



Full wwPDB EM Validation Report ⓘ

Mar 29, 2026 – 01:10 PM UTC

PDB ID : 4UG0 / pdb_00004ug0
EMDB ID : EMD-2938
Title : STRUCTURE OF THE HUMAN 80S RIBOSOME
Authors : Khatter, H.; Myasnikov, A.G.; Natchiar, S.K.; Klaholz, B.P.
Deposited on : 2015-03-20
Resolution : 3.60 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

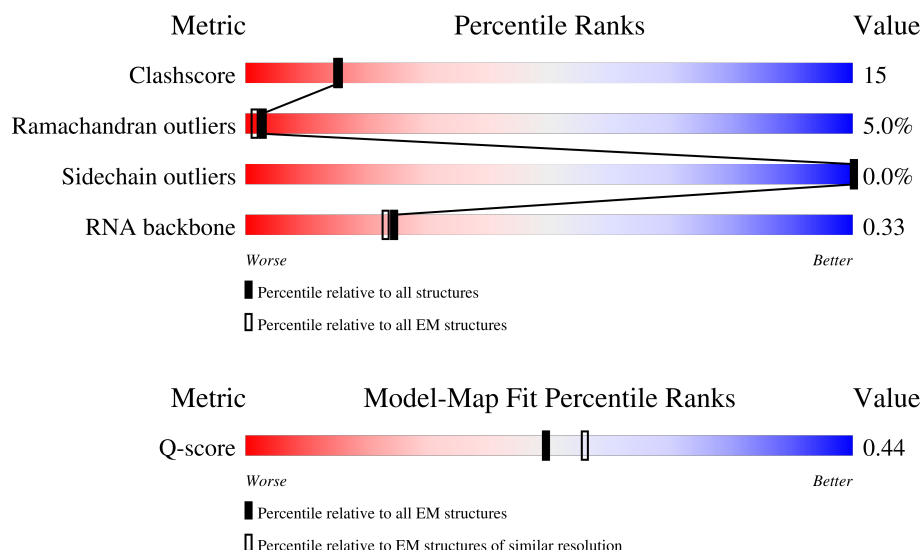
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 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.














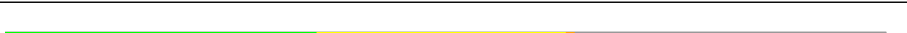













Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	12797 (3.10 - 4.10)

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

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




















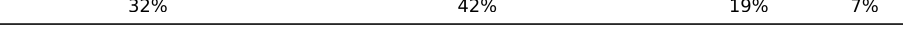
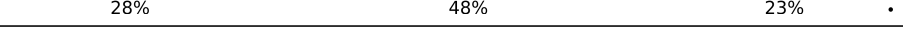




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Mol	Chain	Length	Quality of chain
4	LA	257	
5	LB	403	
6	LC	427	
7	LD	297	
8	LE	288	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	214	
13	LJ	178	
14	LL	211	
15	LM	215	
16	LN	204	
17	LO	203	
18	LP	184	
19	LQ	188	
20	LR	196	
21	LS	176	
22	LT	160	
23	LU	128	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





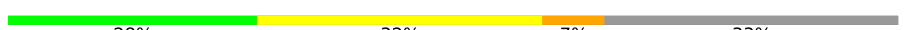





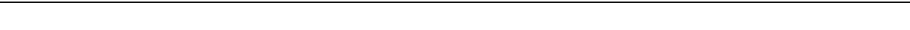

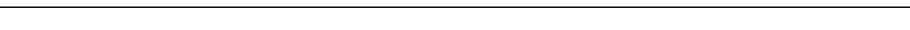
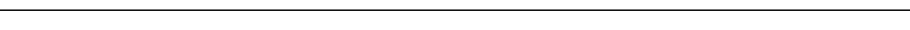











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Mol	Chain	Length	Quality of chain
29	La	148	
30	Lb	159	
31	Lc	115	
32	Ld	125	
33	Le	135	
34	Lf	110	
35	Lg	117	
36	Lh	123	
37	Li	105	
38	Lj	97	
39	Lk	70	
40	Ll	51	
41	Lm	128	
42	Ln	25	
43	Lo	106	
44	Lp	92	
45	Lr	137	
46	Lz	217	
47	S2	1869	
48	S6	75	
49	SA	295	
50	SB	264	
51	SD	243	
52	SE	263	
53	SF	204	

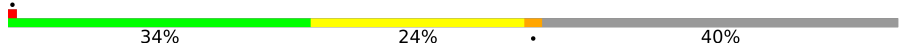


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Mol	Chain	Length	Quality of chain
54	SH	194	
55	SI	208	
56	SK	165	
57	SL	158	
58	SP	145	
59	SQ	146	
60	SR	135	
61	SS	152	
62	ST	145	
63	SU	119	
64	SV	83	
65	SX	143	
66	Sa	115	
67	Sc	69	
68	Sd	56	
69	Sf	156	
70	Sg	317	
71	SC	293	
72	SG	249	
73	SJ	194	
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	

2 Entry composition [i](#)

There are 83 unique types of molecules in this entry. The entry contains 218776 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 ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L5	3776	Total	C	N	O	P	0	0
			80184	35672	14597	26140	3775		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L7	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

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

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	367	Total	C	N	O	S	0	0
			2919	1835	582	488	14		

- 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	242	Total	C	N	O	S	0	0
			1958	1257	372	325	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	213	Total	C	N	O	S	0	0
			1711	1082	329	285	15		

- 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 L13.

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

- Molecule 15 is a protein called 60S RIBOSOMAL PROTEIN L14.

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

- Molecule 16 is a protein called 60S RIBOSOMAL PROTEIN L15.

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

- Molecule 17 is a protein called 60S RIBOSOMAL PROTEIN L13A.

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

- Molecule 18 is a protein called 60S RIBOSOMAL PROTEIN L17.

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

- Molecule 19 is a protein called 60S RIBOSOMAL PROTEIN L18.

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

- Molecule 20 is a protein called 60S RIBOSOMAL PROTEIN L19.

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

- Molecule 21 is a protein called 60S RIBOSOMAL PROTEIN L18A.

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

- Molecule 22 is a protein called 60S RIBOSOMAL PROTEIN L21.

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

- Molecule 23 is a protein called 60S RIBOSOMAL PROTEIN L22.

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

- Molecule 24 is a protein called 60S RIBOSOMAL PROTEIN L23.

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

- Molecule 25 is a protein called 60S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	124	Total	C	N	O	S	0	0
			1015	634	207	170	4		

- Molecule 26 is a protein called 60S RIBOSOMAL PROTEIN L23A.

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

- Molecule 27 is a protein called 60S RIBOSOMAL PROTEIN L26.

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

- Molecule 28 is a protein called 60S RIBOSOMAL PROTEIN L27.

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

- Molecule 29 is a protein called 60S RIBOSOMAL PROTEIN L27A.

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

- Molecule 30 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	75	Total	C	N	O	S	0	0
			610	378	130	99	3		

- Molecule 31 is a protein called 60S RIBOSOMAL PROTEIN L30.

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

- Molecule 32 is a protein called 60S RIBOSOMAL PROTEIN L31.

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

- Molecule 33 is a protein called 60S RIBOSOMAL PROTEIN L32.

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

- Molecule 34 is a protein called 60S RIBOSOMAL PROTEIN L35A.

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

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L34.

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

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L35.

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

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L36.

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

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L37.

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

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L38.

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

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L39.

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

- Molecule 41 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

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

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L41.

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

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L36A.

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

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L37A.

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

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L28.

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

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Lz	217	Total	C	N	O	S	0	0
			1741	1113	312	307	9		

- Molecule 47 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	S2	1742	Total	C	N	O	P	0	0
			36900	16458	6595	12106	1741		

- Molecule 48 is a RNA chain called HUMAN INITIATOR MET-TRNA-I.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	S6	75	Total	C	N	O	P	0	0
			1604	717	298	515	74		

- Molecule 49 is a protein called 40S RIBOSOMAL PROTEIN SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SA	222	Total	C	N	O	S	0	0
			1747	1109	306	324	8		

- Molecule 50 is a protein called 40S RIBOSOMAL PROTEIN S3A.

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

- Molecule 51 is a protein called 40S RIBOSOMAL PROTEIN S3.

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

- Molecule 52 is a protein called 40S RIBOSOMAL PROTEIN S4, X ISOFORM.

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

- Molecule 53 is a protein called 40S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SF	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 54 is a protein called 40S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SH	189	Total	C	N	O	S	0	0
			1521	969	280	271	1		

- Molecule 55 is a protein called 40S RIBOSOMAL PROTEIN S8.

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

- Molecule 56 is a protein called 40S RIBOSOMAL PROTEIN S10.

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

- Molecule 57 is a protein called 40S RIBOSOMAL PROTEIN S11.

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

- Molecule 58 is a protein called 40S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SP	97	Total	C	N	O	S	0	0
			804	505	155	138	6		

- Molecule 59 is a protein called 40S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SQ	146	Total	C	N	O	S	0	0
			1158	736	218	200	4		

- Molecule 60 is a protein called 40S RIBOSOMAL PROTEIN S17-LIKE.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SR	132	Total	C	N	O	S	0	0
			1072	673	199	195	5		

- Molecule 61 is a protein called 40S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SS	150	Total	C	N	O	S	0	0
			1235	776	250	208	1		

- Molecule 62 is a protein called 40S RIBOSOMAL PROTEIN S19.

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

- Molecule 63 is a protein called 40S RIBOSOMAL PROTEIN S20.

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

- Molecule 64 is a protein called 40S RIBOSOMAL PROTEIN S21.

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

- Molecule 65 is a protein called 40S RIBOSOMAL PROTEIN S23.

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

- Molecule 66 is a protein called 40S RIBOSOMAL PROTEIN S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Sa	107	Total	C	N	O	S	0	0
			847	528	176	138	5		

- Molecule 67 is a protein called 40S RIBOSOMAL PROTEIN S28.

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

- Molecule 68 is a protein called 40S RIBOSOMAL PROTEIN S29.

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

- Molecule 69 is a protein called UBIQUITIN-40S RIBOSOMAL PROTEIN S27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sf	71	Total	C	N	O	S	0	0
			581	367	109	98	7		

- Molecule 70 is a protein called GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 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.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SM	122	Total	C	N	O	S	0	0
			952	596	169	179	8		

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

Mol	Chain	Residues	Atoms		AltConf
82	L5	149	Total	Mg	0
			149	149	
82	L7	5	Total	Mg	0
			5	5	
82	L8	2	Total	Mg	0
			2	2	
82	LA	1	Total	Mg	0
			1	1	
82	LB	1	Total	Mg	0
			1	1	
82	LH	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
82	LJ	1	Total 1	Mg 1	0
82	LN	1	Total 1	Mg 1	0
82	LP	1	Total 1	Mg 1	0
82	LQ	1	Total 1	Mg 1	0
82	La	1	Total 1	Mg 1	0
82	Le	1	Total 1	Mg 1	0
82	Ll	1	Total 1	Mg 1	0
82	S2	66	Total 66	Mg 66	0
82	S6	7	Total 7	Mg 7	0

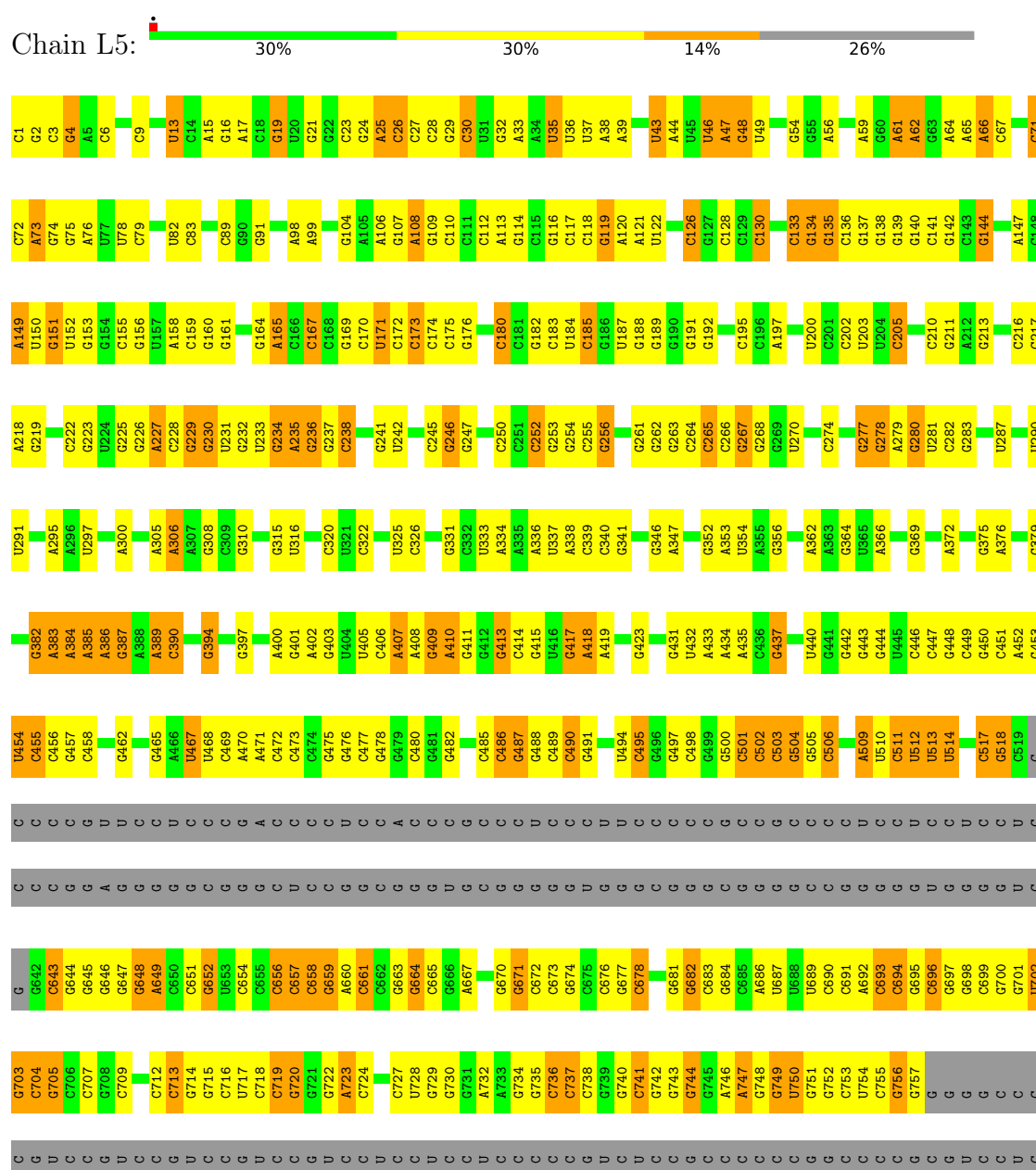
- Molecule 83 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

3 Residue-property plots

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

• Molecule 1: 28S ribosomal RNA

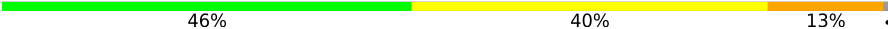


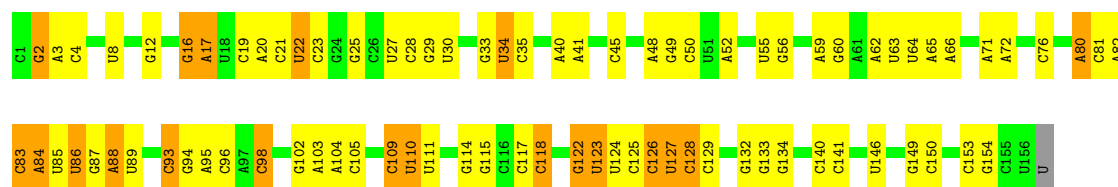






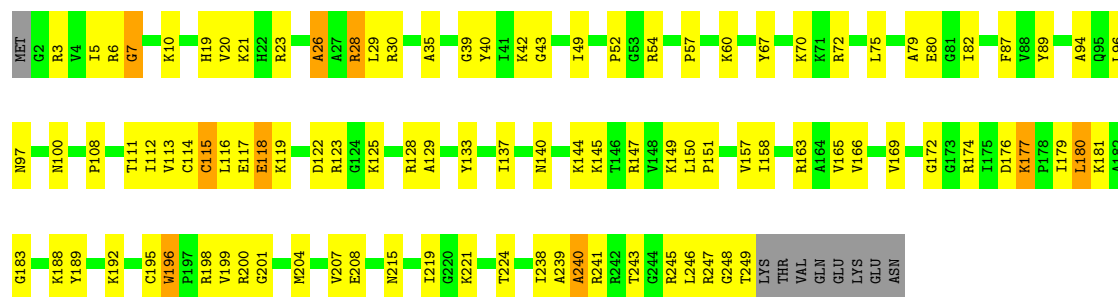


Chain L8:  46% 40% 13% .



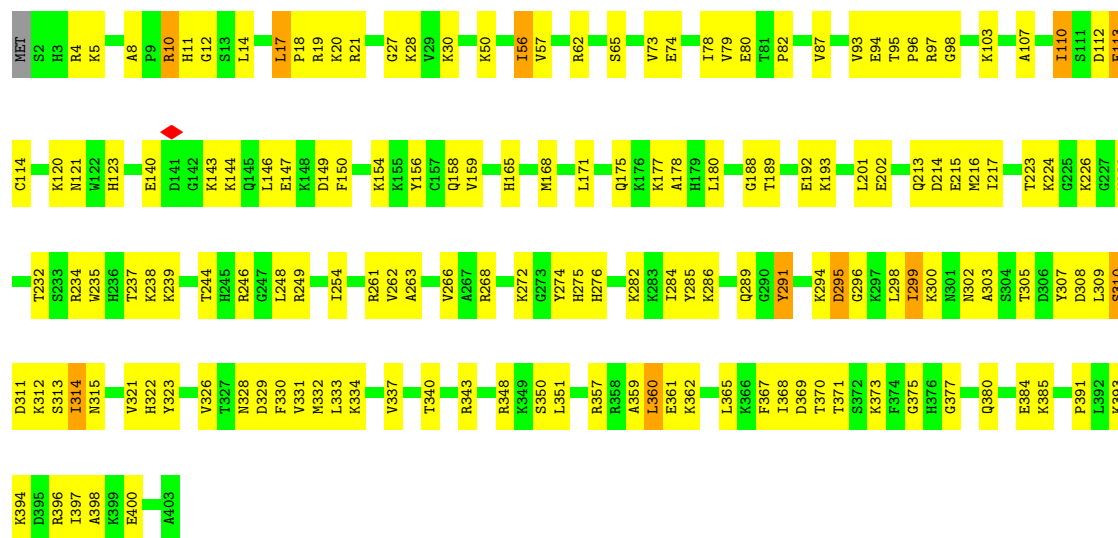
• Molecule 4: 60S RIBOSOMAL PROTEIN L8

Chain LA:  58% 35% . .



• Molecule 5: 60S RIBOSOMAL PROTEIN L3

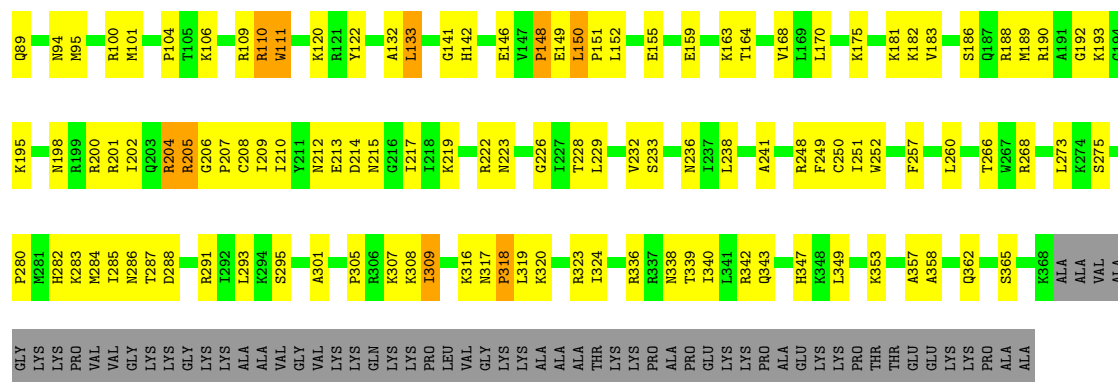
Chain LB:  60% 37% .



• Molecule 6: 60S RIBOSOMAL PROTEIN L4

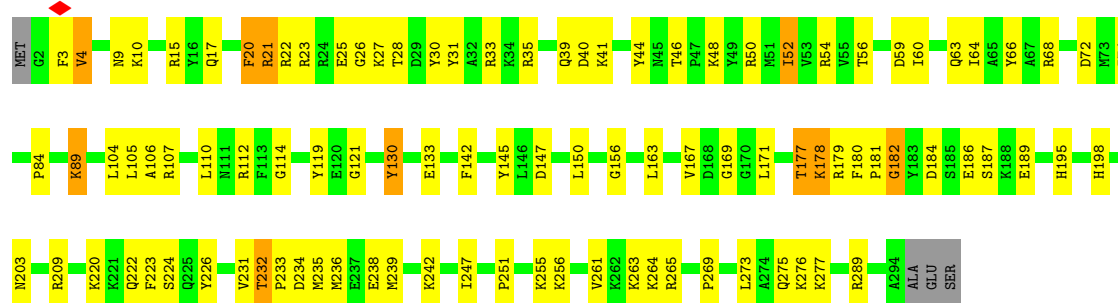
Chain LC:  51% 33% . 14%





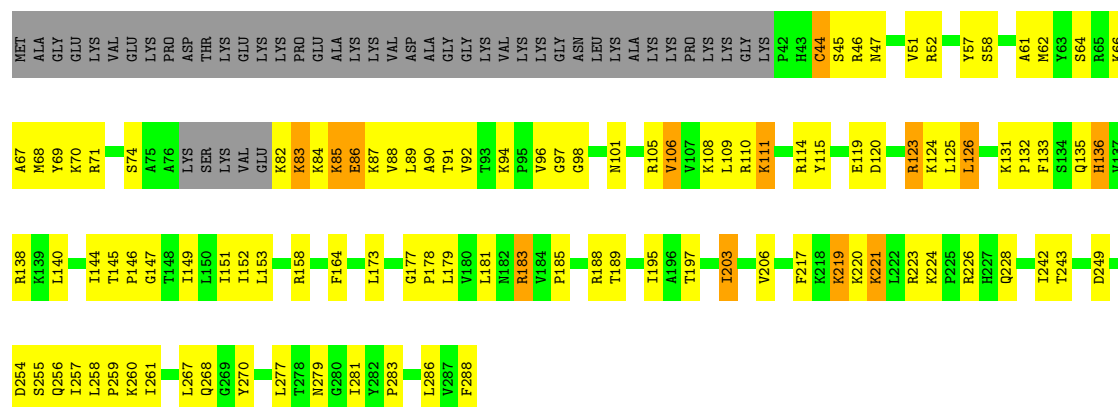
• Molecule 7: 60S RIBOSOMAL PROTEIN L5

Chain LD: 65% 30% ..



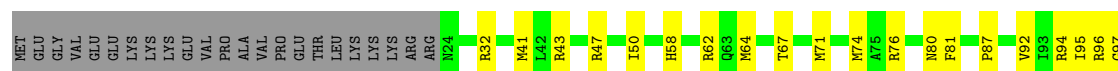
• Molecule 8: 60S RIBOSOMAL PROTEIN L6

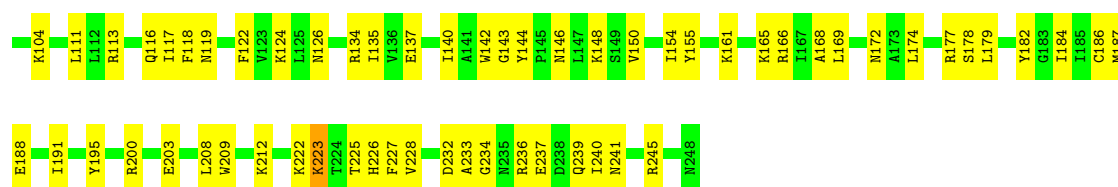
Chain LE: 47% 32% 5% 16%



• Molecule 9: 60S RIBOSOMAL PROTEIN L7

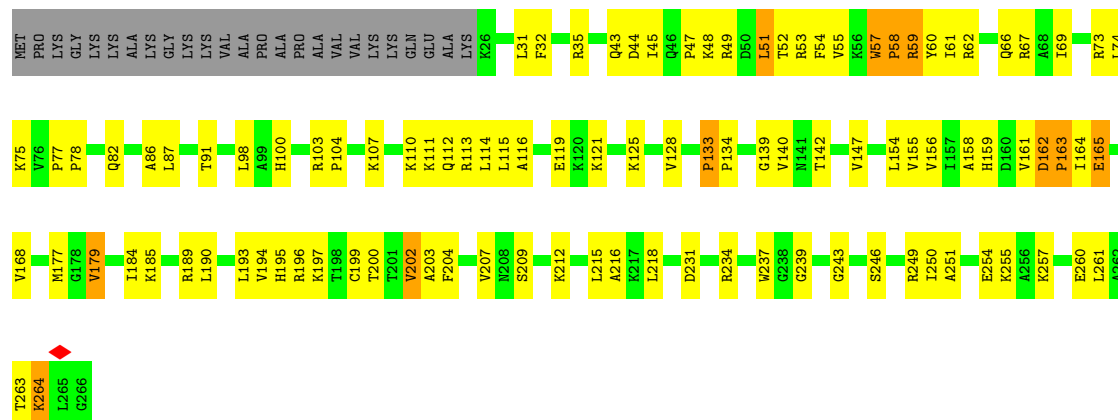
Chain LF: 59% 31% 9%





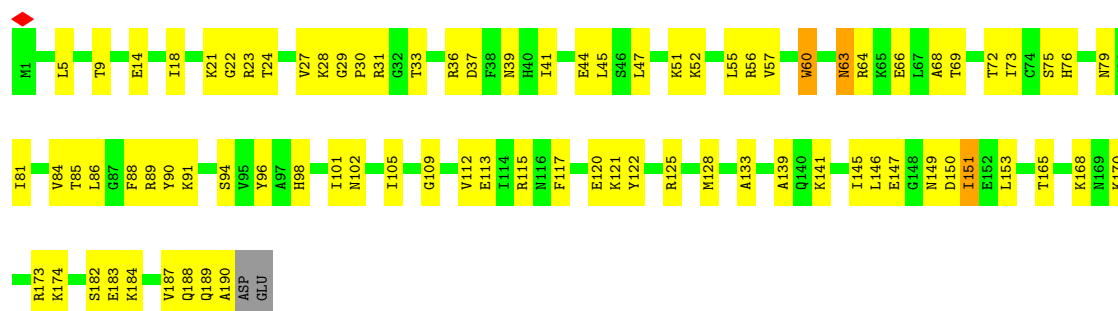
• Molecule 10: 60S RIBOSOMAL PROTEIN L7A

Chain LG: 52% 35% 9%



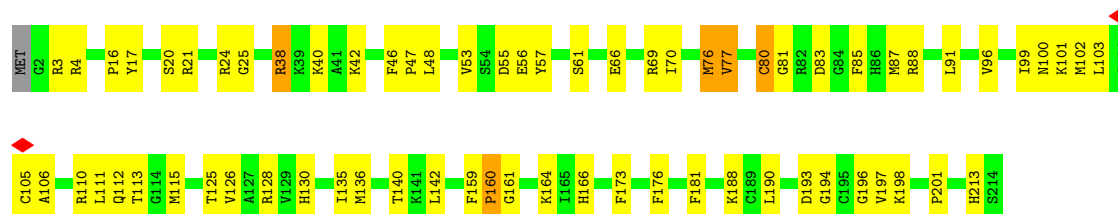
• Molecule 11: 60S RIBOSOMAL PROTEIN L9

Chain LH: 56% 42% 2%



• Molecule 12: 60S RIBOSOMAL PROTEIN L10-LIKE

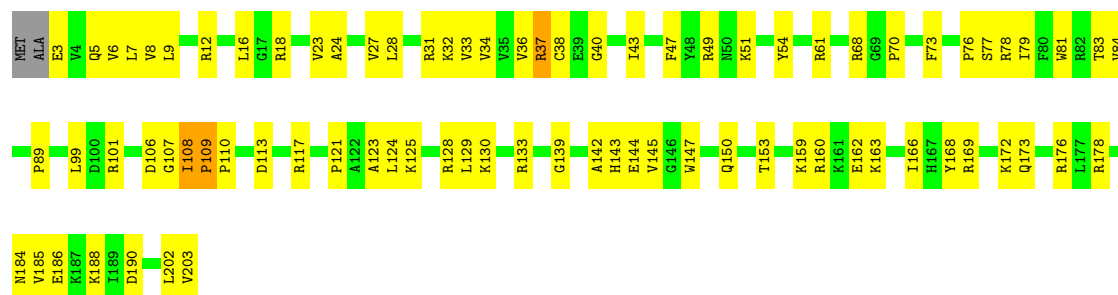
Chain LI: 67% 30% 3%



• Molecule 13: 60S RIBOSOMAL PROTEIN L11

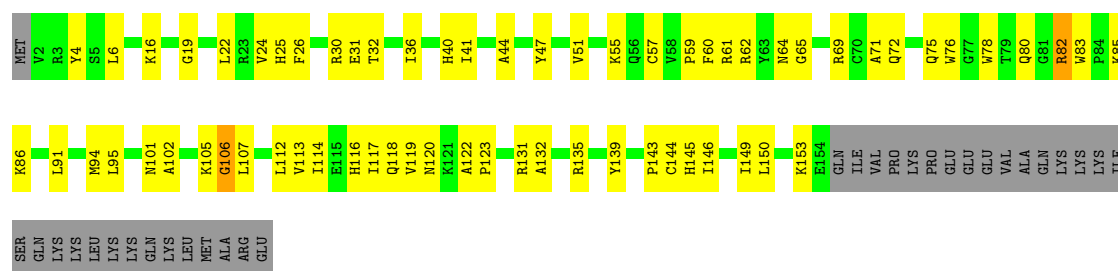
- Molecule 17: 60S RIBOSOMAL PROTEIN L13A

Chain LO:  59% 38% ..



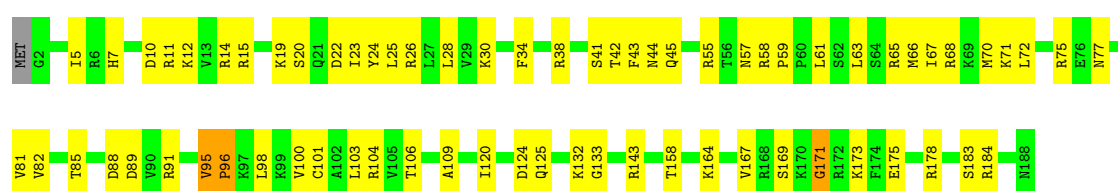
- Molecule 18: 60S RIBOSOMAL PROTEIN L17

Chain LP:  48% 34% 17%



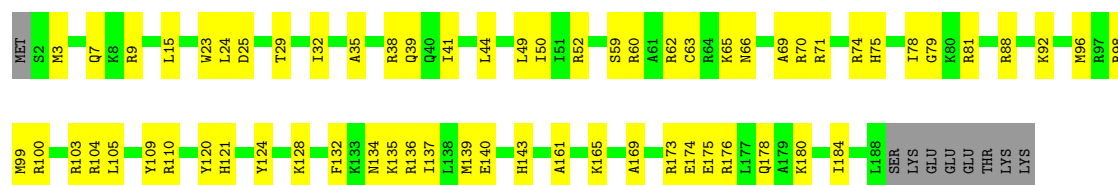
- Molecule 19: 60S RIBOSOMAL PROTEIN L18

Chain LQ:  63% 35% ..



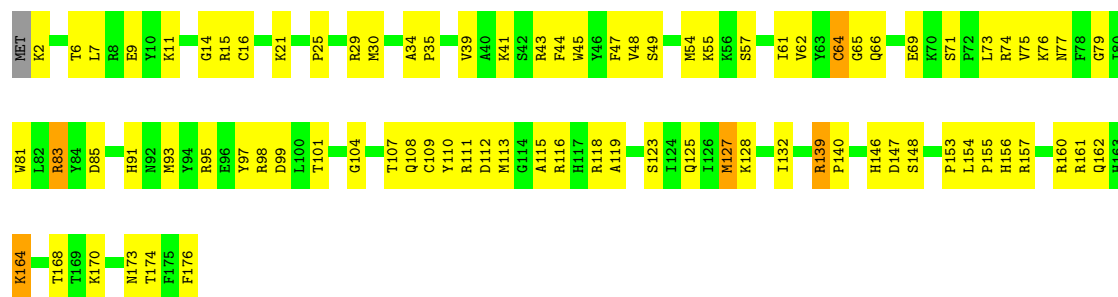
- Molecule 20: 60S RIBOSOMAL PROTEIN L19

Chain LR:  63% 33% 5%



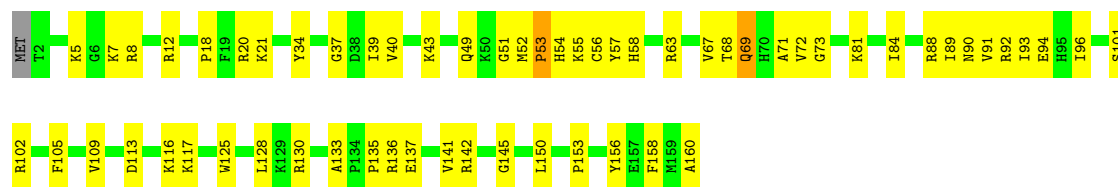
- Molecule 21: 60S RIBOSOMAL PROTEIN L18A

Chain LS:  52% 45% ..



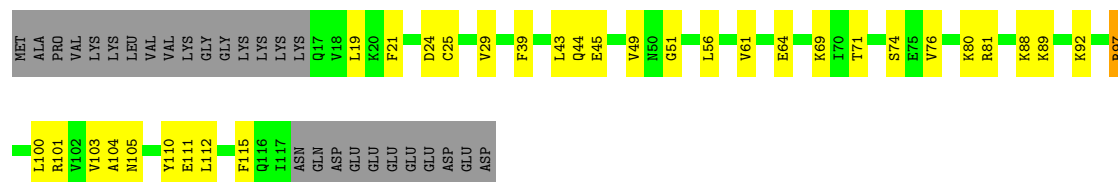
• Molecule 22: 60S RIBOSOMAL PROTEIN L21

Chain LT: 62% 36% ..



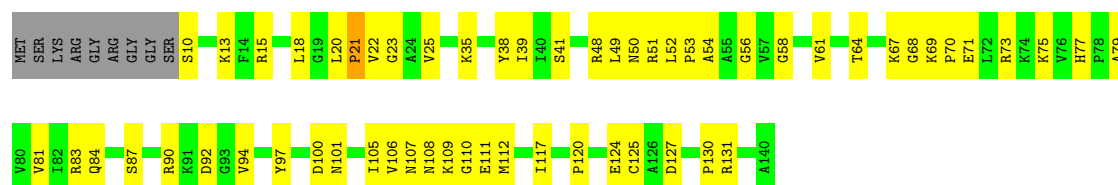
• Molecule 23: 60S RIBOSOMAL PROTEIN L22

Chain LU: 53% 25% 21%



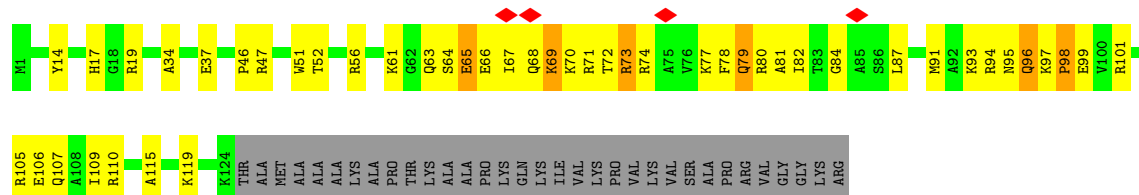
• Molecule 24: 60S RIBOSOMAL PROTEIN L23

Chain LV: 52% 41% 6%



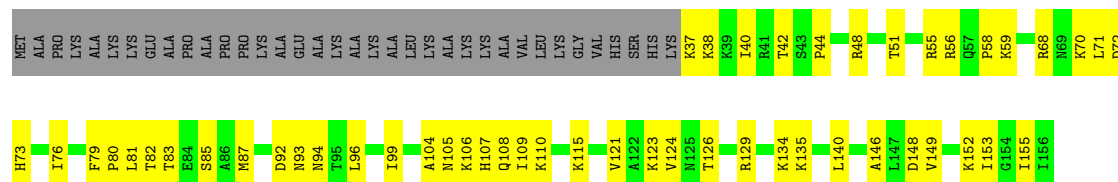
• Molecule 25: 60S RIBOSOMAL PROTEIN L24

Chain LW: 49% 26% 21%



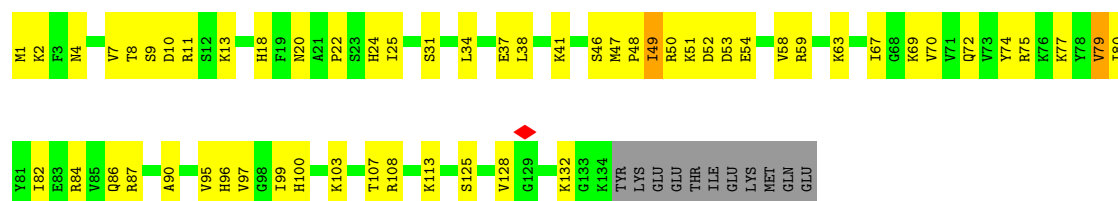
- Molecule 26: 60S RIBOSOMAL PROTEIN L23A

Chain LX: 



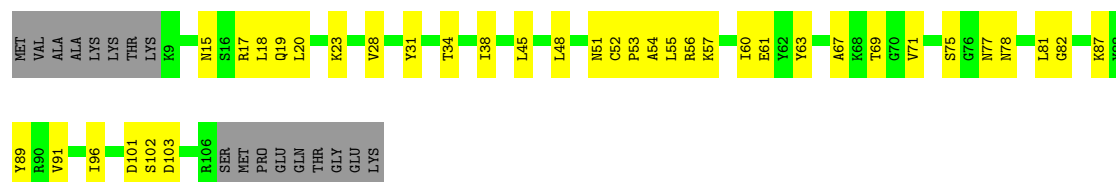
- Molecule 27: 60S RIBOSOMAL PROTEIN L26

Chain LY: 



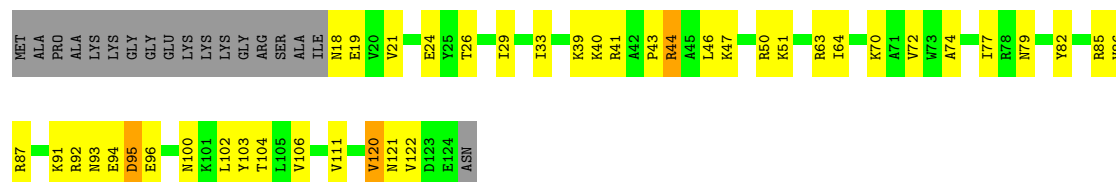
- Molecule 31: 60S RIBOSOMAL PROTEIN L30

Chain Lc: 



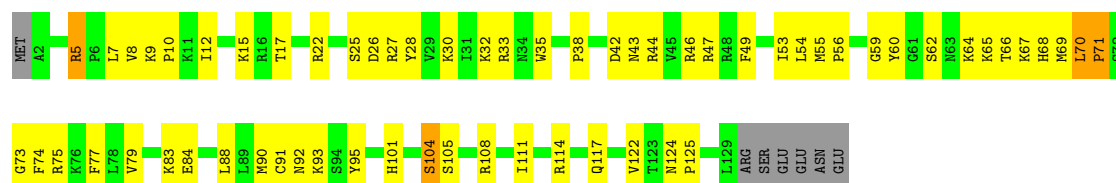
- Molecule 32: 60S RIBOSOMAL PROTEIN L31

Chain Ld: 



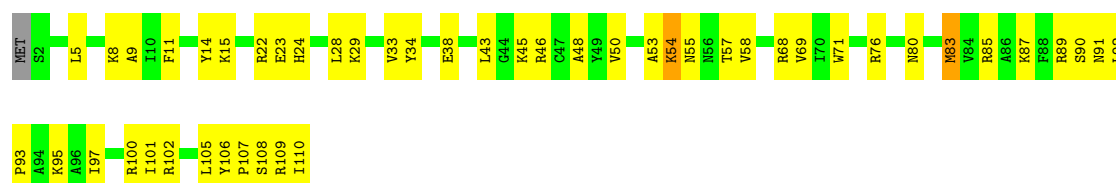
- Molecule 33: 60S RIBOSOMAL PROTEIN L32

Chain Le: 



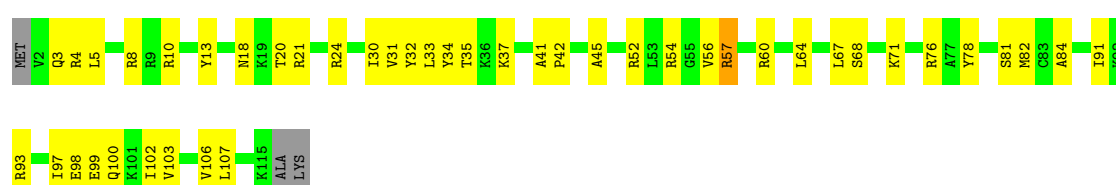
- Molecule 34: 60S RIBOSOMAL PROTEIN L35A

Chain Lf: 

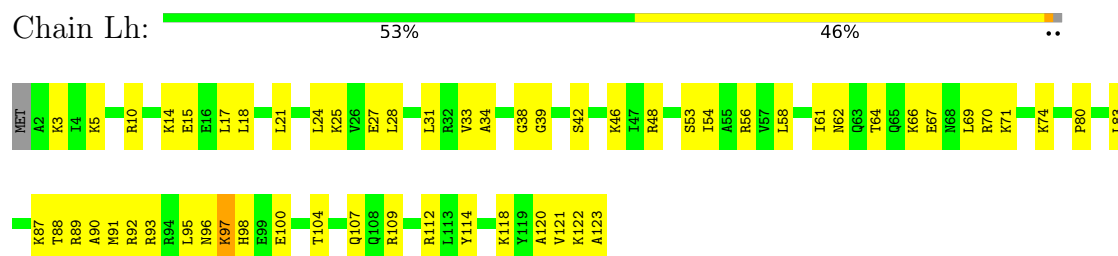


- Molecule 35: 60S RIBOSOMAL PROTEIN L34

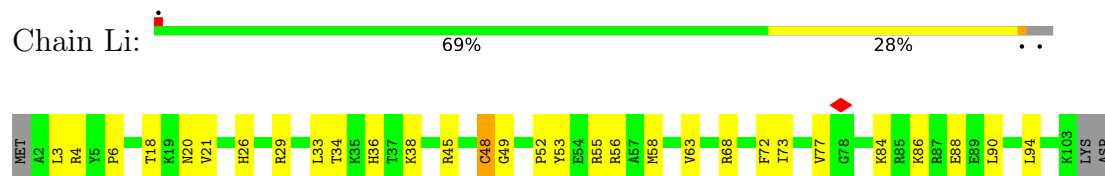
Chain Lg: 



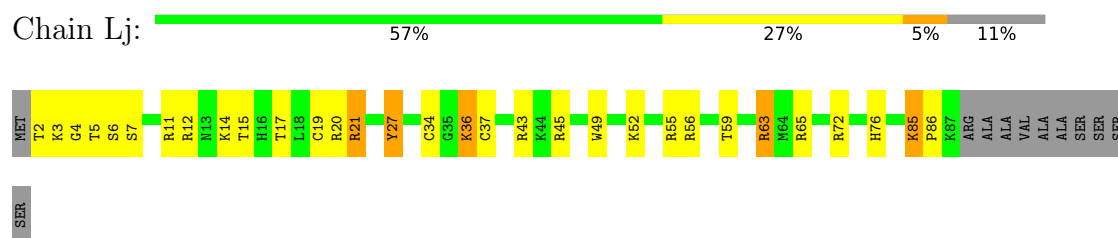
- Molecule 36: 60S RIBOSOMAL PROTEIN L35



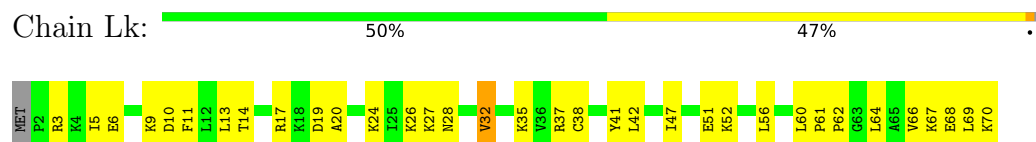
- Molecule 37: 60S RIBOSOMAL PROTEIN L36



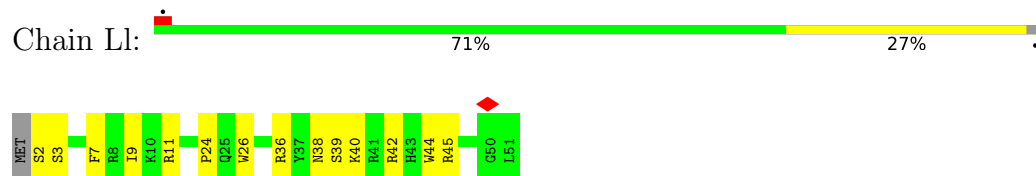
- Molecule 38: 60S RIBOSOMAL PROTEIN L37



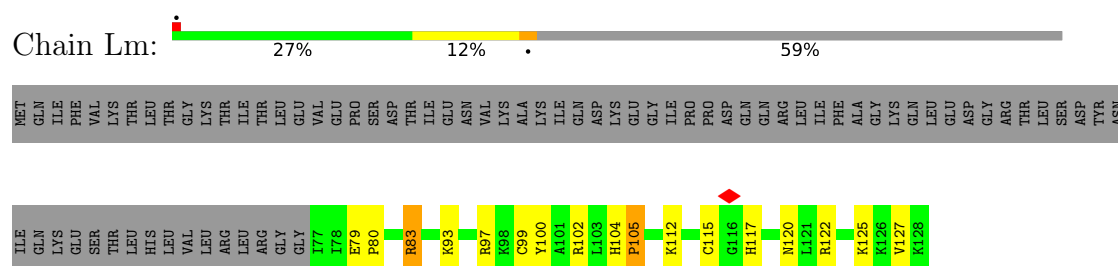
- Molecule 39: 60S RIBOSOMAL PROTEIN L38



- Molecule 40: 60S RIBOSOMAL PROTEIN L39



- Molecule 41: UBIQUITIN-60S RIBOSOMAL PROTEIN L40



- Molecule 42: 60S RIBOSOMAL PROTEIN L41

Chain Ln: 



- Molecule 43: 60S RIBOSOMAL PROTEIN L36A

Chain Lo: 



- Molecule 44: 60S RIBOSOMAL PROTEIN L37A

Chain Lp: 



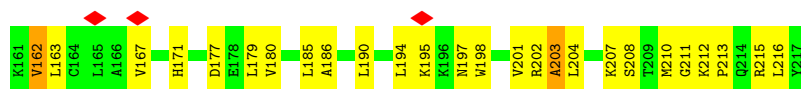
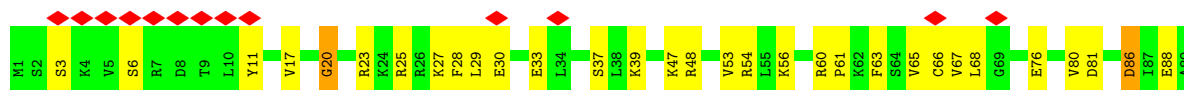
- Molecule 45: 60S RIBOSOMAL PROTEIN L28

Chain Lr: 

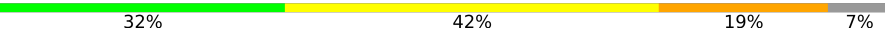


- Molecule 46: 60S RIBOSOMAL PROTEIN L10A

Chain Lz: 



- Molecule 47: 18S ribosomal RNA

Chain S2: 

G1047	G970	A904	C833	U	C	A641	U566	G594	G431	U359	C293	A	G167	A77	U1
C1047	G971	C905	C834	C	C	U642	C570	G505	G432	A360	U294	C	C168	C76	A2
A1052	A972	U906	C835	U	G	A643	U571	G506	A433	C362	C295	C	U169	A79	C3
G1053	C973	G907	C836	U	C	G644	U572	G507	G433	C363		A	A170	C4	C4
G1054	C974	A908	A837	A	C	G645	U573	A508	A365	A508	A299	A	A171	A83	G7
A1055	G975	G909	C838	G	C	G646	U574	G509	G436	A364		C	U172	A84	U8
U1056	G976	G910	C839	C	C	U647	A574	G510	A437			C			U9
C1057	G977	C911	C840	U	G	A648	A575	U511	G438	U367	C303	C	A175	U93	C14
G1058	G978	C912	G841	G	A	U649	A576		A439	U368	U305	G	U176	G94	C17
A1059	C979	A913	C842	A	G	A650		U514	G440	C369	G306	G	G177	C98	C18
U1060	A980	U914	C843	G	G	U651	U581	G515	C441	C370	G307	U	C178	A99	G23
U1061	A981	U844	U844	U	C	U652	C582	A516		A371	G308	A	C179		A25
A1062	A982	G845	G845	G	G		C583	C517	A445		G309	C	G180		A27
	A983	G846	G846	U	A	A655	G584	G518		U375	C310	G	A181		U28
	G986	A847	U848	C	G	G856	C585	A519	A448	A376	C311	C	A103		G29
	G987	A920	U848	C	G	U657	G586		A449	G377	G312	C			U31
	A990	G921		C	C	U658	A587	A522	A450	U378	A313	C	G184	U109	U32
	A991	A922	C851	G	A	G589	A588	A523	G451	C379	U314	C	C186	G113	A38
	A992	G923	G852	C	C	C600	G589	U524	G452	C381	C315	U	C187	U115	A40
	G925	G925	C853	C	C	U681	A590	A525		C382	G316	C	C188	U116	A41
	A926	A926	U863	G	G	G682	U591	A526	C459	G383	C317	U	U189	G28	A42
	A927	A927	A864	C	C		C592	C527		U384	A318	C	C117	C30	U43
	A928	G928	A865	C	C	U666	C593	A528	A464	G385	C319	C	C118	U31	U44
	A929	G929	A865	C	C	A668	A594	A529	A465	G386	G320	G	C192	U119	A45
	C930	C930	G868	C	C	U689	U595	U530	G466	C387	C322	C	C193	G33	A46
	A1001	C931	A869	G	G	A670	U596	A531	G467	U388	C323	C	C194	G122	A50
	A1002	G932	A870	C	C	U671	G597	C532	A468	U389	C324	C	C195	G123	U53
	A1003	G933	U871	C	C	A672	A598	A533	A469	C390	C325	C	C196	G52	G52
	A1004	G934	A872	C	C	G673	A599	G534	G470	C391	G326	C	U197	U142	C53
	A1005	C937	G873	C	C	G674	G600	G535	G471		G327	G	U198	G145	A54
	A1008	A938	G874	C	C	U675	A604	A536	C472	C399	G328	C	U128	A146	G56
	A1009	U939	A875	C	C	U676	A605	C537	A473	C400	U328	C	C129	A147	U57
	U1010	U940	C876	U	U	A679	G606	U538	G474	A401	G329	C	G129	U148	G62
	U1011	G941	C877	C	C	U682	U607	C540	G477	C402	G330	C	C134	A149	A64
	U1012	G942	C878	C	C	G683	U608	U542			G331	C	G134	G155	C65
	U1013	G943	C879	U	U	G684	U609	G543	G480	U406	G332	G	G205	U154	G66
	U1014	A944	G880	U	U	G685	G613	G544	C481	G407	G333	G	G206	A141	G67
	U1015		G881	C	C	U686	C614	A545	G482	A408	G334	G	G207	U141	A68
	U1016	G947	U882	C	C	U687	G617	G546	C483	C409	G335	G	G208	C142	C89
	U1017	C950	C884	C	C	G688	C618	C548	A484	G410	A396	C	A209	U143	G70
	U1018	G951	U887	C	C	U689	U619	C549	A485	G411	G337	C	U210	U144	G71
	U1019	G952	U888	C	C	G690	G621	C550	U486	G412	G338	C	G211	G145	C72
	U1020	C953	U889	C	C	G691	G622	U551	G487	G413	A399	C	C212	A147	C73
	U1021	U954	U890	C	C	G692	G623	U552	A488	A414	C340	C	G213	U148	G74
	U1022	A955	U891	C	C	A693	U627	G553	A489	A415	C341	C	G214	A149	U76
	U1023	G956	U892	C	C	C694	A628	A554	C491	U416	C342	C	C215	G156	
	U1024	A957	U893	C	C	G695	U629	A555	C492	C417	A343	C	A216	U152	
	G1033	G958	G894	C	C	G696	A630	U556	A493	G419	U344	G	U217	G153	
	A1034	G959	G895	C	C	G697	U631	U557	G494	G420	U345	C	U218	U154	
	A1035	U960	U896	C	C	U698	U632	U558	U495	G421	G346	C	U219	G155	
	A1036	G961	U897	C	C	G	C633	G559	C496	U422	C347	C	U222	U156	
	G1037	A962	U898	C	C	G	A634	A560	C497	U423	U352	U	G225	U161	
	A1113	G963	U899	C	C	G	G635	A561	C498	U424	C353	C	A	C162	
	U1114	A964	C900	A	A	C	G636	U562	G499	G425	U354	C	U	U163	
	U1115	U965	G901	U	U	C	C639	G563	A500	A426	U355	C		A164	
	U1116	U966	G902	G	G	G	A640	G565	C501	C429	C356	C		A165	
	U1117		A903	C	C	U			C502	A292		C		A166	
	U1118														
	U1119														
	U1120														
	G1121														
	C1124														

Response	Percentage
Yes	42%
No	32%
Don't know	25%



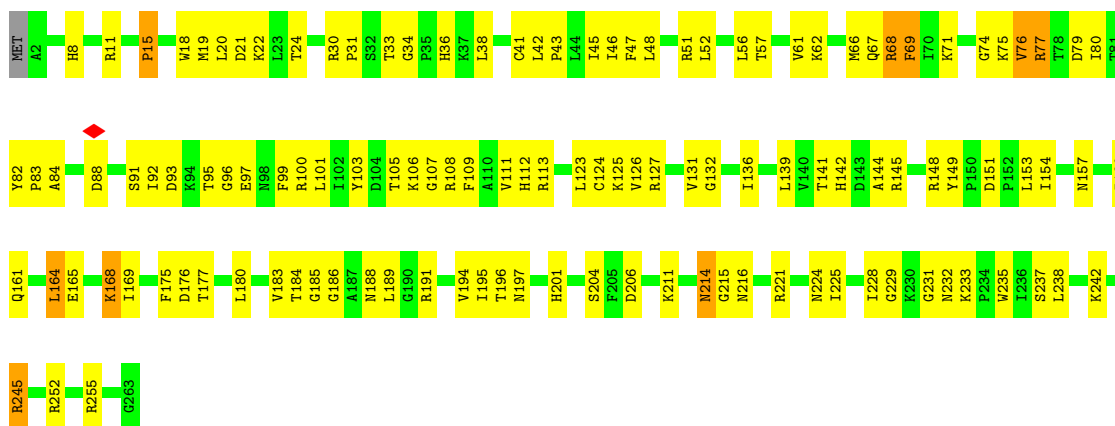
Response	Percentage
Yes	41%
No	39%
Don't know	19%



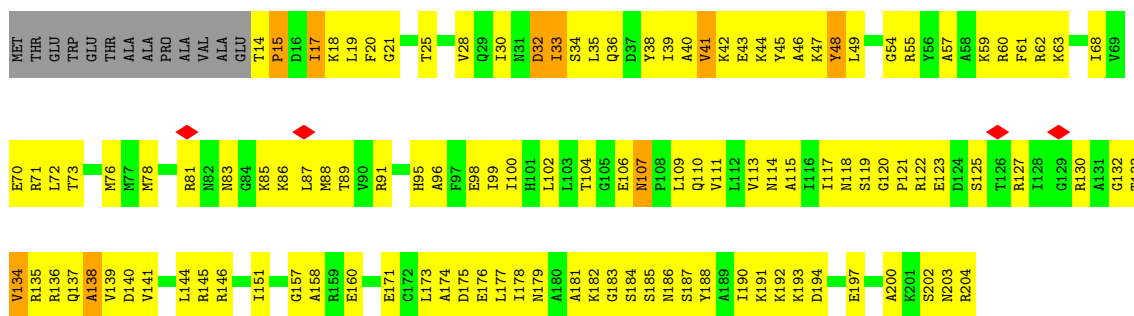
Response	Percentage
Yes	53%
No	38%
Don't know	7%



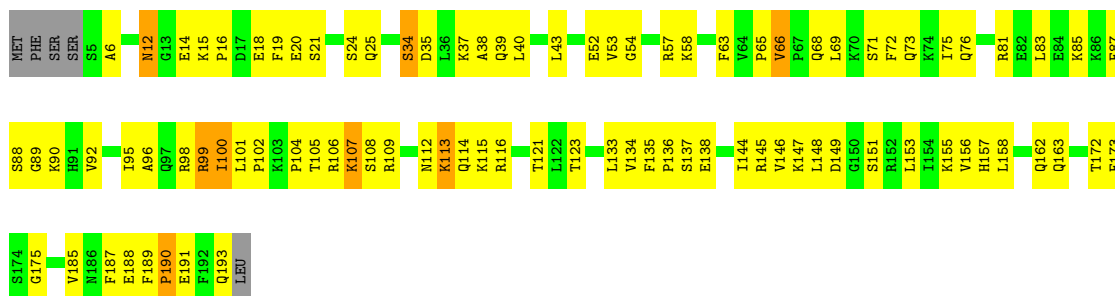
Opinion	Percentage
Doing a good job	53%
Doing a bad job	43%



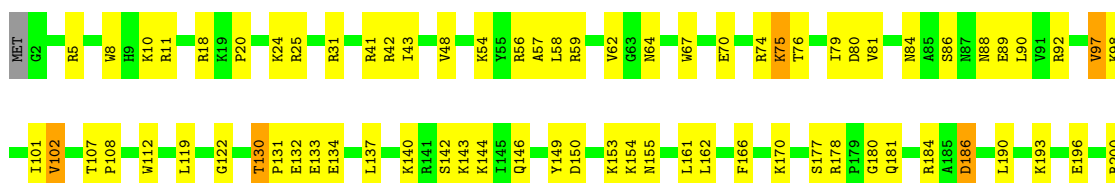
• Molecule 53: 40S RIBOSOMAL PROTEIN S5



• Molecule 54: 40S RIBOSOMAL PROTEIN S7



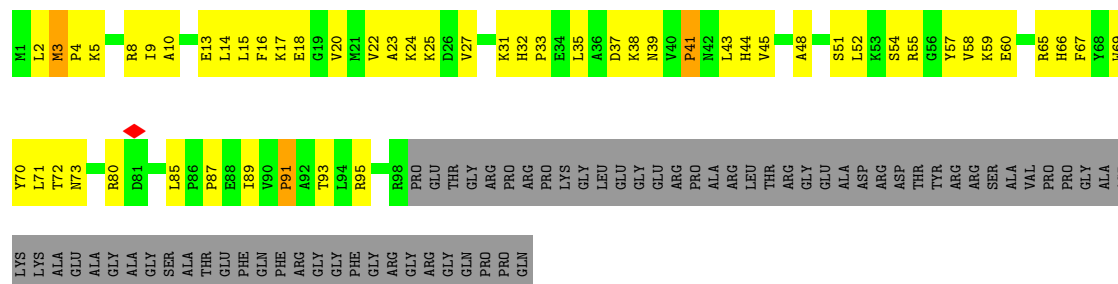
• Molecule 55: 40S RIBOSOMAL PROTEIN S8





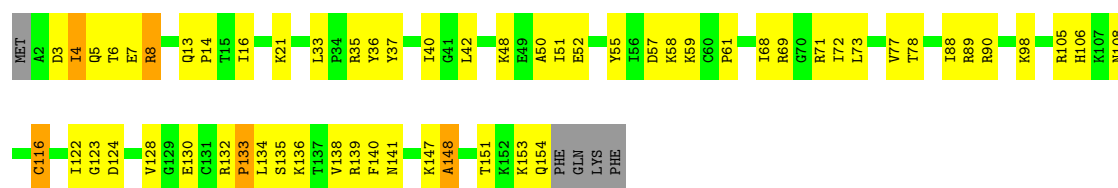
• Molecule 56: 40S RIBOSOMAL PROTEIN S10

Chain SK: 27% 31% 41%



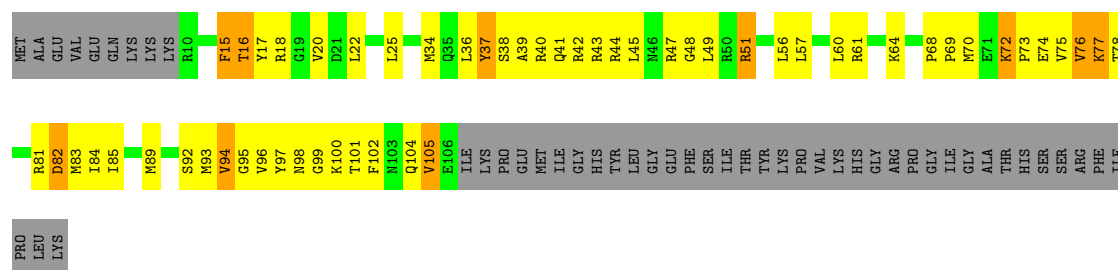
• Molecule 57: 40S RIBOSOMAL PROTEIN S11

Chain SL: 59% 34%



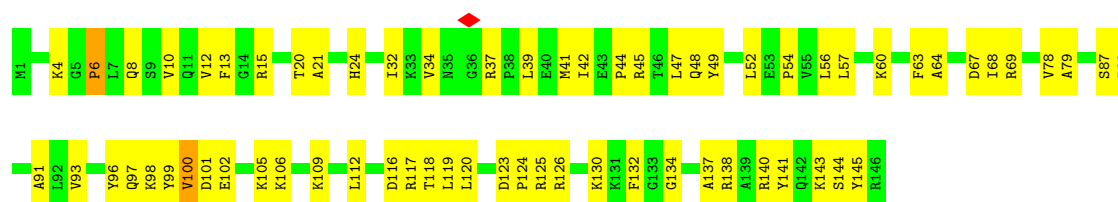
• Molecule 58: 40S RIBOSOMAL PROTEIN S15

Chain SP: 28% 32% 7% 33%



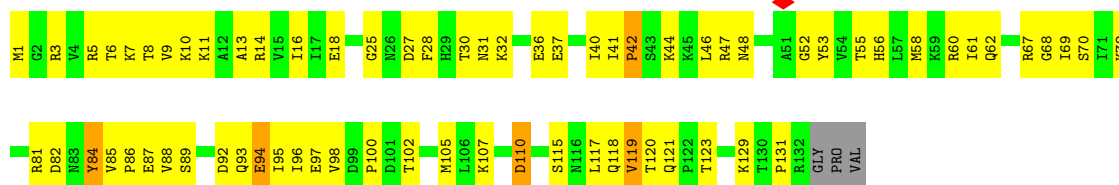
• Molecule 59: 40S RIBOSOMAL PROTEIN S16

Chain SQ: 54% 45%



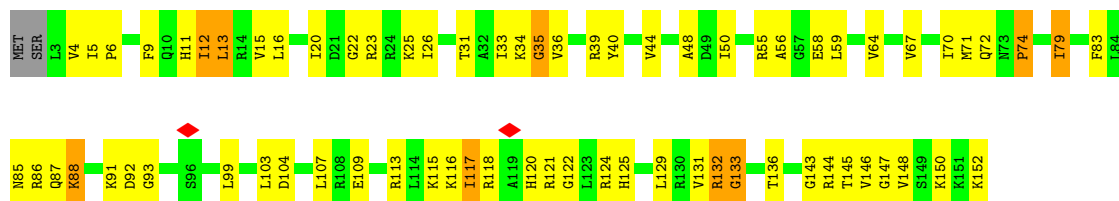
• Molecule 60: 40S RIBOSOMAL PROTEIN S17-LIKE

Chain SR: 



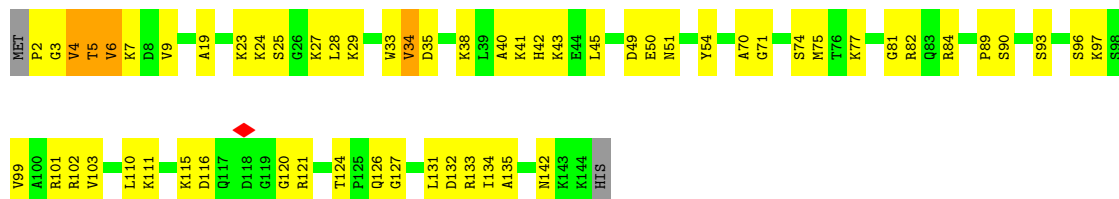
• Molecule 61: 40S RIBOSOMAL PROTEIN S18

Chain SS: 



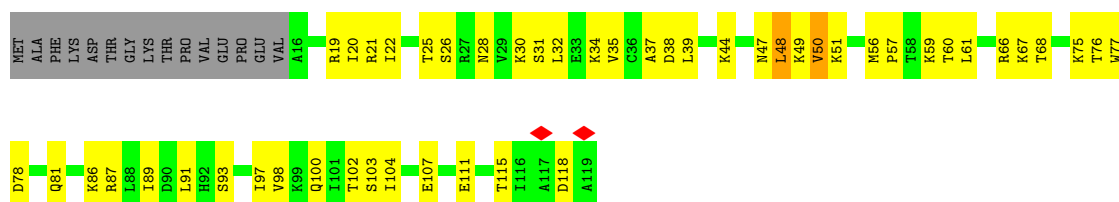
• Molecule 62: 40S RIBOSOMAL PROTEIN S19

Chain ST: 



• Molecule 63: 40S RIBOSOMAL PROTEIN S20

Chain SU: 



• Molecule 64: 40S RIBOSOMAL PROTEIN S21

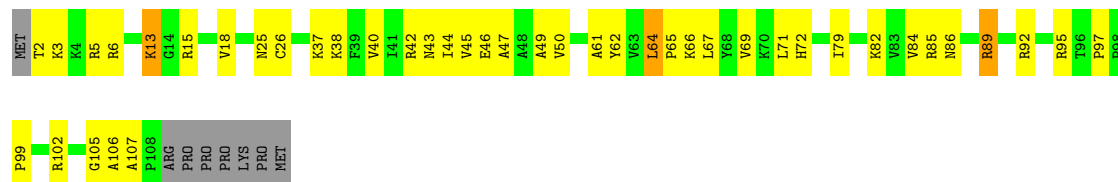
Chain SV: 



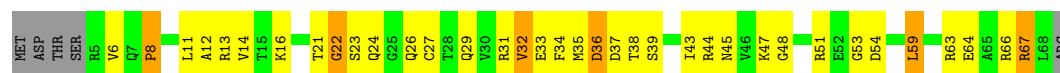
• Molecule 65: 40S RIBOSOMAL PROTEIN S23

Chain SX: 

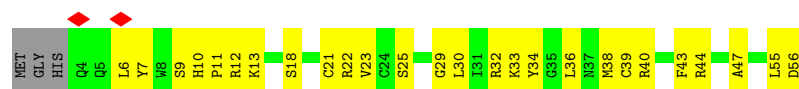
● Molecule 66: 40S RIBOSOMAL PROTEIN S26



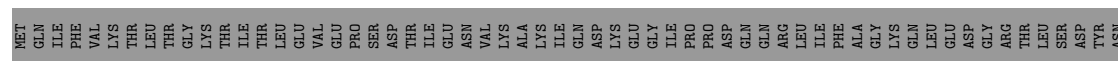
• Molecule 67: 40S RIBOSOMAL PROTEIN S28



• Molecule 68: 40S RIBOSOMAL PROTEIN S29

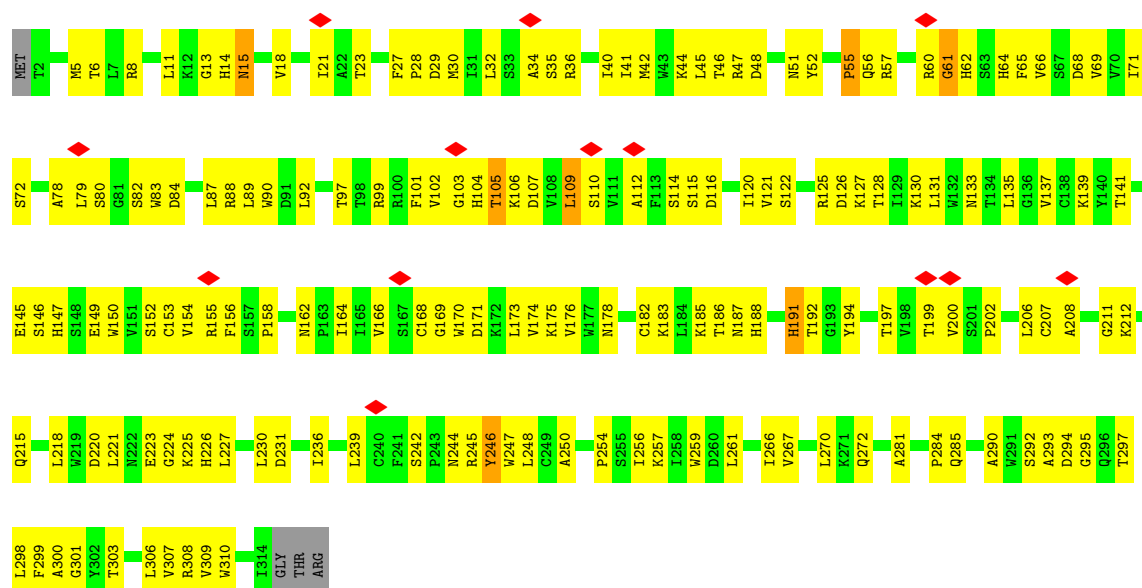


- Molecule 69: UBIQUITIN-40S RIBOSOMAL PROTEIN S27A



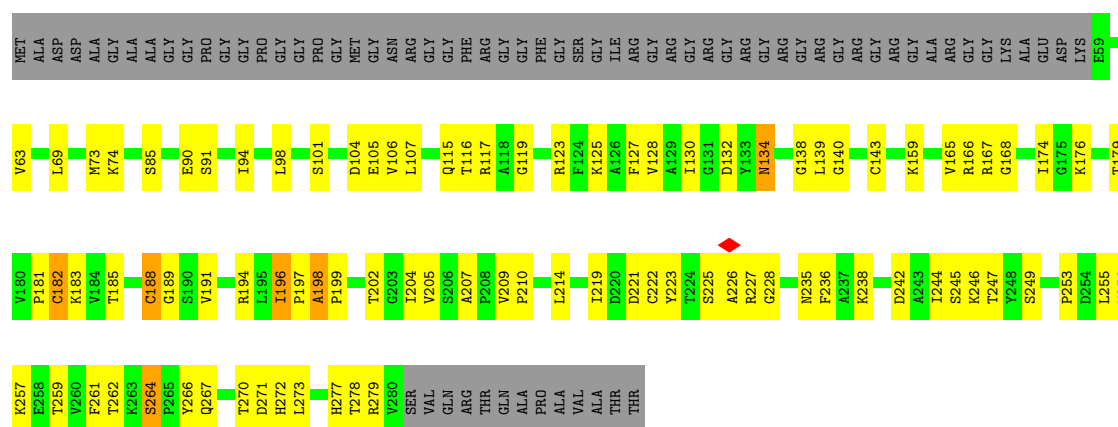
- Molecule 70: GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1





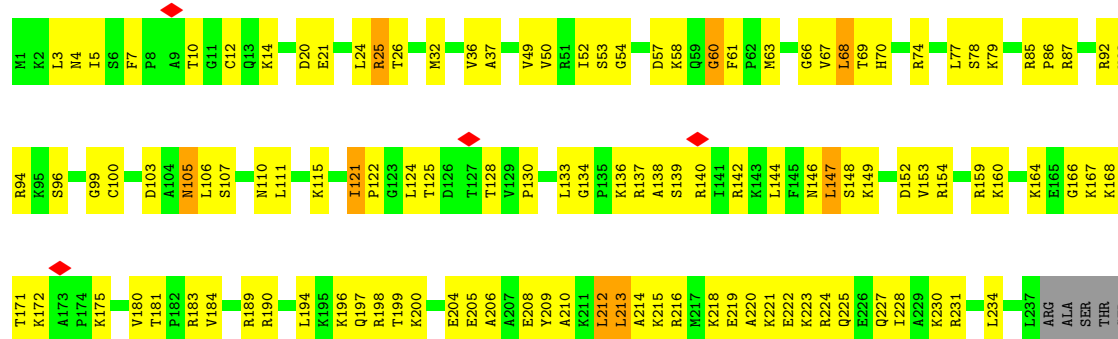
• Molecule 71: 40S RIBOSOMAL PROTEIN S2

Chain SC: 45% 29% 24%



• Molecule 72: 40S RIBOSOMAL PROTEIN S6

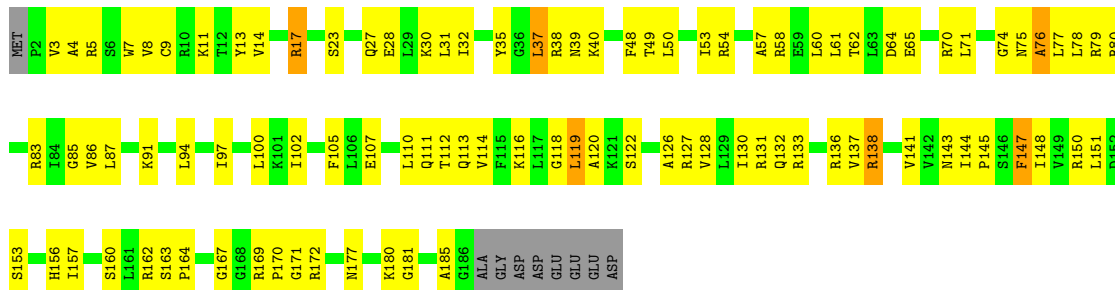
Chain SG: 48% 44% 5%



LYS
SER
GLU
SER
SER
GLN
LYS

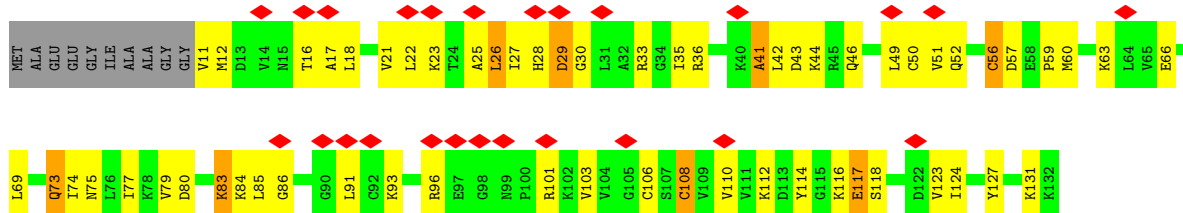
• Molecule 73: 40S RIBOSOMAL PROTEIN S9

Chain SJ:  45% 47% 5%



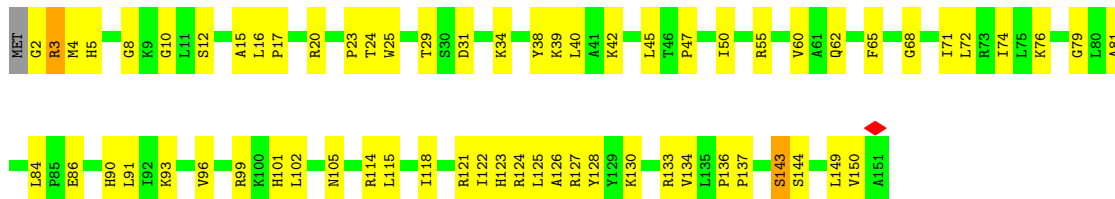
• Molecule 74: 40S RIBOSOMAL PROTEIN

Chain SM:  19% 47% 39% 6% 8%



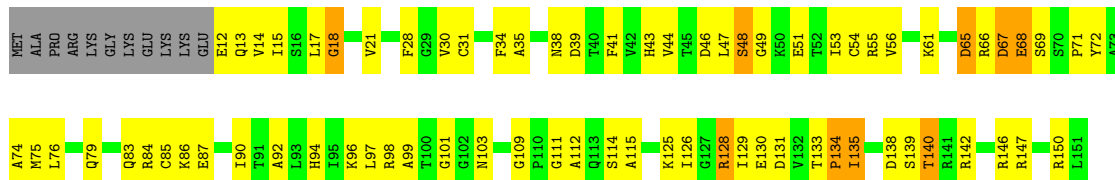
• Molecule 75: 40S RIBOSOMAL PROTEIN S13

Chain SN:  56% 42%



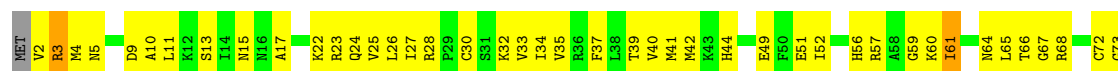
• Molecule 76: 40S RIBOSOMAL PROTEIN S14

Chain SO:  44% 42% 6% 7%



• Molecule 77: 40S RIBOSOMAL PROTEIN S15A

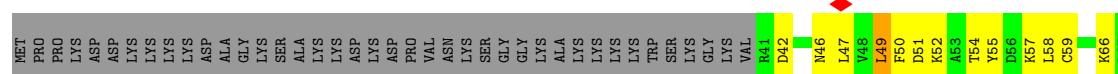
Chain SW:  49% 48%



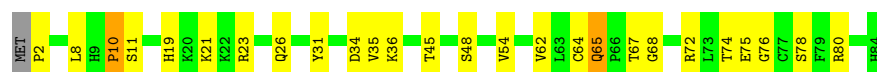
• Molecule 78: 40S RIBOSOMAL PROTEIN S24



• Molecule 79: 40S RIBOSOMAL PROTEIN S25



• Molecule 80: 40S RIBOSOMAL PROTEIN S27



• Molecule 81: 40S RIBOSOMAL PROTEIN S30



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	24000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Not provided	
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	4500	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.362	Depositor
Minimum map value	-0.237	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.020	Depositor
Recommended contour level	0.01	Depositor
Map size (\AA)	330.0, 330.0, 330.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.1, 1.1, 1.1	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.20	0/89645	0.29	0/139764
2	L7	0.17	0/2858	0.22	0/4455
3	L8	0.19	0/3701	0.26	0/5766
4	LA	0.44	0/1936	0.91	3/2596 (0.1%)
5	LB	0.37	0/3306	0.82	6/4424 (0.1%)
6	LC	0.40	0/2973	0.86	9/3992 (0.2%)
7	LD	0.37	0/2428	0.81	6/3252 (0.2%)
8	LE	0.38	0/1996	0.94	8/2673 (0.3%)
9	LF	0.39	0/1905	0.80	0/2539
10	LG	0.39	0/1960	0.87	7/2637 (0.3%)
11	LH	0.34	0/1537	0.80	2/2066 (0.1%)
12	LI	0.40	0/1751	0.84	5/2340 (0.2%)
13	LJ	0.34	0/1433	0.80	0/1915
14	LL	0.39	0/1732	0.90	8/2315 (0.3%)
15	LM	0.38	0/1161	0.80	2/1554 (0.1%)
16	LN	0.42	0/1746	0.87	4/2338 (0.2%)
17	LO	0.42	0/1682	0.84	4/2250 (0.2%)
18	LP	0.41	0/1268	0.85	2/1701 (0.1%)
19	LQ	0.39	0/1537	0.91	7/2052 (0.3%)
20	LR	0.38	0/1582	0.80	0/2091
21	LS	0.38	0/1493	0.79	2/2003 (0.1%)
22	LT	0.40	0/1326	0.93	4/1770 (0.2%)
23	LU	0.32	0/839	0.75	1/1126 (0.1%)
24	LV	0.39	0/993	0.82	2/1332 (0.2%)
25	LW	0.38	0/1030	0.93	8/1364 (0.6%)
26	LX	0.38	0/1002	0.87	3/1345 (0.2%)
27	LY	0.36	0/1132	0.85	2/1504 (0.1%)
28	LZ	0.38	0/1130	0.77	0/1507
29	La	0.39	0/1191	0.80	0/1591
30	Lb	0.35	0/620	0.76	2/819 (0.2%)
31	Lc	0.37	0/774	0.75	0/1038
32	Ld	0.38	0/903	0.80	1/1216 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Le	0.42	0/1071	0.87	5/1429 (0.3%)
34	Lf	0.38	0/895	0.87	1/1198 (0.1%)
35	Lg	0.37	0/916	0.78	0/1220
36	Lh	0.35	0/1023	0.79	0/1351
37	Li	0.39	0/843	0.78	2/1115 (0.2%)
38	Lj	0.41	0/720	0.87	1/952 (0.1%)
39	Lk	0.37	0/575	0.88	3/761 (0.4%)
40	Ll	0.38	0/454	0.81	0/599
41	Lm	0.36	0/435	0.95	3/575 (0.5%)
42	Ln	0.40	0/231	0.89	1/294 (0.3%)
43	Lo	0.37	0/875	0.81	0/1153
44	Lp	0.42	0/718	0.81	0/953
45	Lr	0.37	0/1017	0.83	3/1364 (0.2%)
46	Lz	0.34	0/1769	0.81	1/2371 (0.0%)
47	S2	0.16	0/41243	0.26	0/64257
48	S6	0.21	1/1795 (0.1%)	0.36	1/2798 (0.0%)
49	SA	0.35	0/1784	0.83	5/2424 (0.2%)
50	SB	0.36	0/1765	0.78	0/2362
51	SD	0.37	0/1793	0.79	0/2414
52	SE	0.34	0/2118	0.84	1/2849 (0.0%)
53	SF	0.40	0/1531	0.86	4/2059 (0.2%)
54	SH	0.34	0/1544	0.80	0/2068
55	SI	0.34	0/1715	0.76	0/2287
56	SK	0.36	0/851	0.91	0/1147
57	SL	0.36	0/1268	0.76	0/1696
58	SP	0.38	0/815	0.87	1/1087 (0.1%)
59	SQ	0.33	0/1177	0.80	2/1575 (0.1%)
60	SR	0.39	0/1086	0.92	3/1457 (0.2%)
61	SS	0.33	0/1253	0.86	2/1676 (0.1%)
62	ST	0.34	0/1131	0.81	1/1515 (0.1%)
63	SU	0.37	0/831	0.89	0/1115
64	SV	0.34	0/643	0.72	1/860 (0.1%)
65	SX	0.39	0/1116	0.79	0/1490
66	Sa	0.41	0/862	0.81	0/1156
67	Sc	0.36	0/508	0.88	3/680 (0.4%)
68	Sd	0.30	0/455	0.76	0/603
69	Sf	0.33	0/593	0.77	0/786
70	Sg	0.31	0/2493	0.81	2/3394 (0.1%)
71	SC	0.37	0/1762	0.87	9/2381 (0.4%)
72	SG	0.34	0/1946	0.92	9/2590 (0.3%)
73	SJ	0.35	0/1550	0.77	0/2069
74	SM	0.32	0/962	0.80	1/1290 (0.1%)
75	SN	0.40	0/1232	0.81	1/1656 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SO	0.41	0/1062	0.95	7/1425 (0.5%)
77	SW	0.39	0/1051	0.86	1/1406 (0.1%)
78	SY	0.35	0/1083	0.76	0/1438
79	SZ	0.36	0/604	0.91	1/810 (0.1%)
80	Sb	0.35	0/665	0.88	2/891 (0.2%)
81	Se	0.34	0/465	0.69	0/612
All	All	0.28	1/234864 (0.0%)	0.56	175/344993 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
34	Lf	0	1
58	SP	0	1
All	All	0	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	S6	76	A	C4'-O4'	-5.29	1.38	1.45

All (175) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	LQ	58	ARG	CA-C-N	12.44	128.74	119.66
19	LQ	58	ARG	C-N-CA	12.44	128.74	119.66
48	S6	76	A	C5'-C4'-O4'	10.61	125.02	109.10
6	LC	206	GLY	CA-C-N	9.77	129.82	119.76
6	LC	206	GLY	C-N-CA	9.77	129.82	119.76
22	LT	133	ALA	CA-C-N	9.77	126.79	119.66
22	LT	133	ALA	C-N-CA	9.77	126.79	119.66
72	SG	121	ILE	CA-C-N	9.47	131.68	119.84
72	SG	121	ILE	C-N-CA	9.47	131.68	119.84
17	LO	108	ILE	CA-C-N	9.08	126.29	119.66
17	LO	108	ILE	C-N-CA	9.08	126.29	119.66
53	SF	107	ASN	CA-C-N	8.77	128.93	119.28
53	SF	107	ASN	C-N-CA	8.77	128.93	119.28
14	LL	129	ARG	CB-CA-C	-7.91	107.44	116.54
6	LC	50	GLN	CA-C-N	7.70	127.71	119.78
6	LC	50	GLN	C-N-CA	7.70	127.71	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	Lz	20	GLY	N-CA-C	7.68	121.94	112.73
45	Lr	103	ARG	CA-C-N	7.34	127.36	119.28
45	Lr	103	ARG	C-N-CA	7.34	127.36	119.28
72	SG	61	PHE	CA-C-N	7.20	127.19	119.78
72	SG	61	PHE	C-N-CA	7.20	127.19	119.78
33	Le	70	LEU	CA-C-N	7.13	128.75	119.84
33	Le	70	LEU	C-N-CA	7.13	128.75	119.84
76	SO	135	ILE	N-CA-C	7.13	114.76	108.63
71	SC	182	CYS	CB-CA-C	-7.03	108.46	116.54
15	LM	18	GLY	CA-C-N	6.99	126.97	119.28
15	LM	18	GLY	C-N-CA	6.99	126.97	119.28
76	SO	135	ILE	CA-C-N	6.99	126.98	119.78
76	SO	135	ILE	C-N-CA	6.99	126.98	119.78
14	LL	54	PRO	CA-C-N	6.86	134.05	121.70
14	LL	54	PRO	C-N-CA	6.86	134.05	121.70
59	SQ	123	ASP	CA-C-N	6.86	126.82	119.28
59	SQ	123	ASP	C-N-CA	6.86	126.82	119.28
16	LN	155	VAL	N-CA-C	-6.77	106.54	113.10
14	LL	54	PRO	CA-C-O	-6.75	113.65	121.34
76	SO	18	GLY	CA-C-N	6.74	126.66	119.85
76	SO	18	GLY	C-N-CA	6.74	126.66	119.85
14	LL	11	LYS	CA-C-N	6.73	126.71	119.78
14	LL	11	LYS	C-N-CA	6.73	126.71	119.78
39	Lk	61	PRO	N-CA-C	6.71	118.89	110.70
38	Lj	4	GLY	N-CA-C	6.64	116.25	110.21
7	LD	235	MET	N-CA-C	-6.62	103.82	114.09
41	Lm	79	GLU	CA-C-N	6.57	126.51	119.28
41	Lm	79	GLU	C-N-CA	6.57	126.51	119.28
49	SA	206	ASP	CA-C-N	6.46	126.38	119.28
49	SA	206	ASP	C-N-CA	6.46	126.38	119.28
22	LT	145	GLY	N-CA-C	-6.45	106.87	115.32
5	LB	17	LEU	CA-C-N	-6.45	111.78	119.84
5	LB	17	LEU	C-N-CA	-6.45	111.78	119.84
10	LG	179	VAL	N-CA-C	6.38	114.21	107.76
26	LX	79	PHE	CA-C-N	6.35	126.32	119.78
26	LX	79	PHE	C-N-CA	6.35	126.32	119.78
19	LQ	158	THR	CA-C-N	6.34	126.25	119.85
19	LQ	158	THR	C-N-CA	6.34	126.25	119.85
17	LO	109	PRO	CA-C-N	6.22	126.79	120.38
17	LO	109	PRO	C-N-CA	6.22	126.79	120.38
8	LE	131	LYS	CA-C-N	6.22	126.18	120.21
8	LE	131	LYS	C-N-CA	6.22	126.18	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	LN	145	ASN	CA-C-N	6.19	126.16	119.78
16	LN	145	ASN	C-N-CA	6.19	126.16	119.78
25	LW	79	GLN	CA-C-N	6.18	132.82	121.70
25	LW	79	GLN	C-N-CA	6.18	132.82	121.70
67	Sc	32	VAL	N-CA-C	6.17	117.71	109.37
49	SA	70	ASN	CA-C-N	6.15	126.04	119.28
49	SA	70	ASN	C-N-CA	6.15	126.04	119.28
71	SC	209	VAL	CA-C-N	-6.14	113.40	120.04
71	SC	209	VAL	C-N-CA	-6.14	113.40	120.04
16	LN	148	THR	N-CA-C	-6.04	104.73	114.09
4	LA	7	GLY	N-CA-C	-5.98	107.57	114.69
72	SG	7	PHE	CA-C-N	5.97	125.85	119.28
72	SG	7	PHE	C-N-CA	5.97	125.85	119.28
74	SM	73	GLN	CB-CA-C	-5.96	108.70	115.79
71	SC	264	SER	CA-C-N	5.88	125.75	119.28
71	SC	264	SER	C-N-CA	5.88	125.75	119.28
25	LW	98	PRO	CA-C-O	-5.87	114.65	121.34
12	LI	46	PHE	CA-C-N	5.86	125.72	119.28
12	LI	46	PHE	C-N-CA	5.86	125.72	119.28
60	SR	129	LYS	N-CA-C	-5.86	103.61	111.87
6	LC	275	SER	CB-CA-C	-5.85	109.85	116.63
25	LW	69	LYS	CA-C-N	5.84	132.21	121.70
25	LW	69	LYS	C-N-CA	5.84	132.21	121.70
72	SG	134	GLY	CA-C-N	5.76	125.72	119.78
72	SG	134	GLY	C-N-CA	5.76	125.72	119.78
64	SV	6	GLY	N-CA-C	-5.73	107.82	115.32
12	LI	25	GLY	N-CA-C	-5.70	107.37	115.30
67	Sc	48	GLY	CA-C-N	5.70	125.65	119.78
67	Sc	48	GLY	C-N-CA	5.70	125.65	119.78
60	SR	84	TYR	CA-C-N	5.68	123.82	120.24
60	SR	84	TYR	C-N-CA	5.68	123.82	120.24
45	Lr	45	HIS	N-CA-C	5.65	117.38	108.96
33	Le	5	ARG	CA-C-N	5.61	125.55	119.78
33	Le	5	ARG	C-N-CA	5.61	125.55	119.78
71	SC	196	ILE	CA-C-N	5.59	125.53	119.78
71	SC	196	ILE	C-N-CA	5.59	125.53	119.78
7	LD	44	TYR	CB-CA-C	-5.58	109.65	117.23
4	LA	196	TRP	N-CA-C	5.57	120.33	112.75
7	LD	46	THR	CA-C-N	5.57	125.52	119.78
7	LD	46	THR	C-N-CA	5.57	125.52	119.78
8	LE	111	LYS	CB-CA-C	-5.47	109.28	115.79
53	SF	134	VAL	N-CA-C	5.46	116.85	108.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	LW	69	LYS	N-CA-C	5.45	122.40	110.80
11	LH	60	TRP	CB-CA-C	-5.44	110.28	116.54
12	LI	76	MET	N-CA-C	-5.44	102.82	110.50
12	LI	196	GLY	N-CA-C	5.43	119.05	110.96
22	LT	40	VAL	N-CA-C	5.42	116.29	108.48
70	Sg	103	GLY	N-CA-C	-5.42	108.16	115.36
6	LC	241	ALA	CA-C-N	5.39	126.58	119.84
6	LC	241	ALA	C-N-CA	5.39	126.58	119.84
11	LH	151	ILE	N-CA-C	-5.39	105.13	113.16
71	SC	198	ALA	CA-C-N	5.38	125.32	119.78
71	SC	198	ALA	C-N-CA	5.38	125.32	119.78
53	SF	138	ALA	N-CA-C	5.37	118.42	110.48
49	SA	196	GLU	N-CA-C	5.36	117.88	111.71
21	LS	139	ARG	CA-C-N	5.35	125.17	119.28
21	LS	139	ARG	C-N-CA	5.35	125.17	119.28
34	Lf	90	SER	CA-C-O	5.35	121.04	117.94
61	SS	79	ILE	CA-C-N	5.35	125.29	119.78
61	SS	79	ILE	C-N-CA	5.35	125.29	119.78
6	LC	150	LEU	CA-C-N	-5.34	114.70	121.91
6	LC	150	LEU	C-N-CA	-5.34	114.70	121.91
5	LB	171	LEU	CA-C-N	5.30	125.11	119.28
5	LB	171	LEU	C-N-CA	5.30	125.11	119.28
19	LQ	164	LYS	CA-C-N	5.29	125.19	119.85
19	LQ	164	LYS	C-N-CA	5.29	125.19	119.85
26	LX	126	THR	N-CA-C	5.28	117.68	110.55
18	LP	131	ARG	N-CA-C	5.28	116.68	107.49
27	LY	75	ARG	N-CA-C	5.27	117.03	111.28
70	Sg	109	LEU	CB-CA-C	-5.24	108.82	116.53
10	LG	57	TRP	CA-C-N	5.23	126.38	119.84
10	LG	57	TRP	C-N-CA	5.23	126.38	119.84
32	Ld	95	ASP	N-CA-C	-5.23	105.02	111.40
52	SE	84	ALA	CB-CA-C	-5.23	110.53	116.54
5	LB	12	GLY	N-CA-C	-5.22	105.08	112.81
39	Lk	60	LEU	CA-C-N	5.21	125.75	120.38
39	Lk	60	LEU	C-N-CA	5.21	125.75	120.38
37	Li	3	LEU	CB-CA-C	-5.20	110.60	116.63
77	SW	61	ILE	N-CA-C	5.20	114.27	106.42
8	LE	145	THR	CA-C-N	-5.19	114.41	119.76
8	LE	145	THR	C-N-CA	-5.19	114.41	119.76
27	LY	79	VAL	N-CA-C	5.19	115.52	107.78
14	LL	94	ILE	N-CA-C	-5.19	107.70	112.83
10	LG	162	ASP	CA-C-N	-5.18	113.36	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	LG	162	ASP	C-N-CA	-5.18	113.36	119.84
7	LD	232	THR	CA-C-N	5.18	125.10	119.76
7	LD	232	THR	C-N-CA	5.18	125.10	119.76
18	LP	78	TRP	N-CA-C	5.17	116.65	109.31
41	Lm	83	ARG	N-CA-C	-5.17	106.95	113.20
14	LL	129	ARG	N-CA-C	5.16	116.15	108.31
76	SO	109	GLY	CA-C-N	5.15	124.95	119.28
76	SO	109	GLY	C-N-CA	5.15	124.95	119.28
37	Li	63	VAL	N-CA-C	-5.14	106.08	113.07
24	LV	20	LEU	CA-C-N	5.13	126.26	119.84
24	LV	20	LEU	C-N-CA	5.13	126.26	119.84
58	SP	72	LYS	N-CA-C	5.13	117.97	108.94
72	SG	60	GLY	N-CA-C	5.13	122.18	115.36
8	LE	83	LYS	N-CA-C	5.11	116.54	110.97
8	LE	46	ARG	CB-CA-C	-5.11	109.19	116.34
23	LU	97	ARG	N-CA-C	-5.11	105.61	111.07
79	SZ	78	LYS	N-CA-C	-5.10	107.57	112.97
42	Ln	12	ARG	N-CA-C	-5.08	106.42	113.18
75	SN	134	VAL	N-CA-C	-5.08	106.16	113.07
8	LE	183	ARG	N-CA-C	5.08	118.45	111.54
33	Le	79	VAL	N-CA-C	5.07	114.78	106.72
5	LB	56	ILE	N-CA-C	5.06	115.20	108.27
25	LW	98	PRO	CA-C-N	5.06	130.81	121.70
25	LW	98	PRO	C-N-CA	5.06	130.81	121.70
19	LQ	95	VAL	N-CA-C	5.04	113.33	109.19
62	ST	110	LEU	N-CA-C	-5.04	107.13	113.28
80	Sb	65	GLN	CA-C-N	5.04	124.97	119.78
80	Sb	65	GLN	C-N-CA	5.04	124.97	119.78
30	Lb	36	ASP	CA-C-N	5.03	124.81	119.28
30	Lb	36	ASP	C-N-CA	5.03	124.81	119.28
10	LG	133	PRO	CA-C-N	5.02	126.12	119.84
10	LG	133	PRO	C-N-CA	5.02	126.12	119.84
4	LA	248	GLY	N-CA-C	-5.00	108.11	114.16

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
34	Lf	105	LEU	Peptide
58	SP	72	LYS	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	L5	80184	0	40397	1527	0
2	L7	2558	0	1296	34	0
3	L8	3314	0	1683	56	0
4	LA	1898	0	1993	86	0
5	LB	3238	0	3376	118	0
6	LC	2919	0	3092	115	0
7	LD	2382	0	2410	79	0
8	LE	1958	0	2126	82	0
9	LF	1870	0	1996	68	0
10	LG	1927	0	2074	77	0
11	LH	1518	0	1601	55	0
12	LI	1711	0	1749	45	0
13	LJ	1410	0	1441	59	0
14	LL	1701	0	1818	66	0
15	LM	1138	0	1204	53	0
16	LN	1701	0	1749	77	0
17	LO	1650	0	1794	61	0
18	LP	1242	0	1269	44	0
19	LQ	1513	0	1628	54	0
20	LR	1566	0	1729	49	0
21	LS	1453	0	1490	66	0
22	LT	1298	0	1366	54	0
23	LU	825	0	850	23	0
24	LV	979	0	1039	44	0
25	LW	1015	0	1079	51	0
26	LX	985	0	1066	37	0
27	LY	1115	0	1205	42	0
28	LZ	1107	0	1182	42	0
29	La	1162	0	1213	42	0
30	Lb	610	0	650	18	0
31	Lc	764	0	804	22	0
32	Ld	888	0	930	31	0
33	Le	1053	0	1147	50	0
34	Lf	876	0	912	34	0
35	Lg	906	0	1000	38	0
36	Lh	1015	0	1148	50	0
37	Li	832	0	917	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Lj	705	0	738	32	0
39	Lk	569	0	637	22	0
40	Ll	444	0	483	13	0
41	Lm	429	0	466	13	0
42	Ln	230	0	276	9	0
43	Lo	862	0	932	21	0
44	Lp	708	0	757	29	0
45	Lr	1002	0	1068	42	0
46	Lz	1741	0	1854	58	0
47	S2	36900	0	18598	792	0
48	S6	1604	0	816	43	0
49	SA	1747	0	1751	72	0
50	SB	1738	0	1809	81	0
51	SD	1765	0	1865	74	0
52	SE	2076	0	2177	98	0
53	SF	1509	0	1563	103	0
54	SH	1521	0	1616	71	0
55	SI	1686	0	1772	55	0
56	SK	827	0	854	45	0
57	SL	1247	0	1323	44	0
58	SP	804	0	841	55	0
59	SQ	1158	0	1232	45	0
60	SR	1072	0	1130	55	0
61	SS	1235	0	1309	65	0
62	ST	1112	0	1146	46	0
63	SU	821	0	883	46	0
64	SV	636	0	637	24	0
65	SX	1098	0	1167	57	0
66	Sa	847	0	896	25	0
67	Sc	506	0	536	23	0
68	Sd	445	0	442	31	0
69	Sf	581	0	597	25	0
70	Sg	2436	0	2393	125	0
71	SC	1725	0	1813	60	0
72	SG	1923	0	2089	105	0
73	SJ	1525	0	1640	84	0
74	SM	952	0	983	49	0
75	SN	1208	0	1294	48	0
76	SO	1049	0	1073	58	0
77	SW	1034	0	1080	59	0
78	SY	1065	0	1142	54	0
79	SZ	598	0	656	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	Sb	651	0	672	19	0
81	Se	459	0	503	17	0
82	L5	149	0	0	0	0
82	L7	5	0	0	0	0
82	L8	2	0	0	0	0
82	LA	1	0	0	0	0
82	LB	1	0	0	0	0
82	LH	1	0	0	0	0
82	LJ	1	0	0	0	0
82	LN	1	0	0	0	0
82	LP	1	0	0	0	0
82	LQ	1	0	0	0	0
82	La	1	0	0	0	0
82	Le	1	0	0	0	0
82	Ll	1	0	0	0	0
82	S2	66	0	0	0	0
82	S6	7	0	0	0	0
83	Lg	1	0	0	0	0
83	Lj	1	0	0	0	0
83	Lm	1	0	0	0	0
83	Lo	1	0	0	0	0
83	Lp	1	0	0	0	0
83	Sa	1	0	0	0	0
All	All	218776	0	161932	5392	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 15.

All (5392) 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)
25:LW:69:LYS:H	25:LW:70:LYS:HB2	1.28	0.98
1:L5:747:A:H62	1:L5:916:C:H42	1.12	0.95
47:S2:122:G:H4'	52:SE:145:ARG:HG2	1.48	0.94
58:SP:96:VAL:HG11	61:SS:118:ARG:HG3	1.53	0.91
1:L5:1961:G:H1	1:L5:2024:G:HO2'	1.12	0.90
25:LW:77:LYS:HB3	25:LW:78:PHE:HB3	1.54	0.90
50:SB:28:LYS:HD3	50:SB:48:LEU:HD21	1.52	0.90
10:LG:47:PRO:HG2	10:LG:49:ARG:HE	1.37	0.90
1:L5:3953:G:N7	1:L5:4056:A:N6	2.21	0.88
1:L5:1176:C:N3	1:L5:1183:C:N4	2.22	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SF:127:ARG:HB3	53:SF:137:GLN:HB2	1.57	0.87
47:S2:1270:G:N2	47:S2:1513:C:N3	2.23	0.87
70:Sg:147:HIS:HE1	70:Sg:173:LEU:HB2	1.38	0.86
54:SH:144:ILE:HG23	77:SW:52:ILE:HG23	1.58	0.86
1:L5:1072:C:N4	1:L5:1239:C:N3	2.24	0.86
1:L5:4296:U:O4	1:L5:4314:C:N4	2.10	0.85
47:S2:873:G:OP1	57:SL:154:GLN:NE2	2.09	0.85
70:Sg:18:VAL:HA	70:Sg:35:SER:HA	1.58	0.85
6:LC:208:CYS:HB2	6:LC:248:ARG:HE	1.40	0.85
47:S2:337:C:H2'	47:S2:338:G:H4'	1.59	0.84
9:LF:71:MET:HA	9:LF:74:MET:HE3	1.59	0.84
57:SL:55:TYR:OH	57:SL:116:CYS:SG	2.35	0.84
47:S2:1218:C:N3	47:S2:1680:G:N2	2.25	0.84
48:S6:51:U:H3	48:S6:63:A:H61	1.24	0.84
72:SG:216:ARG:HA	72:SG:219:GLU:HG2	1.59	0.83
52:SE:95:THR:HG22	78:SY:16:ARG:HD2	1.57	0.83
21:LS:81:TRP:HB3	21:LS:127:MET:HE3	1.60	0.83
76:SO:30:VAL:HG12	76:SO:94:HIS:HB2	1.60	0.83
77:SW:26:LEU:HD11	77:SW:60:LYS:HB3	1.60	0.83
59:SQ:6:PRO:HG2	59:SQ:8:GLN:HE22	1.42	0.82
72:SG:5:ILE:HG12	72:SG:111:LEU:HB3	1.61	0.82
5:LB:14:LEU:HA	5:LB:17:LEU:HD13	1.60	0.82
1:L5:1761:G:H1	1:L5:1768:C:H42	1.24	0.82
1:L5:3692:A:H62	1:L5:3823:G:H21	1.23	0.82
1:L5:4875:G:H22	1:L5:4879:C:H5'	1.43	0.82
35:Lg:42:PRO:HD2	35:Lg:56:VAL:HG21	1.61	0.82
8:LE:203:ILE:HG22	8:LE:206:VAL:HG22	1.59	0.82
63:SU:66:ARG:H	68:Sd:40:ARG:HH22	1.28	0.82
72:SG:148:SER:HB3	72:SG:149:LYS:HB2	1.61	0.82
20:LR:32:ILE:HG12	20:LR:49:LEU:HD21	1.61	0.81
10:LG:264:LYS:HE3	50:SB:225:LEU:HD22	1.62	0.81
19:LQ:85:THR:HG22	19:LQ:104:ARG:HB2	1.62	0.81
58:SP:81:ARG:HD3	58:SP:82:ASP:H	1.45	0.81
1:L5:985:C:N3	1:L5:1068:G:N2	2.27	0.81
76:SO:17:LEU:HD23	76:SO:18:GLY:H	1.44	0.81
1:L5:1985:G:N2	1:L5:2005:G:O6	2.14	0.81
1:L5:4087:G:N7	4:LA:67:TYR:OH	2.13	0.81
55:SI:130:THR:HA	55:SI:134:GLU:HB2	1.61	0.81
1:L5:4425:G:OP1	41:Lm:100:TYR:OH	1.99	0.81
27:LY:8:THR:HG22	27:LY:10:ASP:H	1.46	0.81
61:SS:6:PRO:HG2	61:SS:58:GLU:HB2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2119:C:H4'	1:L5:2120:G:H4'	1.63	0.81
48:S6:74:C:H5''	48:S6:75:C:OP2	1.81	0.81
4:LA:28:ARG:HD3	4:LA:123:ARG:HD3	1.62	0.80
8:LE:84:LYS:HB2	8:LE:85:LYS:HB3	1.62	0.80
33:Le:69:MET:HE3	33:Le:73:GLY:HA2	1.63	0.80
1:L5:308:G:N2	1:L5:308:G:OP2	2.14	0.80
1:L5:3716:C:O2	1:L5:3737:A:N6	2.13	0.80
58:SP:92:SER:O	58:SP:104:GLN:NE2	2.13	0.80
42:Ln:11:ARG:HD2	47:S2:1183:A:H5'	1.61	0.80
69:Sf:88:PRO:O	69:Sf:91:ASN:ND2	2.15	0.80
79:SZ:46:ASN:HB3	79:SZ:80:ARG:HA	1.62	0.80
56:SK:32:HIS:H	56:SK:41:PRO:HA	1.46	0.80
71:SC:182:CYS:SG	71:SC:183:LYS:N	2.53	0.80
47:S2:526:A:H5'	81:Se:31:ARG:HH12	1.45	0.79
47:S2:1467:C:OP1	60:SR:1:MET:N	2.15	0.79
3:L8:122:G:N1	3:L8:127:U:O4	2.13	0.79
1:L5:54:G:H5''	38:Lj:43:ARG:HH12	1.47	0.79
47:S2:380:G:OP1	55:SI:56:ARG:NH2	2.16	0.79
47:S2:925:G:H1	47:S2:1017:U:H3	1.30	0.79
38:Lj:36:LYS:HA	38:Lj:45:ARG:HH11	1.48	0.79
65:SX:51:VAL:HA	65:SX:72:VAL:HG12	1.65	0.79
1:L5:223:G:N3	6:LC:223:ASN:ND2	2.30	0.79
1:L5:1726:U:H3	1:L5:1836:G:H1	1.30	0.79
47:S2:992:A:N7	66:Sa:15:ARG:NH2	2.30	0.79
47:S2:1537:A:H5''	62:ST:84:ARG:HH12	1.48	0.79
1:L5:4648:A:OP1	20:LR:62:ARG:NH2	2.16	0.78
47:S2:1008:A:H1'	75:SN:101:HIS:HD1	1.48	0.78
56:SK:93:THR:OG1	56:SK:95:ARG:NH1	2.16	0.78
55:SI:74:ARG:HH21	55:SI:112:TRP:HB2	1.47	0.78
21:LS:95:ARG:NH1	21:LS:112:ASP:OD2	2.17	0.78
47:S2:969:U:O2	47:S2:971:G:N2	2.17	0.78
1:L5:957:G:N2	1:L5:959:G:O6	2.16	0.78
1:L5:3641:U:OP2	1:L5:3646:A:N6	2.16	0.78
1:L5:1236:C:N3	1:L5:1238:A:N6	2.32	0.78
37:Li:33:LEU:HD21	37:Li:38:LYS:HB2	1.65	0.78
55:SI:48:VAL:HG11	55:SI:54:LYS:HD3	1.64	0.78
49:SA:4:ALA:H	49:SA:5:LEU:HA	1.47	0.78
58:SP:84:ILE:HG13	58:SP:85:ILE:HG12	1.66	0.78
47:S2:1058:A:N6	47:S2:1830:U:OP1	2.16	0.78
47:S2:191:A:H62	47:S2:209:A:H1'	1.49	0.78
53:SF:125:SER:HA	53:SF:138:ALA:HA	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2695:A:OP1	39:Lk:26:LYS:NZ	2.15	0.77
1:L5:4093:G:H3'	1:L5:4094:G:H8	1.47	0.77
14:LL:90:VAL:HG22	36:Lh:114:TYR:HE1	1.50	0.77
7:LD:177:THR:O	7:LD:179:ARG:N	2.18	0.77
47:S2:1024:A:OP2	75:SN:124:ARG:NH2	2.18	0.77
11:LH:75:SER:O	11:LH:79:ASN:ND2	2.18	0.77
17:LO:27:VAL:O	17:LO:101:ARG:NH2	2.17	0.77
17:LO:125:LYS:HG3	17:LO:129:LEU:HD12	1.64	0.77
50:SB:34:LYS:HA	50:SB:43:ASN:HA	1.67	0.77
1:L5:2559:G:H1	1:L5:2568:C:H42	1.33	0.77
65:SX:91:LEU:HD21	81:Se:6:LEU:HG	1.67	0.77
24:LV:87:SER:OG	25:LW:19:ARG:NH1	2.17	0.76
47:S2:497:C:N4	47:S2:505:G:O6	2.18	0.76
47:S2:1285:G:N2	69:Sf:103:LEU:O	2.19	0.76
1:L5:1955:G:N1	1:L5:2028:C:O2	2.14	0.76
1:L5:2710:C:OP1	20:LR:39:GLN:NE2	2.18	0.76
1:L5:4735:G:H1	1:L5:4964:C:H42	1.34	0.76
1:L5:1538:U:H4'	1:L5:1629:G:H5'	1.67	0.76
16:LN:98:LEU:HD22	16:LN:128:LYS:HD2	1.68	0.76
57:SL:135:SER:O	57:SL:139:ARG:NH1	2.18	0.76
60:SR:25:GLY:H	60:SR:31:ASN:HB3	1.48	0.76
1:L5:375:G:O6	38:Lj:56:ARG:NH2	2.18	0.76
1:L5:4765:G:H22	1:L5:4869:U:H3	1.32	0.76
47:S2:691:G:H3'	47:S2:692:G:H5''	1.67	0.76
71:SC:202:THR:HG22	73:SJ:54:ARG:HD3	1.68	0.76
53:SF:134:VAL:HG12	53:SF:135:ARG:HG2	1.67	0.76
54:SH:72:PHE:HB3	54:SH:76:GLN:HE21	1.50	0.76
1:L5:1594:C:O2'	1:L5:1597:G:O2'	2.04	0.75
27:LY:34:LEU:HD13	27:LY:46:SER:HA	1.67	0.75
45:Lr:103:ARG:HD3	45:Lr:106:LEU:HD13	1.68	0.75
71:SC:134:ASN:O	71:SC:167:ARG:NH2	2.19	0.75
1:L5:2414:G:O6	1:L5:2429:A:N6	2.19	0.75
47:S2:65:C:OP1	72:SG:136:LYS:NZ	2.20	0.75
1:L5:1076:C:N4	1:L5:1233:G:O6	2.19	0.75
1:L5:2114:G:O2'	1:L5:2115:G:N7	2.19	0.75
1:L5:2725:A:N6	20:LR:88:ARG:O	2.19	0.75
4:LA:30:ARG:O	4:LA:163:ARG:NH2	2.20	0.75
18:LP:122:ALA:HB3	18:LP:143:PRO:HB2	1.68	0.75
56:SK:65:ARG:NH1	68:Sd:21:CYS:O	2.17	0.75
36:Lh:70:ARG:HG2	36:Lh:83:LEU:HD22	1.68	0.75
36:Lh:80:PRO:HD2	36:Lh:83:LEU:HD12	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1896:A:OP2	9:LF:96:ARG:NH1	2.19	0.75
1:L5:407:A:O2'	1:L5:410:A:OP1	2.05	0.75
1:L5:513:U:O2	1:L5:645:G:N1	2.20	0.75
3:L8:118:C:N4	3:L8:132:G:O6	2.20	0.75
1:L5:2702:C:OP1	23:LU:101:ARG:NH2	2.19	0.75
3:L8:12:G:N2	18:LP:120:ASN:OD1	2.20	0.75
23:LU:104:ALA:HA	23:LU:110:TYR:HA	1.68	0.75
49:SA:147:LEU:O	49:SA:165:ASN:ND2	2.20	0.75
12:LI:135:ILE:HG22	12:LI:136:MET:HG3	1.69	0.75
27:LY:38:LEU:HA	27:LY:41:LYS:HB3	1.69	0.75
35:Lg:8:ARG:HH22	35:Lg:31:VAL:HG23	1.51	0.75
47:S2:837:A:H2'	47:S2:838:G:H4'	1.69	0.75
47:S2:1679:A:H2'	53:SF:60:ARG:HD2	1.69	0.75
1:L5:3625:G:O2'	1:L5:3626:G:OP1	2.04	0.75
1:L5:4968:A:H5'	5:LB:120:LYS:HB2	1.68	0.75
3:L8:86:U:H5'	36:Lh:5:LYS:HE3	1.69	0.75
25:LW:98:PRO:HA	25:LW:99:GLU:HB3	1.69	0.75
1:L5:4635:A:H2	1:L5:4663:G:H21	1.32	0.74
1:L5:4871:C:H3'	15:LM:91:TRP:CZ3	2.22	0.74
3:L8:102:G:H4'	38:Lj:21:ARG:HG2	1.69	0.74
47:S2:583:C:OP1	73:SJ:162:ARG:NH2	2.19	0.74
1:L5:2300:A:N1	6:LC:181:LYS:NZ	2.34	0.74
14:LL:54:PRO:HA	14:LL:55:ILE:HG22	1.68	0.74
25:LW:87:LEU:HD22	72:SG:160:LYS:HB3	1.68	0.74
46:Lz:47:LYS:HE3	46:Lz:197:ASN:HD21	1.50	0.74
52:SE:125:LYS:NZ	52:SE:225:ILE:O	2.18	0.74
78:SY:91:LEU:HB3	78:SY:96:LEU:HD11	1.68	0.74
1:L5:501:C:H41	1:L5:503:C:H41	1.35	0.74
1:L5:975:C:OP1	9:LF:47:ARG:NH2	2.19	0.74
1:L5:229:G:H5'	27:LY:11:ARG:HG3	1.68	0.74
1:L5:3766:A:N6	47:S2:1828:C:O2	2.20	0.74
6:LC:66:SER:HB2	6:LC:77:PRO:HA	1.69	0.74
16:LN:73:ARG:HB3	16:LN:89:VAL:HG23	1.70	0.74
47:S2:877:C:H5'	47:S2:878:G:H5''	1.68	0.74
5:LB:285:TYR:HB2	5:LB:332:MET:HB3	1.67	0.74
19:LQ:20:SER:O	19:LQ:26:ARG:NH2	2.20	0.74
1:L5:1440:U:O2	1:L5:1441:C:N4	2.20	0.74
1:L5:1802:A:N3	22:LT:130:ARG:NH1	2.35	0.74
6:LC:283:LYS:H	19:LQ:24:TYR:HE2	1.36	0.74
47:S2:594:A:H4'	47:S2:595:U:H5'	1.70	0.74
47:S2:1479:G:N2	68:Sd:56:ASP:OD1	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LP:116:HIS:HB3	18:LP:149:ILE:HB	1.70	0.74
24:LV:71:GLU:O	24:LV:75:LYS:NZ	2.20	0.74
47:S2:493:A:H1'	47:S2:574:A:H5'	1.70	0.74
1:L5:715:G:H1	1:L5:953:C:H42	1.36	0.74
50:SB:122:GLU:OE2	50:SB:213:ARG:NH1	2.20	0.74
11:LH:30:PRO:HG2	11:LH:85:THR:HG22	1.70	0.73
47:S2:354:U:OP1	57:SL:90:ARG:NH1	2.21	0.73
3:L8:85:U:H2'	3:L8:86:U:H4'	1.70	0.73
51:SD:137:VAL:HB	51:SD:185:LYS:HB3	1.69	0.73
65:SX:46:HIS:HB3	65:SX:101:LEU:HD21	1.70	0.73
14:LL:171:GLU:HA	14:LL:174:LYS:HD3	1.69	0.73
47:S2:506:G:OP1	78:SY:108:LYS:NZ	2.21	0.73
7:LD:261:VAL:HG12	7:LD:263:LYS:H	1.54	0.73
39:Lk:37:ARG:HD3	39:Lk:42:LEU:HD12	1.70	0.73
53:SF:111:VAL:HG13	53:SF:181:ALA:HB2	1.71	0.73
8:LE:153:LEU:HD11	8:LE:195:ILE:HG13	1.70	0.73
50:SB:88:THR:OG1	50:SB:96:CYS:SG	2.46	0.73
5:LB:217:ILE:HD11	5:LB:333:LEU:HD21	1.70	0.73
6:LC:228:THR:OG1	6:LC:248:ARG:NH2	2.21	0.73
49:SA:177:MET:SD	49:SA:180:ARG:NH2	2.62	0.73
47:S2:581:U:OP1	73:SJ:133:ARG:NH2	2.21	0.73
47:S2:795:A:H2'	47:S2:796:G:H8	1.53	0.73
78:SY:113:ARG:HA	78:SY:116:LYS:HZ3	1.54	0.73
1:L5:4376:A:O2'	29:La:42:ARG:NH1	2.22	0.73
9:LF:148:LYS:HG3	9:LF:245:ARG:HH11	1.54	0.73
21:LS:109:CYS:O	21:LS:111:ARG:N	2.21	0.73
47:S2:996:A:OP1	75:SN:114:ARG:NH1	2.21	0.73
78:SY:20:ARG:NH1	78:SY:74:MET:SD	2.62	0.73
1:L5:1886:G:H1	1:L5:1893:C:H42	1.37	0.73
1:L5:3702:A:O2'	1:L5:3774:A:OP1	2.07	0.73
1:L5:4136:G:H1	1:L5:4148:C:H42	1.37	0.73
1:L5:4745:G:H1	1:L5:4955:A:H2	1.37	0.73
26:LX:56:ARG:HG2	26:LX:58:PRO:HD3	1.70	0.73
64:SV:4:ASP:HB3	71:SC:174:ILE:HA	1.69	0.73
1:L5:2574:G:N7	1:L5:2760:G:N2	2.37	0.72
14:LL:25:TRP:HE1	16:LN:199:GLN:HB3	1.54	0.72
61:SS:23:ARG:HH22	79:SZ:47:LEU:HA	1.53	0.72
1:L5:977:C:H2'	1:L5:978:G:H8	1.53	0.72
1:L5:2760:G:O2'	1:L5:2762:G:N2	2.22	0.72
1:L5:3857:G:H5''	18:LP:86:LYS:HB2	1.69	0.72
61:SS:35:GLY:HA3	61:SS:99:LEU:HG	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SN:34:LYS:HG2	75:SN:74:ILE:HD11	1.71	0.72
12:LI:188:LYS:HD2	12:LI:213:HIS:HD2	1.54	0.72
47:S2:127:C:H1'	47:S2:129:C:H5'	1.72	0.72
7:LD:84:PRO:HB3	7:LD:89:LYS:HD3	1.70	0.72
8:LE:136:HIS:O	8:LE:138:ARG:NH1	2.23	0.72
47:S2:383:G:H21	57:SL:133:PRO:HG2	1.53	0.72
70:Sg:133:ASN:ND2	70:Sg:137:VAL:O	2.20	0.72
74:SM:50:CYS:SG	74:SM:51:VAL:N	2.62	0.72
1:L5:3663:A:OP1	4:LA:119:LYS:NZ	2.22	0.72
53:SF:15:PRO:HD3	59:SQ:57:LEU:HG	1.72	0.72
14:LL:153:PRO:HG2	14:LL:156:PRO:HG3	1.72	0.72
24:LV:21:PRO:HA	24:LV:54:ALA:HA	1.71	0.72
60:SR:95:ILE:H	60:SR:96:ILE:HA	1.55	0.72
74:SM:50:CYS:HB3	74:SM:75:ASN:HB3	1.72	0.72
4:LA:70:LYS:HD2	4:LA:72:ARG:HE	1.55	0.72
36:Lh:87:LYS:HB3	36:Lh:91:MET:HB2	1.69	0.72
44:Lp:28:LYS:HG3	44:Lp:29:ILE:HG13	1.72	0.72
47:S2:1550:G:H3'	47:S2:1579:A:H61	1.54	0.72
47:S2:1660:C:O2	68:Sd:32:ARG:NH2	2.23	0.72
47:S2:1648:G:N2	47:S2:1675:A:OP2	2.22	0.72
50:SB:32:ASP:HA	50:SB:46:LYS:HA	1.71	0.72
53:SF:78:MET:O	53:SF:83:ASN:ND2	2.23	0.72
27:LY:87:ARG:HB3	27:LY:95:VAL:HB	1.72	0.71
1:L5:4980:C:N3	18:LP:69:ARG:NH2	2.38	0.71
57:SL:77:VAL:HA	57:SL:88:ILE:HG22	1.71	0.71
74:SM:51:VAL:HG23	74:SM:77:ILE:HB	1.72	0.71
77:SW:51:GLU:HG3	80:Sb:8:LEU:HD11	1.70	0.71
1:L5:1734:G:O2'	1:L5:1793:A:N6	2.22	0.71
22:LT:8:ARG:NH2	22:LT:52:MET:SD	2.64	0.71
25:LW:66:GLU:HB2	25:LW:67:ILE:HG13	1.72	0.71
35:Lg:37:LYS:HB3	35:Lg:60:ARG:HH11	1.56	0.71
47:S2:1130:G:H4'	75:SN:10:GLY:HA2	1.71	0.71
52:SE:101:LEU:HG	52:SE:111:VAL:HA	1.72	0.71
66:Sa:64:LEU:HD12	66:Sa:65:PRO:HD2	1.72	0.71
70:Sg:220:ASP:HB3	70:Sg:223:GLU:HB2	1.72	0.71
51:SD:157:MET:HE2	51:SD:187:LYS:HD3	1.72	0.71
1:L5:470:A:N1	8:LE:105:ARG:NH1	2.38	0.71
1:L5:734:G:N1	1:L5:931:C:OP1	2.23	0.71
1:L5:979:C:O2	1:L5:1275:G:N1	2.18	0.71
1:L5:3956:G:O2'	1:L5:3957:U:OP2	2.08	0.71
51:SD:132:LYS:HE2	51:SD:191:PRO:HA	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:35:TYR:O	73:SJ:111:GLN:NE2	2.23	0.71
76:SO:12:GLU:HA	76:SO:13:GLN:HG3	1.73	0.71
78:SY:60:PHE:H	78:SY:71:GLY:HA2	1.55	0.71
1:L5:4883:C:OP2	15:LM:117:LYS:NZ	2.23	0.71
47:S2:1539:U:H5'	62:ST:45:LEU:HB3	1.73	0.71
71:SC:202:THR:OG1	71:SC:221:ASP:OD2	2.08	0.71
1:L5:4935:C:H2'	8:LE:183:ARG:HH22	1.56	0.71
73:SJ:4:ALA:N	73:SJ:5:ARG:HB2	2.06	0.71
1:L5:1818:G:OP2	1:L5:1818:G:N2	2.24	0.71
8:LE:220:LYS:HG3	8:LE:221:LYS:H	1.55	0.71
50:SB:33:VAL:HG22	50:SB:96:CYS:HB3	1.73	0.71
71:SC:116:THR:OG1	71:SC:119:GLY:O	2.08	0.71
1:L5:2334:C:N4	6:LC:189:MET:O	2.24	0.70
1:L5:2385:U:H4'	20:LR:3:MET:HG3	1.71	0.70
5:LB:188:GLY:O	5:LB:193:LYS:NZ	2.24	0.70
52:SE:164:LEU:HD12	52:SE:165:GLU:H	1.55	0.70
53:SF:123:GLU:HG3	53:SF:200:ALA:HB2	1.71	0.70
64:SV:16:LYS:HG2	64:SV:23:ILE:HG22	1.73	0.70
70:Sg:29:ASP:HB3	70:Sg:45:LEU:HB2	1.73	0.70
63:SU:25:THR:HG22	63:SU:86:LYS:HA	1.74	0.70
1:L5:2772:C:O3'	39:Lk:17:ARG:NH2	2.24	0.70
47:S2:1583:C:H5''	47:S2:1584:G:H2'	1.73	0.70
58:SP:18:ARG:HH21	61:SS:93:GLY:HA2	1.55	0.70
72:SG:205:GLU:O	72:SG:209:TYR:N	2.23	0.70
77:SW:37:PHE:HE1	77:SW:103:VAL:HG21	1.55	0.70
8:LE:223:ARG:HB3	8:LE:224:LYS:HA	1.73	0.70
10:LG:193:LEU:HD12	10:LG:194:VAL:HG23	1.72	0.70
11:LH:23:ARG:HA	11:LH:45:LEU:HD12	1.72	0.70
33:Le:88:LEU:HD22	33:Le:95:TYR:HE1	1.57	0.70
47:S2:190:G:OP1	55:SI:149:TYR:OH	2.09	0.70
47:S2:1253:A:OP2	47:S2:1526:G:N2	2.23	0.70
1:L5:1387:A:N6	1:L5:1397:A:OP2	2.20	0.70
1:L5:2667:C:OP1	20:LR:100:ARG:NH2	2.23	0.70
1:L5:4242:U:O2	1:L5:4283:G:N2	2.25	0.70
33:Le:91:CYS:SG	33:Le:95:TYR:OH	2.48	0.70
50:SB:182:LYS:HG2	50:SB:231:LEU:HD13	1.72	0.70
5:LB:303:ALA:HB1	5:LB:368:ILE:HG21	1.74	0.70
32:Ld:93:ASN:ND2	32:Ld:100:ASN:O	2.24	0.70
1:L5:2755:A:OP2	28:LZ:51:ARG:NH2	2.24	0.70
18:LP:112:LEU:HD21	18:LP:150:LEU:HD13	1.74	0.70
56:SK:14:LEU:HD11	56:SK:35:LEU:HD22	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1751:A:OP2	12:LI:40:LYS:NZ	2.24	0.70
1:L5:3965:A:N7	1:L5:4049:U:O2'	2.24	0.70
18:LP:16:LYS:O	18:LP:101:ASN:ND2	2.24	0.70
47:S2:852:G:N2	47:S2:853:C:N3	2.40	0.70
49:SA:2:SER:HB3	49:SA:56:GLU:HG2	1.73	0.70
4:LA:246:LEU:HD13	47:S2:1069:U:H4'	1.73	0.70
14:LL:50:PRO:HB3	14:LL:150:LEU:HD13	1.72	0.70
17:LO:54:TYR:OH	17:LO:73:PHE:O	2.09	0.70
47:S2:1430:C:OP1	62:ST:7:LYS:NZ	2.25	0.70
1:L5:1957:U:O2	1:L5:1958:A:N6	2.24	0.69
6:LC:78:ARG:NH2	6:LC:89:GLN:O	2.25	0.69
47:S2:753:C:OP1	47:S2:792:C:O2'	2.10	0.69
47:S2:1756:C:H42	47:S2:1776:G:H22	1.40	0.69
1:L5:237:G:O2'	1:L5:238:C:OP1	2.10	0.69
50:SB:66:VAL:HG22	50:SB:87:ILE:HG22	1.74	0.69
58:SP:22:LEU:HA	58:SP:25:LEU:HB2	1.73	0.69
70:Sg:147:HIS:NE2	70:Sg:168:CYS:O	2.25	0.69
1:L5:3699:C:O2'	1:L5:3775:A:O2'	2.11	0.69
1:L5:4629:U:O2'	25:LW:19:ARG:NH2	2.25	0.69
46:Lz:25:ARG:NH2	46:Lz:210:MET:O	2.25	0.69
48:S6:8:G:O2'	48:S6:49:G:OP2	2.08	0.69
55:SI:8:TRP:HA	55:SI:18:ARG:HH21	1.57	0.69
1:L5:683:C:HO2'	8:LE:101:ASN:H	1.38	0.69
1:L5:2630:U:O4	23:LU:89:LYS:NZ	2.22	0.69
6:LC:188:ARG:HG3	6:LC:202:ILE:HG13	1.75	0.69
11:LH:102:ASN:HB2	11:LH:115:ARG:HB2	1.74	0.69
39:Lk:5:ILE:HG22	39:Lk:6:GLU:H	1.56	0.69
70:Sg:220:ASP:HB2	70:Sg:225:LYS:H	1.54	0.69
52:SE:11:ARG:NH1	52:SE:21:ASP:OD1	2.25	0.69
1:L5:994:G:N2	1:L5:1049:C:O2	2.25	0.69
1:L5:2809:G:O2'	1:L5:4644:G:OP1	2.09	0.69
12:LI:42:LYS:HG2	12:LI:194:GLY:HA2	1.74	0.69
1:L5:2652:G:H1	44:Lp:61:MET:HE2	1.58	0.69
50:SB:71:LEU:HD13	50:SB:82:ARG:HG3	1.73	0.69
1:L5:957:G:O2'	1:L5:958:G:OP2	2.11	0.69
1:L5:1271:G:H22	1:L5:2122:G:H5''	1.58	0.69
1:L5:1562:G:N2	1:L5:1565:A:OP2	2.25	0.69
1:L5:1973:G:N1	1:L5:1994:C:N3	2.40	0.69
1:L5:2373:C:H5'	32:Ld:46:LEU:HD23	1.75	0.69
1:L5:2458:C:O2'	1:L5:3671:G:N3	2.23	0.69
47:S2:636:C:OP2	81:Se:21:LYS:NZ	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1271:C:N4	47:S2:1512:C:N3	2.41	0.69
49:SA:156:TYR:O	64:SV:60:ARG:NH2	2.26	0.69
50:SB:103:MET:HG2	50:SB:215:VAL:HG12	1.74	0.69
52:SE:183:VAL:HG23	52:SE:189:LEU:HA	1.75	0.69
73:SJ:136:ARG:NH1	73:SJ:138:ARG:O	2.25	0.69
1:L5:1352:C:OP2	19:LQ:104:ARG:NH1	2.26	0.69
1:L5:4431:U:OP2	12:LI:3:ARG:NH2	2.26	0.69
47:S2:380:G:N1	47:S2:383:G:OP2	2.26	0.69
66:Sa:99:PRO:O	66:Sa:102:ARG:NH1	2.26	0.69
76:SO:34:PHE:HB3	76:SO:41:PHE:HB2	1.75	0.69
1:L5:291:U:O2'	16:LN:182:HIS:NE2	2.21	0.68
1:L5:4589:A:N1	1:L5:4621:C:O2'	2.26	0.68
2:L7:113:G:N2	7:LD:72:ASP:O	2.27	0.68
34:Lf:106:TYR:O	34:Lf:108:SER:N	2.26	0.68
43:Lo:31:ASP:OD2	43:Lo:38:LYS:HE2	1.92	0.68
70:Sg:11:LEU:HD21	70:Sg:52:TYR:HB2	1.74	0.68
1:L5:76:A:H5'	14:LL:101:ARG:HH12	1.58	0.68
1:L5:3748:A:OP1	4:LA:243:THR:OG1	2.11	0.68
5:LB:113:GLU:OE2	5:LB:168:MET:N	2.26	0.68
47:S2:219:U:O2'	55:SI:186:ASP:OD2	2.08	0.68
47:S2:950:C:H42	47:S2:976:G:H1	1.40	0.68
47:S2:1540:G:OP2	62:ST:43:LYS:NZ	2.20	0.68
1:L5:476:G:O6	1:L5:678:C:N4	2.26	0.68
1:L5:3783:A:H2	1:L5:3790:U:H3	1.38	0.68
45:Lr:21:ASN:O	45:Lr:23:GLN:N	2.24	0.68
47:S2:815:U:H2'	47:S2:816:A:H8	1.57	0.68
70:Sg:254:PRO:O	70:Sg:272:GLN:NE2	2.25	0.68
72:SG:54:GLY:HA3	72:SG:63:MET:HG2	1.76	0.68
1:L5:970:G:H22	8:LE:126:LEU:HD21	1.59	0.68
1:L5:1090:G:OP1	22:LT:142:ARG:NH1	2.25	0.68
2:L7:67:C:N3	2:L7:108:G:N2	2.41	0.68
28:LZ:12:LEU:HB2	28:LZ:81:MET:HB3	1.75	0.68
47:S2:920:A:O2'	47:S2:922:A:O5'	2.11	0.68
1:L5:2298:U:OP1	6:LC:204:ARG:NH2	2.26	0.68
47:S2:1609:C:OP1	61:SS:131:VAL:N	2.25	0.68
48:S6:38:A:N7	53:SF:133:THR:N	2.42	0.68
1:L5:89:C:OP1	29:La:59:LYS:NZ	2.21	0.68
52:SE:56:LEU:HD12	78:SY:22:GLN:HE22	1.58	0.68
60:SR:5:ARG:HB2	60:SR:10:LYS:HZ1	1.59	0.68
46:Lz:105:LYS:HB3	46:Lz:133:LYS:HD2	1.76	0.68
47:S2:574:A:H4'	78:SY:89:HIS:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1121:G:N2	50:SB:202:GLN:O	2.24	0.68
51:SD:54:ARG:HE	51:SD:57:ASN:HD22	1.41	0.68
73:SJ:137:VAL:HG22	73:SJ:157:ILE:HG22	1.74	0.68
1:L5:966:A:N6	1:L5:2253:A:OP2	2.25	0.68
5:LB:234:ARG:NH1	5:LB:268:ARG:O	2.27	0.68
5:LB:357:ARG:HD3	5:LB:360:LEU:HD21	1.74	0.68
47:S2:317:C:OP1	72:SG:183:ARG:NH1	2.26	0.68
47:S2:1036:A:N3	47:S2:1844:U:O2'	2.27	0.68
52:SE:75:LYS:O	52:SE:77:ARG:N	2.26	0.68
75:SN:29:THR:HG22	75:SN:31:ASP:H	1.59	0.68
75:SN:76:LYS:HD3	75:SN:81:ALA:HB3	1.75	0.68
1:L5:663:G:N2	1:L5:664:G:N7	2.41	0.68
5:LB:254:ILE:HG21	5:LB:262:VAL:HG22	1.75	0.68
6:LC:198:ASN:ND2	27:LY:10:ASP:OD1	2.26	0.68
56:SK:80:ARG:HA	56:SK:85:LEU:HD12	1.75	0.68
70:Sg:146:SER:HA	70:Sg:175:LYS:HD2	1.74	0.68
71:SC:101:SER:OG	71:SC:132:ASP:OD1	2.12	0.68
73:SJ:138:ARG:NH2	73:SJ:153:SER:OG	2.26	0.68
1:L5:1656:U:OP2	29:La:26:ARG:NH2	2.26	0.67
42:Lm:10:MET:HE2	47:S2:1172:U:H5'	1.77	0.67
1:L5:1187:G:H1'	7:LD:275:GLN:HE21	1.59	0.67
1:L5:1436:C:H5''	1:L5:2119:C:H42	1.59	0.67
1:L5:4200:G:N2	1:L5:4221:C:O2	2.23	0.67
14:LL:107:THR:HB	37:Li:18:THR:HG23	1.75	0.67
48:S6:11:G:N7	48:S6:26:G:N2	2.41	0.67
57:SL:55:TYR:HH	57:SL:116:CYS:HG	1.20	0.67
5:LB:305:THR:HG22	5:LB:307:TYR:H	1.58	0.67
13:LJ:106:GLY:HA3	13:LJ:131:TYR:HA	1.75	0.67
37:Li:45:ARG:HD3	37:Li:49:GLY:HA3	1.76	0.67
47:S2:563:G:O2'	73:SJ:131:ARG:NH1	2.28	0.67
47:S2:795:A:H62	54:SH:109:ARG:HH22	1.41	0.67
47:S2:1047:C:H42	47:S2:1071:G:H1	1.42	0.67
47:S2:1445:U:O4	47:S2:1446:A:N6	2.28	0.67
53:SF:54:GLY:O	59:SQ:125:ARG:NH2	2.27	0.67
1:L5:1397:A:HO2'	1:L5:1467:C:HO2'	1.37	0.67
1:L5:3599:A:OP1	55:SI:200:ARG:NH1	2.27	0.67
1:L5:2267:U:OP1	45:Lr:37:SER:OG	2.13	0.67
1:L5:4093:G:H3'	1:L5:4094:G:C8	2.30	0.67
46:Lz:53:VAL:HG11	46:Lz:185:LEU:HD22	1.77	0.67
65:SX:55:VAL:HA	81:Se:6:LEU:HD13	1.77	0.67
1:L5:2541:G:H1	1:L5:2775:C:H42	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4078:C:O2'	1:L5:4172:A:N6	2.27	0.67
9:LF:228:VAL:HA	21:LS:39:VAL:HG12	1.75	0.67
36:Lh:15:GLU:HA	36:Lh:18:LEU:HG	1.76	0.67
69:Sf:141:CYS:O	69:Sf:151:ASN:ND2	2.27	0.67
1:L5:687:U:H4'	8:LE:106:VAL:HG11	1.77	0.67
1:L5:961:G:H2'	8:LE:123:ARG:HB2	1.76	0.67
1:L5:963:G:OP1	45:Lr:107:ARG:NH1	2.21	0.67
1:L5:970:G:OP2	1:L5:970:G:N2	2.28	0.67
1:L5:1242:G:H1	1:L5:1269:G:H21	1.42	0.67
1:L5:1516:G:O2'	14:LL:18:TRP:NE1	2.24	0.67
1:L5:2514:G:H21	1:L5:2744:A:H2	1.41	0.67
4:LA:247:ARG:NH1	4:LA:249:THR:O	2.27	0.67
47:S2:127:C:N4	47:S2:180:G:O2'	2.27	0.67
47:S2:1218:C:H1'	47:S2:1683:C:H42	1.60	0.67
60:SR:107:LYS:HA	60:SR:110:ASP:HB3	1.77	0.67
61:SS:120:HIS:CE1	61:SS:124:ARG:HE	2.12	0.67
1:L5:2669:C:O2'	1:L5:2670:C:O5'	2.12	0.67
27:LY:87:ARG:HB2	27:LY:97:VAL:HG23	1.77	0.67
43:Lo:34:TYR:O	43:Lo:39:ARG:NH1	2.28	0.67
47:S2:14:C:OP1	71:SC:235:ASN:ND2	2.28	0.67
47:S2:1354:G:N2	47:S2:1357:A:OP2	2.25	0.67
60:SR:44:LYS:HG3	60:SR:47:ARG:HH22	1.60	0.67
63:SU:66:ARG:NH1	63:SU:68:THR:OG1	2.28	0.67
79:SZ:83:LEU:O	79:SZ:87:ALA:N	2.22	0.67
1:L5:2645:G:O6	1:L5:2689:C:N4	2.20	0.67
14:LL:50:PRO:O	14:LL:52:SER:N	2.26	0.67
52:SE:105:THR:HG23	52:SE:106:LYS:HG2	1.74	0.67
55:SI:76:THR:HG22	55:SI:108:PRO:HG2	1.77	0.67
67:Sc:14:VAL:HA	67:Sc:32:VAL:HG12	1.77	0.67
1:L5:2089:G:H21	6:LC:307:LYS:HE3	1.60	0.66
1:L5:2543:A:H2'	1:L5:2546:G:H21	1.60	0.66
6:LC:301:ALA:HB1	19:LQ:132:LYS:HE2	1.77	0.66
8:LE:277:LEU:HA	8:LE:281:ILE:HD11	1.77	0.66
16:LN:38:ARG:HH21	16:LN:60:VAL:HG12	1.59	0.66
16:LN:114:ARG:HE	16:LN:137:PRO:HB3	1.60	0.66
22:LT:135:PRO:O	22:LT:137:GLU:N	2.22	0.66
26:LX:83:THR:HG22	26:LX:85:SER:H	1.60	0.66
27:LY:2:LYS:HD2	27:LY:7:VAL:HG23	1.75	0.66
47:S2:388:U:O4	47:S2:389:A:N6	2.24	0.66
53:SF:188:TYR:HA	53:SF:191:LYS:HB2	1.77	0.66
1:L5:1440:U:O2'	1:L5:1442:C:N4	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:79:GLN:HA	25:LW:80:ARG:HB3	1.77	0.66
47:S2:71:G:O2'	47:S2:72:C:OP1	2.13	0.66
70:Sg:57:ARG:NH1	70:Sg:92:LEU:O	2.27	0.66
76:SO:130:GLU:HG2	76:SO:131:ASP:H	1.61	0.66
78:SY:88:LYS:HE2	78:SY:99:LYS:HE2	1.77	0.66
1:L5:174:C:N3	1:L5:263:G:N2	2.42	0.66
1:L5:3715:U:OP1	48:S6:4:C:O2'	2.14	0.66
47:S2:1588:A:O2'	47:S2:1589:A:O5'	2.13	0.66
61:SS:44:VAL:HG13	61:SS:70:ILE:HG13	1.77	0.66
1:L5:943:A:H3'	9:LF:148:LYS:HD3	1.76	0.66
1:L5:4525:C:OP1	5:LB:246:ARG:NH1	2.29	0.66
47:S2:798:A:N6	47:S2:801:U:O5'	2.23	0.66
47:S2:1292:C:H41	69:Sf:148:TYR:HA	1.59	0.66
52:SE:52:LEU:HD21	52:SE:111:VAL:HG11	1.76	0.66
1:L5:2533:C:OP2	26:LX:123:LYS:NZ	2.29	0.66
1:L5:2634:C:H5'	20:LR:59:SER:HA	1.77	0.66
1:L5:4769:G:H1	1:L5:4865:C:H42	1.43	0.66
1:L5:4907:G:H1	1:L5:4914:C:H42	1.43	0.66
4:LA:150:LEU:HD12	4:LA:151:PRO:HD2	1.76	0.66
6:LC:250:CYS:HB3	6:LC:252:TRP:HE1	1.60	0.66
32:Ld:47:LYS:O	32:Ld:51:LYS:NZ	2.21	0.66
58:SP:36:LEU:O	58:SP:38:SER:N	2.27	0.66
1:L5:4613:C:O2	11:LH:121:LYS:NZ	2.27	0.66
5:LB:282:LYS:HE2	5:LB:337:VAL:HG22	1.78	0.66
47:S2:847:A:N6	47:S2:848:U:O2	2.29	0.66
47:S2:1598:G:H2'	79:SZ:82:SER:HB3	1.77	0.66
9:LF:113:ARG:NH2	9:LF:208:LEU:O	2.28	0.66
17:LO:78:ARG:HD3	17:LO:81:TRP:HB3	1.77	0.66
25:LW:74:ARG:NH2	47:S2:1779:G:N7	2.44	0.66
56:SK:5:LYS:HA	56:SK:8:ARG:HB2	1.78	0.66
1:L5:1872:G:O2'	1:L5:4219:A:N3	2.27	0.66
10:LG:67:ARG:NH1	16:LN:29:GLN:OE1	2.23	0.66
33:Le:43:ASN:OD1	33:Le:44:ARG:N	2.29	0.66
50:SB:174:ARG:HG3	50:SB:175:GLU:HG2	1.77	0.66
51:SD:210:ILE:HD11	60:SR:16:ILE:HD13	1.77	0.66
81:Se:40:ARG:O	81:Se:44:ASN:ND2	2.29	0.66
1:L5:135:G:N2	36:Lh:95:LEU:O	2.28	0.66
1:L5:2811:G:N2	1:L5:2814:C:OP2	2.27	0.66
1:L5:2867:C:H42	1:L5:2883:G:H1	1.44	0.66
1:L5:3846:C:HO2'	1:L5:4632:U:HO2'	1.40	0.66
1:L5:3960:A:N6	1:L5:4046:A:OP1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4041:C:OP1	1:L5:4045:G:N1	2.29	0.66
1:L5:709:C:H42	1:L5:1287:G:H1	1.44	0.66
1:L5:2007:G:H1'	1:L5:2008:U:H5	1.60	0.66
14:LL:150:LEU:HG	36:Lh:123:ALA:HB3	1.76	0.66
52:SE:42:LEU:HD21	52:SE:47:PHE:HB2	1.78	0.66
53:SF:204:ARG:HH21	67:Sc:63:ARG:HB3	1.59	0.66
71:SC:188:CYS:SG	71:SC:189:GLY:N	2.69	0.66
5:LB:340:THR:HG22	5:LB:343:ARG:HH12	1.61	0.65
35:Lg:106:VAL:HG13	35:Lg:107:LEU:HG	1.78	0.65
47:S2:1605:G:OP1	62:ST:84:ARG:NH2	2.30	0.65
5:LB:175:GLN:HE21	5:LB:177:LYS:HB3	1.61	0.65
7:LD:104:LEU:HB2	7:LD:247:ILE:HD11	1.78	0.65
43:Lo:6:LYS:HG2	43:Lo:93:LEU:HG	1.76	0.65
46:Lz:56:LYS:HG2	46:Lz:152:LYS:HD3	1.78	0.65
47:S2:1103:C:OP1	50:SB:157:GLN:NE2	2.25	0.65
47:S2:1589:A:O3'	62:ST:82:ARG:NH1	2.28	0.65
49:SA:2:SER:HB2	49:SA:59:LEU:HD21	1.79	0.65
49:SA:54:THR:HG22	49:SA:162:PRO:HG2	1.77	0.65
1:L5:48:G:N2	1:L5:49:U:O4	2.20	0.65
1:L5:683:C:O2'	8:LE:101:ASN:N	2.22	0.65
1:L5:1444:G:N2	1:L5:2102:G:O6	2.29	0.65
1:L5:3784:A:O2'	1:L5:3785:A:OP1	2.14	0.65
5:LB:201:LEU:HD23	5:LB:202:GLU:HG2	1.78	0.65
20:LR:78:ILE:HA	20:LR:81:ARG:HH11	1.60	0.65
47:S2:1281:G:H5''	74:SM:101:ARG:HG2	1.78	0.65
58:SP:37:TYR:O	58:SP:42:ARG:NH2	2.30	0.65
58:SP:84:ILE:HG23	58:SP:85:ILE:H	1.60	0.65
61:SS:44:VAL:HG22	61:SS:70:ILE:HG21	1.78	0.65
65:SX:34:THR:O	65:SX:36:LEU:N	2.29	0.65
70:Sg:122:SER:OG	70:Sg:130:LYS:O	2.14	0.65
1:L5:974:C:N3	6:LC:323:ARG:NH1	2.45	0.65
1:L5:2789:A:O2'	40:Ll:45:ARG:NH2	2.29	0.65
1:L5:4086:G:H5''	10:LG:54:PHE:HB3	1.78	0.65
1:L5:4730:C:OP2	1:L5:4965:U:O2'	2.13	0.65
6:LC:104:PRO:O	6:LC:106:LYS:NZ	2.29	0.65
13:LJ:99:PHE:HB2	13:LJ:159:LYS:HE3	1.78	0.65
47:S2:525:A:O2'	81:Se:31:ARG:NH1	2.29	0.65
51:SD:198:ILE:HG23	51:SD:200:PRO:HD3	1.77	0.65
53:SF:18:LYS:HE3	53:SF:46:ALA:H	1.61	0.65
6:LC:362:GLN:HA	6:LC:365:SER:HB2	1.79	0.65
6:LC:316:LYS:HE3	6:LC:324:ILE:HD11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:57:TYR:HB2	8:LE:62:MET:HE2	1.79	0.65
36:Lh:53:SER:HA	36:Lh:56:ARG:HH21	1.62	0.65
51:SD:106:ARG:HG3	51:SD:107:TYR:H	1.61	0.65
77:SW:3:ARG:HH22	77:SW:28:ARG:HD2	1.60	0.65
78:SY:109:GLU:OE2	78:SY:113:ARG:NE	2.30	0.65
78:SY:127:ALA:HA	78:SY:130:LYS:HD3	1.77	0.65
1:L5:2527:A:OP1	20:LR:9:ARG:NH1	2.27	0.65
53:SF:191:LYS:HA	53:SF:194:ASP:HB2	1.78	0.65
76:SO:14:VAL:H	76:SO:15:ILE:HA	1.61	0.65
19:LQ:61:LEU:HD22	19:LQ:82:VAL:HG11	1.79	0.65
28:LZ:53:VAL:HG13	28:LZ:54:THR:H	1.62	0.65
53:SF:120:GLY:HA3	53:SF:146:ARG:HE	1.61	0.65
60:SR:81:ARG:NH1	60:SR:84:TYR:OH	2.30	0.65
1:L5:1320:U:O2'	1:L5:1891:A:N1	2.29	0.65
1:L5:4302:U:H4'	22:LT:5:LYS:HD3	1.78	0.65
4:LA:79:ALA:H	4:LA:82:ILE:HD12	1.62	0.65
34:Lf:14:TYR:OH	34:Lf:92:LEU:O	2.14	0.65
47:S2:190:G:O2'	47:S2:209:A:N6	2.30	0.65
47:S2:1707:U:O2'	47:S2:1849:G:N2	2.30	0.65
54:SH:147:LYS:HB3	54:SH:151:SER:HB3	1.78	0.65
59:SQ:102:GLU:HB2	70:Sg:57:ARG:HA	1.78	0.65
64:SV:36:VAL:HG12	64:SV:37:ALA:H	1.60	0.65
65:SX:101:LEU:HD13	65:SX:124:LYS:HD3	1.78	0.65
1:L5:137:G:H2'	1:L5:138:G:H8	1.61	0.65
1:L5:1698:C:H3'	9:LF:177:ARG:HH21	1.61	0.65
1:L5:3973:G:H21	1:L5:4051:C:H5'	1.60	0.65
1:L5:4384:U:O2'	1:L5:4386:C:OP1	2.14	0.65
5:LB:57:VAL:HG22	5:LB:73:VAL:HG12	1.79	0.65
7:LD:64:ILE:HG13	7:LD:105:LEU:HD21	1.79	0.65
12:LI:66:GLU:OE1	12:LI:69:ARG:NH1	2.29	0.65
47:S2:145:G:OP1	72:SG:139:SER:OG	2.15	0.64
47:S2:649:U:H1'	65:SX:45:SER:HB3	1.78	0.64
47:S2:1204:A:OP1	71:SC:117:ARG:NE	2.26	0.64
47:S2:1280:G:H22	47:S2:1317:C:H41	1.45	0.64
51:SD:107:TYR:HA	51:SD:110:LEU:HB2	1.77	0.64
52:SE:71:LYS:HG3	52:SE:91:SER:HB2	1.79	0.64
67:Sc:31:ARG:HA	67:Sc:43:ILE:HA	1.78	0.64
71:SC:94:ILE:HD11	71:SC:98:LEU:HD12	1.79	0.64
79:SZ:111:ARG:HG2	79:SZ:112:ASN:H	1.62	0.64
1:L5:1743:A:H1'	7:LD:15:ARG:HH21	1.61	0.64
1:L5:2068:C:OP1	34:Lf:85:ARG:NH2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3689:G:O2'	1:L5:3818:U:OP2	2.14	0.64
8:LE:114:ARG:HB2	45:Lr:86:ALA:HB1	1.79	0.64
54:SH:83:LEU:HD11	54:SH:92:VAL:HG11	1.79	0.64
64:SV:19:ALA:O	77:SW:23:ARG:NH2	2.30	0.64
1:L5:4128:A:H1'	10:LG:35:ARG:HG2	1.79	0.64
1:L5:4281:A:H2'	1:L5:4282:A:H2'	1.79	0.64
1:L5:4367:G:OP2	19:LQ:183:SER:OG	2.15	0.64
39:Lk:10:ASP:HA	39:Lk:13:LEU:HB2	1.78	0.64
47:S2:1453:C:N3	47:S2:1475:G:N2	2.44	0.64
51:SD:54:ARG:NE	51:SD:57:ASN:HD22	1.95	0.64
58:SP:74:GLU:H	58:SP:93:MET:H	1.43	0.64
75:SN:47:PRO:HD2	75:SN:86:GLU:HG3	1.79	0.64
1:L5:3772:U:H4'	1:L5:3772:U:OP1	1.98	0.64
2:L7:55:A:O2'	13:LJ:151:ILE:O	2.15	0.64
9:LF:116:GLN:O	9:LF:119:ASN:ND2	2.30	0.64
47:S2:1629:C:O2'	61:SS:85:ASN:OD1	2.12	0.64
59:SQ:93:VAL:HG13	59:SQ:105:LYS:HG3	1.79	0.64
62:ST:9:VAL:HG21	62:ST:135:ALA:HB1	1.79	0.64
1:L5:984:C:O2	1:L5:1069:G:N2	2.25	0.64
1:L5:1840:G:OP2	1:L5:1840:G:N2	2.27	0.64
1:L5:2106:G:N1	1:L5:2126:G:N7	2.45	0.64
6:LC:358:ALA:O	6:LC:362:GLN:N	2.31	0.64
17:LO:159:LYS:O	17:LO:163:LYS:NZ	2.28	0.64
18:LP:112:LEU:HD11	18:LP:150:LEU:HB3	1.79	0.64
27:LY:79:VAL:HG13	27:LY:99:ILE:H	1.61	0.64
34:Lf:23:GLU:O	34:Lf:91:ASN:ND2	2.30	0.64
54:SH:145:ARG:NH2	77:SW:49:GLU:OE1	2.31	0.64
64:SV:74:LYS:O	64:SV:81:LYS:NZ	2.31	0.64
70:Sg:87:LEU:HB3	70:Sg:101:PHE:H	1.63	0.64
1:L5:467:U:H3	1:L5:689:U:H3	1.43	0.64
10:LG:251:ALA:O	10:LG:255:LYS:N	2.31	0.64
35:Lg:5:LEU:HD23	35:Lg:32:TYR:HD1	1.62	0.64
50:SB:130:THR:OG1	50:SB:178:THR:O	2.14	0.64
54:SH:191:GLU:HG3	54:SH:193:GLN:H	1.61	0.64
72:SG:49:VAL:HG22	72:SG:115:LYS:HB2	1.79	0.64
1:L5:66:A:N6	1:L5:282:C:O2'	2.29	0.64
1:L5:1802:A:H5''	1:L5:1803:G:H5'	1.79	0.64
8:LE:147:GLY:HA2	8:LE:203:ILE:HD12	1.80	0.64
47:S2:814:U:OP1	52:SE:22:LYS:NZ	2.30	0.64
47:S2:960:U:O2'	47:S2:962:A:N7	2.25	0.64
69:Sf:118:ARG:HG2	69:Sf:119:ARG:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SW:37:PHE:CE1	77:SW:103:VAL:HG21	2.33	0.64
1:L5:440:U:O2'	34:Lf:91:ASN:O	2.15	0.64
1:L5:2626:U:O4	23:LU:97:ARG:NH1	2.31	0.64
1:L5:4541:G:N2	1:L5:4544:A:OP2	2.30	0.64
15:LM:3:PHE:HB3	15:LM:6:PHE:HE1	1.62	0.64
47:S2:556:U:O2'	47:S2:558:G:OP2	2.15	0.64
47:S2:1488:C:O2'	47:S2:1490:G:OP2	2.16	0.64
58:SP:98:ASN:H	58:SP:99:GLY:C	2.06	0.64
1:L5:472:C:H42	1:L5:682:G:H22	1.46	0.64
5:LB:57:VAL:HB	5:LB:367:PHE:HB3	1.78	0.64
7:LD:107:ARG:HG3	7:LD:251:PRO:HB3	1.79	0.64
15:LM:20:HIS:HB3	15:LM:23:LYS:HD2	1.79	0.64
21:LS:173:ASN:OD1	21:LS:174:THR:N	2.30	0.64
37:Li:34:THR:HG22	37:Li:36:HIS:H	1.63	0.64
47:S2:390:C:O2'	57:SL:8:ARG:NH2	2.31	0.64
47:S2:1311:C:N4	47:S2:1312:G:O6	2.31	0.64
47:S2:1858:G:OP2	76:SO:146:ARG:NH2	2.31	0.64
54:SH:163:GLN:HE21	54:SH:189:PHE:HE2	1.46	0.64
72:SG:212:LEU:O	72:SG:216:ARG:N	2.28	0.64
1:L5:35:U:O2'	1:L5:1525:A:N1	2.31	0.64
1:L5:1552:G:H2'	1:L5:1574:G:N2	2.13	0.64
1:L5:1596:U:O2'	18:LP:135:ARG:NH2	2.31	0.64
1:L5:4191:G:H1	1:L5:4204:C:H42	1.45	0.64
2:L7:53:U:H4'	2:L7:54:A:H5'	1.80	0.64
9:LF:124:LYS:NZ	9:LF:126:ASN:OD1	2.28	0.64
47:S2:1267:C:N4	47:S2:1515:G:O6	2.31	0.64
47:S2:1738:C:OP1	72:SG:92:ARG:NH2	2.30	0.64
1:L5:3654:G:O2'	1:L5:3693:U:OP1	2.16	0.63
3:L8:141:C:O2'	16:LN:136:ASP:OD2	2.16	0.63
4:LA:201:GLY:HA2	4:LA:204:MET:HE3	1.79	0.63
8:LE:96:VAL:N	8:LE:97:GLY:HA2	2.13	0.63
10:LG:115:LEU:O	10:LG:119:GLU:N	2.21	0.63
20:LR:136:ARG:HA	20:LR:139:MET:HE3	1.79	0.63
27:LY:49:ILE:HG21	27:LY:80:ILE:HD11	1.80	0.63
31:Lc:28:VAL:HG13	31:Lc:34:THR:HG22	1.80	0.63
32:Ld:85:ARG:HB3	32:Ld:111:VAL:HG21	1.79	0.63
32:Ld:93:ASN:O	32:Ld:95:ASP:N	2.28	0.63
47:S2:39:A:H5'	73:SJ:7:TRP:HE1	1.63	0.63
49:SA:12:GLU:HG3	49:SA:13:GLU:H	1.63	0.63
49:SA:33:GLN:HB2	49:SA:154:LEU:HD12	1.80	0.63
79:SZ:51:ASP:OD1	79:SZ:52:LYS:N	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3965:A:H61	1:L5:4040:C:P	2.20	0.63
22:LT:68:THR:OG1	22:LT:71:ALA:O	2.16	0.63
57:SL:78:THR:HG21	57:SL:89:ARG:HG3	1.80	0.63
61:SS:129:LEU:HD21	61:SS:136:THR:HG21	1.81	0.63
77:SW:22:LYS:HA	80:Sb:2:PRO:HB3	1.79	0.63
1:L5:1218:G:H2'	1:L5:1219:G:H4'	1.80	0.63
1:L5:1367:C:O2'	1:L5:1369:C:OP2	2.16	0.63
1:L5:1492:G:H4'	30:Lb:41:ARG:HE	1.63	0.63
1:L5:3661:G:N2	1:L5:3682:A:OP2	2.26	0.63
1:L5:4769:G:N2	1:L5:4866:C:N3	2.47	0.63
5:LB:80:GLU:OE1	5:LB:323:TYR:OH	2.15	0.63
28:LZ:84:ARG:NH2	35:Lg:99:GLU:OE2	2.31	0.63
45:Lr:28:GLU:OE2	45:Lr:31:ASN:ND2	2.31	0.63
46:Lz:39:LYS:HG2	46:Lz:163:LEU:HD13	1.80	0.63
46:Lz:208:SER:HB2	46:Lz:211:GLY:HA3	1.79	0.63
52:SE:189:LEU:H	52:SE:245:ARG:HH22	1.46	0.63
71:SC:94:ILE:HG21	71:SC:159:LYS:HB3	1.79	0.63
1:L5:4473:A:OP1	41:Lm:102:ARG:NH1	2.29	0.63
1:L5:4576:U:HO2'	1:L5:5067:U:HO2'	1.47	0.63
1:L5:4635:A:H8	1:L5:5048:A:H61	1.45	0.63
24:LV:13:LYS:NZ	24:LV:124:GLU:OE1	2.31	0.63
28:LZ:97:ASN:OD1	28:LZ:98:LYS:N	2.27	0.63
47:S2:1134:G:OP1	66:Sa:6:ARG:NE	2.32	0.63
53:SF:33:ILE:HG13	53:SF:34:SER:H	1.63	0.63
53:SF:106:GLU:HG2	53:SF:107:ASN:H	1.63	0.63
42:Ln:18:ARG:NH2	47:S2:1182:A:OP1	2.32	0.63
77:SW:9:ASP:OD1	77:SW:10:ALA:N	2.31	0.63
1:L5:390:C:H42	1:L5:401:G:H1	1.45	0.63
1:L5:2407:G:OP2	1:L5:2407:G:N2	2.27	0.63
1:L5:3970:G:H2'	1:L5:3971:G:H8	1.63	0.63
1:L5:4301:U:H4'	22:LT:54:HIS:CD2	2.33	0.63
13:LJ:85:LYS:NZ	13:LJ:115:LEU:HB2	2.14	0.63
16:LN:120:TRP:HE1	16:LN:123:GLU:HG3	1.63	0.63
28:LZ:48:ARG:HE	28:LZ:69:LYS:HD3	1.61	0.63
65:SX:67:ARG:NH1	65:SX:114:ASP:OD2	2.31	0.63
67:Sc:12:ALA:HA	67:Sc:34:PHE:HA	1.80	0.63
77:SW:11:LEU:HD21	77:SW:37:PHE:HE2	1.64	0.63
1:L5:1459:A:OP1	19:LQ:65:ARG:NH2	2.31	0.63
1:L5:1554:A:OP1	44:Lp:5:THR:OG1	2.12	0.63
3:L8:71:A:O5'	27:LY:50:ARG:NH1	2.31	0.63
35:Lg:21:ARG:HE	35:Lg:33:LEU:HD22	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:19:G:OP1	36:Lh:93:ARG:NE	2.29	0.63
1:L5:320:C:OP1	37:Li:84:LYS:NZ	2.22	0.63
1:L5:4902:C:H2'	1:L5:4903:G:H8	1.64	0.63
4:LA:114:CYS:HB2	4:LA:169:VAL:HG23	1.80	0.63
5:LB:74:GLU:OE2	5:LB:285:TYR:OH	2.15	0.63
12:LI:48:LEU:HD11	12:LI:142:LEU:HD23	1.81	0.63
39:Lk:24:LYS:HB2	39:Lk:35:LYS:HB2	1.80	0.63
52:SE:214:ASN:ND2	52:SE:216:ASN:OD1	2.32	0.63
54:SH:104:PRO:HA	54:SH:107:LYS:HD2	1.81	0.63
72:SG:68:LEU:HG	72:SG:69:THR:HG23	1.81	0.63
1:L5:4350:C:H42	1:L5:4364:G:H1	1.46	0.63
3:L8:109:C:H2'	38:Lj:20:ARG:NH1	2.13	0.63
48:S6:60:A:OP1	48:S6:62:C:N4	2.31	0.63
76:SO:13:GLN:HE21	76:SO:21:VAL:CG1	2.12	0.63
1:L5:2098:G:O3'	1:L5:2259:G:N2	2.31	0.62
4:LA:42:LYS:HG2	4:LA:89:TYR:HE1	1.63	0.62
7:LD:52:ILE:HA	7:LD:147:ASP:HB3	1.81	0.62
15:LM:47:ARG:HB2	21:LS:73:LEU:HD11	1.81	0.62
23:LU:100:LEU:HD21	23:LU:112:LEU:HD22	1.81	0.62
47:S2:1314:U:H2'	47:S2:1315:U:H4'	1.80	0.62
54:SH:53:VAL:HG13	54:SH:175:GLY:HA3	1.80	0.62
63:SU:66:ARG:HE	63:SU:75:LYS:HG2	1.64	0.62
1:L5:704:C:N4	1:L5:705:G:O6	2.32	0.62
1:L5:2474:G:OP2	26:LX:48:ARG:NH2	2.32	0.62
1:L5:4474:A:H2'	1:L5:4476:C:H5''	1.81	0.62
1:L5:4600:G:O2'	1:L5:4601:U:O5'	2.16	0.62
1:L5:4981:G:H5'	18:LP:71:ALA:HB2	1.81	0.62
24:LV:49:LEU:HD23	24:LV:50:ASN:HB2	1.81	0.62
28:LZ:89:ILE:HD12	28:LZ:90:PRO:HD2	1.81	0.62
47:S2:697:G:OP2	47:S2:734:C:O2'	2.16	0.62
57:SL:73:LEU:O	57:SL:128:VAL:N	2.30	0.62
70:Sg:104:HIS:NE2	70:Sg:126:ASP:OD2	2.31	0.62
1:L5:4759:C:OP1	17:LO:117:ARG:NH2	2.28	0.62
6:LC:55:SER:HB3	6:LC:58:ALA:HB2	1.81	0.62
6:LC:291:ARG:O	6:LC:295:SER:OG	2.13	0.62
10:LG:51:LEU:O	10:LG:53:ARG:N	2.30	0.62
47:S2:876:C:N3	47:S2:910:G:N2	2.47	0.62
47:S2:1822:A:N1	47:S2:1823:A:N6	2.47	0.62
76:SO:103:ASN:ND2	76:SO:140:THR:O	2.33	0.62
1:L5:1076:C:O2	1:L5:1235:G:N1	2.32	0.62
1:L5:1380:G:N2	1:L5:1381:U:O4	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2130:G:O2'	1:L5:2244:C:O2	2.12	0.62
1:L5:2659:A:N6	1:L5:2675:G:O2'	2.32	0.62
1:L5:5005:G:H1'	1:L5:5042:A:H61	1.64	0.62
25:LW:79:GLN:HB3	25:LW:80:ARG:O	1.99	0.62
70:Sg:166:VAL:HG12	70:Sg:176:VAL:HG22	1.79	0.62
72:SG:221:LYS:O	72:SG:225:GLN:N	2.32	0.62
1:L5:1278:C:H2'	1:L5:1279:A:H4'	1.79	0.62
1:L5:1445:U:H3	1:L5:2099:G:H22	1.46	0.62
24:LV:84:GLN:HA	24:LV:101:ASN:HB3	1.81	0.62
47:S2:923:G:OP1	75:SN:2:GLY:N	2.33	0.62
47:S2:1410:C:N4	47:S2:1411:G:O6	2.32	0.62
61:SS:148:VAL:HG11	61:SS:150:LYS:HE2	1.80	0.62
71:SC:123:ARG:NH2	71:SC:143:CYS:SG	2.73	0.62
1:L5:3:C:H2'	1:L5:4:G:C8	2.33	0.62
9:LF:172:ASN:OD1	9:LF:187:MET:N	2.27	0.62
26:LX:148:ASP:OD1	26:LX:149:VAL:N	2.32	0.62
46:Lz:80:VAL:HG11	46:Lz:147:LYS:HE2	1.81	0.62
1:L5:1173:G:O6	1:L5:1174:G:N2	2.33	0.62
1:L5:3807:A:HO2'	47:S2:1816:G:HO2'	1.48	0.62
1:L5:4576:U:O2'	1:L5:5067:U:O2'	2.16	0.62
21:LS:64:CYS:SG	21:LS:65:GLY:N	2.73	0.62
39:Lk:19:ASP:OD1	39:Lk:20:ALA:N	2.32	0.62
44:Lp:55:TRP:O	44:Lp:63:THR:OG1	2.16	0.62
47:S2:1189:A:H2'	47:S2:1190:A:H8	1.64	0.62
55:SI:41:ARG:HH11	55:SI:62:VAL:HG21	1.63	0.62
1:L5:254:G:C2	1:L5:255:C:H1'	2.35	0.62
1:L5:744:G:N2	1:L5:921:C:O2	2.32	0.62
1:L5:2482:C:H2'	1:L5:2483:G:H4'	1.81	0.62
1:L5:3893:C:H1'	18:LP:69:ARG:HH12	1.64	0.62
5:LB:93:VAL:HG23	5:LB:158:GLN:HE22	1.65	0.62
54:SH:66:VAL:HG22	54:SH:96:ALA:HB1	1.81	0.62
63:SU:25:THR:OG1	63:SU:111:GLU:OE1	2.17	0.62
74:SM:18:LEU:HD21	74:SM:49:LEU:HD22	1.80	0.62
1:L5:3859:G:OP2	18:LP:25:HIS:NE2	2.29	0.62
6:LC:141:GLY:O	6:LC:182:LYS:NZ	2.28	0.62
9:LF:179:LEU:HB3	9:LF:184:ILE:HB	1.81	0.62
11:LH:174:LYS:HB2	41:Lm:127:VAL:HG21	1.80	0.62
15:LM:31:ILE:HG22	21:LS:98:ARG:HE	1.65	0.62
31:Lc:77:ASN:OD1	31:Lc:78:ASN:N	2.33	0.62
50:SB:128:LYS:HD3	50:SB:134:LEU:HD13	1.81	0.62
53:SF:100:ILE:HG12	53:SF:178:ILE:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SQ:130:LYS:HA	59:SQ:137:ALA:HA	1.81	0.62
1:L5:2736:G:OP1	44:Lp:48:LYS:NZ	2.33	0.62
10:LG:147:VAL:HG13	10:LG:179:VAL:HG21	1.80	0.62
14:LL:205:GLN:HA	14:LL:208:GLU:HB2	1.82	0.62
47:S2:413:G:N2	47:S2:424:C:O2	2.33	0.62
47:S2:795:A:H2'	47:S2:796:G:C8	2.34	0.62
47:S2:1545:A:HO2'	47:S2:1546:G:H8	1.47	0.62
47:S2:1834:A:H2	47:S2:1837:G:H1	1.48	0.62
55:SI:67:TRP:CD1	55:SI:70:GLU:H	2.18	0.62
65:SX:55:VAL:HG11	81:Se:2:VAL:HG13	1.82	0.62
1:L5:1489:G:H2'	1:L5:1490:G:H8	1.65	0.61
7:LD:156:GLY:HA2	7:LD:181:PRO:HD3	1.82	0.61
47:S2:1580:A:OP1	63:SU:86:LYS:NZ	2.32	0.61
47:S2:1849:G:H1'	47:S2:1850:A:H5'	1.82	0.61
53:SF:28:VAL:HG23	53:SF:109:LEU:HD22	1.82	0.61
1:L5:1757:U:O2'	1:L5:1758:G:N3	2.33	0.61
13:LJ:33:LEU:HD12	13:LJ:36:ALA:HB3	1.81	0.61
22:LT:88:ARG:HH12	30:Lb:33:LYS:HB3	1.63	0.61
24:LV:61:VAL:O	24:LV:79:ALA:N	2.34	0.61
47:S2:312:G:H5'	47:S2:313:A:H5'	1.82	0.61
47:S2:835:C:N4	78:SY:9:THR:O	2.32	0.61
47:S2:1594:A:OP1	59:SQ:45:ARG:NH2	2.32	0.61
62:ST:124:THR:HG23	62:ST:127:GLY:H	1.66	0.61
66:Sa:25:ASN:OD1	66:Sa:26:CYS:N	2.33	0.61
70:Sg:44:LYS:N	70:Sg:55:PRO:O	2.33	0.61
5:LB:223:THR:HB	5:LB:275:HIS:H	1.65	0.61
47:S2:1620:A:O2'	58:SP:40:ARG:NH2	2.34	0.61
56:SK:52:LEU:HA	56:SK:55:ARG:HG2	1.82	0.61
75:SN:71:ILE:HA	75:SN:74:ILE:HG22	1.82	0.61
1:L5:443:G:H5''	34:Lf:54:LYS:HD3	1.82	0.61
1:L5:1240:G:N7	1:L5:1271:G:O2'	2.27	0.61
29:La:75:LEU:HB3	29:La:117:LEU:HD11	1.83	0.61
1:L5:2307:A:N3	1:L5:2333:G:O2'	2.32	0.61
1:L5:4138:C:H3'	1:L5:4139:G:H8	1.64	0.61
1:L5:4272:G:N2	1:L5:4272:G:OP2	2.33	0.61
1:L5:4731:G:OP1	1:L5:4731:G:N2	2.26	0.61
47:S2:1857:G:H5''	76:SO:146:ARG:HE	1.65	0.61
78:SY:129:LYS:HA	78:SY:132:LYS:HD2	1.83	0.61
1:L5:2612:G:H1	1:L5:2727:C:H42	1.46	0.61
1:L5:3605:C:OP1	20:LR:71:ARG:NE	2.32	0.61
1:L5:3774:A:O2'	1:L5:3775:A:N3	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4344:U:OP1	43:Lo:32:SER:HB3	2.01	0.61
1:L5:4472:G:O2'	41:Lm:100:TYR:O	2.17	0.61
1:L5:4741:C:O2'	1:L5:4742:G:O4'	2.18	0.61
10:LG:207:VAL:HG21	10:LG:215:LEU:HD13	1.81	0.61
17:LO:77:SER:HB3	17:LO:106:ASP:HB2	1.82	0.61
28:LZ:52:LYS:O	28:LZ:65:ARG:NE	2.33	0.61
47:S2:322:C:N3	47:S2:329:G:N1	2.48	0.61
58:SP:104:GLN:HG2	58:SP:105:VAL:N	2.16	0.61
62:ST:19:ALA:O	62:ST:23:LYS:N	2.33	0.61
1:L5:486:C:O2	1:L5:671:G:N2	2.27	0.61
1:L5:4125:C:H4'	10:LG:45:ILE:HG12	1.82	0.61
5:LB:359:ALA:O	5:LB:361:GLU:N	2.33	0.61
7:LD:198:HIS:ND1	7:LD:203:ASN:OD1	2.33	0.61
39:Lk:27:LYS:HA	39:Lk:32:VAL:HG22	1.83	0.61
43:Lo:63:THR:HB	43:Lo:89:LYS:HG2	1.83	0.61
55:SI:101:ILE:HD12	55:SI:190:LEU:HD11	1.82	0.61
63:SU:22:ILE:N	63:SU:89:ILE:O	2.32	0.61
70:Sg:106:LYS:HB2	70:Sg:126:ASP:HB3	1.81	0.61
74:SM:17:ALA:HB1	74:SM:124:ILE:HD13	1.81	0.61
1:L5:1403:G:N1	1:L5:1414:C:N3	2.41	0.61
20:LR:25:ASP:HB3	20:LR:32:ILE:HD11	1.82	0.61
28:LZ:11:VAL:HG11	28:LZ:80:LEU:HB3	1.83	0.61
46:Lz:157:PHE:HB3	46:Lz:167:VAL:HB	1.82	0.61
51:SD:11:PHE:O	51:SD:15:GLY:N	2.31	0.61
63:SU:67:LYS:HB2	63:SU:78:ASP:HB2	1.83	0.61
72:SG:225:GLN:HA	72:SG:228:ILE:HG22	1.83	0.61
1:L5:418:A:OP2	3:L8:16:G:N2	2.34	0.61
8:LE:270:TYR:HD1	15:LM:110:PHE:HB2	1.66	0.61
47:S2:1464:C:OP1	60:SR:60:ARG:NH2	2.33	0.61
52:SE:180:LEU:HA	52:SE:194:VAL:HA	1.83	0.61
57:SL:71:ARG:HB2	57:SL:130:GLU:HB2	1.83	0.61
70:Sg:88:ARG:HD2	70:Sg:90:TRP:CE2	2.35	0.61
73:SJ:169:ARG:HD2	73:SJ:170:PRO:HD2	1.82	0.61
1:L5:1266:G:N2	1:L5:1268:G:O5'	2.34	0.61
1:L5:2437:C:OP2	1:L5:2528:G:O2'	2.18	0.61
1:L5:4742:G:H22	1:L5:4958:C:H2'	1.66	0.61
22:LT:113:ASP:HB3	22:LT:117:LYS:HE3	1.82	0.61
1:L5:491:G:H1	1:L5:663:G:H1'	1.64	0.60
1:L5:1540:C:H4'	4:LA:19:HIS:HD2	1.64	0.60
3:L8:66:A:H5'	36:Lh:10:ARG:HH22	1.66	0.60
8:LE:109:LEU:O	8:LE:111:LYS:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LJ:85:LYS:HZ2	13:LJ:115:LEU:HB2	1.64	0.60
36:Lh:66:LYS:O	36:Lh:70:ARG:N	2.30	0.60
45:Lr:47:LYS:O	45:Lr:103:ARG:NE	2.31	0.60
47:S2:94:G:O2'	47:S2:508:A:O2'	2.16	0.60
47:S2:1270:G:H1	47:S2:1513:C:H42	1.49	0.60
1:L5:137:G:OP1	36:Lh:96:ASN:ND2	2.34	0.60
1:L5:2843:U:H2'	1:L5:2844:A:C8	2.36	0.60
1:L5:2889:G:H21	1:L5:5034:A:H8	1.47	0.60
2:L7:7:G:OP1	7:LD:33:ARG:NE	2.34	0.60
6:LC:84:THR:HG23	6:LC:86:ARG:HB3	1.83	0.60
32:Ld:41:ARG:HB2	32:Ld:77:ILE:O	2.01	0.60
46:Lz:90:LEU:HD13	46:Lz:124:LEU:HD11	1.82	0.60
50:SB:134:LEU:HG	50:SB:218:LEU:HD12	1.82	0.60
51:SD:42:THR:OG1	51:SD:45:ARG:O	2.20	0.60
52:SE:164:LEU:CD1	52:SE:165:GLU:H	2.14	0.60
53:SF:193:LYS:O	53:SF:197:GLU:N	2.34	0.60
65:SX:59:ALA:HB2	65:SX:67:ARG:HG2	1.83	0.60
74:SM:69:LEU:HD23	74:SM:74:ILE:HD12	1.83	0.60
1:L5:180:C:O2	1:L5:256:G:N2	2.33	0.60
1:L5:518:G:N2	1:L5:643:C:O2	2.34	0.60
1:L5:917:A:N3	1:L5:918:G:N2	2.48	0.60
26:LX:96:LEU:HD11	26:LX:149:VAL:HG13	1.81	0.60
33:Le:114:ARG:HH11	33:Le:117:GLN:HE21	1.48	0.60
47:S2:126:G:O6	72:SG:196:LYS:NZ	2.33	0.60
47:S2:744:G:N2	47:S2:795:A:N1	2.49	0.60
53:SF:30:ILE:HG12	53:SF:113:VAL:HG11	1.84	0.60
56:SK:60:GLU:HB3	56:SK:69:TRP:HA	1.82	0.60
1:L5:748:G:O6	1:L5:918:G:O2'	2.16	0.60
1:L5:2848:G:O2'	1:L5:3838:U:O4	2.13	0.60
1:L5:4471:U:OP2	11:LH:168:LYS:NZ	2.34	0.60
15:LM:25:VAL:HG22	15:LM:38:VAL:HG22	1.83	0.60
31:Lc:45:LEU:HD23	31:Lc:96:ILE:HD12	1.82	0.60
75:SN:130:LYS:NZ	75:SN:137:PRO:O	2.34	0.60
79:SZ:88:LEU:HB3	79:SZ:109:TYR:HE2	1.65	0.60
1:L5:1699:A:H62	1:L5:2118:G:H22	1.49	0.60
1:L5:2643:G:H1	1:L5:2691:U:H3	1.50	0.60
6:LC:12:SER:OG	6:LC:16:GLU:O	2.12	0.60
7:LD:54:ARG:NH2	7:LD:147:ASP:OD2	2.35	0.60
20:LR:98:ARG:NH1	20:LR:132:PHE:O	2.33	0.60
47:S2:511:U:O2'	47:S2:576:A:N1	2.34	0.60
1:L5:2011:C:H3'	1:L5:2012:A:H4'	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4955:A:H2'	1:L5:4956:A:C8	2.37	0.60
10:LG:58:PRO:HD2	10:LG:61:ILE:HD11	1.82	0.60
21:LS:164:LYS:HD2	34:Lf:34:TYR:HB2	1.84	0.60
44:Lp:42:CYS:HB3	44:Lp:44:LYS:HG2	1.84	0.60
47:S2:303:C:O4'	55:SI:64:ASN:ND2	2.35	0.60
58:SP:96:VAL:O	58:SP:96:VAL:HG12	2.01	0.60
65:SX:134:TYR:OH	81:Se:13:ARG:NH1	2.35	0.60
1:L5:437:G:H5''	33:Le:53:ILE:HD13	1.84	0.60
1:L5:1978:C:O2	1:L5:1987:C:N4	2.33	0.60
1:L5:3713:U:OP1	1:L5:3740:G:N2	2.35	0.60
1:L5:3736:A:H1'	1:L5:3933:G:H5''	1.84	0.60
1:L5:4523:A:H5''	1:L5:4524:G:H5'	1.82	0.60
19:LQ:63:LEU:HB2	19:LQ:88:ASP:HA	1.84	0.60
23:LU:19:LEU:HB2	23:LU:74:SER:HB3	1.84	0.60
47:S2:836:G:H8	47:S2:837:A:H4'	1.66	0.60
49:SA:5:LEU:HD21	64:SV:80:SER:HB2	1.84	0.60
68:Sd:21:CYS:SG	68:Sd:25:SER:N	2.74	0.60
72:SG:171:THR:HG22	72:SG:172:LYS:H	1.66	0.60
1:L5:1281:G:N2	6:LC:320:LYS:O	2.35	0.60
6:LC:183:VAL:HG11	6:LC:226:GLY:HA3	1.82	0.60
47:S2:377:G:N2	47:S2:387:C:O2	2.33	0.60
47:S2:379:C:O2	55:SI:5:ARG:NH1	2.34	0.60
47:S2:819:G:OP1	73:SJ:79:ARG:NH2	2.35	0.60
48:S6:20:A:H62	48:S6:59:A:H61	1.49	0.60
49:SA:4:ALA:N	49:SA:5:LEU:HA	2.16	0.60
67:Sc:29:GLN:HG3	67:Sc:45:ASN:HB3	1.82	0.60
70:Sg:158:PRO:HG2	70:Sg:202:PRO:HB3	1.82	0.60
77:SW:30:CYS:HA	77:SW:34:ILE:HD11	1.83	0.60
1:L5:1973:G:H21	1:L5:1995:G:H1'	1.65	0.60
2:L7:118:C:OP2	7:LD:256:LYS:NZ	2.29	0.60
10:LG:112:GLN:O	10:LG:116:ALA:N	2.35	0.60
20:LR:38:ARG:HA	20:LR:41:ILE:HG22	1.84	0.60
46:Lz:113:SER:OG	46:Lz:114:GLU:OE1	2.18	0.60
47:S2:879:C:O2	47:S2:907:G:N2	2.35	0.60
47:S2:1120:U:N3	47:S2:1121:G:N7	2.49	0.60
47:S2:1337:C:H4'	63:SU:67:LYS:HE3	1.84	0.60
47:S2:1660:C:OP2	68:Sd:32:ARG:NH1	2.34	0.60
49:SA:36:GLN:NE2	64:SV:67:ASP:OD1	2.34	0.60
50:SB:65:ARG:H	50:SB:88:THR:HG22	1.67	0.60
73:SJ:128:VAL:HG12	73:SJ:132:GLN:HE22	1.67	0.60
75:SN:4:MET:HE3	75:SN:124:ARG:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SO:147:ARG:HD2	76:SO:150:ARG:HE	1.67	0.60
1:L5:506:C:H42	1:L5:652:G:H1	1.48	0.60
9:LF:94:ARG:HD2	9:LF:117:ILE:HA	1.83	0.60
46:Lz:149:ASP:O	46:Lz:154:THR:N	2.34	0.60
54:SH:157:HIS:NE2	54:SH:188:GLU:OE1	2.35	0.60
58:SP:98:ASN:HB2	58:SP:99:GLY:HA3	1.84	0.60
59:SQ:24:HIS:CE1	59:SQ:69:ARG:HB2	2.37	0.60
61:SS:23:ARG:NH2	79:SZ:47:LEU:HA	2.17	0.60
72:SG:74:ARG:HG2	72:SG:96:SER:HA	1.84	0.60
1:L5:673:C:H2'	1:L5:674:G:C8	2.37	0.59
1:L5:1963:C:H2'	1:L5:1964:A:H8	1.67	0.59
2:L7:71:G:O6	2:L7:104:C:N4	2.22	0.59
17:LO:110:PRO:HA	17:LO:113:ASP:CG	2.27	0.59
17:LO:173:GLN:HA	17:LO:176:ARG:HE	1.67	0.59
52:SE:11:ARG:NH1	52:SE:21:ASP:O	2.35	0.59
77:SW:17:ALA:HB1	77:SW:25:VAL:HG11	1.84	0.59
1:L5:509:A:H5''	29:La:83:SER:HB2	1.83	0.59
4:LA:118:GLU:HG3	4:LA:119:LYS:H	1.67	0.59
18:LP:113:VAL:HG21	18:LP:153:LYS:HE3	1.84	0.59
32:Ld:63:ARG:NH2	32:Ld:96:GLU:OE1	2.35	0.59
47:S2:165:G:H4'	72:SG:53:SER:HB2	1.84	0.59
47:S2:165:G:OP2	47:S2:165:G:N2	2.35	0.59
47:S2:821:G:N2	73:SJ:148:ILE:O	2.34	0.59
1:L5:1825:A:H4'	30:Lb:39:PHE:HZ	1.66	0.59
2:L7:58:A:H2'	2:L7:59:G:C8	2.37	0.59
4:LA:174:ARG:HA	44:Lp:69:TRP:CZ3	2.36	0.59
13:LJ:40:LEU:HB2	13:LJ:48:PRO:HG3	1.83	0.59
70:Sg:114:SER:OG	70:Sg:116:ASP:OD1	2.17	0.59
77:SW:15:ASN:HD21	77:SW:72:CYS:H	1.51	0.59
79:SZ:49:LEU:H	79:SZ:83:LEU:HD12	1.67	0.59
1:L5:119:G:N7	10:LG:113:ARG:NH2	2.51	0.59
1:L5:2003:G:H22	1:L5:2016:C:H42	1.49	0.59
1:L5:4233:A:O2'	1:L5:4234:A:H2'	2.03	0.59
10:LG:194:VAL:O	10:LG:196:ARG:N	2.35	0.59
17:LO:128:ARG:HH12	21:LS:162:GLN:HG3	1.67	0.59
22:LT:116:LYS:HE2	22:LT:128:LEU:HD23	1.83	0.59
47:S2:947:G:H1	47:S2:979:C:H42	1.49	0.59
49:SA:110:ASN:OD1	49:SA:111:GLN:N	2.35	0.59
1:L5:977:C:H2'	1:L5:978:G:C8	2.35	0.59
1:L5:1691:G:H5'	19:LQ:15:ARG:HG3	1.84	0.59
1:L5:4471:U:H2'	1:L5:4472:G:H8	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:45:C:H4'	40:L1:11:ARG:HD3	1.84	0.59
5:LB:74:GLU:OE1	5:LB:334:LYS:NZ	2.32	0.59
7:LD:27:LYS:HG2	13:LJ:147:ARG:NH1	2.17	0.59
15:LM:70:GLN:O	15:LM:72:TYR:N	2.34	0.59
34:Lf:11:PHE:HD2	34:Lf:97:ILE:HA	1.66	0.59
47:S2:600:G:H5'	47:S2:630:U:H2'	1.83	0.59
52:SE:69:PHE:HE1	78:SY:17:LEU:HD22	1.67	0.59
58:SP:18:ARG:HG3	58:SP:20:VAL:HG23	1.85	0.59
72:SG:85:ARG:O	72:SG:87:ARG:NH1	2.35	0.59
74:SM:49:LEU:HD21	74:SM:77:ILE:HD11	1.84	0.59
1:L5:197:A:N3	1:L5:222:C:O2'	2.36	0.59
1:L5:930:G:H4'	1:L5:931:C:O5'	2.03	0.59
47:S2:361:U:O4'	47:S2:1175:G:N2	2.35	0.59
47:S2:797:C:O2	54:SH:109:ARG:NH2	2.35	0.59
47:S2:1609:C:H5''	61:SS:131:VAL:HB	1.85	0.59
49:SA:158:ASP:OD1	49:SA:159:ILE:N	2.36	0.59
60:SR:100:PRO:HA	60:SR:117:LEU:HD12	1.85	0.59
76:SO:46:ASP:O	76:SO:48:SER:N	2.32	0.59
76:SO:67:ASP:O	76:SO:69:SER:N	2.36	0.59
77:SW:15:ASN:ND2	77:SW:72:CYS:H	2.00	0.59
1:L5:736:C:H2'	1:L5:737:C:H4'	1.84	0.59
1:L5:1868:A:HO2'	1:L5:4402:C:HO2'	1.47	0.59
1:L5:2402:G:O2'	35:Lg:10:ARG:O	2.21	0.59
1:L5:3621:A:O2'	1:L5:4658:G:O2'	2.19	0.59
1:L5:3960:A:N6	1:L5:4045:G:O2'	2.36	0.59
47:S2:1374:C:O2'	47:S2:1464:C:O2	2.20	0.59
73:SJ:77:LEU:HB3	73:SJ:80:ARG:HH21	1.67	0.59
1:L5:13:U:O4	3:L8:115:G:N2	2.35	0.59
1:L5:1279:A:H2	6:LC:323:ARG:HH12	1.49	0.59
1:L5:4769:G:H1	1:L5:4865:C:N4	2.00	0.59
5:LB:305:THR:O	5:LB:309:LEU:N	2.31	0.59
18:LP:40:HIS:O	18:LP:44:ALA:N	2.35	0.59
20:LR:78:ILE:HA	20:LR:81:ARG:NH1	2.18	0.59
47:S2:384:U:O4	55:SI:5:ARG:NH2	2.35	0.59
47:S2:944:A:H5''	76:SO:134:PRO:HB2	1.85	0.59
47:S2:1284:A:H4'	47:S2:1285:G:H2'	1.85	0.59
50:SB:34:LYS:NZ	50:SB:95:ASN:OD1	2.28	0.59
52:SE:185:GLY:H	52:SE:189:LEU:HB3	1.68	0.59
53:SF:188:TYR:O	53:SF:192:LYS:N	2.36	0.59
55:SI:89:GLU:OE2	55:SI:92:ARG:NH2	2.36	0.59
67:Sc:13:ARG:HD3	67:Sc:35:MET:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3653:A:N6	1:L5:3691:G:O2'	2.33	0.59
1:L5:4618:G:H5'	24:LV:15:ARG:HB2	1.85	0.59
1:L5:4662:C:O2'	1:L5:5004:C:OP1	2.21	0.59
36:Lh:87:LYS:O	36:Lh:92:ARG:NH1	2.35	0.59
47:S2:1464:C:OP2	60:SR:60:ARG:NH1	2.35	0.59
47:S2:1617:G:OP2	58:SP:47:ARG:NH2	2.28	0.59
47:S2:1692:U:H2'	47:S2:1693:G:C8	2.37	0.59
60:SR:42:PRO:HD2	60:SR:46:LEU:HD23	1.85	0.59
60:SR:58:MET:HA	60:SR:61:ILE:HG12	1.82	0.59
70:Sg:34:ALA:HB1	70:Sg:66:VAL:HG11	1.85	0.59
80:Sb:65:GLN:HB2	80:Sb:72:ARG:HB3	1.85	0.59
15:LM:31:ILE:HG13	15:LM:35:ARG:HB3	1.84	0.59
20:LR:176:ARG:NH2	47:S2:909:G:O3'	2.35	0.59
47:S2:879:C:N3	47:S2:880:G:N1	2.51	0.59
47:S2:1587:G:N2	62:ST:74:SER:O	2.36	0.59
47:S2:1610:G:O2'	61:SS:86:ARG:NH2	2.36	0.59
47:S2:1616:U:H3	47:S2:1620:A:H2	1.51	0.59
50:SB:208:HIS:CE1	50:SB:209:ASP:HB2	2.38	0.59
60:SR:5:ARG:HB2	60:SR:10:LYS:NZ	2.18	0.59
1:L5:727:C:OP1	9:LF:76:ARG:NH1	2.36	0.58
1:L5:1556:C:O2'	1:L5:2669:C:OP1	2.16	0.58
1:L5:2601:A:N6	1:L5:2744:A:OP2	2.36	0.58
1:L5:3807:A:O2'	47:S2:1816:G:O2'	2.20	0.58
1:L5:4941:G:OP1	8:LE:219:LYS:NZ	2.36	0.58
1:L5:5054:C:H4'	1:L5:5055:G:H5'	1.84	0.58
27:LY:34:LEU:HD21	27:LY:47:MET:HE3	1.85	0.58
47:S2:596:U:HO2'	47:S2:645:C:HO2'	1.47	0.58
70:Sg:176:VAL:O	70:Sg:187:ASN:ND2	2.36	0.58
73:SJ:11:LYS:NZ	73:SJ:13:TYR:O	2.30	0.58
74:SM:80:ASP:O	74:SM:83:LYS:HG2	2.03	0.58
1:L5:4103:C:H4'	1:L5:4104:G:C8	2.38	0.58
5:LB:11:HIS:HE1	5:LB:237:THR:HG23	1.69	0.58
15:LM:27:ILE:HA	15:LM:38:VAL:HG23	1.85	0.58
16:LN:114:ARG:N	16:LN:135:ILE:O	2.36	0.58
21:LS:15:ARG:HB2	21:LS:25:PRO:HG2	1.85	0.58
65:SX:109:GLY:O	65:SX:119:ARG:NH1	2.36	0.58
65:SX:132:ALA:HB1	65:SX:137:LYS:HD2	1.84	0.58
70:Sg:78:ALA:H	70:Sg:89:LEU:HD12	1.66	0.58
72:SG:152:ASP:OD1	72:SG:153:VAL:N	2.36	0.58
72:SG:215:LYS:O	72:SG:219:GLU:N	2.36	0.58
1:L5:2399:G:N2	35:Lg:4:ARG:HE	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4911:A:OP1	5:LB:97:ARG:NH1	2.32	0.58
5:LB:262:VAL:HG11	5:LB:268:ARG:HH11	1.68	0.58
27:LY:59:ARG:HG3	27:LY:103:LYS:HD2	1.83	0.58
47:S2:400:C:P	65:SX:11:ARG:HH12	2.27	0.58
51:SD:71:ALA:HB3	56:SK:20:VAL:HG11	1.84	0.58
60:SR:84:TYR:O	60:SR:87:GLU:HG2	2.03	0.58
65:SX:28:LYS:HE3	65:SX:32:LEU:HD13	1.85	0.58
1:L5:1266:G:N2	1:L5:2111:G:N3	2.51	0.58
1:L5:2459:G:H1	16:LN:108:ARG:HH22	1.50	0.58
1:L5:3708:C:OP1	4:LA:241:ARG:NH1	2.36	0.58
4:LA:137:ILE:HD11	4:LA:149:LYS:HB2	1.84	0.58
7:LD:223:PHE:HB3	7:LD:226:TYR:HB2	1.85	0.58
21:LS:34:ALA:HB1	21:LS:39:VAL:HG23	1.84	0.58
28:LZ:100:VAL:HG21	28:LZ:110:ALA:HB2	1.85	0.58
33:Le:104:SER:OG	33:Le:105:SER:N	2.37	0.58
45:Lr:88:ALA:O	45:Lr:91:SER:OG	2.18	0.58
47:S2:614:C:O2'	47:S2:626:G:N2	2.35	0.58
47:S2:881:G:O6	47:S2:905:C:N4	2.36	0.58
55:SI:79:ILE:HG21	55:SI:170:LYS:HZ2	1.68	0.58
1:L5:1370:G:H4'	1:L5:1371:A:H5'	1.85	0.58
1:L5:2687:U:O4'	35:Lg:21:ARG:NH1	2.36	0.58
1:L5:3961:G:H1'	1:L5:4048:A:H61	1.68	0.58
18:LP:26:PHE:HA	18:LP:144:CYS:SG	2.43	0.58
21:LS:11:LYS:HE2	21:LS:29:ARG:HE	1.68	0.58
21:LS:69:GLU:OE2	21:LS:76:LYS:NZ	2.35	0.58
25:LW:105:ARG:HH22	72:SG:144:LEU:HD11	1.68	0.58
47:S2:1033:G:N1	47:S2:1080:A:O2'	2.32	0.58
52:SE:229:GLY:H	52:SE:235:TRP:HB2	1.69	0.58
56:SK:58:VAL:HA	56:SK:71:LEU:HA	1.85	0.58
66:Sa:38:LYS:HB3	66:Sa:71:LEU:HB2	1.84	0.58
1:L5:1269:G:O6	1:L5:2111:G:N2	2.28	0.58
1:L5:1805:A:N6	30:Lb:26:SER:O	2.36	0.58
1:L5:2556:G:N2	1:L5:2571:C:O2	2.35	0.58
1:L5:4670:C:O2'	1:L5:4672:A:OP2	2.20	0.58
47:S2:1268:C:H42	47:S2:1514:G:H22	1.51	0.58
47:S2:1656:G:H2'	47:S2:1657:G:H8	1.69	0.58
50:SB:144:LYS:HD2	50:SB:208:HIS:HB3	1.84	0.58
57:SL:61:PRO:HD3	57:SL:141:ASN:HD21	1.69	0.58
58:SP:78:THR:OG1	58:SP:96:VAL:N	2.37	0.58
61:SS:64:VAL:HA	61:SS:67:VAL:HG12	1.85	0.58
70:Sg:5:MET:HA	70:Sg:8:ARG:HH22	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SN:17:PRO:O	75:SN:20:ARG:NH1	2.30	0.58
77:SW:94:LEU:HD11	77:SW:102:ILE:HG13	1.86	0.58
1:L5:1077:C:N4	1:L5:1233:G:O6	2.37	0.58
1:L5:2057:A:OP1	17:LO:18:ARG:NH2	2.36	0.58
1:L5:2380:G:N2	1:L5:2425:U:OP1	2.26	0.58
1:L5:3653:A:H5''	4:LA:179:ILE:HD11	1.86	0.58
26:LX:92:ASP:OD1	26:LX:93:ASN:ND2	2.37	0.58
47:S2:536:A:N6	47:S2:549:C:O4'	2.36	0.58
47:S2:1008:A:H1'	75:SN:101:HIS:ND1	2.18	0.58
1:L5:1405:C:N4	1:L5:1411:C:N3	2.51	0.58
1:L5:1811:G:H21	30:Lb:57:MET:HE1	1.69	0.58
1:L5:4097:G:H22	1:L5:4113:U:H1'	1.68	0.58
1:L5:4315:A:OP1	22:LT:69:GLN:NE2	2.35	0.58
1:L5:4492:U:O2'	1:L5:4512:U:O2	2.21	0.58
1:L5:5022:U:N3	1:L5:5025:C:O2	2.36	0.58
11:LH:37:ASP:OD1	11:LH:39:ASN:ND2	2.37	0.58
47:S2:77:A:C4	72:SG:154:ARG:HG3	2.39	0.58
47:S2:1328:G:H1	47:S2:1501:C:H42	1.51	0.58
48:S6:35:A:H2'	48:S6:36:U:C2	2.39	0.58
53:SF:61:PHE:HA	67:Sc:51:ARG:NH2	2.19	0.58
53:SF:133:THR:OG1	53:SF:134:VAL:N	2.35	0.58
53:SF:179:ASN:HB3	53:SF:186:ASN:HB3	1.84	0.58
68:Sd:22:ARG:HG2	68:Sd:38:MET:SD	2.43	0.58
1:L5:712:C:H42	1:L5:956:A:H61	1.51	0.58
1:L5:976:G:H2'	1:L5:977:C:N1	2.19	0.58
1:L5:1552:G:H2'	1:L5:1574:G:H22	1.68	0.58
1:L5:1804:A:N6	1:L5:1833:G:O4'	2.37	0.58
1:L5:2462:C:OP1	16:LN:108:ARG:NH1	2.37	0.58
1:L5:4136:G:N2	1:L5:4148:C:N3	2.52	0.58
2:L7:48:G:OP1	7:LD:226:TYR:OH	2.22	0.58
28:LZ:11:VAL:N	28:LZ:23:ALA:O	2.35	0.58
28:LZ:42:LEU:HA	28:LZ:74:VAL:HA	1.85	0.58
44:Lp:8:VAL:O	44:Lp:27:LYS:NZ	2.25	0.58
47:S2:213:G:O2'	47:S2:214:U:OP1	2.20	0.58
47:S2:1171:G:N2	47:S2:1188:A:OP2	2.36	0.58
47:S2:1235:G:H1	47:S2:1523:C:H42	1.51	0.58
47:S2:1412:C:O2'	47:S2:1413:G:N7	2.34	0.58
72:SG:219:GLU:HB2	72:SG:222:GLU:HB3	1.86	0.58
76:SO:31:CYS:HA	76:SO:44:VAL:HA	1.85	0.58
1:L5:1364:U:H5	14:LL:36:ARG:HH12	1.51	0.58
1:L5:1541:C:O2'	1:L5:2448:G:N3	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3770:U:H2'	1:L5:3771:C:O4'	2.04	0.58
1:L5:4044:U:O2'	1:L5:4045:G:N7	2.37	0.58
6:LC:318:PRO:HG2	9:LF:155:TYR:HD1	1.69	0.58
23:LU:64:GLU:HB3	23:LU:71:THR:HB	1.86	0.58
32:Ld:121:ASN:OD1	32:Ld:122:VAL:N	2.36	0.58
34:Lf:8:LYS:HB3	34:Lf:100:ARG:NH1	2.19	0.58
53:SF:17:ILE:HG23	53:SF:18:LYS:H	1.69	0.58
56:SK:80:ARG:HH21	56:SK:87:PRO:HA	1.69	0.58
71:SC:130:ILE:O	71:SC:138:GLY:N	2.35	0.58
76:SO:96:LYS:NZ	76:SO:130:GLU:OE1	2.36	0.58
8:LE:120:ASP:OD2	45:Lr:112:ARG:NH1	2.37	0.57
10:LG:110:LYS:O	10:LG:114:LEU:N	2.32	0.57
16:LN:53:TYR:HB2	16:LN:133:ILE:HD13	1.86	0.57
20:LR:29:THR:HA	20:LR:32:ILE:HD12	1.85	0.57
23:LU:44:GLN:HG3	23:LU:56:LEU:HG	1.85	0.57
47:S2:563:G:O6	47:S2:592:C:N4	2.37	0.57
47:S2:1157:G:O3'	77:SW:76:SER:OG	2.22	0.57
49:SA:89:LYS:NZ	60:SR:82:ASP:OD1	2.35	0.57
50:SB:122:GLU:HG2	50:SB:140:VAL:HG12	1.86	0.57
56:SK:57:TYR:O	56:SK:72:THR:OG1	2.19	0.57
57:SL:124:ASP:HB2	57:SL:147:LYS:HB3	1.85	0.57
57:SL:148:ALA:HB1	57:SL:153:LYS:HE2	1.86	0.57
70:Sg:158:PRO:HD3	70:Sg:200:VAL:HG21	1.86	0.57
70:Sg:242:SER:HB2	70:Sg:247:TRP:HB2	1.86	0.57
73:SJ:153:SER:HA	73:SJ:156:HIS:HD2	1.69	0.57
1:L5:66:A:H61	1:L5:282:C:HO2'	1.50	0.57
1:L5:1501:C:H2'	19:LQ:68:ARG:HE	1.69	0.57
5:LB:213:GLN:HG2	5:LB:362:LYS:HE2	1.85	0.57
14:LL:64:VAL:HA	14:LL:67:HIS:HB2	1.86	0.57
17:LO:76:PRO:HA	17:LO:79:ILE:HG22	1.86	0.57
26:LX:80:PRO:HB3	26:LX:155:ILE:HD13	1.86	0.57
47:S2:178:C:O5'	47:S2:313:A:N6	2.37	0.57
47:S2:194:C:H42	47:S2:205:G:H1	1.51	0.57
47:S2:1098:C:H2'	47:S2:1099:G:C8	2.39	0.57
47:S2:1109:C:O2'	47:S2:1110:G:O4'	2.22	0.57
47:S2:1643:U:O2'	47:S2:1644:C:O5'	2.20	0.57
52:SE:238:LEU:HD11	52:SE:242:LYS:HG2	1.86	0.57
60:SR:7:LYS:O	60:SR:11:LYS:N	2.35	0.57
70:Sg:207:CYS:SG	70:Sg:208:ALA:N	2.77	0.57
1:L5:28:C:H2'	1:L5:29:G:H8	1.69	0.57
1:L5:223:G:O2'	1:L5:225:G:OP2	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1721:G:N2	1:L5:1842:G:O2'	2.38	0.57
1:L5:1903:G:OP1	34:Lf:87:LYS:NZ	2.25	0.57
1:L5:4119:C:N4	35:Lg:100:GLN:OE1	2.38	0.57
1:L5:5000:G:OP1	5:LB:394:LYS:NZ	2.35	0.57
2:L7:7:G:O3'	7:LD:33:ARG:NH1	2.37	0.57
3:L8:98:C:OP1	26:LX:70:LYS:NZ	2.33	0.57
7:LD:31:TYR:O	7:LD:33:ARG:N	2.30	0.57
10:LG:57:TRP:O	10:LG:62:ARG:NH1	2.37	0.57
10:LG:184:ILE:HG21	10:LG:190:LEU:HD11	1.86	0.57
13:LJ:22:LEU:HD13	13:LJ:40:LEU:HD22	1.85	0.57
30:Lb:58:GLN:O	30:Lb:62:ALA:N	2.32	0.57
47:S2:207:G:C2	47:S2:208:G:H1'	2.39	0.57
47:S2:522:A:H5''	73:SJ:145:PRO:HD2	1.86	0.57
47:S2:698:G:H5'	47:S2:733:C:H42	1.69	0.57
47:S2:1679:A:C8	53:SF:60:ARG:HB3	2.38	0.57
49:SA:176:TRP:CD1	49:SA:199:PRO:HA	2.39	0.57
56:SK:23:ALA:HB3	56:SK:67:PHE:HB2	1.84	0.57
70:Sg:61:GLY:O	70:Sg:88:ARG:NH2	2.37	0.57
1:L5:226:G:OP2	27:LY:1:MET:N	2.33	0.57
1:L5:400:A:OP1	18:LP:4:TYR:OH	2.22	0.57
1:L5:1530:G:H1'	38:Lj:49:TRP:HH2	1.69	0.57
1:L5:1837:A:H2'	1:L5:1838:A:C8	2.40	0.57
1:L5:4235:G:N2	1:L5:4292:A:OP1	2.29	0.57
10:LG:163:PRO:HA	16:LN:26:ARG:HH22	1.69	0.57
25:LW:70:LYS:HD2	47:S2:1783:C:H5	1.69	0.57
41:Lm:99:CYS:HB2	41:Lm:115:CYS:HB3	1.84	0.57
47:S2:1208:A:O2'	47:S2:1835:A:N7	2.36	0.57
52:SE:18:TRP:HB3	52:SE:20:LEU:HG	1.86	0.57
57:SL:40:ILE:HG12	57:SL:68:ILE:HD13	1.86	0.57
68:Sd:43:PHE:O	68:Sd:47:ALA:N	2.38	0.57
75:SN:96:VAL:HG11	75:SN:150:VAL:HG11	1.85	0.57
1:L5:713:C:H42	1:L5:955:G:H1	1.53	0.57
1:L5:962:C:H3'	1:L5:2264:C:N4	2.19	0.57
1:L5:1402:C:N3	1:L5:1415:G:N1	2.51	0.57
1:L5:1763:C:N4	1:L5:1769:G:O6	2.37	0.57
10:LG:184:ILE:HG23	10:LG:189:ARG:HH11	1.68	0.57
11:LH:91:LYS:O	11:LH:182:SER:OG	2.18	0.57
15:LM:41:PRO:HG3	15:LM:73:VAL:HG13	1.86	0.57
18:LP:6:LEU:HD23	18:LP:116:HIS:HD2	1.69	0.57
20:LR:92:LYS:O	20:LR:96:MET:HG3	2.04	0.57
34:Lf:50:VAL:HG12	34:Lf:69:VAL:HG12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Lz:20:GLY:O	46:Lz:23:ARG:NE	2.37	0.57
47:S2:315:C:H42	47:S2:335:G:H1	1.53	0.57
49:SA:12:GLU:O	49:SA:14:ASP:N	2.37	0.57
51:SD:204:LEU:O	51:SD:206:ASP:N	2.36	0.57
54:SH:12:ASN:OD1	54:SH:14:GLU:HG2	2.05	0.57
54:SH:20:GLU:O	54:SH:24:SER:N	2.36	0.57
55:SI:10:LYS:HE2	57:SL:136:LYS:HE3	1.86	0.57
55:SI:43:ILE:HG12	55:SI:57:ALA:HA	1.86	0.57
59:SQ:67:ASP:OD1	59:SQ:68:ILE:N	2.38	0.57
69:Sf:111:ASN:ND2	69:Sf:113:LYS:O	2.38	0.57
73:SJ:65:GLU:HA	73:SJ:70:ARG:HD3	1.86	0.57
73:SJ:77:LEU:HA	73:SJ:80:ARG:HE	1.67	0.57
1:L5:408:A:O2'	1:L5:411:G:OP2	2.13	0.57
1:L5:958:G:O2'	1:L5:959:G:OP1	2.19	0.57
1:L5:1472:C:H42	1:L5:1492:G:H1	1.51	0.57
1:L5:4391:G:OP1	6:LC:75:ARG:NH1	2.32	0.57
1:L5:4909:A:O2'	1:L5:4910:G:O5'	2.21	0.57
9:LF:241:ASN:O	9:LF:245:ARG:NH2	2.38	0.57
10:LG:73:ARG:HH22	10:LG:243:GLY:HA3	1.69	0.57
13:LJ:56:THR:HB	13:LJ:57:VAL:HG22	1.86	0.57
47:S2:291:G:N2	47:S2:293:C:OP2	2.36	0.57
47:S2:1388:A:O2'	51:SD:205:PRO:O	2.16	0.57
51:SD:22:ASN:O	51:SD:26:THR:OG1	2.15	0.57
67:Sc:13:ARG:NH1	67:Sc:33:GLU:OE1	2.33	0.57
1:L5:173:C:N4	1:L5:264:C:O2	2.37	0.57
1:L5:1090:G:H5''	22:LT:142:ARG:HH12	1.70	0.57
1:L5:1761:G:H1	1:L5:1768:C:N4	1.99	0.57
1:L5:3746:A:H5'	4:LA:243:THR:HG23	1.85	0.57
1:L5:3848:U:H2'	1:L5:3849:A:H8	1.69	0.57
43:Lo:15:CYS:SG	43:Lo:19:GLN:NE2	2.77	0.57
52:SE:34:GLY:HA3	52:SE:83:PRO:HG3	1.86	0.57
69:Sf:120:GLU:HB3	69:Sf:122:PRO:HD3	1.87	0.57
1:L5:1616:U:H2'	1:L5:1617:G:H8	1.70	0.57
1:L5:3631:U:O2'	1:L5:3805:U:OP1	2.21	0.57
12:LI:85:PHE:CE2	12:LI:87:MET:HE3	2.39	0.57
17:LO:81:TRP:HZ2	17:LO:99:LEU:HD21	1.69	0.57
47:S2:798:A:H4'	54:SH:109:ARG:HG2	1.85	0.57
47:S2:830:A:OP2	47:S2:846:G:N2	2.37	0.57
49:SA:43:SER:HB2	60:SR:123:THR:HG22	1.86	0.57
50:SB:97:LEU:HD22	50:SB:232:HIS:NE2	2.20	0.57
52:SE:11:ARG:NH2	52:SE:24:THR:O	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SE:231:GLY:O	52:SE:233:LYS:N	2.37	0.57
60:SR:5:ARG:HE	60:SR:53:TYR:HB2	1.68	0.57
62:ST:70:ALA:HB3	62:ST:75:MET:HE3	1.85	0.57
70:Sg:21:ILE:HB	70:Sg:290:ALA:HB2	1.86	0.57
73:SJ:130:ILE:HD13	73:SJ:145:PRO:HA	1.86	0.57
1:L5:2065:G:O2'	34:Lf:80:ASN:OD1	2.21	0.57
1:L5:2656:U:OP1	28:LZ:76:ASN:ND2	2.37	0.57
4:LA:26:ALA:H	4:LA:75:LEU:HD23	1.70	0.57
11:LH:9:THR:HG22	11:LH:56:ARG:HB2	1.87	0.57
11:LH:18:ILE:HG22	11:LH:27:VAL:HA	1.86	0.57
16:LN:15:GLN:HG3	37:Li:52:PRO:HD2	1.87	0.57
17:LO:130:LYS:HB2	17:LO:133:ARG:HG2	1.87	0.57
47:S2:1348:G:H22	47:S2:1381:G:H22	1.53	0.57
47:S2:1568:C:O2'	47:S2:1569:A:O5'	2.22	0.57
47:S2:1718:G:O2'	47:S2:1815:A:N6	2.38	0.57
50:SB:189:ILE:HB	50:SB:190:PRO:HD3	1.87	0.57
52:SE:189:LEU:O	52:SE:245:ARG:NH2	2.37	0.57
53:SF:138:ALA:H	53:SF:204:ARG:HA	1.70	0.57
72:SG:230:LYS:O	72:SG:234:LEU:N	2.37	0.57
1:L5:458:C:H42	1:L5:698:G:H1	1.53	0.57
1:L5:1350:C:H2'	1:L5:1351:G:C8	2.40	0.57
1:L5:4617:G:O2'	24:LV:13:LYS:O	2.22	0.57
1:L5:4718:G:OP1	5:LB:20:LYS:NZ	2.31	0.57
4:LA:115:CYS:HB2	4:LA:165:VAL:HG12	1.87	0.57
4:LA:118:GLU:HG2	4:LA:125:LYS:HG3	1.86	0.57
4:LA:176:ASP:CG	4:LA:177:LYS:H	2.12	0.57
25:LW:69:LYS:H	25:LW:70:LYS:CB	2.10	0.57
47:S2:143:U:C5	72:SG:180:VAL:HG22	2.39	0.57
47:S2:1570:G:N7	62:ST:97:LYS:NZ	2.42	0.57
50:SB:87:ILE:HG23	50:SB:101:HIS:HB2	1.85	0.57
52:SE:191:ARG:HE	52:SE:245:ARG:HB3	1.70	0.57
65:SX:115:ILE:HG22	65:SX:117:GLY:H	1.69	0.57
66:Sa:105:GLY:O	66:Sa:107:ALA:N	2.38	0.57
69:Sf:107:LYS:HE2	74:SM:60:MET:HE1	1.86	0.57
72:SG:66:GLY:N	72:SG:100:CYS:SG	2.78	0.57
1:L5:1921:C:O3'	21:LS:160:ARG:HG2	2.04	0.56
1:L5:2005:G:N2	1:L5:2015:U:O2	2.37	0.56
1:L5:2006:U:OP2	1:L5:2007:G:N1	2.38	0.56
4:LA:108:PRO:O	4:LA:111:THR:OG1	2.21	0.56
19:LQ:63:LEU:O	19:LQ:67:ILE:HG12	2.05	0.56
25:LW:82:ILE:HG12	25:LW:84:GLY:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:317:C:H42	47:S2:333:G:H1	1.51	0.56
47:S2:688:U:H4'	47:S2:689:U:O5'	2.03	0.56
47:S2:1281:G:H8	74:SM:101:ARG:HE	1.50	0.56
50:SB:129:THR:HG21	50:SB:133:TYR:HB2	1.87	0.56
53:SF:63:LYS:HG3	53:SF:71:ARG:HH22	1.70	0.56
57:SL:59:LYS:HG2	57:SL:134:LEU:HD11	1.87	0.56
74:SM:26:LEU:HD12	74:SM:27:ILE:H	1.70	0.56
1:L5:4332:C:O2'	22:LT:49:GLN:NE2	2.37	0.56
4:LA:113:VAL:HG12	4:LA:166:VAL:HA	1.86	0.56
6:LC:146:GLU:HG2	6:LC:175:LYS:HD2	1.85	0.56
13:LJ:60:PHE:HB2	13:LJ:62:ILE:HG12	1.87	0.56
21:LS:127:MET:HG2	22:LT:153:PRO:HG2	1.86	0.56
33:Le:77:PHE:HA	45:Lr:21:ASN:ND2	2.20	0.56
37:Li:20:ASN:OD1	37:Li:21:VAL:N	2.37	0.56
44:Lp:17:ARG:O	44:Lp:23:ARG:NH1	2.38	0.56
47:S2:525:A:H2'	47:S2:526:A:C8	2.40	0.56
47:S2:1869:A:H1'	50:SB:115:LYS:HG2	1.87	0.56
48:S6:9:U:O2'	48:S6:46:G:N2	2.37	0.56
48:S6:33:C:O2'	48:S6:34:C:O5'	2.23	0.56
49:SA:3:GLY:HA3	49:SA:8:LEU:HD11	1.88	0.56
49:SA:6:ASP:HB2	49:SA:8:LEU:HG	1.87	0.56
59:SQ:124:PRO:O	59:SQ:126:ARG:NH2	2.38	0.56
65:SX:70:VAL:O	65:SX:83:ALA:N	2.36	0.56
66:Sa:40:VAL:HG22	66:Sa:69:VAL:O	2.05	0.56
77:SW:40:VAL:O	77:SW:44:HIS:ND1	2.30	0.56
1:L5:964:A:N1	1:L5:2251:G:O2'	2.32	0.56
1:L5:4522:G:O2'	1:L5:4525:C:OP2	2.18	0.56
2:L7:22:A:H2	7:LD:264:LYS:HE3	1.69	0.56
5:LB:10:ARG:NH2	5:LB:11:HIS:O	2.38	0.56
10:LG:58:PRO:O	10:LG:60:TYR:N	2.38	0.56
25:LW:71:ARG:HG2	25:LW:72:THR:HG23	1.87	0.56
45:Lr:94:ARG:HD2	45:Lr:98:ARG:HH21	1.68	0.56
46:Lz:204:LEU:HB3	46:Lz:216:LEU:HG	1.86	0.56
47:S2:400:C:OP2	65:SX:11:ARG:NH1	2.38	0.56
47:S2:668:A:H5'	47:S2:669:A:OP2	2.05	0.56
47:S2:1316:C:N4	47:S2:1318:G:N7	2.52	0.56
47:S2:1320:G:C5	47:S2:1321:G:H1'	2.40	0.56
48:S6:38:A:OP2	48:S6:39:C:N4	2.32	0.56
53:SF:72:LEU:HD23	53:SF:151:ILE:HG23	1.86	0.56
53:SF:88:MET:HE3	53:SF:91:ARG:NH2	2.20	0.56
53:SF:88:MET:HB2	53:SF:91:ARG:HH21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SP:82:ASP:OD1	58:SP:83:MET:N	2.39	0.56
62:ST:42:HIS:CD2	62:ST:81:GLY:H	2.23	0.56
65:SX:68:LYS:HG2	65:SX:91:LEU:HD22	1.88	0.56
77:SW:72:CYS:SG	77:SW:73:GLY:N	2.73	0.56
1:L5:956:A:H3'	1:L5:957:G:C8	2.39	0.56
1:L5:2269:C:H41	45:Lr:11:ARG:HD3	1.71	0.56
1:L5:2326:G:OP2	33:Le:101:HIS:ND1	2.31	0.56
1:L5:3621:A:HO2'	1:L5:4658:G:HO2'	1.45	0.56
5:LB:295:ASP:OD1	5:LB:296:GLY:N	2.36	0.56
12:LI:100:ASN:O	12:LI:102:MET:N	2.38	0.56
13:LJ:6:GLY:O	13:LJ:10:ASN:N	2.36	0.56
24:LV:39:ILE:HG12	24:LV:61:VAL:HG11	1.87	0.56
32:Ld:86:VAL:HG21	32:Ld:106:VAL:HG12	1.87	0.56
33:Le:88:LEU:HD22	33:Le:95:TYR:CE1	2.40	0.56
47:S2:33:G:H1	47:S2:522:A:H2	1.52	0.56
47:S2:794:A:H2'	47:S2:795:A:H4'	1.87	0.56
61:SS:40:TYR:HD1	61:SS:83:PHE:HE2	1.54	0.56
1:L5:442:G:OP1	34:Lf:68:ARG:NH1	2.36	0.56
1:L5:1093:C:H2'	1:L5:1094:G:C8	2.41	0.56
1:L5:3663:A:N6	1:L5:4168:G:O2'	2.34	0.56
1:L5:3705:G:H21	4:LA:224:THR:HG21	1.71	0.56
1:L5:4471:U:H2'	1:L5:4472:G:C8	2.41	0.56
1:L5:4478:G:O3'	11:LH:170:LYS:NZ	2.39	0.56
3:L8:109:C:H2'	38:Lj:20:ARG:HH11	1.70	0.56
19:LQ:88:ASP:HB3	19:LQ:109:ALA:HB2	1.88	0.56
31:Lc:67:ALA:O	31:Lc:69:THR:N	2.35	0.56
47:S2:523:A:OP2	73:SJ:127:ARG:NH2	2.36	0.56
53:SF:185:SER:O	53:SF:191:LYS:NZ	2.33	0.56
54:SH:116:ARG:NH2	54:SH:121:THR:HA	2.21	0.56
70:Sg:82:SER:OG	70:Sg:84:ASP:OD1	2.21	0.56
70:Sg:300:ALA:HB3	70:Sg:310:TRP:HZ3	1.69	0.56
1:L5:1978:C:H41	1:L5:1979:A:H2	1.52	0.56
1:L5:3757:G:H5''	1:L5:3758:U:C5	2.41	0.56
16:LN:84:PRO:HA	16:LN:87:HIS:ND1	2.21	0.56
17:LO:47:PHE:HZ	17:LO:144:GLU:HG3	1.71	0.56
29:La:28:HIS:CD2	29:La:32:ARG:HG2	2.41	0.56
32:Ld:46:LEU:HD11	32:Ld:72:VAL:HG21	1.86	0.56
47:S2:1628:C:OP1	62:ST:38:LYS:NZ	2.36	0.56
49:SA:68:ILE:HG22	49:SA:70:ASN:H	1.70	0.56
50:SB:132:GLY:HA3	50:SB:221:PRO:HG3	1.88	0.56
54:SH:95:ILE:HD11	54:SH:133:LEU:HD21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:42:HIS:NE2	62:ST:82:ARG:O	2.39	0.56
73:SJ:118:GLY:O	73:SJ:120:ALA:N	2.39	0.56
1:L5:455:C:O2	33:Le:5:ARG:NE	2.38	0.56
1:L5:2335:C:H2'	1:L5:2336:G:H8	1.70	0.56
1:L5:4237:C:O2'	1:L5:4326:G:N2	2.38	0.56
1:L5:4294:C:O2	1:L5:4316:G:N2	2.34	0.56
2:L7:83:A:H2	2:L7:93:G:H22	1.51	0.56
24:LV:35:LYS:HB2	24:LV:67:LYS:HB2	1.87	0.56
29:La:36:GLY:O	29:La:38:LEU:N	2.38	0.56
29:La:71:PRO:HB2	29:La:108:TYR:HA	1.86	0.56
35:Lg:41:ALA:O	35:Lg:52:ARG:NH1	2.37	0.56
47:S2:1348:G:H22	47:S2:1381:G:N2	2.04	0.56
48:S6:20:A:H62	48:S6:59:A:N6	2.02	0.56
70:Sg:34:ALA:HB2	70:Sg:40:ILE:HG23	1.88	0.56
71:SC:139:LEU:HD21	71:SC:238:LYS:HG3	1.87	0.56
72:SG:164:LYS:HG2	72:SG:166:GLY:H	1.71	0.56
77:SW:112:ASP:OD1	77:SW:113:HIS:N	2.37	0.56
80:Sb:21:LYS:C	80:Sb:23:ARG:H	2.13	0.56
1:L5:135:G:N2	36:Lh:100:GLU:OE2	2.38	0.56
1:L5:1955:G:O6	1:L5:1956:A:N6	2.39	0.56
1:L5:4043:G:OP2	1:L5:4045:G:N2	2.38	0.56
2:L7:40:U:O2	13:LJ:73:THR:OG1	2.16	0.56
4:LA:29:LEU:O	4:LA:123:ARG:NH1	2.38	0.56
7:LD:20:PHE:O	7:LD:22:ARG:N	2.39	0.56
14:LL:49:ARG:NH2	36:Lh:118:LYS:HA	2.19	0.56
27:LY:52:ASP:HB2	27:LY:69:LYS:HD3	1.87	0.56
47:S2:659:G:N2	65:SX:17:ARG:HH22	2.03	0.56
47:S2:1563:G:H5'	62:ST:121:ARG:HH11	1.71	0.56
47:S2:1737:G:OP1	72:SG:94:ARG:NH2	2.39	0.56
48:S6:9:U:OP2	48:S6:14:C:N4	2.38	0.56
50:SB:198:GLU:OE2	50:SB:210:VAL:HB	2.06	0.56
52:SE:112:HIS:NE2	52:SE:237:SER:O	2.39	0.56
57:SL:124:ASP:HA	57:SL:147:LYS:HD3	1.86	0.56
59:SQ:12:VAL:HG21	59:SQ:91:ALA:HA	1.86	0.56
74:SM:49:LEU:HD12	74:SM:131:LYS:HE2	1.88	0.56
1:L5:1698:C:H3'	9:LF:177:ARG:NH2	2.21	0.56
1:L5:2430:C:H2'	1:L5:2431:A:C8	2.41	0.56
1:L5:2843:U:O2'	1:L5:4632:U:OP1	2.24	0.56
1:L5:4100:C:H42	1:L5:4109:G:H1	1.54	0.56
13:LJ:46:GLN:NE2	13:LJ:72:CYS:SG	2.77	0.56
16:LN:11:TRP:CZ2	16:LN:44:ARG:HG2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LS:168:THR:HG22	21:LS:170:LYS:H	1.71	0.56
49:SA:120:ARG:NH1	71:SC:266:TYR:O	2.39	0.56
49:SA:180:ARG:O	49:SA:184:ARG:HG2	2.06	0.56
70:Sg:147:HIS:ND1	70:Sg:171:ASP:HB2	2.21	0.56
1:L5:2561:C:N4	1:L5:2562:G:O6	2.38	0.56
1:L5:2669:C:O2'	1:L5:2670:C:O4'	2.22	0.56
1:L5:4096:C:N4	1:L5:4115:G:OP2	2.39	0.56
1:L5:4734:A:H2'	1:L5:4735:G:C8	2.41	0.56
3:L8:153:C:H5'	10:LG:185:LYS:HZ2	1.71	0.56
5:LB:103:LYS:NZ	5:LB:149:ASP:OD1	2.38	0.56
7:LD:40:ASP:OD1	22:LT:69:GLN:HA	2.06	0.56
43:Lo:44:LYS:HE3	43:Lo:52:THR:HB	1.88	0.56
47:S2:23:G:O2'	47:S2:416:U:OP1	2.24	0.56
64:SV:16:LYS:H	71:SC:259:THR:HG21	1.71	0.56
76:SO:99:ALA:H	76:SO:133:THR:HB	1.71	0.56
1:L5:116:G:N2	1:L5:155:C:N3	2.46	0.55
1:L5:1371:A:N6	3:L8:28:C:O2'	2.39	0.55
1:L5:1699:A:H2'	1:L5:2095:A:H4'	1.88	0.55
1:L5:2014:C:H2'	1:L5:2015:U:O4'	2.06	0.55
1:L5:2611:A:H5'	1:L5:2688:G:H4'	1.88	0.55
1:L5:4740:G:N1	1:L5:4959:U:O2	2.38	0.55
1:L5:5041:G:O4'	25:LW:56:ARG:NH2	2.39	0.55
6:LC:251:ILE:C	6:LC:252:TRP:HD1	2.13	0.55
28:LZ:112:ARG:HH12	28:LZ:116:VAL:HG13	1.71	0.55
47:S2:500:A:H3'	47:S2:501:C:H6	1.70	0.55
47:S2:1600:G:H5'	79:SZ:42:ASP:O	2.06	0.55
47:S2:1821:U:O4	47:S2:1822:A:N6	2.39	0.55
54:SH:52:GLU:HA	54:SH:58:LYS:HA	1.87	0.55
72:SG:50:VAL:HB	72:SG:111:LEU:HD11	1.88	0.55
72:SG:231:ARG:HA	72:SG:234:LEU:HB2	1.87	0.55
1:L5:746:A:H61	1:L5:915:A:H3'	1.70	0.55
1:L5:946:C:O2'	1:L5:947:C:H5''	2.07	0.55
1:L5:1418:C:N4	1:L5:1419:G:O6	2.39	0.55
1:L5:1440:U:H1'	1:L5:1441:C:H5	1.71	0.55
1:L5:1958:A:O2'	1:L5:2025:A:N1	2.38	0.55
1:L5:2001:G:H2'	1:L5:2002:A:H4'	1.87	0.55
4:LA:42:LYS:HG2	4:LA:89:TYR:CE1	2.40	0.55
11:LH:5:LEU:HA	11:LH:60:TRP:HA	1.87	0.55
11:LH:128:MET:HE1	11:LH:146:LEU:HD22	1.88	0.55
17:LO:7:LEU:HD22	17:LO:31:ARG:HH12	1.71	0.55
18:LP:41:ILE:HG23	18:LP:95:LEU:HD23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LZ:100:VAL:HG23	28:LZ:106:LEU:HG	1.89	0.55
31:Lc:77:ASN:O	31:Lc:81:LEU:N	2.30	0.55
36:Lh:104:THR:HB	36:Lh:107:GLN:OE1	2.06	0.55
46:Lz:204:LEU:HD13	46:Lz:216:LEU:HD11	1.87	0.55
57:SL:4:ILE:HD13	57:SL:55:TYR:HA	1.88	0.55
1:L5:752:G:H1	1:L5:911:U:H3	1.52	0.55
1:L5:1187:G:H1'	7:LD:275:GLN:NE2	2.20	0.55
1:L5:2848:G:OP1	24:LV:25:VAL:N	2.30	0.55
1:L5:4094:G:N1	1:L5:4114:C:O2	2.39	0.55
24:LV:112:MET:HE1	24:LV:117:ILE:HG13	1.88	0.55
25:LW:87:LEU:HD22	72:SG:160:LYS:HE2	1.89	0.55
47:S2:818:A:OP1	73:SJ:80:ARG:NH2	2.38	0.55
47:S2:1497:G:N7	56:SK:25:LYS:NZ	2.52	0.55
47:S2:1594:A:P	59:SQ:45:ARG:HH21	2.29	0.55
47:S2:1622:U:H3'	47:S2:1623:A:H4'	1.86	0.55
1:L5:1397:A:C8	29:La:114:LYS:HD3	2.41	0.55
1:L5:2428:A:N6	1:L5:2789:A:N7	2.53	0.55
20:LR:100:ARG:HG2	20:LR:104:ARG:HH21	1.70	0.55
48:S6:42:A:H2'	48:S6:43:G:C8	2.41	0.55
50:SB:110:MET:HE3	50:SB:213:ARG:HG3	1.89	0.55
51:SD:132:LYS:HG3	51:SD:191:PRO:HB3	1.88	0.55
52:SE:11:ARG:HH11	52:SE:20:LEU:HB3	1.72	0.55
65:SX:53:GLU:HB2	65:SX:71:ARG:HB2	1.89	0.55
72:SG:70:HIS:ND1	72:SG:103:ASP:OD1	2.40	0.55
80:Sb:36:LYS:HE2	80:Sb:80:ARG:HD2	1.88	0.55
1:L5:2486:G:H2'	1:L5:2487:G:C8	2.42	0.55
1:L5:2704:C:H42	1:L5:2712:G:H1	1.55	0.55
1:L5:4991:U:O2'	1:L5:4992:G:OP1	2.24	0.55
7:LD:41:LYS:HG3	22:LT:93:ILE:HG21	1.88	0.55
12:LI:88:ARG:HH22	12:LI:173:PHE:HB2	1.72	0.55
32:Ld:93:ASN:HA	32:Ld:103:TYR:CD2	2.41	0.55
38:Lj:52:LYS:HG2	38:Lj:55:ARG:NH1	2.21	0.55
47:S2:1259:A:O2'	47:S2:1518:C:N4	2.39	0.55
47:S2:1309:C:H2'	69:Sf:143:LYS:HG3	1.89	0.55
64:SV:70:LEU:O	64:SV:74:LYS:HG2	2.07	0.55
70:Sg:131:LEU:HB3	70:Sg:139:LYS:HB3	1.88	0.55
78:SY:113:ARG:HA	78:SY:116:LYS:NZ	2.21	0.55
1:L5:33:A:N3	1:L5:1527:A:O2'	2.40	0.55
1:L5:976:G:H2'	1:L5:977:C:C2	2.41	0.55
1:L5:2452:G:H1	1:L5:2467:U:H2'	1.71	0.55
1:L5:2645:G:N2	1:L5:2690:C:O2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:123:U:O2'	3:L8:126:C:N4	2.39	0.55
5:LB:367:PHE:HZ	5:LB:380:GLN:HE22	1.54	0.55
6:LC:190:ARG:HG2	6:LC:192:GLY:H	1.72	0.55
16:LN:117:ASN:OD1	16:LN:118:SER:N	2.39	0.55
23:LU:61:VAL:HG12	23:LU:74:SER:HA	1.88	0.55
44:Lp:26:VAL:HG22	44:Lp:30:GLU:HG3	1.88	0.55
47:S2:1574:C:N4	47:S2:1575:G:O6	2.40	0.55
47:S2:1597:C:H2'	47:S2:1598:G:C8	2.41	0.55
52:SE:201:HIS:HB3	52:SE:204:SER:HB3	1.88	0.55
58:SP:81:ARG:NH1	58:SP:83:MET:O	2.39	0.55
70:Sg:178:ASN:HB2	70:Sg:182:CYS:HA	1.88	0.55
71:SC:91:SER:O	71:SC:94:ILE:HG22	2.07	0.55
74:SM:116:LYS:O	74:SM:118:SER:N	2.40	0.55
77:SW:65:LEU:O	77:SW:67:GLY:N	2.40	0.55
1:L5:917:A:O4'	1:L5:918:G:N2	2.40	0.55
1:L5:4102:C:H42	1:L5:4107:G:H1	1.55	0.55
3:L8:41:A:N6	3:L8:102:G:O2'	2.35	0.55
5:LB:96:PRO:HG3	17:LO:153:THR:HG22	1.89	0.55
25:LW:82:ILE:HG21	72:SG:130:PRO:HG2	1.89	0.55
38:Lj:17:THR:O	38:Lj:27:TYR:HB3	2.05	0.55
47:S2:606:G:H5''	81:Se:56:ASN:HB3	1.89	0.55
47:S2:795:A:H5''	47:S2:797:C:H5	1.72	0.55
52:SE:92:ILE:HG23	52:SE:96:GLY:H	1.70	0.55
68:Sd:22:ARG:NH1	68:Sd:38:MET:SD	2.80	0.55
72:SG:218:LYS:O	72:SG:221:LYS:NZ	2.27	0.55
80:Sb:54:VAL:H	80:Sb:62:VAL:HG23	1.70	0.55
1:L5:15:A:OP1	26:LX:56:ARG:HG3	2.07	0.55
1:L5:405:U:N3	1:L5:408:A:OP2	2.25	0.55
1:L5:2582:A:O2'	1:L5:2653:C:O2'	2.20	0.55
1:L5:4573:G:N2	1:L5:4722:G:OP2	2.39	0.55
10:LG:154:LEU:HB3	10:LG:204:PHE:HD2	1.71	0.55
15:LM:42:CYS:HB3	15:LM:77:TRP:CD1	2.42	0.55
35:Lg:20:THR:HG22	35:Lg:35:THR:H	1.70	0.55
42:Ln:2:ARG:HD3	42:Ln:5:TRP:CD1	2.41	0.55
47:S2:1566:G:H8	62:ST:101:ARG:HH22	1.53	0.55
52:SE:238:LEU:HD13	52:SE:242:LYS:HA	1.89	0.55
65:SX:140:ARG:HH22	65:SX:142:ARG:HH11	1.53	0.55
70:Sg:220:ASP:O	70:Sg:224:GLY:N	2.32	0.55
1:L5:1266:G:H1'	1:L5:2111:G:H4'	1.88	0.55
1:L5:1550:G:H1	1:L5:1578:U:H3	1.55	0.55
1:L5:1758:G:O6	1:L5:1761:G:N2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4097:G:H1	1:L5:4112:C:H42	1.55	0.55
1:L5:4903:G:H1	1:L5:4918:C:H42	1.54	0.55
5:LB:189:THR:HG23	5:LB:192:GLU:H	1.72	0.55
6:LC:212:ASN:CG	6:LC:213:GLU:H	2.15	0.55
11:LH:14:GLU:HA	11:LH:52:LYS:HG2	1.89	0.55
47:S2:186:C:H2'	47:S2:187:G:H8	1.70	0.55
47:S2:533:A:H61	47:S2:552:G:H1'	1.72	0.55
47:S2:969:U:OP1	47:S2:970:G:O2'	2.22	0.55
47:S2:1297:U:H2'	47:S2:1298:G:H2'	1.87	0.55
53:SF:175:ASP:OD1	53:SF:176:GLU:N	2.40	0.55
73:SJ:97:ILE:HA	73:SJ:100:LEU:HD13	1.89	0.55
1:L5:417:G:H1'	3:L8:16:G:H22	1.72	0.55
1:L5:482:G:H1	1:L5:672:C:H42	1.55	0.55
1:L5:755:C:H2'	1:L5:756:G:H8	1.71	0.55
1:L5:1359:G:O2'	16:LN:203:TYR:HB2	2.07	0.55
1:L5:1492:G:H4'	30:Lb:41:ARG:HH21	1.72	0.55
1:L5:1696:C:O2'	1:L5:1698:C:N4	2.33	0.55
1:L5:1951:G:H5'	21:LS:116:ARG:NH1	2.22	0.55
9:LF:150:VAL:HG23	9:LF:191:ILE:HD11	1.89	0.55
20:LR:44:LEU:HD13	20:LR:49:LEU:HD23	1.88	0.55
28:LZ:11:VAL:HG22	28:LZ:82:PRO:HA	1.88	0.55
47:S2:152:U:O2	47:S2:167:G:N2	2.40	0.55
47:S2:525:A:H5''	81:Se:32:ALA:HB2	1.88	0.55
47:S2:527:C:H2'	47:S2:528:A:C8	2.41	0.55
47:S2:913:A:OP2	54:SH:99:ARG:NH1	2.40	0.55
47:S2:1189:A:H2'	47:S2:1190:A:C8	2.41	0.55
47:S2:1327:G:N2	47:S2:1502:C:O2	2.34	0.55
62:ST:24:LYS:HG2	62:ST:25:SER:H	1.71	0.55
70:Sg:109:LEU:HD22	70:Sg:152:SER:HA	1.89	0.55
79:SZ:50:PHE:HB3	79:SZ:58:LEU:HD21	1.89	0.55
1:L5:1762:C:H42	1:L5:1772:C:N4	2.05	0.54
1:L5:2562:G:O2'	1:L5:2565:A:N6	2.24	0.54
1:L5:2562:G:N2	1:L5:2565:A:OP2	2.39	0.54
1:L5:4265:U:OP2	1:L5:4266:G:N2	2.40	0.54
6:LC:252:TRP:CZ3	6:LC:260:LEU:HD12	2.42	0.54
11:LH:105:ILE:HG22	11:LH:112:VAL:HG22	1.90	0.54
70:Sg:153:CYS:HB2	70:Sg:197:THR:HA	1.88	0.54
70:Sg:191:HIS:CG	70:Sg:192:THR:H	2.26	0.54
72:SG:219:GLU:O	72:SG:223:LYS:N	2.38	0.54
1:L5:283:G:N2	37:Li:77:VAL:O	2.40	0.54
1:L5:1253:G:N2	1:L5:1257:A:O4'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1800:U:H2'	1:L5:1801:A:C8	2.42	0.54
1:L5:2361:G:N2	1:L5:3860:A:OP2	2.30	0.54
1:L5:2623:A:H61	1:L5:2633:U:H3	1.55	0.54
1:L5:3879:G:O2'	1:L5:3881:G:OP2	2.22	0.54
8:LE:83:LYS:N	8:LE:84:LYS:HB3	2.22	0.54
16:LN:46:ASP:OD1	16:LN:47:LYS:N	2.37	0.54
28:LZ:101:PHE:O	28:LZ:102:ARG:HG2	2.08	0.54
46:Lz:3:SER:HB2	46:Lz:212:LYS:HD3	1.89	0.54
47:S2:208:G:N2	47:S2:209:A:N7	2.55	0.54
47:S2:941:C:H2'	47:S2:942:G:C8	2.43	0.54
50:SB:138:PHE:O	50:SB:213:ARG:N	2.39	0.54
51:SD:53:THR:HA	51:SD:90:LYS:HG3	1.89	0.54
59:SQ:102:GLU:HG2	59:SQ:106:LYS:HE2	1.88	0.54
62:ST:116:ASP:HB2	62:ST:120:GLY:HA3	1.89	0.54
76:SO:61:LYS:HE3	76:SO:76:LEU:HD13	1.88	0.54
1:L5:1234:G:H2'	1:L5:1235:G:C8	2.42	0.54
1:L5:1264:C:H2'	1:L5:1265:G:C8	2.43	0.54
1:L5:2107:C:N4	1:L5:2127:C:N3	2.55	0.54
1:L5:2108:G:H3'	1:L5:2109:G:C8	2.42	0.54
1:L5:2300:A:OP2	33:Le:83:LYS:NZ	2.28	0.54
1:L5:3610:A:H2'	1:L5:3611:A:H8	1.73	0.54
15:LM:120:ASN:HA	15:LM:123:ILE:HG22	1.89	0.54
20:LR:176:ARG:NH1	47:S2:909:G:OP1	2.40	0.54
26:LX:140:LEU:HD12	26:LX:146:ALA:HB2	1.89	0.54
28:LZ:89:ILE:HG12	28:LZ:117:LYS:HB3	1.89	0.54
33:Le:90:MET:HE1	45:Lr:112:ARG:HB2	1.88	0.54
45:Lr:32:LEU:HD11	45:Lr:50:GLY:HA2	1.89	0.54
47:S2:1003:U:O3'	50:SB:165:ARG:NH2	2.40	0.54
47:S2:1711:U:H2'	47:S2:1712:A:C8	2.42	0.54
58:SP:101:THR:O	61:SS:118:ARG:NH1	2.40	0.54
65:SX:40:PRO:HG2	65:SX:120:PHE:HE2	1.71	0.54
1:L5:1699:A:H62	1:L5:2118:G:N2	2.04	0.54
1:L5:2378:G:H2'	1:L5:2379:A:H5''	1.88	0.54
1:L5:4467:A:O2'	1:L5:4510:A:N3	2.35	0.54
24:LV:61:VAL:N	24:LV:79:ALA:O	2.39	0.54
53:SF:179:ASN:HB2	53:SF:187:SER:HB3	1.89	0.54
54:SH:108:SER:HB3	54:SH:113:LYS:HD3	1.89	0.54
58:SP:64:LYS:HG3	58:SP:73:PRO:HB2	1.89	0.54
61:SS:74:PRO:HA	61:SS:79:ILE:HB	1.88	0.54
71:SC:63:VAL:N	71:SC:90:GLU:OE2	2.40	0.54
71:SC:221:ASP:OD1	71:SC:222:CYS:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:702:U:O2'	33:Le:5:ARG:NH2	2.40	0.54
1:L5:735:G:OP1	15:LM:74:ARG:NH2	2.36	0.54
1:L5:2785:C:O2'	1:L5:2786:C:OP1	2.25	0.54
1:L5:3726:A:N6	1:L5:4359:U:O2'	2.41	0.54
1:L5:3969:G:O2'	46:Lz:33:GLU:OE2	2.26	0.54
1:L5:4934:A:C4	1:L5:4935:C:H5	2.25	0.54
14:LL:48:PRO:HB2	36:Lh:120:ALA:HB2	1.89	0.54
19:LQ:5:ILE:HG23	19:LQ:7:HIS:HD2	1.72	0.54
31:Lc:17:ARG:HA	31:Lc:20:LEU:HD13	1.89	0.54
65:SX:81:ILE:HG21	65:SX:120:PHE:HD2	1.72	0.54
72:SG:206:ALA:HA	72:SG:209:TYR:CD2	2.43	0.54
1:L5:974:C:O2'	1:L5:975:C:OP1	2.25	0.54
1:L5:1743:A:H1'	7:LD:15:ARG:NH2	2.22	0.54
1:L5:1753:G:N2	1:L5:1778:C:O2	2.40	0.54
1:L5:2664:G:OP2	20:LR:121:HIS:HB2	2.08	0.54
3:L8:94:G:OP2	38:Lj:72:ARG:NH1	2.41	0.54
13:LJ:109:ILE:HG22	13:LJ:128:LEU:HD11	1.90	0.54
42:Ln:13:LEU:HD23	42:Ln:17:ARG:HH22	1.72	0.54
57:SL:42:LEU:HD21	57:SL:72:ILE:HD11	1.90	0.54
60:SR:100:PRO:HD3	60:SR:118:GLN:HB2	1.89	0.54
63:SU:21:ARG:O	63:SU:115:THR:OG1	2.24	0.54
70:Sg:79:LEU:HD11	70:Sg:120:ILE:HD13	1.89	0.54
72:SG:79:LYS:HB3	72:SG:86:PRO:HG3	1.90	0.54
1:L5:25:A:N3	1:L5:339:C:O2'	2.38	0.54
1:L5:918:G:O2'	1:L5:919:C:OP1	2.25	0.54
1:L5:3773:U:O2'	1:L5:3774:A:H2'	2.08	0.54
5:LB:348:ARG:HH12	5:LB:351:LEU:HD23	1.73	0.54
8:LE:132:PRO:HG2	8:LE:135:GLN:OE1	2.07	0.54
8:LE:270:TYR:CD1	15:LM:110:PHE:HB2	2.43	0.54
9:LF:226:HIS:ND1	9:LF:228:VAL:HG22	2.23	0.54
9:LF:227:PHE:N	9:LF:233:ALA:O	2.39	0.54
19:LQ:41:SER:OG	19:LQ:44:ASN:OD1	2.26	0.54
50:SB:175:GLU:O	50:SB:178:THR:OG1	2.19	0.54
72:SG:209:TYR:CD1	72:SG:213:LEU:HD23	2.43	0.54
1:L5:189:G:H1	1:L5:252:C:H42	1.55	0.54
1:L5:267:G:H2'	1:L5:268:G:H8	1.72	0.54
1:L5:1244:G:H5''	1:L5:1269:G:C8	2.42	0.54
1:L5:1317:U:H5	33:Le:42:ASP:HB2	1.73	0.54
1:L5:1493:G:OP2	30:Lb:44:ARG:NH1	2.41	0.54
1:L5:2054:U:O4	17:LO:49:ARG:NH1	2.41	0.54
1:L5:3870:C:O3'	5:LB:261:ARG:NH1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3968:U:H4'	46:Lz:160:LYS:HE2	1.90	0.54
1:L5:4040:C:N3	1:L5:4041:C:N4	2.56	0.54
1:L5:4443:C:H1'	1:L5:4444:C:H5	1.73	0.54
1:L5:4775:C:O2	1:L5:4861:G:N2	2.41	0.54
8:LE:270:TYR:CE1	15:LM:107:PHE:HA	2.42	0.54
19:LQ:81:VAL:HG22	19:LQ:101:CYS:SG	2.47	0.54
20:LR:180:LYS:HE3	20:LR:184:ILE:HD11	1.88	0.54
22:LT:105:PHE:O	22:LT:109:VAL:HG23	2.08	0.54
31:Lc:15:ASN:HA	31:Lc:18:LEU:HB3	1.89	0.54
47:S2:1265:A:H2	47:S2:1517:G:H22	1.55	0.54
47:S2:1727:G:N2	47:S2:1807:C:O2	2.37	0.54
56:SK:24:LYS:HE2	56:SK:65:ARG:HD3	1.90	0.54
61:SS:26:ILE:HD11	61:SS:59:LEU:HD22	1.89	0.54
76:SO:14:VAL:HG21	76:SO:18:GLY:HA3	1.90	0.54
1:L5:2060:G:N2	21:LS:115:ALA:HB2	2.22	0.54
1:L5:3614:G:H2'	1:L5:3617:G:H22	1.72	0.54
1:L5:3944:G:H2'	1:L5:3945:A:C8	2.42	0.54
4:LA:49:ILE:HG21	4:LA:60:LYS:HZ2	1.73	0.54
5:LB:391:PRO:HD3	25:LW:63:GLN:HE21	1.71	0.54
38:Lj:34:CYS:SG	38:Lj:37:CYS:HB3	2.48	0.54
47:S2:465:A:H4'	47:S2:466:G:O5'	2.08	0.54
47:S2:1868:U:H3	66:Sa:97:PRO:HB2	1.72	0.54
55:SI:133:GLU:O	55:SI:137:LEU:N	2.41	0.54
55:SI:150:ASP:O	55:SI:154:LYS:NZ	2.39	0.54
73:SJ:4:ALA:HB3	73:SJ:5:ARG:HA	1.90	0.54
1:L5:26:C:O2'	1:L5:338:A:N3	2.38	0.54
1:L5:281:U:H2'	1:L5:282:C:H6	1.73	0.54
1:L5:2659:A:N1	1:L5:2672:C:O2'	2.40	0.54
1:L5:2898:G:OP2	20:LR:135:LYS:NZ	2.40	0.54
2:L7:87:G:N2	2:L7:90:A:OP2	2.41	0.54
11:LH:45:LEU:HD23	11:LH:57:VAL:HG12	1.89	0.54
13:LJ:83:LEU:O	13:LJ:87:LEU:N	2.41	0.54
17:LO:3:GLU:OE1	17:LO:5:GLN:NE2	2.27	0.54
21:LS:101:THR:HG23	21:LS:104:GLY:H	1.72	0.54
26:LX:105:ASN:OD1	26:LX:106:LYS:N	2.41	0.54
47:S2:375:U:H3	47:S2:389:A:H61	1.54	0.54
47:S2:1752:C:N3	47:S2:1779:G:N1	2.55	0.54
74:SM:17:ALA:HB1	74:SM:124:ILE:HG21	1.90	0.54
1:L5:1353:G:HO2'	1:L5:1355:G:HO2'	1.54	0.53
1:L5:1441:C:OP1	1:L5:2109:G:O2'	2.23	0.53
1:L5:5049:G:HO2'	5:LB:322:HIS:HE2	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:55:U:H3	3:L8:62:A:H2	1.53	0.53
32:Ld:40:LYS:HA	32:Ld:43:PRO:HG2	1.89	0.53
47:S2:829:C:OP1	52:SE:22:LYS:N	2.42	0.53
50:SB:105:LEU:HD23	50:SB:110:MET:HE2	1.90	0.53
57:SL:89:ARG:HG2	57:SL:108:ASN:HB3	1.90	0.53
61:SS:109:GLU:O	61:SS:113:ARG:NH1	2.40	0.53
63:SU:28:ASN:HD21	63:SU:30:LYS:HB3	1.73	0.53
63:SU:56:MET:HE3	63:SU:57:PRO:HD2	1.90	0.53
69:Sf:82:LYS:HE2	69:Sf:84:SER:HA	1.89	0.53
74:SM:21:VAL:HG13	74:SM:22:LEU:HG	1.90	0.53
77:SW:77:PRO:HG2	77:SW:79:PHE:CE2	2.43	0.53
1:L5:394:G:N2	1:L5:397:G:OP2	2.36	0.53
1:L5:2561:C:O2	1:L5:2566:G:N2	2.40	0.53
2:L7:77:A:H62	2:L7:99:G:H21	1.53	0.53
6:LC:214:ASP:OD1	6:LC:215:ASN:N	2.40	0.53
49:SA:69:GLU:HB2	71:SC:270:THR:HG21	1.89	0.53
53:SF:32:ASP:CG	53:SF:33:ILE:H	2.16	0.53
1:L5:1252:C:O2'	1:L5:1258:G:O6	2.26	0.53
1:L5:1326:A:OP2	1:L5:4445:U:O2'	2.24	0.53
1:L5:2638:G:H4'	35:Lg:24:ARG:HH21	1.73	0.53
1:L5:2901:G:N7	1:L5:2902:G:N2	2.55	0.53
1:L5:3680:U:OP1	4:LA:54:ARG:NH1	2.38	0.53
1:L5:4767:C:H42	1:L5:4867:G:H1	1.57	0.53
4:LA:49:ILE:HD13	4:LA:60:LYS:NZ	2.23	0.53
6:LC:318:PRO:O	6:LC:320:LYS:N	2.41	0.53
7:LD:23:ARG:HG2	7:LD:30:TYR:HE1	1.72	0.53
17:LO:108:ILE:HG23	17:LO:160:ARG:HD3	1.90	0.53
47:S2:748:C:OP1	47:S2:796:G:N1	2.35	0.53
47:S2:1159:G:OP2	65:SX:5:ARG:NH2	2.35	0.53
47:S2:1280:G:H1'	47:S2:1318:G:N2	2.23	0.53
47:S2:1280:G:N7	74:SM:101:ARG:NH2	2.57	0.53
47:S2:1320:G:H2'	47:S2:1321:G:H4'	1.90	0.53
47:S2:1534:C:O2	47:S2:1598:G:N2	2.41	0.53
51:SD:60:GLY:HA3	51:SD:65:ARG:HB3	1.89	0.53
52:SE:125:LYS:H	52:SE:142:HIS:CE1	2.26	0.53
53:SF:18:LYS:HG3	53:SF:46:ALA:HB3	1.90	0.53
58:SP:57:LEU:HA	58:SP:60:LEU:HB3	1.91	0.53
59:SQ:132:PHE:HB2	63:SU:77:TRP:CD1	2.44	0.53
70:Sg:220:ASP:HB2	70:Sg:225:LYS:N	2.22	0.53
72:SG:137:ARG:HB2	72:SG:140:ARG:HB2	1.90	0.53
72:SG:216:ARG:HG3	72:SG:223:LYS:HZ2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:14:VAL:HG23	73:SJ:48:PHE:CD1	2.43	0.53
1:L5:1:C:O2'	1:L5:2:G:N7	2.41	0.53
1:L5:1352:C:H41	19:LQ:55:ARG:NH1	2.06	0.53
1:L5:2599:G:H5''	35:Lg:60:ARG:NH2	2.24	0.53
17:LO:61:ARG:HA	17:LO:70:PRO:HD2	1.91	0.53
22:LT:54:HIS:ND1	22:LT:56:CYS:SG	2.74	0.53
45:Lr:119:ARG:O	45:Lr:122:LYS:HG2	2.07	0.53
47:S2:537:C:OP1	47:S2:539:C:N4	2.40	0.53
47:S2:1019:C:H5''	75:SN:72:LEU:HD22	1.89	0.53
48:S6:42:A:H2'	48:S6:43:G:H8	1.74	0.53
52:SE:151:ASP:O	52:SE:154:ILE:HG12	2.08	0.53
53:SF:88:MET:HE3	53:SF:91:ARG:HH21	1.73	0.53
60:SR:44:LYS:O	60:SR:48:ASN:ND2	2.42	0.53
69:Sf:141:CYS:H	69:Sf:151:ASN:HD22	1.54	0.53
73:SJ:87:LEU:HG	73:SJ:91:LYS:HE3	1.90	0.53
1:L5:138:G:H2'	1:L5:139:G:C8	2.43	0.53
1:L5:1170:G:H1	1:L5:1191:C:H42	1.57	0.53
1:L5:2474:G:N2	1:L5:2502:G:H2'	2.23	0.53
1:L5:2639:U:H2'	1:L5:2694:G:H1	1.73	0.53
1:L5:4342:C:O3'	43:Lo:37:GLY:HA3	2.08	0.53
1:L5:4734:A:H2'	1:L5:4735:G:H8	1.72	0.53
47:S2:448:A:H5''	55:SI:25:ARG:HA	1.91	0.53
47:S2:647:U:H2'	47:S2:648:A:C8	2.44	0.53
47:S2:918:U:O2'	77:SW:56:HIS:O	2.24	0.53
55:SI:42:ARG:HG2	55:SI:59:ARG:HB2	1.91	0.53
58:SP:37:TYR:O	58:SP:39:ALA:N	2.40	0.53
63:SU:97:ILE:HG23	63:SU:100:GLN:HB3	1.91	0.53
70:Sg:8:ARG:HB2	70:Sg:309:VAL:HG23	1.91	0.53
71:SC:277:HIS:O	71:SC:279:ARG:N	2.42	0.53
73:SJ:64:ASP:HB3	77:SW:117:ARG:HH21	1.72	0.53
77:SW:103:VAL:HB	77:SW:110:ILE:HD11	1.90	0.53
78:SY:29:HIS:ND1	78:SY:29:HIS:O	2.42	0.53
80:Sb:34:ASP:HA	80:Sb:45:THR:HA	1.91	0.53
1:L5:364:G:O6	38:Lj:52:LYS:NZ	2.31	0.53
1:L5:497:G:N2	1:L5:657:C:N3	2.57	0.53
1:L5:988:C:N4	1:L5:1065:G:H1	2.05	0.53
1:L5:1075:G:H2'	1:L5:1076:C:H4'	1.90	0.53
1:L5:1730:U:H1'	22:LT:101:SER:HB2	1.90	0.53
1:L5:2893:U:O2'	55:SI:88:ASN:ND2	2.42	0.53
1:L5:3896:C:O2'	1:L5:3897:G:O4'	2.26	0.53
1:L5:4945:G:N1	34:Lf:58:VAL:O	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:153:C:H5'	10:LG:185:LYS:NZ	2.24	0.53
5:LB:384:GLU:OE2	25:LW:14:TYR:OH	2.25	0.53
8:LE:140:LEU:HD11	8:LE:144:ILE:HG21	1.89	0.53
15:LM:6:PHE:O	15:LM:11:ARG:NE	2.39	0.53
24:LV:58:GLY:H	24:LV:81:VAL:HG23	1.73	0.53
32:Ld:24:GLU:HB3	32:Ld:85:ARG:HD2	1.91	0.53
34:Lf:53:ALA:O	34:Lf:55:ASN:N	2.41	0.53
34:Lf:109:ARG:HG3	34:Lf:110:ILE:HG12	1.91	0.53
46:Lz:67:VAL:HB	46:Lz:68:LEU:HG	1.89	0.53
47:S2:1333:U:H4'	51:SD:141:LYS:HE3	1.90	0.53
47:S2:1507:G:H5'	69:Sf:94:LYS:HD2	1.90	0.53
51:SD:55:THR:HG23	51:SD:56:GLN:H	1.72	0.53
78:SY:9:THR:HG22	78:SY:25:ILE:HA	1.90	0.53
1:L5:741:C:H2'	1:L5:742:G:C8	2.44	0.53
1:L5:933:G:H4'	1:L5:934:C:H5''	1.91	0.53
1:L5:1242:G:O6	1:L5:1268:G:N2	2.41	0.53
1:L5:2361:G:O2'	1:L5:2362:U:H5''	2.08	0.53
1:L5:4128:A:H4'	28:LZ:54:THR:HG21	1.90	0.53
3:L8:83:C:N4	27:LY:50:ARG:HH22	2.06	0.53
17:LO:142:ALA:O	17:LO:147:TRP:HB3	2.09	0.53
25:LW:68:GLN:HE21	25:LW:69:LYS:NZ	2.07	0.53
29:La:82:VAL:HG21	29:La:101:ILE:HG12	1.91	0.53
47:S2:1617:G:N2	47:S2:1620:A:O5'	2.42	0.53
52:SE:184:THR:O	52:SE:224:ASN:ND2	2.42	0.53
63:SU:47:ASN:HA	63:SU:48:LEU:HB2	1.91	0.53
70:Sg:109:LEU:HD11	70:Sg:125:ARG:HE	1.74	0.53
71:SC:194:ARG:N	71:SC:225:SER:OG	2.42	0.53
1:L5:167:C:H42	1:L5:268:G:H1	1.56	0.53
1:L5:501:C:H41	1:L5:503:C:N4	2.04	0.53
1:L5:1395:U:OP1	14:LL:186:ARG:NH1	2.42	0.53
1:L5:1774:C:H2'	1:L5:1775:A:O4'	2.09	0.53
1:L5:2422:C:O2'	1:L5:3857:G:O2'	2.24	0.53
11:LH:85:THR:O	11:LH:188:GLN:NE2	2.42	0.53
14:LL:30:ALA:O	14:LL:34:ARG:HG3	2.08	0.53
14:LL:106:SER:HG	14:LL:109:SER:HG	1.49	0.53
24:LV:87:SER:HA	24:LV:97:TYR:HB3	1.89	0.53
41:Lm:97:ARG:HB3	41:Lm:120:ASN:HB3	1.90	0.53
44:Lp:64:VAL:HG12	44:Lp:65:ALA:H	1.73	0.53
46:Lz:48:ARG:HD3	46:Lz:159:MET:SD	2.49	0.53
65:SX:48:LYS:HB3	65:SX:99:GLU:OE2	2.09	0.53
78:SY:126:GLY:O	78:SY:130:LYS:NZ	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:161:G:O6	1:L5:274:C:N4	2.42	0.53
1:L5:419:A:N3	1:L5:1332:C:O2'	2.42	0.53
1:L5:1971:C:N3	1:L5:2000:G:N2	2.56	0.53
1:L5:2493:G:O2'	3:L8:127:U:OP1	2.27	0.53
5:LB:397:ILE:HA	5:LB:400:GLU:HB3	1.91	0.53
47:S2:537:C:O2'	47:S2:548:C:N3	2.41	0.53
47:S2:843:C:H2'	47:S2:844:U:H5'	1.91	0.53
47:S2:1103:C:H2'	47:S2:1104:G:C8	2.44	0.53
47:S2:1544:C:H42	47:S2:1588:A:H8	1.57	0.53
52:SE:62:LYS:HA	52:SE:80:ILE:HG12	1.91	0.53
61:SS:33:ILE:HG21	61:SS:99:LEU:HD23	1.91	0.53
63:SU:20:ILE:N	63:SU:91:LEU:O	2.28	0.53
1:L5:1629:G:H1	4:LA:208:GLU:CD	2.17	0.53
1:L5:2113:G:N2	1:L5:2117:G:N7	2.55	0.53
1:L5:2273:G:H4'	6:LC:309:ILE:HG23	1.90	0.53
1:L5:4210:U:H2'	1:L5:4211:C:C6	2.44	0.53
6:LC:11:TYR:HD1	6:LC:17:SER:HB3	1.74	0.53
10:LG:98:LEU:HD23	10:LG:218:LEU:HD11	1.91	0.53
12:LI:4:ARG:HH11	12:LI:99:ILE:HD11	1.71	0.53
47:S2:524:U:O4	73:SJ:38:ARG:NH2	2.42	0.53
47:S2:570:C:H4'	78:SY:36:PRO:HG3	1.91	0.53
47:S2:1270:G:H2'	47:S2:1271:C:O4'	2.08	0.53
47:S2:1322:G:H2'	47:S2:1323:U:O4'	2.08	0.53
47:S2:1741:U:H2'	47:S2:1742:C:O4'	2.09	0.53
51:SD:103:GLU:O	51:SD:106:ARG:HG2	2.09	0.53
52:SE:177:THR:HA	52:SE:195:ILE:HB	1.91	0.53
63:SU:19:ARG:NH1	63:SU:118:ASP:OD1	2.42	0.53
63:SU:67:LYS:O	68:Sd:44:ARG:NH2	2.42	0.53
77:SW:11:LEU:HD21	77:SW:37:PHE:CE2	2.43	0.53
77:SW:26:LEU:HD21	77:SW:60:LYS:HD3	1.90	0.53
1:L5:490:C:N4	1:L5:491:G:O6	2.41	0.52
1:L5:1242:G:H1	1:L5:1269:G:N2	2.07	0.52
1:L5:1478:C:O2	1:L5:1487:G:N2	2.28	0.52
1:L5:2073:C:H5'	9:LF:212:LYS:HB3	1.91	0.52
1:L5:2263:A:N7	1:L5:2265:G:O2'	2.35	0.52
1:L5:3974:G:H2'	1:L5:3975:C:H4'	1.89	0.52
13:LJ:95:ARG:HB3	13:LJ:177:GLY:HA3	1.91	0.52
19:LQ:59:PRO:HG2	19:LQ:143:ARG:HA	1.90	0.52
43:Lo:2:VAL:N	43:Lo:90:HIS:O	2.41	0.52
46:Lz:162:VAL:HG12	46:Lz:163:LEU:HG	1.89	0.52
47:S2:314:U:O4	47:S2:338:G:N2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:430:C:H2'	47:S2:431:G:C8	2.44	0.52
47:S2:551:U:H3'	47:S2:552:G:H8	1.74	0.52
47:S2:964:A:N1	47:S2:1065:G:O2'	2.36	0.52
53:SF:43:GLU:HB3	53:SF:44:LYS:HA	1.91	0.52
76:SO:85:CYS:HB2	76:SO:90:ILE:HD11	1.91	0.52
78:SY:94:HIS:NE2	78:SY:96:LEU:HD23	2.24	0.52
80:Sb:31:TYR:O	80:Sb:48:SER:OG	2.19	0.52
1:L5:74:G:H5'	14:LL:59:VAL:HG13	1.90	0.52
3:L8:80:A:H2'	3:L8:81:C:O4'	2.09	0.52
9:LF:117:ILE:HG12	9:LF:118:PHE:CD2	2.44	0.52
10:LG:73:ARG:NH1	10:LG:243:GLY:H	2.07	0.52
12:LI:55:ASP:OD1	12:LI:164:LYS:HE2	2.09	0.52
13:LJ:158:SER:O	13:LJ:160:GLU:N	2.37	0.52
33:Le:65:LYS:HG2	33:Le:66:THR:HG23	1.90	0.52
34:Lf:11:PHE:CD2	34:Lf:97:ILE:HA	2.45	0.52
34:Lf:43:LEU:O	34:Lf:109:ARG:NH2	2.26	0.52
38:Lj:2:THR:HB	38:Lj:6:SER:OG	2.08	0.52
51:SD:76:ARG:NH1	51:SD:76:ARG:O	2.37	0.52
53:SF:45:TYR:H	53:SF:46:ALA:HA	1.74	0.52
63:SU:49:LYS:O	63:SU:51:LYS:N	2.36	0.52
79:SZ:111:ARG:HG2	79:SZ:112:ASN:N	2.24	0.52
1:L5:137:G:H2'	1:L5:138:G:C8	2.43	0.52
1:L5:497:G:H1	1:L5:656:C:H42	1.57	0.52
1:L5:977:C:O2'	1:L5:978:G:H5'	2.09	0.52
1:L5:1182:C:H5'	1:L5:1183:C:H1'	1.91	0.52
1:L5:1591:U:H3	1:L5:4555:U:H5''	1.73	0.52
1:L5:1805:A:H4'	30:Lb:28:ARG:CZ	2.39	0.52
1:L5:4948:C:H3'	1:L5:4949:G:N2	2.24	0.52
2:L7:69:U:H3	2:L7:106:G:H1	1.56	0.52
6:LC:109:ARG:O	6:LC:111:TRP:N	2.39	0.52
14:LL:43:ALA:O	14:LL:149:GLN:NE2	2.38	0.52
16:LN:120:TRP:NE1	16:LN:123:GLU:HG3	2.24	0.52
25:LW:69:LYS:N	25:LW:70:LYS:HB2	2.12	0.52
26:LX:149:VAL:HA	26:LX:152:LYS:HD2	1.90	0.52
47:S2:617:G:N7	65:SX:67:ARG:NH2	2.53	0.52
47:S2:833:C:N4	78:SY:10:ARG:HB2	2.24	0.52
65:SX:140:ARG:NH2	65:SX:142:ARG:HH11	2.08	0.52
69:Sf:142:GLY:HA2	69:Sf:149:CYS:SG	2.50	0.52
72:SG:3:LEU:HD13	72:SG:5:ILE:HG13	1.91	0.52
73:SJ:14:VAL:HG23	73:SJ:48:PHE:HD1	1.74	0.52
76:SO:83:GLN:O	76:SO:86:LYS:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:417:G:H4'	1:L5:418:A:O5'	2.08	0.52
1:L5:691:C:H2'	1:L5:692:A:C8	2.44	0.52
1:L5:2264:C:H5'	45:Lr:108:MET:HB3	1.91	0.52
1:L5:4313:A:H4'	22:LT:71:ALA:HB3	1.92	0.52
13:LJ:105:PHE:O	13:LJ:132:VAL:N	2.42	0.52
19:LQ:67:ILE:HG22	19:LQ:71:LYS:NZ	2.25	0.52
24:LV:48:ARG:HG2	24:LV:49:LEU:N	2.24	0.52
38:Lj:2:THR:O	38:Lj:7:SER:OG	2.26	0.52
42:Ln:2:ARG:NH1	47:S2:1842:C:OP2	2.33	0.52
47:S2:538:U:H5''	47:S2:546:G:C4	2.43	0.52
47:S2:1520:G:OP1	61:SS:136:THR:N	2.42	0.52
47:S2:1674:G:H5''	53:SF:86:LYS:HB3	1.91	0.52
47:S2:1865:C:H5'	47:S2:1866:A:C8	2.44	0.52
52:SE:67:GLN:NE2	78:SY:85:ASN:HD21	2.07	0.52
52:SE:188:ASN:HA	52:SE:245:ARG:HH12	1.74	0.52
54:SH:134:VAL:HG12	54:SH:137:SER:HB3	1.91	0.52
61:SS:116:LYS:O	61:SS:117:ILE:HG22	2.08	0.52
62:ST:131:LEU:HD12	62:ST:134:ILE:HD11	1.91	0.52
63:SU:60:THR:HG23	63:SU:81:GLN:HE22	1.74	0.52
68:Sd:11:PRO:HB3	68:Sd:13:LYS:NZ	2.25	0.52
72:SG:24:LEU:O	72:SG:26:THR:N	2.42	0.52
73:SJ:169:ARG:NH2	73:SJ:170:PRO:O	2.43	0.52
1:L5:495:C:H42	1:L5:659:G:H1	1.57	0.52
1:L5:1402:C:H2'	1:L5:1403:G:O4'	2.09	0.52
6:LC:212:ASN:HB3	6:LC:232:VAL:HG12	1.91	0.52
10:LG:78:PRO:O	10:LG:82:GLN:HG3	2.08	0.52
23:LU:45:GLU:OE1	23:LU:45:GLU:N	2.43	0.52
25:LW:91:MET:HE3	25:LW:95:ASN:HB3	1.91	0.52
47:S2:56:G:OP1	78:SY:111:LYS:NZ	2.41	0.52
47:S2:1452:A:N7	47:S2:1475:G:N1	2.57	0.52
51:SD:164:VAL:O	51:SD:168:VAL:HG22	2.10	0.52
59:SQ:134:GLY:HA3	59:SQ:141:TYR:H	1.74	0.52
66:Sa:85:ARG:HG3	66:Sa:86:ASN:H	1.74	0.52
74:SM:11:VAL:N	74:SM:123:VAL:O	2.43	0.52
1:L5:693:C:O2'	1:L5:694:C:OP1	2.22	0.52
1:L5:1185:G:H2'	1:L5:1186:U:C6	2.44	0.52
1:L5:2090:U:H4'	6:LC:305:PRO:HD2	1.90	0.52
1:L5:3747:A:N7	4:LA:245:ARG:HD2	2.24	0.52
1:L5:4202:U:O2'	1:L5:4203:A:OP2	2.27	0.52
6:LC:94:ASN:HA	6:LC:100:ARG:O	2.10	0.52
8:LE:86:GLU:H	8:LE:89:LEU:HD12	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:114:ARG:HG3	8:LE:115:TYR:H	1.75	0.52
14:LL:35:ARG:O	14:LL:39:ARG:N	2.43	0.52
14:LL:66:TYR:O	14:LL:68:THR:N	2.42	0.52
47:S2:974:C:H2'	47:S2:975:G:H8	1.75	0.52
47:S2:1358:U:OP2	71:SC:123:ARG:NH1	2.43	0.52
49:SA:128:ARG:HD3	49:SA:153:PRO:HD2	1.91	0.52
51:SD:80:PRO:O	51:SD:82:GLY:N	2.43	0.52
58:SP:38:SER:O	58:SP:41:GLN:HG2	2.10	0.52
62:ST:111:LYS:HB3	62:ST:126:GLN:NE2	2.24	0.52
68:Sd:23:VAL:HG23	68:Sd:38:MET:HE1	1.91	0.52
70:Sg:299:PHE:CD1	70:Sg:309:VAL:HG12	2.44	0.52
71:SC:69:LEU:HD22	71:SC:74:LYS:HD2	1.91	0.52
1:L5:28:C:O2'	16:LN:162:ARG:O	2.28	0.52
1:L5:509:A:H2'	14:LL:163:LYS:HE3	1.90	0.52
1:L5:1091:C:H2'	1:L5:1092:G:C8	2.45	0.52
1:L5:1405:C:N3	1:L5:1412:G:N1	2.57	0.52
1:L5:2621:A:O2'	1:L5:2701:U:O2'	2.26	0.52
1:L5:5002:U:OP2	5:LB:385:LYS:NZ	2.43	0.52
5:LB:11:HIS:CE1	5:LB:237:THR:HG23	2.45	0.52
29:La:19:HIS:HB3	29:La:25:HIS:HB2	1.90	0.52
37:Li:48:CYS:SG	37:Li:49:GLY:N	2.82	0.52
47:S2:326:C:H4'	47:S2:327:G:H5'	1.92	0.52
49:SA:104:THR:O	49:SA:107:THR:OG1	2.20	0.52
52:SE:124:CYS:O	52:SE:160:ILE:N	2.29	0.52
70:Sg:149:GLU:CD	70:Sg:170:TRP:HB2	2.34	0.52
75:SN:84:LEU:HD21	75:SN:149:LEU:HD21	1.90	0.52
81:Se:24:LYS:HG3	81:Se:25:LYS:HG3	1.91	0.52
1:L5:3662:A:O2'	4:LA:118:GLU:OE1	2.21	0.52
1:L5:4730:C:H4'	1:L5:4731:G:OP1	2.09	0.52
5:LB:62:ARG:O	5:LB:65:SER:OG	2.19	0.52
6:LC:94:ASN:OD1	6:LC:95:MET:N	2.42	0.52
16:LN:119:TYR:OH	16:LN:131:GLU:OE1	2.17	0.52
39:Lk:26:LYS:HE2	39:Lk:35:LYS:NZ	2.25	0.52
47:S2:162:C:H5'	72:SG:87:ARG:NH2	2.25	0.52
47:S2:1562:C:OP1	62:ST:71:GLY:N	2.42	0.52
47:S2:1656:G:H2'	47:S2:1657:G:C8	2.44	0.52
50:SB:27:LYS:HA	50:SB:51:ARG:NH2	2.25	0.52
50:SB:130:THR:HB	50:SB:180:ASP:OD1	2.09	0.52
1:L5:265:C:P	36:Lh:112:ARG:HH12	2.32	0.52
1:L5:366:A:H4'	40:Ll:40:LYS:HG2	1.92	0.52
1:L5:3612:C:H1'	1:L5:5016:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:369:ASP:OD1	5:LB:370:THR:N	2.43	0.52
13:LJ:146:ARG:HG2	13:LJ:147:ARG:HG3	1.90	0.52
24:LV:107:ASN:O	24:LV:109:LYS:N	2.37	0.52
26:LX:72:ASP:O	26:LX:76:ILE:HG12	2.10	0.52
47:S2:305:U:H5'	55:SI:41:ARG:NH2	2.24	0.52
47:S2:309:G:H2'	47:S2:310:C:N1	2.24	0.52
47:S2:413:G:H2'	47:S2:414:A:H8	1.74	0.52
47:S2:559:G:O2'	47:S2:560:A:O4'	2.28	0.52
47:S2:824:C:H1'	73:SJ:144:ILE:HG21	1.91	0.52
47:S2:1644:C:OP1	59:SQ:143:LYS:N	2.38	0.52
53:SF:25:THR:HA	53:SF:107:ASN:HD21	1.75	0.52
71:SC:210:PRO:HD3	71:SC:236:PHE:HE2	1.75	0.52
73:SJ:27:GLN:O	73:SJ:30:LYS:HG2	2.10	0.52
1:L5:689:U:H4'	45:Lr:85:ASN:ND2	2.25	0.52
1:L5:988:C:H42	1:L5:1065:G:H1	1.58	0.52
1:L5:1983:A:N6	1:L5:1987:C:O4'	2.43	0.52
1:L5:2078:C:OP1	33:Le:64:LYS:HG2	2.10	0.52
1:L5:2089:G:H5'	19:LQ:38:ARG:HH12	1.75	0.52
1:L5:3723:A:OP2	37:Li:68:ARG:NH1	2.43	0.52
1:L5:3757:G:H5''	1:L5:3758:U:H5	1.75	0.52
6:LC:209:ILE:HB	6:LC:229:LEU:HD23	1.91	0.52
7:LD:180:PHE:HB3	7:LD:195:HIS:CD2	2.45	0.52
21:LS:83:ARG:HD3	21:LS:125:GLN:OE1	2.10	0.52
33:Le:35:TRP:HZ2	33:Le:55:MET:HG3	1.75	0.52
34:Lf:45:LYS:NZ	34:Lf:108:SER:HA	2.24	0.52
47:S2:359:U:OP1	65:SX:22:TRP:NE1	2.37	0.52
47:S2:406:U:H2'	47:S2:408:A:C8	2.45	0.52
47:S2:440:G:O2'	47:S2:1737:G:H1'	2.10	0.52
47:S2:1447:G:OP1	63:SU:87:ARG:NH1	2.36	0.52
74:SM:18:LEU:HD23	74:SM:124:ILE:HD11	1.92	0.52
78:SY:99:LYS:O	78:SY:101:LYS:NZ	2.41	0.52
1:L5:267:G:H2'	1:L5:268:G:C8	2.44	0.51
1:L5:1324:A:O2'	1:L5:1326:A:OP1	2.28	0.51
1:L5:1436:C:H5''	1:L5:2119:C:N4	2.23	0.51
1:L5:1755:C:N3	7:LD:4:VAL:N	2.54	0.51
1:L5:1969:G:H1	1:L5:2019:C:N4	2.08	0.51
1:L5:2291:G:N2	1:L5:2344:U:O2	2.32	0.51
1:L5:2828:U:O2'	1:L5:2829:U:OP1	2.27	0.51
1:L5:2845:A:H61	1:L5:3843:C:H42	1.58	0.51
1:L5:3684:G:OP1	4:LA:174:ARG:NH2	2.39	0.51
6:LC:133:LEU:HD23	45:Lr:6:GLN:HE21	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:142:HIS:HE1	6:LC:248:ARG:HA	1.75	0.51
10:LG:73:ARG:HH12	10:LG:243:GLY:H	1.58	0.51
17:LO:173:GLN:HB3	17:LO:176:ARG:HH21	1.74	0.51
18:LP:64:ASN:HB2	18:LP:80:GLN:OE1	2.10	0.51
19:LQ:42:THR:HA	19:LQ:45:GLN:HE22	1.75	0.51
26:LX:146:ALA:HA	26:LX:149:VAL:HG12	1.90	0.51
28:LZ:30:ASP:CG	28:LZ:31:ASP:H	2.18	0.51
29:La:123:ILE:HG12	29:La:143:ALA:HB3	1.92	0.51
39:Lk:47:ILE:HG12	39:Lk:52:LYS:HB2	1.92	0.51
47:S2:356:C:OP2	57:SL:105:ARG:NH1	2.20	0.51
47:S2:1611:G:H5'	61:SS:86:ARG:HH22	1.75	0.51
49:SA:58:LEU:HD21	49:SA:177:MET:HG2	1.92	0.51
51:SD:135:GLU:OE2	51:SD:159:HIS:NE2	2.36	0.51
52:SE:45:ILE:HA	52:SE:61:VAL:HG11	1.92	0.51
53:SF:145:ARG:HG2	67:Sc:47:LYS:HZ1	1.75	0.51
53:SF:174:ALA:O	53:SF:178:ILE:HG12	2.10	0.51
60:SR:52:GLY:O	60:SR:55:THR:OG1	2.20	0.51
61:SS:55:ARG:O	61:SS:59:LEU:HD13	2.10	0.51
63:SU:39:LEU:HD22	63:SU:102:THR:HG22	1.92	0.51
70:Sg:259:TRP:HE1	70:Sg:266:ILE:HG13	1.75	0.51
75:SN:15:ALA:HB1	80:Sb:26:GLN:HG2	1.92	0.51
1:L5:1198:G:H2'	1:L5:1199:G:C8	2.45	0.51
1:L5:1598:C:H2'	1:L5:1599:A:H8	1.75	0.51
1:L5:1758:G:N2	1:L5:1773:U:O4	2.36	0.51
1:L5:2709:C:N4	1:L5:2710:C:O2'	2.43	0.51
1:L5:3771:C:H3'	1:L5:3772:U:C5'	2.40	0.51
3:L8:72:A:HO2'	3:L8:88:A:H2	1.58	0.51
11:LH:30:PRO:HD2	11:LH:84:VAL:HG22	1.92	0.51
12:LI:57:TYR:OH	12:LI:128:ARG:NH2	2.43	0.51
14:LL:19:GLN:HA	14:LL:22:VAL:HG13	1.92	0.51
21:LS:15:ARG:HH11	21:LS:25:PRO:HD2	1.74	0.51
24:LV:68:GLY:O	24:LV:73:ARG:NH2	2.42	0.51
36:Lh:66:LYS:HG2	36:Lh:70:ARG:HG3	1.91	0.51
38:Lj:52:LYS:HG2	38:Lj:55:ARG:HH11	1.74	0.51
44:Lp:50:ARG:HH21	44:Lp:56:HIS:CE1	2.28	0.51
46:Lz:23:ARG:HH22	46:Lz:179:LEU:HD11	1.75	0.51
47:S2:805:U:O3'	77:SW:120:HIS:NE2	2.42	0.51
47:S2:1419:C:H4'	47:S2:1420:G:OP1	2.09	0.51
47:S2:1513:C:H5''	68:Sd:10:HIS:HB3	1.92	0.51
49:SA:198:MET:SD	49:SA:199:PRO:HD2	2.50	0.51
71:SC:270:THR:HA	71:SC:273:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:205:C:O2	1:L5:211:G:N2	2.44	0.51
1:L5:265:C:OP1	36:Lh:112:ARG:NH1	2.42	0.51
1:L5:1378:C:H3'	1:L5:1379:C:C5'	2.40	0.51
1:L5:1806:G:O6	1:L5:1832:C:N4	2.26	0.51
1:L5:1870:C:H2'	1:L5:1871:A:C8	2.45	0.51
1:L5:3848:U:H2'	1:L5:3849:A:C8	2.45	0.51
1:L5:4038:C:H5	1:L5:4050:A:H4'	1.76	0.51
1:L5:4685:U:OP2	41:Lm:112:LYS:NZ	2.39	0.51
3:L8:117:C:H4'	26:LX:55:ARG:HH22	1.75	0.51
14:LL:3:PRO:HB2	29:La:44:ASN:ND2	2.25	0.51
14:LL:146:LEU:HA	14:LL:147:ALA:HB3	1.93	0.51
23:LU:25:CYS:O	23:LU:29:VAL:HG23	2.10	0.51
45:Lr:32:LEU:C	45:Lr:34:ALA:H	2.18	0.51
47:S2:350:C:O2'	47:S2:383:G:N2	2.43	0.51
47:S2:553:U:O4	47:S2:554:A:N6	2.43	0.51
47:S2:1752:C:O2	47:S2:1780:G:N1	2.31	0.51
76:SO:14:VAL:HG11	76:SO:17:LEU:C	2.35	0.51
1:L5:2:G:H2'	1:L5:3:C:O4'	2.11	0.51
1:L5:32:G:OP1	16:LN:73:ARG:NH1	2.43	0.51
1:L5:2442:G:O2'	1:L5:2512:A:N3	2.35	0.51
1:L5:4041:C:C2	46:Lz:101:LYS:HA	2.46	0.51
3:L8:122:G:C5	3:L8:123:U:H1'	2.46	0.51
4:LA:181:LYS:HG2	4:LA:183:GLY:H	1.75	0.51
9:LF:94:ARG:HA	9:LF:140:ILE:HG22	1.91	0.51
9:LF:122:PHE:CE1	9:LF:150:VAL:HG12	2.45	0.51
28:LZ:12:LEU:HD23	28:LZ:22:LYS:HG2	1.93	0.51
46:Lz:67:VAL:O	46:Lz:111:LEU:N	2.44	0.51
47:S2:1659:U:H3'	68:Sd:32:ARG:HH22	1.75	0.51
1:L5:514:U:OP2	1:L5:648:G:N2	2.43	0.51
1:L5:1177:U:H2'	1:L5:1178:G:H8	1.75	0.51
1:L5:2346:C:O2'	1:L5:2347:A:H3'	2.10	0.51
1:L5:2520:C:H1'	1:L5:2640:G:H21	1.75	0.51
1:L5:4691:A:O2'	11:LH:68:ALA:O	2.27	0.51
1:L5:4871:C:H42	21:LS:157:ARG:HH21	1.58	0.51
2:L7:11:A:O2'	2:L7:13:A:OP2	2.28	0.51
9:LF:116:GLN:HE22	9:LF:212:LYS:NZ	2.08	0.51
11:LH:47:LEU:HD23	11:LH:55:LEU:HD12	1.91	0.51
36:Lh:109:ARG:HA	36:Lh:112:ARG:HG2	1.91	0.51
47:S2:1016:U:H6	75:SN:17:PRO:HG3	1.75	0.51
47:S2:1112:U:H2'	47:S2:1113:A:H4'	1.90	0.51
47:S2:1588:A:H5''	62:ST:77:LYS:HE2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SD:168:VAL:HG12	51:SD:189:MET:HA	1.93	0.51
58:SP:76:VAL:HB	58:SP:94:VAL:HA	1.92	0.51
70:Sg:105:THR:OG1	70:Sg:126:ASP:OD2	2.28	0.51
1:L5:480:C:H42	1:L5:674:G:H1	1.58	0.51
1:L5:683:C:H4'	8:LE:101:ASN:HB2	1.92	0.51
1:L5:755:C:H2'	1:L5:756:G:C8	2.46	0.51
1:L5:1197:C:H2'	1:L5:1198:G:C8	2.45	0.51
1:L5:1352:C:P	19:LQ:104:ARG:HH12	2.33	0.51
1:L5:1387:A:N6	29:La:74:ASN:OD1	2.40	0.51
1:L5:4280:A:N6	7:LD:150:LEU:HD21	2.26	0.51
1:L5:4772:C:O2	1:L5:4863:G:N1	2.44	0.51
14:LL:42:LYS:HG3	14:LL:45:ARG:HH22	1.74	0.51
28:LZ:100:VAL:HG22	28:LZ:107:LYS:HA	1.92	0.51
35:Lg:76:ARG:NH2	35:Lg:84:ALA:HB2	2.25	0.51
46:Lz:198:TRP:HZ3	46:Lz:202:ARG:HB2	1.76	0.51
47:S2:1854:U:H2'	47:S2:1855:G:C8	2.45	0.51
49:SA:39:TYR:HB2	49:SA:50:ASN:HB3	1.91	0.51
49:SA:190:SER:O	49:SA:192:GLU:N	2.40	0.51
73:SJ:113:GLN:HA	73:SJ:116:LYS:HG2	1.91	0.51
1:L5:2730:U:H2'	1:L5:2731:C:C6	2.46	0.51
1:L5:3673:C:O2'	1:L5:3674:G:OP1	2.29	0.51
1:L5:3753:G:H22	1:L5:3771:C:H1'	1.75	0.51
13:LJ:85:LYS:NZ	13:LJ:116:GLY:H	2.08	0.51
17:LO:16:LEU:HB2	17:LO:43:ILE:HG22	1.92	0.51
47:S2:794:A:N6	47:S2:796:G:O6	2.44	0.51
48:S6:38:A:H62	53:SF:133:THR:H	1.57	0.51
57:SL:77:VAL:HG12	57:SL:122:ILE:HG22	1.92	0.51
60:SR:27:ASP:O	60:SR:30:THR:OG1	2.24	0.51
62:ST:49:ASP:OD1	62:ST:50:GLU:N	2.44	0.51
67:Sc:23:SER:OG	67:Sc:24:GLN:N	2.44	0.51
72:SG:50:VAL:HG21	72:SG:111:LEU:HD21	1.93	0.51
75:SN:23:PRO:O	75:SN:25:TRP:N	2.44	0.51
75:SN:99:ARG:HG2	75:SN:115:LEU:HD11	1.93	0.51
76:SO:111:GLY:HA2	76:SO:114:SER:HB3	1.92	0.51
1:L5:383:A:O2'	1:L5:384:A:O5'	2.28	0.51
1:L5:969:C:H1'	1:L5:970:G:C4	2.45	0.51
1:L5:2108:G:C5	1:L5:2109:G:H1'	2.46	0.51
1:L5:3766:A:H5''	47:S2:1849:G:O6	2.11	0.51
1:L5:3919:C:H5''	4:LA:207:VAL:HG22	1.92	0.51
1:L5:4228:G:H5''	1:L5:4229:U:O4'	2.11	0.51
1:L5:4478:G:O2'	1:L5:4602:A:N1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:188:ARG:HE	6:LC:202:ILE:HD12	1.76	0.51
12:LI:176:PHE:HB2	12:LI:181:PHE:CE2	2.44	0.51
16:LN:169:ARG:HH21	16:LN:174:LEU:HD11	1.75	0.51
25:LW:91:MET:HG3	25:LW:94:ARG:HB3	1.92	0.51
42:Ln:10:MET:C	42:Ln:12:ARG:H	2.19	0.51
47:S2:196:C:O2'	47:S2:203:G:N2	2.44	0.51
47:S2:598:G:O2'	47:S2:605:A:N1	2.42	0.51
47:S2:1611:G:O2'	61:SS:87:GLN:O	2.29	0.51
47:S2:1758:G:O2'	47:S2:1774:C:N4	2.44	0.51
57:SL:128:VAL:HG12	57:SL:140:PHE:HB3	1.92	0.51
63:SU:49:LYS:C	63:SU:51:LYS:H	2.18	0.51
1:L5:1215:C:H3'	1:L5:1216:C:H5''	1.93	0.51
1:L5:3641:U:H5	1:L5:3646:A:N7	2.08	0.51
1:L5:4997:G:H2'	1:L5:4998:G:H8	1.76	0.51
7:LD:56:THR:OG1	7:LD:59:ASP:O	2.26	0.51
15:LM:126:GLU:OE2	17:LO:184:ASN:ND2	2.44	0.51
18:LP:83:TRP:O	18:LP:85:LYS:N	2.44	0.51
23:LU:39:PHE:O	23:LU:43:LEU:HD13	2.10	0.51
47:S2:436:G:OP1	47:S2:471:G:O2'	2.29	0.51
47:S2:535:G:N2	47:S2:548:C:H42	2.09	0.51
47:S2:1102:G:H2'	47:S2:1103:C:H6	1.76	0.51
48:S6:69:U:H2'	48:S6:70:G:H8	1.75	0.51
53:SF:15:PRO:HG3	59:SQ:57:LEU:HA	1.93	0.51
53:SF:157:GLY:HA2	53:SF:160:GLU:HG2	1.93	0.51
60:SR:36:GLU:OE1	60:SR:36:GLU:N	2.43	0.51
67:Sc:37:ASP:O	67:Sc:39:SER:N	2.43	0.51
70:Sg:44:LYS:HB3	70:Sg:46:THR:HG23	1.93	0.51
71:SC:253:PRO:HA	71:SC:256:TRP:CD2	2.45	0.51
1:L5:180:C:N3	1:L5:256:G:N1	2.58	0.51
1:L5:1478:C:H2'	1:L5:1479:G:C8	2.46	0.51
1:L5:1520:C:H4'	6:LC:94:ASN:ND2	2.25	0.51
1:L5:3888:G:O2'	1:L5:3889:G:OP1	2.22	0.51
1:L5:4897:G:O2'	1:L5:4926:C:N4	2.43	0.51
5:LB:4:ARG:HH21	5:LB:8:ALA:HB3	1.75	0.51
6:LC:54:VAL:HG21	6:LC:101:MET:SD	2.50	0.51
12:LI:77:VAL:N	12:LI:80:CYS:SG	2.66	0.51
17:LO:16:LEU:HD21	17:LO:83:THR:HG21	1.93	0.51
18:LP:31:GLU:OE1	18:LP:60:PHE:HA	2.11	0.51
31:Lc:48:LEU:HD13	31:Lc:57:LYS:HG3	1.92	0.51
47:S2:39:A:N6	47:S2:515:G:H1'	2.26	0.51
47:S2:156:G:N2	72:SG:60:GLY:O	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1142:G:N2	47:S2:1144:A:H3'	2.25	0.51
47:S2:1220:A:N3	47:S2:1677:U:O2'	2.40	0.51
50:SB:102:GLY:HA2	50:SB:215:VAL:HG13	1.93	0.51
51:SD:226:GLN:HG3	70:Sg:186:THR:HA	1.94	0.51
52:SE:56:LEU:HD11	78:SY:58:PHE:HZ	1.76	0.51
54:SH:87:PHE:CE2	54:SH:90:LYS:HD2	2.46	0.51
62:ST:81:GLY:O	62:ST:93:SER:N	2.44	0.51
70:Sg:27:PHE:HB3	70:Sg:30:MET:HB3	1.92	0.51
70:Sg:298:LEU:HB3	70:Sg:310:TRP:HB2	1.92	0.51
73:SJ:40:LYS:HG3	81:Se:34:ARG:HH12	1.76	0.51
73:SJ:61:LEU:HA	73:SJ:70:ARG:HH12	1.75	0.51
80:Sb:21:LYS:O	80:Sb:23:ARG:N	2.38	0.51
1:L5:1176:C:H42	1:L5:1183:C:H41	1.59	0.50
1:L5:1508:A:OP1	6:LC:110:ARG:NH2	2.44	0.50
1:L5:2059:C:O2	21:LS:118:ARG:NH1	2.44	0.50
9:LF:188:GLU:O	9:LF:191:ILE:HG22	2.11	0.50
11:LH:63:ASN:OD1	11:LH:64:ARG:N	2.44	0.50
13:LJ:111:GLU:HG3	13:LJ:114:ASP:HB2	1.92	0.50
14:LL:211:LYS:HD2	46:Lz:185:LEU:HB2	1.93	0.50
15:LM:127:VAL:HG21	17:LO:178:ARG:HE	1.76	0.50
24:LV:83:ARG:HD3	24:LV:120:PRO:HG2	1.93	0.50
33:Le:90:MET:HG2	45:Lr:33:LYS:HA	1.92	0.50
47:S2:30:C:O2'	47:S2:596:U:OP1	2.25	0.50
47:S2:399:C:H4'	65:SX:11:ARG:NH1	2.26	0.50
47:S2:1569:A:O2'	47:S2:1626:C:O2	2.25	0.50
47:S2:1622:U:OP2	47:S2:1623:A:O2'	2.26	0.50
48:S6:31:G:N2	53:SF:134:VAL:HG13	2.26	0.50
53:SF:40:ALA:HA	53:SF:44:LYS:HE3	1.92	0.50
57:SL:13:GLN:NE2	57:SL:14:PRO:HD2	2.26	0.50
70:Sg:30:MET:HE3	70:Sg:42:MET:HE1	1.93	0.50
70:Sg:147:HIS:CE1	70:Sg:173:LEU:HB2	2.30	0.50
1:L5:151:G:H3'	16:LN:49:ARG:HH22	1.75	0.50
1:L5:262:G:H2'	1:L5:263:G:C8	2.46	0.50
1:L5:702:U:H2'	1:L5:703:G:H4'	1.93	0.50
1:L5:1952:G:H4'	21:LS:93:MET:HG3	1.93	0.50
1:L5:3612:C:H1'	1:L5:5016:A:C8	2.46	0.50
1:L5:3970:G:H2'	1:L5:3971:G:C8	2.44	0.50
5:LB:285:TYR:HD1	5:LB:365:LEU:HD21	1.76	0.50
11:LH:41:ILE:HG21	11:LH:73:ILE:HD11	1.93	0.50
11:LH:113:GLU:HG2	11:LH:125:ARG:HA	1.92	0.50
13:LJ:100:SER:N	13:LJ:104:ASN:O	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:182:HIS:O	16:LN:183:THR:OG1	2.22	0.50
25:LW:46:PRO:O	25:LW:52:THR:OG1	2.24	0.50
26:LX:82:THR:HA	26:LX:87:MET:HE2	1.93	0.50
28:LZ:30:ASP:OD1	28:LZ:31:ASP:N	2.44	0.50
29:La:26:ARG:HB2	29:La:29:PRO:HG3	1.92	0.50
46:Lz:94:ASN:O	46:Lz:98:LYS:HG3	2.11	0.50
50:SB:32:ASP:OD1	50:SB:33:VAL:N	2.45	0.50
53:SF:133:THR:HB	53:SF:134:VAL:HG23	1.91	0.50
66:Sa:79:ILE:HG13	66:Sa:84:VAL:HG23	1.93	0.50
72:SG:200:LYS:O	72:SG:204:GLU:N	2.45	0.50
73:SJ:4:ALA:H	73:SJ:5:ARG:HB2	1.75	0.50
1:L5:724:C:N3	1:L5:942:G:N2	2.56	0.50
1:L5:1213:G:C6	1:L5:1215:C:C4	2.99	0.50
1:L5:1272:C:O2'	8:LE:74:SER:HB2	2.11	0.50
6:LC:11:TYR:CD1	6:LC:17:SER:HB3	2.46	0.50
9:LF:169:LEU:HA	9:LF:174:LEU:HD22	1.93	0.50
9:LF:222:LYS:HG3	9:LF:223:LYS:H	1.76	0.50
36:Lh:21:LEU:O	36:Lh:25:LYS:HG2	2.11	0.50
37:Li:45:ARG:NH2	37:Li:49:GLY:O	2.40	0.50
39:Lk:5:ILE:HG22	39:Lk:6:GLU:N	2.26	0.50
46:Lz:116:LEU:HA	46:Lz:119:GLN:HG2	1.94	0.50
46:Lz:203:ALA:HB1	46:Lz:215:ARG:HB2	1.93	0.50
47:S2:76:U:O2'	47:S2:78:C:OP2	2.25	0.50
47:S2:864:A:H4'	77:SW:78:ARG:HH12	1.76	0.50
47:S2:1163:C:H2'	47:S2:1164:G:H8	1.75	0.50
47:S2:1678:A:H2'	47:S2:1679:A:C8	2.46	0.50
52:SE:45:ILE:HG13	52:SE:61:VAL:HG11	1.93	0.50
54:SH:87:PHE:HE2	54:SH:90:LYS:HD2	1.75	0.50
70:Sg:130:LYS:HB3	70:Sg:141:THR:HG23	1.93	0.50
74:SM:52:GLN:HE22	74:SM:66:GLU:HB3	1.76	0.50
76:SO:12:GLU:N	76:SO:14:VAL:HA	2.26	0.50
76:SO:128:ARG:HH12	76:SO:130:GLU:HB2	1.76	0.50
1:L5:15:A:H2'	1:L5:16:G:O4'	2.10	0.50
1:L5:1866:U:O2'	1:L5:1867:A:O5'	2.26	0.50
1:L5:1971:C:H3'	1:L5:2001:G:H22	1.77	0.50
1:L5:4381:A:H2'	1:L5:4382:G:O4'	2.12	0.50
1:L5:4415:A:N6	1:L5:4416:G:N3	2.59	0.50
1:L5:4725:C:H2'	1:L5:4726:G:H8	1.76	0.50
1:L5:4730:C:H1'	1:L5:4731:G:H3'	1.93	0.50
4:LA:176:ASP:OD1	4:LA:177:LYS:N	2.42	0.50
5:LB:150:PHE:O	5:LB:154:LYS:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:266:THR:HG23	6:LC:268:ARG:H	1.77	0.50
8:LE:44:CYS:SG	8:LE:45:SER:N	2.82	0.50
14:LL:54:PRO:CA	14:LL:55:ILE:HG22	2.41	0.50
18:LP:105:LYS:HD2	18:LP:107:LEU:HD11	1.93	0.50
47:S2:833:C:O2'	47:S2:834:C:OP1	2.28	0.50
47:S2:1620:A:OP1	58:SP:44:ARG:NH2	2.44	0.50
47:S2:1854:U:H2'	47:S2:1855:G:H8	1.77	0.50
50:SB:85:LYS:HB2	50:SB:101:HIS:HB3	1.93	0.50
53:SF:38:TYR:HD1	53:SF:144:LEU:HD13	1.77	0.50
60:SR:10:LYS:HD3	60:SR:14:ARG:HH22	1.76	0.50
60:SR:28:PHE:HA	60:SR:55:THR:HG21	1.94	0.50
67:Sc:21:THR:O	67:Sc:29:GLN:NE2	2.44	0.50
75:SN:38:TYR:O	75:SN:42:LYS:HG3	2.11	0.50
1:L5:413:G:OP2	40:Ll:36:ARG:NH2	2.45	0.50
1:L5:2896:G:H1	1:L5:3605:C:H42	1.58	0.50
1:L5:4638:U:OP1	1:L5:5044:A:O2'	2.27	0.50
7:LD:9:ASN:OD1	7:LD:10:LYS:N	2.45	0.50
7:LD:236:MET:O	7:LD:239:MET:HG2	2.11	0.50
10:LG:251:ALA:O	10:LG:255:LYS:HG2	2.10	0.50
11:LH:36:ARG:NH1	11:LH:37:ASP:O	2.44	0.50
14:LL:42:LYS:HG3	14:LL:45:ARG:NH2	2.27	0.50
50:SB:32:ASP:HB2	50:SB:46:LYS:HG2	1.94	0.50
51:SD:161:GLY:O	51:SD:164:VAL:HG12	2.12	0.50
60:SR:86:PRO:O	60:SR:89:SER:OG	2.16	0.50
61:SS:4:VAL:HA	79:SZ:50:PHE:HE1	1.76	0.50
65:SX:9:THR:O	65:SX:11:ARG:N	2.44	0.50
70:Sg:301:GLY:HA2	70:Sg:307:VAL:HA	1.93	0.50
71:SC:166:ARG:O	71:SC:181:PRO:HD3	2.11	0.50
1:L5:113:A:H2'	1:L5:114:G:O4'	2.12	0.50
1:L5:1402:C:O2	1:L5:1416:G:N2	2.44	0.50
1:L5:1530:G:H1'	38:Lj:49:TRP:CH2	2.47	0.50
1:L5:2116:C:H4'	1:L5:2117:G:O5'	2.12	0.50
1:L5:2562:G:O2'	1:L5:2564:G:N7	2.38	0.50
12:LI:53:VAL:HG11	22:LT:160:ALA:OXT	2.11	0.50
15:LM:47:ARG:HE	21:LS:73:LEU:HD21	1.75	0.50
27:LY:74:TYR:HE2	27:LY:77:LYS:HD2	1.75	0.50
36:Lh:96:ASN:O	36:Lh:98:HIS:N	2.44	0.50
47:S2:126:G:H8	72:SG:199:THR:HG21	1.77	0.50
47:S2:1170:A:N6	47:S2:1189:A:OP2	2.42	0.50
49:SA:76:VAL:HG13	49:SA:123:VAL:HG23	1.94	0.50
50:SB:179:ASN:HB2	50:SB:183:GLU:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SB:192:SER:O	50:SB:196:ASP:N	2.45	0.50
51:SD:204:LEU:C	51:SD:206:ASP:H	2.19	0.50
1:L5:78:U:H5''	16:LN:185:GLY:HA2	1.93	0.50
1:L5:279:A:OP1	16:LN:47:LYS:NZ	2.36	0.50
1:L5:1914:C:O3'	17:LO:89:PRO:HG3	2.12	0.50
1:L5:2765:A:H2'	1:L5:2766:A:H5'	1.93	0.50
1:L5:5020:G:H1	1:L5:5029:C:H42	1.59	0.50
8:LE:82:LYS:HG3	8:LE:84:LYS:HB3	1.93	0.50
17:LO:139:GLY:O	17:LO:150:GLN:NE2	2.45	0.50
24:LV:73:ARG:NH2	47:S2:1724:A:OP1	2.44	0.50
47:S2:355:G:OP1	57:SL:105:ARG:NH1	2.45	0.50
47:S2:690:G:H1	47:S2:738:C:N4	2.10	0.50
47:S2:1395:C:H3'	47:S2:1396:A:H5''	1.93	0.50
52:SE:211:LYS:HE2	52:SE:215:GLY:HA2	1.93	0.50
75:SN:122:ILE:O	75:SN:126:ALA:N	2.33	0.50
1:L5:230:G:O2'	27:LY:18:HIS:NE2	2.44	0.50
1:L5:281:U:H2'	1:L5:282:C:C6	2.47	0.50
1:L5:477:C:H42	1:L5:677:G:H1	1.59	0.50
1:L5:1267:C:N4	1:L5:2122:G:OP2	2.44	0.50
1:L5:1389:U:O2'	1:L5:1469:C:O2	2.24	0.50
1:L5:2264:C:O2'	1:L5:2265:G:OP1	2.25	0.50
1:L5:2387:G:H5''	20:LR:23:TRP:CD1	2.46	0.50
1:L5:3610:A:H2'	1:L5:3611:A:C8	2.47	0.50
1:L5:4118:U:C4	4:LA:89:TYR:HD2	2.29	0.50
1:L5:4263:C:H2'	1:L5:4264:G:O4'	2.12	0.50
1:L5:4741:C:O2	1:L5:4959:U:N3	2.35	0.50
3:L8:153:C:H2'	3:L8:154:G:C8	2.47	0.50
8:LE:181:LEU:HD22	8:LE:268:GLN:HG3	1.94	0.50
14:LL:126:LEU:HD23	14:LL:137:GLY:HA2	1.93	0.50
15:LM:90:ARG:O	15:LM:94:LYS:HG3	2.12	0.50
25:LW:34:ALA:HA	25:LW:37:GLU:HB3	1.94	0.50
46:Lz:66:CYS:SG	46:Lz:67:VAL:N	2.85	0.50
47:S2:1238:U:O2'	61:SS:147:GLY:O	2.30	0.50
59:SQ:112:LEU:HB3	59:SQ:119:LEU:HD13	1.93	0.50
70:Sg:292:SER:OG	70:Sg:293:ALA:N	2.45	0.50
73:SJ:23:SER:O	73:SJ:27:GLN:N	2.45	0.50
73:SJ:78:LEU:HD21	73:SJ:97:ILE:HD11	1.93	0.50
75:SN:40:LEU:HD22	75:SN:45:LEU:HD12	1.92	0.50
1:L5:1697:G:H3'	1:L5:1698:C:C6	2.47	0.50
1:L5:2243:C:H2'	1:L5:2244:C:H5	1.77	0.50
1:L5:2900:U:H2'	1:L5:2901:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2900:U:H2'	1:L5:2901:G:H8	1.77	0.50
1:L5:3593:C:H2'	1:L5:3595:U:C4	2.47	0.50
1:L5:4755:G:H1	1:L5:4878:C:H42	1.58	0.50
5:LB:17:LEU:O	5:LB:19:ARG:N	2.45	0.50
10:LG:87:LEU:HD11	10:LG:91:THR:HG21	1.94	0.50
10:LG:100:HIS:CE1	10:LG:103:ARG:HH21	2.30	0.50
10:LG:190:LEU:HB3	10:LG:199:CYS:HB3	1.94	0.50
13:LJ:85:LYS:HZ2	13:LJ:116:GLY:H	1.59	0.50
22:LT:51:GLY:HA3	22:LT:92:ARG:HG3	1.94	0.50
35:Lg:3:GLN:NE2	35:Lg:30:ILE:H	2.10	0.50
36:Lh:88:THR:O	36:Lh:90:ALA:N	2.42	0.50
47:S2:197:U:H2'	47:S2:198:U:H4'	1.92	0.50
47:S2:222:U:H3	47:S2:299:A:H61	1.60	0.50
47:S2:330:G:N7	72:SG:189:ARG:NH1	2.60	0.50
47:S2:483:C:H5''	65:SX:48:LYS:NZ	2.27	0.50
48:S6:31:G:H22	53:SF:134:VAL:HG13	1.77	0.50
53:SF:123:GLU:OE2	53:SF:197:GLU:HA	2.12	0.50
1:L5:182:G:N1	1:L5:255:C:O2	2.34	0.49
1:L5:376:A:H4'	6:LC:86:ARG:HD3	1.94	0.49
1:L5:385:A:C2	1:L5:387:G:H5'	2.46	0.49
1:L5:494:U:H3	1:L5:660:A:H61	1.60	0.49
1:L5:958:G:O2'	1:L5:959:G:H5'	2.12	0.49
1:L5:974:C:H2'	1:L5:975:C:C6	2.46	0.49
1:L5:1969:G:H3'	1:L5:1970:A:C8	2.47	0.49
1:L5:2744:A:H2'	1:L5:2745:A:C8	2.47	0.49
1:L5:3625:G:HO2'	1:L5:3626:G:P	2.31	0.49
1:L5:3798:U:O2'	1:L5:3800:A:N7	2.39	0.49
1:L5:4875:G:N1	1:L5:4878:C:O3'	2.45	0.49
1:L5:5050:C:H4'	5:LB:322:HIS:H	1.77	0.49
16:LN:38:ARG:HB2	16:LN:62:TYR:CE2	2.47	0.49
22:LT:116:LYS:HZ1	22:LT:125:TRP:CD1	2.30	0.49
45:Lr:64:ILE:O	45:Lr:78:VAL:HG12	2.12	0.49
46:Lz:90:LEU:HD22	46:Lz:124:LEU:HD21	1.93	0.49
47:S2:878:G:H2'	47:S2:878:G:N3	2.27	0.49
47:S2:1736:G:H2'	47:S2:1737:G:C8	2.46	0.49
49:SA:108:PHE:HB2	49:SA:136:GLU:HB3	1.94	0.49
52:SE:191:ARG:HE	52:SE:245:ARG:HD2	1.77	0.49
65:SX:60:LYS:HB3	65:SX:62:PRO:HD2	1.93	0.49
68:Sd:11:PRO:HB3	68:Sd:13:LYS:HZ3	1.76	0.49
69:Sf:123:SER:OG	69:Sf:124:ASP:N	2.45	0.49
70:Sg:23:THR:HG21	70:Sg:292:SER:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SC:271:ASP:OD1	71:SC:272:HIS:N	2.45	0.49
1:L5:128:C:O2	1:L5:140:G:N2	2.29	0.49
1:L5:1180:C:H3'	1:L5:1181:C:C5'	2.42	0.49
1:L5:1617:G:H1'	1:L5:2513:A:N6	2.26	0.49
1:L5:4101:C:H2'	1:L5:4102:C:C5	2.47	0.49
6:LC:339:THR:O	6:LC:343:GLN:HG2	2.13	0.49
11:LH:21:LYS:HB3	11:LH:24:THR:HB	1.93	0.49
12:LI:47:PRO:HB2	12:LI:48:LEU:HD12	1.92	0.49
13:LJ:112:HIS:CE1	13:LJ:126:TYR:H	2.30	0.49
14:LL:54:PRO:HB3	14:LL:97:SER:HB2	1.94	0.49
14:LL:77:SER:HB3	14:LL:80:GLU:HG2	1.94	0.49
15:LM:17:PHE:CE1	15:LM:54:CYS:HA	2.47	0.49
25:LW:101:ARG:NE	72:SG:148:SER:O	2.45	0.49
35:Lg:93:ARG:O	35:Lg:97:ILE:HG22	2.12	0.49
47:S2:363:A:N6	47:S2:400:C:O2'	2.45	0.49
47:S2:440:G:OP1	55:SI:24:LYS:NZ	2.41	0.49
47:S2:1079:C:O2'	47:S2:1182:A:N1	2.45	0.49
47:S2:1102:G:H2'	47:S2:1103:C:C6	2.47	0.49
47:S2:1170:A:H5'	47:S2:1172:U:H1'	1.93	0.49
48:S6:16:G:H1'	48:S6:20:A:H61	1.77	0.49
49:SA:39:TYR:CE2	60:SR:105:MET:HB3	2.46	0.49
49:SA:145:ILE:HG22	49:SA:159:ILE:HB	1.93	0.49
51:SD:124:ARG:O	51:SD:128:GLU:N	2.40	0.49
54:SH:53:VAL:HG11	54:SH:172:THR:HA	1.93	0.49
68:Sd:29:GLY:O	68:Sd:40:ARG:HG3	2.12	0.49
72:SG:32:MET:HA	72:SG:52:ILE:HG13	1.94	0.49
72:SG:121:ILE:O	72:SG:125:THR:OG1	2.30	0.49
1:L5:676:C:H2'	1:L5:677:G:C8	2.47	0.49
1:L5:732:A:H61	1:L5:934:C:H41	1.59	0.49
1:L5:980:U:H2'	1:L5:981:C:H6	1.77	0.49
1:L5:2068:C:OP1	34:Lf:15:LYS:HE2	2.11	0.49
1:L5:2333:G:H5''	6:LC:195:LYS:HE2	1.94	0.49
1:L5:2409:U:H5''	1:L5:2410:C:H5	1.77	0.49
1:L5:2794:C:H3'	1:L5:2795:A:H8	1.77	0.49
1:L5:3682:A:OP1	4:LA:128:ARG:N	2.45	0.49
22:LT:53:PRO:HB3	22:LT:91:VAL:HG22	1.94	0.49
26:LX:68:ARG:NH1	26:LX:70:LYS:HG2	2.27	0.49
33:Le:28:TYR:HB3	33:Le:30:LYS:HG2	1.94	0.49
47:S2:3:C:H41	73:SJ:17:ARG:HE	1.60	0.49
47:S2:561:A:O3'	73:SJ:164:PRO:HG3	2.12	0.49
47:S2:932:G:O2'	47:S2:934:G:OP2	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1553:C:H4'	47:S2:1554:C:H5	1.78	0.49
50:SB:198:GLU:O	50:SB:202:GLN:HB2	2.12	0.49
53:SF:19:LEU:O	53:SF:21:GLY:N	2.43	0.49
56:SK:4:PRO:HG2	56:SK:8:ARG:HE	1.77	0.49
61:SS:120:HIS:O	61:SS:122:GLY:N	2.45	0.49
68:Sd:22:ARG:NH2	68:Sd:36:LEU:O	2.44	0.49
76:SO:34:PHE:CD1	76:SO:98:ARG:HD3	2.47	0.49
77:SW:37:PHE:O	77:SW:40:VAL:HG22	2.11	0.49
78:SY:20:ARG:HD2	78:SY:76:TYR:CE1	2.47	0.49
1:L5:489:C:H42	1:L5:664:G:H1	1.61	0.49
1:L5:1356:U:O2'	1:L5:1505:C:O2	2.29	0.49
1:L5:1818:G:O2'	1:L5:1819:G:H5''	2.13	0.49
1:L5:2120:G:O2'	1:L5:2121:C:OP1	2.30	0.49
1:L5:3859:G:H4'	18:LP:139:TYR:CE1	2.47	0.49
1:L5:4102:C:N4	1:L5:4103:C:O2	2.46	0.49
1:L5:4326:G:O2'	7:LD:35:ARG:HD2	2.13	0.49
3:L8:60:G:C8	36:Lh:58:LEU:HD22	2.48	0.49
5:LB:360:LEU:HD12	5:LB:361:GLU:N	2.27	0.49
6:LC:150:LEU:HB3	6:LC:151:PRO:HD3	1.93	0.49
10:LG:111:LYS:HA	10:LG:114:LEU:HD12	1.93	0.49
15:LM:7:VAL:HG13	15:LM:27:ILE:HD13	1.94	0.49
17:LO:12:ARG:HA	17:LO:40:GLY:HA3	1.94	0.49
18:LP:57:CYS:HB3	18:LP:72:GLN:HB2	1.94	0.49
20:LR:110:ARG:HD3	20:LR:120:TYR:CG	2.47	0.49
29:La:75:LEU:HD13	29:La:113:GLY:HA2	1.94	0.49
32:Ld:92:ARG:HA	32:Ld:102:LEU:HD23	1.94	0.49
47:S2:311:C:H4'	47:S2:339:A:H4'	1.94	0.49
47:S2:980:A:O2'	47:S2:981:A:OP1	2.27	0.49
47:S2:1022:U:H5'	47:S2:1023:A:C8	2.48	0.49
49:SA:104:THR:HG1	49:SA:107:THR:HG1	1.60	0.49
49:SA:120:ARG:HH12	71:SC:267:GLN:HA	1.76	0.49
60:SR:32:LYS:HZ1	60:SR:47:ARG:HH21	1.60	0.49
70:Sg:194:TYR:O	70:Sg:211:GLY:HA3	2.12	0.49
70:Sg:285:GLN:HE21	70:Sg:303:THR:HG21	1.77	0.49
76:SO:74:ALA:HB1	76:SO:115:ALA:HB2	1.93	0.49
77:SW:80:ASP:OD1	77:SW:124:LYS:HG2	2.13	0.49
1:L5:980:U:H2'	1:L5:981:C:C6	2.47	0.49
1:L5:1090:G:H2'	1:L5:1091:C:O4'	2.11	0.49
1:L5:1902:G:H2'	1:L5:1903:G:H8	1.77	0.49
1:L5:1971:C:H3'	1:L5:2001:G:N2	2.27	0.49
1:L5:2583:C:OP2	35:Lg:76:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2758:G:O2'	1:L5:2764:A:N3	2.43	0.49
1:L5:2774:C:H2'	1:L5:2775:C:H6	1.78	0.49
1:L5:4061:G:C6	1:L5:4062:A:C4	3.01	0.49
1:L5:4661:G:N2	1:L5:5005:G:OP1	2.41	0.49
8:LE:261:ILE:HG23	8:LE:267:LEU:HD22	1.95	0.49
10:LG:57:TRP:O	10:LG:59:ARG:N	2.38	0.49
13:LJ:35:ARG:NE	13:LJ:122:SER:O	2.40	0.49
27:LY:128:VAL:O	27:LY:132:LYS:N	2.45	0.49
45:Lr:68:SER:OG	45:Lr:69:GLY:N	2.46	0.49
47:S2:962:A:O3'	76:SO:66:ARG:NH2	2.43	0.49
47:S2:1183:A:H2'	47:S2:1184:G:H8	1.77	0.49
62:ST:33:TRP:HH2	62:ST:102:ARG:HH11	1.60	0.49
79:SZ:93:SER:N	79:SZ:97:ILE:HG21	2.26	0.49
1:L5:21:G:H5''	38:Lj:43:ARG:HG2	1.94	0.49
1:L5:160:G:H2'	1:L5:161:G:H8	1.77	0.49
1:L5:176:G:H1'	1:L5:261:G:H22	1.78	0.49
1:L5:648:G:O2'	1:L5:649:A:OP1	2.26	0.49
1:L5:4578:G:H2'	1:L5:4579:U:C6	2.48	0.49
1:L5:5027:C:H4'	1:L5:5028:G:O5'	2.11	0.49
2:L7:63:C:H5'	2:L7:64:G:H5''	1.93	0.49
7:LD:106:ALA:HB1	7:LD:169:GLY:HA3	1.95	0.49
8:LE:89:LEU:N	8:LE:90:ALA:HA	2.28	0.49
9:LF:166:ARG:HD2	9:LF:209:TRP:CE2	2.47	0.49
9:LF:182:TYR:CE2	9:LF:203:GLU:HG2	2.47	0.49
14:LL:169:ILE:HG12	29:La:123:ILE:HD11	1.94	0.49
35:Lg:13:TYR:O	35:Lg:18:ASN:ND2	2.32	0.49
42:Ln:2:ARG:HD3	42:Ln:5:TRP:NE1	2.27	0.49
47:S2:28:U:H2'	47:S2:29:G:H8	1.78	0.49
47:S2:103:A:N6	47:S2:356:C:O4'	2.46	0.49
47:S2:595:U:O2'	47:S2:596:U:O5'	2.31	0.49
47:S2:1650:A:H3'	47:S2:1651:A:H8	1.78	0.49
48:S6:58:A:O2'	48:S6:59:A:H5''	2.12	0.49
57:SL:89:ARG:HA	57:SL:108:ASN:HA	1.95	0.49
1:L5:62:A:H5'	16:LN:174:LEU:HD22	1.94	0.49
1:L5:385:A:H4'	1:L5:386:A:OP1	2.10	0.49
1:L5:1372:A:OP1	16:LN:202:ARG:NH2	2.46	0.49
1:L5:1758:G:H2'	1:L5:1759:G:O4'	2.12	0.49
1:L5:3714:G:H8	1:L5:3714:G:OP2	1.96	0.49
1:L5:4243:C:N4	1:L5:4264:G:H2'	2.28	0.49
1:L5:4430:G:H5'	12:LI:3:ARG:HH12	1.78	0.49
11:LH:85:THR:OG1	11:LH:86:LEU:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LX:153:ILE:HG13	26:LX:155:ILE:HG12	1.94	0.49
27:LY:4:ASN:HD22	27:LY:7:VAL:HG13	1.78	0.49
33:Le:70:LEU:HB2	33:Le:71:PRO:HD2	1.94	0.49
41:Lm:80:PRO:O	41:Lm:83:ARG:HG2	2.13	0.49
44:Lp:23:ARG:HA	44:Lp:26:VAL:HG12	1.94	0.49
47:S2:170:A:H5'	72:SG:137:ARG:HG3	1.95	0.49
47:S2:371:A:OP2	55:SI:10:LYS:HB2	2.12	0.49
47:S2:1294:G:N3	69:Sf:138:ARG:HB3	2.27	0.49
47:S2:1560:U:H2'	47:S2:1561:A:C8	2.47	0.49
48:S6:29:G:H2'	48:S6:30:G:C8	2.48	0.49
54:SH:88:SER:O	54:SH:90:LYS:N	2.42	0.49
55:SI:42:ARG:HG3	55:SI:58:LEU:HB2	1.94	0.49
62:ST:23:LYS:HE3	62:ST:51:ASN:OD1	2.13	0.49
64:SV:76:ASP:OD1	64:SV:77:GLY:N	2.45	0.49
70:Sg:48:ASP:HB2	70:Sg:51:ASN:O	2.12	0.49
71:SC:106:VAL:HG22	71:SC:128:VAL:HG22	1.94	0.49
1:L5:958:G:H21	8:LE:125:LEU:HD23	1.77	0.49
1:L5:1447:C:H2'	1:L5:1448:G:C8	2.48	0.49
1:L5:2362:U:OP1	18:LP:82:ARG:NH1	2.46	0.49
1:L5:2458:C:OP1	16:LN:67:ARG:NH2	2.44	0.49
1:L5:3588:C:H2'	1:L5:3589:G:C8	2.47	0.49
1:L5:3959:U:O2'	1:L5:3961:G:N7	2.42	0.49
1:L5:4102:C:O2'	1:L5:4104:G:O6	2.26	0.49
3:L8:96:C:H5''	36:Lh:66:LYS:HD2	1.95	0.49
4:LA:97:ASN:HB3	4:LA:100:ASN:ND2	2.28	0.49
8:LE:152:ILE:HG23	8:LE:158:ARG:HA	1.94	0.49
14:LL:126:LEU:N	14:LL:138:ASP:OD2	2.41	0.49
19:LQ:124:ASP:OD1	19:LQ:125:GLN:N	2.45	0.49
21:LS:154:LEU:HB3	21:LS:157:ARG:HD3	1.95	0.49
24:LV:22:VAL:HG21	24:LV:52:LEU:HD22	1.94	0.49
26:LX:73:HIS:CD2	26:LX:115:LYS:HG2	2.48	0.49
47:S2:40:A:H61	47:S2:514:U:H3	1.61	0.49
47:S2:190:G:H22	47:S2:208:G:H3'	1.78	0.49
47:S2:1083:A:O2'	47:S2:1858:G:N2	2.44	0.49
47:S2:1325:G:H1	47:S2:1503:C:H42	1.60	0.49
47:S2:1395:C:O2	47:S2:1474:A:N6	2.45	0.49
47:S2:1580:A:H8	63:SU:56:MET:HE1	1.78	0.49
49:SA:32:PHE:CE2	49:SA:33:GLN:HG3	2.48	0.49
49:SA:104:THR:OG1	49:SA:107:THR:OG1	2.25	0.49
50:SB:27:LYS:HA	50:SB:51:ARG:HH21	1.77	0.49
53:SF:35:LEU:HD21	53:SF:146:ARG:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:105:THR:OG1	54:SH:106:ARG:N	2.46	0.49
56:SK:13:GLU:O	56:SK:17:LYS:N	2.42	0.49
56:SK:18:GLU:HG3	56:SK:20:VAL:HG22	1.94	0.49
72:SG:209:TYR:O	72:SG:214:ALA:N	2.46	0.49
75:SN:39:LYS:HA	75:SN:42:LYS:HD2	1.95	0.49
78:SY:15:ASN:HD21	78:SY:20:ARG:HH21	1.59	0.49
80:Sb:74:THR:O	80:Sb:76:GLY:N	2.46	0.49
1:L5:61:A:O2'	16:LN:172:ARG:NH2	2.43	0.49
1:L5:2557:G:H1	1:L5:2570:U:H3	1.61	0.49
1:L5:2770:C:H2'	1:L5:2771:G:H8	1.77	0.49
2:L7:23:A:HO2'	2:L7:24:C:H6	1.61	0.49
3:L8:83:C:H42	27:LY:50:ARG:HH22	1.59	0.49
4:LA:97:ASN:HB3	4:LA:100:ASN:HD22	1.78	0.49
13:LJ:54:ARG:HG3	13:LJ:55:TYR:N	2.28	0.49
16:LN:200:LEU:HD22	16:LN:204:ARG:NH1	2.28	0.49
20:LR:135:LYS:HG2	20:LR:139:MET:HE2	1.94	0.49
29:La:102:ASP:OD1	29:La:103:VAL:N	2.46	0.49
33:Le:47:ARG:HD2	33:Le:49:PHE:HE2	1.77	0.49
38:Lj:63:ARG:NH2	38:Lj:65:ARG:HE	2.11	0.49
47:S2:562:U:C5	73:SJ:172:ARG:HD3	2.48	0.49
47:S2:912:C:O2'	47:S2:913:A:OP1	2.30	0.49
47:S2:1060:A:O2'	47:S2:1062:A:N7	2.45	0.49
47:S2:1373:C:H5'	60:SR:7:LYS:HB2	1.94	0.49
47:S2:1392:U:H2'	47:S2:1393:G:H8	1.78	0.49
47:S2:1531:A:OP2	53:SF:81:ARG:NH1	2.46	0.49
47:S2:1785:C:O2'	47:S2:1786:U:O5'	2.23	0.49
49:SA:111:GLN:HG3	49:SA:112:ILE:HG13	1.94	0.49
51:SD:8:LYS:NZ	63:SU:59:LYS:HG2	2.28	0.49
56:SK:43:LEU:HG	56:SK:44:HIS:ND1	2.27	0.49
70:Sg:112:ALA:HB3	70:Sg:121:VAL:HB	1.95	0.49
70:Sg:174:VAL:O	70:Sg:188:HIS:HD2	1.95	0.49
77:SW:24:GLN:HG3	77:SW:64:ASN:HA	1.94	0.49
77:SW:65:LEU:C	77:SW:67:GLY:H	2.21	0.49
78:SY:88:LYS:HZ3	78:SY:97:TYR:HD2	1.61	0.49
78:SY:125:VAL:O	78:SY:129:LYS:HG3	2.12	0.49
1:L5:389:A:H1'	27:LY:90:ALA:O	2.13	0.49
1:L5:1977:C:H5'	1:L5:1978:C:C5	2.48	0.49
1:L5:2115:G:O2'	1:L5:2117:G:O4'	2.30	0.49
1:L5:2610:G:H1	1:L5:2729:C:H42	1.61	0.49
1:L5:4124:G:N2	10:LG:43:GLN:O	2.46	0.49
1:L5:4767:C:O3'	1:L5:4874:A:N6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:63:GLN:HG3	7:LD:74:ILE:HD12	1.95	0.49
7:LD:163:LEU:O	7:LD:167:VAL:HG23	2.13	0.49
7:LD:177:THR:OG1	7:LD:178:LYS:N	2.45	0.49
7:LD:184:ASP:HB2	7:LD:189:GLU:HB2	1.94	0.49
9:LF:241:ASN:HB3	9:LF:245:ARG:HH22	1.77	0.49
12:LI:100:ASN:C	12:LI:102:MET:H	2.20	0.49
31:Lc:19:GLN:NE2	75:SN:150:VAL:O	2.46	0.49
35:Lg:64:LEU:HG	35:Lg:67:LEU:HD12	1.94	0.49
36:Lh:25:LYS:HD2	36:Lh:54:ILE:HD11	1.95	0.49
38:Lj:52:LYS:O	38:Lj:56:ARG:HG3	2.13	0.49
38:Lj:63:ARG:NH2	38:Lj:65:ARG:HH21	2.11	0.49
47:S2:52:G:N2	47:S2:507:G:O6	2.46	0.49
47:S2:377:G:H5'	55:SI:98:LYS:HE2	1.95	0.49
47:S2:388:U:C4	47:S2:389:A:N7	2.81	0.49
47:S2:1139:C:H5	47:S2:1149:A:H62	1.61	0.49
47:S2:1232:U:H2'	47:S2:1233:G:H8	1.78	0.49
47:S2:1284:A:H61	74:SM:33:ARG:HE	1.61	0.49
47:S2:1288:U:O2'	47:S2:1312:G:N2	2.46	0.49
59:SQ:54:PRO:HG2	59:SQ:88:ILE:HD11	1.94	0.49
63:SU:44:LYS:HA	63:SU:47:ASN:HB3	1.94	0.49
70:Sg:64:HIS:CE1	70:Sg:84:ASP:HB3	2.48	0.49
71:SC:244:ILE:HA	71:SC:247:THR:HG23	1.95	0.49
78:SY:88:LYS:HD2	78:SY:91:LEU:HB2	1.94	0.49
1:L5:277:G:O2'	1:L5:278:G:OP2	2.26	0.48
1:L5:336:A:H5''	1:L5:337:U:OP2	2.12	0.48
1:L5:1925:G:N3	21:LS:115:ALA:HB1	2.28	0.48
1:L5:2361:G:H5'	18:LP:65:GLY:H	1.78	0.48
1:L5:2457:G:H21	1:L5:3672:G:N2	2.11	0.48
1:L5:2555:G:N2	1:L5:2572:C:H42	2.11	0.48
1:L5:2695:A:H4'	1:L5:2696:A:O5'	2.13	0.48
1:L5:3961:G:H1'	1:L5:4048:A:N6	2.28	0.48
1:L5:4039:G:H2'	1:L5:4040:C:C6	2.48	0.48
3:L8:29:G:H2'	3:L8:30:U:C6	2.48	0.48
5:LB:371:THR:O	5:LB:373:LYS:NZ	2.40	0.48
7:LD:220:LYS:O	7:LD:224:SER:OG	2.29	0.48
11:LH:188:GLN:O	11:LH:190:ALA:N	2.46	0.48
26:LX:105:ASN:HB3	26:LX:108:GLN:HG2	1.94	0.48
33:Le:35:TRP:CZ2	33:Le:55:MET:HG3	2.48	0.48
33:Le:77:PHE:HA	45:Lr:21:ASN:HD21	1.77	0.48
38:Lj:19:CYS:HB2	38:Lj:27:TYR:HB2	1.94	0.48
48:S6:38:A:N7	53:SF:132:GLY:HA3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:SA:27:GLY:HA3	49:SA:150:THR:HG1	1.78	0.48
49:SA:91:ALA:HB3	49:SA:98:PRO:HB3	1.95	0.48
54:SH:156:VAL:HB	54:SH:187:PHE:CD1	2.47	0.48
65:SX:81:ILE:HG21	65:SX:120:PHE:CD2	2.47	0.48
65:SX:125:VAL:HG22	65:SX:126:ALA:H	1.78	0.48
70:Sg:68:ASP:OD1	70:Sg:69:VAL:N	2.44	0.48
72:SG:139:SER:HA	72:SG:142:ARG:HD3	1.95	0.48
1:L5:1972:G:N3	1:L5:1972:G:H2'	2.29	0.48
1:L5:2363:A:H2'	1:L5:2364:G:O4'	2.13	0.48
1:L5:2389:A:O2'	1:L5:2390:G:OP1	2.29	0.48
1:L5:2862:G:N3	1:L5:3624:A:H2'	2.27	0.48
1:L5:4232:U:H3	43:Lo:8:ARG:HH12	1.59	0.48
4:LA:118:GLU:HG3	4:LA:119:LYS:N	2.28	0.48
8:LE:152:ILE:HD11	8:LE:189:THR:HG21	1.95	0.48
9:LF:237:GLU:OE1	21:LS:41:LYS:NZ	2.33	0.48
12:LI:56:GLU:OE1	12:LI:161:GLY:HA3	2.12	0.48
15:LM:70:GLN:HA	15:LM:73:VAL:HG12	1.96	0.48
36:Lh:14:LYS:HE3	36:Lh:61:ILE:HG23	1.95	0.48
38:Lj:63:ARG:HH21	38:Lj:65:ARG:HE	1.59	0.48
39:Lk:20:ALA:HB1	39:Lk:64:LEU:HD11	1.95	0.48
46:Lz:37:SER:HB3	46:Lz:203:ALA:HB3	1.95	0.48
47:S2:1392:U:H2'	47:S2:1393:G:C8	2.48	0.48
47:S2:1673:U:H5''	59:SQ:78:VAL:HB	1.95	0.48
52:SE:195:ILE:O	52:SE:197:ASN:N	2.45	0.48
53:SF:115:ALA:O	53:SF:119:SER:OG	2.19	0.48
58:SP:64:LYS:HB2	58:SP:74:GLU:OE1	2.14	0.48
70:Sg:206:LEU:HD22	70:Sg:221:LEU:H	1.79	0.48
1:L5:714:G:H5''	6:LC:316:LYS:HG2	1.94	0.48
1:L5:1332:C:H2'	1:L5:1333:A:C8	2.48	0.48
1:L5:3896:C:O2'	1:L5:3897:G:O5'	2.24	0.48
1:L5:4508:C:N3	1:L5:4512:U:H5	2.11	0.48
6:LC:219:LYS:HE3	6:LC:222:ARG:NH2	2.28	0.48
10:LG:86:ALA:HB1	10:LG:185:LYS:HB2	1.94	0.48
14:LL:166:ALA:HB1	29:La:97:ALA:O	2.12	0.48
15:LM:47:ARG:HD2	15:LM:70:GLN:HE21	1.77	0.48
16:LN:56:LYS:HB2	16:LN:59:TYR:CE2	2.48	0.48
25:LW:82:ILE:CG2	72:SG:130:PRO:HG2	2.42	0.48
37:Li:26:HIS:O	37:Li:29:ARG:HG2	2.13	0.48
38:Lj:27:TYR:HA	38:Lj:34:CYS:HA	1.95	0.48
46:Lz:147:LYS:HG3	46:Lz:151:VAL:HG23	1.94	0.48
47:S2:305:U:O2'	47:S2:309:G:OP2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:388:U:N3	47:S2:389:A:N7	2.61	0.48
47:S2:1219:C:O2'	67:Sc:26:GLN:OE1	2.23	0.48
47:S2:1244:U:H2'	47:S2:1245:G:H8	1.77	0.48
47:S2:1627:C:H5'	62:ST:41:LYS:HD2	1.96	0.48
53:SF:120:GLY:O	53:SF:146:ARG:NH2	2.46	0.48
58:SP:101:THR:HB	58:SP:102:PHE:HB3	1.94	0.48
69:Sf:141:CYS:N	69:Sf:151:ASN:HD22	2.11	0.48
76:SO:130:GLU:HG2	76:SO:131:ASP:N	2.28	0.48
80:Sb:36:LYS:HB2	80:Sb:78:SER:OG	2.13	0.48
1:L5:975:C:N3	1:L5:976:G:C4	2.82	0.48
1:L5:1420:A:H2'	1:L5:1501:C:OP2	2.14	0.48
1:L5:1477:C:H2'	1:L5:1478:C:O4'	2.14	0.48
1:L5:1905:U:P	34:Lf:76:ARG:HH12	2.37	0.48
1:L5:3713:U:H4'	1:L5:3714:G:OP2	2.11	0.48
1:L5:4251:A:C2	13:LJ:127:GLY:HA3	2.49	0.48
1:L5:5011:A:H61	1:L5:5037:U:H3	1.61	0.48
4:LA:5:ILE:HD12	4:LA:6:ARG:O	2.14	0.48
4:LA:35:ALA:O	4:LA:39:GLY:N	2.38	0.48
5:LB:56:ILE:HD11	5:LB:365:LEU:HB3	1.95	0.48
7:LD:25:GLU:HG3	7:LD:27:LYS:HG3	1.94	0.48
8:LE:91:THR:HG22	8:LE:92:VAL:HG22	1.95	0.48
18:LP:19:GLY:HA3	18:LP:94:MET:HE1	1.94	0.48
47:S2:115:U:O2'	47:S2:381:C:O2	2.28	0.48
47:S2:563:G:HO2'	73:SJ:131:ARG:NH1	2.10	0.48
47:S2:847:A:C6	47:S2:848:U:H1'	2.48	0.48
48:S6:41:C:H2'	48:S6:42:A:C8	2.48	0.48
50:SB:97:LEU:HD22	50:SB:232:HIS:CD2	2.49	0.48
52:SE:68:ARG:HG3	52:SE:76:VAL:HG21	1.96	0.48
54:SH:39:GLN:HB3	54:SH:75:ILE:HD11	1.94	0.48
56:SK:45:VAL:HA	56:SK:48:ALA:HB3	1.96	0.48
67:Sc:16:LYS:HE3	67:Sc:31:ARG:HH21	1.78	0.48
73:SJ:181:GLY:O	73:SJ:185:ALA:N	2.46	0.48
77:SW:72:CYS:HA	77:SW:129:PHE:HA	1.96	0.48
1:L5:1244:G:H1'	1:L5:1245:C:C2	2.48	0.48
1:L5:1455:G:O2'	1:L5:1456:C:OP1	2.30	0.48
1:L5:2399:G:N3	35:Lg:4:ARG:NH2	2.48	0.48
1:L5:2496:G:H3'	1:L5:2497:C:C6	2.49	0.48
1:L5:2724:G:O2'	1:L5:2726:G:OP2	2.32	0.48
1:L5:4414:A:O2'	1:L5:4427:G:N2	2.46	0.48
1:L5:4616:A:H4'	5:LB:65:SER:HB3	1.96	0.48
5:LB:140:GLU:O	5:LB:144:LYS:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:152:LEU:HD11	6:LC:251:ILE:HG13	1.95	0.48
7:LD:50:ARG:HA	7:LD:145:TYR:H	1.79	0.48
36:Lh:71:LYS:HA	36:Lh:74:LYS:HG2	1.96	0.48
46:Lz:54:ARG:HD3	46:Lz:149:ASP:HA	1.96	0.48
46:Lz:86:ASP:HB3	46:Lz:88:GLU:OE1	2.13	0.48
47:S2:77:A:O3'	72:SG:159:ARG:NH2	2.46	0.48
47:S2:194:C:N3	47:S2:205:G:N2	2.50	0.48
47:S2:526:A:OP1	81:Se:35:ARG:NH1	2.45	0.48
47:S2:1347:U:H2'	47:S2:1348:G:C8	2.48	0.48
53:SF:158:ALA:HB2	53:SF:173:LEU:HB3	1.95	0.48
55:SI:130:THR:HB	55:SI:131:PRO:HD3	1.96	0.48
57:SL:35:ARG:NE	57:SL:50:ALA:O	2.45	0.48
70:Sg:40:ILE:HD12	70:Sg:90:TRP:HE1	1.78	0.48
74:SM:52:GLN:H	74:SM:77:ILE:H	1.60	0.48
1:L5:246:G:H2'	1:L5:247:G:H8	1.78	0.48
1:L5:346:G:O2'	1:L5:1367:C:N4	2.34	0.48
1:L5:456:C:H2'	1:L5:457:G:C8	2.49	0.48
1:L5:718:C:H2'	1:L5:719:C:O4'	2.13	0.48
1:L5:746:A:N6	1:L5:916:C:OP2	2.47	0.48
1:L5:982:U:O4	8:LE:71:ARG:NH1	2.46	0.48
1:L5:2307:A:C8	1:L5:2332:A:C6	3.01	0.48
1:L5:3956:G:HO2'	1:L5:3957:U:P	2.33	0.48
5:LB:393:LYS:HA	5:LB:396:ARG:HH11	1.79	0.48
6:LC:142:HIS:CE1	6:LC:249:PHE:H	2.30	0.48
6:LC:336:ARG:O	6:LC:340:ILE:HG12	2.14	0.48
17:LO:81:TRP:HA	17:LO:84:VAL:HG12	1.96	0.48
24:LV:92:ASP:OD1	24:LV:94:VAL:HG22	2.13	0.48
47:S2:500:A:H3'	47:S2:501:C:C6	2.47	0.48
47:S2:983:A:C2	76:SO:139:SER:HB3	2.49	0.48
47:S2:1280:G:H1'	47:S2:1318:G:H22	1.77	0.48
47:S2:1383:A:H2'	47:S2:1384:C:C6	2.48	0.48
48:S6:9:U:HO2'	48:S6:46:G:N2	2.12	0.48
53:SF:76:MET:HB2	53:SF:89:THR:HB	1.95	0.48
53:SF:91:ARG:HD2	79:SZ:103:HIS:HE2	1.79	0.48
54:SH:18:GLU:HG2	54:SH:19:PHE:H	1.78	0.48
55:SI:8:TRP:HZ3	55:SI:20:PRO:HB3	1.78	0.48
60:SR:41:ILE:HD13	60:SR:47:ARG:HB2	1.96	0.48
64:SV:56:CYS:HB3	64:SV:59:ILE:HG12	1.96	0.48
74:SM:85:LEU:HD21	74:SM:108:CYS:N	2.29	0.48
76:SO:54:CYS:SG	76:SO:84:ARG:HB3	2.53	0.48
1:L5:36:U:N3	1:L5:46:U:O2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:135:G:N1	36:Lh:97:LYS:HA	2.29	0.48
1:L5:1661:C:N4	29:La:9:ARG:O	2.36	0.48
1:L5:4054:C:C2	46:Lz:207:LYS:HD3	2.49	0.48
1:L5:4906:C:H42	1:L5:4915:G:H1	1.62	0.48
1:L5:5029:C:H2'	1:L5:5030:U:O4'	2.14	0.48
14:LL:150:LEU:O	14:LL:151:THR:OG1	2.30	0.48
15:LM:99:GLU:O	15:LM:103:LYS:HG2	2.14	0.48
16:LN:20:ARG:HH22	37:Li:52:PRO:HG3	1.79	0.48
18:LP:22:LEU:HD12	18:LP:146:ILE:HD13	1.96	0.48
43:Lo:66:ILE:HG23	43:Lo:85:ILE:HB	1.95	0.48
46:Lz:30:GLU:O	46:Lz:171:HIS:ND1	2.47	0.48
47:S2:958:G:N2	76:SO:68:GLU:OE2	2.47	0.48
47:S2:1419:C:N3	47:S2:1428:G:N2	2.55	0.48
59:SQ:39:LEU:HD23	59:SQ:52:LEU:HA	1.95	0.48
67:Sc:14:VAL:HG23	67:Sc:53:GLY:H	1.79	0.48
71:SC:125:LYS:HA	71:SC:143:CYS:HA	1.95	0.48
74:SM:26:LEU:HD12	74:SM:27:ILE:N	2.28	0.48
75:SN:4:MET:HE2	75:SN:5:HIS:NE2	2.29	0.48
76:SO:72:TYR:HA	76:SO:75:MET:SD	2.53	0.48
76:SO:103:ASN:CG	76:SO:142:ARG:HB2	2.39	0.48
1:L5:79:C:OP2	16:LN:194:ARG:NH2	2.47	0.48
1:L5:988:C:H3'	1:L5:989:U:H5''	1.95	0.48
1:L5:1279:A:H3'	1:L5:1280:C:C6	2.49	0.48
1:L5:1956:A:C5	1:L5:1957:U:H1'	2.49	0.48
1:L5:2843:U:H2'	1:L5:2844:A:H8	1.76	0.48
4:LA:196:TRP:O	4:LA:198:ARG:N	2.46	0.48
5:LB:95:THR:HG23	5:LB:98:GLY:N	2.28	0.48
9:LF:150:VAL:O	9:LF:154:ILE:HG12	2.14	0.48
10:LG:246:SER:HA	10:LG:249:ARG:HH12	1.78	0.48
14:LL:92:ARG:NH2	14:LL:98:VAL:HB	2.29	0.48
35:Lg:20:THR:HG21	35:Lg:34:TYR:CD1	2.48	0.48
50:SB:63:LYS:HG3	50:SB:89:GLU:O	2.13	0.48
67:Sc:44:ARG:HA	67:Sc:64:GLU:O	2.13	0.48
72:SG:194:LEU:HA	72:SG:197:GLN:HB3	1.96	0.48
76:SO:46:ASP:OD1	76:SO:53:ILE:HD11	2.14	0.48
79:SZ:88:LEU:HB3	79:SZ:109:TYR:CE2	2.47	0.48
1:L5:977:C:N3	1:L5:1277:G:N1	2.48	0.48
1:L5:2045:G:O2'	1:L5:2046:G:H5''	2.14	0.48
1:L5:2118:G:H2'	1:L5:2118:G:N3	2.29	0.48
1:L5:5004:C:H2'	1:L5:5005:G:O4'	2.13	0.48
10:LG:57:TRP:CE3	10:LG:61:ILE:HD11	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LX:94:ASN:OD1	26:LX:146:ALA:N	2.46	0.48
35:Lg:20:THR:HG21	35:Lg:34:TYR:HD1	1.79	0.48
47:S2:93:U:O2'	52:SE:8:HIS:ND1	2.42	0.48
47:S2:483:C:H5'	65:SX:48:LYS:H	1.78	0.48
47:S2:496:C:H2'	47:S2:497:C:C6	2.48	0.48
47:S2:1133:A:H4'	66:Sa:13:LYS:HD2	1.95	0.48
51:SD:226:GLN:HE21	70:Sg:185:LYS:HG2	1.77	0.48
54:SH:185:VAL:HB	54:SH:187:PHE:CE1	2.49	0.48
56:SK:65:ARG:HE	68:Sd:22:ARG:HA	1.79	0.48
57:SL:73:LEU:HD22	57:SL:90:ARG:HH21	1.78	0.48
61:SS:48:ALA:HB3	61:SS:50:ILE:HG12	1.96	0.48
70:Sg:107:ASP:HB3	70:Sg:125:ARG:HG2	1.96	0.48
70:Sg:121:VAL:HG23	70:Sg:156:PHE:CZ	2.48	0.48
78:SY:15:ASN:HD21	78:SY:20:ARG:NH2	2.12	0.48
78:SY:58:PHE:O	78:SY:72:PHE:N	2.32	0.48
1:L5:112:C:H2'	1:L5:113:A:H8	1.79	0.48
1:L5:509:A:C8	29:La:82:VAL:HG13	2.49	0.48
1:L5:1870:C:H2'	1:L5:1871:A:H8	1.78	0.48
1:L5:2028:C:H2'	1:L5:2029:A:C8	2.48	0.48
1:L5:2442:G:N2	1:L5:2780:C:O2	2.34	0.48
1:L5:2858:A:O2'	1:L5:2859:G:O5'	2.32	0.48
1:L5:3667:C:H4'	4:LA:7:GLY:O	2.14	0.48
5:LB:28:LYS:NZ	5:LB:30:LYS:HD2	2.28	0.48
14:LL:140:SER:HA	14:LL:143:GLU:HB3	1.96	0.48
16:LN:120:TRP:HE1	16:LN:123:GLU:CG	2.27	0.48
21:LS:14:GLY:HA2	21:LS:62:VAL:HG23	1.96	0.48
34:Lf:9:ALA:O	34:Lf:100:ARG:HG3	2.14	0.48
43:Lo:9:ARG:HA	43:Lo:20:PRO:HA	1.94	0.48
47:S2:1703:C:H2'	47:S2:1704:C:O4'	2.14	0.48
50:SB:36:PRO:HD3	50:SB:98:THR:HG23	1.95	0.48
52:SE:42:LEU:HG	52:SE:46:ILE:HD11	1.96	0.48
54:SH:73:GLN:HB3	54:SH:135:PHE:CZ	2.48	0.48
72:SG:37:ALA:HA	72:SG:49:VAL:HA	1.95	0.48
1:L5:156:G:OP1	36:Lh:109:ARG:NH1	2.47	0.47
1:L5:1380:G:O2'	1:L5:1382:G:O6	2.30	0.47
1:L5:1930:U:H5'	17:LO:49:ARG:HG2	1.94	0.47
1:L5:1975:G:O4'	1:L5:1984:A:O2'	2.28	0.47
1:L5:2252:G:O2'	1:L5:2254:G:OP2	2.32	0.47
1:L5:3682:A:H5'	4:LA:129:ALA:HB2	1.95	0.47
1:L5:4499:G:H1'	1:L5:4528:G:H21	1.79	0.47
8:LE:179:LEU:HA	8:LE:183:ARG:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:110:ARG:HG3	12:LI:111:LEU:HD13	1.95	0.47
13:LJ:144:LYS:HE2	13:LJ:146:ARG:O	2.14	0.47
17:LO:3:GLU:HB3	17:LO:5:GLN:OE1	2.13	0.47
19:LQ:91:ARG:HG3	29:La:76:ASP:OD1	2.14	0.47
25:LW:64:SER:OG	25:LW:65:GLU:N	2.47	0.47
33:Le:26:ASP:OD1	33:Le:27:ARG:N	2.47	0.47
35:Lg:57:ARG:HH12	35:Lg:71:LYS:HD2	1.78	0.47
46:Lz:186:ALA:O	46:Lz:190:LEU:HG	2.14	0.47
47:S2:649:U:H2'	47:S2:650:A:O4'	2.14	0.47
47:S2:1406:G:H22	47:S2:1441:U:H3	1.62	0.47
47:S2:1410:C:H42	47:S2:1435:C:H42	1.61	0.47
47:S2:1473:G:N2	47:S2:1475:G:O5'	2.46	0.47
48:S6:31:G:H22	53:SF:135:ARG:H	1.60	0.47
55:SI:142:SER:O	55:SI:144:LYS:N	2.47	0.47
56:SK:27:VAL:HG13	56:SK:43:LEU:HD13	1.95	0.47
58:SP:81:ARG:HD3	58:SP:82:ASP:N	2.23	0.47
58:SP:92:SER:HB3	58:SP:94:VAL:HG13	1.94	0.47
72:SG:210:ALA:O	72:SG:215:LYS:HB2	2.14	0.47
1:L5:76:A:H5'	14:LL:101:ARG:HH22	1.79	0.47
1:L5:511:C:H42	1:L5:648:G:H1	1.61	0.47
1:L5:1064:G:C2	1:L5:1065:G:H1'	2.50	0.47
1:L5:1271:G:N2	1:L5:2122:G:H5''	2.27	0.47
1:L5:4885:U:H2'	1:L5:4886:C:O4'	2.14	0.47
2:L7:97:G:H4'	9:LF:134:ARG:NE	2.29	0.47
16:LN:27:CYS:O	16:LN:31:ARG:HG3	2.14	0.47
19:LQ:15:ARG:NH2	19:LQ:19:LYS:HG2	2.29	0.47
21:LS:81:TRP:CE3	21:LS:128:LYS:HG3	2.49	0.47
43:Lo:45:GLN:HE22	43:Lo:51:GLN:HA	1.79	0.47
46:Lz:177:ASP:O	46:Lz:180:VAL:HG12	2.13	0.47
47:S2:890:U:O4	47:S2:896:U:O2'	2.29	0.47
47:S2:1313:A:H5''	47:S2:1314:U:H5	1.79	0.47
47:S2:1670:C:H2'	47:S2:1671:G:C8	2.50	0.47
48:S6:13:G:C2	48:S6:14:C:H1'	2.49	0.47
49:SA:6:ASP:O	49:SA:9:GLN:NE2	2.34	0.47
49:SA:15:VAL:HG23	49:SA:16:LEU:HD12	1.96	0.47
53:SF:171:GLU:HA	53:SF:174:ALA:HB3	1.95	0.47
55:SI:79:ILE:HG21	55:SI:170:LYS:HD3	1.97	0.47
56:SK:10:ALA:O	56:SK:14:LEU:N	2.37	0.47
74:SM:46:GLN:HG3	74:SM:112:LYS:HG3	1.96	0.47
1:L5:1180:C:H3'	1:L5:1181:C:H5''	1.95	0.47
1:L5:1801:A:H2'	1:L5:1802:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2577:C:H41	28:LZ:17:ARG:HH21	1.62	0.47
1:L5:4768:G:P	1:L5:4874:A:H61	2.37	0.47
5:LB:394:LYS:O	5:LB:398:ALA:N	2.47	0.47
12:LI:57:TYR:HD1	12:LI:130:HIS:HA	1.80	0.47
13:LJ:16:ARG:HE	13:LJ:137:PRO:HG3	1.79	0.47
13:LJ:31:ASP:HB3	13:LJ:35:ARG:HH22	1.79	0.47
17:LO:54:TYR:CD2	17:LO:145:VAL:HG21	2.48	0.47
19:LQ:175:GLU:HG3	29:La:50:PRO:O	2.14	0.47
45:Lr:47:LYS:HG3	45:Lr:102:TYR:CE1	2.49	0.47
47:S2:75:G:H21	72:SG:159:ARG:HH11	1.60	0.47
47:S2:217:A:H2'	47:S2:218:U:H5'	1.95	0.47
47:S2:823:U:H5	73:SJ:143:ASN:HB3	1.79	0.47
47:S2:1113:A:H2'	47:S2:1113:A:N3	2.29	0.47
47:S2:1472:C:H4'	70:Sg:15:ASN:HD21	1.79	0.47
49:SA:206:ASP:HA	49:SA:207:PRO:HD3	1.74	0.47
50:SB:173:THR:HG23	50:SB:177:GLN:OE1	2.14	0.47
53:SF:91:ARG:HH12	79:SZ:104:ARG:HH21	1.63	0.47
54:SH:145:ARG:NH1	54:SH:153:LEU:HD12	2.28	0.47
70:Sg:135:LEU:HD12	70:Sg:137:VAL:H	1.79	0.47
71:SC:196:ILE:HG23	71:SC:223:TYR:HB2	1.95	0.47
1:L5:1088:C:H2'	1:L5:1089:G:C8	2.50	0.47
1:L5:1326:A:H2'	1:L5:1327:C:C6	2.49	0.47
1:L5:1609:U:H2'	1:L5:1610:C:O4'	2.14	0.47
1:L5:1969:G:N2	1:L5:2019:C:N3	2.59	0.47
1:L5:2635:U:H2'	1:L5:2636:U:C6	2.50	0.47
1:L5:3877:A:N3	1:L5:4401:G:O2'	2.32	0.47
1:L5:3880:G:HO2'	1:L5:3881:G:H8	1.59	0.47
1:L5:4080:C:H2'	1:L5:4081:G:C8	2.49	0.47
1:L5:4314:C:O2'	30:Lb:36:ASP:OD1	2.19	0.47
1:L5:4901:G:N1	1:L5:4921:C:O2	2.48	0.47
4:LA:20:VAL:HA	4:LA:23:ARG:HD3	1.96	0.47
5:LB:371:THR:OG1	5:LB:377:GLY:O	2.29	0.47
16:LN:184:ILE:HG23	16:LN:194:ARG:HH12	1.78	0.47
25:LW:97:LYS:H	72:SG:146:ASN:CG	2.22	0.47
47:S2:1342:U:N3	47:S2:1483:A:N1	2.61	0.47
52:SE:176:ASP:OD1	52:SE:177:THR:N	2.41	0.47
53:SF:190:ILE:O	53:SF:194:ASP:N	2.48	0.47
57:SL:16:ILE:HG23	57:SL:36:TYR:HB2	1.97	0.47
59:SQ:8:GLN:HA	59:SQ:99:TYR:CZ	2.49	0.47
59:SQ:97:GLN:NE2	70:Sg:60:ARG:H	2.11	0.47
63:SU:50:VAL:HG23	63:SU:91:LEU:HD21	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:86:VAL:HG21	73:SJ:105:PHE:CE1	2.49	0.47
1:L5:722:G:N2	1:L5:946:C:O2	2.34	0.47
1:L5:960:A:H5''	8:LE:125:LEU:HD13	1.94	0.47
1:L5:1553:A:OP2	1:L5:1574:G:N2	2.45	0.47
1:L5:1667:G:N1	1:L5:2281:U:OP2	2.35	0.47
1:L5:1868:A:H61	12:LI:115:MET:HE3	1.79	0.47
1:L5:2389:A:H2'	1:L5:2390:G:C8	2.49	0.47
1:L5:3867:A:H2'	1:L5:3868:G:O4'	2.15	0.47
1:L5:5027:C:H1'	1:L5:5028:G:OP2	2.15	0.47
4:LA:238:ILE:O	4:LA:240:ALA:N	2.48	0.47
6:LC:71:ARG:O	6:LC:73:VAL:N	2.41	0.47
7:LD:184:ASP:HB3	7:LD:189:GLU:H	1.79	0.47
8:LE:153:LEU:HD13	34:Lf:106:TYR:HA	1.96	0.47
10:LG:77:PRO:HA	10:LG:237:TRP:CZ3	2.49	0.47
10:LG:103:ARG:HD2	10:LG:193:LEU:O	2.15	0.47
11:LH:76:HIS:HA	11:LH:79:ASN:HD22	1.79	0.47
11:LH:81:ILE:HA	11:LH:84:VAL:HG12	1.96	0.47
13:LJ:57:VAL:C	13:LJ:59:SER:H	2.22	0.47
19:LQ:167:VAL:HG12	19:LQ:169:SER:H	1.79	0.47
20:LR:41:ILE:HD12	20:LR:44:LEU:HD11	1.96	0.47
21:LS:16:CYS:HB3	21:LS:25:PRO:HG3	1.95	0.47
28:LZ:57:MET:HG2	28:LZ:61:LYS:HB2	1.96	0.47
28:LZ:59:LYS:O	28:LZ:62:ILE:HG22	2.15	0.47
34:Lf:33:VAL:HG23	34:Lf:38:GLU:HG2	1.97	0.47
46:Lz:116:LEU:HG	46:Lz:119:GLN:HE21	1.79	0.47
47:S2:800:U:H3	47:S2:865:A:H2	1.62	0.47
47:S2:963:A:OP2	76:SO:66:ARG:HB3	2.14	0.47
47:S2:1199:A:H2'	47:S2:1200:A:O4'	2.15	0.47
54:SH:72:PHE:HB3	54:SH:76:GLN:HG2	1.97	0.47
57:SL:69:ARG:HH22	57:SL:132:ARG:HA	1.78	0.47
64:SV:16:LYS:HA	64:SV:23:ILE:HA	1.96	0.47
70:Sg:171:ASP:O	70:Sg:173:LEU:HG	2.15	0.47
72:SG:144:LEU:HB2	72:SG:147:LEU:H	1.80	0.47
73:SJ:60:LEU:HD11	73:SJ:70:ARG:HA	1.97	0.47
74:SM:93:LYS:HD3	74:SM:101:ARG:HH11	1.79	0.47
1:L5:280:G:N2	1:L5:306:A:OP2	2.28	0.47
1:L5:475:G:H2'	1:L5:476:G:C8	2.49	0.47
1:L5:1195:G:H2'	1:L5:1196:G:C8	2.49	0.47
1:L5:1404:G:N1	1:L5:1414:C:O2	2.48	0.47
1:L5:2003:G:H1'	1:L5:2004:U:C5	2.49	0.47
1:L5:2257:C:OP2	9:LF:32:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2540:C:H2'	1:L5:2541:G:C8	2.49	0.47
1:L5:2739:C:O2'	4:LA:188:LYS:HD3	2.15	0.47
1:L5:3901:A:H5'	1:L5:3902:A:H5''	1.97	0.47
1:L5:4231:C:H5'	1:L5:4234:A:N6	2.30	0.47
1:L5:4871:C:C4	21:LS:176:PHE:HE1	2.32	0.47
5:LB:289:GLN:HA	5:LB:329:ASP:OD1	2.15	0.47
5:LB:321:VAL:HG12	5:LB:322:HIS:ND1	2.29	0.47
14:LL:132:SER:OG	14:LL:133:ALA:N	2.43	0.47
15:LM:52:PHE:HA	15:LM:55:MET:HG2	1.96	0.47
17:LO:162:GLU:O	17:LO:166:ILE:HG13	2.14	0.47
25:LW:56:ARG:HH11	25:LW:61:LYS:HB3	1.79	0.47
25:LW:106:GLU:HA	25:LW:109:ILE:HD12	1.97	0.47
41:Lm:93:LYS:HE3	41:Lm:102:ARG:HB3	1.97	0.47
47:S2:38:A:H5''	73:SJ:5:ARG:HD2	1.97	0.47
47:S2:1852:C:H2'	47:S2:1853:C:C6	2.50	0.47
56:SK:15:LEU:HD21	56:SK:71:LEU:HD11	1.95	0.47
58:SP:74:GLU:O	58:SP:93:MET:HB3	2.15	0.47
62:ST:40:ALA:H	62:ST:96:SER:HB2	1.79	0.47
66:Sa:44:ILE:HD11	76:SO:97:LEU:HD23	1.97	0.47
70:Sg:272:GLN:HB2	70:Sg:308:ARG:NH1	2.30	0.47
1:L5:23:C:H4'	38:Lj:59:THR:HG22	1.96	0.47
1:L5:46:U:H5''	1:L5:47:A:H2'	1.96	0.47
1:L5:376:A:O2'	6:LC:85:HIS:O	2.32	0.47
1:L5:382:G:N1	1:L5:385:A:OP2	2.47	0.47
1:L5:712:C:H5'	1:L5:713:C:OP2	2.15	0.47
1:L5:715:G:OP1	6:LC:317:ASN:ND2	2.48	0.47
1:L5:954:C:H2'	1:L5:955:G:C8	2.50	0.47
1:L5:1086:C:H2'	1:L5:1087:A:H8	1.80	0.47
1:L5:1958:A:H2'	1:L5:1958:A:N3	2.30	0.47
1:L5:2000:G:C8	1:L5:2018:C:H1'	2.50	0.47
1:L5:2863:G:O4'	1:L5:3619:G:N2	2.48	0.47
1:L5:3614:G:H2'	1:L5:3617:G:N2	2.30	0.47
1:L5:3796:U:HO2'	47:S2:1720:U:HO2'	1.60	0.47
1:L5:4595:G:N2	24:LV:10:SER:O	2.40	0.47
1:L5:4731:G:C8	1:L5:4733:C:H3'	2.50	0.47
2:L7:38:U:H2'	2:L7:40:U:OP2	2.14	0.47
4:LA:117:GLU:HA	4:LA:125:LYS:HB2	1.96	0.47
4:LA:189:TYR:HA	4:LA:192:LYS:HB2	1.97	0.47
5:LB:113:GLU:HG2	5:LB:178:ALA:HB2	1.97	0.47
5:LB:308:ASP:OD2	5:LB:312:LYS:NZ	2.33	0.47
6:LC:79:VAL:HG13	6:LC:87:SER:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:284:MET:O	19:LQ:24:TYR:OH	2.31	0.47
6:LC:349:LEU:O	6:LC:353:LYS:HG2	2.14	0.47
7:LD:22:ARG:HE	7:LD:27:LYS:HB2	1.78	0.47
10:LG:250:ILE:O	10:LG:254:GLU:N	2.48	0.47
10:LG:257:LYS:O	10:LG:261:LEU:N	2.43	0.47
11:LH:150:ASP:HB3	11:LH:153:LEU:H	1.80	0.47
13:LJ:48:PRO:HA	13:LJ:72:CYS:HB2	1.96	0.47
15:LM:82:ILE:O	15:LM:86:TRP:HB3	2.15	0.47
19:LQ:89:ASP:OD2	19:LQ:91:ARG:HB3	2.15	0.47
21:LS:48:VAL:CG1	21:LS:54:MET:HB2	2.45	0.47
21:LS:97:TYR:HE2	21:LS:109:CYS:HB2	1.80	0.47
27:LY:24:HIS:CE1	27:LY:25:ILE:HG13	2.49	0.47
27:LY:31:SER:HA	27:LY:48:PRO:HA	1.96	0.47
32:Ld:70:LYS:O	32:Ld:74:ALA:N	2.47	0.47
47:S2:77:A:H2'	47:S2:78:C:O4'	2.14	0.47
47:S2:98:C:H42	47:S2:432:G:H1	1.63	0.47
47:S2:122:G:H1	47:S2:342:C:H42	1.63	0.47
47:S2:587:A:H1'	47:S2:589:G:N2	2.30	0.47
47:S2:957:A:H1'	47:S2:958:G:H5'	1.96	0.47
47:S2:1137:U:O2'	47:S2:1138:C:OP1	2.29	0.47
47:S2:1298:G:H4'	58:SP:78:THR:H	1.79	0.47
47:S2:1490:G:H2'	47:S2:1491:G:C8	2.50	0.47
50:SB:228:LEU:HG	50:SB:232:HIS:HB2	1.96	0.47
51:SD:106:ARG:O	51:SD:110:LEU:N	2.39	0.47
56:SK:31:LYS:HA	56:SK:41:PRO:HA	1.96	0.47
59:SQ:96:TYR:HA	59:SQ:100:VAL:HG22	1.95	0.47
60:SR:102:THR:O	60:SR:105:MET:HG2	2.15	0.47
62:ST:28:LEU:HD13	62:ST:54:TYR:CD2	2.50	0.47
70:Sg:65:PHE:O	70:Sg:83:TRP:HD1	1.98	0.47
70:Sg:250:ALA:HB3	70:Sg:257:LYS:HB3	1.97	0.47
77:SW:76:SER:HB2	77:SW:77:PRO:HD3	1.95	0.47
1:L5:48:G:N7	1:L5:290:U:H5''	2.29	0.47
1:L5:1250:C:H3'	1:L5:1251:C:H6	1.79	0.47
1:L5:1676:C:H41	1:L5:4378:A:H5''	1.79	0.47
1:L5:1923:A:O3'	15:LM:34:ASN:ND2	2.47	0.47
1:L5:2709:C:N4	1:L5:2710:C:HO2'	2.13	0.47
1:L5:4313:A:OP1	22:LT:92:ARG:HD2	2.14	0.47
5:LB:310:SER:OG	5:LB:311:ASP:N	2.46	0.47
10:LG:107:LYS:O	10:LG:111:LYS:N	2.43	0.47
28:LZ:53:VAL:HG21	28:LZ:62:ILE:HG13	1.96	0.47
31:Lc:31:TYR:CE1	31:Lc:60:ILE:HD11	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Le:7:LEU:HB2	33:Le:93:LYS:HB3	1.95	0.47
45:Lr:64:ILE:HG23	45:Lr:102:TYR:CZ	2.50	0.47
47:S2:1:U:H1'	71:SC:205:VAL:HG12	1.96	0.47
47:S2:493:A:H61	47:S2:510:G:H1'	1.79	0.47
47:S2:555:A:H8	47:S2:556:U:H4'	1.80	0.47
47:S2:963:A:C6	47:S2:964:A:C6	3.03	0.47
47:S2:996:A:O2'	47:S2:997:A:OP2	2.30	0.47
47:S2:1310:U:H2'	47:S2:1311:C:O4'	2.14	0.47
47:S2:1415:C:H2'	47:S2:1417:C:H5'	1.97	0.47
47:S2:1640:A:H2'	47:S2:1641:A:O4'	2.15	0.47
51:SD:138:VAL:HB	51:SD:150:MET:HB3	1.97	0.47
58:SP:78:THR:HG21	58:SP:97:TYR:HB2	1.96	0.47
59:SQ:132:PHE:HB2	63:SU:77:TRP:HD1	1.80	0.47
70:Sg:236:ILE:HG21	70:Sg:239:LEU:HB2	1.97	0.47
1:L5:130:C:H42	1:L5:138:G:H1	1.61	0.47
1:L5:1485:C:O2	1:L5:4349:C:O2'	2.21	0.47
1:L5:1489:G:H2'	1:L5:1490:G:C8	2.47	0.47
1:L5:1601:A:OP1	38:Lj:5:THR:OG1	2.30	0.47
1:L5:2089:G:H4'	6:LC:305:PRO:HG2	1.97	0.47
1:L5:2543:A:H5''	1:L5:2544:G:N7	2.30	0.47
1:L5:2861:C:H3'	1:L5:2862:G:C8	2.50	0.47
1:L5:4339:A:H2'	1:L5:4340:U:C6	2.50	0.47
1:L5:4475:G:H5''	1:L5:4476:C:H5'	1.96	0.47
1:L5:4492:U:H5''	1:L5:4493:U:H5'	1.97	0.47
1:L5:4612:C:H2'	1:L5:4613:C:H6	1.80	0.47
1:L5:5028:G:H2'	1:L5:5029:C:C6	2.49	0.47
3:L8:93:C:OP1	38:Lj:76:HIS:NE2	2.37	0.47
12:LI:77:VAL:HA	12:LI:81:GLY:O	2.15	0.47
16:LN:84:PRO:HA	16:LN:87:HIS:HD1	1.77	0.47
23:LU:24:ASP:HB3	23:LU:69:LYS:HD3	1.96	0.47
25:LW:73:ARG:HA	25:LW:74:ARG:HA	1.59	0.47
33:Le:92:ASN:OD1	33:Le:93:LYS:N	2.48	0.47
47:S2:53:C:P	78:SY:112:ASN:HD22	2.37	0.47
47:S2:545:A:O2'	47:S2:546:G:H8	1.98	0.47
47:S2:689:U:H2'	47:S2:690:G:H4'	1.97	0.47
47:S2:1124:C:OP1	50:SB:150:ILE:HG13	2.15	0.47
49:SA:34:MET:HE1	49:SA:148:CYS:HB2	1.96	0.47
52:SE:125:LYS:HG2	52:SE:126:VAL:O	2.15	0.47
54:SH:6:ALA:O	54:SH:24:SER:OG	2.26	0.47
65:SX:107:ARG:HD3	65:SX:112:VAL:HB	1.97	0.47
71:SC:189:GLY:C	71:SC:191:VAL:H	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SG:220:ALA:HA	72:SG:223:LYS:NZ	2.29	0.47
1:L5:1509:C:H2'	1:L5:1510:G:C8	2.50	0.47
1:L5:2109:G:H2'	1:L5:2110:C:H6	1.79	0.47
1:L5:2373:C:H5''	32:Ld:50:ARG:NH2	2.29	0.47
1:L5:4653:C:OP1	32:Ld:79:ASN:ND2	2.48	0.47
1:L5:4909:A:OP2	5:LB:156:TYR:OH	2.19	0.47
1:L5:4988:U:H4'	1:L5:4989:U:C4	2.50	0.47
1:L5:5049:G:O2'	5:LB:322:HIS:NE2	2.40	0.47
3:L8:19:C:H2'	3:L8:20:A:C8	2.50	0.47
4:LA:180:LEU:HD21	44:Lp:22:LEU:HB3	1.97	0.47
5:LB:300:LYS:HG2	5:LB:311:ASP:OD1	2.15	0.47
6:LC:200:ARG:NH1	6:LC:201:ARG:HH12	2.12	0.47
7:LD:222:GLN:HG3	7:LD:223:PHE:CD1	2.49	0.47
8:LE:133:PHE:HA	8:LE:136:HIS:CE1	2.50	0.47
9:LF:143:GLY:HA3	9:LF:240:ILE:HB	1.96	0.47
10:LG:55:VAL:HG22	26:LX:44:PRO:HA	1.97	0.47
17:LO:185:VAL:HB	17:LO:188:LYS:HD3	1.97	0.47
20:LR:105:LEU:HD11	20:LR:109:TYR:HE2	1.80	0.47
21:LS:30:MET:HE1	21:LS:47:PHE:CG	2.50	0.47
24:LV:22:VAL:HG22	24:LV:53:PRO:HD2	1.96	0.47
25:LW:56:ARG:NH1	25:LW:61:LYS:HB3	2.29	0.47
28:LZ:76:ASN:OD1	28:LZ:77:TYR:N	2.47	0.47
47:S2:380:G:H5''	55:SI:31:ARG:NH1	2.29	0.47
47:S2:983:A:H2	76:SO:139:SER:HB3	1.79	0.47
47:S2:1539:U:H3	47:S2:1594:A:H61	1.63	0.47
53:SF:102:LEU:O	79:SZ:66:LYS:HD3	2.15	0.47
54:SH:65:PRO:HB2	54:SH:68:GLN:HE22	1.80	0.47
58:SP:18:ARG:H	61:SS:91:LYS:HG3	1.79	0.47
64:SV:66:ASP:OD1	64:SV:67:ASP:N	2.48	0.47
1:L5:497:G:H22	1:L5:656:C:N4	2.13	0.46
1:L5:737:C:N3	1:L5:927:G:N2	2.62	0.46
1:L5:957:G:HO2'	1:L5:958:G:P	2.35	0.46
1:L5:1540:C:H42	1:L5:1619:G:H1	1.63	0.46
1:L5:1739:G:N3	1:L5:1742:A:N6	2.62	0.46
1:L5:1892:A:O2'	1:L5:1893:C:H5'	2.15	0.46
1:L5:2252:G:O6	45:Lr:98:ARG:NH1	2.48	0.46
1:L5:2335:C:H2'	1:L5:2336:G:C8	2.49	0.46
1:L5:4158:C:H2'	1:L5:4159:C:C6	2.50	0.46
1:L5:4568:A:H5''	5:LB:21:ARG:NH1	2.30	0.46
1:L5:5016:A:N6	1:L5:5033:G:O2'	2.48	0.46
2:L7:75:G:H5''	21:LS:49:SER:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:79:VAL:HB	5:LB:331:VAL:HG13	1.97	0.46
5:LB:95:THR:HG23	5:LB:98:GLY:H	1.80	0.46
7:LD:273:LEU:O	7:LD:277:LYS:HG3	2.15	0.46
19:LQ:10:ASP:OD1	19:LQ:11:ARG:N	2.47	0.46
20:LR:15:LEU:O	20:LR:52:ARG:NH2	2.47	0.46
20:LR:169:ALA:O	20:LR:173:ARG:N	2.45	0.46
31:Lc:53:PRO:O	31:Lc:55:LEU:N	2.49	0.46
39:Lk:3:ARG:NH1	39:Lk:41:TYR:OH	2.48	0.46
47:S2:863:U:O2	77:SW:124:LYS:NZ	2.38	0.46
47:S2:1521:C:H4'	61:SS:145:THR:OG1	2.15	0.46
48:S6:13:G:H1'	48:S6:24:G:N2	2.30	0.46
51:SD:35:SER:HB2	51:SD:51:LEU:O	2.16	0.46
52:SE:79:ASP:CG	52:SE:80:ILE:H	2.22	0.46
52:SE:99:PHE:CD1	52:SE:113:ARG:HG2	2.50	0.46
60:SR:119:VAL:HA	60:SR:120:THR:HA	1.72	0.46
61:SS:118:ARG:HH22	61:SS:152:LYS:HD2	1.79	0.46
75:SN:40:LEU:HD12	75:SN:50:ILE:HG23	1.97	0.46
1:L5:37:U:H2'	1:L5:38:A:O4'	2.16	0.46
1:L5:108:A:N1	1:L5:333:U:O2'	2.41	0.46
1:L5:133:C:H5'	1:L5:134:G:OP1	2.16	0.46
1:L5:418:A:N6	3:L8:16:G:H1'	2.29	0.46
1:L5:454:U:O2'	1:L5:456:C:N4	2.47	0.46
1:L5:713:C:N4	1:L5:955:G:H1	2.13	0.46
1:L5:2495:U:H2'	1:L5:2496:G:H8	1.80	0.46
1:L5:3604:A:H2'	1:L5:3605:C:O4'	2.15	0.46
1:L5:3971:G:H21	1:L5:4050:A:H62	1.61	0.46
1:L5:4648:A:H2'	1:L5:4649:G:H8	1.79	0.46
1:L5:5013:C:N3	1:L5:5027:C:O2'	2.49	0.46
5:LB:302:ASN:HB2	5:LB:313:SER:HA	1.97	0.46
6:LC:73:VAL:HB	6:LC:78:ARG:HH11	1.80	0.46
10:LG:51:LEU:C	10:LG:52:THR:HG1	2.24	0.46
14:LL:108:GLU:OE2	37:Li:18:THR:HG22	2.15	0.46
21:LS:99:ASP:HB2	21:LS:108:GLN:OE1	2.15	0.46
45:Lr:28:GLU:HG2	45:Lr:31:ASN:HB2	1.97	0.46
47:S2:142:C:O2	72:SG:180:VAL:HG11	2.15	0.46
47:S2:526:A:H5''	81:Se:35:ARG:HH12	1.80	0.46
47:S2:1013:U:OP1	47:S2:1129:G:O2'	2.32	0.46
47:S2:1239:U:H5''	61:SS:148:VAL:HG12	1.96	0.46
47:S2:1552:G:N3	47:S2:1557:C:N4	2.45	0.46
47:S2:1594:A:OP2	79:SZ:104:ARG:HG3	2.15	0.46
47:S2:1807:C:H2'	47:S2:1808:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1808:U:H2'	47:S2:1809:A:C8	2.50	0.46
47:S2:1812:U:H2'	47:S2:1813:A:H5''	1.97	0.46
53:SF:106:GLU:HG2	53:SF:107:ASN:N	2.29	0.46
69:Sf:133:ALA:O	69:Sf:139:HIS:NE2	2.46	0.46
70:Sg:215:GLN:HG2	70:Sg:231:ASP:HB3	1.96	0.46
73:SJ:49:THR:O	73:SJ:53:ILE:HG12	2.15	0.46
73:SJ:136:ARG:HA	73:SJ:141:VAL:HA	1.97	0.46
76:SO:43:HIS:HA	76:SO:55:ARG:HA	1.97	0.46
1:L5:67:C:N4	1:L5:325:U:O2'	2.47	0.46
1:L5:729:G:O4'	9:LF:76:ARG:NH2	2.49	0.46
1:L5:747:A:H62	1:L5:916:C:N4	1.96	0.46
1:L5:1838:A:H2	9:LF:111:LEU:HD22	1.79	0.46
1:L5:2695:A:H1'	1:L5:2696:A:OP2	2.15	0.46
1:L5:2774:C:H2'	1:L5:2775:C:C6	2.51	0.46
1:L5:3771:C:H3'	1:L5:3772:U:H5''	1.97	0.46
1:L5:4049:U:O2'	1:L5:4050:A:OP2	2.33	0.46
1:L5:4244:A:H2'	1:L5:4245:G:O4'	2.16	0.46
1:L5:4888:U:O2'	1:L5:4931:G:N2	2.48	0.46
6:LC:232:VAL:O	6:LC:233:SER:OG	2.25	0.46
10:LG:48:LYS:HE3	26:LX:42:THR:OG1	2.15	0.46
13:LJ:22:LEU:O	13:LJ:71:HIS:HB2	2.15	0.46
21:LS:29:ARG:NH1	22:LT:150:LEU:HB2	2.31	0.46
21:LS:44:PHE:O	21:LS:48:VAL:HG23	2.15	0.46
47:S2:482:G:N1	47:S2:485:A:OP2	2.45	0.46
48:S6:40:C:H2'	48:S6:41:C:H5'	1.96	0.46
51:SD:167:TYR:OH	51:SD:201:LYS:O	2.30	0.46
52:SE:69:PHE:CE1	78:SY:17:LEU:HD22	2.50	0.46
52:SE:95:THR:OG1	52:SE:97:GLU:OE1	2.25	0.46
55:SI:119:LEU:HD12	55:SI:153:LYS:HE3	1.97	0.46
59:SQ:47:LEU:O	59:SQ:49:TYR:N	2.47	0.46
70:Sg:5:MET:HG3	70:Sg:270:LEU:HD12	1.97	0.46
70:Sg:215:GLN:HA	70:Sg:231:ASP:HA	1.97	0.46
72:SG:164:LYS:HD2	72:SG:167:LYS:HB2	1.97	0.46
73:SJ:61:LEU:HD12	73:SJ:70:ARG:HH22	1.79	0.46
74:SM:114:TYR:O	74:SM:117:GLU:HB2	2.15	0.46
1:L5:517:C:H41	1:L5:645:G:H21	1.63	0.46
1:L5:954:C:N4	1:L5:955:G:O6	2.48	0.46
1:L5:1376:C:OP2	1:L5:1379:C:N4	2.46	0.46
1:L5:2243:C:H2'	1:L5:2244:C:C5	2.50	0.46
1:L5:2904:U:N3	1:L5:3592:G:O4'	2.48	0.46
1:L5:4049:U:H4'	1:L5:4051:C:H41	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:114:CYS:HB2	5:LB:165:HIS:NE2	2.31	0.46
6:LC:286:ASN:O	6:LC:288:ASP:N	2.48	0.46
9:LF:148:LYS:HE3	9:LF:245:ARG:NE	2.30	0.46
16:LN:172:ARG:HH11	16:LN:174:LEU:HD23	1.79	0.46
17:LO:168:TYR:O	17:LO:172:LYS:HG3	2.16	0.46
20:LR:60:ARG:NH2	20:LR:63:CYS:SG	2.88	0.46
20:LR:62:ARG:HA	20:LR:65:LYS:HB3	1.98	0.46
21:LS:79:GLY:H	21:LS:132:ILE:HG12	1.80	0.46
34:Lf:48:ALA:HB2	34:Lf:71:TRP:CE3	2.50	0.46
34:Lf:93:PRO:C	34:Lf:95:LYS:H	2.24	0.46
47:S2:450:C:H2'	47:S2:451:G:H5''	1.97	0.46
47:S2:903:A:H3'	47:S2:903:A:N3	2.30	0.46
47:S2:1277:C:H3'	47:S2:1278:A:C8	2.51	0.46
52:SE:141:THR:OG1	52:SE:145:ARG:N	2.49	0.46
54:SH:121:THR:HG22	54:SH:123:THR:H	1.81	0.46
60:SR:94:GLU:HA	60:SR:96:ILE:HG12	1.97	0.46
70:Sg:14:HIS:CD2	70:Sg:41:ILE:HG13	2.50	0.46
72:SG:14:LYS:HG2	72:SG:124:LEU:HD11	1.96	0.46
72:SG:68:LEU:O	72:SG:69:THR:OG1	2.28	0.46
72:SG:209:TYR:HD1	72:SG:213:LEU:HD23	1.80	0.46
1:L5:2124:G:H4'	1:L5:2125:C:OP1	2.16	0.46
1:L5:2465:C:H1'	1:L5:3672:G:H1	1.79	0.46
1:L5:2601:A:O2'	1:L5:2743:A:OP1	2.32	0.46
1:L5:3748:A:H1'	4:LA:224:THR:HG23	1.98	0.46
1:L5:4122:G:H21	28:LZ:135:ARG:HB2	1.80	0.46
1:L5:4623:G:N2	1:L5:4674:C:O2	2.38	0.46
1:L5:4764:A:OP1	11:LH:23:ARG:NH2	2.49	0.46
1:L5:4873:G:H1	15:LM:98:ARG:HH11	1.61	0.46
3:L8:133:G:H2'	3:L8:134:G:H8	1.81	0.46
22:LT:54:HIS:CG	22:LT:55:LYS:N	2.83	0.46
28:LZ:25:ILE:HA	28:LZ:43:VAL:HG12	1.97	0.46
47:S2:57:U:O2'	47:S2:499:G:N3	2.44	0.46
47:S2:509:G:H2'	47:S2:510:G:H8	1.80	0.46
47:S2:682:U:O2'	77:SW:4:MET:SD	2.70	0.46
47:S2:1159:G:P	77:SW:76:SER:HB3	2.56	0.46
47:S2:1414:A:N6	47:S2:1419:C:H41	2.14	0.46
49:SA:27:GLY:HA3	49:SA:150:THR:OG1	2.15	0.46
51:SD:76:ARG:HH21	56:SK:66:HIS:CE1	2.34	0.46
61:SS:148:VAL:HB	61:SS:150:LYS:HG2	1.98	0.46
65:SX:88:ASP:HB2	81:Se:10:GLY:HA2	1.96	0.46
68:Sd:30:LEU:HA	68:Sd:39:CYS:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:230:LEU:HB3	70:Sg:259:TRP:HZ3	1.81	0.46
71:SC:188:CYS:SG	71:SC:191:VAL:HB	2.55	0.46
72:SG:181:THR:HG22	72:SG:184:VAL:HG23	1.97	0.46
72:SG:209:TYR:HB3	72:SG:214:ALA:HB2	1.98	0.46
76:SO:99:ALA:O	76:SO:101:GLY:N	2.48	0.46
77:SW:33:VAL:HG13	77:SW:34:ILE:HG23	1.98	0.46
1:L5:742:G:H2'	1:L5:743:G:C8	2.51	0.46
1:L5:1757:U:H5'	1:L5:1758:G:OP1	2.14	0.46
1:L5:2387:G:H2'	1:L5:2388:A:H8	1.79	0.46
1:L5:4920:C:H2'	1:L5:4921:C:O4'	2.14	0.46
4:LA:49:ILE:HD13	4:LA:60:LYS:HZ1	1.79	0.46
4:LA:116:LEU:HD23	4:LA:158:ILE:HG13	1.96	0.46
7:LD:180:PHE:O	7:LD:182:GLY:N	2.49	0.46
11:LH:31:ARG:HD2	11:LH:149:ASN:HD21	1.80	0.46
14:LL:123:LYS:HD3	14:LL:155:MET:HE3	1.98	0.46
15:LM:69:HIS:ND1	15:LM:69:HIS:O	2.47	0.46
21:LS:29:ARG:HH11	22:LT:150:LEU:HB2	1.81	0.46
43:Lo:97:LYS:O	43:Lo:99:ARG:N	2.40	0.46
47:S2:148:U:H2'	47:S2:149:A:H8	1.80	0.46
47:S2:209:A:C6	47:S2:210:U:H1'	2.51	0.46
47:S2:1240:A:OP1	61:SS:150:LYS:NZ	2.44	0.46
47:S2:1615:U:OP2	58:SP:43:ARG:NH1	2.49	0.46
47:S2:1644:C:H2'	47:S2:1645:C:C6	2.51	0.46
49:SA:9:GLN:O	49:SA:11:LYS:HG2	2.15	0.46
50:SB:71:LEU:HA	50:SB:74:LEU:HB3	1.97	0.46
50:SB:224:GLU:CD	50:SB:226:GLY:H	2.24	0.46
52:SE:124:CYS:SG	52:SE:141:THR:HB	2.56	0.46
60:SR:67:ARG:HA	60:SR:68:GLY:HA2	1.58	0.46
73:SJ:50:LEU:HD13	73:SJ:102:ILE:HD13	1.97	0.46
77:SW:106:THR:OG1	77:SW:111:MET:HE3	2.16	0.46
1:L5:423:G:O2'	18:LP:118:GLN:HB2	2.15	0.46
1:L5:737:C:H42	1:L5:927:G:H1	1.64	0.46
1:L5:1196:G:C2	1:L5:1197:C:H1'	2.51	0.46
1:L5:1579:C:H2'	1:L5:1580:C:C6	2.51	0.46
1:L5:1962:A:H8	1:L5:2024:G:N2	2.14	0.46
1:L5:1993:C:H2'	1:L5:1994:C:C6	2.51	0.46
1:L5:2120:G:H21	9:LF:41:MET:HE1	1.80	0.46
1:L5:3940:U:H5''	10:LG:75:LYS:HD2	1.98	0.46
1:L5:3973:G:H2'	1:L5:3974:G:C5	2.51	0.46
1:L5:4288:C:H2'	1:L5:4289:U:O4'	2.15	0.46
2:L7:29:C:H4'	13:LJ:12:MET:HE1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:LA:49:ILE:HG21	4:LA:60:LYS:NZ	2.31	0.46
9:LF:222:LYS:HG2	9:LF:225:THR:HG22	1.97	0.46
15:LM:31:ILE:HG22	21:LS:98:ARG:NE	2.29	0.46
16:LN:114:ARG:HH12	16:LN:157:LYS:HG2	1.81	0.46
18:LP:102:ALA:O	18:LP:106:GLY:N	2.42	0.46
21:LS:77:ASN:HB2	21:LS:132:ILE:O	2.15	0.46
24:LV:90:ARG:NH2	24:LV:92:ASP:OD2	2.38	0.46
25:LW:98:PRO:HA	25:LW:99:GLU:CB	2.42	0.46
27:LY:82:ILE:HG22	27:LY:84:ARG:H	1.79	0.46
30:Lb:55:LYS:HA	30:Lb:58:GLN:HG2	1.96	0.46
32:Ld:93:ASN:HB2	32:Ld:102:LEU:N	2.31	0.46
46:Lz:11:TYR:HB3	46:Lz:216:LEU:HA	1.98	0.46
47:S2:420:G:OP1	77:SW:88:LYS:NZ	2.45	0.46
47:S2:1057:C:H6	47:S2:1059:G:H8	1.64	0.46
49:SA:57:LYS:HD3	64:SV:70:LEU:HD21	1.97	0.46
51:SD:106:ARG:HB3	51:SD:175:VAL:HG12	1.97	0.46
55:SI:80:ASP:OD1	55:SI:81:VAL:N	2.48	0.46
55:SI:81:VAL:HG22	55:SI:102:VAL:HG12	1.98	0.46
56:SK:32:HIS:N	56:SK:41:PRO:HA	2.22	0.46
75:SN:91:LEU:HD11	75:SN:121:ARG:HD2	1.98	0.46
77:SW:2:VAL:O	77:SW:4:MET:N	2.46	0.46
78:SY:54:VAL:HB	78:SY:76:TYR:HB2	1.98	0.46
1:L5:418:A:H62	3:L8:16:G:H1'	1.81	0.46
1:L5:651:C:H2'	1:L5:652:G:C8	2.51	0.46
1:L5:965:G:H21	45:Lr:99:LYS:NZ	2.14	0.46
1:L5:3670:C:O2'	1:L5:3671:G:C8	2.64	0.46
1:L5:4580:U:H4'	5:LB:180:LEU:HD22	1.98	0.46
8:LE:82:LYS:N	8:LE:84:LYS:HD3	2.31	0.46
10:LG:133:PRO:HA	10:LG:134:PRO:HD3	1.79	0.46
11:LH:173:ARG:HG2	41:Lm:127:VAL:HB	1.98	0.46
15:LM:43:THR:HG23	15:LM:45:VAL:HG23	1.98	0.46
16:LN:169:ARG:HG3	16:LN:174:LEU:HD21	1.98	0.46
24:LV:41:SER:O	24:LV:61:VAL:HG13	2.16	0.46
36:Lh:28:LEU:HD12	36:Lh:31:LEU:HD12	1.98	0.46
44:Lp:37:TYR:CD2	44:Lp:71:TYR:HB2	2.51	0.46
47:S2:367:U:OP1	55:SI:11:ARG:NH2	2.49	0.46
47:S2:509:G:H2'	47:S2:510:G:C8	2.51	0.46
47:S2:1393:G:H2'	47:S2:1394:G:C8	2.51	0.46
47:S2:1513:C:H5'	68:Sd:9:SER:C	2.41	0.46
47:S2:1610:G:N2	47:S2:1629:C:O2	2.45	0.46
47:S2:1613:G:OP1	61:SS:88:LYS:NZ	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S6:35:A:H2'	48:S6:36:U:N1	2.31	0.46
51:SD:35:SER:H	51:SD:52:ALA:HA	1.81	0.46
52:SE:126:VAL:HG12	52:SE:139:LEU:HD13	1.98	0.46
54:SH:96:ALA:HB3	54:SH:98:ARG:NH1	2.31	0.46
61:SS:125:HIS:CE1	61:SS:131:VAL:HG21	2.51	0.46
70:Sg:11:LEU:H	70:Sg:306:LEU:HD11	1.80	0.46
70:Sg:125:ARG:HB2	70:Sg:150:TRP:CG	2.51	0.46
72:SG:36:VAL:N	72:SG:50:VAL:O	2.48	0.46
72:SG:138:ALA:O	72:SG:142:ARG:HG3	2.15	0.46
73:SJ:107:GLU:O	73:SJ:112:THR:OG1	2.33	0.46
74:SM:86:GLY:O	74:SM:106:CYS:N	2.43	0.46
75:SN:76:LYS:C	75:SN:79:GLY:H	2.24	0.46
78:SY:9:THR:H	78:SY:26:ASP:HB3	1.80	0.46
1:L5:112:C:H2'	1:L5:113:A:C8	2.51	0.46
1:L5:940:C:H2'	1:L5:941:C:O4'	2.16	0.46
1:L5:1396:G:O2'	1:L5:1468:C:O2'	2.29	0.46
1:L5:1568:C:OP2	44:Lp:2:ALA:N	2.48	0.46
1:L5:4251:A:OP1	13:LJ:108:GLY:N	2.42	0.46
1:L5:4991:U:HO2'	1:L5:4992:G:P	2.38	0.46
4:LA:140:ASN:HB3	4:LA:145:LYS:HB3	1.98	0.46
5:LB:78:ILE:HG21	5:LB:314:ILE:HD12	1.98	0.46
5:LB:215:GLU:N	5:LB:284:ILE:HG22	2.31	0.46
13:LJ:155:HIS:ND1	13:LJ:155:HIS:O	2.49	0.46
27:LY:70:VAL:HG13	27:LY:80:ILE:HG23	1.96	0.46
28:LZ:104:PRO:HA	28:LZ:107:LYS:HB3	1.97	0.46
35:Lg:103:VAL:HA	35:Lg:106:VAL:HG12	1.98	0.46
47:S2:375:U:OP2	57:SL:59:LYS:NZ	2.41	0.46
47:S2:528:A:H2'	47:S2:529:A:O4'	2.16	0.46
47:S2:868:G:O2'	47:S2:869:A:OP1	2.28	0.46
47:S2:1103:C:N3	47:S2:1130:G:N2	2.64	0.46
47:S2:1281:G:C5'	74:SM:101:ARG:HG2	2.43	0.46
47:S2:1865:C:O2	66:Sa:92:ARG:HB3	2.16	0.46
48:S6:49:G:H1	48:S6:65:C:H42	1.63	0.46
49:SA:149:ASN:HB2	49:SA:165:ASN:OD1	2.16	0.46
53:SF:179:ASN:O	53:SF:183:GLY:HA2	2.16	0.46
56:SK:58:VAL:CG2	56:SK:69:TRP:HB3	2.46	0.46
57:SL:57:ASP:OD1	57:SL:58:LYS:N	2.49	0.46
62:ST:34:VAL:HG23	62:ST:35:ASP:H	1.81	0.46
63:SU:81:GLN:HG2	68:Sd:55:LEU:HD12	1.98	0.46
66:Sa:42:ARG:HB2	66:Sa:67:LEU:HD11	1.98	0.46
72:SG:220:ALA:HA	72:SG:223:LYS:HZ1	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SM:26:LEU:HD12	74:SM:27:ILE:HG12	1.98	0.46
76:SO:128:ARG:NH1	76:SO:130:GLU:HB2	2.31	0.46
1:L5:923:C:OP1	21:LS:74:ARG:NH2	2.49	0.46
1:L5:969:C:N3	1:L5:2256:C:N4	2.64	0.46
1:L5:1273:G:H4'	8:LE:74:SER:HA	1.96	0.46
1:L5:1750:G:H5'	12:LI:40:LYS:NZ	2.31	0.46
1:L5:2590:G:H2'	1:L5:2754:G:H22	1.81	0.46
1:L5:2647:A:H3'	1:L5:2648:G:H8	1.81	0.46
1:L5:3602:C:H2'	1:L5:3603:G:C8	2.51	0.46
1:L5:4763:U:O2	11:LH:44:GLU:N	2.48	0.46
1:L5:4871:C:C4	21:LS:176:PHE:CE1	3.04	0.46
1:L5:5026:U:H4'	1:L5:5028:G:H5''	1.98	0.46
4:LA:23:ARG:HG2	4:LA:52:PRO:O	2.16	0.46
8:LE:62:MET:O	8:LE:66:LYS:HG2	2.15	0.46
8:LE:108:LYS:HB3	8:LE:109:LEU:H	1.52	0.46
8:LE:242:ILE:O	8:LE:243:THR:OG1	2.27	0.46
17:LO:9:LEU:O	17:LO:36:VAL:N	2.48	0.46
20:LR:7:GLN:NE2	20:LR:35:ALA:O	2.49	0.46
20:LR:78:ILE:HD12	20:LR:81:ARG:HH11	1.81	0.46
25:LW:47:ARG:HH12	47:S2:1793:A:H4'	1.80	0.46
28:LZ:41:ALA:HB2	28:LZ:77:TYR:CZ	2.50	0.46
28:LZ:108:ARG:HG2	28:LZ:111:ARG:HH21	1.79	0.46
39:Lk:24:LYS:HB2	39:Lk:35:LYS:HE2	1.98	0.46
40:Ll:2:SER:OG	40:Ll:3:SER:N	2.49	0.46
46:Lz:39:LYS:HD2	46:Lz:202:ARG:NE	2.30	0.46
47:S2:490:C:H42	47:S2:510:G:H1	1.63	0.46
47:S2:842:C:H2'	47:S2:843:C:O4'	2.16	0.46
47:S2:1061:U:O2'	47:S2:1062:A:OP2	2.32	0.46
47:S2:1214:A:O2'	47:S2:1216:C:OP1	2.28	0.46
47:S2:1285:G:H5''	74:SM:35:ILE:HB	1.98	0.46
47:S2:1307:U:H5''	69:Sf:102:VAL:HG13	1.98	0.46
47:S2:1349:G:H1	47:S2:1380:C:H42	1.63	0.46
48:S6:31:G:H1	53:Sf:134:VAL:HA	1.81	0.46
51:SD:56:GLN:HA	51:SD:59:LEU:HD13	1.98	0.46
51:SD:71:ALA:HB1	51:SD:75:LYS:HD2	1.98	0.46
60:SR:44:LYS:HG3	60:SR:47:ARG:NH2	2.27	0.46
70:Sg:155:ARG:HB2	70:Sg:199:THR:HA	1.98	0.46
1:L5:170:C:H1'	1:L5:171:U:O4'	2.15	0.45
1:L5:295:A:O4'	43:Lo:39:ARG:HD2	2.16	0.45
1:L5:1548:G:O2'	1:L5:2812:A:N3	2.42	0.45
1:L5:2252:G:OP1	8:LE:87:LYS:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4748:U:H1'	1:L5:4953:G:N2	2.31	0.45
3:L8:4:C:H5'	18:LP:61:ARG:HB3	1.98	0.45
3:L8:19:C:H2'	3:L8:20:A:H8	1.79	0.45
9:LF:104:LYS:HE2	9:LF:135:ILE:HD13	1.97	0.45
12:LI:105:CYS:HA	12:LI:106:ALA:HA	1.65	0.45
18:LP:32:THR:O	18:LP:36:ILE:HG12	2.16	0.45
47:S2:213:G:HO2'	47:S2:214:U:P	2.37	0.45
47:S2:986:G:N2	76:SO:135:ILE:HD12	2.30	0.45
47:S2:1113:A:H3'	47:S2:1114:U:H5'	1.97	0.45
47:S2:1285:G:H4'	74:SM:36:ARG:HB2	1.98	0.45
47:S2:1382:A:H2'	47:S2:1383:A:H5'	1.99	0.45
47:S2:1465:A:OP1	60:SR:56:HIS:NE2	2.45	0.45
56:SK:5:LYS:HE2	74:SM:27:ILE:HG21	1.97	0.45
66:Sa:47:ALA:O	66:Sa:50:VAL:HG12	2.16	0.45
67:Sc:29:GLN:HA	67:Sc:45:ASN:HA	1.97	0.45
72:SG:209:TYR:HA	72:SG:213:LEU:HB3	1.99	0.45
73:SJ:58:ARG:O	73:SJ:62:THR:HG23	2.16	0.45
77:SW:10:ALA:O	77:SW:13:SER:OG	2.24	0.45
79:SZ:77:LEU:HD22	79:SZ:79:ILE:HB	1.98	0.45
1:L5:158:A:O2'	37:Li:26:HIS:HB3	2.16	0.45
1:L5:737:C:N4	1:L5:927:G:H1	2.15	0.45
1:L5:1573:G:OP1	1:L5:2667:C:O2'	2.31	0.45
1:L5:1778:C:H4'	7:LD:4:VAL:O	2.15	0.45
1:L5:1890:G:O2'	1:L5:1891:A:H5'	2.16	0.45
1:L5:3723:A:H2'	1:L5:3724:A:H8	1.81	0.45
1:L5:4097:G:N2	1:L5:4113:U:H1'	2.31	0.45
1:L5:4325:A:C8	1:L5:4326:G:H1'	2.51	0.45
1:L5:4587:G:O2'	5:LB:14:LEU:O	2.34	0.45
8:LE:149:ILE:HG23	8:LE:197:THR:HB	1.99	0.45
10:LG:147:VAL:O	10:LG:177:MET:HG2	2.17	0.45
12:LI:96:VAL:HA	12:LI:125:THR:HA	1.98	0.45
16:LN:193:ARG:O	16:LN:197:THR:HG23	2.16	0.45
22:LT:39:ILE:HD12	22:LT:102:ARG:HD3	1.98	0.45
47:S2:1021:U:H4'	47:S2:1022:U:O4'	2.16	0.45
47:S2:1454:A:C8	60:SR:3:ARG:HG3	2.51	0.45
47:S2:1522:A:H4'	61:SS:143:GLY:C	2.41	0.45
47:S2:1537:A:H2	47:S2:1597:C:N3	2.14	0.45
47:S2:1606:G:O2'	47:S2:1607:A:H8	1.99	0.45
51:SD:53:THR:HG23	51:SD:90:LYS:HE3	1.98	0.45
51:SD:121:GLY:O	51:SD:125:PHE:N	2.41	0.45
53:SF:104:THR:OG1	53:SF:178:ILE:HD12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:134:VAL:HG22	54:SH:173:PHE:CD2	2.51	0.45
54:SH:147:LYS:O	54:SH:149:ASP:N	2.48	0.45
63:SU:61:LEU:HD22	68:Sd:34:TYR:CZ	2.51	0.45
72:SG:159:ARG:HB3	72:SG:172:LYS:HB3	1.99	0.45
73:SJ:83:ARG:HG3	73:SJ:150:ARG:NE	2.30	0.45
76:SO:46:ASP:O	76:SO:49:GLY:N	2.39	0.45
78:SY:20:ARG:NH1	78:SY:22:GLN:OE1	2.44	0.45
1:L5:28:C:H2'	1:L5:29:G:C8	2.51	0.45
1:L5:235:A:H5'	1:L5:236:G:OP2	2.17	0.45
1:L5:1367:C:H1'	1:L5:1371:A:OP1	2.17	0.45
1:L5:1805:A:H4'	30:Lb:28:ARG:NH1	2.30	0.45
1:L5:3970:G:H1'	1:L5:4052:C:H42	1.81	0.45
8:LE:149:ILE:HD13	8:LE:270:TYR:HE2	1.80	0.45
16:LN:150:TRP:HH2	16:LN:159:ARG:NH1	2.14	0.45
26:LX:109:ILE:HD11	26:LX:124:VAL:HG11	1.99	0.45
28:LZ:51:ARG:HE	28:LZ:65:ARG:NH2	2.14	0.45
29:La:93:ASN:C	29:La:95:THR:H	2.24	0.45
42:Ln:10:MET:HE3	42:Ln:14:LYS:HB2	1.98	0.45
47:S2:146:G:O6	47:S2:147:A:N6	2.49	0.45
47:S2:641:A:OP1	73:SJ:40:LYS:NZ	2.35	0.45
47:S2:1869:A:N7	50:SB:112:SER:HA	2.31	0.45
52:SE:19:MET:HE1	52:SE:108:ARG:HH11	1.82	0.45
52:SE:56:LEU:HD23	52:SE:57:THR:HG23	1.97	0.45
58:SP:104:GLN:HG2	58:SP:105:VAL:H	1.81	0.45
66:Sa:37:LYS:HG2	66:Sa:72:HIS:CE1	2.51	0.45
1:L5:29:G:H5''	16:LN:172:ARG:HG3	1.98	0.45
1:L5:142:G:H2'	1:L5:144:G:H5''	1.99	0.45
1:L5:150:U:C4	10:LG:161:VAL:HG13	2.50	0.45
1:L5:331:G:O3'	16:LN:159:ARG:NH2	2.49	0.45
1:L5:1217:G:H2'	1:L5:1218:G:C5	2.52	0.45
1:L5:1245:C:H1'	1:L5:2111:G:C6	2.51	0.45
1:L5:1273:G:H2'	1:L5:1273:G:N3	2.32	0.45
1:L5:1641:G:N3	1:L5:3918:G:O2'	2.45	0.45
1:L5:1694:C:H42	1:L5:1842:G:H1	1.64	0.45
1:L5:2003:G:H1'	1:L5:2004:U:H5	1.81	0.45
1:L5:2541:G:H1	1:L5:2775:C:N4	2.14	0.45
1:L5:3642:A:O2'	38:Lj:3:LYS:N	2.49	0.45
1:L5:3754:G:C6	1:L5:3755:G:C6	3.04	0.45
1:L5:3921:U:O2'	1:L5:4542:U:N3	2.44	0.45
1:L5:4043:G:N7	1:L5:4045:G:H1'	2.32	0.45
1:L5:4101:C:H2'	1:L5:4102:C:H5	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:21:C:C2'	3:L8:22:U:H5'	2.46	0.45
5:LB:340:THR:HG22	5:LB:343:ARG:NH1	2.28	0.45
10:LG:156:VAL:HB	10:LG:202:VAL:HG13	1.98	0.45
10:LG:212:LYS:O	10:LG:216:ALA:N	2.48	0.45
11:LH:86:LEU:HD22	11:LH:188:GLN:O	2.17	0.45
14:LL:164:GLU:OE2	14:LL:167:ARG:NH2	2.50	0.45
15:LM:6:PHE:H	15:LM:11:ARG:NH2	2.14	0.45
18:LP:6:LEU:HD23	18:LP:116:HIS:CD2	2.51	0.45
22:LT:67:VAL:HG13	22:LT:72:VAL:HG22	1.98	0.45
26:LX:80:PRO:HD2	36:Lh:33:VAL:HG22	1.98	0.45
33:Le:70:LEU:HG	33:Le:74:PHE:O	2.16	0.45
34:Lf:29:LYS:HE3	34:Lf:83:MET:HE2	1.97	0.45
46:Lz:66:CYS:SG	46:Lz:107:TYR:HD2	2.40	0.45
47:S2:562:U:H4'	73:SJ:132:GLN:HB2	1.99	0.45
47:S2:1134:G:P	66:Sa:6:ARG:HH21	2.39	0.45
49:SA:158:ASP:HB3	64:SV:60:ARG:HH12	1.81	0.45
49:SA:173:LEU:HB2	49:SA:203:PHE:HE1	1.80	0.45
53:SF:88:MET:HB2	53:SF:91:ARG:NH2	2.30	0.45
53:SF:118:ASN:ND2	53:SF:183:GLY:HA3	2.32	0.45
58:SP:74:GLU:H	58:SP:93:MET:N	2.11	0.45
59:SQ:34:VAL:N	59:SQ:37:ARG:O	2.25	0.45
62:ST:27:LYS:HG3	62:ST:29:LYS:HG2	1.99	0.45
1:L5:486:C:N4	1:L5:670:G:O6	2.44	0.45
1:L5:487:G:C2	1:L5:488:G:H1'	2.51	0.45
1:L5:1836:G:H4'	22:LT:130:ARG:O	2.16	0.45
1:L5:2374:A:H5'	32:Ld:64:ILE:O	2.17	0.45
1:L5:2405:G:N7	40:Ll:2:SER:HB2	2.30	0.45
1:L5:2680:G:C2	1:L5:2681:G:H1'	2.51	0.45
1:L5:4109:G:N2	1:L5:4110:C:N3	2.64	0.45
1:L5:4716:C:OP2	5:LB:30:LYS:HE2	2.16	0.45
1:L5:4933:C:O2'	1:L5:4934:A:O4'	2.31	0.45
5:LB:50:LYS:HD3	5:LB:340:THR:O	2.17	0.45
6:LC:33:ARG:HE	6:LC:36:ILE:HD12	1.81	0.45
6:LC:38:ASN:O	6:LC:42:THR:HG23	2.16	0.45
10:LG:60:TYR:CZ	10:LG:61:ILE:HG23	2.52	0.45
15:LM:16:SER:OG	15:LM:54:CYS:O	2.20	0.45
31:Lc:38:ILE:HG21	31:Lc:63:TYR:HB3	1.97	0.45
33:Le:12:ILE:HD11	33:Le:69:MET:HE2	1.98	0.45
36:Lh:53:SER:HA	36:Lh:56:ARG:NH2	2.31	0.45
47:S2:50:A:H62	47:S2:477:G:H21	1.63	0.45
47:S2:71:G:H3'	47:S2:72:C:H5''	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SD:132:LYS:HE3	51:SD:189:MET:HE2	1.97	0.45
54:SH:135:PHE:HB3	54:SH:136:PRO:HD3	1.99	0.45
63:SU:34:LYS:HA	63:SU:37:ALA:HB3	1.99	0.45
70:Sg:178:ASN:OD1	70:Sg:183:LYS:HB3	2.17	0.45
71:SC:196:ILE:CG2	71:SC:223:TYR:HB2	2.46	0.45
72:SG:223:LYS:O	72:SG:227:GLN:HG2	2.17	0.45
1:L5:478:G:N2	1:L5:676:C:O2	2.50	0.45
1:L5:922:C:H2'	1:L5:923:C:C6	2.52	0.45
1:L5:978:G:N2	1:L5:1277:G:H1'	2.31	0.45
1:L5:1321:G:H2'	1:L5:3876:A:N7	2.31	0.45
1:L5:1890:G:N2	1:L5:1939:A:H61	2.15	0.45
1:L5:2654:C:H2'	1:L5:2655:C:C6	2.52	0.45
1:L5:3955:G:O6	1:L5:4057:C:N4	2.40	0.45
1:L5:3971:G:N2	1:L5:4050:A:H62	2.13	0.45
1:L5:4493:U:H2'	1:L5:4494:G:H8	1.81	0.45
1:L5:4948:C:O2'	1:L5:4949:G:OP1	2.30	0.45
4:LA:7:GLY:HA2	4:LA:10:LYS:HE3	1.99	0.45
6:LC:204:ARG:HG3	6:LC:205:ARG:H	1.80	0.45
8:LE:64:SER:C	8:LE:67:ALA:H	2.24	0.45
10:LG:139:GLY:O	10:LG:142:THR:OG1	2.23	0.45
11:LH:117:PHE:CE1	11:LH:165:THR:HB	2.52	0.45
12:LI:17:TYR:O	12:LI:96:VAL:HG12	2.17	0.45
13:LJ:20:LEU:O	13:LJ:74:VAL:N	2.31	0.45
17:LO:109:PRO:HA	17:LO:110:PRO:HD3	1.81	0.45
25:LW:80:ARG:HA	25:LW:81:ALA:HA	1.53	0.45
47:S2:317:C:N4	47:S2:333:G:H1	2.14	0.45
47:S2:380:G:OP1	55:SI:31:ARG:HD2	2.16	0.45
47:S2:553:U:H2'	47:S2:554:A:C8	2.51	0.45
47:S2:583:C:H5'	47:S2:584:G:OP2	2.17	0.45
47:S2:938:A:H2'	47:S2:939:U:O4'	2.16	0.45
47:S2:1005:G:OP1	50:SB:162:ARG:NH1	2.50	0.45
47:S2:1203:G:H1'	71:SC:115:GLN:HG3	1.99	0.45
47:S2:1414:A:N6	47:S2:1429:G:H1	2.15	0.45
47:S2:1453:C:H42	47:S2:1475:G:H1	1.64	0.45
57:SL:135:SER:HB3	57:SL:138:VAL:HB	1.97	0.45
74:SM:16:THR:HB	74:SM:79:VAL:HG22	1.98	0.45
77:SW:77:PRO:HG2	77:SW:79:PHE:CZ	2.52	0.45
1:L5:106:A:H2'	1:L5:107:G:O4'	2.16	0.45
1:L5:195:C:HO2'	27:LY:125:SER:HG	1.61	0.45
1:L5:405:U:P	27:LY:87:ARG:HH12	2.40	0.45
1:L5:965:G:H8	8:LE:88:VAL:HG13	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1290:G:H21	1:L5:4942:C:N4	2.14	0.45
1:L5:2074:C:H2'	1:L5:2075:G:C8	2.51	0.45
1:L5:2438:A:O2'	1:L5:2440:U:OP2	2.29	0.45
1:L5:2579:G:N1	1:L5:2582:A:OP2	2.48	0.45
1:L5:2622:G:O6	23:LU:81:ARG:NH2	2.50	0.45
1:L5:3597:G:OP1	20:LR:143:HIS:NE2	2.50	0.45
1:L5:4082:G:C2	1:L5:4083:U:H5	2.35	0.45
1:L5:4631:G:H2'	1:L5:4632:U:O4'	2.17	0.45
1:L5:4937:C:OP1	8:LE:183:ARG:NH1	2.46	0.45
1:L5:4978:G:O2'	1:L5:4980:C:OP2	2.28	0.45
4:LA:108:PRO:HG3	44:Lp:90:LYS:HD2	1.99	0.45
14:LL:150:LEU:HD11	36:Lh:121:VAL:HB	1.99	0.45
18:LP:114:ILE:HA	18:LP:150:LEU:HD23	1.99	0.45
21:LS:85:ASP:HB3	21:LS:123:SER:HB2	1.99	0.45
22:LT:73:GLY:HA2	22:LT:90:ASN:HA	1.98	0.45
24:LV:70:PRO:HA	24:LV:73:ARG:HD2	1.98	0.45
27:LY:50:ARG:HG3	27:LY:51:LYS:N	2.32	0.45
29:La:134:GLU:O	29:La:138:LYS:N	2.40	0.45
47:S2:883:U:H2'	47:S2:884:C:C6	2.51	0.45
51:SD:30:ALA:HB1	51:SD:103:GLU:OE1	2.17	0.45
62:ST:3:GLY:O	62:ST:4:VAL:HG12	2.17	0.45
63:SU:86:LYS:O	63:SU:87:ARG:NH2	2.44	0.45
64:SV:24:ILE:HG23	64:SV:28:ASP:HB3	1.99	0.45
68:Sd:7:TYR:CE2	68:Sd:9:SER:HB2	2.51	0.45
70:Sg:220:ASP:OD1	70:Sg:227:LEU:HG	2.16	0.45
71:SC:191:VAL:HA	71:SC:228:GLY:HA3	1.98	0.45
79:SZ:92:LEU:HA	79:SZ:97:ILE:HB	1.99	0.45
1:L5:66:A:N6	1:L5:282:C:HO2'	2.10	0.45
1:L5:235:A:N6	1:L5:238:C:N3	2.65	0.45
1:L5:1884:C:H4'	1:L5:2070:U:H5	1.82	0.45
1:L5:2478:C:H2'	1:L5:2479:G:C8	2.51	0.45
1:L5:3877:A:O2'	1:L5:4400:G:N2	2.47	0.45
1:L5:4537:C:H2'	1:L5:4538:G:C8	2.52	0.45
4:LA:40:TYR:HB3	4:LA:94:ALA:HB2	1.99	0.45
5:LB:144:LYS:HD3	5:LB:147:GLU:OE2	2.17	0.45
5:LB:371:THR:HG21	25:LW:17:HIS:CE1	2.52	0.45
21:LS:113:MET:HE3	21:LS:119:ALA:HB3	1.99	0.45
21:LS:139:ARG:HA	21:LS:140:PRO:HD3	1.83	0.45
24:LV:18:LEU:HA	24:LV:56:GLY:HA2	1.99	0.45
31:Lc:17:ARG:NE	31:Lc:103:ASP:OD2	2.50	0.45
36:Lh:64:THR:HA	36:Lh:67:GLU:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:109:U:H3	47:S2:352:U:H3	1.65	0.45
47:S2:180:G:O2'	47:S2:181:A:H2'	2.17	0.45
47:S2:338:G:O2'	47:S2:339:A:H5'	2.17	0.45
47:S2:379:C:OP2	55:SI:181:GLN:NE2	2.49	0.45
47:S2:535:G:H22	47:S2:537:C:H1'	1.82	0.45
47:S2:1565:C:H2'	47:S2:1566:G:O4'	2.16	0.45
48:S6:10:G:O2'	48:S6:11:G:N7	2.46	0.45
51:SD:76:ARG:HD3	56:SK:22:VAL:HB	1.98	0.45
52:SE:82:TYR:CD1	52:SE:83:PRO:HD2	2.51	0.45
54:SH:68:GLN:O	54:SH:71:SER:OG	2.25	0.45
55:SI:8:TRP:CZ3	55:SI:20:PRO:HB3	2.51	0.45
55:SI:162:LEU:HG	55:SI:166:PHE:HE2	1.82	0.45
65:SX:90:CYS:HB3	65:SX:130:LEU:HD11	1.99	0.45
68:Sd:30:LEU:HG	68:Sd:38:MET:O	2.17	0.45
1:L5:346:G:HO2'	1:L5:1367:C:H41	1.60	0.45
1:L5:2043:A:H1'	1:L5:4462:C:H1'	1.99	0.45
1:L5:2057:A:H62	17:LO:18:ARG:HD3	1.82	0.45
1:L5:3620:G:OP1	1:L5:3622:C:N4	2.50	0.45
1:L5:3784:A:O2'	1:L5:3785:A:H5'	2.17	0.45
1:L5:4988:U:H5'	1:L5:5061:A:C8	2.52	0.45
5:LB:28:LYS:HZ1	5:LB:30:LYS:HD2	1.82	0.45
5:LB:107:ALA:CB	5:LB:201:LEU:HD21	2.47	0.45
5:LB:114:CYS:SG	5:LB:180:LEU:HD12	2.57	0.45
10:LG:260:GLU:O	10:LG:263:THR:HG22	2.17	0.45
12:LI:188:LYS:HD2	12:LI:213:HIS:CD2	2.43	0.45
14:LL:170:THR:HG22	14:LL:172:GLU:H	1.82	0.45
16:LN:124:ASP:OD1	16:LN:125:SER:N	2.48	0.45
16:LN:160:GLU:OE1	16:LN:160:GLU:N	2.39	0.45
17:LO:38:CYS:SG	17:LO:77:SER:HA	2.57	0.45
19:LQ:12:LYS:HD3	19:LQ:14:ARG:HH12	1.81	0.45
24:LV:75:LYS:HE2	24:LV:77:HIS:NE2	2.31	0.45
26:LX:110:LYS:HG3	26:LX:121:VAL:HG21	1.98	0.45
26:LX:129:ARG:HD3	26:LX:135:LYS:HD2	1.98	0.45
29:La:148:ALA:HB2	37:Li:6:PRO:O	2.17	0.45
31:Lc:81:LEU:HD23	31:Lc:91:VAL:O	2.17	0.45
47:S2:93:U:H2'	47:S2:94:G:O4'	2.16	0.45
47:S2:924:G:OP1	75:SN:3:ARG:HD3	2.16	0.45
47:S2:1192:U:H2'	47:S2:1193:U:C6	2.52	0.45
47:S2:1572:C:H2'	47:S2:1573:G:O4'	2.17	0.45
66:Sa:89:ARG:HA	66:Sa:92:ARG:NH1	2.31	0.45
1:L5:280:G:OP2	16:LN:44:ARG:NH1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1729:A:H61	1:L5:1800:U:H3	1.65	0.45
1:L5:3767:C:O2'	1:L5:3768:U:OP1	2.32	0.45
1:L5:4945:G:N2	34:Lf:57:THR:OG1	2.49	0.45
2:L7:77:A:H62	2:L7:99:G:N2	2.13	0.45
4:LA:177:LYS:HE3	44:Lp:33:GLN:HE22	1.82	0.45
9:LF:58:HIS:CE1	9:LF:62:ARG:HD2	2.52	0.45
12:LI:21:ARG:O	12:LI:24:ARG:NH1	2.50	0.45
13:LJ:29:SER:OG	13:LJ:67:LYS:O	2.30	0.45
24:LV:100:ASP:OD1	24:LV:101:ASN:N	2.50	0.45
30:Lb:58:GLN:HA	30:Lb:61:ASN:HB2	1.99	0.45
35:Lg:68:SER:HB2	35:Lg:71:LYS:HG2	1.98	0.45
47:S2:1511:U:O2'	47:S2:1512:C:O5'	2.32	0.45
50:SB:34:LYS:HG2	50:SB:43:ASN:HB3	1.99	0.45
51:SD:71:ALA:O	51:SD:75:LYS:N	2.47	0.45
61:SS:39:ARG:NH1	62:ST:38:LYS:HB3	2.32	0.45
65:SX:51:VAL:HG21	65:SX:94:ILE:HD11	1.99	0.45
68:Sd:29:GLY:O	68:Sd:40:ARG:N	2.50	0.45
1:L5:454:U:H1'	1:L5:455:C:C6	2.52	0.44
1:L5:716:C:H2'	1:L5:717:U:C6	2.52	0.44
1:L5:987:C:H2'	1:L5:988:C:C6	2.52	0.44
1:L5:1339:U:H2'	1:L5:1340:C:C6	2.52	0.44
1:L5:4280:A:C2	7:LD:31:TYR:HE1	2.35	0.44
4:LA:40:TYR:HB2	4:LA:89:TYR:HB3	1.99	0.44
5:LB:291:TYR:HE1	5:LB:299:ILE:HG13	1.82	0.44
7:LD:60:ILE:O	7:LD:60:ILE:HG13	2.17	0.44
9:LF:87:PRO:HG2	9:LF:144:TYR:CD2	2.52	0.44
9:LF:92:VAL:HG12	9:LF:142:TRP:HB3	1.99	0.44
12:LI:38:ARG:HG2	12:LI:83:ASP:HB2	1.98	0.44
19:LQ:25:LEU:HD12	19:LQ:28:LEU:HD12	1.98	0.44
33:Le:35:TRP:CZ2	33:Le:56:PRO:HD2	2.52	0.44
36:Lh:15:GLU:OE1	36:Lh:15:GLU:N	2.49	0.44
47:S2:380:G:H5''	55:SI:31:ARG:HH11	1.82	0.44
47:S2:563:G:O6	47:S2:564:A:N6	2.50	0.44
47:S2:851:C:H5''	47:S2:852:G:O4'	2.18	0.44
47:S2:1036:A:H2'	47:S2:1037:G:H5'	1.99	0.44
47:S2:1325:G:H4'	47:S2:1510:G:H4'	1.99	0.44
47:S2:1535:U:H5'	47:S2:1536:G:C8	2.52	0.44
52:SE:71:LYS:HD3	52:SE:74:GLY:HA2	1.98	0.44
52:SE:252:ARG:NH2	73:SJ:75:ASN:HB3	2.32	0.44
53:SF:49:LEU:HD11	59:SQ:49:TYR:HB3	1.99	0.44
53:SF:86:LYS:O	53:SF:87:LEU:HD12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:158:LEU:O	54:SH:190:PRO:HD2	2.18	0.44
55:SI:193:LYS:O	55:SI:196:GLU:HG2	2.17	0.44
65:SX:52:LEU:HD22	65:SX:53:GLU:HG2	1.98	0.44
65:SX:85:VAL:HA	65:SX:86:PRO:HD2	1.88	0.44
70:Sg:62:HIS:CE1	70:Sg:82:SER:HA	2.52	0.44
74:SM:56:CYS:SG	74:SM:57:ASP:N	2.84	0.44
77:SW:27:ILE:HG12	77:SW:61:ILE:HB	1.98	0.44
1:L5:2350:U:N3	1:L5:3906:A:OP1	2.47	0.44
1:L5:2701:U:H3	1:L5:2715:G:H1	1.65	0.44
1:L5:3766:A:H62	47:S2:1829:G:H1'	1.83	0.44
1:L5:4081:G:O2'	4:LA:122:ASP:HB3	2.17	0.44
3:L8:2:G:H3'	3:L8:3:A:C8	2.52	0.44
5:LB:112:ASP:O	5:LB:113:GLU:HB2	2.17	0.44
13:LJ:110:GLN:H	13:LJ:110:GLN:CD	2.24	0.44
20:LR:174:GLU:O	20:LR:178:GLN:N	2.45	0.44
25:LW:94:ARG:O	25:LW:97:LYS:NZ	2.47	0.44
33:Le:67:LYS:HE2	33:Le:68:HIS:NE2	2.31	0.44
45:Lr:107:ARG:HG3	45:Lr:108:MET:H	1.82	0.44
47:S2:3:C:N4	73:SJ:17:ARG:HE	2.16	0.44
47:S2:872:A:O2'	47:S2:873:G:OP2	2.33	0.44
47:S2:1078:C:H2'	47:S2:1079:C:C6	2.52	0.44
47:S2:1865:C:H5'	47:S2:1866:A:N7	2.31	0.44
51:SD:54:ARG:HB2	51:SD:58:VAL:HG13	1.98	0.44
52:SE:127:ARG:NE	52:SE:142:HIS:HA	2.33	0.44
57:SL:5:GLN:O	57:SL:7:GLU:N	2.46	0.44
64:SV:69:ILE:O	64:SV:73:ALA:N	2.38	0.44
65:SX:91:LEU:O	65:SX:94:ILE:HG22	2.16	0.44
69:Sf:101:ALA:O	69:Sf:103:LEU:N	2.50	0.44
71:SC:207:ALA:O	71:SC:210:PRO:HD2	2.17	0.44
73:SJ:85:GLY:HA2	73:SJ:151:LEU:HD22	1.99	0.44
73:SJ:110:LEU:HD22	73:SJ:147:PHE:CD2	2.53	0.44
1:L5:227:A:C2	27:LY:9:SER:HB2	2.52	0.44
1:L5:693:C:H2'	1:L5:694:C:C6	2.52	0.44
1:L5:1354:A:OP2	19:LQ:106:THR:HG21	2.17	0.44
1:L5:1750:G:H5'	12:LI:40:LYS:HZ3	1.82	0.44
1:L5:3651:A:H5''	4:LA:199:VAL:HA	1.98	0.44
1:L5:4911:A:H3'	1:L5:4912:G:H4'	1.98	0.44
1:L5:4949:G:C2	1:L5:4950:U:H2'	2.52	0.44
1:L5:4979:A:OP1	5:LB:228:TYR:HB2	2.17	0.44
4:LA:112:ILE:HD11	44:Lp:79:VAL:HG22	1.98	0.44
6:LC:252:TRP:HE3	6:LC:257:PHE:HD1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:187:SER:HB3	7:LD:189:GLU:HG3	1.98	0.44
9:LF:148:LYS:CG	9:LF:245:ARG:HH11	2.26	0.44
31:Lc:63:TYR:O	31:Lc:67:ALA:N	2.50	0.44
33:Le:108:ARG:O	33:Le:111:ILE:HG22	2.18	0.44
35:Lg:37:LYS:HE3	35:Lg:60:ARG:NH1	2.32	0.44
36:Lh:97:LYS:HZ1	36:Lh:98:HIS:HB2	1.83	0.44
47:S2:24:C:O2'	47:S2:25:A:H2'	2.18	0.44
47:S2:180:G:O2'	47:S2:181:A:N3	2.50	0.44
47:S2:1019:C:H5''	75:SN:72:LEU:HB2	1.99	0.44
47:S2:1473:G:N2	47:S2:1475:G:H8	2.15	0.44
49:SA:183:LEU:HD23	49:SA:186:ARG:HD2	1.99	0.44
50:SB:33:VAL:HG13	50:SB:96:CYS:O	2.16	0.44
50:SB:128:LYS:HG3	50:SB:129:THR:O	2.18	0.44
51:SD:106:ARG:HG3	51:SD:107:TYR:N	2.30	0.44
53:SF:173:LEU:O	53:SF:177:LEU:HG	2.17	0.44
53:SF:182:LYS:O	53:SF:184:SER:N	2.41	0.44
62:ST:99:VAL:O	62:ST:103:VAL:HG23	2.17	0.44
73:SJ:163:SER:H	73:SJ:167:GLY:HA3	1.81	0.44
1:L5:19:G:H1'	16:LN:112:ALA:HB2	1.99	0.44
1:L5:191:G:H2'	1:L5:192:G:H8	1.82	0.44
1:L5:197:A:N1	1:L5:225:G:O2'	2.45	0.44
1:L5:455:C:N4	1:L5:702:U:O2	2.50	0.44
1:L5:673:C:H2'	1:L5:674:G:H8	1.81	0.44
1:L5:1178:G:H5'	7:LD:289:ARG:HE	1.82	0.44
1:L5:1297:U:H2'	1:L5:1298:C:C6	2.53	0.44
1:L5:1677:U:H4'	1:L5:1680:G:C2	2.52	0.44
1:L5:1963:C:H2'	1:L5:1964:A:C8	2.50	0.44
1:L5:2269:C:N4	45:Lr:11:ARG:HD3	2.30	0.44
1:L5:3684:G:H2'	1:L5:3685:C:C6	2.52	0.44
1:L5:4046:A:P	1:L5:4046:A:H8	2.41	0.44
1:L5:4325:A:N7	1:L5:4326:G:H1'	2.33	0.44
1:L5:4948:C:H3'	1:L5:4949:G:H21	1.81	0.44
5:LB:87:VAL:HG11	5:LB:110:ILE:HD12	1.99	0.44
5:LB:238:LYS:NZ	5:LB:239:LYS:O	2.37	0.44
5:LB:348:ARG:NH1	5:LB:351:LEU:HD23	2.31	0.44
11:LH:96:TYR:HB3	11:LH:101:ILE:HD12	1.99	0.44
19:LQ:67:ILE:HG22	19:LQ:71:LYS:HZ2	1.82	0.44
24:LV:111:GLU:OE2	24:LV:131:ARG:NH2	2.50	0.44
33:Le:9:LYS:HD2	33:Le:10:PRO:HD2	1.99	0.44
36:Lh:42:SER:O	36:Lh:46:LYS:HG2	2.17	0.44
41:Lm:104:HIS:HB2	41:Lm:105:PRO:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:691:G:H3'	47:S2:692:G:C5'	2.44	0.44
47:S2:837:A:C2	47:S2:839:C:H5''	2.52	0.44
47:S2:933:G:H1'	47:S2:1001:A:H5''	1.99	0.44
47:S2:1308:U:H3	69:Sf:141:CYS:HB2	1.83	0.44
47:S2:1325:G:N2	47:S2:1504:U:O2	2.50	0.44
47:S2:1546:G:H21	47:S2:1669:G:N2	2.15	0.44
49:SA:190:SER:HB2	49:SA:193:HIS:HB3	1.99	0.44
51:SD:74:GLN:NE2	51:SD:84:VAL:O	2.50	0.44
58:SP:101:THR:HA	58:SP:102:PHE:HA	1.80	0.44
58:SP:104:GLN:N	58:SP:104:GLN:OE1	2.50	0.44
68:Sd:7:TYR:HE2	68:Sd:9:SER:HB2	1.83	0.44
70:Sg:168:CYS:SG	70:Sg:169:GLY:N	2.87	0.44
73:SJ:114:VAL:HB	73:SJ:126:ALA:HB1	1.99	0.44
1:L5:227:A:H2	27:LY:9:SER:HB2	1.83	0.44
1:L5:233:U:H1'	1:L5:234:G:H21	1.83	0.44
1:L5:719:C:H3'	1:L5:720:G:H8	1.82	0.44
1:L5:917:A:N6	1:L5:919:C:H41	2.16	0.44
1:L5:1755:C:C2	7:LD:3:PHE:HA	2.52	0.44
3:L8:140:C:H2'	3:L8:141:C:C6	2.53	0.44
5:LB:291:TYR:O	5:LB:298:LEU:HB2	2.17	0.44
9:LF:80:ASN:OD1	22:LT:142:ARG:HA	2.17	0.44
10:LG:44:ASP:OD1	10:LG:45:ILE:N	2.49	0.44
18:LP:24:VAL:HG12	18:LP:86:LYS:HG3	1.99	0.44
19:LQ:167:VAL:HG22	19:LQ:175:GLU:OE1	2.17	0.44
23:LU:49:VAL:O	23:LU:51:GLY:N	2.42	0.44
39:Lk:11:PHE:HE2	39:Lk:56:LEU:HD11	1.82	0.44
44:Lp:64:VAL:HG12	44:Lp:65:ALA:N	2.32	0.44
45:Lr:25:TYR:O	45:Lr:27:THR:HG23	2.17	0.44
45:Lr:114:ALA:HA	45:Lr:117:ILE:HG22	2.00	0.44
47:S2:186:C:H2'	47:S2:187:G:C8	2.51	0.44
47:S2:380:G:P	55:SI:56:ARG:HH22	2.39	0.44
47:S2:483:C:H5''	65:SX:48:LYS:HG3	1.99	0.44
47:S2:535:G:H2'	47:S2:535:G:N3	2.32	0.44
47:S2:557:U:H2'	47:S2:558:G:C8	2.52	0.44
51:SD:70:THR:O	51:SD:74:GLN:HG2	2.18	0.44
53:SF:55:ARG:HG2	53:SF:62:ARG:NH1	2.33	0.44
54:SH:58:LYS:O	54:SH:90:LYS:HD3	2.16	0.44
54:SH:69:LEU:HA	54:SH:72:PHE:HD2	1.83	0.44
58:SP:77:LYS:HA	58:SP:78:THR:HB	1.98	0.44
69:Sf:94:LYS:O	69:Sf:95:ARG:NH1	2.48	0.44
71:SC:246:LYS:O	71:SC:249:SER:OG	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SM:85:LEU:HD21	74:SM:108:CYS:H	1.83	0.44
76:SO:84:ARG:HA	76:SO:87:GLU:OE2	2.18	0.44
1:L5:1305:C:H2'	1:L5:1306:C:C6	2.53	0.44
1:L5:2289:C:O2'	45:Lr:22:LYS:NZ	2.34	0.44
1:L5:2505:C:H4'	1:L5:2506:G:O5'	2.17	0.44
1:L5:2579:G:N2	1:L5:2581:A:H3'	2.32	0.44
1:L5:2850:A:H5''	1:L5:4496:A:OP1	2.18	0.44
1:L5:2893:U:H2'	1:L5:2894:A:O4'	2.18	0.44
1:L5:4174:U:H2'	1:L5:4175:G:C8	2.53	0.44
1:L5:4413:C:H41	1:L5:4429:C:H41	1.66	0.44
1:L5:4759:C:H5''	17:LO:37:ARG:NH1	2.32	0.44
1:L5:4759:C:H5''	17:LO:37:ARG:HH12	1.83	0.44
1:L5:4948:C:HO2'	1:L5:4949:G:P	2.41	0.44
1:L5:4974:C:H1'	1:L5:4985:U:C2	2.52	0.44
13:LJ:159:LYS:O	13:LJ:163:MET:N	2.49	0.44
15:LM:128:LYS:HD2	15:LM:131:GLN:HE21	1.83	0.44
19:LQ:72:LEU:HD22	19:LQ:75:ARG:NH1	2.32	0.44
20:LR:99:MET:HE1	20:LR:128:LYS:HA	1.98	0.44
21:LS:2:LYS:HD2	21:LS:35:PRO:HD3	2.00	0.44
25:LW:71:ARG:O	25:LW:72:THR:OG1	2.33	0.44
35:Lg:52:ARG:O	35:Lg:54:ARG:NH1	2.51	0.44
36:Lh:14:LYS:HA	36:Lh:17:LEU:HB2	2.00	0.44
46:Lz:6:SER:OG	46:Lz:212:LYS:HD2	2.17	0.44
47:S2:332:G:N7	72:SG:190:ARG:NH2	2.66	0.44
47:S2:399:C:C2	57:SL:106:HIS:HD2	2.36	0.44
47:S2:975:G:O2'	76:SO:49:GLY:O	2.28	0.44
47:S2:1144:A:H2'	47:S2:1145:A:C8	2.53	0.44
47:S2:1280:G:C2	47:S2:1281:G:H1'	2.53	0.44
47:S2:1421:A:H62	47:S2:1422:G:N2	2.15	0.44
47:S2:1479:G:H2'	47:S2:1480:A:O4'	2.17	0.44
47:S2:1747:C:H42	47:S2:1787:G:H1	1.65	0.44
56:SK:51:SER:O	56:SK:54:SER:OG	2.25	0.44
59:SQ:109:LYS:HE2	59:SQ:120:LEU:HD21	1.99	0.44
61:SS:12:ILE:O	61:SS:22:GLY:N	2.35	0.44
73:SJ:169:ARG:NH2	73:SJ:170:PRO:HG2	2.33	0.44
74:SM:42:LEU:HD12	74:SM:43:ASP:N	2.33	0.44
74:SM:86:GLY:C	74:SM:106:CYS:H	2.26	0.44
76:SO:71:PRO:O	76:SO:75:MET:HG3	2.17	0.44
78:SY:20:ARG:HH11	78:SY:74:MET:HA	1.82	0.44
1:L5:24:G:H5''	1:L5:25:A:OP1	2.18	0.44
1:L5:408:A:H5''	1:L5:409:G:OP1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1520:C:H4'	6:LC:94:ASN:HD22	1.83	0.44
1:L5:1534:A:C2	38:Lj:11:ARG:HB3	2.52	0.44
1:L5:1768:C:H4'	1:L5:1769:G:C8	2.52	0.44
1:L5:2069:A:N1	1:L5:2071:A:H1'	2.33	0.44
1:L5:2415:U:C4	1:L5:2416:G:C6	3.05	0.44
1:L5:2502:G:H3'	1:L5:2503:G:H5''	1.99	0.44
1:L5:3775:A:H5'	1:L5:3776:G:OP2	2.18	0.44
1:L5:3895:G:O6	1:L5:4564:A:N6	2.51	0.44
2:L7:1:G:H4'	7:LD:265:ARG:HG2	2.00	0.44
10:LG:165:GLU:HA	10:LG:168:VAL:HG13	2.00	0.44
11:LH:41:ILE:HD11	11:LH:69:THR:HB	2.00	0.44
14:LL:62:PRO:HB2	14:LL:63:THR:H	1.71	0.44
19:LQ:100:VAL:HG13	19:LQ:120:ILE:HD12	1.99	0.44
27:LY:22:PRO:HG2	27:LY:25:ILE:HB	1.99	0.44
27:LY:51:LYS:HD2	27:LY:72:GLN:HA	2.00	0.44
31:Lc:61:GLU:HG3	31:Lc:71:VAL:HG21	1.98	0.44
31:Lc:82:GLY:HA2	31:Lc:91:VAL:HG12	1.99	0.44
33:Le:22:ARG:HB3	33:Le:25:SER:HB3	1.99	0.44
35:Lg:37:LYS:HB3	35:Lg:60:ARG:NH1	2.28	0.44
36:Lh:3:LYS:HE2	36:Lh:5:LYS:HD3	1.99	0.44
37:Li:56:ARG:HB3	37:Li:72:PHE:CE2	2.53	0.44
47:S2:290:U:O2'	47:S2:292:A:N7	2.49	0.44
47:S2:523:A:OP1	73:SJ:127:ARG:NH1	2.50	0.44
47:S2:689:U:C4	47:S2:690:G:H1'	2.53	0.44
47:S2:1096:G:H2'	47:S2:1097:G:H8	1.82	0.44
47:S2:1255:G:H5'	47:S2:1256:G:H4'	1.99	0.44
48:S6:13:G:C6	48:S6:14:C:C2	3.05	0.44
50:SB:65:ARG:NH2	76:SO:51:GLU:OE2	2.50	0.44
52:SE:38:LEU:HA	52:SE:41:CYS:SG	2.57	0.44
52:SE:61:VAL:HG12	52:SE:80:ILE:HG23	2.00	0.44
52:SE:186:GLY:N	52:SE:189:LEU:HD23	2.32	0.44
53:SF:110:GLN:O	53:SF:114:ASN:ND2	2.51	0.44
58:SP:49:LEU:C	58:SP:51:ARG:H	2.26	0.44
58:SP:75:VAL:O	58:SP:77:LYS:N	2.51	0.44
1:L5:491:G:N1	1:L5:663:G:H1'	2.32	0.44
1:L5:920:C:H5'	15:LM:72:TYR:OH	2.18	0.44
1:L5:923:C:H2'	1:L5:924:C:C6	2.53	0.44
1:L5:1264:C:H2'	1:L5:1265:G:H8	1.83	0.44
1:L5:1350:C:H2'	1:L5:1351:G:H8	1.83	0.44
1:L5:1390:G:N2	1:L5:1393:G:OP2	2.37	0.44
1:L5:1447:C:H2'	1:L5:1448:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1699:A:OP2	9:LF:177:ARG:NH2	2.50	0.44
1:L5:4648:A:H2'	1:L5:4649:G:C8	2.53	0.44
2:L7:36:C:N4	2:L7:37:G:O6	2.50	0.44
5:LB:315:ASN:HD21	5:LB:326:VAL:HG12	1.83	0.44
11:LH:63:ASN:OD1	11:LH:66:GLU:HG2	2.17	0.44
15:LM:2:VAL:O	15:LM:4:ARG:HG3	2.18	0.44
15:LM:31:ILE:HD13	21:LS:75:VAL:HG12	2.00	0.44
19:LQ:23:ILE:HB	45:Lr:8:MET:HB3	2.00	0.44
23:LU:105:ASN:HB2	23:LU:111:GLU:HB2	2.00	0.44
30:Lb:57:MET:O	30:Lb:61:ASN:N	2.50	0.44
47:S2:694:G:O6	47:S2:738:C:O2'	2.29	0.44
47:S2:1848:U:N3	47:S2:1850:A:OP2	2.51	0.44
56:SK:24:LYS:HA	56:SK:66:HIS:HA	1.99	0.44
66:Sa:43:ASN:OD1	66:Sa:66:LYS:NZ	2.47	0.44
72:SG:144:LEU:HB2	72:SG:147:LEU:N	2.33	0.44
75:SN:55:ARG:HA	75:SN:60:VAL:O	2.18	0.44
1:L5:943:A:OP1	9:LF:146:ASN:ND2	2.50	0.44
1:L5:1628:C:H42	4:LA:3:ARG:HD3	1.83	0.44
1:L5:1693:U:H2'	1:L5:1694:C:O4'	2.18	0.44
1:L5:2318:G:N2	1:L5:2321:G:OP2	2.50	0.44
1:L5:2482:C:N3	1:L5:2483:G:H1'	2.32	0.44
1:L5:4765:G:N2	1:L5:4869:U:H3	2.08	0.44
2:L7:10:C:C4	7:LD:20:PHE:HD1	2.35	0.44
5:LB:80:GLU:HG2	5:LB:82:PRO:HD3	1.99	0.44
5:LB:232:THR:OG1	5:LB:249:ARG:NH2	2.51	0.44
8:LE:151:ILE:HB	8:LE:195:ILE:HB	2.00	0.44
8:LE:257:ILE:HD12	8:LE:260:LYS:HB2	2.00	0.44
10:LG:32:PHE:CE2	28:LZ:55:ALA:HB2	2.53	0.44
13:LJ:166:PHE:HB3	13:LJ:174:ILE:HD11	1.98	0.44
17:LO:7:LEU:O	17:LO:34:VAL:N	2.49	0.44
20:LR:175:GLU:HA	20:LR:178:GLN:HB3	2.00	0.44
21:LS:48:VAL:HG13	21:LS:54:MET:HE3	2.00	0.44
23:LU:74:SER:OG	23:LU:76:VAL:O	2.31	0.44
24:LV:48:ARG:HH21	24:LV:51:ARG:NH1	2.16	0.44
26:LX:76:ILE:CG2	26:LX:109:ILE:HG22	2.48	0.44
27:LY:24:HIS:ND1	27:LY:25:ILE:HG13	2.33	0.44
37:Li:58:MET:HE3	37:Li:94:LEU:HD12	2.00	0.44
46:Lz:95:LYS:HG2	46:Lz:98:LYS:NZ	2.33	0.44
47:S2:921:G:H2'	77:SW:28:ARG:NH1	2.33	0.44
47:S2:1334:G:H2'	47:S2:1335:G:O4'	2.17	0.44
47:S2:1545:A:C6	47:S2:1546:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S6:33:C:H4'	48:S6:34:C:OP1	2.18	0.44
48:S6:37:A:N7	53:SF:132:GLY:HA2	2.33	0.44
50:SB:125:VAL:HG12	50:SB:169:MET:HE3	2.00	0.44
58:SP:97:TYR:O	58:SP:98:ASN:ND2	2.51	0.44
64:SV:35:ASN:HB3	64:SV:50:PHE:CD1	2.52	0.44
70:Sg:84:ASP:OD1	70:Sg:84:ASP:N	2.49	0.44
80:Sb:62:VAL:HG22	80:Sb:64:CYS:H	1.83	0.44
1:L5:149:A:H5''	1:L5:151:G:H5'	2.00	0.43
1:L5:724:C:H42	1:L5:942:G:H1	1.66	0.43
1:L5:735:G:H2'	1:L5:736:C:C5	2.52	0.43
1:L5:1248:C:H2'	1:L5:1249:C:C6	2.53	0.43
1:L5:1361:G:OP2	14:LL:28:GLN:NE2	2.50	0.43
1:L5:1979:A:C2	1:L5:1983:A:H5''	2.53	0.43
1:L5:2683:C:H2'	1:L5:2684:C:C6	2.53	0.43
1:L5:2887:U:O2'	20:LR:79:GLY:HA3	2.18	0.43
1:L5:3766:A:N3	47:S2:1849:G:C6	2.86	0.43
1:L5:3973:G:N2	1:L5:4050:A:H2'	2.33	0.43
1:L5:4978:G:H2'	1:L5:4979:A:H5''	1.99	0.43
8:LE:58:SER:N	8:LE:61:ALA:HB3	2.33	0.43
15:LM:95:ILE:C	15:LM:97:ALA:H	2.26	0.43
17:LO:7:LEU:HD22	17:LO:31:ARG:HH22	1.83	0.43
18:LP:30:ARG:HB2	18:LP:119:VAL:HG21	2.00	0.43
21:LS:83:ARG:CZ	22:LT:156:TYR:HD1	2.31	0.43
22:LT:34:TYR:CE2	22:LT:96:ILE:HD11	2.52	0.43
23:LU:21:PHE:CE1	23:LU:80:LYS:HB2	2.52	0.43
31:Lc:31:TYR:HE1	31:Lc:60:ILE:HD11	1.81	0.43
32:Ld:93:ASN:HA	32:Ld:103:TYR:CE2	2.52	0.43
33:Le:25:SER:OG	33:Le:33:ARG:HG2	2.18	0.43
33:Le:114:ARG:HH11	33:Le:117:GLN:NE2	2.13	0.43
37:Li:84:LYS:O	37:Li:88:GLU:HG2	2.18	0.43
39:Lk:66:VAL:HA	39:Lk:67:LYS:HA	1.69	0.43
47:S2:67:C:N4	72:SG:164:LYS:HB2	2.33	0.43
47:S2:656:G:O2'	71:SC:227:ARG:NH1	2.51	0.43
47:S2:803:C:H4'	77:SW:80:ASP:OD2	2.18	0.43
47:S2:873:G:H21	54:SH:114:GLN:CD	2.25	0.43
47:S2:1270:G:O2'	47:S2:1301:A:N7	2.42	0.43
49:SA:215:GLN:OE1	49:SA:215:GLN:N	2.51	0.43
51:SD:209:SER:HB2	60:SR:40:ILE:HB	2.00	0.43
61:SS:22:GLY:HA2	61:SS:56:ALA:HB3	1.99	0.43
61:SS:131:VAL:O	61:SS:133:GLY:N	2.44	0.43
65:SX:22:TRP:O	65:SX:24:ASP:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65: SX:101: LEU: O	65: SX:123: VAL: HG22	2.18	0.43
65: SX:125: VAL: O	65: SX:127: ASN: N	2.51	0.43
70: Sg:6: THR: O	70: Sg:8: ARG: NH1	2.51	0.43
72: SG:58: LYS: HE3	72: SG:105: ASN: HB2	2.00	0.43
72: SG:194: LEU: O	72: SG:198: ARG: N	2.43	0.43
74: SM:44: LYS: HD3	74: SM:112: LYS: NZ	2.33	0.43
76: SO:147: ARG: HD2	76: SO:150: ARG: NE	2.31	0.43
1: L5:138: G: H2'	1: L5:139: G: H8	1.82	0.43
1: L5:185: C: C5	14: LL:44: ARG: HD3	2.53	0.43
1: L5:227: A: H2'	1: L5:228: C: O4'	2.19	0.43
1: L5:700: G: H2'	1: L5:701: G: O4'	2.18	0.43
1: L5:705: G: H1	1: L5:1292: C: H42	1.67	0.43
1: L5:753: C: H42	1: L5:910: G: H1	1.66	0.43
1: L5:1442: C: N3	1: L5:2104: G: N2	2.66	0.43
1: L5:1969: G: H3'	1: L5:1970: A: H8	1.83	0.43
1: L5:2696: A: H5'	39: Lk:70: LYS: HD2	1.99	0.43
1: L5:2770: C: H2'	1: L5:2771: G: C8	2.53	0.43
1: L5:3670: C: O2'	1: L5:3671: G: N7	2.48	0.43
1: L5:3670: C: O2'	1: L5:3671: G: OP2	2.37	0.43
1: L5:3755: G: N1	1: L5:3770: U: O2	2.51	0.43
1: L5:4049: U: H4'	1: L5:4051: C: N4	2.33	0.43
1: L5:4769: G: N2	1: L5:4865: C: N3	2.58	0.43
7: LD:209: ARG: NH1	7: LD:234: ASP: OD2	2.50	0.43
8: LE:146: PRO: HA	8: LE:164: PHE: HD2	1.83	0.43
11: LH:182: SER: OG	11: LH:183: GLU: N	2.48	0.43
14: LL:146: LEU: HB2	14: LL:148: THR: N	2.34	0.43
15: LM:96: GLU: HA	15: LM:99: GLU: HB2	2.00	0.43
16: LN:115: VAL: HA	16: LN:134: LEU: HD23	2.01	0.43
18: LP:59: PRO: HG2	18: LP:76: TRP: HB2	1.99	0.43
20: LR:66: ASN: O	20: LR:70: ARG: N	2.51	0.43
21: LS:160: ARG: HG3	21: LS:161: ARG: H	1.82	0.43
47: S2:589: G: O3'	47: S2:590: A: H2'	2.17	0.43
47: S2:895: G: H2'	47: S2:896: U: H4'	2.00	0.43
47: S2:1044: G: H8	47: S2:1044: G: OP2	2.01	0.43
47: S2:1060: A: H4'	47: S2:1061: U: O5'	2.18	0.43
47: S2:1406: G: H2'	47: S2:1407: U: O4'	2.18	0.43
47: S2:1673: U: OP1	59: SQ:79: ALA: N	2.50	0.43
50: SB:214: LYS: HD3	50: SB:216: LYS: HD2	2.00	0.43
51: SD:135: GLU: CD	51: SD:157: MET: HG2	2.43	0.43
53: SF:14: THR: HA	53: SF:15: PRO: HA	1.72	0.43
53: SF:39: ILE: HG23	53: SF:68: ILE: HG21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:37:LYS:O	54:SH:39:GLN:N	2.47	0.43
59:SQ:87:SER:O	59:SQ:91:ALA:N	2.50	0.43
60:SR:98:VAL:HB	60:SR:115:SER:HB3	2.00	0.43
65:SX:15:SER:O	65:SX:18:ARG:HG2	2.18	0.43
68:Sd:12:ARG:O	68:Sd:18:SER:OG	2.30	0.43
70:Sg:162:ASN:O	70:Sg:164:ILE:N	2.45	0.43
70:Sg:170:TRP:HB3	70:Sg:194:TYR:HB2	1.98	0.43
77:SW:41:MET:HG2	77:SW:129:PHE:CE2	2.53	0.43
79:SZ:57:LYS:HE2	79:SZ:77:LEU:HD11	1.98	0.43
1:L5:963:G:H1'	1:L5:2252:G:C6	2.53	0.43
1:L5:980:U:O2'	1:L5:981:C:H5'	2.18	0.43
1:L5:1361:G:H2'	1:L5:1362:G:O4'	2.18	0.43
1:L5:1687:U:H2'	1:L5:1688:G:C8	2.53	0.43
1:L5:1932:A:H62	1:L5:2053:C:N4	2.15	0.43
1:L5:2370:A:C8	32:Ld:39:LYS:HD2	2.53	0.43
1:L5:3753:G:H22	1:L5:3771:C:H6	1.66	0.43
1:L5:4218:U:H4'	30:Lb:7:HIS:ND1	2.34	0.43
1:L5:4231:C:O2'	1:L5:4233:A:H1'	2.17	0.43
3:L8:60:G:N7	36:Lh:62:ASN:ND2	2.66	0.43
6:LC:33:ARG:NH1	19:LQ:22:ASP:HB2	2.34	0.43
13:LJ:9:GLU:O	13:LJ:13:ARG:HB2	2.18	0.43
14:LL:2:ALA:HA	29:La:41:HIS:CE1	2.53	0.43
14:LL:63:THR:HG21	29:La:66:ASN:HB3	2.00	0.43
17:LO:8:VAL:HG23	17:LO:117:ARG:HA	2.00	0.43
18:LP:114:ILE:HD11	18:LP:117:ILE:HB	1.98	0.43
19:LQ:43:PHE:CD2	19:LQ:133:GLY:HA3	2.54	0.43
22:LT:51:GLY:HA3	22:LT:92:ARG:CD	2.49	0.43
24:LV:69:LYS:HA	24:LV:70:PRO:HD3	1.87	0.43
25:LW:70:LYS:HD2	47:S2:1783:C:C5	2.52	0.43
28:LZ:112:ARG:NH1	28:LZ:116:VAL:HG13	2.34	0.43
45:Lr:51:VAL:HG23	45:Lr:62:VAL:HG22	1.99	0.43
47:S2:496:C:H42	47:S2:506:G:H1	1.65	0.43
47:S2:535:G:N2	47:S2:537:C:H1'	2.33	0.43
47:S2:565:G:N1	47:S2:586:G:H1'	2.34	0.43
47:S2:572:U:H5''	78:SY:59:GLY:O	2.19	0.43
47:S2:913:A:N6	54:SH:98:ARG:HB3	2.33	0.43
47:S2:1420:G:H5'	62:ST:133:ARG:NH2	2.31	0.43
49:SA:80:ARG:HH22	49:SA:166:LYS:HG2	1.82	0.43
50:SB:167:LYS:O	50:SB:171:ILE:HG12	2.18	0.43
51:SD:95:GLY:O	51:SD:97:CYS:N	2.48	0.43
52:SE:31:PRO:HB3	52:SE:43:PRO:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SE:201:HIS:N	52:SE:206:ASP:OD1	2.35	0.43
57:SL:132:ARG:O	57:SL:134:LEU:N	2.50	0.43
58:SP:36:LEU:HG	58:SP:37:TYR:CE2	2.53	0.43
60:SR:88:VAL:O	60:SR:92:ASP:HB2	2.18	0.43
61:SS:72:GLN:O	61:SS:74:PRO:HD3	2.18	0.43
70:Sg:270:LEU:HD11	70:Sg:310:TRP:NE1	2.33	0.43
76:SO:92:ALA:CB	76:SO:125:LYS:HB2	2.48	0.43
1:L5:423:G:OP1	18:LP:62:ARG:NH1	2.51	0.43
1:L5:1097:C:O2	1:L5:1200:G:N2	2.51	0.43
1:L5:1670:G:H2'	1:L5:1855:G:H5''	2.00	0.43
1:L5:1725:U:H5''	9:LF:104:LYS:HG3	1.99	0.43
1:L5:2411:C:H42	1:L5:2433:G:H1	1.64	0.43
1:L5:2464:C:O2'	1:L5:2465:C:O5'	2.34	0.43
1:L5:4136:G:H2'	1:L5:4137:C:C6	2.54	0.43
1:L5:4489:G:N2	1:L5:4592:C:OP1	2.50	0.43
3:L8:110:U:O2'	3:L8:111:U:H4'	2.18	0.43
13:LJ:21:CYS:SG	13:LJ:73:THR:HG22	2.58	0.43
13:LJ:88:LYS:C	13:LJ:91:GLU:H	2.26	0.43
14:LL:89:LYS:HE2	36:Lh:114:TYR:CE2	2.53	0.43
16:LN:114:ARG:NH1	16:LN:157:LYS:HA	2.32	0.43
21:LS:69:GLU:HG3	21:LS:71:SER:H	1.83	0.43
22:LT:89:ILE:H	22:LT:89:ILE:HD12	1.84	0.43
22:LT:94:GLU:H	22:LT:94:GLU:CD	2.26	0.43
35:Lg:45:ALA:N	35:Lg:81:SER:O	2.50	0.43
35:Lg:98:GLU:O	35:Lg:102:ILE:HG12	2.19	0.43
43:Lo:3:ASN:HD21	43:Lo:95:GLY:H	1.67	0.43
47:S2:38:A:H4'	73:SJ:7:TRP:CD1	2.53	0.43
47:S2:642:U:P	73:SJ:39:ASN:HB2	2.58	0.43
47:S2:1058:A:H2'	47:S2:1059:G:O4'	2.18	0.43
47:S2:1239:U:H1'	47:S2:1242:U:C5	2.52	0.43
47:S2:1244:U:H2'	47:S2:1245:G:C8	2.52	0.43
47:S2:1281:G:C8	74:SM:101:ARG:HB3	2.53	0.43
47:S2:1623:A:O5'	61:SS:133:GLY:HA3	2.18	0.43
52:SE:103:TYR:HB3	52:SE:107:GLY:HA2	2.01	0.43
53:SF:125:SER:O	53:SF:136:ARG:NH2	2.49	0.43
54:SH:98:ARG:O	54:SH:100:ILE:N	2.48	0.43
60:SR:13:ALA:O	60:SR:16:ILE:HG22	2.19	0.43
61:SS:11:HIS:O	61:SS:13:LEU:N	2.51	0.43
61:SS:25:LYS:HA	61:SS:55:ARG:HA	1.99	0.43
65:SX:95:GLU:HB2	65:SX:98:ASP:OD2	2.18	0.43
70:Sg:191:HIS:CG	70:Sg:192:THR:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:110:LEU:HB2	73:SJ:147:PHE:O	2.18	0.43
1:L5:195:C:H42	1:L5:246:G:H1	1.65	0.43
1:L5:364:G:N7	38:Lj:55:ARG:NH2	2.67	0.43
1:L5:715:G:H1	1:L5:953:C:N4	2.11	0.43
1:L5:1243:C:O2'	1:L5:1244:G:H5'	2.18	0.43
1:L5:1971:C:H5'	1:L5:2015:U:O4	2.18	0.43
1:L5:2543:A:H5''	1:L5:2544:G:C8	2.54	0.43
1:L5:2778:G:H4'	26:LX:107:HIS:CE1	2.53	0.43
1:L5:3762:U:H3'	1:L5:3763:A:C8	2.53	0.43
1:L5:4334:U:H4'	22:LT:7:LYS:HG3	2.00	0.43
1:L5:4861:G:H4'	17:LO:169:ARG:NH2	2.33	0.43
10:LG:66:GLN:O	10:LG:69:ILE:HG22	2.18	0.43
13:LJ:153:ALA:HA	13:LJ:154:LYS:HA	1.60	0.43
14:LL:161:TYR:HE1	29:La:105:ARG:HH21	1.66	0.43
17:LO:23:VAL:HG13	17:LO:33:VAL:HG11	2.01	0.43
17:LO:81:TRP:CZ2	17:LO:99:LEU:HD21	2.51	0.43
22:LT:18:PRO:HB2	22:LT:21:LYS:HG3	2.01	0.43
25:LW:93:LYS:HD2	72:SG:144:LEU:HD22	2.01	0.43
29:La:83:SER:OG	29:La:84:GLU:N	2.51	0.43
47:S2:215:G:N7	47:S2:312:G:N1	2.67	0.43
47:S2:412:G:O2'	47:S2:812:A:N6	2.51	0.43
47:S2:464:A:OP2	47:S2:465:A:N6	2.51	0.43
47:S2:903:A:H2'	47:S2:904:A:C5	2.54	0.43
47:S2:1269:G:N2	47:S2:1514:G:N3	2.66	0.43
47:S2:1397:U:O4	59:SQ:12:VAL:HA	2.18	0.43
51:SD:222:PRO:HG2	70:Sg:226:HIS:CE1	2.54	0.43
52:SE:36:HIS:ND1	52:SE:41:CYS:HB3	2.33	0.43
53:SF:19:LEU:H	53:SF:48:TYR:HE1	1.66	0.43
53:SF:113:VAL:O	53:SF:117:ILE:HG12	2.18	0.43
58:SP:84:ILE:HG23	58:SP:85:ILE:N	2.30	0.43
62:ST:82:ARG:HG3	62:ST:90:SER:HB2	2.00	0.43
65:SX:49:GLY:O	65:SX:100:VAL:HG22	2.18	0.43
70:Sg:194:TYR:CE2	70:Sg:212:LYS:HB2	2.53	0.43
77:SW:74:VAL:HG23	77:SW:126:LEU:O	2.18	0.43
1:L5:1606:U:H2'	1:L5:1607:C:O4'	2.18	0.43
1:L5:2403:A:OP1	35:Lg:10:ARG:HD3	2.17	0.43
1:L5:3692:A:H62	1:L5:3823:G:N2	2.04	0.43
1:L5:4128:A:H2'	1:L5:4129:G:O4'	2.19	0.43
1:L5:4235:G:O2'	1:L5:4330:G:H1'	2.19	0.43
1:L5:4944:C:H5''	8:LE:158:ARG:NH2	2.33	0.43
6:LC:31:PRO:HD3	6:LC:282:HIS:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:44:LEU:HA	6:LC:47:ASN:HD22	1.84	0.43
7:LD:22:ARG:HB3	7:LD:28:THR:HG22	2.00	0.43
12:LI:190:LEU:HD13	12:LI:197:VAL:HG23	2.00	0.43
13:LJ:87:LEU:O	13:LJ:91:GLU:N	2.51	0.43
15:LM:34:ASN:HA	15:LM:51:PRO:HA	1.99	0.43
17:LO:6:VAL:HG13	17:LO:32:LYS:HE2	2.00	0.43
20:LR:161:ALA:O	20:LR:165:LYS:HB3	2.19	0.43
30:Lb:36:ASP:HA	30:Lb:37:PRO:HD3	1.82	0.43
33:Le:75:ARG:O	33:Le:95:TYR:HB2	2.18	0.43
47:S2:216:C:H41	47:S2:309:G:H1	1.66	0.43
47:S2:314:U:H2'	47:S2:315:C:C5	2.54	0.43
47:S2:667:U:H5''	47:S2:1087:A:C5	2.54	0.43
47:S2:1238:U:C4	47:S2:1239:U:C2	3.06	0.43
47:S2:1454:A:C5'	60:SR:5:ARG:HH22	2.31	0.43
47:S2:1583:C:H3'	47:S2:1584:G:H8	1.83	0.43
48:S6:15:A:H61	48:S6:21:A:H2	1.66	0.43
49:SA:90:PHE:CD1	49:SA:179:ALA:HB2	2.53	0.43
50:SB:221:PRO:C	50:SB:223:PHE:H	2.26	0.43
51:SD:104:SER:HB3	51:SD:108:LYS:HE2	2.00	0.43
57:SL:151:THR:HA	75:SN:133:ARG:NH2	2.33	0.43
59:SQ:24:HIS:HE1	59:SQ:69:ARG:HB2	1.83	0.43
59:SQ:134:GLY:HA3	59:SQ:141:TYR:N	2.33	0.43
63:SU:26:SER:HB2	63:SU:32:LEU:HD22	1.99	0.43
66:Sa:45:VAL:HG22	66:Sa:49:ALA:HB3	2.00	0.43
70:Sg:35:SER:OG	70:Sg:36:ARG:N	2.51	0.43
70:Sg:89:LEU:O	70:Sg:97:THR:HA	2.18	0.43
72:SG:57:ASP:HA	72:SG:106:LEU:HB2	1.99	0.43
72:SG:221:LYS:HA	72:SG:224:ARG:HB3	2.01	0.43
1:L5:231:U:H4'	27:LY:100:HIS:CD2	2.54	0.43
1:L5:1951:G:O2'	21:LS:95:ARG:NH2	2.51	0.43
1:L5:3697:U:H1'	1:L5:3819:G:N2	2.34	0.43
1:L5:3701:C:C2	1:L5:3745:U:C4	3.07	0.43
1:L5:3766:A:N3	47:S2:1849:G:C5	2.87	0.43
1:L5:3798:U:H1'	1:L5:3801:U:C5	2.53	0.43
1:L5:4121:G:H5''	4:LA:87:PHE:CE1	2.54	0.43
1:L5:4209:G:H4'	22:LT:12:ARG:HH21	1.84	0.43
1:L5:4905:C:H2'	1:L5:4906:C:H6	1.83	0.43
1:L5:5047:C:H2'	1:L5:5050:C:H5	1.83	0.43
3:L8:84:A:N1	27:LY:113:LYS:HE3	2.34	0.43
7:LD:17:GLN:NE2	22:LT:20:ARG:O	2.52	0.43
8:LE:254:ASP:OD1	8:LE:255:SER:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:62:TYR:CD1	16:LN:134:LEU:HD12	2.54	0.43
24:LV:106:VAL:HG12	24:LV:107:ASN:O	2.18	0.43
33:Le:114:ARG:HD2	33:Le:117:GLN:HE21	1.83	0.43
46:Lz:60:ARG:HB2	46:Lz:61:PRO:HD3	1.99	0.43
47:S2:313:A:O2'	47:S2:314:U:O5'	2.30	0.43
47:S2:314:U:H2'	47:S2:315:C:C6	2.54	0.43
47:S2:488:U:O2'	47:S2:489:A:OP1	2.34	0.43
47:S2:530:U:N3	47:S2:531:A:N7	2.67	0.43
47:S2:822:U:H5''	47:S2:824:C:P	2.58	0.43
47:S2:1154:U:OP1	47:S2:1156:U:H5'	2.18	0.43
47:S2:1318:G:C2	47:S2:1319:U:C2	3.06	0.43
47:S2:1413:G:H5''	47:S2:1414:A:OP2	2.19	0.43
47:S2:1476:A:H3'	47:S2:1476:A:N3	2.34	0.43
47:S2:1589:A:O2'	62:ST:82:ARG:NH1	2.52	0.43
49:SA:77:ILE:HA	49:SA:99:ILE:O	2.19	0.43
51:SD:126:ILE:HG21	51:SD:134:CYS:HB3	2.01	0.43
52:SE:168:LYS:HE2	72:SG:208:GLU:OE2	2.18	0.43
53:SF:135:ARG:HB3	53:SF:203:ASN:ND2	2.34	0.43
56:SK:37:ASP:HB3	56:SK:38:LYS:H	1.70	0.43
59:SQ:116:ASP:O	59:SQ:118:THR:N	2.52	0.43
61:SS:109:GLU:OE1	61:SS:109:GLU:N	2.50	0.43
72:SG:77:LEU:N	72:SG:93:LYS:O	2.44	0.43
1:L5:150:U:H3	10:LG:162:ASP:HB3	1.84	0.43
1:L5:210:C:O2'	1:L5:233:U:O2'	2.35	0.43
1:L5:698:G:H2'	1:L5:699:C:C6	2.53	0.43
1:L5:2404:A:H1'	38:Lj:12:ARG:HH11	1.84	0.43
1:L5:3753:G:N2	1:L5:3771:C:H6	2.17	0.43
1:L5:3808:C:N4	1:L5:3809:G:O6	2.52	0.43
1:L5:3897:G:O2'	1:L5:4559:A:N6	2.43	0.43
1:L5:3907:G:H2'	1:L5:4447:C:O2'	2.19	0.43
1:L5:3974:G:C5	1:L5:3975:C:H1'	2.54	0.43
1:L5:4041:C:H3'	1:L5:4042:G:C5'	2.47	0.43
1:L5:4088:C:C6	10:LG:54:PHE:HZ	2.37	0.43
1:L5:4122:G:N2	35:Lg:98:GLU:OE2	2.51	0.43
1:L5:4313:A:H1'	22:LT:90:ASN:ND2	2.34	0.43
1:L5:4623:G:H2'	1:L5:4624:A:O4'	2.19	0.43
1:L5:4935:C:O2'	1:L5:4936:G:H5'	2.18	0.43
14:LL:55:ILE:HD12	14:LL:55:ILE:HA	1.90	0.43
15:LM:96:GLU:N	15:LM:99:GLU:OE1	2.52	0.43
18:LP:59:PRO:HG2	18:LP:76:TRP:CG	2.54	0.43
21:LS:147:ASP:CG	21:LS:148:SER:H	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:66:GLU:HA	25:LW:67:ILE:HA	1.59	0.43
28:LZ:136:PHE:HB2	35:Lg:91:ILE:HG12	2.01	0.43
32:Ld:63:ARG:N	32:Ld:104:THR:O	2.51	0.43
36:Lh:24:LEU:HA	36:Lh:27:GLU:HB3	2.00	0.43
47:S2:327:G:H1'	47:S2:328:U:O4'	2.18	0.43
47:S2:795:A:H62	54:SH:109:ARG:NH2	2.10	0.43
47:S2:1035:A:H2'	47:S2:1036:A:O4'	2.19	0.43
47:S2:1422:G:H1'	47:S2:1424:G:C8	2.53	0.43
54:SH:157:HIS:HB3	54:SH:190:PRO:HG3	2.00	0.43
56:SK:93:THR:HG1	56:SK:95:ARG:NH1	2.15	0.43
62:ST:115:LYS:HA	62:ST:121:ARG:HA	2.01	0.43
63:SU:38:ASP:CG	63:SU:104:ILE:HD12	2.43	0.43
72:SG:4:ASN:HB2	72:SG:110:ASN:OD1	2.19	0.43
73:SJ:4:ALA:H	73:SJ:5:ARG:NE	2.17	0.43
78:SY:37:LYS:O	78:SY:41:ARG:HG2	2.18	0.43
1:L5:390:C:N4	1:L5:401:G:H1	2.14	0.43
1:L5:695:G:H2'	1:L5:696:C:H5'	2.00	0.43
1:L5:924:C:H2'	1:L5:925:C:C6	2.54	0.43
1:L5:1387:A:N6	29:La:112:LEU:HB3	2.34	0.43
1:L5:2042:A:O4'	1:L5:4462:C:O2'	2.37	0.43
1:L5:3717:A:H2'	1:L5:3718:A:C8	2.54	0.43
1:L5:4232:U:O4	43:Lo:8:ARG:NH1	2.52	0.43
6:LC:159:GLU:HA	6:LC:217:ILE:HB	2.00	0.43
7:LD:39:GLN:HA	7:LD:48:LYS:HE3	2.00	0.43
9:LF:226:HIS:CD2	9:LF:234:GLY:HA3	2.54	0.43
11:LH:90:TYR:HD1	11:LH:184:LYS:HA	1.83	0.43
22:LT:92:ARG:NH1	22:LT:94:GLU:OE2	2.52	0.43
24:LV:23:GLY:HA2	24:LV:39:ILE:O	2.19	0.43
29:La:77:LYS:O	29:La:80:THR:OG1	2.20	0.43
37:Li:52:PRO:HA	37:Li:55:ARG:HD3	2.01	0.43
47:S2:339:A:O2'	47:S2:340:C:O5'	2.35	0.43
47:S2:480:G:H2'	47:S2:481:C:O4'	2.18	0.43
47:S2:872:A:O2'	47:S2:873:G:H8	2.02	0.43
47:S2:1113:A:H1'	47:S2:1121:G:H1	1.83	0.43
47:S2:1298:G:H4'	58:SP:78:THR:HG22	2.01	0.43
49:SA:205:ARG:CG	49:SA:210:ILE:HG21	2.48	0.43
52:SE:148:ARG:HE	52:SE:149:TYR:HE2	1.67	0.43
52:SE:151:ASP:OD2	52:SE:153:LEU:HB2	2.19	0.43
52:SE:252:ARG:HH22	73:SJ:76:ALA:N	2.17	0.43
70:Sg:294:ASP:OD1	70:Sg:295:GLY:N	2.52	0.43
71:SC:242:ASP:HA	71:SC:245:SER:OG	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SC:255:LEU:C	71:SC:257:LYS:H	2.26	0.43
73:SJ:32:ILE:HD11	73:SJ:40:LYS:HG2	2.01	0.43
75:SN:4:MET:HE2	75:SN:5:HIS:HE2	1.83	0.43
1:L5:254:G:N1	1:L5:255:C:O2	2.51	0.43
1:L5:964:A:H2'	1:L5:964:A:N3	2.34	0.43
1:L5:1250:C:H3'	1:L5:1251:C:C6	2.53	0.43
1:L5:1293:G:C6	1:L5:1294:A:C8	3.07	0.43
1:L5:1974:U:H3	1:L5:2002:A:H62	1.65	0.43
1:L5:3659:G:OP1	4:LA:241:ARG:HG2	2.19	0.43
1:L5:3913:G:H3'	1:L5:3914:U:H4'	2.01	0.43
1:L5:3942:A:H61	1:L5:4071:U:H3	1.66	0.43
1:L5:3977:C:O2'	1:L5:4035:G:N7	2.49	0.43
1:L5:4988:U:H5'	1:L5:5061:A:N7	2.33	0.43
2:L7:12:U:O2	2:L7:108:G:O2'	2.36	0.43
3:L8:64:U:H2'	3:L8:65:A:O4'	2.18	0.43
4:LA:5:ILE:HG22	4:LA:208:GLU:O	2.19	0.43
7:LD:133:GLU:OE1	7:LD:133:GLU:N	2.52	0.43
16:LN:149:GLN:O	16:LN:152:THR:HG22	2.19	0.43
17:LO:36:VAL:HG22	17:LO:107:GLY:O	2.19	0.43
21:LS:45:TRP:HE1	21:LS:61:ILE:HD11	1.83	0.43
32:Ld:41:ARG:O	32:Ld:44:ARG:HB3	2.19	0.43
33:Le:77:PHE:HD1	45:Lr:21:ASN:HD21	1.66	0.43
34:Lf:71:TRP:HB2	34:Lf:89:ARG:NH1	2.34	0.43
36:Lh:69:LEU:HD23	36:Lh:83:LEU:HD11	2.01	0.43
36:Lh:89:ARG:HG3	36:Lh:93:ARG:NH1	2.33	0.43
39:Lk:28:ASN:OD1	39:Lk:32:VAL:N	2.34	0.43
46:Lz:60:ARG:HG2	46:Lz:171:HIS:CD2	2.54	0.43
46:Lz:204:LEU:O	46:Lz:215:ARG:HA	2.18	0.43
47:S2:133:C:H5'	47:S2:134:C:H5'	2.01	0.43
47:S2:1054:G:C2	47:S2:1055:A:H1'	2.54	0.43
47:S2:1217:A:O2'	47:S2:1684:C:N3	2.50	0.43
49:SA:22:GLY:O	49:SA:24:HIS:N	2.46	0.43
50:SB:100:PHE:HZ	50:SB:215:VAL:HG11	1.84	0.43
50:SB:103:MET:HG2	50:SB:215:VAL:CG1	2.48	0.43
56:SK:59:LYS:O	56:SK:70:TYR:N	2.37	0.43
57:SL:13:GLN:HG2	57:SL:36:TYR:HB3	2.00	0.43
61:SS:15:VAL:O	61:SS:20:ILE:HD13	2.18	0.43
62:ST:40:ALA:HB2	62:ST:96:SER:N	2.34	0.43
67:Sc:13:ARG:HA	67:Sc:54:ASP:O	2.19	0.43
69:Sf:151:ASN:OD1	69:Sf:151:ASN:N	2.52	0.43
70:Sg:248:LEU:N	70:Sg:259:TRP:O	2.29	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SN:90:HIS:HA	75:SN:93:LYS:HE3	2.01	0.43
1:L5:948:C:H5''	8:LE:51:VAL:HG11	2.00	0.42
1:L5:962:C:H5'	1:L5:2264:C:C4	2.54	0.42
1:L5:1329:G:O2'	1:L5:1330:A:OP1	2.31	0.42
1:L5:1733:G:H5'	22:LT:58:HIS:NE2	2.34	0.42
1:L5:2123:C:O2'	1:L5:2124:G:O5'	2.31	0.42
1:L5:2757:A:H2'	1:L5:2758:G:C8	2.54	0.42
6:LC:338:ASN:O	6:LC:342:ARG:HG3	2.19	0.42
9:LF:64:MET:O	9:LF:67:THR:HG22	2.18	0.42
11:LH:91:LYS:HD2	11:LH:145:ILE:HG22	2.01	0.42
12:LI:16:PRO:HG3	12:LI:128:ARG:NH1	2.34	0.42
13:LJ:64:ARG:HD3	43:Lo:104:ILE:O	2.19	0.42
17:LO:54:TYR:CE2	17:LO:145:VAL:HG21	2.54	0.42
33:Le:54:LEU:HD23	33:Le:60:TYR:OH	2.19	0.42
46:Lz:29:LEU:HG	46:Lz:171:HIS:ND1	2.33	0.42
47:S2:184:G:H3'	47:S2:185:G:H8	1.82	0.42
47:S2:291:G:H1'	47:S2:292:A:H5''	2.01	0.42
47:S2:319:C:H5'	47:S2:320:G:OP2	2.19	0.42
47:S2:467:G:H2'	47:S2:468:A:H8	1.83	0.42
47:S2:524:U:H5''	47:S2:525:A:O4'	2.19	0.42
47:S2:587:A:H1'	47:S2:589:G:H22	1.84	0.42
47:S2:927:C:H2'	47:S2:928:G:C8	2.54	0.42
47:S2:943:U:O2'	76:SO:135:ILE:O	2.35	0.42
47:S2:1141:G:H1	47:S2:1146:C:H42	1.66	0.42
47:S2:1455:A:OP1	60:SR:5:ARG:NH1	2.52	0.42
50:SB:37:ALA:O	50:SB:39:PHE:N	2.47	0.42
51:SD:146:ARG:HH11	51:SD:147:ALA:H	1.67	0.42
59:SQ:13:PHE:HA	59:SQ:21:ALA:O	2.19	0.42
65:SX:9:THR:OG1	65:SX:10:ALA:N	2.51	0.42
65:SX:60:LYS:HG2	65:SX:114:ASP:O	2.19	0.42
72:SG:10:THR:OG1	72:SG:128:THR:HG21	2.19	0.42
1:L5:99:A:H4'	16:LN:181:HIS:ND1	2.34	0.42
1:L5:1612:G:H2'	1:L5:1612:G:N3	2.34	0.42
1:L5:1798:G:H4'	1:L5:4215:C:C4	2.54	0.42
1:L5:1802:A:H4'	22:LT:105:PHE:CE1	2.54	0.42
1:L5:2758:G:H1'	1:L5:2765:A:H1'	2.00	0.42
1:L5:4183:G:H2'	1:L5:4183:G:N3	2.33	0.42
4:LA:96:LEU:HD21	44:Lp:83:ILE:HG23	2.02	0.42
5:LB:27:GLY:HA2	5:LB:276:HIS:CD2	2.55	0.42
7:LD:21:ARG:O	7:LD:25:GLU:HG2	2.18	0.42
7:LD:142:PHE:HD2	7:LD:171:LEU:HD22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:69:TYR:O	8:LE:70:LYS:HB3	2.19	0.42
10:LG:155:VAL:HA	10:LG:203:ALA:HA	2.01	0.42
10:LG:159:HIS:HB2	10:LG:184:ILE:O	2.19	0.42
12:LI:61:SER:HA	12:LI:126:VAL:HG22	2.02	0.42
13:LJ:112:HIS:HE1	13:LJ:125:ILE:HA	1.84	0.42
16:LN:48:ALA:O	16:LN:53:TYR:HB3	2.19	0.42
17:LO:51:LYS:HE2	17:LO:144:GLU:HB3	2.00	0.42
19:LQ:171:GLY:O	19:LQ:173:LYS:N	2.48	0.42
24:LV:107:ASN:C	24:LV:109:LYS:H	2.26	0.42
46:Lz:63:PHE:N	46:Lz:150:GLU:OE2	2.52	0.42
47:S2:594:A:O4'	47:S2:643:A:N6	2.52	0.42
47:S2:958:G:H2'	47:S2:958:G:N3	2.34	0.42
47:S2:1217:A:H2'	47:S2:1218:C:C6	2.54	0.42
47:S2:1454:A:H5'	60:SR:5:ARG:HH22	1.84	0.42
47:S2:1522:A:H2	47:S2:1523:C:C6	2.36	0.42
47:S2:1785:C:HO2'	47:S2:1786:U:P	2.42	0.42
53:SF:59:LYS:HB2	53:SF:62:ARG:HD3	2.00	0.42
54:SH:43:LEU:HB2	54:SH:72:PHE:CZ	2.54	0.42
54:SH:101:LEU:HA	54:SH:102:PRO:HD3	1.79	0.42
60:SR:18:GLU:HA	60:SR:70:SER:HB2	2.01	0.42
68:Sd:6:LEU:HA	68:Sd:7:TYR:HA	1.76	0.42
77:SW:3:ARG:HD3	77:SW:9:ASP:OD2	2.19	0.42
77:SW:57:ARG:NH1	80:Sb:26:GLN:OE1	2.52	0.42
77:SW:111:MET:HG3	77:SW:112:ASP:H	1.84	0.42
80:Sb:21:LYS:C	80:Sb:23:ARG:N	2.77	0.42
1:L5:458:C:N4	1:L5:698:G:H1	2.15	0.42
1:L5:1444:G:C4	1:L5:2100:A:C6	3.07	0.42
1:L5:1825:A:H4'	30:Lb:39:PHE:CZ	2.51	0.42
1:L5:4438:U:H2'	1:L5:4439:U:O4'	2.19	0.42
1:L5:4525:C:O2'	5:LB:244:THR:HA	2.19	0.42
1:L5:4725:C:H2'	1:L5:4726:G:C8	2.54	0.42
3:L8:93:C:O2'	3:L8:94:G:H8	2.03	0.42
5:LB:226:LYS:HD2	5:LB:272:LYS:HE3	2.01	0.42
6:LC:214:ASP:O	6:LC:215:ASN:ND2	2.52	0.42
6:LC:318:PRO:HG2	9:LF:155:TYR:CD1	2.51	0.42
7:LD:106:ALA:O	7:LD:110:LEU:HD13	2.19	0.42
11:LH:28:LYS:HB3	11:LH:33:THR:OG1	2.20	0.42
24:LV:107:ASN:OD1	24:LV:111:GLU:N	2.50	0.42
28:LZ:46:ILE:HA	28:LZ:70:SER:HA	2.01	0.42
31:Lc:102:SER:OG	31:Lc:103:ASP:N	2.51	0.42
34:Lf:48:ALA:O	34:Lf:102:ARG:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Lg:41:ALA:O	35:Lg:52:ARG:HD3	2.18	0.42
39:Lk:35:LYS:HB3	39:Lk:42:LEU:HD21	2.00	0.42
40:Ll:7:PHE:HE2	40:Ll:11:ARG:HH21	1.67	0.42
47:S2:141:A:O2'	47:S2:178:C:N3	2.37	0.42
47:S2:819:G:H4'	52:SE:255:ARG:NH2	2.35	0.42
47:S2:896:U:O4	47:S2:898:U:N3	2.52	0.42
47:S2:1226:G:N1	47:S2:1639:G:OP2	2.51	0.42
47:S2:1590:C:P	62:ST:82:ARG:HH12	2.42	0.42
47:S2:1643:U:O2'	47:S2:1644:C:H6	2.02	0.42
47:S2:1743:G:C6	47:S2:1744:G:N1	2.88	0.42
48:S6:6:G:H1	48:S6:68:C:H42	1.67	0.42
50:SB:68:GLU:HA	50:SB:84:PHE:O	2.19	0.42
59:SQ:138:ARG:O	59:SQ:140:ARG:HG3	2.19	0.42
61:SS:31:THR:HA	61:SS:36:VAL:HG13	2.01	0.42
61:SS:117:ILE:HG13	61:SS:118:ARG:H	1.85	0.42
65:SX:85:VAL:HG12	65:SX:122:VAL:HG11	2.02	0.42
70:Sg:254:PRO:HG3	70:Sg:284:PRO:HD2	2.01	0.42
71:SC:168:GLY:N	71:SC:179:THR:O	2.32	0.42
72:SG:216:ARG:O	72:SG:220:ALA:N	2.53	0.42
80:Sb:34:ASP:OD1	80:Sb:35:VAL:N	2.53	0.42
1:L5:2024:G:H8	1:L5:2024:G:OP2	2.02	0.42
1:L5:2552:G:N2	1:L5:2764:A:N7	2.66	0.42
1:L5:3774:A:O2'	1:L5:3775:A:H5''	2.20	0.42
1:L5:3975:C:H2'	1:L5:3976:C:O4'	2.19	0.42
1:L5:4365:C:OP1	19:LQ:184:ARG:NH2	2.52	0.42
1:L5:4566:U:H1'	5:LB:268:ARG:HG2	2.00	0.42
1:L5:4769:G:H3'	1:L5:4770:U:H5''	2.01	0.42
1:L5:4924:C:O2'	1:L5:4925:U:H5'	2.19	0.42
2:L7:58:A:H2'	2:L7:59:G:H8	1.82	0.42
5:LB:286:LYS:HE2	5:LB:330:PHE:HZ	1.84	0.42
6:LC:148:PRO:HB2	6:LC:149:GLU:H	1.75	0.42
7:LD:226:TYR:HD1	7:LD:231:VAL:HG11	1.84	0.42
8:LE:206:VAL:O	8:LE:256:GLN:HG2	2.19	0.42
8:LE:219:LYS:HB3	8:LE:220:LYS:H	1.57	0.42
13:LJ:97:ASN:ND2	13:LJ:178:LYS:HB2	2.34	0.42
16:LN:162:ARG:HH12	16:LN:164:LEU:HD21	1.84	0.42
19:LQ:70:MET:SD	19:LQ:98:LEU:HD22	2.60	0.42
33:Le:32:LYS:HE2	33:Le:32:LYS:HB3	1.90	0.42
47:S2:303:C:H5''	55:SI:75:LYS:HD3	2.01	0.42
47:S2:1129:G:H5'	80:Sb:19:HIS:CD2	2.55	0.42
47:S2:1234:C:H4'	47:S2:1246:A:H61	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1235:G:H1	47:S2:1523:C:N4	2.14	0.42
47:S2:1310:U:O4'	69:Sf:143:LYS:HB3	2.19	0.42
47:S2:1350:U:H3	47:S2:1379:A:H61	1.66	0.42
47:S2:1490:G:H2'	47:S2:1491:G:H8	1.83	0.42
47:S2:1504:U:H1'	47:S2:1509:U:H5	1.84	0.42
47:S2:1537:A:H2'	47:S2:1538:C:O4'	2.20	0.42
47:S2:1673:U:H2'	47:S2:1674:G:O4'	2.20	0.42
47:S2:1865:C:O2'	66:Sa:95:ARG:NH2	2.52	0.42
50:SB:143:THR:HB	50:SB:205:TYR:HE2	1.85	0.42
52:SE:47:PHE:HD2	52:SE:48:LEU:HD12	1.84	0.42
53:SF:140:ASP:OD1	53:SF:141:VAL:N	2.51	0.42
53:SF:157:GLY:HA2	53:SF:160:GLU:OE2	2.20	0.42
53:SF:191:LYS:HA	53:SF:194:ASP:CB	2.46	0.42
54:SH:72:PHE:O	54:SH:76:GLN:N	2.51	0.42
57:SL:77:VAL:O	57:SL:123:GLY:N	2.46	0.42
58:SP:17:TYR:HA	61:SS:91:LYS:HA	2.00	0.42
60:SR:37:GLU:OE2	70:Sg:127:LYS:NZ	2.52	0.42
65:SX:61:GLN:N	65:SX:62:PRO:HD2	2.34	0.42
66:Sa:45:VAL:HG11	66:Sa:64:LEU:HD21	2.00	0.42
68:Sd:33:LYS:HE2	68:Sd:34:TYR:CE1	2.55	0.42
70:Sg:242:SER:N	70:Sg:246:TYR:O	2.44	0.42
72:SG:37:ALA:HA	72:SG:49:VAL:HG12	2.02	0.42
72:SG:63:MET:HE1	72:SG:100:CYS:HA	2.02	0.42
74:SM:25:ALA:HA	74:SM:28:HIS:CE1	2.53	0.42
1:L5:505:G:H5'	1:L5:506:C:OP2	2.19	0.42
1:L5:1752:G:O6	1:L5:1777:C:N4	2.51	0.42
1:L5:1886:G:H1	1:L5:1893:C:N4	2.10	0.42
1:L5:2117:G:H3'	1:L5:2117:G:N3	2.35	0.42
1:L5:2268:A:O2'	19:LQ:30:LYS:HE2	2.20	0.42
1:L5:2287:G:O6	29:La:10:LYS:HE3	2.20	0.42
1:L5:2671:C:OP1	44:Lp:46:LYS:NZ	2.35	0.42
1:L5:3640:U:H3'	1:L5:3646:A:N6	2.35	0.42
1:L5:3914:U:H5'	1:L5:3915:U:OP1	2.18	0.42
1:L5:4107:G:H2'	1:L5:4108:G:H8	1.84	0.42
2:L7:96:U:H4'	9:LF:137:GLU:OE2	2.20	0.42
4:LA:113:VAL:O	4:LA:133:TYR:HB2	2.19	0.42
9:LF:43:ARG:O	9:LF:47:ARG:HG2	2.19	0.42
20:LR:24:LEU:HA	20:LR:50:ILE:HG22	2.01	0.42
21:LS:9:GLU:O	21:LS:66:GLN:HG3	2.19	0.42
24:LV:105:ILE:O	24:LV:112:MET:HG3	2.19	0.42
26:LX:81:LEU:HD11	26:LX:99:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:La:75:LEU:HD23	29:La:117:LEU:HD11	2.01	0.42
32:Ld:40:LYS:HE2	32:Ld:44:ARG:NH2	2.34	0.42
33:Le:38:PRO:HB2	33:Le:43:ASN:HD21	1.84	0.42
33:Le:84:GLU:OE1	45:Lr:20:ARG:NH2	2.52	0.42
44:Lp:91:ASP:O	44:Lp:92:GLN:HB2	2.20	0.42
47:S2:692:G:H4'	47:S2:692:G:OP1	2.18	0.42
47:S2:1223:A:H2'	47:S2:1224:G:O4'	2.19	0.42
47:S2:1375:G:H2'	47:S2:1376:A:C8	2.55	0.42
47:S2:1421:A:P	62:ST:133:ARG:HH22	2.43	0.42
47:S2:1610:G:N7	61:SS:132:ARG:NH2	2.66	0.42
47:S2:1706:G:H2'	47:S2:1707:U:C6	2.55	0.42
49:SA:3:GLY:HA2	49:SA:63:ARG:NH2	2.35	0.42
53:SF:41:VAL:HG11	53:SF:68:ILE:HG12	2.00	0.42
54:SH:18:GLU:HG2	54:SH:19:PHE:N	2.35	0.42
55:SI:107:THR:OG1	55:SI:108:PRO:HD3	2.19	0.42
55:SI:142:SER:HA	55:SI:146:GLN:HG2	2.01	0.42
58:SP:34:MET:SD	58:SP:45:LEU:HB3	2.59	0.42
61:SS:5:ILE:HA	61:SS:6:PRO:HA	1.74	0.42
61:SS:131:VAL:C	61:SS:133:GLY:H	2.26	0.42
63:SU:61:LEU:H	63:SU:81:GLN:NE2	2.17	0.42
70:Sg:106:LYS:HB2	70:Sg:126:ASP:CB	2.49	0.42
70:Sg:147:HIS:HB2	70:Sg:149:GLU:O	2.20	0.42
76:SO:17:LEU:CD2	76:SO:18:GLY:H	2.21	0.42
76:SO:34:PHE:HE1	76:SO:98:ARG:CZ	2.33	0.42
79:SZ:55:TYR:HB3	79:SZ:59:CYS:SG	2.60	0.42
80:Sb:10:PRO:HB2	80:Sb:11:SER:H	1.65	0.42
1:L5:681:G:H2'	1:L5:682:G:O4'	2.20	0.42
1:L5:737:C:H2'	1:L5:738:C:H6	1.85	0.42
1:L5:943:A:P	9:LF:148:LYS:HE2	2.59	0.42
1:L5:948:C:H2'	1:L5:949:G:C8	2.53	0.42
1:L5:1501:C:O3'	19:LQ:91:ARG:NH1	2.52	0.42
1:L5:1509:C:H2'	1:L5:1510:G:H8	1.83	0.42
1:L5:3680:U:H5''	4:LA:54:ARG:NH1	2.34	0.42
1:L5:3757:G:C2	1:L5:3768:U:N3	2.87	0.42
1:L5:3757:G:N2	1:L5:3769:C:C4	2.88	0.42
1:L5:3765:G:H2'	1:L5:3765:G:N3	2.35	0.42
1:L5:4087:G:H4'	10:LG:54:PHE:CZ	2.54	0.42
1:L5:4201:G:H21	1:L5:4203:A:H62	1.68	0.42
1:L5:4902:C:H2'	1:L5:4903:G:C8	2.48	0.42
5:LB:223:THR:O	5:LB:274:TYR:HA	2.18	0.42
6:LC:122:TYR:CE2	6:LC:280:PRO:HB3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:183:VAL:HA	6:LC:204:ARG:HB3	2.01	0.42
9:LF:96:ARG:HH11	9:LF:97:GLY:H	1.67	0.42
12:LI:48:LEU:HB2	12:LI:140:THR:O	2.19	0.42
13:LJ:50:PHE:CE1	13:LJ:70:VAL:HG12	2.54	0.42
13:LJ:119:TYR:HD2	61:SS:12:ILE:HG21	1.84	0.42
14:LL:75:GLY:HA3	14:LL:99:ASP:HB2	2.02	0.42
14:LL:158:ARG:O	14:LL:160:VAL:N	2.48	0.42
15:LM:96:GLU:H	15:LM:99:GLU:CD	2.27	0.42
16:LN:7:ILE:HA	16:LN:10:LEU:HB3	2.01	0.42
21:LS:160:ARG:HD3	21:LS:160:ARG:HA	1.91	0.42
31:Lc:53:PRO:HG2	31:Lc:56:ARG:HD3	2.01	0.42
33:Le:75:ARG:HB2	33:Le:95:TYR:HB3	2.01	0.42
33:Le:122:VAL:HG12	33:Le:124:ASN:H	1.85	0.42
34:Lf:22:ARG:HB3	34:Lf:24:HIS:ND1	2.35	0.42
43:Lo:12:CYS:HB2	43:Lo:15:CYS:HB3	2.00	0.42
45:Lr:54:ALA:HB1	45:Lr:56:ASP:OD1	2.19	0.42
46:Lz:207:LYS:NZ	46:Lz:213:PRO:HD3	2.35	0.42
47:S2:118:C:H2'	47:S2:119:U:O4'	2.19	0.42
47:S2:1142:G:H2'	47:S2:1144:A:OP2	2.19	0.42
47:S2:1163:C:H2'	47:S2:1164:G:C8	2.53	0.42
47:S2:1215:C:O2'	47:S2:1645:C:OP2	2.37	0.42
48:S6:6:G:H2'	48:S6:7:A:H8	1.85	0.42
49:SA:21:ALA:HB1	49:SA:169:HIS:O	2.20	0.42
52:SE:132:GLY:N	52:SE:136:ILE:O	2.47	0.42
53:SF:96:ALA:HA	53:SF:99:ILE:HG22	2.01	0.42
54:SH:63:PHE:HA	54:SH:95:ILE:O	2.19	0.42
56:SK:89:ILE:O	56:SK:91:PRO:HD3	2.19	0.42
59:SQ:15:ARG:HG2	59:SQ:20:THR:OG1	2.20	0.42
63:SU:28:ASN:ND2	63:SU:30:LYS:HB3	2.34	0.42
63:SU:31:SER:O	63:SU:35:VAL:HG23	2.20	0.42
70:Sg:47:ARG:HA	70:Sg:52:TYR:CD1	2.53	0.42
70:Sg:110:SER:HB3	70:Sg:153:CYS:HA	2.00	0.42
71:SC:165:VAL:HG12	71:SC:244:ILE:HB	2.02	0.42
72:SG:78:SER:OG	72:SG:79:LYS:N	2.53	0.42
73:SJ:28:GLU:HA	73:SJ:31:LEU:HD13	2.01	0.42
77:SW:32:LYS:HA	77:SW:35:VAL:HG22	2.01	0.42
78:SY:28:LEU:HG	78:SY:30:PRO:HD3	2.00	0.42
78:SY:90:ARG:HA	78:SY:93:ARG:HG2	2.02	0.42
1:L5:369:G:N2	1:L5:372:A:OP2	2.52	0.42
1:L5:691:C:N3	1:L5:692:A:N6	2.67	0.42
1:L5:742:G:H2'	1:L5:743:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:976:G:C8	1:L5:977:C:C4	3.08	0.42
1:L5:1403:G:N2	1:L5:1415:G:N3	2.68	0.42
1:L5:1757:U:H4'	1:L5:1758:G:H5'	2.02	0.42
1:L5:2046:G:O2'	1:L5:2047:A:N7	2.45	0.42
1:L5:2658:G:N2	1:L5:2676:A:OP2	2.33	0.42
1:L5:3910:C:H2'	1:L5:3911:C:C6	2.55	0.42
1:L5:3965:A:N6	1:L5:4039:G:O3'	2.52	0.42
1:L5:4946:U:O2	8:LE:158:ARG:HD2	2.20	0.42
7:LD:22:ARG:O	7:LD:26:GLY:N	2.52	0.42
7:LD:121:GLY:HA2	7:LD:130:TYR:CE2	2.54	0.42
9:LF:116:GLN:HE22	9:LF:212:LYS:HZ2	1.66	0.42
10:LG:209:SER:HA	10:LG:212:LYS:HB2	2.02	0.42
13:LJ:36:ALA:O	13:LJ:70:VAL:HG21	2.19	0.42
14:LL:57:PRO:HG2	14:LL:73:GLY:HA3	2.02	0.42
17:LO:186:GLU:O	17:LO:190:ASP:N	2.53	0.42
23:LU:88:LYS:HD2	23:LU:97:ARG:HH12	1.85	0.42
25:LW:78:PHE:CD2	25:LW:79:GLN:N	2.88	0.42
45:Lr:65:LYS:HD2	45:Lr:77:TYR:HE1	1.83	0.42
47:S2:378:U:C4	47:S2:379:C:C4	3.07	0.42
47:S2:519:A:O2'	73:SJ:9:CYS:HB3	2.19	0.42
47:S2:590:A:O2'	47:S2:591:U:O4'	2.37	0.42
47:S2:750:C:N4	47:S2:794:A:H1'	2.35	0.42
71:SC:104:ASP:OD1	71:SC:105:GLU:N	2.53	0.42
73:SJ:94:LEU:HA	73:SJ:97:ILE:HD12	2.02	0.42
75:SN:99:ARG:NH1	75:SN:143:SER:HA	2.35	0.42
76:SO:35:ALA:HB3	76:SO:98:ARG:O	2.19	0.42
1:L5:118:C:H42	1:L5:153:G:H1	1.67	0.42
1:L5:254:G:N2	1:L5:255:C:H1'	2.35	0.42
1:L5:278:G:N2	16:LN:50:ARG:O	2.46	0.42
1:L5:362:A:N6	40:Ll:39:SER:OG	2.52	0.42
1:L5:723:A:H5''	6:LC:347:HIS:HA	2.02	0.42
1:L5:749:G:C2	1:L5:750:U:H1'	2.55	0.42
1:L5:916:C:H2'	1:L5:917:A:H5'	2.01	0.42
1:L5:1175:A:N1	1:L5:1185:G:N1	2.67	0.42
1:L5:1249:C:N3	1:L5:1261:G:N2	2.67	0.42
1:L5:1288:G:O2'	1:L5:1289:C:OP1	2.33	0.42
1:L5:1392:A:H2'	1:L5:1393:G:C8	2.55	0.42
1:L5:1440:U:H1'	1:L5:1441:C:C5	2.54	0.42
1:L5:1736:A:H2'	1:L5:1737:A:O4'	2.20	0.42
1:L5:2018:C:H2'	1:L5:2019:C:C6	2.55	0.42
1:L5:3750:G:H2'	1:L5:3751:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3767:C:H2'	1:L5:3768:U:N1	2.35	0.42
1:L5:4149:C:H2'	1:L5:4150:G:C8	2.55	0.42
5:LB:8:ALA:HB2	24:LV:49:LEU:HD13	2.01	0.42
5:LB:121:ASN:C	5:LB:123:HIS:H	2.25	0.42
6:LC:164:THR:O	6:LC:168:VAL:HG23	2.20	0.42
9:LF:182:TYR:HD1	9:LF:200:ARG:HD2	1.85	0.42
17:LO:108:ILE:HG21	17:LO:160:ARG:NH1	2.35	0.42
19:LQ:95:VAL:HA	19:LQ:96:PRO:HD3	1.76	0.42
28:LZ:103:ASP:O	28:LZ:107:LYS:N	2.42	0.42
32:Ld:91:LYS:HB2	32:Ld:103:TYR:CE1	2.55	0.42
33:Le:15:LYS:NZ	33:Le:59:GLY:O	2.45	0.42
40:Ll:38:ASN:O	40:Ll:40:LYS:N	2.52	0.42
43:Lo:55:ILE:HG21	43:Lo:57:ARG:HH21	1.85	0.42
47:S2:54:A:H3'	47:S2:451:G:H22	1.85	0.42
47:S2:534:G:H2'	47:S2:535:G:H8	1.85	0.42
47:S2:809:A:H4'	52:SE:221:ARG:CZ	2.49	0.42
47:S2:1119:A:C6	47:S2:1120:U:H1'	2.55	0.42
47:S2:1535:U:O2'	53:SF:88:MET:HE2	2.20	0.42
47:S2:1771:G:H3'	47:S2:1771:G:N3	2.35	0.42
50:SB:62:LEU:O	50:SB:88:THR:HG21	2.20	0.42
51:SD:75:LYS:NZ	56:SK:18:GLU:HG2	2.34	0.42
56:SK:5:LYS:O	56:SK:9:ILE:N	2.53	0.42
69:Sf:108:VAL:HG23	69:Sf:110:GLU:H	1.85	0.42
70:Sg:69:VAL:HG23	70:Sg:80:SER:HB3	2.02	0.42
76:SO:38:ASN:C	76:SO:69:SER:HB3	2.45	0.42
80:Sb:67:THR:OG1	80:Sb:68:GLY:N	2.51	0.42
1:L5:169:G:H2'	1:L5:170:C:H6	1.84	0.42
1:L5:402:A:H2'	1:L5:403:G:O4'	2.20	0.42
1:L5:985:C:H42	1:L5:1068:G:H1	1.67	0.42
1:L5:1253:G:H22	1:L5:1256:G:H3'	1.84	0.42
1:L5:1768:C:H4'	1:L5:1769:G:H8	1.85	0.42
1:L5:3728:A:H3'	1:L5:3729:U:H6	1.84	0.42
1:L5:3786:U:OP1	1:L5:4550:G:O2'	2.37	0.42
1:L5:3801:U:O2	1:L5:3803:A:N6	2.53	0.42
1:L5:3873:G:H2'	1:L5:3874:G:C8	2.54	0.42
1:L5:3971:G:H2'	1:L5:3972:A:H5''	2.02	0.42
1:L5:4502:C:H2'	1:L5:4503:A:O4'	2.19	0.42
1:L5:4667:C:OP1	5:LB:224:LYS:NZ	2.32	0.42
2:L7:9:C:OP2	2:L7:10:C:N4	2.43	0.42
3:L8:16:G:HO2'	3:L8:17:A:P	2.41	0.42
5:LB:56:ILE:HG13	5:LB:367:PHE:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:210:ILE:HD12	6:LC:252:TRP:NE1	2.35	0.42
6:LC:252:TRP:CE3	6:LC:257:PHE:HD1	2.38	0.42
8:LE:66:LYS:HE2	8:LE:68:MET:HE2	2.02	0.42
9:LF:223:LYS:HA	9:LF:232:ASP:HB3	2.01	0.42
13:LJ:8:LYS:O	13:LJ:11:PRO:HD2	2.19	0.42
13:LJ:53:ALA:HB3	13:LJ:63:ARG:O	2.19	0.42
15:LM:72:TYR:HA	15:LM:75:GLN:HG2	2.02	0.42
15:LM:97:ALA:HB1	17:LO:203:VAL:HG21	2.01	0.42
22:LT:54:HIS:HB3	22:LT:57:TYR:HD2	1.85	0.42
29:La:59:LYS:HE2	29:La:59:LYS:HB3	1.88	0.42
40:Ll:9:ILE:HD12	40:Ll:9:ILE:HA	1.95	0.42
47:S2:345:U:H1'	52:SE:33:THR:HG23	2.01	0.42
47:S2:588:G:H21	47:S2:589:G:H1	1.67	0.42
47:S2:1256:G:C8	68:Sd:40:ARG:HD2	2.55	0.42
47:S2:1616:U:OP2	58:SP:43:ARG:NH2	2.51	0.42
47:S2:1680:G:H2'	47:S2:1681:U:C6	2.55	0.42
47:S2:1723:G:N2	47:S2:1811:C:O2	2.38	0.42
47:S2:1777:G:H2'	47:S2:1778:C:C2	2.54	0.42
50:SB:220:LYS:C	50:SB:222:LYS:H	2.28	0.42
63:SU:56:MET:HB2	63:SU:86:LYS:HB2	2.02	0.42
63:SU:91:LEU:HB3	63:SU:93:SER:HB3	2.01	0.42
70:Sg:112:ALA:HB2	70:Sg:154:VAL:HG23	2.01	0.42
70:Sg:152:SER:HB2	70:Sg:168:CYS:SG	2.60	0.42
70:Sg:245:ARG:O	70:Sg:247:TRP:N	2.53	0.42
71:SC:204:ILE:HA	71:SC:221:ASP:OD1	2.20	0.42
72:SG:167:LYS:HB3	72:SG:168:LYS:H	1.51	0.42
73:SJ:38:ARG:HG2	73:SJ:39:ASN:H	1.85	0.42
76:SO:39:ASP:N	76:SO:69:SER:HB3	2.35	0.42
79:SZ:98:LYS:HB2	79:SZ:110:THR:OG1	2.19	0.42
1:L5:346:G:H2'	1:L5:347:A:O4'	2.20	0.42
1:L5:717:U:H3	1:L5:951:G:H1	1.67	0.42
1:L5:1171:G:C2	1:L5:1191:C:C2	3.08	0.42
1:L5:1577:G:N2	44:Lp:17:ARG:HD2	2.35	0.42
1:L5:2093:A:H4'	1:L5:2095:A:OP2	2.20	0.42
1:L5:2779:C:H2'	1:L5:2780:C:H6	1.85	0.42
1:L5:3801:U:H3	1:L5:3803:A:N6	2.17	0.42
1:L5:3883:U:H2'	1:L5:3884:U:O4'	2.20	0.42
1:L5:4114:C:H5'	1:L5:4115:G:C2	2.55	0.42
1:L5:4950:U:H1'	1:L5:4952:G:OP2	2.19	0.42
2:L7:108:G:P	7:LD:273:LEU:HD21	2.60	0.42
5:LB:94:GLU:CD	5:LB:158:GLN:HE21	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:232:THR:HA	7:LD:233:PRO:HD3	1.84	0.42
8:LE:249:ASP:N	8:LE:249:ASP:OD1	2.51	0.42
9:LF:50:ILE:HG12	9:LF:186:CYS:HB2	2.01	0.42
14:LL:204:GLU:HG3	14:LL:205:GLN:HG3	2.02	0.42
16:LN:73:ARG:HH21	16:LN:92:LEU:HD21	1.84	0.42
17:LO:121:PRO:HA	17:LO:124:LEU:HD13	2.01	0.42
18:LP:120:ASN:O	18:LP:145:HIS:N	2.50	0.42
40:Ll:24:PRO:HB2	40:Ll:26:TRP:NE1	2.35	0.42
46:Lz:194:LEU:HG	46:Lz:197:ASN:HB2	2.02	0.42
47:S2:115:U:H2'	47:S2:116:U:C6	2.54	0.42
47:S2:1592:C:H4'	59:SQ:44:PRO:HB2	2.02	0.42
51:SD:105:LEU:HD23	51:SD:184:ILE:HD12	2.01	0.42
52:SE:51:ARG:NH2	52:SE:109:PHE:O	2.53	0.42
52:SE:123:LEU:HD12	52:SE:160:ILE:O	2.20	0.42
53:SF:35:LEU:HD12	53:SF:117:ILE:HD13	2.02	0.42
55:SI:90:LEU:HD13	55:SI:97:VAL:HG21	2.02	0.42
58:SP:68:PRO:O	58:SP:70:MET:N	2.53	0.42
70:Sg:72:SER:OG	70:Sg:115:SER:HA	2.20	0.42
71:SC:73:MET:HG3	71:SC:73:MET:O	2.20	0.42
72:SG:231:ARG:HA	72:SG:234:LEU:HD12	2.02	0.42
74:SM:50:CYS:SG	74:SM:110:VAL:HG13	2.60	0.42
75:SN:71:ILE:H	75:SN:71:ILE:HD12	1.85	0.42
78:SY:86:GLU:HG3	78:SY:90:ARG:HB2	2.00	0.42
1:L5:225:G:OP2	6:LC:223:ASN:HB2	2.20	0.41
1:L5:305:A:H5'	37:Li:53:TYR:CE1	2.55	0.41
1:L5:1386:C:O2'	1:L5:1502:G:N2	2.48	0.41
1:L5:1861:U:H2'	1:L5:1862:U:O4'	2.19	0.41
1:L5:2540:C:H2'	1:L5:2541:G:H8	1.85	0.41
1:L5:3923:A:H1'	1:L5:4381:A:O4'	2.20	0.41
2:L7:62:U:OP1	7:LD:276:LYS:HG3	2.20	0.41
4:LA:112:ILE:CD1	44:Lp:79:VAL:HG22	2.50	0.41
4:LA:245:ARG:O	4:LA:247:ARG:HG3	2.19	0.41
5:LB:234:ARG:NH1	5:LB:235:TRP:HE1	2.17	0.41
6:LC:34:PRO:O	6:LC:38:ASN:ND2	2.53	0.41
6:LC:250:CYS:HB3	6:LC:252:TRP:NE1	2.29	0.41
7:LD:39:GLN:NE2	7:LD:48:LYS:HB2	2.35	0.41
7:LD:186:GLU:OE1	7:LD:186:GLU:N	2.53	0.41
8:LE:86:GLU:HB3	8:LE:87:LYS:H	1.58	0.41
8:LE:188:ARG:NH1	8:LE:217:PHE:O	2.53	0.41
10:LG:231:ASP:HA	10:LG:234:ARG:HH11	1.85	0.41
11:LH:89:ARG:HA	11:LH:146:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:103:LEU:HD13	12:LI:113:THR:OG1	2.20	0.41
14:LL:25:TRP:NE1	16:LN:201:HIS:HD2	2.17	0.41
15:LM:29:ASP:OD1	15:LM:30:VAL:N	2.53	0.41
15:LM:91:TRP:HA	15:LM:94:LYS:HD2	2.01	0.41
15:LM:108:ASP:O	15:LM:111:LYS:HB3	2.19	0.41
20:LR:105:LEU:HD22	20:LR:135:LYS:HG3	2.01	0.41
44:Lp:33:GLN:HE21	44:Lp:69:TRP:CD1	2.38	0.41
45:Lr:3:ALA:HB1	45:Lr:45:HIS:HB3	2.02	0.41
47:S2:1217:A:H2'	47:S2:1218:C:H6	1.85	0.41
49:SA:144:THR:N	49:SA:158:ASP:OD2	2.52	0.41
50:SB:87:ILE:N	50:SB:99:ASN:O	2.53	0.41
50:SB:197:ILE:O	50:SB:201:CYS:N	2.35	0.41
51:SD:25:LEU:HD23	51:SD:37:VAL:HG11	2.02	0.41
52:SE:88:ASP:O	52:SE:100:ARG:HA	2.19	0.41
58:SP:15:PHE:O	58:SP:16:THR:OG1	2.32	0.41
70:Sg:294:ASP:OD2	70:Sg:297:THR:OG1	2.27	0.41
73:SJ:57:ALA:O	73:SJ:61:LEU:N	2.47	0.41
73:SJ:114:VAL:HG13	73:SJ:119:LEU:HD22	2.02	0.41
73:SJ:136:ARG:HD3	73:SJ:160:SER:HA	2.01	0.41
75:SN:125:LEU:O	75:SN:128:TYR:HB3	2.20	0.41
1:L5:455:C:H41	1:L5:701:G:N2	2.17	0.41
1:L5:689:U:H2'	1:L5:690:C:H6	1.86	0.41
1:L5:1181:C:H2'	1:L5:1182:C:H4'	2.01	0.41
1:L5:2482:C:C4	1:L5:2483:G:H1'	2.55	0.41
1:L5:2590:G:H2'	1:L5:2754:G:N2	2.35	0.41
1:L5:4685:U:P	41:Lm:112:LYS:HZ3	2.42	0.41
8:LE:257:ILE:HD12	8:LE:260:LYS:HD2	2.02	0.41
10:LG:69:ILE:HG12	10:LG:73:ARG:HE	1.85	0.41
10:LG:113:ARG:HA	10:LG:116:ALA:HB3	2.02	0.41
16:LN:178:HIS:HA	16:LN:181:HIS:CE1	2.54	0.41
28:LZ:53:VAL:HG13	28:LZ:54:THR:N	2.30	0.41
28:LZ:83:THR:HG22	28:LZ:85:TYR:H	1.85	0.41
31:Lc:53:PRO:HB2	31:Lc:56:ARG:HD3	2.01	0.41
46:Lz:113:SER:OG	46:Lz:114:GLU:N	2.53	0.41
47:S2:869:A:N6	54:SH:114:GLN:O	2.53	0.41
50:SB:81:PHE:O	50:SB:105:LEU:HD12	2.20	0.41
50:SB:103:MET:O	50:SB:103:MET:HG3	2.19	0.41
52:SE:36:HIS:HD1	52:SE:41:CYS:HB3	1.85	0.41
52:SE:184:THR:HA	52:SE:189:LEU:HB2	2.02	0.41
52:SE:238:LEU:CD1	52:SE:242:LYS:HG2	2.50	0.41
56:SK:65:ARG:NH1	68:Sd:25:SER:OG	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:5:THR:OG1	62:ST:6:VAL:N	2.44	0.41
67:Sc:6:VAL:HG13	67:Sc:8:PRO:HD3	2.02	0.41
72:SG:14:LYS:HG2	72:SG:124:LEU:CD1	2.50	0.41
78:SY:13:MET:O	78:SY:22:GLN:N	2.47	0.41
1:L5:126:C:N4	1:L5:142:G:H22	2.18	0.41
1:L5:1209:U:H5''	1:L5:1210:C:OP2	2.20	0.41
1:L5:1460:C:H2'	1:L5:1461:C:C6	2.55	0.41
1:L5:2294:G:OP1	6:LC:193:LYS:HG2	2.19	0.41
1:L5:2750:G:OP1	1:L5:2768:C:H1'	2.19	0.41
1:L5:3956:G:H1'	1:L5:3957:U:C5'	2.51	0.41
1:L5:3965:A:N6	1:L5:4048:A:O2'	2.53	0.41
1:L5:4564:A:H5''	17:LO:68:ARG:HH22	1.85	0.41
4:LA:147:ARG:HG2	4:LA:157:VAL:HG22	2.01	0.41
6:LC:305:PRO:HG3	19:LQ:38:ARG:NH2	2.35	0.41
14:LL:41:ALA:HA	14:LL:44:ARG:CZ	2.50	0.41
16:LN:60:VAL:HG23	16:LN:134:LEU:HB2	2.02	0.41
19:LQ:15:ARG:HH22	19:LQ:19:LYS:HG2	1.85	0.41
19:LQ:57:ASN:C	19:LQ:59:PRO:HD3	2.45	0.41
20:LR:134:ASN:O	20:LR:137:ILE:HG22	2.20	0.41
27:LY:86:GLN:HE22	27:LY:96:HIS:CE1	2.38	0.41
38:Lj:85:LYS:HA	38:Lj:86:PRO:HD2	1.91	0.41
43:Lo:92:GLU:OE1	43:Lo:92:GLU:N	2.53	0.41
46:Lz:67:VAL:HB	46:Lz:68:LEU:CG	2.50	0.41
47:S2:745:C:H4'	54:SH:107:LYS:HB3	2.01	0.41
47:S2:919:A:H5'	75:SN:16:LEU:HD22	2.02	0.41
47:S2:1522:A:C8	61:SS:146:VAL:HG22	2.55	0.41
48:S6:38:A:H62	53:SF:133:THR:N	2.17	0.41
49:SA:97:THR:HA	49:SA:98:PRO:HD3	1.80	0.41
50:SB:197:ILE:HD11	50:SB:210:VAL:HG11	2.02	0.41
50:SB:197:ILE:HD11	50:SB:210:VAL:HG21	2.02	0.41
53:SF:122:ARG:HE	67:Sc:59:LEU:HD21	1.85	0.41
57:SL:48:LYS:O	57:SL:52:GLU:HG2	2.20	0.41
58:SP:61:ARG:HG2	58:SP:89:MET:SD	2.60	0.41
65:SX:133:LEU:HD23	65:SX:133:LEU:HA	1.92	0.41
70:Sg:256:ILE:HD12	70:Sg:270:LEU:HD13	2.03	0.41
71:SC:183:LYS:HE3	77:SW:95:PRO:HA	2.03	0.41
73:SJ:64:ASP:HB3	77:SW:117:ARG:NH2	2.36	0.41
76:SO:65:ASP:O	76:SO:68:GLU:HB2	2.20	0.41
1:L5:71:C:C2	1:L5:73:A:H1'	2.55	0.41
1:L5:446:C:H2'	1:L5:447:C:C6	2.54	0.41
1:L5:942:G:H1	1:L5:943:A:N6	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:982:U:H2'	1:L5:983:C:C6	2.56	0.41
1:L5:1174:G:H2'	1:L5:1175:A:C8	2.55	0.41
1:L5:1321:G:OP1	1:L5:1880:G:O2'	2.34	0.41
1:L5:1374:G:OP2	6:LC:120:LYS:NZ	2.49	0.41
1:L5:1406:G:H3'	1:L5:1407:C:H3'	2.01	0.41
1:L5:1501:C:H1'	19:LQ:91:ARG:HH11	1.85	0.41
1:L5:1833:G:O2'	1:L5:1834:U:O4'	2.38	0.41
1:L5:1868:A:O2'	1:L5:4402:C:O2'	2.26	0.41
1:L5:2739:C:H4'	44:Lp:52:VAL:HG21	2.01	0.41
1:L5:2845:A:H61	1:L5:3843:C:N4	2.18	0.41
1:L5:3855:C:H2'	1:L5:3856:A:H8	1.85	0.41
1:L5:4200:G:N2	12:LI:112:GLN:OE1	2.53	0.41
1:L5:4555:U:O2'	1:L5:4556:U:H5'	2.20	0.41
1:L5:4635:A:H3'	1:L5:4636:U:H4'	2.02	0.41
1:L5:4685:U:H2'	1:L5:4686:G:C8	2.55	0.41
1:L5:5023:C:N4	1:L5:5025:C:O2'	2.53	0.41
3:L8:122:G:N2	3:L8:128:C:H41	2.19	0.41
4:LA:150:LEU:CD1	4:LA:151:PRO:HD2	2.45	0.41
5:LB:82:PRO:HB3	5:LB:328:ASN:ND2	2.35	0.41
6:LC:207:PRO:HB3	6:LC:249:PHE:HD2	1.85	0.41
7:LD:63:GLN:OE1	7:LD:63:GLN:N	2.53	0.41
8:LE:94:LYS:H	8:LE:106:VAL:HG23	1.85	0.41
14:LL:92:ARG:C	14:LL:95:GLY:H	2.29	0.41
16:LN:36:LEU:HD13	16:LN:64:ILE:HD13	2.01	0.41
20:LR:69:ALA:HB1	20:LR:74:ARG:HB2	2.01	0.41
21:LS:45:TRP:HA	21:LS:48:VAL:HB	2.03	0.41
22:LT:57:TYR:CE1	22:LT:89:ILE:HD11	2.54	0.41
26:LX:37:LYS:HA	26:LX:38:LYS:HA	1.59	0.41
32:Ld:26:THR:HA	32:Ld:85:ARG:HA	2.01	0.41
32:Ld:29:ILE:HG23	32:Ld:33:ILE:HD13	2.02	0.41
32:Ld:93:ASN:HB2	32:Ld:102:LEU:CA	2.50	0.41
46:Lz:76:GLU:HG3	46:Lz:144:MET:HG3	2.01	0.41
47:S2:337:C:C2'	47:S2:338:G:H4'	2.39	0.41
47:S2:468:A:H2'	47:S2:469:A:O4'	2.21	0.41
47:S2:659:G:O2'	47:S2:662:G:O3'	2.38	0.41
51:SD:8:LYS:HG3	63:SU:61:LEU:HD21	2.02	0.41
51:SD:137:VAL:HG22	51:SD:151:LYS:HG2	2.01	0.41
51:SD:154:ASP:OD1	51:SD:155:GLY:N	2.53	0.41
54:SH:54:GLY:HA3	54:SH:57:ARG:HH21	1.86	0.41
56:SK:31:LYS:HG2	56:SK:32:HIS:O	2.20	0.41
59:SQ:10:VAL:HG22	59:SQ:98:LYS:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SQ:37:ARG:HB3	59:SQ:41:MET:HG3	2.03	0.41
60:SR:58:MET:O	60:SR:62:GLN:HG3	2.20	0.41
63:SU:21:ARG:HB3	63:SU:115:THR:HG21	2.02	0.41
70:Sg:44:LYS:HG3	70:Sg:55:PRO:O	2.21	0.41
75:SN:84:LEU:CD2	75:SN:149:LEU:HD21	2.50	0.41
1:L5:225:G:OP1	6:LC:222:ARG:HD2	2.20	0.41
1:L5:387:G:O4'	1:L5:411:G:N2	2.53	0.41
1:L5:648:G:HO2'	1:L5:649:A:P	2.44	0.41
1:L5:1293:G:H3'	1:L5:1294:A:C2	2.55	0.41
1:L5:1329:G:OP1	1:L5:2350:U:O2'	2.38	0.41
1:L5:1625:G:H4'	1:L5:1626:G:H5''	2.02	0.41
1:L5:2018:C:H2'	1:L5:2019:C:C5	2.55	0.41
1:L5:2558:C:N4	1:L5:2559:G:O6	2.53	0.41
1:L5:2622:G:H2'	1:L5:2623:A:H8	1.86	0.41
1:L5:3846:C:O2'	1:L5:4632:U:O2'	2.16	0.41
1:L5:4238:G:O6	1:L5:4286:C:N4	2.31	0.41
1:L5:4344:U:H2'	1:L5:4345:C:O4'	2.20	0.41
6:LC:11:TYR:CE2	6:LC:149:GLU:HG2	2.56	0.41
6:LC:163:LYS:HE2	6:LC:163:LYS:HB2	1.87	0.41
7:LD:66:TYR:HE2	7:LD:68:ARG:HH21	1.67	0.41
8:LE:83:LYS:HB2	8:LE:84:LYS:HA	2.02	0.41
9:LF:186:CYS:SG	9:LF:187:MET:N	2.94	0.41
12:LI:159:PHE:HA	12:LI:160:PRO:HD3	1.85	0.41
13:LJ:19:LYS:HE3	13:LJ:133:VAL:HG11	2.03	0.41
16:LN:68:ARG:HA	16:LN:98:LEU:HD11	2.03	0.41
25:LW:91:MET:HG3	25:LW:94:ARG:HE	1.85	0.41
25:LW:93:LYS:HZ2	72:SG:144:LEU:HA	1.85	0.41
27:LY:54:GLU:HG2	27:LY:67:ILE:HG22	2.01	0.41
47:S2:45:A:N6	47:S2:481:C:H4'	2.35	0.41
47:S2:141:A:N3	47:S2:143:U:H1'	2.36	0.41
47:S2:582:C:O4'	78:SY:33:ALA:HB2	2.21	0.41
47:S2:604:A:N3	47:S2:639:C:O2'	2.50	0.41
47:S2:1520:G:H5'	47:S2:1521:C:OP2	2.20	0.41
47:S2:1592:C:H2'	47:S2:1593:C:C6	2.56	0.41
50:SB:138:PHE:CD2	50:SB:214:LYS:HB3	2.56	0.41
51:SD:162:ASP:N	51:SD:163:PRO:HD2	2.36	0.41
67:Sc:66:ARG:O	67:Sc:67:ARG:C	2.64	0.41
69:Sf:110:GLU:HG3	74:SM:63:LYS:HG2	2.03	0.41
74:SM:73:GLN:HB3	74:SM:74:ILE:H	1.66	0.41
77:SW:35:VAL:O	77:SW:39:THR:HG23	2.20	0.41
78:SY:55:ILE:HG23	78:SY:75:ILE:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:165:A:N6	1:L5:270:U:H3	2.19	0.41
1:L5:195:C:O2'	27:LY:125:SER:OG	2.34	0.41
1:L5:233:U:H4'	1:L5:234:G:OP1	2.19	0.41
1:L5:512:U:H3	1:L5:648:G:N2	2.19	0.41
1:L5:720:G:H2'	1:L5:720:G:N3	2.35	0.41
1:L5:735:G:C2	1:L5:736:C:N4	2.89	0.41
1:L5:2007:G:H1'	1:L5:2008:U:C5	2.49	0.41
1:L5:3712:A:H4'	1:L5:3713:U:OP2	2.21	0.41
1:L5:4100:C:N4	1:L5:4109:G:H1	2.17	0.41
1:L5:4971:A:O3'	18:LP:55:LYS:NZ	2.53	0.41
5:LB:248:LEU:HD12	5:LB:249:ARG:HG3	2.02	0.41
5:LB:263:ALA:O	5:LB:266:VAL:HG12	2.21	0.41
5:LB:285:TYR:CD1	5:LB:365:LEU:HD21	2.55	0.41
6:LC:12:SER:HA	6:LC:155:GLU:HG2	2.03	0.41
6:LC:35:ASP:OD1	6:LC:36:ILE:N	2.54	0.41
6:LC:46:LYS:O	6:LC:49:ARG:HG2	2.21	0.41
7:LD:178:LYS:HE2	7:LD:179:ARG:NH1	2.36	0.41
8:LE:258:LEU:N	8:LE:259:PRO:HD2	2.35	0.41
12:LI:166:HIS:CG	22:LT:158:PHE:HE2	2.38	0.41
13:LJ:24:ILE:HG12	13:LJ:127:GLY:O	2.20	0.41
16:LN:116:LEU:HB2	16:LN:135:ILE:CD1	2.51	0.41
16:LN:121:VAL:HG11	16:LN:131:GLU:HG3	2.03	0.41
16:LN:200:LEU:HD23	16:LN:200:LEU:HA	1.92	0.41
20:LR:137:ILE:HD12	20:LR:140:GLU:OE2	2.21	0.41
21:LS:43:ARG:HD2	21:LS:47:PHE:HE2	1.86	0.41
22:LT:43:LYS:C	22:LT:58:HIS:HD1	2.19	0.41
47:S2:618:C:N4	65:SX:114:ASP:OD2	2.52	0.41
47:S2:629:A:C6	47:S2:632:C:C2	3.08	0.41
47:S2:1036:A:C2	47:S2:1844:U:H4'	2.56	0.41
47:S2:1349:G:H1	47:S2:1380:C:N4	2.19	0.41
54:SH:68:GLN:OE1	54:SH:68:GLN:N	2.54	0.41
55:SI:84:ASN:HD21	55:SI:90:LEU:HD12	1.85	0.41
59:SQ:132:PHE:CE2	63:SU:76:THR:HA	2.54	0.41
61:SS:104:ASP:HA	61:SS:107:LEU:HD12	2.02	0.41
70:Sg:32:LEU:HD23	70:Sg:71:ILE:HD12	2.03	0.41
74:SM:41:ALA:O	74:SM:44:LYS:HG2	2.20	0.41
74:SM:79:VAL:HG11	74:SM:84:LYS:H	1.85	0.41
75:SN:143:SER:OG	75:SN:144:SER:N	2.53	0.41
78:SY:40:ILE:O	78:SY:44:LEU:HD13	2.21	0.41
1:L5:43:U:H5''	16:LN:85:VAL:HG22	2.03	0.41
1:L5:54:G:OP1	38:Lj:43:ARG:NH1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:147:A:OP1	10:LG:197:LYS:HD2	2.20	0.41
1:L5:150:U:OP2	10:LG:140:VAL:HG23	2.20	0.41
1:L5:477:C:N4	1:L5:677:G:H1	2.18	0.41
1:L5:714:G:C6	1:L5:715:G:C6	3.08	0.41
1:L5:757:G:N3	1:L5:757:G:H2'	2.36	0.41
1:L5:1072:C:H4'	1:L5:1073:G:OP1	2.20	0.41
1:L5:1435:G:H2'	1:L5:1436:C:H5'	2.03	0.41
1:L5:1881:C:H5'	1:L5:2281:U:H1'	2.03	0.41
1:L5:2365:C:O2'	1:L5:2828:U:O2	2.39	0.41
1:L5:2478:C:N4	1:L5:2479:G:O6	2.53	0.41
1:L5:4056:A:H2'	1:L5:4057:C:C5	2.55	0.41
1:L5:4742:G:H2'	1:L5:4743:G:C8	2.56	0.41
1:L5:5018:C:H2'	1:L5:5019:A:H8	1.85	0.41
4:LA:29:LEU:HB2	4:LA:123:ARG:C	2.46	0.41
6:LC:24:LEU:HA	6:LC:25:PRO:HD3	1.94	0.41
6:LC:33:ARG:HE	6:LC:36:ILE:CD1	2.33	0.41
8:LE:135:GLN:OE1	8:LE:135:GLN:N	2.53	0.41
8:LE:177:GLY:HA2	8:LE:178:PRO:HD3	1.89	0.41
11:LH:29:GLY:HA3	11:LH:30:PRO:HD3	1.85	0.41
16:LN:145:ASN:HA	16:LN:146:PRO:HD3	1.87	0.41
21:LS:55:LYS:HG3	21:LS:57:SER:HB3	2.01	0.41
29:La:40:HIS:CE1	29:La:41:HIS:CD2	3.09	0.41
34:Lf:46:ARG:HD3	34:Lf:106:TYR:OH	2.21	0.41
47:S2:378:U:H5'	55:SI:97:VAL:CG1	2.51	0.41
47:S2:481:C:H5''	47:S2:482:G:OP2	2.21	0.41
47:S2:1412:C:H5'	47:S2:1413:G:OP1	2.20	0.41
47:S2:1458:G:C6	47:S2:1459:G:C5	3.09	0.41
47:S2:1740:C:H2'	47:S2:1741:U:C6	2.56	0.41
51:SD:61:GLU:OE2	56:SK:73:ASN:ND2	2.53	0.41
54:SH:146:VAL:HG11	77:SW:42:MET:HE1	2.02	0.41
56:SK:32:HIS:ND1	56:SK:33:PRO:HD2	2.35	0.41
60:SR:81:ARG:HA	60:SR:84:TYR:HE2	1.86	0.41
62:ST:2:PRO:HA	62:ST:3:GLY:HA3	1.70	0.41
70:Sg:164:ILE:HG23	70:Sg:178:ASN:HA	2.01	0.41
71:SC:256:TRP:HB3	77:SW:68:ARG:NH1	2.36	0.41
72:SG:21:GLU:O	72:SG:25:ARG:HG2	2.20	0.41
72:SG:67:VAL:HG11	72:SG:99:GLY:HA2	2.03	0.41
75:SN:114:ARG:O	75:SN:118:ILE:HG13	2.21	0.41
1:L5:501:C:O3'	1:L5:504:G:H8	2.04	0.41
1:L5:927:G:O2'	1:L5:928:C:P	2.78	0.41
1:L5:978:G:H1	1:L5:1276:C:N4	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1598:C:H2'	1:L5:1599:A:C8	2.54	0.41
1:L5:1660:U:H2'	29:La:12:ARG:HG3	2.02	0.41
1:L5:2414:G:H2'	1:L5:2415:U:C6	2.56	0.41
1:L5:2844:A:O2'	1:L5:4631:G:H4'	2.21	0.41
1:L5:2860:C:O4'	1:L5:3837:C:O2'	2.38	0.41
1:L5:3974:G:H4'	46:Lz:28:PHE:CE1	2.54	0.41
1:L5:4120:U:O2'	1:L5:4121:G:OP1	2.37	0.41
1:L5:4280:A:N3	7:LD:31:TYR:HE1	2.19	0.41
1:L5:4341:C:N4	48:S6:76:A:C2	2.89	0.41
1:L5:4977:A:OP1	5:LB:343:ARG:NH2	2.46	0.41
1:L5:5000:G:H2'	1:L5:5001:U:O4'	2.20	0.41
1:L5:5025:C:H5	1:L5:5026:U:C6	2.39	0.41
4:LA:219:ILE:HG22	4:LA:221:LYS:H	1.85	0.41
9:LF:122:PHE:HE1	9:LF:150:VAL:HG12	1.84	0.41
10:LG:103:ARG:HA	10:LG:104:PRO:HD3	1.86	0.41
12:LI:42:LYS:HA	12:LI:194:GLY:O	2.21	0.41
13:LJ:160:GLU:O	13:LJ:163:MET:HB3	2.21	0.41
25:LW:79:GLN:HA	25:LW:80:ARG:CB	2.46	0.41
29:La:126:ALA:HB3	29:La:129:PHE:CZ	2.56	0.41
39:Lk:10:ASP:O	39:Lk:14:THR:N	2.53	0.41
40:Ll:44:TRP:CE2	40:Ll:45:ARG:HB2	2.56	0.41
44:Lp:79:VAL:O	44:Lp:83:ILE:HG12	2.20	0.41
45:Lr:46:ARG:NH1	45:Lr:70:GLN:HG3	2.36	0.41
47:S2:306:C:H5'	47:S2:309:G:OP2	2.20	0.41
47:S2:319:C:O2	47:S2:332:G:N2	2.54	0.41
47:S2:517:C:H2'	47:S2:518:G:O4'	2.20	0.41
47:S2:535:G:H22	47:S2:548:C:H42	1.68	0.41
47:S2:1356:G:H2'	47:S2:1357:A:C8	2.56	0.41
47:S2:1522:A:H8	61:SS:146:VAL:HG22	1.85	0.41
47:S2:1648:G:H5''	59:SQ:125:ARG:HB3	2.03	0.41
49:SA:152:SER:HA	49:SA:153:PRO:HD2	1.91	0.41
49:SA:184:ARG:HB3	49:SA:191:ARG:HH21	1.85	0.41
49:SA:201:LEU:HA	60:SR:85:VAL:HG11	2.03	0.41
49:SA:210:ILE:HB	49:SA:214:GLU:CD	2.46	0.41
51:SD:92:ALA:O	51:SD:93:THR:OG1	2.27	0.41
54:SH:145:ARG:HH11	54:SH:153:LEU:HD12	1.85	0.41
55:SI:177:SER:HB2	55:SI:186:ASP:HB2	2.02	0.41
60:SR:6:THR:HG22	60:SR:8:THR:H	1.86	0.41
64:SV:28:ASP:OD2	64:SV:31:SER:HB3	2.20	0.41
70:Sg:218:LEU:HB3	70:Sg:227:LEU:HD12	2.01	0.41
71:SC:185:THR:HG22	71:SC:194:ARG:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SN:101:HIS:NE2	75:SN:105:ASN:ND2	2.69	0.41
78:SY:76:TYR:HB3	78:SY:77:ASP:H	1.66	0.41
1:L5:158:A:N6	1:L5:277:G:C4	2.88	0.41
1:L5:356:G:O2'	3:L8:25:G:N3	2.54	0.41
1:L5:501:C:H3'	1:L5:502:C:C5'	2.50	0.41
1:L5:962:C:OP1	1:L5:2265:G:N1	2.52	0.41
1:L5:977:C:H4'	8:LE:47:ASN:HD21	1.85	0.41
1:L5:1075:G:N1	1:L5:1076:C:O2	2.54	0.41
1:L5:1084:C:H2'	1:L5:1085:C:C6	2.55	0.41
1:L5:1341:U:H5'	6:LC:109:ARG:HA	2.03	0.41
1:L5:1633:G:H5'	1:L5:1634:A:OP1	2.21	0.41
1:L5:1953:U:H2'	1:L5:1954:U:C6	2.56	0.41
1:L5:1969:G:H1	1:L5:2019:C:H42	1.69	0.41
1:L5:2389:A:HO2'	1:L5:2390:G:P	2.44	0.41
1:L5:2495:U:H2'	1:L5:2496:G:C8	2.55	0.41
1:L5:2714:G:H2'	1:L5:2715:G:C8	2.56	0.41
1:L5:2889:G:OP1	20:LR:75:HIS:ND1	2.40	0.41
1:L5:3651:A:OP1	4:LA:200:ARG:HG2	2.21	0.41
1:L5:3777:G:O2'	1:L5:3815:G:O6	2.26	0.41
1:L5:4086:G:C8	26:LX:44:PRO:HG3	2.56	0.41
1:L5:4114:C:H3'	1:L5:4115:G:O4'	2.21	0.41
1:L5:4690:G:O2'	1:L5:4700:A:N6	2.51	0.41
1:L5:4742:G:N2	1:L5:4958:C:H2'	2.33	0.41
1:L5:4767:C:N4	1:L5:4867:G:H1	2.17	0.41
1:L5:4885:U:H3	1:L5:4935:C:N4	2.18	0.41
1:L5:4944:C:H1'	34:Lf:71:TRP:CZ2	2.56	0.41
2:L7:37:G:H2'	2:L7:38:U:O4'	2.21	0.41
3:L8:33:G:H4'	3:L8:34:U:C5	2.55	0.41
4:LA:115:CYS:O	4:LA:116:LEU:HB2	2.21	0.41
5:LB:216:MET:O	5:LB:350:SER:OG	2.33	0.41
6:LC:71:ARG:O	6:LC:73:VAL:HG22	2.21	0.41
8:LE:164:PHE:CE1	8:LE:173:LEU:HD22	2.56	0.41
9:LF:236:ARG:HB2	9:LF:239:GLN:HB3	2.02	0.41
10:LG:73:ARG:NH2	10:LG:243:GLY:HA3	2.34	0.41
11:LH:89:ARG:HE	11:LH:187:VAL:HA	1.86	0.41
11:LH:168:LYS:O	11:LH:170:LYS:N	2.51	0.41
14:LL:46:ILE:HB	14:LL:49:ARG:CG	2.51	0.41
15:LM:39:ASP:HB2	15:LM:47:ARG:HG2	2.03	0.41
17:LO:24:ALA:O	17:LO:28:LEU:HG	2.20	0.41
17:LO:128:ARG:NH1	21:LS:162:GLN:HG3	2.36	0.41
18:LP:72:GLN:O	18:LP:75:GLN:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LQ:178:ARG:N	29:La:51:GLY:HA2	2.36	0.41
21:LS:83:ARG:HA	21:LS:91:HIS:O	2.21	0.41
22:LT:84:ILE:O	30:Lb:24:PRO:HD3	2.21	0.41
23:LU:103:VAL:HG12	23:LU:104:ALA:O	2.21	0.41
24:LV:107:ASN:ND2	24:LV:111:GLU:HB2	2.36	0.41
25:LW:96:GLN:HE21	25:LW:101:ARG:HH12	1.68	0.41
26:LX:71:LEU:HB3	26:LX:76:ILE:HD11	2.03	0.41
26:LX:104:ALA:O	26:LX:134:LYS:NZ	2.54	0.41
27:LY:107:THR:OG1	27:LY:108:ARG:N	2.54	0.41
28:LZ:89:ILE:CG1	28:LZ:117:LYS:HB3	2.50	0.41
31:Lc:87:LYS:HB3	31:Lc:89:TYR:CE2	2.56	0.41
32:Ld:120:VAL:HB	32:Ld:121:ASN:H	1.66	0.41
33:Le:69:MET:CE	33:Le:73:GLY:HA2	2.42	0.41
37:Li:58:MET:SD	37:Li:90:LEU:HB3	2.61	0.41
46:Lz:65:VAL:HB	46:Lz:143:ASN:ND2	2.36	0.41
47:S2:323:C:O2'	47:S2:324:C:O5'	2.36	0.41
47:S2:422:U:O2'	47:S2:652:U:H5''	2.21	0.41
47:S2:609:U:O2	47:S2:635:G:N2	2.53	0.41
47:S2:744:G:O2'	54:SH:107:LYS:HA	2.21	0.41
47:S2:795:A:H62	54:SH:109:ARG:HH12	1.68	0.41
47:S2:955:A:H8	47:S2:955:A:OP2	2.04	0.41
47:S2:1199:A:OP1	66:Sa:2:THR:OG1	2.19	0.41
47:S2:1209:A:H5'	66:Sa:82:LYS:HE3	2.02	0.41
47:S2:1772:C:H5''	47:S2:1773:C:OP2	2.21	0.41
47:S2:1780:G:H2'	47:S2:1781:A:O4'	2.20	0.41
48:S6:49:G:N2	48:S6:65:C:N3	2.63	0.41
49:SA:67:ALA:HB2	64:SV:36:VAL:O	2.21	0.41
51:SD:99:ILE:O	51:SD:103:GLU:HG2	2.21	0.41
51:SD:140:GLY:HA3	51:SD:182:LEU:HB2	2.02	0.41
52:SE:56:LEU:HD12	78:SY:22:GLN:NE2	2.31	0.41
52:SE:180:LEU:HD12	52:SE:228:ILE:HG13	2.02	0.41
52:SE:229:GLY:N	52:SE:235:TRP:HB2	2.36	0.41
53:SF:121:PRO:O	53:SF:141:VAL:HG11	2.21	0.41
53:SF:125:SER:O	53:SF:136:ARG:NE	2.51	0.41
54:SH:15:LYS:H	54:SH:16:PRO:HD2	1.85	0.41
56:SK:16:PHE:CE2	56:SK:85:LEU:HD13	2.55	0.41
60:SR:7:LYS:NZ	60:SR:11:LYS:HD2	2.35	0.41
60:SR:93:GLN:HB3	60:SR:94:GLU:H	1.69	0.41
61:SS:40:TYR:CD1	61:SS:83:PHE:HE2	2.35	0.41
62:ST:40:ALA:N	62:ST:96:SER:HB2	2.35	0.41
67:Sc:11:LEU:HB2	67:Sc:36:ASP:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:Sc:22:GLY:HA3	67:Sc:27:CYS:SG	2.61	0.41
71:SC:107:LEU:HB2	71:SC:127:PHE:HB2	2.02	0.41
71:SC:127:PHE:HA	71:SC:140:GLY:O	2.20	0.41
72:SG:67:VAL:N	72:SG:100:CYS:SG	2.90	0.41
72:SG:133:LEU:HG	72:SG:160:LYS:NZ	2.36	0.41
72:SG:160:LYS:H	72:SG:172:LYS:HG2	1.85	0.41
73:SJ:71:LEU:C	73:SJ:74:GLY:H	2.29	0.41
74:SM:12:MET:HE2	74:SM:127:TYR:CG	2.56	0.41
75:SN:123:HIS:O	75:SN:127:ARG:NH1	2.54	0.41
77:SW:30:CYS:HB3	77:SW:59:GLY:H	1.85	0.41
78:SY:20:ARG:HB3	78:SY:76:TYR:CD1	2.55	0.41
78:SY:56:PHE:HB2	78:SY:74:MET:HB3	2.01	0.41
78:SY:125:VAL:HG12	78:SY:129:LYS:NZ	2.36	0.41
1:L5:1836:G:C2'	1:L5:1837:A:H5'	2.51	0.41
1:L5:1979:A:C6	1:L5:1983:A:H5''	2.55	0.41
1:L5:2626:U:C6	23:LU:92:LYS:HG2	2.56	0.41
1:L5:3769:C:H2'	1:L5:3770:U:H1'	2.03	0.41
1:L5:4389:C:H2'	1:L5:4390:A:C8	2.55	0.41
1:L5:4612:C:H1'	11:LH:120:GLU:OE2	2.21	0.41
1:L5:4933:C:H2'	1:L5:4934:A:C8	2.55	0.41
7:LD:112:ARG:C	7:LD:114:GLY:H	2.29	0.41
9:LF:226:HIS:HE1	9:LF:228:VAL:HG13	1.85	0.41
10:LG:74:LEU:O	10:LG:239:GLY:HA3	2.21	0.41
10:LG:154:LEU:HB3	10:LG:204:PHE:CD2	2.53	0.41
11:LH:133:ALA:N	11:LH:147:GLU:O	2.54	0.41
12:LI:76:MET:O	12:LI:77:VAL:HB	2.20	0.41
24:LV:56:GLY:O	24:LV:81:VAL:HG21	2.21	0.41
25:LW:96:GLN:HB2	72:SG:146:ASN:OD1	2.21	0.41
26:LX:73:HIS:CG	26:LX:115:LYS:HG2	2.56	0.41
26:LX:148:ASP:O	26:LX:152:LYS:HG3	2.21	0.41
37:Li:26:HIS:HE2	37:Li:29:ARG:HD3	1.85	0.41
47:S2:7:G:H1	47:S2:17:C:H42	1.69	0.41
47:S2:72:C:O3'	47:S2:73:C:H2'	2.21	0.41
47:S2:303:C:H1'	55:SI:184:ARG:NH2	2.36	0.41
47:S2:525:A:H61	47:S2:588:G:H22	1.68	0.41
47:S2:958:G:C6	47:S2:959:G:N1	2.89	0.41
47:S2:1838:U:O2'	47:S2:1839:U:H5'	2.21	0.41
49:SA:201:LEU:N	60:SR:85:VAL:HG11	2.35	0.41
52:SE:157:ASN:O	52:SE:175:PHE:HB2	2.21	0.41
53:SF:36:GLN:C	53:SF:38:TYR:H	2.28	0.41
53:SF:91:ARG:O	53:SF:95:HIS:ND1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SK:2:LEU:HD12	56:SK:3:MET:HB2	2.02	0.41
58:SP:37:TYR:C	58:SP:38:SER:HG	2.28	0.41
58:SP:56:LEU:O	58:SP:60:LEU:N	2.46	0.41
63:SU:60:THR:HG23	63:SU:81:GLN:NE2	2.36	0.41
63:SU:61:LEU:H	63:SU:81:GLN:HE22	1.67	0.41
64:SV:53:TYR:CE1	64:SV:72:LEU:HB3	2.56	0.41
74:SM:59:PRO:O	74:SM:60:MET:HB2	2.21	0.41
75:SN:62:GLN:HB3	75:SN:65:PHE:CD2	2.56	0.41
75:SN:136:PRO:HA	75:SN:137:PRO:HD3	1.99	0.41
1:L5:29:G:H2'	1:L5:30:C:O4'	2.19	0.40
1:L5:501:C:H3'	1:L5:502:C:H5''	2.02	0.40
1:L5:964:A:N1	1:L5:965:G:H2'	2.37	0.40
1:L5:1302:U:H5	1:L5:1303:A:C6	2.39	0.40
1:L5:1354:A:N1	1:L5:1385:G:O2'	2.42	0.40
1:L5:1379:C:P	1:L5:1380:G:H5'	2.61	0.40
1:L5:1417:C:H2'	1:L5:1418:C:O4'	2.21	0.40
1:L5:1979:A:N1	1:L5:1983:A:H5''	2.36	0.40
1:L5:2415:U:H2'	1:L5:2416:G:O4'	2.21	0.40
1:L5:2622:G:H2'	1:L5:2623:A:C8	2.56	0.40
1:L5:4334:U:H1'	22:LT:8:ARG:HB2	2.03	0.40
1:L5:4665:A:H2'	1:L5:4666:G:O4'	2.21	0.40
1:L5:4873:G:H1	15:LM:98:ARG:NH1	2.18	0.40
1:L5:4885:U:H3	1:L5:4935:C:H42	1.70	0.40
6:LC:25:PRO:HD2	6:LC:28:PHE:CE2	2.55	0.40
9:LF:81:PHE:HB2	22:LT:141:VAL:HB	2.03	0.40
16:LN:94:PHE:CE2	16:LN:96:ARG:HB3	2.55	0.40
24:LV:22:VAL:HG23	24:LV:52:LEU:HB3	2.03	0.40
25:LW:107:GLN:HA	25:LW:110:ARG:HH11	1.86	0.40
29:La:69:PHE:CD2	29:La:71:PRO:HD3	2.55	0.40
32:Ld:18:ASN:OD1	32:Ld:19:GLU:N	2.53	0.40
35:Lg:78:TYR:HD1	35:Lg:82:MET:HE3	1.87	0.40
47:S2:836:G:N7	47:S2:837:A:O2'	2.54	0.40
47:S2:938:A:C2	47:S2:939:U:H1'	2.56	0.40
47:S2:1145:A:N6	47:S2:1150:A:H2	2.19	0.40
49:SA:14:ASP:OD1	49:SA:17:LYS:NZ	2.52	0.40
49:SA:130:ASP:O	49:SA:133:PRO:HD2	2.21	0.40
51:SD:71:ALA:HB1	56:SK:20:VAL:HG21	2.02	0.40
52:SE:15:PRO:HD2	52:SE:18:TRP:CE3	2.57	0.40
54:SH:21:SER:O	54:SH:25:GLN:HG3	2.21	0.40
59:SQ:32:ILE:HD11	59:SQ:63:PHE:CE1	2.57	0.40
64:SV:55:ILE:HD11	64:SV:69:ILE:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SC:196:ILE:HA	71:SC:197:PRO:HD3	1.81	0.40
73:SJ:37:LEU:HB3	73:SJ:38:ARG:H	1.45	0.40
78:SY:50:THR:O	78:SY:51:THR:OG1	2.26	0.40
79:SZ:68:ILE:HG22	79:SZ:109:TYR:HD2	1.87	0.40
1:L5:1:C:O3'	1:L5:2:G:H8	2.04	0.40
1:L5:1265:G:H4'	1:L5:2113:G:N7	2.36	0.40
1:L5:1302:U:O2'	33:Le:17:THR:O	2.34	0.40
1:L5:1472:C:N4	1:L5:1492:G:H1	2.18	0.40
1:L5:2003:G:H22	1:L5:2016:C:N4	2.17	0.40
1:L5:2270:G:C6	1:L5:2271:C:N3	2.90	0.40
1:L5:2621:A:OP1	23:LU:80:LYS:NZ	2.38	0.40
1:L5:3798:U:H2'	1:L5:3800:A:OP2	2.21	0.40
1:L5:4430:G:OP1	12:LI:3:ARG:NH1	2.54	0.40
5:LB:114:CYS:HB2	5:LB:165:HIS:CD2	2.56	0.40
5:LB:214:ASP:HB3	5:LB:362:LYS:HA	2.03	0.40
6:LC:46:LYS:HB3	6:LC:46:LYS:HE2	1.84	0.40
7:LD:39:GLN:HG3	7:LD:40:ASP:O	2.20	0.40
7:LD:238:GLU:OE1	7:LD:242:LYS:NZ	2.54	0.40
8:LE:47:ASN:HD22	8:LE:62:MET:HE1	1.87	0.40
9:LF:95:ILE:HG13	9:LF:96:ARG:N	2.36	0.40
10:LG:59:ARG:NH2	16:LN:32:GLN:O	2.49	0.40
11:LH:88:PHE:CZ	11:LH:151:ILE:HB	2.56	0.40
11:LH:94:SER:OG	11:LH:101:ILE:HD13	2.21	0.40
14:LL:170:THR:HB	14:LL:173:GLU:HG2	2.03	0.40
17:LO:173:GLN:CB	17:LO:176:ARG:HH21	2.33	0.40
24:LV:38:TYR:HB3	24:LV:64:THR:O	2.22	0.40
27:LY:8:THR:HG23	27:LY:13:LYS:HD2	2.03	0.40
32:Ld:86:VAL:HG22	32:Ld:87:ARG:O	2.21	0.40
39:Lk:51:GLU:OE1	39:Lk:51:GLU:N	2.55	0.40
40:Ll:24:PRO:HB2	40:Ll:26:TRP:CD1	2.56	0.40
47:S2:123:G:O3'	52:SE:148:ARG:NH1	2.50	0.40
47:S2:201:C:C5	47:S2:202:G:H1'	2.56	0.40
47:S2:315:C:H2'	47:S2:316:G:H8	1.86	0.40
47:S2:1136:U:H2'	47:S2:1137:U:C6	2.57	0.40
50:SB:167:LYS:NZ	50:SB:200:ALA:O	2.54	0.40
51:SD:226:GLN:HE21	70:Sg:185:LYS:CG	2.33	0.40
52:SE:191:ARG:NE	52:SE:245:ARG:HB3	2.35	0.40
57:SL:68:ILE:HA	57:SL:130:GLU:O	2.21	0.40
57:SL:151:THR:HA	75:SN:133:ARG:CZ	2.52	0.40
60:SR:9:VAL:O	60:SR:13:ALA:N	2.53	0.40
61:SS:117:ILE:HG13	61:SS:118:ARG:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SU:49:LYS:O	63:SU:50:VAL:HG12	2.21	0.40
65:SX:53:GLU:HB3	65:SX:54:LYS:H	1.71	0.40
70:Sg:133:ASN:HB3	70:Sg:135:LEU:HG	2.03	0.40
70:Sg:256:ILE:HD12	70:Sg:270:LEU:HD22	2.03	0.40
71:SC:214:LEU:HD22	71:SC:219:ILE:HG13	2.03	0.40
72:SG:216:ARG:HD2	72:SG:223:LYS:HD3	2.03	0.40
76:SO:75:MET:O	76:SO:79:GLN:HG2	2.21	0.40
79:SZ:77:LEU:HD23	79:SZ:78:LYS:H	1.85	0.40
1:L5:82:U:H2'	1:L5:83:C:O4'	2.21	0.40
1:L5:189:G:H1	1:L5:252:C:N4	2.18	0.40
1:L5:369:G:N1	1:L5:372:A:OP2	2.54	0.40
1:L5:658:C:H2'	1:L5:659:G:O4'	2.21	0.40
1:L5:660:A:N6	1:L5:661:C:O2	2.53	0.40
1:L5:744:G:H1	1:L5:920:C:H42	1.69	0.40
1:L5:2758:G:H2'	1:L5:2759:G:C8	2.56	0.40
1:L5:3663:A:N3	1:L5:3663:A:H2'	2.36	0.40
1:L5:3772:U:H1'	1:L5:3776:G:N1	2.36	0.40
1:L5:3827:G:H3'	1:L5:3828:A:H5''	2.02	0.40
1:L5:3965:A:H1'	1:L5:4038:C:C2	2.57	0.40
1:L5:4324:A:H2'	1:L5:4325:A:C8	2.55	0.40
1:L5:4477:A:H2'	1:L5:4478:G:C8	2.56	0.40
1:L5:4504:C:H2'	1:L5:4505:C:C6	2.56	0.40
1:L5:4875:G:N2	1:L5:4879:C:H5'	2.22	0.40
11:LH:69:THR:O	11:LH:72:THR:OG1	2.29	0.40
16:LN:39:ALA:HB3	16:LN:61:ILE:HD11	2.03	0.40
20:LR:103:ARG:NH1	20:LR:124:TYR:CZ	2.89	0.40
21:LS:6:THR:O	21:LS:107:THR:OG1	2.36	0.40
22:LT:39:ILE:HA	22:LT:63:ARG:HA	2.04	0.40
25:LW:115:ALA:O	25:LW:119:LYS:HG2	2.22	0.40
27:LY:58:VAL:O	27:LY:63:LYS:HG3	2.22	0.40
35:Lg:5:LEU:HD23	35:Lg:32:TYR:CD1	2.49	0.40
36:Lh:34:ALA:O	36:Lh:38:GLY:N	2.52	0.40
39:Lk:24:LYS:HD2	39:Lk:69:LEU:HD22	2.04	0.40
41:Lm:122:ARG:NH2	41:Lm:125:LYS:HG2	2.36	0.40
45:Lr:96:MET:HA	45:Lr:100:ASN:HD22	1.86	0.40
47:S2:148:U:H2'	47:S2:149:A:C8	2.56	0.40
47:S2:316:G:H1	47:S2:334:C:H42	1.69	0.40
47:S2:526:A:H5''	81:Se:35:ARG:NH1	2.37	0.40
47:S2:878:G:H3'	47:S2:878:G:OP1	2.21	0.40
47:S2:937:C:H2'	47:S2:938:A:C8	2.56	0.40
47:S2:1580:A:C8	63:SU:56:MET:HE1	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SB:40:ASN:N	50:SB:75:GLN:OE1	2.34	0.40
50:SB:158:HIS:O	50:SB:162:ARG:HG3	2.22	0.40
50:SB:180:ASP:O	50:SB:184:VAL:HG23	2.22	0.40
51:SD:135:GLU:HB2	51:SD:187:LYS:HB2	2.02	0.40
54:SH:34:SER:OG	54:SH:35:ASP:N	2.54	0.40
54:SH:40:LEU:HD23	54:SH:40:LEU:O	2.21	0.40
54:SH:81:ARG:O	54:SH:85:LYS:HD3	2.21	0.40
55:SI:161:LEU:HD23	55:SI:196:GLU:HB3	2.03	0.40
55:SI:178:ARG:O	55:SI:178:ARG:HG3	2.21	0.40
71:SC:210:PRO:HD3	71:SC:236:PHE:CE2	2.56	0.40
79:SZ:51:ASP:N	79:SZ:54:THR:OG1	2.41	0.40
1:L5:287:U:O2	16:LN:93:LYS:HE3	2.22	0.40
1:L5:509:A:H2'	14:LL:163:LYS:CE	2.51	0.40
1:L5:1086:C:H2'	1:L5:1087:A:C8	2.56	0.40
1:L5:1468:C:OP1	29:La:132:ARG:NH2	2.55	0.40
1:L5:2506:G:O2'	1:L5:2507:A:H5'	2.22	0.40
1:L5:2752:G:H3'	1:L5:2753:G:H8	1.86	0.40
1:L5:3759:A:N7	1:L5:3763:A:H2	2.19	0.40
1:L5:3767:C:O2'	1:L5:3768:U:P	2.79	0.40
1:L5:3969:G:H4'	1:L5:4054:C:H41	1.85	0.40
1:L5:4307:A:H2'	1:L5:4308:C:C6	2.56	0.40
1:L5:4475:G:P	11:LH:173:ARG:HH12	2.44	0.40
1:L5:4480:A:H2'	1:L5:4481:U:O4'	2.22	0.40
1:L5:4757:C:H5''	1:L5:4758:U:OP2	2.22	0.40
3:L8:40:A:OP2	3:L8:102:G:N1	2.40	0.40
3:L8:93:C:HO2'	3:L8:94:G:H8	1.68	0.40
6:LC:141:GLY:O	6:LC:204:ARG:NH1	2.51	0.40
6:LC:251:ILE:C	6:LC:252:TRP:CD1	2.98	0.40
6:LC:285:ILE:N	19:LQ:124:ASP:OD2	2.44	0.40
6:LC:293:LEU:HD22	19:LQ:34:PHE:CD2	2.56	0.40
8:LE:283:PRO:HA	8:LE:286:LEU:HD12	2.04	0.40
8:LE:286:LEU:HB3	8:LE:288:PHE:HD2	1.86	0.40
11:LH:120:GLU:OE2	11:LH:122:TYR:HB3	2.21	0.40
12:LI:91:LEU:HD11	12:LI:135:ILE:HG12	2.03	0.40
15:LM:11:ARG:HG2	15:LM:57:LEU:HD22	2.03	0.40
19:LQ:61:LEU:HD21	19:LQ:66:MET:HB3	2.02	0.40
47:S2:30:C:O2'	47:S2:596:U:H5''	2.22	0.40
47:S2:118:C:H1'	47:S2:445:A:C4	2.56	0.40
47:S2:312:G:C5'	47:S2:313:A:H5'	2.49	0.40
47:S2:502:C:O4'	52:SE:66:MET:HG3	2.21	0.40
47:S2:524:U:H2'	81:Se:28:LYS:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:694:G:H2'	47:S2:695:C:O4'	2.22	0.40
47:S2:950:C:H2'	47:S2:951:C:O4'	2.21	0.40
47:S2:1004:U:H2'	47:S2:1005:G:C8	2.56	0.40
47:S2:1359:U:H2'	47:S2:1360:U:C6	2.57	0.40
47:S2:1665:G:H5''	62:ST:89:PRO:HD2	2.03	0.40
51:SD:58:VAL:HG23	51:SD:59:LEU:HD12	2.04	0.40
53:SF:70:GLU:O	53:SF:73:THR:OG1	2.30	0.40
53:SF:98:GLU:OE1	53:SF:98:GLU:N	2.54	0.40
54:SH:145:ARG:HD3	54:SH:155:LYS:HE3	2.04	0.40
54:SH:163:GLN:HG2	54:SH:189:PHE:CZ	2.55	0.40
61:SS:4:VAL:HA	79:SZ:50:PHE:CE1	2.57	0.40
61:SS:34:LYS:HE3	61:SS:103:LEU:HD11	2.03	0.40
61:SS:115:LYS:HG3	61:SS:116:LYS:HG3	2.04	0.40
70:Sg:105:THR:HG21	70:Sg:128:THR:HG21	2.04	0.40
71:SC:198:ALA:HA	71:SC:199:PRO:HD3	1.96	0.40
1:L5:407:A:O2'	1:L5:408:A:H5'	2.22	0.40
1:L5:1852:U:OP1	29:La:23:GLY:N	2.54	0.40
1:L5:2253:A:H2'	1:L5:2254:G:H5''	2.04	0.40
1:L5:2561:C:H1'	1:L5:2567:G:N2	2.36	0.40
1:L5:2785:C:HO2'	1:L5:2786:C:P	2.43	0.40
1:L5:4040:C:N4	1:L5:4042:G:O6	2.45	0.40
3:L8:49:G:OP1	36:Lh:48:ARG:HD3	2.21	0.40
4:LA:49:ILE:O	4:LA:49:ILE:HG13	2.21	0.40
4:LA:57:PRO:HG3	44:Lp:53:GLY:O	2.21	0.40
5:LB:143:LYS:HA	5:LB:146:LEU:HG	2.04	0.40
6:LC:236:ASN:OD1	6:LC:238:LEU:HG	2.22	0.40
7:LD:31:TYR:C	7:LD:33:ARG:H	2.26	0.40
9:LF:161:LYS:HA	9:LF:165:LYS:O	2.21	0.40
12:LI:193:ASP:OD2	12:LI:198:LYS:HE3	2.21	0.40
13:LJ:44:THR:HG23	13:LJ:46:GLN:HG2	2.04	0.40
18:LP:47:TYR:O	18:LP:51:VAL:HG23	2.22	0.40
23:LU:100:LEU:HD11	23:LU:112:LEU:HD13	2.02	0.40
33:Le:46:ARG:HA	33:Le:55:MET:HE1	2.03	0.40
33:Le:67:LYS:HG2	33:Le:68:HIS:CD2	2.56	0.40
34:Lf:28:LEU:HD22	34:Lf:101:ILE:HD11	2.03	0.40
36:Lh:122:LYS:HA	36:Lh:122:LYS:HD2	1.86	0.40
46:Lz:39:LYS:HD2	46:Lz:202:ARG:HE	1.86	0.40
47:S2:833:C:H41	78:SY:10:ARG:HB2	1.83	0.40
47:S2:1121:G:O2'	50:SB:204:ILE:O	2.37	0.40
47:S2:1312:G:H3'	74:SM:29:ASP:OD1	2.21	0.40
47:S2:1420:G:H22	47:S2:1427:C:H2'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S2:1520:G:H5''	47:S2:1521:C:C5	2.57	0.40
47:S2:1554:C:H41	51:SD:9:ARG:NH2	2.20	0.40
49:SA:154:LEU:HD13	64:SV:66:ASP:OD2	2.21	0.40
52:SE:161:GLN:O	52:SE:169:ILE:HA	2.22	0.40
53:SF:96:ALA:O	53:SF:99:ILE:HG22	2.21	0.40
57:SL:37:TYR:CD2	57:SL:51:ILE:HG12	2.56	0.40
59:SQ:60:LYS:O	59:SQ:64:ALA:N	2.55	0.40
70:Sg:147:HIS:HB3	70:Sg:171:ASP:OD2	2.22	0.40
73:SJ:86:VAL:HG21	73:SJ:105:PHE:CD1	2.56	0.40
73:SJ:177:ASN:O	73:SJ:180:LYS:HG2	2.21	0.40
76:SO:28:PHE:HD2	76:SO:94:HIS:CE1	2.39	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%)	207 (84%)	25 (10%)	14 (6%)	1	13
5	LB	400/403 (99%)	344 (86%)	42 (10%)	14 (4%)	3	23
6	LC	365/427 (86%)	311 (85%)	30 (8%)	24 (7%)	1	12
7	LD	291/297 (98%)	258 (89%)	22 (8%)	11 (4%)	2	21
8	LE	238/288 (83%)	182 (76%)	37 (16%)	19 (8%)	1	8
9	LF	223/248 (90%)	201 (90%)	18 (8%)	4 (2%)	6	34
10	LG	239/266 (90%)	205 (86%)	19 (8%)	15 (6%)	1	12
11	LH	188/192 (98%)	162 (86%)	18 (10%)	8 (4%)	2	18
12	LI	211/214 (99%)	177 (84%)	26 (12%)	8 (4%)	2	21
13	LJ	174/178 (98%)	147 (84%)	19 (11%)	8 (5%)	2	17
14	LL	208/211 (99%)	179 (86%)	18 (9%)	11 (5%)	1	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	LM	137/215 (64%)	115 (84%)	16 (12%)	6 (4%)	2	18
16	LN	201/204 (98%)	180 (90%)	18 (9%)	3 (2%)	8	37
17	LO	199/203 (98%)	180 (90%)	15 (8%)	4 (2%)	6	32
18	LP	151/184 (82%)	130 (86%)	16 (11%)	5 (3%)	3	24
19	LQ	185/188 (98%)	159 (86%)	22 (12%)	4 (2%)	5	30
20	LR	185/196 (94%)	168 (91%)	17 (9%)	0	100	100
21	LS	173/176 (98%)	141 (82%)	21 (12%)	11 (6%)	1	12
22	LT	157/160 (98%)	134 (85%)	18 (12%)	5 (3%)	3	24
23	LU	99/128 (77%)	81 (82%)	17 (17%)	1 (1%)	12	45
24	LV	129/140 (92%)	105 (81%)	18 (14%)	6 (5%)	2	17
25	LW	122/157 (78%)	96 (79%)	22 (18%)	4 (3%)	3	24
26	LX	118/156 (76%)	103 (87%)	13 (11%)	2 (2%)	7	35
27	LY	132/145 (91%)	118 (89%)	10 (8%)	4 (3%)	3	25
28	LZ	133/136 (98%)	118 (89%)	12 (9%)	3 (2%)	5	30
29	La	145/148 (98%)	122 (84%)	18 (12%)	5 (3%)	3	23
30	Lb	73/159 (46%)	62 (85%)	9 (12%)	2 (3%)	4	27
31	Lc	96/115 (84%)	81 (84%)	9 (9%)	6 (6%)	1	12
32	Ld	105/125 (84%)	85 (81%)	15 (14%)	5 (5%)	2	16
33	Le	126/135 (93%)	107 (85%)	14 (11%)	5 (4%)	2	20
34	Lf	107/110 (97%)	87 (81%)	16 (15%)	4 (4%)	2	21
35	Lg	112/117 (96%)	103 (92%)	8 (7%)	1 (1%)	14	46
36	Lh	120/123 (98%)	110 (92%)	8 (7%)	2 (2%)	7	35
37	Li	100/105 (95%)	92 (92%)	4 (4%)	4 (4%)	2	20
38	Lj	84/97 (87%)	67 (80%)	10 (12%)	7 (8%)	0	8
39	Lk	67/70 (96%)	50 (75%)	12 (18%)	5 (8%)	1	9
40	Ll	48/51 (94%)	44 (92%)	3 (6%)	1 (2%)	5	31
41	Lm	50/128 (39%)	43 (86%)	5 (10%)	2 (4%)	2	20
42	Ln	22/25 (88%)	20 (91%)	2 (9%)	0	100	100
43	Lo	102/106 (96%)	85 (83%)	15 (15%)	2 (2%)	6	32
44	Lp	89/92 (97%)	71 (80%)	13 (15%)	5 (6%)	1	14
45	Lr	123/137 (90%)	102 (83%)	15 (12%)	6 (5%)	1	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	Lz	215/217 (99%)	168 (78%)	31 (14%)	16 (7%)	1	9
49	SA	220/295 (75%)	187 (85%)	27 (12%)	6 (3%)	4	27
50	SB	212/264 (80%)	174 (82%)	30 (14%)	8 (4%)	2	21
51	SD	225/243 (93%)	183 (81%)	24 (11%)	18 (8%)	1	8
52	SE	260/263 (99%)	215 (83%)	30 (12%)	15 (6%)	1	13
53	SF	189/204 (93%)	144 (76%)	31 (16%)	14 (7%)	1	9
54	SH	187/194 (96%)	145 (78%)	27 (14%)	15 (8%)	1	8
55	SI	204/208 (98%)	168 (82%)	24 (12%)	12 (6%)	1	13
56	SK	96/165 (58%)	76 (79%)	16 (17%)	4 (4%)	2	19
57	SL	151/158 (96%)	130 (86%)	11 (7%)	10 (7%)	1	12
58	SP	95/145 (66%)	61 (64%)	21 (22%)	13 (14%)	0	3
59	SQ	144/146 (99%)	114 (79%)	20 (14%)	10 (7%)	1	11
60	SR	130/135 (96%)	104 (80%)	17 (13%)	9 (7%)	1	11
61	SS	148/152 (97%)	121 (82%)	13 (9%)	14 (10%)	0	6
62	ST	141/145 (97%)	119 (84%)	16 (11%)	6 (4%)	2	18
63	SU	102/119 (86%)	86 (84%)	11 (11%)	5 (5%)	1	16
64	SV	81/83 (98%)	65 (80%)	11 (14%)	5 (6%)	1	12
65	SX	139/143 (97%)	114 (82%)	12 (9%)	13 (9%)	0	6
66	Sa	103/115 (90%)	77 (75%)	16 (16%)	10 (10%)	0	6
67	Sc	62/69 (90%)	47 (76%)	9 (14%)	6 (10%)	0	6
68	Sd	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
69	Sf	69/156 (44%)	47 (68%)	10 (14%)	12 (17%)	0	1
70	Sg	311/317 (98%)	237 (76%)	58 (19%)	16 (5%)	1	15
71	SC	220/293 (75%)	188 (86%)	23 (10%)	9 (4%)	2	19
72	SG	235/249 (94%)	198 (84%)	26 (11%)	11 (5%)	2	17
73	SJ	183/194 (94%)	157 (86%)	16 (9%)	10 (6%)	1	14
74	SM	120/132 (91%)	79 (66%)	29 (24%)	12 (10%)	0	5
75	SN	148/151 (98%)	133 (90%)	8 (5%)	7 (5%)	2	17
76	SO	138/151 (91%)	101 (73%)	24 (17%)	13 (9%)	0	6
77	SW	127/130 (98%)	109 (86%)	13 (10%)	5 (4%)	2	20
78	SY	129/133 (97%)	108 (84%)	16 (12%)	5 (4%)	2	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
79	SZ	73/125 (58%)	59 (81%)	11 (15%)	3 (4%)	2	19
80	Sb	81/84 (96%)	67 (83%)	12 (15%)	2 (2%)	4	28
81	Se	56/59 (95%)	41 (73%)	11 (20%)	4 (7%)	1	10
All	All	11518/12905 (89%)	9598 (83%)	1346 (12%)	574 (5%)	3	16

All (574) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	LA	118	GLU
5	LB	360	LEU
6	LC	23	THR
6	LC	148	PRO
6	LC	186	SER
6	LC	204	ARG
7	LD	4	VAL
8	LE	110	ARG
8	LE	123	ARG
8	LE	226	ARG
10	LG	195	HIS
11	LH	139	ALA
11	LH	141	LYS
12	LI	77	VAL
12	LI	101	LYS
12	LI	160	PRO
21	LS	21	LYS
21	LS	127	MET
22	LT	53	PRO
22	LT	81	LYS
23	LU	115	PHE
32	Ld	82	TYR
33	Le	62	SER
33	Le	104	SER
36	Lh	39	GLY
37	Li	73	ILE
45	Lr	46	ARG
46	Lz	17	VAL
46	Lz	122	ARG
49	SA	125	THR
50	SB	147	ASN
51	SD	3	VAL
51	SD	55	THR

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Mol	Chain	Res	Type
51	SD	81	GLU
52	SE	76	VAL
52	SE	164	LEU
53	SF	15	PRO
53	SF	33	ILE
54	SH	66	VAL
54	SH	107	LYS
55	SI	130	THR
56	SK	3	MET
57	SL	8	ARG
57	SL	116	CYS
58	SP	37	TYR
58	SP	76	VAL
59	SQ	42	ILE
59	SQ	117	ARG
60	SR	42	PRO
60	SR	94	GLU
61	SS	117	ILE
62	ST	4	VAL
63	SU	50	VAL
63	SU	103	SER
63	SU	107	GLU
65	SX	35	ALA
66	Sa	3	LYS
66	Sa	18	VAL
66	Sa	106	ALA
67	Sc	67	ARG
69	Sf	93	HIS
70	Sg	55	PRO
70	Sg	99	ARG
70	Sg	102	VAL
70	Sg	281	ALA
71	SC	262	THR
72	SG	107	SER
72	SG	122	PRO
73	SJ	3	VAL
73	SJ	8	VAL
73	SJ	17	ARG
74	SM	108	CYS
74	SM	117	GLU
75	SN	24	THR
77	SW	66	THR

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Mol	Chain	Res	Type
4	LA	172	GLY
4	LA	195	CYS
5	LB	113	GLU
6	LC	69	THR
6	LC	73	VAL
6	LC	86	ARG
6	LC	273	LEU
6	LC	308	LYS
6	LC	319	LEU
6	LC	357	ALA
7	LD	21	ARG
7	LD	89	LYS
7	LD	119	TYR
7	LD	177	THR
8	LE	106	VAL
8	LE	124	LYS
8	LE	185	PRO
8	LE	279	ASN
9	LF	168	ALA
9	LF	178	SER
9	LF	223	LYS
10	LG	200	THR
10	LG	202	VAL
11	LH	63	ASN
11	LH	189	GLN
12	LI	70	ILE
12	LI	80	CYS
13	LJ	11	PRO
13	LJ	28	GLU
14	LL	62	PRO
14	LL	90	VAL
14	LL	100	PRO
14	LL	165	LYS
15	LM	71	LYS
16	LN	16	SER
17	LO	123	ALA
17	LO	143	HIS
18	LP	91	LEU
18	LP	132	ALA
19	LQ	77	ASN
19	LQ	103	LEU
21	LS	110	TYR

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Mol	Chain	Res	Type
22	LT	136	ARG
24	LV	21	PRO
24	LV	125	CYS
24	LV	127	ASP
25	LW	51	TRP
25	LW	96	GLN
26	LX	51	THR
26	LX	59	LYS
27	LY	20	ASN
27	LY	49	ILE
28	LZ	33	THR
29	La	11	LEU
29	La	76	ASP
29	La	92	LYS
31	Lc	23	LYS
31	Lc	51	ASN
31	Lc	54	ALA
31	Lc	101	ASP
32	Ld	44	ARG
32	Ld	94	GLU
33	Le	125	PRO
34	Lf	54	LYS
34	Lf	83	MET
36	Lh	97	LYS
39	Lk	9	LYS
44	Lp	64	VAL
45	Lr	22	LYS
45	Lr	67	ARG
46	Lz	93	LEU
49	SA	13	GLU
49	SA	31	ASP
49	SA	170	SER
50	SB	22	VAL
50	SB	37	ALA
50	SB	83	LYS
50	SB	190	PRO
51	SD	93	THR
51	SD	198	ILE
52	SE	144	ALA
52	SE	214	ASN
53	SF	17	ILE
53	SF	48	TYR

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Mol	Chain	Res	Type
53	SF	57	ALA
53	SF	130	ARG
53	SF	139	VAL
53	SF	202	SER
54	SH	34	SER
54	SH	115	LYS
55	SI	75	LYS
55	SI	122	GLY
55	SI	140	LYS
55	SI	143	LYS
55	SI	155	ASN
55	SI	186	ASP
58	SP	15	PHE
58	SP	94	VAL
58	SP	100	LYS
58	SP	105	VAL
59	SQ	100	VAL
60	SR	72	LYS
60	SR	119	VAL
60	SR	131	PRO
61	SS	12	ILE
61	SS	71	MET
61	SS	74	PRO
61	SS	88	LYS
61	SS	121	ARG
61	SS	133	GLY
62	ST	5	THR
62	ST	132	ASP
64	SV	9	VAL
64	SV	10	ASP
64	SV	78	ILE
65	SX	10	ALA
66	Sa	13	LYS
66	Sa	46	GLU
66	Sa	89	ARG
67	Sc	59	LEU
69	Sf	102	VAL
69	Sf	139	HIS
70	Sg	15	ASN
70	Sg	28	PRO
70	Sg	56	GLN
70	Sg	145	GLU

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Mol	Chain	Res	Type
70	Sg	261	LEU
71	SC	261	PHE
71	SC	278	THR
72	SG	12	CYS
72	SG	20	ASP
72	SG	25	ARG
72	SG	147	LEU
73	SJ	37	LEU
73	SJ	147	PHE
74	SM	41	ALA
74	SM	91	LEU
74	SM	96	ARG
75	SN	3	ARG
75	SN	102	LEU
76	SO	48	SER
76	SO	126	ILE
76	SO	128	ARG
77	SW	5	ASN
78	SY	34	THR
78	SY	119	GLY
79	SZ	93	SER
80	Sb	10	PRO
80	Sb	75	GLU
81	Se	29	THR
81	Se	47	PRO
4	LA	144	LYS
4	LA	180	LEU
4	LA	239	ALA
4	LA	240	ALA
5	LB	291	TYR
5	LB	295	ASP
5	LB	314	ILE
6	LC	110	ARG
6	LC	111	TRP
6	LC	132	ALA
6	LC	170	LEU
6	LC	287	THR
6	LC	309	ILE
6	LC	318	PRO
7	LD	20	PHE
7	LD	130	TYR
7	LD	178	LYS

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Mol	Chain	Res	Type
7	LD	182	GLY
7	LD	255	LYS
8	LE	52	ARG
8	LE	86	GLU
8	LE	136	HIS
8	LE	228	GLN
10	LG	58	PRO
10	LG	264	LYS
11	LH	98	HIS
12	LI	38	ARG
13	LJ	169	LYS
14	LL	91	ALA
15	LM	111	LYS
15	LM	118	MET
17	LO	37	ARG
17	LO	202	LEU
19	LQ	96	PRO
21	LS	7	LEU
21	LS	64	CYS
21	LS	83	ARG
21	LS	146	HIS
22	LT	69	GLN
24	LV	130	PRO
25	LW	65	GLU
25	LW	73	ARG
27	LY	37	GLU
28	LZ	8	GLY
29	La	37	GLY
31	Lc	75	SER
32	Ld	21	VAL
35	Lg	57	ARG
37	Li	48	CYS
38	Lj	21	ARG
38	Lj	63	ARG
39	Lk	38	CYS
39	Lk	68	GLU
41	Lm	117	HIS
44	Lp	71	TYR
45	Lr	68	SER
46	Lz	27	LYS
46	Lz	86	ASP
46	Lz	129	ASN

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Mol	Chain	Res	Type
49	SA	98	PRO
51	SD	44	THR
51	SD	215	ASP
51	SD	216	GLU
52	SE	77	ARG
52	SE	93	ASP
52	SE	196	THR
52	SE	232	ASN
53	SF	42	LYS
53	SF	47	LYS
53	SF	85	LYS
54	SH	112	ASN
54	SH	148	LEU
55	SI	86	SER
55	SI	132	GLU
55	SI	180	GLY
57	SL	3	ASP
57	SL	21	LYS
57	SL	33	LEU
57	SL	133	PRO
57	SL	148	ALA
58	SP	16	THR
58	SP	51	ARG
58	SP	95	GLY
59	SQ	4	LYS
59	SQ	48	GLN
59	SQ	56	LEU
59	SQ	101	ASP
59	SQ	145	TYR
61	SS	16	LEU
61	SS	92	ASP
61	SS	132	ARG
61	SS	144	ARG
62	ST	34	VAL
64	SV	36	VAL
65	SX	46	HIS
65	SX	64	SER
65	SX	77	ASN
65	SX	79	LYS
65	SX	109	GLY
65	SX	126	ALA
66	Sa	5	ARG

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Mol	Chain	Res	Type
66	Sa	61	ALA
67	Sc	36	ASP
69	Sf	99	LYS
69	Sf	100	LEU
69	Sf	104	LYS
69	Sf	118	ARG
69	Sf	124	ASP
70	Sg	105	THR
70	Sg	244	ASN
70	Sg	246	TYR
71	SC	188	CYS
71	SC	226	ALA
72	SG	175	LYS
72	SG	212	LEU
72	SG	213	LEU
73	SJ	119	LEU
73	SJ	122	SER
74	SM	23	LYS
74	SM	29	ASP
74	SM	56	CYS
74	SM	83	LYS
75	SN	12	SER
76	SO	65	ASP
76	SO	67	ASP
76	SO	68	GLU
76	SO	138	ASP
76	SO	140	THR
77	SW	93	LEU
78	SY	3	ASP
4	LA	28	ARG
4	LA	80	GLU
4	LA	115	CYS
5	LB	5	LYS
5	LB	10	ARG
5	LB	294	LYS
5	LB	310	SER
6	LC	66	SER
6	LC	205	ARG
8	LE	219	LYS
8	LE	221	LYS
10	LG	59	ARG
10	LG	121	LYS

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Mol	Chain	Res	Type
10	LG	128	VAL
10	LG	165	GLU
12	LI	20	SER
13	LJ	138	GLY
13	LJ	174	ILE
14	LL	151	THR
14	LL	169	ILE
15	LM	88	ALA
16	LN	188	ARG
21	LS	153	PRO
21	LS	155	PRO
24	LV	108	ASN
24	LV	110	GLY
27	LY	53	ASP
29	La	27	LYS
30	Lb	74	ALA
33	Le	8	VAL
34	Lf	5	LEU
37	Li	4	ARG
38	Lj	15	THR
38	Lj	36	LYS
39	Lk	62	PRO
40	Ll	42	ARG
41	Lm	105	PRO
44	Lp	65	ALA
44	Lp	91	ASP
45	Lr	86	ALA
46	Lz	153	SER
46	Lz	195	LYS
46	Lz	203	ALA
49	SA	4	ALA
50	SB	76	ASN
50	SB	86	LEU
50	SB	223	PHE
51	SD	83	SER
51	SD	153	VAL
51	SD	206	ASP
51	SD	222	PRO
51	SD	223	ILE
52	SE	68	ARG
52	SE	131	VAL
54	SH	12	ASN

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Mol	Chain	Res	Type
54	SH	38	ALA
54	SH	138	GLU
54	SH	162	GLN
56	SK	39	ASN
56	SK	41	PRO
56	SK	91	PRO
57	SL	4	ILE
57	SL	6	THR
59	SQ	144	SER
60	SR	110	ASP
62	ST	6	VAL
63	SU	48	LEU
65	SX	9	THR
65	SX	87	ASN
65	SX	117	GLY
66	Sa	62	TYR
66	Sa	64	LEU
69	Sf	86	THR
69	Sf	88	PRO
69	Sf	98	VAL
70	Sg	191	HIS
71	SC	85	SER
71	SC	134	ASN
71	SC	264	SER
73	SJ	138	ARG
74	SM	26	LEU
75	SN	143	SER
76	SO	47	LEU
76	SO	129	ILE
77	SW	111	MET
78	SY	51	THR
78	SY	53	ASP
79	SZ	49	LEU
4	LA	21	LYS
4	LA	26	ALA
4	LA	177	LYS
5	LB	159	VAL
6	LC	72	ALA
6	LC	133	LEU
8	LE	85	LYS
8	LE	126	LEU
9	LF	195	TYR

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Mol	Chain	Res	Type
10	LG	31	LEU
10	LG	51	LEU
10	LG	158	ALA
11	LH	22	GLY
11	LH	51	LYS
12	LI	201	PRO
13	LJ	145	LYS
14	LL	51	ALA
14	LL	55	ILE
14	LL	60	ARG
15	LM	97	ALA
18	LP	106	GLY
18	LP	123	PRO
21	LS	164	LYS
30	Lb	21	ILE
31	Lc	52	CYS
33	Le	71	PRO
37	Li	86	LYS
38	Lj	14	LYS
38	Lj	27	TYR
39	Lk	32	VAL
43	Lo	99	ARG
44	Lp	20	ALA
46	Lz	81	ASP
46	Lz	113	SER
46	Lz	125	GLY
46	Lz	137	LEU
51	SD	68	GLU
51	SD	220	THR
52	SE	30	ARG
52	SE	69	PHE
52	SE	168	LYS
52	SE	245	ARG
53	SF	20	PHE
53	SF	32	ASP
54	SH	89	GLY
54	SH	99	ARG
54	SH	100	ILE
58	SP	77	LYS
58	SP	82	ASP
60	SR	69	ILE
61	SS	9	PHE

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Mol	Chain	Res	Type
61	SS	35	GLY
63	SU	98	VAL
64	SV	45	ARG
65	SX	54	LYS
65	SX	127	ASN
69	Sf	123	SER
71	SC	176	LYS
72	SG	105	ASN
75	SN	8	GLY
76	SO	56	VAL
76	SO	112	ALA
76	SO	134	PRO
77	SW	3	ARG
79	SZ	108	ILE
81	Se	4	GLY
81	Se	14	GLY
7	LD	269	PRO
8	LE	44	CYS
8	LE	119	GLU
10	LG	125	LYS
10	LG	163	PRO
11	LH	109	GLY
13	LJ	159	LYS
18	LP	82	ARG
21	LS	156	HIS
28	LZ	56	ALA
34	Lf	107	PRO
38	Lj	85	LYS
43	Lo	62	THR
51	SD	154	ASP
53	SF	41	VAL
54	SH	113	LYS
54	SH	190	PRO
55	SI	97	VAL
57	SL	98	LYS
60	SR	97	GLU
61	SS	13	LEU
62	ST	142	ASN
67	Sc	38	THR
72	SG	68	LEU
73	SJ	76	ALA
74	SM	30	GLY

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Mol	Chain	Res	Type
5	LB	375	GLY
16	LN	89	VAL
58	SP	48	GLY
67	Sc	8	PRO
70	Sg	13	GLY
73	SJ	171	GLY
75	SN	68	GLY
14	LL	48	PRO
45	Lr	103	ARG
51	SD	41	VAL
52	SE	15	PRO
59	SQ	6	PRO
5	LB	18	PRO
5	LB	299	ILE
10	LG	164	ILE
13	LJ	176	PRO
46	Lz	201	VAL
51	SD	200	PRO
55	SI	102	VAL
60	SR	121	GLN
70	Sg	61	GLY
70	Sg	267	VAL
4	LA	43	GLY
5	LB	110	ILE
6	LC	19	GLY
6	LC	70	GLY
8	LE	203	ILE
22	LT	37	GLY
32	Ld	120	VAL
46	Lz	100	VAL
46	Lz	162	VAL
58	SP	69	PRO
8	LE	98	GLY
15	LM	139	SER
19	LQ	171	GLY
67	Sc	22	GLY
74	SM	103	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%)	189 (100%)	1 (0%)	81	80
5	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	305/348 (88%)	305 (100%)	0	100	100
7	LD	246/250 (98%)	245 (100%)	1 (0%)	84	81
8	LE	215/252 (85%)	215 (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	180/181 (99%)	180 (100%)	0	100	100
13	LJ	148/149 (99%)	148 (100%)	0	100	100
14	LL	176/177 (99%)	176 (100%)	0	100	100
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	173/174 (99%)	173 (100%)	0	100	100
18	LP	134/163 (82%)	134 (100%)	0	100	100
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	166/175 (95%)	166 (100%)	0	100	100
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	139 (100%)	0	100	100
23	LU	91/115 (79%)	91 (100%)	0	100	100
24	LV	101/107 (94%)	101 (100%)	0	100	100
25	LW	103/126 (82%)	103 (100%)	0	100	100
26	LX	108/133 (81%)	107 (99%)	1 (1%)	70	76
27	LY	124/135 (92%)	124 (100%)	0	100	100
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	120 (100%)	0	100	100
30	Lb	63/126 (50%)	63 (100%)	0	100	100
31	Lc	83/97 (86%)	83 (100%)	0	100	100
32	Ld	98/110 (89%)	98 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	Le	114/121 (94%)	114 (100%)	0	100	100
34	Lf	88/89 (99%)	88 (100%)	0	100	100
35	Lg	98/100 (98%)	98 (100%)	0	100	100
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	86 (100%)	0	100	100
38	Lj	73/80 (91%)	73 (100%)	0	100	100
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	48/116 (41%)	48 (100%)	0	100	100
42	Ln	23/24 (96%)	23 (100%)	0	100	100
43	Lo	93/94 (99%)	92 (99%)	1 (1%)	65	74
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
46	Lz	195/196 (100%)	195 (100%)	0	100	100
49	SA	184/243 (76%)	184 (100%)	0	100	100
50	SB	195/231 (84%)	195 (100%)	0	100	100
51	SD	190/202 (94%)	190 (100%)	0	100	100
52	SE	224/225 (100%)	224 (100%)	0	100	100
53	SF	161/170 (95%)	161 (100%)	0	100	100
54	SH	169/174 (97%)	169 (100%)	0	100	100
55	SI	178/180 (99%)	178 (100%)	0	100	100
56	SK	89/136 (65%)	89 (100%)	0	100	100
57	SL	137/142 (96%)	137 (100%)	0	100	100
58	SP	87/130 (67%)	87 (100%)	0	100	100
59	SQ	121/121 (100%)	121 (100%)	0	100	100
60	SR	120/122 (98%)	120 (100%)	0	100	100
61	SS	130/132 (98%)	130 (100%)	0	100	100
62	ST	113/115 (98%)	113 (100%)	0	100	100
63	SU	94/107 (88%)	94 (100%)	0	100	100
64	SV	67/67 (100%)	67 (100%)	0	100	100
65	SX	113/115 (98%)	113 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
66	Sa	90/98 (92%)	90 (100%)	0	100	100
67	Sc	57/62 (92%)	57 (100%)	0	100	100
68	Sd	47/49 (96%)	47 (100%)	0	100	100
69	Sf	64/140 (46%)	64 (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	104/108 (96%)	104 (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
81	Se	47/48 (98%)	47 (100%)	0	100	100
All	All	10039/10997 (91%)	10035 (100%)	4 (0%)	100	100

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	LA	215	ASN
7	LD	52	ILE
26	LX	40	ILE
43	Lo	38	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (144) such sidechains are listed below:

Mol	Chain	Res	Type
4	LA	22	HIS
4	LA	86	GLN
4	LA	215	ASN
4	LA	217	GLN
5	LB	11	HIS
5	LB	167	GLN

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Mol	Chain	Res	Type
5	LB	175	GLN
5	LB	179	HIS
5	LB	258	HIS
5	LB	354	GLN
6	LC	119	GLN
6	LC	142	HIS
6	LC	215	ASN
6	LC	276	ASN
6	LC	299	GLN
6	LC	317	ASN
6	LC	347	HIS
7	LD	17	GLN
7	LD	131	ASN
7	LD	229	ASN
8	LE	284	HIS
9	LF	56	HIS
9	LF	116	GLN
9	LF	119	ASN
9	LF	239	GLN
11	LH	76	HIS
11	LH	79	ASN
11	LH	149	ASN
11	LH	163	GLN
12	LI	92	HIS
12	LI	213	HIS
13	LJ	71	HIS
14	LL	15	HIS
14	LL	113	ASN
15	LM	20	HIS
15	LM	131	GLN
16	LN	37	HIS
16	LN	199	GLN
17	LO	150	GLN
18	LP	80	GLN
18	LP	116	HIS
18	LP	137	ASN
19	LQ	7	HIS
19	LQ	21	GLN
19	LQ	160	HIS
20	LR	27	ASN
20	LR	121	HIS
21	LS	91	HIS

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Mol	Chain	Res	Type
21	LS	117	HIS
21	LS	146	HIS
22	LT	77	ASN
22	LT	98	HIS
23	LU	27	HIS
25	LW	63	GLN
25	LW	68	GLN
25	LW	96	GLN
26	LX	107	HIS
27	LY	24	HIS
27	LY	86	GLN
29	La	34	ASN
29	La	39	HIS
29	La	40	HIS
29	La	41	HIS
29	La	49	HIS
29	La	89	ASN
31	Lc	19	GLN
33	Le	23	HIS
33	Le	34	ASN
33	Le	117	GLN
34	Lf	91	ASN
35	Lg	112	GLN
36	Lh	68	ASN
37	Li	15	HIS
38	Lj	66	HIS
41	Lm	117	HIS
44	Lp	33	GLN
44	Lp	56	HIS
45	Lr	6	GLN
45	Lr	70	GLN
45	Lr	100	ASN
46	Lz	35	GLN
46	Lz	143	ASN
46	Lz	197	ASN
50	SB	101	HIS
51	SD	57	ASN
51	SD	226	GLN
52	SE	161	GLN
52	SE	224	ASN
53	SF	31	ASN
53	SF	74	ASN

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Mol	Chain	Res	Type
53	SF	83	ASN
53	SF	110	GLN
53	SF	114	ASN
53	SF	118	ASN
53	SF	137	GLN
54	SH	33	ASN
54	SH	76	GLN
54	SH	163	GLN
54	SH	165	ASN
55	SI	52	ASN
55	SI	88	ASN
55	SI	99	ASN
55	SI	138	ASN
55	SI	167	GLN
55	SI	168	GLN
56	SK	73	ASN
57	SL	13	GLN
58	SP	54	HIS
59	SQ	8	GLN
59	SQ	35	ASN
61	SS	11	HIS
61	SS	120	HIS
62	ST	83	GLN
63	SU	81	GLN
65	SX	63	ASN
65	SX	87	ASN
65	SX	110	HIS
66	Sa	8	ASN
66	Sa	80	HIS
68	Sd	4	GLN
69	Sf	151	ASN
70	Sg	51	ASN
70	Sg	64	HIS
70	Sg	162	ASN
70	Sg	178	ASN
70	Sg	187	ASN
70	Sg	188	HIS
70	Sg	285	GLN
70	Sg	311	GLN
71	SC	115	GLN
73	SJ	113	GLN
73	SJ	143	ASN

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Mol	Chain	Res	Type
73	SJ	156	HIS
74	SM	52	GLN
75	SN	105	ASN
76	SO	13	GLN
76	SO	26	ASN
76	SO	103	ASN
77	SW	15	ASN
77	SW	70	ASN
78	SY	63	HIS
78	SY	85	ASN
80	Sb	84	HIS
81	Se	56	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3707/5070 (73%)	1303 (35%)	56 (1%)
2	L7	119/121 (98%)	21 (17%)	0
3	L8	155/157 (98%)	44 (28%)	2 (1%)
47	S2	1714/1869 (91%)	676 (39%)	22 (1%)
48	S6	74/75 (98%)	28 (37%)	2 (2%)
All	All	5769/7292 (79%)	2072 (35%)	82 (1%)

All (2072) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	4	G
1	L5	6	C
1	L5	9	C
1	L5	13	U
1	L5	17	A
1	L5	19	G
1	L5	25	A
1	L5	26	C
1	L5	27	C
1	L5	30	C
1	L5	35	U
1	L5	39	A
1	L5	43	U
1	L5	44	A
1	L5	46	U

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Mol	Chain	Res	Type
1	L5	47	A
1	L5	48	G
1	L5	56	A
1	L5	59	A
1	L5	61	A
1	L5	62	A
1	L5	64	A
1	L5	65	A
1	L5	66	A
1	L5	71	C
1	L5	72	C
1	L5	73	A
1	L5	75	G
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	117	C
1	L5	119	G
1	L5	120	A
1	L5	121	A
1	L5	122	U
1	L5	126	C
1	L5	130	C
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	136	C
1	L5	141	C
1	L5	144	G
1	L5	149	A
1	L5	151	G
1	L5	152	U
1	L5	159	C
1	L5	164	G
1	L5	165	A
1	L5	167	C
1	L5	171	U
1	L5	172	C
1	L5	173	C

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Mol	Chain	Res	Type
1	L5	175	C
1	L5	180	C
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	187	U
1	L5	188	G
1	L5	200	U
1	L5	202	C
1	L5	203	U
1	L5	205	C
1	L5	213	G
1	L5	216	C
1	L5	217	C
1	L5	218	A
1	L5	219	G
1	L5	227	A
1	L5	229	G
1	L5	230	G
1	L5	232	G
1	L5	234	G
1	L5	235	A
1	L5	236	G
1	L5	238	C
1	L5	241	G
1	L5	242	U
1	L5	245	C
1	L5	246	G
1	L5	250	C
1	L5	252	C
1	L5	253	G
1	L5	256	G
1	L5	265	C
1	L5	266	C
1	L5	267	G
1	L5	277	G
1	L5	278	G
1	L5	280	G
1	L5	297	U
1	L5	300	A
1	L5	306	A
1	L5	310	G

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Mol	Chain	Res	Type
1	L5	315	G
1	L5	316	U
1	L5	322	C
1	L5	326	C
1	L5	334	A
1	L5	340	C
1	L5	341	G
1	L5	352	G
1	L5	353	A
1	L5	354	U
1	L5	379	G
1	L5	382	G
1	L5	383	A
1	L5	384	A
1	L5	386	A
1	L5	387	G
1	L5	389	A
1	L5	390	C
1	L5	394	G
1	L5	406	C
1	L5	407	A
1	L5	409	G
1	L5	410	A
1	L5	413	G
1	L5	414	C
1	L5	415	G
1	L5	418	A
1	L5	431	G
1	L5	432	U
1	L5	433	A
1	L5	434	A
1	L5	435	A
1	L5	437	G
1	L5	444	G
1	L5	448	G
1	L5	449	C
1	L5	450	G
1	L5	451	C
1	L5	452	A
1	L5	453	G
1	L5	454	U
1	L5	455	C

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Mol	Chain	Res	Type
1	L5	462	G
1	L5	465	G
1	L5	467	U
1	L5	468	U
1	L5	469	C
1	L5	471	A
1	L5	473	C
1	L5	485	C
1	L5	486	C
1	L5	487	G
1	L5	490	C
1	L5	495	C
1	L5	498	C
1	L5	500	G
1	L5	501	C
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	506	C
1	L5	509	A
1	L5	510	U
1	L5	511	C
1	L5	512	U
1	L5	513	U
1	L5	514	U
1	L5	517	C
1	L5	518	G
1	L5	643	C
1	L5	644	G
1	L5	646	G
1	L5	647	G
1	L5	648	G
1	L5	649	A
1	L5	652	G
1	L5	654	C
1	L5	656	C
1	L5	657	C
1	L5	658	C
1	L5	659	G
1	L5	661	C
1	L5	664	G
1	L5	665	C

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Mol	Chain	Res	Type
1	L5	667	A
1	L5	671	G
1	L5	678	C
1	L5	682	G
1	L5	684	G
1	L5	686	A
1	L5	694	C
1	L5	696	C
1	L5	697	G
1	L5	702	U
1	L5	703	G
1	L5	704	C
1	L5	705	G
1	L5	707	C
1	L5	713	C
1	L5	719	C
1	L5	720	G
1	L5	723	A
1	L5	728	U
1	L5	730	G
1	L5	736	C
1	L5	737	C
1	L5	740	G
1	L5	741	C
1	L5	744	G
1	L5	747	A
1	L5	749	G
1	L5	750	U
1	L5	751	G
1	L5	754	U
1	L5	756	G
1	L5	907	C
1	L5	910	G
1	L5	911	U
1	L5	915	A
1	L5	916	C
1	L5	917	A
1	L5	918	G
1	L5	919	C
1	L5	920	C
1	L5	926	G
1	L5	927	G

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Mol	Chain	Res	Type
1	L5	928	C
1	L5	929	A
1	L5	930	G
1	L5	931	C
1	L5	932	A
1	L5	933	G
1	L5	934	C
1	L5	938	C
1	L5	940	C
1	L5	942	G
1	L5	944	A
1	L5	945	U
1	L5	946	C
1	L5	947	C
1	L5	950	G
1	L5	956	A
1	L5	957	G
1	L5	958	G
1	L5	959	G
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	963	G
1	L5	964	A
1	L5	965	G
1	L5	966	A
1	L5	967	C
1	L5	968	C
1	L5	969	C
1	L5	975	C
1	L5	976	G
1	L5	978	G
1	L5	981	C
1	L5	982	U
1	L5	984	C
1	L5	985	C
1	L5	986	C
1	L5	989	U
1	L5	991	C
1	L5	992	C
1	L5	995	C
1	L5	996	G

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Mol	Chain	Res	Type
1	L5	1049	C
1	L5	1051	G
1	L5	1065	G
1	L5	1071	C
1	L5	1072	C
1	L5	1073	G
1	L5	1076	C
1	L5	1078	A
1	L5	1079	C
1	L5	1080	C
1	L5	1081	C
1	L5	1083	U
1	L5	1096	C
1	L5	1100	U
1	L5	1167	C
1	L5	1169	G
1	L5	1170	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	1184	A
1	L5	1188	C
1	L5	1191	C
1	L5	1193	C
1	L5	1202	C
1	L5	1203	G
1	L5	1205	G
1	L5	1210	C
1	L5	1211	G
1	L5	1214	C
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1219	G
1	L5	1221	G
1	L5	1222	A
1	L5	1233	G

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Mol	Chain	Res	Type
1	L5	1237	C
1	L5	1238	A
1	L5	1239	C
1	L5	1243	C
1	L5	1244	G
1	L5	1245	C
1	L5	1250	C
1	L5	1252	C
1	L5	1254	A
1	L5	1256	G
1	L5	1257	A
1	L5	1259	G
1	L5	1260	G
1	L5	1262	G
1	L5	1267	C
1	L5	1268	G
1	L5	1269	G
1	L5	1270	A
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A
1	L5	1275	G
1	L5	1276	C
1	L5	1277	G
1	L5	1279	A
1	L5	1280	C
1	L5	1281	G
1	L5	1285	U
1	L5	1288	G
1	L5	1289	C
1	L5	1290	G
1	L5	1293	G
1	L5	1295	C
1	L5	1296	G
1	L5	1297	U
1	L5	1298	C
1	L5	1301	C
1	L5	1303	A
1	L5	1322	A
1	L5	1326	A
1	L5	1330	A

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Mol	Chain	Res	Type
1	L5	1339	U
1	L5	1343	A
1	L5	1353	G
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1360	G
1	L5	1364	U
1	L5	1365	C
1	L5	1366	G
1	L5	1367	C
1	L5	1368	A
1	L5	1369	C
1	L5	1370	G
1	L5	1371	A
1	L5	1372	A
1	L5	1376	C
1	L5	1377	G
1	L5	1378	C
1	L5	1379	C
1	L5	1381	U
1	L5	1387	A
1	L5	1394	G
1	L5	1396	G
1	L5	1399	G
1	L5	1404	G
1	L5	1407	C
1	L5	1409	C
1	L5	1410	U
1	L5	1411	C
1	L5	1413	C
1	L5	1415	G
1	L5	1416	G
1	L5	1417	C
1	L5	1418	C
1	L5	1420	A
1	L5	1421	G
1	L5	1425	G
1	L5	1428	U
1	L5	1434	G
1	L5	1435	G
1	L5	1437	C

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Mol	Chain	Res	Type
1	L5	1438	U
1	L5	1440	U
1	L5	1441	C
1	L5	1446	C
1	L5	1453	G
1	L5	1456	C
1	L5	1457	G
1	L5	1472	C
1	L5	1475	G
1	L5	1480	C
1	L5	1481	C
1	L5	1482	G
1	L5	1483	C
1	L5	1485	C
1	L5	1486	C
1	L5	1493	G
1	L5	1495	G
1	L5	1497	A
1	L5	1498	G
1	L5	1501	C
1	L5	1502	G
1	L5	1503	A
1	L5	1512	G
1	L5	1523	A
1	L5	1525	A
1	L5	1530	G
1	L5	1534	A
1	L5	1539	G
1	L5	1540	C
1	L5	1547	A
1	L5	1552	G
1	L5	1563	A
1	L5	1564	A
1	L5	1566	C
1	L5	1574	G
1	L5	1578	U
1	L5	1582	U
1	L5	1591	U
1	L5	1592	G
1	L5	1596	U
1	L5	1597	G
1	L5	1611	C

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Mol	Chain	Res	Type
1	L5	1612	G
1	L5	1613	A
1	L5	1614	C
1	L5	1623	A
1	L5	1624	G
1	L5	1625	G
1	L5	1626	G
1	L5	1629	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A
1	L5	1638	A
1	L5	1641	G
1	L5	1646	A
1	L5	1650	A
1	L5	1651	G
1	L5	1654	G
1	L5	1656	U
1	L5	1657	G
1	L5	1661	C
1	L5	1676	C
1	L5	1677	U
1	L5	1681	G
1	L5	1686	C
1	L5	1694	C
1	L5	1696	C
1	L5	1697	G
1	L5	1698	C
1	L5	1699	A
1	L5	1719	A
1	L5	1721	G
1	L5	1723	A
1	L5	1725	U
1	L5	1727	U
1	L5	1728	U
1	L5	1729	A
1	L5	1731	C
1	L5	1734	G
1	L5	1735	U
1	L5	1741	G
1	L5	1742	A
1	L5	1748	U

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Mol	Chain	Res	Type
1	L5	1750	G
1	L5	1751	A
1	L5	1753	G
1	L5	1754	U
1	L5	1755	C
1	L5	1756	U
1	L5	1757	U
1	L5	1758	G
1	L5	1759	G
1	L5	1760	G
1	L5	1761	G
1	L5	1762	C
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1767	A
1	L5	1768	C
1	L5	1771	U
1	L5	1772	C
1	L5	1775	A
1	L5	1777	C
1	L5	1778	C
1	L5	1781	U
1	L5	1787	A
1	L5	1788	A
1	L5	1793	A
1	L5	1804	A
1	L5	1805	A
1	L5	1806	G
1	L5	1807	C
1	L5	1815	G
1	L5	1820	C
1	L5	1821	G
1	L5	1822	U
1	L5	1829	G
1	L5	1832	C
1	L5	1833	G
1	L5	1834	U
1	L5	1835	G
1	L5	1836	G
1	L5	1837	A

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Mol	Chain	Res	Type
1	L5	1842	G
1	L5	1855	G
1	L5	1856	C
1	L5	1866	U
1	L5	1867	A
1	L5	1869	G
1	L5	1882	U
1	L5	1890	G
1	L5	1893	C
1	L5	1897	A
1	L5	1910	G
1	L5	1915	C
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	1929	A
1	L5	1930	U
1	L5	1932	A
1	L5	1936	C
1	L5	1940	G
1	L5	1948	G
1	L5	1954	U
1	L5	1956	A
1	L5	1958	A
1	L5	1959	U
1	L5	1960	A
1	L5	1961	G
1	L5	1963	C
1	L5	1966	C
1	L5	1968	G
1	L5	1971	C
1	L5	1974	U
1	L5	1975	G
1	L5	1976	G
1	L5	1977	C
1	L5	1978	C
1	L5	1981	G
1	L5	1982	G
1	L5	1983	A

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Mol	Chain	Res	Type
1	L5	1984	A
1	L5	1985	G
1	L5	1987	C
1	L5	1989	G
1	L5	1990	A
1	L5	1991	A
1	L5	1993	C
1	L5	1994	C
1	L5	1997	U
1	L5	1998	A
1	L5	1999	A
1	L5	2001	G
1	L5	2002	A
1	L5	2003	G
1	L5	2005	G
1	L5	2006	U
1	L5	2007	G
1	L5	2008	U
1	L5	2009	A
1	L5	2010	A
1	L5	2011	C
1	L5	2012	A
1	L5	2013	A
1	L5	2017	A
1	L5	2018	C
1	L5	2020	U
1	L5	2023	C
1	L5	2026	A
1	L5	2034	G
1	L5	2045	G
1	L5	2046	G
1	L5	2048	U
1	L5	2055	G
1	L5	2056	G
1	L5	2057	A
1	L5	2062	C
1	L5	2063	G
1	L5	2064	G
1	L5	2068	C
1	L5	2069	A
1	L5	2073	C
1	L5	2075	G

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Mol	Chain	Res	Type
1	L5	2077	C
1	L5	2084	C
1	L5	2085	G
1	L5	2089	G
1	L5	2090	U
1	L5	2091	C
1	L5	2092	G
1	L5	2093	A
1	L5	2094	G
1	L5	2095	A
1	L5	2097	U
1	L5	2099	G
1	L5	2100	A
1	L5	2104	G
1	L5	2107	C
1	L5	2108	G
1	L5	2109	G
1	L5	2110	C
1	L5	2111	G
1	L5	2112	G
1	L5	2113	G
1	L5	2114	G
1	L5	2115	G
1	L5	2116	C
1	L5	2117	G
1	L5	2118	G
1	L5	2119	C
1	L5	2120	G
1	L5	2121	C
1	L5	2122	G
1	L5	2123	C
1	L5	2124	G
1	L5	2125	C
1	L5	2126	G
1	L5	2128	G
1	L5	2130	G
1	L5	2244	C
1	L5	2247	C
1	L5	2250	C
1	L5	2251	G
1	L5	2252	G
1	L5	2254	G

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Mol	Chain	Res	Type
1	L5	2255	C
1	L5	2256	C
1	L5	2257	C
1	L5	2259	G
1	L5	2260	C
1	L5	2262	G
1	L5	2263	A
1	L5	2264	C
1	L5	2265	G
1	L5	2268	A
1	L5	2270	G
1	L5	2278	G
1	L5	2289	C
1	L5	2290	C
1	L5	2299	G
1	L5	2300	A
1	L5	2301	G
1	L5	2304	U
1	L5	2312	U
1	L5	2324	C
1	L5	2327	G
1	L5	2331	G
1	L5	2332	A
1	L5	2333	G
1	L5	2346	C
1	L5	2347	A
1	L5	2348	G
1	L5	2351	C
1	L5	2361	G
1	L5	2362	U
1	L5	2364	G
1	L5	2379	A
1	L5	2382	A
1	L5	2390	G
1	L5	2395	A
1	L5	2396	A
1	L5	2397	G
1	L5	2402	G
1	L5	2404	A
1	L5	2410	C
1	L5	2414	G
1	L5	2422	C

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Mol	Chain	Res	Type
1	L5	2425	U
1	L5	2426	U
1	L5	2431	A
1	L5	2448	G
1	L5	2450	G
1	L5	2454	U
1	L5	2465	C
1	L5	2468	U
1	L5	2471	G
1	L5	2474	G
1	L5	2475	G
1	L5	2482	C
1	L5	2483	G
1	L5	2484	A
1	L5	2486	G
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2495	U
1	L5	2502	G
1	L5	2503	G
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2507	A
1	L5	2511	A
1	L5	2513	A
1	L5	2518	G
1	L5	2519	U
1	L5	2527	A
1	L5	2529	A
1	L5	2537	A
1	L5	2544	G
1	L5	2546	G
1	L5	2547	G
1	L5	2551	A
1	L5	2553	A
1	L5	2554	U
1	L5	2556	G
1	L5	2569	G

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Mol	Chain	Res	Type
1	L5	2570	U
1	L5	2572	C
1	L5	2573	A
1	L5	2576	G
1	L5	2583	C
1	L5	2586	G
1	L5	2587	A
1	L5	2588	C
1	L5	2596	G
1	L5	2601	A
1	L5	2602	G
1	L5	2605	G
1	L5	2618	G
1	L5	2624	G
1	L5	2634	C
1	L5	2636	U
1	L5	2638	G
1	L5	2639	U
1	L5	2648	G
1	L5	2649	G
1	L5	2653	C
1	L5	2662	G
1	L5	2670	C
1	L5	2675	G
1	L5	2676	A
1	L5	2681	G
1	L5	2686	G
1	L5	2687	U
1	L5	2689	C
1	L5	2695	A
1	L5	2696	A
1	L5	2701	U
1	L5	2702	C
1	L5	2703	G
1	L5	2704	C
1	L5	2705	G
1	L5	2708	U
1	L5	2710	C
1	L5	2712	G
1	L5	2714	G
1	L5	2717	G
1	L5	2719	C

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Mol	Chain	Res	Type
1	L5	2721	G
1	L5	2723	U
1	L5	2725	A
1	L5	2726	G
1	L5	2735	G
1	L5	2739	C
1	L5	2740	U
1	L5	2743	A
1	L5	2753	G
1	L5	2754	G
1	L5	2756	G
1	L5	2760	G
1	L5	2761	U
1	L5	2762	G
1	L5	2763	U
1	L5	2766	A
1	L5	2768	C
1	L5	2769	U
1	L5	2770	C
1	L5	2776	G
1	L5	2783	A
1	L5	2786	C
1	L5	2787	A
1	L5	2788	U
1	L5	2789	A
1	L5	2794	C
1	L5	2797	C
1	L5	2803	U
1	L5	2807	A
1	L5	2814	C
1	L5	2815	A
1	L5	2816	G
1	L5	2822	G
1	L5	2825	A
1	L5	2826	U
1	L5	2827	G
1	L5	2828	U
1	L5	2829	U
1	L5	2830	G
1	L5	2831	G
1	L5	2833	A
1	L5	2845	A

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Mol	Chain	Res	Type
1	L5	2857	A
1	L5	2859	G
1	L5	2860	C
1	L5	2862	G
1	L5	2864	A
1	L5	2869	U
1	L5	2870	A
1	L5	2874	U
1	L5	2877	G
1	L5	2884	G
1	L5	2885	A
1	L5	2887	U
1	L5	2888	G
1	L5	2894	A
1	L5	2896	G
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2905	C
1	L5	2906	G
1	L5	2907	G
1	L5	2909	C
1	L5	3587	C
1	L5	3589	G
1	L5	3593	C
1	L5	3596	A
1	L5	3597	G
1	L5	3600	G
1	L5	3606	U
1	L5	3608	A
1	L5	3615	G
1	L5	3616	U
1	L5	3625	G
1	L5	3626	G
1	L5	3635	A
1	L5	3640	U
1	L5	3642	A
1	L5	3644	U
1	L5	3646	A
1	L5	3659	G
1	L5	3661	G
1	L5	3662	A

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Mol	Chain	Res	Type
1	L5	3669	G
1	L5	3670	C
1	L5	3671	G
1	L5	3672	G
1	L5	3673	C
1	L5	3674	G
1	L5	3681	G
1	L5	3682	A
1	L5	3690	U
1	L5	3696	C
1	L5	3697	U
1	L5	3699	C
1	L5	3705	G
1	L5	3709	U
1	L5	3710	G
1	L5	3711	A
1	L5	3713	U
1	L5	3714	G
1	L5	3723	A
1	L5	3727	A
1	L5	3728	A
1	L5	3729	U
1	L5	3730	U
1	L5	3732	A
1	L5	3734	U
1	L5	3735	G
1	L5	3736	A
1	L5	3742	G
1	L5	3745	U
1	L5	3748	A
1	L5	3750	G
1	L5	3751	G
1	L5	3753	G
1	L5	3755	G
1	L5	3756	A
1	L5	3757	G
1	L5	3758	U
1	L5	3759	A
1	L5	3760	A
1	L5	3761	C
1	L5	3762	U
1	L5	3764	U

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Mol	Chain	Res	Type
1	L5	3766	A
1	L5	3767	C
1	L5	3768	U
1	L5	3769	C
1	L5	3770	U
1	L5	3772	U
1	L5	3776	G
1	L5	3777	G
1	L5	3785	A
1	L5	3786	U
1	L5	3789	C
1	L5	3790	U
1	L5	3791	C
1	L5	3795	A
1	L5	3802	U
1	L5	3803	A
1	L5	3807	A
1	L5	3811	G
1	L5	3813	A
1	L5	3814	U
1	L5	3817	A
1	L5	3818	U
1	L5	3819	G
1	L5	3840	U
1	L5	3843	C
1	L5	3866	C
1	L5	3867	A
1	L5	3868	G
1	L5	3869	C
1	L5	3870	C
1	L5	3871	A
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3881	G
1	L5	3885	G
1	L5	3888	G
1	L5	3889	G
1	L5	3890	A
1	L5	3892	U
1	L5	3895	G
1	L5	3897	G

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Mol	Chain	Res	Type
1	L5	3901	A
1	L5	3905	A
1	L5	3906	A
1	L5	3907	G
1	L5	3908	A
1	L5	3914	U
1	L5	3915	U
1	L5	3922	G
1	L5	3923	A
1	L5	3933	G
1	L5	3935	C
1	L5	3938	G
1	L5	3939	G
1	L5	3943	A
1	L5	3944	G
1	L5	3947	A
1	L5	3948	C
1	L5	3949	A
1	L5	3954	A
1	L5	3956	G
1	L5	3957	U
1	L5	3958	G
1	L5	3959	U
1	L5	3960	A
1	L5	3961	G
1	L5	3962	A
1	L5	3963	A
1	L5	3965	A
1	L5	3966	A
1	L5	3968	U
1	L5	3969	G
1	L5	3972	A
1	L5	3973	G
1	L5	3975	C
1	L5	3977	C
1	L5	4036	G
1	L5	4037	C
1	L5	4039	G
1	L5	4042	G
1	L5	4043	G
1	L5	4044	U
1	L5	4047	A

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Mol	Chain	Res	Type
1	L5	4048	A
1	L5	4049	U
1	L5	4050	A
1	L5	4051	C
1	L5	4052	C
1	L5	4054	C
1	L5	4055	U
1	L5	4058	U
1	L5	4059	C
1	L5	4062	A
1	L5	4064	C
1	L5	4065	G
1	L5	4071	U
1	L5	4076	G
1	L5	4077	A
1	L5	4078	C
1	L5	4079	C
1	L5	4083	U
1	L5	4084	G
1	L5	4086	G
1	L5	4087	G
1	L5	4095	G
1	L5	4100	C
1	L5	4102	C
1	L5	4103	C
1	L5	4104	G
1	L5	4107	G
1	L5	4110	C
1	L5	4112	C
1	L5	4114	C
1	L5	4115	G
1	L5	4116	C
1	L5	4117	U
1	L5	4118	U
1	L5	4119	C
1	L5	4120	U
1	L5	4121	G
1	L5	4125	C
1	L5	4127	A
1	L5	4131	G
1	L5	4138	C
1	L5	4139	G

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Mol	Chain	Res	Type
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	4151	G
1	L5	4153	C
1	L5	4154	G
1	L5	4156	G
1	L5	4158	C
1	L5	4161	G
1	L5	4162	C
1	L5	4163	U
1	L5	4164	C
1	L5	4166	G
1	L5	4168	G
1	L5	4169	G
1	L5	4170	A
1	L5	4171	C
1	L5	4172	A
1	L5	4173	G
1	L5	4177	C
1	L5	4183	G
1	L5	4184	G
1	L5	4190	U
1	L5	4191	G
1	L5	4193	C
1	L5	4194	U
1	L5	4201	G
1	L5	4202	U
1	L5	4203	A
1	L5	4205	A
1	L5	4209	G
1	L5	4212	A
1	L5	4220	A
1	L5	4222	G
1	L5	4225	G
1	L5	4229	U
1	L5	4234	A
1	L5	4235	G
1	L5	4237	C

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Mol	Chain	Res	Type
1	L5	4245	G
1	L5	4248	A
1	L5	4251	A
1	L5	4254	G
1	L5	4255	A
1	L5	4256	A
1	L5	4258	C
1	L5	4260	U
1	L5	4268	A
1	L5	4271	A
1	L5	4273	A
1	L5	4277	G
1	L5	4280	A
1	L5	4281	A
1	L5	4286	C
1	L5	4287	G
1	L5	4288	C
1	L5	4291	G
1	L5	4292	A
1	L5	4296	U
1	L5	4297	G
1	L5	4302	U
1	L5	4305	G
1	L5	4306	U
1	L5	4311	A
1	L5	4314	C
1	L5	4317	A
1	L5	4319	C
1	L5	4328	G
1	L5	4330	G
1	L5	4337	C
1	L5	4338	G
1	L5	4339	A
1	L5	4346	U
1	L5	4349	C
1	L5	4350	C
1	L5	4367	G
1	L5	4369	A
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4380	A

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Mol	Chain	Res	Type
1	L5	4381	A
1	L5	4382	G
1	L5	4384	U
1	L5	4385	A
1	L5	4387	C
1	L5	4394	A
1	L5	4396	A
1	L5	4398	C
1	L5	4414	A
1	L5	4415	A
1	L5	4419	U
1	L5	4420	U
1	L5	4422	A
1	L5	4427	G
1	L5	4429	C
1	L5	4438	U
1	L5	4448	G
1	L5	4449	A
1	L5	4464	A
1	L5	4465	U
1	L5	4475	G
1	L5	4476	C
1	L5	4477	A
1	L5	4478	G
1	L5	4481	U
1	L5	4488	A
1	L5	4489	G
1	L5	4491	G
1	L5	4498	U
1	L5	4500	U
1	L5	4504	C
1	L5	4510	A
1	L5	4511	A
1	L5	4512	U
1	L5	4513	A
1	L5	4515	G
1	L5	4518	A
1	L5	4523	A
1	L5	4524	G
1	L5	4528	G
1	L5	4531	U
1	L5	4534	G

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Mol	Chain	Res	Type
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4557	U
1	L5	4560	C
1	L5	4567	G
1	L5	4571	A
1	L5	4573	G
1	L5	4575	G
1	L5	4581	G
1	L5	4583	C
1	L5	4587	G
1	L5	4589	A
1	L5	4590	A
1	L5	4595	G
1	L5	4599	A
1	L5	4600	G
1	L5	4601	U
1	L5	4609	G
1	L5	4617	G
1	L5	4627	U
1	L5	4636	U
1	L5	4637	G
1	L5	4639	G
1	L5	4641	U
1	L5	4642	U
1	L5	4656	A
1	L5	4657	U
1	L5	4658	G
1	L5	4670	C
1	L5	4672	A
1	L5	4677	U
1	L5	4678	G
1	L5	4682	U
1	L5	4693	C
1	L5	4695	C
1	L5	4696	C
1	L5	4699	U
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4728	U

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Mol	Chain	Res	Type
1	L5	4730	C
1	L5	4731	G
1	L5	4732	G
1	L5	4733	C
1	L5	4734	A
1	L5	4738	C
1	L5	4739	C
1	L5	4743	G
1	L5	4744	A
1	L5	4749	C
1	L5	4750	G
1	L5	4753	U
1	L5	4756	C
1	L5	4757	C
1	L5	4758	U
1	L5	4760	G
1	L5	4761	G
1	L5	4764	A
1	L5	4768	G
1	L5	4770	U
1	L5	4771	C
1	L5	4772	C
1	L5	4774	C
1	L5	4775	C
1	L5	4776	G
1	L5	4860	G
1	L5	4861	G
1	L5	4862	G
1	L5	4863	G
1	L5	4865	C
1	L5	4868	G
1	L5	4869	U
1	L5	4870	G
1	L5	4871	C
1	L5	4872	G
1	L5	4873	G
1	L5	4874	A
1	L5	4875	G
1	L5	4876	U
1	L5	4877	G
1	L5	4878	C
1	L5	4880	C

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Mol	Chain	Res	Type
1	L5	4882	U
1	L5	4883	C
1	L5	4884	G
1	L5	4888	U
1	L5	4890	G
1	L5	4894	A
1	L5	4896	G
1	L5	4900	C
1	L5	4901	G
1	L5	4902	C
1	L5	4910	G
1	L5	4911	A
1	L5	4912	G
1	L5	4913	G
1	L5	4914	C
1	L5	4918	C
1	L5	4923	C
1	L5	4925	U
1	L5	4926	C
1	L5	4927	G
1	L5	4936	G
1	L5	4938	A
1	L5	4939	C
1	L5	4941	G
1	L5	4945	G
1	L5	4946	U
1	L5	4949	G
1	L5	4950	U
1	L5	4951	G
1	L5	4952	G
1	L5	4956	A
1	L5	4957	C
1	L5	4958	C
1	L5	4959	U
1	L5	4963	G
1	L5	4964	C
1	L5	4968	A
1	L5	4970	C
1	L5	4973	U
1	L5	4976	U
1	L5	4982	A
1	L5	4985	U

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Mol	Chain	Res	Type
1	L5	4988	U
1	L5	4989	U
1	L5	4991	U
1	L5	4992	G
1	L5	5007	A
1	L5	5011	A
1	L5	5014	A
1	L5	5017	G
1	L5	5018	C
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	5031	G
1	L5	5034	A
1	L5	5035	U
1	L5	5041	G
1	L5	5043	A
1	L5	5050	C
1	L5	5054	C
1	L5	5055	G
1	L5	5058	A
1	L5	5061	A
1	L5	5064	G
1	L5	5066	U
1	L5	5068	G
2	L7	7	G
2	L7	20	U
2	L7	22	A
2	L7	24	C
2	L7	25	G
2	L7	26	C
2	L7	36	C
2	L7	40	U
2	L7	49	A
2	L7	54	A
2	L7	60	G
2	L7	63	C
2	L7	64	G
2	L7	73	U

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Mol	Chain	Res	Type
2	L7	84	U
2	L7	97	G
2	L7	100	A
2	L7	109	U
2	L7	110	G
2	L7	111	C
2	L7	120	U
3	L8	2	G
3	L8	8	U
3	L8	17	A
3	L8	22	U
3	L8	23	C
3	L8	27	U
3	L8	34	U
3	L8	35	C
3	L8	48	A
3	L8	50	C
3	L8	52	A
3	L8	56	G
3	L8	59	A
3	L8	63	U
3	L8	76	C
3	L8	80	A
3	L8	82	A
3	L8	83	C
3	L8	84	A
3	L8	86	U
3	L8	87	G
3	L8	88	A
3	L8	89	U
3	L8	93	C
3	L8	95	A
3	L8	98	C
3	L8	103	A
3	L8	104	A
3	L8	105	C
3	L8	109	C
3	L8	110	U
3	L8	114	G
3	L8	118	C
3	L8	122	G
3	L8	123	U

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Mol	Chain	Res	Type
3	L8	124	U
3	L8	125	C
3	L8	126	C
3	L8	127	U
3	L8	128	C
3	L8	129	C
3	L8	146	U
3	L8	149	G
3	L8	150	C
47	S2	2	A
47	S2	3	C
47	S2	4	C
47	S2	9	U
47	S2	17	C
47	S2	18	C
47	S2	25	A
47	S2	27	A
47	S2	31	U
47	S2	33	G
47	S2	41	G
47	S2	42	A
47	S2	44	U
47	S2	45	A
47	S2	46	A
47	S2	52	G
47	S2	56	G
47	S2	62	G
47	S2	64	A
47	S2	67	C
47	S2	68	A
47	S2	69	C
47	S2	70	G
47	S2	72	C
47	S2	73	C
47	S2	74	G
47	S2	76	U
47	S2	77	A
47	S2	78	C
47	S2	79	A
47	S2	83	A
47	S2	84	A
47	S2	98	C

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Mol	Chain	Res	Type
47	S2	99	A
47	S2	103	A
47	S2	113	G
47	S2	114	G
47	S2	126	G
47	S2	127	C
47	S2	140	C
47	S2	141	A
47	S2	142	C
47	S2	144	U
47	S2	148	U
47	S2	153	G
47	S2	154	U
47	S2	155	G
47	S2	156	G
47	S2	160	U
47	S2	161	U
47	S2	162	C
47	S2	163	U
47	S2	167	G
47	S2	168	C
47	S2	171	A
47	S2	172	U
47	S2	175	A
47	S2	177	G
47	S2	178	C
47	S2	180	G
47	S2	181	A
47	S2	184	G
47	S2	185	G
47	S2	188	C
47	S2	190	G
47	S2	191	A
47	S2	192	C
47	S2	198	U
47	S2	201	C
47	S2	202	G
47	S2	208	G
47	S2	209	A
47	S2	210	U
47	S2	211	G
47	S2	214	U

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Mol	Chain	Res	Type
47	S2	215	G
47	S2	219	U
47	S2	291	G
47	S2	292	A
47	S2	293	C
47	S2	295	C
47	S2	299	A
47	S2	304	C
47	S2	305	U
47	S2	306	C
47	S2	307	G
47	S2	308	G
47	S2	309	G
47	S2	312	G
47	S2	313	A
47	S2	314	U
47	S2	316	G
47	S2	319	C
47	S2	320	G
47	S2	323	C
47	S2	324	C
47	S2	325	C
47	S2	326	C
47	S2	328	U
47	S2	329	G
47	S2	330	G
47	S2	334	C
47	S2	338	G
47	S2	339	A
47	S2	340	C
47	S2	341	C
47	S2	342	C
47	S2	343	A
47	S2	347	G
47	S2	351	G
47	S2	354	U
47	S2	360	A
47	S2	361	U
47	S2	362	C
47	S2	364	A
47	S2	369	C
47	S2	370	G

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Mol	Chain	Res	Type
47	S2	371	A
47	S2	385	G
47	S2	386	C
47	S2	388	U
47	S2	391	C
47	S2	400	C
47	S2	401	A
47	S2	402	C
47	S2	407	G
47	S2	408	A
47	S2	409	C
47	S2	411	G
47	S2	413	G
47	S2	417	C
47	S2	418	A
47	S2	423	U
47	S2	426	A
47	S2	429	C
47	S2	434	G
47	S2	435	A
47	S2	436	G
47	S2	438	G
47	S2	441	C
47	S2	448	A
47	S2	449	A
47	S2	450	C
47	S2	452	G
47	S2	459	C
47	S2	464	A
47	S2	465	A
47	S2	466	G
47	S2	467	G
47	S2	469	A
47	S2	472	C
47	S2	473	A
47	S2	474	G
47	S2	482	G
47	S2	487	U
47	S2	488	U
47	S2	489	A
47	S2	492	C
47	S2	493	A

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Mol	Chain	Res	Type
47	S2	495	U
47	S2	502	C
47	S2	503	C
47	S2	505	G
47	S2	507	G
47	S2	516	A
47	S2	517	C
47	S2	530	U
47	S2	532	C
47	S2	533	A
47	S2	534	G
47	S2	535	G
47	S2	537	C
47	S2	538	U
47	S2	539	C
47	S2	540	U
47	S2	542	U
47	S2	544	G
47	S2	545	A
47	S2	547	G
47	S2	549	C
47	S2	550	C
47	S2	551	U
47	S2	556	U
47	S2	557	U
47	S2	559	G
47	S2	560	A
47	S2	563	G
47	S2	566	U
47	S2	574	A
47	S2	575	A
47	S2	576	A
47	S2	581	U
47	S2	582	C
47	S2	584	G
47	S2	585	C
47	S2	587	A
47	S2	588	G
47	S2	589	G
47	S2	590	A
47	S2	591	U
47	S2	592	C

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Mol	Chain	Res	Type
47	S2	593	C
47	S2	596	U
47	S2	604	A
47	S2	605	A
47	S2	606	G
47	S2	607	U
47	S2	608	C
47	S2	613	G
47	S2	621	C
47	S2	627	U
47	S2	628	A
47	S2	629	A
47	S2	631	U
47	S2	634	A
47	S2	643	A
47	S2	644	G
47	S2	651	U
47	S2	655	A
47	S2	656	G
47	S2	657	U
47	S2	660	C
47	S2	666	U
47	S2	669	A
47	S2	670	A
47	S2	671	A
47	S2	672	A
47	S2	673	G
47	S2	675	U
47	S2	679	A
47	S2	683	G
47	S2	685	A
47	S2	686	U
47	S2	687	C
47	S2	688	U
47	S2	689	U
47	S2	690	G
47	S2	691	G
47	S2	692	G
47	S2	693	A
47	S2	694	G
47	S2	695	C
47	S2	696	G

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Mol	Chain	Res	Type
47	S2	697	G
47	S2	698	G
47	S2	731	G
47	S2	733	C
47	S2	734	C
47	S2	735	C
47	S2	736	C
47	S2	738	C
47	S2	739	C
47	S2	746	C
47	S2	747	U
47	S2	749	U
47	S2	750	C
47	S2	751	G
47	S2	752	G
47	S2	753	C
47	S2	787	G
47	S2	788	G
47	S2	789	G
47	S2	790	C
47	S2	791	C
47	S2	794	A
47	S2	795	A
47	S2	796	G
47	S2	797	C
47	S2	798	A
47	S2	800	U
47	S2	810	A
47	S2	811	A
47	S2	812	A
47	S2	813	A
47	S2	815	U
47	S2	818	A
47	S2	821	G
47	S2	822	U
47	S2	823	U
47	S2	830	A
47	S2	834	C
47	S2	835	C
47	S2	837	A
47	S2	838	G
47	S2	839	C

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Mol	Chain	Res	Type
47	S2	840	C
47	S2	841	G
47	S2	842	C
47	S2	843	C
47	S2	847	A
47	S2	848	U
47	S2	853	C
47	S2	864	A
47	S2	865	A
47	S2	869	A
47	S2	870	A
47	S2	873	G
47	S2	874	G
47	S2	876	C
47	S2	877	C
47	S2	878	G
47	S2	879	C
47	S2	881	G
47	S2	883	U
47	S2	887	U
47	S2	888	U
47	S2	889	U
47	S2	890	U
47	S2	891	G
47	S2	892	U
47	S2	893	U
47	S2	894	G
47	S2	896	U
47	S2	897	U
47	S2	899	U
47	S2	900	C
47	S2	901	G
47	S2	902	G
47	S2	903	A
47	S2	904	A
47	S2	907	G
47	S2	908	A
47	S2	909	G
47	S2	913	A
47	S2	914	U
47	S2	917	U
47	S2	919	A

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Mol	Chain	Res	Type
47	S2	920	A
47	S2	930	C
47	S2	933	G
47	S2	934	G
47	S2	939	U
47	S2	943	U
47	S2	952	G
47	S2	954	U
47	S2	955	A
47	S2	956	G
47	S2	958	G
47	S2	961	G
47	S2	963	A
47	S2	964	A
47	S2	965	U
47	S2	970	G
47	S2	971	G
47	S2	972	A
47	S2	973	C
47	S2	978	G
47	S2	979	C
47	S2	981	A
47	S2	990	A
47	S2	992	A
47	S2	996	A
47	S2	999	G
47	S2	1002	U
47	S2	1008	A
47	S2	1017	U
47	S2	1022	U
47	S2	1023	A
47	S2	1027	A
47	S2	1028	A
47	S2	1029	G
47	S2	1041	G
47	S2	1042	A
47	S2	1044	G
47	S2	1052	A
47	S2	1059	G
47	S2	1060	A
47	S2	1061	U
47	S2	1062	A

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Mol	Chain	Res	Type
47	S2	1068	G
47	S2	1076	G
47	S2	1081	U
47	S2	1083	A
47	S2	1084	A
47	S2	1085	C
47	S2	1087	A
47	S2	1088	U
47	S2	1110	G
47	S2	1113	A
47	S2	1114	U
47	S2	1115	U
47	S2	1116	C
47	S2	1118	C
47	S2	1119	A
47	S2	1120	U
47	S2	1126	G
47	S2	1134	G
47	S2	1138	C
47	S2	1139	C
47	S2	1148	A
47	S2	1149	A
47	S2	1150	A
47	S2	1153	C
47	S2	1154	U
47	S2	1155	U
47	S2	1157	G
47	S2	1166	G
47	S2	1170	A
47	S2	1171	G
47	S2	1172	U
47	S2	1175	G
47	S2	1180	C
47	S2	1181	A
47	S2	1186	U
47	S2	1194	A
47	S2	1195	A
47	S2	1198	G
47	S2	1208	A
47	S2	1211	G
47	S2	1212	G
47	S2	1213	C

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Mol	Chain	Res	Type
47	S2	1214	A
47	S2	1215	C
47	S2	1216	C
47	S2	1217	A
47	S2	1224	G
47	S2	1231	C
47	S2	1238	U
47	S2	1240	A
47	S2	1241	A
47	S2	1242	U
47	S2	1248	U
47	S2	1250	A
47	S2	1251	A
47	S2	1253	A
47	S2	1256	G
47	S2	1257	G
47	S2	1258	A
47	S2	1259	A
47	S2	1260	A
47	S2	1264	C
47	S2	1265	A
47	S2	1268	C
47	S2	1269	G
47	S2	1271	C
47	S2	1274	G
47	S2	1275	G
47	S2	1276	A
47	S2	1277	C
47	S2	1280	G
47	S2	1281	G
47	S2	1283	C
47	S2	1284	A
47	S2	1287	A
47	S2	1288	U
47	S2	1289	U
47	S2	1290	G
47	S2	1292	C
47	S2	1294	G
47	S2	1295	A
47	S2	1296	U
47	S2	1297	U
47	S2	1298	G

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Mol	Chain	Res	Type
47	S2	1299	A
47	S2	1300	U
47	S2	1301	A
47	S2	1302	G
47	S2	1303	C
47	S2	1305	C
47	S2	1306	U
47	S2	1307	U
47	S2	1308	U
47	S2	1310	U
47	S2	1311	C
47	S2	1313	A
47	S2	1315	U
47	S2	1317	C
47	S2	1318	G
47	S2	1321	G
47	S2	1323	U
47	S2	1324	G
47	S2	1330	G
47	S2	1331	C
47	S2	1332	A
47	S2	1337	C
47	S2	1341	C
47	S2	1342	U
47	S2	1343	U
47	S2	1363	C
47	S2	1364	U
47	S2	1371	U
47	S2	1372	U
47	S2	1373	C
47	S2	1378	A
47	S2	1383	A
47	S2	1393	G
47	S2	1396	A
47	S2	1397	U
47	S2	1398	G
47	S2	1404	U
47	S2	1405	A
47	S2	1407	U
47	S2	1409	A
47	S2	1410	C
47	S2	1412	C

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Mol	Chain	Res	Type
47	S2	1413	G
47	S2	1414	A
47	S2	1415	C
47	S2	1416	C
47	S2	1418	C
47	S2	1419	C
47	S2	1420	G
47	S2	1423	C
47	S2	1424	G
47	S2	1425	G
47	S2	1427	C
47	S2	1428	G
47	S2	1431	G
47	S2	1432	U
47	S2	1434	C
47	S2	1436	C
47	S2	1437	C
47	S2	1438	A
47	S2	1442	U
47	S2	1448	A
47	S2	1449	G
47	S2	1454	A
47	S2	1455	A
47	S2	1456	G
47	S2	1457	U
47	S2	1458	G
47	S2	1463	U
47	S2	1464	C
47	S2	1468	C
47	S2	1471	C
47	S2	1472	C
47	S2	1473	G
47	S2	1475	G
47	S2	1476	A
47	S2	1477	U
47	S2	1480	A
47	S2	1481	G
47	S2	1484	A
47	S2	1487	A
47	S2	1489	A
47	S2	1490	G
47	S2	1493	C

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Mol	Chain	Res	Type
47	S2	1494	U
47	S2	1495	G
47	S2	1497	G
47	S2	1498	A
47	S2	1505	U
47	S2	1506	A
47	S2	1507	G
47	S2	1508	A
47	S2	1509	U
47	S2	1510	G
47	S2	1512	C
47	S2	1513	C
47	S2	1515	G
47	S2	1520	G
47	S2	1521	C
47	S2	1522	A
47	S2	1523	C
47	S2	1525	C
47	S2	1526	G
47	S2	1527	C
47	S2	1531	A
47	S2	1533	A
47	S2	1535	U
47	S2	1536	G
47	S2	1538	C
47	S2	1540	G
47	S2	1543	U
47	S2	1545	A
47	S2	1546	G
47	S2	1550	G
47	S2	1551	U
47	S2	1552	G
47	S2	1553	C
47	S2	1554	C
47	S2	1555	U
47	S2	1556	A
47	S2	1557	C
47	S2	1558	C
47	S2	1567	G
47	S2	1568	C
47	S2	1569	A
47	S2	1570	G

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Mol	Chain	Res	Type
47	S2	1573	G
47	S2	1574	C
47	S2	1575	G
47	S2	1579	A
47	S2	1580	A
47	S2	1581	C
47	S2	1585	U
47	S2	1586	U
47	S2	1587	G
47	S2	1588	A
47	S2	1589	A
47	S2	1598	G
47	S2	1599	U
47	S2	1600	G
47	S2	1603	G
47	S2	1614	A
47	S2	1621	U
47	S2	1623	A
47	S2	1626	C
47	S2	1636	G
47	S2	1637	A
47	S2	1638	G
47	S2	1639	G
47	S2	1640	A
47	S2	1644	C
47	S2	1648	G
47	S2	1651	A
47	S2	1653	U
47	S2	1654	G
47	S2	1655	C
47	S2	1660	C
47	S2	1661	A
47	S2	1662	U
47	S2	1663	A
47	S2	1664	A
47	S2	1665	G
47	S2	1679	A
47	S2	1680	G
47	S2	1686	G
47	S2	1688	C
47	S2	1694	U
47	S2	1695	A

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Mol	Chain	Res	Type
47	S2	1697	A
47	S2	1698	C
47	S2	1701	C
47	S2	1714	U
47	S2	1719	A
47	S2	1721	U
47	S2	1722	G
47	S2	1729	U
47	S2	1730	U
47	S2	1735	A
47	S2	1737	G
47	S2	1742	C
47	S2	1743	G
47	S2	1744	G
47	S2	1745	A
47	S2	1746	U
47	S2	1748	G
47	S2	1751	C
47	S2	1752	C
47	S2	1754	G
47	S2	1755	C
47	S2	1757	G
47	S2	1758	G
47	S2	1772	C
47	S2	1773	C
47	S2	1775	U
47	S2	1777	G
47	S2	1781	A
47	S2	1783	C
47	S2	1784	G
47	S2	1786	U
47	S2	1805	G
47	S2	1812	U
47	S2	1813	A
47	S2	1814	G
47	S2	1823	A
47	S2	1824	A
47	S2	1825	A
47	S2	1826	G
47	S2	1831	A
47	S2	1835	A
47	S2	1838	U

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Mol	Chain	Res	Type
47	S2	1839	U
47	S2	1849	G
47	S2	1850	A
47	S2	1851	A
47	S2	1852	C
47	S2	1857	G
47	S2	1858	G
47	S2	1861	G
47	S2	1862	G
47	S2	1863	A
47	S2	1865	C
47	S2	1868	U
47	S2	1869	A
48	S6	4	C
48	S6	9	U
48	S6	17	C
48	S6	18	G
48	S6	19	G
48	S6	20	A
48	S6	21	A
48	S6	22	G
48	S6	23	C
48	S6	31	G
48	S6	33	C
48	S6	34	C
48	S6	35	A
48	S6	36	U
48	S6	37	A
48	S6	39	C
48	S6	40	C
48	S6	41	C
48	S6	42	A
48	S6	45	G
48	S6	46	G
48	S6	47	U
48	S6	57	G
48	S6	59	A
48	S6	61	C
48	S6	73	A
48	S6	75	C
48	S6	76	A

All (82) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	172	C
1	L5	385	A
1	L5	406	C
1	L5	417	G
1	L5	648	G
1	L5	693	C
1	L5	918	G
1	L5	930	G
1	L5	931	C
1	L5	956	A
1	L5	958	G
1	L5	974	C
1	L5	1072	C
1	L5	1238	A
1	L5	1329	G
1	L5	1359	G
1	L5	1410	U
1	L5	1455	G
1	L5	1633	G
1	L5	1649	U
1	L5	1821	G
1	L5	1947	U
1	L5	2019	C
1	L5	2068	C
1	L5	2096	G
1	L5	2116	C
1	L5	2119	C
1	L5	2120	G
1	L5	2124	G
1	L5	2256	C
1	L5	2389	A
1	L5	2467	U
1	L5	2505	C
1	L5	2695	A
1	L5	2785	C
1	L5	2806	A
1	L5	2828	U
1	L5	3625	G
1	L5	3673	C
1	L5	3713	U
1	L5	3767	C
1	L5	3784	A
1	L5	3810	C

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Mol	Chain	Res	Type
1	L5	3888	G
1	L5	3956	G
1	L5	4600	G
1	L5	4730	C
1	L5	4731	G
1	L5	4889	G
1	L5	4909	A
1	L5	4913	G
1	L5	4937	C
1	L5	4948	C
1	L5	4958	C
1	L5	4991	U
1	L5	5027	C
3	L8	16	G
3	L8	87	G
47	S2	24	C
47	S2	213	G
47	S2	339	A
47	S2	370	G
47	S2	417	C
47	S2	465	A
47	S2	604	A
47	S2	606	G
47	S2	668	A
47	S2	688	U
47	S2	795	A
47	S2	833	C
47	S2	868	G
47	S2	912	C
47	S2	980	A
47	S2	1061	U
47	S2	1137	U
47	S2	1404	U
47	S2	1419	C
47	S2	1664	A
47	S2	1823	A
47	S2	1860	A
48	S6	33	C
48	S6	34	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 245 ligands modelled in this entry, 245 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
43	Lo	1
66	Sa	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Lo	105:GLN	C	106:PHE	N	3.21
1	Sa	99:PRO	C	100:ARG	N	3.14

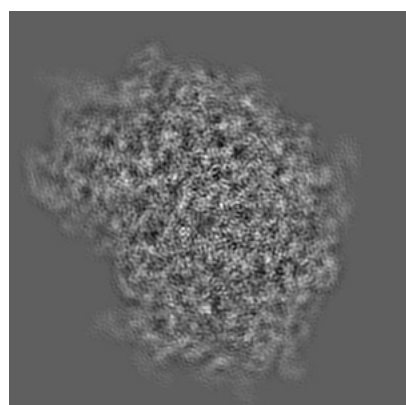
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2938. These allow visual inspection of the internal detail of the map and identification of artifacts.

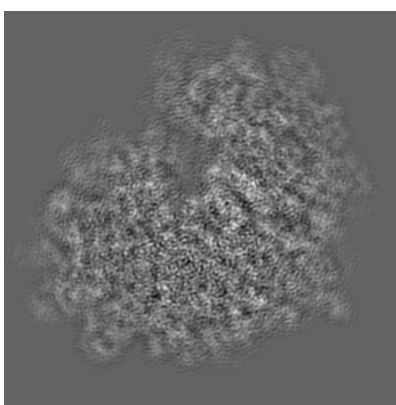
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

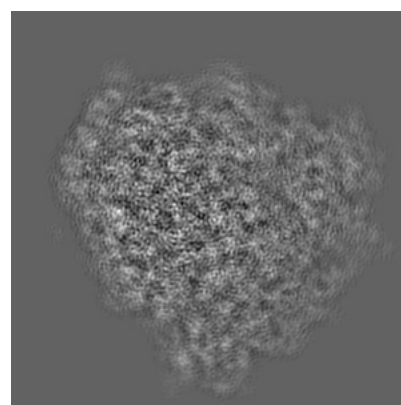
6.1.1 Primary map



X



Y

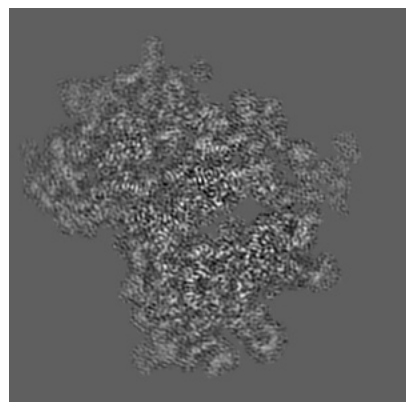


Z

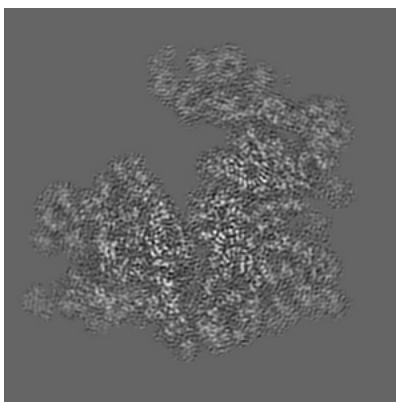
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

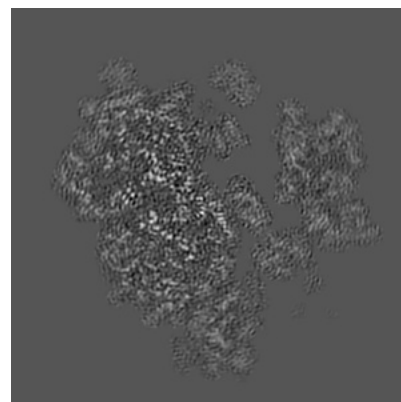
6.2.1 Primary map



X Index: 150



Y Index: 150

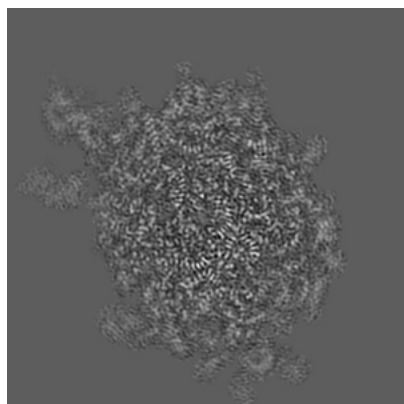


Z Index: 150

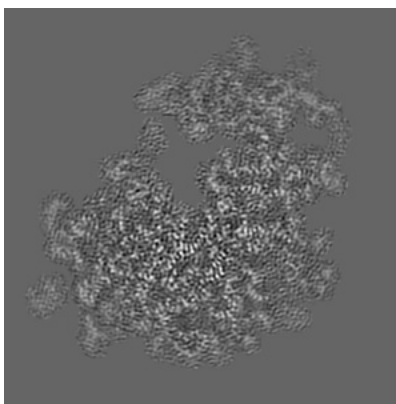
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

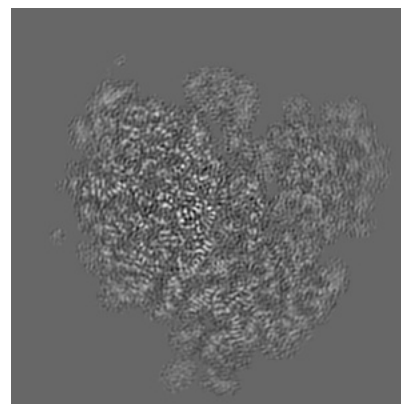
6.3.1 Primary map



X Index: 123



Y Index: 162

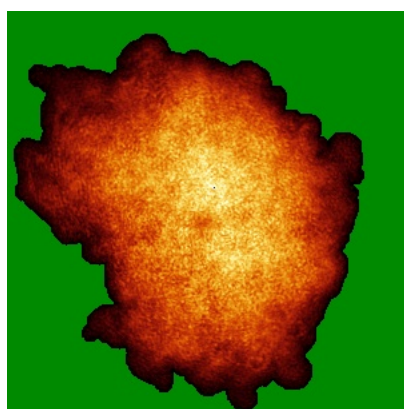


Z Index: 172

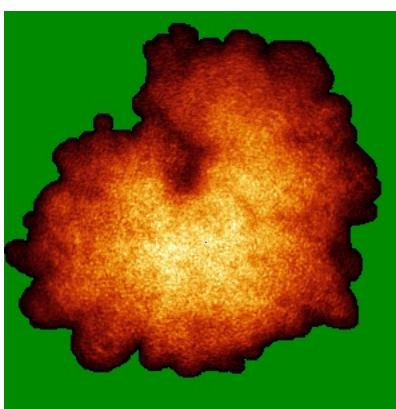
The images above show the largest variance slices of the map in three orthogonal directions.

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

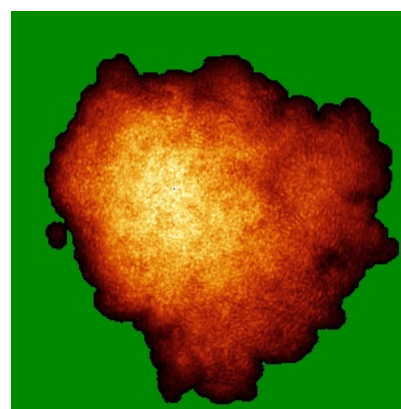
6.4.1 Primary map



X



Y

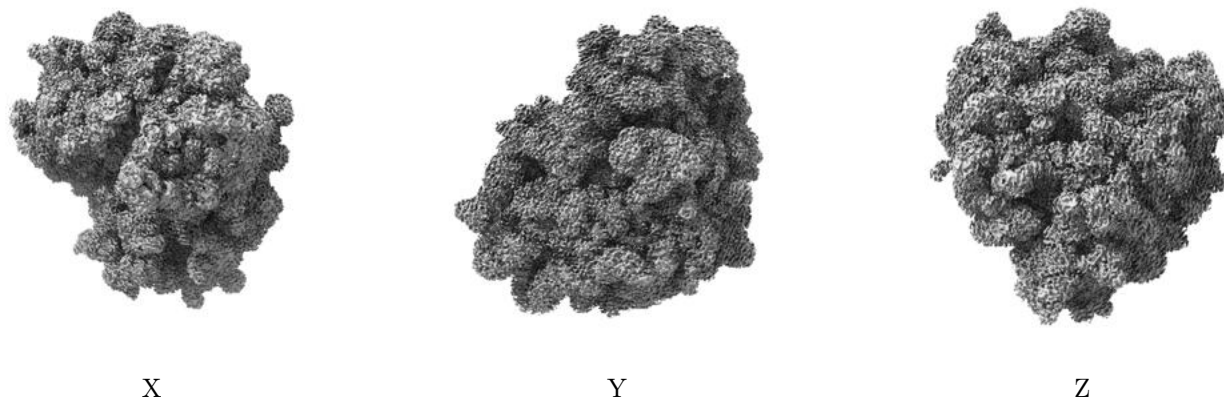


Z

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 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

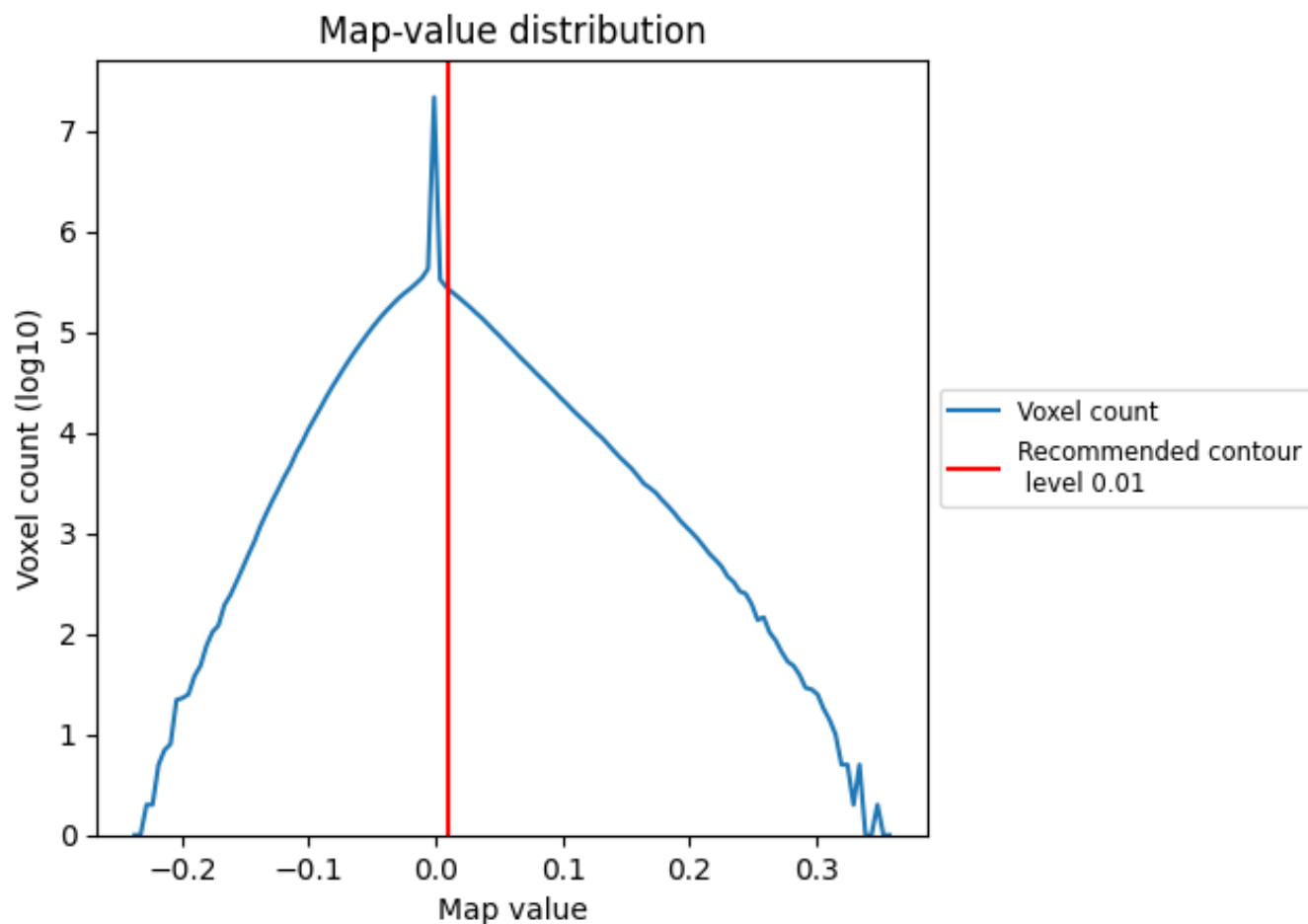
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

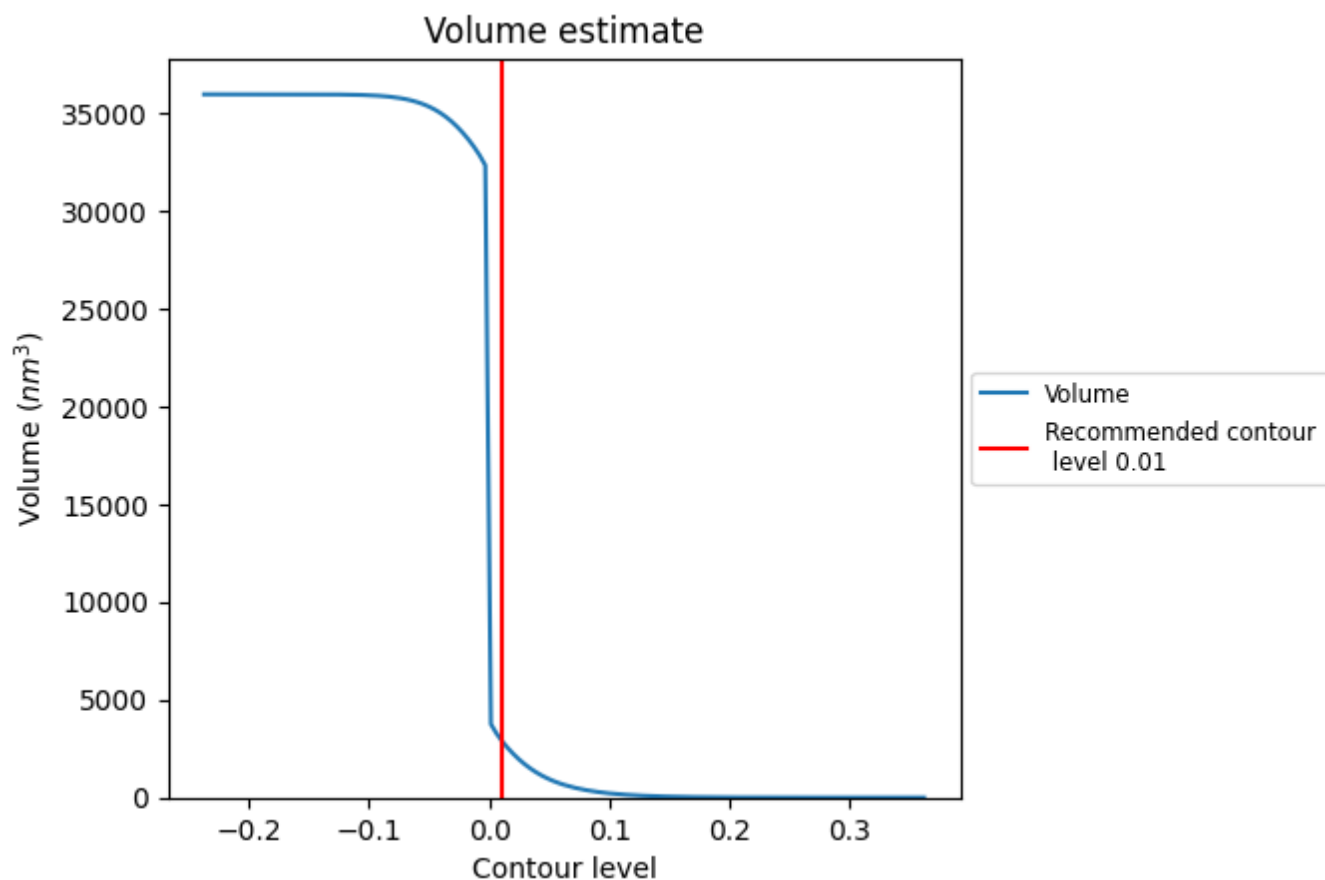
This section contains the results of statistical analysis of the map.

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.

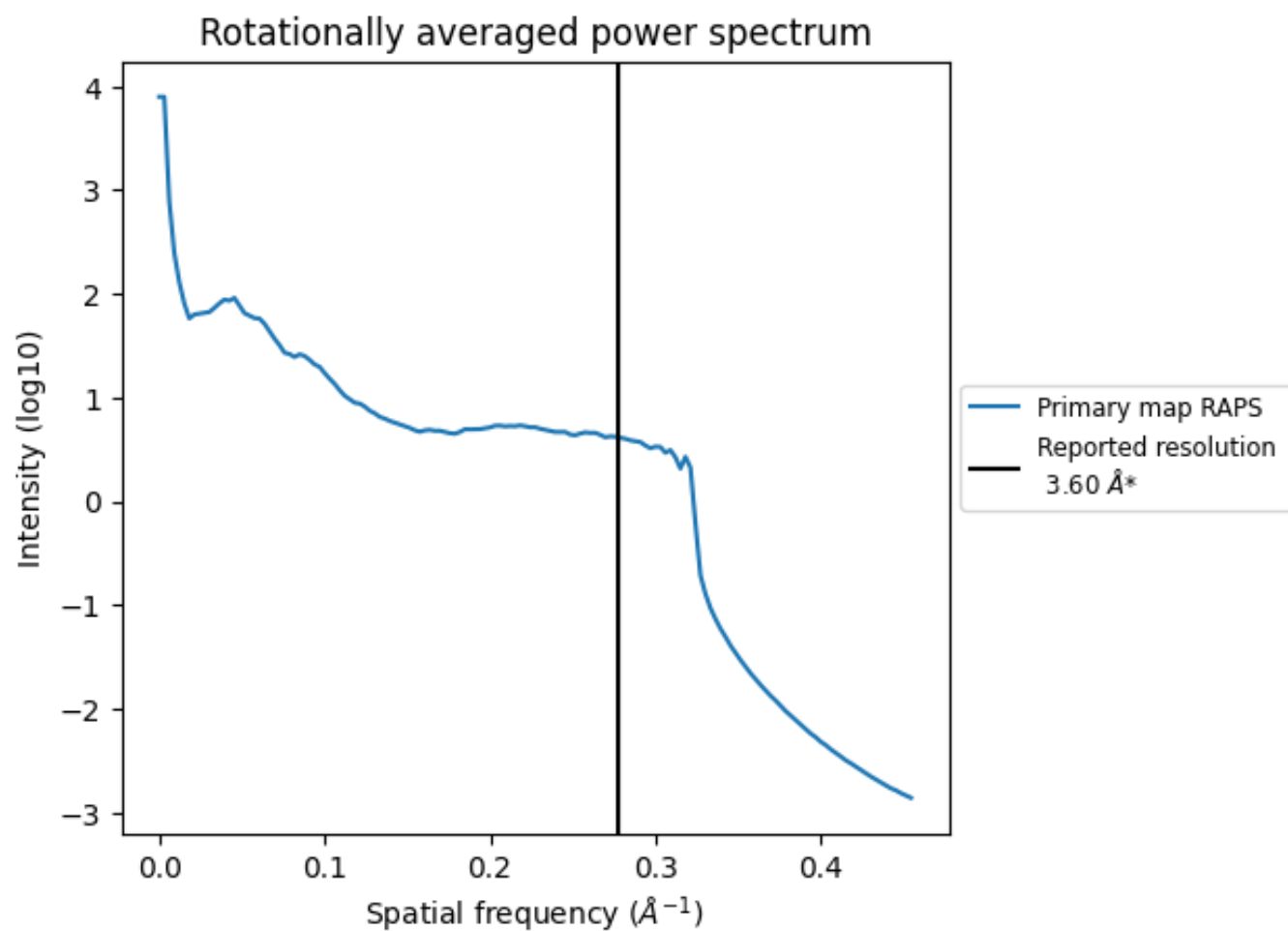
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2951 nm^3 ; this corresponds to an approximate mass of 2666 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 0.278 \AA^{-1}

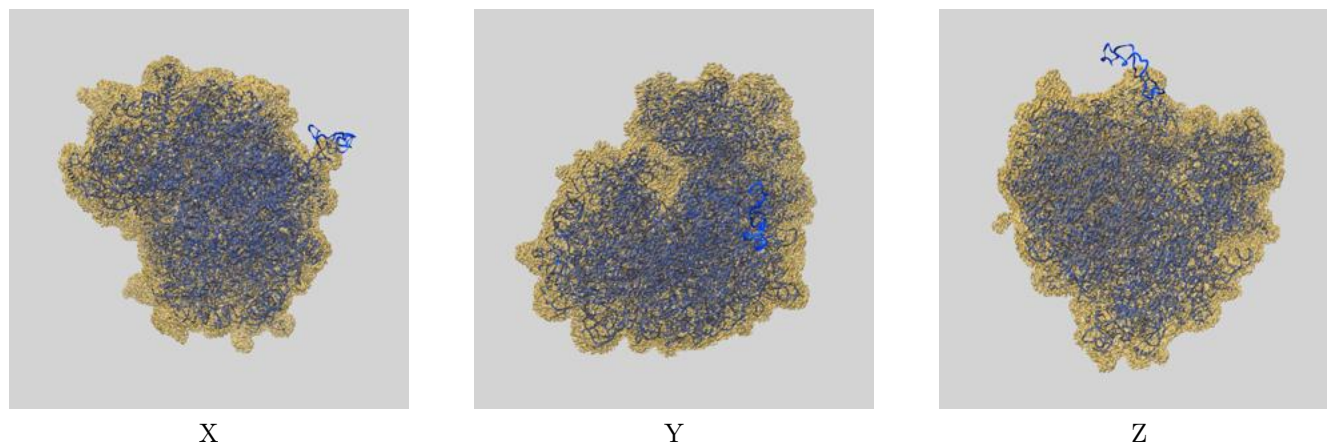
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

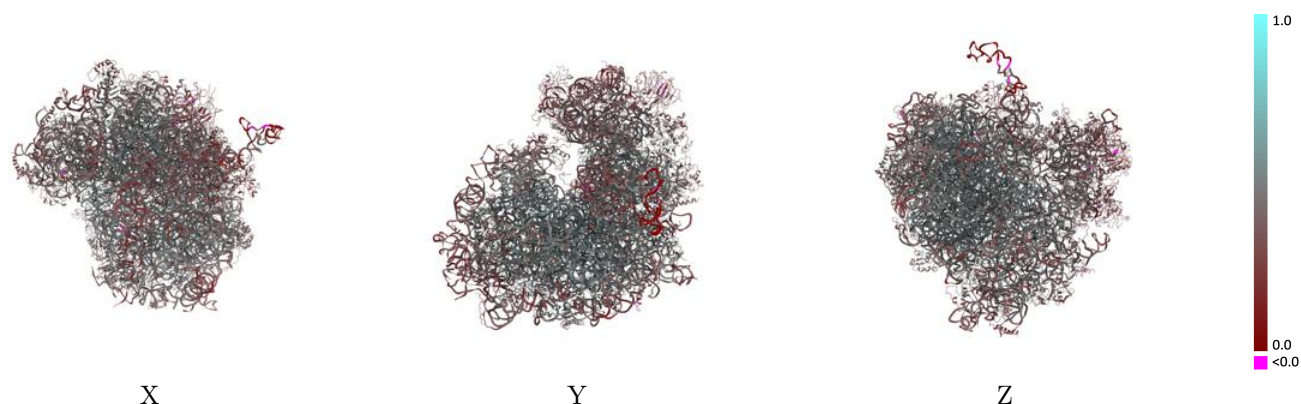
This section contains information regarding the fit between EMDB map EMD-2938 and PDB model 4UG0. Per-residue inclusion information can be found in [section 3](#) on [page 20](#).

9.1 Map-model overlay [i](#)



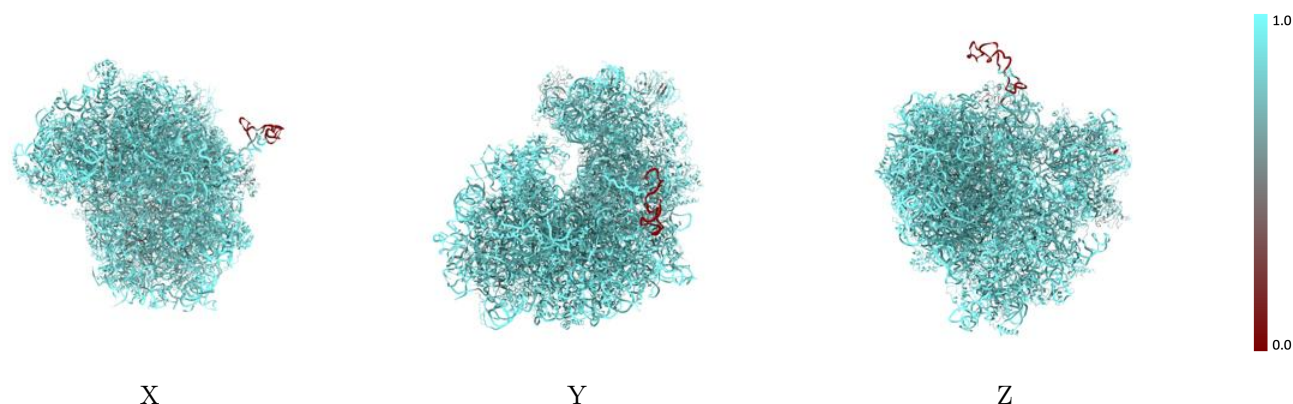
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



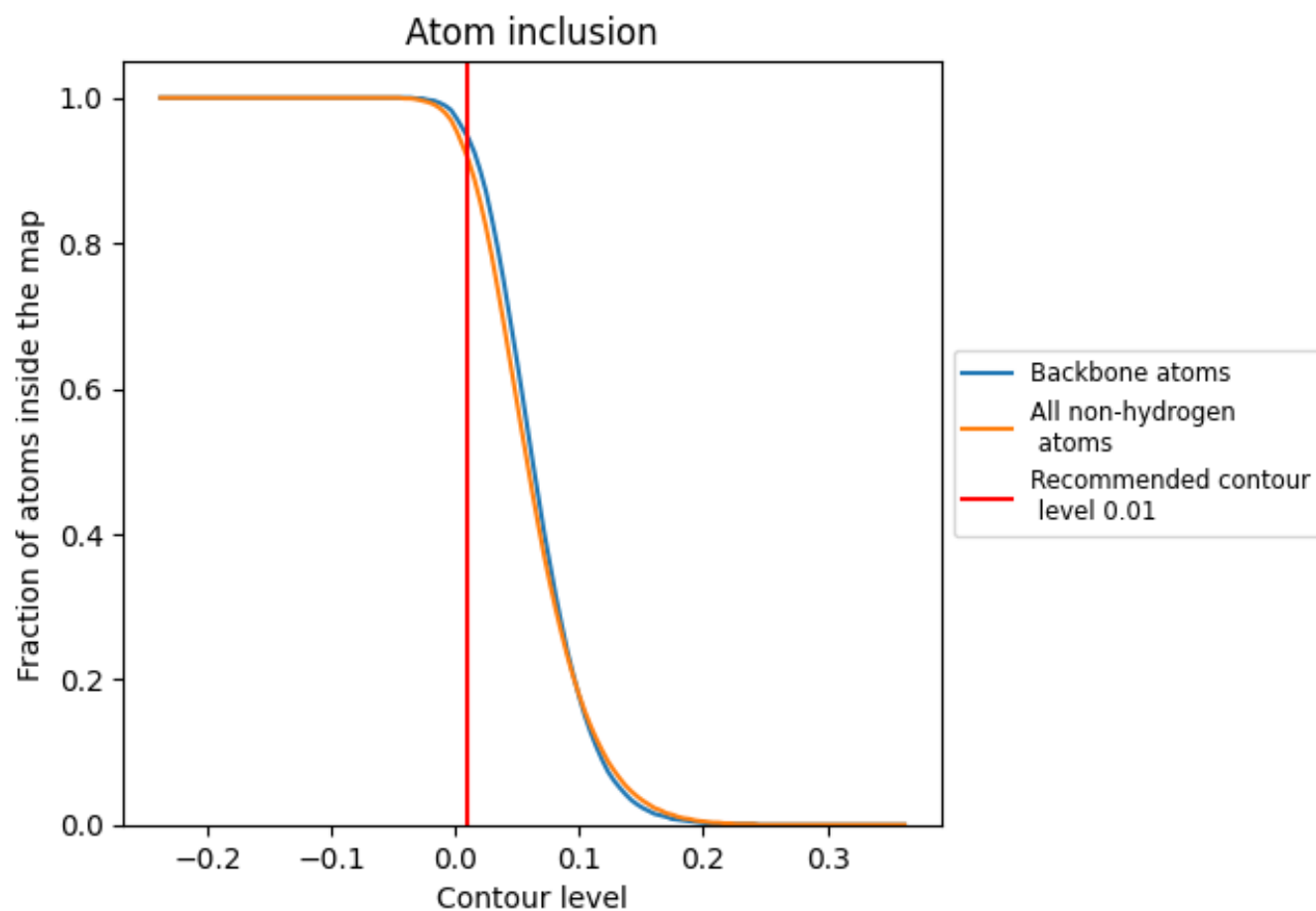
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 92% 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 (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9180	 0.4400
L5	 0.9450	 0.4620
L7	 0.9730	 0.4890
L8	 0.9590	 0.4900
LA	 0.9160	 0.5040
LB	 0.9120	 0.4670
LC	 0.9040	 0.4700
LD	 0.8970	 0.4170
LE	 0.8790	 0.4070
LF	 0.8920	 0.4770
LG	 0.8960	 0.4090
LH	 0.9030	 0.4300
LI	 0.8930	 0.4370
LJ	 0.8880	 0.3890
LL	 0.9250	 0.4550
LM	 0.9090	 0.4410
LN	 0.8950	 0.5010
LO	 0.9180	 0.4750
LP	 0.9070	 0.4790
LQ	 0.9000	 0.4750
LR	 0.9110	 0.4530
LS	 0.9130	 0.4730
LT	 0.9090	 0.4680
LU	 0.9110	 0.4010
LV	 0.9250	 0.4790
LW	 0.8720	 0.3930
LX	 0.8910	 0.4510
LY	 0.9130	 0.4350
LZ	 0.9020	 0.4380
La	 0.9190	 0.4960
Lb	 0.8800	 0.4310
Lc	 0.9140	 0.4480
Ld	 0.9220	 0.4620
Le	 0.9050	 0.4980
Lf	 0.9240	 0.5010













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Chain	Atom inclusion	Q-score
Lg	 0.9000	 0.4660
Lh	 0.9030	 0.4350
Li	 0.9060	 0.4380
Lj	 0.9150	 0.4900
Lk	 0.9140	 0.4010
Ll	 0.9010	 0.4850
Lm	 0.9090	 0.4620
Ln	 0.9330	 0.5140
Lo	 0.9200	 0.4800
Lp	 0.9240	 0.4920
Lr	 0.9210	 0.4730
Lz	 0.7030	 0.2650
S2	 0.9430	 0.4350
S6	 0.8860	 0.3390
SA	 0.8920	 0.4110
SB	 0.9040	 0.4260
SC	 0.8890	 0.4200
SD	 0.8440	 0.3480
SE	 0.8780	 0.4290
SF	 0.8400	 0.3670
SG	 0.8730	 0.3710
SH	 0.8900	 0.3800
SI	 0.8870	 0.4320
SJ	 0.8800	 0.4030
SK	 0.8210	 0.3020
SL	 0.8940	 0.4650
SM	 0.6630	 0.2750
SN	 0.8920	 0.4370
SO	 0.8870	 0.4430
SP	 0.8590	 0.3280
SQ	 0.8210	 0.3530
SR	 0.8620	 0.3650
SS	 0.8560	 0.3290
ST	 0.8360	 0.3470
SU	 0.8340	 0.3320
SV	 0.9020	 0.4270
SW	 0.8770	 0.4560
SX	 0.8890	 0.4620
SY	 0.8820	 0.3870
SZ	 0.8830	 0.3340
Sa	 0.9070	 0.4620
Sb	 0.9220	 0.4170

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Chain	Atom inclusion	Q-score
Sc	 0.8750	 0.3650
Sd	 0.7940	 0.3770
Se	 0.8060	 0.3560
Sf	 0.5800	 0.2210
Sg	 0.8160	 0.3010