



wwPDB EM Validation Summary Report ⓘ

Mar 20, 2026 – 02:27 AM UTC

PDB ID : 6T63 / pdb_00006t63
EMDB ID : EMD-10383
Title : A model of the EIAV CA-SP hexamer (C2) from Gag-deltaMA tubes assembled at pH6
Authors : Dick, R.A.; Xu, C.; Morado, D.R.; Kravchuk, V.; Ricana, C.L.; Lyddon, T.D.; Broad, A.M.; Feathers, J.R.; Johnson, M.C.; Vogt, V.M.; Perilla, J.R.; Briggs, J.A.G.; Schur, F.K.M.
Deposited on : 2019-10-17
Resolution : 3.80 Å(reported)
Based on initial model : 2EIA

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

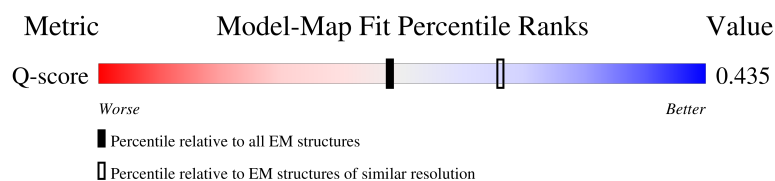
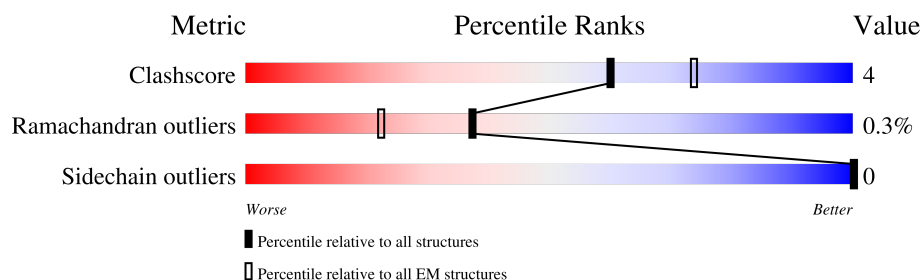
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance

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

The reported resolution of this entry is 3.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	10198 (3.30 - 4.30)

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	486	
1	B	486	
1	C	486	
1	D	486	

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Mol	Chain	Length	Quality of chain
1	E	486	
1	F	486	
1	G	486	
1	H	486	
1	I	486	
1	J	486	
1	K	486	
1	L	486	
1	M	486	
1	N	486	
1	O	486	
1	P	486	
1	Q	486	
1	R	486	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 30978 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 Gag polyprotein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	B	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	C	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	F	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	D	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	H	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	I	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	E	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	G	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	J	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	K	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	L	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	O	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	M	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	Q	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	R	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		
1	N	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		

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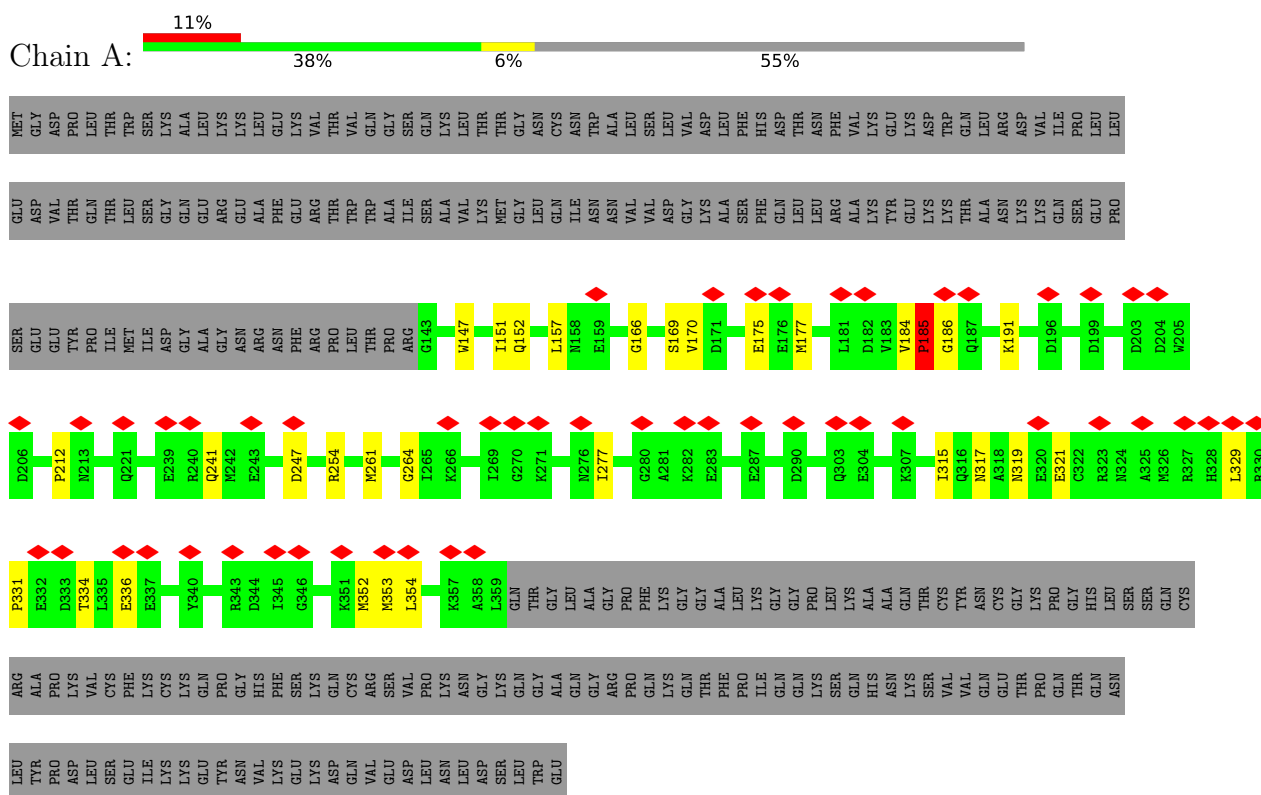
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Mol	Chain	Residues	Atoms					AltConf	Trace
1	P	217	Total	C	N	O	S	0	0
			1721	1081	304	324	12		

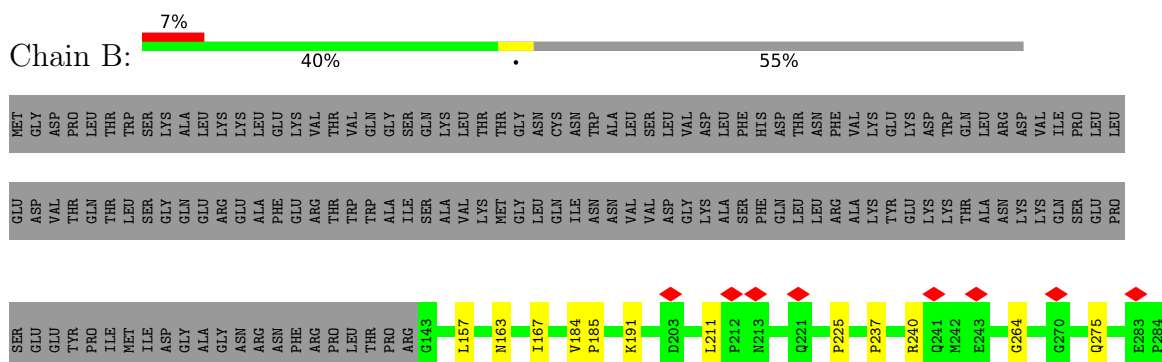
3 Residue-property plots [i](#)

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.

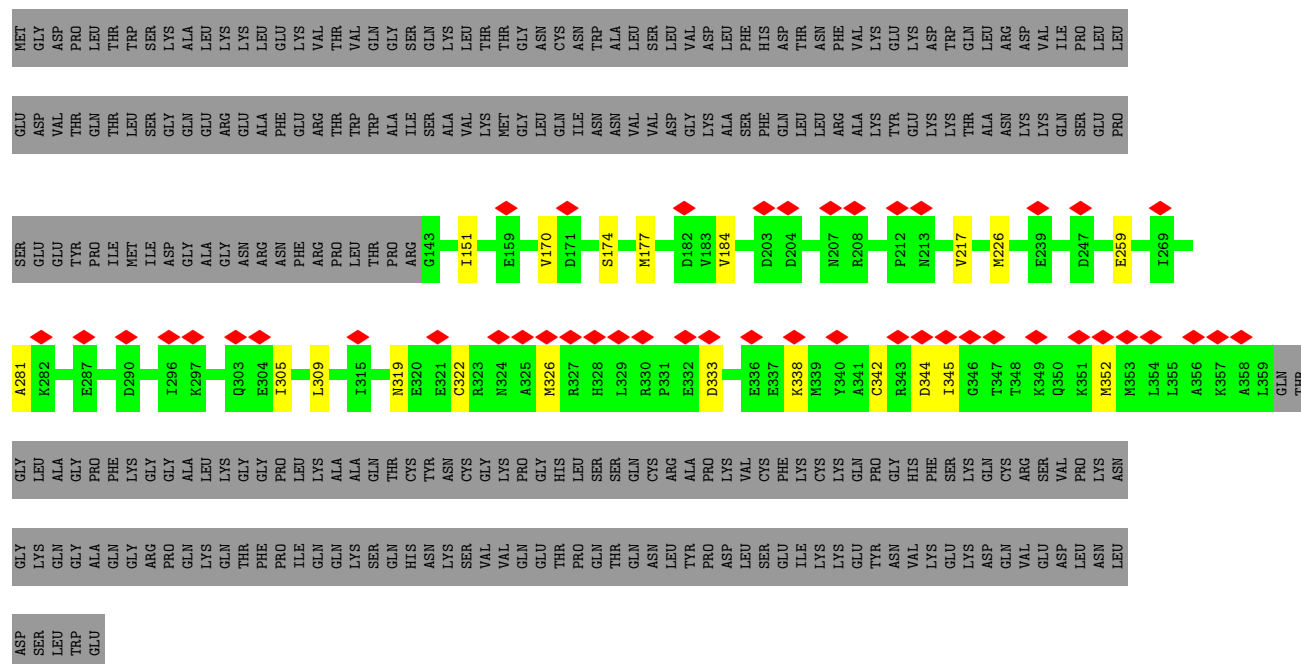
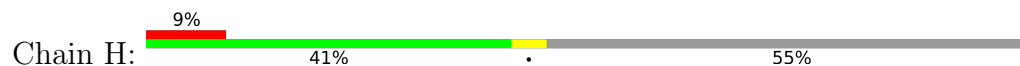
• Molecule 1: Gag polyprotein



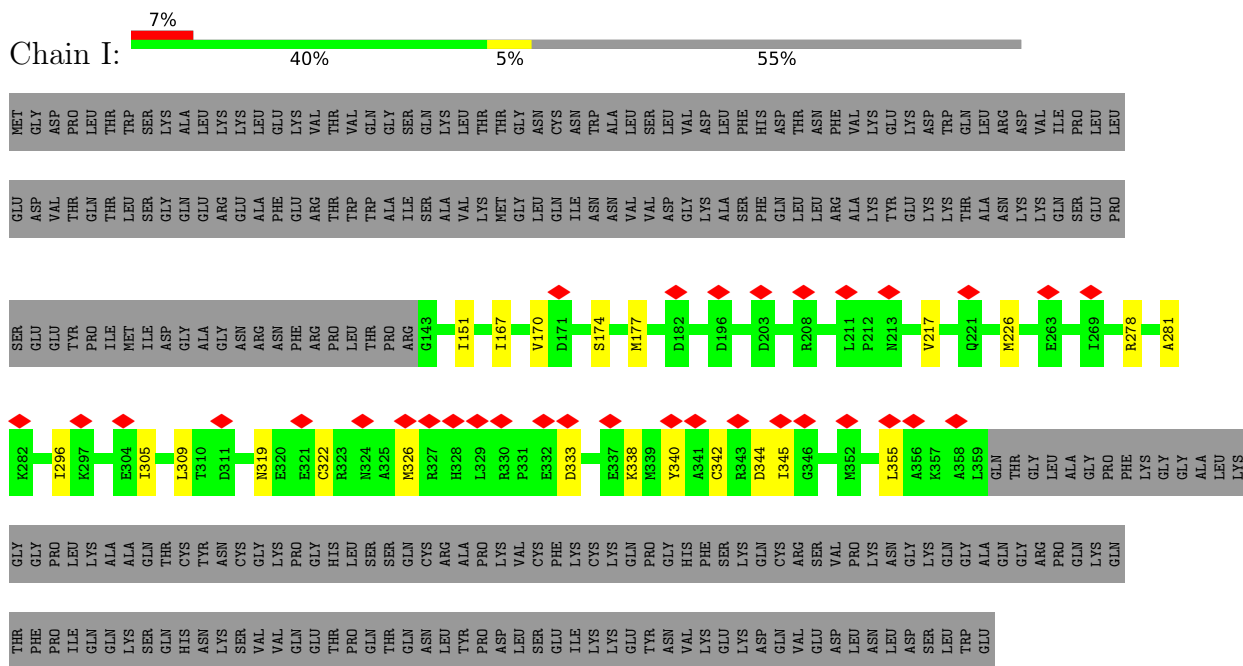
• Molecule 1: Gag polyprotein



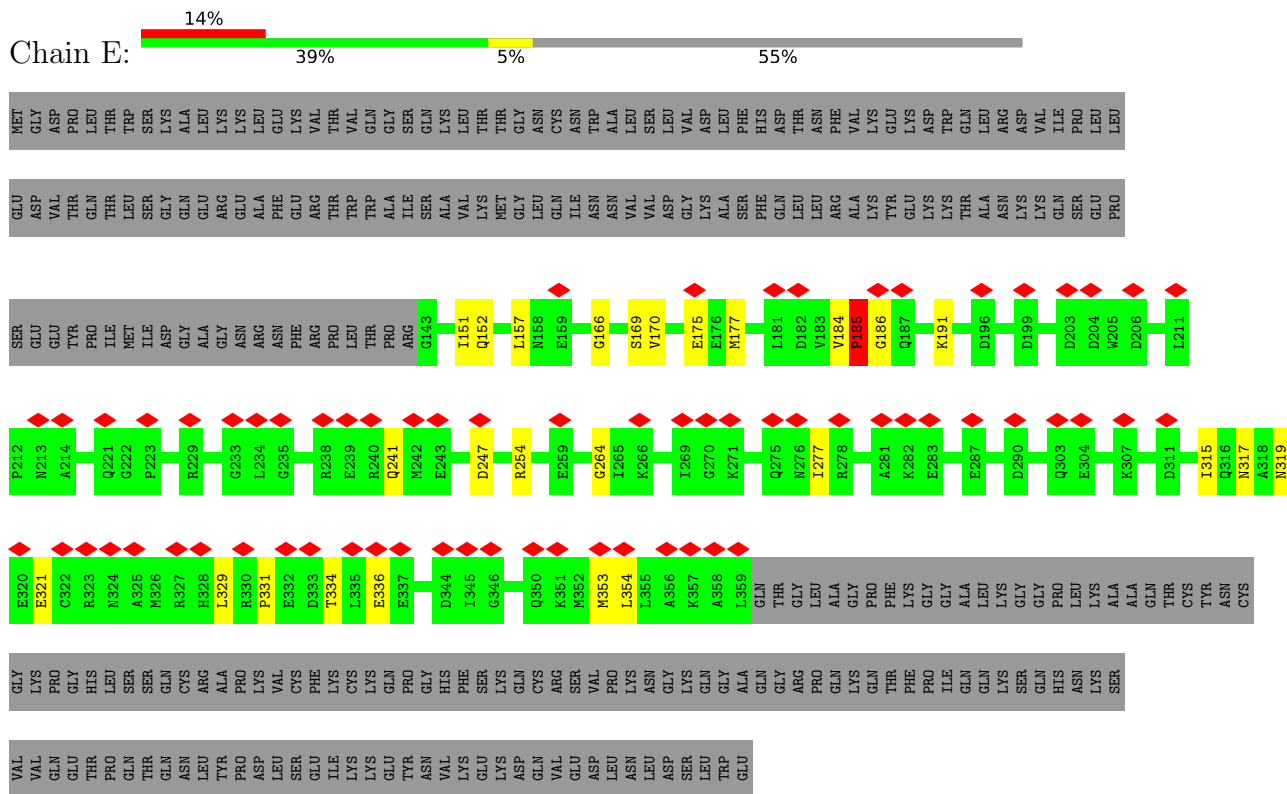
Chain D: 14% 39% 5% 55%



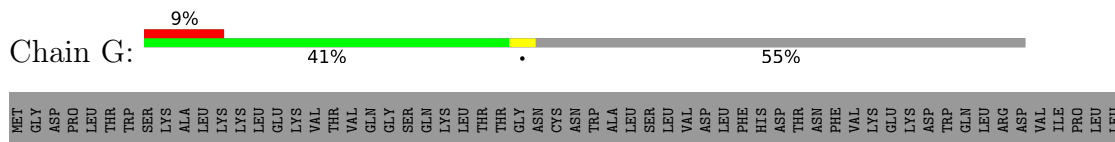
WORLDWIDE
PDB
PROTEIN DATA BANK



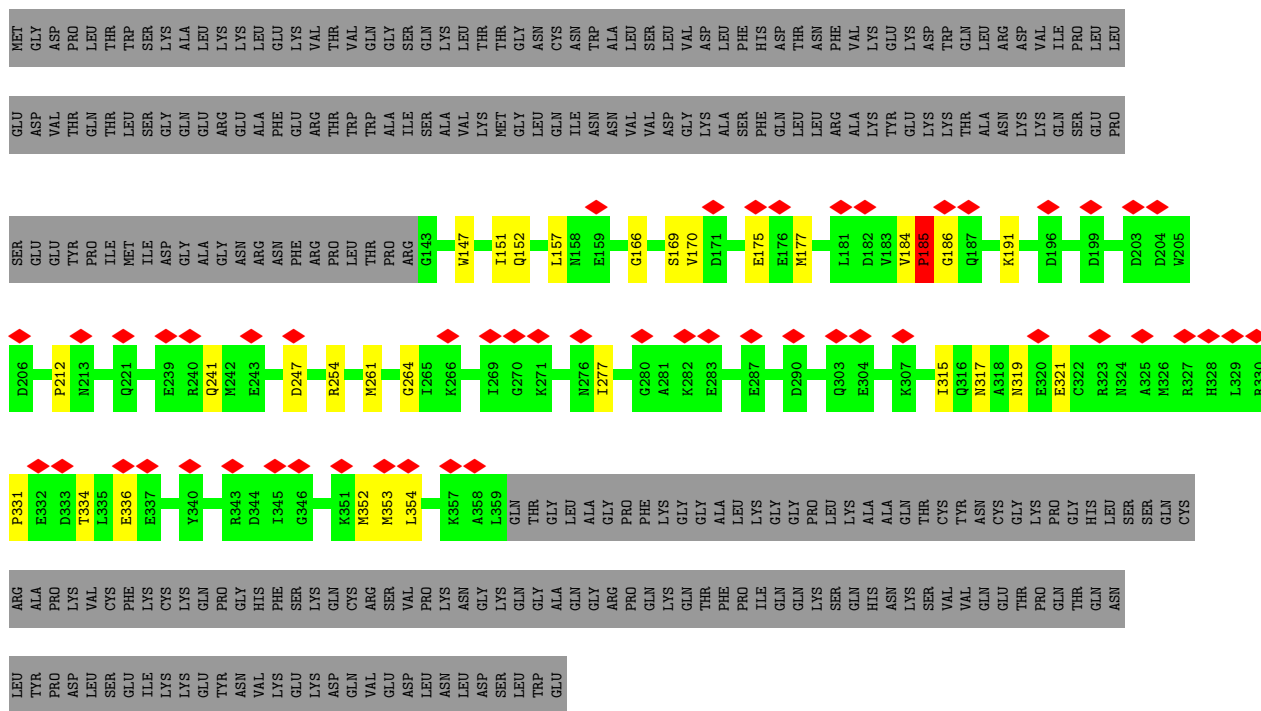
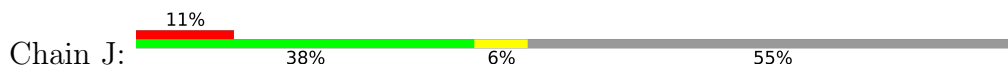
- Molecule 1: Gag polyprotein



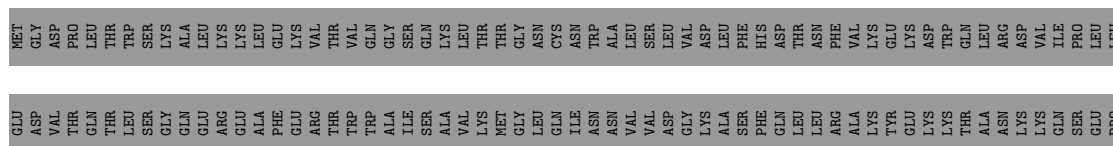
- Molecule 1: Gag polyprotein

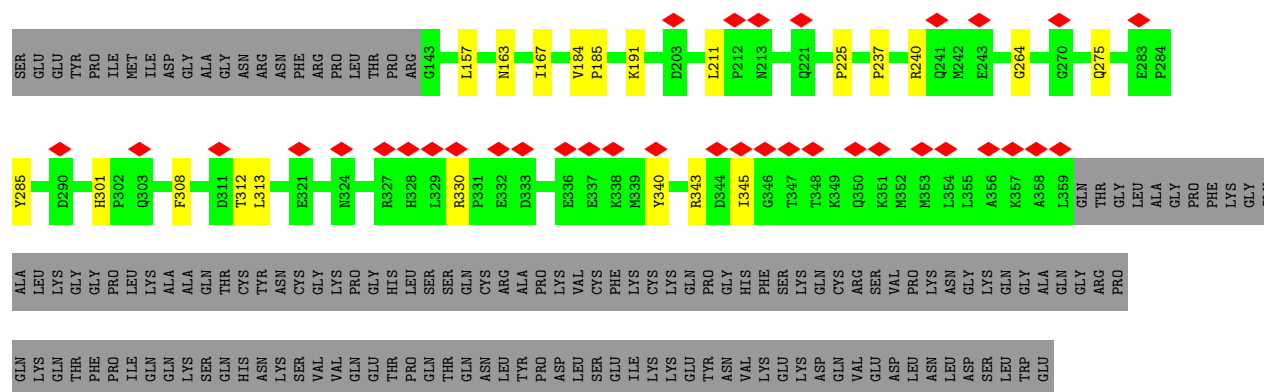


- Molecule 1: Gag polyprotein

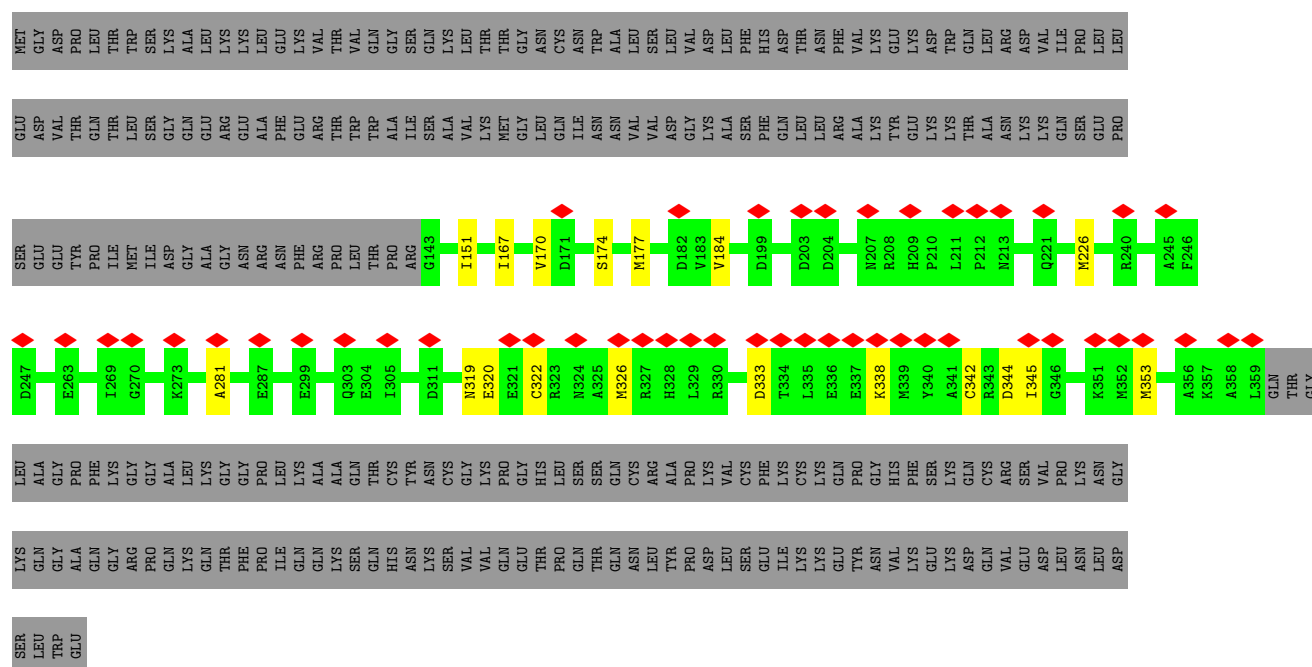


- Molecule 1: Gag polyprotein

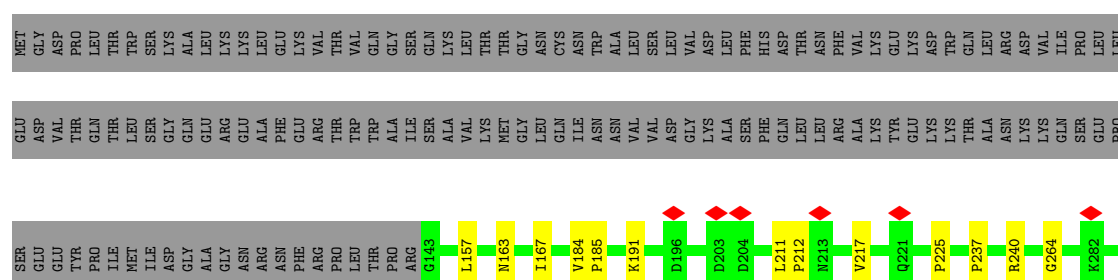
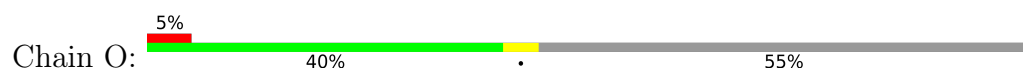




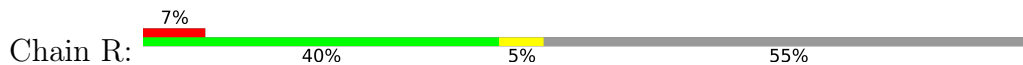
- Molecule 1: Gag polyprotein



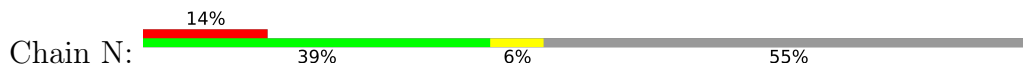
- Molecule 1: Gag polyprotein



- Molecule 1: Gag polyprotein

[illegible]

- Molecule 1: Gag polyprotein

[illegible]

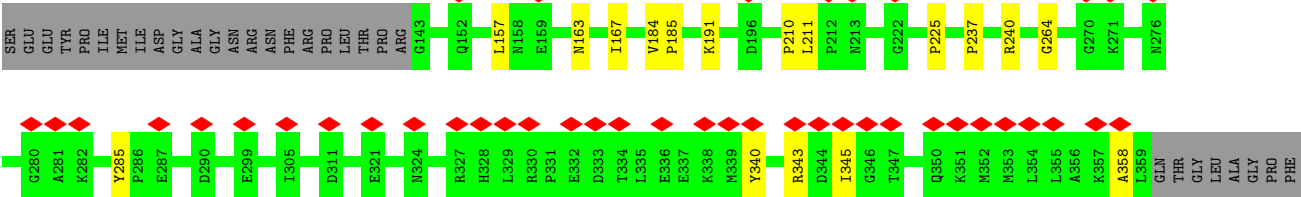
SER	GLU	GLN	HIS	ASN	LYS	SER	VAL	VAL	VAL	GLN	THR	THR	PRO	GLN	THR	THR	GLN	ASN	LEU	TYR	PRO	ASP	LEU	SER	SER	GLU	GLY	ILE	LYS	LYS	LYS	TYR	GLY	GLY	ASN	VAL	LYS	GLY	GLU	LYS	ASP	GLN	VAL	GLY	ASP	LEU	ASN	ASP	SER	LEU	TRP	GLU
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● Molecule 1: Gag polyprotein



MET	GLY	ASP	THR	THR	THR	SER	LYS	ALA	LEU	LYS	GLY	THR	VAL	GLN	THR	THR	VAL	GLN	ILE	SER	GLN	LYS	VAL	LEU	THR	THR	GLY	ASN	CYS	ASN	TRP	ALA	LEU	SER	LEU	VAL	ASP	GLY	LYS	ALA	SER	PHE	HIS	ASP	GLN	THR	ASN	PHE	VAL	LYS	GLY	GLU	LYS	ASP	TRP	GLN	LEU	ALA	ASN	ARG	LYS	ASP	VAL	TLE	PRO	LEU	LEU
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GLU	ASP	VAL	THR	THR	THR	LEU	SER	GLN	GLY	ARG	ALA	GLY	PHE	GLU	ARG	THR	TRP	TRP	ALA	ILE	SER	GLN	ALA	VAL	LYS	MET	GLY	LEU	ASN	ILE	ASN	TRP	ALA	VAL	SER	LEU	ASP	GLY	LYS	ALA	SER	PHE	GLN	THR	LEU	ASN	ARG	LYS	ASP	VAL	TLE	PRO	GLU	PRO
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LYS	GLY	ALA	LEU	LYS	GLY	PRO	LEU	LYS	ALA	GLN	THR	CYS	TYR	ASN	CYS	GLY	LYS	PRO	GLY	HIS	LEU	SER	THR	GLN	ASN	CYS	ARG	ALA	PRO	LYS	VAL	CYS	PHE	GLY	LYS	CYS	LYS	GLN	PRO	GLY	ASN	VAL	LYS	GLY	ASP	PRO	THR	GLN	GLY	ALA	GLY	PRO	PHE
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GLY	ARG	PRO	GLN	LYS	THR	PHE	ILE	GLN	GLN	LYS	LYS	SER	HIS	ASN	VAL	VAL	GLU	THR	PRO	GLN	GLN	THR	GLN	THR	GLN	ASN	LEU	TYR	PRO	ASP	LEU	SER	GLY	ILE	LYS	LYS	GLU	TYR	ASN	VAL	LYS	GLU	ASP	GLY	VAL	GLU	ASP	LEU	ASN	LEU	ASP	SER	LYS	GLN	TRP	GLU
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4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of subtomograms used	112929	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; CTF-correction was performed using NOVACTF	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	3.4	Depositor
Minimum defocus (nm)	-1500	Depositor
Maximum defocus (nm)	-3500	Depositor
Magnification	130000	Depositor
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	2.183	Depositor
Minimum map value	-1.578	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.195	Depositor
Recommended contour level	0.499	Depositor
Map size ($\text{\AA}$)	245.676, 245.676, 245.676	wwPDB
Map dimensions	236, 236, 236	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.041, 1.041, 1.041	Depositor

5 Model quality

5.1 Standard geometry

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	0.24	0/1755	0.51	0/2375
1	B	0.25	0/1755	0.49	0/2375
1	C	0.23	0/1755	0.51	0/2375
1	D	0.24	0/1755	0.51	0/2375
1	E	0.24	0/1755	0.51	0/2375
1	F	0.25	0/1755	0.49	0/2375
1	G	0.25	0/1755	0.49	0/2375
1	H	0.23	0/1755	0.51	0/2375
1	I	0.23	0/1755	0.51	0/2375
1	J	0.24	0/1755	0.51	0/2375
1	K	0.25	0/1755	0.49	0/2375
1	L	0.23	0/1755	0.51	0/2375
1	M	0.24	0/1755	0.51	0/2375
1	N	0.24	0/1755	0.51	0/2375
1	O	0.24	0/1755	0.49	0/2375
1	P	0.25	0/1755	0.49	0/2375
1	Q	0.23	0/1755	0.51	0/2375
1	R	0.23	0/1755	0.51	0/2375
All	All	0.24	0/31590	0.51	0/42750

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	1
1	D	0	1
1	E	0	1
1	J	0	1
1	M	0	1
1	N	0	1
All	All	0	6

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 6 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	185	PRO	Peptide
1	D	185	PRO	Peptide
1	E	185	PRO	Peptide
1	J	185	PRO	Peptide
1	M	185	PRO	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1721	0	1718	36	0
1	B	1721	0	1716	18	0
1	C	1721	0	1717	13	0
1	D	1721	0	1718	20	0
1	E	1721	0	1718	32	0
1	F	1721	0	1718	17	0
1	G	1721	0	1718	13	0
1	H	1721	0	1716	16	0
1	I	1721	0	1718	21	0
1	J	1721	0	1718	36	0
1	K	1721	0	1716	18	0
1	L	1721	0	1717	15	0
1	M	1721	0	1718	22	0
1	N	1721	0	1718	33	0
1	O	1721	0	1718	17	0
1	P	1721	0	1718	13	0
1	Q	1721	0	1716	18	0
1	R	1721	0	1718	22	0
All	All	30978	0	30914	277	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 277 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)
1:A:170:VAL:HG11	1:C:170:VAL:HG13	1.31	1.11
1:K:330:ARG:NH1	1:R:340:TYR:CD1	1.91	1.10
1:J:170:VAL:HG11	1:L:170:VAL:HG13	1.30	1.04
1:B:330:ARG:NH1	1:I:340:TYR:CD1	1.91	1.03
1:I:170:VAL:HG13	1:E:170:VAL:HG11	1.44	0.98

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	215/486 (44%)	199 (93%)	15 (7%)	1 (0%)	24	57
1	B	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	C	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
1	D	215/486 (44%)	199 (93%)	15 (7%)	1 (0%)	24	57
1	E	215/486 (44%)	200 (93%)	14 (6%)	1 (0%)	24	57
1	F	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	G	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	H	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
1	I	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
1	J	215/486 (44%)	199 (93%)	15 (7%)	1 (0%)	24	57
1	K	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	L	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
1	M	215/486 (44%)	200 (93%)	14 (6%)	1 (0%)	24	57
1	N	215/486 (44%)	200 (93%)	14 (6%)	1 (0%)	24	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	O	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	P	215/486 (44%)	201 (94%)	13 (6%)	1 (0%)	24	57
1	Q	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
1	R	215/486 (44%)	197 (92%)	18 (8%)	0	100	100
All	All	3870/8748 (44%)	3585 (93%)	273 (7%)	12 (0%)	37	67

5 of 12 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	185	PRO
1	D	185	PRO
1	E	185	PRO
1	J	185	PRO
1	M	185	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	187/421 (44%)	187 (100%)	0	100	100
1	B	187/421 (44%)	187 (100%)	0	100	100
1	C	187/421 (44%)	187 (100%)	0	100	100
1	D	187/421 (44%)	187 (100%)	0	100	100
1	E	187/421 (44%)	187 (100%)	0	100	100
1	F	187/421 (44%)	187 (100%)	0	100	100
1	G	187/421 (44%)	187 (100%)	0	100	100
1	H	187/421 (44%)	187 (100%)	0	100	100
1	I	187/421 (44%)	187 (100%)	0	100	100
1	J	187/421 (44%)	187 (100%)	0	100	100
1	K	187/421 (44%)	187 (100%)	0	100	100
1	L	187/421 (44%)	187 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	M	187/421 (44%)	187 (100%)	0	100	100
1	N	187/421 (44%)	187 (100%)	0	100	100
1	O	187/421 (44%)	187 (100%)	0	100	100
1	P	187/421 (44%)	187 (100%)	0	100	100
1	Q	187/421 (44%)	187 (100%)	0	100	100
1	R	187/421 (44%)	187 (100%)	0	100	100
All	All	3366/7578 (44%)	3366 (100%)	0	100	100

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 97 such sidechains are listed below:

Mol	Chain	Res	Type
1	K	303	GLN
1	O	350	GLN
1	L	149	ASN
1	O	154	ASN
1	M	241	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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.

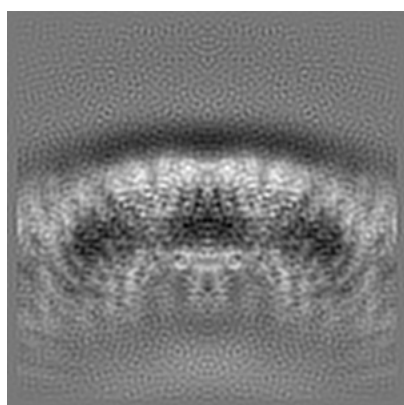
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10383. These allow visual inspection of the internal detail of the map and identification of artifacts.

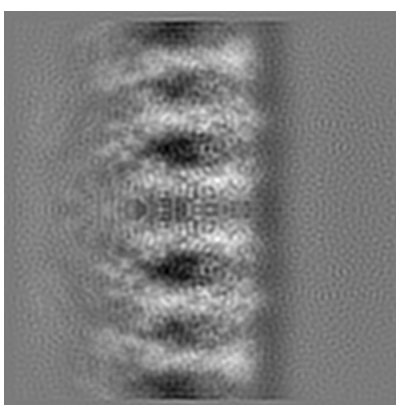
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

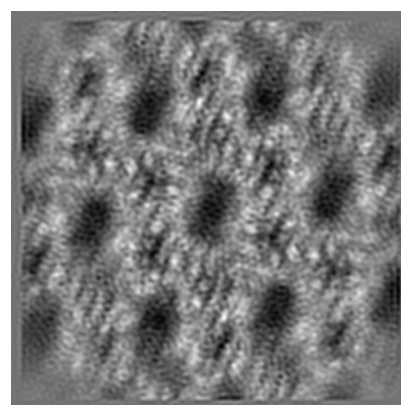
6.1.1 Primary map



X



Y

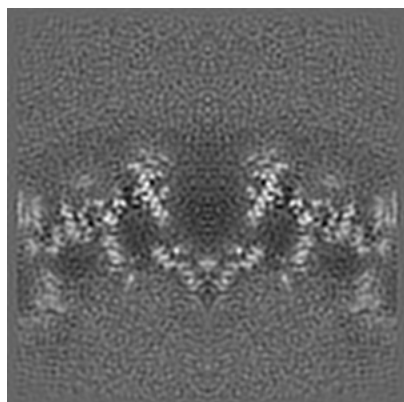


Z

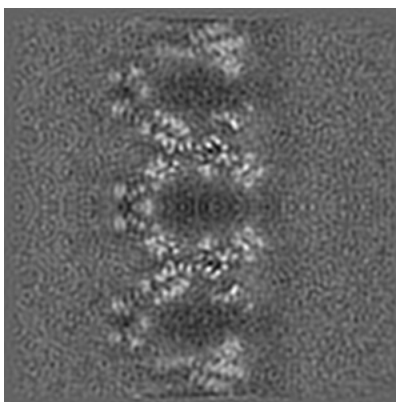
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

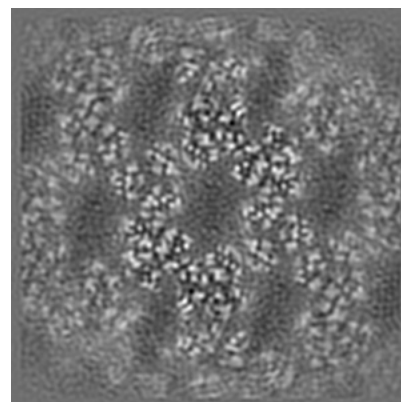
6.2.1 Primary map



X Index: 118



Y Index: 118

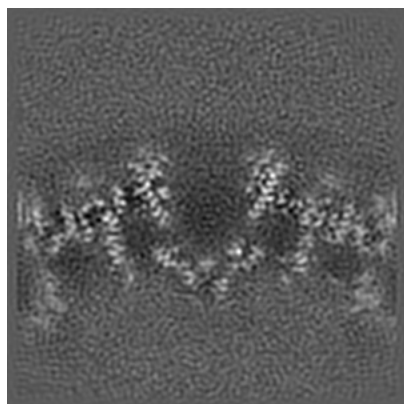


Z Index: 118

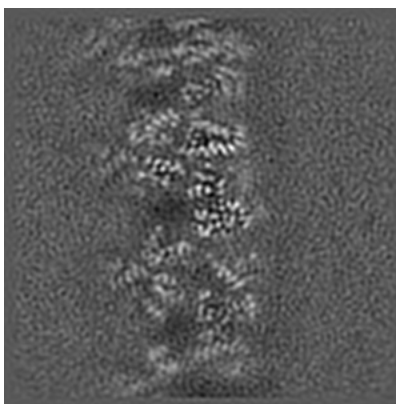
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

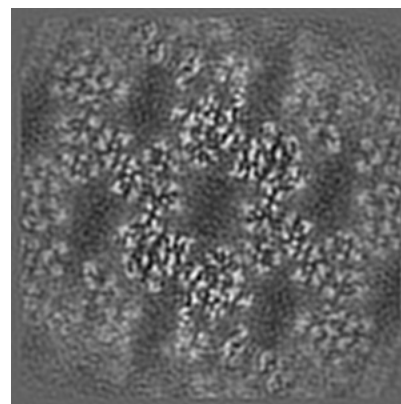
6.3.1 Primary map



X Index: 119



Y Index: 157

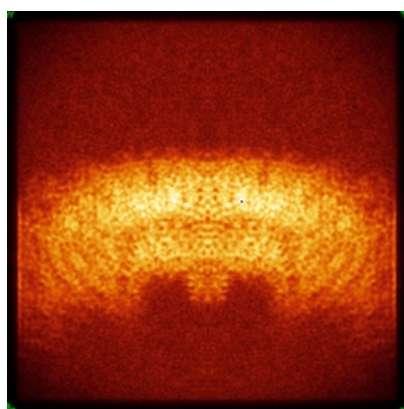


Z Index: 120

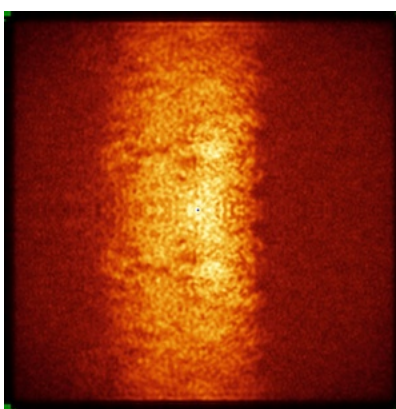
The images above show the largest variance slices of the map in three orthogonal directions.

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

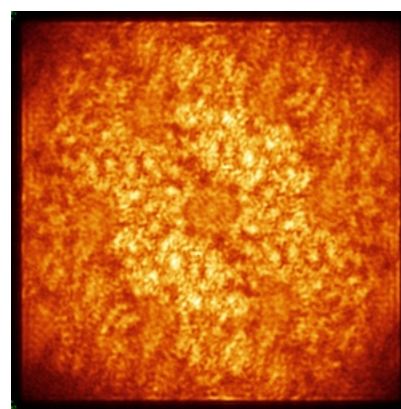
6.4.1 Primary map



X



Y

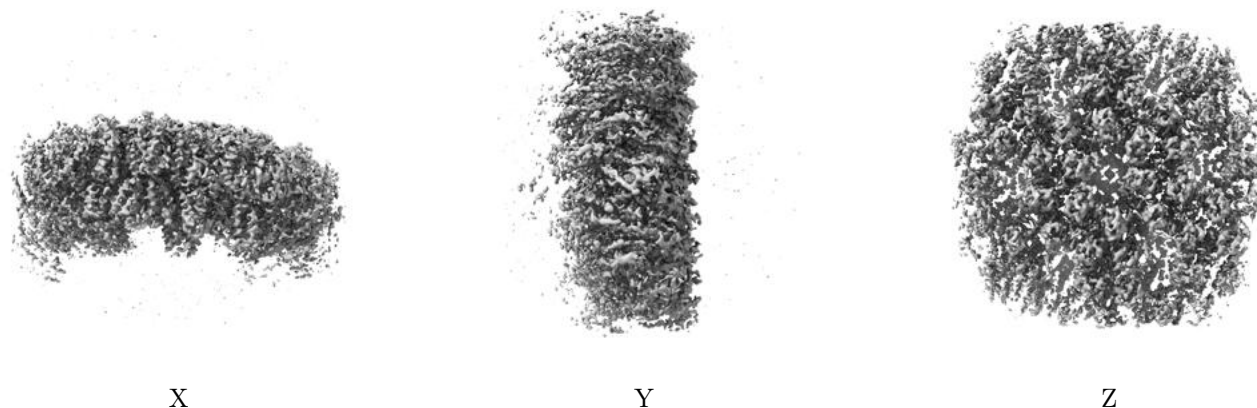


Z

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 0.499. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

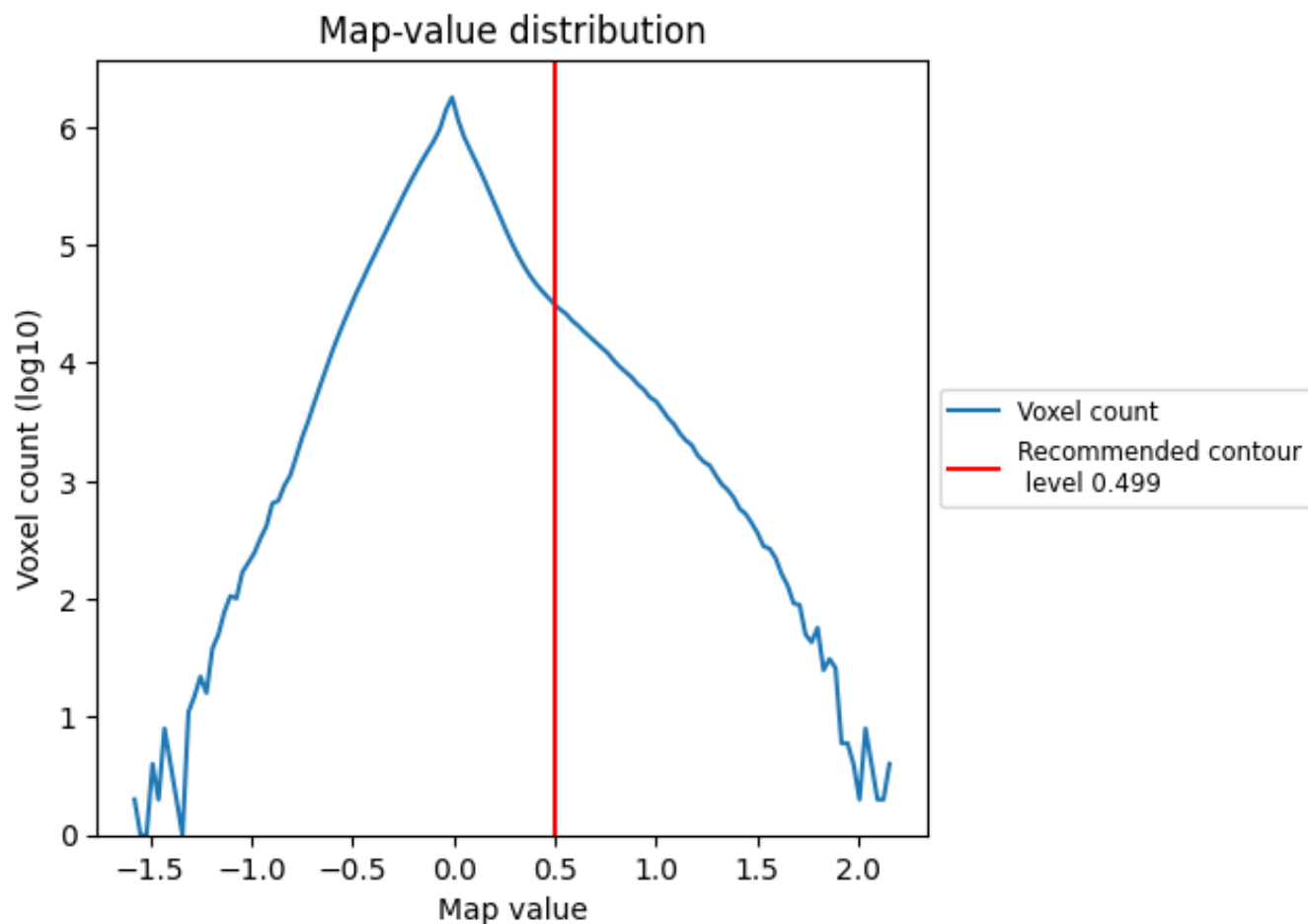
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

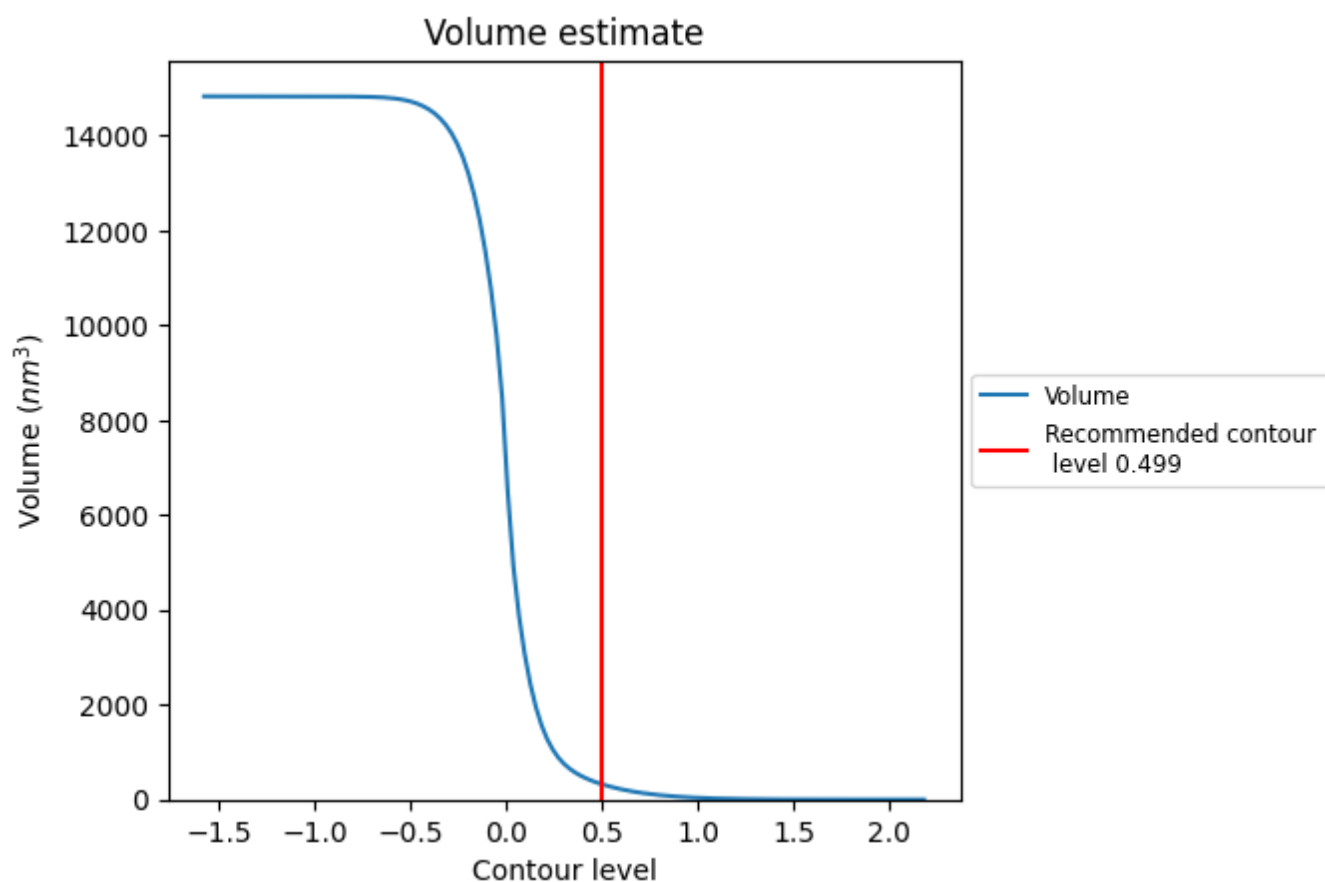
This section contains the results of statistical analysis of the map.

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.

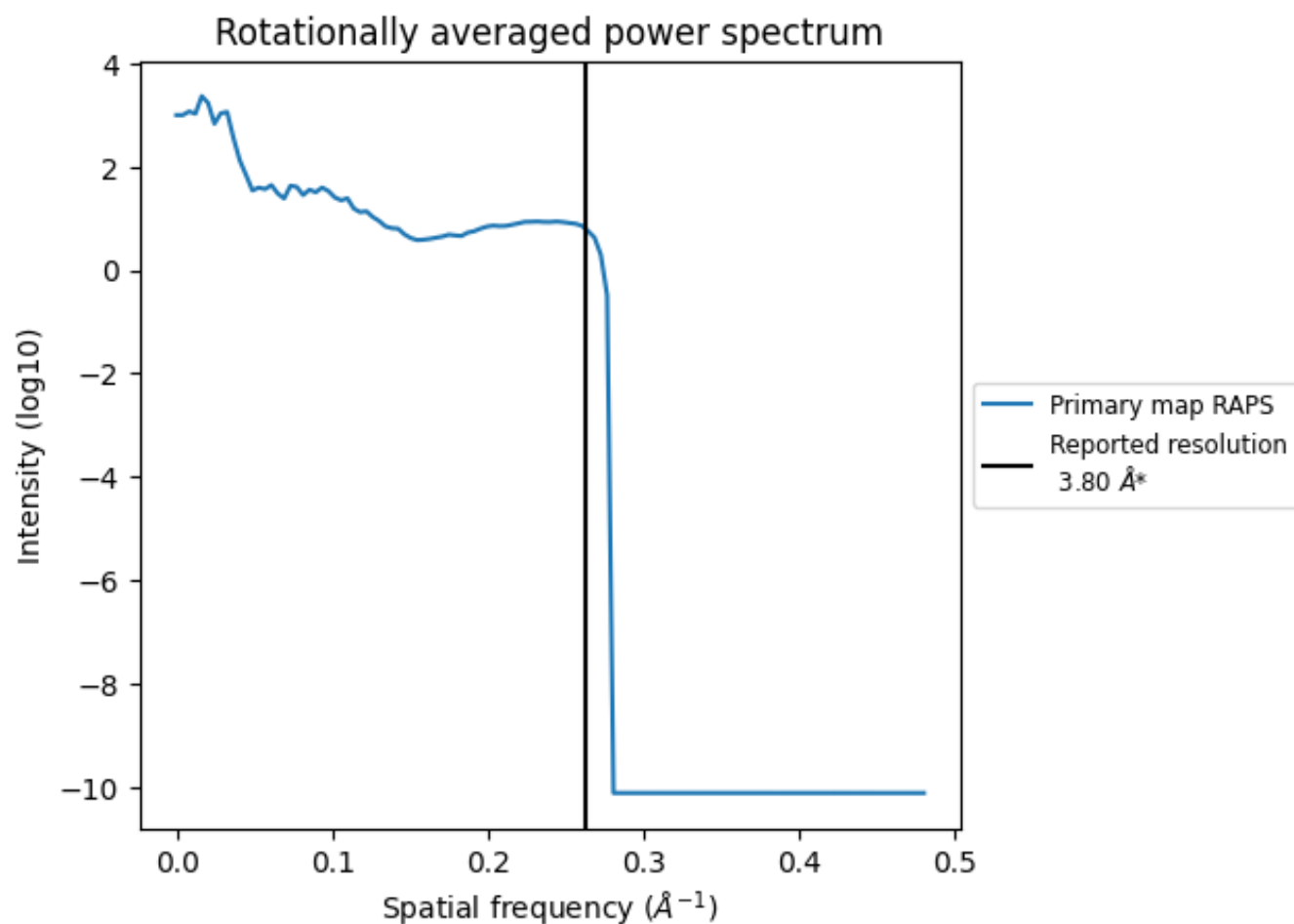
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 325 nm³; this corresponds to an approximate mass of 294 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

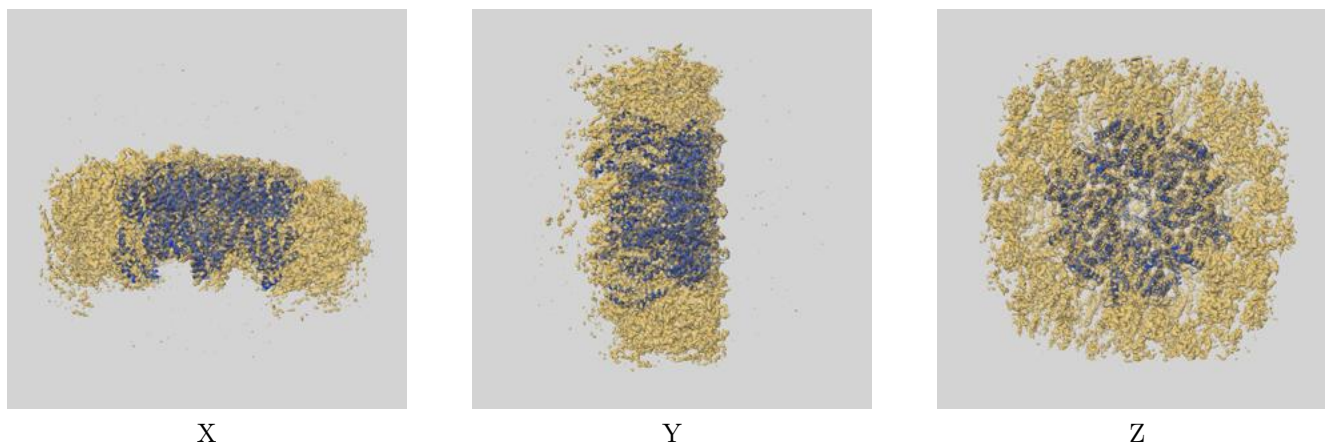
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

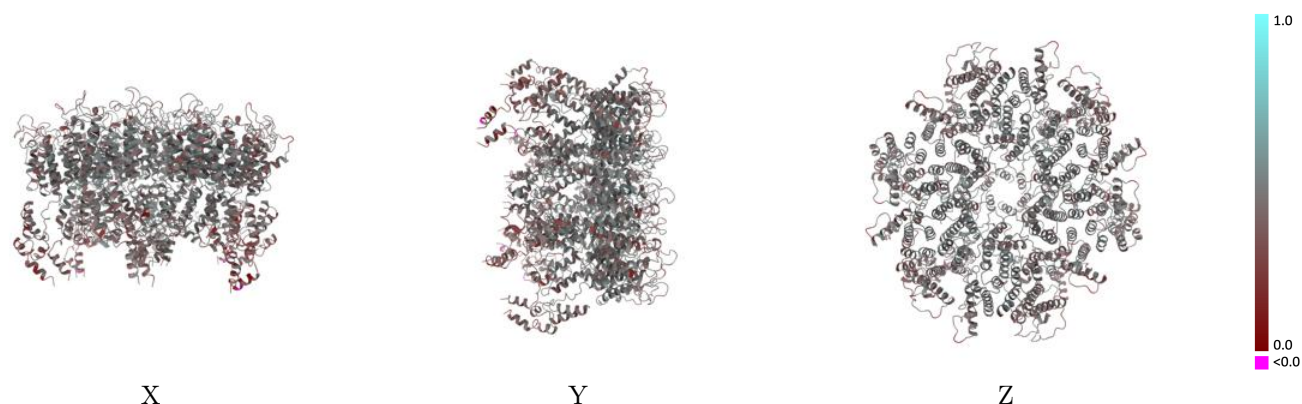
This section contains information regarding the fit between EMDB map EMD-10383 and PDB model 6T63. Per-residue inclusion information can be found in [section 3](#) on [page 6](#).

9.1 Map-model overlay [i](#)



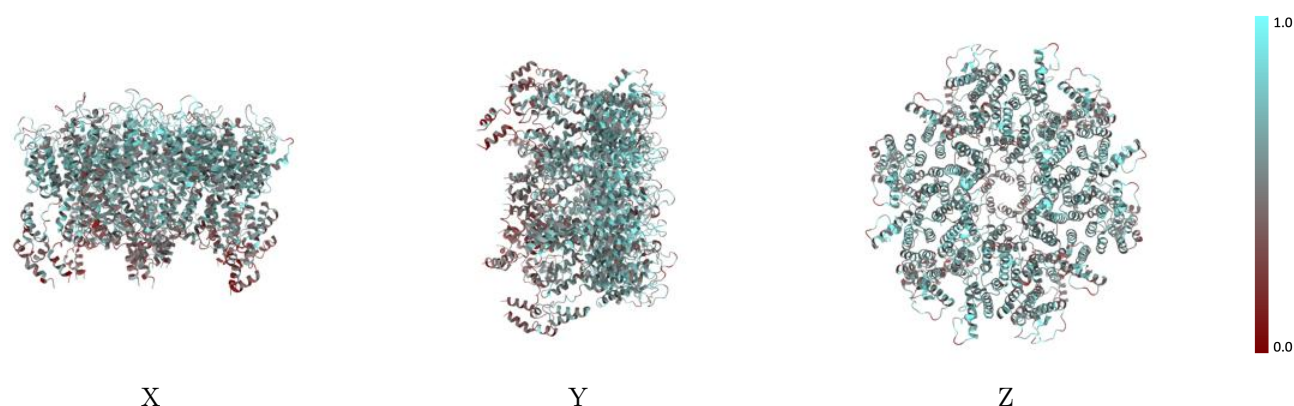
The images above show the 3D surface view of the map at the recommended contour level 0.499 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



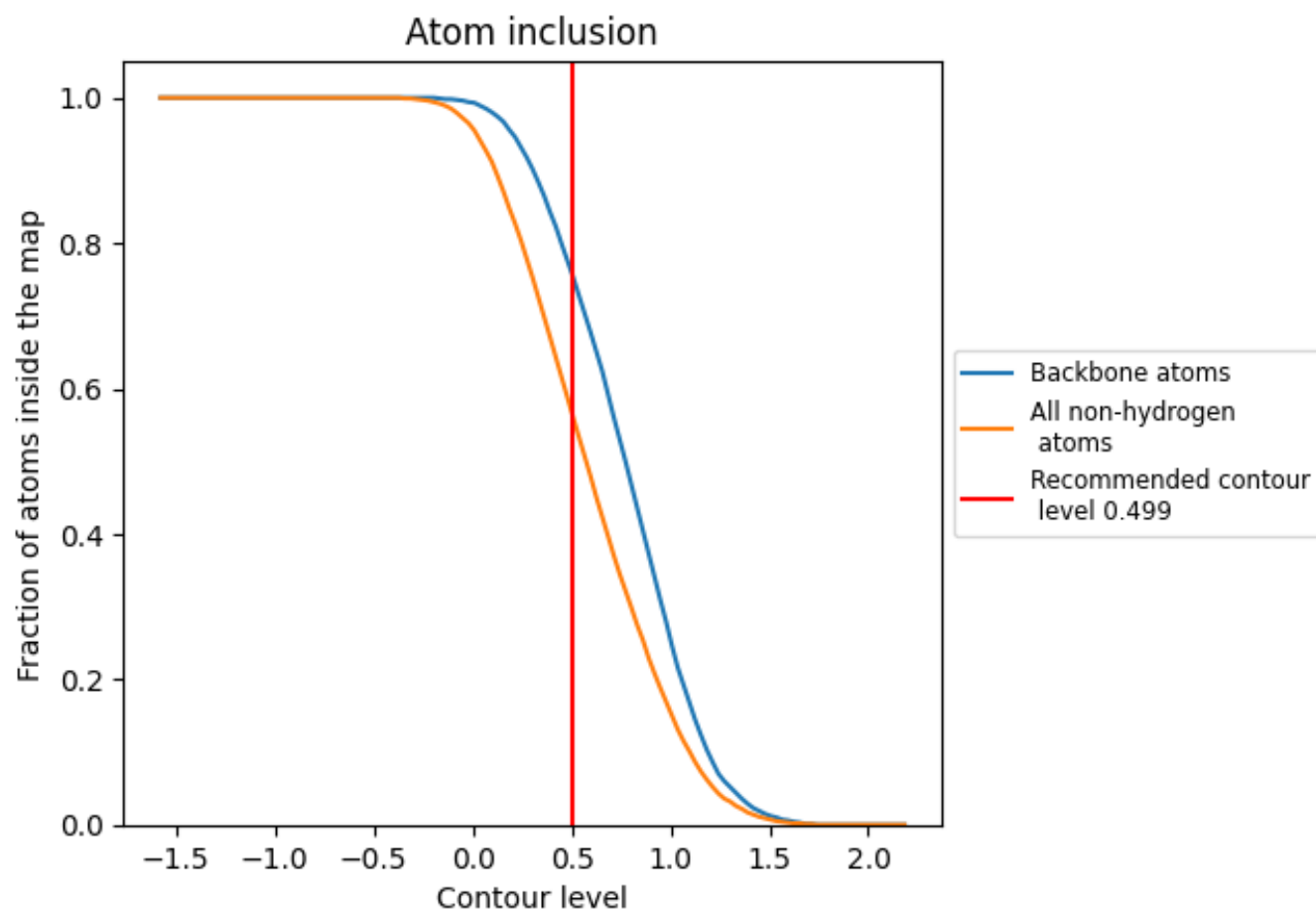
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.499).

9.4 Atom inclusion [i](#)



At the recommended contour level, 76% of all backbone atoms, 57% 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 (0.499) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5680	 0.4350
A	 0.5620	 0.4630
B	 0.5840	 0.4220
C	 0.5550	 0.4090
D	 0.5120	 0.3900
E	 0.5140	 0.4130
F	 0.6310	 0.4830
G	 0.5670	 0.4390
H	 0.5850	 0.4260
I	 0.6070	 0.4650
J	 0.5620	 0.4670
K	 0.5840	 0.4190
L	 0.5550	 0.4080
M	 0.5120	 0.3880
N	 0.5130	 0.4160
O	 0.6290	 0.4840
P	 0.5660	 0.4400
Q	 0.5860	 0.4270
R	 0.6070	 0.4650

