



wwPDB EM Validation Summary Report ⓘ

Jun 15, 2026 – 10:52 PM EDT

PDB ID : 9MNC / pdb_00009mnc
EMDB ID : EMD-48420
Title : Human 80S ribosome bound to small molecule SW393071
Authors : Erzberger, J.P.; Cruz, V.E.
Deposited on : 2024-12-20
Resolution : 2.33 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

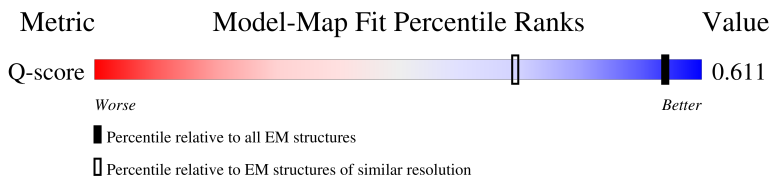
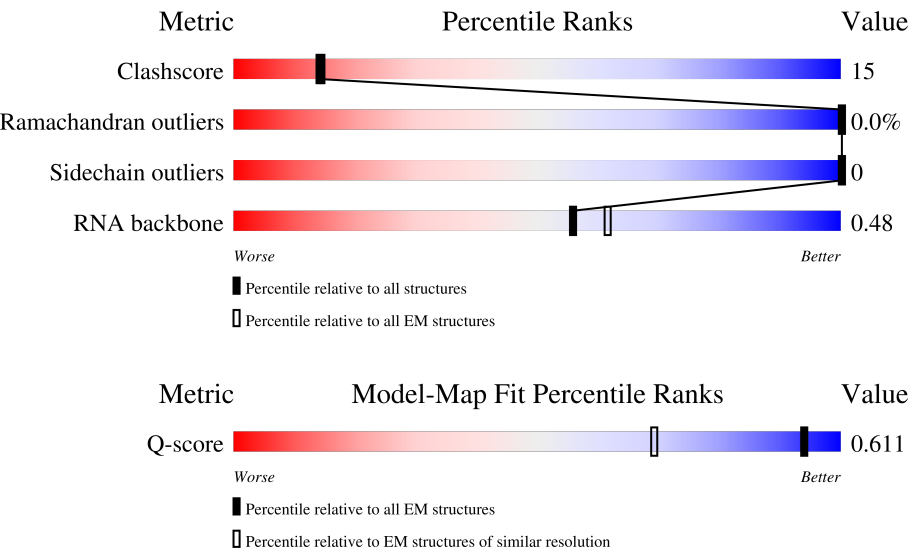
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data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

1 Overall quality at a glance i

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

The reported resolution of this entry is 2.33 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.








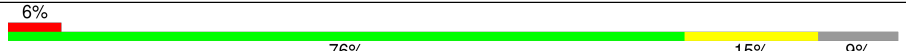
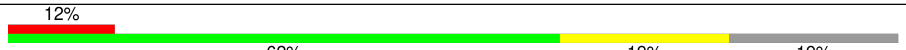

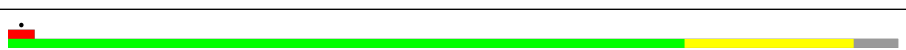

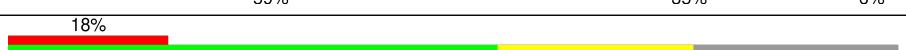
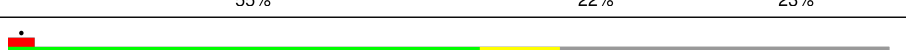

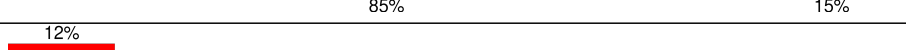
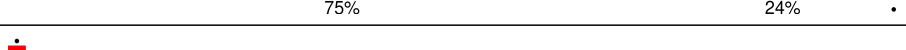
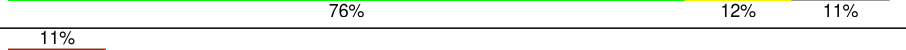





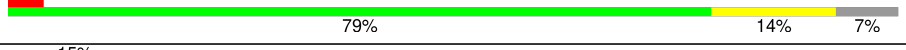
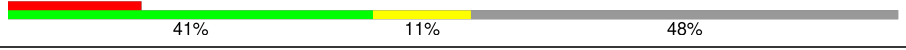


Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	4434 (1.83 - 2.83)

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	L1	157	<div><div>5%</div><div>45%</div><div>46%</div><div>6%</div></div>
2	L5	5069	<div><div>12%</div><div>35%</div><div>26%</div><div>8%</div><div>31%</div></div>
3	L8	297	<div><div>17%</div><div>73%</div><div>26%</div></div>

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Mol	Chain	Length	Quality of chain
4	L9	121	
5	LB	403	
6	LC	427	
7	LD	257	
8	LE	145	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	135	
13	LJ	178	
14	LK	288	
15	LM	215	
16	LN	204	
17	LO	123	
18	LP	97	
19	LQ	211	
20	LR	196	
21	LS	176	
22	LT	160	
23	LU	51	
24	LV	140	
25	LW	157	
26	LY	203	
27	LZ	136	
28	La	148	

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Mol	Chain	Length	Quality of chain
29	Lb	161	
30	Lc	115	
31	Ld	125	
32	Le	106	
33	Lf	110	
34	Lg	117	
35	Lh	184	
36	Li	105	
37	Lj	188	
38	Lk	70	
39	Ll	137	
40	Lm	128	
41	Ln	156	
42	Lo	99	
43	Lp	92	
44	Lz	214	
45	S1	264	
46	SA	295	
47	SC	293	
48	SD	204	
49	SE	263	
50	SG	249	
51	SH	194	
52	SI	208	
53	SJ	194	

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Mol	Chain	Length	Quality of chain
54	SK	243	
55	SL	158	
56	SM	165	
57	SN	151	
58	SO	151	
59	SP	145	
60	SQ	146	
61	SS	135	
62	ST	152	
63	SU	145	
64	SV	83	
65	SW	130	
66	SX	143	
67	SY	132	
68	SZ	119	
69	Sa	115	
70	Sb	84	
71	Sc	125	
72	Sd	69	
73	Se	133	
74	Sf	56	
75	Sg	317	
76	So	25	
77	Sy	132	
78	Sz	156	

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Mol	Chain	Length	Quality of chain
79	S2	1869	<div><div></div><div>26%</div><div>31%</div><div>43%</div><div>13%</div><div>13%</div></div>

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 213617 atoms, of which 19 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 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L1	148	Total	C	N	O	P	0	0
			3153	1408	563	1035	147		

- Molecule 2 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L5	3508	Total	C	N	O	P	0	0
			75275	33564	13761	24443	3507		

- Molecule 3 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L8	293	Total	C	N	O	S	0	0
			2386	1510	435	427	14		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L9	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 5 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	LB	401	Total	C	N	O	S	0	0
			3234	2058	607	555	14		

- Molecule 6 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	LC	365	Total	C	N	O	S	0	0
			2908	1829	580	486	13		

- Molecule 7 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LD	248	Total	C	N	O	S	0	0
			1899	1189	389	315	6		

- Molecule 8 is a protein called Large ribosomal subunit protein uL24.

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

- Molecule 9 is a protein called Large ribosomal subunit protein uL30.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LF	173	SER	ALA	conflict	UNP P18124

- Molecule 10 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	216	Total	C	N	O	S	0	0
			1752	1117	337	294	4		

- Molecule 11 is a protein called Large ribosomal subunit protein uL6.

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 eL32.

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

- Molecule 13 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	167	Total	C	N	O	S	0	0
			1340	848	250	236	6		

- Molecule 14 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LK	222	Total	C	N	O	S	0	0
			1780	1147	337	292	4		

- Molecule 15 is a protein called Large ribosomal subunit protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LM	135	Total	C	N	O	S	0	0
			1111	713	213	178	7		

- Molecule 16 is a protein called Large ribosomal subunit protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LN	203	Total	C	N	O	S	0	0
			1700	1072	359	265	4		

- Molecule 17 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LO	122	Total	C	N	O	S	0	0
			1014	641	205	167	1		

- Molecule 18 is a protein called Large ribosomal subunit protein eL37.

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

- Molecule 19 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LQ	206	Total	C	N	O	S	0	0
			1664	1041	345	274	4		

- Molecule 20 is a protein called Large ribosomal subunit protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LR	186	Total	C	N	O	S	0	0
			1558	965	335	249	9		

- Molecule 21 is a protein called Large ribosomal subunit protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LS	176	Total	C	N	O	S	0	0
			1460	930	284	235	11		

- Molecule 22 is a protein called Large ribosomal subunit protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LT	157	Total	C	N	O	S	0	0
			1284	815	250	214	5		

- Molecule 23 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	50	Total	C	N	O	S	0	0
			443	281	98	63	1		

- Molecule 24 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LV	130	Total	C	N	O	S	0	0
			972	615	183	169	5		

- Molecule 25 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	82	Total	C	N	O	S	0	0
			671	424	132	112	3		

- Molecule 26 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LY	198	Total	C	N	O	S	0	0
			1624	1048	317	254	5		

- Molecule 27 is a protein called Large ribosomal subunit protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LZ	135	Total	C	N	O	S	0	0
			1106	714	208	181	3		

- Molecule 28 is a protein called Large ribosomal subunit protein uL15.

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

- Molecule 29 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Lb	104	Total	C	N	O	S	0	0
			848	526	186	132	4		

- Molecule 30 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lc	101	Total	C	N	O	S	0	0
			785	498	138	142	7		

- Molecule 31 is a protein called Large ribosomal subunit protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ld	104	Total	C	N	O	S	0	0
			862	546	167	147	2		

- Molecule 32 is a protein called Large ribosomal subunit protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Le	105	Total	C	N	O	S	0	0
			863	543	175	139	6		

- Molecule 33 is a protein called Large ribosomal subunit protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Lf	109	Total	C	N	O	S	0	0
			875	555	174	143	3		

- Molecule 34 is a protein called Large ribosomal subunit protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lg	111	Total	C	N	O	S	0	0
			882	552	182	142	6		

- Molecule 35 is a protein called Large ribosomal subunit protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lh	159	Total	C	N	O	S	0	0
			1289	808	249	223	9		

- Molecule 36 is a protein called Large ribosomal subunit protein eL36.

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

- Molecule 37 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Lj	187	Total	C	N	O	S	0	0
			1512	944	314	249	5		

- Molecule 38 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lk	68	Total	C	N	O	S	0	0
			559	360	101	97	1		

- Molecule 39 is a protein called Large ribosomal subunit protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Ll	124	Total	C	N	O	S	0	0
			990	614	205	167	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ll	2	ACE	-	acetylation	UNP P46779

- Molecule 40 is a protein called Large ribosomal subunit protein eL22.

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

- Molecule 41 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Ln	116	Total	C	N	O	S	0	0
			949	606	178	164	1		

- Molecule 42 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Lo	52	Total	C	N	O	S	1	0
			436	272	91	67	6		

There are 29 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	PRO	deletion	UNP P62987
Lo	?	-	PRO	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	ARG	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	PHE	deletion	UNP P62987
Lo	?	-	ALA	deletion	UNP P62987
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	LYS	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	GLU	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	ARG	deletion	UNP P62987
Lo	?	-	THR	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	SER	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	TYR	deletion	UNP P62987

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Chain	Residue	Modelled	Actual	Comment	Reference
Lo	?	-	ASN	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	LYS	deletion	UNP P62987

- Molecule 43 is a protein called Large ribosomal subunit protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lp	88	Total	C	N	O	S	0	0
			681	430	131	113	7		

- Molecule 44 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lz	198	Total	C	N	O	S	0	0
			1616	1029	312	263	12		

- Molecule 45 is a protein called Small ribosomal subunit protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	S1	221	Total	C	N	O	S	0	0
			1790	1135	323	318	14		

- Molecule 46 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	SA	220	Total	C	N	O	S	0	0
			1731	1099	303	321	8		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SA	2	ACE	-	acetylation	UNP P08865

- Molecule 47 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	SC	219	Total	C	N	O	S	0	0
			1700	1100	292	298	10		

- Molecule 48 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	SD	184	Total	C	N	O	S	0	0
			1463	917	276	263	7		

- Molecule 49 is a protein called Small ribosomal subunit protein eS4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SE	262	Total	C	N	O	S	0	0
			2075	1324	386	357	8		

- Molecule 50 is a protein called Small ribosomal subunit protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SG	229	Total	C	N	O	S	0	0
			1853	1158	369	319	7		

- Molecule 51 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SH	187	Total	C	N	O	S	0	0
			1509	963	277	268	1		

- Molecule 52 is a protein called Small ribosomal subunit protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SI	207	Total	C	N	O	S	0	0
			1695	1064	334	292	5		

- Molecule 53 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SJ	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 54 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SK	224	Total	C	N	O	S	0	0
			1745	1112	314	312	7		

- Molecule 55 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SL	143	Total	C	N	O	S	0	0
			1180	754	223	197	6		

- Molecule 56 is a protein called Small ribosomal subunit protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SM	97	Total	C	N	O	S	0	0
			816	533	144	133	6		

- Molecule 57 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SN	150	Total	C	N	O	S	0	0
			1207	773	229	204	1		

- Molecule 58 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SO	127	Total	C	N	O	S	0	0
			956	585	189	176	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SO	138	IAS	ASP	conflict	UNP P62263

- Molecule 59 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SP	125	Total	C	N	O	S	0	0
			1021	647	192	175	7		

- Molecule 60 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SQ	139	Total	C	N	O	S	0	0
			1108	704	210	191	3		

- Molecule 61 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SS	131	Total	C	N	O	S	0	0
			1064	668	198	194	4		

- Molecule 62 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	ST	147	Total	C	N	O	S	0	0
			1208	758	244	205	1		

- Molecule 63 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SU	141	Total	C	N	O	S	0	0
			1094	685	210	196	3		

- Molecule 64 is a protein called Small ribosomal subunit protein eS21.

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

- Molecule 65 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SW	129	Total	C	N	O	S	0	0
			1033	659	193	175	6		

- Molecule 66 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SX	140	Total	C	N	O	S	0	0
			1088	687	215	183	3		

- Molecule 67 is a protein called Isoform 3 of Small ribosomal subunit protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SY	122	Total	C	N	O	S	0	0
			1002	635	196	166	5		

- Molecule 68 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SZ	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 69 is a protein called Small ribosomal subunit protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sa	99	Total	C	N	O	S	0	0
			792	492	165	130	5		

- Molecule 70 is a protein called Small ribosomal subunit protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Sb	83	Total	C	N	O	S	0	0
			650	408	121	114	7		

- Molecule 71 is a protein called Small ribosomal subunit protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Sc	83	Total	C	N	O	S	0	0
			670	431	125	113	1		

- Molecule 72 is a protein called Small ribosomal subunit protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Sd	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 73 is a protein called FAU ubiquitin-like and ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Se	55	Total	C	N	O	S	0	0
			437	271	95	70	1		

- Molecule 74 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Sf	43	Total	C	N	O	S	0	0
			349	216	71	57	5		

- Molecule 75 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sg	303	Total	C	N	O	S	0	0
			2364	1492	412	448	12		

- Molecule 76 is a protein called Small ribosomal subunit protein eS32.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	So	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 77 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Sy	121	Total	C	N	O	S	0	0
			939	590	166	174	9		

- Molecule 78 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms				AltConf	Trace
78	Sz	16	Total	C	N	O	0	0
			142	95	28	19		

- Molecule 79 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	S2	1635	Total	C	N	O	P	0	0
			34964	15636	6271	11423	1634		

- Molecule 80 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
80	L1	4	Total	Mg	0
			4	4	
80	L5	206	Total	Mg	0
			206	206	
80	L9	3	Total	Mg	0
			3	3	
80	LD	1	Total	Mg	0
			1	1	
80	LI	2	Total	Mg	0
			2	2	
80	LN	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
80	LR	1	Total 1	Mg 1	0
80	LV	1	Total 1	Mg 1	0
80	La	1	Total 1	Mg 1	0
80	Lh	1	Total 1	Mg 1	0
80	ST	1	Total 1	Mg 1	0
80	SX	1	Total 1	Mg 1	0
80	S2	98	Total 98	Mg 98	0

- Molecule 81 is POTASSIUM ION (CCD ID: K) (formula: K).

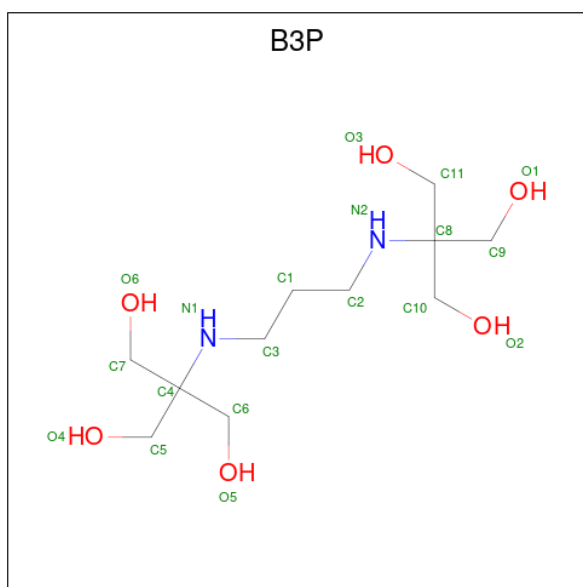
Mol	Chain	Residues	Atoms		AltConf
81	L1	3	Total 3	K 3	0
81	L5	42	Total 42	K 42	0
81	L9	1	Total 1	K 1	0
81	LC	1	Total 1	K 1	0
81	LD	2	Total 2	K 2	0
81	Lg	1	Total 1	K 1	0
81	Lz	1	Total 1	K 1	0
81	SE	1	Total 1	K 1	0
81	ST	1	Total 1	K 1	0
81	SU	1	Total 1	K 1	0
81	Sa	1	Total 1	K 1	0
81	Sf	1	Total 1	K 1	0

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Mol	Chain	Residues	Atoms		AltConf
81	S2	38	Total	K	0
			38	38	

- Molecule 82 is 2-[3-(2-HYDROXY-1,1-DIHYDROXYMETHYL-ETHYLAMINO)-PROPYLAMINO]-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (CCD ID: B3P) (formula: $C_{11}H_{26}N_2O_6$).



Mol	Chain	Residues	Atoms				AltConf
82	L5	1	Total	C	N	O	0
			19	11	2	6	

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

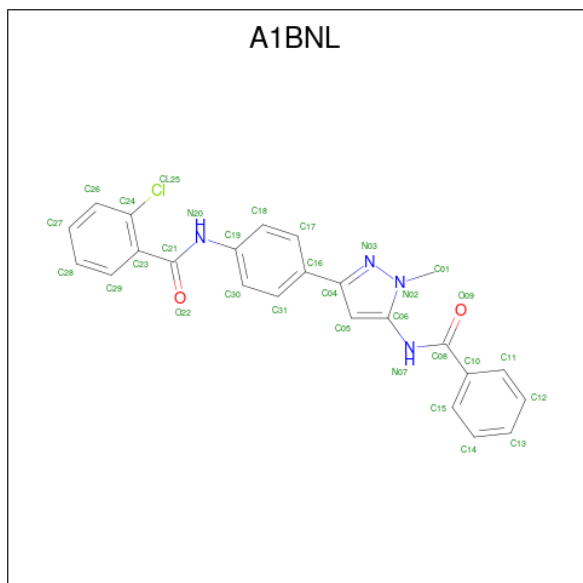
Mol	Chain	Residues	Atoms		AltConf
83	LP	1	Total	Zn	0
			1	1	
83	Le	1	Total	Zn	0
			1	1	
83	Lg	1	Total	Zn	0
			1	1	
83	Lo	1	Total	Zn	0
			1	1	
83	Lp	1	Total	Zn	0
			1	1	
83	Sa	1	Total	Zn	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
83	Sf	1	Total	Zn	0
			1	1	
83	S2	1	Total	Zn	0
			1	1	

- Molecule 84 is N-[4-(5-benzamido-1-methyl-1H-pyrazol-3-yl)phenyl]-2-chlorobenzamide (CCD ID: A1BNL) (formula: C₂₄H₁₉ClN₄O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						AltConf
84	SX	1	Total	C	Cl	H	N	O	0
			50	24	1	19	4	2	

- Molecule 85 is water.

Mol	Chain	Residues	Atoms		AltConf
85	L1	117	Total	O	0
			117	117	
85	L5	3736	Total	O	0
			3736	3736	
85	L8	28	Total	O	0
			28	28	
85	L9	73	Total	O	0
			73	73	
85	LB	81	Total	O	0
			81	81	
85	LC	85	Total	O	0
			85	85	

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Mol	Chain	Residues	Atoms		AltConf
85	LD	73	Total 73	O 73	0
85	LE	14	Total 14	O 14	0
85	LF	42	Total 42	O 42	0
85	LG	12	Total 12	O 12	0
85	LH	17	Total 17	O 17	0
85	LI	51	Total 51	O 51	0
85	LJ	3	Total 3	O 3	0
85	LK	14	Total 14	O 14	0
85	LM	5	Total 5	O 5	0
85	LN	75	Total 75	O 75	0
85	LO	12	Total 12	O 12	0
85	LP	36	Total 36	O 36	0
85	LQ	37	Total 37	O 37	0
85	LR	21	Total 21	O 21	0
85	LS	30	Total 30	O 30	0
85	LT	29	Total 29	O 29	0
85	LU	10	Total 10	O 10	0
85	LV	21	Total 21	O 21	0
85	LW	8	Total 8	O 8	0
85	LY	35	Total 35	O 35	0
85	LZ	5	Total 5	O 5	0

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Mol	Chain	Residues	Atoms		AltConf
85	La	48	Total 48	O 48	0
85	Lb	18	Total 18	O 18	0
85	Lc	8	Total 8	O 8	0
85	Ld	13	Total 13	O 13	0
85	Le	22	Total 22	O 22	0
85	Lf	29	Total 29	O 29	0
85	Lg	30	Total 30	O 30	0
85	Lh	43	Total 43	O 43	0
85	Li	4	Total 4	O 4	0
85	Lj	56	Total 56	O 56	0
85	Lk	1	Total 1	O 1	0
85	Ll	27	Total 27	O 27	0
85	Lm	1	Total 1	O 1	0
85	Ln	15	Total 15	O 15	0
85	Lo	2	Total 2	O 2	0
85	Lp	23	Total 23	O 23	0
85	Lz	10	Total 10	O 10	0
85	S1	19	Total 19	O 19	0
85	SA	6	Total 6	O 6	0
85	SC	20	Total 20	O 20	0
85	SD	12	Total 12	O 12	0

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Mol	Chain	Residues	Atoms		AltConf
85	SE	27	Total 27	O 27	0
85	SG	7	Total 7	O 7	0
85	SH	4	Total 4	O 4	0
85	SI	24	Total 24	O 24	0
85	SJ	25	Total 25	O 25	0
85	SK	2	Total 2	O 2	0
85	SL	38	Total 38	O 38	0
85	SN	22	Total 22	O 22	0
85	SO	28	Total 28	O 28	0
85	SP	3	Total 3	O 3	0
85	SQ	14	Total 14	O 14	0
85	SS	4	Total 4	O 4	0
85	ST	10	Total 10	O 10	0
85	SU	10	Total 10	O 10	0
85	SV	6	Total 6	O 6	0
85	SW	26	Total 26	O 26	0
85	SX	38	Total 38	O 38	0
85	SY	3	Total 3	O 3	0
85	SZ	5	Total 5	O 5	0
85	Sa	29	Total 29	O 29	0
85	Sb	9	Total 9	O 9	0

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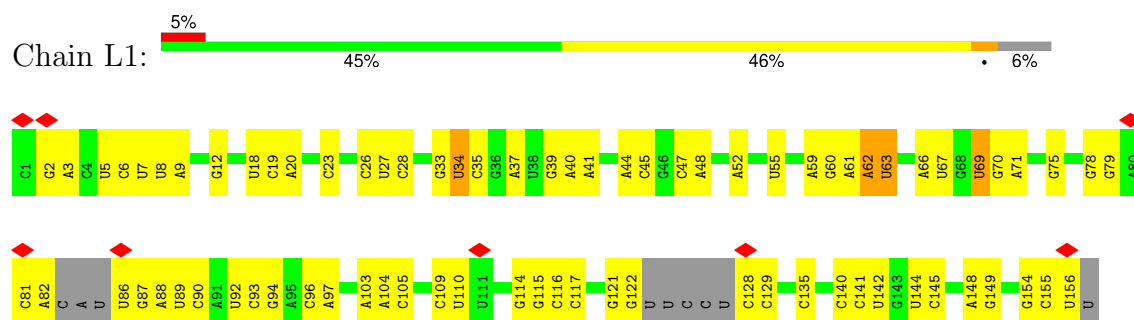
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Mol	Chain	Residues	Atoms		AltConf
85	Sc	3	Total 3	O 3	0
85	Sd	1	Total 1	O 1	0
85	Se	7	Total 7	O 7	0
85	Sf	4	Total 4	O 4	0
85	So	3	Total 3	O 3	0
85	S2	1288	Total 1288	O 1288	0

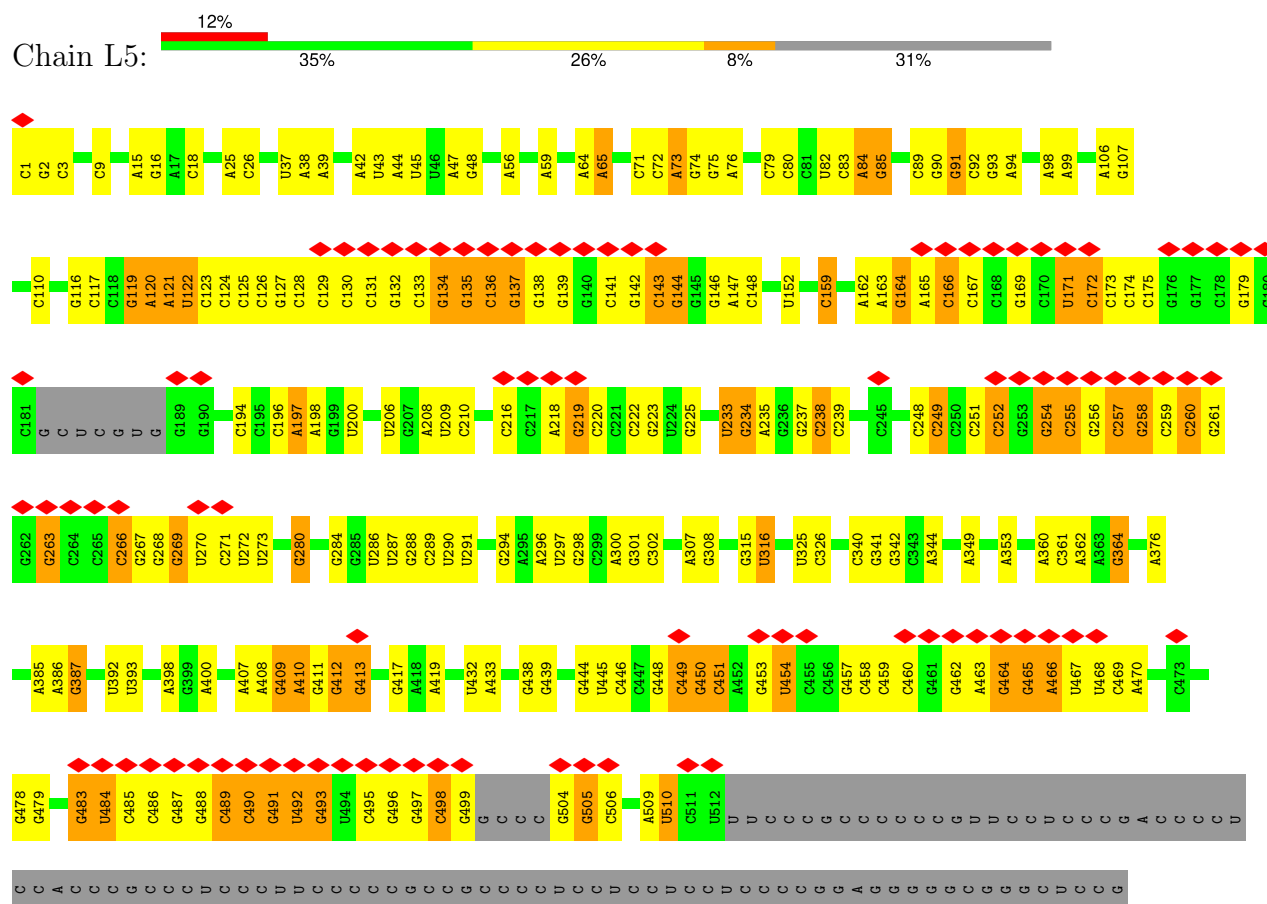
3 Residue-property plots

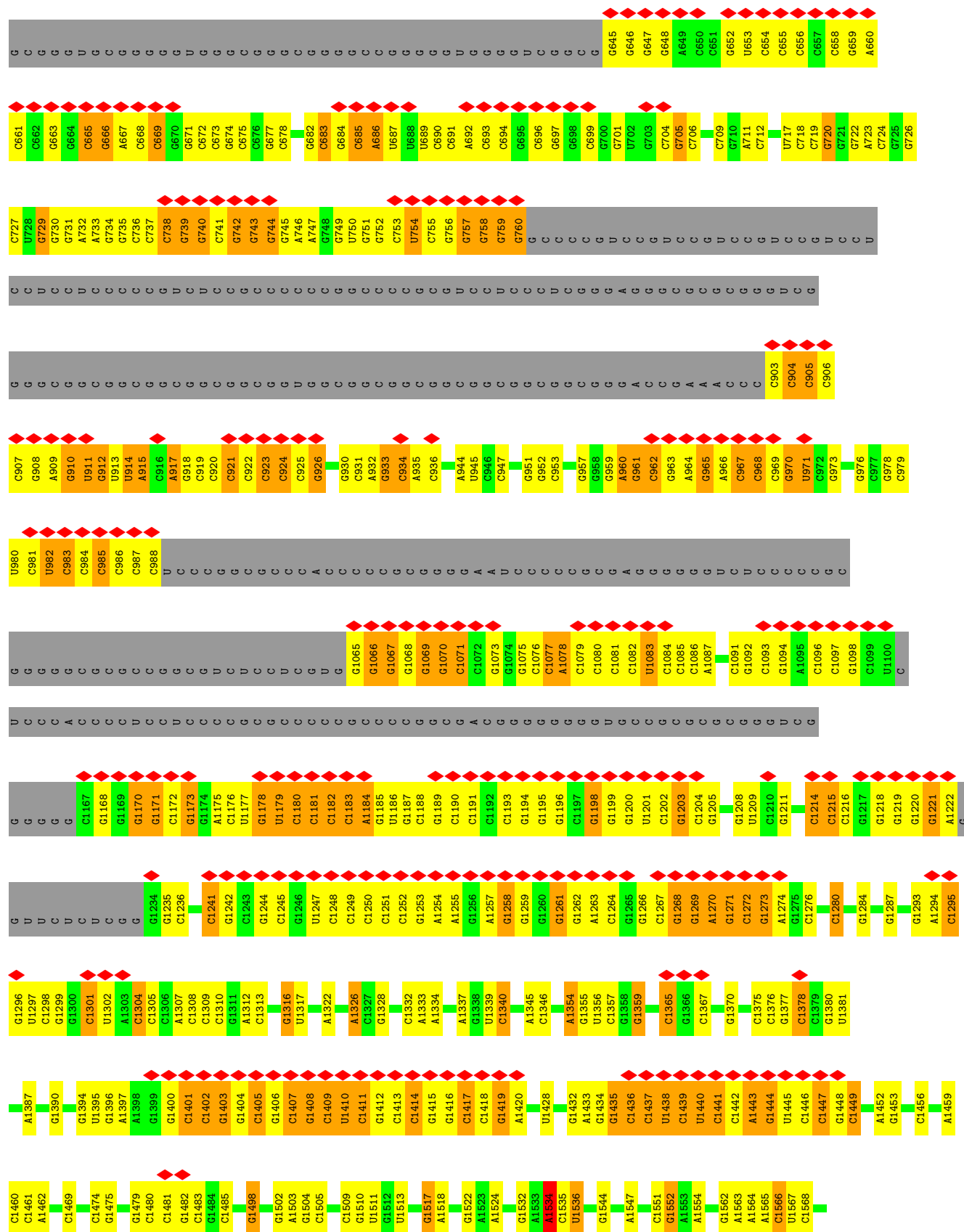
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

• Molecule 1: 5.8S rRNA

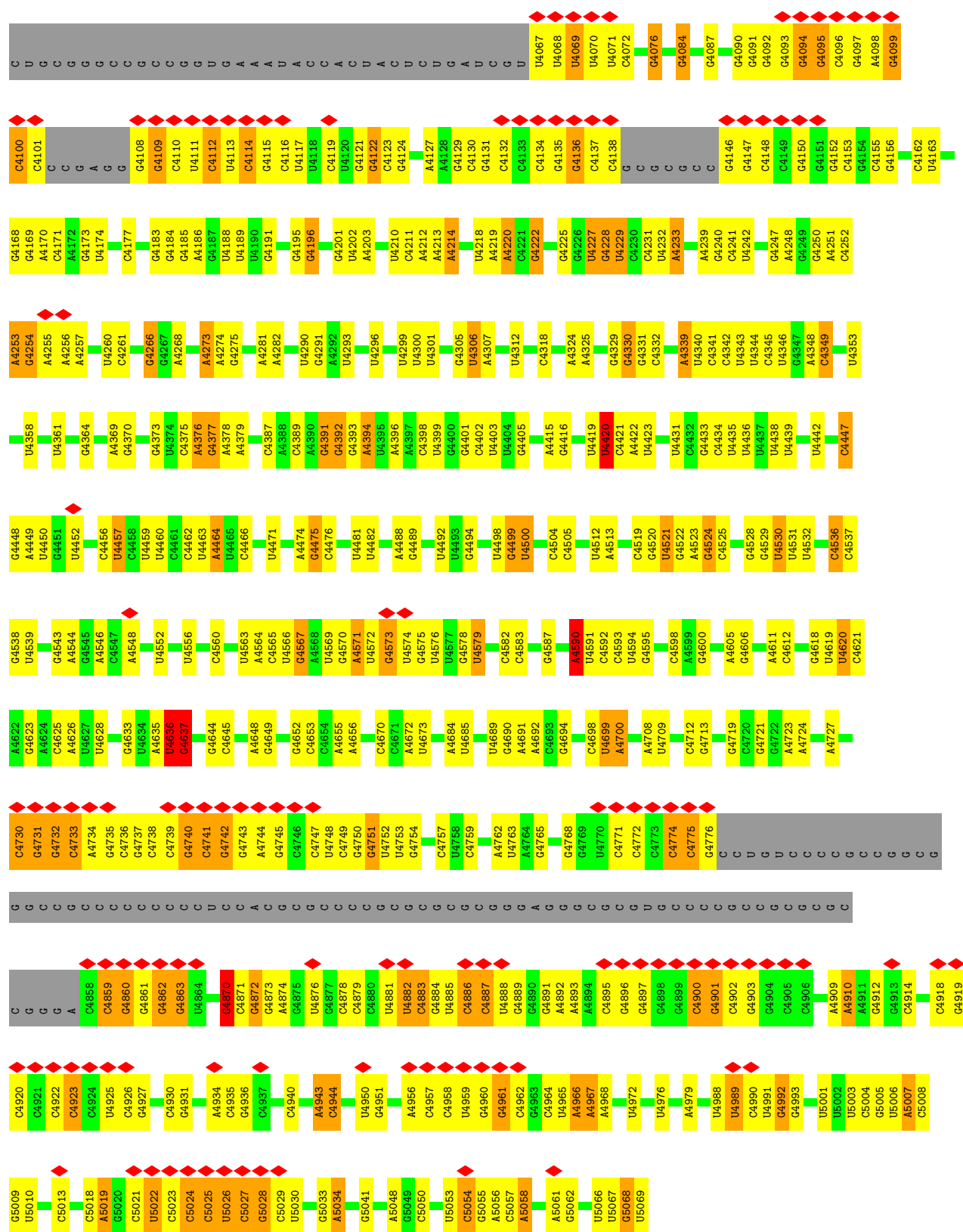


• Molecule 2: 28S rRNA

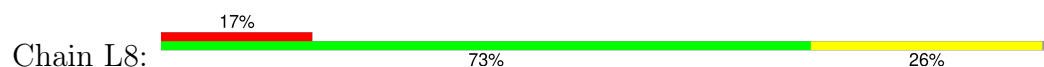


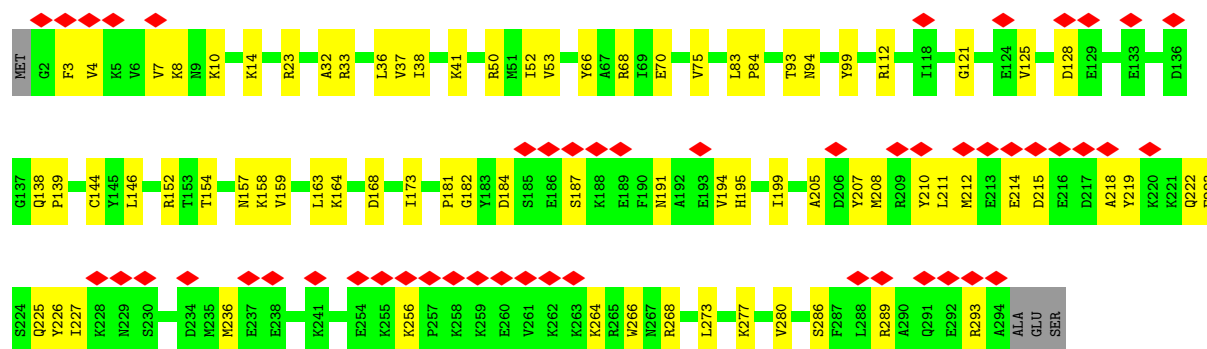




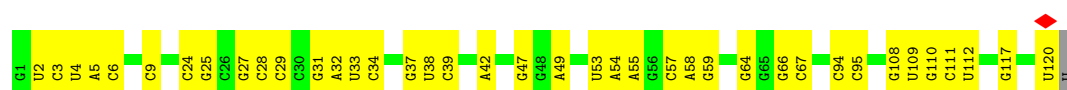


• Molecule 3: Large ribosomal subunit protein uL18

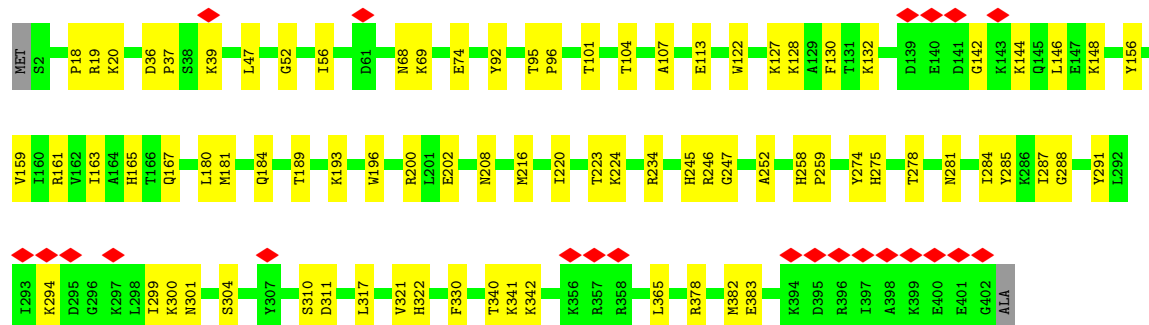
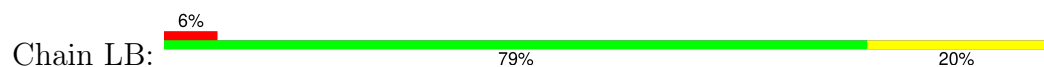




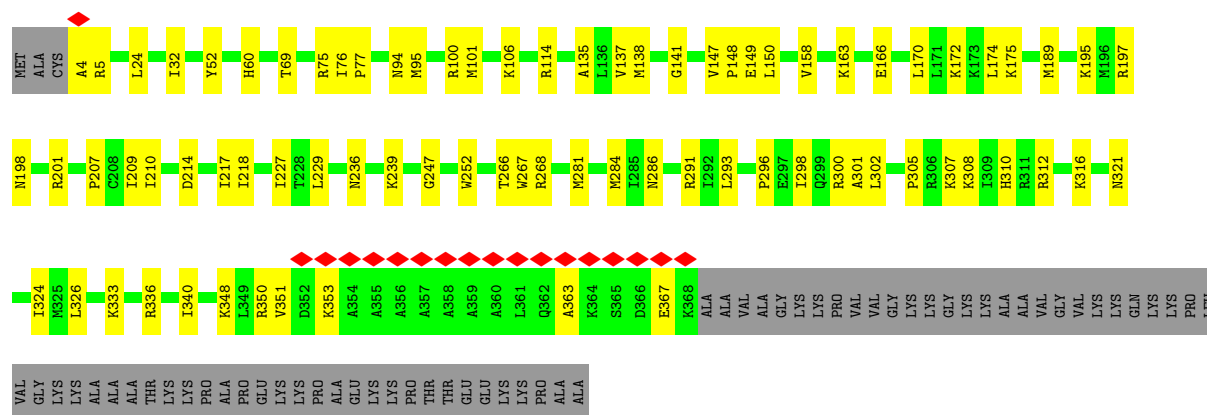
- Molecule 4: 5S rRNA




- Molecule 5: Large ribosomal subunit protein uL3

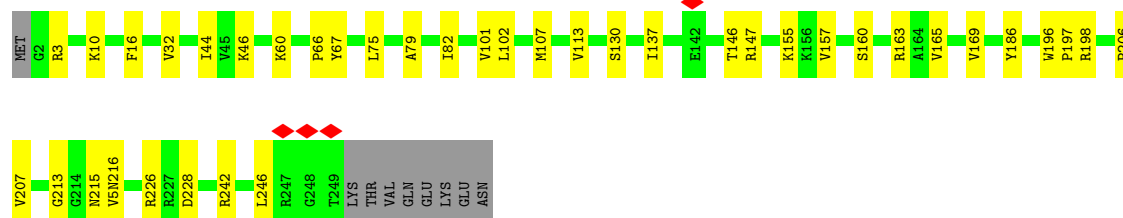


- Molecule 6: Large ribosomal subunit protein uL4



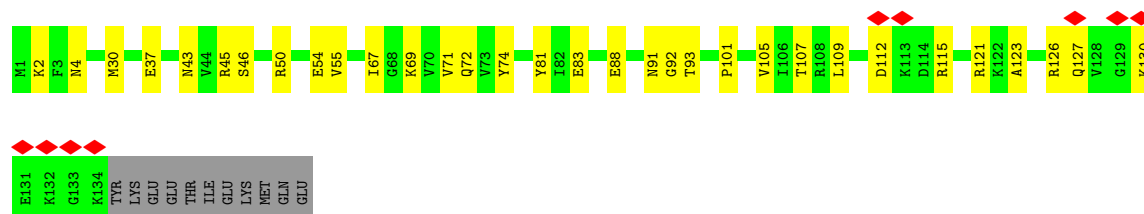
- Molecule 7: Large ribosomal subunit protein uL2

Chain LD: 




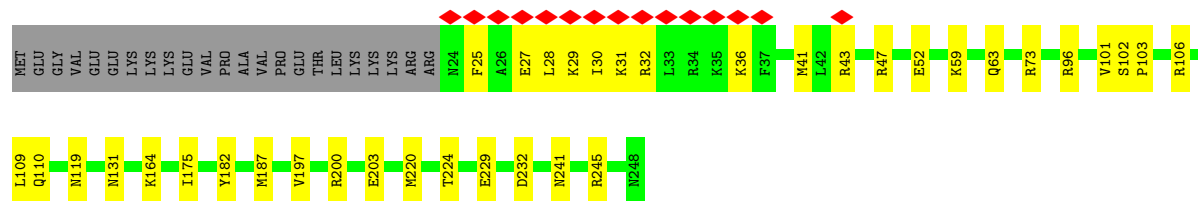
- Molecule 8: Large ribosomal subunit protein uL24

Chain LE: 



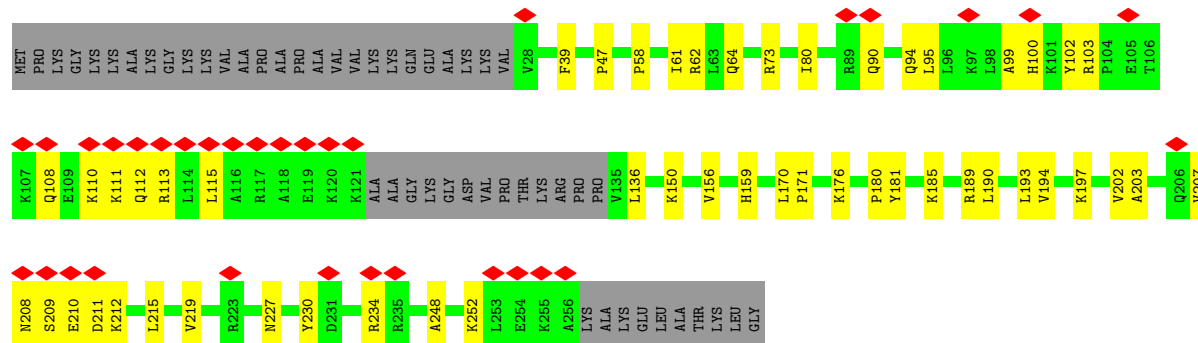
- Molecule 9: Large ribosomal subunit protein uL30

Chain LF: 



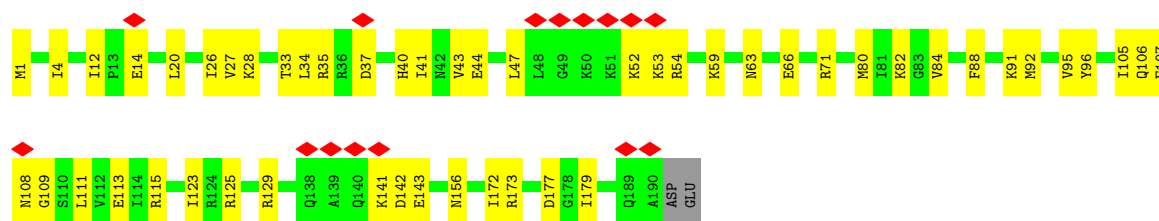
- Molecule 10: Large ribosomal subunit protein eL8

Chain LG: 

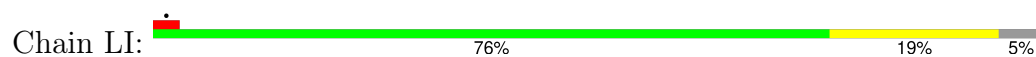


- Molecule 11: Large ribosomal subunit protein uL6

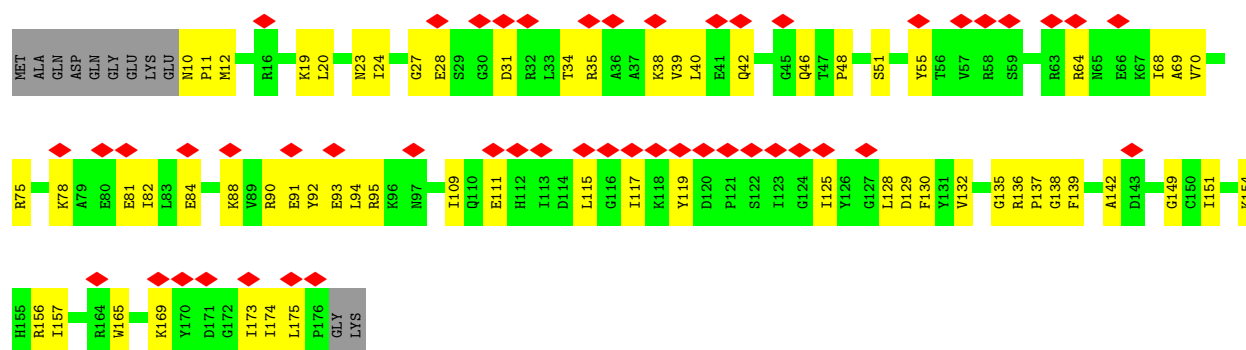
Chain LH: 



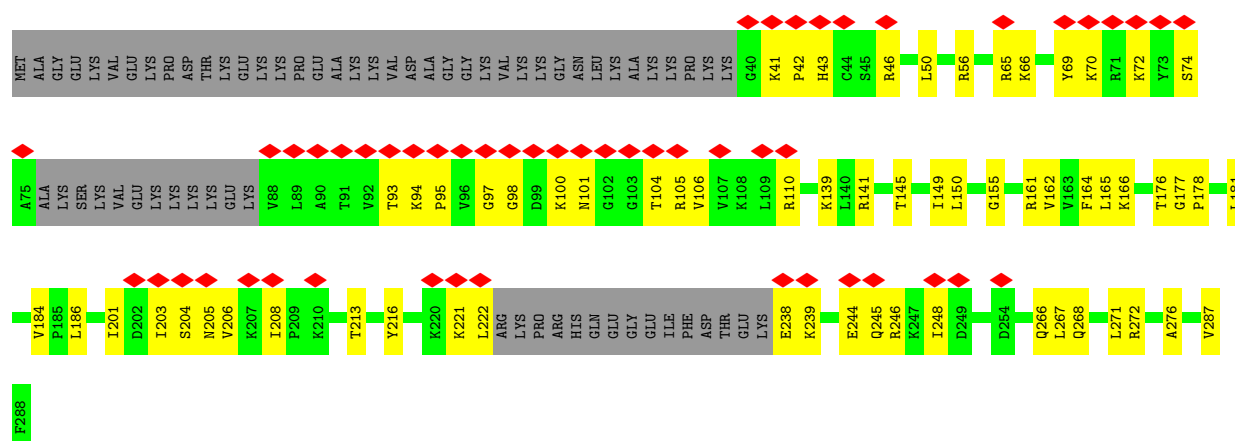
- Molecule 12: Large ribosomal subunit protein eL32



- Molecule 13: Large ribosomal subunit protein uL5

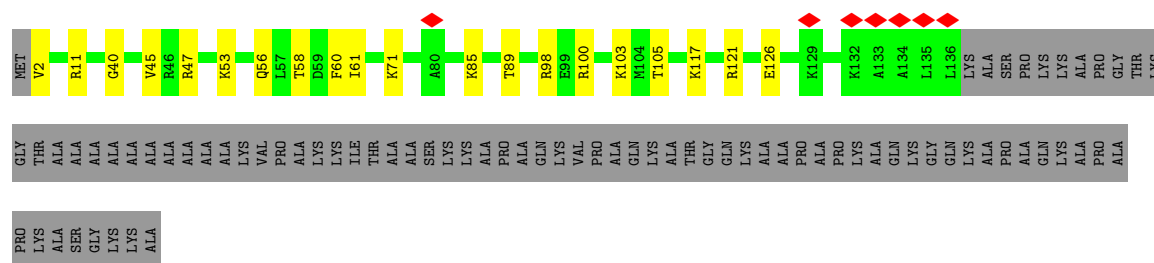


- Molecule 14: Large ribosomal subunit protein eL6



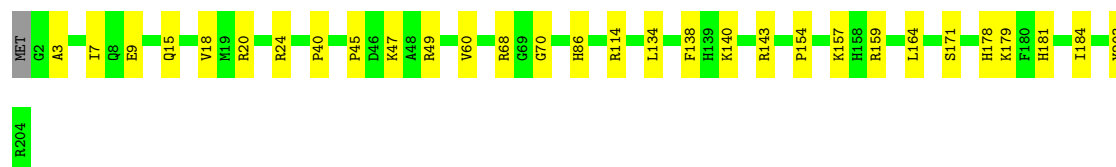
- Molecule 15: Large ribosomal subunit protein eL14





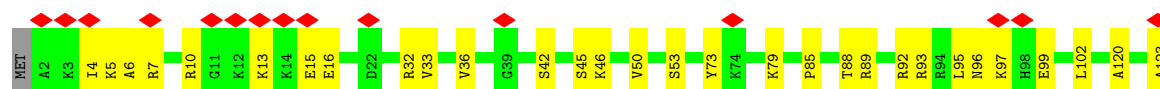
- Molecule 16: Large ribosomal subunit protein eL15

Chain LN:



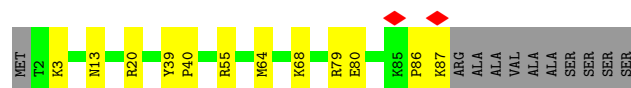
- Molecule 17: Large ribosomal subunit protein uL29

Chain LO:



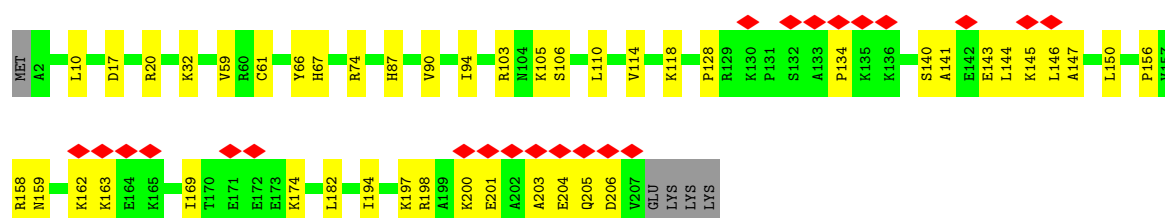
- Molecule 18: Large ribosomal subunit protein eL37

Chain LP:



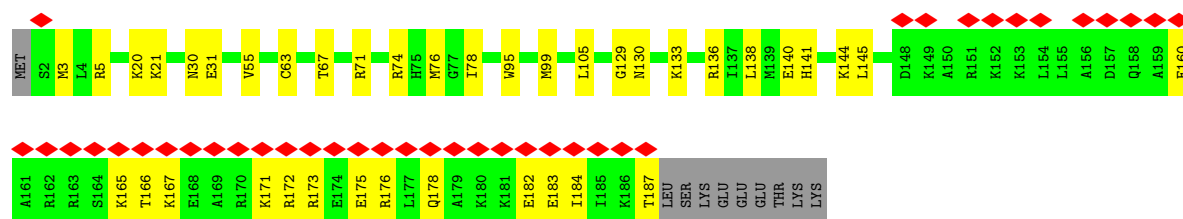
- Molecule 19: Large ribosomal subunit protein eL13

Chain LQ:

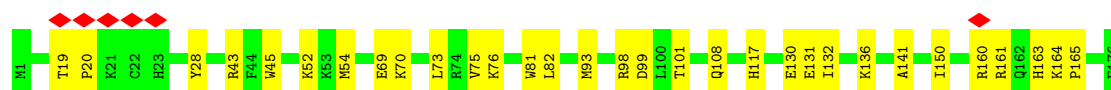
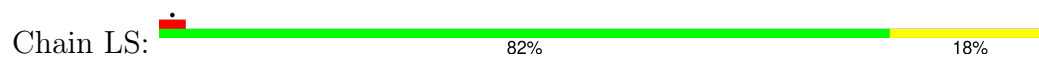


- Molecule 20: Large ribosomal subunit protein eL19

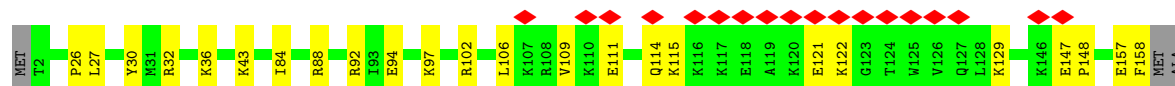
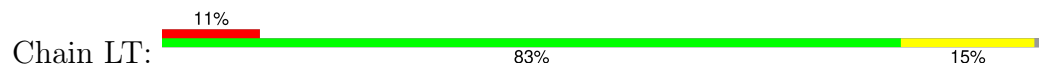
Chain LR:



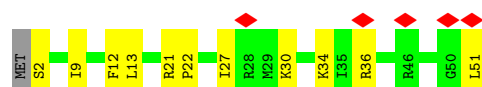
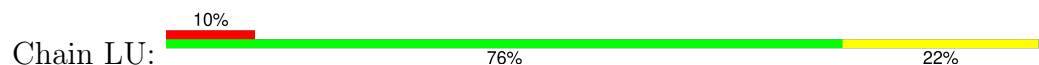
- Molecule 21: Large ribosomal subunit protein eL20



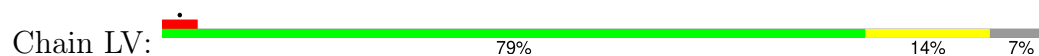
- Molecule 22: Large ribosomal subunit protein eL21



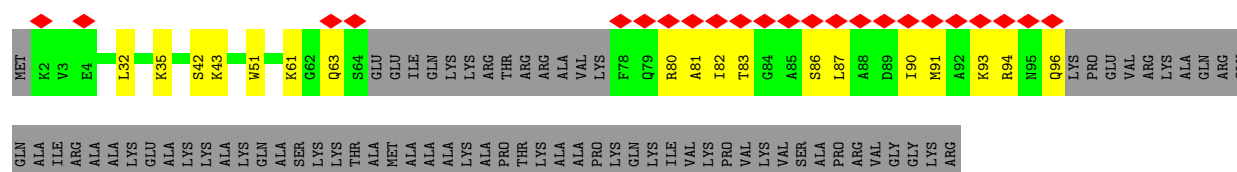
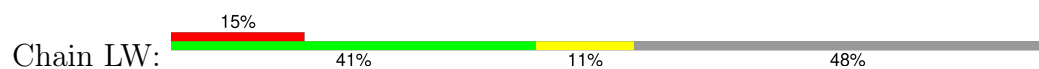
- Molecule 23: Large ribosomal subunit protein eL39



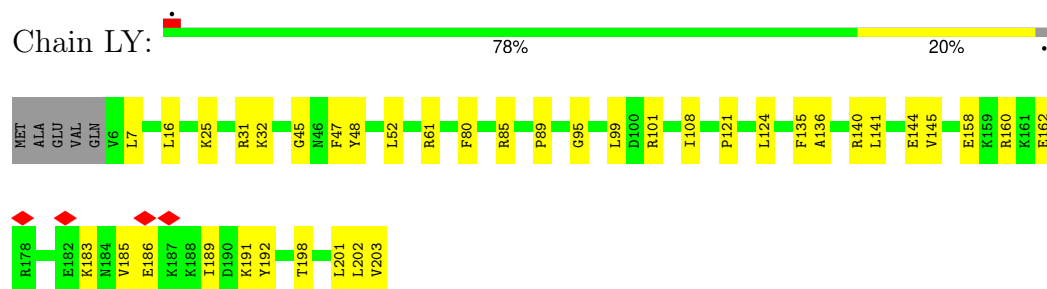
- Molecule 24: Large ribosomal subunit protein uL14



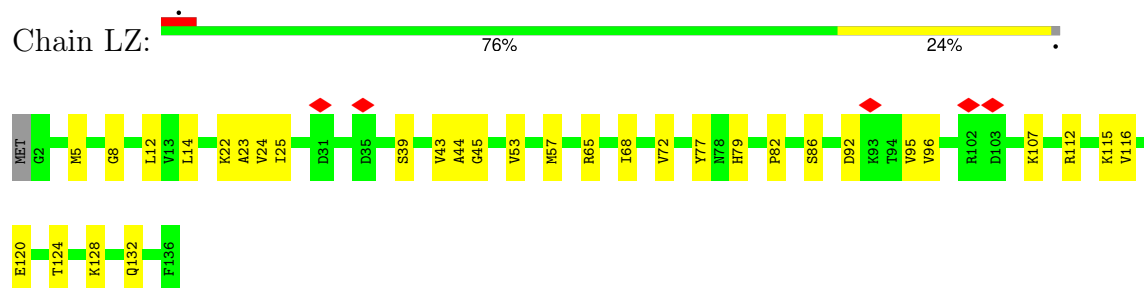
- Molecule 25: Large ribosomal subunit protein eL24



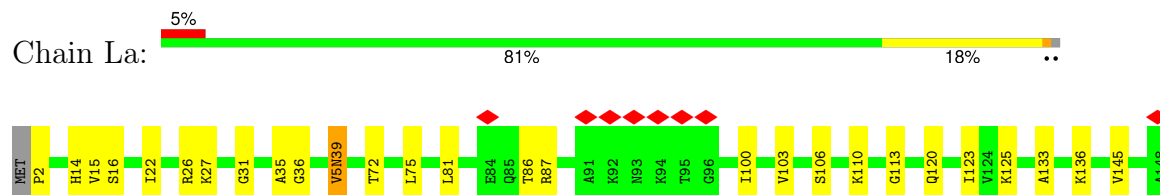
- Molecule 26: Large ribosomal subunit protein uL13



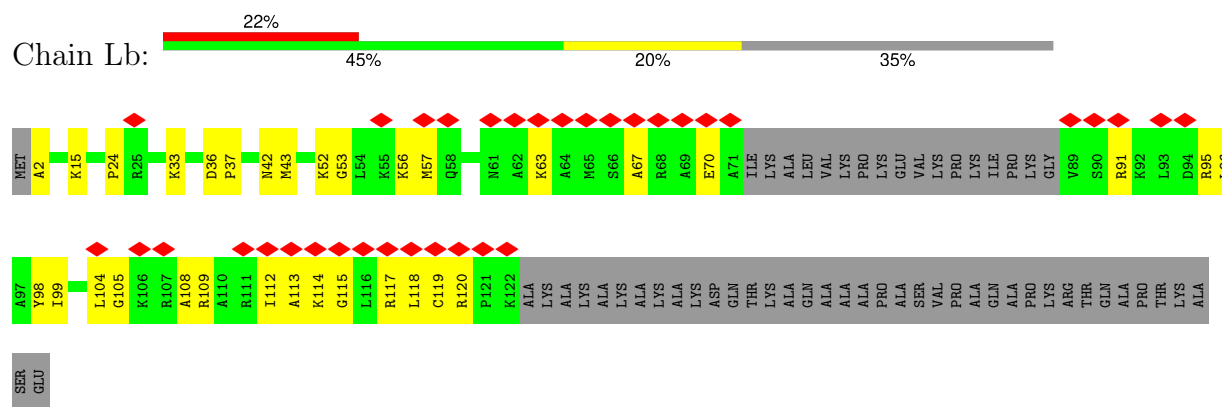
- Molecule 27: Large ribosomal subunit protein eL27



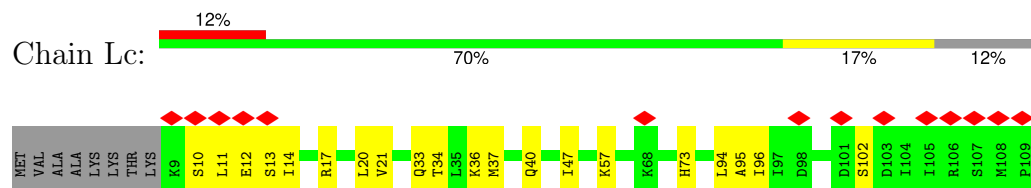
- Molecule 28: Large ribosomal subunit protein uL15



- Molecule 29: Large ribosomal subunit protein eL29




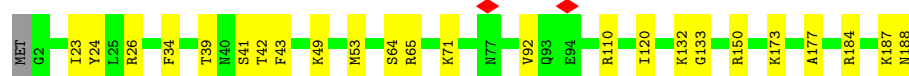
- Molecule 30: Large ribosomal subunit protein eL30



- Molecule 31: Large ribosomal subunit protein eL31

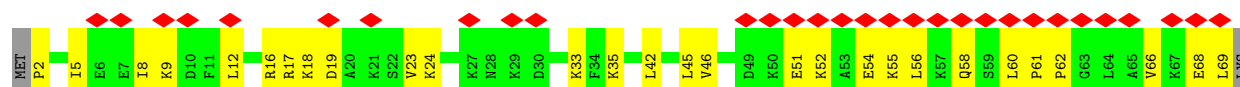
- Molecule 37: Large ribosomal subunit protein eL18

Chain Lj: 




- Molecule 38: Large ribosomal subunit protein eL38

Chain Lk: 



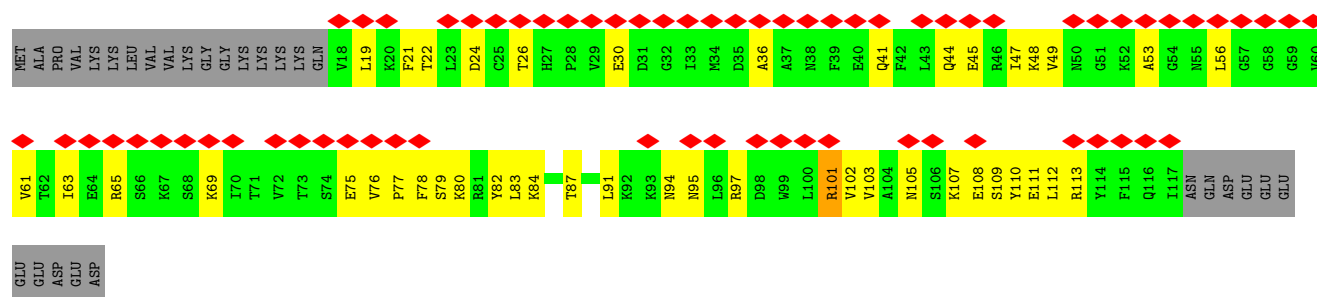
- Molecule 39: Large ribosomal subunit protein eL28

Chain Ll: 



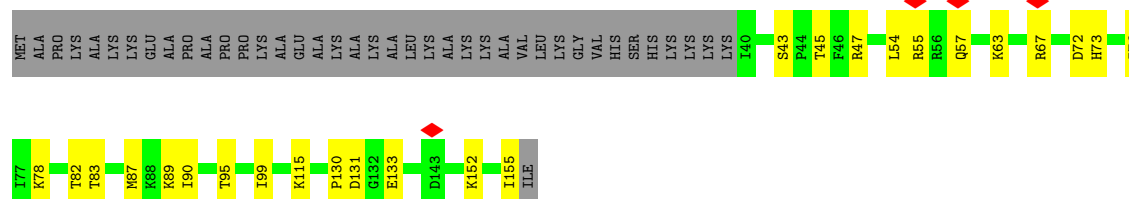
- Molecule 40: Large ribosomal subunit protein eL22

Chain Lm: 



- Molecule 41: Large ribosomal subunit protein uL23

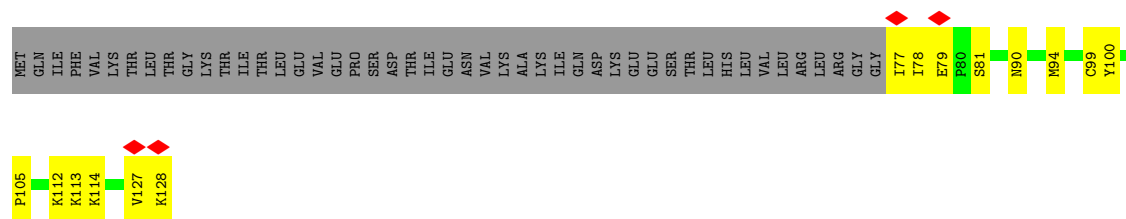
Chain Ln: 



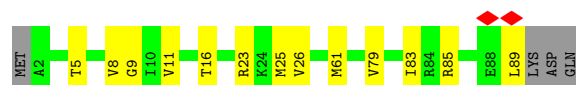
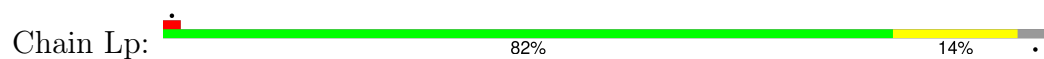
- Molecule 42: Large ribosomal subunit protein eL40

Chain Lo: 

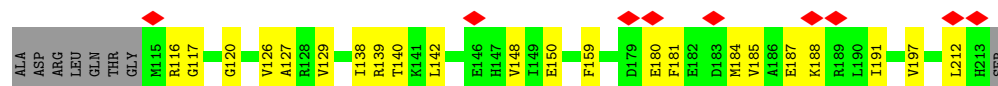




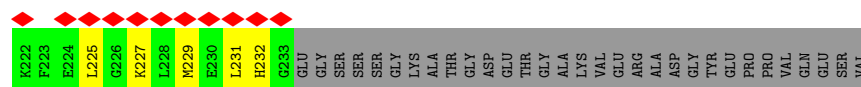
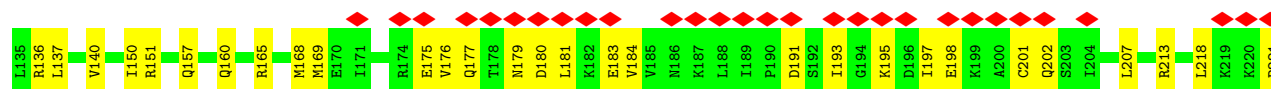
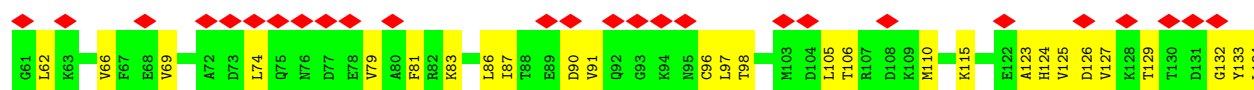
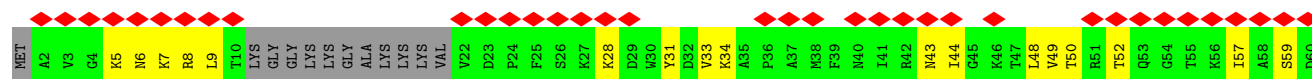
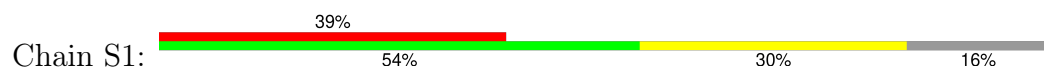
- Molecule 43: Large ribosomal subunit protein eL43



- Molecule 44: Large ribosomal subunit protein uL16

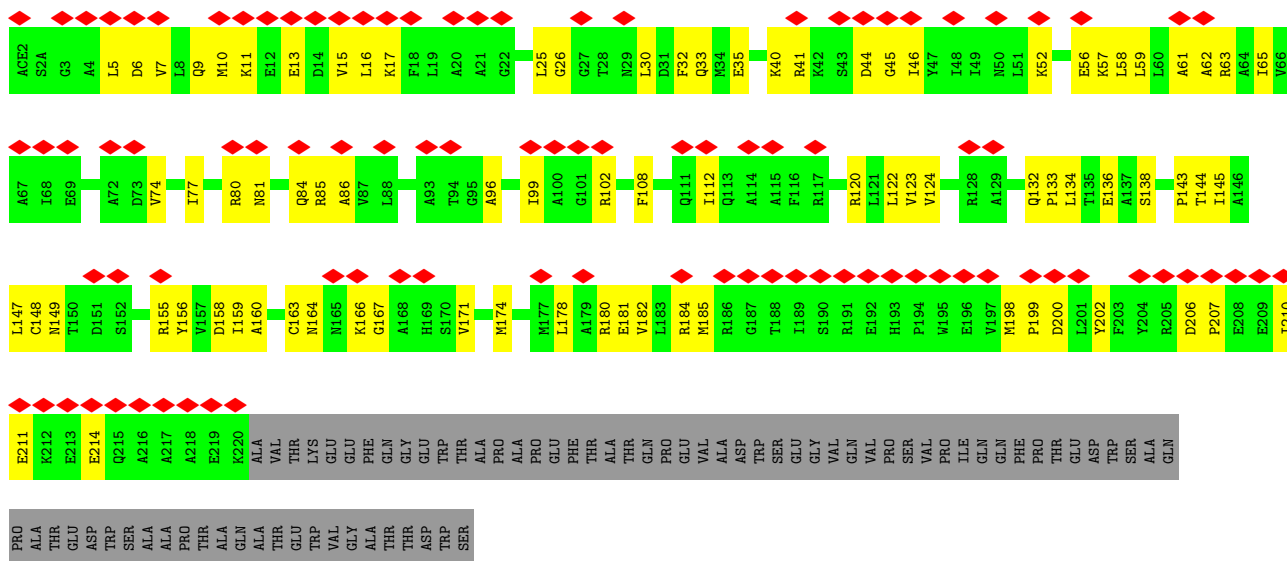


- Molecule 45: Small ribosomal subunit protein eS1

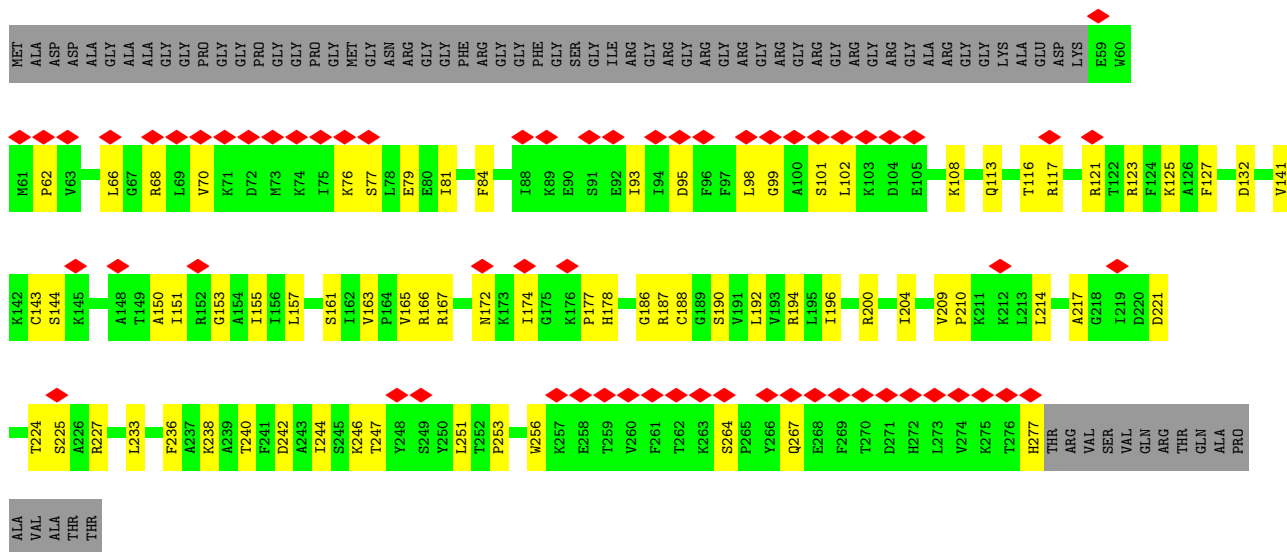


- Molecule 46: Small ribosomal subunit protein uS2

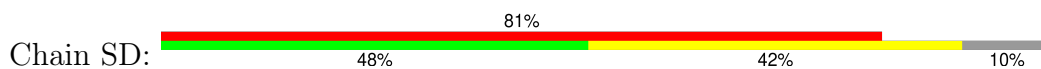


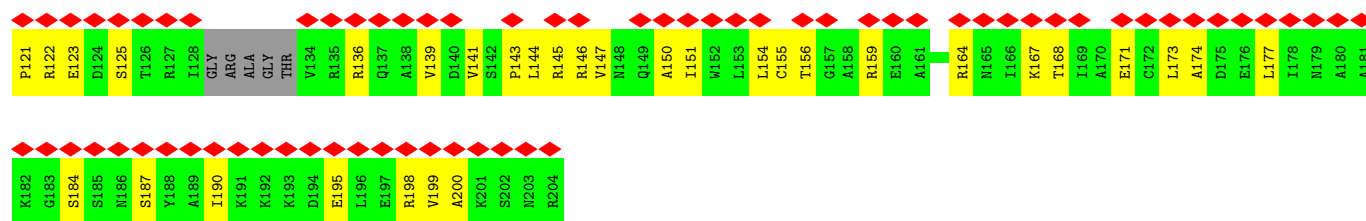


- Molecule 47: Small ribosomal subunit protein uS5

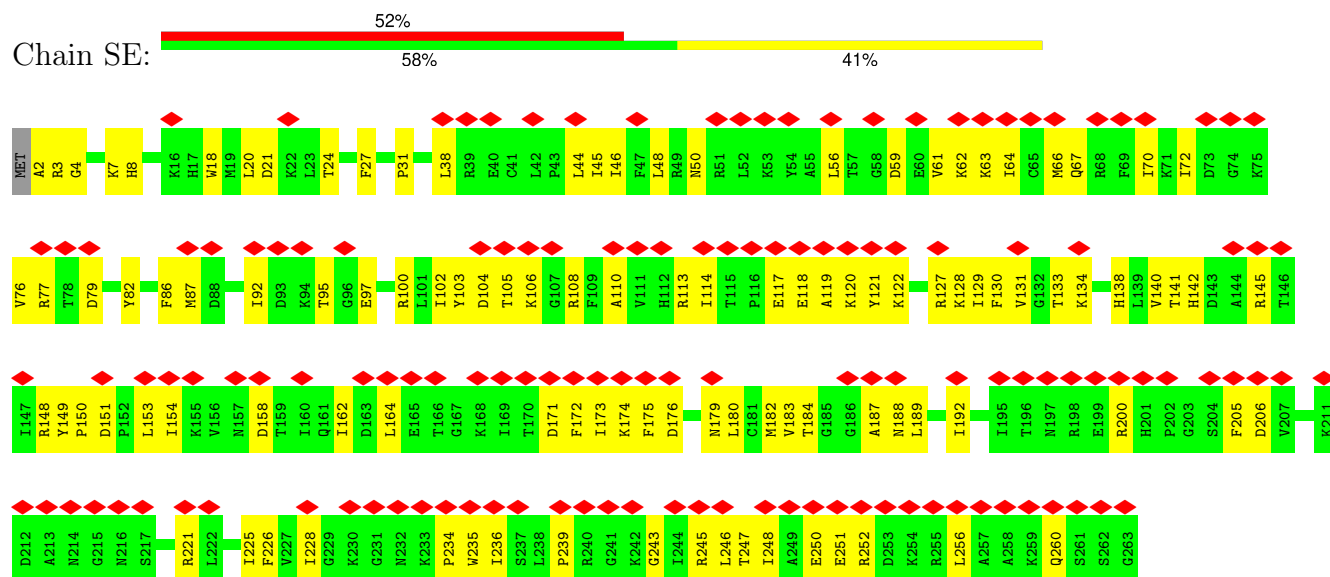


- Molecule 48: Small ribosomal subunit protein uS7

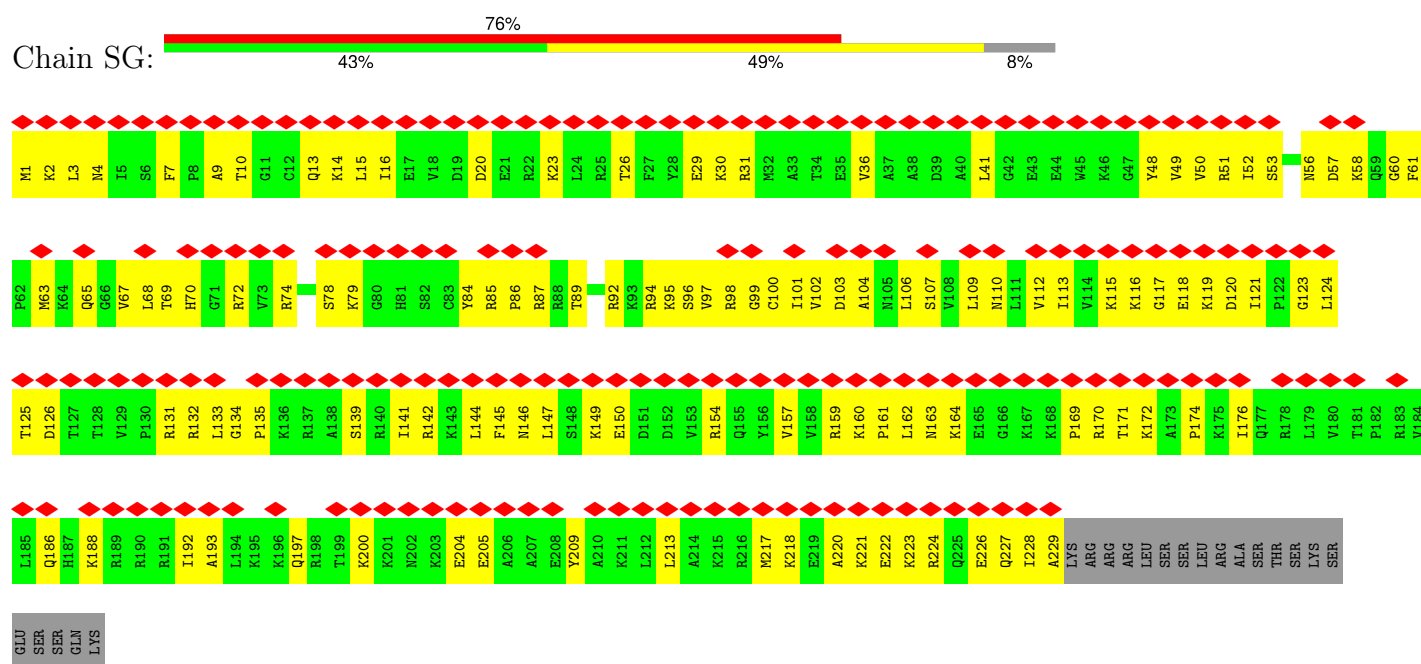




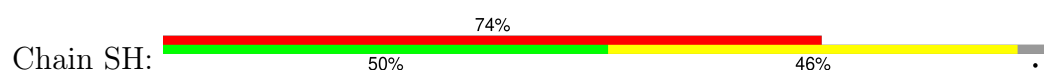
• Molecule 49: Small ribosomal subunit protein eS4, X isoform



• Molecule 50: Small ribosomal subunit protein eS6

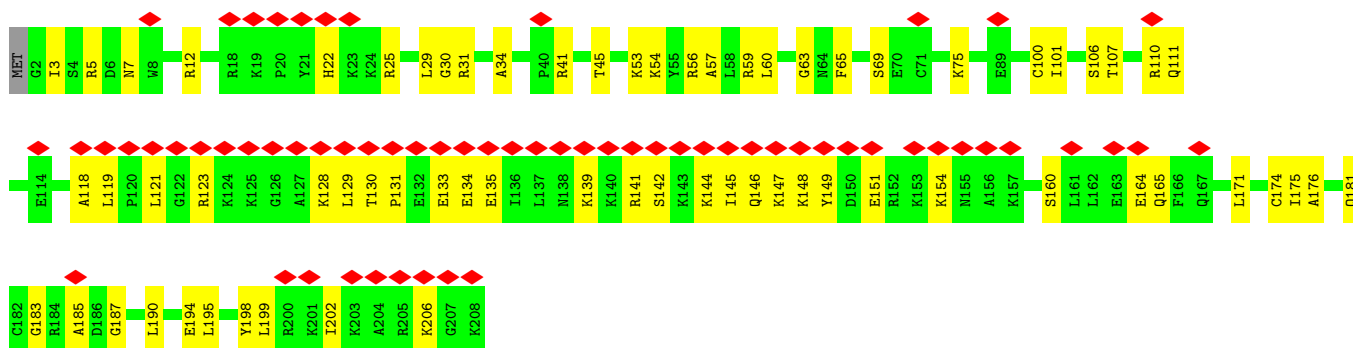


• Molecule 51: Small ribosomal subunit protein eS7

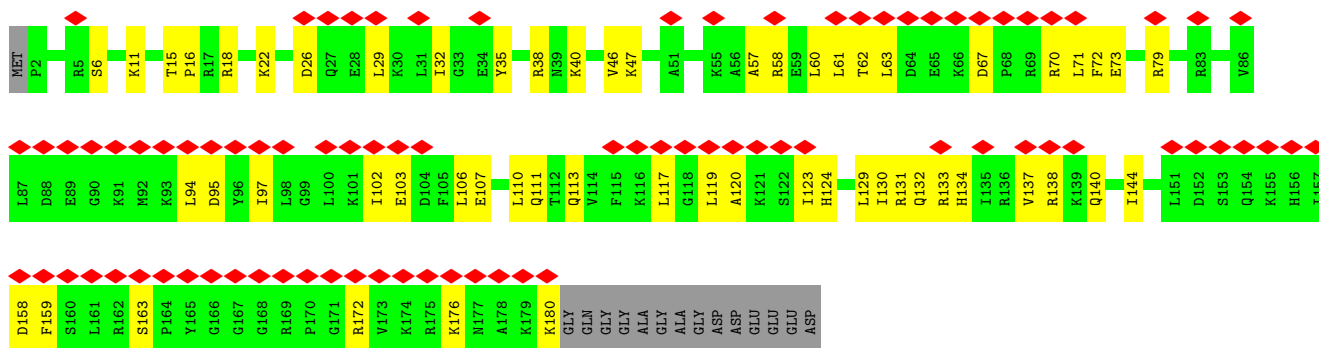
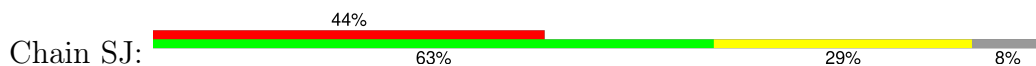




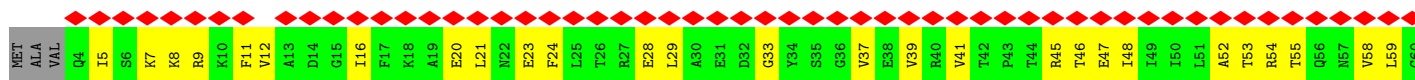
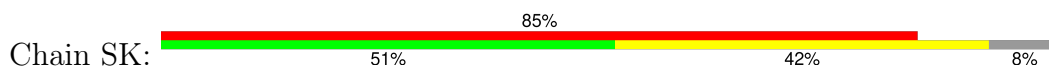
• Molecule 52: Small ribosomal subunit protein eS8

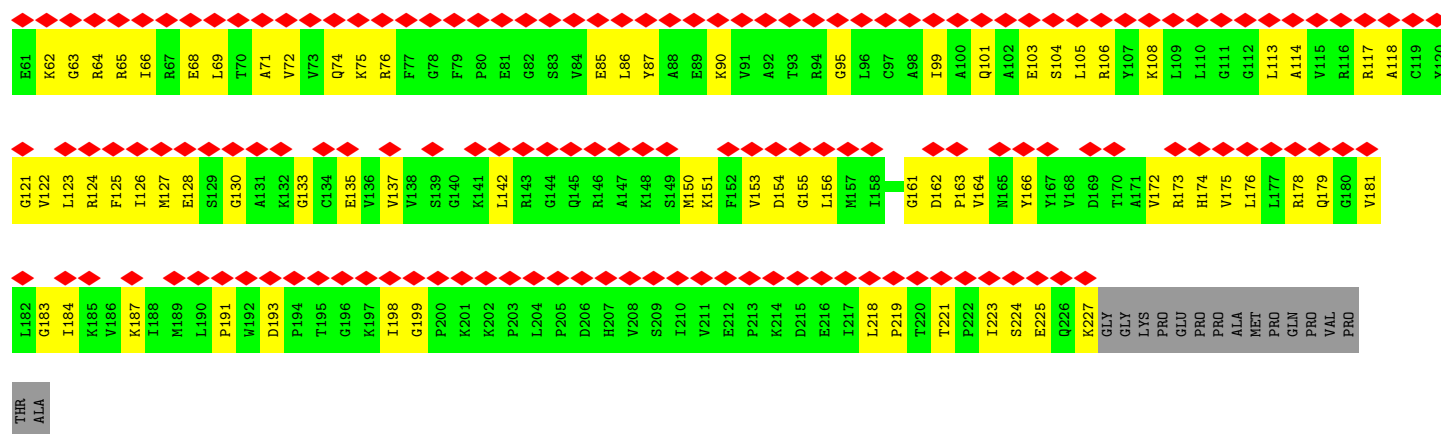


• Molecule 53: Small ribosomal subunit protein uS4

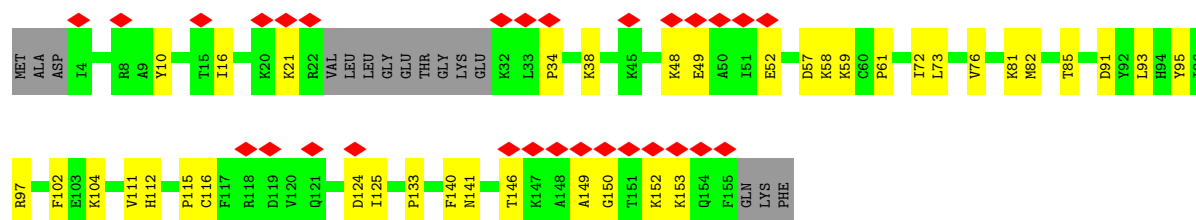


• Molecule 54: Small ribosomal subunit protein uS3

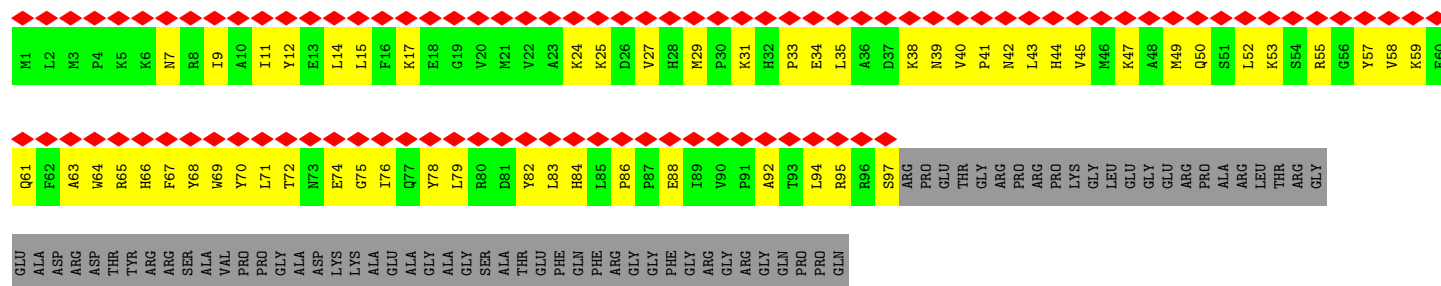
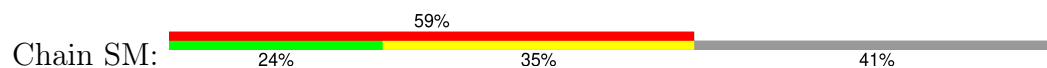




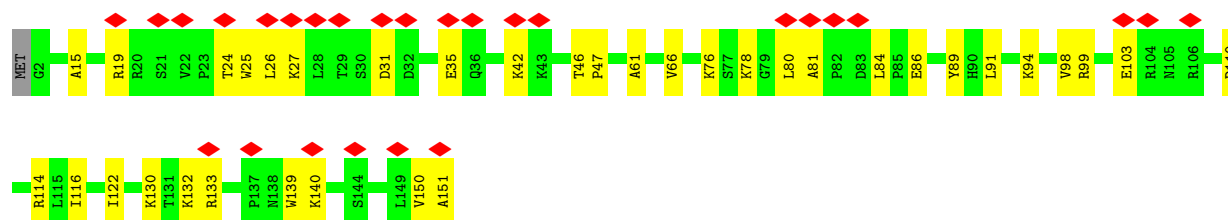
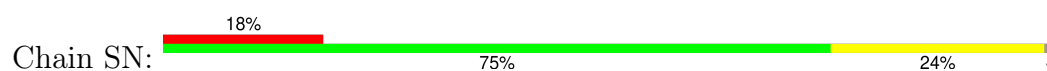
- Molecule 55: Small ribosomal subunit protein uS17



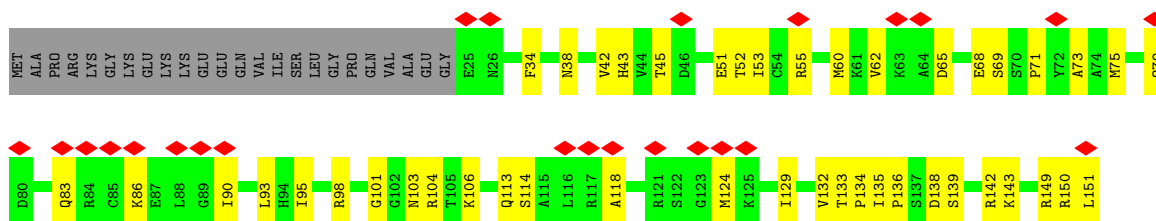
- Molecule 56: Small ribosomal subunit protein eS10



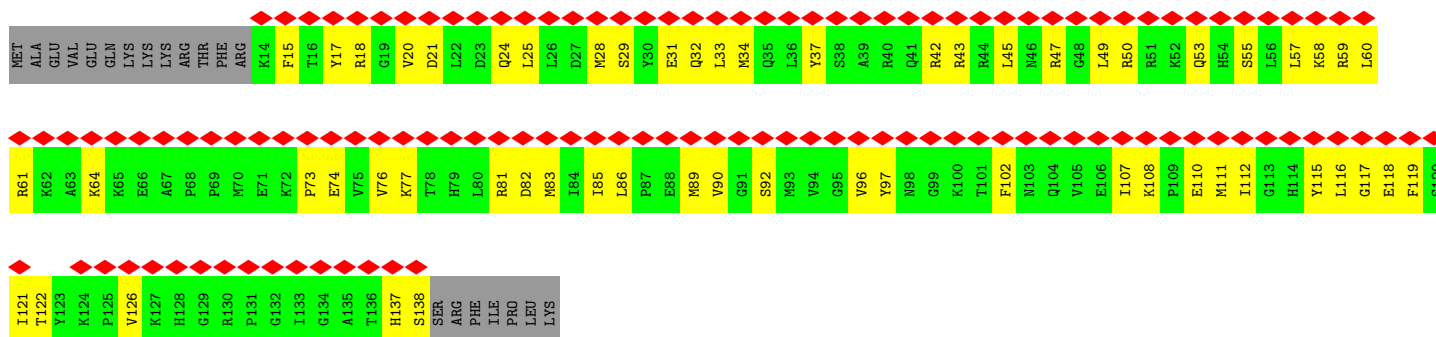
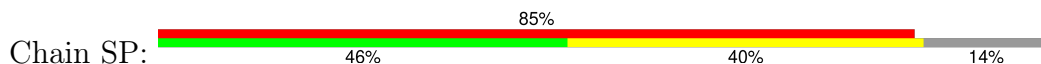
- Molecule 57: Small ribosomal subunit protein uS15



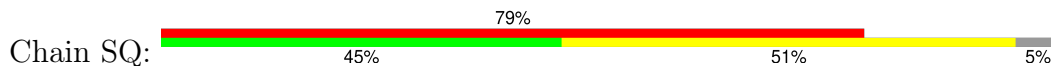
- Molecule 58: Small ribosomal subunit protein uS11



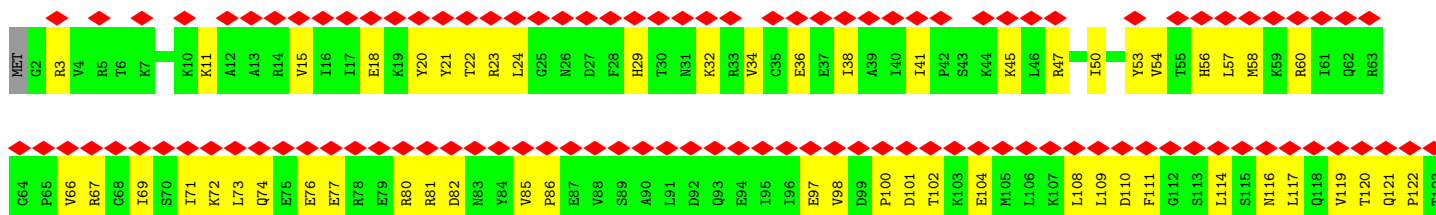
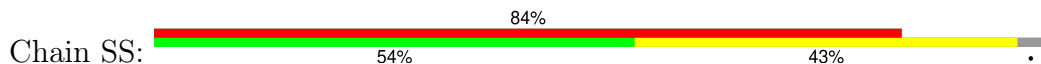
• Molecule 59: Small ribosomal subunit protein uS19

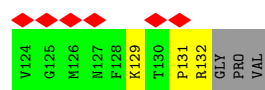


• Molecule 60: Small ribosomal subunit protein uS9

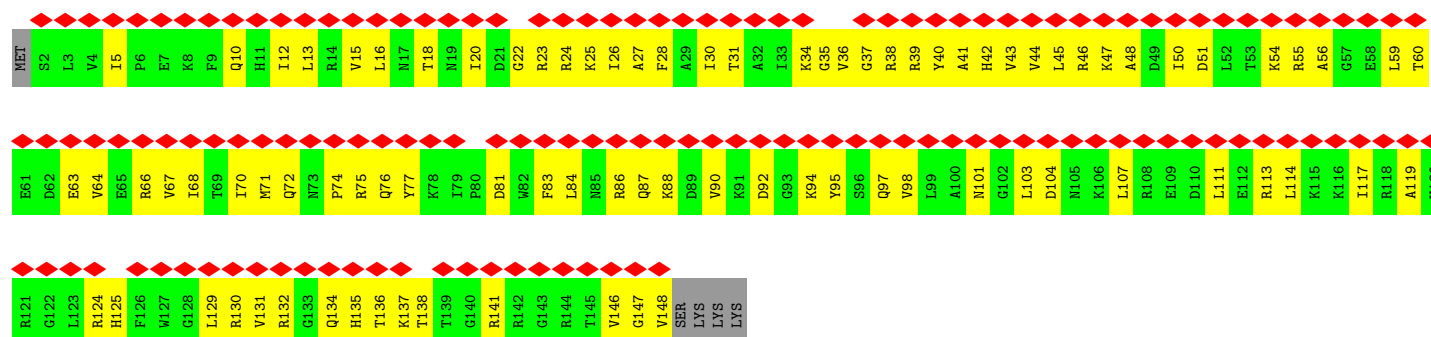
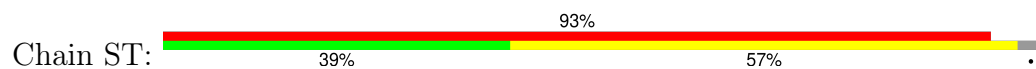


• Molecule 61: Small ribosomal subunit protein eS17

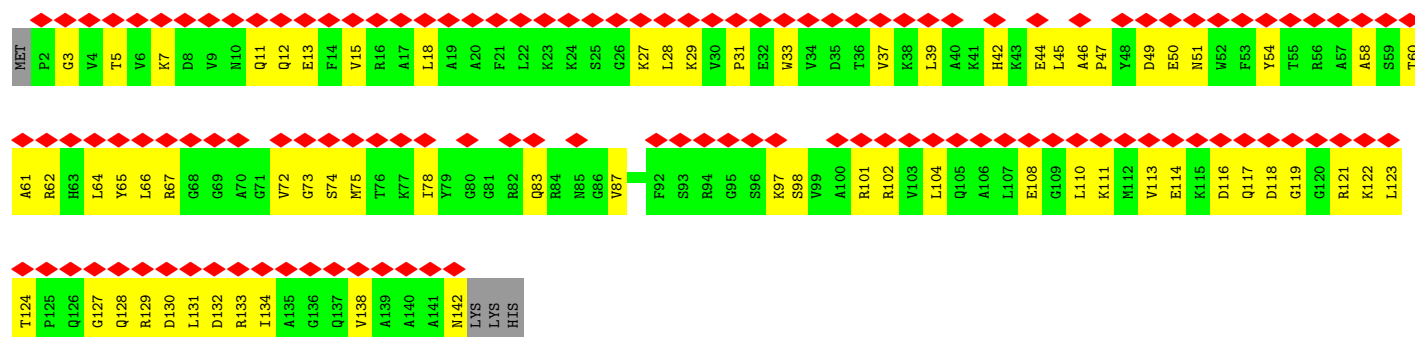




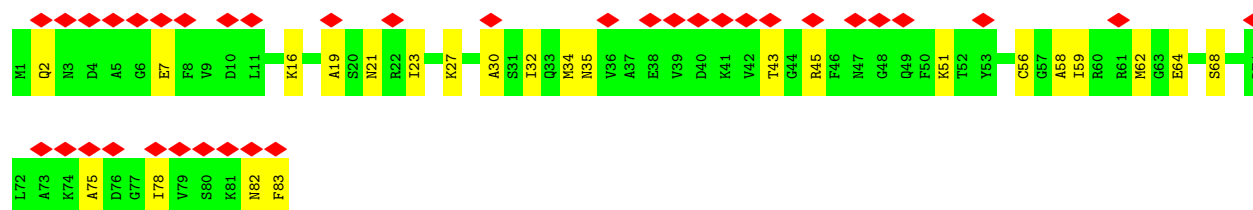
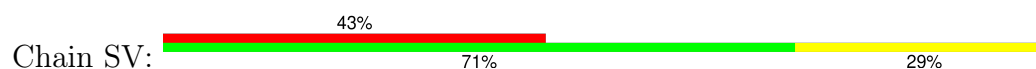
- Molecule 62: Small ribosomal subunit protein uS13



- Molecule 63: Small ribosomal subunit protein eS19

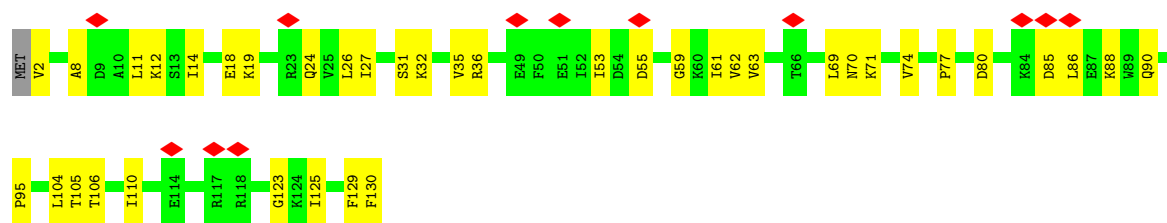


- Molecule 64: Small ribosomal subunit protein eS21

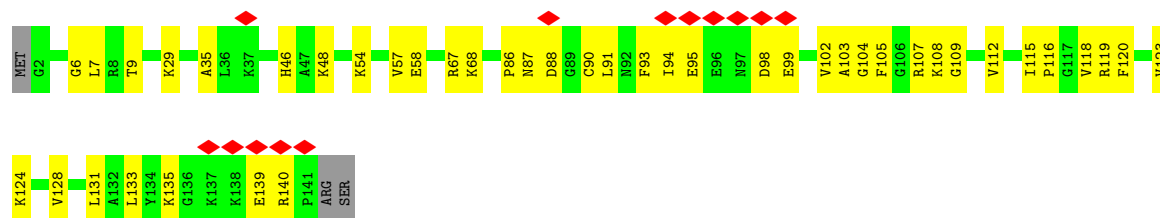


- Molecule 65: Small ribosomal subunit protein uS8

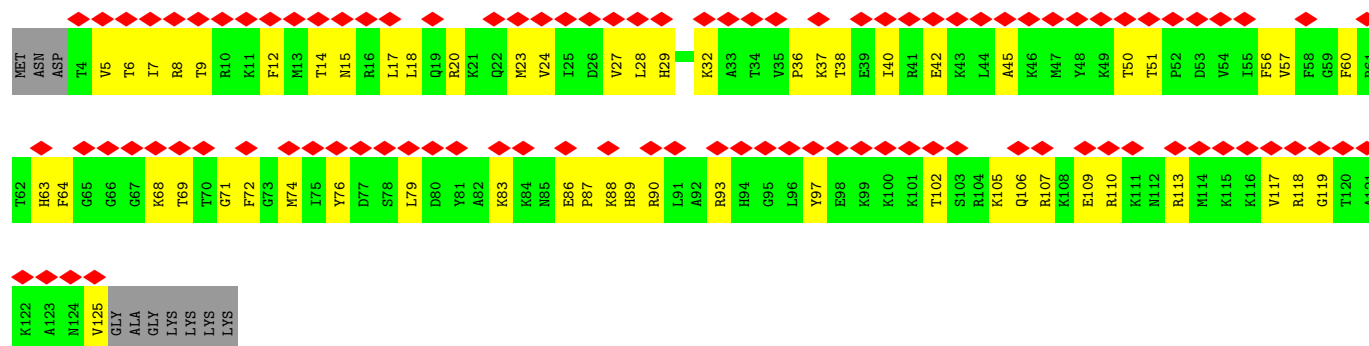
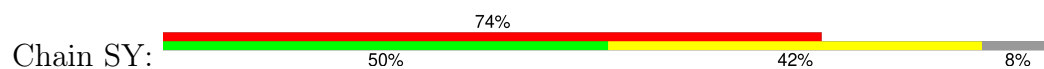




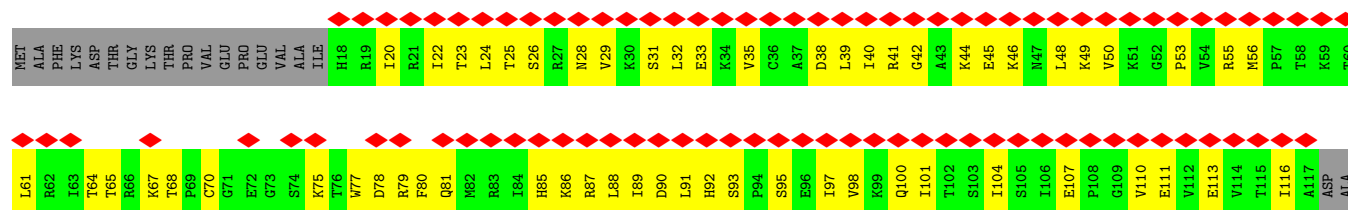
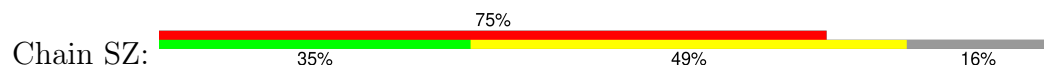
- Molecule 66: Small ribosomal subunit protein uS12



- Molecule 67: Isoform 3 of Small ribosomal subunit protein eS24

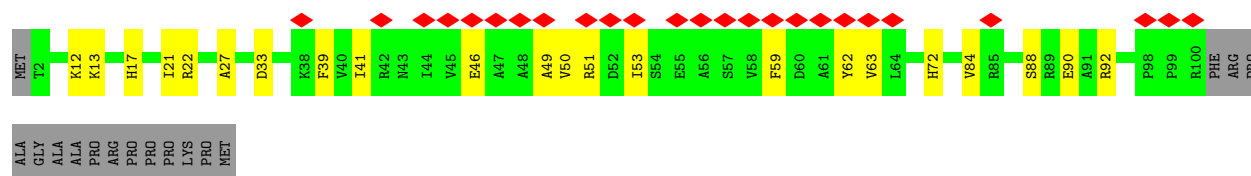


- Molecule 68: Small ribosomal subunit protein uS10

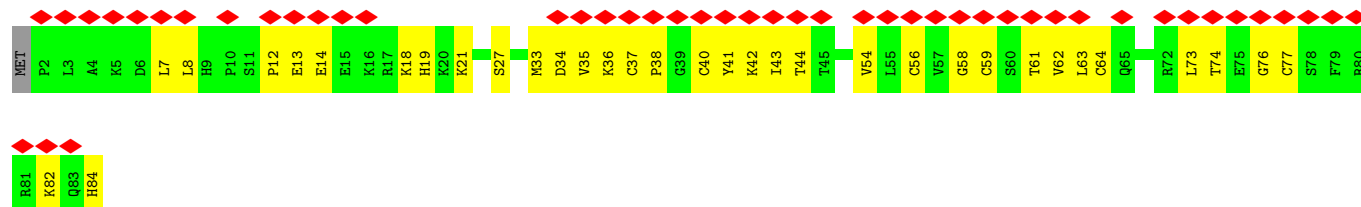


- Molecule 69: Small ribosomal subunit protein eS26

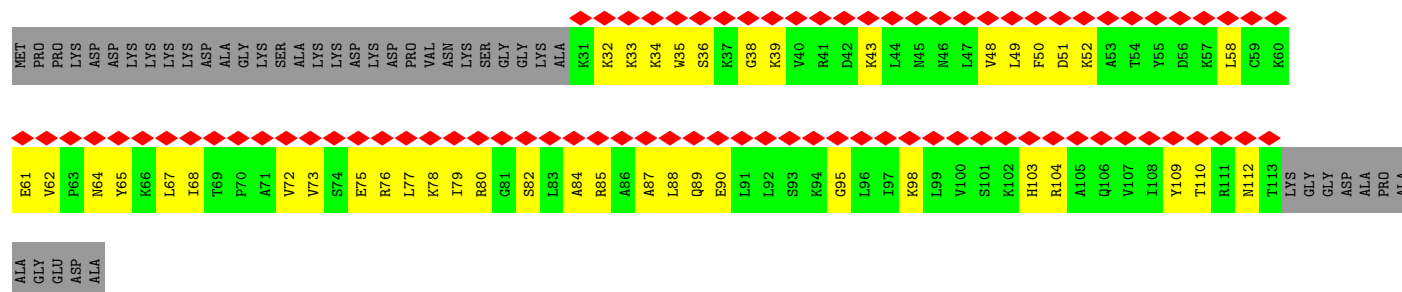




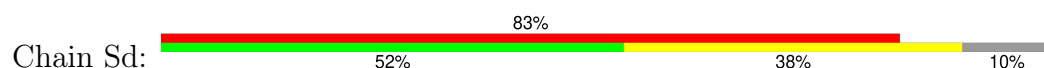
- Molecule 70: Small ribosomal subunit protein eS27



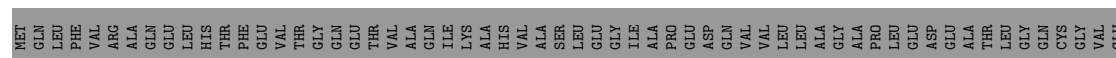
- Molecule 71: Small ribosomal subunit protein eS25

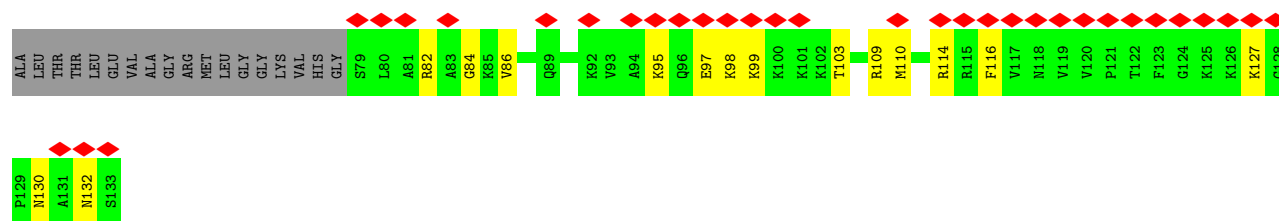


- Molecule 72: Small ribosomal subunit protein eS28



- Molecule 73: FAU ubiquitin-like and ribosomal protein S30

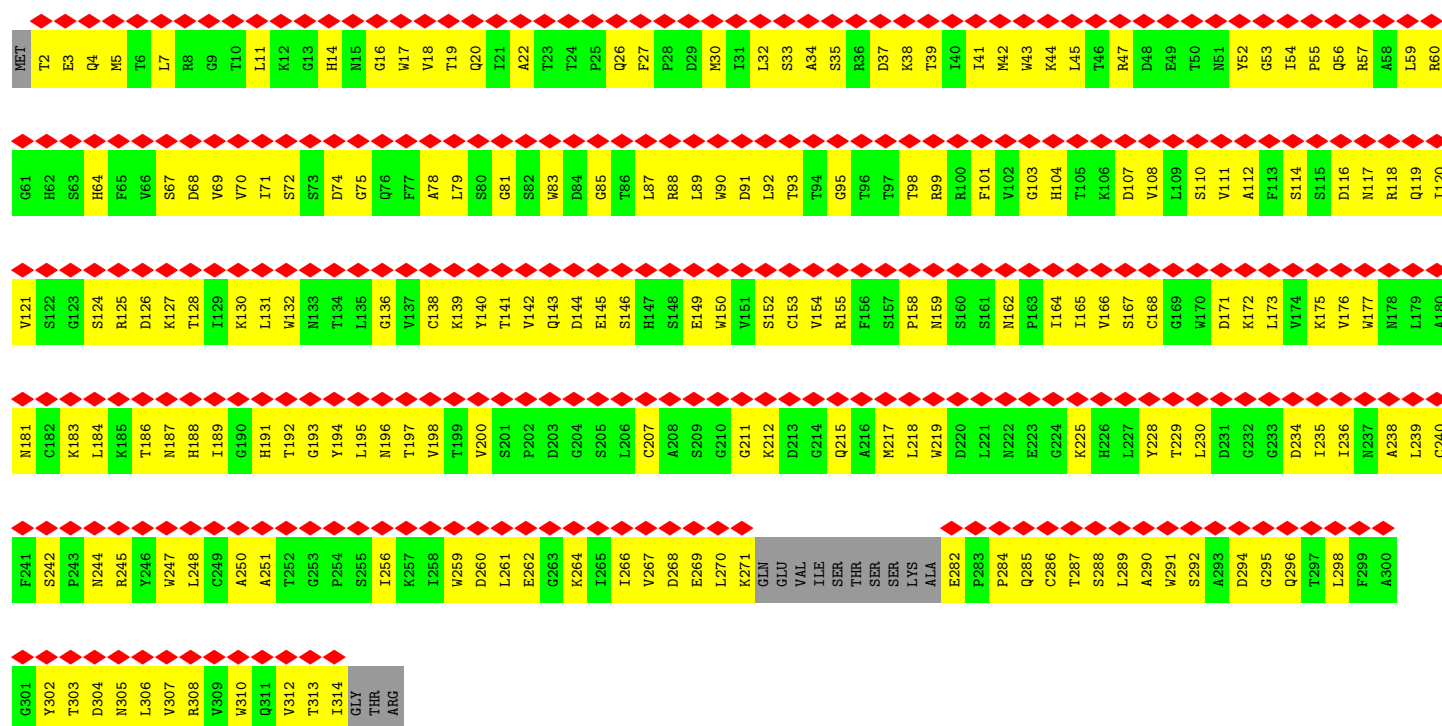




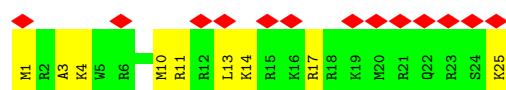
- Molecule 74: Small ribosomal subunit protein uS14



- Molecule 75: Receptor of activated protein C kinase 1



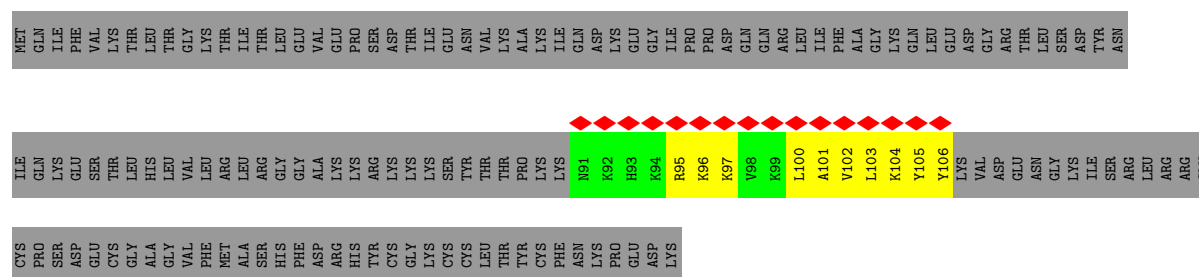
- Molecule 76: Small ribosomal subunit protein eS32



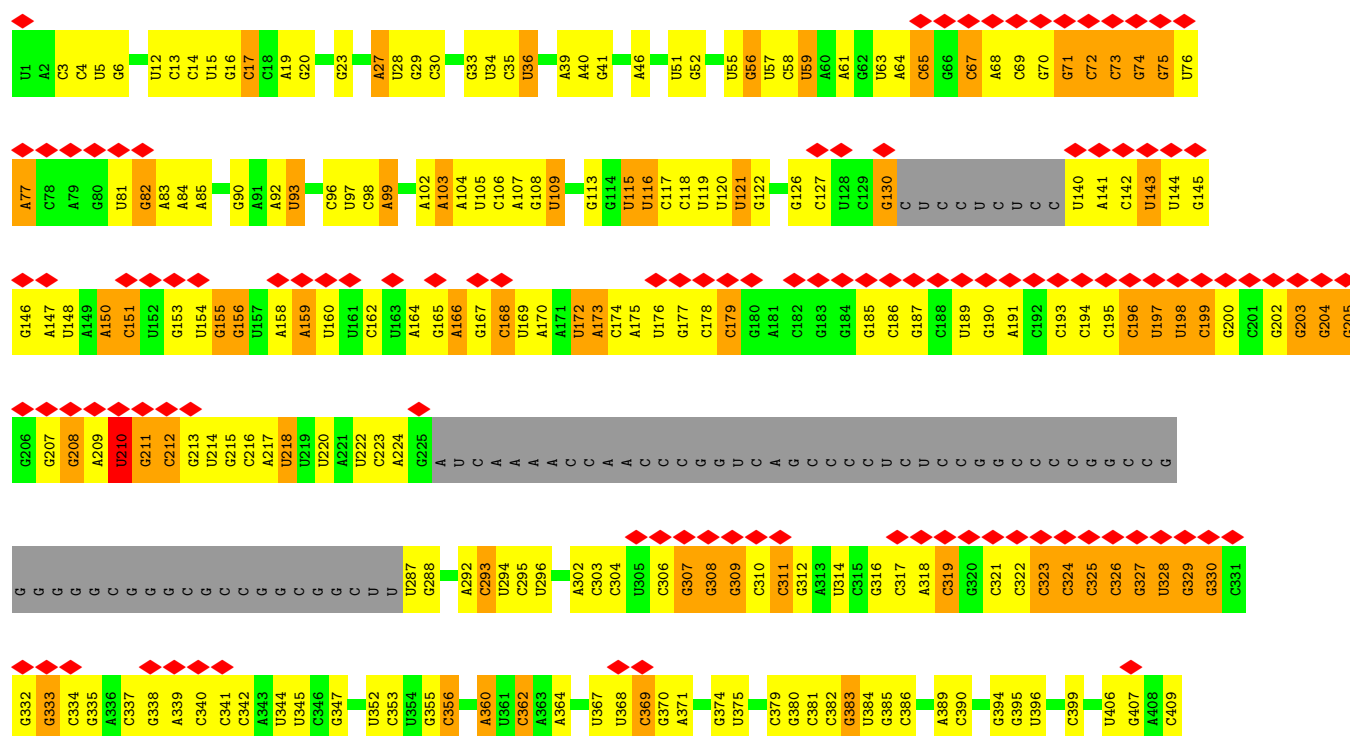
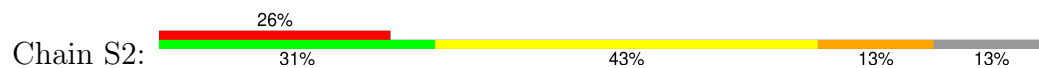
- Molecule 77: Small ribosomal subunit protein eS12



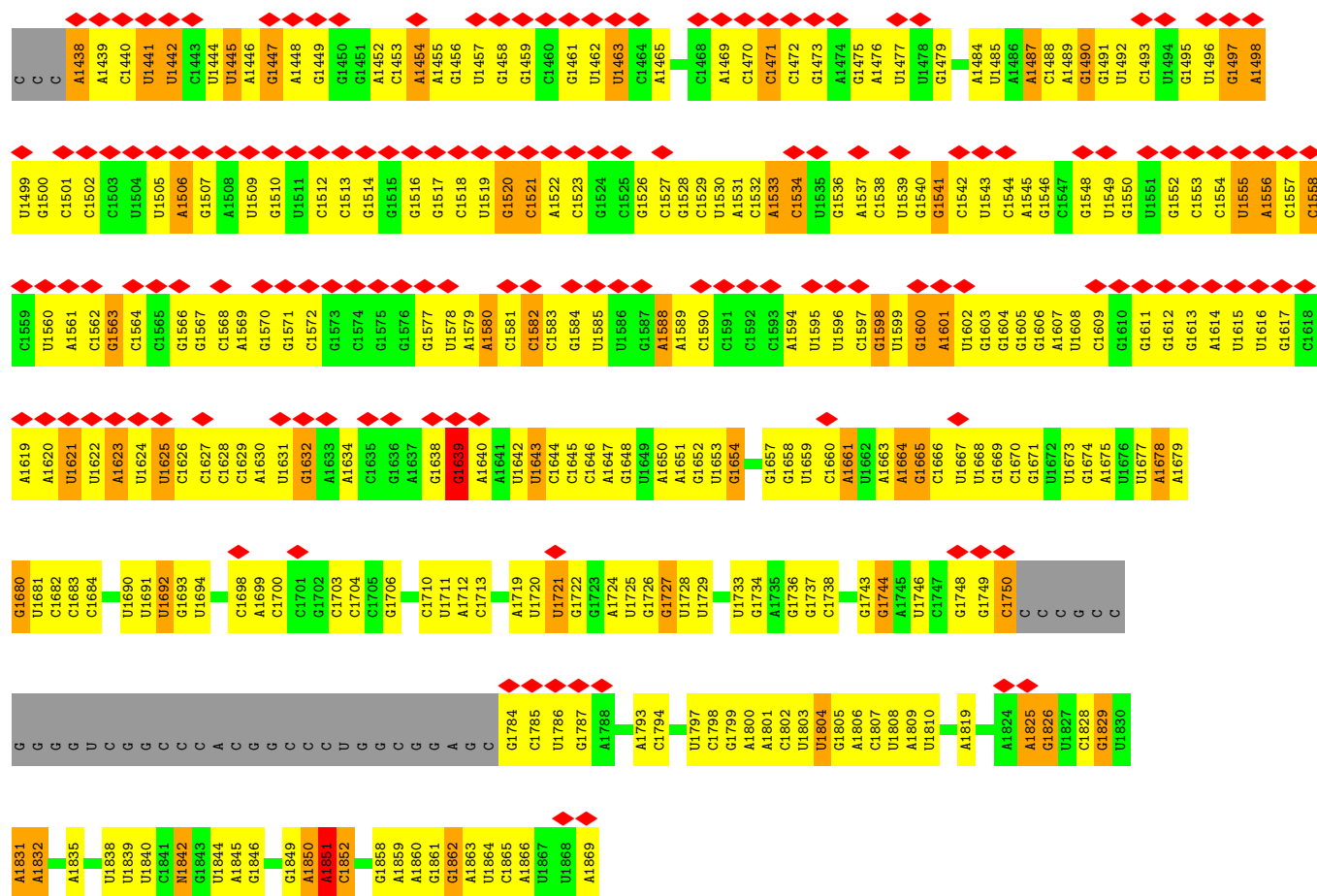
• Molecule 78: Ubiquitin-40S ribosomal protein S27a



• Molecule 79: 18S rRNA







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	236566	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	39.3	Depositor
Minimum defocus (nm)	900	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.373	Depositor
Minimum map value	-0.177	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.035	Depositor
Map size (\AA)	432.00003, 432.00003, 432.00003	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.08, 1.08, 1.08	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: K, 7MG, IAS, A2M, HY3, PSU, A1BNL, UR3, OMC, V5N, 4AC, B3P, HIC, 1MA, UY1, 6MZ, B8N, M3L, ACE, 5MC, MA6, ZN, MLZ, 2MG, OMG, JMH, MG, OMU

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	L1	0.28	0/3450	0.33	0/5372
2	L5	0.28	4/81133 (0.0%)	0.36	0/126550
3	L8	0.20	0/2432	0.35	0/3256
4	L9	0.26	0/2858	0.31	0/4455
5	LB	0.21	0/3289	0.38	0/4399
6	LC	0.23	0/2962	0.39	0/3977
7	LD	0.23	0/1924	0.40	0/2578
8	LE	0.21	0/1132	0.36	0/1504
9	LF	0.23	0/1905	0.39	0/2540
10	LG	0.21	0/1781	0.37	0/2397
11	LH	0.20	0/1537	0.38	0/2066
12	LI	0.23	0/1071	0.41	0/1429
13	LJ	0.19	0/1363	0.40	0/1824
14	LK	0.19	0/1814	0.37	0/2435
15	LM	0.22	0/1133	0.37	0/1516
16	LN	0.24	0/1745	0.41	0/2338
17	LO	0.23	0/1022	0.37	0/1351
18	LP	0.24	0/720	0.44	0/952
19	LQ	0.21	0/1695	0.37	0/2270
20	LR	0.20	0/1574	0.35	0/2080
21	LS	0.22	0/1500	0.38	0/2013
22	LT	0.21	0/1312	0.36	0/1753
23	LU	0.23	0/453	0.41	0/599
24	LV	0.22	0/986	0.37	0/1324
25	LW	0.19	0/684	0.35	0/910
26	LY	0.24	0/1656	0.40	0/2216
27	LZ	0.22	0/1129	0.37	0/1507
28	La	0.23	0/1178	0.37	0/1573
29	Lb	0.21	0/850	0.39	0/1121
30	Lc	0.20	0/796	0.38	0/1068
31	Ld	0.20	0/877	0.39	0/1181

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Le	0.21	0/866	0.35	0/1141
33	Lf	0.22	0/894	0.35	0/1198
34	Lg	0.22	0/892	0.35	0/1189
35	Lh	0.22	0/1317	0.41	0/1769
36	Li	0.19	0/843	0.33	0/1115
37	Lj	0.24	0/1536	0.40	0/2052
38	Lk	0.18	0/565	0.34	0/750
39	Ll	0.26	0/1003	0.39	0/1346
40	Lm	0.17	0/830	0.36	0/1114
41	Ln	0.21	0/966	0.36	0/1301
42	Lo	0.20	0/433	0.35	0/575
43	Lp	0.23	0/691	0.41	0/919
44	Lz	0.22	0/1654	0.36	0/2209
45	S1	0.17	0/1816	0.32	0/2427
46	SA	0.18	0/1766	0.33	0/2399
47	SC	0.18	0/1737	0.39	0/2347
48	SD	0.16	0/1483	0.33	0/1993
49	SE	0.16	0/2117	0.35	0/2849
50	SG	0.17	0/1876	0.37	0/2499
51	SH	0.16	0/1532	0.35	0/2053
52	SI	0.18	0/1724	0.39	0/2298
53	SJ	0.16	0/1520	0.30	0/2030
54	SK	0.16	0/1773	0.36	0/2387
55	SL	0.18	0/1201	0.34	0/1604
56	SM	0.14	0/840	0.35	0/1133
57	SN	0.19	0/1231	0.32	0/1656
58	SO	0.17	0/959	0.33	0/1284
59	SP	0.16	0/1041	0.36	0/1392
60	SQ	0.15	0/1125	0.32	0/1506
61	SS	0.14	0/1078	0.32	0/1447
62	ST	0.16	0/1226	0.34	0/1643
63	SU	0.16	0/1113	0.34	0/1493
64	SV	0.15	0/643	0.35	0/860
65	SW	0.20	0/1050	0.36	0/1406
66	SX	0.18	0/1096	0.33	0/1461
67	SY	0.16	0/1019	0.35	0/1354
68	SZ	0.15	0/805	0.36	0/1081
69	Sa	0.19	0/805	0.33	0/1079
70	Sb	0.16	0/664	0.38	0/891
71	Sc	0.14	0/678	0.31	0/906
72	Sd	0.15	0/490	0.31	0/656
73	Se	0.15	0/442	0.33	0/582
74	Sf	0.15	0/354	0.35	0/467

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	Sg	0.16	0/2420	0.40	0/3294
76	So	0.16	0/240	0.29	0/305
77	Sy	0.13	0/949	0.33	0/1273
78	Sz	0.16	0/144	0.35	0/188
79	S2	0.23	4/37101 (0.0%)	0.32	0/57824
All	All	0.24	8/216509 (0.0%)	0.35	0/317299

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
40	Lm	0	1
60	SQ	0	1
All	All	0	2

The worst 5 of 8 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	1773	OMU	O3'-P	5.30	1.61	1.56
79	S2	1326	OMU	O3'-P	5.30	1.61	1.56
79	S2	1804	OMU	O3'-P	5.24	1.61	1.56
79	S2	799	OMU	O3'-P	5.15	1.61	1.56
2	L5	3830	A2M	O3'-P	5.12	1.61	1.56

There are no bond angle outliers.

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
40	Lm	101	ARG	Sidechain
60	SQ	37	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	L1	3153	0	1603	61	0
2	L5	75275	0	38121	1522	0
3	L8	2386	0	2421	74	0
4	L9	2558	0	1295	31	0
5	LB	3234	0	3372	59	0
6	LC	2908	0	3082	65	0
7	LD	1899	0	1985	22	0
8	LE	1115	0	1205	33	0
9	LF	1870	0	1996	31	0
10	LG	1752	0	1877	44	0
11	LH	1518	0	1601	46	0
12	LI	1053	0	1147	21	0
13	LJ	1340	0	1377	51	0
14	LK	1780	0	1938	73	0
15	LM	1111	0	1174	16	0
16	LN	1700	0	1749	30	0
17	LO	1014	0	1148	29	0
18	LP	705	0	736	9	0
19	LQ	1664	0	1773	37	0
20	LR	1558	0	1718	28	0
21	LS	1460	0	1502	27	0
22	LT	1284	0	1352	21	0
23	LU	443	0	483	9	0
24	LV	972	0	1034	14	0
25	LW	671	0	684	27	0
26	LY	1624	0	1771	30	0
27	LZ	1106	0	1182	31	0
28	La	1162	0	1206	20	0
29	Lb	848	0	918	44	0
30	Lc	785	0	825	12	0
31	Ld	862	0	912	16	0
32	Le	863	0	929	21	0
33	Lf	875	0	912	13	0
34	Lg	882	0	972	18	0
35	Lh	1289	0	1324	32	0
36	Li	832	0	917	23	0
37	Lj	1512	0	1628	22	0
38	Lk	559	0	624	26	0
39	Ll	990	0	1054	15	0
40	Lm	816	0	842	45	0
41	Ln	949	0	1016	20	0
42	Lo	436	0	477	16	0
43	Lp	681	0	731	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	Lz	1616	0	1667	36	0
45	S1	1790	0	1873	75	0
46	SA	1731	0	1734	68	0
47	SC	1700	0	1784	55	0
48	SD	1463	0	1517	84	0
49	SE	2075	0	2177	94	0
50	SG	1853	0	2005	158	0
51	SH	1509	0	1604	99	0
52	SI	1695	0	1785	66	0
53	SJ	1495	0	1615	56	0
54	SK	1745	0	1839	120	0
55	SL	1180	0	1253	37	0
56	SM	816	0	841	73	0
57	SN	1207	0	1294	32	0
58	SO	956	0	981	37	0
59	SP	1021	0	1065	63	0
60	SQ	1108	0	1174	90	0
61	SS	1064	0	1118	58	0
62	ST	1208	0	1270	103	0
63	SU	1094	0	1120	76	0
64	SV	636	0	637	33	0
65	SW	1033	0	1080	32	0
66	SX	1088	0	1149	43	0
67	SY	1002	0	1075	49	0
68	SZ	795	0	862	66	0
69	Sa	792	0	841	21	0
70	Sb	650	0	672	42	0
71	Sc	670	0	745	46	0
72	Sd	488	0	514	26	0
73	Se	437	0	484	19	0
74	Sf	349	0	347	23	0
75	Sg	2364	0	2318	234	0
76	So	239	0	289	12	0
77	Sy	939	0	974	120	0
78	Sz	142	0	166	20	0
79	S2	34964	0	17693	1137	0
80	L1	4	0	0	0	0
80	L5	206	0	0	0	0
80	L9	3	0	0	0	0
80	LD	1	0	0	0	0
80	LI	2	0	0	0	0
80	LN	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	LR	1	0	0	0	0
80	LV	1	0	0	0	0
80	La	1	0	0	0	0
80	Lh	1	0	0	0	0
80	S2	98	0	0	0	0
80	ST	1	0	0	0	0
80	SX	1	0	0	0	0
81	L1	3	0	0	0	0
81	L5	42	0	0	0	0
81	L9	1	0	0	0	0
81	LC	1	0	0	0	0
81	LD	2	0	0	0	0
81	Lg	1	0	0	0	0
81	Lz	1	0	0	0	0
81	S2	38	0	0	0	0
81	SE	1	0	0	0	0
81	ST	1	0	0	0	0
81	SU	1	0	0	0	0
81	Sa	1	0	0	0	0
81	Sf	1	0	0	0	0
82	L5	19	0	26	3	0
83	LP	1	0	0	0	0
83	Le	1	0	0	0	0
83	Lg	1	0	0	0	0
83	Lo	1	0	0	0	0
83	Lp	1	0	0	0	0
83	S2	1	0	0	0	0
83	Sa	1	0	0	0	0
83	Sf	1	0	0	0	0
84	SX	31	19	0	1	0
85	L1	117	0	0	1	0
85	L5	3736	0	0	69	0
85	L8	28	0	0	2	0
85	L9	73	0	0	0	0
85	LB	81	0	0	2	0
85	LC	85	0	0	3	0
85	LD	73	0	0	0	0
85	LE	14	0	0	0	0
85	LF	42	0	0	1	0
85	LG	12	0	0	0	0
85	LH	17	0	0	0	0
85	LI	51	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
85	LJ	3	0	0	0	0
85	LK	14	0	0	0	0
85	LM	5	0	0	0	0
85	LN	75	0	0	5	0
85	LO	12	0	0	0	0
85	LP	36	0	0	2	0
85	LQ	37	0	0	0	0
85	LR	21	0	0	2	0
85	LS	30	0	0	1	0
85	LT	29	0	0	1	0
85	LU	10	0	0	0	0
85	LV	21	0	0	0	0
85	LW	8	0	0	0	0
85	LY	35	0	0	1	0
85	LZ	5	0	0	1	0
85	La	48	0	0	0	0
85	Lb	18	0	0	0	0
85	Lc	8	0	0	0	0
85	Ld	13	0	0	1	0
85	Le	22	0	0	2	0
85	Lf	29	0	0	1	0
85	Lg	30	0	0	0	0
85	Lh	43	0	0	0	0
85	Li	4	0	0	2	0
85	Lj	56	0	0	1	0
85	Lk	1	0	0	0	0
85	Ll	27	0	0	0	0
85	Lm	1	0	0	0	0
85	Ln	15	0	0	1	0
85	Lo	2	0	0	0	0
85	Lp	23	0	0	0	0
85	Lz	10	0	0	0	0
85	S1	19	0	0	1	0
85	S2	1288	0	0	55	0
85	SA	6	0	0	0	0
85	SC	20	0	0	3	0
85	SD	12	0	0	1	0
85	SE	27	0	0	1	0
85	SG	7	0	0	1	0
85	SH	4	0	0	0	0
85	SI	24	0	0	2	0
85	SJ	25	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
85	SK	2	0	0	0	0
85	SL	38	0	0	1	0
85	SN	22	0	0	1	0
85	SO	28	0	0	1	0
85	SP	3	0	0	1	0
85	SQ	14	0	0	0	0
85	SS	4	0	0	1	0
85	ST	10	0	0	1	0
85	SU	10	0	0	3	0
85	SV	6	0	0	3	0
85	SW	26	0	0	1	0
85	SX	38	0	0	5	0
85	SY	3	0	0	1	0
85	SZ	5	0	0	0	0
85	Sa	29	0	0	2	0
85	Sb	9	0	0	0	0
85	Sc	3	0	0	1	0
85	Sd	1	0	0	1	0
85	Se	7	0	0	1	0
85	Sf	4	0	0	0	0
85	So	3	0	0	2	0
All	All	213598	19	154201	5545	0

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

The worst 5 of 5545 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)
50:SG:57:ASP:OD2	50:SG:72:ARG:HD3	1.25	1.35
2:L5:2906:G:H2'	2:L5:2908:U:H1'	1.22	1.17
24:LV:13:LYS:HD3	24:LV:128:LEU:HD11	1.26	1.15
54:SK:106:ARG:HG3	54:SK:175:VAL:HG22	1.33	1.10
50:SG:116:LYS:HE3	50:SG:125:THR:HG21	1.31	1.10

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	
3	L8	291/297 (98%)	283 (97%)	8 (3%)	0	100	100
5	LB	398/403 (99%)	388 (98%)	10 (2%)	0	100	100
6	LC	363/427 (85%)	356 (98%)	7 (2%)	0	100	100
7	LD	245/257 (95%)	237 (97%)	8 (3%)	0	100	100
8	LE	132/145 (91%)	129 (98%)	3 (2%)	0	100	100
9	LF	223/248 (90%)	216 (97%)	7 (3%)	0	100	100
10	LG	212/266 (80%)	205 (97%)	7 (3%)	0	100	100
11	LH	188/192 (98%)	179 (95%)	9 (5%)	0	100	100
12	LI	126/135 (93%)	125 (99%)	1 (1%)	0	100	100
13	LJ	165/178 (93%)	158 (96%)	7 (4%)	0	100	100
14	LK	216/288 (75%)	208 (96%)	8 (4%)	0	100	100
15	LM	133/215 (62%)	128 (96%)	5 (4%)	0	100	100
16	LN	201/204 (98%)	194 (96%)	7 (4%)	0	100	100
17	LO	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
18	LP	84/97 (87%)	84 (100%)	0	0	100	100
19	LQ	204/211 (97%)	201 (98%)	3 (2%)	0	100	100
20	LR	184/196 (94%)	179 (97%)	5 (3%)	0	100	100
21	LS	174/176 (99%)	171 (98%)	3 (2%)	0	100	100
22	LT	155/160 (97%)	151 (97%)	4 (3%)	0	100	100
23	LU	48/51 (94%)	48 (100%)	0	0	100	100
24	LV	128/140 (91%)	128 (100%)	0	0	100	100
25	LW	78/157 (50%)	76 (97%)	2 (3%)	0	100	100
26	LY	196/203 (97%)	194 (99%)	2 (1%)	0	100	100
27	LZ	133/136 (98%)	131 (98%)	2 (2%)	0	100	100
28	La	144/148 (97%)	136 (94%)	7 (5%)	1 (1%)	18	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	Lb	99/161 (62%)	98 (99%)	1 (1%)	0	100	100
30	Lc	99/115 (86%)	99 (100%)	0	0	100	100
31	Ld	102/125 (82%)	101 (99%)	1 (1%)	0	100	100
32	Le	102/106 (96%)	100 (98%)	2 (2%)	0	100	100
33	Lf	107/110 (97%)	106 (99%)	1 (1%)	0	100	100
34	Lg	109/117 (93%)	108 (99%)	1 (1%)	0	100	100
35	Lh	157/184 (85%)	154 (98%)	3 (2%)	0	100	100
36	Li	100/105 (95%)	98 (98%)	2 (2%)	0	100	100
37	Lj	185/188 (98%)	180 (97%)	5 (3%)	0	100	100
38	Lk	66/70 (94%)	66 (100%)	0	0	100	100
39	Ll	122/137 (89%)	122 (100%)	0	0	100	100
40	Lm	98/128 (77%)	92 (94%)	6 (6%)	0	100	100
41	Ln	114/156 (73%)	113 (99%)	1 (1%)	0	100	100
42	Lo	50/99 (50%)	49 (98%)	1 (2%)	0	100	100
43	Lp	86/92 (94%)	81 (94%)	5 (6%)	0	100	100
44	Lz	194/214 (91%)	190 (98%)	4 (2%)	0	100	100
45	S1	217/264 (82%)	215 (99%)	2 (1%)	0	100	100
46	SA	218/295 (74%)	214 (98%)	4 (2%)	0	100	100
47	SC	217/293 (74%)	211 (97%)	6 (3%)	0	100	100
48	SD	180/204 (88%)	168 (93%)	12 (7%)	0	100	100
49	SE	260/263 (99%)	252 (97%)	8 (3%)	0	100	100
50	SG	227/249 (91%)	218 (96%)	9 (4%)	0	100	100
51	SH	185/194 (95%)	180 (97%)	5 (3%)	0	100	100
52	SI	205/208 (99%)	200 (98%)	5 (2%)	0	100	100
53	SJ	177/194 (91%)	169 (96%)	8 (4%)	0	100	100
54	SK	222/243 (91%)	215 (97%)	7 (3%)	0	100	100
55	SL	139/158 (88%)	136 (98%)	3 (2%)	0	100	100
56	SM	95/165 (58%)	88 (93%)	7 (7%)	0	100	100
57	SN	148/151 (98%)	143 (97%)	5 (3%)	0	100	100
58	SO	123/151 (82%)	120 (98%)	3 (2%)	0	100	100
59	SP	123/145 (85%)	118 (96%)	5 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
60	SQ	137/146 (94%)	132 (96%)	5 (4%)	0	100	100
61	SS	129/135 (96%)	123 (95%)	6 (5%)	0	100	100
62	ST	145/152 (95%)	133 (92%)	12 (8%)	0	100	100
63	SU	139/145 (96%)	132 (95%)	7 (5%)	0	100	100
64	SV	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
65	SW	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
66	SX	137/143 (96%)	134 (98%)	3 (2%)	0	100	100
67	SY	120/132 (91%)	120 (100%)	0	0	100	100
68	SZ	98/119 (82%)	95 (97%)	3 (3%)	0	100	100
69	Sa	97/115 (84%)	94 (97%)	3 (3%)	0	100	100
70	Sb	81/84 (96%)	79 (98%)	2 (2%)	0	100	100
71	Sc	81/125 (65%)	79 (98%)	2 (2%)	0	100	100
72	Sd	60/69 (87%)	57 (95%)	3 (5%)	0	100	100
73	Se	53/133 (40%)	52 (98%)	1 (2%)	0	100	100
74	Sf	41/56 (73%)	41 (100%)	0	0	100	100
75	Sg	299/317 (94%)	275 (92%)	24 (8%)	0	100	100
76	So	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
77	Sy	119/132 (90%)	114 (96%)	5 (4%)	0	100	100
78	Sz	14/156 (9%)	10 (71%)	4 (29%)	0	100	100
All	All	11048/12734 (87%)	10720 (97%)	327 (3%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
28	La	15	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	L8	247/250 (99%)	247 (100%)	0	100	100
5	LB	347/348 (100%)	347 (100%)	0	100	100
6	LC	304/348 (87%)	304 (100%)	0	100	100
7	LD	189/198 (96%)	189 (100%)	0	100	100
8	LE	124/135 (92%)	124 (100%)	0	100	100
9	LF	195/216 (90%)	195 (100%)	0	100	100
10	LG	187/223 (84%)	187 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	114/121 (94%)	114 (100%)	0	100	100
13	LJ	141/149 (95%)	141 (100%)	0	100	100
14	LK	196/252 (78%)	196 (100%)	0	100	100
15	LM	115/161 (71%)	115 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	109/110 (99%)	109 (100%)	0	100	100
18	LP	73/80 (91%)	73 (100%)	0	100	100
19	LQ	172/177 (97%)	172 (100%)	0	100	100
20	LR	165/175 (94%)	165 (100%)	0	100	100
21	LS	157/157 (100%)	157 (100%)	0	100	100
22	LT	138/140 (99%)	138 (100%)	0	100	100
23	LU	47/48 (98%)	47 (100%)	0	100	100
24	LV	100/107 (94%)	100 (100%)	0	100	100
25	LW	69/126 (55%)	69 (100%)	0	100	100
26	LY	170/174 (98%)	170 (100%)	0	100	100
27	LZ	117/118 (99%)	117 (100%)	0	100	100
28	La	119/120 (99%)	119 (100%)	0	100	100
29	Lb	85/126 (68%)	85 (100%)	0	100	100
30	Lc	86/97 (89%)	86 (100%)	0	100	100
31	Ld	95/110 (86%)	95 (100%)	0	100	100
32	Le	92/93 (99%)	92 (100%)	0	100	100
33	Lf	88/89 (99%)	88 (100%)	0	100	100
34	Lg	95/100 (95%)	95 (100%)	0	100	100
35	Lh	140/163 (86%)	140 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	Li	86/89 (97%)	86 (100%)	0	100	100
37	Lj	164/165 (99%)	164 (100%)	0	100	100
38	Lk	63/65 (97%)	63 (100%)	0	100	100
39	Ll	107/120 (89%)	107 (100%)	0	100	100
40	Lm	90/115 (78%)	90 (100%)	0	100	100
41	Ln	104/133 (78%)	104 (100%)	0	100	100
42	Lo	48/90 (53%)	48 (100%)	0	100	100
43	Lp	71/75 (95%)	71 (100%)	0	100	100
44	Lz	170/181 (94%)	170 (100%)	0	100	100
45	S1	200/231 (87%)	200 (100%)	0	100	100
46	SA	182/242 (75%)	182 (100%)	0	100	100
47	SC	185/225 (82%)	185 (100%)	0	100	100
48	SD	157/170 (92%)	157 (100%)	0	100	100
49	SE	224/225 (100%)	224 (100%)	0	100	100
50	SG	199/218 (91%)	199 (100%)	0	100	100
51	SH	168/174 (97%)	168 (100%)	0	100	100
52	SI	179/180 (99%)	179 (100%)	0	100	100
53	SJ	160/168 (95%)	160 (100%)	0	100	100
54	SK	188/202 (93%)	188 (100%)	0	100	100
55	SL	130/142 (92%)	130 (100%)	0	100	100
56	SM	88/136 (65%)	88 (100%)	0	100	100
57	SN	130/131 (99%)	130 (100%)	0	100	100
58	SO	99/118 (84%)	99 (100%)	0	100	100
59	SP	111/130 (85%)	111 (100%)	0	100	100
60	SQ	115/121 (95%)	115 (100%)	0	100	100
61	SS	119/122 (98%)	119 (100%)	0	100	100
62	ST	127/132 (96%)	127 (100%)	0	100	100
63	SU	111/115 (96%)	111 (100%)	0	100	100
64	SV	67/67 (100%)	67 (100%)	0	100	100
65	SW	112/113 (99%)	112 (100%)	0	100	100
66	SX	111/114 (97%)	111 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
67	SY	107/114 (94%)	107 (100%)	0	100	100
68	SZ	92/107 (86%)	92 (100%)	0	100	100
69	Sa	86/98 (88%)	86 (100%)	0	100	100
70	Sb	75/76 (99%)	75 (100%)	0	100	100
71	Sc	74/103 (72%)	74 (100%)	0	100	100
72	Sd	55/62 (89%)	55 (100%)	0	100	100
73	Se	45/104 (43%)	45 (100%)	0	100	100
74	Sf	37/49 (76%)	37 (100%)	0	100	100
75	Sg	263/275 (96%)	263 (100%)	0	100	100
76	So	24/24 (100%)	24 (100%)	0	100	100
77	Sy	103/108 (95%)	103 (100%)	0	100	100
78	Sz	15/140 (11%)	15 (100%)	0	100	100
All	All	9657/10823 (89%)	9657 (100%)	0	100	100

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 87 such sidechains are listed below:

Mol	Chain	Res	Type
50	SG	163	ASN
60	SQ	114	GLN
51	SH	168	HIS
56	SM	28	HIS
66	SX	16	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L1	145/157 (92%)	15 (10%)	0
2	L5	3488/5069 (68%)	596 (17%)	18 (0%)
4	L9	119/121 (98%)	8 (6%)	0
79	S2	1628/1869 (87%)	297 (18%)	8 (0%)
All	All	5380/7216 (74%)	916 (17%)	26 (0%)

5 of 916 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L1	23	C
1	L1	34	U
1	L1	35	C
1	L1	48	A
1	L1	52	A

5 of 26 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	L5	3597	G
2	L5	5026	U
79	S2	912	C
2	L5	4699	U
79	S2	73	C

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

223 non-standard protein/DNA/RNA residues are 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	$\# Z > 2$
2	OMG	L5	1522	2	23,26,27	1.19	3 (13%)	32,38,41	2.05	7 (21%)
79	PSU	S2	1045	79	18,21,22	1.34	3 (16%)	21,30,33	2.15	4 (19%)
79	OMG	S2	509	80,79	23,26,27	1.20	3 (13%)	32,38,41	1.97	5 (15%)
79	PSU	S2	1367	79	18,21,22	1.36	3 (16%)	21,30,33	2.03	3 (14%)
2	A2M	L5	4523	2	22,25,26	1.33	2 (9%)	30,36,39	1.21	4 (13%)
2	PSU	L5	3844	2	18,21,22	1.36	3 (16%)	21,30,33	2.12	3 (14%)
79	PSU	S2	918	79	18,21,22	1.43	3 (16%)	21,30,33	2.11	5 (23%)
79	PSU	S2	1244	79	18,21,22	1.37	2 (11%)	21,30,33	2.03	4 (19%)
2	A2M	L5	1534	2,80	22,25,26	1.29	1 (4%)	30,36,39	1.00	1 (3%)
79	OMC	S2	1710	79	19,22,23	0.79	0	25,31,34	0.79	0
2	OMG	L5	3744	2	23,26,27	1.19	3 (13%)	32,38,41	2.02	6 (18%)
2	PSU	L5	4689	2	18,21,22	1.40	4 (22%)	21,30,33	2.02	3 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	UR3	L5	4530	2	19,22,23	0.91	1 (5%)	26,32,35	1.77	3 (11%)
79	MA6	S2	1851	79	23,26,27	1.45	5 (21%)	33,38,41	2.35	12 (36%)
2	PSU	L5	4579	2	18,21,22	1.40	4 (22%)	21,30,33	2.10	3 (14%)
2	PSU	L5	5001	2	18,21,22	1.44	4 (22%)	21,30,33	2.12	4 (19%)
79	A2M	S2	1031	79	22,25,26	1.28	1 (4%)	30,36,39	0.99	1 (3%)
79	A2M	S2	484	79	22,25,26	1.32	2 (9%)	30,36,39	1.02	3 (10%)
2	2MG	L5	729	2	23,26,27	1.29	2 (8%)	33,38,41	1.45	4 (12%)
2	5MC	L5	3782	2,80	19,22,23	1.57	3 (15%)	26,32,35	1.17	3 (11%)
79	OMU	S2	1288	79	19,22,23	1.21	4 (21%)	25,31,34	1.85	5 (20%)
2	1MA	L5	1322	2,80	21,25,26	0.74	1 (4%)	30,37,40	1.32	5 (16%)
2	PSU	L5	1683	2,81	18,21,22	1.44	3 (16%)	21,30,33	2.17	3 (14%)
2	OMG	L5	4196	2	23,26,27	1.19	3 (13%)	32,38,41	1.96	7 (21%)
2	OMG	L5	4499	2	23,26,27	1.18	3 (13%)	32,38,41	2.06	7 (21%)
79	OMG	S2	436	79	23,26,27	1.20	3 (13%)	32,38,41	2.02	6 (18%)
2	OMU	L5	4306	2	19,22,23	1.31	3 (15%)	25,31,34	1.94	5 (20%)
79	OMU	S2	116	79	19,22,23	1.22	3 (15%)	25,31,34	1.90	5 (20%)
2	A2M	L5	400	2	22,25,26	1.34	1 (4%)	30,36,39	1.00	4 (13%)
2	6MZ	L5	4220	2	22,25,26	1.48	3 (13%)	29,36,39	2.26	10 (34%)
79	PSU	S2	119	79	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
79	OMU	S2	627	79	19,22,23	1.19	2 (10%)	25,31,34	1.85	5 (20%)
2	PSU	L5	4296	2	18,21,22	1.43	4 (22%)	21,30,33	2.28	4 (19%)
2	PSU	L5	4552	2	18,21,22	1.39	3 (16%)	21,30,33	2.15	4 (19%)
7	V5N	LD	216	7	8,11,12	1.51	2 (25%)	8,14,16	1.67	3 (37%)
2	PSU	L5	1792	2,81	18,21,22	1.38	4 (22%)	21,30,33	1.96	3 (14%)
2	JMH	L5	1456	2	18,22,23	2.72	6 (33%)	23,32,35	1.00	0
2	OMG	L5	4370	2	23,26,27	1.16	3 (13%)	32,38,41	2.04	7 (21%)
2	OMU	L5	4620	2	19,22,23	1.32	3 (15%)	25,31,34	1.80	5 (20%)
79	PSU	S2	36	79	18,21,22	1.39	3 (16%)	21,30,33	2.08	4 (19%)
79	A2M	S2	668	80,79	22,25,26	1.37	2 (9%)	30,36,39	1.02	1 (3%)
2	OMC	L5	2804	2	19,22,23	0.79	0	25,31,34	0.69	0
2	PSU	L5	3770	2	18,21,22	1.34	2 (11%)	21,30,33	2.12	4 (19%)
79	PSU	S2	1056	79	18,21,22	1.37	3 (16%)	21,30,33	2.17	4 (19%)
79	PSU	S2	1232	79	18,21,22	1.40	2 (11%)	21,30,33	2.03	4 (19%)
2	PSU	L5	3639	2	18,21,22	1.42	3 (16%)	21,30,33	2.03	4 (19%)
79	A2M	S2	512	79	22,25,26	1.35	1 (4%)	30,36,39	1.08	3 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
79	A2M	S2	159	79	22,25,26	1.38	1 (4%)	30,36,39	1.08	3 (10%)
2	PSU	L5	4628	2	18,21,22	1.40	4 (22%)	21,30,33	2.11	5 (23%)
79	OMU	S2	1442	79	19,22,23	1.24	3 (15%)	25,31,34	1.85	4 (16%)
2	A2M	L5	1326	2	22,25,26	1.26	1 (4%)	30,36,39	1.03	2 (6%)
2	A2M	L5	1871	2,80	22,25,26	1.23	1 (4%)	30,36,39	1.13	2 (6%)
2	PSU	L5	4673	2	18,21,22	1.43	3 (16%)	21,30,33	2.18	3 (14%)
2	OMU	L5	4227	2	19,22,23	1.27	3 (15%)	25,31,34	1.83	4 (16%)
79	PSU	S2	686	79	18,21,22	1.39	2 (11%)	21,30,33	2.08	4 (19%)
79	7MG	S2	1639	79	23,26,27	1.04	1 (4%)	27,39,42	0.91	2 (7%)
79	OMC	S2	517	79	19,22,23	0.74	0	25,31,34	0.81	0
66	HY3	SX	62	66	7,8,9	0.93	0	7,10,12	1.19	0
2	PSU	L5	1860	2	18,21,22	1.44	3 (16%)	21,30,33	2.05	4 (19%)
2	PSU	L5	1677	2	18,21,22	1.50	4 (22%)	21,30,33	2.15	5 (23%)
79	A2M	S2	99	80,79	22,25,26	1.34	2 (9%)	30,36,39	1.07	3 (10%)
79	OMG	S2	1490	80,79	23,26,27	1.20	3 (13%)	32,38,41	2.00	6 (18%)
79	PSU	S2	815	79	18,21,22	1.42	4 (22%)	21,30,33	2.15	4 (19%)
2	PSU	L5	4361	2	18,21,22	1.41	3 (16%)	21,30,33	2.00	3 (14%)
2	A2M	L5	4571	2	22,25,26	1.26	1 (4%)	30,36,39	0.95	1 (3%)
79	PSU	S2	866	79	18,21,22	1.36	2 (11%)	21,30,33	2.13	4 (19%)
2	OMG	L5	2050	2	23,26,27	1.18	3 (13%)	32,38,41	2.17	9 (28%)
2	A2M	L5	2401	2	22,25,26	1.25	2 (9%)	30,36,39	1.00	2 (6%)
2	PSU	L5	3637	2,81	18,21,22	1.44	3 (16%)	21,30,33	2.08	5 (23%)
79	PSU	S2	651	79	18,21,22	1.35	3 (16%)	21,30,33	2.08	4 (19%)
79	PSU	S2	1177	79	18,21,22	1.36	3 (16%)	21,30,33	2.18	4 (19%)
1	OMG	L1	75	1	23,26,27	1.21	3 (13%)	32,38,41	1.95	6 (18%)
2	PSU	L5	1782	2	18,21,22	1.43	4 (22%)	21,30,33	2.19	4 (19%)
2	PSU	L5	1781	2	18,21,22	1.45	3 (16%)	21,30,33	2.23	4 (19%)
79	PSU	S2	34	79	18,21,22	1.37	2 (11%)	21,30,33	2.10	5 (23%)
2	PSU	L5	3851	2	18,21,22	1.35	3 (16%)	21,30,33	2.02	6 (28%)
2	OMU	L5	4498	2	19,22,23	1.25	3 (15%)	25,31,34	1.93	5 (20%)
79	PSU	S2	218	79	18,21,22	1.38	3 (16%)	21,30,33	2.09	5 (23%)
79	PSU	S2	1347	79	18,21,22	1.35	2 (11%)	21,30,33	2.06	3 (14%)
79	OMC	S2	1703	79	19,22,23	0.78	0	25,31,34	0.76	0
2	OMC	L5	3808	2	19,22,23	0.78	0	25,31,34	0.84	1 (4%)
2	PSU	L5	4457	2	18,21,22	1.41	3 (16%)	21,30,33	2.08	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	L5	3734	2	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
79	OMG	S2	644	79	23,26,27	1.18	3 (13%)	32,38,41	1.94	6 (18%)
79	PSU	S2	1046	79	18,21,22	1.33	3 (16%)	21,30,33	2.09	5 (23%)
79	PSU	S2	814	79	18,21,22	1.41	3 (16%)	21,30,33	2.07	5 (23%)
79	PSU	S2	609	79	18,21,22	1.35	3 (16%)	21,30,33	2.13	4 (19%)
2	PSU	L5	2632	2	18,21,22	1.44	3 (16%)	21,30,33	2.09	5 (23%)
2	PSU	L5	4972	2	18,21,22	1.41	3 (16%)	21,30,33	2.08	4 (19%)
79	OMC	S2	174	79	19,22,23	0.79	0	25,31,34	0.91	0
2	PSU	L5	4636	2	18,21,22	1.40	3 (16%)	21,30,33	2.13	4 (19%)
2	OMC	L5	3869	2	19,22,23	0.77	0	25,31,34	0.76	0
2	OMG	L5	4228	2	23,26,27	1.14	3 (13%)	32,38,41	2.02	6 (18%)
2	OMC	L5	2422	2,80	19,22,23	0.78	0	25,31,34	0.81	0
2	OMC	L5	1340	2	19,22,23	0.79	0	25,31,34	0.83	1 (4%)
79	PSU	S2	681	79	18,21,22	1.36	3 (16%)	21,30,33	2.05	3 (14%)
79	OMU	S2	121	79	19,22,23	1.23	2 (10%)	25,31,34	1.87	5 (20%)
2	PSU	L5	4532	2	18,21,22	1.37	2 (11%)	21,30,33	2.13	3 (14%)
2	UY1	L5	3818	2,81	19,22,23	1.67	5 (26%)	21,31,34	1.89	4 (19%)
2	OMG	L5	4392	2	23,26,27	1.22	3 (13%)	32,38,41	2.10	6 (18%)
79	PSU	S2	572	81,79	18,21,22	1.43	3 (16%)	21,30,33	2.07	5 (23%)
2	OMU	L5	1773	2	19,22,23	1.25	4 (21%)	25,31,34	1.74	5 (20%)
2	OMC	L5	2365	2	19,22,23	0.77	0	25,31,34	0.78	0
79	PSU	S2	109	79	18,21,22	1.40	3 (16%)	21,30,33	2.22	4 (19%)
79	PSU	S2	822	79	18,21,22	1.36	2 (11%)	21,30,33	2.10	4 (19%)
79	B8N	S2	1248	79	25,29,30	3.37	8 (32%)	28,42,45	1.98	7 (25%)
79	PSU	S2	93	79	18,21,22	1.41	3 (16%)	21,30,33	2.08	5 (23%)
79	PSU	S2	1625	79	18,21,22	1.43	2 (11%)	21,30,33	2.05	4 (19%)
2	PSU	L5	3884	2	18,21,22	1.39	3 (16%)	21,30,33	2.13	4 (19%)
2	PSU	L5	1744	2,81	18,21,22	1.45	3 (16%)	21,30,33	2.05	4 (19%)
2	5MC	L5	4447	2,81	19,22,23	1.72	3 (15%)	26,32,35	1.28	3 (11%)
2	2MG	L5	1517	2	23,26,27	1.28	2 (8%)	33,38,41	1.44	4 (12%)
79	PSU	S2	210	79	18,21,22	1.37	2 (11%)	21,30,33	2.06	5 (23%)
2	A2M	L5	2815	2	22,25,26	1.25	1 (4%)	30,36,39	0.95	2 (6%)
2	A2M	L5	398	2	22,25,26	1.29	1 (4%)	30,36,39	1.03	3 (10%)
79	OMG	S2	867	79	23,26,27	1.17	3 (13%)	32,38,41	1.96	6 (18%)
79	OMG	S2	601	79	23,26,27	1.22	3 (13%)	32,38,41	2.02	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	OMU	L5	2415	2	19,22,23	1.28	3 (15%)	25,31,34	1.81	4 (16%)
79	PSU	S2	1238	79	18,21,22	1.38	2 (11%)	21,30,33	2.08	4 (19%)
2	PSU	L5	3764	2	18,21,22	1.43	3 (16%)	21,30,33	2.07	6 (28%)
79	PSU	S2	1692	79	18,21,22	1.37	4 (22%)	21,30,33	2.05	4 (19%)
79	A2M	S2	1383	79	22,25,26	1.36	2 (9%)	30,36,39	1.08	2 (6%)
2	OMC	L5	2824	2	19,22,23	0.76	0	25,31,34	0.77	0
2	PSU	L5	3715	2	18,21,22	1.39	2 (11%)	21,30,33	2.08	5 (23%)
2	OMG	L5	2364	2	23,26,27	1.17	4 (17%)	32,38,41	1.99	6 (18%)
79	PSU	S2	1643	80,79	18,21,22	1.37	2 (11%)	21,30,33	2.05	4 (19%)
79	A2M	S2	27	80,79	22,25,26	1.30	2 (9%)	30,36,39	1.07	2 (6%)
79	PSU	S2	406	79	18,21,22	1.32	2 (11%)	21,30,33	2.17	4 (19%)
2	A2M	L5	2363	2,80	22,25,26	1.23	1 (4%)	30,36,39	1.03	3 (10%)
32	MLZ	Le	53	32	8,9,10	0.65	0	4,9,11	0.70	0
2	OMG	L5	4870	2	23,26,27	1.16	3 (13%)	32,38,41	2.01	6 (18%)
2	PSU	L5	4521	2,80,81	18,21,22	1.45	4 (22%)	21,30,33	1.93	5 (23%)
79	A2M	S2	166	79	22,25,26	1.42	3 (13%)	30,36,39	1.07	3 (10%)
2	OMG	L5	1625	2,81	23,26,27	1.22	3 (13%)	32,38,41	2.11	6 (18%)
79	OMG	S2	1328	79	23,26,27	1.20	3 (13%)	32,38,41	1.98	5 (15%)
2	PSU	L5	1862	2	18,21,22	1.36	3 (16%)	21,30,33	2.23	4 (19%)
2	A2M	L5	2787	2	22,25,26	1.31	2 (9%)	30,36,39	1.02	1 (3%)
2	A2M	L5	3760	2,79	22,25,26	1.30	1 (4%)	30,36,39	1.01	1 (3%)
79	4AC	S2	1337	79	21,24,25	3.20	11 (52%)	28,34,37	1.18	4 (14%)
2	OMU	L5	2837	2	19,22,23	1.25	3 (15%)	25,31,34	2.02	6 (24%)
2	PSU	L5	4293	2	18,21,22	1.42	3 (16%)	21,30,33	2.07	4 (19%)
2	A2M	L5	1524	2	22,25,26	1.40	2 (9%)	30,36,39	1.09	3 (10%)
2	OMG	L5	4494	2	23,26,27	1.17	3 (13%)	32,38,41	2.07	5 (15%)
2	OMC	L5	3841	2	19,22,23	0.78	0	25,31,34	0.73	0
2	OMG	L5	1760	2	23,26,27	1.18	3 (13%)	32,38,41	1.96	6 (18%)
2	OMG	L5	3944	2	23,26,27	1.18	3 (13%)	32,38,41	2.03	7 (21%)
2	PSU	L5	4442	2	18,21,22	1.41	3 (16%)	21,30,33	2.05	4 (19%)
2	PSU	L5	1536	2	18,21,22	1.42	3 (16%)	21,30,33	2.18	4 (19%)
2	PSU	L5	2508	2	18,21,22	1.42	3 (16%)	21,30,33	2.11	5 (23%)
2	A2M	L5	3825	2	22,25,26	1.17	1 (4%)	30,36,39	0.97	2 (6%)
79	PSU	S2	105	79	18,21,22	1.41	3 (16%)	21,30,33	2.11	4 (19%)
2	PSU	L5	5010	2	18,21,22	1.42	4 (22%)	21,30,33	2.12	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	L1	69	1	18,21,22	1.43	4 (22%)	21,30,33	2.09	4 (19%)
79	PSU	S2	1081	79	18,21,22	1.42	4 (22%)	21,30,33	2.06	5 (23%)
2	PSU	L5	4353	2	18,21,22	1.36	3 (16%)	21,30,33	2.11	5 (23%)
79	PSU	S2	966	79	18,21,22	1.34	3 (16%)	21,30,33	1.97	4 (19%)
2	PSU	L5	4420	2	18,21,22	1.42	4 (22%)	21,30,33	2.08	4 (19%)
79	PSU	S2	801	79	18,21,22	1.39	3 (16%)	21,30,33	2.15	4 (19%)
79	PSU	S2	863	79	18,21,22	1.37	3 (16%)	21,30,33	2.18	4 (19%)
2	OMG	L5	2424	2	23,26,27	1.23	3 (13%)	32,38,41	2.00	5 (15%)
2	OMG	L5	2876	2	23,26,27	1.20	3 (13%)	32,38,41	2.07	7 (21%)
2	PSU	L5	4312	2	18,21,22	1.45	3 (16%)	21,30,33	2.16	4 (19%)
2	PSU	L5	4431	2	18,21,22	1.45	3 (16%)	21,30,33	2.13	4 (19%)
79	OMU	S2	1804	79	19,22,23	1.27	4 (21%)	25,31,34	1.84	4 (16%)
79	OMU	S2	799	79	19,22,23	1.24	2 (10%)	25,31,34	1.86	5 (20%)
79	OMC	S2	1391	79	19,22,23	0.79	0	25,31,34	0.84	0
79	4AC	S2	1842	81,79	21,24,25	3.13	10 (47%)	28,34,37	1.13	3 (10%)
2	OMC	L5	1881	2,80	19,22,23	0.79	1 (5%)	25,31,34	0.92	0
79	A2M	S2	468	79	22,25,26	1.32	1 (4%)	30,36,39	1.06	3 (10%)
2	A2M	L5	3867	2	22,25,26	1.37	2 (9%)	30,36,39	1.07	2 (6%)
2	PSU	L5	3758	2	18,21,22	1.36	2 (11%)	21,30,33	2.10	4 (19%)
79	PSU	S2	1174	81,79	18,21,22	1.40	3 (16%)	21,30,33	2.15	4 (19%)
2	PSU	L5	4471	2	18,21,22	1.42	4 (22%)	21,30,33	2.02	3 (14%)
2	OMG	L5	4618	2	23,26,27	1.19	4 (17%)	32,38,41	2.04	8 (25%)
2	PSU	L5	3762	2	18,21,22	1.36	2 (11%)	21,30,33	1.99	5 (23%)
79	PSU	S2	649	79	18,21,22	1.38	3 (16%)	21,30,33	2.15	4 (19%)
28	V5N	La	39	28	8,11,12	1.29	1 (12%)	8,14,16	2.03	3 (37%)
2	OMG	L5	3899	2,80	23,26,27	1.19	3 (13%)	32,38,41	2.14	9 (28%)
5	HIC	LB	245	5	10,11,12	1.04	0	9,14,16	2.50	2 (22%)
79	PSU	S2	1445	79	18,21,22	1.36	2 (11%)	21,30,33	2.12	4 (19%)
79	A2M	S2	590	79	22,25,26	1.40	3 (13%)	30,36,39	1.10	3 (10%)
79	MA6	S2	1850	79	23,26,27	1.50	5 (21%)	33,38,41	2.34	13 (39%)
2	PSU	L5	3853	2,80	18,21,22	1.45	4 (22%)	21,30,33	2.11	5 (23%)
2	OMC	L5	2351	2,80	19,22,23	0.77	0	25,31,34	0.90	1 (4%)
79	OMU	S2	172	79	19,22,23	1.24	3 (15%)	25,31,34	1.90	5 (20%)
2	PSU	L5	3920	2,80	18,21,22	1.43	4 (22%)	21,30,33	2.08	4 (19%)
2	OMG	L5	4623	2	23,26,27	1.20	4 (17%)	32,38,41	2.07	6 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
79	A2M	S2	576	81,79	22,25,26	1.26	2 (9%)	30,36,39	1.05	3 (10%)
79	PSU	S2	823	79	18,21,22	1.45	3 (16%)	21,30,33	2.09	4 (19%)
2	PSU	L5	4299	2	18,21,22	1.39	3 (16%)	21,30,33	2.18	4 (19%)
2	PSU	L5	3695	2,80,81	18,21,22	1.34	2 (11%)	21,30,33	2.17	4 (19%)
2	PSU	L5	4423	2	18,21,22	1.41	3 (16%)	21,30,33	1.99	4 (19%)
2	A2M	L5	4590	2	22,25,26	1.25	2 (9%)	30,36,39	1.10	4 (13%)
2	PSU	L5	4403	2	18,21,22	1.38	4 (22%)	21,30,33	2.06	4 (19%)
2	PSU	L5	4576	2	18,21,22	1.42	3 (16%)	21,30,33	2.14	4 (19%)
2	OMG	L5	3792	2,81	23,26,27	1.17	3 (13%)	32,38,41	1.98	6 (18%)
2	PSU	L5	3768	2	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
2	OMG	L5	4637	2,81	23,26,27	1.17	3 (13%)	32,38,41	2.09	6 (18%)
2	A2M	L5	3830	2	22,25,26	1.28	1 (4%)	30,36,39	1.11	1 (3%)
2	PSU	L5	3730	2	18,21,22	1.38	3 (16%)	21,30,33	2.16	4 (19%)
79	PSU	S2	1004	79	18,21,22	1.34	2 (11%)	21,30,33	2.09	3 (14%)
2	OMC	L5	4456	2	19,22,23	0.75	0	25,31,34	0.87	1 (4%)
2	OMG	L5	1316	2	23,26,27	1.17	4 (17%)	32,38,41	2.12	6 (18%)
29	MLZ	Lb	5	29	8,9,10	0.69	0	4,9,11	0.67	0
2	OMC	L5	3701	2,81	19,22,23	0.77	0	25,31,34	0.85	1 (4%)
2	PSU	L5	4500	2	18,21,22	1.39	2 (11%)	21,30,33	2.21	5 (23%)
79	OMU	S2	428	79	19,22,23	1.21	3 (15%)	25,31,34	1.90	5 (20%)
79	OMG	S2	683	79	23,26,27	1.19	3 (13%)	32,38,41	2.03	6 (18%)
79	6MZ	S2	1832	80,81,79	22,25,26	1.48	4 (18%)	29,36,39	2.15	8 (27%)
79	A2M	S2	1678	79	22,25,26	1.33	1 (4%)	30,36,39	1.04	2 (6%)
2	A2M	L5	3785	2	22,25,26	1.36	2 (9%)	30,36,39	1.28	4 (13%)
2	OMU	L5	3925	2	19,22,23	1.19	3 (15%)	25,31,34	2.05	5 (20%)
58	IAS	SO	138	58	6,7,8	1.11	0	3,8,10	2.10	1 (33%)
79	OMU	S2	1326	80,79	19,22,23	1.25	3 (15%)	25,31,34	1.94	5 (20%)
2	2MG	L5	4872	2	23,26,27	1.28	2 (8%)	33,38,41	1.42	4 (12%)
2	OMC	L5	4536	2	19,22,23	0.76	0	25,31,34	0.85	1 (4%)
2	PSU	L5	1582	2	18,21,22	1.40	4 (22%)	21,30,33	2.09	4 (19%)
42	M3L	Lo	98	42	10,11,12	0.83	0	9,14,16	0.69	0
2	OMC	L5	2861	2	19,22,23	0.77	0	25,31,34	0.84	0
2	A2M	L5	3718	2	22,25,26	1.19	1 (4%)	30,36,39	1.00	2 (6%)
79	OMC	S2	462	79	19,22,23	0.80	0	25,31,34	0.79	0
1	PSU	L1	55	1	18,21,22	1.36	3 (16%)	21,30,33	2.10	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	OMC	L5	3887	2	19,22,23	0.80	1 (5%)	25,31,34	0.91	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
2	OMG	L5	1522	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	1045	79	-	0/7/25/26	0/2/2/2
79	OMG	S2	509	80,79	-	0/9/27/28	0/3/3/3
79	PSU	S2	1367	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	4523	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	3844	2	-	1/7/25/26	0/2/2/2
79	PSU	S2	918	79	-	1/7/25/26	0/2/2/2
79	PSU	S2	1244	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	1534	2,80	-	1/9/27/28	0/3/3/3
79	OMC	S2	1710	79	-	0/9/27/28	0/2/2/2
2	OMG	L5	3744	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	4689	2	-	0/7/25/26	0/2/2/2
2	UR3	L5	4530	2	-	0/7/25/26	0/2/2/2
79	MA6	S2	1851	79	-	3/11/29/30	0/3/3/3
2	PSU	L5	4579	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	5001	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	1031	79	-	1/9/27/28	0/3/3/3
79	A2M	S2	484	79	-	1/9/27/28	0/3/3/3
2	2MG	L5	729	2	-	1/9/27/28	0/3/3/3
2	5MC	L5	3782	2,80	-	0/7/25/26	0/2/2/2
79	OMU	S2	1288	79	-	1/9/27/28	0/2/2/2
2	1MA	L5	1322	2,80	-	2/7/25/26	0/3/3/3
2	PSU	L5	1683	2,81	-	0/7/25/26	0/2/2/2
2	OMG	L5	4196	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	4499	2	-	0/9/27/28	0/3/3/3
79	OMG	S2	436	79	-	0/9/27/28	0/3/3/3
2	OMU	L5	4306	2	-	0/9/27/28	0/2/2/2
79	OMU	S2	116	79	-	0/9/27/28	0/2/2/2
2	A2M	L5	400	2	-	0/9/27/28	0/3/3/3
2	6MZ	L5	4220	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	119	79	-	0/7/25/26	0/2/2/2
79	OMU	S2	627	79	-	4/9/27/28	0/2/2/2
2	PSU	L5	4296	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4552	2	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	V5N	LD	216	7	-	1/9/10/12	0/1/1/1
2	PSU	L5	1792	2,81	-	0/7/25/26	0/2/2/2
2	JMH	L5	1456	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4370	2	-	1/9/27/28	0/3/3/3
2	OMU	L5	4620	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	36	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	668	80,79	-	3/9/27/28	0/3/3/3
2	OMC	L5	2804	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	3770	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1056	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1232	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3639	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	512	79	-	0/9/27/28	0/3/3/3
79	A2M	S2	159	79	-	0/9/27/28	0/3/3/3
2	PSU	L5	4628	2	-	0/7/25/26	0/2/2/2
79	OMU	S2	1442	79	-	2/9/27/28	0/2/2/2
2	A2M	L5	1326	2	-	3/9/27/28	0/3/3/3
2	A2M	L5	1871	2,80	-	0/9/27/28	0/3/3/3
2	PSU	L5	4673	2	-	0/7/25/26	0/2/2/2
2	OMU	L5	4227	2	-	1/9/27/28	0/2/2/2
79	PSU	S2	686	79	-	0/7/25/26	0/2/2/2
79	7MG	S2	1639	79	-	0/7/37/38	0/3/3/3
79	OMC	S2	517	79	-	1/9/27/28	0/2/2/2
66	HY3	SX	62	66	-	0/1/12/14	0/1/1/1
2	PSU	L5	1860	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1677	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	99	80,79	-	2/9/27/28	0/3/3/3
79	OMG	S2	1490	80,79	-	1/9/27/28	0/3/3/3
79	PSU	S2	815	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4361	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	4571	2	-	1/9/27/28	0/3/3/3
79	PSU	S2	866	79	-	0/7/25/26	0/2/2/2
2	OMG	L5	2050	2	-	0/9/27/28	0/3/3/3
2	A2M	L5	2401	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	3637	2,81	-	0/7/25/26	0/2/2/2
79	PSU	S2	651	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1177	79	-	0/7/25/26	0/2/2/2
1	OMG	L1	75	1	-	0/9/27/28	0/3/3/3
2	PSU	L5	1782	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1781	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	34	79	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	L5	3851	2	-	1/7/25/26	0/2/2/2
2	OMU	L5	4498	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	218	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1347	79	-	0/7/25/26	0/2/2/2
79	OMC	S2	1703	79	-	0/9/27/28	0/2/2/2
2	OMC	L5	3808	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	4457	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	3734	2	-	2/7/25/26	0/2/2/2
79	OMG	S2	644	79	-	2/9/27/28	0/3/3/3
79	PSU	S2	1046	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	814	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	609	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	2632	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4972	2	-	0/7/25/26	0/2/2/2
79	OMC	S2	174	79	-	1/9/27/28	0/2/2/2
2	PSU	L5	4636	2	-	2/7/25/26	0/2/2/2
2	OMC	L5	3869	2	-	0/9/27/28	0/2/2/2
2	OMG	L5	4228	2	-	0/9/27/28	0/3/3/3
2	OMC	L5	2422	2,80	-	0/9/27/28	0/2/2/2
2	OMC	L5	1340	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	681	79	-	0/7/25/26	0/2/2/2
79	OMU	S2	121	79	-	0/9/27/28	0/2/2/2
2	PSU	L5	4532	2	-	0/7/25/26	0/2/2/2
2	UY1	L5	3818	2,81	-	1/9/27/28	0/2/2/2
2	OMG	L5	4392	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	572	81,79	-	0/7/25/26	0/2/2/2
2	OMU	L5	1773	2	-	0/9/27/28	0/2/2/2
2	OMC	L5	2365	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	109	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	822	79	-	0/7/25/26	0/2/2/2
79	B8N	S2	1248	79	-	9/16/34/35	0/2/2/2
79	PSU	S2	93	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1625	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3884	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1744	2,81	-	0/7/25/26	0/2/2/2
2	5MC	L5	4447	2,81	-	4/7/25/26	0/2/2/2
2	2MG	L5	1517	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	210	79	-	4/7/25/26	0/2/2/2
2	A2M	L5	2815	2	-	1/9/27/28	0/3/3/3
2	A2M	L5	398	2	-	0/9/27/28	0/3/3/3
79	OMG	S2	867	79	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
79	OMG	S2	601	79	-	0/9/27/28	0/3/3/3
2	OMU	L5	2415	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	1238	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3764	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1692	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	1383	79	-	0/9/27/28	0/3/3/3
2	OMC	L5	2824	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	3715	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	2364	2	-	2/9/27/28	0/3/3/3
79	PSU	S2	1643	80,79	-	0/7/25/26	0/2/2/2
79	A2M	S2	27	80,79	-	0/9/27/28	0/3/3/3
79	PSU	S2	406	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	2363	2,80	-	0/9/27/28	0/3/3/3
32	MLZ	Le	53	32	-	0/7/8/10	-
2	OMG	L5	4870	2	-	3/9/27/28	0/3/3/3
2	PSU	L5	4521	2,80,81	-	2/7/25/26	0/2/2/2
79	A2M	S2	166	79	-	1/9/27/28	0/3/3/3
2	OMG	L5	1625	2,81	-	0/9/27/28	0/3/3/3
79	OMG	S2	1328	79	-	0/9/27/28	0/3/3/3
2	PSU	L5	1862	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	2787	2	-	3/9/27/28	0/3/3/3
2	A2M	L5	3760	2,79	-	5/9/27/28	0/3/3/3
79	4AC	S2	1337	79	-	0/11/29/30	0/2/2/2
2	OMU	L5	2837	2	-	1/9/27/28	0/2/2/2
2	PSU	L5	4293	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	1524	2	-	2/9/27/28	0/3/3/3
2	OMG	L5	4494	2	-	1/9/27/28	0/3/3/3
2	OMC	L5	3841	2	-	0/9/27/28	0/2/2/2
2	OMG	L5	1760	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	3944	2	-	1/9/27/28	0/3/3/3
2	PSU	L5	4442	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1536	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	2508	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	3825	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	105	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	5010	2	-	0/7/25/26	0/2/2/2
1	PSU	L1	69	1	-	0/7/25/26	0/2/2/2
79	PSU	S2	1081	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4353	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	966	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4420	2	-	2/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
79	PSU	S2	801	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	863	79	-	0/7/25/26	0/2/2/2
2	OMG	L5	2424	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	2876	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	4312	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4431	2	-	0/7/25/26	0/2/2/2
79	OMU	S2	1804	79	-	0/9/27/28	0/2/2/2
79	OMU	S2	799	79	-	1/9/27/28	0/2/2/2
79	OMC	S2	1391	79	-	1/9/27/28	0/2/2/2
79	4AC	S2	1842	81,79	-	0/11/29/30	0/2/2/2
2	OMC	L5	1881	2,80	-	0/9/27/28	0/2/2/2
79	A2M	S2	468	79	-	1/9/27/28	0/3/3/3
2	A2M	L5	3867	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	3758	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1174	81,79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4471	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4618	2	-	1/9/27/28	0/3/3/3
2	PSU	L5	3762	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	649	79	-	0/7/25/26	0/2/2/2
28	V5N	La	39	28	-	1/9/10/12	0/1/1/1
2	OMG	L5	3899	2,80	-	0/9/27/28	0/3/3/3
5	HIC	LB	245	5	-	0/5/6/8	0/1/1/1
79	PSU	S2	1445	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	590	79	-	1/9/27/28	0/3/3/3
79	MA6	S2	1850	79	-	1/11/29/30	0/3/3/3
2	PSU	L5	3853	2,80	-	0/7/25/26	0/2/2/2
2	OMC	L5	2351	2,80	-	1/9/27/28	0/2/2/2
79	OMU	S2	172	79	-	1/9/27/28	0/2/2/2
2	PSU	L5	3920	2,80	-	0/7/25/26	0/2/2/2
2	OMG	L5	4623	2	-	2/9/27/28	0/3/3/3
79	A2M	S2	576	81,79	-	2/9/27/28	0/3/3/3
79	PSU	S2	823	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4299	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	3695	2,80,81	-	0/7/25/26	0/2/2/2
2	PSU	L5	4423	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	4590	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	4403	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4576	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	3792	2,81	-	0/9/27/28	0/3/3/3
2	PSU	L5	3768	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4637	2,81	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A2M	L5	3830	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	3730	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1004	79	-	0/7/25/26	0/2/2/2
2	OMC	L5	4456	2	-	0/9/27/28	0/2/2/2
2	OMG	L5	1316	2	-	1/9/27/28	0/3/3/3
29	MLZ	Lb	5	29	-	4/7/8/10	-
2	OMC	L5	3701	2,81	-	4/9/27/28	0/2/2/2
2	PSU	L5	4500	2	-	3/7/25/26	0/2/2/2
79	OMU	S2	428	79	-	3/9/27/28	0/2/2/2
79	OMG	S2	683	79	-	0/9/27/28	0/3/3/3
79	6MZ	S2	1832	80,81,79	-	2/9/27/28	0/3/3/3
79	A2M	S2	1678	79	-	1/9/27/28	0/3/3/3
2	A2M	L5	3785	2	-	4/9/27/28	0/3/3/3
2	OMU	L5	3925	2	-	0/9/27/28	0/2/2/2
58	IAS	SO	138	58	-	1/7/7/8	-
79	OMU	S2	1326	80,79	-	0/9/27/28	0/2/2/2
2	2MG	L5	4872	2	-	0/9/27/28	0/3/3/3
2	OMC	L5	4536	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	1582	2	-	0/7/25/26	0/2/2/2
42	M3L	Lo	98	42	-	5/9/10/12	-
2	OMC	L5	2861	2	-	0/9/27/28	0/2/2/2
2	A2M	L5	3718	2	-	0/9/27/28	0/3/3/3
79	OMC	S2	462	79	-	0/9/27/28	0/2/2/2
1	PSU	L1	55	1	-	0/7/25/26	0/2/2/2
2	OMC	L5	3887	2	-	0/9/27/28	0/2/2/2

The worst 5 of 564 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	S2	1248	B8N	C4-N3	-8.62	1.25	1.40
79	S2	1248	B8N	C6-N1	7.62	1.55	1.36
79	S2	1337	4AC	C4-N3	7.13	1.44	1.32
2	L5	1456	JMH	C2-N1	6.96	1.48	1.38
79	S2	1842	4AC	C4-N3	6.90	1.44	1.32

The worst 5 of 860 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	4530	UR3	C4-N3-C2	-7.09	118.88	124.58
2	L5	4312	PSU	N1-C2-N3	7.01	122.56	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	1782	PSU	N1-C2-N3	6.99	122.54	115.17
2	L5	1781	PSU	N1-C2-N3	6.96	122.51	115.17
2	L5	1683	PSU	N1-C2-N3	6.95	122.50	115.17

There are no chirality outliers.

5 of 129 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
29	Lb	5	MLZ	C-CA-CB-CG
29	Lb	5	MLZ	CD-CE-NZ-CM
2	L5	2815	A2M	C1'-C2'-O2'-CM'
2	L5	4571	A2M	C1'-C2'-O2'-CM'
2	L5	4590	A2M	C4'-C5'-O5'-P

There are no ring outliers.

118 monomers are involved in 227 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
79	S2	509	OMG	2	0
79	S2	918	PSU	2	0
2	L5	1534	A2M	1	0
79	S2	1710	OMC	1	0
2	L5	4530	UR3	1	0
79	S2	1851	MA6	3	0
2	L5	4579	PSU	1	0
79	S2	1031	A2M	2	0
79	S2	484	A2M	2	0
2	L5	729	2MG	2	0
79	S2	1288	OMU	2	0
2	L5	4196	OMG	1	0
2	L5	4499	OMG	1	0
79	S2	436	OMG	2	0
2	L5	4306	OMU	4	0
79	S2	116	OMU	3	0
2	L5	4220	6MZ	2	0
79	S2	627	OMU	1	0
2	L5	4620	OMU	1	0
79	S2	36	PSU	1	0
2	L5	3770	PSU	1	0
79	S2	1232	PSU	2	0
79	S2	512	A2M	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
79	S2	159	A2M	5	0
79	S2	1442	OMU	2	0
2	L5	1871	A2M	1	0
2	L5	4227	OMU	1	0
79	S2	686	PSU	1	0
79	S2	1639	7MG	2	0
79	S2	99	A2M	1	0
79	S2	815	PSU	1	0
2	L5	4571	A2M	4	0
79	S2	866	PSU	2	0
79	S2	651	PSU	1	0
2	L5	1781	PSU	1	0
79	S2	218	PSU	2	0
79	S2	1347	PSU	1	0
79	S2	1703	OMC	1	0
2	L5	3808	OMC	5	0
2	L5	4457	PSU	1	0
2	L5	3734	PSU	1	0
79	S2	644	OMG	1	0
79	S2	814	PSU	1	0
79	S2	609	PSU	2	0
2	L5	2632	PSU	2	0
79	S2	174	OMC	3	0
2	L5	4636	PSU	1	0
2	L5	4228	OMG	2	0
2	L5	2422	OMC	1	0
2	L5	1340	OMC	1	0
79	S2	121	OMU	2	0
2	L5	4392	OMG	2	0
79	S2	572	PSU	1	0
2	L5	1773	OMU	6	0
2	L5	2365	OMC	1	0
79	S2	109	PSU	1	0
79	S2	93	PSU	1	0
79	S2	1625	PSU	3	0
2	L5	3884	PSU	1	0
2	L5	4447	5MC	1	0
2	L5	1517	2MG	2	0
79	S2	210	PSU	2	0
2	L5	2815	A2M	3	0
79	S2	867	OMG	4	0
79	S2	601	OMG	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L5	2415	OMU	3	0
79	S2	1238	PSU	3	0
2	L5	3764	PSU	1	0
79	S2	1692	PSU	1	0
2	L5	2824	OMC	1	0
2	L5	3715	PSU	1	0
2	L5	2364	OMG	1	0
79	S2	1643	PSU	1	0
79	S2	27	A2M	2	0
2	L5	2363	A2M	1	0
32	Le	53	MLZ	1	0
2	L5	4870	OMG	1	0
2	L5	4521	PSU	1	0
79	S2	166	A2M	1	0
2	L5	1625	OMG	1	0
79	S2	1328	OMG	4	0
2	L5	3760	A2M	5	0
79	S2	1337	4AC	3	0
2	L5	1760	OMG	3	0
2	L5	3944	OMG	1	0
2	L5	1536	PSU	1	0
1	L1	69	PSU	2	0
2	L5	4420	PSU	5	0
2	L5	2424	OMG	1	0
2	L5	2876	OMG	3	0
79	S2	1804	OMU	4	0
79	S2	799	OMU	4	0
79	S2	1391	OMC	4	0
79	S2	1842	4AC	2	0
2	L5	1881	OMC	1	0
79	S2	468	A2M	3	0
2	L5	3867	A2M	3	0
2	L5	3762	PSU	2	0
28	La	39	V5N	1	0
2	L5	3899	OMG	2	0
79	S2	1445	PSU	4	0
79	S2	590	A2M	3	0
79	S2	1850	MA6	4	0
2	L5	2351	OMC	4	0
79	S2	172	OMU	2	0
79	S2	576	A2M	1	0
2	L5	4590	A2M	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L5	4637	OMG	1	0
2	L5	1316	OMG	2	0
2	L5	3701	OMC	1	0
79	S2	1832	6MZ	1	0
79	S2	1678	A2M	4	0
2	L5	3785	A2M	1	0
2	L5	3925	OMU	1	0
2	L5	4872	2MG	7	0
2	L5	4536	OMC	1	0
2	L5	3718	A2M	3	0
2	L5	3887	OMC	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 425 ligands modelled in this entry, 423 are monoatomic - leaving 2 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	$\# Z > 2$
84	A1BNL	SX	201	-	33,34,34	0.96	1 (3%)	45,47,47	2.57	18 (40%)
82	B3P	L5	5101	-	18,18,18	0.78	0	23,23,23	0.82	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
84	A1BNL	SX	201	-	-	2/20/20/20	0/4/4/4
82	B3P	L5	5101	-	-	20/28/28/28	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	SX	201	A1BNL	C19-N20	2.04	1.45	1.41

The worst 5 of 18 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	SX	201	A1BNL	C05-C06-N02	-7.23	104.30	107.50
84	SX	201	A1BNL	C04-C05-C06	6.16	109.04	104.91
84	SX	201	A1BNL	C31-C16-C17	-4.89	112.34	118.57
84	SX	201	A1BNL	C10-C08-N07	4.35	122.52	116.25
84	SX	201	A1BNL	C01-N02-C06	-3.78	123.66	128.98

There are no chirality outliers.

5 of 22 torsion outliers are listed below:

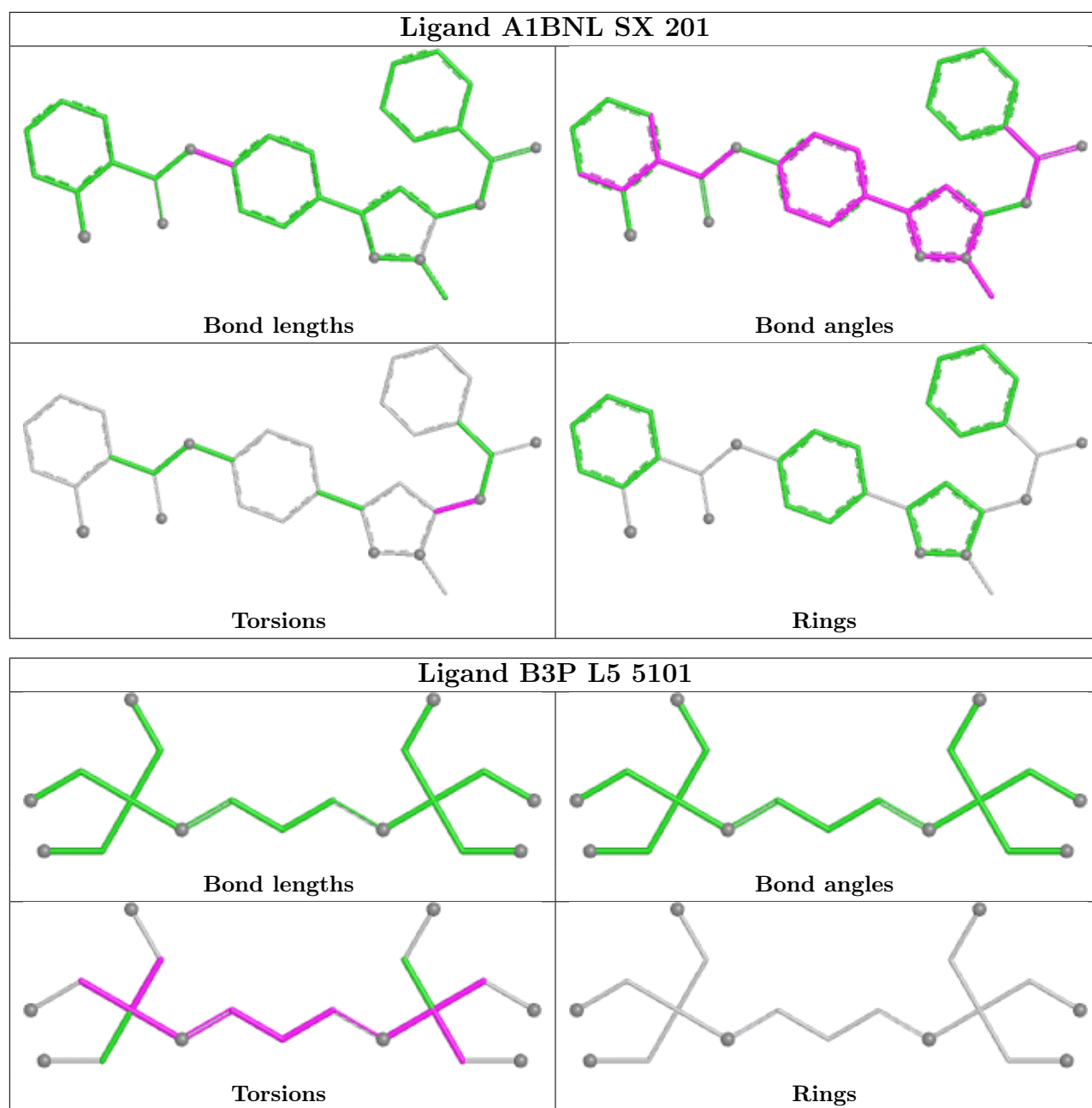
Mol	Chain	Res	Type	Atoms
82	L5	5101	B3P	C6-C4-N1-C3
82	L5	5101	B3P	C7-C4-N1-C3
82	L5	5101	B3P	C9-C8-N2-C2
82	L5	5101	B3P	C10-C8-N2-C2
82	L5	5101	B3P	C11-C8-N2-C2

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	SX	201	A1BNL	1	0
82	L5	5101	B3P	3	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.



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.

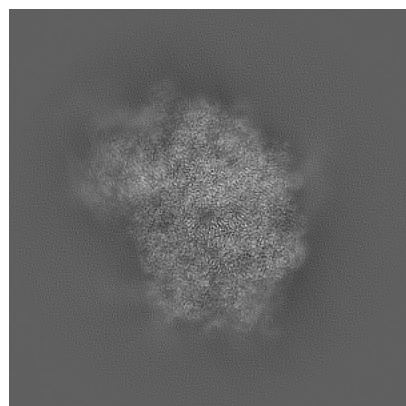
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-48420. These allow visual inspection of the internal detail of the map and identification of artifacts.

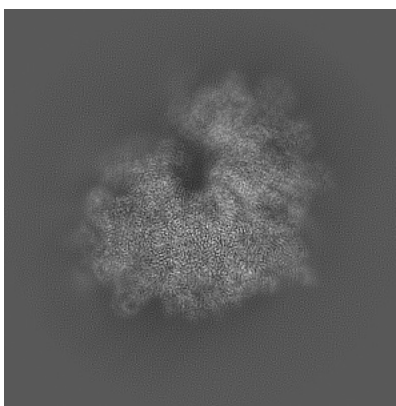
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

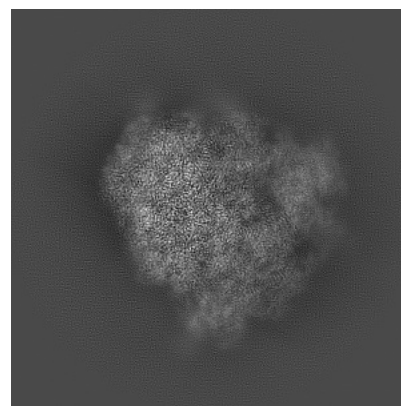
6.1.1 Primary map



X

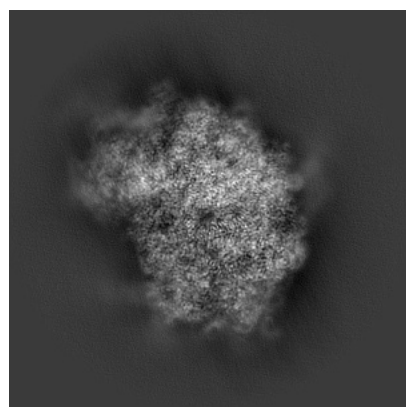


Y

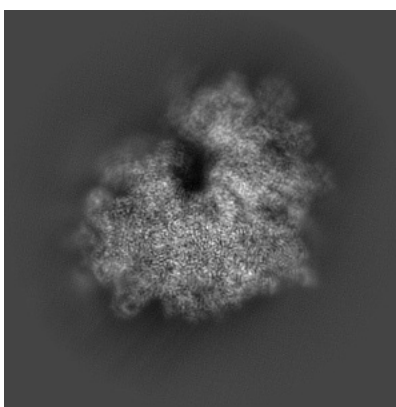


Z

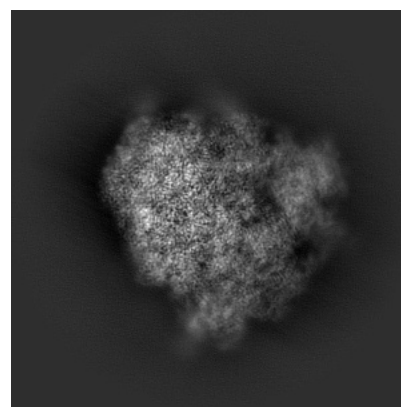
6.1.2 Raw map



X



Y

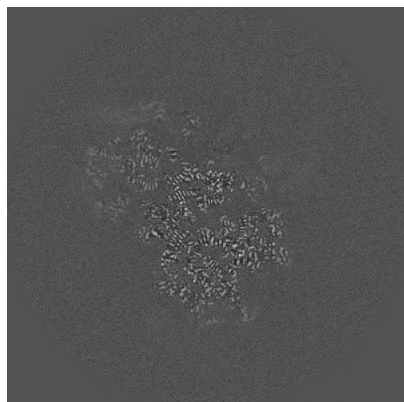


Z

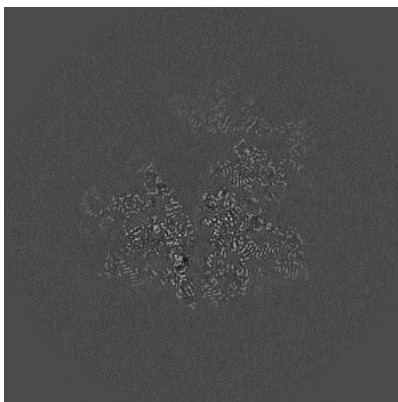
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

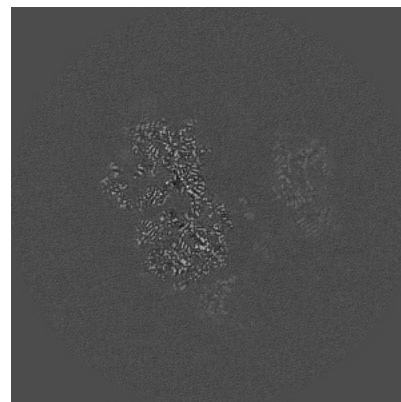
6.2.1 Primary map



X Index: 200

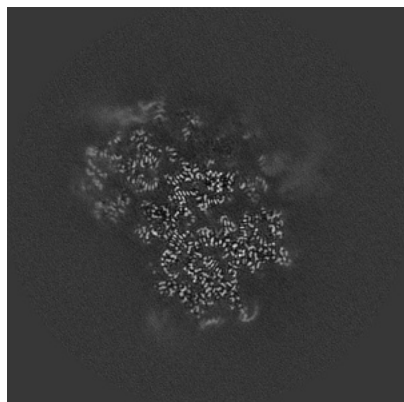


Y Index: 200

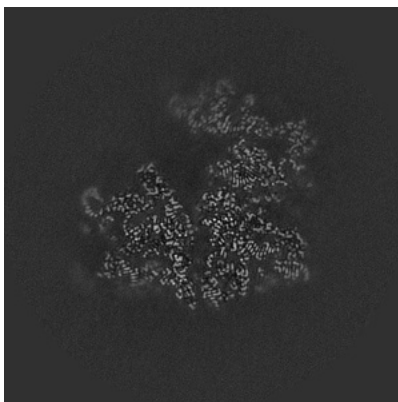


Z Index: 200

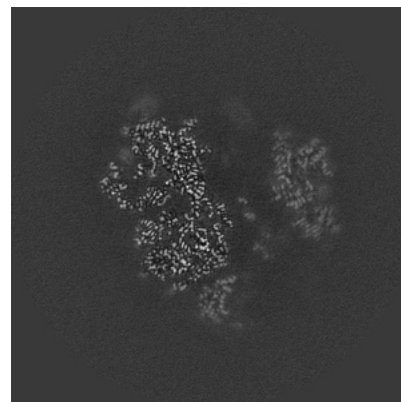
6.2.2 Raw map



X Index: 200



Y Index: 200

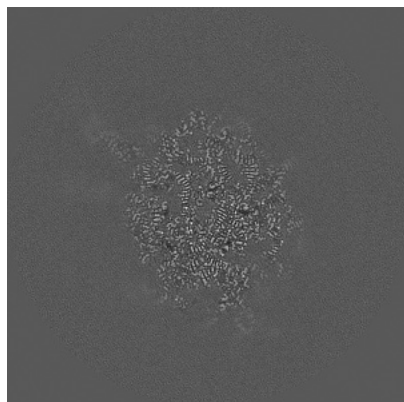


Z Index: 200

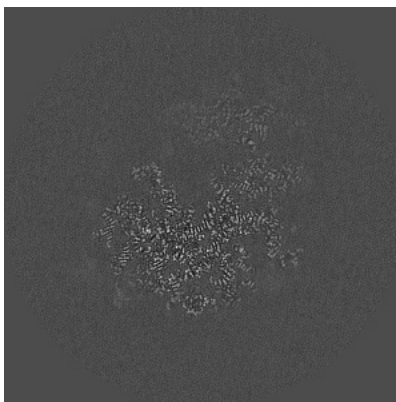
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

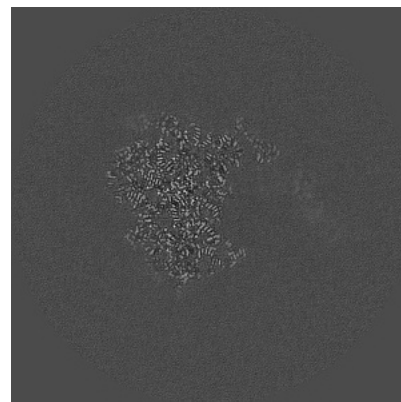
6.3.1 Primary map



X Index: 177

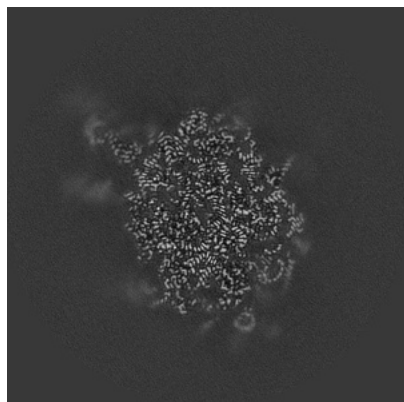


Y Index: 213

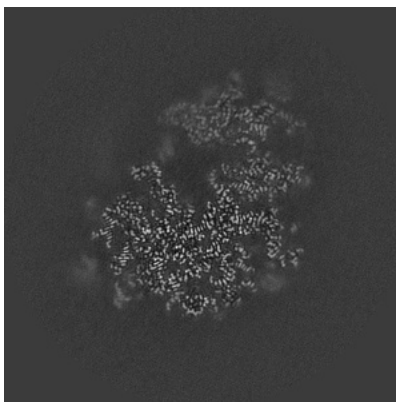


Z Index: 170

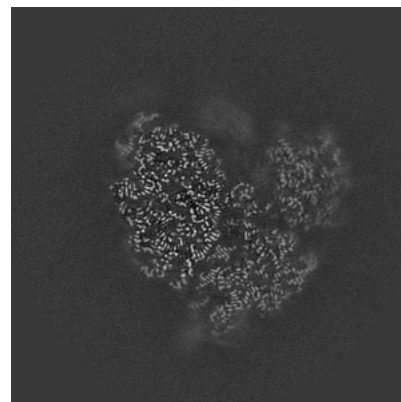
6.3.2 Raw map



X Index: 179



Y Index: 213

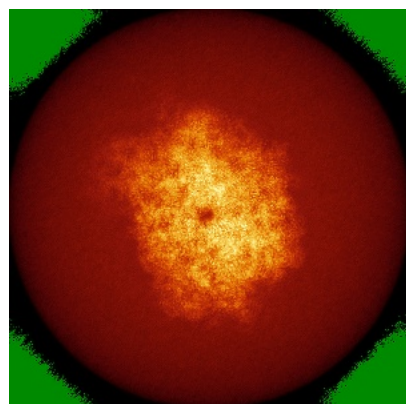


Z Index: 225

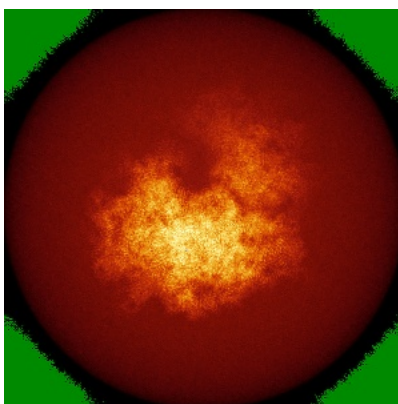
The images above show the largest variance slices of the map in three orthogonal directions.

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

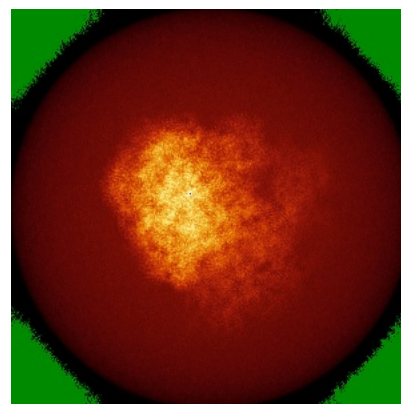
6.4.1 Primary map



X

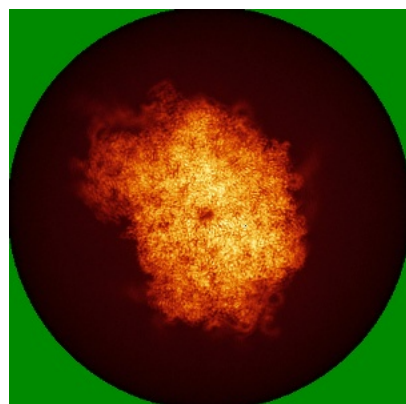


Y

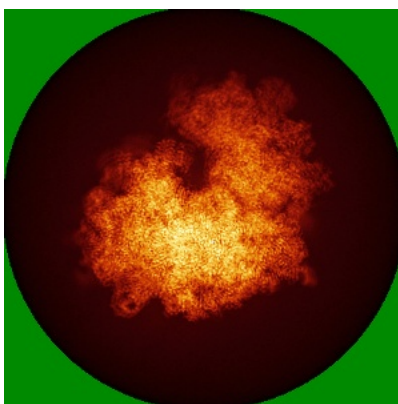


Z

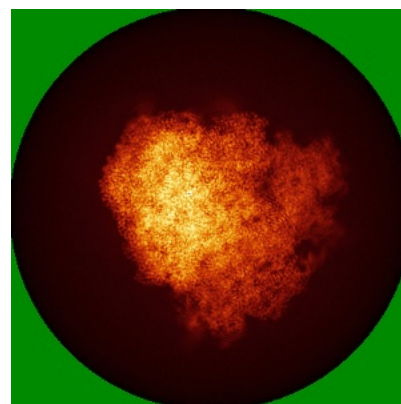
6.4.2 Raw map



X



Y

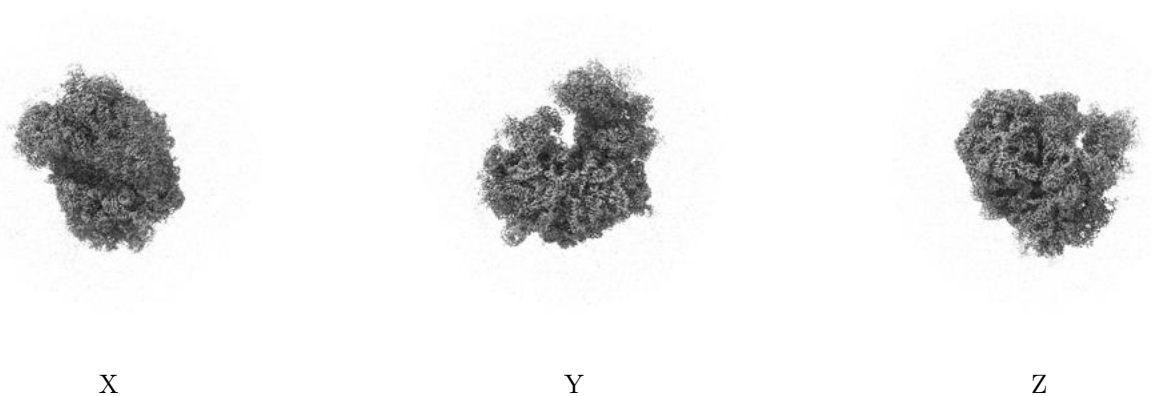


Z

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.

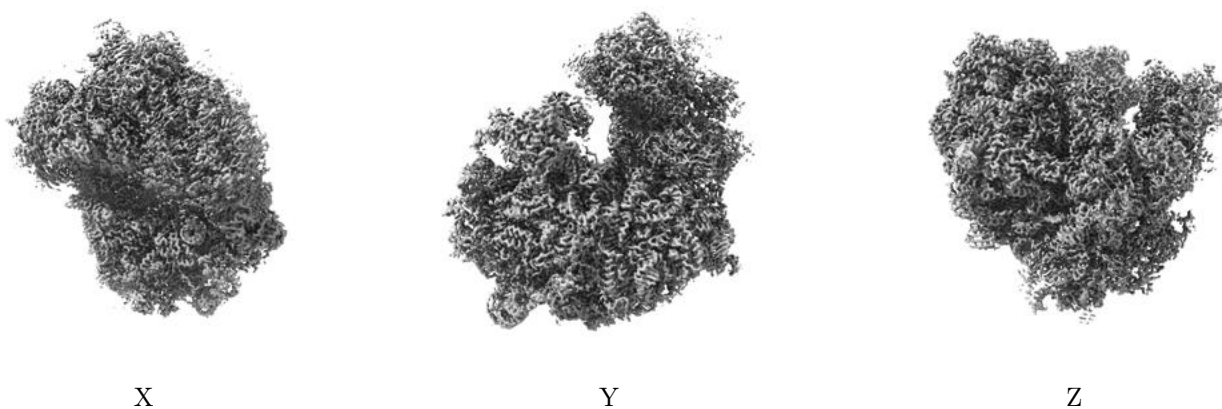
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.035. 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.

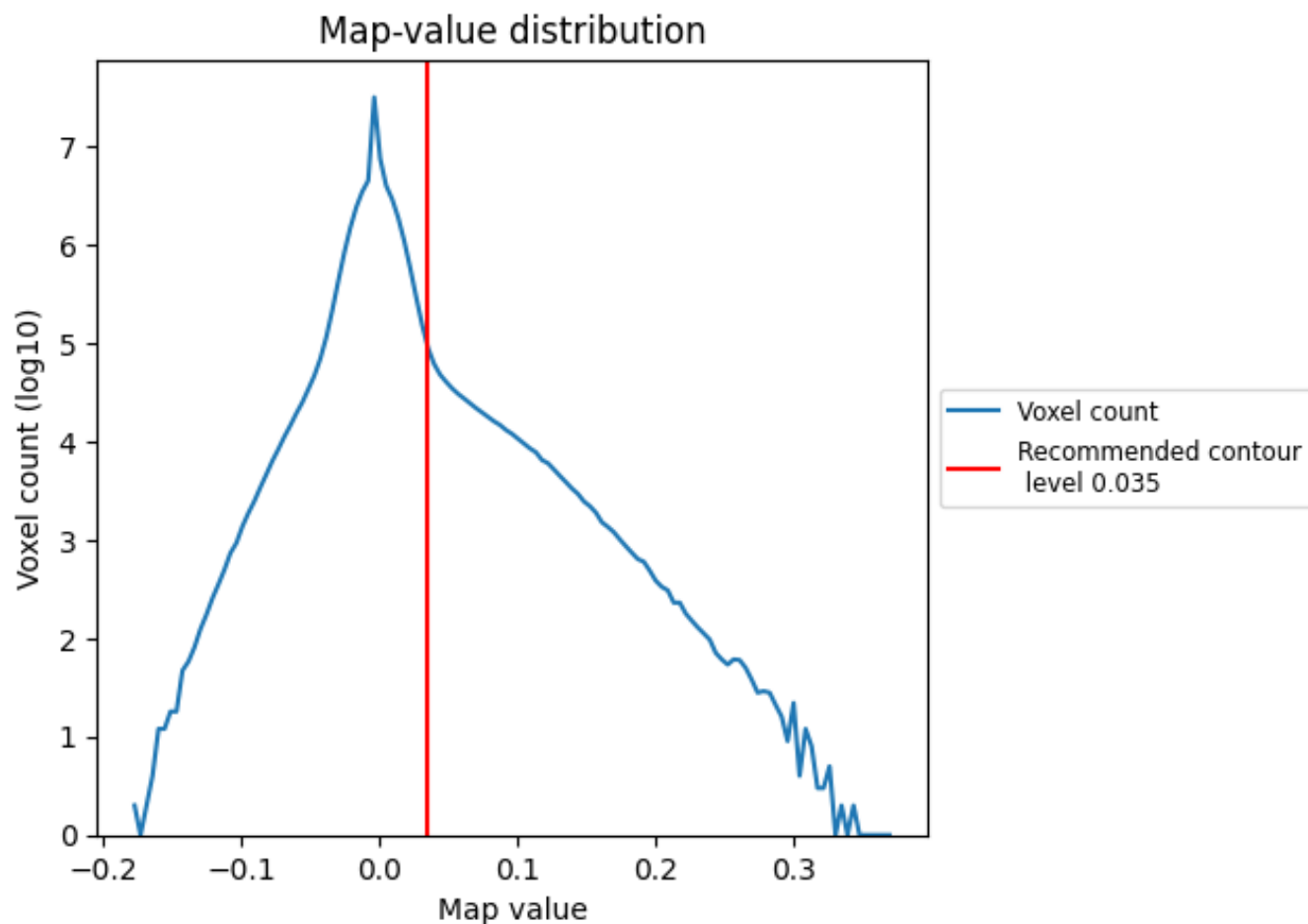
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

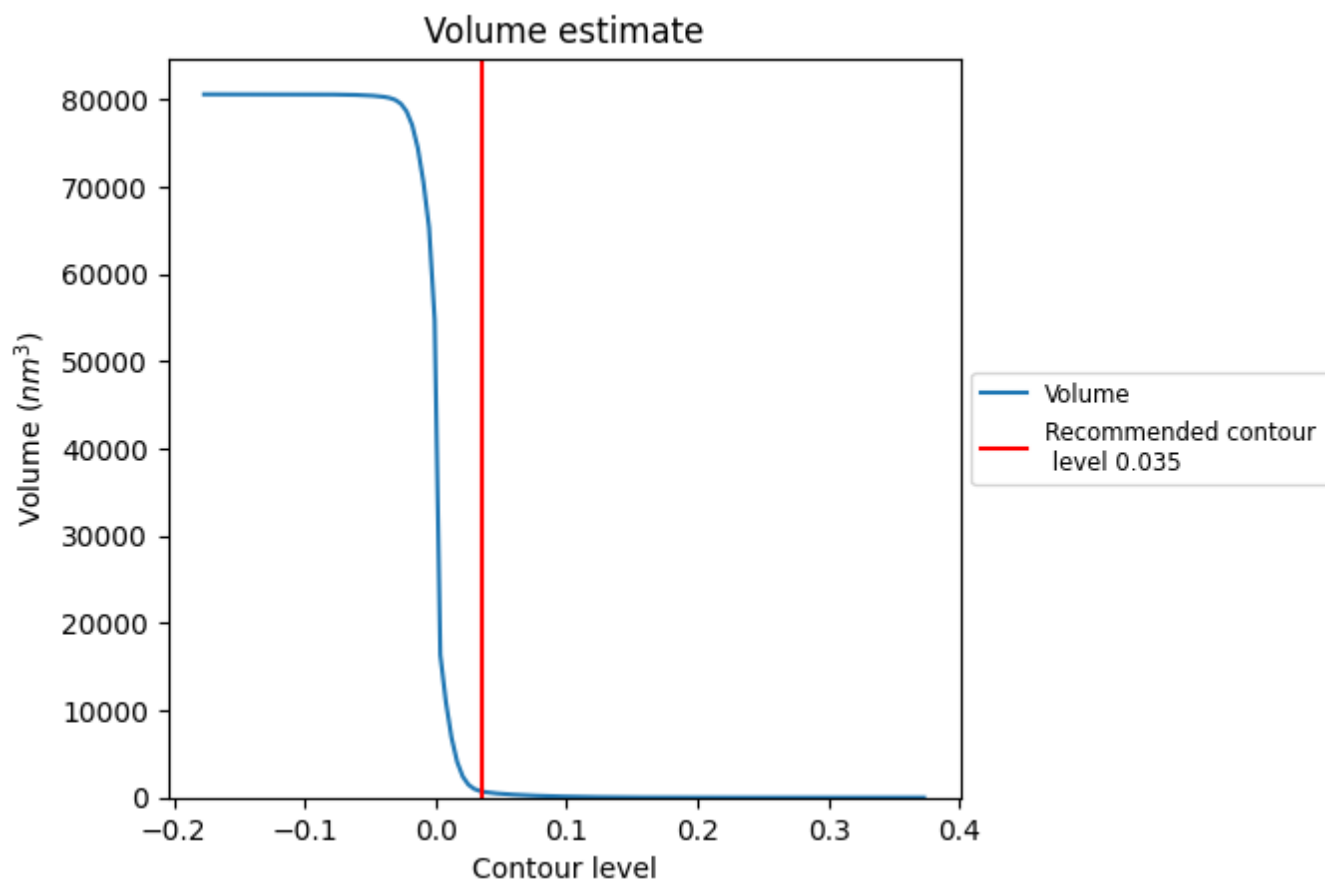
This section contains the results of statistical analysis of the map.

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.

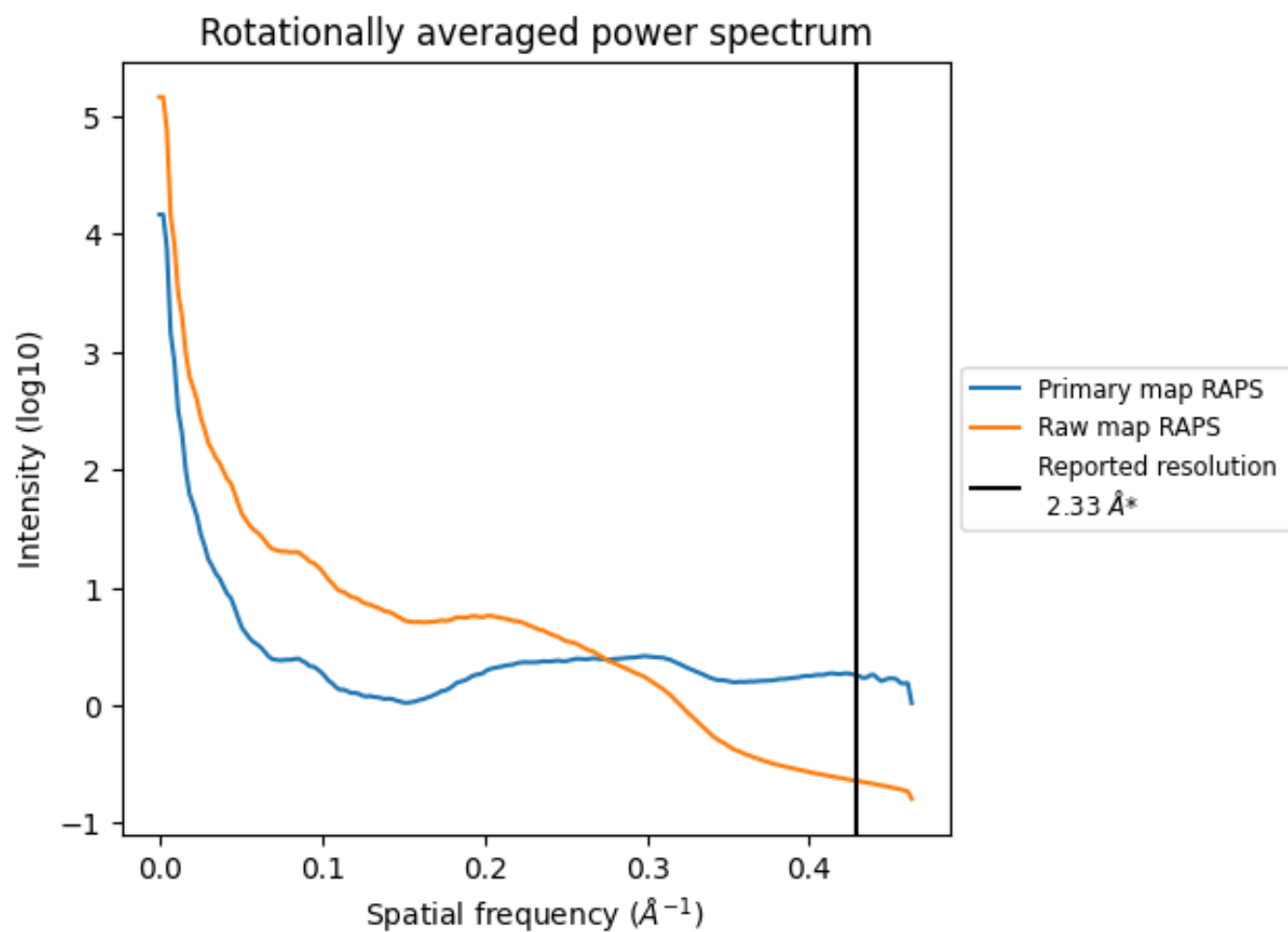
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 720 nm³; this corresponds to an approximate mass of 650 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 ⓘ

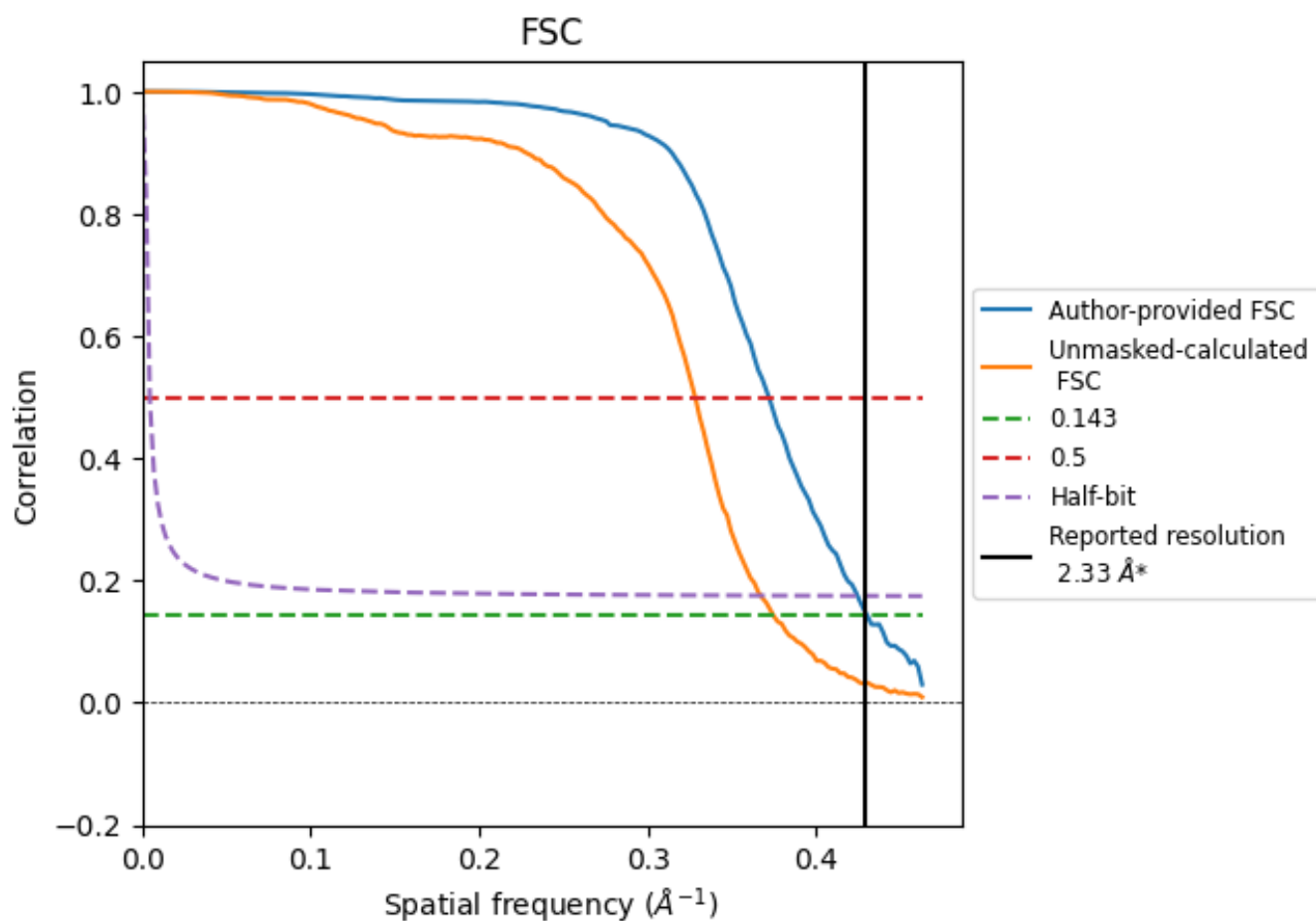


*Reported resolution corresponds to spatial frequency of 0.429 Å⁻¹

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 0.429 Å⁻¹

8.2 Resolution estimates [i](#)

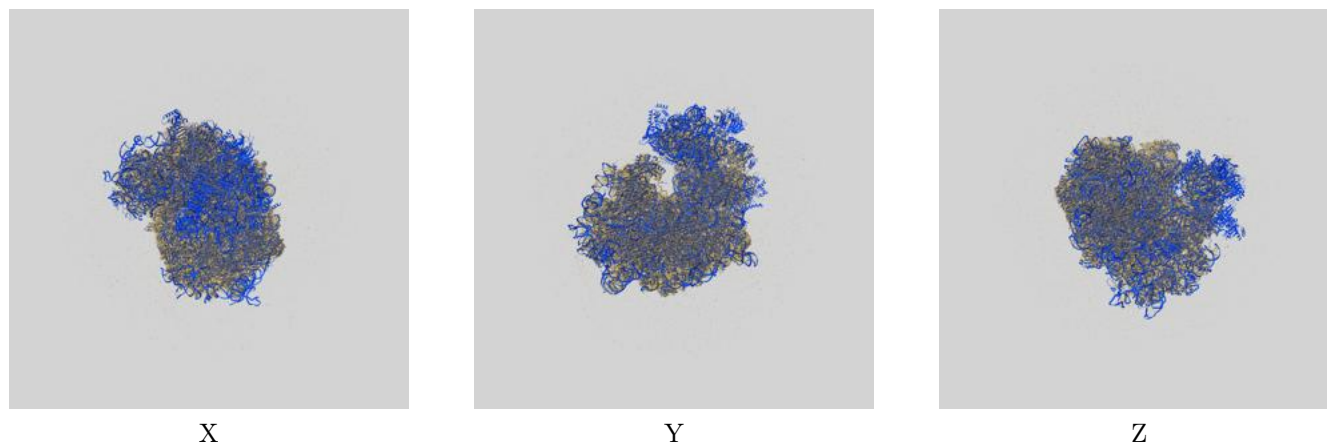
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.33	-	-
Author-provided FSC curve	2.32	2.69	2.36
Unmasked-calculated*	2.67	3.05	2.72

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.67 differs from the reported value 2.33 by more than 10 %

9 Map-model fit [i](#)

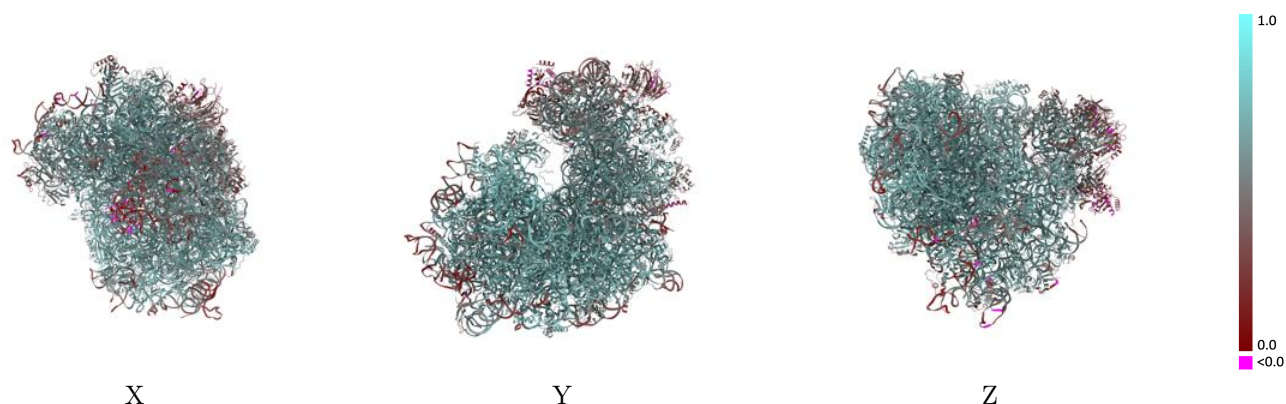
This section contains information regarding the fit between EMDB map EMD-48420 and PDB model 9MNC. Per-residue inclusion information can be found in section [3](#) on page [27](#).

9.1 Map-model overlay [i](#)



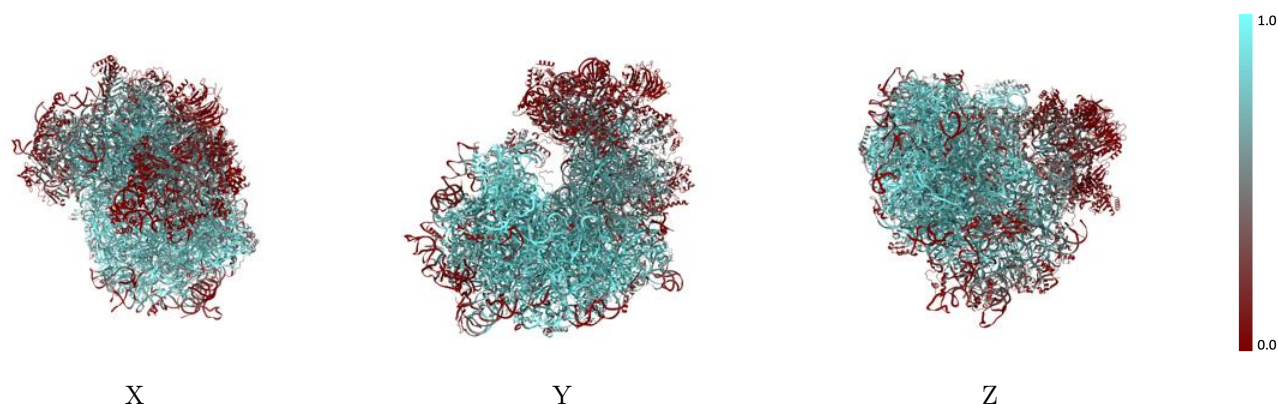
The images above show the 3D surface view of the map at the recommended contour level 0.035 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



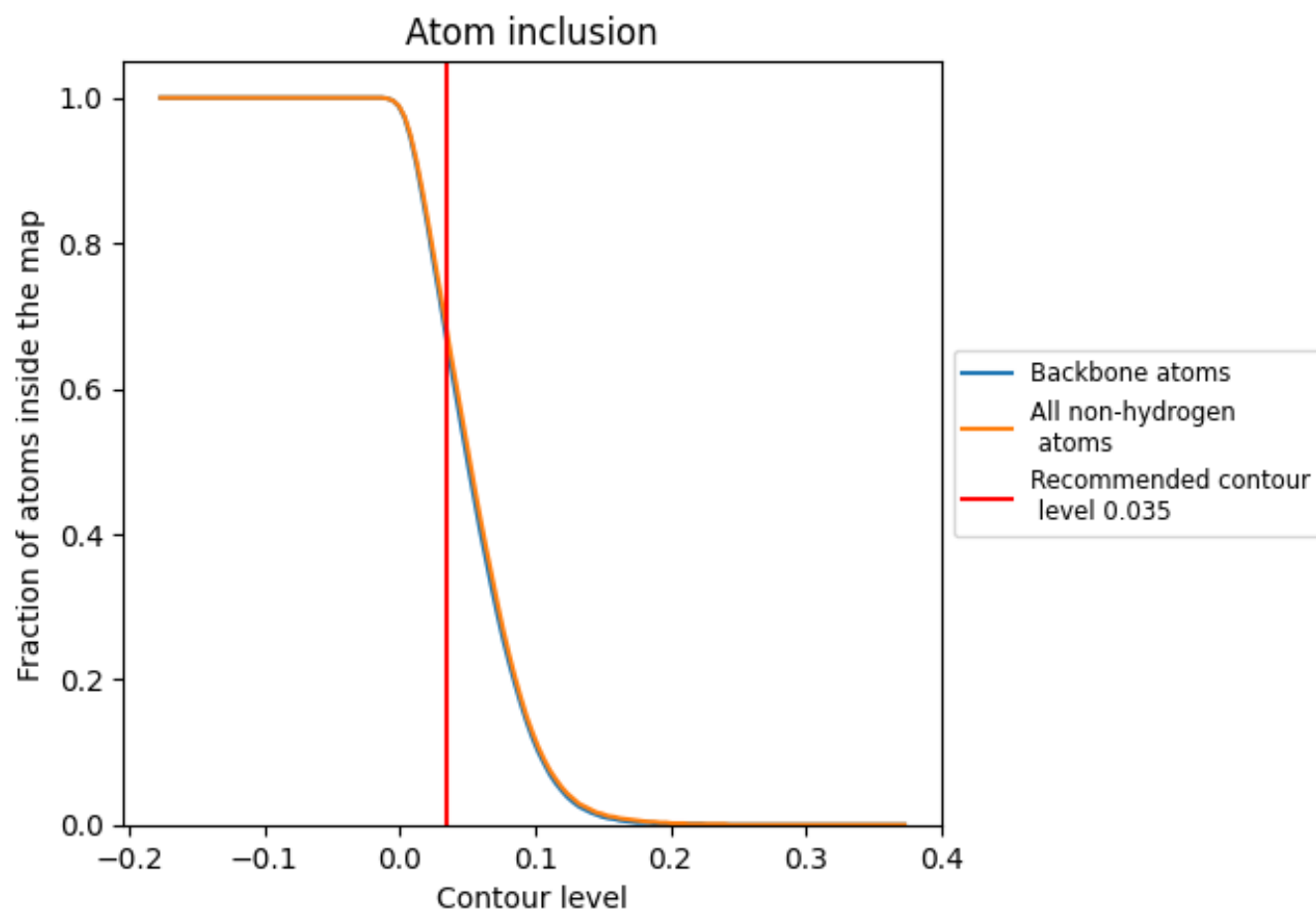
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.035).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 66% of all backbone atoms, 68% 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 (0.035) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6780	 0.6110
L1	 0.8970	 0.6740
L5	 0.7900	 0.6320
L8	 0.7260	 0.6360
L9	 0.9340	 0.6860
LB	 0.8600	 0.6910
LC	 0.8630	 0.6860
LD	 0.9250	 0.7170
LE	 0.8140	 0.6640
LF	 0.8620	 0.6800
LG	 0.7220	 0.6230
LH	 0.7810	 0.6590
LI	 0.8990	 0.7000
LJ	 0.5480	 0.5870
LK	 0.6560	 0.6160
LM	 0.8020	 0.6650
LN	 0.9540	 0.7190
LO	 0.7620	 0.6460
LP	 0.9240	 0.7120
LQ	 0.7800	 0.6570
LR	 0.7020	 0.6070
LS	 0.8750	 0.6970
LT	 0.8010	 0.6680
LU	 0.8390	 0.6810
LV	 0.8740	 0.7000
LW	 0.6640	 0.5820
LY	 0.8780	 0.6930
LZ	 0.7670	 0.6520
La	 0.9040	 0.7090
Lb	 0.5860	 0.5760
Lc	 0.7680	 0.6510
Ld	 0.8150	 0.6640
Le	 0.7730	 0.6570
Lf	 0.9240	 0.7130
Lg	 0.8240	 0.6710









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Chain	Atom inclusion	Q-score
Lh	 0.8450	 0.6820
Li	 0.7120	 0.6380
Lj	 0.9110	 0.7130
Lk	 0.5300	 0.5800
Ll	 0.8750	 0.6950
Lm	 0.3500	 0.5210
Ln	 0.8170	 0.6710
Lo	 0.8130	 0.6720
Lp	 0.8790	 0.7000
Lz	 0.8120	 0.6680
S1	 0.4560	 0.5930
S2	 0.6080	 0.5860
SA	 0.4330	 0.5870
SC	 0.5710	 0.6200
SD	 0.1780	 0.5210
SE	 0.4090	 0.5900
SG	 0.1860	 0.4490
SH	 0.2140	 0.4740
SI	 0.5480	 0.5810
SJ	 0.4530	 0.5820
SK	 0.1140	 0.4300
SL	 0.6840	 0.6400
SM	 0.0280	 0.3370
SN	 0.6750	 0.6500
SO	 0.6170	 0.6340
SP	 0.0590	 0.3970
SQ	 0.1870	 0.4850
SS	 0.1690	 0.4720
ST	 0.0900	 0.4390
SU	 0.1410	 0.4570
SV	 0.4230	 0.5910
SW	 0.7080	 0.6660
SX	 0.7090	 0.6520
SY	 0.2480	 0.5200
SZ	 0.1310	 0.4160
Sa	 0.6420	 0.6280
Sb	 0.3780	 0.5150
Sc	 0.0470	 0.3930
Sd	 0.1400	 0.4960
Se	 0.3340	 0.5230
Sf	 0.3060	 0.5670
Sg	 0.0180	 0.3200

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Chain	Atom inclusion	Q-score
So	 0.4680	 0.6030
Sy	 0.0000	 0.1130
Sz	 0.0000	 0.1210