Full wwPDB EM Validation Report ⓘ

Mar 23, 2026 – 05:02 AM UTC

PDB ID	:	9B0P / pdb_00009b0p
EMDB ID	:	EMD-44049
Title	:	In situ human Hibernating class1 80S ribosome
Authors	:	Wei, Z.; Yong, X.
Deposited on	:	2024-03-12
Resolution	:	2.82 Å(reported)

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

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

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

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

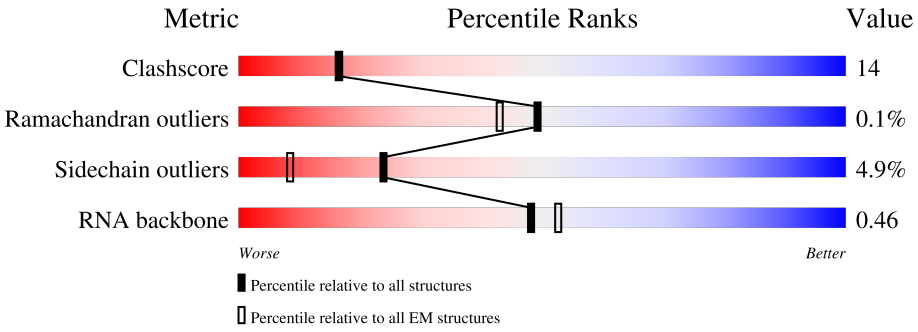
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

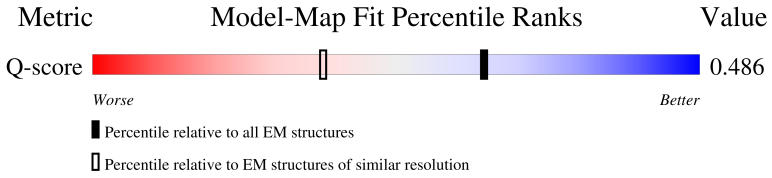
1 Overall quality at a glance

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

The reported resolution of this entry is 2.82 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	11795 (2.32 - 3.32)

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

Mol	Chain	Length	Quality of chain
1	S2	1869	10% 34% 46% 13% 7%
2	SD	227	27% 53% 45% .
3	SF	189	30% 52% 47% .

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Mol	Chain	Length	Quality of chain
4	SK	98	41% 44% 52%
5	SP	121	35% 52% 47%
6	SQ	144	25% 50% 46%
7	SS	145	40% 48% 49%
8	ST	143	29% 55% 42%
9	SU	104	43% 48% 51%
10	Sc	64	48% 41% 56%
11	Sd	55	5% 60% 38%
12	Sg	313	60% 46% 50%
13	SM	122	91% 45% 50% 5%
14	SZ	75	59% 40% 57%
15	Sf	67	78% 63% 33%
16	CD	55	85% 58% 42%
17	SE	262	25% 54% 42%
18	SI	206	23% 56% 41%
19	SL	153	21% 60% 38%
20	SX	141	11% 65% 32%
21	SG	237	51% 51% 46%
22	SJ	185	26% 50% 46%
23	SY	131	50% 54% 43%
24	Se	58	43% 76% 22%
25	SA	221	17% 52% 44%
26	SB	214	32% 52% 46%
27	SH	189	54% 52% 44%
28	SV	83	23% 66% 30%

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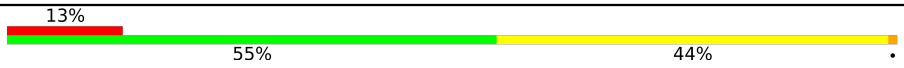
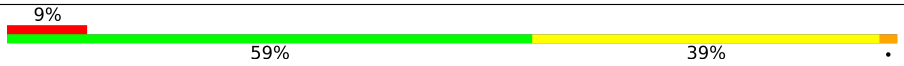
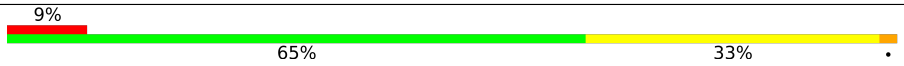
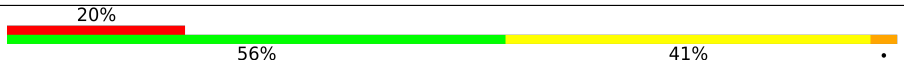
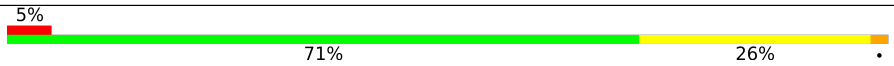
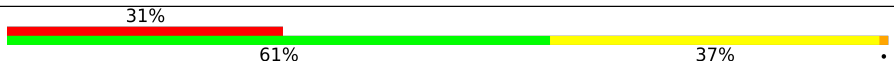
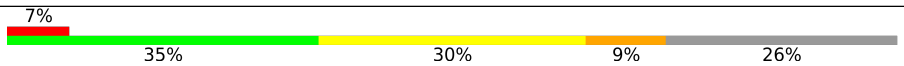
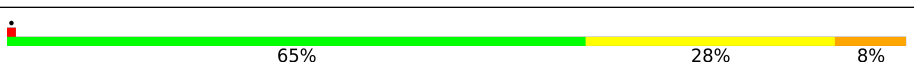
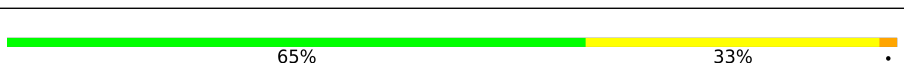
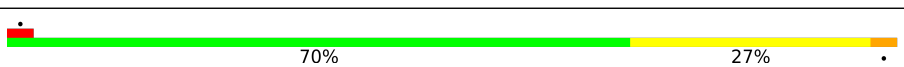
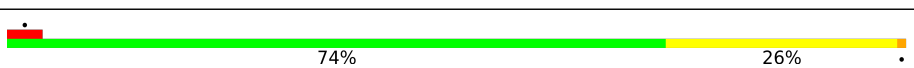
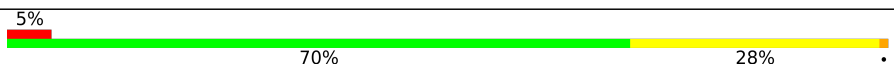
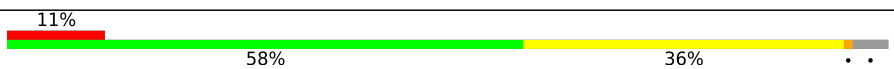
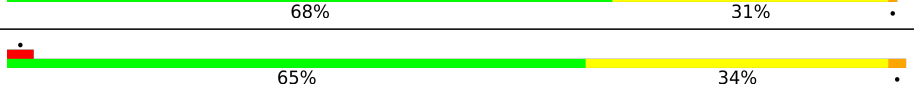
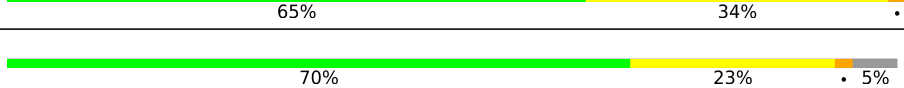
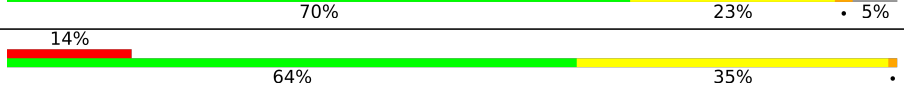
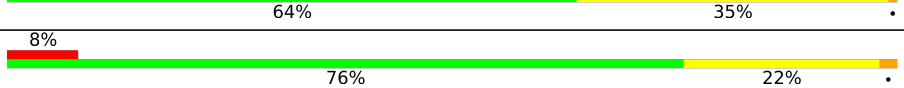
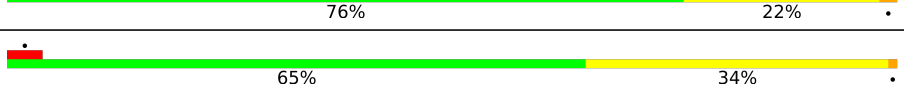
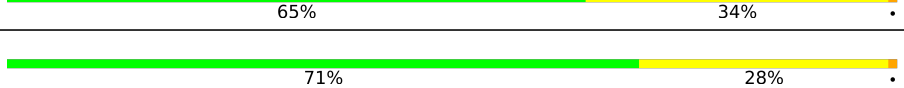
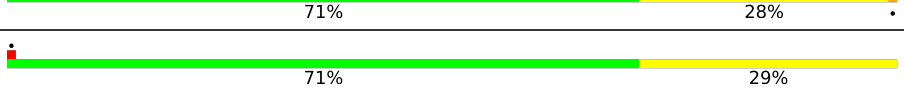
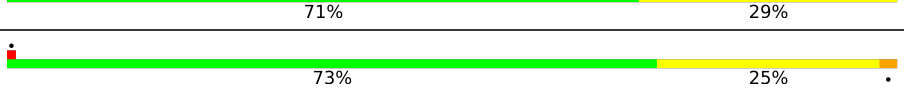
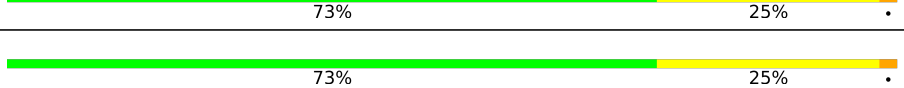
Mol	Chain	Length	Quality of chain
29	Sa	102	
30	SC	222	
31	SN	150	
32	SO	140	
33	SW	129	
34	Sb	83	
35	L5	5070	
36	L7	120	
37	L8	156	
38	LA	248	
39	LB	402	
40	LC	368	
41	LD	293	
42	LE	247	
43	LF	225	
44	LG	241	
45	LH	190	
46	LI	213	
47	LJ	176	
48	LL	210	
49	LM	139	
50	LN	203	
51	LO	201	
52	LP	153	
53	LQ	187	

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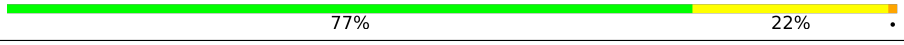
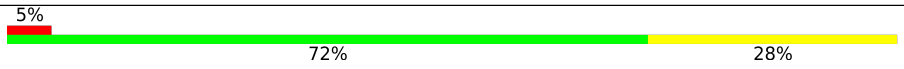
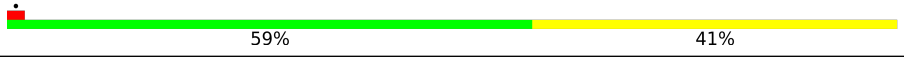
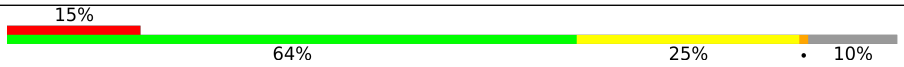
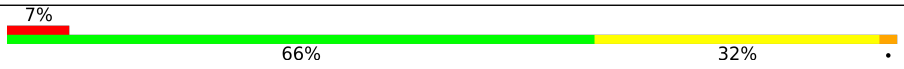
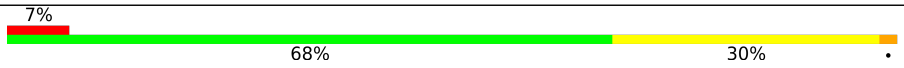
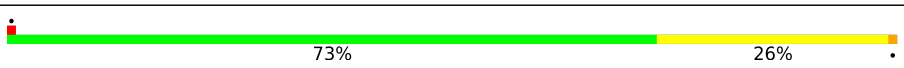
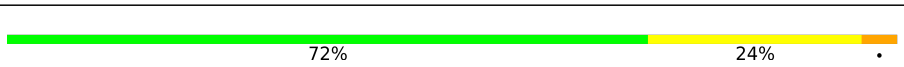
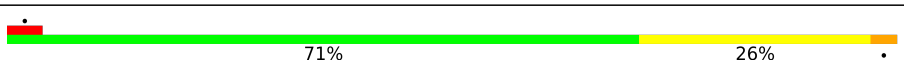
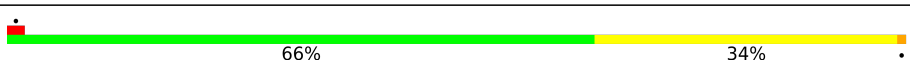
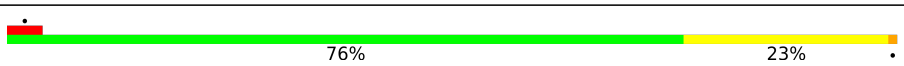
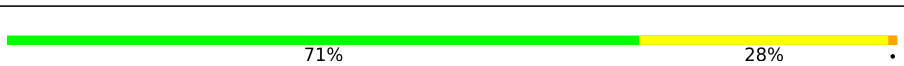
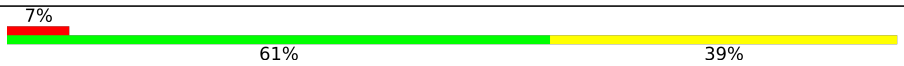
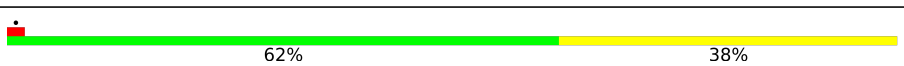
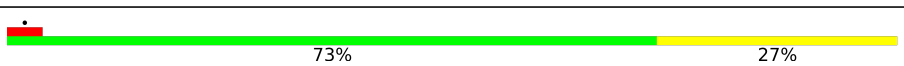
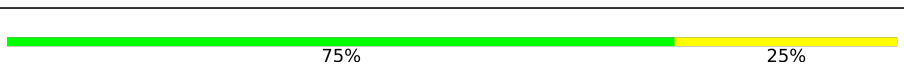
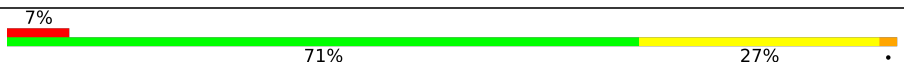
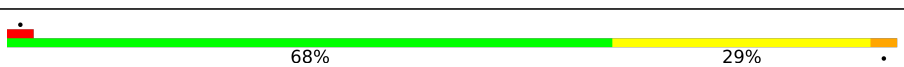
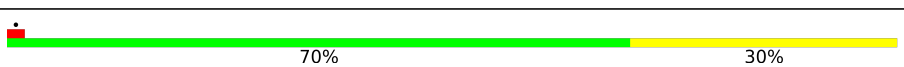
Mol	Chain	Length	Quality of chain
54	LR	187	
55	LS	175	
56	LT	159	
57	LU	101	
58	LV	131	
59	LX	120	
60	LY	134	
61	LZ	135	
62	La	147	
63	Lb	121	
64	Lc	98	
65	Ld	107	
66	Le	128	
67	Lf	109	
68	Lg	114	
69	Lh	122	
70	Li	102	
71	Lj	86	
72	Lk	69	
73	Ll	50	
74	Lm	52	
75	Ln	24	
76	Lo	105	
77	Lp	91	
78	Lr	125	

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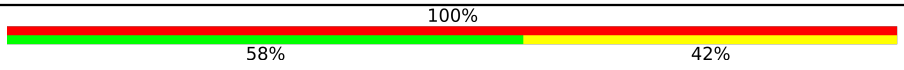
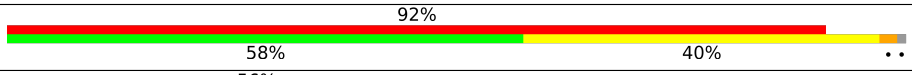
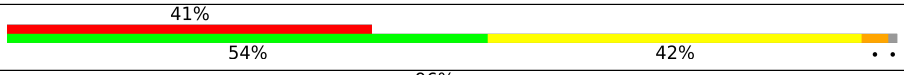
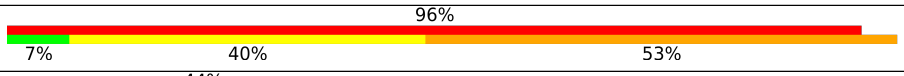
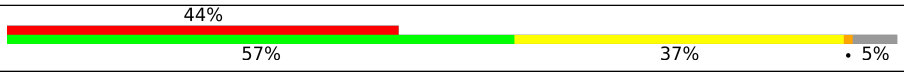
Mol	Chain	Length	Quality of chain
79	Lz	217	
80	CA	356	
81	Ls	196	
82	Lt	141	
83	CB	856	
84	Et	75	
85	LW	124	

2 Entry composition

There are 87 unique types of molecules in this entry. The entry contains 229857 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 18S rRNA.

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

- Molecule 2 is a protein called Small ribosomal subunit protein uS3.

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

- Molecule 3 is a protein called 40S ribosomal protein S5.

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

- Molecule 4 is a protein called 40S ribosomal protein S10.

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

- Molecule 5 is a protein called Small ribosomal subunit protein uS19.

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

- Molecule 6 is a protein called Small ribosomal subunit protein uS9.

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

- Molecule 7 is a protein called 40S ribosomal protein S18.

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

- Molecule 8 is a protein called 40S ribosomal protein S19.

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

- Molecule 9 is a protein called 40S ribosomal protein S20.

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

- Molecule 10 is a protein called 40S ribosomal protein S28.

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

- Molecule 11 is a protein called 40S ribosomal protein S29.

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

- Molecule 12 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 13 is a protein called Small ribosomal subunit protein eS12.

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

- Molecule 14 is a protein called Small ribosomal subunit protein eS25.

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

- Molecule 15 is a protein called Ubiquitin-40S ribosomal protein S27a.

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

- Molecule 16 is a protein called Serbp1.

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

- Molecule 17 is a protein called Small ribosomal subunit protein eS4, X isoform.

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

- Molecule 18 is a protein called 40S ribosomal protein S8.

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

- Molecule 19 is a protein called 40S ribosomal protein S11.

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

- Molecule 20 is a protein called 40S ribosomal protein S23.

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

- Molecule 21 is a protein called 40S ribosomal protein S6.

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

- Molecule 22 is a protein called 40S ribosomal protein S9.

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

- Molecule 23 is a protein called 40S ribosomal protein S24.

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

- Molecule 24 is a protein called Small ribosomal subunit protein eS30.

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

- Molecule 25 is a protein called 40S ribosomal protein SA.

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

- Molecule 26 is a protein called 40S ribosomal protein S3a.

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

- Molecule 27 is a protein called Small ribosomal subunit protein eS7.

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

- Molecule 28 is a protein called 40S ribosomal protein S21.

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

- Molecule 29 is a protein called 40S ribosomal protein S26.

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

- Molecule 30 is a protein called 40S ribosomal protein S2.

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

- Molecule 31 is a protein called 40S ribosomal protein S13.

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

- Molecule 32 is a protein called Small ribosomal subunit protein uS11.

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

- Molecule 33 is a protein called 40S ribosomal protein S15a.

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

- Molecule 34 is a protein called Small ribosomal subunit protein eS27.

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

- Molecule 35 is a RNA chain called 28S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
35	L5	3740	Total	C	N	O	P	0	0
			79860	35549	14585	25987	3739		

- Molecule 36 is a RNA chain called 5S rRNA [Homo sapiens].

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

- Molecule 37 is a RNA chain called 5.8S rRNA [Homo sapiens].

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

- Molecule 38 is a protein called 60S ribosomal protein L8.

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

- Molecule 39 is a protein called Large ribosomal subunit protein uL3.

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

- Molecule 40 is a protein called 60S ribosomal protein L4.

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

- Molecule 41 is a protein called Large ribosomal subunit protein uL18.

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

- Molecule 42 is a protein called Large ribosomal subunit protein eL6.

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

- Molecule 43 is a protein called 60S ribosomal protein L7.

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

- Molecule 44 is a protein called 60S ribosomal protein L7a.

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

- Molecule 45 is a protein called 60S ribosomal protein L9.

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

- Molecule 46 is a protein called Ribosomal protein uL16-like.

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

- Molecule 47 is a protein called 60S ribosomal protein L11.

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

- Molecule 48 is a protein called Large ribosomal subunit protein eL13.

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

- Molecule 49 is a protein called 60S ribosomal protein L14.

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

- Molecule 50 is a protein called 60S ribosomal protein L15.

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

- Molecule 51 is a protein called 60S ribosomal protein L13a.

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

- Molecule 52 is a protein called 60S ribosomal protein L17.

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

- Molecule 53 is a protein called 60S ribosomal protein L18.

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

- Molecule 54 is a protein called 60S ribosomal protein L19.

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

- Molecule 55 is a protein called 60S ribosomal protein L18a.

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

- Molecule 56 is a protein called 60S ribosomal protein L21.

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

- Molecule 57 is a protein called Heparin-binding protein HBp15.

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

- Molecule 58 is a protein called 60S ribosomal protein L23.

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

- Molecule 59 is a protein called 60S ribosomal protein L23a.

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

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

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

- Molecule 61 is a protein called 60S ribosomal protein L27.

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

- Molecule 62 is a protein called 60S ribosomal protein L27a.

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

- Molecule 63 is a protein called Large ribosomal subunit protein eL29.

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

- Molecule 64 is a protein called 60S ribosomal protein L30.

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

- Molecule 65 is a protein called 60S ribosomal protein L31.

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

- Molecule 66 is a protein called 60S ribosomal protein L32.

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

- Molecule 67 is a protein called 60S ribosomal protein L35a.

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

- Molecule 68 is a protein called 60S ribosomal protein L34.

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

- Molecule 69 is a protein called 60S ribosomal protein L35.

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

- Molecule 70 is a protein called 60S ribosomal protein L36.

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

- Molecule 71 is a protein called 60S ribosomal protein L37.

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

- Molecule 72 is a protein called 60S ribosomal protein L38.

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

- Molecule 73 is a protein called 60S ribosomal protein L39.

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

- Molecule 74 is a protein called Large ribosomal subunit protein eL40.

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

- Molecule 75 is a protein called 60S ribosomal protein L41.

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

- Molecule 76 is a protein called 60S ribosomal protein L36a.

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

- Molecule 77 is a protein called 60S ribosomal protein L37a.

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

- Molecule 78 is a protein called 60S ribosomal protein L28.

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

- Molecule 79 is a protein called 60S ribosomal protein L10a.

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

- Molecule 80 is a protein called Proliferation-associated protein 2G4.

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

- Molecule 81 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Ls	196	Total	C	N	O	S	0	0
			1496	952	259	276	9		

- Molecule 82 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Lt	141	Total	C	N	O	S	0	0
			1046	652	191	199	4		

- Molecule 83 is a protein called Elongation factor 2.

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

- Molecule 84 is a RNA chain called E site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Et	75	Total	C	N	O	P	0	0
			1593	712	281	526	74		

- Molecule 85 is a protein called Ribosomal protein L24.

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

- Molecule 86 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
86	S2	27	Total	Mg	0
			27	27	
86	SQ	1	Total	Mg	0
			1	1	
86	SG	1	Total	Mg	0
			1	1	
86	L5	210	Total	Mg	0
			210	210	
86	L7	3	Total	Mg	0
			3	3	
86	L8	6	Total	Mg	0
			6	6	
86	LA	1	Total	Mg	0
			1	1	
86	LI	1	Total	Mg	0
			1	1	
86	LP	1	Total	Mg	0
			1	1	
86	LV	1	Total	Mg	0
			1	1	
86	Le	1	Total	Mg	0
			1	1	
86	Lg	1	Total	Mg	0
			1	1	
86	Lj	1	Total	Mg	0
			1	1	

- Molecule 87 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

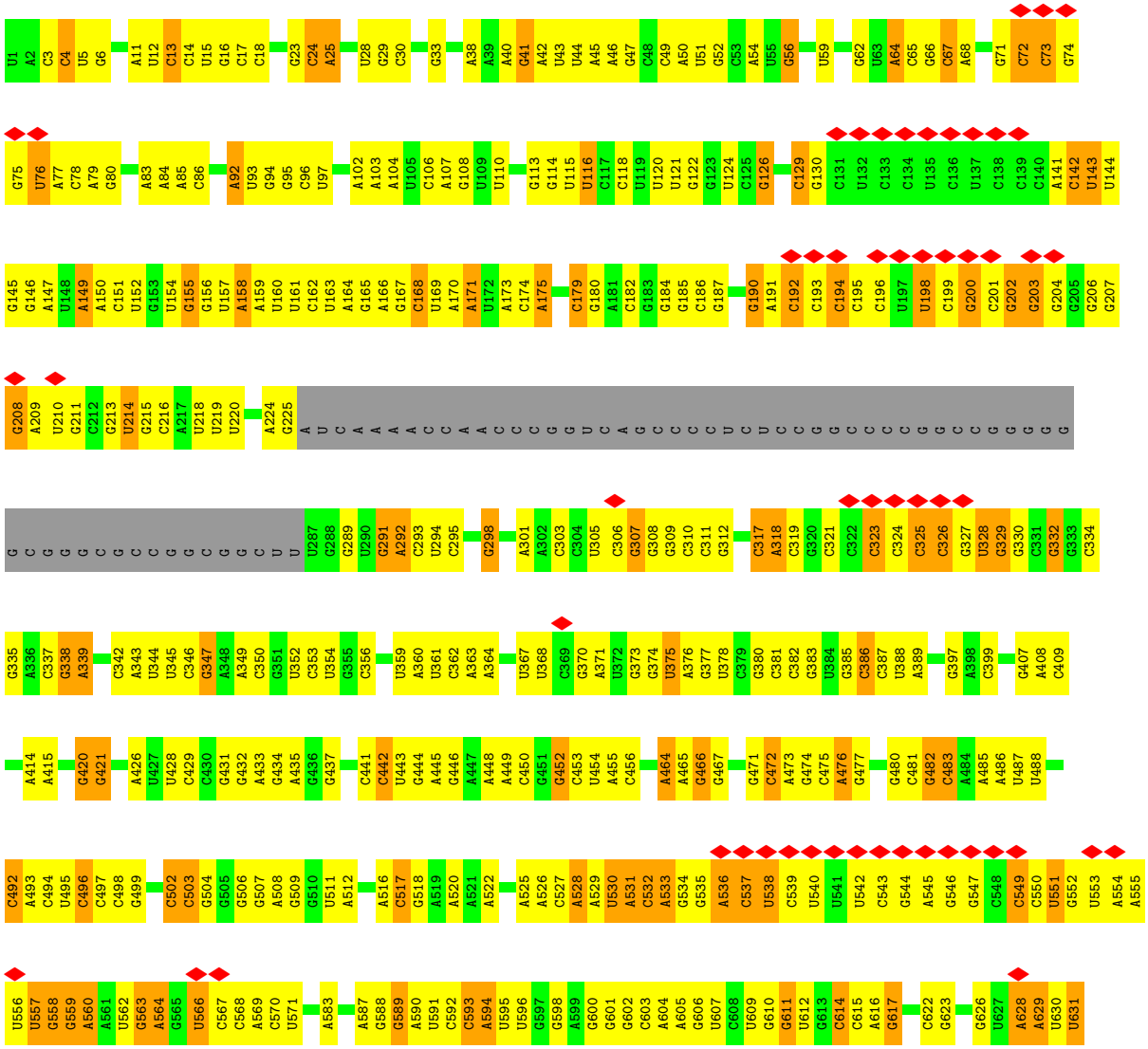
Mol	Chain	Residues	Atoms	AltConf
87	Sa	1	Total Zn 1 1	0
87	Lg	1	Total Zn 1 1	0
87	Lj	1	Total Zn 1 1	0
87	Lm	1	Total Zn 1 1	0
87	Lo	1	Total Zn 1 1	0
87	Lp	1	Total Zn 1 1	0

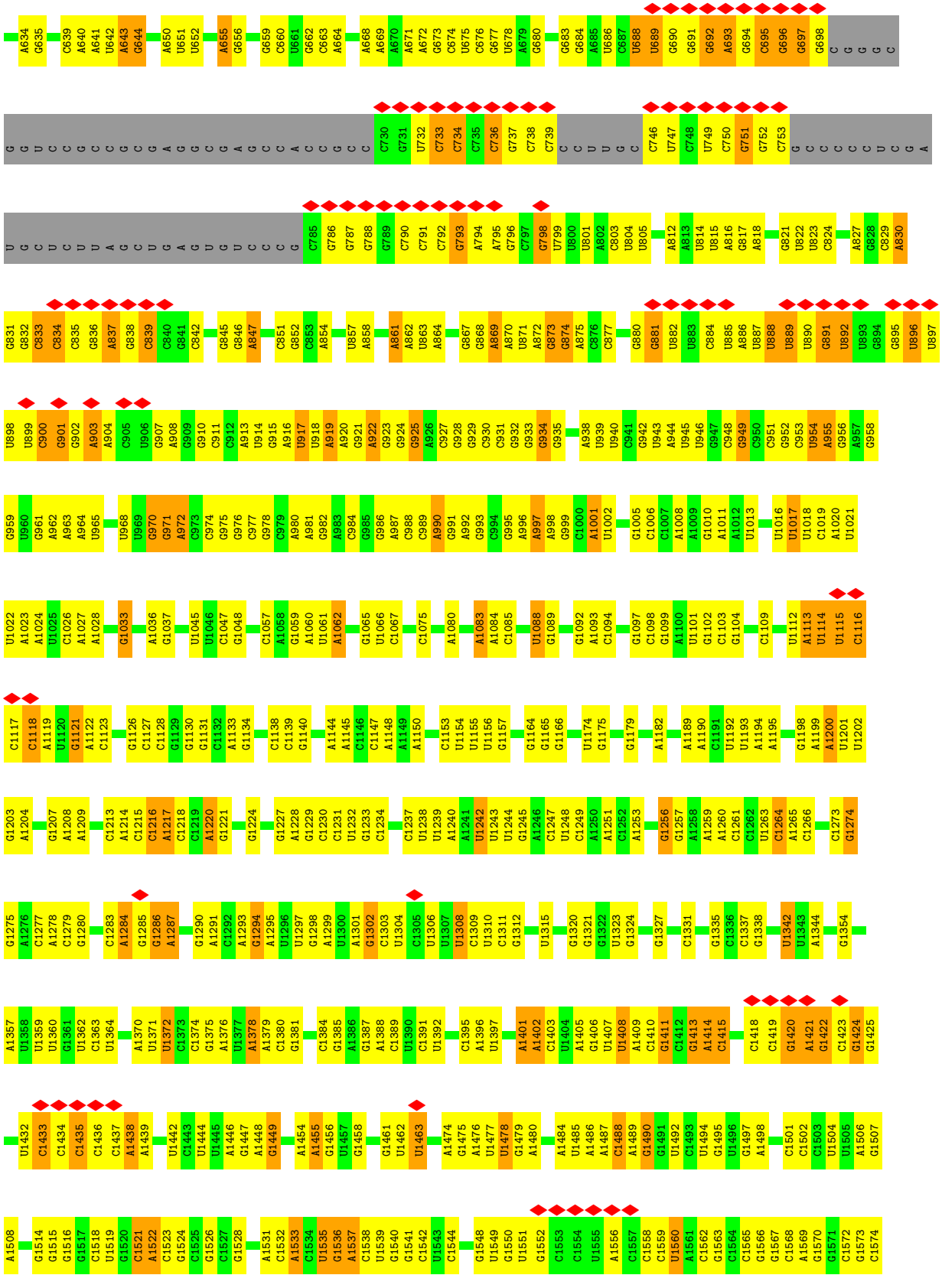
3 Residue-property plots (i)

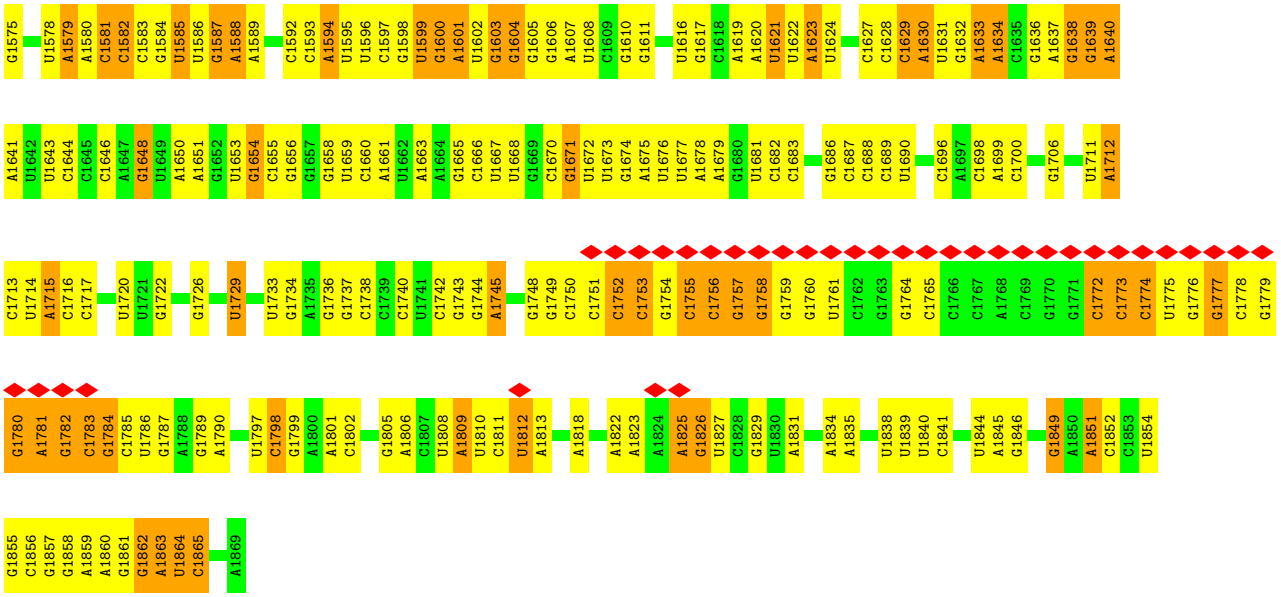
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: 18S rRNA

Chain S2:

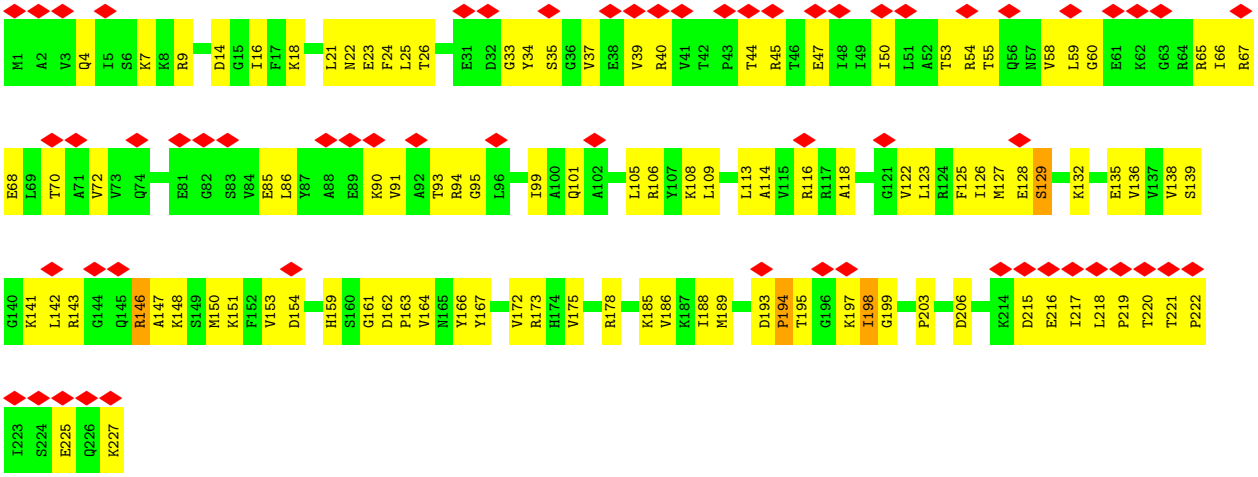






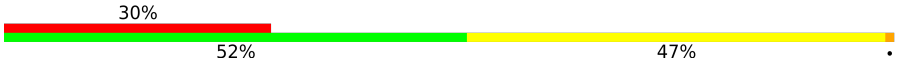
• Molecule 2: Small ribosomal subunit protein uS3

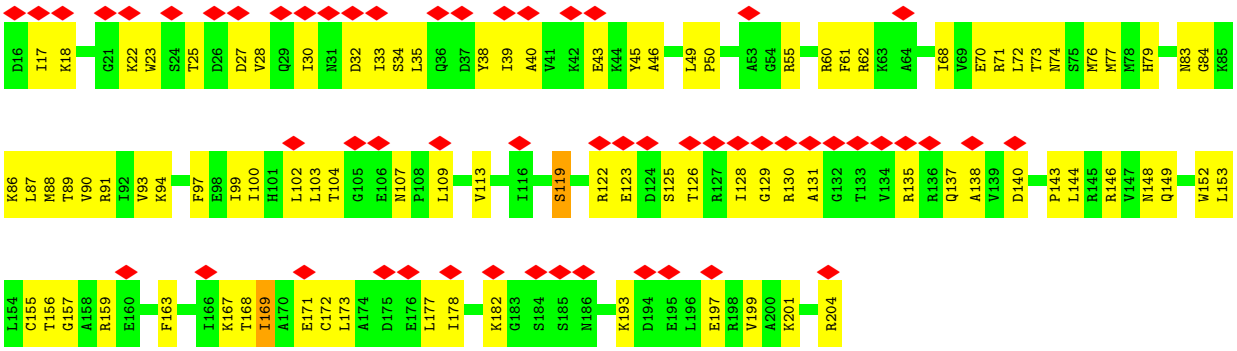
Chain SD:



• Molecule 3: 40S ribosomal protein S5

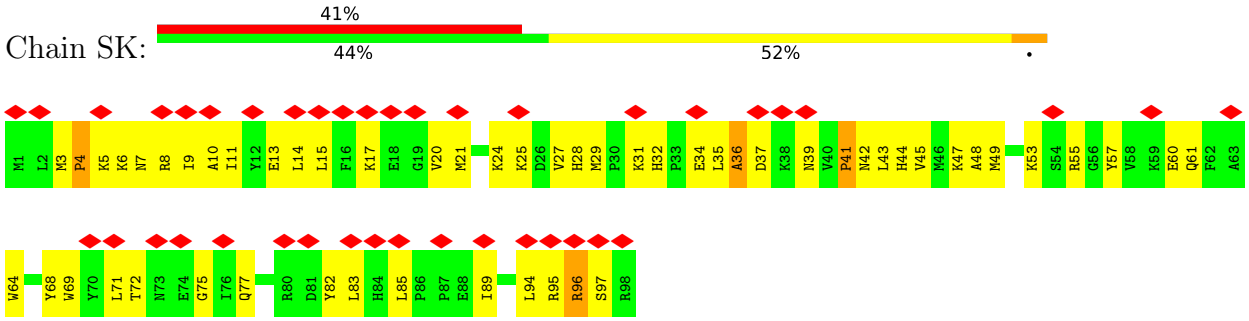
Chain SF:





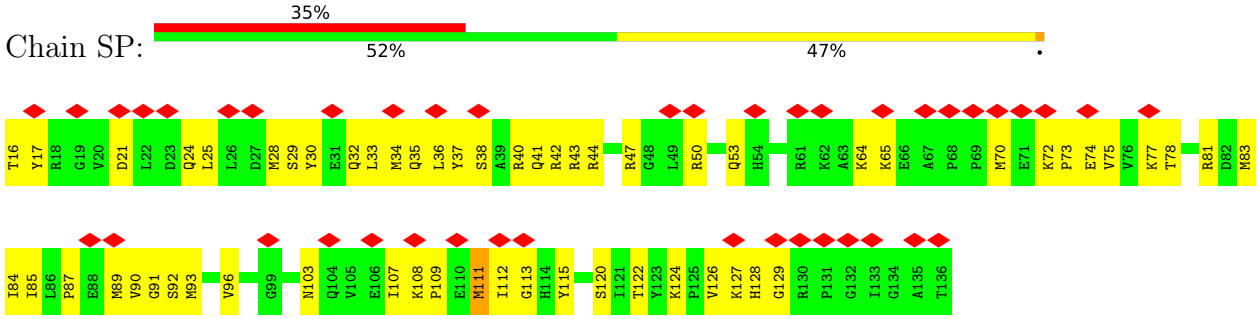
• Molecule 4: 40S ribosomal protein S10

Chain SK:



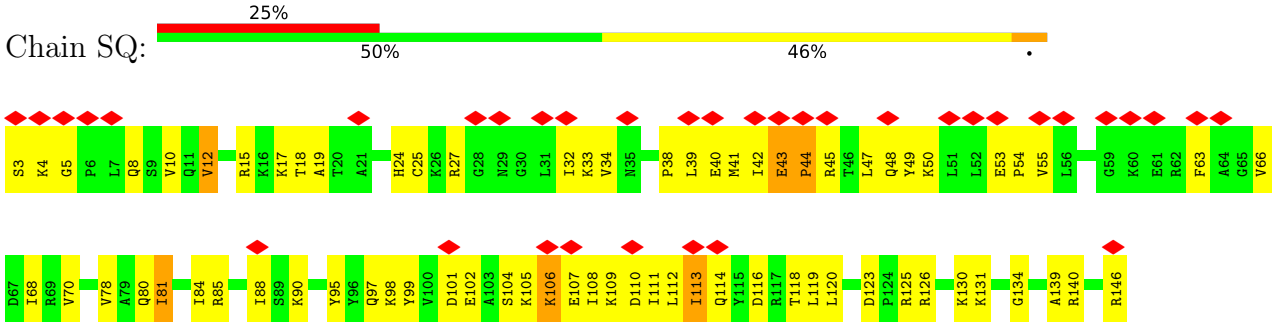
• Molecule 5: Small ribosomal subunit protein uS19

Chain SP:



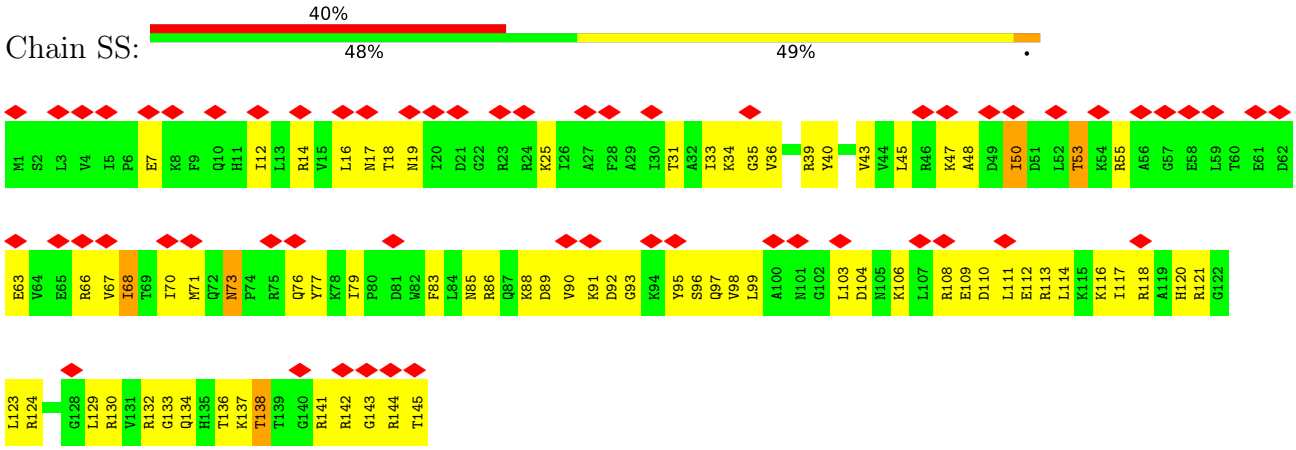
• Molecule 6: Small ribosomal subunit protein uS9

Chain SQ:



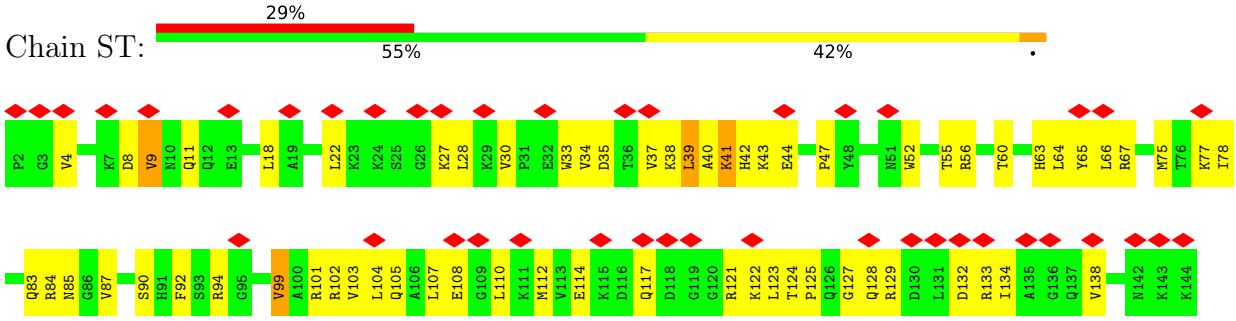
• Molecule 7: 40S ribosomal protein S18

Chain SS:



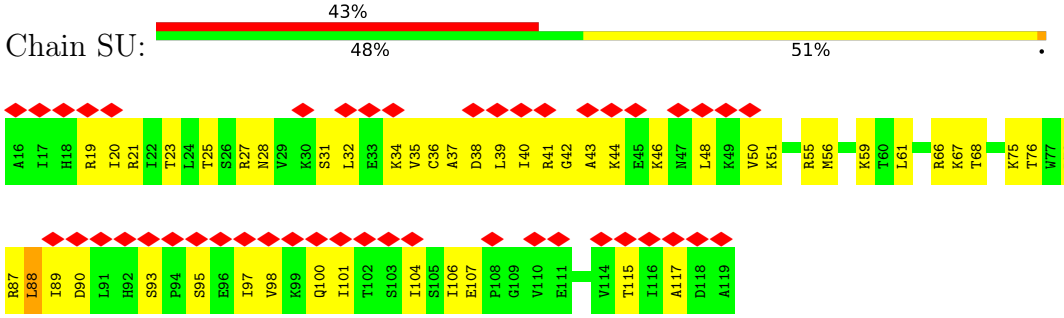
• Molecule 8: 40S ribosomal protein S19

Chain ST:



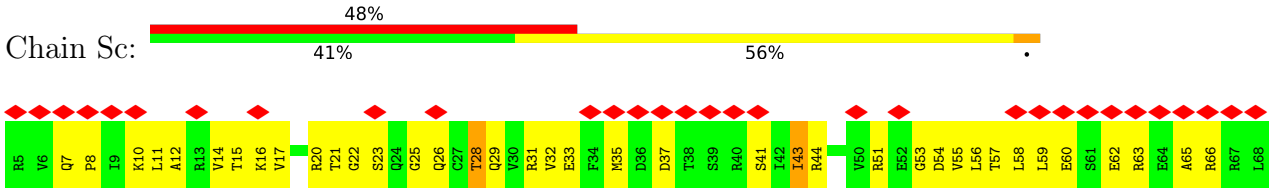
• Molecule 9: 40S ribosomal protein S20

Chain SU:



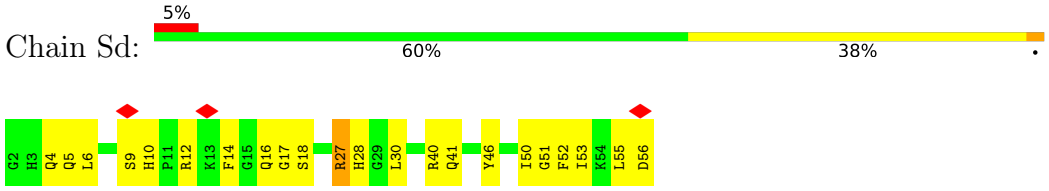
• Molecule 10: 40S ribosomal protein S28

Chain Sc:



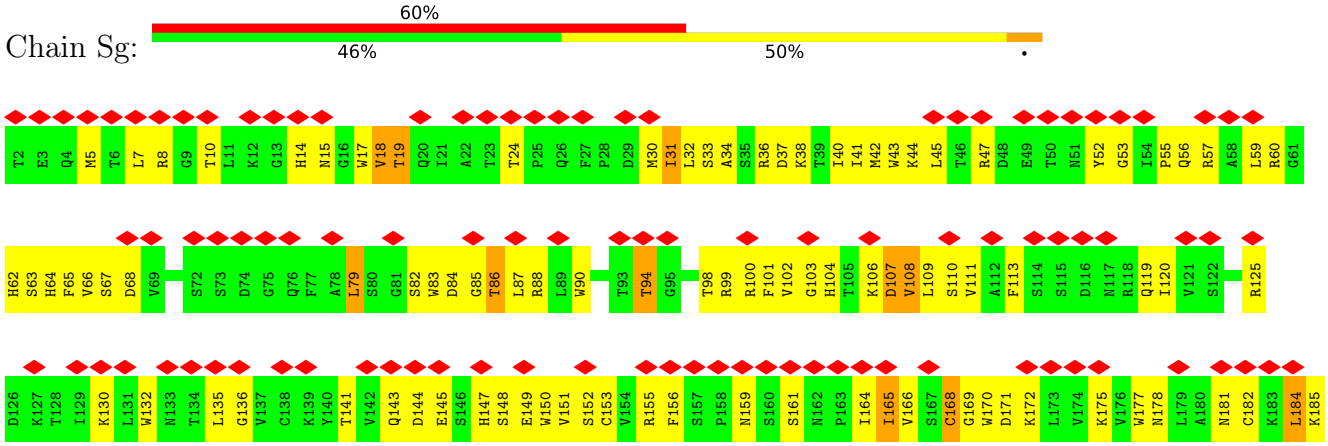
• Molecule 11: 40S ribosomal protein S29

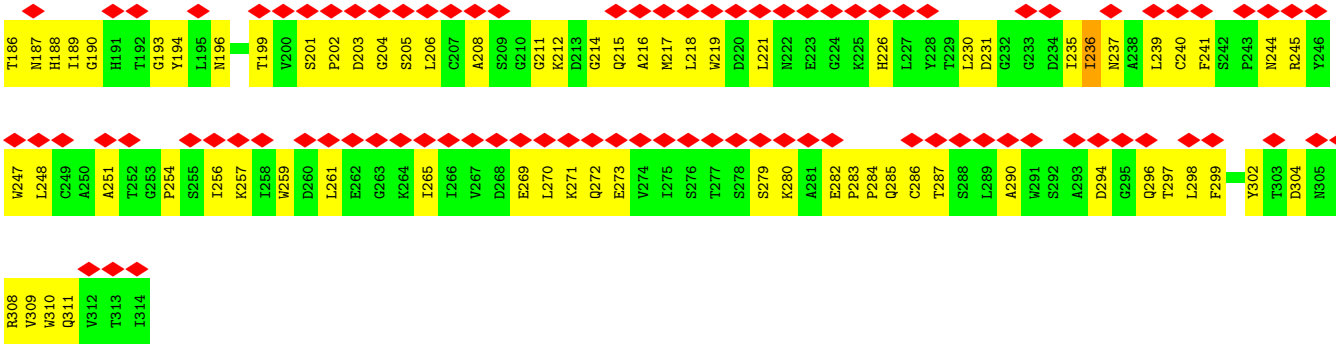
Chain Sd:



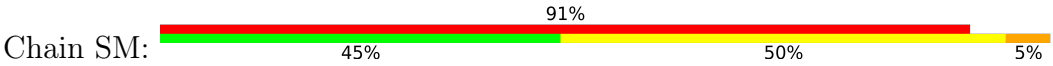
• Molecule 12: Receptor of activated protein C kinase 1

Chain Sg:

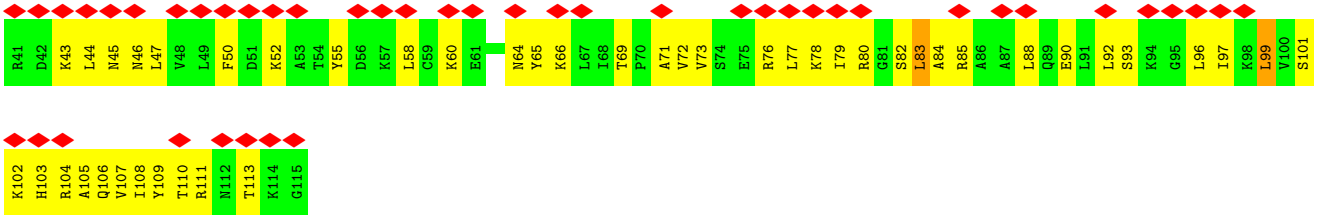




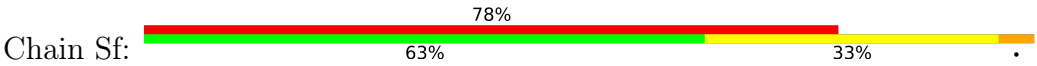
• Molecule 13: Small ribosomal subunit protein eS12

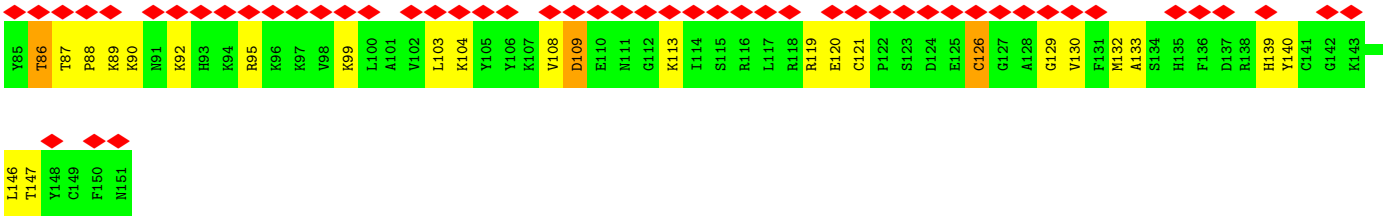


• Molecule 14: Small ribosomal subunit protein eS25



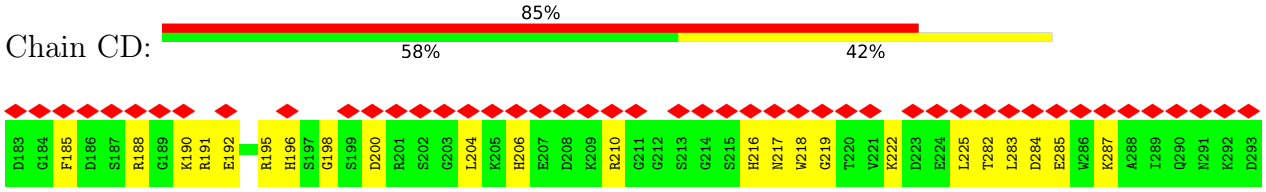
• Molecule 15: Ubiquitin-40S ribosomal protein S27a





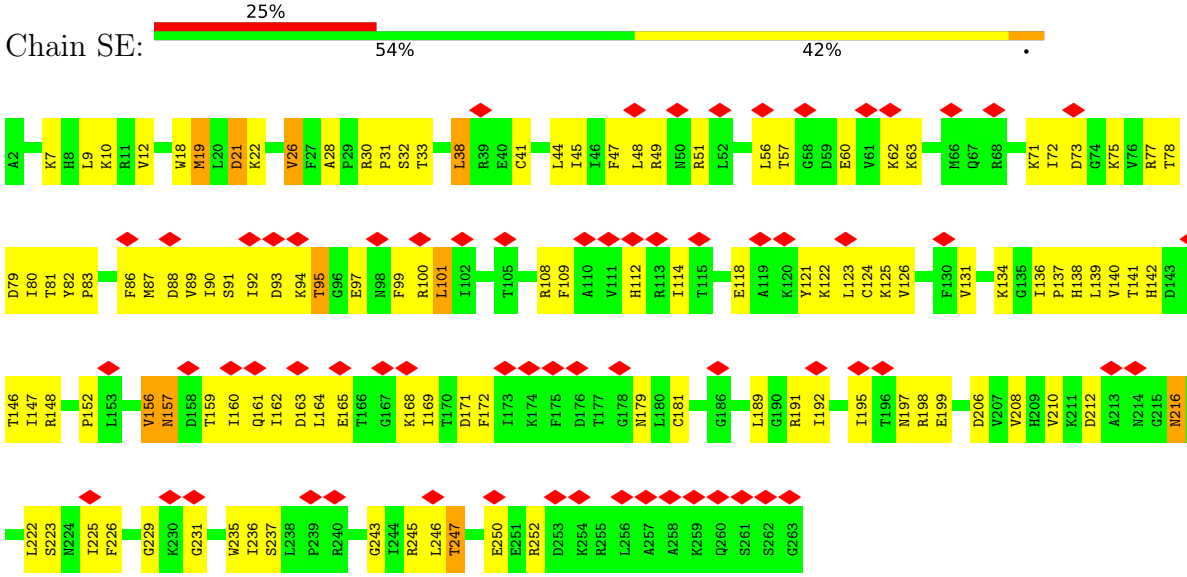
• Molecule 16: Serbp1

Chain CD:



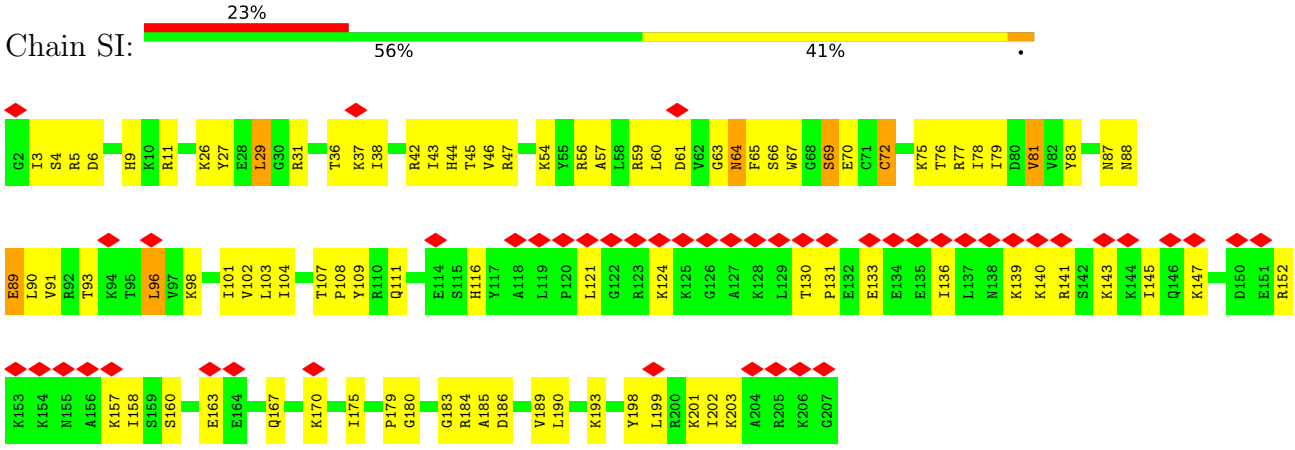
• Molecule 17: Small ribosomal subunit protein eS4, X isoform

Chain SE:



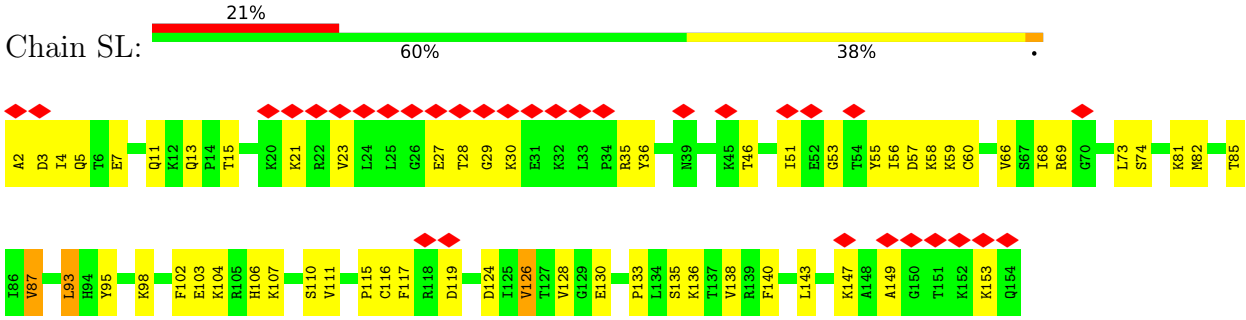
• Molecule 18: 40S ribosomal protein S8

Chain SI:



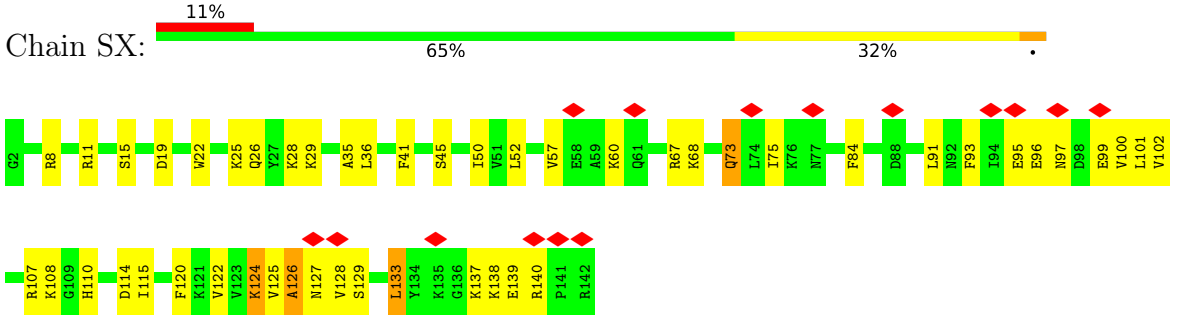
• Molecule 19: 40S ribosomal protein S11

Chain SL:



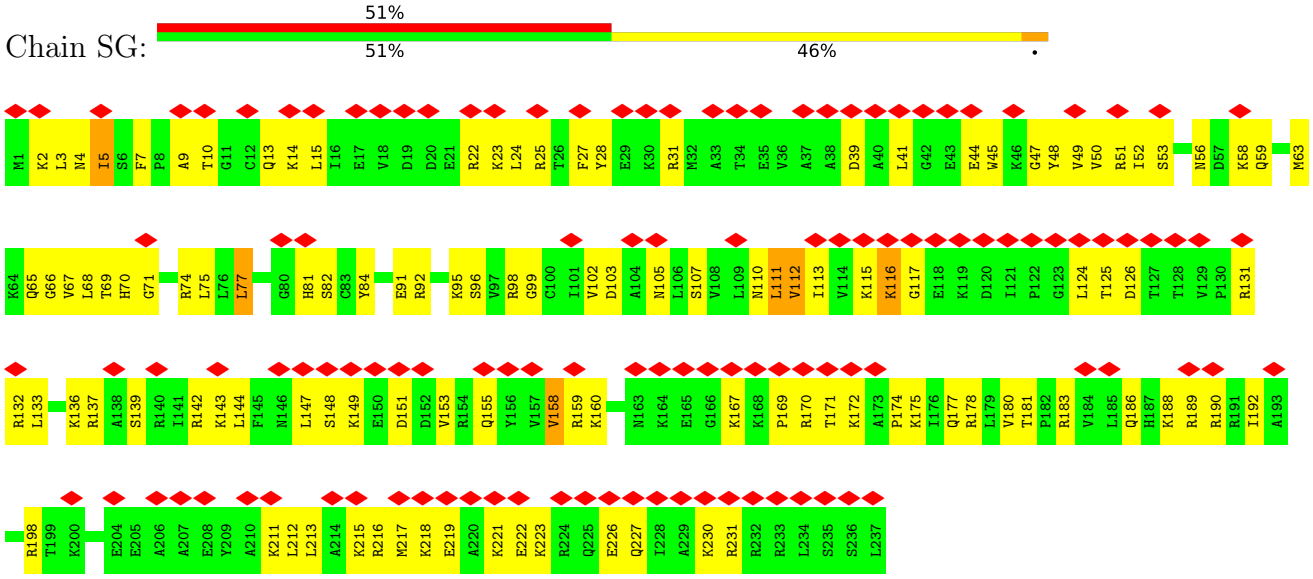
• Molecule 20: 40S ribosomal protein S23

Chain SX:



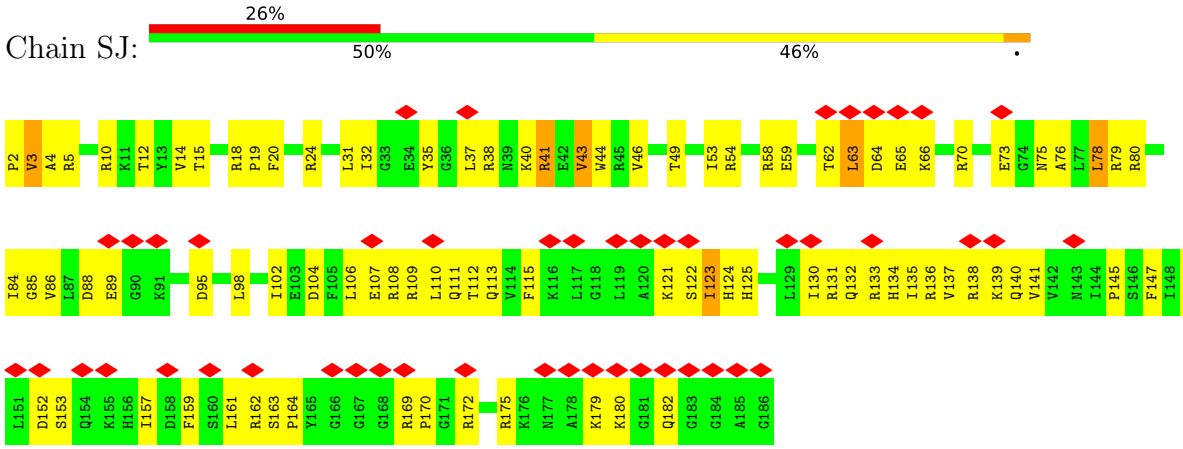
• Molecule 21: 40S ribosomal protein S6

Chain SG:



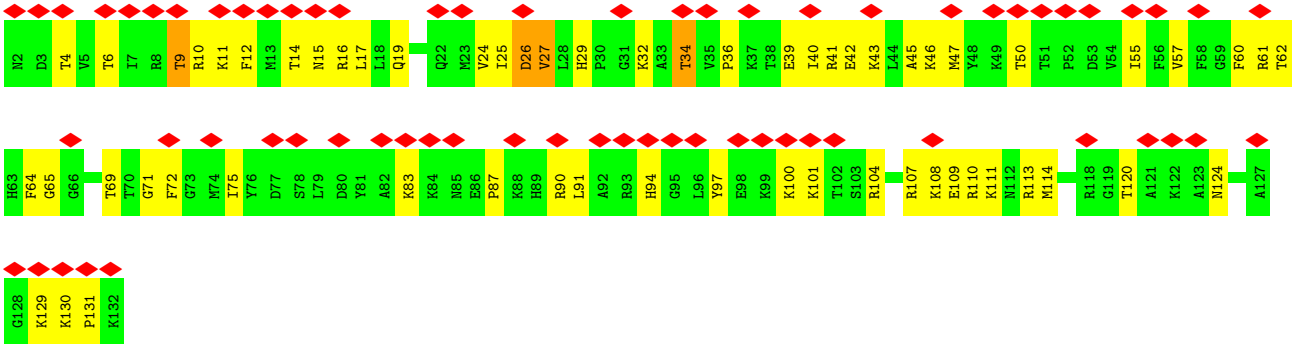
• Molecule 22: 40S ribosomal protein S9

Chain SJ:

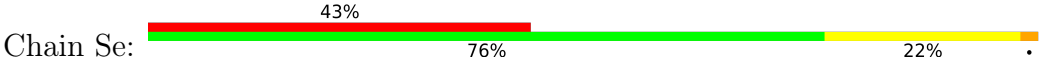


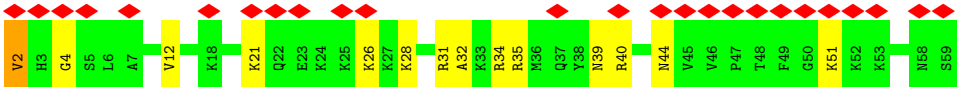
• Molecule 23: 40S ribosomal protein S24

Chain SY:

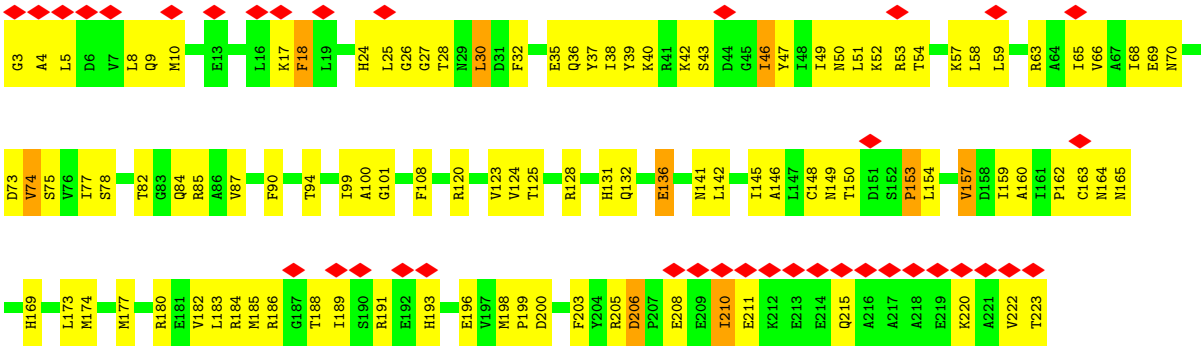


• Molecule 24: Small ribosomal subunit protein eS30

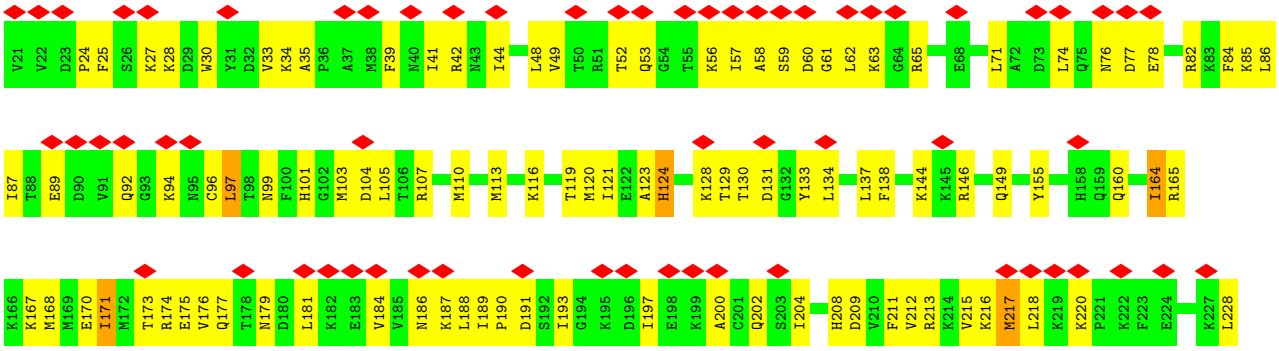


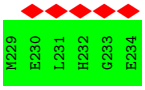


• Molecule 25: 40S ribosomal protein SA



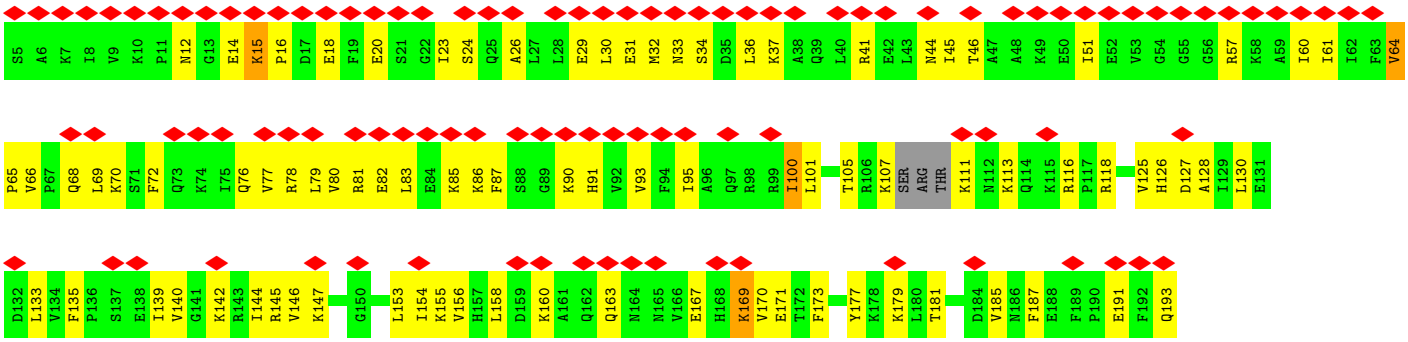
• Molecule 26: 40S ribosomal protein S3a





• Molecule 27: Small ribosomal subunit protein eS7

Chain SH:

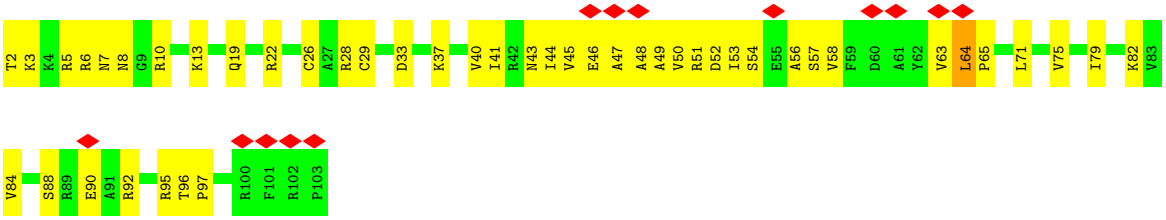


• Molecule 28: 40S ribosomal protein S21

Chain SV:

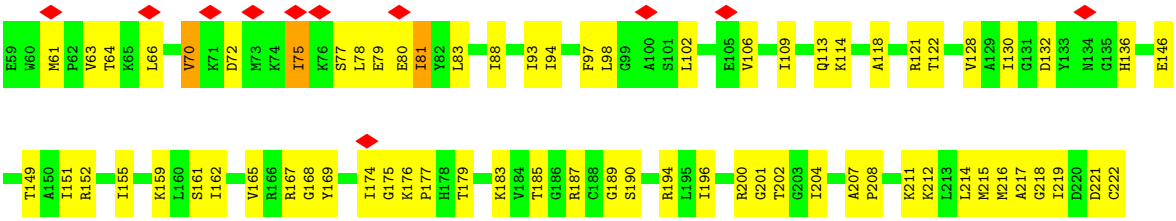
• Molecule 29: 40S ribosomal protein S26

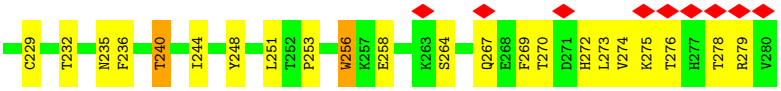
Chain Sa:



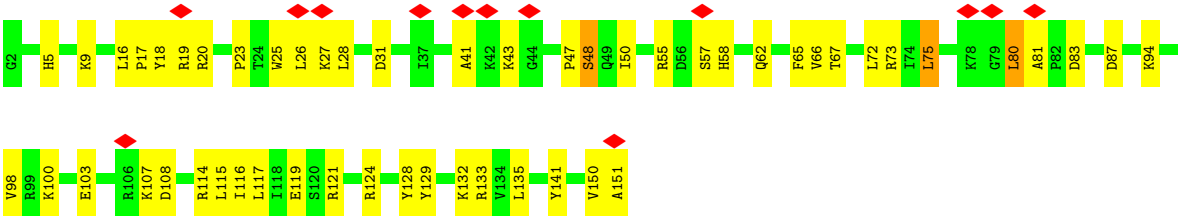
• Molecule 30: 40S ribosomal protein S2

Chain SC:

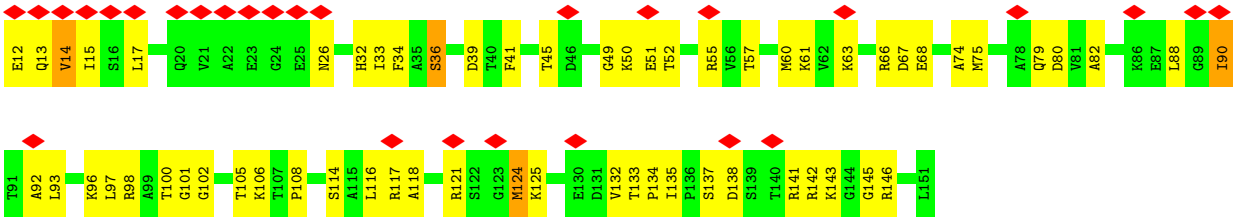




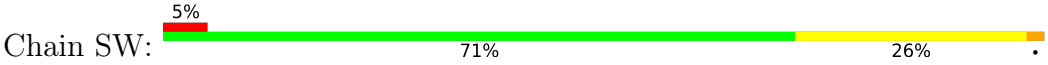
• Molecule 31: 40S ribosomal protein S13

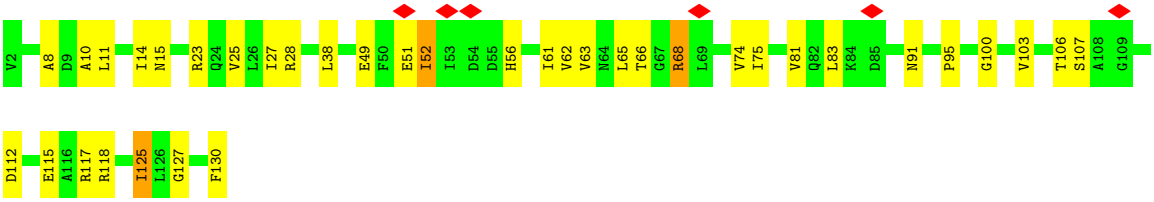


• Molecule 32: Small ribosomal subunit protein uS11

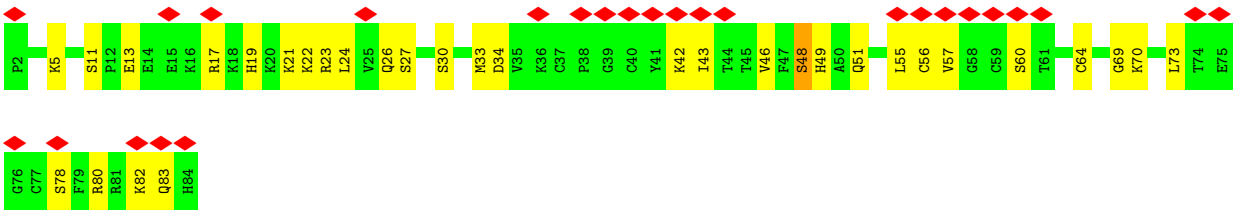


• Molecule 33: 40S ribosomal protein S15a



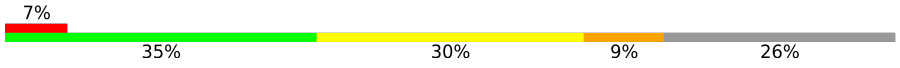


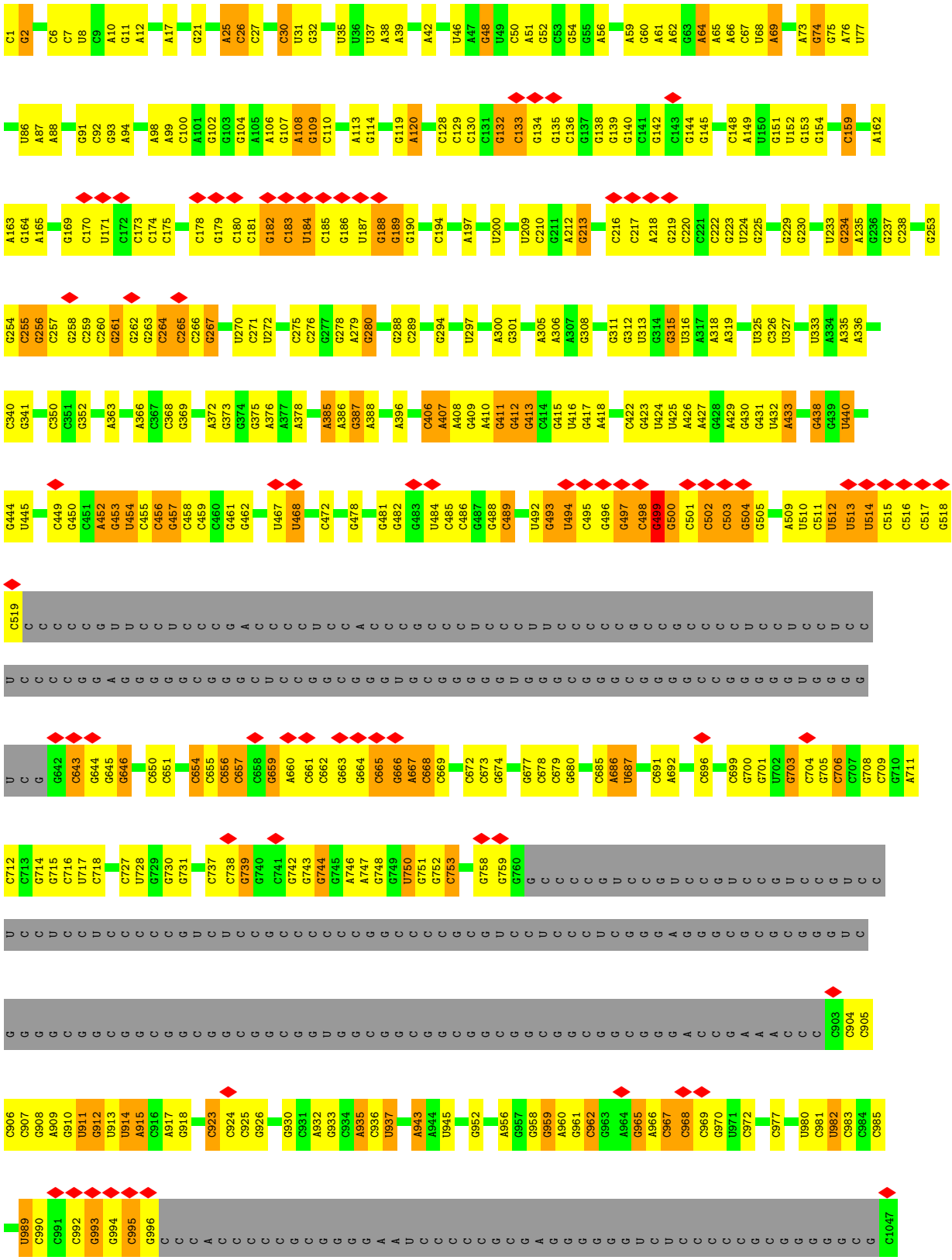
• Molecule 34: Small ribosomal subunit protein eS27

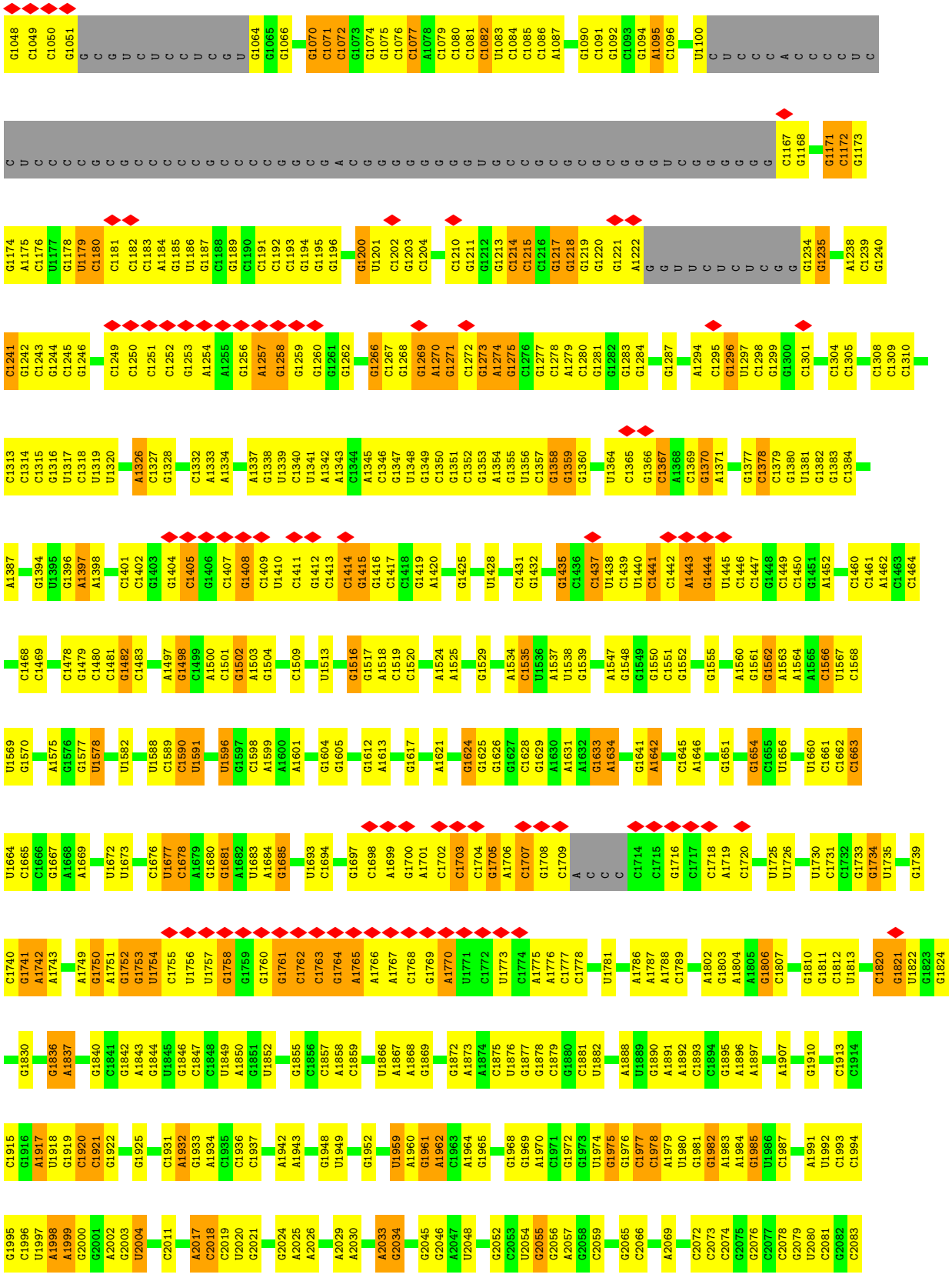


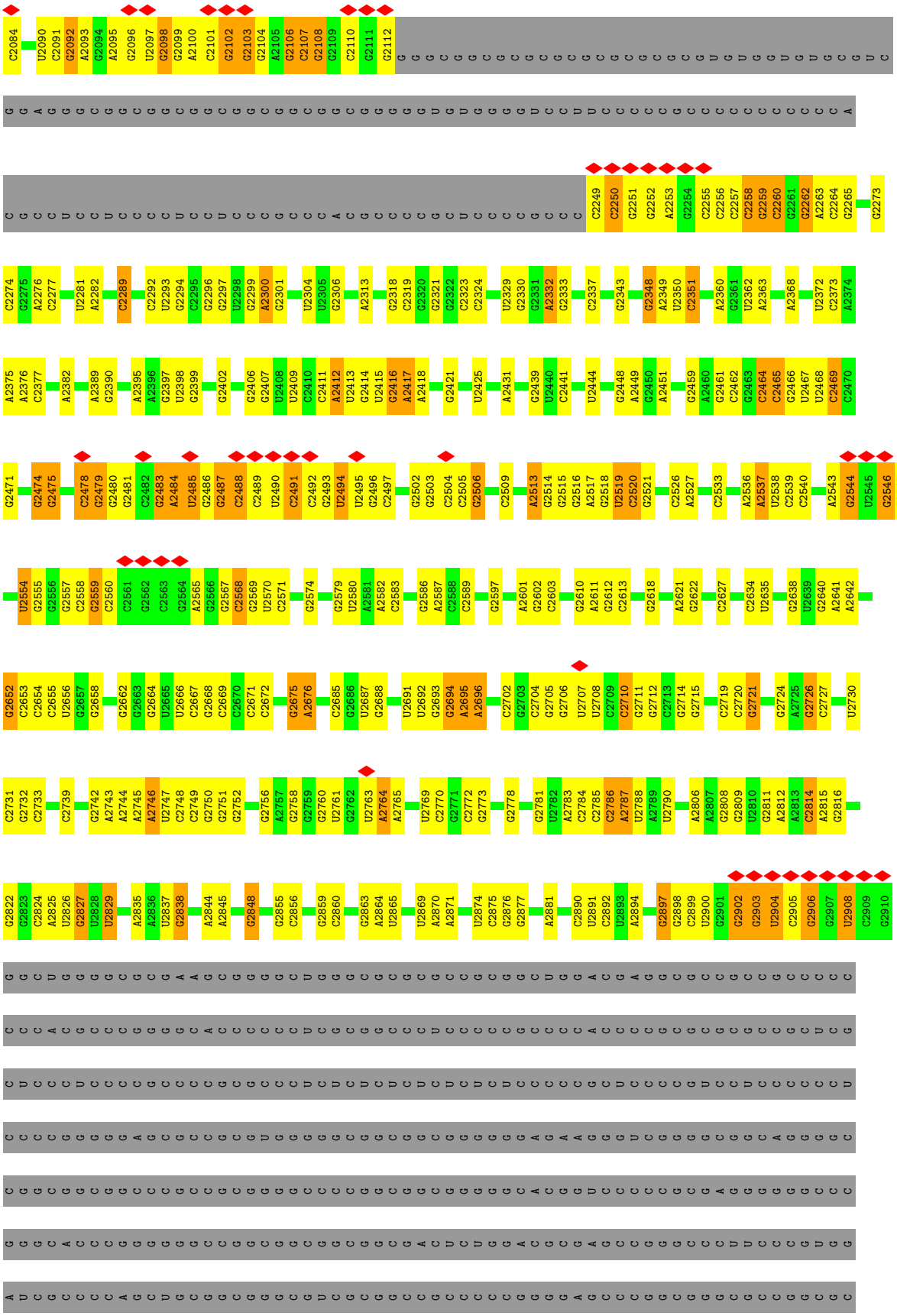
• Molecule 35: 28S rRNA [Homo sapiens]

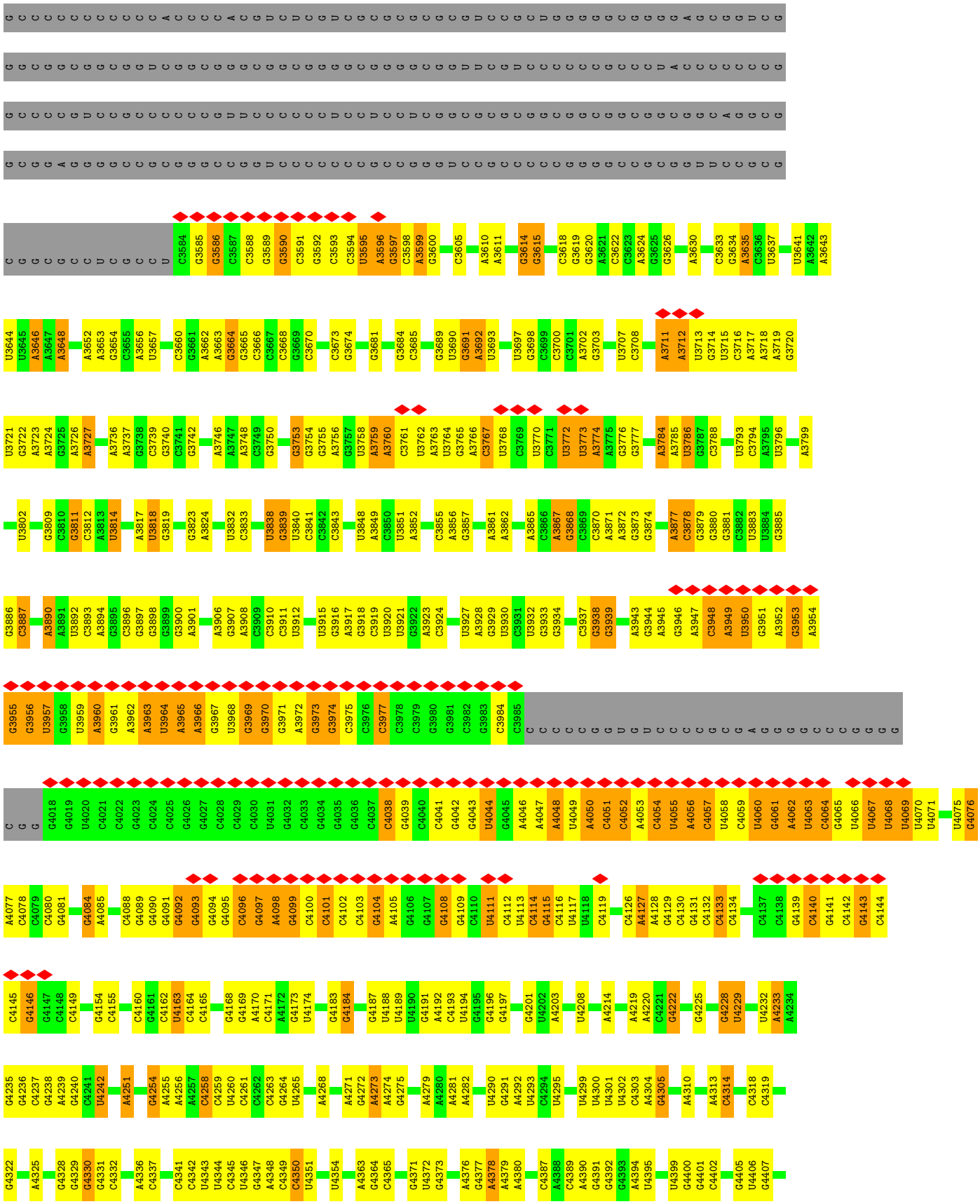
Chain L5:

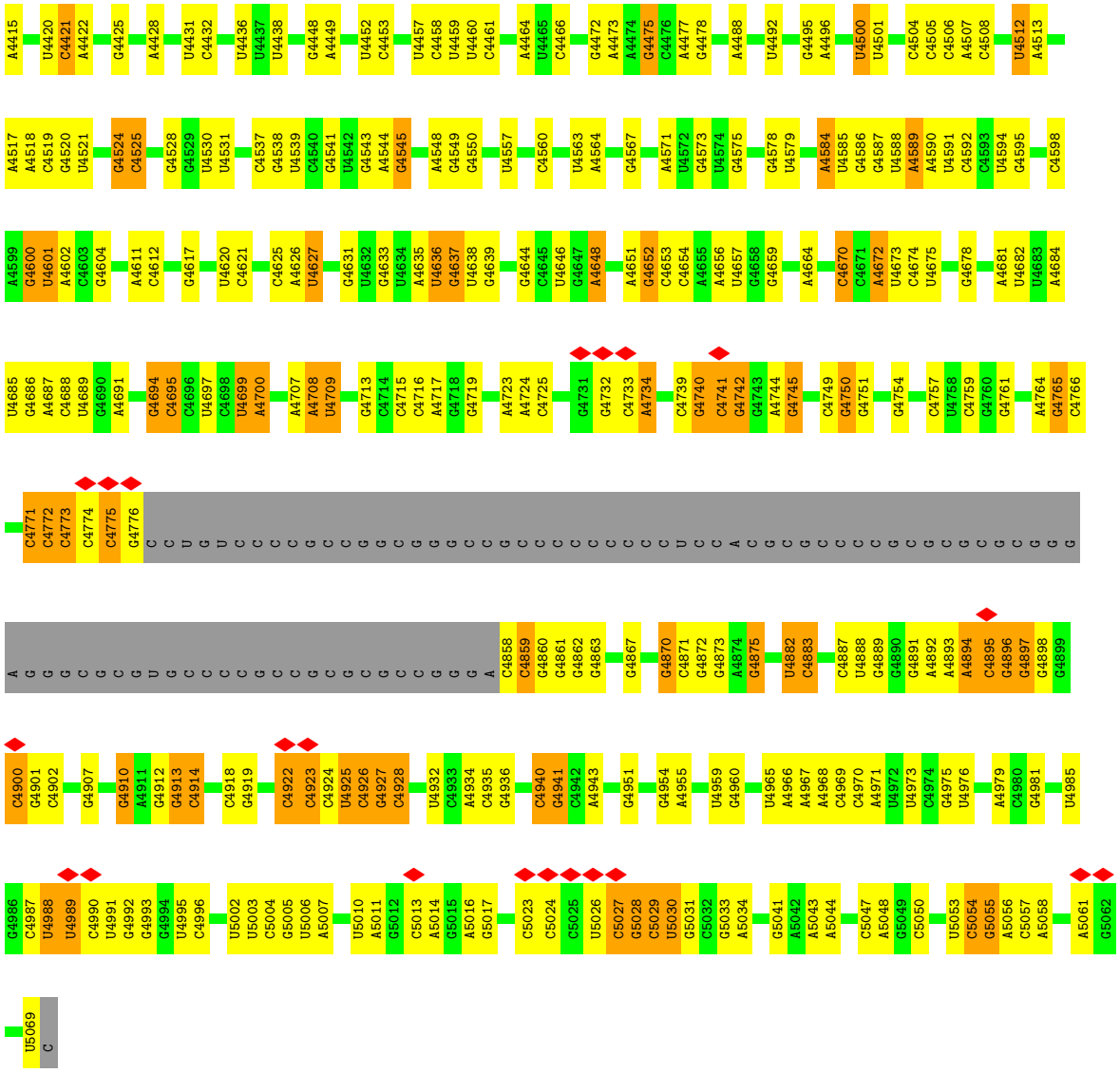






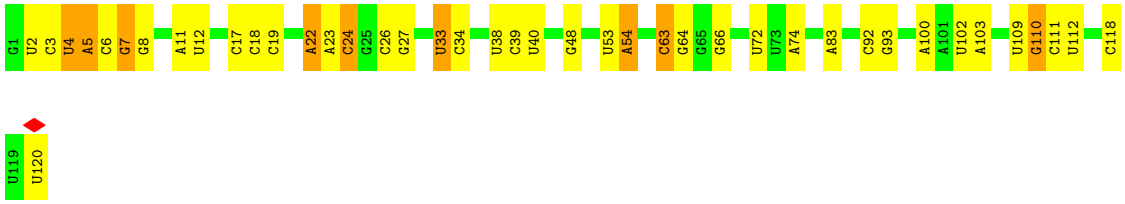






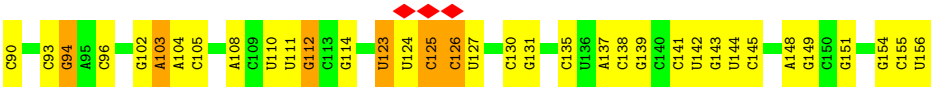
• Molecule 36: 5S rRNA [Homo sapiens]

Chain L7:



• Molecule 37: 5.8S rRNA [Homo sapiens]

Chain L8:

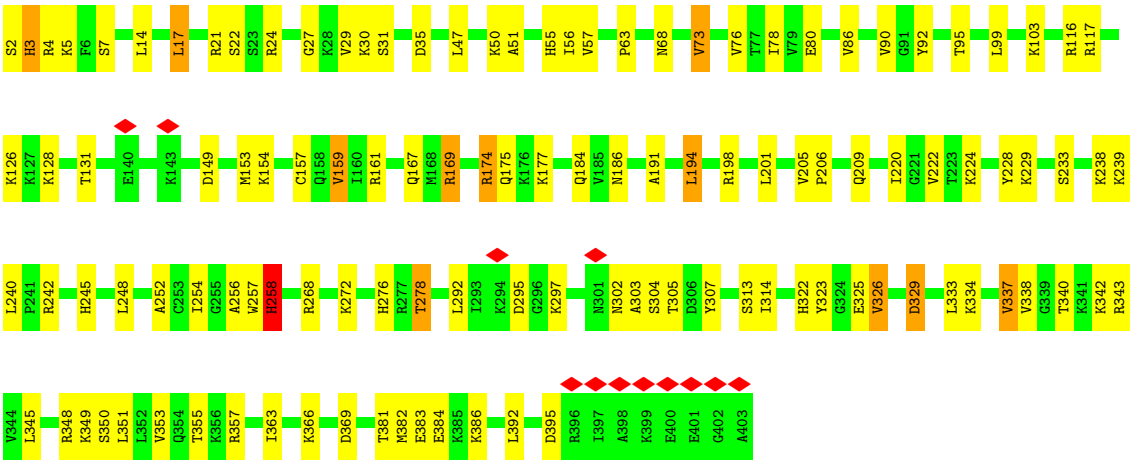


• Molecule 38: 60S ribosomal protein L8

Chain LA:

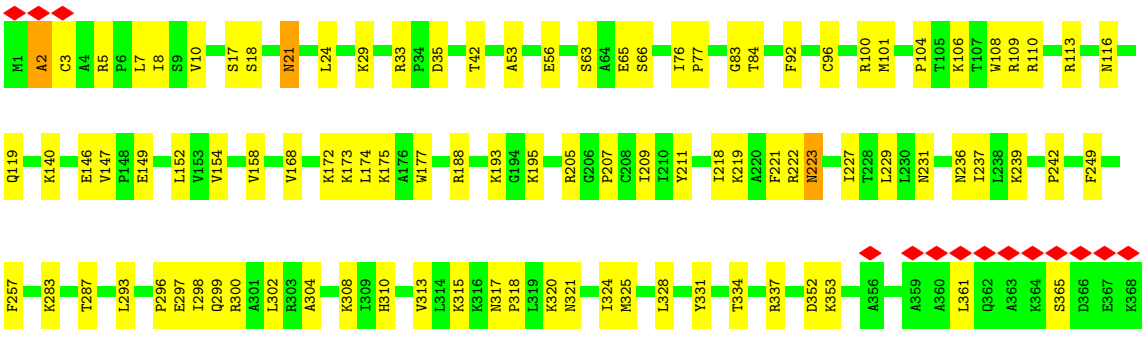
• Molecule 39: Large ribosomal subunit protein uL3

Chain LB:



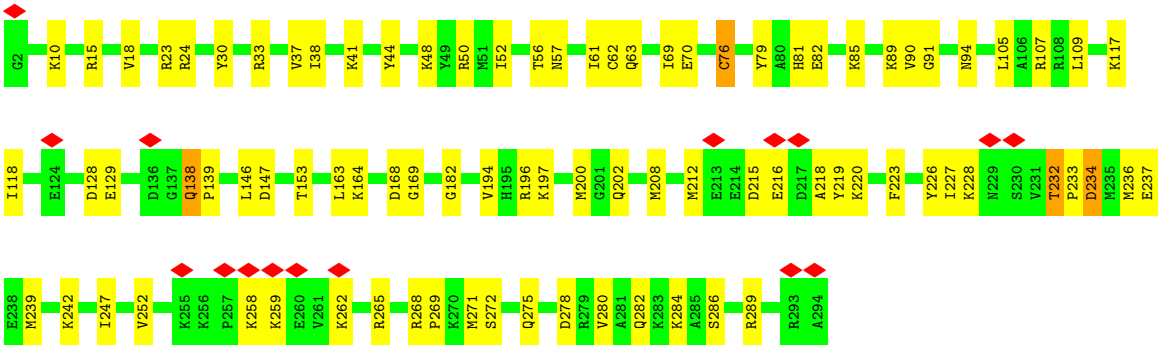
• Molecule 40: 60S ribosomal protein L4

Chain LC:



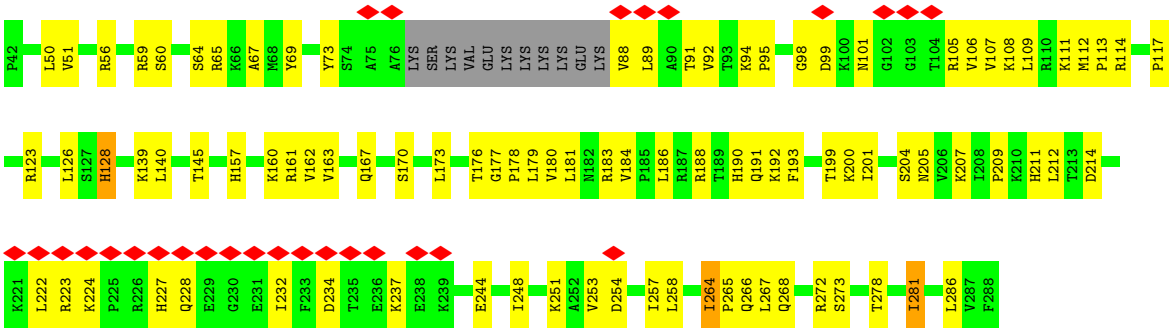
• Molecule 41: Large ribosomal subunit protein uL18

Chain LD:



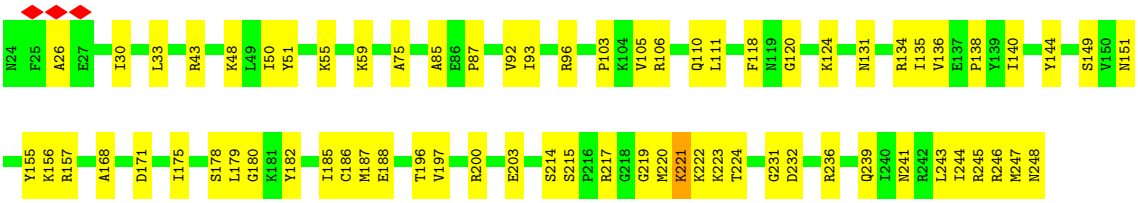
• Molecule 42: Large ribosomal subunit protein eL6

Chain LE:



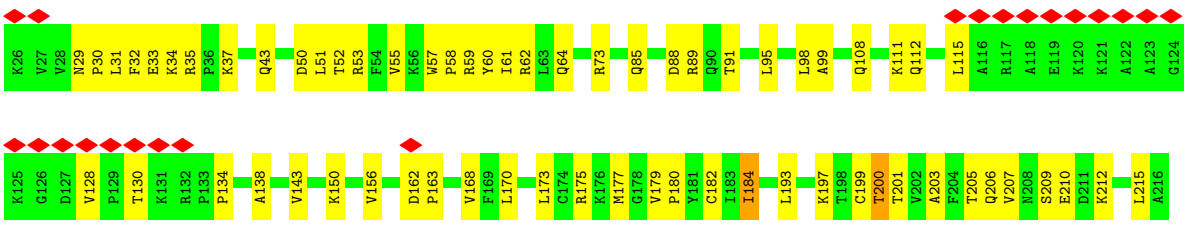
• Molecule 43: 60S ribosomal protein L7

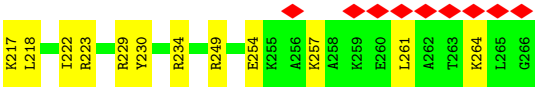
Chain LF:



• Molecule 44: 60S ribosomal protein L7a

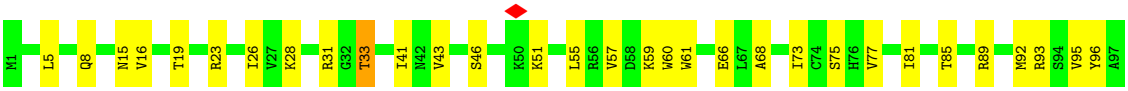
Chain LG:





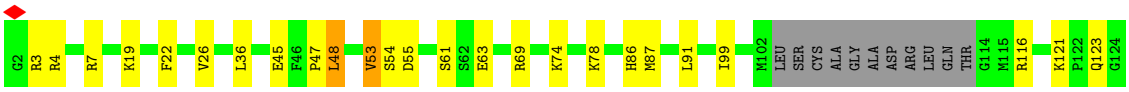
• Molecule 45: 60S ribosomal protein L9

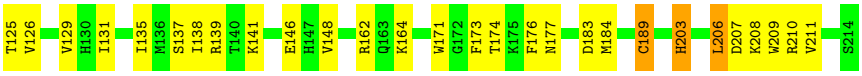
Chain LH:



• Molecule 46: Ribosomal protein uL16-like

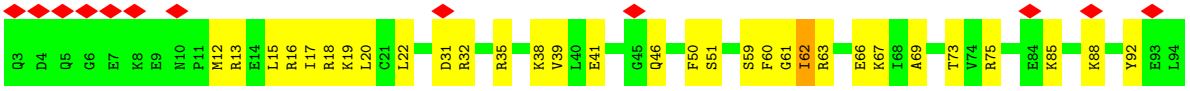
Chain LI:





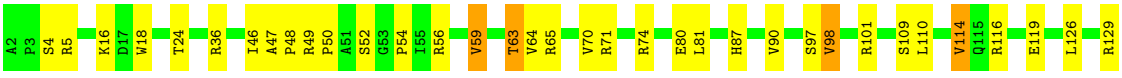
• Molecule 47: 60S ribosomal protein L11

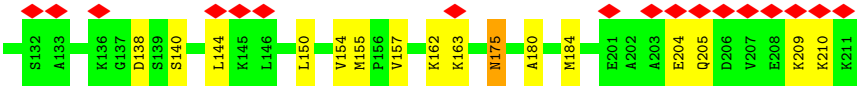
Chain LJ:



• Molecule 48: Large ribosomal subunit protein eL13

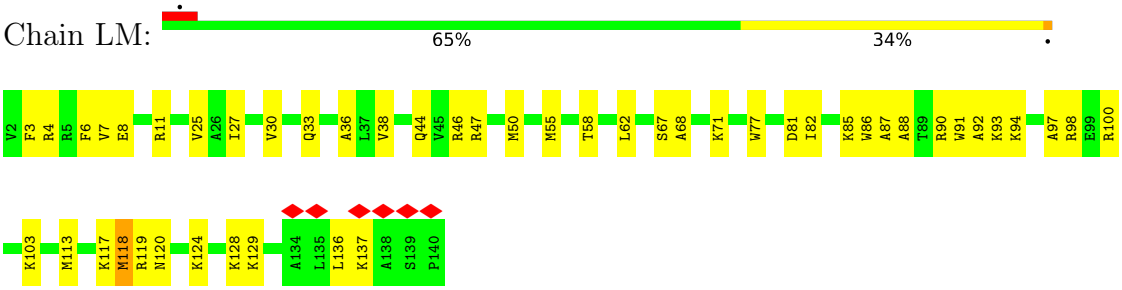
Chain LL:





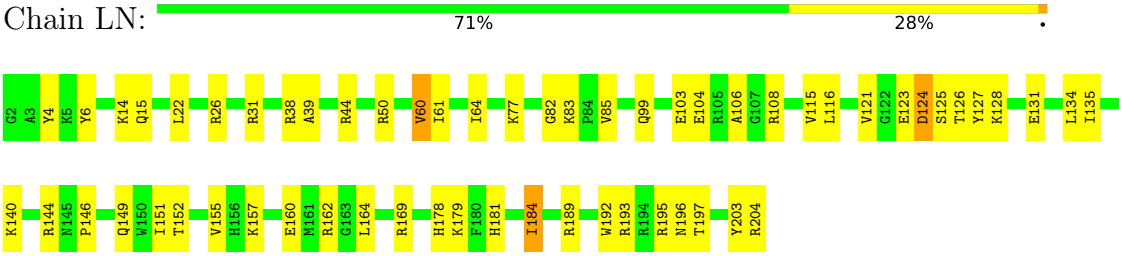
• Molecule 49: 60S ribosomal protein L14

Chain LM:



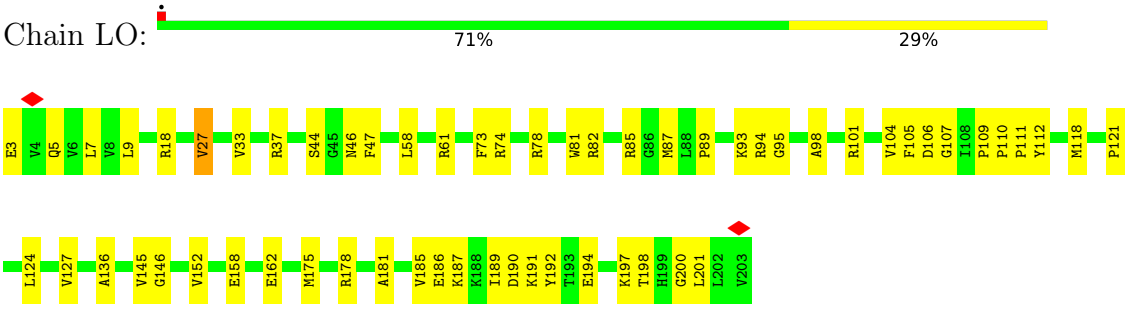
• Molecule 50: 60S ribosomal protein L15

Chain LN:



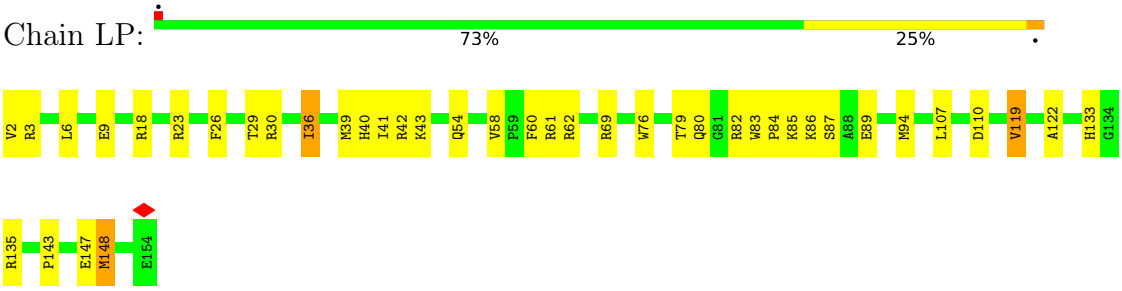
• Molecule 51: 60S ribosomal protein L13a

Chain LO:



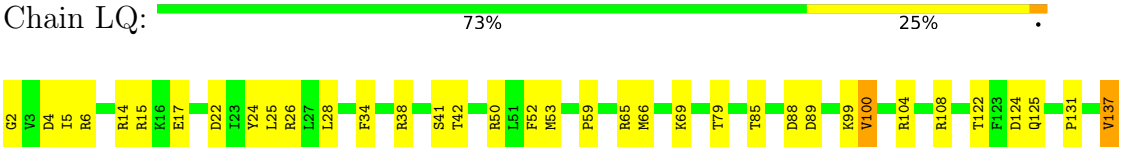
• Molecule 52: 60S ribosomal protein L17

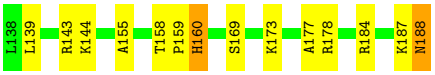
Chain LP:



• Molecule 53: 60S ribosomal protein L18

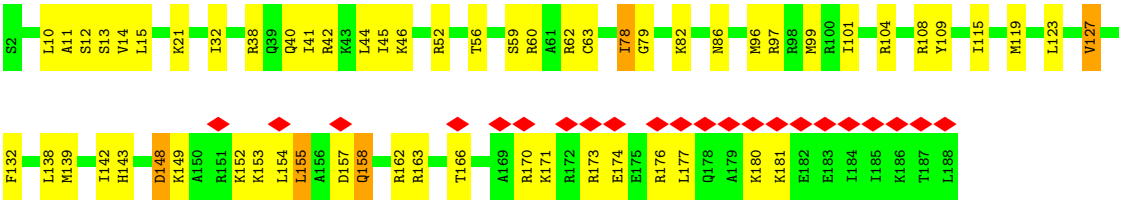
Chain LQ:





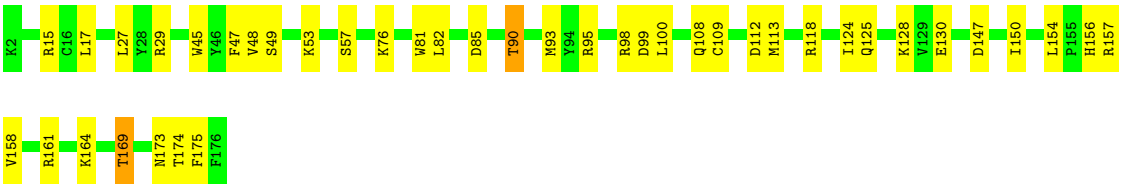
• Molecule 54: 60S ribosomal protein L19

Chain LR:



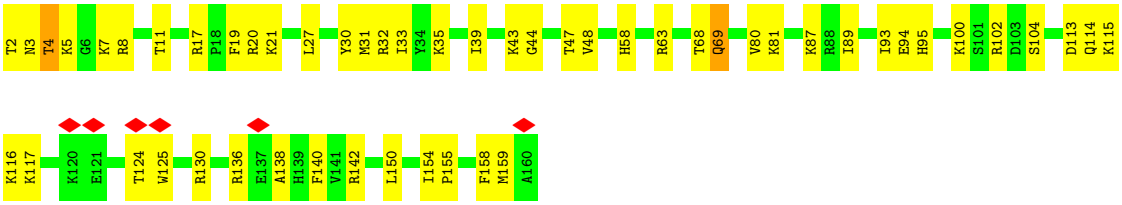
• Molecule 55: 60S ribosomal protein L18a

Chain LS:



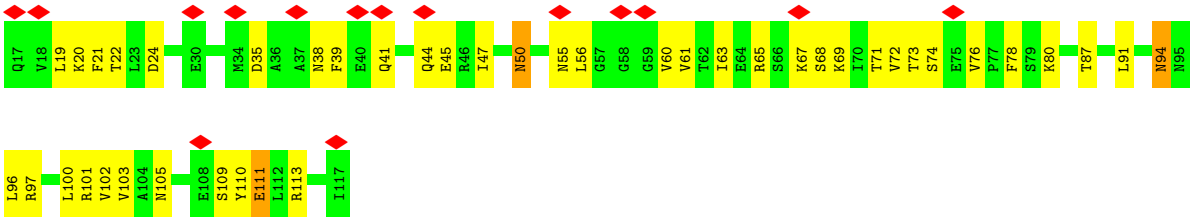
• Molecule 56: 60S ribosomal protein L21

Chain LT:



• Molecule 57: Heparin-binding protein HBp15

Chain LU:

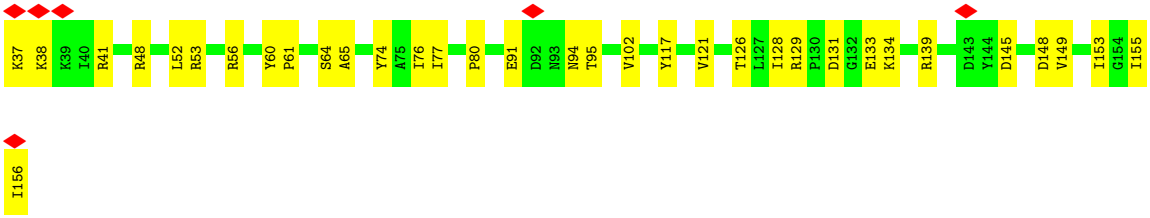


• Molecule 58: 60S ribosomal protein L23

Chain LV:

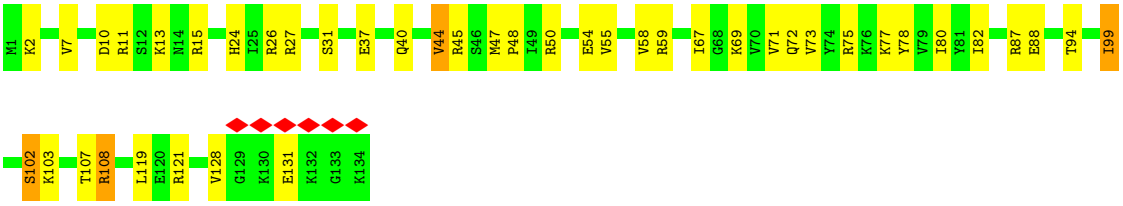
• Molecule 59: 60S ribosomal protein L23a

Chain LX:



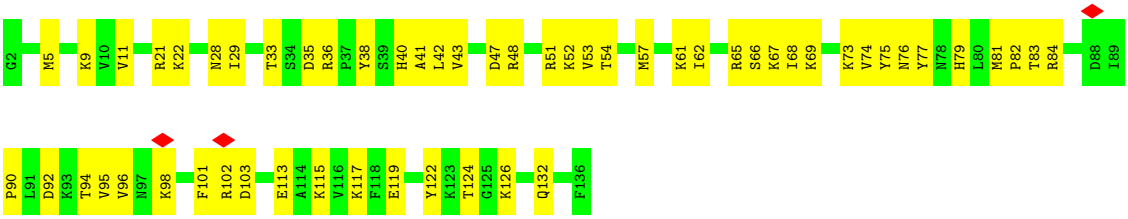
• Molecule 60: 60S ribosomal protein L26

Chain LY:



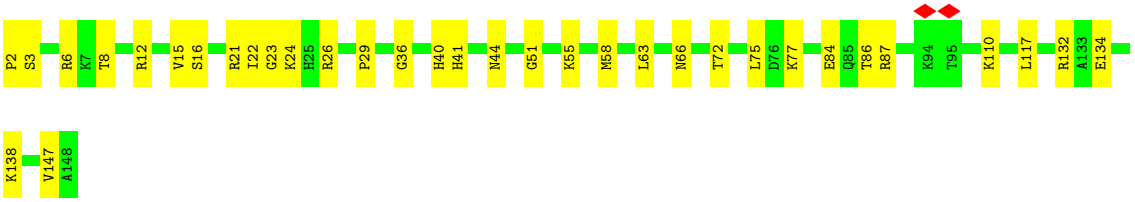
• Molecule 61: 60S ribosomal protein L27

Chain LZ:



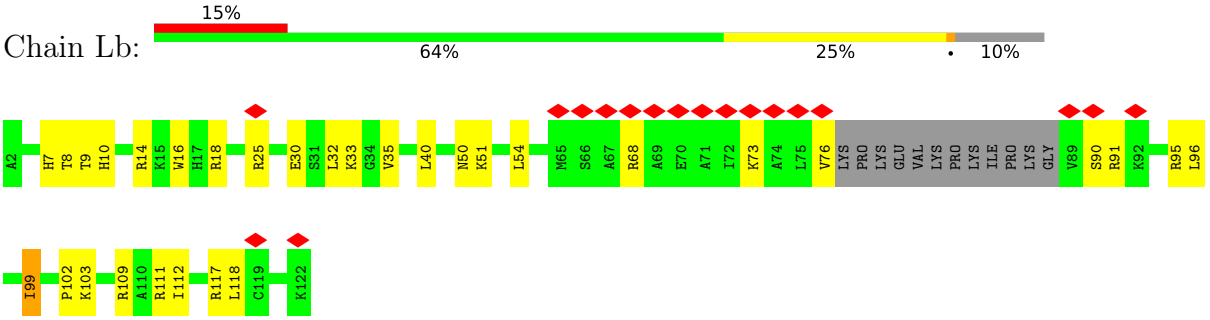
• Molecule 62: 60S ribosomal protein L27a

Chain La:



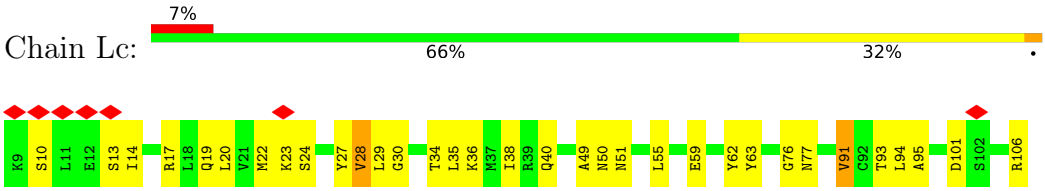
• Molecule 63: Large ribosomal subunit protein eL29

Chain Lb:



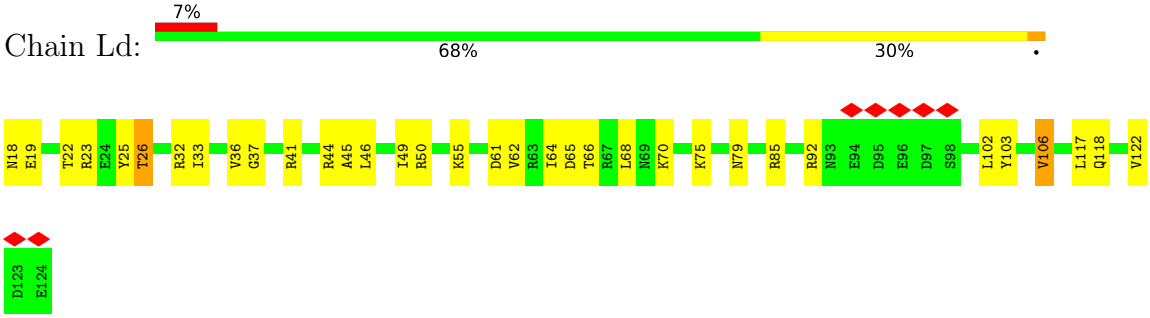
• Molecule 64: 60S ribosomal protein L30

Chain Lc:



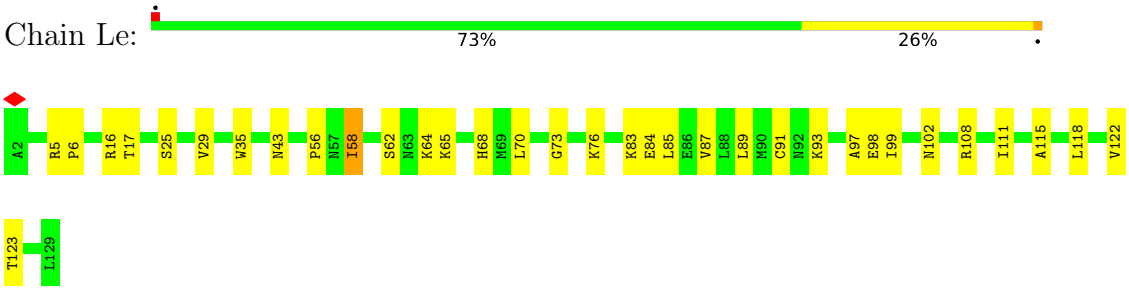
• Molecule 65: 60S ribosomal protein L31

Chain Ld:



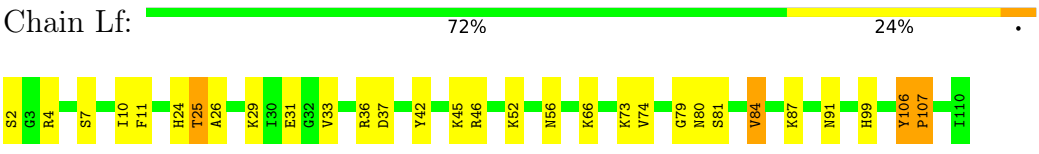
• Molecule 66: 60S ribosomal protein L32

Chain Le:



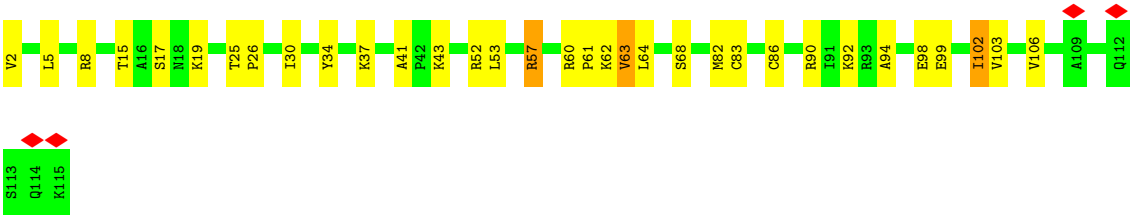
• Molecule 67: 60S ribosomal protein L35a

Chain Lf:

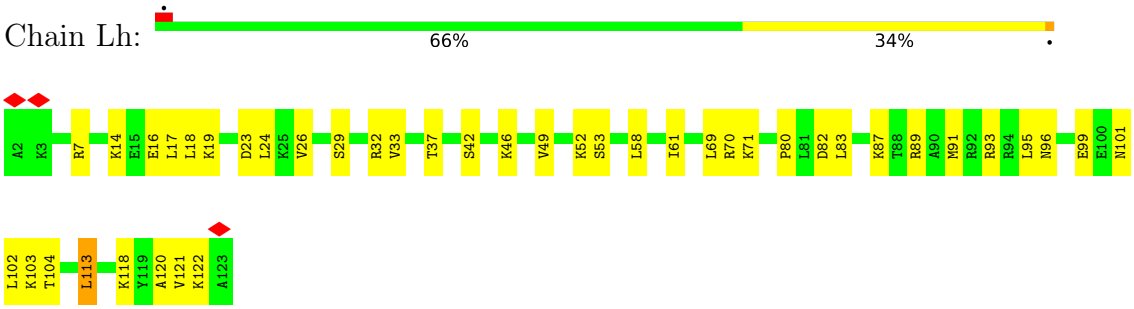


• Molecule 68: 60S ribosomal protein L34

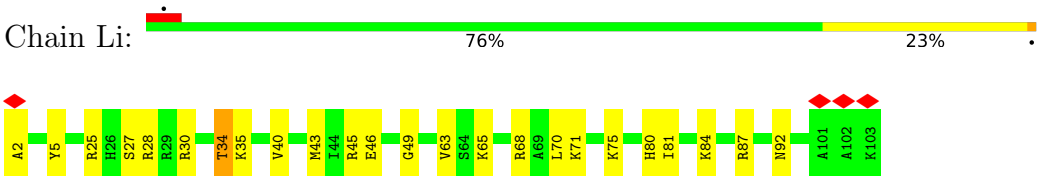
Chain Lg:



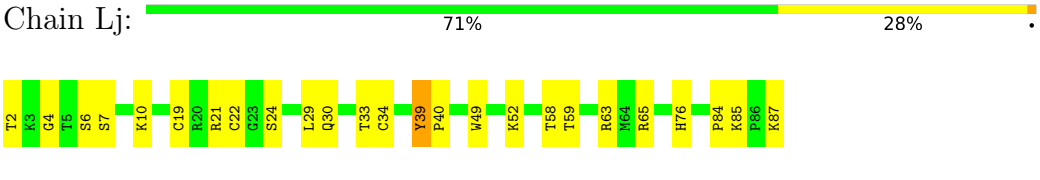
• Molecule 69: 60S ribosomal protein L35



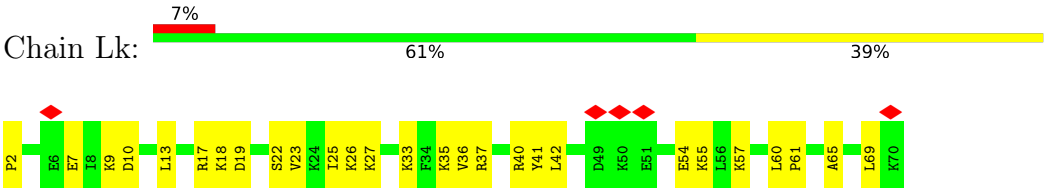
• Molecule 70: 60S ribosomal protein L36



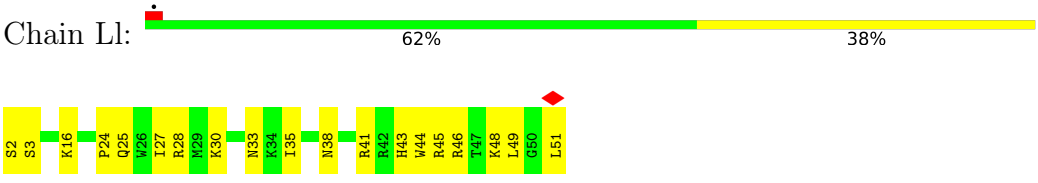
• Molecule 71: 60S ribosomal protein L37



• Molecule 72: 60S ribosomal protein L38

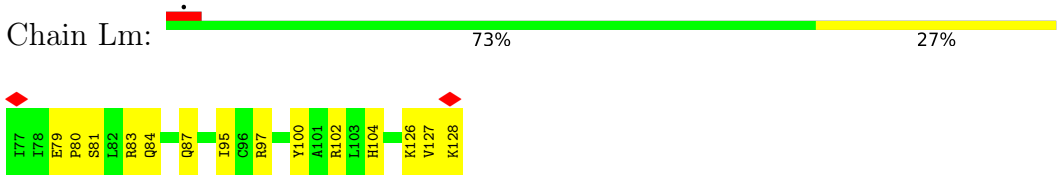


• Molecule 73: 60S ribosomal protein L39



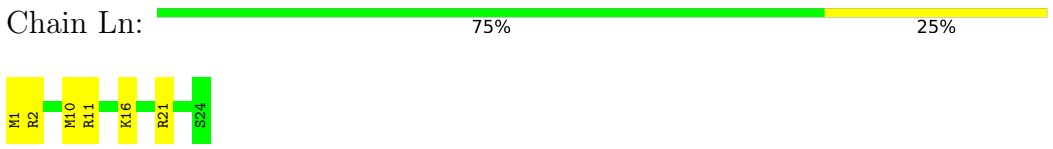
• Molecule 74: Large ribosomal subunit protein eL40

Chain Lm:



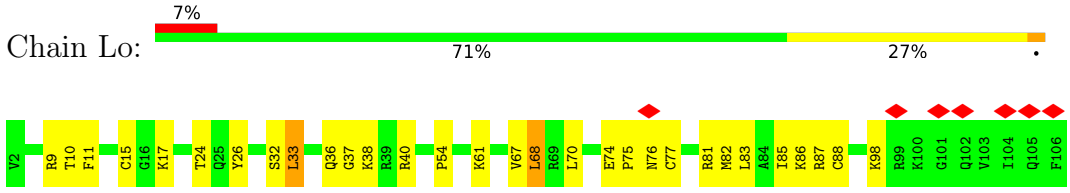
• Molecule 75: 60S ribosomal protein L41

Chain Ln:



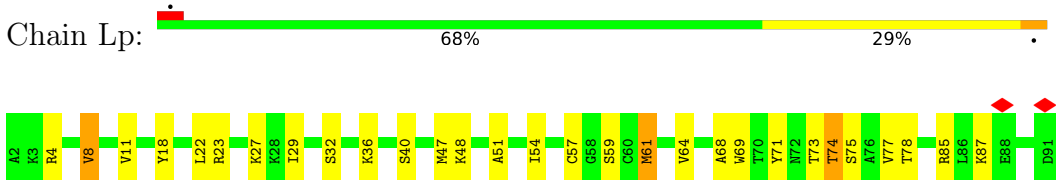
• Molecule 76: 60S ribosomal protein L36a

Chain Lo:



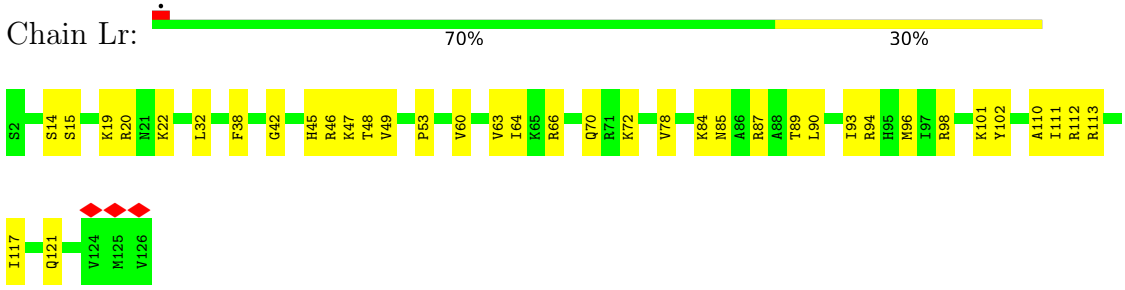
• Molecule 77: 60S ribosomal protein L37a

Chain Lp:



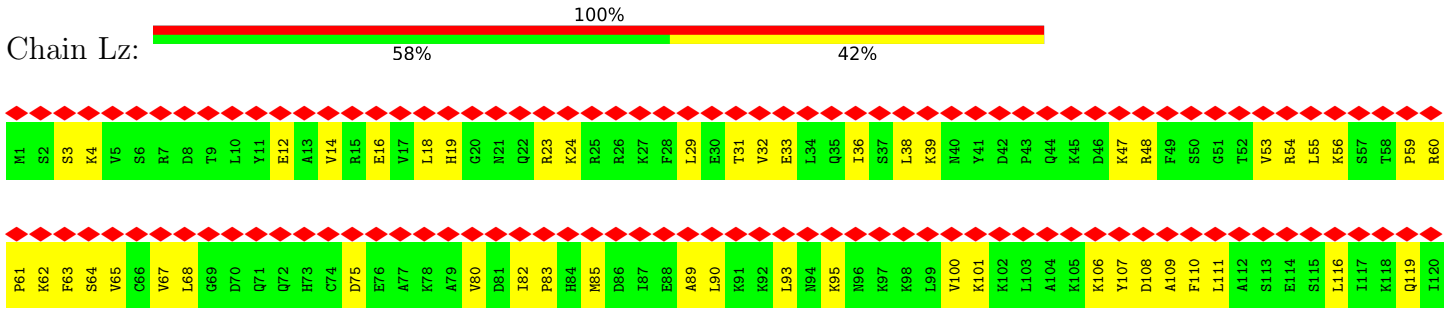
• Molecule 78: 60S ribosomal protein L28

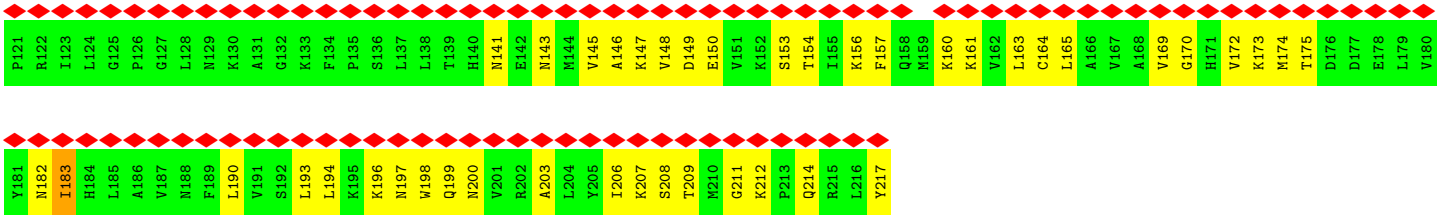
Chain Lr:



• Molecule 79: 60S ribosomal protein L10a

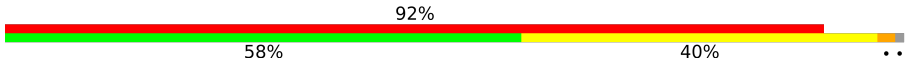
Chain Lz:

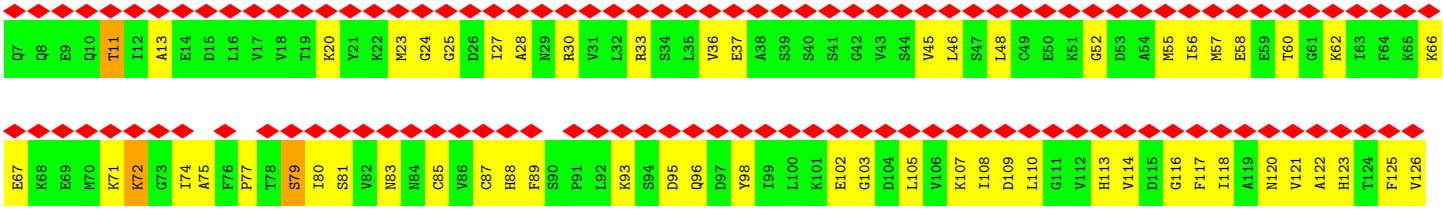




• Molecule 80: Proliferation-associated protein 2G4

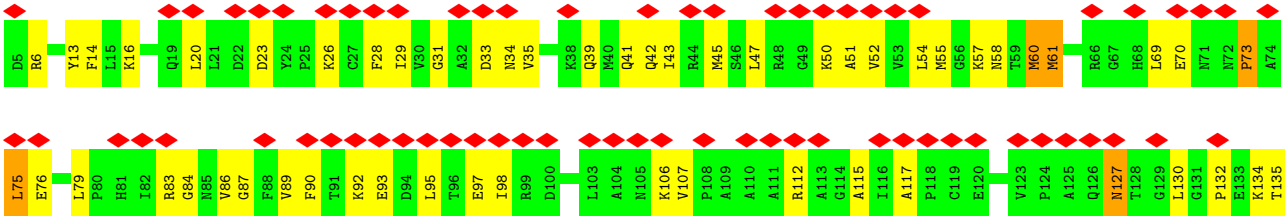
Chain CA:





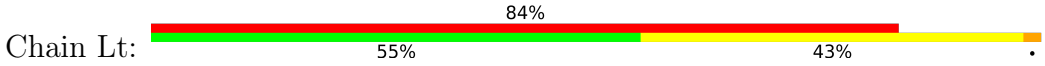
• Molecule 81: 60S acidic ribosomal protein P0

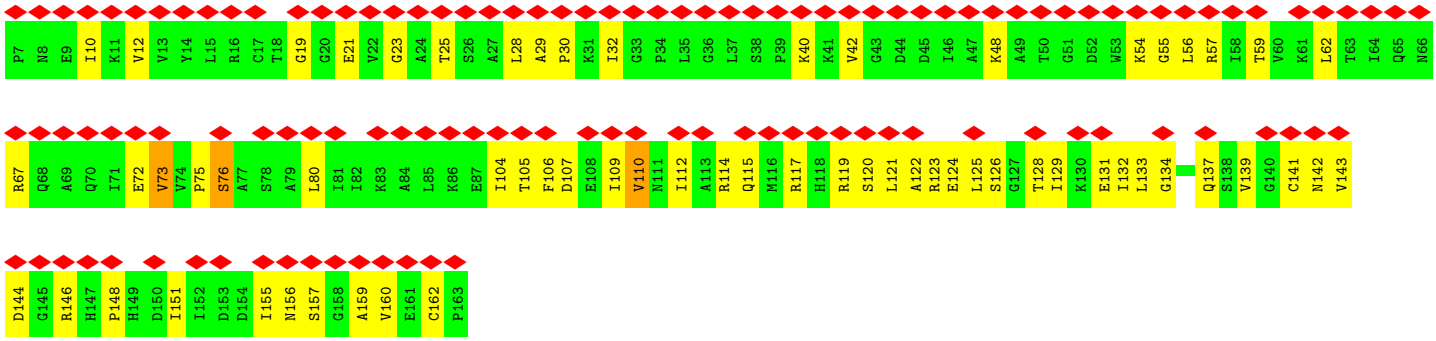
Chain Ls:



• Molecule 82: 60S ribosomal protein L12

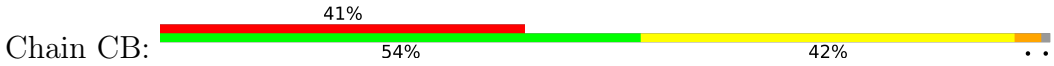
Chain Lt:

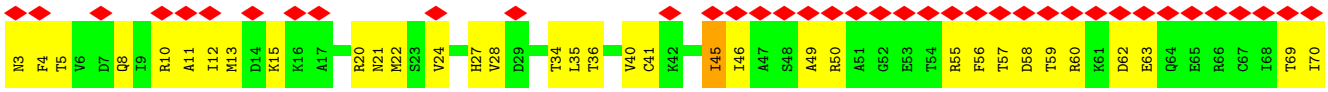


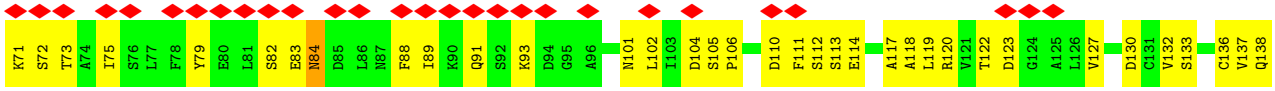


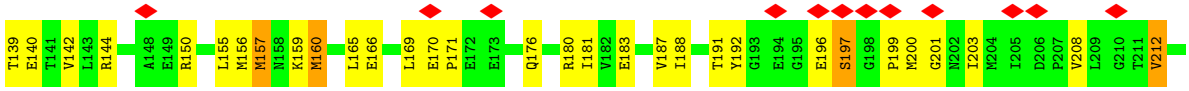
• Molecule 83: Elongation factor 2

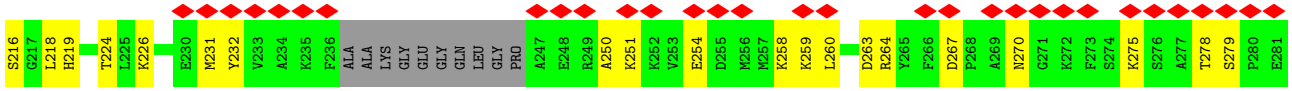
Chain CB:

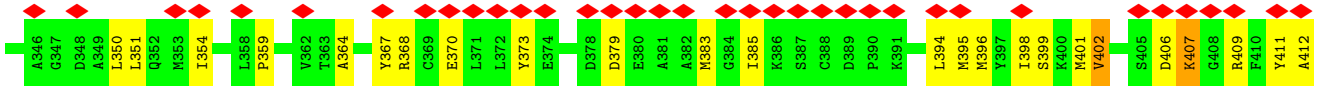


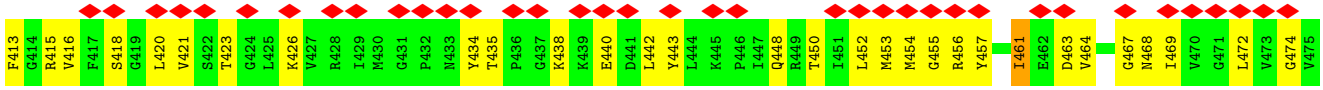


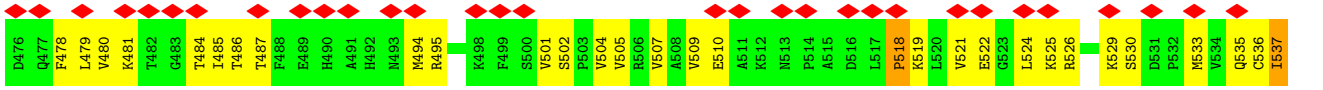


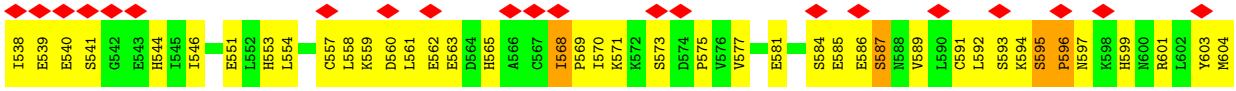


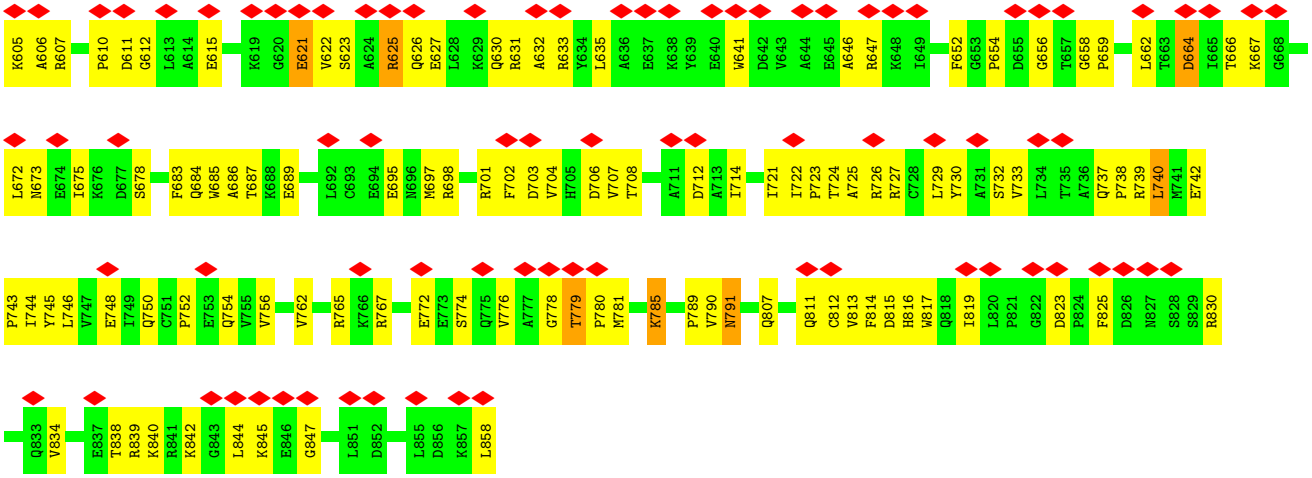






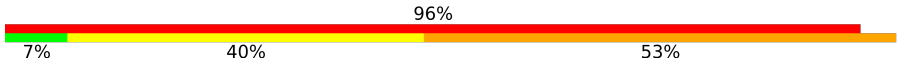


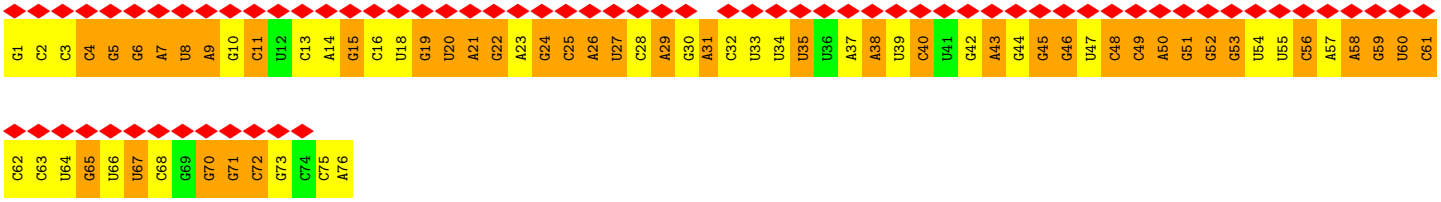




• Molecule 84: E site tRNA

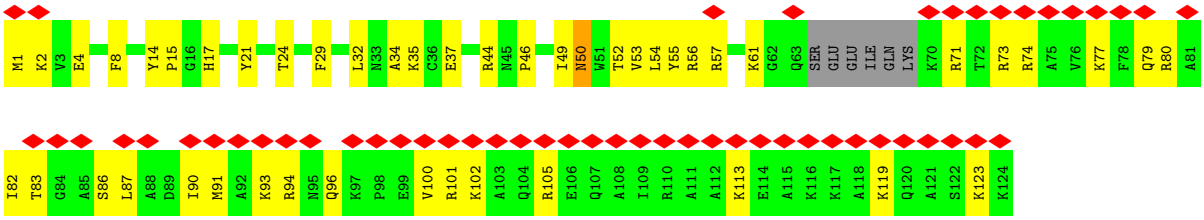
Chain Et:





• Molecule 85: Ribosomal protein L24

Chain LW:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	54349	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.246	Depositor
Minimum map value	-0.107	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.029	Depositor
Map size (Å)	546.816, 546.816, 546.816	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.068, 1.068, 1.068	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	S2	0.12	0/41243	0.27	0/64259
2	SD	0.53	2/1793 (0.1%)	0.97	5/2414 (0.2%)
3	SF	0.17	0/1516	0.45	0/2037
4	SK	0.24	0/851	0.62	2/1147 (0.2%)
5	SP	0.21	0/1003	0.56	0/1342
6	SQ	0.16	0/1160	0.47	0/1553
7	SS	0.15	0/1216	0.44	0/1628
8	ST	0.17	0/1131	0.52	1/1515 (0.1%)
9	SU	0.19	0/831	0.55	0/1115
10	Sc	0.21	0/508	0.56	0/680
11	Sd	0.16	0/470	0.51	0/623
12	Sg	0.17	0/2493	0.53	0/3394
13	SM	0.14	0/950	0.44	0/1275
14	SZ	0.17	0/604	0.51	0/810
15	Sf	0.18	0/560	0.47	0/745
16	CD	0.13	0/447	0.35	0/592
17	SE	0.18	0/2118	0.53	1/2849 (0.0%)
18	SI	0.17	0/1715	0.45	0/2287
19	SL	0.13	0/1268	0.39	0/1696
20	SX	0.16	0/1116	0.39	0/1490
21	SG	0.16	0/1946	0.46	0/2590
22	SJ	0.17	0/1550	0.42	0/2069
23	SY	0.47	2/1083 (0.2%)	1.04	3/1438 (0.2%)
24	Se	0.15	0/465	0.43	0/612
25	SA	0.22	0/1778	0.63	1/2416 (0.0%)
26	SB	0.18	0/1765	0.48	0/2362
27	SH	0.17	0/1519	0.48	0/2033
28	SV	0.15	0/643	0.43	0/860
29	Sa	0.15	0/836	0.45	0/1121
30	SC	0.16	0/1762	0.46	0/2381
31	SN	0.15	0/1232	0.39	0/1656
32	SO	0.16	0/1062	0.52	2/1425 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	SW	0.18	0/1051	0.43	0/1406
34	Sb	0.21	0/665	0.55	0/891
35	L5	0.16	0/89313	0.30	1/139291 (0.0%)
36	L7	0.15	0/2861	0.25	0/4459
37	L8	0.16	0/3701	0.26	0/5766
38	LA	0.18	0/1936	0.46	0/2596
39	LB	0.16	0/3306	0.41	0/4424
40	LC	0.16	0/2981	0.40	2/4002 (0.0%)
41	LD	0.15	0/2428	0.39	0/3252
42	LE	0.18	0/1942	0.47	0/2606
43	LF	0.17	0/1905	0.36	0/2539
44	LG	0.17	0/1960	0.43	0/2637
45	LH	0.17	0/1537	0.43	0/2066
46	LI	0.15	0/1673	0.38	0/2233
47	LJ	0.18	0/1433	0.48	0/1915
48	LL	0.15	0/1732	0.37	0/2315
49	LM	0.16	0/1161	0.39	0/1554
50	LN	0.16	0/1746	0.38	0/2338
51	LO	0.16	0/1682	0.35	0/2250
52	LP	0.16	0/1268	0.36	0/1701
53	LQ	0.17	0/1537	0.39	0/2052
54	LR	0.14	0/1581	0.41	1/2088 (0.0%)
55	LS	0.15	0/1493	0.34	0/2003
56	LT	0.17	0/1326	0.37	0/1770
57	LU	0.18	0/839	0.54	0/1126
58	LV	0.16	0/993	0.39	0/1332
59	LX	0.16	0/1002	0.38	0/1345
60	LY	0.14	0/1132	0.37	0/1504
61	LZ	0.17	0/1130	0.38	0/1507
62	La	0.16	0/1191	0.35	0/1591
63	Lb	0.14	0/889	0.40	0/1175
64	Lc	0.15	0/774	0.39	0/1038
65	Ld	0.15	0/903	0.39	0/1216
66	Le	0.15	0/1071	0.35	0/1429
67	Lf	0.16	0/895	0.39	0/1198
68	Lg	0.14	0/916	0.32	0/1220
69	Lh	0.13	0/1023	0.37	0/1351
70	Li	0.15	0/843	0.39	0/1115
71	Lj	0.17	0/720	0.39	0/952
72	Lk	0.16	0/575	0.44	0/761
73	Ll	0.16	0/454	0.35	0/599
74	Lm	0.13	0/435	0.36	0/575
75	Ln	0.14	0/231	0.36	0/294

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	Lo	0.16	0/876	0.42	0/1156
77	Lp	0.15	0/718	0.35	0/953
78	Lr	0.15	0/1017	0.39	0/1364
79	Lz	0.15	0/1769	0.46	0/2371
80	CA	0.14	0/2810	0.42	0/3780
81	Ls	0.17	0/1519	0.48	1/2052 (0.0%)
82	Lt	0.19	0/1058	0.62	0/1430
83	CB	0.27	2/6734 (0.0%)	0.61	9/9094 (0.1%)
84	Et	0.15	0/1778	0.37	0/2767
85	LW	0.15	0/979	0.45	0/1295
All	All	0.17	6/246126 (0.0%)	0.37	29/360158 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
6	SQ	0	1
20	SX	0	1
22	SJ	0	1
27	SH	0	1
28	SV	0	1
38	LA	0	2
39	LB	0	2
48	LL	0	1
49	LM	0	1
51	LO	0	1
56	LT	0	1
67	Lf	0	1
71	Lj	0	1
79	Lz	0	1
82	Lt	0	1
All	All	0	17

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	SD	194	PRO	CB-CG	16.54	2.32	1.49
2	SD	194	PRO	CG-CD	-10.69	1.14	1.50
83	CB	199	PRO	CB-CG	-10.48	0.97	1.49
83	CB	596	PRO	CG-CD	-10.02	1.16	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	SY	36	PRO	CG-CD	-9.51	1.18	1.50
23	SY	36	PRO	CB-CG	-8.14	1.08	1.49

All (29) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	SD	194	PRO	CB-CG-CD	-25.13	25.68	106.10
2	SD	194	PRO	CA-N-CD	-24.61	77.55	112.00
23	SY	36	PRO	CB-CG-CD	23.06	179.91	106.10
23	SY	36	PRO	N-CD-CG	-20.36	72.66	103.20
25	SA	153	PRO	CA-N-CD	-17.26	87.84	112.00
83	CB	199	PRO	CA-N-CD	-16.60	88.75	112.00
83	CB	596	PRO	N-CD-CG	-16.54	78.38	103.20
23	SY	36	PRO	CA-CB-CG	-15.29	75.45	104.50
83	CB	199	PRO	N-CD-CG	-15.02	80.67	103.20
83	CB	596	PRO	CA-CB-CG	-13.86	78.17	104.50
83	CB	199	PRO	CA-CB-CG	-13.76	78.36	104.50
2	SD	194	PRO	N-CD-CG	12.94	122.61	103.20
2	SD	194	PRO	N-CA-CB	-12.75	91.41	103.52
4	SK	4	PRO	CA-N-CD	-9.58	98.58	112.00
83	CB	596	PRO	N-CA-CB	-8.99	94.97	103.52
40	LC	2	ALA	CA-C-N	7.11	134.49	121.70
40	LC	2	ALA	C-N-CA	7.11	134.49	121.70
83	CB	518	PRO	CA-N-CD	-6.86	102.40	112.00
32	SO	14	VAL	CA-C-N	6.61	133.59	121.70
32	SO	14	VAL	C-N-CA	6.61	133.59	121.70
2	SD	193	ASP	C-N-CD	6.14	150.18	125.00
83	CB	596	PRO	CA-N-CD	-6.05	103.53	112.00
35	L5	499	G	O4'-C1'-N9	5.91	117.37	108.50
81	Ls	73	PRO	CA-N-CD	-5.78	103.91	112.00
4	SK	41	PRO	CA-N-CD	-5.54	104.24	112.00
54	LR	78	ILE	N-CA-C	-5.38	107.58	112.96
8	ST	39	LEU	CA-CB-CG	-5.35	97.57	116.30
83	CB	199	PRO	CB-CG-CD	-5.21	89.42	106.10
17	SE	19	MET	CA-CB-CG	5.05	124.20	114.10

There are no chirality outliers.

All (17) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
38	LA	13	GLY	Peptide
38	LA	54	ARG	Peptide

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Mol	Chain	Res	Type	Group
39	LB	17	LEU	Peptide
39	LB	258	HIS	Peptide
48	LL	154	VAL	Peptide
49	LM	87	ALA	Peptide
51	LO	110	PRO	Peptide
56	LT	136	ARG	Peptide
67	Lf	106	TYR	Peptide
71	Lj	39	TYR	Peptide
82	Lt	119	ARG	Sidechain
79	Lz	183	ILE	Peptide
27	SH	15	LYS	Peptide
22	SJ	19	PRO	Peptide
6	SQ	43	GLU	Peptide
28	SV	78	ILE	Peptide
20	SX	126	ALA	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	S2	36898	0	18604	905	0
2	SD	1765	0	1865	90	0
3	SF	1495	0	1549	83	0
4	SK	827	0	854	51	0
5	SP	985	0	1031	63	0
6	SQ	1142	0	1213	68	0
7	SS	1198	0	1261	64	0
8	ST	1112	0	1146	62	0
9	SU	821	0	883	44	0
10	Sc	506	0	536	40	0
11	Sd	459	0	452	23	0
12	Sg	2436	0	2393	138	0
13	SM	940	0	965	59	0
14	SZ	598	0	656	46	0
15	Sf	548	0	555	28	0
16	CD	440	0	402	26	0
17	SE	2076	0	2177	118	0
18	SI	1686	0	1772	69	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	SL	1247	0	1323	47	0
20	SX	1098	0	1167	41	0
21	SG	1923	0	2089	116	0
22	SJ	1525	0	1640	81	0
23	SY	1065	0	1142	54	0
24	Se	459	0	503	17	0
25	SA	1741	0	1746	96	0
26	SB	1738	0	1809	87	0
27	SH	1497	0	1590	76	0
28	SV	636	0	637	26	0
29	Sa	821	0	870	37	0
30	SC	1725	0	1813	69	0
31	SN	1208	0	1294	52	0
32	SO	1049	0	1073	60	0
33	SW	1034	0	1080	30	0
34	Sb	651	0	672	27	0
35	L5	79860	0	40305	1408	0
36	L7	2561	0	1295	35	0
37	L8	3314	0	1683	63	0
38	LA	1898	0	1993	69	0
39	LB	3238	0	3376	88	0
40	LC	2927	0	3104	70	0
41	LD	2382	0	2410	68	0
42	LE	1904	0	2055	71	0
43	LF	1870	0	1996	58	0
44	LG	1927	0	2074	55	0
45	LH	1518	0	1601	51	0
46	LI	1634	0	1671	36	0
47	LJ	1410	0	1441	53	0
48	LL	1701	0	1818	41	0
49	LM	1138	0	1204	34	0
50	LN	1701	0	1749	48	0
51	LO	1650	0	1794	43	0
52	LP	1242	0	1269	26	0
53	LQ	1513	0	1628	31	0
54	LR	1566	0	1728	50	0
55	LS	1453	0	1490	32	0
56	LT	1298	0	1366	47	0
57	LU	825	0	850	36	0
58	LV	979	0	1039	16	0
59	LX	985	0	1066	25	0
60	LY	1115	0	1205	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	LZ	1107	0	1182	42	0
62	La	1162	0	1213	25	0
63	Lb	876	0	948	34	0
64	Lc	764	0	804	22	0
65	Ld	888	0	930	25	0
66	Le	1053	0	1147	23	0
67	Lf	876	0	912	21	0
68	Lg	906	0	998	22	0
69	Lh	1015	0	1148	32	0
70	Li	832	0	917	20	0
71	Lj	705	0	737	17	0
72	Lk	569	0	637	19	0
73	Ll	444	0	483	14	0
74	Lm	429	0	465	10	0
75	Ln	230	0	276	9	0
76	Lo	862	0	929	18	0
77	Lp	708	0	756	21	0
78	Lr	1002	0	1068	30	0
79	Lz	1741	0	1854	72	0
80	CA	2764	0	2779	101	0
81	Ls	1496	0	1540	63	0
82	Lt	1046	0	1076	49	0
83	CB	6605	0	6679	281	0
84	Et	1593	0	810	70	0
85	LW	965	0	1029	39	0
86	L5	210	0	0	0	0
86	L7	3	0	0	0	0
86	L8	6	0	0	0	0
86	LA	1	0	0	0	0
86	LI	1	0	0	0	0
86	LP	1	0	0	0	0
86	LV	1	0	0	0	0
86	Le	1	0	0	0	0
86	Lg	1	0	0	0	0
86	Lj	1	0	0	0	0
86	S2	27	0	0	0	0
86	SG	1	0	0	0	0
86	SQ	1	0	0	0	0
87	Lg	1	0	0	0	0
87	Lj	1	0	0	0	0
87	Lm	1	0	0	0	0
87	Lo	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
87	Lp	1	0	0	0	0
87	Sa	1	0	0	0	0
All	All	229857	0	173289	5622	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 14.

All (5622) 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)
35:L5:1443:A:N6	35:L5:2104:G:H21	1.25	1.31
35:L5:1443:A:H61	35:L5:2104:G:N2	1.31	1.27
35:L5:1762:C:N4	35:L5:1770:A:C2	2.12	1.18
35:L5:1176:C:H42	35:L5:1184:A:N6	1.42	1.18
35:L5:1176:C:N4	35:L5:1184:A:H61	1.42	1.17
35:L5:1100:U:H3	35:L5:1194:G:H1	1.09	1.00
1:S2:1729:U:H3	1:S2:1805:G:H1	1.04	1.00
35:L5:1755:C:H42	35:L5:1776:A:N6	1.60	0.99
35:L5:1095:A:C2	35:L5:1200:G:N1	2.32	0.97
35:L5:1269:G:N2	35:L5:1441:C:C2	2.32	0.97
35:L5:3754:G:H1	35:L5:3770:U:H3	1.05	0.96
82:Lt:114:ARG:HD3	82:Lt:129:ILE:HB	1.46	0.96
35:L5:1755:C:N4	35:L5:1776:A:H61	1.64	0.96
35:L5:1755:C:N4	35:L5:1776:A:N6	2.14	0.95
1:S2:1674:G:H4'	3:SF:77:MET:HE1	1.49	0.94
35:L5:1762:C:N4	35:L5:1770:A:H2	1.57	0.92
42:LE:222:LEU:HD22	42:LE:237:LYS:HD2	1.49	0.92
35:L5:1095:A:H2	35:L5:1200:G:N1	1.64	0.90
1:S2:1748:G:H1	1:S2:1786:U:H3	1.02	0.90
8:ST:64:LEU:HD21	8:ST:122:LYS:HA	1.52	0.90
35:L5:3967:G:H1	35:L5:4055:U:H3	0.92	0.90
35:L5:2483:G:H1	35:L5:2495:U:H3	1.19	0.90
83:CB:219:HIS:HA	83:CB:337:LYS:HE2	1.53	0.90
26:SB:121:ILE:HG12	26:SB:164:ILE:HD11	1.51	0.89
83:CB:452:LEU:HD13	83:CB:461:ILE:HG21	1.55	0.89
35:L5:1072:C:O2	35:L5:1240:G:N2	2.06	0.89
1:S2:925:G:H1	1:S2:1017:U:H3	0.91	0.88
35:L5:4907:G:N2	35:L5:4914:C:O2	2.07	0.88
33:SW:27:ILE:HB	33:SW:61:ILE:HB	1.55	0.88
39:LB:14:LEU:HD23	39:LB:17:LEU:HD21	1.56	0.88
35:L5:1402:C:O2	35:L5:1415:G:N2	2.06	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1414:C:H2'	35:L5:1415:G:H8	1.37	0.87
35:L5:2557:G:H1	35:L5:2570:U:H3	0.88	0.87
35:L5:4517:A:N7	39:LB:2:SER:N	2.22	0.87
21:SG:5:ILE:HD11	21:SG:14:LYS:HD3	1.57	0.86
84:Et:37:A:H3'	84:Et:38:A:H8	1.38	0.86
1:S2:1488:C:O2'	1:S2:1490:G:OP2	1.94	0.86
35:L5:665:C:H4'	35:L5:666:G:H5'	1.57	0.86
25:SA:153:PRO:O	25:SA:153:PRO:HD2	1.76	0.85
12:Sg:66:VAL:HA	12:Sg:82:SER:HA	1.57	0.85
1:S2:528:A:H2'	1:S2:529:A:H8	1.42	0.85
57:LU:105:ASN:HD22	57:LU:111:GLU:HB3	1.40	0.85
35:L5:2611:A:H5'	35:L5:2688:G:H4'	1.59	0.84
35:L5:1095:A:H2	35:L5:1200:G:H1	0.88	0.83
1:S2:1166:G:N7	20:SX:25:LYS:NZ	2.27	0.83
35:L5:1401:C:O2	35:L5:1416:G:N2	2.11	0.83
10:Sc:44:ARG:HH22	10:Sc:63:ARG:HH11	1.23	0.83
50:LN:124:ASP:HB3	50:LN:127:TYR:H	1.43	0.83
35:L5:1972:G:N2	35:L5:1994:C:O2	2.12	0.82
48:LL:63:THR:HG22	48:LL:65:ARG:H	1.45	0.81
35:L5:493:G:H1	35:L5:660:A:H2	1.26	0.81
7:SS:132:ARG:HB2	7:SS:134:GLN:HE22	1.45	0.81
43:LF:105:VAL:HG13	43:LF:136:VAL:HG12	1.61	0.81
35:L5:1709:C:H42	35:L5:1716:G:N2	1.78	0.81
35:L5:1709:C:N4	35:L5:1716:G:H22	1.78	0.81
48:LL:81:LEU:HD11	48:LL:98:VAL:HB	1.62	0.81
35:L5:4910:G:H4'	39:LB:95:THR:HG22	1.60	0.81
26:SB:33:VAL:HG23	26:SB:44:ILE:HB	1.63	0.80
35:L5:1353:G:N7	53:LQ:104:ARG:NH2	2.29	0.80
35:L5:1402:C:N3	35:L5:1415:G:N1	2.29	0.80
59:LX:156:ILE:HD11	80:CA:291:MET:HB2	1.62	0.80
83:CB:45:ILE:HD12	83:CB:46:ILE:H	1.46	0.80
35:L5:2702:C:OP1	57:LU:101:ARG:NH2	2.15	0.80
35:L5:4773:C:N3	35:L5:4861:G:N1	2.27	0.80
17:SE:26:VAL:HG22	22:SJ:4:ALA:HB2	1.63	0.80
30:SC:94:ILE:HD11	30:SC:159:LYS:HB3	1.64	0.80
41:LD:208:MET:HB2	41:LD:233:PRO:HG3	1.63	0.80
82:Lt:105:THR:HA	82:Lt:143:VAL:HA	1.64	0.80
83:CB:604:MET:HB2	83:CB:704:VAL:HA	1.63	0.80
1:S2:1522:A:H4'	7:SS:144:ARG:HG2	1.63	0.79
9:SU:35:VAL:HG11	9:SU:107:GLU:HG2	1.63	0.79
71:Lj:63:ARG:HG2	71:Lj:65:ARG:HG2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:231:MET:HE1	83:CB:343:TRP:HE1	1.46	0.79
54:LR:154:LEU:O	54:LR:158:GLN:N	2.15	0.79
1:S2:1033:G:H1	1:S2:1080:A:HO2'	1.27	0.79
84:Et:21:A:N6	84:Et:48:C:C2	2.50	0.79
34:Sb:5:LYS:HE3	34:Sb:5:LYS:HA	1.64	0.79
39:LB:184:GLN:HE21	39:LB:186:ASN:HD21	1.30	0.79
83:CB:260:LEU:HD13	83:CB:293:ILE:HD11	1.64	0.79
1:S2:116:U:H3	1:S2:347:G:H1	1.30	0.78
35:L5:1656:U:OP2	62:La:26:ARG:NH2	2.16	0.78
35:L5:1401:C:N3	35:L5:1416:G:N1	2.31	0.78
1:S2:588:G:H4'	1:S2:589:G:H5'	1.65	0.78
35:L5:1443:A:N6	35:L5:2104:G:N2	2.07	0.78
8:ST:77:LYS:HB2	8:ST:94:ARG:HH21	1.47	0.78
26:SB:87:ILE:H	26:SB:101:HIS:HB2	1.49	0.78
35:L5:1176:C:N3	35:L5:1184:A:N1	2.32	0.78
41:LD:138:GLN:HG3	41:LD:139:PRO:HD2	1.65	0.78
26:SB:28:LYS:HD3	26:SB:48:LEU:HD13	1.66	0.78
1:S2:1818:A:H4'	75:Ln:16:LYS:HZ2	1.49	0.78
82:Lt:142:ASN:HD22	82:Lt:148:PRO:HB3	1.48	0.78
18:SI:37:LYS:NZ	18:SI:93:THR:O	2.17	0.77
35:L5:1479:G:H21	48:LL:184:MET:HE1	1.48	0.77
1:S2:697:G:H22	33:SW:118:ARG:HH22	1.32	0.77
2:SD:132:LYS:HB2	2:SD:189:MET:HG2	1.66	0.77
60:LY:54:GLU:HG2	60:LY:108:ARG:HG2	1.65	0.77
42:LE:180:VAL:HG11	42:LE:258:LEU:HD11	1.65	0.77
35:L5:4751:G:N7	67:Lf:52:LYS:NZ	2.32	0.77
38:LA:116:LEU:HB3	38:LA:126:LEU:HB2	1.65	0.77
12:Sg:298:LEU:HB3	12:Sg:310:TRP:HB2	1.66	0.77
55:LS:128:LYS:NZ	55:LS:130:GLU:OE2	2.16	0.77
1:S2:873:G:N3	54:LR:162:ARG:NH2	2.33	0.76
42:LE:204:SER:O	42:LE:205:ASN:ND2	2.17	0.76
82:Lt:104:ILE:HG12	82:Lt:106:PHE:HD2	1.50	0.76
12:Sg:155:ARG:HH12	12:Sg:199:THR:HG23	1.51	0.76
81:Ls:146:LYS:HG3	81:Ls:155:LEU:HD11	1.67	0.76
85:LW:93:LYS:O	85:LW:101:ARG:NH2	2.17	0.76
23:SY:10:ARG:HG3	23:SY:11:LYS:HG3	1.66	0.76
35:L5:1175:A:H2	35:L5:1185:G:H1	1.30	0.76
35:L5:1269:G:N2	35:L5:1441:C:O2	2.17	0.76
2:SD:60:GLY:HA3	2:SD:65:ARG:H	1.51	0.76
35:L5:1268:G:N7	63:Lb:111:ARG:NH2	2.33	0.76
68:Lg:83:CYS:SG	68:Lg:86:CYS:HB2	2.26	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1536:G:H2'	1:S2:1537:A:H8	1.51	0.76
7:SS:34:LYS:HB3	7:SS:103:LEU:HD23	1.67	0.76
38:LA:104:VAL:HA	38:LA:107:MET:HE2	1.68	0.76
81:Ls:13:TYR:HE1	81:Ls:60:MET:HB3	1.48	0.76
26:SB:104:ASP:OD2	26:SB:105:LEU:N	2.19	0.76
35:L5:4773:C:O2	35:L5:4861:G:N2	2.16	0.76
35:L5:3708:C:O2	35:L5:3742:G:N2	2.13	0.75
44:LG:200:THR:HG22	44:LG:201:THR:HG23	1.68	0.75
59:LX:91:GLU:HB2	80:CA:291:MET:HE1	1.68	0.75
1:S2:1047:C:H5'	32:SO:143:LYS:HB2	1.68	0.75
21:SG:115:LYS:NZ	21:SG:116:LYS:O	2.18	0.75
36:L7:72:U:O2	36:L7:103:A:N6	2.20	0.75
35:L5:1596:U:O2'	52:LP:135:ARG:NH2	2.18	0.75
17:SE:121:TYR:HA	17:SE:163:ASP:HA	1.68	0.75
21:SG:23:LYS:HD2	21:SG:41:LEU:HB2	1.69	0.75
21:SG:116:LYS:HZ1	21:SG:125:THR:HG21	1.51	0.75
22:SJ:135:ILE:HD11	22:SJ:157:ILE:HG23	1.69	0.75
1:S2:851:C:H5"	1:S2:852:G:H5'	1.66	0.75
12:Sg:145:GLU:O	12:Sg:175:LYS:NZ	2.19	0.75
26:SB:85:LYS:HB3	26:SB:101:HIS:HB3	1.65	0.75
44:LG:234:ARG:NH1	70:Li:46:GLU:OE2	2.20	0.75
83:CB:745:TYR:HB2	83:CB:814:PHE:HA	1.67	0.75
1:S2:1057:C:OP1	84:Et:37:A:O2'	2.03	0.75
1:S2:1277:C:H2'	1:S2:1278:A:H8	1.51	0.75
17:SE:94:LYS:HZ3	23:SY:16:ARG:HB2	1.50	0.75
35:L5:2520:C:O2	35:L5:2640:G:N2	2.20	0.74
40:LC:149:GLU:HG2	78:Lr:72:LYS:HE3	1.69	0.74
83:CB:596:PRO:HG2	83:CB:597:ASN:N	1.97	0.74
2:SD:70:THR:HA	2:SD:86:LEU:HD23	1.70	0.74
37:L8:96:C:OP1	69:Lh:70:ARG:NH1	2.20	0.74
1:S2:1594:A:N7	14:SZ:104:ARG:NH2	2.35	0.74
1:S2:1540:G:OP2	8:ST:43:LYS:NZ	2.21	0.74
35:L5:1095:A:N1	35:L5:1200:G:O6	2.21	0.74
1:S2:1756:C:N4	1:S2:1775:U:O4	2.20	0.74
23:SY:130:LYS:HG3	23:SY:131:PRO:HD3	1.70	0.74
1:S2:1675:A:O3'	3:SF:74:ASN:ND2	2.21	0.74
35:L5:138:G:H2'	35:L5:139:G:C8	2.23	0.74
35:L5:2019:C:OP1	81:Ls:6:ARG:NH2	2.21	0.74
18:SI:163:GLU:OE1	18:SI:167:GLN:NE2	2.21	0.73
30:SC:176:LYS:O	30:SC:200:ARG:NH2	2.20	0.73
35:L5:261:G:H2'	35:L5:262:G:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2554:U:O2	35:L5:2764:A:N7	2.20	0.73
1:S2:1287:A:OP2	15:Sf:99:LYS:NZ	2.19	0.73
35:L5:4093:G:N1	35:L5:4114:C:C2	2.55	0.73
35:L5:3967:G:N2	35:L5:4055:U:O2	2.20	0.73
35:L5:4052:C:H1'	79:Lz:209:THR:HA	1.69	0.73
35:L5:4907:G:N1	35:L5:4914:C:N3	2.31	0.73
43:LF:232:ASP:OD1	43:LF:236:ARG:NH2	2.20	0.73
1:S2:1396:A:N7	1:S2:1449:G:O6	2.21	0.73
33:SW:11:LEU:HD12	33:SW:74:VAL:HB	1.71	0.73
35:L5:513:U:H3'	35:L5:514:U:H4'	1.69	0.73
35:L5:2756:G:O6	61:LZ:51:ARG:NH2	2.18	0.73
17:SE:72:ILE:HG22	17:SE:90:ILE:HG13	1.70	0.73
25:SA:38:ILE:HD11	25:SA:47:TYR:HB3	1.70	0.73
17:SE:126:VAL:HA	17:SE:141:THR:HA	1.71	0.73
35:L5:493:G:O6	35:L5:660:A:N1	2.22	0.73
44:LG:58:PRO:HD2	44:LG:61:ILE:HD12	1.71	0.73
39:LB:224:LYS:HB3	39:LB:340:THR:HG22	1.70	0.73
18:SI:11:ARG:O	19:SL:136:LYS:NZ	2.22	0.73
52:LP:94:MET:HG2	52:LP:148:MET:HE1	1.71	0.73
85:LW:73:ARG:H	85:LW:73:ARG:HD3	1.54	0.73
50:LN:60:VAL:HG22	50:LN:134:LEU:HB2	1.71	0.72
4:SK:85:LEU:HD12	4:SK:89:ILE:HG13	1.71	0.72
43:LF:157:ARG:HE	43:LF:248:ASN:HB2	1.54	0.72
46:LI:36:LEU:HD11	46:LI:69:ARG:HH11	1.52	0.72
80:CA:279:THR:HG22	80:CA:281:ARG:H	1.53	0.72
1:S2:1444:U:OP1	6:SQ:15:ARG:NH2	2.23	0.72
41:LD:146:LEU:HD22	41:LD:163:LEU:HD12	1.70	0.72
1:S2:1502:C:H4'	83:CB:673:ASN:HD22	1.54	0.72
35:L5:2486:G:O6	35:L5:2493:G:O6	2.07	0.72
37:L8:141:C:OP1	50:LN:38:ARG:NH1	2.22	0.72
55:LS:154:LEU:HB3	55:LS:157:ARG:HD3	1.72	0.72
17:SE:171:ASP:OD2	17:SE:172:PHE:N	2.22	0.72
79:Lz:3:SER:OG	79:Lz:211:GLY:O	2.07	0.72
1:S2:94:G:HO2'	1:S2:508:A:HO2'	1.24	0.72
1:S2:1298:G:OP2	5:SP:77:LYS:NZ	2.23	0.72
12:Sg:5:MET:HE1	12:Sg:245:ARG:HH22	1.54	0.72
5:SP:30:TYR:HA	5:SP:33:LEU:HG	1.71	0.71
26:SB:60:ASP:HA	26:SB:63:LYS:HE3	1.71	0.71
83:CB:20:ARG:NH2	83:CB:91:GLN:OE1	2.23	0.71
1:S2:508:A:H3'	1:S2:509:G:H8	1.55	0.71
1:S2:1752:C:H42	1:S2:1778:C:H42	1.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:SL:57:ASP:OD2	19:SL:60:CYS:N	2.23	0.71
27:SH:82:GLU:HA	27:SH:85:LYS:HD2	1.72	0.71
35:L5:502:C:H3'	35:L5:503:C:H3'	1.71	0.71
35:L5:1942:A:H2'	35:L5:1943:A:C8	2.25	0.71
54:LR:173:ARG:HG2	54:LR:176:ARG:HE	1.53	0.71
81:Ls:76:GLU:HA	81:Ls:79:LEU:HD23	1.71	0.71
14:SZ:60:LYS:O	14:SZ:64:ASN:ND2	2.22	0.71
1:S2:1720:U:HO2'	35:L5:3796:U:HO2'	1.33	0.71
35:L5:2652:G:N2	77:Lp:59:SER:O	2.24	0.71
1:S2:528:A:H2'	1:S2:529:A:C8	2.26	0.71
6:SQ:97:GLN:HE22	12:Sg:60:ARG:HD2	1.53	0.71
10:Sc:14:VAL:HG13	10:Sc:53:GLY:H	1.55	0.71
33:SW:51:GLU:HB2	33:SW:62:VAL:HB	1.73	0.71
35:L5:3589:G:N2	35:L5:3590:G:N7	2.38	0.71
41:LD:91:GLY:O	41:LD:94:ASN:ND2	2.23	0.71
85:LW:50:ASN:OD1	85:LW:50:ASN:N	2.19	0.71
1:S2:532:C:H2'	1:S2:533:A:H8	1.55	0.71
1:S2:691:G:N2	1:S2:691:G:OP2	2.22	0.71
1:S2:146:G:H1	1:S2:173:A:H61	1.38	0.71
17:SE:18:TRP:HH2	17:SE:31:PRO:HD3	1.55	0.71
17:SE:51:ARG:NH1	17:SE:109:PHE:O	2.24	0.71
22:SJ:172:ARG:HA	22:SJ:175:ARG:HD3	1.73	0.71
57:LU:61:VAL:HG23	57:LU:74:SER:HB2	1.73	0.71
5:SP:85:ILE:HG23	5:SP:89:MET:HE1	1.73	0.70
35:L5:989:U:O2	35:L5:1064:G:O6	2.09	0.70
35:L5:1351:G:OP1	40:LC:33:ARG:NH2	2.24	0.70
1:S2:1010:G:H2'	1:S2:1011:A:H8	1.56	0.70
3:SF:122:ARG:HB2	3:SF:146:ARG:HH21	1.55	0.70
8:ST:124:THR:HG23	8:ST:127:GLY:H	1.55	0.70
13:SM:40:LYS:NZ	13:SM:43:ASP:OD2	2.24	0.70
29:Sa:22:ARG:NH2	32:SO:145:GLY:O	2.22	0.70
84:Et:37:A:H3'	84:Et:38:A:C8	2.26	0.70
1:S2:76:U:O2'	21:SG:159:ARG:NH1	2.23	0.70
2:SD:106:ARG:HG3	2:SD:175:VAL:HG22	1.71	0.70
32:SO:75:MET:HB2	32:SO:118:ALA:HB2	1.72	0.70
35:L5:4672:A:OP1	58:LV:15:ARG:NH2	2.25	0.70
83:CB:453:MET:N	83:CB:453:MET:SD	2.64	0.70
1:S2:1565:C:OP2	8:ST:102:ARG:NH2	2.24	0.70
7:SS:91:LYS:HE2	7:SS:92:ASP:HB3	1.72	0.70
12:Sg:166:VAL:HG21	12:Sg:221:LEU:HD11	1.73	0.70
12:Sg:279:SER:HB2	12:Sg:280:LYS:HE3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:SH:144:ILE:O	27:SH:145:ARG:NH1	2.24	0.70
35:L5:1708:G:H2'	35:L5:1709:C:H3'	1.72	0.70
35:L5:1942:A:H2'	35:L5:1943:A:H8	1.57	0.70
12:Sg:272:GLN:HB3	12:Sg:308:ARG:HH12	1.57	0.70
44:LG:134:PRO:HB3	44:LG:206:GLN:HE21	1.55	0.70
54:LR:15:LEU:HD22	54:LR:52:ARG:HB2	1.72	0.70
83:CB:155:LEU:HD11	83:CB:157:MET:HE3	1.73	0.70
83:CB:845:LYS:HE3	83:CB:847:GLY:H	1.57	0.70
1:S2:686:U:O2	27:SH:118:ARG:NH2	2.24	0.70
35:L5:67:C:OP2	35:L5:312:G:N2	2.23	0.70
1:S2:72:C:N4	21:SG:169:PRO:O	2.25	0.70
27:SH:61:ILE:HD11	27:SH:95:ILE:HG12	1.74	0.70
52:LP:39:MET:HG2	52:LP:43:LYS:HD3	1.74	0.70
35:L5:1266:G:H5'	63:Lb:99:ILE:HD11	1.74	0.70
35:L5:1709:C:N3	35:L5:1716:G:N1	2.39	0.70
68:Lg:82:MET:HE1	68:Lg:90:ARG:HD2	1.73	0.70
1:S2:11:A:H5'	30:SC:113:GLN:HE21	1.57	0.70
12:Sg:201:SER:OG	12:Sg:203:ASP:O	2.08	0.70
45:LH:113:GLU:OE2	45:LH:115:ARG:NH1	2.25	0.70
74:Lm:79:GLU:OE2	74:Lm:81:SER:OG	2.10	0.70
35:L5:4076:G:OP1	44:LG:73:ARG:NH1	2.24	0.69
46:LI:174:THR:HG22	46:LI:176:PHE:H	1.57	0.69
2:SD:217:ILE:HG12	2:SD:219:PRO:HD3	1.73	0.69
17:SE:18:TRP:NE1	17:SE:41:CYS:O	2.25	0.69
35:L5:1972:G:N1	35:L5:1994:C:N3	2.33	0.69
35:L5:4126:C:H5"	35:L5:4127:A:H5"	1.73	0.69
76:Lo:36:GLN:OE1	76:Lo:40:ARG:NH2	2.25	0.69
1:S2:1677:U:OP1	3:SF:148:ASN:ND2	2.25	0.69
6:SQ:112:LEU:HD13	6:SQ:120:LEU:HD21	1.72	0.69
35:L5:3717:A:H2'	35:L5:3718:A:C8	2.28	0.69
80:CA:310:GLU:HG3	80:CA:314:GLU:HB3	1.72	0.69
83:CB:267:ASP:HB3	83:CB:270:ASN:HB3	1.74	0.69
15:Sf:126:CYS:HB3	15:Sf:130:VAL:HG12	1.74	0.69
35:L5:1480:C:O2'	35:L5:1482:G:OP2	2.10	0.69
1:S2:617:G:N7	20:SX:67:ARG:NH1	2.40	0.69
1:S2:1228:A:H2'	1:S2:1229:G:C8	2.27	0.69
35:L5:748:G:O6	55:LS:98:ARG:NH2	2.26	0.69
35:L5:1654:G:N2	35:L5:1678:C:OP1	2.24	0.69
35:L5:3641:U:OP2	35:L5:3646:A:N6	2.25	0.69
57:LU:24:ASP:HB2	57:LU:69:LYS:HE3	1.75	0.69
1:S2:925:G:OP1	31:SN:121:ARG:NH1	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1617:G:H4'	11:Sd:14:PHE:CE2	2.28	0.69
35:L5:1762:C:N3	35:L5:1770:A:N1	2.40	0.69
35:L5:1995:G:H4'	82:Lt:128:THR:HB	1.73	0.69
39:LB:80:GLU:OE1	39:LB:323:TYR:OH	2.10	0.69
79:Lz:47:LYS:O	79:Lz:48:ARG:NH1	2.26	0.69
80:CA:110:LEU:O	80:CA:120:ASN:ND2	2.25	0.69
1:S2:1216:C:N4	1:S2:1342:U:OP1	2.26	0.69
3:SF:169:ILE:H	3:SF:169:ILE:HD12	1.58	0.69
12:Sg:159:ASN:ND2	12:Sg:161:SER:O	2.26	0.69
22:SJ:132:GLN:HB3	22:SJ:134:HIS:CE1	2.27	0.69
35:L5:752:G:O6	35:L5:911:U:O2	2.10	0.69
35:L5:4093:G:N2	35:L5:4114:C:N3	2.41	0.69
41:LD:239:MET:HA	41:LD:242:LYS:HD3	1.73	0.69
49:LM:38:VAL:HG21	49:LM:50:MET:HE3	1.73	0.69
59:LX:80:PRO:HG2	59:LX:155:ILE:HG21	1.73	0.69
79:Lz:36:ILE:HB	79:Lz:190:LEU:HD11	1.73	0.69
19:SL:7:GLU:HG3	19:SL:11:GLN:HE22	1.56	0.69
35:L5:62:A:N3	35:L5:77:U:O2'	2.23	0.69
35:L5:267:G:H4'	69:Lh:113:LEU:HD11	1.74	0.69
37:L8:102:G:H4'	71:Lj:21:ARG:HB2	1.74	0.69
82:Lt:76:SER:O	82:Lt:117:ARG:NH1	2.26	0.69
18:SI:81:VAL:HG22	18:SI:91:VAL:HG23	1.74	0.69
56:LT:39:ILE:HG12	56:LT:102:ARG:HD2	1.76	0.69
1:S2:191:A:N6	1:S2:208:G:O2'	2.25	0.68
1:S2:604:A:H2'	1:S2:605:A:C8	2.28	0.68
13:SM:63:LYS:NZ	15:Sf:108:VAL:HG11	2.08	0.68
35:L5:4305:G:N7	56:LT:87:LYS:NZ	2.41	0.68
48:LL:87:HIS:HB3	48:LL:90:VAL:HG12	1.75	0.68
82:Lt:114:ARG:NE	82:Lt:114:ARG:O	2.25	0.68
35:L5:257:C:H2'	35:L5:258:G:C8	2.27	0.68
81:Ls:13:TYR:CE1	81:Ls:60:MET:HB3	2.29	0.68
4:SK:14:LEU:HA	4:SK:17:LYS:HG2	1.73	0.68
21:SG:67:VAL:HB	21:SG:99:GLY:HA2	1.75	0.68
35:L5:186:G:H1'	35:L5:1366:G:H21	1.59	0.68
35:L5:1338:G:OP2	62:La:12:ARG:NH1	2.26	0.68
35:L5:4405:G:OP2	46:LI:7:ARG:NH2	2.26	0.68
79:Lz:23:ARG:NH2	79:Lz:174:MET:O	2.26	0.68
1:S2:43:U:OP2	1:S2:485:A:N6	2.25	0.68
3:SF:38:TYR:HE2	3:SF:144:LEU:HD23	1.58	0.68
12:Sg:7:LEU:HD11	12:Sg:308:ARG:HB2	1.75	0.68
25:SA:132:GLN:NE2	25:SA:136:GLU:OE1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:262:G:H2'	35:L5:263:G:C8	2.28	0.68
1:S2:1536:G:H2'	1:S2:1537:A:C8	2.27	0.68
17:SE:152:PRO:HG2	21:SG:216:ARG:HG2	1.75	0.68
48:LL:63:THR:HG21	62:La:66:ASN:HD22	1.58	0.68
83:CB:10:ARG:NH1	83:CB:10:ARG:O	2.26	0.68
83:CB:623:SER:HB2	83:CB:625:ARG:HH11	1.59	0.68
1:S2:928:G:H2'	1:S2:929:G:C8	2.28	0.68
20:SX:50:ILE:HD13	20:SX:75:ILE:HD11	1.76	0.68
42:LE:222:LEU:HD21	42:LE:223:ARG:HH11	1.57	0.68
83:CB:654:PRO:HD2	83:CB:658:GLY:HA3	1.74	0.68
1:S2:962:A:H5"	32:SO:66:ARG:HD3	1.75	0.68
1:S2:1075:C:OP1	31:SN:107:LYS:NZ	2.27	0.68
1:S2:1415:C:O2'	8:ST:132:ASP:OD2	2.11	0.68
12:Sg:186:THR:HG22	12:Sg:188:HIS:HB2	1.75	0.68
36:L7:74:A:N3	55:LS:53:LYS:NZ	2.41	0.68
47:LJ:20:LEU:HD11	47:LJ:130:PHE:HD2	1.58	0.68
1:S2:1562:C:H2'	1:S2:1563:G:H8	1.59	0.68
15:Sf:86:THR:HG23	15:Sf:88:PRO:HD3	1.75	0.68
35:L5:1187:G:OP2	35:L5:1187:G:N2	2.26	0.68
35:L5:1707:C:C2	63:Lb:103:LYS:HB3	2.28	0.68
35:L5:1844:G:O3'	63:Lb:25:ARG:NH1	2.27	0.68
41:LD:62:CYS:HB3	41:LD:105:LEU:HD22	1.75	0.68
60:LY:31:SER:HA	60:LY:48:PRO:HA	1.76	0.68
1:S2:466:G:O2'	21:SG:59:GLN:NE2	2.27	0.68
17:SE:168:LYS:HE2	17:SE:168:LYS:HA	1.73	0.68
30:SC:194:ARG:HD3	30:SC:196:ILE:HD11	1.76	0.68
35:L5:1172:C:H1'	35:L5:1189:G:H22	1.59	0.68
35:L5:3970:G:O2'	35:L5:4052:C:N4	2.27	0.68
35:L5:4891:G:H1	35:L5:4928:C:H5	1.40	0.68
1:S2:1277:C:H5"	4:SK:55:ARG:HH11	1.59	0.68
2:SD:172:VAL:HG22	2:SD:185:LYS:HG3	1.76	0.68
12:Sg:106:LYS:HE2	12:Sg:125:ARG:HB3	1.75	0.68
35:L5:3946:G:H1	35:L5:4067:U:H3	1.42	0.68
43:LF:220:MET:HB2	43:LF:232:ASP:OD2	1.93	0.68
50:LN:164:LEU:O	50:LN:169:ARG:NH2	2.26	0.68
6:SQ:32:ILE:HG22	6:SQ:39:LEU:HD13	1.76	0.67
30:SC:187:ARG:NH2	30:SC:189:GLY:O	2.28	0.67
35:L5:494:U:H2'	35:L5:495:C:C6	2.28	0.67
48:LL:204:GLU:OE2	48:LL:205:GLN:NE2	2.26	0.67
79:Lz:54:ARG:NH1	79:Lz:149:ASP:OD2	2.27	0.67
83:CB:4:PHE:N	83:CB:45:ILE:O	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SD:40:ARG:HB3	2:SD:47:GLU:HG3	1.76	0.67
35:L5:4093:G:C2	35:L5:4114:C:N3	2.62	0.67
60:LY:2:LYS:HD3	60:LY:7:VAL:HG13	1.75	0.67
7:SS:36:VAL:HG23	7:SS:40:TYR:HB3	1.76	0.67
35:L5:1273:G:C8	63:Lb:117:ARG:HD2	2.30	0.67
35:L5:1396:G:N7	62:La:110:LYS:NZ	2.42	0.67
39:LB:222:VAL:O	39:LB:343:ARG:NH1	2.27	0.67
1:S2:639:C:H2'	1:S2:640:A:H8	1.58	0.67
5:SP:44:ARG:HE	5:SP:50:ARG:HH22	1.42	0.67
35:L5:2474:G:N2	35:L5:2502:G:O2'	2.27	0.67
11:Sd:17:GLY:O	11:Sd:27:ARG:NH2	2.28	0.67
21:SG:213:LEU:HD13	21:SG:216:ARG:HB3	1.77	0.67
64:Lc:51:ASN:HB2	64:Lc:77:ASN:HB2	1.74	0.67
21:SG:70:HIS:HA	21:SG:98:ARG:HH12	1.59	0.67
35:L5:478:G:OP1	78:Lr:66:ARG:NH2	2.27	0.67
71:Lj:22:CYS:SG	71:Lj:24:SER:OG	2.52	0.67
83:CB:778:GLY:O	83:CB:779:THR:HG23	1.95	0.67
1:S2:76:U:OP2	21:SG:155:GLN:NE2	2.28	0.67
1:S2:981:A:H2'	1:S2:982:G:C8	2.30	0.67
1:S2:1522:A:N6	5:SP:129:GLY:O	2.26	0.67
3:SF:126:THR:HA	3:SF:135:ARG:HG3	1.77	0.67
5:SP:81:ARG:NH2	5:SP:120:SER:O	2.28	0.67
6:SQ:8:GLN:HE21	6:SQ:27:ARG:HG2	1.58	0.67
1:S2:829:C:H5"	17:SE:21:ASP:HB2	1.76	0.67
35:L5:1328:G:O2'	35:L5:2349:A:OP1	2.13	0.67
35:L5:2488:C:N4	37:L8:126:C:OP2	2.28	0.67
35:L5:3973:G:N2	35:L5:3974:G:O6	2.27	0.67
80:CA:20:LYS:HA	80:CA:23:MET:HB3	1.77	0.67
12:Sg:18:VAL:O	12:Sg:287:THR:OG1	2.12	0.66
25:SA:222:VAL:HG13	25:SA:223:THR:HG23	1.77	0.66
35:L5:1734:G:N2	35:L5:1735:U:O4	2.23	0.66
3:SF:171:GLU:OE2	3:SF:171:GLU:N	2.28	0.66
12:Sg:152:SER:H	12:Sg:169:GLY:HA2	1.61	0.66
27:SH:145:ARG:NE	33:SW:51:GLU:OE1	2.28	0.66
55:LS:47:PHE:HE1	55:LS:125:GLN:HG2	1.61	0.66
80:CA:159:PRO:HG2	80:CA:220:VAL:HG22	1.78	0.66
1:S2:1401:A:H2'	1:S2:1402:A:C8	2.31	0.66
22:SJ:130:ILE:HG12	22:SJ:135:ILE:HG21	1.75	0.66
25:SA:26:GLY:O	25:SA:150:THR:OG1	2.12	0.66
78:Lr:46:ARG:HA	78:Lr:70:GLN:HE22	1.61	0.66
83:CB:526:ARG:HH21	83:CB:565:HIS:HA	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:157:U:O2'	1:S2:159:A:N7	2.24	0.66
1:S2:198:U:H2'	1:S2:199:C:H2'	1.76	0.66
2:SD:136:VAL:HG12	2:SD:186:VAL:HG13	1.77	0.66
22:SJ:112:THR:HA	22:SJ:123:ILE:HD11	1.77	0.66
35:L5:4274:A:H2'	35:L5:4275:G:C8	2.30	0.66
35:L5:224:U:O2	40:LC:219:LYS:NZ	2.29	0.66
35:L5:1414:C:H2'	35:L5:1415:G:C8	2.27	0.66
35:L5:4274:A:H2'	35:L5:4275:G:H8	1.61	0.66
64:Lc:20:LEU:O	64:Lc:24:SER:OG	2.12	0.66
1:S2:1130:G:OP2	1:S2:1130:G:N2	2.24	0.66
6:SQ:43:GLU:O	6:SQ:45:ARG:N	2.27	0.66
8:ST:9:VAL:O	8:ST:11:GLN:NE2	2.28	0.66
35:L5:678:C:H4'	78:Lr:96:MET:HE2	1.77	0.66
35:L5:3896:C:O2'	39:LB:268:ARG:NH2	2.24	0.66
35:L5:4992:G:H2'	35:L5:4993:G:C8	2.31	0.66
55:LS:95:ARG:NH2	55:LS:112:ASP:OD2	2.29	0.66
80:CA:75:ALA:HB2	80:CA:113:HIS:HB3	1.76	0.66
83:CB:518:PRO:HD2	83:CB:519:LYS:H	1.60	0.66
8:ST:104:LEU:HD22	8:ST:121:ARG:HD2	1.76	0.66
19:SL:69:ARG:NH1	19:SL:130:GLU:OE2	2.29	0.66
26:SB:65:ARG:NH1	32:SO:51:GLU:OE2	2.27	0.66
35:L5:1444:G:H22	35:L5:2103:G:H1	1.42	0.66
35:L5:3868:G:H22	35:L5:3900:G:H1'	1.61	0.66
44:LG:33:GLU:N	44:LG:33:GLU:OE2	2.29	0.66
1:S2:1284:A:O2'	13:SM:106:CYS:SG	2.53	0.66
35:L5:4260:U:H2'	35:L5:4261:C:C6	2.31	0.66
43:LF:131:ASN:OD1	43:LF:134:ARG:NH2	2.26	0.66
43:LF:244:ILE:O	43:LF:248:ASN:ND2	2.28	0.66
44:LG:205:THR:HG22	44:LG:206:GLN:H	1.58	0.66
66:Le:84:GLU:OE2	78:Lr:20:ARG:NH1	2.24	0.66
1:S2:628:A:H2'	2:SD:143:ARG:HH12	1.61	0.66
9:SU:61:LEU:HD13	9:SU:82:MET:HG2	1.78	0.66
13:SM:25:ALA:HB1	13:SM:31:LEU:HD11	1.78	0.66
25:SA:50:ASN:HD21	25:SA:52:LYS:HE3	1.61	0.66
35:L5:3969:G:O6	35:L5:4051:C:N4	2.29	0.66
1:S2:609:U:H2'	1:S2:610:G:H8	1.60	0.66
35:L5:513:U:H1'	35:L5:516:C:H41	1.58	0.66
35:L5:2059:C:O2	55:LS:118:ARG:NH2	2.28	0.66
35:L5:3689:G:O2'	35:L5:3818:U:OP2	2.12	0.66
35:L5:3717:A:H2'	35:L5:3718:A:H8	1.59	0.66
36:L7:54:A:O3'	47:LJ:154:LYS:NZ	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:LC:293:LEU:O	40:LC:299:GLN:NE2	2.28	0.66
41:LD:194:VAL:HA	41:LD:197:LYS:HD2	1.77	0.66
45:LH:59:LYS:HE3	45:LH:66:GLU:HG3	1.78	0.66
3:SF:102:LEU:HD11	14:SZ:110:THR:HB	1.78	0.65
21:SG:136:LYS:HE2	21:SG:174:PRO:HB2	1.78	0.65
35:L5:3967:G:OP2	35:L5:3969:G:N2	2.29	0.65
83:CB:130:ASP:HB3	83:CB:133:SER:HB2	1.78	0.65
1:S2:527:C:H2'	1:S2:528:A:C8	2.31	0.65
6:SQ:32:ILE:HG23	6:SQ:68:ILE:HD11	1.76	0.65
21:SG:215:LYS:NZ	21:SG:219:GLU:OE1	2.29	0.65
35:L5:4325:A:O2'	41:LD:48:LYS:NZ	2.28	0.65
39:LB:117:ARG:HA	39:LB:177:LYS:HD2	1.78	0.65
57:LU:24:ASP:HB3	57:LU:111:GLU:HA	1.76	0.65
67:Lf:25:THR:HG22	67:Lf:87:LYS:HE3	1.78	0.65
76:Lo:11:PHE:O	76:Lo:81:ARG:NH2	2.29	0.65
83:CB:772:GLU:OE2	83:CB:774:SER:OG	2.11	0.65
3:SF:129:GLY:O	3:SF:135:ARG:NH2	2.26	0.65
11:Sd:16:GLN:OE1	11:Sd:16:GLN:N	2.26	0.65
53:LQ:187:LYS:O	53:LQ:188:ASN:ND2	2.28	0.65
83:CB:626:GLN:HG3	83:CB:631:ARG:HB2	1.77	0.65
1:S2:830:A:OP2	1:S2:846:G:N2	2.27	0.65
12:Sg:87:LEU:HB2	12:Sg:101:PHE:HB2	1.77	0.65
35:L5:1094:G:H1	35:L5:1201:U:H3	1.42	0.65
35:L5:4472:G:O2'	74:Lm:100:TYR:O	2.15	0.65
65:Ld:64:ILE:HG23	65:Ld:68:LEU:HD23	1.78	0.65
1:S2:345:U:O2	17:SE:33:THR:OG1	2.14	0.65
1:S2:446:G:OP2	18:SI:47:ARG:NH2	2.29	0.65
35:L5:2658:G:N2	35:L5:2676:A:OP2	2.30	0.65
5:SP:81:ARG:HH21	5:SP:120:SER:HG	1.43	0.65
35:L5:2469:C:H5	35:L5:2471:G:H1	1.43	0.65
35:L5:4887:C:H42	35:L5:4932:U:H3	1.44	0.65
1:S2:1616:U:O2'	1:S2:1661:A:N3	2.29	0.65
81:Ls:60:MET:HE2	81:Ls:60:MET:HA	1.78	0.65
5:SP:16:THR:HA	5:SP:21:ASP:HA	1.79	0.65
7:SS:63:GLU:HA	7:SS:66:ARG:HG2	1.78	0.65
21:SG:144:LEU:O	85:LW:94:ARG:NH1	2.28	0.65
35:L5:1762:C:H5"	35:L5:1764:G:H1	1.62	0.65
35:L5:2078:C:OP1	66:Le:64:LYS:HG2	1.97	0.65
44:LG:180:PRO:HB3	44:LG:223:ARG:HG2	1.77	0.65
83:CB:412:ALA:HB3	83:CB:472:LEU:HB2	1.77	0.65
32:SO:82:ALA:HB1	32:SO:124:MET:HE1	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:327:U:O2'	70:Li:30:ARG:NH1	2.29	0.65
35:L5:4478:G:O2'	35:L5:4602:A:N1	2.30	0.65
58:LV:74:LYS:C	58:LV:75:LYS:HD3	2.22	0.65
81:Ls:23:ASP:O	81:Ls:92:LYS:NZ	2.30	0.65
81:Ls:47:LEU:HD22	81:Ls:51:ALA:HB3	1.77	0.65
85:LW:77:LYS:HB2	85:LW:79:GLN:HE22	1.62	0.65
1:S2:1286:G:N2	1:S2:1312:G:O2'	2.28	0.65
17:SE:252:ARG:NH1	22:SJ:75:ASN:OD1	2.30	0.65
22:SJ:135:ILE:HD12	22:SJ:136:ARG:H	1.61	0.65
23:SY:120:THR:O	23:SY:124:ASN:ND2	2.27	0.65
41:LD:41:LYS:NZ	56:LT:32:ARG:O	2.30	0.65
42:LE:192:LYS:HD3	67:Lf:107:PRO:HB3	1.79	0.65
26:SB:209:ASP:HB3	26:SB:211:PHE:HE2	1.63	0.64
27:SH:31:GLU:OE2	27:SH:41:ARG:NH1	2.30	0.64
35:L5:1100:U:O4	35:L5:1194:G:O6	2.14	0.64
35:L5:2745:A:H2'	35:L5:2746:A:H8	1.62	0.64
37:L8:62:A:OP1	69:Lh:52:LYS:NZ	2.30	0.64
37:L8:148:A:N3	44:LG:60:TYR:OH	2.28	0.64
44:LG:95:LEU:HD23	44:LG:184:ILE:HD11	1.79	0.64
45:LH:117:PHE:O	45:LH:120:GLU:HG3	1.97	0.64
47:LJ:104:ASN:HB3	47:LJ:133:VAL:HA	1.79	0.64
58:LV:33:GLY:HA3	58:LV:69:LYS:HE2	1.79	0.64
1:S2:557:U:H2'	1:S2:558:G:C8	2.31	0.64
4:SK:32:HIS:CE1	4:SK:34:GLU:HB2	2.32	0.64
23:SY:43:LYS:HA	23:SY:46:LYS:HE2	1.78	0.64
26:SB:133:TYR:HE1	26:SB:220:LYS:HG3	1.59	0.64
32:SO:66:ARG:NH2	84:Et:40:C:OP1	2.30	0.64
35:L5:88:A:N7	53:LQ:173:LYS:NZ	2.46	0.64
35:L5:513:U:N3	35:L5:516:C:OP2	2.30	0.64
1:S2:520:A:H5"	22:SJ:12:THR:HG23	1.78	0.64
1:S2:1017:U:H5'	31:SN:55:ARG:HH11	1.60	0.64
1:S2:1679:A:OP1	10:Sc:20:ARG:NH2	2.29	0.64
35:L5:2299:G:O6	40:LC:188:ARG:NH2	2.30	0.64
85:LW:71:ARG:HH12	85:LW:73:ARG:HD2	1.62	0.64
1:S2:1550:G:H3'	1:S2:1579:A:H61	1.60	0.64
79:Lz:206:ILE:HD11	79:Lz:214:GLN:HB2	1.80	0.64
4:SK:8:ARG:HH21	4:SK:82:TYR:HE2	1.46	0.64
12:Sg:45:LEU:HD12	12:Sg:47:ARG:HE	1.63	0.64
32:SO:14:VAL:H	32:SO:15:ILE:HA	1.63	0.64
39:LB:384:GLU:OE2	85:LW:14:TYR:OH	2.15	0.64
5:SP:44:ARG:HG2	5:SP:84:ILE:HD11	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:SY:27:VAL:HG22	23:SY:69:THR:HB	1.79	0.64
29:Sa:43:ASN:HD21	29:Sa:47:ALA:HB2	1.62	0.64
35:L5:3619:G:H22	35:L5:3624:A:H1'	1.63	0.64
35:L5:4242:U:H3	35:L5:4281:A:H2	1.45	0.64
49:LM:36:ALA:HB3	49:LM:55:MET:HE1	1.77	0.64
35:L5:1258:G:H2'	35:L5:1259:G:C8	2.32	0.64
35:L5:1996:C:H42	35:L5:2000:G:N2	1.96	0.64
35:L5:2318:G:N2	35:L5:2321:G:OP2	2.26	0.64
49:LM:11:ARG:NH1	49:LM:58:THR:O	2.29	0.64
79:Lz:55:LEU:HD11	79:Lz:183:ILE:HG12	1.80	0.64
80:CA:181:PRO:O	80:CA:204:ASN:ND2	2.31	0.64
1:S2:165:G:H2'	1:S2:166:A:H8	1.62	0.64
1:S2:1560:U:O2	1:S2:1575:G:O6	2.16	0.64
22:SJ:32:ILE:HD13	24:Se:34:ARG:HB3	1.79	0.64
28:SV:78:ILE:HG22	28:SV:79:VAL:H	1.62	0.64
35:L5:4897:G:H2'	35:L5:4898:G:C8	2.33	0.64
43:LF:85:ALA:HB2	56:LT:138:ALA:H	1.63	0.64
35:L5:4967:A:H2'	35:L5:4968:A:H8	1.63	0.64
1:S2:989:C:OP2	26:SB:155:TYR:OH	2.15	0.64
21:SG:218:LYS:HE2	21:SG:218:LYS:HA	1.80	0.64
28:SV:51:LYS:NZ	28:SV:76:ASP:O	2.31	0.64
38:LA:96:LEU:HB3	77:Lp:87:LYS:HG3	1.80	0.64
1:S2:1228:A:H2'	1:S2:1229:G:H8	1.61	0.63
1:S2:1387:G:N1	2:SD:206:ASP:OD2	2.27	0.63
1:S2:1674:G:H5"	3:SF:86:LYS:HD3	1.80	0.63
16:CD:222:LYS:H	16:CD:222:LYS:HD2	1.62	0.63
35:L5:4238:G:H2'	35:L5:4239:A:H8	1.64	0.63
36:L7:12:U:O3'	36:L7:109:U:O2'	2.12	0.63
1:S2:126:G:OP2	21:SG:198:ARG:NH1	2.31	0.63
1:S2:1651:A:O2'	3:SF:83:ASN:OD1	2.14	0.63
22:SJ:63:LEU:HD23	22:SJ:70:ARG:HB2	1.80	0.63
30:SC:278:THR:HA	30:SC:279:ARG:HD2	1.79	0.63
35:L5:1273:G:H8	63:Lb:117:ARG:HD2	1.63	0.63
35:L5:2514:G:OP1	68:Lg:17:SER:OG	2.17	0.63
35:L5:4996:C:OP1	65:Ld:32:ARG:NH2	2.31	0.63
1:S2:289:G:N2	1:S2:293:C:O2	2.27	0.63
1:S2:1354:G:N1	1:S2:1357:A:OP2	2.25	0.63
35:L5:4097:G:O6	35:L5:4098:A:N6	2.31	0.63
83:CB:13:MET:SD	83:CB:468:ASN:ND2	2.72	0.63
1:S2:1605:G:OP1	8:ST:84:ARG:NH1	2.28	0.63
27:SH:191:GLU:O	27:SH:193:GLN:NE2	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:SC:167:ARG:HB3	30:SC:177:PRO:HB2	1.81	0.63
35:L5:1195:G:H2'	35:L5:1196:G:C8	2.33	0.63
35:L5:4098:A:N1	35:L5:4112:C:N4	2.47	0.63
35:L5:4291:G:H5'	35:L5:4293:U:C6	2.33	0.63
84:Et:22:G:H2'	84:Et:23:A:H8	1.63	0.63
1:S2:190:G:H5'	18:SI:145:ILE:HG12	1.79	0.63
9:SU:43:ALA:HB1	9:SU:50:VAL:HG21	1.81	0.63
83:CB:626:GLN:OE1	83:CB:627:GLU:N	2.31	0.63
1:S2:1738:C:OP1	21:SG:92:ARG:NH1	2.29	0.63
4:SK:27:VAL:HG13	4:SK:28:HIS:CD2	2.34	0.63
17:SE:192:ILE:HG13	17:SE:243:GLY:HA3	1.80	0.63
35:L5:3910:C:H2'	35:L5:3911:C:C6	2.34	0.63
46:LI:146:GLU:OE2	46:LI:146:GLU:N	2.26	0.63
73:Ll:25:GLN:CD	73:Ll:25:GLN:H	2.07	0.63
81:Ls:35:VAL:HG13	81:Ls:39:GLN:HE21	1.62	0.63
25:SA:148:CYS:SG	25:SA:160:ALA:HB1	2.39	0.63
27:SH:145:ARG:HH12	33:SW:52:ILE:H	1.47	0.63
30:SC:102:LEU:HD13	30:SC:130:ILE:HD11	1.79	0.63
47:LJ:166:PHE:HD1	47:LJ:174:ILE:HD11	1.64	0.63
79:Lz:24:LYS:HD2	79:Lz:29:LEU:HD12	1.80	0.63
83:CB:641:TRP:HD1	83:CB:646:ALA:HB2	1.62	0.63
2:SD:68:GLU:HB2	4:SK:20:VAL:HG21	1.80	0.63
25:SA:191:ARG:NH1	28:SV:44:GLY:O	2.32	0.63
41:LD:50:ARG:NH2	41:LD:147:ASP:OD1	2.27	0.63
57:LU:94:ASN:HB2	57:LU:96:LEU:HD11	1.80	0.63
72:Lk:60:LEU:HD22	72:Lk:61:PRO:HD2	1.79	0.63
1:S2:165:G:OP2	1:S2:165:G:N2	2.24	0.63
7:SS:73:ASN:N	7:SS:73:ASN:OD1	2.31	0.63
9:SU:46:LYS:HE3	9:SU:101:ILE:HG12	1.81	0.63
23:SY:40:ILE:HD11	23:SY:57:VAL:HG21	1.81	0.63
35:L5:1435:G:O6	35:L5:1449:C:N4	2.20	0.63
35:L5:2324:C:O2'	66:Le:98:GLU:OE1	2.17	0.63
37:L8:137:A:H2'	37:L8:138:C:C6	2.34	0.63
43:LF:156:LYS:NZ	43:LF:248:ASN:OXT	2.31	0.63
59:LX:102:VAL:HA	59:LX:134:LYS:HD2	1.81	0.63
83:CB:104:ASP:OD1	83:CB:105:SER:N	2.31	0.63
6:SQ:43:GLU:HG3	6:SQ:44:PRO:HD3	1.79	0.62
6:SQ:54:PRO:HG2	6:SQ:88:ILE:HD11	1.80	0.62
15:Sf:121:CYS:HB3	15:Sf:126:CYS:HB2	1.80	0.62
26:SB:24:PRO:HB2	26:SB:28:LYS:HE2	1.81	0.62
27:SH:100:ILE:HD11	27:SH:125:VAL:HG11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Lt:105:THR:HG22	82:Lt:107:ASP:H	1.63	0.62
83:CB:401:MET:HG2	83:CB:529:LYS:HG3	1.81	0.62
2:SD:146:ARG:NH1	16:CD:204:LEU:O	2.32	0.62
26:SB:137:LEU:HD13	26:SB:215:VAL:HG12	1.81	0.62
35:L5:1461:C:H2'	35:L5:1462:A:H8	1.63	0.62
35:L5:2262:G:OP2	78:Lr:98:ARG:NH1	2.32	0.62
35:L5:4075:U:OP1	44:LG:249:ARG:NH2	2.28	0.62
37:L8:90:C:HO2'	60:LY:24:HIS:HD1	1.46	0.62
78:Lr:93:ILE:HD11	78:Lr:110:ALA:HB1	1.79	0.62
83:CB:50:ARG:O	83:CB:55:ARG:NH1	2.31	0.62
8:ST:27:LYS:HB2	8:ST:110:LEU:HD11	1.80	0.62
15:Sf:103:LEU:C	15:Sf:104:LYS:HD3	2.24	0.62
19:SL:87:VAL:HA	19:SL:110:SER:HA	1.80	0.62
25:SA:169:HIS:HA	25:SA:203:PHE:CE1	2.35	0.62
35:L5:3952:A:H2'	35:L5:3953:G:C8	2.34	0.62
42:LE:278:THR:O	67:Lf:4:ARG:NH2	2.32	0.62
4:SK:27:VAL:HG23	4:SK:43:LEU:HD23	1.81	0.62
7:SS:35:GLY:O	7:SS:97:GLN:NE2	2.32	0.62
8:ST:18:LEU:HB2	8:ST:134:ILE:HG21	1.79	0.62
18:SI:72:CYS:HB2	18:SI:109:TYR:HE1	1.64	0.62
22:SJ:20:PHE:H	22:SJ:24:ARG:HH21	1.47	0.62
27:SH:167:GLU:N	27:SH:167:GLU:OE2	2.32	0.62
35:L5:1234:G:H2'	35:L5:1235:G:C8	2.35	0.62
35:L5:3811:G:O2'	35:L5:3814:U:OP2	2.16	0.62
47:LJ:15:LEU:HD21	47:LJ:157:ILE:HG12	1.81	0.62
57:LU:80:LYS:NZ	57:LU:109:SER:O	2.30	0.62
80:CA:181:PRO:HA	80:CA:230:VAL:HA	1.81	0.62
83:CB:416:VAL:O	83:CB:467:GLY:N	2.32	0.62
84:Et:22:G:H2'	84:Et:23:A:C8	2.33	0.62
1:S2:67:C:H41	21:SG:167:LYS:HD3	1.65	0.62
7:SS:98:VAL:HG23	7:SS:103:LEU:HB2	1.79	0.62
10:Sc:12:ALA:N	10:Sc:56:LEU:O	2.31	0.62
56:LT:43:LYS:O	56:LT:58:HIS:ND1	2.31	0.62
1:S2:145:G:H2'	1:S2:146:G:C8	2.35	0.62
1:S2:927:C:H1'	34:Sb:51:GLN:NE2	2.14	0.62
1:S2:993:G:OP1	1:S2:1131:G:N2	2.25	0.62
34:Sb:49:HIS:ND1	34:Sb:69:GLY:O	2.32	0.62
1:S2:996:A:H2'	1:S2:997:A:C8	2.35	0.62
1:S2:1408:U:H4'	6:SQ:24:HIS:CE1	2.35	0.62
21:SG:116:LYS:NZ	21:SG:125:THR:HG21	2.14	0.62
31:SN:5:HIS:HD2	31:SN:117:LEU:HD22	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4128:A:H1'	44:LG:35:ARG:HG3	1.82	0.62
47:LJ:96:LYS:HD2	47:LJ:175:LEU:HA	1.81	0.62
79:Lz:55:LEU:H	79:Lz:154:THR:HG21	1.65	0.62
83:CB:21:ASN:HA	83:CB:101:ASN:HB3	1.80	0.62
1:S2:604:A:N3	1:S2:639:C:O2'	2.31	0.62
1:S2:1461:G:H3'	1:S2:1463:U:H3	1.64	0.62
25:SA:185:MET:HE1	28:SV:46:PHE:HB2	1.80	0.62
35:L5:3736:A:H2'	35:L5:3737:A:C8	2.35	0.62
42:LE:161:ARG:NH1	42:LE:273:SER:OG	2.33	0.62
80:CA:122:ALA:HB3	80:CA:320:LYS:HB3	1.80	0.62
5:SP:84:ILE:H	5:SP:84:ILE:HD12	1.64	0.62
22:SJ:134:HIS:CD2	22:SJ:163:SER:HB2	2.34	0.62
35:L5:444:G:H2'	35:L5:445:U:C6	2.35	0.62
35:L5:1461:C:H2'	35:L5:1462:A:C8	2.35	0.62
1:S2:568:C:H2'	1:S2:569:A:O4'	2.00	0.62
1:S2:639:C:H2'	1:S2:640:A:C8	2.34	0.62
5:SP:38:SER:OG	5:SP:41:GLN:OE1	2.15	0.62
12:Sg:109:LEU:HD21	12:Sg:125:ARG:HD3	1.81	0.62
35:L5:46:U:H5"	48:LL:16:LYS:HG2	1.82	0.62
45:LH:81:ILE:O	45:LH:85:THR:HG22	2.00	0.62
1:S2:367:U:H4'	1:S2:371:A:C8	2.34	0.61
1:S2:453:C:O2'	21:SG:92:ARG:O	2.17	0.61
9:SU:28:ASN:OD1	9:SU:31:SER:OG	2.18	0.61
17:SE:198:ARG:HG2	17:SE:208:VAL:HG12	1.81	0.61
18:SI:87:ASN:HB3	18:SI:90:LEU:HD23	1.82	0.61
26:SB:77:ASP:N	26:SB:77:ASP:OD1	2.32	0.61
30:SC:149:THR:HA	30:SC:152:ARG:HG2	1.82	0.61
35:L5:1333:A:H2'	35:L5:1334:A:C8	2.35	0.61
83:CB:370:GLU:O	83:CB:495:ARG:NH1	2.33	0.61
1:S2:570:C:O2'	23:SY:34:THR:O	2.18	0.61
1:S2:696:G:O2'	1:S2:736:C:O2	2.18	0.61
1:S2:1388:A:H61	2:SD:161:GLY:HA3	1.65	0.61
1:S2:1542:C:H4'	8:ST:11:GLN:HB2	1.81	0.61
6:SQ:85:ARG:NH2	6:SQ:116:ASP:OD2	2.33	0.61
35:L5:4765:G:H21	55:LS:173:ASN:HD21	1.48	0.61
35:L5:4910:G:N2	51:LO:106:ASP:O	2.33	0.61
50:LN:39:ALA:HB3	50:LN:61:ILE:HG22	1.83	0.61
70:Li:63:VAL:HG12	70:Li:65:LYS:HG3	1.81	0.61
80:CA:25:GLY:HA3	80:CA:333:ILE:HB	1.82	0.61
35:L5:1435:G:N1	35:L5:1449:C:N3	2.34	0.61
35:L5:1755:C:N3	35:L5:1776:A:N1	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4239:A:H2'	35:L5:4240:G:C8	2.35	0.61
38:LA:229:ALA:HB3	38:LA:234:LYS:HB3	1.80	0.61
41:LD:265:ARG:HD3	41:LD:269:PRO:HD3	1.82	0.61
83:CB:621:GLU:HG3	83:CB:622:VAL:HG23	1.82	0.61
1:S2:24:C:HO2'	1:S2:25:A:H8	1.47	0.61
1:S2:380:G:N3	18:SI:5:ARG:NH1	2.48	0.61
16:CD:225:LEU:O	24:Se:51:LYS:NZ	2.33	0.61
21:SG:126:ASP:OD1	21:SG:126:ASP:N	2.32	0.61
46:LI:87:MET:HG2	46:LI:138:ILE:HG12	1.82	0.61
69:Lh:58:LEU:HD23	69:Lh:61:ILE:HD11	1.82	0.61
79:Lz:160:LYS:HG2	79:Lz:161:LYS:N	2.15	0.61
80:CA:183:GLU:OE2	80:CA:209:GLN:NE2	2.33	0.61
1:S2:298:G:OP1	17:SE:134:LYS:N	2.33	0.61
1:S2:980:A:H2'	1:S2:981:A:C8	2.35	0.61
1:S2:1588:A:H2'	1:S2:1589:A:C8	2.36	0.61
13:SM:58:GLU:HB3	13:SM:61:TYR:HB2	1.83	0.61
35:L5:1756:U:O2'	35:L5:1758:G:OP2	2.18	0.61
35:L5:3937:C:H1'	50:LN:125:SER:HB2	1.82	0.61
43:LF:222:LYS:HB3	43:LF:231:GLY:HA2	1.81	0.61
52:LP:41:ILE:HG23	52:LP:42:ARG:HD2	1.82	0.61
69:Lh:95:LEU:HD23	69:Lh:99:GLU:HG3	1.82	0.61
80:CA:116:GLY:HA3	80:CA:193:HIS:ND1	2.16	0.61
1:S2:1420:G:O2'	1:S2:1421:A:O4'	2.18	0.61
1:S2:1630:A:O2'	7:SS:85:ASN:ND2	2.34	0.61
3:SF:35:LEU:HB3	3:SF:39:ILE:HG12	1.82	0.61
18:SI:83:TYR:HB2	18:SI:202:ILE:HD11	1.81	0.61
22:SJ:37:LEU:HD12	22:SJ:43:VAL:HG22	1.80	0.61
36:L7:6:C:H4'	41:LD:52:ILE:HD13	1.81	0.61
54:LR:32:ILE:HG13	54:LR:44:LEU:HD13	1.82	0.61
80:CA:233:GLY:N	80:CA:314:GLU:OE2	2.33	0.61
83:CB:596:PRO:HG2	83:CB:597:ASN:H	1.66	0.61
1:S2:1628:C:H5"	8:ST:38:LYS:HE2	1.82	0.61
61:LZ:5:MET:HE3	61:LZ:82:PRO:HB3	1.82	0.61
83:CB:3:ASN:HA	83:CB:46:ILE:HA	1.83	0.61
2:SD:22:ASN:O	2:SD:26:THR:OG1	2.16	0.61
20:SX:96:GLU:OE1	20:SX:97:ASN:ND2	2.33	0.61
22:SJ:124:HIS:HD2	24:Se:31:ARG:HD2	1.65	0.61
25:SA:85:ARG:NH1	25:SA:203:PHE:O	2.31	0.61
35:L5:2021:G:OP1	81:Ls:58:ASN:ND2	2.26	0.61
35:L5:3911:C:H2'	35:L5:3912:U:H6	1.65	0.61
39:LB:50:LYS:HB2	39:LB:345:LEU:HD11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:LJ:18:ARG:HB2	47:LJ:133:VAL:HG23	1.82	0.61
1:S2:28:U:H2'	1:S2:29:G:H8	1.66	0.61
1:S2:532:C:H2'	1:S2:533:A:C8	2.35	0.61
21:SG:74:ARG:HD2	21:SG:96:SER:HB3	1.82	0.61
35:L5:128:C:H2'	35:L5:129:C:C6	2.35	0.61
35:L5:4127:A:HO2'	35:L5:4128:A:H8	1.49	0.61
35:L5:4537:C:H2'	35:L5:4538:G:H8	1.65	0.61
1:S2:1755:C:C4	1:S2:1756:C:N4	2.69	0.61
10:Sc:31:ARG:HA	10:Sc:43:ILE:HA	1.82	0.61
13:SM:33:ARG:HG2	13:SM:91:LEU:HD11	1.81	0.61
26:SB:62:LEU:HA	26:SB:65:ARG:HH21	1.66	0.61
27:SH:46:THR:HG23	27:SH:65:PRO:HD3	1.83	0.61
32:SO:74:ALA:HB3	32:SO:114:SER:HB2	1.82	0.61
35:L5:1577:G:O2'	35:L5:1612:G:H4'	2.01	0.61
35:L5:2579:G:N2	35:L5:2582:A:OP2	2.28	0.61
35:L5:3722:G:OP2	70:Li:68:ARG:NH1	2.34	0.61
35:L5:4238:G:H2'	35:L5:4239:A:C8	2.35	0.61
39:LB:302:ASN:O	39:LB:304:SER:N	2.33	0.61
84:Et:58:A:O2'	84:Et:60:U:OP2	2.15	0.61
22:SJ:122:SER:O	22:SJ:125:HIS:N	2.33	0.60
26:SB:129:THR:OG1	26:SB:131:ASP:OD1	2.19	0.60
35:L5:691:C:H2'	35:L5:692:A:C8	2.35	0.60
35:L5:3873:G:H2'	35:L5:3874:G:C8	2.36	0.60
35:L5:4431:U:OP2	46:LI:3:ARG:NH2	2.32	0.60
42:LE:224:LYS:NZ	42:LE:234:ASP:OD2	2.33	0.60
51:LO:186:GLU:HA	51:LO:189:ILE:HG22	1.83	0.60
1:S2:5:U:H2'	1:S2:6:G:H8	1.66	0.60
1:S2:1700:C:O2	1:S2:1834:A:N6	2.34	0.60
27:SH:101:LEU:O	27:SH:116:ARG:NH1	2.34	0.60
35:L5:1701:A:OP1	35:L5:1703:C:N4	2.22	0.60
35:L5:1994:C:H2'	35:L5:1995:G:C8	2.36	0.60
43:LF:180:GLY:HA2	43:LF:185:ILE:HG22	1.82	0.60
45:LH:23:ARG:NH1	45:LH:41:ILE:O	2.29	0.60
57:LU:19:LEU:HD23	57:LU:19:LEU:H	1.66	0.60
58:LV:65:VAL:HG22	58:LV:73:ARG:HA	1.83	0.60
16:CD:188:ARG:HH12	16:CD:190:LYS:HZ3	1.49	0.60
25:SA:4:ALA:H	28:SV:79:VAL:HG12	1.65	0.60
35:L5:498:C:H42	35:L5:657:C:H42	1.49	0.60
35:L5:1646:A:O2'	71:Lj:49:TRP:O	2.19	0.60
35:L5:1683:U:OP1	62:La:44:ASN:ND2	2.32	0.60
35:L5:3963:A:H62	35:L5:3966:A:H8	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4896:G:H2'	35:L5:4897:G:C8	2.36	0.60
44:LG:50:ASP:OD2	44:LG:52:THR:HG23	2.01	0.60
1:S2:1203:G:H2'	1:S2:1204:A:C8	2.36	0.60
14:SZ:99:LEU:HD21	14:SZ:102:LYS:HB2	1.84	0.60
17:SE:229:GLY:HA2	17:SE:235:TRP:CD1	2.37	0.60
22:SJ:40:LYS:HA	22:SJ:43:VAL:HG23	1.84	0.60
25:SA:211:GLU:OE2	25:SA:211:GLU:N	2.28	0.60
33:SW:112:ASP:OD1	33:SW:115:GLU:HG3	2.01	0.60
35:L5:4302:U:H4'	56:LT:5:LYS:HD2	1.82	0.60
42:LE:222:LEU:HD21	42:LE:223:ARG:NH1	2.15	0.60
83:CB:351:LEU:HA	83:CB:354:ILE:HG12	1.84	0.60
1:S2:332:G:O6	21:SG:186:GLN:NE2	2.30	0.60
14:SZ:79:ILE:HD12	14:SZ:83:LEU:HD11	1.83	0.60
22:SJ:75:ASN:HA	22:SJ:78:LEU:HD12	1.83	0.60
34:Sb:23:ARG:NH1	34:Sb:27:SER:OG	2.34	0.60
35:L5:75:G:O2'	48:LL:101:ARG:NH1	2.34	0.60
35:L5:1824:G:H5"	56:LT:35:LYS:HE3	1.83	0.60
38:LA:144:LYS:HE3	38:LA:159:SER:HB3	1.83	0.60
45:LH:41:ILE:HG12	45:LH:73:ILE:HD11	1.82	0.60
79:Lz:32:VAL:N	79:Lz:170:GLY:O	2.33	0.60
1:S2:1533:A:H2	1:S2:1536:G:N3	2.00	0.60
1:S2:1745:A:O3'	21:SG:31:ARG:NH1	2.34	0.60
7:SS:53:THR:O	7:SS:55:ARG:NH1	2.34	0.60
14:SZ:77:LEU:HG	14:SZ:78:LYS:H	1.67	0.60
35:L5:4310:A:N3	56:LT:7:LYS:NZ	2.45	0.60
35:L5:4604:G:OP1	45:LH:174:LYS:NZ	2.35	0.60
61:LZ:42:LEU:HD13	61:LZ:98:LYS:HZ3	1.67	0.60
61:LZ:54:THR:H	61:LZ:57:MET:HE3	1.66	0.60
1:S2:56:G:OP1	23:SY:111:LYS:NZ	2.31	0.60
13:SM:129:LYS:HA	13:SM:132:LYS:HD2	1.84	0.60
18:SI:43:ILE:HD11	18:SI:60:LEU:HD21	1.84	0.60
27:SH:20:GLU:O	27:SH:24:SER:N	2.35	0.60
35:L5:1591:U:OP2	35:L5:2856:C:O2'	2.13	0.60
35:L5:2601:A:N6	35:L5:2744:A:OP2	2.32	0.60
35:L5:2856:C:O2	39:LB:242:ARG:NH2	2.32	0.60
40:LC:211:TYR:HE2	40:LC:229:LEU:HB3	1.66	0.60
42:LE:179:LEU:HD22	42:LE:183:ARG:HA	1.84	0.60
7:SS:73:ASN:O	7:SS:76:GLN:NE2	2.32	0.60
11:Sd:40:ARG:NH1	11:Sd:41:GLN:OE1	2.34	0.60
25:SA:184:ARG:NH2	25:SA:193:HIS:O	2.34	0.60
35:L5:1961:G:O2'	35:L5:2025:A:N6	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2319:C:OP2	66:Le:62:SER:OG	2.14	0.60
35:L5:4941:G:OP2	42:LE:188:ARG:NH2	2.33	0.60
59:LX:64:SER:HB2	69:Lh:69:LEU:HD13	1.84	0.60
83:CB:561:LEU:HA	83:CB:565:HIS:HB2	1.83	0.60
1:S2:329:G:H2'	1:S2:330:G:C8	2.37	0.60
3:SF:22:LYS:HG3	3:SF:23:TRP:CE2	2.37	0.60
8:ST:38:LYS:NZ	8:ST:41:LYS:HA	2.17	0.60
12:Sg:40:ILE:HB	12:Sg:59:LEU:HB3	1.82	0.60
19:SL:35:ARG:NH1	19:SL:53:GLY:O	2.35	0.60
35:L5:1095:A:N1	35:L5:1200:G:C6	2.70	0.60
79:Lz:18:LEU:O	79:Lz:19:HIS:ND1	2.34	0.60
80:CA:27:ILE:HA	80:CA:30:ARG:HE	1.67	0.60
1:S2:329:G:H2'	1:S2:330:G:H8	1.67	0.60
1:S2:600:G:H2'	1:S2:601:G:H8	1.66	0.60
1:S2:640:A:H2'	1:S2:641:A:C8	2.37	0.60
6:SQ:34:VAL:HG23	6:SQ:70:VAL:HB	1.84	0.60
10:Sc:21:THR:OG1	10:Sc:66:ARG:NH2	2.33	0.60
12:Sg:282:GLU:HG2	12:Sg:283:PRO:HD2	1.84	0.60
1:S2:1673:U:O2'	3:SF:84:GLY:O	2.20	0.59
7:SS:106:LYS:HA	7:SS:109:GLU:HG2	1.82	0.59
9:SU:101:ILE:HD12	9:SU:101:ILE:H	1.66	0.59
21:SG:7:PHE:CE1	21:SG:10:THR:HG23	2.37	0.59
35:L5:93:G:H2'	35:L5:94:A:C8	2.37	0.59
35:L5:2758:G:O2'	35:L5:2765:A:N3	2.28	0.59
38:LA:207:VAL:HG23	38:LA:208:GLU:OE2	2.02	0.59
44:LG:57:TRP:O	44:LG:62:ARG:NH1	2.34	0.59
1:S2:377:G:H5'	18:SI:98:LYS:HB3	1.83	0.59
1:S2:1745:A:N3	21:SG:65:GLN:NE2	2.48	0.59
6:SQ:40:GLU:HA	6:SQ:48:GLN:HE22	1.68	0.59
12:Sg:302:TYR:HE2	12:Sg:308:ARG:HH11	1.49	0.59
21:SG:50:VAL:HG11	21:SG:111:LEU:HD13	1.82	0.59
23:SY:26:ASP:N	23:SY:26:ASP:OD1	2.35	0.59
25:SA:77:ILE:HG22	25:SA:99:ILE:HB	1.84	0.59
26:SB:49:VAL:HG11	26:SB:62:LEU:HD21	1.84	0.59
35:L5:1852:U:OP1	62:La:23:GLY:N	2.32	0.59
35:L5:4281:A:H2'	35:L5:4282:A:H2'	1.83	0.59
79:Lz:153:SER:OG	79:Lz:156:LYS:NZ	2.35	0.59
82:Lt:124:GLU:HB3	82:Lt:125:LEU:HD22	1.84	0.59
83:CB:394:LEU:HD23	83:CB:487:THR:HG23	1.84	0.59
1:S2:496:C:OP1	17:SE:49:ARG:NH2	2.32	0.59
1:S2:556:U:H3'	1:S2:557:U:H4'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:990:A:OP2	29:Sa:37:LYS:NZ	2.34	0.59
1:S2:1446:A:N3	9:SU:55:ARG:NH1	2.49	0.59
6:SQ:105:LYS:HA	6:SQ:108:ILE:HG22	1.85	0.59
7:SS:47:LYS:HG3	7:SS:79:ILE:HD11	1.84	0.59
20:SX:11:ARG:O	20:SX:15:SER:OG	2.16	0.59
23:SY:94:HIS:O	23:SY:94:HIS:ND1	2.35	0.59
26:SB:63:LYS:HG2	26:SB:89:GLU:O	2.02	0.59
27:SH:93:VAL:HG11	27:SH:133:LEU:HD12	1.83	0.59
35:L5:138:G:H2'	35:L5:139:G:H8	1.66	0.59
35:L5:663:G:H2'	35:L5:664:G:C8	2.37	0.59
35:L5:966:A:OP1	35:L5:967:C:N4	2.34	0.59
38:LA:29:LEU:O	38:LA:123:ARG:NE	2.29	0.59
42:LE:56:ARG:O	42:LE:56:ARG:NH1	2.32	0.59
1:S2:1010:G:H2'	1:S2:1011:A:C8	2.38	0.59
1:S2:1535:U:O3'	3:SF:88:MET:HE1	2.03	0.59
12:Sg:143:GLN:CD	12:Sg:144:ASP:H	2.09	0.59
14:SZ:52:LYS:HZ2	14:SZ:55:TYR:HB3	1.66	0.59
17:SE:162:ILE:HG22	17:SE:169:ILE:HA	1.83	0.59
20:SX:95:GLU:OE1	20:SX:140:ARG:NH1	2.35	0.59
31:SN:25:TRP:CD2	34:Sb:82:LYS:HE2	2.37	0.59
35:L5:1915:C:OP2	51:LO:94:ARG:NH2	2.35	0.59
35:L5:4093:G:N1	35:L5:4114:C:N3	2.50	0.59
79:Lz:143:ASN:ND2	79:Lz:150:GLU:OE1	2.35	0.59
1:S2:106:C:H2'	1:S2:107:A:H8	1.67	0.59
1:S2:165:G:H2'	1:S2:166:A:C8	2.36	0.59
5:SP:53:GLN:CD	5:SP:53:GLN:H	2.09	0.59
8:ST:75:MET:HA	8:ST:75:MET:HE3	1.84	0.59
12:Sg:284:PRO:HB2	12:Sg:302:TYR:HB2	1.84	0.59
35:L5:2021:G:OP1	81:Ls:58:ASN:N	2.32	0.59
35:L5:4260:U:H2'	35:L5:4261:C:H6	1.65	0.59
35:L5:4940:C:H5'	35:L5:4941:G:H5"	1.84	0.59
44:LG:29:ASN:HD21	44:LG:31:LEU:HB2	1.68	0.59
70:Li:2:ALA:N	70:Li:5:TYR:HH	1.99	0.59
71:Lj:33:THR:HG23	71:Lj:40:PRO:HD3	1.83	0.59
81:Ls:135:THR:HG22	81:Ls:139:GLN:HE21	1.67	0.59
18:SI:81:VAL:HB	18:SI:102:VAL:HG12	1.83	0.59
32:SO:34:PHE:HB3	32:SO:41:PHE:HB2	1.84	0.59
35:L5:1730:U:H4'	56:LT:100:LYS:HG3	1.84	0.59
35:L5:4165:C:OP1	44:LG:53:ARG:NH2	2.34	0.59
42:LE:281:ILE:HB	42:LE:286:LEU:HD21	1.84	0.59
80:CA:249:ARG:NH2	80:CA:274:ASP:OD1	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:27:HIS:CD2	83:CB:138:GLN:HB2	2.38	0.59
83:CB:581:GLU:N	83:CB:581:GLU:OE1	2.36	0.59
1:S2:1156:U:O4	30:SC:194:ARG:NH1	2.35	0.59
6:SQ:50:LYS:HD2	6:SQ:85:ARG:HH12	1.67	0.59
13:SM:15:ASN:OD1	13:SM:16:THR:N	2.35	0.59
28:SV:38:GLU:OE1	28:SV:38:GLU:N	2.36	0.59
35:L5:943:A:N6	43:LF:188:GLU:OE2	2.29	0.59
35:L5:1707:C:H2'	63:Lb:103:LYS:HD2	1.85	0.59
35:L5:4239:A:H2'	35:L5:4240:G:H8	1.67	0.59
42:LE:145:THR:HB	42:LE:200:LYS:HE3	1.85	0.59
81:Ls:52:VAL:HG13	81:Ls:90:PHE:HB2	1.84	0.59
3:SF:32:ASP:OD1	3:SF:34:SER:OG	2.18	0.59
20:SX:52:LEU:HD11	20:SX:73:GLN:HB2	1.85	0.59
21:SG:167:LYS:HE3	21:SG:170:ARG:HG2	1.85	0.59
35:L5:1996:C:O2	81:Ls:41:GLN:NE2	2.31	0.59
36:L7:48:G:OP1	41:LD:226:TYR:OH	2.20	0.59
69:Lh:16:GLU:HA	69:Lh:19:LYS:HB3	1.84	0.59
1:S2:1562:C:H2'	1:S2:1563:G:C8	2.37	0.59
8:ST:129:ARG:O	8:ST:133:ARG:HG2	2.02	0.59
16:CD:282:THR:N	16:CD:285:GLU:OE2	2.35	0.59
25:SA:169:HIS:HD1	25:SA:203:PHE:HE1	1.50	0.59
35:L5:178:C:N4	35:L5:179:G:O6	2.36	0.59
35:L5:2017:A:O2'	35:L5:2018:C:O5'	2.21	0.59
39:LB:369:ASP:OD2	85:LW:17:HIS:NE2	2.34	0.59
83:CB:75:ILE:HG13	83:CB:454:MET:HA	1.85	0.59
1:S2:1844:U:OP2	75:Ln:11:ARG:NH2	2.36	0.59
32:SO:45:THR:HA	32:SO:52:THR:HA	1.85	0.59
35:L5:746:A:H2'	35:L5:747:A:C8	2.38	0.59
81:Ls:13:TYR:OH	81:Ls:61:MET:SD	2.61	0.59
1:S2:303:C:H4'	18:SI:75:LYS:HD2	1.85	0.58
1:S2:975:G:O2'	32:SO:49:GLY:O	2.18	0.58
1:S2:1551:U:OP1	2:SD:9:ARG:NH2	2.35	0.58
1:S2:1585:U:C4	8:ST:67:ARG:HD2	2.37	0.58
1:S2:1740:C:OP1	18:SI:44:HIS:ND1	2.33	0.58
35:L5:256:G:H2'	35:L5:257:C:C6	2.38	0.58
35:L5:1220:G:H2'	35:L5:1221:G:C8	2.38	0.58
35:L5:3736:A:H2'	35:L5:3737:A:H8	1.68	0.58
80:CA:139:LYS:HG2	80:CA:315:PHE:CD2	2.37	0.58
1:S2:1627:C:H5"	8:ST:41:LYS:HD2	1.84	0.58
1:S2:1658:G:OP2	1:S2:1660:C:N4	2.35	0.58
1:S2:1681:U:O2'	10:Sc:23:SER:O	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1781:A:O2'	1:S2:1782:G:N7	2.33	0.58
16:CD:188:ARG:NH1	16:CD:190:LYS:HZ3	2.01	0.58
25:SA:173:LEU:HD11	25:SA:177:MET:HE2	1.84	0.58
35:L5:184:U:H1'	35:L5:254:G:H22	1.68	0.58
35:L5:1270:A:H8	35:L5:2106:G:H21	1.50	0.58
35:L5:1669:A:H4'	35:L5:1685:G:N2	2.18	0.58
42:LE:91:THR:HG22	42:LE:108:LYS:HB2	1.85	0.58
42:LE:128:HIS:ND1	42:LE:128:HIS:O	2.36	0.58
45:LH:96:TYR:HA	45:LH:177:ASP:HB2	1.83	0.58
80:CA:25:GLY:HA2	80:CA:334:THR:HG22	1.85	0.58
1:S2:1285:G:OP2	13:SM:61:TYR:OH	2.21	0.58
15:Sf:119:ARG:O	15:Sf:132:MET:HB2	2.02	0.58
20:SX:107:ARG:HG3	20:SX:110:HIS:HB3	1.85	0.58
27:SH:171:GLU:OE1	27:SH:171:GLU:N	2.35	0.58
35:L5:711:A:H2'	35:L5:712:C:C6	2.38	0.58
35:L5:4322:G:N2	35:L5:4325:A:OP2	2.35	0.58
35:L5:4967:A:H2'	35:L5:4968:A:C8	2.38	0.58
63:Lb:8:THR:HG22	63:Lb:10:HIS:H	1.69	0.58
79:Lz:53:VAL:HG13	79:Lz:157:PHE:HZ	1.68	0.58
4:SK:41:PRO:HD2	4:SK:44:HIS:HB2	1.85	0.58
12:Sg:41:ILE:HG23	12:Sg:55:PRO:HB3	1.85	0.58
18:SI:83:TYR:HD2	18:SI:101:ILE:HD13	1.68	0.58
27:SH:142:LYS:HG2	27:SH:156:VAL:HG23	1.86	0.58
35:L5:2444:U:O2'	37:L8:112:G:O2'	2.21	0.58
35:L5:3641:U:H5	35:L5:3646:A:N7	2.01	0.58
39:LB:161:ARG:HG2	39:LB:184:GLN:HA	1.83	0.58
83:CB:157:MET:HE1	83:CB:181:ILE:HG21	1.84	0.58
83:CB:742:GLU:OE1	83:CB:791:ASN:ND2	2.36	0.58
2:SD:141:LYS:HB3	2:SD:147:ALA:HB2	1.83	0.58
10:Sc:44:ARG:NH2	10:Sc:63:ARG:HD2	2.18	0.58
35:L5:1179:U:H3'	35:L5:1180:C:H5"	1.85	0.58
35:L5:1933:G:H2'	35:L5:1934:A:C8	2.39	0.58
35:L5:4208:U:OP2	56:LT:4:THR:OG1	2.19	0.58
41:LD:18:VAL:HG22	41:LD:24:ARG:HD2	1.83	0.58
49:LM:136:LEU:O	49:LM:137:LYS:NZ	2.35	0.58
68:Lg:94:ALA:O	68:Lg:98:GLU:HG2	2.03	0.58
83:CB:689:GLU:O	83:CB:730:TYR:OH	2.19	0.58
1:S2:656:G:N2	1:S2:663:C:H5"	2.17	0.58
1:S2:1550:G:O2'	1:S2:1558:C:O2	2.20	0.58
1:S2:1598:G:N2	1:S2:1599:U:O4	2.35	0.58
12:Sg:17:TRP:H	12:Sg:36:ARG:HB2	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:SA:77:ILE:HD11	25:SA:124:VAL:HG22	1.85	0.58
35:L5:952:G:H5”	67:Lf:73:LYS:HE3	1.84	0.58
35:L5:2667:C:O4’	54:LR:96:MET:HG3	2.04	0.58
35:L5:2704:C:H2’	35:L5:2705:G:C8	2.39	0.58
41:LD:164:LYS:NZ	41:LD:168:ASP:OD1	2.37	0.58
61:LZ:68:ILE:HD12	61:LZ:119:GLU:HG3	1.85	0.58
66:Le:85:LEU:HD22	66:Le:111:ILE:HG23	1.85	0.58
80:CA:154:LEU:HD11	80:CA:332:ARG:HD2	1.84	0.58
83:CB:72:SER:HB3	83:CB:114:GLU:CD	2.28	0.58
84:Et:16:C:H5”	84:Et:60:U:H3	1.68	0.58
85:LW:2:LYS:HE2	85:LW:4:GLU:HB2	1.85	0.58
1:S2:51:U:H2’	1:S2:52:G:H8	1.68	0.58
13:SM:30:GLY:O	13:SM:112:LYS:NZ	2.34	0.58
17:SE:210:VAL:HB	17:SE:218:PHE:CE1	2.37	0.58
25:SA:8:LEU:HD21	25:SA:59:LEU:HD11	1.86	0.58
35:L5:280:G:OP2	50:LN:44:ARG:NH1	2.32	0.58
35:L5:982:U:H2’	35:L5:983:C:C6	2.39	0.58
35:L5:2259:G:H5’	35:L5:2260:C:C5	2.39	0.58
43:LF:50:ILE:HD11	43:LF:185:ILE:HD12	1.86	0.58
53:LQ:50:ARG:HA	53:LQ:53:MET:HE3	1.85	0.58
1:S2:1239:U:H5”	5:SP:124:LYS:HD2	1.84	0.58
27:SH:81:ARG:HG2	27:SH:85:LYS:HE3	1.86	0.58
35:L5:1179:U:OP2	41:LD:289:ARG:NH2	2.37	0.58
35:L5:1762:C:C4	35:L5:1770:A:N1	2.72	0.58
35:L5:2906:G:H1’	35:L5:2908:U:H1’	1.85	0.58
35:L5:3966:A:N6	35:L5:4057:C:O2	2.37	0.58
83:CB:62:ASP:OD2	83:CB:559:LYS:NZ	2.29	0.58
1:S2:1656:G:H1	1:S2:1668:U:H3	1.52	0.58
36:L7:5:A:OP1	47:LJ:147:ARG:NH1	2.37	0.58
50:LN:116:LEU:HD22	50:LN:135:ILE:HD11	1.85	0.58
68:Lg:5:LEU:HD21	68:Lg:30:ILE:HG22	1.85	0.58
83:CB:815:ASP:OD2	83:CB:816:HIS:ND1	2.28	0.58
1:S2:145:G:H2’	1:S2:146:G:H8	1.68	0.58
1:S2:747:U:O2	27:SH:111:LYS:NZ	2.36	0.58
1:S2:1504:U:H5”	83:CB:667:LYS:NZ	2.18	0.58
9:SU:80:PHE:HB3	11:Sd:52:PHE:HB3	1.85	0.58
12:Sg:304:ASP:OD1	12:Sg:304:ASP:N	2.35	0.58
21:SG:7:PHE:HE1	21:SG:9:ALA:HB3	1.69	0.58
35:L5:1070:G:O2’	35:L5:1071:C:O5’	2.22	0.58
45:LH:112:VAL:HG13	45:LH:128:MET:HE3	1.85	0.58
51:LO:81:TRP:HB2	51:LO:104:VAL:HG21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:55:ARG:HG3	83:CB:56:PHE:H	1.68	0.58
83:CB:155:LEU:HD12	83:CB:212:VAL:HB	1.86	0.58
83:CB:659:PRO:HG2	83:CB:698:ARG:HB2	1.85	0.58
84:Et:33:U:O2'	84:Et:37:A:N6	2.37	0.58
8:ST:40:ALA:HB1	8:ST:42:HIS:CE1	2.39	0.57
17:SE:206:ASP:O	17:SE:222:LEU:N	2.37	0.57
28:SV:39:VAL:O	28:SV:41:LYS:NZ	2.36	0.57
59:LX:145:ASP:HB3	59:LX:148:ASP:HB3	1.86	0.57
72:Lk:10:ASP:HA	72:Lk:13:LEU:HG	1.85	0.57
83:CB:57:THR:OG1	83:CB:104:ASP:OD2	2.17	0.57
83:CB:250:ALA:O	83:CB:254:GLU:HG2	2.04	0.57
84:Et:4:C:H2'	84:Et:5:G:H8	1.69	0.57
1:S2:380:G:N1	1:S2:383:G:OP2	2.34	0.57
12:Sg:104:HIS:CE1	12:Sg:130:LYS:HD2	2.39	0.57
27:SH:31:GLU:OE2	27:SH:37:LYS:NZ	2.36	0.57
27:SH:145:ARG:NH1	33:SW:52:ILE:H	2.02	0.57
35:L5:1982:G:H2'	35:L5:1983:A:O4'	2.04	0.57
35:L5:3585:G:H2'	35:L5:3586:G:H8	1.67	0.57
43:LF:85:ALA:H	56:LT:138:ALA:HB2	1.70	0.57
79:Lz:29:LEU:HD21	79:Lz:173:LYS:HE3	1.86	0.57
1:S2:874:G:H2'	1:S2:875:A:H8	1.68	0.57
1:S2:1566:G:O6	8:ST:101:ARG:NH1	2.36	0.57
8:ST:38:LYS:HZ1	8:ST:41:LYS:HA	1.69	0.57
28:SV:11:LEU:HD23	28:SV:11:LEU:H	1.69	0.57
35:L5:4459:U:H2'	35:L5:4460:U:C6	2.39	0.57
35:L5:4732:G:N2	35:L5:4734:A:N7	2.52	0.57
81:Ls:136:SER:HA	81:Ls:139:GLN:HG3	1.86	0.57
1:S2:107:A:H2'	1:S2:108:G:C8	2.39	0.57
1:S2:925:G:N2	31:SN:48:SER:OG	2.35	0.57
1:S2:1781:A:H3'	1:S2:1783:C:C2	2.39	0.57
35:L5:234:G:H22	35:L5:2304:U:H3	1.51	0.57
35:L5:261:G:H2'	35:L5:262:G:H8	1.69	0.57
35:L5:4113:U:O2'	35:L5:4115:G:OP2	2.22	0.57
35:L5:4913:G:H4'	35:L5:4914:C:O5'	2.02	0.57
65:Ld:50:ARG:HG3	65:Ld:62:VAL:HB	1.85	0.57
80:CA:234:GLU:O	80:CA:236:LYS:NZ	2.32	0.57
83:CB:632:ALA:HB3	83:CB:647:ARG:HH11	1.69	0.57
1:S2:158:A:H61	1:S2:467:G:H1'	1.68	0.57
1:S2:1217:A:H2'	1:S2:1218:C:C6	2.40	0.57
2:SD:66:ILE:O	2:SD:70:THR:HG23	2.05	0.57
12:Sg:202:PRO:HD3	12:Sg:241:PHE:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1100:U:O3'	35:L5:1167:C:N4	2.37	0.57
35:L5:1346:C:H2'	35:L5:1347:G:H8	1.69	0.57
35:L5:1751:A:H2'	35:L5:1752:G:C8	2.39	0.57
35:L5:4715:C:OP1	39:LB:348:ARG:NH2	2.37	0.57
79:Lz:4:LYS:H	79:Lz:4:LYS:HD2	1.69	0.57
80:CA:185:MET:HG3	80:CA:229:LEU:HD23	1.86	0.57
1:S2:746:C:H2'	1:S2:747:U:C6	2.39	0.57
1:S2:846:G:P	17:SE:108:ARG:HH22	2.28	0.57
1:S2:1706:G:H5'	75:Ln:1:MET:HG3	1.86	0.57
7:SS:71:MET:HE2	7:SS:99:LEU:HD12	1.86	0.57
13:SM:83:LYS:HA	13:SM:105:GLY:HA3	1.86	0.57
15:Sf:88:PRO:HG2	15:Sf:89:LYS:HD2	1.86	0.57
26:SB:123:ALA:HB2	26:SB:165:ARG:HG3	1.86	0.57
32:SO:79:GLN:HA	32:SO:82:ALA:HB3	1.86	0.57
35:L5:3910:C:H2'	35:L5:3911:C:H6	1.69	0.57
44:LG:254:GLU:OE1	44:LG:257:LYS:NZ	2.28	0.57
47:LJ:160:GLU:CD	47:LJ:160:GLU:H	2.11	0.57
84:Et:16:C:H4'	84:Et:18:U:H5"	1.86	0.57
1:S2:321:C:OP2	85:LW:123:LYS:NZ	2.37	0.57
1:S2:388:U:H2'	1:S2:389:A:H8	1.70	0.57
1:S2:502:C:O3'	17:SE:62:LYS:NZ	2.37	0.57
1:S2:1378:A:N6	25:SA:136:GLU:OE2	2.36	0.57
10:Sc:59:LEU:HB2	10:Sc:63:ARG:HH22	1.70	0.57
18:SI:78:ILE:HA	18:SI:104:ILE:HG22	1.86	0.57
22:SJ:65:GLU:O	22:SJ:66:LYS:HG2	2.03	0.57
30:SC:169:TYR:OH	30:SC:175:GLY:O	2.20	0.57
31:SN:43:LYS:O	31:SN:43:LYS:NZ	2.32	0.57
35:L5:2611:A:H2'	35:L5:2612:G:C8	2.39	0.57
35:L5:4126:C:OP1	44:LG:37:LYS:NZ	2.38	0.57
82:Lt:62:LEU:H	82:Lt:75:PRO:HD3	1.69	0.57
85:LW:53:VAL:HG13	85:LW:57:ARG:HE	1.70	0.57
1:S2:64:A:OP2	21:SG:177:GLN:NE2	2.38	0.57
1:S2:1285:G:N1	13:SM:57:ASP:OD2	2.33	0.57
1:S2:1776:G:N2	1:S2:1777:G:N7	2.53	0.57
4:SK:3:MET:HE1	4:SK:48:ALA:HB2	1.87	0.57
14:SZ:69:THR:HG23	14:SZ:72:VAL:H	1.70	0.57
19:SL:5:GLN:NE2	19:SL:11:GLN:O	2.37	0.57
19:SL:11:GLN:HB3	19:SL:56:ILE:HG21	1.87	0.57
21:SG:142:ARG:HH22	21:SG:149:LYS:HD2	1.68	0.57
32:SO:14:VAL:N	32:SO:15:ILE:HA	2.19	0.57
35:L5:1836:G:N7	56:LT:116:LYS:NZ	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3666:C:OP1	38:LA:234:LYS:NZ	2.37	0.57
80:CA:203:GLN:HE22	80:CA:229:LEU:HB3	1.70	0.57
83:CB:686:ALA:HB2	83:CB:726:ARG:HG3	1.86	0.57
84:Et:23:A:H2'	84:Et:24:G:C8	2.39	0.57
1:S2:104:A:H62	1:S2:356:C:H5	1.52	0.57
1:S2:156:G:H1'	21:SG:56:ASN:HD21	1.68	0.57
1:S2:1115:U:O2'	1:S2:1117:C:OP2	2.20	0.57
6:SQ:38:PRO:HD2	6:SQ:41:MET:SD	2.45	0.57
17:SE:246:LEU:HD23	17:SE:246:LEU:H	1.69	0.57
21:SG:47:GLY:O	21:SG:115:LYS:NZ	2.33	0.57
35:L5:1332:C:H2'	35:L5:1333:A:H8	1.70	0.57
35:L5:3957:U:H5'	35:L5:3960:A:H62	1.69	0.57
35:L5:4139:G:H21	35:L5:4140:C:H41	1.53	0.57
35:L5:4378:A:O2'	35:L5:4379:A:H2'	2.05	0.57
42:LE:163:VAL:HG21	42:LE:201:ILE:HD11	1.87	0.57
80:CA:181:PRO:HB2	80:CA:204:ASN:HB2	1.87	0.57
80:CA:333:ILE:HG13	80:CA:334:THR:HG23	1.87	0.57
83:CB:20:ARG:HG3	83:CB:22:MET:HE3	1.85	0.57
1:S2:522:A:H5"	22:SJ:145:PRO:HD2	1.87	0.57
1:S2:534:G:H2'	1:S2:535:G:H8	1.69	0.57
3:SF:61:PHE:CE2	10:Sc:51:ARG:HD2	2.40	0.57
17:SE:71:LYS:NZ	17:SE:93:ASP:OD2	2.25	0.57
22:SJ:124:HIS:CE1	24:Se:35:ARG:HD3	2.39	0.57
25:SA:24:HIS:HB3	25:SA:51:LEU:HD11	1.85	0.57
26:SB:128:LYS:HE3	26:SB:134:LEU:HB3	1.87	0.57
27:SH:160:LYS:O	27:SH:160:LYS:NZ	2.31	0.57
35:L5:492:U:H2'	35:L5:493:G:C8	2.40	0.57
35:L5:1566:C:H2'	35:L5:1567:U:C6	2.39	0.57
35:L5:3887:C:OP2	51:LO:85:ARG:NH2	2.32	0.57
35:L5:4537:C:H2'	35:L5:4538:G:C8	2.39	0.57
37:L8:137:A:H2'	37:L8:138:C:H6	1.69	0.57
38:LA:225:ILE:HG12	38:LA:234:LYS:HA	1.86	0.57
52:LP:84:PRO:HB2	52:LP:87:SER:HB2	1.86	0.57
26:SB:71:LEU:HD11	26:SB:189:ILE:HG23	1.86	0.56
35:L5:1259:G:H2'	35:L5:1260:G:H8	1.70	0.56
35:L5:4646:U:OP1	54:LR:59:SER:N	2.33	0.56
38:LA:28:ARG:HB2	38:LA:123:ARG:HB2	1.87	0.56
1:S2:144:U:H3'	21:SG:178:ARG:HH22	1.70	0.56
1:S2:1189:A:H2'	1:S2:1190:A:H8	1.70	0.56
1:S2:1526:G:OP1	6:SQ:146:ARG:NH1	2.38	0.56
13:SM:64:LEU:O	13:SM:68:LEU:HD12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:SA:27:GLY:HA3	25:SA:46:ILE:HG12	1.87	0.56
29:Sa:47:ALA:HA	29:Sa:50:VAL:HG23	1.87	0.56
35:L5:666:G:N7	35:L5:668:C:N4	2.53	0.56
35:L5:956:A:H1'	35:L5:2076:G:H5"	1.86	0.56
44:LG:217:LYS:O	44:LG:217:LYS:HD2	2.05	0.56
74:Lm:80:PRO:HA	74:Lm:83:ARG:HB3	1.85	0.56
84:Et:38:A:H2'	84:Et:39:U:C6	2.39	0.56
1:S2:4:C:H4'	30:SC:207:ALA:HB2	1.86	0.56
1:S2:17:C:O2'	1:S2:1194:A:N1	2.35	0.56
1:S2:76:U:HO2'	21:SG:159:ARG:HH12	1.53	0.56
1:S2:432:G:H2'	1:S2:433:A:C8	2.40	0.56
1:S2:1331:C:N4	16:CD:196:HIS:O	2.38	0.56
1:S2:1435:C:O2'	1:S2:1437:C:N4	2.38	0.56
1:S2:1608:U:H4'	7:SS:130:ARG:HE	1.70	0.56
1:S2:1827:U:H1'	35:L5:3759:A:H1'	1.86	0.56
3:SF:143:PRO:HD3	10:Sc:56:LEU:HD13	1.85	0.56
9:SU:51:LYS:HB3	9:SU:90:ASP:HB2	1.86	0.56
13:SM:85:LEU:HD21	13:SM:109:VAL:HG22	1.87	0.56
15:Sf:133:ALA:N	15:Sf:140:TYR:O	2.35	0.56
25:SA:198:MET:HE2	25:SA:199:PRO:HG2	1.87	0.56
26:SB:39:PHE:HE2	26:SB:74:LEU:HD13	1.71	0.56
26:SB:113:MET:HE1	26:SB:209:ASP:HB3	1.87	0.56
32:SO:33:ILE:HG23	32:SO:97:LEU:HA	1.87	0.56
35:L5:2505:C:N4	35:L5:4085:A:OP2	2.36	0.56
40:LC:66:SER:HA	40:LC:77:PRO:HA	1.85	0.56
47:LJ:118:LYS:NZ	47:LJ:119:TYR:O	2.38	0.56
59:LX:128:ILE:HG12	59:LX:134:LYS:HG3	1.87	0.56
65:Ld:46:LEU:HD23	65:Ld:49:ILE:HD12	1.86	0.56
67:Lf:56:ASN:OD1	67:Lf:66:LYS:NZ	2.34	0.56
3:SF:70:GLU:O	3:SF:74:ASN:HB2	2.06	0.56
20:SX:41:PHE:HZ	20:SX:102:VAL:HG12	1.71	0.56
22:SJ:164:PRO:HB3	22:SJ:170:PRO:HA	1.88	0.56
27:SH:160:LYS:HG2	27:SH:163:GLN:HE22	1.71	0.56
32:SO:93:LEU:HD13	32:SO:124:MET:HG2	1.87	0.56
32:SO:102:GLY:O	32:SO:106:LYS:NZ	2.35	0.56
35:L5:753:C:H5	35:L5:910:G:H1	1.52	0.56
35:L5:1820:C:O2'	35:L5:1821:G:N7	2.39	0.56
35:L5:4290:U:OP1	76:Lo:9:ARG:NH1	2.37	0.56
1:S2:1244:U:H2'	1:S2:1245:G:H8	1.71	0.56
3:SF:123:GLU:N	3:SF:197:GLU:OE2	2.38	0.56
4:SK:57:TYR:HB3	4:SK:75:GLY:HA2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:SS:112:GLU:HB2	7:SS:116:LYS:HE2	1.86	0.56
17:SE:131:VAL:HA	17:SE:137:PRO:HA	1.87	0.56
35:L5:943:A:N7	43:LF:151:ASN:ND2	2.52	0.56
35:L5:2656:U:H5"	61:LZ:38:TYR:HB3	1.87	0.56
1:S2:1123:C:H4'	26:SB:149:GLN:HG3	1.86	0.56
27:SH:93:VAL:HG21	27:SH:173:PHE:HE1	1.70	0.56
35:L5:461:G:H2'	35:L5:462:G:H8	1.69	0.56
35:L5:499:G:H2'	35:L5:504:G:H22	1.70	0.56
35:L5:4095:G:H1	35:L5:4114:C:H1'	1.70	0.56
44:LG:182:CYS:HB3	44:LG:222:ILE:HD13	1.87	0.56
59:LX:61:PRO:HG2	69:Lh:80:PRO:HG3	1.87	0.56
83:CB:113:SER:OG	83:CB:533:MET:HB2	2.06	0.56
83:CB:402:VAL:HG13	83:CB:411:TYR:HB2	1.87	0.56
1:S2:1204:A:O2'	1:S2:1700:C:OP2	2.22	0.56
7:SS:48:ALA:HB1	7:SS:66:ARG:HD2	1.87	0.56
13:SM:40:LYS:HZ1	15:Sf:129:GLY:HA2	1.70	0.56
14:SZ:104:ARG:HG3	14:SZ:105:ALA:H	1.71	0.56
26:SB:124:HIS:HD1	26:SB:124:HIS:C	2.13	0.56
30:SC:270:THR:O	30:SC:274:VAL:HG23	2.05	0.56
35:L5:366:A:N1	40:LC:84:THR:HG22	2.20	0.56
35:L5:1560:A:H2'	35:L5:1561:G:C8	2.41	0.56
38:LA:137:ILE:HD11	38:LA:149:LYS:HB2	1.88	0.56
70:Li:80:HIS:HE2	70:Li:84:LYS:HE3	1.70	0.56
83:CB:59:THR:OG1	83:CB:73:THR:OG1	2.23	0.56
1:S2:363:A:N1	1:S2:397:G:O2'	2.38	0.56
1:S2:382:C:H2'	1:S2:383:G:C8	2.41	0.56
1:S2:1277:C:H2'	1:S2:1278:A:C8	2.38	0.56
13:SM:73:GLN:HG2	13:SM:74:ILE:HD13	1.87	0.56
25:SA:25:LEU:HB3	25:SA:46:ILE:HG21	1.88	0.56
31:SN:20:ARG:HA	31:SN:65:PHE:HE1	1.70	0.56
35:L5:679:C:H2'	35:L5:680:G:H8	1.70	0.56
35:L5:1214:C:N3	63:Lb:90:SER:OG	2.38	0.56
35:L5:4761:G:OP2	51:LO:37:ARG:NH1	2.26	0.56
35:L5:4883:C:N4	42:LE:181:LEU:O	2.31	0.56
83:CB:63:GLU:OE2	83:CB:70:ILE:N	2.31	0.56
85:LW:34:ALA:HA	85:LW:37:GLU:HB3	1.88	0.56
1:S2:323:C:O2'	1:S2:325:C:N4	2.39	0.56
1:S2:557:U:H3'	1:S2:558:G:H2'	1.88	0.56
1:S2:1147:C:OP1	29:Sa:6:ARG:NH1	2.38	0.56
1:S2:1672:U:OP1	6:SQ:18:THR:OG1	2.10	0.56
5:SP:33:LEU:HA	5:SP:36:LEU:HD21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SU:38:ASP:OD2	9:SU:41:ARG:NH2	2.38	0.56
38:LA:101:VAL:HG22	38:LA:165:VAL:HG22	1.88	0.56
49:LM:118:MET:HB3	51:LO:192:TYR:HE2	1.70	0.56
68:Lg:61:PRO:HA	68:Lg:64:LEU:HD12	1.87	0.56
1:S2:303:C:O2	18:SI:184:ARG:NH2	2.39	0.56
14:SZ:47:LEU:HD23	14:SZ:80:ARG:HG3	1.88	0.56
14:SZ:66:LYS:H	14:SZ:66:LYS:HD3	1.71	0.56
17:SE:73:ASP:O	17:SE:75:LYS:NZ	2.39	0.56
35:L5:4589:A:N1	35:L5:4621:C:O2'	2.35	0.56
39:LB:29:VAL:HG12	39:LB:31:SER:H	1.71	0.56
40:LC:209:ILE:HB	40:LC:229:LEU:HD13	1.88	0.56
60:LY:82:ILE:HD13	60:LY:99:ILE:HD11	1.87	0.56
83:CB:11:ALA:O	83:CB:15:LYS:HD3	2.06	0.56
83:CB:592:LEU:HD22	83:CB:593:SER:H	1.70	0.56
85:LW:102:LYS:HZ2	85:LW:105:ARG:HG2	1.71	0.56
1:S2:530:U:C2	1:S2:531:A:C8	2.95	0.55
6:SQ:5:GLY:O	6:SQ:8:GLN:NE2	2.36	0.55
12:Sg:120:ILE:HD11	12:Sg:132:TRP:HB2	1.88	0.55
17:SE:90:ILE:HD13	17:SE:101:LEU:HD23	1.89	0.55
19:SL:13:GLN:NE2	19:SL:36:TYR:HB3	2.21	0.55
20:SX:126:ALA:O	20:SX:128:VAL:N	2.39	0.55
35:L5:1709:C:O2	35:L5:1716:G:O6	2.23	0.55
35:L5:1996:C:H1'	81:Ls:41:GLN:HE21	1.71	0.55
35:L5:2448:G:H2'	35:L5:2449:A:C8	2.40	0.55
35:L5:3772:U:H2'	35:L5:3773:U:H5"	1.87	0.55
51:LO:194:GLU:O	51:LO:198:THR:HG23	2.06	0.55
80:CA:198:GLU:CD	80:CA:198:GLU:H	2.14	0.55
1:S2:327:G:H5"	1:S2:328:U:C2	2.41	0.55
1:S2:498:C:H2'	1:S2:499:G:C8	2.41	0.55
1:S2:1217:A:H2'	1:S2:1218:C:H6	1.71	0.55
1:S2:1407:U:H2'	1:S2:1408:U:C6	2.41	0.55
2:SD:108:LYS:HG2	2:SD:113:LEU:HD13	1.88	0.55
17:SE:71:LYS:N	17:SE:91:SER:O	2.40	0.55
21:SG:181:THR:HG22	21:SG:183:ARG:H	1.71	0.55
25:SA:163:CYS:SG	25:SA:164:ASN:N	2.77	0.55
31:SN:20:ARG:HA	31:SN:65:PHE:CE1	2.41	0.55
35:L5:1405:C:N4	35:L5:1408:G:N3	2.49	0.55
35:L5:4765:G:N2	55:LS:173:ASN:HD21	2.03	0.55
35:L5:4985:U:O2	39:LB:174:ARG:NH1	2.39	0.55
45:LH:93:ARG:HD2	45:LH:143:GLU:HB3	1.88	0.55
55:LS:113:MET:HG2	55:LS:124:ILE:HG12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:LZ:101:PHE:O	61:LZ:102:ARG:HD2	2.07	0.55
1:S2:1261:C:O2	11:Sd:10:HIS:NE2	2.25	0.55
4:SK:37:ASP:OD1	4:SK:37:ASP:N	2.38	0.55
5:SP:17:TYR:HD2	5:SP:36:LEU:HD12	1.71	0.55
12:Sg:42:MET:HB3	12:Sg:57:ARG:HB3	1.87	0.55
14:SZ:43:LYS:HE3	14:SZ:45:ASN:HB3	1.87	0.55
23:SY:55:ILE:HG13	23:SY:75:ILE:HG22	1.88	0.55
26:SB:82:ARG:NH2	26:SB:191:ASP:OD1	2.40	0.55
35:L5:1626:G:OP2	50:LN:77:LYS:NZ	2.39	0.55
35:L5:2411:C:H2'	35:L5:2412:A:H8	1.72	0.55
35:L5:4648:A:OP1	54:LR:62:ARG:NH2	2.38	0.55
36:L7:11:A:N1	36:L7:66:G:O2'	2.39	0.55
48:LL:110:LEU:O	48:LL:114:VAL:HG13	2.05	0.55
57:LU:24:ASP:N	57:LU:110:TYR:O	2.35	0.55
67:Lf:74:VAL:HG22	67:Lf:84:VAL:HG11	1.89	0.55
85:LW:1:MET:HA	85:LW:1:MET:HE3	1.86	0.55
1:S2:1403:C:N4	1:S2:1433:C:OP1	2.37	0.55
4:SK:4:PRO:HD2	4:SK:4:PRO:O	2.05	0.55
35:L5:2520:C:H2'	35:L5:2521:G:H8	1.70	0.55
52:LP:30:ARG:HA	52:LP:119:VAL:HG11	1.88	0.55
61:LZ:68:ILE:O	61:LZ:115:LYS:NZ	2.35	0.55
5:SP:17:TYR:CZ	5:SP:112:ILE:HB	2.42	0.55
22:SJ:76:ALA:O	22:SJ:80:ARG:HG3	2.07	0.55
35:L5:308:G:OP2	35:L5:308:G:N2	2.34	0.55
35:L5:318:A:H2'	35:L5:319:A:C8	2.42	0.55
35:L5:1460:C:H5"	53:LQ:144:LYS:HB2	1.88	0.55
35:L5:2786:C:O2'	35:L5:2787:A:OP2	2.23	0.55
44:LG:52:THR:HG22	59:LX:41:ARG:HB2	1.89	0.55
47:LJ:88:LYS:HD3	47:LJ:92:TYR:CE2	2.42	0.55
67:Lf:37:ASP:OD1	67:Lf:37:ASP:N	2.38	0.55
78:Lr:90:LEU:HD22	78:Lr:111:ILE:HG23	1.89	0.55
13:SM:63:LYS:HZ2	15:Sf:108:VAL:HG11	1.71	0.55
32:SO:117:ARG:NH1	32:SO:121:ARG:HB3	2.22	0.55
35:L5:325:U:H2'	35:L5:326:C:C6	2.41	0.55
35:L5:1866:U:OP1	46:LI:4:ARG:NH1	2.19	0.55
35:L5:3715:U:OP1	84:Et:3:C:O2'	2.23	0.55
42:LE:224:LYS:HG2	42:LE:227:HIS:HB2	1.87	0.55
48:LL:116:ARG:NH2	48:LL:155:MET:O	2.37	0.55
84:Et:4:C:H2'	84:Et:5:G:C8	2.41	0.55
1:S2:677:G:H21	1:S2:1028:A:H62	1.55	0.55
1:S2:1114:U:O2'	1:S2:1115:U:O5'	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1401:A:O3'	9:SU:51:LYS:NZ	2.40	0.55
2:SD:125:PHE:O	2:SD:129:SER:OG	2.24	0.55
4:SK:15:LEU:HG	4:SK:71:LEU:HD11	1.88	0.55
12:Sg:62:HIS:CD2	12:Sg:90:TRP:HZ2	2.24	0.55
12:Sg:286:CYS:HA	12:Sg:302:TYR:HD1	1.71	0.55
13:SM:85:LEU:O	13:SM:89:VAL:HG22	2.07	0.55
28:SV:12:TYR:HB3	30:SC:79:GLU:HB3	1.88	0.55
32:SO:97:LEU:O	32:SO:132:VAL:N	2.33	0.55
35:L5:1179:U:O2'	35:L5:1180:C:OP1	2.22	0.55
35:L5:2413:U:H2'	35:L5:2414:G:H8	1.72	0.55
35:L5:4541:G:N2	35:L5:4544:A:OP2	2.31	0.55
1:S2:549:C:H2'	1:S2:550:C:C6	2.42	0.55
1:S2:867:G:H2'	1:S2:868:G:N3	2.22	0.55
1:S2:1247:C:H2'	16:CD:190:LYS:NZ	2.22	0.55
1:S2:1455:A:H2'	1:S2:1456:G:H8	1.71	0.55
12:Sg:212:LYS:HA	12:Sg:235:ILE:HD13	1.89	0.55
17:SE:18:TRP:CH2	17:SE:31:PRO:HD3	2.40	0.55
17:SE:125:LYS:O	17:SE:142:HIS:N	2.38	0.55
17:SE:247:THR:OG1	17:SE:250:GLU:OE1	2.18	0.55
18:SI:81:VAL:HA	18:SI:102:VAL:HA	1.87	0.55
30:SC:70:VAL:HG12	30:SC:75:ILE:HD11	1.89	0.55
35:L5:280:G:H5"	50:LN:14:LYS:NZ	2.22	0.55
35:L5:1339:U:H2'	35:L5:1340:C:C6	2.42	0.55
35:L5:5010:U:H2'	35:L5:5011:A:H8	1.70	0.55
36:L7:23:A:N3	36:L7:118:C:O2'	2.32	0.55
42:LE:176:THR:HB	42:LE:186:LEU:HD23	1.88	0.55
43:LF:30:ILE:HA	43:LF:33:LEU:HD12	1.89	0.55
55:LS:47:PHE:CE1	55:LS:125:GLN:HG2	2.41	0.55
84:Et:7:A:H2'	84:Et:49:C:H6	1.71	0.55
1:S2:174:C:H2'	1:S2:175:A:O4'	2.06	0.55
1:S2:557:U:H5'	1:S2:558:G:H8	1.72	0.55
1:S2:1402:A:P	9:SU:51:LYS:HZ3	2.30	0.55
1:S2:1538:C:H2'	1:S2:1539:U:C6	2.42	0.55
1:S2:1610:G:P	7:SS:121:ARG:HH21	2.30	0.55
5:SP:36:LEU:HD23	5:SP:36:LEU:H	1.70	0.55
10:Sc:11:LEU:HD12	10:Sc:55:VAL:HG22	1.88	0.55
11:Sd:5:GLN:OE1	11:Sd:5:GLN:N	2.40	0.55
17:SE:212:ASP:OD1	17:SE:216:ASN:N	2.39	0.55
35:L5:109:G:OP2	48:LL:74:ARG:NH2	2.39	0.55
35:L5:182:G:N2	35:L5:255:C:O2	2.40	0.55
35:L5:2557:G:O6	35:L5:2570:U:O4	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4363:A:H5”	76:Lo:36:GLN:HG2	1.88	0.55
40:LC:352:ASP:OD1	40:LC:353:LYS:N	2.40	0.55
64:Lc:29:LEU:HD13	64:Lc:91:VAL:HG11	1.89	0.55
74:Lm:83:ARG:O	74:Lm:87:GLN:HG3	2.06	0.55
79:Lz:23:ARG:O	79:Lz:212:LYS:NZ	2.30	0.55
80:CA:52:GLY:HA2	80:CA:55:MET:HE1	1.88	0.55
83:CB:561:LEU:HD12	83:CB:570:ILE:HD13	1.88	0.55
1:S2:1764:G:H5’	1:S2:1765:C:H5”	1.88	0.55
17:SE:156:VAL:O	17:SE:157:ASN:ND2	2.36	0.55
19:SL:82:MET:SD	19:SL:85:THR:OG1	2.65	0.55
35:L5:418:A:C2	37:L8:17:A:H1’	2.42	0.55
35:L5:4256:A:N6	47:LJ:59:SER:OG	2.40	0.55
35:L5:4591:U:H2’	35:L5:4592:C:C6	2.42	0.55
58:LV:60:MET:HE3	58:LV:78:PRO:HB3	1.89	0.55
63:Lb:99:ILE:O	63:Lb:109:ARG:NH1	2.40	0.55
81:Ls:34:ASN:HB2	81:Ls:185:PHE:CE1	2.42	0.55
81:Ls:130:LEU:HD13	81:Ls:134:LYS:HD3	1.88	0.55
1:S2:697:G:N2	33:SW:118:ARG:HH22	2.02	0.54
1:S2:1418:C:H4’	1:S2:1420:G:H21	1.72	0.54
7:SS:25:LYS:HD2	7:SS:55:ARG:HD3	1.90	0.54
7:SS:138:THR:O	7:SS:138:THR:OG1	2.24	0.54
12:Sg:19:THR:OG1	12:Sg:67:SER:O	2.25	0.54
22:SJ:138:ARG:HH21	22:SJ:153:SER:HA	1.71	0.54
35:L5:1681:G:H5’	62:La:29:PRO:HB2	1.89	0.54
37:L8:21:C:OP1	40:LC:195:LYS:NZ	2.39	0.54
42:LE:112:MET:HG3	42:LE:113:PRO:HD2	1.89	0.54
44:LG:162:ASP:HB3	44:LG:163:PRO:HD3	1.89	0.54
65:Ld:19:GLU:HB3	65:Ld:102:LEU:HD11	1.89	0.54
73:Ll:38:ASN:HB3	73:Ll:41:ARG:HG3	1.89	0.54
83:CB:539:GLU:HG2	83:CB:540:GLU:H	1.72	0.54
85:LW:53:VAL:HG22	85:LW:57:ARG:HH21	1.73	0.54
1:S2:106:C:OP1	1:S2:431:G:O2’	2.24	0.54
1:S2:1310:U:H2’	1:S2:1311:C:H6	1.70	0.54
1:S2:1736:G:H2’	1:S2:1737:G:H8	1.72	0.54
3:SF:130:ARG:HA	3:SF:130:ARG:NH1	2.23	0.54
3:SF:137:GLN:OE1	3:SF:138:ALA:N	2.40	0.54
6:SQ:8:GLN:OE1	6:SQ:8:GLN:N	2.39	0.54
6:SQ:25:CYS:HB3	6:SQ:95:TYR:HD1	1.71	0.54
12:Sg:24:THR:HG22	12:Sg:30:MET:HE2	1.89	0.54
27:SH:78:ARG:HG2	27:SH:78:ARG:HH11	1.72	0.54
29:Sa:52:ASP:OD2	29:Sa:52:ASP:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3597:G:H2'	35:L5:3598:C:H6	1.72	0.54
40:LC:106:LYS:HG2	40:LC:108:TRP:CZ2	2.42	0.54
43:LF:182:TYR:HB3	43:LF:200:ARG:HG3	1.88	0.54
56:LT:68:THR:HG22	56:LT:69:GLN:H	1.71	0.54
59:LX:129:ARG:NH2	59:LX:133:GLU:OE2	2.40	0.54
72:Lk:23:VAL:HG22	72:Lk:36:VAL:HG22	1.90	0.54
72:Lk:26:LYS:HD3	72:Lk:69:LEU:HD22	1.89	0.54
79:Lz:160:LYS:HG2	79:Lz:161:LYS:H	1.72	0.54
1:S2:1157:G:O2'	33:SW:74:VAL:O	2.19	0.54
1:S2:1588:A:H2'	1:S2:1589:A:H8	1.70	0.54
1:S2:1748:G:O6	1:S2:1786:U:O4	2.26	0.54
12:Sg:302:TYR:CE2	12:Sg:308:ARG:HD3	2.42	0.54
17:SE:91:SER:OG	17:SE:93:ASP:OD1	2.23	0.54
20:SX:124:LYS:HG2	20:SX:129:SER:HA	1.89	0.54
21:SG:58:LYS:HA	21:SG:107:SER:HB3	1.89	0.54
27:SH:170:VAL:HG13	27:SH:187:PHE:HB2	1.89	0.54
35:L5:186:G:N3	35:L5:1366:G:N2	2.56	0.54
35:L5:654:C:H2'	35:L5:655:C:C6	2.42	0.54
35:L5:2003:G:N2	35:L5:2004:U:O4	2.36	0.54
42:LE:177:GLY:HA3	42:LE:184:VAL:HB	1.89	0.54
65:Ld:46:LEU:HD22	65:Ld:64:ILE:HD13	1.88	0.54
83:CB:776:VAL:HG21	83:CB:781:MET:HB2	1.89	0.54
1:S2:1175:G:P	75:Ln:21:ARG:HH22	2.29	0.54
1:S2:1285:G:N2	13:SM:58:GLU:HB2	2.23	0.54
1:S2:1582:C:H2'	1:S2:1583:C:C6	2.42	0.54
3:SF:201:LYS:HE2	3:SF:204:ARG:HH22	1.72	0.54
5:SP:33:LEU:HA	5:SP:36:LEU:CD2	2.36	0.54
12:Sg:201:SER:HB3	12:Sg:206:LEU:HD12	1.89	0.54
17:SE:44:LEU:H	17:SE:44:LEU:HD12	1.71	0.54
25:SA:36:GLN:O	25:SA:53:ARG:NH1	2.41	0.54
29:Sa:54:SER:O	29:Sa:57:SER:OG	2.24	0.54
35:L5:1317:U:H2'	35:L5:1318:C:C6	2.43	0.54
35:L5:1683:U:H2'	35:L5:1684:A:C8	2.43	0.54
35:L5:2102:G:H1'	35:L5:2103:G:C8	2.43	0.54
35:L5:2382:A:N1	35:L5:2829:U:O2'	2.33	0.54
39:LB:292:LEU:O	39:LB:297:LYS:NZ	2.41	0.54
41:LD:232:THR:HG22	41:LD:234:ASP:H	1.72	0.54
42:LE:117:PRO:O	78:Lr:112:ARG:NH1	2.39	0.54
42:LE:254:ASP:HA	42:LE:257:ILE:HG22	1.88	0.54
47:LJ:95:ARG:HG2	47:LJ:96:LYS:N	2.22	0.54
59:LX:156:ILE:CD1	80:CA:291:MET:HB2	2.34	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:510:GLU:N	83:CB:510:GLU:OE2	2.41	0.54
1:S2:54:A:OP1	23:SY:111:LYS:NZ	2.35	0.54
1:S2:690:G:OP2	1:S2:690:G:N2	2.29	0.54
1:S2:942:G:H2'	1:S2:943:U:C6	2.43	0.54
1:S2:1484:A:H4'	2:SD:159:HIS:ND1	2.22	0.54
17:SE:79:ASP:HB3	17:SE:82:TYR:HB2	1.88	0.54
17:SE:197:ASN:OD1	17:SE:199:GLU:HG2	2.07	0.54
22:SJ:110:LEU:N	22:SJ:147:PHE:O	2.37	0.54
23:SY:29:HIS:ND1	23:SY:32:LYS:O	2.32	0.54
26:SB:24:PRO:O	26:SB:28:LYS:HG3	2.08	0.54
35:L5:181:C:H3'	35:L5:182:G:H8	1.72	0.54
35:L5:197:A:N3	35:L5:222:C:O2'	2.39	0.54
35:L5:1753:G:H2'	35:L5:1754:U:C2	2.43	0.54
54:LR:99:MET:HE2	54:LR:99:MET:HA	1.89	0.54
80:CA:77:PRO:HD3	80:CA:277:PRO:O	2.08	0.54
82:Lt:121:LEU:HG	82:Lt:129:ILE:HG22	1.89	0.54
83:CB:510:GLU:OE1	83:CB:571:LYS:NZ	2.41	0.54
1:S2:124:U:H5"	17:SE:148:ARG:HH21	1.72	0.54
1:S2:902:G:O2'	1:S2:903:A:O4'	2.26	0.54
1:S2:1673:U:H5"	6:SQ:78:VAL:HG12	1.90	0.54
1:S2:1865:C:O2'	29:Sa:95:ARG:NH1	2.41	0.54
11:Sd:4:GLN:N	11:Sd:4:GLN:OE1	2.39	0.54
12:Sg:30:MET:HB2	12:Sg:42:MET:SD	2.48	0.54
18:SI:107:THR:O	18:SI:111:GLN:HG2	2.07	0.54
21:SG:158:VAL:HB	21:SG:160:LYS:HZ3	1.72	0.54
35:L5:99:A:H2'	35:L5:100:C:O2	2.07	0.54
35:L5:151:G:OP2	50:LN:4:TYR:OH	2.18	0.54
35:L5:1642:A:N6	38:LA:2:GLY:O	2.38	0.54
35:L5:1662:C:H2'	35:L5:1663:C:C6	2.43	0.54
35:L5:1697:G:H2'	35:L5:1698:C:C6	2.43	0.54
35:L5:1751:A:H2'	35:L5:1752:G:H8	1.72	0.54
35:L5:4936:G:C5	42:LE:183:ARG:HD2	2.43	0.54
37:L8:67:U:H2'	37:L8:68:G:H8	1.73	0.54
54:LR:127:VAL:HG12	54:LR:132:PHE:HD2	1.72	0.54
57:LU:41:GLN:HA	57:LU:44:GLN:HG2	1.90	0.54
1:S2:30:C:OP1	20:SX:138:LYS:NZ	2.34	0.54
1:S2:942:G:H21	32:SO:137:SER:HB2	1.72	0.54
1:S2:1391:C:H4'	11:Sd:55:LEU:HD12	1.88	0.54
12:Sg:68:ASP:OD2	12:Sg:111:VAL:N	2.32	0.54
13:SM:80:ASP:OD1	13:SM:80:ASP:N	2.41	0.54
25:SA:69:GLU:OE2	25:SA:69:GLU:N	2.29	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1645:C:H2'	35:L5:1646:A:C8	2.42	0.54
35:L5:1975:G:N2	35:L5:1983:A:OP1	2.41	0.54
35:L5:2580:U:P	61:LZ:36:ARG:HH22	2.31	0.54
35:L5:3948:C:H5"	35:L5:3949:A:OP1	2.08	0.54
35:L5:4251:A:H5"	47:LJ:108:GLY:HA3	1.90	0.54
38:LA:107:MET:HE1	38:LA:113:VAL:HG11	1.88	0.54
39:LB:22:SER:OG	39:LB:24:ARG:O	2.22	0.54
39:LB:233:SER:O	39:LB:272:LYS:NZ	2.34	0.54
65:Ld:22:THR:HG23	65:Ld:122:VAL:HG13	1.90	0.54
80:CA:250:ASP:OD2	80:CA:253:LYS:HE2	2.07	0.54
83:CB:120:ARG:NH2	83:CB:495:ARG:O	2.41	0.54
7:SS:45:LEU:HD21	7:SS:50:ILE:HG22	1.90	0.54
8:ST:18:LEU:HD23	8:ST:134:ILE:HG13	1.89	0.54
35:L5:7:C:H2'	35:L5:8:U:C6	2.43	0.54
35:L5:1175:A:H5"	41:LD:268:ARG:NH2	2.21	0.54
35:L5:2484:A:H62	35:L5:2494:U:H3	1.56	0.54
35:L5:4761:G:N2	35:L5:4766:C:O3'	2.41	0.54
35:L5:4966:A:OP1	39:LB:128:LYS:NZ	2.41	0.54
41:LD:107:ARG:HG3	41:LD:247:ILE:HG22	1.88	0.54
41:LD:234:ASP:OD1	41:LD:234:ASP:N	2.40	0.54
43:LF:85:ALA:N	56:LT:138:ALA:HB2	2.22	0.54
66:Le:93:LYS:HE2	66:Le:93:LYS:HA	1.88	0.54
81:Ls:35:VAL:HG13	81:Ls:39:GLN:NE2	2.23	0.54
82:Lt:106:PHE:O	82:Lt:110:VAL:N	2.34	0.54
83:CB:454:MET:N	83:CB:454:MET:HE3	2.22	0.54
83:CB:834:VAL:O	83:CB:838:THR:OG1	2.22	0.54
1:S2:553:U:O4	1:S2:554:A:N6	2.41	0.54
1:S2:696:G:H21	1:S2:737:G:N2	2.06	0.54
1:S2:1758:G:N2	1:S2:1772:C:OP1	2.27	0.54
6:SQ:98:LYS:NZ	12:Sg:94:THR:O	2.41	0.54
12:Sg:86:THR:HG23	12:Sg:102:VAL:HG12	1.90	0.54
17:SE:100:ARG:HH12	17:SE:236:ILE:HD13	1.72	0.54
17:SE:157:ASN:C	17:SE:157:ASN:HD22	2.16	0.54
35:L5:108:A:N1	35:L5:333:U:O2'	2.41	0.54
35:L5:153:G:H2'	35:L5:154:G:H8	1.73	0.54
35:L5:1178:G:OP1	35:L5:1178:G:N2	2.26	0.54
35:L5:1681:G:O2'	62:La:41:HIS:NE2	2.39	0.54
35:L5:2413:U:H2'	35:L5:2414:G:C8	2.43	0.54
35:L5:4954:G:H2'	35:L5:4955:A:H8	1.73	0.54
37:L8:40:A:H2'	37:L8:41:A:C8	2.43	0.54
55:LS:45:TRP:O	55:LS:49:SER:OG	2.13	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:141:ASP:OD1	80:CA:177:PHE:HB3	2.08	0.54
83:CB:45:ILE:HD12	83:CB:46:ILE:N	2.19	0.54
83:CB:443:TYR:CD1	83:CB:478:PHE:HB3	2.43	0.54
83:CB:494:MET:HE2	83:CB:494:MET:HA	1.89	0.54
1:S2:141:A:H4'	1:S2:142:C:H3'	1.89	0.54
1:S2:144:U:OP2	21:SG:139:SER:OG	2.25	0.54
1:S2:534:G:H2'	1:S2:535:G:C8	2.43	0.54
3:SF:49:LEU:HD11	6:SQ:49:TYR:HB2	1.90	0.54
4:SK:32:HIS:HD2	4:SK:45:VAL:HG11	1.73	0.54
9:SU:66:ARG:NH1	9:SU:66:ARG:O	2.39	0.54
21:SG:160:LYS:HB2	21:SG:172:LYS:HB3	1.90	0.54
27:SH:72:PHE:HB3	27:SH:76:GLN:OE1	2.08	0.54
35:L5:1524:A:H61	35:L5:1651:G:H22	1.56	0.54
35:L5:4093:G:H22	35:L5:4114:C:N4	2.05	0.54
35:L5:4108:G:H2'	35:L5:4109:G:C8	2.43	0.54
35:L5:4741:C:H4'	35:L5:4742:G:H5'	1.90	0.54
35:L5:4882:U:OP1	49:LM:117:LYS:NZ	2.41	0.54
35:L5:5010:U:H2'	35:L5:5011:A:C8	2.43	0.54
43:LF:203:GLU:N	43:LF:203:GLU:OE2	2.41	0.54
43:LF:220:MET:O	43:LF:221:LYS:HG2	2.08	0.54
65:Ld:68:LEU:HD22	65:Ld:106:VAL:HG22	1.90	0.54
80:CA:81:SER:HB2	80:CA:85:CYS:HB3	1.89	0.54
1:S2:30:C:O3'	20:SX:137:LYS:NZ	2.41	0.53
1:S2:1679:A:H2'	3:SF:60:ARG:HD3	1.90	0.53
2:SD:127:MET:HE3	2:SD:154:ASP:HB3	1.88	0.53
2:SD:198:ILE:HD12	2:SD:199:GLY:N	2.23	0.53
7:SS:138:THR:HA	7:SS:141:ARG:HH21	1.72	0.53
10:Sc:60:GLU:H	10:Sc:63:ARG:NH1	2.07	0.53
17:SE:157:ASN:ND2	17:SE:157:ASN:C	2.66	0.53
18:SI:36:THR:HG21	18:SI:179:PRO:HB2	1.90	0.53
27:SH:82:GLU:OE1	27:SH:82:GLU:N	2.41	0.53
35:L5:1437:C:N4	35:L5:1438:U:O4	2.41	0.53
35:L5:1890:G:OP2	35:L5:1890:G:N2	2.38	0.53
35:L5:2730:U:H2'	35:L5:2731:C:C6	2.43	0.53
35:L5:2848:G:O2'	35:L5:3838:U:O4	2.19	0.53
35:L5:3700:C:O2'	35:L5:3774:A:N3	2.33	0.53
35:L5:4970:C:C2	35:L5:4971:A:C8	2.96	0.53
37:L8:5:U:OP2	52:LP:62:ARG:NH1	2.40	0.53
38:LA:116:LEU:HD13	38:LA:164:ALA:HB2	1.90	0.53
47:LJ:22:LEU:HG	47:LJ:128:LEU:HD13	1.91	0.53
64:Lc:22:MET:O	64:Lc:23:LYS:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Lz:75:ASP:N	79:Lz:75:ASP:OD1	2.38	0.53
82:Lt:112:ILE:HA	82:Lt:115:GLN:HB2	1.89	0.53
83:CB:675:ILE:HD11	83:CB:721:ILE:HG12	1.89	0.53
1:S2:629:A:O2'	1:S2:631:U:OP1	2.25	0.53
6:SQ:90:LYS:HG2	6:SQ:120:LEU:HD12	1.89	0.53
23:SY:110:ARG:O	23:SY:114:MET:HG2	2.07	0.53
29:Sa:41:ILE:O	29:Sa:41:ILE:HG22	2.08	0.53
35:L5:86:U:OP1	53:LQ:169:SER:OG	2.25	0.53
35:L5:493:G:N1	35:L5:660:A:C2	2.69	0.53
35:L5:1279:A:O2'	35:L5:1281:G:N7	2.34	0.53
35:L5:1350:C:H2'	35:L5:1351:G:C8	2.43	0.53
35:L5:1617:G:H1'	35:L5:2513:A:N6	2.23	0.53
48:LL:209:LYS:HG3	48:LL:210:LYS:HG2	1.90	0.53
69:Lh:99:GLU:HA	69:Lh:102:LEU:HD22	1.89	0.53
84:Et:9:A:H2'	84:Et:11:C:H41	1.73	0.53
1:S2:71:G:O6	21:SG:170:ARG:NH2	2.41	0.53
1:S2:921:G:C6	33:SW:28:ARG:HD3	2.43	0.53
4:SK:60:GLU:HB2	4:SK:69:TRP:CD1	2.43	0.53
12:Sg:8:ARG:HB3	12:Sg:52:TYR:HE2	1.73	0.53
17:SE:112:HIS:NE2	17:SE:237:SER:O	2.41	0.53
20:SX:95:GLU:OE2	20:SX:140:ARG:NH2	2.41	0.53
27:SH:146:VAL:O	33:SW:49:GLU:HG3	2.09	0.53
35:L5:139:G:H2'	35:L5:140:G:C8	2.44	0.53
35:L5:1513:U:H4'	48:LL:4:SER:HB2	1.90	0.53
35:L5:2057:A:OP1	51:LO:18:ARG:NH2	2.41	0.53
35:L5:2745:A:H2'	35:L5:2746:A:C8	2.41	0.53
36:L7:120:U:H5"	41:LD:262:LYS:HE2	1.91	0.53
53:LQ:155:ALA:O	53:LQ:158:THR:OG1	2.27	0.53
83:CB:157:MET:HE2	83:CB:157:MET:HA	1.88	0.53
1:S2:554:A:HO2'	1:S2:555:A:H8	1.56	0.53
1:S2:694:G:H2'	1:S2:695:C:O4'	2.07	0.53
1:S2:939:U:H5"	77:Lp:85:ARG:HD2	1.90	0.53
1:S2:1127:C:H2'	1:S2:1128:C:C6	2.44	0.53
12:Sg:256:ILE:HB	12:Sg:270:LEU:HB3	1.89	0.53
21:SG:7:PHE:HB2	21:SG:124:LEU:HD21	1.90	0.53
22:SJ:169:ARG:HH22	22:SJ:175:ARG:HE	1.55	0.53
34:Sb:33:MET:HE1	34:Sb:48:SER:HA	1.89	0.53
35:L5:4681:A:H2'	35:L5:4682:U:O4'	2.08	0.53
35:L5:4872:G:OP2	49:LM:94:LYS:NZ	2.38	0.53
35:L5:4896:G:O2'	35:L5:4897:G:O5'	2.26	0.53
35:L5:5006:U:H4'	35:L5:5007:A:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:LZ:9:LYS:NZ	61:LZ:83:THR:O	2.39	0.53
72:Lk:27:LYS:HE2	72:Lk:27:LYS:H	1.73	0.53
1:S2:146:G:H1	1:S2:173:A:N6	2.04	0.53
1:S2:432:G:H2'	1:S2:433:A:H8	1.73	0.53
1:S2:1098:C:H2'	1:S2:1099:G:C8	2.43	0.53
3:SF:130:ARG:HA	3:SF:130:ARG:CZ	2.39	0.53
7:SS:120:HIS:CE1	7:SS:124:ARG:HD2	2.44	0.53
12:Sg:17:TRP:HB2	12:Sg:36:ARG:HG3	1.91	0.53
17:SE:44:LEU:HD11	17:SE:82:TYR:HB3	1.91	0.53
35:L5:1739:G:N3	35:L5:1742:A:N6	2.57	0.53
35:L5:1970:A:OP2	81:Ls:112:ARG:NH2	2.41	0.53
45:LH:140:GLN:HB3	45:LH:143:GLU:HG2	1.88	0.53
48:LL:46:ILE:HB	48:LL:49:ARG:HB2	1.91	0.53
51:LO:7:LEU:HD23	51:LO:33:VAL:HG22	1.90	0.53
52:LP:39:MET:HE2	52:LP:43:LYS:HE2	1.91	0.53
69:Lh:101:ASN:O	69:Lh:103:LYS:NZ	2.30	0.53
79:Lz:85:MET:HB3	79:Lz:89:ALA:HB3	1.89	0.53
82:Lt:104:ILE:HG12	82:Lt:106:PHE:CD2	2.38	0.53
83:CB:56:PHE:HB3	83:CB:455:GLY:HA3	1.90	0.53
84:Et:25:C:C4	84:Et:26:A:H1'	2.43	0.53
1:S2:442:C:H2'	1:S2:443:U:C6	2.44	0.53
1:S2:1598:G:OP2	14:SZ:82:SER:OG	2.11	0.53
2:SD:44:THR:HB	2:SD:45:ARG:HD3	1.89	0.53
4:SK:5:LYS:O	4:SK:9:ILE:HG13	2.08	0.53
18:SI:69:SER:HB3	19:SL:21:LYS:HB2	1.89	0.53
26:SB:71:LEU:HD12	26:SB:74:LEU:HB2	1.89	0.53
26:SB:186:ASN:OD1	26:SB:187:LYS:N	2.41	0.53
35:L5:422:C:H2'	35:L5:423:G:H8	1.74	0.53
35:L5:2306:G:H1'	35:L5:2332:A:N6	2.22	0.53
35:L5:3758:U:H2'	35:L5:3765:G:N2	2.23	0.53
38:LA:116:LEU:HD12	38:LA:117:GLU:H	1.72	0.53
38:LA:180:LEU:HD22	77:Lp:18:TYR:HB3	1.89	0.53
40:LC:321:ASN:HB3	40:LC:324:ILE:HB	1.91	0.53
44:LG:32:PHE:HE1	61:LZ:53:VAL:HG12	1.74	0.53
51:LO:201:LEU:HD12	51:LO:201:LEU:H	1.73	0.53
84:Et:7:A:H2'	84:Et:49:C:C6	2.44	0.53
84:Et:9:A:H4'	84:Et:46:G:O3'	2.08	0.53
85:LW:8:PHE:HZ	85:LW:49:ILE:HD12	1.74	0.53
1:S2:5:U:H2'	1:S2:6:G:C8	2.43	0.53
1:S2:563:G:O2'	1:S2:564:A:OP1	2.26	0.53
1:S2:692:G:H2'	1:S2:739:C:H1'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1628:C:H2'	1:S2:1629:C:C6	2.43	0.53
1:S2:1729:U:O2	1:S2:1805:G:N2	2.29	0.53
2:SD:194:PRO:HB2	2:SD:197:LYS:HB2	1.90	0.53
12:Sg:177:TRP:HZ3	12:Sg:184:LEU:HB3	1.73	0.53
21:SG:222:GLU:O	21:SG:226:GLU:HG3	2.08	0.53
25:SA:66:VAL:HG21	25:SA:185:MET:SD	2.49	0.53
26:SB:28:LYS:HD3	26:SB:48:LEU:CD1	2.37	0.53
27:SH:12:ASN:ND2	27:SH:16:PRO:O	2.41	0.53
31:SN:16:LEU:HD11	31:SN:62:GLN:HG3	1.91	0.53
35:L5:1070:G:OP2	42:LE:65:ARG:NH1	2.36	0.53
35:L5:1762:C:C4	35:L5:1770:A:C2	2.94	0.53
35:L5:3861:A:H2'	35:L5:3862:A:H8	1.74	0.53
35:L5:4740:G:O6	35:L5:4959:U:O2	2.27	0.53
39:LB:302:ASN:HD22	39:LB:313:SER:HB2	1.74	0.53
48:LL:175:ASN:O	48:LL:175:ASN:ND2	2.31	0.53
56:LT:80:VAL:HG12	56:LT:81:LYS:H	1.74	0.53
80:CA:203:GLN:NE2	80:CA:229:LEU:O	2.42	0.53
81:Ls:192:VAL:HG22	81:Ls:199:TYR:H	1.73	0.53
1:S2:146:G:N7	21:SG:137:ARG:NH2	2.42	0.53
1:S2:630:U:OP1	16:CD:210:ARG:NH1	2.41	0.53
1:S2:1001:A:H8	29:Sa:19:GLN:HE22	1.57	0.53
1:S2:1595:U:H2'	1:S2:1596:U:C6	2.44	0.53
6:SQ:130:LYS:NZ	6:SQ:131:LYS:O	2.42	0.53
12:Sg:8:ARG:N	12:Sg:309:VAL:O	2.37	0.53
17:SE:122:LYS:N	17:SE:162:ILE:O	2.41	0.53
35:L5:655:C:H2'	35:L5:656:C:C2	2.44	0.53
35:L5:716:C:OP1	40:LC:317:ASN:HB2	2.09	0.53
35:L5:717:U:H2'	35:L5:718:C:C6	2.44	0.53
35:L5:1548:G:O2'	35:L5:2812:A:N3	2.38	0.53
35:L5:1629:G:H1	38:LA:208:GLU:HG2	1.74	0.53
35:L5:3861:A:H2'	35:L5:3862:A:C8	2.44	0.53
35:L5:4233:A:H4'	76:Lo:98:LYS:HE3	1.89	0.53
37:L8:141:C:H2'	37:L8:142:U:C6	2.44	0.53
69:Lh:23:ASP:HA	69:Lh:26:VAL:HG22	1.91	0.53
73:Ll:16:LYS:HD3	73:Ll:49:LEU:HD22	1.91	0.53
79:Lz:82:ILE:HD12	79:Lz:83:PRO:HD2	1.90	0.53
83:CB:721:ILE:O	83:CB:725:ALA:N	2.32	0.53
1:S2:857:U:H2'	1:S2:858:A:C8	2.44	0.53
3:SF:86:LYS:O	3:SF:90:VAL:HG23	2.09	0.53
14:SZ:52:LYS:HA	14:SZ:55:TYR:HB2	1.91	0.53
34:Sb:34:ASP:OD2	34:Sb:82:LYS:HD3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2468:U:O2'	35:L5:2506:G:N2	2.42	0.53
35:L5:2835:A:O2'	39:LB:228:TYR:O	2.21	0.53
42:LE:232:ILE:HD12	42:LE:232:ILE:O	2.09	0.53
49:LM:7:VAL:HG13	49:LM:27:ILE:HD13	1.91	0.53
49:LM:81:ASP:O	49:LM:85:LYS:HG3	2.08	0.53
61:LZ:95:VAL:HG13	61:LZ:96:VAL:HG23	1.91	0.53
1:S2:64:A:N6	1:S2:83:A:OP2	2.42	0.53
1:S2:525:A:H5"	24:Se:32:ALA:HB2	1.91	0.53
1:S2:1234:C:H41	7:SS:137:LYS:HD3	1.73	0.53
1:S2:1245:G:O2'	1:S2:1492:U:OP1	2.25	0.53
1:S2:1745:A:H62	1:S2:1789:G:H21	1.57	0.53
2:SD:24:PHE:CD2	2:SD:25:LEU:HD23	2.43	0.53
2:SD:35:SER:O	2:SD:35:SER:OG	2.21	0.53
7:SS:110:ASP:HA	7:SS:113:ARG:HG2	1.91	0.53
9:SU:55:ARG:HB2	9:SU:87:ARG:HG2	1.89	0.53
20:SX:100:VAL:HG12	20:SX:125:VAL:HA	1.90	0.53
24:Se:28:LYS:HE3	24:Se:32:ALA:HB1	1.90	0.53
27:SH:65:PRO:HG2	27:SH:68:GLN:HB2	1.91	0.53
35:L5:500:G:O5'	35:L5:504:G:N2	2.42	0.53
35:L5:1996:C:H42	35:L5:2000:G:H22	1.54	0.53
35:L5:2666:U:O2'	35:L5:2668:G:N7	2.37	0.53
35:L5:3599:A:H2'	35:L5:3600:G:C8	2.43	0.53
35:L5:4054:C:N4	79:Lz:33:GLU:OE1	2.42	0.53
38:LA:33:ASP:N	38:LA:33:ASP:OD1	2.41	0.53
41:LD:56:THR:HG22	41:LD:57:ASN:H	1.74	0.53
44:LG:108:GLN:N	44:LG:108:GLN:OE1	2.42	0.53
78:Lr:38:PHE:O	78:Lr:45:HIS:NE2	2.31	0.53
79:Lz:145:VAL:HG23	79:Lz:146:ALA:H	1.74	0.53
83:CB:127:VAL:HG23	83:CB:155:LEU:HA	1.89	0.53
1:S2:795:A:H2'	1:S2:796:G:C8	2.44	0.52
1:S2:1128:C:HO2'	34:Sb:19:HIS:HD1	1.57	0.52
1:S2:1265:A:O2'	1:S2:1327:G:OP2	2.21	0.52
1:S2:1745:A:H62	1:S2:1789:G:N2	2.07	0.52
14:SZ:58:LEU:HD23	14:SZ:58:LEU:H	1.74	0.52
22:SJ:88:ASP:OD1	22:SJ:89:GLU:N	2.42	0.52
26:SB:52:THR:HG23	26:SB:57:ILE:HA	1.90	0.52
26:SB:103:MET:H	26:SB:215:VAL:HG23	1.74	0.52
34:Sb:49:HIS:CE1	34:Sb:70:LYS:HG2	2.45	0.52
35:L5:1707:C:N3	63:Lb:102:PRO:HB2	2.24	0.52
35:L5:2079:G:H2'	35:L5:2080:U:C6	2.44	0.52
35:L5:2480:G:H2'	35:L5:2481:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3965:A:N7	35:L5:4048:A:O2'	2.39	0.52
35:L5:4406:U:C2	35:L5:4407:G:C8	2.96	0.52
51:LO:3:GLU:N	67:Lf:31:GLU:OE1	2.42	0.52
56:LT:154:ILE:HG13	56:LT:155:PRO:HD2	1.92	0.52
61:LZ:53:VAL:HG13	61:LZ:62:ILE:HG12	1.90	0.52
62:La:36:GLY:HA3	62:La:40:HIS:CE1	2.43	0.52
85:LW:87:LEU:O	85:LW:91:MET:HB2	2.09	0.52
1:S2:634:A:H2'	1:S2:635:G:H8	1.74	0.52
22:SJ:138:ARG:NH2	22:SJ:152:ASP:O	2.42	0.52
25:SA:58:LEU:HD12	25:SA:174:MET:HE2	1.92	0.52
32:SO:97:LEU:HD22	32:SO:98:ARG:H	1.73	0.52
35:L5:1503:A:H4'	35:L5:1504:G:H5'	1.90	0.52
35:L5:2539:C:H2'	35:L5:2540:C:C6	2.44	0.52
35:L5:4578:G:H2'	35:L5:4579:U:C6	2.43	0.52
35:L5:5057:C:H2'	35:L5:5058:A:C8	2.44	0.52
49:LM:3:PHE:H	55:LS:175:PHE:HZ	1.56	0.52
49:LM:81:ASP:OD2	49:LM:81:ASP:N	2.41	0.52
51:LO:27:VAL:HG22	51:LO:101:ARG:HB2	1.90	0.52
72:Lk:40:ARG:HD3	72:Lk:41:TYR:CZ	2.44	0.52
1:S2:28:U:H2'	1:S2:29:G:C8	2.44	0.52
1:S2:951:C:H2'	1:S2:952:G:C8	2.45	0.52
1:S2:1028:A:H2	35:L5:1563:A:H61	1.57	0.52
1:S2:1101:U:H2'	1:S2:1102:G:C8	2.45	0.52
1:S2:1487:A:H5'	30:SC:118:ALA:HB2	1.91	0.52
3:SF:17:ILE:C	3:SF:18:LYS:HD3	2.34	0.52
3:SF:204:ARG:CZ	10:Sc:63:ARG:HE	2.22	0.52
17:SE:57:THR:HG22	17:SE:60:GLU:CD	2.35	0.52
23:SY:16:ARG:HA	23:SY:19:GLN:HA	1.91	0.52
26:SB:39:PHE:CE2	26:SB:74:LEU:HD13	2.44	0.52
35:L5:1345:A:H2'	35:L5:1346:C:C6	2.44	0.52
35:L5:2029:A:H2'	35:L5:2030:A:C8	2.44	0.52
35:L5:3660:C:OP1	38:LA:241:ARG:NH2	2.40	0.52
35:L5:3760:A:C8	83:CB:596:PRO:HB2	2.44	0.52
35:L5:4187:G:H4'	50:LN:82:GLY:HA2	1.91	0.52
35:L5:4220:A:H2'	35:L5:4222:G:H5"	1.91	0.52
35:L5:4364:G:H2'	35:L5:4365:C:H6	1.74	0.52
38:LA:45:VAL:HB	38:LA:61:VAL:HG12	1.91	0.52
41:LD:41:LYS:HB2	56:LT:68:THR:O	2.09	0.52
45:LH:15:ASN:OD1	45:LH:15:ASN:N	2.40	0.52
45:LH:41:ILE:HD13	45:LH:43:VAL:HG22	1.90	0.52
45:LH:137:SER:HB3	45:LH:145:ILE:HG12	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:LZ:41:ALA:HB2	61:LZ:77:TYR:HE1	1.73	0.52
83:CB:594:LYS:NZ	83:CB:858:LEU:OXT	2.41	0.52
1:S2:609:U:H2'	1:S2:610:G:C8	2.42	0.52
1:S2:924:G:N2	31:SN:87:ASP:OD1	2.38	0.52
2:SD:68:GLU:HB2	4:SK:20:VAL:CG2	2.39	0.52
3:SF:77:MET:HE3	3:SF:86:LYS:N	2.24	0.52
12:Sg:98:THR:HG22	12:Sg:99:ARG:HG2	1.90	0.52
13:SM:54:SER:OG	13:SM:80:ASP:O	2.27	0.52
27:SH:158:LEU:HD21	27:SH:187:PHE:HB3	1.91	0.52
35:L5:102:G:O2'	35:L5:1381:U:O2'	2.25	0.52
35:L5:174:C:H2'	35:L5:175:C:C6	2.44	0.52
35:L5:313:U:H5"	50:LN:179:LYS:HE2	1.92	0.52
35:L5:1802:A:H5"	35:L5:1803:G:H5'	1.90	0.52
35:L5:1996:C:N4	35:L5:2000:G:H22	2.08	0.52
35:L5:2521:G:H4'	68:Lg:26:PRO:HD2	1.90	0.52
35:L5:3880:G:H2'	35:L5:3881:G:C8	2.44	0.52
35:L5:4279:A:H5'	35:L5:4281:A:H1'	1.90	0.52
39:LB:86:VAL:HG12	39:LB:201:LEU:HD23	1.90	0.52
40:LC:331:TYR:CZ	43:LF:55:LYS:HG3	2.44	0.52
43:LF:106:ARG:O	43:LF:110:GLN:HG3	2.09	0.52
49:LM:100:ARG:HA	49:LM:103:LYS:HG2	1.91	0.52
53:LQ:6:ARG:NH1	63:Lb:18:ARG:O	2.42	0.52
80:CA:361:SER:OG	80:CA:362:ALA:N	2.42	0.52
83:CB:111:PHE:HD2	83:CB:501:VAL:HG13	1.74	0.52
83:CB:359:PRO:HB2	83:CB:364:ALA:HB2	1.90	0.52
83:CB:762:VAL:HG22	83:CB:765:ARG:HH22	1.74	0.52
1:S2:861:A:O2'	1:S2:862:A:N7	2.42	0.52
1:S2:924:G:H1	1:S2:1018:U:H3	1.58	0.52
14:SZ:85:ARG:HA	14:SZ:88:LEU:HD12	1.90	0.52
16:CD:217:ASN:OD1	16:CD:218:TRP:N	2.41	0.52
21:SG:48:TYR:OH	21:SG:116:LYS:NZ	2.31	0.52
27:SH:51:ILE:HD13	27:SH:179:LYS:HG2	1.91	0.52
35:L5:179:G:H2'	35:L5:180:C:C6	2.44	0.52
35:L5:1298:C:H2'	35:L5:1299:G:C8	2.45	0.52
35:L5:1398:A:N1	35:L5:1419:G:O2'	2.43	0.52
35:L5:1662:C:H2'	35:L5:1663:C:H6	1.75	0.52
35:L5:1994:C:H2'	35:L5:1995:G:H8	1.74	0.52
35:L5:3615:G:H21	85:LW:44:ARG:NH1	2.08	0.52
35:L5:4717:A:OP2	39:LB:30:LYS:NZ	2.28	0.52
40:LC:308:LYS:HG2	40:LC:310:HIS:CE1	2.45	0.52
44:LG:150:LYS:HE3	44:LG:177:MET:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:84:ASN:N	83:CB:84:ASN:OD1	2.43	0.52
83:CB:752:PRO:HD2	83:CB:807:GLN:O	2.10	0.52
1:S2:95:G:OP1	17:SE:10:LYS:NZ	2.43	0.52
1:S2:454:U:H2'	1:S2:455:A:H8	1.74	0.52
1:S2:847:A:OP1	17:SE:108:ARG:NH2	2.42	0.52
14:SZ:92:LEU:HD13	14:SZ:109:TYR:HE2	1.75	0.52
17:SE:160:ILE:HD13	17:SE:162:ILE:HG23	1.91	0.52
29:Sa:29:CYS:SG	32:SO:146:ARG:HG3	2.50	0.52
35:L5:1358:G:O2'	35:L5:1360:G:O6	2.23	0.52
35:L5:1369:C:OP2	35:L5:1370:G:O2'	2.25	0.52
35:L5:2017:A:HO2'	35:L5:2018:C:H6	1.56	0.52
35:L5:3654:G:O2'	35:L5:3693:U:OP1	2.22	0.52
35:L5:3754:G:H2'	35:L5:3755:G:H8	1.74	0.52
35:L5:4301:U:OP2	35:L5:4303:C:N4	2.43	0.52
35:L5:4893:A:H5'	49:LM:129:LYS:NZ	2.24	0.52
37:L8:39:G:H1'	37:L8:103:A:N6	2.25	0.52
39:LB:353:VAL:HG12	39:LB:355:THR:HG23	1.92	0.52
56:LT:63:ARG:NH1	63:Lb:30:GLU:OE2	2.42	0.52
82:Lt:21:GLU:O	82:Lt:48:LYS:NZ	2.43	0.52
1:S2:84:A:N3	1:S2:150:A:O2'	2.40	0.52
1:S2:190:G:H4'	18:SI:141:ARG:NH2	2.25	0.52
1:S2:812:A:O2'	17:SE:12:VAL:O	2.16	0.52
1:S2:970:G:H4'	1:S2:971:G:OP2	2.10	0.52
4:SK:95:ARG:O	4:SK:97:SER:N	2.43	0.52
5:SP:25:LEU:HD12	5:SP:87:PRO:HG3	1.91	0.52
5:SP:28:MET:SD	5:SP:33:LEU:HB3	2.50	0.52
17:SE:250:GLU:OE1	17:SE:250:GLU:N	2.35	0.52
21:SG:189:ARG:HA	21:SG:192:ILE:HG22	1.92	0.52
25:SA:145:ILE:HG22	25:SA:159:ILE:HB	1.92	0.52
34:Sb:55:LEU:HD11	34:Sb:60:SER:HA	1.91	0.52
35:L5:966:A:H3'	35:L5:967:C:C6	2.43	0.52
35:L5:1837:A:OP2	56:LT:130:ARG:NH1	2.39	0.52
35:L5:2527:A:OP1	54:LR:38:ARG:NH2	2.43	0.52
38:LA:107:MET:O	38:LA:139:HIS:NE2	2.39	0.52
42:LE:211:HIS:HD1	42:LE:211:HIS:H	1.57	0.52
47:LJ:51:SER:N	47:LJ:69:ALA:O	2.42	0.52
79:Lz:59:PRO:HG2	79:Lz:62:LYS:HD3	1.92	0.52
81:Ls:26:LYS:HB3	81:Ls:95:LEU:HD11	1.91	0.52
84:Et:38:A:H2'	84:Et:39:U:H6	1.75	0.52
1:S2:381:C:H5"	18:SI:54:LYS:HE3	1.91	0.52
1:S2:1273:C:O2'	1:S2:1506:A:N1	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Sg:5:MET:HA	12:Sg:311:GLN:O	2.10	0.52
16:CD:195:ARG:HA	16:CD:204:LEU:HD11	1.92	0.52
21:SG:84:TYR:OH	21:SG:91:GLU:OE1	2.28	0.52
25:SA:205:ARG:HD2	25:SA:210:ILE:HG23	1.91	0.52
35:L5:937:U:OP1	49:LM:46:ARG:NE	2.42	0.52
35:L5:2610:G:H2'	35:L5:2611:A:C8	2.45	0.52
35:L5:5004:C:H2'	35:L5:5005:G:O4'	2.09	0.52
36:L7:54:A:C6	47:LJ:12:MET:HG2	2.44	0.52
41:LD:44:TYR:HA	56:LT:33:ILE:HD12	1.92	0.52
57:LU:56:LEU:HD13	57:LU:61:VAL:HG13	1.90	0.52
83:CB:754:GLN:H	83:CB:754:GLN:CD	2.18	0.52
7:SS:113:ARG:HH11	7:SS:114:LEU:HD12	1.74	0.52
32:SO:61:LYS:NZ	32:SO:80:ASP:OD2	2.28	0.52
35:L5:385:A:OP1	60:LY:77:LYS:NZ	2.43	0.52
37:L8:60:G:O6	37:L8:96:C:O2'	2.23	0.52
41:LD:216:GLU:O	41:LD:220:LYS:HG2	2.10	0.52
45:LH:113:GLU:OE1	45:LH:125:ARG:NH1	2.43	0.52
47:LJ:41:GLU:N	47:LJ:41:GLU:OE1	2.42	0.52
83:CB:772:GLU:OE1	83:CB:785:LYS:HG2	2.10	0.52
84:Et:15:G:N2	84:Et:21:A:H1'	2.25	0.52
84:Et:30:G:H3'	84:Et:31:A:H8	1.75	0.52
1:S2:1114:U:O2'	1:S2:1115:U:H2'	2.09	0.52
1:S2:1661:A:H8	11:Sd:14:PHE:HB2	1.75	0.52
4:SK:7:ASN:HA	4:SK:10:ALA:HB3	1.92	0.52
5:SP:43:ARG:O	5:SP:47:ARG:HG2	2.10	0.52
5:SP:85:ILE:HD13	5:SP:111:MET:HE2	1.91	0.52
21:SG:131:ARG:HB2	85:LW:82:ILE:HD13	1.92	0.52
26:SB:160:GLN:O	26:SB:164:ILE:HG23	2.09	0.52
27:SH:44:ASN:OD1	27:SH:68:GLN:NE2	2.43	0.52
35:L5:1081:C:O2'	35:L5:1082:C:H5'	2.10	0.52
35:L5:3786:U:OP1	35:L5:4550:G:O2'	2.25	0.52
35:L5:3950:U:H2'	35:L5:3951:G:C8	2.45	0.52
44:LG:173:LEU:HD13	70:Li:43:MET:HE3	1.91	0.52
44:LG:207:VAL:HG21	44:LG:215:LEU:HD22	1.91	0.52
45:LH:104:VAL:O	45:LH:113:GLU:HB2	2.10	0.52
50:LN:99:GLN:O	50:LN:103:GLU:HG3	2.10	0.52
64:Lc:36:LYS:O	64:Lc:40:GLN:HG3	2.10	0.52
80:CA:191:LYS:HG3	80:CA:194:VAL:HG11	1.91	0.52
83:CB:155:LEU:CD1	83:CB:157:MET:HE3	2.40	0.52
84:Et:21:A:H2'	84:Et:22:G:C8	2.44	0.52
1:S2:12:U:H2'	1:S2:13:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1535:U:O4	3:SF:159:ARG:NH1	2.43	0.51
18:SI:61:ASP:O	18:SI:78:ILE:N	2.33	0.51
25:SA:108:PHE:HD2	25:SA:136:GLU:HB3	1.74	0.51
27:SH:57:ARG:HD2	27:SH:91:HIS:CE1	2.45	0.51
35:L5:212:A:H2'	35:L5:213:G:H8	1.75	0.51
35:L5:2021:G:H4'	81:Ls:84:GLY:C	2.34	0.51
35:L5:2072:C:OP1	53:LQ:2:GLY:N	2.43	0.51
35:L5:2844:A:O2'	35:L5:4631:G:H4'	2.10	0.51
35:L5:4563:U:C2	35:L5:4564:A:C8	2.97	0.51
37:L8:5:U:H2'	37:L8:6:C:H6	1.74	0.51
41:LD:228:LYS:C	41:LD:228:LYS:HD2	2.35	0.51
41:LD:258:LYS:H	41:LD:259:LYS:HZ3	1.59	0.51
42:LE:244:GLU:O	42:LE:248:ILE:HG12	2.10	0.51
48:LL:54:PRO:HG2	48:LL:97:SER:HB3	1.92	0.51
49:LM:118:MET:HB3	51:LO:192:TYR:CE2	2.44	0.51
55:LS:85:ASP:HA	55:LS:90:THR:HA	1.91	0.51
55:LS:161:ARG:NH1	55:LS:164:LYS:HG3	2.25	0.51
82:Lt:106:PHE:HD1	82:Lt:110:VAL:HB	1.75	0.51
83:CB:278:THR:HA	83:CB:284:LYS:HA	1.91	0.51
1:S2:15:U:H2'	1:S2:16:G:O4'	2.11	0.51
1:S2:194:C:H2'	1:S2:195:C:H6	1.75	0.51
1:S2:925:G:O6	1:S2:1017:U:O4	2.29	0.51
1:S2:929:G:H2'	1:S2:930:C:O4'	2.11	0.51
1:S2:935:G:O2'	31:SN:108:ASP:OD1	2.22	0.51
1:S2:1413:G:H2'	1:S2:1414:A:C8	2.45	0.51
1:S2:1714:U:H2'	1:S2:1715:A:C8	2.45	0.51
3:SF:149:GLN:O	3:SF:153:LEU:HD22	2.10	0.51
8:ST:28:LEU:HA	8:ST:110:LEU:HD21	1.91	0.51
9:SU:21:ARG:HG2	9:SU:115:THR:HG22	1.92	0.51
13:SM:20:GLU:O	13:SM:24:THR:HG23	2.10	0.51
13:SM:94:ILE:HD11	13:SM:96:ARG:HD2	1.92	0.51
35:L5:386:A:O2'	60:LY:87:ARG:NH1	2.43	0.51
35:L5:1443:A:N1	35:L5:2104:G:N3	2.57	0.51
35:L5:1764:G:H4'	35:L5:1769:G:C6	2.45	0.51
35:L5:4054:C:H1'	79:Lz:207:LYS:HB2	1.92	0.51
61:LZ:76:ASN:OD1	61:LZ:77:TYR:N	2.43	0.51
67:Lf:36:ARG:HD2	67:Lf:80:ASN:H	1.74	0.51
79:Lz:141:ASN:ND2	79:Lz:149:ASP:O	2.43	0.51
83:CB:304:ILE:HG21	83:CB:336:LEU:HB2	1.92	0.51
83:CB:584:SER:OG	83:CB:585:GLU:OE1	2.27	0.51
1:S2:375:U:H2'	1:S2:376:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1189:A:OP1	20:SX:28:LYS:HD3	2.11	0.51
1:S2:1424:G:H2'	1:S2:1425:G:C8	2.45	0.51
1:S2:1523:C:OP1	7:SS:145:THR:OG1	2.29	0.51
2:SD:163:PRO:HA	2:SD:166:TYR:CE1	2.44	0.51
6:SQ:110:ASP:OD1	6:SQ:111:ILE:N	2.43	0.51
7:SS:43:VAL:O	7:SS:47:LYS:HG2	2.10	0.51
15:Sf:132:MET:HE1	15:Sf:139:HIS:HB3	1.92	0.51
19:SL:93:LEU:HD21	20:SX:8:ARG:NH1	2.24	0.51
20:SX:84:PHE:O	20:SX:122:VAL:N	2.42	0.51
30:SC:264:SER:HB3	30:SC:267:GLN:HG2	1.91	0.51
31:SN:27:LYS:O	31:SN:28:LEU:HD13	2.10	0.51
35:L5:106:A:H2'	35:L5:107:G:O4'	2.09	0.51
35:L5:368:C:O4'	40:LC:83:GLY:HA3	2.10	0.51
35:L5:493:G:C6	35:L5:660:A:N1	2.78	0.51
35:L5:715:G:OP1	40:LC:321:ASN:ND2	2.42	0.51
35:L5:993:G:O2'	35:L5:994:G:O4'	2.19	0.51
35:L5:2496:G:H2'	35:L5:2497:C:C6	2.46	0.51
35:L5:2520:C:H2'	35:L5:2521:G:C8	2.46	0.51
35:L5:2558:C:H2'	35:L5:2559:G:C8	2.46	0.51
35:L5:2744:A:H2'	35:L5:2745:A:C8	2.46	0.51
37:L8:79:G:H2'	37:L8:80:A:O4'	2.10	0.51
42:LE:190:HIS:HB3	42:LE:193:PHE:HD2	1.75	0.51
53:LQ:137:VAL:HG23	53:LQ:139:LEU:HD13	1.92	0.51
73:Ll:24:PRO:HD2	73:Ll:27:ILE:HG13	1.91	0.51
80:CA:152:ALA:O	80:CA:156:LEU:HG	2.11	0.51
82:Lt:121:LEU:O	82:Lt:121:LEU:HD13	2.11	0.51
83:CB:170:GLU:HG3	83:CB:171:PRO:HD2	1.91	0.51
83:CB:420:LEU:HD21	83:CB:463:ASP:HB2	1.93	0.51
1:S2:349:A:H2'	1:S2:350:C:C6	2.45	0.51
1:S2:374:G:OP1	19:SL:135:SER:OG	2.27	0.51
1:S2:388:U:H2'	1:S2:389:A:C8	2.45	0.51
1:S2:1507:G:H1	15:Sf:87:THR:HA	1.75	0.51
1:S2:1713:C:H2'	1:S2:1714:U:C6	2.46	0.51
1:S2:1751:C:H1'	1:S2:1784:G:N2	2.26	0.51
14:SZ:47:LEU:HD11	14:SZ:78:LYS:HB3	1.91	0.51
22:SJ:137:VAL:HG12	22:SJ:138:ARG:H	1.75	0.51
26:SB:57:ILE:HG12	26:SB:59:SER:H	1.75	0.51
35:L5:1090:G:OP1	56:LT:142:ARG:NH1	2.43	0.51
35:L5:1733:G:N3	35:L5:4214:A:H2'	2.24	0.51
35:L5:2863:G:O2'	54:LR:82:LYS:O	2.25	0.51
35:L5:3595:U:H5"	35:L5:3597:G:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3920:U:H2'	35:L5:3921:U:C6	2.45	0.51
35:L5:4716:C:OP1	39:LB:276:HIS:ND1	2.40	0.51
35:L5:4954:G:H2'	35:L5:4955:A:C8	2.45	0.51
38:LA:116:LEU:O	38:LA:125:LYS:N	2.39	0.51
55:LS:99:ASP:OD1	55:LS:108:GLN:NE2	2.43	0.51
80:CA:58:GLU:O	80:CA:62:LYS:HG3	2.11	0.51
80:CA:123:HIS:NE2	80:CA:125:PHE:HB3	2.26	0.51
81:Ls:31:GLY:N	81:Ls:190:GLN:OE1	2.42	0.51
84:Et:21:A:C6	84:Et:48:C:C2	2.98	0.51
1:S2:694:G:N7	1:S2:696:G:N2	2.58	0.51
1:S2:984:C:O2'	32:SO:138:ASP:O	2.20	0.51
1:S2:1405:A:H2'	1:S2:1406:G:O4'	2.11	0.51
1:S2:1566:G:N7	8:ST:101:ARG:NH2	2.58	0.51
1:S2:1839:U:H2'	1:S2:1840:U:C6	2.45	0.51
10:Sc:56:LEU:HD12	10:Sc:57:THR:H	1.76	0.51
13:SM:52:LEU:HB2	13:SM:76:LEU:HD11	1.92	0.51
14:SZ:84:ALA:O	14:SZ:88:LEU:HG	2.11	0.51
25:SA:184:ARG:HH21	25:SA:191:ARG:H	1.58	0.51
35:L5:495:C:H2'	35:L5:496:G:C8	2.45	0.51
40:LC:110:ARG:O	40:LC:113:ARG:NH1	2.39	0.51
44:LG:111:LYS:HE3	44:LG:112:GLN:HG3	1.92	0.51
50:LN:140:LYS:HE2	50:LN:144:ARG:HH21	1.76	0.51
57:LU:19:LEU:HA	57:LU:74:SER:H	1.74	0.51
57:LU:65:ARG:HA	57:LU:69:LYS:O	2.11	0.51
61:LZ:22:LYS:HE3	61:LZ:132:GLN:O	2.11	0.51
78:Lr:42:GLY:HA2	78:Lr:48:THR:HG21	1.91	0.51
1:S2:1528:G:O2'	1:S2:1666:C:OP1	2.24	0.51
3:SF:55:ARG:O	3:SF:62:ARG:NH2	2.44	0.51
4:SK:15:LEU:HD13	4:SK:21:MET:HB2	1.93	0.51
6:SQ:109:LYS:O	6:SQ:113:ILE:HG12	2.11	0.51
7:SS:124:ARG:HH21	7:SS:129:LEU:HD13	1.76	0.51
8:ST:18:LEU:O	8:ST:22:LEU:HD12	2.09	0.51
12:Sg:273:GLU:N	12:Sg:273:GLU:OE1	2.43	0.51
17:SE:125:LYS:HB2	17:SE:226:PHE:CE1	2.46	0.51
19:SL:13:GLN:HE22	19:SL:36:TYR:HD2	1.58	0.51
19:SL:68:ILE:HG21	19:SL:143:LEU:HD11	1.91	0.51
21:SG:39:ASP:OD1	21:SG:47:GLY:N	2.43	0.51
23:SY:25:ILE:HD11	23:SY:60:PHE:CZ	2.46	0.51
25:SA:180:ARG:O	25:SA:184:ARG:HB2	2.11	0.51
35:L5:254:G:H2'	35:L5:255:C:O4'	2.11	0.51
35:L5:453:G:H2'	35:L5:453:G:N3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1633:G:H5'	35:L5:1634:A:OP1	2.11	0.51
36:L7:11:A:N7	56:LT:20:ARG:NH1	2.54	0.51
48:LL:48:PRO:HG3	69:Lh:118:LYS:HE3	1.93	0.51
56:LT:124:THR:OG1	56:LT:125:TRP:N	2.41	0.51
58:LV:90:ARG:NH2	58:LV:140:ALA:O	2.39	0.51
77:Lp:74:THR:O	77:Lp:78:THR:HG23	2.11	0.51
83:CB:114:GLU:OE2	83:CB:118:ALA:HB2	2.10	0.51
83:CB:251:LYS:H	83:CB:251:LYS:HE2	1.76	0.51
1:S2:884:C:H2'	1:S2:885:U:O4'	2.10	0.51
6:SQ:123:ASP:OD1	6:SQ:125:ARG:HG2	2.11	0.51
12:Sg:214:GLY:HA2	12:Sg:236:ILE:HG23	1.92	0.51
17:SE:139:LEU:HD22	17:SE:147:ILE:HD11	1.93	0.51
18:SI:103:LEU:HD13	18:SI:170:LYS:HG3	1.91	0.51
32:SO:14:VAL:HG11	32:SO:17:LEU:HB2	1.93	0.51
35:L5:1333:A:H2'	35:L5:1334:A:H8	1.74	0.51
35:L5:1578:U:OP1	35:L5:3637:U:O2'	2.21	0.51
39:LB:51:ALA:HB3	39:LB:78:ILE:HG22	1.93	0.51
39:LB:303:ALA:HB2	39:LB:314:ILE:HD12	1.92	0.51
42:LE:264:ILE:HD11	42:LE:267:LEU:HD22	1.92	0.51
47:LJ:50:PHE:HB3	47:LJ:67:LYS:HD2	1.93	0.51
52:LP:122:ALA:HB3	52:LP:143:PRO:HG2	1.93	0.51
57:LU:19:LEU:HB2	57:LU:73:THR:HB	1.92	0.51
73:Ll:43:HIS:HB3	73:Ll:46:ARG:HG3	1.91	0.51
83:CB:34:THR:HG21	83:CB:218:LEU:HD23	1.93	0.51
1:S2:185:G:N1	1:S2:214:U:N3	2.53	0.51
1:S2:291:G:O2'	1:S2:292:A:OP1	2.29	0.51
1:S2:342:C:H2'	1:S2:343:A:C8	2.46	0.51
1:S2:616:A:N3	24:Se:12:VAL:HG21	2.26	0.51
1:S2:691:G:N1	1:S2:692:G:N3	2.58	0.51
1:S2:932:G:O2'	1:S2:934:G:OP2	2.22	0.51
2:SD:44:THR:HB	2:SD:45:ARG:HH11	1.76	0.51
2:SD:68:GLU:O	2:SD:72:VAL:HG12	2.10	0.51
6:SQ:25:CYS:HB3	6:SQ:95:TYR:CD1	2.46	0.51
14:SZ:44:LEU:HG	14:SZ:45:ASN:H	1.75	0.51
17:SE:125:LYS:HA	17:SE:159:THR:HA	1.91	0.51
26:SB:56:LYS:NZ	26:SB:61:GLY:HA3	2.26	0.51
28:SV:10:ASP:OD1	30:SC:248:TYR:OH	2.27	0.51
28:SV:74:LYS:NZ	28:SV:80:SER:HB3	2.25	0.51
32:SO:92:ALA:C	32:SO:93:LEU:HD12	2.35	0.51
35:L5:700:G:H2'	35:L5:701:G:C8	2.45	0.51
35:L5:2296:G:O2'	40:LC:242:PRO:O	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2483:G:O6	35:L5:2495:U:O4	2.28	0.51
35:L5:2695:A:OP1	72:Lk:35:LYS:NZ	2.43	0.51
35:L5:2890:C:H2'	35:L5:2891:U:C6	2.46	0.51
35:L5:4194:U:O2'	46:LI:116:ARG:NH2	2.44	0.51
36:L7:8:G:OP2	41:LD:30:TYR:OH	2.21	0.51
43:LF:236:ARG:HB2	43:LF:239:GLN:HB2	1.92	0.51
45:LH:134:CYS:HA	45:LH:146:LEU:HA	1.93	0.51
47:LJ:108:GLY:HA2	47:LJ:129:ASP:HA	1.91	0.51
66:Le:85:LEU:HD21	66:Le:115:ALA:HB2	1.92	0.51
1:S2:67:C:N4	21:SG:167:LYS:HD3	2.25	0.51
1:S2:152:U:H1'	21:SG:132:ARG:HD2	1.93	0.51
1:S2:215:G:H2'	1:S2:216:C:H6	1.76	0.51
12:Sg:215:GLN:HA	12:Sg:231:ASP:HA	1.93	0.51
15:Sf:119:ARG:HD3	15:Sf:120:GLU:N	2.26	0.51
15:Sf:146:LEU:HD22	15:Sf:147:THR:H	1.76	0.51
17:SE:95:THR:O	17:SE:95:THR:OG1	2.28	0.51
19:SL:104:LYS:O	20:SX:11:ARG:NH2	2.43	0.51
22:SJ:54:ARG:HH21	30:SC:202:THR:HG22	1.75	0.51
30:SC:212:LYS:O	30:SC:216:MET:HG3	2.11	0.51
34:Sb:42:LYS:HD3	34:Sb:56:CYS:SG	2.51	0.51
35:L5:406:C:O2'	35:L5:407:A:OP1	2.28	0.51
37:L8:70:G:H5"	60:LY:27:ARG:CZ	2.41	0.51
38:LA:22:HIS:O	38:LA:24:LYS:NZ	2.42	0.51
47:LJ:32:ARG:O	47:LJ:126:TYR:OH	2.25	0.51
52:LP:18:ARG:NH2	52:LP:147:GLU:OE2	2.43	0.51
55:LS:93:MET:SD	55:LS:113:MET:HE1	2.50	0.51
80:CA:11:THR:HG22	80:CA:13:ALA:H	1.75	0.51
82:Lt:12:VAL:O	82:Lt:12:VAL:HG12	2.11	0.51
84:Et:50:A:H2'	84:Et:51:G:C8	2.46	0.51
1:S2:1298:G:H4'	5:SP:78:THR:HA	1.92	0.51
1:S2:1779:G:C2	1:S2:1780:G:C5	2.99	0.51
2:SD:21:LEU:O	2:SD:25:LEU:HG	2.10	0.51
20:SX:125:VAL:HG22	20:SX:126:ALA:H	1.76	0.51
22:SJ:132:GLN:HB3	22:SJ:134:HIS:HE1	1.75	0.51
26:SB:78:GLU:OE1	26:SB:189:ILE:HG22	2.11	0.51
31:SN:16:LEU:HD13	31:SN:17:PRO:HD2	1.92	0.51
35:L5:2809:G:O2'	35:L5:4644:G:OP1	2.27	0.51
35:L5:3663:A:N6	35:L5:4168:G:O2'	2.44	0.51
35:L5:3949:A:O2'	35:L5:3950:U:O5'	2.28	0.51
38:LA:83:HIS:HB3	77:Lp:64:VAL:HG22	1.93	0.51
39:LB:302:ASN:HB3	39:LB:313:SER:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:LC:101:MET:HE3	40:LC:104:PRO:HA	1.93	0.51
40:LC:116:ASN:HB2	40:LC:119:GLN:HG3	1.93	0.51
54:LR:153:LYS:C	54:LR:154:LEU:HB3	2.36	0.51
57:LU:20:LYS:HG3	57:LU:20:LYS:O	2.11	0.51
61:LZ:66:SER:HB2	61:LZ:122:TYR:HE2	1.76	0.51
68:Lg:15:THR:O	68:Lg:19:LYS:NZ	2.44	0.51
83:CB:10:ARG:HA	83:CB:13:MET:HB2	1.92	0.51
83:CB:91:GLN:HE22	83:CB:359:PRO:HA	1.76	0.51
1:S2:1005:G:H2'	1:S2:1006:C:C6	2.45	0.50
1:S2:1851:A:H5'	75:Ln:1:MET:HE3	1.92	0.50
3:SF:22:LYS:HG3	3:SF:23:TRP:CD2	2.46	0.50
3:SF:168:THR:OG1	3:SF:169:ILE:HD12	2.11	0.50
6:SQ:43:GLU:HG3	6:SQ:44:PRO:CD	2.41	0.50
6:SQ:110:ASP:O	6:SQ:114:GLN:HG2	2.11	0.50
17:SE:92:ILE:HG21	23:SY:17:LEU:HD11	1.92	0.50
21:SG:142:ARG:NH2	21:SG:148:SER:O	2.45	0.50
23:SY:62:THR:HA	23:SY:69:THR:HA	1.93	0.50
35:L5:12:A:H4'	59:LX:53:ARG:HG2	1.93	0.50
35:L5:1367:C:O2'	35:L5:1369:C:OP2	2.23	0.50
35:L5:1846:G:H2'	35:L5:1847:C:C6	2.45	0.50
35:L5:1877:G:O6	63:Lb:10:HIS:NE2	2.44	0.50
35:L5:2467:U:H4'	35:L5:2468:U:H5'	1.94	0.50
35:L5:2515:G:OP1	68:Lg:37:LYS:NZ	2.35	0.50
35:L5:2640:G:H2'	35:L5:2641:A:C8	2.47	0.50
35:L5:4091:G:N2	35:L5:4092:G:N7	2.59	0.50
35:L5:4258:C:H2'	35:L5:4259:C:H6	1.76	0.50
35:L5:4425:G:OP1	74:Lm:100:TYR:OH	2.27	0.50
35:L5:5027:C:O2'	35:L5:5028:G:H5"	2.11	0.50
37:L8:83:C:H42	60:LY:50:ARG:NH2	2.08	0.50
44:LG:257:LYS:O	44:LG:261:LEU:HG	2.11	0.50
50:LN:155:VAL:O	50:LN:162:ARG:NH2	2.43	0.50
53:LQ:15:ARG:NH1	53:LQ:52:PHE:O	2.43	0.50
83:CB:216:SER:OG	83:CB:219:HIS:HB2	2.11	0.50
84:Et:14:A:C6	84:Et:22:G:C4	2.99	0.50
1:S2:614:C:H2'	1:S2:626:G:C8	2.47	0.50
1:S2:1310:U:H2'	1:S2:1311:C:C6	2.47	0.50
12:Sg:107:ASP:OD1	12:Sg:107:ASP:N	2.35	0.50
19:SL:5:GLN:HE22	19:SL:11:GLN:H	1.60	0.50
25:SA:73:ASP:OD1	25:SA:120:ARG:HB2	2.10	0.50
25:SA:159:ILE:HG22	25:SA:159:ILE:O	2.10	0.50
30:SC:272:HIS:O	30:SC:276:THR:HG22	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:188:G:N2	35:L5:190:G:O6	2.44	0.50
35:L5:189:G:H2'	35:L5:190:G:H8	1.76	0.50
35:L5:230:G:OP1	60:LY:15:ARG:NH1	2.39	0.50
35:L5:433:A:C2	35:L5:3867:A:H4'	2.46	0.50
35:L5:1481:C:O2'	35:L5:1482:G:O5'	2.30	0.50
35:L5:1509:C:H5"	62:La:2:PRO:HD3	1.93	0.50
35:L5:1743:A:N1	35:L5:1789:C:O2'	2.39	0.50
35:L5:2496:G:H2'	35:L5:2497:C:H6	1.75	0.50
35:L5:3664:G:H2'	35:L5:3665:G:H8	1.76	0.50
35:L5:4563:U:H2'	35:L5:4564:A:H8	1.76	0.50
39:LB:50:LYS:NZ	39:LB:337:VAL:O	2.41	0.50
47:LJ:151:ILE:HD11	47:LJ:156:ARG:HG2	1.93	0.50
57:LU:22:THR:HG22	57:LU:109:SER:HA	1.92	0.50
61:LZ:21:ARG:NH1	61:LZ:47:ASP:OD2	2.43	0.50
64:Lc:13:SER:HB3	64:Lc:17:ARG:HH11	1.77	0.50
79:Lz:90:LEU:HA	79:Lz:93:LEU:HD12	1.92	0.50
83:CB:592:LEU:HD22	83:CB:593:SER:N	2.26	0.50
1:S2:492:C:OP2	23:SY:107:ARG:NH2	2.44	0.50
1:S2:1057:C:O2'	1:S2:1059:G:N7	2.35	0.50
1:S2:1084:A:OP1	1:S2:1858:G:O2'	2.27	0.50
4:SK:13:GLU:OE1	4:SK:13:GLU:N	2.40	0.50
13:SM:87:GLU:OE1	13:SM:92:CYS:HB3	2.11	0.50
17:SE:56:LEU:HB2	17:SE:60:GLU:OE2	2.11	0.50
18:SI:116:HIS:CD2	18:SI:152:ARG:HD3	2.46	0.50
28:SV:66:ASP:OD1	28:SV:67:ASP:N	2.43	0.50
35:L5:677:G:H2'	35:L5:678:C:H6	1.77	0.50
35:L5:1502:G:N7	62:La:77:LYS:NZ	2.49	0.50
35:L5:4543:G:H2'	35:L5:4544:A:C8	2.46	0.50
53:LQ:177:ALA:O	62:La:51:GLY:HA2	2.12	0.50
64:Lc:49:ALA:HB1	64:Lc:77:ASN:HA	1.94	0.50
1:S2:192:C:H2'	1:S2:193:C:C6	2.47	0.50
1:S2:496:C:H2'	1:S2:497:C:H6	1.76	0.50
1:S2:659:G:H2'	1:S2:663:C:C6	2.46	0.50
1:S2:1117:C:H2'	1:S2:1118:C:C6	2.47	0.50
3:SF:178:ILE:O	3:SF:182:LYS:HG3	2.11	0.50
10:Sc:33:GLU:HB3	10:Sc:41:SER:HB2	1.94	0.50
12:Sg:17:TRP:N	12:Sg:36:ARG:HB2	2.26	0.50
12:Sg:216:ALA:N	12:Sg:230:LEU:O	2.45	0.50
14:SZ:46:ASN:C	14:SZ:47:LEU:HD22	2.35	0.50
25:SA:49:ILE:HG21	25:SA:162:PRO:O	2.11	0.50
32:SO:13:GLN:HB3	32:SO:15:ILE:HG13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:30:C:H5	50:LN:189:ARG:HH21	1.57	0.50
35:L5:661:C:H2'	35:L5:662:C:C6	2.46	0.50
35:L5:1613:A:H5"	38:LA:183:GLY:CA	2.42	0.50
35:L5:3919:C:H5"	38:LA:207:VAL:HG13	1.91	0.50
35:L5:4220:A:OP2	56:LT:2:THR:OG1	2.15	0.50
35:L5:4392:G:N2	35:L5:4395:U:O2	2.35	0.50
35:L5:4584:A:H2'	35:L5:4585:U:O4'	2.12	0.50
35:L5:4892:A:H2'	35:L5:4893:A:O4'	2.10	0.50
35:L5:4922:C:H2'	35:L5:4923:C:C6	2.47	0.50
48:LL:50:PRO:O	48:LL:52:SER:N	2.44	0.50
50:LN:149:GLN:O	50:LN:152:THR:OG1	2.28	0.50
56:LT:48:VAL:HG21	56:LT:94:GLU:HG2	1.93	0.50
57:LU:72:VAL:O	57:LU:72:VAL:HG12	2.11	0.50
80:CA:95:ASP:OD2	80:CA:96:GLN:N	2.45	0.50
1:S2:122:G:H21	17:SE:146:THR:HG21	1.74	0.50
1:S2:1598:G:H1'	1:S2:1599:U:H5	1.77	0.50
13:SM:49:LEU:HD23	13:SM:114:TYR:OH	2.11	0.50
16:CD:200:ASP:OD1	16:CD:200:ASP:N	2.42	0.50
18:SI:42:ARG:NH2	18:SI:59:ARG:HH12	2.09	0.50
30:SC:201:GLY:N	30:SC:221:ASP:OD2	2.40	0.50
30:SC:204:ILE:HD13	30:SC:222:CYS:HB3	1.93	0.50
32:SO:57:THR:N	32:SO:60:MET:SD	2.83	0.50
35:L5:1269:G:N2	35:L5:1440:U:O2	2.44	0.50
35:L5:1519:C:H2'	35:L5:1520:C:H6	1.76	0.50
35:L5:2431:A:OP1	73:Ll:41:ARG:NH1	2.45	0.50
35:L5:2554:U:C2	35:L5:2764:A:N7	2.79	0.50
35:L5:2693:G:OP2	72:Lk:33:LYS:NZ	2.37	0.50
35:L5:3948:C:O3'	35:L5:3949:A:H8	1.95	0.50
35:L5:4492:U:O2'	35:L5:4512:U:O2	2.24	0.50
76:Lo:26:TYR:HB3	76:Lo:67:VAL:HB	1.93	0.50
80:CA:176:SER:OG	80:CA:350:GLN:OE1	2.25	0.50
1:S2:106:C:H2'	1:S2:107:A:C8	2.45	0.50
1:S2:107:A:H2'	1:S2:108:G:H8	1.77	0.50
1:S2:551:U:H5'	24:Se:39:ASN:ND2	2.26	0.50
1:S2:604:A:C4	22:SJ:20:PHE:HE2	2.30	0.50
1:S2:674:C:H2'	1:S2:675:U:C6	2.46	0.50
1:S2:1244:U:H2'	1:S2:1245:G:C8	2.47	0.50
4:SK:29:MET:HB3	4:SK:42:ASN:HB2	1.94	0.50
5:SP:92:SER:H	5:SP:107:ILE:HB	1.76	0.50
22:SJ:133:ARG:HH12	23:SY:65:GLY:HA2	1.76	0.50
27:SH:147:LYS:HG2	27:SH:153:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:129:C:H2'	35:L5:130:C:C6	2.47	0.50
35:L5:935:A:O2'	49:LM:44:GLN:O	2.27	0.50
35:L5:2092:G:O2'	35:L5:2262:G:N2	2.45	0.50
35:L5:2613:C:H4'	68:Lg:2:VAL:HG23	1.94	0.50
41:LD:278:ASP:OD2	41:LD:282:GLN:NE2	2.44	0.50
48:LL:63:THR:HG21	62:La:66:ASN:HB3	1.92	0.50
56:LT:8:ARG:O	56:LT:11:THR:OG1	2.30	0.50
77:Lp:32:SER:OG	77:Lp:69:TRP:O	2.28	0.50
83:CB:82:SER:OG	83:CB:83:GLU:N	2.44	0.50
83:CB:480:VAL:HA	83:CB:529:LYS:NZ	2.27	0.50
1:S2:1650:A:H5"	6:SQ:139:ALA:HB2	1.93	0.50
1:S2:1777:G:H2'	1:S2:1778:C:H6	1.77	0.50
14:SZ:90:GLU:O	14:SZ:93:SER:OG	2.30	0.50
25:SA:5:LEU:O	25:SA:9:GLN:NE2	2.41	0.50
27:SH:33:ASN:ND2	27:SH:36:LEU:HB2	2.27	0.50
27:SH:91:HIS:CD2	27:SH:169:LYS:HE3	2.46	0.50
30:SC:167:ARG:NH1	30:SC:218:GLY:O	2.44	0.50
30:SC:211:LYS:O	30:SC:215:MET:HG2	2.12	0.50
31:SN:83:ASP:OD1	31:SN:83:ASP:N	2.45	0.50
35:L5:461:G:H2'	35:L5:462:G:C8	2.46	0.50
35:L5:1346:C:H2'	35:L5:1347:G:C8	2.45	0.50
35:L5:1705:G:H2'	35:L5:1706:A:O4'	2.11	0.50
35:L5:1802:A:N3	56:LT:130:ARG:NH2	2.55	0.50
35:L5:2107:C:N4	35:L5:2108:G:O6	2.44	0.50
79:Lz:54:ARG:HH22	79:Lz:156:LYS:HG3	1.76	0.50
1:S2:151:C:OP1	23:SY:120:THR:HA	2.11	0.50
1:S2:317:C:H2'	1:S2:318:A:H5"	1.93	0.50
1:S2:907:G:H2'	1:S2:908:A:C8	2.47	0.50
1:S2:1578:U:H2'	2:SD:4:GLN:HE21	1.76	0.50
1:S2:1864:U:H3'	29:Sa:5:ARG:HH21	1.77	0.50
5:SP:72:LYS:HE3	5:SP:73:PRO:HD2	1.93	0.50
7:SS:88:LYS:HG3	7:SS:95:TYR:HE1	1.76	0.50
10:Sc:60:GLU:H	10:Sc:63:ARG:HH12	1.58	0.50
12:Sg:125:ARG:HG3	12:Sg:150:TRP:CD2	2.47	0.50
12:Sg:165:ILE:HB	12:Sg:177:TRP:HB2	1.93	0.50
25:SA:184:ARG:HE	25:SA:191:ARG:H	1.59	0.50
26:SB:27:LYS:NZ	26:SB:53:GLN:HG2	2.27	0.50
26:SB:97:LEU:HD13	26:SB:228:LEU:HD11	1.93	0.50
27:SH:130:LEU:HB3	27:SH:177:TYR:CE2	2.47	0.50
31:SN:66:VAL:HG23	31:SN:67:THR:HG23	1.93	0.50
35:L5:92:C:OP2	35:L5:4341:C:O2'	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1396:G:HO2'	35:L5:1468:C:HO2'	1.57	0.50
35:L5:2610:G:H2'	35:L5:2611:A:H8	1.77	0.50
35:L5:3614:G:HO2'	35:L5:3615:G:P	2.33	0.50
35:L5:3690:U:H2'	35:L5:3691:G:O4'	2.12	0.50
36:L7:7:G:OP1	41:LD:33:ARG:NH1	2.44	0.50
55:LS:29:ARG:HE	56:LT:150:LEU:HD13	1.77	0.50
80:CA:117:PHE:CE1	80:CA:192:GLN:HB2	2.47	0.50
80:CA:208:GLN:HA	80:CA:211:LYS:HE3	1.93	0.50
83:CB:518:PRO:HD2	83:CB:519:LYS:N	2.26	0.50
1:S2:506:G:OP1	23:SY:108:LYS:NZ	2.41	0.50
1:S2:751:G:H1'	1:S2:793:G:H21	1.77	0.50
1:S2:1504:U:H5"	83:CB:667:LYS:HZ1	1.77	0.50
1:S2:1854:U:H2'	1:S2:1855:G:H8	1.77	0.50
2:SD:99:ILE:HG12	2:SD:173:ARG:NH1	2.27	0.50
14:SZ:92:LEU:HD13	14:SZ:109:TYR:CE2	2.47	0.50
17:SE:206:ASP:HB2	17:SE:222:LEU:HB2	1.94	0.50
22:SJ:107:GLU:O	22:SJ:113:GLN:NE2	2.44	0.50
22:SJ:136:ARG:HB2	22:SJ:141:VAL:HG12	1.94	0.50
25:SA:78:SER:O	25:SA:101:GLY:N	2.44	0.50
35:L5:1535:C:H5"	71:Lj:10:LYS:HG3	1.94	0.50
35:L5:1913:C:O2	51:LO:87:MET:HG2	2.11	0.50
35:L5:2368:A:N6	35:L5:2827:G:O2'	2.45	0.50
35:L5:2480:G:H2'	35:L5:2481:G:C8	2.46	0.50
35:L5:2824:C:H2'	35:L5:2825:A:C8	2.47	0.50
35:L5:3848:U:H2'	35:L5:3849:A:C8	2.47	0.50
35:L5:3917:A:H2'	35:L5:3918:G:H8	1.77	0.50
37:L8:66:A:H2'	37:L8:67:U:C6	2.46	0.50
53:LQ:178:ARG:HA	53:LQ:184:ARG:O	2.12	0.50
56:LT:114:GLN:NE2	56:LT:115:LYS:HG3	2.27	0.50
67:Lf:42:TYR:HA	67:Lf:45:LYS:HG3	1.93	0.50
69:Lh:82:ASP:OD2	69:Lh:82:ASP:N	2.45	0.50
80:CA:33:ARG:O	80:CA:37:GLU:HG2	2.11	0.50
83:CB:748:GLU:O	83:CB:811:GLN:N	2.45	0.50
5:SP:103:ASN:HB3	5:SP:120:SER:HB2	1.93	0.49
6:SQ:134:GLY:HA3	6:SQ:140:ARG:HA	1.94	0.49
9:SU:36:CYS:SG	9:SU:37:ALA:N	2.84	0.49
18:SI:89:GLU:O	18:SI:93:THR:HG23	2.12	0.49
21:SG:132:ARG:O	85:LW:83:THR:OG1	2.28	0.49
26:SB:57:ILE:HG12	26:SB:59:SER:HB3	1.93	0.49
26:SB:173:THR:O	26:SB:177:GLN:HG2	2.12	0.49
27:SH:26:ALA:O	27:SH:30:LEU:HG	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:455:C:O2'	35:L5:456:C:H5'	2.11	0.49
35:L5:1332:C:H2'	35:L5:1333:A:C8	2.47	0.49
35:L5:1567:U:H2'	35:L5:1568:C:C6	2.47	0.49
35:L5:3964:U:H4'	35:L5:4048:A:N6	2.27	0.49
36:L7:17:C:OP1	47:LJ:156:ARG:NH2	2.44	0.49
44:LG:138:ALA:HB1	44:LG:199:CYS:SG	2.51	0.49
47:LJ:13:ARG:O	47:LJ:136:ARG:NH1	2.45	0.49
51:LO:47:PHE:HA	51:LO:136:ALA:HB2	1.94	0.49
64:Lc:50:ASN:ND2	64:Lc:76:GLY:O	2.44	0.49
66:Le:91:CYS:O	66:Le:93:LYS:N	2.45	0.49
80:CA:225:ALA:HB1	80:CA:320:LYS:HE3	1.93	0.49
83:CB:706:ASP:OD1	83:CB:707:VAL:N	2.45	0.49
83:CB:745:TYR:CE2	83:CB:812:CYS:HB3	2.47	0.49
1:S2:421:G:P	19:SL:98:LYS:HA	2.52	0.49
1:S2:600:G:H2'	1:S2:601:G:C8	2.47	0.49
1:S2:921:G:C5	33:SW:28:ARG:HD3	2.46	0.49
1:S2:1101:U:H2'	1:S2:1102:G:H8	1.77	0.49
1:S2:1264:C:P	11:Sd:28:HIS:HE2	2.35	0.49
1:S2:1558:C:H2'	1:S2:1559:C:C6	2.47	0.49
1:S2:1643:U:H2'	1:S2:1644:C:C6	2.47	0.49
2:SD:105:LEU:O	2:SD:109:LEU:HD22	2.12	0.49
7:SS:66:ARG:O	7:SS:70:ILE:HG12	2.12	0.49
14:SZ:47:LEU:HD12	14:SZ:79:ILE:HD13	1.94	0.49
17:SE:9:LEU:HB3	17:SE:28:ALA:HB3	1.95	0.49
17:SE:62:LYS:HG3	17:SE:63:LYS:N	2.27	0.49
18:SI:38:ILE:HA	18:SI:60:LEU:O	2.12	0.49
27:SH:126:HIS:CE1	27:SH:181:THR:HG23	2.47	0.49
27:SH:130:LEU:HB3	27:SH:177:TYR:HE2	1.77	0.49
31:SN:19:ARG:NH1	31:SN:19:ARG:HA	2.26	0.49
34:Sb:34:ASP:HB3	34:Sb:43:ILE:HD11	1.94	0.49
35:L5:162:A:H2'	35:L5:163:A:H8	1.76	0.49
35:L5:1095:A:H2'	35:L5:1096:C:H6	1.77	0.49
35:L5:1271:G:N3	35:L5:1271:G:H5"	2.27	0.49
35:L5:4132:C:H2'	35:L5:4133:C:O4'	2.12	0.49
35:L5:4154:G:H2'	35:L5:4155:C:C6	2.47	0.49
35:L5:4342:C:O3'	76:Lo:37:GLY:HA3	2.12	0.49
36:L7:83:A:H4'	43:LF:224:THR:HB	1.93	0.49
37:L8:144:U:H2'	37:L8:145:C:C6	2.46	0.49
54:LR:148:ASP:OD1	54:LR:149:LYS:N	2.46	0.49
79:Lz:31:THR:OG1	79:Lz:208:SER:OG	2.29	0.49
83:CB:144:ARG:NH2	83:CB:781:MET:SD	2.85	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:526:A:H2'	1:S2:527:C:C6	2.47	0.49
1:S2:571:U:O2'	23:SY:61:ARG:NH1	2.46	0.49
1:S2:943:U:H2'	1:S2:944:A:H8	1.77	0.49
1:S2:1127:C:O2'	34:Sb:17:ARG:NH2	2.46	0.49
1:S2:1338:G:H5"	9:SU:76:THR:HG21	1.94	0.49
1:S2:1478:U:H2'	1:S2:1479:G:C8	2.47	0.49
1:S2:1779:G:H2'	1:S2:1780:G:C8	2.47	0.49
4:SK:7:ASN:O	4:SK:11:ILE:HG12	2.11	0.49
20:SX:101:LEU:HD22	20:SX:124:LYS:HE2	1.94	0.49
25:SA:39:TYR:C	25:SA:40:LYS:HG2	2.38	0.49
25:SA:164:ASN:OD1	25:SA:165:ASN:N	2.46	0.49
32:SO:88:LEU:HD22	32:SO:90:ILE:HG12	1.93	0.49
35:L5:497:G:O2'	35:L5:499:G:H8	1.95	0.49
35:L5:667:A:H5"	35:L5:668:C:H5"	1.93	0.49
35:L5:2544:G:OP1	35:L5:2546:G:N2	2.46	0.49
35:L5:2904:U:O4	35:L5:3592:G:N2	2.46	0.49
35:L5:4739:C:H2'	35:L5:4740:G:H5'	1.94	0.49
41:LD:219:TYR:CE2	41:LD:227:ILE:HD11	2.47	0.49
70:Li:81:ILE:H	70:Li:81:ILE:HD12	1.77	0.49
80:CA:355:LYS:O	80:CA:359:GLN:HG2	2.12	0.49
1:S2:1144:A:H2'	1:S2:1145:A:C8	2.47	0.49
1:S2:1397:U:H3	6:SQ:12:VAL:HA	1.77	0.49
3:SF:167:LYS:HG3	3:SF:172:CYS:SG	2.53	0.49
6:SQ:78:VAL:O	6:SQ:81:ILE:HG22	2.12	0.49
12:Sg:199:THR:HG21	12:Sg:240:CYS:HA	1.94	0.49
13:SM:33:ARG:HG3	13:SM:109:VAL:HG12	1.94	0.49
14:SZ:52:LYS:NZ	14:SZ:55:TYR:HB3	2.27	0.49
17:SE:179:ASN:HA	17:SE:231:GLY:HA2	1.93	0.49
19:SL:103:GLU:OE1	20:SX:11:ARG:NH1	2.45	0.49
21:SG:27:PHE:CD1	21:SG:52:ILE:HD11	2.47	0.49
21:SG:70:HIS:O	21:SG:70:HIS:ND1	2.41	0.49
23:SY:87:PRO:HG2	23:SY:90:ARG:NH1	2.28	0.49
26:SB:110:MET:HA	26:SB:110:MET:HE3	1.93	0.49
30:SC:132:ASP:OD2	30:SC:136:HIS:HB2	2.13	0.49
30:SC:146:GLU:CD	30:SC:149:THR:HG22	2.36	0.49
33:SW:81:VAL:HG21	33:SW:125:ILE:HD13	1.94	0.49
35:L5:102:G:OP1	48:LL:71:ARG:NH2	2.42	0.49
35:L5:210:C:HO2'	35:L5:233:U:HO2'	1.57	0.49
35:L5:387:G:HO2'	35:L5:412:G:H1	1.61	0.49
35:L5:1194:G:H2'	35:L5:1195:G:C8	2.48	0.49
35:L5:1516:G:O2'	48:LL:18:TRP:NE1	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1952:G:H4'	55:LS:93:MET:HE3	1.94	0.49
35:L5:3951:G:H2'	35:L5:3952:A:C8	2.47	0.49
35:L5:4771:C:H2'	35:L5:4772:C:C6	2.47	0.49
37:L8:74:U:H3	60:LY:72:GLN:NE2	2.11	0.49
41:LD:223:PHE:O	41:LD:227:ILE:HD13	2.12	0.49
45:LH:124:ARG:NH1	45:LH:164:ALA:O	2.46	0.49
53:LQ:25:LEU:HD12	53:LQ:28:LEU:HD11	1.94	0.49
53:LQ:59:PRO:HG3	53:LQ:143:ARG:HA	1.94	0.49
59:LX:95:THR:HG22	59:LX:139:ARG:HD2	1.94	0.49
80:CA:199:LYS:NZ	80:CA:217:GLU:O	2.39	0.49
83:CB:396:MET:O	83:CB:484:THR:OG1	2.20	0.49
1:S2:615:C:H2'	1:S2:616:A:O4'	2.13	0.49
1:S2:678:U:OP2	1:S2:1026:C:N4	2.26	0.49
1:S2:1490:G:OP2	1:S2:1490:G:H8	1.95	0.49
2:SD:225:GLU:O	12:Sg:187:ASN:N	2.44	0.49
3:SF:87:LEU:HD22	6:SQ:47:LEU:HD11	1.93	0.49
8:ST:35:ASP:OD2	8:ST:35:ASP:N	2.35	0.49
12:Sg:186:THR:CG2	12:Sg:188:HIS:HB2	2.43	0.49
13:SM:96:ARG:HA	13:SM:96:ARG:CZ	2.43	0.49
17:SE:229:GLY:HA2	17:SE:235:TRP:HD1	1.74	0.49
22:SJ:106:LEU:O	22:SJ:109:ARG:HG2	2.12	0.49
27:SH:31:GLU:O	27:SH:32:MET:HG3	2.12	0.49
30:SC:232:THR:O	30:SC:235:ASN:N	2.45	0.49
35:L5:511:C:OP2	48:LL:163:LYS:NZ	2.45	0.49
35:L5:908:G:H2'	35:L5:909:A:C8	2.48	0.49
35:L5:1402:C:N4	35:L5:1415:G:O6	2.43	0.49
35:L5:1749:A:H2'	35:L5:1750:G:C8	2.48	0.49
35:L5:1994:C:H1'	82:Lt:132:ILE:HA	1.94	0.49
35:L5:2459:G:N2	35:L5:2462:C:OP2	2.42	0.49
37:L8:66:A:H2'	37:L8:67:U:H6	1.78	0.49
37:L8:154:G:H2'	37:L8:155:C:C6	2.46	0.49
46:LI:208:LYS:HA	46:LI:211:VAL:HG12	1.93	0.49
49:LM:90:ARG:HA	49:LM:93:LYS:HG2	1.95	0.49
62:La:84:GLU:N	62:La:84:GLU:OE2	2.46	0.49
79:Lz:67:VAL:O	79:Lz:111:LEU:N	2.37	0.49
80:CA:118:ILE:HB	80:CA:190:LEU:HD23	1.93	0.49
80:CA:227:ASP:HB3	80:CA:320:LYS:HD3	1.95	0.49
84:Et:61:C:H2'	84:Et:62:C:C6	2.47	0.49
1:S2:954:U:O2	32:SO:55:ARG:NH2	2.45	0.49
1:S2:986:G:O4'	32:SO:138:ASP:HB2	2.12	0.49
12:Sg:10:THR:HA	12:Sg:308:ARG:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Sg:217:MET:HG3	12:Sg:219:TRP:CZ2	2.47	0.49
18:SI:88:ASN:O	18:SI:91:VAL:HG12	2.12	0.49
34:Sb:21:LYS:NZ	34:Sb:26:GLN:OE1	2.27	0.49
35:L5:68:U:H2'	35:L5:69:A:O4'	2.12	0.49
35:L5:1296:G:H2'	35:L5:1297:U:C6	2.47	0.49
44:LG:88:ASP:OD1	44:LG:89:ARG:N	2.46	0.49
47:LJ:166:PHE:CD1	47:LJ:174:ILE:HD11	2.47	0.49
73:Ll:28:ARG:HA	73:Ll:33:ASN:ND2	2.28	0.49
80:CA:117:PHE:HE1	80:CA:192:GLN:HB2	1.78	0.49
80:CA:163:ASN:N	80:CA:163:ASN:OD1	2.44	0.49
83:CB:438:LYS:HB3	83:CB:440:GLU:HG3	1.94	0.49
84:Et:1:G:H2'	84:Et:2:C:C6	2.48	0.49
1:S2:434:G:H2'	1:S2:435:A:C8	2.48	0.49
1:S2:962:A:H2'	1:S2:963:A:O4'	2.13	0.49
1:S2:1372:U:OP2	1:S2:1385:G:N1	2.42	0.49
21:SG:223:LYS:NZ	21:SG:227:GLN:HB2	2.28	0.49
23:SY:47:MET:HE2	23:SY:47:MET:C	2.37	0.49
25:SA:10:MET:HA	25:SA:10:MET:HE3	1.95	0.49
30:SC:272:HIS:O	30:SC:275:LYS:HG3	2.12	0.49
35:L5:163:A:H2'	35:L5:164:G:H8	1.78	0.49
35:L5:1464:C:H5"	63:Lb:32:LEU:HD12	1.94	0.49
35:L5:1567:U:H2'	35:L5:1568:C:H6	1.78	0.49
35:L5:1962:A:H2	35:L5:2024:G:H21	1.59	0.49
35:L5:4500:U:H2'	35:L5:4501:U:C6	2.47	0.49
51:LO:111:PRO:HG2	51:LO:112:TYR:CE1	2.48	0.49
60:LY:44:VAL:HG11	60:LY:119:LEU:HD13	1.95	0.49
61:LZ:95:VAL:HG11	61:LZ:113:GLU:HG2	1.94	0.49
66:Le:89:LEU:HD13	66:Le:118:LEU:HG	1.93	0.49
67:Lf:10:ILE:HG22	67:Lf:29:LYS:HB3	1.94	0.49
79:Lz:16:GLU:HG2	79:Lz:18:LEU:HD13	1.94	0.49
83:CB:595:SER:HA	83:CB:724:THR:OG1	2.13	0.49
1:S2:51:U:H2'	1:S2:52:G:C8	2.46	0.49
1:S2:482:G:N1	1:S2:485:A:OP2	2.44	0.49
1:S2:948:C:O2'	1:S2:949:G:H5'	2.13	0.49
1:S2:1749:G:H2'	1:S2:1750:C:C6	2.48	0.49
1:S2:1756:C:H5"	1:S2:1757:G:OP2	2.12	0.49
1:S2:1805:G:H2'	1:S2:1806:A:C8	2.48	0.49
1:S2:1811:C:H3'	1:S2:1812:U:H4'	1.94	0.49
4:SK:17:LYS:HB3	16:CD:283:LEU:HB3	1.95	0.49
6:SQ:85:ARG:HE	6:SQ:119:LEU:HD23	1.78	0.49
22:SJ:104:ASP:HA	22:SJ:107:GLU:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:SH:91:HIS:HD2	27:SH:169:LYS:HE3	1.78	0.49
30:SC:77:SER:O	30:SC:80:GLU:HG3	2.12	0.49
35:L5:444:G:H2'	35:L5:445:U:H6	1.77	0.49
35:L5:1298:C:H2'	35:L5:1299:G:H8	1.76	0.49
35:L5:1442:C:N4	35:L5:2104:G:N3	2.61	0.49
35:L5:1910:G:O2'	35:L5:1917:A:N1	2.46	0.49
35:L5:2306:G:H1'	35:L5:2332:A:H61	1.76	0.49
39:LB:92:TYR:HB3	39:LB:99:LEU:HD22	1.93	0.49
43:LF:175:ILE:HG23	43:LF:179:LEU:HD12	1.94	0.49
45:LH:31:ARG:O	45:LH:149:ASN:ND2	2.36	0.49
45:LH:92:MET:HB2	45:LH:181:VAL:HA	1.94	0.49
46:LI:54:SER:HB2	46:LI:135:ILE:HD11	1.95	0.49
47:LJ:129:ASP:OD2	47:LJ:129:ASP:N	2.43	0.49
61:LZ:48:ARG:HB2	61:LZ:69:LYS:HB3	1.95	0.49
61:LZ:74:VAL:HG22	61:LZ:98:LYS:HZ2	1.78	0.49
74:Lm:80:PRO:O	74:Lm:84:GLN:HG3	2.12	0.49
79:Lz:23:ARG:C	79:Lz:212:LYS:HZ3	2.17	0.49
80:CA:57:MET:HE1	80:CA:74:ILE:HD11	1.95	0.49
82:Lt:40:LYS:HE2	82:Lt:40:LYS:H	1.77	0.49
83:CB:601:ARG:HB2	83:CB:708:THR:OG1	2.12	0.49
84:Et:58:A:O2'	84:Et:61:C:N4	2.45	0.49
1:S2:483:C:H4'	20:SX:101:LEU:HD11	1.95	0.49
1:S2:1845:A:H2'	1:S2:1846:G:C8	2.48	0.49
12:Sg:113:PHE:HA	12:Sg:120:ILE:HG22	1.94	0.49
25:SA:3:GLY:N	25:SA:9:GLN:HE22	2.10	0.49
25:SA:39:TYR:CE1	25:SA:40:LYS:HG3	2.47	0.49
31:SN:5:HIS:CD2	31:SN:117:LEU:HD22	2.46	0.49
35:L5:60:G:H2'	35:L5:61:A:C8	2.48	0.49
35:L5:159:C:H5'	70:Li:25:ARG:HH21	1.78	0.49
35:L5:1348:U:H2'	35:L5:1349:G:H8	1.78	0.49
35:L5:1960:A:C4	81:Ls:14:PHE:HE2	2.31	0.49
35:L5:2870:A:H2'	35:L5:2871:A:C8	2.48	0.49
35:L5:3633:C:H2'	35:L5:3634:G:C8	2.48	0.49
35:L5:3928:A:H2'	35:L5:3929:G:O4'	2.13	0.49
35:L5:4329:G:H5'	35:L5:4330:G:O5'	2.13	0.49
35:L5:4331:G:O6	76:Lo:86:LYS:NZ	2.44	0.49
35:L5:4524:G:N3	39:LB:252:ALA:HB1	2.27	0.49
42:LE:98:GLY:HA2	42:LE:101:ASN:HB3	1.95	0.49
61:LZ:84:ARG:HG2	64:Lc:62:TYR:OH	2.13	0.49
66:Le:99:ILE:HD13	66:Le:108:ARG:HB2	1.95	0.49
68:Lg:8:ARG:HB2	68:Lg:34:TYR:HE2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:195:ILE:HG21	80:CA:277:PRO:HD3	1.94	0.49
1:S2:559:G:O2'	1:S2:560:A:H5"	2.11	0.49
12:Sg:155:ARG:HG3	12:Sg:155:ARG:HH11	1.77	0.49
20:SX:93:PHE:CD2	20:SX:133:LEU:HB3	2.47	0.49
30:SC:63:VAL:O	30:SC:63:VAL:HG23	2.13	0.49
33:SW:8:ALA:HA	33:SW:74:VAL:HG11	1.94	0.49
35:L5:453:G:OP1	42:LE:228:GLN:NE2	2.45	0.49
35:L5:1076:C:H2'	35:L5:1077:C:O4'	2.13	0.49
35:L5:3598:C:H2'	35:L5:3599:A:C8	2.48	0.49
35:L5:4638:U:H2'	35:L5:4639:G:N3	2.28	0.49
36:L7:48:G:H5'	41:LD:226:TYR:HE1	1.77	0.49
36:L7:110:G:H2'	36:L7:111:C:C6	2.47	0.49
37:L8:58:G:O6	71:Lj:63:ARG:NH2	2.46	0.49
37:L8:123:U:H3	37:L8:125:C:H6	1.61	0.49
41:LD:196:ARG:O	41:LD:200:MET:HG2	2.12	0.49
42:LE:111:LYS:HD2	78:Lr:87:ARG:NH1	2.28	0.49
42:LE:209:PRO:HB2	42:LE:212:LEU:HD23	1.95	0.49
79:Lz:53:VAL:HG22	79:Lz:157:PHE:HE1	1.77	0.49
79:Lz:67:VAL:HA	79:Lz:68:LEU:HA	1.62	0.49
83:CB:200:MET:HG3	83:CB:367:TYR:CD2	2.47	0.49
83:CB:656:GLY:HA2	83:CB:684:GLN:HE22	1.78	0.49
83:CB:776:VAL:HG23	83:CB:778:GLY:H	1.77	0.49
1:S2:1523:C:H2'	1:S2:1524:G:H8	1.77	0.48
2:SD:55:THR:HG23	2:SD:90:LYS:HD3	1.94	0.48
6:SQ:42:ILE:HG13	6:SQ:43:GLU:H	1.78	0.48
14:SZ:47:LEU:HG	14:SZ:80:ARG:N	2.28	0.48
25:SA:169:HIS:HA	25:SA:203:PHE:HE1	1.78	0.48
32:SO:93:LEU:CD1	32:SO:124:MET:HG2	2.43	0.48
35:L5:709:C:OP1	67:Lf:46:ARG:NH2	2.43	0.48
35:L5:1359:G:H4'	50:LN:203:TYR:HB2	1.95	0.48
35:L5:1995:G:H2'	35:L5:1996:C:C6	2.48	0.48
35:L5:3721:U:H2'	35:L5:3722:G:H8	1.78	0.48
35:L5:3857:G:H5"	52:LP:86:LYS:HB2	1.95	0.48
37:L8:8:U:H2'	37:L8:9:A:C8	2.48	0.48
37:L8:149:G:H21	44:LG:64:GLN:HE22	1.60	0.48
39:LB:240:LEU:HB2	39:LB:248:LEU:HA	1.95	0.48
48:LL:63:THR:HG21	62:La:66:ASN:ND2	2.26	0.48
64:Lc:28:VAL:HG12	64:Lc:95:ALA:HB3	1.95	0.48
79:Lz:12:GLU:HB3	79:Lz:217:TYR:HD1	1.79	0.48
1:S2:199:C:H1'	1:S2:200:G:C8	2.48	0.48
5:SP:35:GLN:O	7:SS:88:LYS:NZ	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:SQ:80:GLN:O	6:SQ:84:ILE:HG12	2.13	0.48
8:ST:101:ARG:HG2	8:ST:105:GLN:HE22	1.78	0.48
12:Sg:178:ASN:HD21	12:Sg:181:ASN:H	1.60	0.48
13:SM:118:SER:O	13:SM:121:LYS:NZ	2.46	0.48
25:SA:149:ASN:OD1	25:SA:150:THR:N	2.44	0.48
35:L5:1084:C:H2'	35:L5:1085:C:H6	1.77	0.48
35:L5:1086:C:H2'	35:L5:1087:A:H8	1.77	0.48
35:L5:1725:U:H2'	35:L5:1726:U:H6	1.77	0.48
35:L5:1893:C:H1'	35:L5:1937:C:O2	2.13	0.48
35:L5:3722:G:H2'	35:L5:3723:A:H8	1.77	0.48
35:L5:3954:A:O2'	35:L5:3955:G:O5'	2.32	0.48
35:L5:4055:U:O2'	79:Lz:164:CYS:SG	2.65	0.48
35:L5:4699:U:H1'	35:L5:4700:A:H5"	1.94	0.48
36:L7:33:U:H2'	36:L7:34:C:C6	2.48	0.48
36:L7:63:C:O5'	46:LI:206:LEU:HB2	2.13	0.48
42:LE:178:PRO:O	42:LE:181:LEU:N	2.22	0.48
80:CA:261:THR:HG21	80:CA:291:MET:SD	2.53	0.48
81:Ls:153:GLU:OE2	81:Ls:153:GLU:HA	2.13	0.48
83:CB:136:CYS:O	83:CB:140:GLU:HG3	2.13	0.48
83:CB:165:LEU:HD21	83:CB:301:PHE:HD2	1.77	0.48
83:CB:259:LYS:HA	83:CB:264:ARG:HD3	1.95	0.48
83:CB:385:ILE:HD13	83:CB:418:SER:HB2	1.95	0.48
1:S2:3:C:O2	22:SJ:18:ARG:NH2	2.46	0.48
1:S2:38:A:H5"	22:SJ:5:ARG:HB3	1.94	0.48
1:S2:185:G:O6	1:S2:214:U:O4	2.32	0.48
1:S2:441:C:H2'	1:S2:442:C:C6	2.49	0.48
1:S2:1446:A:H1'	9:SU:55:ARG:HD2	1.93	0.48
1:S2:1777:G:H2'	1:S2:1778:C:C6	2.47	0.48
3:SF:27:ASP:OD2	3:SF:107:ASN:ND2	2.47	0.48
7:SS:67:VAL:O	7:SS:71:MET:HG2	2.13	0.48
12:Sg:8:ARG:HB3	12:Sg:52:TYR:CE2	2.48	0.48
17:SE:87:MET:HE1	17:SE:123:LEU:H	1.78	0.48
17:SE:97:GLU:CD	17:SE:97:GLU:N	2.71	0.48
18:SI:38:ILE:HG12	18:SI:96:LEU:HD21	1.94	0.48
18:SI:65:PHE:O	18:SI:109:TYR:OH	2.30	0.48
25:SA:52:LYS:HD2	25:SA:52:LYS:C	2.38	0.48
26:SB:170:GLU:HA	26:SB:173:THR:HG22	1.95	0.48
35:L5:37:U:H2'	35:L5:38:A:O4'	2.13	0.48
35:L5:318:A:H2'	35:L5:319:A:H8	1.76	0.48
35:L5:496:G:O6	35:L5:497:G:N2	2.46	0.48
35:L5:687:U:N3	42:LE:95:PRO:HG2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:909:A:H2'	35:L5:910:G:H8	1.78	0.48
35:L5:2505:C:N4	35:L5:4084:G:H4'	2.28	0.48
35:L5:3856:A:H5"	52:LP:83:TRP:O	2.13	0.48
35:L5:4518:A:OP2	35:L5:4518:A:H8	1.96	0.48
35:L5:4873:G:C2	51:LO:175:MET:HG3	2.48	0.48
35:L5:4910:G:H22	51:LO:107:GLY:HA3	1.77	0.48
40:LC:297:GLU:HA	40:LC:300:ARG:HD3	1.95	0.48
44:LG:99:ALA:HB3	44:LG:193:LEU:HD11	1.95	0.48
47:LJ:115:LEU:HD12	47:LJ:116:GLY:HA2	1.95	0.48
49:LM:62:LEU:HD21	49:LM:82:ILE:HD11	1.94	0.48
69:Lh:89:ARG:O	69:Lh:93:ARG:HG2	2.13	0.48
79:Lz:64:SER:OG	79:Lz:65:VAL:N	2.46	0.48
83:CB:725:ALA:O	83:CB:729:LEU:HG	2.13	0.48
1:S2:1533:A:H5'	3:SF:163:PHE:CE1	2.49	0.48
3:SF:109:LEU:O	3:SF:113:VAL:HG23	2.13	0.48
4:SK:83:LEU:HB2	4:SK:85:LEU:HD23	1.94	0.48
15:Sf:109:ASP:O	15:Sf:113:LYS:HG3	2.13	0.48
25:SA:184:ARG:HH21	25:SA:191:ARG:N	2.10	0.48
26:SB:167:LYS:HZ1	26:SB:200:ALA:HB3	1.79	0.48
31:SN:115:LEU:O	31:SN:119:GLU:HG2	2.13	0.48
35:L5:1186:U:H2'	35:L5:1187:G:N3	2.28	0.48
35:L5:1217:G:H2'	35:L5:1218:G:C8	2.49	0.48
35:L5:2017:A:O2'	35:L5:2018:C:H6	1.97	0.48
35:L5:2079:G:H2'	35:L5:2080:U:H6	1.78	0.48
35:L5:2580:U:O2'	61:LZ:79:HIS:ND1	2.36	0.48
35:L5:2634:C:H2'	35:L5:2635:U:H6	1.79	0.48
35:L5:3896:C:HO2'	39:LB:268:ARG:HH22	1.57	0.48
35:L5:4236:G:H4'	35:L5:4328:G:O2'	2.13	0.48
39:LB:307:TYR:CE1	39:LB:366:LYS:HE2	2.48	0.48
47:LJ:35:ARG:HA	47:LJ:38:LYS:HE2	1.94	0.48
47:LJ:63:ARG:O	47:LJ:66:GLU:HG3	2.13	0.48
57:LU:80:LYS:HE3	57:LU:110:TYR:CD2	2.48	0.48
61:LZ:102:ARG:HA	61:LZ:102:ARG:NH1	2.29	0.48
83:CB:191:THR:HG23	83:CB:192:TYR:CD1	2.48	0.48
83:CB:607:ARG:HE	83:CB:701:ARG:NE	2.11	0.48
83:CB:739:ARG:NH2	83:CB:823:ASP:OD1	2.43	0.48
1:S2:342:C:H2'	1:S2:343:A:H8	1.79	0.48
1:S2:873:G:H5"	54:LR:166:THR:OG1	2.14	0.48
1:S2:1189:A:H2'	1:S2:1190:A:C8	2.48	0.48
1:S2:1655:C:OP1	8:ST:92:PHE:N	2.46	0.48
1:S2:1736:G:H2'	1:S2:1737:G:C8	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:SK:57:TYR:HB3	4:SK:75:GLY:CA	2.44	0.48
7:SS:19:ASN:OD1	7:SS:19:ASN:N	2.45	0.48
12:Sg:271:LYS:HA	12:Sg:271:LYS:HD2	1.66	0.48
15:Sf:119:ARG:HD3	15:Sf:120:GLU:H	1.78	0.48
17:SE:87:MET:HE1	17:SE:122:LYS:CG	2.43	0.48
35:L5:280:G:H5"	50:LN:14:LYS:HZ1	1.78	0.48
35:L5:417:G:OP1	35:L5:2329:U:O2'	2.28	0.48
35:L5:426:A:H2'	35:L5:427:A:C8	2.48	0.48
35:L5:1326:A:H2'	35:L5:1327:C:C6	2.48	0.48
35:L5:2249:C:H2'	35:L5:2250:C:C5	2.48	0.48
35:L5:2705:G:H1	35:L5:2710:C:N4	2.10	0.48
35:L5:3652:A:H2'	35:L5:3653:A:C8	2.49	0.48
35:L5:3681:G:N1	38:LA:118:GLU:OE2	2.42	0.48
38:LA:109:GLU:HG2	38:LA:138:SER:HA	1.94	0.48
40:LC:328:LEU:HB3	43:LF:187:MET:HG3	1.96	0.48
48:LL:52:SER:O	48:LL:52:SER:OG	2.32	0.48
76:Lo:33:LEU:HA	76:Lo:38:LYS:HG2	1.95	0.48
83:CB:505:VAL:HG13	83:CB:554:LEU:HD12	1.95	0.48
1:S2:552:G:OP1	24:Se:39:ASN:ND2	2.41	0.48
1:S2:845:G:H2'	1:S2:846:G:C8	2.49	0.48
1:S2:1310:U:C2	1:S2:1311:C:C5	3.02	0.48
1:S2:1629:C:H4'	7:SS:83:PHE:CD2	2.49	0.48
3:SF:23:TRP:CH2	3:SF:97:PHE:HB3	2.48	0.48
3:SF:33:ILE:HG22	10:Sc:55:VAL:HG11	1.95	0.48
9:SU:61:LEU:HD22	9:SU:82:MET:HE3	1.96	0.48
18:SI:3:ILE:HD12	18:SI:3:ILE:O	2.13	0.48
19:SL:149:ALA:O	31:SN:133:ARG:NH2	2.47	0.48
35:L5:257:C:H2'	35:L5:258:G:H8	1.72	0.48
35:L5:959:G:C8	42:LE:123:ARG:HG2	2.49	0.48
35:L5:1317:U:OP1	62:La:21:ARG:NH1	2.34	0.48
35:L5:3911:C:H2'	35:L5:3912:U:C6	2.47	0.48
35:L5:4092:G:C4	35:L5:4093:G:N2	2.82	0.48
35:L5:4188:U:H2'	35:L5:4189:U:C6	2.49	0.48
35:L5:4620:U:OP2	35:L5:4670:C:N4	2.44	0.48
35:L5:4740:G:H1'	35:L5:4742:G:H5"	1.96	0.48
35:L5:4981:G:O6	39:LB:21:ARG:NH2	2.47	0.48
41:LD:232:THR:HG22	41:LD:234:ASP:N	2.29	0.48
51:LO:78:ARG:HD2	51:LO:78:ARG:HA	1.63	0.48
80:CA:80:ILE:HG22	80:CA:108:ILE:HG12	1.95	0.48
82:Lt:134:GLY:O	82:Lt:137:GLN:HG2	2.13	0.48
83:CB:10:ARG:HD3	83:CB:463:ASP:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:350:LEU:O	83:CB:354:ILE:HG23	2.13	0.48
1:S2:414:A:OP1	1:S2:814:U:O2'	2.30	0.48
1:S2:975:G:H4'	32:SO:32:HIS:ND1	2.29	0.48
1:S2:1278:A:H2'	1:S2:1279:C:C6	2.48	0.48
3:SF:40:ALA:H	3:SF:68:ILE:HD11	1.78	0.48
7:SS:34:LYS:HD2	7:SS:104:ASP:OD1	2.14	0.48
8:ST:117:GLN:OE1	8:ST:117:GLN:N	2.42	0.48
13:SM:85:LEU:HD11	13:SM:109:VAL:HG21	1.95	0.48
17:SE:47:PHE:HD1	17:SE:48:LEU:HD13	1.79	0.48
17:SE:90:ILE:O	17:SE:99:PHE:N	2.47	0.48
19:SL:93:LEU:HD21	20:SX:8:ARG:HH12	1.78	0.48
22:SJ:115:PHE:CD1	22:SJ:115:PHE:C	2.91	0.48
23:SY:97:TYR:OH	23:SY:101:LYS:NZ	2.34	0.48
26:SB:124:HIS:C	26:SB:124:HIS:ND1	2.72	0.48
35:L5:1241:C:C5	63:Lb:118:LEU:HD13	2.49	0.48
35:L5:3765:G:O2'	35:L5:3767:C:N4	2.46	0.48
35:L5:3932:U:H2'	35:L5:3933:G:H8	1.78	0.48
36:L7:23:A:H2'	36:L7:24:C:C6	2.49	0.48
40:LC:361:LEU:O	40:LC:365:SER:OG	2.23	0.48
64:Lc:20:LEU:HG	64:Lc:101:ASP:HB3	1.96	0.48
79:Lz:203:ALA:HB2	79:Lz:217:TYR:CD2	2.49	0.48
80:CA:109:ASP:OD1	80:CA:110:LEU:N	2.47	0.48
83:CB:58:ASP:HB3	83:CB:63:GLU:HB3	1.95	0.48
1:S2:533:A:H61	1:S2:550:C:H42	1.62	0.48
1:S2:1337:C:H2'	1:S2:1338:G:H8	1.79	0.48
3:SF:100:ILE:O	3:SF:104:THR:HG22	2.14	0.48
3:SF:153:LEU:O	3:SF:157:GLY:N	2.45	0.48
13:SM:91:LEU:HD13	13:SM:106:CYS:HB2	1.94	0.48
25:SA:123:VAL:HG22	25:SA:145:ILE:HD11	1.96	0.48
28:SV:11:LEU:HB2	30:SC:79:GLU:HG2	1.95	0.48
29:Sa:46:GLU:O	29:Sa:49:ALA:N	2.40	0.48
32:SO:34:PHE:CE1	32:SO:36:SER:HB3	2.48	0.48
35:L5:270:U:H2'	35:L5:271:C:H6	1.79	0.48
35:L5:1701:A:H5'	40:LC:304:ALA:HB3	1.96	0.48
35:L5:4459:U:H2'	35:L5:4460:U:H6	1.79	0.48
38:LA:133:TYR:HB3	38:LA:168:VAL:HG12	1.95	0.48
40:LC:315:LYS:HD2	43:LF:168:ALA:HB1	1.95	0.48
42:LE:67:ALA:HA	42:LE:69:TYR:CE2	2.49	0.48
55:LS:15:ARG:HB3	55:LS:27:LEU:HD23	1.96	0.48
69:Lh:7:ARG:HG2	69:Lh:7:ARG:HH11	1.78	0.48
83:CB:41:CYS:HA	83:CB:49:ALA:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:739:ARG:HB3	83:CB:819:ILE:HG23	1.95	0.48
84:Et:27:U:H2'	84:Et:28:C:C6	2.48	0.48
84:Et:33:U:H2'	84:Et:35:U:H5"	1.95	0.48
1:S2:193:C:H2'	1:S2:194:C:H6	1.78	0.48
1:S2:1601:A:OP2	1:S2:1636:G:N2	2.47	0.48
1:S2:1712:A:H2'	1:S2:1713:C:C6	2.49	0.48
3:SF:30:ILE:HG12	3:SF:113:VAL:HG11	1.96	0.48
3:SF:173:LEU:O	3:SF:177:LEU:HD12	2.14	0.48
5:SP:64:LYS:HE3	5:SP:91:GLY:O	2.14	0.48
5:SP:111:MET:O	5:SP:113:GLY:N	2.47	0.48
12:Sg:256:ILE:C	12:Sg:257:LYS:HD2	2.39	0.48
13:SM:60:MET:O	13:SM:64:LEU:HD13	2.14	0.48
17:SE:94:LYS:NZ	23:SY:16:ARG:H	2.12	0.48
20:SX:8:ARG:NH1	20:SX:8:ARG:HB3	2.28	0.48
35:L5:223:G:H4'	35:L5:225:G:C8	2.47	0.48
35:L5:1364:U:OP2	48:LL:36:ARG:NH1	2.31	0.48
35:L5:2273:G:H2'	35:L5:2274:C:C6	2.48	0.48
35:L5:3871:A:H2'	35:L5:3872:A:C8	2.49	0.48
35:L5:4460:U:H2'	35:L5:4461:C:H6	1.78	0.48
40:LC:10:VAL:O	40:LC:18:SER:OG	2.29	0.48
45:LH:112:VAL:HG22	45:LH:126:VAL:HG22	1.96	0.48
45:LH:176:LEU:O	45:LH:180:TYR:OH	2.29	0.48
48:LL:180:ALA:O	48:LL:184:MET:HG2	2.14	0.48
1:S2:543:C:H3'	1:S2:544:G:C8	2.48	0.48
1:S2:963:A:H2'	1:S2:964:A:C8	2.49	0.48
1:S2:1531:A:H2'	1:S2:1532:C:C6	2.48	0.48
1:S2:1535:U:H5"	3:SF:169:ILE:HD11	1.95	0.48
10:Sc:21:THR:OG1	10:Sc:22:GLY:N	2.47	0.48
11:Sd:52:PHE:C	11:Sd:53:ILE:HD13	2.39	0.48
23:SY:39:GLU:O	23:SY:43:LYS:HG2	2.13	0.48
26:SB:25:PHE:HA	26:SB:28:LYS:HD2	1.95	0.48
30:SC:183:LYS:HG2	33:SW:95:PRO:HA	1.96	0.48
35:L5:194:C:O2	60:LY:121:ARG:NH1	2.46	0.48
35:L5:1867:A:H2'	35:L5:1868:A:C8	2.49	0.48
35:L5:2362:U:H2'	35:L5:2363:A:H8	1.78	0.48
35:L5:3635:A:C8	35:L5:3692:A:C8	3.02	0.48
35:L5:4093:G:C2	35:L5:4114:C:C2	3.02	0.48
39:LB:128:LYS:O	39:LB:131:THR:OG1	2.23	0.48
43:LF:87:PRO:HG3	43:LF:144:TYR:CD2	2.48	0.48
44:LG:29:ASN:ND2	44:LG:31:LEU:HB2	2.29	0.48
44:LG:88:ASP:HB3	44:LG:91:THR:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Lb:117:ARG:O	63:Lb:118:LEU:HG	2.14	0.48
78:Lr:85:ASN:O	78:Lr:89:THR:HG23	2.13	0.48
83:CB:401:MET:HG2	83:CB:529:LYS:CG	2.44	0.48
83:CB:412:ALA:O	83:CB:472:LEU:N	2.37	0.48
1:S2:193:C:H2'	1:S2:194:C:C6	2.49	0.47
1:S2:626:G:N2	1:S2:626:G:OP2	2.47	0.47
1:S2:1112:U:O2	1:S2:1121:G:O6	2.32	0.47
1:S2:1540:G:H5'	8:ST:47:PRO:HB3	1.95	0.47
1:S2:1620:A:H1'	1:S2:1624:U:OP2	2.13	0.47
5:SP:81:ARG:NH2	5:SP:120:SER:HG	2.11	0.47
7:SS:113:ARG:HH11	7:SS:113:ARG:HG3	1.78	0.47
14:SZ:43:LYS:HG2	14:SZ:45:ASN:HD22	1.78	0.47
16:CD:284:ASP:OD1	16:CD:285:GLU:N	2.47	0.47
22:SJ:54:ARG:NH1	22:SJ:98:LEU:O	2.48	0.47
25:SA:196:GLU:OE2	25:SA:196:GLU:N	2.37	0.47
27:SH:60:ILE:HD13	27:SH:90:LYS:HG3	1.95	0.47
30:SC:114:LYS:HD3	30:SC:121:ARG:HH21	1.79	0.47
35:L5:644:G:H2'	35:L5:645:G:O4'	2.14	0.47
35:L5:1383:G:H2'	35:L5:1384:C:C6	2.49	0.47
35:L5:1551:C:H2'	35:L5:1552:G:O4'	2.14	0.47
35:L5:1589:C:H2'	35:L5:1590:C:C6	2.49	0.47
35:L5:3923:A:H2'	35:L5:3924:C:C6	2.48	0.47
35:L5:4131:G:H2'	35:L5:4132:C:C6	2.49	0.47
65:Ld:75:LYS:HB2	65:Ld:79:ASN:O	2.14	0.47
66:Le:5:ARG:O	66:Le:93:LYS:NZ	2.27	0.47
83:CB:93:LYS:H	83:CB:93:LYS:HD3	1.78	0.47
83:CB:106:PRO:HD2	83:CB:114:GLU:OE1	2.14	0.47
83:CB:791:ASN:ND2	83:CB:791:ASN:H	2.12	0.47
1:S2:798:G:N3	27:SH:113:LYS:NZ	2.54	0.47
1:S2:815:U:C2	1:S2:816:A:C8	3.02	0.47
1:S2:952:G:H2'	1:S2:953:C:O4'	2.14	0.47
1:S2:1265:A:H5'	1:S2:1266:C:OP2	2.14	0.47
1:S2:1320:G:H2'	1:S2:1321:G:O4'	2.14	0.47
1:S2:1750:C:OP2	85:LW:74:ARG:NH2	2.46	0.47
3:SF:169:ILE:HA	3:SF:172:CYS:HB2	1.95	0.47
5:SP:37:TYR:O	7:SS:88:LYS:NZ	2.47	0.47
13:SM:61:TYR:CZ	13:SM:107:SER:HB2	2.49	0.47
22:SJ:95:ASP:OD1	22:SJ:95:ASP:N	2.47	0.47
23:SY:42:GLU:O	23:SY:46:LYS:HG2	2.14	0.47
35:L5:699:C:O2'	35:L5:968:C:O2	2.31	0.47
35:L5:1621:A:OP2	71:Lj:30:GLN:NE2	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2083:C:OP2	53:LQ:14:ARG:NH2	2.47	0.47
35:L5:2411:C:H2'	35:L5:2412:A:C8	2.50	0.47
35:L5:2415:U:H2'	35:L5:2416:G:C8	2.48	0.47
35:L5:2465:C:H2'	35:L5:2466:G:O4'	2.14	0.47
35:L5:3967:G:H2'	35:L5:3967:G:N3	2.29	0.47
35:L5:3969:G:H5"	35:L5:3970:G:C2	2.49	0.47
35:L5:3971:G:N2	35:L5:3973:G:H1'	2.29	0.47
35:L5:4192:A:H2'	35:L5:4193:C:H6	1.78	0.47
45:LH:107:GLU:N	45:LH:107:GLU:OE1	2.47	0.47
50:LN:123:GLU:O	50:LN:124:ASP:HB2	2.13	0.47
52:LP:40:HIS:NE2	52:LP:110:ASP:O	2.42	0.47
58:LV:104:VAL:HB	58:LV:112:MET:HE3	1.96	0.47
82:Lt:72:GLU:OE1	82:Lt:72:GLU:N	2.45	0.47
83:CB:373:TYR:O	83:CB:495:ARG:NH2	2.47	0.47
83:CB:678:SER:HB2	83:CB:721:ILE:HD11	1.95	0.47
85:LW:50:ASN:HA	85:LW:55:TYR:CG	2.48	0.47
1:S2:323:C:H2'	1:S2:327:G:H22	1.79	0.47
1:S2:1438:A:H2'	1:S2:1439:A:C8	2.49	0.47
1:S2:1542:C:P	8:ST:63:HIS:HE2	2.37	0.47
2:SD:122:VAL:O	2:SD:126:ILE:HG13	2.15	0.47
3:SF:60:ARG:HG2	3:SF:61:PHE:CD1	2.50	0.47
9:SU:97:ILE:O	9:SU:100:GLN:NE2	2.48	0.47
12:Sg:44:LYS:NZ	12:Sg:56:GLN:HB3	2.30	0.47
12:Sg:168:CYS:SG	12:Sg:169:GLY:N	2.86	0.47
19:SL:153:LYS:HA	19:SL:153:LYS:HD3	1.77	0.47
35:L5:162:A:H2'	35:L5:163:A:C8	2.50	0.47
35:L5:181:C:OP1	35:L5:183:C:N4	2.47	0.47
35:L5:2864:A:H2'	35:L5:2865:U:C6	2.50	0.47
35:L5:4389:C:H2'	35:L5:4390:A:C8	2.50	0.47
35:L5:4415:A:H4'	46:LI:74:LYS:HE2	1.97	0.47
39:LB:29:VAL:HA	39:LB:220:ILE:HD13	1.96	0.47
42:LE:170:SER:OG	42:LE:214:ASP:OD2	2.15	0.47
44:LG:143:VAL:HG13	44:LG:203:ALA:HB2	1.97	0.47
48:LL:48:PRO:HB2	69:Lh:120:ALA:HB2	1.96	0.47
55:LS:76:LYS:NZ	55:LS:100:LEU:O	2.47	0.47
78:Lr:46:ARG:HA	78:Lr:70:GLN:NE2	2.27	0.47
80:CA:248:LYS:NZ	80:CA:249:ARG:O	2.45	0.47
83:CB:325:SER:O	83:CB:326:GLU:HG3	2.15	0.47
83:CB:335:LEU:O	83:CB:339:VAL:HG13	2.14	0.47
83:CB:743:PRO:O	83:CB:790:VAL:HG23	2.14	0.47
84:Et:61:C:H2'	84:Et:62:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:159:A:N1	1:S2:467:G:O2’	2.46	0.47
1:S2:614:C:H5”	1:S2:615:C:C6	2.48	0.47
1:S2:1415:C:H4’	8:ST:128:GLN:HE22	1.79	0.47
1:S2:1597:C:H4’	1:S2:1603:G:C6	2.50	0.47
1:S2:1808:U:H2’	1:S2:1809:A:C8	2.49	0.47
12:Sg:32:LEU:HD23	12:Sg:32:LEU:H	1.80	0.47
12:Sg:42:MET:O	12:Sg:42:MET:HE3	2.15	0.47
21:SG:50:VAL:HG22	21:SG:113:ILE:HA	1.95	0.47
22:SJ:109:ARG:HD3	22:SJ:111:GLN:HB3	1.96	0.47
25:SA:65:ILE:O	25:SA:68:ILE:HG12	2.15	0.47
25:SA:154:LEU:HD13	25:SA:157:VAL:HG13	1.95	0.47
27:SH:105:THR:HG23	27:SH:107:LYS:H	1.80	0.47
35:L5:1428:U:H5”	53:LQ:42:THR:OG1	2.14	0.47
35:L5:1881:C:H5’	35:L5:2281:U:H1’	1.95	0.47
35:L5:1968:G:H4’	81:Ls:34:ASN:OD1	2.14	0.47
35:L5:4458:C:H2’	35:L5:4459:U:C6	2.48	0.47
35:L5:4764:A:N1	45:LH:60:TRP:HB2	2.29	0.47
38:LA:180:LEU:HD21	77:Lp:22:LEU:HB3	1.96	0.47
39:LB:3:HIS:O	39:LB:3:HIS:CG	2.67	0.47
60:LY:67:ILE:HD12	60:LY:107:THR:HG21	1.95	0.47
82:Lt:105:THR:HG23	82:Lt:143:VAL:HG13	1.96	0.47
84:Et:27:U:H2’	84:Et:28:C:H6	1.80	0.47
1:S2:149:A:N7	1:S2:169:U:O2	2.47	0.47
1:S2:307:G:N2	18:SI:45:THR:O	2.47	0.47
1:S2:1093:A:H2’	1:S2:1094:C:H6	1.78	0.47
1:S2:1199:A:H2’	1:S2:1200:A:C8	2.49	0.47
1:S2:1213:C:H2’	1:S2:1214:A:C8	2.49	0.47
1:S2:1311:C:H2’	1:S2:1312:G:C8	2.49	0.47
2:SD:148:LYS:HE3	16:CD:206:HIS:CD2	2.50	0.47
4:SK:53:LYS:NZ	4:SK:60:GLU:HB3	2.29	0.47
13:SM:89:VAL:HG23	13:SM:91:LEU:HD12	1.97	0.47
21:SG:4:ASN:HB3	21:SG:110:ASN:HB3	1.97	0.47
29:Sa:79:ILE:HG22	29:Sa:84:VAL:HG23	1.96	0.47
35:L5:17:A:OP2	59:LX:60:TYR:OH	2.25	0.47
35:L5:106:A:O2’	35:L5:335:A:N3	2.46	0.47
35:L5:217:C:OP2	35:L5:219:G:H1’	2.14	0.47
35:L5:1241:C:C4	63:Lb:118:LEU:HD13	2.49	0.47
35:L5:2875:C:OP1	77:Lp:23:ARG:NH2	2.48	0.47
35:L5:3893:C:H2’	35:L5:3894:A:C8	2.49	0.47
35:L5:4088:C:H2’	35:L5:4089:G:C8	2.50	0.47
35:L5:4228:G:H5”	35:L5:4229:U:O4’	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4299:U:OP1	63:Lb:33:LYS:NZ	2.47	0.47
35:L5:4343:U:H2'	35:L5:4344:U:C6	2.49	0.47
35:L5:4504:C:H2'	35:L5:4505:C:C6	2.50	0.47
35:L5:4611:A:H2'	35:L5:4612:C:H6	1.78	0.47
39:LB:92:TYR:HB2	39:LB:159:VAL:HG13	1.95	0.47
39:LB:239:LYS:HE3	39:LB:248:LEU:HD13	1.96	0.47
43:LF:157:ARG:HE	43:LF:248:ASN:CB	2.25	0.47
45:LH:59:LYS:HA	45:LH:59:LYS:HD2	1.66	0.47
45:LH:98:HIS:NE2	83:CB:166:GLU:OE2	2.32	0.47
47:LJ:95:ARG:HD3	47:LJ:95:ARG:H	1.79	0.47
64:Lc:34:THR:HG23	64:Lc:95:ALA:HB2	1.97	0.47
78:Lr:47:LYS:HB2	78:Lr:102:TYR:CZ	2.50	0.47
81:Ls:117:ALA:O	81:Ls:164:GLY:N	2.39	0.47
85:LW:56:ARG:HA	85:LW:61:LYS:HG3	1.95	0.47
1:S2:17:C:H2'	1:S2:18:C:C6	2.50	0.47
1:S2:1778:C:H2'	1:S2:1779:G:C8	2.49	0.47
2:SD:93:THR:HG21	2:SD:198:ILE:HG21	1.95	0.47
3:SF:55:ARG:HG3	6:SQ:125:ARG:HH21	1.80	0.47
4:SK:25:LYS:HD2	4:SK:25:LYS:C	2.39	0.47
5:SP:92:SER:HB2	5:SP:107:ILE:HD12	1.96	0.47
6:SQ:101:ASP:OD1	6:SQ:101:ASP:N	2.45	0.47
12:Sg:218:LEU:HD22	12:Sg:261:LEU:HD23	1.97	0.47
21:SG:9:ALA:O	85:LW:80:ARG:HD3	2.14	0.47
25:SA:141:ASN:HB2	28:SV:31:SER:O	2.15	0.47
26:SB:85:LYS:HD2	26:SB:85:LYS:HA	1.66	0.47
31:SN:25:TRP:HE3	34:Sb:83:GLN:HE21	1.62	0.47
35:L5:148:C:OP2	44:LG:197:LYS:NZ	2.45	0.47
35:L5:173:C:P	48:LL:129:ARG:HH21	2.37	0.47
35:L5:270:U:H2'	35:L5:271:C:C6	2.50	0.47
35:L5:375:G:OP2	71:Lj:52:LYS:NZ	2.32	0.47
35:L5:1175:A:H2	35:L5:1185:G:N1	2.07	0.47
35:L5:1907:A:H4'	43:LF:223:LYS:HE3	1.96	0.47
35:L5:3877:A:N3	35:L5:4401:G:O2'	2.35	0.47
37:L8:67:U:H2'	37:L8:68:G:C8	2.49	0.47
37:L8:141:C:H2'	37:L8:142:U:H6	1.80	0.47
39:LB:175:GLN:NE2	39:LB:177:LYS:O	2.41	0.47
48:LL:50:PRO:HB3	48:LL:150:LEU:HB3	1.97	0.47
50:LN:104:GLU:HA	50:LN:160:GLU:HG3	1.97	0.47
83:CB:701:ARG:HD3	83:CB:703:ASP:OD1	2.13	0.47
1:S2:77:A:H2'	1:S2:78:C:C6	2.49	0.47
1:S2:93:U:O2'	17:SE:7:LYS:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:156:G:H1'	21:SG:56:ASN:ND2	2.27	0.47
1:S2:397:G:OP1	19:SL:106:HIS:NE2	2.47	0.47
1:S2:522:A:O2'	22:SJ:131:ARG:NH1	2.46	0.47
1:S2:562:U:H2'	1:S2:563:G:C8	2.49	0.47
1:S2:695:C:N4	1:S2:736:C:O2'	2.47	0.47
1:S2:1022:U:H1'	31:SN:128:TYR:CD2	2.49	0.47
1:S2:1093:A:H2'	1:S2:1094:C:C6	2.49	0.47
1:S2:1599:U:H5"	1:S2:1600:G:C8	2.50	0.47
1:S2:1677:U:P	3:SF:71:ARG:HH22	2.37	0.47
1:S2:1782:G:H2'	1:S2:1784:G:C4	2.49	0.47
1:S2:1864:U:C2	29:Sa:75:VAL:HG11	2.50	0.47
1:S2:1865:C:O2	29:Sa:92:ARG:HG3	2.15	0.47
2:SD:227:LYS:HB3	12:Sg:184:LEU:HD11	1.96	0.47
9:SU:23:THR:HA	9:SU:88:LEU:HA	1.95	0.47
10:Sc:12:ALA:HB2	10:Sc:58:LEU:HD22	1.96	0.47
12:Sg:296:GLN:O	12:Sg:311:GLN:HG3	2.14	0.47
23:SY:61:ARG:NH1	23:SY:61:ARG:HA	2.30	0.47
23:SY:83:LYS:NZ	23:SY:91:LEU:HD23	2.30	0.47
25:SA:5:LEU:HD21	28:SV:41:LYS:HA	1.96	0.47
25:SA:37:TYR:CG	25:SA:162:PRO:HG3	2.49	0.47
25:SA:39:TYR:O	25:SA:40:LYS:HG2	2.15	0.47
26:SB:71:LEU:HD22	26:SB:84:PHE:HE1	1.79	0.47
27:SH:64:VAL:HG21	27:SH:72:PHE:CE2	2.50	0.47
28:SV:74:LYS:HZ2	28:SV:80:SER:HB3	1.80	0.47
30:SC:78:LEU:HD13	30:SC:97:PHE:CD2	2.49	0.47
30:SC:214:LEU:HD23	30:SC:244:ILE:HD11	1.96	0.47
34:Sb:42:LYS:NZ	34:Sb:57:VAL:HG22	2.30	0.47
35:L5:1178:G:H2'	41:LD:286:SER:OG	2.14	0.47
35:L5:1431:C:H2'	35:L5:1432:G:O4'	2.15	0.47
35:L5:2297:G:H4'	40:LC:242:PRO:HB2	1.95	0.47
35:L5:2373:C:H5'	65:Ld:46:LEU:HD13	1.96	0.47
35:L5:2845:A:H61	35:L5:3843:C:H42	1.61	0.47
35:L5:3865:A:H61	35:L5:3881:G:H1	1.63	0.47
35:L5:4420:U:H3'	35:L5:4421:C:C5	2.50	0.47
35:L5:4587:G:OP1	51:LO:61:ARG:HD2	2.15	0.47
35:L5:4637:G:H2'	35:L5:4638:U:C6	2.50	0.47
37:L8:26:C:O2'	40:LC:53:ALA:O	2.31	0.47
37:L8:39:G:O2'	37:L8:104:A:N1	2.44	0.47
43:LF:124:LYS:HD3	43:LF:197:VAL:HG11	1.97	0.47
44:LG:205:THR:HG22	44:LG:206:GLN:N	2.27	0.47
45:LH:89:ARG:HH21	45:LH:187:VAL:HG13	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:LM:113:MET:HE3	49:LM:117:LYS:HD3	1.97	0.47
51:LO:158:GLU:O	51:LO:162:GLU:HG3	2.14	0.47
57:LU:45:GLU:OE1	57:LU:45:GLU:N	2.45	0.47
63:Lb:51:LYS:O	63:Lb:54:LEU:HB2	2.14	0.47
64:Lc:30:GLY:O	64:Lc:34:THR:OG1	2.31	0.47
65:Ld:23:ARG:NH1	65:Ld:25:TYR:OH	2.47	0.47
65:Ld:26:THR:HG22	65:Ld:85:ARG:HH11	1.79	0.47
66:Le:35:TRP:CZ2	66:Le:56:PRO:HD2	2.50	0.47
70:Li:45:ARG:NH1	70:Li:49:GLY:O	2.43	0.47
76:Lo:61:LYS:HD2	76:Lo:87:ARG:HH12	1.79	0.47
79:Lz:198:TRP:CG	79:Lz:199:GLN:N	2.83	0.47
80:CA:71:LYS:C	80:CA:72:LYS:HD3	2.40	0.47
81:Ls:189:ILE:HD11	81:Ls:192:VAL:HG12	1.97	0.47
83:CB:150:ARG:HG2	83:CB:200:MET:SD	2.55	0.47
83:CB:423:THR:OG1	83:CB:448:GLN:O	2.32	0.47
83:CB:685:TRP:CE2	83:CB:726:ARG:HD3	2.50	0.47
83:CB:781:MET:HA	83:CB:781:MET:HE3	1.95	0.47
84:Et:48:C:OP2	84:Et:48:C:H4'	2.14	0.47
85:LW:21:TYR:N	85:LW:29:PHE:O	2.40	0.47
1:S2:85:A:H2'	1:S2:86:C:H6	1.79	0.47
1:S2:203:G:OP2	18:SI:147:LYS:HD2	2.15	0.47
1:S2:964:A:H2'	1:S2:965:U:H6	1.80	0.47
1:S2:1037:G:H4'	1:S2:1845:A:H4'	1.97	0.47
1:S2:1209:A:H5"	29:Sa:82:LYS:HD3	1.97	0.47
7:SS:18:THR:OG1	7:SS:19:ASN:N	2.48	0.47
8:ST:134:ILE:O	8:ST:138:VAL:HG12	2.15	0.47
22:SJ:133:ARG:NH1	23:SY:65:GLY:HA2	2.30	0.47
35:L5:132:G:N3	35:L5:133:C:O2'	2.48	0.47
35:L5:737:C:C4	35:L5:739:G:H5"	2.50	0.47
35:L5:1356:U:H2'	35:L5:1357:C:C6	2.50	0.47
35:L5:2486:G:N7	35:L5:2493:G:N1	2.54	0.47
35:L5:2859:G:H2'	35:L5:2860:C:H6	1.79	0.47
39:LB:220:ILE:HG12	39:LB:278:THR:HB	1.97	0.47
42:LE:207:LYS:HA	42:LE:207:LYS:HD3	1.55	0.47
43:LF:118:PHE:CD1	43:LF:247:MET:HE1	2.50	0.47
46:LI:48:LEU:O	46:LI:139:ARG:HA	2.14	0.47
50:LN:149:GLN:HE22	69:Lh:102:LEU:HD21	1.79	0.47
54:LR:153:LYS:NZ	54:LR:157:ASP:OD2	2.37	0.47
57:LU:87:THR:O	57:LU:91:LEU:HD13	2.14	0.47
66:Le:65:LYS:HD3	66:Le:65:LYS:N	2.29	0.47
79:Lz:47:LYS:HE3	79:Lz:194:LEU:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:85:A:H2'	1:S2:86:C:C6	2.50	0.47
1:S2:166:A:H2'	1:S2:167:G:H8	1.80	0.47
1:S2:381:C:OP2	18:SI:31:ARG:NH2	2.47	0.47
1:S2:880:G:H3'	1:S2:881:G:H8	1.79	0.47
1:S2:1745:A:H1'	21:SG:66:GLY:HA2	1.97	0.47
11:Sd:56:ASP:N	11:Sd:56:ASP:OD1	2.44	0.47
12:Sg:208:ALA:HB3	12:Sg:239:LEU:HD21	1.97	0.47
18:SI:6:ASP:OD2	18:SI:9:HIS:ND1	2.47	0.47
21:SG:147:LEU:HB3	21:SG:151:ASP:HB3	1.97	0.47
22:SJ:84:ILE:HG22	22:SJ:86:VAL:HG13	1.96	0.47
26:SB:92:GLN:HE22	44:LG:264:LYS:HD2	1.80	0.47
30:SC:130:ILE:HG23	30:SC:162:ILE:HD11	1.96	0.47
31:SN:151:ALA:HA	64:Lc:19:GLN:CD	2.40	0.47
35:L5:2376:A:H2'	35:L5:2377:C:C6	2.50	0.47
35:L5:4697:U:H4'	74:Lm:104:HIS:CE1	2.50	0.47
38:LA:57:PRO:HB3	77:Lp:54:ILE:HG13	1.95	0.47
59:LX:37:LYS:HA	59:LX:38:LYS:HA	1.64	0.47
61:LZ:73:LYS:HD3	61:LZ:75:TYR:CZ	2.50	0.47
67:Lf:45:LYS:HD3	67:Lf:106:TYR:O	2.14	0.47
71:Lj:34:CYS:HB3	71:Lj:39:TYR:H	1.79	0.47
76:Lo:68:LEU:HD21	76:Lo:85:ILE:HD13	1.96	0.47
80:CA:140:ALA:HA	80:CA:343:TYR:CE2	2.50	0.47
80:CA:172:LYS:HG2	80:CA:354:LEU:HD11	1.97	0.47
1:S2:531:A:H3'	1:S2:532:C:H5"	1.96	0.47
1:S2:873:G:H5'	54:LR:163:ARG:HA	1.97	0.47
1:S2:921:G:C6	34:Sb:22:LYS:HA	2.50	0.47
1:S2:991:G:C6	1:S2:1134:G:H4'	2.50	0.47
6:SQ:116:ASP:O	6:SQ:119:LEU:HG	2.15	0.47
9:SU:95:SER:HA	9:SU:98:VAL:HG22	1.97	0.47
16:CD:225:LEU:HD23	16:CD:225:LEU:H	1.80	0.47
21:SG:71:GLY:O	21:SG:98:ARG:HG2	2.15	0.47
22:SJ:135:ILE:HD12	22:SJ:136:ARG:N	2.29	0.47
29:Sa:13:LYS:HA	29:Sa:13:LYS:HD3	1.76	0.47
29:Sa:44:ILE:O	29:Sa:44:ILE:HG13	2.14	0.47
30:SC:72:ASP:OD1	30:SC:72:ASP:N	2.34	0.47
30:SC:168:GLY:N	30:SC:179:THR:O	2.38	0.47
35:L5:746:A:H2'	35:L5:747:A:H8	1.79	0.47
35:L5:2264:C:H2'	35:L5:2265:G:O4'	2.15	0.47
35:L5:3620:G:OP1	35:L5:3622:C:N4	2.47	0.47
35:L5:3799:A:N3	35:L5:4506:C:O2'	2.41	0.47
35:L5:3945:A:H2'	35:L5:3946:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4088:C:H2'	35:L5:4089:G:H8	1.80	0.47
40:LC:63:SER:O	40:LC:63:SER:OG	2.27	0.47
41:LD:70:GLU:CD	41:LD:70:GLU:H	2.22	0.47
54:LR:170:ARG:O	54:LR:174:GLU:HG2	2.15	0.47
67:Lf:79:GLY:O	67:Lf:81:SER:N	2.46	0.47
68:Lg:99:GLU:O	68:Lg:102:ILE:HG22	2.15	0.47
80:CA:80:ILE:HD12	80:CA:80:ILE:O	2.15	0.47
83:CB:155:LEU:HD22	83:CB:156:MET:H	1.80	0.47
83:CB:305:MET:HE1	83:CB:333:LYS:HB2	1.97	0.47
83:CB:330:LYS:HE3	83:CB:331:GLU:O	2.15	0.47
83:CB:434:TYR:HE2	83:CB:442:LEU:HD12	1.79	0.47
83:CB:695:GLU:OE2	83:CB:842:LYS:NZ	2.48	0.47
1:S2:383:G:O2'	19:SL:133:PRO:O	2.31	0.46
1:S2:1198:G:H2'	1:S2:1199:A:C8	2.50	0.46
12:Sg:156:PHE:HA	12:Sg:165:ILE:HD13	1.98	0.46
13:SM:83:LYS:O	13:SM:87:GLU:HG2	2.14	0.46
17:SE:164:LEU:O	17:SE:165:GLU:HG3	2.15	0.46
21:SG:159:ARG:O	21:SG:160:LYS:NZ	2.45	0.46
22:SJ:124:HIS:CD2	24:Se:31:ARG:HD2	2.46	0.46
22:SJ:124:HIS:CG	24:Se:35:ARG:HD3	2.50	0.46
25:SA:57:LYS:NZ	25:SA:160:ALA:O	2.41	0.46
25:SA:68:ILE:HD11	25:SA:74:VAL:HB	1.96	0.46
30:SC:273:LEU:HA	30:SC:273:LEU:HD23	1.70	0.46
35:L5:1094:G:H2'	35:L5:1095:A:C8	2.50	0.46
35:L5:1341:U:H2'	35:L5:1342:A:C8	2.50	0.46
35:L5:1341:U:H2'	35:L5:1342:A:H8	1.81	0.46
35:L5:3597:G:H2'	35:L5:3598:C:C6	2.50	0.46
35:L5:4077:A:N1	35:L5:4171:C:N4	2.60	0.46
35:L5:5043:A:H2'	35:L5:5044:A:C8	2.49	0.46
40:LC:152:LEU:HD21	40:LC:174:LEU:HD13	1.97	0.46
51:LO:190:ASP:OD2	51:LO:191:LYS:N	2.48	0.46
79:Lz:174:MET:HG3	79:Lz:175:THR:N	2.30	0.46
82:Lt:28:LEU:O	82:Lt:28:LEU:HD13	2.15	0.46
1:S2:344:U:H2'	1:S2:345:U:C6	2.50	0.46
1:S2:399:C:H5	1:S2:680:G:H5"	1.79	0.46
1:S2:1059:G:O2'	35:L5:3768:U:H5"	2.15	0.46
1:S2:1083:A:N7	1:S2:1841:C:O2'	2.44	0.46
1:S2:1164:G:O2'	1:S2:1165:G:H5'	2.15	0.46
1:S2:1247:C:O5'	16:CD:190:LYS:NZ	2.47	0.46
1:S2:1409:A:H61	1:S2:1432:U:H3	1.61	0.46
2:SD:217:ILE:HG23	2:SD:218:LEU:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:SM:48:HIS:HB2	13:SM:111:VAL:O	2.16	0.46
22:SJ:140:GLN:NE2	23:SY:64:PHE:HB3	2.30	0.46
23:SY:47:MET:HE2	23:SY:47:MET:O	2.15	0.46
32:SO:142:ARG:HG3	32:SO:143:LYS:N	2.30	0.46
35:L5:238:C:OP2	60:LY:45:ARG:NH2	2.48	0.46
35:L5:1629:G:N1	38:LA:208:GLU:HG2	2.30	0.46
35:L5:2065:G:H21	67:Lf:80:ASN:ND2	2.13	0.46
35:L5:2407:G:O6	73:Ll:2:SER:N	2.49	0.46
35:L5:2459:G:H2'	35:L5:2461:G:OP2	2.15	0.46
35:L5:3723:A:H2'	35:L5:3724:A:H8	1.80	0.46
35:L5:4066:U:H2'	35:L5:4067:U:C6	2.49	0.46
35:L5:4129:G:H1'	44:LG:34:LYS:HE3	1.96	0.46
35:L5:4627:U:O2'	39:LB:55:HIS:ND1	2.41	0.46
35:L5:4635:A:OP1	35:L5:4636:U:O2'	2.31	0.46
39:LB:80:GLU:HG3	39:LB:326:VAL:HB	1.98	0.46
40:LC:56:GLU:CD	40:LC:56:GLU:H	2.23	0.46
46:LI:207:ASP:HA	46:LI:210:ARG:HE	1.81	0.46
53:LQ:79:THR:HB	53:LQ:99:LYS:HD3	1.96	0.46
70:Li:71:LYS:HE3	70:Li:71:LYS:HB2	1.69	0.46
80:CA:36:VAL:HG23	80:CA:125:PHE:CE2	2.50	0.46
80:CA:227:ASP:HB3	80:CA:320:LYS:CD	2.46	0.46
80:CA:280:LEU:HA	80:CA:283:PHE:HE1	1.80	0.46
81:Ls:157:ASP:OD1	81:Ls:157:ASP:N	2.47	0.46
1:S2:144:U:H3'	21:SG:178:ARG:NH2	2.30	0.46
1:S2:480:G:H2'	1:S2:481:C:C6	2.50	0.46
1:S2:830:A:C2	1:S2:845:G:C6	3.04	0.46
1:S2:1047:C:H5'	32:SO:143:LYS:CB	2.43	0.46
1:S2:1304:U:H5"	15:Sf:95:ARG:HG2	1.96	0.46
2:SD:135:GLU:HG3	2:SD:153:VAL:HG22	1.98	0.46
7:SS:86:ARG:HH22	7:SS:90:VAL:HG12	1.80	0.46
8:ST:28:LEU:HD12	8:ST:110:LEU:HD23	1.98	0.46
12:Sg:217:MET:HG3	12:Sg:219:TRP:CE2	2.49	0.46
12:Sg:237:ASN:ND2	12:Sg:285:GLN:HG3	2.30	0.46
13:SM:40:LYS:HA	13:SM:40:LYS:HD2	1.59	0.46
24:Se:40:ARG:O	24:Se:44:ASN:ND2	2.48	0.46
26:SB:129:THR:HG22	26:SB:176:VAL:HG13	1.97	0.46
26:SB:167:LYS:HA	26:SB:170:GLU:HG3	1.98	0.46
28:SV:21:ASN:ND2	33:SW:66:THR:O	2.48	0.46
32:SO:97:LEU:HD11	32:SO:108:PRO:HG3	1.95	0.46
35:L5:458:C:OP1	78:Lr:87:ARG:NH2	2.48	0.46
35:L5:659:G:H2'	35:L5:660:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:705:G:H2'	35:L5:706:C:C6	2.50	0.46
35:L5:1858:A:H2'	35:L5:1859:C:H6	1.80	0.46
35:L5:1878:G:H2'	35:L5:1879:C:C6	2.51	0.46
35:L5:3946:G:N2	35:L5:4068:U:O2	2.48	0.46
35:L5:4364:G:H2'	35:L5:4365:C:C6	2.49	0.46
35:L5:5055:G:H21	65:Ld:118:GLN:NE2	2.13	0.46
37:L8:40:A:H2'	37:L8:41:A:H8	1.80	0.46
38:LA:28:ARG:HB2	38:LA:123:ARG:CB	2.45	0.46
50:LN:149:GLN:NE2	69:Lh:99:GLU:O	2.49	0.46
83:CB:398:ILE:HG12	83:CB:485:ILE:CD1	2.45	0.46
84:Et:19:G:N2	84:Et:57:A:H1'	2.31	0.46
1:S2:931:C:H2'	1:S2:932:G:C8	2.50	0.46
2:SD:25:LEU:HD12	2:SD:34:TYR:OH	2.15	0.46
2:SD:215:ASP:OD1	2:SD:216:GLU:N	2.47	0.46
4:SK:31:LYS:HZ1	4:SK:39:ASN:HA	1.80	0.46
5:SP:29:SER:H	5:SP:32:GLN:HE22	1.62	0.46
8:ST:105:GLN:HA	8:ST:108:GLU:HG2	1.97	0.46
12:Sg:141:THR:HG23	12:Sg:141:THR:O	2.15	0.46
15:Sf:132:MET:CE	15:Sf:139:HIS:HB3	2.45	0.46
25:SA:183:LEU:O	25:SA:188:THR:OG1	2.32	0.46
26:SB:101:HIS:HA	26:SB:217:MET:SD	2.56	0.46
31:SN:116:ILE:H	31:SN:116:ILE:HD12	1.79	0.46
33:SW:106:THR:OG1	33:SW:107:SER:N	2.48	0.46
35:L5:517:C:N4	35:L5:646:G:O2'	2.48	0.46
35:L5:664:G:N2	35:L5:666:G:O6	2.49	0.46
35:L5:911:U:H2'	35:L5:912:G:C4	2.51	0.46
35:L5:1239:C:H5	42:LE:60:SER:HB2	1.79	0.46
35:L5:1342:A:OP1	50:LN:204:ARG:HD2	2.15	0.46
35:L5:2292:C:H2'	35:L5:2293:U:C6	2.50	0.46
35:L5:2638:G:H22	35:L5:2719:C:P	2.39	0.46
35:L5:2747:U:H2'	35:L5:2748:C:C6	2.51	0.46
35:L5:3719:A:C4	35:L5:3720:G:C8	3.04	0.46
35:L5:4273:A:H2'	35:L5:4274:A:C8	2.50	0.46
39:LB:220:ILE:HG23	39:LB:278:THR:HG22	1.97	0.46
47:LJ:119:TYR:HD2	47:LJ:120:ASP:N	2.13	0.46
51:LO:73:PHE:HB3	51:LO:78:ARG:HB3	1.96	0.46
53:LQ:22:ASP:O	53:LQ:26:ARG:HG2	2.15	0.46
63:Lb:35:VAL:CG2	63:Lb:40:LEU:HD13	2.46	0.46
83:CB:114:GLU:CD	83:CB:114:GLU:C	2.83	0.46
84:Et:18:U:O2	84:Et:57:A:H2'	2.15	0.46
1:S2:65:C:C2	21:SG:133:LEU:HD22	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:373:G:H2'	1:S2:374:G:H8	1.81	0.46
1:S2:527:C:H4'	22:SJ:121:LYS:HE2	1.98	0.46
1:S2:569:A:H2'	1:S2:570:C:O4'	2.16	0.46
1:S2:963:A:H2'	1:S2:964:A:H8	1.80	0.46
1:S2:1237:C:O2'	5:SP:129:GLY:N	2.48	0.46
1:S2:1619:A:H8	1:S2:1619:A:O5'	1.98	0.46
1:S2:1745:A:H3'	1:S2:1745:A:OP2	2.15	0.46
2:SD:7:LYS:HB3	2:SD:7:LYS:HZ3	1.80	0.46
2:SD:116:ARG:HD2	16:CD:219:GLY:C	2.41	0.46
3:SF:68:ILE:O	3:SF:72:LEU:HD23	2.15	0.46
4:SK:14:LEU:HD22	4:SK:35:LEU:HD11	1.97	0.46
9:SU:19:ARG:O	9:SU:117:ALA:HA	2.15	0.46
12:Sg:33:SER:HB2	12:Sg:43:TRP:HE1	1.80	0.46
19:SL:29:GLY:HA3	19:SL:30:LYS:HA	1.54	0.46
31:SN:100:LYS:O	31:SN:103:GLU:HG3	2.16	0.46
33:SW:51:GLU:N	33:SW:62:VAL:O	2.48	0.46
35:L5:1555:G:O6	77:Lp:4:ARG:NH1	2.47	0.46
35:L5:1683:U:H2'	35:L5:1684:A:H8	1.80	0.46
35:L5:3697:U:H5"	35:L5:3698:G:H5'	1.97	0.46
35:L5:4069:U:H2'	35:L5:4070:U:C6	2.51	0.46
35:L5:4093:G:N7	35:L5:4095:G:C2	2.84	0.46
35:L5:4524:G:C2	39:LB:252:ALA:HB1	2.50	0.46
44:LG:175:ARG:HD2	44:LG:230:TYR:CG	2.50	0.46
45:LH:104:VAL:HB	45:LH:113:GLU:HB2	1.98	0.46
57:LU:21:PHE:CE1	57:LU:80:LYS:HB2	2.50	0.46
58:LV:83:ARG:HG2	58:LV:98:PHE:CG	2.51	0.46
60:LY:73:VAL:HG12	60:LY:80:ILE:HG22	1.97	0.46
65:Ld:70:LYS:HB3	65:Ld:70:LYS:HE2	1.68	0.46
81:Ls:33:ASP:O	81:Ls:35:VAL:N	2.48	0.46
1:S2:96:C:H2'	1:S2:97:U:C6	2.51	0.46
1:S2:291:G:H2'	1:S2:292:A:C8	2.50	0.46
1:S2:1256:G:OP2	11:Sd:40:ARG:NH1	2.49	0.46
1:S2:1410:C:H2'	1:S2:1411:G:C8	2.51	0.46
2:SD:86:LEU:HD13	2:SD:86:LEU:HA	1.74	0.46
4:SK:47:LYS:HD3	4:SK:47:LYS:HA	1.71	0.46
5:SP:70:MET:HG2	47:LJ:178:LYS:HZ1	1.80	0.46
10:Sc:12:ALA:O	10:Sc:56:LEU:N	2.45	0.46
14:SZ:96:LEU:HG	14:SZ:97:ILE:HD13	1.98	0.46
19:SL:119:ASP:O	19:SL:147:LYS:NZ	2.49	0.46
22:SJ:58:ARG:O	22:SJ:62:THR:HG22	2.16	0.46
22:SJ:179:LYS:HA	22:SJ:182:GLN:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:SN:132:LYS:HD3	31:SN:132:LYS:HA	1.77	0.46
32:SO:124:MET:HE3	32:SO:124:MET:HB2	1.51	0.46
33:SW:83:LEU:HD23	33:SW:117:ARG:HG2	1.98	0.46
35:L5:25:A:C8	35:L5:341:G:C8	3.04	0.46
35:L5:1278:C:H2'	35:L5:1279:A:O4'	2.16	0.46
35:L5:1519:C:H2'	35:L5:1520:C:C6	2.51	0.46
35:L5:1811:G:H2'	35:L5:1812:C:H6	1.81	0.46
35:L5:1942:A:N3	35:L5:4432:C:O2'	2.43	0.46
35:L5:2054:U:OP2	51:LO:44:SER:OG	2.28	0.46
35:L5:4691:A:O2'	45:LH:68:ALA:O	2.31	0.46
35:L5:5055:G:H2'	35:L5:5056:A:C8	2.51	0.46
37:L8:93:C:OP1	71:Lj:76:HIS:NE2	2.35	0.46
37:L8:130:C:H2'	37:L8:131:G:H8	1.79	0.46
38:LA:144:LYS:HG2	38:LA:160:SER:HB2	1.97	0.46
50:LN:146:PRO:HB2	69:Lh:104:THR:HG23	1.97	0.46
59:LX:76:ILE:HG22	59:LX:77:ILE:HD13	1.98	0.46
62:La:72:THR:HG22	62:La:110:LYS:HB3	1.97	0.46
69:Lh:42:SER:O	69:Lh:46:LYS:HG2	2.16	0.46
82:Lt:126:SER:HB3	82:Lt:159:ALA:O	2.15	0.46
83:CB:35:LEU:HD23	83:CB:35:LEU:HA	1.79	0.46
83:CB:59:THR:HG21	83:CB:456:ARG:N	2.31	0.46
1:S2:494:C:O3'	17:SE:57:THR:OG1	2.33	0.46
1:S2:650:A:OP2	20:SX:108:LYS:HG2	2.16	0.46
1:S2:1112:U:H2'	1:S2:1113:A:C8	2.50	0.46
1:S2:1237:C:O3'	5:SP:129:GLY:HA3	2.15	0.46
1:S2:1291:A:OP2	1:S2:1302:G:O2'	2.25	0.46
1:S2:1414:A:H3'	1:S2:1415:C:H5"	1.97	0.46
1:S2:1640:A:H2'	1:S2:1641:A:O4'	2.16	0.46
1:S2:1667:U:H2'	1:S2:1668:U:C6	2.50	0.46
6:SQ:81:ILE:HD12	6:SQ:81:ILE:HA	1.77	0.46
12:Sg:147:HIS:CD2	12:Sg:169:GLY:HA3	2.51	0.46
15:Sf:103:LEU:HD23	15:Sf:104:LYS:H	1.81	0.46
17:SE:32:SER:OG	17:SE:81:THR:OG1	2.25	0.46
20:SX:60:LYS:HG2	20:SX:114:ASP:O	2.16	0.46
22:SJ:31:LEU:O	22:SJ:35:TYR:HB2	2.16	0.46
22:SJ:85:GLY:HA3	22:SJ:108:ARG:HE	1.81	0.46
26:SB:33:VAL:HG12	26:SB:96:CYS:SG	2.56	0.46
26:SB:99:ASN:OD1	26:SB:99:ASN:N	2.48	0.46
27:SH:145:ARG:HG2	27:SH:155:LYS:HD3	1.97	0.46
35:L5:1315:C:N4	35:L5:1316:G:O6	2.48	0.46
35:L5:2696:A:C4	72:Lk:69:LEU:HD21	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2815:A:H2'	35:L5:2816:G:C8	2.51	0.46
35:L5:4080:C:H2'	35:L5:4081:G:H8	1.80	0.46
35:L5:4688:C:H2'	35:L5:4689:U:C6	2.50	0.46
41:LD:280:VAL:O	41:LD:284:LYS:HG2	2.14	0.46
42:LE:272:ARG:HH11	42:LE:272:ARG:HB3	1.80	0.46
48:LL:126:LEU:N	48:LL:138:ASP:OD2	2.34	0.46
51:LO:105:PHE:CD1	51:LO:109:PRO:HG2	2.51	0.46
65:Ld:36:VAL:HG21	65:Ld:44:ARG:HG2	1.98	0.46
79:Lz:23:ARG:HA	79:Lz:212:LYS:HD3	1.97	0.46
80:CA:45:VAL:HG12	80:CA:98:TYR:H	1.81	0.46
82:Lt:109:ILE:HA	82:Lt:112:ILE:HG22	1.98	0.46
83:CB:420:LEU:HG	83:CB:464:VAL:O	2.16	0.46
84:Et:21:A:H3'	84:Et:46:G:O6	2.15	0.46
1:S2:325:C:H3'	1:S2:326:C:H4'	1.98	0.46
1:S2:945:U:H2'	1:S2:946:U:C6	2.50	0.46
1:S2:974:C:H2'	1:S2:975:G:C8	2.51	0.46
1:S2:1256:G:N2	11:Sd:30:LEU:O	2.43	0.46
1:S2:1629:C:OP1	7:SS:39:ARG:HD3	2.15	0.46
1:S2:1750:C:H2'	1:S2:1751:C:O4'	2.16	0.46
1:S2:1773:C:H2'	1:S2:1774:C:H5"	1.97	0.46
1:S2:1845:A:H2'	1:S2:1846:G:H8	1.81	0.46
2:SD:25:LEU:HB2	2:SD:34:TYR:CZ	2.51	0.46
4:SK:43:LEU:HD22	4:SK:47:LYS:HG2	1.97	0.46
5:SP:85:ILE:HD12	5:SP:111:MET:HB2	1.97	0.46
9:SU:66:ARG:NH2	9:SU:75:LYS:HA	2.30	0.46
12:Sg:7:LEU:HD12	12:Sg:309:VAL:O	2.16	0.46
12:Sg:194:TYR:O	12:Sg:211:GLY:HA3	2.16	0.46
14:SZ:69:THR:H	14:SZ:72:VAL:HG12	1.81	0.46
14:SZ:102:LYS:HA	14:SZ:102:LYS:HD2	1.69	0.46
21:SG:142:ARG:HB2	21:SG:147:LEU:HB2	1.98	0.46
25:SA:208:GLU:N	25:SA:208:GLU:OE2	2.49	0.46
35:L5:2045:G:O6	35:L5:3870:C:O2'	2.31	0.46
35:L5:2416:G:O2'	35:L5:2417:A:OP1	2.33	0.46
35:L5:2475:G:N7	59:LX:48:ARG:NH2	2.56	0.46
35:L5:2517:A:N3	35:L5:2539:C:O2'	2.45	0.46
35:L5:2527:A:P	54:LR:38:ARG:HH21	2.39	0.46
35:L5:3754:G:O6	35:L5:3770:U:O4	2.34	0.46
35:L5:3932:U:H2'	35:L5:3933:G:C8	2.50	0.46
35:L5:4858:C:O2	35:L5:4859:C:N4	2.49	0.46
39:LB:35:ASP:HB2	39:LB:186:ASN:ND2	2.31	0.46
44:LG:156:VAL:HG13	44:LG:184:ILE:HG13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:LH:102:ASN:HB2	45:LH:115:ARG:HB2	1.97	0.46
47:LJ:31:ASP:O	47:LJ:35:ARG:HG3	2.16	0.46
54:LR:38:ARG:C	54:LR:40:GLN:H	2.24	0.46
59:LX:129:ARG:NH1	59:LX:131:ASP:OD2	2.48	0.46
62:La:134:GLU:O	62:La:138:LYS:HG2	2.16	0.46
65:Ld:61:ASP:OD2	65:Ld:103:TYR:HB2	2.16	0.46
81:Ls:29:ILE:N	81:Ls:191:GLN:O	2.45	0.46
81:Ls:139:GLN:HE22	83:CB:183:GLU:CB	2.28	0.46
82:Lt:141:CYS:SG	82:Lt:142:ASN:N	2.89	0.46
83:CB:535:GLN:HG3	83:CB:537:ILE:HG23	1.96	0.46
84:Et:31:A:H3'	84:Et:32:C:H6	1.81	0.46
1:S2:289:G:N2	1:S2:293:C:C2	2.84	0.46
1:S2:552:G:H2'	1:S2:553:U:C6	2.50	0.46
3:SF:131:ALA:HB2	3:SF:135:ARG:CZ	2.46	0.46
3:SF:171:GLU:H	3:SF:171:GLU:CD	2.23	0.46
13:SM:61:TYR:OH	13:SM:108:CYS:SG	2.65	0.46
27:SH:18:GLU:CD	27:SH:18:GLU:H	2.24	0.46
29:Sa:43:ASN:HB2	29:Sa:45:VAL:HG12	1.98	0.46
33:SW:68:ARG:O	33:SW:68:ARG:HG2	2.14	0.46
35:L5:1213:G:OP1	43:LF:59:LYS:NZ	2.42	0.46
35:L5:2864:A:H2'	35:L5:2865:U:H6	1.81	0.46
35:L5:3614:G:O2'	35:L5:3615:G:OP1	2.19	0.46
35:L5:3721:U:H2'	35:L5:3722:G:C8	2.51	0.46
35:L5:4347:G:H2'	35:L5:4348:A:C8	2.51	0.46
41:LD:215:ASP:OD1	41:LD:218:ALA:N	2.45	0.46
43:LF:92:VAL:HG13	43:LF:140:ILE:HD12	1.97	0.46
45:LH:28:LYS:HD2	45:LH:33:THR:OG1	2.16	0.46
47:LJ:95:ARG:HH11	47:LJ:96:LYS:H	1.63	0.46
54:LR:170:ARG:HG3	54:LR:171:LYS:N	2.30	0.46
56:LT:81:LYS:HB3	63:Lb:16:TRP:CZ3	2.51	0.46
77:Lp:73:THR:O	77:Lp:77:VAL:HG23	2.16	0.46
83:CB:188:ILE:HG13	83:CB:192:TYR:CE1	2.51	0.46
84:Et:60:U:H2'	84:Et:61:C:H5	1.81	0.46
1:S2:218:U:O2	18:SI:184:ARG:NH1	2.41	0.46
1:S2:498:C:C5'	17:SE:7:LYS:HD3	2.46	0.46
1:S2:1017:U:OP2	31:SN:55:ARG:NH1	2.49	0.46
1:S2:1113:A:H2'	1:S2:1114:U:C2	2.50	0.46
1:S2:1507:G:C6	15:Sf:90:LYS:HA	2.51	0.46
1:S2:1622:U:H4'	7:SS:133:GLY:HA2	1.98	0.46
1:S2:1648:G:H22	1:S2:1675:A:P	2.38	0.46
1:S2:1755:C:H2'	1:S2:1756:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1858:G:OP2	32:SO:146:ARG:NH2	2.47	0.46
2:SD:172:VAL:O	2:SD:173:ARG:HD2	2.16	0.46
7:SS:7:GLU:H	7:SS:7:GLU:CD	2.24	0.46
8:ST:64:LEU:HD22	8:ST:123:LEU:HD13	1.98	0.46
10:Sc:29:GLN:HA	10:Sc:44:ARG:O	2.16	0.46
10:Sc:62:GLU:O	29:Sa:51:ARG:NE	2.49	0.46
13:SM:26:LEU:HD12	13:SM:27:ILE:HG23	1.97	0.46
21:SG:77:LEU:HD23	21:SG:95:LYS:HB2	1.97	0.46
23:SY:4:THR:OG1	23:SY:32:LYS:NZ	2.46	0.46
27:SH:95:ILE:HD11	27:SH:133:LEU:HB2	1.97	0.46
27:SH:139:ILE:O	31:SN:19:ARG:NH1	2.49	0.46
29:Sa:40:VAL:C	29:Sa:41:ILE:HD12	2.40	0.46
35:L5:1076:C:H2'	35:L5:1077:C:C6	2.51	0.46
35:L5:1086:C:H2'	35:L5:1087:A:C8	2.51	0.46
35:L5:1378:C:H4'	35:L5:1379:C:H5'	1.97	0.46
35:L5:2672:C:O3'	35:L5:2675:G:H5'	2.15	0.46
35:L5:2899:C:OP1	54:LR:108:ARG:NH2	2.42	0.46
35:L5:3610:A:H2'	35:L5:3611:A:C8	2.51	0.46
35:L5:3963:A:H3'	35:L5:3965:A:H5'	1.98	0.46
35:L5:4061:G:O2'	35:L5:4062:A:OP1	2.31	0.46
35:L5:4095:G:H2'	35:L5:4096:C:C4	2.51	0.46
35:L5:4457:U:H1'	39:LB:252:ALA:HB3	1.98	0.46
38:LA:30:ARG:HG3	38:LA:36:GLU:OE2	2.15	0.46
42:LE:173:LEU:HD11	42:LE:191:GLN:HA	1.98	0.46
44:LG:128:VAL:O	44:LG:130:THR:HG23	2.16	0.46
44:LG:173:LEU:O	44:LG:177:MET:HG2	2.16	0.46
45:LH:55:LEU:HD13	45:LH:77:VAL:HG11	1.97	0.46
46:LI:19:LYS:HD2	46:LI:26:VAL:HB	1.98	0.46
46:LI:121:LYS:HE2	46:LI:121:LYS:HB3	1.62	0.46
51:LO:5:GLN:OE1	51:LO:5:GLN:N	2.47	0.46
52:LP:36:ILE:O	52:LP:39:MET:HB2	2.16	0.46
66:Le:6:PRO:HG3	66:Le:73:GLY:HA3	1.97	0.46
79:Lz:63:PHE:CE2	79:Lz:108:ASP:HB2	2.51	0.46
83:CB:112:SER:C	83:CB:114:GLU:N	2.72	0.46
83:CB:413:PHE:CE2	83:CB:469:ILE:HB	2.51	0.46
83:CB:479:LEU:HD23	83:CB:479:LEU:HA	1.81	0.46
1:S2:108:G:O2'	1:S2:854:A:N1	2.46	0.45
1:S2:142:C:H41	1:S2:330:G:P	2.39	0.45
1:S2:143:U:OP2	21:SG:149:LYS:NZ	2.40	0.45
1:S2:158:A:H4'	1:S2:464:A:C6	2.51	0.45
1:S2:511:U:H2'	1:S2:512:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1323:U:H2'	1:S2:1324:G:C8	2.51	0.45
1:S2:1372:U:P	1:S2:1385:G:H22	2.39	0.45
1:S2:1673:U:H2'	1:S2:1674:G:O4'	2.16	0.45
5:SP:84:ILE:HG13	5:SP:115:TYR:CE2	2.51	0.45
13:SM:122:ASP:O	13:SM:126:GLU:N	2.42	0.45
14:SZ:69:THR:O	14:SZ:73:VAL:HG12	2.16	0.45
17:SE:47:PHE:CD1	17:SE:48:LEU:HD13	2.51	0.45
17:SE:56:LEU:HD11	23:SY:72:PHE:CE2	2.51	0.45
22:SJ:139:LYS:HD2	22:SJ:140:GLN:HB2	1.97	0.45
25:SA:57:LYS:HD3	28:SV:70:LEU:HD21	1.98	0.45
30:SC:161:SER:O	30:SC:161:SER:OG	2.28	0.45
35:L5:92:C:C2	62:La:55:LYS:HE2	2.50	0.45
35:L5:1095:A:H2'	35:L5:1096:C:C6	2.50	0.45
35:L5:2526:C:H5"	54:LR:10:LEU:HD21	1.97	0.45
35:L5:3723:A:H2'	35:L5:3724:A:C8	2.52	0.45
35:L5:3977:C:N4	35:L5:3984:C:OP1	2.49	0.45
35:L5:4291:G:H4'	35:L5:4292:A:H5"	1.98	0.45
35:L5:4348:A:C6	35:L5:4350:C:C4	3.05	0.45
35:L5:4530:U:H2'	35:L5:4531:U:H2'	1.98	0.45
35:L5:4936:G:C4	42:LE:183:ARG:HD2	2.51	0.45
39:LB:392:LEU:HB2	39:LB:395:ASP:OD1	2.16	0.45
42:LE:50:LEU:HD23	42:LE:50:LEU:H	1.80	0.45
52:LP:54:GLN:HA	52:LP:83:TRP:CD1	2.50	0.45
53:LQ:65:ARG:O	53:LQ:69:LYS:HG2	2.16	0.45
56:LT:159:MET:HE3	56:LT:159:MET:HA	1.97	0.45
58:LV:97:TYR:OH	85:LW:37:GLU:OE2	2.29	0.45
62:La:87:ARG:HG2	62:La:87:ARG:HH11	1.81	0.45
75:Ln:16:LYS:HB3	75:Ln:16:LYS:HE2	1.64	0.45
83:CB:426:LYS:HE3	83:CB:426:LYS:HB2	1.73	0.45
1:S2:1256:G:C8	9:SU:66:ARG:HB2	2.51	0.45
1:S2:1308:U:H2'	1:S2:1309:C:H6	1.82	0.45
2:SD:138:VAL:HB	2:SD:150:MET:SD	2.56	0.45
27:SH:154:ILE:HB	27:SH:185:VAL:HG22	1.99	0.45
28:SV:64:GLU:OE1	28:SV:67:ASP:HB2	2.15	0.45
30:SC:94:ILE:O	30:SC:98:LEU:N	2.34	0.45
30:SC:272:HIS:C	30:SC:272:HIS:CD2	2.94	0.45
34:Sb:24:LEU:HD22	34:Sb:24:LEU:H	1.81	0.45
35:L5:99:A:H5"	50:LN:184:ILE:HD12	1.97	0.45
35:L5:169:G:N2	35:L5:171:U:O4	2.49	0.45
35:L5:425:U:H2'	35:L5:426:A:H8	1.81	0.45
35:L5:1846:G:H2'	35:L5:1847:C:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3648:A:H1'	35:L5:3785:A:N6	2.30	0.45
35:L5:3784:A:O2'	35:L5:3785:A:H3'	2.16	0.45
36:L7:40:U:O2	47:LJ:73:THR:OG1	2.34	0.45
40:LC:168:VAL:HG12	40:LC:172:LYS:HD2	1.99	0.45
40:LC:325:MET:HE1	43:LF:155:TYR:CZ	2.50	0.45
41:LD:208:MET:HE3	41:LD:223:PHE:CG	2.52	0.45
51:LO:121:PRO:HA	51:LO:124:LEU:HD12	1.98	0.45
52:LP:2:VAL:HG22	52:LP:3:ARG:H	1.80	0.45
54:LR:127:VAL:HG12	54:LR:132:PHE:CD2	2.51	0.45
72:Lk:22:SER:HB2	72:Lk:65:ALA:HB3	1.99	0.45
79:Lz:172:VAL:O	79:Lz:173:LYS:HG2	2.16	0.45
83:CB:685:TRP:CD1	83:CB:685:TRP:C	2.94	0.45
1:S2:194:C:H2'	1:S2:195:C:C6	2.51	0.45
1:S2:428:U:P	1:S2:429:C:H41	2.40	0.45
1:S2:634:A:H2'	1:S2:635:G:C8	2.51	0.45
1:S2:1293:A:H3'	1:S2:1294:G:H8	1.81	0.45
1:S2:1374:C:H2'	1:S2:1375:G:O4'	2.16	0.45
1:S2:1589:A:N3	1:S2:1653:U:O2'	2.45	0.45
1:S2:1631:U:H2'	1:S2:1632:G:O4'	2.16	0.45
2:SD:125:PHE:O	2:SD:128:GLU:HG2	2.16	0.45
8:ST:56:ARG:O	8:ST:60:THR:HG22	2.16	0.45
12:Sg:101:PHE:CE1	12:Sg:136:GLY:HA2	2.52	0.45
15:Sf:103:LEU:O	15:Sf:104:LYS:HD3	2.16	0.45
20:SX:102:VAL:HG13	20:SX:120:PHE:HB3	1.99	0.45
22:SJ:102:ILE:O	22:SJ:106:LEU:HD12	2.16	0.45
25:SA:42:LYS:HG2	25:SA:46:ILE:O	2.16	0.45
27:SH:86:LYS:NZ	27:SH:87:PHE:HD2	2.15	0.45
27:SH:140:VAL:HG13	31:SN:19:ARG:HH22	1.81	0.45
30:SC:113:GLN:OE1	30:SC:122:THR:OG1	2.34	0.45
32:SO:117:ARG:C	32:SO:117:ARG:HD3	2.42	0.45
35:L5:229:G:H5"	60:LY:11:ARG:HG3	1.97	0.45
35:L5:677:G:H2'	35:L5:678:C:C6	2.52	0.45
35:L5:2491:C:H2'	35:L5:2492:C:C6	2.51	0.45
35:L5:2602:G:H2'	35:L5:2603:C:C6	2.52	0.45
35:L5:2811:G:N1	35:L5:2814:C:OP2	2.36	0.45
35:L5:4774:C:O2'	35:L5:4775:C:O2	2.33	0.45
37:L8:69:U:H2'	37:L8:70:G:O4'	2.16	0.45
38:LA:196:TRP:HB3	38:LA:197:PRO:HD3	1.98	0.45
43:LF:50:ILE:HD11	43:LF:185:ILE:CD1	2.47	0.45
44:LG:209:SER:HA	44:LG:212:LYS:HD3	1.99	0.45
47:LJ:13:ARG:NH2	47:LJ:154:LYS:O	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:LT:44:GLY:HA2	56:LT:95:HIS:HB3	1.98	0.45
65:Ld:33:ILE:HD11	65:Ld:41:ARG:O	2.16	0.45
70:Li:35:LYS:HB3	70:Li:35:LYS:HE3	1.66	0.45
83:CB:5:THR:H	83:CB:8:GLN:NE2	2.14	0.45
83:CB:664:ASP:OD1	83:CB:664:ASP:N	2.49	0.45
83:CB:738:PRO:HD2	83:CB:825:PHE:CE2	2.51	0.45
84:Et:9:A:O2'	84:Et:45:G:N3	2.41	0.45
1:S2:786:G:N7	21:SG:231:ARG:NH2	2.64	0.45
1:S2:959:G:H1'	1:S2:964:A:N6	2.32	0.45
1:S2:961:G:N2	84:Et:38:A:H4'	2.31	0.45
1:S2:1384:C:C2	1:S2:1385:G:C8	3.04	0.45
1:S2:1579:A:H4'	1:S2:1581:C:H5	1.81	0.45
1:S2:1643:U:H2'	1:S2:1644:C:H6	1.82	0.45
1:S2:1679:A:OP2	3:SF:60:ARG:HD2	2.17	0.45
1:S2:1713:C:H2'	1:S2:1714:U:H6	1.81	0.45
1:S2:1859:A:P	29:Sa:10:ARG:HH12	2.39	0.45
1:S2:1860:A:H3'	29:Sa:8:ASN:HB3	1.99	0.45
2:SD:194:PRO:HD3	2:SD:195:THR:N	2.26	0.45
5:SP:124:LYS:HE3	5:SP:124:LYS:HB3	1.70	0.45
12:Sg:14:HIS:HD1	12:Sg:14:HIS:H	1.64	0.45
12:Sg:83:TRP:C	12:Sg:107:ASP:HB3	2.42	0.45
13:SM:69:CYS:HB2	13:SM:74:ILE:HB	1.99	0.45
18:SI:64:ASN:OD1	18:SI:64:ASN:N	2.49	0.45
18:SI:76:THR:HG22	18:SI:108:PRO:HG2	1.97	0.45
19:SL:74:SER:OG	19:SL:126:VAL:O	2.29	0.45
25:SA:68:ILE:HG22	25:SA:120:ARG:HH21	1.82	0.45
26:SB:144:LYS:HB2	26:SB:208:HIS:HB3	1.98	0.45
27:SH:70:LYS:O	27:SH:70:LYS:NZ	2.33	0.45
27:SH:145:ARG:CG	27:SH:155:LYS:HD3	2.47	0.45
33:SW:10:ALA:O	33:SW:14:ILE:HG22	2.15	0.45
33:SW:63:VAL:HG12	33:SW:65:LEU:HD23	1.99	0.45
35:L5:718:C:OP1	43:LF:217:ARG:HD3	2.15	0.45
35:L5:1460:C:H2'	35:L5:1461:C:H6	1.82	0.45
35:L5:1693:U:H2'	35:L5:1694:C:O4'	2.17	0.45
35:L5:1979:A:H2	35:L5:1987:C:H42	1.64	0.45
35:L5:1996:C:H1'	81:Ls:41:GLN:NE2	2.30	0.45
35:L5:2293:U:H2'	35:L5:2294:G:C8	2.52	0.45
35:L5:3793:U:H2'	35:L5:3794:C:C6	2.51	0.45
35:L5:4044:U:O2	79:Lz:95:LYS:HE3	2.17	0.45
35:L5:4401:G:H2'	35:L5:4402:C:H6	1.80	0.45
37:L8:93:C:HO2'	37:L8:94:G:H8	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LB:333:LEU:HD23	39:LB:337:VAL:HG21	1.99	0.45
40:LC:334:THR:HG21	43:LF:51:TYR:OH	2.16	0.45
48:LL:71:ARG:HA	48:LL:157:VAL:HG21	1.98	0.45
50:LN:123:GLU:HB3	50:LN:128:LYS:HG2	1.99	0.45
54:LR:115:ILE:HB	54:LR:119:MET:HB3	1.98	0.45
61:LZ:92:ASP:OD2	61:LZ:94:THR:HG22	2.15	0.45
70:Li:34:THR:OG1	70:Li:35:LYS:N	2.49	0.45
71:Lj:2:THR:HG22	71:Lj:4:GLY:H	1.80	0.45
83:CB:559:LYS:HA	83:CB:562:GLU:OE2	2.16	0.45
83:CB:664:ASP:HA	83:CB:704:VAL:HG13	1.97	0.45
1:S2:65:C:C2	21:SG:174:PRO:HB3	2.52	0.45
1:S2:378:U:OP1	18:SI:98:LYS:HB2	2.17	0.45
1:S2:1016:U:H4’	31:SN:16:LEU:HD22	1.97	0.45
1:S2:1201:U:H2’	1:S2:1202:U:C6	2.51	0.45
1:S2:1592:C:H2’	1:S2:1593:C:C6	2.51	0.45
1:S2:1631:U:OP1	7:SS:35:GLY:N	2.50	0.45
3:SF:140:ASP:OD1	3:SF:140:ASP:N	2.48	0.45
12:Sg:32:LEU:HA	12:Sg:42:MET:HA	1.99	0.45
14:SZ:106:GLN:HG3	14:SZ:108:ILE:HD11	1.97	0.45
18:SI:57:ALA:HB2	18:SI:183:GLY:HA2	1.98	0.45
25:SA:163:CYS:SG	25:SA:174:MET:HG2	2.57	0.45
25:SA:200:ASP:HA	25:SA:203:PHE:HB2	1.98	0.45
26:SB:94:LYS:HA	26:SB:94:LYS:HD2	1.72	0.45
28:SV:47:ASN:OD1	28:SV:47:ASN:N	2.49	0.45
30:SC:179:THR:HA	30:SC:219:ILE:HG23	1.97	0.45
35:L5:426:A:H2’	35:L5:427:A:H8	1.81	0.45
35:L5:1382:G:H2’	35:L5:1383:G:H8	1.81	0.45
35:L5:2055:G:C8	55:LS:158:VAL:HG21	2.51	0.45
35:L5:2080:U:H2’	35:L5:2081:C:C6	2.51	0.45
35:L5:3972:A:H1’	35:L5:4050:A:H61	1.82	0.45
35:L5:4078:C:OP1	50:LN:31:ARG:NH1	2.49	0.45
35:L5:4371:G:O2’	35:L5:4372:U:OP2	2.29	0.45
35:L5:4518:A:OP2	39:LB:258:HIS:HB2	2.17	0.45
35:L5:4924:C:H2’	35:L5:4925:U:C2	2.52	0.45
35:L5:5016:A:N6	35:L5:5033:G:O2’	2.50	0.45
36:L7:26:C:H5”	41:LD:56:THR:HG21	1.99	0.45
39:LB:382:MET:HE3	39:LB:382:MET:HB3	1.86	0.45
43:LF:26:ALA:O	43:LF:30:ILE:HG22	2.16	0.45
46:LI:47:PRO:HB3	46:LI:171:TRP:CZ2	2.52	0.45
49:LM:120:ASN:O	49:LM:124:LYS:HD2	2.16	0.45
52:LP:76:TRP:CD1	52:LP:76:TRP:H	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:LR:41:ILE:O	54:LR:45:ILE:HG13	2.17	0.45
57:LU:50:ASN:N	57:LU:50:ASN:OD1	2.49	0.45
58:LV:20:LEU:HB2	58:LV:55:ALA:O	2.16	0.45
83:CB:71:LYS:HE2	83:CB:71:LYS:HB2	1.71	0.45
83:CB:767:ARG:HD3	83:CB:789:PRO:HG2	1.99	0.45
1:S2:502:C:H3'	1:S2:503:C:C6	2.52	0.45
1:S2:958:G:H2'	1:S2:959:G:C8	2.52	0.45
1:S2:1278:A:H2'	1:S2:1279:C:H6	1.80	0.45
1:S2:1279:C:H2'	1:S2:1280:G:H8	1.80	0.45
2:SD:35:SER:OG	2:SD:91:VAL:HG21	2.16	0.45
21:SG:22:ARG:NE	21:SG:22:ARG:HA	2.31	0.45
21:SG:116:LYS:HA	21:SG:116:LYS:HD3	1.68	0.45
21:SG:158:VAL:HB	21:SG:160:LYS:NZ	2.31	0.45
21:SG:188:LYS:HB2	21:SG:188:LYS:HE2	1.55	0.45
27:SH:125:VAL:HA	27:SH:128:ALA:HB3	1.97	0.45
35:L5:1:C:H4'	35:L5:2:G:O4'	2.16	0.45
35:L5:86:U:H2'	35:L5:87:A:C8	2.51	0.45
35:L5:1171:G:N7	35:L5:1172:C:N4	2.65	0.45
35:L5:1304:C:H2'	35:L5:1305:C:C6	2.52	0.45
35:L5:1468:C:OP1	62:La:132:ARG:NH2	2.46	0.45
35:L5:1741:G:O2'	35:L5:1781:U:OP2	2.27	0.45
35:L5:1761:G:N7	35:L5:1773:U:N3	2.65	0.45
35:L5:2781:G:O2'	73:Ll:3:SER:O	2.34	0.45
35:L5:4111:U:H2'	35:L5:4112:C:H5	1.82	0.45
35:L5:4184:G:H5'	38:LA:233:ARG:HB2	1.99	0.45
35:L5:4987:C:P	39:LB:116:ARG:HH22	2.40	0.45
36:L7:27:G:OP1	47:LJ:146:ARG:NH2	2.50	0.45
40:LC:296:PRO:O	40:LC:300:ARG:HG3	2.16	0.45
46:LI:177:ASN:ND2	46:LI:177:ASN:H	2.14	0.45
48:LL:140:SER:O	48:LL:144:LEU:HG	2.16	0.45
55:LS:82:LEU:HD13	55:LS:124:ILE:HG23	1.98	0.45
70:Li:70:LEU:HD22	70:Li:87:ARG:HH21	1.81	0.45
72:Lk:27:LYS:HE2	72:Lk:27:LYS:N	2.31	0.45
78:Lr:89:THR:O	78:Lr:93:ILE:HG22	2.17	0.45
80:CA:56:ILE:O	80:CA:60:THR:OG1	2.24	0.45
83:CB:112:SER:O	83:CB:114:GLU:N	2.49	0.45
1:S2:595:U:H2'	1:S2:596:U:C6	2.51	0.45
1:S2:610:G:H2'	1:S2:611:G:H8	1.82	0.45
1:S2:1238:U:H1'	5:SP:126:VAL:HG12	1.98	0.45
1:S2:1447:G:H2'	1:S2:1448:A:C8	2.51	0.45
1:S2:1568:C:H2'	1:S2:1569:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SF:89:THR:O	3:SF:93:VAL:HG12	2.16	0.45
6:SQ:50:LYS:HA	6:SQ:53:GLU:OE1	2.17	0.45
7:SS:108:ARG:HA	7:SS:111:LEU:HD12	1.97	0.45
12:Sg:290:ALA:N	12:Sg:299:PHE:O	2.45	0.45
17:SE:138:HIS:CD2	17:SE:148:ARG:HD3	2.51	0.45
20:SX:125:VAL:O	20:SX:126:ALA:C	2.60	0.45
21:SG:53:SER:HB3	21:SG:112:VAL:HG13	1.99	0.45
21:SG:217:MET:HG3	21:SG:217:MET:O	2.17	0.45
35:L5:54:G:O2'	50:LN:108:ARG:NH2	2.36	0.45
35:L5:512:U:H2'	35:L5:513:U:H4'	1.99	0.45
35:L5:2020:U:O3'	81:Ls:57:LYS:HA	2.17	0.45
35:L5:2375:A:H2'	35:L5:2376:A:H8	1.81	0.45
35:L5:2537:A:OP1	72:Lk:42:LEU:N	2.49	0.45
35:L5:2580:U:OP1	61:LZ:36:ARG:NH2	2.49	0.45
35:L5:3972:A:H1'	35:L5:4050:A:N6	2.31	0.45
35:L5:4670:C:O2'	35:L5:4672:A:OP2	2.25	0.45
35:L5:4685:U:H2'	35:L5:4686:G:C8	2.51	0.45
42:LE:251:LYS:HE3	42:LE:251:LYS:HB3	1.75	0.45
48:LL:56:ARG:NH1	48:LL:74:ARG:O	2.45	0.45
52:LP:69:ARG:HG2	52:LP:79:THR:HG22	1.98	0.45
54:LR:177:LEU:HD12	54:LR:180:LYS:HB3	1.99	0.45
66:Le:68:HIS:NE2	78:Lr:22:LYS:HG3	2.32	0.45
67:Lf:24:HIS:ND1	67:Lf:25:THR:HG23	2.32	0.45
70:Li:70:LEU:HD22	70:Li:87:ARG:HE	1.82	0.45
79:Lz:148:VAL:HG23	79:Lz:149:ASP:H	1.82	0.45
80:CA:83:ASN:HD21	80:CA:105:LEU:H	1.64	0.45
81:Ls:26:LYS:HE3	81:Ls:93:GLU:O	2.16	0.45
83:CB:119:LEU:HD23	83:CB:119:LEU:HA	1.84	0.45
83:CB:701:ARG:HG2	83:CB:702:PHE:N	2.31	0.45
1:S2:120:U:H1'	17:SE:33:THR:O	2.16	0.45
1:S2:414:A:H2'	1:S2:415:A:H8	1.80	0.45
1:S2:837:A:H61	23:SY:9:THR:H	1.65	0.45
1:S2:869:A:C4	1:S2:915:G:H1'	2.52	0.45
1:S2:1592:C:H2'	1:S2:1593:C:H6	1.81	0.45
1:S2:1755:C:N4	1:S2:1756:C:N4	2.64	0.45
1:S2:1797:U:H2'	1:S2:1798:C:C6	2.52	0.45
2:SD:143:ARG:HB2	16:CD:216:HIS:O	2.17	0.45
4:SK:31:LYS:NZ	4:SK:39:ASN:HA	2.32	0.45
5:SP:70:MET:HG2	47:LJ:178:LYS:NZ	2.31	0.45
17:SE:77:ARG:HD2	17:SE:82:TYR:CE1	2.51	0.45
17:SE:162:ILE:O	17:SE:162:ILE:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:SY:45:ALA:HB1	23:SY:50:THR:O	2.16	0.45
25:SA:37:TYR:CD1	25:SA:162:PRO:HG3	2.52	0.45
29:Sa:53:ILE:H	29:Sa:53:ILE:HG12	1.60	0.45
31:SN:41:ALA:HB1	31:SN:80:LEU:HD11	1.98	0.45
33:SW:75:ILE:HD12	33:SW:127:GLY:HA2	1.97	0.45
35:L5:271:C:H2'	35:L5:272:U:H6	1.82	0.45
35:L5:1184:A:H2'	35:L5:1185:G:C8	2.52	0.45
35:L5:1239:C:P	43:LF:48:LYS:HZ1	2.40	0.45
35:L5:1613:A:H5"	38:LA:183:GLY:HA2	1.99	0.45
35:L5:2072:C:C2	35:L5:2073:C:C5	3.05	0.45
35:L5:2409:U:H5	35:L5:2783:A:N1	2.15	0.45
35:L5:2570:U:H2'	35:L5:2571:C:C6	2.51	0.45
35:L5:2891:U:H2'	35:L5:2892:C:O4'	2.17	0.45
35:L5:4127:A:O2'	35:L5:4128:A:H8	2.00	0.45
35:L5:4601:U:H2'	35:L5:4602:A:H8	1.81	0.45
35:L5:4653:C:OP1	65:Ld:79:ASN:ND2	2.50	0.45
35:L5:5030:U:C2	35:L5:5031:G:C8	3.04	0.45
41:LD:61:ILE:HG12	41:LD:79:TYR:HE1	1.82	0.45
44:LG:51:LEU:O	44:LG:55:VAL:HG23	2.17	0.45
54:LR:13:SER:OG	54:LR:38:ARG:NH1	2.50	0.45
64:Lc:55:LEU:HD11	68:Lg:92:LYS:HG3	1.98	0.45
64:Lc:106:ARG:O	64:Lc:106:ARG:NE	2.46	0.45
68:Lg:41:ALA:O	68:Lg:52:ARG:HD2	2.16	0.45
77:Lp:57:CYS:O	77:Lp:61:MET:HA	2.17	0.45
79:Lz:16:GLU:HG2	79:Lz:18:LEU:HB2	1.98	0.45
81:Ls:50:LYS:NZ	81:Ls:97:GLU:OE2	2.49	0.45
83:CB:24:VAL:HG22	83:CB:104:ASP:HA	1.99	0.45
83:CB:750:GLN:HE21	83:CB:781:MET:HG3	1.82	0.45
83:CB:752:PRO:HB2	83:CB:754:GLN:OE1	2.17	0.45
1:S2:454:U:H2'	1:S2:455:A:C8	2.52	0.45
1:S2:804:U:H2'	1:S2:805:U:C6	2.52	0.45
1:S2:900:C:H5'	1:S2:901:G:N7	2.32	0.45
5:SP:35:GLN:OE1	5:SP:35:GLN:N	2.50	0.45
12:Sg:251:ALA:HB1	12:Sg:286:CYS:SG	2.57	0.45
18:SI:98:LYS:O	18:SI:175:ILE:HG23	2.17	0.45
18:SI:139:LYS:O	18:SI:140:LYS:HG3	2.17	0.45
26:SB:35:ALA:HB2	26:SB:44:ILE:HD11	1.98	0.45
26:SB:134:LEU:HD11	26:SB:218:LEU:HB2	1.99	0.45
30:SC:63:VAL:O	30:SC:64:THR:OG1	2.34	0.45
35:L5:52:G:H4'	35:L5:1529:G:H4'	1.99	0.45
35:L5:142:G:O2'	35:L5:144:G:O5'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:458:C:H2'	35:L5:459:C:C6	2.52	0.45
35:L5:1258:G:H2'	35:L5:1259:G:H8	1.80	0.45
35:L5:1672:U:H2'	35:L5:1673:U:C6	2.52	0.45
35:L5:2106:G:H2'	35:L5:2107:C:O4'	2.17	0.45
35:L5:2375:A:H2'	35:L5:2376:A:C8	2.52	0.45
40:LC:211:TYR:CZ	40:LC:231:ASN:HB2	2.52	0.45
55:LS:95:ARG:NH1	55:LS:113:MET:SD	2.90	0.45
57:LU:91:LEU:HB3	57:LU:97:ARG:HB3	1.98	0.45
63:Lb:73:LYS:HD3	63:Lb:73:LYS:HA	1.77	0.45
71:Lj:84:PRO:O	71:Lj:85:LYS:HG3	2.16	0.45
78:Lr:94:ARG:HG3	78:Lr:111:ILE:HD11	1.98	0.45
79:Lz:53:VAL:HG13	79:Lz:157:PHE:CZ	2.48	0.45
79:Lz:203:ALA:HA	79:Lz:217:TYR:HA	1.99	0.45
82:Lt:131:GLU:OE2	82:Lt:155:ILE:HG21	2.16	0.45
85:LW:54:LEU:HD23	85:LW:54:LEU:HA	1.83	0.45
1:S2:79:A:H2'	1:S2:80:G:O4'	2.17	0.45
1:S2:171:A:OP1	21:SG:137:ARG:HD3	2.17	0.45
1:S2:186:C:H2'	1:S2:187:G:H8	1.82	0.45
1:S2:787:G:OP1	21:SG:230:LYS:HG2	2.17	0.45
1:S2:803:C:H2'	1:S2:804:U:C6	2.52	0.45
1:S2:891:G:H2'	1:S2:892:U:H5"	1.99	0.45
1:S2:1395:C:H1'	1:S2:1474:A:C5	2.52	0.45
1:S2:1421:A:H3'	1:S2:1422:G:C8	2.53	0.45
1:S2:1777:G:H8	1:S2:1777:G:OP2	1.99	0.45
3:SF:43:GLU:HA	3:SF:46:ALA:HB2	1.98	0.45
3:SF:122:ARG:NH2	10:Sc:57:THR:O	2.36	0.45
4:SK:49:MET:HB3	4:SK:69:TRP:CE2	2.52	0.45
5:SP:120:SER:O	5:SP:120:SER:OG	2.34	0.45
7:SS:142:ARG:HD3	7:SS:143:GLY:N	2.31	0.45
8:ST:103:VAL:O	8:ST:107:LEU:HD13	2.17	0.45
13:SM:25:ALA:CB	13:SM:31:LEU:HD11	2.46	0.45
13:SM:32:ALA:HB1	13:SM:37:GLU:C	2.42	0.45
13:SM:35:ILE:HD13	13:SM:108:CYS:SG	2.57	0.45
17:SE:88:ASP:OD1	17:SE:122:LYS:NZ	2.42	0.45
17:SE:123:LEU:O	17:SE:123:LEU:HD23	2.17	0.45
21:SG:24:LEU:HB3	21:SG:28:TYR:CE1	2.52	0.45
21:SG:212:LEU:O	21:SG:216:ARG:N	2.41	0.45
23:SY:29:HIS:HB2	23:SY:32:LYS:HB2	1.99	0.45
25:SA:90:PHE:CD1	25:SA:90:PHE:C	2.94	0.45
26:SB:58:ALA:O	26:SB:62:LEU:HD23	2.17	0.45
28:SV:9:VAL:HG13	28:SV:9:VAL:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:SV:39:VAL:HB	28:SV:44:GLY:HA2	1.99	0.45
30:SC:236:PHE:O	30:SC:240:THR:HG22	2.17	0.45
31:SN:57:SER:OG	31:SN:58:HIS:ND1	2.48	0.45
32:SO:102:GLY:N	32:SO:134:PRO:O	2.36	0.45
35:L5:1244:G:H2'	35:L5:1245:C:H6	1.82	0.45
35:L5:2538:U:H2'	35:L5:2539:C:C6	2.52	0.45
35:L5:2654:C:H2'	35:L5:2655:C:H6	1.81	0.45
35:L5:3726:A:H2'	35:L5:3727:A:C8	2.51	0.45
35:L5:3893:C:H2'	35:L5:3894:A:H8	1.82	0.45
35:L5:4723:A:H2'	35:L5:4724:A:C8	2.51	0.45
36:L7:40:U:O4'	47:LJ:46:GLN:NE2	2.50	0.45
37:L8:135:C:O3'	59:LX:56:ARG:NH1	2.50	0.45
45:LH:96:TYR:HA	45:LH:177:ASP:CB	2.47	0.45
54:LR:104:ARG:O	54:LR:108:ARG:HG3	2.16	0.45
80:CA:45:VAL:O	80:CA:48:LEU:HG	2.16	0.45
83:CB:485:ILE:HD12	83:CB:485:ILE:N	2.32	0.45
83:CB:538:ILE:HD11	83:CB:544:HIS:CE1	2.52	0.45
1:S2:40:A:H2'	1:S2:486:A:N7	2.33	0.44
1:S2:910:G:H2'	1:S2:911:C:O4'	2.16	0.44
4:SK:31:LYS:HD3	4:SK:36:ALA:HA	1.99	0.44
5:SP:40:ARG:HG2	5:SP:40:ARG:HH11	1.82	0.44
7:SS:70:ILE:HD13	7:SS:77:TYR:CD1	2.52	0.44
8:ST:101:ARG:HG2	8:ST:105:GLN:NE2	2.32	0.44
10:Sc:26:GLN:H	10:Sc:26:GLN:HG2	1.59	0.44
14:SZ:79:ILE:HD13	14:SZ:79:ILE:HA	1.89	0.44
18:SI:70:GLU:N	18:SI:70:GLU:OE2	2.50	0.44
32:SO:26:ASN:OD1	32:SO:26:ASN:N	2.49	0.44
35:L5:750:U:C2	35:L5:751:G:C8	3.05	0.44
35:L5:1624:G:H4'	35:L5:1625:G:H5'	1.98	0.44
35:L5:1754:U:H2'	35:L5:1755:C:H6	1.82	0.44
35:L5:1952:G:H4'	55:LS:93:MET:HB3	1.97	0.44
35:L5:2484:A:N7	35:L5:2486:G:N1	2.65	0.44
35:L5:2485:U:H1'	35:L5:2486:G:N1	2.32	0.44
35:L5:3656:A:H2'	35:L5:3657:U:H6	1.81	0.44
35:L5:4389:C:H2'	35:L5:4390:A:H8	1.82	0.44
38:LA:46:LYS:HD2	38:LA:46:LYS:HA	1.82	0.44
61:LZ:52:LYS:HB2	61:LZ:52:LYS:HE3	1.75	0.44
61:LZ:90:PRO:O	61:LZ:117:LYS:HE3	2.17	0.44
76:Lo:54:PRO:O	84:Et:75:C:O2'	2.25	0.44
77:Lp:47:MET:HE2	77:Lp:71:TYR:HE2	1.81	0.44
79:Lz:163:LEU:HD12	79:Lz:164:CYS:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:CA:81:SER:OG	80:CA:107:LYS:HD3	2.16	0.44
80:CA:105:LEU:HB3	80:CA:126:VAL:HG22	1.99	0.44
80:CA:138:ARG:HG3	80:CA:315:PHE:HE2	1.82	0.44
83:CB:581:GLU:HG3	83:CB:740:LEU:HD12	2.00	0.44
83:CB:666:THR:HG22	83:CB:706:ASP:HA	1.99	0.44
84:Et:7:A:H3'	84:Et:8:U:H5"	1.98	0.44
1:S2:338:G:H3'	1:S2:339:A:H8	1.83	0.44
1:S2:345:U:H2'	1:S2:346:C:C6	2.53	0.44
1:S2:352:U:H2'	1:S2:353:C:C6	2.53	0.44
1:S2:407:G:C6	20:SX:36:LEU:HD21	2.52	0.44
1:S2:544:G:H2'	1:S2:545:A:O4'	2.17	0.44
1:S2:907:G:H2'	1:S2:908:A:H8	1.82	0.44
1:S2:1229:G:H2'	1:S2:1230:C:C6	2.52	0.44
5:SP:17:TYR:CD2	5:SP:36:LEU:HD12	2.52	0.44
9:SU:66:ARG:HH22	9:SU:75:LYS:HA	1.82	0.44
12:Sg:104:HIS:HA	12:Sg:130:LYS:HZ2	1.82	0.44
17:SE:125:LYS:O	17:SE:141:THR:OG1	2.35	0.44
19:SL:3:ASP:OD1	19:SL:3:ASP:N	2.50	0.44
27:SH:18:GLU:OE1	27:SH:18:GLU:N	2.49	0.44
30:SC:253:PRO:HA	30:SC:256:TRP:CD2	2.53	0.44
35:L5:271:C:H2'	35:L5:272:U:C6	2.52	0.44
35:L5:481:G:H2'	35:L5:482:G:C8	2.52	0.44
35:L5:1677:U:H4'	35:L5:1680:G:C2	2.53	0.44
35:L5:1777:C:H2'	35:L5:1778:C:C6	2.52	0.44
35:L5:2078:C:H2'	35:L5:2079:G:C8	2.52	0.44
35:L5:2621:A:OP1	57:LU:80:LYS:HE2	2.16	0.44
35:L5:3960:A:H2'	35:L5:3963:A:O2'	2.17	0.44
35:L5:4233:A:C5	35:L5:4235:G:C8	3.05	0.44
35:L5:4965:U:H4'	35:L5:4966:A:H5'	1.99	0.44
40:LC:207:PRO:HB3	40:LC:249:PHE:CD2	2.52	0.44
40:LC:334:THR:HG22	40:LC:337:ARG:HH21	1.82	0.44
63:Lb:103:LYS:HB2	63:Lb:103:LYS:HE2	1.73	0.44
83:CB:525:LYS:HE2	83:CB:525:LYS:HB2	1.82	0.44
1:S2:210:U:H2'	1:S2:211:G:C8	2.52	0.44
1:S2:218:U:H2'	1:S2:219:U:C6	2.52	0.44
1:S2:656:G:H21	1:S2:663:C:H5"	1.80	0.44
1:S2:832:G:O2'	1:S2:833:C:H5'	2.18	0.44
1:S2:987:A:C2	26:SB:120:MET:HE1	2.52	0.44
1:S2:1260:A:C2	1:S2:1620:A:C4	3.06	0.44
2:SD:70:THR:HG22	2:SD:86:LEU:HD23	1.99	0.44
3:SF:76:MET:HA	3:SF:155:CYS:SG	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:SQ:50:LYS:O	6:SQ:53:GLU:HB2	2.16	0.44
9:SU:48:LEU:HB3	9:SU:93:SER:OG	2.17	0.44
11:Sd:12:ARG:HD3	11:Sd:12:ARG:HA	1.75	0.44
12:Sg:8:ARG:HG2	12:Sg:311:GLN:HB2	1.99	0.44
12:Sg:244:ASN:ND2	12:Sg:294:ASP:O	2.50	0.44
21:SG:52:ILE:HA	21:SG:111:LEU:HB3	2.00	0.44
22:SJ:3:VAL:HG13	22:SJ:5:ARG:HH11	1.82	0.44
22:SJ:110:LEU:HB3	22:SJ:147:PHE:HB3	1.99	0.44
22:SJ:124:HIS:ND1	24:Se:35:ARG:HD3	2.33	0.44
24:Se:21:LYS:HD2	24:Se:21:LYS:HA	1.85	0.44
30:SC:66:LEU:HD21	30:SC:81:ILE:HD12	1.98	0.44
35:L5:48:G:OP1	48:LL:16:LYS:NZ	2.49	0.44
35:L5:1550:G:OP1	54:LR:86:ASN:HB3	2.17	0.44
35:L5:2691:U:C2	35:L5:2692:U:C5	3.06	0.44
35:L5:2897:G:H2'	35:L5:2898:G:C8	2.53	0.44
35:L5:4093:G:H8	35:L5:4094:G:N7	2.14	0.44
35:L5:4400:G:C6	35:L5:4401:G:N7	2.85	0.44
35:L5:4749:C:H2'	35:L5:4750:G:O4'	2.17	0.44
41:LD:117:LYS:HE2	41:LD:117:LYS:HA	2.00	0.44
42:LE:98:GLY:HA3	42:LE:99:ASP:HA	1.75	0.44
51:LO:9:LEU:HD23	51:LO:118:MET:HB2	2.00	0.44
53:LQ:66:MET:HB2	53:LQ:66:MET:HE3	1.66	0.44
60:LY:58:VAL:HG23	60:LY:59:ARG:HG2	1.99	0.44
78:Lr:32:LEU:HD22	78:Lr:110:ALA:HA	2.00	0.44
79:Lz:116:LEU:HD23	79:Lz:119:GLN:HG3	1.99	0.44
81:Ls:127:ASN:HA	81:Ls:153:GLU:OE2	2.18	0.44
81:Ls:145:THR:O	83:CB:183:GLU:HG2	2.18	0.44
82:Lt:19:GLY:HA2	82:Lt:48:LYS:HE3	1.99	0.44
82:Lt:62:LEU:O	82:Lt:73:VAL:HG13	2.18	0.44
83:CB:114:GLU:O	83:CB:117:ALA:N	2.50	0.44
84:Et:56:C:H2'	84:Et:57:A:O4'	2.17	0.44
1:S2:203:G:H8	18:SI:143:LYS:NZ	2.15	0.44
1:S2:917:U:H2'	1:S2:918:U:O4'	2.17	0.44
1:S2:919:A:OP1	31:SN:20:ARG:NH2	2.43	0.44
1:S2:944:A:H5"	32:SO:134:PRO:HB3	1.98	0.44
1:S2:1687:C:H2'	1:S2:1688:C:H6	1.82	0.44
5:SP:41:GLN:NE2	5:SP:113:GLY:O	2.51	0.44
5:SP:108:LYS:HB2	5:SP:109:PRO:HD2	1.99	0.44
6:SQ:41:MET:HE2	6:SQ:41:MET:O	2.18	0.44
6:SQ:101:ASP:O	6:SQ:104:SER:OG	2.30	0.44
12:Sg:170:TRP:HA	12:Sg:194:TYR:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:SM:81:ASP:OD2	13:SM:83:LYS:HG2	2.17	0.44
14:SZ:65:TYR:C	14:SZ:111:ARG:HD3	2.42	0.44
18:SI:26:LYS:HE2	18:SI:29:LEU:HD22	1.99	0.44
21:SG:5:ILE:HD13	21:SG:124:LEU:CD1	2.47	0.44
22:SJ:20:PHE:H	22:SJ:24:ARG:NH2	2.14	0.44
27:SH:145:ARG:HB2	27:SH:153:LEU:HG	2.00	0.44
31:SN:25:TRP:CD1	31:SN:25:TRP:C	2.95	0.44
31:SN:128:TYR:HE1	31:SN:132:LYS:HG3	1.83	0.44
35:L5:10:A:H2'	35:L5:11:G:C8	2.53	0.44
35:L5:458:C:OP1	42:LE:114:ARG:HG2	2.17	0.44
35:L5:1283:G:N1	35:L5:2076:G:OP1	2.43	0.44
35:L5:2098:G:H2'	35:L5:2099:G:C8	2.52	0.44
35:L5:3848:U:H2'	35:L5:3849:A:H8	1.81	0.44
35:L5:4299:U:H2'	35:L5:4300:U:H6	1.83	0.44
39:LB:63:PRO:HA	39:LB:68:ASN:ND2	2.32	0.44
39:LB:209:GLN:N	39:LB:209:GLN:OE1	2.50	0.44
40:LC:283:LYS:HB3	40:LC:283:LYS:HE3	1.79	0.44
44:LG:207:VAL:HG21	44:LG:215:LEU:CD2	2.47	0.44
46:LI:91:LEU:HD12	46:LI:135:ILE:HG23	2.00	0.44
82:Lt:112:ILE:HA	82:Lt:115:GLN:OE1	2.18	0.44
83:CB:176:GLN:O	83:CB:180:ARG:HG2	2.17	0.44
83:CB:456:ARG:NE	83:CB:456:ARG:HA	2.33	0.44
83:CB:662:LEU:HB2	83:CB:683:PHE:CE1	2.53	0.44
84:Et:8:U:N3	84:Et:15:G:O6	2.50	0.44
84:Et:22:G:C2	84:Et:23:A:C5	3.05	0.44
1:S2:961:G:H22	84:Et:38:A:H4'	1.82	0.44
1:S2:1414:A:O3'	8:ST:125:PRO:HB3	2.17	0.44
1:S2:1737:G:H2'	1:S2:1738:C:C6	2.53	0.44
10:Sc:15:THR:CG2	10:Sc:16:LYS:H	2.30	0.44
12:Sg:196:ASN:OD1	12:Sg:237:ASN:HA	2.18	0.44
19:SL:58:LYS:HD2	19:SL:59:LYS:HG3	2.00	0.44
19:SL:107:LYS:HB2	19:SL:107:LYS:HE2	1.79	0.44
21:SG:223:LYS:HZ1	21:SG:227:GLN:HB2	1.82	0.44
25:SA:18:PHE:HA	25:SA:173:LEU:HD21	1.99	0.44
35:L5:300:A:H2'	35:L5:301:G:H8	1.83	0.44
35:L5:965:G:N2	35:L5:2092:G:H1'	2.32	0.44
35:L5:1095:A:H2	35:L5:1200:G:C2	2.32	0.44
35:L5:1327:C:H2'	35:L5:1328:G:C8	2.53	0.44
35:L5:1872:G:O2'	35:L5:4219:A:N3	2.40	0.44
35:L5:1932:A:H2'	35:L5:1933:G:C8	2.53	0.44
35:L5:2399:G:O2'	35:L5:2822:G:O2'	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2417:A:C4	35:L5:2418:A:C8	3.05	0.44
35:L5:2544:G:N2	37:L8:126:C:OP1	2.42	0.44
35:L5:2574:G:OP1	61:LZ:67:LYS:HD3	2.18	0.44
35:L5:2634:C:H2'	35:L5:2635:U:C6	2.53	0.44
35:L5:2844:A:N6	35:L5:3839:G:O2'	2.50	0.44
35:L5:4271:A:H3'	35:L5:4272:G:N2	2.33	0.44
35:L5:4343:U:H2'	35:L5:4344:U:H6	1.83	0.44
35:L5:4460:U:H2'	35:L5:4461:C:C6	2.53	0.44
38:LA:30:ARG:O	38:LA:163:ARG:NH1	2.38	0.44
40:LC:140:LYS:NZ	40:LC:242:PRO:HD2	2.33	0.44
41:LD:208:MET:HE2	41:LD:208:MET:HB3	1.89	0.44
49:LM:119:ARG:HG2	51:LO:189:ILE:HD11	1.99	0.44
51:LO:27:VAL:HG13	51:LO:98:ALA:HB1	1.98	0.44
56:LT:27:LEU:HA	56:LT:30:TYR:HD2	1.82	0.44
69:Lh:24:LEU:HD21	69:Lh:53:SER:HB3	1.99	0.44
80:CA:247:TYR:CE2	80:CA:304:PRO:HB3	2.52	0.44
80:CA:248:LYS:HE2	80:CA:248:LYS:HB2	1.85	0.44
82:Lt:54:LYS:HA	82:Lt:55:GLY:HA2	1.78	0.44
83:CB:683:PHE:O	83:CB:687:THR:HG23	2.17	0.44
84:Et:15:G:C2	84:Et:59:G:C5	3.05	0.44
85:LW:86:SER:O	85:LW:90:ILE:HD12	2.17	0.44
1:S2:49:C:H2'	1:S2:472:C:H41	1.83	0.44
1:S2:927:C:H1'	34:Sb:51:GLN:HE21	1.78	0.44
1:S2:1790:A:H5"	21:SG:81:HIS:CE1	2.52	0.44
1:S2:1825:A:N6	83:CB:714:ILE:O	2.51	0.44
1:S2:1856:C:H2'	1:S2:1857:G:C8	2.53	0.44
2:SD:72:VAL:HG21	4:SK:68:TYR:CD2	2.53	0.44
2:SD:85:GLU:N	2:SD:85:GLU:OE2	2.51	0.44
3:SF:119:SER:HA	3:SF:193:LYS:HD3	2.00	0.44
9:SU:67:LYS:HB2	9:SU:78:ASP:HB2	1.98	0.44
11:Sd:14:PHE:O	11:Sd:14:PHE:CD1	2.71	0.44
12:Sg:178:ASN:O	12:Sg:182:CYS:HA	2.18	0.44
12:Sg:237:ASN:HD21	12:Sg:285:GLN:HG3	1.83	0.44
13:SM:63:LYS:O	13:SM:66:GLU:HG2	2.18	0.44
35:L5:6:C:H2'	35:L5:7:C:H6	1.83	0.44
35:L5:50:C:C2	35:L5:51:A:C8	3.06	0.44
35:L5:667:A:N3	78:Lr:46:ARG:NH2	2.66	0.44
35:L5:1537:A:H2'	35:L5:1538:U:C6	2.52	0.44
35:L5:1590:C:H5"	35:L5:1591:U:O5'	2.18	0.44
35:L5:4473:A:OP1	74:Lm:102:ARG:NE	2.49	0.44
35:L5:4773:C:N4	35:L5:4861:G:O6	2.22	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:LC:221:PHE:HB3	40:LC:227:ILE:HG21	2.00	0.44
46:LI:36:LEU:O	46:LI:86:HIS:HD2	2.00	0.44
46:LI:61:SER:HA	46:LI:126:VAL:HG12	1.99	0.44
49:LM:86:TRP:CE2	49:LM:92:ALA:HB2	2.52	0.44
55:LS:156:HIS:CE1	55:LS:174:THR:HG21	2.52	0.44
57:LU:55:ASN:C	57:LU:55:ASN:OD1	2.60	0.44
61:LZ:29:ILE:HG13	61:LZ:40:HIS:NE2	2.33	0.44
71:Lj:19:CYS:SG	71:Lj:34:CYS:HB2	2.57	0.44
83:CB:27:HIS:HB2	83:CB:139:THR:HG23	1.99	0.44
83:CB:36:THR:O	83:CB:40:VAL:N	2.46	0.44
83:CB:120:ARG:O	83:CB:368:ARG:NH2	2.43	0.44
83:CB:568:ILE:HD12	83:CB:568:ILE:HA	1.79	0.44
1:S2:144:U:P	21:SG:178:ARG:HH21	2.41	0.44
1:S2:155:G:H2'	1:S2:156:G:H8	1.82	0.44
1:S2:641:A:H5"	22:SJ:44:TRP:HH2	1.83	0.44
1:S2:693:A:N1	1:S2:739:C:H4'	2.33	0.44
1:S2:1286:G:N1	13:SM:37:GLU:OE2	2.51	0.44
1:S2:1533:A:N7	1:S2:1604:G:H1'	2.32	0.44
1:S2:1677:U:H2'	1:S2:1678:A:H8	1.82	0.44
1:S2:1711:U:H2'	1:S2:1712:A:H8	1.82	0.44
2:SD:34:TYR:OH	2:SD:37:VAL:HB	2.17	0.44
4:SK:24:LYS:HG3	4:SK:25:LYS:N	2.33	0.44
4:SK:95:ARG:NH1	4:SK:96:ARG:O	2.46	0.44
7:SS:114:LEU:HD23	7:SS:121:ARG:HB3	2.00	0.44
10:Sc:31:ARG:HG3	10:Sc:31:ARG:O	2.18	0.44
12:Sg:85:GLY:HA2	12:Sg:108:VAL:HG22	1.99	0.44
20:SX:41:PHE:CZ	20:SX:102:VAL:HG12	2.51	0.44
25:SA:63:ARG:NH2	28:SV:38:GLU:HA	2.33	0.44
30:SC:187:ARG:HE	30:SC:187:ARG:HB3	1.64	0.44
35:L5:481:G:H2'	35:L5:482:G:H8	1.83	0.44
35:L5:1174:G:H1	35:L5:1186:U:H3	1.66	0.44
35:L5:1191:C:H2'	35:L5:1192:C:H6	1.82	0.44
35:L5:1234:G:H2'	35:L5:1235:G:H8	1.81	0.44
35:L5:3619:G:H4'	54:LR:79:GLY:O	2.18	0.44
35:L5:3739:C:O2'	84:Et:72:C:OP1	2.30	0.44
35:L5:4985:U:H4'	39:LB:175:GLN:HG3	2.00	0.44
35:L5:5043:A:H2'	35:L5:5044:A:H8	1.82	0.44
36:L7:54:A:C5	47:LJ:12:MET:HG2	2.52	0.44
37:L8:5:U:H2'	37:L8:6:C:C6	2.51	0.44
37:L8:41:A:H4'	71:Lj:59:THR:HG23	2.00	0.44
38:LA:171:GLY:O	77:Lp:68:ALA:HB2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LB:103:LYS:HB2	39:LB:103:LYS:HE2	1.56	0.44
41:LD:38:ILE:HG13	56:LT:30:TYR:HB3	2.00	0.44
42:LE:99:ASP:C	42:LE:101:ASN:H	2.26	0.44
44:LG:30:PRO:HG2	61:LZ:124:THR:HA	1.99	0.44
46:LI:206:LEU:HD12	46:LI:209:TRP:HB3	2.00	0.44
55:LS:147:ASP:HB3	55:LS:150:ILE:HB	2.00	0.44
55:LS:161:ARG:HH11	55:LS:164:LYS:HG3	1.81	0.44
83:CB:630:GLN:HG3	83:CB:633:ARG:HH22	1.82	0.44
1:S2:71:G:H3'	1:S2:72:C:H4'	1.98	0.44
1:S2:492:C:H5	23:SY:104:ARG:HH12	1.64	0.44
1:S2:543:C:H3'	1:S2:544:G:H8	1.83	0.44
1:S2:1047:C:H2'	1:S2:1048:G:O4'	2.18	0.44
1:S2:1238:U:O2	1:S2:1242:U:H5	2.00	0.44
1:S2:1362:U:H5"	1:S2:1363:C:C5	2.53	0.44
1:S2:1378:A:H4'	1:S2:1379:A:O5'	2.17	0.44
1:S2:1487:A:O2'	1:S2:1488:C:H5'	2.18	0.44
1:S2:1598:G:N7	14:SZ:85:ARG:NH2	2.66	0.44
2:SD:67:ARG:HH12	4:SK:94:LEU:C	2.26	0.44
3:SF:123:GLU:OE2	3:SF:204:ARG:NH2	2.51	0.44
6:SQ:25:CYS:SG	6:SQ:68:ILE:HG22	2.58	0.44
7:SS:70:ILE:HA	7:SS:77:TYR:HD1	1.83	0.44
12:Sg:103:GLY:O	12:Sg:130:LYS:NZ	2.50	0.44
15:Sf:92:LYS:HA	15:Sf:92:LYS:HD2	1.70	0.44
18:SI:201:LYS:HD3	18:SI:201:LYS:HA	1.78	0.44
21:SG:45:TRP:O	21:SG:48:TYR:HB2	2.17	0.44
25:SA:146:ALA:HB3	25:SA:157:VAL:HG21	2.00	0.44
27:SH:78:ARG:HG2	27:SH:78:ARG:NH1	2.32	0.44
35:L5:210:C:H5'	35:L5:235:A:C2	2.53	0.44
35:L5:423:G:H5'	52:LP:26:PHE:HZ	1.82	0.44
35:L5:650:C:H2'	35:L5:651:C:C6	2.53	0.44
35:L5:914:U:O2'	35:L5:915:A:OP2	2.29	0.44
35:L5:1332:C:H5"	66:Le:29:VAL:HB	2.00	0.44
35:L5:2018:C:H2'	35:L5:2019:C:C6	2.52	0.44
35:L5:2362:U:OP1	52:LP:82:ARG:NH2	2.42	0.44
35:L5:2478:C:H2'	35:L5:2479:G:H5'	1.99	0.44
35:L5:2487:G:OP2	35:L5:2487:G:H8	2.01	0.44
35:L5:3707:U:H2'	35:L5:3708:C:C6	2.53	0.44
35:L5:3754:G:H2'	35:L5:3755:G:C8	2.53	0.44
35:L5:4314:C:H4'	56:LT:68:THR:CG2	2.48	0.44
37:L8:65:A:C4	37:L8:66:A:C8	3.05	0.44
41:LD:212:MET:HE1	41:LD:233:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:LY:47:MET:HE3	60:LY:48:PRO:HD2	2.00	0.44
72:Lk:54:GLU:HA	72:Lk:57:LYS:NZ	2.33	0.44
77:Lp:8:VAL:O	77:Lp:11:VAL:HG22	2.18	0.44
80:CA:195:ILE:O	80:CA:195:ILE:HG13	2.17	0.44
80:CA:273:PHE:HB3	80:CA:276:MET:HE3	1.99	0.44
82:Lt:59:THR:HA	82:Lt:80:LEU:HD11	1.99	0.44
83:CB:551:GLU:H	83:CB:551:GLU:CD	2.24	0.44
84:Et:6:G:H1	84:Et:67:U:H3	1.65	0.44
1:S2:154:U:O2'	21:SG:15:LEU:HB2	2.18	0.44
1:S2:642:U:H5"	22:SJ:41:ARG:HH21	1.83	0.44
1:S2:980:A:H2'	1:S2:981:A:H8	1.79	0.44
1:S2:1016:U:O2	34:Sb:30:SER:OG	2.35	0.44
1:S2:1639:G:N2	84:Et:30:G:O2'	2.49	0.44
1:S2:1856:C:OP1	32:SO:141:ARG:NH2	2.51	0.44
2:SD:53:THR:OG1	2:SD:54:ARG:HD3	2.17	0.44
2:SD:65:ARG:HH11	2:SD:65:ARG:HG3	1.83	0.44
2:SD:94:ARG:O	2:SD:101:GLN:NE2	2.45	0.44
3:SF:144:LEU:O	3:SF:148:ASN:HB2	2.18	0.44
6:SQ:15:ARG:HA	6:SQ:19:ALA:O	2.18	0.44
8:ST:83:GLN:HG2	8:ST:85:ASN:OD1	2.18	0.44
12:Sg:188:HIS:NE2	12:Sg:219:TRP:CE2	2.85	0.44
13:SM:22:LEU:HD13	13:SM:89:VAL:HA	1.99	0.44
17:SE:164:LEU:C	17:SE:165:GLU:HG3	2.42	0.44
18:SI:139:LYS:HE2	18:SI:141:ARG:HD2	2.00	0.44
18:SI:190:LEU:HD11	18:SI:198:TYR:HD2	1.83	0.44
19:SL:95:TYR:HB2	19:SL:102:PHE:CE1	2.52	0.44
32:SO:39:ASP:OD1	32:SO:68:GLU:HB3	2.17	0.44
35:L5:120:A:H2'	35:L5:149:A:H61	1.83	0.44
35:L5:4520:G:H1'	39:LB:256:ALA:HB1	2.00	0.44
37:L8:138:C:H2'	37:L8:139:G:H8	1.83	0.44
38:LA:80:GLU:HB2	38:LA:170:ALA:HA	2.00	0.44
42:LE:167:GLN:HG3	42:LE:173:LEU:HD23	2.00	0.44
45:LH:103:VAL:HA	45:LH:113:GLU:O	2.18	0.44
47:LJ:113:ILE:HD12	47:LJ:114:ASP:N	2.33	0.44
52:LP:85:LYS:O	52:LP:89:GLU:HG2	2.18	0.44
53:LQ:66:MET:HE1	53:LQ:100:VAL:HG23	2.00	0.44
60:LY:2:LYS:HE3	60:LY:2:LYS:HB3	1.80	0.44
69:Lh:32:ARG:HG2	69:Lh:32:ARG:HH11	1.82	0.44
80:CA:66:LYS:HG3	80:CA:67:GLU:CD	2.42	0.44
80:CA:290:ARG:O	80:CA:293:VAL:HG12	2.16	0.44
82:Lt:19:GLY:HA3	82:Lt:59:THR:HB	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CB:112:SER:C	83:CB:114:GLU:H	2.26	0.44
83:CB:197:SER:HA	83:CB:201:GLY:HA2	2.00	0.44
1:S2:677:G:OP1	31:SN:124:ARG:NH1	2.44	0.43
1:S2:1533:A:C8	1:S2:1604:G:H1'	2.53	0.43
2:SD:114:ALA:O	2:SD:118:ALA:N	2.49	0.43
3:SF:122:ARG:NE	10:Sc:57:THR:OG1	2.41	0.43
5:SP:96:VAL:HG23	5:SP:120:SER:HB3	2.00	0.43
7:SS:14:ARG:HH12	7:SS:17:ASN:HA	1.82	0.43
8:ST:114:GLU:OE1	8:ST:114:GLU:N	2.50	0.43
9:SU:59:LYS:HB2	9:SU:84:ILE:HB	1.99	0.43
11:Sd:46:TYR:O	11:Sd:50:ILE:HD12	2.18	0.43
16:CD:192:GLU:H	16:CD:192:GLU:CD	2.26	0.43
17:SE:216:ASN:N	17:SE:216:ASN:OD1	2.51	0.43
19:SL:5:GLN:NE2	19:SL:11:GLN:H	2.15	0.43
21:SG:216:ARG:C	21:SG:218:LYS:H	2.26	0.43
22:SJ:64:ASP:OD1	22:SJ:65:GLU:N	2.51	0.43
26:SB:167:LYS:HG3	26:SB:168:MET:N	2.33	0.43
35:L5:1091:C:H2'	35:L5:1092:G:H8	1.83	0.43
35:L5:1726:U:H5'	43:LF:135:ILE:HD11	2.00	0.43
35:L5:2276:A:H2'	35:L5:2277:C:O4'	2.18	0.43
35:L5:4055:U:H2'	35:L5:4056:A:O4'	2.17	0.43
35:L5:4129:G:H2'	35:L5:4130:C:C6	2.53	0.43
35:L5:4173:G:H2'	35:L5:4174:U:C6	2.53	0.43
35:L5:4678:G:N2	35:L5:4713:G:H1'	2.32	0.43
39:LB:167:GLN:HB3	39:LB:169:ARG:HE	1.83	0.43
40:LC:2:ALA:HA	40:LC:3:CYS:HB3	1.99	0.43
40:LC:8:ILE:HD11	40:LC:257:PHE:CE2	2.53	0.43
40:LC:33:ARG:NH1	40:LC:35:ASP:OD2	2.51	0.43
40:LC:92:PHE:O	40:LC:100:ARG:NH1	2.51	0.43
42:LE:157:HIS:HB3	42:LE:160:LYS:HG3	1.99	0.43
47:LJ:95:ARG:O	47:LJ:175:LEU:N	2.28	0.43
47:LJ:114:ASP:N	47:LJ:114:ASP:OD1	2.48	0.43
53:LQ:4:ASP:O	53:LQ:4:ASP:OD2	2.36	0.43
57:LU:38:ASN:HA	57:LU:41:GLN:HG3	2.00	0.43
57:LU:63:ILE:HA	57:LU:71:THR:O	2.18	0.43
58:LV:131:ARG:HA	58:LV:131:ARG:HD2	1.80	0.43
64:Lc:22:MET:HG3	64:Lc:27:TYR:CE1	2.52	0.43
70:Li:92:ASN:OD1	70:Li:92:ASN:C	2.61	0.43
80:CA:169:ALA:O	80:CA:173:VAL:HG12	2.18	0.43
81:Ls:132:PRO:HB3	81:Ls:147:ILE:HD13	2.00	0.43
83:CB:196:GLU:CD	83:CB:197:SER:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:41:G:OP2	1:S2:486:A:N6	2.46	0.43
1:S2:1220:A:N3	1:S2:1677:U:O2'	2.42	0.43
1:S2:1396:A:C5	1:S2:1449:G:O6	2.70	0.43
1:S2:1772:C:H2'	1:S2:1772:C:O2	2.18	0.43
2:SD:33:GLY:O	2:SD:53:THR:HG23	2.18	0.43
3:SF:79:HIS:ND1	3:SF:79:HIS:O	2.51	0.43
3:SF:88:MET:O	3:SF:91:ARG:HG2	2.18	0.43
8:ST:4:VAL:HG13	8:ST:8:ASP:OD1	2.18	0.43
9:SU:27:ARG:NH1	11:Sd:51:GLY:HA3	2.33	0.43
10:Sc:12:ALA:HB1	10:Sc:32:VAL:HB	2.00	0.43
12:Sg:45:LEU:HD13	12:Sg:52:TYR:O	2.18	0.43
12:Sg:159:ASN:OD1	12:Sg:204:GLY:HA3	2.18	0.43
20:SX:68:LYS:HB3	20:SX:91:LEU:HD13	1.99	0.43
29:Sa:56:ALA:O	32:SO:125:LYS:HA	2.18	0.43
35:L5:294:G:O6	35:L5:315:G:H1'	2.18	0.43
35:L5:962:C:H2'	35:L5:1702:C:H5	1.82	0.43
35:L5:980:U:H2'	35:L5:981:C:C6	2.53	0.43
35:L5:1355:G:P	53:LQ:108:ARG:HH12	2.41	0.43
35:L5:1601:A:N7	35:L5:3643:A:C4	2.87	0.43
35:L5:1628:C:OP2	38:LA:9:ARG:HD2	2.18	0.43
35:L5:2558:C:H2'	35:L5:2559:G:H8	1.82	0.43
35:L5:2749:C:H2'	35:L5:2750:G:H8	1.83	0.43
35:L5:2869:U:O2'	35:L5:2881:A:N7	2.41	0.43
35:L5:3974:G:N2	35:L5:4052:C:OP1	2.48	0.43
35:L5:4473:A:H5"	74:Lm:95:ILE:HD12	2.00	0.43
35:L5:4744:A:H2'	35:L5:4745:G:O4'	2.18	0.43
35:L5:4935:C:H2'	35:L5:4936:G:C8	2.53	0.43
37:L8:102:G:OP2	37:L8:104:A:O2'	2.31	0.43
39:LB:229:LYS:HA	39:LB:229:LYS:HD2	1.81	0.43
52:LP:61:ARG:NH2	52:LP:76:TRP:HB3	2.33	0.43
69:Lh:70:ARG:HG2	69:Lh:83:LEU:HD22	1.99	0.43
72:Lk:7:GLU:OE1	72:Lk:9:LYS:N	2.50	0.43
76:Lo:82:MET:HE2	76:Lo:82:MET:HA	1.99	0.43
80:CA:163:ASN:HB3	80:CA:201:ILE:HG22	1.99	0.43
83:CB:69:THR:HG22	83:CB:106:PRO:HB3	2.01	0.43
83:CB:159:LYS:HA	83:CB:159:LYS:HD3	1.74	0.43
83:CB:224:THR:HG23	83:CB:226:LYS:H	1.82	0.43
83:CB:300:VAL:HG22	83:CB:315:LEU:HD13	1.99	0.43
83:CB:480:VAL:HA	83:CB:529:LYS:HZ1	1.82	0.43
83:CB:524:LEU:HD12	83:CB:536:CYS:HB3	2.00	0.43
83:CB:568:ILE:HD12	83:CB:569:PRO:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:24:C:O2'	1:S2:25:A:H8	1.99	0.43
1:S2:155:G:C6	1:S2:164:A:C6	3.06	0.43
1:S2:529:A:H61	1:S2:555:A:H61	1.66	0.43
1:S2:598:G:O2'	1:S2:605:A:N1	2.46	0.43
1:S2:1122:A:O2'	26:SB:146:ARG:HD3	2.19	0.43
1:S2:1304:U:OP1	15:Sf:95:ARG:N	2.46	0.43
1:S2:1688:C:H2'	1:S2:1689:C:H6	1.83	0.43
1:S2:1862:G:H1'	1:S2:1863:A:H2'	2.00	0.43
3:SF:55:ARG:HG3	6:SQ:125:ARG:NH2	2.32	0.43
3:SF:128:ILE:HG21	10:Sc:23:SER:OG	2.18	0.43
5:SP:44:ARG:HG2	5:SP:44:ARG:NH1	2.33	0.43
6:SQ:8:GLN:HA	6:SQ:99:TYR:CZ	2.52	0.43
8:ST:52:TRP:HA	8:ST:55:THR:HG22	1.99	0.43
8:ST:112:MET:O	8:ST:124:THR:HG22	2.17	0.43
20:SX:139:GLU:CD	20:SX:140:ARG:H	2.26	0.43
22:SJ:115:PHE:HB2	22:SJ:123:ILE:HD12	2.00	0.43
23:SY:41:ARG:HA	23:SY:55:ILE:HD13	2.00	0.43
25:SA:200:ASP:HA	25:SA:203:PHE:CD2	2.53	0.43
26:SB:86:LEU:HA	26:SB:99:ASN:O	2.19	0.43
26:SB:87:ILE:HB	26:SB:101:HIS:CG	2.52	0.43
26:SB:138:PHE:HE1	26:SB:216:LYS:HD3	1.83	0.43
32:SO:12:GLU:HA	32:SO:13:GLN:HA	1.84	0.43
35:L5:74:G:H5'	48:LL:59:VAL:HG13	2.01	0.43
35:L5:972:C:C6	42:LE:126:LEU:HD13	2.54	0.43
35:L5:2323:C:H2'	35:L5:2324:C:C6	2.53	0.43
35:L5:2533:C:OP1	59:LX:139:ARG:NH1	2.52	0.43
35:L5:4054:C:H1'	79:Lz:207:LYS:HD3	1.99	0.43
35:L5:4894:A:H3'	35:L5:4895:C:H5'	2.00	0.43
38:LA:56:ALA:HB2	38:LA:130:SER:HB3	1.99	0.43
38:LA:130:SER:HB2	38:LA:171:GLY:HA3	1.98	0.43
40:LC:287:THR:HG21	53:LQ:24:TYR:HE1	1.82	0.43
42:LE:101:ASN:OD1	42:LE:105:ARG:NH2	2.41	0.43
51:LO:197:LYS:HE3	51:LO:197:LYS:HB2	1.76	0.43
60:LY:128:VAL:O	60:LY:131:GLU:HG3	2.18	0.43
79:Lz:106:LYS:HG3	79:Lz:107:TYR:CD1	2.53	0.43
81:Ls:83:ARG:HA	81:Ls:83:ARG:HD3	1.73	0.43
83:CB:395:MET:HE2	83:CB:494:MET:HE3	1.99	0.43
1:S2:149:A:C2	1:S2:150:A:H1'	2.54	0.43
1:S2:499:G:N1	1:S2:504:G:C6	2.86	0.43
1:S2:628:A:OP2	2:SD:178:ARG:NH2	2.51	0.43
1:S2:1536:G:C2	1:S2:1537:A:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1712:A:H2'	1:S2:1713:C:H6	1.82	0.43
1:S2:1752:C:N4	1:S2:1778:C:H42	2.10	0.43
6:SQ:42:ILE:HD12	6:SQ:42:ILE:HA	1.88	0.43
13:SM:79:VAL:HG11	13:SM:85:LEU:HB2	2.01	0.43
17:SE:101:LEU:HD13	17:SE:101:LEU:HA	1.81	0.43
26:SB:33:VAL:C	26:SB:34:LYS:HD2	2.43	0.43
28:SV:38:GLU:OE1	28:SV:50:PHE:HA	2.18	0.43
30:SC:88:ILE:HG12	30:SC:93:ILE:HD11	2.00	0.43
32:SO:96:LYS:HA	32:SO:96:LYS:HD3	1.70	0.43
35:L5:352:G:C8	40:LC:193:LYS:HE2	2.53	0.43
35:L5:737:C:C5	35:L5:739:G:H5"	2.53	0.43
35:L5:966:A:OP2	35:L5:2092:G:N2	2.50	0.43
35:L5:1308:C:H2'	35:L5:1309:C:C6	2.53	0.43
35:L5:1320:U:O2'	35:L5:1891:A:N1	2.38	0.43
35:L5:1786:A:H2'	35:L5:1789:C:C5	2.53	0.43
35:L5:2020:U:H2'	35:L5:2021:G:H8	1.84	0.43
35:L5:2073:C:C2	35:L5:2074:C:C5	3.06	0.43
35:L5:2090:U:H4'	35:L5:2091:C:H3'	2.00	0.43
35:L5:2521:G:H5'	35:L5:2640:G:H1'	2.01	0.43
35:L5:2692:U:O2	72:Lk:2:PRO:HB2	2.19	0.43
35:L5:2874:U:O2'	35:L5:2876:G:N7	2.47	0.43
35:L5:3855:C:H2'	35:L5:3856:A:H8	1.82	0.43
35:L5:4585:U:H2'	35:L5:4586:G:H8	1.84	0.43
35:L5:4653:C:H2'	35:L5:4654:C:C6	2.53	0.43
35:L5:5053:U:H3'	35:L5:5054:C:C6	2.53	0.43
37:L8:88:A:H2'	37:L8:89:U:O4'	2.18	0.43
39:LB:305:THR:C	39:LB:307:TYR:H	2.26	0.43
41:LD:23:ARG:O	41:LD:23:ARG:NH1	2.47	0.43
41:LD:69:ILE:HG12	56:LT:31:MET:HG3	2.00	0.43
42:LE:88:VAL:HA	42:LE:89:LEU:HA	1.73	0.43
42:LE:112:MET:O	78:Lr:87:ARG:NE	2.51	0.43
45:LH:116:ASN:OD1	45:LH:119:GLY:HA2	2.18	0.43
46:LI:63:GLU:H	46:LI:63:GLU:CD	2.26	0.43
50:LN:192:TRP:O	50:LN:196:ASN:HB2	2.19	0.43
83:CB:160:MET:HE2	83:CB:160:MET:HB3	1.91	0.43
83:CB:610:PRO:HG3	83:CB:641:TRP:HZ3	1.83	0.43
84:Et:1:G:H2'	84:Et:2:C:H6	1.83	0.43
1:S2:186:C:H2'	1:S2:187:G:C8	2.53	0.43
1:S2:1230:C:H2'	1:S2:1231:C:H6	1.83	0.43
1:S2:1264:C:H4'	1:S2:1265:A:O4'	2.19	0.43
2:SD:218:LEU:HD13	12:Sg:189:ILE:HD11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Sg:248:LEU:N	12:Sg:259:TRP:O	2.51	0.43
13:SM:44:LYS:O	13:SM:46:GLN:N	2.44	0.43
14:SZ:46:ASN:O	14:SZ:47:LEU:HD13	2.19	0.43
17:SE:56:LEU:HD21	23:SY:72:PHE:HE2	1.83	0.43
17:SE:86:PHE:HA	17:SE:109:PHE:HZ	1.83	0.43
19:SL:55:TYR:CD1	19:SL:115:PRO:HG2	2.53	0.43
25:SA:220:LYS:HA	25:SA:220:LYS:HD3	1.85	0.43
29:Sa:64:LEU:HD13	29:Sa:65:PRO:HD2	2.01	0.43
30:SC:208:PRO:O	30:SC:212:LYS:HG2	2.19	0.43
35:L5:279:A:OP1	50:LN:50:ARG:NH1	2.52	0.43
35:L5:908:G:H2'	35:L5:909:A:H8	1.82	0.43
35:L5:1500:A:H5"	35:L5:1501:C:H5"	2.00	0.43
35:L5:2517:A:O4'	68:Lg:62:LYS:HE2	2.19	0.43
35:L5:2611:A:H2'	35:L5:2612:G:H8	1.79	0.43
35:L5:3938:G:H4'	35:L5:3939:G:O5'	2.19	0.43
35:L5:4111:U:H2'	35:L5:4112:C:C5	2.53	0.43
35:L5:4896:G:H2'	35:L5:4897:G:H8	1.83	0.43
42:LE:258:LEU:HD23	42:LE:258:LEU:HA	1.90	0.43
45:LH:41:ILE:O	45:LH:41:ILE:HD12	2.19	0.43
46:LI:203:HIS:C	46:LI:203:HIS:ND1	2.76	0.43
60:LY:26:ARG:NH1	60:LY:75:ARG:O	2.47	0.43
60:LY:69:LYS:HE3	60:LY:71:VAL:HG12	2.01	0.43
65:Ld:33:ILE:HD12	65:Ld:45:ALA:HB2	2.00	0.43
83:CB:509:VAL:HG21	83:CB:546:ILE:HD12	2.01	0.43
1:S2:593:C:H4'	24:Se:26:LYS:HE3	2.00	0.43
2:SD:60:GLY:CA	2:SD:65:ARG:H	2.26	0.43
6:SQ:33:LYS:HA	6:SQ:38:PRO:HA	2.01	0.43
6:SQ:55:VAL:HG12	6:SQ:63:PHE:CZ	2.54	0.43
6:SQ:97:GLN:NE2	12:Sg:60:ARG:HD2	2.28	0.43
8:ST:65:TYR:HD1	8:ST:66:LEU:HD23	1.82	0.43
12:Sg:44:LYS:O	12:Sg:53:GLY:HA2	2.19	0.43
12:Sg:164:ILE:HD12	12:Sg:185:LYS:HD3	2.00	0.43
12:Sg:165:ILE:O	12:Sg:177:TRP:N	2.52	0.43
21:SG:56:ASN:OD1	21:SG:56:ASN:C	2.61	0.43
21:SG:139:SER:O	21:SG:142:ARG:HG2	2.19	0.43
22:SJ:122:SER:O	22:SJ:122:SER:OG	2.34	0.43
35:L5:679:C:H2'	35:L5:680:G:C8	2.52	0.43
35:L5:1350:C:H2'	35:L5:1351:G:H8	1.82	0.43
35:L5:1566:C:H2'	35:L5:1567:U:H6	1.83	0.43
35:L5:1806:G:H2'	35:L5:1807:C:H6	1.84	0.43
35:L5:1873:A:H5'	63:Lb:7:HIS:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2337:C:H4'	78:Lr:19:LYS:HB2	2.00	0.43
35:L5:3592:G:N7	35:L5:3593:C:N4	2.66	0.43
35:L5:3937:C:H1'	50:LN:125:SER:CB	2.46	0.43
35:L5:4500:U:H2'	35:L5:4501:U:H6	1.84	0.43
35:L5:4875:G:H2'	55:LS:169:THR:HB	2.00	0.43
35:L5:4968:A:H2'	35:L5:4969:C:C6	2.53	0.43
38:LA:123:ARG:O	38:LA:125:LYS:HG2	2.19	0.43
39:LB:254:ILE:HD13	39:LB:268:ARG:NH2	2.33	0.43
40:LC:65:GLU:HG2	40:LC:66:SER:H	1.82	0.43
45:LH:19:THR:HG22	45:LH:26:ILE:HB	2.00	0.43
46:LI:99:ILE:HG22	46:LI:123:GLN:HB3	2.00	0.43
56:LT:19:PHE:CE2	56:LT:20:ARG:HD3	2.54	0.43
67:Lf:2:SER:O	67:Lf:2:SER:OG	2.23	0.43
79:Lz:65:VAL:HG22	79:Lz:109:ALA:HB3	2.01	0.43
81:Ls:28:PHE:HB2	81:Ls:89:VAL:CG1	2.48	0.43
83:CB:314:LYS:HD2	83:CB:314:LYS:HA	1.86	0.43
83:CB:507:VAL:HA	83:CB:575:PRO:HD3	2.01	0.43
83:CB:586:GLU:OE2	83:CB:607:ARG:HG3	2.19	0.43
83:CB:744:ILE:HA	83:CB:789:PRO:HA	2.00	0.43
1:S2:201:C:H5"	1:S2:202:G:H21	1.84	0.43
1:S2:452:G:H2'	1:S2:453:C:C6	2.54	0.43
1:S2:536:A:H3'	1:S2:537:C:H5"	2.01	0.43
1:S2:544:G:H2'	1:S2:545:A:C8	2.54	0.43
1:S2:566:U:H3'	1:S2:567:C:C6	2.53	0.43
1:S2:733:C:C5	1:S2:734:C:H1'	2.54	0.43
1:S2:817:G:H4'	22:SJ:73:GLU:OE1	2.19	0.43
1:S2:943:U:O2'	32:SO:135:ILE:O	2.37	0.43
1:S2:1611:G:OP2	7:SS:121:ARG:NH2	2.43	0.43
1:S2:1757:G:C8	1:S2:1758:G:H1'	2.54	0.43
6:SQ:47:LEU:HB3	6:SQ:50:LYS:HB3	1.99	0.43
18:SI:124:LYS:HB2	18:SI:124:LYS:HE2	1.70	0.43
20:SX:50:ILE:HD11	20:SX:99:GLU:OE2	2.19	0.43
21:SG:105:ASN:OD1	21:SG:105:ASN:N	2.41	0.43
24:Se:2:VAL:HG13	24:Se:4:GLY:H	1.84	0.43
35:L5:234:G:H1	35:L5:2304:U:H3	1.67	0.43
35:L5:438:G:OP1	66:Le:16:ARG:NH1	2.39	0.43
35:L5:1084:C:H2'	35:L5:1085:C:C6	2.53	0.43
35:L5:1445:U:O4	35:L5:2100:A:N6	2.43	0.43
35:L5:1538:U:H2'	35:L5:1539:G:H8	1.83	0.43
35:L5:1604:G:H2'	35:L5:1605:G:C8	2.54	0.43
35:L5:1697:G:O2'	35:L5:1698:C:O4'	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1788:A:H2'	46:LI:22:PHE:CZ	2.54	0.43
35:L5:2705:G:H1	35:L5:2710:C:H41	1.66	0.43
35:L5:2720:C:H2'	35:L5:2721:G:O4'	2.18	0.43
35:L5:3762:U:H2'	35:L5:3763:A:O4'	2.19	0.43
35:L5:3793:U:H2'	35:L5:3794:C:H6	1.83	0.43
35:L5:5003:U:H2'	35:L5:5004:C:C6	2.53	0.43
36:L7:111:C:H2'	36:L7:112:U:O4'	2.18	0.43
40:LC:334:THR:HG22	40:LC:337:ARG:NH2	2.34	0.43
47:LJ:15:LEU:HD23	47:LJ:15:LEU:HA	1.62	0.43
54:LR:14:VAL:HG21	54:LR:42:ARG:HG2	2.00	0.43
61:LZ:33:THR:C	61:LZ:35:ASP:H	2.27	0.43
75:Ln:10:MET:HE2	75:Ln:10:MET:HB2	1.79	0.43
77:Lp:36:LYS:HD2	77:Lp:48:LYS:NZ	2.34	0.43
81:Ls:42:GLN:NE2	81:Ls:43:ILE:HG13	2.34	0.43
82:Lt:10:ILE:HG21	82:Lt:67:ARG:H	1.82	0.43
83:CB:139:THR:HA	83:CB:142:VAL:HG22	2.01	0.43
85:LW:46:PRO:O	85:LW:52:THR:OG1	2.31	0.43
1:S2:346:C:H5"	17:SE:38:LEU:HD22	2.00	0.43
1:S2:1097:G:H4'	25:SA:32:PHE:CG	2.54	0.43
1:S2:1112:U:O2'	1:S2:1113:A:H5'	2.18	0.43
1:S2:1335:G:H4'	2:SD:172:VAL:HG11	2.00	0.43
1:S2:1402:A:H4'	9:SU:51:LYS:HE2	2.00	0.43
1:S2:1438:A:H2'	1:S2:1439:A:H8	1.83	0.43
1:S2:1541:G:H2'	1:S2:1542:C:C6	2.54	0.43
1:S2:1633:A:H2'	1:S2:1634:A:C8	2.54	0.43
1:S2:1809:A:H2'	1:S2:1809:A:N3	2.34	0.43
3:SF:17:ILE:HG21	3:SF:46:ALA:HB1	2.00	0.43
12:Sg:14:HIS:HB3	12:Sg:41:ILE:CD1	2.49	0.43
12:Sg:99:ARG:HH22	12:Sg:135:LEU:HB2	1.83	0.43
12:Sg:245:ARG:HG3	12:Sg:247:TRP:HB2	2.00	0.43
17:SE:121:TYR:HE2	17:SE:161:GLN:HE21	1.65	0.43
23:SY:60:PHE:CD1	23:SY:71:GLY:HA3	2.54	0.43
25:SA:37:TYR:OH	25:SA:57:LYS:NZ	2.47	0.43
26:SB:71:LEU:HD23	26:SB:82:ARG:HD3	2.01	0.43
27:SH:14:GLU:HG2	27:SH:15:LYS:H	1.84	0.43
27:SH:76:GLN:HB3	27:SH:135:PHE:HE2	1.84	0.43
27:SH:140:VAL:HG13	31:SN:19:ARG:NH2	2.34	0.43
31:SN:98:VAL:HG13	31:SN:115:LEU:HD13	2.01	0.43
35:L5:458:C:H2'	35:L5:459:C:H6	1.84	0.43
35:L5:712:C:OP1	42:LE:139:LYS:HE2	2.18	0.43
35:L5:1079:C:H2'	35:L5:1080:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1380:G:H4'	35:L5:1381:U:H6	1.84	0.43
35:L5:1449:C:H2'	35:L5:1450:C:C6	2.54	0.43
35:L5:1664:U:H2'	35:L5:1665:C:C6	2.54	0.43
35:L5:2343:G:P	40:LC:109:ARG:HH22	2.42	0.43
35:L5:2837:U:H2'	35:L5:2838:G:O4'	2.18	0.43
35:L5:3598:C:H2'	35:L5:3599:A:H8	1.83	0.43
35:L5:4143:G:N3	35:L5:4145:C:H1'	2.34	0.43
35:L5:4633:G:N2	35:L5:4664:A:N7	2.67	0.43
38:LA:227:ARG:HB2	38:LA:239:ALA:HB2	2.00	0.43
45:LH:61:TRP:CZ3	49:LM:33:GLN:HG3	2.54	0.43
45:LH:107:GLU:OE2	45:LH:127:ARG:NH1	2.52	0.43
46:LI:55:ASP:HA	46:LI:131:ILE:O	2.19	0.43
50:LN:115:VAL:HA	50:LN:134:LEU:HD13	2.01	0.43
50:LN:121:VAL:HG11	50:LN:131:GLU:HG3	2.00	0.43
54:LR:123:LEU:O	54:LR:127:VAL:HG13	2.18	0.43
54:LR:132:PHE:CE2	54:LR:138:LEU:HD13	2.54	0.43
61:LZ:5:MET:O	61:LZ:28:ASN:ND2	2.51	0.43
83:CB:55:ARG:HG3	83:CB:56:PHE:CD2	2.54	0.43
84:Et:2:C:H2'	84:Et:3:C:C6	2.54	0.43
1:S2:442:C:H2'	1:S2:443:U:H6	1.83	0.43
1:S2:498:C:H5'	17:SE:7:LYS:HD3	2.01	0.43
1:S2:517:C:H2'	1:S2:518:G:O4'	2.18	0.43
1:S2:1019:C:OP1	31:SN:72:LEU:HB2	2.18	0.43
1:S2:1284:A:OP1	1:S2:1285:G:O2'	2.31	0.43
1:S2:1677:U:H2'	1:S2:1678:A:C8	2.54	0.43
2:SD:53:THR:HB	2:SD:94:ARG:HD3	2.00	0.43
2:SD:220:THR:OG1	2:SD:221:THR:N	2.51	0.43
4:SK:49:MET:HE2	4:SK:69:TRP:CG	2.54	0.43
10:Sc:15:THR:HG22	10:Sc:16:LYS:N	2.34	0.43
12:Sg:34:ALA:HB1	12:Sg:66:VAL:HG23	2.01	0.43
13:SM:35:ILE:HG21	15:Sf:103:LEU:HD22	2.01	0.43
13:SM:35:ILE:HD11	13:SM:61:TYR:CZ	2.54	0.43
13:SM:84:LYS:HD2	13:SM:84:LYS:HA	1.91	0.43
14:SZ:76:ARG:CZ	14:SZ:76:ARG:HA	2.49	0.43
23:SY:15:ASN:HB2	23:SY:17:LEU:HD23	2.00	0.43
26:SB:189:ILE:HB	26:SB:190:PRO:HD3	2.01	0.43
29:Sa:10:ARG:HB2	29:Sa:33:ASP:OD1	2.19	0.43
30:SC:80:GLU:O	30:SC:83:LEU:HB3	2.18	0.43
35:L5:263:G:N7	35:L5:264:C:N4	2.67	0.43
35:L5:452:A:H4'	35:L5:453:G:H5'	2.01	0.43
35:L5:664:G:H2'	35:L5:665:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:727:C:H2'	35:L5:728:U:C6	2.54	0.43
35:L5:1316:G:P	66:Le:43:ASN:HD22	2.42	0.43
35:L5:1348:U:H2'	35:L5:1349:G:C8	2.53	0.43
35:L5:1561:G:H3'	35:L5:1562:G:H5"	1.99	0.43
35:L5:1920:C:H3'	35:L5:1921:C:H5"	2.00	0.43
35:L5:2685:C:OP1	68:Lg:57:ARG:HG3	2.19	0.43
35:L5:3715:U:H5"	84:Et:3:C:O2'	2.19	0.43
35:L5:3740:G:H4'	84:Et:71:G:OP1	2.19	0.43
35:L5:3809:G:OP2	35:L5:3809:G:N2	2.36	0.43
35:L5:4495:G:C2	35:L5:4496:A:N7	2.87	0.43
35:L5:4518:A:O5'	35:L5:4520:G:H4'	2.19	0.43
35:L5:4651:A:H2'	35:L5:4652:G:O4'	2.18	0.43
35:L5:4691:A:OP1	45:LH:75:SER:OG	2.34	0.43
35:L5:4887:C:N4	35:L5:4932:U:H3	2.14	0.43
40:LC:298:ILE:O	40:LC:302:LEU:HG	2.18	0.43
53:LQ:34:PHE:CE1	53:LQ:38:ARG:HG3	2.54	0.43
66:Le:85:LEU:HD12	66:Le:85:LEU:HA	1.88	0.43
69:Lh:122:LYS:H	69:Lh:122:LYS:HG2	1.69	0.43
71:Lj:58:THR:OG1	71:Lj:59:THR:N	2.52	0.43
76:Lo:61:LYS:HE2	76:Lo:87:ARG:HH22	1.83	0.43
80:CA:164:THR:OG1	80:CA:215[A]:LYS:NZ	2.52	0.43
82:Lt:120:SER:O	82:Lt:122:ALA:N	2.51	0.43
83:CB:683:PHE:CZ	83:CB:687:THR:HG21	2.54	0.43
83:CB:746:LEU:N	83:CB:813:VAL:O	2.52	0.43
83:CB:839:ARG:HH21	83:CB:844:LEU:HD13	1.84	0.43
1:S2:916:A:N1	31:SN:73:ARG:HD2	2.34	0.43
1:S2:1021:U:H4'	1:S2:1022:U:O4'	2.19	0.43
1:S2:1088:U:H4'	1:S2:1089:G:OP2	2.19	0.43
1:S2:1658:G:H2'	1:S2:1659:U:O4'	2.19	0.43
1:S2:1841:C:P	75:Ln:2:ARG:HD2	2.59	0.43
2:SD:25:LEU:HD13	2:SD:50:ILE:HD12	2.01	0.43
2:SD:167:TYR:OH	2:SD:203:PRO:HA	2.19	0.43
6:SQ:3:SER:OG	6:SQ:4:LYS:N	2.49	0.43
10:Sc:12:ALA:HA	10:Sc:33:GLU:O	2.19	0.43
14:SZ:77:LEU:O	14:SZ:78:LYS:HE2	2.19	0.43
17:SE:122:LYS:O	17:SE:162:ILE:N	2.47	0.43
17:SE:124:CYS:C	17:SE:159:THR:HG1	2.27	0.43
19:SL:93:LEU:HG	19:SL:102:PHE:HB3	2.01	0.43
26:SB:181:LEU:O	26:SB:184:VAL:HG12	2.19	0.43
29:Sa:26:CYS:SG	29:Sa:28:ARG:HB3	2.59	0.43
34:Sb:33:MET:HE3	34:Sb:46:VAL:HG13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:288:G:H2'	35:L5:289:C:C6	2.54	0.43
35:L5:408:A:O2'	35:L5:411:G:OP2	2.26	0.43
35:L5:751:G:H2'	35:L5:752:G:O4'	2.18	0.43
35:L5:994:G:H2'	35:L5:995:C:H4'	2.01	0.43
35:L5:2474:G:H2'	35:L5:2502:G:N2	2.33	0.43
35:L5:2702:C:O3'	57:LU:113:ARG:NH1	2.52	0.43
35:L5:2784:C:H2'	35:L5:2785:C:H6	1.84	0.43
35:L5:4318:C:H4'	76:Lo:17:LYS:HA	2.01	0.43
35:L5:4507:A:H2'	35:L5:4508:C:C6	2.54	0.43
35:L5:4525:C:H5"	39:LB:245:HIS:HB3	2.00	0.43
38:LA:5:ILE:HG13	38:LA:6:ARG:O	2.19	0.43
38:LA:65:ASP:OD2	38:LA:72:ARG:NE	2.35	0.43
38:LA:115:CYS:SG	38:LA:124:GLY:HA3	2.58	0.43
40:LC:168:VAL:HG13	40:LC:177:TRP:CZ3	2.53	0.43
50:LN:64:ILE:HD11	50:LN:106:ALA:HB2	2.01	0.43
50:LN:140:LYS:HD2	50:LN:140:LYS:HA	1.73	0.43
50:LN:178:HIS:HA	50:LN:181:HIS:NE2	2.33	0.43
53:LQ:122:THR:OG1	53:LQ:124:ASP:OD2	2.36	0.43
54:LR:154:LEU:HD23	54:LR:155:LEU:N	2.34	0.43
61:LZ:35:ASP:OD2	61:LZ:35:ASP:N	2.52	0.43
66:Le:97:ALA:O	66:Le:122:VAL:HA	2.19	0.43
78:Lr:117:ILE:O	78:Lr:121:GLN:HG3	2.18	0.43
81:Ls:34:ASN:HB2	81:Ls:185:PHE:HE1	1.83	0.43
81:Ls:55:MET:HB3	81:Ls:87:GLY:HA2	2.00	0.43
84:Et:70:G:H5'	84:Et:71:G:OP2	2.18	0.43
1:S2:429:C:P	22:SJ:2:PRO:HD2	2.59	0.42
1:S2:643:A:OP1	22:SJ:38:ARG:NH2	2.32	0.42
1:S2:895:G:H3'	1:S2:896:U:H4'	2.01	0.42
1:S2:1395:C:H2'	1:S2:1396:A:O4'	2.19	0.42
1:S2:1408:U:H4'	6:SQ:24:HIS:HE1	1.79	0.42
1:S2:1514:G:H2'	1:S2:1515:G:C8	2.54	0.42
1:S2:1798:C:H2'	1:S2:1799:G:O4'	2.19	0.42
2:SD:18:LYS:H	2:SD:18:LYS:HG2	1.61	0.42
7:SS:14:ARG:HD2	7:SS:14:ARG:HA	1.65	0.42
11:Sd:6:LEU:HA	11:Sd:9:SER:HB3	2.01	0.42
12:Sg:143:GLN:OE1	12:Sg:144:ASP:N	2.34	0.42
16:CD:191:ARG:NH2	83:CB:712:ASP:OD2	2.50	0.42
17:SE:87:MET:HE1	17:SE:122:LYS:HG2	2.00	0.42
17:SE:87:MET:SD	17:SE:87:MET:O	2.77	0.42
17:SE:141:THR:HG22	17:SE:145:ARG:O	2.19	0.42
21:SG:23:LYS:HE2	21:SG:23:LYS:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:SG:63:MET:HA	21:SG:98:ARG:HB3	2.00	0.42
21:SG:159:ARG:HH21	21:SG:171:THR:C	2.27	0.42
21:SG:211:LYS:HE3	21:SG:211:LYS:HB3	1.82	0.42
23:SY:100:LYS:HA	23:SY:100:LYS:HD2	1.83	0.42
30:SC:61:MET:HE2	30:SC:61:MET:HA	2.01	0.42
31:SN:94:LYS:O	31:SN:98:VAL:HG12	2.18	0.42
35:L5:305:A:OP2	50:LN:15:GLN:NE2	2.46	0.42
35:L5:369:G:N2	35:L5:372:A:OP2	2.44	0.42
35:L5:1352:C:O2'	35:L5:1356:U:OP1	2.35	0.42
35:L5:1667:G:N1	35:L5:2281:U:OP2	2.32	0.42
35:L5:1669:A:H4'	35:L5:1685:G:H22	1.82	0.42
35:L5:1850:A:OP2	48:LL:5:ARG:NH1	2.52	0.42
35:L5:2749:C:H2'	35:L5:2750:G:C8	2.53	0.42
35:L5:3668:C:H5'	38:LA:8:GLN:O	2.19	0.42
35:L5:4101:C:H1'	35:L5:4109:G:O6	2.19	0.42
35:L5:4625:C:OP1	39:LB:224:LYS:HG2	2.19	0.42
35:L5:4872:G:O6	49:LM:98:ARG:NH1	2.52	0.42
36:L7:3:C:H2'	36:L7:4:U:H6	1.83	0.42
39:LB:153:MET:HE2	39:LB:194:LEU:HD11	2.00	0.42
43:LF:93:ILE:HG21	43:LF:247:MET:HE3	2.01	0.42
46:LI:78:LYS:HE3	46:LI:78:LYS:HB2	1.65	0.42
53:LQ:85:THR:HA	53:LQ:104:ARG:O	2.18	0.42
59:LX:149:VAL:O	59:LX:153:ILE:HG12	2.19	0.42
61:LZ:103:ASP:OD1	61:LZ:103:ASP:N	2.52	0.42
62:La:75:LEU:HD22	62:La:117:LEU:HD11	2.00	0.42
73:Ll:44:TRP:CH2	73:Ll:45:ARG:HD2	2.54	0.42
76:Lo:75:PRO:HD2	76:Lo:76:ASN:H	1.84	0.42
79:Lz:56:LYS:O	79:Lz:182:ASN:ND2	2.52	0.42
79:Lz:141:ASN:CG	79:Lz:149:ASP:HB3	2.44	0.42
80:CA:288[A]:LYS:HB2	80:CA:288[A]:LYS:HE2	1.83	0.42
81:Ls:16:LYS:O	81:Ls:20:LEU:HD13	2.19	0.42
83:CB:192:TYR:OH	83:CB:780:PRO:HG2	2.19	0.42
83:CB:559:LYS:O	83:CB:563:GLU:HG2	2.19	0.42
83:CB:607:ARG:NE	83:CB:701:ARG:HE	2.17	0.42
1:S2:14:C:H5'	30:SC:190:SER:OG	2.18	0.42
1:S2:328:U:O2'	1:S2:329:G:O5'	2.32	0.42
1:S2:527:C:H2'	1:S2:528:A:H8	1.80	0.42
1:S2:940:U:H3	1:S2:1002:U:H3	1.67	0.42
1:S2:952:G:C6	1:S2:975:G:N1	2.87	0.42
1:S2:976:G:H2'	1:S2:977:C:C6	2.54	0.42
1:S2:1279:C:H2'	1:S2:1280:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1476:A:H4'	1:S2:1477:U:H5"	2.01	0.42
1:S2:1676:U:H2'	1:S2:1677:U:O4'	2.19	0.42
1:S2:1678:A:O2'	1:S2:1679:A:H5'	2.18	0.42
2:SD:142:LEU:HD23	2:SD:142:LEU:H	1.84	0.42
3:SF:122:ARG:NH2	10:Sc:58:LEU:HA	2.34	0.42
4:SK:77:GLN:OE1	4:SK:77:GLN:N	2.47	0.42
7:SS:12:ILE:HD11	7:SS:19:ASN:HB2	2.00	0.42
8:ST:39:LEU:HD11	8:ST:99:VAL:HG21	2.01	0.42
9:SU:48:LEU:O	9:SU:50:VAL:HG23	2.19	0.42
12:Sg:272:GLN:HB3	12:Sg:308:ARG:NH1	2.31	0.42
17:SE:87:MET:HE1	17:SE:122:LYS:HG3	2.01	0.42
18:SI:152:ARG:HE	18:SI:152:ARG:HB2	1.63	0.42
25:SA:38:ILE:HD12	25:SA:38:ILE:HA	1.74	0.42
25:SA:123:VAL:HG13	25:SA:145:ILE:HG13	2.01	0.42
30:SC:251:LEU:HG	30:SC:256:TRP:HZ3	1.84	0.42
35:L5:66:A:N1	35:L5:311:G:O2'	2.48	0.42
35:L5:406:C:HO2'	35:L5:407:A:P	2.42	0.42
35:L5:497:G:H4'	35:L5:498:C:OP1	2.19	0.42
35:L5:663:G:C6	35:L5:664:G:C6	3.07	0.42
35:L5:664:G:H2'	35:L5:665:C:C6	2.54	0.42
35:L5:1412:G:C2	35:L5:1413:C:C5	3.07	0.42
35:L5:2258:C:H3'	35:L5:2259:G:H8	1.84	0.42
35:L5:3923:A:H2'	35:L5:3924:C:H6	1.84	0.42
35:L5:3953:G:N2	35:L5:4060:U:O4'	2.52	0.42
35:L5:4458:C:H2'	35:L5:4459:U:H6	1.83	0.42
35:L5:4600:G:O2'	35:L5:4601:U:P	2.77	0.42
35:L5:4742:G:OP1	35:L5:4900:C:N4	2.51	0.42
38:LA:20:VAL:HA	38:LA:23:ARG:HG3	2.01	0.42
38:LA:30:ARG:HD2	38:LA:63:PHE:CE1	2.53	0.42
41:LD:107:ARG:NH2	41:LD:169:GLY:O	2.51	0.42
42:LE:265:PRO:C	42:LE:266:GLN:HG2	2.43	0.42
50:LN:135:ILE:HD12	50:LN:151:ILE:HD13	2.01	0.42
50:LN:157:LYS:O	50:LN:162:ARG:NH1	2.41	0.42
61:LZ:98:LYS:HE2	61:LZ:98:LYS:HA	2.00	0.42
78:Lr:32:LEU:HD23	78:Lr:113:ARG:HD3	2.01	0.42
82:Lt:126:SER:OG	82:Lt:162:CYS:HB2	2.19	0.42
83:CB:279:SER:HB3	83:CB:285:LEU:HD21	2.00	0.42
85:LW:102:LYS:HA	85:LW:102:LYS:HD2	1.71	0.42
1:S2:155:G:H2'	1:S2:156:G:C8	2.54	0.42
1:S2:928:G:H1	1:S2:1013:U:H3	1.66	0.42
1:S2:1387:G:H2'	1:S2:1388:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1607:A:N6	1:S2:1632:G:H1'	2.35	0.42
1:S2:1751:C:N4	85:LW:74:ARG:HD2	2.33	0.42
1:S2:1808:U:H2'	1:S2:1809:A:H8	1.84	0.42
2:SD:7:LYS:NZ	9:SU:25:THR:HG21	2.34	0.42
2:SD:23:GLU:HG2	4:SK:64:TRP:HE1	1.84	0.42
7:SS:91:LYS:HG3	7:SS:92:ASP:N	2.33	0.42
18:SI:107:THR:OG1	18:SI:108:PRO:HD2	2.20	0.42
18:SI:193:LYS:HA	18:SI:193:LYS:HD3	1.79	0.42
26:SB:25:PHE:HA	26:SB:28:LYS:HG3	2.00	0.42
26:SB:164:ILE:HG13	26:SB:165:ARG:N	2.33	0.42
30:SC:109:ILE:HD11	30:SC:151:ILE:HD11	2.01	0.42
35:L5:1080:C:H2'	35:L5:1081:C:H6	1.84	0.42
35:L5:1743:A:H1'	41:LD:15:ARG:CZ	2.49	0.42
35:L5:1969:G:H4'	81:Ls:35:VAL:O	2.19	0.42
35:L5:2362:U:H2'	35:L5:2363:A:C8	2.54	0.42
35:L5:2439:G:H5'	35:L5:2778:G:OP2	2.19	0.42
35:L5:3870:C:H2'	35:L5:3871:A:C8	2.54	0.42
35:L5:3937:C:H3'	35:L5:3938:G:H2'	2.00	0.42
35:L5:3956:G:O2'	35:L5:3960:A:H8	2.03	0.42
35:L5:5029:C:O2'	35:L5:5030:U:H6	2.02	0.42
38:LA:113:VAL:HB	38:LA:164:ALA:HB1	2.00	0.42
40:LC:173:LYS:HA	40:LC:173:LYS:HD3	1.74	0.42
40:LC:221:PHE:O	40:LC:222:ARG:HG2	2.20	0.42
41:LD:202:GLN:OE1	41:LD:202:GLN:HA	2.18	0.42
43:LF:236:ARG:NH2	43:LF:243:LEU:HD22	2.34	0.42
47:LJ:19:LYS:HB3	47:LJ:75:ARG:NH1	2.35	0.42
69:Lh:87:LYS:HD2	69:Lh:91:MET:HE2	2.00	0.42
72:Lk:25:ILE:O	72:Lk:27:LYS:NZ	2.46	0.42
77:Lp:87:LYS:HE3	77:Lp:87:LYS:HB3	1.87	0.42
80:CA:28:ALA:HB1	80:CA:121:VAL:HG11	2.01	0.42
80:CA:46:LEU:HD11	80:CA:93:LYS:HA	2.00	0.42
83:CB:119:LEU:HA	83:CB:122:THR:HG22	2.00	0.42
83:CB:584:SER:OG	83:CB:737:GLN:HB2	2.20	0.42
84:Et:4:C:C2	84:Et:5:G:N7	2.87	0.42
1:S2:929:G:N2	1:S2:1104:G:H4'	2.35	0.42
1:S2:986:G:N2	32:SO:135:ILE:HD12	2.33	0.42
1:S2:1474:A:H2'	1:S2:1475:G:O4'	2.19	0.42
1:S2:1501:C:H2'	1:S2:1502:C:H6	1.84	0.42
3:SF:99:ILE:HD11	14:SZ:108:ILE:HG13	2.01	0.42
4:SK:6:LYS:HD3	4:SK:6:LYS:HA	1.69	0.42
5:SP:44:ARG:HG2	5:SP:44:ARG:HH11	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:SS:31:THR:HA	7:SS:36:VAL:HG13	2.01	0.42
12:Sg:17:TRP:HB2	12:Sg:36:ARG:CG	2.48	0.42
17:SE:32:SER:HG	17:SE:81:THR:HG1	1.60	0.42
17:SE:181:CYS:SG	17:SE:195:ILE:HG13	2.60	0.42
19:SL:2:ALA:HA	35:L5:3596:A:C4	2.54	0.42
20:SX:19:ASP:C	20:SX:19:ASP:OD1	2.63	0.42
31:SN:18:TYR:O	33:SW:56:HIS:NE2	2.42	0.42
31:SN:31:ASP:OD1	31:SN:31:ASP:N	2.44	0.42
31:SN:129:TYR:HB3	31:SN:135:LEU:HG	2.02	0.42
35:L5:189:G:H2'	35:L5:190:G:C8	2.54	0.42
35:L5:288:G:H2'	35:L5:289:C:H6	1.85	0.42
35:L5:423:G:H2'	35:L5:424:U:C6	2.54	0.42
35:L5:519:C:H1'	35:L5:643:C:C2	2.54	0.42
35:L5:687:U:O2'	42:LE:94:LYS:HB3	2.19	0.42
35:L5:1304:C:H2'	35:L5:1305:C:H6	1.85	0.42
35:L5:2514:G:OP1	68:Lg:15:THR:OG1	2.37	0.42
35:L5:2654:C:H2'	35:L5:2655:C:C6	2.55	0.42
35:L5:3684:G:H2'	35:L5:3685:C:C6	2.55	0.42
35:L5:3951:G:H8	35:L5:3951:G:OP2	2.02	0.42
35:L5:4475:G:OP2	45:LH:173:ARG:NH2	2.52	0.42
35:L5:4578:G:H2'	35:L5:4579:U:H6	1.83	0.42
37:L8:138:C:H2'	37:L8:139:G:C8	2.54	0.42
38:LA:7:GLY:HA2	38:LA:10:LYS:HG3	2.00	0.42
40:LC:297:GLU:CD	40:LC:297:GLU:H	2.27	0.42
41:LD:223:PHE:HB3	41:LD:226:TYR:HB2	2.00	0.42
42:LE:224:LYS:HE2	42:LE:224:LYS:HB2	1.91	0.42
43:LF:214:SER:OG	43:LF:215:SER:N	2.53	0.42
55:LS:93:MET:HE2	55:LS:95:ARG:HD3	2.01	0.42
55:LS:109:CYS:O	55:LS:113:MET:HB2	2.19	0.42
61:LZ:126:LYS:HB2	61:LZ:126:LYS:HE2	1.79	0.42
70:Li:75:LYS:HA	70:Li:75:LYS:HD3	1.87	0.42
70:Li:80:HIS:NE2	70:Li:84:LYS:HE3	2.35	0.42
79:Lz:24:LYS:HE3	79:Lz:173:LYS:HA	2.00	0.42
81:Ls:106:LYS:HE3	81:Ls:186:GLY:N	2.34	0.42
1:S2:642:U:H5"	22:SJ:41:ARG:HE	1.83	0.42
1:S2:656:G:H5'	1:S2:662:G:N2	2.34	0.42
1:S2:1127:C:H2'	1:S2:1128:C:H6	1.82	0.42
1:S2:1331:C:N3	16:CD:198:GLY:N	2.59	0.42
1:S2:1344:A:N1	1:S2:1385:G:O2'	2.43	0.42
1:S2:1567:G:H2'	1:S2:1568:C:C6	2.55	0.42
1:S2:1587:G:C5	8:ST:78:ILE:HD11	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:SD:188:ILE:N	2:SD:188:ILE:HD12	2.35	0.42
8:ST:30:VAL:HB	8:ST:34:VAL:HG11	2.01	0.42
9:SU:40:ILE:HG23	9:SU:44:LYS:HE2	2.00	0.42
12:Sg:265:ILE:H	12:Sg:265:ILE:HD12	1.84	0.42
19:SL:93:LEU:HD12	19:SL:93:LEU:HA	1.94	0.42
21:SG:159:ARG:NE	21:SG:171:THR:OG1	2.53	0.42
23:SY:17:LEU:H	23:SY:17:LEU:HD22	1.84	0.42
25:SA:36:GLN:H	25:SA:36:GLN:HG2	1.52	0.42
25:SA:184:ARG:NE	25:SA:191:ARG:HA	2.35	0.42
27:SH:26:ALA:O	27:SH:29:GLU:HG3	2.19	0.42
27:SH:33:ASN:HD21	27:SH:36:LEU:HB2	1.85	0.42
35:L5:189:G:C6	35:L5:253:G:C6	3.08	0.42
35:L5:363:A:N1	35:L5:376:A:H5"	2.35	0.42
35:L5:663:G:N1	35:L5:664:G:C6	2.87	0.42
35:L5:1786:A:O2'	35:L5:1788:A:OP2	2.30	0.42
35:L5:1976:G:H21	82:Lt:139:VAL:HG12	1.83	0.42
35:L5:3664:G:H2'	35:L5:3665:G:C8	2.53	0.42
35:L5:4588:U:H5'	39:LB:14:LEU:HB3	2.02	0.42
35:L5:4652:G:H2'	35:L5:4653:C:C6	2.55	0.42
35:L5:4694:G:H5'	35:L5:4695:C:OP2	2.20	0.42
35:L5:4708:A:N3	35:L5:4709:U:H5'	2.35	0.42
35:L5:4895:C:H3'	35:L5:4895:C:OP2	2.19	0.42
36:L7:39:C:O2'	47:LJ:46:GLN:HG3	2.19	0.42
41:LD:153:THR:O	41:LD:153:THR:OG1	2.35	0.42
43:LF:92:VAL:O	43:LF:120:GLY:HA2	2.19	0.42
45:LH:89:ARG:NH2	45:LH:187:VAL:HG13	2.35	0.42
46:LI:184:MET:HB3	46:LI:189:CYS:HB2	2.01	0.42
51:LO:187:LYS:HD3	51:LO:187:LYS:HA	1.90	0.42
54:LR:153:LYS:C	54:LR:155:LEU:H	2.27	0.42
56:LT:113:ASP:O	56:LT:117:LYS:HD3	2.20	0.42
63:Lb:102:PRO:HA	63:Lb:109:ARG:HH22	1.84	0.42
76:Lo:10:THR:HG21	76:Lo:70:LEU:HD23	2.02	0.42
82:Lt:48:LYS:HA	82:Lt:48:LYS:HD2	1.71	0.42
83:CB:293:ILE:O	83:CB:297:ILE:HG13	2.19	0.42
83:CB:438:LYS:HB2	83:CB:438:LYS:HE2	1.80	0.42
83:CB:635:LEU:HB3	83:CB:641:TRP:HB2	2.02	0.42
84:Et:30:G:C6	84:Et:31:A:C6	3.07	0.42
1:S2:601:G:H2'	1:S2:602:G:C8	2.55	0.42
1:S2:846:G:C4	17:SE:19:MET:HE2	2.55	0.42
1:S2:1139:C:H2'	1:S2:1140:G:O4'	2.20	0.42
1:S2:1716:C:H2'	1:S2:1717:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Sd:14:PHE:CD1	11:Sd:14:PHE:C	2.97	0.42
18:SI:87:ASN:O	18:SI:90:LEU:HB2	2.19	0.42
21:SG:22:ARG:HE	21:SG:25:ARG:NH1	2.18	0.42
22:SJ:10:ARG:HE	22:SJ:10:ARG:HB3	1.59	0.42
25:SA:30:LEU:HB2	25:SA:47:TYR:CZ	2.54	0.42
26:SB:30:TRP:CH2	32:SO:88:LEU:HD21	2.54	0.42
29:Sa:58:VAL:HG12	32:SO:125:LYS:HB3	2.01	0.42
30:SC:278:THR:HA	30:SC:279:ARG:HA	1.85	0.42
32:SO:67:ASP:OD1	32:SO:67:ASP:N	2.52	0.42
34:Sb:78:SER:O	34:Sb:80:ARG:NH2	2.45	0.42
35:L5:429:A:H2'	35:L5:430:G:C8	2.54	0.42
35:L5:499:G:C2'	35:L5:504:G:H22	2.32	0.42
35:L5:1664:U:H2'	35:L5:1665:C:H6	1.84	0.42
35:L5:1762:C:H6	35:L5:1762:C:H2'	1.66	0.42
35:L5:2080:U:H2'	35:L5:2081:C:H6	1.85	0.42
35:L5:2710:C:N3	35:L5:2712:G:C8	2.87	0.42
35:L5:3759:A:H5'	35:L5:3765:G:H22	1.85	0.42
35:L5:4236:G:H2'	35:L5:4237:C:C6	2.55	0.42
37:L8:39:G:H1'	37:L8:103:A:H61	1.83	0.42
37:L8:64:U:C2	37:L8:65:A:C8	3.07	0.42
37:L8:93:C:O2'	37:L8:94:G:H8	2.01	0.42
38:LA:96:LEU:HD22	38:LA:108:PRO:HD2	2.01	0.42
38:LA:126:LEU:HD13	38:LA:150:LEU:HD21	2.00	0.42
46:LI:137:SER:HB3	46:LI:173:PHE:CE1	2.54	0.42
60:LY:10:ASP:HB3	60:LY:13:LYS:HB2	2.02	0.42
60:LY:102:SER:OG	60:LY:103:LYS:NZ	2.49	0.42
62:La:3:SER:HA	62:La:6:ARG:HD2	2.00	0.42
69:Lh:33:VAL:O	69:Lh:37:THR:HG23	2.18	0.42
80:CA:187:SER:HB3	80:CA:201:ILE:HG13	2.01	0.42
80:CA:220:VAL:HB	80:CA:221:HIS:CE1	2.54	0.42
83:CB:59:THR:O	83:CB:456:ARG:NH1	2.52	0.42
83:CB:597:ASN:CG	83:CB:599:HIS:HB2	2.45	0.42
1:S2:92:A:H61	1:S2:444:G:H1'	1.84	0.42
1:S2:166:A:H2'	1:S2:167:G:C8	2.55	0.42
1:S2:337:C:C4	1:S2:338:G:C8	3.08	0.42
1:S2:1024:A:OP2	31:SN:124:ARG:NH2	2.45	0.42
1:S2:1748:G:H2'	1:S2:1749:G:C8	2.54	0.42
2:SD:163:PRO:O	2:SD:167:TYR:HB2	2.19	0.42
5:SP:75:VAL:HG22	5:SP:93:MET:HG3	2.02	0.42
5:SP:90:VAL:HG11	5:SP:109:PRO:HA	2.02	0.42
6:SQ:97:GLN:HB2	6:SQ:105:LYS:HE3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:ST:102:ARG:NE	8:ST:102:ARG:HA	2.33	0.42
9:SU:66:ARG:NH1	9:SU:76:THR:O	2.53	0.42
17:SE:136:ILE:HD12	17:SE:148:ARG:HD2	2.02	0.42
18:SI:77:ARG:NH2	18:SI:79:ILE:HG12	2.35	0.42
21:SG:137:ARG:HD2	21:SG:178:ARG:NH1	2.35	0.42
25:SA:17:LYS:HD3	25:SA:199:PRO:HG3	2.02	0.42
27:SH:66:VAL:HA	27:SH:69:LEU:HD23	2.01	0.42
31:SN:23:PRO:HB2	31:SN:26:LEU:HD23	2.02	0.42
31:SN:75:LEU:HB3	31:SN:81:ALA:HB2	2.02	0.42
35:L5:170:C:H4'	35:L5:171:U:O4'	2.19	0.42
35:L5:425:U:H2'	35:L5:426:A:C8	2.54	0.42
35:L5:1468:C:H2'	35:L5:1469:C:H6	1.84	0.42
35:L5:1478:C:H2'	35:L5:1479:G:H8	1.84	0.42
35:L5:1613:A:H5"	38:LA:183:GLY:HA3	2.01	0.42
35:L5:1725:U:H2'	35:L5:1726:U:C6	2.54	0.42
35:L5:2568:C:H2'	35:L5:2569:G:C8	2.55	0.42
35:L5:3890:A:N7	35:L5:4571:A:H1'	2.35	0.42
36:L7:92:C:H2'	36:L7:93:G:H8	1.85	0.42
40:LC:29:LYS:HA	40:LC:29:LYS:HD2	1.90	0.42
59:LX:117:TYR:CE1	59:LX:153:ILE:HD12	2.54	0.42
65:Ld:37:GLY:O	65:Ld:41:ARG:HG3	2.19	0.42
79:Lz:198:TRP:CG	79:Lz:199:GLN:H	2.37	0.42
83:CB:337:LYS:HD2	83:CB:341:ARG:NH2	2.35	0.42
83:CB:592:LEU:HD23	83:CB:603:TYR:CD1	2.55	0.42
83:CB:612:GLY:HA2	83:CB:615:GLU:HG2	2.01	0.42
83:CB:678:SER:HB3	83:CB:722:ILE:HG13	2.00	0.42
1:S2:142:C:H42	1:S2:329:G:H5"	1.85	0.42
1:S2:224:A:H2'	1:S2:225:G:O4'	2.20	0.42
1:S2:443:U:H2'	1:S2:444:G:O4'	2.19	0.42
1:S2:496:C:H2'	1:S2:497:C:C6	2.53	0.42
1:S2:1174:U:H2'	1:S2:1175:G:C8	2.55	0.42
1:S2:1370:A:O2'	1:S2:1372:U:OP1	2.36	0.42
1:S2:1548:G:H2'	1:S2:1549:U:C6	2.54	0.42
1:S2:1687:C:H2'	1:S2:1688:C:C6	2.54	0.42
1:S2:1749:G:H2'	1:S2:1750:C:H6	1.84	0.42
2:SD:95:GLY:O	2:SD:126:ILE:HG23	2.19	0.42
3:SF:91:ARG:HD2	14:SZ:103:HIS:CE1	2.54	0.42
12:Sg:82:SER:O	12:Sg:108:VAL:HG23	2.19	0.42
13:SM:61:TYR:O	13:SM:65:VAL:HG12	2.19	0.42
14:SZ:78:LYS:HD3	14:SZ:78:LYS:HA	1.79	0.42
15:Sf:146:LEU:HD22	15:Sf:147:THR:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:SE:86:PHE:CD1	17:SE:87:MET:HB3	2.55	0.42
21:SG:149:LYS:HD2	21:SG:149:LYS:HA	1.74	0.42
25:SA:57:LYS:HD2	25:SA:57:LYS:HA	1.82	0.42
26:SB:41:ILE:HD11	26:SB:76:ASN:ND2	2.35	0.42
32:SO:34:PHE:HA	32:SO:98:ARG:HG3	2.01	0.42
35:L5:495:C:H2'	35:L5:496:G:H8	1.82	0.42
35:L5:1238:A:C8	42:LE:59:ARG:HD2	2.54	0.42
35:L5:1849:U:H3'	48:LL:5:ARG:NH1	2.34	0.42
35:L5:1959:U:H4'	35:L5:1960:A:H5"	2.02	0.42
35:L5:2281:U:C2	35:L5:2282:A:C8	3.08	0.42
35:L5:2726:G:H2'	35:L5:2727:C:C6	2.55	0.42
35:L5:3851:U:H2'	35:L5:3852:A:O4'	2.20	0.42
35:L5:3964:U:O2'	35:L5:4048:A:N1	2.51	0.42
35:L5:4508:C:N3	35:L5:4512:U:H5	2.17	0.42
35:L5:4520:G:H2'	35:L5:4521:U:O4'	2.19	0.42
35:L5:4598:C:H2'	35:L5:4611:A:N6	2.34	0.42
35:L5:4970:C:H2'	35:L5:4971:A:H8	1.85	0.42
37:L8:142:U:H2'	37:L8:143:G:O4'	2.19	0.42
38:LA:5:ILE:O	38:LA:8:GLN:HB2	2.20	0.42
39:LB:56:ILE:O	39:LB:73:VAL:HA	2.20	0.42
39:LB:76:VAL:HG12	39:LB:334:LYS:HA	2.02	0.42
39:LB:154:LYS:HG3	39:LB:191:ALA:HA	2.02	0.42
41:LD:37:VAL:HG12	41:LD:50:ARG:HD2	2.02	0.42
41:LD:52:ILE:O	41:LD:62:CYS:HA	2.19	0.42
43:LF:171:ASP:OD2	43:LF:171:ASP:C	2.62	0.42
45:LH:106:GLN:HB2	45:LH:111:LEU:HB3	2.01	0.42
47:LJ:120:ASP:O	47:LJ:123:ILE:HG13	2.20	0.42
50:LN:6:TYR:CZ	70:Li:40:VAL:HG22	2.55	0.42
64:Lc:38:ILE:HG21	64:Lc:63:TYR:HB3	2.01	0.42
65:Ld:117:LEU:HD23	65:Ld:117:LEU:HA	1.88	0.42
83:CB:187:VAL:O	83:CB:191:THR:HG22	2.20	0.42
83:CB:518:PRO:HA	83:CB:521:VAL:HG22	2.02	0.42
1:S2:210:U:H2'	1:S2:211:G:H8	1.84	0.42
1:S2:455:A:H2'	1:S2:456:C:C6	2.55	0.42
1:S2:1540:G:OP1	8:ST:39:LEU:HD23	2.20	0.42
2:SD:40:ARG:CZ	9:SU:106:ILE:HG21	2.49	0.42
3:SF:167:LYS:HA	14:SZ:71:ALA:HB1	2.01	0.42
5:SP:111:MET:HG3	7:SS:117:ILE:HG12	2.01	0.42
5:SP:127:LYS:O	5:SP:128:HIS:HB3	2.20	0.42
6:SQ:8:GLN:H	6:SQ:8:GLN:CD	2.28	0.42
6:SQ:102:GLU:HB2	6:SQ:105:LYS:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Sg:178:ASN:ND2	12:Sg:181:ASN:H	2.18	0.42
17:SE:95:THR:HG23	17:SE:97:GLU:OE2	2.20	0.42
21:SG:49:VAL:HG22	21:SG:115:LYS:HE3	2.02	0.42
21:SG:69:THR:O	21:SG:99:GLY:HA3	2.20	0.42
22:SJ:49:THR:O	22:SJ:53:ILE:HG13	2.19	0.42
22:SJ:122:SER:O	22:SJ:124:HIS:N	2.53	0.42
22:SJ:136:ARG:NH2	22:SJ:159:PHE:O	2.51	0.42
25:SA:210:ILE:H	25:SA:210:ILE:HG12	1.51	0.42
30:SC:258:GLU:OE1	30:SC:258:GLU:HA	2.20	0.42
35:L5:691:C:H2'	35:L5:692:A:H8	1.84	0.42
35:L5:937:U:C6	49:LM:46:ARG:HD2	2.55	0.42
35:L5:2471:G:H5"	44:LG:59:ARG:HD2	2.01	0.42
35:L5:2509:C:H5'	37:L8:108:A:H4'	2.01	0.42
35:L5:2714:G:H2'	35:L5:2715:G:H8	1.85	0.42
35:L5:3753:G:H2'	35:L5:3754:G:O4'	2.20	0.42
35:L5:3919:C:C5'	38:LA:207:VAL:HG13	2.49	0.42
35:L5:3933:G:H2'	35:L5:3934:G:H8	1.84	0.42
35:L5:4258:C:H2'	35:L5:4259:C:C6	2.55	0.42
35:L5:4563:U:H2'	35:L5:4564:A:C8	2.55	0.42
35:L5:4918:C:H2'	35:L5:4919:G:C8	2.55	0.42
35:L5:4993:G:H22	35:L5:5058:A:H2	1.67	0.42
43:LF:75:ALA:HB2	56:LT:140:PHE:CE2	2.55	0.42
47:LJ:95:ARG:HG2	47:LJ:96:LYS:H	1.84	0.42
61:LZ:61:LYS:HE2	61:LZ:65:ARG:HD2	2.02	0.42
64:Lc:10:SER:O	64:Lc:14:ILE:HG22	2.19	0.42
80:CA:204:ASN:N	80:CA:205:PRO:HD3	2.35	0.42
80:CA:326:MET:HE1	80:CA:331:MET:SD	2.59	0.42
83:CB:553:HIS:CE1	83:CB:557:CYS:SG	3.13	0.42
1:S2:12:U:H2'	1:S2:13:C:H6	1.84	0.42
1:S2:563:G:H1	1:S2:592:C:H5	1.66	0.42
1:S2:1202:U:H2'	1:S2:1203:G:H8	1.84	0.42
1:S2:1521:C:N4	7:SS:137:LYS:HG3	2.34	0.42
1:S2:1801:A:H2'	1:S2:1802:C:C6	2.55	0.42
2:SD:23:GLU:HG2	4:SK:64:TRP:NE1	2.35	0.42
7:SS:89:ASP:HB3	7:SS:93:GLY:H	1.85	0.42
10:Sc:35:MET:HE3	10:Sc:35:MET:HB3	1.86	0.42
11:Sd:12:ARG:HG3	11:Sd:18:SER:HA	2.01	0.42
15:Sf:113:LYS:HE3	15:Sf:113:LYS:HB3	1.86	0.42
19:SL:27:GLU:C	19:SL:29:GLY:HA2	2.45	0.42
21:SG:5:ILE:HD13	21:SG:124:LEU:HD12	2.01	0.42
21:SG:116:LYS:HD3	21:SG:117:GLY:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:SG:131:ARG:HD2	85:LW:80:ARG:HB2	2.01	0.42
23:SY:104:ARG:HE	23:SY:108:LYS:HE2	1.84	0.42
25:SA:128:ARG:O	25:SA:131:HIS:ND1	2.53	0.42
32:SO:135:ILE:O	32:SO:135:ILE:HG13	2.18	0.42
35:L5:6:C:H2'	35:L5:7:C:C6	2.55	0.42
35:L5:35:U:OP2	50:LN:83:LYS:NZ	2.53	0.42
35:L5:489:C:N3	35:L5:665:C:N4	2.67	0.42
35:L5:1243:C:C2	35:L5:1244:G:C8	3.08	0.42
35:L5:1342:A:O2'	35:L5:1343:A:H5'	2.20	0.42
35:L5:1625:G:N1	35:L5:3918:G:OP1	2.50	0.42
35:L5:1895:G:H2'	35:L5:1896:A:O4'	2.20	0.42
35:L5:1998:A:H2'	35:L5:1999:A:C8	2.55	0.42
35:L5:2390:G:H22	35:L5:2825:A:H2	1.67	0.42
35:L5:2621:A:H2'	35:L5:2622:G:C8	2.55	0.42
35:L5:4538:G:H2'	35:L5:4539:U:C6	2.55	0.42
35:L5:4626:A:OP2	39:LB:224:LYS:NZ	2.48	0.42
35:L5:4684:A:H2'	35:L5:4685:U:O4'	2.20	0.42
35:L5:4765:G:O6	49:LM:4:ARG:NH2	2.53	0.42
40:LC:211:TYR:CE2	40:LC:229:LEU:HB3	2.51	0.42
47:LJ:61:GLY:O	47:LJ:62:ILE:HG23	2.20	0.42
50:LN:126:THR:HG23	50:LN:127:TYR:CD1	2.55	0.42
54:LR:11:ALA:HA	54:LR:41:ILE:HG21	2.01	0.42
56:LT:100:LYS:O	56:LT:104:SER:OG	2.25	0.42
57:LU:76:VAL:C	57:LU:78:PHE:H	2.28	0.42
59:LX:74:TYR:CE2	69:Lh:26:VAL:HG12	2.55	0.42
65:Ld:92:ARG:HA	65:Ld:102:LEU:HD23	2.02	0.42
73:Ll:33:ASN:HD21	73:Ll:35:ILE:HG22	1.85	0.42
80:CA:158:LYS:HE2	80:CA:329:GLY:HA2	2.02	0.42
81:Ls:13:TYR:HE2	81:Ls:54:LEU:HD11	1.84	0.42
81:Ls:26:LYS:HB2	81:Ls:26:LYS:HE2	1.73	0.42
81:Ls:33:ASP:CG	81:Ls:34:ASN:H	2.27	0.42
81:Ls:115:ALA:O	81:Ls:167:VAL:HG22	2.20	0.42
82:Lt:56:LEU:O	82:Lt:57:ARG:NE	2.52	0.42
83:CB:587:SER:O	83:CB:605:LYS:NZ	2.52	0.42
84:Et:15:G:C6	84:Et:59:G:C4	3.08	0.42
84:Et:20:U:OP1	84:Et:20:U:H2'	2.20	0.42
1:S2:96:C:H2'	1:S2:97:U:H6	1.85	0.41
1:S2:475:C:H1'	1:S2:507:G:H1'	2.02	0.41
1:S2:990:A:O5'	26:SB:116:LYS:NZ	2.51	0.41
1:S2:1103:C:H2'	1:S2:1104:G:H8	1.85	0.41
1:S2:1179:G:N2	1:S2:1182:A:OP2	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1247:C:H2'	16:CD:190:LYS:HZ1	1.84	0.41
1:S2:1401:A:O2'	9:SU:51:LYS:NZ	2.46	0.41
1:S2:1675:A:OP1	3:SF:86:LYS:NZ	2.47	0.41
1:S2:1681:U:H2'	1:S2:1682:C:C6	2.55	0.41
1:S2:1689:C:H2'	1:S2:1690:U:C6	2.55	0.41
12:Sg:188:HIS:C	12:Sg:188:HIS:CD2	2.98	0.41
18:SI:130:THR:N	18:SI:131:PRO:HD2	2.35	0.41
18:SI:157:LYS:HA	18:SI:157:LYS:HE2	2.02	0.41
19:SL:135:SER:HB2	19:SL:138:VAL:HG22	2.02	0.41
20:SX:67:ARG:HB3	20:SX:84:PHE:HE1	1.85	0.41
25:SA:37:TYR:HA	25:SA:53:ARG:HD2	2.01	0.41
25:SA:78:SER:HB2	25:SA:87:VAL:HG11	2.02	0.41
26:SB:41:ILE:HD12	26:SB:41:ILE:N	2.35	0.41
27:SH:77:VAL:HA	27:SH:80:VAL:HG22	2.01	0.41
29:Sa:47:ALA:HA	29:Sa:50:VAL:CG2	2.50	0.41
31:SN:47:PRO:HA	31:SN:50:ILE:HB	2.02	0.41
35:L5:223:G:H4'	35:L5:225:G:N7	2.35	0.41
35:L5:457:G:H2'	35:L5:458:C:H6	1.85	0.41
35:L5:498:C:N4	35:L5:657:C:H42	2.14	0.41
35:L5:705:G:H2'	35:L5:706:C:H6	1.84	0.41
35:L5:1552:G:H1'	35:L5:1575:A:N6	2.35	0.41
35:L5:1878:G:OP2	63:Lb:14:ARG:NH1	2.53	0.41
35:L5:2249:C:H2'	35:L5:2250:C:H5	1.85	0.41
35:L5:2808:G:O3'	54:LR:60:ARG:NH1	2.53	0.41
35:L5:4163:U:H5'	35:L5:4164:C:H5"	2.02	0.41
35:L5:4477:A:H4'	45:LH:174:LYS:HD2	2.01	0.41
35:L5:4724:A:H2'	35:L5:4725:C:O4'	2.20	0.41
35:L5:4891:G:H22	49:LM:118:MET:HE3	1.85	0.41
35:L5:4934:A:H2'	35:L5:4935:C:C6	2.55	0.41
35:L5:5002:U:H2'	35:L5:5003:U:C6	2.55	0.41
39:LB:27:GLY:HA2	39:LB:276:HIS:CD2	2.55	0.41
39:LB:257:TRP:CD1	39:LB:257:TRP:C	2.98	0.41
39:LB:329:ASP:OD1	39:LB:329:ASP:N	2.44	0.41
41:LD:82:GLU:O	41:LD:85:LYS:HG2	2.19	0.41
43:LF:136:VAL:O	43:LF:140:ILE:HG12	2.20	0.41
44:LG:85:GLN:OE1	44:LG:229:ARG:NH1	2.50	0.41
52:LP:133:HIS:H	52:LP:135:ARG:NH1	2.17	0.41
56:LT:35:LYS:HA	56:LT:35:LYS:HD2	1.92	0.41
57:LU:97:ARG:HE	57:LU:97:ARG:HB2	1.66	0.41
58:LV:82:ILE:HD13	58:LV:104:VAL:HG13	2.01	0.41
59:LX:65:ALA:HB2	69:Lh:69:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Lz:38:LEU:HD21	79:Lz:197:ASN:CG	2.45	0.41
80:CA:80:ILE:O	80:CA:89:PHE:HB3	2.20	0.41
80:CA:210:LYS:HA	80:CA:210:LYS:HD3	1.88	0.41
81:Ls:135:THR:CG2	81:Ls:139:GLN:HE21	2.31	0.41
82:Lt:156:ASN:OD1	82:Lt:157:SER:N	2.53	0.41
83:CB:169:LEU:HD23	83:CB:169:LEU:HA	1.88	0.41
84:Et:6:G:H2'	84:Et:7:A:C8	2.54	0.41
1:S2:47:G:C6	1:S2:480:G:C2	3.08	0.41
1:S2:65:C:C4	21:SG:133:LEU:HB3	2.55	0.41
1:S2:185:G:N2	1:S2:214:U:O2	2.51	0.41
1:S2:1220:A:H2'	1:S2:1221:G:O4'	2.20	0.41
1:S2:1389:C:O2'	2:SD:162:ASP:HB3	2.20	0.41
1:S2:1587:G:OP1	8:ST:67:ARG:NH2	2.53	0.41
1:S2:1622:U:H3'	1:S2:1623:A:H4'	2.02	0.41
2:SD:59:LEU:HA	2:SD:66:ILE:HG12	2.00	0.41
6:SQ:113:ILE:HD11	6:SQ:120:LEU:HD23	2.01	0.41
8:ST:104:LEU:O	8:ST:108:GLU:HG2	2.20	0.41
12:Sg:297:THR:HG22	12:Sg:311:GLN:OE1	2.20	0.41
13:SM:23:LYS:HA	13:SM:26:LEU:HG	2.02	0.41
17:SE:179:ASN:O	17:SE:195:ILE:HD12	2.19	0.41
20:SX:29:LYS:HE2	20:SX:35:ALA:HB1	2.02	0.41
21:SG:143:LYS:HE3	21:SG:143:LYS:HB3	1.70	0.41
26:SB:35:ALA:O	26:SB:42:ARG:HD2	2.20	0.41
26:SB:62:LEU:HD22	26:SB:65:ARG:NH2	2.34	0.41
26:SB:144:LYS:HG3	26:SB:208:HIS:CD2	2.55	0.41
27:SH:31:GLU:N	27:SH:31:GLU:OE1	2.53	0.41
27:SH:70:LYS:HA	27:SH:70:LYS:HD2	1.81	0.41
32:SO:50:LYS:HG3	32:SO:51:GLU:N	2.34	0.41
35:L5:21:G:H1'	37:L8:103:A:N3	2.35	0.41
35:L5:76:A:H5'	48:LL:101:ARG:NH1	2.35	0.41
35:L5:106:A:H1'	35:L5:336:A:N3	2.34	0.41
35:L5:132:G:N2	35:L5:136:C:O2'	2.53	0.41
35:L5:259:C:H2'	35:L5:260:C:C6	2.54	0.41
35:L5:930:G:OP1	40:LC:353:LYS:HE3	2.19	0.41
35:L5:1401:C:N4	35:L5:1416:G:O6	2.41	0.41
35:L5:1577:G:H5'	35:L5:1578:U:H5"	2.02	0.41
35:L5:1660:U:O2'	62:La:12:ARG:HG3	2.20	0.41
35:L5:2372:U:H2'	35:L5:2373:C:C6	2.55	0.41
35:L5:3886:G:H5"	51:LO:82:ARG:NH2	2.34	0.41
35:L5:3893:C:O2'	35:L5:4979:A:N1	2.51	0.41
35:L5:4095:G:H5"	35:L5:4096:C:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4965:U:H5”	39:LB:128:LYS:NZ	2.35	0.41
39:LB:382:MET:HE3	39:LB:386:LYS:NZ	2.35	0.41
41:LD:182:GLY:HA2	41:LD:194:VAL:CG2	2.50	0.41
45:LH:41:ILE:HD12	45:LH:41:ILE:C	2.45	0.41
51:LO:74:ARG:HG2	51:LO:146:GLY:HA3	2.02	0.41
51:LO:181:ALA:O	51:LO:185:VAL:HG22	2.20	0.41
61:LZ:74:VAL:HG13	61:LZ:98:LYS:NZ	2.34	0.41
68:Lg:90:ARG:HH11	68:Lg:90:ARG:HG3	1.85	0.41
79:Lz:199:GLN:OE1	79:Lz:200:ASN:N	2.53	0.41
83:CB:350:LEU:HD12	83:CB:350:LEU:HA	1.88	0.41
83:CB:743:PRO:HG3	83:CB:817:TRP:CZ3	2.55	0.41
85:LW:119:LYS:HD3	85:LW:119:LYS:HA	1.88	0.41
1:S2:381:C:N4	18:SI:27:TYR:HB2	2.35	0.41
1:S2:494:C:C2	1:S2:495:U:C5	3.08	0.41
1:S2:655:A:H4’	1:S2:656:G:H3’	2.03	0.41
1:S2:688:U:O2’	1:S2:689:U:OP2	2.34	0.41
1:S2:1020:A:H4’	31:SN:128:TYR:OH	2.20	0.41
1:S2:1485:U:OP1	2:SD:151:LYS:NZ	2.51	0.41
1:S2:1633:A:H2’	1:S2:1634:A:H8	1.85	0.41
1:S2:1686:G:H2’	1:S2:1687:C:H6	1.85	0.41
1:S2:1716:C:C2	1:S2:1717:C:C5	3.08	0.41
2:SD:222:PRO:HG2	12:Sg:226:HIS:ND1	2.34	0.41
5:SP:34:MET:HB3	5:SP:42:ARG:HG3	2.02	0.41
6:SQ:17:LYS:HA	6:SQ:126:ARG:HD3	2.03	0.41
8:ST:37:VAL:C	8:ST:39:LEU:H	2.27	0.41
8:ST:94:ARG:H	8:ST:94:ARG:HG2	1.64	0.41
16:CD:185:PHE:HB3	16:CD:191:ARG:HA	2.02	0.41
16:CD:287:LYS:HE2	16:CD:287:LYS:HB3	1.73	0.41
17:SE:86:PHE:HA	17:SE:109:PHE:CZ	2.55	0.41
18:SI:56:ARG:NE	18:SI:180:GLY:O	2.49	0.41
18:SI:186:ASP:OD2	18:SI:186:ASP:N	2.53	0.41
22:SJ:46:VAL:HG11	22:SJ:106:LEU:HD11	2.01	0.41
26:SB:193:ILE:HD11	26:SB:212:VAL:HG23	2.02	0.41
32:SO:63:LYS:HA	32:SO:63:LYS:HD2	1.75	0.41
33:SW:112:ASP:OD1	33:SW:112:ASP:C	2.63	0.41
34:Sb:42:LYS:HZ2	34:Sb:57:VAL:HG22	1.84	0.41
35:L5:25:A:H2’	35:L5:26:C:H6	1.84	0.41
35:L5:212:A:H2’	35:L5:213:G:C8	2.53	0.41
35:L5:1569:U:H2’	35:L5:1570:G:C8	2.55	0.41
35:L5:1742:A:OP2	41:LD:10:LYS:HG2	2.20	0.41
35:L5:1769:G:N7	35:L5:1770:A:H1’	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:2704:C:H2'	35:L5:2705:G:H8	1.83	0.41
35:L5:3832:U:H2'	35:L5:3833:C:H6	1.84	0.41
35:L5:4139:G:H1'	35:L5:4146:G:N1	2.35	0.41
35:L5:4345:C:H2'	35:L5:4346:U:H6	1.84	0.41
37:L8:65:A:H2'	37:L8:66:A:H8	1.85	0.41
49:LM:97:ALA:HB1	51:LO:200:GLY:O	2.20	0.41
50:LN:189:ARG:O	50:LN:193:ARG:HG3	2.20	0.41
54:LR:109:TYR:HD2	54:LR:142:ILE:HD13	1.85	0.41
57:LU:94:ASN:HB2	57:LU:96:LEU:CD1	2.46	0.41
61:LZ:74:VAL:HG13	61:LZ:98:LYS:HZ2	1.84	0.41
65:Ld:45:ALA:O	65:Ld:49:ILE:HG13	2.19	0.41
78:Lr:64:ILE:HG23	78:Lr:102:TYR:CZ	2.55	0.41
79:Lz:196:LYS:HB3	79:Lz:196:LYS:HE2	1.93	0.41
83:CB:275:LYS:HB2	83:CB:275:LYS:HE2	1.87	0.41
83:CB:697:MET:HE2	83:CB:697:MET:HB2	1.82	0.41
1:S2:888:U:H4'	1:S2:889:U:H5'	2.02	0.41
1:S2:1248:U:H2'	1:S2:1249:C:C6	2.55	0.41
1:S2:1518:C:OP1	1:S2:1519:U:H2'	2.19	0.41
1:S2:1621:U:O2'	1:S2:1622:U:H2'	2.21	0.41
1:S2:1733:U:H2'	1:S2:1734:G:O4'	2.19	0.41
9:SU:88:LEU:C	9:SU:89:ILE:HD13	2.45	0.41
9:SU:101:ILE:HA	9:SU:104:ILE:HG12	2.02	0.41
13:SM:40:LYS:HZ1	15:Sf:129:GLY:CA	2.33	0.41
17:SE:9:LEU:HB2	17:SE:30:ARG:HD3	2.02	0.41
17:SE:22:LYS:HB3	17:SE:22:LYS:HE2	1.79	0.41
18:SI:83:TYR:HB3	18:SI:101:ILE:HB	2.02	0.41
18:SI:133:GLU:HA	18:SI:136:ILE:HG22	2.01	0.41
19:SL:4:ILE:HG21	19:SL:55:TYR:HA	2.01	0.41
25:SA:3:GLY:HA3	28:SV:79:VAL:HG12	2.02	0.41
25:SA:73:ASP:OD1	25:SA:73:ASP:C	2.62	0.41
26:SB:167:LYS:O	26:SB:171:ILE:HG23	2.20	0.41
29:Sa:46:GLU:O	29:Sa:48:ALA:N	2.54	0.41
30:SC:75:ILE:HG22	30:SC:269:PHE:HE2	1.85	0.41
30:SC:78:LEU:O	30:SC:81:ILE:HG23	2.21	0.41
31:SN:119:GLU:OE1	31:SN:141:TYR:HE2	2.03	0.41
34:Sb:11:SER:OG	34:Sb:13:GLU:HG2	2.21	0.41
35:L5:113:A:H2'	35:L5:114:G:O4'	2.20	0.41
35:L5:173:C:H2'	35:L5:174:C:C6	2.55	0.41
35:L5:378:A:O2'	35:L5:413:G:N2	2.52	0.41
35:L5:1308:C:OP1	51:LO:93:LYS:NZ	2.53	0.41
35:L5:1596:U:HO2'	52:LP:135:ARG:HH22	1.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1763:C:H2'	35:L5:1764:G:H5'	2.01	0.41
35:L5:2772:C:C2	35:L5:2773:G:C8	3.08	0.41
35:L5:3702:A:C6	35:L5:3703:G:C8	3.08	0.41
35:L5:3971:G:H21	35:L5:3973:G:H1'	1.86	0.41
35:L5:4337:C:N3	76:Lo:61:LYS:HE3	2.35	0.41
35:L5:4399:U:H2'	35:L5:4400:G:O4'	2.21	0.41
35:L5:4708:A:C2	35:L5:4709:U:H5'	2.55	0.41
40:LC:7:LEU:HG	40:LC:21:ASN:HB2	2.02	0.41
40:LC:223:ASN:HD22	40:LC:223:ASN:HA	1.61	0.41
40:LC:298:ILE:HD13	53:LQ:131:PRO:HB3	2.03	0.41
43:LF:43:ARG:HG2	43:LF:43:ARG:HH11	1.84	0.41
44:LG:205:THR:CG2	44:LG:206:GLN:H	2.28	0.41
49:LM:124:LYS:HE2	51:LO:178:ARG:NH2	2.35	0.41
57:LU:101:ARG:HG2	57:LU:103:VAL:HG23	2.03	0.41
77:Lp:8:VAL:O	77:Lp:27:LYS:HD2	2.20	0.41
79:Lz:62:LYS:HD2	79:Lz:62:LYS:HA	1.88	0.41
79:Lz:147:LYS:HE2	79:Lz:150:GLU:HB3	2.02	0.41
81:Ls:69:LEU:HD12	81:Ls:75:LEU:HD21	2.02	0.41
81:Ls:146:LYS:O	81:Ls:153:GLU:HB3	2.21	0.41
82:Lt:142:ASN:ND2	82:Lt:148:PRO:HB3	2.26	0.41
83:CB:12:ILE:HD12	83:CB:12:ILE:HA	1.94	0.41
83:CB:454:MET:N	83:CB:454:MET:SD	2.89	0.41
1:S2:75:G:C4	1:S2:76:U:H5	2.39	0.41
1:S2:602:G:H3'	1:S2:603:C:H2'	2.02	0.41
1:S2:995:G:N2	1:S2:998:A:OP2	2.45	0.41
1:S2:1128:C:O2'	34:Sb:19:HIS:ND1	2.46	0.41
1:S2:1533:A:N3	1:S2:1533:A:H2'	2.35	0.41
1:S2:1639:G:HO2'	1:S2:1640:A:H8	1.64	0.41
1:S2:1654:G:OP1	8:ST:90:SER:OG	2.38	0.41
1:S2:1753:C:H5'	1:S2:1780:G:H22	1.85	0.41
1:S2:1826:G:H8	1:S2:1826:G:OP2	2.03	0.41
4:SK:3:MET:HE3	4:SK:8:ARG:HD2	2.01	0.41
4:SK:14:LEU:HA	4:SK:17:LYS:CG	2.46	0.41
10:Sc:10:LYS:N	10:Sc:58:LEU:O	2.52	0.41
12:Sg:64:HIS:HB2	12:Sg:84:ASP:OD2	2.19	0.41
14:SZ:101:SER:HB3	14:SZ:108:ILE:HB	2.01	0.41
18:SI:160:SER:O	18:SI:163:GLU:HB3	2.21	0.41
21:SG:221:LYS:HE3	21:SG:221:LYS:HB3	1.85	0.41
22:SJ:162:ARG:H	22:SJ:162:ARG:HG2	1.63	0.41
25:SA:184:ARG:NH2	25:SA:189:ILE:HG22	2.36	0.41
29:Sa:2:THR:OG1	29:Sa:3:LYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:SO:101:GLY:HA3	32:SO:134:PRO:HD2	2.02	0.41
35:L5:181:C:H3'	35:L5:182:G:C8	2.54	0.41
35:L5:181:C:H1'	35:L5:256:G:N2	2.35	0.41
35:L5:457:G:H2'	35:L5:458:C:C6	2.55	0.41
35:L5:2406:G:O3'	73:Ll:48:LYS:HE3	2.21	0.41
35:L5:2751:G:H2'	35:L5:2752:G:H8	1.85	0.41
35:L5:3927:U:H2'	35:L5:3928:A:C8	2.55	0.41
35:L5:4093:G:C8	35:L5:4094:G:N7	2.89	0.41
35:L5:4594:U:H2'	35:L5:4595:G:C8	2.55	0.41
35:L5:4652:G:H2'	35:L5:4653:C:H6	1.84	0.41
35:L5:4870:G:H5"	49:LM:91:TRP:CD2	2.56	0.41
35:L5:4988:U:H4'	35:L5:4989:U:H5	1.84	0.41
36:L7:7:G:OP1	41:LD:33:ARG:HD2	2.21	0.41
38:LA:177:LYS:HG3	77:Lp:29:ILE:HG21	2.02	0.41
39:LB:4:ARG:O	39:LB:5:LYS:HG2	2.20	0.41
39:LB:206:PRO:HG2	39:LB:209:GLN:OE1	2.19	0.41
39:LB:381:THR:OG1	39:LB:383:GLU:HG2	2.20	0.41
40:LC:205:ARG:HD3	40:LC:205:ARG:HA	1.78	0.41
42:LE:162:VAL:HG11	42:LE:184:VAL:HG11	2.03	0.41
43:LF:50:ILE:HD13	43:LF:50:ILE:HA	1.80	0.41
46:LI:55:ASP:OD1	46:LI:162:ARG:HG2	2.21	0.41
48:LL:80:GLU:H	48:LL:80:GLU:HG3	1.66	0.41
49:LM:47:ARG:NH1	49:LM:68:ALA:O	2.44	0.41
59:LX:94:ASN:HD21	59:LX:145:ASP:HA	1.85	0.41
66:Le:70:LEU:HD21	66:Le:76:LYS:HE2	2.02	0.41
80:CA:246:ILE:HB	80:CA:305:PHE:HB2	2.02	0.41
80:CA:260:LYS:HE3	80:CA:260:LYS:HB3	1.82	0.41
83:CB:474:GLY:O	83:CB:478:PHE:HE2	2.04	0.41
83:CB:507:VAL:HG13	83:CB:554:LEU:HD13	2.00	0.41
84:Et:43:A:H2'	84:Et:44:G:C8	2.55	0.41
1:S2:494:C:N4	1:S2:509:G:H21	2.19	0.41
1:S2:538:U:H2'	1:S2:539:C:C6	2.54	0.41
1:S2:816:A:H2'	1:S2:817:G:O4'	2.21	0.41
1:S2:845:G:C6	1:S2:846:G:C2	3.09	0.41
1:S2:1638:G:H5"	1:S2:1639:G:OP1	2.19	0.41
6:SQ:102:GLU:O	6:SQ:106:LYS:N	2.43	0.41
6:SQ:104:SER:O	6:SQ:107:GLU:HG2	2.20	0.41
6:SQ:108:ILE:O	6:SQ:112:LEU:HG	2.20	0.41
9:SU:56:MET:HG3	9:SU:86:LYS:HD2	2.02	0.41
12:Sg:36:ARG:HD3	12:Sg:65:PHE:CG	2.55	0.41
12:Sg:79:LEU:HD11	12:Sg:111:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Sg:110:SER:CB	12:Sg:153:CYS:HA	2.50	0.41
12:Sg:148:SER:N	12:Sg:171:ASP:OD1	2.43	0.41
17:SE:47:PHE:CD1	17:SE:47:PHE:C	2.99	0.41
18:SI:63:GLY:HA3	18:SI:185:ALA:O	2.21	0.41
22:SJ:63:LEU:O	22:SJ:70:ARG:NH1	2.47	0.41
23:SY:101:LYS:HE2	23:SY:101:LYS:HB2	1.87	0.41
25:SA:94:THR:HG22	25:SA:183:LEU:HD11	2.01	0.41
25:SA:215:GLN:OE1	25:SA:215:GLN:N	2.54	0.41
35:L5:31:U:H2'	35:L5:32:G:O4'	2.19	0.41
35:L5:264:C:H2'	35:L5:265:C:C6	2.56	0.41
35:L5:714:G:H2'	35:L5:715:G:H8	1.84	0.41
35:L5:1251:C:H2'	35:L5:1252:C:C6	2.55	0.41
35:L5:1266:G:N7	63:Lb:95:ARG:HB2	2.36	0.41
35:L5:2348:G:OP1	35:L5:2351:C:N4	2.53	0.41
35:L5:3870:C:H2'	35:L5:3871:A:H8	1.86	0.41
35:L5:3957:U:H5'	35:L5:3960:A:N6	2.33	0.41
35:L5:4062:A:H2'	35:L5:4063:U:C5	2.56	0.41
35:L5:4104:G:H3'	35:L5:4105:A:C8	2.56	0.41
35:L5:4538:G:H2'	35:L5:4539:U:H6	1.85	0.41
35:L5:4896:G:O2'	35:L5:4897:G:O4'	2.39	0.41
39:LB:153:MET:O	39:LB:157:CYS:HB2	2.21	0.41
41:LD:271:MET:HE3	41:LD:271:MET:HB3	1.84	0.41
42:LE:268:GLN:O	42:LE:272:ARG:HG3	2.21	0.41
44:LG:111:LYS:O	44:LG:115:LEU:HD23	2.20	0.41
44:LG:210:GLU:H	44:LG:210:GLU:CD	2.29	0.41
45:LH:5:LEU:HB2	45:LH:60:TRP:CZ3	2.56	0.41
45:LH:115:ARG:HD3	45:LH:123:ILE:HG13	2.02	0.41
46:LI:53:VAL:HG11	56:LT:158:PHE:HZ	1.84	0.41
47:LJ:18:ARG:HD2	47:LJ:135:GLY:HA3	2.02	0.41
49:LM:77:TRP:O	49:LM:81:ASP:HA	2.21	0.41
54:LR:10:LEU:O	54:LR:14:VAL:HG12	2.21	0.41
66:Le:58:ILE:HA	66:Le:58:ILE:HD12	1.83	0.41
69:Lh:23:ASP:OD1	69:Lh:23:ASP:N	2.54	0.41
81:Ls:178:LEU:C	81:Ls:180:ILE:H	2.29	0.41
82:Lt:67:ARG:HA	82:Lt:67:ARG:HD2	1.66	0.41
82:Lt:114:ARG:HB2	82:Lt:133:LEU:HD13	2.02	0.41
83:CB:27:HIS:HD2	83:CB:138:GLN:H	1.69	0.41
83:CB:558:LEU:HD23	83:CB:558:LEU:HA	1.87	0.41
83:CB:723:PRO:O	83:CB:727:ARG:HG3	2.20	0.41
85:LW:14:TYR:HB3	85:LW:15:PRO:HD2	2.02	0.41
1:S2:28:U:O3'	20:SX:124:LYS:NZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:642:U:H4'	1:S2:644:G:H4'	2.02	0.41
1:S2:830:A:C5	1:S2:831:G:H1'	2.56	0.41
1:S2:833:C:H2'	1:S2:834:C:C6	2.56	0.41
1:S2:863:U:H2'	1:S2:864:A:H8	1.84	0.41
1:S2:886:A:H2'	1:S2:887:U:O4'	2.21	0.41
1:S2:959:G:O2'	1:S2:1065:G:H4'	2.21	0.41
1:S2:1036:A:C4	1:S2:1037:G:C8	3.09	0.41
1:S2:1514:G:H2'	1:S2:1515:G:H8	1.85	0.41
1:S2:1563:G:C6	1:S2:1573:G:N1	2.89	0.41
2:SD:58:VAL:HA	2:SD:65:ARG:HD3	2.02	0.41
2:SD:72:VAL:HG21	4:SK:68:TYR:HD2	1.86	0.41
3:SF:152:TRP:O	3:SF:156:THR:OG1	2.35	0.41
8:ST:44:GLU:N	8:ST:44:GLU:OE1	2.54	0.41
14:SZ:43:LYS:CG	14:SZ:45:ASN:HD22	2.34	0.41
16:CD:195:ARG:O	16:CD:204:LEU:HD21	2.21	0.41
19:SL:30:LYS:HA	19:SL:30:LYS:HD2	1.81	0.41
24:Se:31:ARG:CZ	24:Se:31:ARG:HB3	2.51	0.41
29:Sa:5:ARG:HB2	29:Sa:7:ASN:O	2.20	0.41
33:SW:23:ARG:HH11	33:SW:23:ARG:HA	1.86	0.41
35:L5:64:A:H1'	35:L5:76:A:H1'	2.03	0.41
35:L5:440:U:O2'	67:Lf:91:ASN:O	2.33	0.41
35:L5:687:U:C4	42:LE:95:PRO:HG2	2.56	0.41
35:L5:752:G:C5	35:L5:753:C:C2	3.08	0.41
35:L5:1397:A:N1	35:L5:1498:G:O2'	2.53	0.41
35:L5:1707:C:N3	63:Lb:103:LYS:HB3	2.34	0.41
35:L5:1837:A:OP2	56:LT:130:ARG:HG2	2.20	0.41
35:L5:2642:A:C2	72:Lk:2:PRO:HD2	2.56	0.41
35:L5:2870:A:H2'	35:L5:2871:A:H8	1.83	0.41
37:L8:6:C:H2'	37:L8:7:U:H6	1.85	0.41
37:L8:75:G:C8	73:Ll:30:LYS:HG3	2.55	0.41
38:LA:102:LEU:HD12	38:LA:107:MET:HG2	2.03	0.41
38:LA:115:CYS:O	38:LA:164:ALA:HA	2.20	0.41
38:LA:205:ASN:HB2	38:LA:208:GLU:OE2	2.20	0.41
39:LB:322:HIS:O	39:LB:342:LYS:HE3	2.21	0.41
41:LD:41:LYS:HD2	56:LT:93:ILE:HG21	2.03	0.41
41:LD:236:MET:O	41:LD:239:MET:HG3	2.20	0.41
41:LD:272:SER:OG	41:LD:275:GLN:HG3	2.21	0.41
43:LF:241:ASN:O	43:LF:245:ARG:HG2	2.20	0.41
46:LI:45:GLU:O	46:LI:141:LYS:HD2	2.20	0.41
48:LL:162:LYS:HD2	48:LL:162:LYS:HA	1.96	0.41
54:LR:154:LEU:O	54:LR:157:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Lh:18:LEU:HD13	69:Lh:18:LEU:HA	1.96	0.41
80:CA:328:ASN:OD1	80:CA:328:ASN:N	2.51	0.41
83:CB:295:ASP:O	83:CB:299:LYS:HG2	2.21	0.41
83:CB:592:LEU:HD23	83:CB:603:TYR:CE1	2.55	0.41
83:CB:683:PHE:CE2	83:CB:687:THR:HG21	2.55	0.41
84:Et:52:G:C4	84:Et:53:G:C8	3.08	0.41
1:S2:14:C:H5"	30:SC:229:CYS:HB2	2.03	0.41
1:S2:129:C:P	1:S2:214:U:H2'	2.60	0.41
1:S2:354:U:P	19:SL:107:LYS:HE3	2.61	0.41
1:S2:399:C:C5	1:S2:680:G:H5"	2.56	0.41
1:S2:594:A:H4'	1:S2:595:U:H5'	2.02	0.41
1:S2:817:G:N2	1:S2:818:A:N7	2.68	0.41
1:S2:921:G:C2	34:Sb:22:LYS:HG2	2.56	0.41
1:S2:1380:C:H2'	1:S2:1381:G:C8	2.55	0.41
1:S2:1391:C:C4'	11:Sd:55:LEU:HD12	2.51	0.41
2:SD:142:LEU:O	2:SD:143:ARG:C	2.64	0.41
4:SK:14:LEU:H	4:SK:14:LEU:HD23	1.84	0.41
5:SP:74:GLU:H	5:SP:74:GLU:CD	2.29	0.41
5:SP:128:HIS:ND1	5:SP:128:HIS:C	2.79	0.41
7:SS:39:ARG:O	7:SS:43:VAL:HG12	2.20	0.41
9:SU:31:SER:O	9:SU:35:VAL:HG22	2.21	0.41
12:Sg:31:ILE:HG13	12:Sg:45:LEU:HD21	2.03	0.41
12:Sg:88:ARG:HD3	12:Sg:100:ARG:HB2	2.03	0.41
12:Sg:148:SER:OG	12:Sg:149:GLU:OE1	2.39	0.41
12:Sg:265:ILE:HD12	12:Sg:265:ILE:N	2.36	0.41
17:SE:94:LYS:HZ3	23:SY:16:ARG:H	1.67	0.41
18:SI:66:SER:O	18:SI:189:VAL:HG12	2.20	0.41
18:SI:79:ILE:HD12	18:SI:170:LYS:HB2	2.02	0.41
19:SL:111:VAL:HG12	19:SL:140:PHE:HB2	2.01	0.41
19:SL:116:CYS:SG	19:SL:117:PHE:N	2.93	0.41
25:SA:182:VAL:O	25:SA:186:ARG:HG3	2.21	0.41
27:SH:57:ARG:HD2	27:SH:91:HIS:NE2	2.35	0.41
30:SC:204:ILE:HG13	30:SC:215:MET:SD	2.61	0.41
32:SO:116:LEU:HD12	32:SO:116:LEU:HA	1.93	0.41
34:Sb:34:ASP:HB3	34:Sb:43:ILE:CG1	2.50	0.41
35:L5:659:G:H2'	35:L5:660:A:H8	1.85	0.41
35:L5:1080:C:H2'	35:L5:1081:C:C6	2.55	0.41
35:L5:1274:A:O2'	35:L5:1275:G:H8	2.04	0.41
35:L5:1396:G:O2'	35:L5:1468:C:O2'	2.34	0.41
35:L5:1857:C:H2'	35:L5:1858:A:C8	2.55	0.41
35:L5:1888:A:N3	35:L5:3883:U:O2'	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:1896:A:OP1	43:LF:223:LYS:NZ	2.37	0.41
35:L5:2350:U:O5'	35:L5:2351:C:H5"	2.21	0.41
35:L5:2413:U:C2	35:L5:2414:G:C8	3.09	0.41
35:L5:2536:A:H5"	72:Lk:37:ARG:HH12	1.86	0.41
35:L5:2732:G:H2'	35:L5:2733:C:C6	2.55	0.41
35:L5:4345:C:H2'	35:L5:4346:U:C6	2.56	0.41
35:L5:4968:A:H2'	35:L5:4969:C:H6	1.85	0.41
40:LC:76:ILE:HG12	40:LC:96:CYS:SG	2.61	0.41
41:LD:89:LYS:HB2	41:LD:89:LYS:HE3	1.54	0.41
41:LD:196:ARG:NH1	41:LD:237:GLU:OE1	2.54	0.41
42:LE:109:LEU:H	42:LE:109:LEU:HD12	1.85	0.41
42:LE:223:ARG:HA	42:LE:224:LYS:HA	1.69	0.41
44:LG:218:LEU:HA	44:LG:218:LEU:HD12	1.82	0.41
46:LI:55:ASP:OD2	46:LI:164:LYS:HE3	2.21	0.41
57:LU:76:VAL:O	57:LU:78:PHE:N	2.53	0.41
58:LV:90:ARG:HD3	58:LV:124:GLU:OE2	2.21	0.41
60:LY:26:ARG:HG2	60:LY:78:TYR:CE1	2.54	0.41
60:LY:37:GLU:O	60:LY:40:GLN:HG3	2.21	0.41
73:Ll:25:GLN:CD	73:Ll:25:GLN:N	2.78	0.41
74:Lm:126:LYS:HB3	74:Lm:128:LYS:HG2	2.03	0.41
79:Lz:33:GLU:HA	79:Lz:169:VAL:H	1.86	0.41
80:CA:102:GLU:OE2	80:CA:103:GLY:N	2.54	0.41
83:CB:379:ASP:O	83:CB:383:MET:HE2	2.20	0.41
83:CB:409:ARG:HD3	83:CB:409:ARG:HA	1.80	0.41
83:CB:529:LYS:HE2	83:CB:529:LYS:HB2	1.95	0.41
83:CB:767:ARG:HH12	83:CB:830:ARG:HH12	1.68	0.41
1:S2:72:C:H2'	1:S2:73:C:C2	2.56	0.41
1:S2:151:C:C4	1:S2:168:C:N4	2.89	0.41
1:S2:293:C:O2'	1:S2:294:U:H3'	2.21	0.41
1:S2:528:A:C6	1:S2:558:G:N1	2.89	0.41
1:S2:693:A:C6	1:S2:739:C:H4'	2.55	0.41
1:S2:965:U:O2	1:S2:1066:U:H1'	2.20	0.41
1:S2:1092:G:OP2	31:SN:9:LYS:NZ	2.43	0.41
1:S2:1175:G:OP2	75:Ln:21:ARG:NH2	2.53	0.41
1:S2:1202:U:H2'	1:S2:1203:G:C8	2.56	0.41
1:S2:1230:C:H5'	1:S2:1607:A:O2'	2.21	0.41
1:S2:1284:A:P	1:S2:1285:G:HO2'	2.43	0.41
1:S2:1395:C:H1'	1:S2:1474:A:C4	2.56	0.41
1:S2:1410:C:H2'	1:S2:1411:G:H8	1.85	0.41
1:S2:1630:A:N3	1:S2:1630:A:H2'	2.35	0.41
1:S2:1737:G:H2'	1:S2:1738:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1849:G:C8	35:L5:3767:C:H5'	2.56	0.41
2:SD:125:PHE:C	2:SD:125:PHE:CD2	2.99	0.41
3:SF:50:PRO:HB2	3:SF:73:THR:HG21	2.02	0.41
4:SK:61:GLN:O	4:SK:68:TYR:HB2	2.19	0.41
9:SU:20:ILE:HG13	9:SU:115:THR:O	2.21	0.41
9:SU:42:GLY:O	9:SU:46:LYS:HE2	2.20	0.41
12:Sg:106:LYS:HE3	12:Sg:106:LYS:HB3	1.83	0.41
12:Sg:149:GLU:HG2	12:Sg:171:ASP:OD2	2.21	0.41
12:Sg:254:PRO:HG3	12:Sg:283:PRO:HD2	2.03	0.41
12:Sg:257:LYS:NZ	12:Sg:269:GLU:HG2	2.36	0.41
13:SM:120:ALA:O	13:SM:123:VAL:HG22	2.21	0.41
17:SE:19:MET:O	17:SE:19:MET:SD	2.79	0.41
18:SI:158:ILE:HD13	19:SL:21:LYS:HE3	2.02	0.41
21:SG:103:ASP:HB2	21:SG:105:ASN:OD1	2.20	0.41
22:SJ:79:ARG:HA	22:SJ:79:ARG:HE	1.85	0.41
23:SY:12:PHE:CD2	23:SY:12:PHE:C	2.99	0.41
26:SB:107:ARG:NH2	32:SO:133:THR:O	2.54	0.41
26:SB:175:GLU:O	26:SB:179:ASN:ND2	2.50	0.41
27:SH:31:GLU:C	27:SH:32:MET:HG3	2.46	0.41
27:SH:127:ASP:OD1	27:SH:127:ASP:N	2.54	0.41
30:SC:128:VAL:HG21	30:SC:155:ILE:HD12	2.03	0.41
30:SC:174:ILE:HG13	30:SC:175:GLY:N	2.36	0.41
35:L5:163:A:H2'	35:L5:164:G:C8	2.55	0.41
35:L5:488:G:H8	35:L5:488:G:O5'	2.03	0.41
35:L5:923:C:H2'	35:L5:925:C:C5	2.55	0.41
35:L5:1249:C:H2'	35:L5:1250:C:H6	1.86	0.41
35:L5:1309:C:H2'	35:L5:1310:C:C6	2.56	0.41
35:L5:1313:C:O2	35:L5:3881:G:O2'	2.34	0.41
35:L5:1371:A:N1	37:L8:28:C:O2'	2.53	0.41
35:L5:1767:A:N6	35:L5:1769:G:HO2'	2.19	0.41
35:L5:1812:C:H2'	35:L5:1813:U:C6	2.56	0.41
35:L5:2289:C:O2'	78:Lr:22:LYS:HE3	2.21	0.41
35:L5:2543:A:H2	35:L5:2773:G:H22	1.69	0.41
35:L5:2671:C:H2'	35:L5:2672:C:C6	2.56	0.41
35:L5:2730:U:H2'	35:L5:2731:C:H6	1.84	0.41
35:L5:3700:C:H2'	35:L5:3746:A:H61	1.86	0.41
35:L5:3722:G:H2'	35:L5:3723:A:C8	2.54	0.41
35:L5:3946:G:C4	35:L5:3948:C:N4	2.81	0.41
35:L5:3949:A:H61	35:L5:4064:C:H42	1.69	0.41
35:L5:3960:A:C6	35:L5:3964:U:H5'	2.56	0.41
35:L5:4089:G:H2'	35:L5:4090:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:4236:G:H2'	35:L5:4237:C:H6	1.84	0.41
35:L5:4258:C:C2	35:L5:4259:C:C5	3.09	0.41
35:L5:4263:C:H2'	35:L5:4264:G:O4'	2.20	0.41
35:L5:4674:C:H2'	35:L5:4675:U:C6	2.56	0.41
35:L5:4862:G:H2'	35:L5:4863:G:C8	2.55	0.41
35:L5:5002:U:H2'	35:L5:5003:U:H6	1.86	0.41
38:LA:242:ARG:NH2	38:LA:243:THR:O	2.54	0.41
40:LC:211:TYR:OH	40:LC:218:ILE:HD11	2.21	0.41
40:LC:236:ASN:HB3	40:LC:239:LYS:HG3	2.03	0.41
41:LD:128:ASP:OD2	41:LD:129:GLU:N	2.46	0.41
47:LJ:17:ILE:HG13	47:LJ:132:VAL:HG23	2.03	0.41
57:LU:65:ARG:O	57:LU:67:LYS:NZ	2.54	0.41
60:LY:88:GLU:HG3	60:LY:94:THR:HG22	2.02	0.41
62:La:23:GLY:HA3	62:La:24:LYS:HA	1.59	0.41
67:Lf:11:PHE:CE1	67:Lf:26:ALA:HB1	2.56	0.41
68:Lg:60:ARG:O	68:Lg:63:VAL:HG13	2.21	0.41
77:Lp:51:ALA:HB3	77:Lp:54:ILE:HD12	2.03	0.41
81:Ls:57:LYS:O	81:Ls:60:MET:HB2	2.20	0.41
83:CB:88:PHE:HE1	83:CB:250:ALA:HA	1.85	0.41
83:CB:123:ASP:CG	83:CB:415:ARG:HH12	2.29	0.41
83:CB:308:LYS:O	83:CB:312:THR:HG23	2.21	0.41
83:CB:586:GLU:OE1	83:CB:607:ARG:HB2	2.20	0.41
84:Et:19:G:H4'	84:Et:20:U:OP2	2.20	0.41
84:Et:28:C:H2'	84:Et:29:A:O4'	2.21	0.41
84:Et:29:A:C2	84:Et:30:G:C5	3.09	0.41
85:LW:96:GLN:O	85:LW:100:VAL:HB	2.20	0.41
1:S2:121:U:H2'	1:S2:122:G:C8	2.56	0.41
1:S2:122:G:H4'	17:SE:145:ARG:HD3	2.03	0.41
1:S2:179:C:H3'	1:S2:180:G:H8	1.86	0.41
1:S2:955:A:C2	1:S2:972:A:C5	3.08	0.41
1:S2:1238:U:O2'	5:SP:126:VAL:HG12	2.21	0.41
1:S2:1274:G:N7	4:SK:27:VAL:HG21	2.36	0.41
8:ST:42:HIS:HB3	8:ST:83:GLN:HB2	2.03	0.41
8:ST:112:MET:HG3	8:ST:127:GLY:HA2	2.03	0.41
14:SZ:72:VAL:O	14:SZ:76:ARG:N	2.48	0.41
17:SE:191:ARG:HD2	17:SE:245:ARG:HD2	2.02	0.41
19:SL:57:ASP:OD2	19:SL:59:LYS:N	2.54	0.41
28:SV:64:GLU:O	28:SV:68:SER:OG	2.39	0.41
30:SC:165:VAL:HG21	30:SC:217:ALA:HB1	2.03	0.41
30:SC:212:LYS:HG2	30:SC:212:LYS:H	1.63	0.41
35:L5:184:U:O2'	35:L5:189:G:O5'	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:385:A:N3	35:L5:387:G:H5"	2.36	0.41
35:L5:468:U:N3	35:L5:686:A:N1	2.69	0.41
35:L5:499:G:H2'	35:L5:499:G:N3	2.35	0.41
35:L5:1588:U:H2'	35:L5:1589:C:C6	2.56	0.41
35:L5:1830:G:H4'	63:Lb:68:ARG:NH1	2.36	0.41
35:L5:1876:U:O3'	43:LF:103:PRO:HD3	2.21	0.41
35:L5:1985:G:N2	35:L5:2003:G:O2'	2.54	0.41
35:L5:2822:G:OP2	54:LR:21:LYS:NZ	2.48	0.41
35:L5:2902:G:N7	35:L5:2903:G:N2	2.69	0.41
35:L5:4254:G:O2'	35:L5:4256:A:H2	2.03	0.41
35:L5:4545:G:OP2	38:LA:214:GLY:N	2.42	0.41
35:L5:4897:G:OP1	49:LM:128:LYS:NZ	2.53	0.41
37:L8:4:C:H2'	37:L8:5:U:H6	1.86	0.41
39:LB:57:VAL:O	39:LB:366:LYS:N	2.49	0.41
40:LC:318:PRO:C	40:LC:320:LYS:H	2.28	0.41
50:LN:22:LEU:O	50:LN:26:ARG:HD3	2.20	0.41
50:LN:195:ARG:HE	50:LN:195:ARG:HB3	1.69	0.41
53:LQ:88:ASP:OD1	53:LQ:89:ASP:N	2.54	0.41
54:LR:152:LYS:HE3	54:LR:152:LYS:HB3	1.92	0.41
55:LS:81:TRP:HZ3	55:LS:130:GLU:HG3	1.85	0.41
57:LU:65:ARG:HG2	57:LU:67:LYS:N	2.36	0.41
60:LY:54:GLU:HB3	60:LY:67:ILE:HG22	2.03	0.41
80:CA:229:LEU:HD12	80:CA:229:LEU:HA	1.85	0.41
83:CB:111:PHE:CD2	83:CB:501:VAL:HG22	2.56	0.41
83:CB:406:ASP:O	83:CB:407:LYS:HB3	2.21	0.41
83:CB:744:ILE:H	83:CB:744:ILE:HD12	1.86	0.41
84:Et:44:G:H2'	84:Et:45:G:O4'	2.21	0.41
84:Et:65:G:C6	84:Et:66:U:C4	3.09	0.41
1:S2:102:A:H4'	1:S2:104:A:C8	2.56	0.40
1:S2:359:U:OP1	20:SX:22:TRP:NE1	2.53	0.40
1:S2:536:A:H3'	1:S2:537:C:C5'	2.49	0.40
1:S2:832:G:O6	23:SY:11:LYS:NZ	2.47	0.40
1:S2:1686:G:H2'	1:S2:1687:C:C6	2.56	0.40
3:SF:88:MET:HE3	3:SF:91:ARG:NH2	2.36	0.40
5:SP:65:LYS:HD2	5:SP:65:LYS:C	2.46	0.40
12:Sg:172:LYS:HG3	12:Sg:193:GLY:C	2.46	0.40
13:SM:53:ALA:HA	13:SM:79:VAL:HB	2.03	0.40
13:SM:128:PHE:HB3	13:SM:132:LYS:NZ	2.36	0.40
17:SE:122:LYS:HD3	17:SE:124:CYS:SG	2.61	0.40
17:SE:160:ILE:HD12	17:SE:160:ILE:O	2.21	0.40
19:SL:28:THR:N	19:SL:29:GLY:HA2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:SG:44:GLU:HG2	21:SG:45:TRP:CD1	2.57	0.40
22:SJ:175:ARG:O	22:SJ:179:LYS:NZ	2.45	0.40
26:SB:171:ILE:HB	26:SB:174:ARG:HH21	1.86	0.40
27:SH:127:ASP:O	27:SH:130:LEU:HG	2.20	0.40
35:L5:416:U:H4'	35:L5:2330:G:H4'	2.03	0.40
35:L5:1377:G:H4'	35:L5:1378:C:H3'	2.03	0.40
35:L5:1875:C:H2'	35:L5:1876:U:C6	2.56	0.40
35:L5:1964:A:C4	35:L5:1965:G:C8	3.09	0.40
35:L5:2250:C:H2'	35:L5:2251:G:C8	2.56	0.40
35:L5:2693:G:H2'	35:L5:2694:G:N2	2.36	0.40
35:L5:2706:G:H1	54:LR:46:LYS:NZ	2.18	0.40
35:L5:3878:C:OP1	35:L5:4400:G:O2'	2.25	0.40
35:L5:3949:A:O2'	35:L5:3950:U:H6	2.04	0.40
35:L5:3953:G:H2'	35:L5:3954:A:H5'	2.03	0.40
35:L5:4098:A:H2'	35:L5:4099:G:H4'	2.03	0.40
35:L5:4336:A:H5"	35:L5:4337:C:H5'	2.02	0.40
35:L5:4612:C:C2	45:LH:120:GLU:HB3	2.56	0.40
42:LE:73:TYR:CD1	42:LE:73:TYR:N	2.89	0.40
42:LE:222:LEU:HD13	42:LE:237:LYS:HB2	2.03	0.40
43:LF:48:LYS:HG2	63:Lb:96:LEU:HD13	2.02	0.40
44:LG:170:LEU:HA	44:LG:170:LEU:HD23	1.82	0.40
45:LH:128:MET:HE2	45:LH:128:MET:N	2.36	0.40
48:LL:47:ALA:HB3	48:LL:48:PRO:HD3	2.02	0.40
53:LQ:159:PRO:HA	53:LQ:160:HIS:HA	1.62	0.40
54:LR:82:LYS:HE2	54:LR:82:LYS:HB3	1.76	0.40
56:LT:17:ARG:HD3	56:LT:47:THR:OG1	2.21	0.40
64:Lc:35:LEU:HD23	64:Lc:35:LEU:HA	1.84	0.40
64:Lc:35:LEU:HD11	64:Lc:59:GLU:OE1	2.20	0.40
69:Lh:17:LEU:HD23	69:Lh:17:LEU:HA	1.94	0.40
69:Lh:71:LYS:HB2	69:Lh:71:LYS:HE2	1.88	0.40
79:Lz:39:LYS:HD3	79:Lz:39:LYS:HA	1.87	0.40
79:Lz:65:VAL:HG12	79:Lz:111:LEU:HD13	2.03	0.40
79:Lz:110:PHE:HD1	79:Lz:110:PHE:HA	1.77	0.40
80:CA:202:ILE:CD1	80:CA:209:GLN:HB3	2.51	0.40
80:CA:331:MET:HE3	80:CA:333:ILE:HG23	2.03	0.40
82:Lt:29:ALA:N	82:Lt:30:PRO:HD2	2.36	0.40
82:Lt:62:LEU:HD12	82:Lt:62:LEU:HA	1.95	0.40
83:CB:502:SER:O	83:CB:504:VAL:N	2.54	0.40
83:CB:631:ARG:O	83:CB:635:LEU:HD12	2.21	0.40
85:LW:113:LYS:HD3	85:LW:113:LYS:HA	1.73	0.40
1:S2:4:C:H1'	22:SJ:18:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:334:C:OP2	21:SG:190:ARG:NH2	2.45	0.40
1:S2:651:U:H2'	1:S2:652:U:C6	2.57	0.40
1:S2:1116:C:H2'	1:S2:1117:C:C5	2.56	0.40
1:S2:1192:U:H2'	1:S2:1193:U:C6	2.56	0.40
1:S2:1407:U:H2'	1:S2:1408:U:H6	1.82	0.40
1:S2:1408:U:H2'	1:S2:1409:A:C8	2.56	0.40
1:S2:1610:G:H2'	1:S2:1611:G:C8	2.56	0.40
1:S2:1650:A:H2'	1:S2:1651:A:O4'	2.21	0.40
5:SP:53:GLN:HB3	5:SP:83:MET:SD	2.61	0.40
5:SP:107:ILE:HA	5:SP:111:MET:HE1	2.03	0.40
6:SQ:47:LEU:HD23	6:SQ:50:LYS:HG2	2.03	0.40
10:Sc:15:THR:HG22	10:Sc:16:LYS:H	1.85	0.40
17:SE:31:PRO:HG2	17:SE:38:LEU:HB2	2.02	0.40
17:SE:114:ILE:HD12	17:SE:118:GLU:HG3	2.03	0.40
21:SG:98:ARG:HD3	21:SG:99:GLY:O	2.22	0.40
25:SA:70:ASN:O	25:SA:73:ASP:HB3	2.21	0.40
25:SA:188:THR:C	25:SA:189:ILE:HG13	2.46	0.40
26:SB:138:PHE:O	26:SB:213:ARG:N	2.54	0.40
27:SH:83:LEU:HD22	27:SH:86:LYS:HE2	2.04	0.40
31:SN:114:ARG:HD3	31:SN:114:ARG:HA	1.78	0.40
35:L5:10:A:H2'	35:L5:11:G:H8	1.86	0.40
35:L5:1318:C:H2'	35:L5:1319:U:O4'	2.21	0.40
35:L5:1739:G:H5"	36:L7:102:U:H1'	2.03	0.40
35:L5:1977:C:O2'	35:L5:1978:C:OP1	2.35	0.40
35:L5:2517:A:H5'	68:Lg:62:LYS:HB2	2.03	0.40
35:L5:2518:G:H1'	35:L5:2539:C:H1'	2.04	0.40
35:L5:2519:U:H1'	35:L5:2520:C:C6	2.57	0.40
35:L5:4070:U:H2'	35:L5:4071:U:C6	2.56	0.40
35:L5:4169:G:H4'	35:L5:4171:C:C2	2.56	0.40
35:L5:5004:C:OP1	85:LW:35:LYS:HD2	2.20	0.40
36:L7:22:A:H2'	36:L7:23:A:C8	2.56	0.40
37:L8:19:C:H2'	37:L8:20:A:C8	2.55	0.40
39:LB:238:LYS:HE2	39:LB:238:LYS:HB2	1.82	0.40
41:LD:56:THR:HG22	41:LD:57:ASN:N	2.34	0.40
43:LF:50:ILE:HD12	43:LF:186:CYS:HB3	2.03	0.40
45:LH:187:VAL:O	45:LH:188:GLN:HB2	2.22	0.40
46:LI:183:ASP:OD1	46:LI:184:MET:N	2.54	0.40
47:LJ:19:LYS:HB3	47:LJ:75:ARG:CZ	2.51	0.40
51:LO:58:LEU:HD23	51:LO:58:LEU:HA	1.97	0.40
51:LO:192:TYR:CD1	51:LO:192:TYR:N	2.89	0.40
52:LP:60:PHE:CE1	52:LP:82:ARG:HB2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:LR:158:GLN:O	54:LR:162:ARG:HG3	2.20	0.40
54:LR:176:ARG:HD2	54:LR:177:LEU:N	2.35	0.40
63:Lb:90:SER:OG	63:Lb:91:ARG:N	2.55	0.40
67:Lf:10:ILE:HG13	67:Lf:99:HIS:O	2.21	0.40
80:CA:79:SER:OG	80:CA:109:ASP:HB3	2.22	0.40
80:CA:279:THR:HG22	80:CA:281:ARG:HB2	2.03	0.40
83:CB:208:VAL:HG23	83:CB:258:LYS:HA	2.02	0.40
83:CB:232:TYR:HD1	83:CB:232:TYR:HA	1.82	0.40
83:CB:767:ARG:HH12	83:CB:830:ARG:NH1	2.19	0.40
83:CB:840:LYS:HE2	83:CB:840:LYS:HB2	1.75	0.40
85:LW:2:LYS:CE	85:LW:4:GLU:HB2	2.50	0.40
1:S2:420:G:HO2'	1:S2:421:G:P	2.45	0.40
1:S2:675:U:H2'	1:S2:676:C:H6	1.85	0.40
1:S2:834:C:N4	1:S2:839:C:H42	2.19	0.40
1:S2:1297:U:O2'	1:S2:1299:A:N7	2.49	0.40
1:S2:1359:U:H2'	1:S2:1360:U:H6	1.86	0.40
1:S2:1391:C:H2'	1:S2:1392:U:O4'	2.20	0.40
1:S2:1516:G:H4'	5:SP:122:THR:HG21	2.03	0.40
2:SD:162:ASP:OD2	2:SD:162:ASP:C	2.65	0.40
7:SS:116:LYS:N	7:SS:116:LYS:HD3	2.35	0.40
8:ST:33:TRP:CD1	8:ST:37:VAL:HG22	2.56	0.40
10:Sc:20:ARG:HD3	10:Sc:28:THR:HG22	2.02	0.40
17:SE:41:CYS:CB	17:SE:83:PRO:HB3	2.52	0.40
20:SX:67:ARG:HG3	20:SX:115:ILE:HG13	2.04	0.40
23:SY:129:LYS:HA	23:SY:129:LYS:HD3	1.82	0.40
25:SA:206:ASP:C	25:SA:208:GLU:H	2.30	0.40
27:SH:144:ILE:HG13	33:SW:52:ILE:CG1	2.51	0.40
30:SC:72:ASP:OD2	30:SC:272:HIS:NE2	2.55	0.40
30:SC:106:VAL:HG22	30:SC:128:VAL:HG22	2.04	0.40
35:L5:326:C:OP2	70:Li:28:ARG:NH2	2.37	0.40
35:L5:424:U:H2'	35:L5:425:U:C6	2.56	0.40
35:L5:454:U:C4	35:L5:703:G:C8	3.09	0.40
35:L5:513:U:O2	35:L5:516:C:H5	2.05	0.40
35:L5:1256:G:H5"	35:L5:1257:A:H8	1.87	0.40
35:L5:1621:A:H5"	35:L5:2451:A:H5'	2.02	0.40
35:L5:1806:G:H2'	35:L5:1807:C:C6	2.56	0.40
35:L5:2018:C:H2'	35:L5:2019:C:H6	1.85	0.40
35:L5:2033:A:N3	35:L5:2034:G:C8	2.89	0.40
35:L5:2033:A:O2'	35:L5:2034:G:O5'	2.28	0.40
35:L5:2300:A:OP1	66:Le:83:LYS:NZ	2.51	0.40
35:L5:2597:G:H5"	68:Lg:43:LYS:HG3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:L5:3715:U:H2'	35:L5:3716:C:O4'	2.21	0.40
35:L5:4038:C:N4	35:L5:4051:C:OP2	2.54	0.40
35:L5:4069:U:H2'	35:L5:4070:U:H6	1.86	0.40
35:L5:4300:U:H4'	56:LT:89:ILE:HG22	2.03	0.40
35:L5:4350:C:C2	35:L5:4351:U:C5	3.09	0.40
37:L8:47:C:H1'	37:L8:61:A:H2'	2.03	0.40
37:L8:67:U:OP1	71:Lj:87:LYS:HG3	2.21	0.40
40:LC:5:ARG:HD2	40:LC:24:LEU:O	2.21	0.40
42:LE:178:PRO:O	42:LE:180:VAL:N	2.54	0.40
43:LF:96:ARG:NH2	43:LF:224:THR:HG22	2.36	0.40
43:LF:96:ARG:HD2	43:LF:138:PRO:O	2.21	0.40
52:LP:9:GLU:CD	52:LP:9:GLU:H	2.28	0.40
56:LT:3:ASN:OD1	56:LT:3:ASN:N	2.54	0.40
61:LZ:81:MET:HE1	64:Lc:59:GLU:HG3	2.03	0.40
72:Lk:17:ARG:HG3	72:Lk:18:LYS:N	2.36	0.40
81:Ls:70:GLU:H	81:Ls:70:GLU:HG3	1.61	0.40
81:Ls:107:VAL:O	81:Ls:184:SER:HB3	2.21	0.40
81:Ls:112:ARG:O	81:Ls:167:VAL:HG21	2.21	0.40
81:Ls:139:GLN:HE22	83:CB:183:GLU:HB2	1.87	0.40
82:Lt:23:GLY:O	82:Lt:25:THR:N	2.54	0.40
82:Lt:146:ARG:HG3	82:Lt:151:ILE:HD11	2.02	0.40
83:CB:60:ARG:HH22	83:CB:560:ASP:CG	2.25	0.40
83:CB:591:CYS:SG	83:CB:732:SER:HA	2.61	0.40
1:S2:50:A:OP2	1:S2:472:C:N4	2.54	0.40
1:S2:65:C:OP2	21:SG:175:LYS:HB3	2.22	0.40
1:S2:475:C:H2'	1:S2:476:A:O4'	2.22	0.40
1:S2:922:A:H2'	1:S2:923:G:O4'	2.22	0.40
1:S2:945:U:H2'	1:S2:946:U:H6	1.87	0.40
1:S2:1232:U:H2'	1:S2:1233:G:C8	2.57	0.40
1:S2:1446:A:C1'	9:SU:55:ARG:HD2	2.51	0.40
1:S2:1670:C:H2'	1:S2:1671:G:O4'	2.22	0.40
5:SP:21:ASP:N	5:SP:24:GLN:OE1	2.54	0.40
10:Sc:7:GLN:NE2	10:Sc:8:PRO:HD2	2.36	0.40
12:Sg:37:ASP:C	12:Sg:38:LYS:HG2	2.47	0.40
12:Sg:38:LYS:HE3	12:Sg:38:LYS:HB3	1.97	0.40
12:Sg:189:ILE:HG12	12:Sg:190:GLY:H	1.86	0.40
19:SL:124:ASP:OD1	19:SL:124:ASP:N	2.51	0.40
22:SJ:137:VAL:HG12	22:SJ:138:ARG:N	2.35	0.40
25:SA:84:GLN:HG2	25:SA:100:ALA:HB1	2.04	0.40
26:SB:97:LEU:H	26:SB:97:LEU:HG	1.73	0.40
29:Sa:71:LEU:HD23	29:Sa:71:LEU:HA	1.78	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Sa:88:SER:OG	29:Sa:90:GLU:OE2	2.37	0.40
29:Sa:96:THR:HA	29:Sa:97:PRO:HD3	1.98	0.40
33:SW:25:VAL:HG12	33:SW:65:LEU:HD21	2.04	0.40
33:SW:100:GLY:HA2	33:SW:130:PHE:HB3	2.02	0.40
35:L5:1719:A:H2'	35:L5:1720:C:H6	1.87	0.40
35:L5:1764:G:H5"	35:L5:1765:A:OP2	2.22	0.40
35:L5:1811:G:H2'	35:L5:1812:C:C6	2.55	0.40
35:L5:1840:G:H1'	43:LF:111:LEU:HD22	2.03	0.40
35:L5:2065:G:H2'	35:L5:2066:C:O4'	2.21	0.40
35:L5:4585:U:H2'	35:L5:4586:G:C8	2.56	0.40
35:L5:4673:U:H2'	35:L5:4674:C:H6	1.87	0.40
35:L5:4926:C:H3'	35:L5:4927:G:N3	2.36	0.40
38:LA:189:TYR:CD2	38:LA:196:TRP:HB2	2.56	0.40
39:LB:103:LYS:HD2	39:LB:149:ASP:OD1	2.22	0.40
39:LB:348:ARG:HG2	39:LB:349:LYS:N	2.37	0.40
40:LC:146:GLU:HB3	40:LC:175:LYS:HG2	2.03	0.40
41:LD:76:CYS:SG	41:LD:109:LEU:HB2	2.61	0.40
45:LH:41:ILE:CD1	45:LH:43:VAL:HG22	2.52	0.40
46:LI:91:LEU:HG	46:LI:135:ILE:HA	2.03	0.40
47:LJ:95:ARG:NH1	47:LJ:96:LYS:H	2.19	0.40
49:LM:6:PHE:HB2	49:LM:8:GLU:OE1	2.22	0.40
50:LN:83:LYS:O	50:LN:85:VAL:N	2.55	0.40
51:LO:89:PRO:O	51:LO:95:GLY:HA3	2.21	0.40
54:LR:97:ARG:O	54:LR:101:ILE:HD12	2.22	0.40
57:LU:65:ARG:HG2	57:LU:67:LYS:H	1.86	0.40
58:LV:13:LYS:HD2	58:LV:124:GLU:HB3	2.03	0.40
58:LV:91:LYS:HD3	58:LV:91:LYS:HA	1.90	0.40
58:LV:99:GLU:HG2	85:LW:21:TYR:OH	2.22	0.40
63:Lb:25:ARG:HD2	63:Lb:25:ARG:HA	1.88	0.40
65:Ld:19:GLU:HB2	65:Ld:92:ARG:HH21	1.86	0.40
78:Lr:47:LYS:HE2	78:Lr:47:LYS:HB3	1.86	0.40
78:Lr:53:PRO:HD3	78:Lr:117:ILE:HD13	2.03	0.40
78:Lr:113:ARG:O	78:Lr:117:ILE:HG13	2.22	0.40
79:Lz:100:VAL:HG22	79:Lz:101:LYS:H	1.85	0.40
81:Ls:160:LEU:HD12	81:Ls:161:ILE:HG22	2.04	0.40
82:Lt:123:ARG:HH21	82:Lt:125:LEU:C	2.28	0.40
83:CB:79:TYR:HB2	83:CB:351:LEU:HD22	2.02	0.40
83:CB:188:ILE:HG13	83:CB:192:TYR:HE1	1.86	0.40
83:CB:522:GLU:O	83:CB:526:ARG:HG3	2.21	0.40
1:S2:93:U:H2'	1:S2:94:G:O4'	2.21	0.40
1:S2:118:C:H1'	1:S2:445:A:C5	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:167:G:H21	21:SG:132:ARG:HG3	1.85	0.40
1:S2:326:C:H2'	1:S2:327:G:H5'	2.04	0.40
1:S2:373:G:H2'	1:S2:374:G:C8	2.55	0.40
1:S2:386:C:H2'	1:S2:387:C:C6	2.56	0.40
1:S2:476:A:H2'	1:S2:477:G:O4'	2.22	0.40
1:S2:570:C:H2'	1:S2:571:U:H6	1.87	0.40
1:S2:1060:A:H1'	1:S2:1062:A:N7	2.36	0.40
1:S2:1415:C:H4'	8:ST:128:GLN:NE2	2.36	0.40
3:SF:25:THR:O	3:SF:28:VAL:HG22	2.21	0.40
3:SF:68:ILE:H	3:SF:68:ILE:HG12	1.72	0.40
3:SF:103:LEU:HA	14:SZ:66:LYS:HG3	2.02	0.40
7:SS:63:GLU:HG3	7:SS:66:ARG:HE	1.87	0.40
7:SS:68:ILE:HD13	7:SS:68:ILE:HA	1.97	0.40
7:SS:118:ARG:HD3	7:SS:123:LEU:HD21	2.04	0.40
8:ST:64:LEU:HD23	8:ST:64:LEU:O	2.22	0.40
10:Sc:20:ARG:NH1	10:Sc:25:GLY:O	2.46	0.40
10:Sc:43:ILE:HG12	10:Sc:65:ALA:HB1	2.03	0.40
21:SG:51:ARG:HB3	21:SG:112:VAL:HG22	2.02	0.40
23:SY:109:GLU:C	23:SY:113:ARG:HH21	2.29	0.40
26:SB:27:LYS:HZ3	26:SB:53:GLN:HG2	1.86	0.40
26:SB:171:ILE:HD11	26:SB:197:ILE:HG12	2.02	0.40
27:SH:34:SER:O	27:SH:34:SER:OG	2.34	0.40
35:L5:35:U:H4'	35:L5:1525:A:C2	2.56	0.40
35:L5:743:G:H2'	35:L5:744:G:O4'	2.20	0.40
35:L5:1077:C:OP1	35:L5:1215:C:O2'	2.37	0.40
35:L5:1383:G:H2'	35:L5:1384:C:H6	1.87	0.40
35:L5:1598:C:C2	35:L5:1599:A:C8	3.10	0.40
35:L5:2052:G:O2'	35:L5:2057:A:N1	2.50	0.40
35:L5:2323:C:H2'	35:L5:2324:C:H6	1.87	0.40
35:L5:2464:C:HO2'	35:L5:2465:C:H6	1.63	0.40
35:L5:2516:G:O3'	68:Lg:62:LYS:NZ	2.50	0.40
35:L5:2705:G:H2'	35:L5:2706:G:C8	2.56	0.40
35:L5:2897:G:H2'	35:L5:2898:G:H8	1.85	0.40
35:L5:3610:A:H2'	35:L5:3611:A:H8	1.86	0.40
35:L5:3690:U:OP2	38:LA:200:ARG:HD2	2.21	0.40
35:L5:3711:A:H5"	35:L5:3712:A:OP1	2.21	0.40
35:L5:3764:U:H2'	35:L5:3765:G:O4'	2.20	0.40
35:L5:4638:U:OP1	35:L5:5044:A:O2'	2.39	0.40
36:L7:18:C:H2'	36:L7:19:C:H6	1.87	0.40
36:L7:92:C:H2'	36:L7:93:G:C8	2.57	0.40
39:LB:357:ARG:HE	39:LB:357:ARG:HB2	1.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:LE:190:HIS:ND1	42:LE:192:LYS:HB3	2.36	0.40
43:LF:219:GLY:O	43:LF:246:ARG:NH1	2.44	0.40
51:LO:46:ASN:OD1	51:LO:46:ASN:N	2.54	0.40
54:LR:139:MET:HE2	54:LR:143:HIS:NE2	2.37	0.40
54:LR:177:LEU:O	54:LR:181:LYS:N	2.48	0.40
63:Lb:111:ARG:HG3	63:Lb:112:ILE:N	2.35	0.40
65:Ld:65:ASP:OD1	65:Ld:66:THR:N	2.54	0.40
79:Lz:60:ARG:CZ	79:Lz:61:PRO:HG3	2.52	0.40
79:Lz:60:ARG:HB3	79:Lz:61:PRO:HD3	2.02	0.40
80:CA:24:GLY:O	80:CA:27:ILE:HG22	2.21	0.40
80:CA:87:CYS:SG	80:CA:88:HIS:CE1	3.14	0.40
83:CB:284:LYS:H	83:CB:284:LYS:HG3	1.77	0.40
83:CB:394:LEU:HD11	83:CB:421:VAL:HG23	2.03	0.40
83:CB:581:GLU:OE2	83:CB:695:GLU:HB2	2.20	0.40
83:CB:606:ALA:HB2	83:CB:732:SER:OG	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	SD	225/227 (99%)	206 (92%)	18 (8%)	1 (0%)	30 58
3	SF	187/189 (99%)	167 (89%)	20 (11%)	0	100 100
4	SK	96/98 (98%)	86 (90%)	8 (8%)	2 (2%)	5 18
5	SP	119/121 (98%)	107 (90%)	12 (10%)	0	100 100
6	SQ	142/144 (99%)	124 (87%)	17 (12%)	1 (1%)	18 45
7	SS	143/145 (99%)	138 (96%)	5 (4%)	0	100 100
8	ST	141/143 (99%)	130 (92%)	10 (7%)	1 (1%)	18 45
9	SU	102/104 (98%)	94 (92%)	8 (8%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	Sc	62/64 (97%)	47 (76%)	15 (24%)	0	100	100
11	Sd	53/55 (96%)	50 (94%)	3 (6%)	0	100	100
12	Sg	311/313 (99%)	271 (87%)	40 (13%)	0	100	100
13	SM	120/122 (98%)	107 (89%)	12 (10%)	1 (1%)	16	41
14	SZ	73/75 (97%)	59 (81%)	14 (19%)	0	100	100
15	Sf	65/67 (97%)	57 (88%)	8 (12%)	0	100	100
16	CD	51/55 (93%)	49 (96%)	2 (4%)	0	100	100
17	SE	260/262 (99%)	247 (95%)	13 (5%)	0	100	100
18	SI	204/206 (99%)	196 (96%)	8 (4%)	0	100	100
19	SL	151/153 (99%)	140 (93%)	11 (7%)	0	100	100
20	SX	139/141 (99%)	124 (89%)	14 (10%)	1 (1%)	18	45
21	SG	235/237 (99%)	222 (94%)	13 (6%)	0	100	100
22	SJ	183/185 (99%)	171 (93%)	11 (6%)	1 (0%)	24	53
23	SY	129/131 (98%)	118 (92%)	11 (8%)	0	100	100
24	Se	56/58 (97%)	51 (91%)	5 (9%)	0	100	100
25	SA	219/221 (99%)	197 (90%)	22 (10%)	0	100	100
26	SB	212/214 (99%)	207 (98%)	5 (2%)	0	100	100
27	SH	182/189 (96%)	159 (87%)	23 (13%)	0	100	100
28	SV	81/83 (98%)	73 (90%)	8 (10%)	0	100	100
29	Sa	100/102 (98%)	89 (89%)	11 (11%)	0	100	100
30	SC	220/222 (99%)	204 (93%)	16 (7%)	0	100	100
31	SN	148/150 (99%)	143 (97%)	5 (3%)	0	100	100
32	SO	138/140 (99%)	126 (91%)	12 (9%)	0	100	100
33	SW	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
34	Sb	81/83 (98%)	68 (84%)	13 (16%)	0	100	100
38	LA	246/248 (99%)	222 (90%)	24 (10%)	0	100	100
39	LB	400/402 (100%)	374 (94%)	26 (6%)	0	100	100
40	LC	366/368 (100%)	341 (93%)	25 (7%)	0	100	100
41	LD	291/293 (99%)	275 (94%)	16 (6%)	0	100	100
42	LE	232/247 (94%)	209 (90%)	23 (10%)	0	100	100
43	LF	223/225 (99%)	215 (96%)	8 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	LG	239/241 (99%)	226 (95%)	13 (5%)	0	100	100
45	LH	188/190 (99%)	172 (92%)	16 (8%)	0	100	100
46	LI	198/213 (93%)	188 (95%)	10 (5%)	0	100	100
47	LJ	174/176 (99%)	162 (93%)	12 (7%)	0	100	100
48	LL	208/210 (99%)	192 (92%)	16 (8%)	0	100	100
49	LM	137/139 (99%)	128 (93%)	8 (6%)	1 (1%)	18	45
50	LN	201/203 (99%)	192 (96%)	8 (4%)	1 (0%)	24	53
51	LO	199/201 (99%)	191 (96%)	8 (4%)	0	100	100
52	LP	151/153 (99%)	141 (93%)	10 (7%)	0	100	100
53	LQ	185/187 (99%)	175 (95%)	10 (5%)	0	100	100
54	LR	183/187 (98%)	177 (97%)	6 (3%)	0	100	100
55	LS	173/175 (99%)	161 (93%)	12 (7%)	0	100	100
56	LT	157/159 (99%)	147 (94%)	10 (6%)	0	100	100
57	LU	99/101 (98%)	85 (86%)	14 (14%)	0	100	100
58	LV	129/131 (98%)	124 (96%)	5 (4%)	0	100	100
59	LX	118/120 (98%)	115 (98%)	3 (2%)	0	100	100
60	LY	132/134 (98%)	127 (96%)	5 (4%)	0	100	100
61	LZ	133/135 (98%)	122 (92%)	11 (8%)	0	100	100
62	La	145/147 (99%)	138 (95%)	7 (5%)	0	100	100
63	Lb	105/121 (87%)	97 (92%)	8 (8%)	0	100	100
64	Lc	96/98 (98%)	88 (92%)	8 (8%)	0	100	100
65	Ld	105/107 (98%)	99 (94%)	6 (6%)	0	100	100
66	Le	126/128 (98%)	118 (94%)	8 (6%)	0	100	100
67	Lf	107/109 (98%)	98 (92%)	8 (8%)	1 (1%)	14	38
68	Lg	112/114 (98%)	112 (100%)	0	0	100	100
69	Lh	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
70	Li	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
71	Lj	84/86 (98%)	79 (94%)	5 (6%)	0	100	100
72	Lk	67/69 (97%)	66 (98%)	1 (2%)	0	100	100
73	Ll	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
74	Lm	50/52 (96%)	50 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
75	Ln	22/24 (92%)	22 (100%)	0	0	100	100
76	Lo	103/105 (98%)	99 (96%)	4 (4%)	0	100	100
77	Lp	89/91 (98%)	84 (94%)	5 (6%)	0	100	100
78	Lr	123/125 (98%)	118 (96%)	5 (4%)	0	100	100
79	Lz	215/217 (99%)	168 (78%)	47 (22%)	0	100	100
80	CA	350/356 (98%)	335 (96%)	15 (4%)	0	100	100
81	Ls	194/196 (99%)	182 (94%)	11 (6%)	1 (0%)	24	53
82	Lt	137/141 (97%)	104 (76%)	32 (23%)	1 (1%)	18	45
83	CB	842/856 (98%)	789 (94%)	49 (6%)	4 (0%)	24	53
85	LW	114/124 (92%)	110 (96%)	4 (4%)	0	100	100
All	All	12971/13206 (98%)	12031 (93%)	923 (7%)	17 (0%)	49	75

All (17) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	SK	96	ARG
82	Lt	144	ASP
83	CB	407	LYS
83	CB	779	THR
20	SX	127	ASN
50	LN	124	ASP
8	ST	41	LYS
49	LM	88	ALA
83	CB	481	LYS
83	CB	611	ASP
13	SM	96	ARG
4	SK	36	ALA
22	SJ	123	ILE
6	SQ	44	PRO
67	Lf	107	PRO
81	Ls	73	PRO
2	SD	198	ILE

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	SD	190/190 (100%)	182 (96%)	8 (4%)	26	59
3	SF	159/159 (100%)	153 (96%)	6 (4%)	29	62
4	SK	89/89 (100%)	88 (99%)	1 (1%)	65	86
5	SP	107/107 (100%)	106 (99%)	1 (1%)	70	89
6	SQ	119/119 (100%)	112 (94%)	7 (6%)	18	46
7	SS	126/126 (100%)	117 (93%)	9 (7%)	13	38
8	ST	113/113 (100%)	110 (97%)	3 (3%)	39	72
9	SU	94/94 (100%)	88 (94%)	6 (6%)	16	42
10	Sc	57/57 (100%)	52 (91%)	5 (9%)	9	28
11	Sd	48/48 (100%)	47 (98%)	1 (2%)	47	78
12	Sg	272/272 (100%)	255 (94%)	17 (6%)	16	43
13	SM	102/104 (98%)	96 (94%)	6 (6%)	18	46
14	SZ	66/66 (100%)	61 (92%)	5 (8%)	12	35
15	Sf	60/60 (100%)	57 (95%)	3 (5%)	22	53
16	CD	46/46 (100%)	46 (100%)	0	100	100
17	SE	224/224 (100%)	207 (92%)	17 (8%)	12	35
18	SI	178/178 (100%)	165 (93%)	13 (7%)	13	36
19	SL	137/137 (100%)	126 (92%)	11 (8%)	11	32
20	SX	113/113 (100%)	107 (95%)	6 (5%)	20	50
21	SG	207/207 (100%)	192 (93%)	15 (7%)	13	37
22	SJ	161/161 (100%)	150 (93%)	11 (7%)	14	40
23	SY	113/113 (100%)	106 (94%)	7 (6%)	16	44
24	Se	47/47 (100%)	46 (98%)	1 (2%)	47	78
25	SA	183/183 (100%)	167 (91%)	16 (9%)	9	29
26	SB	195/195 (100%)	185 (95%)	10 (5%)	21	52
27	SH	166/169 (98%)	160 (96%)	6 (4%)	31	64
28	SV	67/67 (100%)	61 (91%)	6 (9%)	9	27
29	Sa	89/89 (100%)	87 (98%)	2 (2%)	45	77
30	SC	188/188 (100%)	182 (97%)	6 (3%)	34	68
31	SN	130/130 (100%)	126 (97%)	4 (3%)	35	69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	SO	110/110 (100%)	105 (96%)	5 (4%)	24	57
33	SW	112/112 (100%)	105 (94%)	7 (6%)	16	43
34	Sb	75/75 (100%)	72 (96%)	3 (4%)	28	61
38	LA	190/190 (100%)	177 (93%)	13 (7%)	14	40
39	LB	348/348 (100%)	325 (93%)	23 (7%)	15	41
40	LC	306/306 (100%)	297 (97%)	9 (3%)	37	71
41	LD	246/247 (100%)	237 (96%)	9 (4%)	30	63
42	LE	209/220 (95%)	198 (95%)	11 (5%)	20	50
43	LF	194/194 (100%)	190 (98%)	4 (2%)	47	78
44	LG	203/205 (99%)	197 (97%)	6 (3%)	36	69
45	LH	169/169 (100%)	160 (95%)	9 (5%)	20	50
46	LI	172/180 (96%)	164 (95%)	8 (5%)	23	55
47	LJ	148/148 (100%)	141 (95%)	7 (5%)	23	55
48	LL	176/176 (100%)	166 (94%)	10 (6%)	18	47
49	LM	118/118 (100%)	113 (96%)	5 (4%)	26	59
50	LN	171/171 (100%)	168 (98%)	3 (2%)	51	80
51	LO	173/173 (100%)	169 (98%)	4 (2%)	44	76
52	LP	134/134 (100%)	125 (93%)	9 (7%)	15	40
53	LQ	164/164 (100%)	156 (95%)	8 (5%)	22	53
54	LR	166/166 (100%)	158 (95%)	8 (5%)	23	54
55	LS	156/156 (100%)	151 (97%)	5 (3%)	34	68
56	LT	139/139 (100%)	136 (98%)	3 (2%)	45	77
57	LU	91/91 (100%)	81 (89%)	10 (11%)	6	19
58	LV	101/101 (100%)	95 (94%)	6 (6%)	18	46
59	LX	108/108 (100%)	105 (97%)	3 (3%)	38	71
60	LY	124/124 (100%)	119 (96%)	5 (4%)	28	61
61	LZ	117/117 (100%)	115 (98%)	2 (2%)	53	81
62	La	120/120 (100%)	112 (93%)	8 (7%)	15	40
63	Lb	88/101 (87%)	84 (96%)	4 (4%)	24	57
64	Lc	83/83 (100%)	79 (95%)	4 (5%)	23	54
65	Ld	98/98 (100%)	94 (96%)	4 (4%)	27	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
66	Le	114/114 (100%)	108 (95%)	6 (5%)	20 50
67	Lf	88/88 (100%)	84 (96%)	4 (4%)	24 57
68	Lg	98/98 (100%)	90 (92%)	8 (8%)	10 31
69	Lh	109/109 (100%)	103 (94%)	6 (6%)	19 49
70	Li	86/86 (100%)	84 (98%)	2 (2%)	44 76
71	Lj	73/73 (100%)	70 (96%)	3 (4%)	27 60
72	Lk	64/64 (100%)	62 (97%)	2 (3%)	35 69
73	Ll	47/47 (100%)	46 (98%)	1 (2%)	47 78
74	Lm	48/48 (100%)	46 (96%)	2 (4%)	26 59
75	Ln	23/23 (100%)	23 (100%)	0	100 100
76	Lo	93/93 (100%)	84 (90%)	9 (10%)	8 24
77	Lp	74/74 (100%)	69 (93%)	5 (7%)	14 40
78	Lr	109/109 (100%)	101 (93%)	8 (7%)	13 36
79	Lz	195/196 (100%)	191 (98%)	4 (2%)	47 78
80	CA	303/305 (99%)	294 (97%)	9 (3%)	36 69
81	Ls	162/164 (99%)	150 (93%)	12 (7%)	13 36
82	Lt	112/115 (97%)	106 (95%)	6 (5%)	20 50
83	CB	722/728 (99%)	681 (94%)	41 (6%)	18 47
85	LW	97/103 (94%)	94 (97%)	3 (3%)	35 69
All	All	11272/11332 (100%)	10717 (95%)	555 (5%)	24 53

All (555) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	SD	14	ASP
2	SD	16	ILE
2	SD	39	VAL
2	SD	123	LEU
2	SD	129	SER
2	SD	139	SER
2	SD	146	ARG
2	SD	164	VAL
3	SF	45	TYR
3	SF	94	LYS
3	SF	119	SER

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Mol	Chain	Res	Type
3	SF	125	SER
3	SF	169	ILE
3	SF	199	VAL
4	SK	72	THR
5	SP	111	MET
6	SQ	10	VAL
6	SQ	12	VAL
6	SQ	66	VAL
6	SQ	81	ILE
6	SQ	106	LYS
6	SQ	113	ILE
6	SQ	118	THR
7	SS	16	LEU
7	SS	33	ILE
7	SS	50	ILE
7	SS	53	THR
7	SS	68	ILE
7	SS	73	ASN
7	SS	96	SER
7	SS	136	THR
7	SS	138	THR
8	ST	9	VAL
8	ST	87	VAL
8	ST	99	VAL
9	SU	32	LEU
9	SU	34	LYS
9	SU	39	LEU
9	SU	68	THR
9	SU	81	GLN
9	SU	88	LEU
10	Sc	17	VAL
10	Sc	28	THR
10	Sc	37	ASP
10	Sc	43	ILE
10	Sc	54	ASP
11	Sd	27	ARG
12	Sg	15	ASN
12	Sg	18	VAL
12	Sg	19	THR
12	Sg	31	ILE
12	Sg	63	SER
12	Sg	79	LEU

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Mol	Chain	Res	Type
12	Sg	86	THR
12	Sg	94	THR
12	Sg	107	ASP
12	Sg	108	VAL
12	Sg	119	GLN
12	Sg	151	VAL
12	Sg	165	ILE
12	Sg	168	CYS
12	Sg	184	LEU
12	Sg	205	SER
12	Sg	236	ILE
13	SM	40	LYS
13	SM	107	SER
13	SM	110	VAL
13	SM	111	VAL
13	SM	123	VAL
13	SM	128	PHE
14	SZ	50	PHE
14	SZ	83	LEU
14	SZ	99	LEU
14	SZ	107	VAL
14	SZ	113	THR
15	Sf	86	THR
15	Sf	109	ASP
15	Sf	126	CYS
17	SE	21	ASP
17	SE	26	VAL
17	SE	38	LEU
17	SE	45	ILE
17	SE	78	THR
17	SE	80	ILE
17	SE	89	VAL
17	SE	95	THR
17	SE	101	LEU
17	SE	140	VAL
17	SE	156	VAL
17	SE	157	ASN
17	SE	189	LEU
17	SE	216	ASN
17	SE	223	SER
17	SE	225	ILE
17	SE	247	THR

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Mol	Chain	Res	Type
18	SI	4	SER
18	SI	29	LEU
18	SI	46	VAL
18	SI	64	ASN
18	SI	67	TRP
18	SI	69	SER
18	SI	72	CYS
18	SI	81	VAL
18	SI	89	GLU
18	SI	96	LEU
18	SI	121	LEU
18	SI	199	LEU
18	SI	203	LYS
19	SL	15	THR
19	SL	23	VAL
19	SL	46	THR
19	SL	51	ILE
19	SL	66	VAL
19	SL	73	LEU
19	SL	81	LYS
19	SL	87	VAL
19	SL	93	LEU
19	SL	126	VAL
19	SL	128	VAL
20	SX	26	GLN
20	SX	45	SER
20	SX	57	VAL
20	SX	73	GLN
20	SX	124	LYS
20	SX	133	LEU
21	SG	2	LYS
21	SG	3	LEU
21	SG	5	ILE
21	SG	13	GLN
21	SG	68	LEU
21	SG	75	LEU
21	SG	77	LEU
21	SG	82	SER
21	SG	102	VAL
21	SG	111	LEU
21	SG	112	VAL
21	SG	116	LYS

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Mol	Chain	Res	Type
21	SG	153	VAL
21	SG	158	VAL
21	SG	180	VAL
22	SJ	3	VAL
22	SJ	14	VAL
22	SJ	15	THR
22	SJ	41	ARG
22	SJ	43	VAL
22	SJ	59	GLU
22	SJ	63	LEU
22	SJ	78	LEU
22	SJ	149	VAL
22	SJ	161	LEU
22	SJ	180	LYS
23	SY	6	THR
23	SY	9	THR
23	SY	14	THR
23	SY	24	VAL
23	SY	26	ASP
23	SY	27	VAL
23	SY	34	THR
24	Se	2	VAL
25	SA	18	PHE
25	SA	28	THR
25	SA	30	LEU
25	SA	35	GLU
25	SA	43	SER
25	SA	46	ILE
25	SA	54	THR
25	SA	74	VAL
25	SA	75	SER
25	SA	82	THR
25	SA	125	THR
25	SA	136	GLU
25	SA	142	LEU
25	SA	157	VAL
25	SA	206	ASP
25	SA	210	ILE
26	SB	97	LEU
26	SB	119	THR
26	SB	124	HIS
26	SB	130	THR

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Mol	Chain	Res	Type
26	SB	164	ILE
26	SB	171	ILE
26	SB	188	LEU
26	SB	202	GLN
26	SB	204	ILE
26	SB	217	MET
27	SH	23	ILE
27	SH	45	ILE
27	SH	64	VAL
27	SH	79	LEU
27	SH	100	ILE
27	SH	169	LYS
28	SV	13	VAL
28	SV	17	CYS
28	SV	52	THR
28	SV	65	SER
28	SV	68	SER
28	SV	79	VAL
29	Sa	63	VAL
29	Sa	64	LEU
30	SC	70	VAL
30	SC	75	ILE
30	SC	81	ILE
30	SC	185	THR
30	SC	240	THR
30	SC	256	TRP
31	SN	48	SER
31	SN	75	LEU
31	SN	80	LEU
31	SN	150	VAL
32	SO	36	SER
32	SO	90	ILE
32	SO	100	THR
32	SO	105	THR
32	SO	124	MET
33	SW	15	ASN
33	SW	38	LEU
33	SW	52	ILE
33	SW	68	ARG
33	SW	91	ASN
33	SW	103	VAL
33	SW	125	ILE

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Mol	Chain	Res	Type
34	Sb	48	SER
34	Sb	64	CYS
34	Sb	73	LEU
38	LA	15	VAL
38	LA	45	VAL
38	LA	46	LYS
38	LA	48	ILE
38	LA	49	ILE
38	LA	77	ILE
38	LA	102	LEU
38	LA	114	CYS
38	LA	135	THR
38	LA	169	VAL
38	LA	180	LEU
38	LA	207	VAL
38	LA	219	ILE
39	LB	3	HIS
39	LB	7	SER
39	LB	47	LEU
39	LB	73	VAL
39	LB	90	VAL
39	LB	126	LYS
39	LB	159	VAL
39	LB	169	ARG
39	LB	174	ARG
39	LB	194	LEU
39	LB	198	ARG
39	LB	205	VAL
39	LB	258	HIS
39	LB	278	THR
39	LB	295	ASP
39	LB	325	GLU
39	LB	326	VAL
39	LB	329	ASP
39	LB	337	VAL
39	LB	338	VAL
39	LB	350	SER
39	LB	351	LEU
39	LB	363	ILE
40	LC	17	SER
40	LC	21	ASN
40	LC	42	THR

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Mol	Chain	Res	Type
40	LC	147	VAL
40	LC	154	VAL
40	LC	158	VAL
40	LC	223	ASN
40	LC	237	ILE
40	LC	313	VAL
41	LD	63	GLN
41	LD	76	CYS
41	LD	81	HIS
41	LD	90	VAL
41	LD	118	ILE
41	LD	138	GLN
41	LD	232	THR
41	LD	234	ASP
41	LD	252	VAL
42	LE	51	VAL
42	LE	64	SER
42	LE	92	VAL
42	LE	106	VAL
42	LE	107	VAL
42	LE	128	HIS
42	LE	140	LEU
42	LE	199	THR
42	LE	253	VAL
42	LE	264	ILE
42	LE	281	ILE
43	LF	149	SER
43	LF	178	SER
43	LF	196	THR
43	LF	221	LYS
44	LG	43	GLN
44	LG	98	LEU
44	LG	168	VAL
44	LG	179	VAL
44	LG	184	ILE
44	LG	200	THR
45	LH	8	GLN
45	LH	16	VAL
45	LH	33	THR
45	LH	46	SER
45	LH	51	LYS
45	LH	57	VAL

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Mol	Chain	Res	Type
45	LH	95	VAL
45	LH	112	VAL
45	LH	187	VAL
46	LI	48	LEU
46	LI	53	VAL
46	LI	125	THR
46	LI	129	VAL
46	LI	148	VAL
46	LI	189	CYS
46	LI	203	HIS
46	LI	206	LEU
47	LJ	16	ARG
47	LJ	39	VAL
47	LJ	60	PHE
47	LJ	62	ILE
47	LJ	85	LYS
47	LJ	123	ILE
47	LJ	167	GLN
48	LL	24	THR
48	LL	59	VAL
48	LL	63	THR
48	LL	64	VAL
48	LL	70	VAL
48	LL	98	VAL
48	LL	109	SER
48	LL	114	VAL
48	LL	119	GLU
48	LL	175	ASN
49	LM	25	VAL
49	LM	30	VAL
49	LM	67	SER
49	LM	71	LYS
49	LM	118	MET
50	LN	60	VAL
50	LN	184	ILE
50	LN	197	THR
51	LO	27	VAL
51	LO	127	VAL
51	LO	145	VAL
51	LO	152	VAL
52	LP	6	LEU
52	LP	23	ARG

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Mol	Chain	Res	Type
52	LP	29	THR
52	LP	36	ILE
52	LP	58	VAL
52	LP	80	GLN
52	LP	107	LEU
52	LP	119	VAL
52	LP	148	MET
53	LQ	5	ILE
53	LQ	17	GLU
53	LQ	41	SER
53	LQ	100	VAL
53	LQ	125	GLN
53	LQ	137	VAL
53	LQ	160	HIS
53	LQ	188	ASN
54	LR	12	SER
54	LR	56	THR
54	LR	63	CYS
54	LR	78	ILE
54	LR	127	VAL
54	LR	148	ASP
54	LR	155	LEU
54	LR	158	GLN
55	LS	17	LEU
55	LS	48	VAL
55	LS	57	SER
55	LS	90	THR
55	LS	169	THR
56	LT	4	THR
56	LT	21	LYS
56	LT	69	GLN
57	LU	35	ASP
57	LU	39	PHE
57	LU	47	ILE
57	LU	50	ASN
57	LU	60	VAL
57	LU	68	SER
57	LU	94	ASN
57	LU	100	LEU
57	LU	102	VAL
57	LU	111	GLU
58	LV	57	VAL

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Mol	Chain	Res	Type
58	LV	65	VAL
58	LV	90	ARG
58	LV	94	VAL
58	LV	99	GLU
58	LV	118	THR
59	LX	52	LEU
59	LX	121	VAL
59	LX	126	THR
60	LY	44	VAL
60	LY	55	VAL
60	LY	99	ILE
60	LY	102	SER
60	LY	108	ARG
61	LZ	11	VAL
61	LZ	43	VAL
62	La	8	THR
62	La	15	VAL
62	La	16	SER
62	La	22	ILE
62	La	58	MET
62	La	63	LEU
62	La	86	THR
62	La	147	VAL
63	Lb	9	THR
63	Lb	50	ASN
63	Lb	76	VAL
63	Lb	99	ILE
64	Lc	28	VAL
64	Lc	91	VAL
64	Lc	93	THR
64	Lc	94	LEU
65	Ld	18	ASN
65	Ld	26	THR
65	Ld	55	LYS
65	Ld	106	VAL
66	Le	17	THR
66	Le	25	SER
66	Le	58	ILE
66	Le	87	VAL
66	Le	102	ASN
66	Le	123	THR
67	Lf	7	SER

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Mol	Chain	Res	Type
67	Lf	25	THR
67	Lf	33	VAL
67	Lf	84	VAL
68	Lg	25	THR
68	Lg	53	LEU
68	Lg	57	ARG
68	Lg	63	VAL
68	Lg	68	SER
68	Lg	102	ILE
68	Lg	103	VAL
68	Lg	106	VAL
69	Lh	14	LYS
69	Lh	29	SER
69	Lh	49	VAL
69	Lh	96	ASN
69	Lh	113	LEU
69	Lh	121	VAL
70	Li	27	SER
70	Li	34	THR
71	Lj	6	SER
71	Lj	7	SER
71	Lj	29	LEU
72	Lk	19	ASP
72	Lk	55	LYS
73	Ll	51	LEU
74	Lm	97	ARG
74	Lm	127	VAL
76	Lo	15	CYS
76	Lo	24	THR
76	Lo	32	SER
76	Lo	33	LEU
76	Lo	68	LEU
76	Lo	74	GLU
76	Lo	77	CYS
76	Lo	83	LEU
76	Lo	88	CYS
77	Lp	8	VAL
77	Lp	40	SER
77	Lp	61	MET
77	Lp	74	THR
77	Lp	75	SER
78	Lr	14	SER

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Mol	Chain	Res	Type
78	Lr	15	SER
78	Lr	49	VAL
78	Lr	60	VAL
78	Lr	63	VAL
78	Lr	78	VAL
78	Lr	84	LYS
78	Lr	101	LYS
79	Lz	14	VAL
79	Lz	80	VAL
79	Lz	165	LEU
79	Lz	193	LEU
80	CA	11	THR
80	CA	72	LYS
80	CA	79	SER
80	CA	114	VAL
80	CA	142[A]	VAL
80	CA	221	HIS
80	CA	269	VAL
80	CA	291	MET
80	CA	331	MET
81	Ls	45	MET
81	Ls	60	MET
81	Ls	61	MET
81	Ls	75	LEU
81	Ls	86	VAL
81	Ls	98	ILE
81	Ls	127	ASN
81	Ls	173	THR
81	Ls	188	VAL
81	Ls	189	ILE
81	Ls	192	VAL
81	Ls	200	ASN
82	Lt	32	ILE
82	Lt	42	VAL
82	Lt	73	VAL
82	Lt	76	SER
82	Lt	110	VAL
82	Lt	160	VAL
83	CB	28	VAL
83	CB	45	ILE
83	CB	84	ASN
83	CB	89	ILE

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Mol	Chain	Res	Type
83	CB	102	LEU
83	CB	110	ASP
83	CB	132	VAL
83	CB	137	VAL
83	CB	157	MET
83	CB	160	MET
83	CB	197	SER
83	CB	203	ILE
83	CB	212	VAL
83	CB	263	ASP
83	CB	288	THR
83	CB	399	SER
83	CB	402	VAL
83	CB	435	THR
83	CB	450	THR
83	CB	457	TYR
83	CB	461	ILE
83	CB	486	THR
83	CB	530	SER
83	CB	537	ILE
83	CB	541	SER
83	CB	568	ILE
83	CB	573	SER
83	CB	577	VAL
83	CB	587	SER
83	CB	589	VAL
83	CB	595	SER
83	CB	621	GLU
83	CB	625	ARG
83	CB	652	PHE
83	CB	664	ASP
83	CB	672	LEU
83	CB	733	VAL
83	CB	740	LEU
83	CB	756	VAL
83	CB	785	LYS
83	CB	791	ASN
85	LW	24	THR
85	LW	32	LEU
85	LW	50	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) such sidechains are listed below:

Mol	Chain	Res	Type
6	SQ	24	HIS
6	SQ	48	GLN
6	SQ	97	GLN
7	SS	85	ASN
7	SS	134	GLN
8	ST	128	GLN
12	Sg	56	GLN
12	Sg	62	HIS
12	Sg	147	HIS
14	SZ	45	ASN
17	SE	157	ASN
18	SI	87	ASN
18	SI	116	HIS
18	SI	146	GLN
19	SL	11	GLN
19	SL	13	GLN
20	SX	31	HIS
20	SX	61	GLN
20	SX	92	ASN
21	SG	59	GLN
22	SJ	125	HIS
22	SJ	134	HIS
22	SJ	177	ASN
23	SY	112	ASN
25	SA	110	ASN
26	SB	76	ASN
26	SB	163	GLN
27	SH	162	GLN
28	SV	29	HIS
30	SC	272	HIS
31	SN	5	HIS
31	SN	62	GLN
32	SO	79	GLN
33	SW	90	GLN
34	Sb	9	HIS
34	Sb	51	GLN
38	LA	38	HIS
38	LA	216	HIS
39	LB	3	HIS
39	LB	184	GLN
39	LB	186	ASN
40	LC	21	ASN
40	LC	38	ASN

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Mol	Chain	Res	Type
40	LC	198	ASN
40	LC	223	ASN
40	LC	347	HIS
41	LD	63	GLN
41	LD	225	GLN
42	LE	228	GLN
42	LE	268	GLN
43	LF	39	GLN
43	LF	235	ASN
44	LG	46	GLN
44	LG	64	GLN
44	LG	81	ASN
44	LG	206	GLN
46	LI	73	ASN
46	LI	92	HIS
46	LI	144	ASN
46	LI	147	HIS
46	LI	177	ASN
47	LJ	10	ASN
47	LJ	42	GLN
47	LJ	104	ASN
49	LM	20	HIS
49	LM	34	ASN
49	LM	125	ASN
50	LN	32	GLN
50	LN	149	GLN
52	LP	34	GLN
52	LP	80	GLN
52	LP	133	HIS
52	LP	137	ASN
53	LQ	188	ASN
54	LR	40	GLN
54	LR	130	ASN
54	LR	178	GLN
56	LT	66	ASN
56	LT	98	HIS
57	LU	94	ASN
58	LV	27	ASN
59	LX	94	ASN
60	LY	14	ASN
60	LY	96	HIS
62	La	34	ASN

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Mol	Chain	Res	Type
62	La	66	ASN
64	Lc	15	ASN
64	Lc	19	GLN
65	Ld	116	ASN
66	Le	57	ASN
67	Lf	21	GLN
69	Lh	98	HIS
71	Lj	48	ASN
71	Lj	66	HIS
78	Lr	23	GLN
78	Lr	70	GLN
79	Lz	200	ASN
80	CA	96	GLN
80	CA	221	HIS
81	Ls	39	GLN
82	Lt	68	GLN
82	Lt	149	HIS
83	CB	715	HIS
85	LW	45	ASN
85	LW	59	HIS
85	LW	79	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	S2	1715/1869 (91%)	476 (27%)	6 (0%)
35	L5	3704/5070 (73%)	864 (23%)	22 (0%)
36	L7	119/120 (99%)	14 (11%)	0
37	L8	155/156 (99%)	31 (20%)	0
84	Et	73/75 (97%)	52 (71%)	0
All	All	5766/7290 (79%)	1437 (24%)	28 (0%)

All (1437) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	S2	4	C
1	S2	13	C
1	S2	23	G
1	S2	24	C
1	S2	25	A
1	S2	33	G

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Mol	Chain	Res	Type
1	S2	41	G
1	S2	42	A
1	S2	44	U
1	S2	45	A
1	S2	46	A
1	S2	56	G
1	S2	59	U
1	S2	62	G
1	S2	64	A
1	S2	66	G
1	S2	67	C
1	S2	68	A
1	S2	72	C
1	S2	73	C
1	S2	74	G
1	S2	76	U
1	S2	92	A
1	S2	103	A
1	S2	110	U
1	S2	113	G
1	S2	114	G
1	S2	115	U
1	S2	116	U
1	S2	126	G
1	S2	129	C
1	S2	130	G
1	S2	142	C
1	S2	143	U
1	S2	147	A
1	S2	149	A
1	S2	155	G
1	S2	158	A
1	S2	160	U
1	S2	161	U
1	S2	162	C
1	S2	163	U
1	S2	168	C
1	S2	170	A
1	S2	171	A
1	S2	175	A
1	S2	179	C
1	S2	182	C

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Mol	Chain	Res	Type
1	S2	184	G
1	S2	190	G
1	S2	192	C
1	S2	194	C
1	S2	196	C
1	S2	198	U
1	S2	200	G
1	S2	202	G
1	S2	203	G
1	S2	204	G
1	S2	206	G
1	S2	207	G
1	S2	208	G
1	S2	209	A
1	S2	213	G
1	S2	214	U
1	S2	220	U
1	S2	291	G
1	S2	292	A
1	S2	295	C
1	S2	298	G
1	S2	301	A
1	S2	305	U
1	S2	306	C
1	S2	307	G
1	S2	308	G
1	S2	309	G
1	S2	310	C
1	S2	311	C
1	S2	312	G
1	S2	317	C
1	S2	318	A
1	S2	319	C
1	S2	323	C
1	S2	324	C
1	S2	325	C
1	S2	326	C
1	S2	328	U
1	S2	329	G
1	S2	332	G
1	S2	335	G
1	S2	338	G

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Mol	Chain	Res	Type
1	S2	339	A
1	S2	347	G
1	S2	360	A
1	S2	361	U
1	S2	362	C
1	S2	364	A
1	S2	368	U
1	S2	370	G
1	S2	375	U
1	S2	385	G
1	S2	386	C
1	S2	408	A
1	S2	409	C
1	S2	421	G
1	S2	426	A
1	S2	437	G
1	S2	442	C
1	S2	448	A
1	S2	449	A
1	S2	450	C
1	S2	452	G
1	S2	464	A
1	S2	465	A
1	S2	466	G
1	S2	471	G
1	S2	472	C
1	S2	473	A
1	S2	474	G
1	S2	476	A
1	S2	482	G
1	S2	483	C
1	S2	487	U
1	S2	488	U
1	S2	492	C
1	S2	493	A
1	S2	496	C
1	S2	502	C
1	S2	503	C
1	S2	516	A
1	S2	517	C
1	S2	528	A
1	S2	530	U

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Mol	Chain	Res	Type
1	S2	531	A
1	S2	532	C
1	S2	533	A
1	S2	536	A
1	S2	537	C
1	S2	538	U
1	S2	540	U
1	S2	542	U
1	S2	546	G
1	S2	547	G
1	S2	549	C
1	S2	551	U
1	S2	557	U
1	S2	558	G
1	S2	559	G
1	S2	560	A
1	S2	563	G
1	S2	564	A
1	S2	566	U
1	S2	583	A
1	S2	587	A
1	S2	589	G
1	S2	590	A
1	S2	591	U
1	S2	593	C
1	S2	594	A
1	S2	606	G
1	S2	607	U
1	S2	611	G
1	S2	612	U
1	S2	614	C
1	S2	617	G
1	S2	622	C
1	S2	623	G
1	S2	628	A
1	S2	629	A
1	S2	631	U
1	S2	643	A
1	S2	644	G
1	S2	655	A
1	S2	660	C
1	S2	664	A

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Mol	Chain	Res	Type
1	S2	668	A
1	S2	669	A
1	S2	671	A
1	S2	672	A
1	S2	673	G
1	S2	683	G
1	S2	684	G
1	S2	688	U
1	S2	689	U
1	S2	692	G
1	S2	693	A
1	S2	695	C
1	S2	696	G
1	S2	697	G
1	S2	698	G
1	S2	732	U
1	S2	733	C
1	S2	734	C
1	S2	736	C
1	S2	738	C
1	S2	749	U
1	S2	750	C
1	S2	751	G
1	S2	752	G
1	S2	753	C
1	S2	788	G
1	S2	790	C
1	S2	791	C
1	S2	792	C
1	S2	793	G
1	S2	794	A
1	S2	798	G
1	S2	799	U
1	S2	801	U
1	S2	821	G
1	S2	822	U
1	S2	823	U
1	S2	824	C
1	S2	827	A
1	S2	830	A
1	S2	833	C
1	S2	834	C

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Mol	Chain	Res	Type
1	S2	835	C
1	S2	836	G
1	S2	837	A
1	S2	838	G
1	S2	839	C
1	S2	842	C
1	S2	847	A
1	S2	861	A
1	S2	869	A
1	S2	870	A
1	S2	871	U
1	S2	872	A
1	S2	873	G
1	S2	874	G
1	S2	877	C
1	S2	881	G
1	S2	882	U
1	S2	888	U
1	S2	889	U
1	S2	890	U
1	S2	891	G
1	S2	892	U
1	S2	896	U
1	S2	897	U
1	S2	898	U
1	S2	899	U
1	S2	900	C
1	S2	901	G
1	S2	903	A
1	S2	904	A
1	S2	913	A
1	S2	914	U
1	S2	917	U
1	S2	919	A
1	S2	920	A
1	S2	922	A
1	S2	925	G
1	S2	933	G
1	S2	934	G
1	S2	938	A
1	S2	949	G
1	S2	954	U

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Mol	Chain	Res	Type
1	S2	955	A
1	S2	956	G
1	S2	968	U
1	S2	970	G
1	S2	971	G
1	S2	972	A
1	S2	978	G
1	S2	988	C
1	S2	990	A
1	S2	992	A
1	S2	997	A
1	S2	999	G
1	S2	1001	A
1	S2	1008	A
1	S2	1017	U
1	S2	1023	A
1	S2	1027	A
1	S2	1033	G
1	S2	1045	U
1	S2	1061	U
1	S2	1062	A
1	S2	1067	C
1	S2	1083	A
1	S2	1085	C
1	S2	1088	U
1	S2	1109	C
1	S2	1113	A
1	S2	1114	U
1	S2	1115	U
1	S2	1116	C
1	S2	1118	C
1	S2	1119	A
1	S2	1121	G
1	S2	1126	G
1	S2	1133	A
1	S2	1138	C
1	S2	1148	A
1	S2	1150	A
1	S2	1153	C
1	S2	1154	U
1	S2	1155	U
1	S2	1195	A

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Mol	Chain	Res	Type
1	S2	1200	A
1	S2	1207	G
1	S2	1208	A
1	S2	1215	C
1	S2	1216	C
1	S2	1217	A
1	S2	1220	A
1	S2	1224	G
1	S2	1227	G
1	S2	1240	A
1	S2	1242	U
1	S2	1243	U
1	S2	1251	A
1	S2	1253	A
1	S2	1256	G
1	S2	1257	G
1	S2	1259	A
1	S2	1263	U
1	S2	1264	C
1	S2	1274	G
1	S2	1275	G
1	S2	1283	C
1	S2	1284	A
1	S2	1286	G
1	S2	1287	A
1	S2	1290	G
1	S2	1294	G
1	S2	1295	A
1	S2	1301	A
1	S2	1302	G
1	S2	1303	C
1	S2	1306	U
1	S2	1308	U
1	S2	1315	U
1	S2	1342	U
1	S2	1364	U
1	S2	1371	U
1	S2	1372	U
1	S2	1376	A
1	S2	1378	A
1	S2	1401	A
1	S2	1402	A

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Mol	Chain	Res	Type
1	S2	1408	U
1	S2	1411	G
1	S2	1413	G
1	S2	1414	A
1	S2	1415	C
1	S2	1419	C
1	S2	1420	G
1	S2	1421	A
1	S2	1422	G
1	S2	1423	C
1	S2	1424	G
1	S2	1433	C
1	S2	1434	C
1	S2	1435	C
1	S2	1436	C
1	S2	1438	A
1	S2	1442	U
1	S2	1449	G
1	S2	1454	A
1	S2	1455	A
1	S2	1458	G
1	S2	1462	U
1	S2	1463	U
1	S2	1478	U
1	S2	1480	A
1	S2	1486	A
1	S2	1488	C
1	S2	1489	A
1	S2	1490	G
1	S2	1494	U
1	S2	1495	G
1	S2	1497	G
1	S2	1498	A
1	S2	1508	A
1	S2	1521	C
1	S2	1522	A
1	S2	1533	A
1	S2	1535	U
1	S2	1536	G
1	S2	1537	A
1	S2	1544	C
1	S2	1552	G

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Mol	Chain	Res	Type
1	S2	1556	A
1	S2	1560	U
1	S2	1570	G
1	S2	1572	C
1	S2	1574	C
1	S2	1579	A
1	S2	1580	A
1	S2	1581	C
1	S2	1582	C
1	S2	1584	G
1	S2	1585	U
1	S2	1586	U
1	S2	1587	G
1	S2	1588	A
1	S2	1594	A
1	S2	1599	U
1	S2	1600	G
1	S2	1601	A
1	S2	1602	U
1	S2	1603	G
1	S2	1604	G
1	S2	1606	G
1	S2	1621	U
1	S2	1623	A
1	S2	1629	C
1	S2	1630	A
1	S2	1633	A
1	S2	1634	A
1	S2	1637	A
1	S2	1638	G
1	S2	1639	G
1	S2	1640	A
1	S2	1646	C
1	S2	1648	G
1	S2	1654	G
1	S2	1663	A
1	S2	1665	G
1	S2	1671	G
1	S2	1683	C
1	S2	1696	C
1	S2	1698	C
1	S2	1699	A

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Mol	Chain	Res	Type
1	S2	1712	A
1	S2	1715	A
1	S2	1722	G
1	S2	1726	G
1	S2	1729	U
1	S2	1742	C
1	S2	1743	G
1	S2	1744	G
1	S2	1745	A
1	S2	1752	C
1	S2	1753	C
1	S2	1754	G
1	S2	1755	C
1	S2	1756	C
1	S2	1757	G
1	S2	1758	G
1	S2	1759	G
1	S2	1760	G
1	S2	1761	U
1	S2	1772	C
1	S2	1773	C
1	S2	1774	C
1	S2	1777	G
1	S2	1780	G
1	S2	1782	G
1	S2	1783	C
1	S2	1784	G
1	S2	1785	C
1	S2	1787	G
1	S2	1798	C
1	S2	1809	A
1	S2	1810	U
1	S2	1812	U
1	S2	1813	A
1	S2	1822	A
1	S2	1823	A
1	S2	1825	A
1	S2	1826	G
1	S2	1829	G
1	S2	1831	A
1	S2	1835	A
1	S2	1838	U

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Mol	Chain	Res	Type
1	S2	1849	G
1	S2	1851	A
1	S2	1852	C
1	S2	1861	G
1	S2	1862	G
1	S2	1863	A
1	S2	1864	U
1	S2	1865	C
35	L5	2	G
35	L5	25	A
35	L5	26	C
35	L5	27	C
35	L5	30	C
35	L5	39	A
35	L5	42	A
35	L5	48	G
35	L5	56	A
35	L5	59	A
35	L5	64	A
35	L5	65	A
35	L5	69	A
35	L5	73	A
35	L5	74	G
35	L5	91	G
35	L5	98	A
35	L5	104	G
35	L5	108	A
35	L5	109	G
35	L5	110	C
35	L5	119	G
35	L5	120	A
35	L5	132	G
35	L5	133	C
35	L5	134	G
35	L5	135	G
35	L5	145	G
35	L5	152	U
35	L5	159	C
35	L5	165	A
35	L5	182	G
35	L5	183	C
35	L5	184	U

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Mol	Chain	Res	Type
35	L5	185	C
35	L5	187	U
35	L5	188	G
35	L5	189	G
35	L5	200	U
35	L5	209	U
35	L5	213	G
35	L5	216	C
35	L5	218	A
35	L5	220	C
35	L5	234	G
35	L5	237	G
35	L5	255	C
35	L5	256	G
35	L5	261	G
35	L5	264	C
35	L5	265	C
35	L5	266	C
35	L5	267	G
35	L5	275	C
35	L5	276	C
35	L5	278	G
35	L5	280	G
35	L5	297	U
35	L5	306	A
35	L5	315	G
35	L5	316	U
35	L5	340	C
35	L5	350	C
35	L5	373	G
35	L5	385	A
35	L5	387	G
35	L5	388	A
35	L5	396	A
35	L5	407	A
35	L5	409	G
35	L5	410	A
35	L5	411	G
35	L5	412	G
35	L5	413	G
35	L5	415	G
35	L5	431	G

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Mol	Chain	Res	Type
35	L5	432	U
35	L5	433	A
35	L5	438	G
35	L5	440	U
35	L5	449	C
35	L5	450	G
35	L5	452	A
35	L5	453	G
35	L5	454	U
35	L5	456	C
35	L5	457	G
35	L5	467	U
35	L5	468	U
35	L5	472	C
35	L5	484	U
35	L5	485	C
35	L5	486	C
35	L5	489	C
35	L5	493	G
35	L5	494	U
35	L5	497	G
35	L5	498	C
35	L5	499	G
35	L5	500	G
35	L5	501	C
35	L5	502	C
35	L5	503	C
35	L5	504	G
35	L5	505	G
35	L5	509	A
35	L5	510	U
35	L5	512	U
35	L5	513	U
35	L5	514	U
35	L5	515	C
35	L5	518	G
35	L5	643	C
35	L5	646	G
35	L5	654	C
35	L5	656	C
35	L5	657	C
35	L5	659	G

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Mol	Chain	Res	Type
35	L5	665	C
35	L5	666	G
35	L5	667	A
35	L5	668	C
35	L5	669	C
35	L5	672	C
35	L5	673	C
35	L5	674	G
35	L5	685	C
35	L5	686	A
35	L5	687	U
35	L5	696	C
35	L5	703	G
35	L5	704	C
35	L5	706	C
35	L5	708	G
35	L5	730	G
35	L5	731	G
35	L5	738	C
35	L5	739	G
35	L5	742	G
35	L5	744	G
35	L5	750	U
35	L5	753	C
35	L5	758	G
35	L5	759	G
35	L5	904	C
35	L5	905	C
35	L5	906	C
35	L5	907	C
35	L5	911	U
35	L5	912	G
35	L5	913	U
35	L5	914	U
35	L5	915	A
35	L5	917	A
35	L5	918	G
35	L5	923	C
35	L5	924	C
35	L5	926	G
35	L5	932	A
35	L5	933	G

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Mol	Chain	Res	Type
35	L5	935	A
35	L5	936	C
35	L5	937	U
35	L5	943	A
35	L5	945	U
35	L5	958	G
35	L5	959	G
35	L5	960	A
35	L5	961	G
35	L5	962	C
35	L5	965	G
35	L5	967	C
35	L5	968	C
35	L5	969	C
35	L5	970	G
35	L5	977	C
35	L5	982	U
35	L5	985	C
35	L5	989	U
35	L5	990	C
35	L5	992	C
35	L5	993	G
35	L5	995	C
35	L5	996	G
35	L5	1048	G
35	L5	1049	C
35	L5	1050	C
35	L5	1051	G
35	L5	1066	G
35	L5	1070	G
35	L5	1071	C
35	L5	1072	C
35	L5	1074	G
35	L5	1075	G
35	L5	1077	C
35	L5	1082	C
35	L5	1083	U
35	L5	1095	A
35	L5	1168	G
35	L5	1171	G
35	L5	1172	C
35	L5	1173	G

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Mol	Chain	Res	Type
35	L5	1179	U
35	L5	1180	C
35	L5	1181	C
35	L5	1182	C
35	L5	1183	C
35	L5	1193	C
35	L5	1200	G
35	L5	1202	C
35	L5	1203	G
35	L5	1204	C
35	L5	1210	C
35	L5	1211	G
35	L5	1214	C
35	L5	1215	C
35	L5	1217	G
35	L5	1218	G
35	L5	1219	G
35	L5	1222	A
35	L5	1235	G
35	L5	1241	C
35	L5	1242	G
35	L5	1246	G
35	L5	1253	G
35	L5	1254	A
35	L5	1257	A
35	L5	1258	G
35	L5	1262	G
35	L5	1266	G
35	L5	1267	C
35	L5	1269	G
35	L5	1270	A
35	L5	1271	G
35	L5	1272	C
35	L5	1273	G
35	L5	1274	A
35	L5	1275	G
35	L5	1277	G
35	L5	1280	C
35	L5	1284	G
35	L5	1287	G
35	L5	1294	A
35	L5	1295	C

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Mol	Chain	Res	Type
35	L5	1296	G
35	L5	1301	C
35	L5	1314	C
35	L5	1326	A
35	L5	1337	A
35	L5	1354	A
35	L5	1358	G
35	L5	1359	G
35	L5	1365	C
35	L5	1367	C
35	L5	1370	G
35	L5	1378	C
35	L5	1387	A
35	L5	1394	G
35	L5	1397	A
35	L5	1404	G
35	L5	1405	C
35	L5	1407	C
35	L5	1408	G
35	L5	1409	C
35	L5	1410	U
35	L5	1411	C
35	L5	1414	C
35	L5	1415	G
35	L5	1417	C
35	L5	1420	A
35	L5	1425	G
35	L5	1435	G
35	L5	1437	C
35	L5	1439	C
35	L5	1441	C
35	L5	1443	A
35	L5	1444	G
35	L5	1446	C
35	L5	1447	C
35	L5	1452	A
35	L5	1482	G
35	L5	1483	C
35	L5	1497	A
35	L5	1498	G
35	L5	1502	G
35	L5	1516	G

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Mol	Chain	Res	Type
35	L5	1517	G
35	L5	1518	A
35	L5	1534	A
35	L5	1535	C
35	L5	1547	A
35	L5	1562	G
35	L5	1564	A
35	L5	1566	C
35	L5	1578	U
35	L5	1582	U
35	L5	1591	U
35	L5	1596	U
35	L5	1624	G
35	L5	1631	A
35	L5	1633	G
35	L5	1634	A
35	L5	1641	G
35	L5	1642	A
35	L5	1654	G
35	L5	1661	C
35	L5	1663	C
35	L5	1676	C
35	L5	1677	U
35	L5	1678	C
35	L5	1681	G
35	L5	1685	G
35	L5	1699	A
35	L5	1700	G
35	L5	1703	C
35	L5	1704	C
35	L5	1705	G
35	L5	1707	C
35	L5	1718	C
35	L5	1731	C
35	L5	1734	G
35	L5	1740	C
35	L5	1741	G
35	L5	1742	A
35	L5	1750	G
35	L5	1752	G
35	L5	1753	G
35	L5	1754	U

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Mol	Chain	Res	Type
35	L5	1757	U
35	L5	1758	G
35	L5	1760	G
35	L5	1761	G
35	L5	1762	C
35	L5	1763	C
35	L5	1764	G
35	L5	1765	A
35	L5	1766	A
35	L5	1768	C
35	L5	1770	A
35	L5	1775	A
35	L5	1787	A
35	L5	1804	A
35	L5	1806	G
35	L5	1810	G
35	L5	1820	C
35	L5	1821	G
35	L5	1822	U
35	L5	1836	G
35	L5	1837	A
35	L5	1842	G
35	L5	1843	A
35	L5	1855	G
35	L5	1869	G
35	L5	1882	U
35	L5	1892	A
35	L5	1897	A
35	L5	1917	A
35	L5	1918	U
35	L5	1919	G
35	L5	1920	C
35	L5	1921	C
35	L5	1922	G
35	L5	1925	G
35	L5	1931	C
35	L5	1932	A
35	L5	1936	C
35	L5	1948	G
35	L5	1949	U
35	L5	1959	U
35	L5	1961	G

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Mol	Chain	Res	Type
35	L5	1962	A
35	L5	1974	U
35	L5	1975	G
35	L5	1978	C
35	L5	1980	U
35	L5	1981	G
35	L5	1982	G
35	L5	1984	A
35	L5	1985	G
35	L5	1991	A
35	L5	1992	U
35	L5	1993	C
35	L5	1997	U
35	L5	1998	A
35	L5	1999	A
35	L5	2002	A
35	L5	2004	U
35	L5	2011	C
35	L5	2017	A
35	L5	2018	C
35	L5	2026	A
35	L5	2033	A
35	L5	2034	G
35	L5	2046	G
35	L5	2048	U
35	L5	2055	G
35	L5	2056	G
35	L5	2069	A
35	L5	2084	C
35	L5	2092	G
35	L5	2093	A
35	L5	2095	A
35	L5	2096	G
35	L5	2097	U
35	L5	2098	G
35	L5	2101	C
35	L5	2102	G
35	L5	2103	G
35	L5	2106	G
35	L5	2107	C
35	L5	2108	G
35	L5	2110	C

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Mol	Chain	Res	Type
35	L5	2112	G
35	L5	2250	C
35	L5	2252	G
35	L5	2253	A
35	L5	2255	C
35	L5	2256	C
35	L5	2257	C
35	L5	2258	C
35	L5	2259	G
35	L5	2260	C
35	L5	2262	G
35	L5	2263	A
35	L5	2289	C
35	L5	2300	A
35	L5	2301	G
35	L5	2313	A
35	L5	2332	A
35	L5	2333	G
35	L5	2348	G
35	L5	2351	C
35	L5	2360	A
35	L5	2389	A
35	L5	2395	A
35	L5	2397	G
35	L5	2398	U
35	L5	2402	G
35	L5	2412	A
35	L5	2417	A
35	L5	2421	G
35	L5	2425	U
35	L5	2441	C
35	L5	2464	C
35	L5	2465	C
35	L5	2469	C
35	L5	2474	G
35	L5	2475	G
35	L5	2478	C
35	L5	2479	G
35	L5	2483	G
35	L5	2484	A
35	L5	2485	U
35	L5	2487	G

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Mol	Chain	Res	Type
35	L5	2488	C
35	L5	2489	C
35	L5	2490	U
35	L5	2491	C
35	L5	2494	U
35	L5	2503	G
35	L5	2504	C
35	L5	2506	G
35	L5	2513	A
35	L5	2519	U
35	L5	2520	C
35	L5	2537	A
35	L5	2544	G
35	L5	2546	G
35	L5	2547	G
35	L5	2554	U
35	L5	2555	G
35	L5	2559	G
35	L5	2560	C
35	L5	2565	A
35	L5	2567	G
35	L5	2568	C
35	L5	2583	C
35	L5	2586	G
35	L5	2587	A
35	L5	2589	C
35	L5	2618	G
35	L5	2627	C
35	L5	2652	G
35	L5	2653	C
35	L5	2662	G
35	L5	2664	G
35	L5	2669	C
35	L5	2675	G
35	L5	2676	A
35	L5	2687	U
35	L5	2694	G
35	L5	2695	A
35	L5	2696	A
35	L5	2707	U
35	L5	2708	U
35	L5	2710	C

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Mol	Chain	Res	Type
35	L5	2711	G
35	L5	2721	G
35	L5	2724	G
35	L5	2726	G
35	L5	2739	C
35	L5	2742	G
35	L5	2743	A
35	L5	2746	A
35	L5	2761	U
35	L5	2763	U
35	L5	2764	A
35	L5	2769	U
35	L5	2770	C
35	L5	2787	A
35	L5	2788	U
35	L5	2790	U
35	L5	2806	A
35	L5	2814	C
35	L5	2826	U
35	L5	2827	G
35	L5	2829	U
35	L5	2838	G
35	L5	2848	G
35	L5	2855	G
35	L5	2877	G
35	L5	2894	A
35	L5	2897	G
35	L5	2900	U
35	L5	2902	G
35	L5	2903	G
35	L5	2904	U
35	L5	2905	C
35	L5	2906	G
35	L5	2908	U
35	L5	3586	G
35	L5	3588	C
35	L5	3590	G
35	L5	3591	C
35	L5	3594	C
35	L5	3595	U
35	L5	3596	A
35	L5	3597	G

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Mol	Chain	Res	Type
35	L5	3599	A
35	L5	3605	C
35	L5	3615	G
35	L5	3618	C
35	L5	3626	G
35	L5	3630	A
35	L5	3635	A
35	L5	3644	U
35	L5	3646	A
35	L5	3648	A
35	L5	3662	A
35	L5	3664	G
35	L5	3670	C
35	L5	3673	C
35	L5	3674	G
35	L5	3691	G
35	L5	3692	A
35	L5	3711	A
35	L5	3712	A
35	L5	3713	U
35	L5	3714	G
35	L5	3727	A
35	L5	3748	A
35	L5	3750	G
35	L5	3753	G
35	L5	3756	A
35	L5	3759	A
35	L5	3760	A
35	L5	3761	C
35	L5	3766	A
35	L5	3767	C
35	L5	3772	U
35	L5	3773	U
35	L5	3774	A
35	L5	3776	G
35	L5	3777	G
35	L5	3784	A
35	L5	3786	U
35	L5	3788	C
35	L5	3802	U
35	L5	3811	G
35	L5	3812	C

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Mol	Chain	Res	Type
35	L5	3814	U
35	L5	3817	A
35	L5	3818	U
35	L5	3819	G
35	L5	3823	G
35	L5	3824	A
35	L5	3838	U
35	L5	3839	G
35	L5	3840	U
35	L5	3841	C
35	L5	3867	A
35	L5	3868	G
35	L5	3877	A
35	L5	3878	C
35	L5	3879	G
35	L5	3885	G
35	L5	3887	C
35	L5	3890	A
35	L5	3892	U
35	L5	3897	G
35	L5	3898	G
35	L5	3901	A
35	L5	3906	A
35	L5	3907	G
35	L5	3908	A
35	L5	3915	U
35	L5	3916	G
35	L5	3930	U
35	L5	3938	G
35	L5	3939	G
35	L5	3943	A
35	L5	3944	G
35	L5	3947	A
35	L5	3948	C
35	L5	3949	A
35	L5	3950	U
35	L5	3953	G
35	L5	3955	G
35	L5	3956	G
35	L5	3957	U
35	L5	3959	U
35	L5	3960	A

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Mol	Chain	Res	Type
35	L5	3961	G
35	L5	3962	A
35	L5	3963	A
35	L5	3964	U
35	L5	3965	A
35	L5	3966	A
35	L5	3968	U
35	L5	3969	G
35	L5	3970	G
35	L5	3973	G
35	L5	3974	G
35	L5	3975	C
35	L5	3977	C
35	L5	4038	C
35	L5	4039	G
35	L5	4041	C
35	L5	4042	G
35	L5	4043	G
35	L5	4044	U
35	L5	4046	A
35	L5	4047	A
35	L5	4048	A
35	L5	4049	U
35	L5	4050	A
35	L5	4051	C
35	L5	4052	C
35	L5	4053	A
35	L5	4054	C
35	L5	4055	U
35	L5	4056	A
35	L5	4057	C
35	L5	4058	U
35	L5	4059	C
35	L5	4060	U
35	L5	4061	G
35	L5	4062	A
35	L5	4063	U
35	L5	4064	C
35	L5	4065	G
35	L5	4067	U
35	L5	4068	U
35	L5	4069	U

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Mol	Chain	Res	Type
35	L5	4076	G
35	L5	4084	G
35	L5	4092	G
35	L5	4093	G
35	L5	4096	C
35	L5	4097	G
35	L5	4098	A
35	L5	4099	G
35	L5	4100	C
35	L5	4101	C
35	L5	4102	C
35	L5	4103	C
35	L5	4104	G
35	L5	4108	G
35	L5	4111	U
35	L5	4114	C
35	L5	4115	G
35	L5	4116	C
35	L5	4117	U
35	L5	4119	C
35	L5	4127	A
35	L5	4133	C
35	L5	4134	C
35	L5	4140	C
35	L5	4141	G
35	L5	4142	C
35	L5	4143	G
35	L5	4144	C
35	L5	4146	G
35	L5	4149	C
35	L5	4160	C
35	L5	4162	C
35	L5	4163	U
35	L5	4170	A
35	L5	4183	G
35	L5	4184	G
35	L5	4191	G
35	L5	4196	G
35	L5	4197	G
35	L5	4201	G
35	L5	4203	A
35	L5	4222	G

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Mol	Chain	Res	Type
35	L5	4225	G
35	L5	4228	G
35	L5	4229	U
35	L5	4232	U
35	L5	4233	A
35	L5	4242	U
35	L5	4251	A
35	L5	4254	G
35	L5	4255	A
35	L5	4258	C
35	L5	4265	U
35	L5	4268	A
35	L5	4273	A
35	L5	4295	U
35	L5	4304	A
35	L5	4305	G
35	L5	4313	A
35	L5	4314	C
35	L5	4319	C
35	L5	4330	G
35	L5	4332	C
35	L5	4349	C
35	L5	4350	C
35	L5	4354	U
35	L5	4373	G
35	L5	4376	A
35	L5	4377	G
35	L5	4378	A
35	L5	4380	A
35	L5	4387	C
35	L5	4391	G
35	L5	4394	A
35	L5	4421	C
35	L5	4422	A
35	L5	4428	A
35	L5	4436	U
35	L5	4438	U
35	L5	4448	G
35	L5	4449	A
35	L5	4452	U
35	L5	4453	C
35	L5	4464	A

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Mol	Chain	Res	Type
35	L5	4466	C
35	L5	4475	G
35	L5	4488	A
35	L5	4500	U
35	L5	4512	U
35	L5	4513	A
35	L5	4519	C
35	L5	4524	G
35	L5	4525	C
35	L5	4528	G
35	L5	4545	G
35	L5	4548	A
35	L5	4549	G
35	L5	4557	U
35	L5	4560	C
35	L5	4567	G
35	L5	4573	G
35	L5	4575	G
35	L5	4584	A
35	L5	4589	A
35	L5	4590	A
35	L5	4600	G
35	L5	4601	U
35	L5	4617	G
35	L5	4627	U
35	L5	4636	U
35	L5	4637	G
35	L5	4648	A
35	L5	4652	G
35	L5	4656	A
35	L5	4657	U
35	L5	4659	G
35	L5	4670	C
35	L5	4672	A
35	L5	4687	A
35	L5	4694	G
35	L5	4695	C
35	L5	4700	A
35	L5	4707	A
35	L5	4708	A
35	L5	4709	U
35	L5	4719	G

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Mol	Chain	Res	Type
35	L5	4733	C
35	L5	4734	A
35	L5	4740	G
35	L5	4741	C
35	L5	4742	G
35	L5	4745	G
35	L5	4750	G
35	L5	4754	G
35	L5	4757	C
35	L5	4759	C
35	L5	4765	G
35	L5	4771	C
35	L5	4772	C
35	L5	4773	C
35	L5	4775	C
35	L5	4776	G
35	L5	4859	C
35	L5	4860	G
35	L5	4867	G
35	L5	4870	G
35	L5	4871	C
35	L5	4875	G
35	L5	4882	U
35	L5	4883	C
35	L5	4888	U
35	L5	4889	G
35	L5	4894	A
35	L5	4895	C
35	L5	4896	G
35	L5	4897	G
35	L5	4900	C
35	L5	4901	G
35	L5	4902	C
35	L5	4910	G
35	L5	4912	G
35	L5	4914	C
35	L5	4922	C
35	L5	4923	C
35	L5	4925	U
35	L5	4926	C
35	L5	4927	G
35	L5	4928	C

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Mol	Chain	Res	Type
35	L5	4940	C
35	L5	4941	G
35	L5	4943	A
35	L5	4951	G
35	L5	4960	G
35	L5	4973	U
35	L5	4975	G
35	L5	4976	U
35	L5	4988	U
35	L5	4989	U
35	L5	4990	C
35	L5	4991	U
35	L5	4995	U
35	L5	5013	C
35	L5	5014	A
35	L5	5017	G
35	L5	5023	C
35	L5	5024	C
35	L5	5026	U
35	L5	5027	C
35	L5	5028	G
35	L5	5029	C
35	L5	5030	U
35	L5	5034	A
35	L5	5041	G
35	L5	5047	C
35	L5	5048	A
35	L5	5050	C
35	L5	5054	C
35	L5	5055	G
35	L5	5061	A
35	L5	5069	U
36	L7	2	U
36	L7	4	U
36	L7	5	A
36	L7	7	G
36	L7	22	A
36	L7	24	C
36	L7	33	U
36	L7	38	U
36	L7	53	U
36	L7	54	A

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Mol	Chain	Res	Type
36	L7	63	C
36	L7	64	G
36	L7	100	A
36	L7	110	G
37	L8	25	G
37	L8	34	U
37	L8	35	C
37	L8	48	A
37	L8	52	A
37	L8	59	A
37	L8	60	G
37	L8	62	A
37	L8	63	U
37	L8	68	G
37	L8	80	A
37	L8	82	A
37	L8	83	C
37	L8	84	A
37	L8	85	U
37	L8	86	U
37	L8	87	G
37	L8	94	G
37	L8	103	A
37	L8	105	C
37	L8	110	U
37	L8	111	U
37	L8	112	G
37	L8	114	G
37	L8	123	U
37	L8	124	U
37	L8	125	C
37	L8	126	C
37	L8	127	U
37	L8	151	G
37	L8	156	U
84	Et	4	C
84	Et	5	G
84	Et	6	G
84	Et	7	A
84	Et	8	U
84	Et	9	A
84	Et	10	G

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Mol	Chain	Res	Type
84	Et	11	C
84	Et	13	C
84	Et	15	G
84	Et	19	G
84	Et	20	U
84	Et	21	A
84	Et	22	G
84	Et	24	G
84	Et	25	C
84	Et	26	A
84	Et	27	U
84	Et	29	A
84	Et	31	A
84	Et	34	U
84	Et	35	U
84	Et	38	A
84	Et	40	C
84	Et	42	G
84	Et	43	A
84	Et	45	G
84	Et	46	G
84	Et	47	U
84	Et	48	C
84	Et	49	C
84	Et	50	A
84	Et	51	G
84	Et	52	G
84	Et	53	G
84	Et	54	U
84	Et	55	U
84	Et	56	C
84	Et	58	A
84	Et	59	G
84	Et	60	U
84	Et	61	C
84	Et	63	C
84	Et	64	U
84	Et	65	G
84	Et	67	U
84	Et	68	C
84	Et	70	G
84	Et	71	G

Continued on next page...

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Mol	Chain	Res	Type
84	Et	72	C
84	Et	73	G
84	Et	76	A

All (28) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	S2	291	G
1	S2	420	G
1	S2	563	G
1	S2	688	U
1	S2	1434	C
1	S2	1781	A
35	L5	406	C
35	L5	493	G
35	L5	912	G
35	L5	914	U
35	L5	1082	C
35	L5	1590	C
35	L5	1633	G
35	L5	1977	C
35	L5	2033	A
35	L5	2055	G
35	L5	2416	G
35	L5	2675	G
35	L5	2760	G
35	L5	2786	C
35	L5	3614	G
35	L5	3673	C
35	L5	3948	C
35	L5	4055	U
35	L5	4061	G
35	L5	4600	G
35	L5	4699	U
35	L5	4913	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 261 ligands modelled in this entry, 261 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
16	CD	1
82	Lt	1
84	Et	1
54	LR	1
1	S2	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CD	225:LEU	C	282:THR	N	57.64
1	Lt	87:GLU	C	104:ILE	N	8.89
1	Et	16:C	O3'	18:U	P	5.86
1	LR	153:LYS	C	154:LEU	N	3.52
1	S2	1210:G	O3'	1211:G	P	3.00

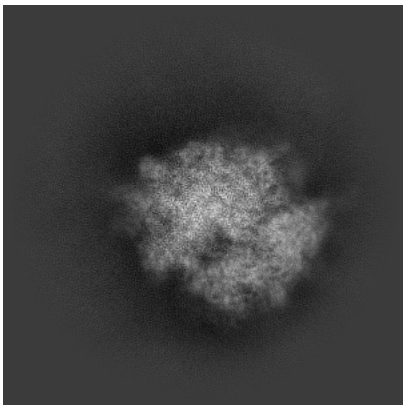
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-44049. These allow visual inspection of the internal detail of the map and identification of artifacts.

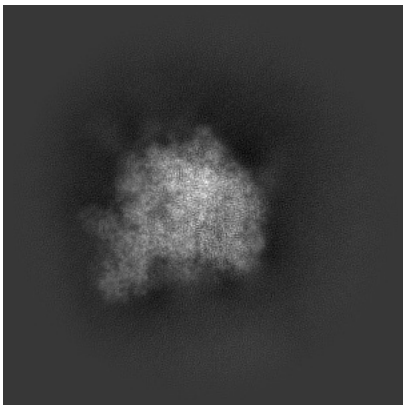
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

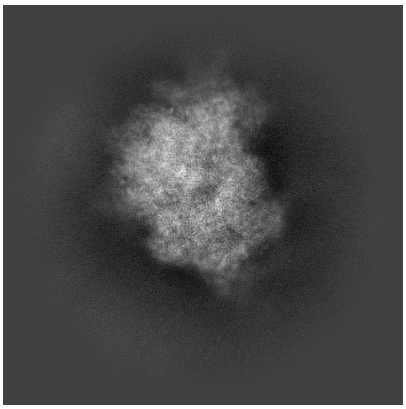
6.1.1 Primary map



X

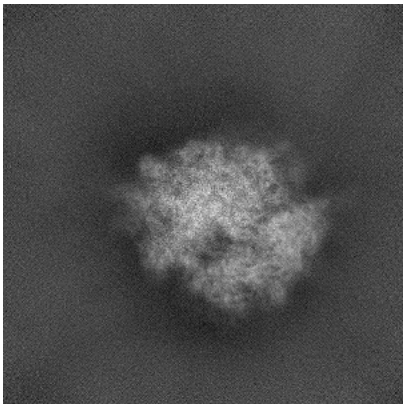


Y

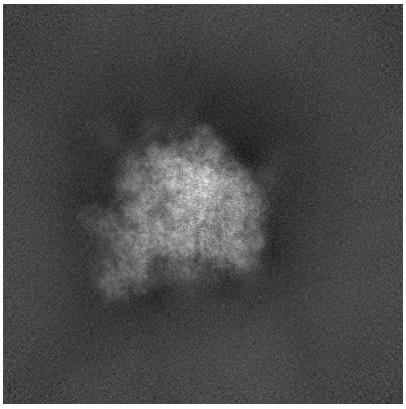


Z

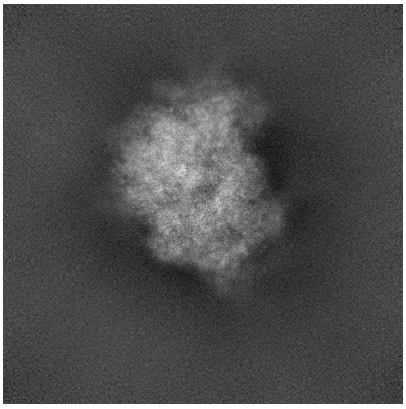
6.1.2 Raw map



X



Y

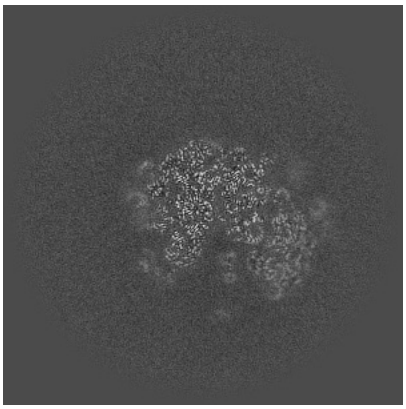


Z

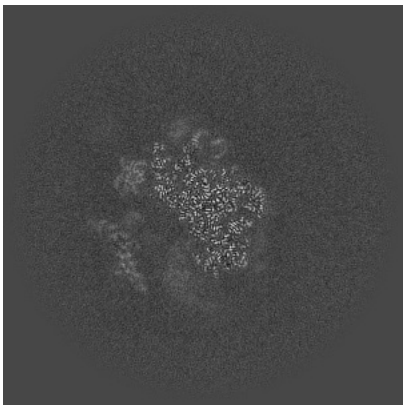
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

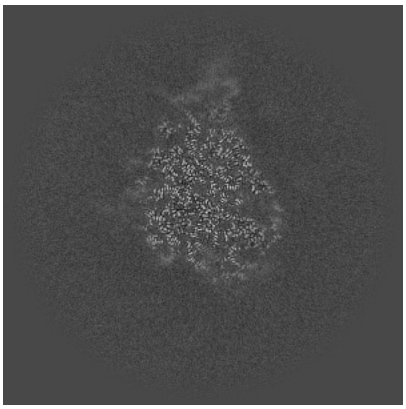
6.2.1 Primary map



X Index: 256

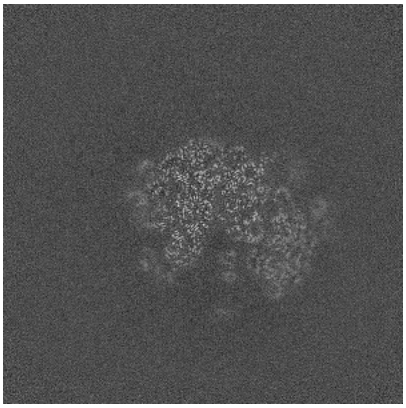


Y Index: 256

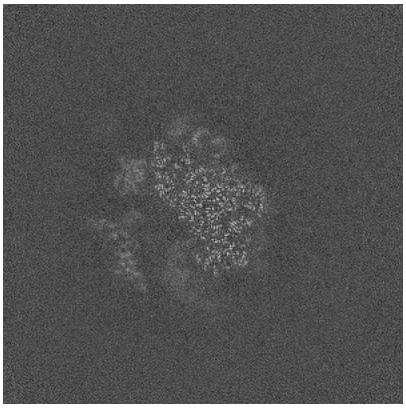


Z Index: 256

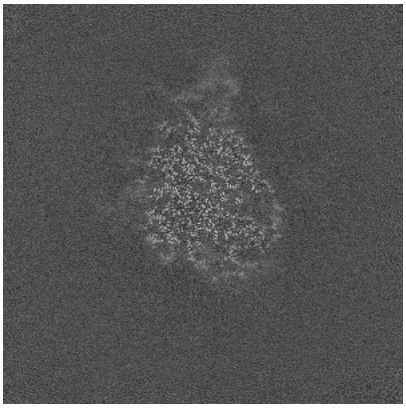
6.2.2 Raw map



X Index: 256



Y Index: 256

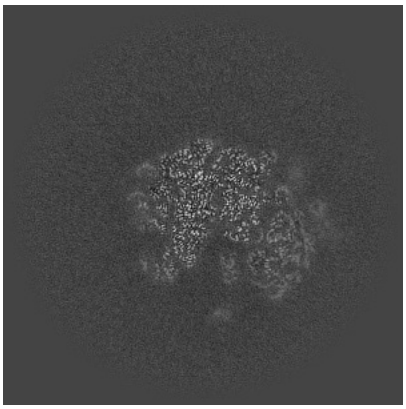


Z Index: 256

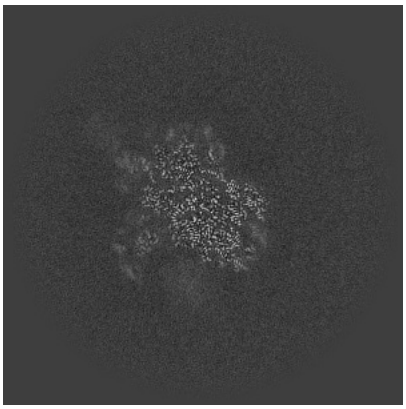
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

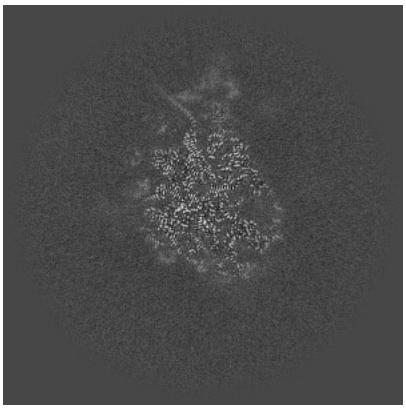
6.3.1 Primary map



X Index: 253

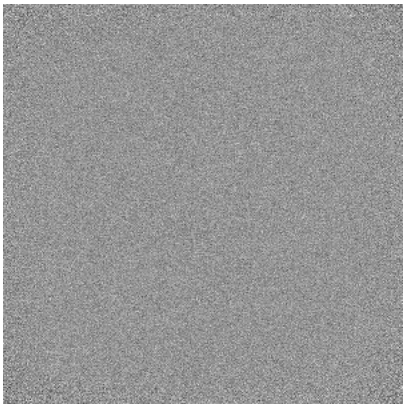


Y Index: 243

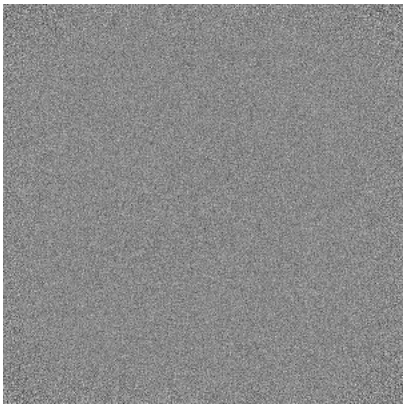


Z Index: 254

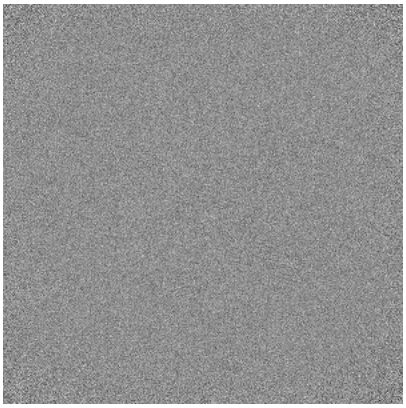
6.3.2 Raw map



X Index: 0



Y Index: 0

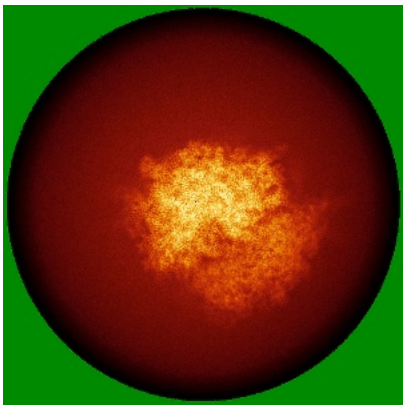


Z Index: 0

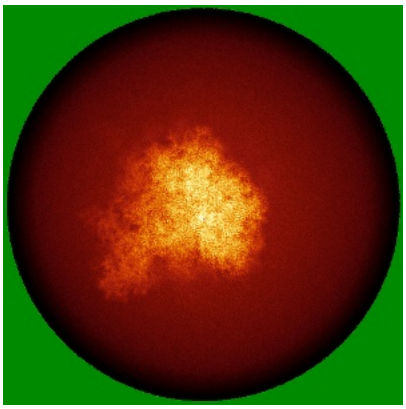
The images above show the largest variance slices of the map in three orthogonal directions.

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

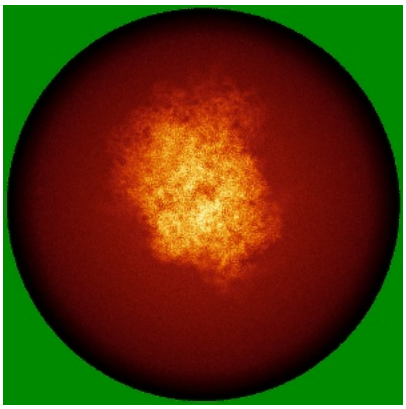
6.4.1 Primary map



X

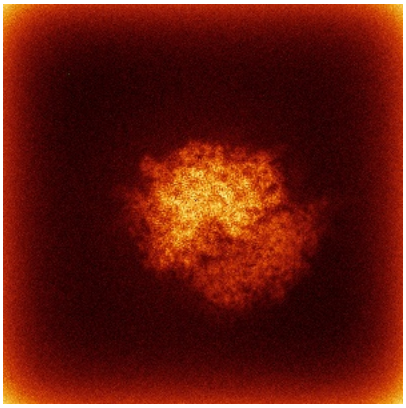


Y

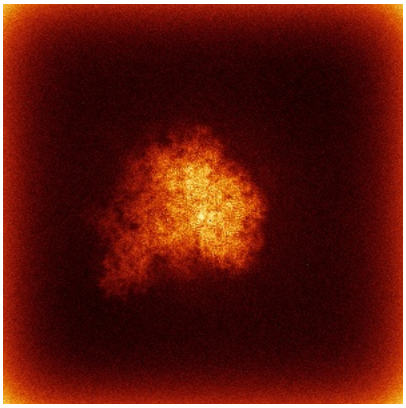


Z

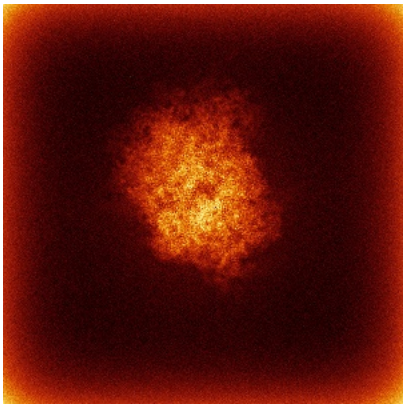
6.4.2 Raw map



X



Y

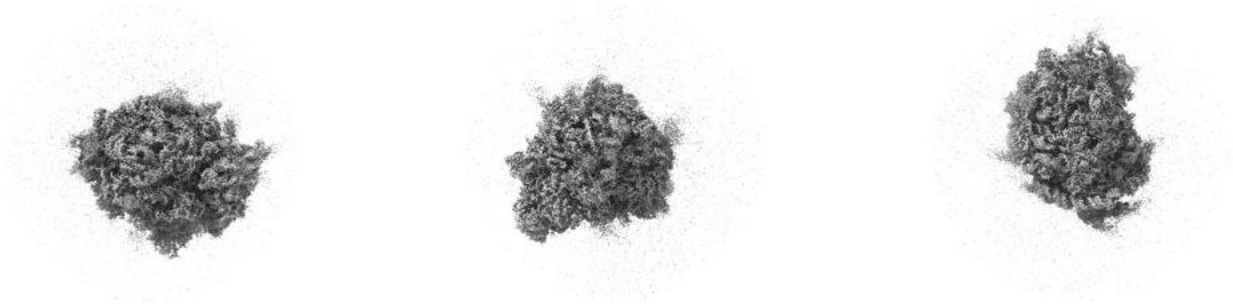


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.029. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

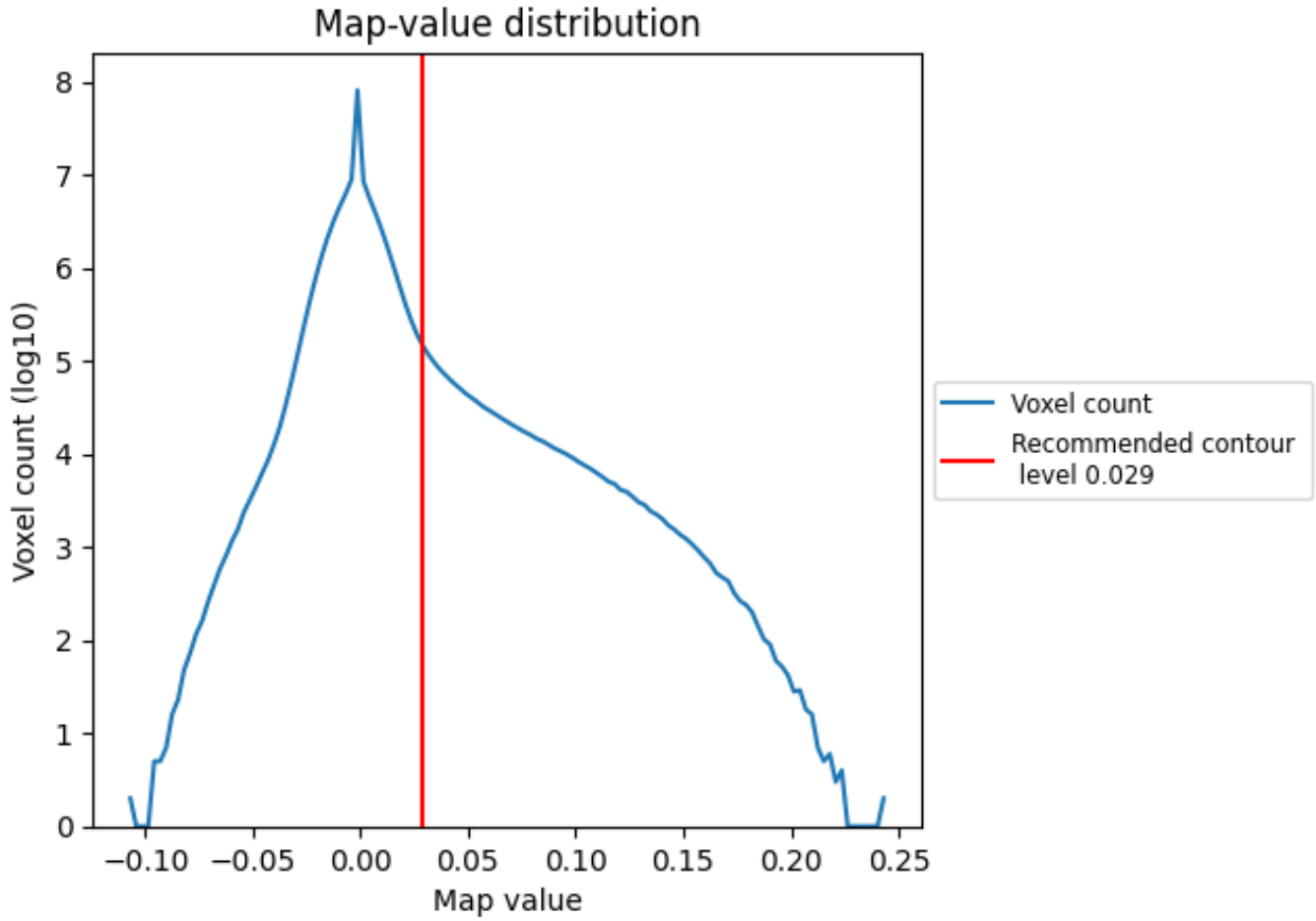
6.6 Mask visualisation (i)

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

7 Map analysis

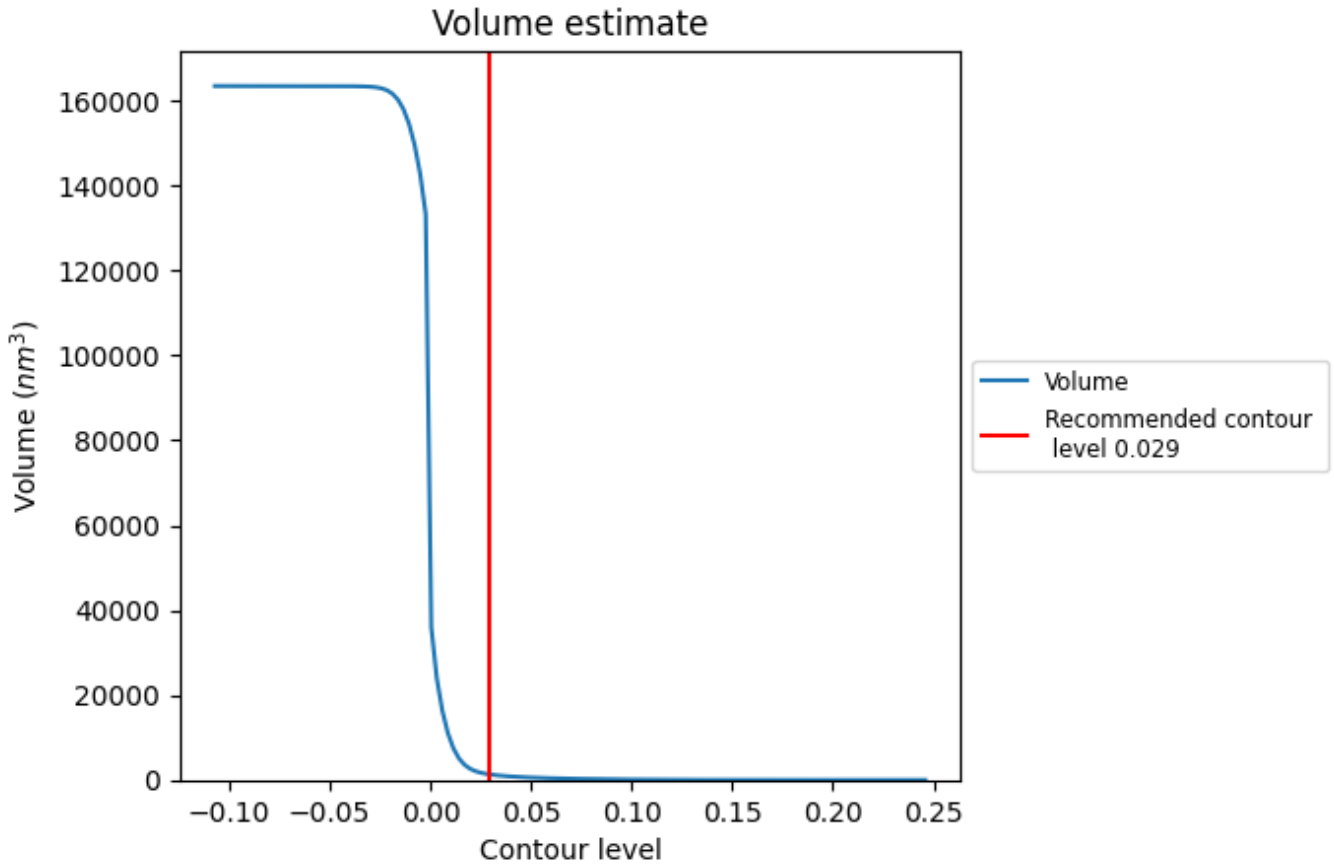
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

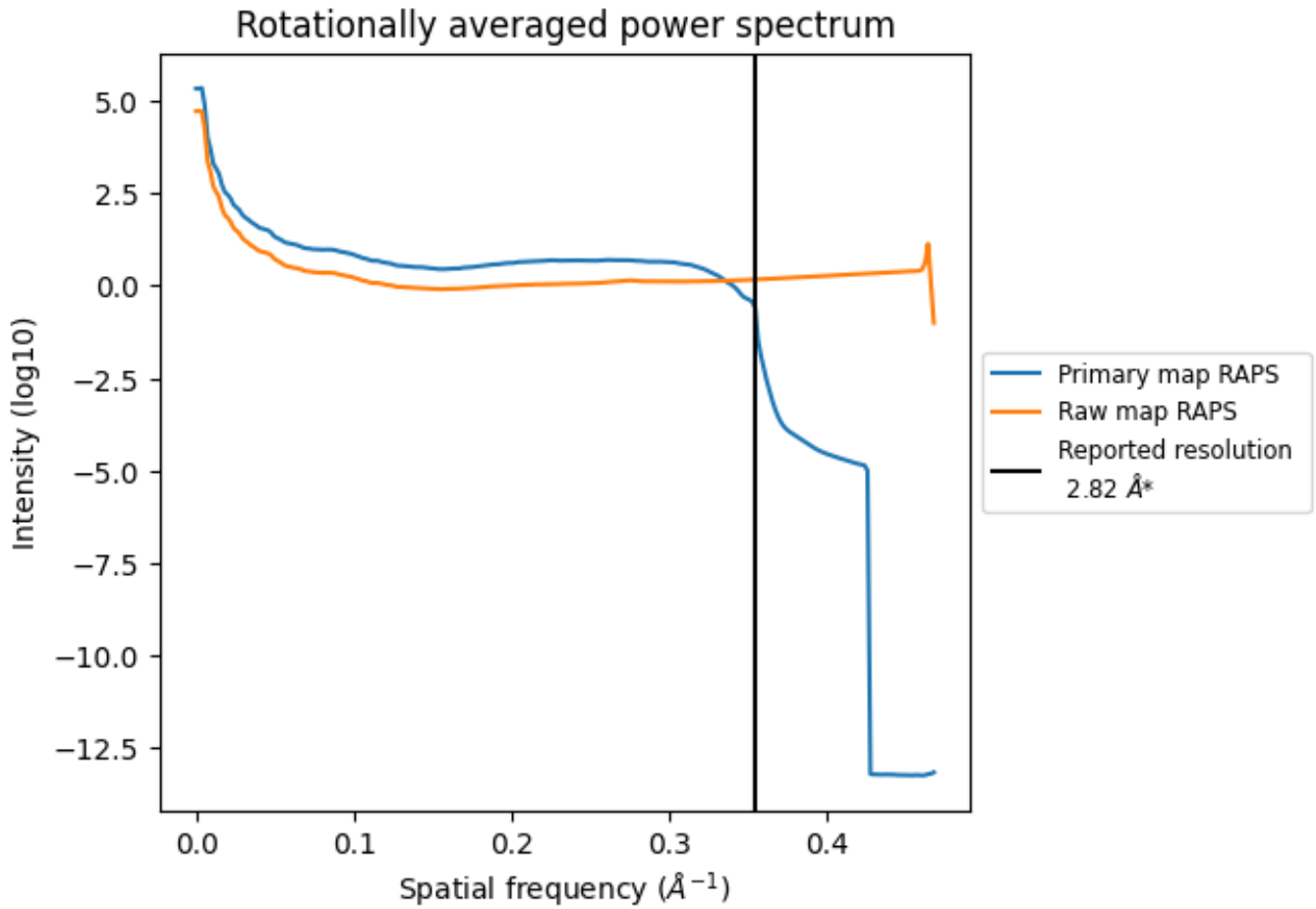
7.2 Volume estimate



The volume at the recommended contour level is 1352 nm^3; this corresponds to an approximate mass of 1221 kDa.

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

7.3 Rotationally averaged power spectrum (i)

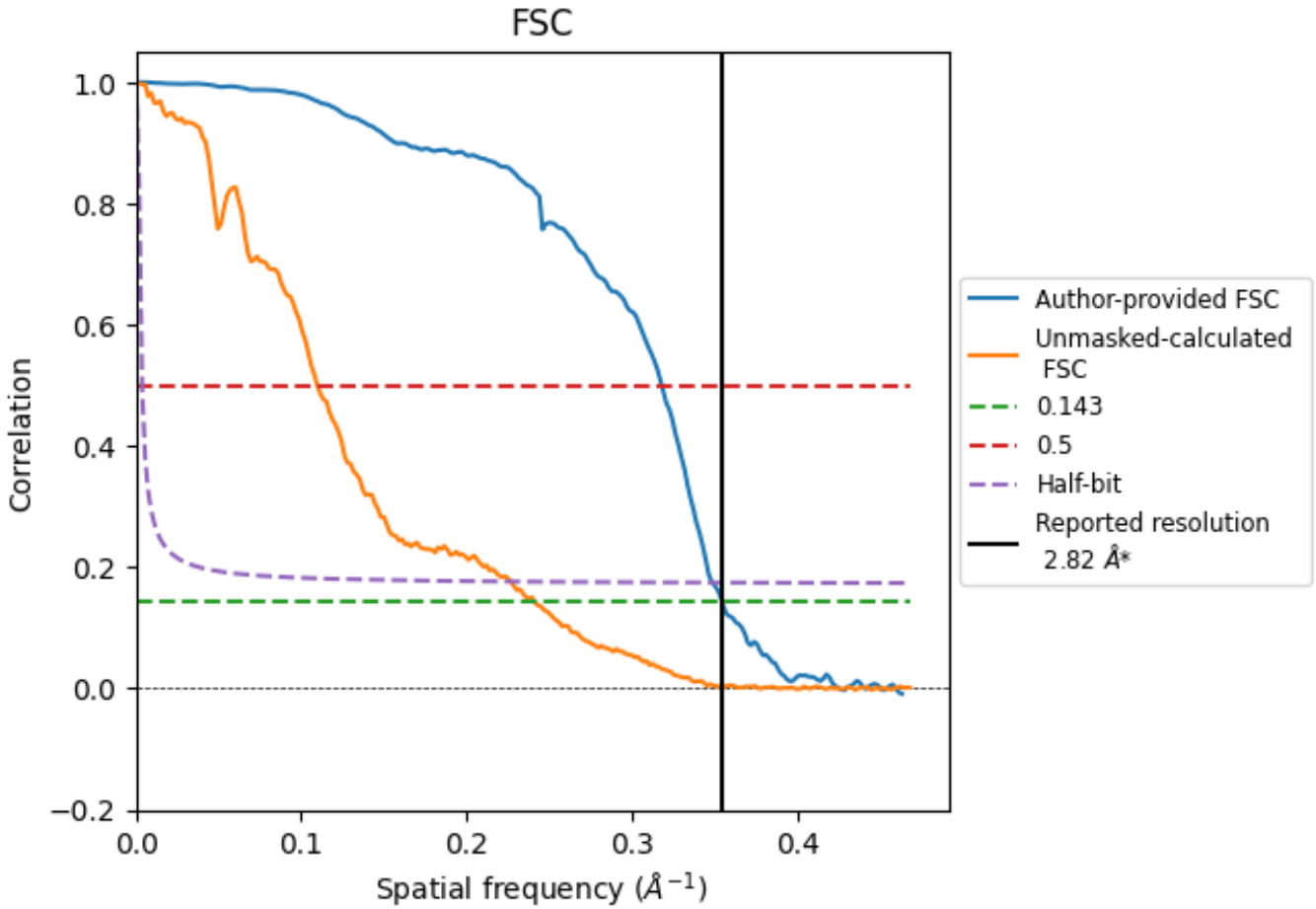


*Reported resolution corresponds to spatial frequency of 0.355 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.355 Å^{-1}

8.2 Resolution estimates (i)

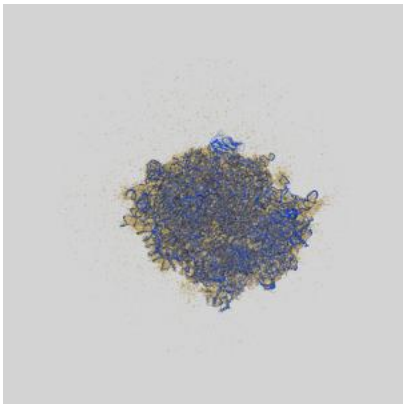
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.82	-	-
Author-provided FSC curve	2.82	3.14	2.87
Unmasked-calculated*	4.15	9.12	4.41

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.15 differs from the reported value 2.82 by more than 10 %

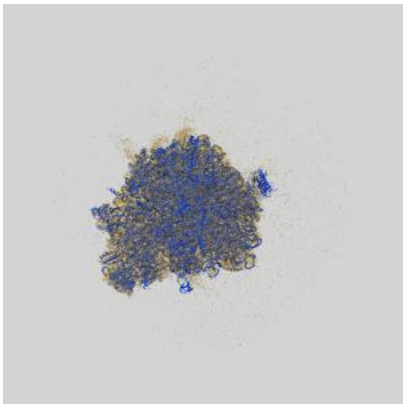
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-44049 and PDB model 9B0P. Per-residue inclusion information can be found in section 3 on page 21.

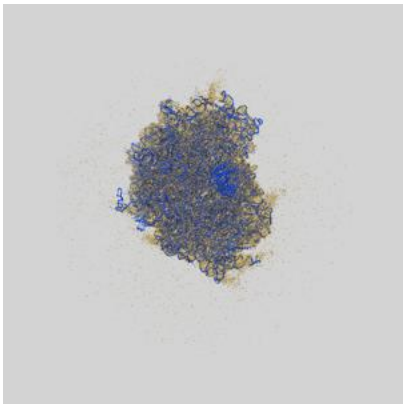
9.1 Map-model overlay



X



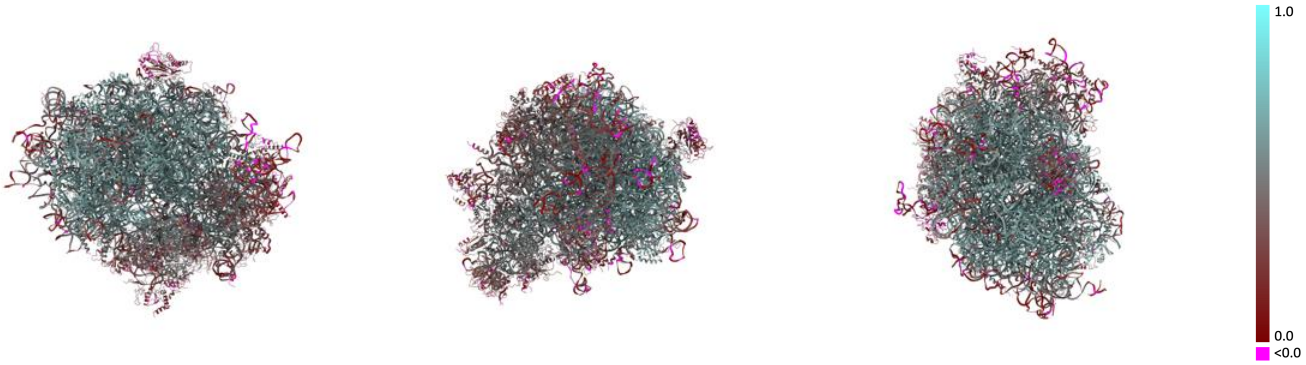
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.029 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.

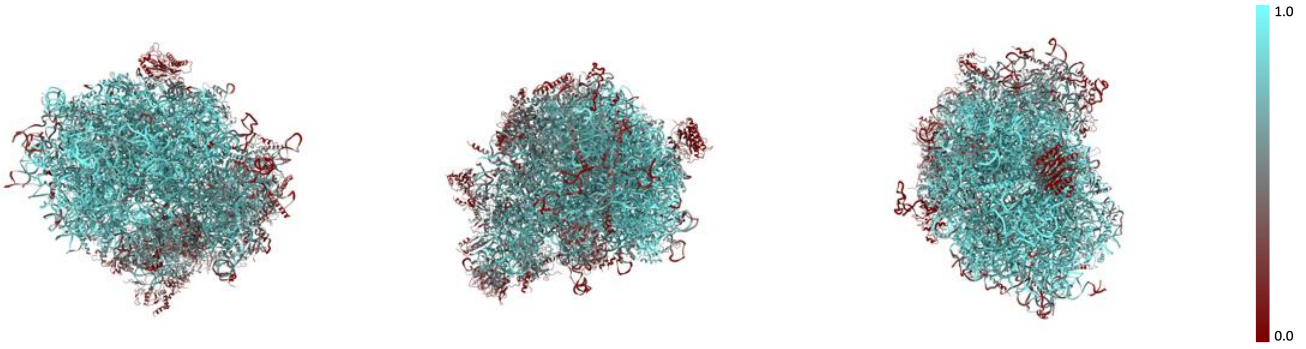
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

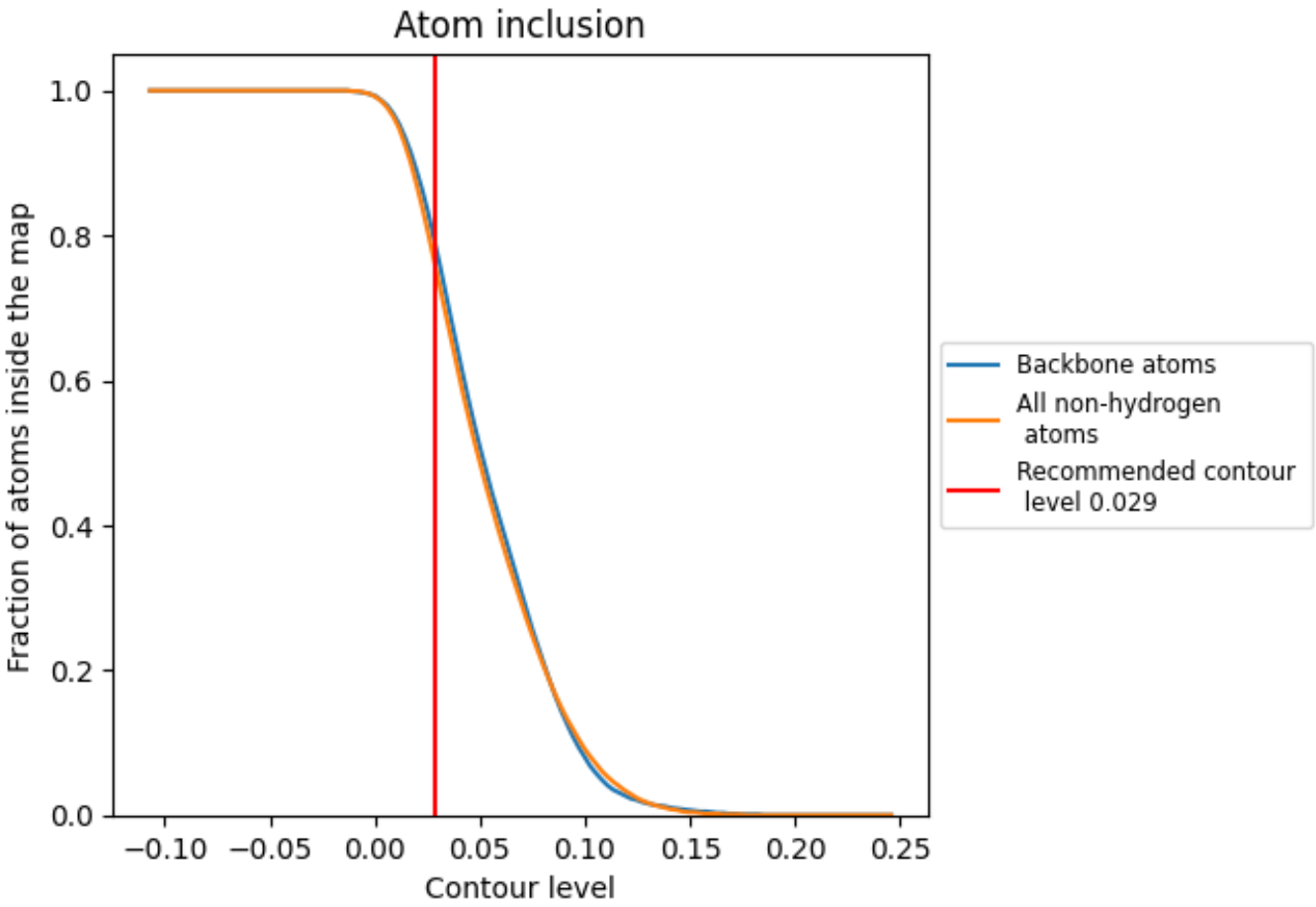
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.029).

9.4 Atom inclusion (i)



At the recommended contour level, 79% of all backbone atoms, 76% 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 (0.029) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7550	0.4860
CA	0.0940	0.2430
CB	0.4470	0.3890
CD	0.1870	0.2300
Et	0.1050	0.1280
L5	0.8610	0.5240
L7	0.9640	0.5920
L8	0.9120	0.5640
LA	0.9280	0.6110
LB	0.8790	0.5910
LC	0.8800	0.5910
LD	0.8080	0.5460
LE	0.7750	0.5210
LF	0.9120	0.6020
LG	0.7770	0.5310
LH	0.8410	0.5770
LI	0.8810	0.5920
LJ	0.6940	0.4780
LL	0.8250	0.5630
LM	0.8550	0.5720
LN	0.9550	0.6190
LO	0.9050	0.6010
LP	0.9010	0.6070
LQ	0.9270	0.6190
LR	0.7880	0.5260
LS	0.9210	0.6090
LT	0.8560	0.5750
LU	0.6630	0.4560
LV	0.8900	0.6020
LW	0.5270	0.3990
LX	0.8390	0.5720
LY	0.8530	0.5870
LZ	0.8460	0.5650
La	0.9250	0.6140
Lb	0.7430	0.5050

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Chain	Atom inclusion	Q-score
Lc	0.8340	0.5440
Ld	0.8310	0.5660
Le	0.9190	0.6110
Lf	0.9300	0.6120
Lg	0.8770	0.5850
Lh	0.8550	0.5880
Li	0.8460	0.5740
Lj	0.9240	0.6060
Lk	0.7150	0.5160
Ll	0.8840	0.5990
Lm	0.8820	0.5930
Ln	0.8950	0.6000
Lo	0.8420	0.5800
Lp	0.8770	0.5920
Lr	0.8860	0.5900
Ls	0.4070	0.3540
Lt	0.1790	0.1930
Lz	0.0230	0.1170
S2	0.7920	0.4390
SA	0.6040	0.4500
SB	0.5460	0.4020
SC	0.7030	0.4910
SD	0.5350	0.4080
SE	0.5270	0.3930
SF	0.5080	0.3800
SG	0.4150	0.3180
SH	0.3920	0.3070
SI	0.6060	0.4280
SJ	0.5590	0.4150
SK	0.4890	0.3780
SL	0.6390	0.4630
SM	0.1720	0.2100
SN	0.7120	0.4940
SO	0.6190	0.4470
SP	0.5330	0.4090
SQ	0.5660	0.4110
SS	0.4710	0.3780
ST	0.5320	0.3910
SU	0.5000	0.3670
SV	0.5920	0.4460
SW	0.7220	0.5080
SX	0.7080	0.5070

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Chain	Atom inclusion	Q-score
SY	0.3940	0.3160
SZ	0.3550	0.2990
Sa	0.7160	0.5010
Sb	0.5510	0.4130
Sc	0.4180	0.3150
Sd	0.7320	0.4860
Se	0.4600	0.3740
Sf	0.2420	0.2360
Sg	0.3690	0.3250