



wwPDB EM Validation Summary Report ⓘ

Nov 19, 2022 – 11:24 pm GMT

PDB ID : 6FLQ
EMDB ID : EMD-4275
Title : CryoEM structure of E.coli RNA polymerase paused elongation complex bound to NusA
Authors : Guo, X.; Weixlbaumer, A.
Deposited on : 2018-01-26
Resolution : 4.10 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

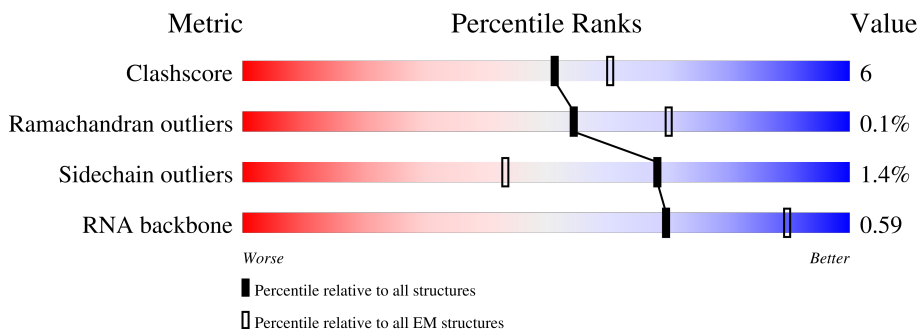
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 4.10 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.



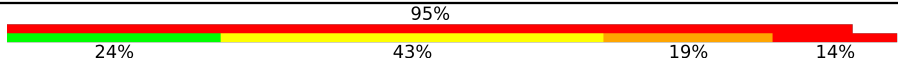

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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	A	329	88% 79% 14% 6%
1	B	329	86% 76% 14% 9%
2	C	1342	85% 82% 17%
3	D	1407	81% 81% 14% 5%
4	E	91	92% 93% 5%
5	F	495	100% 96%
6	N	31	94% 77% 23%

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Mol	Chain	Length	Quality of chain
7	R	21	 <p>95% 24% 43% 19% 14%</p>
8	T	39	 <p>79% 69% 31%</p>

2 Entry composition [i](#)

There are 10 unique types of molecules in this entry. The entry contains 30201 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 protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	310	Total	C	N	O	S	0	0
			2168	1339	394	429	6		
1	B	298	Total	C	N	O	S	0	0
			2068	1280	374	408	6		

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	1341	Total	C	N	O	S	0	0
			10573	6634	1841	2055	43		

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	D	1334	Total	C	N	O	S	0	0
			10357	6510	1846	1952	49		

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	E	90	Total	C	N	O	S	0	0
			709	430	136	142	1		

- Molecule 5 is a protein called Transcription termination/antitermination protein NusA.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	F	495	Total	C	N	O	0	0
			2447	1457	495	495		

- Molecule 6 is a DNA chain called DNA (31-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	N	31	647	304	131	181	31	0	0

- Molecule 7 is a RNA chain called RNA (5'-R(*CP*CP*UP*GP*AP*UP*CP*AP*GP*GP*CP*GP*AP*UP*GP*UP*GP*UP*GP*UP*GP*CP*U)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
7	R	21	444	199	77	148	20	0	0

- Molecule 8 is a DNA chain called DNA (39-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
8	T	39	785	375	135	236	39	0	0

- Molecule 9 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
9	D	1	1	1	0

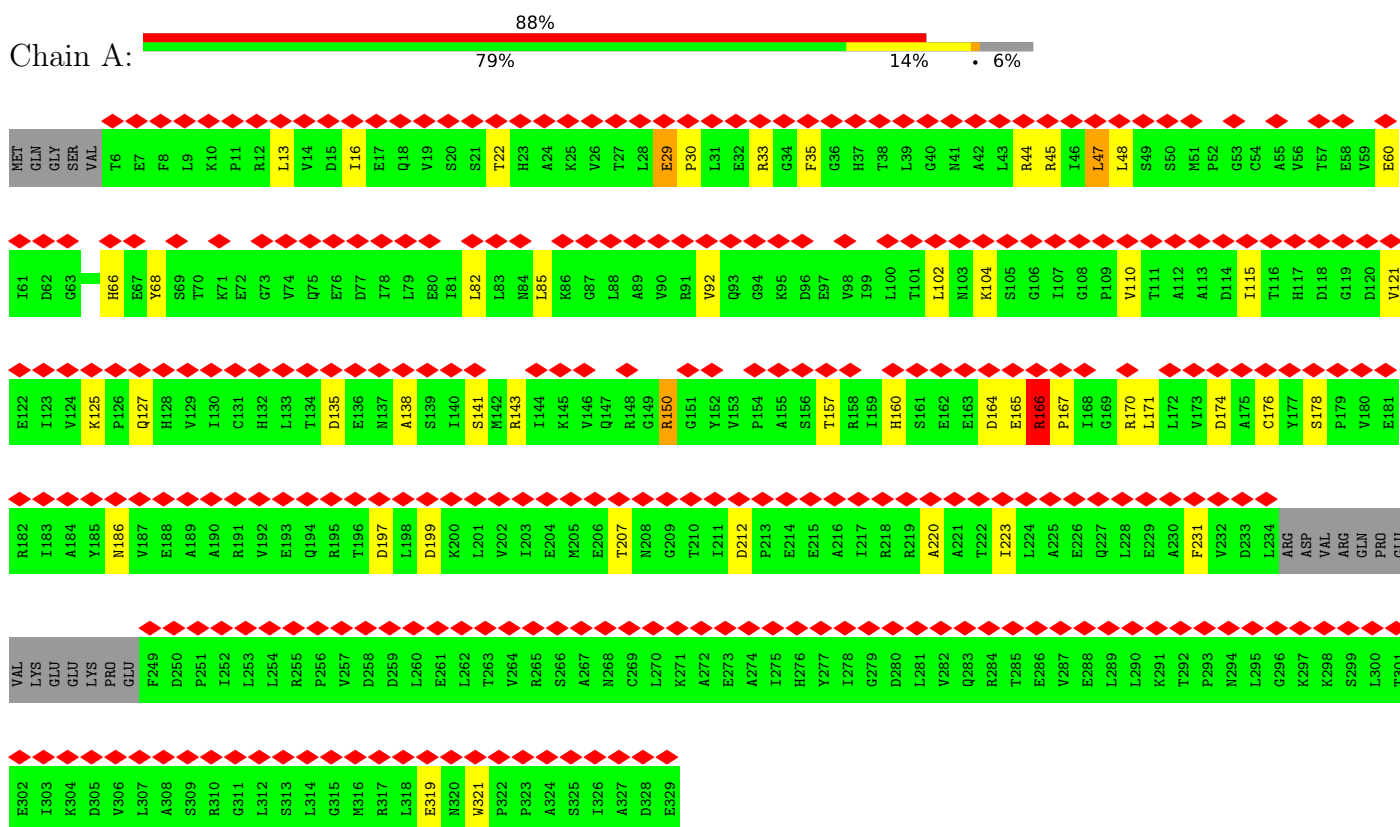
- Molecule 10 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
10	D	2	2	2	0

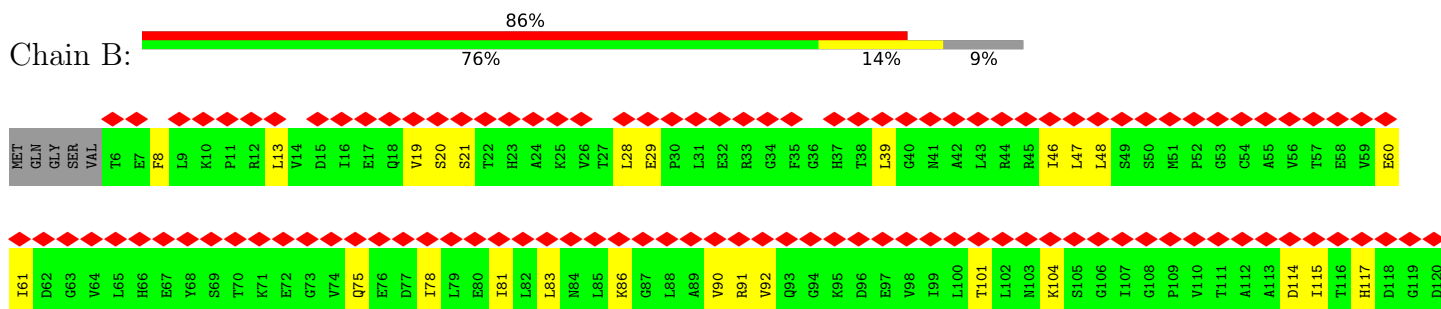
3 Residue-property plots

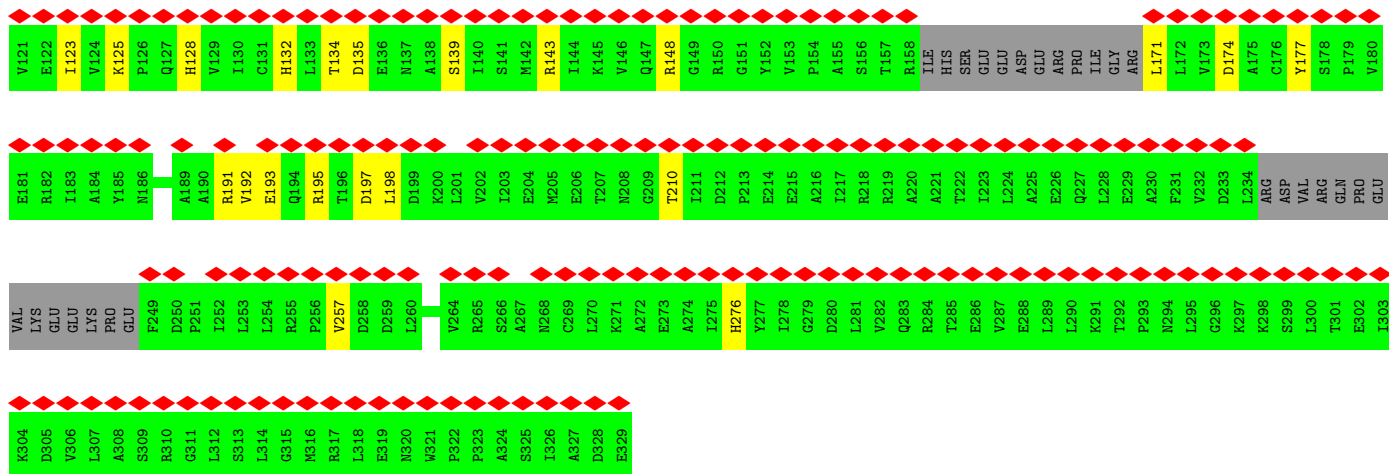
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: DNA-directed RNA polymerase subunit alpha

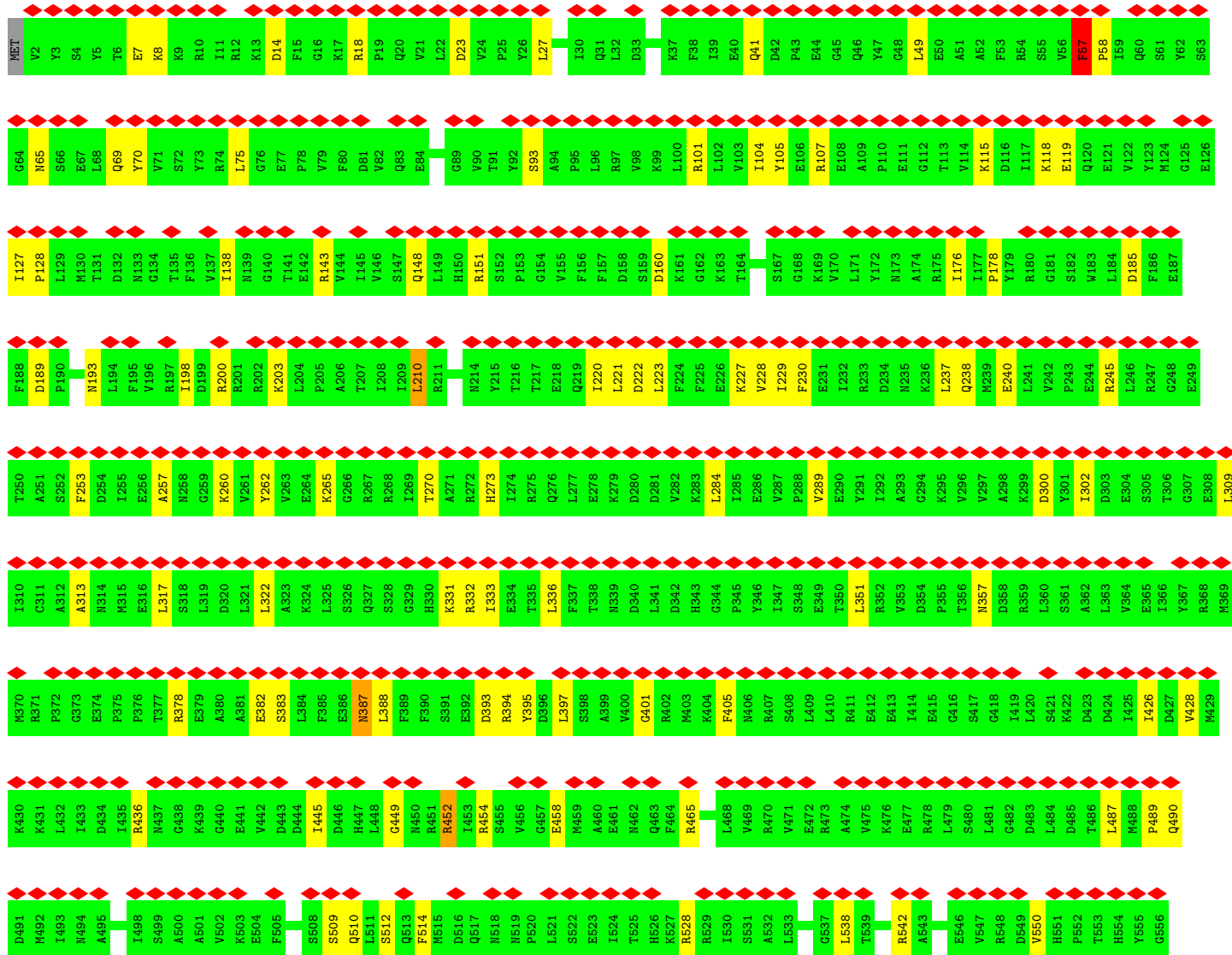
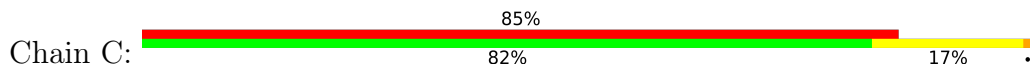


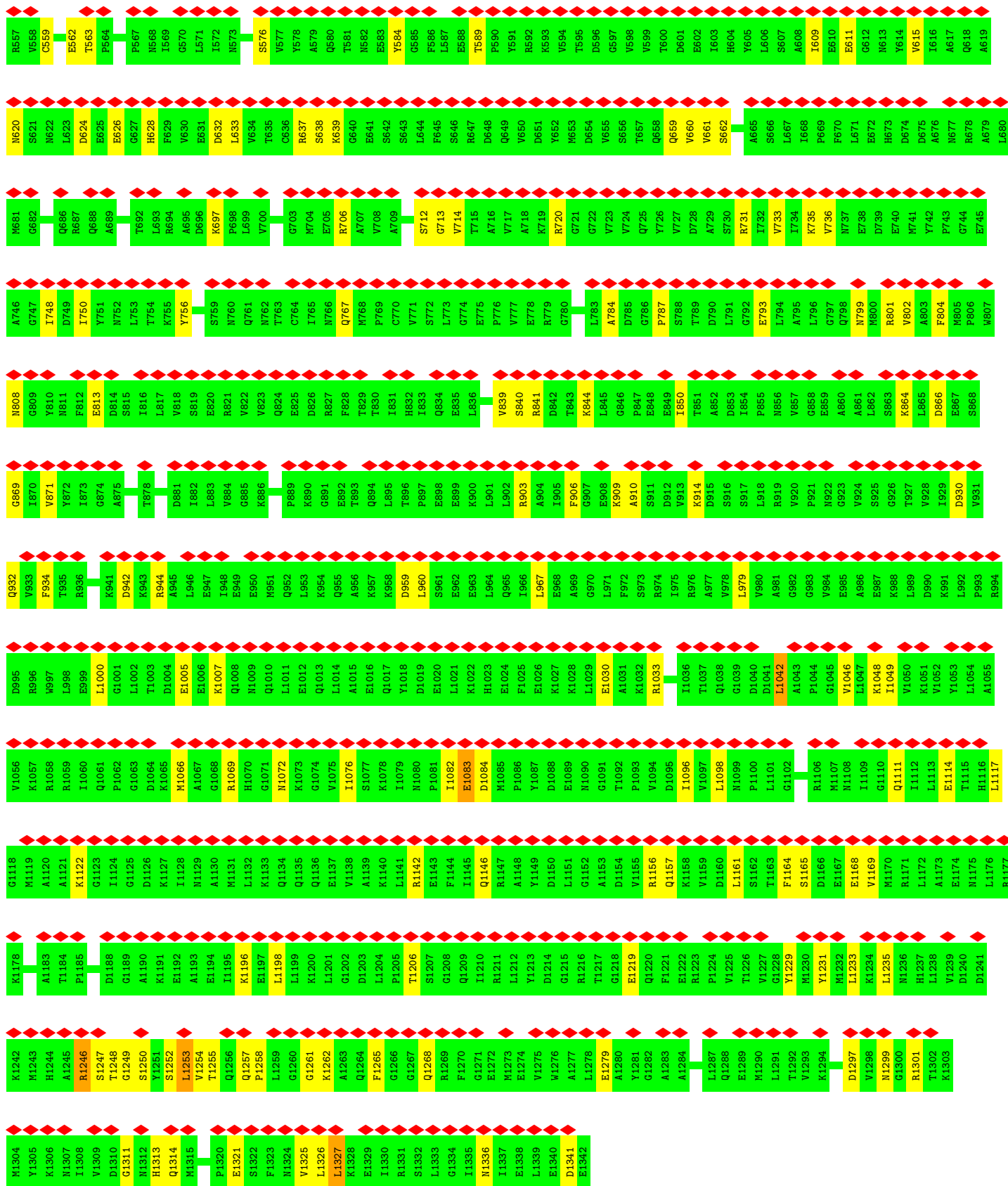
- Molecule 1: DNA-directed RNA polymerase subunit alpha





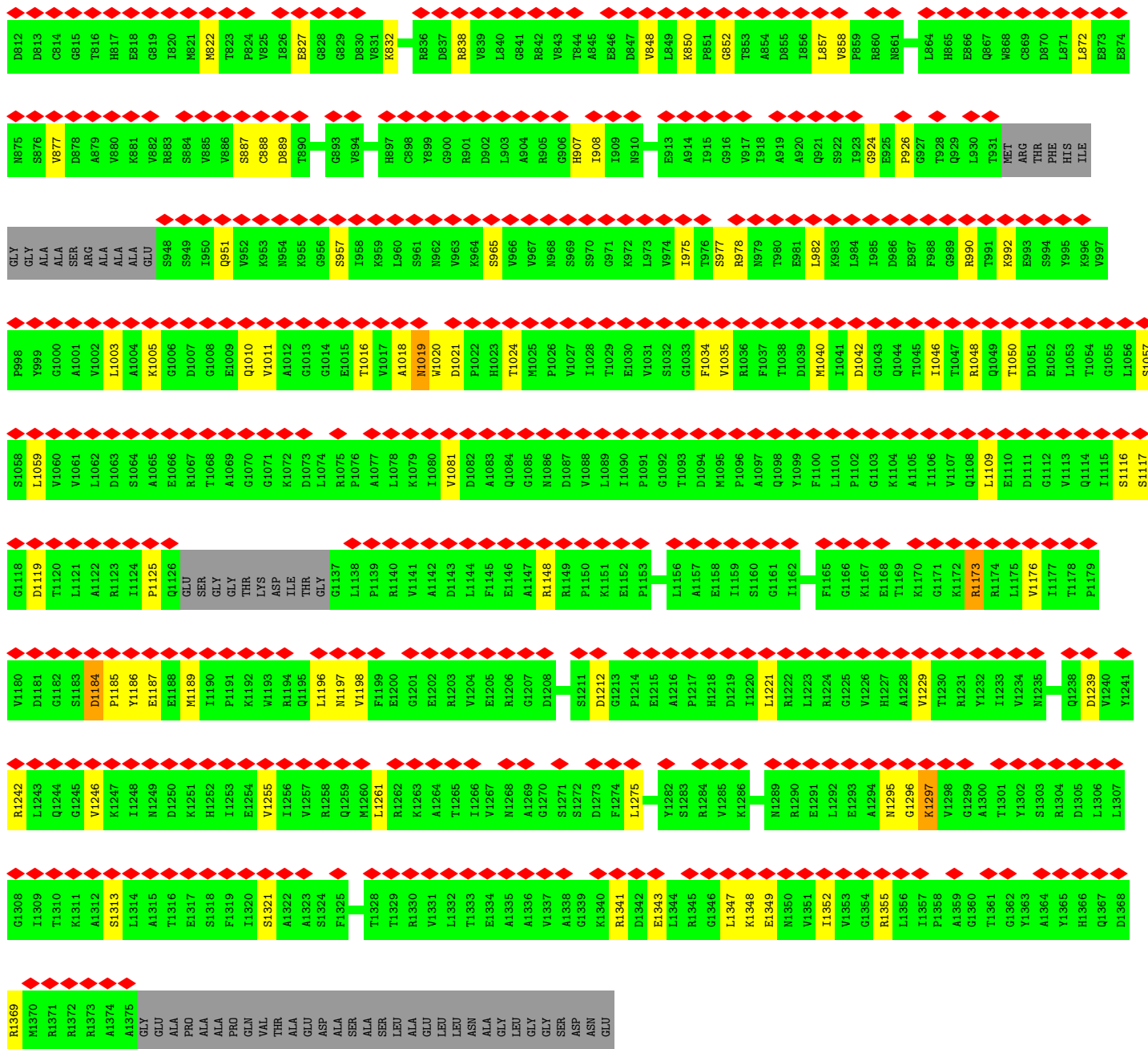
• Molecule 2: DNA-directed RNA polymerase subunit beta

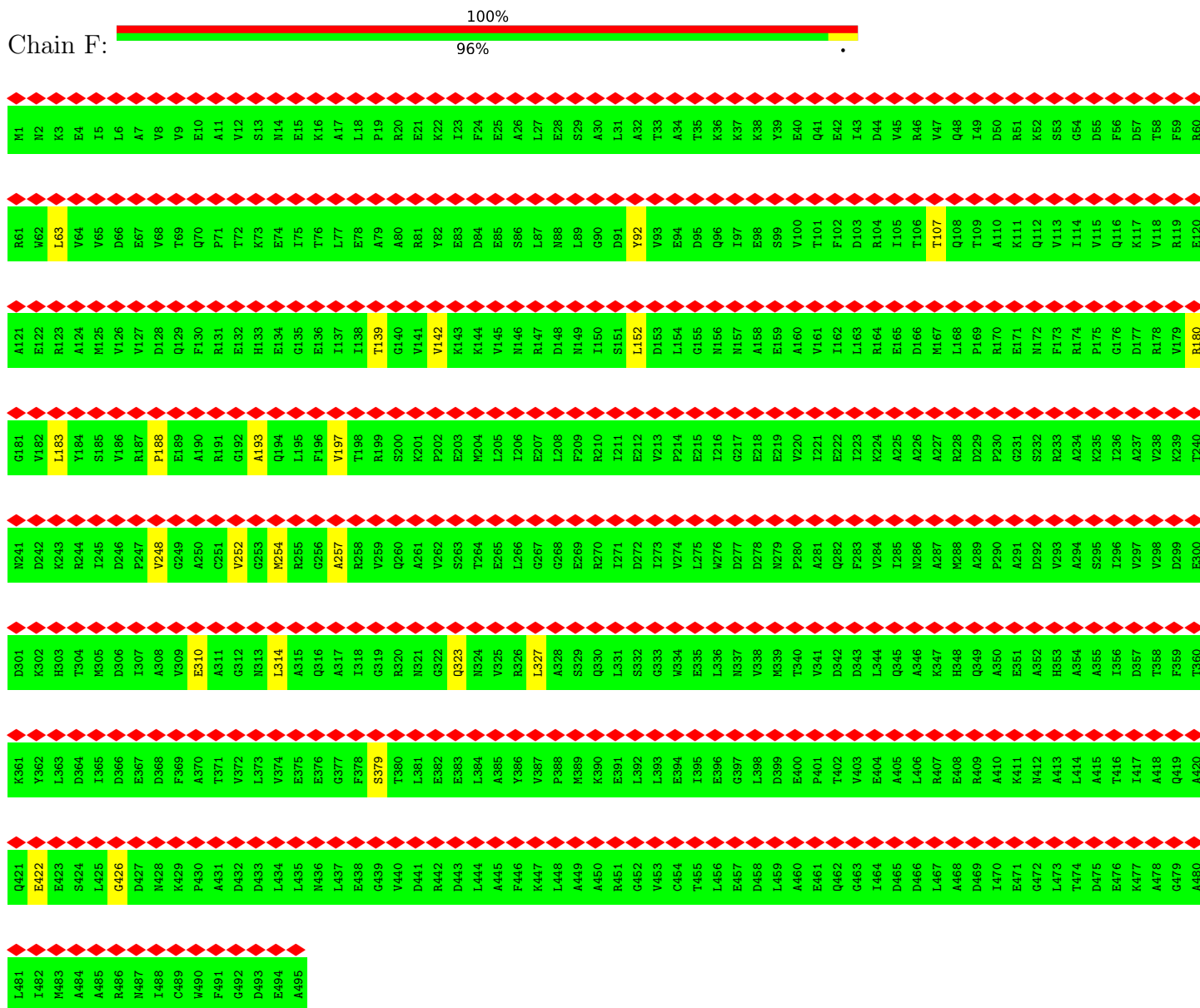




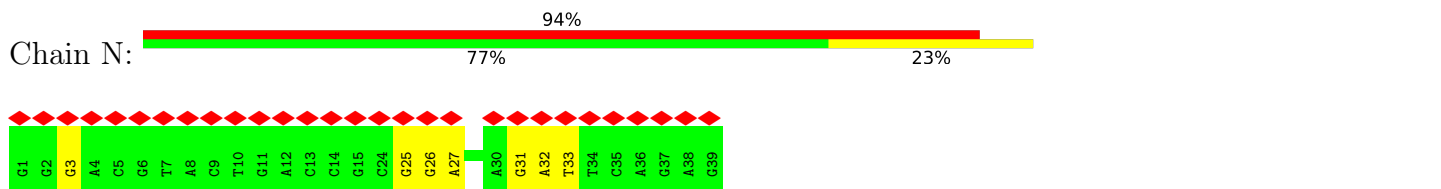


NET	L128	L189	L252	R312	P379	G444	Q504	A565	T627	N690	D751
LYS	D129	K190	V253	G313	F380	K445	D505	K566	T627	D691	G752
ASP	M130	S191	P254	R314	I381	A446	V506	T567	G628	R692	S753
LEU	P131	M192	P255	A315	I382	Q448	V507	S568	F629	W693	L754
LYS	L132	D193	D256	I316	G383	L449	L510	L569	A632	S694	L755
PHE	R133	L194	G257	T317	K384	L450	Y511	K570	A633	K695	E756
LEU	D134	E195	G258	K321	K384	P451	Y512	D571	RG34	A696	T757
GLU	I135	Q196	R259	K322	H450	L452	M513	T572	G636	W697	F758
ALA	I136	E197	F260	P323	T514	V453	G514	V574	A637	D699	A761
THR	R137	C198	A261	R324	R388	C454	D516	G575	S638	M700	N762
LYS	Y138	E199	T262	L324	L387	C454	D516	R576	V639	L701	L763
THR	L139	Q200	S263	K325	L387	A455	C517	A577	G640	Q702	R764
GLN	Y140	Q200	S263	K325	L387	A455	C517	A577	G640	T703	E765
GLU	L141	L201	D264	L327	R388	A456	C517	A577	G640	E704	G766
E16	F141	L201	D264	L327	R388	A456	C517	A577	G640	T705	L767
F17	F141	L201	D264	L327	R388	A456	C517	A577	G640	W706	N768
D18	F141	L201	D264	L327	R388	A456	C517	A577	G640	I707	V769
I22	F141	L201	D264	L327	R388	A456	C517	A577	G640	N708	L770
A23	F141	L201	D264	L327	R388	A456	C517	A577	G640	R709	L771
L24	F141	L201	D264	L327	R388	A456	C517	A577	G640	D710	F772
L24	F141	L201	D264	L327	R388	A456	C517	A577	G640	G711	F773
A25	F141	L201	D264	L327	R388	A456	C517	A577	G640	E712	S774
S26	F141	L201	D264	L327	R388	A456	C517	A577	G640	E713	S775
P27	F141	L201	D264	L327	R388	A456	C517	A577	G640	E714	T776
D28	F141	L201	D264	L327	R388	A456	C517	A577	G640	E715	T777
M29	F141	L201	D264	L327	R388	A456	C517	A577	G640	E716	H777
I30	F141	L201	D264	L327	R388	A456	C517	A577	G640	Q716	G778
R31	F141	L201	D264	L327	R388	A456	C517	A577	G640	V717	A779
S32	F141	L201	D264	L327	R388	A456	C517	A577	G640	S718	R780
W33	F141	L201	D264	L327	R388	A456	C517	A577	G640	F719	K781
S34	F141	L201	D264	L327	R388	A456	C517	A577	G640	F720	G782
F35	F141	L201	D264	L327	R388	A456	C517	A577	G640	I722	L783
G36	F141	L201	D264	L327	R388	A456	C517	A577	G640	I723	D785
E37	F141	L201	D264	L327	R388	A456	C517	A577	G640	I724	T786
W38	F141	L201	D264	L327	R388	A456	C517	A577	G640	I725	A787
K39	F141	L201	D264	L327	R388	A456	C517	A577	G640	I726	L788
K40	F141	L201	D264	L327	R388	A456	C517	A577	G640	I727	K789
P41	F141	L201	D264	L327	R388	A456	C517	A577	G640	I728	T790
E42	F141	L201	D264	L327	R388	A456	C517	A577	G640	I729	A791
T43	F141	L201	D264	L327	R388	A456	C517	A577	G640	I730	N792
I44	F141	L201	D264	L327	R388	A456	C517	A577	G640	I731	S793
N45	F141	L201	D264	L327	R388	A456	C517	A577	G640	I732	G794
Y46	F141	L201	D264	L327	R388	A456	C517	A577	G640	I733	Y795
Y46	F141	L201	D264	L327	R388	A456	C517	A577	G640	I734	L796
R47	F141	L201	D264	L327	R388	A456	C517	A577	G640	I735	T797
T48	F141	L201	D264	L327	R388	A456	C517	A577	G640	I736	R798
F49	F141	L201	D264	L327	R388	A456	C517	A577	G640	I737	R799
K50	F141	L201	D264	L327	R388	A456	C517	A577	G640	I738	L800
P51	F141	L201	D264	L327	R388	A456	C517	A577	G640	I739	W801
E52	F141	L201	D264	L327	R388	A456	C517	A577	G640	I740	D802
R53	F141	L201	D264	L327	R388	A456	C517	A577	G640	I741	A803
D54	F141	L201	D264	L327	R388	A456	C517	A577	G640	I742	A804
G55	F141	L201	D264	L327	R388	A456	C517	A577	G640	I743	Q805
L56	F141	L201	D264	L327	R388	A456	C517	A577	G640	I744	D806
F57	F141	L201	D264	L327	R388	A456	C517	A577	G640	I745	L807
C58	F141	L201	D264	L327	R388	A456	C517	A577	G640	I746	W808
A59	F141	L201	D264	L327	R388	A456	C517	A577	G640	I747	E811
F62	F141	L201	D264	L327	R388	A456	C517	A577	G640	I748	
G63	F141	L201	D264	L327	R388	A456	C517	A577	G640	I749	
	F141	L201	D264	L327	R388	A456	C517	A577	G640	I750	

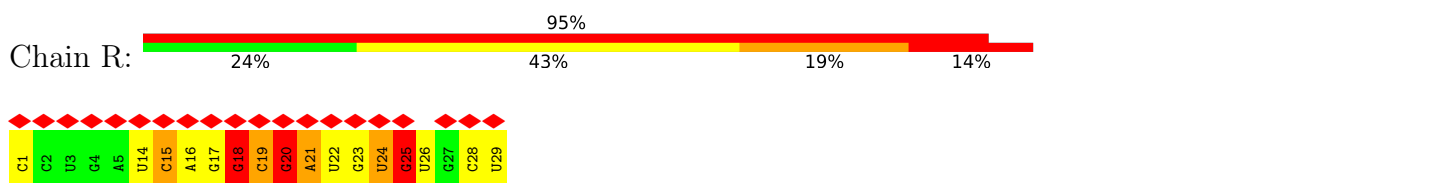




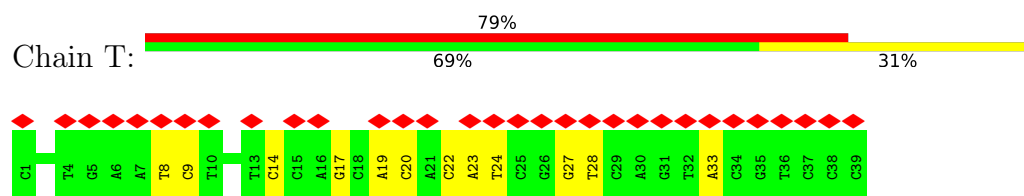
• Molecule 6: DNA (31-MER)



• Molecule 7: RNA (5'-R>(*CP*CP*UP*GP*AP*UP*CP*AP*GP*GP*CP*GP*AP*UP*GP*UP*GP*UP*GP*CP*U)-3')



• Molecule 8: DNA (39-MER)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	157100	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	53	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	3200	Depositor
Magnification	105000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	2.869	Depositor
Minimum map value	-1.326	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.086	Depositor
Recommended contour level	0.45	Depositor
Map size (\AA)	308.0, 308.0, 308.0	wwPDB
Map dimensions	280, 280, 280	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.1, 1.1, 1.1	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	A	0.65	0/2189	0.73	3/2981 (0.1%)
1	B	0.58	0/2086	0.77	3/2841 (0.1%)
2	C	0.78	1/10742 (0.0%)	0.75	8/14494 (0.1%)
3	D	0.73	3/10514 (0.0%)	0.75	4/14199 (0.0%)
4	E	0.57	0/711	0.66	0/956
5	F	0.26	0/2446	0.46	0/3406
6	N	1.05	0/728	1.06	1/1121 (0.1%)
7	R	0.98	0/494	1.75	18/766 (2.3%)
8	T	1.26	2/876 (0.2%)	1.09	1/1346 (0.1%)
All	All	0.74	6/30786 (0.0%)	0.78	38/42110 (0.1%)

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
1	A	0	4
1	B	0	4
2	C	0	4
3	D	0	5
5	F	0	1
All	All	0	18

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	1084	ASP	C-N	-11.21	1.08	1.34
3	D	115	TRP	CB-CG	-5.71	1.40	1.50
3	D	108	ALA	C-N	-5.60	1.21	1.34
3	D	1255	VAL	CB-CG1	-5.28	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	T	14	DC	C3'-O3'	-5.27	1.37	1.44

The worst 5 of 38 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	R	25	G	C4-N9-C1'	9.15	138.39	126.50
7	R	25	G	C8-N9-C1'	-8.60	115.82	127.00
1	B	13	LEU	CA-CB-CG	8.46	134.76	115.30
3	D	982	LEU	CA-CB-CG	8.29	134.37	115.30
7	R	28	C	C5-C6-N1	8.11	125.06	121.00

There are no chirality outliers.

5 of 18 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	166	ARG	Peptide
1	A	29	GLU	Peptide
1	A	319	GLU	Peptide
1	A	321	TRP	Peptide
1	B	19	VAL	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	A	2168	0	1960	31	0
1	B	2068	0	1867	24	0
2	C	10573	0	10584	145	0
3	D	10357	0	10571	133	0
4	E	709	0	719	7	0
5	F	2447	0	1180	11	0
6	N	647	0	347	6	0
7	R	444	0	228	9	0
8	T	785	0	440	8	0
9	D	1	0	0	0	0
10	D	2	0	0	0	0
All	All	30201	0	27896	334	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 6.

The worst 5 of 334 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)
2:C:393:ASP:OD2	2:C:394:ARG:NH1	1.90	1.04
3:D:1341:ARG:NH1	3:D:1343:GLU:OE2	1.98	0.97
3:D:129:ASP:OD2	3:D:220:ARG:NH1	1.98	0.96
1:A:33:ARG:NH1	1:A:199:ASP:OD2	2.02	0.91
3:D:832:LYS:HZ2	3:D:1242:ARG:HH12	1.12	0.90

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	
1	A	306/329 (93%)	262 (86%)	44 (14%)	0	100	100
1	B	292/329 (89%)	243 (83%)	47 (16%)	2 (1%)	22	60
2	C	1339/1342 (100%)	1190 (89%)	147 (11%)	2 (0%)	51	84
3	D	1328/1407 (94%)	1191 (90%)	136 (10%)	1 (0%)	51	84
4	E	88/91 (97%)	82 (93%)	6 (7%)	0	100	100
5	F	493/495 (100%)	458 (93%)	35 (7%)	0	100	100
All	All	3846/3993 (96%)	3426 (89%)	415 (11%)	5 (0%)	54	84

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	C	57	PHE
2	C	58	PRO
1	B	61	ILE

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Mol	Chain	Res	Type
1	B	117	HIS
3	D	1185	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	
1	A	194/286 (68%)	192 (99%)	2 (1%)	76	85
1	B	183/286 (64%)	182 (100%)	1 (0%)	88	93
2	C	1155/1157 (100%)	1128 (98%)	27 (2%)	50	70
3	D	1114/1168 (95%)	1107 (99%)	7 (1%)	86	92
4	E	74/75 (99%)	74 (100%)	0	100	100
All	All	2720/2972 (92%)	2683 (99%)	37 (1%)	68	80

5 of 37 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	1301	ARG
3	D	1173	ARG
2	C	1327	LEU
3	D	416	ILE
2	C	550	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 17 such sidechains are listed below:

Mol	Chain	Res	Type
3	D	1019	ASN
3	D	1326	GLN
2	C	1146	GLN
2	C	1237	HIS
2	C	1268	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
7	R	19/21 (90%)	6 (31%)	1 (5%)

5 of 6 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
7	R	18	G
7	R	19	C
7	R	20	G
7	R	21	A
7	R	25	G

All (1) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
7	R	20	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 3 ligands modelled in this entry, 3 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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
6	N	1
7	R	1
2	C	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	N	15:DG	O3'	24:DC	P	28.78
1	R	5:A	O3'	14:U	P	17.75
1	C	1084:ASP	C	1085:MET	N	1.08

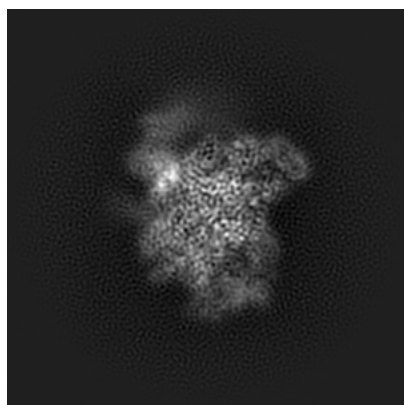
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-4275. These allow visual inspection of the internal detail of the map and identification of artifacts.

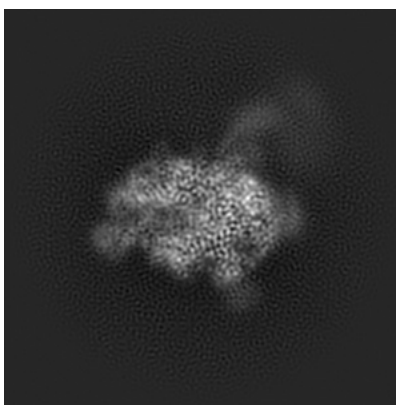
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

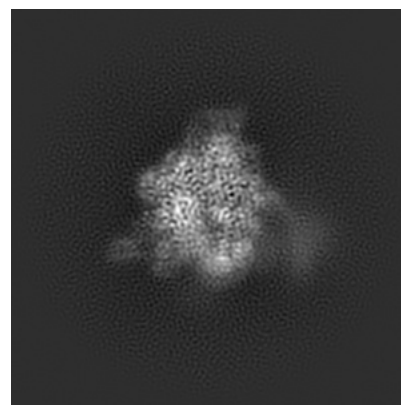
6.1.1 Primary map



X



Y

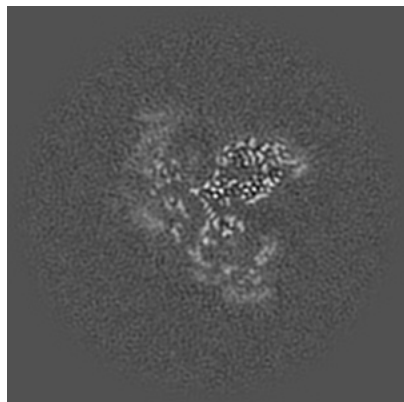


Z

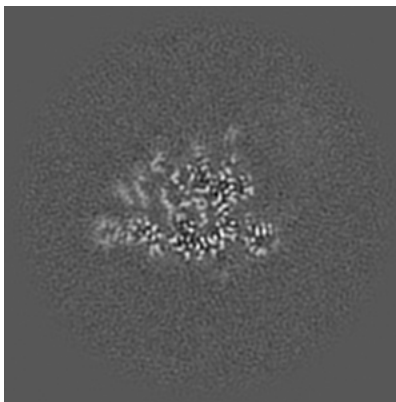
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

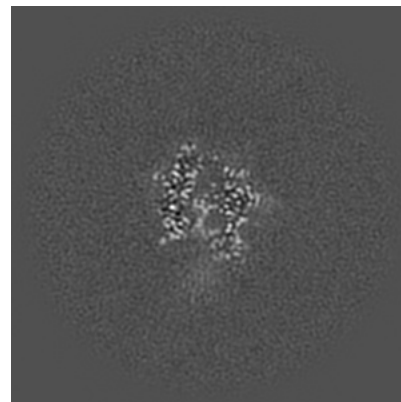
6.2.1 Primary map



X Index: 140



Y Index: 140

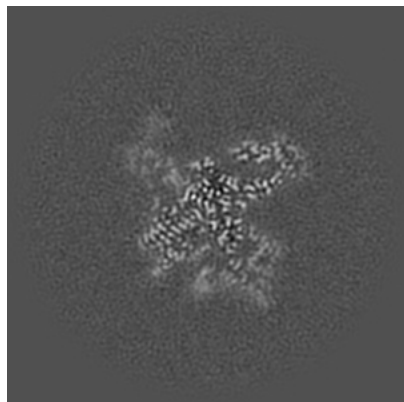


Z Index: 140

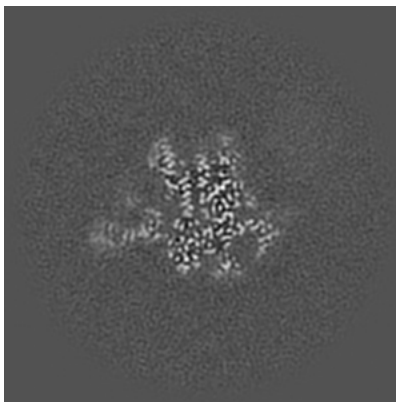
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

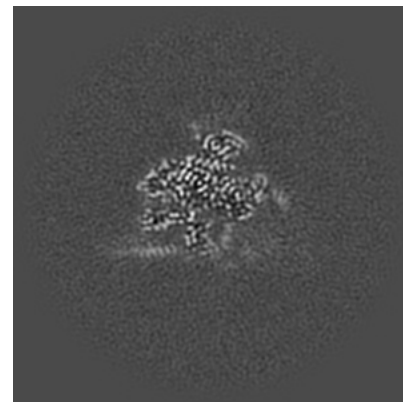
6.3.1 Primary map



X Index: 150



Y Index: 147



Z Index: 156

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

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.45. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

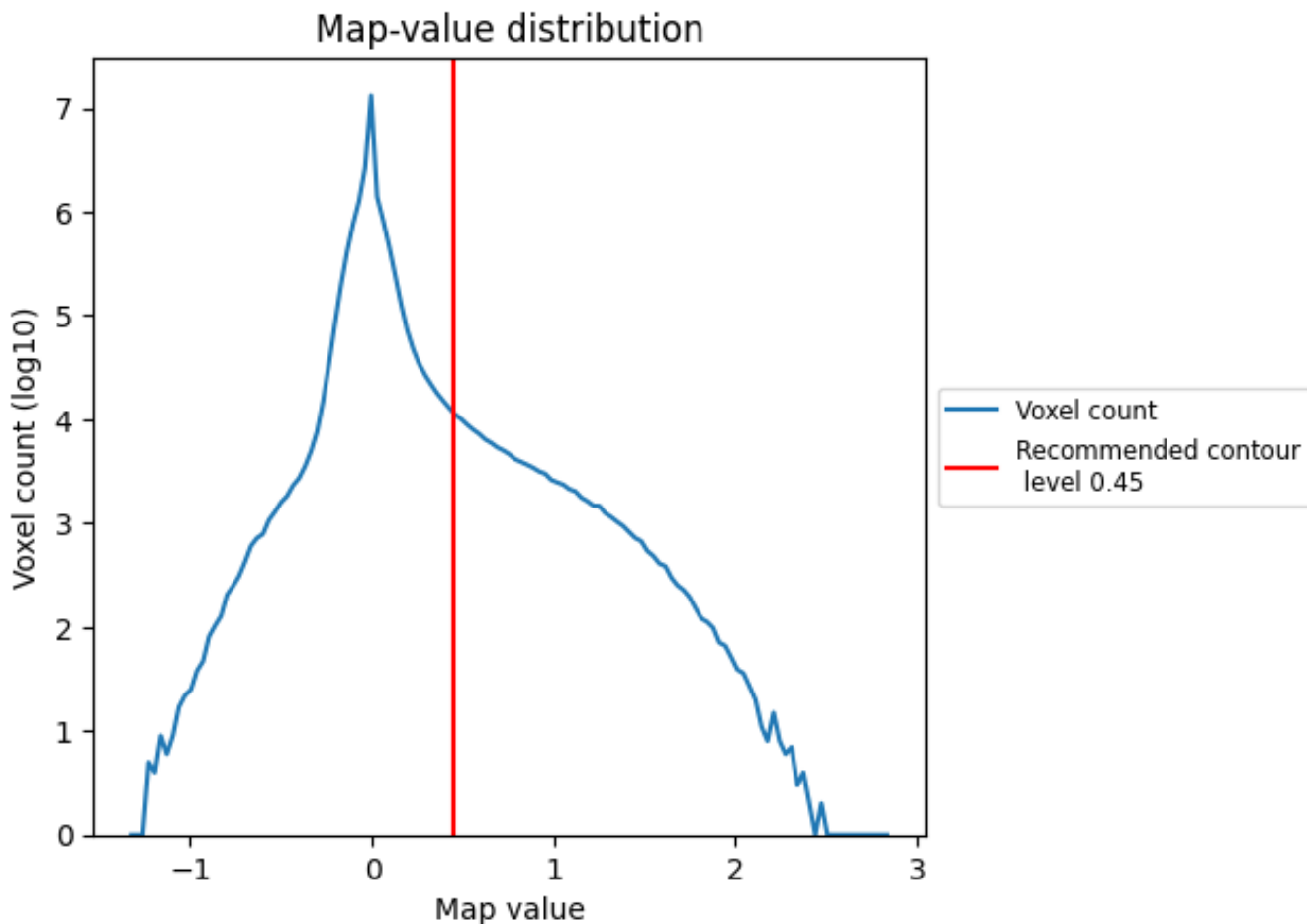
6.5 Mask visualisation

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

7 Map analysis [i](#)

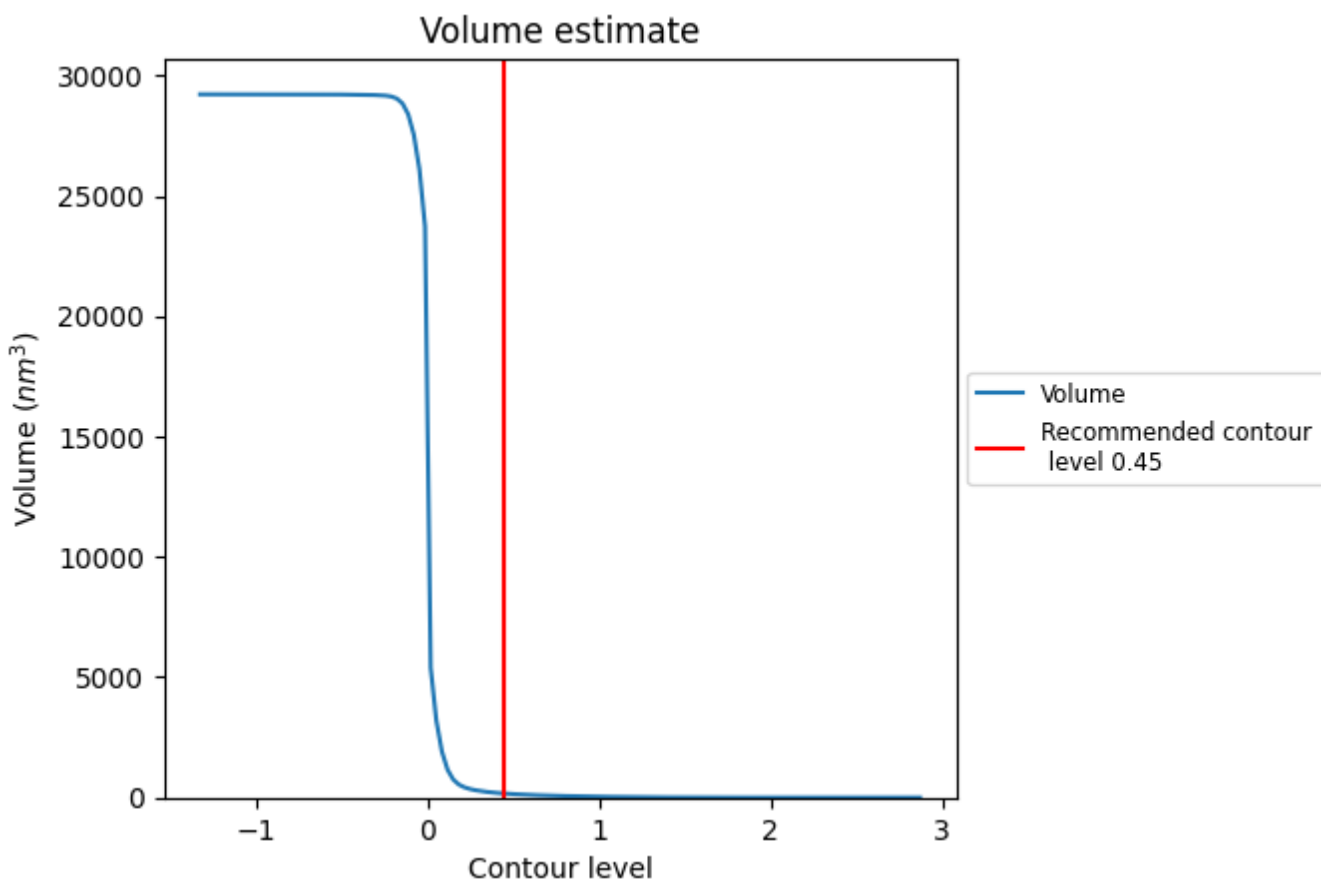
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

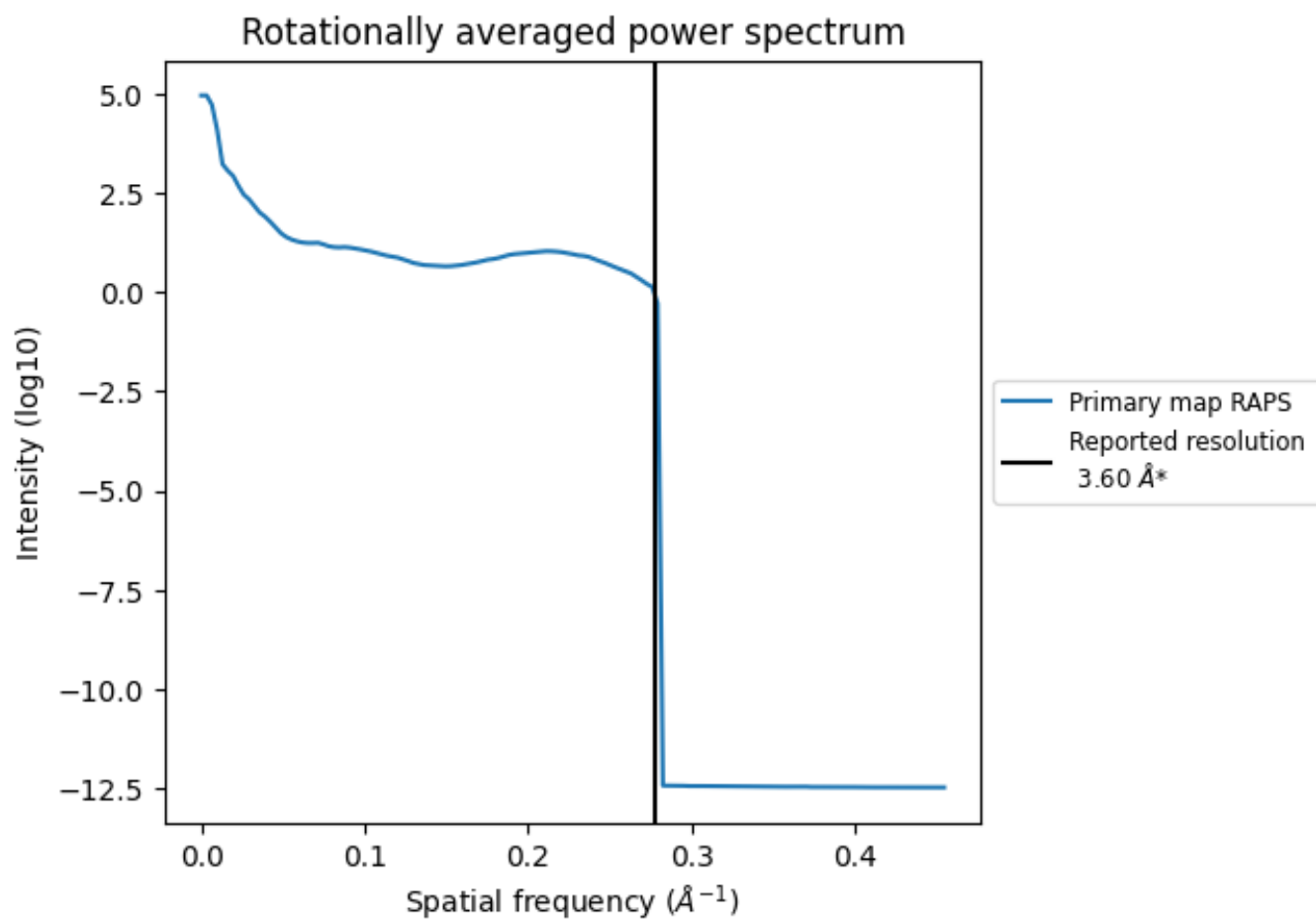
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 166 nm³; this corresponds to an approximate mass of 150 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

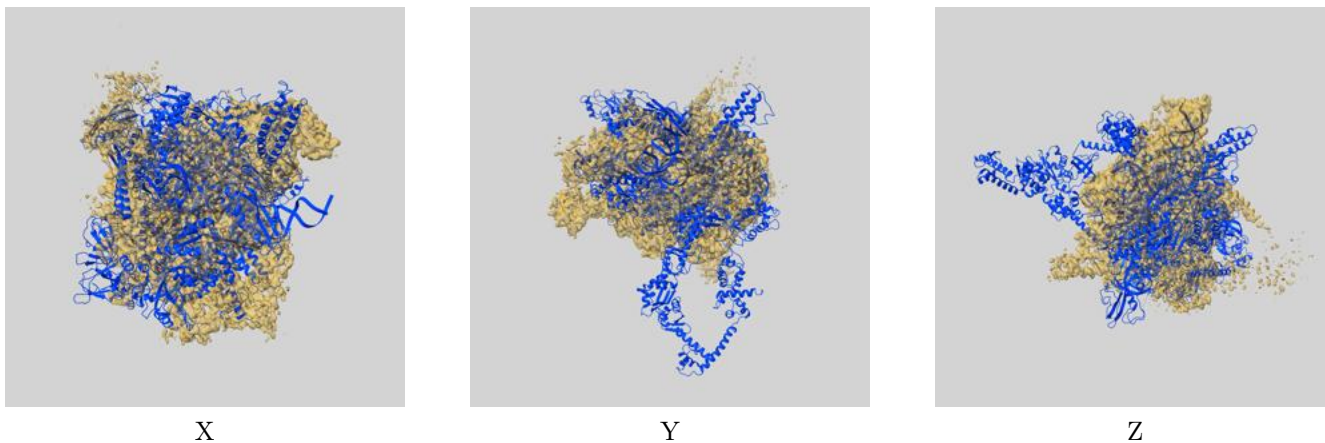
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-4275 and PDB model 6FLQ. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



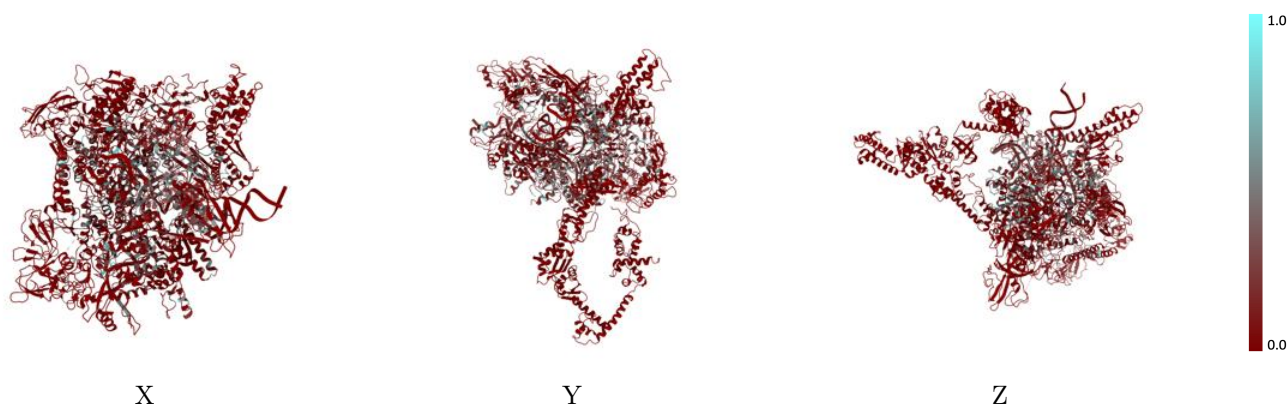
The images above show the 3D surface view of the map at the recommended contour level 0.45 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



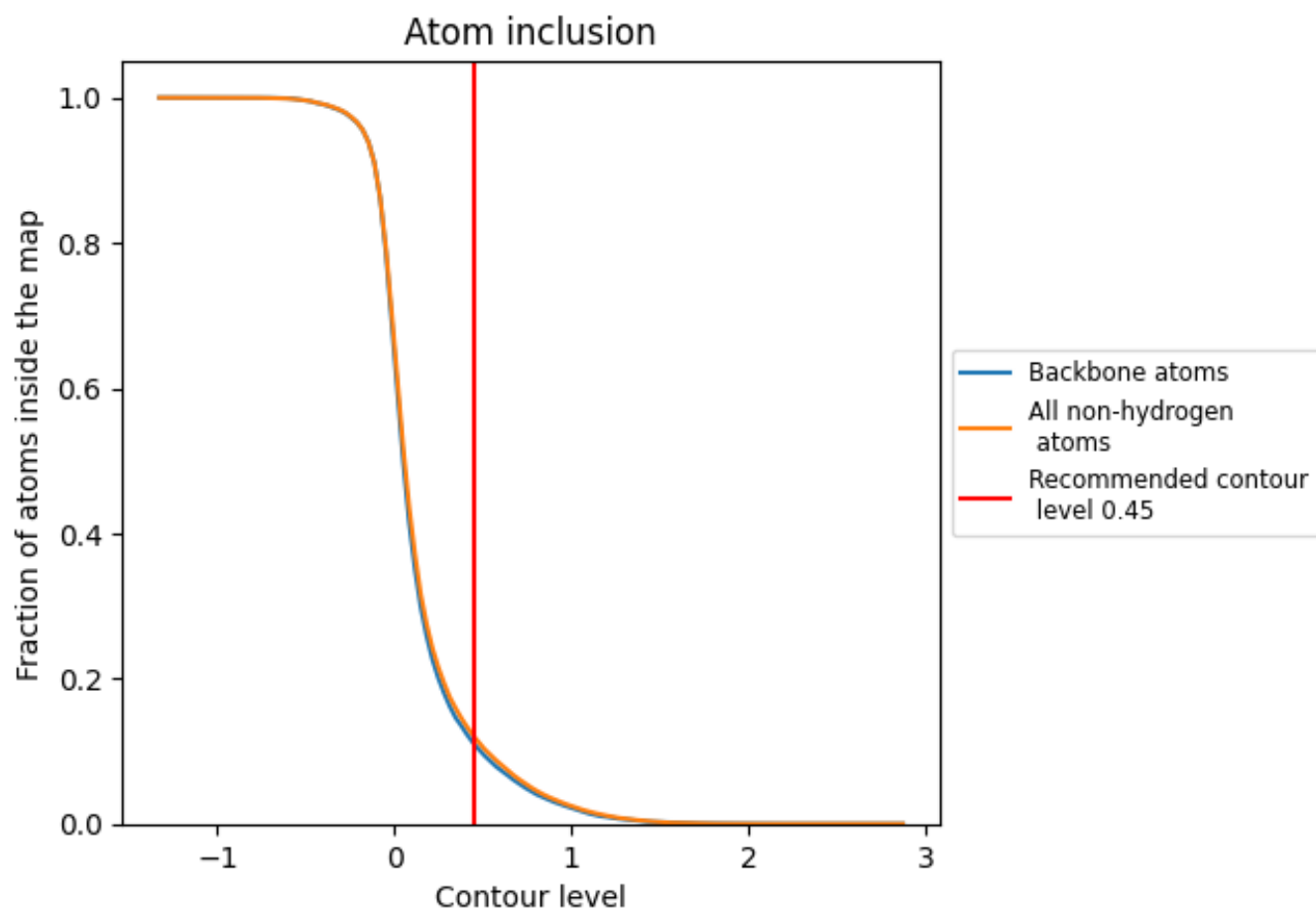
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.45).





















9.4 Atom inclusion [i](#)



At the recommended contour level, 11% of all backbone atoms, 12% 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 (0.45) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.1200	 -0.0110
A	 0.0840	 -0.0070
B	 0.0486	 -0.0030
C	 0.1385	 -0.0150
D	 0.1486	 -0.0060
E	 0.0682	 -0.0180
F	 0.0008	 -0.0220
N	 0.1128	 -0.0070
R	 0.2275	 -0.0290
T	 0.1529	 -0.0050

