



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 04:01 AM UTC

PDB ID : 8XSY / pdb_00008xsy
EMDB ID : EMD-38630
Title : Cryo-EM structure of the human 80S ribosome with Tigecycline, e-tRNA and CCDC124 (40S head Swivelled)
Authors : Li, X.; Wang, M.; Cheng, J.
Deposited on : 2024-01-10
Resolution : 3.00 Å(reported)
Based on initial model : 6Z6M

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

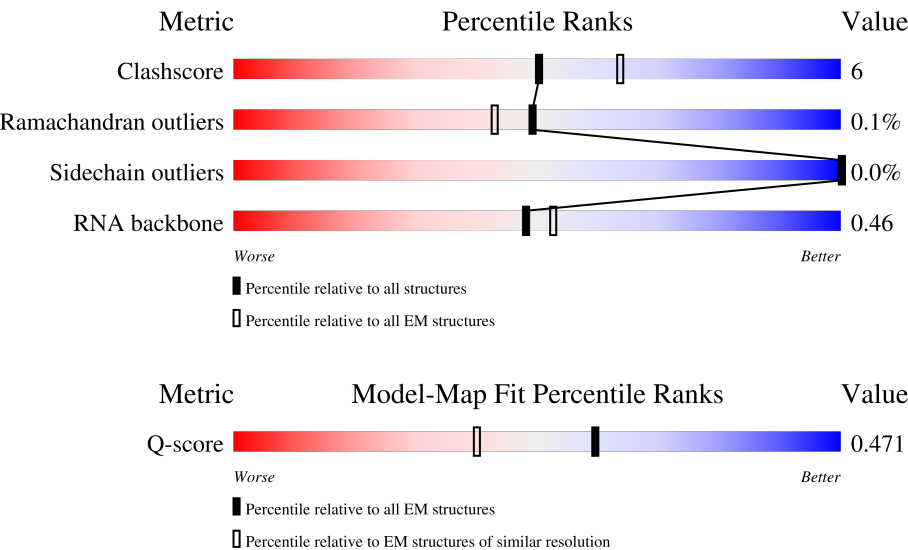
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data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

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.00 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.



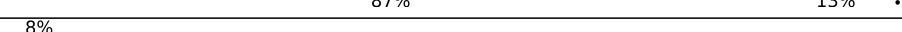
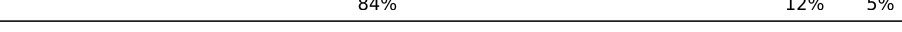
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	14081 (2.50 - 3.50)

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

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

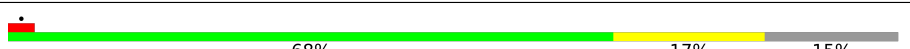
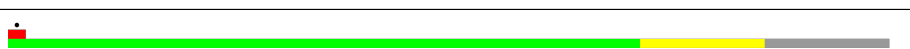
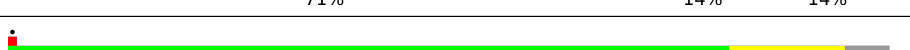
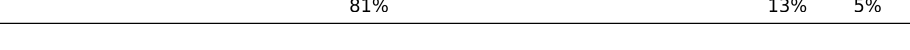
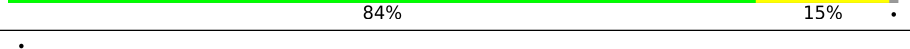
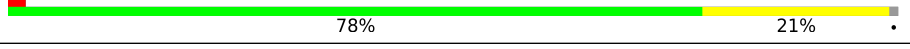
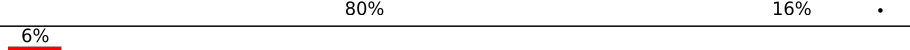
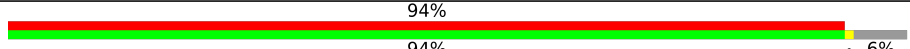
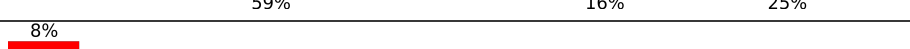
Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	La	148	
30	Lb	159	
31	Lc	115	
32	Ld	125	
33	Le	135	
34	Lf	110	
35	Lg	117	
36	Lh	123	
37	Li	105	
38	Lj	97	
39	Lk	70	
40	Ll	51	
41	Lm	128	
42	Ln	25	
43	Lo	106	
44	Lp	92	
45	Lr	137	
46	Ls	317	
47	Lt	165	
48	Lz	217	
49	S2	1869	
50	SA	295	
51	SB	264	
52	SD	243	
53	SE	263	

Continued on next page...

Continued from previous page...

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

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
79	SZ	125	
80	Sb	84	
81	Se	59	
82	Sf	156	
83	CA	394	
84	CB	408	
85	CC	75	
86	CE	223	

2 Entry composition [i](#)

There are 89 unique types of molecules in this entry. The entry contains 223822 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

There is a discrepancy between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	221	Total	C	N	O	S	0	0
			1774	1142	336	292	4		

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

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

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

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

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

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

- Molecule 12 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	202	Total	C	N	O	S	0	0
			1639	1041	316	269	13		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	100	Total	C	N	O	S	0	0
			816	524	142	148	2		

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LY	133	Total	C	N	O	S	0	0
			1106	694	224	185	3		

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	109	Total	C	N	O	S	0	0
			882	549	192	137	4		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lm	52	Total	C	N	O	S	0	0
			430	267	90	67	6		

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

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

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

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

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

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

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

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

- Molecule 46 is a protein called Large ribosomal subunit protein uL10.

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

- Molecule 47 is a protein called 60S ribosomal protein L12.

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

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

Mol	Chain	Residues	Atoms				AltConf	Trace
48	Lz	205	Total	C	N	O	0	0
			1018	607	205	206		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S2	1740	Total	C	N	O	P	0	0
			36896	16458	6597	12102	1739		

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
S2	582	C	U	conflict	GB 36162
S2	583	C	A	conflict	GB 36162
S2	584	G	A	conflict	GB 36162
S2	798	A	G	conflict	GB 36162
S2	1095	U	C	conflict	GB 36162

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SF	184	Total	C	N	O	S	0	0
			1461	914	276	264	7		

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SK	95	Total	C	N	O	S	0	0
			799	524	139	130	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SL	144	Total	C	N	O	S	0	0
			1182	752	224	200	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SP	129	Total	C	N	O	S	0	0
			1061	672	202	180	7		

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SS	144	Total	C	N	O	S	0	0
			1190	746	241	202	1		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SM	122	Total	C	N	O		0	0
			604	359	122	123			

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SM	52	GLN	LEU	conflict	UNP P25398
SM	69	LEU	CYS	conflict	UNP P25398
SM	99	ASN	LYS	conflict	UNP P25398

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SO	135	Total	C	N	O	S	0	0
			1010	618	198	188	6		

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
78	SY	126	Total	C	N	O	S	0	0
			1027	648	201	173	5		

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

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

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

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

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

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

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

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

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

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

- Molecule 84 is a protein called SERPINE1 mRNA-binding protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	CB	16	Total	C	N	O	S	0	0
			127	80	22	24	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
85	CC	69	Total	C	N	O	P	0	0
			1482	661	277	475	69		

- Molecule 86 is a protein called Coiled-coil domain-containing protein 124.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	CE	73	Total	C	N	O	S	0	0
			613	369	122	121	1		

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

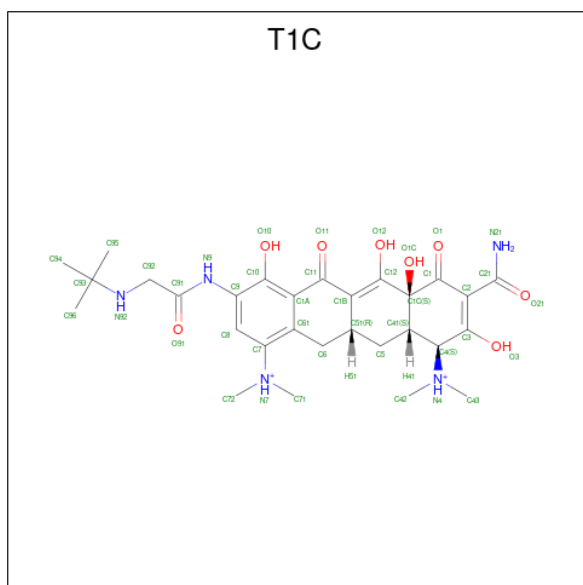
Mol	Chain	Residues	Atoms		AltConf
87	L5	212	Total	Mg	0
			212	212	
87	L7	3	Total	Mg	0
			3	3	
87	L8	4	Total	Mg	0
			4	4	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
87	LA	1	Total	Mg	0
			1	1	
87	LP	1	Total	Mg	0
			1	1	
87	LV	1	Total	Mg	0
			1	1	
87	Le	1	Total	Mg	0
			1	1	
87	Lg	1	Total	Mg	0
			1	1	
87	Lj	1	Total	Mg	0
			1	1	
87	S2	28	Total	Mg	0
			28	28	
87	SQ	1	Total	Mg	0
			1	1	
87	SG	1	Total	Mg	0
			1	1	

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



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

Continued on next page...

Continued from previous page...

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

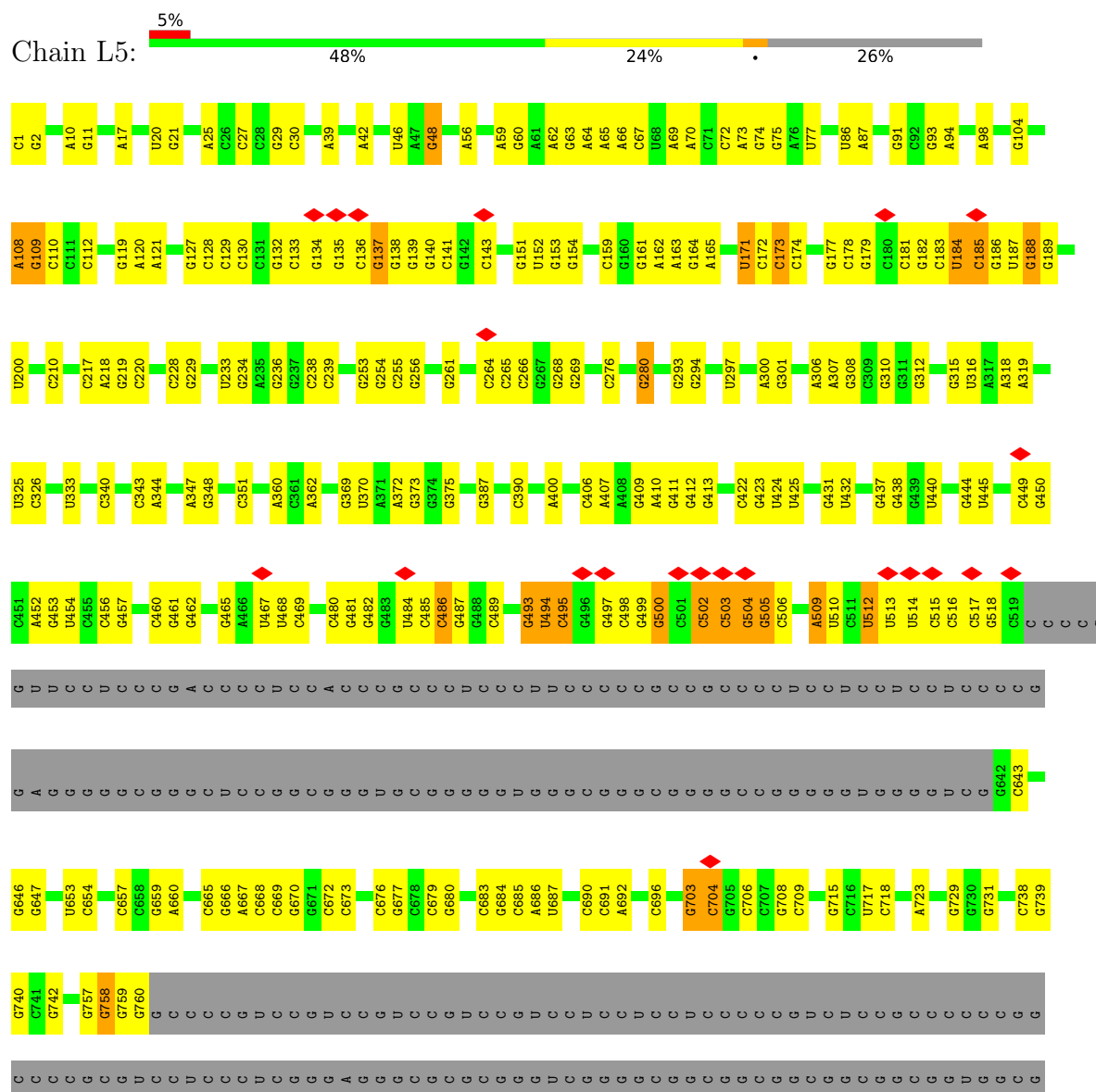
- Molecule 89 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

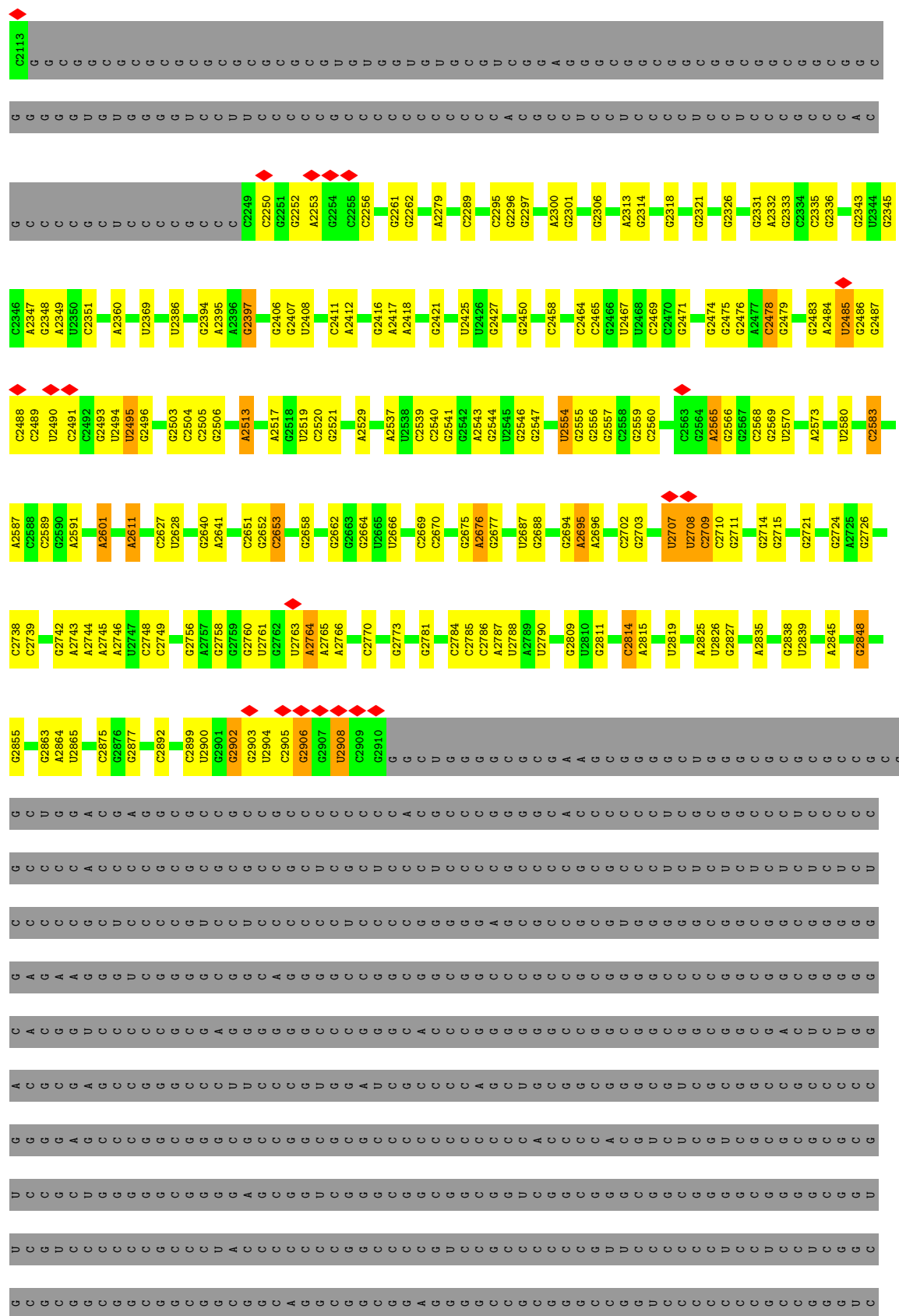
3 Residue-property plots [i](#)

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.

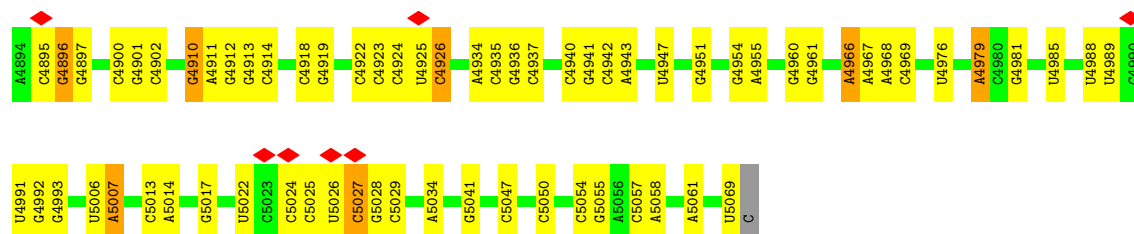
• Molecule 1: 28S rRNA



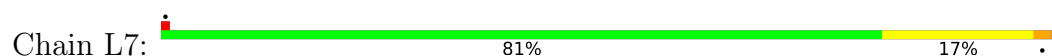




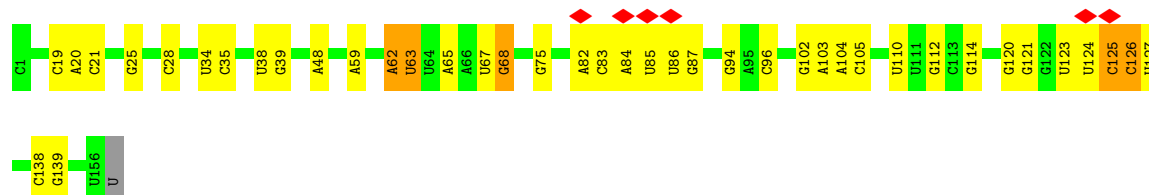
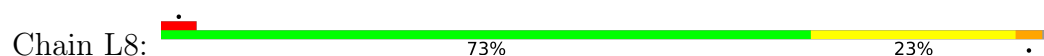




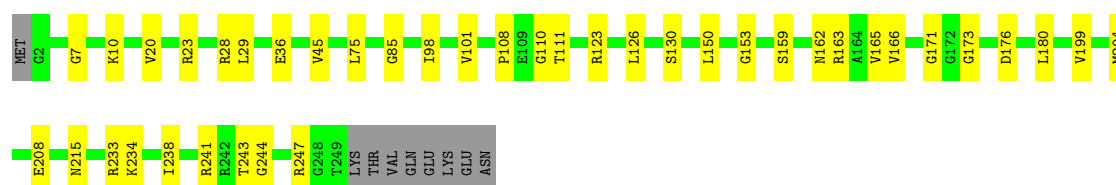
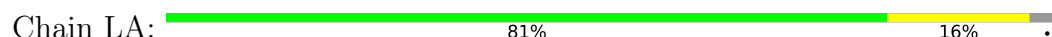
• Molecule 2: 5S rRNA



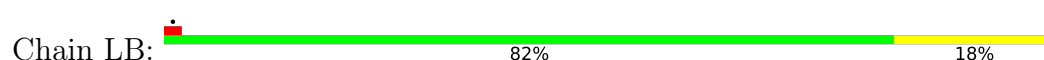
• Molecule 3: 5.8S rRNA



• Molecule 4: 60S ribosomal protein L8



• Molecule 5: 60S ribosomal protein L3



Chain LC:

Amino Acid	Chain LC
GLN	1
LYS	2
PRO	3
LEU	4
VAL	5
GLY	6
LYS	7
LYS	8
ALA	9
ALA	10
ALA	11
THR	12
LYS	13
LYS	14
PRO	15
PRO	16
ALA	17
PRO	18
GLY	19
LYS	20
LYS	21
PRO	22
THR	23
GLY	24
LYS	25
ALA	26
ALA	27
VAL	28
GLY	29
LYS	30

Chain LD: 87% 12%

Chain LE:

Category	Percentage
Green	62%
Yellow	15%
Grey	23%

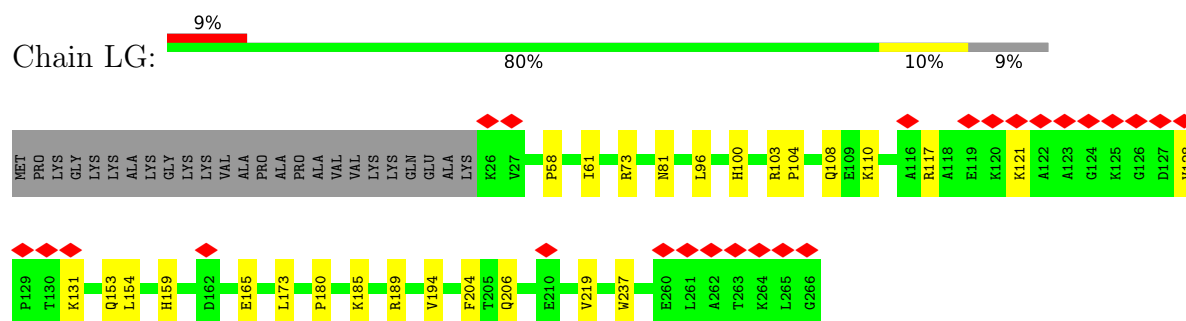
Metabolites (top to bottom): MET, ALA, GLY, GLU, LYS, VAL, GLU, LYS, PRO, ASP, THR, LYS, GLU, LYS, PRO, GLU, ALA, LYS, VAL, ASP, ALA, GLY, GLY, LYS, VAL, LYS, GLY, ASN, LEU, LYS, ALA, LYS, PRO, LYS, GLY, LYS, P42, R46, R65, R68, K72, Y73, A76, LYS, SER, LYS, VAL, GLU, LYS, LYS.

Metabolites (bottom to top): ARG, HIS, GLN, GLU, GLY, ILE, PHE, ASP, THR, GLU, K237, E238, I242, R246, I257, S273, G280, I281, L286, V287, F288, LYS, G103, T104, R105, R110, K111, T145, T148, I149, L150, I151, I152, T154, G155, R156, H157, R158, G159, K160, R161, G177, P178, L181, N182, R183, V184, P185, I186, R187, H190, Q191, K192, F193, V194, I195, N205, V206, K221, LEU, ARG, LYS, THR.

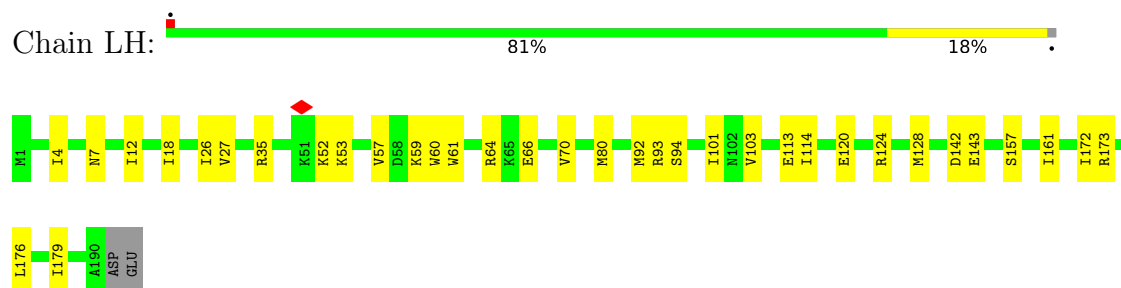
Chain LF:

Category	Percentage
MET	77%
GLU	77%
GLY	77%
VAL	77%
VAL	77%
GLU	77%
GLU	77%
LYS	77%
LYS	77%
LYS	77%
LYS	77%
VAL	77%
PRO	77%
ALA	77%
VAL	77%
PRO	77%
GLU	77%
THR	77%
LEU	77%
LEU	77%
LYS	77%
LYS	77%
LYS	77%
ARG	77%
ARG	77%
N24	77%
F25	77%
A26	77%
E27	77%
I28	77%
K29	77%
I30	77%
K31	77%
R46	77%
R47	77%
K48	77%
L49	77%
I50	77%
Y51	77%
E52	77%
Y57	77%
R76	77%
V105	77%
L109	77%
G110	77%
L111	77%
F122	77%
L125	77%
M131	77%
I135	77%
V136	77%
K148	77%

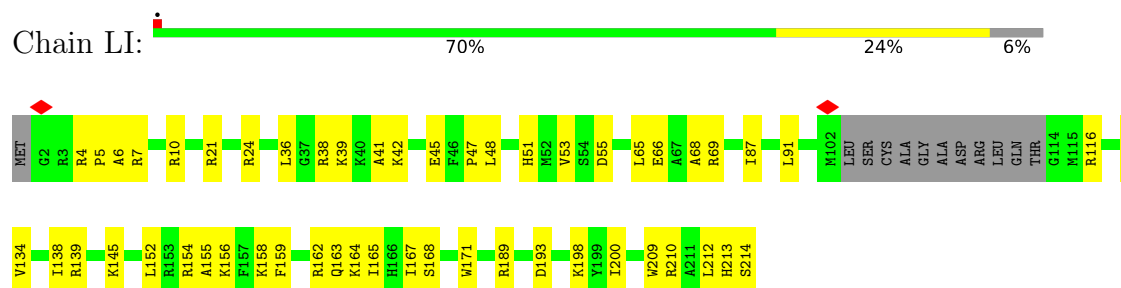
- Molecule 10: 60S ribosomal protein L7a



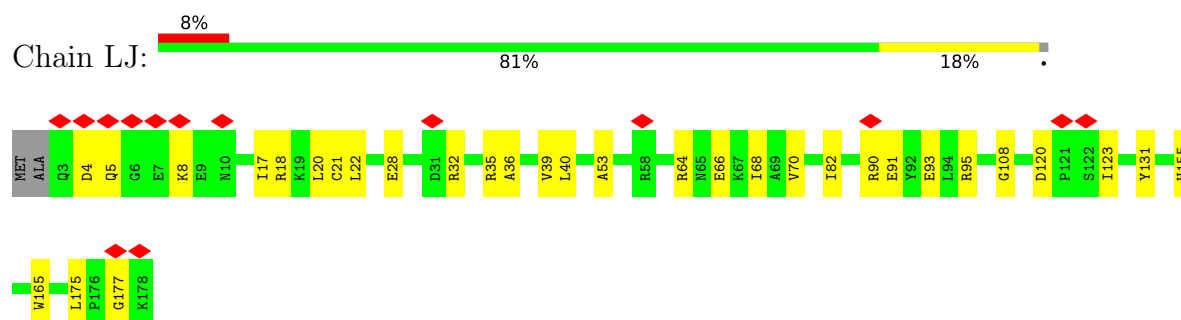
- Molecule 11: 60S ribosomal protein L9



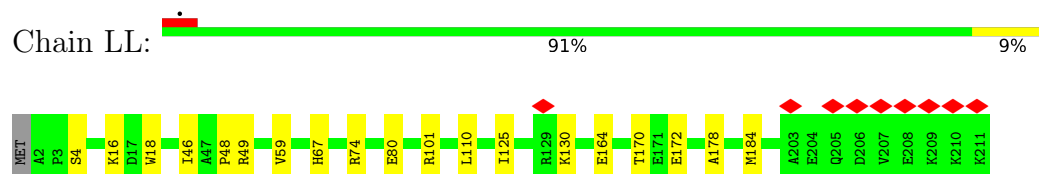
- Molecule 12: Large ribosomal subunit protein uL16



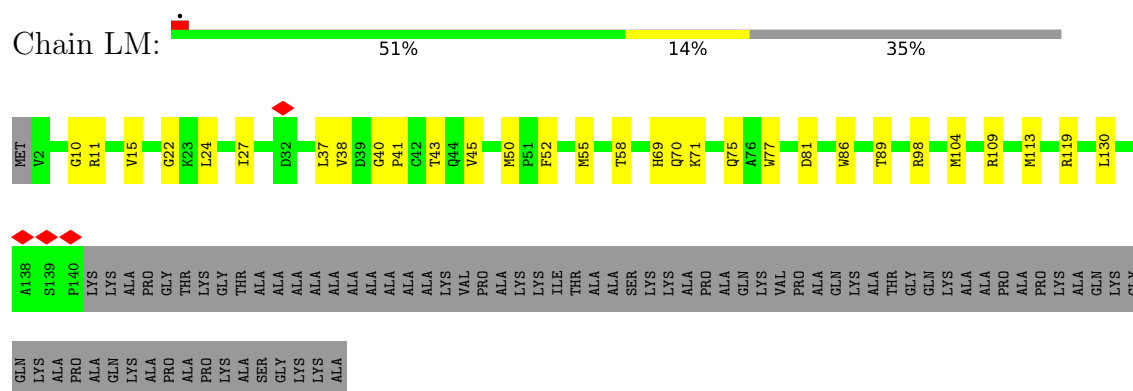
- Molecule 13: 60S ribosomal protein L11



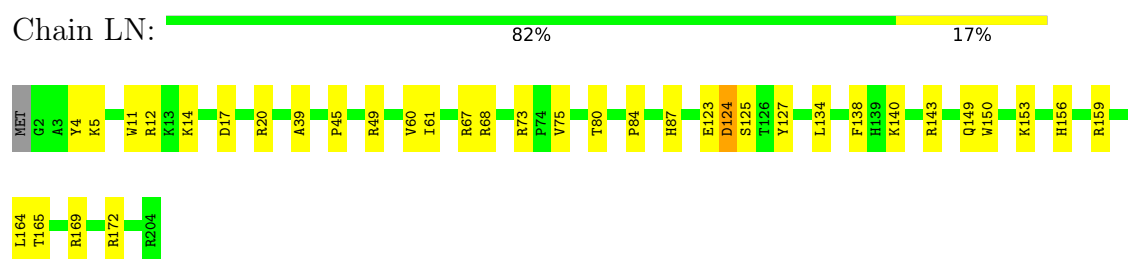
- Molecule 14: 60S ribosomal protein L13



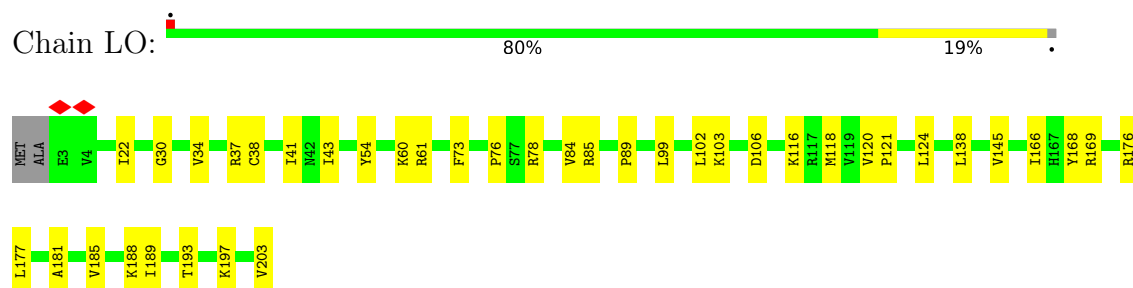
- Molecule 15: 60S ribosomal protein L14



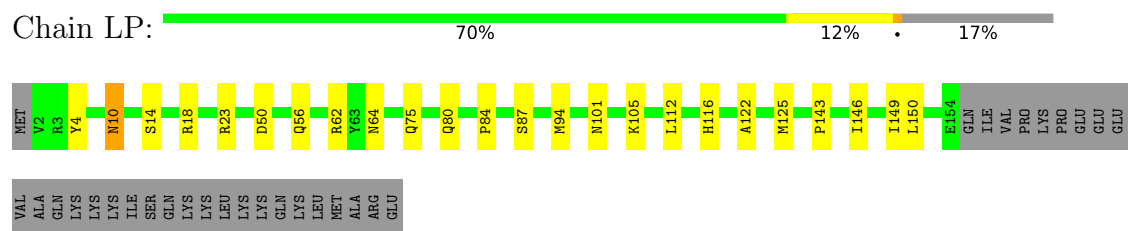
- Molecule 16: 60S ribosomal protein L15



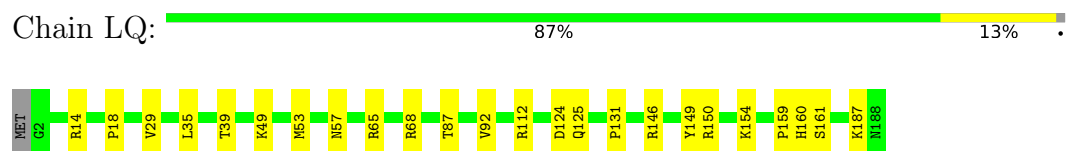
- Molecule 17: 60S ribosomal protein L13a



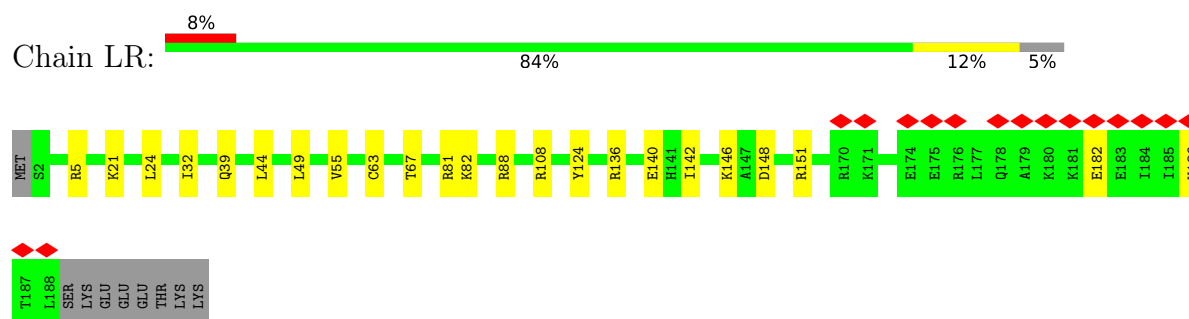
- Molecule 18: 60S ribosomal protein L17



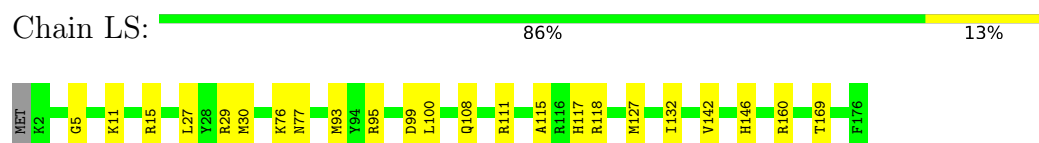
- Molecule 19: 60S ribosomal protein L18



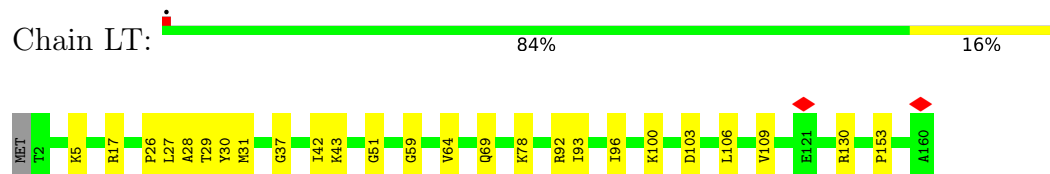
- Molecule 20: 60S ribosomal protein L19



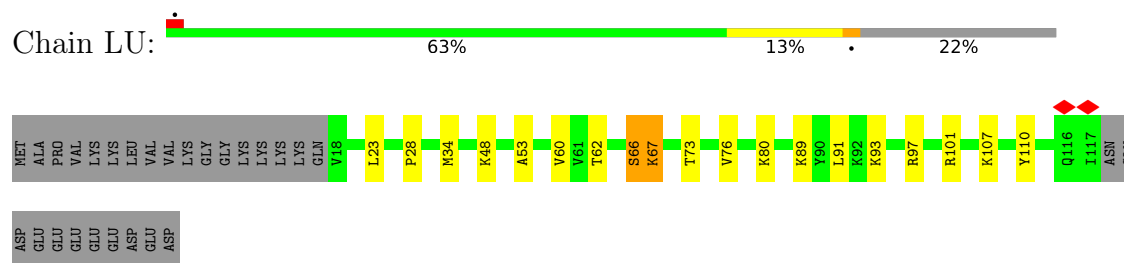
- Molecule 21: 60S ribosomal protein L18a



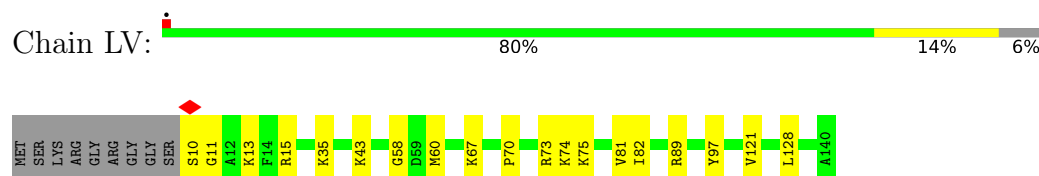
- Molecule 22: 60S ribosomal protein L21



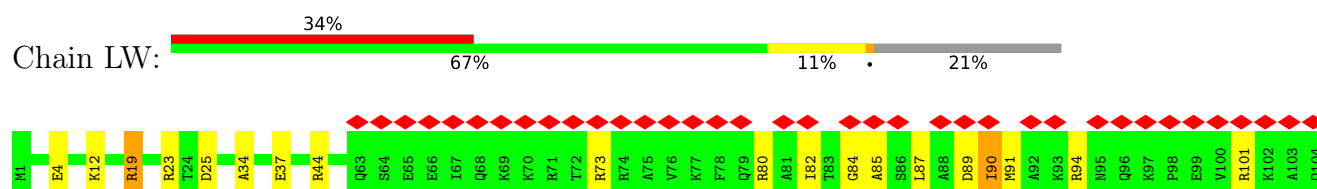
- Molecule 23: 60S ribosomal protein L22

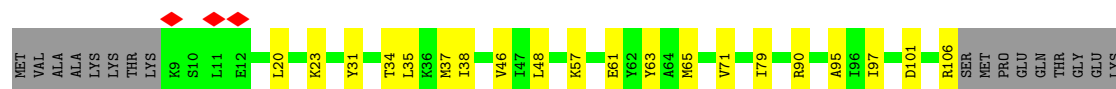


- Molecule 24: 60S ribosomal protein L23



- Molecule 25: 60S ribosomal protein L24

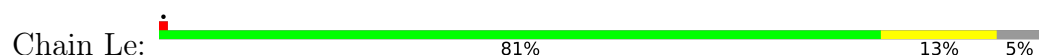




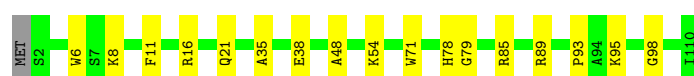
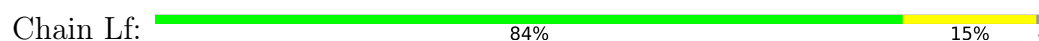
- Molecule 32: 60S ribosomal protein L31



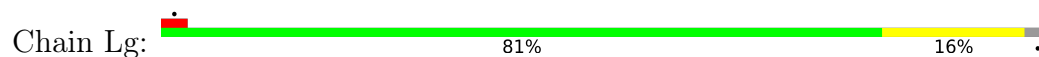
- Molecule 33: 60S ribosomal protein L32



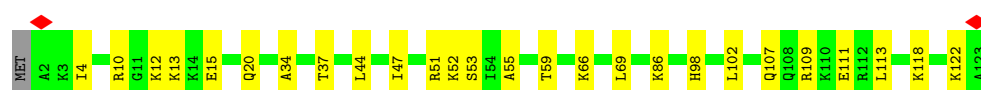
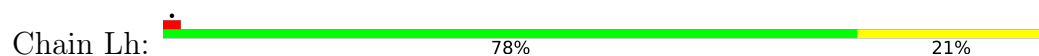
- Molecule 34: 60S ribosomal protein L35a



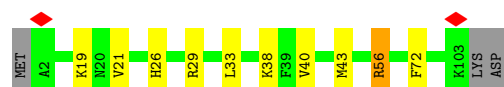
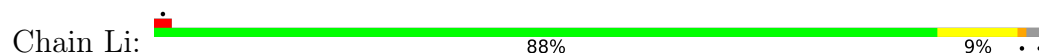
- Molecule 35: 60S ribosomal protein L34



- Molecule 36: 60S ribosomal protein L35

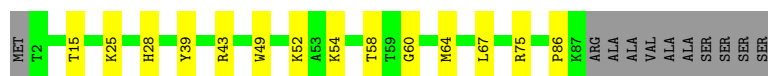


- Molecule 37: 60S ribosomal protein L36



- Molecule 38: 60S ribosomal protein L37

Chain Lj:  74% 14% 11%



- Molecule 39: 60S ribosomal protein L38

Chain Lk:  80% 19%



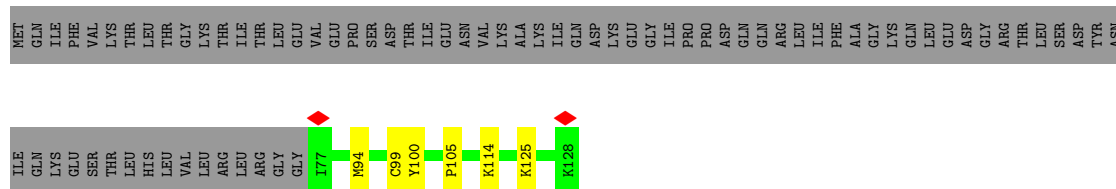
- Molecule 40: 60S ribosomal protein L39

Chain Ll:  82% 16%



- Molecule 41: Ubiquitin-60S ribosomal protein L40

Chain Lm:  36% 5% 59%



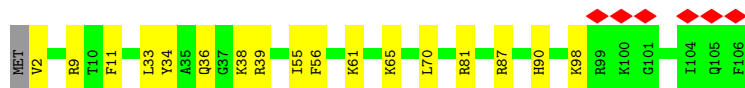
- Molecule 42: 60S ribosomal protein L41

Chain Ln:  80% 16%



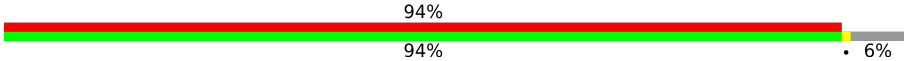
- Molecule 43: 60S ribosomal protein L36a

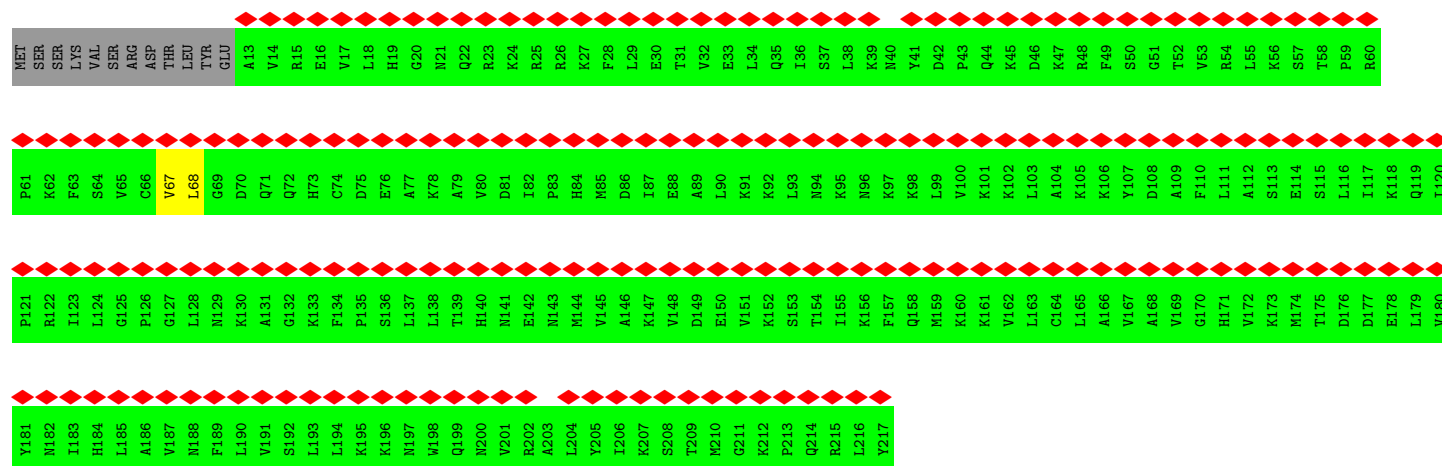
Chain Lo:  6% 83% 16%



- Molecule 44: 60S ribosomal protein L37a

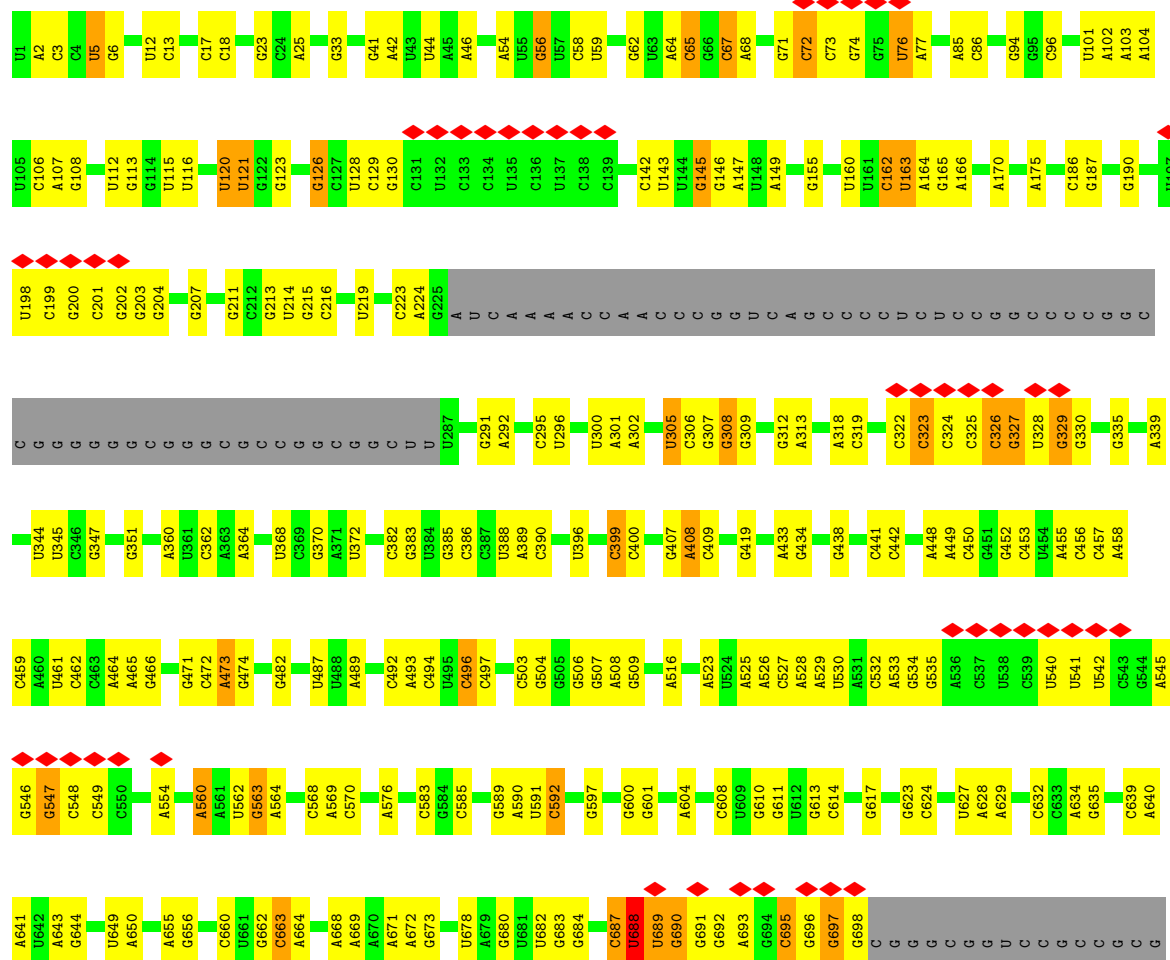
Chain Lp:  83% 16%

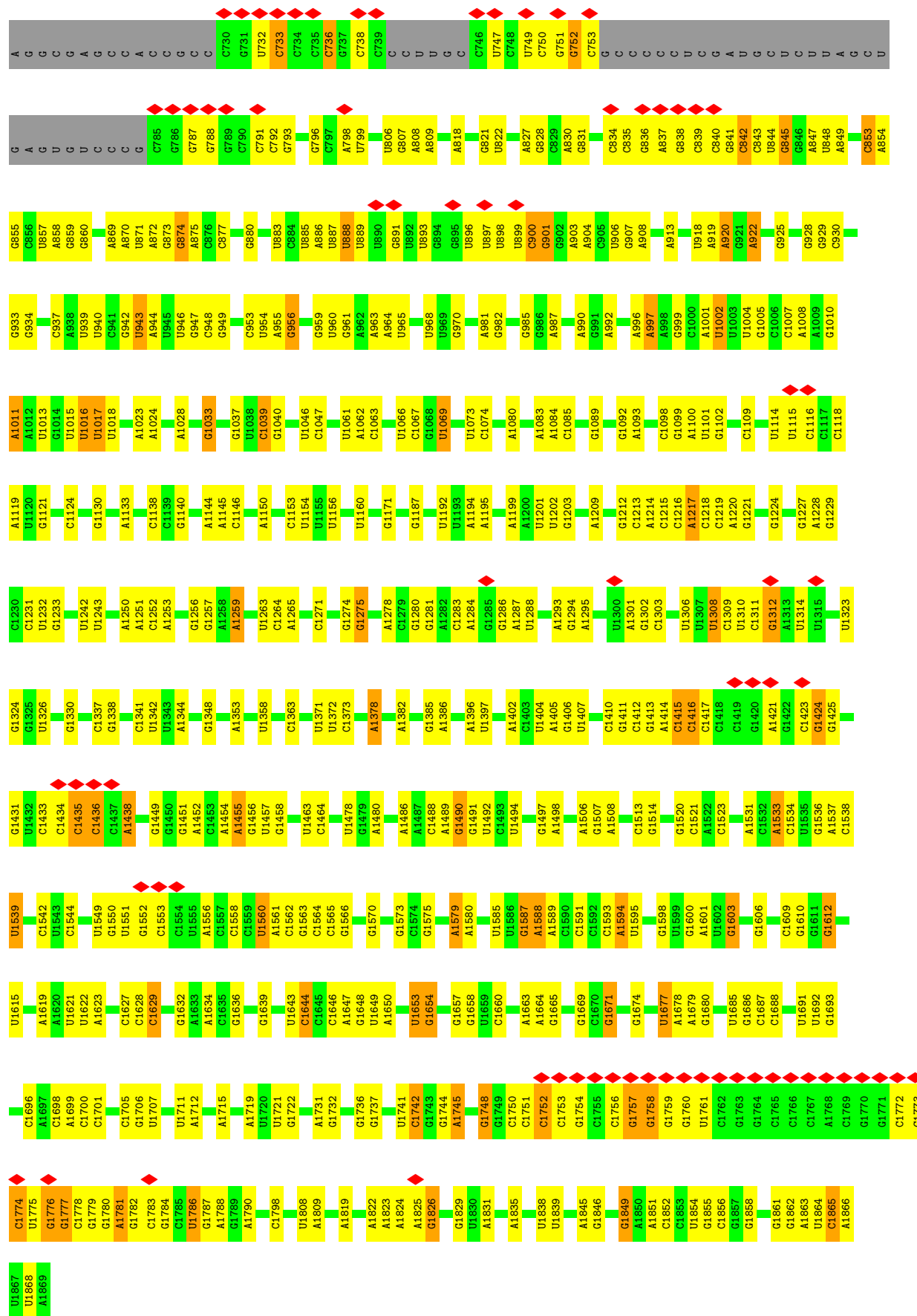
Chain Lz:  94% 94% 6%

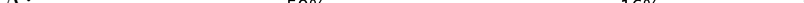


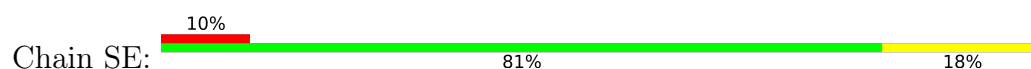
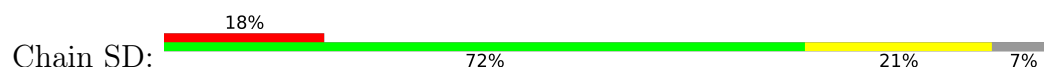
• Molecule 49: 18S rRNA

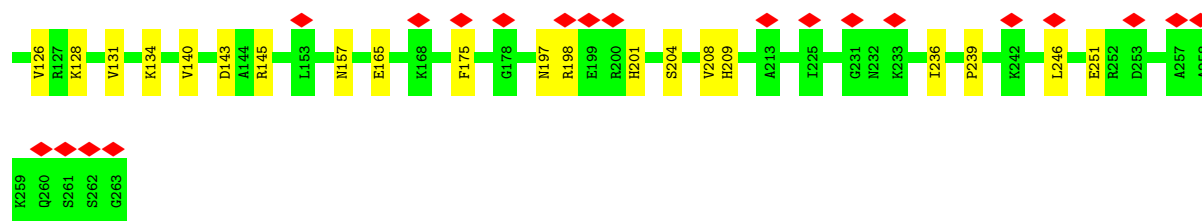
Chain S2:  7% 53% 35% 5% 7%





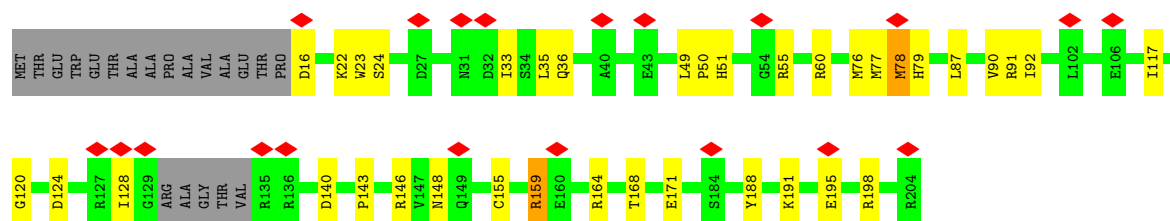
- Chain SA: 





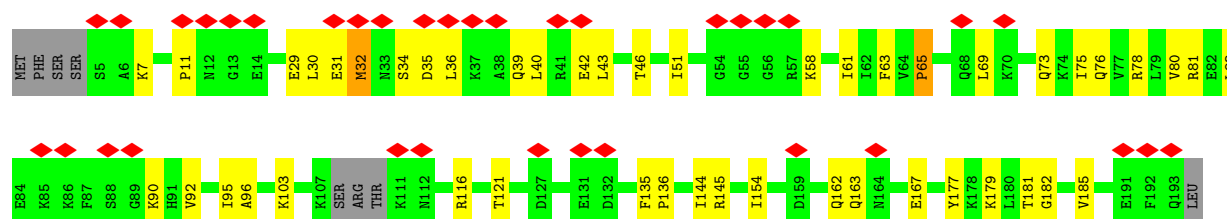
- Molecule 54: 40S ribosomal protein S5

Chain SF: 10% 72% 17% 10%



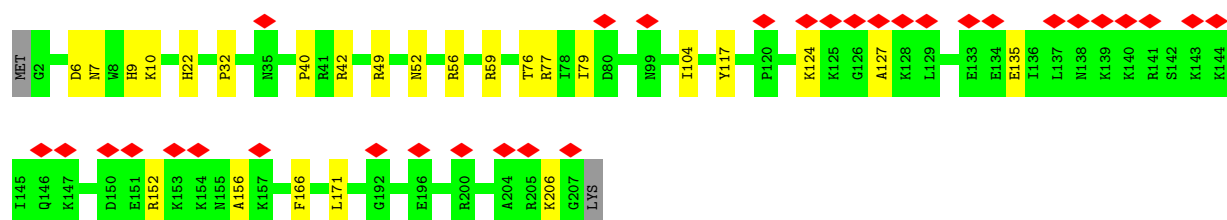
- Molecule 55: 40S ribosomal protein S7

Chain SH: 18% 72% 23%



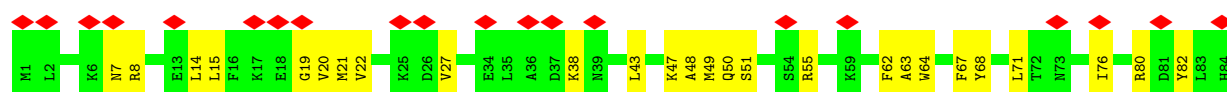
- Molecule 56: 40S ribosomal protein S8

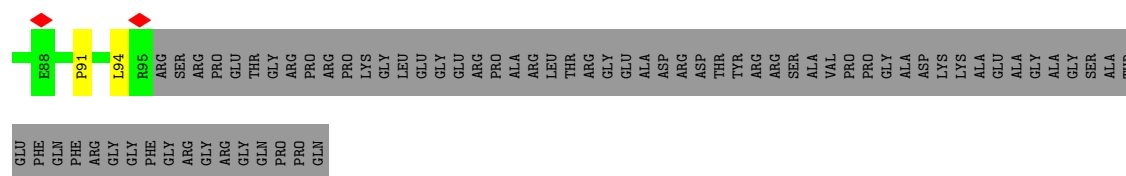
Chain SI: 15% 87% 12%



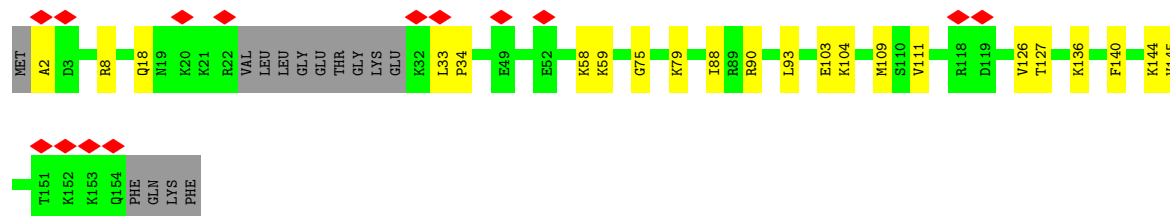
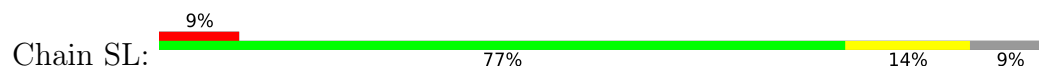
- Molecule 57: 40S ribosomal protein S10

Chain SK: 13% 41% 17% 42%

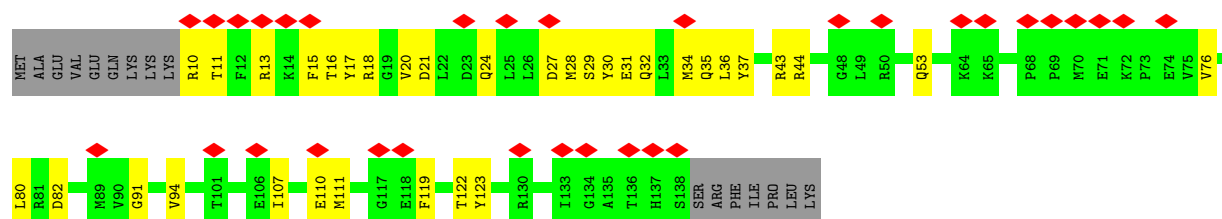




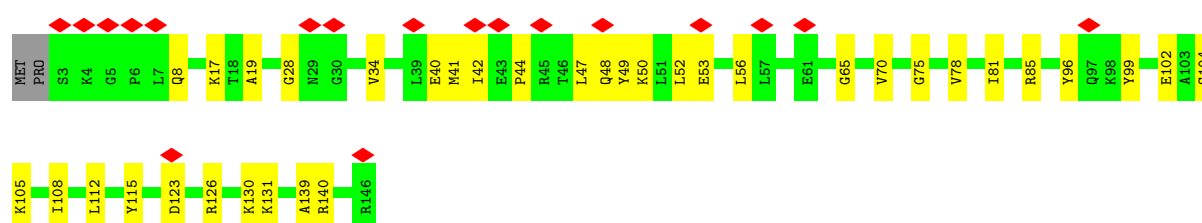
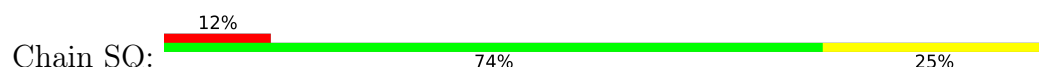
- Molecule 58: 40S ribosomal protein S11



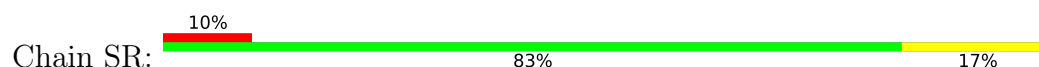
- Molecule 59: 40S ribosomal protein S15



- Molecule 60: 40S ribosomal protein S16

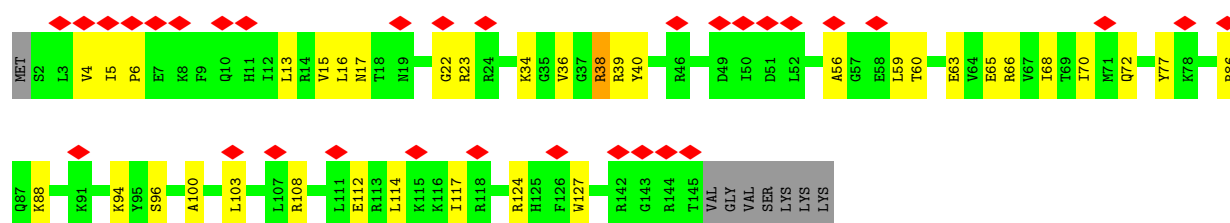


- Molecule 61: 40S ribosomal protein S17



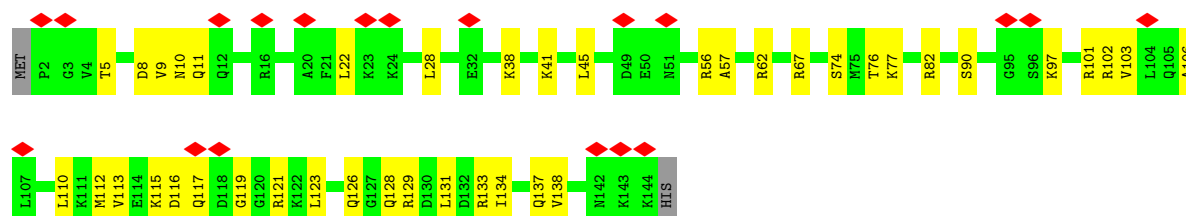
- Molecule 62: 40S ribosomal protein S18

Chain SS: 



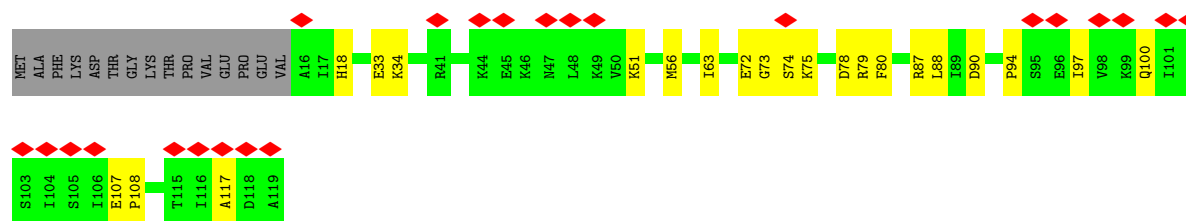
- Molecule 63: 40S ribosomal protein S19

Chain ST: 

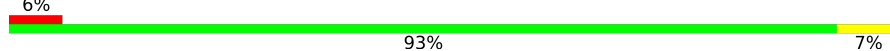


- Molecule 64: 40S ribosomal protein S20

Chain SU: 



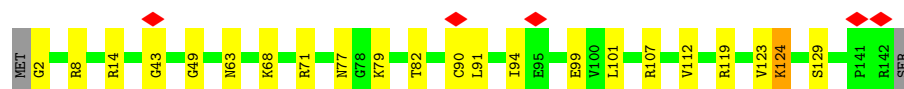
- Molecule 65: 40S ribosomal protein S21

Chain SV: 



- Molecule 66: 40S ribosomal protein S23

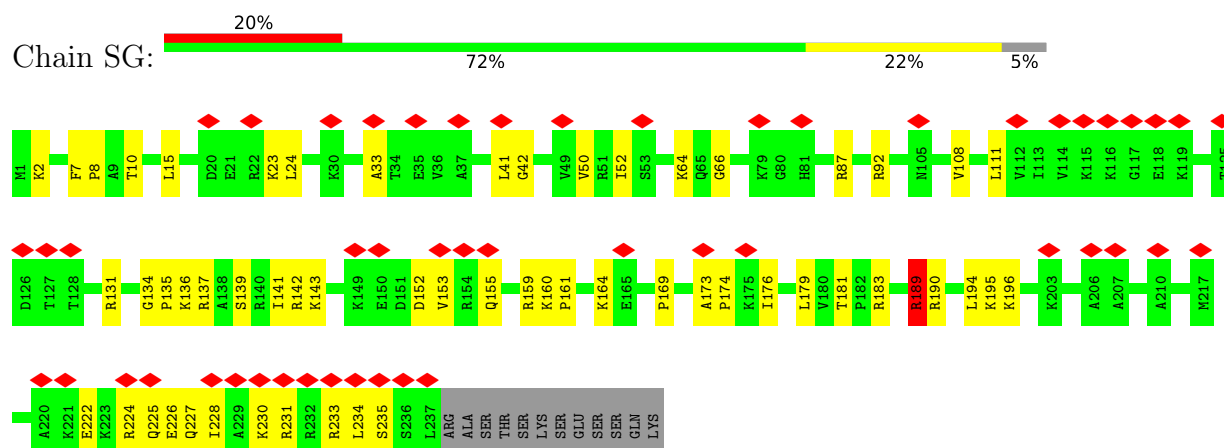
Chain SX: 



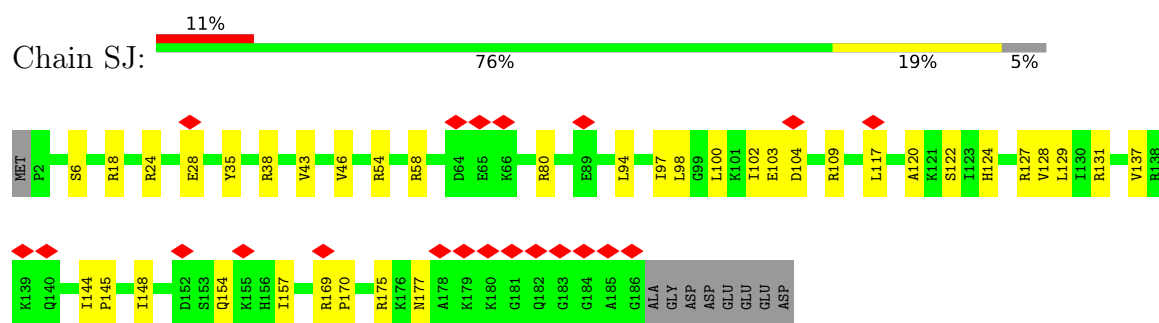
- Molecule 67: 40S ribosomal protein S26

Chain Sa: 

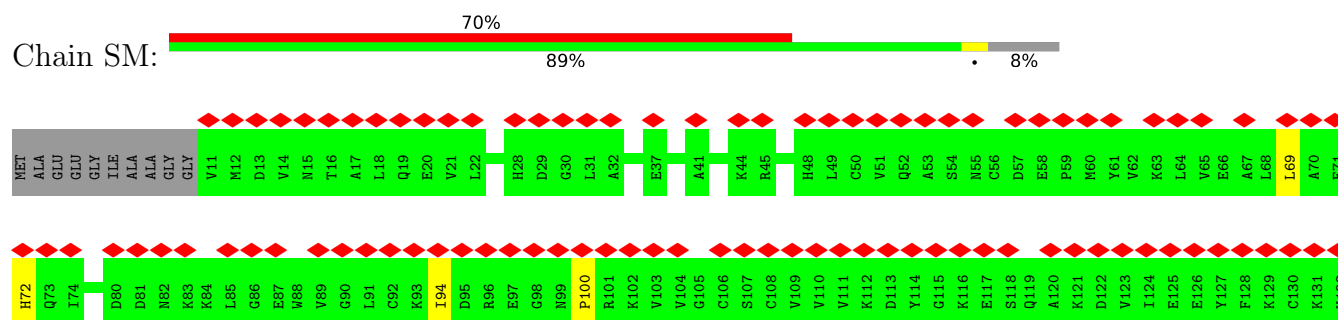
- Molecule 72: 40S ribosomal protein S6



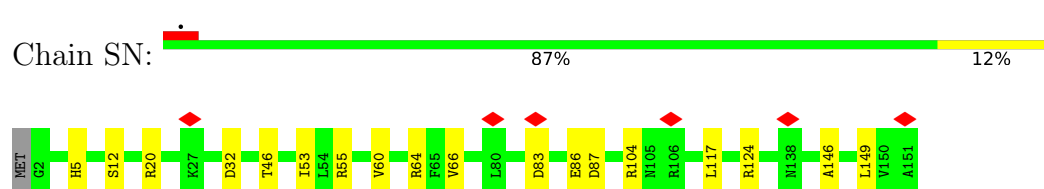
- Molecule 73: 40S ribosomal protein S9



- Molecule 74: 40S ribosomal protein S12



- Molecule 75: 40S ribosomal protein S13



- Molecule 76: 40S ribosomal protein S14



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	46089	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; Relion	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.059	Depositor
Minimum map value	-0.023	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	447.36, 447.36, 447.36	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.932, 0.932, 0.932	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, T1C, MG, MLZ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	L5	0.19	0/89548	0.35	0/139613
2	L7	0.17	0/2861	0.29	0/4459
3	L8	0.18	0/3701	0.33	0/5766
4	LA	0.23	0/1936	0.51	0/2596
5	LB	0.25	0/3306	0.55	0/4424
6	LC	0.25	0/2981	0.52	2/4002 (0.0%)
7	LD	0.22	0/2428	0.43	0/3252
8	LE	0.18	0/1808	0.52	2/2425 (0.1%)
9	LF	0.22	0/1905	0.47	0/2539
10	LG	0.22	0/1960	0.48	0/2637
11	LH	0.22	0/1537	0.48	0/2066
12	LI	0.24	0/1677	0.49	0/2237
13	LJ	0.25	0/1433	0.58	0/1915
14	LL	0.22	0/1732	0.50	0/2315
15	LM	0.22	0/1161	0.52	0/1554
16	LN	0.23	0/1746	0.51	0/2338
17	LO	0.23	0/1682	0.44	0/2250
18	LP	0.19	0/1268	0.45	0/1701
19	LQ	0.19	0/1537	0.42	0/2052
20	LR	0.19	0/1582	0.40	0/2091
21	LS	0.23	0/1493	0.45	0/2003
22	LT	0.24	0/1326	0.51	0/1770
23	LU	0.22	0/830	0.60	3/1114 (0.3%)
24	LV	0.20	0/993	0.49	0/1332
25	LW	0.27	0/1030	0.60	2/1364 (0.1%)
26	LX	0.19	0/1002	0.45	0/1345
27	LY	0.22	0/1123	0.45	0/1493
28	LZ	0.20	0/1130	0.46	0/1507
29	La	0.22	0/1191	0.44	0/1591
30	Lb	0.22	0/895	0.58	0/1182
31	Lc	0.19	0/774	0.45	0/1038
32	Ld	0.24	0/903	0.52	0/1216

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Le	0.21	0/1071	0.46	0/1429
34	Lf	0.23	0/895	0.52	0/1198
35	Lg	0.20	0/916	0.40	0/1220
36	Lh	0.22	0/1023	0.48	0/1351
37	Li	0.20	0/843	0.44	0/1115
38	Lj	0.24	0/720	0.52	0/952
39	Lk	0.22	0/575	0.48	0/761
40	Ll	0.20	0/454	0.35	0/599
41	Lm	0.18	0/425	0.39	0/561
42	Ln	0.21	0/231	0.47	0/294
43	Lo	0.24	0/876	0.47	0/1156
44	Lp	0.22	0/718	0.46	0/953
45	Lr	0.21	0/1017	0.44	0/1364
46	Ls	0.19	0/1519	0.49	0/2052
47	Lt	0.24	0/1058	0.70	2/1430 (0.1%)
48	Lz	0.15	0/1017	0.42	0/1416
49	S2	0.16	0/41241	0.36	1/64258 (0.0%)
50	SA	0.26	0/1778	0.53	1/2416 (0.0%)
51	SB	0.30	0/1765	0.64	2/2362 (0.1%)
52	SD	0.26	0/1793	0.57	0/2414
53	SE	0.20	0/2118	0.51	0/2849
54	SF	0.26	0/1481	0.60	1/1988 (0.1%)
55	SH	0.33	0/1519	0.70	4/2033 (0.2%)
56	SI	0.22	0/1715	0.53	1/2287 (0.0%)
57	SK	0.34	0/823	0.77	0/1111
58	SL	0.16	0/1202	0.40	0/1606
59	SP	0.32	0/1082	0.74	0/1446
60	SQ	0.24	0/1160	0.59	0/1553
61	SR	0.31	0/1105	0.69	0/1484
62	SS	0.29	0/1208	0.65	0/1618
63	ST	0.34	0/1131	0.58	0/1515
64	SU	0.31	0/831	0.67	0/1115
65	SV	0.17	0/643	0.40	0/860
66	SX	0.24	0/1116	0.52	0/1490
67	Sa	0.23	0/836	0.59	0/1121
68	Sc	0.22	0/508	0.61	1/680 (0.1%)
69	Sd	0.26	0/470	0.65	1/623 (0.2%)
70	Sg	0.23	0/2493	0.62	0/3394
71	SC	0.28	0/1762	0.63	0/2381
72	SG	0.27	0/1946	0.68	2/2590 (0.1%)
73	SJ	0.27	0/1550	0.53	0/2069
74	SM	0.11	0/603	0.30	0/837
75	SN	0.19	0/1232	0.47	0/1656

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SO	0.24	0/1023	0.54	0/1372
77	SW	0.22	0/1051	0.54	0/1406
78	SY	0.20	0/1044	0.51	0/1388
79	SZ	0.46	0/604	1.16	4/810 (0.5%)
80	Sb	0.20	0/665	0.44	0/891
81	Se	0.19	0/465	0.54	0/612
82	Sf	0.29	0/560	0.78	0/745
83	CA	0.24	0/2810	0.60	2/3780 (0.1%)
84	CB	0.17	0/128	0.43	0/171
85	CC	0.18	0/1658	0.33	0/2582
86	CE	0.17	0/616	0.27	0/812
All	All	0.21	0/239572	0.44	31/351363 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	LA	0	1
13	LJ	0	1
17	LO	0	1
25	LW	0	1
30	Lb	0	1
35	Lg	0	1
37	Li	0	1
50	SA	0	1
53	SE	0	1
54	SF	0	1
62	SS	0	2
72	SG	0	1
All	All	0	13

There are no bond length outliers.

All (31) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	SH	35	ASP	CA-C-O	8.85	130.71	119.12
51	SB	172	MET	CB-CG-SD	-8.33	87.70	112.70
51	SB	168	MET	CB-CG-SD	8.25	137.45	112.70
72	SG	189	ARG	CB-CG-CD	-7.93	93.07	111.30
79	SZ	88	LEU	CB-CG-CD2	-7.14	89.28	110.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	SF	159	ARG	CG-CD-NE	6.32	125.90	112.00
23	LU	66	SER	CA-C-N	6.08	133.16	121.54
23	LU	66	SER	C-N-CA	6.08	133.16	121.54
6	LC	2	ALA	CA-C-N	6.08	132.64	121.70
6	LC	2	ALA	C-N-CA	6.08	132.64	121.70
68	Sc	19	GLY	N-CA-C	5.86	119.13	110.63
79	SZ	102	LYS	CA-C-N	-5.85	114.62	121.64
79	SZ	102	LYS	C-N-CA	-5.85	114.62	121.64
55	SH	65	PRO	CA-C-N	5.74	124.92	120.33
55	SH	65	PRO	C-N-CA	5.74	124.92	120.33
83	CA	325	LEU	CA-C-N	5.67	135.80	123.15
83	CA	325	LEU	C-N-CA	5.67	135.80	123.15
79	SZ	83	LEU	CB-CG-CD2	-5.58	93.96	110.70
55	SH	32	MET	CB-CG-SD	5.50	129.19	112.70
72	SG	189	ARG	CG-CD-NE	5.34	123.75	112.00
25	LW	90	ILE	CA-C-N	-5.22	112.00	121.14
25	LW	90	ILE	C-N-CA	-5.22	112.00	121.14
69	Sd	27	ARG	CA-CB-CG	-5.20	103.69	114.10
8	LE	280	GLY	CA-C-N	5.18	127.64	120.49
8	LE	280	GLY	C-N-CA	5.18	127.64	120.49
49	S2	688	U	P-O3'-C3'	5.18	127.97	120.20
47	Lt	8	ASN	CA-C-N	5.10	131.27	121.54
47	Lt	8	ASN	C-N-CA	5.10	131.27	121.54
56	SI	135	GLU	CA-CB-CG	5.03	124.16	114.10
23	LU	67	LYS	CA-CB-CG	5.02	124.14	114.10
50	SA	205	ARG	CB-CG-CD	-5.00	99.79	111.30

There are no chirality outliers.

All (13) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	LA	110	GLY	Peptide
13	LJ	18	ARG	Peptide
17	LO	30	GLY	Peptide
25	LW	19	ARG	Sidechain
30	Lb	117	ARG	Sidechain
35	Lg	29	ARG	Sidechain
37	Li	56	ARG	Sidechain
50	SA	205	ARG	Sidechain
53	SE	66	MET	Peptide
54	SF	78	MET	Peptide
72	SG	189	ARG	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
62	SS	23	ARG	Sidechain
62	SS	38	ARG	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	L5	80096	0	40355	563	0
2	L7	2561	0	1295	10	0
3	L8	3314	0	1683	17	0
4	LA	1898	0	1993	27	0
5	LB	3238	0	3376	50	0
6	LC	2927	0	3104	36	0
7	LD	2382	0	2410	25	0
8	LE	1774	0	1930	29	0
9	LF	1870	0	1996	26	0
10	LG	1927	0	2074	17	0
11	LH	1518	0	1601	24	0
12	LI	1639	0	1687	34	0
13	LJ	1410	0	1441	21	0
14	LL	1701	0	1818	18	0
15	LM	1138	0	1204	21	0
16	LN	1701	0	1749	27	0
17	LO	1650	0	1794	29	0
18	LP	1242	0	1269	15	0
19	LQ	1513	0	1628	18	0
20	LR	1566	0	1729	17	0
21	LS	1453	0	1490	14	0
22	LT	1298	0	1366	20	0
23	LU	816	0	842	11	0
24	LV	979	0	1039	12	0
25	LW	1015	0	1079	20	0
26	LX	985	0	1066	16	0
27	LY	1106	0	1192	19	0
28	LZ	1107	0	1182	17	0
29	La	1162	0	1213	17	0
30	Lb	882	0	959	17	0
31	Lc	764	0	804	13	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	Ld	888	0	930	11	0
33	Le	1053	0	1147	14	0
34	Lf	876	0	912	11	0
35	Lg	906	0	998	18	0
36	Lh	1015	0	1148	17	0
37	Li	832	0	917	7	0
38	Lj	705	0	737	13	0
39	Lk	569	0	637	10	0
40	Ll	444	0	483	6	0
41	Lm	430	0	466	5	0
42	Ln	230	0	276	4	0
43	Lo	862	0	929	10	0
44	Lp	708	0	756	11	0
45	Lr	1002	0	1068	10	0
46	Ls	1496	0	1540	31	0
47	Lt	1046	0	1076	26	0
48	Lz	1018	0	448	1	0
49	S2	36896	0	18603	350	0
50	SA	1741	0	1746	34	0
51	SB	1738	0	1809	26	0
52	SD	1765	0	1865	35	0
53	SE	2076	0	2177	31	0
54	SF	1461	0	1511	32	0
55	SH	1497	0	1590	33	0
56	SI	1686	0	1772	16	0
57	SK	799	0	823	19	0
58	SL	1182	0	1253	16	0
59	SP	1061	0	1107	30	0
60	SQ	1142	0	1213	30	0
61	SR	1090	0	1149	22	0
62	SS	1190	0	1249	28	0
63	ST	1112	0	1146	37	0
64	SU	821	0	883	15	0
65	SV	636	0	637	4	0
66	SX	1098	0	1167	17	0
67	Sa	821	0	870	14	0
68	Sc	506	0	536	9	0
69	Sd	459	0	451	11	0
70	Sg	2436	0	2393	59	0
71	SC	1725	0	1813	30	0
72	SG	1923	0	2089	50	0
73	SJ	1525	0	1640	26	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
74	SM	604	0	281	2	0
75	SN	1208	0	1294	15	0
76	SO	1010	0	1034	25	0
77	SW	1034	0	1080	22	0
78	SY	1027	0	1093	21	0
79	SZ	598	0	656	26	0
80	Sb	651	0	672	10	0
81	Se	459	0	503	11	0
82	Sf	548	0	555	12	0
83	CA	2764	0	2779	50	0
84	CB	127	0	120	5	0
85	CC	1482	0	751	11	0
86	CE	613	0	625	2	0
87	L5	212	0	0	0	0
87	L7	3	0	0	0	0
87	L8	4	0	0	0	0
87	LA	1	0	0	0	0
87	LP	1	0	0	0	0
87	LV	1	0	0	0	0
87	Le	1	0	0	0	0
87	Lg	1	0	0	0	0
87	Lj	1	0	0	0	0
87	S2	28	0	0	0	0
87	SG	1	0	0	0	0
87	SQ	1	0	0	0	0
88	CC	42	0	38	0	0
88	L5	294	0	266	11	0
89	Lg	1	0	0	0	0
89	Lj	1	0	0	0	0
89	Lm	1	0	0	0	0
89	Lo	1	0	0	0	0
89	Lp	1	0	0	0	0
89	SD	1	0	0	0	0
89	SM	1	0	0	0	0
89	Sa	1	0	0	0	0
All	All	223822	0	166075	2149	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 6.

All (2149) 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)
60:SQ:28:GLY:O	60:SQ:65:GLY:HA2	1.47	1.11
49:S2:886:A:N6	49:S2:901:G:C4	2.21	1.09
49:S2:1756:C:H42	49:S2:1776:G:N2	1.49	1.09
49:S2:1756:C:N4	49:S2:1776:G:H22	1.51	1.07
25:LW:4:GLU:O	25:LW:12:LYS:HA	1.53	1.06
49:S2:1287:A:H62	49:S2:1312:G:H21	1.04	1.04
1:L5:1176:C:N4	1:L5:1184:A:H61	1.58	1.01
1:L5:1176:C:H42	1:L5:1184:A:N6	1.57	1.01
70:Sg:46:THR:O	70:Sg:52:TYR:HA	1.61	1.00
5:LB:214:ASP:HA	5:LB:284:ILE:O	1.61	0.99
1:L5:1175:A:C2	1:L5:1185:G:N1	2.34	0.95
1:L5:1976:G:N1	1:L5:1991:A:C2	2.37	0.92
1:L5:2483:G:H1	1:L5:2495:U:H3	1.17	0.92
38:Lj:15:THR:O	38:Lj:28:HIS:HA	1.70	0.92
60:SQ:28:GLY:O	60:SQ:65:GLY:CA	2.17	0.92
1:L5:1175:A:H2	1:L5:1185:G:H1	1.14	0.90
1:L5:1175:A:H2	1:L5:1185:G:N1	1.67	0.89
15:LM:77:TRP:O	15:LM:81:ASP:HA	1.73	0.89
49:S2:925:G:H1	49:S2:1017:U:H3	1.25	0.84
1:L5:1176:C:H42	1:L5:1184:A:H61	0.84	0.83
66:SX:101:LEU:HB3	66:SX:123:VAL:O	1.79	0.82
59:SP:24:GLN:O	59:SP:28:MET:HB2	1.79	0.82
49:S2:1287:A:H62	49:S2:1312:G:N2	1.78	0.81
1:L5:1095:A:H2	1:L5:1200:G:H1	1.27	0.80
11:LH:59:LYS:HE2	11:LH:66:GLU:HB3	1.64	0.79
49:S2:1415:C:OP1	63:ST:129:ARG:NH1	2.14	0.79
1:L5:1762:C:N4	1:L5:1770:A:C2	2.52	0.78
1:L5:493:G:H1	1:L5:660:A:H2	1.32	0.78
12:LI:210:ARG:O	12:LI:214:SER:HB2	1.84	0.77
49:S2:1192:U:OP2	66:SX:119:ARG:NH2	2.17	0.76
55:SH:163:GLN:O	55:SH:167:GLU:HB3	1.84	0.76
49:S2:1007:C:O2'	75:SN:104:ARG:NH2	2.18	0.76
79:SZ:49:LEU:H	79:SZ:83:LEU:HD21	1.49	0.76
1:L5:499:G:H2'	1:L5:504:G:H22	1.50	0.76
72:SG:176:ILE:HB	72:SG:179:LEU:HD23	1.68	0.75
49:S2:1293:A:N3	82:Sf:138:ARG:NH2	2.35	0.75
10:LG:180:PRO:HG3	10:LG:219:VAL:HG13	1.67	0.74
8:LE:96:VAL:HA	8:LE:103:GLY:O	1.88	0.74
1:L5:1479:G:H21	14:LL:184:MET:HE1	1.52	0.74
53:SE:246:LEU:HD13	53:SE:251:GLU:HB2	1.69	0.73
73:SJ:97:ILE:HA	73:SJ:100:LEU:HD13	1.69	0.73
12:LI:209:TRP:O	12:LI:212:LEU:O	2.06	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:LT:37:GLY:N	22:LT:64:VAL:O	2.22	0.72
33:Le:45:VAL:HG12	33:Le:52:GLN:HB3	1.71	0.72
49:S2:1287:A:N6	49:S2:1312:G:H21	1.84	0.72
49:S2:1451:G:N7	61:SR:44:LYS:NZ	2.38	0.72
49:S2:547:G:H1'	49:S2:549:C:H41	1.55	0.72
10:LG:96:LEU:HD21	10:LG:189:ARG:HD3	1.72	0.71
43:Lo:61:LYS:HD2	43:Lo:87:ARG:HH12	1.55	0.71
52:SD:175:VAL:HB	52:SD:182:LEU:HB3	1.72	0.71
17:LO:85:ARG:HG3	17:LO:99:LEU:HD11	1.73	0.71
47:Lt:121:LEU:HB3	47:Lt:123:ARG:HB3	1.72	0.71
13:LJ:21:CYS:HB2	13:LJ:131:TYR:O	1.91	0.71
1:L5:1996:C:H42	1:L5:2000:G:N2	1.88	0.71
72:SG:181:THR:HG22	72:SG:183:ARG:H	1.55	0.70
54:SF:49:LEU:HD13	60:SQ:50:LYS:HG2	1.73	0.70
15:LM:38:VAL:HG21	15:LM:50:MET:HE3	1.72	0.70
49:S2:1748:G:H1	49:S2:1786:U:H3	1.37	0.70
9:LF:105:VAL:HG13	9:LF:136:VAL:HG12	1.74	0.70
49:S2:1660:C:H3'	69:Sd:32:ARG:HH22	1.57	0.70
49:S2:1536:G:H2'	49:S2:1537:A:H8	1.57	0.69
49:S2:886:A:N6	49:S2:901:G:C5	2.60	0.69
1:L5:935:A:N1	15:LM:70:GLN:NE2	2.41	0.69
11:LH:12:ILE:HD13	11:LH:18:ILE:HG21	1.74	0.69
61:SR:36:GLU:OE1	61:SR:47:ARG:NH1	2.26	0.69
63:ST:9:VAL:HG21	63:ST:138:VAL:HG23	1.73	0.69
73:SJ:38:ARG:HB2	73:SJ:127:ARG:HH22	1.57	0.69
1:L5:1976:G:C6	1:L5:1991:A:N1	2.60	0.69
1:L5:2520:C:O2	1:L5:2640:G:N2	2.26	0.69
1:L5:3937:C:H1'	16:LN:125:SER:HB2	1.75	0.69
60:SQ:112:LEU:O	60:SQ:115:TYR:O	2.11	0.68
70:Sg:292:SER:HB3	70:Sg:299:PHE:HE2	1.56	0.68
76:SO:56:VAL:HG23	76:SO:60:MET:HE2	1.74	0.68
60:SQ:28:GLY:O	60:SQ:65:GLY:C	2.36	0.68
1:L5:74:G:H5''	14:LL:59:VAL:HG22	1.75	0.68
1:L5:3947:A:H61	1:L5:4066:U:H3	1.40	0.68
70:Sg:129:ILE:HD11	70:Sg:151:VAL:HG11	1.75	0.68
16:LN:124:ASP:HB3	16:LN:127:TYR:H	1.57	0.68
49:S2:1674:G:H4'	54:SF:77:MET:HE1	1.76	0.68
70:Sg:57:ARG:NH1	70:Sg:92:LEU:O	2.27	0.68
49:S2:67:C:H41	72:SG:164:LYS:H	1.40	0.68
51:SB:38:MET:HE1	51:SB:182:LYS:HA	1.76	0.68
1:L5:344:A:H5'	38:Lj:75:ARG:HH21	1.57	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Ld:64:ILE:HG23	32:Ld:68:LEU:HD23	1.76	0.68
54:SF:78:MET:O	54:SF:79:HIS:ND1	2.27	0.68
1:L5:3745:U:HO2'	4:LA:243:THR:H	1.42	0.67
1:L5:3896:C:O2'	5:LB:268:ARG:NH2	2.27	0.67
36:Lh:44:LEU:HA	36:Lh:47:ILE:HD12	1.77	0.67
52:SD:75:LYS:NZ	57:SK:20:VAL:O	2.26	0.67
1:L5:2611:A:H5'	1:L5:2688:G:H4'	1.76	0.67
49:S2:886:A:C6	49:S2:901:G:N3	2.63	0.67
49:S2:919:A:OP2	75:SN:64:ARG:NH2	2.28	0.67
1:L5:4546:A:N7	4:LA:215:ASN:ND2	2.43	0.67
49:S2:1016:U:OP2	80:Sb:20:LYS:NZ	2.28	0.66
12:LI:36:LEU:HD11	12:LI:69:ARG:HH11	1.61	0.66
1:L5:2557:G:H1	1:L5:2570:U:H3	1.43	0.66
19:LQ:35:LEU:O	19:LQ:39:THR:HB	1.96	0.66
60:SQ:40:GLU:HG2	60:SQ:41:MET:HG3	1.78	0.66
18:LP:116:HIS:HB3	18:LP:149:ILE:HB	1.78	0.66
27:LY:30:MET:HE1	27:LY:75:ARG:HG2	1.77	0.66
1:L5:4242:U:H3	1:L5:4281:A:H2	1.44	0.66
39:Lk:23:VAL:HG22	39:Lk:36:VAL:HG22	1.78	0.66
3:L8:63:U:O2'	36:Lh:52:LYS:NZ	2.29	0.66
55:SH:61:ILE:HG23	55:SH:95:ILE:HD13	1.77	0.66
1:L5:4429:C:N3	12:LI:158:LYS:NZ	2.44	0.66
6:LC:218:ILE:O	6:LC:222:ARG:HB2	1.95	0.66
8:LE:73:TYR:O	30:Lb:117:ARG:NH1	2.29	0.66
1:L5:1176:C:N3	1:L5:1184:A:N1	2.44	0.66
1:L5:2517:A:H5'	35:Lg:62:LYS:HD3	1.78	0.66
10:LG:165:GLU:OE1	16:LN:11:TRP:NE1	2.28	0.66
27:LY:31:SER:HA	27:LY:48:PRO:HA	1.77	0.66
70:Sg:87:LEU:HB2	70:Sg:101:PHE:HB2	1.78	0.66
4:LA:45:VAL:O	4:LA:85:GLY:N	2.29	0.65
71:SC:194:ARG:HE	71:SC:196:ILE:HD11	1.61	0.65
13:LJ:90:ARG:NH2	13:LJ:108:GLY:O	2.29	0.65
49:S2:563:G:H1	49:S2:592:C:H5	1.44	0.65
52:SD:73:VAL:O	52:SD:77:PHE:HB2	1.96	0.65
73:SJ:169:ARG:HE	73:SJ:175:ARG:HH22	1.44	0.65
1:L5:679:C:OP1	45:Lr:84:LYS:NZ	2.29	0.65
22:LT:93:ILE:HA	22:LT:96:ILE:HG12	1.78	0.65
83:CA:25:GLY:HA3	83:CA:333:ILE:HG13	1.77	0.65
1:L5:1273:G:N7	30:Lb:117:ARG:NH1	2.45	0.65
1:L5:1977:C:OP1	47:Lt:57:ARG:NH2	2.30	0.65
49:S2:1868:U:O2'	67:Sa:100:ARG:NH2	2.30	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CA:246:ILE:HB	83:CA:305:PHE:HB2	1.78	0.65
37:Li:19:LYS:HZ3	37:Li:21:VAL:HA	1.60	0.64
52:SD:74:GLN:NE2	52:SD:79:PHE:O	2.31	0.64
57:SK:7:ASN:ND2	57:SK:38:LYS:O	2.30	0.64
70:Sg:98:THR:HG22	70:Sg:99:ARG:HG2	1.79	0.64
49:S2:940:U:H3	49:S2:1002:U:H3	1.46	0.64
54:SF:76:MET:HE2	54:SF:92:ILE:HG21	1.78	0.64
21:LS:77:ASN:HB2	21:LS:132:ILE:O	1.98	0.64
66:SX:107:ARG:HD3	66:SX:112:VAL:HG12	1.80	0.64
79:SZ:57:LYS:HE2	79:SZ:77:LEU:HD22	1.80	0.64
1:L5:2458:C:H5''	16:LN:67:ARG:HD2	1.80	0.64
67:Sa:45:VAL:HG21	67:Sa:64:LEU:HD13	1.79	0.64
38:Lj:54:LYS:O	38:Lj:58:THR:HB	1.98	0.64
1:L5:1971:C:O2	46:Ls:41:GLN:NE2	2.31	0.63
1:L5:4093:G:N1	1:L5:4114:C:C2	2.66	0.63
3:L8:65:A:O2'	36:Lh:10:ARG:NH2	2.31	0.63
53:SE:114:ILE:HD12	53:SE:118:GLU:HB3	1.80	0.63
70:Sg:174:VAL:HB	70:Sg:188:HIS:HB2	1.80	0.63
78:SY:58:PHE:HE2	78:SY:74:MET:HE1	1.63	0.63
18:LP:4:TYR:HA	18:LP:18:ARG:HH22	1.63	0.63
27:LY:47:MET:HE3	27:LY:48:PRO:HD2	1.79	0.63
49:S2:1228:A:H2'	49:S2:1229:G:H8	1.63	0.63
70:Sg:46:THR:OG1	70:Sg:51:ASN:O	2.16	0.63
1:L5:2695:A:OP1	39:Lk:35:LYS:NZ	2.32	0.63
51:SB:103:MET:HG2	51:SB:215:VAL:HG12	1.79	0.63
75:SN:20:ARG:HH21	77:SW:56:HIS:HB3	1.63	0.63
4:LA:36:GLU:OE1	4:LA:163:ARG:NH1	2.32	0.63
59:SP:44:ARG:NH2	59:SP:53:GLN:OE1	2.32	0.63
1:L5:3641:U:OP2	1:L5:3646:A:N6	2.31	0.63
13:LJ:35:ARG:HD2	13:LJ:123:ILE:HA	1.81	0.63
52:SD:45:ARG:HE	52:SD:83:SER:HA	1.63	0.63
71:SC:90:GLU:HB2	71:SC:93:ILE:HG12	1.80	0.63
1:L5:184:U:H3	1:L5:253:G:H1	1.46	0.63
6:LC:140:LYS:HZ1	6:LC:242:PRO:HD2	1.64	0.63
49:S2:1337:C:H2'	49:S2:1338:G:H8	1.64	0.63
1:L5:493:G:O6	1:L5:660:A:N1	2.31	0.63
1:L5:2347:A:N3	33:Le:30:LYS:NZ	2.47	0.63
71:SC:165:VAL:HG21	71:SC:217:ALA:HB1	1.79	0.63
46:Ls:28:PHE:HB2	46:Ls:89:VAL:HB	1.80	0.63
73:SJ:46:VAL:HG13	73:SJ:102:ILE:HD11	1.81	0.62
27:LY:8:THR:HG21	27:LY:13:LYS:HD3	1.80	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Le:82:VAL:HG13	33:Le:114:ARG:HG2	1.79	0.62
1:L5:4093:G:N1	1:L5:4114:C:N3	2.48	0.62
49:S2:1533:A:OP1	54:SF:164:ARG:NH2	2.31	0.62
44:Lp:30:GLU:HA	44:Lp:33:GLN:HG2	1.80	0.62
4:LA:28:ARG:HD2	4:LA:123:ARG:HD3	1.80	0.62
21:LS:93:MET:SD	21:LS:95:ARG:NH1	2.72	0.62
37:Li:33:LEU:HD21	37:Li:38:LYS:HD3	1.79	0.62
1:L5:2083:C:OP2	19:LQ:14:ARG:NH2	2.33	0.62
4:LA:29:LEU:O	4:LA:123:ARG:NH1	2.33	0.62
1:L5:1332:C:H2'	1:L5:1333:A:H8	1.65	0.62
1:L5:1762:C:N4	1:L5:1770:A:H2	1.97	0.62
1:L5:2469:C:H5	1:L5:2471:G:H1	1.45	0.62
49:S2:959:G:OP1	76:SO:104:ARG:NH1	2.33	0.62
54:SF:51:HIS:O	60:SQ:50:LYS:NZ	2.33	0.62
28:LZ:100:VAL:HG13	28:LZ:107:LYS:HA	1.82	0.62
49:S2:1488:C:O2'	49:S2:1490:G:OP2	2.15	0.62
49:S2:170:A:H5'	72:SG:137:ARG:HG3	1.82	0.61
49:S2:396:U:OP2	58:SL:79:LYS:NZ	2.32	0.61
72:SG:23:LYS:HD3	72:SG:41:LEU:HD13	1.81	0.61
83:CA:255:TYR:HB3	83:CA:301:LEU:HD21	1.82	0.61
49:S2:433:A:H5''	56:SI:22:HIS:HB3	1.82	0.61
59:SP:53:GLN:HG2	59:SP:80:LEU:HD11	1.81	0.61
1:L5:1095:A:C2	1:L5:1200:G:N1	2.63	0.61
1:L5:3689:G:O2'	1:L5:3818:U:OP2	2.17	0.61
24:LV:58:GLY:N	24:LV:81:VAL:O	2.32	0.61
76:SO:34:PHE:HB3	76:SO:41:PHE:HB2	1.80	0.61
49:S2:624:C:H41	66:SX:63:ASN:HD22	1.48	0.61
1:L5:1996:C:H42	1:L5:2000:G:H22	1.46	0.61
10:LG:104:PRO:HG2	10:LG:194:VAL:HG13	1.81	0.61
72:SG:159:ARG:HG3	72:SG:173:ALA:HB2	1.82	0.61
50:SA:70:ASN:HB3	50:SA:73:ASP:HB2	1.83	0.61
53:SE:102:ILE:HD11	53:SE:239:PRO:HD3	1.83	0.61
71:SC:102:LEU:HD12	71:SC:130:ILE:HG12	1.83	0.61
7:LD:80:ALA:HA	7:LD:83:LEU:HG	1.83	0.61
12:LI:65:LEU:HD21	12:LI:91:LEU:HD23	1.82	0.61
33:Le:117:GLN:O	45:Lr:119:ARG:NH2	2.33	0.61
40:Ll:9:ILE:HG23	40:Ll:51:LEU:HD21	1.81	0.61
49:S2:1636:G:O2'	54:SF:164:ARG:NH2	2.33	0.61
63:ST:134:ILE:HG13	63:ST:137:GLN:HE21	1.65	0.61
19:LQ:53:MET:HE2	19:LQ:57:ASN:HB3	1.80	0.61
26:LX:129:ARG:O	26:LX:132:GLY:N	2.30	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1660:C:OP1	69:Sd:16:GLN:NE2	2.34	0.61
62:SS:4:VAL:HG12	62:SS:5:ILE:HG22	1.82	0.61
1:L5:1175:A:N1	1:L5:1185:G:O6	2.34	0.61
1:L5:1996:C:N4	1:L5:2000:G:H22	1.98	0.61
49:S2:3:C:O2	73:SJ:18:ARG:NH1	2.31	0.61
54:SF:35:LEU:HD12	54:SF:117:ILE:HD13	1.82	0.61
49:S2:634:A:OP1	81:Se:13:ARG:NH1	2.34	0.60
49:S2:1228:A:H2'	49:S2:1229:G:C8	2.36	0.60
62:SS:16:LEU:HD23	62:SS:17:ASN:H	1.65	0.60
49:S2:1839:U:H5	67:Sa:28:ARG:HH12	1.48	0.60
64:SU:94:PRO:HD2	64:SU:97:ILE:HD11	1.83	0.60
75:SN:53:ILE:HG22	80:Sb:52:THR:HG21	1.82	0.60
8:LE:152:ILE:O	8:LE:159:GLY:N	2.34	0.60
25:LW:34:ALA:HA	25:LW:37:GLU:HG2	1.83	0.60
27:LY:39:ARG:O	27:LY:42:TYR:O	2.19	0.60
49:S2:1536:G:H2'	49:S2:1537:A:C8	2.35	0.60
51:SB:88:THR:HA	51:SB:98:THR:HA	1.83	0.60
53:SE:126:VAL:O	53:SE:157:ASN:N	2.35	0.60
49:S2:1610:G:O2'	62:SS:86:ARG:NH1	2.34	0.60
1:L5:1095:A:N1	1:L5:1200:G:O6	2.34	0.60
17:LO:34:VAL:HG22	17:LO:103:LYS:HB2	1.82	0.60
32:Ld:85:ARG:HB3	32:Ld:109:VAL:O	2.01	0.60
55:SH:154:ILE:HB	55:SH:185:VAL:HG12	1.82	0.60
1:L5:469:C:O2	8:LE:105:ARG:NH1	2.34	0.60
12:LI:145:LYS:HE3	12:LI:167:ILE:HG13	1.84	0.60
28:LZ:92:ASP:HB3	28:LZ:95:VAL:HG22	1.84	0.60
49:S2:928:G:H1	49:S2:1013:U:H3	1.48	0.60
56:SI:40:PRO:O	56:SI:59:ARG:NE	2.35	0.60
1:L5:4745:G:H1	1:L5:4955:A:H61	1.50	0.60
47:Lt:57:ARG:NH1	47:Lt:58:ILE:O	2.35	0.60
54:SF:16:ASP:N	54:SF:24:SER:HG	2.00	0.60
63:ST:82:ARG:NH2	63:ST:90:SER:OG	2.35	0.60
71:SC:67:GLY:HA2	71:SC:93:ILE:HD11	1.83	0.60
83:CA:172:LYS:HD3	83:CA:175:HIS:HE1	1.67	0.60
19:LQ:18:PRO:HG3	19:LQ:29:VAL:HG21	1.84	0.60
47:Lt:82:ILE:HG21	47:Lt:137:GLN:HG3	1.84	0.60
49:S2:1751:C:H42	49:S2:1782:G:H21	1.49	0.60
50:SA:198:MET:HE2	50:SA:200:ASP:HB2	1.84	0.60
64:SU:51:LYS:HB2	64:SU:90:ASP:HB2	1.83	0.60
57:SK:47:LYS:HA	57:SK:50:GLN:HG3	1.84	0.59
1:L5:1837:A:OP2	22:LT:130:ARG:NH1	2.35	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:290:SER:OG	6:LC:294:LYS:NZ	2.35	0.59
50:SA:79:SER:O	50:SA:84:GLN:NE2	2.35	0.59
1:L5:709:C:OP1	34:Lf:89:ARG:NH2	2.34	0.59
13:LJ:95:ARG:HH22	13:LJ:177:GLY:HA3	1.66	0.59
21:LS:5:GLY:O	21:LS:111:ARG:NH2	2.35	0.59
52:SD:226:GLN:NE2	70:Sg:224:GLY:O	2.35	0.59
19:LQ:146:ARG:HB2	19:LQ:149:TYR:HD2	1.68	0.59
60:SQ:112:LEU:O	60:SQ:115:TYR:C	2.45	0.59
65:SV:35:ASN:ND2	71:SC:267:GLN:OE1	2.35	0.59
79:SZ:99:LEU:HD21	79:SZ:102:LYS:HB2	1.84	0.59
1:L5:1976:G:O6	1:L5:1991:A:N1	2.36	0.59
13:LJ:64:ARG:NH1	86:CE:43:ASP:OD2	2.35	0.59
49:S2:1644:C:H4'	60:SQ:140:ARG:HB2	1.85	0.59
52:SD:55:THR:HA	52:SD:58:VAL:HG22	1.85	0.59
1:L5:919:C:OP1	15:LM:69:HIS:ND1	2.34	0.59
1:L5:2556:G:H4'	28:LZ:109:LYS:HE2	1.85	0.59
46:Ls:13:TYR:OH	46:Ls:55:MET:O	2.20	0.59
49:S2:944:A:H5''	76:SO:134:PRO:HB3	1.83	0.59
77:SW:106:THR:HG22	77:SW:108:ALA:H	1.67	0.59
64:SU:80:PHE:HB3	69:Sd:52:PHE:HB3	1.85	0.59
1:L5:4910:G:N2	17:LO:106:ASP:O	2.35	0.59
49:S2:1015:U:O2'	75:SN:55:ARG:NH1	2.36	0.59
1:L5:1179:U:OP2	7:LD:289:ARG:NH2	2.36	0.59
12:LI:66:GLU:OE2	12:LI:69:ARG:NH2	2.26	0.59
47:Lt:50:THR:HG21	47:Lt:72:GLU:HB2	1.84	0.59
52:SD:226:GLN:HG3	70:Sg:186:THR:HG22	1.84	0.59
1:L5:109:G:OP2	14:LL:74:ARG:NH2	2.34	0.59
72:SG:7:PHE:HD2	72:SG:10:THR:HG22	1.68	0.59
1:L5:3589:G:N2	1:L5:3590:G:N7	2.51	0.58
44:Lp:36:LYS:HE3	44:Lp:48:LYS:HD2	1.84	0.58
64:SU:33:GLU:OE2	64:SU:87:ARG:NH1	2.36	0.58
1:L5:63:G:OP2	16:LN:169:ARG:NH2	2.32	0.58
1:L5:4040:C:H5'	1:L5:4045:G:H22	1.68	0.58
15:LM:104:MET:HE3	15:LM:109:ARG:HG2	1.85	0.58
24:LV:70:PRO:HA	24:LV:73:ARG:HB2	1.85	0.58
49:S2:1156:U:OP1	77:SW:71:LYS:NZ	2.35	0.58
58:SL:75:GLY:HA3	58:SL:88:ILE:HD12	1.85	0.58
1:L5:4910:G:H4'	5:LB:95:THR:HG22	1.84	0.58
13:LJ:53:ALA:HB2	13:LJ:68:ILE:HG13	1.85	0.58
49:S2:695:C:N4	49:S2:736:C:O2'	2.37	0.58
1:L5:1785:C:OP1	12:LI:133:GLN:NE2	2.36	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:123:GLU:HG3	16:LN:124:ASP:H	1.68	0.58
47:Lt:125:LEU:HD12	47:Lt:127:GLY:H	1.69	0.58
49:S2:639:C:H2'	49:S2:640:A:H8	1.67	0.58
71:SC:183:LYS:HA	71:SC:195:LEU:O	2.02	0.58
73:SJ:170:PRO:O	73:SJ:175:ARG:NH2	2.36	0.58
1:L5:2899:C:OP1	20:LR:108:ARG:NH2	2.35	0.58
1:L5:4472:G:O2'	41:Lm:100:TYR:O	2.20	0.58
3:L8:38:U:O2'	36:Lh:86:LYS:NZ	2.35	0.58
17:LO:166:ILE:HG12	17:LO:169:ARG:HH21	1.69	0.58
51:SB:123:ALA:HB2	51:SB:165:ARG:HG3	1.84	0.58
56:SI:6:ASP:OD1	56:SI:9:HIS:ND1	2.35	0.58
1:L5:121:A:OP1	10:LG:110:LYS:NZ	2.31	0.58
49:S2:1756:C:N3	49:S2:1776:G:N1	2.48	0.58
63:ST:22:LEU:HD11	63:ST:112:MET:HE1	1.85	0.58
1:L5:1396:G:HO2'	1:L5:1468:C:HO2'	1.48	0.58
1:L5:4969:C:O2	18:LP:75:GLN:NE2	2.37	0.58
30:Lb:90:SER:OG	30:Lb:95:ARG:NH2	2.37	0.58
42:Ln:1:MET:HB2	49:S2:1706:G:H5'	1.85	0.58
49:S2:874:G:H2'	49:S2:875:A:H8	1.69	0.58
70:Sg:193:GLY:N	70:Sg:213:ASP:OD1	2.37	0.58
1:L5:683:C:O2'	8:LE:100:LYS:NZ	2.37	0.58
8:LE:153:LEU:HD11	8:LE:195:ILE:HG13	1.86	0.58
36:Lh:4:ILE:HD11	36:Lh:53:SER:HB3	1.85	0.58
1:L5:143:C:O4'	10:LG:108:GLN:NE2	2.36	0.57
1:L5:3961:G:N2	1:L5:3964:U:O3'	2.37	0.57
25:LW:80:ARG:NH2	72:SG:8:PRO:O	2.36	0.57
46:Ls:102:LEU:O	46:Ls:105:ASN:C	2.47	0.57
54:SF:143:PRO:HA	54:SF:146:ARG:HG2	1.86	0.57
70:Sg:124:SER:OG	70:Sg:126:ASP:OD1	2.19	0.57
1:L5:1187:G:N2	1:L5:1187:G:OP2	2.35	0.57
23:LU:48:LYS:HG2	23:LU:53:ALA:HB2	1.86	0.57
32:Ld:54:MET:O	32:Ld:57:MET:O	2.21	0.57
60:SQ:102:GLU:HA	60:SQ:105:LYS:HB3	1.85	0.57
63:ST:22:LEU:HD23	63:ST:28:LEU:HD11	1.86	0.57
70:Sg:120:ILE:O	70:Sg:131:LEU:HA	2.03	0.57
1:L5:4924:C:O2'	1:L5:4926:C:O2	2.20	0.57
46:Ls:111:ALA:H	46:Ls:182:PRO:HG2	1.68	0.57
72:SG:139:SER:HA	72:SG:142:ARG:HH21	1.70	0.57
6:LC:319:LEU:HD11	9:LF:152:GLU:HG2	1.86	0.57
49:S2:922:A:OP1	77:SW:28:ARG:NH2	2.37	0.57
52:SD:106:ARG:HB2	52:SD:175:VAL:HG22	1.87	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SG:23:LYS:HE2	72:SG:42:GLY:H	1.69	0.57
79:SZ:57:LYS:O	79:SZ:61:GLU:HG3	2.03	0.57
3:L8:75:G:OP2	27:LY:74:TYR:OH	2.22	0.57
52:SD:172:VAL:HG22	52:SD:185:LYS:HG2	1.85	0.57
25:LW:84:GLY:HA2	72:SG:161:PRO:HD3	1.87	0.57
49:S2:624:C:H41	66:SX:63:ASN:ND2	2.02	0.57
50:SA:30:LEU:HD21	50:SA:35:GLU:HG2	1.86	0.57
49:S2:126:G:O6	72:SG:196:LYS:HE2	2.05	0.57
49:S2:1007:C:H2'	49:S2:1008:A:C8	2.39	0.57
1:L5:4587:G:OP1	17:LO:61:ARG:NH1	2.37	0.57
83:CA:200:THR:O	83:CA:213:HIS:NE2	2.32	0.57
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.86	0.57
1:L5:1373:A:H2	6:LC:234:LYS:HD2	1.68	0.57
1:L5:4279:A:H5'	1:L5:4281:A:H1'	1.86	0.57
12:LI:21:ARG:O	12:LI:24:ARG:NH1	2.38	0.57
15:LM:130:LEU:HB3	17:LO:177:LEU:HD11	1.86	0.57
49:S2:687:C:O2'	55:SH:103:LYS:NZ	2.37	0.57
83:CA:296:CYS:HB3	83:CA:302:LEU:HD13	1.87	0.57
1:L5:1961:G:OP1	46:Ls:6:ARG:NH2	2.38	0.56
1:L5:4139:G:H21	1:L5:4140:C:H41	1.53	0.56
2:L7:6:C:O2'	7:LD:50:ARG:NH2	2.37	0.56
49:S2:818:A:OP1	73:SJ:80:ARG:NH1	2.38	0.56
60:SQ:130:LYS:NZ	60:SQ:131:LYS:O	2.38	0.56
1:L5:2758:G:O2'	1:L5:2765:A:N3	2.36	0.56
49:S2:1562:C:H2'	49:S2:1563:G:H8	1.69	0.56
49:S2:1563:G:OP1	63:ST:121:ARG:NH1	2.38	0.56
69:Sd:26:ASN:C	69:Sd:27:ARG:HG3	2.30	0.56
76:SO:93:LEU:HD12	76:SO:124:MET:HG2	1.87	0.56
1:L5:4298:A:OP1	19:LQ:160:HIS:NE2	2.38	0.56
1:L5:4717:A:OP2	5:LB:30:LYS:NZ	2.34	0.56
6:LC:218:ILE:HG12	6:LC:229:LEU:HG	1.88	0.56
12:LI:193:ASP:OD2	12:LI:198:LYS:HG3	2.05	0.56
29:La:71:PRO:HG2	29:La:108:TYR:HA	1.87	0.56
31:Lc:34:THR:HG23	31:Lc:95:ALA:HB2	1.87	0.56
34:Lf:35:ALA:HB3	34:Lf:38:GLU:HG3	1.87	0.56
49:S2:527:C:H2'	49:S2:528:A:H8	1.70	0.56
50:SA:51:LEU:H	61:SR:105:MET:HE1	1.71	0.56
58:SL:93:LEU:HD21	66:SX:8:ARG:HE	1.69	0.56
63:ST:76:THR:HG21	63:ST:97:LYS:HG2	1.86	0.56
66:SX:91:LEU:HD21	81:Se:6:LEU:HD23	1.86	0.56
70:Sg:292:SER:OG	70:Sg:294:ASP:OD1	2.23	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Se:27:LYS:HE3	81:Se:33:LYS:HE3	1.87	0.56
1:L5:2092:G:O2'	1:L5:2262:G:N2	2.36	0.56
26:LX:100:VAL:HG23	26:LX:134:LYS:HB3	1.86	0.56
49:S2:747:U:N3	49:S2:796:G:N1	2.53	0.56
53:SE:128:LYS:HB2	53:SE:140:VAL:HB	1.87	0.56
59:SP:10:ARG:O	59:SP:13:ARG:NH2	2.39	0.56
70:Sg:26:GLN:NE2	70:Sg:73:SER:O	2.36	0.56
83:CA:228:VAL:O	83:CA:318:GLN:HA	2.05	0.56
1:L5:1914:C:H4'	17:LO:89:PRO:HD3	1.88	0.56
1:L5:1959:U:H4'	1:L5:1960:A:H5''	1.88	0.56
8:LE:161:ARG:NH1	8:LE:273:SER:OG	2.38	0.56
26:LX:110:LYS:HG2	26:LX:114:LYS:HE2	1.88	0.56
45:Lr:52:GLU:OE2	45:Lr:79:ARG:NH1	2.38	0.56
50:SA:128:ARG:NH2	50:SA:151:ASP:O	2.38	0.56
62:SS:68:ILE:HG13	62:SS:72:GLN:HE22	1.70	0.56
76:SO:56:VAL:HG12	76:SO:81:VAL:HG23	1.87	0.56
1:L5:3713:U:OP2	1:L5:3714:G:N2	2.39	0.56
43:Lo:34:TYR:O	43:Lo:39:ARG:NH1	2.38	0.56
46:Ls:47:LEU:HD13	46:Ls:50:LYS:HB3	1.88	0.56
1:L5:512:U:H3	1:L5:647:G:H1	1.54	0.56
50:SA:131:HIS:HA	50:SA:134:LEU:HD12	1.88	0.56
1:L5:2875:C:OP1	44:Lp:23:ARG:NH2	2.38	0.56
31:Lc:106:ARG:HH21	84:CB:10:GLY:HA3	1.71	0.56
46:Ls:27:CYS:HB2	46:Ls:193:PHE:HB3	1.88	0.56
49:S2:1124:C:H5''	51:SB:150:ILE:HG12	1.86	0.56
71:SC:254:ASP:O	71:SC:257:LYS:NZ	2.39	0.56
1:L5:3717:A:H2'	1:L5:3718:A:C8	2.40	0.56
49:S2:1275:G:OP2	57:SK:47:LYS:NZ	2.38	0.56
56:SI:124:LYS:HB2	56:SI:127:ALA:HB2	1.86	0.56
10:LG:153:GLN:NE2	10:LG:206:GLN:OE1	2.39	0.55
12:LI:210:ARG:O	12:LI:214:SER:CB	2.52	0.55
24:LV:35:LYS:HB2	24:LV:67:LYS:HG3	1.87	0.55
28:LZ:10:VAL:O	28:LZ:83:THR:OG1	2.23	0.55
49:S2:65:C:N4	72:SG:134:GLY:O	2.38	0.55
49:S2:857:U:H2'	49:S2:858:A:C8	2.41	0.55
49:S2:886:A:C5	49:S2:901:G:C2	2.94	0.55
1:L5:1976:G:C6	1:L5:1991:A:C2	2.94	0.55
5:LB:35:ASP:OD2	5:LB:193:LYS:NZ	2.39	0.55
5:LB:105:VAL:HG22	5:LB:153:MET:HE1	1.87	0.55
28:LZ:13:VAL:O	28:LZ:20:GLY:N	2.39	0.55
31:Lc:38:ILE:HG21	31:Lc:63:TYR:HB3	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:94:G:HO2'	49:S2:508:A:HO2'	1.53	0.55
59:SP:18:ARG:HH11	62:SS:88:LYS:HG2	1.71	0.55
1:L5:1238:A:O2'	9:LF:52:GLU:OE2	2.24	0.55
49:S2:72:C:N4	72:SG:169:PRO:O	2.39	0.55
49:S2:1790:A:O2'	72:SG:64:LYS:NZ	2.38	0.55
62:SS:34:LYS:HG3	62:SS:103:LEU:HD23	1.88	0.55
1:L5:46:U:H5''	14:LL:16:LYS:HG2	1.87	0.55
47:Lt:130:LYS:NZ	47:Lt:157:SER:OG	2.39	0.55
49:S2:886:A:C6	49:S2:901:G:C4	2.92	0.55
61:SR:21:TYR:HE2	61:SR:73:LEU:HD13	1.71	0.55
61:SR:31:ASN:ND2	61:SR:55:THR:HG22	2.21	0.55
1:L5:1365:C:H2'	1:L5:1366:G:H2'	1.89	0.55
6:LC:298:ILE:HD13	19:LQ:131:PRO:HB3	1.87	0.55
49:S2:649:U:H2'	49:S2:650:A:H8	1.70	0.55
55:SH:36:LEU:HA	55:SH:39:GLN:HB3	1.87	0.55
56:SI:152:ARG:O	56:SI:156:ALA:HB2	2.06	0.55
70:Sg:173:LEU:HD22	70:Sg:189:ILE:HG12	1.88	0.55
1:L5:4220:A:H2'	1:L5:4222:G:H5''	1.89	0.55
6:LC:317:ASN:HD22	6:LC:320:LYS:HE2	1.70	0.55
55:SH:144:ILE:HB	77:SW:52:ILE:HB	1.88	0.55
66:SX:71:ARG:NH1	66:SX:82:THR:OG1	2.35	0.55
73:SJ:94:LEU:HD23	73:SJ:97:ILE:HD12	1.88	0.55
1:L5:1241:C:H41	30:Lb:114:LYS:HE2	1.72	0.55
1:L5:1563:A:N6	49:S2:1028:A:N1	2.55	0.55
1:L5:1697:G:N2	1:L5:2084:C:OP1	2.38	0.55
12:LI:152:LEU:HB3	12:LI:165:ILE:HD12	1.89	0.55
49:S2:691:G:OP2	49:S2:691:G:N2	2.38	0.55
1:L5:1830:G:H5'	30:Lb:65:MET:HE1	1.89	0.55
50:SA:154:LEU:HD21	50:SA:160:ALA:HB2	1.88	0.55
51:SB:57:ILE:HG22	51:SB:59:SER:H	1.71	0.55
70:Sg:249:CYS:SG	70:Sg:291:TRP:NE1	2.80	0.55
79:SZ:50:PHE:HB2	79:SZ:55:TYR:CZ	2.42	0.55
1:L5:2020:U:H2'	1:L5:2021:G:H8	1.70	0.55
1:L5:4981:G:O6	5:LB:21:ARG:NH2	2.37	0.55
7:LD:120:GLU:O	7:LD:248:ARG:NH1	2.40	0.55
49:S2:528:A:H2'	49:S2:529:A:H8	1.71	0.55
51:SB:179:ASN:HB3	51:SB:183:GLU:HB3	1.87	0.55
62:SS:65:GLU:HA	62:SS:68:ILE:HG22	1.88	0.55
76:SO:97:LEU:HD21	76:SO:108:PRO:HG3	1.89	0.55
1:L5:62:A:N3	1:L5:77:U:O2'	2.38	0.55
1:L5:369:G:N2	1:L5:372:A:OP2	2.35	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:928:G:H2'	49:S2:929:G:C8	2.42	0.55
60:SQ:17:LYS:O	60:SQ:126:ARG:NH1	2.39	0.55
72:SG:135:PRO:HG2	72:SG:141:ILE:HD13	1.89	0.55
83:CA:339:GLU:HG3	83:CA:342:LEU:HB3	1.87	0.55
49:S2:831:G:O6	78:SY:11:LYS:NZ	2.40	0.54
65:SV:12:TYR:HB3	71:SC:79:GLU:HB3	1.88	0.54
77:SW:24:GLN:HA	77:SW:63:VAL:O	2.06	0.54
83:CA:181:PRO:HB2	83:CA:204:ASN:HB2	1.89	0.54
1:L5:2000:G:N2	1:L5:2000:G:OP2	2.39	0.54
4:LA:101:VAL:HG22	4:LA:165:VAL:HG22	1.89	0.54
10:LG:58:PRO:HD2	10:LG:61:ILE:HD12	1.88	0.54
44:Lp:51:ALA:HB3	44:Lp:54:ILE:HD12	1.89	0.54
49:S2:1603:G:H4'	62:SS:38:ARG:NH2	2.21	0.54
51:SB:90:ASP:HB2	51:SB:223:PHE:HZ	1.73	0.54
1:L5:21:G:H5''	38:Lj:43:ARG:HG2	1.90	0.54
1:L5:2486:G:O6	1:L5:2493:G:O6	2.25	0.54
1:L5:3811:G:O2'	1:L5:3814:U:OP2	2.25	0.54
62:SS:34:LYS:HB3	62:SS:100:ALA:HA	1.88	0.54
66:SX:68:LYS:HE2	81:Se:9:ALA:HB2	1.89	0.54
70:Sg:46:THR:O	70:Sg:52:TYR:CA	2.48	0.54
70:Sg:79:LEU:HD22	70:Sg:120:ILE:HD12	1.88	0.54
1:L5:137:G:H2'	1:L5:138:G:H8	1.72	0.54
1:L5:956:A:H1'	1:L5:2076:G:H5''	1.89	0.54
1:L5:1373:A:H5''	6:LC:44:LEU:HD13	1.89	0.54
1:L5:1500:A:H5''	1:L5:1501:C:H5''	1.90	0.54
1:L5:3619:G:H22	1:L5:3624:A:H1'	1.72	0.54
1:L5:4194:U:O2'	12:LI:116:ARG:NH2	2.40	0.54
49:S2:697:G:OP2	49:S2:733:C:N4	2.40	0.54
70:Sg:149:GLU:HG3	70:Sg:150:TRP:H	1.73	0.54
83:CA:17:VAL:HA	83:CA:20:LYS:HG2	1.88	0.54
1:L5:1699:A:O2'	6:LC:306:ARG:NH2	2.40	0.54
14:LL:170:THR:HG22	14:LL:172:GLU:H	1.72	0.54
26:LX:88:LYS:NZ	83:CA:258:LYS:O	2.41	0.54
46:Ls:29:ILE:HB	46:Ls:191:GLN:HB2	1.88	0.54
49:S2:54:A:H5'	78:SY:108:LYS:HE3	1.89	0.54
49:S2:372:U:OP1	58:SL:136:LYS:NZ	2.34	0.54
49:S2:635:G:H5''	81:Se:21:LYS:HG2	1.88	0.54
49:S2:1612:G:H5'	62:SS:88:LYS:HB3	1.88	0.54
49:S2:1622:U:H3	59:SP:122:THR:HG1	1.54	0.54
54:SF:79:HIS:HE1	54:SF:159:ARG:NE	2.05	0.54
20:LR:148:ASP:OD1	20:LR:151:ARG:NH2	2.36	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Lg:103:VAL:HB	84:CB:20:LEU:HD23	1.90	0.54
49:S2:1560:U:H2'	49:S2:1561:A:H8	1.71	0.54
50:SA:81:ASN:HA	50:SA:84:GLN:HB2	1.90	0.54
1:L5:4076:G:OP1	10:LG:73:ARG:NE	2.35	0.54
1:L5:4119:C:N4	35:Lg:100:GLN:OE1	2.41	0.54
46:Ls:28:PHE:HZ	46:Ls:95:LEU:HA	1.72	0.54
54:SF:171:GLU:OE1	79:SZ:106:GLN:NE2	2.41	0.54
1:L5:989:U:O2	1:L5:1064:G:O6	2.25	0.54
7:LD:51:MET:HE3	7:LD:105:LEU:HD23	1.89	0.54
8:LE:190:HIS:HB3	8:LE:193:PHE:HD2	1.72	0.54
12:LI:5:PRO:HB2	12:LI:7:ARG:HG2	1.90	0.54
34:Lf:11:PHE:O	34:Lf:98:GLY:N	2.39	0.54
60:SQ:19:ALA:HB2	60:SQ:75:GLY:HA3	1.90	0.54
1:L5:1513:U:H4'	14:LL:4:SER:HB2	1.90	0.53
10:LG:117:ARG:NH1	10:LG:128:VAL:O	2.40	0.53
12:LI:38:ARG:HG2	12:LI:41:ALA:HB2	1.89	0.53
15:LM:52:PHE:HA	15:LM:55:MET:HG2	1.90	0.53
43:Lo:65:LYS:HG3	43:Lo:87:ARG:HE	1.73	0.53
49:S2:1033:G:N1	49:S2:1080:A:O2'	2.34	0.53
57:SK:22:VAL:HA	57:SK:67:PHE:O	2.08	0.53
79:SZ:47:LEU:HG	79:SZ:78:LYS:HB2	1.89	0.53
12:LI:48:LEU:O	12:LI:139:ARG:HA	2.08	0.53
12:LI:87:ILE:HG12	12:LI:138:ILE:HG12	1.90	0.53
46:Ls:53:VAL:HG12	46:Ls:89:VAL:HG22	1.89	0.53
78:SY:104:ARG:HG2	78:SY:108:LYS:HD2	1.90	0.53
83:CA:138:ARG:NH2	83:CA:232:SER:O	2.41	0.53
1:L5:2745:A:H2'	1:L5:2746:A:H8	1.74	0.53
26:LX:82:THR:HG22	26:LX:155:ILE:HG23	1.90	0.53
31:Lc:20:LEU:HD21	31:Lc:101:ASP:HB2	1.90	0.53
49:S2:1589:A:O2'	63:ST:82:ARG:NH1	2.41	0.53
54:SF:188:TYR:HA	54:SF:191:LYS:HG2	1.91	0.53
1:L5:1320:U:O2'	1:L5:1891:A:N1	2.40	0.53
7:LD:291:GLN:NE2	12:LI:214:SER:O	2.42	0.53
20:LR:21:LYS:HE3	20:LR:55:VAL:HA	1.91	0.53
26:LX:122:ALA:HB3	26:LX:139:ARG:HG2	1.90	0.53
49:S2:1745:A:H1'	72:SG:66:GLY:HA2	1.91	0.53
53:SE:197:ASN:HB3	53:SE:209:HIS:HB2	1.91	0.53
54:SF:50:PRO:HG2	54:SF:90:VAL:HG23	1.89	0.53
71:SC:196:ILE:HB	71:SC:223:TYR:HB2	1.90	0.53
71:SC:244:ILE:O	71:SC:247:THR:OG1	2.17	0.53
1:L5:2100:A:OP1	9:LF:31:LYS:NZ	2.42	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2702:C:OP1	23:LU:101:ARG:NH2	2.36	0.53
1:L5:4277:G:H5''	22:LT:17:ARG:HG2	1.91	0.53
23:LU:62:THR:OG1	23:LU:73:THR:OG1	2.25	0.53
30:Lb:14:ARG:HG2	30:Lb:18:ARG:HH21	1.73	0.53
31:Lc:57:LYS:O	31:Lc:61:GLU:HG3	2.08	0.53
49:S2:1337:C:H2'	49:S2:1338:G:C8	2.43	0.53
83:CA:280:LEU:HD21	83:CA:293:VAL:HG11	1.91	0.53
1:L5:4992:G:H2'	1:L5:4993:G:C8	2.44	0.53
57:SK:14:LEU:HD23	57:SK:21:MET:HE3	1.90	0.53
79:SZ:99:LEU:HD13	79:SZ:109:TYR:CZ	2.43	0.53
1:L5:151:G:OP2	16:LN:4:TYR:OH	2.23	0.53
3:L8:62:A:OP1	36:Lh:51:ARG:NH1	2.42	0.53
43:Lo:33:LEU:HA	43:Lo:38:LYS:HG2	1.90	0.53
49:S2:77:A:O2'	72:SG:174:PRO:O	2.26	0.53
52:SD:44:THR:HG22	52:SD:45:ARG:H	1.73	0.53
61:SR:96:ILE:HG22	61:SR:98:VAL:HG13	1.90	0.53
62:SS:94:LYS:NZ	62:SS:96:SER:OG	2.42	0.53
11:LH:173:ARG:NH1	41:Lm:125:LYS:O	2.42	0.53
45:Lr:26:SER:OG	45:Lr:28:GLU:OE1	2.26	0.53
53:SE:6:LYS:O	53:SE:30:ARG:NH2	2.42	0.53
62:SS:63:GLU:HB3	62:SS:66:ARG:NH2	2.23	0.53
83:CA:81:SER:HB3	83:CA:85:CYS:HB2	1.90	0.53
85:CC:19:A:N3	85:CC:59:A:N6	2.57	0.53
1:L5:437:G:H4'	33:Le:53:ILE:HA	1.90	0.53
1:L5:4092:G:H3'	1:L5:4093:G:H21	1.73	0.53
16:LN:45:PRO:O	16:LN:49:ARG:HG3	2.08	0.53
42:Ln:12:ARG:HG2	42:Ln:15:ARG:HH21	1.74	0.53
49:S2:1252:C:OP1	64:SU:75:LYS:NZ	2.41	0.53
1:L5:4485:C:O2'	41:Lm:114:LYS:NZ	2.42	0.53
15:LM:40:GLY:O	15:LM:45:VAL:C	2.52	0.53
25:LW:4:GLU:O	25:LW:12:LYS:CA	2.43	0.53
49:S2:639:C:H2'	49:S2:640:A:C8	2.43	0.53
83:CA:20:LYS:HA	83:CA:23:MET:HG3	1.91	0.53
1:L5:2811:G:N1	1:L5:2814:C:OP2	2.30	0.52
7:LD:64:ILE:HG13	7:LD:105:LEU:HD21	1.91	0.52
9:LF:148:LYS:NZ	9:LF:152:GLU:OE2	2.34	0.52
46:Ls:82:ILE:O	46:Ls:83:ARG:NH1	2.41	0.52
55:SH:116:ARG:HH21	55:SH:121:THR:HA	1.74	0.52
56:SI:117:TYR:HD1	56:SI:152:ARG:HB3	1.74	0.52
70:Sg:30:MET:HE3	70:Sg:92:LEU:HD21	1.91	0.52
83:CA:122:ALA:HB3	83:CA:320:LYS:HB3	1.89	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1100:U:O3'	1:L5:1167:C:N4	2.42	0.52
1:L5:1692:C:H5''	19:LQ:53:MET:HE3	1.90	0.52
1:L5:1940:G:H22	1:L5:4434:C:H5''	1.74	0.52
21:LS:15:ARG:HB3	21:LS:27:LEU:HD23	1.89	0.52
49:S2:885:U:H3	49:S2:901:G:H1	1.55	0.52
51:SB:67:PHE:O	51:SB:86:LEU:HB2	2.09	0.52
53:SE:87:MET:HE1	53:SE:236:ILE:HG21	1.89	0.52
83:CA:100:LEU:HD21	83:CA:127:VAL:HG11	1.91	0.52
1:L5:163:A:H2'	1:L5:164:G:C8	2.45	0.52
29:La:73:VAL:HG21	29:La:81:LEU:HD11	1.92	0.52
49:S2:527:C:H2'	49:S2:528:A:C8	2.44	0.52
49:S2:1410:C:H2'	49:S2:1411:G:H8	1.73	0.52
49:S2:1660:C:O2	69:Sd:32:ARG:NH2	2.42	0.52
1:L5:2279:A:O2'	33:Le:48:ARG:NH2	2.42	0.52
1:L5:4630:G:H5'	25:LW:19:ARG:HH22	1.74	0.52
15:LM:10:GLY:N	15:LM:27:ILE:O	2.39	0.52
27:LY:19:PHE:O	27:LY:26:ARG:NH2	2.43	0.52
53:SE:100:ARG:HD2	53:SE:114:ILE:HD13	1.90	0.52
70:Sg:247:TRP:HA	70:Sg:259:TRP:O	2.09	0.52
83:CA:229:LEU:HD23	83:CA:318:GLN:HB3	1.91	0.52
1:L5:1727:U:OP1	9:LF:131:ASN:ND2	2.43	0.52
1:L5:2902:G:O6	1:L5:3594:C:N4	2.42	0.52
1:L5:4415:A:OP1	12:LI:154:ARG:NH2	2.43	0.52
39:Lk:27:LYS:HB3	39:Lk:70:LYS:HD3	1.91	0.52
49:S2:145:G:OP1	72:SG:143:LYS:NZ	2.43	0.52
50:SA:77:ILE:HG21	50:SA:133:PRO:HG3	1.91	0.52
51:SB:165:ARG:HG2	51:SB:169:MET:HE2	1.90	0.52
62:SS:15:VAL:HG12	62:SS:68:ILE:HD13	1.92	0.52
1:L5:153:G:H2'	1:L5:154:G:H8	1.73	0.52
1:L5:1732:C:H5''	22:LT:43:LYS:HD2	1.90	0.52
1:L5:2520:C:H2'	1:L5:2521:G:H8	1.73	0.52
33:Le:87:VAL:HG11	45:Lr:27:THR:HG22	1.92	0.52
44:Lp:88:GLU:O	44:Lp:91:ASP:C	2.52	0.52
49:S2:1160:U:O4	66:SX:2:GLY:N	2.43	0.52
1:L5:1332:C:H2'	1:L5:1333:A:C8	2.45	0.52
1:L5:4363:A:H5''	43:Lo:36:GLN:HG2	1.90	0.52
24:LV:10:SER:OG	24:LV:11:GLY:N	2.39	0.52
27:LY:101:PRO:HA	27:LY:104:VAL:HG22	1.92	0.52
49:S2:145:G:H2'	49:S2:146:G:C8	2.45	0.52
49:S2:525:A:OP2	81:Se:26:LYS:NZ	2.39	0.52
1:L5:362:A:N6	40:Ll:37:TYR:O	2.38	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:690:C:OP2	8:LE:111:LYS:NZ	2.42	0.52
1:L5:2521:G:H4'	35:Lg:26:PRO:HD2	1.92	0.52
4:LA:108:PRO:O	4:LA:111:THR:OG1	2.26	0.52
52:SD:142:LEU:HD22	52:SD:150:MET:HE3	1.91	0.52
1:L5:1:C:H4'	26:LX:37:LYS:HG3	1.91	0.52
1:L5:3887:C:OP2	17:LO:85:ARG:NH2	2.38	0.52
1:L5:4184:G:H5'	4:LA:233:ARG:HB2	1.92	0.52
5:LB:80:GLU:OE2	5:LB:328:ASN:ND2	2.34	0.52
15:LM:71:LYS:O	15:LM:75:GLN:HG3	2.10	0.52
49:S2:570:C:H4'	78:SY:36:PRO:HG3	1.92	0.52
55:SH:42:GLU:HG2	55:SH:43:LEU:HD12	1.92	0.52
56:SI:42:ARG:HB3	56:SI:59:ARG:HB3	1.92	0.52
59:SP:17:TYR:N	59:SP:20:VAL:O	2.37	0.52
1:L5:2495:U:H2'	1:L5:2496:G:H8	1.75	0.52
1:L5:3751:G:H21	1:L5:3775:A:H8	1.56	0.52
1:L5:4274:A:H2'	1:L5:4275:G:C8	2.45	0.52
5:LB:80:GLU:OE1	5:LB:323:TYR:OH	2.26	0.52
5:LB:93:VAL:HG13	5:LB:102:PHE:HB2	1.92	0.52
5:LB:113:GLU:HB2	5:LB:178:ALA:HB2	1.92	0.52
18:LP:10:ASN:O	18:LP:10:ASN:ND2	2.43	0.52
49:S2:508:A:H3'	49:S2:509:G:H8	1.75	0.52
61:SR:98:VAL:HG23	61:SR:103:LYS:HZ1	1.75	0.52
62:SS:36:VAL:HG23	62:SS:40:TYR:HB3	1.92	0.52
1:L5:2601:A:OP1	35:Lg:40:LYS:NZ	2.39	0.51
1:L5:2809:G:O2'	1:L5:4644:G:OP1	2.26	0.51
1:L5:2835:A:O2'	5:LB:228:TYR:O	2.25	0.51
9:LF:219:GLY:O	9:LF:246:ARG:NH1	2.42	0.51
29:La:72:THR:HG22	29:La:110:LYS:HB3	1.91	0.51
49:S2:1415:C:H5'	63:ST:129:ARG:HH22	1.74	0.51
55:SH:63:PHE:HA	55:SH:95:ILE:O	2.09	0.51
1:L5:188:G:H2'	88:L5:5314:T1C:H62C	1.91	0.51
1:L5:390:C:H5''	83:CA:211:LYS:HE2	1.92	0.51
1:L5:709:C:P	34:Lf:89:ARG:HH22	2.32	0.51
1:L5:968:C:H5'	8:LE:110:ARG:HD3	1.93	0.51
1:L5:1411:C:H2'	1:L5:1412:G:C8	2.46	0.51
1:L5:1524:A:H61	1:L5:1651:G:H22	1.58	0.51
4:LA:20:VAL:HA	4:LA:23:ARG:HG3	1.91	0.51
27:LY:48:PRO:O	27:LY:115:ARG:NH1	2.38	0.51
46:Ls:81:HIS:HB3	46:Ls:191:GLN:HG3	1.93	0.51
49:S2:1436:C:O2'	49:S2:1438:A:OP2	2.26	0.51
55:SH:69:LEU:HD13	55:SH:96:ALA:HB2	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SK:21:MET:HB2	57:SK:49:MET:HE1	1.92	0.51
59:SP:110:GLU:HB2	62:SS:117:ILE:HD11	1.93	0.51
60:SQ:78:VAL:HA	60:SQ:81:ILE:HD12	1.91	0.51
71:SC:78:LEU:HD11	71:SC:97:PHE:HB3	1.91	0.51
74:SM:69:LEU:O	74:SM:72:HIS:C	2.53	0.51
74:SM:94:ILE:HA	74:SM:100:PRO:HA	1.91	0.51
1:L5:3969:G:O2'	1:L5:4054:C:N4	2.43	0.51
23:LU:80:LYS:NZ	23:LU:107:LYS:O	2.41	0.51
47:Lt:113:ALA:HA	47:Lt:116:MET:HG2	1.92	0.51
49:S2:688:U:H5	55:SH:103:LYS:H	1.59	0.51
49:S2:1010:G:H2'	49:S2:1011:A:C8	2.46	0.51
49:S2:1615:U:OP2	59:SP:43:ARG:NH1	2.44	0.51
63:ST:56:ARG:HG3	63:ST:103:VAL:HG21	1.92	0.51
1:L5:4060:U:H2'	1:L5:4061:G:C8	2.46	0.51
1:L5:4758:U:H5''	17:LO:116:LYS:HE3	1.92	0.51
1:L5:4769:G:H5''	17:LO:176:ARG:HD3	1.91	0.51
49:S2:399:C:N3	58:SL:104:LYS:NZ	2.57	0.51
49:S2:1213:C:H2'	49:S2:1214:A:C8	2.45	0.51
15:LM:24:LEU:HB2	15:LM:43:THR:HG21	1.92	0.51
49:S2:1654:G:OP1	63:ST:82:ARG:NH2	2.37	0.51
52:SD:25:LEU:HA	52:SD:28:GLU:HB2	1.92	0.51
70:Sg:220:ASP:HB3	70:Sg:227:LEU:HD23	1.92	0.51
78:SY:102:THR:OG1	78:SY:106:GLN:OE1	2.28	0.51
1:L5:509:A:N6	29:La:106:SER:OG	2.44	0.51
1:L5:1175:A:N1	1:L5:1185:G:C6	2.79	0.51
1:L5:1371:A:N1	3:L8:28:C:O2'	2.43	0.51
1:L5:4966:A:H5'	5:LB:128:LYS:HG3	1.92	0.51
12:LI:42:LYS:HB2	12:LI:45:GLU:HG3	1.93	0.51
15:LM:11:ARG:NH1	15:LM:58:THR:O	2.42	0.51
49:S2:56:G:OP1	78:SY:111:LYS:NZ	2.42	0.51
72:SG:231:ARG:O	72:SG:235:SER:OG	2.25	0.51
79:SZ:48:VAL:HG13	79:SZ:83:LEU:HD11	1.91	0.51
82:Sf:132:MET:SD	82:Sf:139:HIS:HB3	2.51	0.51
22:LT:37:GLY:CA	22:LT:64:VAL:O	2.59	0.51
25:LW:91:MET:HA	25:LW:94:ARG:HG2	1.92	0.51
27:LY:8:THR:HB	27:LY:10:ASP:H	1.74	0.51
60:SQ:139:ALA:O	60:SQ:140:ARG:NH1	2.43	0.51
1:L5:3659:G:OP1	4:LA:241:ARG:NH1	2.38	0.51
2:L7:12:U:OP2	2:L7:67:C:O2'	2.28	0.51
18:LP:94:MET:HE1	18:LP:146:ILE:HB	1.92	0.51
23:LU:66:SER:O	23:LU:67:LYS:HG3	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Lg:57:ARG:HH11	35:Lg:67:LEU:HD11	1.75	0.51
49:S2:1513:C:H2'	49:S2:1514:G:H8	1.74	0.51
58:SL:127:THR:HB	58:SL:144:LYS:HB2	1.93	0.51
70:Sg:256:ILE:HB	70:Sg:270:LEU:HB2	1.92	0.51
72:SG:152:ASP:OD2	72:SG:155:GLN:N	2.41	0.51
76:SO:44:VAL:HG12	76:SO:53:ILE:HB	1.93	0.51
1:L5:1802:A:N3	22:LT:130:ARG:NH2	2.57	0.51
15:LM:15:VAL:O	15:LM:22:GLY:N	2.44	0.51
36:Lh:13:LYS:NZ	36:Lh:15:GLU:OE1	2.37	0.51
49:S2:682:U:O2'	77:SW:4:MET:SD	2.65	0.51
62:SS:124:ARG:O	62:SS:127:TRP:C	2.54	0.51
70:Sg:289:LEU:HD13	70:Sg:298:LEU:HD11	1.91	0.51
73:SJ:28:GLU:HB2	73:SJ:43:VAL:HG11	1.92	0.51
1:L5:1464:C:H5''	30:Lb:32:LEU:HD12	1.92	0.51
1:L5:3976:C:N4	1:L5:4035:G:OP2	2.44	0.51
23:LU:28:PRO:HB2	23:LU:34:MET:HG2	1.93	0.51
49:S2:528:A:H2'	49:S2:529:A:C8	2.46	0.51
50:SA:199:PRO:O	50:SA:202:TYR:N	2.44	0.51
54:SF:91:ARG:HD2	79:SZ:103:HIS:CE1	2.46	0.51
56:SI:49:ARG:O	56:SI:52:ASN:ND2	2.42	0.51
58:SL:126:VAL:HG12	58:SL:145:VAL:HG22	1.94	0.51
61:SR:93:GLN:NE2	61:SR:96:ILE:HD13	2.26	0.51
78:SY:91:LEU:O	78:SY:95:GLY:HA2	2.10	0.51
1:L5:75:G:O2'	14:LL:101:ARG:NH1	2.40	0.50
1:L5:1591:U:N3	1:L5:4555:U:OP1	2.36	0.50
8:LE:177:GLY:HA3	8:LE:184:VAL:HB	1.92	0.50
10:LG:154:LEU:HB3	10:LG:204:PHE:HB2	1.93	0.50
25:LW:80:ARG:HD2	72:SG:131:ARG:HG2	1.92	0.50
25:LW:94:ARG:O	25:LW:101:ARG:NH2	2.44	0.50
40:Ll:21:ARG:NH1	40:Ll:22:PRO:O	2.45	0.50
49:S2:1752:C:N3	49:S2:1778:C:N4	2.59	0.50
57:SK:8:ARG:NH1	57:SK:82:TYR:OH	2.44	0.50
1:L5:706:C:HO2'	1:L5:1298:C:HO2'	1.58	0.50
1:L5:3786:U:OP1	1:L5:4550:G:O2'	2.30	0.50
11:LH:103:VAL:HA	11:LH:113:GLU:O	2.11	0.50
33:Le:77:PHE:HB3	33:Le:88:LEU:HD11	1.92	0.50
43:Lo:2:VAL:N	43:Lo:90:HIS:O	2.44	0.50
49:S2:948:C:H2'	49:S2:949:G:H8	1.75	0.50
52:SD:76:ARG:HB2	57:SK:22:VAL:HG21	1.94	0.50
57:SK:15:LEU:O	57:SK:19:GLY:HA2	2.11	0.50
62:SS:6:PRO:HD2	79:SZ:49:LEU:HD11	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4612:C:C2	11:LH:120:GLU:HB2	2.47	0.50
8:LE:281:ILE:HD12	8:LE:286:LEU:HD11	1.93	0.50
16:LN:159:ARG:HB3	16:LN:164:LEU:HB2	1.93	0.50
25:LW:85:ALA:HB1	25:LW:89:ASP:HB3	1.92	0.50
55:SH:78:ARG:O	55:SH:81:ARG:N	2.44	0.50
83:CA:129:VAL:HG11	83:CA:342:LEU:HD21	1.93	0.50
83:CA:324:LEU:HG	83:CA:326:MET:HE3	1.94	0.50
1:L5:423:G:OP1	18:LP:62:ARG:NH1	2.43	0.50
1:L5:1646:A:O2'	38:Lj:49:TRP:O	2.29	0.50
1:L5:1872:G:O2'	1:L5:4219:A:N3	2.42	0.50
1:L5:4942:C:H5''	8:LE:155:GLY:HA2	1.93	0.50
31:Lc:38:ILE:HD11	31:Lc:46:VAL:HG21	1.94	0.50
34:Lf:78:HIS:HB2	34:Lf:85:ARG:HG2	1.93	0.50
49:S2:162:C:H5''	72:SG:87:ARG:HH22	1.77	0.50
49:S2:907:G:H2'	49:S2:908:A:C8	2.46	0.50
70:Sg:220:ASP:OD1	70:Sg:220:ASP:N	2.45	0.50
8:LE:157:HIS:HB3	8:LE:160:LYS:HD2	1.92	0.50
25:LW:23:ARG:NH2	25:LW:25:ASP:OD2	2.41	0.50
28:LZ:113:GLU:OE2	28:LZ:117:LYS:NZ	2.38	0.50
49:S2:1199:A:OP1	67:Sa:2:THR:N	2.45	0.50
52:SD:23:GLU:OE2	52:SD:27:ARG:NE	2.45	0.50
52:SD:40:ARG:HE	64:SU:108:PRO:HG3	1.77	0.50
83:CA:56:ILE:HA	83:CA:59:GLU:HG2	1.94	0.50
1:L5:1726:U:H5'	9:LF:135:ILE:HD11	1.94	0.50
1:L5:4457:U:H1'	5:LB:252:ALA:HB3	1.93	0.50
5:LB:300:LYS:O	5:LB:304:SER:OG	2.25	0.50
49:S2:455:A:H2'	49:S2:456:C:C6	2.46	0.50
49:S2:525:A:H2'	49:S2:526:A:C8	2.46	0.50
49:S2:568:C:H2'	49:S2:569:A:C8	2.47	0.50
49:S2:1639:G:H1'	85:CC:29:G:H3'	1.93	0.50
49:S2:1736:G:H2'	49:S2:1737:G:H8	1.77	0.50
54:SF:49:LEU:HD22	60:SQ:47:LEU:HD13	1.93	0.50
1:L5:163:A:H2'	1:L5:164:G:H8	1.76	0.50
1:L5:500:G:H1'	1:L5:504:G:H3'	1.94	0.50
49:S2:1004:U:H2'	49:S2:1005:G:C8	2.47	0.50
57:SK:63:ALA:HB2	57:SK:68:TYR:HE1	1.77	0.50
81:Se:33:LYS:NZ	81:Se:36:MET:SD	2.73	0.50
1:L5:1175:A:H2	1:L5:1185:G:C2	2.30	0.50
1:L5:4714:C:OP1	5:LB:31:SER:OG	2.30	0.50
15:LM:86:TRP:O	15:LM:89:THR:OG1	2.27	0.50
36:Lh:109:ARG:HG2	36:Lh:113:LEU:HD13	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Ls:102:LEU:O	46:Ls:105:ASN:O	2.29	0.50
49:S2:390:C:H4'	58:SL:8:ARG:HH21	1.77	0.50
52:SD:12:VAL:HG13	69:Sd:36:LEU:HD23	1.94	0.50
52:SD:109:LEU:HD11	52:SD:115:VAL:HG22	1.94	0.50
55:SH:29:GLU:HA	55:SH:32:MET:HE2	1.94	0.50
63:ST:28:LEU:HD22	63:ST:106:ALA:HB1	1.92	0.50
73:SJ:137:VAL:HG22	73:SJ:157:ILE:HG13	1.93	0.50
76:SO:95:ILE:HG21	76:SO:116:LEU:HD11	1.94	0.50
1:L5:1762:C:N3	1:L5:1770:A:N1	2.60	0.50
7:LD:152:ARG:O	7:LD:157:ASN:ND2	2.45	0.50
49:S2:853:C:H2'	49:S2:854:A:H8	1.76	0.50
49:S2:1566:G:OP2	63:ST:102:ARG:NH2	2.45	0.50
1:L5:2318:G:N2	1:L5:2321:G:OP2	2.37	0.49
1:L5:2335:C:H2'	1:L5:2336:G:H8	1.77	0.49
1:L5:2520:C:H2'	1:L5:2521:G:C8	2.47	0.49
1:L5:4630:G:H5'	25:LW:19:ARG:NH2	2.26	0.49
49:S2:201:C:H3'	49:S2:202:G:H21	1.77	0.49
49:S2:1378:A:H61	50:SA:109:THR:HG21	1.76	0.49
49:S2:1424:G:H2'	49:S2:1425:G:H8	1.77	0.49
52:SD:31:GLU:HA	52:SD:107:TYR:CE2	2.47	0.49
70:Sg:199:THR:HG21	70:Sg:240:CYS:HA	1.94	0.49
76:SO:34:PHE:O	76:SO:40:THR:HA	2.12	0.49
1:L5:461:G:H2'	1:L5:462:G:H8	1.76	0.49
1:L5:1687:U:OP2	30:Lb:19:ASN:ND2	2.36	0.49
1:L5:1730:U:H4'	22:LT:100:LYS:HB2	1.94	0.49
1:L5:1933:G:H2'	1:L5:1934:A:C8	2.47	0.49
1:L5:2046:G:O4'	17:LO:60:LYS:NZ	2.42	0.49
29:La:100:ILE:HG21	29:La:125:LYS:HE2	1.93	0.49
49:S2:1705:C:H2'	49:S2:1706:G:C8	2.47	0.49
59:SP:123:TYR:OH	62:SS:124:ARG:NH1	2.45	0.49
63:ST:113:VAL:HG12	63:ST:123:LEU:HD23	1.94	0.49
67:Sa:45:VAL:HG11	67:Sa:64:LEU:HD22	1.94	0.49
70:Sg:150:TRP:HB2	70:Sg:170:TRP:HB2	1.93	0.49
85:CC:61:C:H2'	85:CC:62:A:H8	1.76	0.49
1:L5:460:C:H2'	1:L5:461:G:H8	1.77	0.49
1:L5:1958:A:O2'	1:L5:2025:A:N1	2.44	0.49
1:L5:4699:U:H1'	1:L5:4700:A:H5''	1.93	0.49
5:LB:10:ARG:NH2	5:LB:265:SER:O	2.45	0.49
14:LL:46:ILE:HB	14:LL:49:ARG:HB2	1.94	0.49
22:LT:106:LEU:HA	22:LT:109:VAL:HG12	1.93	0.49
32:Ld:92:ARG:HB3	32:Ld:94:GLU:HG2	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:186:C:H2'	49:S2:187:G:C8	2.47	0.49
49:S2:1679:A:OP1	54:SF:60:ARG:NH2	2.45	0.49
62:SS:108:ARG:NH1	62:SS:112:GLU:OE1	2.45	0.49
71:SC:165:VAL:HG11	71:SC:219:ILE:HD11	1.93	0.49
83:CA:224:TYR:O	83:CA:322:THR:HA	2.13	0.49
1:L5:1593:A:H5''	1:L5:2839:U:H5''	1.95	0.49
17:LO:38:CYS:HA	17:LO:41:ILE:HG13	1.95	0.49
49:S2:920:A:OP1	77:SW:57:ARG:NH2	2.39	0.49
1:L5:1514:U:H2'	1:L5:1515:A:C8	2.47	0.49
1:L5:1802:A:H5''	1:L5:1803:G:H5'	1.95	0.49
3:L8:102:G:OP2	3:L8:104:A:O2'	2.29	0.49
16:LN:73:ARG:HG2	16:LN:75:VAL:HG13	1.94	0.49
39:Lk:26:LYS:HB2	39:Lk:69:LEU:HD12	1.95	0.49
46:Ls:26:LYS:HB2	46:Ls:91:THR:HG23	1.93	0.49
7:LD:156:GLY:HA2	7:LD:181:PRO:HG3	1.94	0.49
24:LV:13:LYS:HD2	24:LV:128:LEU:HD11	1.93	0.49
49:S2:326:C:O2	49:S2:327:G:N2	2.46	0.49
49:S2:457:C:H2'	49:S2:458:A:H8	1.78	0.49
70:Sg:299:PHE:HD1	70:Sg:309:VAL:HG12	1.76	0.49
81:Se:39:ASN:O	81:Se:44:ASN:ND2	2.46	0.49
1:L5:139:G:H2'	1:L5:140:G:H8	1.78	0.49
1:L5:2708:U:C4	83:CA:254:GLN:HG3	2.47	0.49
1:L5:5027:C:H5	56:SI:79:ILE:HG12	1.77	0.49
21:LS:11:LYS:HE2	21:LS:29:ARG:HD2	1.93	0.49
49:S2:1752:C:H42	49:S2:1778:C:H42	1.61	0.49
52:SD:115:VAL:HG21	52:SD:142:LEU:HD23	1.95	0.49
23:LU:23:LEU:HD13	23:LU:110:TYR:HB2	1.94	0.49
32:Ld:97:ASP:OD1	32:Ld:97:ASP:N	2.45	0.49
53:SE:88:ASP:OD1	53:SE:122:LYS:NZ	2.43	0.49
79:SZ:69:THR:HB	79:SZ:72:VAL:HG22	1.95	0.49
1:L5:62:A:OP1	16:LN:169:ARG:NH1	2.46	0.49
1:L5:4522:G:O2'	1:L5:4525:C:OP2	2.31	0.49
20:LR:142:ILE:HG22	20:LR:146:LYS:HE2	1.95	0.49
49:S2:1130:G:OP2	49:S2:1130:G:N2	2.37	0.49
49:S2:1542:C:OP1	63:ST:62:ARG:NH2	2.28	0.49
50:SA:122:LEU:HD21	50:SA:133:PRO:HB2	1.93	0.49
15:LM:81:ASP:N	15:LM:81:ASP:OD1	2.44	0.49
55:SH:145:ARG:NH1	77:SW:51:GLU:OE1	2.36	0.49
68:Sc:7:GLN:NE2	68:Sc:10:LYS:HE3	2.28	0.49
71:SC:187:ARG:HH22	71:SC:227:ARG:HH22	1.61	0.49
1:L5:161:G:H2'	1:L5:162:A:H8	1.76	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1942:A:H2'	1:L5:1943:A:C8	2.47	0.48
5:LB:50:LYS:HB2	5:LB:345:LEU:HD11	1.95	0.48
31:Lc:71:VAL:H	84:CB:13:VAL:HG13	1.77	0.48
32:Ld:36:VAL:HG21	32:Ld:44:ARG:HD3	1.94	0.48
46:Ls:18:ILE:HD13	46:Ls:21:LEU:HD21	1.95	0.48
49:S2:107:A:H2'	49:S2:108:G:C8	2.48	0.48
49:S2:155:G:H4'	72:SG:15:LEU:HD22	1.94	0.48
49:S2:848:U:H2'	49:S2:849:A:H8	1.78	0.48
59:SP:29:SER:OG	59:SP:30:TYR:N	2.43	0.48
1:L5:2744:A:H2'	1:L5:2745:A:C8	2.49	0.48
8:LE:242:ILE:HG23	8:LE:246:ARG:HD2	1.95	0.48
11:LH:92:MET:HE1	11:LH:161:ILE:HB	1.95	0.48
31:Lc:65:MET:HE2	84:CB:20:LEU:HD12	1.93	0.48
49:S2:1171:G:O2'	49:S2:1187:G:O6	2.30	0.48
49:S2:1455:A:H2'	49:S2:1456:G:H8	1.78	0.48
49:S2:1677:U:H2'	49:S2:1678:A:H8	1.77	0.48
49:S2:1679:A:H2'	54:SF:60:ARG:HD2	1.94	0.48
51:SB:146:ARG:HB2	51:SB:149:GLN:HG3	1.95	0.48
59:SP:24:GLN:HA	59:SP:27:ASP:OD1	2.12	0.48
77:SW:14:ILE:HD11	77:SW:27:ILE:HD11	1.94	0.48
79:SZ:88:LEU:HD21	79:SZ:109:TYR:CE1	2.48	0.48
85:CC:68:U:H2'	85:CC:69:G:C8	2.47	0.48
1:L5:1975:G:O6	47:Lt:16:ARG:NH1	2.43	0.48
1:L5:1994:C:H2'	1:L5:1995:G:H8	1.78	0.48
1:L5:4618:G:H5''	24:LV:15:ARG:HB3	1.95	0.48
36:Lh:107:GLN:O	36:Lh:111:GLU:HG3	2.13	0.48
49:S2:1808:U:H2'	49:S2:1809:A:C8	2.49	0.48
54:SF:168:THR:OG1	54:SF:171:GLU:OE1	2.30	0.48
55:SH:39:GLN:HG2	55:SH:75:ILE:HG21	1.95	0.48
1:L5:1095:A:H2	1:L5:1200:G:N1	2.03	0.48
1:L5:4541:G:N2	1:L5:4544:A:OP2	2.37	0.48
6:LC:362:GLN:NE2	6:LC:366:ASP:OD2	2.46	0.48
10:LG:159:HIS:ND1	10:LG:185:LYS:HA	2.28	0.48
27:LY:67:ILE:O	27:LY:84:ARG:NH2	2.46	0.48
28:LZ:136:PHE:OXT	35:Lg:90:ARG:NH2	2.46	0.48
49:S2:96:C:O2	49:S2:473:A:O2'	2.31	0.48
49:S2:807:G:H2'	49:S2:808:A:H8	1.78	0.48
49:S2:1854:U:OP1	76:SO:150:ARG:NH2	2.45	0.48
54:SF:140:ASP:OD1	54:SF:140:ASP:N	2.46	0.48
1:L5:2652:G:N2	44:Lp:59:SER:O	2.45	0.48
1:L5:3664:G:H2'	1:L5:3665:G:H8	1.78	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3807:A:OP1	42:Ln:23:ARG:NE	2.44	0.48
1:L5:4893:A:OP1	17:LO:188:LYS:NZ	2.47	0.48
16:LN:5:LYS:HG3	37:Li:40:VAL:HG11	1.96	0.48
49:S2:5:U:H2'	49:S2:6:G:H8	1.77	0.48
49:S2:1232:U:H2'	49:S2:1233:G:H8	1.78	0.48
49:S2:1756:C:H42	49:S2:1776:G:H22	0.69	0.48
49:S2:1757:G:H8	49:S2:1758:G:H1'	1.79	0.48
76:SO:61:LYS:NZ	76:SO:80:ASP:OD2	2.34	0.48
79:SZ:103:HIS:CE1	79:SZ:104:ARG:HG3	2.49	0.48
1:L5:137:G:H2'	1:L5:138:G:C8	2.49	0.48
1:L5:1348:U:H2'	1:L5:1349:G:H8	1.79	0.48
1:L5:3868:G:H22	1:L5:3900:G:H1'	1.79	0.48
1:L5:4392:G:N2	1:L5:4395:U:O2	2.44	0.48
19:LQ:92:VAL:O	19:LQ:112:ARG:NH2	2.39	0.48
49:S2:1856:C:H3'	76:SO:146:ARG:HD2	1.94	0.48
58:SL:18:GLN:HG2	58:SL:33:LEU:HD11	1.96	0.48
59:SP:13:ARG:N	59:SP:13:ARG:HD2	2.29	0.48
59:SP:24:GLN:O	59:SP:28:MET:CB	2.55	0.48
1:L5:4260:U:H2'	1:L5:4261:C:C6	2.49	0.48
44:Lp:47:MET:HE2	44:Lp:57:CYS:HB2	1.94	0.48
49:S2:1587:G:N1	63:ST:74:SER:OG	2.44	0.48
73:SJ:117:LEU:HD11	73:SJ:154:GLN:HE21	1.78	0.48
76:SO:103:ASN:HD21	76:SO:140:THR:HG22	1.78	0.48
1:L5:422:C:H2'	1:L5:423:G:H8	1.78	0.48
1:L5:1328:G:O2'	1:L5:2349:A:OP1	2.31	0.48
1:L5:4239:A:H2'	1:L5:4240:G:C8	2.49	0.48
21:LS:99:ASP:OD2	21:LS:108:GLN:NE2	2.46	0.48
27:LY:39:ARG:O	27:LY:42:TYR:C	2.57	0.48
41:Lm:99:CYS:HB2	41:Lm:114:LYS:HD2	1.95	0.48
49:S2:163:U:H2'	49:S2:164:A:H8	1.77	0.48
49:S2:534:G:H2'	49:S2:535:G:H8	1.78	0.48
49:S2:649:U:H2'	49:S2:650:A:C8	2.49	0.48
49:S2:1004:U:H2'	49:S2:1005:G:H8	1.79	0.48
49:S2:1491:G:H2'	49:S2:1492:U:C6	2.48	0.48
49:S2:1854:U:H2'	49:S2:1855:G:H8	1.79	0.48
71:SC:253:PRO:HA	71:SC:256:TRP:CG	2.49	0.48
1:L5:493:G:N1	1:L5:660:A:C2	2.74	0.48
1:L5:691:C:H2'	1:L5:692:A:C8	2.49	0.48
13:LJ:22:LEU:HD11	13:LJ:82:ILE:HG21	1.95	0.48
16:LN:84:PRO:HA	16:LN:87:HIS:CG	2.49	0.48
46:Ls:134:LYS:HB2	46:Ls:137:PHE:HB3	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SE:54:TYR:OH	53:SE:97:GLU:OE2	2.22	0.48
54:SF:168:THR:N	54:SF:171:GLU:OE2	2.44	0.48
59:SP:15:PHE:HE1	59:SP:110:GLU:HG3	1.79	0.48
62:SS:60:THR:N	62:SS:63:GLU:OE2	2.37	0.48
79:SZ:54:THR:HA	79:SZ:57:LYS:HZ3	1.79	0.48
1:L5:2651:C:O2'	1:L5:2653:C:OP1	2.25	0.48
47:Lt:13:VAL:HG23	47:Lt:64:ILE:HG13	1.96	0.48
49:S2:323:C:H2'	49:S2:327:G:H22	1.79	0.48
49:S2:1707:U:O2	49:S2:1849:G:N2	2.41	0.48
49:S2:1866:A:H61	67:Sa:85:ARG:H	1.62	0.48
51:SB:98:THR:O	51:SB:232:HIS:NE2	2.42	0.48
72:SG:153:VAL:HG12	72:SG:176:ILE:HD13	1.96	0.48
72:SG:233:ARG:HH11	72:SG:234:LEU:HD11	1.79	0.48
1:L5:2406:G:N7	40:Ll:2:SER:N	2.61	0.47
1:L5:2748:C:O2'	35:Lg:61:PRO:O	2.29	0.47
5:LB:206:PRO:HG2	5:LB:209:GLN:HG3	1.96	0.47
12:LI:6:ALA:O	12:LI:10:ARG:HB2	2.14	0.47
18:LP:50:ASP:OD2	18:LP:56:GLN:NE2	2.47	0.47
25:LW:82:ILE:HG12	72:SG:131:ARG:HB2	1.96	0.47
28:LZ:9:LYS:NZ	28:LZ:83:THR:O	2.41	0.47
49:S2:1413:G:H2'	49:S2:1414:A:H8	1.79	0.47
49:S2:1736:G:H2'	49:S2:1737:G:C8	2.49	0.47
51:SB:109:LYS:HG3	51:SB:113:MET:HE2	1.95	0.47
52:SD:32:ASP:HA	52:SD:54:ARG:NH1	2.29	0.47
72:SG:136:LYS:HG3	72:SG:174:PRO:HB2	1.94	0.47
76:SO:40:THR:HG21	76:SO:74:ALA:HB2	1.96	0.47
1:L5:139:G:H2'	1:L5:140:G:C8	2.49	0.47
1:L5:1268:G:H2'	30:Lb:107:ARG:HH22	1.79	0.47
5:LB:36:ASP:OD1	5:LB:36:ASP:N	2.46	0.47
47:Lt:117:ARG:HH22	47:Lt:129:ILE:HG23	1.79	0.47
49:S2:1280:G:H2'	49:S2:1281:G:H8	1.79	0.47
49:S2:1679:A:H5''	68:Sc:20:ARG:HH22	1.79	0.47
50:SA:51:LEU:HD13	61:SR:105:MET:HE1	1.96	0.47
53:SE:66:MET:HG2	53:SE:78:THR:HB	1.96	0.47
53:SE:201:HIS:O	53:SE:204:SER:C	2.57	0.47
83:CA:12:ILE:HD12	83:CA:17:VAL:HG12	1.97	0.47
83:CA:158:LYS:HD3	83:CA:330:PRO:HD3	1.96	0.47
85:CC:68:U:H2'	85:CC:69:G:H8	1.79	0.47
1:L5:1976:G:C2	1:L5:1991:A:C2	3.03	0.47
1:L5:4748:U:H5''	34:Lf:54:LYS:HE3	1.96	0.47
18:LP:84:PRO:HB2	18:LP:87:SER:HB2	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Le:45:VAL:HG11	33:Le:53:ILE:HG12	1.96	0.47
49:S2:948:C:H2'	49:S2:949:G:C8	2.49	0.47
66:SX:77:ASN:O	66:SX:79:LYS:N	2.46	0.47
71:SC:191:VAL:HG11	71:SC:236:PHE:HA	1.97	0.47
79:SZ:44:LEU:HD12	79:SZ:45:ASN:H	1.79	0.47
1:L5:4872:G:O6	15:LM:98:ARG:NH1	2.47	0.47
13:LJ:93:GLU:HG3	13:LJ:175:LEU:HD23	1.96	0.47
49:S2:640:A:H2'	49:S2:641:A:C8	2.50	0.47
82:Sf:135:HIS:HE2	82:Sf:140:TYR:HB3	1.79	0.47
83:CA:86:VAL:O	83:CA:107:LYS:NZ	2.35	0.47
1:L5:162:A:H2'	1:L5:163:A:C8	2.50	0.47
13:LJ:120:ASP:HB3	13:LJ:123:ILE:HG12	1.96	0.47
49:S2:806:U:H3	49:S2:857:U:H3	1.62	0.47
50:SA:39:TYR:CE2	61:SR:105:MET:HB2	2.50	0.47
54:SF:55:ARG:NH1	60:SQ:123:ASP:OD1	2.46	0.47
65:SV:73:ALA:HB1	65:SV:78:ILE:HB	1.96	0.47
68:Sc:14:VAL:HG12	68:Sc:32:VAL:HG12	1.95	0.47
69:Sd:6:LEU:HA	69:Sd:9:SER:HB2	1.97	0.47
70:Sg:185:LYS:HG2	70:Sg:186:THR:HG23	1.96	0.47
1:L5:1631:A:C2	4:LA:204:MET:HG2	2.49	0.47
1:L5:1655:C:OP2	29:La:26:ARG:NH1	2.48	0.47
1:L5:2033:A:OP1	12:LI:162:ARG:NH2	2.41	0.47
1:L5:2709:C:H1'	20:LR:39:GLN:HB3	1.96	0.47
1:L5:3746:A:H5''	4:LA:244:GLY:HA3	1.97	0.47
1:L5:4581:G:HO2'	5:LB:92:TYR:HH	1.59	0.47
49:S2:1588:A:H2'	49:S2:1589:A:C8	2.50	0.47
63:ST:116:ASP:OD1	63:ST:117:GLN:N	2.47	0.47
76:SO:19:PRO:HD2	76:SO:89:GLY:HA3	1.96	0.47
1:L5:185:C:N3	1:L5:254:G:H1'	2.30	0.47
1:L5:255:C:C2	88:L5:5316:T1C:H51	2.50	0.47
1:L5:1840:G:H1'	9:LF:111:LEU:HD22	1.96	0.47
1:L5:2495:U:H2'	1:L5:2496:G:C8	2.48	0.47
1:L5:4233:A:H4'	43:Lo:98:LYS:HE3	1.96	0.47
1:L5:4301:U:OP2	1:L5:4303:C:N4	2.48	0.47
1:L5:4467:A:O2'	1:L5:4510:A:N3	2.40	0.47
1:L5:4635:A:OP1	1:L5:4636:U:O2'	2.25	0.47
1:L5:4967:A:H2'	1:L5:4968:A:C8	2.49	0.47
9:LF:109:LEU:HG	9:LF:136:VAL:HG11	1.97	0.47
9:LF:155:TYR:HD1	9:LF:187:MET:HE3	1.79	0.47
12:LI:156:LYS:HG3	12:LI:163:GLN:HB2	1.96	0.47
19:LQ:159:PRO:HA	19:LQ:160:HIS:HA	1.56	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Lc:20:LEU:HA	31:Lc:23:LYS:HG2	1.97	0.47
46:Ls:35:VAL:HG22	46:Ls:39:GLN:NE2	2.30	0.47
49:S2:1310:U:H2'	49:S2:1311:C:C6	2.50	0.47
49:S2:1711:U:H2'	49:S2:1712:A:H8	1.79	0.47
53:SE:134:LYS:HD3	53:SE:134:LYS:HA	1.76	0.47
59:SP:37:TYR:O	62:SS:88:LYS:NZ	2.48	0.47
63:ST:10:ASN:OD1	63:ST:11:GLN:N	2.48	0.47
66:SX:49:GLY:O	66:SX:99:GLU:HA	2.15	0.47
70:Sg:188:HIS:HB3	70:Sg:219:TRP:CE2	2.50	0.47
79:SZ:50:PHE:HB3	79:SZ:54:THR:OG1	2.14	0.47
16:LN:39:ALA:HB3	16:LN:61:ILE:HB	1.97	0.47
26:LX:64:SER:HB2	36:Lh:69:LEU:HD13	1.97	0.47
49:S2:67:C:C5	72:SG:164:LYS:HB2	2.49	0.47
49:S2:453:C:O2'	72:SG:92:ARG:O	2.29	0.47
49:S2:457:C:H2'	49:S2:458:A:C8	2.50	0.47
49:S2:996:A:H2'	49:S2:997:A:C8	2.50	0.47
71:SC:166:ARG:HD3	71:SC:181:PRO:HG3	1.96	0.47
72:SG:33:ALA:N	72:SG:52:ILE:O	2.48	0.47
78:SY:57:VAL:HB	78:SY:60:PHE:HE1	1.79	0.47
1:L5:2427:G:OP1	20:LR:5:ARG:NH2	2.48	0.47
1:L5:3930:U:H3	1:L5:4180:G:H1	1.63	0.47
1:L5:4389:C:H2'	1:L5:4390:A:C8	2.49	0.47
1:L5:4670:C:O2'	1:L5:4672:A:OP2	2.29	0.47
5:LB:168:MET:HA	5:LB:171:LEU:HB2	1.97	0.47
24:LV:97:TYR:CE1	25:LW:19:ARG:HD3	2.50	0.47
27:LY:4:ASN:HB3	27:LY:7:VAL:HG12	1.96	0.47
49:S2:787:G:H5''	72:SG:234:LEU:HD22	1.97	0.47
51:SB:67:PHE:O	51:SB:85:LYS:C	2.58	0.47
59:SP:24:GLN:H	59:SP:24:GLN:CD	2.23	0.47
64:SU:72:GLU:HG2	64:SU:73:GLY:H	1.79	0.47
1:L5:93:G:H2'	1:L5:94:A:C8	2.50	0.47
1:L5:1495:G:O3'	19:LQ:187:LYS:NZ	2.46	0.47
5:LB:289:GLN:HE21	5:LB:301:ASN:HB2	1.80	0.47
14:LL:125:ILE:HD11	36:Lh:122:LYS:HB3	1.97	0.47
26:LX:122:ALA:N	26:LX:139:ARG:O	2.45	0.47
49:S2:690:G:H8	55:SH:182:GLY:HA3	1.80	0.47
52:SD:131:ALA:HA	52:SD:191:PRO:HD3	1.97	0.47
72:SG:224:ARG:HG3	72:SG:227:GLN:HE21	1.79	0.47
78:SY:6:THR:HB	78:SY:28:LEU:HB2	1.97	0.47
80:Sb:19:HIS:CD2	80:Sb:21:LYS:H	2.33	0.47
1:L5:178:C:H2'	1:L5:179:G:C8	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:188:G:H1	88:L5:5314:T1C:H92	1.62	0.46
1:L5:2628:U:OP1	23:LU:93:LYS:NZ	2.47	0.46
6:LC:260:LEU:HA	6:LC:263:LEU:HD12	1.96	0.46
49:S2:223:C:H2'	49:S2:224:A:C8	2.50	0.46
70:Sg:11:LEU:HB2	70:Sg:307:VAL:HB	1.97	0.46
70:Sg:107:ASP:HB2	70:Sg:125:ARG:HD2	1.98	0.46
72:SG:227:GLN:HA	72:SG:230:LYS:HG2	1.97	0.46
79:SZ:74:SER:OG	79:SZ:79:ILE:O	2.27	0.46
1:L5:307:A:N3	1:L5:310:G:O2'	2.43	0.46
1:L5:1070:G:N7	8:LE:46:ARG:NH1	2.63	0.46
1:L5:2707:U:O3'	83:CA:263:ARG:NH2	2.48	0.46
6:LC:71:ARG:HG3	6:LC:73:VAL:HG22	1.96	0.46
44:Lp:11:VAL:HG11	44:Lp:26:VAL:HG23	1.97	0.46
44:Lp:85:ARG:NH1	49:S2:939:U:OP1	2.48	0.46
49:S2:186:C:H2'	49:S2:187:G:H8	1.80	0.46
49:S2:858:A:H2'	49:S2:859:G:H8	1.80	0.46
49:S2:1410:C:H2'	49:S2:1411:G:C8	2.50	0.46
71:SC:108:LYS:HB2	71:SC:233:LEU:HD13	1.95	0.46
83:CA:361:SER:OG	83:CA:362:ALA:N	2.49	0.46
1:L5:238:C:OP2	27:LY:45:ARG:NH2	2.49	0.46
37:Li:26:HIS:CE1	37:Li:29:ARG:HE	2.33	0.46
49:S2:1845:A:H2'	49:S2:1846:G:C8	2.50	0.46
50:SA:17:LYS:HE3	50:SA:177:MET:HE1	1.97	0.46
51:SB:67:PHE:O	51:SB:85:LYS:O	2.32	0.46
68:Sc:46:VAL:HG11	68:Sc:56:LEU:HD21	1.97	0.46
70:Sg:120:ILE:HB	70:Sg:132:TRP:HB2	1.97	0.46
73:SJ:131:ARG:HA	73:SJ:131:ARG:HD2	1.66	0.46
80:Sb:19:HIS:HD2	80:Sb:21:LYS:HB2	1.81	0.46
82:Sf:109:ASP:OD1	82:Sf:109:ASP:N	2.48	0.46
1:L5:1258:G:H2'	1:L5:1259:G:C8	2.51	0.46
1:L5:1686:C:P	30:Lb:19:ASN:HD22	2.38	0.46
1:L5:1749:A:H2'	1:L5:1750:G:C8	2.50	0.46
1:L5:4537:C:H2'	1:L5:4538:G:C8	2.50	0.46
3:L8:96:C:H5''	36:Lh:66:LYS:HG2	1.97	0.46
9:LF:236:ARG:HD3	9:LF:239:GLN:HB2	1.97	0.46
11:LH:93:ARG:HD2	11:LH:143:GLU:HB3	1.96	0.46
17:LO:76:PRO:HB3	17:LO:138:LEU:HG	1.96	0.46
49:S2:987:A:C6	51:SB:120:MET:HE1	2.50	0.46
49:S2:1063:C:O2'	76:SO:150:ARG:O	2.23	0.46
71:SC:190:SER:O	71:SC:227:ARG:NH1	2.48	0.46
73:SJ:35:TYR:OH	73:SJ:103:GLU:HG3	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SZ:74:SER:HA	79:SZ:79:ILE:HB	1.95	0.46
1:L5:108:A:N1	1:L5:333:U:O2'	2.45	0.46
1:L5:502:C:H3'	1:L5:503:C:H3'	1.97	0.46
1:L5:2745:A:H2'	1:L5:2746:A:C8	2.50	0.46
1:L5:3956:G:O5'	1:L5:3966:A:N6	2.48	0.46
1:L5:4954:G:H2'	1:L5:4955:A:C8	2.51	0.46
4:LA:180:LEU:HD11	44:Lp:26:VAL:HG11	1.98	0.46
19:LQ:49:LYS:O	19:LQ:53:MET:HG3	2.14	0.46
20:LR:44:LEU:HD22	20:LR:49:LEU:HD12	1.96	0.46
49:S2:5:U:H2'	49:S2:6:G:C8	2.50	0.46
49:S2:17:C:O2'	49:S2:1194:A:N1	2.43	0.46
52:SD:113:LEU:HD22	52:SD:118:ALA:HB2	1.98	0.46
55:SH:80:VAL:O	55:SH:83:LEU:N	2.48	0.46
71:SC:74:LYS:HG3	71:SC:269:PHE:CD2	2.50	0.46
1:L5:4238:G:H2'	1:L5:4239:A:C8	2.50	0.46
16:LN:138:PHE:HA	16:LN:143:ARG:HD2	1.98	0.46
25:LW:87:LEU:HD12	25:LW:90:ILE:HD11	1.97	0.46
47:Lt:57:ARG:HE	47:Lt:83:LYS:HD3	1.79	0.46
49:S2:494:C:N4	49:S2:509:G:H21	2.14	0.46
52:SD:27:ARG:NH1	57:SK:62:PHE:O	2.48	0.46
60:SQ:44:PRO:HG2	60:SQ:81:ILE:HD11	1.98	0.46
61:SR:71:ILE:HG13	61:SR:74:GLN:HB2	1.97	0.46
1:L5:370:U:O3'	38:Lj:25:LYS:NZ	2.41	0.46
1:L5:2658:G:N2	1:L5:2676:A:OP2	2.36	0.46
1:L5:3715:U:H5	1:L5:3738:G:H1	1.64	0.46
1:L5:3765:G:O2'	1:L5:3767:C:N4	2.49	0.46
3:L8:19:C:H2'	3:L8:20:A:C8	2.51	0.46
16:LN:68:ARG:NH1	16:LN:124:ASP:O	2.48	0.46
26:LX:74:TYR:O	26:LX:77:ILE:C	2.59	0.46
51:SB:69:VAL:HG23	51:SB:74:LEU:HD11	1.98	0.46
58:SL:58:LYS:HG3	58:SL:59:LYS:HG3	1.98	0.46
1:L5:1794:A:H5''	1:L5:4214:A:H61	1.81	0.46
1:L5:2554:U:O2	1:L5:2764:A:N7	2.49	0.46
1:L5:4061:G:H2'	1:L5:4062:A:C8	2.51	0.46
2:L7:1:G:O3'	7:LD:265:ARG:NH1	2.49	0.46
24:LV:82:ILE:HD12	24:LV:121:VAL:HG22	1.98	0.46
26:LX:80:PRO:HA	26:LX:98:PHE:HA	1.97	0.46
28:LZ:136:PHE:O	35:Lg:78:TYR:OH	2.30	0.46
32:Ld:24:GLU:OE2	32:Ld:87:ARG:NH2	2.48	0.46
49:S2:828:G:OP1	73:SJ:6:SER:OG	2.33	0.46
62:SS:39:ARG:NH1	63:ST:38:LYS:HD2	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SJ:120:ALA:HB2	73:SJ:129:LEU:HD12	1.97	0.46
73:SJ:127:ARG:HE	73:SJ:145:PRO:HG2	1.81	0.46
75:SN:87:ASP:OD1	75:SN:87:ASP:N	2.48	0.46
80:Sb:21:LYS:HD3	80:Sb:26:GLN:OE1	2.16	0.46
1:L5:1095:A:N1	1:L5:1200:G:C6	2.84	0.46
1:L5:1683:U:H2'	1:L5:1684:A:C8	2.51	0.46
1:L5:1994:C:H1'	47:Lt:132:ILE:HA	1.97	0.46
1:L5:4251:A:H5''	13:LJ:108:GLY:HA3	1.97	0.46
4:LA:126:LEU:HD13	4:LA:150:LEU:HD21	1.98	0.46
4:LA:234:LYS:HG2	4:LA:238:ILE:HG12	1.98	0.46
11:LH:101:ILE:HG23	11:LH:114:ILE:HG23	1.98	0.46
17:LO:121:PRO:HA	17:LO:124:LEU:HD12	1.98	0.46
1:L5:758:G:O5'	11:LH:52:LYS:NZ	2.40	0.46
1:L5:1645:C:H2'	1:L5:1646:A:C8	2.51	0.46
1:L5:3877:A:O2'	1:L5:4400:G:N2	2.48	0.46
4:LA:98:ILE:HD13	4:LA:166:VAL:HG12	1.98	0.46
5:LB:29:VAL:HA	5:LB:220:ILE:HD13	1.98	0.46
5:LB:92:TYR:HB2	5:LB:159:VAL:HB	1.97	0.46
13:LJ:20:LEU:C	13:LJ:131:TYR:O	2.58	0.46
20:LR:24:LEU:HB3	20:LR:32:ILE:HD13	1.97	0.46
23:LU:60:VAL:HG11	23:LU:76:VAL:HG13	1.98	0.46
49:S2:987:A:H4'	67:Sa:70:LYS:HD3	1.98	0.46
49:S2:1217:A:H2'	49:S2:1218:C:C6	2.51	0.46
53:SE:29:PRO:HG2	53:SE:46:ILE:HD11	1.97	0.46
54:SF:22:LYS:HG3	54:SF:23:TRP:CD2	2.51	0.46
60:SQ:40:GLU:HA	60:SQ:48:GLN:HE21	1.80	0.46
72:SG:139:SER:HA	72:SG:142:ARG:HE	1.80	0.46
83:CA:185:MET:O	83:CA:202:ILE:HA	2.16	0.46
1:L5:1:C:H3'	1:L5:2:G:H8	1.80	0.45
1:L5:1348:U:H2'	1:L5:1349:G:C8	2.51	0.45
1:L5:2343:G:OP2	6:LC:109:ARG:NH2	2.49	0.45
1:L5:2411:C:H2'	1:L5:2412:A:H8	1.81	0.45
6:LC:66:SER:HA	6:LC:77:PRO:HA	1.98	0.45
12:LI:65:LEU:HD23	12:LI:159:PHE:HZ	1.80	0.45
49:S2:560:A:OP2	73:SJ:177:ASN:ND2	2.49	0.45
49:S2:1232:U:H2'	49:S2:1233:G:C8	2.51	0.45
49:S2:1628:C:H2'	49:S2:1629:C:C6	2.51	0.45
55:SH:31:GLU:OE2	55:SH:40:LEU:HB3	2.15	0.45
64:SU:97:ILE:HA	64:SU:100:GLN:HG3	1.98	0.45
77:SW:79:PHE:O	77:SW:124:LYS:HA	2.15	0.45
78:SY:91:LEU:HD22	78:SY:96:LEU:HD23	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:67:C:OP2	1:L5:312:G:N2	2.47	0.45
1:L5:188:G:H22	88:L5:5314:T1C:H92	1.62	0.45
1:L5:3917:A:H2'	1:L5:3918:G:H8	1.80	0.45
1:L5:4258:C:H2'	1:L5:4259:C:H6	1.81	0.45
8:LE:191:GLN:HA	8:LE:194:VAL:HG22	1.98	0.45
17:LO:54:TYR:OH	17:LO:73:PHE:O	2.33	0.45
32:Ld:54:MET:O	32:Ld:57:MET:C	2.59	0.45
36:Lh:34:ALA:HA	36:Lh:37:THR:HG22	1.98	0.45
49:S2:656:G:N2	49:S2:663:C:H5''	2.32	0.45
49:S2:808:A:H2	49:S2:855:G:H22	1.64	0.45
50:SA:184:ARG:HD3	50:SA:191:ARG:HG2	1.98	0.45
56:SI:32:PRO:O	56:SI:56:ARG:NH1	2.49	0.45
70:Sg:76:GLN:OE1	70:Sg:93:THR:OG1	2.34	0.45
70:Sg:163:PRO:O	70:Sg:178:ASN:C	2.59	0.45
77:SW:14:ILE:HA	77:SW:25:VAL:HG21	1.98	0.45
1:L5:70:A:OP2	29:La:64:LYS:NZ	2.41	0.45
1:L5:318:A:H2'	1:L5:319:A:C8	2.51	0.45
1:L5:1823:G:H4'	7:LD:45:ASN:HB2	1.98	0.45
1:L5:5027:C:OP2	56:SI:77:ARG:NH1	2.50	0.45
8:LE:150:LEU:HD13	8:LE:194:VAL:HG21	1.98	0.45
50:SA:24:HIS:HB3	50:SA:51:LEU:HD11	1.98	0.45
52:SD:66:ILE:HD11	52:SD:86:LEU:HB3	1.98	0.45
53:SE:45:ILE:HG13	53:SE:61:VAL:HG21	1.99	0.45
55:SH:58:LYS:HB2	55:SH:90:LYS:HG2	1.98	0.45
82:Sf:140:TYR:HB2	82:Sf:147:THR:HG22	1.99	0.45
1:L5:1803:G:C6	22:LT:109:VAL:HG23	2.51	0.45
11:LH:27:VAL:HG22	11:LH:80:MET:HE2	1.98	0.45
13:LJ:36:ALA:HA	13:LJ:39:VAL:HG12	1.99	0.45
17:LO:193:THR:HG22	17:LO:197:LYS:HD3	1.97	0.45
28:LZ:135:ARG:HD2	28:LZ:135:ARG:HA	1.67	0.45
33:Le:70:LEU:HD11	33:Le:76:LYS:HB3	1.99	0.45
51:SB:184:VAL:O	51:SB:188:LEU:HG	2.17	0.45
55:SH:76:GLN:HG2	55:SH:135:PHE:HD2	1.80	0.45
61:SR:37:GLU:OE2	70:Sg:150:TRP:NE1	2.49	0.45
71:SC:210:PRO:HD3	71:SC:236:PHE:CE2	2.51	0.45
73:SJ:144:ILE:HA	73:SJ:145:PRO:HD3	1.83	0.45
1:L5:256:G:N7	88:L5:5316:T1C:H51C	2.31	0.45
1:L5:480:C:H2'	1:L5:481:G:C8	2.52	0.45
1:L5:1814:C:O2'	30:Lb:42:ASN:OD1	2.23	0.45
1:L5:2848:G:O2'	1:L5:3838:U:O4	2.28	0.45
1:L5:4140:C:N3	1:L5:4145:C:O2'	2.44	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:67:U:H2'	3:L8:68:G:H8	1.82	0.45
9:LF:162:ILE:HD12	9:LF:167:ILE:HB	1.97	0.45
9:LF:238:ASP:OD1	9:LF:239:GLN:NE2	2.46	0.45
18:LP:14:SER:O	18:LP:105:LYS:NZ	2.38	0.45
35:Lg:103:VAL:HA	35:Lg:106:VAL:HG22	1.98	0.45
47:Lt:81:ILE:HD12	47:Lt:113:ALA:HB1	1.98	0.45
49:S2:164:A:H3'	49:S2:165:G:H21	1.81	0.45
49:S2:1685:U:H2'	49:S2:1686:G:C8	2.51	0.45
64:SU:34:LYS:NZ	64:SU:107:GLU:OE1	2.40	0.45
66:SX:68:LYS:HD2	81:Se:6:LEU:HG	1.98	0.45
67:Sa:12:LYS:HB2	67:Sa:33:ASP:OD2	2.17	0.45
70:Sg:47:ARG:HG3	70:Sg:52:TYR:CE1	2.52	0.45
1:L5:1333:A:H2'	1:L5:1334:A:C8	2.51	0.45
1:L5:1339:U:H2'	1:L5:1340:C:C6	2.51	0.45
1:L5:2261:G:H3'	45:Lr:98:ARG:HH12	1.81	0.45
1:L5:3910:C:O2'	1:L5:4196:G:N2	2.50	0.45
4:LA:150:LEU:O	4:LA:153:GLY:N	2.50	0.45
22:LT:28:ALA:HA	22:LT:31:MET:HG2	1.99	0.45
23:LU:91:LEU:HB3	23:LU:97:ARG:HB3	1.97	0.45
28:LZ:29:ILE:HG22	28:LZ:32:GLY:H	1.82	0.45
47:Lt:140:GLY:O	47:Lt:142:ASN:N	2.48	0.45
49:S2:860:G:H21	77:SW:107:SER:HB3	1.81	0.45
49:S2:1779:G:H2'	49:S2:1780:G:H8	1.82	0.45
54:SF:33:ILE:HA	54:SF:36:GLN:HG3	1.99	0.45
58:SL:111:VAL:HG12	58:SL:140:PHE:HB2	1.99	0.45
64:SU:18:HIS:HB3	64:SU:117:ALA:HB2	1.98	0.45
70:Sg:42:MET:SD	70:Sg:92:LEU:HD11	2.56	0.45
72:SG:190:ARG:HH21	72:SG:194:LEU:HD21	1.82	0.45
79:SZ:54:THR:HA	79:SZ:57:LYS:HG2	1.98	0.45
1:L5:962:C:H2'	1:L5:1702:C:H5	1.82	0.45
1:L5:1268:G:P	30:Lb:107:ARG:HH12	2.39	0.45
23:LU:89:LYS:HE3	23:LU:89:LYS:HB3	1.77	0.45
46:Ls:121:VAL:HG13	46:Ls:160:LEU:HD23	1.97	0.45
49:S2:981:A:H2'	49:S2:982:G:C8	2.52	0.45
49:S2:1593:C:H2'	49:S2:1594:A:C8	2.51	0.45
49:S2:1779:G:H2'	49:S2:1780:G:C8	2.52	0.45
59:SP:18:ARG:HB2	59:SP:36:LEU:HD22	1.99	0.45
68:Sc:35:MET:HE2	68:Sc:35:MET:HB3	1.84	0.45
71:SC:256:TRP:CD2	77:SW:68:ARG:HD2	2.51	0.45
1:L5:456:C:H2'	1:L5:457:G:H8	1.81	0.45
1:L5:1512:G:OP1	29:La:7:LYS:NZ	2.39	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4146:G:H2'	1:L5:4147:G:C8	2.51	0.45
1:L5:4761:G:H2'	1:L5:4762:A:H8	1.81	0.45
4:LA:173:GLY:O	4:LA:176:ASP:HB2	2.17	0.45
22:LT:42:ILE:O	22:LT:59:GLY:N	2.48	0.45
26:LX:80:PRO:HG2	26:LX:155:ILE:HD11	1.98	0.45
37:Li:56:ARG:HD2	37:Li:72:PHE:CZ	2.52	0.45
43:Lo:11:PHE:O	43:Lo:81:ARG:NH1	2.48	0.45
46:Ls:69:LEU:HD23	46:Ls:75:LEU:HD11	1.98	0.45
47:Lt:117:ARG:HH21	47:Lt:121:LEU:HD22	1.81	0.45
49:S2:806:U:H2'	49:S2:807:G:C8	2.52	0.45
49:S2:1084:A:OP1	49:S2:1858:G:O2'	2.29	0.45
72:SG:189:ARG:C	72:SG:189:ARG:HD3	2.41	0.45
79:SZ:42:ASP:OD1	79:SZ:42:ASP:N	2.49	0.45
1:L5:86:U:HO2'	29:La:65:ARG:HH21	1.59	0.45
1:L5:2784:C:H2'	1:L5:2785:C:H6	1.81	0.45
1:L5:3722:G:H2'	1:L5:3723:A:H8	1.82	0.45
16:LN:165:THR:O	16:LN:169:ARG:HG3	2.17	0.45
19:LQ:124:ASP:OD1	19:LQ:125:GLN:N	2.50	0.45
21:LS:127:MET:HG2	22:LT:153:PRO:HB2	1.99	0.45
32:Ld:108:TYR:CE2	32:Ld:110:PRO:HG3	2.52	0.45
33:Le:82:VAL:O	33:Le:86:GLU:HG2	2.16	0.45
47:Lt:115:GLN:O	47:Lt:119:ARG:NH1	2.48	0.45
50:SA:104:THR:O	50:SA:107:THR:OG1	2.31	0.45
71:SC:60:TRP:CD1	71:SC:92:GLU:HG3	2.52	0.45
78:SY:104:ARG:HH11	78:SY:108:LYS:HE2	1.82	0.45
83:CA:266:PHE:O	83:CA:269:VAL:N	2.50	0.45
1:L5:1604:G:H2'	1:L5:1605:G:C8	2.52	0.45
2:L7:34:C:N3	2:L7:46:C:O2'	2.49	0.45
10:LG:131:LYS:HD3	10:LG:131:LYS:HA	1.78	0.45
73:SJ:24:ARG:NH1	73:SJ:28:GLU:OE2	2.50	0.45
76:SO:33:ILE:HA	76:SO:41:PHE:O	2.17	0.45
1:L5:72:C:C5	14:LL:67:HIS:HD2	2.35	0.44
1:L5:173:C:H2'	1:L5:174:C:C6	2.52	0.44
1:L5:480:C:H2'	1:L5:481:G:H8	1.82	0.44
1:L5:717:U:H2'	1:L5:718:C:C6	2.53	0.44
1:L5:1720:C:OP1	1:L5:1835:G:O2'	2.34	0.44
2:L7:23:A:N3	2:L7:118:C:O2'	2.39	0.44
2:L7:112:U:H2'	2:L7:113:G:H8	1.82	0.44
5:LB:220:ILE:HG12	5:LB:278:THR:HG23	1.98	0.44
49:S2:570:C:O2'	78:SY:34:THR:O	2.31	0.44
49:S2:750:C:O2	49:S2:752:G:N1	2.50	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:956:G:H5'	76:SO:60:MET:HA	1.98	0.44
49:S2:1650:A:H5''	60:SQ:139:ALA:HB2	1.99	0.44
63:ST:123:LEU:HD13	63:ST:128:GLN:HB3	2.00	0.44
75:SN:146:ALA:HA	75:SN:149:LEU:HB2	1.98	0.44
79:SZ:102:LYS:HA	79:SZ:107:VAL:HG12	1.99	0.44
1:L5:27:C:O3'	1:L5:60:G:N2	2.45	0.44
1:L5:1070:G:OP2	8:LE:65:ARG:NH1	2.51	0.44
1:L5:1177:U:O2'	7:LD:286:SER:OG	2.28	0.44
1:L5:3697:U:H5''	1:L5:3698:G:H5'	1.98	0.44
1:L5:4099:G:H2'	1:L5:4101:C:H41	1.83	0.44
1:L5:4274:A:H2'	1:L5:4275:G:H8	1.82	0.44
1:L5:4314:C:O2'	30:Lb:36:ASP:OD1	2.29	0.44
1:L5:4881:U:C4	15:LM:113:MET:HG2	2.51	0.44
88:L5:5312:T1C:H962	88:L5:5312:T1C:H921	1.80	0.44
3:L8:120:G:H2'	3:L8:121:G:H8	1.83	0.44
7:LD:209:ARG:NH1	7:LD:234:ASP:OD1	2.50	0.44
8:LE:178:PRO:O	8:LE:181:LEU:N	2.38	0.44
39:Lk:35:LYS:HA	39:Lk:43:TYR:O	2.18	0.44
47:Lt:12:VAL:HB	47:Lt:65:GLN:HB3	2.00	0.44
49:S2:382:C:H2'	49:S2:383:G:H8	1.80	0.44
49:S2:747:U:O4	49:S2:796:G:O6	2.36	0.44
49:S2:1563:G:H5''	63:ST:115:LYS:NZ	2.32	0.44
83:CA:172:LYS:HA	83:CA:175:HIS:CE1	2.52	0.44
1:L5:138:G:H2'	1:L5:139:G:C8	2.51	0.44
1:L5:400:A:H1'	18:LP:101:ASN:OD1	2.17	0.44
8:LE:281:ILE:HB	8:LE:286:LEU:HD21	2.00	0.44
18:LP:4:TYR:HA	18:LP:18:ARG:NH2	2.30	0.44
22:LT:51:GLY:HA3	22:LT:92:ARG:HG3	1.98	0.44
31:Lc:37:MET:HG3	31:Lc:97:ILE:HD11	2.00	0.44
49:S2:344:U:H2'	49:S2:345:U:C6	2.52	0.44
49:S2:844:U:H2'	49:S2:845:G:C8	2.53	0.44
49:S2:853:C:H2'	49:S2:854:A:C8	2.53	0.44
49:S2:964:A:H2'	49:S2:965:U:H6	1.82	0.44
49:S2:1156:U:O4	71:SC:194:ARG:NH1	2.50	0.44
49:S2:1435:C:O2'	49:S2:1436:C:O4'	2.33	0.44
52:SD:161:GLY:O	52:SD:164:VAL:HG12	2.18	0.44
60:SQ:53:GLU:OE2	60:SQ:85:ARG:NH2	2.33	0.44
67:Sa:24:THR:HG21	67:Sa:71:LEU:HA	2.00	0.44
70:Sg:7:LEU:HD11	70:Sg:308:ARG:HG2	1.99	0.44
70:Sg:191:HIS:ND1	70:Sg:213:ASP:OD2	2.32	0.44
76:SO:45:THR:HG22	76:SO:52:THR:HA	1.98	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CA:190:LEU:HB3	83:CA:223:VAL:HG23	2.00	0.44
1:L5:161:G:H2'	1:L5:162:A:C8	2.52	0.44
1:L5:4039:G:N2	1:L5:4050:A:O2'	2.49	0.44
7:LD:122:GLN:O	7:LD:248:ARG:NH2	2.50	0.44
16:LN:149:GLN:O	16:LN:153:LYS:HG2	2.17	0.44
25:LW:73:ARG:HH22	49:S2:1781:A:H2'	1.82	0.44
46:Ls:21:LEU:HD13	46:Ls:69:LEU:HD22	1.99	0.44
49:S2:12:U:H2'	49:S2:13:C:C6	2.53	0.44
57:SK:48:ALA:O	57:SK:51:SER:OG	2.30	0.44
71:SC:204:ILE:HD13	71:SC:214:LEU:HB2	2.00	0.44
83:CA:87:CYS:SG	83:CA:88:HIS:N	2.91	0.44
1:L5:3893:C:O2'	1:L5:4979:A:N1	2.49	0.44
1:L5:4591:U:H2'	1:L5:4592:C:C6	2.53	0.44
4:LA:247:ARG:HB3	49:S2:1069:U:H4'	2.00	0.44
8:LE:72:LYS:HB2	30:Lb:119:CYS:HB3	2.00	0.44
12:LI:55:ASP:OD2	12:LI:164:LYS:NZ	2.46	0.44
18:LP:64:ASN:O	18:LP:80:GLN:NE2	2.51	0.44
21:LS:76:LYS:NZ	21:LS:100:LEU:O	2.50	0.44
22:LT:26:PRO:O	22:LT:29:THR:OG1	2.29	0.44
49:S2:886:A:C6	49:S2:901:G:C2	3.06	0.44
52:SD:168:VAL:HA	52:SD:188:ILE:O	2.17	0.44
61:SR:44:LYS:O	61:SR:48:ASN:ND2	2.50	0.44
61:SR:72:LYS:O	61:SR:75:GLU:HB3	2.17	0.44
64:SU:63:ILE:HD13	69:Sd:36:LEU:HD11	2.00	0.44
70:Sg:10:THR:HG22	70:Sg:308:ARG:HG3	1.98	0.44
70:Sg:17:TRP:H	70:Sg:36:ARG:HB3	1.83	0.44
83:CA:12:ILE:HG12	83:CA:324:LEU:HD11	2.00	0.44
1:L5:280:G:H5''	16:LN:14:LYS:HE2	1.99	0.44
1:L5:1994:C:H2'	1:L5:1995:G:C8	2.53	0.44
1:L5:4208:U:OP1	1:L5:4334:U:O2'	2.30	0.44
2:L7:55:A:H4'	13:LJ:155:HIS:HB2	1.99	0.44
18:LP:112:LEU:HB3	18:LP:150:LEU:HD12	1.99	0.44
39:Lk:24:LYS:HA	39:Lk:67:LYS:O	2.17	0.44
49:S2:929:G:H2'	49:S2:930:C:O4'	2.18	0.44
49:S2:1564:C:OP1	63:ST:121:ARG:NH2	2.50	0.44
49:S2:1687:C:H2'	49:S2:1688:C:C6	2.53	0.44
50:SA:169:HIS:HA	50:SA:203:PHE:CE2	2.53	0.44
55:SH:51:ILE:HG12	55:SH:179:LYS:HG2	2.00	0.44
59:SP:20:VAL:HG21	59:SP:36:LEU:HD11	1.99	0.44
63:ST:128:GLN:HA	63:ST:131:LEU:HD12	1.98	0.44
1:L5:1346:C:H2'	1:L5:1347:G:H8	1.83	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1442:C:H2'	1:L5:1443:A:C8	2.52	0.44
1:L5:2748:C:H1'	35:Lg:61:PRO:HB2	2.00	0.44
1:L5:4761:G:H2'	1:L5:4762:A:C8	2.52	0.44
1:L5:4768:G:OP1	17:LO:168:TYR:OH	2.28	0.44
88:L5:5317:T1C:H953	88:L5:5317:T1C:H921	1.79	0.44
5:LB:258:HIS:HA	5:LB:260:ALA:N	2.33	0.44
7:LD:82:GLU:OE2	7:LD:108:ARG:NH2	2.41	0.44
15:LM:40:GLY:N	15:LM:45:VAL:O	2.43	0.44
28:LZ:64:LYS:HA	28:LZ:67:LYS:HE2	2.00	0.44
49:S2:953:C:H2'	49:S2:954:U:O4'	2.17	0.44
49:S2:1550:G:H3'	49:S2:1579:A:H61	1.83	0.44
49:S2:1609:C:H2'	49:S2:1610:G:C8	2.53	0.44
55:SH:76:GLN:HG2	55:SH:135:PHE:CD2	2.52	0.44
66:SX:90:CYS:O	66:SX:94:ILE:HD12	2.18	0.44
70:Sg:258:ILE:HD13	70:Sg:268:ASP:HB3	1.99	0.44
82:Sf:87:THR:O	82:Sf:90:LYS:NZ	2.41	0.44
83:CA:192:GLN:NE2	83:CA:193:HIS:CE1	2.85	0.44
1:L5:29:G:H5''	16:LN:172:ARG:HG2	2.00	0.44
1:L5:1306:C:H2'	1:L5:1307:A:H8	1.81	0.44
1:L5:1308:C:H2'	1:L5:1309:C:C6	2.53	0.44
1:L5:2407:G:H2'	40:Ll:13:LEU:HD22	1.99	0.44
1:L5:2709:C:H42	83:CA:258:LYS:HG2	1.83	0.44
5:LB:29:VAL:HG12	5:LB:31:SER:H	1.83	0.44
11:LH:59:LYS:HB2	11:LH:70:VAL:HG21	2.00	0.44
47:Lt:22:VAL:HA	47:Lt:48:LYS:HG3	2.00	0.44
49:S2:562:U:H2'	49:S2:563:G:C8	2.52	0.44
49:S2:1039:C:H2'	49:S2:1040:G:H8	1.83	0.44
49:S2:1046:U:H2'	49:S2:1047:C:C6	2.52	0.44
49:S2:1098:C:H2'	49:S2:1099:G:C8	2.52	0.44
49:S2:1264:C:H4'	49:S2:1265:A:O4'	2.17	0.44
49:S2:1692:U:H2'	49:S2:1693:G:C8	2.53	0.44
49:S2:1865:C:C2	67:Sa:5:ARG:HG2	2.52	0.44
53:SE:197:ASN:OD1	53:SE:198:ARG:N	2.51	0.44
55:SH:30:LEU:O	55:SH:34:SER:OG	2.34	0.44
68:Sc:32:VAL:O	68:Sc:41:SER:HA	2.18	0.44
70:Sg:133:ASN:HD21	70:Sg:137:VAL:HB	1.81	0.44
82:Sf:89:LYS:HZ3	82:Sf:92:LYS:HB2	1.83	0.44
1:L5:494:U:H2'	1:L5:495:C:C6	2.53	0.44
1:L5:1749:A:OP2	86:CE:67:LYS:HE2	2.17	0.44
1:L5:2543:A:H2	1:L5:2773:G:H22	1.64	0.44
1:L5:2749:C:H5'	35:Lg:65:MET:HA	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3610:A:H2'	1:L5:3611:A:H8	1.83	0.44
5:LB:106:PHE:N	5:LB:133:TYR:OH	2.48	0.44
6:LC:187:GLN:OE1	6:LC:201:ARG:NH2	2.51	0.44
8:LE:206:VAL:HG11	8:LE:257:ILE:HD11	2.00	0.44
49:S2:102:A:H4'	49:S2:104:A:C8	2.53	0.44
49:S2:888:U:H2'	49:S2:900:C:H42	1.83	0.44
50:SA:200:ASP:HA	50:SA:203:PHE:HB2	2.00	0.44
59:SP:111:MET:HG2	59:SP:119:PHE:CZ	2.52	0.44
61:SR:93:GLN:HE21	61:SR:96:ILE:HD13	1.82	0.44
62:SS:13:LEU:HD21	62:SS:59:LEU:HD11	1.99	0.44
1:L5:2709:C:H41	83:CA:256:GLY:C	2.25	0.43
1:L5:4186:A:H2'	1:L5:4187:G:C8	2.53	0.43
5:LB:165:HIS:HA	5:LB:179:HIS:O	2.18	0.43
9:LF:27:GLU:HA	9:LF:30:ILE:HG22	2.00	0.43
16:LN:17:ASP:OD1	16:LN:20:ARG:NH2	2.49	0.43
26:LX:74:TYR:O	26:LX:77:ILE:O	2.36	0.43
49:S2:71:G:H2'	49:S2:72:C:H4'	2.00	0.43
49:S2:1101:U:H2'	49:S2:1102:G:C8	2.53	0.43
50:SA:128:ARG:HE	50:SA:153:PRO:HD3	1.83	0.43
53:SE:87:MET:N	53:SE:101:LEU:O	2.51	0.43
59:SP:29:SER:HB3	59:SP:32:GLN:HE22	1.82	0.43
60:SQ:47:LEU:HB2	60:SQ:81:ILE:HD13	1.99	0.43
66:SX:124:LYS:HA	66:SX:129:SER:HA	2.00	0.43
72:SG:225:GLN:HA	72:SG:228:ILE:HG12	2.00	0.43
83:CA:248:LYS:NZ	83:CA:249:ARG:O	2.51	0.43
1:L5:239:C:OP1	27:LY:46:SER:OG	2.35	0.43
1:L5:308:G:O6	16:LN:12:ARG:NH1	2.51	0.43
1:L5:351:C:OP2	6:LC:197:ARG:NH1	2.39	0.43
1:L5:956:A:H8	1:L5:957:G:C8	2.36	0.43
1:L5:2568:C:H2'	1:L5:2569:G:H8	1.83	0.43
1:L5:4315:A:OP1	22:LT:69:GLN:NE2	2.50	0.43
1:L5:4611:A:H2	11:LH:120:GLU:HB3	1.82	0.43
1:L5:4985:U:OP1	5:LB:117:ARG:NH2	2.44	0.43
4:LA:130:SER:HB2	4:LA:171:GLY:HA3	2.00	0.43
33:Le:78:LEU:HB3	45:Lr:20:ARG:HD3	1.99	0.43
46:Ls:28:PHE:HE2	46:Ls:98:ILE:HD12	1.83	0.43
49:S2:17:C:H2'	49:S2:18:C:C6	2.53	0.43
49:S2:844:U:H2'	49:S2:845:G:H8	1.83	0.43
53:SE:143:ASP:OD2	53:SE:145:ARG:NE	2.43	0.43
59:SP:31:GLU:O	59:SP:34:MET:HB2	2.18	0.43
70:Sg:67:SER:HB3	70:Sg:83:TRP:CD1	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sg:169:GLY:O	70:Sg:172:LYS:N	2.51	0.43
72:SG:228:ILE:HA	72:SG:231:ARG:HG2	1.99	0.43
1:L5:276:C:H2'	37:Li:29:ARG:HH12	1.83	0.43
1:L5:2568:C:H2'	1:L5:2569:G:C8	2.53	0.43
1:L5:2583:C:OP2	35:Lg:76:ARG:NH1	2.51	0.43
1:L5:4188:U:H2'	1:L5:4189:U:C6	2.53	0.43
1:L5:4281:A:H2'	1:L5:4282:A:H2'	1.99	0.43
6:LC:79:VAL:HG21	6:LC:86:ARG:HE	1.82	0.43
20:LR:136:ARG:O	20:LR:140:GLU:HG3	2.18	0.43
46:Ls:174:LEU:HA	46:Ls:177:MET:HG3	2.00	0.43
49:S2:76:U:OP2	72:SG:155:GLN:NE2	2.51	0.43
49:S2:1144:A:H2'	49:S2:1145:A:C8	2.52	0.43
49:S2:1259:A:HO2'	49:S2:1263:U:H3	1.66	0.43
49:S2:1591:C:O2'	54:SF:87:LEU:HD12	2.18	0.43
49:S2:1669:G:OP1	64:SU:79:ARG:NH1	2.52	0.43
49:S2:1777:G:H2'	49:S2:1778:C:C6	2.53	0.43
51:SB:71:LEU:HD22	51:SB:84:PHE:HE1	1.84	0.43
54:SF:49:LEU:HD11	60:SQ:49:TYR:HB2	2.00	0.43
78:SY:91:LEU:HB3	78:SY:96:LEU:HB3	2.01	0.43
82:Sf:99:LYS:HD3	82:Sf:99:LYS:HA	1.85	0.43
1:L5:691:C:H2'	1:L5:692:A:H8	1.83	0.43
1:L5:1577:G:O2'	1:L5:1612:G:H4'	2.18	0.43
1:L5:2029:A:H2'	1:L5:2030:A:C8	2.53	0.43
1:L5:3617:G:OP1	25:LW:44:ARG:NH2	2.36	0.43
1:L5:3726:A:H2'	1:L5:3727:A:C8	2.53	0.43
1:L5:4537:C:H2'	1:L5:4538:G:H8	1.84	0.43
3:L8:125:C:H1'	3:L8:126:C:H2'	2.01	0.43
4:LA:7:GLY:HA2	4:LA:10:LYS:HB2	2.00	0.43
5:LB:301:ASN:OD1	5:LB:302:ASN:N	2.49	0.43
7:LD:179:ARG:HA	7:LD:179:ARG:HD3	1.85	0.43
48:Lz:67:VAL:HA	48:Lz:68:LEU:HA	1.56	0.43
49:S2:85:A:H2'	49:S2:86:C:C6	2.53	0.43
49:S2:407:G:H22	66:SX:43:GLY:HA3	1.83	0.43
49:S2:610:G:H2'	49:S2:611:G:H8	1.83	0.43
49:S2:874:G:H2'	49:S2:875:A:C8	2.52	0.43
49:S2:1217:A:H2'	49:S2:1218:C:H6	1.82	0.43
51:SB:123:ALA:HB3	51:SB:139:CYS:SG	2.59	0.43
53:SE:101:LEU:HD23	53:SE:101:LEU:HA	1.80	0.43
53:SE:175:PHE:HE2	53:SE:198:ARG:HD2	1.83	0.43
55:SH:11:PRO:HD3	55:SH:46:THR:HG23	2.00	0.43
72:SG:222:GLU:HA	72:SG:225:GLN:HG3	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2906:G:H1'	1:L5:2908:U:H1'	2.00	0.43
1:L5:3610:A:H2'	1:L5:3611:A:C8	2.53	0.43
1:L5:3965:A:O2'	1:L5:4050:A:OP2	2.26	0.43
1:L5:4504:C:H2'	1:L5:4505:C:C6	2.54	0.43
1:L5:4743:G:H2'	1:L5:4744:A:C8	2.54	0.43
10:LG:81:ASN:ND2	10:LG:237:TRP:O	2.52	0.43
27:LY:2:LYS:HE3	27:LY:2:LYS:HB3	1.87	0.43
28:LZ:84:ARG:HD3	84:CB:20:LEU:HD13	2.01	0.43
46:Ls:98:ILE:HA	46:Ls:101:MET:HG3	1.99	0.43
49:S2:419:G:O2'	77:SW:88:LYS:HE2	2.18	0.43
49:S2:942:G:H2'	49:S2:943:U:C6	2.53	0.43
49:S2:1016:U:OP1	80:Sb:30:SER:OG	2.36	0.43
49:S2:1323:U:H2'	49:S2:1324:G:C8	2.53	0.43
49:S2:1416:C:C4	49:S2:1417:C:N4	2.86	0.43
49:S2:1627:C:H5''	63:ST:41:LYS:CD	2.49	0.43
63:ST:134:ILE:O	63:ST:138:VAL:HG22	2.18	0.43
69:Sd:3:HIS:CE1	69:Sd:5:GLN:HB2	2.54	0.43
1:L5:2055:G:O2'	21:LS:160:ARG:NH2	2.52	0.43
13:LJ:20:LEU:O	13:LJ:131:TYR:O	2.37	0.43
13:LJ:28:GLU:OE2	13:LJ:32:ARG:HB3	2.18	0.43
17:LO:78:ARG:HD2	17:LO:78:ARG:HA	1.81	0.43
21:LS:142:VAL:HG12	21:LS:146:HIS:CE1	2.53	0.43
49:S2:1092:G:H2'	49:S2:1093:A:H8	1.84	0.43
49:S2:1310:U:H5''	82:Sf:130:VAL:HG12	2.01	0.43
49:S2:1587:G:C6	63:ST:67:ARG:HD3	2.53	0.43
50:SA:42:LYS:HD2	50:SA:48:ILE:HD11	1.99	0.43
55:SH:39:GLN:CG	55:SH:75:ILE:HG21	2.49	0.43
60:SQ:8:GLN:HG3	60:SQ:99:TYR:CZ	2.54	0.43
62:SS:117:ILE:HD13	62:SS:117:ILE:HA	1.89	0.43
63:ST:129:ARG:HD2	63:ST:133:ARG:CZ	2.47	0.43
77:SW:18:GLU:OE1	77:SW:65:LEU:HD23	2.18	0.43
1:L5:1399:G:H2'	1:L5:1400:G:C8	2.54	0.43
1:L5:2765:A:H2'	1:L5:2766:A:C8	2.54	0.43
1:L5:2864:A:H2'	1:L5:2865:U:C6	2.53	0.43
1:L5:3633:C:H2'	1:L5:3634:G:C8	2.54	0.43
1:L5:3973:G:N2	1:L5:3974:G:O6	2.49	0.43
1:L5:4622:A:H4'	5:LB:13:SER:HB2	2.00	0.43
1:L5:4761:G:OP2	17:LO:37:ARG:NH1	2.40	0.43
2:L7:110:G:H2'	2:L7:111:C:C6	2.54	0.43
6:LC:279:LEU:HD23	6:LC:279:LEU:HA	1.91	0.43
13:LJ:5:GLN:HA	13:LJ:8:LYS:HE3	2.01	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LY:80:ILE:HD11	27:LY:104:VAL:HG11	2.01	0.43
49:S2:655:A:H4'	49:S2:656:G:H3'	1.99	0.43
50:SA:39:TYR:CZ	50:SA:40:LYS:HE2	2.53	0.43
51:SB:170:GLU:HA	51:SB:173:THR:HG22	1.99	0.43
56:SI:166:PHE:CE1	56:SI:171:LEU:HD21	2.54	0.43
61:SR:98:VAL:HG23	61:SR:103:LYS:NZ	2.33	0.43
64:SU:78:ASP:OD1	69:Sd:54:LYS:HD3	2.19	0.43
67:Sa:13:LYS:HD3	67:Sa:13:LYS:HA	1.84	0.43
72:SG:139:SER:HB2	72:SG:143:LYS:NZ	2.34	0.43
73:SJ:104:ASP:N	73:SJ:104:ASP:OD1	2.51	0.43
1:L5:1683:U:OP1	29:La:44:ASN:ND2	2.46	0.43
1:L5:2601:A:N6	1:L5:2744:A:OP2	2.51	0.43
1:L5:3599:A:H2'	1:L5:3600:G:C8	2.53	0.43
1:L5:3861:A:H2'	1:L5:3862:A:C8	2.54	0.43
1:L5:4872:G:C2	17:LO:203:VAL:HG23	2.53	0.43
8:LE:150:LEU:O	8:LE:161:ARG:HA	2.19	0.43
29:La:102:ASP:HB3	29:La:105:ARG:HB3	2.00	0.43
35:Lg:42:PRO:HD2	35:Lg:56:VAL:HG21	2.01	0.43
49:S2:101:U:H3'	49:S2:408:A:H61	1.84	0.43
49:S2:1706:G:H2'	49:S2:1707:U:H6	1.83	0.43
52:SD:34:TYR:OH	52:SD:37:VAL:HG13	2.18	0.43
60:SQ:96:TYR:HB3	60:SQ:105:LYS:HB2	2.00	0.43
1:L5:10:A:H2'	1:L5:11:G:C8	2.54	0.43
1:L5:375:G:OP2	38:Lj:52:LYS:NZ	2.38	0.43
1:L5:1399:G:H2'	1:L5:1400:G:H8	1.84	0.43
1:L5:1503:A:H4'	1:L5:1504:G:H5'	2.01	0.43
1:L5:4693:C:OP1	11:LH:64:ARG:NH2	2.52	0.43
5:LB:56:ILE:O	5:LB:73:VAL:HA	2.19	0.43
11:LH:7:ASN:HA	11:LH:57:VAL:O	2.19	0.43
11:LH:94:SER:HB2	11:LH:142:ASP:HB3	2.01	0.43
29:La:23:GLY:HA3	29:La:24:LYS:HA	1.60	0.43
34:Lf:48:ALA:HB2	34:Lf:71:TRP:CZ3	2.53	0.43
39:Lk:24:LYS:HB3	39:Lk:69:LEU:HD11	2.01	0.43
49:S2:1101:U:H2'	49:S2:1102:G:H8	1.84	0.43
49:S2:1259:A:O2'	49:S2:1263:U:N3	2.51	0.43
49:S2:1658:G:OP2	49:S2:1660:C:N4	2.52	0.43
55:SH:39:GLN:HG3	55:SH:75:ILE:HD13	2.00	0.43
75:SN:5:HIS:HB3	75:SN:117:LEU:HD13	2.01	0.43
1:L5:444:G:H2'	1:L5:445:U:C6	2.54	0.43
1:L5:3717:A:H2'	1:L5:3718:A:H8	1.81	0.43
1:L5:3932:U:H2'	1:L5:3933:G:C8	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4225:G:OP1	12:LI:24:ARG:NH2	2.52	0.43
1:L5:4967:A:H2'	1:L5:4968:A:H8	1.83	0.43
10:LG:173:LEU:HA	37:Li:43:MET:HE2	2.01	0.43
11:LH:120:GLU:OE2	11:LH:124:ARG:NH2	2.47	0.43
12:LI:189:ARG:NH1	12:LI:200:ILE:O	2.51	0.43
16:LN:75:VAL:HG11	16:LN:80:THR:HG22	2.01	0.43
35:Lg:100:GLN:HA	35:Lg:103:VAL:HG12	2.00	0.43
36:Lh:55:ALA:O	36:Lh:59:THR:OG1	2.29	0.43
41:Lm:94:MET:HG2	41:Lm:105:PRO:HA	2.00	0.43
49:S2:532:C:H2'	49:S2:533:A:H8	1.83	0.43
49:S2:918:U:O2'	77:SW:56:HIS:O	2.36	0.43
49:S2:959:G:H2'	49:S2:960:U:C6	2.54	0.43
49:S2:1024:A:OP2	75:SN:124:ARG:NH2	2.52	0.43
49:S2:1609:C:H2'	49:S2:1610:G:H8	1.84	0.43
60:SQ:52:LEU:HD12	60:SQ:56:LEU:HD23	2.00	0.43
70:Sg:302:TYR:HE2	70:Sg:308:ARG:HB2	1.83	0.43
73:SJ:54:ARG:O	73:SJ:58:ARG:HG3	2.19	0.43
77:SW:11:LEU:HD21	77:SW:37:PHE:CE2	2.54	0.43
78:SY:36:PRO:O	78:SY:40:ILE:HG12	2.19	0.43
80:Sb:5:LYS:HD2	80:Sb:5:LYS:HA	1.84	0.43
1:L5:2397:G:O6	35:Lg:4:ARG:NH2	2.42	0.42
1:L5:2485:U:H4'	1:L5:2486:G:N2	2.33	0.42
1:L5:4391:G:OP1	6:LC:75:ARG:NH1	2.42	0.42
20:LR:82:LYS:HA	20:LR:82:LYS:HD2	1.82	0.42
28:LZ:30:ASP:O	28:LZ:39:SER:OG	2.28	0.42
35:Lg:67:LEU:HD22	35:Lg:71:LYS:HE3	2.00	0.42
46:Ls:24:TYR:CG	46:Ls:90:PHE:HB3	2.54	0.42
49:S2:496:C:H2'	49:S2:497:C:H6	1.84	0.42
52:SD:132:LYS:HB3	52:SD:189:MET:HG2	2.01	0.42
70:Sg:72:SER:OG	70:Sg:74:ASP:OD1	2.30	0.42
70:Sg:212:LYS:HA	70:Sg:235:ILE:HG13	2.01	0.42
1:L5:347:A:H2'	1:L5:348:G:C8	2.54	0.42
1:L5:493:G:C6	1:L5:660:A:N1	2.87	0.42
1:L5:1051:G:N2	1:L5:1064:G:OP1	2.52	0.42
1:L5:1241:C:H6	30:Lb:118:LEU:HB2	1.84	0.42
1:L5:1414:C:H2'	1:L5:1415:G:H8	1.84	0.42
1:L5:1969:G:H4'	46:Ls:36:GLY:HA2	2.01	0.42
1:L5:4347:G:H2'	1:L5:4348:A:C8	2.54	0.42
5:LB:113:GLU:H	5:LB:113:GLU:HG2	1.69	0.42
6:LC:150:LEU:O	6:LC:152:LEU:N	2.52	0.42
26:LX:119:ILE:HD12	26:LX:140:LEU:HD22	2.02	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Lc:31:TYR:CZ	31:Lc:35:LEU:HD11	2.53	0.42
31:Lc:48:LEU:HD13	31:Lc:57:LYS:HG3	2.00	0.42
39:Lk:26:LYS:HA	39:Lk:69:LEU:HB2	2.01	0.42
49:S2:106:C:H2'	49:S2:107:A:H8	1.84	0.42
49:S2:441:C:H2'	49:S2:442:C:C6	2.54	0.42
53:SE:21:ASP:OD1	53:SE:21:ASP:N	2.48	0.42
54:SF:124:ASP:HB3	68:Sc:47:LYS:HD3	2.01	0.42
56:SI:206:LYS:HA	56:SI:206:LYS:HD2	1.80	0.42
70:Sg:302:TYR:CE2	70:Sg:308:ARG:HB2	2.54	0.42
75:SN:60:VAL:HG13	75:SN:66:VAL:HG21	2.01	0.42
85:CC:22:C:H2'	85:CC:23:G:C8	2.53	0.42
1:L5:300:A:H2'	1:L5:301:G:H8	1.83	0.42
1:L5:343:C:O3'	38:Lj:75:ARG:NH2	2.51	0.42
1:L5:729:G:H5''	9:LF:76:ARG:HD2	2.00	0.42
1:L5:1238:A:O3'	9:LF:48:LYS:NZ	2.52	0.42
1:L5:1552:G:O2'	1:L5:1574:G:N2	2.37	0.42
1:L5:2539:C:H2'	1:L5:2540:C:C6	2.54	0.42
4:LA:75:LEU:HD12	4:LA:75:LEU:HA	1.94	0.42
5:LB:83:PRO:O	5:LB:167:GLN:NE2	2.44	0.42
6:LC:159:GLU:HA	6:LC:217:ILE:HB	2.01	0.42
10:LG:117:ARG:HE	10:LG:121:LYS:HG3	1.84	0.42
20:LR:81:ARG:HG2	20:LR:88:ARG:CZ	2.49	0.42
22:LT:100:LYS:HA	22:LT:103:ASP:HB2	2.00	0.42
30:Lb:13:SER:HA	30:Lb:16:TRP:NE1	2.34	0.42
47:Lt:115:GLN:HA	47:Lt:119:ARG:HH22	1.84	0.42
49:S2:656:G:H5'	49:S2:662:G:N2	2.33	0.42
49:S2:1146:C:OP1	67:Sa:89:ARG:NH2	2.52	0.42
50:SA:173:LEU:HD11	50:SA:177:MET:HE2	2.01	0.42
53:SE:42:LEU:HB2	53:SE:109:PHE:CD2	2.54	0.42
53:SE:72:ILE:HD13	53:SE:77:ARG:HB2	2.01	0.42
56:SI:10:LYS:HE3	58:SL:136:LYS:HE3	2.02	0.42
57:SK:76:ILE:O	57:SK:80:ARG:HB2	2.19	0.42
83:CA:123:HIS:NE2	83:CA:337:PRO:HD2	2.34	0.42
1:L5:171:U:H3	14:LL:130:LYS:HB2	1.85	0.42
1:L5:1563:A:H2'	1:L5:1564:A:C8	2.54	0.42
1:L5:1617:G:H1'	1:L5:2513:A:N6	2.33	0.42
1:L5:2664:G:H4'	1:L5:2677:G:H4'	2.02	0.42
1:L5:3923:A:H2'	1:L5:3924:C:C6	2.54	0.42
1:L5:4099:G:H2'	1:L5:4101:C:N4	2.34	0.42
1:L5:4954:G:H2'	1:L5:4955:A:H8	1.84	0.42
3:L8:120:G:H2'	3:L8:121:G:C8	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:358:ARG:H	5:LB:358:ARG:HG2	1.68	0.42
6:LC:44:LEU:HB2	6:LC:238:LEU:HD21	2.01	0.42
11:LH:12:ILE:HB	11:LH:53:LYS:O	2.20	0.42
45:Lr:32:LEU:HD12	45:Lr:106:LEU:HB3	2.01	0.42
49:S2:525:A:H2'	49:S2:526:A:H8	1.84	0.42
49:S2:689:U:H2'	49:S2:690:G:C2	2.54	0.42
49:S2:946:U:H2'	49:S2:947:G:C8	2.54	0.42
49:S2:1653:U:H3	49:S2:1671:G:H1	1.68	0.42
57:SK:91:PRO:HD2	57:SK:94:LEU:HD12	2.01	0.42
73:SJ:127:ARG:CB	81:Se:31:ARG:HH12	2.33	0.42
78:SY:106:GLN:O	78:SY:110:ARG:HD3	2.20	0.42
79:SZ:111:ARG:HD3	79:SZ:114:LYS:HD3	2.01	0.42
83:CA:11:THR:OG1	83:CA:12:ILE:N	2.52	0.42
85:CC:63:U:H2'	85:CC:64:C:H6	1.84	0.42
1:L5:1503:A:H62	19:LQ:87:THR:HG21	1.84	0.42
1:L5:4218:U:OP1	22:LT:5:LYS:NZ	2.53	0.42
6:LC:218:ILE:O	6:LC:221:PHE:C	2.62	0.42
7:LD:104:LEU:HB2	7:LD:247:ILE:HD12	2.02	0.42
13:LJ:91:GLU:CD	59:SP:13:ARG:HE	2.26	0.42
32:Ld:92:ARG:HA	32:Ld:102:LEU:HD23	2.00	0.42
34:Lf:93:PRO:HB2	34:Lf:95:LYS:HG2	2.01	0.42
46:Ls:144:THR:O	46:Ls:144:THR:OG1	2.35	0.42
49:S2:305:U:O5'	49:S2:308:G:O2'	2.36	0.42
49:S2:1741:U:H2'	49:S2:1742:C:O4'	2.20	0.42
53:SE:175:PHE:HZ	53:SE:208:VAL:HG11	1.84	0.42
55:SH:73:GLN:HA	55:SH:76:GLN:HB2	2.01	0.42
83:CA:88:HIS:HB3	83:CA:246:ILE:HG13	2.00	0.42
85:CC:63:U:H2'	85:CC:64:C:C6	2.54	0.42
1:L5:1207:C:H2'	1:L5:1208:G:H8	1.84	0.42
1:L5:2863:G:O2'	20:LR:82:LYS:O	2.34	0.42
1:L5:4246:G:H2'	1:L5:4247:G:H8	1.84	0.42
1:L5:4723:A:H2'	1:L5:4724:A:C8	2.55	0.42
5:LB:89:ILE:HG12	5:LB:197:ALA:HB1	2.00	0.42
8:LE:145:THR:O	8:LE:148:THR:OG1	2.25	0.42
9:LF:50:ILE:HD12	9:LF:186:CYS:HB3	2.01	0.42
11:LH:26:ILE:HG13	11:LH:35:ARG:HG3	2.01	0.42
11:LH:128:MET:SD	11:LH:157:SER:HB3	2.60	0.42
12:LI:68:ALA:HB1	12:LI:155:ALA:HB1	2.02	0.42
43:Lo:70:LEU:HD12	43:Lo:81:ARG:HH21	1.84	0.42
49:S2:455:A:H2'	49:S2:456:C:H6	1.85	0.42
49:S2:1013:U:O5'	75:SN:12:SER:OG	2.38	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SD:215:ASP:N	52:SD:215:ASP:OD1	2.53	0.42
54:SF:77:MET:H	54:SF:77:MET:HG2	1.68	0.42
57:SK:15:LEU:HD21	57:SK:71:LEU:HD13	2.02	0.42
60:SQ:104:SER:O	60:SQ:108:ILE:HG12	2.18	0.42
70:Sg:252:THR:O	70:Sg:252:THR:OG1	2.35	0.42
71:SC:206:SER:OG	71:SC:210:PRO:HG2	2.19	0.42
76:SO:31:CYS:HB2	76:SO:93:LEU:HD13	2.01	0.42
76:SO:103:ASN:HB3	76:SO:142:ARG:HG3	2.00	0.42
78:SY:3:ASP:OD1	78:SY:3:ASP:N	2.53	0.42
1:L5:86:U:H2'	1:L5:87:A:H8	1.85	0.42
1:L5:1686:C:O2'	30:Lb:18:ARG:NH1	2.52	0.42
1:L5:3656:A:H2'	1:L5:3657:U:H6	1.85	0.42
1:L5:4108:G:H2'	1:L5:4109:G:H8	1.84	0.42
1:L5:4208:U:H2'	1:L5:4209:G:C8	2.55	0.42
1:L5:4711:C:O2'	17:LO:145:VAL:O	2.38	0.42
1:L5:4764:A:N1	11:LH:60:TRP:HB2	2.34	0.42
9:LF:57:TYR:OH	9:LF:189:ASP:OD1	2.34	0.42
49:S2:1677:U:H2'	49:S2:1678:A:C8	2.53	0.42
50:SA:126:ASP:HB3	50:SA:129:ALA:HB3	2.01	0.42
54:SF:155:CYS:HB3	54:SF:159:ARG:NH1	2.34	0.42
60:SQ:34:VAL:HG12	60:SQ:70:VAL:HB	2.01	0.42
71:SC:206:SER:OG	71:SC:207:ALA:N	2.52	0.42
1:L5:86:U:H2'	1:L5:87:A:C8	2.54	0.42
1:L5:293:G:H4'	1:L5:294:G:C8	2.55	0.42
1:L5:486:C:H2'	1:L5:487:G:C8	2.55	0.42
1:L5:1468:C:OP1	29:La:132:ARG:NH2	2.48	0.42
1:L5:1704:C:O2	1:L5:2097:U:N3	2.52	0.42
1:L5:2297:G:H4'	6:LC:242:PRO:HB2	2.01	0.42
1:L5:2781:G:O2'	40:Ll:3:SER:O	2.37	0.42
1:L5:4290:U:OP1	43:Lo:9:ARG:NH1	2.39	0.42
1:L5:4598:C:H2'	1:L5:4611:A:H61	1.85	0.42
39:Lk:5:ILE:HG21	39:Lk:11:PHE:HB2	2.02	0.42
47:Lt:151:ILE:O	47:Lt:155:ILE:HB	2.20	0.42
49:S2:120:U:H2'	49:S2:121:U:C6	2.55	0.42
49:S2:163:U:H2'	49:S2:164:A:C8	2.55	0.42
49:S2:351:G:OP1	56:SI:7:ASN:ND2	2.52	0.42
49:S2:1218:C:H2'	49:S2:1219:C:H6	1.84	0.42
49:S2:1278:A:OP1	57:SK:55:ARG:NH1	2.50	0.42
49:S2:1565:C:H5	63:ST:101:ARG:HH12	1.66	0.42
50:SA:185:MET:HE2	50:SA:185:MET:HB3	1.76	0.42
52:SD:197:LYS:HE2	52:SD:197:LYS:HB2	1.90	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SE:104:ASP:HB3	53:SE:110:ALA:HB2	2.01	0.42
55:SH:177:TYR:O	55:SH:181:THR:OG1	2.36	0.42
58:SL:90:ARG:HD2	58:SL:109:MET:HE2	2.02	0.42
63:ST:5:THR:H	63:ST:8:ASP:HB2	1.84	0.42
63:ST:57:ALA:HA	63:ST:103:VAL:HG13	2.01	0.42
65:SV:17:CYS:O	65:SV:21:ASN:N	2.52	0.42
70:Sg:18:VAL:HG21	70:Sg:307:VAL:HG22	2.01	0.42
72:SG:226:GLU:OE1	72:SG:230:LYS:NZ	2.52	0.42
1:L5:343:C:O2'	38:Lj:75:ARG:NH2	2.52	0.42
1:L5:481:G:H2'	1:L5:482:G:C8	2.55	0.42
1:L5:1499:C:OP1	19:LQ:150:ARG:NH2	2.39	0.42
1:L5:1762:C:H5''	1:L5:1764:G:H1	1.85	0.42
1:L5:2295:C:H2'	1:L5:2296:G:H8	1.85	0.42
1:L5:4076:G:OP2	1:L5:4163:U:N3	2.47	0.42
1:L5:4301:U:OP1	22:LT:78:LYS:NZ	2.46	0.42
5:LB:286:LYS:HB3	5:LB:332:MET:HB3	2.00	0.42
7:LD:103:LEU:HG	7:LD:247:ILE:HG21	2.00	0.42
10:LG:100:HIS:ND1	10:LG:103:ARG:HD2	2.35	0.42
13:LJ:66:GLU:O	13:LJ:68:ILE:HG12	2.20	0.42
17:LO:43:ILE:HD11	17:LO:138:LEU:HD13	2.01	0.42
49:S2:532:C:H2'	49:S2:533:A:C8	2.55	0.42
49:S2:750:C:H41	49:S2:793:G:H21	1.68	0.42
49:S2:1711:U:H2'	49:S2:1712:A:C8	2.54	0.42
49:S2:1752:C:N3	49:S2:1779:G:N1	2.68	0.42
50:SA:10:MET:HE2	50:SA:10:MET:HB3	1.90	0.42
51:SB:87:ILE:O	51:SB:99:ASN:N	2.49	0.42
59:SP:31:GLU:O	59:SP:35:GLN:HG2	2.19	0.42
63:ST:110:LEU:HD22	63:ST:112:MET:HE3	2.02	0.42
67:Sa:60:ASP:OD1	67:Sa:60:ASP:N	2.47	0.42
1:L5:164:G:H2'	1:L5:165:A:C8	2.55	0.42
1:L5:1558:A:H2'	1:L5:1559:G:C8	2.55	0.42
12:LI:53:VAL:HG22	12:LI:134:VAL:HG22	2.02	0.42
18:LP:122:ALA:HB3	18:LP:143:PRO:HB2	2.02	0.42
22:LT:27:LEU:HA	22:LT:30:TYR:HB2	2.00	0.42
29:La:71:PRO:HD2	29:La:109:TYR:HB2	2.02	0.42
32:Ld:29:ILE:O	32:Ld:33:ILE:HG12	2.20	0.42
49:S2:920:A:H4'	77:SW:57:ARG:HD3	2.02	0.42
55:SH:177:TYR:CZ	55:SH:181:THR:HG21	2.55	0.42
56:SI:76:THR:HG21	56:SI:104:ILE:HD12	2.02	0.42
60:SQ:42:ILE:HG22	60:SQ:44:PRO:HD2	2.01	0.42
60:SQ:140:ARG:HA	60:SQ:140:ARG:HD3	1.93	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:182:G:H2'	1:L5:182:G:N3	2.35	0.41
1:L5:1097:C:H2'	1:L5:1098:G:C8	2.56	0.41
1:L5:1974:U:H4'	1:L5:1975:G:H3'	2.00	0.41
1:L5:2540:C:H2'	1:L5:2541:G:C8	2.55	0.41
1:L5:2899:C:P	20:LR:108:ARG:HH22	2.43	0.41
1:L5:4088:C:H2'	1:L5:4089:G:C8	2.55	0.41
1:L5:4238:G:H2'	1:L5:4239:A:H8	1.84	0.41
1:L5:4745:G:H1	1:L5:4955:A:N6	2.16	0.41
5:LB:73:VAL:O	24:LV:89:ARG:NH2	2.47	0.41
19:LQ:154:LYS:HE2	19:LQ:161:SER:HB3	2.02	0.41
26:LX:147:LEU:HD12	26:LX:147:LEU:HA	1.91	0.41
28:LZ:88:ASP:O	28:LZ:121:ARG:NH2	2.45	0.41
55:SH:65:PRO:O	55:SH:69:LEU:N	2.52	0.41
63:ST:126:GLN:O	63:ST:129:ARG:HB2	2.20	0.41
77:SW:44:HIS:NE2	77:SW:112:ASP:OD2	2.52	0.41
80:Sb:34:ASP:O	80:Sb:79:PHE:HA	2.20	0.41
1:L5:20:U:H3'	1:L5:21:G:H8	1.85	0.41
1:L5:228:C:O2'	27:LY:14:ASN:OD1	2.26	0.41
1:L5:2666:U:OP2	20:LR:124:TYR:OH	2.31	0.41
1:L5:3596:A:H1'	58:SL:2:ALA:HA	2.02	0.41
1:L5:3654:G:O2'	1:L5:3693:U:OP1	2.29	0.41
1:L5:3933:G:H2'	1:L5:3934:G:H8	1.85	0.41
3:L8:67:U:H5''	38:Lj:86:PRO:HA	2.02	0.41
5:LB:57:VAL:HG22	5:LB:73:VAL:HG22	2.01	0.41
7:LD:77:ALA:O	7:LD:108:ARG:NH1	2.53	0.41
11:LH:59:LYS:HA	11:LH:59:LYS:HD2	1.85	0.41
17:LO:84:VAL:HG11	17:LO:102:LEU:HD22	2.02	0.41
45:Lr:16:PHE:HB3	45:Lr:27:THR:H	1.84	0.41
47:Lt:48:LYS:HA	47:Lt:48:LYS:HD2	1.77	0.41
47:Lt:105:THR:HG22	47:Lt:107:ASP:HB2	2.02	0.41
49:S2:1457:U:H2'	49:S2:1458:G:C8	2.55	0.41
49:S2:1628:C:H2'	49:S2:1629:C:H6	1.84	0.41
50:SA:136:GLU:O	50:SA:140:VAL:HG22	2.20	0.41
50:SA:198:MET:SD	61:SR:85:VAL:HG13	2.60	0.41
52:SD:37:VAL:HG12	52:SD:50:ILE:HD13	2.02	0.41
55:SH:136:PRO:O	55:SH:162:GLN:HG3	2.20	0.41
73:SJ:109:ARG:HA	73:SJ:148:ILE:HD13	2.02	0.41
73:SJ:127:ARG:HB3	81:Se:31:ARG:HH12	1.85	0.41
78:SY:44:LEU:HD23	78:SY:55:ILE:HD11	2.02	0.41
83:CA:199:LYS:HE2	83:CA:216:ALA:HB3	2.02	0.41
85:CC:24:U:H2'	85:CC:25:G:H8	1.84	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:72:C:H5	14:LL:67:HIS:HD2	1.68	0.41
1:L5:229:G:H5''	27:LY:11:ARG:HG3	2.01	0.41
1:L5:461:G:H2'	1:L5:462:G:C8	2.54	0.41
1:L5:2478:C:N3	1:L5:2591:A:O2'	2.53	0.41
1:L5:2565:A:H3'	1:L5:2566:G:H8	1.86	0.41
1:L5:3669:G:H21	1:L5:3672:G:N2	2.18	0.41
1:L5:3782:C:P	42:Ln:23:ARG:HH22	2.42	0.41
1:L5:4174:U:H2'	1:L5:4175:G:H8	1.85	0.41
1:L5:5006:U:H4'	1:L5:5007:A:H5'	2.01	0.41
9:LF:122:PHE:O	9:LF:205:ASN:ND2	2.53	0.41
25:LW:80:ARG:HH12	72:SG:10:THR:C	2.28	0.41
47:Lt:124:GLU:HG3	47:Lt:125:LEU:H	1.84	0.41
49:S2:842:C:H2'	49:S2:843:C:C6	2.55	0.41
49:S2:1344:A:N1	49:S2:1385:G:O2'	2.52	0.41
49:S2:1416:C:H2'	49:S2:1417:C:C6	2.55	0.41
49:S2:1619:A:O2'	59:SP:82:ASP:OD2	2.36	0.41
57:SK:27:VAL:HB	57:SK:43:LEU:HD21	2.01	0.41
61:SR:31:ASN:HD22	61:SR:55:THR:HG22	1.86	0.41
75:SN:83:ASP:OD1	75:SN:83:ASP:N	2.52	0.41
1:L5:505:G:H1	1:L5:653:U:H3	1.68	0.41
1:L5:1504:G:H2'	1:L5:1505:C:C6	2.54	0.41
1:L5:1656:U:O2'	1:L5:3906:A:N1	2.48	0.41
1:L5:2089:G:O2'	6:LC:307:LYS:NZ	2.41	0.41
1:L5:4387:C:OP2	1:L5:4532:U:O2'	2.36	0.41
2:L7:92:C:H2'	2:L7:93:G:H8	1.85	0.41
3:L8:138:C:H2'	3:L8:139:G:C8	2.55	0.41
5:LB:214:ASP:CA	5:LB:284:ILE:O	2.50	0.41
5:LB:238:LYS:HE2	5:LB:238:LYS:HB2	1.87	0.41
24:LV:43:LYS:HG3	24:LV:60:MET:HG2	2.03	0.41
49:S2:300:U:H2'	49:S2:301:A:C8	2.55	0.41
49:S2:329:G:H2'	49:S2:330:G:C8	2.55	0.41
49:S2:1039:C:H2'	49:S2:1040:G:C8	2.56	0.41
49:S2:1308:U:H2'	49:S2:1309:C:H6	1.85	0.41
51:SB:154:SER:OG	51:SB:205:TYR:OH	2.38	0.41
59:SP:16:THR:HA	59:SP:20:VAL:C	2.45	0.41
71:SC:60:TRP:CH2	71:SC:62:PRO:HB3	2.56	0.41
72:SG:50:VAL:HG21	72:SG:111:LEU:HB3	2.02	0.41
1:L5:1867:A:H2'	1:L5:1868:A:C8	2.55	0.41
1:L5:4043:G:N2	1:L5:4045:G:N3	2.68	0.41
1:L5:4935:C:H2'	1:L5:4936:G:C8	2.56	0.41
1:L5:5057:C:H2'	1:L5:5058:A:C8	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:325:MET:HE1	9:LF:155:TYR:CE2	2.56	0.41
11:LH:172:ILE:O	11:LH:176:LEU:HD23	2.21	0.41
13:LJ:17:ILE:HD11	13:LJ:165:TRP:CZ2	2.55	0.41
14:LL:48:PRO:HG3	36:Lh:118:LYS:HE3	2.02	0.41
15:LM:41:PRO:HB3	15:LM:70:GLN:HE21	1.84	0.41
34:Lf:6:TRP:HZ3	34:Lf:8:LYS:HG2	1.86	0.41
38:Lj:60:GLY:HA2	38:Lj:64:MET:SD	2.61	0.41
47:Lt:16:ARG:HD2	47:Lt:28:LEU:HD12	2.02	0.41
47:Lt:113:ALA:HA	47:Lt:116:MET:HE2	2.02	0.41
49:S2:388:U:H2'	49:S2:389:A:C8	2.54	0.41
49:S2:1250:A:H5'	64:SU:74:SER:HB2	2.02	0.41
49:S2:1311:C:H2'	49:S2:1312:G:C4	2.55	0.41
49:S2:1415:C:P	63:ST:129:ARG:HH12	2.41	0.41
49:S2:1455:A:H2'	49:S2:1456:G:C8	2.55	0.41
49:S2:1538:C:H2'	49:S2:1539:U:C6	2.56	0.41
49:S2:1562:C:H2'	49:S2:1563:G:C8	2.51	0.41
49:S2:1627:C:H2'	49:S2:1628:C:H6	1.84	0.41
49:S2:1808:U:H2'	49:S2:1809:A:H8	1.86	0.41
57:SK:64:TRP:HB3	69:Sd:23:VAL:HA	2.02	0.41
62:SS:70:ILE:HG22	62:SS:77:TYR:CD2	2.56	0.41
64:SU:56:MET:HE3	64:SU:88:LEU:HD21	2.02	0.41
75:SN:32:ASP:OD1	75:SN:32:ASP:N	2.53	0.41
78:SY:44:LEU:HA	78:SY:44:LEU:HD12	1.85	0.41
78:SY:76:TYR:OH	78:SY:86:GLU:OE1	2.28	0.41
1:L5:703:G:H2'	1:L5:704:C:H4'	2.03	0.41
1:L5:1983:A:H62	1:L5:1987:C:H5''	1.85	0.41
5:LB:162:VAL:O	5:LB:182:GLU:HA	2.20	0.41
7:LD:37:VAL:HG12	7:LD:50:ARG:HD3	2.03	0.41
11:LH:92:MET:HE2	11:LH:179:ILE:HG22	2.02	0.41
13:LJ:40:LEU:HD12	13:LJ:70:VAL:HG13	2.02	0.41
18:LP:23:ARG:HD2	18:LP:125:MET:HE1	2.02	0.41
20:LR:63:CYS:O	20:LR:67:THR:OG1	2.30	0.41
24:LV:74:LYS:C	24:LV:75:LYS:HD2	2.45	0.41
36:Lh:12:LYS:NZ	36:Lh:20:GLN:OE1	2.40	0.41
49:S2:296:U:O2'	53:SE:131:VAL:O	2.33	0.41
49:S2:433:A:H2'	49:S2:434:G:C8	2.56	0.41
49:S2:610:G:H2'	49:S2:611:G:C8	2.56	0.41
58:SL:103:GLU:OE1	66:SX:14:ARG:NH1	2.51	0.41
73:SJ:58:ARG:HG2	73:SJ:98:LEU:HD21	2.03	0.41
78:SY:91:LEU:O	78:SY:95:GLY:CA	2.69	0.41
83:CA:134:GLN:NE2	83:CA:342:LEU:O	2.53	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1516:G:O2'	14:LL:18:TRP:NE1	2.53	0.41
1:L5:1741:G:O2'	1:L5:1781:U:OP2	2.30	0.41
1:L5:2066:C:H4'	34:Lf:79:GLY:HA2	2.02	0.41
88:L5:5315:T1C:H61C	88:L5:5317:T1C:C9	2.50	0.41
7:LD:181:PRO:HD2	7:LD:195:HIS:CD2	2.56	0.41
11:LH:4:ILE:HG12	11:LH:61:TRP:CH2	2.56	0.41
14:LL:178:ALA:N	29:La:134:GLU:OE2	2.43	0.41
16:LN:150:TRP:O	16:LN:156:HIS:ND1	2.54	0.41
31:Lc:79:ILE:HG12	31:Lc:90:ARG:HG2	2.02	0.41
34:Lf:16:ARG:HB3	34:Lf:21:GLN:HG2	2.03	0.41
49:S2:1201:U:H2'	49:S2:1202:U:C6	2.55	0.41
50:SA:24:HIS:O	50:SA:48:ILE:HA	2.21	0.41
50:SA:199:PRO:O	50:SA:203:PHE:HD1	2.04	0.41
53:SE:15:PRO:HD2	53:SE:18:TRP:CZ3	2.55	0.41
53:SE:15:PRO:HG3	53:SE:39:ARG:HD3	2.03	0.41
58:SL:33:LEU:HD12	58:SL:34:PRO:HD2	2.02	0.41
59:SP:76:VAL:HG23	59:SP:94:VAL:HG22	2.03	0.41
59:SP:91:GLY:HA2	59:SP:107:ILE:O	2.21	0.41
70:Sg:168:CYS:HB3	70:Sg:198:VAL:HG13	2.03	0.41
72:SG:2:LYS:O	72:SG:108:VAL:HA	2.21	0.41
77:SW:5:ASN:HB3	77:SW:8:ALA:HB3	2.03	0.41
82:Sf:141:CYS:HB3	82:Sf:146:LEU:HD23	2.03	0.41
83:CA:80:ILE:HG12	83:CA:108:ILE:HD13	2.03	0.41
1:L5:48:G:OP1	14:LL:16:LYS:NZ	2.42	0.41
1:L5:1558:A:H2'	1:L5:1559:G:H8	1.84	0.41
1:L5:2296:G:O2'	6:LC:242:PRO:O	2.34	0.41
1:L5:3975:C:H5''	1:L5:4031:U:H5'	2.02	0.41
1:L5:4139:G:O6	1:L5:4141:G:N2	2.52	0.41
1:L5:4458:C:H2'	1:L5:4459:U:C6	2.55	0.41
2:L7:92:C:H2'	2:L7:93:G:C8	2.55	0.41
8:LE:68:MET:HE3	8:LE:68:MET:HB3	1.84	0.41
15:LM:37:LEU:HD12	15:LM:37:LEU:HA	1.97	0.41
21:LS:30:MET:HB3	21:LS:30:MET:HE2	1.87	0.41
29:La:36:GLY:HA3	29:La:40:HIS:CE1	2.55	0.41
49:S2:215:G:H2'	49:S2:216:C:H6	1.85	0.41
49:S2:1758:G:O3'	49:S2:1774:C:N4	2.54	0.41
52:SD:21:LEU:HB3	52:SD:77:PHE:HE2	1.86	0.41
52:SD:135:GLU:HA	52:SD:153:VAL:HA	2.03	0.41
53:SE:10:LYS:HA	53:SE:10:LYS:HD3	1.89	0.41
83:CA:166:VAL:O	83:CA:170:TRP:HB2	2.21	0.41
1:L5:424:U:H2'	1:L5:425:U:C6	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:460:C:H2'	1:L5:461:G:C8	2.54	0.41
1:L5:676:C:H2'	1:L5:677:G:H8	1.86	0.41
1:L5:679:C:H2'	1:L5:680:G:C8	2.56	0.41
1:L5:1478:C:H2'	1:L5:1479:G:H8	1.85	0.41
1:L5:1677:U:H4'	1:L5:1680:G:C2	2.56	0.41
1:L5:2008:U:O2'	1:L5:2010:A:N7	2.50	0.41
1:L5:2326:G:H5''	33:Le:127:ALA:HB2	2.02	0.41
1:L5:2640:G:H2'	1:L5:2641:A:C8	2.55	0.41
1:L5:3707:U:H2'	1:L5:3708:C:C6	2.56	0.41
1:L5:3971:G:N2	1:L5:3973:G:N3	2.69	0.41
1:L5:4067:U:H2'	1:L5:4068:U:C6	2.55	0.41
1:L5:4378:A:O2'	1:L5:4379:A:H2'	2.21	0.41
1:L5:4588:U:H5'	5:LB:14:LEU:HB2	2.02	0.41
3:L8:21:C:H3'	6:LC:196:MET:HE2	2.03	0.41
4:LA:159:SER:OG	4:LA:162:ASN:OD1	2.37	0.41
5:LB:154:LYS:HE2	5:LB:191:ALA:HB2	2.02	0.41
6:LC:304:ALA:HA	6:LC:305:PRO:HD3	1.95	0.41
7:LD:59:ASP:OD1	7:LD:60:ILE:N	2.54	0.41
8:LE:154:THR:HG21	8:LE:193:PHE:CD1	2.56	0.41
8:LE:183:ARG:HA	8:LE:183:ARG:HD2	1.89	0.41
9:LF:155:TYR:CD1	9:LF:187:MET:HE3	2.56	0.41
9:LF:226:HIS:HA	9:LF:233:ALA:HB3	2.02	0.41
12:LI:51:HIS:CD2	12:LI:168:SER:HB2	2.55	0.41
13:LJ:4:ASP:O	13:LJ:8:LYS:HB3	2.21	0.41
14:LL:164:GLU:HG3	29:La:100:ILE:HB	2.03	0.41
17:LO:118:MET:HG2	21:LS:169:THR:HG22	2.02	0.41
19:LQ:65:ARG:HA	19:LQ:68:ARG:HE	1.86	0.41
24:LV:97:TYR:CD1	25:LW:19:ARG:HD3	2.56	0.41
46:Ls:114:GLY:HA2	46:Ls:166:LYS:HE2	2.03	0.41
49:S2:126:G:H5''	72:SG:195:LYS:HG2	2.03	0.41
49:S2:886:A:N6	49:S2:901:G:N9	2.66	0.41
49:S2:1288:U:O4	49:S2:1311:C:N3	2.54	0.41
49:S2:1344:A:N6	49:S2:1386:A:H5'	2.36	0.41
49:S2:1405:A:H2'	49:S2:1406:G:O4'	2.20	0.41
49:S2:1562:C:H4'	63:ST:119:GLY:HA3	2.03	0.41
49:S2:1563:G:H2'	49:S2:1564:C:H6	1.85	0.41
49:S2:1587:G:H5''	63:ST:77:LYS:HD3	2.02	0.41
49:S2:1677:U:OP1	54:SF:148:ASN:HB3	2.20	0.41
49:S2:1731:A:H2'	49:S2:1732:G:C8	2.56	0.41
50:SA:163:CYS:HB3	50:SA:174:MET:HE3	2.03	0.41
61:SR:33:ARG:NE	70:Sg:107:ASP:OD2	2.38	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SR:37:GLU:CD	70:Sg:150:TRP:HE1	2.29	0.41
61:SR:76:GLU:O	61:SR:79:GLU:HG3	2.21	0.41
62:SS:4:VAL:HG11	79:SZ:52:LYS:NZ	2.36	0.41
67:Sa:41:ILE:HD12	67:Sa:41:ILE:HG23	1.79	0.41
75:SN:46:THR:HB	75:SN:86:GLU:HG3	2.02	0.41
76:SO:43:HIS:CD2	76:SO:55:ARG:HB2	2.55	0.41
79:SZ:55:TYR:O	79:SZ:58:LEU:HG	2.21	0.41
83:CA:35:LEU:HD22	83:CA:108:ILE:HG21	2.03	0.41
83:CA:144:LYS:HD3	83:CA:338:PHE:HZ	1.85	0.41
1:L5:129:C:H2'	1:L5:130:C:C6	2.56	0.41
1:L5:325:U:H2'	1:L5:326:C:C6	2.56	0.41
1:L5:654:C:H4'	6:LC:269:LYS:HB3	2.03	0.41
1:L5:1179:U:H3'	1:L5:1180:C:H5''	2.03	0.41
1:L5:1194:G:H2'	1:L5:1195:G:C8	2.55	0.41
1:L5:1631:A:C8	4:LA:199:VAL:HG21	2.56	0.41
1:L5:1725:U:H2'	1:L5:1726:U:H6	1.86	0.41
1:L5:1843:A:H2'	1:L5:1844:G:C8	2.57	0.41
1:L5:2714:G:H2'	1:L5:2715:G:H8	1.86	0.41
1:L5:3759:A:O2'	49:S2:1826:G:O2'	2.38	0.41
1:L5:4507:A:H2'	1:L5:4508:C:C6	2.56	0.41
88:L5:5316:T1C:H713	88:L5:5316:T1C:H62C	2.02	0.41
6:LC:8:ILE:HD11	6:LC:257:PHE:CZ	2.56	0.41
8:LE:185:PRO:HG2	8:LE:187:ARG:HG3	2.03	0.41
16:LN:11:TRP:O	16:LN:14:LYS:HG3	2.21	0.41
17:LO:22:ILE:HD13	17:LO:120:VAL:HG11	2.03	0.41
21:LS:115:ALA:O	21:LS:118:ARG:NH1	2.54	0.41
26:LX:81:LEU:HG	26:LX:83:THR:HG23	2.02	0.41
39:Lk:5:ILE:O	39:Lk:45:LEU:HA	2.21	0.41
46:Ls:83:ARG:HD3	46:Ls:83:ARG:HA	1.87	0.41
49:S2:534:G:H2'	49:S2:535:G:C8	2.55	0.41
49:S2:1017:U:H2'	49:S2:1018:U:H6	1.86	0.41
54:SF:120:GLY:O	54:SF:146:ARG:NH2	2.45	0.41
59:SP:11:THR:O	59:SP:13:ARG:NH1	2.54	0.41
70:Sg:197:THR:HG23	70:Sg:239:LEU:HD12	2.03	0.41
72:SG:24:LEU:HD23	72:SG:24:LEU:HA	1.94	0.41
73:SJ:124:HIS:O	73:SJ:128:VAL:HG23	2.21	0.41
76:SO:66:ARG:HH22	85:CC:38:C:H5'	1.86	0.41
79:SZ:49:LEU:N	79:SZ:83:LEU:HD21	2.28	0.41
82:Sf:131:PHE:HB3	82:Sf:132:MET:H	1.64	0.41
1:L5:723:A:OP1	1:L5:934:C:N4	2.54	0.40
1:L5:1866:U:OP1	12:LI:4:ARG:NH1	2.34	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2049:G:O2'	1:L5:3884:U:O2'	2.31	0.40
1:L5:2297:G:H5'	6:LC:205:ARG:HG2	2.03	0.40
1:L5:2394:G:O2'	1:L5:2819:U:O4	2.33	0.40
1:L5:4896:G:H2'	1:L5:4897:G:C8	2.56	0.40
88:L5:5315:T1C:H951	88:L5:5315:T1C:H921	1.87	0.40
5:LB:49:TYR:OH	5:LB:168:MET:SD	2.74	0.40
15:LM:119:ARG:HG3	17:LO:189:ILE:HB	2.02	0.40
33:Le:37:LYS:HA	33:Le:38:PRO:HD3	1.92	0.40
35:Lg:61:PRO:HA	35:Lg:64:LEU:HD12	2.02	0.40
36:Lh:98:HIS:O	36:Lh:102:LEU:HG	2.22	0.40
45:Lr:28:GLU:HG2	45:Lr:31:ASN:HB2	2.03	0.40
46:Ls:36:GLY:O	46:Ls:40:MET:HG3	2.22	0.40
49:S2:1037:G:H4'	49:S2:1845:A:H4'	2.02	0.40
55:SH:7:LYS:HD3	55:SH:7:LYS:HA	1.83	0.40
55:SH:83:LEU:HD22	55:SH:92:VAL:HG21	2.03	0.40
59:SP:21:ASP:HB3	59:SP:24:GLN:NE2	2.36	0.40
62:SS:114:LEU:HD23	62:SS:114:LEU:HA	1.92	0.40
83:CA:32:LEU:HD13	83:CA:35:LEU:HD21	2.02	0.40
1:L5:182:G:N2	88:L5:5316:T1C:H712	2.36	0.40
1:L5:318:A:H2'	1:L5:319:A:H8	1.85	0.40
1:L5:1283:G:N1	1:L5:2076:G:OP1	2.40	0.40
1:L5:2018:C:H2'	1:L5:2019:C:C6	2.56	0.40
1:L5:2386:U:H5''	20:LR:24:LEU:HD12	2.03	0.40
1:L5:2521:G:H5'	1:L5:2640:G:H1'	2.02	0.40
1:L5:2764:A:H2'	1:L5:2765:A:H8	1.86	0.40
1:L5:3920:U:H2'	1:L5:3921:U:C6	2.56	0.40
1:L5:4572:U:H2'	1:L5:4573:G:C8	2.56	0.40
5:LB:107:ALA:HB2	5:LB:201:LEU:HG	2.04	0.40
5:LB:181:MET:HE1	5:LB:346:THR:HG23	2.04	0.40
9:LF:46:ARG:O	9:LF:50:ILE:HG12	2.21	0.40
12:LI:39:LYS:HE3	12:LI:39:LYS:HB2	1.83	0.40
16:LN:140:LYS:HD3	16:LN:140:LYS:HA	1.85	0.40
38:Lj:67:LEU:HA	38:Lj:67:LEU:HD23	1.87	0.40
46:Ls:160:LEU:HG	46:Ls:161:ILE:HG13	2.02	0.40
49:S2:461:U:H2'	49:S2:462:C:C6	2.56	0.40
49:S2:1406:G:H2'	49:S2:1407:U:C6	2.56	0.40
62:SS:22:GLY:HA2	62:SS:56:ALA:HB3	2.03	0.40
68:Sc:13:ARG:HB2	68:Sc:35:MET:SD	2.61	0.40
77:SW:57:ARG:CZ	80:Sb:26:GLN:HE21	2.34	0.40
80:Sb:62:VAL:HG23	80:Sb:74:THR:HG21	2.04	0.40
83:CA:248:LYS:O	83:CA:302:LEU:HA	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1631:A:H2	4:LA:208:GLU:HG3	1.86	0.40
1:L5:3664:G:H2'	1:L5:3665:G:C8	2.56	0.40
1:L5:3893:C:H2'	1:L5:3894:A:C8	2.56	0.40
1:L5:4584:A:H2'	1:L5:4585:U:O4'	2.22	0.40
1:L5:4918:C:H2'	1:L5:4919:G:C8	2.56	0.40
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.21	0.40
7:LD:90:VAL:HG11	7:LD:226:TYR:HA	2.04	0.40
16:LN:60:VAL:HG23	16:LN:134:LEU:HB2	2.04	0.40
17:LO:181:ALA:O	17:LO:185:VAL:HG22	2.22	0.40
19:LQ:35:LEU:O	19:LQ:39:THR:CB	2.67	0.40
25:LW:84:GLY:HA2	72:SG:160:LYS:HA	2.03	0.40
49:S2:1657:G:H2'	49:S2:1658:G:H8	1.86	0.40
50:SA:63:ARG:HG2	50:SA:185:MET:HE1	2.03	0.40
52:SD:169:ASP:OD1	52:SD:169:ASP:N	2.54	0.40
53:SE:126:VAL:O	53:SE:157:ASN:CA	2.69	0.40
54:SF:195:GLU:HA	54:SF:198:ARG:HG2	2.03	0.40
61:SR:21:TYR:HA	61:SR:24:LEU:HD12	2.04	0.40
70:Sg:40:ILE:HB	70:Sg:59:LEU:HB2	2.02	0.40
71:SC:192:LEU:HB3	71:SC:227:ARG:HB3	2.02	0.40
76:SO:56:VAL:HG13	76:SO:77:ALA:HB1	2.02	0.40
82:Sf:92:LYS:HD2	82:Sf:92:LYS:HA	1.96	0.40
1:L5:268:G:H2'	1:L5:269:G:C8	2.56	0.40
1:L5:715:G:OP1	6:LC:321:ASN:ND2	2.43	0.40
1:L5:2540:C:H2'	1:L5:2541:G:H8	1.87	0.40
1:L5:4135:G:H2'	1:L5:4136:G:C8	2.56	0.40
1:L5:4208:U:H2'	1:L5:4209:G:H8	1.86	0.40
1:L5:4761:G:P	17:LO:37:ARG:HH12	2.43	0.40
3:L8:102:G:H5''	38:Lj:39:TYR:HE1	1.86	0.40
9:LF:125:LEU:HD23	9:LF:125:LEU:HA	1.92	0.40
12:LI:209:TRP:O	12:LI:212:LEU:C	2.64	0.40
14:LL:80:GLU:HB3	14:LL:110:LEU:HD12	2.04	0.40
21:LS:93:MET:HE1	21:LS:117:HIS:NE2	2.37	0.40
28:LZ:50:PRO:HD3	28:LZ:68:ILE:HG12	2.03	0.40
49:S2:85:A:H2'	49:S2:86:C:H6	1.85	0.40
49:S2:1326:U:H5'	49:S2:1494:U:OP2	2.22	0.40
51:SB:101:HIS:O	51:SB:217:MET:HG2	2.22	0.40
51:SB:147:ASN:OD1	51:SB:147:ASN:N	2.54	0.40
63:ST:137:GLN:NE2	63:ST:138:VAL:HG13	2.36	0.40
70:Sg:164:ILE:HD13	70:Sg:178:ASN:HA	2.04	0.40
72:SG:2:LYS:HB3	72:SG:15:LEU:HD11	2.03	0.40
1:L5:1346:C:H2'	1:L5:1347:G:C8	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2580:U:O2'	28:LZ:79:HIS:ND1	2.42	0.40
1:L5:4642:U:H2'	1:L5:4643:G:C8	2.56	0.40
4:LA:180:LEU:HD11	44:Lp:26:VAL:HG21	2.02	0.40
5:LB:163:ILE:HG22	5:LB:180:LEU:HD22	2.04	0.40
7:LD:53:VAL:HG11	7:LD:159:VAL:HA	2.03	0.40
7:LD:223:PHE:HB3	7:LD:226:TYR:HB2	2.04	0.40
9:LF:241:ASN:O	9:LF:245:ARG:HG2	2.21	0.40
12:LI:47:PRO:HB3	12:LI:171:TRP:CZ2	2.57	0.40
20:LR:182:GLU:HG3	20:LR:186:LYS:NZ	2.37	0.40
49:S2:918:U:H4'	75:SN:20:ARG:NH2	2.37	0.40
49:S2:1073:U:H2'	49:S2:1074:C:H6	1.87	0.40
49:S2:1220:A:N3	49:S2:1677:U:O2'	2.49	0.40
51:SB:174:ARG:NH1	51:SB:175:GLU:OE2	2.54	0.40
68:Sc:18:LEU:HB2	68:Sc:29:GLN:HB2	2.04	0.40
71:SC:106:VAL:HG22	71:SC:128:VAL:HG22	2.04	0.40
85:CC:61:C:H2'	85:CC:62:A:C8	2.55	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	LA	246/257 (96%)	227 (92%)	19 (8%)	0	100	100
5	LB	400/403 (99%)	379 (95%)	20 (5%)	1 (0%)	36	70
6	LC	366/427 (86%)	340 (93%)	26 (7%)	0	100	100
7	LD	291/297 (98%)	277 (95%)	14 (5%)	0	100	100
8	LE	215/288 (75%)	199 (93%)	16 (7%)	0	100	100
9	LF	223/248 (90%)	215 (96%)	8 (4%)	0	100	100
10	LG	239/266 (90%)	225 (94%)	14 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	LH	188/192 (98%)	172 (92%)	16 (8%)	0	100	100
12	LI	198/214 (92%)	187 (94%)	10 (5%)	1 (0%)	24	60
13	LJ	174/178 (98%)	161 (92%)	13 (8%)	0	100	100
14	LL	208/211 (99%)	196 (94%)	12 (6%)	0	100	100
15	LM	137/215 (64%)	128 (93%)	9 (7%)	0	100	100
16	LN	201/204 (98%)	190 (94%)	10 (5%)	1 (0%)	24	60
17	LO	199/203 (98%)	194 (98%)	5 (2%)	0	100	100
18	LP	151/184 (82%)	142 (94%)	9 (6%)	0	100	100
19	LQ	185/188 (98%)	176 (95%)	9 (5%)	0	100	100
20	LR	185/196 (94%)	181 (98%)	4 (2%)	0	100	100
21	LS	173/176 (98%)	161 (93%)	12 (7%)	0	100	100
22	LT	157/160 (98%)	151 (96%)	6 (4%)	0	100	100
23	LU	98/128 (77%)	93 (95%)	5 (5%)	0	100	100
24	LV	129/140 (92%)	122 (95%)	7 (5%)	0	100	100
25	LW	122/157 (78%)	113 (93%)	9 (7%)	0	100	100
26	LX	118/156 (76%)	116 (98%)	2 (2%)	0	100	100
27	LY	131/145 (90%)	126 (96%)	5 (4%)	0	100	100
28	LZ	133/136 (98%)	127 (96%)	6 (4%)	0	100	100
29	La	145/148 (98%)	137 (94%)	8 (6%)	0	100	100
30	Lb	105/159 (66%)	98 (93%)	7 (7%)	0	100	100
31	Lc	96/115 (84%)	92 (96%)	4 (4%)	0	100	100
32	Ld	105/125 (84%)	97 (92%)	8 (8%)	0	100	100
33	Le	126/135 (93%)	122 (97%)	4 (3%)	0	100	100
34	Lf	107/110 (97%)	100 (94%)	7 (6%)	0	100	100
35	Lg	112/117 (96%)	111 (99%)	1 (1%)	0	100	100
36	Lh	120/123 (98%)	119 (99%)	1 (1%)	0	100	100
37	Li	100/105 (95%)	100 (100%)	0	0	100	100
38	Lj	84/97 (87%)	76 (90%)	8 (10%)	0	100	100
39	Lk	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
40	Ll	48/51 (94%)	47 (98%)	1 (2%)	0	100	100
41	Lm	49/128 (38%)	49 (100%)	0	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	Ln	22/25 (88%)	22 (100%)	0	0	100	100
43	Lo	103/106 (97%)	97 (94%)	5 (5%)	1 (1%)	12	45
44	Lp	89/92 (97%)	83 (93%)	6 (7%)	0	100	100
45	Lr	123/137 (90%)	117 (95%)	6 (5%)	0	100	100
46	Ls	194/317 (61%)	174 (90%)	20 (10%)	0	100	100
47	Lt	137/165 (83%)	107 (78%)	29 (21%)	1 (1%)	18	53
48	Lz	203/217 (94%)	180 (89%)	23 (11%)	0	100	100
50	SA	219/295 (74%)	208 (95%)	11 (5%)	0	100	100
51	SB	212/264 (80%)	202 (95%)	10 (5%)	0	100	100
52	SD	225/243 (93%)	207 (92%)	18 (8%)	0	100	100
53	SE	260/263 (99%)	242 (93%)	17 (6%)	1 (0%)	30	65
54	SF	180/204 (88%)	172 (96%)	7 (4%)	1 (1%)	21	56
55	SH	182/194 (94%)	173 (95%)	9 (5%)	0	100	100
56	SI	204/208 (98%)	197 (97%)	7 (3%)	0	100	100
57	SK	93/165 (56%)	85 (91%)	8 (9%)	0	100	100
58	SL	140/158 (89%)	134 (96%)	6 (4%)	0	100	100
59	SP	127/145 (88%)	119 (94%)	8 (6%)	0	100	100
60	SQ	142/146 (97%)	132 (93%)	10 (7%)	0	100	100
61	SR	133/135 (98%)	126 (95%)	7 (5%)	0	100	100
62	SS	142/152 (93%)	133 (94%)	9 (6%)	0	100	100
63	ST	141/145 (97%)	133 (94%)	7 (5%)	1 (1%)	18	53
64	SU	102/119 (86%)	93 (91%)	9 (9%)	0	100	100
65	SV	81/83 (98%)	79 (98%)	2 (2%)	0	100	100
66	SX	139/143 (97%)	129 (93%)	9 (6%)	1 (1%)	18	53
67	Sa	100/115 (87%)	91 (91%)	8 (8%)	1 (1%)	12	45
68	Sc	62/69 (90%)	59 (95%)	3 (5%)	0	100	100
69	Sd	53/56 (95%)	49 (92%)	3 (6%)	1 (2%)	6	30
70	Sg	311/317 (98%)	275 (88%)	36 (12%)	0	100	100
71	SC	220/293 (75%)	207 (94%)	13 (6%)	0	100	100
72	SG	235/249 (94%)	224 (95%)	11 (5%)	0	100	100
73	SJ	183/194 (94%)	173 (94%)	9 (5%)	1 (0%)	24	60

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
74	SM	120/132 (91%)	113 (94%)	7 (6%)	0	100	100
75	SN	148/151 (98%)	143 (97%)	5 (3%)	0	100	100
76	SO	133/151 (88%)	120 (90%)	12 (9%)	1 (1%)	16	50
77	SW	127/130 (98%)	120 (94%)	7 (6%)	0	100	100
78	SY	124/133 (93%)	118 (95%)	6 (5%)	0	100	100
79	SZ	73/125 (58%)	58 (80%)	15 (20%)	0	100	100
80	Sb	81/84 (96%)	73 (90%)	8 (10%)	0	100	100
81	Se	56/59 (95%)	50 (89%)	6 (11%)	0	100	100
82	Sf	65/156 (42%)	50 (77%)	15 (23%)	0	100	100
83	CA	350/394 (89%)	332 (95%)	18 (5%)	0	100	100
84	CB	14/408 (3%)	14 (100%)	0	0	100	100
86	CE	71/223 (32%)	70 (99%)	1 (1%)	0	100	100
All	All	12250/14412 (85%)	11492 (94%)	745 (6%)	13 (0%)	49	80

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	LI	213	HIS
43	Lo	56	PHE
5	LB	302	ASN
16	LN	124	ASP
53	SE	165	GLU
54	SF	128	ILE
67	Sa	46	GLU
73	SJ	122	SER
63	ST	45	LEU
66	SX	124	LYS
76	SO	140	THR
69	Sd	14	PHE
47	Lt	9	GLU

5.3.2 Protein sidechains ⓘ

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

The Analysed column shows the number of residues for which the sidechain conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LA	190/199 (96%)	190 (100%)	0	100	100
5	LB	348/349 (100%)	346 (99%)	2 (1%)	78	88
6	LC	306/348 (88%)	306 (100%)	0	100	100
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	195/252 (77%)	195 (100%)	0	100	100
9	LF	194/215 (90%)	194 (100%)	0	100	100
10	LG	203/223 (91%)	203 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	172/181 (95%)	172 (100%)	0	100	100
13	LJ	148/149 (99%)	148 (100%)	0	100	100
14	LL	176/177 (99%)	176 (100%)	0	100	100
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	173/174 (99%)	173 (100%)	0	100	100
18	LP	134/163 (82%)	133 (99%)	1 (1%)	76	86
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	166/175 (95%)	166 (100%)	0	100	100
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	139 (100%)	0	100	100
23	LU	90/115 (78%)	90 (100%)	0	100	100
24	LV	101/107 (94%)	101 (100%)	0	100	100
25	LW	103/126 (82%)	103 (100%)	0	100	100
26	LX	108/133 (81%)	108 (100%)	0	100	100
27	LY	123/135 (91%)	123 (100%)	0	100	100
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	120 (100%)	0	100	100
30	Lb	89/126 (71%)	89 (100%)	0	100	100
31	Lc	83/97 (86%)	83 (100%)	0	100	100
32	Ld	98/110 (89%)	98 (100%)	0	100	100
33	Le	114/121 (94%)	114 (100%)	0	100	100
34	Lf	88/89 (99%)	88 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	Lg	98/100 (98%)	98 (100%)	0	100	100
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	86 (100%)	0	100	100
38	Lj	73/80 (91%)	73 (100%)	0	100	100
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	47/115 (41%)	47 (100%)	0	100	100
42	Ln	23/24 (96%)	23 (100%)	0	100	100
43	Lo	93/94 (99%)	92 (99%)	1 (1%)	65	83
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
46	Ls	162/258 (63%)	162 (100%)	0	100	100
47	Lt	112/137 (82%)	112 (100%)	0	100	100
50	SA	183/243 (75%)	183 (100%)	0	100	100
51	SB	195/231 (84%)	195 (100%)	0	100	100
52	SD	190/202 (94%)	190 (100%)	0	100	100
53	SE	224/225 (100%)	224 (100%)	0	100	100
54	SF	156/170 (92%)	156 (100%)	0	100	100
55	SH	166/174 (95%)	166 (100%)	0	100	100
56	SI	178/180 (99%)	178 (100%)	0	100	100
57	SK	86/136 (63%)	86 (100%)	0	100	100
58	SL	130/142 (92%)	130 (100%)	0	100	100
59	SP	115/130 (88%)	115 (100%)	0	100	100
60	SQ	119/121 (98%)	119 (100%)	0	100	100
61	SR	122/122 (100%)	122 (100%)	0	100	100
62	SS	125/132 (95%)	125 (100%)	0	100	100
63	ST	113/115 (98%)	113 (100%)	0	100	100
64	SU	94/107 (88%)	94 (100%)	0	100	100
65	SV	67/67 (100%)	67 (100%)	0	100	100
66	SX	113/115 (98%)	113 (100%)	0	100	100
67	Sa	89/98 (91%)	89 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	Sc	57/62 (92%)	57 (100%)	0	100	100
69	Sd	48/49 (98%)	48 (100%)	0	100	100
70	Sg	272/275 (99%)	272 (100%)	0	100	100
71	SC	188/225 (84%)	188 (100%)	0	100	100
72	SG	207/218 (95%)	207 (100%)	0	100	100
73	SJ	161/168 (96%)	161 (100%)	0	100	100
75	SN	130/131 (99%)	130 (100%)	0	100	100
76	SO	105/119 (88%)	105 (100%)	0	100	100
77	SW	112/113 (99%)	111 (99%)	1 (1%)	70	85
78	SY	109/115 (95%)	109 (100%)	0	100	100
79	SZ	66/103 (64%)	66 (100%)	0	100	100
80	Sb	75/76 (99%)	75 (100%)	0	100	100
81	Se	47/48 (98%)	47 (100%)	0	100	100
82	Sf	60/140 (43%)	60 (100%)	0	100	100
83	CA	303/336 (90%)	303 (100%)	0	100	100
84	CB	14/328 (4%)	14 (100%)	0	100	100
86	CE	62/190 (33%)	62 (100%)	0	100	100
All	All	10380/11941 (87%)	10375 (100%)	5 (0%)	100	100

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	LB	355	THR
5	LB	361	GLU
18	LP	10	ASN
43	Lo	55	ILE
77	SW	15	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (108) such sidechains are listed below:

Mol	Chain	Res	Type
4	LA	95	GLN
4	LA	97	ASN
5	LB	121	ASN
5	LB	138	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	LB	184	GLN
5	LB	236	HIS
5	LB	245	HIS
5	LB	289	GLN
5	LB	376	HIS
6	LC	317	ASN
6	LC	329	ASN
7	LD	222	GLN
7	LD	275	GLN
7	LD	282	GLN
8	LE	182	ASN
9	LF	80	ASN
9	LF	126	ASN
10	LG	66	GLN
10	LG	153	GLN
11	LH	102	ASN
11	LH	156	ASN
12	LI	147	HIS
14	LL	19	GLN
14	LL	149	GLN
15	LM	34	ASN
16	LN	15	GLN
16	LN	145	ASN
17	LO	42	ASN
17	LO	150	GLN
18	LP	21	ASN
20	LR	39	GLN
20	LR	178	GLN
21	LS	122	HIS
22	LT	127	GLN
23	LU	94	ASN
25	LW	95	ASN
25	LW	120	GLN
26	LX	93	ASN
27	LY	18	HIS
27	LY	127	GLN
29	La	67	GLN
30	Lb	6	ASN
31	Lc	19	GLN
32	Ld	18	ASN
32	Ld	69	ASN
33	Le	52	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
35	Lg	3	GLN
35	Lg	73	HIS
35	Lg	114	GLN
36	Lh	30	GLN
37	Li	15	HIS
37	Li	36	HIS
45	Lr	85	ASN
46	Ls	159	GLN
46	Ls	191	GLN
50	SA	50	ASN
51	SB	124	HIS
51	SB	158	HIS
53	SE	50	ASN
53	SE	67	GLN
54	SF	79	HIS
54	SF	186	ASN
55	SH	12	ASN
55	SH	39	GLN
55	SH	162	GLN
56	SI	7	ASN
56	SI	44	HIS
56	SI	167	GLN
58	SL	11	GLN
59	SP	24	GLN
61	SR	31	ASN
61	SR	48	ASN
62	SS	17	ASN
63	ST	137	GLN
63	ST	142	ASN
65	SV	2	GLN
66	SX	16	HIS
66	SX	31	HIS
66	SX	63	ASN
67	Sa	80	HIS
68	Sc	29	GLN
69	Sd	28	HIS
70	Sg	143	GLN
70	Sg	162	ASN
70	Sg	311	GLN
71	SC	113	GLN
71	SC	115	GLN
71	SC	235	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
72	SG	59	GLN
72	SG	197	GLN
73	SJ	39	ASN
73	SJ	111	GLN
73	SJ	113	GLN
73	SJ	140	GLN
73	SJ	154	GLN
73	SJ	156	HIS
75	SN	36	GLN
75	SN	58	HIS
76	SO	113	GLN
77	SW	5	ASN
77	SW	120	HIS
78	SY	2	ASN
79	SZ	106	GLN
80	Sb	65	GLN
80	Sb	84	HIS
81	Se	58	ASN
83	CA	192	GLN
83	CA	221	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3703/5070 (73%)	814 (21%)	20 (0%)
2	L7	119/121 (98%)	9 (7%)	0
3	L8	155/157 (98%)	26 (16%)	0
49	S2	1715/1869 (91%)	450 (26%)	5 (0%)
85	CC	67/75 (89%)	18 (26%)	1 (1%)
All	All	5759/7292 (78%)	1317 (22%)	26 (0%)

All (1317) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	17	A
1	L5	25	A
1	L5	30	C
1	L5	39	A
1	L5	42	A
1	L5	48	G
1	L5	56	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	59	A
1	L5	64	A
1	L5	65	A
1	L5	66	A
1	L5	69	A
1	L5	73	A
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	112	C
1	L5	119	G
1	L5	120	A
1	L5	127	G
1	L5	128	C
1	L5	132	G
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	136	C
1	L5	137	G
1	L5	141	C
1	L5	152	U
1	L5	159	C
1	L5	171	U
1	L5	172	C
1	L5	173	C
1	L5	177	G
1	L5	181	C
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	186	G
1	L5	187	U
1	L5	188	G
1	L5	189	G
1	L5	200	U
1	L5	210	C
1	L5	217	C
1	L5	218	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	219	G
1	L5	220	C
1	L5	233	U
1	L5	234	G
1	L5	236	G
1	L5	261	G
1	L5	264	C
1	L5	265	C
1	L5	266	C
1	L5	280	G
1	L5	297	U
1	L5	306	A
1	L5	315	G
1	L5	316	U
1	L5	340	C
1	L5	360	A
1	L5	373	G
1	L5	387	G
1	L5	407	A
1	L5	409	G
1	L5	410	A
1	L5	411	G
1	L5	412	G
1	L5	413	G
1	L5	431	G
1	L5	432	U
1	L5	438	G
1	L5	440	U
1	L5	449	C
1	L5	450	G
1	L5	452	A
1	L5	453	G
1	L5	454	U
1	L5	465	G
1	L5	467	U
1	L5	468	U
1	L5	484	U
1	L5	485	C
1	L5	486	C
1	L5	489	C
1	L5	493	G
1	L5	494	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	495	C
1	L5	497	G
1	L5	498	C
1	L5	500	G
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	505	G
1	L5	506	C
1	L5	509	A
1	L5	510	U
1	L5	512	U
1	L5	513	U
1	L5	514	U
1	L5	515	C
1	L5	516	C
1	L5	517	C
1	L5	518	G
1	L5	643	C
1	L5	646	G
1	L5	657	C
1	L5	659	G
1	L5	665	C
1	L5	666	G
1	L5	667	A
1	L5	668	C
1	L5	669	C
1	L5	670	G
1	L5	672	C
1	L5	673	C
1	L5	684	G
1	L5	685	C
1	L5	686	A
1	L5	687	U
1	L5	696	C
1	L5	703	G
1	L5	704	C
1	L5	708	G
1	L5	731	G
1	L5	738	C
1	L5	739	G
1	L5	740	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	742	G
1	L5	757	G
1	L5	758	G
1	L5	759	G
1	L5	760	G
1	L5	904	C
1	L5	906	C
1	L5	913	U
1	L5	914	U
1	L5	915	A
1	L5	917	A
1	L5	918	G
1	L5	923	C
1	L5	924	C
1	L5	926	G
1	L5	932	A
1	L5	933	G
1	L5	935	A
1	L5	936	C
1	L5	941	C
1	L5	943	A
1	L5	945	U
1	L5	956	A
1	L5	959	G
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	965	G
1	L5	966	A
1	L5	967	C
1	L5	969	C
1	L5	970	G
1	L5	972	C
1	L5	982	U
1	L5	989	U
1	L5	990	C
1	L5	992	C
1	L5	993	G
1	L5	995	C
1	L5	996	G
1	L5	1048	G
1	L5	1049	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	1050	C
1	L5	1051	G
1	L5	1070	G
1	L5	1071	C
1	L5	1072	C
1	L5	1075	G
1	L5	1095	A
1	L5	1168	G
1	L5	1171	G
1	L5	1172	C
1	L5	1173	G
1	L5	1178	G
1	L5	1179	U
1	L5	1180	C
1	L5	1181	C
1	L5	1182	C
1	L5	1183	C
1	L5	1193	C
1	L5	1202	C
1	L5	1203	G
1	L5	1204	C
1	L5	1210	C
1	L5	1211	G
1	L5	1214	C
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1219	G
1	L5	1222	A
1	L5	1235	G
1	L5	1246	G
1	L5	1247	U
1	L5	1253	G
1	L5	1254	A
1	L5	1257	A
1	L5	1258	G
1	L5	1266	G
1	L5	1267	C
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	1275	G
1	L5	1280	C
1	L5	1284	G
1	L5	1285	U
1	L5	1287	G
1	L5	1294	A
1	L5	1295	C
1	L5	1296	G
1	L5	1301	C
1	L5	1302	U
1	L5	1324	A
1	L5	1326	A
1	L5	1337	A
1	L5	1344	C
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1365	C
1	L5	1366	G
1	L5	1387	A
1	L5	1393	G
1	L5	1394	G
1	L5	1397	A
1	L5	1407	C
1	L5	1408	G
1	L5	1409	C
1	L5	1410	U
1	L5	1411	C
1	L5	1414	C
1	L5	1416	G
1	L5	1420	A
1	L5	1435	G
1	L5	1438	U
1	L5	1444	G
1	L5	1447	C
1	L5	1457	G
1	L5	1482	G
1	L5	1483	C
1	L5	1497	A
1	L5	1498	G
1	L5	1502	G
1	L5	1504	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	1517	G
1	L5	1518	A
1	L5	1525	A
1	L5	1534	A
1	L5	1535	C
1	L5	1547	A
1	L5	1562	G
1	L5	1566	C
1	L5	1574	G
1	L5	1578	U
1	L5	1591	U
1	L5	1596	U
1	L5	1613	A
1	L5	1614	C
1	L5	1624	G
1	L5	1625	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A
1	L5	1637	A
1	L5	1638	A
1	L5	1640	C
1	L5	1641	G
1	L5	1642	A
1	L5	1654	G
1	L5	1661	C
1	L5	1670	G
1	L5	1676	C
1	L5	1677	U
1	L5	1678	C
1	L5	1680	G
1	L5	1691	G
1	L5	1694	C
1	L5	1697	G
1	L5	1699	A
1	L5	1700	G
1	L5	1703	C
1	L5	1704	C
1	L5	1705	G
1	L5	1708	G
1	L5	1718	C
1	L5	1719	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	1726	U
1	L5	1731	C
1	L5	1734	G
1	L5	1741	G
1	L5	1742	A
1	L5	1753	G
1	L5	1755	C
1	L5	1757	U
1	L5	1758	G
1	L5	1760	G
1	L5	1761	G
1	L5	1762	C
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1768	C
1	L5	1770	A
1	L5	1771	U
1	L5	1772	C
1	L5	1775	A
1	L5	1785	C
1	L5	1787	A
1	L5	1804	A
1	L5	1810	G
1	L5	1815	G
1	L5	1820	C
1	L5	1821	G
1	L5	1822	U
1	L5	1834	U
1	L5	1836	G
1	L5	1837	A
1	L5	1842	G
1	L5	1855	G
1	L5	1869	G
1	L5	1882	U
1	L5	1892	A
1	L5	1897	A
1	L5	1898	C
1	L5	1917	A
1	L5	1918	U
1	L5	1919	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	1920	C
1	L5	1921	C
1	L5	1922	G
1	L5	1925	G
1	L5	1930	U
1	L5	1931	C
1	L5	1932	A
1	L5	1936	C
1	L5	1940	G
1	L5	1946	G
1	L5	1948	G
1	L5	1949	U
1	L5	1951	G
1	L5	1959	U
1	L5	1960	A
1	L5	1961	G
1	L5	1962	A
1	L5	1972	G
1	L5	1974	U
1	L5	1975	G
1	L5	1978	C
1	L5	1980	U
1	L5	1983	A
1	L5	1984	A
1	L5	1985	G
1	L5	1986	U
1	L5	1987	C
1	L5	1988	G
1	L5	1990	A
1	L5	1992	U
1	L5	1993	C
1	L5	1997	U
1	L5	2001	G
1	L5	2002	A
1	L5	2004	U
1	L5	2014	C
1	L5	2017	A
1	L5	2018	C
1	L5	2024	G
1	L5	2026	A
1	L5	2034	G
1	L5	2046	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	2048	U
1	L5	2055	G
1	L5	2056	G
1	L5	2069	A
1	L5	2084	C
1	L5	2085	G
1	L5	2089	G
1	L5	2092	G
1	L5	2093	A
1	L5	2095	A
1	L5	2096	G
1	L5	2097	U
1	L5	2098	G
1	L5	2102	G
1	L5	2106	G
1	L5	2107	C
1	L5	2108	G
1	L5	2110	C
1	L5	2111	G
1	L5	2112	G
1	L5	2250	C
1	L5	2252	G
1	L5	2253	A
1	L5	2256	C
1	L5	2289	C
1	L5	2300	A
1	L5	2301	G
1	L5	2306	G
1	L5	2313	A
1	L5	2314	G
1	L5	2331	G
1	L5	2332	A
1	L5	2333	G
1	L5	2345	G
1	L5	2348	G
1	L5	2351	C
1	L5	2360	A
1	L5	2369	U
1	L5	2395	A
1	L5	2397	G
1	L5	2408	U
1	L5	2417	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	2418	A
1	L5	2421	G
1	L5	2425	U
1	L5	2450	G
1	L5	2464	C
1	L5	2465	C
1	L5	2467	U
1	L5	2474	G
1	L5	2475	G
1	L5	2476	G
1	L5	2478	C
1	L5	2479	G
1	L5	2484	A
1	L5	2485	U
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2494	U
1	L5	2495	U
1	L5	2503	G
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2513	A
1	L5	2519	U
1	L5	2529	A
1	L5	2537	A
1	L5	2544	G
1	L5	2546	G
1	L5	2547	G
1	L5	2554	U
1	L5	2555	G
1	L5	2559	G
1	L5	2560	C
1	L5	2565	A
1	L5	2573	A
1	L5	2583	C
1	L5	2587	A
1	L5	2589	C
1	L5	2601	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	2611	A
1	L5	2627	C
1	L5	2653	C
1	L5	2662	G
1	L5	2669	C
1	L5	2670	C
1	L5	2676	A
1	L5	2687	U
1	L5	2694	G
1	L5	2695	A
1	L5	2696	A
1	L5	2703	G
1	L5	2707	U
1	L5	2708	U
1	L5	2709	C
1	L5	2710	C
1	L5	2711	G
1	L5	2721	G
1	L5	2724	G
1	L5	2726	G
1	L5	2738	C
1	L5	2739	C
1	L5	2742	G
1	L5	2743	A
1	L5	2756	G
1	L5	2761	U
1	L5	2763	U
1	L5	2764	A
1	L5	2770	C
1	L5	2787	A
1	L5	2788	U
1	L5	2790	U
1	L5	2814	C
1	L5	2815	A
1	L5	2825	A
1	L5	2826	U
1	L5	2827	G
1	L5	2838	G
1	L5	2845	A
1	L5	2848	G
1	L5	2855	G
1	L5	2877	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	2892	C
1	L5	2900	U
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2905	C
1	L5	2906	G
1	L5	2908	U
1	L5	3585	G
1	L5	3587	C
1	L5	3588	C
1	L5	3590	G
1	L5	3591	C
1	L5	3594	C
1	L5	3595	U
1	L5	3596	A
1	L5	3597	G
1	L5	3604	A
1	L5	3606	U
1	L5	3615	G
1	L5	3616	U
1	L5	3618	C
1	L5	3626	G
1	L5	3630	A
1	L5	3635	A
1	L5	3644	U
1	L5	3646	A
1	L5	3648	A
1	L5	3662	A
1	L5	3673	C
1	L5	3674	G
1	L5	3710	G
1	L5	3714	G
1	L5	3727	A
1	L5	3729	U
1	L5	3735	G
1	L5	3736	A
1	L5	3750	G
1	L5	3753	G
1	L5	3757	G
1	L5	3758	U
1	L5	3759	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	3760	A
1	L5	3761	C
1	L5	3771	C
1	L5	3776	G
1	L5	3777	G
1	L5	3784	A
1	L5	3786	U
1	L5	3802	U
1	L5	3811	G
1	L5	3812	C
1	L5	3814	U
1	L5	3817	A
1	L5	3818	U
1	L5	3819	G
1	L5	3823	G
1	L5	3838	U
1	L5	3839	G
1	L5	3840	U
1	L5	3867	A
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3885	G
1	L5	3887	C
1	L5	3890	A
1	L5	3892	U
1	L5	3897	G
1	L5	3901	A
1	L5	3906	A
1	L5	3907	G
1	L5	3908	A
1	L5	3915	U
1	L5	3926	C
1	L5	3938	G
1	L5	3939	G
1	L5	3942	A
1	L5	3943	A
1	L5	3947	A
1	L5	3950	U
1	L5	3951	G
1	L5	3955	G
1	L5	3956	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	3958	G
1	L5	3959	U
1	L5	3960	A
1	L5	3961	G
1	L5	3962	A
1	L5	3963	A
1	L5	3964	U
1	L5	3965	A
1	L5	3966	A
1	L5	3969	G
1	L5	3970	G
1	L5	3971	G
1	L5	3973	G
1	L5	3974	G
1	L5	3975	C
1	L5	3977	C
1	L5	4035	G
1	L5	4036	G
1	L5	4038	C
1	L5	4039	G
1	L5	4041	C
1	L5	4042	G
1	L5	4043	G
1	L5	4044	U
1	L5	4045	G
1	L5	4046	A
1	L5	4048	A
1	L5	4049	U
1	L5	4051	C
1	L5	4052	C
1	L5	4053	A
1	L5	4055	U
1	L5	4064	C
1	L5	4065	G
1	L5	4076	G
1	L5	4084	G
1	L5	4086	G
1	L5	4097	G
1	L5	4099	G
1	L5	4101	C
1	L5	4102	C
1	L5	4104	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	4106	G
1	L5	4107	G
1	L5	4108	G
1	L5	4111	U
1	L5	4112	C
1	L5	4113	U
1	L5	4114	C
1	L5	4115	G
1	L5	4116	C
1	L5	4117	U
1	L5	4119	C
1	L5	4120	U
1	L5	4122	G
1	L5	4127	A
1	L5	4133	C
1	L5	4140	C
1	L5	4141	G
1	L5	4142	C
1	L5	4143	G
1	L5	4144	C
1	L5	4146	G
1	L5	4149	C
1	L5	4150	G
1	L5	4162	C
1	L5	4163	U
1	L5	4168	G
1	L5	4170	A
1	L5	4183	G
1	L5	4191	G
1	L5	4196	G
1	L5	4197	G
1	L5	4203	A
1	L5	4222	G
1	L5	4228	G
1	L5	4229	U
1	L5	4233	A
1	L5	4242	U
1	L5	4251	A
1	L5	4254	G
1	L5	4257	A
1	L5	4265	U
1	L5	4268	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	4273	A
1	L5	4291	G
1	L5	4304	A
1	L5	4305	G
1	L5	4314	C
1	L5	4329	G
1	L5	4330	G
1	L5	4332	C
1	L5	4349	C
1	L5	4354	U
1	L5	4373	G
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4379	A
1	L5	4380	A
1	L5	4387	C
1	L5	4391	G
1	L5	4394	A
1	L5	4422	A
1	L5	4426	C
1	L5	4448	G
1	L5	4449	A
1	L5	4453	C
1	L5	4464	A
1	L5	4475	G
1	L5	4488	A
1	L5	4500	U
1	L5	4512	U
1	L5	4513	A
1	L5	4519	C
1	L5	4524	G
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4560	C
1	L5	4567	G
1	L5	4573	G
1	L5	4575	G
1	L5	4584	A
1	L5	4590	A
1	L5	4600	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	4617	G
1	L5	4630	G
1	L5	4636	U
1	L5	4637	G
1	L5	4656	A
1	L5	4657	U
1	L5	4670	C
1	L5	4672	A
1	L5	4679	G
1	L5	4684	A
1	L5	4687	A
1	L5	4694	G
1	L5	4695	C
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4719	G
1	L5	4720	C
1	L5	4731	G
1	L5	4734	A
1	L5	4741	C
1	L5	4742	G
1	L5	4745	G
1	L5	4750	G
1	L5	4754	G
1	L5	4757	C
1	L5	4759	C
1	L5	4761	G
1	L5	4764	A
1	L5	4765	G
1	L5	4770	U
1	L5	4771	C
1	L5	4772	C
1	L5	4773	C
1	L5	4775	C
1	L5	4776	G
1	L5	4859	C
1	L5	4860	G
1	L5	4870	G
1	L5	4871	C
1	L5	4875	G
1	L5	4882	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	4883	C
1	L5	4888	U
1	L5	4889	G
1	L5	4891	G
1	L5	4895	C
1	L5	4896	G
1	L5	4900	C
1	L5	4901	G
1	L5	4902	C
1	L5	4910	G
1	L5	4911	A
1	L5	4912	G
1	L5	4914	C
1	L5	4922	C
1	L5	4923	C
1	L5	4925	U
1	L5	4926	C
1	L5	4934	A
1	L5	4937	C
1	L5	4940	C
1	L5	4941	G
1	L5	4943	A
1	L5	4947	U
1	L5	4951	G
1	L5	4960	G
1	L5	4961	G
1	L5	4966	A
1	L5	4976	U
1	L5	4979	A
1	L5	4988	U
1	L5	4989	U
1	L5	4991	U
1	L5	5007	A
1	L5	5013	C
1	L5	5014	A
1	L5	5017	G
1	L5	5022	U
1	L5	5024	C
1	L5	5025	C
1	L5	5026	U
1	L5	5027	C
1	L5	5028	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	L5	5029	C
1	L5	5034	A
1	L5	5041	G
1	L5	5047	C
1	L5	5050	C
1	L5	5054	C
1	L5	5055	G
1	L5	5061	A
1	L5	5069	U
2	L7	33	U
2	L7	38	U
2	L7	53	U
2	L7	64	G
2	L7	97	G
2	L7	100	A
2	L7	106	G
2	L7	110	G
2	L7	111	C
3	L8	25	G
3	L8	34	U
3	L8	35	C
3	L8	39	G
3	L8	48	A
3	L8	59	A
3	L8	62	A
3	L8	63	U
3	L8	68	G
3	L8	82	A
3	L8	83	C
3	L8	84	A
3	L8	85	U
3	L8	86	U
3	L8	87	G
3	L8	94	G
3	L8	103	A
3	L8	105	C
3	L8	110	U
3	L8	112	G
3	L8	114	G
3	L8	123	U
3	L8	124	U
3	L8	125	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	L8	126	C
3	L8	127	U
49	S2	2	A
49	S2	5	U
49	S2	23	G
49	S2	25	A
49	S2	33	G
49	S2	41	G
49	S2	42	A
49	S2	44	U
49	S2	46	A
49	S2	56	G
49	S2	58	C
49	S2	59	U
49	S2	62	G
49	S2	64	A
49	S2	65	C
49	S2	67	C
49	S2	68	A
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	76	U
49	S2	103	A
49	S2	113	G
49	S2	115	U
49	S2	116	U
49	S2	120	U
49	S2	121	U
49	S2	123	G
49	S2	126	G
49	S2	128	U
49	S2	129	C
49	S2	130	G
49	S2	142	C
49	S2	143	U
49	S2	145	G
49	S2	147	A
49	S2	149	A
49	S2	160	U
49	S2	162	C
49	S2	163	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	166	A
49	S2	175	A
49	S2	190	G
49	S2	198	U
49	S2	199	C
49	S2	200	G
49	S2	203	G
49	S2	204	G
49	S2	207	G
49	S2	211	G
49	S2	213	G
49	S2	214	U
49	S2	219	U
49	S2	292	A
49	S2	295	C
49	S2	302	A
49	S2	305	U
49	S2	306	C
49	S2	307	G
49	S2	308	G
49	S2	309	G
49	S2	312	G
49	S2	313	A
49	S2	318	A
49	S2	319	C
49	S2	322	C
49	S2	323	C
49	S2	324	C
49	S2	325	C
49	S2	326	C
49	S2	327	G
49	S2	328	U
49	S2	329	G
49	S2	335	G
49	S2	339	A
49	S2	347	G
49	S2	360	A
49	S2	362	C
49	S2	364	A
49	S2	368	U
49	S2	370	G
49	S2	385	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	386	C
49	S2	399	C
49	S2	400	C
49	S2	408	A
49	S2	409	C
49	S2	438	G
49	S2	448	A
49	S2	449	A
49	S2	450	C
49	S2	452	G
49	S2	459	C
49	S2	464	A
49	S2	465	A
49	S2	466	G
49	S2	471	G
49	S2	472	C
49	S2	473	A
49	S2	474	G
49	S2	482	G
49	S2	487	U
49	S2	489	A
49	S2	492	C
49	S2	493	A
49	S2	496	C
49	S2	503	C
49	S2	504	G
49	S2	506	G
49	S2	507	G
49	S2	516	A
49	S2	523	A
49	S2	530	U
49	S2	540	U
49	S2	541	U
49	S2	542	U
49	S2	545	A
49	S2	546	G
49	S2	547	G
49	S2	548	C
49	S2	554	A
49	S2	560	A
49	S2	563	G
49	S2	564	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	576	A
49	S2	583	C
49	S2	585	C
49	S2	589	G
49	S2	590	A
49	S2	591	U
49	S2	592	C
49	S2	597	G
49	S2	600	G
49	S2	601	G
49	S2	604	A
49	S2	608	C
49	S2	613	G
49	S2	614	C
49	S2	617	G
49	S2	623	G
49	S2	627	U
49	S2	628	A
49	S2	629	A
49	S2	632	C
49	S2	643	A
49	S2	644	G
49	S2	660	C
49	S2	663	C
49	S2	664	A
49	S2	668	A
49	S2	669	A
49	S2	671	A
49	S2	672	A
49	S2	673	G
49	S2	678	U
49	S2	680	G
49	S2	683	G
49	S2	684	G
49	S2	687	C
49	S2	688	U
49	S2	689	U
49	S2	690	G
49	S2	692	G
49	S2	693	A
49	S2	695	C
49	S2	696	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	697	G
49	S2	698	G
49	S2	732	U
49	S2	733	C
49	S2	736	C
49	S2	738	C
49	S2	749	U
49	S2	751	G
49	S2	752	G
49	S2	753	C
49	S2	788	G
49	S2	791	C
49	S2	792	C
49	S2	798	A
49	S2	799	U
49	S2	809	A
49	S2	821	G
49	S2	822	U
49	S2	827	A
49	S2	830	A
49	S2	834	C
49	S2	835	C
49	S2	836	G
49	S2	837	A
49	S2	838	G
49	S2	839	C
49	S2	840	C
49	S2	841	G
49	S2	842	C
49	S2	845	G
49	S2	847	A
49	S2	853	C
49	S2	869	A
49	S2	870	A
49	S2	871	U
49	S2	872	A
49	S2	873	G
49	S2	874	G
49	S2	877	C
49	S2	880	G
49	S2	883	U
49	S2	887	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	888	U
49	S2	889	U
49	S2	891	G
49	S2	893	U
49	S2	896	U
49	S2	897	U
49	S2	898	U
49	S2	899	U
49	S2	900	C
49	S2	901	G
49	S2	903	A
49	S2	904	A
49	S2	906	U
49	S2	913	A
49	S2	920	A
49	S2	922	A
49	S2	933	G
49	S2	934	G
49	S2	937	C
49	S2	943	U
49	S2	955	A
49	S2	956	G
49	S2	961	G
49	S2	963	A
49	S2	968	U
49	S2	970	G
49	S2	985	G
49	S2	990	A
49	S2	992	A
49	S2	997	A
49	S2	999	G
49	S2	1001	A
49	S2	1002	U
49	S2	1011	A
49	S2	1016	U
49	S2	1017	U
49	S2	1023	A
49	S2	1033	G
49	S2	1039	C
49	S2	1061	U
49	S2	1062	A
49	S2	1066	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	1067	C
49	S2	1069	U
49	S2	1083	A
49	S2	1085	C
49	S2	1089	G
49	S2	1100	A
49	S2	1109	C
49	S2	1114	U
49	S2	1115	U
49	S2	1116	C
49	S2	1118	C
49	S2	1119	A
49	S2	1121	G
49	S2	1133	A
49	S2	1138	C
49	S2	1140	G
49	S2	1150	A
49	S2	1153	C
49	S2	1154	U
49	S2	1195	A
49	S2	1203	G
49	S2	1209	A
49	S2	1212	G
49	S2	1215	C
49	S2	1216	C
49	S2	1217	A
49	S2	1221	G
49	S2	1224	G
49	S2	1227	G
49	S2	1231	C
49	S2	1242	U
49	S2	1243	U
49	S2	1251	A
49	S2	1253	A
49	S2	1256	G
49	S2	1257	G
49	S2	1259	A
49	S2	1271	C
49	S2	1274	G
49	S2	1275	G
49	S2	1283	C
49	S2	1284	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	1286	G
49	S2	1294	G
49	S2	1295	A
49	S2	1301	A
49	S2	1302	G
49	S2	1303	C
49	S2	1306	U
49	S2	1308	U
49	S2	1312	G
49	S2	1314	U
49	S2	1330	G
49	S2	1341	C
49	S2	1342	U
49	S2	1348	G
49	S2	1353	A
49	S2	1358	U
49	S2	1363	C
49	S2	1371	U
49	S2	1372	U
49	S2	1373	C
49	S2	1378	A
49	S2	1382	A
49	S2	1396	A
49	S2	1397	U
49	S2	1402	A
49	S2	1404	U
49	S2	1412	C
49	S2	1415	C
49	S2	1416	C
49	S2	1421	A
49	S2	1423	C
49	S2	1424	G
49	S2	1431	G
49	S2	1433	C
49	S2	1434	C
49	S2	1435	C
49	S2	1436	C
49	S2	1438	A
49	S2	1449	G
49	S2	1452	A
49	S2	1454	A
49	S2	1455	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	1463	U
49	S2	1464	C
49	S2	1478	U
49	S2	1480	A
49	S2	1486	A
49	S2	1489	A
49	S2	1490	G
49	S2	1497	G
49	S2	1498	A
49	S2	1506	A
49	S2	1507	G
49	S2	1508	A
49	S2	1520	G
49	S2	1521	C
49	S2	1523	C
49	S2	1531	A
49	S2	1533	A
49	S2	1534	C
49	S2	1539	U
49	S2	1544	C
49	S2	1549	U
49	S2	1551	U
49	S2	1552	G
49	S2	1553	C
49	S2	1556	A
49	S2	1558	C
49	S2	1560	U
49	S2	1570	G
49	S2	1573	G
49	S2	1575	G
49	S2	1579	A
49	S2	1580	A
49	S2	1585	U
49	S2	1587	G
49	S2	1588	A
49	S2	1594	A
49	S2	1595	U
49	S2	1598	G
49	S2	1600	G
49	S2	1601	A
49	S2	1603	G
49	S2	1606	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	1612	G
49	S2	1621	U
49	S2	1623	A
49	S2	1629	C
49	S2	1632	G
49	S2	1634	A
49	S2	1643	U
49	S2	1644	C
49	S2	1646	C
49	S2	1647	A
49	S2	1648	G
49	S2	1649	U
49	S2	1653	U
49	S2	1654	G
49	S2	1663	A
49	S2	1664	A
49	S2	1665	G
49	S2	1671	G
49	S2	1677	U
49	S2	1680	G
49	S2	1691	U
49	S2	1696	C
49	S2	1698	C
49	S2	1699	A
49	S2	1700	C
49	S2	1701	C
49	S2	1715	A
49	S2	1719	A
49	S2	1721	U
49	S2	1722	G
49	S2	1742	C
49	S2	1744	G
49	S2	1745	A
49	S2	1748	G
49	S2	1750	C
49	S2	1752	C
49	S2	1753	C
49	S2	1754	G
49	S2	1757	G
49	S2	1758	G
49	S2	1759	G
49	S2	1760	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	S2	1761	U
49	S2	1772	C
49	S2	1773	C
49	S2	1774	C
49	S2	1775	U
49	S2	1776	G
49	S2	1777	G
49	S2	1781	A
49	S2	1783	C
49	S2	1784	G
49	S2	1786	U
49	S2	1787	G
49	S2	1788	A
49	S2	1798	C
49	S2	1819	A
49	S2	1822	A
49	S2	1823	A
49	S2	1824	A
49	S2	1825	A
49	S2	1826	G
49	S2	1829	G
49	S2	1831	A
49	S2	1835	A
49	S2	1838	U
49	S2	1849	G
49	S2	1851	A
49	S2	1852	C
49	S2	1861	G
49	S2	1862	G
49	S2	1863	A
49	S2	1864	U
49	S2	1865	C
85	CC	7	G
85	CC	8	U
85	CC	9	G
85	CC	17	G
85	CC	18	G
85	CC	20	A
85	CC	29	G
85	CC	37	A
85	CC	43	A
85	CC	46	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	CC	47	C
85	CC	57	A
85	CC	58	A
85	CC	60	C
85	CC	63	U
85	CC	73	C
85	CC	74	C
85	CC	75	A

All (26) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	184	U
1	L5	186	G
1	L5	406	C
1	L5	493	G
1	L5	504	G
1	L5	914	U
1	L5	1633	G
1	L5	1977	C
1	L5	2033	A
1	L5	2416	G
1	L5	2475	G
1	L5	2675	G
1	L5	2760	G
1	L5	2786	C
1	L5	3614	G
1	L5	3673	C
1	L5	3735	G
1	L5	4378	A
1	L5	4699	U
1	L5	4913	G
49	S2	112	U
49	S2	291	G
49	S2	563	G
49	S2	688	U
49	S2	1434	C
85	CC	73	C

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
41	MLZ	Lm	98	41	8,9,10	0.80	0	4,9,11	0.62	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
41	MLZ	Lm	98	41	-	1/7/8/10	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
41	Lm	98	MLZ	CD-CE-NZ-CM

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 271 ligands modelled in this entry, 263 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
88	T1C	CC	101	-	45,45,45	1.14	4 (8%)	56,72,72	1.03	3 (5%)
88	T1C	L5	5312	-	45,45,45	1.15	4 (8%)	56,72,72	1.05	4 (7%)
88	T1C	L5	5314	87	45,45,45	1.16	4 (8%)	56,72,72	1.12	5 (8%)
88	T1C	L5	5317	-	45,45,45	1.16	4 (8%)	56,72,72	1.17	6 (10%)
88	T1C	L5	5313	87	45,45,45	1.15	4 (8%)	56,72,72	1.08	3 (5%)
88	T1C	L5	5311	-	45,45,45	1.15	4 (8%)	56,72,72	1.02	3 (5%)
88	T1C	L5	5316	-	45,45,45	1.21	4 (8%)	56,72,72	1.64	11 (19%)
88	T1C	L5	5315	-	45,45,45	1.17	4 (8%)	56,72,72	1.35	6 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	T1C	CC	101	-	-	6/22/80/80	0/4/4/4
88	T1C	L5	5312	-	-	16/22/80/80	0/4/4/4
88	T1C	L5	5314	87	-	11/22/80/80	0/4/4/4
88	T1C	L5	5317	-	-	15/22/80/80	0/4/4/4
88	T1C	L5	5313	87	-	8/22/80/80	0/4/4/4
88	T1C	L5	5311	-	-	12/22/80/80	0/4/4/4
88	T1C	L5	5316	-	-	6/22/80/80	0/4/4/4
88	T1C	L5	5315	-	-	16/22/80/80	0/4/4/4

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	L5	5317	T1C	C21-N21	5.09	1.48	1.33
88	L5	5315	T1C	C21-N21	5.06	1.48	1.33
88	L5	5313	T1C	C21-N21	5.03	1.47	1.33
88	L5	5311	T1C	C21-N21	5.02	1.47	1.33
88	L5	5312	T1C	C21-N21	5.01	1.47	1.33
88	L5	5316	T1C	C21-N21	5.00	1.47	1.33
88	CC	101	T1C	C21-N21	4.99	1.47	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
88	L5	5314	T1C	C21-N21	4.94	1.47	1.33
88	L5	5312	T1C	C4-N4	2.74	1.53	1.47
88	L5	5314	T1C	C4-N4	2.71	1.53	1.47
88	L5	5317	T1C	C4-N4	2.69	1.53	1.47
88	CC	101	T1C	C4-N4	2.49	1.52	1.47
88	L5	5311	T1C	C4-N4	2.46	1.52	1.47
88	L5	5316	T1C	C7-N7	2.45	1.49	1.42
88	L5	5313	T1C	C4-N4	2.39	1.52	1.47
88	L5	5316	T1C	C4-N4	2.38	1.52	1.47
88	L5	5315	T1C	C4-N4	2.32	1.52	1.47
88	L5	5313	T1C	O11-C11	2.31	1.28	1.23
88	L5	5314	T1C	O11-C11	2.24	1.27	1.23
88	L5	5317	T1C	O11-C11	2.23	1.27	1.23
88	CC	101	T1C	O11-C11	2.22	1.27	1.23
88	L5	5316	T1C	O11-C11	2.20	1.27	1.23
88	L5	5312	T1C	O11-C11	2.19	1.27	1.23
88	L5	5315	T1C	O11-C11	2.19	1.27	1.23
88	L5	5311	T1C	O11-C11	2.16	1.27	1.23
88	L5	5317	T1C	C7-N7	2.14	1.48	1.42
88	CC	101	T1C	C7-N7	2.14	1.48	1.42
88	L5	5315	T1C	C7-N7	2.13	1.48	1.42
88	L5	5312	T1C	C7-N7	2.13	1.48	1.42
88	L5	5311	T1C	C7-N7	2.12	1.48	1.42
88	L5	5313	T1C	C7-N7	2.07	1.48	1.42
88	L5	5314	T1C	C7-N7	2.07	1.48	1.42

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
88	L5	5316	T1C	C51-C5-C41	4.81	118.57	110.38
88	L5	5316	T1C	C1C-C1-C2	4.80	123.37	115.75
88	L5	5315	T1C	C11-C1B-C12	4.69	122.51	118.80
88	L5	5313	T1C	C11-C1B-C12	4.66	122.49	118.80
88	L5	5316	T1C	C1C-C41-C4	4.54	117.85	111.64
88	L5	5315	T1C	C1C-C41-C4	4.53	117.83	111.64
88	L5	5316	T1C	C61-C6-C51	4.18	118.65	113.12
88	L5	5312	T1C	C1C-C1-C2	3.92	121.98	115.75
88	L5	5311	T1C	C1C-C1-C2	3.88	121.91	115.75
88	L5	5311	T1C	C11-C1B-C12	3.73	121.75	118.80
88	CC	101	T1C	C11-C1B-C12	3.67	121.70	118.80
88	L5	5317	T1C	C61-C6-C51	3.64	117.95	113.12
88	L5	5314	T1C	C61-C6-C51	3.47	117.72	113.12

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
88	L5	5315	T1C	C1C-C1-C2	3.31	121.00	115.75
88	L5	5313	T1C	C1-C1C-C12	3.23	113.67	109.88
88	L5	5317	T1C	C1C-C1-C2	3.13	120.73	115.75
88	CC	101	T1C	C1-C1C-C12	3.02	113.43	109.88
88	L5	5315	T1C	C51-C5-C41	2.97	115.45	110.38
88	L5	5314	T1C	C1C-C1-C2	2.95	120.44	115.75
88	L5	5317	T1C	C11-C1B-C12	2.83	121.04	118.80
88	L5	5316	T1C	C61-C7-N7	2.80	122.21	118.87
88	L5	5316	T1C	O1C-C1C-C12	-2.70	105.82	110.14
88	L5	5312	T1C	C51-C5-C41	2.68	114.95	110.38
88	L5	5316	T1C	C11-C1B-C12	2.65	120.89	118.80
88	L5	5314	T1C	O1C-C1C-C12	-2.63	105.94	110.14
88	L5	5316	T1C	C5-C41-C4	-2.51	110.10	113.73
88	L5	5315	T1C	O1C-C1C-C12	-2.48	106.17	110.14
88	L5	5312	T1C	C11-C1B-C12	2.42	120.72	118.80
88	L5	5316	T1C	C1C-C12-C1B	2.42	125.52	123.06
88	CC	101	T1C	O1C-C1C-C12	-2.38	106.33	110.14
88	L5	5314	T1C	C1C-C41-C4	2.38	114.89	111.64
88	L5	5314	T1C	C11-C1B-C12	2.32	120.64	118.80
88	L5	5317	T1C	C1C-C41-C4	2.25	114.72	111.64
88	L5	5316	T1C	C72-N7-C71	-2.23	109.02	116.18
88	L5	5315	T1C	C1C-C12-C1B	-2.22	120.81	123.06
88	L5	5317	T1C	C1-C1C-C12	2.22	112.48	109.88
88	L5	5317	T1C	O1C-C1C-C12	-2.18	106.66	110.14
88	L5	5312	T1C	C5-C41-C4	-2.16	110.62	113.73
88	L5	5313	T1C	O1C-C1C-C12	-2.10	106.78	110.14
88	L5	5311	T1C	C5-C41-C4	-2.06	110.76	113.73
88	L5	5316	T1C	C8-C7-N7	-2.05	117.71	120.89

There are no chirality outliers.

All (90) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
88	L5	5311	T1C	C3-C2-C21-O21
88	L5	5311	T1C	C3-C2-C21-N21
88	L5	5311	T1C	C1-C2-C21-O21
88	L5	5311	T1C	C1-C2-C21-N21
88	L5	5312	T1C	C91-C92-N92-C93
88	L5	5312	T1C	C92-C91-N9-C9
88	L5	5312	T1C	C3-C4-N4-C43
88	L5	5312	T1C	C3-C4-N4-C42
88	L5	5312	T1C	C3-C2-C21-O21

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
88	L5	5312	T1C	C3-C2-C21-N21
88	L5	5312	T1C	C1-C2-C21-O21
88	L5	5313	T1C	C91-C92-N92-C93
88	L5	5313	T1C	C92-C91-N9-C9
88	L5	5313	T1C	O91-C91-N9-C9
88	L5	5313	T1C	C1-C2-C21-O21
88	L5	5313	T1C	C1-C2-C21-N21
88	L5	5314	T1C	C91-C92-N92-C93
88	L5	5314	T1C	C92-C91-N9-C9
88	L5	5314	T1C	C3-C4-N4-C43
88	L5	5314	T1C	C1-C2-C21-O21
88	L5	5314	T1C	C1-C2-C21-N21
88	L5	5315	T1C	C94-C93-N92-C92
88	L5	5315	T1C	C95-C93-N92-C92
88	L5	5315	T1C	C96-C93-N92-C92
88	L5	5315	T1C	C92-C91-N9-C9
88	L5	5315	T1C	C41-C4-N4-C43
88	L5	5315	T1C	C3-C4-N4-C43
88	L5	5315	T1C	C3-C4-N4-C42
88	L5	5315	T1C	C1-C2-C21-O21
88	L5	5315	T1C	C1-C2-C21-N21
88	L5	5316	T1C	C1-C2-C21-O21
88	L5	5316	T1C	C1-C2-C21-N21
88	L5	5317	T1C	C94-C93-N92-C92
88	L5	5317	T1C	C95-C93-N92-C92
88	L5	5317	T1C	C96-C93-N92-C92
88	L5	5317	T1C	C92-C91-N9-C9
88	L5	5317	T1C	C1-C2-C21-O21
88	L5	5317	T1C	C1-C2-C21-N21
88	CC	101	T1C	C3-C2-C21-O21
88	CC	101	T1C	C3-C2-C21-N21
88	CC	101	T1C	C1-C2-C21-O21
88	CC	101	T1C	C1-C2-C21-N21
88	L5	5315	T1C	O91-C91-N9-C9
88	L5	5317	T1C	O91-C91-N9-C9
88	L5	5314	T1C	O91-C91-N9-C9
88	L5	5312	T1C	O91-C91-N9-C9
88	L5	5311	T1C	C92-C91-N9-C9
88	L5	5317	T1C	N9-C91-C92-N92
88	L5	5315	T1C	C10-C9-N9-C91
88	L5	5311	T1C	O91-C91-N9-C9
88	L5	5317	T1C	O91-C91-C92-N92

Continued on next page...

Continued from previous page...

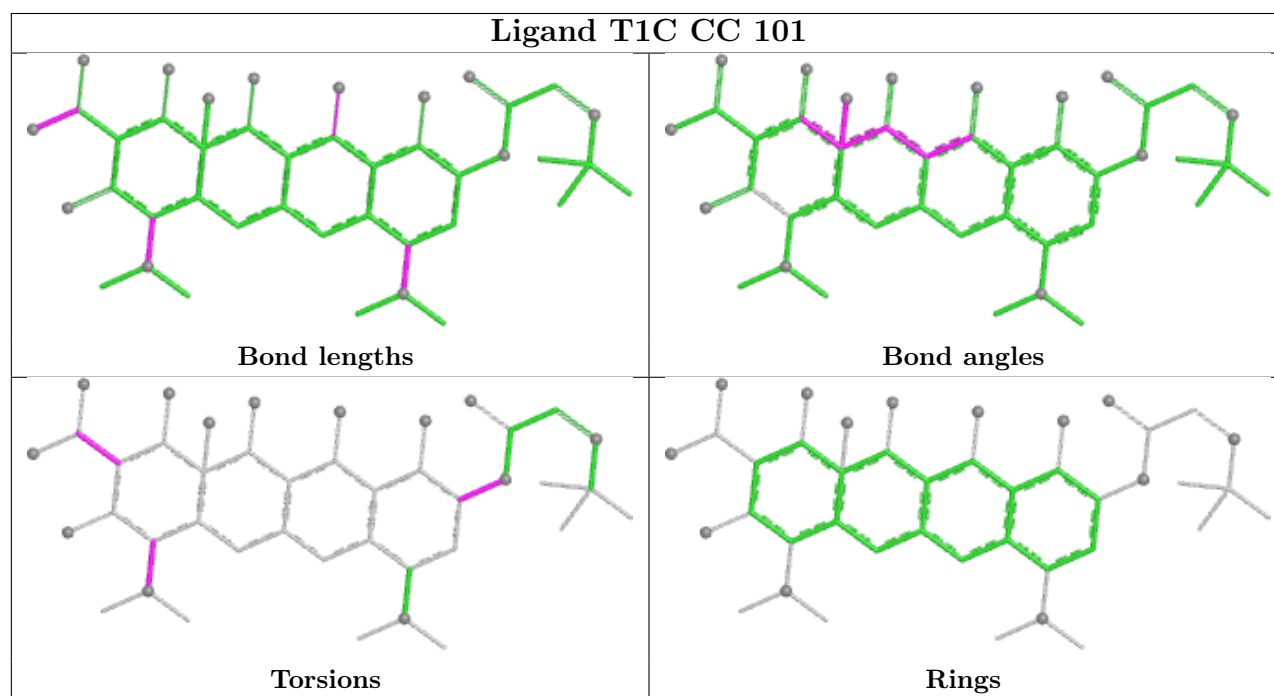
Mol	Chain	Res	Type	Atoms
88	L5	5311	T1C	C10-C9-N9-C91
88	L5	5314	T1C	O91-C91-C92-N92
88	L5	5315	T1C	C8-C9-N9-C91
88	L5	5311	T1C	C8-C9-N9-C91
88	CC	101	T1C	C10-C9-N9-C91
88	L5	5314	T1C	N9-C91-C92-N92
88	L5	5311	T1C	O91-C91-C92-N92
88	L5	5312	T1C	C10-C9-N9-C91
88	L5	5312	T1C	C41-C4-N4-C42
88	L5	5314	T1C	C41-C4-N4-C43
88	L5	5314	T1C	C41-C4-N4-C42
88	L5	5314	T1C	C3-C4-N4-C42
88	L5	5315	T1C	C41-C4-N4-C42
88	L5	5315	T1C	C3-C2-C21-N21
88	L5	5316	T1C	C41-C4-N4-C42
88	L5	5317	T1C	C41-C4-N4-C43
88	L5	5317	T1C	C41-C4-N4-C42
88	L5	5317	T1C	C3-C2-C21-N21
88	L5	5315	T1C	C3-C2-C21-O21
88	L5	5317	T1C	C3-C2-C21-O21
88	L5	5311	T1C	N9-C91-C92-N92
88	L5	5315	T1C	C91-C92-N92-C93
88	L5	5317	T1C	C91-C92-N92-C93
88	L5	5316	T1C	C10-C9-N9-C91
88	L5	5312	T1C	C1-C2-C21-N21
88	L5	5312	T1C	C95-C93-N92-C92
88	L5	5312	T1C	C96-C93-N92-C92
88	L5	5312	T1C	C61-C7-N7-C72
88	L5	5311	T1C	C61-C7-N7-C71
88	L5	5312	T1C	C61-C7-N7-C71
88	L5	5313	T1C	C61-C7-N7-C71
88	L5	5317	T1C	C61-C7-N7-C71
88	L5	5312	T1C	C41-C4-N4-C43
88	CC	101	T1C	C41-C4-N4-C42
88	L5	5313	T1C	C61-C7-N7-C72
88	L5	5316	T1C	C8-C9-N9-C91
88	L5	5313	T1C	C3-C2-C21-O21
88	L5	5311	T1C	C61-C7-N7-C72
88	L5	5316	T1C	O91-C91-C92-N92

There are no ring outliers.

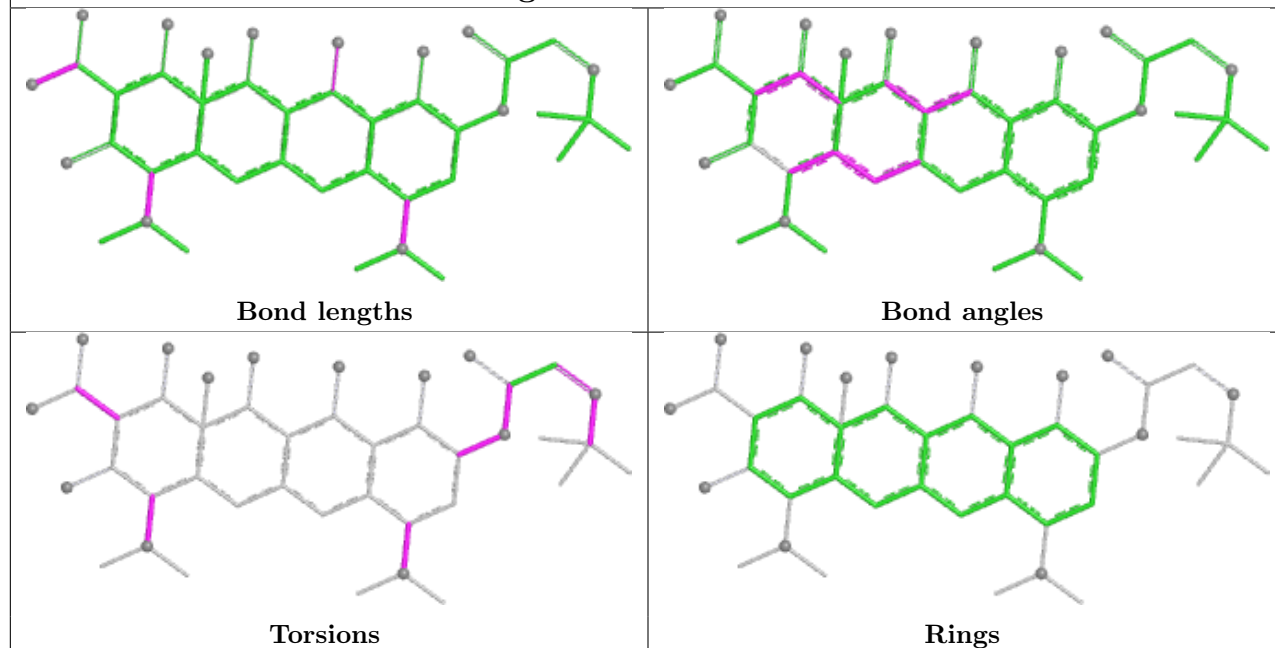
5 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	L5	5312	T1C	1	0
88	L5	5314	T1C	3	0
88	L5	5317	T1C	2	0
88	L5	5316	T1C	4	0
88	L5	5315	T1C	2	0

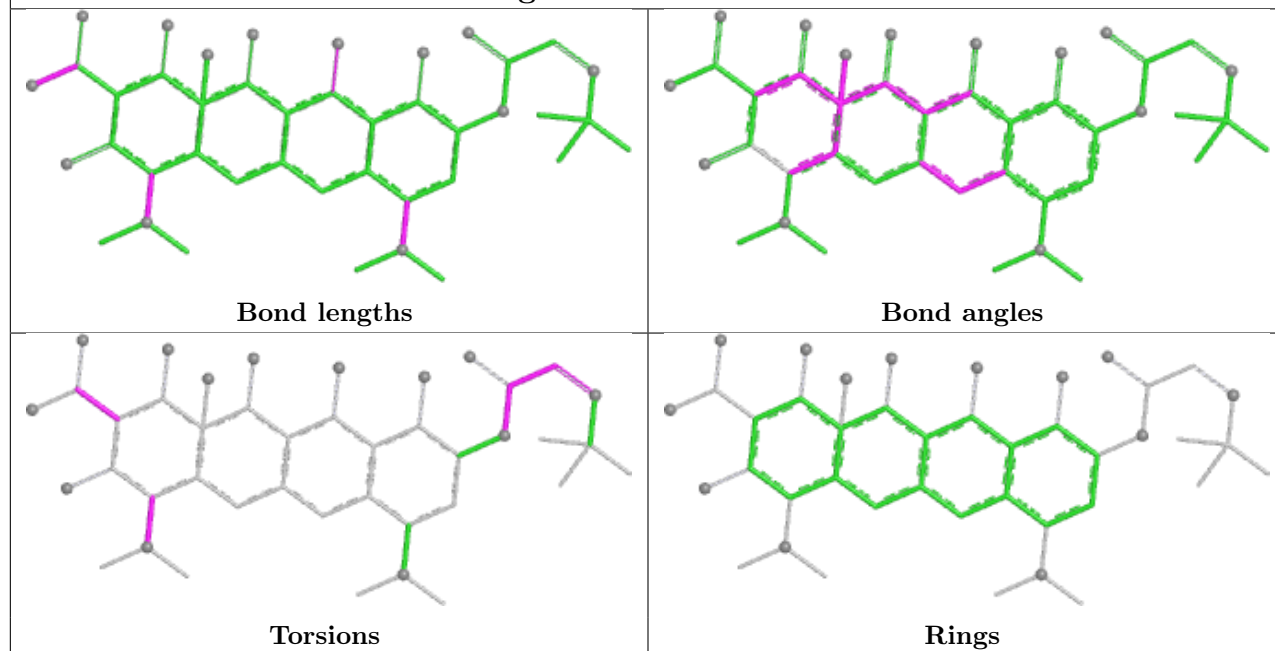
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



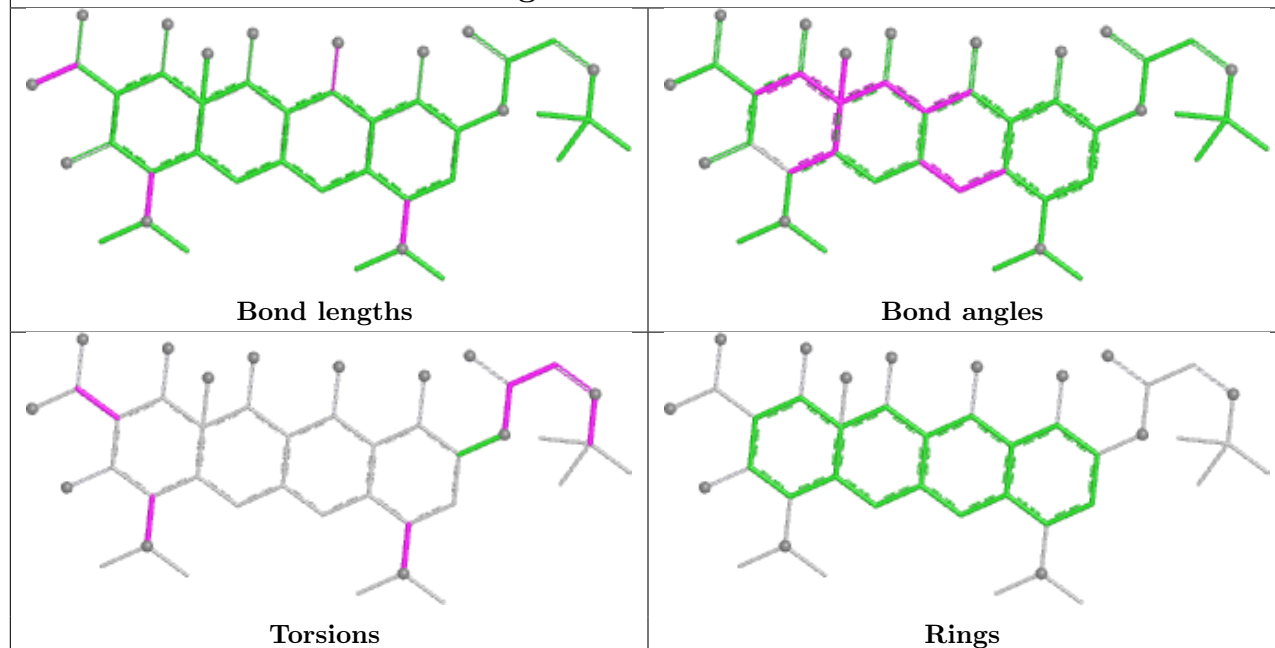
Ligand T1C L5 5312



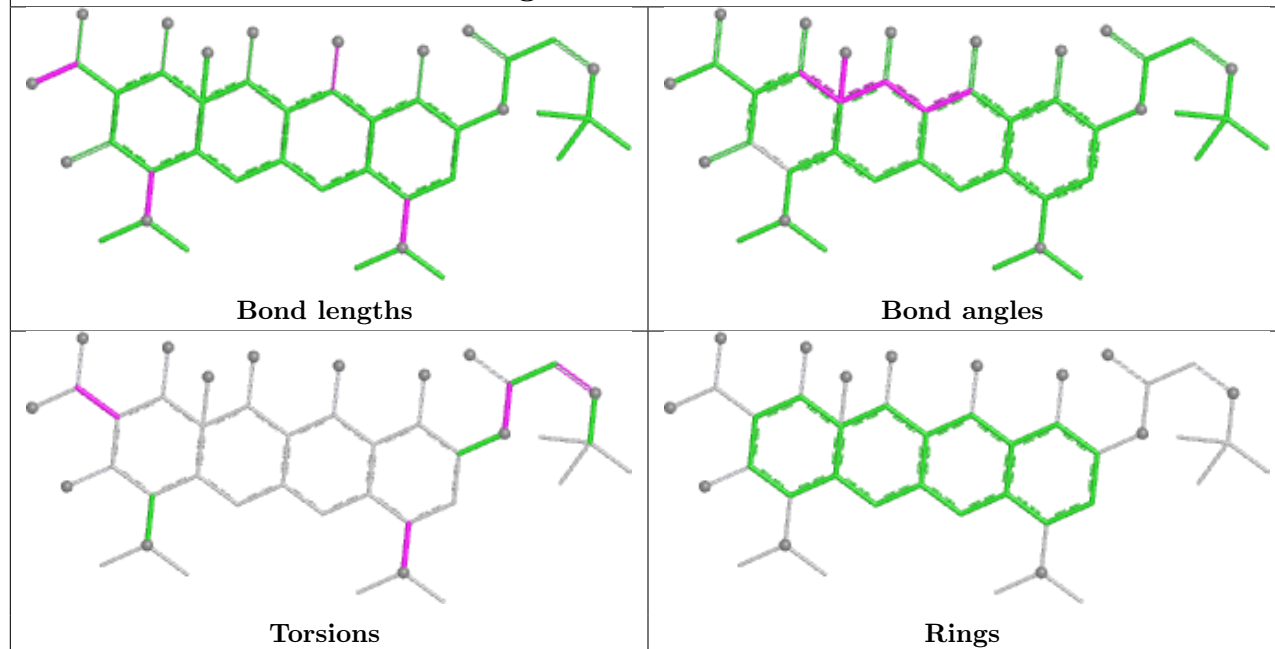
Ligand T1C L5 5314



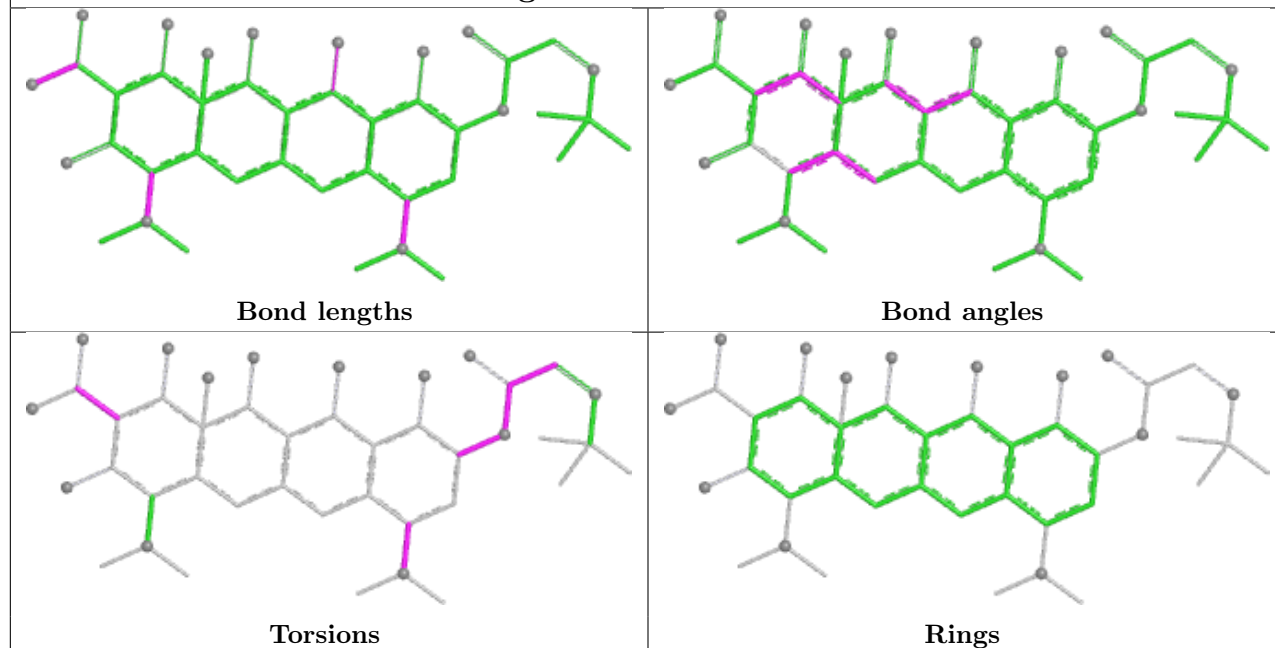
Ligand T1C L5 5317



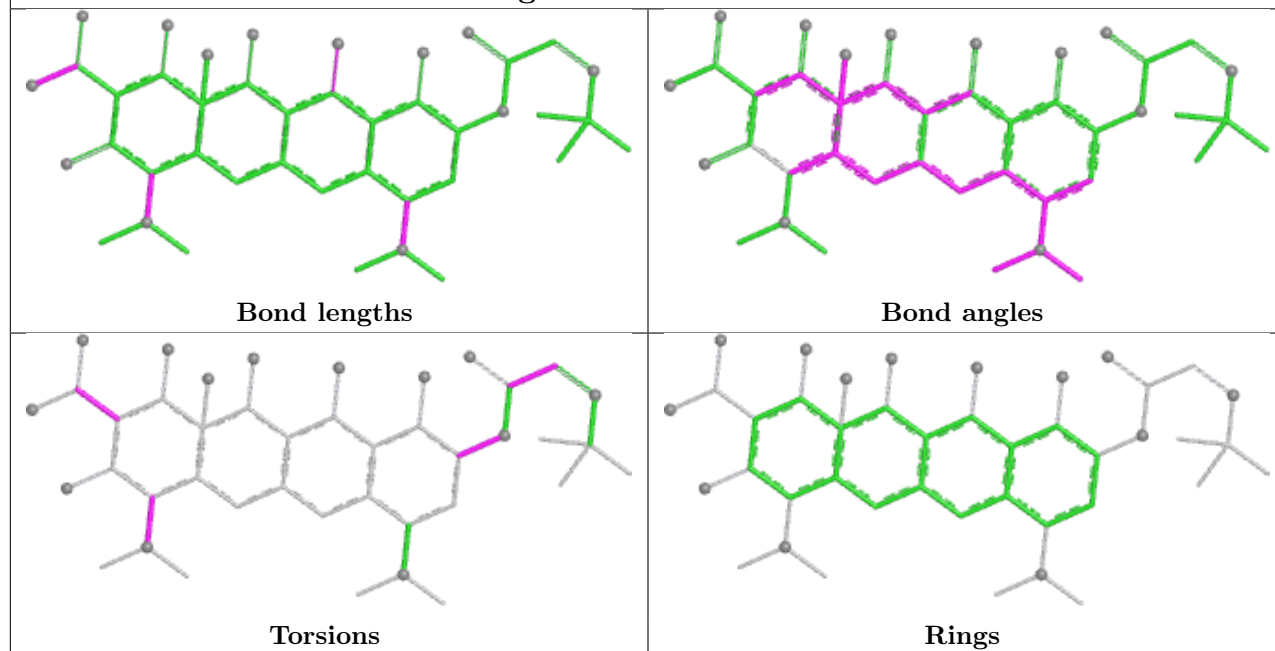
Ligand T1C L5 5313

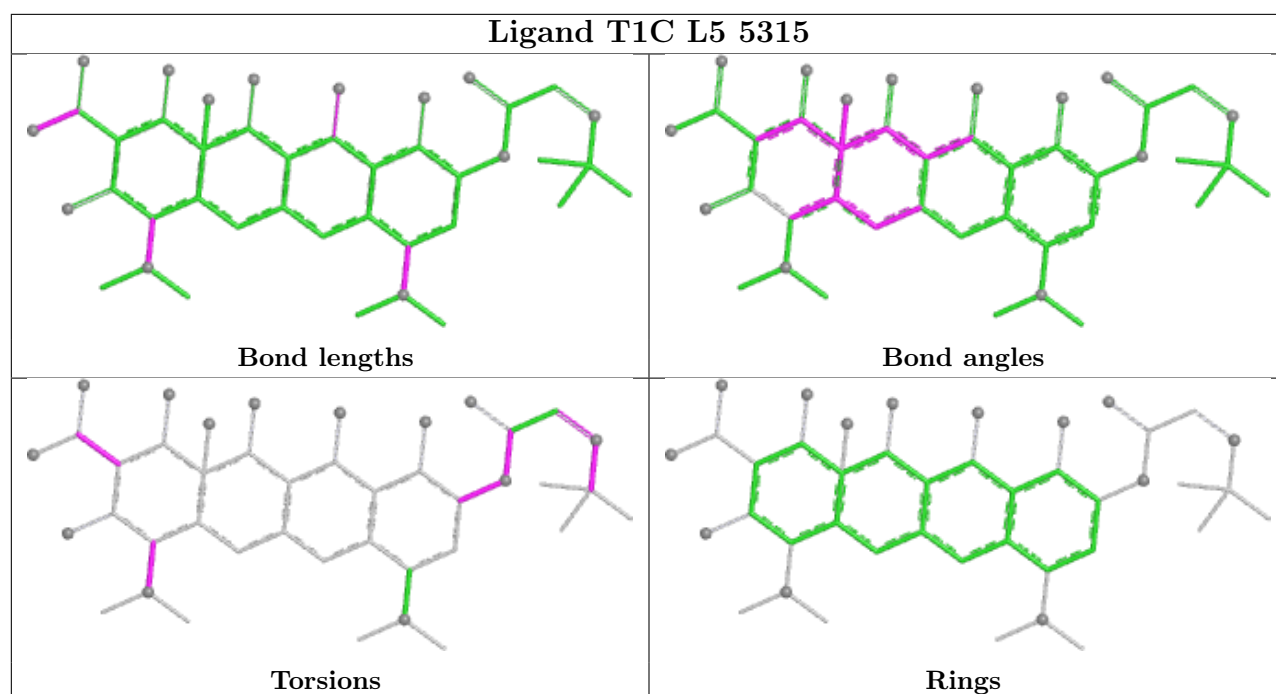


Ligand T1C L5 5311



Ligand T1C L5 5316





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

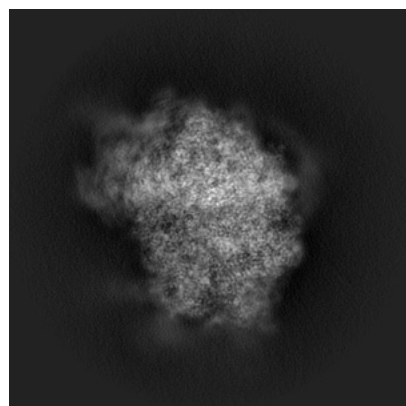
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38630. These allow visual inspection of the internal detail of the map and identification of artifacts.

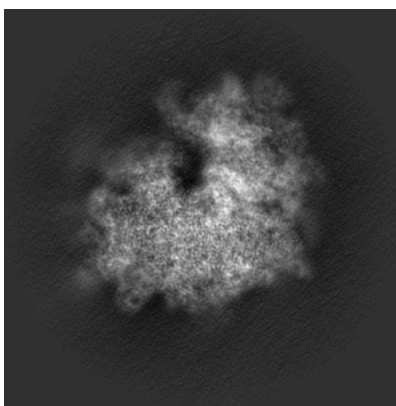
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

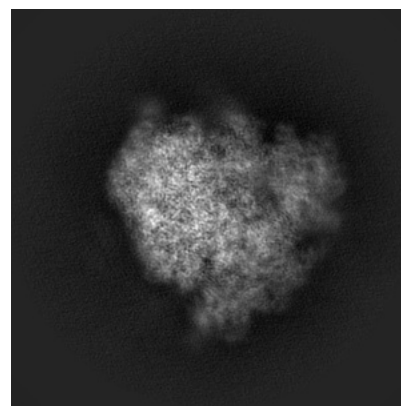
6.1.1 Primary map



X

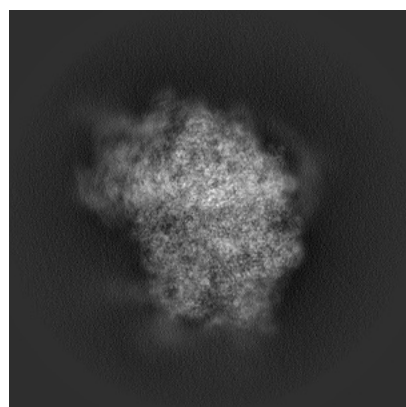


Y

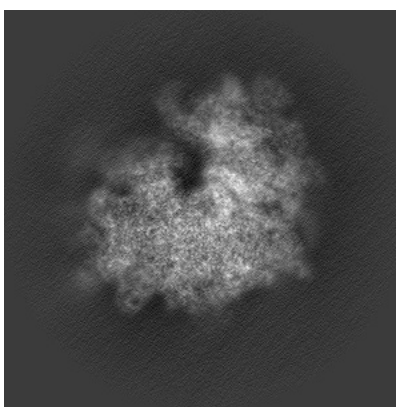


Z

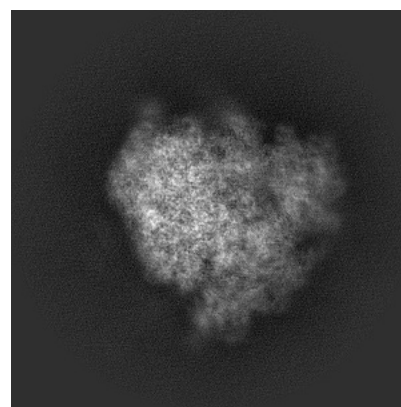
6.1.2 Raw map



X



Y

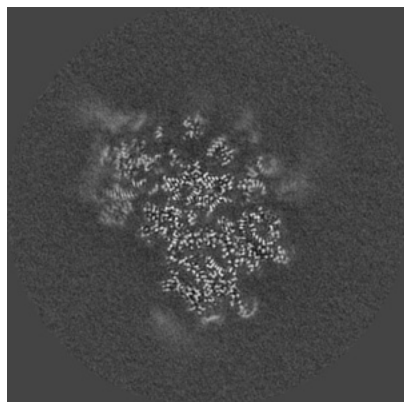


Z

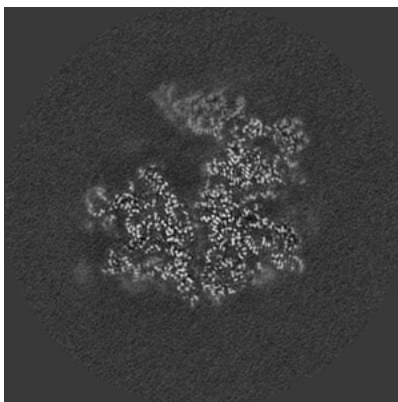
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

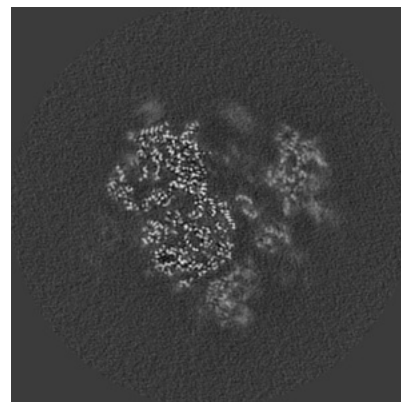
6.2.1 Primary map



X Index: 240

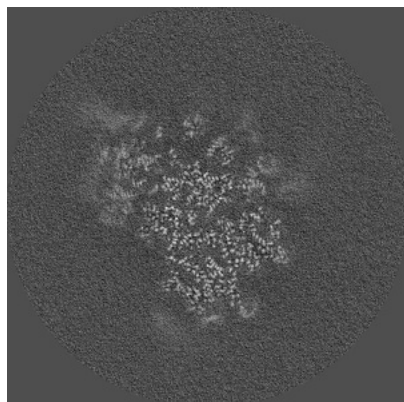


Y Index: 240

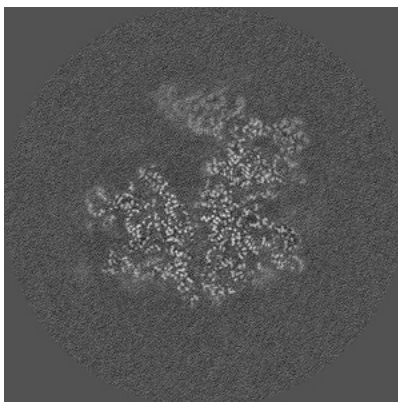


Z Index: 240

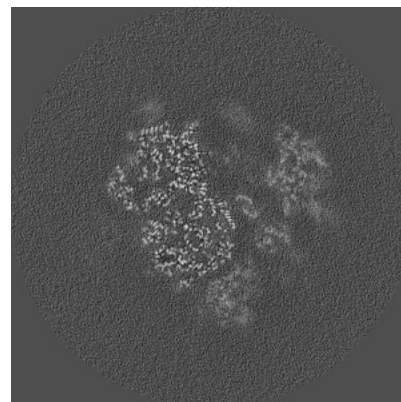
6.2.2 Raw map



X Index: 240



Y Index: 240

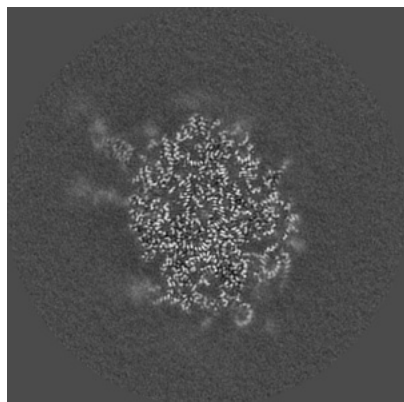


Z Index: 240

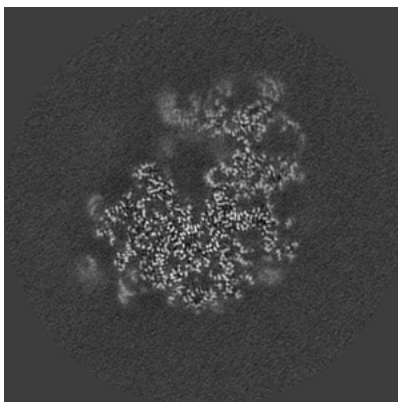
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

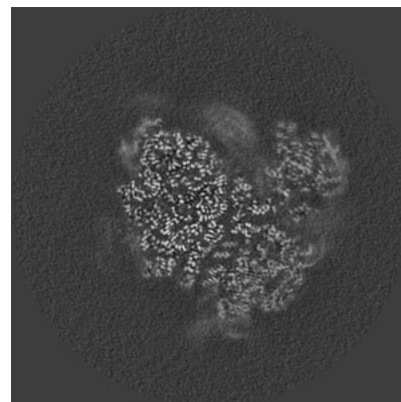
6.3.1 Primary map



X Index: 219

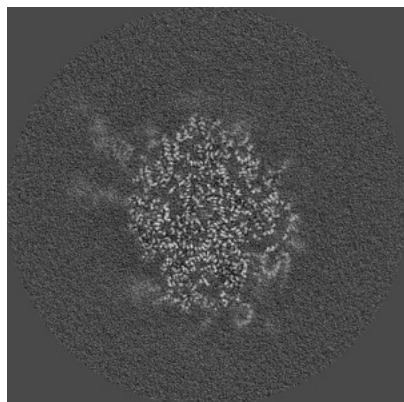


Y Index: 254

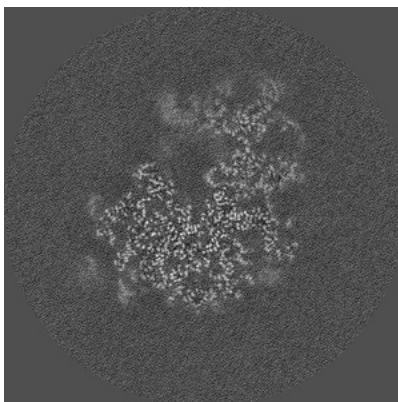


Z Index: 270

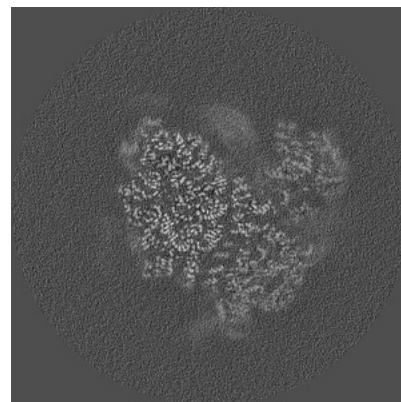
6.3.2 Raw map



X Index: 219



Y Index: 254

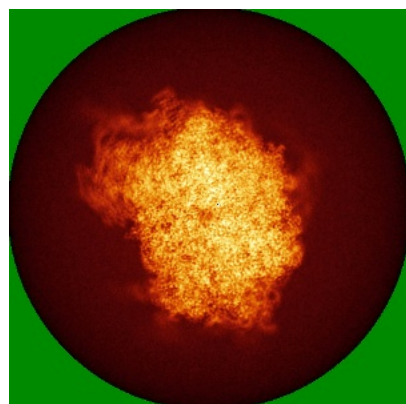


Z Index: 271

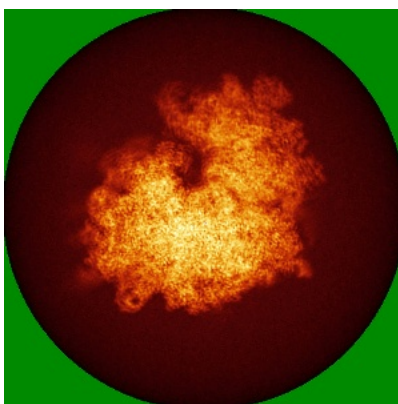
The images above show the largest variance slices of the map in three orthogonal directions.

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

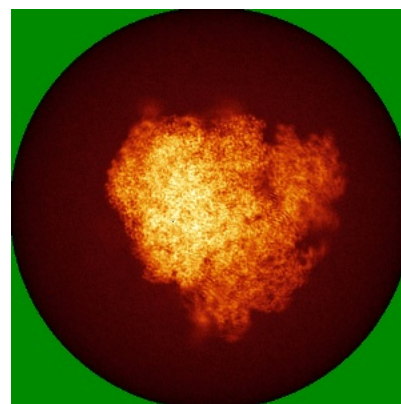
6.4.1 Primary map



X

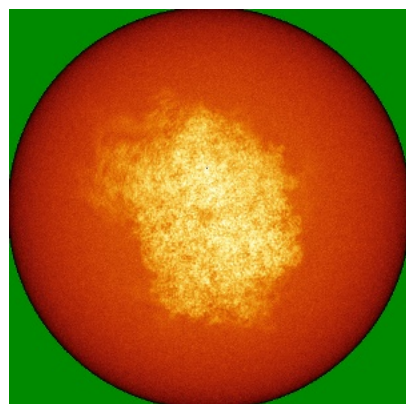


Y

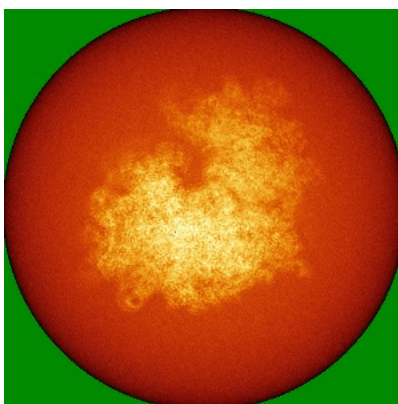


Z

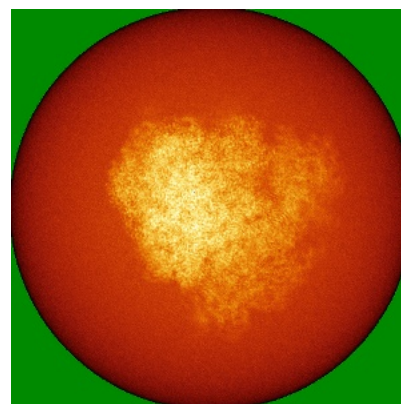
6.4.2 Raw map



X



Y

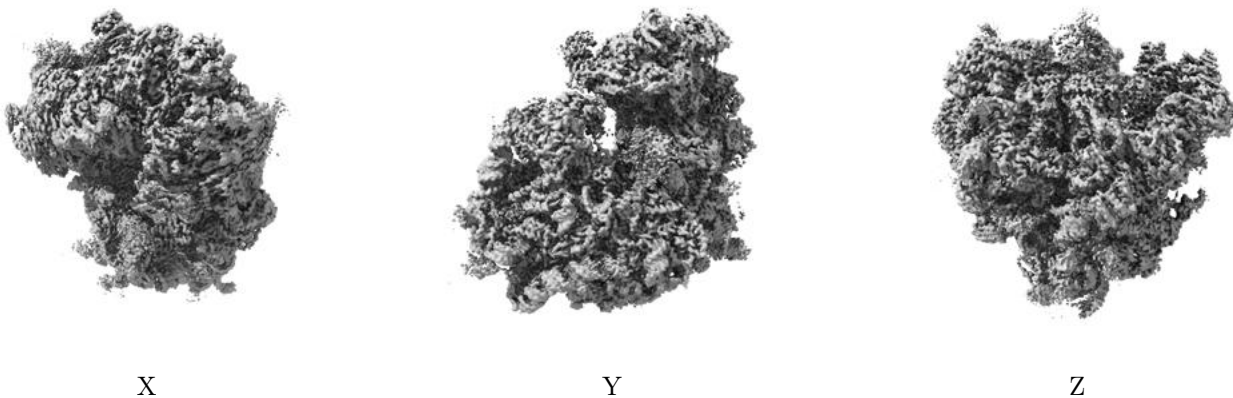


Z

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

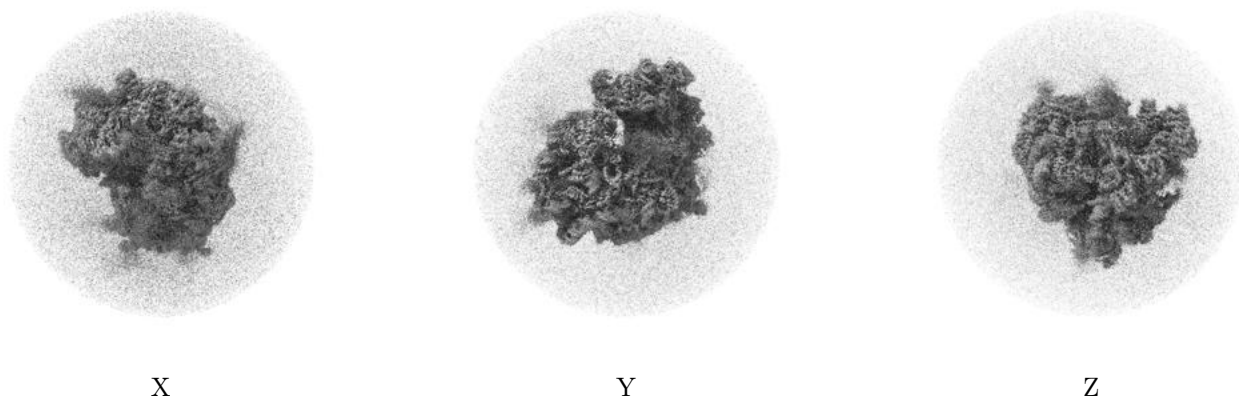
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

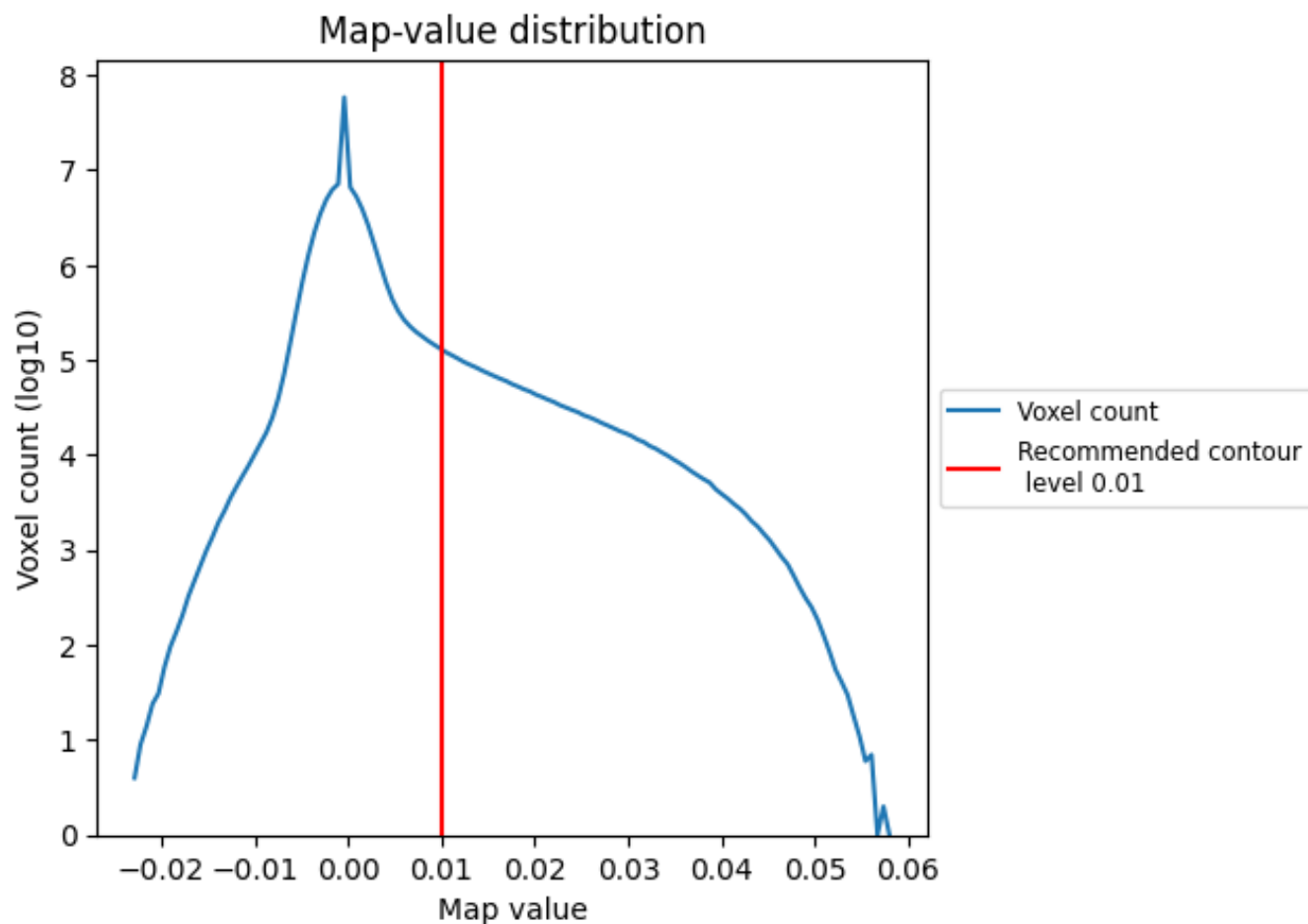
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

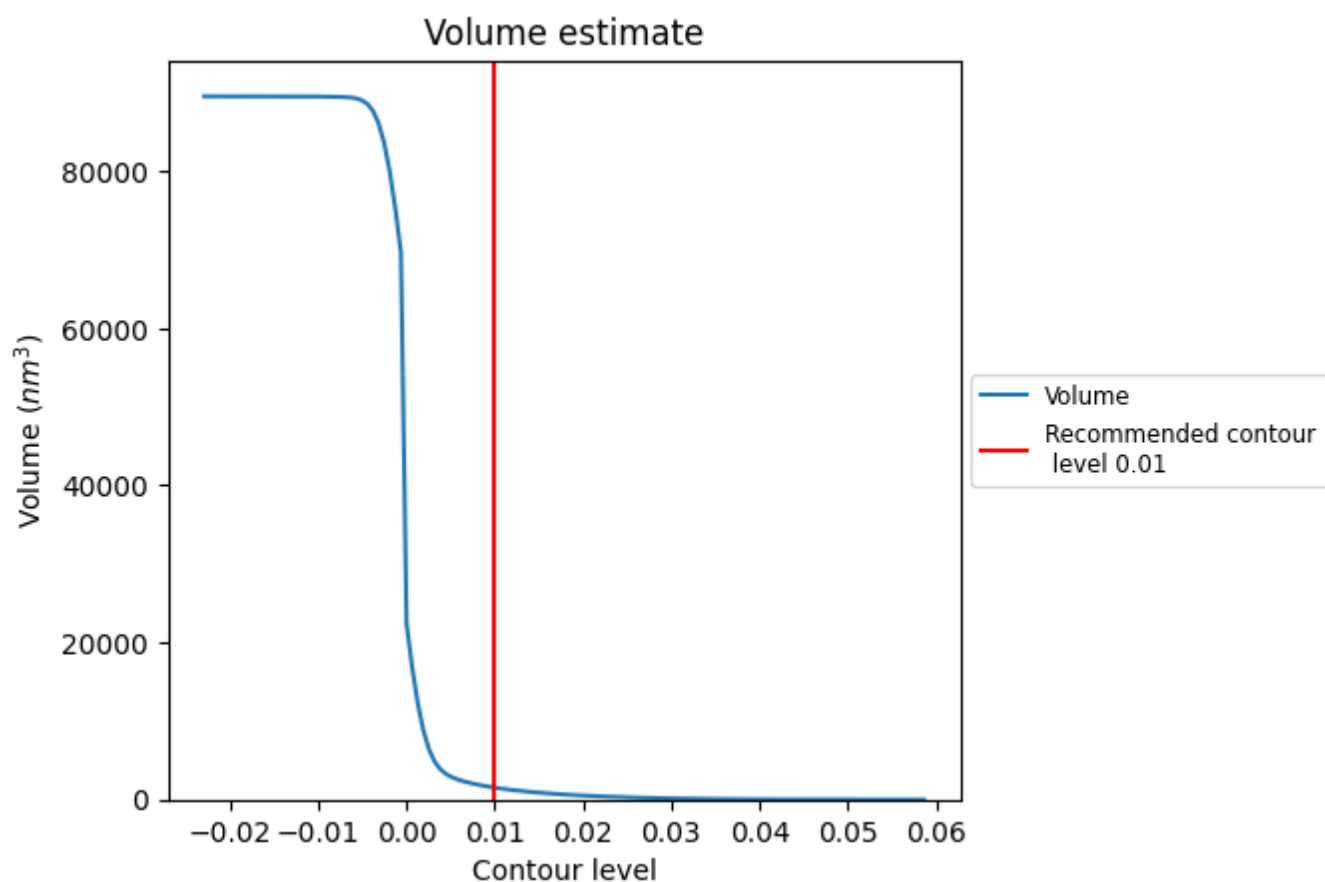
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

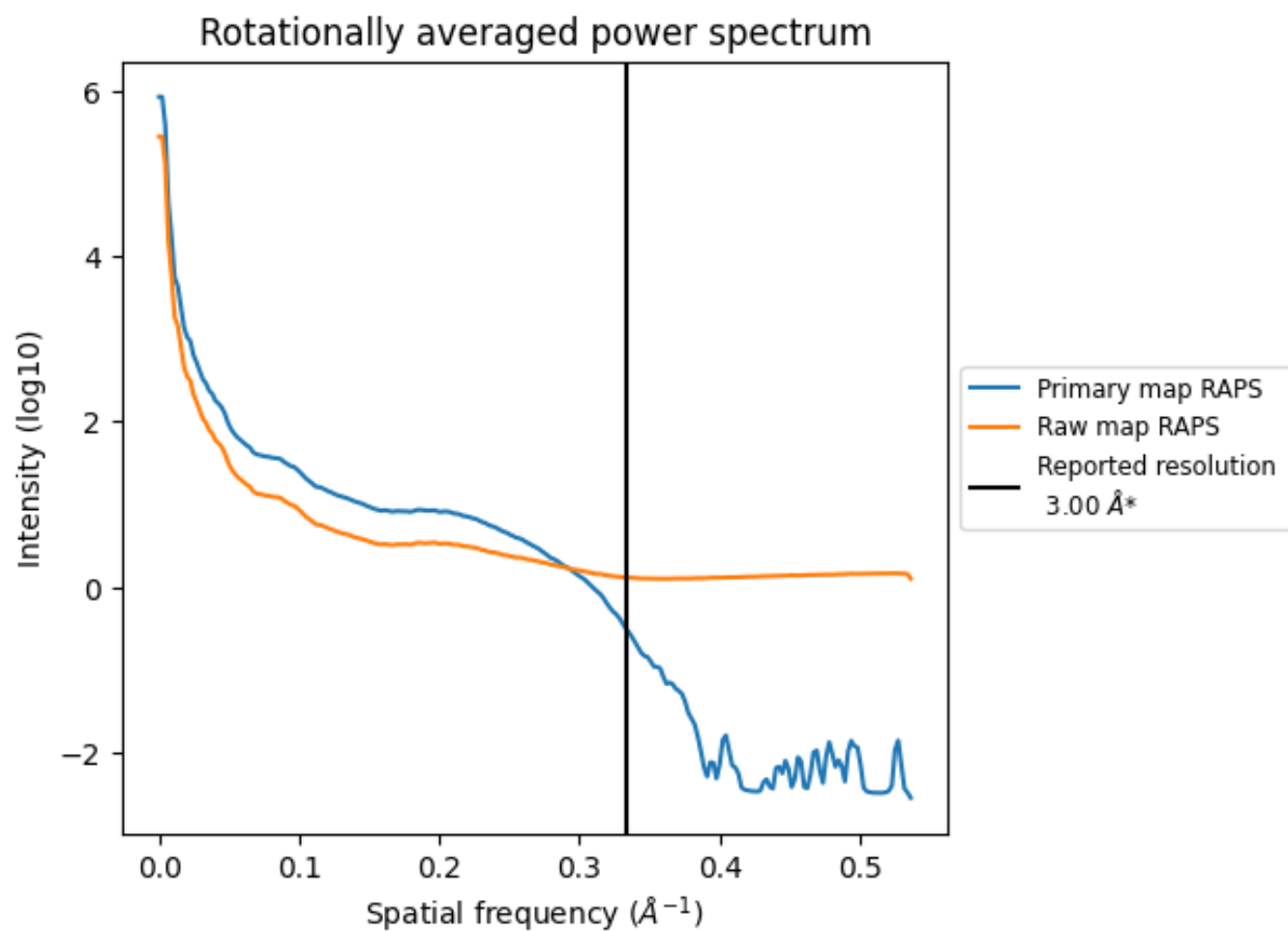
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1517 nm³; this corresponds to an approximate mass of 1370 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

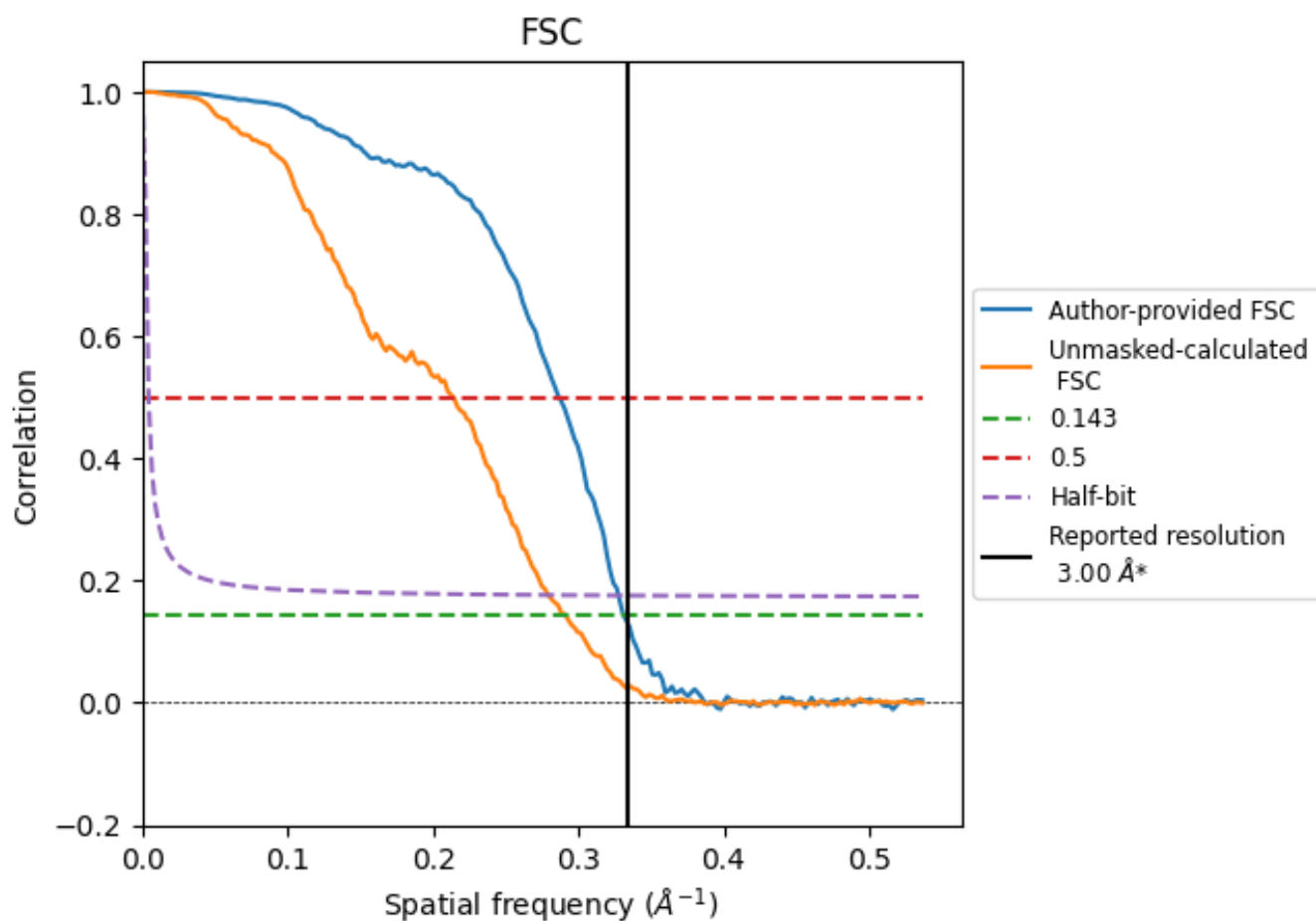


*Reported resolution corresponds to spatial frequency of 0.333 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of $0.333 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

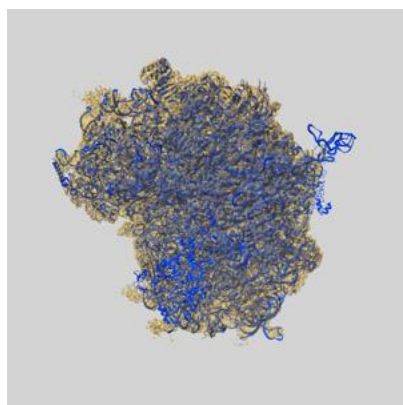
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	3.02	3.49	3.05
Unmasked-calculated*	3.44	4.68	3.58

*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 3.44 differs from the reported value 3.0 by more than 10 %

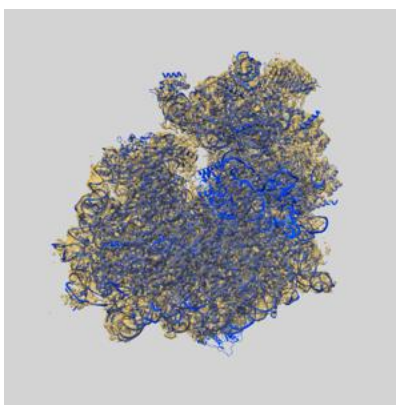
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-38630 and PDB model 8XSY. Per-residue inclusion information can be found in [section 3](#) on [page 22](#).

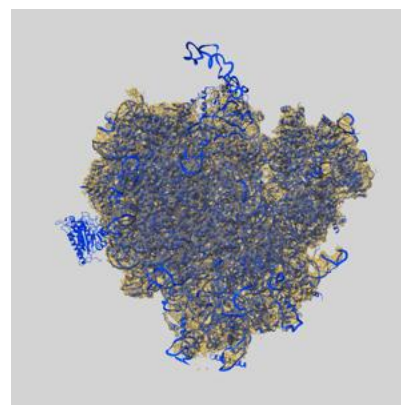
9.1 Map-model overlay [i](#)



X



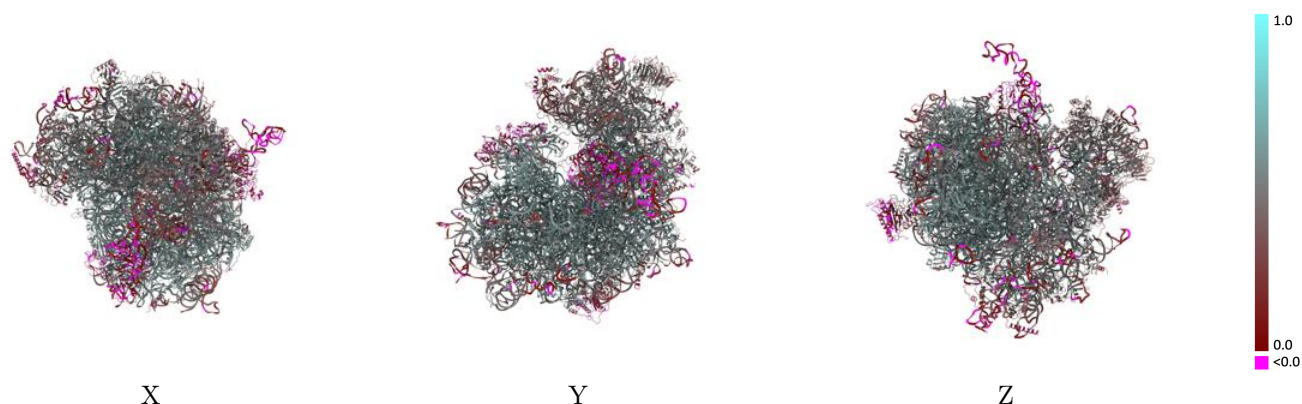
Y



Z

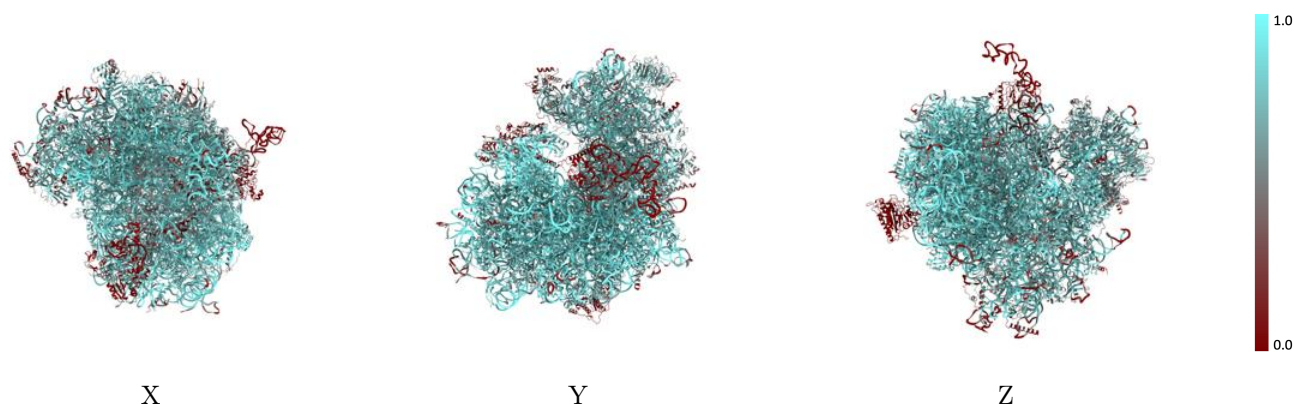
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



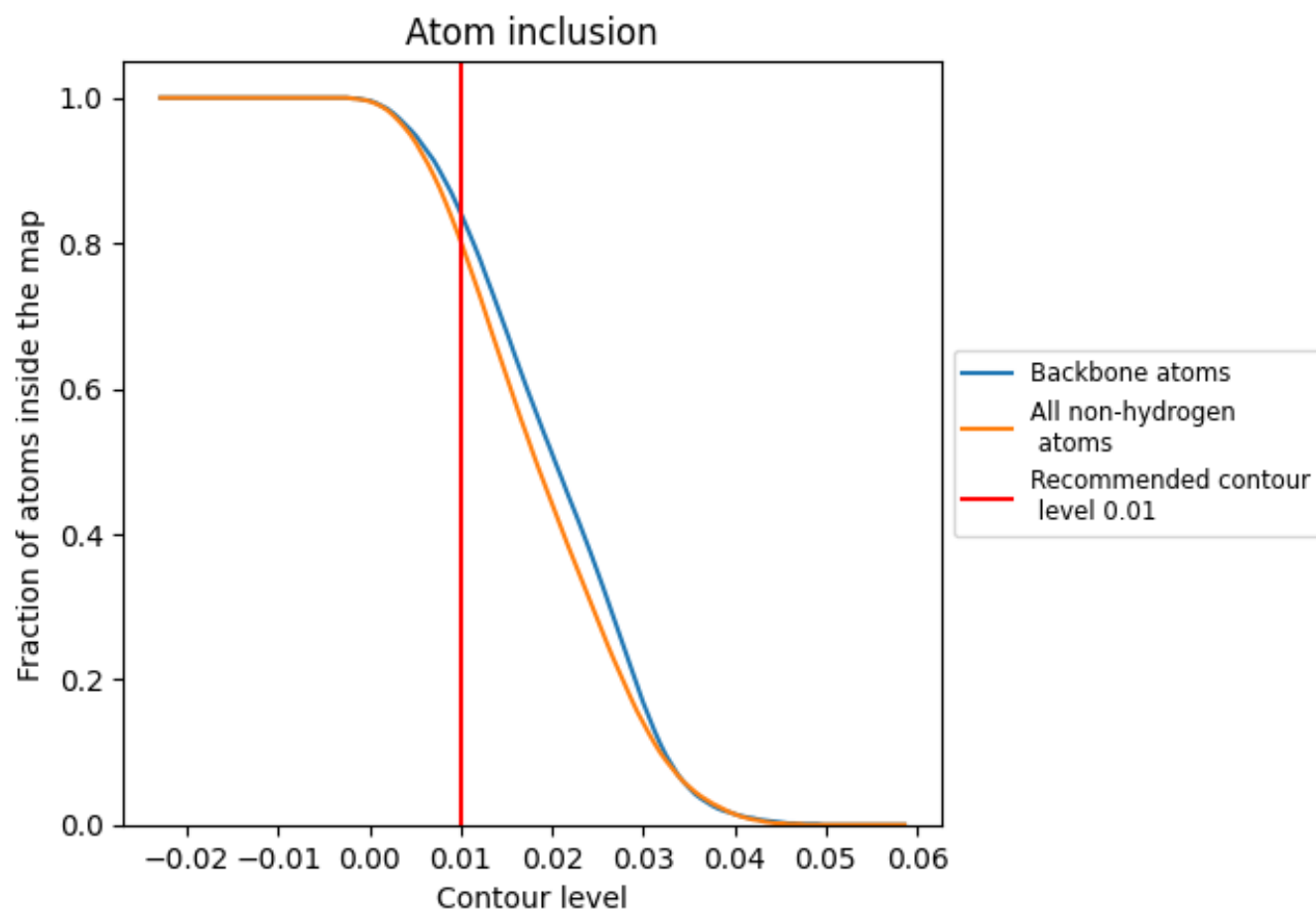
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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

9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 80% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8020	 0.4710
CA	 0.0020	 0.1350
CB	 0.2320	 0.4220
CC	 0.2560	 0.1910
CE	 0.0450	 0.3010
L5	 0.8910	 0.4920
L7	 0.9830	 0.5720
L8	 0.9250	 0.5100
LA	 0.8840	 0.5740
LB	 0.8630	 0.5570
LC	 0.8330	 0.5320
LD	 0.8650	 0.5340
LE	 0.8300	 0.5210
LF	 0.8570	 0.5530
LG	 0.7530	 0.4850
LH	 0.8430	 0.5380
LI	 0.8690	 0.5600
LJ	 0.7400	 0.4710
LL	 0.8160	 0.5110
LM	 0.8800	 0.5450
LN	 0.8850	 0.5660
LO	 0.8690	 0.5570
LP	 0.8760	 0.5620
LQ	 0.8620	 0.5600
LR	 0.7930	 0.5050
LS	 0.9060	 0.5760
LT	 0.8460	 0.5440
LU	 0.7840	 0.4790
LV	 0.8590	 0.5560
LW	 0.5080	 0.3340
LX	 0.8180	 0.5340
LY	 0.8450	 0.5300
LZ	 0.8430	 0.5380
La	 0.8790	 0.5660
Lb	 0.7670	 0.4820



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
Lc	 0.8340	 0.5300
Ld	 0.8330	 0.5370
Le	 0.8500	 0.5600
Lf	 0.9030	 0.5750
Lg	 0.8240	 0.5380
Lh	 0.8190	 0.5230
Li	 0.8260	 0.5140
Lj	 0.8840	 0.5560
Lk	 0.7810	 0.4960
Ll	 0.8530	 0.5400
Lm	 0.8470	 0.5400
Ln	 0.8570	 0.5460
Lo	 0.8240	 0.5490
Lp	 0.8190	 0.5520
Lr	 0.8430	 0.5390
Ls	 0.0920	 0.0590
Lt	 0.0290	 0.0220
Lz	 0.0250	 0.0820
S2	 0.8590	 0.4560
SA	 0.7510	 0.4660
SB	 0.6940	 0.4540
SC	 0.7480	 0.4690
SD	 0.5780	 0.3950
SE	 0.6760	 0.4490
SF	 0.6230	 0.4060
SG	 0.6020	 0.3560
SH	 0.6260	 0.4000
SI	 0.6710	 0.4530
SJ	 0.6780	 0.4330
SK	 0.5690	 0.3300
SL	 0.7210	 0.4930
SM	 0.2910	 0.1970
SN	 0.7570	 0.5010
SO	 0.7220	 0.4720
SP	 0.5560	 0.3730
SQ	 0.6680	 0.4370
SR	 0.6670	 0.4300
SS	 0.5820	 0.3730
ST	 0.6500	 0.4020
SU	 0.6000	 0.3970
SV	 0.7400	 0.4710
SW	 0.7450	 0.4910

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
SX	 0.7660	 0.4820
SY	 0.6270	 0.3870
SZ	 0.4890	 0.3190
Sa	 0.7770	 0.4940
Sb	 0.6890	 0.4470
Sc	 0.5490	 0.4230
Sd	 0.7280	 0.4510
Se	 0.5590	 0.3840
Sf	 0.3130	 0.2120
Sg	 0.6120	 0.3780