



wwPDB EM Validation Summary Report ⓘ

Feb 13, 2024 – 04:50 PM EST

PDB ID : 3JAP
EMDB ID : EMD-3048
Title : Structure of a partial yeast 48S preinitiation complex in closed conformation
Authors : Llacer, J.L.; Hussain, T.; Ramakrishnan, V.
Deposited on : 2015-06-18
Resolution : 4.90 Å (reported)
Based on initial models : 4U1E, 2D74, 3CW2, 4U1D, 4U1C, 3J81

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:

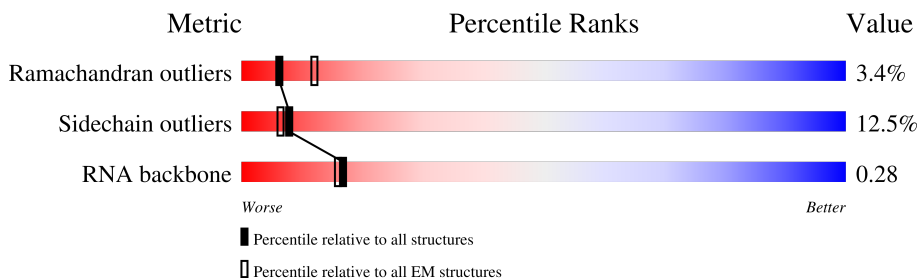
EMDB validation analysis : 0.0.1.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

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 4.90 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	1	75	28% (Poor fit) 51% (0 outliers) 49% (1 outlier)
2	2	1781	6% (Poor fit) 49% (0 outliers) 50% (1 outlier)
3	3	25	20% (Poor fit) 12% (0 outliers) 44% (1 outlier) 44% (Not modelled)
4	A	254	68% (0 outliers) 13% (1 outlier) 18% (Not modelled)
5	B	255	74% (0 outliers) 13% (1 outlier) 13% (Not modelled)
6	C	259	73% (0 outliers) 11% (1 outlier) 16% (Not modelled)
7	D	237	5% (Poor fit) 76% (0 outliers) 18% (1 outlier) 6% (Not modelled)
8	E	261	84% (0 outliers) 15% (1 outlier)

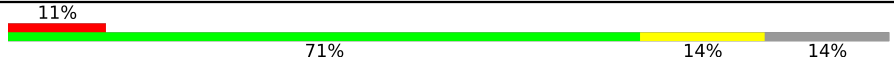







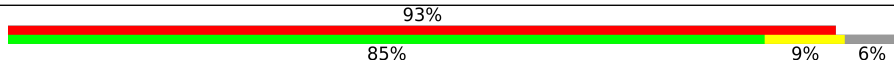
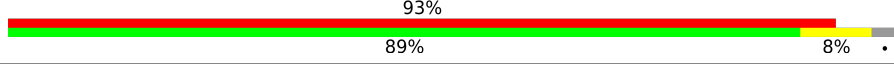
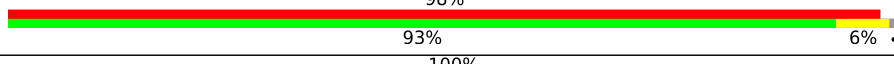
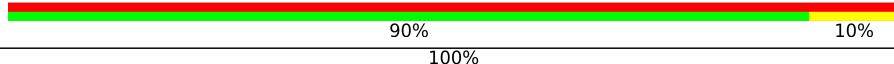
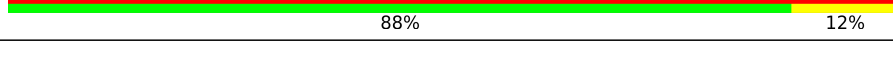

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Mol	Chain	Length	Quality of chain
9	F	227	8% 73% 18% 9%
10	G	236	5% 86% 9% .
11	H	190	5% 78% 18% ..
12	I	201	5% 83% 9% . 6%
13	J	188	5% 84% 12% ..
14	K	106	5% 69% 20% . 9%
15	L	156	11% 90% 8% ..
16	M	134	22% 73% 14% 13%
17	N	151	8% 87% 12% ..
18	O	137	5% 82% 9% . 7%
19	P	142	6% 67% 14% . 18%
20	Q	143	5% 79% 19% ..
21	R	136	6% 74% 14% . 12%
22	S	146	8% 77% 22% ..
23	T	144	5% 85% 14% .
24	U	117	11% 78% 11% . 9%
25	V	87	5% 89% 10% .
26	W	130	5% 89% 9% ..
27	X	145	5% 80% 17% ..
28	Y	135	5% 89% 10% .
29	Z	108	13% 60% .. 35%
30	a	119	5% 70% 12% . 18%
31	b	82	5% 90% 9% .
32	c	67	7% 81% 10% . 7%
33	d	56	5% 79% 14% . 5%

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Mol	Chain	Length	Quality of chain
34	e	63	
35	f	150	
36	g	326	
37	h	25	
38	i	153	
39	j	304	
40	k	527	
41	l	285	
42	m	108	
43	o	588	
44	p	652	
45	q	347	
46	r	31	
47	s	52	

2 Entry composition

There are 51 unique types of molecules in this entry. The entry contains 98333 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 Met-tRNAi (U31:A39 variant).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	1	75	1607	716	296	520	75	0	0

- Molecule 2 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	2	1780	37797	16892	6658	12467	1780	0	0

- Molecule 3 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	3	14	287	129	42	102	14	0	0

- Molecule 4 is a protein called uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	A	208	1626	1040	286	298	2	0	0

- Molecule 5 is a protein called eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	B	222	1769	1117	324	325	3	0	0

- Molecule 6 is a protein called uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	C	217	1629	1041	287	297	4	0	0

- Molecule 7 is a protein called uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	D	223	1744	1108	313	318	5	0	0

- Molecule 8 is a protein called eS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	E	260	2078	1322	393	359	4	0	0

- Molecule 9 is a protein called uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	F	206	1609	1008	298	300	3	0	0

- Molecule 10 is a protein called eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	G	226	1812	1134	348	326	4	0	0

- Molecule 11 is a protein called eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	H	184	1483	950	270	263		0	0

- Molecule 12 is a protein called eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	I	188	1489	923	300	265	1	0	0

- Molecule 13 is a protein called uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	J	182	1471	929	287	254	1	0	0

- Molecule 14 is a protein called eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	96	Total	C	N	O	S	0	0
			809	533	129	146	1		

- Molecule 15 is a protein called uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	L	155	Total	C	N	O	S	0	0
			1248	798	237	210	3		

- Molecule 16 is a protein called eS12.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	M	117	Total	C	N	O	0	0
			885	553	161	171		

- Molecule 17 is a protein called uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	N	150	Total	C	N	O	S	0	0
			1187	756	223	206	2		

- Molecule 18 is a protein called uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	O	127	Total	C	N	O	S	0	0
			942	578	188	173	3		

- Molecule 19 is a protein called uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	P	117	Total	C	N	O	S	0	0
			927	595	166	161	5		

- Molecule 20 is a protein called uS9.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	Q	141	Total	C	N	O	0	0
			1105	709	204	192		

- Molecule 21 is a protein called eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	R	120	Total	C	N	O	S	0	0
			959	598	178	180	3		

- Molecule 22 is a protein called uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	S	145	Total	C	N	O	S	0	0
			1193	741	240	210	2		

- Molecule 23 is a protein called eS19.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	T	143	Total	C	N	O	0	0
			1110	693	210	207		

- Molecule 24 is a protein called uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	U	106	Total	C	N	O	S	0	0
			845	540	152	152	1		

- Molecule 25 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	V	87	Total	C	N	O	S	0	0
			687	424	126	135	2		

- Molecule 26 is a protein called uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	W	129	Total	C	N	O	S	0	0
			1021	651	187	180	3		

- Molecule 27 is a protein called uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	X	144	Total	C	N	O	S	0	0
			1119	708	218	191	2		

- Molecule 28 is a protein called eS24.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	Y	134	Total	C	N	O	0	0
			1061	665	207	189		

- Molecule 29 is a protein called eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Z	70	Total	C	N	O	S	0	0
			558	355	104	98	1		

- Molecule 30 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	a	98	Total	C	N	O	S	0	0
			779	480	165	129	5		

- Molecule 31 is a protein called eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	b	81	Total	C	N	O	S	0	0
			609	379	112	113	5		

- Molecule 32 is a protein called eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	c	62	Total	C	N	O	S	0	0
			487	301	97	88	1		

- Molecule 33 is a protein called uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	d	53	Total	C	N	O	S	0	0
			446	280	89	76	1		

- Molecule 34 is a protein called eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	e	54	Total	C	N	O	S	0	0
			433	271	88	73	1		

- Molecule 35 is a protein called eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	f	69	Total	C	N	O	S	0	0
			546	351	101	90	4		

- Molecule 36 is a protein called RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	g	318	Total	C	N	O	S	0	0
			2466	1561	430	470	5		

- Molecule 37 is a protein called eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	h	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 38 is a protein called eIF1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	i	111	Total	C	N	O	S	0	0
			884	542	170	167	5		

- Molecule 39 is a protein called eIF2 alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	j	249	Total	C	N	O	S	0	0
			2006	1283	333	382	8		

- Molecule 40 is a protein called eIF2 gamma.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	k	396	Total	C	N	O	S	0	0
			3034	1932	542	544	16		

- Molecule 41 is a protein called eIF2 beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	l	128	Total	C	N	O	S	0	0
			1036	661	186	182	7		

- Molecule 42 is a protein called eIF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	m	90	Total	C	N	O	S	0	0
			716	452	132	128	4		

- Molecule 43 is a protein called eIF3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	o	550	Total	C	N	O	S	0	0
			4189	2667	721	794	7		

- Molecule 44 is a protein called eIF3c.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	p	634	Total	C	N	O	S	0	0
			4899	3121	826	940	12		

- Molecule 45 is a protein called eIF3i.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	q	342	Total	C	N	O	S	0	0
			2693	1711	443	530	9		

- Molecule 46 is a protein called eIF3b.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	r	31	Total	C	N	O	S	0	0
			277	177	48	50	2		

- Molecule 47 is a protein called eIF3g.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	s	52	Total	C	N	O	0	0
			418	257	82	79		

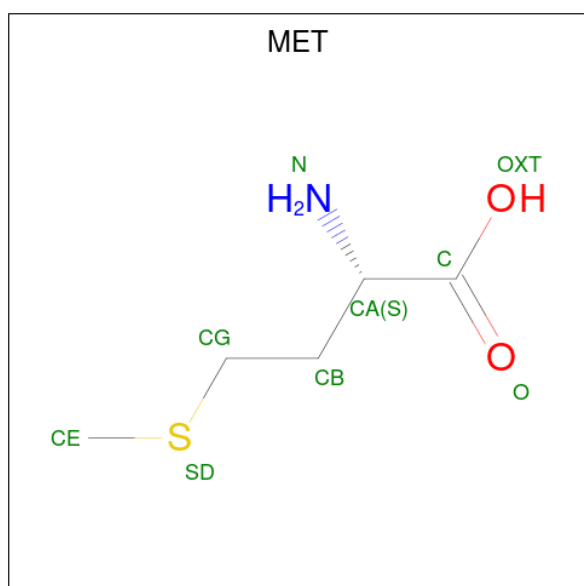
- Molecule 48 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
48	2	80	Total	Mg	0
			80	80	
48	k	1	Total	Mg	0
			1	1	

- Molecule 49 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
49	a	1	Total Zn 1 1	0
49	b	1	Total Zn 1 1	0
49	f	1	Total Zn 1 1	0
49	l	1	Total Zn 1 1	0

- Molecule 50 is METHIONINE (three-letter code: MET) (formula: C₅H₁₁NO₂S).



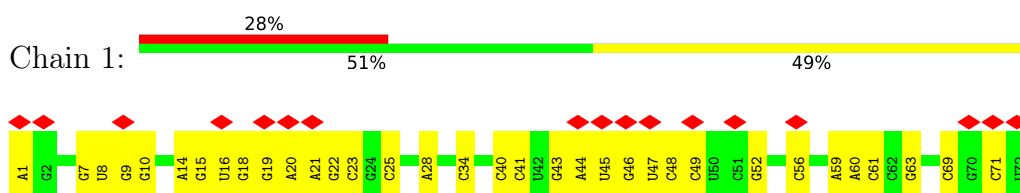
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	S	
50	k	1	8	5	1	1	1	0

- Molecule 51 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: GCP) (formula: C₁₁H₁₈N₅O₁₃P₃).

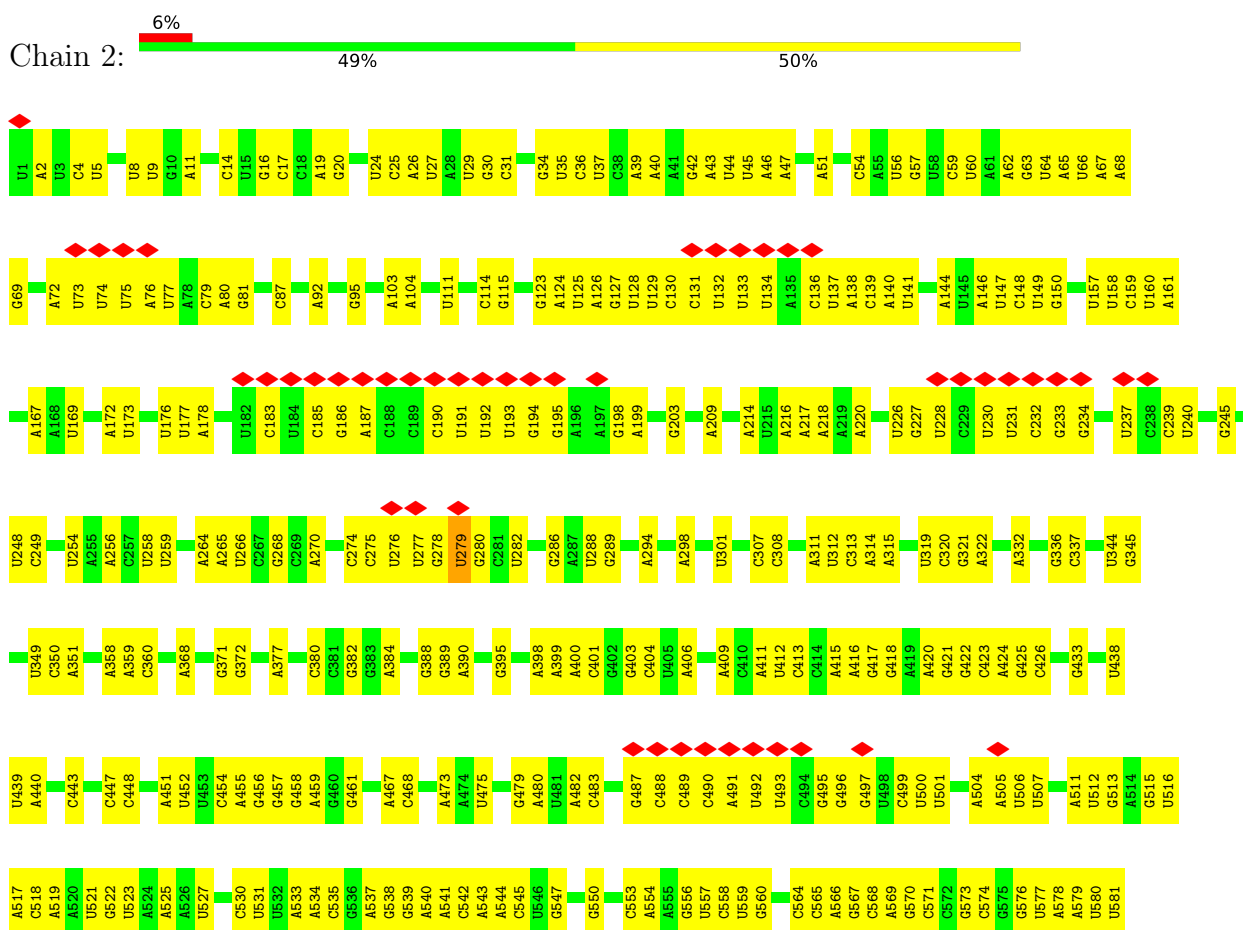
3 Residue-property plots [i](#)

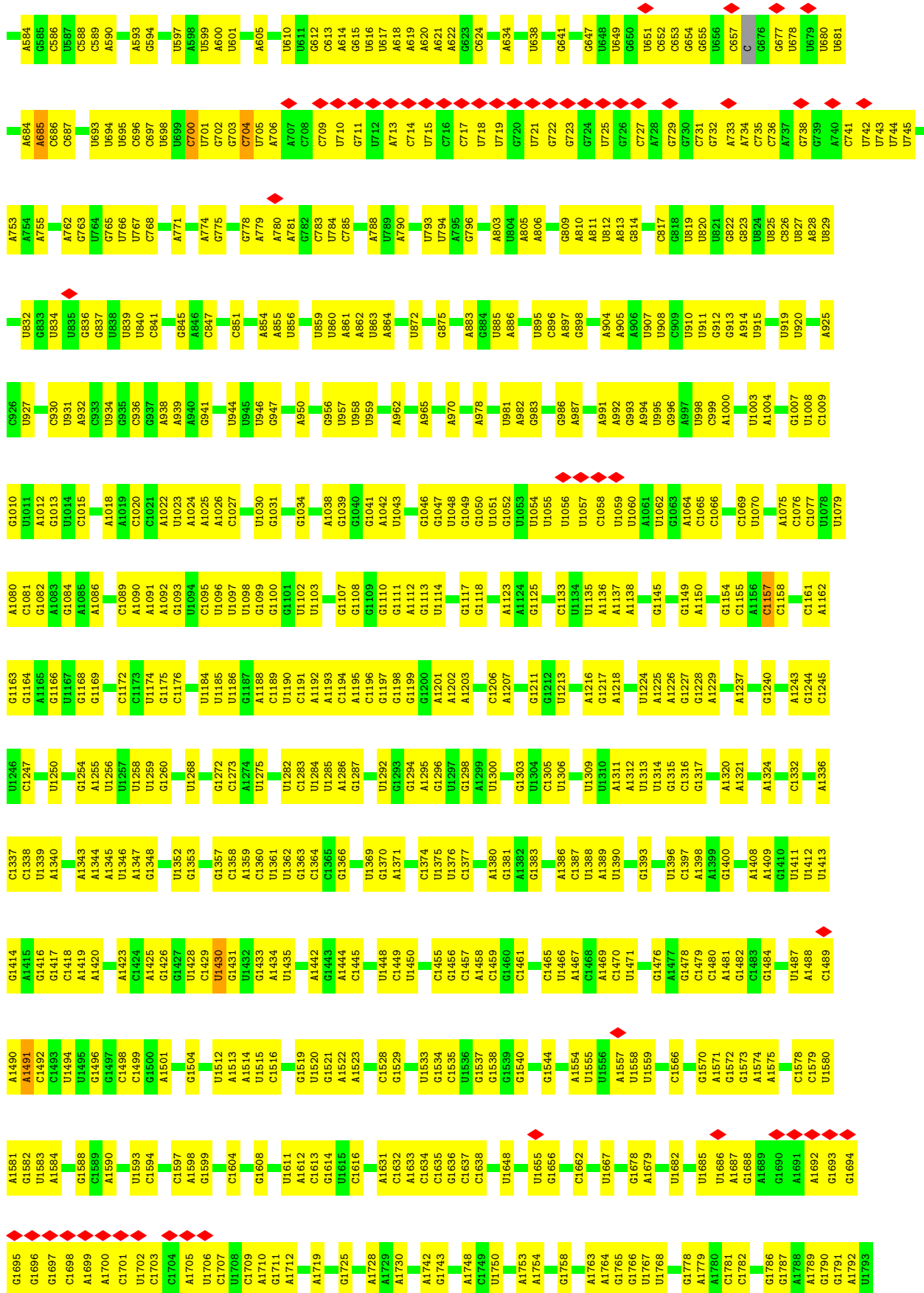
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Met-tRNAi (U31:A39 variant)



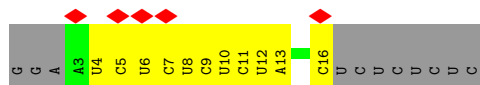
- Molecule 2: 18S rRNA



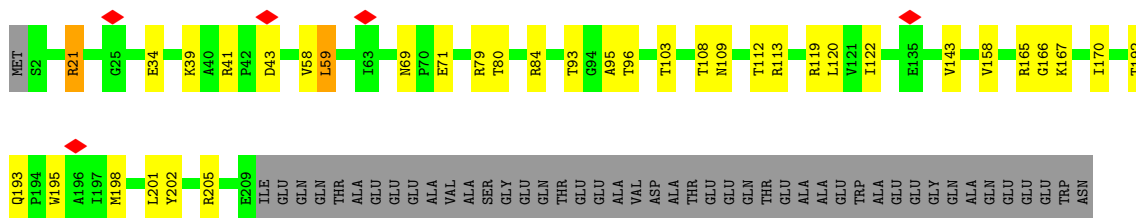


C1794
A1795
U1796
U1797
A1798

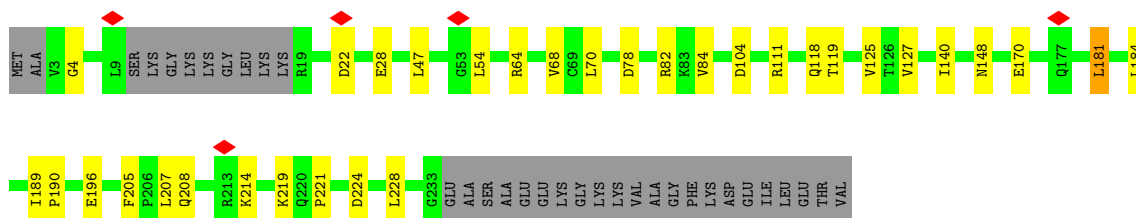
• Molecule 3: mRNA



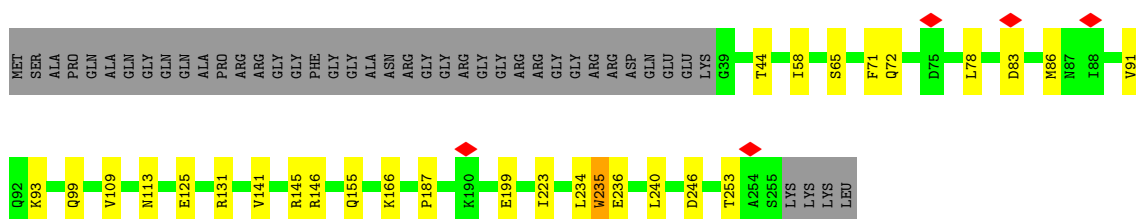
• Molecule 4: uS2



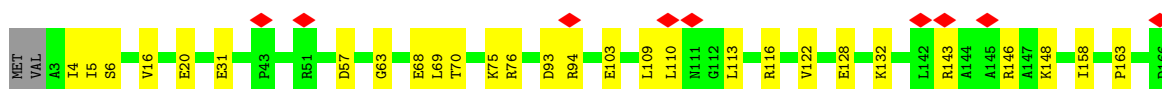
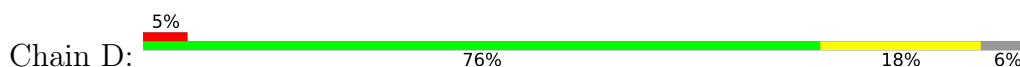
• Molecule 5: eS1



• Molecule 6: uS5

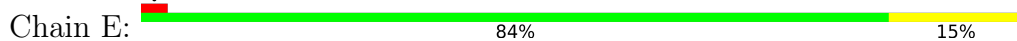


• Molecule 7: uS3

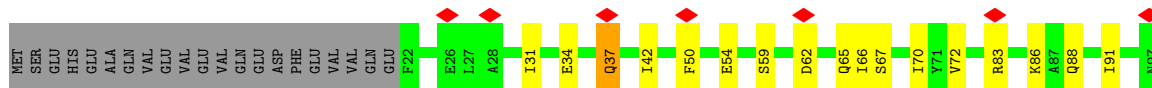
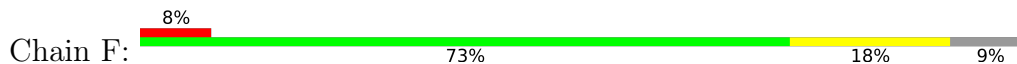




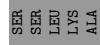
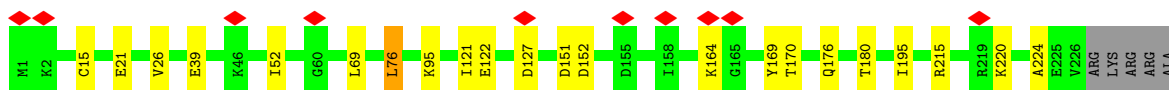
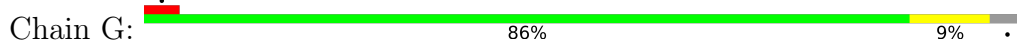
• Molecule 8: eS4



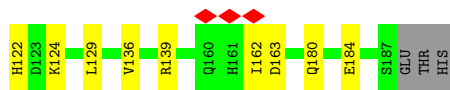
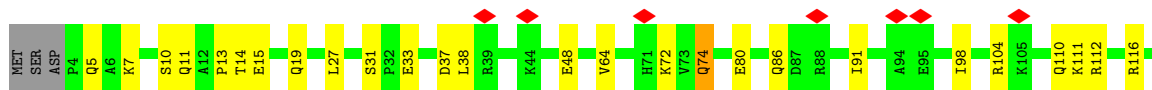
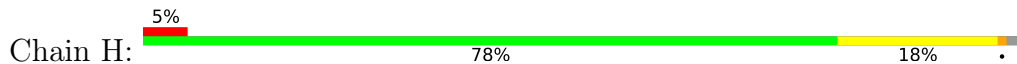
• Molecule 9: uS7



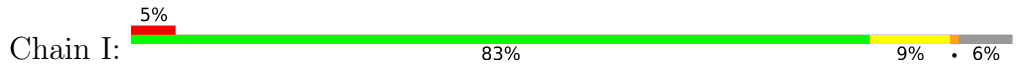
• Molecule 10: eS6

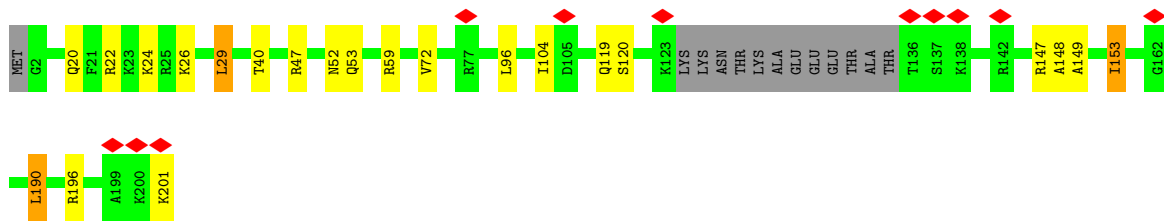


• Molecule 11: eS7

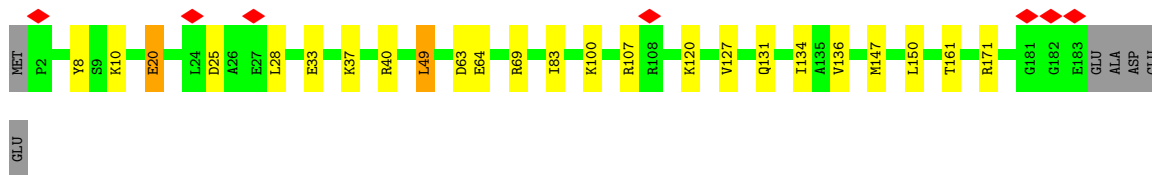
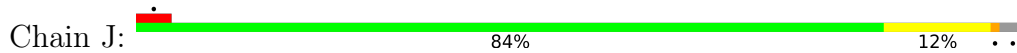


• Molecule 12: eS8





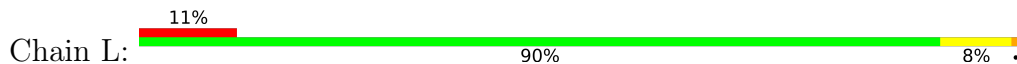
• Molecule 13: uS4



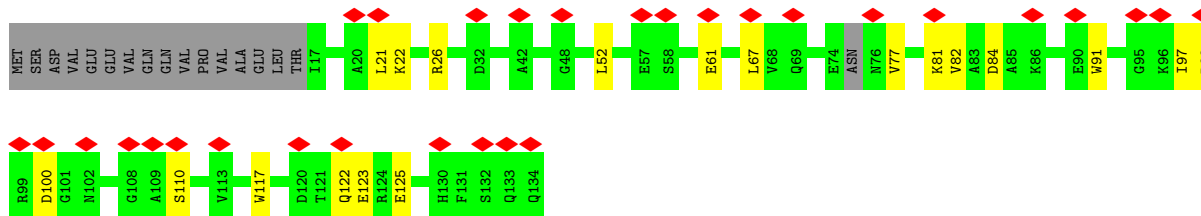
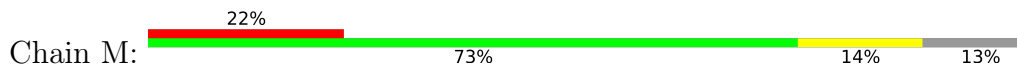
• Molecule 14: eS10



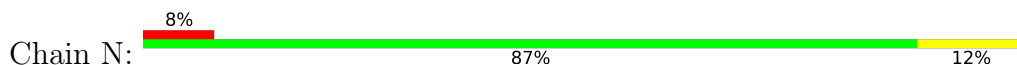
• Molecule 15: uS17




• Molecule 16: eS12

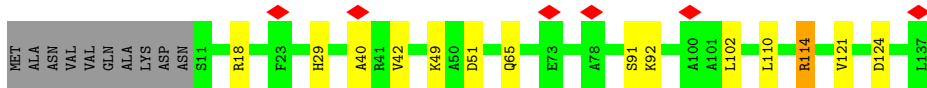


• Molecule 17: uS15



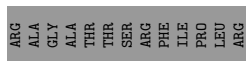
- Molecule 18: uS11

Chain O:  82% 9% 7%




- Molecule 19: uS19

Chain P:  6% 67% 14% 18%




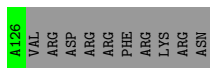
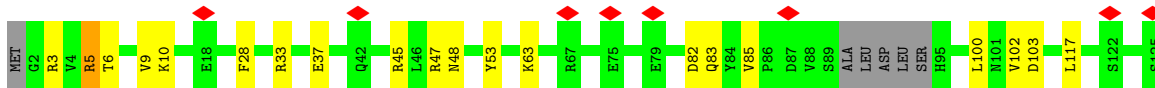
- Molecule 20: uS9

Chain Q:  79% 19%




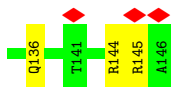
- Molecule 21: eS17

Chain R:  6% 74% 14% 12%




- Molecule 22: uS13

Chain S:  8% 77% 22%

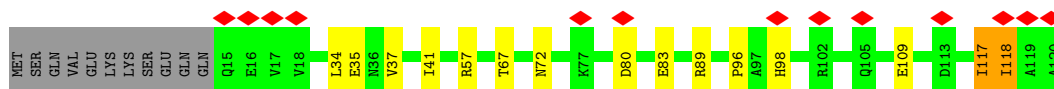
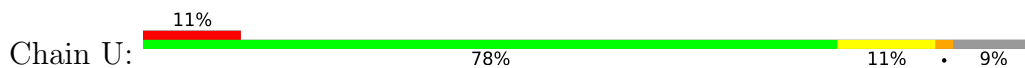


- Molecule 23: eS19

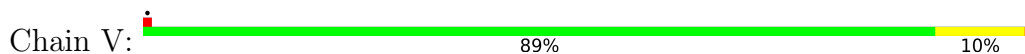
Chain T:  5% 85% 14%



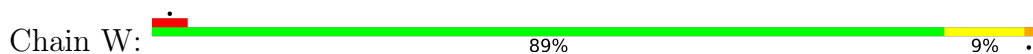
• Molecule 24: uS10



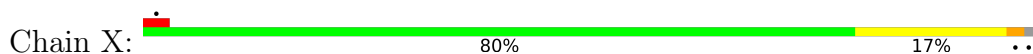
• Molecule 25: eS21



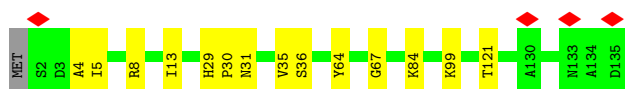
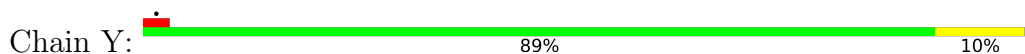
• Molecule 26: uS8



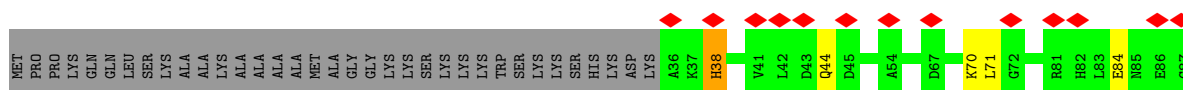
• Molecule 27: uS12

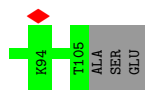


• Molecule 28: eS24

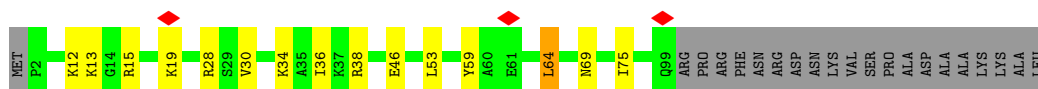


• Molecule 29: eS25

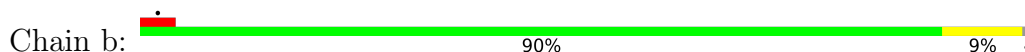




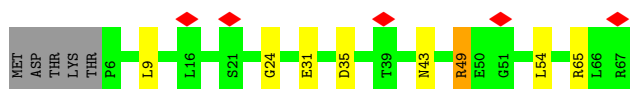
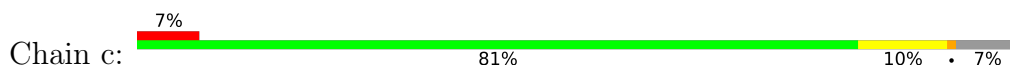
• Molecule 30: eS26



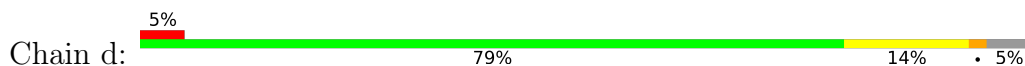
• Molecule 31: eS27



• Molecule 32: eS28



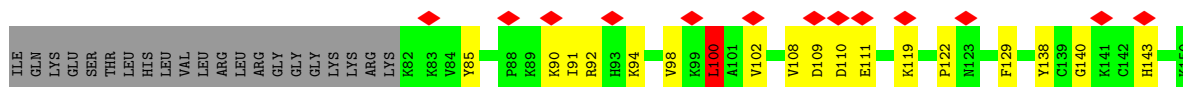
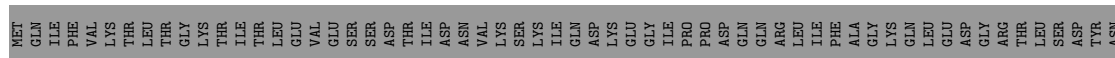
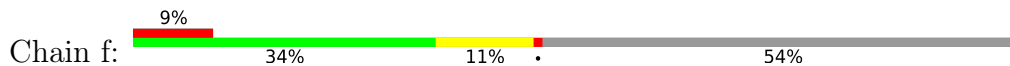
• Molecule 33: uS14

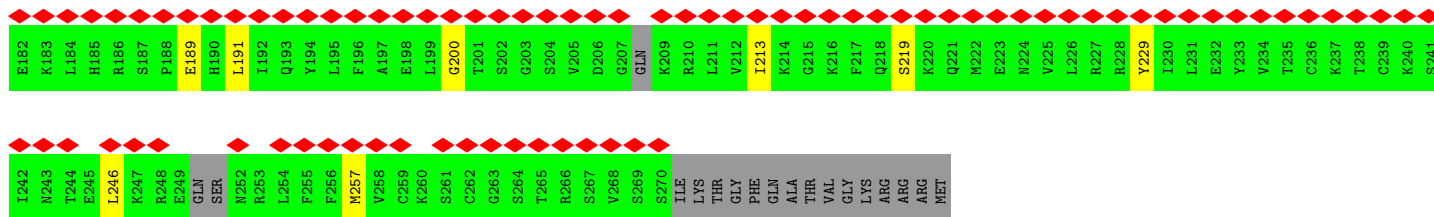


• Molecule 34: eS30

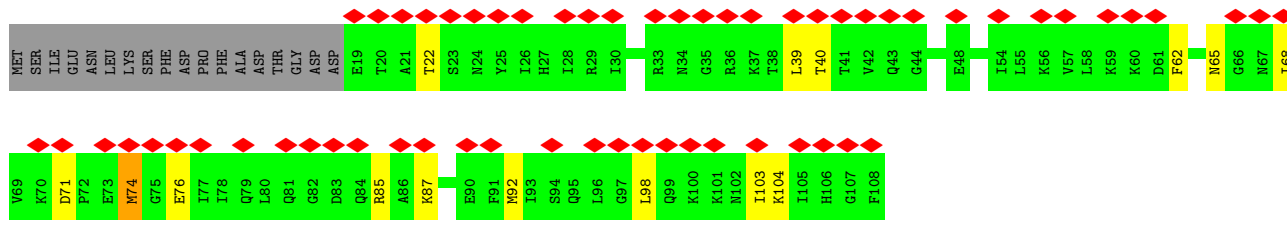


• Molecule 35: eS31

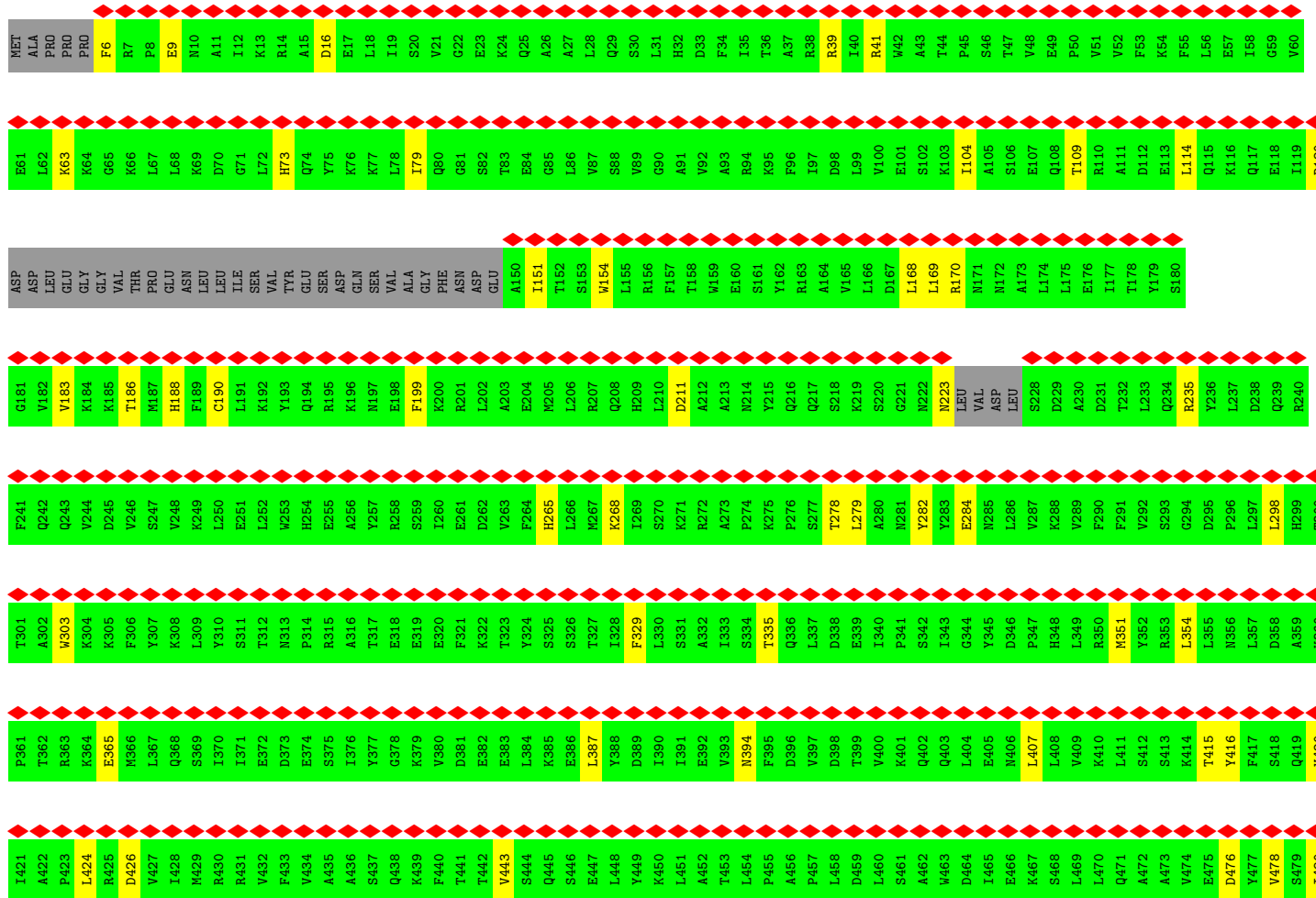
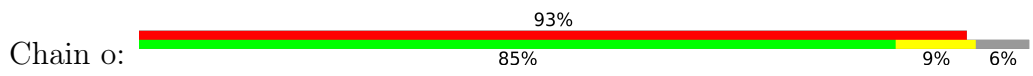




• Molecule 42: eIF1



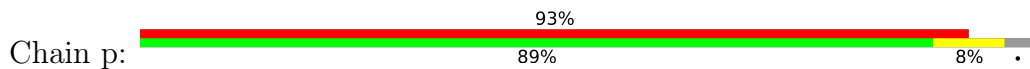
• Molecule 43: eIF3a



T481	I482	D483	H484	E485	S486	A487	K488	V489	T490	F491	A492	K493	D494	P495	X753	X754	X755	X756	X757	X758	X759	X760	X761	X762	X763	X764	X765	X766	X767	X768	X769	X772	X773	X774	X775	X776	X777	X778	X779	X780	X781	X782	X783	X784	X785	X788	X789	X790	X792	X793	X794	X795	X796	X797	X798	X799	X800	X801
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X802	X806	X807	X808	X809	X810	X811	X812	X813	X814	X815	X816	X817	X818	X828	X829	X830	X831	X832	X833	X834	X837	X838	X839	X840	X841	X842	X843	X844	X845	X846	X850	X851	X852	X853	X854	X855	X856	X857	X858	X859	X860	X861	X862	X863	X864	X865	X866
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• Molecule 44: eIF3c



X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X116	X117	X118	X119	X120	X121	X122	X123	X124	X125	X126	X127	X128	X129	X130	X131	X132	X133	X134	X135	X139	X140	X141	X144	X145	X146	X147	X148	X150	X151	X152	X153	X156	X157	X158	X170	X171	X172	X173	X174	X175	X176	X179	X180
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X181	X182	X183	X184	X185	Y195	N196	T197	T198	K199	Q200	R201	V202	K203	K204	V205	S206	X211	X212	X213	X214	X215	X216	X217	X218	Q251	E252	D253	F254	F255	T256	R257	L258	Q259	T260	I261	I262	D263	S264	R265	G266	K267	K268	T269	V270	M271	Q272	Q273	Q274	L275	I276	S277	T278	L279	E280	E281	L282	L283	T284
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V285	A286	E287	K288	P289	Y290	E291	P292	I293	M294	A295	Y296	L297	L298	L299	I300	P301	S302	R303	F304	D305	A306	S307	A308	N309	L310	S311	Y312	Q313	Q314	I315	D316	Q317	W318	K319	S320	S321	F322	N323	D324	L325	S326	K327	L328	L329	S330	I331	L332	S333	Q334	T335	I336	D337	T338	Y339	Q340	V341	L342	L283	T284	E343	F344
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A345	D346	P347	I348	D349	F350	I351	E352	D353	E354	P355	K356	E357	D358	S359	D360	G361	K363	R364	I365	L366	G367	S368	I369	F370	S371	F372	E373	E374	R375	L376	D377	D378	E379	F380	M381	K382	S383	L384	L385	N386	I387	D388	P389	H390	S391	S392	S393	Y394	L395	I396	R397	L398	R399	D400	E401	Q402	S403	I404
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Y405	N406	L407	I408	L409	R410	T411	Q412	L413	Y414	F415	E416	A417	T418	L419	K420	D421	H423	D424	L425	E426	R427	A428	L429	T430	R431	P432	F433	V434	K435	R436	L437	D438	H439	I440	Y441	Y442	K443	S444	E445	N446	L447	I448	K449	I450	M451	E452	T453	A454	A455	W456	N457	I458	I459	P460	A461	Q462	F463	K464
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S465	K466	F467	T468	S469	K470	D471	Q472	L473	D474	S475	A476	D477	Y478	V479	D480	N481	L482	I483	D484	G485	L486	S487	T488	I489	Q610	S491	K492	Q493	N494	A495	I496	A497	V498	Q499	K500	R501	A502	I503	L504	Y505	N506	I507	Y508	E509	T510	A511	L512	S513	K514	D515	F516	Q517	T518	A519	K520	D521	M522	L523	L524
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T525	S526	Q527	V528	Q529	T530	N531	I532	N533	Q534	F535	D536	S537	S538	L539	Q540	I541	F543	N544	R545	G546	V547	Y508	H609	Q610	L550	G551	L552	S553	A554	F555	K556	L557	C558	L559	E560	E561	E562	C563	H564	Q565	S566	I567	N568	D569	L570	L571	S572	S573	S574	H575	L576	R577	E578	I579	G580	G581	Q582	Q583	S584
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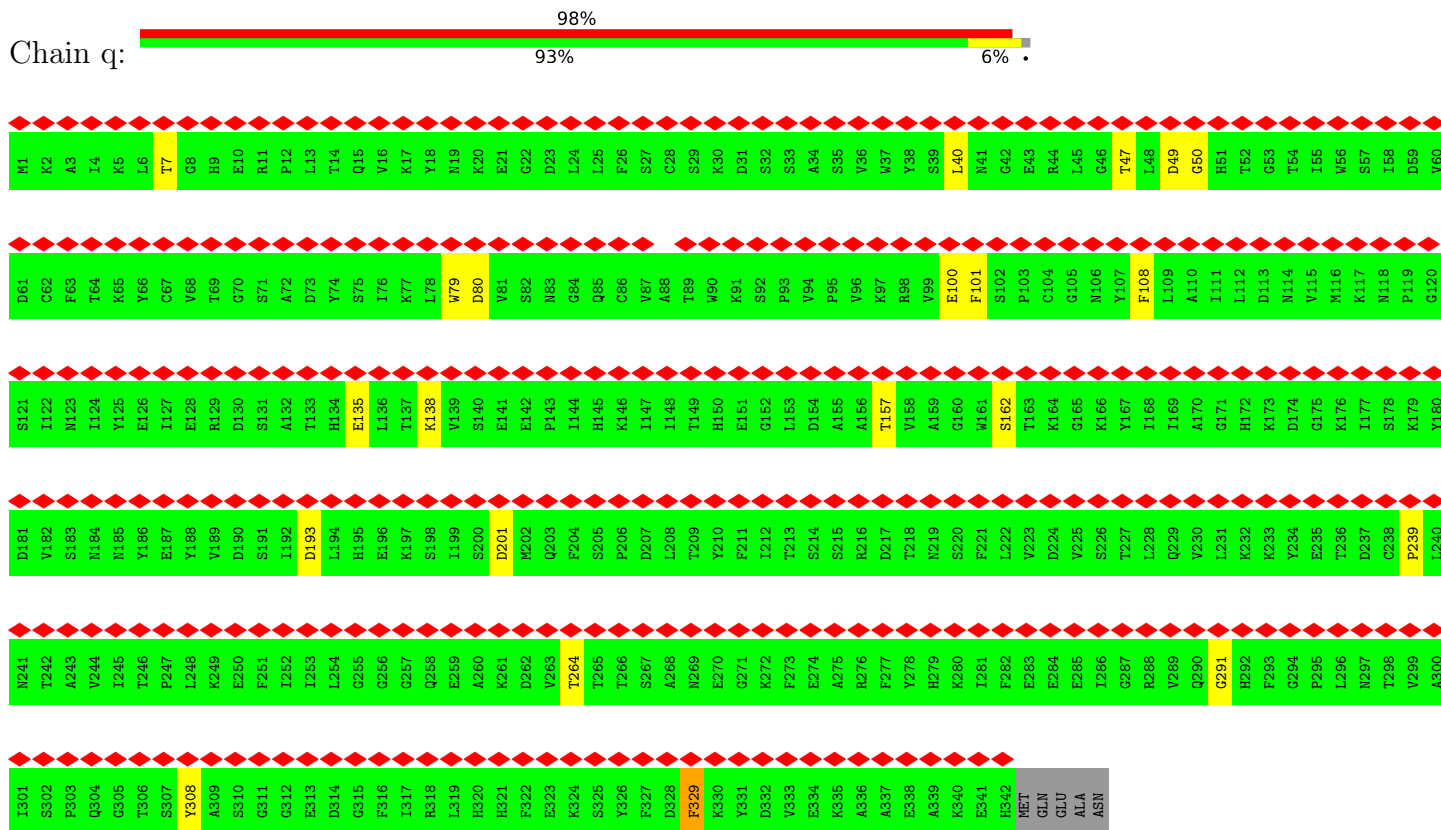
L585	H586	R587	I588	S589	L590	N591	S592	S593	N594	N595	A596	S597	A598	D599	E600	R601	A602	R603	Q604	C605	G606	P607	Y608	H609	Q610	H611	I612	N613	L614	D615	L616	I617	D618	V619	V620	I560	F621	L622	T623	C624	S625	G626	L627	I628	E629	I630	L631	P631	R632	M633	T634	A635	F636	G637	S638	C639	I640	K641	G642	M643	R644
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I645	P646	Y647	S648	P649	K650	S651	I652	R653	R654	S655	L656	H657	E658	Y659	D660	K661	L662	S663	F664	Q665	G666	P667	P668	E669	F670	T670	L671	R672	D673	G674	V675	L676	F677	F678	A679	K680	S681	M682	Q683	C684	G685	L686	N686	W687	R688	D689	S690	L691	K692	Y693	L694	R695	E696	I697	K698	S699	M700	A701	L702	L703	P704
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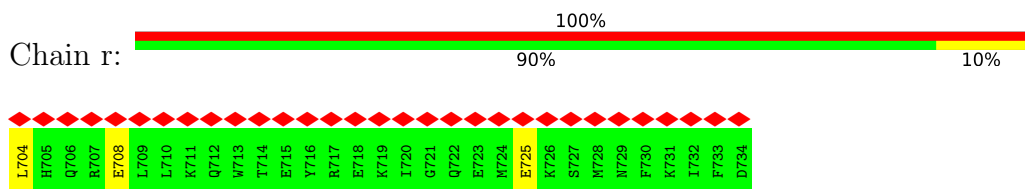
M705	M706	E707	T708	V709	L710	M711	S712	L713	T714	E715	R716	V717	Q718	V719	E720	S721	L722	K723	T724	Y725	G726	F727	S728	E729	K730	R731	F732	Y733	S734	S735	F736	S737	V738	A739	K740	L741	E742	L743	L744	F745	D746	L747	P748	E749	N750	K751	V752	V753	E754	V755	L756	Q757	S758	V759	I760	A761	E762	L763	E764
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I765	P766	A767	K768	L769	M770	D771	E772	K773	I774	I775	F776	V777	V778	E779	K780	G781	D782	E783	I784	T785	G786	L787	E788	E789	A790	M791	V792	K793	L794	ASN	LYS	GLU	TYR	LYS	ILE	ALA	LYS	GLU	ARG	LEU	ASN	ASN	PRO	PRO	SER	ASN	ARG	ARG	ARG
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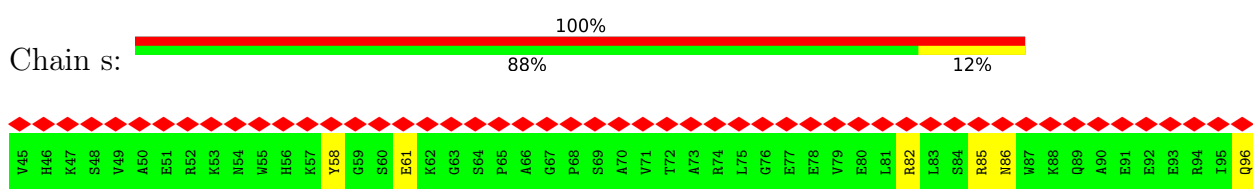
• Molecule 45: eIF3i



• Molecule 46: eIF3b



• Molecule 47: eIF3g



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	21401	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Each particle	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	27	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	104478	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.443	Depositor
Minimum map value	-0.234	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.07	Depositor
Map size (\AA)	402.0, 402.0, 402.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.34, 1.34, 1.34	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, GCP

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	1	0.38	1/1797 (0.1%)	0.69	0/2799
2	2	0.27	0/42269	0.69	7/65862 (0.0%)
3	3	0.30	0/317	0.69	0/489
4	A	0.42	0/1666	0.78	2/2279 (0.1%)
5	B	0.40	0/1793	0.72	2/2414 (0.1%)
6	C	0.39	0/1659	0.69	0/2252
7	D	0.42	0/1769	0.72	1/2378 (0.0%)
8	E	0.38	0/2122	0.67	0/2861
9	F	0.41	0/1628	0.75	0/2198
10	G	0.41	0/1835	0.72	1/2451 (0.0%)
11	H	0.42	0/1507	0.71	0/2028
12	I	0.41	0/1515	0.73	2/2029 (0.1%)
13	J	0.40	0/1495	0.75	1/2001 (0.0%)
14	K	0.48	0/831	0.77	1/1123 (0.1%)
15	L	0.41	0/1276	0.63	0/1718
16	M	0.46	0/891	0.80	1/1201 (0.1%)
17	N	0.41	0/1210	0.77	0/1628
18	O	0.38	0/953	0.68	0/1279
19	P	0.42	0/946	0.71	1/1273 (0.1%)
20	Q	0.43	0/1125	0.71	0/1510
21	R	0.43	0/969	0.77	1/1299 (0.1%)
22	S	0.43	0/1212	0.78	0/1629
23	T	0.40	0/1129	0.72	0/1520
24	U	0.40	0/857	0.73	0/1158
25	V	0.36	0/696	0.66	0/938
26	W	0.39	0/1039	0.74	1/1399 (0.1%)
27	X	0.40	0/1137	0.75	2/1516 (0.1%)
28	Y	0.40	0/1075	0.69	0/1433
29	Z	0.44	0/567	0.69	0/762
30	a	0.36	0/791	0.67	0/1059
31	b	0.38	0/619	0.65	0/837
32	c	0.38	0/489	0.71	0/655

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	d	0.41	0/457	0.62	0/607
34	e	0.40	0/440	0.73	0/586
35	f	0.49	0/559	0.73	1/747 (0.1%)
36	g	0.41	0/2521	0.64	1/3431 (0.0%)
37	h	0.36	0/234	0.75	0/300
38	i	0.39	0/894	0.70	0/1188
39	j	0.47	0/2034	0.77	2/2737 (0.1%)
40	k	0.47	0/3079	0.70	1/4157 (0.0%)
41	l	0.47	0/1051	0.76	1/1402 (0.1%)
42	m	0.41	0/724	0.75	1/968 (0.1%)
43	o	0.49	0/3796	0.80	0/5128
44	p	0.49	0/4602	0.76	2/6226 (0.0%)
45	q	0.50	0/2757	0.67	0/3733
46	r	0.49	0/282	0.74	0/373
47	s	0.47	0/426	0.64	0/571
All	All	0.38	1/103040 (0.0%)	0.71	32/148132 (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
9	F	0	1
27	X	0	1
28	Y	0	1
41	l	0	1
All	All	0	4

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	1	A	OP3-P	-9.88	1.49	1.61

The worst 5 of 32 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	2	685	A	C2'-C3'-O3'	8.09	127.30	109.50
12	I	29	LEU	CA-CB-CG	7.26	132.00	115.30
39	j	166	LEU	CA-CB-CG	6.66	130.62	115.30
41	l	191	LEU	CA-CB-CG	6.50	130.25	115.30
26	W	26	LEU	CA-CB-CG	6.10	129.33	115.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	F	191	THR	Peptide
27	X	63	GLN	Peptide
28	Y	29	HIS	Peptide
41	l	158	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	A	206/254 (81%)	170 (82%)	27 (13%)	9 (4%)	2	24
5	B	218/255 (86%)	185 (85%)	25 (12%)	8 (4%)	3	27
6	C	215/259 (83%)	186 (86%)	22 (10%)	7 (3%)	4	29
7	D	221/237 (93%)	196 (89%)	16 (7%)	9 (4%)	3	25
8	E	258/261 (99%)	225 (87%)	28 (11%)	5 (2%)	8	40
9	F	204/227 (90%)	169 (83%)	28 (14%)	7 (3%)	3	29
10	G	224/236 (95%)	197 (88%)	23 (10%)	4 (2%)	8	41
11	H	182/190 (96%)	157 (86%)	15 (8%)	10 (6%)	2	21
12	I	184/201 (92%)	160 (87%)	15 (8%)	9 (5%)	2	22
13	J	180/188 (96%)	154 (86%)	19 (11%)	7 (4%)	3	26
14	K	94/106 (89%)	81 (86%)	7 (7%)	6 (6%)	1	18
15	L	153/156 (98%)	133 (87%)	13 (8%)	7 (5%)	2	23
16	M	113/134 (84%)	85 (75%)	21 (19%)	7 (6%)	1	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	N	148/151 (98%)	134 (90%)	13 (9%)	1 (1%)	22	62
18	O	125/137 (91%)	102 (82%)	16 (13%)	7 (6%)	2	20
19	P	115/142 (81%)	96 (84%)	13 (11%)	6 (5%)	2	21
20	Q	139/143 (97%)	108 (78%)	20 (14%)	11 (8%)	1	14
21	R	116/136 (85%)	101 (87%)	13 (11%)	2 (2%)	9	43
22	S	143/146 (98%)	111 (78%)	21 (15%)	11 (8%)	1	14
23	T	141/144 (98%)	126 (89%)	15 (11%)	0	100	100
24	U	104/117 (89%)	84 (81%)	16 (15%)	4 (4%)	3	26
25	V	85/87 (98%)	74 (87%)	7 (8%)	4 (5%)	2	23
26	W	127/130 (98%)	112 (88%)	10 (8%)	5 (4%)	3	26
27	X	142/145 (98%)	117 (82%)	14 (10%)	11 (8%)	1	14
28	Y	132/135 (98%)	118 (89%)	7 (5%)	7 (5%)	2	21
29	Z	68/108 (63%)	50 (74%)	17 (25%)	1 (2%)	10	46
30	a	96/119 (81%)	81 (84%)	11 (12%)	4 (4%)	3	24
31	b	79/82 (96%)	61 (77%)	15 (19%)	3 (4%)	3	26
32	c	60/67 (90%)	51 (85%)	6 (10%)	3 (5%)	2	22
33	d	51/56 (91%)	33 (65%)	15 (29%)	3 (6%)	1	19
34	e	52/63 (82%)	45 (86%)	6 (12%)	1 (2%)	8	40
35	f	67/150 (45%)	48 (72%)	9 (13%)	10 (15%)	0	4
36	g	312/326 (96%)	257 (82%)	45 (14%)	10 (3%)	4	30
37	h	23/25 (92%)	23 (100%)	0	0	100	100
38	i	109/153 (71%)	92 (84%)	14 (13%)	3 (3%)	5	32
39	j	243/304 (80%)	205 (84%)	32 (13%)	6 (2%)	5	34
40	k	388/527 (74%)	339 (87%)	43 (11%)	6 (2%)	10	46
41	l	120/285 (42%)	100 (83%)	16 (13%)	4 (3%)	4	29
42	m	88/108 (82%)	76 (86%)	10 (11%)	2 (2%)	6	36
43	o	451/588 (77%)	417 (92%)	31 (7%)	3 (1%)	22	62
44	p	554/652 (85%)	497 (90%)	45 (8%)	12 (2%)	6	37
45	q	340/347 (98%)	302 (89%)	33 (10%)	5 (2%)	10	46
46	r	29/31 (94%)	27 (93%)	2 (7%)	0	100	100
47	s	50/52 (96%)	46 (92%)	4 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	7149/8360 (86%)	6131 (86%)	778 (11%)	240 (3%)	6	29

5 of 240 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	95	ALA
4	A	166	GLY
6	C	141	VAL
6	C	235	TRP
7	D	216	PRO

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	A	174/211 (82%)	147 (84%)	27 (16%)	2	15
5	B	198/228 (87%)	174 (88%)	24 (12%)	5	22
6	C	176/203 (87%)	153 (87%)	23 (13%)	4	20
7	D	185/196 (94%)	152 (82%)	33 (18%)	2	11
8	E	223/224 (100%)	186 (83%)	37 (17%)	2	13
9	F	174/194 (90%)	140 (80%)	34 (20%)	1	9
10	G	192/200 (96%)	174 (91%)	18 (9%)	8	30
11	H	164/170 (96%)	138 (84%)	26 (16%)	2	15
12	I	147/159 (92%)	133 (90%)	14 (10%)	8	29
13	J	153/158 (97%)	135 (88%)	18 (12%)	5	22
14	K	88/96 (92%)	70 (80%)	18 (20%)	1	7
15	L	136/137 (99%)	128 (94%)	8 (6%)	19	46
16	M	93/109 (85%)	82 (88%)	11 (12%)	5	22
17	N	127/128 (99%)	108 (85%)	19 (15%)	3	16
18	O	96/104 (92%)	88 (92%)	8 (8%)	11	36
19	P	100/119 (84%)	83 (83%)	17 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
20	Q	117/119 (98%)	99 (85%)	18 (15%)	2	15
21	R	109/124 (88%)	91 (84%)	18 (16%)	2	14
22	S	128/129 (99%)	105 (82%)	23 (18%)	1	11
23	T	117/118 (99%)	97 (83%)	20 (17%)	2	12
24	U	96/107 (90%)	83 (86%)	13 (14%)	4	19
25	V	73/73 (100%)	66 (90%)	7 (10%)	8	29
26	W	110/111 (99%)	102 (93%)	8 (7%)	14	40
27	X	119/120 (99%)	102 (86%)	17 (14%)	3	17
28	Y	108/109 (99%)	102 (94%)	6 (6%)	21	48
29	Z	60/88 (68%)	55 (92%)	5 (8%)	11	36
30	a	83/100 (83%)	71 (86%)	12 (14%)	3	17
31	b	71/72 (99%)	67 (94%)	4 (6%)	21	48
32	c	54/59 (92%)	48 (89%)	6 (11%)	6	24
33	d	46/48 (96%)	39 (85%)	7 (15%)	3	16
34	e	47/55 (86%)	39 (83%)	8 (17%)	2	13
35	f	57/133 (43%)	48 (84%)	9 (16%)	2	15
36	g	265/272 (97%)	231 (87%)	34 (13%)	4	20
37	h	23/23 (100%)	20 (87%)	3 (13%)	4	20
38	i	93/130 (72%)	74 (80%)	19 (20%)	1	7
39	j	224/274 (82%)	185 (83%)	39 (17%)	2	12
40	k	332/449 (74%)	306 (92%)	26 (8%)	12	38
41	l	119/246 (48%)	103 (87%)	16 (13%)	4	19
42	m	77/96 (80%)	64 (83%)	13 (17%)	2	13
43	o	411/444 (93%)	364 (89%)	47 (11%)	5	23
44	p	507/536 (95%)	469 (92%)	38 (8%)	13	39
45	q	297/301 (99%)	280 (94%)	17 (6%)	20	47
46	r	30/30 (100%)	27 (90%)	3 (10%)	7	28
47	s	43/43 (100%)	37 (86%)	6 (14%)	3	18
All	All	6242/7045 (89%)	5465 (88%)	777 (12%)	8	21

5 of 777 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
28	Y	99	LYS
39	j	7	ARG
30	a	38	ARG
28	Y	84	LYS
36	g	18	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 84 such sidechains are listed below:

Mol	Chain	Res	Type
36	g	161	ASN
43	o	32	HIS
38	i	44	ASN
40	k	508	HIS
43	o	242	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	74/75 (98%)	32 (43%)	7 (9%)
2	2	1778/1781 (99%)	879 (49%)	146 (8%)
3	3	13/25 (52%)	11 (84%)	1 (7%)
All	All	1865/1881 (99%)	922 (49%)	154 (8%)

5 of 922 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	8	U
1	1	9	G
1	1	10	G
1	1	14	A
1	1	15	G

5 of 154 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	2	1315	G
2	2	1579	C
2	2	1360	C
2	2	1430	U
2	2	1765	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 [i](#)

Of 87 ligands modelled in this entry, 85 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
51	GCP	k	603	48	27,34,34	1.96	8 (29%)	34,54,54	1.98	8 (23%)
50	MET	k	601	-	6,7,8	0.43	0	2,7,9	0.19	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
51	GCP	k	603	48	-	2/15/38/38	0/3/3/3
50	MET	k	601	-	-	1/5/6/8	-

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	k	603	GCP	PG-O1G	5.43	1.61	1.50
51	k	603	GCP	C5-C6	4.82	1.49	1.41
51	k	603	GCP	PB-O3A	3.15	1.61	1.58
51	k	603	GCP	PG-O2G	2.86	1.61	1.54
51	k	603	GCP	C5-C4	2.82	1.48	1.40

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

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	k	603	GCP	C2-N3-C4	5.46	121.60	115.36
51	k	603	GCP	C2-N1-C6	4.11	122.46	115.93
51	k	603	GCP	C5-C6-N1	-3.86	118.16	123.43
51	k	603	GCP	C4-C5-C6	-3.77	117.20	120.80
51	k	603	GCP	N3-C2-N1	-3.63	122.38	127.22

There are no chirality outliers.

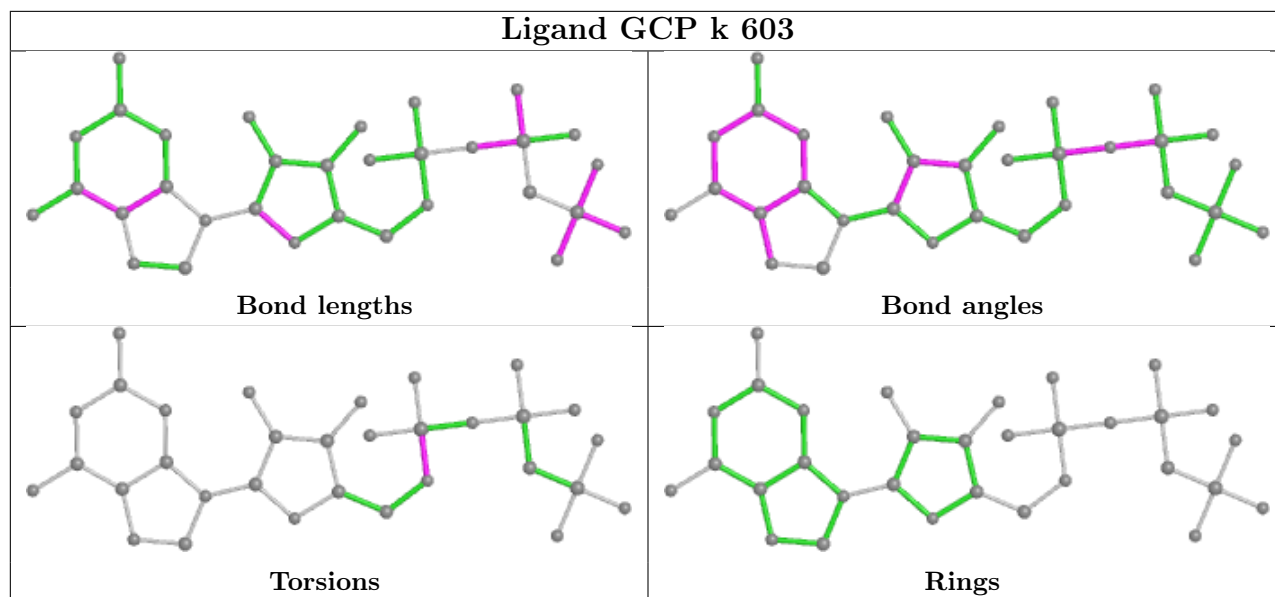
All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
51	k	603	GCP	C5'-O5'-PA-O3A
50	k	601	MET	CA-CB-CG-SD
51	k	603	GCP	C5'-O5'-PA-O1A

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 [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
43	o	7
44	p	7

The worst 5 of 14 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	o	495:PRO	C	753:UNK	N	221.30
1	p	218:UNK	C	251:GLN	N	63.04
1	p	32:UNK	C	116:UNK	N	42.95
1	p	185:UNK	C	193:ARG	N	15.92
1	o	818:UNK	C	828:UNK	N	14.63

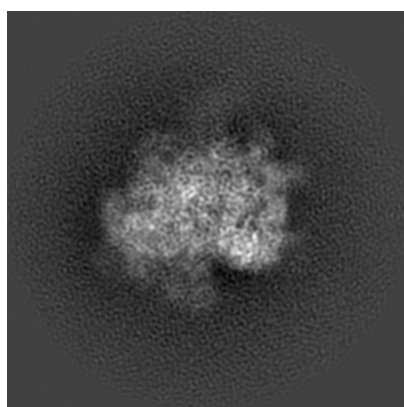
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3048. These allow visual inspection of the internal detail of the map and identification of artifacts.

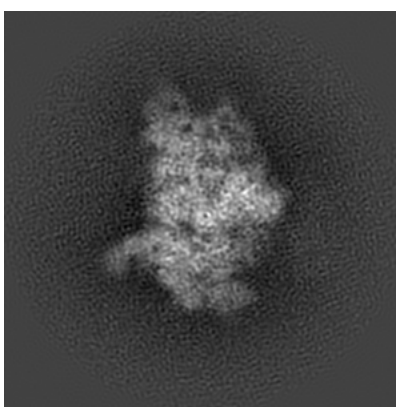
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

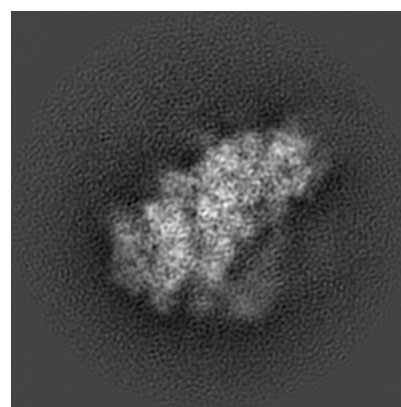
6.1.1 Primary map



X



Y

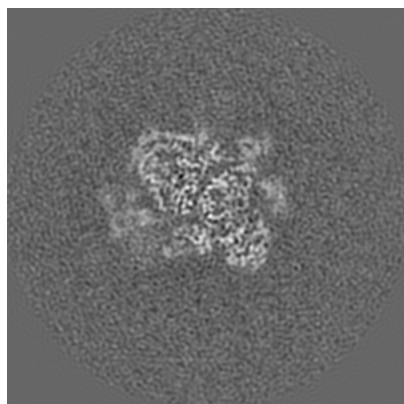


Z

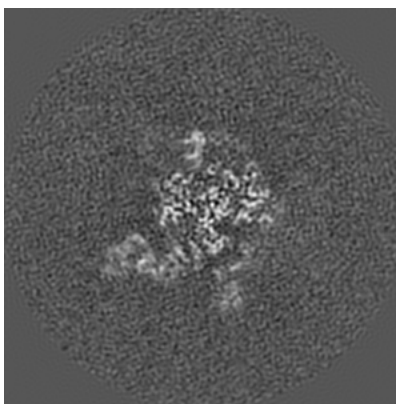
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

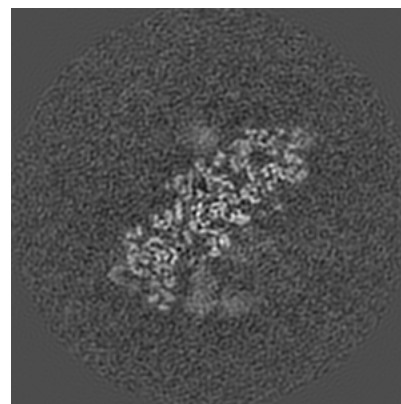
6.2.1 Primary map



X Index: 150



Y Index: 150

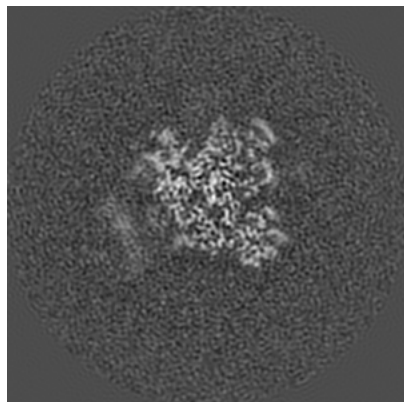


Z Index: 150

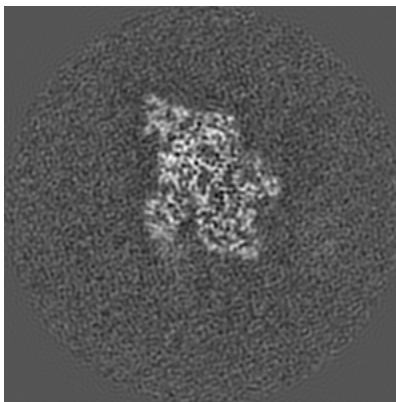
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

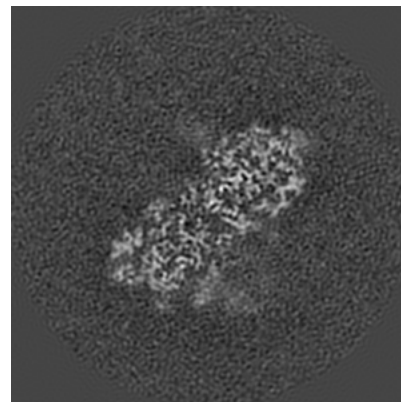
6.3.1 Primary map



X Index: 161



Y Index: 171

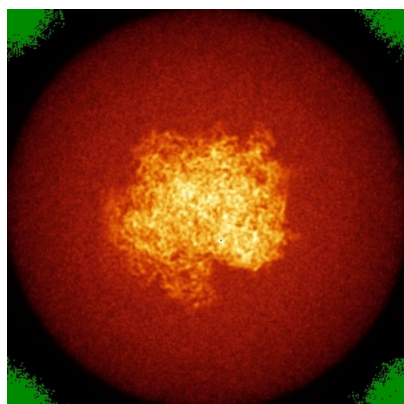


Z Index: 143

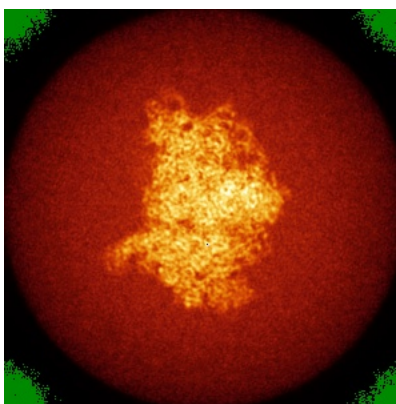
The images above show the largest variance slices of the map in three orthogonal directions.

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

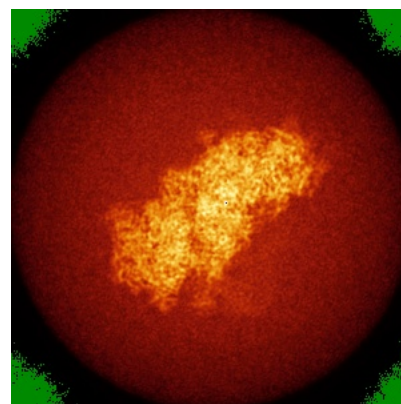
6.4.1 Primary map



X



Y

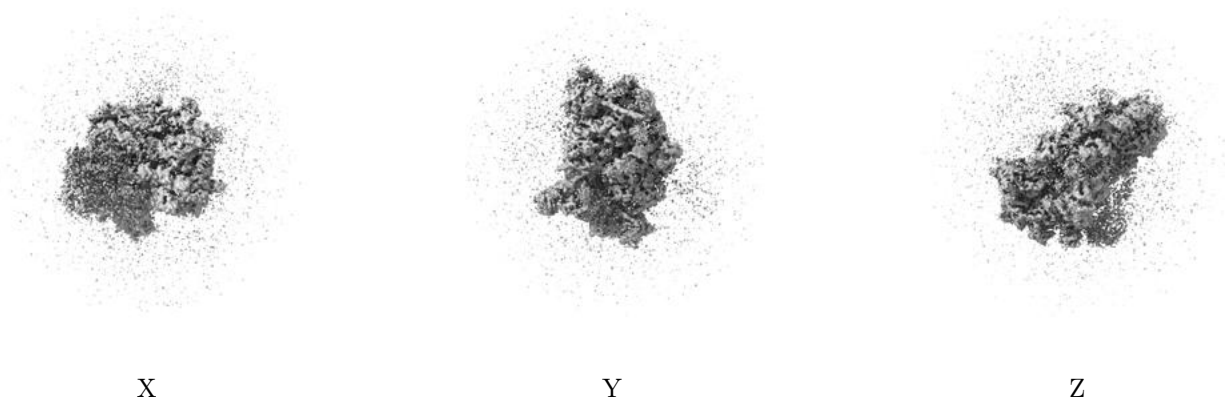


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.07. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

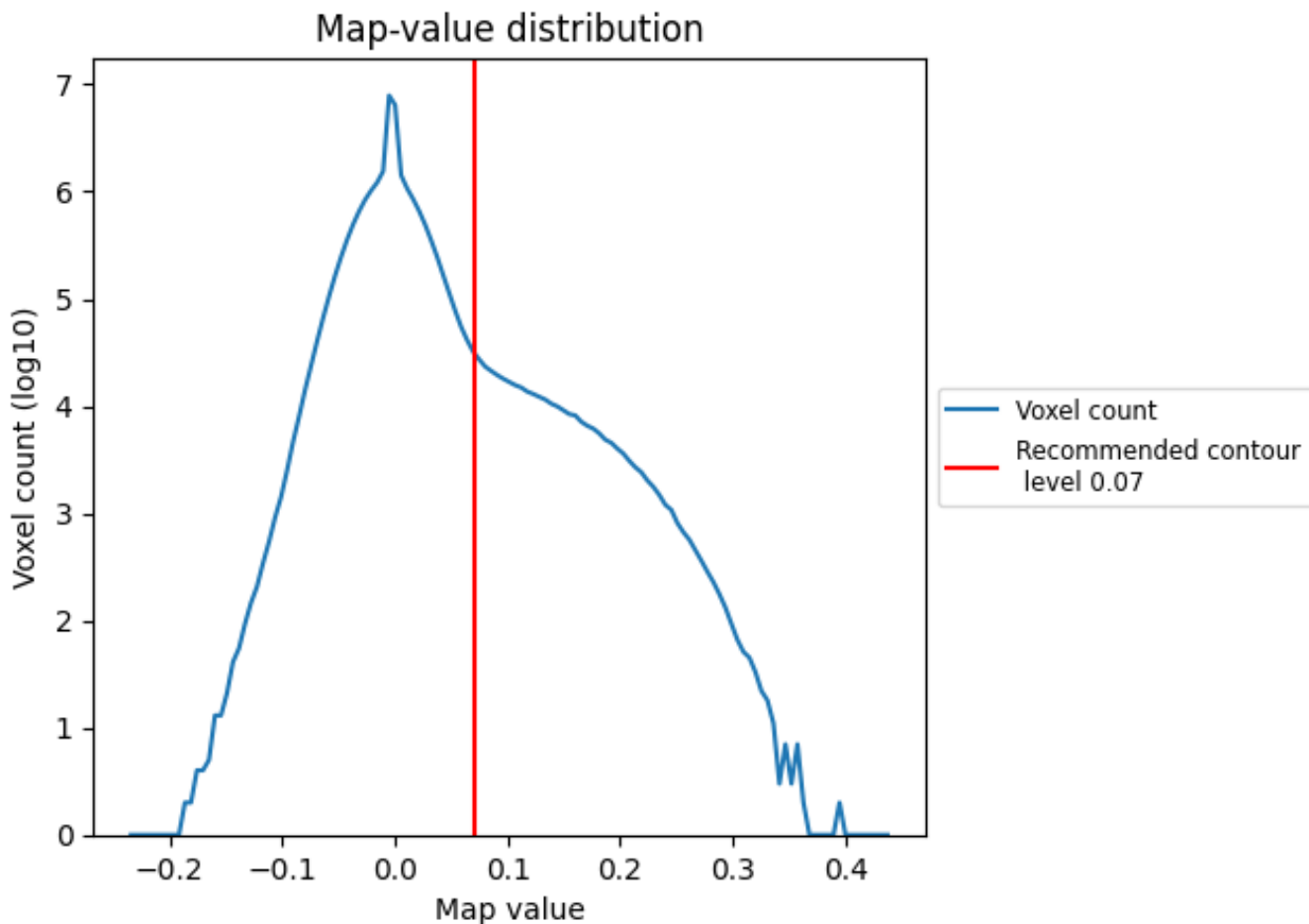
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

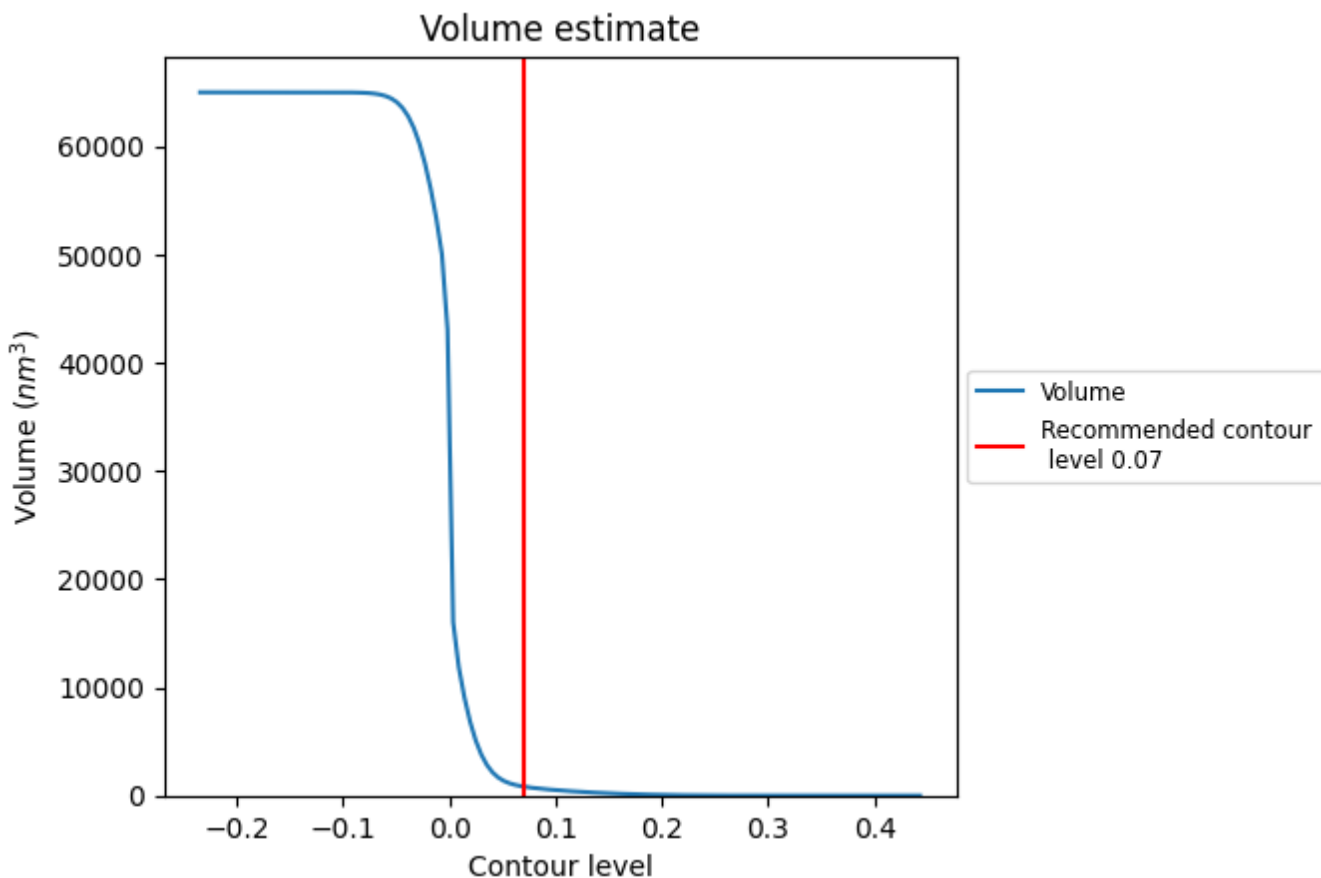
This section contains the results of statistical analysis of the map.

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.

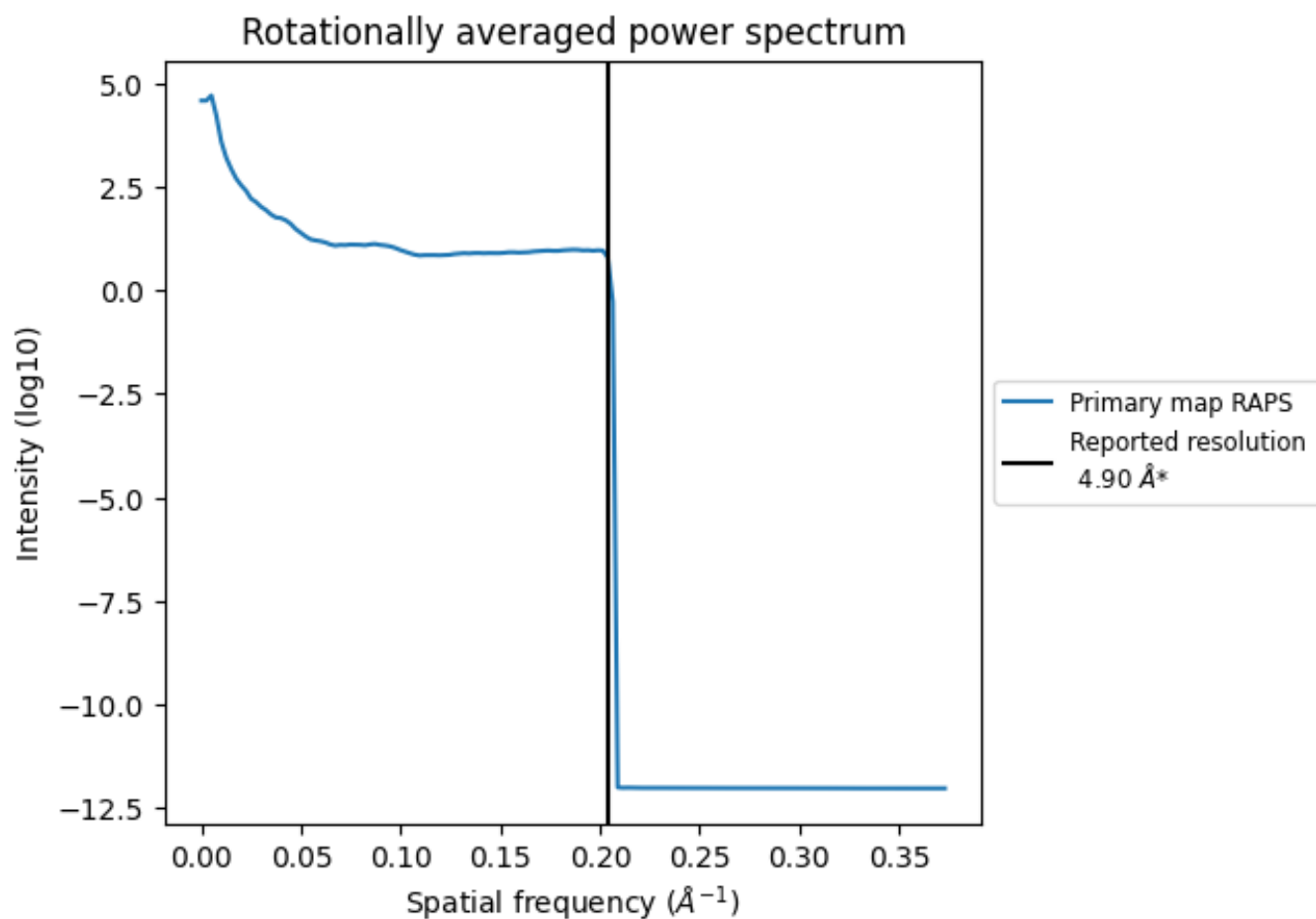
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 830 nm³; this corresponds to an approximate mass of 750 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](#)

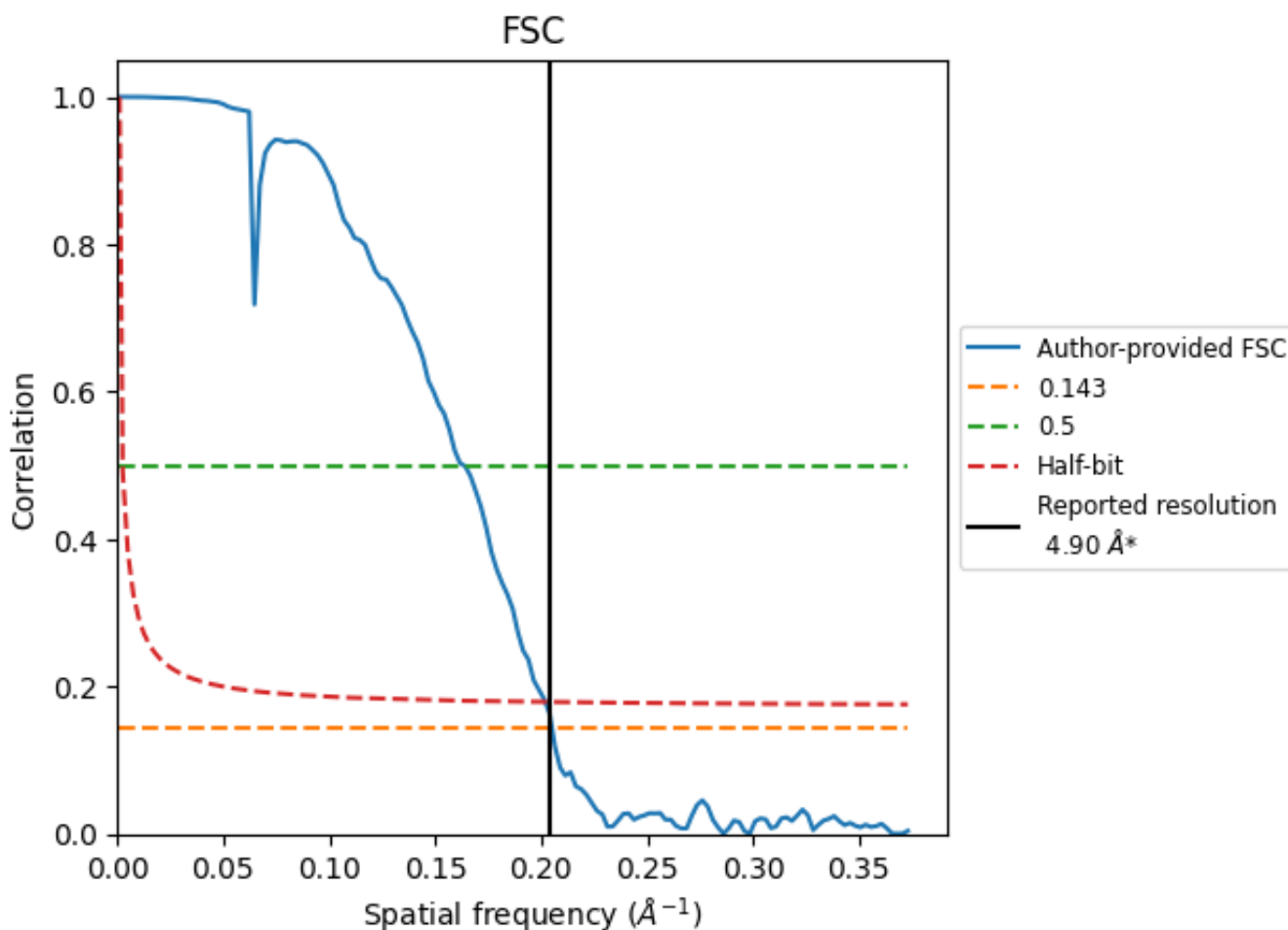


*Reported resolution corresponds to spatial frequency of 0.204 Å⁻¹

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 0.204 Å⁻¹

8.2 Resolution estimates [i](#)

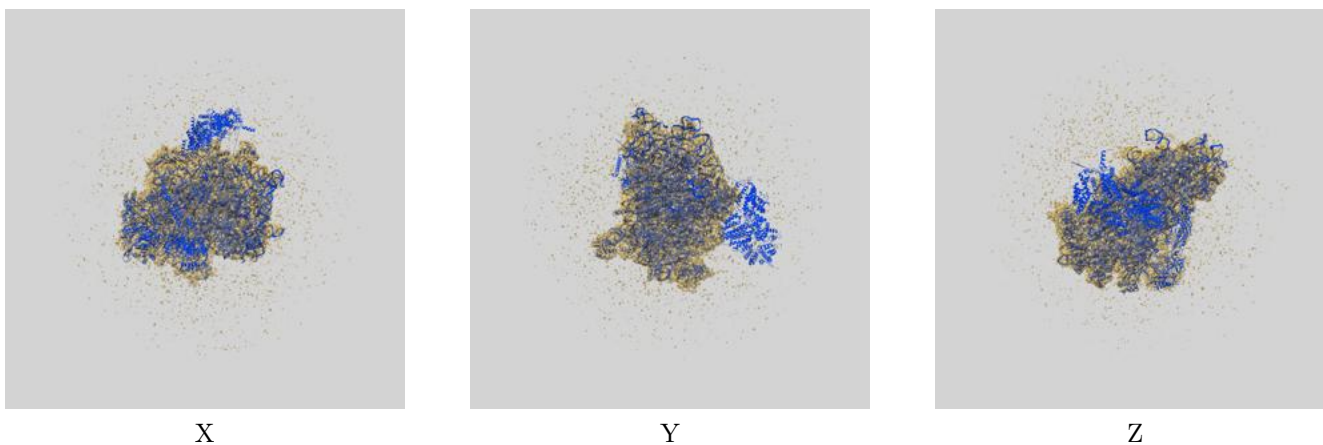
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.90	-	-
Author-provided FSC curve	4.88	6.12	4.95
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

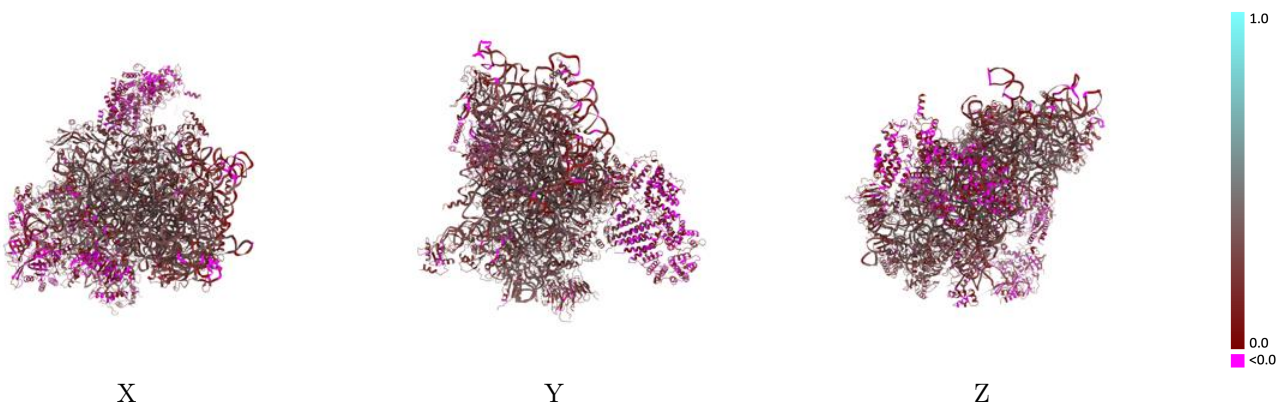
This section contains information regarding the fit between EMDB map EMD-3048 and PDB model 3JAP. Per-residue inclusion information can be found in section 3 on page 14.

9.1 Map-model overlay [i](#)



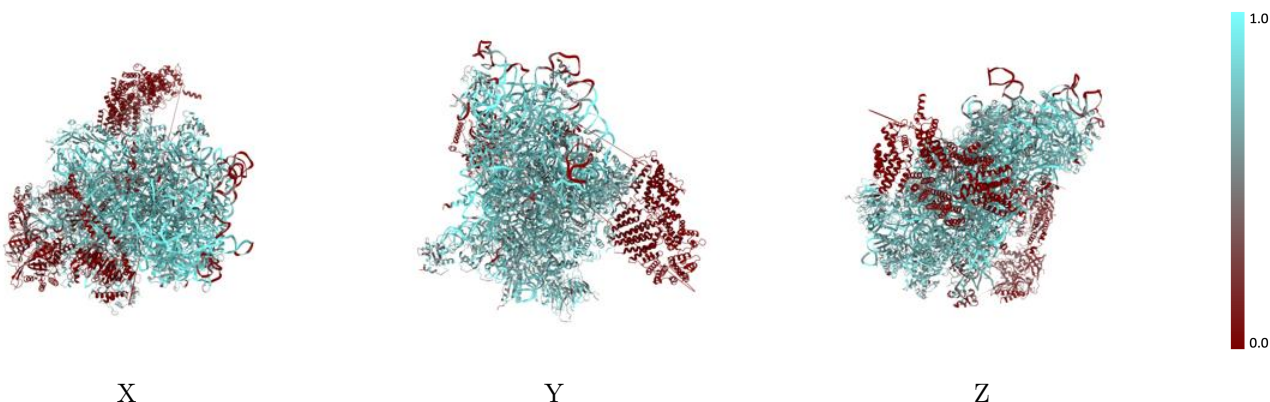
The images above show the 3D surface view of the map at the recommended contour level 0.07 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



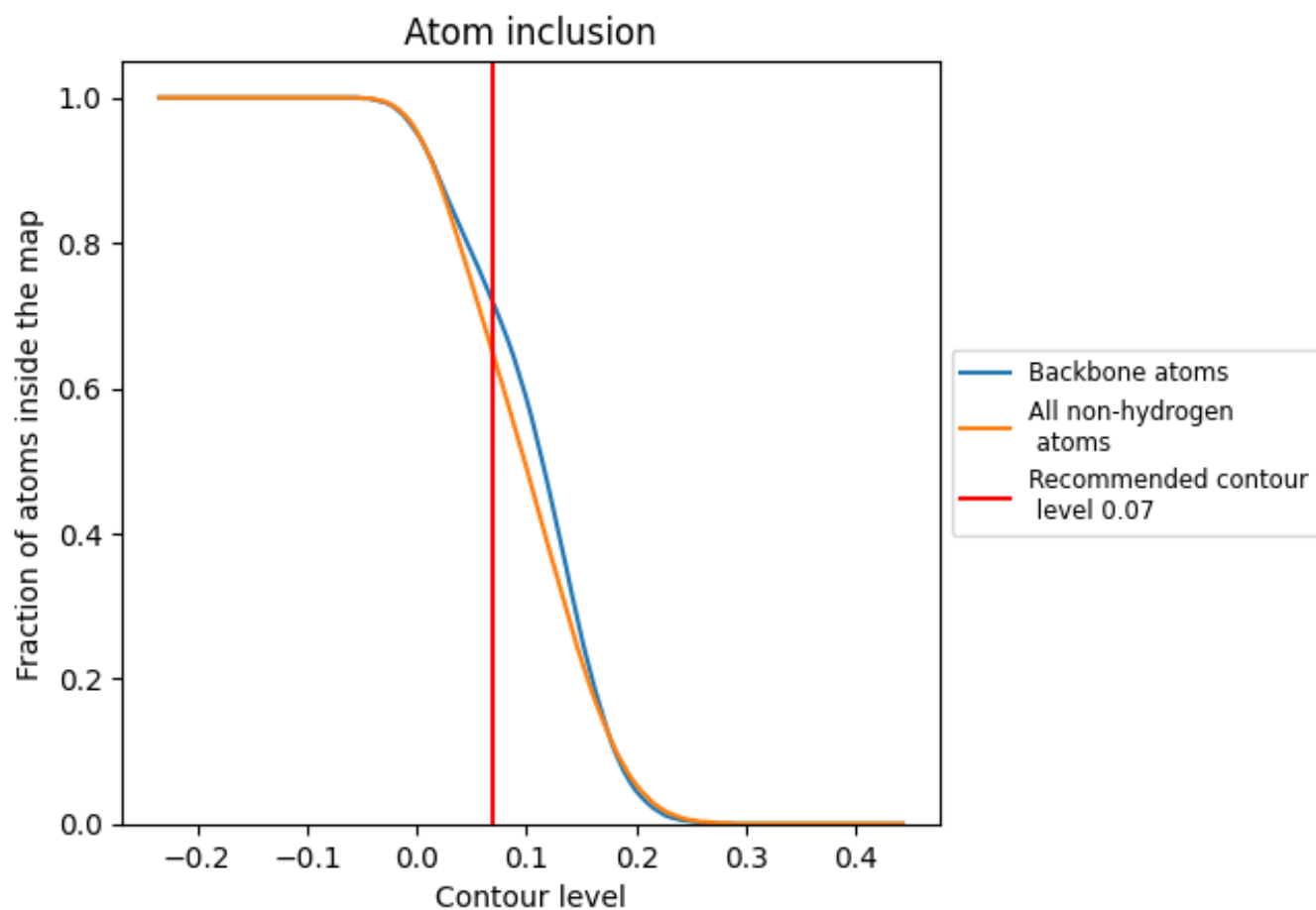
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.07).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 72% of all backbone atoms, 64% 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 (0.07) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6440	 0.2440
1	 0.5980	 0.1680
2	 0.8680	 0.2900
3	 0.5500	 0.2110
A	 0.7510	 0.2890
B	 0.7500	 0.2810
C	 0.7190	 0.3090
D	 0.6810	 0.2810
E	 0.7300	 0.2980
F	 0.6790	 0.2580
G	 0.7150	 0.2460
H	 0.6710	 0.2540
I	 0.7160	 0.2620
J	 0.7290	 0.2960
K	 0.7120	 0.2710
L	 0.6860	 0.2970
M	 0.5650	 0.2000
N	 0.7280	 0.2870
O	 0.7510	 0.2800
P	 0.7200	 0.2620
Q	 0.7090	 0.2650
R	 0.7170	 0.2850
S	 0.6780	 0.2640
T	 0.7290	 0.2560
U	 0.6470	 0.2680
V	 0.7320	 0.3010
W	 0.7130	 0.2930
X	 0.7190	 0.3190
Y	 0.7650	 0.2910
Z	 0.6190	 0.2420
a	 0.7430	 0.3170
b	 0.7180	 0.2800
c	 0.6940	 0.2950
d	 0.7590	 0.3010
e	 0.7160	 0.3180



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Chain	Atom inclusion	Q-score
f	 0.6550	 0.2270
g	 0.7090	 0.2410
h	 0.3730	 0.2170
i	 0.6400	 0.2810
j	 0.3060	 0.1650
k	 0.1170	 0.1100
l	 0.1040	 0.1240
m	 0.2760	 0.2020
o	 0.0130	 0.0720
p	 0.0310	 0.0920
q	 0.0260	 0.0530
r	 0.0180	 0.0550
s	 0.0030	 0.0760