



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 05:37 PM UTC

PDB ID : 8XSX / pdb_00008xsx
EMDB ID : EMD-38629
Title : Cryo-EM structure of the human 80S ribosome with Tigecycline, E-tRNA, SERBP1 and eEF2
Authors : Li, X.; Wang, M.; Cheng, J.
Deposited on : 2024-01-10
Resolution : 2.40 Å(reported)
Based on initial model : 6Z6M

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

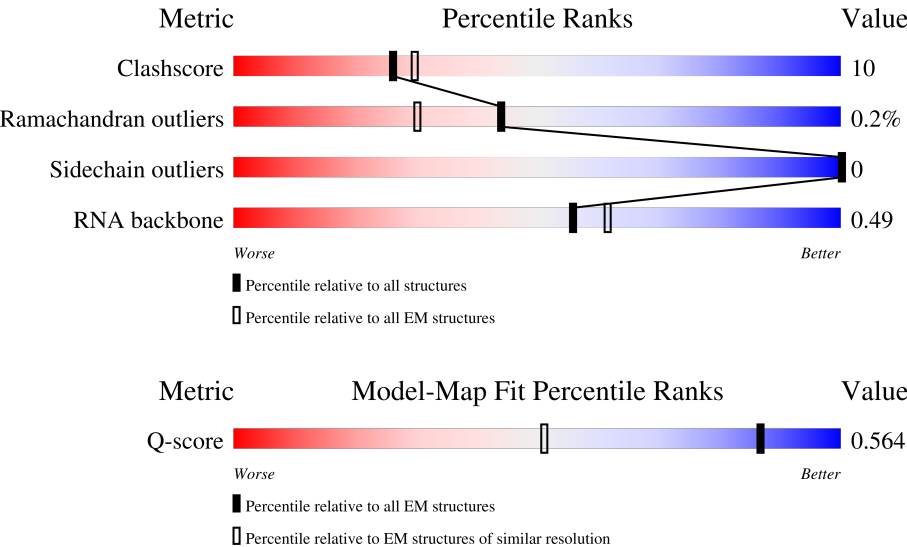
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.40 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.



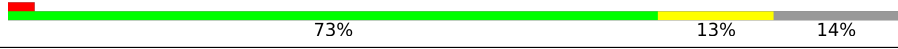
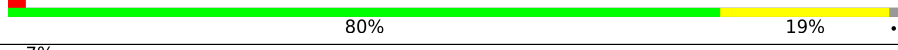
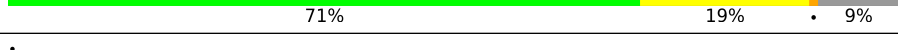
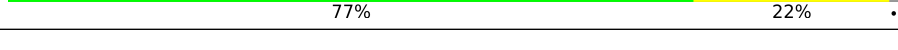
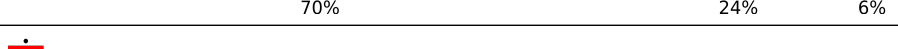
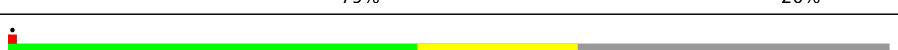
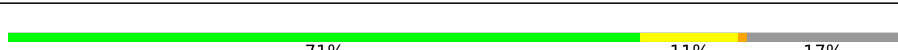
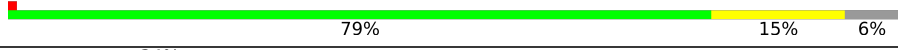
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	5628 (1.90 - 2.90)

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	L5	5070	6% 43% 26% 6% 26%
2	L7	121	72% 24% ...
3	L8	157	5% 56% 36% 7%

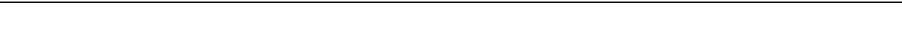
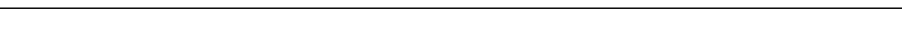
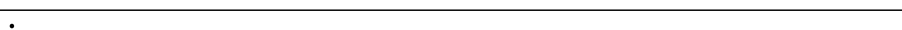
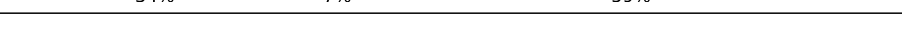
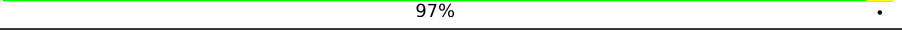
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Mol	Chain	Length	Quality of chain
4	LA	257	
5	LB	403	
6	LC	427	
7	LD	297	
8	LE	288	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	214	
13	LJ	178	
14	LK	165	
15	LL	211	
16	LM	215	
17	LN	204	
18	LO	203	
19	LP	184	
20	LQ	188	
21	LR	196	
22	LS	176	
23	LT	160	
24	LU	128	
25	LV	140	
26	LW	157	
27	LX	156	
28	LY	145	

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Mol	Chain	Length	Quality of chain
29	LZ	136	
30	La	148	
31	Lb	159	
32	Lc	115	
33	Ld	125	
34	Le	135	
35	Lf	110	
36	Lg	117	
37	Lh	123	
38	Li	105	
39	Lj	97	
40	Lk	70	
41	Ll	51	
42	Lm	128	
43	Ln	25	
44	Lo	106	
45	Lp	92	
46	Lr	137	
47	Ls	317	
48	Lz	217	
49	S2	1869	
50	SA	295	
51	SB	264	
52	SD	243	
53	SE	263	

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Mol	Chain	Length	Quality of chain
54	SF	204	
55	SH	194	
56	SI	208	
57	SK	165	
58	SL	158	
59	SP	145	
60	SQ	146	
61	SR	135	
62	SS	152	
63	ST	145	
64	SU	119	
65	SV	83	
66	SX	143	
67	Sa	115	
68	Sc	69	
69	Sd	56	
70	Sg	317	
71	SC	293	
72	SG	249	
73	SJ	194	
74	SM	132	
75	SN	151	
76	SO	151	
77	SW	130	
78	SY	133	

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Mol	Chain	Length	Quality of chain
79	SZ	125	
80	Sb	84	
81	Se	59	
82	Sf	156	
83	CA	394	
84	CB	858	
85	CC	75	
86	CD	402	

2 Entry composition [i](#)

There are 90 unique types of molecules in this entry. The entry contains 231068 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L5	3771	Total	C	N	O	P	0	0
			80096	35636	14582	26108	3770		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L5	2113	C	G	conflict	GB 86475748

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	LC	368	Total	C	N	O	S	0	0
			2927	1840	583	489	15		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	236	Total	C	N	O	S	0	0
			1904	1222	361	317	4		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	241	Total	C	N	O	S	0	0
			1927	1228	371	324	4		

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

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

- Molecule 12 is a protein called 60S ribosomal protein L10-like.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	176	Total	C	N	O	S	0	0
			1410	888	263	253	6		

- Molecule 14 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LK	157	Total	C	N	O	S	0	0
			1185	736	222	223	4		

- Molecule 15 is a protein called 60S ribosomal protein L13.

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

- Molecule 16 is a protein called 60S ribosomal protein L14.

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

- Molecule 17 is a protein called 60S ribosomal protein L15.

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

- Molecule 18 is a protein called 60S ribosomal protein L13a.

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

- Molecule 19 is a protein called 60S ribosomal protein L17.

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

- Molecule 20 is a protein called 60S ribosomal protein L18.

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

- Molecule 21 is a protein called 60S ribosomal protein L19.

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

- Molecule 22 is a protein called 60S ribosomal protein L18a.

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

- Molecule 23 is a protein called 60S ribosomal protein L21.

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

- Molecule 24 is a protein called 60S ribosomal protein L22.

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

- Molecule 25 is a protein called 60S ribosomal protein L23.

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

- Molecule 26 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LW	118	Total	C	N	O	S	0	0
			965	604	199	158	4		

- Molecule 27 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LX	120	Total	C	N	O	S	0	0
			985	630	185	169	1		

- Molecule 28 is a protein called 60S ribosomal protein L26.

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

- Molecule 29 is a protein called 60S ribosomal protein L27.

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

- Molecule 30 is a protein called 60S ribosomal protein L27a.

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

- Molecule 31 is a protein called 60S ribosomal protein L29.

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

- Molecule 32 is a protein called 60S ribosomal protein L30.

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

- Molecule 33 is a protein called 60S ribosomal protein L31.

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

- Molecule 34 is a protein called 60S ribosomal protein L32.

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

- Molecule 35 is a protein called 60S ribosomal protein L35a.

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

- Molecule 36 is a protein called 60S ribosomal protein L34.

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

- Molecule 37 is a protein called 60S ribosomal protein L35.

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

- Molecule 38 is a protein called 60S ribosomal protein L36.

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

- Molecule 39 is a protein called 60S ribosomal protein L37.

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

- Molecule 40 is a protein called 60S ribosomal protein L38.

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

- Molecule 41 is a protein called 60S ribosomal protein L39.

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

- Molecule 42 is a protein called Ubiquitin-60S ribosomal protein L40.

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

- Molecule 43 is a protein called 60S ribosomal protein L41.

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

- Molecule 44 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lo	105	Total	C	N	O	S	0	0
			862	542	175	139	6		

- Molecule 45 is a protein called 60S ribosomal protein L37a.

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

- Molecule 46 is a protein called 60S ribosomal protein L28.

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

- Molecule 47 is a protein called Large ribosomal subunit protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Ls	203	Total	C	N	O	S	0	0
			1564	995	273	287	9		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
48	Lz	217	Total	C	N	O	0	0
			1078	643	217	218		

- Molecule 49 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S2	1740	Total	C	N	O	P	0	0
			36898	16459	6599	12101	1739		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SA	221	Total	C	N	O	S	0	0
			1741	1106	305	322	8		

- Molecule 51 is a protein called 40S ribosomal protein S3a.

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

- Molecule 52 is a protein called 40S ribosomal protein S3.

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

- Molecule 53 is a protein called 40S ribosomal protein S4, X isoform.

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

- Molecule 54 is a protein called 40S ribosomal protein S5.

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

- Molecule 55 is a protein called 40S ribosomal protein S7.

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

- Molecule 56 is a protein called 40S ribosomal protein S8.

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

- Molecule 57 is a protein called 40S ribosomal protein S10.

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

- Molecule 58 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SL	153	Total	C	N	O	S	0	0
			1247	793	234	214	6		

- Molecule 59 is a protein called 40S ribosomal protein S15.

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

- Molecule 60 is a protein called 40S ribosomal protein S16.

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

- Molecule 61 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SR	135	Total	C	N	O	S	0	0
			1090	685	202	198	5		

- Molecule 62 is a protein called 40S ribosomal protein S18.

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

- Molecule 63 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	ST	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 64 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SU	104	Total	C	N	O	S	0	0
			821	514	155	148	4		

- Molecule 65 is a protein called 40S ribosomal protein S21.

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

- Molecule 66 is a protein called 40S ribosomal protein S23.

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

- Molecule 67 is a protein called 40S ribosomal protein S26.

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

- Molecule 68 is a protein called 40S ribosomal protein S28.

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

- Molecule 69 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sd	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 70 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 71 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SC	222	Total	C	N	O	S	0	0
			1725	1115	298	302	10		

- Molecule 72 is a protein called 40S ribosomal protein S6.

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

- Molecule 73 is a protein called 40S ribosomal protein S9.

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

- Molecule 74 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SM	122	Total	C	N	O	S	0	0
			940	590	164	177	9		

- Molecule 75 is a protein called 40S ribosomal protein S13.

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

- Molecule 76 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SO	140	Total	C	N	O	S	0	0
			1049	642	204	197	6		

- Molecule 77 is a protein called 40S ribosomal protein S15a.

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

- Molecule 78 is a protein called 40S ribosomal protein S24.

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

- Molecule 79 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	SZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 80 is a protein called 40S ribosomal protein S27.

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

- Molecule 81 is a protein called 40S ribosomal protein S30.

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

- Molecule 82 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Sf	67	Total	C	N	O	S	0	0
			548	346	102	93	7		

- Molecule 83 is a protein called Proliferation-associated protein 2G4.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	CA	354	Total	C	N	O	S	4	0
			2764	1744	475	528	17		

- Molecule 84 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	CB	846	Total	C	N	O	S	0	0
			6605	4193	1136	1232	44		

- Molecule 85 is a RNA chain called E-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	CC	75	Total	C	N	O	P	0	0
			1607	717	298	517	75		

- Molecule 86 is a protein called SERPINE1 mRNA-binding protein 1.

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

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CD	?	-	SER	deletion	UNP Q8NC51
CD	?	-	SER	deletion	UNP Q8NC51
CD	?	-	PHE	deletion	UNP Q8NC51
CD	?	-	SER	deletion	UNP Q8NC51
CD	?	-	HIS	deletion	UNP Q8NC51
CD	?	-	TYR	deletion	UNP Q8NC51

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

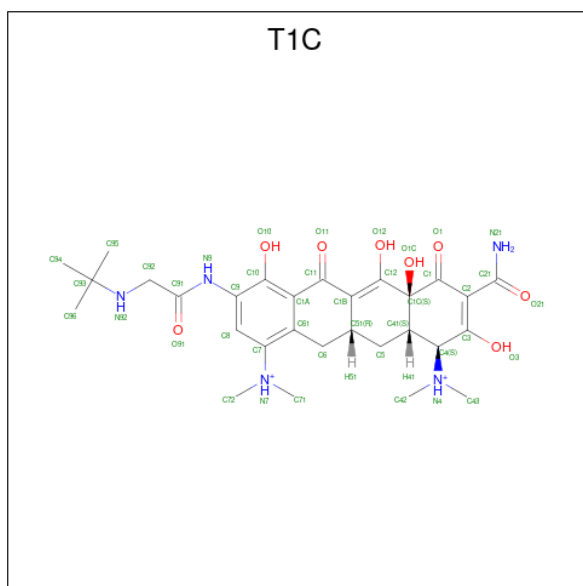
Mol	Chain	Residues	Atoms		AltConf
87	L5	214	Total	Mg	0
			214	214	
87	L7	3	Total	Mg	0
			3	3	
87	L8	6	Total	Mg	0
			6	6	
87	LA	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
87	LB	1	Total	Mg	0
			1	1	
87	LP	1	Total	Mg	0
			1	1	
87	LV	1	Total	Mg	0
			1	1	
87	Le	1	Total	Mg	0
			1	1	
87	Lj	1	Total	Mg	0
			1	1	
87	S2	30	Total	Mg	0
			30	30	

- Molecule 88 is TIGECYCLINE (CCD ID: T1C) (formula: $C_{29}H_{41}N_5O_8$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
88	L5	1	Total	C	N	O	0
			42	29	5	8	
88	L5	1	Total	C	N	O	0
			42	29	5	8	
88	L5	1	Total	C	N	O	0
			42	29	5	8	
88	L5	1	Total	C	N	O	0
			42	29	5	8	
88	L5	1	Total	C	N	O	0
			42	29	5	8	

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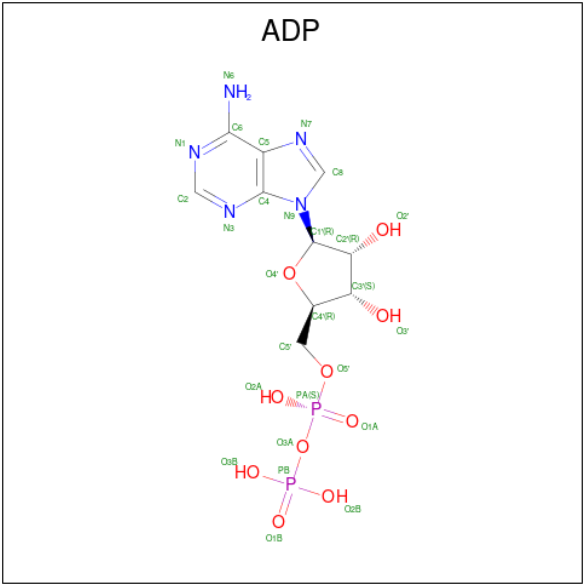
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Mol	Chain	Residues	Atoms				AltConf
88	L5	1	Total	C	N	O	0
			42	29	5	8	
88	CC	1	Total	C	N	O	0
			42	29	5	8	

- Molecule 89 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
89	Lg	1	Total	Zn	0
			1	1	
89	Lj	1	Total	Zn	0
			1	1	
89	Lm	1	Total	Zn	0
			1	1	
89	Lo	1	Total	Zn	0
			1	1	
89	Lp	1	Total	Zn	0
			1	1	
89	SK	1	Total	Zn	0
			1	1	
89	Sa	1	Total	Zn	0
			1	1	
89	SM	1	Total	Zn	0
			1	1	

- Molecule 90 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂).

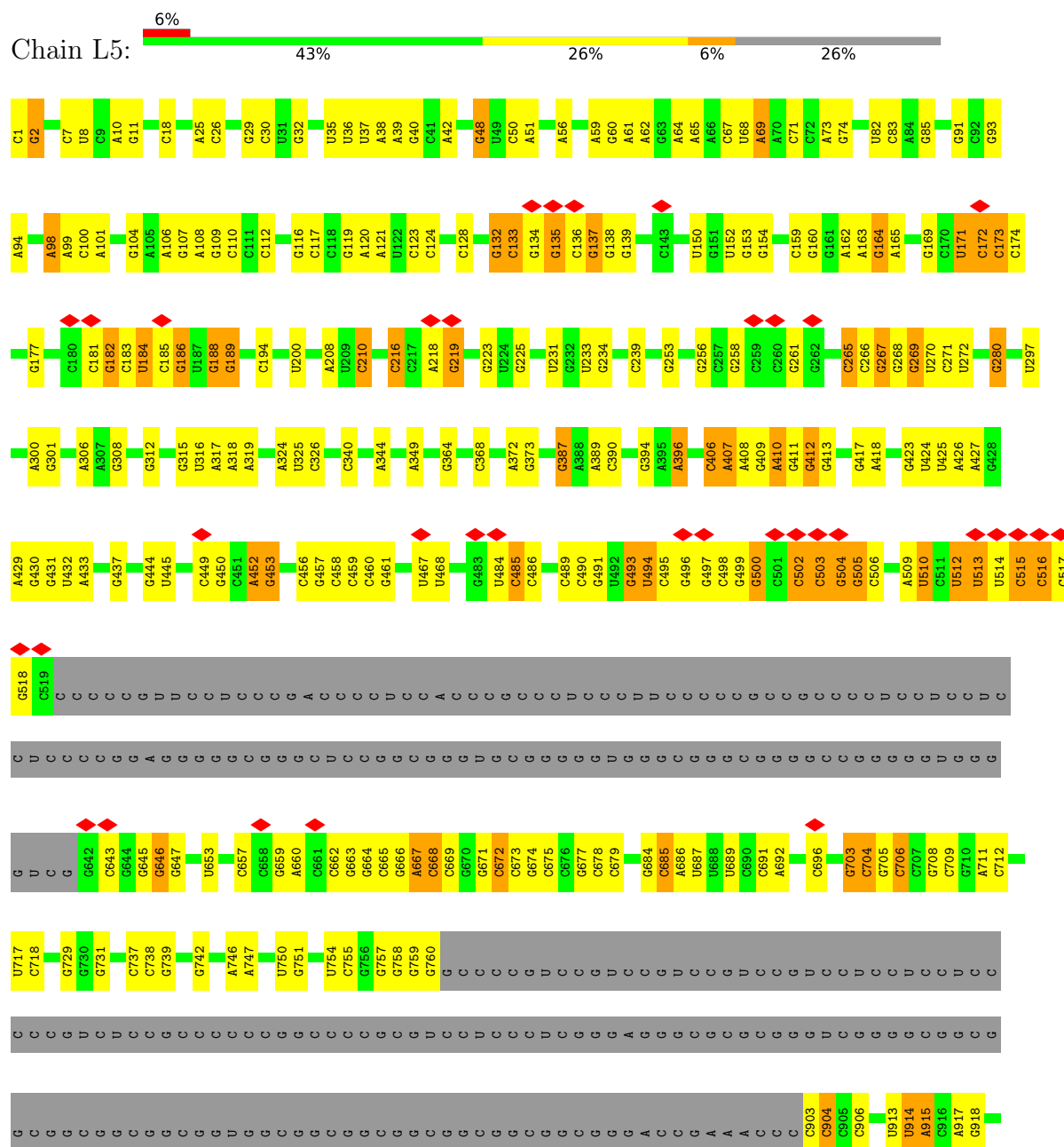


Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
90	CB	1	27	10	5	10	2	0

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.

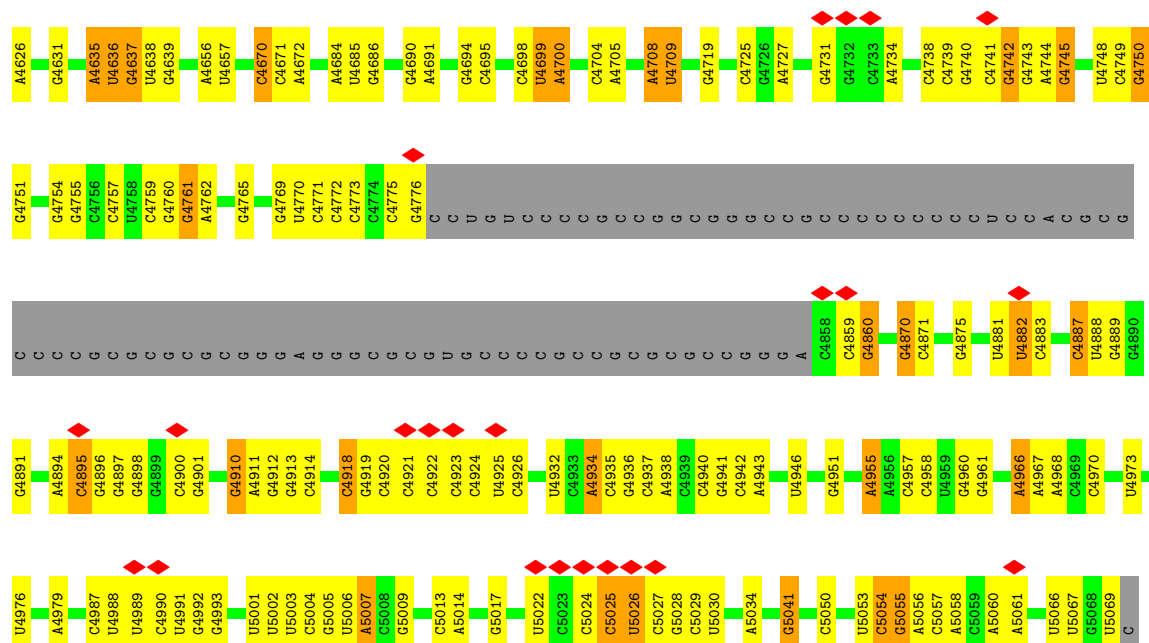
• Molecule 1: 28S rRNA



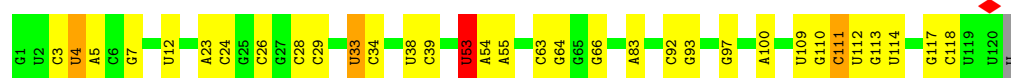
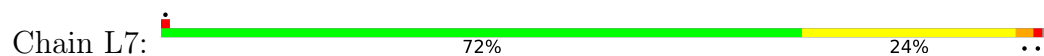








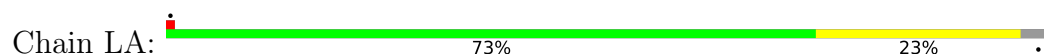
• Molecule 2: 5S rRNA



• Molecule 3: 5.8S rRNA

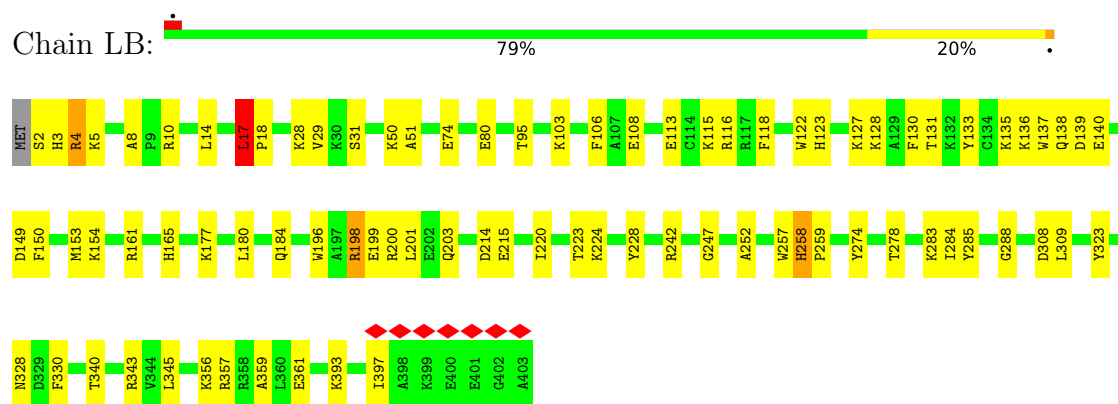


• Molecule 4: 60S ribosomal protein L8

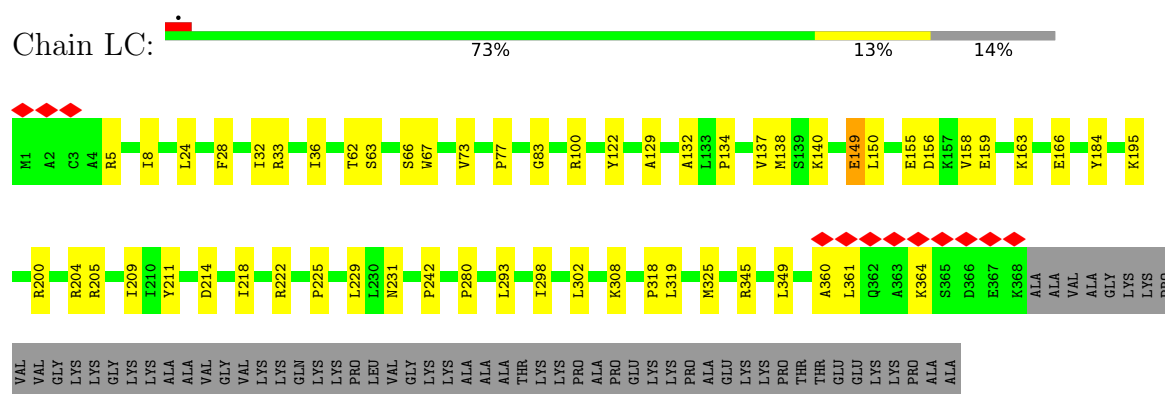


ASN

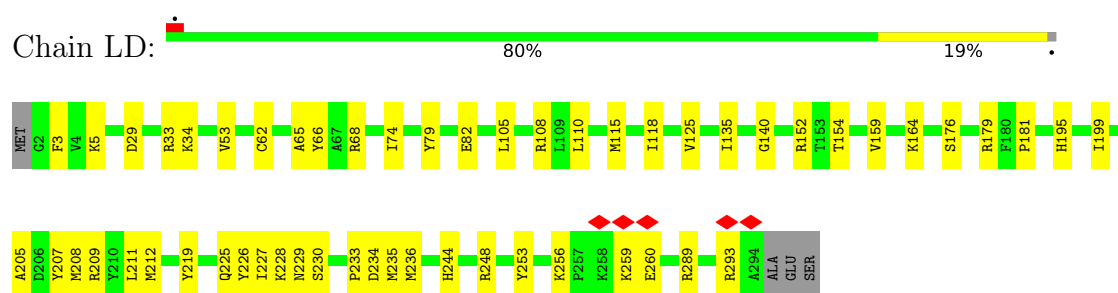
- Molecule 5: 60S ribosomal protein L3



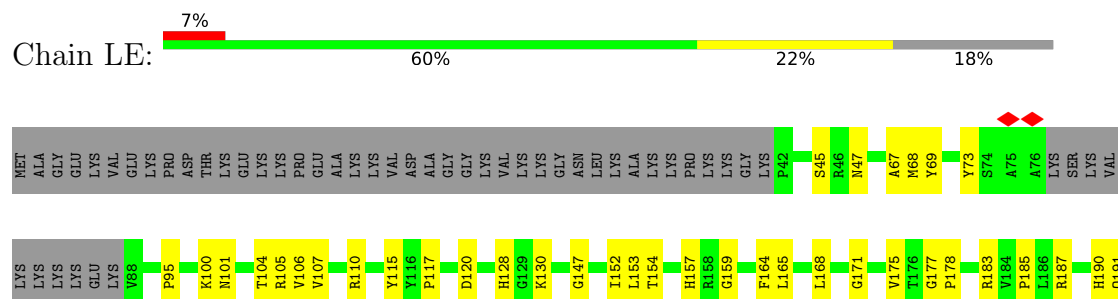
- Molecule 6: 60S ribosomal protein L4

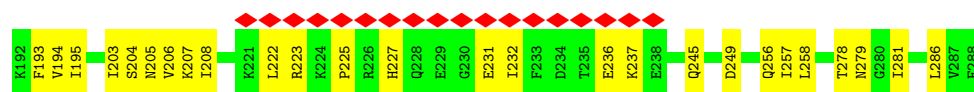


- Molecule 7: 60S ribosomal protein L5



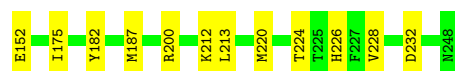
- Molecule 8: 60S ribosomal protein L6





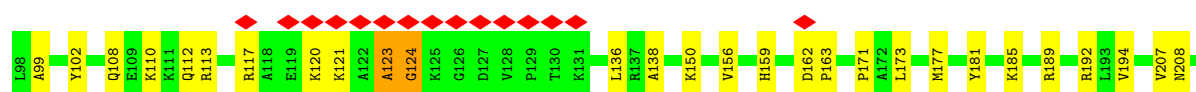
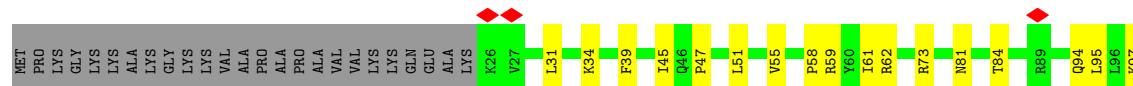
- Molecule 9: 60S ribosomal protein L7

Chain LF: 79% 12% 9%



- Molecule 10: 60S ribosomal protein L7a

Chain LG: 9% 71% 19% 9%



- Molecule 11: 60S ribosomal protein L9

Chain LH: 77% 22% 1%



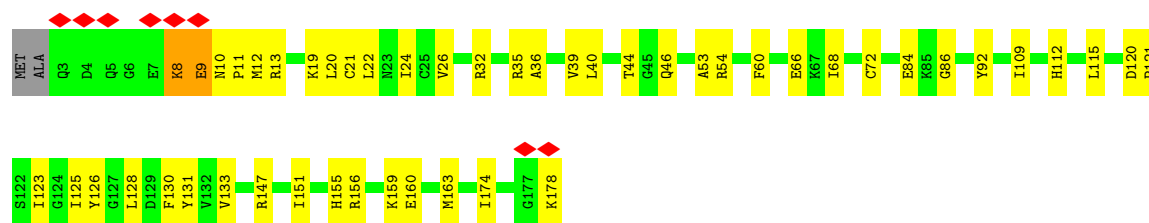
- Molecule 12: 60S ribosomal protein L10-like

Chain LI: 70% 24% 6%

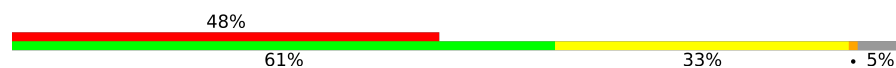


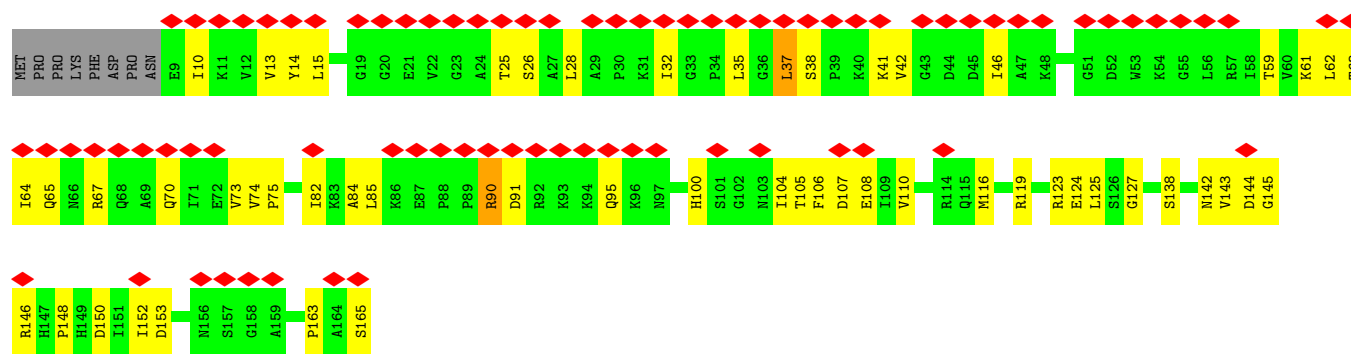
- Molecule 13: 60S ribosomal protein L11

Chain LJ:  71% 26%



- Molecule 14: 60S ribosomal protein L12

Chain LK:  48% 61% 33% 5%



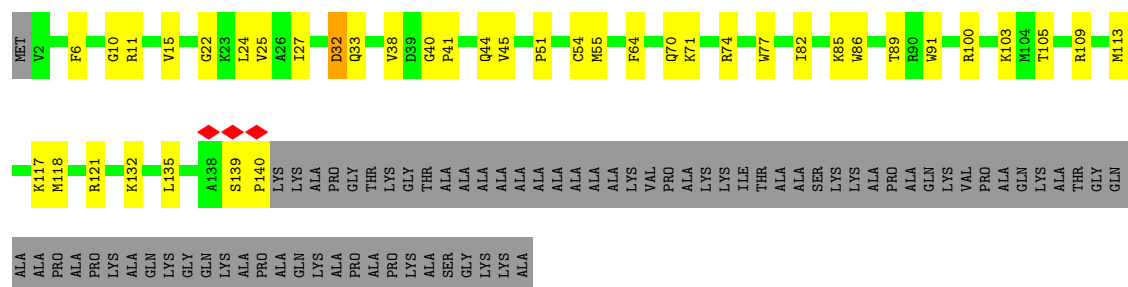
- Molecule 15: 60S ribosomal protein L13

Chain LL:  5% 79% 20%



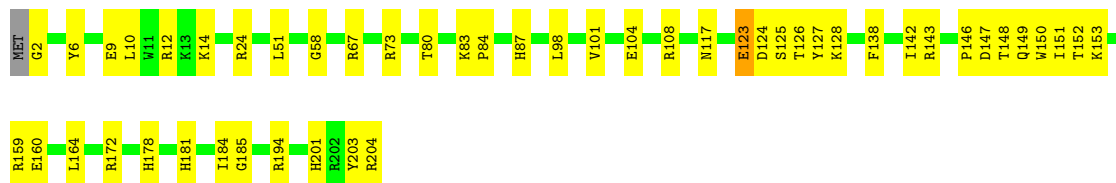
- Molecule 16: 60S ribosomal protein L14

Chain LM:  46% 18% 35%



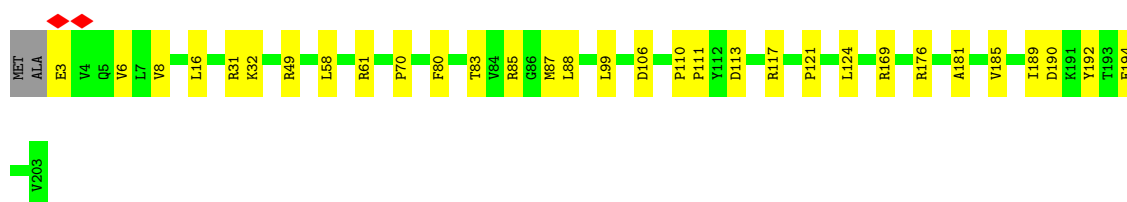
- Molecule 17: 60S ribosomal protein L15

Chain LN:  75% 24%



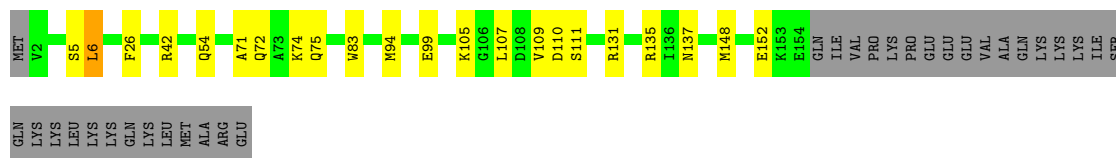
- Molecule 18: 60S ribosomal protein L13a

Chain LO:  84% 15%



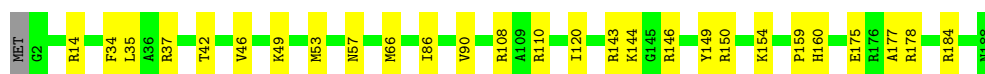
- Molecule 19: 60S ribosomal protein L17

Chain LP:  71% 11% 17%



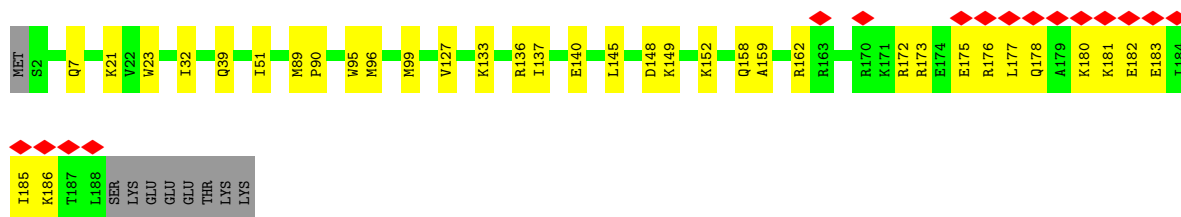
- Molecule 20: 60S ribosomal protein L18

Chain LQ:  85% 14%



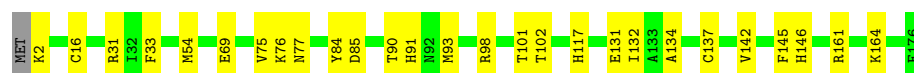
- Molecule 21: 60S ribosomal protein L19

Chain LR:  8% 78% 18% 5%



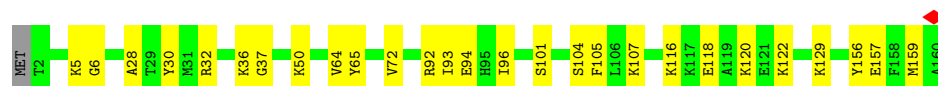
- Molecule 22: 60S ribosomal protein L18a

Chain LS:  84% 15%



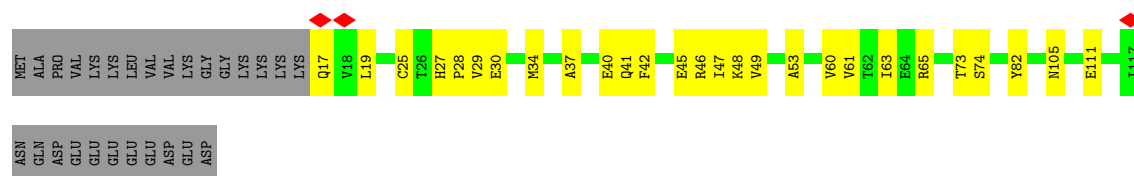
- Molecule 23: 60S ribosomal protein L21

Chain LT:  82% 17%



- Molecule 24: 60S ribosomal protein L22

Chain LU:  58% 21% 21%



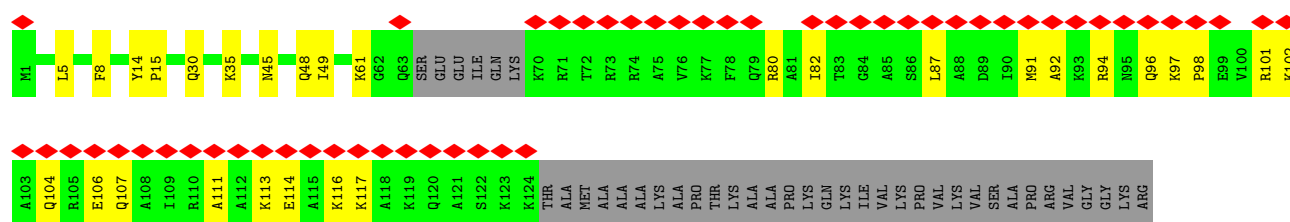
- Molecule 25: 60S ribosomal protein L23

Chain LV:  79% 15% 6%



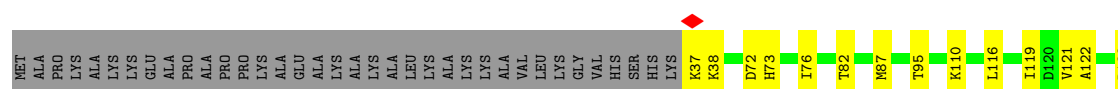
- Molecule 26: 60S ribosomal protein L24

Chain LW:  34% 57% 18% 25%



- Molecule 27: 60S ribosomal protein L23a

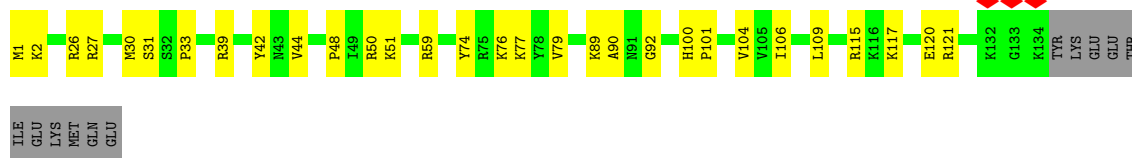
Chain LX:  61% 16% 23%





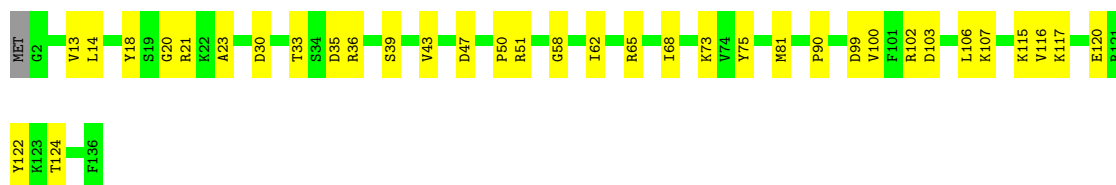
- Molecule 28: 60S ribosomal protein L26

Chain LY: 72% 21% 8%



- Molecule 29: 60S ribosomal protein L27

Chain LZ: 74% 26%



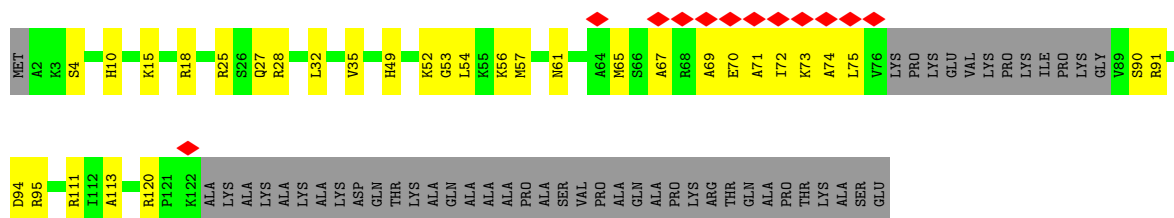
- Molecule 30: 60S ribosomal protein L27a

Chain La: 80% 20%



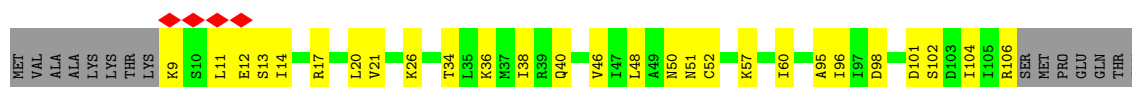
- Molecule 31: 60S ribosomal protein L29

Chain Lb: 8% 48% 20% 31%



- Molecule 32: 60S ribosomal protein L30

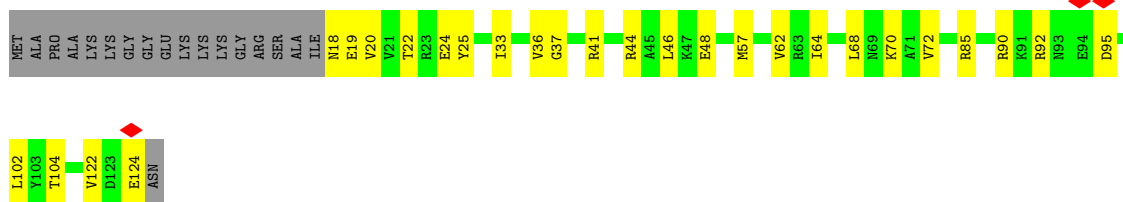
Chain Lc: 62% 23% 15%



GLU
LYS

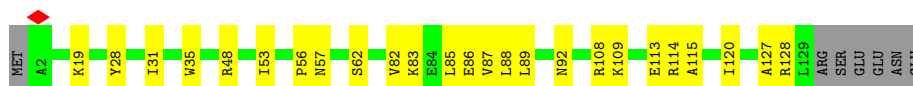
- Molecule 33: 60S ribosomal protein L31

Chain Ld: 



- Molecule 34: 60S ribosomal protein L32

Chain Le: 



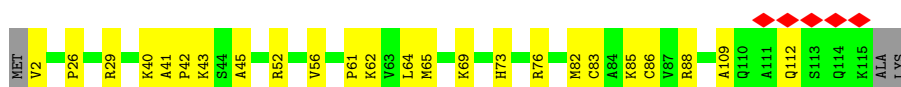
- Molecule 35: 60S ribosomal protein L35a

Chain Lf: 



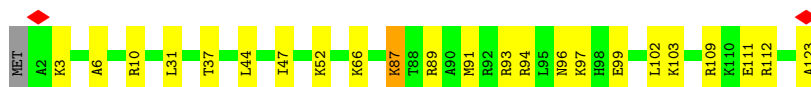
- Molecule 36: 60S ribosomal protein L34

Chain Lg: 



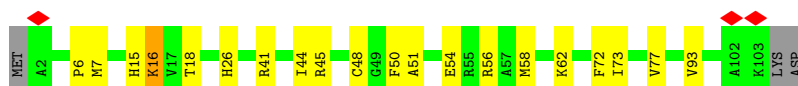
- Molecule 37: 60S ribosomal protein L35

Chain Lh: 

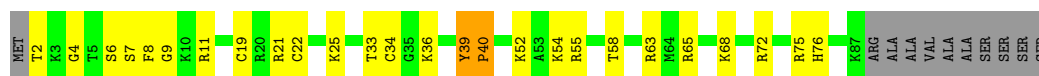


- Molecule 38: 60S ribosomal protein L36

Chain Li: 



• Molecule 39: 60S ribosomal protein L37

Chain Lj:  62% 25% 11%

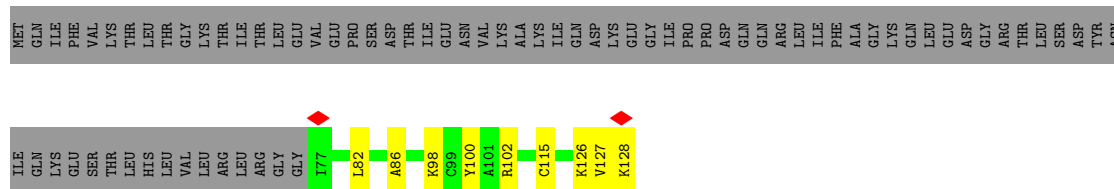
• Molecule 40: 60S ribosomal protein L38

Chain Lk:  76% 23% 1%

• Molecule 41: 60S ribosomal protein L39

Chain Ll:  76% 22% 1%

• Molecule 42: Ubiquitin-60S ribosomal protein L40

Chain Lm:  34% 7% 59%

• Molecule 43: 60S ribosomal protein L41

Chain Ln:  76% 20% 1%

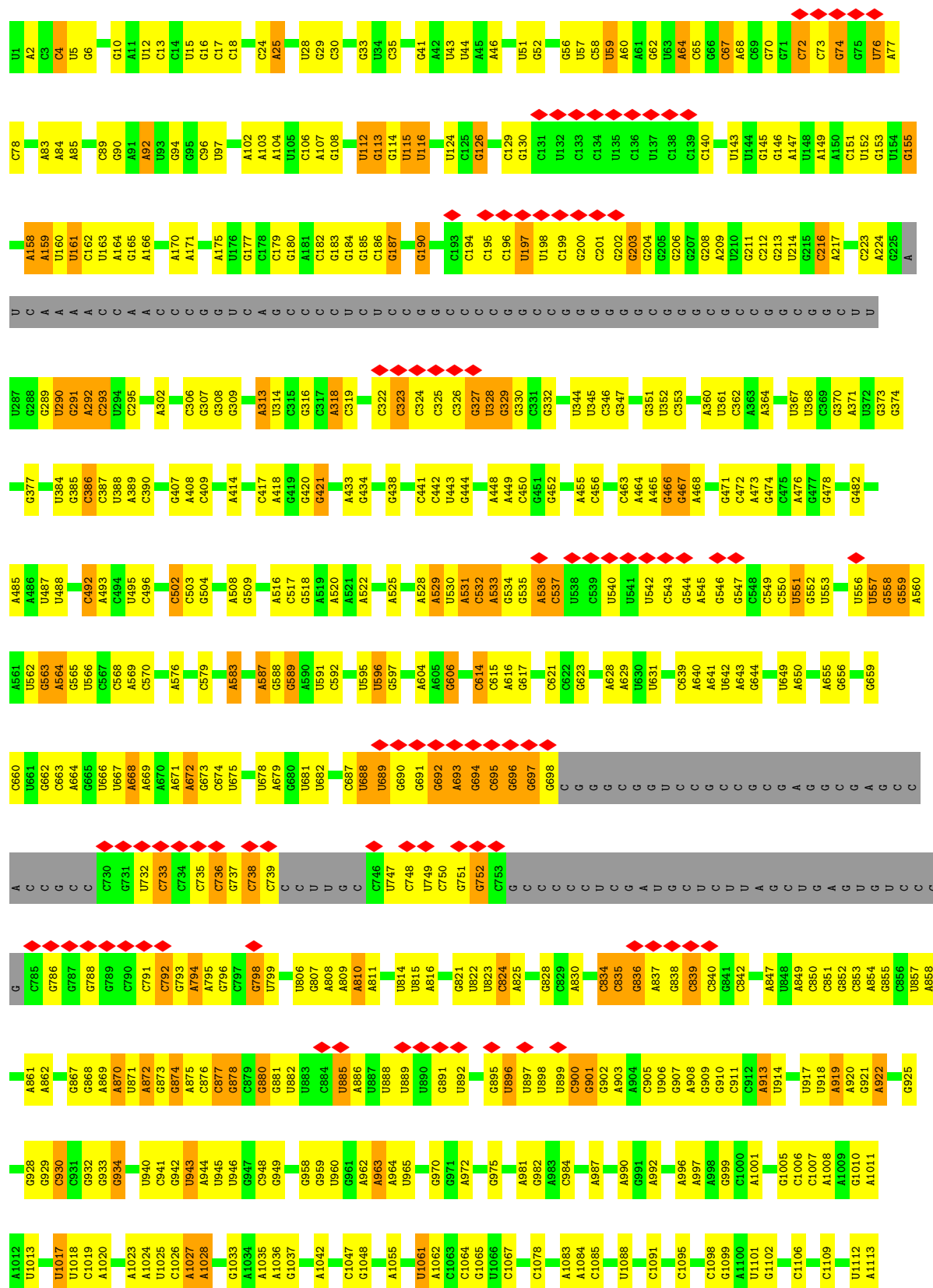
• Molecule 44: 60S ribosomal protein L36a

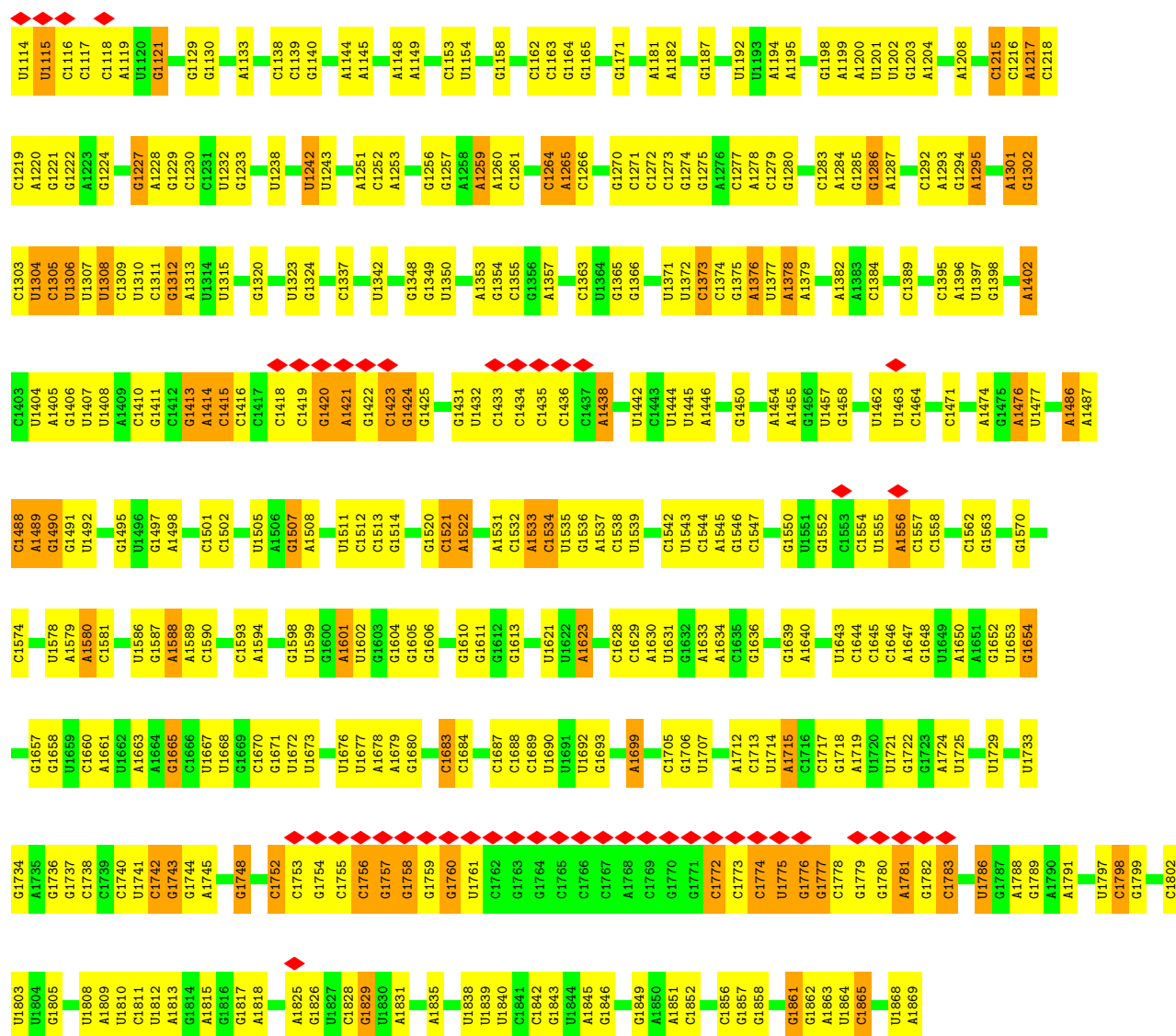
Chain Lo:  85% 14% 1%

• Molecule 45: 60S ribosomal protein L37a

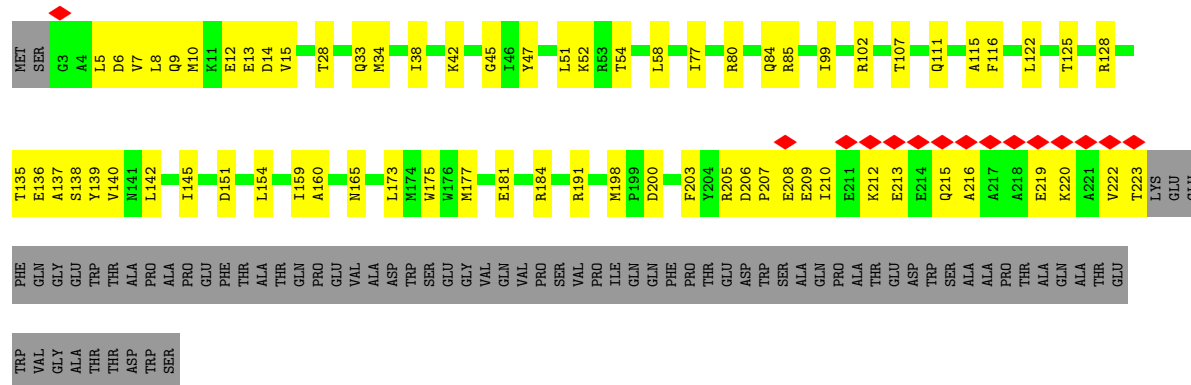
Chain Lp:  73% 26% 1%





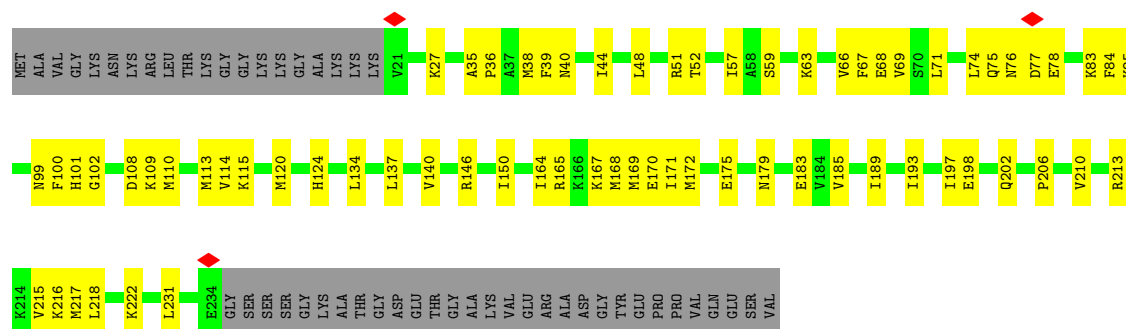


• Molecule 50: 40S ribosomal protein SA



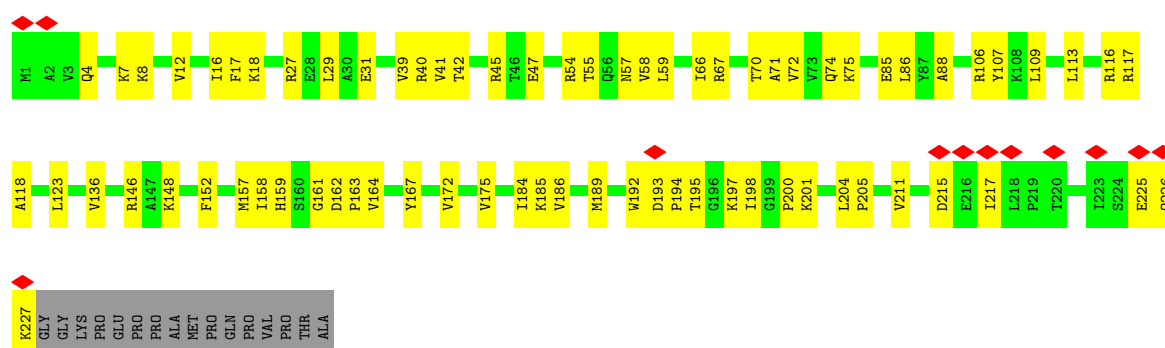
• Molecule 51: 40S ribosomal protein S3a

Chain SB: 



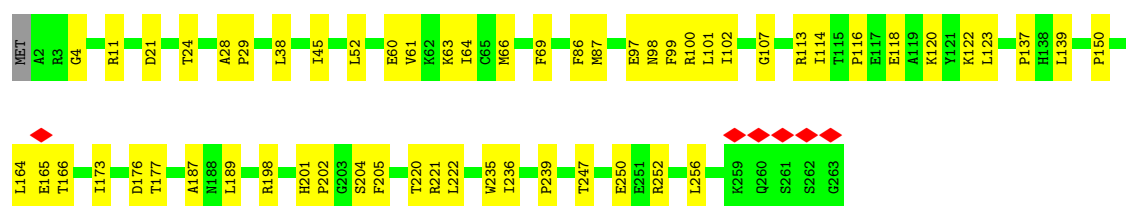
• Molecule 52: 40S ribosomal protein S3

Chain SD: 



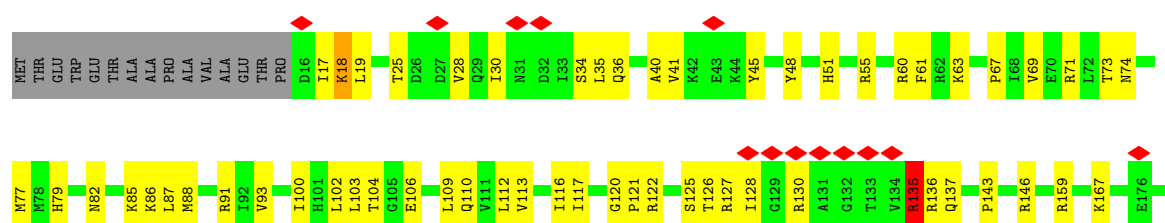
• Molecule 53: 40S ribosomal protein S4, X isoform

Chain SE: 



• Molecule 54: 40S ribosomal protein S5

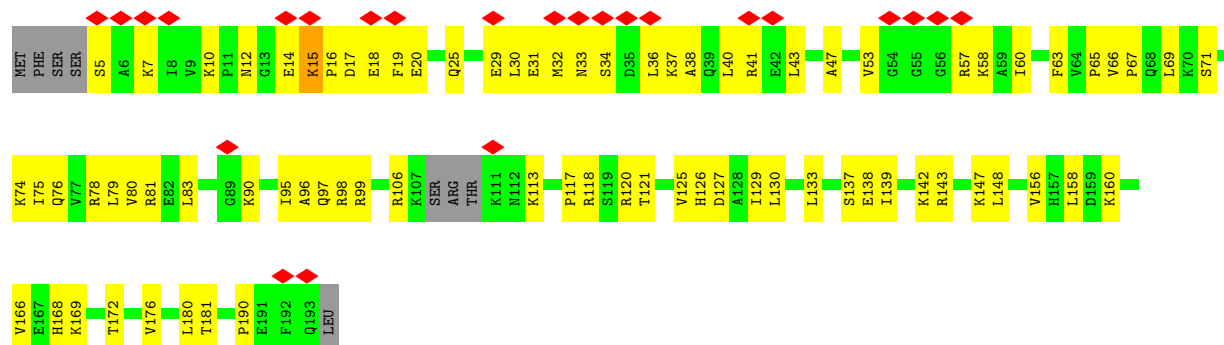
Chain SF: 



R204

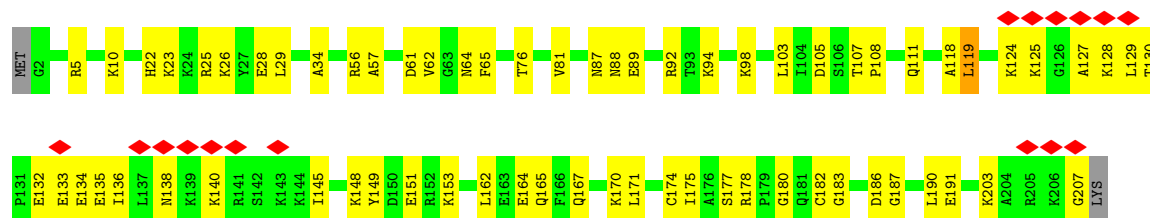
- Molecule 55: 40S ribosomal protein S7

Chain SH: 

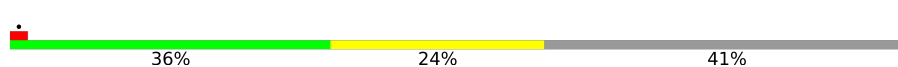


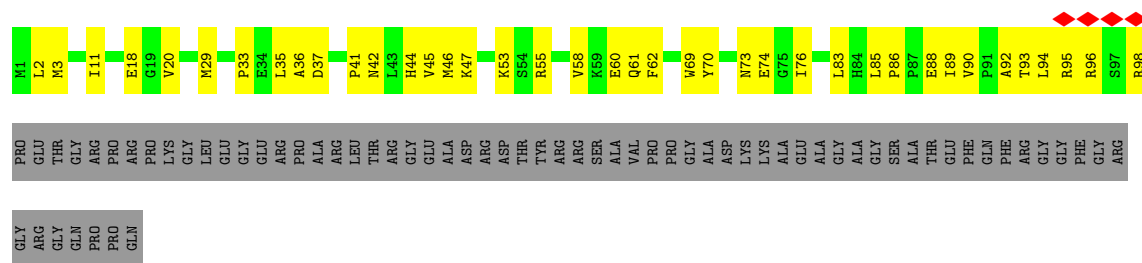
- Molecule 56: 40S ribosomal protein S8

Chain SI: 



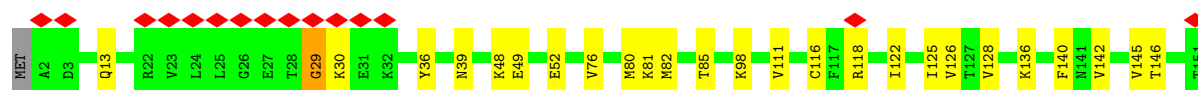
- Molecule 57: 40S ribosomal protein S10

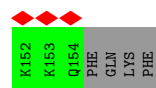
Chain SK: 



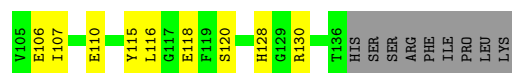
- Molecule 58: 40S ribosomal protein S11

Chain SL: 

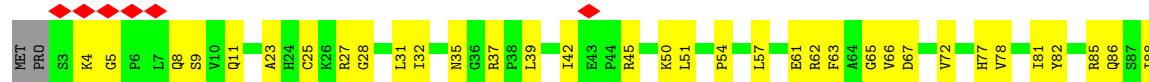




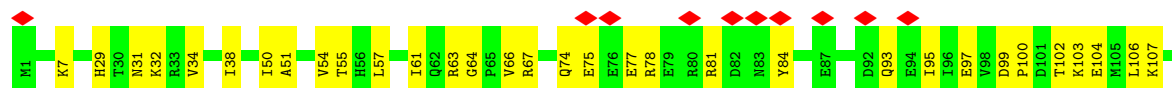
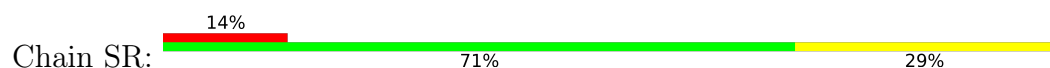
- Molecule 59: 40S ribosomal protein S15



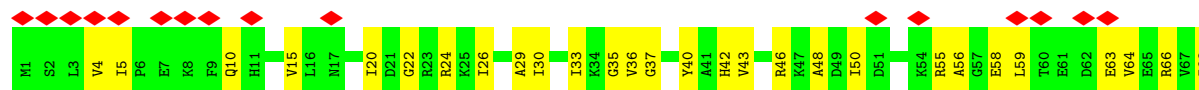
- Molecule 60: 40S ribosomal protein S16



- Molecule 61: 40S ribosomal protein S17

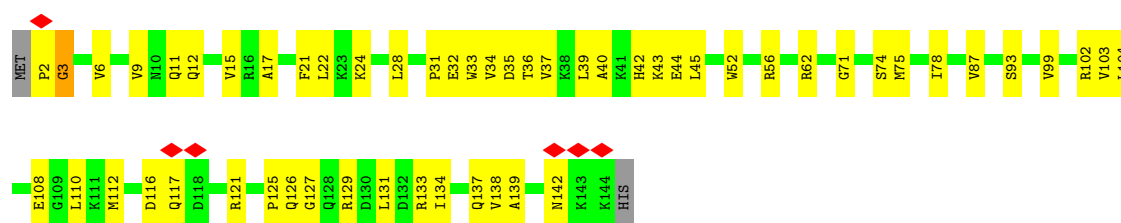


- Molecule 62: 40S ribosomal protein S18



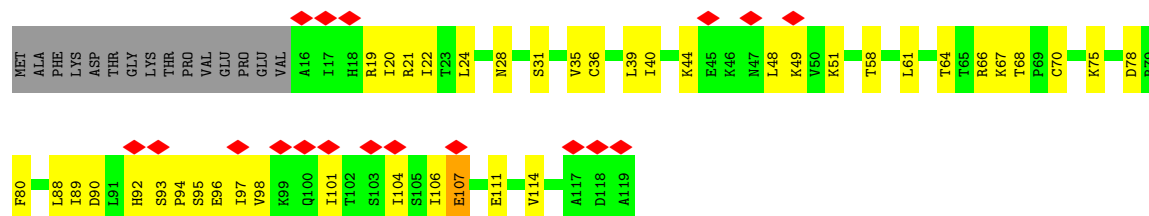
- Molecule 63: 40S ribosomal protein S19

Chain ST:  61% 37% ..



- Molecule 64: 40S ribosomal protein S20

Chain SU:  15% 53% 34% • 13%



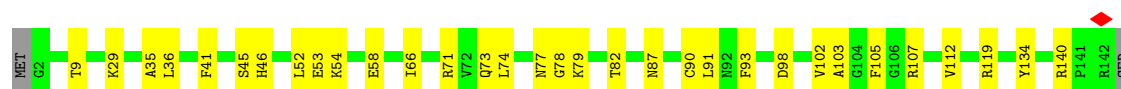
- Molecule 65: 40S ribosomal protein S21

Chain SV:  70% 29% •



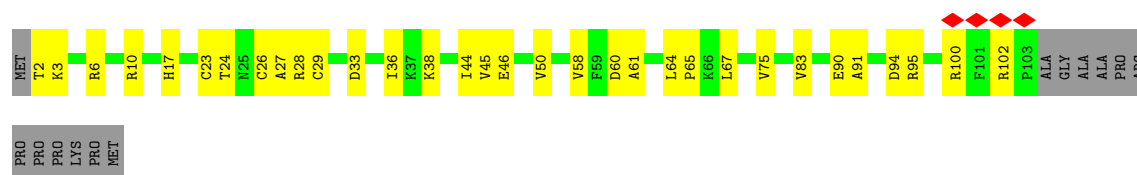
- Molecule 66: 40S ribosomal protein S23

Chain SX:  76% 22% •



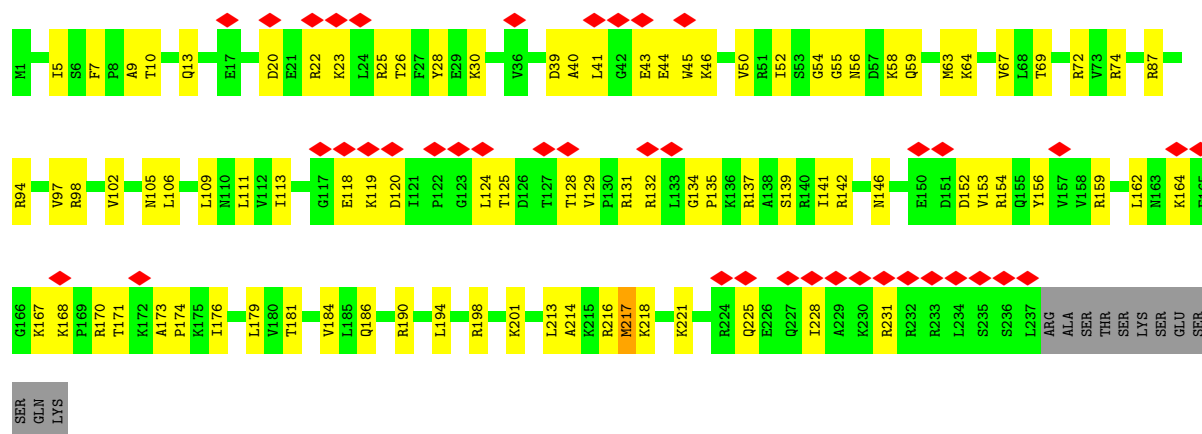
- Molecule 67: 40S ribosomal protein S26

Chain Sa:  61% 28% 11%

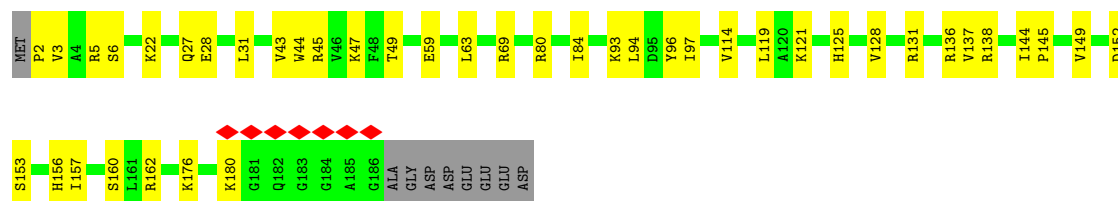
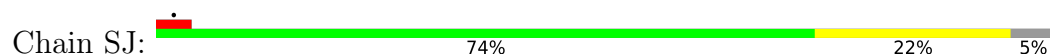


- Molecule 68: 40S ribosomal protein S28

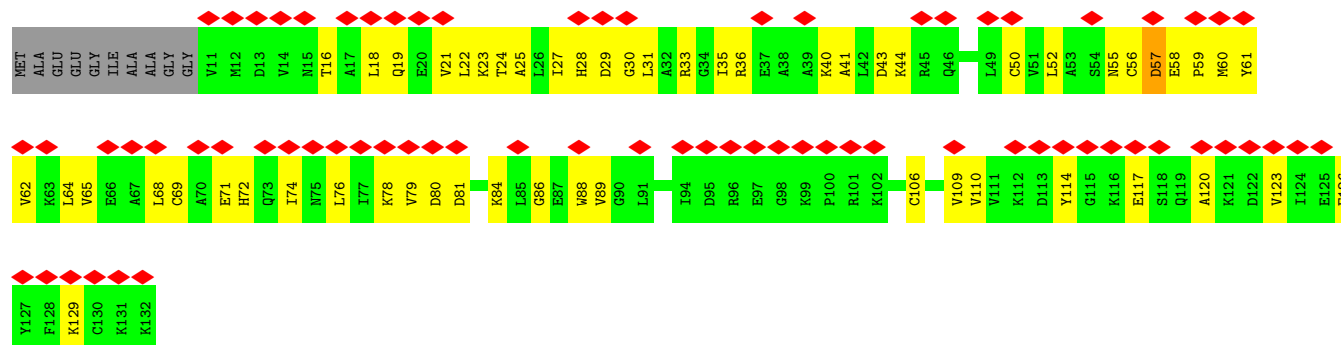
Chain Sc:  17% 49% 42% • 7%



• Molecule 73: 40S ribosomal protein S9



• Molecule 74: 40S ribosomal protein S12



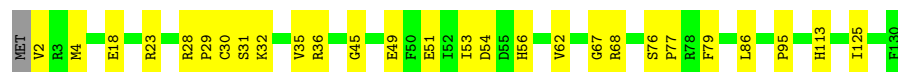
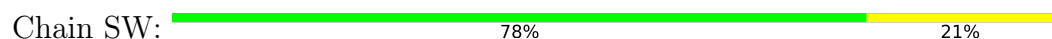
• Molecule 75: 40S ribosomal protein S13



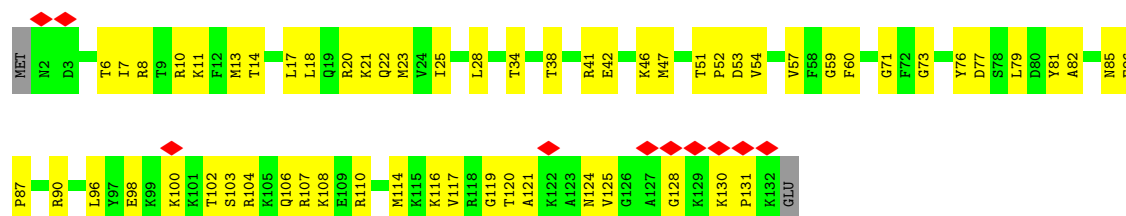
• Molecule 76: 40S ribosomal protein S14



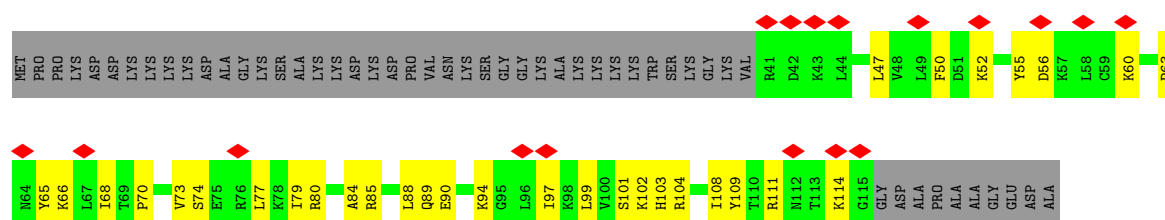
- Molecule 77: 40S ribosomal protein S15a



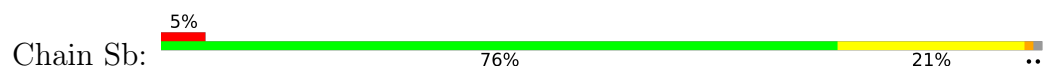
- Molecule 78: 40S ribosomal protein S24



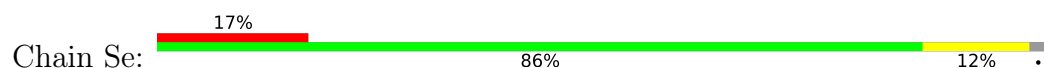
- Molecule 79: 40S ribosomal protein S25

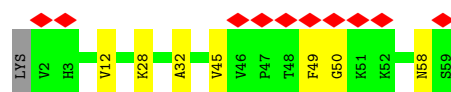


- Molecule 80: 40S ribosomal protein S27

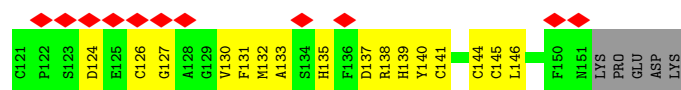
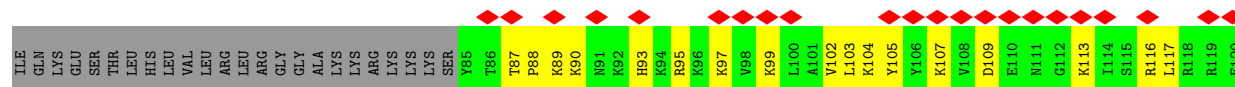
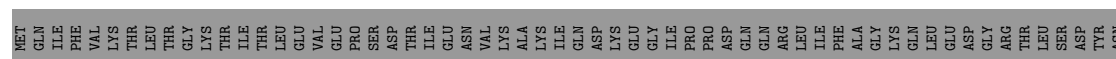


- Molecule 81: 40S ribosomal protein S30

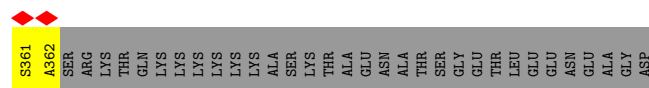
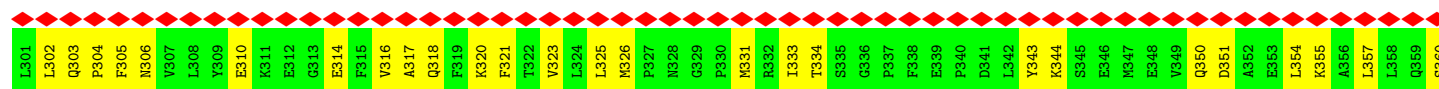
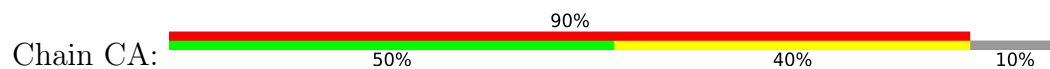




- Molecule 82: Ubiquitin-40S ribosomal protein S27a

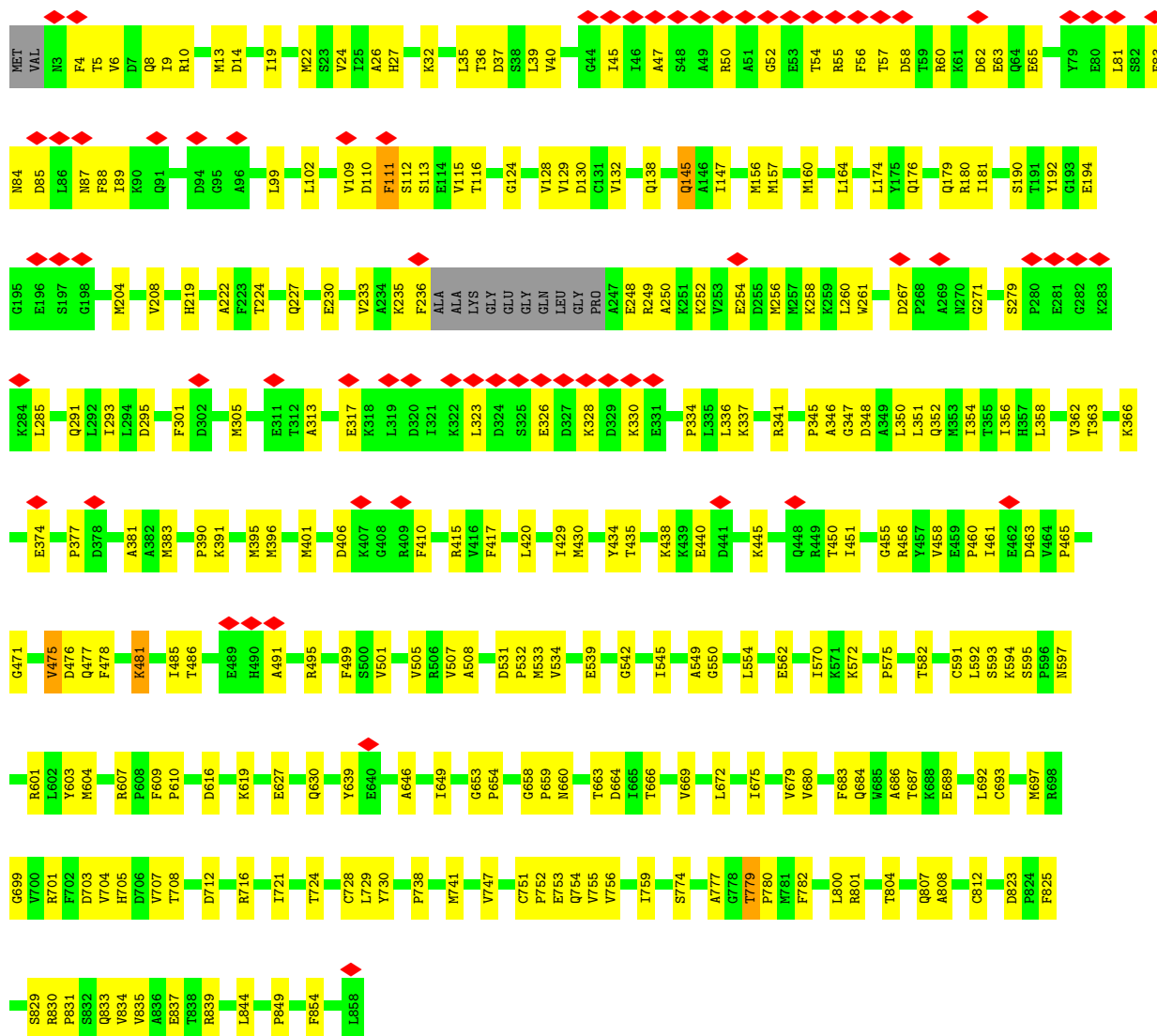


- Molecule 83: Proliferation-associated protein 2G4



- Molecule 84: Elongation factor 2

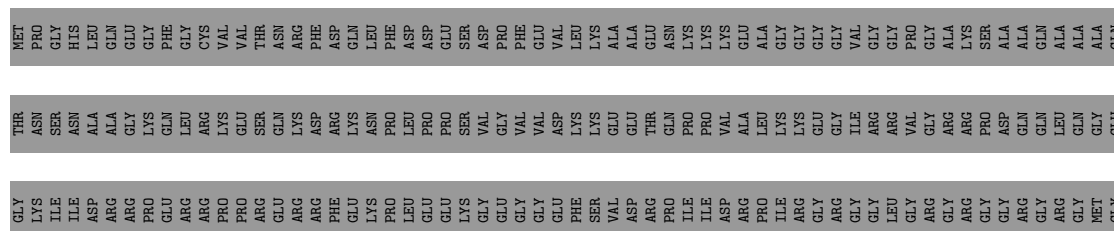




• Molecule 85: E-tRNA



• Molecule 86: SERPINE1 mRNA-binding protein 1



ARG	GLY	D183	G184	F185	K190	R191	E192	R195	H196	S197	H206	E207	D208	G219	K222	D223	E224	L225	THR	GLU	SER	PRO	LYS	TYR	ILE	GLN	LYS	GLN	ILE	SER	TYR	ASN	TYR	SER	ASP	LEU	ASP	GLN	SER	ASN	VAL	THR	GLU	THR	PRO	GLY	GLU	HIS	HIS	PRO	VAL						
ALA	ASP	THR	GLU	ASN	LYS	GLU	ASN	VAL	GLU	VAL	LYS	GLU	GLY	PRO	LYS	GLU	MET	T282	L283	D284	E285	W286	K287	A288	I289	Q290	N291	K292	D293	ARG	ALA	LYS	VAL	GLU	PHE	ASN	ILE	ARG	LYS	PRO	ASN	GLY	GLU	GLY	ALA	ASP	GLY	GLN	TRP	LYS	LYS	GLY	PHE	VAL	LEU	HIS	LYS
SER	LYS	SER	GLU	GLU	ALA	HIS	ALA	PRO	ASP	VAL	ASP	MET	ASP	HIS	ALA	PHE	PRO	ARG	LYS	PRO	ALA	ALA	ASN	ASP	ILE	THR	SER	GLN	LEU	GLU	ILE	ASN	PHE	GLY	ASP	LEU	GLY	ARG	PRO	GLY	ARG	GLY	GLY	GLY	ARG	ARG	PRO	ASN	ARG	GLY	SER	ARG					
THR	ASP	LYS	SER	SER	ALA	SER	ALA	PRO	ASP	VAL	ASP	ASP	PRO	GLU	ALA	PHE	PRO	ALA	LEU	ALA	ALA	ALA	ASP	ASP	THR	SER	GLN	LEU	GLU	ILE	ASN	PHE	GLY	ASP	LEU	GLY	ARG	PRO	GLY	ARG	GLY	GLY	GLY	ARG	ARG	PRO	ASN	ARG	GLY	SER	ARG						

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	88213	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; Relion	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.098	Depositor
Minimum map value	-0.017	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.015	Depositor
Map size ($\text{\AA}$)	447.36, 447.36, 447.36	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.932, 0.932, 0.932	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, ADP, T1C

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	L5	0.25	0/89548	0.34	0/139613
2	L7	0.25	0/2861	0.32	1/4459 (0.0%)
3	L8	0.24	0/3701	0.30	0/5766
4	LA	0.26	0/1936	0.57	0/2596
5	LB	0.26	0/3306	0.57	5/4424 (0.1%)
6	LC	0.24	0/2981	0.46	0/4002
7	LD	0.24	0/2428	0.43	0/3252
8	LE	0.21	0/1942	0.47	0/2606
9	LF	0.23	0/1905	0.43	0/2539
10	LG	0.22	0/1960	0.45	1/2637 (0.0%)
11	LH	0.24	0/1537	0.43	0/2066
12	LI	0.25	0/1673	0.44	0/2233
13	LJ	0.35	3/1433 (0.2%)	0.50	1/1915 (0.1%)
14	LK	0.27	1/1200 (0.1%)	0.48	0/1617
15	LL	0.26	0/1732	0.50	0/2315
16	LM	0.24	0/1161	0.52	1/1554 (0.1%)
17	LN	0.27	0/1746	0.52	2/2338 (0.1%)
18	LO	0.24	0/1682	0.42	0/2250
19	LP	0.22	0/1268	0.46	0/1701
20	LQ	0.23	0/1537	0.41	0/2052
21	LR	0.20	0/1582	0.36	0/2091
22	LS	0.27	0/1493	0.43	0/2003
23	LT	0.23	0/1326	0.46	0/1770
24	LU	0.24	0/839	0.53	0/1126
25	LV	0.22	0/993	0.48	0/1332
26	LW	0.25	0/979	0.49	0/1295
27	LX	0.23	0/1002	0.43	0/1345
28	LY	0.25	0/1132	0.45	0/1504
29	LZ	0.22	0/1130	0.42	0/1507
30	La	0.25	0/1191	0.48	0/1591
31	Lb	0.29	0/889	0.55	0/1175
32	Lc	0.23	0/774	0.44	0/1038

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Ld	0.26	0/903	0.46	0/1216
34	Le	0.32	0/1071	0.58	0/1429
35	Lf	0.24	0/895	0.58	3/1198 (0.3%)
36	Lg	0.22	0/916	0.38	0/1220
37	Lh	0.22	0/1023	0.39	1/1351 (0.1%)
38	Li	0.21	0/843	0.43	0/1115
39	Lj	0.31	0/720	0.57	0/952
40	Lk	0.26	0/575	0.56	0/761
41	Ll	0.24	0/454	0.43	0/599
42	Lm	0.21	0/435	0.39	0/575
43	Ln	0.20	0/231	0.33	0/294
44	Lo	0.28	0/876	0.50	0/1156
45	Lp	0.27	0/718	0.50	0/953
46	Lr	0.23	0/1017	0.41	0/1364
47	Ls	0.27	0/1589	0.49	0/2145
48	Lz	0.11	0/1077	0.35	0/1500
49	S2	0.20	0/41244	0.31	0/64263
50	SA	0.25	0/1778	0.48	0/2416
51	SB	0.22	0/1765	0.44	0/2362
52	SD	0.25	0/1793	0.47	0/2414
53	SE	0.26	0/2118	0.48	0/2849
54	SF	0.28	0/1516	0.55	1/2037 (0.0%)
55	SH	0.25	0/1519	0.52	0/2033
56	SI	0.28	0/1715	0.55	1/2287 (0.0%)
57	SK	0.27	0/851	0.46	0/1147
58	SL	0.18	0/1268	0.34	0/1696
59	SP	0.23	0/1003	0.46	0/1342
60	SQ	0.23	0/1160	0.48	0/1553
61	SR	0.21	0/1105	0.49	0/1484
62	SS	0.22	0/1216	0.42	0/1628
63	ST	0.24	0/1131	0.48	0/1515
64	SU	0.29	0/831	0.56	0/1115
65	SV	0.33	1/643 (0.2%)	0.53	0/860
66	SX	0.23	0/1116	0.47	0/1490
67	Sa	0.23	0/836	0.45	0/1121
68	Sc	0.24	0/508	0.56	0/680
69	Sd	0.18	0/470	0.34	0/623
70	Sg	0.21	0/2493	0.49	0/3394
71	SC	0.26	0/1762	0.51	0/2381
72	SG	0.26	0/1946	0.48	0/2590
73	SJ	0.21	0/1550	0.42	0/2069
74	SM	0.23	0/950	0.58	2/1275 (0.2%)
75	SN	0.19	0/1232	0.34	0/1656

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SO	0.24	0/1062	0.51	0/1425
77	SW	0.22	0/1051	0.45	0/1406
78	SY	0.26	0/1083	0.47	0/1438
79	SZ	0.31	0/604	0.59	0/810
80	Sb	0.35	1/665 (0.2%)	0.50	1/891 (0.1%)
81	Se	0.17	0/465	0.44	0/612
82	Sf	0.29	0/560	0.52	0/745
83	CA	0.36	2/2810 (0.1%)	0.56	4/3780 (0.1%)
84	CB	0.42	8/6734 (0.1%)	0.55	4/9094 (0.0%)
85	CC	0.16	0/1798	0.27	0/2802
86	CD	0.18	0/447	0.33	0/592
All	All	0.25	16/247008 (0.0%)	0.40	28/361415 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
5	LB	0	2
10	LG	0	1
14	LK	0	1
35	Lf	0	1
39	Lj	0	1
48	Lz	0	1
54	SF	0	1
58	SL	0	1
63	ST	0	1
71	SC	0	1
76	SO	0	1
All	All	0	12

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	CA	205	PRO	CG-CD	-14.38	1.01	1.50
84	CB	145	GLN	CD-NE2	-13.82	1.04	1.33
84	CB	111	PHE	CD2-CE2	-12.39	1.01	1.38
84	CB	111	PHE	CB-CG	-10.01	1.27	1.50
84	CB	145	GLN	CG-CD	-9.83	1.27	1.52
84	CB	111	PHE	CE2-CZ	-6.86	1.18	1.38
83	CA	205	PRO	N-CD	6.55	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	CB	111	PHE	CG-CD2	6.43	1.52	1.38
84	CB	145	GLN	CB-CG	-6.42	1.33	1.52
84	CB	111	PHE	CD1-CE1	-6.20	1.20	1.38
13	LJ	9	GLU	CD-OE2	-5.90	1.14	1.25
80	Sb	36	LYS	CE-NZ	-5.77	1.32	1.49
14	LK	37	LEU	CG-CD1	-5.17	1.35	1.52
65	SV	79	VAL	CB-CG2	-5.15	1.35	1.52
13	LJ	9	GLU	CD-OE1	-5.03	1.15	1.25
13	LJ	9	GLU	CG-CD	-5.01	1.39	1.52

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	CA	205	PRO	N-CD-CG	-16.06	79.12	103.20
84	CB	145	GLN	CA-CB-CG	-15.20	83.71	114.10
84	CB	111	PHE	CG-CD1-CE1	-12.34	99.72	120.70
5	LB	17	LEU	C-N-CD	-8.34	90.80	125.00
83	CA	205	PRO	CA-CB-CG	-8.05	89.21	104.50
83	CA	205	PRO	CA-N-CD	-7.90	100.94	112.00
84	CB	475	VAL	N-CA-C	-7.31	106.09	113.47
35	Lf	62	GLY	CA-C-N	7.15	130.87	120.51
35	Lf	62	GLY	C-N-CA	7.15	130.87	120.51
84	CB	111	PHE	CD1-CE1-CZ	6.83	132.29	120.00
74	SM	57	ASP	CA-C-N	-6.75	102.79	122.38
74	SM	57	ASP	C-N-CA	-6.75	102.79	122.38
35	Lf	106	TYR	C-N-CD	-6.15	99.79	125.00
5	LB	259	PRO	N-CA-C	-6.12	99.87	112.47
83	CA	205	PRO	N-CA-CB	-5.88	97.08	103.25
10	LG	124	GLY	N-CA-C	5.75	122.52	111.31
13	LJ	9	GLU	CB-CG-CD	-5.59	103.10	112.60
17	LN	123	GLU	CA-C-N	5.57	132.17	121.54
17	LN	123	GLU	C-N-CA	5.57	132.17	121.54
2	L7	53	U	C5'-C4'-C3'	5.52	123.48	115.20
54	SF	135	ARG	CA-CB-CG	-5.49	103.12	114.10
5	LB	258	HIS	N-CA-C	5.48	121.92	109.81
56	SI	119	LEU	CB-CG-CD1	-5.47	94.28	110.70
5	LB	258	HIS	CA-C-N	-5.29	113.22	119.84
5	LB	258	HIS	C-N-CA	-5.29	113.22	119.84
16	LM	32	ASP	N-CA-C	5.27	118.85	111.74
80	Sb	36	LYS	CD-CE-NZ	-5.25	95.10	111.90
37	Lh	87	LYS	CB-CA-C	-5.23	110.53	116.54

There are no chirality outliers.

All (12) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	LB	17	LEU	Peptide
5	LB	198	ARG	Sidechain
10	LG	123	ALA	Peptide
14	LK	90	ARG	Sidechain
35	Lf	106	TYR	Peptide
39	Lj	39	TYR	Peptide
48	Lz	183	ILE	Peptide
71	SC	278	THR	Peptide
54	SF	135	ARG	Sidechain
58	SL	29	GLY	Peptide
76	SO	14	VAL	Peptide
63	ST	3	GLY	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	L5	80096	0	40358	905	0
2	L7	2561	0	1295	27	0
3	L8	3314	0	1683	42	0
4	LA	1898	0	1993	49	0
5	LB	3238	0	3376	80	0
6	LC	2927	0	3104	48	0
7	LD	2382	0	2410	48	0
8	LE	1904	0	2055	57	0
9	LF	1870	0	1996	23	0
10	LG	1927	0	2074	36	0
11	LH	1518	0	1601	29	0
12	LI	1634	0	1671	46	0
13	LJ	1410	0	1441	45	0
14	LK	1185	0	1240	56	0
15	LL	1701	0	1818	51	0
16	LM	1138	0	1204	32	0
17	LN	1701	0	1749	36	0
18	LO	1650	0	1794	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	LP	1242	0	1269	15	0
20	LQ	1513	0	1628	23	0
21	LR	1566	0	1729	33	0
22	LS	1453	0	1490	26	0
23	LT	1298	0	1366	20	0
24	LU	825	0	850	18	0
25	LV	979	0	1039	14	0
26	LW	965	0	1029	28	0
27	LX	985	0	1066	23	0
28	LY	1115	0	1205	30	0
29	LZ	1107	0	1182	24	0
30	La	1162	0	1213	25	0
31	Lb	876	0	948	25	0
32	Lc	764	0	804	20	0
33	Ld	888	0	930	25	0
34	Le	1053	0	1147	24	0
35	Lf	876	0	912	12	0
36	Lg	906	0	998	25	0
37	Lh	1015	0	1148	25	0
38	Li	832	0	917	15	0
39	Lj	705	0	736	22	0
40	Lk	569	0	637	11	0
41	Ll	444	0	483	9	0
42	Lm	429	0	465	7	0
43	Ln	230	0	276	4	0
44	Lo	862	0	929	13	0
45	Lp	708	0	756	17	0
46	Lr	1002	0	1068	13	0
47	Ls	1564	0	1622	46	0
48	Lz	1078	0	475	3	0
49	S2	36898	0	18603	608	0
50	SA	1741	0	1746	57	0
51	SB	1738	0	1809	52	0
52	SD	1765	0	1865	74	0
53	SE	2076	0	2177	46	0
54	SF	1495	0	1549	71	0
55	SH	1497	0	1590	71	0
56	SI	1686	0	1772	52	0
57	SK	827	0	854	32	0
58	SL	1247	0	1323	19	0
59	SP	985	0	1031	28	0
60	SQ	1142	0	1213	58	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	SR	1090	0	1149	37	0
62	SS	1198	0	1261	58	0
63	ST	1112	0	1146	54	0
64	SU	821	0	883	44	0
65	SV	636	0	637	24	0
66	SX	1098	0	1167	27	0
67	Sa	821	0	870	29	0
68	Sc	506	0	536	31	0
69	Sd	459	0	452	16	0
70	Sg	2436	0	2393	142	0
71	SC	1725	0	1813	45	0
72	SG	1923	0	2089	103	0
73	SJ	1525	0	1640	29	0
74	SM	940	0	965	48	0
75	SN	1208	0	1294	13	0
76	SO	1049	0	1073	50	0
77	SW	1034	0	1080	26	0
78	SY	1065	0	1142	44	0
79	SZ	598	0	656	30	0
80	Sb	651	0	672	20	0
81	Se	459	0	503	5	0
82	Sf	548	0	555	45	0
83	CA	2764	0	2779	135	0
84	CB	6605	0	6681	223	0
85	CC	1607	0	815	16	0
86	CD	440	0	402	13	0
87	L5	214	0	0	0	0
87	L7	3	0	0	0	0
87	L8	6	0	0	0	0
87	LA	1	0	0	0	0
87	LB	1	0	0	0	0
87	LP	1	0	0	0	0
87	LV	1	0	0	0	0
87	Le	1	0	0	0	0
87	Lj	1	0	0	0	0
87	S2	30	0	0	0	0
88	CC	42	0	38	1	0
88	L5	252	0	228	7	0
89	Lg	1	0	0	0	0
89	Lj	1	0	0	0	0
89	Lm	1	0	0	0	0
89	Lo	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
89	Lp	1	0	0	0	0
89	SK	1	0	0	0	0
89	SM	1	0	0	0	0
89	Sa	1	0	0	0	0
90	CB	27	0	12	1	0
All	All	231068	0	173642	4074	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 10.

All (4074) 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)
45:Lp:53:GLY:HA2	45:Lp:66:GLY:O	1.20	1.29
1:L5:1176:C:H42	1:L5:1184:A:N6	1.44	1.14
1:L5:1176:C:N4	1:L5:1184:A:H61	1.45	1.13
1:L5:173:C:P	15:LL:129:ARG:HH21	1.72	1.11
72:SG:213:LEU:HG	72:SG:217:MET:HE2	1.32	1.11
49:S2:886:A:N6	49:S2:901:G:C4	2.19	1.10
74:SM:35:ILE:HD12	82:Sf:103:LEU:HD22	1.37	1.06
83:CA:249:ARG:HE	83:CA:251:PRO:HD3	1.22	1.04
1:L5:4518:A:OP2	5:LB:258:HIS:ND1	1.93	1.00
49:S2:748:C:H42	49:S2:795:A:N6	1.59	1.00
1:L5:1175:A:C2	1:L5:1185:G:N1	2.30	1.00
50:SA:205:ARG:HB2	50:SA:209:GLU:OE2	1.62	1.00
70:Sg:246:TYR:HE2	70:Sg:260:ASP:HA	1.27	0.99
17:LN:51:LEU:O	17:LN:117:ASN:ND2	1.95	0.99
28:LY:74:TYR:CD2	28:LY:77:LYS:HG2	1.96	0.99
45:Lp:53:GLY:CA	45:Lp:66:GLY:O	2.11	0.98
11:LH:171:ASP:O	11:LH:174:LYS:O	1.81	0.98
49:S2:694:G:O6	49:S2:737:G:C2	2.14	0.98
49:S2:694:G:C6	49:S2:737:G:N2	2.32	0.98
49:S2:925:G:H1	49:S2:1017:U:H3	1.05	0.97
57:SK:90:VAL:HG13	57:SK:94:LEU:HD23	1.45	0.97
1:L5:1175:A:H2	1:L5:1185:G:N1	1.61	0.96
54:SF:137:GLN:OE1	68:Sc:63:ARG:NH2	2.00	0.95
2:L7:53:U:H4'	13:LJ:9:GLU:OE2	1.66	0.95
66:SX:105:PHE:CE2	66:SX:112:VAL:HB	2.02	0.95
54:SF:128:ILE:HD13	68:Sc:22:GLY:O	1.64	0.94
50:SA:28:THR:HA	50:SA:45:GLY:O	1.65	0.94
49:S2:748:C:N4	49:S2:795:A:H61	1.65	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1748:G:H1	49:S2:1786:U:H3	1.08	0.94
52:SD:106:ARG:HG2	52:SD:175:VAL:HG22	1.47	0.93
5:LB:356:LYS:O	5:LB:359:ALA:O	1.85	0.93
1:L5:74:G:H5'	15:LL:59:VAL:HG22	1.51	0.93
1:L5:1095:A:H2	1:L5:1200:G:H1	1.13	0.93
5:LB:214:ASP:HA	5:LB:284:ILE:O	1.69	0.92
84:CB:435:THR:HG21	84:CB:438:LYS:HE2	1.50	0.92
26:LW:87:LEU:HG	26:LW:91:MET:HE1	1.50	0.92
54:SF:103:LEU:HA	79:SZ:66:LYS:HD2	1.51	0.92
49:S2:748:C:N4	49:S2:795:A:N6	2.16	0.92
49:S2:164:A:H3'	49:S2:165:G:H21	1.33	0.92
15:LL:208:GLU:HA	15:LL:211:LYS:HG2	1.51	0.92
61:SR:104:GLU:HG3	61:SR:107:LYS:HE3	1.52	0.92
49:S2:1285:G:H5'	74:SM:35:ILE:HG23	1.53	0.91
7:LD:233:PRO:HA	7:LD:236:MET:HE2	1.53	0.91
79:SZ:90:GLU:OE2	79:SZ:94:LYS:NZ	2.03	0.91
71:SC:211:LYS:HG2	71:SC:215:MET:HE2	1.53	0.91
55:SH:78:ARG:HG2	55:SH:81:ARG:HH21	1.36	0.90
1:L5:2017:A:HO2'	1:L5:2018:C:H6	0.98	0.90
55:SH:10:LYS:HE3	55:SH:20:GLU:HG3	1.53	0.90
24:LU:105:ASN:HD21	24:LU:111:GLU:HB2	1.34	0.90
47:Ls:124:PRO:HA	47:Ls:157:ASP:OD1	1.72	0.90
59:SP:115:TYR:HB2	59:SP:118:GLU:HG3	1.53	0.89
84:CB:9:ILE:HG12	84:CB:45:ILE:HD11	1.54	0.89
84:CB:111:PHE:CZ	84:CB:145:GLN:OE1	2.26	0.89
49:S2:468:A:OP2	72:SG:74:ARG:NH2	2.06	0.88
1:L5:1175:A:H2	1:L5:1185:G:H1	1.07	0.88
49:S2:1464:C:OP1	61:SR:63:ARG:NH2	2.06	0.88
1:L5:1762:C:N4	1:L5:1770:A:C2	2.42	0.88
84:CB:607:ARG:HD2	84:CB:701:ARG:HD3	1.55	0.87
49:S2:885:U:H3	49:S2:901:G:H1	1.22	0.87
49:S2:886:A:N6	49:S2:901:G:C5	2.42	0.87
28:LY:74:TYR:HD2	28:LY:77:LYS:HG2	1.35	0.87
76:SO:117:ARG:NH1	76:SO:121:ARG:HH21	1.72	0.86
5:LB:14:LEU:HD22	5:LB:17:LEU:HD11	1.56	0.86
49:S2:1756:C:H41	49:S2:1757:G:H21	1.20	0.86
49:S2:1857:G:H3'	76:SO:146:ARG:HH12	1.41	0.86
60:SQ:28:GLY:O	60:SQ:65:GLY:HA2	1.74	0.86
83:CA:23:MET:HE1	83:CA:64:PHE:HE2	1.40	0.86
64:SU:51:LYS:HB2	64:SU:90:ASP:HB2	1.57	0.86
1:L5:499:G:H2'	1:L5:504:G:H22	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:27:PHE:CE1	70:Sg:29:ASP:HB3	2.11	0.85
60:SQ:8:GLN:OE1	60:SQ:27:ARG:NH1	2.09	0.85
49:S2:152:U:C1'	72:SG:132:ARG:HH22	1.90	0.85
72:SG:74:ARG:HG2	72:SG:94:ARG:HG2	1.59	0.85
32:Lc:17:ARG:HB3	32:Lc:104:ILE:HG12	1.58	0.84
24:LU:19:LEU:HD12	24:LU:73:THR:HB	1.58	0.84
83:CA:30:ARG:NH1	83:CA:59:GLU:OE1	2.11	0.84
70:Sg:101:PHE:CZ	70:Sg:136:GLY:HA3	2.12	0.84
49:S2:1543:U:H5'	60:SQ:37:ARG:HH12	1.40	0.84
83:CA:31:VAL:HG23	83:CA:55:MET:HE3	1.61	0.83
56:SI:130:THR:HG22	56:SI:134:GLU:OE2	1.78	0.83
8:LE:223:ARG:H	8:LE:237:LYS:HE3	1.43	0.83
13:LJ:21:CYS:HB2	13:LJ:131:TYR:O	1.78	0.83
84:CB:279:SER:HB3	84:CB:285:LEU:HD21	1.59	0.83
55:SH:138:GLU:OE1	75:SN:19:ARG:NH2	2.09	0.82
84:CB:111:PHE:HB3	84:CB:501:VAL:HG13	1.62	0.82
83:CA:118:ILE:HD11	83:CA:276:MET:HE1	1.61	0.82
29:LZ:100:VAL:HG13	29:LZ:107:LYS:HA	1.61	0.82
67:Sa:44:ILE:HG22	67:Sa:67:LEU:HG	1.61	0.81
1:L5:4429:C:O3'	12:LI:30:LYS:NZ	2.14	0.81
49:S2:588:G:H4'	49:S2:589:G:H5'	1.60	0.81
49:S2:696:G:H21	49:S2:737:G:H1	1.24	0.81
1:L5:4755:G:N7	8:LE:279:ASN:ND2	2.27	0.81
12:LI:191:ILE:HD11	12:LI:212:LEU:HD21	1.62	0.81
26:LW:5:LEU:O	26:LW:30:GLN:NE2	2.14	0.81
49:S2:1652:G:H1	49:S2:1672:U:H3	1.29	0.81
84:CB:84:ASN:HA	84:CB:87:ASN:HD21	1.45	0.81
72:SG:213:LEU:O	72:SG:216:ARG:O	1.98	0.81
66:SX:105:PHE:HE2	66:SX:112:VAL:HB	1.46	0.81
1:L5:4518:A:C8	5:LB:258:HIS:CE1	2.68	0.81
53:SE:201:HIS:HB2	53:SE:205:PHE:O	1.81	0.81
6:LC:140:LYS:O	6:LC:204:ARG:NH2	2.14	0.81
28:LY:31:SER:HA	28:LY:48:PRO:HA	1.63	0.81
52:SD:54:ARG:HD3	52:SD:57:ASN:HD22	1.46	0.81
55:SH:129:ILE:HG21	55:SH:180:LEU:HD11	1.62	0.81
84:CB:754:GLN:HG2	84:CB:755:VAL:HG13	1.62	0.81
13:LJ:8:LYS:HD2	13:LJ:9:GLU:HG3	1.60	0.81
22:LS:84:TYR:HE1	22:LS:93:MET:HG3	1.45	0.81
36:Lg:69:LYS:HG3	36:Lg:73:HIS:CE1	2.16	0.81
1:L5:4516:G:OP2	5:LB:3:HIS:ND1	2.14	0.81
59:SP:93:MET:CE	59:SP:104:GLN:HE21	1.93	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sb:36:LYS:NZ	80:Sb:41:TYR:HA	1.95	0.80
84:CB:839:ARG:HH12	84:CB:849:PRO:HD3	1.47	0.80
1:L5:493:G:H1	1:L5:660:A:H2	1.29	0.80
10:LG:120:LYS:O	10:LG:124:GLY:HA2	1.81	0.80
1:L5:173:C:P	15:LL:129:ARG:NH2	2.53	0.80
63:ST:9:VAL:HG21	63:ST:138:VAL:HG13	1.62	0.80
14:LK:37:LEU:HD12	14:LK:67:ARG:NH1	1.97	0.80
49:S2:1488:C:O2'	49:S2:1490:G:OP2	1.99	0.80
52:SD:167:TYR:CE2	52:SD:204:LEU:HD23	2.17	0.80
64:SU:49:LYS:HB3	64:SU:92:HIS:HB3	1.64	0.80
47:Ls:93:GLU:HG3	47:Ls:97:GLU:OE2	1.80	0.80
84:CB:539:GLU:O	84:CB:542:GLY:N	2.12	0.80
32:Lc:21:VAL:HG11	32:Lc:96:ILE:HD12	1.64	0.79
70:Sg:256:ILE:HB	70:Sg:270:LEU:HB3	1.64	0.79
28:LY:77:LYS:HG3	28:LY:79:VAL:HG22	1.64	0.79
30:La:84:GLU:OE2	30:La:87:ARG:NH1	2.15	0.79
84:CB:19:ILE:HG22	84:CB:99:LEU:HB3	1.64	0.79
1:L5:2611:A:H5'	1:L5:2688:G:H4'	1.62	0.79
1:L5:4518:A:C8	5:LB:258:HIS:HE1	2.00	0.79
1:L5:4936:G:C6	8:LE:183:ARG:HD3	2.18	0.79
54:SF:135:ARG:HG3	54:SF:136:ARG:H	1.47	0.79
83:CA:190:LEU:O	83:CA:223:VAL:HB	1.83	0.79
24:LU:105:ASN:ND2	24:LU:111:GLU:HB2	1.98	0.79
49:S2:1536:G:H2'	49:S2:1537:A:H8	1.48	0.79
56:SI:119:LEU:HD11	56:SI:153:LYS:HD3	1.65	0.79
29:LZ:13:VAL:O	29:LZ:20:GLY:N	2.16	0.79
49:S2:190:G:H5'	56:SI:145:ILE:HG12	1.64	0.78
14:LK:35:LEU:C	14:LK:67:ARG:HH12	1.90	0.78
68:Sc:10:LYS:HG2	68:Sc:34:PHE:CD2	2.18	0.78
70:Sg:132:TRP:HB3	70:Sg:136:GLY:HA2	1.65	0.78
1:L5:4279:A:H5'	1:L5:4281:A:H1'	1.65	0.78
8:LE:67:ALA:HA	8:LE:69:TYR:CE1	2.18	0.78
84:CB:111:PHE:CE1	84:CB:145:GLN:OE1	2.36	0.78
7:LD:225:GLN:O	7:LD:228:LYS:O	2.00	0.78
49:S2:329:G:H2'	49:S2:330:G:C8	2.18	0.78
70:Sg:246:TYR:CE2	70:Sg:260:ASP:HA	2.16	0.78
70:Sg:302:TYR:HE2	70:Sg:308:ARG:HD2	1.49	0.78
1:L5:1702:C:H4'	6:LC:308:LYS:HD2	1.64	0.78
49:S2:1301:A:H4'	69:Sd:3:HIS:CE1	2.17	0.78
63:ST:28:LEU:HA	63:ST:110:LEU:HD11	1.65	0.78
57:SK:3:MET:HG3	57:SK:44:HIS:HD2	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SE:87:MET:HE2	53:SE:123:LEU:HB2	1.66	0.78
61:SR:66:VAL:HG23	61:SR:67:ARG:H	1.47	0.78
59:SP:18:ARG:NH1	59:SP:36:LEU:O	2.16	0.78
36:Lg:43:LYS:HE3	36:Lg:52:ARG:CZ	2.15	0.77
55:SH:53:VAL:HG11	55:SH:172:THR:HA	1.65	0.77
49:S2:1228:A:H2'	49:S2:1229:G:C8	2.18	0.77
15:LL:64:VAL:HA	15:LL:67:HIS:CD2	2.20	0.77
50:SA:206:ASP:OD1	50:SA:207:PRO:HD2	1.84	0.77
54:SF:128:ILE:HD11	68:Sc:26:GLN:HE22	1.48	0.77
70:Sg:46:THR:O	70:Sg:52:TYR:HA	1.84	0.77
15:LL:128:PRO:HD2	15:LL:143:GLU:OE2	1.84	0.77
60:SQ:28:GLY:O	60:SQ:65:GLY:CA	2.32	0.77
52:SD:55:THR:HA	52:SD:58:VAL:HG12	1.64	0.77
52:SD:59:LEU:HA	52:SD:66:ILE:HG12	1.66	0.77
84:CB:604:MET:HG2	84:CB:728:CYS:SG	2.25	0.77
1:L5:150:U:H3	10:LG:162:ASP:HB2	1.50	0.77
24:LU:19:LEU:HB3	24:LU:74:SER:O	1.83	0.76
27:LX:156:ILE:HG13	83:CA:291:MET:SD	2.26	0.76
64:SU:48:LEU:HD13	64:SU:93:SER:HB2	1.65	0.76
78:SY:59:GLY:O	78:SY:71:GLY:HA2	1.83	0.76
1:L5:344:A:H5'	39:Lj:75:ARG:HH21	1.50	0.76
60:SQ:112:LEU:O	60:SQ:115:TYR:O	2.04	0.76
62:SS:15:VAL:HB	62:SS:68:ILE:HD11	1.68	0.76
1:L5:1176:C:N3	1:L5:1184:A:N1	2.34	0.76
49:S2:384:U:O4	56:SI:5:ARG:NH2	2.16	0.76
53:SE:87:MET:HE1	53:SE:236:ILE:HD13	1.66	0.76
1:L5:2707:U:OP1	83:CA:271:ARG:NH2	2.19	0.76
23:LT:37:GLY:N	23:LT:64:VAL:O	2.17	0.76
56:SI:64:ASN:HB3	56:SI:186:ASP:OD1	1.86	0.76
70:Sg:11:LEU:HB2	70:Sg:307:VAL:HB	1.68	0.76
55:SH:30:LEU:C	55:SH:37:LYS:HZ2	1.94	0.75
70:Sg:64:HIS:CD2	70:Sg:65:PHE:H	2.03	0.75
70:Sg:174:VAL:HB	70:Sg:188:HIS:HB2	1.68	0.75
26:LW:104:GLN:NE2	72:SG:156:TYR:OH	2.19	0.75
49:S2:563:G:H1	49:S2:592:C:H5	1.31	0.75
68:Sc:10:LYS:HG2	68:Sc:34:PHE:HD2	1.52	0.75
1:L5:1845:U:H5''	31:Lb:25:ARG:HH12	1.50	0.75
84:CB:111:PHE:CZ	84:CB:145:GLN:NE2	2.53	0.75
49:S2:67:C:C5	72:SG:162:LEU:HB3	2.22	0.75
49:S2:1857:G:C8	76:SO:146:ARG:NH1	2.55	0.75
62:SS:105:ASN:OD1	62:SS:108:ARG:NH2	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SU:40:ILE:HD11	64:SU:89:ILE:HD12	1.67	0.75
1:L5:4259:C:OP2	13:LJ:54:ARG:NH1	2.19	0.75
59:SP:87:PRO:HA	59:SP:90:VAL:HG23	1.69	0.75
72:SG:5:ILE:HD13	72:SG:111:LEU:HB2	1.69	0.75
83:CA:249:ARG:NE	83:CA:251:PRO:HD3	1.99	0.75
1:L5:326:C:OP1	15:LL:103:ARG:NH2	2.20	0.74
49:S2:126:G:H21	49:S2:180:G:H21	1.35	0.74
49:S2:373:G:H4'	58:SL:85:THR:HG21	1.69	0.74
80:Sb:36:LYS:HZ1	80:Sb:41:TYR:HA	1.48	0.74
1:L5:2836:A:H1'	5:LB:228:TYR:CE2	2.22	0.74
29:LZ:21:ARG:NH1	29:LZ:47:ASP:O	2.21	0.74
49:S2:1857:G:H3'	76:SO:146:ARG:NH1	2.01	0.74
76:SO:117:ARG:CZ	76:SO:121:ARG:HH21	2.00	0.74
84:CB:616:ASP:OD2	84:CB:639:TYR:OH	2.04	0.74
1:L5:4242:U:H3	1:L5:4281:A:H2	1.32	0.74
84:CB:594:LYS:HG2	84:CB:601:ARG:HG2	1.69	0.74
84:CB:595:SER:HA	84:CB:724:THR:HG21	1.68	0.74
49:S2:1287:A:OP2	82:Sf:99:LYS:NZ	2.19	0.74
53:SE:69:PHE:HZ	78:SY:17:LEU:HB3	1.52	0.74
1:L5:2017:A:O2'	1:L5:2018:C:O5'	2.05	0.74
1:L5:3717:A:H2'	1:L5:3718:A:C8	2.22	0.74
1:L5:2469:C:H5	1:L5:2471:G:H1	1.33	0.74
33:Ld:62:VAL:HG12	33:Ld:104:THR:HB	1.70	0.74
49:S2:1858:G:OP2	76:SO:146:ARG:NH2	2.21	0.74
62:SS:48:ALA:HB2	62:SS:70:ILE:HD12	1.69	0.74
82:Sf:87:THR:HB	82:Sf:90:LYS:HD2	1.68	0.74
72:SG:43:GLU:O	72:SG:119:LYS:NZ	2.20	0.73
1:L5:1498:G:OP1	20:LQ:150:ARG:NH1	2.20	0.73
1:L5:1762:C:N4	1:L5:1770:A:H2	1.86	0.73
56:SI:124:LYS:HG2	56:SI:128:LYS:HZ3	1.54	0.73
5:LB:223:THR:O	5:LB:274:TYR:HA	1.89	0.73
22:LS:161:ARG:HH21	22:LS:164:LYS:HG3	1.53	0.73
49:S2:468:A:P	72:SG:74:ARG:HH22	2.11	0.73
57:SK:86:PRO:HG2	57:SK:89:ILE:HG12	1.69	0.73
47:Ls:26:LYS:HB3	47:Ls:95:LEU:HD21	1.70	0.73
60:SQ:28:GLY:O	60:SQ:65:GLY:C	2.31	0.73
19:LP:42:ARG:NH2	19:LP:110:ASP:OD1	2.22	0.73
34:Le:108:ARG:HD3	34:Le:128:ARG:HG3	1.70	0.73
47:Ls:30:VAL:HG21	47:Ls:187:LEU:HB3	1.70	0.73
64:SU:94:PRO:HD2	64:SU:97:ILE:HD11	1.69	0.73
53:SE:69:PHE:CE1	78:SY:17:LEU:HD22	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:10:THR:HG21	70:Sg:306:LEU:HD12	1.71	0.73
1:L5:1187:G:N2	1:L5:1187:G:OP2	2.20	0.73
49:S2:1536:G:H2'	49:S2:1537:A:C8	2.24	0.73
74:SM:43:ASP:OD1	82:Sf:116:ARG:NH2	2.22	0.73
7:LD:66:TYR:HE2	7:LD:68:ARG:HE	1.37	0.72
52:SD:123:LEU:HD11	52:SD:152:PHE:HB3	1.71	0.72
32:Lc:36:LYS:O	32:Lc:40:GLN:HG2	1.89	0.72
79:SZ:111:ARG:HD3	79:SZ:114:LYS:HG3	1.71	0.72
84:CB:190:SER:HB3	84:CB:204:MET:HE2	1.72	0.72
1:L5:194:C:O2	28:LY:121:ARG:NH2	2.20	0.72
49:S2:570:C:O2'	78:SY:34:THR:O	2.07	0.72
49:S2:1192:U:OP2	66:SX:119:ARG:NH2	2.22	0.72
49:S2:70:G:N7	72:SG:167:LYS:NZ	2.38	0.72
1:L5:2658:G:N2	1:L5:2676:A:OP2	2.21	0.72
72:SG:20:ASP:HB3	72:SG:23:LYS:HD2	1.71	0.72
13:LJ:84:GLU:OE2	13:LJ:92:TYR:OH	2.07	0.72
74:SM:24:THR:O	74:SM:28:HIS:ND1	2.22	0.72
1:L5:1095:A:N1	1:L5:1200:G:O6	2.22	0.72
49:S2:928:G:H1	49:S2:1013:U:H3	1.36	0.72
72:SG:141:ILE:HD11	72:SG:153:VAL:HB	1.71	0.72
49:S2:981:A:H2'	49:S2:982:G:C8	2.25	0.72
61:SR:31:ASN:HD22	61:SR:55:THR:HG22	1.53	0.72
1:L5:493:G:O6	1:L5:660:A:N1	2.23	0.72
21:LR:176:ARG:HB3	21:LR:180:LYS:NZ	2.05	0.72
49:S2:197:U:OP2	49:S2:203:G:N2	2.21	0.72
49:S2:1398:G:O2'	70:Sg:88:ARG:NH2	2.23	0.71
49:S2:1507:G:H22	82:Sf:87:THR:HA	1.53	0.71
82:Sf:140:TYR:HH	82:Sf:145:CYS:HG	1.36	0.71
52:SD:162:ASP:N	52:SD:163:PRO:HD2	2.05	0.71
62:SS:36:VAL:HG13	62:SS:40:TYR:HD2	1.54	0.71
73:SJ:137:VAL:HG12	73:SJ:138:ARG:H	1.54	0.71
1:L5:1750:G:N2	12:LI:193:ASP:OD2	2.22	0.71
49:S2:1415:C:O5'	63:ST:129:ARG:NH2	2.24	0.71
70:Sg:168:CYS:HB2	70:Sg:195:LEU:HD22	1.72	0.71
1:L5:2557:G:H1	1:L5:2570:U:H3	1.37	0.71
1:L5:4748:U:H5''	35:Lf:54:LYS:HE3	1.71	0.71
47:Ls:200:ASN:HB3	47:Ls:202:GLU:OE1	1.90	0.71
1:L5:4153:C:H5''	27:LX:38:LYS:HE2	1.72	0.71
10:LG:108:GLN:O	10:LG:112:GLN:HG2	1.91	0.71
51:SB:109:LYS:HG3	51:SB:113:MET:HE2	1.73	0.71
55:SH:17:ASP:OD1	55:SH:20:GLU:HG2	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1304:U:H5''	82:Sf:95:ARG:HD3	1.73	0.71
49:S2:1415:C:H4'	63:ST:129:ARG:NH1	2.06	0.71
83:CA:17:VAL:HA	83:CA:20:LYS:HE3	1.73	0.71
14:LK:105:THR:N	14:LK:108:GLU:OE2	2.19	0.71
33:Ld:57:MET:CE	33:Ld:90:ARG:HB2	2.21	0.71
55:SH:12:ASN:ND2	55:SH:16:PRO:O	2.24	0.71
64:SU:48:LEU:HD11	64:SU:97:ILE:HD12	1.70	0.71
83:CA:181:PRO:HB3	83:CA:203:GLN:HE21	1.54	0.71
1:L5:4075:U:OP1	10:LG:249:ARG:NH2	2.23	0.71
54:SF:127:ARG:HB3	54:SF:135:ARG:HH21	1.56	0.71
66:SX:107:ARG:HD3	66:SX:112:VAL:HG22	1.71	0.71
4:LA:137:ILE:HD11	4:LA:149:LYS:HB2	1.73	0.70
68:Sc:22:GLY:O	68:Sc:23:SER:OG	2.07	0.70
72:SG:55:GLY:H	72:SG:63:MET:HE3	1.56	0.70
79:SZ:50:PHE:CD2	79:SZ:55:TYR:HB2	2.26	0.70
2:L7:53:U:C4'	13:LJ:9:GLU:OE2	2.39	0.70
49:S2:24:C:H42	49:S2:650:A:H61	1.37	0.70
60:SQ:57:LEU:HD11	60:SQ:112:LEU:HD23	1.71	0.70
84:CB:291:GLN:HA	84:CB:295:ASP:OD2	1.91	0.70
1:L5:173:C:OP2	15:LL:129:ARG:NH2	2.25	0.70
60:SQ:97:GLN:HG3	60:SQ:105:LYS:HG3	1.73	0.70
74:SM:58:GLU:OE1	74:SM:60:MET:HG2	1.92	0.70
84:CB:401:MET:HE3	84:CB:410:PHE:HB2	1.71	0.70
40:Lk:6:GLU:HG2	40:Lk:7:GLU:HG2	1.74	0.70
62:SS:4:VAL:HG11	79:SZ:52:LYS:NZ	2.06	0.70
74:SM:117:GLU:HA	74:SM:120:ALA:HB3	1.72	0.70
27:LX:148:ASP:HA	27:LX:151:ASN:HD22	1.57	0.70
67:Sa:29:CYS:HB2	76:SO:146:ARG:HG3	1.74	0.70
7:LD:219:TYR:CE2	7:LD:227:ILE:HD11	2.26	0.70
21:LR:136:ARG:O	21:LR:140:GLU:HG3	1.92	0.70
49:S2:694:G:O6	49:S2:737:G:N2	2.22	0.70
65:SV:74:LYS:HG2	65:SV:79:VAL:HG23	1.72	0.70
72:SG:7:PHE:HB2	72:SG:113:ILE:HD12	1.72	0.70
84:CB:395:MET:HE1	84:CB:491:ALA:HB1	1.73	0.70
84:CB:429:ILE:HD13	84:CB:475:VAL:HG13	1.73	0.70
1:L5:171:U:H3'	1:L5:172:C:H4'	1.74	0.70
1:L5:1755:C:H42	1:L5:1775:A:H61	1.40	0.70
11:LH:91:LYS:HB2	11:LH:183:GLU:HG3	1.72	0.70
14:LK:90:ARG:HH11	14:LK:91:ASP:H	1.40	0.70
70:Sg:32:LEU:HD21	70:Sg:71:ILE:HD11	1.73	0.70
79:SZ:68:ILE:HB	79:SZ:109:TYR:HB2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1961:G:O2'	1:L5:2025:A:N6	2.24	0.70
26:LW:97:LYS:HG3	26:LW:98:PRO:HD3	1.72	0.70
1:L5:1460:C:H5''	20:LQ:144:LYS:HG3	1.74	0.70
70:Sg:129:ILE:O	70:Sg:141:THR:OG1	2.08	0.70
84:CB:450:THR:OG1	84:CB:461:ILE:O	2.09	0.70
1:L5:2709:C:O3'	21:LR:39:GLN:NE2	2.25	0.69
15:LL:87:HIS:HB3	15:LL:90:VAL:HG22	1.73	0.69
52:SD:194:PRO:HB3	52:SD:198:ILE:H	1.56	0.69
70:Sg:59:LEU:HD23	70:Sg:90:TRP:CD2	2.27	0.69
4:LA:108:PRO:HG3	45:Lp:90:LYS:HD2	1.72	0.69
63:ST:104:LEU:HD23	63:ST:121:ARG:HD2	1.74	0.69
8:LE:165:LEU:HD21	8:LE:257:ILE:HD11	1.74	0.69
8:LE:190:HIS:HB3	8:LE:193:PHE:HD2	1.57	0.69
28:LY:39:ARG:O	28:LY:42:TYR:O	2.10	0.69
49:S2:690:G:N2	49:S2:690:G:OP2	2.25	0.69
63:ST:129:ARG:O	63:ST:133:ARG:HG3	1.92	0.69
74:SM:84:LYS:HD3	74:SM:88:TRP:CE2	2.28	0.69
84:CB:111:PHE:HZ	84:CB:145:GLN:OE1	1.71	0.69
56:SI:26:LYS:HG3	56:SI:29:LEU:HD23	1.74	0.69
49:S2:65:C:N4	72:SG:134:GLY:O	2.25	0.69
54:SF:127:ARG:CB	54:SF:135:ARG:HH21	2.06	0.69
62:SS:22:GLY:HA2	62:SS:56:ALA:HB3	1.74	0.69
1:L5:3970:G:O2'	1:L5:4052:C:N4	2.24	0.69
15:LL:206:ASP:HA	15:LL:209:LYS:HG2	1.74	0.69
47:Ls:43:ILE:HD13	47:Ls:187:LEU:HG	1.74	0.69
47:Ls:94:ASP:HB3	47:Ls:97:GLU:OE1	1.93	0.69
56:SI:164:GLU:HA	56:SI:167:GLN:HG2	1.75	0.69
49:S2:152:U:H2'	49:S2:153:G:C8	2.27	0.69
49:S2:604:A:H4'	73:SJ:22:LYS:HD3	1.74	0.69
52:SD:18:LYS:HE3	52:SD:39:VAL:HB	1.75	0.69
72:SG:113:ILE:CD1	72:SG:124:LEU:HD21	2.22	0.69
49:S2:1598:G:O2'	79:SZ:80:ARG:O	2.11	0.69
1:L5:1468:C:OP1	30:La:132:ARG:NH2	2.25	0.69
16:LM:25:VAL:HG22	16:LM:38:VAL:HG22	1.74	0.69
49:S2:1301:A:H4'	69:Sd:3:HIS:HE1	1.58	0.69
70:Sg:258:ILE:HB	70:Sg:268:ASP:HB2	1.75	0.69
75:SN:66:VAL:HG23	75:SN:67:THR:HG23	1.74	0.69
1:L5:4992:G:H2'	1:L5:4993:G:C8	2.28	0.68
6:LC:33:ARG:HG3	6:LC:122:TYR:OH	1.92	0.68
8:LE:95:PRO:HA	8:LE:104:THR:HA	1.73	0.68
59:SP:93:MET:SD	59:SP:106:GLU:OE1	2.51	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:206:LEU:HD11	70:Sg:218:LEU:HD13	1.75	0.68
82:Sf:140:TYR:OH	82:Sf:145:CYS:SG	2.50	0.68
83:CA:159:PRO:HD3	83:CA:325:LEU:HD11	1.74	0.68
49:S2:67:C:H42	72:SG:170:ARG:HG2	1.59	0.68
55:SH:34:SER:OG	55:SH:78:ARG:NH2	2.26	0.68
62:SS:4:VAL:HG11	79:SZ:52:LYS:HZ1	1.57	0.68
74:SM:41:ALA:O	74:SM:44:LYS:O	2.10	0.68
49:S2:928:G:H2'	49:S2:929:G:C8	2.29	0.68
72:SG:113:ILE:HD11	72:SG:124:LEU:HD21	1.75	0.68
40:Lk:27:LYS:HB2	40:Lk:70:LYS:HD3	1.74	0.68
49:S2:1199:A:OP1	67:Sa:2:THR:OG1	2.07	0.68
11:LH:59:LYS:HE3	11:LH:66:GLU:HB3	1.75	0.68
62:SS:42:HIS:O	62:SS:46:ARG:HG2	1.92	0.68
1:L5:173:C:OP1	15:LL:129:ARG:NH2	2.26	0.68
8:LE:223:ARG:HG3	8:LE:237:LYS:HD2	1.74	0.68
24:LU:42:PHE:HA	24:LU:45:GLU:OE2	1.94	0.68
31:Lb:72:ILE:O	31:Lb:75:LEU:HG	1.93	0.68
49:S2:1613:G:OP1	62:SS:88:LYS:NZ	2.27	0.68
60:SQ:82:TYR:HA	60:SQ:85:ARG:HD3	1.74	0.68
72:SG:118:GLU:OE2	72:SG:119:LYS:NZ	2.26	0.68
1:L5:3689:G:O2'	1:L5:3818:U:OP2	2.12	0.68
13:LJ:159:LYS:HG2	13:LJ:163:MET:HE2	1.74	0.68
27:LX:82:THR:HA	27:LX:87:MET:HE3	1.74	0.68
63:ST:133:ARG:C	63:ST:137:GLN:HE22	2.02	0.68
64:SU:61:LEU:HD22	69:Sd:34:TYR:CE1	2.29	0.68
71:SC:120:GLN:OE1	71:SC:122:THR:OG1	2.12	0.68
74:SM:41:ALA:O	74:SM:44:LYS:C	2.37	0.68
84:CB:84:ASN:HA	84:CB:87:ASN:ND2	2.08	0.68
1:L5:2838:G:H5'	5:LB:247:GLY:HA2	1.74	0.68
1:L5:3961:G:N2	1:L5:3964:U:O3'	2.26	0.68
52:SD:194:PRO:HB2	52:SD:197:LYS:H	1.59	0.68
78:SY:18:LEU:O	78:SY:85:ASN:ND2	2.26	0.68
1:L5:1755:C:C2	7:LD:3:PHE:CZ	2.82	0.67
1:L5:4635:A:OP1	1:L5:4636:U:O2'	2.12	0.67
1:L5:4745:G:H1	1:L5:4955:A:H61	1.42	0.67
29:LZ:99:ASP:HB3	29:LZ:102:ARG:NH2	2.10	0.67
63:ST:133:ARG:O	63:ST:137:GLN:NE2	2.27	0.67
84:CB:420:LEU:HD21	84:CB:463:ASP:HB2	1.76	0.67
1:L5:4139:G:H21	1:L5:4140:C:H41	1.43	0.67
10:LG:81:ASN:O	10:LG:84:THR:OG1	2.11	0.67
84:CB:4:PHE:HD1	84:CB:8:GLN:NE2	1.91	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CB:654:PRO:HD2	84:CB:658:GLY:HA3	1.76	0.67
60:SQ:8:GLN:CD	60:SQ:27:ARG:NH1	2.53	0.67
70:Sg:245:ARG:NH1	70:Sg:294:ASP:O	2.27	0.67
78:SY:7:ILE:O	78:SY:47:MET:HE1	1.93	0.67
84:CB:9:ILE:HG22	84:CB:13:MET:HE3	1.76	0.67
1:L5:3938:G:OP2	17:LN:24:ARG:NH1	2.27	0.67
62:SS:4:VAL:HA	79:SZ:50:PHE:CZ	2.30	0.67
84:CB:751:CYS:SG	84:CB:755:VAL:HG23	2.35	0.67
49:S2:694:G:C6	49:S2:737:G:C2	2.80	0.67
59:SP:41:GLN:HG3	59:SP:84:ILE:HD12	1.77	0.67
1:L5:1339:U:H2'	1:L5:1340:C:C6	2.30	0.67
54:SF:34:SER:HB2	54:SF:143:PRO:HB3	1.75	0.67
70:Sg:47:ARG:HG3	70:Sg:52:TYR:CE1	2.30	0.67
72:SG:221:LYS:O	72:SG:225:GLN:HG2	1.95	0.67
74:SM:55:ASN:HB2	74:SM:81:ASP:HA	1.76	0.67
80:Sb:45:THR:OG1	80:Sb:82:LYS:NZ	2.28	0.67
12:LI:30:LYS:HD3	12:LI:63:GLU:HA	1.75	0.67
14:LK:35:LEU:C	14:LK:67:ARG:NH1	2.51	0.67
1:L5:459:C:H5'	8:LE:110:ARG:HD2	1.77	0.67
10:LG:189:ARG:HG2	10:LG:192:ARG:NH2	2.10	0.67
50:SA:125:THR:HG22	50:SA:175:TRP:HE1	1.58	0.67
84:CB:481:LYS:NZ	84:CB:531:ASP:O	2.27	0.67
49:S2:549:C:H2'	49:S2:550:C:C6	2.29	0.67
60:SQ:110:ASP:O	60:SQ:114:GLN:HG2	1.95	0.67
70:Sg:47:ARG:HG3	70:Sg:52:TYR:HE1	1.60	0.67
84:CB:24:VAL:HG23	84:CB:102:LEU:HD11	1.77	0.67
5:LB:356:LYS:O	5:LB:359:ALA:C	2.38	0.66
49:S2:878:G:H1	49:S2:908:A:H2	1.38	0.66
1:L5:2299:G:OP2	6:LC:204:ARG:NH1	2.28	0.66
1:L5:4274:A:H2'	1:L5:4275:G:C8	2.29	0.66
5:LB:2:SER:O	5:LB:3:HIS:ND1	2.28	0.66
44:Lo:99:ARG:HH21	44:Lo:102:GLN:HE22	1.42	0.66
49:S2:1415:C:P	63:ST:129:ARG:HH22	2.18	0.66
63:ST:108:GLU:OE2	63:ST:121:ARG:NE	2.25	0.66
18:LO:8:VAL:HG12	18:LO:117:ARG:HG3	1.76	0.66
25:LV:56:GLY:N	25:LV:59:ASP:OD2	2.20	0.66
1:L5:3786:U:OP1	1:L5:4550:G:O2'	2.12	0.66
1:L5:5026:U:O2'	56:SI:167:GLN:O	2.08	0.66
3:L8:123:U:O2'	3:L8:126:C:N4	2.29	0.66
6:LC:134:PRO:HA	6:LC:150:LEU:HD22	1.77	0.66
49:S2:1588:A:H2'	49:S2:1589:A:C8	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SI:119:LEU:HD11	56:SI:153:LYS:CD	2.25	0.66
56:SI:149:TYR:O	56:SI:153:LYS:HG2	1.95	0.66
14:LK:73:VAL:O	14:LK:75:PRO:HD3	1.96	0.66
16:LM:100:ARG:HA	16:LM:103:LYS:HG2	1.78	0.66
49:S2:323:C:H2'	49:S2:327:G:H22	1.60	0.66
1:L5:504:G:H2'	1:L5:504:G:N3	2.10	0.66
8:LE:223:ARG:HA	8:LE:225:PRO:HD3	1.78	0.66
64:SU:22:ILE:HG22	64:SU:114:VAL:HG22	1.76	0.66
74:SM:36:ARG:O	74:SM:40:LYS:HG2	1.95	0.66
1:L5:1100:U:O3'	1:L5:1167:C:N4	2.28	0.66
1:L5:3969:G:O2'	1:L5:4054:C:N4	2.29	0.66
49:S2:693:A:N6	49:S2:738:C:O2'	2.29	0.66
79:SZ:74:SER:O	79:SZ:77:LEU:O	2.14	0.66
70:Sg:91:ASP:OD1	70:Sg:96:THR:OG1	2.11	0.66
77:SW:28:ARG:HB3	77:SW:29:PRO:HD3	1.78	0.66
1:L5:4882:U:OP1	16:LM:117:LYS:NZ	2.25	0.66
7:LD:79:TYR:O	7:LD:82:GLU:HG2	1.95	0.66
25:LV:48:ARG:NH1	25:LV:49:LEU:HB3	2.11	0.66
49:S2:152:U:C1'	72:SG:132:ARG:NH2	2.59	0.66
50:SA:198:MET:HG2	50:SA:200:ASP:H	1.60	0.66
57:SK:41:PRO:HG2	57:SK:44:HIS:ND1	2.10	0.66
57:SK:95:ARG:O	57:SK:96:ARG:NE	2.27	0.66
60:SQ:112:LEU:O	60:SQ:115:TYR:C	2.38	0.66
62:SS:35:GLY:O	62:SS:97:GLN:NE2	2.29	0.66
1:L5:1095:A:C2	1:L5:1200:G:N1	2.58	0.65
1:L5:1973:G:C5'	14:LK:119:ARG:HH21	2.08	0.65
28:LY:26:ARG:O	28:LY:30:MET:HG3	1.96	0.65
54:SF:127:ARG:C	54:SF:128:ILE:HD12	2.21	0.65
4:LA:31:ALA:HB2	4:LA:123:ARG:NH2	2.11	0.65
23:LT:93:ILE:HA	23:LT:96:ILE:HG12	1.78	0.65
27:LX:155:ILE:HA	37:Lh:37:THR:HG21	1.78	0.65
34:Le:83:LYS:HA	34:Le:86:GLU:OE1	1.95	0.65
49:S2:377:G:H5'	56:SI:98:LYS:HB3	1.77	0.65
53:SE:100:ARG:HH21	53:SE:118:GLU:HG2	1.60	0.65
68:Sc:44:ARG:HH12	68:Sc:63:ARG:HB3	1.60	0.65
71:SC:146:GLU:HB2	71:SC:149:THR:HG22	1.79	0.65
84:CB:56:PHE:HB3	84:CB:455:GLY:HA3	1.76	0.65
52:SD:75:LYS:HZ1	57:SK:18:GLU:HG2	1.62	0.65
55:SH:130:LEU:HD21	55:SH:156:VAL:HG21	1.78	0.65
1:L5:208:A:H2	1:L5:233:U:H5''	1.62	0.65
1:L5:407:A:O2'	1:L5:410:A:OP1	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1175:A:N1	1:L5:1185:G:O6	2.29	0.65
1:L5:2017:A:O2'	1:L5:2018:C:H6	1.76	0.65
1:L5:3589:G:N2	1:L5:3590:G:N7	2.44	0.65
36:Lg:69:LYS:HG3	36:Lg:73:HIS:HE1	1.60	0.65
50:SA:206:ASP:O	50:SA:209:GLU:HG3	1.97	0.65
55:SH:57:ARG:NH1	55:SH:58:LYS:O	2.29	0.65
64:SU:48:LEU:HD13	64:SU:93:SER:CB	2.27	0.65
49:S2:690:G:H2'	49:S2:691:G:N3	2.12	0.65
49:S2:1678:A:OP2	54:SF:63:LYS:NZ	2.29	0.65
84:CB:435:THR:CG2	84:CB:438:LYS:HE2	2.27	0.65
4:LA:49:ILE:HD13	4:LA:60:LYS:HE3	1.79	0.65
49:S2:1354:G:N2	49:S2:1357:A:OP2	2.22	0.65
1:L5:173:C:H2'	1:L5:174:C:H6	1.62	0.65
5:LB:133:TYR:O	5:LB:136:LYS:HG2	1.97	0.65
49:S2:1673:U:H5''	60:SQ:78:VAL:HG22	1.79	0.65
56:SI:133:GLU:HA	56:SI:136:ILE:HG12	1.77	0.65
72:SG:55:GLY:H	72:SG:63:MET:CE	2.08	0.65
22:LS:84:TYR:CE1	22:LS:93:MET:HG3	2.30	0.65
67:Sa:36:ILE:HD11	67:Sa:75:VAL:HG12	1.79	0.65
50:SA:52:LYS:HE2	65:SV:82:ASN:HB2	1.79	0.65
55:SH:57:ARG:HH11	55:SH:58:LYS:H	1.45	0.65
1:L5:2709:C:H42	83:CA:258:LYS:HG2	1.60	0.64
49:S2:878:G:O6	49:S2:908:A:N1	2.30	0.64
84:CB:227:GLN:O	84:CB:230:GLU:HG3	1.98	0.64
1:L5:1238:A:O2'	9:LF:52:GLU:OE2	2.16	0.64
12:LI:48:LEU:HB2	12:LI:142:LEU:HD23	1.78	0.64
49:S2:1091:C:HO2'	77:SW:2:VAL:N	1.95	0.64
1:L5:989:U:O2	1:L5:1064:G:O6	2.15	0.64
36:Lg:41:ALA:O	36:Lg:52:ARG:NH1	2.26	0.64
49:S2:152:U:H1'	72:SG:132:ARG:NH2	2.11	0.64
54:SF:135:ARG:HG3	54:SF:136:ARG:N	2.07	0.64
1:L5:4970:C:H5''	19:LP:71:ALA:HB1	1.78	0.64
10:LG:120:LYS:O	10:LG:123:ALA:O	2.15	0.64
50:SA:77:ILE:HG12	50:SA:99:ILE:HB	1.79	0.64
55:SH:147:LYS:HA	77:SW:49:GLU:OE2	1.97	0.64
60:SQ:97:GLN:CG	60:SQ:105:LYS:HG3	2.27	0.64
65:SV:14:PRO:HG3	71:SC:248:TYR:CZ	2.32	0.64
72:SG:181:THR:HG22	72:SG:184:VAL:HG23	1.79	0.64
76:SO:117:ARG:NH1	76:SO:121:ARG:NH2	2.46	0.64
84:CB:672:LEU:HD13	84:CB:707:VAL:HG21	1.79	0.64
84:CB:752:PRO:O	84:CB:754:GLN:OE1	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2486:G:O6	1:L5:2493:G:O6	2.16	0.64
5:LB:108:GLU:CD	5:LB:138:GLN:HE21	2.05	0.64
13:LJ:66:GLU:O	13:LJ:68:ILE:HG12	1.98	0.64
52:SD:7:LYS:NZ	64:SU:111:GLU:OE1	2.27	0.64
55:SH:5:SER:HA	55:SH:25:GLN:OE1	1.97	0.64
84:CB:692:LEU:HD11	84:CB:738:PRO:HB2	1.78	0.64
11:LH:94:SER:HB2	11:LH:142:ASP:HB3	1.77	0.64
26:LW:94:ARG:HG3	72:SG:146:ASN:HB2	1.80	0.64
1:L5:2836:A:H1'	5:LB:228:TYR:HE2	1.60	0.64
14:LK:35:LEU:O	14:LK:67:ARG:NH1	2.30	0.64
49:S2:1228:A:H2'	49:S2:1229:G:H8	1.62	0.64
49:S2:1495:G:H4'	69:Sd:26:ASN:ND2	2.12	0.64
51:SB:36:PRO:HB2	51:SB:38:MET:HE3	1.78	0.64
63:ST:108:GLU:CD	63:ST:121:ARG:HE	2.06	0.64
84:CB:354:ILE:HG23	84:CB:358:LEU:HD12	1.79	0.64
14:LK:14:TYR:CE2	14:LK:61:LYS:HE2	2.33	0.64
27:LX:156:ILE:HD11	83:CA:291:MET:HG2	1.80	0.64
47:Ls:39:GLN:HE22	47:Ls:43:ILE:HD11	1.62	0.64
55:SH:37:LYS:HE2	55:SH:37:LYS:HA	1.78	0.64
75:SN:63:VAL:HA	75:SN:66:VAL:HG22	1.78	0.64
17:LN:138:PHE:HA	17:LN:143:ARG:HD2	1.79	0.64
49:S2:466:G:H1'	72:SG:59:GLN:HE21	1.62	0.64
49:S2:876:C:H2'	49:S2:877:C:C6	2.33	0.64
54:SF:35:LEU:HD11	54:SF:146:ARG:HE	1.63	0.64
56:SI:57:ALA:HB2	56:SI:183:GLY:HA2	1.79	0.64
70:Sg:85:GLY:HA2	70:Sg:108:VAL:HG13	1.79	0.64
78:SY:130:LYS:HG3	78:SY:131:PRO:HD3	1.79	0.64
3:L8:81:C:H5''	37:Lh:3:LYS:NZ	2.13	0.64
30:La:148:ALA:HB2	38:Li:6:PRO:HB2	1.80	0.64
32:Lc:34:THR:HG23	32:Lc:95:ALA:HB2	1.80	0.64
49:S2:1287:A:P	82:Sf:99:LYS:HZ1	2.21	0.64
54:SF:74:ASN:HA	54:SF:77:MET:HE2	1.79	0.64
62:SS:4:VAL:HG13	62:SS:5:ILE:H	1.63	0.64
23:LT:72:VAL:HG11	23:LT:96:ILE:HD13	1.79	0.63
49:S2:550:C:H2'	49:S2:551:U:C6	2.33	0.63
49:S2:1729:U:H3	49:S2:1805:G:H1	1.45	0.63
51:SB:165:ARG:HG2	51:SB:169:MET:HE3	1.79	0.63
60:SQ:51:LEU:HD11	60:SQ:81:ILE:HD12	1.81	0.63
62:SS:50:ILE:HG21	62:SS:59:LEU:HD11	1.79	0.63
70:Sg:72:SER:OG	70:Sg:74:ASP:OD1	2.16	0.63
84:CB:83:GLU:CD	84:CB:83:GLU:H	2.06	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CB:111:PHE:HB3	84:CB:501:VAL:CG1	2.28	0.63
1:L5:3614:G:O2'	1:L5:3615:G:OP1	2.13	0.63
5:LB:199:GLU:OE2	5:LB:200:ARG:NH1	2.30	0.63
8:LE:165:LEU:HD13	8:LE:208:ILE:HD12	1.81	0.63
49:S2:747:U:N3	49:S2:796:G:N1	2.46	0.63
49:S2:1743:G:H21	49:S2:1791:A:H62	1.45	0.63
55:SH:78:ARG:HG2	55:SH:81:ARG:NH2	2.11	0.63
77:SW:32:LYS:HA	77:SW:35:VAL:HG22	1.80	0.63
83:CA:220:VAL:HG12	83:CA:221:HIS:CD2	2.32	0.63
1:L5:1095:A:H2	1:L5:1200:G:N1	1.92	0.63
49:S2:1095:C:N3	49:S2:1149:A:N1	2.46	0.63
70:Sg:118:ARG:NH2	70:Sg:134:THR:OG1	2.31	0.63
72:SG:124:LEU:HD23	72:SG:125:THR:HG23	1.79	0.63
82:Sf:107:LYS:HG3	82:Sf:117:LEU:HD21	1.80	0.63
84:CB:111:PHE:CZ	84:CB:145:GLN:CD	2.76	0.63
84:CB:531:ASP:HB3	84:CB:534:VAL:HG22	1.80	0.63
1:L5:1332:C:H2'	1:L5:1333:A:H8	1.63	0.63
5:LB:50:LYS:HB2	5:LB:345:LEU:HD11	1.81	0.63
53:SE:100:ARG:HB2	53:SE:114:ILE:HD13	1.81	0.63
58:SL:80:MET:HE2	58:SL:122:ILE:HG12	1.81	0.63
72:SG:44:GLU:HA	72:SG:119:LYS:HD2	1.80	0.63
83:CA:160:GLY:N	83:CA:217:GLU:OE2	2.31	0.63
83:CA:189:GLN:HG2	83:CA:199:LYS:HD3	1.79	0.63
3:L8:83:C:H42	28:LY:50:ARG:NH2	1.96	0.63
22:LS:84:TYR:OH	22:LS:93:MET:HE3	1.99	0.63
38:Li:15:HIS:O	38:Li:16:LYS:HB2	1.97	0.63
47:Ls:94:ASP:HB3	47:Ls:97:GLU:CD	2.24	0.63
63:ST:32:GLU:CD	63:ST:32:GLU:H	2.05	0.63
55:SH:53:VAL:O	55:SH:57:ARG:HB3	1.98	0.63
78:SY:11:LYS:O	78:SY:23:MET:HA	1.98	0.63
84:CB:50:ARG:NH1	84:CB:52:GLY:HA3	2.13	0.63
1:L5:2389:A:H5'	33:Ld:70:LYS:HE2	1.80	0.63
49:S2:1271:C:H42	49:S2:1511:U:H3	1.46	0.63
51:SB:68:GLU:OE1	51:SB:85:LYS:HD2	1.99	0.63
52:SD:113:LEU:HD11	52:SD:117:ARG:HD2	1.79	0.63
83:CA:246:ILE:HB	83:CA:305:PHE:HB2	1.79	0.63
1:L5:1845:U:H5''	31:Lb:25:ARG:NH1	2.12	0.63
29:LZ:33:THR:OG1	29:LZ:35:ASP:OD1	2.12	0.63
32:Lc:17:ARG:HB3	32:Lc:104:ILE:CG1	2.29	0.63
15:LL:65:ARG:HD3	30:La:66:ASN:HD22	1.63	0.62
70:Sg:31:ILE:HG21	70:Sg:299:PHE:CE2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SY:14:THR:HG22	78:SY:21:LYS:HG2	1.81	0.62
84:CB:111:PHE:HZ	84:CB:145:GLN:NE2	1.96	0.62
84:CB:111:PHE:HE1	84:CB:145:GLN:OE1	1.82	0.62
84:CB:801:ARG:HA	84:CB:804:THR:HG22	1.81	0.62
15:LL:65:ARG:HD3	30:La:66:ASN:ND2	2.14	0.62
39:Lj:33:THR:HA	39:Lj:40:PRO:HD3	1.81	0.62
68:Sc:44:ARG:HH21	68:Sc:58:LEU:HD23	1.61	0.62
1:L5:267:G:OP1	37:Lh:109:ARG:NH1	2.31	0.62
1:L5:679:C:OP1	46:Lr:84:LYS:NZ	2.32	0.62
1:L5:4302:U:H4'	23:LT:5:LYS:HD3	1.81	0.62
25:LV:69:LYS:HB3	25:LV:72:LEU:HD12	1.81	0.62
49:S2:1424:G:H2'	49:S2:1425:G:C8	2.34	0.62
63:ST:11:GLN:OE1	63:ST:62:ARG:HD2	1.99	0.62
70:Sg:34:ALA:HB2	70:Sg:69:VAL:HG13	1.81	0.62
84:CB:113:SER:HB3	84:CB:532:PRO:HB2	1.82	0.62
1:L5:4092:G:H3'	1:L5:4093:G:H21	1.64	0.62
1:L5:5025:C:OP1	56:Sl:124:LYS:HD3	1.99	0.62
78:SY:41:ARG:NH1	78:SY:52:PRO:O	2.33	0.62
82:Sf:109:ASP:H	82:Sf:113:LYS:HG3	1.64	0.62
1:L5:4591:U:H2'	1:L5:4592:C:C6	2.34	0.62
49:S2:640:A:H2'	49:S2:641:A:C8	2.34	0.62
49:S2:1106:C:H5''	80:Sb:70:LYS:HD2	1.82	0.62
54:SF:104:THR:HG23	54:SF:106:GLU:H	1.65	0.62
70:Sg:64:HIS:CG	70:Sg:65:PHE:H	2.17	0.62
70:Sg:108:VAL:HA	70:Sg:124:SER:HB2	1.81	0.62
1:L5:3910:C:H2'	1:L5:3911:C:C6	2.35	0.62
49:S2:140:C:H42	49:S2:313:A:H61	1.47	0.62
56:Sl:124:LYS:HG3	56:Sl:125:LYS:HG2	1.81	0.62
83:CA:230:VAL:O	83:CA:316:VAL:HA	1.99	0.62
84:CB:5:THR:O	84:CB:9:ILE:HG13	1.99	0.62
84:CB:562:GLU:HG2	84:CB:570:ILE:HG12	1.82	0.62
6:LC:155:GLU:O	6:LC:158:VAL:HG22	2.00	0.62
50:SA:205:ARG:HD3	61:SR:81:ARG:NH2	2.15	0.62
53:SE:69:PHE:CZ	78:SY:17:LEU:HB3	2.33	0.62
54:SF:128:ILE:HD11	68:Sc:26:GLN:NE2	2.13	0.62
1:L5:184:U:H3	1:L5:253:G:H1	1.48	0.62
4:LA:188:LYS:NZ	4:LA:192:LYS:HE3	2.15	0.62
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.82	0.62
28:LY:74:TYR:CE2	28:LY:77:LYS:HG2	2.33	0.62
39:Lj:52:LYS:HE3	39:Lj:55:ARG:HH21	1.65	0.62
54:SF:126:THR:HG21	68:Sc:27:CYS:SG	2.40	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:292:SER:OG	70:Sg:294:ASP:OD1	2.16	0.62
73:SJ:44:TRP:HA	73:SJ:47:LYS:HG2	1.81	0.62
12:LI:38:ARG:NH2	12:LI:45:GLU:OE1	2.32	0.62
70:Sg:48:ASP:OD1	70:Sg:51:ASN:ND2	2.33	0.62
1:L5:3903:A:N1	1:L5:4557:U:H5	1.97	0.62
1:L5:4135:G:H2'	1:L5:4136:G:C8	2.35	0.62
2:L7:54:A:O4'	13:LJ:9:GLU:OE1	2.18	0.62
8:LE:153:LEU:HD11	8:LE:195:ILE:HG13	1.80	0.62
17:LN:150:TRP:HA	17:LN:153:LYS:HD3	1.81	0.62
27:LX:82:THR:HG21	37:Lh:37:THR:HG22	1.81	0.62
47:Ls:35:VAL:HG13	47:Ls:39:GLN:OE1	2.00	0.62
50:SA:51:LEU:HA	50:SA:54:THR:HG22	1.82	0.62
64:SU:61:LEU:HD22	69:Sd:34:TYR:CZ	2.34	0.62
49:S2:695:C:N4	49:S2:736:C:O2'	2.33	0.61
61:SR:102:THR:O	61:SR:106:LEU:HG	2.00	0.61
63:ST:134:ILE:HA	63:ST:137:GLN:NE2	2.15	0.61
74:SM:69:CYS:SG	74:SM:76:LEU:HD21	2.40	0.61
84:CB:753:GLU:OE1	84:CB:782:PHE:CE1	2.53	0.61
1:L5:737:C:OP2	16:LM:71:LYS:NZ	2.33	0.61
4:LA:114:CYS:HB2	4:LA:169:VAL:HG13	1.82	0.61
8:LE:207:LYS:O	8:LE:256:GLN:NE2	2.29	0.61
15:LL:145:LYS:HG3	15:LL:146:LEU:HD12	1.81	0.61
21:LR:89:MET:HE3	21:LR:90:PRO:HD2	1.82	0.61
49:S2:164:A:H3'	49:S2:165:G:N2	2.12	0.61
54:SF:100:ILE:O	54:SF:104:THR:HG22	2.00	0.61
1:L5:4946:U:HO2'	35:Lf:2:SER:N	1.97	0.61
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.00	0.61
49:S2:67:C:C5	72:SG:164:LYS:HG3	2.34	0.61
52:SD:17:PHE:HE2	52:SD:39:VAL:HG11	1.65	0.61
52:SD:75:LYS:NZ	57:SK:18:GLU:HG2	2.15	0.61
1:L5:4459:U:H2'	1:L5:4460:U:C6	2.36	0.61
49:S2:1825:A:H61	84:CB:597:ASN:HD22	1.47	0.61
65:SV:1:MET:HE3	71:SC:254:ASP:O	2.00	0.61
1:L5:4537:C:H2'	1:L5:4538:G:C8	2.36	0.61
55:SH:60:ILE:HD11	55:SH:90:LYS:HE2	1.83	0.61
60:SQ:96:TYR:HA	60:SQ:100:VAL:HG22	1.82	0.61
70:Sg:260:ASP:O	70:Sg:264:LYS:HA	2.00	0.61
84:CB:9:ILE:HG12	84:CB:45:ILE:CD1	2.28	0.61
1:L5:208:A:C2	1:L5:233:U:H5''	2.36	0.61
1:L5:2097:U:OP2	9:LF:35:LYS:NZ	2.33	0.61
5:LB:133:TYR:HA	5:LB:136:LYS:HE3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:214:ASP:CA	5:LB:284:ILE:O	2.46	0.61
49:S2:508:A:H3'	49:S2:509:G:H8	1.65	0.61
50:SA:208:GLU:O	50:SA:212:LYS:HG2	1.99	0.61
51:SB:76:ASN:OD1	51:SB:77:ASP:N	2.33	0.61
53:SE:64:ILE:HG23	53:SE:69:PHE:CZ	2.35	0.61
62:SS:4:VAL:HG13	62:SS:5:ILE:N	2.16	0.61
71:SC:68:ARG:HG2	71:SC:277:HIS:HB2	1.81	0.61
84:CB:649:ILE:HG12	84:CB:663:THR:HG22	1.81	0.61
5:LB:150:PHE:CG	5:LB:198:ARG:NH2	2.68	0.61
25:LV:58:GLY:N	25:LV:81:VAL:O	2.31	0.61
1:L5:494:U:H2'	1:L5:495:C:C6	2.35	0.61
1:L5:1942:A:H2'	1:L5:1943:A:C8	2.35	0.61
1:L5:4093:G:N1	1:L5:4114:C:N3	2.49	0.61
8:LE:278:THR:OG1	8:LE:281:ILE:HD13	2.01	0.61
27:LX:129:ARG:O	27:LX:132:GLY:N	2.27	0.61
57:SK:73:ASN:HA	57:SK:76:ILE:HD12	1.82	0.61
84:CB:147:ILE:HD11	84:CB:192:TYR:HB2	1.82	0.61
45:Lp:6:LYS:HG2	45:Lp:7:LYS:HG3	1.83	0.61
49:S2:943:U:OP2	51:SB:216:LYS:NZ	2.33	0.61
49:S2:1017:U:H2'	49:S2:1018:U:H6	1.66	0.61
62:SS:56:ALA:HA	62:SS:59:LEU:HD23	1.81	0.61
62:SS:73:ASN:CG	62:SS:76:GLN:HE22	2.09	0.61
79:SZ:65:TYR:HA	79:SZ:111:ARG:HH21	1.66	0.61
49:S2:562:U:H2'	49:S2:563:G:C8	2.36	0.61
49:S2:1420:G:O2'	49:S2:1421:A:O4'	2.19	0.61
49:S2:1433:C:O2	64:SU:19:ARG:NH2	2.34	0.61
64:SU:48:LEU:HD11	64:SU:97:ILE:CD1	2.31	0.61
83:CA:249:ARG:NH2	83:CA:274:ASP:OD1	2.34	0.61
83:CA:321:PHE:HE2	83:CA:323:VAL:HB	1.65	0.61
1:L5:233:U:HO2'	1:L5:234:G:H8	1.49	0.60
5:LB:340:THR:H	5:LB:343:ARG:HE	1.49	0.60
64:SU:36:CYS:O	64:SU:40:ILE:HG12	2.01	0.60
69:Sd:19:ARG:HD2	69:Sd:32:ARG:HD3	1.83	0.60
71:SC:65:LYS:HE3	71:SC:273:LEU:HD13	1.83	0.60
82:Sf:133:ALA:N	82:Sf:140:TYR:O	2.33	0.60
49:S2:752:G:OP1	49:S2:792:C:O2'	2.17	0.60
49:S2:834:C:H42	49:S2:839:C:H42	1.49	0.60
50:SA:80:ARG:NH2	50:SA:165:ASN:O	2.34	0.60
56:SI:162:LEU:HD11	56:SI:191:GLU:HG2	1.83	0.60
1:L5:4910:G:N2	18:LO:106:ASP:O	2.33	0.60
4:LA:135:THR:HG22	4:LA:149:LYS:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:193:ASP:CG	12:LI:198:LYS:HE3	2.27	0.60
21:LR:177:LEU:HA	21:LR:180:LYS:HE2	1.82	0.60
54:SF:30:ILE:HG21	54:SF:36:GLN:HA	1.83	0.60
62:SS:81:ASP:OD1	62:SS:82:TRP:N	2.34	0.60
78:SY:57:VAL:HB	78:SY:60:PHE:HE1	1.67	0.60
84:CB:111:PHE:CD2	84:CB:111:PHE:O	2.54	0.60
1:L5:3923:A:H2'	1:L5:3924:C:C6	2.36	0.60
15:LL:205:GLN:HA	15:LL:208:GLU:HG2	1.81	0.60
20:LQ:57:ASN:OD1	20:LQ:143:ARG:NH2	2.34	0.60
49:S2:1535:U:O4	54:SF:159:ARG:NE	2.33	0.60
50:SA:77:ILE:HD12	50:SA:122:LEU:HD11	1.84	0.60
51:SB:36:PRO:HB3	51:SB:231:LEU:HD21	1.83	0.60
65:SV:17:CYS:HB2	65:SV:56:CYS:HB3	1.83	0.60
83:CA:20:LYS:CB	83:CA:23:MET:HE2	2.31	0.60
1:L5:173:C:H2'	1:L5:174:C:C6	2.36	0.60
1:L5:1962:A:H2	1:L5:2024:G:H21	1.50	0.60
49:S2:12:U:H2'	49:S2:13:C:C6	2.36	0.60
55:SH:69:LEU:HD22	55:SH:96:ALA:HB2	1.84	0.60
66:SX:74:LEU:O	66:SX:78:GLY:HA2	2.01	0.60
69:Sd:26:ASN:OD1	69:Sd:27:ARG:N	2.35	0.60
55:SH:10:LYS:NZ	55:SH:12:ASN:HB3	2.16	0.60
84:CB:219:HIS:CD2	84:CB:337:LYS:HG2	2.36	0.60
1:L5:2485:U:H4'	1:L5:2486:G:N2	2.17	0.60
1:L5:4274:A:H2'	1:L5:4275:G:H8	1.65	0.60
5:LB:122:TRP:CE2	5:LB:127:LYS:HE3	2.37	0.60
49:S2:170:A:H5'	72:SG:137:ARG:HG3	1.82	0.60
1:L5:326:C:P	15:LL:103:ARG:NH2	2.75	0.60
1:L5:709:C:OP1	35:Lf:89:ARG:NH2	2.35	0.60
1:L5:1179:U:H3'	1:L5:1180:C:H5''	1.84	0.60
1:L5:1258:G:H2'	1:L5:1259:G:C8	2.36	0.60
1:L5:1969:G:H4'	47:Ls:36:GLY:HA2	1.83	0.60
8:LE:236:GLU:HG2	8:LE:237:LYS:H	1.66	0.60
18:LO:110:PRO:HA	18:LO:113:ASP:CG	2.26	0.60
22:LS:84:TYR:HE1	22:LS:93:MET:CG	2.14	0.60
55:SH:32:MET:H	55:SH:37:LYS:HD2	1.67	0.60
60:SQ:86:GLN:HE22	60:SQ:122:ALA:HB2	1.66	0.60
70:Sg:178:ASN:HB3	70:Sg:185:LYS:NZ	2.16	0.60
1:L5:138:G:H2'	1:L5:139:G:H8	1.67	0.60
1:L5:2083:C:OP2	20:LQ:14:ARG:NH2	2.29	0.60
1:L5:2710:C:O5'	21:LR:39:GLN:NE2	2.35	0.60
12:LI:3:ARG:HG3	12:LI:123:GLN:HE22	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Lh:6:ALA:O	37:Lh:10:ARG:HG3	2.01	0.60
55:SH:127:ASP:OD1	55:SH:142:LYS:NZ	2.35	0.60
83:CA:189:GLN:NE2	83:CA:199:LYS:C	2.59	0.60
1:L5:4146:G:H2'	1:L5:4147:G:C8	2.37	0.60
10:LG:99:ALA:HB1	10:LG:136:LEU:HD11	1.83	0.60
14:LK:46:ILE:HD11	14:LK:62:LEU:HD11	1.84	0.60
14:LK:123:ARG:HG2	47:Ls:48:ARG:HD2	1.84	0.60
49:S2:1756:C:N4	49:S2:1757:G:H21	1.93	0.60
8:LE:222:LEU:HB3	8:LE:237:LYS:HG3	1.84	0.59
15:LL:64:VAL:HA	15:LL:67:HIS:HD2	1.65	0.59
33:Ld:19:GLU:HG3	33:Ld:102:LEU:HD11	1.84	0.59
54:SF:28:VAL:HG21	54:SF:41:VAL:HG11	1.84	0.59
56:SI:119:LEU:HD12	56:SI:119:LEU:N	2.16	0.59
14:LK:32:ILE:HD13	14:LK:42:VAL:HG21	1.83	0.59
19:LP:54:GLN:HA	19:LP:83:TRP:CD1	2.37	0.59
63:ST:22:LEU:HD21	63:ST:112:MET:HE1	1.84	0.59
67:Sa:10:ARG:HB2	67:Sa:33:ASP:OD2	2.02	0.59
49:S2:672:A:N6	49:S2:1027:A:OP1	2.28	0.59
49:S2:1410:C:H2'	49:S2:1411:G:H8	1.67	0.59
63:ST:134:ILE:HA	63:ST:137:GLN:HE21	1.67	0.59
66:SX:52:LEU:HD11	66:SX:73:GLN:HB2	1.83	0.59
84:CB:434:TYR:HD1	84:CB:440:GLU:O	1.85	0.59
19:LP:71:ALA:O	19:LP:74:LYS:HB2	2.01	0.59
22:LS:85:ASP:OD1	22:LS:90:THR:HB	2.03	0.59
29:LZ:116:VAL:O	29:LZ:120:GLU:HG3	2.02	0.59
54:SF:128:ILE:CD1	68:Sc:26:GLN:HE22	2.15	0.59
86:CD:206:HIS:HE1	86:CD:208:ASP:OD1	1.86	0.59
1:L5:1812:C:H5''	31:Lb:56:LYS:HE2	1.84	0.59
1:L5:3641:U:H5	1:L5:3646:A:N7	2.00	0.59
18:LO:6:VAL:HG22	18:LO:32:LYS:HE2	1.84	0.59
30:La:131:ARG:HG2	30:La:135:GLU:OE2	2.02	0.59
49:S2:1679:A:OP1	54:SF:60:ARG:NH1	2.35	0.59
1:L5:1845:U:OP1	31:Lb:25:ARG:NH2	2.35	0.59
49:S2:689:U:H2'	49:S2:690:G:C2	2.37	0.59
52:SD:192:TRP:C	52:SD:194:PRO:HD2	2.26	0.59
56:SI:130:THR:HA	56:SI:133:GLU:HG3	1.84	0.59
83:CA:326:MET:HE1	83:CA:331:MET:HG2	1.84	0.59
1:L5:1932:A:OP1	18:LO:49:ARG:NH2	2.35	0.59
1:L5:1998:A:C8	47:Ls:55:MET:HB2	2.38	0.59
1:L5:4260:U:H2'	1:L5:4261:C:C6	2.38	0.59
1:L5:4518:A:OP2	5:LB:258:HIS:CE1	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:110:LYS:HD2	10:LG:113:ARG:HH12	1.68	0.59
28:LY:101:PRO:HA	28:LY:104:VAL:HG22	1.84	0.59
42:Lm:98:LYS:HE3	42:Lm:115:CYS:HB2	1.85	0.59
49:S2:152:U:C4'	72:SG:132:ARG:HH22	2.15	0.59
49:S2:1064:C:O3'	76:SO:149:ARG:NH1	2.36	0.59
70:Sg:225:LYS:HD2	70:Sg:226:HIS:N	2.17	0.59
80:Sb:11:SER:OG	80:Sb:14:GLU:HG3	2.03	0.59
84:CB:62:ASP:HA	84:CB:65:GLU:HB3	1.84	0.59
1:L5:3887:C:OP2	18:LO:85:ARG:NH2	2.26	0.59
4:LA:188:LYS:HZ1	4:LA:192:LYS:HE3	1.67	0.59
7:LD:233:PRO:CA	7:LD:236:MET:HE2	2.31	0.59
16:LM:24:LEU:HD11	16:LM:86:TRP:CG	2.38	0.59
49:S2:201:C:H3'	49:S2:202:G:H21	1.67	0.59
70:Sg:82:SER:OG	70:Sg:83:TRP:N	2.35	0.59
82:Sf:126:CYS:HB3	82:Sf:130:VAL:HB	1.84	0.59
84:CB:653:GLY:HA2	84:CB:660:ASN:HB2	1.83	0.59
1:L5:2280:G:OP1	34:Le:48:ARG:NH2	2.36	0.59
17:LN:178:HIS:HA	17:LN:181:HIS:NE2	2.18	0.59
49:S2:1533:A:H2	49:S2:1536:G:N3	1.99	0.59
59:SP:81:ARG:NH1	59:SP:120:SER:OG	2.36	0.59
67:Sa:23:CYS:O	67:Sa:27:ALA:N	2.36	0.59
70:Sg:7:LEU:HA	70:Sg:309:VAL:O	2.03	0.59
71:SC:244:ILE:O	71:SC:247:THR:OG1	2.18	0.59
83:CA:260:LYS:HG2	83:CA:263:ARG:HH21	1.67	0.59
84:CB:609:PHE:CD2	84:CB:699:GLY:HA2	2.38	0.59
1:L5:137:G:H2'	1:L5:138:G:H8	1.68	0.59
1:L5:510:U:OP1	15:LL:163:LYS:HE2	2.03	0.59
1:L5:1976:G:N3	14:LK:138:SER:OG	2.36	0.59
1:L5:4233:A:H4'	44:Lo:98:LYS:HE2	1.84	0.59
33:Ld:44:ARG:O	33:Ld:48:GLU:HG2	2.03	0.59
49:S2:694:G:O6	49:S2:737:G:N3	2.36	0.59
49:S2:1407:U:H2'	49:S2:1408:U:C6	2.38	0.59
53:SE:139:LEU:HD23	53:SE:150:PRO:HB3	1.84	0.59
72:SG:64:LYS:HB2	72:SG:97:VAL:HG21	1.83	0.59
74:SM:120:ALA:HA	74:SM:123:VAL:HG22	1.84	0.59
1:L5:4093:G:N1	1:L5:4114:C:C2	2.71	0.58
49:S2:1270:G:OP1	82:Sf:89:LYS:NZ	2.28	0.58
49:S2:1657:G:H1	49:S2:1667:U:H3	1.50	0.58
53:SE:201:HIS:O	53:SE:204:SER:C	2.46	0.58
70:Sg:40:ILE:HB	70:Sg:59:LEU:HB2	1.84	0.58
1:L5:1324:A:O2'	1:L5:1326:A:OP1	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SD:158:ILE:HG12	52:SD:189:MET:SD	2.43	0.58
57:SK:95:ARG:NH1	57:SK:98:ARG:O	2.34	0.58
70:Sg:10:THR:CG2	70:Sg:306:LEU:HD12	2.34	0.58
72:SG:22:ARG:HG3	72:SG:25:ARG:HH22	1.67	0.58
1:L5:2020:U:H2'	1:L5:2021:G:H8	1.67	0.58
4:LA:147:ARG:NH1	49:S2:949:G:H4'	2.18	0.58
7:LD:228:LYS:C	7:LD:230:SER:H	2.11	0.58
21:LR:175:GLU:O	21:LR:178:GLN:HG3	2.03	0.58
74:SM:58:GLU:CD	74:SM:61:TYR:H	2.11	0.58
84:CB:10:ARG:NH1	84:CB:14:ASP:OD1	2.34	0.58
84:CB:305:MET:HE2	84:CB:336:LEU:HD22	1.84	0.58
1:L5:4060:U:H2'	1:L5:4061:G:C8	2.38	0.58
25:LV:82:ILE:HD12	25:LV:121:VAL:HG22	1.85	0.58
72:SG:225:GLN:HA	72:SG:228:ILE:HG12	1.85	0.58
84:CB:111:PHE:HZ	84:CB:145:GLN:CD	2.11	0.58
21:LR:172:ARG:HG3	21:LR:176:ARG:HH21	1.69	0.58
50:SA:212:LYS:O	50:SA:215:GLN:NE2	2.37	0.58
59:SP:91:GLY:N	59:SP:107:ILE:O	2.36	0.58
82:Sf:140:TYR:HE1	82:Sf:146:LEU:N	2.02	0.58
6:LC:66:SER:HA	6:LC:77:PRO:HA	1.84	0.58
6:LC:149:GLU:HG2	46:Lr:72:LYS:HG2	1.86	0.58
14:LK:15:LEU:HD13	14:LK:62:LEU:HD13	1.85	0.58
49:S2:1489:A:H62	86:CD:197:SER:HB2	1.68	0.58
52:SD:45:ARG:HE	52:SD:85:GLU:CD	2.12	0.58
76:SO:21:VAL:HG11	76:SO:27:VAL:HG22	1.85	0.58
8:LE:225:PRO:HG2	8:LE:227:HIS:CE1	2.39	0.58
15:LL:108:GLU:OE2	38:Li:18:THR:HG22	2.04	0.58
49:S2:70:G:C8	72:SG:167:LYS:NZ	2.71	0.58
61:SR:97:GLU:OE2	61:SR:120:THR:HB	2.04	0.58
63:ST:6:VAL:HG22	63:ST:11:GLN:HE22	1.69	0.58
64:SU:22:ILE:HG13	64:SU:89:ILE:HB	1.85	0.58
84:CB:111:PHE:CE1	84:CB:145:GLN:NE2	2.71	0.58
84:CB:112:SER:HB2	84:CB:115:VAL:HG23	1.86	0.58
15:LL:17:ASP:O	15:LL:20:ARG:HG2	2.03	0.58
49:S2:433:A:H5''	56:SI:22:HIS:HB3	1.86	0.58
55:SH:137:SER:HB3	55:SH:158:LEU:HD12	1.85	0.58
70:Sg:125:ARG:C	70:Sg:127:LYS:H	2.11	0.58
6:LC:66:SER:O	6:LC:67:TRP:HB2	2.04	0.58
49:S2:145:G:H2'	49:S2:146:G:C8	2.38	0.58
50:SA:205:ARG:HD3	61:SR:81:ARG:HH22	1.69	0.58
51:SB:150:ILE:HG23	61:SR:131:PRO:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SS:114:LEU:HD11	62:SS:121:ARG:HH21	1.67	0.58
72:SG:190:ARG:O	72:SG:194:LEU:HD23	2.04	0.58
77:SW:32:LYS:O	77:SW:36:ARG:HG2	2.04	0.58
78:SY:10:ARG:O	78:SY:11:LYS:C	2.45	0.58
5:LB:308:ASP:OD1	5:LB:309:LEU:N	2.37	0.58
5:LB:340:THR:HG23	5:LB:343:ARG:HH21	1.67	0.58
12:LI:36:LEU:HD11	12:LI:69:ARG:HH11	1.68	0.58
49:S2:107:A:H2'	49:S2:108:G:C8	2.38	0.58
49:S2:1232:U:H2'	49:S2:1233:G:C8	2.39	0.58
56:SI:124:LYS:HG3	56:SI:125:LYS:N	2.19	0.58
73:SJ:3:VAL:HG21	73:SJ:5:ARG:CZ	2.34	0.58
74:SM:40:LYS:HZ1	82:Sf:130:VAL:N	2.01	0.58
84:CB:779:THR:HB	84:CB:780:PRO:HD3	1.85	0.58
1:L5:4378:A:O2'	1:L5:4379:A:H2'	2.03	0.57
11:LH:113:GLU:HG2	11:LH:125:ARG:HG2	1.86	0.57
33:Ld:57:MET:HE2	33:Ld:90:ARG:HB2	1.85	0.57
39:Lj:54:LYS:O	39:Lj:58:THR:HB	2.03	0.57
49:S2:750:C:H41	49:S2:793:G:H21	1.52	0.57
56:SI:61:ASP:OD1	56:SI:62:VAL:N	2.36	0.57
56:SI:76:THR:HG22	56:SI:108:PRO:HG2	1.86	0.57
64:SU:95:SER:HA	64:SU:98:VAL:HG22	1.85	0.57
83:CA:231:SER:HA	83:CA:316:VAL:HG12	1.86	0.57
84:CB:675:ILE:HG23	84:CB:721:ILE:HG21	1.86	0.57
1:L5:4625:C:O2'	1:L5:4626:A:H5'	2.04	0.57
1:L5:4742:G:H2'	1:L5:4743:G:H8	1.69	0.57
1:L5:5057:C:H2'	1:L5:5058:A:C8	2.39	0.57
32:Lc:12:GLU:HB3	49:S2:1007:C:OP1	2.04	0.57
47:Ls:20:LEU:O	47:Ls:23:ASP:O	2.22	0.57
49:S2:944:A:H5''	76:SO:134:PRO:HB3	1.85	0.57
57:SK:35:LEU:O	57:SK:37:ASP:N	2.36	0.57
60:SQ:107:GLU:O	60:SQ:111:ILE:HG13	2.04	0.57
62:SS:4:VAL:HG22	62:SS:5:ILE:HG22	1.85	0.57
66:SX:74:LEU:O	66:SX:78:GLY:CA	2.52	0.57
74:SM:69:CYS:O	74:SM:72:HIS:C	2.48	0.57
83:CA:249:ARG:NH1	83:CA:270:GLU:HG2	2.20	0.57
1:L5:4043:G:N2	1:L5:4045:G:N3	2.52	0.57
22:LS:84:TYR:CZ	22:LS:93:MET:HE3	2.39	0.57
34:Le:109:LYS:O	34:Le:113:GLU:OE1	2.22	0.57
49:S2:996:A:H2'	49:S2:997:A:C8	2.38	0.57
71:SC:252:THR:OG1	71:SC:254:ASP:OD1	2.23	0.57
78:SY:79:LEU:HD11	78:SY:96:LEU:HD21	1.84	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SZ:99:LEU:HD21	79:SZ:102:LYS:HB2	1.85	0.57
84:CB:26:ALA:HB3	84:CB:32:LYS:HE3	1.86	0.57
1:L5:233:U:O2'	1:L5:234:G:H2'	2.04	0.57
1:L5:387:G:O2'	1:L5:412:G:N1	2.28	0.57
65:SV:74:LYS:CG	65:SV:79:VAL:HG23	2.34	0.57
84:CB:475:VAL:HG11	84:CB:485:ILE:HD11	1.86	0.57
1:L5:1755:C:C2	7:LD:3:PHE:HZ	2.22	0.57
1:L5:4699:U:H1'	1:L5:4700:A:H5''	1.86	0.57
4:LA:84:THR:CG2	45:Lp:63:THR:HB	2.34	0.57
31:Lb:54:LEU:HA	31:Lb:57:MET:HE3	1.86	0.57
72:SG:74:ARG:CG	72:SG:94:ARG:HG2	2.33	0.57
84:CB:347:GLY:O	84:CB:351:LEU:HD23	2.03	0.57
1:L5:499:G:H2'	1:L5:504:G:N2	2.16	0.57
4:LA:30:ARG:NH1	4:LA:36:GLU:OE2	2.38	0.57
16:LM:10:GLY:HA2	16:LM:64:PHE:CZ	2.40	0.57
17:LN:148:THR:O	17:LN:151:ILE:HG22	2.05	0.57
20:LQ:49:LYS:HG2	20:LQ:53:MET:HE3	1.87	0.57
27:LX:122:ALA:N	27:LX:139:ARG:O	2.37	0.57
49:S2:857:U:H2'	49:S2:858:A:C8	2.39	0.57
49:S2:1373:C:OP1	61:SR:7:LYS:N	2.36	0.57
52:SD:39:VAL:HG12	52:SD:41:VAL:HG23	1.86	0.57
70:Sg:140:TYR:OH	70:Sg:181:ASN:O	2.23	0.57
70:Sg:251:ALA:HB2	70:Sg:289:LEU:HD23	1.85	0.57
75:SN:63:VAL:HG21	75:SN:71:ILE:HG12	1.87	0.57
8:LE:164:PHE:HA	8:LE:175:VAL:HG12	1.86	0.57
9:LF:182:TYR:HB3	9:LF:200:ARG:HG3	1.85	0.57
16:LM:86:TRP:O	16:LM:86:TRP:CD1	2.57	0.57
28:LY:1:MET:HE3	28:LY:2:LYS:N	2.19	0.57
49:S2:1857:G:OP2	76:SO:146:ARG:HD2	2.04	0.57
54:SF:73:THR:HG22	54:SF:93:VAL:HG21	1.87	0.57
72:SG:7:PHE:HD2	72:SG:10:THR:HG22	1.70	0.57
83:CA:20:LYS:HB2	83:CA:23:MET:HE2	1.86	0.57
84:CB:451:ILE:HD12	84:CB:460:PRO:HA	1.87	0.57
1:L5:1577:G:O2'	1:L5:1612:G:H4'	2.05	0.57
1:L5:1779:U:OP2	7:LD:5:LYS:NZ	2.37	0.57
1:L5:2710:C:P	21:LR:39:GLN:HE21	2.27	0.57
5:LB:8:ALA:HB1	25:LV:48:ARG:HH12	1.69	0.57
8:LE:168:LEU:O	8:LE:171:GLY:N	2.38	0.57
3:L8:19:C:H2'	3:L8:20:A:C8	2.40	0.57
6:LC:345:ARG:O	6:LC:349:LEU:HD23	2.04	0.57
11:LH:37:ASP:OD1	11:LH:39:ASN:ND2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LU:28:PRO:HB2	24:LU:34:MET:HG2	1.87	0.57
49:S2:67:C:O2'	72:SG:164:LYS:NZ	2.36	0.57
49:S2:1455:A:H61	49:S2:1471:C:H42	1.53	0.57
68:Sc:29:GLN:NE2	68:Sc:66:ARG:O	2.38	0.57
70:Sg:110:SER:HB2	70:Sg:153:CYS:HA	1.86	0.57
76:SO:82:ALA:C	76:SO:86:LYS:HZ2	2.12	0.57
83:CA:321:PHE:CE2	83:CA:323:VAL:HB	2.40	0.57
8:LE:223:ARG:HG2	8:LE:225:PRO:HD3	1.87	0.56
16:LM:40:GLY:HA3	16:LM:45:VAL:HB	1.86	0.56
25:LV:112:MET:HE1	25:LV:117:ILE:HD11	1.87	0.56
36:Lg:109:ALA:O	36:Lg:112:GLN:HG3	2.05	0.56
52:SD:67:ARG:NH1	57:SK:93:THR:O	2.38	0.56
80:Sb:36:LYS:NZ	80:Sb:41:TYR:CA	2.68	0.56
1:L5:418:A:C2	3:L8:17:A:H1'	2.40	0.56
1:L5:2298:U:C3'	6:LC:204:ARG:HH12	2.19	0.56
1:L5:4071:U:H2'	1:L5:4072:C:C6	2.40	0.56
27:LX:95:THR:HG22	27:LX:139:ARG:HA	1.85	0.56
44:Lo:44:LYS:HE3	44:Lo:52:THR:HB	1.86	0.56
49:S2:1415:C:H4'	63:ST:129:ARG:HH12	1.69	0.56
49:S2:1644:C:H4'	60:SQ:140:ARG:HB2	1.85	0.56
49:S2:1658:G:OP2	49:S2:1660:C:N4	2.38	0.56
55:SH:57:ARG:HH12	55:SH:90:LYS:HA	1.70	0.56
62:SS:63:GLU:CD	62:SS:66:ARG:HH12	2.12	0.56
66:SX:105:PHE:CD2	66:SX:112:VAL:HB	2.39	0.56
83:CA:8:GLN:O	83:CA:10:GLN:NE2	2.37	0.56
1:L5:677:G:H2'	1:L5:678:C:H6	1.71	0.56
1:L5:1702:C:H4'	6:LC:308:LYS:CD	2.33	0.56
1:L5:2844:A:O2'	1:L5:4631:G:H4'	2.05	0.56
1:L5:3726:A:H2'	1:L5:3727:A:C8	2.40	0.56
1:L5:3951:G:H2'	1:L5:3952:A:C8	2.39	0.56
7:LD:233:PRO:HA	7:LD:236:MET:CE	2.30	0.56
12:LI:36:LEU:HD11	12:LI:69:ARG:NH1	2.20	0.56
21:LR:148:ASP:O	21:LR:152:LYS:HD3	2.05	0.56
22:LS:76:LYS:HB3	22:LS:131:GLU:HG3	1.87	0.56
38:Li:50:PHE:CZ	38:Li:93:VAL:HG11	2.40	0.56
44:Lo:6:LYS:HG2	44:Lo:93:LEU:HG	1.87	0.56
49:S2:152:U:H2'	49:S2:153:G:H8	1.70	0.56
49:S2:1220:A:H2'	49:S2:1221:G:O4'	2.05	0.56
52:SD:167:TYR:HD1	52:SD:200:PRO:HG3	1.68	0.56
52:SD:194:PRO:O	52:SD:195:THR:OG1	2.22	0.56
55:SH:38:ALA:HA	55:SH:41:ARG:HE	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SI:87:ASN:ND2	56:SI:89:GLU:HB3	2.20	0.56
62:SS:4:VAL:HG21	79:SZ:52:LYS:HD3	1.86	0.56
64:SU:98:VAL:HA	64:SU:101:ILE:HG12	1.86	0.56
70:Sg:70:VAL:HG23	70:Sg:113:PHE:CE2	2.40	0.56
1:L5:2758:G:O2'	1:L5:2765:A:N3	2.31	0.56
1:L5:4935:C:H2'	1:L5:4936:G:C8	2.40	0.56
15:LL:86:ILE:HG12	15:LL:121:ARG:NH1	2.21	0.56
49:S2:492:C:OP2	78:SY:107:ARG:NH2	2.38	0.56
53:SE:45:ILE:HA	53:SE:61:VAL:HG11	1.86	0.56
64:SU:22:ILE:HD12	64:SU:39:LEU:HD13	1.87	0.56
1:L5:3966:A:H1'	1:L5:4046:A:H61	1.70	0.56
1:L5:4742:G:H2'	1:L5:4743:G:C8	2.41	0.56
49:S2:1410:C:H2'	49:S2:1411:G:C8	2.40	0.56
54:SF:55:ARG:NH1	60:SQ:123:ASP:OD1	2.38	0.56
55:SH:10:LYS:HE3	55:SH:20:GLU:CG	2.33	0.56
74:SM:64:LEU:O	74:SM:68:LEU:HG	2.05	0.56
78:SY:76:TYR:OH	78:SY:86:GLU:OE1	2.20	0.56
84:CB:26:ALA:HB2	84:CB:128:VAL:HB	1.88	0.56
1:L5:437:G:H5'	34:Le:53:ILE:HD13	1.88	0.56
1:L5:458:C:O2'	8:LE:110:ARG:NE	2.39	0.56
1:L5:1241:C:O2'	31:Lb:120:ARG:O	2.18	0.56
1:L5:4258:C:H2'	1:L5:4259:C:H6	1.70	0.56
14:LK:25:THR:HA	14:LK:28:LEU:HB2	1.88	0.56
28:LY:1:MET:HE3	28:LY:2:LYS:H	1.70	0.56
28:LY:74:TYR:CZ	28:LY:76:LYS:HB3	2.41	0.56
55:SH:30:LEU:O	55:SH:37:LYS:NZ	2.33	0.56
68:Sc:34:PHE:O	68:Sc:35:MET:HG2	2.06	0.56
83:CA:67:GLU:HB3	83:CA:70:MET:HE1	1.88	0.56
83:CA:110:LEU:O	83:CA:120:ASN:ND2	2.38	0.56
1:L5:2318:G:O6	34:Le:19:LYS:HE3	2.05	0.56
1:L5:3720:G:H22	1:L5:3733:A:H2	1.54	0.56
1:L5:4070:U:O2'	1:L5:4071:U:OP1	2.22	0.56
1:L5:4239:A:H2'	1:L5:4240:G:C8	2.41	0.56
1:L5:4924:C:O2'	1:L5:4926:C:O2	2.21	0.56
14:LK:148:PRO:O	14:LK:152:ILE:HG13	2.06	0.56
49:S2:1533:A:N7	49:S2:1604:G:H1'	2.20	0.56
50:SA:173:LEU:HD11	50:SA:177:MET:HE2	1.87	0.56
57:SK:74:GLU:CD	57:SK:74:GLU:H	2.14	0.56
61:SR:99:ASP:HA	61:SR:120:THR:HG22	1.88	0.56
65:SV:58:ALA:O	65:SV:62:MET:HG3	2.05	0.56
73:SJ:27:GLN:HE22	73:SJ:31:LEU:HD11	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SY:13:MET:SD	78:SY:22:GLN:NE2	2.73	0.56
84:CB:224:THR:HG22	84:CB:227:GLN:HG3	1.87	0.56
84:CB:362:VAL:O	84:CB:366:LYS:HG3	2.05	0.56
84:CB:545:ILE:HD12	84:CB:575:PRO:HB3	1.87	0.56
1:L5:171:U:O4	15:LL:130:LYS:HD2	2.06	0.56
44:Lo:71:GLU:HG3	44:Lo:80:LYS:HD2	1.87	0.56
51:SB:52:THR:HG23	51:SB:57:ILE:HG22	1.87	0.56
60:SQ:32:ILE:HD12	60:SQ:39:LEU:HD22	1.88	0.56
71:SC:256:TRP:CD2	77:SW:68:ARG:HD2	2.41	0.56
84:CB:40:VAL:HG13	84:CB:47:ALA:HB1	1.87	0.56
1:L5:1499:C:OP1	20:LQ:150:ARG:NH2	2.38	0.56
1:L5:1785:C:OP1	12:LI:133:GLN:NE2	2.36	0.56
1:L5:4522:G:O2'	1:L5:4525:C:OP2	2.19	0.56
25:LV:90:ARG:HH22	25:LV:140:ALA:C	2.13	0.56
72:SG:135:PRO:HB2	72:SG:141:ILE:HG22	1.88	0.56
79:SZ:56:ASP:O	79:SZ:60:LYS:HG2	2.06	0.56
1:L5:25:A:H2'	1:L5:26:C:H6	1.71	0.56
1:L5:4967:A:H2'	1:L5:4968:A:C8	2.41	0.56
7:LD:53:VAL:HG11	7:LD:159:VAL:HA	1.87	0.56
47:Ls:66:ARG:NH2	47:Ls:79:LEU:HD11	2.21	0.56
49:S2:1755:C:C4	49:S2:1756:C:N4	2.74	0.56
68:Sc:32:VAL:HG11	68:Sc:56:LEU:HD12	1.87	0.56
71:SC:183:LYS:HG2	77:SW:95:PRO:HA	1.89	0.56
73:SJ:114:VAL:HG13	73:SJ:119:LEU:HB2	1.88	0.56
83:CA:11:THR:HG23	83:CA:13:ALA:H	1.72	0.56
1:L5:3951:G:H21	1:L5:4061:G:H1	1.52	0.55
14:LK:35:LEU:HD13	14:LK:64:ILE:HG13	1.87	0.55
14:LK:124:GLU:HG2	14:LK:127:GLY:H	1.71	0.55
49:S2:367:U:H4'	49:S2:371:A:C8	2.41	0.55
49:S2:747:U:O4	49:S2:796:G:O6	2.24	0.55
49:S2:1158:G:O3'	77:SW:76:SER:OG	2.23	0.55
51:SB:108:ASP:OD1	51:SB:109:LYS:N	2.39	0.55
51:SB:124:HIS:HA	51:SB:137:LEU:O	2.05	0.55
52:SD:225:GLU:H	70:Sg:189:ILE:HG22	1.71	0.55
54:SF:127:ARG:HE	54:SF:128:ILE:H	1.55	0.55
59:SP:87:PRO:HA	59:SP:90:VAL:CG2	2.36	0.55
70:Sg:31:ILE:HG21	70:Sg:299:PHE:HE2	1.69	0.55
1:L5:1503:A:H4'	1:L5:1504:G:H5'	1.88	0.55
1:L5:3732:A:H2'	1:L5:3733:A:H8	1.70	0.55
13:LJ:120:ASP:OD1	13:LJ:121:PRO:HD2	2.06	0.55
14:LK:26:SER:HB3	84:CB:774:SER:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:LS:16:CYS:SG	22:LS:54:MET:HG2	2.45	0.55
33:Ld:36:VAL:HG23	33:Ld:41:ARG:HG2	1.88	0.55
49:S2:1714:U:H2'	49:S2:1715:A:C8	2.42	0.55
53:SE:87:MET:HE1	53:SE:236:ILE:HG21	1.88	0.55
72:SG:152:ASP:OD1	72:SG:154:ARG:HB2	2.05	0.55
83:CA:181:PRO:HB2	83:CA:204:ASN:HB2	1.88	0.55
84:CB:111:PHE:CE1	84:CB:145:GLN:CD	2.84	0.55
11:LH:12:ILE:HG12	11:LH:18:ILE:HD12	1.88	0.55
13:LJ:10:ASN:HA	13:LJ:13:ARG:HB2	1.87	0.55
20:LQ:90:VAL:HB	30:La:80:THR:HG21	1.89	0.55
40:Lk:5:ILE:O	40:Lk:45:LEU:HA	2.06	0.55
49:S2:1310:U:H5''	82:Sf:130:VAL:CG1	2.35	0.55
49:S2:1415:C:P	63:ST:129:ARG:NH2	2.80	0.55
52:SD:167:TYR:CD1	52:SD:200:PRO:HG3	2.41	0.55
74:SM:86:GLY:HA2	74:SM:89:VAL:HG12	1.88	0.55
33:Ld:37:GLY:O	33:Ld:41:ARG:HG3	2.06	0.55
49:S2:94:G:HO2'	49:S2:508:A:HO2'	1.55	0.55
49:S2:1353:A:OP1	50:SA:139:TYR:OH	2.23	0.55
49:S2:1521:C:H1'	59:SP:128:HIS:HE1	1.70	0.55
83:CA:107:LYS:NZ	83:CA:316:VAL:HG23	2.22	0.55
1:L5:1332:C:H2'	1:L5:1333:A:C8	2.42	0.55
1:L5:1361:G:H5''	15:LL:35:ARG:HH22	1.71	0.55
1:L5:2092:G:O2'	1:L5:2262:G:N2	2.39	0.55
7:LD:225:GLN:O	7:LD:228:LYS:C	2.49	0.55
49:S2:190:G:N2	49:S2:209:A:OP2	2.39	0.55
54:SF:126:THR:CA	54:SF:135:ARG:HG2	2.36	0.55
1:L5:344:A:C5'	39:Lj:75:ARG:HH21	2.20	0.55
1:L5:711:A:H2'	1:L5:712:C:C6	2.41	0.55
4:LA:84:THR:HG23	45:Lp:63:THR:HB	1.87	0.55
4:LA:147:ARG:HH12	49:S2:949:G:H4'	1.71	0.55
7:LD:289:ARG:O	7:LD:293:ARG:HG2	2.07	0.55
61:SR:104:GLU:HG3	61:SR:107:LYS:CE	2.32	0.55
83:CA:124:THR:OG1	83:CA:318:GLN:N	2.30	0.55
12:LI:61:SER:HA	12:LI:126:VAL:HG12	1.88	0.55
12:LI:68:ALA:HB1	12:LI:155:ALA:HB1	1.87	0.55
30:La:82:VAL:HG11	30:La:101:ILE:HG12	1.87	0.55
66:SX:54:LYS:HE3	66:SX:91:LEU:HG	1.89	0.55
76:SO:95:ILE:HB	76:SO:129:ILE:HG23	1.89	0.55
84:CB:675:ILE:HG22	84:CB:679:VAL:HG23	1.89	0.55
1:L5:2744:A:H2'	1:L5:2745:A:C8	2.42	0.55
1:L5:4059:C:H2'	1:L5:4060:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4071:U:H2'	1:L5:4072:C:H6	1.70	0.55
49:S2:522:A:H5''	73:SJ:145:PRO:HD2	1.89	0.55
49:S2:942:G:H2'	49:S2:943:U:C6	2.42	0.55
49:S2:1284:A:O2'	74:SM:106:CYS:SG	2.63	0.55
83:CA:248:LYS:HG2	83:CA:303:GLN:HB2	1.88	0.55
1:L5:364:G:O6	39:Lj:55:ARG:NH2	2.40	0.55
1:L5:513:U:O2'	1:L5:515:C:N4	2.39	0.55
1:L5:703:G:H2'	1:L5:704:C:H4'	1.89	0.55
1:L5:2297:G:H4'	6:LC:242:PRO:HB2	1.89	0.55
7:LD:207:TYR:CE1	7:LD:211:LEU:HD23	2.41	0.55
14:LK:116:MET:HE1	14:LK:119:ARG:HD3	1.87	0.55
45:Lp:11:VAL:HG11	45:Lp:23:ARG:O	2.06	0.55
49:S2:793:G:H2'	49:S2:794:A:C8	2.42	0.55
49:S2:1139:C:H2'	49:S2:1140:G:O4'	2.06	0.55
53:SE:11:ARG:HA	53:SE:28:ALA:HB2	1.89	0.55
70:Sg:299:PHE:CD1	70:Sg:309:VAL:HG12	2.42	0.55
1:L5:1994:C:H2'	1:L5:1995:G:H8	1.72	0.55
1:L5:3715:U:O2'	85:CC:70:C:O2	2.25	0.55
3:L8:93:C:OP1	39:Lj:76:HIS:NE2	2.35	0.55
12:LI:212:LEU:O	12:LI:214:SER:N	2.40	0.55
34:Le:87:VAL:HG21	46:Lr:27:THR:HG22	1.88	0.55
38:Li:41:ARG:O	38:Li:45:ARG:HG2	2.07	0.55
44:Lo:22:LYS:NZ	44:Lo:73:VAL:HG12	2.20	0.55
47:Ls:55:MET:SD	47:Ls:87:GLY:HA3	2.47	0.55
49:S2:388:U:H2'	49:S2:389:A:C8	2.42	0.55
51:SB:66:VAL:HG11	51:SB:85:LYS:HE2	1.89	0.55
55:SH:142:LYS:HB3	77:SW:54:ASP:HB3	1.88	0.55
84:CB:27:HIS:ND1	84:CB:138:GLN:HB2	2.22	0.55
1:L5:4281:A:H2'	1:L5:4282:A:H2'	1.89	0.54
3:L8:126:C:O2'	3:L8:127:U:O5'	2.25	0.54
4:LA:20:VAL:HA	4:LA:23:ARG:HG3	1.88	0.54
5:LB:108:GLU:OE1	5:LB:138:GLN:NE2	2.36	0.54
10:LG:95:LEU:HD21	10:LG:156:VAL:HG21	1.89	0.54
13:LJ:53:ALA:HB2	13:LJ:68:ILE:HG13	1.89	0.54
36:Lg:69:LYS:O	36:Lg:73:HIS:ND1	2.39	0.54
47:Ls:20:LEU:O	47:Ls:23:ASP:C	2.50	0.54
49:S2:455:A:H2'	49:S2:456:C:C6	2.42	0.54
49:S2:932:G:O2'	49:S2:934:G:OP2	2.21	0.54
1:L5:2475:G:H5''	1:L5:2476:G:C8	2.42	0.54
1:L5:4472:G:O2'	42:Lm:100:TYR:O	2.25	0.54
4:LA:101:VAL:HG22	4:LA:165:VAL:HG22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LF:59:LYS:HE2	9:LF:63:GLN:NE2	2.22	0.54
34:Le:82:VAL:HG12	34:Le:86:GLU:OE2	2.07	0.54
49:S2:534:G:H2'	49:S2:535:G:H8	1.72	0.54
54:SF:30:ILE:HD13	54:SF:113:VAL:HG11	1.87	0.54
63:ST:6:VAL:O	63:ST:11:GLN:NE2	2.40	0.54
76:SO:117:ARG:HG2	76:SO:121:ARG:HE	1.71	0.54
76:SO:149:ARG:HE	76:SO:151:LEU:HD13	1.71	0.54
83:CA:163:ASN:O	83:CA:167:THR:HG23	2.07	0.54
1:L5:163:A:H2'	1:L5:164:G:H8	1.72	0.54
1:L5:2002:A:N6	14:LK:138:SER:HB2	2.23	0.54
49:S2:388:U:H2'	49:S2:389:A:H8	1.72	0.54
51:SB:185:VAL:O	51:SB:189:ILE:HG12	2.07	0.54
52:SD:158:ILE:HG13	52:SD:164:VAL:HG12	1.89	0.54
55:SH:98:ARG:HB2	55:SH:125:VAL:HG13	1.90	0.54
61:SR:104:GLU:HA	61:SR:107:LYS:HG2	1.89	0.54
62:SS:40:TYR:HA	62:SS:83:PHE:CE2	2.42	0.54
84:CB:562:GLU:OE2	84:CB:572:LYS:NZ	2.40	0.54
1:L5:3910:C:H2'	1:L5:3911:C:H6	1.73	0.54
1:L5:4743:G:H2'	1:L5:4744:A:C8	2.42	0.54
3:L8:148:A:H2'	3:L8:149:G:C8	2.42	0.54
5:LB:74:GLU:OE1	5:LB:285:TYR:OH	2.22	0.54
22:LS:31:ARG:HH21	22:LS:33:PHE:HZ	1.53	0.54
49:S2:17:C:H2'	49:S2:18:C:C6	2.42	0.54
49:S2:171:A:P	72:SG:137:ARG:HD3	2.48	0.54
49:S2:346:C:H5''	53:SE:38:LEU:HD23	1.87	0.54
51:SB:179:ASN:HB3	51:SB:183:GLU:HB2	1.90	0.54
71:SC:184:VAL:CG2	71:SC:246:LYS:HG3	2.36	0.54
84:CB:208:VAL:HG13	84:CB:258:LYS:HA	1.90	0.54
84:CB:396:MET:HG2	84:CB:485:ILE:HB	1.89	0.54
84:CB:756:VAL:HA	84:CB:759:ILE:HG12	1.90	0.54
1:L5:4457:U:H1'	5:LB:252:ALA:HB3	1.90	0.54
15:LL:90:VAL:O	15:LL:94:ILE:HG12	2.07	0.54
27:LX:151:ASN:OD1	27:LX:156:ILE:HD12	2.06	0.54
49:S2:1601:A:OP2	49:S2:1636:G:N2	2.36	0.54
53:SE:202:PRO:C	53:SE:204:SER:H	2.15	0.54
76:SO:64:ALA:O	76:SO:66:ARG:N	2.40	0.54
83:CA:206:THR:HG22	83:CA:207:ASP:H	1.73	0.54
1:L5:135:G:N2	37:Lh:94:ARG:HE	2.04	0.54
1:L5:500:G:N3	1:L5:504:G:O2'	2.35	0.54
1:L5:2008:U:H1'	1:L5:2011:C:H5	1.73	0.54
1:L5:2709:C:H41	83:CA:256:GLY:C	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Lb:90:SER:HB2	31:Lb:95:ARG:HH21	1.73	0.54
38:Li:45:ARG:NH2	38:Li:50:PHE:CE1	2.76	0.54
49:S2:159:A:H61	49:S2:467:G:HO2'	1.55	0.54
70:Sg:61:GLY:O	70:Sg:88:ARG:NH2	2.41	0.54
70:Sg:164:ILE:HD12	70:Sg:185:LYS:NZ	2.22	0.54
74:SM:59:PRO:HA	74:SM:62:VAL:HG22	1.89	0.54
84:CB:84:ASN:OD1	84:CB:85:ASP:N	2.40	0.54
49:S2:886:A:C6	49:S2:901:G:C4	2.94	0.54
74:SM:89:VAL:HG21	74:SM:109:VAL:HG21	1.89	0.54
84:CB:756:VAL:O	84:CB:759:ILE:HG12	2.07	0.54
1:L5:4518:A:O5'	1:L5:4520:G:H4'	2.08	0.54
31:Lb:61:ASN:O	31:Lb:65:MET:HG2	2.06	0.54
49:S2:1868:U:O2'	67:Sa:100:ARG:NH1	2.40	0.54
72:SG:120:ASP:OD1	72:SG:125:THR:OG1	2.18	0.54
1:L5:1317:U:H2'	1:L5:1318:C:C6	2.42	0.54
1:L5:2539:C:H2'	1:L5:2540:C:C6	2.43	0.54
1:L5:2800:G:H1'	39:Lj:9:GLY:HA3	1.89	0.54
1:L5:4099:G:H2'	1:L5:4101:C:H41	1.73	0.54
1:L5:4966:A:H5'	5:LB:128:LYS:HG3	1.88	0.54
3:L8:65:A:O2'	37:Lh:10:ARG:NH2	2.41	0.54
30:La:77:LYS:O	30:La:80:THR:OG1	2.22	0.54
37:Lh:44:LEU:O	37:Lh:47:ILE:HB	2.08	0.54
45:Lp:26:VAL:O	45:Lp:30:GLU:HG2	2.08	0.54
49:S2:15:U:H2'	49:S2:16:G:O4'	2.08	0.54
66:SX:77:ASN:ND2	66:SX:79:LYS:HD2	2.23	0.54
68:Sc:36:ASP:OD1	68:Sc:37:ASP:N	2.41	0.54
72:SG:213:LEU:O	72:SG:216:ARG:C	2.51	0.54
83:CA:113:HIS:CB	83:CA:276:MET:HE3	2.38	0.54
84:CB:35:LEU:HD11	84:CB:156:MET:HE1	1.89	0.54
84:CB:337:LYS:O	84:CB:341:ARG:HG3	2.08	0.54
1:L5:1645:C:H2'	1:L5:1646:A:C8	2.42	0.54
1:L5:2602:G:H2'	1:L5:2603:C:C6	2.43	0.54
1:L5:4055:U:H2'	1:L5:4056:A:C8	2.43	0.54
4:LA:45:VAL:O	4:LA:85:GLY:N	2.40	0.54
7:LD:205:ALA:HA	7:LD:236:MET:HE1	1.89	0.54
23:LT:116:LYS:O	23:LT:120:LYS:HG2	2.07	0.54
35:Lf:96:ALA:O	35:Lf:99:HIS:HB2	2.08	0.54
47:Ls:19:GLN:NE2	47:Ls:23:ASP:OD2	2.41	0.54
47:Ls:43:ILE:HA	47:Ls:105:ASN:ND2	2.23	0.54
49:S2:693:A:N6	49:S2:738:C:HO2'	2.05	0.54
52:SD:40:ARG:HH22	64:SU:106:ILE:HD12	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SE:21:ASP:OD2	53:SE:24:THR:HG23	2.08	0.54
65:SV:12:TYR:CZ	71:SC:248:TYR:CZ	2.96	0.54
67:Sa:102:ARG:HD2	67:Sa:102:ARG:H	1.72	0.54
84:CB:753:GLU:HB2	84:CB:780:PRO:O	2.08	0.54
1:L5:216:C:OP2	1:L5:219:G:O2'	2.24	0.53
1:L5:935:A:O4'	16:LM:44:GLN:OE1	2.25	0.53
1:L5:1333:A:H2'	1:L5:1334:A:C8	2.43	0.53
1:L5:4967:A:H2'	1:L5:4968:A:H8	1.72	0.53
7:LD:208:MET:C	7:LD:212:MET:HE3	2.33	0.53
8:LE:157:HIS:CD2	8:LE:187:ARG:HH11	2.26	0.53
25:LV:112:MET:HG2	25:LV:114:GLY:H	1.73	0.53
45:Lp:38:THR:HA	45:Lp:45:THR:HA	1.89	0.53
49:S2:1653:U:H2'	49:S2:1654:G:C8	2.43	0.53
58:SL:48:LYS:O	58:SL:52:GLU:HG3	2.08	0.53
70:Sg:198:VAL:HG12	70:Sg:209:SER:HB2	1.90	0.53
71:SC:167:ARG:HB3	71:SC:177:PRO:HB2	1.89	0.53
84:CB:160:MET:HE3	84:CB:174:LEU:HD21	1.90	0.53
84:CB:533:MET:HE1	84:CB:549:ALA:N	2.23	0.53
1:L5:2748:C:O2'	36:Lg:61:PRO:O	2.26	0.53
1:L5:3648:A:H1'	1:L5:3785:A:N6	2.23	0.53
1:L5:4162:C:H5	10:LG:73:ARG:HH12	1.55	0.53
7:LD:212:MET:HE2	7:LD:219:TYR:CE1	2.43	0.53
12:LI:212:LEU:C	12:LI:214:SER:H	2.17	0.53
49:S2:67:C:C2	72:SG:164:LYS:HD2	2.43	0.53
49:S2:329:G:H2'	49:S2:330:G:H8	1.69	0.53
49:S2:656:G:O2'	71:SC:227:ARG:NH1	2.41	0.53
49:S2:1406:G:H2'	49:S2:1407:U:C6	2.43	0.53
49:S2:1756:C:H41	49:S2:1757:G:N2	1.98	0.53
59:SP:30:TYR:O	59:SP:34:MET:HG3	2.08	0.53
61:SR:103:LYS:HE2	61:SR:117:LEU:HD13	1.89	0.53
64:SU:20:ILE:CD1	64:SU:98:VAL:HG21	2.37	0.53
76:SO:58:GLY:O	76:SO:62:VAL:HG22	2.09	0.53
82:Sf:102:VAL:HB	82:Sf:104:LYS:HD3	1.89	0.53
84:CB:374:GLU:HG2	84:CB:495:ARG:HD3	1.89	0.53
1:L5:1786:A:H2'	1:L5:1789:C:C5	2.44	0.53
6:LC:163:LYS:HB2	6:LC:166:GLU:HG3	1.91	0.53
15:LL:206:ASP:OD1	15:LL:209:LYS:NZ	2.42	0.53
31:Lb:91:ARG:HG3	31:Lb:94:ASP:OD1	2.08	0.53
33:Ld:22:THR:HG22	33:Ld:122:VAL:HB	1.90	0.53
49:S2:455:A:H2'	49:S2:456:C:H6	1.74	0.53
79:SZ:103:HIS:CE1	79:SZ:104:ARG:HG2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CA:134:GLN:HE22	83:CA:344:LYS:NZ	2.07	0.53
1:L5:93:G:H2'	1:L5:94:A:C8	2.44	0.53
1:L5:4685:U:H2'	1:L5:4686:G:C8	2.42	0.53
5:LB:223:THR:O	5:LB:274:TYR:CA	2.56	0.53
7:LD:181:PRO:HD2	7:LD:195:HIS:CD2	2.43	0.53
49:S2:1667:U:H2'	49:S2:1668:U:C6	2.44	0.53
54:SF:127:ARG:HB3	54:SF:135:ARG:NH2	2.23	0.53
64:SU:66:ARG:O	64:SU:66:ARG:NH1	2.38	0.53
74:SM:114:TYR:CE1	74:SM:123:VAL:HG21	2.44	0.53
76:SO:138:ASP:OD1	76:SO:139:SER:N	2.40	0.53
78:SY:51:THR:O	78:SY:54:VAL:HG12	2.08	0.53
1:L5:1762:C:N3	1:L5:1770:A:N1	2.57	0.53
1:L5:2029:A:H2'	1:L5:2030:A:C8	2.43	0.53
1:L5:2520:C:H2'	1:L5:2521:G:H8	1.73	0.53
39:Lj:2:THR:HG22	39:Lj:4:GLY:H	1.72	0.53
50:SA:7:VAL:HG13	50:SA:8:LEU:HG	1.90	0.53
51:SB:198:GLU:O	51:SB:202:GLN:HG2	2.08	0.53
53:SE:98:ASN:O	53:SE:114:ILE:HG12	2.09	0.53
1:L5:1070:G:O2'	1:L5:1071:C:O5'	2.24	0.53
1:L5:2786:C:O2'	1:L5:2787:A:OP2	2.23	0.53
1:L5:3965:A:O2'	1:L5:4050:A:OP2	2.18	0.53
1:L5:4054:C:H5'	1:L5:4055:U:H5	1.73	0.53
1:L5:4238:G:H2'	1:L5:4239:A:C8	2.43	0.53
26:LW:104:GLN:O	26:LW:107:GLN:HG3	2.08	0.53
40:Lk:26:LYS:HA	40:Lk:69:LEU:HB2	1.90	0.53
50:SA:145:ILE:HG12	50:SA:159:ILE:HB	1.91	0.53
50:SA:198:MET:SD	50:SA:200:ASP:HB2	2.48	0.53
54:SF:19:LEU:HD22	54:SF:109:LEU:HD21	1.90	0.53
56:SI:118:ALA:C	56:SI:119:LEU:HD12	2.33	0.53
59:SP:110:GLU:HG3	62:SS:117:ILE:CG2	2.39	0.53
67:Sa:45:VAL:HG21	67:Sa:64:LEU:HD13	1.91	0.53
68:Sc:14:VAL:HG23	68:Sc:53:GLY:H	1.72	0.53
83:CA:162:GLN:O	83:CA:166:VAL:HG23	2.09	0.53
49:S2:549:C:C4	49:S2:550:C:N4	2.76	0.53
49:S2:1337:C:H4'	64:SU:67:LYS:O	2.09	0.53
49:S2:1413:G:H2'	49:S2:1414:A:C8	2.44	0.53
52:SD:161:GLY:C	52:SD:163:PRO:HD2	2.33	0.53
72:SG:5:ILE:HG21	72:SG:124:LEU:HD11	1.91	0.53
76:SO:67:ASP:O	76:SO:70:SER:OG	2.19	0.53
83:CA:113:HIS:HB2	83:CA:276:MET:HE3	1.89	0.53
1:L5:685:C:H5'	8:LE:101:ASN:ND2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1973:G:H5''	14:LK:119:ARG:HE	1.74	0.53
1:L5:4113:U:O2'	1:L5:4115:G:OP2	2.26	0.53
3:L8:62:A:OP1	37:Lh:52:LYS:NZ	2.40	0.53
4:LA:181:LYS:HB2	4:LA:184:ARG:HG3	1.89	0.53
8:LE:152:ILE:O	8:LE:159:GLY:N	2.41	0.53
10:LG:102:TYR:CE2	10:LG:207:VAL:HG23	2.43	0.53
39:Lj:21:ARG:O	39:Lj:22:CYS:SG	2.66	0.53
49:S2:1232:U:H2'	49:S2:1233:G:H8	1.73	0.53
49:S2:1308:U:H2'	49:S2:1309:C:H6	1.73	0.53
49:S2:1861:G:H5''	67:Sa:3:LYS:HA	1.91	0.53
53:SE:102:ILE:HD13	53:SE:239:PRO:HD3	1.90	0.53
68:Sc:30:VAL:HG11	68:Sc:50:VAL:HG11	1.90	0.53
69:Sd:23:VAL:HG21	69:Sd:38:MET:HE3	1.91	0.53
84:CB:32:LYS:NZ	90:CB:1001:ADP:O2B	2.40	0.53
84:CB:429:ILE:HG23	84:CB:485:ILE:HG12	1.91	0.53
1:L5:2859:G:H2'	1:L5:2860:C:H6	1.74	0.53
1:L5:3595:U:H5''	1:L5:3597:G:OP2	2.08	0.53
1:L5:3732:A:H2'	1:L5:3733:A:C8	2.43	0.53
1:L5:4371:G:H5'	85:CC:75:A:H62	1.74	0.53
39:Lj:34:CYS:HB3	39:Lj:39:TYR:H	1.74	0.53
47:Ls:65:ILE:HG23	47:Ls:75:LEU:HB3	1.90	0.53
49:S2:1315:U:H4'	57:SK:2:LEU:HD23	1.91	0.53
56:SI:10:LYS:HB3	58:SL:136:LYS:HZ2	1.74	0.53
63:ST:133:ARG:C	63:ST:137:GLN:NE2	2.67	0.53
74:SM:126:GLU:HA	74:SM:129:LYS:HE2	1.91	0.53
79:SZ:74:SER:O	79:SZ:77:LEU:C	2.52	0.53
1:L5:3667:C:O2'	4:LA:11:GLY:HA3	2.08	0.53
1:L5:4537:C:H2'	1:L5:4538:G:H8	1.73	0.53
1:L5:4600:G:HO2'	1:L5:4609:G:H1	1.55	0.53
34:Le:28:TYR:HB2	34:Le:31:ILE:HG12	1.91	0.53
43:Ln:12:ARG:HG2	43:Ln:15:ARG:HH22	1.73	0.53
52:SD:195:THR:HA	52:SD:201:LYS:HA	1.91	0.53
70:Sg:215:GLN:HG3	70:Sg:231:ASP:HB2	1.91	0.53
82:Sf:137:ASP:OD1	82:Sf:138:ARG:N	2.42	0.53
1:L5:4064:C:H4'	1:L5:4065:G:OP1	2.09	0.52
4:LA:31:ALA:HB2	4:LA:123:ARG:HH22	1.74	0.52
7:LD:62:CYS:HB3	7:LD:105:LEU:HD22	1.91	0.52
24:LU:37:ALA:HB2	24:LU:65:ARG:HH12	1.74	0.52
49:S2:60:A:N3	49:S2:316:G:O2'	2.40	0.52
49:S2:1277:C:H4'	57:SK:55:ARG:HG3	1.91	0.52
53:SE:87:MET:N	53:SE:101:LEU:O	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:152:SER:H	70:Sg:169:GLY:HA2	1.73	0.52
84:CB:56:PHE:CD1	84:CB:456:ARG:HG3	2.43	0.52
84:CB:235:LYS:HG3	84:CB:236:PHE:CD1	2.44	0.52
84:CB:505:VAL:HG21	84:CB:550:GLY:HA2	1.91	0.52
1:L5:106:A:H2'	1:L5:107:G:O4'	2.09	0.52
1:L5:2856:C:O2	5:LB:242:ARG:NH2	2.41	0.52
1:L5:4092:G:N7	1:L5:4114:C:N4	2.56	0.52
5:LB:196:TRP:O	5:LB:200:ARG:HD3	2.09	0.52
33:Ld:57:MET:HE3	33:Ld:90:ARG:HB2	1.91	0.52
42:Lm:126:LYS:HB3	42:Lm:128:LYS:HG2	1.90	0.52
49:S2:682:U:O2'	77:SW:4:MET:SD	2.58	0.52
49:S2:1495:G:H4'	69:Sd:26:ASN:HD22	1.72	0.52
51:SB:71:LEU:HD22	51:SB:84:PHE:HE1	1.74	0.52
52:SD:226:GLN:HG3	70:Sg:186:THR:OG1	2.09	0.52
53:SE:252:ARG:HG2	53:SE:256:LEU:HD13	1.91	0.52
56:SI:34:ALA:HB2	56:SI:56:ARG:HD2	1.92	0.52
66:SX:58:GLU:OE1	66:SX:66:ILE:HD13	2.09	0.52
67:Sa:29:CYS:CB	76:SO:146:ARG:HG3	2.39	0.52
1:L5:4743:G:H2'	1:L5:4744:A:H8	1.74	0.52
13:LJ:35:ARG:HG2	13:LJ:123:ILE:HD13	1.90	0.52
14:LK:90:ARG:NH1	14:LK:91:ASP:H	2.05	0.52
29:LZ:58:GLY:O	29:LZ:62:ILE:HG12	2.09	0.52
49:S2:64:A:N6	49:S2:83:A:OP2	2.42	0.52
49:S2:94:G:O2'	49:S2:508:A:O2'	2.23	0.52
49:S2:1415:C:H4'	63:ST:129:ARG:CZ	2.39	0.52
52:SD:172:VAL:HG22	52:SD:185:LYS:HG2	1.90	0.52
60:SQ:112:LEU:HD22	60:SQ:119:LEU:HD13	1.91	0.52
83:CA:81:SER:OG	83:CA:107:LYS:HE2	2.09	0.52
1:L5:1175:A:N1	1:L5:1185:G:C6	2.76	0.52
1:L5:1788:A:H2'	12:LI:22:PHE:CZ	2.45	0.52
1:L5:3968:U:O4	1:L5:4053:A:O2'	2.26	0.52
1:L5:4040:C:H5'	1:L5:4045:G:H22	1.73	0.52
14:LK:35:LEU:HA	14:LK:67:ARG:HH22	1.74	0.52
19:LP:105:LYS:HG3	19:LP:107:LEU:HG	1.91	0.52
26:LW:80:ARG:HH22	72:SG:129:VAL:HG23	1.75	0.52
49:S2:987:A:N6	51:SB:120:MET:HE1	2.24	0.52
51:SB:137:LEU:HD13	51:SB:215:VAL:HG22	1.91	0.52
52:SD:71:ALA:O	52:SD:74:GLN:HG3	2.08	0.52
60:SQ:5:GLY:N	60:SQ:27:ARG:HH22	2.07	0.52
72:SG:181:THR:HG23	72:SG:184:VAL:H	1.74	0.52
84:CB:250:ALA:O	84:CB:254:GLU:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:677:G:H2'	1:L5:678:C:C6	2.45	0.52
1:L5:685:C:H5'	8:LE:101:ASN:HD22	1.75	0.52
1:L5:2554:U:O2	1:L5:2764:A:N7	2.42	0.52
1:L5:4076:G:OP1	10:LG:73:ARG:NE	2.34	0.52
1:L5:4342:C:O3'	44:Lo:37:GLY:HA3	2.09	0.52
3:L8:81:C:H5''	37:Lh:3:LYS:HZ3	1.74	0.52
24:LU:41:GLN:O	24:LU:45:GLU:OE1	2.27	0.52
47:Ls:94:ASP:HB3	47:Ls:97:GLU:OE2	2.09	0.52
49:S2:1217:A:H2'	49:S2:1218:C:C6	2.44	0.52
49:S2:1377:U:H3'	50:SA:102:ARG:HH12	1.75	0.52
52:SD:75:LYS:HZ1	57:SK:20:VAL:HG23	1.74	0.52
63:ST:44:GLU:O	63:ST:45:LEU:HB2	2.09	0.52
72:SG:41:LEU:HD23	72:SG:45:TRP:CD2	2.44	0.52
72:SG:58:LYS:HG2	72:SG:105:ASN:O	2.10	0.52
83:CA:122:ALA:HB3	83:CA:320:LYS:HB3	1.91	0.52
4:LA:149:LYS:HD2	4:LA:155:LYS:HE2	1.91	0.52
11:LH:95:VAL:HG22	42:Lm:82:LEU:HB3	1.92	0.52
17:LN:104:GLU:HA	17:LN:160:GLU:HG3	1.91	0.52
17:LN:185:GLY:HA3	17:LN:194:ARG:HH12	1.75	0.52
24:LU:47:ILE:HD12	24:LU:63:ILE:HD11	1.92	0.52
31:Lb:67:ALA:O	31:Lb:70:GLU:HG3	2.09	0.52
49:S2:1405:A:H2'	49:S2:1406:G:O4'	2.10	0.52
51:SB:146:ARG:HE	51:SB:206:PRO:HG2	1.74	0.52
59:SP:93:MET:HE2	59:SP:104:GLN:HE21	1.70	0.52
67:Sa:26:CYS:SG	67:Sa:28:ARG:HB2	2.50	0.52
83:CA:20:LYS:HA	83:CA:23:MET:HE2	1.92	0.52
83:CA:286:GLU:OE2	83:CA:290:ARG:NE	2.42	0.52
1:L5:137:G:H2'	1:L5:138:G:C8	2.45	0.52
1:L5:1604:G:H2'	1:L5:1605:G:C8	2.45	0.52
1:L5:1613:A:H5''	4:LA:183:GLY:CA	2.40	0.52
5:LB:106:PHE:O	5:LB:137:TRP:NE1	2.36	0.52
22:LS:31:ARG:NH2	22:LS:102:THR:HG21	2.24	0.52
34:Le:85:LEU:HD21	34:Le:115:ALA:HB2	1.91	0.52
47:Ls:39:GLN:NE2	47:Ls:43:ILE:HD11	2.24	0.52
49:S2:693:A:H2'	49:S2:694:G:C8	2.45	0.52
49:S2:1144:A:H2'	49:S2:1145:A:C8	2.45	0.52
53:SE:198:ARG:HH12	53:SE:222:LEU:HD22	1.74	0.52
54:SF:28:VAL:HG12	54:SF:110:GLN:HB2	1.92	0.52
55:SH:63:PHE:HA	55:SH:95:ILE:O	2.10	0.52
60:SQ:146:ARG:NH1	85:CC:34:A:OP2	2.42	0.52
61:SR:50:ILE:O	61:SR:54:VAL:HG23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SY:59:GLY:O	78:SY:71:GLY:CA	2.54	0.52
79:SZ:50:PHE:CE2	79:SZ:55:TYR:HB2	2.45	0.52
83:CA:192:GLN:HE22	83:CA:193:HIS:CE1	2.27	0.52
84:CB:831:PRO:O	84:CB:835:VAL:HG23	2.10	0.52
1:L5:280:G:H5''	17:LN:14:LYS:HE2	1.92	0.52
10:LG:260:GLU:O	10:LG:264:LYS:HG2	2.10	0.52
21:LR:183:GLU:O	21:LR:186:LYS:HG3	2.10	0.52
27:LX:143:ASP:N	27:LX:143:ASP:OD1	2.42	0.52
52:SD:161:GLY:O	52:SD:164:VAL:HG22	2.10	0.52
70:Sg:64:HIS:HD2	70:Sg:83:TRP:HB2	1.75	0.52
70:Sg:193:GLY:N	70:Sg:213:ASP:OD2	2.42	0.52
1:L5:691:C:H2'	1:L5:692:A:C8	2.45	0.52
1:L5:2033:A:O2'	1:L5:2034:G:O5'	2.28	0.52
1:L5:4430:G:P	12:LI:30:LYS:NZ	2.82	0.52
15:LL:142:GLU:OE2	15:LL:146:LEU:HD22	2.10	0.52
16:LM:85:LYS:O	16:LM:89:THR:HG23	2.10	0.52
27:LX:147:LEU:HD11	83:CA:291:MET:HG3	1.92	0.52
34:Le:89:LEU:O	34:Le:92:ASN:ND2	2.43	0.52
49:S2:29:G:H2'	49:S2:30:C:C6	2.45	0.52
49:S2:67:C:N4	72:SG:170:ARG:HG2	2.24	0.52
49:S2:1304:U:H5'	82:Sf:93:HIS:O	2.10	0.52
49:S2:1845:A:H2'	49:S2:1846:G:C8	2.45	0.52
52:SD:27:ARG:NH1	57:SK:62:PHE:O	2.42	0.52
56:SI:61:ASP:OD1	56:SI:62:VAL:HG13	2.10	0.52
70:Sg:64:HIS:NE2	70:Sg:83:TRP:CE3	2.78	0.52
84:CB:9:ILE:O	84:CB:13:MET:HG3	2.10	0.52
1:L5:1617:G:H1'	1:L5:2513:A:N6	2.25	0.52
1:L5:1802:A:H5''	1:L5:1803:G:H5'	1.92	0.52
1:L5:4910:G:H4'	5:LB:95:THR:HG22	1.90	0.52
16:LM:74:ARG:HG2	16:LM:74:ARG:HH11	1.75	0.52
27:LX:37:LYS:HG2	27:LX:38:LYS:HA	1.92	0.52
34:Le:82:VAL:HG13	34:Le:114:ARG:HG2	1.92	0.52
36:Lg:45:ALA:HB3	36:Lg:82:MET:HE2	1.92	0.52
47:Ls:24:TYR:CB	47:Ls:90:PHE:HB3	2.40	0.52
50:SA:15:VAL:HG21	61:SR:111:PHE:CD2	2.44	0.52
52:SD:70:THR:HG22	52:SD:86:LEU:HB2	1.91	0.52
60:SQ:42:ILE:HG13	60:SQ:51:LEU:HD13	1.92	0.52
84:CB:156:MET:C	84:CB:156:MET:SD	2.92	0.52
84:CB:323:LEU:HD23	84:CB:328:LYS:HA	1.92	0.52
84:CB:445:LYS:HE2	84:CB:478:PHE:CZ	2.44	0.52
84:CB:451:ILE:HG22	84:CB:471:GLY:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:CC:22:C:H2'	85:CC:23:G:H8	1.74	0.52
1:L5:1187:G:H2'	1:L5:1188:C:C6	2.45	0.51
1:L5:1755:C:N3	7:LD:3:PHE:HZ	2.07	0.51
1:L5:3952:A:H2'	1:L5:3953:G:C8	2.45	0.51
1:L5:4099:G:H2'	1:L5:4101:C:N4	2.25	0.51
36:Lg:43:LYS:HE3	36:Lg:52:ARG:NH2	2.24	0.51
49:S2:857:U:H2'	49:S2:858:A:H8	1.75	0.51
49:S2:900:C:H5'	49:S2:901:G:N7	2.26	0.51
53:SE:173:ILE:HD11	53:SE:235:TRP:CD2	2.45	0.51
55:SH:33:ASN:CG	55:SH:37:LYS:HE3	2.35	0.51
55:SH:43:LEU:HD12	55:SH:75:ILE:HD11	1.91	0.51
55:SH:66:VAL:O	55:SH:69:LEU:HB3	2.09	0.51
74:SM:86:GLY:HA3	74:SM:106:CYS:H	1.74	0.51
1:L5:162:A:H2'	1:L5:163:A:H8	1.76	0.51
1:L5:433:A:C2	1:L5:3867:A:H4'	2.45	0.51
1:L5:1095:A:N1	1:L5:1200:G:C6	2.79	0.51
1:L5:1345:A:H2'	1:L5:1346:C:C6	2.45	0.51
1:L5:2415:U:H2'	1:L5:2416:G:C8	2.46	0.51
1:L5:2520:C:H2'	1:L5:2521:G:C8	2.46	0.51
1:L5:3937:C:H1'	17:LN:125:SER:HB3	1.92	0.51
3:L8:102:G:OP2	3:L8:104:A:O2'	2.27	0.51
14:LK:13:VAL:HG23	14:LK:62:LEU:HB2	1.92	0.51
27:LX:121:VAL:HA	27:LX:140:LEU:HA	1.92	0.51
47:Ls:81:HIS:ND1	47:Ls:191:GLN:HG3	2.26	0.51
49:S2:10:G:O2'	71:SC:113:GLN:NE2	2.43	0.51
49:S2:194:C:H2'	49:S2:195:C:H6	1.74	0.51
49:S2:543:C:H3'	49:S2:544:G:H8	1.74	0.51
49:S2:748:C:N3	49:S2:795:A:N1	2.59	0.51
49:S2:1442:U:C2	60:SQ:11:GLN:NE2	2.78	0.51
51:SB:39:PHE:HA	51:SB:75:GLN:OE1	2.10	0.51
55:SH:10:LYS:HG2	55:SH:17:ASP:OD2	2.10	0.51
70:Sg:251:ALA:HB2	70:Sg:289:LEU:CD2	2.41	0.51
83:CA:289:ALA:O	83:CA:293:VAL:HG23	2.11	0.51
84:CB:362:VAL:HG23	84:CB:363:THR:HG23	1.91	0.51
86:CD:206:HIS:CE1	86:CD:208:ASP:OD1	2.64	0.51
1:L5:132:G:H2'	1:L5:133:C:H4'	1.91	0.51
1:L5:1175:A:H2	1:L5:1185:G:C2	2.26	0.51
28:LY:109:LEU:HD22	28:LY:115:ARG:NH2	2.25	0.51
40:Lk:23:VAL:HG23	40:Lk:64:LEU:HD21	1.92	0.51
49:S2:544:G:H2'	49:S2:545:A:C8	2.45	0.51
49:S2:874:G:H2'	49:S2:875:A:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SH:129:ILE:HG21	55:SH:180:LEU:CD1	2.38	0.51
60:SQ:116:ASP:OD1	60:SQ:118:THR:OG1	2.22	0.51
62:SS:114:LEU:HD21	62:SS:121:ARG:HH21	1.75	0.51
65:SV:16:LYS:NZ	71:SC:257:LYS:O	2.43	0.51
70:Sg:26:GLN:NE2	70:Sg:75:GLY:HA3	2.25	0.51
84:CB:675:ILE:HD12	84:CB:721:ILE:HG13	1.92	0.51
1:L5:325:U:H2'	1:L5:326:C:C6	2.45	0.51
1:L5:1308:C:H2'	1:L5:1309:C:C6	2.45	0.51
1:L5:1369:C:OP2	1:L5:1370:G:O2'	2.24	0.51
1:L5:1419:G:O6	30:La:119:LYS:NZ	2.38	0.51
6:LC:8:ILE:HG23	6:LC:149:GLU:OE1	2.11	0.51
29:LZ:50:PRO:HD3	29:LZ:68:ILE:HG12	1.92	0.51
30:La:75:LEU:HD11	30:La:133:ALA:HA	1.91	0.51
36:Lg:40:LYS:HD3	36:Lg:52:ARG:NH2	2.25	0.51
49:S2:587:A:H5'	49:S2:592:C:H42	1.74	0.51
49:S2:786:G:H5''	72:SG:231:ARG:HA	1.92	0.51
49:S2:1229:G:H2'	49:S2:1230:C:C6	2.45	0.51
49:S2:1446:A:H5''	64:SU:58:THR:HG23	1.92	0.51
50:SA:33:GLN:HB3	50:SA:154:LEU:HD12	1.91	0.51
63:ST:42:HIS:HB3	63:ST:93:SER:HB2	1.91	0.51
70:Sg:173:LEU:HG	70:Sg:175:LYS:HG2	1.92	0.51
1:L5:1802:A:H4'	23:LT:105:PHE:CE1	2.46	0.51
8:LE:130:LYS:N	8:LE:130:LYS:HD2	2.25	0.51
12:LI:152:LEU:HB3	12:LI:165:ILE:HD12	1.92	0.51
17:LN:123:GLU:O	17:LN:124:ASP:OD1	2.27	0.51
19:LP:111:SER:OG	19:LP:152:GLU:HG3	2.11	0.51
30:La:134:GLU:O	30:La:138:LYS:HG3	2.10	0.51
41:Ll:23:ILE:HG23	41:Ll:38:ASN:HB2	1.92	0.51
49:S2:77:A:H2'	49:S2:78:C:C6	2.46	0.51
49:S2:158:A:H2'	49:S2:159:A:O4'	2.10	0.51
54:SF:122:ARG:HG3	54:SF:146:ARG:NH1	2.26	0.51
57:SK:42:ASN:HA	57:SK:45:VAL:HG12	1.92	0.51
57:SK:42:ASN:O	57:SK:46:MET:HG3	2.09	0.51
62:SS:4:VAL:HA	79:SZ:50:PHE:CE2	2.45	0.51
64:SU:101:ILE:O	64:SU:104:ILE:HG22	2.11	0.51
74:SM:71:GLU:OE2	74:SM:72:HIS:ND1	2.40	0.51
78:SY:121:ALA:O	78:SY:125:VAL:HG22	2.11	0.51
83:CA:17:VAL:HG13	83:CA:20:LYS:NZ	2.26	0.51
84:CB:701:ARG:NH1	84:CB:703:ASP:OD1	2.44	0.51
1:L5:1:C:H3'	1:L5:2:G:H8	1.75	0.51
1:L5:162:A:H2'	1:L5:163:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1328:G:O2'	1:L5:2349:A:OP1	2.24	0.51
1:L5:1989:G:H2'	1:L5:1990:A:C8	2.46	0.51
1:L5:3973:G:N2	1:L5:3974:G:N7	2.59	0.51
17:LN:104:GLU:OE2	17:LN:108:ARG:NH2	2.43	0.51
49:S2:528:A:H2'	49:S2:529:A:C8	2.45	0.51
49:S2:1302:G:H21	82:Sf:95:ARG:NH2	2.08	0.51
49:S2:1550:G:H3'	49:S2:1579:A:H61	1.75	0.51
49:S2:1562:C:H2'	49:S2:1563:G:H8	1.76	0.51
50:SA:222:VAL:HG13	50:SA:223:THR:HG23	1.93	0.51
51:SB:68:GLU:OE2	51:SB:83:LYS:HB3	2.10	0.51
53:SE:220:THR:HG22	53:SE:221:ARG:H	1.76	0.51
84:CB:6:VAL:HA	84:CB:9:ILE:HD12	1.93	0.51
1:L5:1672:U:H2'	1:L5:1673:U:C6	2.46	0.51
1:L5:4935:C:H2'	1:L5:4936:G:H8	1.74	0.51
2:L7:23:A:N3	2:L7:118:C:O2'	2.34	0.51
3:L8:7:U:H2'	3:L8:8:U:C6	2.46	0.51
8:LE:191:GLN:HA	8:LE:194:VAL:HG22	1.93	0.51
10:LG:185:LYS:O	10:LG:189:ARG:HD3	2.11	0.51
11:LH:163:GLN:HA	11:LH:166:THR:HG23	1.92	0.51
12:LI:85:PHE:HD2	12:LI:87:MET:HG3	1.76	0.51
15:LL:207:VAL:HG12	15:LL:211:LYS:HD3	1.93	0.51
44:Lo:99:ARG:HH21	44:Lo:102:GLN:NE2	2.09	0.51
49:S2:159:A:N6	49:S2:467:G:HO2'	2.09	0.51
49:S2:1279:C:H2'	49:S2:1280:G:H8	1.76	0.51
49:S2:1718:G:O2'	49:S2:1815:A:N6	2.42	0.51
83:CA:189:GLN:NE2	83:CA:199:LYS:O	2.44	0.51
84:CB:267:ASP:HA	84:CB:285:LEU:HD12	1.91	0.51
1:L5:1662:C:H2'	1:L5:1663:C:C6	2.45	0.51
1:L5:2745:A:H2'	1:L5:2746:A:C8	2.46	0.51
14:LK:84:ALA:HB1	14:LK:104:ILE:HD11	1.92	0.51
18:LO:110:PRO:O	18:LO:113:ASP:OD1	2.28	0.51
24:LU:17:GLN:N	24:LU:19:LEU:HD22	2.25	0.51
49:S2:1144:A:H5'	49:S2:1355:C:H41	1.76	0.51
49:S2:1798:C:H2'	49:S2:1799:G:O4'	2.11	0.51
51:SB:198:GLU:HG2	51:SB:210:VAL:HB	1.92	0.51
54:Sf:91:ARG:HD2	79:SZ:103:HIS:CE1	2.46	0.51
59:SP:110:GLU:HG3	62:SS:117:ILE:HG22	1.92	0.51
62:SS:35:GLY:HA3	62:SS:99:LEU:HA	1.91	0.51
66:SX:74:LEU:O	66:SX:78:GLY:N	2.44	0.51
73:SJ:149:VAL:HG11	73:SJ:157:ILE:HD11	1.92	0.51
1:L5:460:C:H2'	1:L5:461:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L7:54:A:H8	13:LJ:9:GLU:CD	2.19	0.51
3:L8:110:U:H5'	41:Ll:8:ARG:HH12	1.76	0.51
6:LC:36:ILE:HD12	6:LC:122:TYR:CE2	2.46	0.51
13:LJ:20:LEU:O	13:LJ:131:TYR:O	2.29	0.51
31:Lb:69:ALA:O	31:Lb:73:LYS:HG2	2.10	0.51
51:SB:110:MET:O	51:SB:114:VAL:HG23	2.10	0.51
53:SE:176:ASP:OD1	53:SE:177:THR:N	2.43	0.51
55:SH:10:LYS:CE	55:SH:20:GLU:HG3	2.35	0.51
78:SY:114:MET:HA	78:SY:117:VAL:HG22	1.93	0.51
84:CB:24:VAL:CG2	84:CB:102:LEU:HD11	2.40	0.51
1:L5:2465:C:H2'	1:L5:2466:G:O4'	2.10	0.51
1:L5:3848:U:H2'	1:L5:3849:A:C8	2.46	0.51
49:S2:1010:G:H2'	49:S2:1011:A:C8	2.45	0.51
49:S2:1065:G:OP1	76:SO:149:ARG:NH1	2.43	0.51
49:S2:1171:G:O2'	49:S2:1187:G:O6	2.22	0.51
49:S2:1227:G:C2	49:S2:1228:A:C8	2.98	0.51
49:S2:1259:A:H1'	49:S2:1264:C:N4	2.25	0.51
51:SB:35:ALA:HB2	51:SB:44:ILE:HD11	1.93	0.51
52:SD:75:LYS:NZ	57:SK:20:VAL:HG23	2.25	0.51
55:SH:37:LYS:O	55:SH:41:ARG:HG3	2.10	0.51
62:SS:40:TYR:HA	62:SS:83:PHE:HE2	1.76	0.51
63:ST:116:ASP:OD1	63:ST:117:GLN:N	2.44	0.51
76:SO:98:ARG:HG2	76:SO:99:ALA:O	2.11	0.51
84:CB:157:MET:CE	84:CB:181:ILE:HB	2.40	0.51
1:L5:1273:G:C6	8:LE:73:TYR:HB2	2.45	0.50
11:LH:91:LYS:HD3	11:LH:143:GLU:OE2	2.10	0.50
29:LZ:43:VAL:HG11	29:LZ:75:TYR:HD2	1.76	0.50
38:Li:51:ALA:HB3	38:Li:54:GLU:HG3	1.92	0.50
49:S2:921:G:O5'	77:SW:28:ARG:NH2	2.44	0.50
49:S2:1017:U:H2'	49:S2:1018:U:C6	2.44	0.50
49:S2:1287:A:P	82:Sf:99:LYS:NZ	2.83	0.50
49:S2:1486:A:H4'	71:SC:118:ALA:HB2	1.93	0.50
49:S2:1487:A:H5'	71:SC:118:ALA:HA	1.92	0.50
49:S2:1513:C:H2'	49:S2:1514:G:H8	1.75	0.50
51:SB:175:GLU:HG3	51:SB:193:ILE:HG12	1.93	0.50
52:SD:8:LYS:HD3	64:SU:61:LEU:HD21	1.93	0.50
52:SD:54:ARG:HD3	52:SD:57:ASN:ND2	2.20	0.50
67:Sa:29:CYS:SG	76:SO:146:ARG:HG3	2.51	0.50
83:CA:31:VAL:CG2	83:CA:55:MET:HE3	2.38	0.50
83:CA:229:LEU:HA	83:CA:317:ALA:O	2.11	0.50
1:L5:1683:U:H2'	1:L5:1684:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LH:172:ILE:C	11:LH:174:LYS:O	2.54	0.50
13:LJ:24:ILE:HG12	13:LJ:128:LEU:HB3	1.93	0.50
28:LY:74:TYR:OH	28:LY:76:LYS:HD2	2.11	0.50
38:Li:56:ARG:HD3	38:Li:72:PHE:CZ	2.45	0.50
41:Ll:24:PRO:O	41:Ll:27:ILE:HB	2.11	0.50
44:Lo:22:LYS:HZ2	44:Lo:73:VAL:HG12	1.76	0.50
44:Lo:71:GLU:HG3	44:Lo:80:LYS:CD	2.41	0.50
49:S2:614:C:H5''	49:S2:615:C:C6	2.46	0.50
1:L5:1692:C:H4'	20:LQ:143:ARG:HH22	1.75	0.50
1:L5:4257:A:C2	13:LJ:60:PHE:HB3	2.46	0.50
6:LC:137:VAL:HG21	6:LC:150:LEU:HD21	1.93	0.50
14:LK:142:ASN:HD22	14:LK:145:GLY:HA2	1.77	0.50
17:LN:149:GLN:O	17:LN:152:THR:OG1	2.26	0.50
28:LY:117:LYS:O	28:LY:120:GLU:HG3	2.12	0.50
49:S2:16:G:H2'	49:S2:17:C:C6	2.46	0.50
49:S2:24:C:O2'	49:S2:25:A:O5'	2.28	0.50
49:S2:115:U:H2'	49:S2:116:U:C6	2.46	0.50
49:S2:1311:C:OP2	74:SM:36:ARG:NH2	2.44	0.50
49:S2:1432:U:H2'	49:S2:1438:A:C8	2.47	0.50
52:SD:162:ASP:N	52:SD:163:PRO:CD	2.72	0.50
70:Sg:64:HIS:CD2	70:Sg:83:TRP:CE3	3.00	0.50
71:SC:75:ILE:HG23	71:SC:80:GLU:OE1	2.11	0.50
77:SW:45:GLY:O	77:SW:68:ARG:NH2	2.44	0.50
1:L5:74:G:H5''	15:LL:59:VAL:CG2	2.34	0.50
1:L5:3786:U:O2	1:L5:3814:U:H4'	2.11	0.50
1:L5:4238:G:H2'	1:L5:4239:A:H8	1.75	0.50
1:L5:4508:C:N3	1:L5:4512:U:H5	2.10	0.50
11:LH:96:TYR:HA	11:LH:177:ASP:OD1	2.11	0.50
25:LV:82:ILE:HG22	25:LV:125:CYS:SG	2.51	0.50
49:S2:606:G:H1'	81:Se:58:ASN:ND2	2.26	0.50
49:S2:674:C:H2'	49:S2:675:U:C6	2.46	0.50
49:S2:1736:G:H2'	49:S2:1737:G:H8	1.76	0.50
49:S2:1772:C:H2'	49:S2:1772:C:O2	2.11	0.50
54:SF:61:PHE:CZ	68:Sc:51:ARG:HB2	2.46	0.50
60:SQ:5:GLY:H	60:SQ:27:ARG:HH22	1.60	0.50
61:SR:29:HIS:HA	61:SR:32:LYS:HE2	1.93	0.50
72:SG:7:PHE:CZ	72:SG:9:ALA:HB3	2.46	0.50
73:SJ:136:ARG:HD3	73:SJ:160:SER:HA	1.94	0.50
1:L5:35:U:OP2	17:LN:83:LYS:NZ	2.44	0.50
1:L5:1461:C:H2'	1:L5:1462:A:C8	2.47	0.50
1:L5:3715:U:H5	1:L5:3738:G:H1	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4039:G:N2	1:L5:4050:A:O2'	2.45	0.50
1:L5:4936:G:C5	8:LE:183:ARG:HD3	2.46	0.50
3:L8:141:C:H2'	3:L8:142:U:C6	2.47	0.50
5:LB:150:PHE:HB3	5:LB:198:ARG:NH2	2.27	0.50
19:LP:99:GLU:HG3	19:LP:109:VAL:HG11	1.93	0.50
27:LX:95:THR:HG22	27:LX:139:ARG:CA	2.42	0.50
49:S2:1277:C:H2'	49:S2:1278:A:H8	1.74	0.50
55:SH:79:LEU:O	55:SH:83:LEU:HD23	2.11	0.50
56:SI:174:CYS:HB2	56:SI:190:LEU:HD21	1.94	0.50
59:SP:57:LEU:HA	59:SP:60:LEU:HD12	1.92	0.50
63:ST:125:PRO:O	63:ST:129:ARG:HG2	2.10	0.50
72:SG:54:GLY:HA2	72:SG:63:MET:HE3	1.93	0.50
81:Se:28:LYS:HD3	81:Se:32:ALA:HB1	1.92	0.50
83:CA:23:MET:HE1	83:CA:64:PHE:CE2	2.32	0.50
83:CA:168:GLU:O	83:CA:172:LYS:HG2	2.11	0.50
84:CB:627:GLU:HB3	84:CB:630:GLN:HG2	1.93	0.50
1:L5:233:U:O2'	1:L5:234:G:H8	1.94	0.50
1:L5:2902:G:O6	1:L5:3594:C:N4	2.44	0.50
2:L7:26:C:O2'	13:LJ:147:ARG:NH1	2.29	0.50
5:LB:139:ASP:OD1	5:LB:140:GLU:N	2.45	0.50
6:LC:36:ILE:HG21	6:LC:122:TYR:HD2	1.77	0.50
49:S2:5:U:H2'	49:S2:6:G:H8	1.77	0.50
49:S2:945:U:H2'	49:S2:946:U:C6	2.47	0.50
78:SY:110:ARG:NH1	78:SY:128:GLY:HA3	2.26	0.50
79:SZ:74:SER:HA	79:SZ:79:ILE:HG22	1.93	0.50
1:L5:1682:A:H5''	15:LL:3:PRO:O	2.12	0.50
1:L5:4125:C:H5'	10:LG:45:ILE:HD12	1.94	0.50
7:LD:34:LYS:HE3	23:LT:30:TYR:CE2	2.46	0.50
12:LI:48:LEU:O	12:LI:139:ARG:HA	2.10	0.50
12:LI:210:ARG:O	12:LI:214:SER:HB3	2.11	0.50
12:LI:210:ARG:C	12:LI:212:LEU:O	2.54	0.50
16:LM:10:GLY:N	16:LM:27:ILE:O	2.37	0.50
21:LR:133:LYS:HB2	21:LR:137:ILE:HD12	1.92	0.50
23:LT:104:SER:HA	23:LT:107:LYS:HE3	1.92	0.50
26:LW:82:ILE:HD13	72:SG:131:ARG:HB2	1.94	0.50
49:S2:1005:G:H2'	49:S2:1006:C:H6	1.77	0.50
49:S2:1310:U:H2'	49:S2:1311:C:H6	1.76	0.50
49:S2:1755:C:N4	49:S2:1775:U:O4	2.45	0.50
49:S2:1797:U:H2'	49:S2:1798:C:C6	2.46	0.50
54:SF:127:ARG:C	54:SF:135:ARG:HH21	2.19	0.50
84:CB:362:VAL:HG23	84:CB:363:THR:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CB:752:PRO:O	84:CB:753:GLU:HB3	2.11	0.50
1:L5:417:G:OP1	1:L5:2329:U:O2'	2.25	0.50
1:L5:956:A:H8	1:L5:957:G:C8	2.30	0.50
1:L5:1730:U:H1'	23:LT:101:SER:HB3	1.94	0.50
1:L5:2792:C:O2	39:Lj:9:GLY:HA2	2.12	0.50
1:L5:3593:C:O2'	1:L5:3595:U:O4	2.25	0.50
1:L5:3960:A:N7	1:L5:3961:G:C8	2.80	0.50
1:L5:4725:C:OP1	5:LB:103:LYS:NZ	2.44	0.50
36:Lg:61:PRO:O	36:Lg:64:LEU:HB2	2.12	0.50
37:Lh:89:ARG:O	37:Lh:93:ARG:HG2	2.11	0.50
49:S2:656:G:H5'	49:S2:662:G:N2	2.26	0.50
49:S2:929:G:H2'	49:S2:930:C:O4'	2.12	0.50
49:S2:1005:G:H2'	49:S2:1006:C:C6	2.47	0.50
49:S2:1221:G:H2'	49:S2:1222:G:C8	2.46	0.50
49:S2:1543:U:P	63:ST:62:ARG:HH22	2.35	0.50
54:SF:102:LEU:O	79:SZ:66:LYS:HD3	2.12	0.50
56:SI:203:LYS:HG3	56:SI:207:GLY:HA3	1.93	0.50
58:SL:49:GLU:OE1	58:SL:116:CYS:O	2.29	0.50
61:SR:103:LYS:HE2	61:SR:117:LEU:HB3	1.94	0.50
66:SX:98:ASP:CG	66:SX:140:ARG:HH22	2.20	0.50
70:Sg:46:THR:O	70:Sg:52:TYR:CA	2.58	0.50
70:Sg:158:PRO:HG3	70:Sg:201:SER:O	2.12	0.50
72:SG:141:ILE:CD1	72:SG:153:VAL:HB	2.38	0.50
80:Sb:36:LYS:HZ2	80:Sb:41:TYR:HA	1.75	0.50
84:CB:113:SER:OG	84:CB:533:MET:HB2	2.11	0.50
84:CB:362:VAL:HG23	84:CB:363:THR:N	2.27	0.50
1:L5:268:G:H2'	1:L5:269:G:H8	1.77	0.50
1:L5:493:G:N1	1:L5:660:A:C2	2.72	0.50
1:L5:1461:C:H2'	1:L5:1462:A:H8	1.76	0.50
1:L5:1504:G:H2'	1:L5:1505:C:C6	2.46	0.50
1:L5:1857:C:H2'	1:L5:1858:A:C8	2.47	0.50
1:L5:2906:G:H1'	1:L5:2908:U:H1'	1.94	0.50
1:L5:4430:G:P	12:LI:30:LYS:HZ2	2.35	0.50
4:LA:234:LYS:HG2	4:LA:238:ILE:HG12	1.94	0.50
30:La:2:PRO:HG2	30:La:5:LEU:HG	1.94	0.50
38:Li:45:ARG:NH2	38:Li:50:PHE:CD1	2.79	0.50
49:S2:557:U:H2'	49:S2:558:G:C8	2.46	0.50
49:S2:809:A:OP1	53:SE:187:ALA:N	2.42	0.50
49:S2:1265:A:N3	49:S2:1265:A:H2'	2.27	0.50
49:S2:1630:A:H5'	62:SS:37:GLY:N	2.27	0.50
49:S2:1779:G:H2'	49:S2:1780:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SQ:5:GLY:HA3	60:SQ:27:ARG:HH12	1.77	0.50
64:SU:20:ILE:HD11	64:SU:98:VAL:HG11	1.93	0.50
73:SJ:121:LYS:H	73:SJ:125:HIS:HD2	1.60	0.50
83:CA:17:VAL:HG13	83:CA:20:LYS:HZ2	1.77	0.50
84:CB:267:ASP:O	84:CB:271:GLY:CA	2.60	0.50
1:L5:684:G:H5''	8:LE:100:LYS:HE3	1.94	0.49
1:L5:1857:C:H2'	1:L5:1858:A:H8	1.77	0.49
1:L5:1994:C:H2'	1:L5:1995:G:C8	2.47	0.49
1:L5:4530:U:H2'	1:L5:4531:U:H2'	1.93	0.49
14:LK:46:ILE:HD11	14:LK:62:LEU:HD21	1.94	0.49
25:LV:90:ARG:O	25:LV:93:GLY:N	2.45	0.49
26:LW:45:ASN:HB3	26:LW:48:GLN:HG3	1.92	0.49
27:LX:73:HIS:HB3	27:LX:116:LEU:HD23	1.94	0.49
49:S2:433:A:H2'	49:S2:434:G:C8	2.47	0.49
49:S2:496:C:H5'	53:SE:29:PRO:HA	1.92	0.49
49:S2:1536:G:P	54:SF:88:MET:HE1	2.52	0.49
51:SB:36:PRO:HB3	51:SB:231:LEU:CD2	2.41	0.49
60:SQ:31:LEU:HB3	60:SQ:67:ASP:OD1	2.11	0.49
84:CB:111:PHE:HZ	84:CB:145:GLN:HE22	1.41	0.49
84:CB:689:GLU:O	84:CB:730:TYR:OH	2.17	0.49
1:L5:485:C:O2	1:L5:485:C:H2'	2.12	0.49
1:L5:691:C:H2'	1:L5:692:A:H8	1.77	0.49
1:L5:4966:A:H2'	1:L5:4967:A:O4'	2.12	0.49
6:LC:67:TRP:CE3	6:LC:73:VAL:HG21	2.46	0.49
7:LD:110:LEU:HD22	7:LD:115:MET:HG3	1.94	0.49
9:LF:26:ALA:O	9:LF:29:LYS:HG3	2.12	0.49
14:LK:105:THR:HG23	14:LK:107:ASP:OD1	2.12	0.49
24:LU:49:VAL:HG11	24:LU:60:VAL:HG21	1.94	0.49
30:La:81:LEU:HD12	30:La:103:VAL:HG12	1.93	0.49
68:Sc:10:LYS:HG2	68:Sc:34:PHE:CE2	2.46	0.49
70:Sg:246:TYR:OH	70:Sg:261:LEU:N	2.45	0.49
83:CA:351:ASP:O	83:CA:355:LYS:HG2	2.13	0.49
84:CB:4:PHE:CD1	84:CB:8:GLN:NE2	2.77	0.49
84:CB:345:PRO:HG2	84:CB:348:ASP:HB2	1.94	0.49
1:L5:256:G:C5	88:L5:5316:T1C:H61C	2.47	0.49
1:L5:326:C:P	15:LL:103:ARG:HH22	2.34	0.49
1:L5:512:U:H3	1:L5:647:G:H1	1.61	0.49
1:L5:1977:C:HO2'	1:L5:1978:C:P	2.35	0.49
1:L5:2062:C:H5'	22:LS:2:LYS:HE2	1.93	0.49
1:L5:2088:A:OP2	20:LQ:37:ARG:NH2	2.46	0.49
1:L5:3816:A:OP1	1:L5:3818:U:H5	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3923:A:H2'	1:L5:3924:C:H6	1.76	0.49
1:L5:5041:G:OP2	26:LW:61:LYS:NZ	2.36	0.49
4:LA:28:ARG:HD2	4:LA:123:ARG:HD2	1.94	0.49
17:LN:9:GLU:HB2	38:Li:44:ILE:HG13	1.95	0.49
21:LR:182:GLU:HA	21:LR:185:ILE:HG12	1.94	0.49
23:LT:30:TYR:CE2	23:LT:94:GLU:OE2	2.65	0.49
49:S2:291:G:O2'	49:S2:292:A:OP1	2.26	0.49
57:SK:60:GLU:HG2	57:SK:61:GLN:N	2.28	0.49
73:SJ:94:LEU:HD23	73:SJ:97:ILE:HD12	1.94	0.49
83:CA:17:VAL:HA	83:CA:20:LYS:HG2	1.93	0.49
1:L5:2526:C:OP1	83:CA:258:LYS:NZ	2.35	0.49
7:LD:115:MET:HE1	7:LD:140:GLY:O	2.11	0.49
11:LH:44:GLU:HB3	11:LH:58:ASP:HB2	1.94	0.49
30:La:78:LEU:O	30:La:81:LEU:HB2	2.12	0.49
50:SA:160:ALA:HB3	65:SV:66:ASP:OD2	2.11	0.49
54:SF:82:ASN:HA	54:SF:85:LYS:HD2	1.94	0.49
62:SS:141:ARG:HA	62:SS:144:ARG:HB2	1.94	0.49
64:SU:21:ARG:HD3	64:SU:88:LEU:HD22	1.94	0.49
73:SJ:137:VAL:O	73:SJ:138:ARG:C	2.54	0.49
74:SM:79:VAL:HG22	74:SM:80:ASP:H	1.78	0.49
84:CB:601:ARG:HB2	84:CB:708:THR:OG1	2.11	0.49
1:L5:2448:G:H2'	1:L5:2449:A:C8	2.47	0.49
1:L5:4128:A:H2	10:LG:34:LYS:HG3	1.76	0.49
12:LI:145:GLU:O	12:LI:149:ILE:HG12	2.11	0.49
19:LP:131:ARG:HG3	19:LP:137:ASN:ND2	2.28	0.49
49:S2:1203:G:H2'	49:S2:1204:A:C8	2.47	0.49
49:S2:1857:G:C3'	76:SO:146:ARG:HH12	2.20	0.49
70:Sg:7:LEU:HB3	70:Sg:310:TRP:CZ3	2.48	0.49
71:SC:172:ASN:O	71:SC:174:ILE:HG12	2.11	0.49
72:SG:159:ARG:HH21	72:SG:171:THR:HG23	1.78	0.49
74:SM:35:ILE:HG13	74:SM:36:ARG:N	2.26	0.49
84:CB:804:THR:HG23	84:CB:807:GLN:H	1.77	0.49
85:CC:24:U:C2	85:CC:25:G:C8	3.00	0.49
1:L5:1307:A:H2'	1:L5:1308:C:C6	2.47	0.49
1:L5:2544:G:N1	3:L8:124:U:OP1	2.29	0.49
1:L5:3946:G:H2'	1:L5:3947:A:H8	1.78	0.49
6:LC:318:PRO:HB2	6:LC:325:MET:HE2	1.94	0.49
14:LK:10:ILE:HD13	14:LK:65:GLN:OE1	2.13	0.49
16:LM:118:MET:HG2	18:LO:192:TYR:CZ	2.48	0.49
20:LQ:66:MET:HE1	20:LQ:86:ILE:HD13	1.93	0.49
26:LW:92:ALA:O	26:LW:96:GLN:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Lb:54:LEU:HA	31:Lb:57:MET:CE	2.43	0.49
49:S2:17:C:O2'	49:S2:1194:A:N1	2.36	0.49
50:SA:135:THR:O	50:SA:138:SER:OG	2.26	0.49
70:Sg:197:THR:HG21	70:Sg:238:ALA:HA	1.95	0.49
71:SC:196:ILE:HB	71:SC:223:TYR:HB2	1.94	0.49
76:SO:117:ARG:HH12	76:SO:121:ARG:HH21	1.58	0.49
82:Sf:102:VAL:HB	82:Sf:104:LYS:HZ2	1.78	0.49
1:L5:389:A:H1'	28:LY:90:ALA:O	2.12	0.49
1:L5:500:G:H1'	1:L5:504:G:H3'	1.95	0.49
1:L5:1613:A:H5''	4:LA:183:GLY:HA2	1.93	0.49
1:L5:1758:G:H2'	1:L5:1759:G:C8	2.48	0.49
1:L5:1875:C:H2'	1:L5:1876:U:C6	2.48	0.49
1:L5:1996:C:H2'	1:L5:1997:U:O4'	2.11	0.49
1:L5:4745:G:H1	1:L5:4955:A:N6	2.09	0.49
7:LD:65:ALA:HB2	7:LD:74:ILE:HD13	1.92	0.49
8:LE:101:ASN:OD1	8:LE:105:ARG:NH2	2.46	0.49
13:LJ:19:LYS:HG3	13:LJ:133:VAL:HG22	1.94	0.49
17:LN:58:GLY:HA3	17:LN:142:ILE:HD11	1.93	0.49
28:LY:50:ARG:HG2	28:LY:51:LYS:H	1.78	0.49
51:SB:71:LEU:HG	51:SB:78:GLU:HG2	1.95	0.49
60:SQ:57:LEU:HD13	60:SQ:111:ILE:HG22	1.94	0.49
72:SG:25:ARG:HA	72:SG:28:TYR:CD2	2.48	0.49
1:L5:223:G:H4'	1:L5:225:G:N7	2.28	0.49
21:LR:176:ARG:HB3	21:LR:180:LYS:HZ1	1.78	0.49
36:Lg:42:PRO:HD2	36:Lg:56:VAL:HG21	1.94	0.49
50:SA:125:THR:HG22	50:SA:175:TRP:NE1	2.25	0.49
53:SE:107:GLY:HA2	53:SE:189:LEU:HG	1.94	0.49
55:SH:143:ARG:HB3	77:SW:51:GLU:OE2	2.12	0.49
63:ST:129:ARG:HB3	63:ST:133:ARG:CZ	2.42	0.49
70:Sg:104:HIS:ND1	70:Sg:108:VAL:HG12	2.27	0.49
83:CA:181:PRO:HB3	83:CA:203:GLN:NE2	2.25	0.49
85:CC:22:C:H2'	85:CC:23:G:C8	2.48	0.49
1:L5:135:G:N2	37:Lh:94:ARG:NE	2.61	0.49
1:L5:2811:G:N1	1:L5:2814:C:OP2	2.36	0.49
1:L5:3599:A:H2'	1:L5:3600:G:C8	2.48	0.49
1:L5:3848:U:H2'	1:L5:3849:A:H8	1.77	0.49
4:LA:242:ARG:NH1	4:LA:246:LEU:HB2	2.28	0.49
12:LI:184:MET:HE2	12:LI:190:LEU:HG	1.95	0.49
13:LJ:24:ILE:HD12	13:LJ:40:LEU:HG	1.95	0.49
13:LJ:36:ALA:HA	13:LJ:39:VAL:HG12	1.95	0.49
49:S2:886:A:C6	49:S2:901:G:N3	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1706:G:H2'	49:S2:1707:U:H6	1.78	0.49
49:S2:1756:C:N3	49:S2:1776:G:N1	2.60	0.49
61:SR:34:VAL:O	61:SR:38:ILE:HG12	2.11	0.49
62:SS:33:ILE:HD12	62:SS:71:MET:HE1	1.94	0.49
71:SC:210:PRO:HD3	71:SC:236:PHE:CE2	2.47	0.49
78:SY:104:ARG:HG2	78:SY:108:LYS:HE2	1.94	0.49
82:Sf:140:TYR:HD1	82:Sf:146:LEU:O	1.95	0.49
84:CB:157:MET:HE2	84:CB:181:ILE:CG2	2.43	0.49
1:L5:493:G:C6	1:L5:660:A:N1	2.80	0.49
1:L5:2611:A:H2'	1:L5:2612:G:C8	2.48	0.49
1:L5:4517:A:H62	5:LB:2:SER:N	2.10	0.49
1:L5:4619:U:H2'	1:L5:4620:U:C6	2.48	0.49
6:LC:5:ARG:HD2	6:LC:24:LEU:O	2.13	0.49
6:LC:211:TYR:CZ	6:LC:231:ASN:HB2	2.48	0.49
14:LK:82:ILE:HD12	14:LK:100:HIS:ND1	2.28	0.49
29:LZ:23:ALA:HB1	29:LZ:43:VAL:HG22	1.94	0.49
49:S2:1310:U:H2'	49:S2:1311:C:C6	2.47	0.49
49:S2:1756:C:C2	49:S2:1776:G:N1	2.81	0.49
52:SD:40:ARG:NH2	64:SU:106:ILE:HD12	2.28	0.49
52:SD:167:TYR:HE2	52:SD:204:LEU:HD23	1.73	0.49
53:SE:60:GLU:HA	53:SE:63:LYS:HG2	1.94	0.49
66:SX:87:ASN:HB3	66:SX:134:TYR:CE1	2.48	0.49
70:Sg:217:MET:HB3	70:Sg:219:TRP:NE1	2.28	0.49
70:Sg:246:TYR:CG	70:Sg:247:TRP:N	2.81	0.49
78:SY:77:ASP:HB2	78:SY:81:TYR:HD2	1.78	0.49
84:CB:415:ARG:HD3	84:CB:417:PHE:CE1	2.48	0.49
1:L5:968:C:H5'	8:LE:110:ARG:NH2	2.28	0.48
1:L5:1872:G:O2'	1:L5:4219:A:N3	2.41	0.48
1:L5:1973:G:H2'	1:L5:1974:U:C5	2.48	0.48
1:L5:4228:G:H5''	1:L5:4229:U:O4'	2.13	0.48
8:LE:165:LEU:HD23	8:LE:203:ILE:HD13	1.95	0.48
10:LG:59:ARG:HG2	10:LG:62:ARG:HH21	1.78	0.48
12:LI:210:ARG:O	12:LI:212:LEU:O	2.31	0.48
15:LL:208:GLU:HA	15:LL:211:LYS:CG	2.35	0.48
49:S2:694:G:H2'	49:S2:695:C:O4'	2.12	0.48
53:SE:97:GLU:OE2	53:SE:113:ARG:CZ	2.61	0.48
56:SI:138:ASN:C	56:SI:140:LYS:H	2.20	0.48
62:SS:15:VAL:HG21	62:SS:33:ILE:HD11	1.94	0.48
73:SJ:152:ASP:OD1	73:SJ:153:SER:N	2.46	0.48
83:CA:18:VAL:O	83:CA:22:LYS:HG3	2.13	0.48
1:L5:116:G:H2'	1:L5:117:C:C6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:87:MET:HG2	12:LI:138:ILE:HG12	1.94	0.48
13:LJ:22:LEU:HD22	13:LJ:130:PHE:CD1	2.48	0.48
16:LM:15:VAL:O	16:LM:22:GLY:N	2.46	0.48
49:S2:414:A:OP1	49:S2:814:U:O2'	2.30	0.48
49:S2:1310:U:H5''	82:Sf:130:VAL:HG13	1.95	0.48
49:S2:1593:C:H2'	49:S2:1594:A:C8	2.49	0.48
51:SB:27:LYS:HD3	51:SB:51:ARG:NH1	2.28	0.48
51:SB:134:LEU:HG	51:SB:218:LEU:HD12	1.95	0.48
53:SE:100:ARG:HH12	53:SE:122:LYS:HA	1.78	0.48
54:SF:127:ARG:HG2	54:SF:136:ARG:HB2	1.95	0.48
62:SS:36:VAL:HG21	62:SS:71:MET:CE	2.43	0.48
72:SG:5:ILE:CG2	72:SG:124:LEU:HD11	2.43	0.48
83:CA:244:THR:OG1	83:CA:306:ASN:OD1	2.20	0.48
84:CB:248:GLU:O	84:CB:252:LYS:HG2	2.13	0.48
1:L5:318:A:H2'	1:L5:319:A:C8	2.48	0.48
1:L5:502:C:H3'	1:L5:503:C:H3'	1.94	0.48
1:L5:1567:U:H2'	1:L5:1568:C:C6	2.48	0.48
1:L5:1677:U:H4'	1:L5:1680:G:C2	2.48	0.48
1:L5:2652:G:N2	45:Lp:59:SER:O	2.46	0.48
1:L5:3664:G:H2'	1:L5:3665:G:H8	1.77	0.48
19:LP:131:ARG:HB2	19:LP:135:ARG:HB2	1.95	0.48
33:Ld:20:VAL:HA	33:Ld:90:ARG:O	2.13	0.48
37:Lh:96:ASN:OD1	37:Lh:99:GLU:HG3	2.13	0.48
49:S2:328:U:O2'	49:S2:329:G:O5'	2.28	0.48
49:S2:466:G:O2'	72:SG:59:GLN:NE2	2.46	0.48
49:S2:1683:C:H2'	49:S2:1684:C:H6	1.78	0.48
50:SA:51:LEU:O	50:SA:54:THR:HG22	2.14	0.48
54:SF:126:THR:HA	54:SF:135:ARG:HG2	1.95	0.48
78:SY:82:ALA:O	78:SY:86:GLU:HB3	2.13	0.48
79:SZ:111:ARG:HD3	79:SZ:114:LYS:CG	2.43	0.48
83:CA:361:SER:OG	83:CA:362:ALA:N	2.46	0.48
1:L5:153:G:H2'	1:L5:154:G:H8	1.78	0.48
1:L5:4188:U:H2'	1:L5:4189:U:C6	2.48	0.48
3:L8:6:C:H2'	3:L8:7:U:C6	2.49	0.48
12:LI:153:ARG:O	12:LI:156:LYS:HG2	2.14	0.48
13:LJ:112:HIS:CE1	13:LJ:126:TYR:H	2.31	0.48
49:S2:223:C:H2'	49:S2:224:A:C8	2.49	0.48
49:S2:1084:A:OP1	49:S2:1858:G:O2'	2.26	0.48
50:SA:136:GLU:O	50:SA:140:VAL:HG22	2.13	0.48
59:SP:91:GLY:CA	59:SP:107:ILE:O	2.62	0.48
63:ST:37:VAL:HG11	63:ST:52:TRP:CZ2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:176:VAL:HB	70:Sg:186:THR:HG23	1.95	0.48
73:SJ:93:LYS:HB2	73:SJ:96:TYR:CD2	2.48	0.48
78:SY:38:THR:O	78:SY:42:GLU:OE1	2.31	0.48
84:CB:686:ALA:O	84:CB:697:MET:HE2	2.14	0.48
84:CB:800:LEU:O	84:CB:804:THR:HG22	2.13	0.48
1:L5:4192:A:H2'	1:L5:4193:C:H6	1.78	0.48
1:L5:4538:G:H2'	1:L5:4539:U:C6	2.49	0.48
1:L5:4769:G:H5''	18:LO:176:ARG:HD3	1.94	0.48
6:LC:5:ARG:NH1	6:LC:24:LEU:O	2.42	0.48
11:LH:4:ILE:HG12	11:LH:61:TRP:CH2	2.48	0.48
43:Ln:15:ARG:HG2	43:Ln:18:ARG:NH2	2.28	0.48
47:Ls:97:GLU:OE1	47:Ls:97:GLU:N	2.43	0.48
49:S2:551:U:H2'	49:S2:552:G:C8	2.48	0.48
49:S2:583:A:OP1	73:SJ:162:ARG:NH2	2.47	0.48
49:S2:1512:C:H5''	69:Sd:8:TRP:CZ3	2.47	0.48
53:SE:247:THR:HG22	53:SE:250:GLU:HG2	1.96	0.48
54:SF:128:ILE:HD12	54:SF:128:ILE:N	2.28	0.48
55:SH:71:SER:O	55:SH:74:LYS:HB2	2.13	0.48
70:Sg:62:HIS:CE1	70:Sg:82:SER:HB2	2.48	0.48
70:Sg:192:THR:OG1	70:Sg:213:ASP:OD2	2.26	0.48
1:L5:746:A:H2'	1:L5:747:A:C8	2.48	0.48
1:L5:1942:A:H2'	1:L5:1943:A:H8	1.79	0.48
1:L5:1973:G:H5''	14:LK:119:ARG:HH21	1.78	0.48
1:L5:2709:C:O2	21:LR:39:GLN:HB3	2.13	0.48
18:LO:83:THR:HG22	18:LO:87:MET:HE3	1.96	0.48
23:LT:157:GLU:HB3	23:LT:159:MET:HE3	1.95	0.48
47:Ls:161:ILE:HD13	47:Ls:167:VAL:HG22	1.96	0.48
49:S2:4:C:H4'	71:SC:207:ALA:HB2	1.96	0.48
49:S2:441:C:H2'	49:S2:442:C:C6	2.48	0.48
49:S2:1556:A:N6	69:Sd:13:LYS:HA	2.29	0.48
49:S2:1777:G:H2'	49:S2:1778:C:H6	1.79	0.48
49:S2:1781:A:H3'	49:S2:1783:C:C4	2.48	0.48
58:SL:49:GLU:OE1	58:SL:118:ARG:HG3	2.13	0.48
58:SL:49:GLU:OE2	58:SL:118:ARG:HD2	2.14	0.48
63:ST:104:LEU:HD23	63:ST:121:ARG:HH11	1.78	0.48
72:SG:50:VAL:HG21	72:SG:111:LEU:HB3	1.95	0.48
75:SN:145:THR:O	75:SN:149:LEU:HG	2.14	0.48
80:Sb:36:LYS:NZ	80:Sb:41:TYR:C	2.72	0.48
1:L5:1566:C:H2'	1:L5:1567:U:C6	2.49	0.48
1:L5:1846:G:H2'	1:L5:1847:C:C6	2.48	0.48
1:L5:2517:A:H5'	36:Lg:62:LYS:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LF:37:PHE:HZ	31:Lb:113:ALA:HB1	1.79	0.48
10:LG:250:ILE:O	10:LG:254:GLU:HG2	2.13	0.48
12:LI:207:ASP:O	12:LI:211:VAL:HG13	2.13	0.48
23:LT:104:SER:O	23:LT:107:LYS:HG2	2.14	0.48
24:LU:25:CYS:O	24:LU:29:VAL:HG22	2.14	0.48
49:S2:656:G:N2	49:S2:663:C:H5'	2.28	0.48
49:S2:1414:A:H2'	49:S2:1415:C:O4'	2.13	0.48
49:S2:1643:U:H2'	49:S2:1644:C:C6	2.49	0.48
49:S2:1736:G:H2'	49:S2:1737:G:C8	2.48	0.48
51:SB:36:PRO:HB2	51:SB:38:MET:CE	2.43	0.48
55:SH:65:PRO:O	55:SH:69:LEU:N	2.46	0.48
60:SQ:97:GLN:HG2	60:SQ:105:LYS:HE2	1.95	0.48
63:ST:139:ALA:HA	63:ST:142:ASN:ND2	2.29	0.48
70:Sg:34:ALA:HB2	70:Sg:69:VAL:CG1	2.44	0.48
70:Sg:109:LEU:HD21	70:Sg:125:ARG:HB2	1.95	0.48
70:Sg:114:SER:HA	70:Sg:156:PHE:HD2	1.79	0.48
82:Sf:102:VAL:HB	82:Sf:104:LYS:NZ	2.29	0.48
83:CA:20:LYS:HA	83:CA:23:MET:HG2	1.95	0.48
83:CA:148:LEU:HD12	83:CA:177:PHE:HZ	1.78	0.48
1:L5:424:U:H2'	1:L5:425:U:C6	2.48	0.48
1:L5:1190:C:H2'	1:L5:1191:C:C6	2.48	0.48
1:L5:1327:C:H2'	1:L5:1328:G:C8	2.48	0.48
1:L5:2407:G:O6	41:Ll:2:SER:N	2.46	0.48
1:L5:2745:A:H2'	1:L5:2746:A:H8	1.78	0.48
1:L5:3656:A:H2'	1:L5:3657:U:H6	1.79	0.48
1:L5:4174:U:H2'	1:L5:4175:G:H8	1.78	0.48
1:L5:4520:G:N7	5:LB:2:SER:N	2.62	0.48
1:L5:4551:U:H2'	1:L5:4552:U:C6	2.48	0.48
14:LK:90:ARG:HH11	14:LK:91:ASP:N	2.09	0.48
43:Ln:1:MET:HE2	43:Ln:5:TRP:C	2.39	0.48
49:S2:352:U:H2'	49:S2:353:C:C6	2.49	0.48
49:S2:557:U:H3'	49:S2:558:G:H2'	1.96	0.48
49:S2:692:G:O6	49:S2:693:A:N6	2.47	0.48
49:S2:1284:A:N7	74:SM:33:ARG:NH2	2.62	0.48
49:S2:1630:A:H1'	62:SS:85:ASN:OD1	2.13	0.48
54:SF:127:ARG:N	54:SF:135:ARG:HE	2.12	0.48
55:SH:118:ARG:HA	55:SH:121:THR:HG23	1.95	0.48
64:SU:66:ARG:HG3	64:SU:68:THR:HG22	1.95	0.48
70:Sg:245:ARG:NH1	70:Sg:295:GLY:HA3	2.29	0.48
72:SG:26:THR:HG21	72:SG:40:ALA:HB2	1.95	0.48
76:SO:14:VAL:O	76:SO:15:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:138:G:H2'	1:L5:139:G:C8	2.46	0.48
1:L5:1194:G:H2'	1:L5:1195:G:C8	2.48	0.48
1:L5:1866:U:H2'	1:L5:1867:A:O4'	2.14	0.48
5:LB:393:LYS:O	5:LB:397:ILE:HG12	2.14	0.48
14:LK:106:PHE:HB2	14:LK:144:ASP:OD2	2.14	0.48
33:Ld:18:ASN:OD1	33:Ld:19:GLU:N	2.44	0.48
49:S2:1217:A:H2'	49:S2:1218:C:H6	1.79	0.48
59:SP:75:VAL:HG12	59:SP:93:MET:HB3	1.95	0.48
63:ST:127:GLY:O	63:ST:131:LEU:HD23	2.13	0.48
72:SG:181:THR:CG2	72:SG:184:VAL:HG23	2.44	0.48
76:SO:28:PHE:HB3	76:SO:47:LEU:HD21	1.96	0.48
76:SO:117:ARG:HH12	76:SO:121:ARG:NH2	2.10	0.48
83:CA:123:HIS:HE1	83:CA:125:PHE:CE1	2.32	0.48
84:CB:267:ASP:O	84:CB:271:GLY:HA2	2.14	0.48
84:CB:829:SER:OG	84:CB:831:PRO:HD2	2.14	0.48
1:L5:1468:C:H2'	1:L5:1469:C:C6	2.49	0.48
1:L5:3607:U:H2'	1:L5:3608:A:C8	2.49	0.48
1:L5:3697:U:H5''	1:L5:3698:G:H5'	1.95	0.48
1:L5:3880:G:H2'	1:L5:3881:G:C8	2.49	0.48
1:L5:4260:U:O2'	13:LJ:133:VAL:HG11	2.14	0.48
15:LL:133:ALA:HB1	15:LL:135:LYS:NZ	2.28	0.48
26:LW:113:LYS:HG3	26:LW:116:LYS:HE3	1.96	0.48
29:LZ:14:LEU:HD11	29:LZ:81:MET:HB2	1.95	0.48
46:Lr:57:GLY:O	46:Lr:58:LYS:HD2	2.14	0.48
49:S2:696:G:N2	49:S2:737:G:H1	2.02	0.48
49:S2:1705:C:H2'	49:S2:1706:G:C8	2.49	0.48
50:SA:215:GLN:O	50:SA:219:GLU:HG2	2.14	0.48
57:SK:11:ILE:HD13	57:SK:45:VAL:HA	1.96	0.48
62:SS:64:VAL:O	62:SS:68:ILE:HG12	2.14	0.48
71:SC:271:ASP:O	71:SC:275:LYS:HG3	2.14	0.48
75:SN:110:ASP:O	75:SN:114:ARG:HG2	2.14	0.48
1:L5:99:A:H5''	17:LN:184:ILE:HD13	1.96	0.47
1:L5:2568:C:H2'	1:L5:2569:G:H8	1.79	0.47
1:L5:2789:A:H1'	41:Ll:45:ARG:HH22	1.79	0.47
1:L5:3928:A:H2'	1:L5:3929:G:O4'	2.14	0.47
3:L8:74:U:C4	28:LY:74:TYR:HD1	2.31	0.47
3:L8:126:C:N4	3:L8:128:C:H42	2.12	0.47
21:LR:159:ALA:HA	21:LR:162:ARG:NH1	2.28	0.47
41:Ll:9:ILE:HD12	41:Ll:51:LEU:HD11	1.96	0.47
49:S2:564:A:H2'	49:S2:565:G:O4'	2.14	0.47
49:S2:595:U:H2'	49:S2:596:U:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1252:C:OP1	64:SU:75:LYS:NZ	2.38	0.47
49:S2:1286:G:N2	49:S2:1312:G:O2'	2.28	0.47
49:S2:1839:U:H2'	49:S2:1840:U:C6	2.48	0.47
52:SD:29:LEU:HD22	52:SD:58:VAL:HG23	1.94	0.47
57:SK:29:MET:HE3	57:SK:33:PRO:HD3	1.96	0.47
61:SR:74:GLN:O	61:SR:78:ARG:HG2	2.13	0.47
64:SU:31:SER:O	64:SU:35:VAL:HG23	2.14	0.47
64:SU:106:ILE:HG22	64:SU:107:GLU:N	2.27	0.47
83:CA:206:THR:HB	83:CA:208:GLN:NE2	2.29	0.47
84:CB:267:ASP:O	84:CB:271:GLY:N	2.46	0.47
86:CD:185:PHE:HB2	86:CD:190:LYS:O	2.14	0.47
1:L5:512:U:OP2	15:LL:165:LYS:NZ	2.43	0.47
1:L5:1371:A:N1	3:L8:28:C:O2'	2.46	0.47
1:L5:2474:G:H2'	1:L5:2502:G:N2	2.28	0.47
1:L5:2640:G:H2'	1:L5:2641:A:C8	2.48	0.47
1:L5:4260:U:H2'	1:L5:4261:C:H6	1.79	0.47
1:L5:4389:C:H2'	1:L5:4390:A:C8	2.48	0.47
1:L5:5004:C:H2'	1:L5:5005:G:O4'	2.14	0.47
2:L7:54:A:C5'	13:LJ:9:GLU:OE1	2.62	0.47
5:LB:8:ALA:CB	25:LV:48:ARG:HH12	2.26	0.47
21:LR:178:GLN:O	21:LR:181:LYS:N	2.46	0.47
35:Lf:78:HIS:O	35:Lf:83:MET:HB2	2.13	0.47
36:Lg:85:LYS:HA	36:Lg:88:ARG:NH2	2.29	0.47
49:S2:688:U:H1'	49:S2:689:U:OP2	2.14	0.47
49:S2:1101:U:H2'	49:S2:1102:G:C8	2.49	0.47
49:S2:1545:A:H2'	49:S2:1546:G:C8	2.49	0.47
49:S2:1589:A:H2'	49:S2:1590:C:O4'	2.13	0.47
52:SD:58:VAL:HG13	52:SD:59:LEU:HD12	1.94	0.47
54:SF:51:HIS:CD2	54:SF:86:LYS:HD2	2.48	0.47
55:SH:139:ILE:HG23	55:SH:156:VAL:HG13	1.95	0.47
58:SL:126:VAL:HG12	58:SL:145:VAL:HG22	1.95	0.47
59:SP:92:SER:H	59:SP:107:ILE:HB	1.79	0.47
60:SQ:32:ILE:HG13	60:SQ:32:ILE:O	2.12	0.47
67:Sa:46:GLU:O	67:Sa:50:VAL:HG23	2.14	0.47
84:CB:346:ALA:O	84:CB:350:LEU:HD13	2.14	0.47
85:CC:69:G:H2'	85:CC:70:C:C6	2.49	0.47
1:L5:3661:G:O3'	4:LA:156:LYS:NZ	2.46	0.47
1:L5:4232:U:H4'	1:L5:4233:A:O4'	2.14	0.47
1:L5:4582:C:OP2	5:LB:28:LYS:NZ	2.47	0.47
5:LB:215:GLU:H	5:LB:284:ILE:HB	1.78	0.47
11:LH:18:ILE:HG12	11:LH:27:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Lc:50:ASN:OD1	32:Lc:51:ASN:N	2.48	0.47
49:S2:880:G:H3'	49:S2:881:G:H8	1.79	0.47
70:Sg:112:ALA:O	70:Sg:120:ILE:HD12	2.14	0.47
72:SG:39:ASP:HB3	72:SG:46:LYS:HD2	1.96	0.47
84:CB:81:LEU:HD23	84:CB:85:ASP:HB3	1.95	0.47
84:CB:233:VAL:CG2	84:CB:256:MET:HG3	2.45	0.47
84:CB:582:THR:HB	84:CB:741:MET:HE2	1.95	0.47
84:CB:683:PHE:HA	84:CB:729:LEU:CD1	2.45	0.47
1:L5:406:C:O2'	1:L5:407:A:OP1	2.30	0.47
1:L5:1176:C:H42	1:L5:1184:A:H61	0.65	0.47
1:L5:2631:U:H1'	24:LU:82:TYR:CG	2.50	0.47
1:L5:3717:A:H2'	1:L5:3718:A:H8	1.72	0.47
1:L5:4887:C:H42	1:L5:4932:U:H3	1.61	0.47
4:LA:113:VAL:HB	4:LA:164:ALA:HB1	1.97	0.47
12:LI:210:ARG:O	12:LI:214:SER:CB	2.63	0.47
29:LZ:103:ASP:HB3	29:LZ:106:LEU:HG	1.97	0.47
49:S2:940:U:H2'	49:S2:941:C:C6	2.49	0.47
49:S2:1556:A:O2'	49:S2:1557:C:O4'	2.33	0.47
49:S2:1692:U:H2'	49:S2:1693:G:C8	2.49	0.47
52:SD:159:HIS:C	52:SD:164:VAL:HG11	2.39	0.47
61:SR:31:ASN:HA	61:SR:34:VAL:HG22	1.95	0.47
64:SU:80:PHE:HB3	69:Sd:52:PHE:HB3	1.96	0.47
70:Sg:62:HIS:CD2	70:Sg:88:ARG:HE	2.32	0.47
72:SG:176:ILE:HB	72:SG:179:LEU:HD23	1.96	0.47
76:SO:151:LEU:HD23	76:SO:151:LEU:H	1.79	0.47
1:L5:188:G:H5''	88:L5:5314:T1C:H51	1.96	0.47
1:L5:1367:C:H5'	1:L5:1370:G:O2'	2.15	0.47
1:L5:1741:G:O2'	1:L5:1781:U:OP2	2.30	0.47
1:L5:1921:C:C6	22:LS:161:ARG:HD3	2.48	0.47
11:LH:8:GLN:HB3	11:LH:74:CYS:SG	2.54	0.47
47:Ls:77:LYS:HE3	47:Ls:198:ILE:HG22	1.95	0.47
49:S2:1365:G:H2'	49:S2:1366:G:C8	2.50	0.47
49:S2:1522:A:H5'	62:SS:144:ARG:HD2	1.97	0.47
49:S2:1755:C:N4	49:S2:1756:C:N4	2.63	0.47
52:SD:31:GLU:HA	52:SD:107:TYR:CE2	2.49	0.47
74:SM:31:LEU:HD13	74:SM:109:VAL:HG13	1.95	0.47
83:CA:35:LEU:CD2	83:CA:108:ILE:HG21	2.44	0.47
1:L5:689:U:OP1	8:LE:107:VAL:HG23	2.14	0.47
1:L5:4390:A:H2'	1:L5:4391:G:O4'	2.14	0.47
13:LJ:19:LYS:HG3	13:LJ:133:VAL:CG2	2.45	0.47
14:LK:123:ARG:HG2	47:Ls:48:ARG:HH11	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LO:181:ALA:O	18:LO:185:VAL:HG22	2.15	0.47
21:LR:178:GLN:O	21:LR:182:GLU:OE1	2.33	0.47
47:Ls:141:LEU:HD12	47:Ls:174:LEU:HD22	1.97	0.47
49:S2:344:U:H2'	49:S2:345:U:C6	2.49	0.47
49:S2:681:U:H4'	66:SX:9:THR:HG22	1.97	0.47
49:S2:798:G:H1'	55:SH:113:LYS:HE2	1.95	0.47
49:S2:861:A:O2'	49:S2:862:A:N7	2.44	0.47
49:S2:948:C:H2'	49:S2:949:G:H8	1.79	0.47
52:SD:66:ILE:O	52:SD:70:THR:HG23	2.15	0.47
54:SF:69:VAL:O	54:SF:73:THR:HG23	2.15	0.47
57:SK:92:ALA:O	57:SK:96:ARG:HG2	2.13	0.47
77:SW:30:CYS:SG	77:SW:31:SER:N	2.88	0.47
83:CA:296:CYS:HB3	83:CA:302:LEU:HD13	1.96	0.47
1:L5:10:A:H2'	1:L5:11:G:C8	2.50	0.47
1:L5:1355:G:OP1	20:LQ:108:ARG:NH2	2.36	0.47
1:L5:1878:G:H2'	1:L5:1879:C:C6	2.50	0.47
1:L5:1978:C:OP1	14:LK:100:HIS:ND1	2.47	0.47
1:L5:2476:G:H2'	1:L5:2477:A:C8	2.49	0.47
1:L5:2815:A:H2'	1:L5:2816:G:C8	2.49	0.47
1:L5:4708:A:N3	1:L5:4709:U:H5'	2.29	0.47
5:LB:288:GLY:HA3	5:LB:330:PHE:CZ	2.50	0.47
8:LE:154:THR:HA	35:Lf:106:TYR:OH	2.14	0.47
13:LJ:151:ILE:HD11	13:LJ:156:ARG:HG2	1.97	0.47
21:LR:95:TRP:CH2	21:LR:99:MET:HE3	2.50	0.47
24:LU:48:LYS:HG2	24:LU:53:ALA:HB2	1.96	0.47
49:S2:987:A:C6	51:SB:120:MET:HE1	2.50	0.47
49:S2:1017:U:H5'	75:SN:55:ARG:HH11	1.79	0.47
49:S2:1286:G:O6	74:SM:36:ARG:HB3	2.15	0.47
51:SB:164:ILE:O	51:SB:168:MET:HG3	2.14	0.47
54:SF:61:PHE:CE2	68:Sc:51:ARG:HD3	2.49	0.47
61:SR:93:GLN:C	61:SR:95:ILE:H	2.22	0.47
62:SS:114:LEU:CD1	62:SS:121:ARG:HE	2.28	0.47
66:SX:41:PHE:HZ	66:SX:102:VAL:HG12	1.80	0.47
70:Sg:141:THR:HG23	70:Sg:143:GLN:OE1	2.14	0.47
72:SG:139:SER:HA	72:SG:142:ARG:HG2	1.96	0.47
74:SM:58:GLU:OE2	74:SM:61:TYR:HB2	2.15	0.47
83:CA:20:LYS:HE2	83:CA:117:PHE:CE2	2.50	0.47
83:CA:27:ILE:HA	83:CA:30:ARG:HG2	1.95	0.47
1:L5:25:A:H2'	1:L5:26:C:C6	2.49	0.47
1:L5:1974:U:P	14:LK:119:ARG:NH2	2.88	0.47
1:L5:2112:G:H5''	1:L5:2251:G:O6	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2520:C:O2	1:L5:2640:G:N2	2.48	0.47
1:L5:3871:A:H2'	1:L5:3872:A:C8	2.48	0.47
1:L5:3976:C:N4	1:L5:4035:G:OP2	2.47	0.47
1:L5:4504:C:H2'	1:L5:4505:C:C6	2.50	0.47
2:L7:54:A:H8	13:LJ:9:GLU:OE1	1.97	0.47
2:L7:83:A:H4'	9:LF:224:THR:HB	1.95	0.47
6:LC:122:TYR:HD1	6:LC:280:PRO:HG3	1.80	0.47
9:LF:87:PRO:HG3	9:LF:144:TYR:CZ	2.50	0.47
14:LK:37:LEU:CD1	14:LK:67:ARG:NH1	2.75	0.47
29:LZ:99:ASP:HB3	29:LZ:102:ARG:HH21	1.80	0.47
33:Ld:24:GLU:HG3	33:Ld:122:VAL:CG2	2.45	0.47
36:Lg:85:LYS:HA	36:Lg:88:ARG:CZ	2.45	0.47
49:S2:735:C:OP2	49:S2:736:C:N4	2.48	0.47
49:S2:810:A:H5''	49:S2:811:A:H5'	1.96	0.47
49:S2:1055:A:N6	49:S2:1061:U:OP2	2.47	0.47
49:S2:1384:C:H4'	52:SD:157:MET:O	2.15	0.47
49:S2:1593:C:H2'	49:S2:1594:A:H8	1.80	0.47
49:S2:1856:C:H2'	49:S2:1857:G:H8	1.79	0.47
50:SA:135:THR:O	50:SA:139:TYR:HD1	1.98	0.47
56:SI:25:ARG:O	56:SI:28:GLU:HG2	2.14	0.47
62:SS:73:ASN:CG	62:SS:76:GLN:NE2	2.73	0.47
75:SN:99:ARG:O	75:SN:103:GLU:HG3	2.15	0.47
83:CA:28:ALA:O	83:CA:31:VAL:HG12	2.14	0.47
83:CA:108:ILE:O	83:CA:122:ALA:HA	2.14	0.47
1:L5:684:G:O2'	8:LE:101:ASN:HA	2.15	0.47
1:L5:1836:G:H4'	23:LT:129:LYS:HG2	1.95	0.47
1:L5:2463:G:C2'	1:L5:2464:C:H5'	2.45	0.47
14:LK:125:LEU:HD13	14:LK:165:SER:HA	1.97	0.47
37:Lh:91:MET:HA	37:Lh:94:ARG:HD3	1.95	0.47
40:Lk:21:LYS:N	40:Lk:37:ARG:O	2.43	0.47
49:S2:828:G:OP1	73:SJ:6:SER:OG	2.24	0.47
70:Sg:31:ILE:HD13	70:Sg:299:PHE:CE2	2.50	0.47
70:Sg:86:THR:HG21	70:Sg:100:ARG:NH2	2.29	0.47
83:CA:66:LYS:HG3	83:CA:67:GLU:OE1	2.15	0.47
83:CA:185:MET:HG2	83:CA:203:GLN:HB3	1.97	0.47
83:CA:351:ASP:HB3	83:CA:354:LEU:HG	1.97	0.47
84:CB:693:CYS:HA	84:CB:839:ARG:HD3	1.96	0.47
1:L5:1577:G:H5'	1:L5:1578:U:H5''	1.96	0.47
1:L5:1884:C:H4'	1:L5:2070:U:C4	2.49	0.47
1:L5:2018:C:H2'	1:L5:2019:C:H6	1.79	0.47
1:L5:2864:A:H2'	1:L5:2865:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3685:C:H5'	4:LA:193:ARG:CZ	2.45	0.47
11:LH:91:LYS:HG2	11:LH:145:ILE:HD13	1.97	0.47
22:LS:90:THR:HG23	23:LT:156:TYR:CD2	2.50	0.47
48:Lz:67:VAL:HA	48:Lz:68:LEU:HA	1.51	0.47
49:S2:292:A:H4'	58:SL:39:ASN:O	2.16	0.47
49:S2:621:C:P	66:SX:112:VAL:HG13	2.55	0.47
49:S2:913:A:O2'	55:SH:67:PRO:HD3	2.15	0.47
49:S2:1752:C:N3	49:S2:1779:G:N1	2.63	0.47
50:SA:10:MET:CE	50:SA:52:LYS:HA	2.45	0.47
52:SD:58:VAL:HG22	52:SD:66:ILE:HD11	1.96	0.47
52:SD:193:ASP:N	52:SD:194:PRO:HD2	2.30	0.47
54:SF:79:HIS:CE1	54:SF:159:ARG:HD2	2.50	0.47
62:SS:20:ILE:CD1	62:SS:30:ILE:HA	2.45	0.47
63:ST:2:PRO:HA	63:ST:3:GLY:HA3	1.70	0.47
66:SX:90:CYS:HA	66:SX:93:PHE:HD2	1.80	0.47
70:Sg:164:ILE:HD12	70:Sg:185:LYS:HZ1	1.78	0.47
74:SM:22:LEU:HD21	74:SM:89:VAL:HG23	1.96	0.47
74:SM:23:LYS:O	74:SM:27:ILE:HG12	2.15	0.47
74:SM:25:ALA:HA	74:SM:28:HIS:CE1	2.49	0.47
78:SY:42:GLU:O	78:SY:46:LYS:HG2	2.14	0.47
84:CB:129:VAL:O	84:CB:157:MET:HA	2.15	0.47
84:CB:833:GLN:O	84:CB:837:GLU:HG3	2.14	0.47
1:L5:2568:C:H2'	1:L5:2569:G:C8	2.50	0.46
1:L5:3920:U:H2'	1:L5:3921:U:C6	2.50	0.46
1:L5:4566:U:H2'	1:L5:4567:G:O4'	2.15	0.46
2:L7:7:G:OP1	7:LD:33:ARG:NH1	2.44	0.46
5:LB:29:VAL:HG12	5:LB:31:SER:H	1.80	0.46
20:LQ:110:ARG:HG3	20:LQ:120:ILE:HD12	1.98	0.46
49:S2:126:G:OP1	72:SG:198:ARG:HD2	2.15	0.46
49:S2:1365:G:H2'	49:S2:1366:G:H8	1.80	0.46
49:S2:1512:C:H5''	69:Sd:8:TRP:HZ3	1.80	0.46
51:SB:27:LYS:HD3	51:SB:51:ARG:HH12	1.80	0.46
52:SD:40:ARG:NH1	52:SD:42:THR:HG22	2.29	0.46
56:SI:103:LEU:HD22	56:SI:170:LYS:HB3	1.95	0.46
56:SI:107:THR:OG1	56:SI:108:PRO:HD3	2.14	0.46
58:SL:13:GLN:OE1	58:SL:36:TYR:HB3	2.15	0.46
59:SP:86:LEU:HB2	59:SP:89:MET:HE3	1.97	0.46
64:SU:35:VAL:HG22	64:SU:107:GLU:HG3	1.96	0.46
65:SV:32:ILE:HG12	65:SV:60:ARG:HD2	1.98	0.46
70:Sg:5:MET:HB3	70:Sg:310:TRP:HB3	1.96	0.46
70:Sg:46:THR:OG1	70:Sg:51:ASN:O	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:87:LEU:HD21	70:Sg:122:SER:HB2	1.96	0.46
70:Sg:173:LEU:HD13	70:Sg:189:ILE:HD13	1.96	0.46
83:CA:53:ASP:O	83:CA:57:MET:HG2	2.14	0.46
83:CA:333:ILE:HG13	83:CA:334:THR:HG23	1.97	0.46
84:CB:659:PRO:O	84:CB:699:GLY:N	2.48	0.46
1:L5:3911:C:H2'	1:L5:3912:U:H6	1.79	0.46
1:L5:4083:U:O2'	1:L5:4086:G:OP1	2.20	0.46
1:L5:4894:A:H3'	1:L5:4895:C:H5'	1.97	0.46
1:L5:4934:A:H2'	1:L5:4935:C:H6	1.79	0.46
12:LI:69:ARG:HH11	12:LI:69:ARG:HG2	1.81	0.46
22:LS:31:ARG:HH22	22:LS:102:THR:HG21	1.77	0.46
28:LY:30:MET:HB3	28:LY:101:PRO:HG3	1.97	0.46
36:Lg:83:CYS:SG	36:Lg:86:CYS:HB2	2.55	0.46
47:Ls:94:ASP:OD2	47:Ls:96:THR:OG1	2.28	0.46
49:S2:867:G:O2'	49:S2:868:G:H5'	2.15	0.46
49:S2:906:U:H2'	49:S2:907:G:C8	2.51	0.46
49:S2:942:G:N3	76:SO:137:SER:OG	2.46	0.46
49:S2:1555:U:H5'	49:S2:1556:A:C5	2.50	0.46
49:S2:1777:G:H2'	49:S2:1778:C:C6	2.50	0.46
50:SA:213:GLU:OE2	61:SR:84:TYR:CZ	2.68	0.46
54:SF:127:ARG:C	54:SF:135:ARG:NH2	2.73	0.46
73:SJ:80:ARG:O	73:SJ:84:ILE:HG12	2.15	0.46
83:CA:117:PHE:CE1	83:CA:192:GLN:HB2	2.51	0.46
83:CA:156:LEU:HB2	83:CA:161:ASN:HD21	1.80	0.46
83:CA:310:GLU:HG3	83:CA:314:GLU:HB3	1.96	0.46
1:L5:2583:C:OP2	36:Lg:76:ARG:NH1	2.46	0.46
1:L5:3774:A:H2'	1:L5:3775:A:N3	2.30	0.46
1:L5:4541:G:N2	1:L5:4544:A:OP2	2.39	0.46
2:L7:33:U:H2'	2:L7:34:C:H6	1.80	0.46
4:LA:114:CYS:HB3	4:LA:167:GLY:O	2.15	0.46
6:LC:195:LYS:HA	6:LC:200:ARG:HG2	1.96	0.46
15:LL:5:ARG:HG3	15:LL:5:ARG:HH11	1.80	0.46
28:LY:50:ARG:HG2	28:LY:50:ARG:HH11	1.79	0.46
28:LY:106:ILE:HG21	28:LY:109:LEU:HD23	1.97	0.46
47:Ls:118:PRO:HD2	47:Ls:183:PHE:CD1	2.51	0.46
49:S2:51:U:H2'	49:S2:52:G:C8	2.50	0.46
49:S2:1687:C:H2'	49:S2:1688:C:H6	1.80	0.46
50:SA:5:LEU:HD12	50:SA:8:LEU:HD12	1.96	0.46
52:SD:59:LEU:HD11	52:SD:88:ALA:HB3	1.97	0.46
56:SI:148:LYS:O	56:SI:151:GLU:HG3	2.16	0.46
60:SQ:146:ARG:NH2	85:CC:32:C:O5'	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SR:51:ALA:O	61:SR:55:THR:HG23	2.15	0.46
62:SS:114:LEU:HD11	62:SS:121:ARG:NH2	2.30	0.46
63:ST:28:LEU:CA	63:ST:110:LEU:HD11	2.41	0.46
64:SU:96:GLU:HG2	64:SU:97:ILE:N	2.29	0.46
68:Sc:35:MET:HA	68:Sc:38:THR:HG22	1.98	0.46
71:SC:191:VAL:HG11	71:SC:236:PHE:HA	1.97	0.46
84:CB:157:MET:HE2	84:CB:181:ILE:HB	1.96	0.46
1:L5:1442:C:H2'	1:L5:1443:A:C8	2.50	0.46
1:L5:4345:C:H2'	1:L5:4346:U:C6	2.51	0.46
2:L7:110:G:H2'	2:L7:111:C:C6	2.51	0.46
5:LB:224:LYS:HE3	5:LB:340:THR:HG22	1.97	0.46
7:LD:209:ARG:HA	7:LD:212:MET:HG2	1.96	0.46
14:LK:106:PHE:O	14:LK:110:VAL:HG13	2.15	0.46
49:S2:318:A:N6	72:SG:186:GLN:HE22	2.13	0.46
49:S2:1279:C:H2'	49:S2:1280:G:C8	2.50	0.46
50:SA:10:MET:HE1	50:SA:52:LYS:HA	1.96	0.46
62:SS:84:LEU:CD1	62:SS:97:GLN:HB2	2.45	0.46
67:Sa:90:GLU:HG2	67:Sa:91:ALA:N	2.29	0.46
70:Sg:64:HIS:HD2	70:Sg:83:TRP:CB	2.28	0.46
70:Sg:107:ASP:N	70:Sg:107:ASP:OD1	2.48	0.46
72:SG:59:GLN:OE1	72:SG:59:GLN:N	2.49	0.46
73:SJ:131:ARG:HA	73:SJ:131:ARG:HD2	1.76	0.46
1:L5:490:C:H2'	1:L5:491:G:C8	2.50	0.46
1:L5:1450:C:H2'	1:L5:1451:G:O4'	2.14	0.46
1:L5:4377:G:O6	30:La:42:ARG:NH2	2.48	0.46
3:L8:70:G:H5''	28:LY:27:ARG:CZ	2.45	0.46
14:LK:38:SER:O	14:LK:42:VAL:HG22	2.15	0.46
23:LT:157:GLU:HB3	23:LT:159:MET:CE	2.45	0.46
39:Lj:19:CYS:SG	39:Lj:21:ARG:O	2.73	0.46
49:S2:184:G:H2'	49:S2:185:G:H8	1.79	0.46
49:S2:824:C:C2	73:SJ:144:ILE:HG21	2.50	0.46
49:S2:1292:C:H2'	49:S2:1293:A:O4'	2.15	0.46
49:S2:1406:G:H2'	49:S2:1407:U:H6	1.80	0.46
49:S2:1507:G:N2	82:Sf:88:PRO:HD2	2.31	0.46
57:SK:3:MET:HG3	57:SK:44:HIS:CD2	2.38	0.46
60:SQ:9:SER:HA	60:SQ:25:CYS:O	2.15	0.46
63:ST:126:GLN:O	63:ST:129:ARG:HB2	2.15	0.46
71:SC:183:LYS:HA	71:SC:195:LEU:O	2.16	0.46
76:SO:64:ALA:C	76:SO:66:ARG:H	2.22	0.46
84:CB:39:LEU:HD11	84:CB:350:LEU:HD22	1.96	0.46
1:L5:453:G:H2'	1:L5:453:G:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1819:G:O2'	7:LD:140:GLY:O	2.30	0.46
1:L5:1830:G:H4'	31:Lb:65:MET:HE1	1.96	0.46
1:L5:1968:G:H5'	47:Ls:112:ARG:NH2	2.31	0.46
1:L5:2669:C:H2'	1:L5:2670:C:O4'	2.16	0.46
1:L5:4258:C:H2'	1:L5:4259:C:C6	2.49	0.46
1:L5:4339:A:H2'	1:L5:4340:U:H6	1.81	0.46
1:L5:4584:A:H2'	1:L5:4585:U:O4'	2.15	0.46
14:LK:37:LEU:HD22	14:LK:64:ILE:HD12	1.98	0.46
33:Ld:95:ASP:N	33:Ld:95:ASP:OD1	2.48	0.46
33:Ld:124:GLU:H	33:Ld:124:GLU:CD	2.24	0.46
38:Li:73:ILE:O	38:Li:77:VAL:HG22	2.16	0.46
49:S2:544:G:H2'	49:S2:545:A:H8	1.79	0.46
49:S2:558:G:O2'	49:S2:559:G:OP2	2.32	0.46
49:S2:851:C:H5''	49:S2:852:G:H5'	1.98	0.46
49:S2:1025:U:H2'	49:S2:1026:C:O4'	2.16	0.46
49:S2:1221:G:H2'	49:S2:1222:G:H8	1.80	0.46
49:S2:1376:A:H5'	49:S2:1377:U:OP2	2.16	0.46
49:S2:1407:U:H2'	49:S2:1408:U:H6	1.80	0.46
49:S2:1457:U:H2'	49:S2:1458:G:C8	2.50	0.46
49:S2:1543:U:H5'	60:SQ:37:ARG:NH1	2.20	0.46
51:SB:168:MET:HG2	51:SB:197:ILE:HG21	1.98	0.46
61:SR:93:GLN:OE1	61:SR:93:GLN:N	2.49	0.46
62:SS:63:GLU:OE1	62:SS:66:ARG:NH1	2.26	0.46
72:SG:59:GLN:CD	72:SG:72:ARG:HH22	2.22	0.46
72:SG:216:ARG:C	72:SG:218:LYS:H	2.24	0.46
74:SM:44:LYS:NZ	82:Sf:127:GLY:O	2.43	0.46
83:CA:79:SER:HB3	83:CA:109:ASP:HB3	1.97	0.46
83:CA:163:ASN:O	83:CA:166:VAL:HB	2.15	0.46
88:CC:101:T1C:H713	88:CC:101:T1C:H62C	1.98	0.46
1:L5:173:C:H5''	15:LL:129:ARG:HH22	1.80	0.46
1:L5:270:U:H2'	1:L5:271:C:C6	2.50	0.46
1:L5:1562:G:H5'	1:L5:1563:A:OP2	2.16	0.46
1:L5:2073:C:OP1	9:LF:212:LYS:HB3	2.15	0.46
1:L5:3753:G:C8	1:L5:3776:G:C8	3.04	0.46
7:LD:226:TYR:C	7:LD:228:LYS:O	2.59	0.46
7:LD:260:GLU:O	7:LD:260:GLU:HG2	2.16	0.46
10:LG:173:LEU:O	10:LG:177:MET:HG2	2.15	0.46
32:Lc:52:CYS:HB3	32:Lc:57:LYS:HE2	1.98	0.46
34:Le:82:VAL:O	34:Le:86:GLU:OE1	2.33	0.46
49:S2:495:U:H2'	49:S2:496:C:O4'	2.16	0.46
49:S2:815:U:C2	49:S2:816:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:959:G:H2'	49:S2:960:U:C6	2.50	0.46
49:S2:1284:A:H5'	49:S2:1284:A:N3	2.31	0.46
52:SD:113:LEU:HD23	52:SD:118:ALA:HB2	1.98	0.46
70:Sg:270:LEU:HD11	70:Sg:310:TRP:CE3	2.51	0.46
72:SG:135:PRO:HB2	72:SG:141:ILE:CG2	2.45	0.46
72:SG:213:LEU:HG	72:SG:217:MET:CE	2.24	0.46
74:SM:50:CYS:HB3	74:SM:110:VAL:HG23	1.96	0.46
74:SM:56:CYS:SG	74:SM:57:ASP:N	2.87	0.46
83:CA:105:LEU:HD13	83:CA:139:LYS:HB3	1.98	0.46
84:CB:301:PHE:CZ	84:CB:336:LEU:HD21	2.51	0.46
1:L5:35:U:H4'	1:L5:1525:A:N1	2.29	0.46
1:L5:182:G:H22	88:L5:5316:T1C:H712	1.81	0.46
1:L5:1283:G:N1	1:L5:2076:G:OP1	2.36	0.46
1:L5:1431:C:H2'	1:L5:1432:G:O4'	2.16	0.46
1:L5:2683:C:H2'	1:L5:2684:C:H6	1.80	0.46
1:L5:2902:G:N7	1:L5:2903:G:N2	2.64	0.46
1:L5:3784:A:O2'	1:L5:3785:A:H3'	2.16	0.46
1:L5:4298:A:OP1	20:LQ:160:HIS:HE1	1.99	0.46
1:L5:4545:G:OP2	4:LA:214:GLY:N	2.39	0.46
1:L5:4744:A:H2'	1:L5:4745:G:O4'	2.16	0.46
2:L7:55:A:H4'	13:LJ:155:HIS:HB2	1.98	0.46
3:L8:56:G:H2'	3:L8:57:C:O4'	2.16	0.46
4:LA:116:LEU:HB3	4:LA:126:LEU:HB2	1.97	0.46
5:LB:10:ARG:CZ	5:LB:14:LEU:HG	2.46	0.46
11:LH:171:ASP:O	11:LH:174:LYS:C	2.55	0.46
40:Lk:8:ILE:HG12	40:Lk:45:LEU:HD21	1.97	0.46
49:S2:1302:G:N2	49:S2:1307:U:O4	2.49	0.46
49:S2:1489:A:OP2	86:CD:195:ARG:NH1	2.48	0.46
55:SH:33:ASN:OD1	55:SH:37:LYS:HE3	2.16	0.46
60:SQ:109:LYS:O	60:SQ:113:ILE:HG12	2.16	0.46
63:ST:139:ALA:HA	63:ST:142:ASN:HD21	1.80	0.46
70:Sg:108:VAL:HA	70:Sg:124:SER:CB	2.46	0.46
72:SG:159:ARG:HG2	72:SG:173:ALA:HB2	1.97	0.46
84:CB:194:GLU:O	84:CB:194:GLU:HG2	2.15	0.46
84:CB:254:GLU:O	84:CB:258:LYS:HG2	2.16	0.46
1:L5:1754:U:H2'	1:L5:1755:C:C5	2.49	0.46
1:L5:2667:C:O4'	21:LR:96:MET:HG3	2.16	0.46
1:L5:5006:U:H4'	1:L5:5007:A:H5'	1.97	0.46
14:LK:107:ASP:OD1	14:LK:108:GLU:N	2.49	0.46
31:Lb:27:GLN:HG3	31:Lb:28:ARG:O	2.16	0.46
46:Lr:119:ARG:O	46:Lr:122:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:849:A:H2'	49:S2:850:C:H6	1.81	0.46
49:S2:1215:C:O2'	49:S2:1645:C:OP2	2.34	0.46
49:S2:1423:C:N4	60:SQ:4:LYS:HG3	2.31	0.46
60:SQ:35:ASN:HD21	60:SQ:72:VAL:HG12	1.81	0.46
71:SC:275:LYS:O	71:SC:280:VAL:HG21	2.16	0.46
72:SG:105:ASN:OD1	72:SG:106:LEU:HD12	2.16	0.46
83:CA:255:TYR:HD2	83:CA:299:HIS:HB3	1.81	0.46
84:CB:823:ASP:OD1	84:CB:825:PHE:HB2	2.15	0.46
1:L5:85:G:N2	1:L5:98:A:OP2	2.34	0.46
1:L5:1524:A:H61	1:L5:1651:G:H22	1.64	0.46
1:L5:1563:A:N6	49:S2:1028:A:N1	2.63	0.46
1:L5:1633:G:H5'	1:L5:1634:A:OP1	2.16	0.46
6:LC:36:ILE:HG21	6:LC:122:TYR:CD2	2.51	0.46
9:LF:226:HIS:ND1	9:LF:228:VAL:HG22	2.31	0.46
13:LJ:20:LEU:C	13:LJ:131:TYR:O	2.59	0.46
15:LL:60:ARG:HD2	15:LL:67:HIS:O	2.16	0.46
16:LM:51:PRO:HG2	16:LM:54:CYS:SG	2.56	0.46
22:LS:69:GLU:OE1	22:LS:101:THR:HA	2.15	0.46
47:Ls:24:TYR:HB3	47:Ls:90:PHE:HB3	1.98	0.46
49:S2:197:U:H5'	49:S2:203:G:H21	1.79	0.46
49:S2:443:U:H2'	49:S2:444:G:O4'	2.16	0.46
49:S2:1130:G:OP2	49:S2:1130:G:N2	2.36	0.46
49:S2:1295:A:N1	49:S2:1305:C:N4	2.64	0.46
49:S2:1491:G:H2'	49:S2:1492:U:C6	2.51	0.46
49:S2:1531:A:H2'	49:S2:1532:C:C6	2.51	0.46
49:S2:1602:U:H4'	62:SS:24:ARG:HH12	1.82	0.46
49:S2:1740:C:H2'	49:S2:1741:U:C6	2.51	0.46
50:SA:216:ALA:O	50:SA:220:LYS:HG2	2.16	0.46
56:SI:129:LEU:HD12	56:SI:129:LEU:HA	1.69	0.46
63:ST:17:ALA:HB1	63:ST:134:ILE:HD11	1.98	0.46
70:Sg:112:ALA:O	70:Sg:121:VAL:HG12	2.16	0.46
71:SC:271:ASP:OD1	71:SC:271:ASP:N	2.48	0.46
80:Sb:36:LYS:HD3	80:Sb:43:ILE:HD13	1.98	0.46
83:CA:107:LYS:HD3	83:CA:317:ALA:HA	1.98	0.46
84:CB:680:VAL:O	84:CB:684:GLN:HG2	2.15	0.46
1:L5:7:C:H2'	1:L5:8:U:C6	2.51	0.45
1:L5:100:C:C2	1:L5:101:A:C8	3.04	0.45
1:L5:231:U:H4'	28:LY:100:HIS:CD2	2.51	0.45
1:L5:1924:C:H2'	1:L5:1925:G:O4'	2.16	0.45
6:LC:62:THR:O	6:LC:63:SER:OG	2.25	0.45
11:LH:118:LEU:HD11	11:LH:167:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LK:90:ARG:HA	14:LK:90:ARG:HD2	1.66	0.45
23:LT:36:LYS:HG3	23:LT:65:TYR:HA	1.99	0.45
47:Ls:43:ILE:HG12	47:Ls:105:ASN:ND2	2.30	0.45
49:S2:639:C:H2'	49:S2:640:A:C8	2.51	0.45
49:S2:1292:C:N3	82:Sf:138:ARG:NH2	2.35	0.45
54:SF:126:THR:O	54:SF:127:ARG:HB2	2.16	0.45
64:SU:22:ILE:CG1	64:SU:89:ILE:HB	2.46	0.45
70:Sg:125:ARG:C	70:Sg:127:LYS:N	2.74	0.45
70:Sg:163:PRO:O	70:Sg:164:ILE:HD13	2.15	0.45
70:Sg:170:TRP:HA	70:Sg:194:TYR:HB2	1.98	0.45
70:Sg:185:LYS:HB3	70:Sg:185:LYS:HE2	1.75	0.45
83:CA:134:GLN:HE22	83:CA:344:LYS:HZ2	1.64	0.45
84:CB:116:THR:HG1	84:CB:499:PHE:HE1	1.61	0.45
84:CB:687:THR:HA	84:CB:697:MET:CE	2.46	0.45
1:L5:67:C:OP2	1:L5:312:G:N2	2.49	0.45
1:L5:1171:G:N7	1:L5:1172:C:N4	2.63	0.45
1:L5:1776:A:H2	7:LD:3:PHE:HE1	1.64	0.45
1:L5:2267:U:OP1	46:Lr:37:SER:OG	2.25	0.45
2:L7:113:G:H2'	2:L7:114:U:C6	2.51	0.45
5:LB:357:ARG:C	5:LB:359:ALA:O	2.59	0.45
8:LE:281:ILE:HG23	8:LE:286:LEU:HD21	1.97	0.45
12:LI:72:ALA:HB3	12:LI:87:MET:HE1	1.96	0.45
21:LR:173:ARG:NH2	49:S2:911:C:OP2	2.49	0.45
26:LW:97:LYS:HA	26:LW:101:ARG:CZ	2.46	0.45
49:S2:84:A:O2'	78:SY:119:GLY:O	2.32	0.45
49:S2:1229:G:H2'	49:S2:1230:C:H6	1.82	0.45
49:S2:1278:A:H2'	49:S2:1279:C:C6	2.52	0.45
49:S2:1706:G:H2'	49:S2:1707:U:C6	2.51	0.45
56:SI:165:GLN:HB3	56:SI:171:LEU:HD23	1.98	0.45
58:SL:30:LYS:HD2	58:SL:30:LYS:HA	1.74	0.45
63:ST:42:HIS:NE2	63:ST:43:LYS:HE2	2.31	0.45
65:SV:4:ASP:OD1	65:SV:5:ALA:N	2.50	0.45
68:Sc:29:GLN:HE22	68:Sc:68:LEU:HG	1.81	0.45
76:SO:71:PRO:HB3	76:SO:114:SER:OG	2.16	0.45
79:SZ:101:SER:OG	79:SZ:108:ILE:HD12	2.15	0.45
83:CA:156:LEU:HB2	83:CA:161:ASN:ND2	2.30	0.45
84:CB:10:ARG:CZ	84:CB:465:PRO:HD3	2.47	0.45
84:CB:839:ARG:HD2	84:CB:844:LEU:HD12	1.98	0.45
1:L5:1251:C:H2'	1:L5:1252:C:C6	2.52	0.45
1:L5:1326:A:H2'	1:L5:1327:C:C6	2.52	0.45
1:L5:1348:U:H2'	1:L5:1349:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1468:C:H2'	1:L5:1469:C:H6	1.81	0.45
1:L5:1566:C:H2'	1:L5:1567:U:H6	1.82	0.45
1:L5:2016:C:H2'	1:L5:2017:A:H8	1.81	0.45
1:L5:2838:G:H5'	5:LB:247:GLY:CA	2.43	0.45
1:L5:3966:A:H1'	1:L5:4046:A:N6	2.30	0.45
1:L5:4306:U:OP2	20:LQ:159:PRO:HD2	2.16	0.45
10:LG:171:PRO:HB3	10:LG:181:TYR:CE2	2.50	0.45
15:LL:51:ALA:HB2	15:LL:149:GLN:NE2	2.31	0.45
17:LN:149:GLN:O	17:LN:153:LYS:HD2	2.16	0.45
18:LO:121:PRO:HA	18:LO:124:LEU:HD12	1.97	0.45
37:Lh:3:LYS:HE3	37:Lh:3:LYS:HB2	1.59	0.45
45:Lp:88:GLU:HA	45:Lp:91:ASP:OD1	2.16	0.45
47:Ls:178:LEU:O	47:Ls:180:ILE:HG13	2.16	0.45
48:Lz:203:ALA:HA	48:Lz:217:TYR:HA	1.97	0.45
49:S2:509:G:OP1	73:SJ:2:PRO:HA	2.17	0.45
49:S2:639:C:H2'	49:S2:640:A:H8	1.81	0.45
54:SF:112:LEU:O	54:SF:116:ILE:HG12	2.16	0.45
57:SK:53:LYS:HE2	57:SK:53:LYS:HB3	1.78	0.45
67:Sa:94:ASP:OD1	67:Sa:95:ARG:N	2.49	0.45
70:Sg:5:MET:HA	70:Sg:311:GLN:O	2.16	0.45
70:Sg:12:LYS:HA	70:Sg:12:LYS:HD2	1.76	0.45
70:Sg:30:MET:HA	70:Sg:43:TRP:O	2.16	0.45
70:Sg:109:LEU:HD23	70:Sg:125:ARG:H	1.81	0.45
78:SY:38:THR:O	78:SY:41:ARG:N	2.49	0.45
83:CA:259:MET:O	83:CA:263:ARG:HG3	2.15	0.45
1:L5:318:A:H2'	1:L5:319:A:H8	1.79	0.45
1:L5:3812:C:OP1	1:L5:3813:A:O2'	2.33	0.45
11:LH:66:GLU:O	11:LH:69:THR:OG1	2.25	0.45
12:LI:85:PHE:CD2	12:LI:87:MET:HG3	2.51	0.45
18:LO:110:PRO:O	18:LO:111:PRO:C	2.58	0.45
33:Ld:24:GLU:HG3	33:Ld:122:VAL:HG21	1.98	0.45
49:S2:550:C:H2'	49:S2:551:U:C5	2.52	0.45
49:S2:1378:A:H4'	49:S2:1379:A:O5'	2.17	0.45
49:S2:1630:A:OP1	62:SS:40:TYR:N	2.43	0.45
50:SA:58:LEU:HD21	50:SA:177:MET:HB3	1.98	0.45
52:SD:72:VAL:HG21	57:SK:70:TYR:CE2	2.51	0.45
56:SI:177:SER:OG	56:SI:182:CYS:SG	2.75	0.45
58:SL:81:LYS:O	58:SL:82:MET:HB2	2.17	0.45
65:SV:11:LEU:HG	71:SC:79:GLU:CD	2.41	0.45
70:Sg:299:PHE:HD1	70:Sg:309:VAL:HG12	1.81	0.45
83:CA:33:ARG:HA	83:CA:36:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CA:107:LYS:HD2	83:CA:318:GLN:HB2	1.98	0.45
83:CA:161:ASN:HB3	83:CA:218:PHE:CE2	2.51	0.45
84:CB:430:MET:HE2	84:CB:486:THR:HG22	1.99	0.45
1:L5:510:U:H5'	30:La:86:THR:HG22	1.99	0.45
1:L5:914:U:O2'	1:L5:915:A:OP2	2.31	0.45
1:L5:1048:G:H2'	1:L5:1049:C:C6	2.51	0.45
1:L5:1355:G:H2'	1:L5:1356:U:C6	2.51	0.45
1:L5:1567:U:H2'	1:L5:1568:C:H6	1.81	0.45
1:L5:1751:A:H2'	1:L5:1752:G:C8	2.52	0.45
1:L5:2045:G:O6	1:L5:3870:C:O2'	2.29	0.45
1:L5:2521:G:H5'	1:L5:2640:G:H1'	1.97	0.45
1:L5:2848:G:O2'	1:L5:3838:U:O4	2.30	0.45
1:L5:4987:C:H2'	5:LB:123:HIS:CE1	2.51	0.45
3:L8:66:A:H2'	3:L8:67:U:C6	2.52	0.45
3:L8:88:A:H2'	3:L8:89:U:O4'	2.16	0.45
15:LL:47:ALA:O	15:LL:149:GLN:HB2	2.16	0.45
18:LO:110:PRO:HA	18:LO:113:ASP:OD1	2.16	0.45
20:LQ:178:ARG:HA	20:LQ:184:ARG:O	2.17	0.45
26:LW:101:ARG:HA	26:LW:104:GLN:CD	2.42	0.45
47:Ls:39:GLN:O	47:Ls:43:ILE:HG13	2.16	0.45
49:S2:153:G:N3	72:SG:13:GLN:NE2	2.61	0.45
49:S2:216:C:C2	49:S2:217:A:C8	3.04	0.45
49:S2:502:C:O4'	53:SE:66:MET:HG3	2.17	0.45
49:S2:1037:G:H4'	49:S2:1845:A:H4'	1.97	0.45
49:S2:1304:U:OP1	82:Sf:95:ARG:HG2	2.16	0.45
49:S2:1554:C:OP2	49:S2:1555:U:O2'	2.34	0.45
52:SD:227:LYS:HD3	70:Sg:187:ASN:HD21	1.82	0.45
54:SF:74:ASN:HA	54:SF:77:MET:CE	2.44	0.45
83:CA:90:SER:O	83:CA:245:THR:HG21	2.17	0.45
1:L5:709:C:P	35:Lf:89:ARG:HH22	2.39	0.45
1:L5:1195:G:H2'	1:L5:1196:G:C8	2.52	0.45
1:L5:1361:G:H5''	15:LL:35:ARG:NH2	2.32	0.45
1:L5:1830:G:C4'	31:Lb:65:MET:HE1	2.47	0.45
1:L5:2726:G:H2'	1:L5:2727:C:C6	2.51	0.45
1:L5:3673:C:P	17:LN:67:ARG:HH22	2.40	0.45
1:L5:3946:G:H2'	1:L5:3947:A:C8	2.52	0.45
1:L5:4458:C:H2'	1:L5:4459:U:C6	2.52	0.45
1:L5:4507:A:H2'	1:L5:4508:C:C6	2.51	0.45
5:LB:149:ASP:O	5:LB:153:MET:HG3	2.17	0.45
7:LD:118:ILE:HD11	7:LD:135:ILE:HD12	1.99	0.45
8:LE:147:GLY:N	8:LE:164:PHE:O	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:180:GLU:O	12:LI:184:MET:HG3	2.16	0.45
26:LW:80:ARG:HH12	72:SG:10:THR:C	2.24	0.45
28:LY:42:TYR:O	28:LY:44:VAL:N	2.48	0.45
34:Le:87:VAL:HG11	46:Lr:25:TYR:HB3	1.98	0.45
49:S2:563:G:HO2'	49:S2:564:A:P	2.40	0.45
49:S2:563:G:O2'	49:S2:564:A:OP1	2.30	0.45
49:S2:668:A:H5''	49:S2:1198:G:H4'	1.99	0.45
54:SF:30:ILE:HG21	54:SF:36:GLN:CA	2.47	0.45
55:SH:168:HIS:HE1	55:SH:169:LYS:HE3	1.80	0.45
74:SM:52:LEU:HD21	74:SM:65:VAL:HG21	1.99	0.45
84:CB:22:MET:SD	84:CB:102:LEU:CD1	3.05	0.45
84:CB:36:THR:OG1	84:CB:57:THR:HG21	2.16	0.45
84:CB:179:GLN:HE22	84:CB:261:TRP:HE1	1.63	0.45
1:L5:1:C:H41	3:L8:156:U:H3	1.63	0.45
1:L5:123:C:H2'	1:L5:124:C:C6	2.51	0.45
1:L5:943:A:H1'	9:LF:58:HIS:ND1	2.31	0.45
1:L5:1693:U:H2'	1:L5:1694:C:O4'	2.17	0.45
1:L5:2348:G:OP1	1:L5:2351:C:N4	2.49	0.45
1:L5:4174:U:H2'	1:L5:4175:G:C8	2.52	0.45
1:L5:4455:G:H5''	5:LB:5:LYS:HE2	1.98	0.45
1:L5:4488:A:H4'	1:L5:4489:G:C8	2.52	0.45
5:LB:17:LEU:HD23	5:LB:17:LEU:HA	1.86	0.45
7:LD:234:ASP:O	7:LD:235:MET:HG3	2.16	0.45
7:LD:244:HIS:O	7:LD:248:ARG:HG2	2.17	0.45
19:LP:5:SER:O	19:LP:6:LEU:HB2	2.16	0.45
29:LZ:35:ASP:OD1	29:LZ:36:ARG:N	2.50	0.45
48:Lz:32:VAL:N	48:Lz:170:GLY:O	2.50	0.45
49:S2:155:G:N2	72:SG:56:ASN:OD1	2.49	0.45
49:S2:1610:G:H2'	49:S2:1611:G:H8	1.81	0.45
49:S2:1858:G:OP1	67:Sa:17:HIS:NE2	2.44	0.45
55:SH:166:VAL:O	55:SH:166:VAL:HG23	2.16	0.45
58:SL:128:VAL:HG12	58:SL:142:VAL:HA	1.99	0.45
65:SV:70:LEU:HG	65:SV:74:LYS:HE2	1.99	0.45
66:SX:90:CYS:HA	66:SX:93:PHE:CD2	2.52	0.45
70:Sg:60:ARG:HG3	70:Sg:60:ARG:O	2.17	0.45
72:SG:43:GLU:HA	72:SG:46:LYS:HG2	1.98	0.45
72:SG:214:ALA:O	72:SG:216:ARG:O	2.34	0.45
79:SZ:90:GLU:O	79:SZ:94:LYS:HG3	2.17	0.45
84:CB:260:LEU:HD13	84:CB:293:ILE:HD11	1.98	0.45
84:CB:591:CYS:O	84:CB:603:TYR:HA	2.16	0.45
85:CC:5:G:H2'	85:CC:6:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:29:G:H5''	17:LN:172:ARG:HG2	1.98	0.45
1:L5:123:C:H2'	1:L5:124:C:H6	1.81	0.45
1:L5:1281:G:N1	8:LE:128:HIS:HB2	2.32	0.45
1:L5:2018:C:H2'	1:L5:2019:C:C6	2.52	0.45
1:L5:4088:C:H2'	1:L5:4089:G:C8	2.51	0.45
1:L5:4524:G:OP2	1:L5:4524:G:H4'	2.17	0.45
1:L5:4572:U:H2'	1:L5:4573:G:C8	2.52	0.45
1:L5:4691:A:O3'	11:LH:71:ARG:HD3	2.17	0.45
1:L5:4870:G:H5''	16:LM:91:TRP:CD2	2.52	0.45
16:LM:77:TRP:CE2	16:LM:82:ILE:HB	2.52	0.45
20:LQ:175:GLU:HA	30:La:51:GLY:C	2.41	0.45
35:Lf:45:LYS:HD3	35:Lf:106:TYR:O	2.17	0.45
49:S2:13:C:H4'	49:S2:1355:C:O2	2.17	0.45
49:S2:921:G:C6	80:Sb:22:LYS:HA	2.52	0.45
49:S2:1019:C:H2'	49:S2:1020:A:O4'	2.17	0.45
58:SL:29:GLY:O	58:SL:30:LYS:HB2	2.16	0.45
63:ST:56:ARG:HG3	63:ST:103:VAL:HG21	1.99	0.45
70:Sg:218:LEU:O	70:Sg:227:LEU:HB2	2.17	0.45
74:SM:16:THR:O	74:SM:19:GLN:N	2.49	0.45
79:SZ:85:ARG:O	79:SZ:89:GLN:HG3	2.16	0.45
84:CB:85:ASP:HA	84:CB:88:PHE:HD2	1.82	0.45
84:CB:693:CYS:HB3	84:CB:835:VAL:HG13	1.98	0.45
1:L5:729:G:H5''	9:LF:76:ARG:HD2	1.99	0.45
1:L5:1348:U:H2'	1:L5:1349:G:C8	2.52	0.45
1:L5:1475:G:H2'	1:L5:1476:C:C6	2.52	0.45
1:L5:2683:C:H2'	1:L5:2684:C:C6	2.52	0.45
1:L5:3727:A:H2'	1:L5:3728:A:C8	2.52	0.45
1:L5:4236:G:H4'	1:L5:4328:G:O2'	2.17	0.45
1:L5:4273:A:H2'	1:L5:4274:A:C8	2.52	0.45
1:L5:4344:U:H2'	1:L5:4345:C:C6	2.52	0.45
1:L5:4881:U:C4	16:LM:113:MET:HG2	2.51	0.45
2:L7:117:G:H5'	7:LD:256:LYS:HD2	1.98	0.45
11:LH:91:LYS:HG2	11:LH:145:ILE:CD1	2.47	0.45
14:LK:35:LEU:CA	14:LK:67:ARG:HH22	2.28	0.45
16:LM:105:THR:O	16:LM:109:ARG:HG3	2.16	0.45
23:LT:118:GLU:O	23:LT:122:LYS:HG2	2.17	0.45
26:LW:87:LEU:O	26:LW:91:MET:SD	2.75	0.45
26:LW:101:ARG:HA	26:LW:104:GLN:NE2	2.32	0.45
31:Lb:32:LEU:O	31:Lb:35:VAL:HG22	2.17	0.45
46:Lr:82:ILE:HG23	46:Lr:84:LYS:HZ3	1.82	0.45
47:Ls:127:ASN:HA	47:Ls:153:GLU:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:112:U:O2'	49:S2:113:G:OP2	2.27	0.45
49:S2:186:C:H2'	49:S2:187:G:C8	2.52	0.45
49:S2:1238:U:O2	49:S2:1242:U:H5	2.00	0.45
49:S2:1285:G:H5'	74:SM:35:ILE:CG2	2.37	0.45
49:S2:1304:U:H2'	49:S2:1305:C:C6	2.52	0.45
54:SF:130:ARG:O	54:SF:136:ARG:HD2	2.16	0.45
57:SK:83:LEU:HB2	57:SK:85:LEU:HD13	1.99	0.45
61:SR:100:PRO:O	61:SR:103:LYS:N	2.50	0.45
67:Sa:58:VAL:HG21	76:SO:28:PHE:HZ	1.82	0.45
70:Sg:219:TRP:HA	70:Sg:227:LEU:HB2	1.98	0.45
70:Sg:244:ASN:CG	70:Sg:245:ARG:HH11	2.24	0.45
83:CA:176:SER:OG	83:CA:350:GLN:OE1	2.29	0.45
1:L5:717:U:H2'	1:L5:718:C:C6	2.52	0.45
1:L5:1705:G:H2'	1:L5:1706:A:O4'	2.17	0.45
1:L5:1933:G:H2'	1:L5:1934:A:C8	2.52	0.45
1:L5:3953:G:H2'	1:L5:3954:A:O4'	2.17	0.45
88:L5:5312:T1C:H951	88:L5:5312:T1C:H921	1.73	0.45
88:L5:5314:T1C:H951	88:L5:5314:T1C:H922	1.77	0.45
3:L8:92:U:H2'	3:L8:93:C:O4'	2.17	0.45
9:LF:58:HIS:CD2	9:LF:62:ARG:HH21	2.34	0.45
17:LN:123:GLU:HB3	17:LN:128:LYS:HG3	1.99	0.45
20:LQ:49:LYS:HE2	20:LQ:49:LYS:HB3	1.82	0.45
22:LS:75:VAL:HG11	22:LS:98:ARG:NH2	2.32	0.45
49:S2:165:G:H2'	49:S2:166:A:H8	1.81	0.45
49:S2:421:G:P	58:SL:98:LYS:HA	2.57	0.45
49:S2:693:A:H2'	49:S2:694:G:N7	2.32	0.45
49:S2:835:C:H4'	49:S2:836:G:N7	2.32	0.45
49:S2:943:U:C2	49:S2:944:A:C8	3.05	0.45
49:S2:1307:U:O2'	82:Sf:135:HIS:ND1	2.34	0.45
49:S2:1413:G:H2'	49:S2:1414:A:H8	1.81	0.45
51:SB:167:LYS:HD3	51:SB:170:GLU:OE2	2.17	0.45
64:SU:24:LEU:HD11	64:SU:39:LEU:HD12	1.99	0.45
75:SN:29:THR:OG1	75:SN:30:SER:N	2.50	0.45
84:CB:35:LEU:HD11	84:CB:156:MET:CE	2.47	0.45
84:CB:36:THR:HG22	84:CB:102:LEU:HD21	1.99	0.45
1:L5:308:G:O6	17:LN:12:ARG:NH1	2.51	0.44
1:L5:1726:U:H5'	9:LF:135:ILE:HD11	1.99	0.44
1:L5:4092:G:C4	1:L5:4093:G:N2	2.85	0.44
1:L5:4139:G:O6	1:L5:4141:G:N2	2.48	0.44
1:L5:4459:U:H2'	1:L5:4460:U:H6	1.82	0.44
2:L7:55:A:O2'	13:LJ:151:ILE:O	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:211:TYR:OH	6:LC:218:ILE:HD11	2.17	0.44
8:LE:115:TYR:CD1	46:Lr:115:SER:HB3	2.52	0.44
11:LH:92:MET:HE1	11:LH:161:ILE:HB	1.99	0.44
11:LH:173:ARG:HB2	42:Lm:127:VAL:HG13	1.99	0.44
13:LJ:160:GLU:HA	13:LJ:163:MET:HE3	1.98	0.44
46:Lr:17:LEU:HD21	46:Lr:19:LYS:HD2	1.99	0.44
49:S2:165:G:C8	49:S2:166:A:C8	3.05	0.44
49:S2:1164:G:O2'	49:S2:1165:G:H5'	2.16	0.44
52:SD:123:LEU:HD11	52:SD:152:PHE:CB	2.45	0.44
56:SI:65:PHE:HA	56:SI:187:GLY:O	2.17	0.44
56:SI:107:THR:O	56:SI:111:GLN:HG2	2.16	0.44
60:SQ:54:PRO:HG2	60:SQ:88:ILE:HD11	1.98	0.44
62:SS:10:GLN:N	62:SS:10:GLN:OE1	2.50	0.44
65:SV:70:LEU:HD21	65:SV:83:PHE:CZ	2.52	0.44
70:Sg:244:ASN:HD21	70:Sg:245:ARG:HH11	1.65	0.44
71:SC:243:ALA:O	71:SC:247:THR:HG23	2.15	0.44
82:Sf:104:LYS:N	82:Sf:104:LYS:HD2	2.32	0.44
1:L5:163:A:H2'	1:L5:164:G:C8	2.50	0.44
1:L5:1631:A:N7	4:LA:199:VAL:HG21	2.31	0.44
10:LG:51:LEU:O	10:LG:55:VAL:HG23	2.17	0.44
17:LN:126:THR:HG23	17:LN:127:TYR:CD2	2.51	0.44
21:LR:158:GLN:HG3	21:LR:162:ARG:NH2	2.32	0.44
40:Lk:5:ILE:O	40:Lk:45:LEU:HD12	2.17	0.44
49:S2:106:C:H2'	49:S2:107:A:H8	1.82	0.44
49:S2:293:C:O2	49:S2:293:C:H2'	2.17	0.44
49:S2:659:G:HO2'	49:S2:662:G:HO2'	1.61	0.44
49:S2:853:C:C2	49:S2:854:A:C8	3.05	0.44
49:S2:964:A:H2'	49:S2:965:U:C6	2.53	0.44
49:S2:1825:A:N3	49:S2:1825:A:H2'	2.32	0.44
50:SA:28:THR:CA	50:SA:45:GLY:O	2.52	0.44
55:SH:18:GLU:O	55:SH:19:PHE:HB3	2.17	0.44
62:SS:43:VAL:HG11	62:SS:83:PHE:CE2	2.53	0.44
70:Sg:83:TRP:HA	70:Sg:107:ASP:HB2	1.98	0.44
70:Sg:113:PHE:CD1	70:Sg:120:ILE:HD13	2.52	0.44
71:SC:78:LEU:HG	71:SC:82:TYR:CE2	2.52	0.44
71:SC:246:LYS:HA	71:SC:249:SER:HB2	1.99	0.44
76:SO:19:PRO:HD2	76:SO:89:GLY:HA3	1.99	0.44
83:CA:49:CYS:SG	83:CA:80:ILE:HD13	2.58	0.44
83:CA:155:ARG:NE	83:CA:360:SER:OG	2.51	0.44
83:CA:203:GLN:HE22	83:CA:229:LEU:H	1.65	0.44
86:CD:284:ASP:HA	86:CD:287:LYS:HE2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:674:G:H2'	1:L5:675:C:C6	2.52	0.44
1:L5:2079:G:H2'	1:L5:2080:U:C6	2.52	0.44
1:L5:2352:U:H2'	1:L5:2353:U:C6	2.53	0.44
5:LB:357:ARG:O	5:LB:361:GLU:HB2	2.17	0.44
7:LD:152:ARG:HG3	7:LD:154:THR:HG23	1.98	0.44
8:LE:193:PHE:HD1	35:Lf:106:TYR:CD1	2.35	0.44
10:LG:138:ALA:HB2	10:LG:194:VAL:HG11	2.00	0.44
15:LL:145:LYS:C	15:LL:146:LEU:HD12	2.42	0.44
16:LM:117:LYS:O	16:LM:121:ARG:HG2	2.17	0.44
26:LW:87:LEU:CG	26:LW:91:MET:HE1	2.33	0.44
32:Lc:38:ILE:HD11	32:Lc:46:VAL:HG21	1.99	0.44
32:Lc:48:LEU:HD13	32:Lc:57:LYS:HG3	2.00	0.44
39:Lj:52:LYS:HA	39:Lj:55:ARG:HG2	1.98	0.44
44:Lo:54:PRO:O	85:CC:74:C:O2'	2.23	0.44
49:S2:96:C:H2'	49:S2:97:U:C6	2.52	0.44
49:S2:1780:G:H2'	49:S2:1781:A:O4'	2.17	0.44
51:SB:44:ILE:HD12	51:SB:69:VAL:HG21	1.99	0.44
62:SS:15:VAL:HB	62:SS:68:ILE:CD1	2.43	0.44
70:Sg:17:TRP:H	70:Sg:36:ARG:HB3	1.82	0.44
70:Sg:58:ALA:C	70:Sg:59:LEU:HD12	2.43	0.44
70:Sg:59:LEU:HD23	70:Sg:90:TRP:CG	2.51	0.44
83:CA:59:GLU:HA	83:CA:62:LYS:HG2	1.97	0.44
83:CA:187:SER:HB2	83:CA:227:ASP:OD1	2.18	0.44
83:CA:227:ASP:HB3	83:CA:320:LYS:HG3	1.99	0.44
1:L5:1725:U:H4'	9:LF:104:LYS:HG3	2.00	0.44
1:L5:2495:U:H2'	1:L5:2496:G:C8	2.52	0.44
1:L5:3868:G:H22	1:L5:3900:G:H1'	1.81	0.44
1:L5:4108:G:H2'	1:L5:4109:G:H8	1.83	0.44
1:L5:4195:G:OP1	1:L5:4221:C:O2'	2.29	0.44
1:L5:4638:U:H2'	1:L5:4639:G:N3	2.32	0.44
3:L8:47:C:H1'	3:L8:61:A:H2'	1.99	0.44
5:LB:201:LEU:O	5:LB:203:GLN:HG2	2.17	0.44
15:LL:86:ILE:HG12	15:LL:121:ARG:HH11	1.80	0.44
29:LZ:99:ASP:CG	29:LZ:102:ARG:HH21	2.25	0.44
36:Lg:61:PRO:HA	36:Lg:64:LEU:HD12	1.99	0.44
38:Li:58:MET:O	38:Li:62:LYS:HG3	2.18	0.44
49:S2:51:U:H2'	49:S2:52:G:H8	1.82	0.44
49:S2:1272:C:H2'	49:S2:1273:C:C6	2.53	0.44
49:S2:1580:A:O2'	49:S2:1581:C:H5'	2.17	0.44
54:SF:120:GLY:O	54:SF:146:ARG:NH1	2.51	0.44
59:SP:18:ARG:NH1	62:SS:88:LYS:HE3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SQ:63:PHE:CZ	60:SQ:92:LEU:HD22	2.53	0.44
60:SQ:118:THR:HA	60:SQ:121:VAL:O	2.16	0.44
63:ST:33:TRP:CZ2	63:ST:102:ARG:HG3	2.53	0.44
70:Sg:47:ARG:HA	70:Sg:52:TYR:HD1	1.83	0.44
83:CA:60:THR:HA	83:CA:63:ILE:HG12	1.98	0.44
83:CA:167:THR:HG22	83:CA:202:ILE:O	2.18	0.44
85:CC:60:C:H2'	85:CC:61:C:H6	1.81	0.44
1:L5:1309:C:H2'	1:L5:1310:C:C6	2.53	0.44
1:L5:1743:A:N1	1:L5:1789:C:O2'	2.44	0.44
1:L5:1984:A:N7	1:L5:2010:A:O2'	2.45	0.44
1:L5:2692:U:O2	40:Lk:2:PRO:HB2	2.17	0.44
1:L5:3652:A:H2'	1:L5:3653:A:C5	2.52	0.44
1:L5:4897:G:H2'	1:L5:4898:G:C8	2.53	0.44
4:LA:206:PRO:HG3	4:LA:213:GLY:HA3	2.00	0.44
6:LC:122:TYR:CD1	6:LC:280:PRO:HG3	2.52	0.44
7:LD:228:LYS:C	7:LD:230:SER:N	2.75	0.44
10:LG:159:HIS:ND1	10:LG:185:LYS:HA	2.32	0.44
12:LI:205:PRO:HD2	12:LI:208:LYS:HD3	1.99	0.44
12:LI:212:LEU:C	12:LI:214:SER:N	2.74	0.44
13:LJ:20:LEU:HG	13:LJ:22:LEU:HD21	1.99	0.44
26:LW:45:ASN:O	26:LW:49:ILE:HG12	2.18	0.44
49:S2:5:U:H2'	49:S2:6:G:C8	2.53	0.44
49:S2:77:A:H5'	72:SG:154:ARG:O	2.17	0.44
49:S2:1284:A:H5''	49:S2:1286:G:O4'	2.17	0.44
54:SF:121:PRO:O	54:SF:146:ARG:HG2	2.18	0.44
56:SI:98:LYS:O	56:SI:175:ILE:HB	2.17	0.44
62:SS:100:ALA:O	62:SS:103:LEU:N	2.49	0.44
70:Sg:101:PHE:CE1	70:Sg:136:GLY:HA3	2.50	0.44
70:Sg:244:ASN:HD21	70:Sg:245:ARG:NH1	2.16	0.44
71:SC:184:VAL:HG11	71:SC:247:THR:HG22	1.99	0.44
72:SG:214:ALA:C	72:SG:216:ARG:O	2.61	0.44
82:Sf:140:TYR:CD1	82:Sf:141:CYS:N	2.86	0.44
84:CB:451:ILE:HG12	84:CB:458:VAL:HB	1.99	0.44
1:L5:300:A:H2'	1:L5:301:G:H8	1.82	0.44
1:L5:1995:G:H2'	1:L5:1996:C:C6	2.52	0.44
1:L5:4750:G:H2'	1:L5:4751:G:C8	2.53	0.44
4:LA:131:GLY:H	4:LA:169:VAL:HG23	1.83	0.44
7:LD:211:LEU:HD13	7:LD:219:TYR:HA	1.99	0.44
26:LW:104:GLN:HA	26:LW:107:GLN:HG3	2.00	0.44
32:Lc:17:ARG:NH1	32:Lc:106:ARG:HD3	2.33	0.44
52:SD:4:GLN:HG2	52:SD:4:GLN:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SK:58:VAL:HG21	57:SK:69:TRP:HB3	1.99	0.44
60:SQ:96:TYR:HA	60:SQ:100:VAL:CG2	2.48	0.44
70:Sg:246:TYR:OH	70:Sg:261:LEU:HB2	2.17	0.44
79:SZ:47:LEU:O	79:SZ:79:ILE:HD12	2.18	0.44
83:CA:86:VAL:HG13	83:CA:229:LEU:HD21	2.00	0.44
1:L5:1097:C:H2'	1:L5:1098:G:C8	2.53	0.44
1:L5:2710:C:P	21:LR:39:GLN:NE2	2.91	0.44
1:L5:4635:A:H3'	1:L5:4636:U:H4'	2.00	0.44
1:L5:4934:A:H2'	1:L5:4935:C:C6	2.52	0.44
8:LE:204:SER:O	8:LE:205:ASN:HB2	2.16	0.44
12:LI:43:VAL:HG22	12:LI:195:CYS:O	2.18	0.44
14:LK:104:ILE:O	14:LK:143:VAL:HA	2.17	0.44
49:S2:536:A:H3'	49:S2:537:C:C5'	2.48	0.44
49:S2:543:C:H3'	49:S2:544:G:C8	2.52	0.44
49:S2:1013:U:OP1	49:S2:1129:G:O2'	2.35	0.44
52:SD:12:VAL:O	52:SD:16:ILE:HG12	2.18	0.44
52:SD:148:LYS:HD2	86:CD:206:HIS:CE1	2.52	0.44
53:SE:97:GLU:HG2	53:SE:99:PHE:CE1	2.53	0.44
61:SR:100:PRO:HG3	61:SR:122:PRO:HD3	2.00	0.44
65:SV:17:CYS:O	65:SV:21:ASN:N	2.50	0.44
68:Sc:45:ASN:ND2	68:Sc:65:ALA:HB1	2.33	0.44
71:SC:208:PRO:O	71:SC:212:LYS:HG3	2.17	0.44
75:SN:20:ARG:HH21	77:SW:56:HIS:HB3	1.82	0.44
82:Sf:124:ASP:OD1	82:Sf:124:ASP:N	2.49	0.44
84:CB:683:PHE:HA	84:CB:729:LEU:HD11	1.99	0.44
1:L5:460:C:H2'	1:L5:461:G:C8	2.52	0.44
1:L5:980:U:H2'	1:L5:981:C:C6	2.52	0.44
1:L5:1720:C:OP1	1:L5:1835:G:O2'	2.35	0.44
1:L5:2765:A:H2'	1:L5:2766:A:C8	2.53	0.44
1:L5:3972:A:H4'	1:L5:3973:G:H5'	2.00	0.44
1:L5:4345:C:H2'	1:L5:4346:U:H6	1.83	0.44
1:L5:4881:U:OP1	16:LM:121:ARG:NH2	2.51	0.44
3:L8:5:U:H2'	3:L8:6:C:H6	1.83	0.44
5:LB:51:ALA:HA	5:LB:323:TYR:CD1	2.53	0.44
6:LC:360:ALA:O	6:LC:364:LYS:HG2	2.18	0.44
7:LD:164:LYS:HG2	7:LD:195:HIS:CE1	2.53	0.44
7:LD:211:LEU:CD1	7:LD:219:TYR:HA	2.48	0.44
14:LK:37:LEU:HD23	14:LK:41:LYS:NZ	2.33	0.44
18:LO:185:VAL:O	18:LO:189:ILE:HG12	2.17	0.44
24:LU:45:GLU:HG2	24:LU:46:ARG:HG2	2.00	0.44
26:LW:14:TYR:HB3	26:LW:15:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:92:A:O2'	53:SE:4:GLY:HA3	2.17	0.44
49:S2:407:G:C6	66:SX:36:LEU:HD21	2.53	0.44
49:S2:517:C:H2'	49:S2:518:G:O4'	2.18	0.44
49:S2:1112:U:H2'	49:S2:1113:A:C8	2.53	0.44
70:Sg:145:GLU:OE1	70:Sg:145:GLU:N	2.51	0.44
72:SG:50:VAL:CG2	72:SG:111:LEU:HB3	2.48	0.44
1:L5:444:G:H2'	1:L5:445:U:C6	2.53	0.44
1:L5:663:G:H2'	1:L5:664:G:C8	2.53	0.44
1:L5:1893:C:H1'	1:L5:1937:C:O2	2.18	0.44
1:L5:4101:C:H1'	1:L5:4109:G:O6	2.18	0.44
1:L5:4761:G:H2'	1:L5:4762:A:C8	2.53	0.44
18:LO:61:ARG:HA	18:LO:70:PRO:HD2	2.00	0.44
26:LW:113:LYS:O	26:LW:116:LYS:HG3	2.17	0.44
27:LX:148:ASP:O	27:LX:151:ASN:HB2	2.18	0.44
28:LY:89:LYS:O	28:LY:92:GLY:N	2.44	0.44
33:Ld:44:ARG:HD2	33:Ld:48:GLU:OE2	2.18	0.44
47:Ls:30:VAL:CG2	47:Ls:187:LEU:HB3	2.45	0.44
49:S2:649:U:H2'	49:S2:650:A:H8	1.83	0.44
49:S2:1538:C:H2'	49:S2:1539:U:C6	2.53	0.44
55:SH:129:ILE:HD13	55:SH:180:LEU:HD13	1.99	0.44
62:SS:26:ILE:O	62:SS:30:ILE:HG12	2.18	0.44
74:SM:72:HIS:HB3	74:SM:74:ILE:HD12	2.00	0.44
84:CB:222:ALA:HB3	84:CB:346:ALA:HA	1.98	0.44
84:CB:660:ASN:ND2	84:CB:687:THR:OG1	2.43	0.44
84:CB:804:THR:HG21	84:CB:808:ALA:H	1.83	0.44
84:CB:839:ARG:HE	84:CB:844:LEU:HB2	1.83	0.44
1:L5:962:C:H2'	1:L5:1702:C:H5	1.82	0.43
1:L5:1087:A:H2'	1:L5:1088:C:C6	2.53	0.43
1:L5:1733:G:N3	1:L5:4214:A:H2'	2.33	0.43
1:L5:2347:A:C4	34:Le:31:ILE:HD11	2.53	0.43
1:L5:2372:U:O2'	33:Ld:46:LEU:HD22	2.17	0.43
1:L5:4300:U:H2'	1:L5:4301:U:C6	2.52	0.43
3:L8:67:U:H2'	3:L8:68:G:H8	1.83	0.43
4:LA:129:ALA:O	4:LA:169:VAL:HG21	2.18	0.43
18:LO:16:LEU:HD12	18:LO:80:PHE:HD1	1.83	0.43
26:LW:102:LYS:O	26:LW:106:GLU:HG2	2.17	0.43
30:La:81:LEU:HD21	30:La:108:TYR:HE2	1.83	0.43
30:La:81:LEU:HD23	30:La:81:LEU:HA	1.80	0.43
40:Lk:51:GLU:OE2	40:Lk:52:LYS:HG3	2.18	0.43
44:Lo:14:LYS:HD3	44:Lo:77:CYS:HB2	1.99	0.43
49:S2:35:C:H5''	49:S2:579:C:H5''	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1671:G:H2'	49:S2:1672:U:C6	2.52	0.43
49:S2:1757:G:C8	49:S2:1758:G:H1'	2.53	0.43
50:SA:85:ARG:HD3	50:SA:203:PHE:O	2.18	0.43
56:SI:128:LYS:HB2	56:SI:128:LYS:HE3	1.80	0.43
60:SQ:102:GLU:OE2	70:Sg:55:PRO:HB2	2.19	0.43
63:ST:31:PRO:O	63:ST:34:VAL:HG23	2.18	0.43
72:SG:102:VAL:HG23	72:SG:106:LEU:HD22	1.99	0.43
77:SW:62:VAL:HG11	80:Sb:8:LEU:HG	1.99	0.43
83:CA:24:GLY:HA2	83:CA:27:ILE:HG22	1.98	0.43
83:CA:142[A]:VAL:HG11	83:CA:232:SER:HB2	1.99	0.43
84:CB:50:ARG:HH11	84:CB:52:GLY:HA3	1.80	0.43
84:CB:267:ASP:HA	84:CB:285:LEU:CD1	2.48	0.43
1:L5:423:G:H5'	19:LP:26:PHE:HZ	1.82	0.43
1:L5:750:U:C2	1:L5:751:G:C8	3.06	0.43
1:L5:2394:G:O2'	1:L5:2819:U:O4	2.28	0.43
1:L5:2693:G:H2'	1:L5:2694:G:N2	2.33	0.43
1:L5:4750:G:H2'	1:L5:4751:G:H8	1.84	0.43
1:L5:4957:C:H2'	1:L5:4958:C:C6	2.53	0.43
88:L5:5312:T1C:H432	88:L5:5312:T1C:H41	1.77	0.43
4:LA:142:GLU:C	4:LA:144:LYS:H	2.25	0.43
6:LC:214:ASP:OD2	6:LC:218:ILE:HD12	2.18	0.43
10:LG:162:ASP:HB3	10:LG:163:PRO:HD3	2.00	0.43
18:LO:190:ASP:O	18:LO:194:GLU:HG2	2.18	0.43
21:LR:148:ASP:OD1	21:LR:149:LYS:N	2.51	0.43
29:LZ:120:GLU:O	29:LZ:124:THR:HG23	2.17	0.43
34:Le:88:LEU:HD23	34:Le:88:LEU:HA	1.86	0.43
49:S2:958:G:H2'	49:S2:959:G:C8	2.53	0.43
49:S2:1323:U:H2'	49:S2:1324:G:C8	2.53	0.43
49:S2:1661:A:H8	69:Sd:14:PHE:HB2	1.83	0.43
55:SH:29:GLU:C	55:SH:31:GLU:H	2.26	0.43
60:SQ:35:ASN:ND2	60:SQ:72:VAL:HG12	2.34	0.43
61:SR:66:VAL:HG23	61:SR:67:ARG:N	2.25	0.43
62:SS:50:ILE:HG13	62:SS:63:GLU:OE1	2.17	0.43
70:Sg:191:HIS:HD2	70:Sg:192:THR:H	1.66	0.43
73:SJ:27:GLN:NE2	73:SJ:31:LEU:HD11	2.33	0.43
84:CB:58:ASP:O	84:CB:456:ARG:NH1	2.51	0.43
84:CB:646:ALA:HA	84:CB:649:ILE:HG13	2.01	0.43
1:L5:1:C:H3'	1:L5:2:G:C8	2.53	0.43
1:L5:1548:G:O2'	1:L5:2812:A:N3	2.48	0.43
1:L5:2326:G:H5''	34:Le:127:ALA:HB2	2.00	0.43
1:L5:3899:G:H5''	5:LB:257:TRP:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4061:G:H2'	1:L5:4062:A:C8	2.53	0.43
1:L5:4208:U:OP1	1:L5:4334:U:O2'	2.32	0.43
6:LC:319:LEU:HD11	9:LF:152:GLU:HA	2.00	0.43
49:S2:536:A:H3'	49:S2:537:C:H5''	1.99	0.43
49:S2:895:G:H3'	49:S2:896:U:H4'	2.00	0.43
49:S2:909:G:H2'	49:S2:910:G:C8	2.53	0.43
49:S2:913:A:N3	55:SH:66:VAL:HG21	2.33	0.43
49:S2:984:C:O2'	76:SO:138:ASP:OD2	2.34	0.43
49:S2:1181:A:H2'	49:S2:1182:A:C8	2.53	0.43
49:S2:1305:C:C2	49:S2:1306:U:C5	3.07	0.43
49:S2:1521:C:H1'	59:SP:128:HIS:CE1	2.50	0.43
52:SD:109:LEU:HD12	52:SD:184:ILE:HD11	1.99	0.43
55:SH:14:GLU:O	55:SH:15:LYS:HB2	2.18	0.43
55:SH:32:MET:N	55:SH:37:LYS:HD2	2.31	0.43
60:SQ:42:ILE:O	60:SQ:45:ARG:HG2	2.17	0.43
70:Sg:244:ASN:ND2	70:Sg:245:ARG:HH11	2.15	0.43
73:SJ:63:LEU:HD11	73:SJ:69:ARG:NH2	2.34	0.43
74:SM:56:CYS:SG	74:SM:61:TYR:CD2	3.06	0.43
84:CB:85:ASP:O	84:CB:89:ILE:HG13	2.19	0.43
1:L5:1414:C:H2'	1:L5:1415:G:H8	1.83	0.43
1:L5:1510:G:H2'	1:L5:1511:U:C6	2.53	0.43
1:L5:1767:A:N6	1:L5:1769:G:O2'	2.51	0.43
1:L5:1847:C:H2'	1:L5:1848:C:C6	2.52	0.43
1:L5:3873:G:H2'	1:L5:3874:G:C8	2.53	0.43
1:L5:3934:G:H2'	1:L5:3935:C:C6	2.53	0.43
5:LB:150:PHE:HB3	5:LB:198:ARG:HH22	1.83	0.43
8:LE:203:ILE:O	8:LE:206:VAL:HB	2.17	0.43
16:LM:51:PRO:C	16:LM:55:MET:HE3	2.43	0.43
17:LN:159:ARG:HB3	17:LN:164:LEU:HB2	1.99	0.43
21:LR:172:ARG:HG3	21:LR:176:ARG:NH2	2.33	0.43
49:S2:808:A:H2	49:S2:855:G:H22	1.66	0.43
49:S2:919:A:OP1	75:SN:20:ARG:NE	2.50	0.43
49:S2:1098:C:H2'	49:S2:1099:G:C8	2.54	0.43
49:S2:1828:C:H2'	49:S2:1829:G:O4'	2.18	0.43
51:SB:40:ASN:N	51:SB:75:GLN:OE1	2.48	0.43
53:SE:252:ARG:O	53:SE:256:LEU:HD13	2.19	0.43
60:SQ:81:ILE:O	60:SQ:85:ARG:HG3	2.18	0.43
63:ST:134:ILE:O	63:ST:138:VAL:HG12	2.18	0.43
67:Sa:24:THR:HA	76:SO:142:ARG:HH12	1.83	0.43
72:SG:164:LYS:HD3	72:SG:167:LYS:HE3	1.99	0.43
78:SY:51:THR:OG1	78:SY:53:ASP:OD1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SZ:90:GLU:OE2	79:SZ:94:LYS:CE	2.66	0.43
83:CA:144:LYS:NZ	83:CA:343:TYR:O	2.45	0.43
84:CB:160:MET:O	84:CB:164:LEU:HG	2.18	0.43
84:CB:381:ALA:HB1	84:CB:395:MET:HE3	2.01	0.43
1:L5:74:G:H5'	15:LL:60:ARG:O	2.18	0.43
1:L5:429:A:H2'	1:L5:430:G:C8	2.53	0.43
1:L5:662:C:H2'	1:L5:663:G:C8	2.53	0.43
1:L5:667:A:H5''	1:L5:668:C:H5''	2.01	0.43
1:L5:1194:G:H2'	1:L5:1195:G:H8	1.84	0.43
1:L5:1588:U:H2'	1:L5:1589:C:C6	2.53	0.43
1:L5:1755:C:C2	1:L5:1756:U:C6	3.06	0.43
1:L5:2264:C:H2'	1:L5:2265:G:O4'	2.18	0.43
1:L5:2319:C:OP2	34:Le:62:SER:OG	2.29	0.43
1:L5:2434:G:O2'	1:L5:2527:A:N1	2.49	0.43
1:L5:2491:C:O2'	1:L5:2492:C:O4'	2.30	0.43
1:L5:2730:U:H2'	1:L5:2731:C:C6	2.54	0.43
1:L5:2769:U:N3	36:Lg:69:LYS:HD3	2.34	0.43
1:L5:3911:C:H2'	1:L5:3912:U:C6	2.54	0.43
1:L5:4093:G:C8	1:L5:4094:G:N7	2.86	0.43
1:L5:4317:A:H2'	1:L5:4318:C:O4'	2.19	0.43
1:L5:4860:G:H5'	18:LO:169:ARG:HD2	2.00	0.43
2:L7:28:C:H1'	2:L7:54:A:H61	1.84	0.43
5:LB:80:GLU:OE2	5:LB:328:ASN:ND2	2.43	0.43
6:LC:293:LEU:HD22	20:LQ:34:PHE:CD2	2.54	0.43
14:LK:35:LEU:O	14:LK:67:ARG:CZ	2.67	0.43
24:LU:61:VAL:HG22	24:LU:74:SER:HB2	1.99	0.43
29:LZ:18:TYR:CD2	29:LZ:73:LYS:HD2	2.53	0.43
49:S2:124:U:OP1	72:SG:201:LYS:NZ	2.39	0.43
49:S2:183:G:C2	49:S2:184:G:C8	3.06	0.43
49:S2:1101:U:H2'	49:S2:1102:G:H8	1.84	0.43
49:S2:1501:C:H2'	49:S2:1502:C:H6	1.84	0.43
51:SB:59:SER:O	51:SB:63:LYS:HG3	2.18	0.43
55:SH:172:THR:O	55:SH:176:VAL:HG12	2.19	0.43
60:SQ:11:GLN:HA	60:SQ:23:ALA:O	2.18	0.43
70:Sg:23:THR:HG21	70:Sg:292:SER:HA	2.01	0.43
72:SG:7:PHE:CD2	72:SG:10:THR:HG22	2.53	0.43
78:SY:102:THR:O	78:SY:107:ARG:NH1	2.52	0.43
83:CA:44:SER:O	83:CA:48:LEU:HG	2.18	0.43
84:CB:109:VAL:HA	84:CB:138:GLN:CD	2.43	0.43
84:CB:595:SER:HA	84:CB:724:THR:CG2	2.43	0.43
1:L5:82:U:H2'	1:L5:83:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2463:G:O2'	1:L5:2464:C:H5'	2.18	0.43
1:L5:3932:U:H2'	1:L5:3933:G:C8	2.53	0.43
4:LA:189:TYR:CD2	4:LA:196:TRP:HB2	2.53	0.43
5:LB:2:SER:O	5:LB:2:SER:OG	2.31	0.43
21:LR:7:GLN:HG2	21:LR:32:ILE:O	2.19	0.43
23:LT:28:ALA:O	23:LT:32:ARG:HG2	2.18	0.43
31:Lb:15:LYS:HA	31:Lb:18:ARG:HG3	2.01	0.43
32:Lc:11:LEU:O	32:Lc:14:ILE:HG22	2.18	0.43
49:S2:344:U:H2'	49:S2:345:U:H6	1.82	0.43
49:S2:1374:C:H2'	49:S2:1375:G:O4'	2.18	0.43
49:S2:1507:G:N1	82:Sf:90:LYS:HA	2.34	0.43
49:S2:1531:A:H4'	49:S2:1605:G:H4'	2.00	0.43
60:SQ:146:ARG:HH21	85:CC:32:C:P	2.41	0.43
68:Sc:50:VAL:O	68:Sc:54:ASP:OD2	2.37	0.43
70:Sg:106:LYS:NZ	70:Sg:126:ASP:HA	2.33	0.43
70:Sg:240:CYS:SG	70:Sg:249:CYS:HB3	2.58	0.43
78:SY:6:THR:OG1	78:SY:28:LEU:HB2	2.18	0.43
84:CB:508:ALA:HB2	84:CB:575:PRO:HA	2.00	0.43
1:L5:32:G:OP1	17:LN:73:ARG:NH1	2.52	0.43
1:L5:239:C:H5'	28:LY:33:PRO:HD3	2.01	0.43
1:L5:495:C:H2'	1:L5:496:G:C8	2.53	0.43
1:L5:1695:U:H2'	1:L5:1696:C:C6	2.54	0.43
1:L5:1755:C:N3	1:L5:1756:U:C5	2.87	0.43
1:L5:1776:A:C2	7:LD:3:PHE:HE1	2.37	0.43
1:L5:2319:C:H1'	34:Le:57:ASN:O	2.18	0.43
1:L5:2335:C:H2'	1:L5:2336:G:H8	1.84	0.43
1:L5:3635:A:C8	1:L5:3692:A:C8	3.07	0.43
1:L5:4417:C:H2'	1:L5:4418:G:O4'	2.18	0.43
2:L7:92:C:H2'	2:L7:93:G:H8	1.83	0.43
3:L8:82:A:N7	3:L8:84:A:H3'	2.34	0.43
9:LF:175:ILE:HD11	9:LF:187:MET:SD	2.59	0.43
10:LG:58:PRO:HD2	10:LG:61:ILE:HD12	2.01	0.43
10:LG:120:LYS:O	10:LG:123:ALA:C	2.61	0.43
34:Le:35:TRP:CZ2	34:Le:56:PRO:HD2	2.54	0.43
49:S2:1737:G:H2'	49:S2:1738:C:H6	1.83	0.43
53:SE:86:PHE:HE1	53:SE:102:ILE:HG13	1.83	0.43
77:SW:23:ARG:HD2	77:SW:23:ARG:HA	1.85	0.43
83:CA:185:MET:SD	83:CA:229:LEU:HB3	2.58	0.43
84:CB:683:PHE:O	84:CB:687:THR:HG22	2.18	0.43
1:L5:2111:G:N2	1:L5:2251:G:O2'	2.51	0.43
1:L5:2522:G:OP1	36:Lg:29:ARG:NH2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2667:C:C1'	21:LR:96:MET:HE2	2.49	0.43
1:L5:4389:C:H2'	1:L5:4390:A:H8	1.82	0.43
22:LS:98:ARG:HG3	22:LS:142:VAL:HG13	2.01	0.43
32:Lc:9:LYS:O	32:Lc:12:GLU:HG3	2.19	0.43
32:Lc:48:LEU:HD21	32:Lc:60:ILE:HG21	2.00	0.43
46:Lr:56:ASP:O	46:Lr:58:LYS:N	2.45	0.43
47:Ls:134:LYS:HD2	47:Ls:177:MET:HE1	1.99	0.43
49:S2:28:U:H2'	49:S2:29:G:H8	1.84	0.43
49:S2:1047:C:H2'	49:S2:1048:G:O4'	2.19	0.43
49:S2:1457:U:H2'	49:S2:1458:G:H8	1.83	0.43
49:S2:1670:C:H2'	49:S2:1671:G:C8	2.54	0.43
55:SH:5:SER:HB3	55:SH:7:LYS:NZ	2.32	0.43
55:SH:30:LEU:O	55:SH:33:ASN:HB3	2.19	0.43
55:SH:148:LEU:HG	77:SW:49:GLU:HG2	2.00	0.43
56:SI:132:GLU:HA	56:SI:135:GLU:OE1	2.19	0.43
60:SQ:77:HIS:O	60:SQ:81:ILE:HG12	2.19	0.43
63:ST:71:GLY:O	63:ST:75:MET:HG2	2.17	0.43
67:Sa:60:ASP:OD1	67:Sa:61:ALA:N	2.48	0.43
76:SO:133:THR:O	76:SO:135:ILE:HG12	2.18	0.43
80:Sb:36:LYS:HD3	80:Sb:43:ILE:CD1	2.49	0.43
83:CA:17:VAL:HA	83:CA:20:LYS:CE	2.45	0.43
85:CC:27:U:H2'	85:CC:28:G:H8	1.83	0.43
1:L5:1794:A:H5''	1:L5:4214:A:N6	2.34	0.43
1:L5:2275:G:H2'	1:L5:2276:A:C8	2.54	0.43
1:L5:3619:G:H22	1:L5:3624:A:H1'	1.84	0.43
1:L5:3736:A:H2'	1:L5:3737:A:C8	2.54	0.43
1:L5:3783:A:O5'	1:L5:3784:A:H5'	2.18	0.43
1:L5:4098:A:H2'	1:L5:4099:G:H4'	2.00	0.43
1:L5:4637:G:H2'	1:L5:4638:U:C6	2.54	0.43
3:L8:58:G:O6	39:Lj:63:ARG:NH1	2.48	0.43
4:LA:150:LEU:O	4:LA:153:GLY:N	2.49	0.43
5:LB:220:ILE:HG12	5:LB:278:THR:HG23	2.01	0.43
10:LG:31:LEU:HD21	29:LZ:122:TYR:O	2.18	0.43
12:LI:44:ASP:OD1	12:LI:45:GLU:N	2.51	0.43
14:LK:63:THR:OG1	14:LK:70:GLN:HB2	2.19	0.43
35:Lf:43:LEU:HD11	35:Lf:76:ARG:HA	2.01	0.43
47:Ls:50:LYS:HB2	47:Ls:50:LYS:HE3	1.84	0.43
49:S2:199:C:O2'	49:S2:201:C:OP2	2.37	0.43
49:S2:534:G:H2'	49:S2:535:G:C8	2.52	0.43
49:S2:615:C:H2'	49:S2:616:A:O4'	2.19	0.43
49:S2:748:C:N3	49:S2:795:A:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:984:C:O2'	76:SO:138:ASP:CG	2.61	0.43
49:S2:1024:A:OP2	75:SN:124:ARG:NH2	2.40	0.43
49:S2:1717:C:H2'	49:S2:1718:G:O4'	2.19	0.43
49:S2:1817:G:H2'	49:S2:1818:A:C8	2.54	0.43
52:SD:161:GLY:HA3	52:SD:163:PRO:HD2	2.01	0.43
53:SE:100:ARG:NH2	53:SE:118:GLU:O	2.51	0.43
54:SF:79:HIS:HE1	54:SF:159:ARG:NH1	2.16	0.43
54:SF:87:LEU:HD11	60:SQ:78:VAL:HG11	2.01	0.43
59:SP:130:ARG:HA	59:SP:130:ARG:HD2	1.87	0.43
77:SW:86:LEU:HD21	77:SW:113:HIS:HB2	2.00	0.43
79:SZ:70:PRO:HA	79:SZ:73:VAL:HG22	1.99	0.43
83:CA:123:HIS:CE1	83:CA:125:PHE:CE1	3.07	0.43
83:CA:148:LEU:HD12	83:CA:177:PHE:CZ	2.53	0.43
83:CA:354:LEU:HA	83:CA:357:LEU:HG	2.00	0.43
84:CB:747:VAL:HG12	84:CB:812:CYS:SG	2.58	0.43
84:CB:779:THR:HB	84:CB:780:PRO:CD	2.47	0.43
1:L5:1629:G:H2'	1:L5:1631:A:N7	2.33	0.43
1:L5:1751:A:H2'	1:L5:1752:G:H8	1.84	0.43
1:L5:1979:A:N6	1:L5:1980:U:O4	2.52	0.43
1:L5:5053:U:H3'	1:L5:5054:C:C6	2.54	0.43
8:LE:68:MET:HE3	8:LE:68:MET:HB3	1.87	0.43
16:LM:33:GLN:O	16:LM:33:GLN:HG2	2.19	0.43
19:LP:72:GLN:HA	19:LP:75:GLN:HG3	2.01	0.43
20:LQ:146:ARG:HB2	20:LQ:149:TYR:HD2	1.84	0.43
39:Lj:65:ARG:O	39:Lj:68:LYS:HG2	2.19	0.43
49:S2:531:A:N3	49:S2:531:A:H2'	2.34	0.43
49:S2:697:G:OP2	49:S2:733:C:N4	2.34	0.43
49:S2:917:U:H2'	49:S2:918:U:O4'	2.18	0.43
49:S2:1035:A:H2'	49:S2:1036:A:O4'	2.18	0.43
49:S2:1395:C:H1'	49:S2:1474:A:C4	2.54	0.43
49:S2:1759:G:O2'	49:S2:1760:G:O4'	2.33	0.43
50:SA:34:MET:HE3	50:SA:34:MET:HB3	1.84	0.43
51:SB:168:MET:O	51:SB:172:MET:HG3	2.19	0.43
54:SF:60:ARG:HG2	54:SF:61:PHE:CZ	2.54	0.43
55:SH:117:PRO:HB2	55:SH:120:ARG:HD3	2.01	0.43
66:SX:29:LYS:HD2	66:SX:35:ALA:HB2	2.00	0.43
66:SX:98:ASP:OD2	66:SX:140:ARG:NH2	2.49	0.43
72:SG:30:LYS:O	72:SG:102:VAL:HG12	2.18	0.43
72:SG:154:ARG:HE	72:SG:154:ARG:HB3	1.70	0.43
73:SJ:125:HIS:HA	73:SJ:128:VAL:HG22	2.01	0.43
80:Sb:32:PHE:O	80:Sb:82:LYS:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sb:36:LYS:NZ	80:Sb:41:TYR:O	2.52	0.43
84:CB:87:ASN:ND2	84:CB:249:ARG:NH2	2.67	0.43
84:CB:252:LYS:O	84:CB:256:MET:HG2	2.19	0.43
1:L5:452:A:H4'	1:L5:453:G:H5'	2.00	0.42
1:L5:1092:G:H2'	1:L5:1093:C:C6	2.54	0.42
1:L5:1508:A:H2'	1:L5:1509:C:C6	2.54	0.42
1:L5:1855:G:OP1	31:Lb:4:SER:HB2	2.19	0.42
1:L5:4039:G:H1'	1:L5:4050:A:O4'	2.19	0.42
1:L5:4070:U:H2'	1:L5:4071:U:C6	2.54	0.42
1:L5:4942:C:OP1	8:LE:187:ARG:NH2	2.51	0.42
1:L5:5001:U:H2'	1:L5:5002:U:O4'	2.19	0.42
1:L5:5004:C:OP1	26:LW:35:LYS:HD3	2.19	0.42
3:L8:6:C:H2'	3:L8:7:U:H6	1.83	0.42
10:LG:102:TYR:OH	10:LG:208:ASN:HB2	2.18	0.42
10:LG:120:LYS:O	10:LG:124:GLY:CA	2.59	0.42
21:LR:23:TRP:CZ3	21:LR:51:ILE:HD12	2.53	0.42
27:LX:156:ILE:OXT	83:CA:294:VAL:HG21	2.19	0.42
32:Lc:57:LYS:HB2	32:Lc:57:LYS:HE3	1.69	0.42
35:Lf:11:PHE:O	35:Lf:98:GLY:N	2.50	0.42
49:S2:291:G:H2'	49:S2:292:A:C8	2.54	0.42
49:S2:1010:G:H2'	49:S2:1011:A:H8	1.85	0.42
49:S2:1778:C:H2'	49:S2:1779:G:O4'	2.19	0.42
51:SB:36:PRO:CB	51:SB:38:MET:CE	2.96	0.42
51:SB:44:ILE:HD11	51:SB:74:LEU:HD21	2.00	0.42
53:SE:164:LEU:C	53:SE:166:THR:H	2.27	0.42
54:SF:125:SER:OG	54:SF:135:ARG:HB3	2.19	0.42
56:SI:56:ARG:NH1	56:SI:180:GLY:O	2.47	0.42
57:SK:47:LYS:HA	57:SK:47:LYS:HD3	1.84	0.42
59:SP:24:GLN:C	59:SP:28:MET:HE3	2.44	0.42
64:SU:40:ILE:O	64:SU:44:LYS:HG2	2.19	0.42
65:SV:62:MET:HE1	80:Sb:3:LEU:HD21	2.00	0.42
66:SX:29:LYS:HE2	66:SX:35:ALA:HB1	2.00	0.42
68:Sc:12:ALA:HB1	68:Sc:32:VAL:HB	2.00	0.42
71:SC:69:LEU:HD21	71:SC:273:LEU:HG	2.01	0.42
71:SC:184:VAL:HG22	71:SC:246:LYS:HG3	2.01	0.42
78:SY:103:SER:HB2	78:SY:106:GLN:HG3	2.01	0.42
80:Sb:38:PRO:HD3	80:Sb:77:CYS:HA	2.01	0.42
83:CA:20:LYS:CA	83:CA:23:MET:HE2	2.48	0.42
84:CB:377:PRO:O	84:CB:383:MET:HE3	2.19	0.42
84:CB:592:LEU:HD13	84:CB:603:TYR:CZ	2.54	0.42
1:L5:1514:U:H2'	1:L5:1515:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2539:C:H2'	1:L5:2540:C:H6	1.83	0.42
1:L5:2779:C:O2'	3:L8:112:G:OP1	2.34	0.42
1:L5:3599:A:H2'	1:L5:3600:G:H8	1.83	0.42
1:L5:3959:U:O2'	1:L5:3961:G:N7	2.48	0.42
1:L5:5003:U:H2'	1:L5:5004:C:C6	2.54	0.42
2:L7:28:C:O2'	2:L7:54:A:N1	2.51	0.42
4:LA:111:THR:O	4:LA:135:THR:HA	2.19	0.42
4:LA:135:THR:CG2	4:LA:149:LYS:HB3	2.48	0.42
5:LB:161:ARG:HG2	5:LB:184:GLN:HA	2.00	0.42
6:LC:218:ILE:O	6:LC:222:ARG:HB2	2.19	0.42
10:LG:39:PHE:CD1	10:LG:47:PRO:HD3	2.55	0.42
12:LI:190:LEU:HD13	12:LI:197:VAL:HG21	2.01	0.42
24:LU:27:HIS:O	24:LU:30:GLU:HG2	2.20	0.42
37:Lh:52:LYS:HD3	37:Lh:52:LYS:HA	1.83	0.42
44:Lo:22:LYS:HE2	44:Lo:22:LYS:HB2	1.78	0.42
49:S2:57:U:OP1	49:S2:504:G:O2'	2.36	0.42
49:S2:649:U:H1'	66:SX:45:SER:HB3	2.01	0.42
49:S2:1112:U:O2	49:S2:1121:G:O6	2.37	0.42
49:S2:1349:G:H2'	49:S2:1350:U:C6	2.55	0.42
49:S2:1610:G:H2'	49:S2:1611:G:C8	2.54	0.42
51:SB:85:LYS:HG2	51:SB:102:GLY:C	2.44	0.42
58:SL:125:ILE:HB	58:SL:146:THR:OG1	2.19	0.42
61:SR:104:GLU:HA	61:SR:107:LYS:HE3	2.00	0.42
63:ST:12:GLN:O	63:ST:15:VAL:HG22	2.19	0.42
78:SY:87:PRO:HG2	78:SY:90:ARG:NH1	2.34	0.42
83:CA:102:GLU:OE2	83:CA:103:GLY:N	2.52	0.42
1:L5:48:G:OP1	15:LL:16:LYS:NZ	2.51	0.42
1:L5:2078:C:H2'	1:L5:2079:G:C8	2.54	0.42
1:L5:3970:G:HO2'	1:L5:4052:C:N4	2.14	0.42
1:L5:4387:C:OP2	1:L5:4532:U:O2'	2.36	0.42
1:L5:4605:A:N3	84:CB:109:VAL:HG21	2.33	0.42
2:L7:12:U:O3'	2:L7:109:U:O2'	2.27	0.42
2:L7:29:C:H5'	13:LJ:12:MET:HE1	2.01	0.42
2:L7:111:C:H2'	2:L7:112:U:O4'	2.19	0.42
2:L7:113:G:H2'	2:L7:114:U:H6	1.85	0.42
5:LB:116:ARG:O	5:LB:177:LYS:HE2	2.18	0.42
5:LB:199:GLU:CD	5:LB:200:ARG:NH1	2.77	0.42
8:LE:231:GLU:O	8:LE:232:ILE:C	2.63	0.42
10:LG:150:LYS:NZ	10:LG:177:MET:O	2.49	0.42
11:LH:63:ASN:O	11:LH:67:LEU:HG	2.19	0.42
29:LZ:90:PRO:O	29:LZ:117:LYS:HE2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Lc:20:LEU:HD21	32:Lc:101:ASP:O	2.19	0.42
33:Ld:92:ARG:HA	33:Ld:102:LEU:HD23	2.01	0.42
37:Lh:103:LYS:NZ	37:Lh:111:GLU:OE2	2.49	0.42
41:Ll:9:ILE:CD1	41:Ll:51:LEU:HD11	2.49	0.42
49:S2:24:C:O2'	49:S2:25:A:H8	2.03	0.42
49:S2:520:A:O2'	49:S2:825:A:N3	2.45	0.42
49:S2:913:A:N7	55:SH:99:ARG:HB3	2.34	0.42
49:S2:975:G:OP1	76:SO:98:ARG:NH1	2.45	0.42
49:S2:1158:G:H5''	77:SW:76:SER:HB2	2.00	0.42
49:S2:1292:C:C1'	82:Sf:140:TYR:CE2	3.02	0.42
49:S2:1671:G:H2'	49:S2:1672:U:H6	1.83	0.42
49:S2:1779:G:H2'	49:S2:1780:G:H8	1.84	0.42
49:S2:1788:A:H2'	49:S2:1789:G:O4'	2.18	0.42
52:SD:59:LEU:HA	52:SD:66:ILE:CG1	2.41	0.42
52:SD:75:LYS:HZ1	57:SK:18:GLU:CG	2.31	0.42
52:SD:136:VAL:HG12	52:SD:186:VAL:HG22	2.00	0.42
64:SU:64:THR:HA	64:SU:78:ASP:O	2.19	0.42
67:Sa:23:CYS:O	67:Sa:27:ALA:HA	2.19	0.42
67:Sa:46:GLU:OE1	76:SO:113:GLN:HG3	2.19	0.42
69:Sd:3:HIS:CD2	69:Sd:5:GLN:H	2.38	0.42
70:Sg:246:TYR:OH	70:Sg:261:LEU:HD23	2.18	0.42
84:CB:6:VAL:HA	84:CB:9:ILE:CD1	2.49	0.42
84:CB:610:PRO:HG2	84:CB:639:TYR:HB3	2.00	0.42
84:CB:849:PRO:HB2	84:CB:854:PHE:CE2	2.54	0.42
1:L5:37:U:H2'	1:L5:38:A:O4'	2.19	0.42
1:L5:60:G:H2'	1:L5:61:A:C8	2.55	0.42
1:L5:1433:A:H3'	1:L5:1434:G:H8	1.83	0.42
1:L5:1877:G:O6	31:Lb:10:HIS:NE2	2.51	0.42
1:L5:2374:A:H5'	33:Ld:64:ILE:O	2.20	0.42
1:L5:2671:C:H2'	1:L5:2672:C:C6	2.54	0.42
1:L5:3879:G:O2'	1:L5:3881:G:OP2	2.35	0.42
1:L5:4271:A:H3'	1:L5:4272:G:N2	2.34	0.42
1:L5:4518:A:N7	5:LB:258:HIS:CE1	2.87	0.42
1:L5:4918:C:H2'	1:L5:4919:G:C8	2.54	0.42
4:LA:183:GLY:O	4:LA:186:TYR:HB3	2.20	0.42
7:LD:179:ARG:HA	7:LD:179:ARG:HD3	1.78	0.42
8:LE:177:GLY:O	8:LE:178:PRO:C	2.62	0.42
9:LF:94:ARG:O	9:LF:118:PHE:N	2.48	0.42
13:LJ:163:MET:HG2	13:LJ:174:ILE:HD12	2.00	0.42
16:LM:77:TRP:NE1	16:LM:82:ILE:HB	2.35	0.42
21:LR:99:MET:HE1	21:LR:127:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:LZ:51:ARG:HB2	29:LZ:65:ARG:HB3	2.00	0.42
49:S2:161:U:OP1	78:SY:116:LYS:NZ	2.51	0.42
49:S2:786:G:OP2	72:SG:231:ARG:HB2	2.19	0.42
49:S2:861:A:C6	55:SH:106:ARG:HD2	2.54	0.42
49:S2:922:A:OP1	77:SW:28:ARG:NH1	2.53	0.42
49:S2:1201:U:H2'	49:S2:1202:U:C6	2.54	0.42
49:S2:1845:A:H2'	49:S2:1846:G:H8	1.83	0.42
50:SA:206:ASP:O	50:SA:210:ILE:HG13	2.19	0.42
51:SB:99:ASN:OD1	51:SB:100:PHE:N	2.53	0.42
53:SE:137:PRO:HB2	53:SE:150:PRO:HD2	2.01	0.42
55:SH:40:LEU:HD11	55:SH:79:LEU:HD21	2.02	0.42
59:SP:25:LEU:HA	59:SP:28:MET:HE3	2.01	0.42
64:SU:28:ASN:HB3	64:SU:31:SER:HB3	2.00	0.42
70:Sg:120:ILE:HG23	70:Sg:132:TRP:HB2	2.00	0.42
74:SM:18:LEU:HA	74:SM:21:VAL:HG12	2.02	0.42
76:SO:77:ALA:O	76:SO:81:VAL:HG23	2.19	0.42
84:CB:531:ASP:HB3	84:CB:534:VAL:CG2	2.48	0.42
84:CB:616:ASP:HA	84:CB:619:LYS:HG2	2.01	0.42
84:CB:687:THR:HA	84:CB:697:MET:HE3	2.02	0.42
1:L5:18:C:H4'	17:LN:138:PHE:CD1	2.55	0.42
1:L5:2280:G:P	34:Le:48:ARG:HH22	2.43	0.42
1:L5:2543:A:H2	1:L5:2773:G:H22	1.67	0.42
1:L5:3971:G:H21	1:L5:3973:G:H1'	1.84	0.42
3:L8:123:U:C2'	3:L8:126:C:H41	2.31	0.42
6:LC:205:ARG:HA	6:LC:205:ARG:HD3	1.86	0.42
6:LC:361:LEU:HD12	6:LC:364:LYS:HE3	2.01	0.42
13:LJ:86:GLY:HA2	13:LJ:109:ILE:HD11	2.01	0.42
14:LK:59:THR:HB	14:LK:74:VAL:HB	2.01	0.42
16:LM:6:PHE:O	16:LM:11:ARG:HD3	2.19	0.42
20:LQ:42:THR:O	20:LQ:46:VAL:HG23	2.19	0.42
21:LR:145:LEU:HA	21:LR:148:ASP:OD2	2.19	0.42
23:LT:50:LYS:O	23:LT:92:ARG:HD3	2.19	0.42
29:LZ:68:ILE:O	29:LZ:115:LYS:NZ	2.50	0.42
49:S2:102:A:H4'	49:S2:104:A:C8	2.54	0.42
49:S2:1265:A:O2'	49:S2:1266:C:H5'	2.20	0.42
49:S2:1402:A:H5'	64:SU:51:LYS:CE	2.50	0.42
49:S2:1650:A:H5''	60:SQ:139:ALA:HB2	2.02	0.42
50:SA:38:ILE:HG21	50:SA:47:TYR:CD1	2.55	0.42
51:SB:83:LYS:HE3	51:SB:83:LYS:HB2	1.68	0.42
52:SD:211:VAL:HG22	61:SR:38:ILE:O	2.20	0.42
54:SF:30:ILE:HD13	54:SF:113:VAL:CG1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SR:57:LEU:HD23	61:SR:57:LEU:HA	1.88	0.42
63:ST:34:VAL:HG13	63:ST:52:TRP:CE2	2.54	0.42
67:Sa:45:VAL:HG11	67:Sa:64:LEU:HD13	2.00	0.42
68:Sc:10:LYS:HG3	68:Sc:11:LEU:N	2.34	0.42
70:Sg:188:HIS:HB3	70:Sg:219:TRP:CZ3	2.55	0.42
78:SY:18:LEU:HD23	78:SY:18:LEU:HA	1.85	0.42
82:Sf:97:LYS:O	82:Sf:99:LYS:HG2	2.18	0.42
83:CA:59:GLU:HA	83:CA:62:LYS:HE3	2.02	0.42
84:CB:593:SER:HB2	84:CB:728:CYS:HB2	1.99	0.42
1:L5:372:A:OP1	39:Lj:36:LYS:HE2	2.19	0.42
1:L5:678:C:H2'	1:L5:679:C:H6	1.84	0.42
1:L5:1097:C:H2'	1:L5:1098:G:H8	1.85	0.42
1:L5:2004:U:O2	1:L5:2016:C:H1'	2.19	0.42
1:L5:2293:U:H2'	1:L5:2294:G:C8	2.55	0.42
1:L5:2747:U:H2'	1:L5:2748:C:C6	2.54	0.42
1:L5:3656:A:H2'	1:L5:3657:U:C6	2.54	0.42
1:L5:4079:C:H2'	1:L5:4080:C:H6	1.84	0.42
1:L5:4738:C:H2'	1:L5:4739:C:C6	2.55	0.42
5:LB:10:ARG:NH2	5:LB:14:LEU:HG	2.35	0.42
5:LB:14:LEU:HA	5:LB:17:LEU:HG	2.00	0.42
11:LH:65:LYS:O	11:LH:69:THR:HG23	2.18	0.42
16:LM:25:VAL:CG2	16:LM:38:VAL:HG22	2.45	0.42
17:LN:98:LEU:O	17:LN:101:VAL:HG22	2.19	0.42
25:LV:85:ARG:O	25:LV:97:TYR:HB2	2.20	0.42
26:LW:117:LYS:HD3	26:LW:117:LYS:HA	1.92	0.42
34:Le:85:LEU:HG	34:Le:120:ILE:HD12	2.01	0.42
34:Le:87:VAL:CG2	46:Lr:27:THR:HG22	2.49	0.42
39:Lj:25:LYS:HE2	41:Ll:50:GLY:O	2.20	0.42
49:S2:738:C:H2'	49:S2:739:C:H5''	2.01	0.42
49:S2:1724:A:H2'	49:S2:1725:U:C6	2.54	0.42
50:SA:181:GLU:HA	50:SA:184:ARG:HG2	2.02	0.42
54:SF:17:ILE:O	54:SF:48:TYR:CE1	2.72	0.42
54:SF:18:LYS:HE3	54:SF:18:LYS:HB3	1.91	0.42
58:SL:111:VAL:HG12	58:SL:140:PHE:HB2	2.01	0.42
59:SP:96:VAL:HG21	59:SP:116:LEU:HB3	2.02	0.42
63:ST:129:ARG:HD2	63:ST:133:ARG:NH2	2.35	0.42
1:L5:368:C:O4'	6:LC:83:GLY:HA3	2.19	0.42
1:L5:1279:A:O2'	1:L5:1281:G:N7	2.48	0.42
1:L5:1978:C:H2'	1:L5:1979:A:O4'	2.20	0.42
1:L5:2540:C:H5''	36:Lg:65:MET:HE1	2.01	0.42
1:L5:2739:C:H5''	45:Lp:69:TRP:CH2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2800:G:H4'	39:Lj:6:SER:HB2	2.02	0.42
1:L5:3664:G:H2'	1:L5:3665:G:C8	2.54	0.42
3:L8:89:U:H2'	3:L8:90:C:C6	2.55	0.42
5:LB:4:ARG:O	5:LB:5:LYS:HB3	2.18	0.42
8:LE:178:PRO:HB3	8:LE:258:LEU:HD21	2.02	0.42
12:LI:66:GLU:CD	12:LI:69:ARG:HH21	2.28	0.42
15:LL:5:ARG:HG3	15:LL:5:ARG:NH1	2.34	0.42
16:LM:132:LYS:O	16:LM:135:LEU:HG	2.19	0.42
17:LN:10:LEU:HD12	38:Li:48:CYS:SG	2.60	0.42
20:LQ:154:LYS:HA	20:LQ:154:LYS:HD3	1.91	0.42
26:LW:8:PHE:HZ	26:LW:49:ILE:HG13	1.85	0.42
30:La:81:LEU:HD22	30:La:106:SER:HB3	2.02	0.42
33:Ld:33:ILE:HD13	33:Ld:33:ILE:HA	1.87	0.42
49:S2:291:G:HO2'	49:S2:292:A:P	2.41	0.42
49:S2:1260:A:C8	49:S2:1261:C:C5	3.08	0.42
50:SA:107:THR:HG23	50:SA:115:ALA:O	2.20	0.42
52:SD:167:TYR:CD2	52:SD:204:LEU:HD23	2.54	0.42
54:SF:126:THR:N	54:SF:135:ARG:HG2	2.34	0.42
55:SH:33:ASN:HD21	55:SH:36:LEU:HB2	1.85	0.42
80:Sb:37:CYS:HB2	80:Sb:63:LEU:HD21	2.01	0.42
1:L5:210:C:OP1	28:LY:59:ARG:NE	2.45	0.42
1:L5:317:A:C2	1:L5:4361:U:H1'	2.55	0.42
1:L5:513:U:N3	1:L5:516:C:OP2	2.45	0.42
1:L5:1440:U:H2'	1:L5:1441:C:C6	2.54	0.42
1:L5:2283:G:H5''	30:La:18:GLY:O	2.20	0.42
1:L5:2664:G:H4'	1:L5:2677:G:H4'	2.02	0.42
1:L5:4091:G:C2	1:L5:4092:G:N7	2.88	0.42
1:L5:4239:A:H2'	1:L5:4240:G:H8	1.85	0.42
1:L5:4611:A:H2'	1:L5:4612:C:H6	1.84	0.42
1:L5:4690:G:O6	1:L5:4698:C:H5''	2.19	0.42
3:L8:140:C:H2'	3:L8:141:C:C6	2.55	0.42
8:LE:45:SER:C	8:LE:47:ASN:H	2.26	0.42
10:LG:94:GLN:O	10:LG:97:LYS:HG2	2.20	0.42
18:LO:88:LEU:HD12	18:LO:99:LEU:HD13	2.00	0.42
21:LR:23:TRP:CE3	21:LR:51:ILE:HD12	2.55	0.42
32:Lc:20:LEU:HD23	32:Lc:102:SER:HA	2.01	0.42
40:Lk:70:LYS:HD2	40:Lk:70:LYS:HA	1.72	0.42
49:S2:43:U:OP2	49:S2:485:A:N6	2.46	0.42
49:S2:532:C:H2'	49:S2:533:A:C8	2.54	0.42
49:S2:659:G:H2'	49:S2:663:C:C5	2.53	0.42
49:S2:1665:G:N2	63:ST:87:VAL:HG22	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1743:G:N2	49:S2:1791:A:H62	2.13	0.42
56:SI:10:LYS:HE3	58:SL:136:LYS:HZ2	1.85	0.42
56:SI:127:ALA:O	56:SI:130:THR:OG1	2.34	0.42
61:SR:75:GLU:O	61:SR:78:ARG:HB2	2.20	0.42
64:SU:78:ASP:OD2	69:Sd:44:ARG:NE	2.35	0.42
1:L5:184:U:O2'	1:L5:189:G:H8	2.03	0.42
1:L5:1662:C:H2'	1:L5:1663:C:H6	1.85	0.42
1:L5:2249:C:H2'	1:L5:2250:C:C5	2.55	0.42
1:L5:2249:C:H2'	1:L5:2250:C:H5	1.84	0.42
1:L5:3893:C:H2'	1:L5:3894:A:C8	2.54	0.42
1:L5:3909:C:O2	1:L5:4396:A:N1	2.53	0.42
2:L7:39:C:O2'	13:LJ:46:GLN:HB3	2.20	0.42
2:L7:54:A:H5'	13:LJ:8:LYS:NZ	2.35	0.42
13:LJ:112:HIS:O	13:LJ:115:LEU:N	2.52	0.42
16:LM:24:LEU:HD11	16:LM:86:TRP:CD1	2.55	0.42
17:LN:84:PRO:HA	17:LN:87:HIS:CG	2.54	0.42
45:Lp:79:VAL:O	45:Lp:83:ILE:HG12	2.20	0.42
49:S2:24:C:HO2'	49:S2:25:A:C5'	2.33	0.42
49:S2:551:U:H2'	49:S2:552:G:N9	2.34	0.42
49:S2:641:A:H2'	49:S2:642:U:O4'	2.20	0.42
49:S2:1534:C:H5''	49:S2:1536:G:O4'	2.20	0.42
49:S2:1562:C:H2'	49:S2:1563:G:C8	2.53	0.42
49:S2:1712:A:H2'	49:S2:1713:C:C6	2.55	0.42
65:SV:1:MET:HA	65:SV:10:ASP:OD2	2.19	0.42
67:Sa:38:LYS:HD2	67:Sa:83:VAL:HG13	2.02	0.42
70:Sg:153:CYS:SG	70:Sg:197:THR:HA	2.60	0.42
70:Sg:174:VAL:HG21	70:Sg:219:TRP:CZ3	2.55	0.42
70:Sg:220:ASP:HB3	70:Sg:224:GLY:H	1.85	0.42
75:SN:36:GLN:HA	75:SN:39:LYS:HG2	2.00	0.42
78:SY:25:ILE:HD11	78:SY:73:GLY:HA3	2.02	0.42
80:Sb:42:LYS:NZ	80:Sb:57:VAL:HG23	2.35	0.42
81:Se:49:PHE:CG	81:Se:50:GLY:N	2.88	0.42
82:Sf:103:LEU:HB2	82:Sf:105:TYR:CD2	2.55	0.42
84:CB:476:ASP:OD1	84:CB:477:GLN:N	2.52	0.42
84:CB:669:VAL:HG21	84:CB:672:LEU:HD22	2.01	0.42
84:CB:751:CYS:HB3	84:CB:756:VAL:HG12	2.02	0.42
85:CC:14:A:H3'	85:CC:15:G:H8	1.85	0.42
1:L5:968:C:C4'	8:LE:110:ARG:HH22	2.33	0.42
1:L5:1524:A:C2	1:L5:1525:A:C8	3.07	0.42
1:L5:1671:U:O4	1:L5:1853:G:H1'	2.20	0.42
1:L5:1727:U:OP1	9:LF:131:ASN:ND2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2298:U:H3'	6:LC:204:ARG:HH12	1.84	0.42
1:L5:3721:U:H2'	1:L5:3722:G:H8	1.84	0.42
1:L5:4244:A:H2'	1:L5:4245:G:O4'	2.19	0.42
1:L5:4685:U:H2'	1:L5:4686:G:H8	1.84	0.42
4:LA:122:ASP:O	4:LA:123:ARG:HB2	2.20	0.42
5:LB:103:LYS:HA	5:LB:103:LYS:HD3	1.89	0.42
5:LB:115:LYS:HA	5:LB:118:PHE:CD2	2.55	0.42
5:LB:154:LYS:HE3	5:LB:154:LYS:HB2	1.84	0.42
5:LB:199:GLU:CG	5:LB:200:ARG:HH11	2.33	0.42
6:LC:138:MET:HE3	6:LC:138:MET:HB3	1.91	0.42
9:LF:220:MET:HB3	9:LF:232:ASP:OD2	2.20	0.42
10:LG:117:ARG:HG3	10:LG:121:LYS:NZ	2.35	0.42
32:Lc:13:SER:O	32:Lc:17:ARG:HG3	2.19	0.42
45:Lp:32:SER:HB2	45:Lp:70:THR:HG22	2.01	0.42
47:Ls:105:ASN:O	47:Ls:106:LYS:C	2.62	0.42
60:SQ:28:GLY:O	60:SQ:66:VAL:N	2.53	0.42
60:SQ:50:LYS:HD3	60:SQ:50:LYS:HA	1.94	0.42
61:SR:103:LYS:NZ	61:SR:119:VAL:HG23	2.34	0.42
70:Sg:270:LEU:HD21	70:Sg:310:TRP:CD1	2.55	0.42
83:CA:35:LEU:HD23	83:CA:108:ILE:HG21	2.02	0.42
83:CA:189:GLN:HE21	83:CA:199:LYS:C	2.26	0.42
84:CB:22:MET:HA	84:CB:124:GLY:O	2.20	0.42
1:L5:1628:C:OP2	4:LA:9:ARG:HD2	2.19	0.41
1:L5:1919:G:N3	22:LS:164:LYS:NZ	2.67	0.41
1:L5:1992:U:H1'	1:L5:2002:A:H5''	2.02	0.41
1:L5:2292:C:H2'	1:L5:2293:U:C6	2.55	0.41
1:L5:3947:A:H2'	1:L5:3948:C:C6	2.55	0.41
1:L5:4524:G:H2'	1:L5:4525:C:C6	2.55	0.41
1:L5:5055:G:H2'	1:L5:5056:A:C8	2.55	0.41
8:LE:165:LEU:HD21	8:LE:257:ILE:CD1	2.47	0.41
12:LI:38:ARG:NH1	12:LI:45:GLU:OE1	2.51	0.41
15:LL:150:LEU:HD13	37:Lh:123:ALA:HB2	2.02	0.41
16:LM:139:SER:HA	16:LM:140:PRO:HD3	1.88	0.41
26:LW:104:GLN:NE2	72:SG:156:TYR:HH	2.15	0.41
27:LX:110:LYS:HG3	27:LX:121:VAL:CG2	2.50	0.41
29:LZ:103:ASP:OD2	29:LZ:106:LEU:HG	2.20	0.41
33:Ld:25:TYR:O	33:Ld:85:ARG:HD2	2.20	0.41
33:Ld:68:LEU:O	33:Ld:72:VAL:HG23	2.19	0.41
36:Lg:2:VAL:HG13	36:Lg:2:VAL:O	2.19	0.41
49:S2:107:A:H2'	49:S2:108:G:H8	1.83	0.41
49:S2:568:C:H2'	49:S2:569:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1373:C:OP1	61:SR:7:LYS:HG3	2.19	0.41
49:S2:1689:C:H2'	49:S2:1690:U:H6	1.85	0.41
52:SD:31:GLU:HA	52:SD:107:TYR:HE2	1.85	0.41
52:SD:194:PRO:O	52:SD:197:LYS:HE2	2.20	0.41
63:ST:39:LEU:HD11	63:ST:99:VAL:HG11	2.01	0.41
65:SV:5:ALA:HB3	65:SV:7:GLU:OE1	2.20	0.41
65:SV:40:ASP:OD2	65:SV:43:THR:OG1	2.37	0.41
66:SX:53:GLU:CD	66:SX:71:ARG:HB2	2.44	0.41
70:Sg:114:SER:HA	70:Sg:156:PHE:CD2	2.54	0.41
76:SO:84:ARG:O	76:SO:88:LEU:HD23	2.20	0.41
77:SW:18:GLU:OE2	77:SW:67:GLY:HA2	2.20	0.41
78:SY:117:VAL:HG21	78:SY:124:ASN:HA	2.01	0.41
83:CA:195:ILE:HD11	83:CA:276:MET:SD	2.60	0.41
1:L5:35:U:H2'	1:L5:36:U:H5'	2.01	0.41
1:L5:50:C:C2	1:L5:51:A:C8	3.08	0.41
1:L5:68:U:H2'	1:L5:69:A:O4'	2.20	0.41
1:L5:121:A:OP1	10:LG:110:LYS:NZ	2.53	0.41
1:L5:390:C:OP1	83:CA:211:LYS:NZ	2.39	0.41
1:L5:646:G:H3'	1:L5:647:G:H8	1.85	0.41
1:L5:2749:C:H5'	36:Lg:65:MET:HA	2.02	0.41
1:L5:4140:C:N3	1:L5:4145:C:O2'	2.49	0.41
1:L5:4473:A:P	42:Lm:102:ARG:HH21	2.42	0.41
1:L5:4670:C:O3'	1:L5:4671:C:H3'	2.20	0.41
5:LB:150:PHE:CB	5:LB:198:ARG:NH2	2.83	0.41
7:LD:125:VAL:HG11	7:LD:199:ILE:HG21	2.03	0.41
11:LH:53:LYS:HE3	11:LH:53:LYS:HB3	1.78	0.41
12:LI:3:ARG:HG3	12:LI:123:GLN:NE2	2.34	0.41
13:LJ:112:HIS:HE1	13:LJ:125:ILE:HA	1.84	0.41
14:LK:150:ASP:HA	14:LK:153:ASP:OD2	2.21	0.41
15:LL:141:ALA:O	15:LL:145:LYS:HG2	2.20	0.41
15:LL:178:ALA:N	30:La:134:GLU:OE2	2.42	0.41
16:LM:41:PRO:HB3	16:LM:70:GLN:HG3	2.02	0.41
17:LN:80:THR:OG1	17:LN:87:HIS:HA	2.20	0.41
25:LV:42:VAL:HB	25:LV:45:ILE:HG13	2.02	0.41
31:Lb:71:ALA:O	31:Lb:74:ALA:N	2.52	0.41
34:Le:83:LYS:CA	34:Le:86:GLU:OE1	2.66	0.41
37:Lh:97:LYS:HD3	37:Lh:97:LYS:HA	1.77	0.41
39:Lj:8:PHE:O	39:Lj:11:ARG:HG3	2.19	0.41
46:Lr:105:ASP:OD1	46:Lr:105:ASP:N	2.53	0.41
47:Ls:194:ASP:OD1	47:Ls:197:SER:OG	2.38	0.41
49:S2:434:G:OP1	56:SI:23:LYS:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:616:A:N3	81:Se:12:VAL:HG21	2.35	0.41
53:SE:164:LEU:O	53:SE:165:GLU:HB3	2.18	0.41
63:ST:33:TRP:HZ2	63:ST:102:ARG:HG3	1.85	0.41
65:SV:3:ASN:HB2	71:SC:173:LYS:O	2.19	0.41
65:SV:11:LEU:HG	71:SC:79:GLU:OE2	2.20	0.41
70:Sg:15:ASN:O	70:Sg:37:ASP:HB3	2.20	0.41
80:Sb:36:LYS:HZ2	80:Sb:41:TYR:CA	2.32	0.41
82:Sf:140:TYR:CD1	82:Sf:146:LEU:O	2.73	0.41
82:Sf:141:CYS:HB3	82:Sf:146:LEU:HD23	2.02	0.41
82:Sf:144:CYS:SG	82:Sf:146:LEU:HD22	2.60	0.41
83:CA:14:GLU:O	83:CA:18:VAL:HG23	2.20	0.41
83:CA:254:GLN:O	83:CA:254:GLN:HG3	2.20	0.41
84:CB:55:ARG:HB3	84:CB:56:PHE:H	1.65	0.41
1:L5:1601:A:N7	1:L5:3643:A:C4	2.87	0.41
1:L5:2072:C:O2'	9:LF:213:LEU:O	2.37	0.41
1:L5:2542:G:H2'	1:L5:2543:A:C8	2.55	0.41
1:L5:2876:G:C8	45:Lp:16:THR:HG22	2.55	0.41
1:L5:4220:A:H2'	1:L5:4222:G:H5''	2.02	0.41
1:L5:4749:C:H2'	1:L5:4750:G:O4'	2.20	0.41
1:L5:4881:U:OP2	16:LM:117:LYS:HE2	2.20	0.41
1:L5:4920:C:H2'	1:L5:4921:C:C6	2.55	0.41
3:L8:79:G:H2'	3:L8:80:A:O4'	2.20	0.41
3:L8:96:C:H5''	37:Lh:66:LYS:HG2	2.03	0.41
13:LJ:10:ASN:N	13:LJ:11:PRO:HD2	2.34	0.41
22:LS:93:MET:HE1	22:LS:117:HIS:NE2	2.34	0.41
32:Lc:20:LEU:CD2	32:Lc:102:SER:HA	2.50	0.41
37:Lh:87:LYS:HD2	37:Lh:91:MET:CE	2.50	0.41
47:Ls:106:LYS:HD2	47:Ls:186:GLY:HA3	2.02	0.41
49:S2:616:A:H1'	81:Se:12:VAL:HG23	2.02	0.41
49:S2:963:A:H2'	49:S2:964:A:C8	2.56	0.41
49:S2:1218:C:H2'	49:S2:1219:C:H6	1.84	0.41
49:S2:1623:A:C6	62:SS:132:ARG:HD3	2.54	0.41
49:S2:1687:C:H2'	49:S2:1688:C:C6	2.54	0.41
50:SA:137:ALA:HB1	50:SA:142:LEU:HB3	2.02	0.41
54:SF:167:LYS:HE2	54:SF:167:LYS:HB3	1.82	0.41
58:SL:76:VAL:HG22	58:SL:125:ILE:HD13	2.02	0.41
63:ST:74:SER:O	63:ST:78:ILE:HG13	2.20	0.41
67:Sa:23:CYS:O	67:Sa:27:ALA:CA	2.68	0.41
67:Sa:36:ILE:CD1	67:Sa:75:VAL:HG12	2.48	0.41
70:Sg:12:LYS:HZ2	70:Sg:13:GLY:H	1.69	0.41
70:Sg:215:GLN:HA	70:Sg:231:ASP:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:3:VAL:HG22	73:SJ:5:ARG:HG3	2.03	0.41
80:Sb:63:LEU:O	80:Sb:74:THR:HG23	2.20	0.41
83:CA:164:THR:O	83:CA:167:THR:N	2.53	0.41
84:CB:156:MET:HE3	84:CB:156:MET:HB3	1.86	0.41
84:CB:330:LYS:HD3	84:CB:334:PRO:CB	2.50	0.41
84:CB:390:PRO:O	84:CB:391:LYS:HE2	2.20	0.41
1:L5:10:A:H2'	1:L5:11:G:H8	1.85	0.41
1:L5:705:G:H2'	1:L5:706:C:C6	2.55	0.41
1:L5:1554:A:H5'	45:Lp:9:GLY:C	2.44	0.41
1:L5:1590:C:H3'	1:L5:1591:U:H4'	2.01	0.41
1:L5:2411:C:H2'	1:L5:2412:A:H8	1.85	0.41
1:L5:2491:C:H2'	1:L5:2492:C:C6	2.56	0.41
1:L5:2521:G:H4'	36:Lg:26:PRO:HD2	2.03	0.41
1:L5:3749:C:H4'	4:LA:221:LYS:O	2.18	0.41
1:L5:3916:G:H2'	1:L5:3917:A:C8	2.55	0.41
1:L5:4323:A:H4'	7:LD:176:SER:OG	2.21	0.41
4:LA:103:PRO:HB2	4:LA:106:THR:HG23	2.02	0.41
8:LE:106:VAL:HG13	8:LE:106:VAL:O	2.20	0.41
13:LJ:44:THR:HG21	13:LJ:72:CYS:SG	2.61	0.41
22:LS:137:CYS:SG	22:LS:146:HIS:HE1	2.43	0.41
49:S2:65:C:O5'	72:SG:174:PRO:HA	2.19	0.41
49:S2:72:C:H5	72:SG:168:LYS:HD3	1.85	0.41
49:S2:85:A:H5'	78:SY:119:GLY:HA2	2.02	0.41
49:S2:806:U:H2'	49:S2:807:G:H8	1.86	0.41
49:S2:1630:A:C5	49:S2:1631:U:C5	3.08	0.41
49:S2:1676:U:H2'	49:S2:1677:U:O4'	2.20	0.41
49:S2:1856:C:H2'	49:S2:1857:G:C8	2.55	0.41
50:SA:42:LYS:HB2	50:SA:42:LYS:HE3	1.91	0.41
50:SA:191:ARG:HG2	50:SA:191:ARG:O	2.21	0.41
51:SB:67:PHE:O	51:SB:69:VAL:HG23	2.20	0.41
52:SD:117:ARG:HH21	86:CD:223:ASP:HB3	1.85	0.41
54:SF:67:PRO:O	54:SF:71:ARG:HG3	2.21	0.41
55:SH:63:PHE:HB3	55:SH:97:GLN:HG3	2.01	0.41
62:SS:139:THR:C	62:SS:144:ARG:HH22	2.29	0.41
63:ST:129:ARG:HB3	63:ST:133:ARG:NH2	2.36	0.41
70:Sg:110:SER:CB	70:Sg:153:CYS:HA	2.50	0.41
70:Sg:178:ASN:HB3	70:Sg:185:LYS:HZ3	1.83	0.41
71:SC:90:GLU:HB2	71:SC:93:ILE:HD12	2.01	0.41
78:SY:57:VAL:HB	78:SY:60:PHE:CE1	2.52	0.41
84:CB:110:ASP:O	84:CB:501:VAL:HG11	2.20	0.41
84:CB:664:ASP:HA	84:CB:704:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:CC:17:G:H1'	85:CC:56:G:H22	1.84	0.41
1:L5:513:U:H2'	1:L5:515:C:C5	2.55	0.41
1:L5:1207:C:H2'	1:L5:1208:G:H8	1.85	0.41
1:L5:1359:G:H4'	17:LN:203:TYR:HB2	2.03	0.41
1:L5:1395:U:O2	1:L5:1469:C:H4'	2.21	0.41
1:L5:1482:G:N3	1:L5:1482:G:H5''	2.36	0.41
1:L5:1589:C:H2'	1:L5:1590:C:C6	2.55	0.41
1:L5:1601:A:C8	1:L5:3643:A:C8	3.08	0.41
1:L5:2570:U:H2'	1:L5:2571:C:C6	2.55	0.41
1:L5:2862:G:N3	1:L5:3624:A:H2'	2.34	0.41
1:L5:3822:U:H5'	1:L5:3823:G:OP2	2.20	0.41
1:L5:3930:U:H3	1:L5:4180:G:H1	1.69	0.41
1:L5:4431:U:OP2	12:LI:3:ARG:NH2	2.48	0.41
1:L5:4760:G:H2'	1:L5:4761:G:O4'	2.19	0.41
1:L5:5066:U:H2'	1:L5:5067:U:C6	2.56	0.41
2:L7:3:C:H2'	2:L7:4:U:C6	2.55	0.41
5:LB:113:GLU:O	5:LB:116:ARG:HB2	2.19	0.41
14:LK:144:ASP:HB2	14:LK:146:ARG:HE	1.85	0.41
20:LQ:177:ALA:O	30:La:51:GLY:HA2	2.20	0.41
33:Ld:36:VAL:HG11	33:Ld:44:ARG:HG2	2.02	0.41
39:Lj:2:THR:O	39:Lj:7:SER:OG	2.23	0.41
49:S2:29:G:H2'	49:S2:30:C:H6	1.85	0.41
49:S2:836:G:P	78:SY:8:ARG:HH22	2.43	0.41
49:S2:901:G:H2'	49:S2:902:G:C8	2.55	0.41
49:S2:1389:C:H4'	52:SD:205:PRO:HB3	2.02	0.41
49:S2:1535:U:H4'	54:SF:88:MET:HE1	2.02	0.41
49:S2:1729:U:O2	49:S2:1805:G:N2	2.43	0.41
50:SA:13:GLU:HG2	50:SA:14:ASP:N	2.36	0.41
54:SF:204:ARG:HH12	68:Sc:60:GLU:HB2	1.84	0.41
57:SK:88:GLU:HG2	57:SK:89:ILE:HD13	2.02	0.41
68:Sc:14:VAL:HG12	68:Sc:30:VAL:HB	2.02	0.41
83:CA:75:ALA:HB2	83:CA:113:HIS:HB3	2.03	0.41
84:CB:130:ASP:OD1	84:CB:132:VAL:HG22	2.21	0.41
84:CB:313:ALA:O	84:CB:317:GLU:HG2	2.19	0.41
1:L5:903:C:O2'	1:L5:904:C:H6	2.03	0.41
1:L5:2732:G:H2'	1:L5:2733:C:C6	2.55	0.41
1:L5:3861:A:H2'	1:L5:3862:A:C8	2.56	0.41
5:LB:131:THR:O	5:LB:135:LYS:HG3	2.20	0.41
14:LK:82:ILE:HD13	14:LK:85:LEU:HD12	2.03	0.41
15:LL:133:ALA:HB1	15:LL:135:LYS:HZ1	1.86	0.41
16:LM:32:ASP:HA	22:LS:145:PHE:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LN:2:GLY:O	17:LN:6:TYR:HD2	2.04	0.41
22:LS:77:ASN:HB2	22:LS:132:ILE:O	2.21	0.41
49:S2:74:G:H5''	49:S2:76:U:C4	2.56	0.41
49:S2:878:G:C6	49:S2:908:A:N1	2.88	0.41
49:S2:1378:A:OP2	50:SA:102:ARG:NH1	2.52	0.41
49:S2:1444:U:H2'	49:S2:1445:U:C6	2.55	0.41
52:SD:116:ARG:HG3	86:CD:219:GLY:H	1.86	0.41
54:SF:25:THR:O	54:SF:28:VAL:HG22	2.20	0.41
54:SF:60:ARG:HG2	54:SF:61:PHE:CE1	2.56	0.41
57:SK:89:ILE:HG21	86:CD:283:LEU:HD13	2.02	0.41
60:SQ:89:SER:HB3	60:SQ:112:LEU:HD13	2.01	0.41
62:SS:24:ARG:HB2	62:SS:29:ALA:HB2	2.01	0.41
65:SV:14:PRO:HD2	71:SC:255:LEU:HD22	2.02	0.41
74:SM:29:ASP:OD1	74:SM:30:GLY:N	2.46	0.41
1:L5:1391:A:H2'	1:L5:1392:A:O4'	2.21	0.41
1:L5:2257:C:O2'	1:L5:2259:G:OP2	2.24	0.41
1:L5:4195:G:O2'	1:L5:4442:U:OP1	2.33	0.41
1:L5:4233:A:C5	1:L5:4235:G:C8	3.09	0.41
1:L5:4727:A:H5'	5:LB:130:PHE:H	1.85	0.41
8:LE:207:LYS:C	8:LE:256:GLN:HE22	2.24	0.41
18:LO:58:LEU:HD23	18:LO:58:LEU:HA	1.91	0.41
19:LP:94:MET:CG	19:LP:148:MET:HE3	2.51	0.41
19:LP:131:ARG:NH1	19:LP:137:ASN:HD22	2.19	0.41
49:S2:2:A:O4'	49:S2:418:A:C8	2.74	0.41
49:S2:59:U:H5''	49:S2:503:C:N4	2.36	0.41
49:S2:161:U:O3'	72:SG:87:ARG:NH2	2.53	0.41
49:S2:1741:U:H2'	49:S2:1742:C:O4'	2.21	0.41
50:SA:111:GLN:HA	50:SA:116:PHE:CG	2.56	0.41
50:SA:220:LYS:HA	50:SA:220:LYS:HD3	1.91	0.41
51:SB:48:LEU:O	76:SO:51:GLU:HG3	2.21	0.41
54:SF:79:HIS:CE1	54:SF:159:ARG:NH1	2.88	0.41
55:SH:126:HIS:CE1	55:SH:181:THR:HG23	2.56	0.41
56:SI:76:THR:HB	56:SI:105:ASP:OD1	2.20	0.41
63:ST:35:ASP:OD1	63:ST:36:THR:HG23	2.20	0.41
64:SU:20:ILE:HD13	64:SU:98:VAL:HG21	2.03	0.41
64:SU:68:THR:HG23	64:SU:70:CYS:O	2.21	0.41
70:Sg:45:LEU:HA	70:Sg:52:TYR:O	2.20	0.41
72:SG:52:ILE:HG23	72:SG:109:LEU:HD11	2.03	0.41
82:Sf:102:VAL:HG12	82:Sf:104:LYS:HZ3	1.86	0.41
83:CA:161:ASN:HB3	83:CA:218:PHE:HE2	1.86	0.41
83:CA:210:LYS:HA	83:CA:210:LYS:HD2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CB:39:LEU:HG	84:CB:351:LEU:CD2	2.50	0.41
84:CB:89:ILE:HG12	84:CB:356:ILE:HG12	2.02	0.41
84:CB:176:GLN:O	84:CB:180:ARG:HG2	2.20	0.41
84:CB:664:ASP:HA	84:CB:704:VAL:CG1	2.51	0.41
84:CB:666:THR:HG22	84:CB:705:HIS:C	2.46	0.41
1:L5:62:A:OP1	17:LN:172:ARG:NH1	2.51	0.41
1:L5:173:C:C1'	37:Lh:112:ARG:NH1	2.84	0.41
1:L5:505:G:H1	1:L5:653:U:H3	1.67	0.41
1:L5:1267:C:C5	31:Lb:111:ARG:NH1	2.81	0.41
1:L5:1337:A:N1	1:L5:1658:G:O2'	2.44	0.41
1:L5:1637:A:OP1	1:L5:1639:U:H5	2.03	0.41
1:L5:1726:U:H5'	9:LF:135:ILE:CD1	2.51	0.41
1:L5:1739:G:H2'	1:L5:1740:C:C6	2.56	0.41
1:L5:1762:C:H5''	1:L5:1764:G:H1	1.85	0.41
1:L5:2065:G:H2'	1:L5:2066:C:O4'	2.21	0.41
1:L5:2676:A:C4	1:L5:2677:G:C8	3.09	0.41
1:L5:2864:A:H2'	1:L5:2865:U:H6	1.84	0.41
1:L5:3690:U:H5'	1:L5:3818:U:OP2	2.21	0.41
1:L5:3711:A:H2'	1:L5:3712:A:O4'	2.21	0.41
1:L5:4079:C:H2'	1:L5:4080:C:C6	2.56	0.41
1:L5:4169:G:H4'	1:L5:4171:C:C2	2.56	0.41
1:L5:4458:C:H2'	1:L5:4459:U:H6	1.86	0.41
1:L5:4578:G:H2'	1:L5:4579:U:C6	2.55	0.41
17:LN:98:LEU:HA	17:LN:101:VAL:HG22	2.03	0.41
24:LU:40:GLU:HG3	24:LU:65:ARG:HB2	2.02	0.41
29:LZ:43:VAL:HG12	29:LZ:73:LYS:O	2.21	0.41
39:Lj:72:ARG:HA	39:Lj:75:ARG:HH11	1.86	0.41
49:S2:289:G:H2'	49:S2:290:U:O4'	2.20	0.41
49:S2:1115:U:O2'	49:S2:1117:C:OP2	2.34	0.41
51:SB:217:MET:HE2	51:SB:217:MET:HB2	1.89	0.41
52:SD:47:GLU:HG2	52:SD:85:GLU:OE2	2.21	0.41
54:SF:40:ALA:HB1	54:SF:45:TYR:CD2	2.56	0.41
56:SI:26:LYS:HG3	56:SI:29:LEU:CD2	2.47	0.41
56:SI:81:VAL:HG11	56:SI:94:LYS:HA	2.02	0.41
56:SI:88:ASN:O	56:SI:92:ARG:HG3	2.21	0.41
59:SP:91:GLY:HA2	59:SP:107:ILE:O	2.21	0.41
60:SQ:146:ARG:NH2	85:CC:32:C:OP2	2.46	0.41
61:SR:74:GLN:HA	61:SR:77:GLU:HG2	2.03	0.41
62:SS:55:ARG:O	62:SS:58:GLU:HB2	2.20	0.41
63:ST:21:PHE:O	63:ST:24:LYS:HG3	2.20	0.41
68:Sc:62:GLU:OE1	68:Sc:62:GLU:N	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SG:41:LEU:HD23	72:SG:45:TRP:CE2	2.56	0.41
72:SG:164:LYS:HD3	72:SG:167:LYS:HG2	2.03	0.41
77:SW:53:ILE:HD11	77:SW:62:VAL:HG23	2.02	0.41
77:SW:76:SER:HB3	77:SW:77:PRO:HD3	2.01	0.41
79:SZ:63:PRO:HA	79:SZ:97:ILE:HD11	2.02	0.41
84:CB:609:PHE:CE2	84:CB:699:GLY:HA2	2.55	0.41
84:CB:830:ARG:O	84:CB:834:VAL:HG23	2.20	0.41
1:L5:160:G:C5	38:Li:26:HIS:CE1	3.09	0.41
1:L5:171:U:O2'	1:L5:265:C:N4	2.43	0.41
1:L5:308:G:OP2	1:L5:308:G:N2	2.37	0.41
1:L5:456:C:H2'	1:L5:457:G:H8	1.85	0.41
1:L5:490:C:H2'	1:L5:491:G:H8	1.86	0.41
1:L5:754:U:H2'	1:L5:755:C:C6	2.56	0.41
1:L5:1273:G:O2'	1:L5:1274:A:H5'	2.20	0.41
1:L5:1519:C:H2'	1:L5:1520:C:H6	1.86	0.41
1:L5:1977:C:O2'	1:L5:1978:C:OP1	2.29	0.41
1:L5:2376:A:H2'	1:L5:2377:C:C6	2.55	0.41
1:L5:2476:G:H2'	1:L5:2477:A:H8	1.85	0.41
1:L5:2647:A:H3'	1:L5:2648:G:H8	1.86	0.41
1:L5:3604:A:H2'	1:L5:3605:C:O4'	2.20	0.41
1:L5:3672:G:O2'	1:L5:3674:G:H5'	2.21	0.41
1:L5:3949:A:H2'	1:L5:3950:U:C6	2.56	0.41
1:L5:4088:C:H2'	1:L5:4089:G:H8	1.84	0.41
1:L5:4280:A:C2	7:LD:29:ASP:HA	2.55	0.41
1:L5:4401:G:H2'	1:L5:4402:C:H6	1.85	0.41
1:L5:4938:A:H4'	8:LE:185:PRO:HD3	2.02	0.41
2:L7:92:C:H2'	2:L7:93:G:C8	2.55	0.41
3:L8:81:C:H5''	37:Lh:3:LYS:HZ2	1.83	0.41
7:LD:108:ARG:CZ	7:LD:253:TYR:HB2	2.51	0.41
8:LE:117:PRO:HG2	8:LE:120:ASP:OD1	2.20	0.41
9:LF:31:LYS:HE3	9:LF:31:LYS:HB3	1.92	0.41
10:LG:244:PRO:HA	10:LG:247:VAL:HG22	2.02	0.41
14:LK:90:ARG:NH2	14:LK:95:GLN:CD	2.79	0.41
18:LO:83:THR:O	18:LO:87:MET:HG3	2.21	0.41
22:LS:84:TYR:CZ	22:LS:91:HIS:HB2	2.56	0.41
28:LY:90:ALA:C	28:LY:92:GLY:H	2.28	0.41
29:LZ:30:ASP:O	29:LZ:39:SER:OG	2.32	0.41
33:Ld:22:THR:CG2	33:Ld:122:VAL:HB	2.51	0.41
49:S2:89:C:H2'	49:S2:90:G:C8	2.56	0.41
49:S2:389:A:H2'	49:S2:390:C:C6	2.56	0.41
49:S2:417:C:O2'	49:S2:418:A:H5''	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:478:G:O2'	84:CB:406:ASP:OD2	2.39	0.41
49:S2:528:A:H2'	49:S2:529:A:H8	1.84	0.41
49:S2:678:U:C2	49:S2:679:A:C8	3.09	0.41
49:S2:885:U:O2	49:S2:901:G:N2	2.42	0.41
49:S2:1415:C:H2'	49:S2:1416:C:C6	2.55	0.41
49:S2:1699:A:OP2	86:CD:195:ARG:NH2	2.54	0.41
49:S2:1842:C:H2'	49:S2:1843:G:C8	2.56	0.41
49:S2:1869:A:C4	51:SB:115:LYS:HE2	2.56	0.41
50:SA:173:LEU:O	50:SA:177:MET:HG2	2.21	0.41
51:SB:85:LYS:HB2	51:SB:101:HIS:HB3	2.02	0.41
54:SF:128:ILE:HD11	68:Sc:26:GLN:OE1	2.20	0.41
55:SH:43:LEU:HA	55:SH:43:LEU:HD23	1.79	0.41
55:SH:133:LEU:HD11	55:SH:176:VAL:HG11	2.03	0.41
55:SH:160:LYS:HD3	55:SH:190:PRO:O	2.21	0.41
70:Sg:107:ASP:O	70:Sg:124:SER:OG	2.27	0.41
70:Sg:163:PRO:C	70:Sg:164:ILE:HD13	2.46	0.41
70:Sg:270:LEU:HD21	70:Sg:310:TRP:CG	2.56	0.41
73:SJ:28:GLU:HG2	73:SJ:43:VAL:HG11	2.03	0.41
74:SM:36:ARG:HE	74:SM:40:LYS:HD3	1.86	0.41
76:SO:90:ILE:HG22	76:SO:124:MET:HE1	2.03	0.41
76:SO:103:ASN:O	76:SO:142:ARG:HD2	2.21	0.41
78:SY:20:ARG:HB3	78:SY:76:TYR:CD1	2.55	0.41
82:Sf:105:TYR:CD1	82:Sf:131:PHE:HD2	2.39	0.41
82:Sf:105:TYR:HB3	82:Sf:131:PHE:HE2	1.86	0.41
82:Sf:132:MET:HE2	82:Sf:139:HIS:C	2.46	0.41
83:CA:244:THR:HG21	83:CA:304:PRO:HB2	2.02	0.41
84:CB:22:MET:SD	84:CB:102:LEU:HD12	2.61	0.41
86:CD:192:GLU:H	86:CD:192:GLU:HG2	1.71	0.41
1:L5:186:G:H5'	1:L5:189:G:H4'	2.03	0.41
1:L5:270:U:H2'	1:L5:271:C:H6	1.85	0.41
1:L5:671:G:H2'	1:L5:672:C:H6	1.85	0.41
1:L5:1998:A:HO2'	1:L5:1999:A:H5'	1.86	0.41
1:L5:2103:G:H2'	1:L5:2104:G:H8	1.86	0.41
1:L5:2662:G:H2'	1:L5:2663:G:C8	2.55	0.41
1:L5:3787:G:H1'	1:L5:3789:C:N4	2.36	0.41
1:L5:3971:G:C6	1:L5:4051:C:H1'	2.55	0.41
1:L5:4254:G:N3	1:L5:4254:G:H2'	2.36	0.41
1:L5:4344:U:H2'	1:L5:4345:C:H6	1.85	0.41
1:L5:4406:U:C2	1:L5:4407:G:C8	3.09	0.41
3:L8:144:U:H2'	3:L8:145:C:C6	2.56	0.41
5:LB:214:ASP:HB2	5:LB:283:LYS:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:245:GLN:O	8:LE:249:ASP:OD1	2.39	0.41
11:LH:27:VAL:HG12	11:LH:84:VAL:HG21	2.03	0.41
11:LH:176:LEU:HB3	42:Lm:86:ALA:HB1	2.03	0.41
13:LJ:125:ILE:O	13:LJ:125:ILE:HG23	2.21	0.41
17:LN:201:HIS:O	17:LN:204:ARG:NE	2.45	0.41
18:LO:3:GLU:O	18:LO:31:ARG:HD2	2.20	0.41
21:LR:21:LYS:HD3	21:LR:21:LYS:HA	1.90	0.41
45:Lp:46:LYS:O	45:Lp:57:CYS:HA	2.21	0.41
49:S2:1476:A:H4'	49:S2:1477:U:H5''	2.01	0.41
49:S2:1733:U:H2'	49:S2:1734:G:O4'	2.21	0.41
49:S2:1737:G:H2'	49:S2:1738:C:C6	2.55	0.41
49:S2:1802:C:H2'	49:S2:1803:U:H6	1.85	0.41
50:SA:6:ASP:HA	50:SA:9:GLN:HG2	2.03	0.41
51:SB:140:VAL:HG12	51:SB:213:ARG:HB2	2.03	0.41
55:SH:76:GLN:O	55:SH:80:VAL:HG23	2.21	0.41
56:SI:177:SER:OG	56:SI:178:ARG:N	2.54	0.41
59:SP:57:LEU:HD11	59:SP:83:MET:HE2	2.03	0.41
70:Sg:238:ALA:HB3	70:Sg:251:ALA:HB3	2.02	0.41
71:SC:253:PRO:HA	71:SC:256:TRP:CD2	2.56	0.41
83:CA:55:MET:O	83:CA:58:GLU:HG3	2.21	0.41
83:CA:82:VAL:HG11	83:CA:98:TYR:CE2	2.56	0.41
83:CA:192:GLN:NE2	83:CA:193:HIS:CG	2.88	0.41
1:L5:271:C:H2'	1:L5:272:U:C6	2.56	0.40
1:L5:324:A:H2'	1:L5:325:U:C6	2.57	0.40
1:L5:426:A:H2'	1:L5:427:A:C8	2.56	0.40
1:L5:1737:A:H2'	1:L5:1738:A:O4'	2.21	0.40
1:L5:1974:U:C5'	14:LK:119:ARG:HH22	2.35	0.40
1:L5:2062:C:OP1	22:LS:2:LYS:HD2	2.21	0.40
1:L5:2408:U:OP1	41:Ll:44:TRP:HB3	2.20	0.40
1:L5:2807:A:O4'	36:Lg:2:VAL:HG11	2.21	0.40
1:L5:2891:U:H2'	1:L5:2892:C:O4'	2.20	0.40
1:L5:3706:C:H2'	1:L5:3707:U:O4'	2.21	0.40
88:L5:5315:T1C:H953	88:L5:5315:T1C:H921	1.84	0.40
3:L8:27:U:H2'	3:L8:28:C:C6	2.56	0.40
3:L8:83:C:H6	3:L8:83:C:P	2.45	0.40
6:LC:32:ILE:HG12	6:LC:129:ALA:HB3	2.03	0.40
18:LO:49:ARG:NH1	18:LO:49:ARG:HG3	2.36	0.40
19:LP:94:MET:HG2	19:LP:148:MET:HE3	2.03	0.40
27:LX:119:ILE:HD13	27:LX:149:VAL:HG11	2.03	0.40
31:Lb:49:HIS:HB3	31:Lb:52:LYS:HD3	2.03	0.40
47:Ls:46:SER:C	47:Ls:101:MET:HE1	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:151:C:OP1	78:SY:120:THR:HA	2.21	0.40
49:S2:386:C:H2'	49:S2:387:C:C6	2.57	0.40
49:S2:750:C:H41	49:S2:793:G:N2	2.16	0.40
50:SA:128:ARG:NH2	50:SA:151:ASP:O	2.54	0.40
50:SA:184:ARG:HD3	50:SA:191:ARG:NH1	2.36	0.40
53:SE:97:GLU:CG	53:SE:99:PHE:CE1	3.04	0.40
53:SE:116:PRO:O	53:SE:120:LYS:HG3	2.21	0.40
60:SQ:61:GLU:HG2	60:SQ:62:ARG:N	2.36	0.40
66:SX:71:ARG:NH1	66:SX:82:THR:OG1	2.35	0.40
67:Sa:65:PRO:HG2	76:SO:129:ILE:O	2.21	0.40
76:SO:12:GLU:HA	76:SO:13:GLN:HA	1.58	0.40
76:SO:19:PRO:HG3	76:SO:27:VAL:HG11	2.02	0.40
83:CA:189:GLN:HE21	83:CA:199:LYS:CB	2.33	0.40
1:L5:1521:C:OP1	6:LC:100:ARG:NH2	2.52	0.40
1:L5:1558:A:H2'	1:L5:1559:G:C8	2.56	0.40
1:L5:1631:A:H2	4:LA:208:GLU:HG3	1.86	0.40
1:L5:2079:G:H2'	1:L5:2080:U:H6	1.86	0.40
1:L5:4072:C:C2	1:L5:4073:A:C8	3.10	0.40
1:L5:4563:U:H2'	1:L5:4564:A:H8	1.86	0.40
4:LA:122:ASP:OD1	4:LA:122:ASP:C	2.64	0.40
4:LA:131:GLY:N	4:LA:169:VAL:HG23	2.36	0.40
4:LA:151:PRO:C	4:LA:153:GLY:H	2.29	0.40
6:LC:28:PHE:CD1	6:LC:132:ALA:HB2	2.56	0.40
6:LC:204:ARG:HG2	6:LC:205:ARG:O	2.21	0.40
7:LD:225:GLN:HA	7:LD:228:LYS:HB2	2.02	0.40
8:LE:206:VAL:HG13	8:LE:256:GLN:HG3	2.02	0.40
14:LK:125:LEU:HD22	14:LK:163:PRO:O	2.21	0.40
15:LL:145:LYS:CG	15:LL:146:LEU:HD12	2.47	0.40
17:LN:146:PRO:HG3	37:Lh:102:LEU:HB3	2.03	0.40
27:LX:72:ASP:O	27:LX:76:ILE:HG12	2.21	0.40
27:LX:129:ARG:NH2	27:LX:131:ASP:OD2	2.50	0.40
30:La:79:TRP:CE3	30:La:87:ARG:HG3	2.56	0.40
35:Lf:33:VAL:HG21	35:Lf:42:TYR:CE1	2.55	0.40
37:Lh:31:LEU:HB3	37:Lh:47:ILE:CG1	2.50	0.40
49:S2:177:G:H22	49:S2:313:A:H5'	1.86	0.40
49:S2:962:A:N1	49:S2:1055:A:O2'	2.54	0.40
49:S2:1162:C:H2'	49:S2:1163:C:O4'	2.22	0.40
52:SD:215:ASP:O	52:SD:217:ILE:HG12	2.22	0.40
53:SE:52:LEU:HD11	53:SE:99:PHE:CZ	2.57	0.40
62:SS:114:LEU:HD13	62:SS:121:ARG:HE	1.87	0.40
66:SX:46:HIS:CD2	66:SX:103:ALA:HB2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:Sa:45:VAL:HG23	67:Sa:50:VAL:HG22	2.03	0.40
72:SG:63:MET:HG2	72:SG:98:ARG:HD2	2.04	0.40
73:SJ:138:ARG:HA	73:SJ:156:HIS:HB3	2.03	0.40
74:SM:23:LYS:HA	74:SM:23:LYS:HD3	1.74	0.40
83:CA:48:LEU:O	83:CA:51:LYS:HG3	2.21	0.40
84:CB:24:VAL:HG23	84:CB:102:LEU:CD1	2.49	0.40
84:CB:37:ASP:OD2	84:CB:54:THR:HA	2.20	0.40
84:CB:227:GLN:HG2	84:CB:352:GLN:HE22	1.85	0.40
84:CB:248:GLU:HG2	84:CB:249:ARG:N	2.36	0.40
84:CB:507:VAL:HG13	84:CB:554:LEU:HD13	2.04	0.40
1:L5:40:G:N2	1:L5:4380:A:H62	2.20	0.40
1:L5:408:A:H5'	1:L5:410:A:OP1	2.22	0.40
1:L5:1209:U:O2'	1:L5:1211:G:H8	2.04	0.40
1:L5:1552:G:O2'	1:L5:1574:G:N2	2.44	0.40
1:L5:2621:A:H2'	1:L5:2622:G:C8	2.57	0.40
1:L5:2720:C:H2'	1:L5:2721:G:O4'	2.21	0.40
1:L5:3975:C:O5'	1:L5:3975:C:H6	2.04	0.40
5:LB:106:PHE:O	5:LB:133:TYR:HE1	2.05	0.40
6:LC:184:TYR:CZ	6:LC:225:PRO:HG2	2.56	0.40
12:LI:55:ASP:CG	12:LI:164:LYS:HE3	2.47	0.40
13:LJ:26:VAL:HG13	13:LJ:32:ARG:HH21	1.84	0.40
15:LL:185:ALA:HB2	38:Li:7:MET:HE1	2.03	0.40
32:Lc:26:LYS:H	32:Lc:98:ASP:HB3	1.85	0.40
43:Ln:12:ARG:HG2	43:Ln:15:ARG:NH2	2.36	0.40
47:Ls:43:ILE:HA	47:Ls:105:ASN:HD21	1.86	0.40
49:S2:201:C:H3'	49:S2:202:G:N2	2.36	0.40
49:S2:870:A:H5'	49:S2:872:A:H1'	2.02	0.40
49:S2:1414:A:H5''	49:S2:1415:C:OP2	2.21	0.40
49:S2:1418:C:O2'	49:S2:1420:G:N3	2.53	0.40
49:S2:1431:G:H2'	49:S2:1432:U:C6	2.55	0.40
49:S2:1758:G:O2'	49:S2:1774:C:N4	2.43	0.40
49:S2:1865:C:H5	67:Sa:6:ARG:H	1.69	0.40
50:SA:12:GLU:HG2	50:SA:13:GLU:N	2.36	0.40
53:SE:137:PRO:HG2	53:SE:150:PRO:HD2	2.03	0.40
55:SH:5:SER:HB3	55:SH:7:LYS:HZ2	1.85	0.40
59:SP:17:TYR:HB2	59:SP:25:LEU:HD11	2.01	0.40
61:SR:116:ASN:OD1	61:SR:117:LEU:N	2.43	0.40
62:SS:73:ASN:HB2	62:SS:76:GLN:HE22	1.85	0.40
68:Sc:10:LYS:HE2	68:Sc:36:ASP:OD2	2.21	0.40
70:Sg:93:THR:O	70:Sg:94:THR:OG1	2.31	0.40
70:Sg:194:TYR:CE2	70:Sg:212:LYS:HD3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:59:GLU:OE2	73:SJ:69:ARG:NH2	2.35	0.40
78:SY:98:GLU:OE2	78:SY:100:LYS:HB2	2.21	0.40
79:SZ:84:ALA:O	79:SZ:88:LEU:HG	2.21	0.40
83:CA:170:TRP:CZ3	83:CA:203:GLN:HB2	2.56	0.40
84:CB:60:ARG:HG3	84:CB:63:GLU:HB2	2.04	0.40
84:CB:686:ALA:C	84:CB:697:MET:HE2	2.47	0.40
84:CB:712:ASP:O	84:CB:716:ARG:HG2	2.21	0.40
1:L5:173:C:H5''	15:LL:129:ARG:NH2	2.36	0.40
1:L5:1812:C:O2'	31:Lb:53:GLY:HA3	2.22	0.40
1:L5:2363:A:H2'	1:L5:2364:G:O4'	2.21	0.40
1:L5:2634:C:H2'	1:L5:2635:U:H6	1.87	0.40
1:L5:2675:G:H1'	1:L5:2676:A:OP2	2.21	0.40
1:L5:3723:A:H2'	1:L5:3724:A:H8	1.86	0.40
1:L5:4095:G:H2'	1:L5:4096:C:C5	2.56	0.40
1:L5:4188:U:H2'	1:L5:4189:U:H6	1.85	0.40
1:L5:4520:G:H2'	1:L5:4521:U:O4'	2.22	0.40
1:L5:4563:U:H2'	1:L5:4564:A:C8	2.57	0.40
5:LB:165:HIS:HB3	5:LB:180:LEU:HD23	2.02	0.40
6:LC:156:ASP:O	6:LC:159:GLU:HB2	2.21	0.40
7:LD:259:LYS:HA	7:LD:259:LYS:HD3	1.91	0.40
12:LI:54:SER:HB2	12:LI:135:ILE:HD11	2.03	0.40
13:LJ:178:LYS:HA	13:LJ:178:LYS:HD3	1.91	0.40
26:LW:111:ALA:O	26:LW:114:GLU:HG3	2.21	0.40
28:LY:74:TYR:CE2	28:LY:76:LYS:HB3	2.56	0.40
49:S2:666:U:H2'	49:S2:667:U:C6	2.57	0.40
49:S2:921:G:H3'	77:SW:28:ARG:NH2	2.37	0.40
49:S2:1018:U:C2	49:S2:1019:C:C5	3.10	0.40
50:SA:80:ARG:O	50:SA:84:GLN:HG3	2.21	0.40
51:SB:48:LEU:HD23	51:SB:48:LEU:H	1.87	0.40
52:SD:146:ARG:O	86:CD:206:HIS:HD2	2.05	0.40
53:SE:87:MET:CE	53:SE:236:ILE:HD13	2.44	0.40
54:SF:113:VAL:O	54:SF:117:ILE:HG12	2.21	0.40
55:SH:10:LYS:HE2	55:SH:47:ALA:HA	2.03	0.40
61:SR:61:ILE:HA	61:SR:64:GLY:O	2.21	0.40
62:SS:117:ILE:HG13	62:SS:119:ALA:H	1.86	0.40
71:SC:183:LYS:HE2	71:SC:183:LYS:HB3	1.83	0.40
72:SG:67:VAL:HG12	72:SG:69:THR:HG22	2.03	0.40
72:SG:139:SER:O	72:SG:142:ARG:HG2	2.22	0.40
73:SJ:45:ARG:O	73:SJ:49:THR:HG23	2.22	0.40
73:SJ:176:LYS:HG2	73:SJ:180:LYS:NZ	2.36	0.40
74:SM:78:LYS:HD2	74:SM:78:LYS:HA	1.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SW:79:PHE:HB2	77:SW:125:ILE:CG2	2.51	0.40
84:CB:285:LEU:HD13	84:CB:285:LEU:HA	1.94	0.40
1:L5:394:G:N2	1:L5:396:A:H3'	2.35	0.40
1:L5:1762:C:C4	1:L5:1770:A:N1	2.89	0.40
1:L5:1943:A:H2'	1:L5:1944:A:O4'	2.22	0.40
1:L5:2495:U:H2'	1:L5:2496:G:H8	1.85	0.40
1:L5:3696:C:O2'	1:L5:3816:A:N1	2.48	0.40
1:L5:4208:U:P	23:LT:6:GLY:HA3	2.61	0.40
1:L5:4311:A:O2'	1:L5:4312:U:H5'	2.21	0.40
1:L5:4704:C:H2'	1:L5:4705:A:C8	2.56	0.40
6:LC:298:ILE:HD12	20:LQ:35:LEU:HD21	2.03	0.40
12:LI:140:THR:HG23	12:LI:141:LYS:O	2.22	0.40
21:LR:181:LYS:O	21:LR:185:ILE:HG23	2.22	0.40
22:LS:134:ALA:HA	22:LS:146:HIS:CE1	2.56	0.40
47:Ls:96:THR:O	47:Ls:100:ASP:OD2	2.39	0.40
49:S2:1490:G:OP2	49:S2:1490:G:H8	2.05	0.40
49:S2:1542:C:OP1	63:ST:62:ARG:NH2	2.53	0.40
49:S2:1628:C:H2'	49:S2:1629:C:C6	2.56	0.40
51:SB:171:ILE:O	51:SB:175:GLU:HG2	2.22	0.40
52:SD:194:PRO:O	52:SD:197:LYS:NZ	2.48	0.40
60:SQ:5:GLY:H	60:SQ:27:ARG:NH2	2.18	0.40
65:SV:70:LEU:HD12	65:SV:79:VAL:HG21	2.03	0.40
70:Sg:36:ARG:C	70:Sg:38:LYS:H	2.28	0.40
71:SC:88:ILE:HG21	71:SC:94:ILE:HD11	2.04	0.40
71:SC:209:VAL:HB	71:SC:210:PRO:HD3	2.03	0.40
72:SG:10:THR:OG1	72:SG:128:THR:HA	2.21	0.40
72:SG:124:LEU:HD23	72:SG:124:LEU:C	2.47	0.40
76:SO:59:GLY:HA2	76:SO:68:GLU:HG2	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	LA	246/257 (96%)	228 (93%)	18 (7%)	0	100	100
5	LB	400/403 (99%)	374 (94%)	24 (6%)	2 (0%)	24	37
6	LC	366/427 (86%)	351 (96%)	14 (4%)	1 (0%)	36	50
7	LD	291/297 (98%)	279 (96%)	11 (4%)	1 (0%)	36	50
8	LE	232/288 (81%)	216 (93%)	16 (7%)	0	100	100
9	LF	223/248 (90%)	216 (97%)	7 (3%)	0	100	100
10	LG	239/266 (90%)	230 (96%)	9 (4%)	0	100	100
11	LH	188/192 (98%)	182 (97%)	6 (3%)	0	100	100
12	LI	198/214 (92%)	193 (98%)	4 (2%)	1 (0%)	24	37
13	LJ	174/178 (98%)	167 (96%)	6 (3%)	1 (1%)	21	32
14	LK	155/165 (94%)	154 (99%)	1 (1%)	0	100	100
15	LL	208/211 (99%)	194 (93%)	13 (6%)	1 (0%)	24	37
16	LM	137/215 (64%)	131 (96%)	6 (4%)	0	100	100
17	LN	201/204 (98%)	192 (96%)	8 (4%)	1 (0%)	24	37
18	LO	199/203 (98%)	198 (100%)	1 (0%)	0	100	100
19	LP	151/184 (82%)	145 (96%)	5 (3%)	1 (1%)	18	28
20	LQ	185/188 (98%)	181 (98%)	4 (2%)	0	100	100
21	LR	185/196 (94%)	184 (100%)	1 (0%)	0	100	100
22	LS	173/176 (98%)	170 (98%)	3 (2%)	0	100	100
23	LT	157/160 (98%)	154 (98%)	3 (2%)	0	100	100
24	LU	99/128 (77%)	93 (94%)	6 (6%)	0	100	100
25	LV	129/140 (92%)	124 (96%)	5 (4%)	0	100	100
26	LW	114/157 (73%)	110 (96%)	4 (4%)	0	100	100
27	LX	118/156 (76%)	117 (99%)	1 (1%)	0	100	100
28	LY	132/145 (91%)	129 (98%)	3 (2%)	0	100	100
29	LZ	133/136 (98%)	129 (97%)	4 (3%)	0	100	100
30	La	145/148 (98%)	135 (93%)	9 (6%)	1 (1%)	18	28
31	Lb	105/159 (66%)	95 (90%)	10 (10%)	0	100	100
32	Lc	96/115 (84%)	95 (99%)	1 (1%)	0	100	100
33	Ld	105/125 (84%)	102 (97%)	3 (3%)	0	100	100
34	Le	126/135 (93%)	119 (94%)	7 (6%)	0	100	100
35	Lf	107/110 (97%)	104 (97%)	2 (2%)	1 (1%)	14	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	Lg	112/117 (96%)	111 (99%)	1 (1%)	0	100	100
37	Lh	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
38	Li	100/105 (95%)	97 (97%)	2 (2%)	1 (1%)	12	20
39	Lj	84/97 (87%)	76 (90%)	7 (8%)	1 (1%)	10	16
40	Lk	67/70 (96%)	66 (98%)	1 (2%)	0	100	100
41	Ll	48/51 (94%)	48 (100%)	0	0	100	100
42	Lm	50/128 (39%)	50 (100%)	0	0	100	100
43	Ln	22/25 (88%)	22 (100%)	0	0	100	100
44	Lo	103/106 (97%)	99 (96%)	4 (4%)	0	100	100
45	Lp	89/92 (97%)	86 (97%)	3 (3%)	0	100	100
46	Lr	123/137 (90%)	118 (96%)	5 (4%)	0	100	100
47	Ls	201/317 (63%)	194 (96%)	7 (4%)	0	100	100
48	Lz	215/217 (99%)	172 (80%)	43 (20%)	0	100	100
50	SA	219/295 (74%)	214 (98%)	5 (2%)	0	100	100
51	SB	212/264 (80%)	205 (97%)	6 (3%)	1 (0%)	24	37
52	SD	225/243 (93%)	215 (96%)	10 (4%)	0	100	100
53	SE	260/263 (99%)	250 (96%)	10 (4%)	0	100	100
54	SF	187/204 (92%)	169 (90%)	17 (9%)	1 (0%)	24	37
55	SH	182/194 (94%)	166 (91%)	15 (8%)	1 (0%)	24	37
56	SI	204/208 (98%)	195 (96%)	9 (4%)	0	100	100
57	SK	96/165 (58%)	89 (93%)	6 (6%)	1 (1%)	12	20
58	SL	151/158 (96%)	136 (90%)	15 (10%)	0	100	100
59	SP	119/145 (82%)	114 (96%)	5 (4%)	0	100	100
60	SQ	142/146 (97%)	132 (93%)	10 (7%)	0	100	100
61	SR	133/135 (98%)	122 (92%)	11 (8%)	0	100	100
62	SS	143/152 (94%)	127 (89%)	16 (11%)	0	100	100
63	ST	141/145 (97%)	130 (92%)	10 (7%)	1 (1%)	18	28
64	SU	102/119 (86%)	92 (90%)	9 (9%)	1 (1%)	12	20
65	SV	81/83 (98%)	77 (95%)	4 (5%)	0	100	100
66	SX	139/143 (97%)	137 (99%)	2 (1%)	0	100	100
67	Sa	100/115 (87%)	96 (96%)	4 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
68	Sc	62/69 (90%)	54 (87%)	7 (11%)	1 (2%)	7	11
69	Sd	53/56 (95%)	51 (96%)	2 (4%)	0	100	100
70	Sg	311/317 (98%)	267 (86%)	44 (14%)	0	100	100
71	SC	220/293 (75%)	210 (96%)	10 (4%)	0	100	100
72	SG	235/249 (94%)	223 (95%)	11 (5%)	1 (0%)	30	43
73	SJ	183/194 (94%)	173 (94%)	10 (6%)	0	100	100
74	SM	120/132 (91%)	113 (94%)	7 (6%)	0	100	100
75	SN	148/151 (98%)	147 (99%)	1 (1%)	0	100	100
76	SO	138/151 (91%)	127 (92%)	10 (7%)	1 (1%)	18	28
77	SW	127/130 (98%)	121 (95%)	6 (5%)	0	100	100
78	SY	129/133 (97%)	118 (92%)	11 (8%)	0	100	100
79	SZ	73/125 (58%)	63 (86%)	10 (14%)	0	100	100
80	Sb	81/84 (96%)	75 (93%)	6 (7%)	0	100	100
81	Se	56/59 (95%)	51 (91%)	4 (7%)	1 (2%)	6	9
82	Sf	65/156 (42%)	56 (86%)	9 (14%)	0	100	100
83	CA	350/394 (89%)	337 (96%)	13 (4%)	0	100	100
84	CB	842/858 (98%)	801 (95%)	37 (4%)	4 (0%)	24	37
86	CD	51/402 (13%)	48 (94%)	3 (6%)	0	100	100
All	All	13131/15041 (87%)	12448 (95%)	656 (5%)	27 (0%)	44	58

All (27) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	LB	18	PRO
12	LI	213	HIS
13	LJ	8	LYS
17	LN	147	ASP
35	Lf	107	PRO
55	SH	15	LYS
84	CB	777	ALA
84	CB	779	THR
7	LD	229	ASN
38	Li	16	LYS
72	SG	217	MET
84	CB	326	GLU
5	LB	4	ARG

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Mol	Chain	Res	Type
51	SB	222	LYS
68	Sc	51	ARG
6	LC	149	GLU
15	LL	97	SER
30	La	15	VAL
54	SF	18	LYS
84	CB	481	LYS
19	LP	6	LEU
57	SK	36	ALA
63	ST	40	ALA
39	Lj	40	PRO
76	SO	89	GLY
64	SU	107	GLU
81	Se	45	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	
4	LA	190/199 (96%)	190 (100%)	0	100	100
5	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	306/348 (88%)	306 (100%)	0	100	100
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	209/252 (83%)	209 (100%)	0	100	100
9	LF	194/215 (90%)	194 (100%)	0	100	100
10	LG	203/223 (91%)	203 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	172/181 (95%)	172 (100%)	0	100	100
13	LJ	148/149 (99%)	148 (100%)	0	100	100
14	LK	129/137 (94%)	129 (100%)	0	100	100
15	LL	176/177 (99%)	176 (100%)	0	100	100
16	LM	118/161 (73%)	118 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	LN	171/172 (99%)	171 (100%)	0	100	100
18	LO	173/174 (99%)	173 (100%)	0	100	100
19	LP	134/163 (82%)	134 (100%)	0	100	100
20	LQ	164/165 (99%)	164 (100%)	0	100	100
21	LR	166/175 (95%)	166 (100%)	0	100	100
22	LS	156/157 (99%)	156 (100%)	0	100	100
23	LT	139/140 (99%)	139 (100%)	0	100	100
24	LU	91/115 (79%)	91 (100%)	0	100	100
25	LV	101/107 (94%)	101 (100%)	0	100	100
26	LW	97/126 (77%)	97 (100%)	0	100	100
27	LX	108/133 (81%)	108 (100%)	0	100	100
28	LY	124/135 (92%)	124 (100%)	0	100	100
29	LZ	117/118 (99%)	117 (100%)	0	100	100
30	La	120/121 (99%)	120 (100%)	0	100	100
31	Lb	88/126 (70%)	88 (100%)	0	100	100
32	Lc	83/97 (86%)	83 (100%)	0	100	100
33	Ld	98/110 (89%)	98 (100%)	0	100	100
34	Le	114/121 (94%)	114 (100%)	0	100	100
35	Lf	88/89 (99%)	88 (100%)	0	100	100
36	Lg	98/100 (98%)	98 (100%)	0	100	100
37	Lh	109/110 (99%)	109 (100%)	0	100	100
38	Li	86/89 (97%)	86 (100%)	0	100	100
39	Lj	73/80 (91%)	73 (100%)	0	100	100
40	Lk	64/65 (98%)	64 (100%)	0	100	100
41	Ll	47/48 (98%)	47 (100%)	0	100	100
42	Lm	48/116 (41%)	48 (100%)	0	100	100
43	Ln	23/24 (96%)	23 (100%)	0	100	100
44	Lo	93/94 (99%)	93 (100%)	0	100	100
45	Lp	74/75 (99%)	74 (100%)	0	100	100
46	Lr	109/121 (90%)	109 (100%)	0	100	100
47	Ls	171/258 (66%)	171 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	SA	183/243 (75%)	183 (100%)	0	100	100
51	SB	195/231 (84%)	195 (100%)	0	100	100
52	SD	190/202 (94%)	190 (100%)	0	100	100
53	SE	224/225 (100%)	224 (100%)	0	100	100
54	SF	159/170 (94%)	159 (100%)	0	100	100
55	SH	166/174 (95%)	166 (100%)	0	100	100
56	SI	178/180 (99%)	178 (100%)	0	100	100
57	SK	89/136 (65%)	89 (100%)	0	100	100
58	SL	137/142 (96%)	137 (100%)	0	100	100
59	SP	107/130 (82%)	107 (100%)	0	100	100
60	SQ	119/121 (98%)	119 (100%)	0	100	100
61	SR	122/122 (100%)	122 (100%)	0	100	100
62	SS	126/132 (96%)	126 (100%)	0	100	100
63	ST	113/115 (98%)	113 (100%)	0	100	100
64	SU	94/107 (88%)	94 (100%)	0	100	100
65	SV	67/67 (100%)	67 (100%)	0	100	100
66	SX	113/115 (98%)	113 (100%)	0	100	100
67	Sa	89/98 (91%)	89 (100%)	0	100	100
68	Sc	57/62 (92%)	57 (100%)	0	100	100
69	Sd	48/49 (98%)	48 (100%)	0	100	100
70	Sg	272/275 (99%)	272 (100%)	0	100	100
71	SC	188/225 (84%)	188 (100%)	0	100	100
72	SG	207/218 (95%)	207 (100%)	0	100	100
73	SJ	161/168 (96%)	161 (100%)	0	100	100
74	SM	102/108 (94%)	102 (100%)	0	100	100
75	SN	130/131 (99%)	130 (100%)	0	100	100
76	SO	110/119 (92%)	110 (100%)	0	100	100
77	SW	112/113 (99%)	112 (100%)	0	100	100
78	SY	113/115 (98%)	113 (100%)	0	100	100
79	SZ	66/103 (64%)	66 (100%)	0	100	100
80	Sb	75/76 (99%)	75 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
81	Se	47/48 (98%)	47 (100%)	0	100	100
82	Sf	60/140 (43%)	60 (100%)	0	100	100
83	CA	303/336 (90%)	303 (100%)	0	100	100
84	CB	722/730 (99%)	722 (100%)	0	100	100
86	CD	46/322 (14%)	46 (100%)	0	100	100
All	All	11225/12584 (89%)	11225 (100%)	0	100	100

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (116) such sidechains are listed below:

Mol	Chain	Res	Type
4	LA	97	ASN
5	LB	145	GLN
6	LC	89	GLN
6	LC	231	ASN
6	LC	329	ASN
7	LD	45	ASN
7	LD	131	ASN
7	LD	202	GLN
7	LD	244	HIS
7	LD	267	ASN
8	LE	128	HIS
9	LF	239	GLN
10	LG	43	GLN
10	LG	159	HIS
11	LH	102	ASN
11	LH	138	GLN
12	LI	59	GLN
12	LI	123	GLN
12	LI	130	HIS
13	LJ	23	ASN
13	LJ	104	ASN
15	LL	149	GLN
16	LM	34	ASN
16	LM	66	HIS
17	LN	91	GLN
18	LO	5	GLN
19	LP	28	ASN
19	LP	137	ASN

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Mol	Chain	Res	Type
21	LR	39	GLN
22	LS	77	ASN
22	LS	108	GLN
23	LT	90	ASN
23	LT	127	GLN
26	LW	50	ASN
26	LW	95	ASN
27	LX	151	ASN
28	LY	40	GLN
28	LY	61	HIS
30	La	14	HIS
30	La	19	HIS
30	La	66	ASN
31	Lb	6	ASN
31	Lb	17	HIS
31	Lb	27	GLN
34	Le	92	ASN
35	Lf	56	ASN
36	Lg	14	ASN
38	Li	15	HIS
39	Lj	13	ASN
41	Ll	17	GLN
42	Lm	104	HIS
44	Lo	102	GLN
47	Ls	19	GLN
50	SA	9	GLN
50	SA	164	ASN
51	SB	163	GLN
52	SD	57	ASN
52	SD	145	GLN
53	SE	142	HIS
53	SE	188	ASN
53	SE	209	HIS
54	SF	79	HIS
54	SF	114	ASN
54	SF	203	ASN
55	SH	157	HIS
55	SH	168	HIS
57	SK	44	HIS
58	SL	94	HIS
59	SP	104	GLN
60	SQ	11	GLN

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Mol	Chain	Res	Type
60	SQ	48	GLN
60	SQ	86	GLN
61	SR	118	GLN
62	SS	76	GLN
62	SS	97	GLN
63	ST	91	HIS
63	ST	137	GLN
64	SU	85	HIS
65	SV	21	ASN
66	SX	16	HIS
68	Sc	29	GLN
68	Sc	45	ASN
69	Sd	3	HIS
69	Sd	5	GLN
70	Sg	15	ASN
70	Sg	20	GLN
70	Sg	26	GLN
70	Sg	119	GLN
70	Sg	272	GLN
71	SC	113	GLN
72	SG	81	HIS
73	SJ	156	HIS
75	SN	58	HIS
77	SW	70	ASN
77	SW	98	GLN
78	SY	63	HIS
83	CA	10	GLN
83	CA	123	HIS
83	CA	134	GLN
83	CA	171	ASN
83	CA	189	GLN
83	CA	192	GLN
83	CA	203	GLN
83	CA	221	HIS
84	CB	8	GLN
84	CB	87	ASN
84	CB	101	ASN
84	CB	168	GLN
84	CB	219	HIS
84	CB	365	GLN
84	CB	490	HIS
84	CB	492	HIS

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Mol	Chain	Res	Type
84	CB	544	HIS
84	CB	599	HIS
84	CB	754	GLN
86	CD	206	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3703/5070 (73%)	787 (21%)	22 (0%)
2	L7	119/121 (98%)	12 (10%)	0
3	L8	155/157 (98%)	29 (18%)	0
49	S2	1715/1869 (91%)	414 (24%)	7 (0%)
85	CC	74/75 (98%)	14 (18%)	0
All	All	5766/7292 (79%)	1256 (21%)	29 (0%)

All (1256) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	2	G
1	L5	30	C
1	L5	39	A
1	L5	42	A
1	L5	48	G
1	L5	56	A
1	L5	59	A
1	L5	64	A
1	L5	65	A
1	L5	69	A
1	L5	71	C
1	L5	73	A
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	112	C
1	L5	119	G
1	L5	120	A
1	L5	128	C
1	L5	132	G

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Mol	Chain	Res	Type
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	136	C
1	L5	137	G
1	L5	152	U
1	L5	159	C
1	L5	164	G
1	L5	165	A
1	L5	169	G
1	L5	171	U
1	L5	172	C
1	L5	173	C
1	L5	177	G
1	L5	181	C
1	L5	182	G
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	186	G
1	L5	188	G
1	L5	189	G
1	L5	200	U
1	L5	210	C
1	L5	216	C
1	L5	218	A
1	L5	219	G
1	L5	258	G
1	L5	261	G
1	L5	265	C
1	L5	266	C
1	L5	267	G
1	L5	269	G
1	L5	280	G
1	L5	297	U
1	L5	306	A
1	L5	315	G
1	L5	316	U
1	L5	340	C
1	L5	349	A
1	L5	373	G
1	L5	387	G

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Mol	Chain	Res	Type
1	L5	396	A
1	L5	407	A
1	L5	409	G
1	L5	410	A
1	L5	411	G
1	L5	412	G
1	L5	413	G
1	L5	431	G
1	L5	432	U
1	L5	449	C
1	L5	450	G
1	L5	452	A
1	L5	453	G
1	L5	467	U
1	L5	468	U
1	L5	484	U
1	L5	485	C
1	L5	486	C
1	L5	489	C
1	L5	493	G
1	L5	494	U
1	L5	497	G
1	L5	498	C
1	L5	500	G
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	505	G
1	L5	506	C
1	L5	509	A
1	L5	510	U
1	L5	512	U
1	L5	513	U
1	L5	514	U
1	L5	515	C
1	L5	516	C
1	L5	517	C
1	L5	518	G
1	L5	643	C
1	L5	645	G
1	L5	646	G
1	L5	657	C

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Mol	Chain	Res	Type
1	L5	659	G
1	L5	665	C
1	L5	666	G
1	L5	667	A
1	L5	668	C
1	L5	669	C
1	L5	672	C
1	L5	673	C
1	L5	685	C
1	L5	686	A
1	L5	687	U
1	L5	696	C
1	L5	703	G
1	L5	704	C
1	L5	706	C
1	L5	708	G
1	L5	731	G
1	L5	738	C
1	L5	739	G
1	L5	742	G
1	L5	757	G
1	L5	758	G
1	L5	759	G
1	L5	760	G
1	L5	904	C
1	L5	906	C
1	L5	913	U
1	L5	914	U
1	L5	915	A
1	L5	917	A
1	L5	918	G
1	L5	923	C
1	L5	924	C
1	L5	926	G
1	L5	931	C
1	L5	932	A
1	L5	933	G
1	L5	935	A
1	L5	936	C
1	L5	937	U
1	L5	945	U
1	L5	959	G

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Mol	Chain	Res	Type
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	965	G
1	L5	967	C
1	L5	968	C
1	L5	969	C
1	L5	970	G
1	L5	972	C
1	L5	977	C
1	L5	982	U
1	L5	989	U
1	L5	990	C
1	L5	992	C
1	L5	993	G
1	L5	995	C
1	L5	996	G
1	L5	1048	G
1	L5	1049	C
1	L5	1050	C
1	L5	1051	G
1	L5	1070	G
1	L5	1071	C
1	L5	1072	C
1	L5	1075	G
1	L5	1094	G
1	L5	1095	A
1	L5	1168	G
1	L5	1171	G
1	L5	1172	C
1	L5	1173	G
1	L5	1178	G
1	L5	1179	U
1	L5	1180	C
1	L5	1181	C
1	L5	1182	C
1	L5	1183	C
1	L5	1193	C
1	L5	1202	C
1	L5	1203	G
1	L5	1204	C
1	L5	1210	C

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Mol	Chain	Res	Type
1	L5	1211	G
1	L5	1214	C
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1219	G
1	L5	1222	A
1	L5	1235	G
1	L5	1243	C
1	L5	1246	G
1	L5	1253	G
1	L5	1254	A
1	L5	1257	A
1	L5	1258	G
1	L5	1266	G
1	L5	1267	C
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A
1	L5	1275	G
1	L5	1280	C
1	L5	1284	G
1	L5	1285	U
1	L5	1287	G
1	L5	1293	G
1	L5	1294	A
1	L5	1295	C
1	L5	1296	G
1	L5	1301	C
1	L5	1302	U
1	L5	1312	A
1	L5	1313	C
1	L5	1326	A
1	L5	1337	A
1	L5	1344	C
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1365	C
1	L5	1366	G
1	L5	1367	C

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Mol	Chain	Res	Type
1	L5	1379	C
1	L5	1387	A
1	L5	1394	G
1	L5	1397	A
1	L5	1403	G
1	L5	1404	G
1	L5	1405	C
1	L5	1407	C
1	L5	1409	C
1	L5	1410	U
1	L5	1414	C
1	L5	1415	G
1	L5	1420	A
1	L5	1425	G
1	L5	1435	G
1	L5	1438	U
1	L5	1444	G
1	L5	1447	C
1	L5	1448	G
1	L5	1457	G
1	L5	1480	C
1	L5	1482	G
1	L5	1483	C
1	L5	1493	G
1	L5	1497	A
1	L5	1498	G
1	L5	1502	G
1	L5	1517	G
1	L5	1534	A
1	L5	1547	A
1	L5	1562	G
1	L5	1564	A
1	L5	1566	C
1	L5	1578	U
1	L5	1591	U
1	L5	1596	U
1	L5	1624	G
1	L5	1625	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A
1	L5	1640	C

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Mol	Chain	Res	Type
1	L5	1641	G
1	L5	1642	A
1	L5	1654	G
1	L5	1661	C
1	L5	1676	C
1	L5	1677	U
1	L5	1678	C
1	L5	1685	G
1	L5	1691	G
1	L5	1699	A
1	L5	1700	G
1	L5	1703	C
1	L5	1704	C
1	L5	1705	G
1	L5	1708	G
1	L5	1716	G
1	L5	1734	G
1	L5	1741	G
1	L5	1742	A
1	L5	1750	G
1	L5	1753	G
1	L5	1755	C
1	L5	1756	U
1	L5	1757	U
1	L5	1758	G
1	L5	1760	G
1	L5	1761	G
1	L5	1762	C
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1768	C
1	L5	1770	A
1	L5	1771	U
1	L5	1775	A
1	L5	1787	A
1	L5	1804	A
1	L5	1810	G
1	L5	1820	C
1	L5	1821	G
1	L5	1822	U

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Mol	Chain	Res	Type
1	L5	1836	G
1	L5	1837	A
1	L5	1842	G
1	L5	1855	G
1	L5	1869	G
1	L5	1897	A
1	L5	1918	U
1	L5	1919	G
1	L5	1920	C
1	L5	1921	C
1	L5	1922	G
1	L5	1925	G
1	L5	1931	C
1	L5	1932	A
1	L5	1936	C
1	L5	1940	G
1	L5	1948	G
1	L5	1949	U
1	L5	1951	G
1	L5	1960	A
1	L5	1961	G
1	L5	1962	A
1	L5	1972	G
1	L5	1975	G
1	L5	1978	C
1	L5	1980	U
1	L5	1982	G
1	L5	1983	A
1	L5	1984	A
1	L5	1985	G
1	L5	1990	A
1	L5	1991	A
1	L5	1992	U
1	L5	1997	U
1	L5	1998	A
1	L5	2002	A
1	L5	2005	G
1	L5	2011	C
1	L5	2017	A
1	L5	2018	C
1	L5	2024	G
1	L5	2025	A

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Mol	Chain	Res	Type
1	L5	2026	A
1	L5	2034	G
1	L5	2046	G
1	L5	2048	U
1	L5	2055	G
1	L5	2056	G
1	L5	2069	A
1	L5	2084	C
1	L5	2085	G
1	L5	2089	G
1	L5	2092	G
1	L5	2093	A
1	L5	2095	A
1	L5	2096	G
1	L5	2097	U
1	L5	2098	G
1	L5	2102	G
1	L5	2107	C
1	L5	2108	G
1	L5	2110	C
1	L5	2111	G
1	L5	2112	G
1	L5	2250	C
1	L5	2252	G
1	L5	2253	A
1	L5	2256	C
1	L5	2261	G
1	L5	2262	G
1	L5	2289	C
1	L5	2300	A
1	L5	2301	G
1	L5	2313	A
1	L5	2316	G
1	L5	2332	A
1	L5	2333	G
1	L5	2348	G
1	L5	2351	C
1	L5	2360	A
1	L5	2395	A
1	L5	2397	G
1	L5	2410	C
1	L5	2417	A

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Mol	Chain	Res	Type
1	L5	2418	A
1	L5	2421	G
1	L5	2425	U
1	L5	2441	C
1	L5	2450	G
1	L5	2453	A
1	L5	2464	C
1	L5	2465	C
1	L5	2474	G
1	L5	2475	G
1	L5	2478	C
1	L5	2479	G
1	L5	2483	G
1	L5	2484	A
1	L5	2485	U
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2494	U
1	L5	2495	U
1	L5	2503	G
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2513	A
1	L5	2519	U
1	L5	2529	A
1	L5	2537	A
1	L5	2544	G
1	L5	2546	G
1	L5	2547	G
1	L5	2554	U
1	L5	2555	G
1	L5	2559	G
1	L5	2560	C
1	L5	2565	A
1	L5	2567	G
1	L5	2573	A
1	L5	2583	C
1	L5	2587	A

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Mol	Chain	Res	Type
1	L5	2589	C
1	L5	2601	A
1	L5	2618	G
1	L5	2627	C
1	L5	2638	G
1	L5	2653	C
1	L5	2662	G
1	L5	2669	C
1	L5	2676	A
1	L5	2686	G
1	L5	2687	U
1	L5	2695	A
1	L5	2696	A
1	L5	2703	G
1	L5	2707	U
1	L5	2708	U
1	L5	2709	C
1	L5	2710	C
1	L5	2711	G
1	L5	2721	G
1	L5	2724	G
1	L5	2726	G
1	L5	2739	C
1	L5	2742	G
1	L5	2743	A
1	L5	2746	A
1	L5	2756	G
1	L5	2761	U
1	L5	2763	U
1	L5	2764	A
1	L5	2769	U
1	L5	2770	C
1	L5	2787	A
1	L5	2788	U
1	L5	2790	U
1	L5	2798	A
1	L5	2826	U
1	L5	2827	G
1	L5	2838	G
1	L5	2842	G
1	L5	2855	G
1	L5	2877	G

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Mol	Chain	Res	Type
1	L5	2892	C
1	L5	2900	U
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2905	C
1	L5	2906	G
1	L5	2908	U
1	L5	3585	G
1	L5	3588	C
1	L5	3590	G
1	L5	3591	C
1	L5	3594	C
1	L5	3595	U
1	L5	3596	A
1	L5	3597	G
1	L5	3604	A
1	L5	3606	U
1	L5	3615	G
1	L5	3618	C
1	L5	3626	G
1	L5	3630	A
1	L5	3635	A
1	L5	3644	U
1	L5	3646	A
1	L5	3662	A
1	L5	3673	C
1	L5	3674	G
1	L5	3685	C
1	L5	3709	U
1	L5	3710	G
1	L5	3711	A
1	L5	3712	A
1	L5	3713	U
1	L5	3714	G
1	L5	3726	A
1	L5	3727	A
1	L5	3748	A
1	L5	3750	G
1	L5	3756	A
1	L5	3757	G
1	L5	3758	U

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Mol	Chain	Res	Type
1	L5	3760	A
1	L5	3773	U
1	L5	3774	A
1	L5	3777	G
1	L5	3783	A
1	L5	3784	A
1	L5	3786	U
1	L5	3802	U
1	L5	3811	G
1	L5	3817	A
1	L5	3818	U
1	L5	3819	G
1	L5	3823	G
1	L5	3838	U
1	L5	3840	U
1	L5	3867	A
1	L5	3868	G
1	L5	3876	A
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3885	G
1	L5	3887	C
1	L5	3890	A
1	L5	3892	U
1	L5	3897	G
1	L5	3898	G
1	L5	3901	A
1	L5	3906	A
1	L5	3907	G
1	L5	3908	A
1	L5	3915	U
1	L5	3930	U
1	L5	3942	A
1	L5	3943	A
1	L5	3950	U
1	L5	3955	G
1	L5	3956	G
1	L5	3958	G
1	L5	3959	U
1	L5	3960	A
1	L5	3961	G

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Mol	Chain	Res	Type
1	L5	3962	A
1	L5	3963	A
1	L5	3964	U
1	L5	3965	A
1	L5	3966	A
1	L5	3969	G
1	L5	3970	G
1	L5	3971	G
1	L5	3974	G
1	L5	3977	C
1	L5	4035	G
1	L5	4036	G
1	L5	4038	C
1	L5	4039	G
1	L5	4041	C
1	L5	4042	G
1	L5	4043	G
1	L5	4044	U
1	L5	4045	G
1	L5	4046	A
1	L5	4048	A
1	L5	4049	U
1	L5	4051	C
1	L5	4052	C
1	L5	4053	A
1	L5	4054	C
1	L5	4055	U
1	L5	4064	C
1	L5	4065	G
1	L5	4066	U
1	L5	4068	U
1	L5	4070	U
1	L5	4071	U
1	L5	4076	G
1	L5	4084	G
1	L5	4086	G
1	L5	4097	G
1	L5	4099	G
1	L5	4101	C
1	L5	4102	C
1	L5	4104	G
1	L5	4106	G

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Mol	Chain	Res	Type
1	L5	4107	G
1	L5	4108	G
1	L5	4111	U
1	L5	4113	U
1	L5	4114	C
1	L5	4115	G
1	L5	4116	C
1	L5	4117	U
1	L5	4119	C
1	L5	4120	U
1	L5	4122	G
1	L5	4127	A
1	L5	4133	C
1	L5	4140	C
1	L5	4141	G
1	L5	4142	C
1	L5	4143	G
1	L5	4144	C
1	L5	4146	G
1	L5	4149	C
1	L5	4150	G
1	L5	4160	C
1	L5	4162	C
1	L5	4163	U
1	L5	4168	G
1	L5	4170	A
1	L5	4183	G
1	L5	4184	G
1	L5	4191	G
1	L5	4196	G
1	L5	4197	G
1	L5	4203	A
1	L5	4222	G
1	L5	4229	U
1	L5	4233	A
1	L5	4251	A
1	L5	4254	G
1	L5	4257	A
1	L5	4265	U
1	L5	4268	A
1	L5	4273	A
1	L5	4281	A

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Mol	Chain	Res	Type
1	L5	4291	G
1	L5	4305	G
1	L5	4314	C
1	L5	4329	G
1	L5	4330	G
1	L5	4332	C
1	L5	4349	C
1	L5	4373	G
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4379	A
1	L5	4380	A
1	L5	4387	C
1	L5	4391	G
1	L5	4394	A
1	L5	4422	A
1	L5	4448	G
1	L5	4449	A
1	L5	4453	C
1	L5	4464	A
1	L5	4466	C
1	L5	4475	G
1	L5	4488	A
1	L5	4500	U
1	L5	4512	U
1	L5	4513	A
1	L5	4518	A
1	L5	4519	C
1	L5	4524	G
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4560	C
1	L5	4567	G
1	L5	4573	G
1	L5	4575	G
1	L5	4584	A
1	L5	4590	A
1	L5	4600	G
1	L5	4617	G
1	L5	4635	A

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Mol	Chain	Res	Type
1	L5	4636	U
1	L5	4637	G
1	L5	4656	A
1	L5	4657	U
1	L5	4670	C
1	L5	4672	A
1	L5	4684	A
1	L5	4694	G
1	L5	4695	C
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4719	G
1	L5	4731	G
1	L5	4734	A
1	L5	4740	G
1	L5	4741	C
1	L5	4742	G
1	L5	4745	G
1	L5	4750	G
1	L5	4754	G
1	L5	4757	C
1	L5	4759	C
1	L5	4761	G
1	L5	4765	G
1	L5	4770	U
1	L5	4771	C
1	L5	4772	C
1	L5	4773	C
1	L5	4775	C
1	L5	4776	G
1	L5	4859	C
1	L5	4860	G
1	L5	4870	G
1	L5	4871	C
1	L5	4875	G
1	L5	4882	U
1	L5	4883	C
1	L5	4887	C
1	L5	4888	U
1	L5	4889	G
1	L5	4891	G

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Mol	Chain	Res	Type
1	L5	4895	C
1	L5	4896	G
1	L5	4900	C
1	L5	4901	G
1	L5	4910	G
1	L5	4911	A
1	L5	4912	G
1	L5	4914	C
1	L5	4918	C
1	L5	4922	C
1	L5	4923	C
1	L5	4925	U
1	L5	4934	A
1	L5	4937	C
1	L5	4940	C
1	L5	4941	G
1	L5	4943	A
1	L5	4951	G
1	L5	4955	A
1	L5	4960	G
1	L5	4961	G
1	L5	4966	A
1	L5	4973	U
1	L5	4976	U
1	L5	4979	A
1	L5	4988	U
1	L5	4989	U
1	L5	4990	C
1	L5	4991	U
1	L5	5007	A
1	L5	5009	G
1	L5	5013	C
1	L5	5014	A
1	L5	5017	G
1	L5	5022	U
1	L5	5024	C
1	L5	5025	C
1	L5	5026	U
1	L5	5027	C
1	L5	5028	G
1	L5	5029	C
1	L5	5030	U

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Mol	Chain	Res	Type
1	L5	5034	A
1	L5	5041	G
1	L5	5050	C
1	L5	5054	C
1	L5	5055	G
1	L5	5060	A
1	L5	5061	A
1	L5	5069	U
2	L7	4	U
2	L7	5	A
2	L7	24	C
2	L7	33	U
2	L7	38	U
2	L7	53	U
2	L7	63	C
2	L7	64	G
2	L7	66	G
2	L7	97	G
2	L7	100	A
2	L7	111	C
3	L8	25	G
3	L8	34	U
3	L8	35	C
3	L8	38	U
3	L8	48	A
3	L8	59	A
3	L8	60	G
3	L8	62	A
3	L8	63	U
3	L8	68	G
3	L8	82	A
3	L8	84	A
3	L8	85	U
3	L8	87	G
3	L8	94	G
3	L8	103	A
3	L8	105	C
3	L8	110	U
3	L8	111	U
3	L8	114	G
3	L8	123	U
3	L8	124	U

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Mol	Chain	Res	Type
3	L8	125	C
3	L8	126	C
3	L8	127	U
3	L8	128	C
3	L8	147	G
3	L8	151	G
3	L8	156	U
49	S2	4	C
49	S2	25	A
49	S2	33	G
49	S2	41	G
49	S2	44	U
49	S2	46	A
49	S2	56	G
49	S2	58	C
49	S2	59	U
49	S2	62	G
49	S2	64	A
49	S2	67	C
49	S2	68	A
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	76	U
49	S2	92	A
49	S2	103	A
49	S2	113	G
49	S2	114	G
49	S2	115	U
49	S2	116	U
49	S2	126	G
49	S2	129	C
49	S2	130	G
49	S2	143	U
49	S2	147	A
49	S2	149	A
49	S2	155	G
49	S2	158	A
49	S2	159	A
49	S2	160	U
49	S2	161	U
49	S2	162	C

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Mol	Chain	Res	Type
49	S2	163	U
49	S2	175	A
49	S2	179	C
49	S2	182	C
49	S2	187	G
49	S2	190	G
49	S2	196	C
49	S2	197	U
49	S2	198	U
49	S2	200	G
49	S2	203	G
49	S2	204	G
49	S2	206	G
49	S2	208	G
49	S2	211	G
49	S2	212	C
49	S2	213	G
49	S2	214	U
49	S2	216	C
49	S2	290	U
49	S2	291	G
49	S2	292	A
49	S2	293	C
49	S2	295	C
49	S2	302	A
49	S2	306	C
49	S2	307	G
49	S2	308	G
49	S2	309	G
49	S2	313	A
49	S2	314	U
49	S2	318	A
49	S2	319	C
49	S2	322	C
49	S2	323	C
49	S2	324	C
49	S2	325	C
49	S2	326	C
49	S2	327	G
49	S2	328	U
49	S2	329	G
49	S2	332	G

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Mol	Chain	Res	Type
49	S2	347	G
49	S2	351	G
49	S2	360	A
49	S2	361	U
49	S2	362	C
49	S2	364	A
49	S2	368	U
49	S2	370	G
49	S2	374	G
49	S2	385	G
49	S2	386	C
49	S2	408	A
49	S2	409	C
49	S2	421	G
49	S2	438	G
49	S2	448	A
49	S2	449	A
49	S2	450	C
49	S2	452	G
49	S2	463	C
49	S2	464	A
49	S2	465	A
49	S2	466	G
49	S2	467	G
49	S2	471	G
49	S2	472	C
49	S2	473	A
49	S2	474	G
49	S2	476	A
49	S2	482	G
49	S2	487	U
49	S2	488	U
49	S2	492	C
49	S2	493	A
49	S2	502	C
49	S2	516	A
49	S2	525	A
49	S2	529	A
49	S2	530	U
49	S2	531	A
49	S2	532	C
49	S2	533	A

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Mol	Chain	Res	Type
49	S2	536	A
49	S2	537	C
49	S2	540	U
49	S2	542	U
49	S2	546	G
49	S2	547	G
49	S2	551	U
49	S2	553	U
49	S2	556	U
49	S2	557	U
49	S2	558	G
49	S2	559	G
49	S2	560	A
49	S2	563	G
49	S2	564	A
49	S2	566	U
49	S2	576	A
49	S2	583	A
49	S2	587	A
49	S2	589	G
49	S2	591	U
49	S2	596	U
49	S2	597	G
49	S2	606	G
49	S2	614	C
49	S2	617	G
49	S2	623	G
49	S2	628	A
49	S2	629	A
49	S2	631	U
49	S2	643	A
49	S2	644	G
49	S2	655	A
49	S2	660	C
49	S2	664	A
49	S2	668	A
49	S2	669	A
49	S2	671	A
49	S2	672	A
49	S2	673	G
49	S2	687	C
49	S2	689	U

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Mol	Chain	Res	Type
49	S2	692	G
49	S2	693	A
49	S2	694	G
49	S2	695	C
49	S2	696	G
49	S2	697	G
49	S2	698	G
49	S2	732	U
49	S2	733	C
49	S2	736	C
49	S2	738	C
49	S2	749	U
49	S2	751	G
49	S2	752	G
49	S2	788	G
49	S2	791	C
49	S2	792	C
49	S2	794	A
49	S2	798	G
49	S2	799	U
49	S2	810	A
49	S2	821	G
49	S2	822	U
49	S2	823	U
49	S2	824	C
49	S2	830	A
49	S2	834	C
49	S2	835	C
49	S2	836	G
49	S2	837	A
49	S2	838	G
49	S2	839	C
49	S2	840	C
49	S2	842	C
49	S2	847	A
49	S2	869	A
49	S2	870	A
49	S2	871	U
49	S2	872	A
49	S2	873	G
49	S2	874	G
49	S2	877	C

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Mol	Chain	Res	Type
49	S2	878	G
49	S2	880	G
49	S2	882	U
49	S2	885	U
49	S2	888	U
49	S2	889	U
49	S2	891	G
49	S2	892	U
49	S2	896	U
49	S2	897	U
49	S2	898	U
49	S2	899	U
49	S2	900	C
49	S2	901	G
49	S2	903	A
49	S2	905	C
49	S2	913	A
49	S2	914	U
49	S2	919	A
49	S2	920	A
49	S2	922	A
49	S2	930	C
49	S2	933	G
49	S2	934	G
49	S2	943	U
49	S2	963	A
49	S2	970	G
49	S2	972	A
49	S2	990	A
49	S2	992	A
49	S2	999	G
49	S2	1001	A
49	S2	1008	A
49	S2	1017	U
49	S2	1023	A
49	S2	1027	A
49	S2	1028	A
49	S2	1033	G
49	S2	1042	A
49	S2	1061	U
49	S2	1062	A
49	S2	1067	C

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Mol	Chain	Res	Type
49	S2	1078	C
49	S2	1083	A
49	S2	1085	C
49	S2	1088	U
49	S2	1109	C
49	S2	1114	U
49	S2	1115	U
49	S2	1116	C
49	S2	1118	C
49	S2	1119	A
49	S2	1121	G
49	S2	1133	A
49	S2	1138	C
49	S2	1148	A
49	S2	1153	C
49	S2	1154	U
49	S2	1195	A
49	S2	1200	A
49	S2	1208	A
49	S2	1215	C
49	S2	1216	C
49	S2	1217	A
49	S2	1224	G
49	S2	1227	G
49	S2	1242	U
49	S2	1243	U
49	S2	1251	A
49	S2	1253	A
49	S2	1256	G
49	S2	1257	G
49	S2	1259	A
49	S2	1264	C
49	S2	1265	A
49	S2	1274	G
49	S2	1275	G
49	S2	1283	C
49	S2	1286	G
49	S2	1294	G
49	S2	1295	A
49	S2	1301	A
49	S2	1302	G
49	S2	1303	C

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Mol	Chain	Res	Type
49	S2	1304	U
49	S2	1305	C
49	S2	1306	U
49	S2	1308	U
49	S2	1312	G
49	S2	1313	A
49	S2	1320	G
49	S2	1342	U
49	S2	1348	G
49	S2	1363	C
49	S2	1371	U
49	S2	1372	U
49	S2	1373	C
49	S2	1376	A
49	S2	1378	A
49	S2	1382	A
49	S2	1396	A
49	S2	1397	U
49	S2	1402	A
49	S2	1404	U
49	S2	1413	G
49	S2	1414	A
49	S2	1415	C
49	S2	1419	C
49	S2	1420	G
49	S2	1421	A
49	S2	1422	G
49	S2	1423	C
49	S2	1424	G
49	S2	1435	C
49	S2	1436	C
49	S2	1438	A
49	S2	1450	G
49	S2	1454	A
49	S2	1462	U
49	S2	1463	U
49	S2	1476	A
49	S2	1486	A
49	S2	1488	C
49	S2	1489	A
49	S2	1490	G
49	S2	1497	G

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Mol	Chain	Res	Type
49	S2	1498	A
49	S2	1505	U
49	S2	1507	G
49	S2	1508	A
49	S2	1520	G
49	S2	1521	C
49	S2	1522	A
49	S2	1533	A
49	S2	1534	C
49	S2	1544	C
49	S2	1547	C
49	S2	1552	G
49	S2	1556	A
49	S2	1558	C
49	S2	1570	G
49	S2	1574	C
49	S2	1578	U
49	S2	1580	A
49	S2	1586	U
49	S2	1587	G
49	S2	1588	A
49	S2	1599	U
49	S2	1601	A
49	S2	1606	G
49	S2	1621	U
49	S2	1623	A
49	S2	1633	A
49	S2	1634	A
49	S2	1639	G
49	S2	1640	A
49	S2	1646	C
49	S2	1647	A
49	S2	1648	G
49	S2	1654	G
49	S2	1663	A
49	S2	1665	G
49	S2	1680	G
49	S2	1683	C
49	S2	1699	A
49	S2	1715	A
49	S2	1719	A
49	S2	1721	U

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Mol	Chain	Res	Type
49	S2	1722	G
49	S2	1742	C
49	S2	1743	G
49	S2	1744	G
49	S2	1745	A
49	S2	1748	G
49	S2	1752	C
49	S2	1753	C
49	S2	1754	G
49	S2	1756	C
49	S2	1757	G
49	S2	1758	G
49	S2	1760	G
49	S2	1761	U
49	S2	1772	C
49	S2	1773	C
49	S2	1774	C
49	S2	1775	U
49	S2	1776	G
49	S2	1777	G
49	S2	1782	G
49	S2	1783	C
49	S2	1786	U
49	S2	1798	C
49	S2	1808	U
49	S2	1809	A
49	S2	1810	U
49	S2	1811	C
49	S2	1812	U
49	S2	1813	A
49	S2	1826	G
49	S2	1829	G
49	S2	1831	A
49	S2	1835	A
49	S2	1838	U
49	S2	1849	G
49	S2	1851	A
49	S2	1852	C
49	S2	1861	G
49	S2	1862	G
49	S2	1863	A
49	S2	1864	U

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Mol	Chain	Res	Type
49	S2	1865	C
85	CC	8	U
85	CC	9	G
85	CC	13	C
85	CC	16	C
85	CC	17	G
85	CC	18	G
85	CC	20	A
85	CC	21	G
85	CC	45	G
85	CC	47	C
85	CC	58	A
85	CC	60	C
85	CC	62	A
85	CC	75	A

All (29) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	406	C
1	L5	493	G
1	L5	504	G
1	L5	914	U
1	L5	1633	G
1	L5	1977	C
1	L5	2033	A
1	L5	2084	C
1	L5	2416	G
1	L5	2504	C
1	L5	2675	G
1	L5	2760	G
1	L5	2786	C
1	L5	3614	G
1	L5	3673	C
1	L5	3709	U
1	L5	3876	A
1	L5	4064	C
1	L5	4070	U
1	L5	4378	A
1	L5	4699	U
1	L5	4913	G
49	S2	112	U

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Mol	Chain	Res	Type
49	S2	291	G
49	S2	420	G
49	S2	563	G
49	S2	688	U
49	S2	1434	C
49	S2	1781	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 275 ligands modelled in this entry, 267 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
88	T1C	CC	101	-	45,45,45	1.20	4 (8%)	56,72,72	1.34	7 (12%)
88	T1C	L5	5315	-	45,45,45	1.16	4 (8%)	56,72,72	1.22	7 (12%)
90	ADP	CB	1001	-	28,29,29	1.38	4 (14%)	43,45,45	1.83	8 (18%)
88	T1C	L5	5317	-	45,45,45	1.15	4 (8%)	56,72,72	1.19	4 (7%)
88	T1C	L5	5316	-	45,45,45	1.20	4 (8%)	56,72,72	1.57	11 (19%)
88	T1C	L5	5313	87	45,45,45	1.15	4 (8%)	56,72,72	0.91	2 (3%)
88	T1C	L5	5312	-	45,45,45	1.16	4 (8%)	56,72,72	1.72	8 (14%)
88	T1C	L5	5314	87	45,45,45	1.18	4 (8%)	56,72,72	0.97	4 (7%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	T1C	CC	101	-	-	7/22/80/80	0/4/4/4
88	T1C	L5	5315	-	-	13/22/80/80	0/4/4/4
90	ADP	CB	1001	-	-	6/16/32/32	0/3/3/3
88	T1C	L5	5317	-	-	17/22/80/80	0/4/4/4
88	T1C	L5	5316	-	-	10/22/80/80	0/4/4/4
88	T1C	L5	5313	87	-	6/22/80/80	0/4/4/4
88	T1C	L5	5312	-	-	16/22/80/80	0/4/4/4
88	T1C	L5	5314	87	-	10/22/80/80	0/4/4/4

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	L5	5314	T1C	C21-N21	5.08	1.48	1.33
88	L5	5312	T1C	C21-N21	5.08	1.48	1.33
88	L5	5313	T1C	C21-N21	5.05	1.48	1.33
88	L5	5316	T1C	C21-N21	5.05	1.48	1.33
88	CC	101	T1C	C21-N21	5.05	1.48	1.33
88	L5	5315	T1C	C21-N21	5.00	1.47	1.33
88	L5	5317	T1C	C21-N21	4.74	1.47	1.33
90	CB	1001	ADP	C5-C4	4.52	1.47	1.39
88	L5	5317	T1C	C4-N4	2.84	1.53	1.47
88	L5	5316	T1C	C4-N4	2.78	1.53	1.47
88	CC	101	T1C	C4-N4	2.66	1.53	1.47
90	CB	1001	ADP	C5-C6	2.63	1.48	1.41
88	L5	5313	T1C	C4-N4	2.61	1.52	1.47
88	L5	5314	T1C	C4-N4	2.58	1.52	1.47
88	L5	5315	T1C	C4-N4	2.41	1.52	1.47
88	CC	101	T1C	C7-N7	2.39	1.48	1.42
88	L5	5317	T1C	C7-N7	2.37	1.48	1.42
88	L5	5316	T1C	C7-N7	2.37	1.48	1.42
90	CB	1001	ADP	C8-N7	2.33	1.36	1.31
90	CB	1001	ADP	C5-N7	-2.32	1.34	1.39
88	L5	5312	T1C	C4-N4	2.30	1.52	1.47
88	CC	101	T1C	O11-C11	2.28	1.28	1.23
88	L5	5314	T1C	C7-N7	2.28	1.48	1.42
88	L5	5313	T1C	O11-C11	2.27	1.28	1.23
88	L5	5312	T1C	O11-C11	2.27	1.28	1.23
88	L5	5314	T1C	O11-C11	2.24	1.27	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	L5	5315	T1C	O11-C11	2.23	1.27	1.23
88	L5	5316	T1C	O11-C11	2.18	1.27	1.23
88	L5	5315	T1C	C7-N7	2.16	1.48	1.42
88	L5	5317	T1C	O11-C11	2.12	1.27	1.23
88	L5	5312	T1C	C7-N7	2.12	1.48	1.42
88	L5	5313	T1C	C7-N7	2.10	1.48	1.42

All (51) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
88	L5	5312	T1C	C1C-C41-C4	6.27	120.21	111.64
88	L5	5312	T1C	C11-C1B-C12	6.04	123.58	118.80
90	CB	1001	ADP	C5-C4-N3	-5.64	118.95	126.72
88	CC	101	T1C	C11-C1B-C12	4.92	122.69	118.80
88	L5	5312	T1C	C1-C1C-C12	4.67	115.35	109.88
88	L5	5315	T1C	C11-C1B-C12	4.45	122.32	118.80
88	L5	5316	T1C	C1C-C1-C2	4.43	122.78	115.75
90	CB	1001	ADP	N3-C4-N9	4.41	134.67	127.17
88	CC	101	T1C	C61-C7-N7	4.16	123.84	118.87
88	L5	5317	T1C	C61-C7-N7	4.12	123.78	118.87
88	L5	5316	T1C	C51-C5-C41	4.09	117.35	110.38
88	L5	5316	T1C	C1C-C41-C4	3.89	116.95	111.64
88	L5	5316	T1C	C61-C6-C51	3.83	118.20	113.12
88	L5	5312	T1C	C1C-C1-C2	3.79	121.78	115.75
90	CB	1001	ADP	C2-N3-C4	3.78	121.06	111.83
88	L5	5316	T1C	C11-C1B-C12	3.75	121.77	118.80
88	L5	5317	T1C	C1C-C1-C2	3.56	121.41	115.75
88	L5	5312	T1C	C1C-C12-C1B	-3.56	119.45	123.06
90	CB	1001	ADP	N3-C2-N1	-3.55	123.21	128.58
88	L5	5314	T1C	C11-C1B-C12	3.50	121.57	118.80
88	L5	5313	T1C	C11-C1B-C12	3.46	121.54	118.80
88	CC	101	T1C	C1C-C1-C2	3.36	121.09	115.75
88	L5	5315	T1C	C1C-C1-C2	3.36	121.08	115.75
90	CB	1001	ADP	C4-C5-N7	-3.35	106.75	110.58
88	L5	5317	T1C	C11-C1B-C12	3.28	121.39	118.80
88	CC	101	T1C	C8-C7-N7	-2.95	116.30	120.89
88	CC	101	T1C	O1C-C1C-C12	-2.87	105.55	110.14
88	L5	5317	T1C	C8-C7-N7	-2.82	116.50	120.89
88	L5	5315	T1C	C51-C5-C41	2.75	115.06	110.38
88	L5	5315	T1C	C1C-C12-C1B	-2.69	120.33	123.06
88	L5	5316	T1C	C61-C7-N7	2.68	122.07	118.87
88	L5	5313	T1C	C1C-C1-C2	2.57	119.84	115.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
90	CB	1001	ADP	C4-N9-C8	2.57	108.43	105.74
88	L5	5312	T1C	O1C-C1C-C12	-2.47	106.19	110.14
90	CB	1001	ADP	C5-N7-C8	2.44	107.28	103.45
88	CC	101	T1C	C1C-C12-C1B	-2.38	120.64	123.06
88	L5	5316	T1C	C1C-C12-C1B	2.38	125.48	123.06
90	CB	1001	ADP	C6-C5-N7	2.23	136.39	132.09
88	L5	5315	T1C	C5-C41-C4	-2.23	110.52	113.73
88	L5	5316	T1C	C72-N7-C71	-2.21	109.09	116.18
88	L5	5314	T1C	C61-C7-N7	2.16	121.45	118.87
88	L5	5312	T1C	C41-C1C-C1	2.15	113.52	111.05
88	L5	5312	T1C	O12-C12-C1C	2.15	116.49	113.37
88	L5	5316	T1C	O1C-C1C-C12	-2.15	106.70	110.14
88	L5	5316	T1C	C8-C7-N7	-2.09	117.64	120.89
88	CC	101	T1C	C1-C1C-C12	2.07	112.31	109.88
88	L5	5315	T1C	C1C-C41-C4	2.07	114.47	111.64
88	L5	5314	T1C	C72-N7-C71	-2.06	109.56	116.18
88	L5	5314	T1C	O1C-C1C-C12	-2.04	106.88	110.14
88	L5	5315	T1C	O12-C12-C1C	2.04	116.32	113.37
88	L5	5316	T1C	C5-C41-C4	-2.03	110.80	113.73

There are no chirality outliers.

All (85) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
88	L5	5312	T1C	C95-C93-N92-C92
88	L5	5312	T1C	C92-C91-N9-C9
88	L5	5312	T1C	C41-C4-N4-C43
88	L5	5312	T1C	C3-C4-N4-C43
88	L5	5312	T1C	C3-C4-N4-C42
88	L5	5312	T1C	C1-C2-C21-O21
88	L5	5312	T1C	C1-C2-C21-N21
88	L5	5313	T1C	C1-C2-C21-O21
88	L5	5313	T1C	C1-C2-C21-N21
88	L5	5314	T1C	C92-C91-N9-C9
88	L5	5314	T1C	O91-C91-N9-C9
88	L5	5314	T1C	C3-C4-N4-C43
88	L5	5314	T1C	C1-C2-C21-O21
88	L5	5314	T1C	C1-C2-C21-N21
88	L5	5315	T1C	C94-C93-N92-C92
88	L5	5315	T1C	C95-C93-N92-C92
88	L5	5315	T1C	C96-C93-N92-C92
88	L5	5315	T1C	C92-C91-N9-C9

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Mol	Chain	Res	Type	Atoms
88	L5	5315	T1C	C1-C2-C21-O21
88	L5	5315	T1C	C1-C2-C21-N21
88	L5	5316	T1C	C1-C2-C21-O21
88	L5	5316	T1C	C1-C2-C21-N21
88	L5	5317	T1C	C94-C93-N92-C92
88	L5	5317	T1C	C95-C93-N92-C92
88	L5	5317	T1C	C96-C93-N92-C92
88	L5	5317	T1C	C92-C91-N9-C9
88	L5	5317	T1C	O91-C91-N9-C9
88	L5	5317	T1C	C3-C4-N4-C43
88	L5	5317	T1C	C3-C2-C21-O21
88	L5	5317	T1C	C1-C2-C21-O21
88	L5	5317	T1C	C1-C2-C21-N21
88	CC	101	T1C	C1-C2-C21-O21
88	CC	101	T1C	C1-C2-C21-N21
90	CB	1001	ADP	C5'-O5'-PA-O1A
90	CB	1001	ADP	C5'-O5'-PA-O2A
90	CB	1001	ADP	C5'-O5'-PA-O3A
90	CB	1001	ADP	O4'-C4'-C5'-O5'
88	L5	5315	T1C	O91-C91-N9-C9
88	L5	5312	T1C	O91-C91-N9-C9
88	L5	5312	T1C	C94-C93-N92-C92
90	CB	1001	ADP	C3'-C4'-C5'-O5'
88	L5	5317	T1C	O91-C91-C92-N92
88	L5	5317	T1C	N9-C91-C92-N92
88	L5	5316	T1C	C10-C9-N9-C91
88	L5	5312	T1C	C96-C93-N92-C92
88	L5	5313	T1C	C10-C9-N9-C91
88	L5	5315	T1C	C10-C9-N9-C91
88	L5	5313	T1C	C8-C9-N9-C91
88	L5	5316	T1C	C8-C9-N9-C91
88	CC	101	T1C	C10-C9-N9-C91
88	L5	5312	T1C	O91-C91-C92-N92
88	CC	101	T1C	N9-C91-C92-N92
88	L5	5315	T1C	C8-C9-N9-C91
88	CC	101	T1C	O91-C91-C92-N92
88	L5	5312	T1C	N9-C91-C92-N92
88	L5	5312	T1C	C41-C4-N4-C42
88	L5	5314	T1C	C41-C4-N4-C43
88	L5	5314	T1C	C41-C4-N4-C42
88	L5	5314	T1C	C3-C4-N4-C42
88	L5	5316	T1C	C3-C4-N4-C43

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Mol	Chain	Res	Type	Atoms
88	L5	5316	T1C	C3-C4-N4-C42
88	L5	5316	T1C	C3-C2-C21-N21
88	L5	5317	T1C	C41-C4-N4-C43
88	L5	5317	T1C	C41-C4-N4-C42
88	L5	5317	T1C	C3-C4-N4-C42
88	L5	5317	T1C	C3-C2-C21-N21
88	L5	5316	T1C	O91-C91-C92-N92
88	L5	5316	T1C	N9-C91-C92-N92
88	L5	5312	T1C	C91-C92-N92-C93
88	L5	5314	T1C	C91-C92-N92-C93
88	L5	5317	T1C	C91-C92-N92-C93
88	L5	5317	T1C	C10-C9-N9-C91
88	L5	5313	T1C	C61-C7-N7-C72
90	CB	1001	ADP	PB-O3A-PA-O1A
88	CC	101	T1C	C8-C9-N9-C91
88	L5	5315	T1C	C61-C7-N7-C71
88	L5	5313	T1C	C61-C7-N7-C71
88	L5	5312	T1C	C3-C2-C21-N21
88	L5	5315	T1C	C41-C4-N4-C42
88	CC	101	T1C	C41-C4-N4-C42
88	L5	5314	T1C	C95-C93-N92-C92
88	L5	5315	T1C	C61-C7-N7-C72
88	L5	5312	T1C	C3-C2-C21-O21
88	L5	5315	T1C	C3-C2-C21-O21
88	L5	5316	T1C	C3-C2-C21-O21

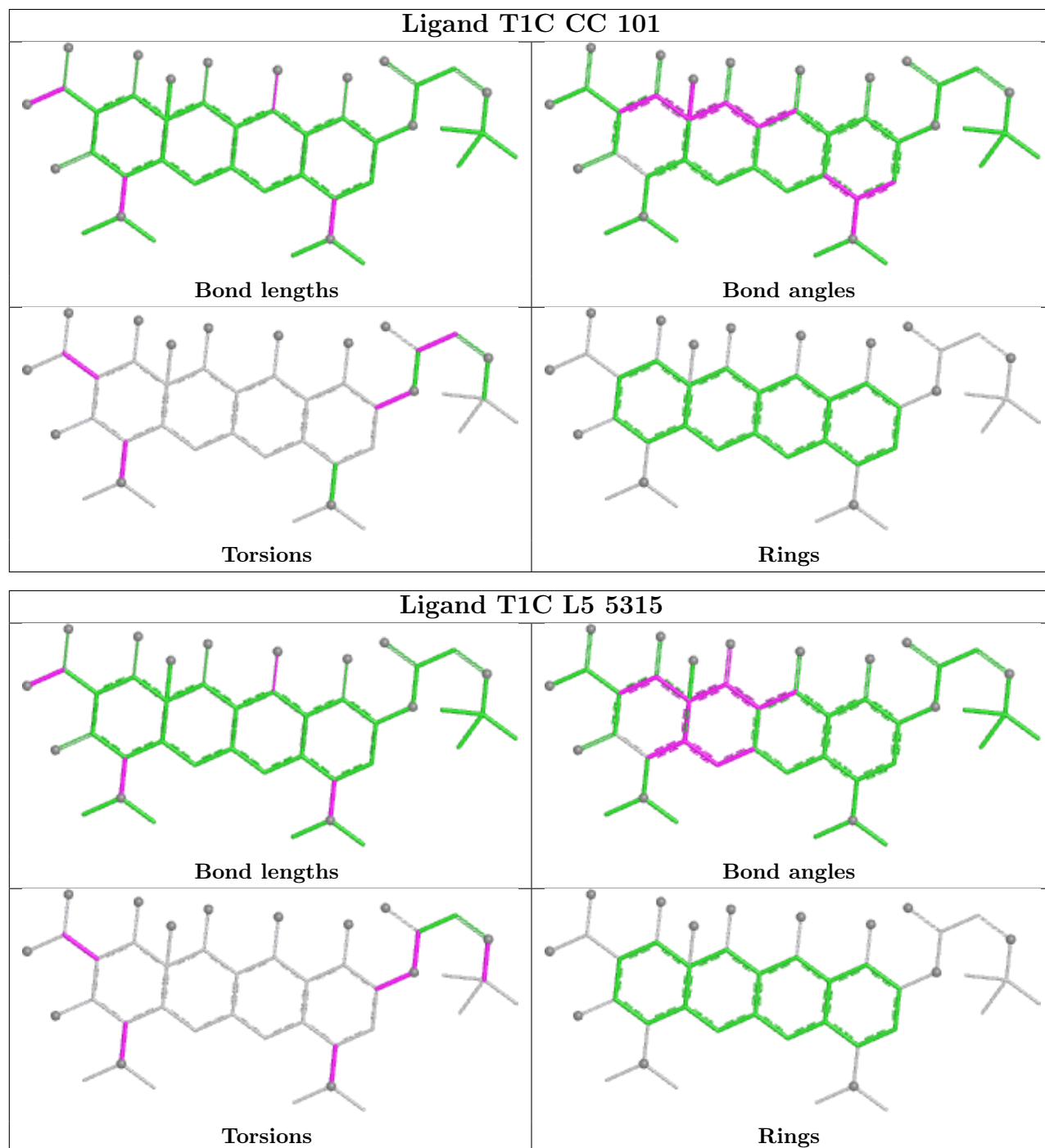
There are no ring outliers.

6 monomers are involved in 9 short contacts:

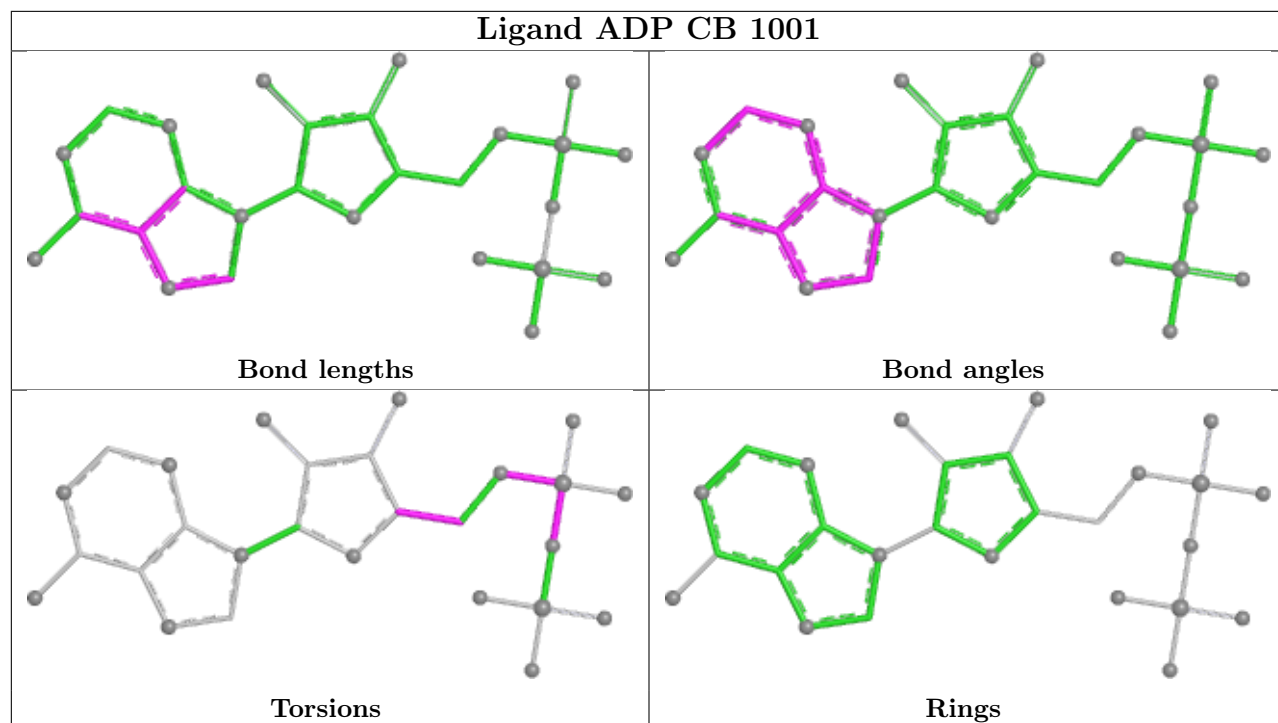
Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	CC	101	T1C	1	0
88	L5	5315	T1C	1	0
90	CB	1001	ADP	1	0
88	L5	5316	T1C	2	0
88	L5	5312	T1C	2	0
88	L5	5314	T1C	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.

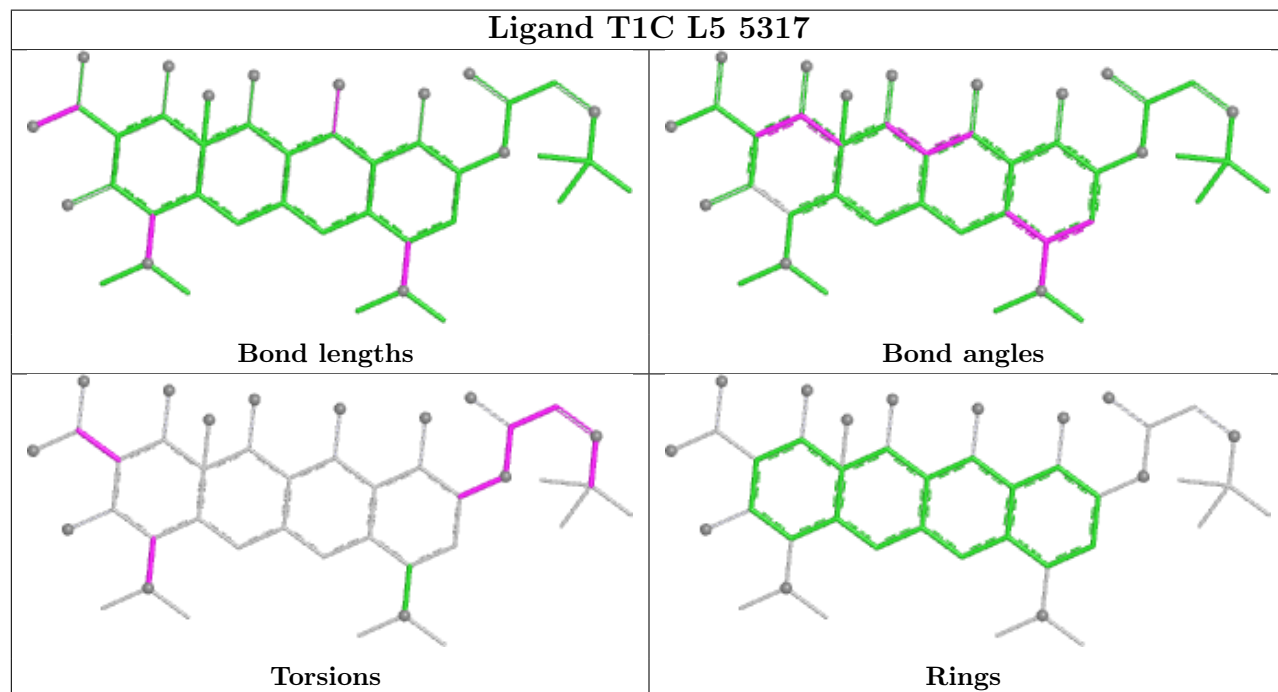
Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



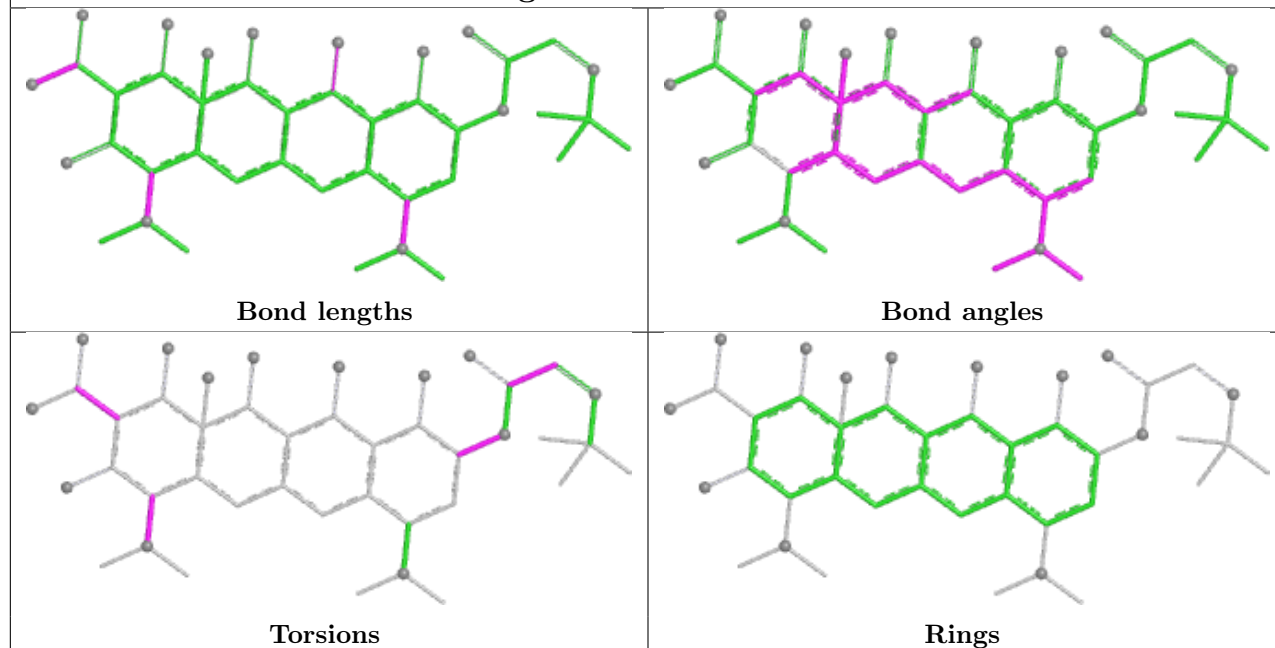
Ligand ADP CB 1001



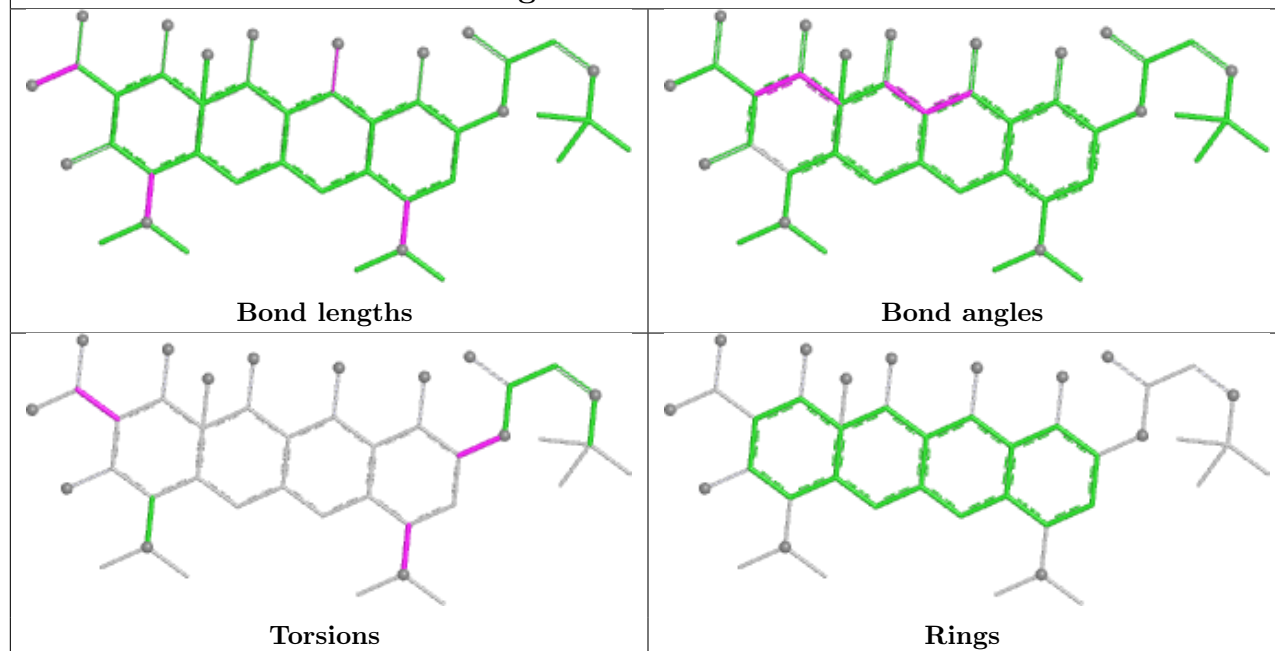
Ligand T1C L5 5317

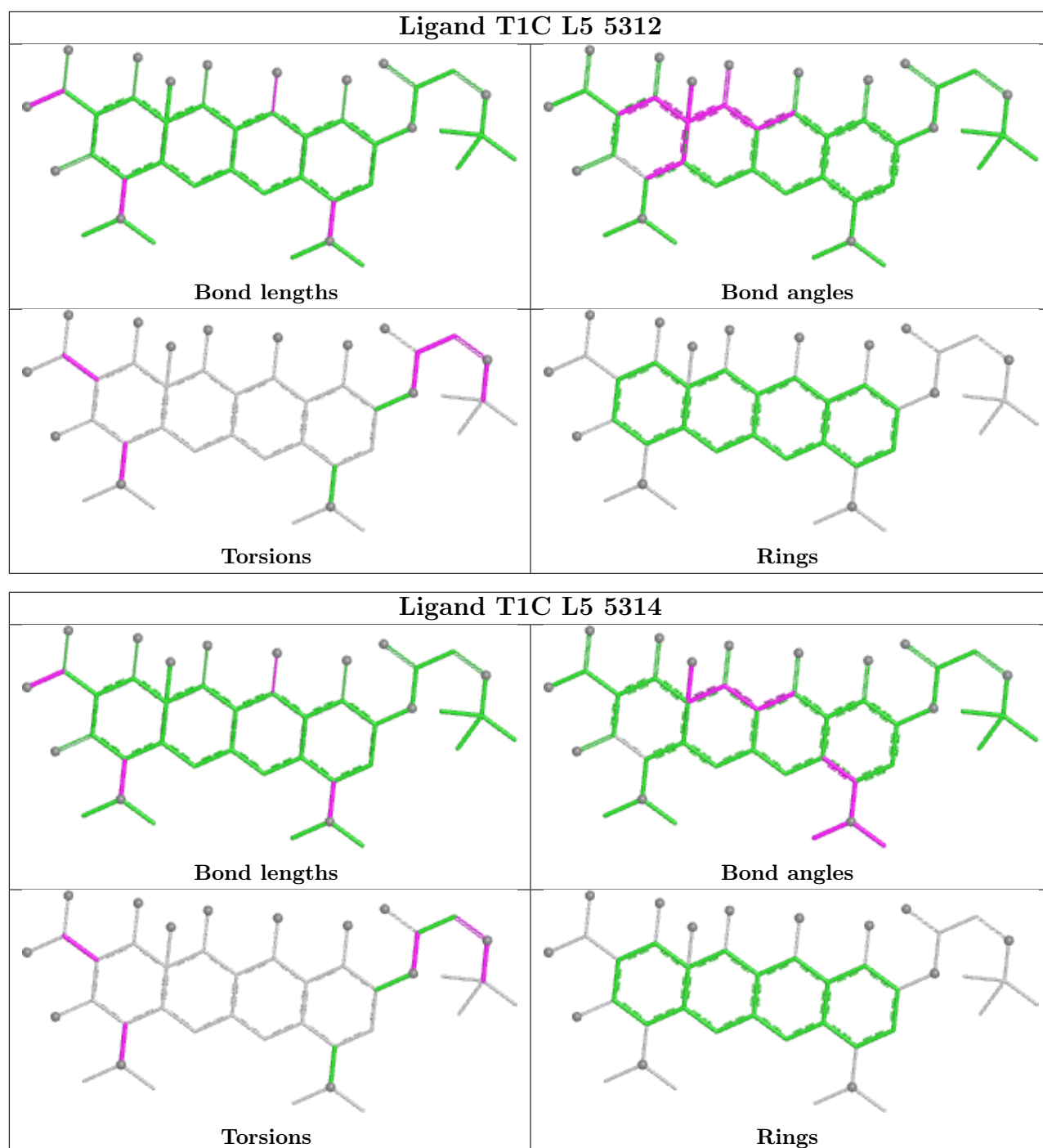


Ligand T1C L5 5316



Ligand T1C L5 5313





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

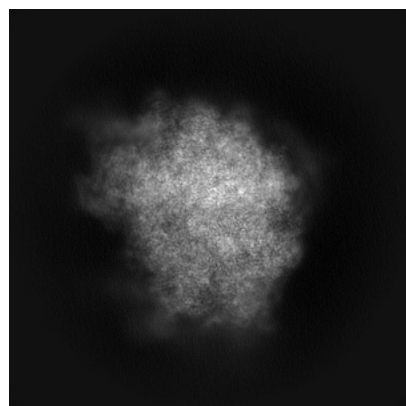
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38629. These allow visual inspection of the internal detail of the map and identification of artifacts.

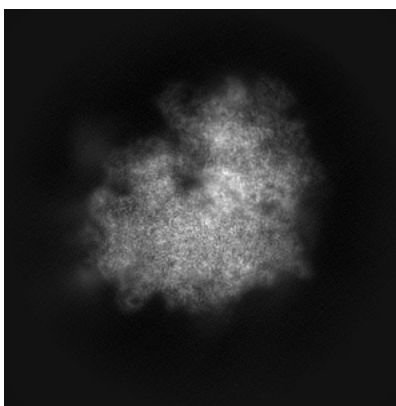
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

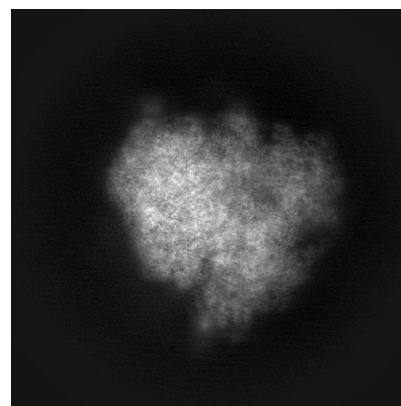
6.1.1 Primary map



X

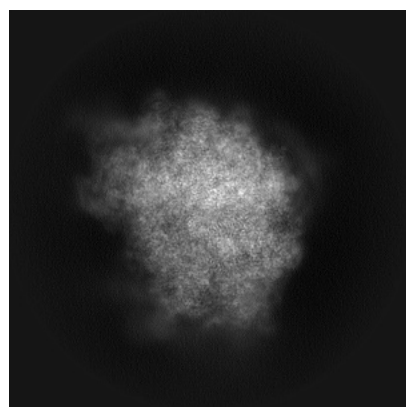


Y

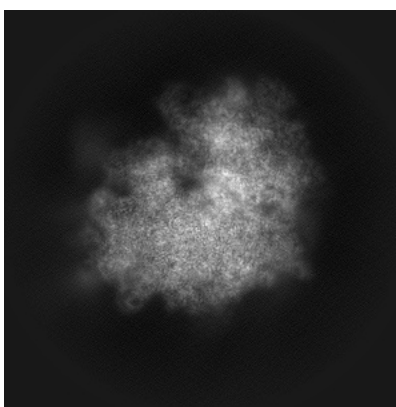


Z

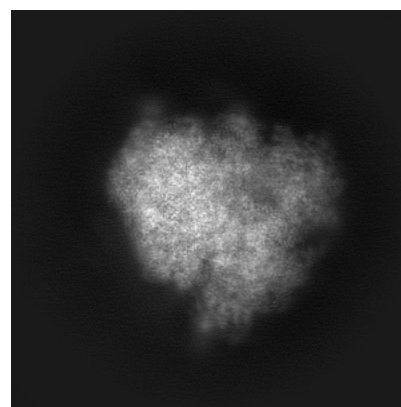
6.1.2 Raw map



X



Y

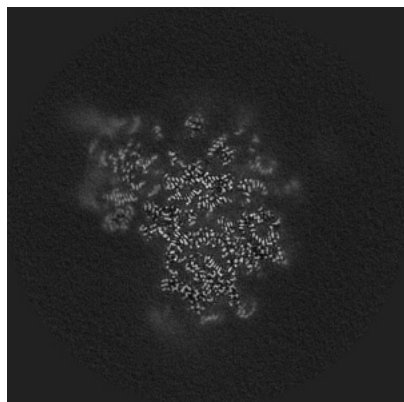


Z

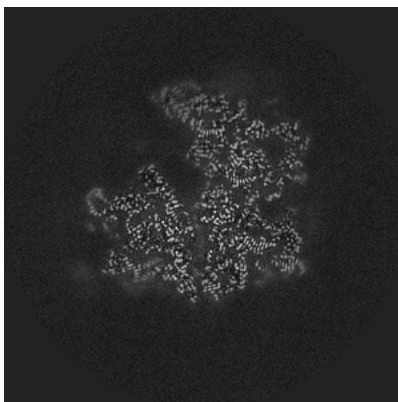
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

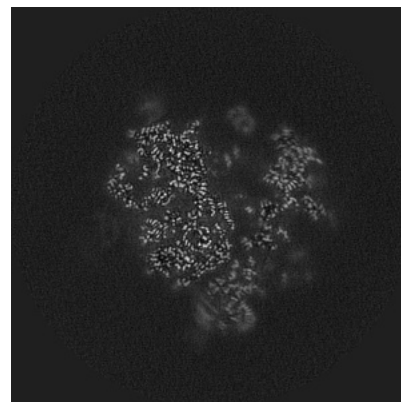
6.2.1 Primary map



X Index: 240

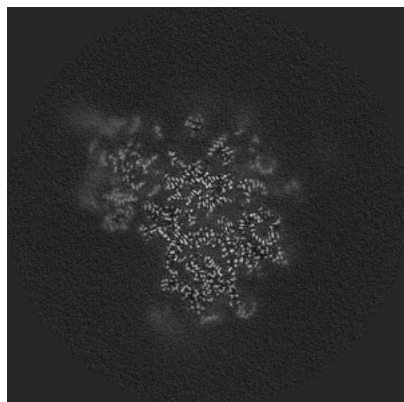


Y Index: 240

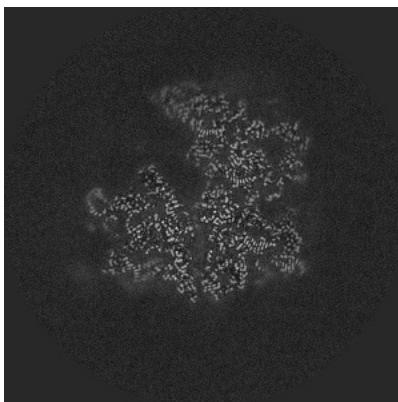


Z Index: 240

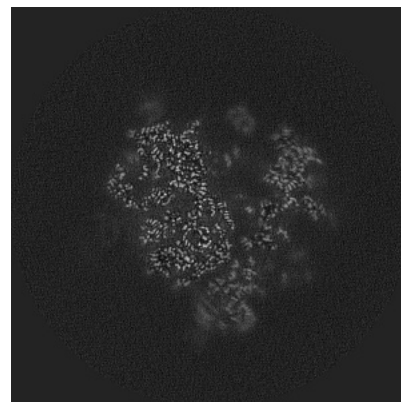
6.2.2 Raw map



X Index: 240



Y Index: 240

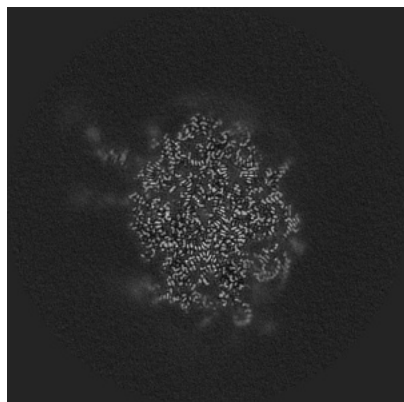


Z Index: 240

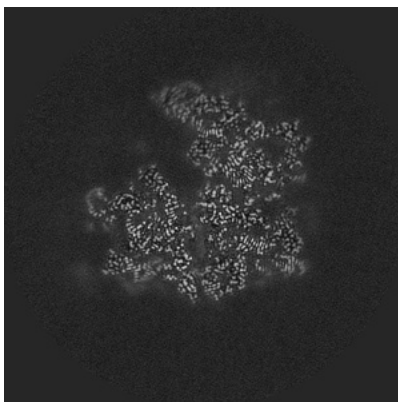
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

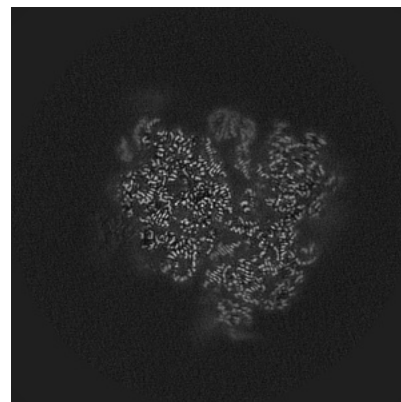
6.3.1 Primary map



X Index: 218

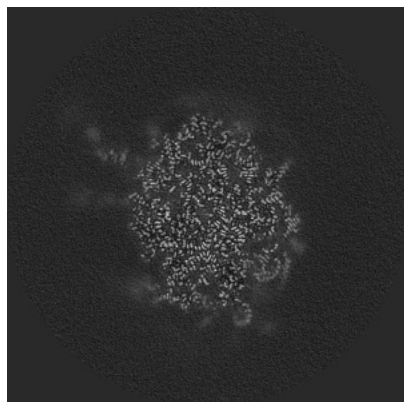


Y Index: 239

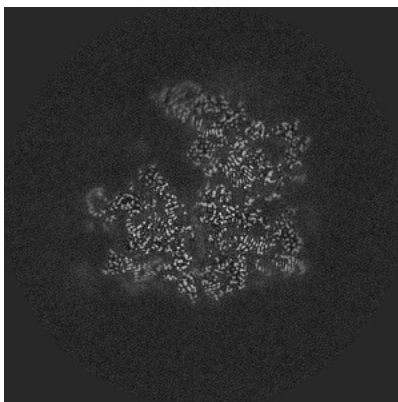


Z Index: 264

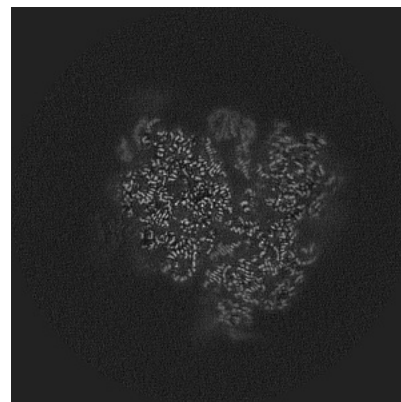
6.3.2 Raw map



X Index: 218



Y Index: 239

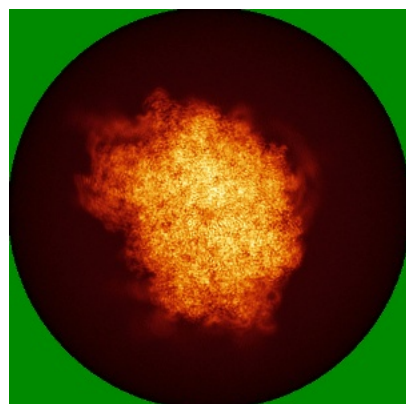


Z Index: 264

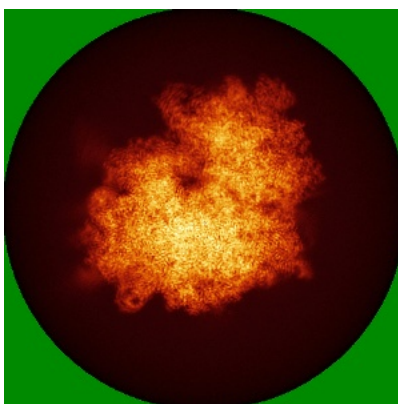
The images above show the largest variance slices of the map in three orthogonal directions.

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

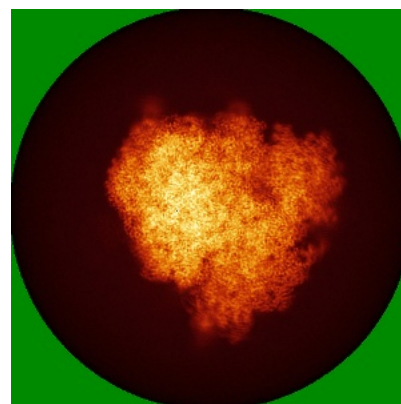
6.4.1 Primary map



X

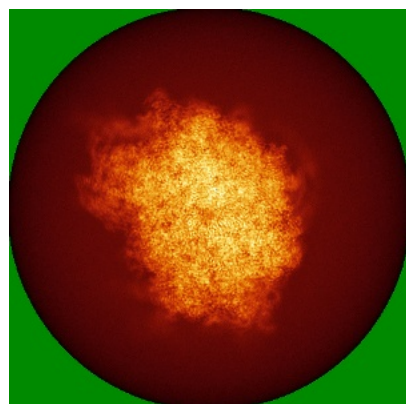


Y

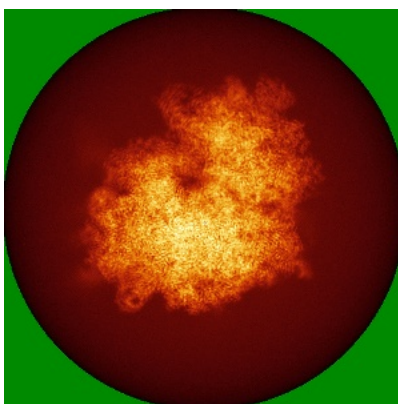


Z

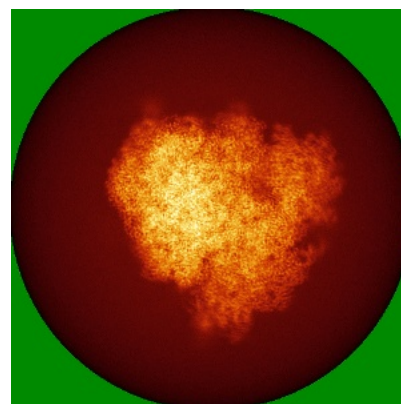
6.4.2 Raw map



X



Y

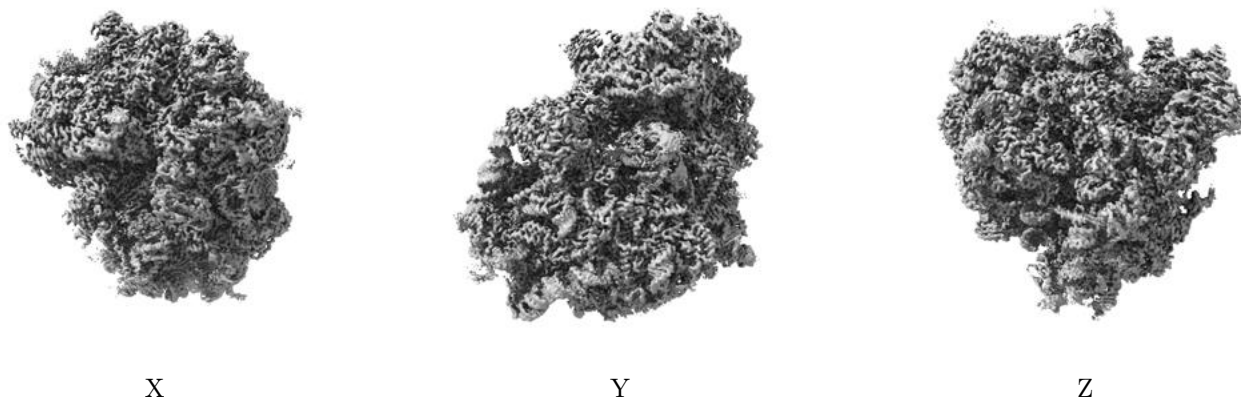


Z

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.

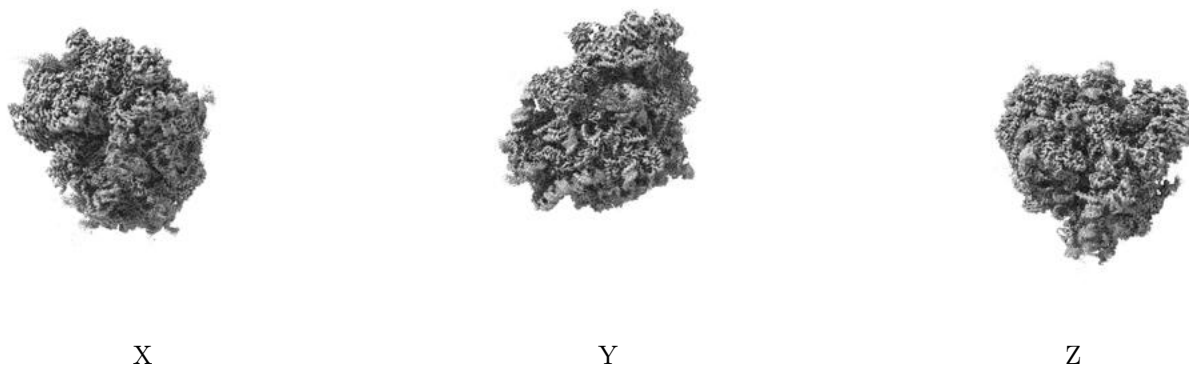
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.015. 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



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.

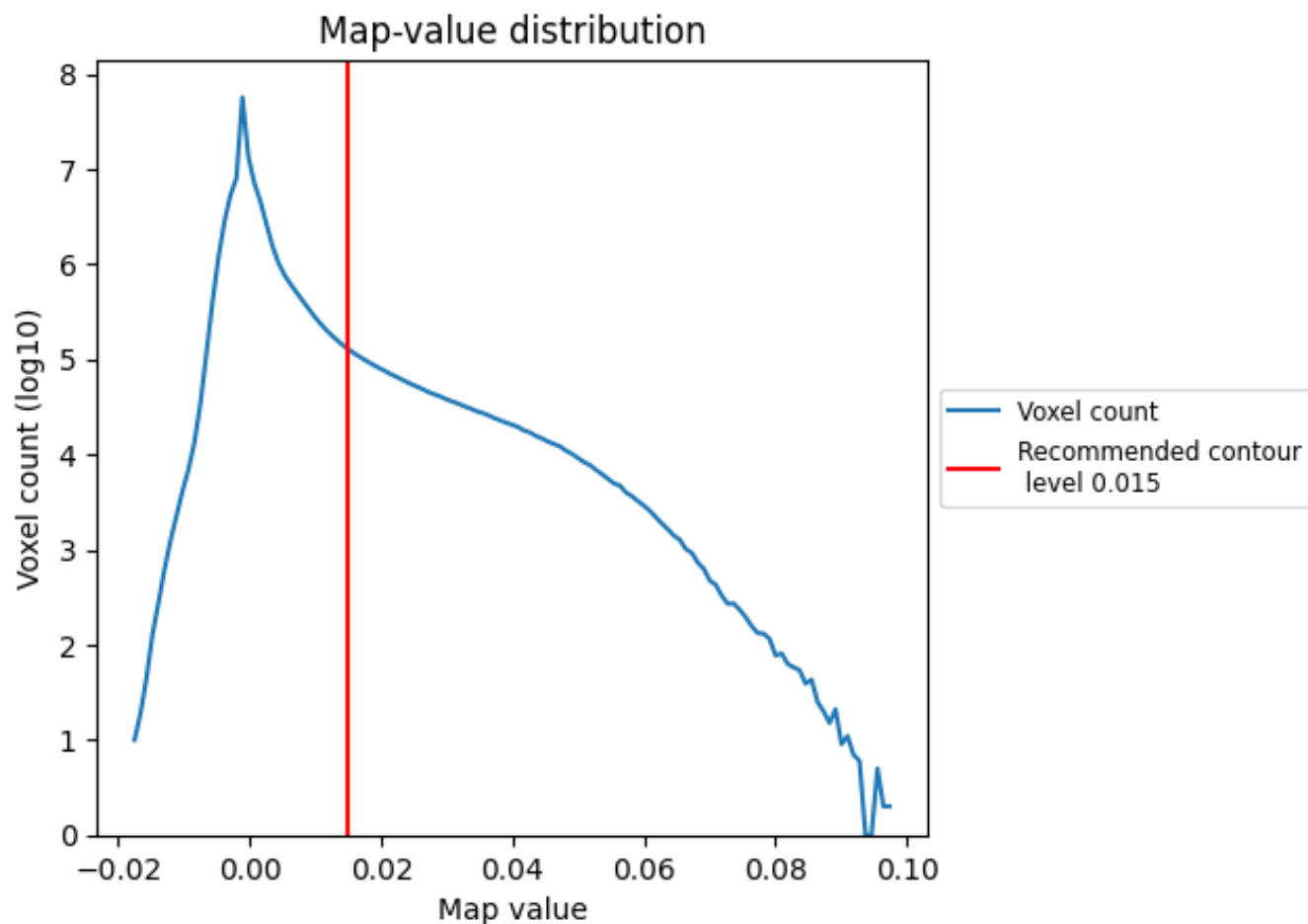
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

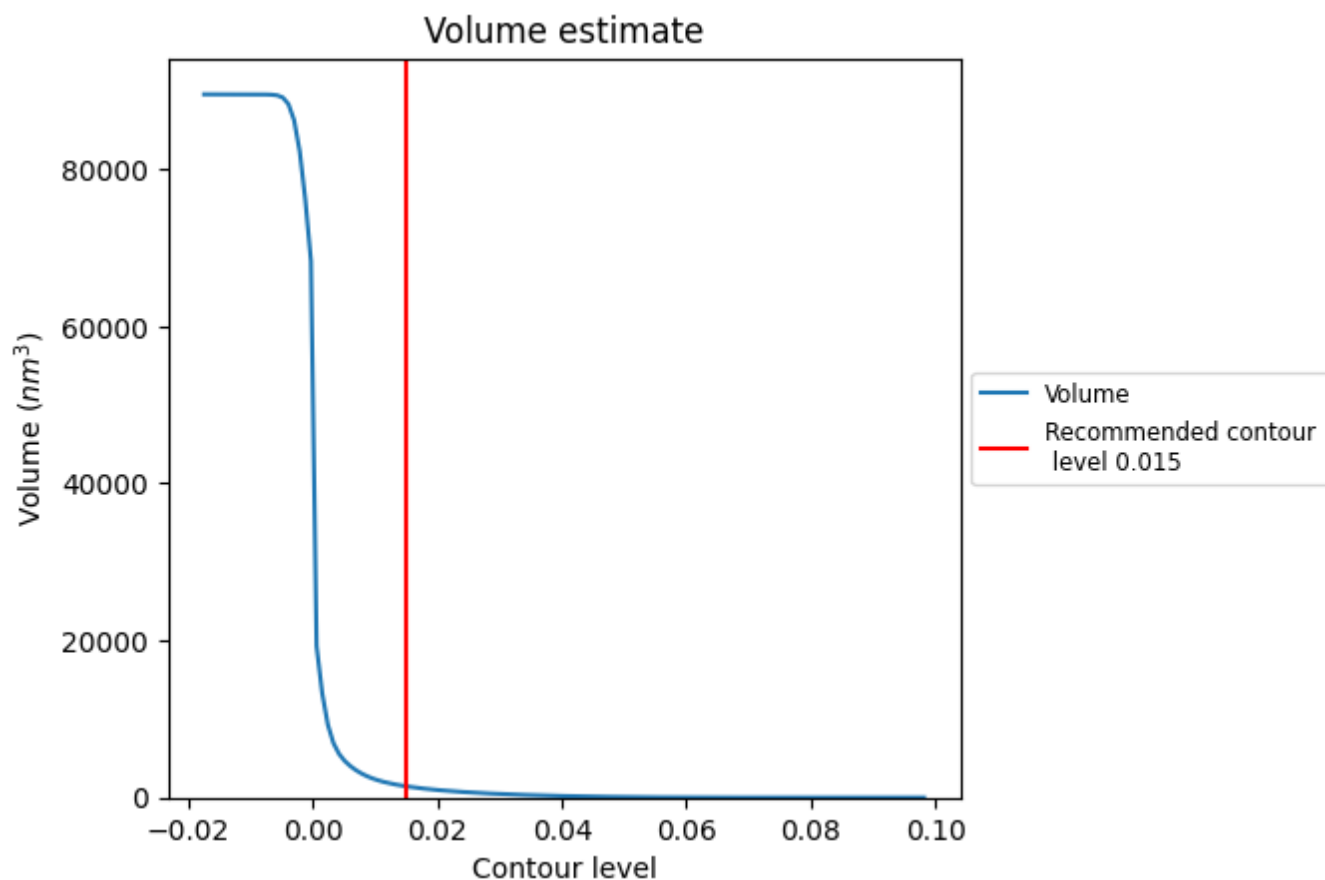
This section contains the results of statistical analysis of the map.

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.

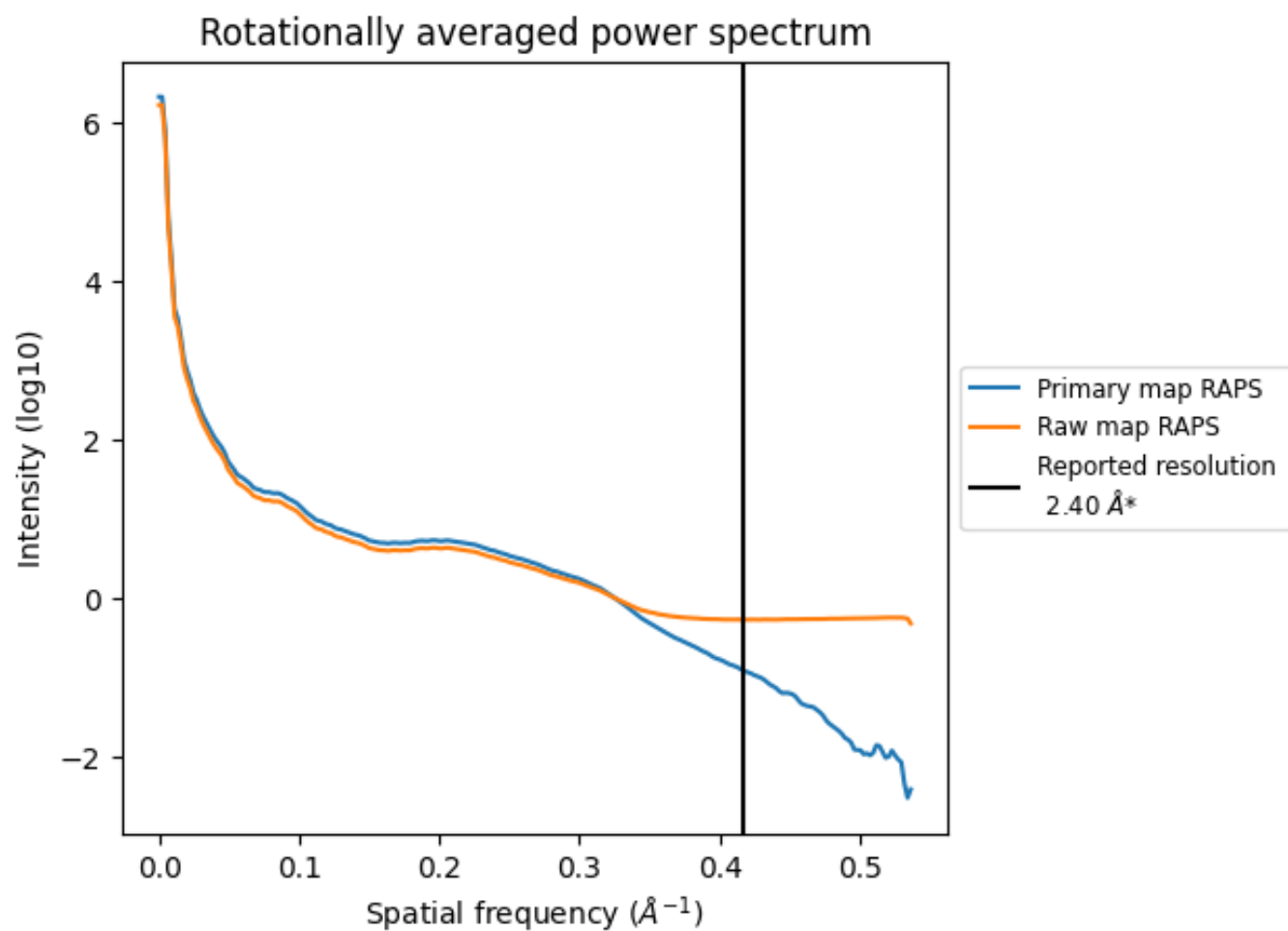
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1431 nm³; this corresponds to an approximate mass of 1293 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 ⓘ

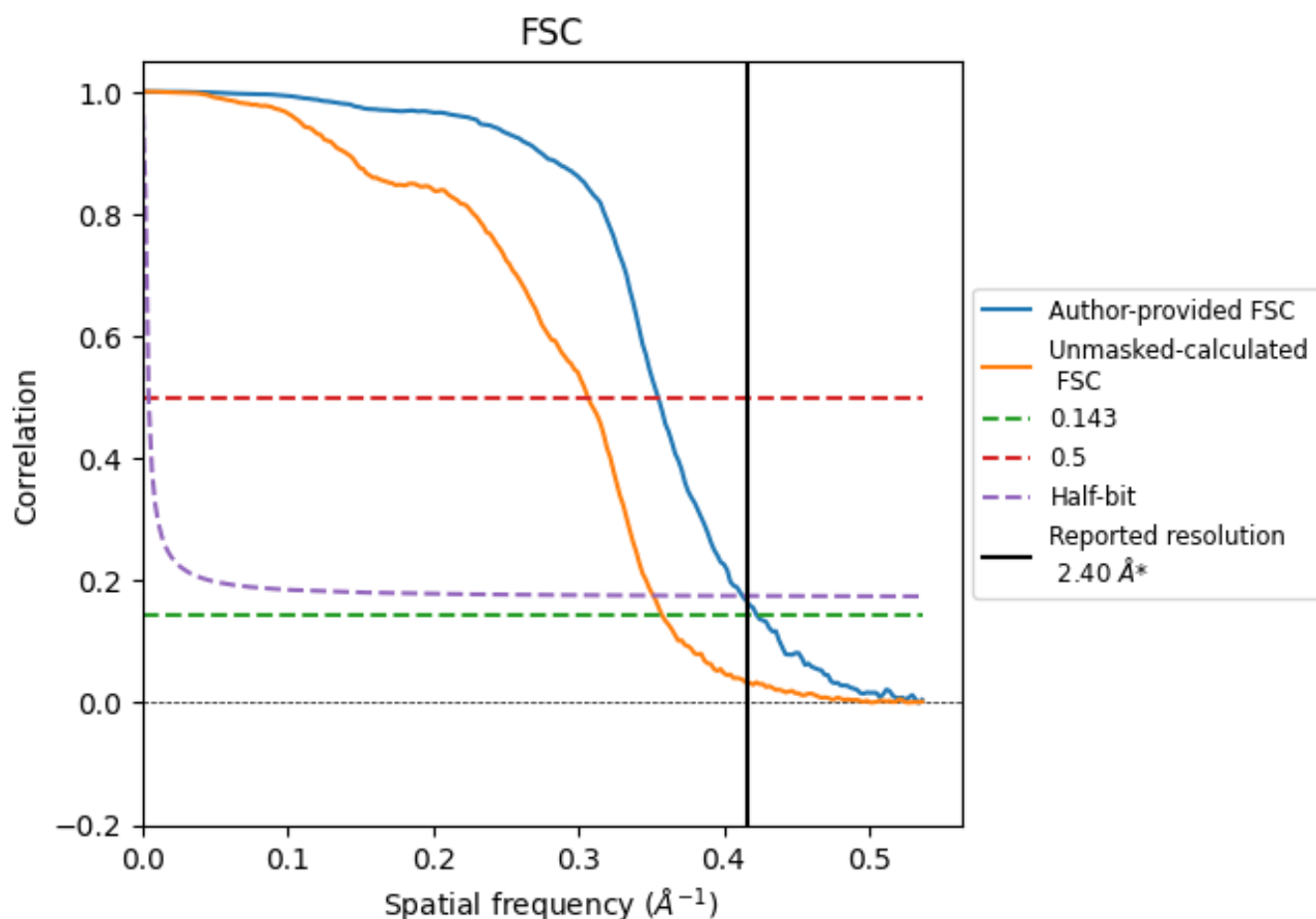


*Reported resolution corresponds to spatial frequency of $0.417 \text{ \AA}^{-1}$

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 $0.417 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

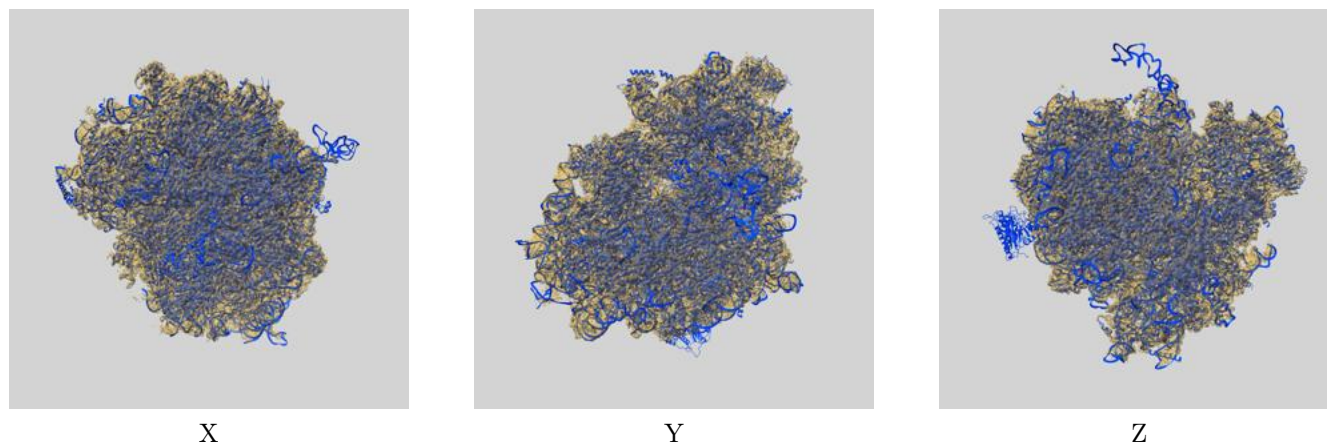
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.40	-	-
Author-provided FSC curve	2.37	2.82	2.42
Unmasked-calculated*	2.80	3.26	2.84

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.80 differs from the reported value 2.4 by more than 10 %

9 Map-model fit [i](#)

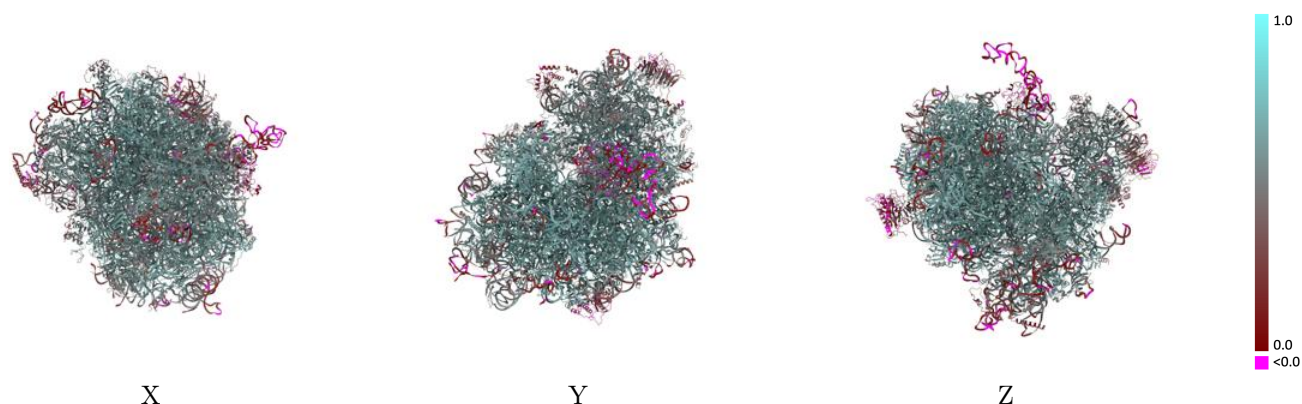
This section contains information regarding the fit between EMDB map EMD-38629 and PDB model 8XSX. Per-residue inclusion information can be found in section 3 on page 23.

9.1 Map-model overlay [i](#)



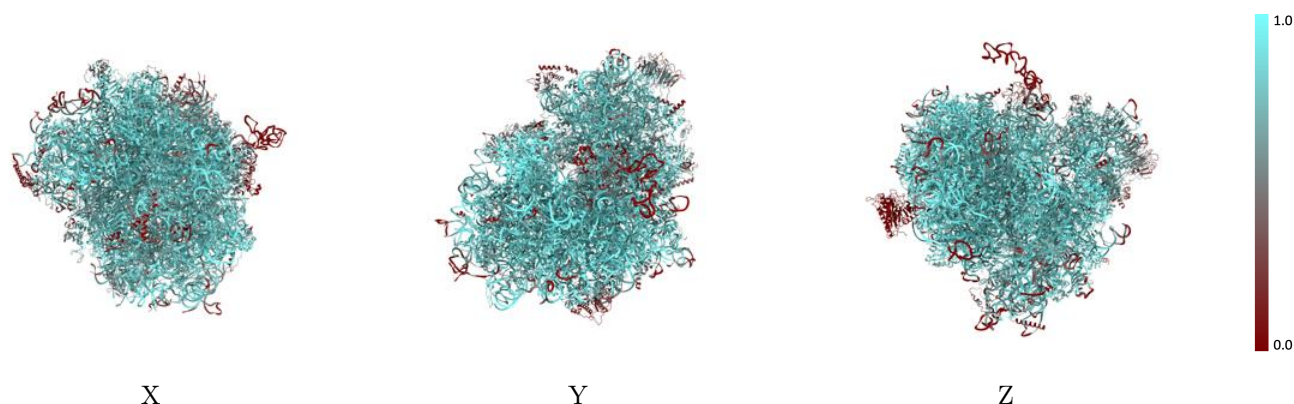
The images above show the 3D surface view of the map at the recommended contour level 0.015 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



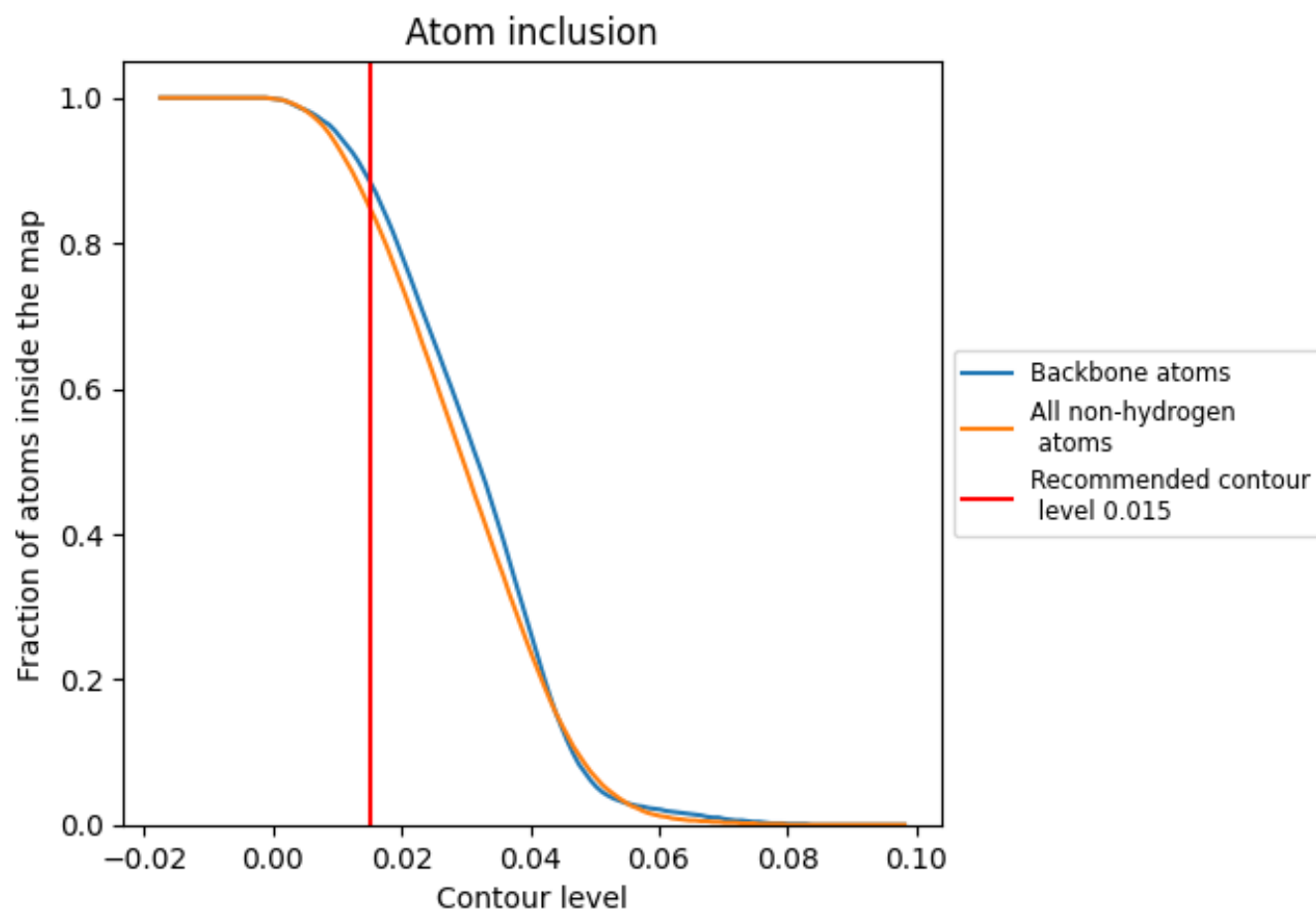
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.015).

9.4 Atom inclusion [i](#)



At the recommended contour level, 89% of all backbone atoms, 85% 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 (0.015) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8500	 0.5640
CA	 0.0030	 0.1770
CB	 0.7410	 0.5500
CC	 0.9350	 0.5670
CD	 0.6780	 0.4760
L5	 0.8980	 0.5750
L7	 0.9900	 0.6360
L8	 0.9390	 0.6020
LA	 0.9660	 0.6630
LB	 0.9190	 0.6410
LC	 0.9250	 0.6390
LD	 0.8900	 0.6160
LE	 0.8060	 0.5690
LF	 0.9410	 0.6480
LG	 0.8170	 0.5890
LH	 0.9180	 0.6400
LI	 0.9220	 0.6410
LJ	 0.7920	 0.5590
LK	 0.3710	 0.4040
LL	 0.8770	 0.6110
LM	 0.9000	 0.6160
LN	 0.9770	 0.6650
LO	 0.9370	 0.6490
LP	 0.9420	 0.6530
LQ	 0.9660	 0.6690
LR	 0.8390	 0.5920
LS	 0.9590	 0.6590
LT	 0.9000	 0.6220
LU	 0.7670	 0.5440
LV	 0.9280	 0.6490
LW	 0.5600	 0.4680
LX	 0.8990	 0.6240
LY	 0.8930	 0.6230
LZ	 0.8930	 0.6220
La	 0.9580	 0.6660



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Chain	Atom inclusion	Q-score
Lb	 0.7870	 0.5690
Lc	 0.8730	 0.6020
Ld	 0.8890	 0.6200
Le	 0.9550	 0.6520
Lf	 0.9610	 0.6550
Lg	 0.9060	 0.6390
Lh	 0.8860	 0.6190
Li	 0.8800	 0.6120
Lj	 0.9690	 0.6510
Lk	 0.7770	 0.5730
Ll	 0.9460	 0.6380
Lm	 0.9110	 0.6460
Ln	 0.9380	 0.6430
Lo	 0.9010	 0.6420
Lp	 0.9300	 0.6520
Lr	 0.9450	 0.6440
Ls	 0.6080	 0.5030
Lz	 0.1410	 0.1050
S2	 0.8950	 0.5400
SA	 0.8370	 0.5830
SB	 0.8380	 0.5980
SC	 0.8960	 0.6180
SD	 0.7820	 0.5490
SE	 0.8280	 0.5790
SF	 0.7010	 0.5070
SG	 0.6310	 0.4470
SH	 0.6880	 0.5040
SI	 0.7730	 0.5350
SJ	 0.8580	 0.5860
SK	 0.7890	 0.5400
SL	 0.8090	 0.5790
SM	 0.3020	 0.2220
SN	 0.8740	 0.6100
SO	 0.8350	 0.5730
SP	 0.7660	 0.5310
SQ	 0.7720	 0.5470
SR	 0.6900	 0.4840
SS	 0.6770	 0.4900
ST	 0.7380	 0.5160
SU	 0.6840	 0.5040
SV	 0.8700	 0.6050
SW	 0.9400	 0.6350

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Chain	Atom inclusion	Q-score
SX	 0.9280	 0.6320
SY	 0.7190	 0.5100
SZ	 0.5510	 0.4340
Sa	 0.8680	 0.6010
Sb	 0.7820	 0.5790
Sc	 0.5700	 0.4740
Sd	 0.9120	 0.6040
Se	 0.7410	 0.5640
Sf	 0.4020	 0.2530
Sg	 0.4780	 0.2910