



wwPDB EM Validation Summary Report ⓘ

Nov 19, 2022 – 10:56 am GMT

PDB ID : 5LKS
EMDB ID : EMD-4070
Title : Structure-function insights reveal the human ribosome as a cancer target for antibiotics
Authors : Myasnikov, A.G.; Natchiar, S.K.; Nebout, M.; Hazemann, I.; Imbert, V.; Khat-ter, H.; Peyron, J.-F.; Klaholz, B.P.
Deposited on : 2016-07-23
Resolution : 3.60 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.dev43
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

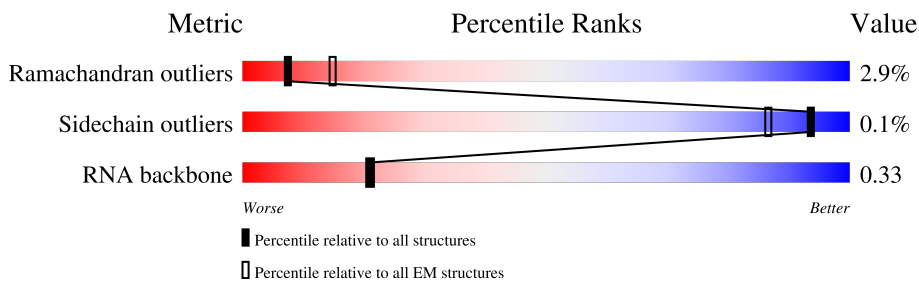
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.





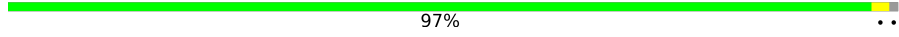
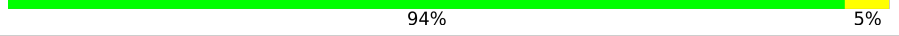
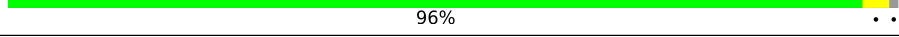
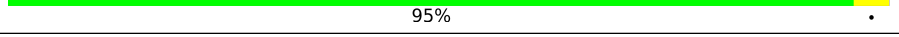

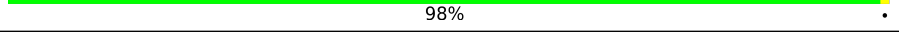
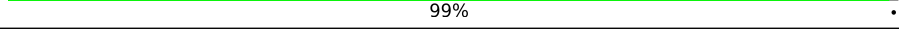

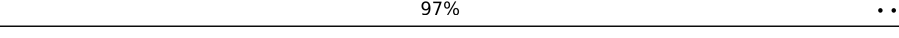
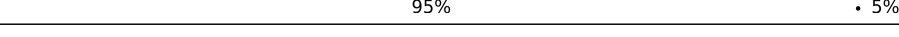
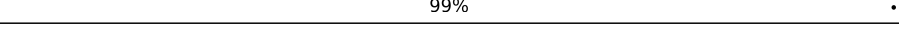
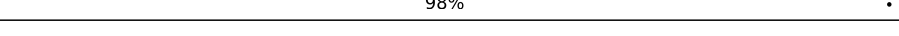

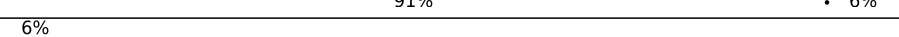
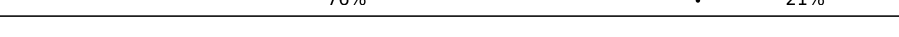

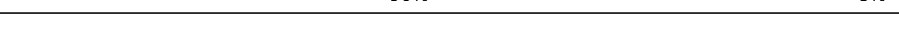






Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	L5	5070	
2	L7	121	
3	L8	157	
4	LA	257	
5	LB	403	
6	LC	427	
7	LD	297	
8	LE	288	

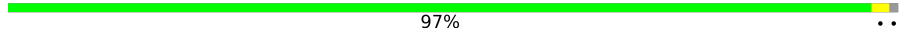
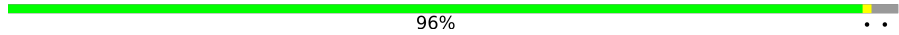
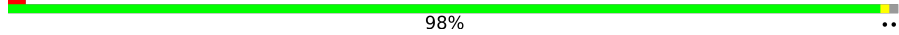
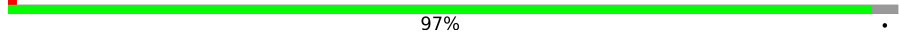

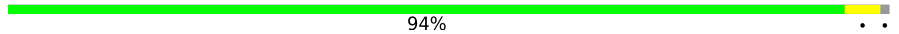
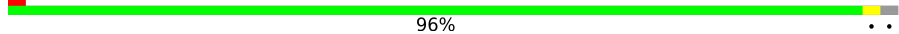


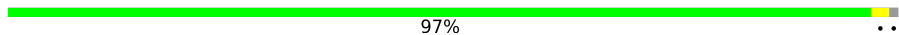
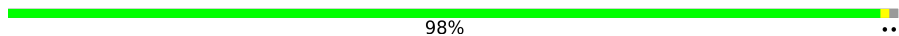

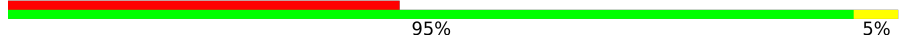




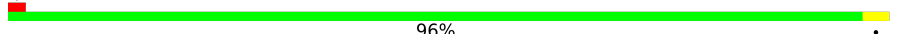

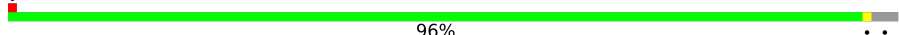
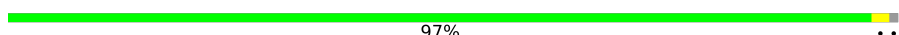

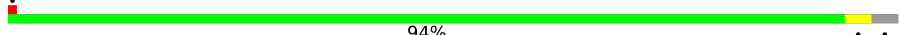

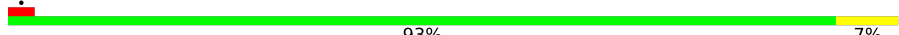
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Mol	Chain	Length	Quality of chain
9	LF	248	 89% 9%
10	LG	266	 86% 5% 9%
11	LH	192	 97% ..
12	LI	214	 94% 5%
13	LJ	178	 96% ..
14	LL	211	 95% .
15	LM	215	 62% . 35%
16	LN	204	 98% .
17	LO	203	 99% .
18	LP	184	 80% . 17%
19	LQ	188	 97% ..
20	LR	196	 95% . 5%
21	LS	176	 99% ..
22	LT	160	 98% ..
23	LU	128	 77% . 21%
24	LV	140	 91% . 6%
25	LW	157	 6% 76% . 21%
26	LX	156	 74% . 24%
27	LY	145	 90% . 8%
28	LZ	136	 99% ..
29	La	148	 95% . ..
30	Lb	157	 47% . 52%
31	Lc	115	 85% 15%
32	Ld	125	 86% 14%
33	Le	135	 93% . 5%

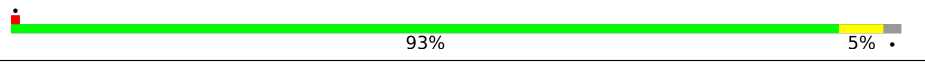
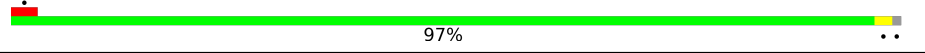
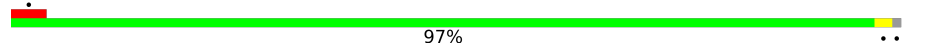

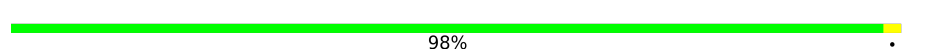
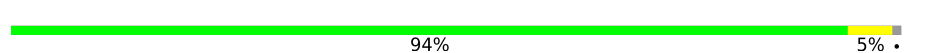

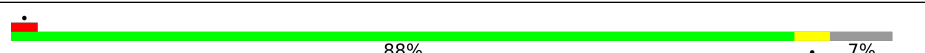
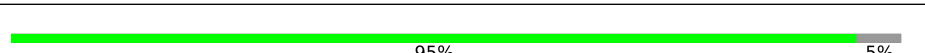
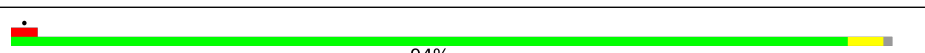
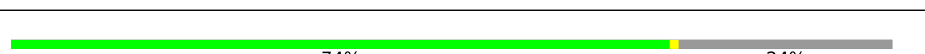
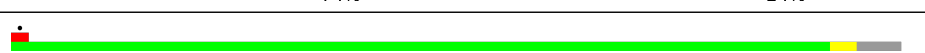
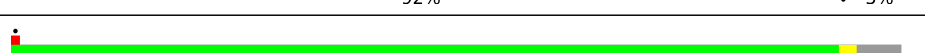
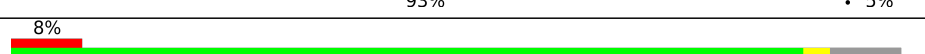
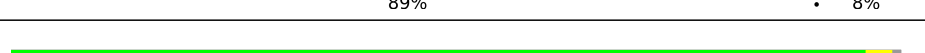
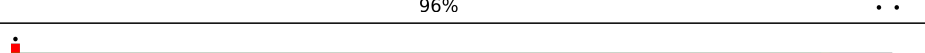
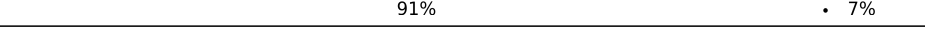
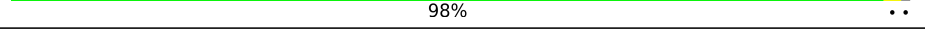
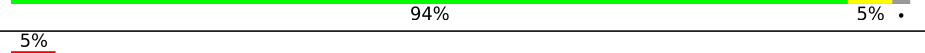

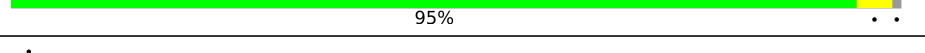

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Mol	Chain	Length	Quality of chain
34	Lf	110	 97%
35	Lg	117	 96%
36	Lh	123	 98%
37	Li	105	 97%
38	Lj	97	 86% 11%
39	Lk	70	 94%
40	Ll	51	 96%
41	Lm	128	 41% 59%
42	Ln	25	 60% 32%
43	Lo	106	 97%
44	Lp	92	 98%
45	Lr	137	 89% 9%
46	Lz	217	 44% 95% 5%
47	S2	1869	 55% 38% 7%
48	SA	295	 73% 25%
49	SB	264	 78% 19%
50	SD	243	 90% 7%
51	SE	263	 96%
52	SF	204	 89% 8%
53	SH	194	 96%
54	SI	208	 97%
55	SK	165	 57% 41%
56	SL	158	 94%
57	SP	145	 63% 33%
58	SQ	146	 93% 7%

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Mol	Chain	Length	Quality of chain
59	SR	135	 93% 5%
60	SS	152	 97%
61	ST	145	 97%
62	SU	119	 82% 5% 13%
63	SV	83	 98%
64	SX	143	 94% 5%
65	Sa	115	 87% 6% 7%
66	Sc	69	 88% 7%
67	Sd	56	 95% 5%
68	Sg	317	 94%
69	SC	293	 74% 24%
70	SG	249	 92% 5%
71	SJ	194	 93% 5%
72	SM	132	 89% 8%
73	SN	151	 96%
74	SO	151	 91% 7%
75	SW	130	 98%
76	SY	133	 94% 5%
77	SZ	125	 58% 40%
78	Sb	84	 95%
79	Se	133	 41% 56%
80	Sf	156	 40% 57%

2 Entry composition [i](#)

There are 84 unique types of molecules in this entry. The entry contains 217138 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L5	4941	G	C	conflict	GB 86475748
L5	4942	C	A	conflict	GB 86475748

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	LE	243	1967	1263	374	326	4	0	0

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	LI	213	1711	1082	329	285	15	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	LX	119	976	625	184	166	1	0	0

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

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

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

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

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

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

- Molecule 30 is a protein called Ribosomal protein L29, isoform CRA_a.

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	Lg	113	895	560	183	146	6	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 46 is a protein called 60S ribosomal protein L10a.

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

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

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

There are 5 discrepancies between the modelled and reference sequences:

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

- Molecule 48 is a protein called 40S ribosomal protein SA.

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

- Molecule 49 is a protein called 40S ribosomal protein S3a.

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

- Molecule 50 is a protein called 40S ribosomal protein S3.

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

- Molecule 51 is a protein called 40S ribosomal protein S4, X isoform.

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

- Molecule 52 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
52	SF	187	1479	924	282	266	7	0	0

- Molecule 53 is a protein called 40S ribosomal protein S7.

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

- Molecule 54 is a protein called 40S ribosomal protein S8.

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

- Molecule 55 is a protein called 40S ribosomal protein S10.

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

- Molecule 56 is a protein called 40S ribosomal protein S11.

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

- Molecule 57 is a protein called 40S ribosomal protein S15.

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

- Molecule 58 is a protein called 40S ribosomal protein S16.

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

- Molecule 59 is a protein called 40S ribosomal protein S17.

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

- Molecule 60 is a protein called 40S ribosomal protein S18.

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

- Molecule 61 is a protein called 40S ribosomal protein S19.

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

- Molecule 62 is a protein called 40S ribosomal protein S20.

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

- Molecule 63 is a protein called 40S ribosomal protein S21.

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

- Molecule 64 is a protein called 40S ribosomal protein S23.

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

- Molecule 65 is a protein called 40S ribosomal protein S26.

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

- Molecule 66 is a protein called 40S ribosomal protein S28.

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

- Molecule 67 is a protein called 40S ribosomal protein S29.

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

- Molecule 68 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 69 is a protein called 40S ribosomal protein S2.

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

- Molecule 70 is a protein called 40S ribosomal protein S6.

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

- Molecule 71 is a protein called 40S ribosomal protein S9.

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

- Molecule 72 is a protein called 40S ribosomal protein S12.

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

There are 3 discrepancies between the modelled and reference sequences:

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

- Molecule 73 is a protein called 40S ribosomal protein S13.

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

- Molecule 74 is a protein called 40S ribosomal protein S14.

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

- Molecule 75 is a protein called 40S ribosomal protein S15a.

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

- Molecule 76 is a protein called 40S ribosomal protein S24.

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

- Molecule 77 is a protein called 40S ribosomal protein S25.

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

- Molecule 78 is a protein called 40S ribosomal protein S27.

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

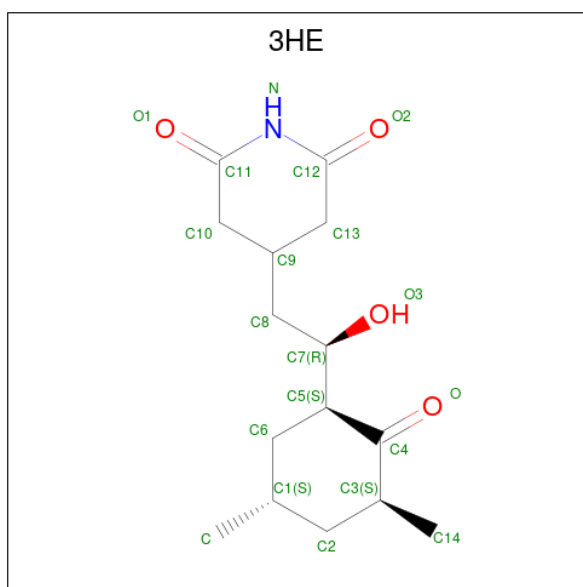
- Molecule 79 is a protein called Ribosomal protein S30.

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

- Molecule 80 is a protein called Ubiquitin-40S ribosomal protein S27a.

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

- Molecule 81 is 4-{(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl}piperidine-2,6-dione (three-letter code: 3HE) (formula: C₁₅H₂₃NO₄).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
81	L5	1	20	15	1	4	0

- Molecule 82 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
82	L5	160	160	160	0
82	L7	3	3	3	0
82	L8	4	4	4	0
82	LC	1	1	1	0
82	LD	1	1	1	0
82	LL	1	1	1	0
82	LP	1	1	1	0
82	LS	2	2	2	0
82	LV	1	1	1	0
82	Le	1	1	1	0
82	S2	48	48	48	0

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Mol	Chain	Residues	Atoms		AltConf
82	Sa	1	Total 1	Mg 1	0

- Molecule 83 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 84 is water.

Mol	Chain	Residues	Atoms		AltConf
84	L5	13	Total 13	O 13	0
84	L8	1	Total 1	O 1	0
84	LA	1	Total 1	O 1	0
84	LD	1	Total 1	O 1	0
84	LN	1	Total 1	O 1	0
84	LT	1	Total 1	O 1	0
84	Le	1	Total 1	O 1	0
84	Lp	1	Total 1	O 1	0

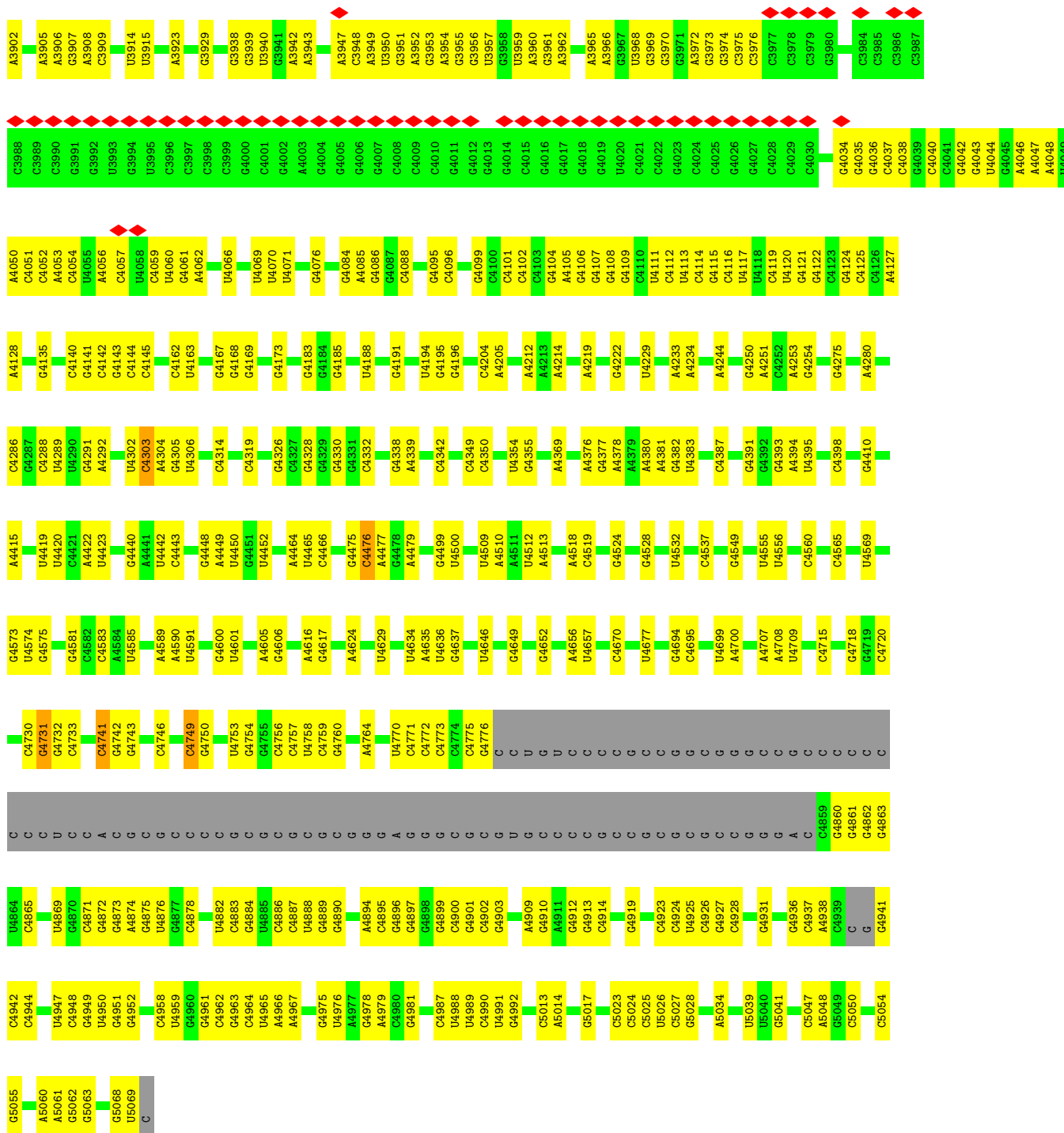
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Mol	Chain	Residues	Atoms		AltConf
84	S2	6	Total 6	O 6	0
84	SV	1	Total 1	O 1	0
84	SX	1	Total 1	O 1	0
84	SN	1	Total 1	O 1	0
84	SW	2	Total 2	O 2	0

C	C2243	G	C2101	G1948	C1835	A1524	G1403	C1285	G1217	G	C1076	G	G1047	G	G1051	G	G1070
C	C2244	G	G2102	G1951	U1836	A1525	G1404	G1300	G1218	G	C1077	G	C1048	G	G1048	G	G1071
C	C2245	U	G2103	G1952	G1641	G1529	C1405	G1301	G1219	G	A1078	G	C1047	G	G1051	G	C1072
C	C2246	C	A2016	G1953	G1642	G1530	G1406	G1302	G1220	G	C1079	G	C1047	G	G1051	G	G1073
C	C2247	C	C2019	A1956	A1643	U1531	G1409	U1303	G1221	G	C1080	G	C1047	G	G1051	G	
C	C2248	C	U2020	U1957	U1735	U1531	U1410	A1308	A1222	G	C1081	G	C1047	G	G1051	G	
C	C2249	C	C2023	A1958	G1741	A1534	C1413	C1308	G	G	C1082	G	C1047	G	G1051	G	
C	C2250	C	G2024	U1959	A1742	C1535	G1414	C1315	U	U	C1083	G	C1047	G	G1051	G	
C	C2251	C	A2025	G1960	G1750	A1547	G1415	G1316	U	U	C1084	G	C1047	G	G1051	G	
C	C2252	C	A2026	G1961	G1750	A1547	G1416	U1317	U	U	C1085	G	C1047	G	G1051	G	
C	C2253	C	C2031	A1964	U1754	C1551	G1417	U1318	U	U	G1089	G	C1047	G	G1051	G	
C	C2254	C	G1965	G1965	U1859	G1552	A1420	U1319	U	U	G	G	C1047	G	G1051	G	
C	C2255	C	U2032	C1966	U1859	G1553	G1421	U1320	C	C	G	G	C1047	G	G1051	G	
C	C2256	C	A2033	G1851	C1661	A1554	G1421	G1321	G1232	G	G	G	C1047	G	G1051	G	
C	C2257	C	G1968	G1855	C1662	A1563	A1433	A1322	G1233	G	G	G	C1047	G	G1051	G	
C	C2258	C	A2042	G1855	C1663	A1563	A1433	A1322	G1234	G	G	G	C1047	G	G1051	G	
C	C2259	C	A2043	U1866	U1871	C1566	C1437	A1326	G1237	G	G	G	C1047	G	G1051	G	
C	C2260	C	U2044	A1867	G1763	C1566	C1437	A1326	C1237	G	G	G	C1047	G	G1051	G	
C	C2261	C	G2045	A1868	G1764	G1570	C1441	U1339	A1238	G	G	G	C1047	G	G1051	G	
C	C2262	C	A2046	G1869	A1765	G1577	C1441	U1339	A1238	G	G	G	C1047	G	G1051	G	
C	C2263	C	U2047	C1870	A1766	U1578	U1445	G1358	C1239	G	G	G	C1047	G	G1051	G	
C	C2264	C	U2048	C1870	A1767	U1578	U1445	G1358	C1240	G	G	G	C1047	G	G1051	G	
C	C2265	C	C2051	C1879	C1768	U1582	U1447	G1352	G1241	G	G	G	C1047	G	G1051	G	
C	C2266	C	U2054	G1880	G1769	U1582	C1447	G1353	G1242	G	G	G	C1047	G	G1051	G	
C	C2267	C	G2055	C1881	A1770	A1583	G1453	G1359	G1243	G	G	G	C1047	G	G1051	G	
C	C2268	C	C2056	U1882	U1771	G1584	G1457	G1359	G1244	G	G	G	C1047	G	G1051	G	
C	C2269	C	A2057	G1883	C1772	G1588	G1457	G1360	U1247	G	G	G	C1047	G	G1051	G	
C	C2270	C	G2058	A1897	U1773	U1588	C1461	G1361	U1247	G	G	G	C1047	G	G1051	G	
C	C2271	C	C2065	C1898	C1774	C1588	C1462	U1361	G1253	G	G	G	C1047	G	G1051	G	
C	C2272	C	G2066	C1898	A1775	C1590	A1462	U1361	G1254	G	G	G	C1047	G	G1051	G	
C	C2273	C	C2066	G1900	A1776	U1591	C1472	U1364	A1254	G	G	G	C1047	G	G1051	G	
C	C2274	C	A2069	G1910	U1779	G1605	C1480	U1364	A1255	G	G	G	C1047	G	G1051	G	
C	C2275	C	U2070	C1911	A1780	U1600	C1481	U1364	A1256	G	G	G	C1047	G	G1051	G	
C	C2276	C	A2071	G1912	A1787	A1600	G1482	U1366	G1257	G	G	G	C1047	G	G1051	G	
C	C2277	C	G2076	G1916	U1791	G1606	G1483	G1370	A1257	G	G	G	C1047	G	G1051	G	
C	C2278	C	U2080	U1917	G1799	C1607	G1485	A1372	C1182	G	G	G	C1047	G	G1051	G	
C	C2279	C	C2084	C1919	G1803	G1612	G1486	A1372	C1182	G	G	G	C1047	G	G1051	G	
C	C2280	C	G2085	C1920	A1804	A1613	C1486	A1372	C1182	G	G	G	C1047	G	G1051	G	
C	C2281	C	C2085	C1921	A1805	C1614	C1486	A1372	C1182	G	G	G	C1047	G	G1051	G	
C	C2282	C	G2089	A1923	C1808	U1620	C1486	A1372	C1182	G	G	G	C1047	G	G1051	G	
C	C2283	C	U2090	C1926	C1812	G1624	G1498	U1385	G1200	G	G	G	C1047	G	G1051	G	
C	C2284	C	C2091	U1927	G1815	G1625	C1501	A1387	U1201	G	G	G	C1047	G	G1051	G	
C	C2285	C	G2092	C1931	G1819	G1626	G1502	A1388	G1202	G	G	G	C1047	G	G1051	G	
C	C2286	C	A2093	A1932	G1821	G1627	A1503	A1388	G1203	G	G	G	C1047	G	G1051	G	
C	C2287	C	G2094	G1936	U1822	G1820	G1513	A1393	C1204	G	G	G	C1047	G	G1051	G	
C	C2288	C	A2095	C1936	G1821	G1820	G1513	A1393	C1204	G	G	G	C1047	G	G1051	G	
C	C2289	C	G2096	U1940	U1822	G1821	G1517	A1388	G1282	G	G	G	C1047	G	G1051	G	
C	C2290	C	U2097	A1941	G	U1728	A1518	A1401	U1288	G	G	G	C1047	G	G1051	G	
C	C2291	C	G2098	A2010	G1823	U1728	A1518	A1401	G1289	G	G	G	C1047	G	G1051	G	
C	C2292	C	C2099	A1941	G	U1728	A1518	A1401	G1289	G	G	G	C1047	G	G1051	G	
C	C2293	C	A2100	A1941	G	U1728	A1518	A1401	G1289	G	G	G	C1047	G	G1051	G	
C	C2294	C	C2101	A2013	G	U1728	A1518	A1401	G1289	G	G	G	C1047	G	G1051	G	

U3772	C3660	G2906	A2789	G2681	A2529	U2413	G2306
U3773	G3661	G2907	C2794	U2687	A2544	G2421	A2307
A3774	A3662	U2908	A2795	U2687	G2544	G2421	A2308
A3775	A3663	C2909	G2796	A2695	U2546	U2426	A2313
G3776	G3664	G2910	C2797	A2696	G2547	U2426	A2314
G3777	G3664	G	A2798	A2696	C2548	A2438	G2315
U3778	G3670	G	A2798	A2696	C2548	A2438	G2315
A3783	G3671	U	C2802	G2700	C2548	G	G2321
A3784	G3672	U	C2802	G2700	C2548	G	G2321
A3785	G3673	G	A2807	U2701	A2553	G2442	G2327
U3786	G3674	G	A2807	U2702	U2554	G2443	G2328
G3787	G3674	G	G2810	G2703	G2555	U2444	G2328
	G3678	U	U2810	G2703	G2555	U2444	G2328
	U3679	C	U2810	U2707	G2556	G2450	G2331
	U3680	G	U2819	U2708	C2563	G2450	A2332
	A3682	C	C2820	C2709	G2567	G2461	A2332
	A3692	G	U2826	G2710	C2567	G2461	A2332
	U3693	G	G2827	G2711	C2568	G2465	A2341
	U3694	G	U2828	G2712	G2569	C2465	G2342
		G	U2834	G2713	U2570	U2468	G2343
		G	A2835	G2714	C2571	C2469	U2344
		G	A2836	G2719	U2572	C2470	C2346
		G	A2850	G2720	A2573	A2347	A2347
		G	G2854	G2721	G2576	G2474	G2348
		G	C2855	A2725	C2583	G2475	A2389
		G	C2856	G2726	G2476	G2476	U2350
		G	A2857	G2727	C2586	A2477	C2351
		G	A2857	C2730	A2587	C2478	A2360
		G	A2858	U2731	C2588	C2482	G2361
		G	A2859	G2732	C2589	C2483	G2361
		G	C2860	G2733	A2600	A2484	A2386
		G	A2870	C2739	A2601	U2485	U2369
		G	C2871	A2743	A2602	G2487	A2370
		G	C2872	A2744	G2602	G2487	A2370
		G	U2873	G2754	C2607	U2490	A2375
		G	C2874	G2754	G2618	C2491	A2379
		G	C2875	G2756	C2627	U2494	G2380
		G	G2876	G2756	C2627	U2495	A2381
		G	G2877	G2760	U2632	U2496	A2382
		G	A2878	U2761	U2637	C2499	A2389
		G	A2879	G2762	G2652	G2390	G2390
		G	A2882	U2763	C2653	G2391	G2391
		G	U2887	U2767	G2652	G2502	G2394
		G	A2894	C2768	C2662	C2503	G2397
		G	G2897	U2769	U2660	C2504	C2402
		G	C2898	G2770	G2662	C2505	G2402
		G	C2899	G2771	C2670	C2506	C2402
		G	G2902	G2772	A2511	A2512	G2406
		G	U2903	G2775	G2673	A2513	G2407
		G	U2904	G2776	A2674	G2675	U2468
		G	C2905	A2787	A2676	U2409	U2409
		G		U2788	A2676	C2520	A2412

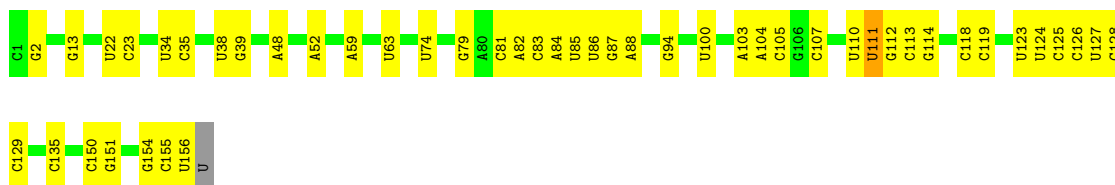


• Molecule 2: 5S ribosomal RNA



• Molecule 3: 5.8S ribosomal RNA

Chain L8:  69% 30%



- Molecule 4: 60S ribosomal protein L8

Chain LA:  93%




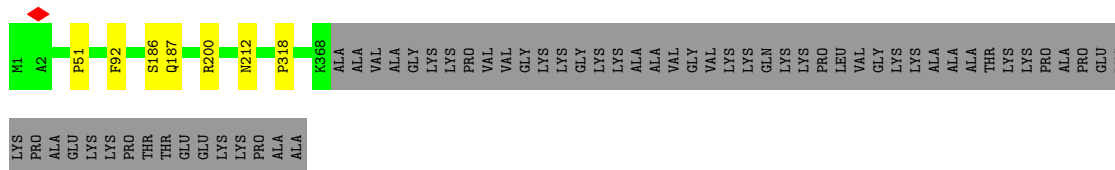
- Molecule 5: 60S ribosomal protein L3

Chain LB:  96%



- Molecule 6: 60S ribosomal protein L4

Chain LC:  85% 14%




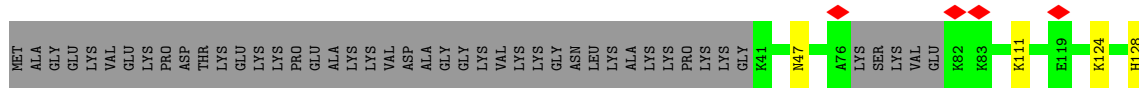
- Molecule 7: 60S ribosomal protein L5

Chain LD:  95%



- Molecule 8: 60S ribosomal protein L6

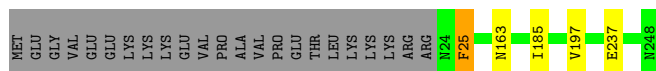
Chain LE:  81% 16%





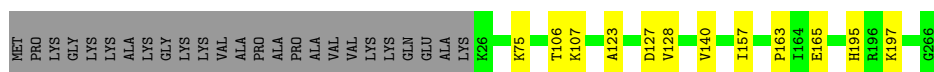
- Molecule 9: 60S ribosomal protein L7

Chain LF: 89% 9%



- Molecule 10: 60S ribosomal protein L7a

Chain LG: 86% 5% 9%



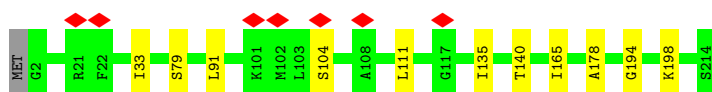
- Molecule 11: 60S ribosomal protein L9

Chain LH: 97% ..



- Molecule 12: 60S ribosomal protein L10-like

Chain LI: 94% 5%



- Molecule 13: 60S ribosomal protein L11

Chain LJ: 96% ..



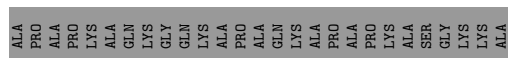
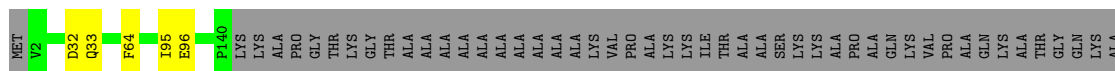
- Molecule 14: 60S ribosomal protein L13

Chain LL: 95% .

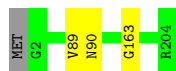


- Molecule 15: 60S ribosomal protein L14

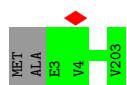
Chain LM: 62% . 35%



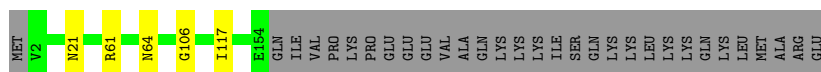
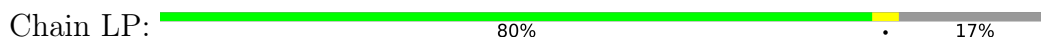
• Molecule 16: 60S ribosomal protein L15



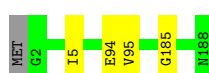
• Molecule 17: 60S ribosomal protein L13a



• Molecule 18: 60S ribosomal protein L17



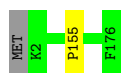
• Molecule 19: 60S ribosomal protein L18



• Molecule 20: 60S ribosomal protein L19



• Molecule 21: 60S ribosomal protein L18a




• Molecule 22: 60S ribosomal protein L21

Chain LT:  98%



- Molecule 23: 60S ribosomal protein L22

Chain LU:  77% 21%




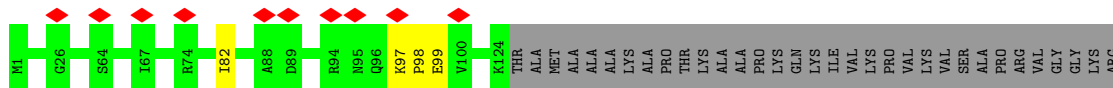
- Molecule 24: 60S ribosomal protein L23

Chain LV:  91% 6%



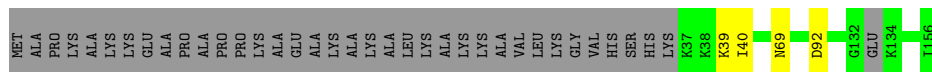
- Molecule 25: 60S ribosomal protein L24

Chain LW:  6% 76% 21%



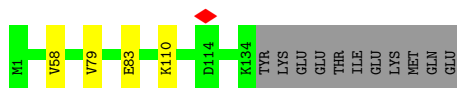
- Molecule 26: 60S ribosomal protein L23a

Chain LX:  74% 24%



- Molecule 27: 60S ribosomal protein L26

Chain LY:  90% 8%



- Molecule 28: 60S ribosomal protein L27

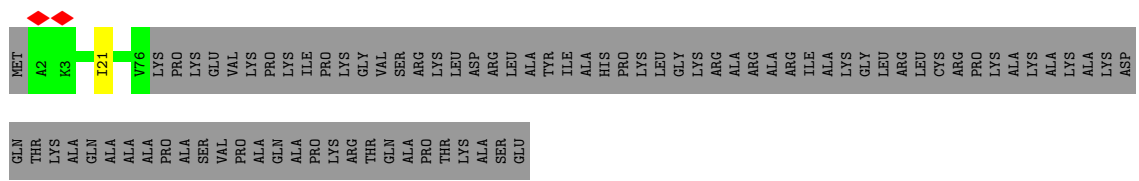
Chain LZ:  99%



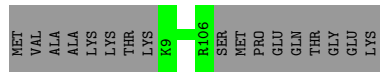
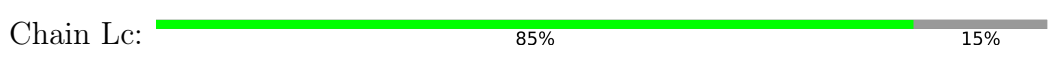
- Molecule 29: 60S ribosomal protein L27a



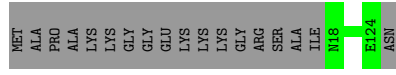
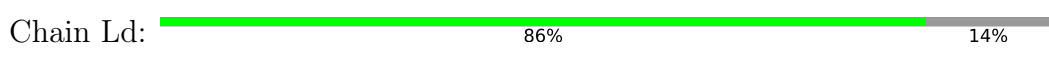
- Molecule 30: Ribosomal protein L29, isoform CRA_a



- Molecule 31: 60S ribosomal protein L30



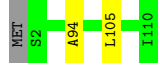
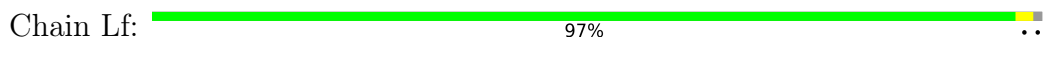
- Molecule 32: 60S ribosomal protein L31



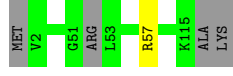
- Molecule 33: 60S ribosomal protein L32



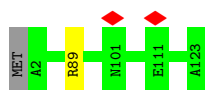
- Molecule 34: 60S ribosomal protein L35a



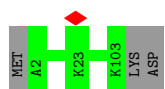
- Molecule 35: 60S ribosomal protein L34



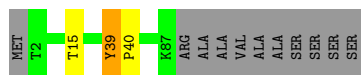
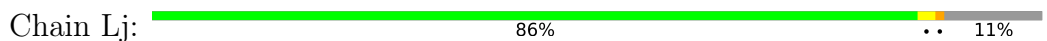
- Molecule 36: 60S ribosomal protein L35



- Molecule 37: 60S ribosomal protein L36



- Molecule 38: 60S ribosomal protein L37



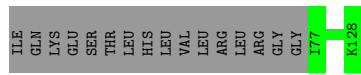
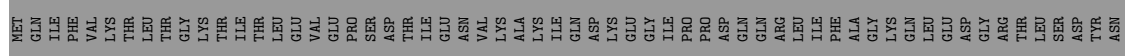
- Molecule 39: 60S ribosomal protein L38



- Molecule 40: 60S ribosomal protein L39



- Molecule 41: Ubiquitin-60S ribosomal protein L40



- Molecule 42: 60S ribosomal protein L41

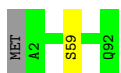




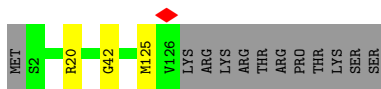
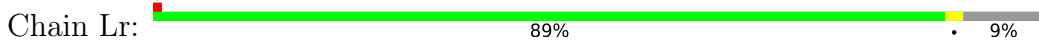
- Molecule 43: 60S ribosomal protein L36a



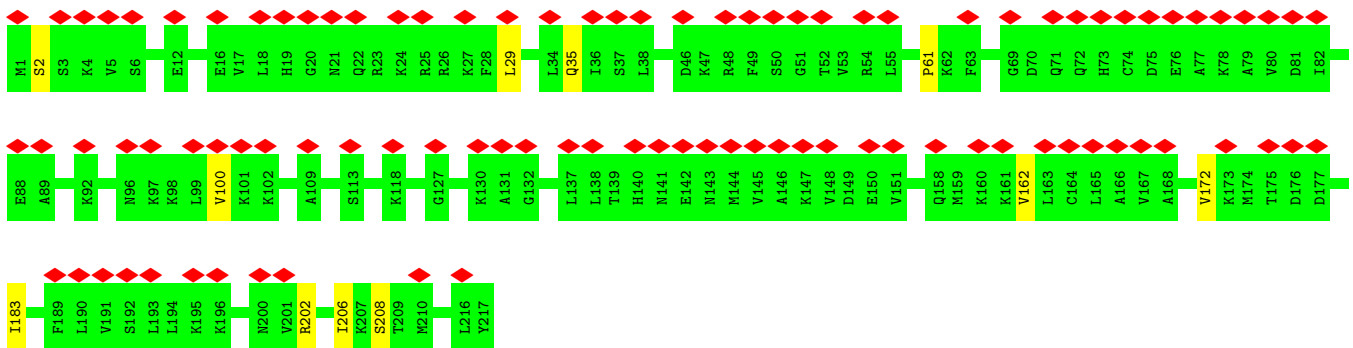
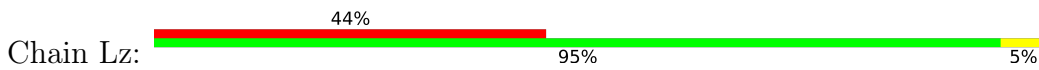
- Molecule 44: 60S ribosomal protein L37a



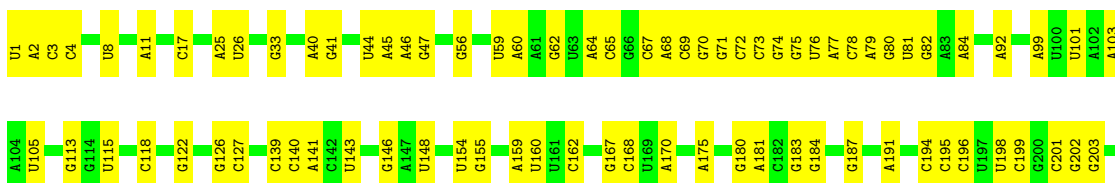
- Molecule 45: 60S ribosomal protein L28

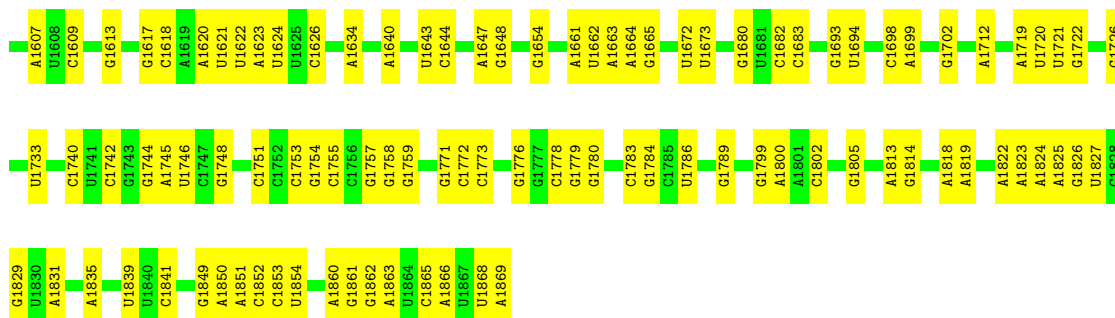


- Molecule 46: 60S ribosomal protein L10a

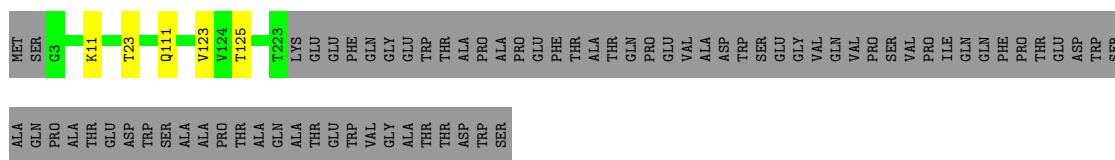
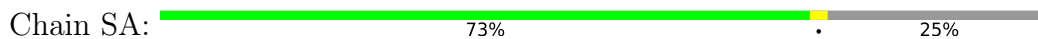


- Molecule 47: 18S ribosomal RNA

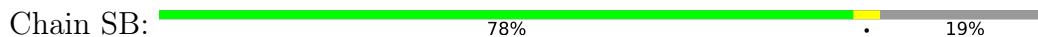




• Molecule 48: 40S ribosomal protein SA



• Molecule 49: 40S ribosomal protein S3a



• Molecule 50: 40S ribosomal protein S3



• Molecule 51: 40S ribosomal protein S4, X isoform

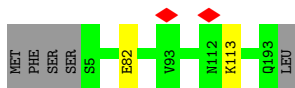


• Molecule 52: 40S ribosomal protein S5





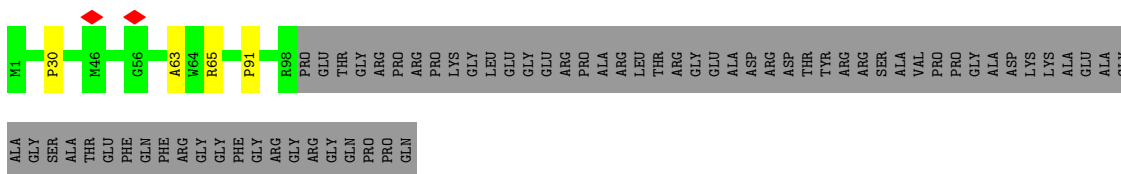
• Molecule 53: 40S ribosomal protein S7



• Molecule 54: 40S ribosomal protein S8



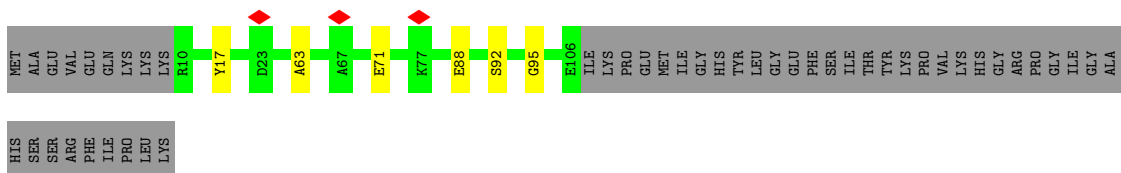
• Molecule 55: 40S ribosomal protein S10



• Molecule 56: 40S ribosomal protein S11



• Molecule 57: 40S ribosomal protein S15

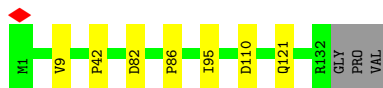


• Molecule 58: 40S ribosomal protein S16

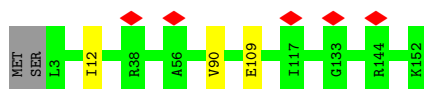




- Molecule 59: 40S ribosomal protein S17



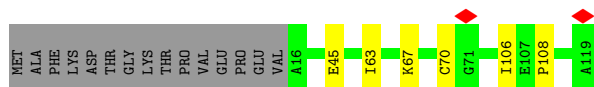
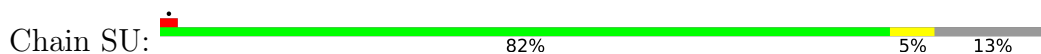
- Molecule 60: 40S ribosomal protein S18



- Molecule 61: 40S ribosomal protein S19



- Molecule 62: 40S ribosomal protein S20



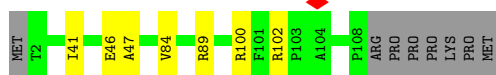
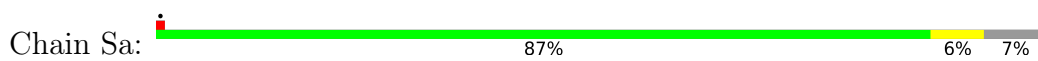
- Molecule 63: 40S ribosomal protein S21



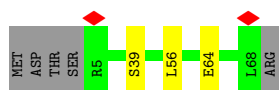
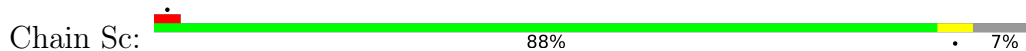
- Molecule 64: 40S ribosomal protein S23



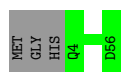
- Molecule 65: 40S ribosomal protein S26



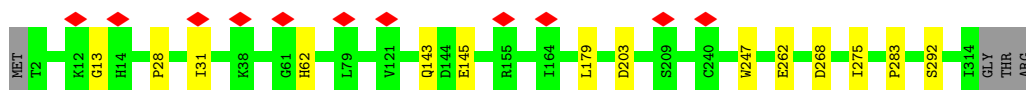
- Molecule 66: 40S ribosomal protein S28



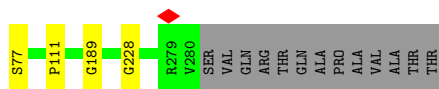
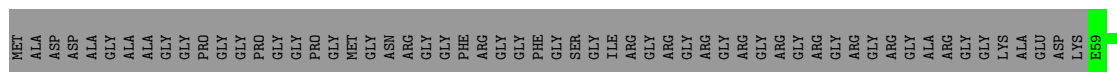
- Molecule 67: 40S ribosomal protein S29



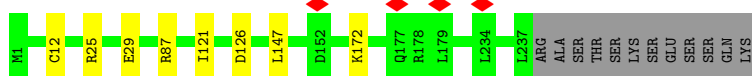
- Molecule 68: Receptor of activated protein C kinase 1



- Molecule 69: 40S ribosomal protein S2



- Molecule 70: 40S ribosomal protein S6

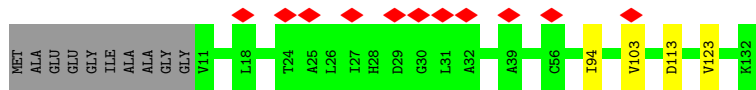
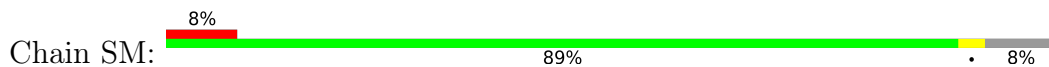


- Molecule 71: 40S ribosomal protein S9





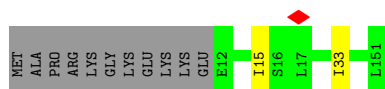
• Molecule 72: 40S ribosomal protein S12



• Molecule 73: 40S ribosomal protein S13



• Molecule 74: 40S ribosomal protein S14



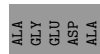
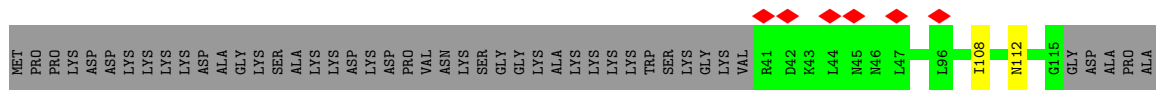
• Molecule 75: 40S ribosomal protein S15a



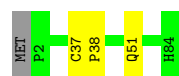
• Molecule 76: 40S ribosomal protein S24



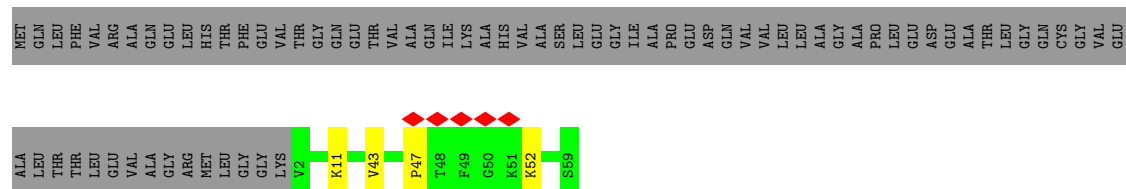
• Molecule 77: 40S ribosomal protein S25



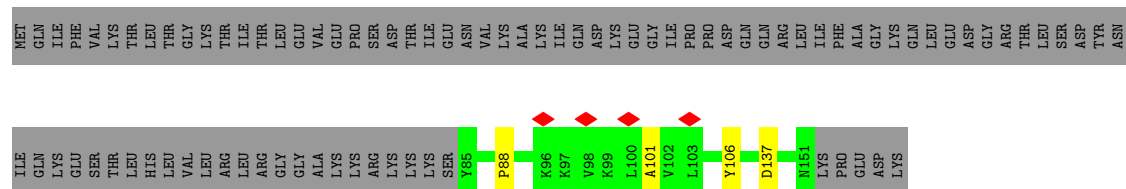
• Molecule 78: 40S ribosomal protein S27



• Molecule 79: Ribosomal protein S30



• Molecule 80: Ubiquitin-40S ribosomal protein S27a



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	19000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; Relion	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	79000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.206	Depositor
Minimum map value	-0.165	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.007	Depositor
Map size (\AA)	506.0, 506.0, 506.0	wwPDB
Map dimensions	460, 460, 460	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.1, 1.1, 1.1	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, 3HE

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	L5	0.71	0/89644	0.88	16/139760 (0.0%)
2	L7	0.61	0/2858	0.79	0/4455
3	L8	0.70	0/3701	0.85	2/5766 (0.0%)
4	LA	0.53	0/1936	0.58	0/2596
5	LB	0.46	0/3306	0.58	0/4424
6	LC	0.45	0/2981	0.56	0/4002
7	LD	0.39	0/2428	0.53	0/3252
8	LE	0.37	0/2005	0.57	0/2685
9	LF	0.47	0/1905	0.57	0/2539
10	LG	0.40	0/1960	0.57	0/2637
11	LH	0.40	0/1537	0.56	0/2066
12	LI	0.39	0/1751	0.51	0/2340
13	LJ	0.35	0/1433	0.57	0/1915
14	LL	0.42	0/1732	0.58	0/2315
15	LM	0.41	0/1161	0.53	0/1554
16	LN	0.51	0/1746	0.58	0/2338
17	LO	0.48	0/1682	0.57	0/2250
18	LP	0.52	0/1268	0.60	0/1701
19	LQ	0.46	0/1537	0.58	0/2052
20	LR	0.42	0/1582	0.56	0/2091
21	LS	0.47	0/1493	0.53	0/2003
22	LT	0.43	0/1326	0.59	0/1770
23	LU	0.36	0/839	0.54	0/1126
24	LV	0.49	0/993	0.59	0/1332
25	LW	0.38	0/1030	0.56	0/1364
26	LX	0.43	0/992	0.54	0/1330
27	LY	0.43	0/1132	0.55	0/1504
28	LZ	0.41	0/1130	0.53	0/1507
29	La	0.48	0/1191	0.59	0/1591
30	Lb	0.37	0/620	0.51	0/819
31	Lc	0.43	0/774	0.55	0/1038
32	Ld	0.46	0/903	0.56	0/1216

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Le	0.50	0/1071	0.57	0/1429
34	Lf	0.48	0/895	0.59	0/1198
35	Lg	0.47	0/904	0.56	0/1203
36	Lh	0.40	0/1023	0.55	0/1351
37	Li	0.39	0/843	0.55	0/1115
38	Lj	0.50	0/720	0.67	1/952 (0.1%)
39	Lk	0.38	0/575	0.55	0/761
40	Ll	0.43	0/454	0.58	0/599
41	Lm	0.41	0/435	0.56	0/575
42	Ln	0.35	0/231	0.49	0/294
43	Lo	0.43	0/876	0.59	0/1156
44	Lp	0.52	0/718	0.57	0/953
45	Lr	0.44	0/1017	0.55	0/1364
46	Lz	0.24	0/1769	0.47	0/2371
47	S2	0.57	0/41243	0.84	9/64257 (0.0%)
48	SA	0.37	0/1778	0.54	0/2416
49	SB	0.39	0/1765	0.54	0/2362
50	SD	0.33	0/1793	0.55	0/2414
51	SE	0.36	0/2118	0.55	0/2849
52	SF	0.31	0/1500	0.53	0/2015
53	SH	0.34	0/1544	0.56	0/2068
54	SI	0.40	0/1715	0.57	0/2287
55	SK	0.30	0/851	0.53	0/1147
56	SL	0.44	0/1268	0.59	0/1696
57	SP	0.29	0/815	0.52	0/1087
58	SQ	0.31	0/1177	0.54	0/1575
59	SR	0.33	0/1086	0.55	0/1457
60	SS	0.31	0/1253	0.60	0/1676
61	ST	0.29	0/1131	0.51	0/1515
62	SU	0.30	0/831	0.55	0/1115
63	SV	0.37	0/643	0.53	0/860
64	SX	0.43	0/1116	0.52	0/1490
65	Sa	0.43	0/863	0.57	0/1159
66	Sc	0.31	0/508	0.58	0/680
67	Sd	0.37	0/455	0.49	0/603
68	Sg	0.27	0/2493	0.54	0/3394
69	SC	0.38	0/1762	0.55	0/2381
70	SG	0.32	0/1946	0.55	0/2590
71	SJ	0.37	0/1550	0.55	0/2069
72	SM	0.27	0/962	0.52	0/1290
73	SN	0.41	0/1232	0.55	0/1656
74	SO	0.40	0/1062	0.55	0/1425
75	SW	0.43	0/1051	0.58	0/1406

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SY	0.33	0/1083	0.52	0/1438
77	SZ	0.31	0/604	0.58	0/810
78	Sb	0.35	0/665	0.51	0/891
79	Se	0.31	0/465	0.52	0/612
80	Sf	0.29	0/560	0.52	0/745
All	All	0.57	0/232995	0.76	28/342094 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	LA	0	1
5	LB	0	3
15	LM	0	1
38	Lj	0	1
42	Ln	0	1
58	SQ	0	1
All	All	0	8

There are no bond length outliers.

The worst 5 of 28 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4303	C	C2-N1-C1'	7.80	127.38	118.80
38	Lj	39	TYR	C-N-CD	-7.33	104.48	120.60
47	S2	1453	C	C2-N1-C1'	6.99	126.49	118.80
1	L5	4741	C	N1-C2-O2	6.28	122.67	118.90
47	S2	356	C	N1-C2-O2	6.11	122.56	118.90

There are no chirality outliers.

5 of 8 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	LA	227	ARG	Sidechain
5	LB	257	TRP	Peptide
5	LB	258	HIS	Peptide
5	LB	35	ASP	Peptide
15	LM	64	PHE	Peptide

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	LA	246/257 (96%)	212 (86%)	27 (11%)	7 (3%)	5	34
5	LB	400/403 (99%)	342 (86%)	44 (11%)	14 (4%)	3	30
6	LC	366/427 (86%)	333 (91%)	26 (7%)	7 (2%)	8	42
7	LD	291/297 (98%)	250 (86%)	30 (10%)	11 (4%)	3	27
8	LE	239/288 (83%)	198 (83%)	31 (13%)	10 (4%)	3	25
9	LF	223/248 (90%)	202 (91%)	16 (7%)	5 (2%)	6	39
10	LG	239/266 (90%)	210 (88%)	17 (7%)	12 (5%)	2	21
11	LH	188/192 (98%)	153 (81%)	31 (16%)	4 (2%)	7	40
12	LI	211/214 (99%)	174 (82%)	26 (12%)	11 (5%)	2	20
13	LJ	174/178 (98%)	157 (90%)	12 (7%)	5 (3%)	4	33
14	LL	208/211 (99%)	184 (88%)	15 (7%)	9 (4%)	2	24
15	LM	137/215 (64%)	122 (89%)	11 (8%)	4 (3%)	4	33
16	LN	201/204 (98%)	179 (89%)	19 (10%)	3 (2%)	10	47
17	LO	199/203 (98%)	183 (92%)	16 (8%)	0	100	100
18	LP	151/184 (82%)	132 (87%)	14 (9%)	5 (3%)	4	31
19	LQ	185/188 (98%)	168 (91%)	13 (7%)	4 (2%)	6	39
20	LR	185/196 (94%)	171 (92%)	13 (7%)	1 (0%)	29	68
21	LS	173/176 (98%)	148 (86%)	24 (14%)	1 (1%)	25	64
22	LT	157/160 (98%)	136 (87%)	18 (12%)	3 (2%)	8	42
23	LU	99/128 (77%)	81 (82%)	16 (16%)	2 (2%)	7	41
24	LV	129/140 (92%)	109 (84%)	17 (13%)	3 (2%)	6	38

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	LW	122/157 (78%)	104 (85%)	14 (12%)	4 (3%)	4	31
26	LX	115/156 (74%)	99 (86%)	12 (10%)	4 (4%)	3	30
27	LY	132/145 (91%)	119 (90%)	9 (7%)	4 (3%)	4	33
28	LZ	133/136 (98%)	118 (89%)	14 (10%)	1 (1%)	19	59
29	La	145/148 (98%)	119 (82%)	19 (13%)	7 (5%)	2	22
30	Lb	73/157 (46%)	66 (90%)	6 (8%)	1 (1%)	11	48
31	Lc	96/115 (84%)	87 (91%)	9 (9%)	0	100	100
32	Ld	105/125 (84%)	89 (85%)	16 (15%)	0	100	100
33	Le	126/135 (93%)	114 (90%)	10 (8%)	2 (2%)	9	46
34	Lf	107/110 (97%)	93 (87%)	12 (11%)	2 (2%)	8	42
35	Lg	109/117 (93%)	101 (93%)	7 (6%)	1 (1%)	17	57
36	Lh	120/123 (98%)	115 (96%)	4 (3%)	1 (1%)	19	59
37	Li	100/105 (95%)	94 (94%)	6 (6%)	0	100	100
38	Lj	84/97 (87%)	74 (88%)	8 (10%)	2 (2%)	6	37
39	Lk	67/70 (96%)	57 (85%)	7 (10%)	3 (4%)	2	23
40	Ll	48/51 (94%)	41 (85%)	6 (12%)	1 (2%)	7	40
41	Lm	50/128 (39%)	47 (94%)	3 (6%)	0	100	100
42	Ln	22/25 (88%)	20 (91%)	1 (4%)	1 (4%)	2	23
43	Lo	103/106 (97%)	90 (87%)	11 (11%)	2 (2%)	8	42
44	Lp	89/92 (97%)	77 (86%)	11 (12%)	1 (1%)	14	53
45	Lr	123/137 (90%)	108 (88%)	12 (10%)	3 (2%)	6	37
46	Lz	215/217 (99%)	174 (81%)	30 (14%)	11 (5%)	2	20
48	SA	219/295 (74%)	200 (91%)	14 (6%)	5 (2%)	6	38
49	SB	212/264 (80%)	177 (84%)	28 (13%)	7 (3%)	4	31
50	SD	225/243 (93%)	190 (84%)	26 (12%)	9 (4%)	3	26
51	SE	260/263 (99%)	221 (85%)	30 (12%)	9 (4%)	3	30
52	SF	185/204 (91%)	158 (85%)	21 (11%)	6 (3%)	4	31
53	SH	187/194 (96%)	154 (82%)	31 (17%)	2 (1%)	14	53
54	SI	204/208 (98%)	173 (85%)	26 (13%)	5 (2%)	5	36
55	SK	96/165 (58%)	80 (83%)	12 (12%)	4 (4%)	3	25
56	SL	151/158 (96%)	127 (84%)	20 (13%)	4 (3%)	5	35

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
57	SP	95/145 (66%)	77 (81%)	12 (13%)	6 (6%)	1	17
58	SQ	144/146 (99%)	125 (87%)	10 (7%)	9 (6%)	1	17
59	SR	130/135 (96%)	109 (84%)	14 (11%)	7 (5%)	2	19
60	SS	148/152 (97%)	126 (85%)	19 (13%)	3 (2%)	7	41
61	ST	141/145 (97%)	124 (88%)	14 (10%)	3 (2%)	7	40
62	SU	102/119 (86%)	87 (85%)	9 (9%)	6 (6%)	1	18
63	SV	81/83 (98%)	64 (79%)	15 (18%)	2 (2%)	5	36
64	SX	139/143 (97%)	120 (86%)	12 (9%)	7 (5%)	2	21
65	Sa	105/115 (91%)	87 (83%)	11 (10%)	7 (7%)	1	15
66	Sc	62/69 (90%)	52 (84%)	7 (11%)	3 (5%)	2	22
67	Sd	51/56 (91%)	46 (90%)	5 (10%)	0	100	100
68	Sg	311/317 (98%)	253 (81%)	44 (14%)	14 (4%)	2	23
69	SC	220/293 (75%)	194 (88%)	22 (10%)	4 (2%)	8	43
70	SG	235/249 (94%)	196 (83%)	31 (13%)	8 (3%)	3	31
71	SJ	183/194 (94%)	161 (88%)	18 (10%)	4 (2%)	6	39
72	SM	120/132 (91%)	93 (78%)	23 (19%)	4 (3%)	4	31
73	SN	148/151 (98%)	133 (90%)	10 (7%)	5 (3%)	3	31
74	SO	138/151 (91%)	116 (84%)	20 (14%)	2 (1%)	11	48
75	SW	127/130 (98%)	106 (84%)	19 (15%)	2 (2%)	9	46
76	SY	129/133 (97%)	113 (88%)	10 (8%)	6 (5%)	2	22
77	SZ	73/125 (58%)	55 (75%)	16 (22%)	2 (3%)	5	35
78	Sb	81/84 (96%)	65 (80%)	13 (16%)	3 (4%)	3	28
79	Se	56/133 (42%)	47 (84%)	5 (9%)	4 (7%)	1	14
80	Sf	65/156 (42%)	51 (78%)	10 (15%)	4 (6%)	1	17
All	All	11508/12977 (89%)	9930 (86%)	1240 (11%)	338 (3%)	7	33

5 of 338 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	LA	118	GLU
4	LA	130	SER
4	LA	239	ALA
5	LB	334	LYS
6	LC	200	ARG

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LA	190/199 (96%)	190 (100%)	0	100	100
5	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	306/348 (88%)	306 (100%)	0	100	100
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	216/252 (86%)	216 (100%)	0	100	100
9	LF	194/215 (90%)	193 (100%)	1 (0%)	88	95
10	LG	203/223 (91%)	203 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	180/181 (99%)	180 (100%)	0	100	100
13	LJ	148/149 (99%)	148 (100%)	0	100	100
14	LL	176/177 (99%)	176 (100%)	0	100	100
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	173/174 (99%)	173 (100%)	0	100	100
18	LP	134/163 (82%)	134 (100%)	0	100	100
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	166/175 (95%)	166 (100%)	0	100	100
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	139 (100%)	0	100	100
23	LU	91/115 (79%)	91 (100%)	0	100	100
24	LV	101/107 (94%)	101 (100%)	0	100	100
25	LW	103/126 (82%)	103 (100%)	0	100	100
26	LX	107/133 (80%)	107 (100%)	0	100	100
27	LY	124/135 (92%)	124 (100%)	0	100	100
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	119 (99%)	1 (1%)	81	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	Lb	63/125 (50%)	63 (100%)	0	100	100
31	Lc	83/97 (86%)	83 (100%)	0	100	100
32	Ld	98/110 (89%)	98 (100%)	0	100	100
33	Le	114/121 (94%)	114 (100%)	0	100	100
34	Lf	88/89 (99%)	88 (100%)	0	100	100
35	Lg	97/100 (97%)	97 (100%)	0	100	100
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	86 (100%)	0	100	100
38	Lj	73/80 (91%)	73 (100%)	0	100	100
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	48/116 (41%)	48 (100%)	0	100	100
42	Ln	23/24 (96%)	15 (65%)	8 (35%)	0	1
43	Lo	93/94 (99%)	93 (100%)	0	100	100
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
46	Lz	195/196 (100%)	195 (100%)	0	100	100
48	SA	183/243 (75%)	183 (100%)	0	100	100
49	SB	195/231 (84%)	195 (100%)	0	100	100
50	SD	190/202 (94%)	190 (100%)	0	100	100
51	SE	224/225 (100%)	224 (100%)	0	100	100
52	SF	157/170 (92%)	157 (100%)	0	100	100
53	SH	169/174 (97%)	169 (100%)	0	100	100
54	SI	178/180 (99%)	178 (100%)	0	100	100
55	SK	89/136 (65%)	89 (100%)	0	100	100
56	SL	137/142 (96%)	137 (100%)	0	100	100
57	SP	87/130 (67%)	87 (100%)	0	100	100
58	SQ	121/121 (100%)	121 (100%)	0	100	100
59	SR	120/122 (98%)	120 (100%)	0	100	100
60	SS	130/132 (98%)	130 (100%)	0	100	100
61	ST	113/115 (98%)	113 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
62	SU	94/107 (88%)	94 (100%)	0	100	100
63	SV	67/67 (100%)	67 (100%)	0	100	100
64	SX	113/115 (98%)	113 (100%)	0	100	100
65	Sa	90/98 (92%)	90 (100%)	0	100	100
66	Sc	57/62 (92%)	57 (100%)	0	100	100
67	Sd	47/49 (96%)	47 (100%)	0	100	100
68	Sg	272/275 (99%)	272 (100%)	0	100	100
69	SC	188/225 (84%)	188 (100%)	0	100	100
70	SG	207/218 (95%)	207 (100%)	0	100	100
71	SJ	161/168 (96%)	161 (100%)	0	100	100
72	SM	104/108 (96%)	104 (100%)	0	100	100
73	SN	130/131 (99%)	130 (100%)	0	100	100
74	SO	110/119 (92%)	110 (100%)	0	100	100
75	SW	112/113 (99%)	112 (100%)	0	100	100
76	SY	113/115 (98%)	113 (100%)	0	100	100
77	SZ	66/103 (64%)	66 (100%)	0	100	100
78	Sb	75/76 (99%)	75 (100%)	0	100	100
79	Se	47/104 (45%)	47 (100%)	0	100	100
80	Sf	60/140 (43%)	60 (100%)	0	100	100
All	All	10030/11052 (91%)	10020 (100%)	10 (0%)	93	98

5 of 10 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
42	Ln	19	LYS
42	Ln	20	MET
42	Ln	21	ARG
42	Ln	10	MET
42	Ln	11	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 124 such sidechains are listed below:

Mol	Chain	Res	Type
34	Lf	21	GLN

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Mol	Chain	Res	Type
70	SG	65	GLN
48	SA	84	GLN
70	SG	13	GLN
76	SY	22	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3707/5070 (73%)	1340 (36%)	102 (2%)
2	L7	119/121 (98%)	33 (27%)	1 (0%)
3	L8	155/157 (98%)	47 (30%)	4 (2%)
47	S2	1717/1869 (91%)	699 (40%)	41 (2%)
All	All	5698/7217 (78%)	2119 (37%)	148 (2%)

5 of 2119 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	2	G
1	L5	3	C
1	L5	13	U
1	L5	17	A
1	L5	18	C

5 of 148 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
47	S2	589	G
47	S2	1664	A
47	S2	659	G
47	S2	1273	C
1	L5	2262	G

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 233 ligands modelled in this entry, 232 are monoatomic - leaving 1 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
81	3HE	L5	5101	-	21,21,21	3.56	8 (38%)	19,30,30	2.32	8 (42%)

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
81	3HE	L5	5101	-	-	1/8/36/36	0/2/2/2

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	L5	5101	3HE	C13-C12	-8.46	1.35	1.50
81	L5	5101	3HE	C10-C11	-7.03	1.37	1.50
81	L5	5101	3HE	C5-C4	-6.68	1.42	1.51
81	L5	5101	3HE	C3-C4	-6.27	1.40	1.51
81	L5	5101	3HE	C13-C9	-4.14	1.46	1.53

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	L5	5101	3HE	C11-N-C12	-5.06	119.64	125.78
81	L5	5101	3HE	C-C1-C2	-3.78	104.75	111.18
81	L5	5101	3HE	C13-C12-N	3.73	120.52	115.95
81	L5	5101	3HE	C5-C6-C1	-3.60	105.80	113.14
81	L5	5101	3HE	C10-C11-N	3.08	119.72	115.95

There are no chirality outliers.

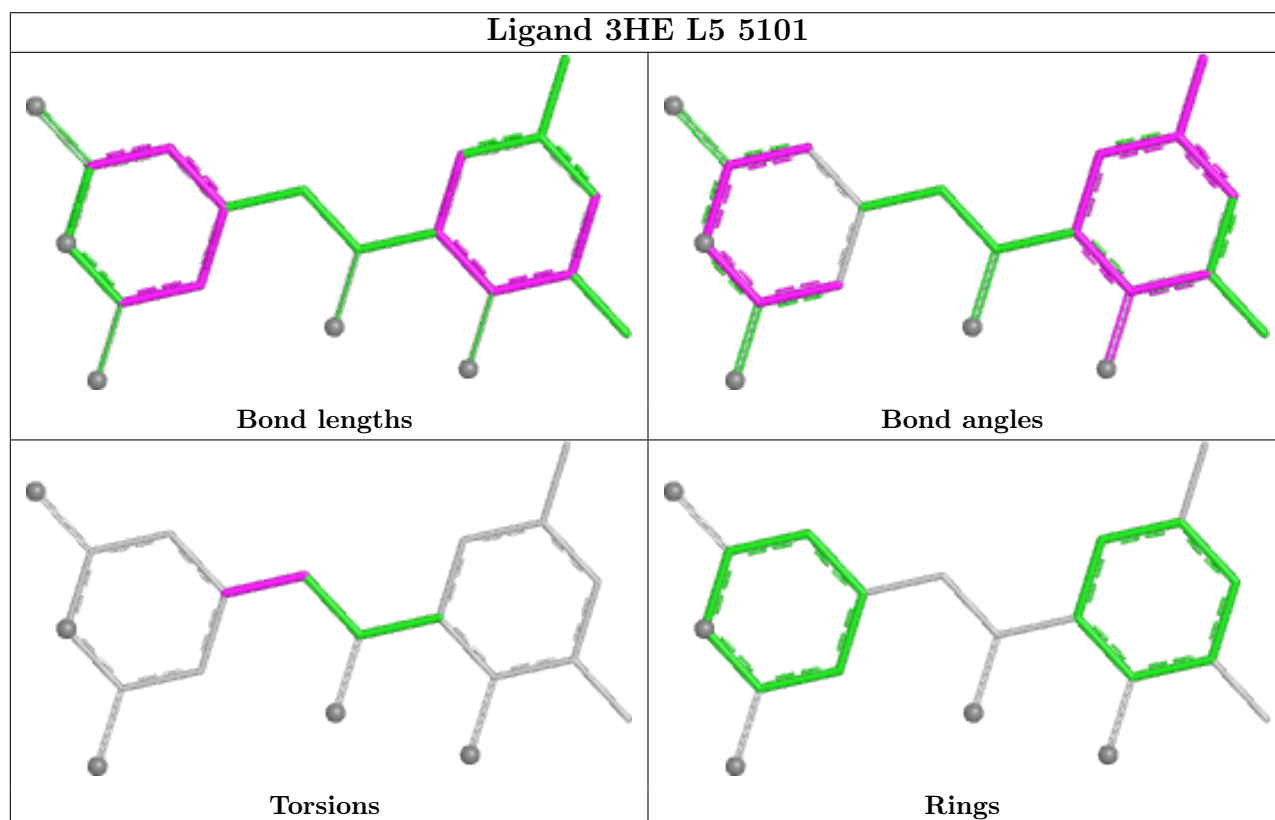
All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
81	L5	5101	3HE	C7-C8-C9-C13

There are no ring outliers.

No monomer is involved in short contacts.

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

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	L5	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	L5	3983:G	O3'	3984:C	P	10.43

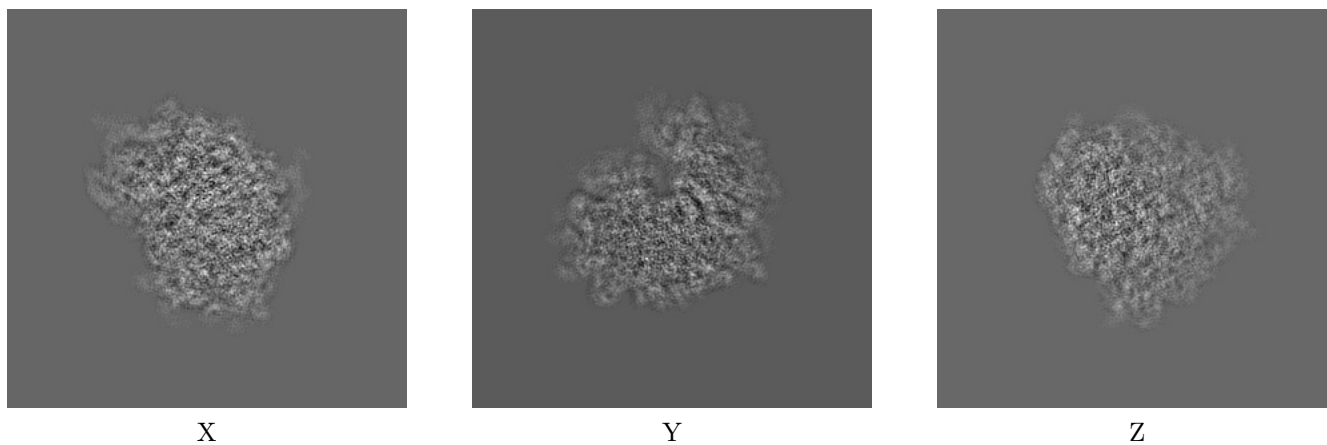
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-4070. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections [i](#)

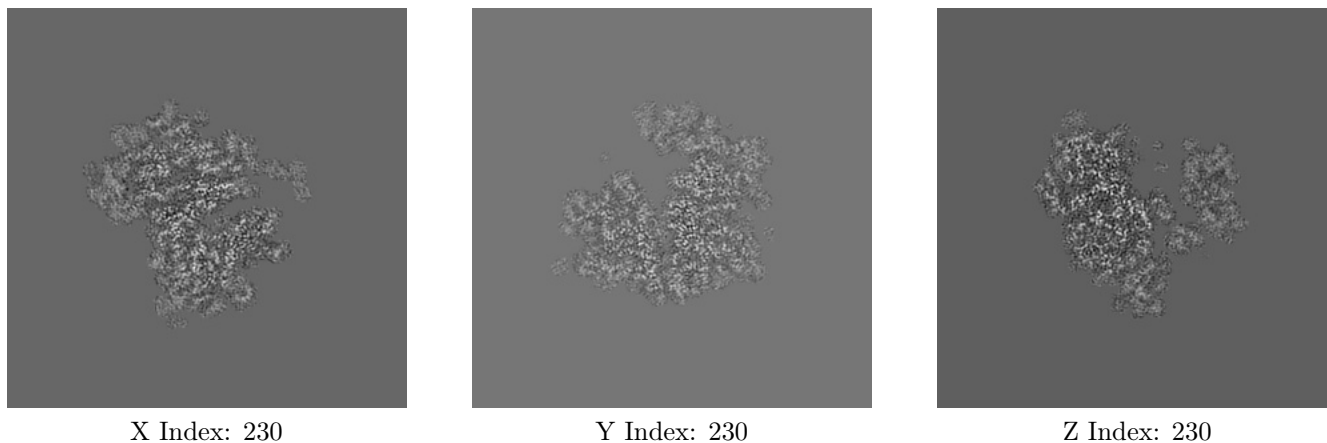
6.1.1 Primary map



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

6.2 Central slices [i](#)

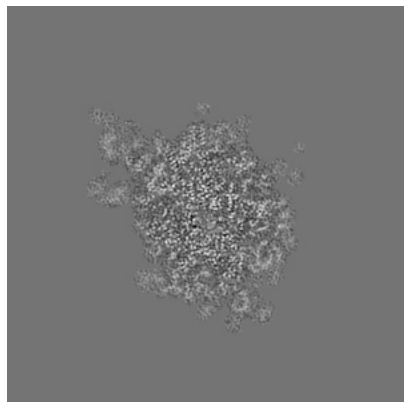
6.2.1 Primary map



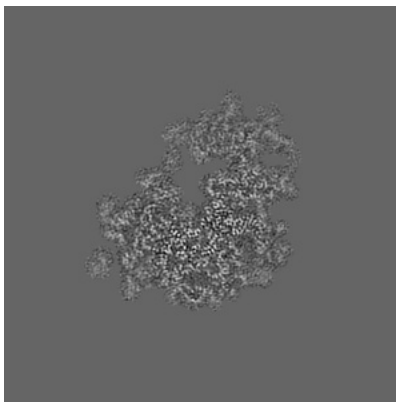
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

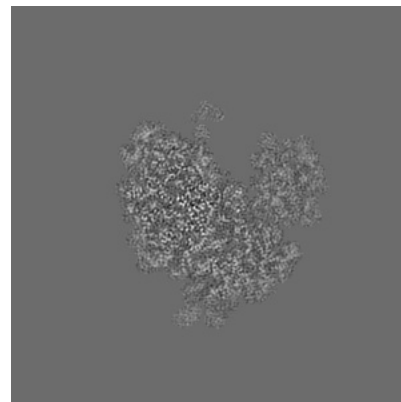
6.3.1 Primary map



X Index: 205



Y Index: 242

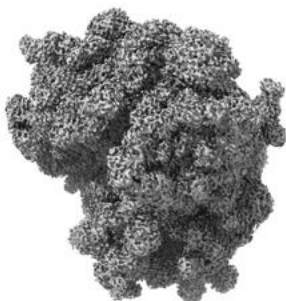


Z Index: 252

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

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.007. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

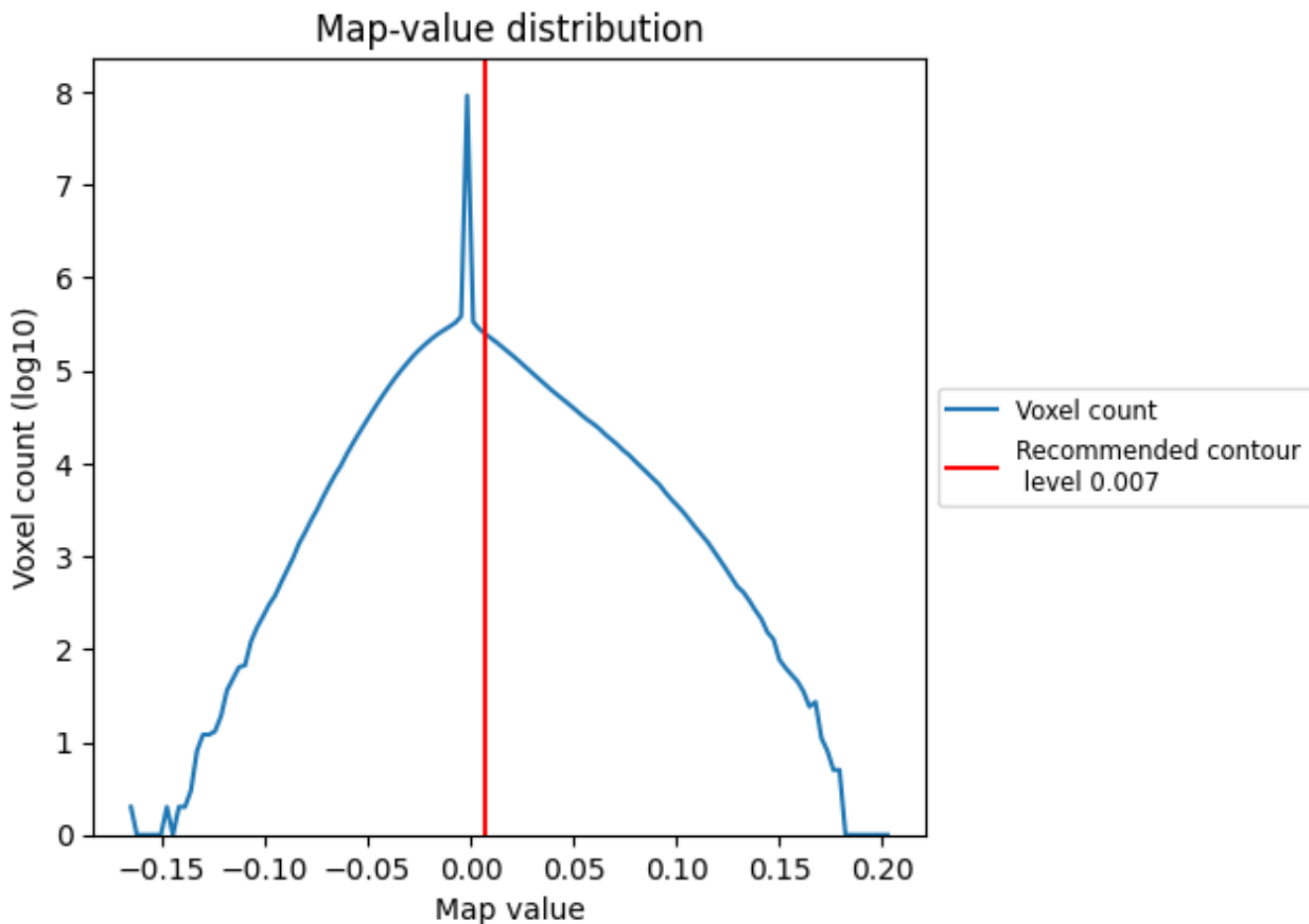
6.5 Mask visualisation

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

7 Map analysis [i](#)

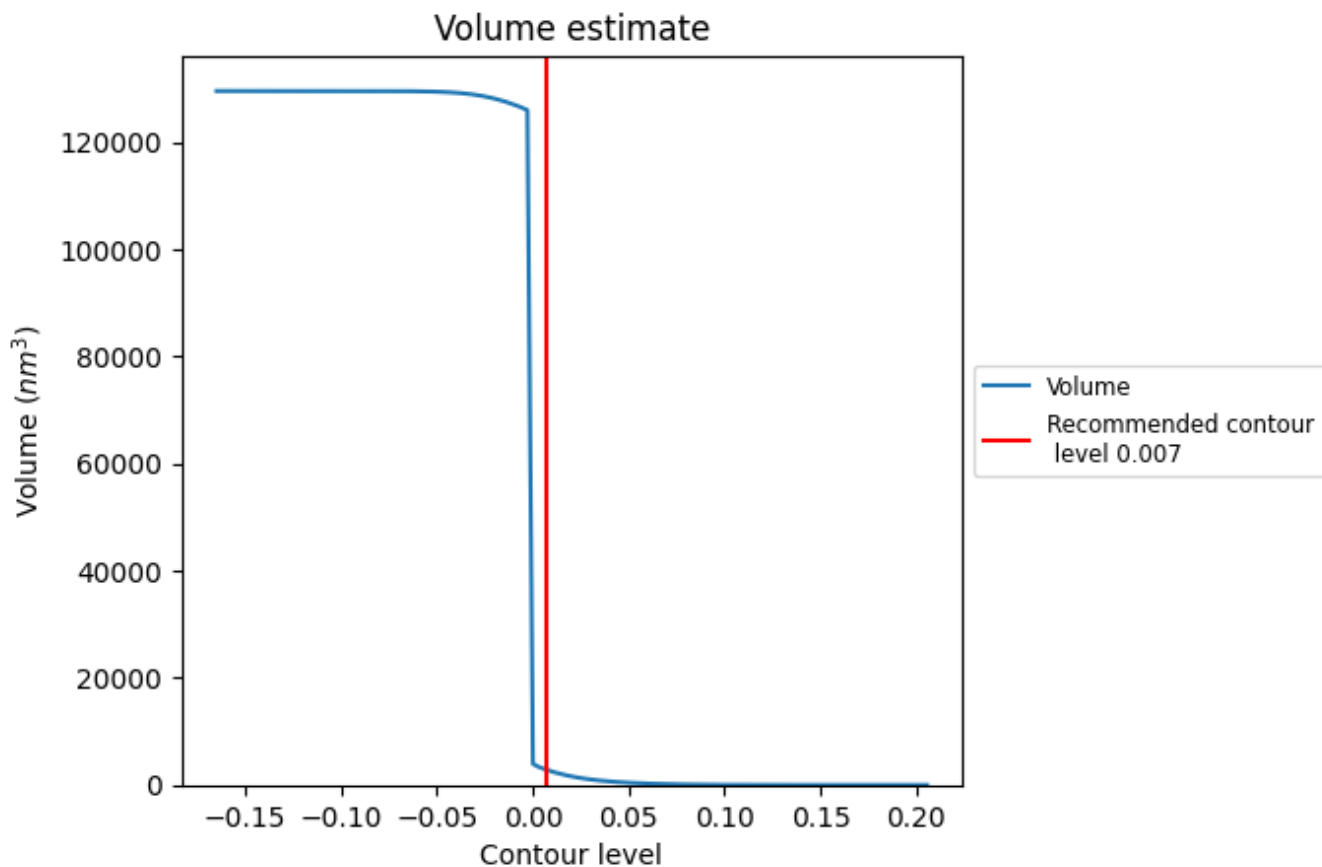
This section contains the results of statistical analysis of the map.

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.

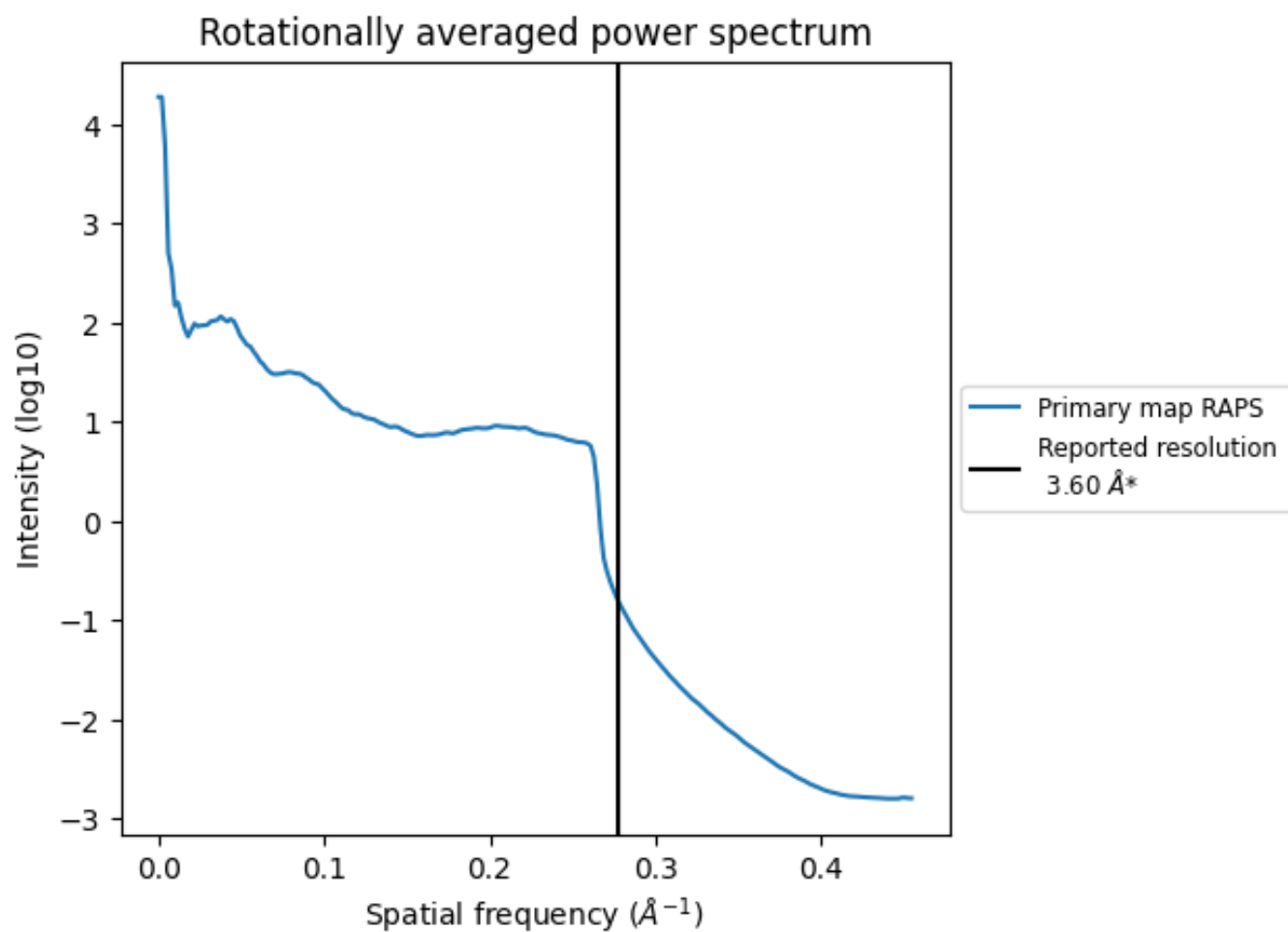
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 2861 nm³; this corresponds to an approximate mass of 2584 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.278\AA^{-1}

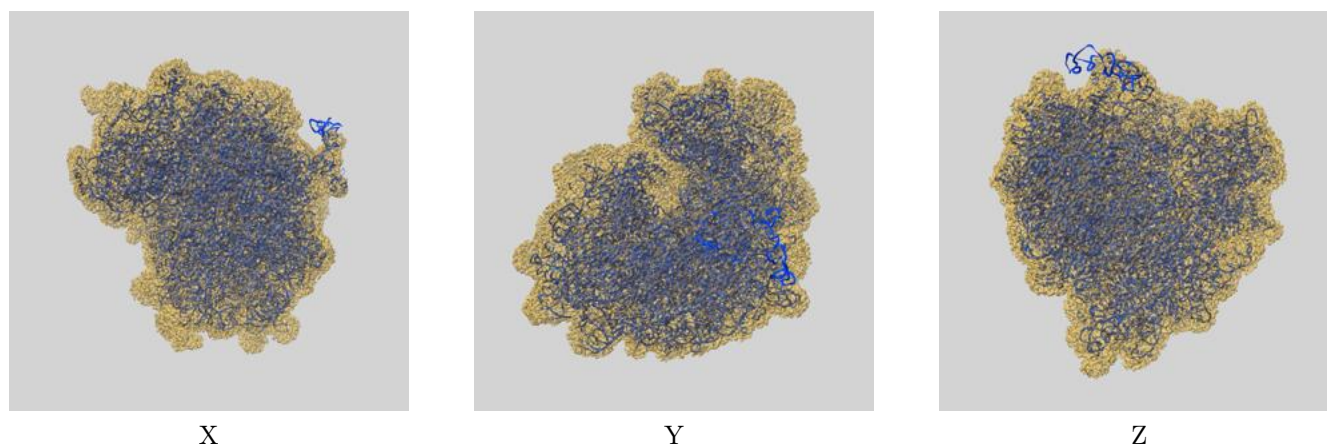
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

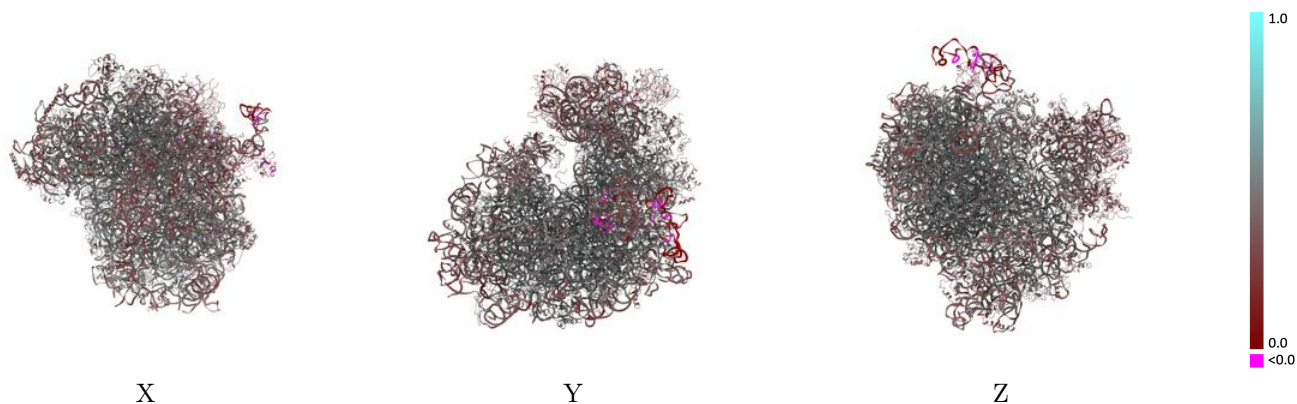
This section contains information regarding the fit between EMDB map EMD-4070 and PDB model 5LKS. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay [i](#)



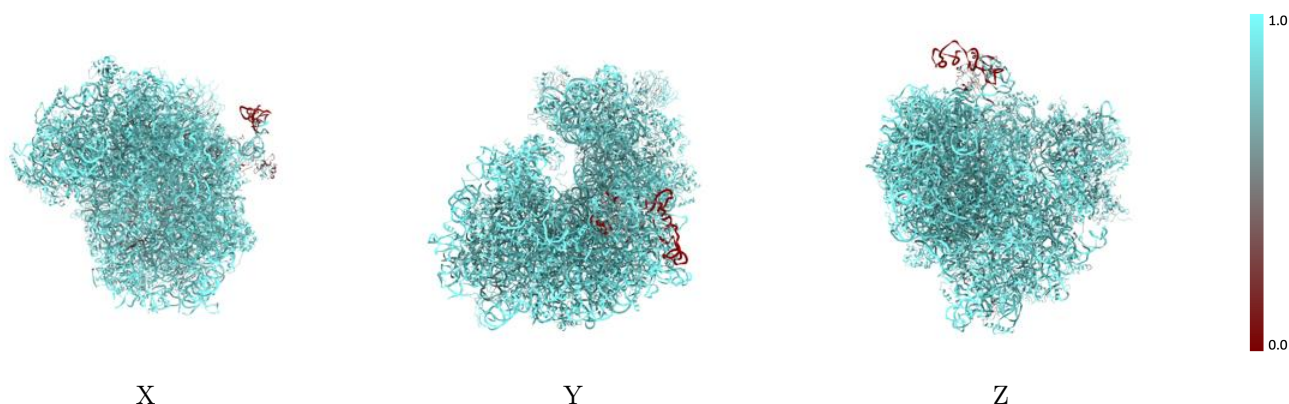
The images above show the 3D surface view of the map at the recommended contour level 0.007 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



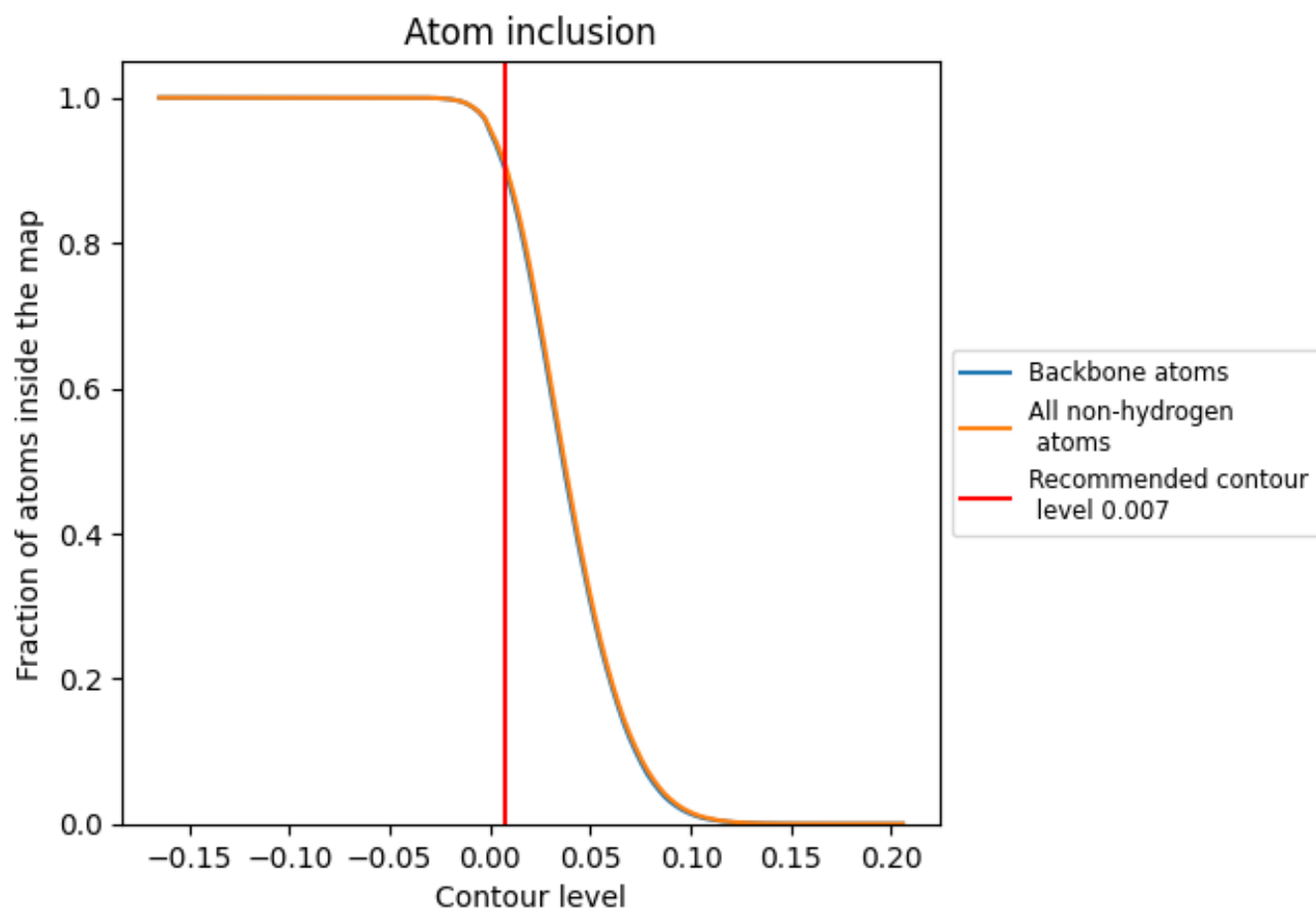
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.007).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 91% 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 (0.007) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9119	 0.4290
L5	 0.9426	 0.4380
L7	 0.9719	 0.4490
L8	 0.9566	 0.4500
LA	 0.9041	 0.4980
LB	 0.9133	 0.4700
LC	 0.9032	 0.4760
LD	 0.9083	 0.4100
LE	 0.8735	 0.4100
LF	 0.8838	 0.4640
LG	 0.8873	 0.4160
LH	 0.9176	 0.4470
LI	 0.8760	 0.4360
LJ	 0.8904	 0.3970
LL	 0.9168	 0.4500
LM	 0.9214	 0.4430
LN	 0.8864	 0.4970
LO	 0.9085	 0.4770
LP	 0.9047	 0.4850
LQ	 0.9081	 0.4850
LR	 0.9179	 0.4560
LS	 0.9323	 0.4810
LT	 0.9121	 0.4800
LU	 0.8984	 0.4010
LV	 0.8987	 0.4830
LW	 0.8163	 0.3870
LX	 0.9125	 0.4650
LY	 0.8942	 0.4530
LZ	 0.9012	 0.4340
La	 0.8991	 0.4840
Lb	 0.8670	 0.4340
Lc	 0.9290	 0.4620
Ld	 0.9195	 0.4700
Le	 0.9175	 0.4930
Lf	 0.8872	 0.4920











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Chain	Atom inclusion	Q-score
Lg	 0.8746	 0.4620
Lh	 0.8869	 0.4420
Li	 0.9173	 0.4450
Lj	 0.9242	 0.5060
Lk	 0.9048	 0.4190
Ll	 0.8865	 0.4820
Lm	 0.9183	 0.4800
Ln	 0.9139	 0.5050
Lo	 0.9152	 0.4560
Lp	 0.9100	 0.4840
Lr	 0.9304	 0.4710
Lz	 0.4761	 0.2120
S2	 0.9412	 0.4220
SA	 0.9000	 0.4180
SB	 0.8934	 0.4190
SC	 0.8930	 0.4390
SD	 0.8328	 0.3540
SE	 0.8736	 0.4240
SF	 0.8143	 0.3470
SG	 0.8787	 0.3770
SH	 0.8908	 0.3990
SI	 0.8832	 0.4340
SJ	 0.8840	 0.4110
SK	 0.8559	 0.3420
SL	 0.8795	 0.4480
SM	 0.7281	 0.2670
SN	 0.8848	 0.4460
SO	 0.8941	 0.4390
SP	 0.8359	 0.3180
SQ	 0.7763	 0.3340
SR	 0.8647	 0.3720
SS	 0.8353	 0.3260
ST	 0.7874	 0.3350
SU	 0.8488	 0.3630
SV	 0.9148	 0.4250
SW	 0.8842	 0.4520
SX	 0.9104	 0.4680
SY	 0.8725	 0.3860
SZ	 0.8045	 0.3340
Sa	 0.9007	 0.4490
Sb	 0.9202	 0.4410
Sc	 0.8436	 0.3580

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Chain	Atom inclusion	Q-score
Sd	 0.8364	 0.3910
Se	 0.8108	 0.3870
Sf	 0.7884	 0.2880
Sg	 0.7963	 0.2980