



wwPDB EM Validation Summary Report ⓘ

Feb 9, 2026 – 05:42 am GMT

PDB ID : 9S3C / pdb_00009s3c
EMDB ID : EMD-54529
Title : NMT1-NAC bound human RNC with 58 amino acid ARF1-linker - State 2
Authors : Denk, T.; Berninghausen, O.; Beckmann, R.
Deposited on : 2025-07-24
Resolution : 2.42 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:

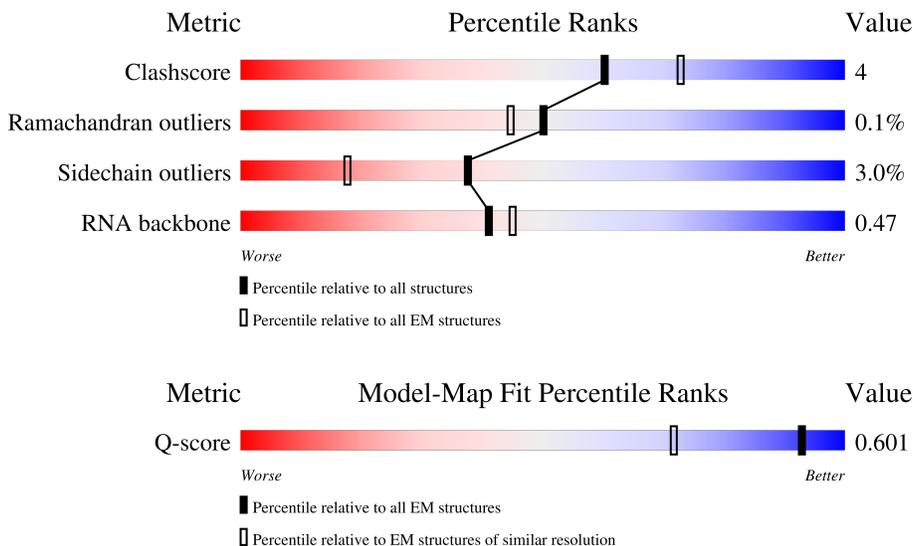
EMDB validation analysis : 0.0.1.dev131
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.48

1 Overall quality at a glance

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

The reported resolution of this entry is 2.42 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	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	5729 (1.92 - 2.92)

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	CM	586	98%
2	CP	75	59% 41%
3	CR	437	82% 12% 5%

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Mol	Chain	Length	Quality of chain
4	CZ	95	
5	L5	5070	
6	L7	121	
7	L8	157	
8	LA	257	
9	LB	403	
10	LC	427	
11	LD	297	
12	LE	288	
13	LF	248	
14	LG	266	
15	LH	192	
16	LI	214	
17	LJ	178	
18	LL	211	
19	LM	215	
20	LN	204	
21	LO	203	
22	LP	184	
23	LQ	188	
24	LR	196	
25	LS	176	
26	LT	160	
27	LU	128	
28	LV	140	

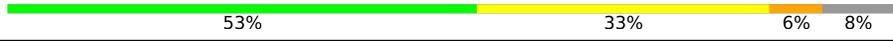
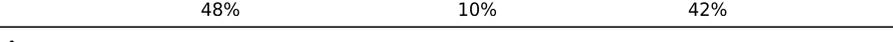
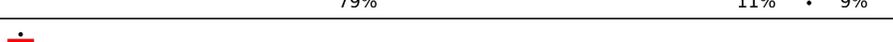
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Mol	Chain	Length	Quality of chain
29	LW	157	71% 27%
30	LX	156	63% 23%
31	LY	145	76% 16% 8%
32	LZ	136	83% 15%
33	La	148	85% 14%
34	Lb	159	42% 53%
35	Lc	115	73% 11% 16%
36	Ld	125	75% 10% 14%
37	Le	135	76% 19% 5%
38	Lf	110	89% 10%
39	Lg	117	86% 10%
40	Lh	123	85% 13%
41	Li	105	91% 6%
42	Lj	97	79% 9% 11%
43	Lk	70	80% 16%
44	Ll	51	73% 25%
45	Lm	128	38% 59%
46	Ln	25	80% 16%
47	Lo	106	82% 17%
48	Lp	92	91% 7%
49	Lr	137	83% 8% 9%
50	Ls	317	48% 17% 33%
51	Lt	165	65% 27%
52	NA	215	22% 69%
53	NB	162	15% 58% 15% 23%

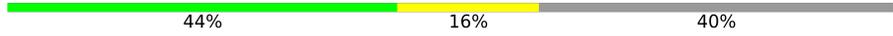
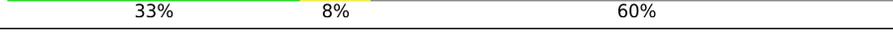
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Mol	Chain	Length	Quality of chain
54	NM	496	
55	S2	1869	
56	SA	295	
57	SB	264	
58	SC	293	
59	SD	243	
60	SE	263	
61	SF	204	
62	SG	249	
63	SH	194	
64	SI	208	
65	SJ	194	
66	SK	165	
67	SL	158	
68	SM	132	
69	SN	151	
70	SO	151	
71	SP	145	
72	SQ	146	
73	SR	135	
74	SS	152	
75	ST	145	
76	SU	119	
77	SV	83	
78	SW	130	

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Mol	Chain	Length	Quality of chain
79	SX	143	 84% 14% ..
80	SY	133	 75% 15% • 8%
81	SZ	125	 44% 16% 40%
82	Sa	115	 72% 13% • 14%
83	Sb	84	 89% 10% •
84	Sc	69	 67% 23% • 9%
85	Sd	56	 79% 16% 5%
86	Se	133	 38% • 59%
87	Sf	156	 33% 8% 60%
88	Sg	317	 81% 15% • •

2 Entry composition [i](#)

There are 91 unique types of molecules in this entry. The entry contains 222376 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 58 amino acid ARF1-linker - V5 peptide - hCMV staller mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	CM	12	247	111	37	87	12	0	0

- Molecule 2 is a RNA chain called prolyl-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	CP	75	1602	713	284	530	75	0	0

- Molecule 3 is a protein called Eukaryotic peptide chain release factor subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	CR	414	3269	2080	557	621	11	0	0

- Molecule 4 is a protein called nascent chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	CZ	80	461	287	84	88	2	0	0

- Molecule 5 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	L5	3648	78199	34823	14307	25422	3647	0	0

- Molecule 6 is a RNA chain called 5S rRNA.

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

- Molecule 7 is a RNA chain called 5.8S rRNA.

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

- Molecule 8 is a protein called 60S ribosomal protein L8.

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

- Molecule 9 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	LB	395	3183	2027	597	545	14	0	0

- Molecule 10 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	LC	364	2884	1814	576	479	15	0	0

- Molecule 11 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	LD	293	2361	1496	430	421	14	0	0

- Molecule 12 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	LE	219	1754	1129	334	287	4	0	0

- Molecule 13 is a protein called Large ribosomal subunit protein uL30.

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

- Molecule 14 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	LG	229	1818	1157	351	306	4	0	0

- Molecule 15 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	LH	190	1510	950	282	272	6	0	0

- Molecule 16 is a protein called Ribosomal protein uL16-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	LI	207	1666	1059	323	270	14	0	0

- Molecule 17 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	LJ	169	1329	841	250	232	6	0	0

- Molecule 18 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	LL	205	1630	1020	340	266	4	0	0

- Molecule 19 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	LM	139	1122	720	216	179	7	0	0

- Molecule 20 is a protein called 60S ribosomal protein L15.

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

- Molecule 21 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LO	200	Total	C	N	O	S	0	0
			1633	1053	318	257	5		

- Molecule 22 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LP	153	Total	C	N	O	S	0	0
			1234	771	240	214	9		

- Molecule 23 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LQ	187	Total	C	N	O	S	0	0
			1502	939	313	245	5		

- Molecule 24 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LR	176	Total	C	N	O	S	0	0
			1452	898	318	227	9		

- Molecule 25 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LS	175	Total	C	N	O	S	0	0
			1452	925	283	234	10		

- Molecule 26 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LT	159	Total	C	N	O	S	0	0
			1282	813	250	213	6		

- Molecule 27 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LU	101	Total	C	N	O	S	0	0
			806	520	141	143	2		

- Molecule 28 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	LV	131	971	613	183	170	5	0	0

- Molecule 29 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	LW	115	808	506	160	139	3	0	0

- Molecule 30 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	LX	120	981	627	184	169	1	0	0

- Molecule 31 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	LY	134	1111	697	225	186	3	0	0

- Molecule 32 is a protein called 60S ribosomal protein L27.

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

- Molecule 33 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	La	147	1154	731	236	184	3	0	0

- Molecule 34 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	Lb	75	590	367	123	97	3	0	0

- Molecule 35 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	Lc	97	742	473	130	133	6	0	0

- Molecule 36 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	Ld	107	874	554	171	147	2	0	0

- Molecule 37 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	Le	128	1049	664	215	165	5	0	0

- Molecule 38 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	Lf	109	872	552	173	144	3	0	0

- Molecule 39 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	Lg	114	889	557	184	142	6	0	0

- Molecule 40 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	Lh	121	1006	635	203	167	1	0	0

- Molecule 41 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	Li	102	813	510	176	123	4	0	0

- Molecule 42 is a protein called Large ribosomal subunit protein eL37.

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

- Molecule 43 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lk	69	Total	C	N	O	S	0	0
			542	350	100	91	1		

- Molecule 44 is a protein called 60S ribosomal protein L39.

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

- Molecule 45 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lm	52	Total	C	N	O	S	0	0
			425	264	90	65	6		

- Molecule 46 is a protein called 60S ribosomal protein L41.

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

- Molecule 47 is a protein called 60S ribosomal protein L36a.

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

- Molecule 48 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Lp	91	Total	C	N	O	S	0	0
			696	440	135	114	7		

- Molecule 49 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Lr	125	Total	C	N	O	S	0	0
			997	618	207	168	4		

- Molecule 50 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Ls	212	Total	C	N	O	S	0	0
			1640	1042	284	305	9		

- Molecule 51 is a protein called Large ribosomal subunit protein uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	Lt	160	Total	C	N	O	S	0	0
			1208	749	226	229	4		

- Molecule 52 is a protein called Nascent polypeptide-associated complex subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	NA	67	Total	C	N	O	S	0	0
			531	335	97	98	1		

- Molecule 53 is a protein called Isoform 2 of Transcription factor BTF3.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	NB	124	Total	C	N	O	S	0	0
			955	593	172	187	3		

- Molecule 54 is a protein called Glycylpeptide N-tetradecanoyltransferase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	NM	393	Total	C	N	O	S	3	0
			3209	2075	544	573	17		

- Molecule 55 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	S2	1713	Total	C	N	O	P	0	0
			36562	16320	6564	11966	1712		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
56	SA	216	1671	1068	297	298	8	0	0

- Molecule 57 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	SB	213	1718	1092	308	304	14	0	0

- Molecule 58 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
58	SC	219	1661	1076	284	291	10	0	0

- Molecule 59 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
59	SD	223	1594	1023	291	273	7	0	0

- Molecule 60 is a protein called Small ribosomal subunit protein eS4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
60	SE	262	1972	1270	370	324	8	0	0

- Molecule 61 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	SF	181	1403	879	269	248	7	0	0

- Molecule 62 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
62	SG	231	1634	1026	332	269	7	0	0

- Molecule 63 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms				AltConf	Trace
63	SH	183	Total	C	N	O	0	0
			1274	819	242	213		

- Molecule 64 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SI	206	Total	C	N	O	S	0	0
			1574	989	308	272	5		

- Molecule 65 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SJ	179	Total	C	N	O	S	0	0
			1431	915	290	224	2		

- Molecule 66 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SK	96	Total	C	N	O	S	0	0
			726	479	127	115	5		

- Molecule 67 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SL	144	Total	C	N	O	S	0	0
			1143	730	213	194	6		

- Molecule 68 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SM	122	Total	C	N	O	S	0	0
			950	596	168	177	9		

- Molecule 69 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SN	150	Total	C	N	O	S	0	0
			1182	758	226	197	1		

- Molecule 70 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SO	134	Total	C	N	O	S	0	0
			969	596	194	173	6		

- Molecule 71 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SP	129	Total	C	N	O	S	0	0
			990	626	190	168	6		

- Molecule 72 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SQ	142	Total	C	N	O	S	0	0
			1075	689	204	179	3		

- Molecule 73 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SR	131	Total	C	N	O	S	0	0
			942	600	179	159	4		

- Molecule 74 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SS	141	Total	C	N	O	S	0	0
			1130	712	232	185	1		

- Molecule 75 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	ST	143	Total	C	N	O	S	0	0
			1081	679	210	189	3		

- Molecule 76 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SU	101	Total	C	N	O	S	0	0
			713	447	137	125	4		

- Molecule 77 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
77	SV	83	618	385	115	113	5	0	0

- Molecule 78 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
78	SW	129	1026	655	193	172	6	0	0

- Molecule 79 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
79	SX	141	1078	682	212	181	3	0	0

- Molecule 80 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
80	SY	123	927	588	183	152	4	0	0

- Molecule 81 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
81	SZ	75	559	361	105	92	1	0	0

- Molecule 82 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
82	Sa	99	781	487	165	124	5	0	0

- Molecule 83 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
83	Sb	83	618	386	118	107	7	0	0

- Molecule 84 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Sc	63	Total	C	N	O	S	0	0
			472	289	92	89	2		

- Molecule 85 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	Sd	53	Total	C	N	O	S	0	0
			433	271	87	70	5		

- Molecule 86 is a protein called Ubiquitin-like FUBI-ribosomal protein eS30 fusion protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	Se	55	Total	C	N	O	S	0	0
			416	254	93	68	1		

- Molecule 87 is a protein called Ubiquitin.

Mol	Chain	Residues	Atoms					AltConf	Trace
87	Sf	63	Total	C	N	O	S	0	0
			515	324	98	86	7		

- Molecule 88 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
88	Sg	308	Total	C	N	O	S	0	0
			2180	1393	381	395	11		

- Molecule 89 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
89	CM	1	Total	Mg	0
			1	1	
89	L5	125	Total	Mg	0
			125	125	
89	L7	3	Total	Mg	0
			3	3	
89	L8	3	Total	Mg	0
			3	3	
89	LA	2	Total	Mg	0
			2	2	
89	LC	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
89	LI	1	Total 1	Mg 1	0
89	LN	1	Total 1	Mg 1	0
89	LP	1	Total 1	Mg 1	0
89	LV	1	Total 1	Mg 1	0
89	S2	50	Total 50	Mg 50	0
89	ST	1	Total 1	Mg 1	0
89	Sa	1	Total 1	Mg 1	0

- Molecule 90 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 91 is water.

Mol	Chain	Residues	Atoms		AltConf
91	L5	4	Total 4	O 4	0
91	L7	1	Total 1	O 1	0

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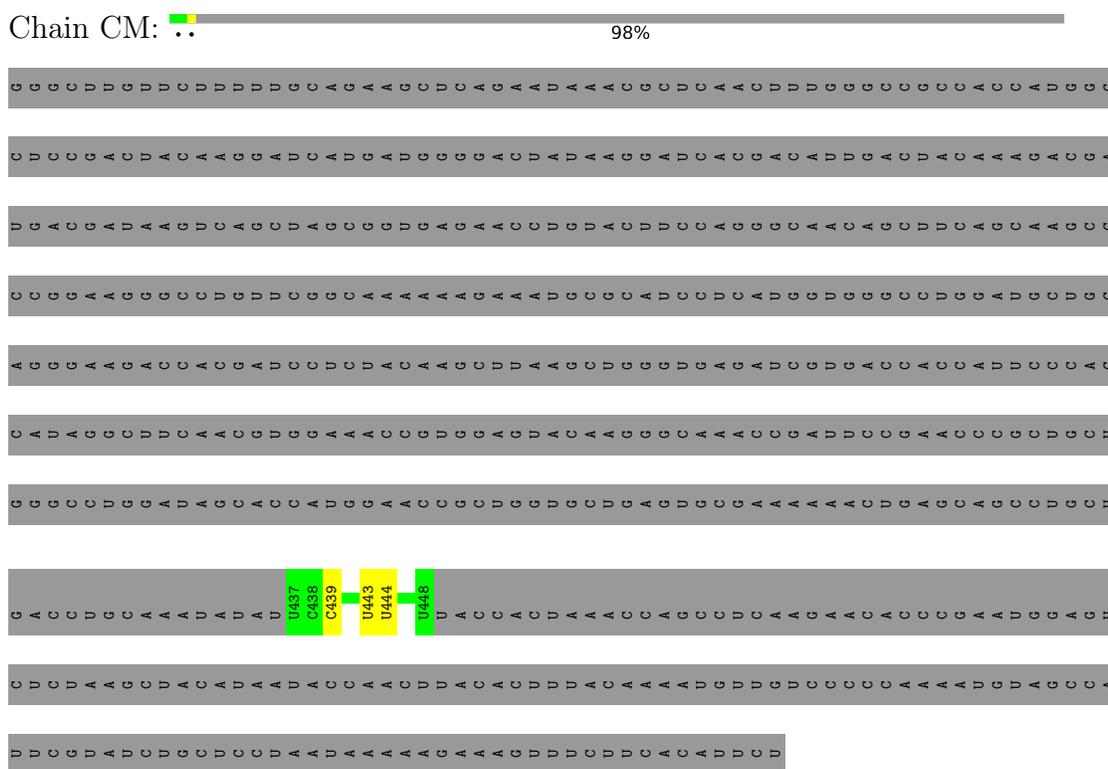
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Mol	Chain	Residues	Atoms		AltConf
91	LI	1	Total 1	O 1	0
91	LN	1	Total 1	O 1	0
91	La	1	Total 1	O 1	0
91	S2	3	Total 3	O 3	0

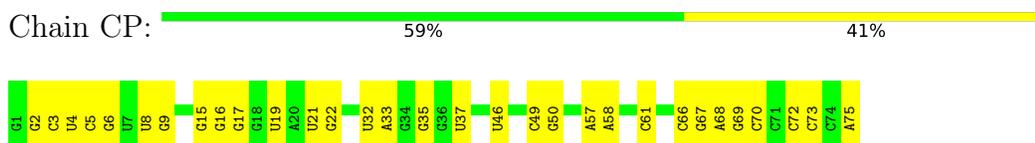
3 Residue-property plots [i](#)

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

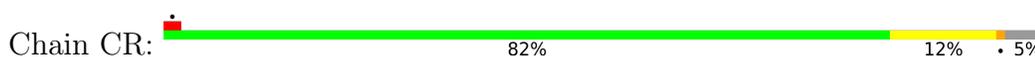
- Molecule 1: 58 amino acid ARF1-linker - V5 peptide - hCMV staller mRNA

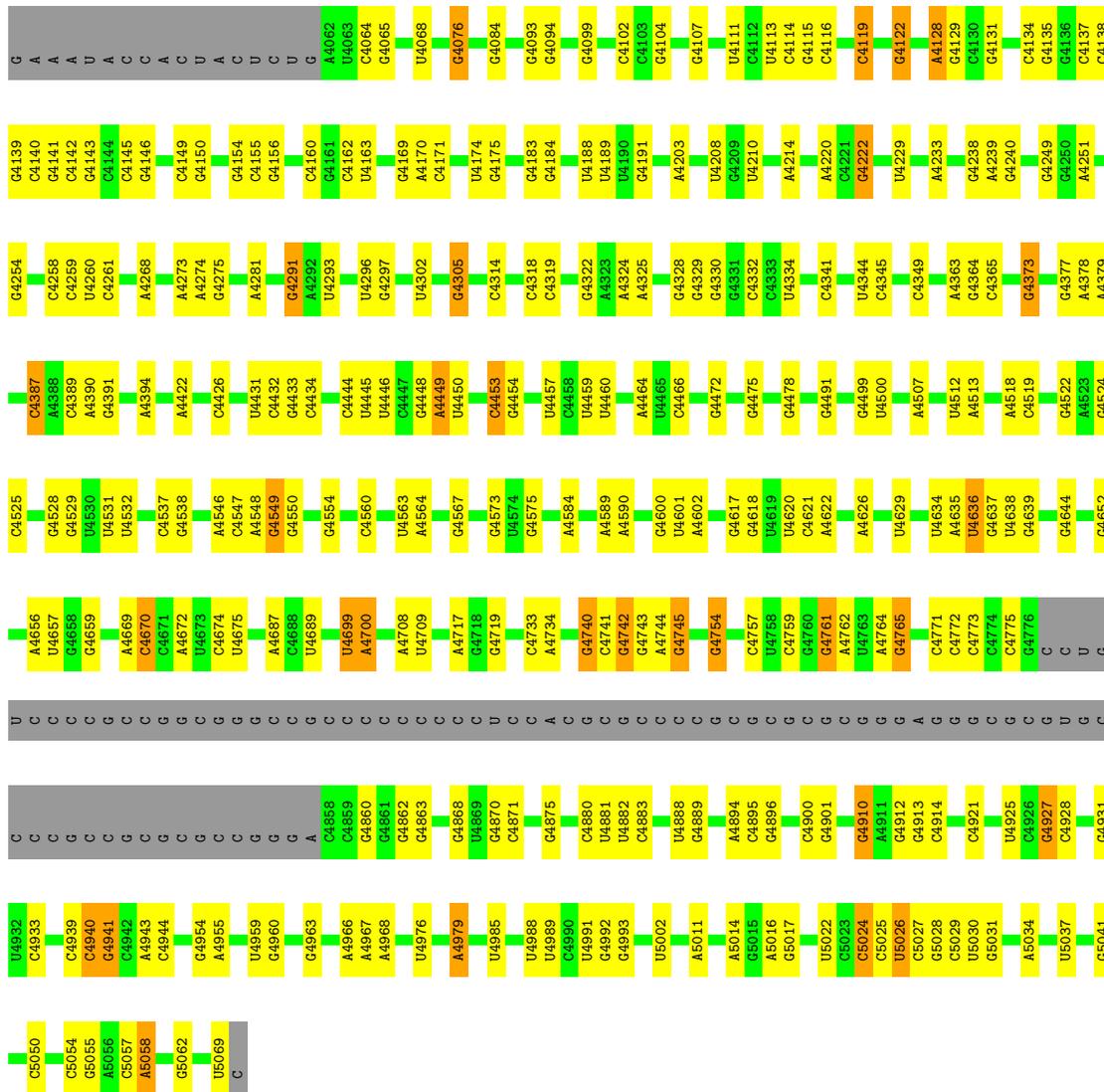


- Molecule 2: prolyl-tRNA



- Molecule 3: Eukaryotic peptide chain release factor subunit 1

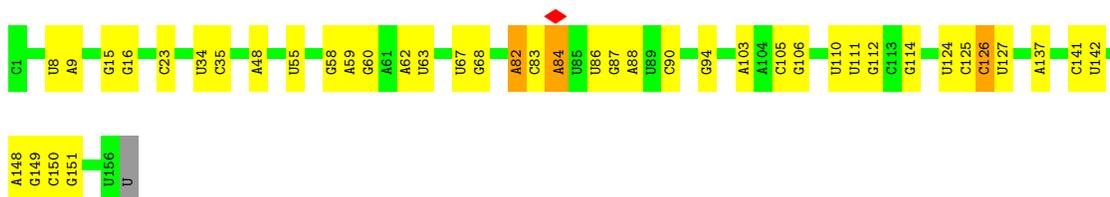




● Molecule 6: 5S rRNA



● Molecule 7: 5.8S rRNA

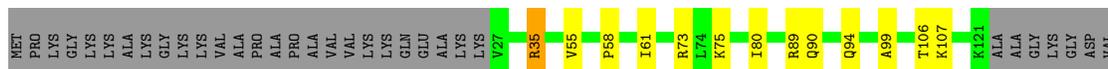




• Molecule 13: Large ribosomal subunit protein uL30



• Molecule 14: 60S ribosomal protein L7a



• Molecule 15: 60S ribosomal protein L9



• Molecule 16: Ribosomal protein uL16-like

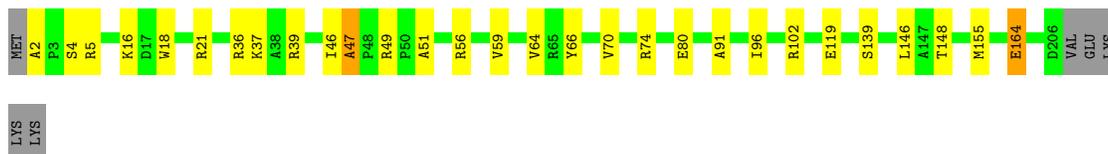
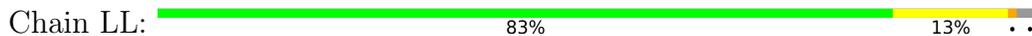


• Molecule 17: 60S ribosomal protein L11

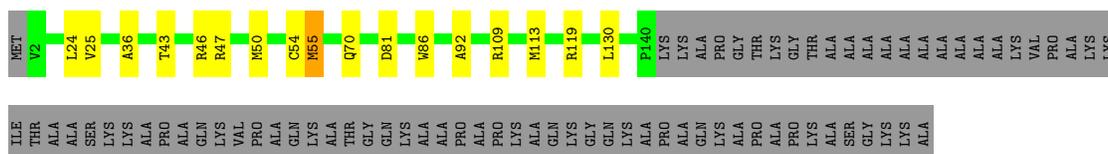




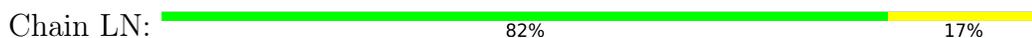
• Molecule 18: 60S ribosomal protein L13



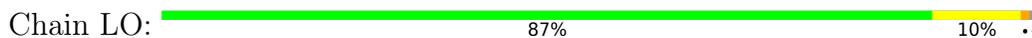
• Molecule 19: 60S ribosomal protein L14



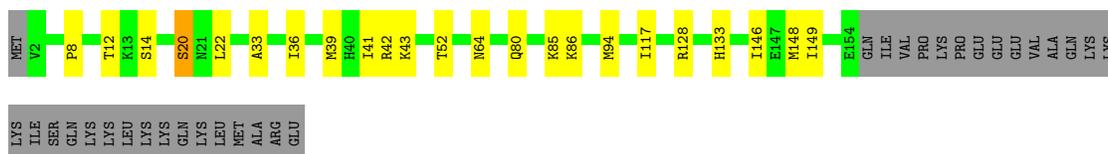
• Molecule 20: 60S ribosomal protein L15



• Molecule 21: 60S ribosomal protein L13a



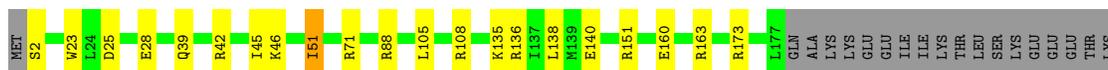
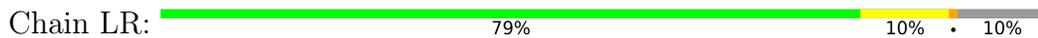
• Molecule 22: 60S ribosomal protein L17



• Molecule 23: 60S ribosomal protein L18



- Molecule 24: 60S ribosomal protein L19

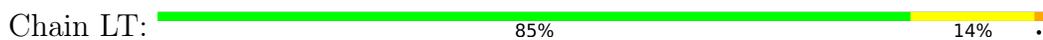


LYS

- Molecule 25: 60S ribosomal protein L18a



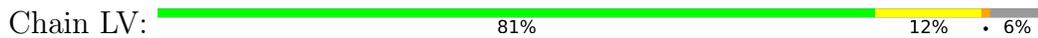
- Molecule 26: 60S ribosomal protein L21



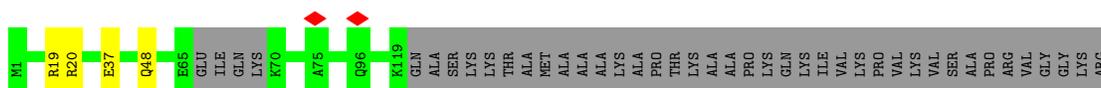
- Molecule 27: 60S ribosomal protein L22



- Molecule 28: 60S ribosomal protein L23

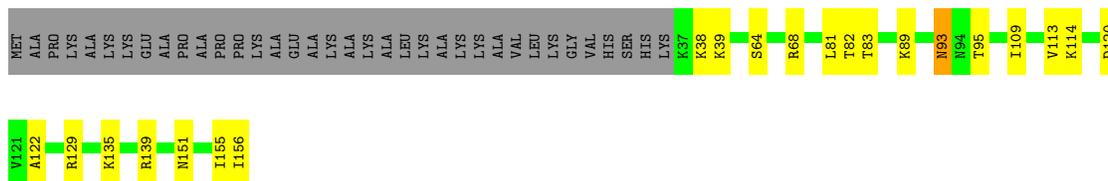


- Molecule 29: 60S ribosomal protein L24



- Molecule 30: 60S ribosomal protein L23a

Chain LX:  63% 13% 23%



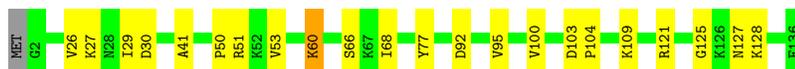
- Molecule 31: 60S ribosomal protein L26

Chain LY:  76% 16% 8%



- Molecule 32: 60S ribosomal protein L27

Chain LZ:  83% 15% ..



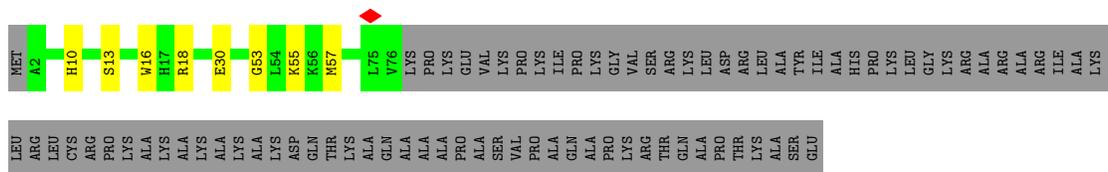
- Molecule 33: 60S ribosomal protein L27a

Chain La:  85% 14% ..



- Molecule 34: 60S ribosomal protein L29

Chain Lb:  42% 5% 53%



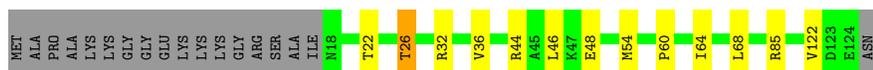
- Molecule 35: 60S ribosomal protein L30

Chain Lc:  73% 11% 16%



- Molecule 36: 60S ribosomal protein L31

Chain Ld:  75% 10% 14%



- Molecule 37: 60S ribosomal protein L32

Chain Le:  76% 19% 5%



- Molecule 38: 60S ribosomal protein L35a

Chain Lf:  89% 10%



- Molecule 39: 60S ribosomal protein L34

Chain Lg:  86% 10%



- Molecule 40: 60S ribosomal protein L35

Chain Lh:  85% 13%



- Molecule 41: 60S ribosomal protein L36

Chain Li:  91% 6%



- Molecule 42: Large ribosomal subunit protein eL37

Chain Lj:  79% 9% 11%



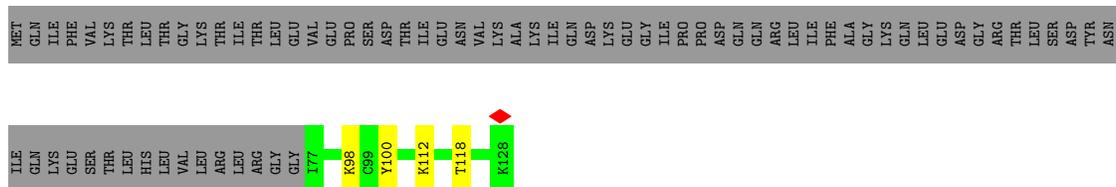
- Molecule 43: 60S ribosomal protein L38



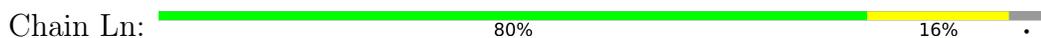
• Molecule 44: 60S ribosomal protein L39



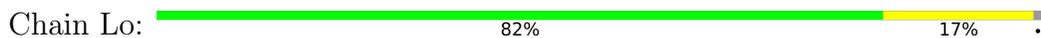
• Molecule 45: Ubiquitin-60S ribosomal protein L40



• Molecule 46: 60S ribosomal protein L41



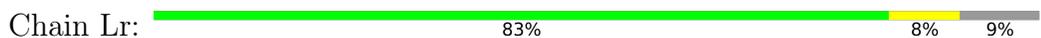
• Molecule 47: 60S ribosomal protein L36a

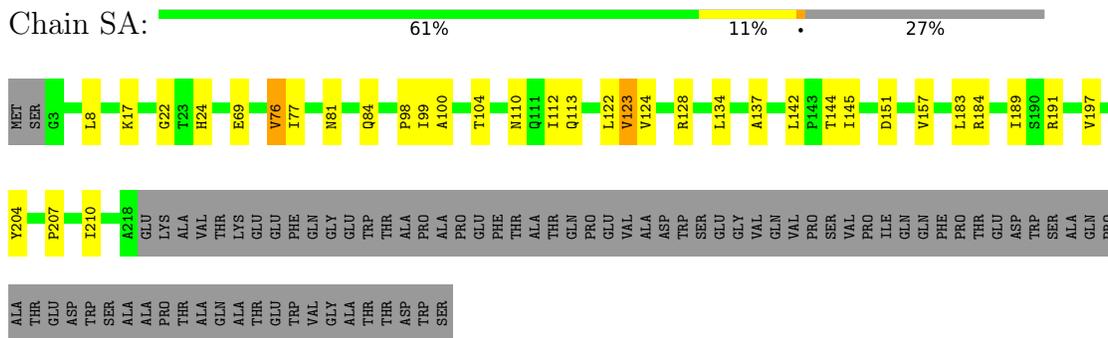


• Molecule 48: 60S ribosomal protein L37a

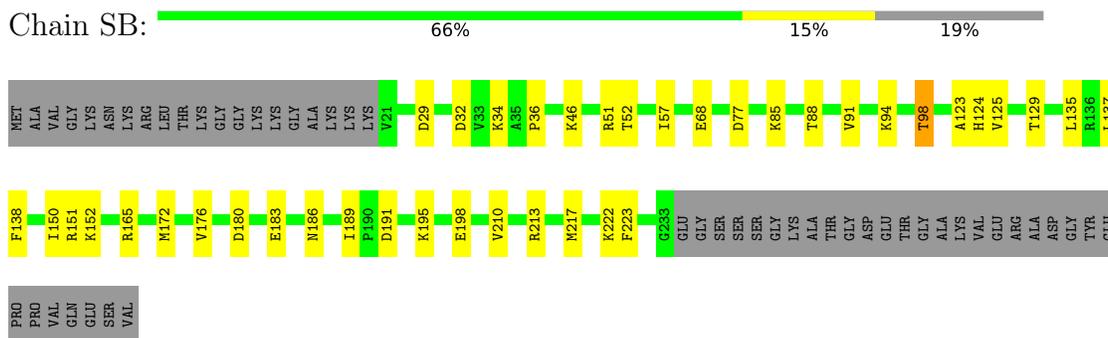


• Molecule 49: 60S ribosomal protein L28

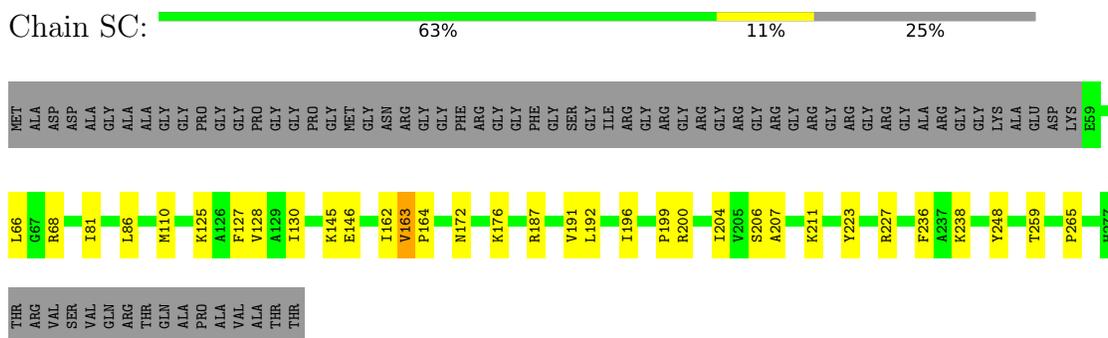




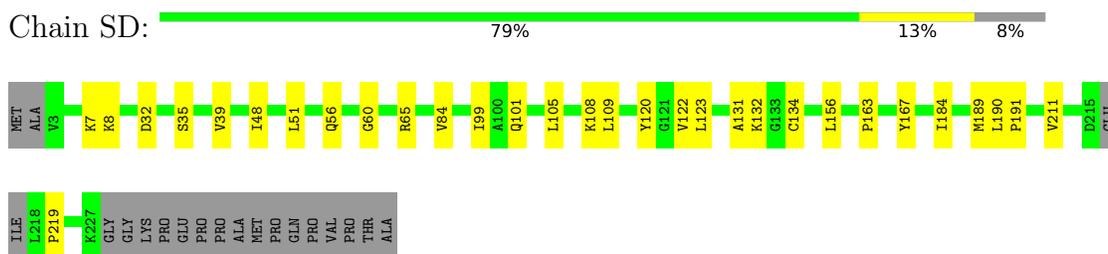
• Molecule 57: 40S ribosomal protein S3a



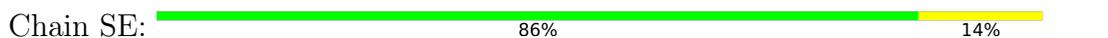
• Molecule 58: 40S ribosomal protein S2



• Molecule 59: 40S ribosomal protein S3

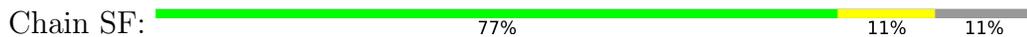


• Molecule 60: Small ribosomal subunit protein eS4, X isoform





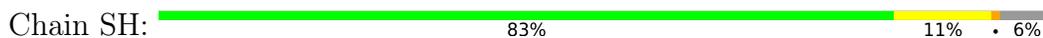
• Molecule 61: 40S ribosomal protein S5



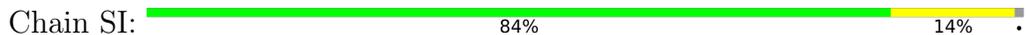
• Molecule 62: 40S ribosomal protein S6



• Molecule 63: 40S ribosomal protein S7

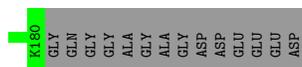


• Molecule 64: 40S ribosomal protein S8

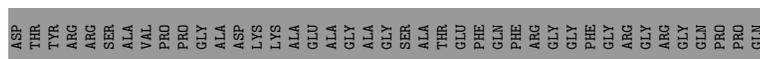


• Molecule 65: 40S ribosomal protein S9

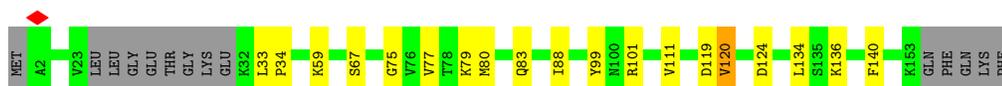




• Molecule 66: 40S ribosomal protein S10



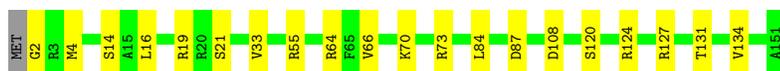
• Molecule 67: 40S ribosomal protein S11



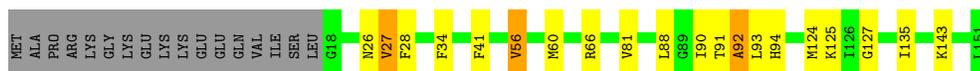
• Molecule 68: 40S ribosomal protein S12



• Molecule 69: 40S ribosomal protein S13



• Molecule 70: 40S ribosomal protein S14

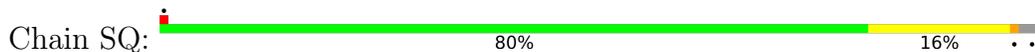


• Molecule 71: 40S ribosomal protein S15

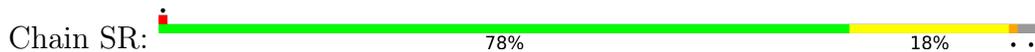




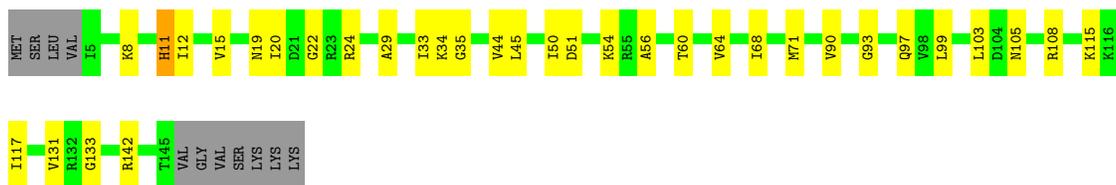
• Molecule 72: 40S ribosomal protein S16



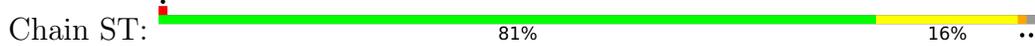
• Molecule 73: 40S ribosomal protein S17



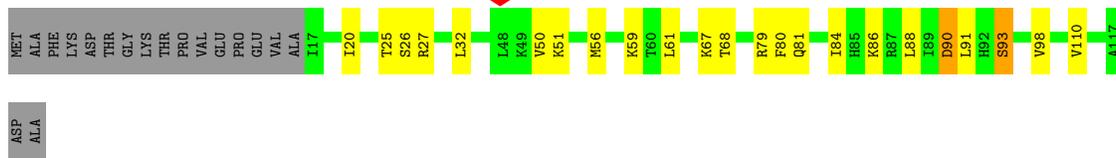
• Molecule 74: 40S ribosomal protein S18



• Molecule 75: 40S ribosomal protein S19



• Molecule 76: 40S ribosomal protein S20

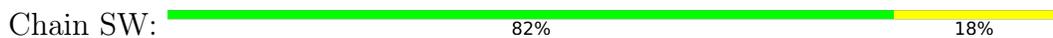


• Molecule 77: 40S ribosomal protein S21

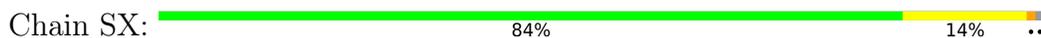




- Molecule 78: 40S ribosomal protein S15a



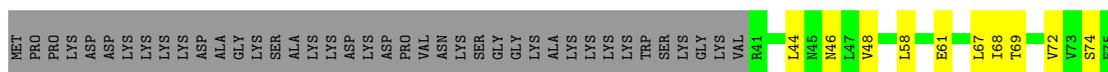
- Molecule 79: 40S ribosomal protein S23



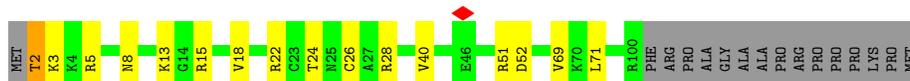
- Molecule 80: 40S ribosomal protein S24



- Molecule 81: 40S ribosomal protein S25



- Molecule 82: 40S ribosomal protein S26



- Molecule 83: 40S ribosomal protein S27



- Molecule 84: 40S ribosomal protein S28

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	49105	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 ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	5.017	Depositor
Minimum map value	-2.474	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.119	Depositor
Recommended contour level	0.075	Depositor
Map size (\AA)	465.28, 465.28, 465.28	wwPDB
Map dimensions	640, 640, 640	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.727, 0.727, 0.727	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: MG, ZN, LYO

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	CM	0.26	0/273	0.42	0/421
2	CP	0.24	0/1789	0.44	0/2788
3	CR	0.22	0/3311	0.52	1/4452 (0.0%)
4	CZ	0.19	0/465	0.44	0/638
5	L5	0.27	0/87471	0.36	0/136443
6	L7	0.26	0/2858	0.33	0/4455
7	L8	0.26	0/3701	0.34	0/5766
8	LA	0.26	0/1936	0.56	2/2596 (0.1%)
9	LB	0.25	0/3251	0.50	0/4352
10	LC	0.23	0/2938	0.50	3/3947 (0.1%)
11	LD	0.21	0/2407	0.47	0/3227
12	LE	0.25	0/1788	0.58	1/2399 (0.0%)
13	LF	0.25	0/1905	0.48	0/2539
14	LG	0.24	0/1849	0.53	1/2496 (0.0%)
15	LH	0.24	0/1529	0.47	0/2058
16	LI	0.23	0/1705	0.48	0/2277
17	LJ	0.24	0/1352	0.52	1/1813 (0.1%)
18	LL	0.23	0/1661	0.49	0/2229
19	LM	0.21	0/1145	0.44	0/1536
20	LN	0.25	0/1746	0.44	0/2338
21	LO	0.25	0/1665	0.50	1/2229 (0.0%)
22	LP	0.23	0/1260	0.46	0/1692
23	LQ	0.24	0/1526	0.48	0/2038
24	LR	0.25	0/1468	0.47	0/1945
25	LS	0.31	1/1492 (0.1%)	0.55	2/2003 (0.1%)
26	LT	0.23	0/1310	0.51	0/1752
27	LU	0.23	0/820	0.62	0/1102
28	LV	0.23	0/985	0.49	0/1323
29	LW	0.23	0/820	0.49	0/1104
30	LX	0.26	0/998	0.49	0/1341
31	LY	0.24	0/1128	0.48	0/1500
32	LZ	0.26	0/1130	0.47	0/1507

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	La	0.24	0/1183	0.44	0/1582
34	Lb	0.26	0/600	0.54	0/796
35	Lc	0.22	0/752	0.47	0/1011
36	Ld	0.23	0/889	0.43	0/1198
37	Le	0.24	0/1067	0.47	0/1425
38	Lf	0.27	0/891	0.53	0/1194
39	Lg	0.23	0/899	0.46	0/1200
40	Lh	0.21	0/1014	0.46	0/1340
41	Li	0.20	0/824	0.43	0/1093
42	Lj	0.25	0/720	0.46	0/952
43	Lk	0.29	0/548	0.61	0/730
44	Ll	0.22	0/454	0.40	0/599
45	Lm	0.20	0/431	0.35	0/570
46	Ln	0.24	0/231	0.36	0/294
47	Lo	0.22	0/876	0.46	0/1156
48	Lp	0.22	0/706	0.47	0/939
49	Lr	0.23	0/1012	0.45	0/1358
50	Ls	0.32	0/1666	0.75	2/2250 (0.1%)
51	Lt	0.33	0/1224	0.82	0/1651
52	NA	0.42	0/536	0.91	2/715 (0.3%)
53	NB	0.42	0/963	0.82	3/1292 (0.2%)
54	NM	0.68	6/3299 (0.2%)	1.00	14/4483 (0.3%)
55	S2	0.26	0/40882	0.39	0/63715
56	SA	0.26	0/1708	0.53	0/2324
57	SB	0.21	0/1745	0.45	0/2337
58	SC	0.23	0/1697	0.47	0/2301
59	SD	0.22	0/1620	0.50	0/2198
60	SE	0.22	0/2014	0.47	0/2726
61	SF	0.25	0/1423	0.55	0/1913
62	SG	0.24	0/1657	0.51	0/2247
63	SH	0.20	0/1295	0.46	0/1763
64	SI	0.22	0/1603	0.47	0/2161
65	SJ	0.22	0/1456	0.51	0/1957
66	SK	0.34	0/750	0.59	0/1026
67	SL	0.24	0/1163	0.44	0/1562
68	SM	0.36	0/960	0.96	6/1286 (0.5%)
69	SN	0.21	0/1206	0.45	0/1626
70	SO	0.26	0/982	0.60	1/1320 (0.1%)
71	SP	0.22	0/1010	0.45	0/1362
72	SQ	0.22	0/1093	0.51	0/1470
73	SR	0.29	0/955	0.66	1/1294 (0.1%)
74	SS	0.27	0/1148	0.67	2/1542 (0.1%)
75	ST	0.21	0/1100	0.40	0/1479

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SU	0.23	0/722	0.55	0/983
77	SV	0.22	0/625	0.41	0/837
78	SW	0.25	0/1043	0.49	0/1396
79	SX	0.25	0/1096	0.52	0/1467
80	SY	0.24	0/944	0.57	1/1271 (0.1%)
81	SZ	0.29	0/565	0.67	2/764 (0.3%)
82	Sa	0.27	0/794	0.52	0/1065
83	Sb	0.26	0/632	0.63	0/851
84	Sc	0.25	0/474	0.69	0/638
85	Sd	0.23	0/443	0.51	0/589
86	Se	0.17	0/420	0.41	0/554
87	Sf	0.30	0/525	0.70	0/695
88	Sg	0.21	0/2235	0.57	0/3068
All	All	0.27	7/238452 (0.0%)	0.45	46/349921 (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
18	LL	0	1
23	LQ	0	1
39	Lg	0	1
51	Lt	0	1
52	NA	0	1
57	SB	0	1
62	SG	0	1
65	SJ	0	1
74	SS	0	1
All	All	0	9

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	NM	364	PRO	CB-CG	20.43	2.51	1.49
54	NM	364	PRO	CG-CD	-17.53	0.91	1.50
54	NM	364	PRO	N-CD	11.46	1.63	1.47
54	NM	364	PRO	N-CA	-9.92	1.35	1.47
54	NM	364	PRO	CA-CB	-6.16	1.45	1.53

The worst 5 of 46 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	NM	364	PRO	CB-CG-CD	-33.15	0.04	106.10
54	NM	364	PRO	CA-N-CD	-17.85	87.01	112.00
54	NM	364	PRO	N-CA-CB	-10.86	91.98	103.38
73	SR	122	PRO	CA-N-CD	-10.44	97.39	112.00
54	NM	364	PRO	CA-CB-CG	-10.33	84.88	104.50

There are no chirality outliers.

5 of 9 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
18	LL	47	ALA	Peptide
23	LQ	94	GLU	Peptide
39	Lg	52	ARG	Peptide
51	Lt	57	ARG	Sidechain
52	NA	110	ASP	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	CM	247	0	128	1	0
2	CP	1602	0	809	4	0
3	CR	3269	0	3312	30	0
4	CZ	461	0	338	4	0
5	L5	78199	0	39524	400	0
6	L7	2558	0	1296	3	0
7	L8	3314	0	1683	15	0
8	LA	1898	0	1993	21	0
9	LB	3183	0	3316	26	0
10	LC	2884	0	3050	19	0
11	LD	2361	0	2378	25	0
12	LE	1754	0	1899	26	0
13	LF	1870	0	1996	21	0
14	LG	1818	0	1911	20	0
15	LH	1510	0	1579	15	0
16	LI	1666	0	1711	22	0
17	LJ	1329	0	1348	17	0
18	LL	1630	0	1715	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	LM	1122	0	1174	11	0
20	LN	1701	0	1749	26	0
21	LO	1633	0	1771	13	0
22	LP	1234	0	1254	13	0
23	LQ	1502	0	1616	11	0
24	LR	1452	0	1580	14	0
25	LS	1452	0	1490	13	0
26	LT	1282	0	1336	17	0
27	LU	806	0	826	11	0
28	LV	971	0	1024	12	0
29	LW	808	0	726	2	0
30	LX	981	0	1055	18	0
31	LY	1111	0	1194	14	0
32	LZ	1107	0	1182	13	0
33	La	1154	0	1198	11	0
34	Lb	590	0	613	9	0
35	Lc	742	0	774	8	0
36	Ld	874	0	918	6	0
37	Le	1049	0	1136	14	0
38	Lf	872	0	901	6	0
39	Lg	889	0	968	8	0
40	Lh	1006	0	1132	14	0
41	Li	813	0	887	4	0
42	Lj	705	0	737	7	0
43	Lk	542	0	590	8	0
44	Ll	444	0	483	7	0
45	Lm	425	0	461	3	0
46	Ln	230	0	276	3	0
47	Lo	862	0	929	10	0
48	Lp	696	0	744	5	0
49	Lr	997	0	1054	5	0
50	Ls	1640	0	1687	36	0
51	Lt	1208	0	1257	33	0
52	NA	531	0	573	10	0
53	NB	955	0	973	19	0
54	NM	3209	0	3185	77	0
55	S2	36562	0	18472	268	0
56	SA	1671	0	1672	17	0
57	SB	1718	0	1786	25	0
58	SC	1661	0	1710	21	0
59	SD	1594	0	1568	19	0
60	SE	1972	0	2012	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	SF	1403	0	1421	12	0
62	SG	1634	0	1568	32	0
63	SH	1274	0	1196	16	0
64	SI	1574	0	1540	22	0
65	SJ	1431	0	1497	22	0
66	SK	726	0	674	10	0
67	SL	1143	0	1177	10	0
68	SM	950	0	987	26	0
69	SN	1182	0	1249	15	0
70	SO	969	0	982	13	0
71	SP	990	0	974	16	0
72	SQ	1075	0	1110	14	0
73	SR	942	0	913	16	0
74	SS	1130	0	1167	19	0
75	ST	1081	0	1093	16	0
76	SU	713	0	692	17	0
77	SV	618	0	617	8	0
78	SW	1026	0	1072	17	0
79	SX	1078	0	1130	12	0
80	SY	927	0	914	12	0
81	SZ	559	0	594	12	0
82	Sa	781	0	831	13	0
83	Sb	618	0	604	4	0
84	Sc	472	0	484	9	0
85	Sd	433	0	415	7	0
86	Se	416	0	439	4	0
87	Sf	515	0	521	6	0
88	Sg	2180	0	1968	28	0
89	CM	1	0	0	0	0
89	L5	125	0	0	0	0
89	L7	3	0	0	0	0
89	L8	3	0	0	0	0
89	LA	2	0	0	0	0
89	LC	1	0	0	0	0
89	LI	1	0	0	0	0
89	LN	1	0	0	0	0
89	LP	1	0	0	0	0
89	LV	1	0	0	0	0
89	S2	50	0	0	0	0
89	ST	1	0	0	0	0
89	Sa	1	0	0	0	0
90	Lg	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
90	Lj	1	0	0	0	0
90	Lm	1	0	0	0	0
90	Lo	1	0	0	0	0
90	Lp	1	0	0	0	0
90	Sa	1	0	0	0	0
90	Sd	1	0	0	0	0
90	Sf	1	0	0	0	0
91	L5	4	0	0	0	0
91	L7	1	0	0	0	0
91	LI	1	0	0	0	0
91	LN	1	0	0	0	0
91	La	1	0	0	0	0
91	S2	3	0	0	0	0
All	All	222376	0	164488	1651	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 4.

The worst 5 of 1651 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)
54:NM:364:PRO:CG	54:NM:364:PRO:N	2.04	1.18
54:NM:364:PRO:CD	54:NM:364:PRO:HG3	1.68	1.17
54:NM:364:PRO:CD	54:NM:364:PRO:HG2	1.68	1.10
54:NM:364:PRO:CG	54:NM:364:PRO:HD2	1.55	1.05
54:NM:364:PRO:CG	54:NM:364:PRO:HD3	1.55	1.02

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	CR	411/437 (94%)	403 (98%)	8 (2%)	0	100	100
4	CZ	76/95 (80%)	67 (88%)	8 (10%)	1 (1%)	10	13
8	LA	246/257 (96%)	230 (94%)	16 (6%)	0	100	100
9	LB	393/403 (98%)	373 (95%)	20 (5%)	0	100	100
10	LC	362/427 (85%)	342 (94%)	19 (5%)	1 (0%)	37	50
11	LD	291/297 (98%)	270 (93%)	21 (7%)	0	100	100
12	LE	213/288 (74%)	191 (90%)	22 (10%)	0	100	100
13	LF	223/248 (90%)	213 (96%)	10 (4%)	0	100	100
14	LG	225/266 (85%)	212 (94%)	13 (6%)	0	100	100
15	LH	188/192 (98%)	177 (94%)	11 (6%)	0	100	100
16	LI	203/214 (95%)	193 (95%)	10 (5%)	0	100	100
17	LJ	167/178 (94%)	164 (98%)	3 (2%)	0	100	100
18	LL	203/211 (96%)	191 (94%)	12 (6%)	0	100	100
19	LM	137/215 (64%)	132 (96%)	5 (4%)	0	100	100
20	LN	201/204 (98%)	196 (98%)	5 (2%)	0	100	100
21	LO	198/203 (98%)	194 (98%)	4 (2%)	0	100	100
22	LP	151/184 (82%)	142 (94%)	9 (6%)	0	100	100
23	LQ	185/188 (98%)	182 (98%)	3 (2%)	0	100	100
24	LR	174/196 (89%)	173 (99%)	1 (1%)	0	100	100
25	LS	173/176 (98%)	165 (95%)	8 (5%)	0	100	100
26	LT	157/160 (98%)	146 (93%)	11 (7%)	0	100	100
27	LU	99/128 (77%)	94 (95%)	5 (5%)	0	100	100
28	LV	129/140 (92%)	119 (92%)	10 (8%)	0	100	100
29	LW	111/157 (71%)	101 (91%)	10 (9%)	0	100	100
30	LX	118/156 (76%)	115 (98%)	3 (2%)	0	100	100
31	LY	132/145 (91%)	128 (97%)	4 (3%)	0	100	100
32	LZ	133/136 (98%)	124 (93%)	9 (7%)	0	100	100
33	La	145/148 (98%)	136 (94%)	9 (6%)	0	100	100
34	Lb	73/159 (46%)	70 (96%)	3 (4%)	0	100	100
35	Lc	95/115 (83%)	92 (97%)	3 (3%)	0	100	100
36	Ld	105/125 (84%)	103 (98%)	2 (2%)	0	100	100
37	Le	126/135 (93%)	123 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	Lf	107/110 (97%)	101 (94%)	6 (6%)	0	100	100
39	Lg	112/117 (96%)	104 (93%)	8 (7%)	0	100	100
40	Lh	119/123 (97%)	116 (98%)	3 (2%)	0	100	100
41	Li	100/105 (95%)	98 (98%)	2 (2%)	0	100	100
42	Lj	84/97 (87%)	81 (96%)	3 (4%)	0	100	100
43	Lk	67/70 (96%)	62 (92%)	5 (8%)	0	100	100
44	Ll	48/51 (94%)	47 (98%)	1 (2%)	0	100	100
45	Lm	50/128 (39%)	50 (100%)	0	0	100	100
46	Ln	22/25 (88%)	22 (100%)	0	0	100	100
47	Lo	103/106 (97%)	100 (97%)	3 (3%)	0	100	100
48	Lp	89/92 (97%)	84 (94%)	5 (6%)	0	100	100
49	Lr	123/137 (90%)	114 (93%)	9 (7%)	0	100	100
50	Ls	210/317 (66%)	204 (97%)	6 (3%)	0	100	100
51	Lt	158/165 (96%)	156 (99%)	2 (1%)	0	100	100
52	NA	65/215 (30%)	57 (88%)	8 (12%)	0	100	100
53	NB	120/162 (74%)	107 (89%)	13 (11%)	0	100	100
54	NM	394/496 (79%)	378 (96%)	16 (4%)	0	100	100
56	SA	214/295 (72%)	202 (94%)	12 (6%)	0	100	100
57	SB	211/264 (80%)	202 (96%)	9 (4%)	0	100	100
58	SC	217/293 (74%)	207 (95%)	10 (5%)	0	100	100
59	SD	219/243 (90%)	207 (94%)	12 (6%)	0	100	100
60	SE	260/263 (99%)	252 (97%)	8 (3%)	0	100	100
61	SF	177/204 (87%)	167 (94%)	9 (5%)	1 (1%)	22	31
62	SG	229/249 (92%)	213 (93%)	14 (6%)	2 (1%)	14	21
63	SH	179/194 (92%)	168 (94%)	11 (6%)	0	100	100
64	SI	204/208 (98%)	197 (97%)	7 (3%)	0	100	100
65	SJ	177/194 (91%)	173 (98%)	4 (2%)	0	100	100
66	SK	94/165 (57%)	88 (94%)	6 (6%)	0	100	100
67	SL	140/158 (89%)	130 (93%)	10 (7%)	0	100	100
68	SM	120/132 (91%)	112 (93%)	8 (7%)	0	100	100
69	SN	148/151 (98%)	143 (97%)	5 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
70	SO	132/151 (87%)	118 (89%)	14 (11%)	0	100	100
71	SP	127/145 (88%)	122 (96%)	5 (4%)	0	100	100
72	SQ	140/146 (96%)	131 (94%)	9 (6%)	0	100	100
73	SR	129/135 (96%)	115 (89%)	14 (11%)	0	100	100
74	SS	139/152 (91%)	118 (85%)	21 (15%)	0	100	100
75	ST	141/145 (97%)	136 (96%)	5 (4%)	0	100	100
76	SU	99/119 (83%)	91 (92%)	8 (8%)	0	100	100
77	SV	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
78	SW	127/130 (98%)	122 (96%)	5 (4%)	0	100	100
79	SX	139/143 (97%)	130 (94%)	8 (6%)	1 (1%)	19	27
80	SY	121/133 (91%)	116 (96%)	5 (4%)	0	100	100
81	SZ	73/125 (58%)	68 (93%)	5 (7%)	0	100	100
82	Sa	97/115 (84%)	91 (94%)	6 (6%)	0	100	100
83	Sb	81/84 (96%)	72 (89%)	9 (11%)	0	100	100
84	Sc	61/69 (88%)	54 (88%)	7 (12%)	0	100	100
85	Sd	51/56 (91%)	51 (100%)	0	0	100	100
86	Se	53/133 (40%)	51 (96%)	2 (4%)	0	100	100
87	Sf	61/156 (39%)	55 (90%)	5 (8%)	1 (2%)	8	10
88	Sg	304/317 (96%)	276 (91%)	28 (9%)	0	100	100
All	All	12559/14649 (86%)	11898 (95%)	654 (5%)	7 (0%)	50	64

5 of 7 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	CZ	48	THR
10	LC	111	TRP
61	SF	80	GLY
79	SX	10	ALA
87	Sf	128	ALA

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	
3	CR	356/375 (95%)	347 (98%)	9 (2%)	42	61
4	CZ	25/83 (30%)	24 (96%)	1 (4%)	27	43
8	LA	190/199 (96%)	182 (96%)	8 (4%)	25	41
9	LB	343/349 (98%)	337 (98%)	6 (2%)	56	73
10	LC	299/348 (86%)	294 (98%)	5 (2%)	56	73
11	LD	241/250 (96%)	235 (98%)	6 (2%)	42	61
12	LE	191/252 (76%)	183 (96%)	8 (4%)	25	41
13	LF	194/215 (90%)	189 (97%)	5 (3%)	41	60
14	LG	188/223 (84%)	182 (97%)	6 (3%)	34	52
15	LH	167/171 (98%)	159 (95%)	8 (5%)	21	35
16	LI	174/181 (96%)	171 (98%)	3 (2%)	56	73
17	LJ	136/149 (91%)	132 (97%)	4 (3%)	37	56
18	LL	164/177 (93%)	160 (98%)	4 (2%)	44	63
19	LM	114/161 (71%)	110 (96%)	4 (4%)	31	49
20	LN	171/172 (99%)	167 (98%)	4 (2%)	45	64
21	LO	170/174 (98%)	165 (97%)	5 (3%)	37	56
22	LP	132/163 (81%)	129 (98%)	3 (2%)	45	64
23	LQ	161/165 (98%)	158 (98%)	3 (2%)	52	70
24	LR	150/175 (86%)	148 (99%)	2 (1%)	65	80
25	LS	156/157 (99%)	154 (99%)	2 (1%)	65	80
26	LT	135/140 (96%)	131 (97%)	4 (3%)	36	55
27	LU	86/115 (75%)	83 (96%)	3 (4%)	31	49
28	LV	99/107 (92%)	97 (98%)	2 (2%)	50	68
29	LW	61/126 (48%)	60 (98%)	1 (2%)	58	75
30	LX	107/133 (80%)	106 (99%)	1 (1%)	75	87
31	LY	123/135 (91%)	118 (96%)	5 (4%)	26	42
32	LZ	117/118 (99%)	112 (96%)	5 (4%)	25	40
33	La	118/121 (98%)	112 (95%)	6 (5%)	20	33
34	Lb	59/126 (47%)	59 (100%)	0	100	100
35	Lc	79/97 (81%)	77 (98%)	2 (2%)	42	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	Ld	94/110 (86%)	92 (98%)	2 (2%)	48	67
37	Le	113/121 (93%)	110 (97%)	3 (3%)	40	58
38	Lf	87/89 (98%)	84 (97%)	3 (3%)	32	50
39	Lg	93/100 (93%)	91 (98%)	2 (2%)	47	65
40	Lh	108/110 (98%)	107 (99%)	1 (1%)	75	87
41	Li	81/89 (91%)	80 (99%)	1 (1%)	67	82
42	Lj	73/80 (91%)	72 (99%)	1 (1%)	62	79
43	Lk	57/65 (88%)	51 (90%)	6 (10%)	5	8
44	Ll	47/48 (98%)	45 (96%)	2 (4%)	25	40
45	Lm	47/116 (40%)	47 (100%)	0	100	100
46	Ln	23/24 (96%)	23 (100%)	0	100	100
47	Lo	93/94 (99%)	91 (98%)	2 (2%)	47	65
48	Lp	71/75 (95%)	70 (99%)	1 (1%)	62	79
49	Lr	107/121 (88%)	103 (96%)	4 (4%)	29	46
50	Ls	180/258 (70%)	171 (95%)	9 (5%)	20	34
51	Lt	132/137 (96%)	122 (92%)	10 (8%)	11	17
52	NA	60/183 (33%)	56 (93%)	4 (7%)	13	21
53	NB	104/136 (76%)	97 (93%)	7 (7%)	13	21
54	NM	353/443 (80%)	348 (99%)	5 (1%)	62	79
56	SA	170/243 (70%)	162 (95%)	8 (5%)	22	36
57	SB	191/231 (83%)	188 (98%)	3 (2%)	58	75
58	SC	175/225 (78%)	171 (98%)	4 (2%)	45	64
59	SD	148/202 (73%)	145 (98%)	3 (2%)	50	68
60	SE	196/225 (87%)	193 (98%)	3 (2%)	60	77
61	SF	142/170 (84%)	140 (99%)	2 (1%)	62	79
62	SG	138/218 (63%)	130 (94%)	8 (6%)	17	27
63	SH	109/174 (63%)	107 (98%)	2 (2%)	54	72
64	SI	149/180 (83%)	145 (97%)	4 (3%)	40	58
65	SJ	143/168 (85%)	142 (99%)	1 (1%)	81	91
66	SK	65/136 (48%)	63 (97%)	2 (3%)	35	54
67	SL	121/142 (85%)	117 (97%)	4 (3%)	33	51

Continued on next page...

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	SM	104/108 (96%)	101 (97%)	3 (3%)	37	56
69	SN	123/131 (94%)	122 (99%)	1 (1%)	79	89
70	SO	95/119 (80%)	90 (95%)	5 (5%)	19	31
71	SP	98/130 (75%)	95 (97%)	3 (3%)	35	54
72	SQ	103/121 (85%)	98 (95%)	5 (5%)	21	35
73	SR	84/122 (69%)	78 (93%)	6 (7%)	12	19
74	SS	112/132 (85%)	110 (98%)	2 (2%)	54	72
75	ST	105/115 (91%)	100 (95%)	5 (5%)	21	35
76	SU	68/107 (64%)	65 (96%)	3 (4%)	24	39
77	SV	62/67 (92%)	62 (100%)	0	100	100
78	SW	110/113 (97%)	108 (98%)	2 (2%)	54	72
79	SX	109/115 (95%)	105 (96%)	4 (4%)	29	46
80	SY	86/115 (75%)	79 (92%)	7 (8%)	9	15
81	SZ	56/103 (54%)	53 (95%)	3 (5%)	18	30
82	Sa	83/98 (85%)	82 (99%)	1 (1%)	67	82
83	Sb	65/76 (86%)	62 (95%)	3 (5%)	23	37
84	Sc	51/62 (82%)	47 (92%)	4 (8%)	10	16
85	Sd	44/49 (90%)	42 (96%)	2 (4%)	23	38
86	Se	39/104 (38%)	38 (97%)	1 (3%)	41	60
87	Sf	56/140 (40%)	52 (93%)	4 (7%)	12	19
88	Sg	201/275 (73%)	193 (96%)	8 (4%)	27	43
All	All	10230/12472 (82%)	9926 (97%)	304 (3%)	37	55

5 of 304 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
67	SL	120	VAL
84	Sc	50	VAL
70	SO	81	VAL
75	ST	87	VAL
88	Sg	186	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 115 such sidechains are listed below:

Mol	Chain	Res	Type
37	Le	117	GLN
83	Sb	51	GLN
53	NB	67	ASN
80	SY	89	HIS
69	SN	62	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	CM	11/586 (1%)	2 (18%)	0
2	CP	74/75 (98%)	24 (32%)	2 (2%)
5	L5	3633/5070 (71%)	741 (20%)	14 (0%)
55	S2	1704/1869 (91%)	467 (27%)	16 (0%)
6	L7	119/121 (98%)	11 (9%)	0
7	L8	155/157 (98%)	25 (16%)	1 (0%)
All	All	5696/7878 (72%)	1270 (22%)	33 (0%)

5 of 1270 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	CM	439	C
1	CM	444	U
2	CP	2	G
2	CP	4	U
2	CP	5	C

5 of 33 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
55	S2	1519	U
55	S2	1585	U
55	S2	1860	A
5	L5	3673	C
5	L5	3614	G

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

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	LYO	CR	63	3	7,9,10	0.78	0	6,10,12	1.11	1 (16%)

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
3	LYO	CR	63	3	-	3/8/9/11	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	CR	63	LYO	CE-CD-CG	-2.12	109.00	113.47

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	CR	63	LYO	N-CA-CB-CG
3	CR	63	LYO	C-CA-CB-CG
3	CR	63	LYO	CA-CB-CG-OG

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 199 ligands modelled in this entry, 199 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

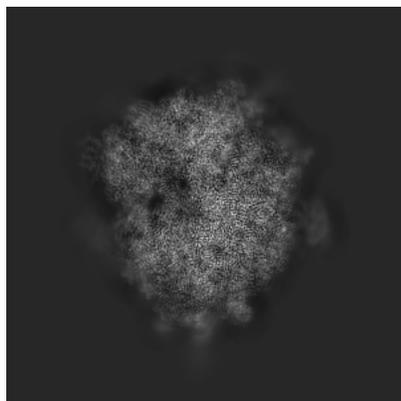
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-54529. These allow visual inspection of the internal detail of the map and identification of artifacts.

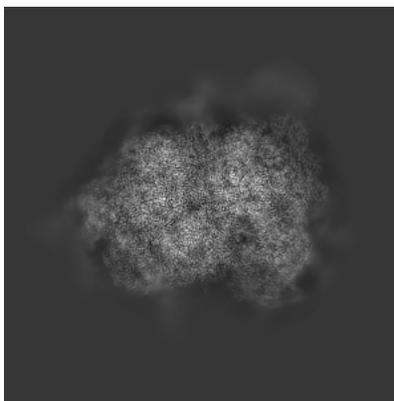
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

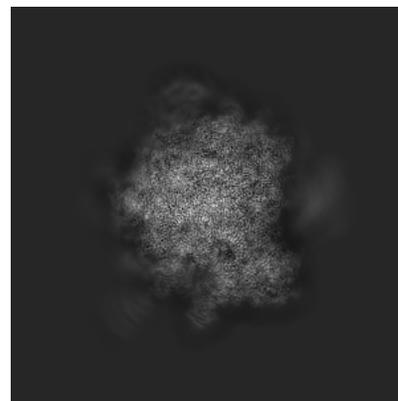
6.1.1 Primary map



X

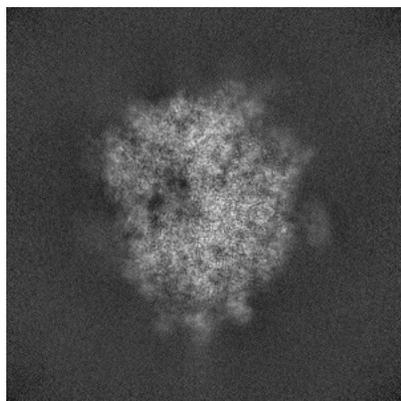


Y

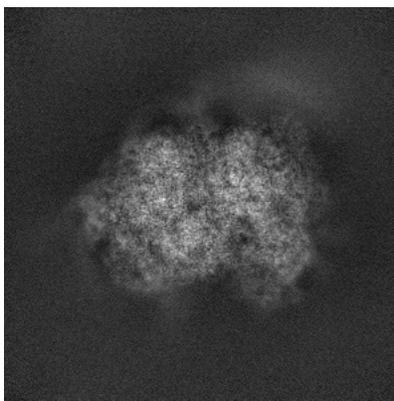


Z

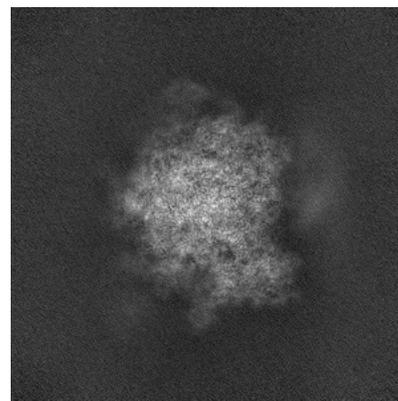
6.1.2 Raw map



X



Y

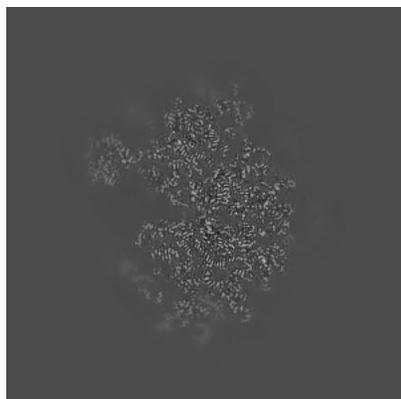


Z

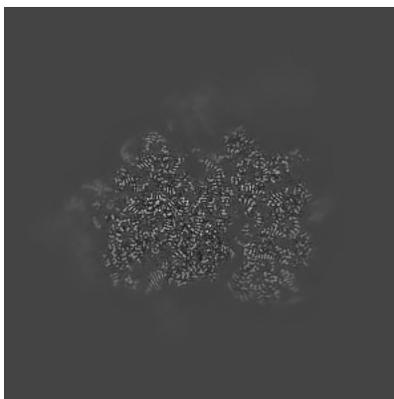
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

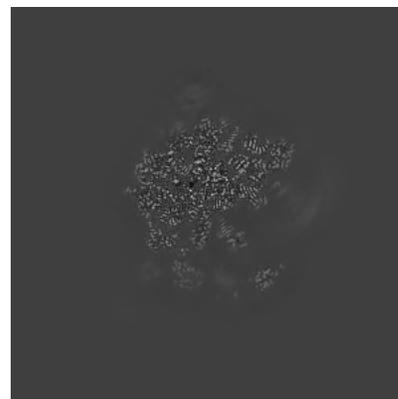
6.2.1 Primary map



X Index: 320

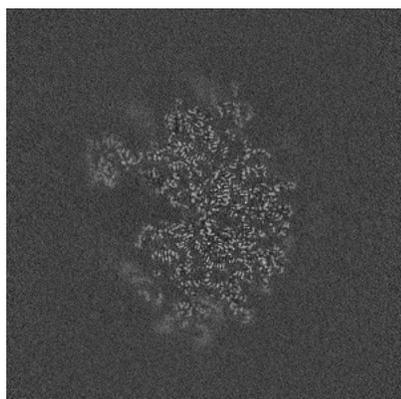


Y Index: 320

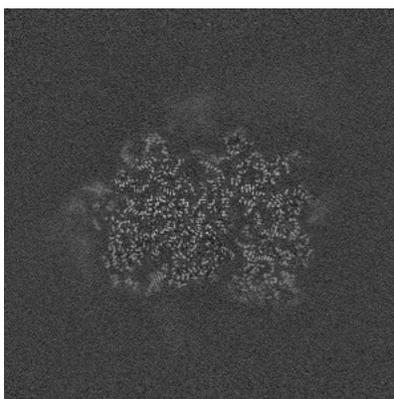


Z Index: 320

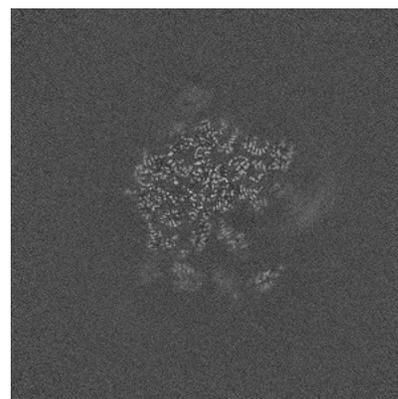
6.2.2 Raw map



X Index: 320



Y Index: 320

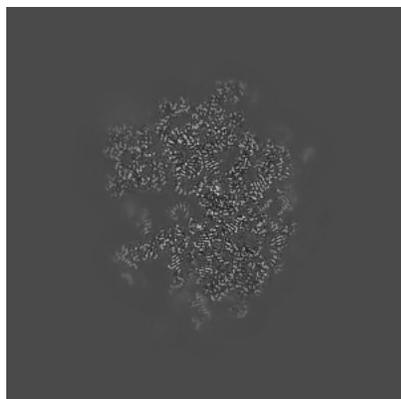


Z Index: 320

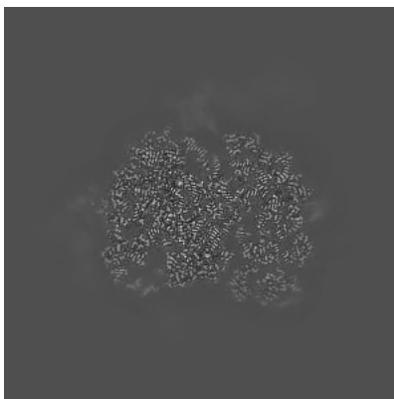
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

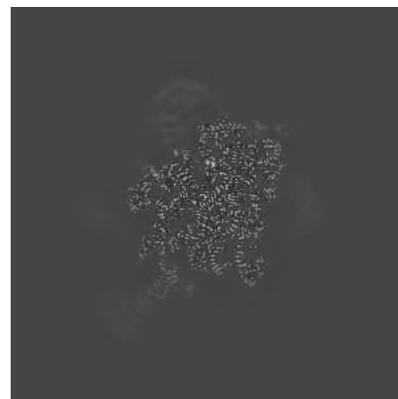
6.3.1 Primary map



X Index: 344

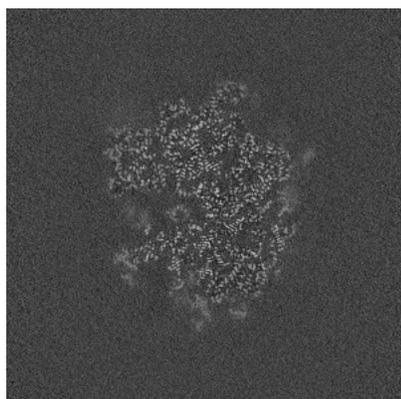


Y Index: 329

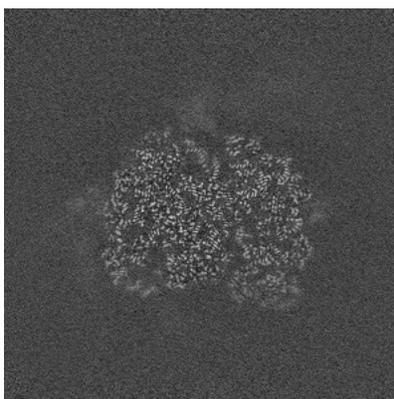


Z Index: 282

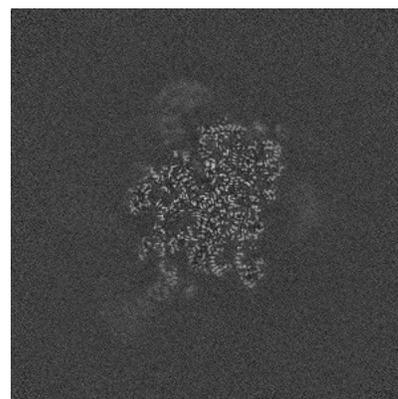
6.3.2 Raw map



X Index: 345



Y Index: 328

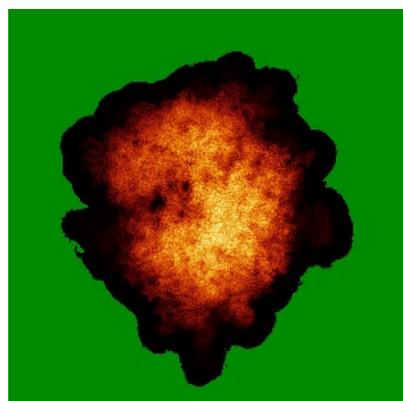


Z Index: 282

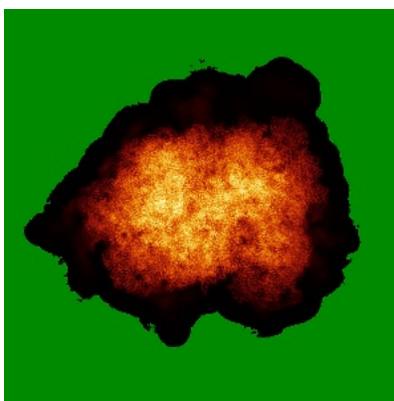
The images above show the largest variance slices of the map in three orthogonal directions.

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

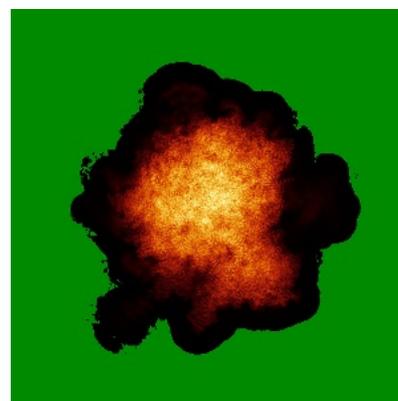
6.4.1 Primary map



X

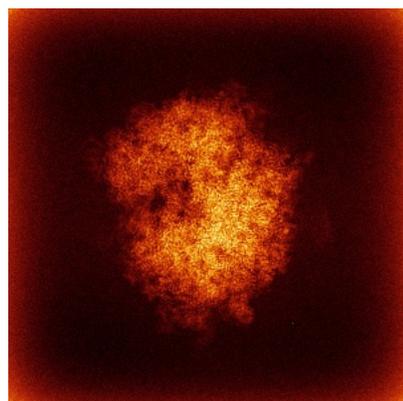


Y

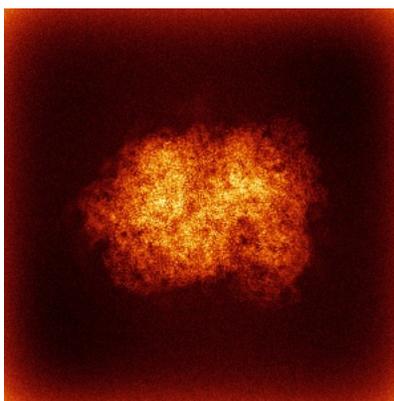


Z

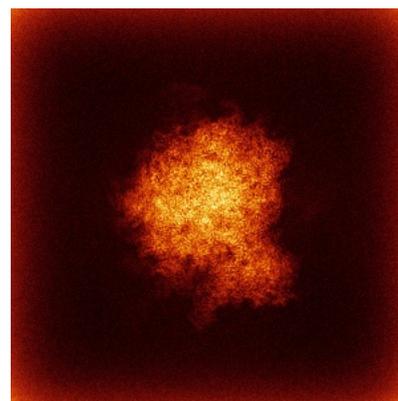
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



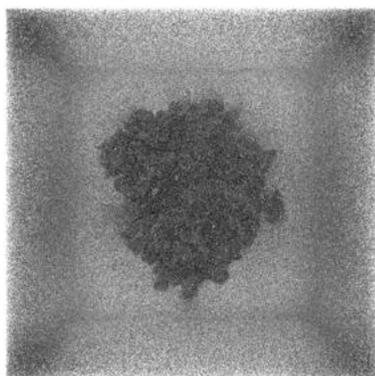
Y



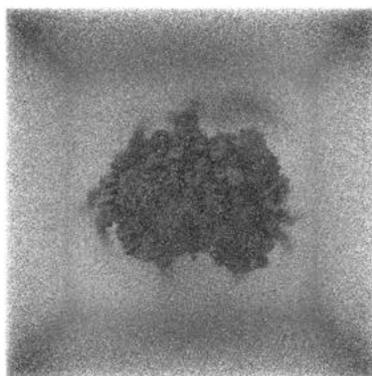
Z

The images above show the 3D surface view of the map at the recommended contour level 0.075. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

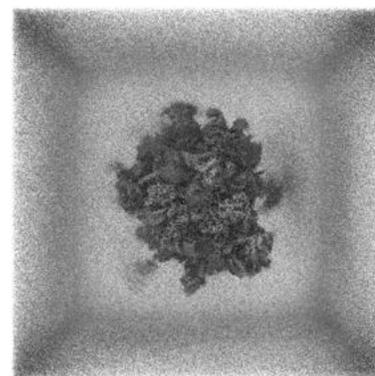
6.5.2 Raw map



X



Y



Z

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

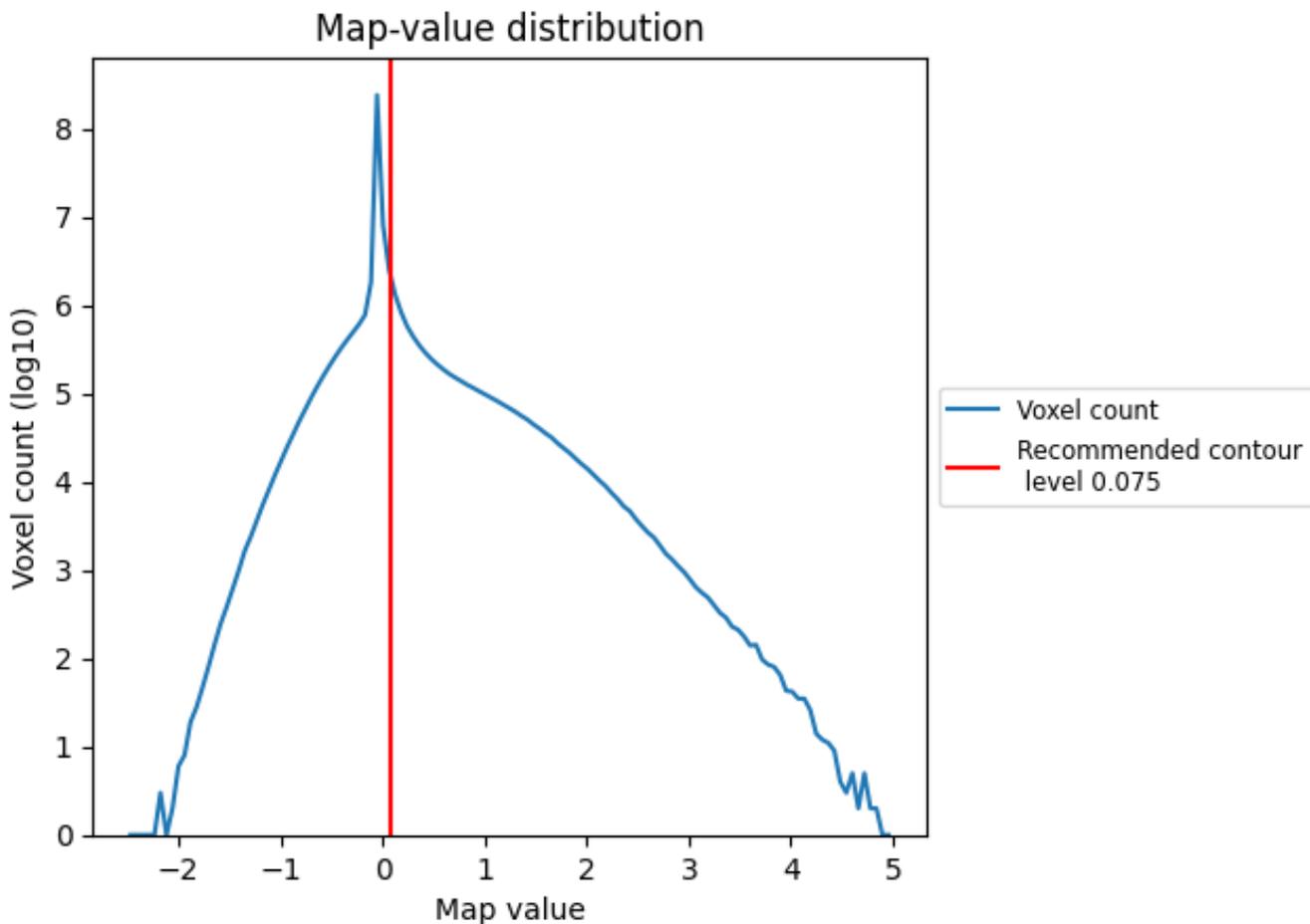
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

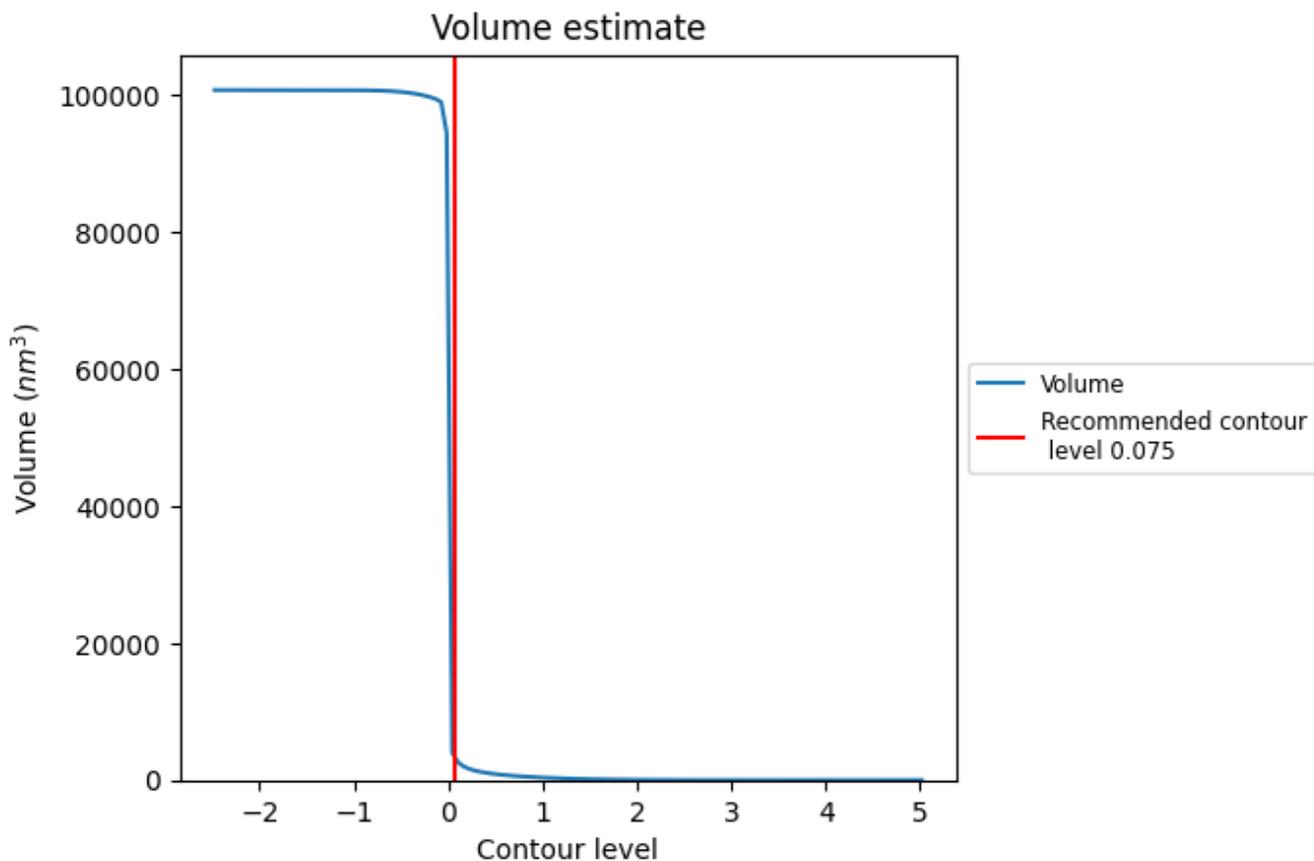
This section contains the results of statistical analysis of the map.

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.

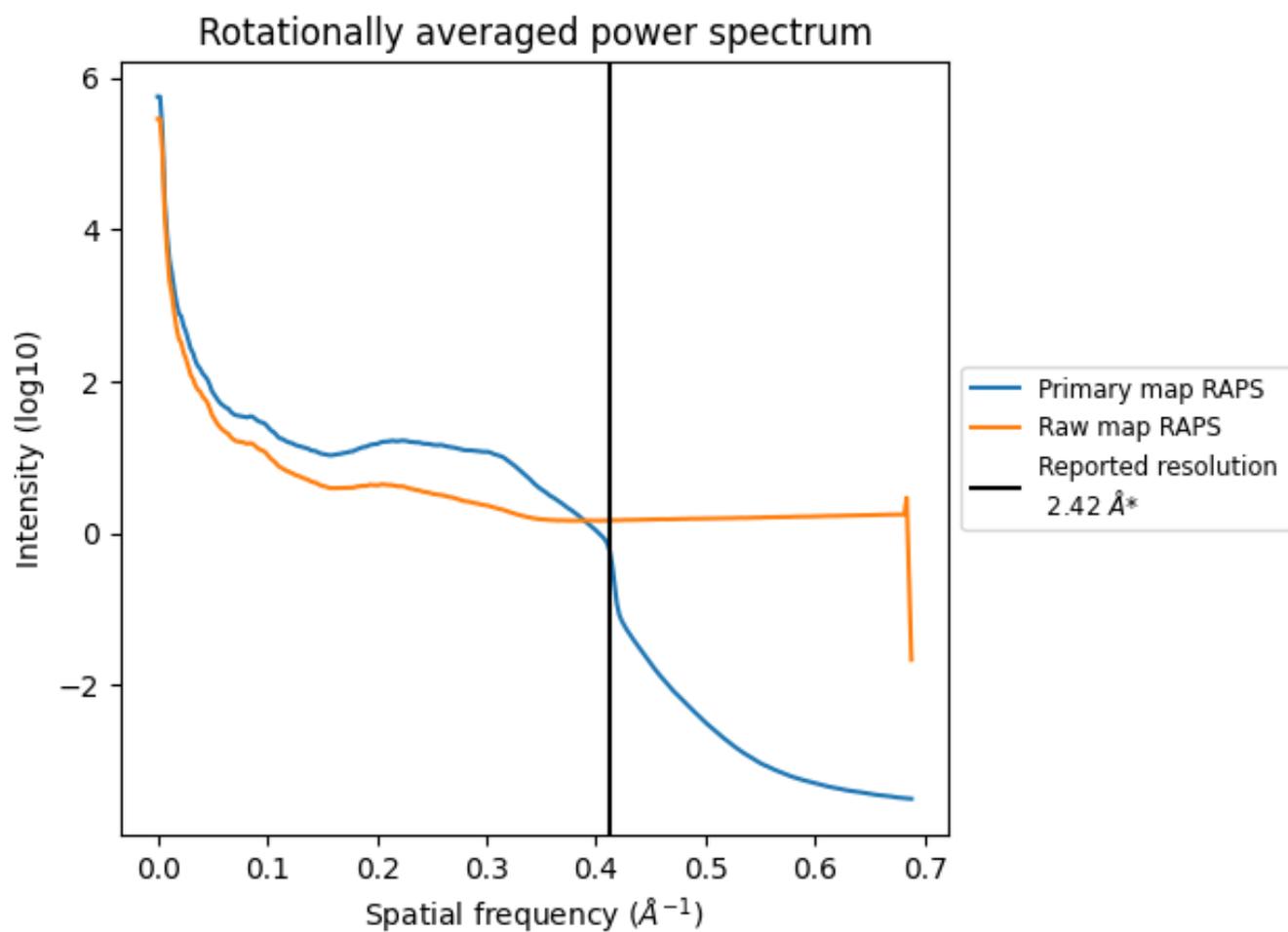
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3243 nm^3 ; this corresponds to an approximate mass of 2929 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](#)

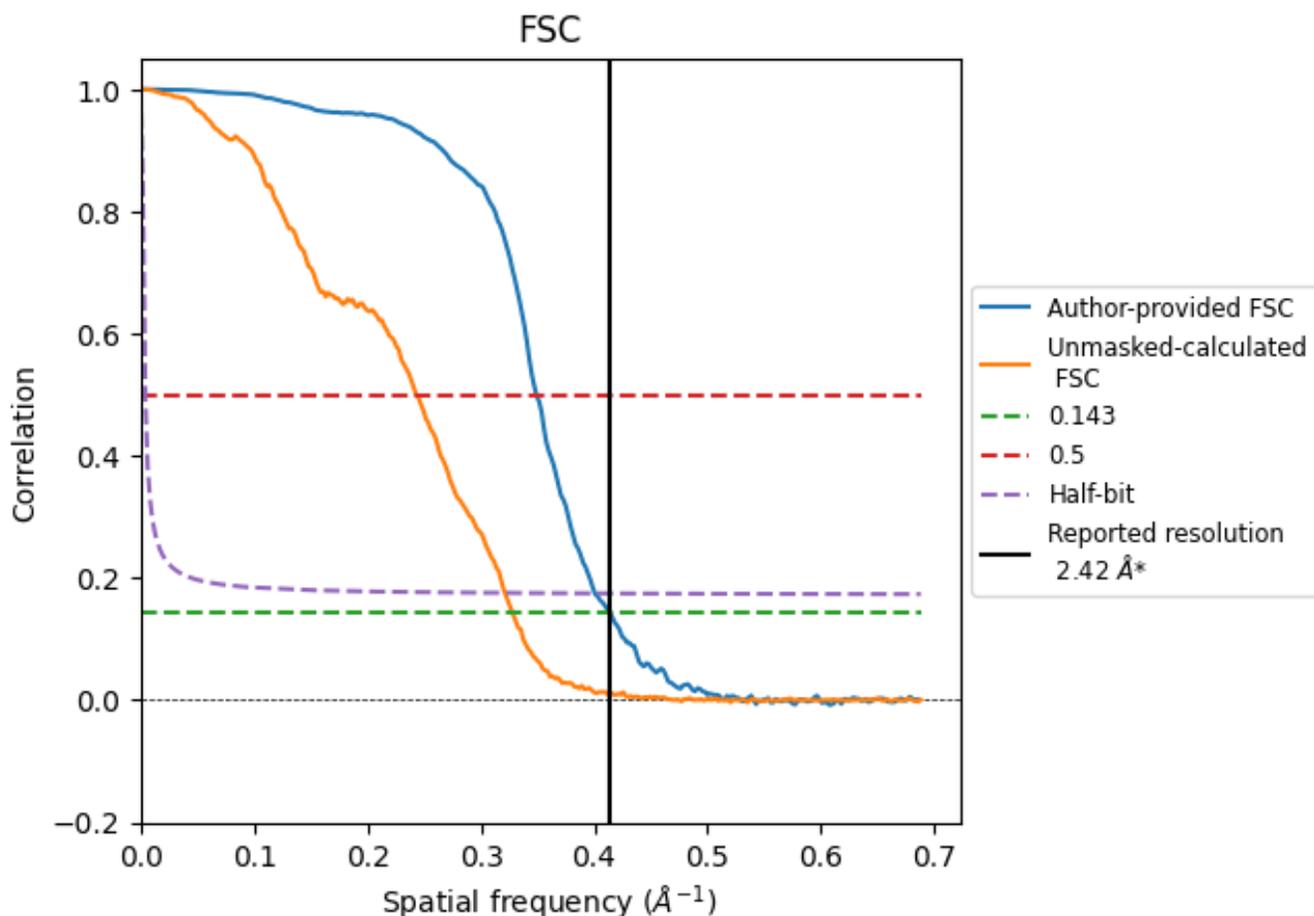


*Reported resolution corresponds to spatial frequency of 0.413 Å⁻¹

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 0.413 \AA^{-1}

8.2 Resolution estimates [i](#)

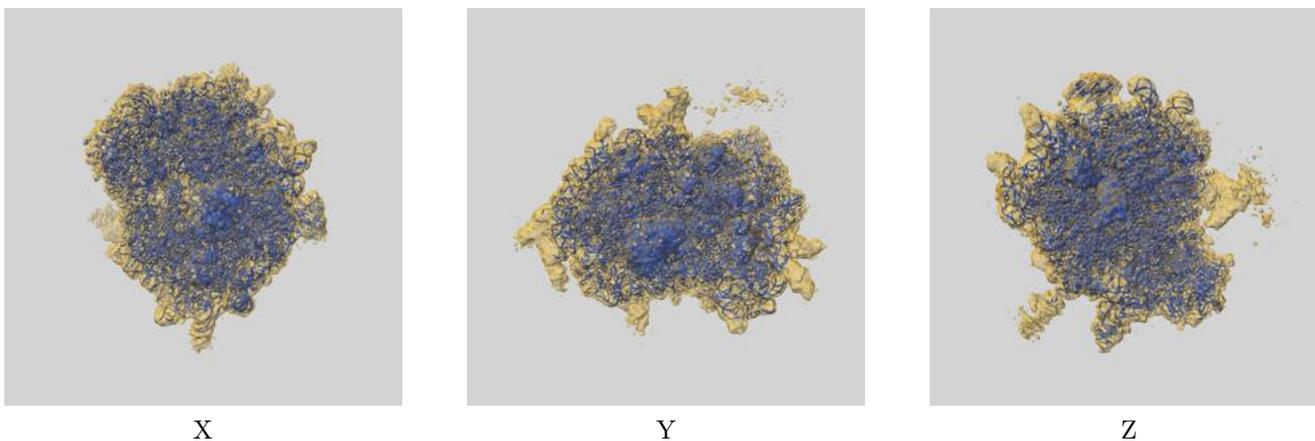
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.42	-	-
Author-provided FSC curve	2.42	2.87	2.50
Unmasked-calculated*	3.05	4.12	3.11

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.05 differs from the reported value 2.42 by more than 10 %

9 Map-model fit [i](#)

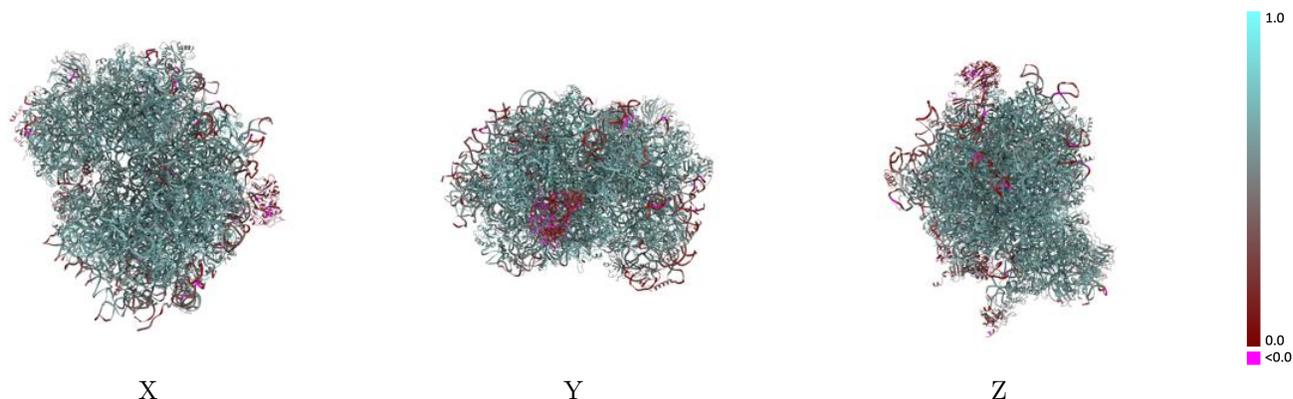
This section contains information regarding the fit between EMDB map EMD-54529 and PDB model 9S3C. Per-residue inclusion information can be found in section 3 on page 22.

9.1 Map-model overlay [i](#)



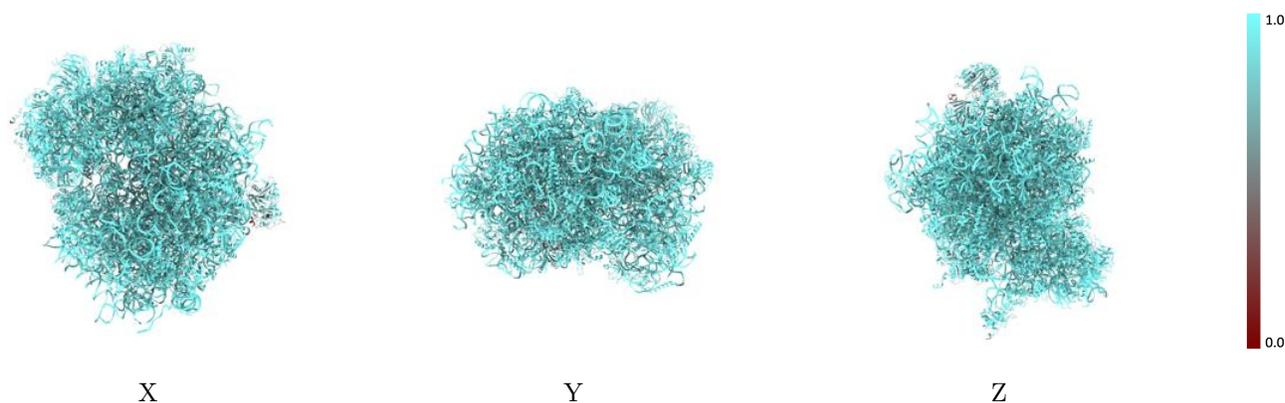
The images above show the 3D surface view of the map at the recommended contour level 0.075 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



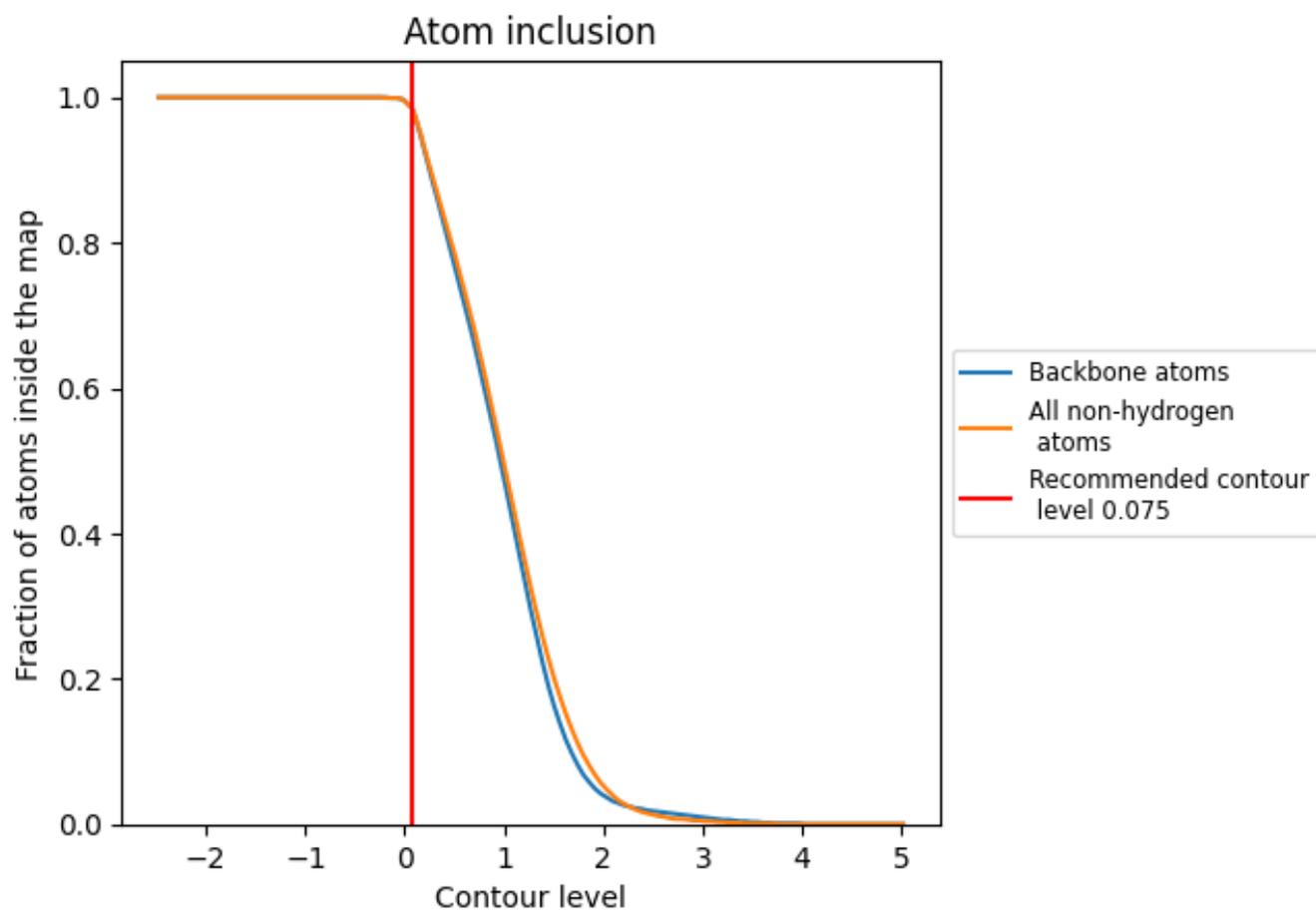
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.075).

9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 98% 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 (0.075) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9850	 0.6010
CM	 0.9880	 0.5930
CP	 0.9880	 0.5870
CR	 0.9390	 0.5180
CZ	 0.8300	 0.3920
L5	 0.9920	 0.6110
L7	 0.9980	 0.6610
L8	 0.9870	 0.6260
LA	 0.9920	 0.6870
LB	 0.9920	 0.6730
LC	 0.9890	 0.6680
LD	 0.9930	 0.6240
LE	 0.9880	 0.6120
LF	 0.9920	 0.6720
LG	 0.9810	 0.6070
LH	 0.9930	 0.6330
LI	 0.9880	 0.6460
LJ	 0.9830	 0.6030
LL	 0.9860	 0.6400
LM	 0.9940	 0.6450
LN	 0.9950	 0.6960
LO	 0.9910	 0.6790
LP	 0.9930	 0.6790
LQ	 0.9920	 0.6800
LR	 0.9940	 0.6590
LS	 0.9940	 0.6750
LT	 0.9830	 0.6340
LU	 0.9840	 0.5710
LV	 0.9970	 0.6760
LW	 0.9760	 0.5270
LX	 0.9850	 0.6450
LY	 0.9940	 0.6480
LZ	 0.9870	 0.6400
La	 0.9950	 0.6820
Lb	 0.9690	 0.5890



Continued on next page...

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Chain	Atom inclusion	Q-score
Lc	0.9890	0.6580
Ld	0.9930	0.6520
Le	0.9970	0.6860
Lf	0.9870	0.6790
Lg	0.9880	0.6610
Lh	0.9930	0.6400
Li	0.9950	0.6360
Lj	0.9930	0.6800
Lk	0.9790	0.5800
Ll	0.9930	0.6550
Lm	0.9760	0.6570
Ln	1.0000	0.6850
Lo	0.9950	0.6640
Lp	0.9960	0.6850
Lr	0.9970	0.6650
Ls	0.9200	0.3060
Lt	0.9740	0.3720
NA	0.6820	0.1220
NB	0.7660	0.2050
NM	0.8470	0.1490
S2	0.9890	0.5920
SA	0.9930	0.6360
SB	0.9890	0.6320
SC	0.9920	0.6460
SD	0.9920	0.5950
SE	0.9920	0.6190
SF	0.9800	0.6050
SG	0.9930	0.5420
SH	0.9860	0.5680
SI	0.9950	0.6250
SJ	0.9950	0.6240
SK	0.9830	0.5790
SL	0.9910	0.6560
SM	0.9200	0.3100
SN	0.9900	0.6640
SO	0.9920	0.6470
SP	0.9900	0.5940
SQ	0.9790	0.6120
SR	0.9680	0.5590
SS	0.9910	0.5990
ST	0.9900	0.6140
SU	0.9840	0.5590

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Chain	Atom inclusion	Q-score
SV	 0.9900	 0.6300
SW	 0.9940	 0.6700
SX	 0.9890	 0.6460
SY	 0.9930	 0.5860
SZ	 0.9910	 0.5820
Sa	 0.9810	 0.6390
Sb	 0.9820	 0.5940
Sc	 0.9720	 0.5540
Sd	 0.9880	 0.6410
Se	 0.9980	 0.6010
Sf	 0.9120	 0.3480
Sg	 0.9880	 0.5440