



## Full wwPDB EM Validation Report ⓘ

Nov 22, 2023 – 01:17 PM EST

PDB ID : 8U11  
EMDB ID : EMD-41792  
Title : In situ cryo-EM structure of bacteriophage P22 gp1:gp5:gp4: gp10: gp9 N-term complex in conformation 2 at 3.1Å resolution  
Authors : Iglesias, S.; Feng-Hou, C.; Cingolani, G.  
Deposited on : 2023-08-30  
Resolution : 3.10 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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

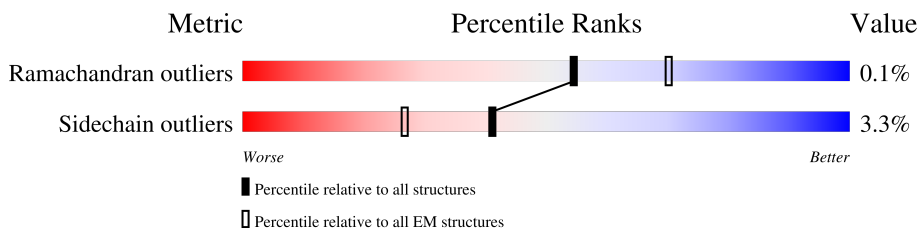
EMDB validation analysis : 0.0.1.dev70  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP)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

# 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 3.10 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.
















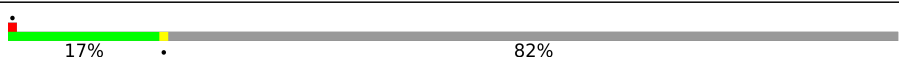
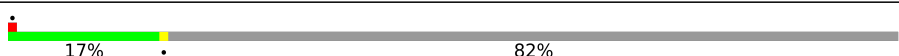

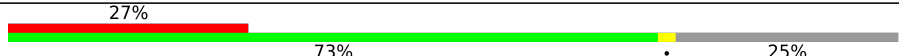
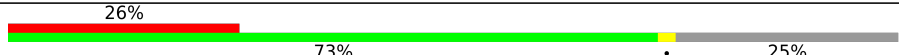
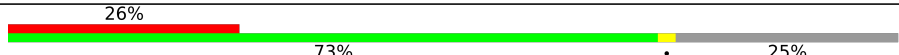
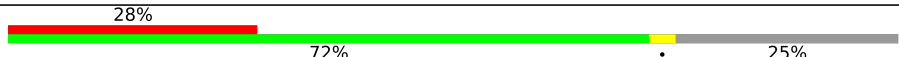
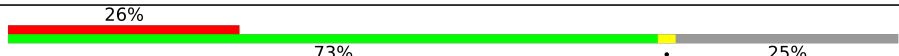



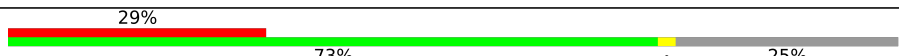
Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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  $\geq 3$ , 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	472	 5% 97%
1	2	472	 8% 98%
1	3	472	 7% 97%
1	4	472	 5% 97%
1	5	472	 6% 97%
1	6	472	 7% 97%
2	10	667	 17% 82%
2	11	667	 17% 82%
2	12	667	 18% 82%

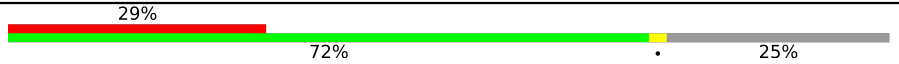

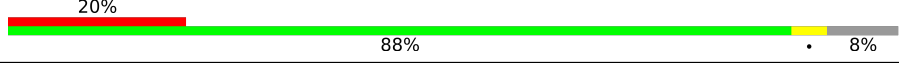
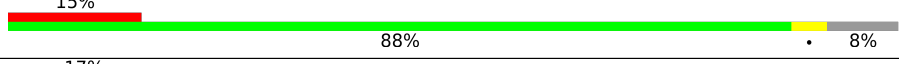
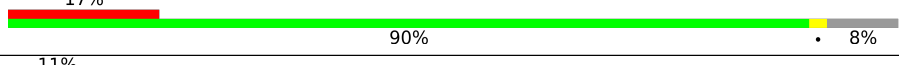
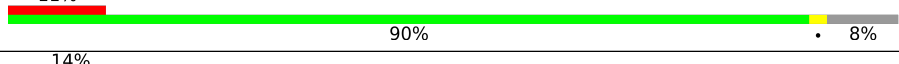
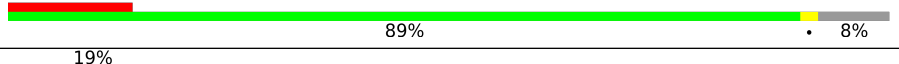
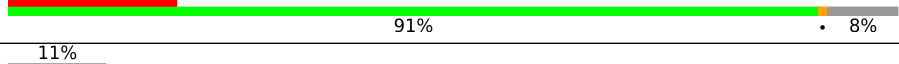
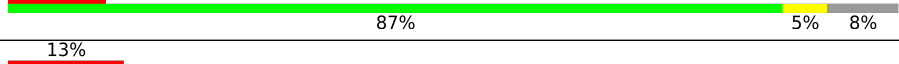
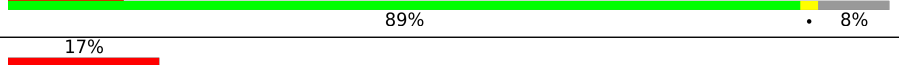

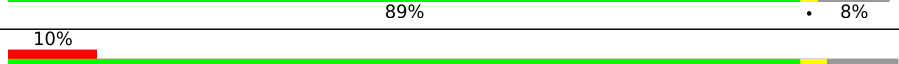
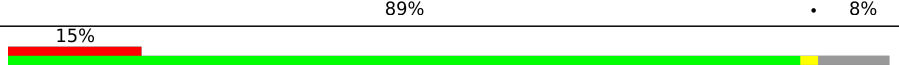
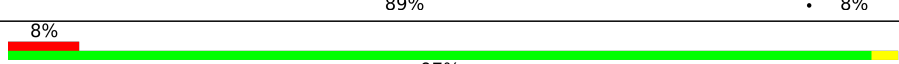
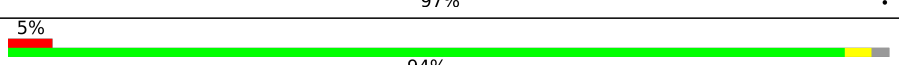
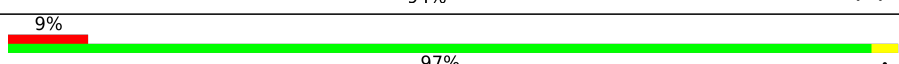
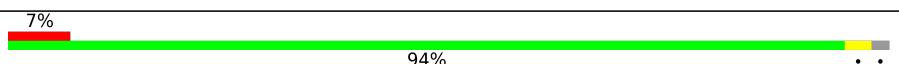
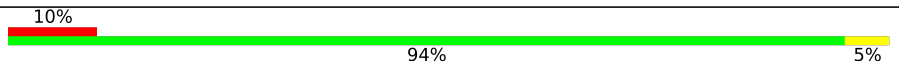
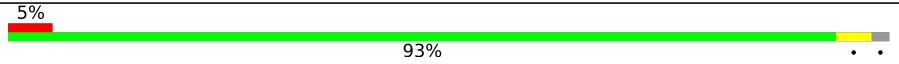
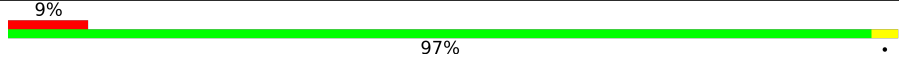
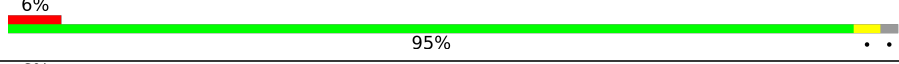
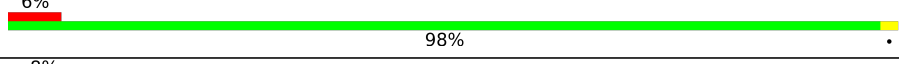
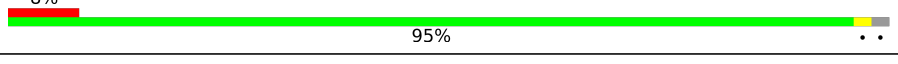

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Mol	Chain	Length	Quality of chain
2	13	667	 18% 82%
2	14	667	 17% 82%
2	15	667	 17% 82%
2	16	667	 18% 82%
2	17	667	 18% 82%
2	18	667	 18% 82%
2	19	667	 17% 82%
2	20	667	 18% 82%
2	21	667	 17% 82%
2	22	667	 18% 82%
2	23	667	 17% 82%
2	24	667	 18% 82%
2	7	667	 18% 82%
2	8	667	 17% 82%
2	9	667	 17% 82%
3	a	725	 29% 73% 25%
3	b	725	 27% 73% 25%
3	c	725	 26% 73% 25%
3	d	725	 26% 73% 25%
3	e	725	 28% 72% 25%
3	f	725	 26% 73% 25%
3	g	725	 28% 73% 25%
3	h	725	 27% 72% 25%
3	i	725	 27% 73% 25%
3	j	725	 29% 73% 25%

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Mol	Chain	Length	Quality of chain
3	k	725	
3	l	725	
4	m	166	
4	n	166	
4	o	166	
4	p	166	
4	q	166	
4	r	166	
4	s	166	
4	t	166	
4	u	166	
4	v	166	
4	x	166	
4	y	166	
5	A	430	
5	B	430	
5	C	430	
5	D	430	
5	E	430	
5	F	430	
5	G	430	
5	H	430	
5	I	430	
5	J	430	

## 2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 138386 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 Packaged DNA stabilization protein gp10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	471	Total 3683	C 2325	N 631	O 709	S 18	0	0
1	2	471	Total 3683	C 2325	N 631	O 709	S 18	0	0
1	3	471	Total 3683	C 2325	N 631	O 709	S 18	0	0
1	4	471	Total 3683	C 2325	N 631	O 709	S 18	0	0
1	5	471	Total 3683	C 2325	N 631	O 709	S 18	0	0
1	6	471	Total 3683	C 2325	N 631	O 709	S 18	0	0

- Molecule 2 is a protein called Tail spike protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	7	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	8	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	9	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	10	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	11	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	12	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	13	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	14	120	Total 934	C 595	N 156	O 182	S 1	0	0
2	15	120	Total 934	C 595	N 156	O 182	S 1	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	16	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	17	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	18	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	19	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	20	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	21	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	22	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	23	120	Total	C	N	O	S	0	0
			934	595	156	182	1		
2	24	120	Total	C	N	O	S	0	0
			934	595	156	182	1		

- Molecule 3 is a protein called Portal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	a	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	b	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	c	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	d	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	e	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	l	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	f	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	k	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	i	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	j	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	h	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		
3	g	544	Total	C	N	O	S	0	0
			4417	2791	756	850	20		

- Molecule 4 is a protein called Peptidoglycan hydrolase gp4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	y	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	m	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	n	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	o	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	p	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	q	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	r	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	s	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	t	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	u	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	v	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		
4	x	152	Total	C	N	O	S	0	0
			1166	731	200	229	6		

- Molecule 5 is a protein called Major capsid protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	429	Total	C	N	O	S	0	0
			3277	2053	568	643	13		
5	C	429	Total	C	N	O	S	0	0
			3277	2053	568	643	13		
5	A	429	Total	C	N	O	S	0	0
			3277	2053	568	643	13		

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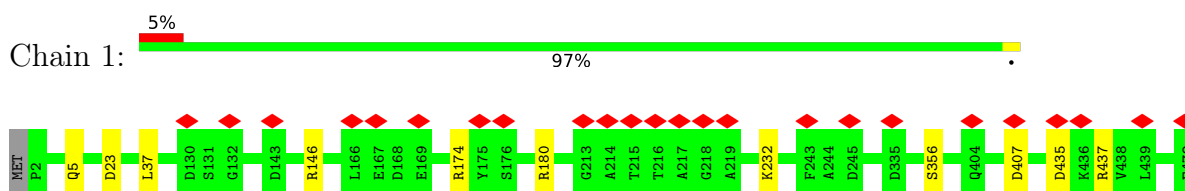
Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	429	Total	C	N	O	S	0	0
			3277	2053	568	643	13		
5	I	429	Total	C	N	O	S	0	0
			3277	2053	568	643	13		
5	D	421	Total	C	N	O	S	0	0
			3219	2017	558	631	13		
5	B	421	Total	C	N	O	S	0	0
			3219	2017	558	631	13		
5	F	421	Total	C	N	O	S	0	0
			3219	2017	558	631	13		
5	H	421	Total	C	N	O	S	0	0
			3219	2017	558	631	13		
5	J	421	Total	C	N	O	S	0	0
			3219	2017	558	631	13		



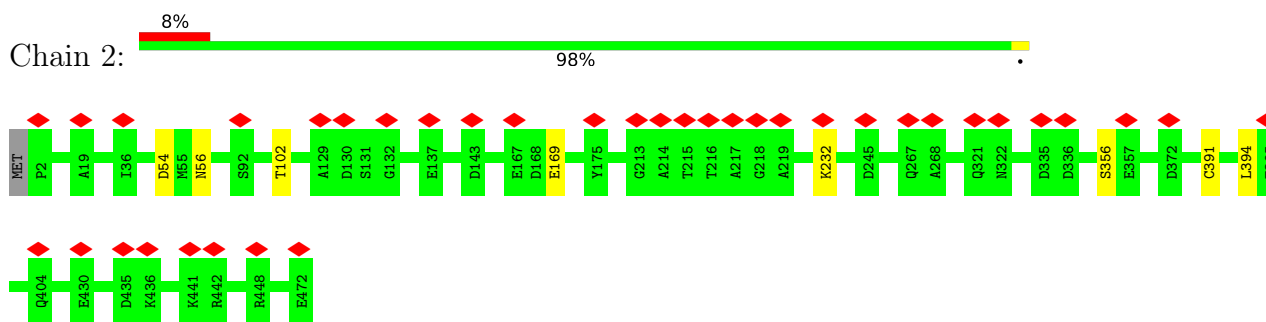
### 3 Residue-property plots [i](#)

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.

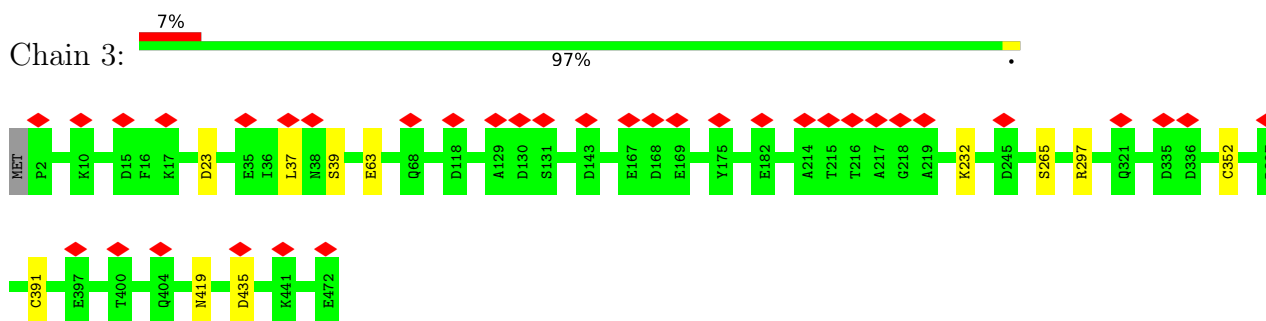
- Molecule 1: Packaged DNA stabilization protein gp10



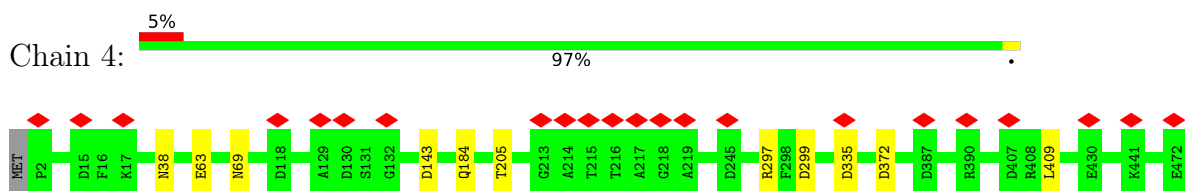
- Molecule 1: Packaged DNA stabilization protein gp10



- Molecule 1: Packaged DNA stabilization protein gp10



- Molecule 1: Packaged DNA stabilization protein gp10



















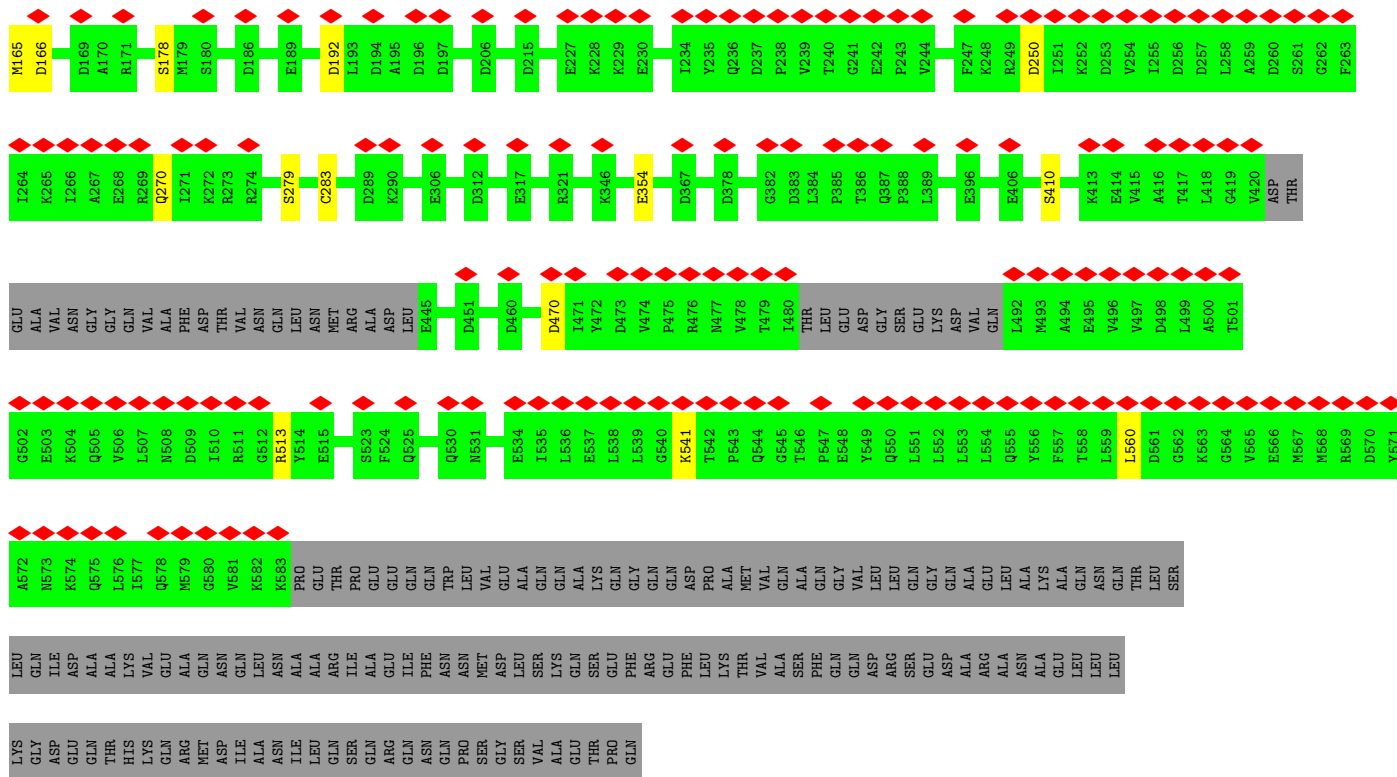




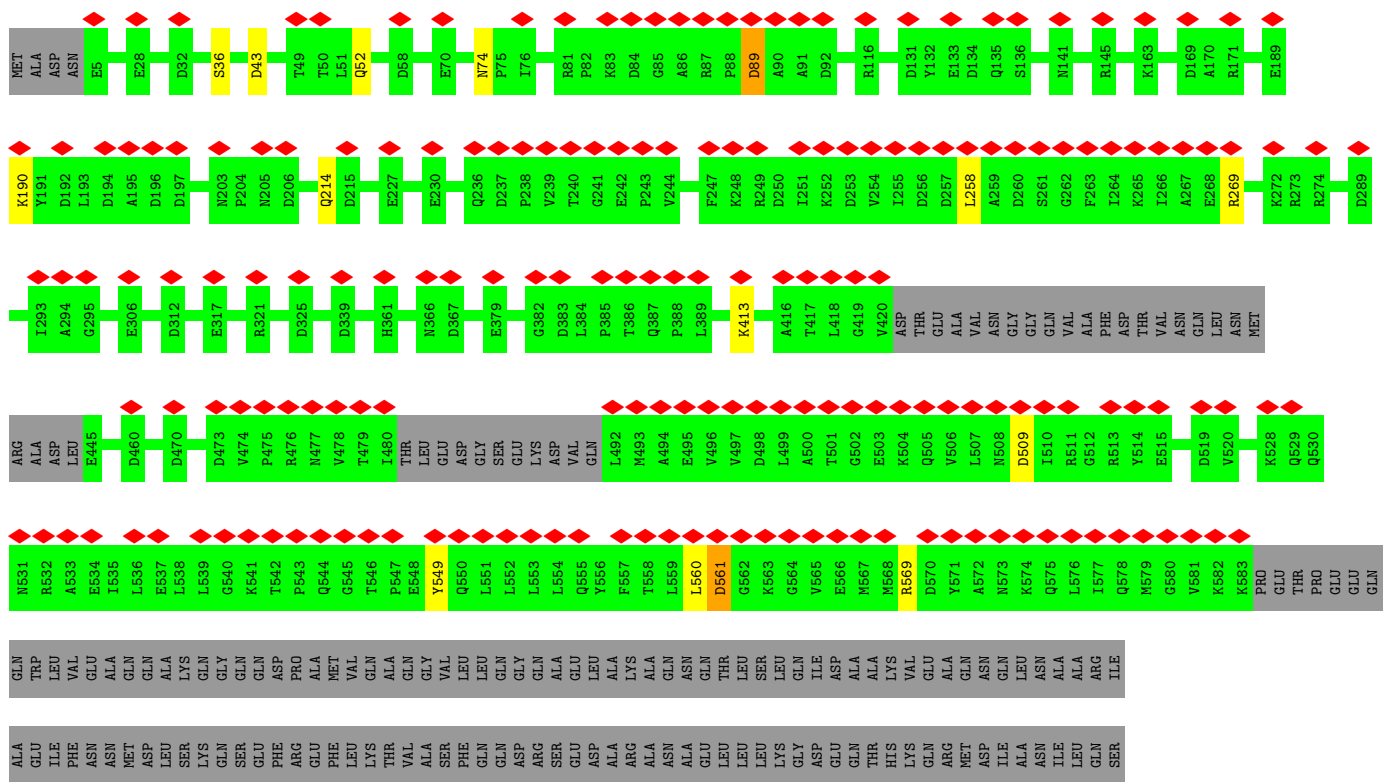








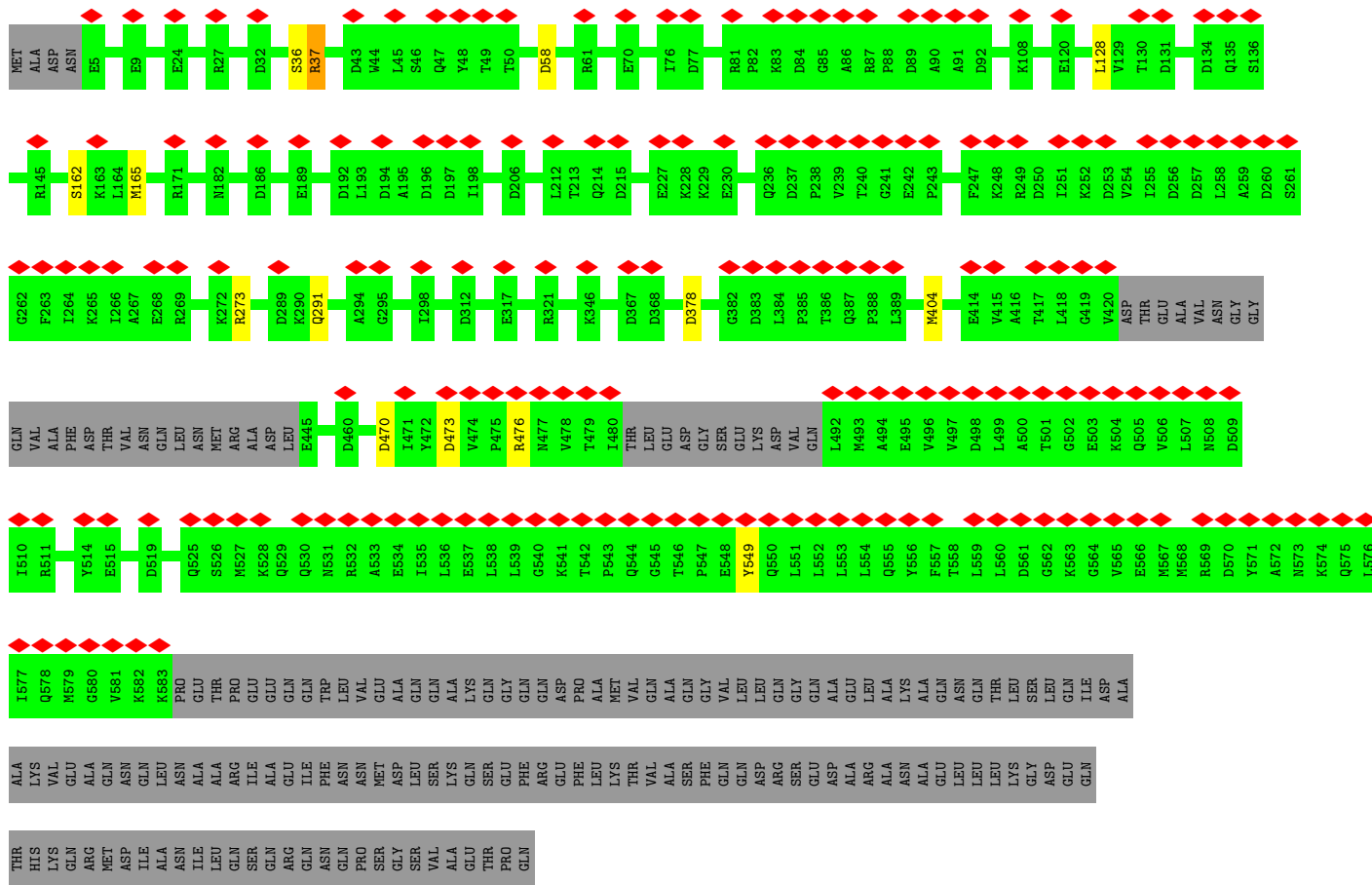
• Molecule 3: Portal protein



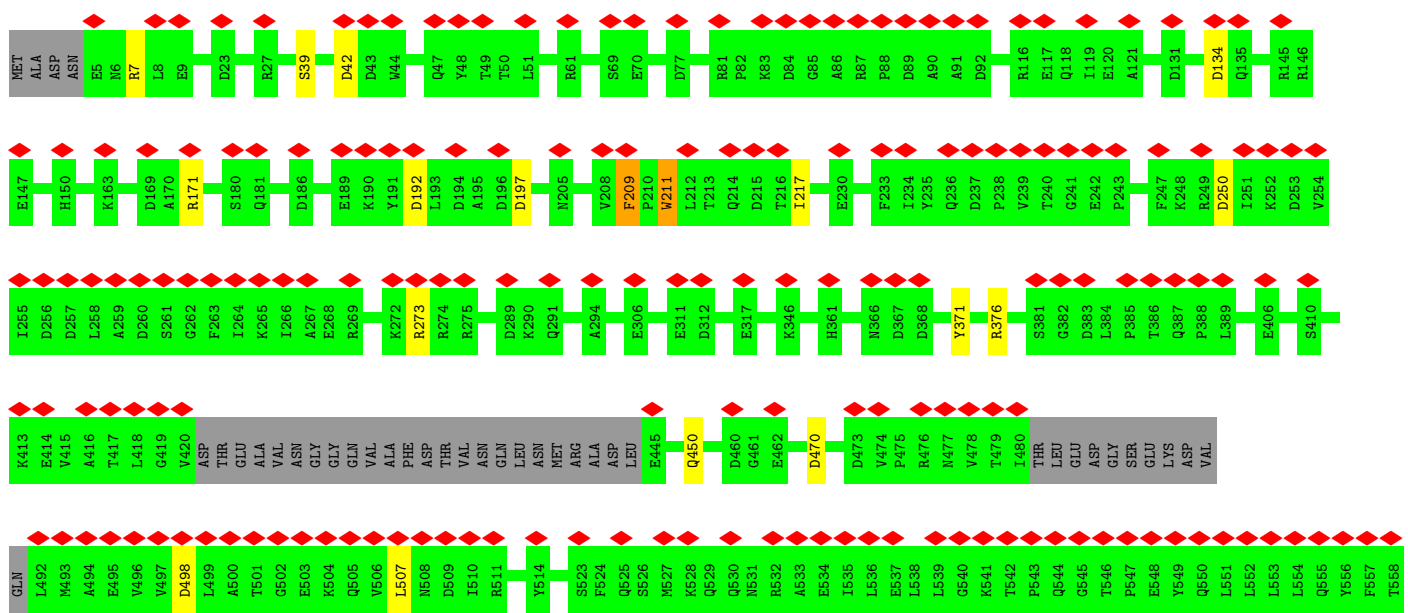
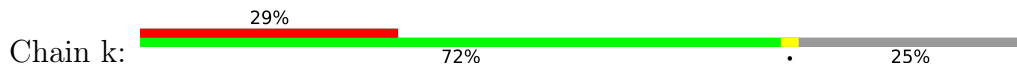




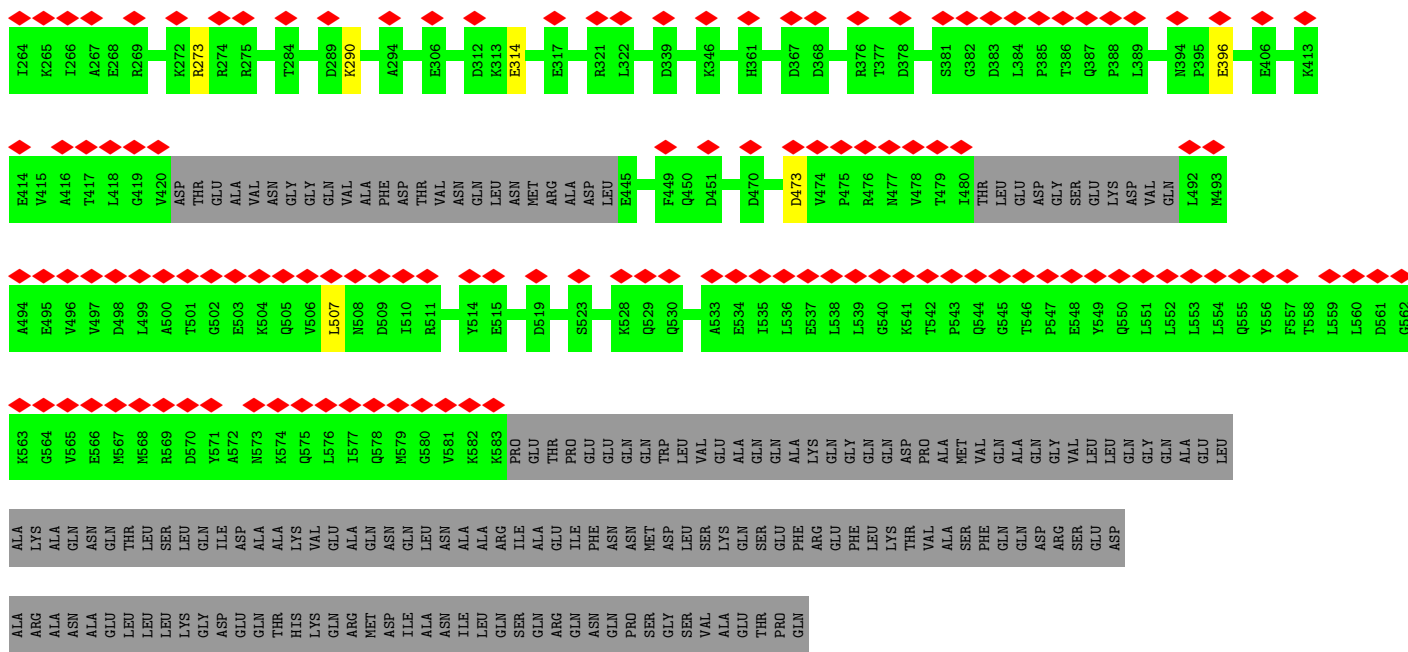




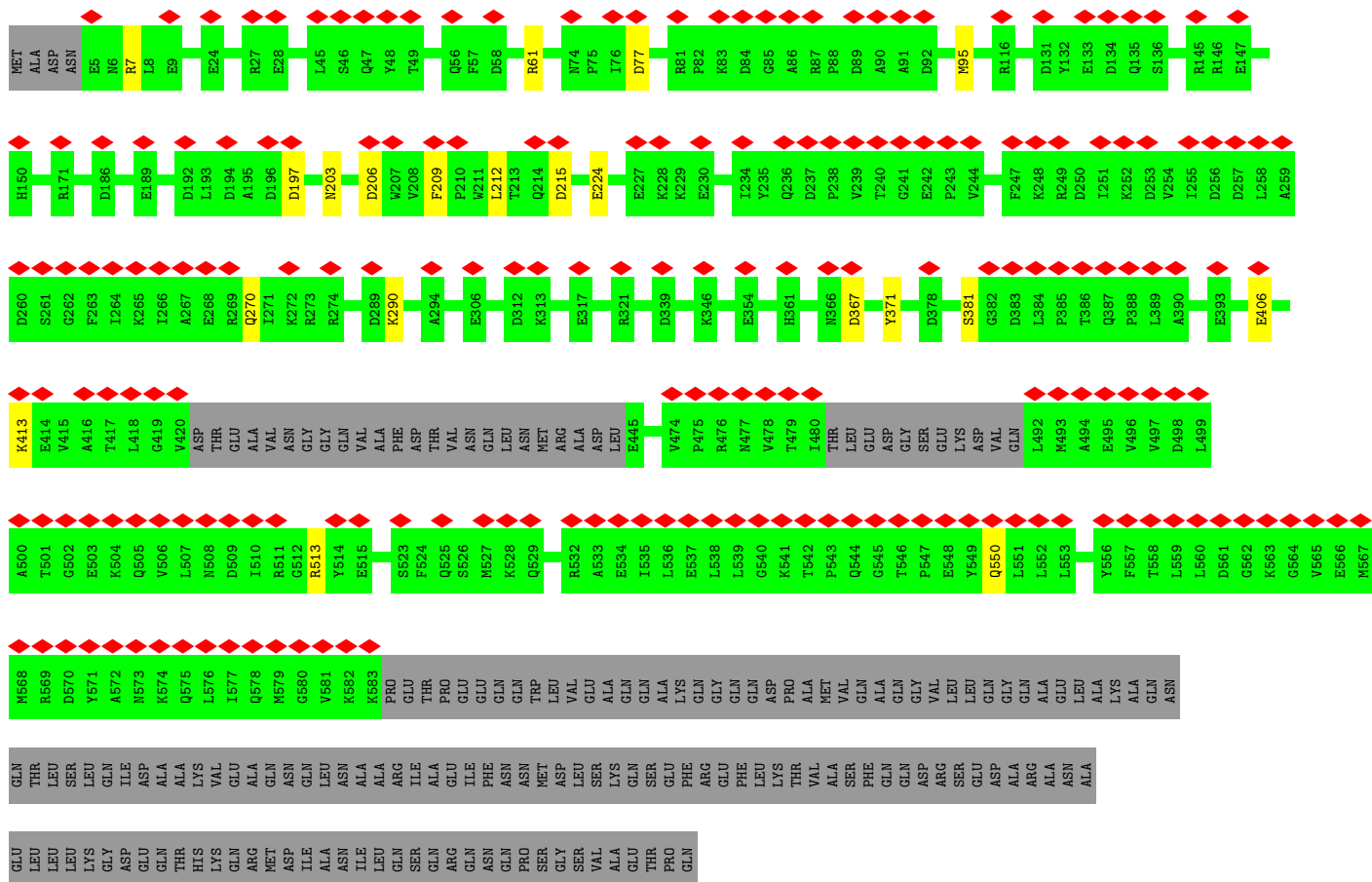
• Molecule 3: Portal protein



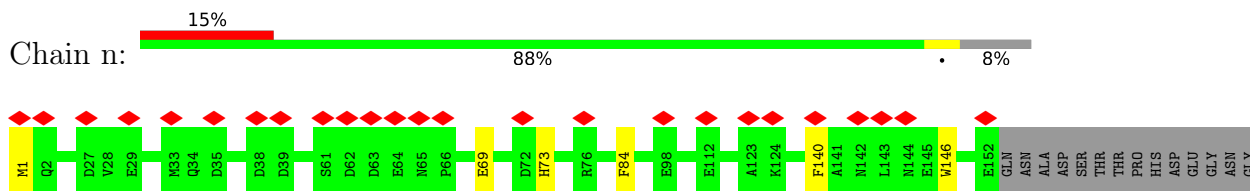




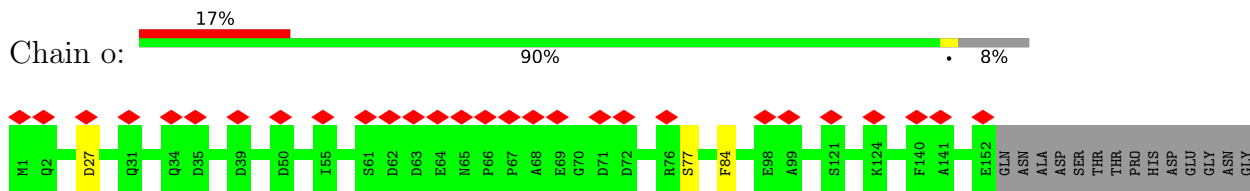
• Molecule 3: Portal protein



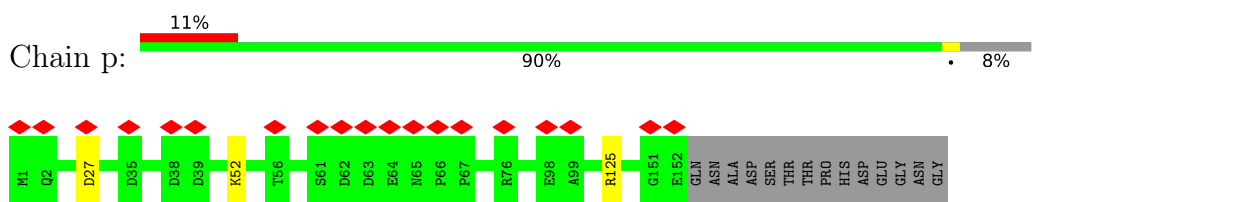




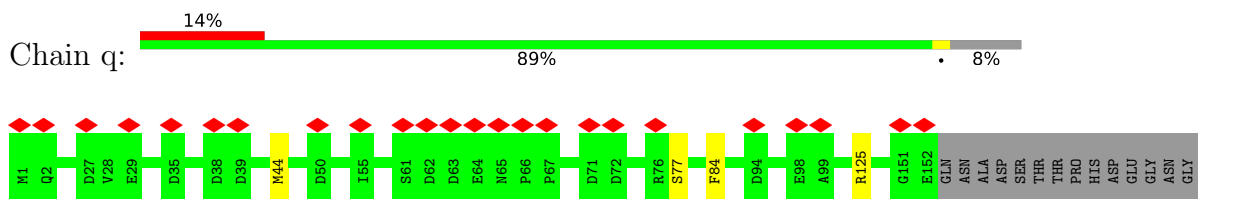
• Molecule 4: Peptidoglycan hydrolase gp4



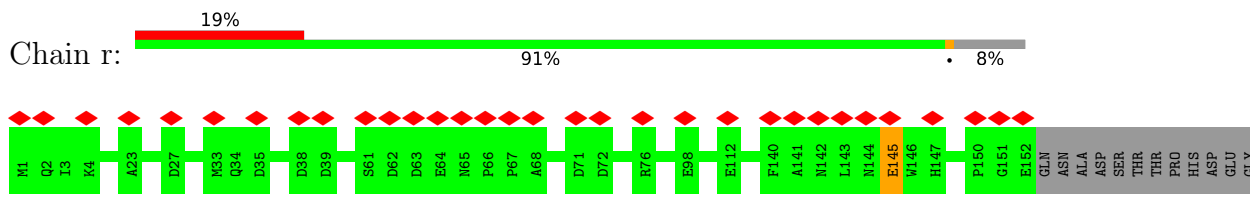
• Molecule 4: Peptidoglycan hydrolase gp4



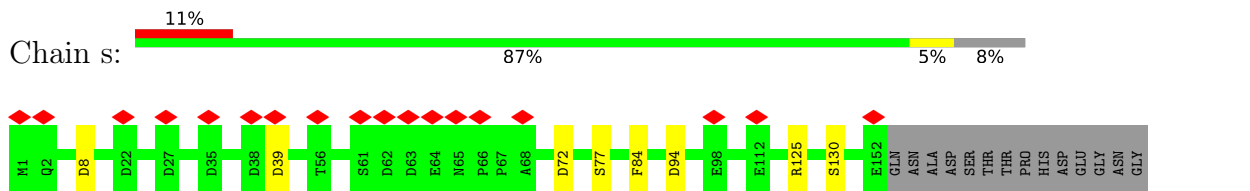
• Molecule 4: Peptidoglycan hydrolase gp4



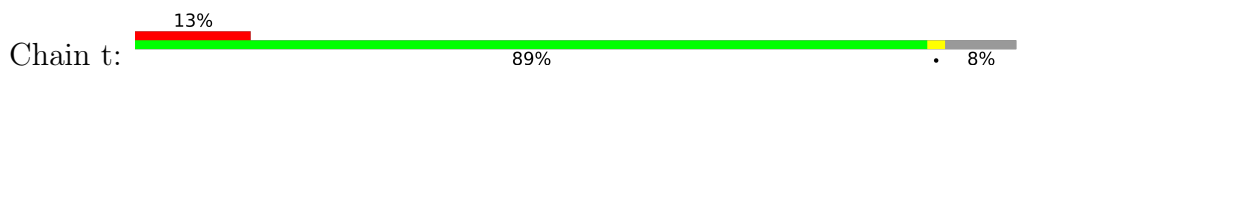
• Molecule 4: Peptidoglycan hydrolase gp4

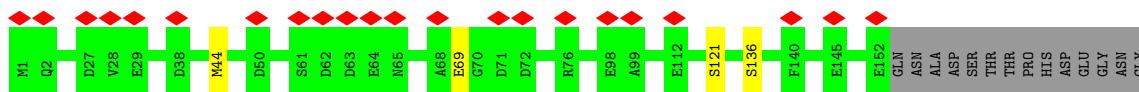


• Molecule 4: Peptidoglycan hydrolase gp4

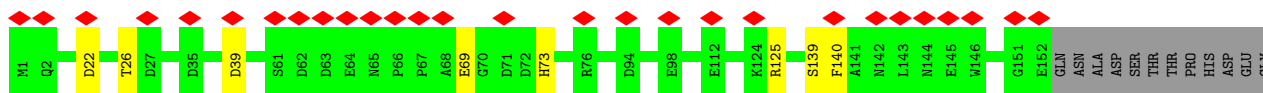
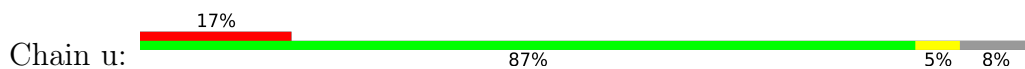


• Molecule 4: Peptidoglycan hydrolase gp4

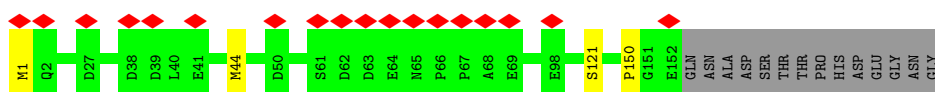
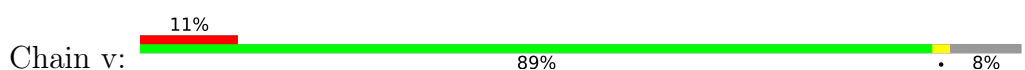




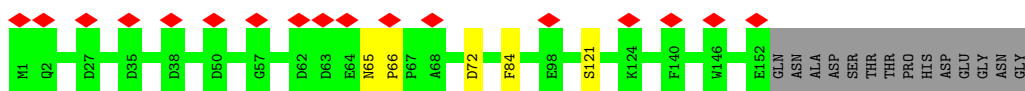
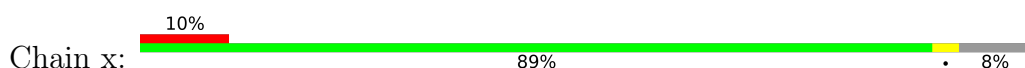
• Molecule 4: Peptidoglycan hydrolase gp4



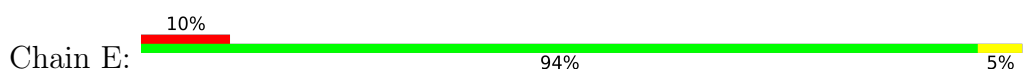
• Molecule 4: Peptidoglycan hydrolase gp4



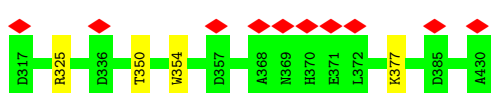
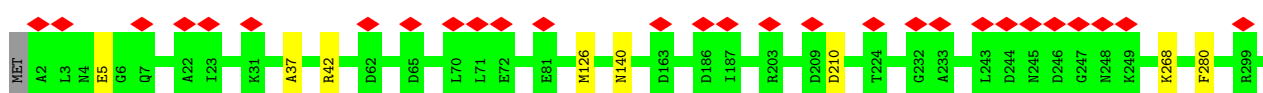
• Molecule 4: Peptidoglycan hydrolase gp4



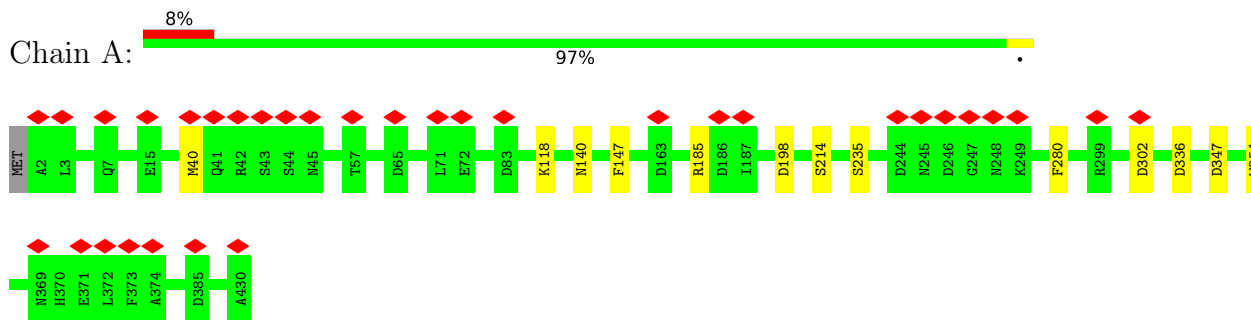
• Molecule 5: Major capsid protein



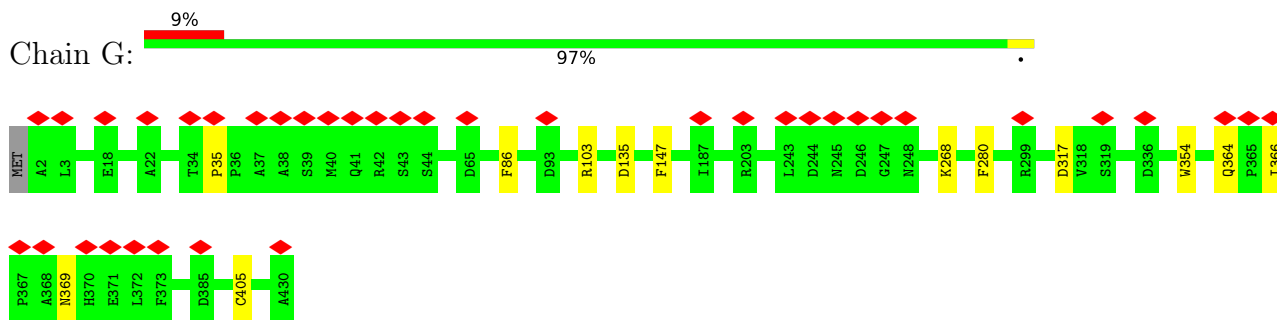
• Molecule 5: Major capsid protein



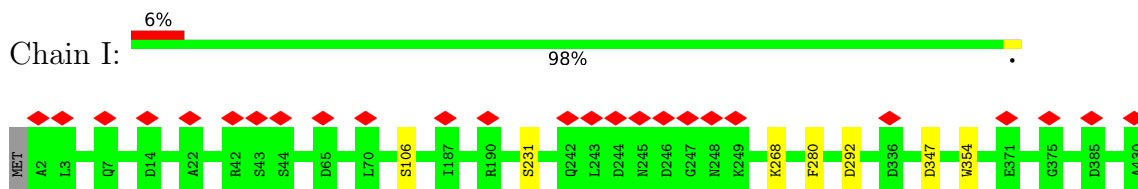
• Molecule 5: Major capsid protein



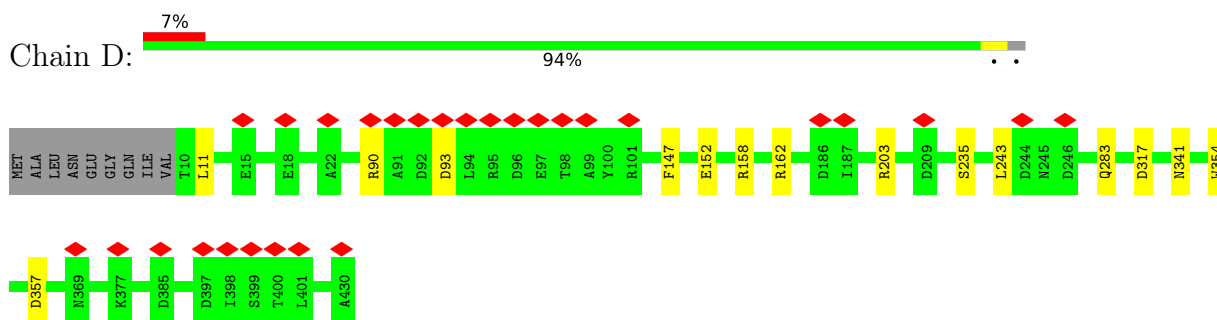
• Molecule 5: Major capsid protein



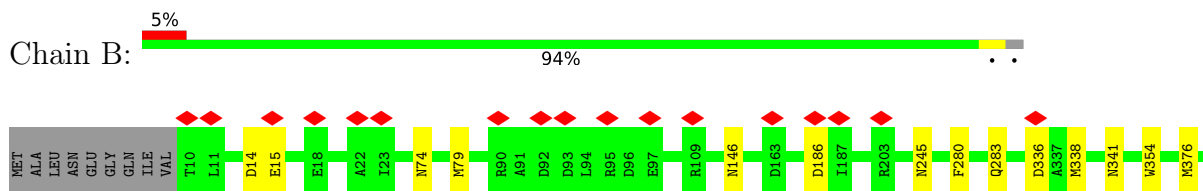
• Molecule 5: Major capsid protein

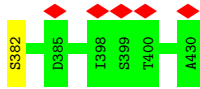


• Molecule 5: Major capsid protein

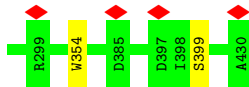
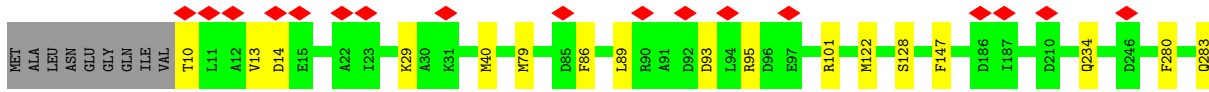
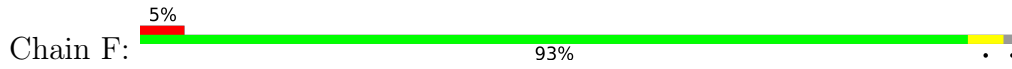


• Molecule 5: Major capsid protein

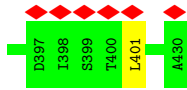
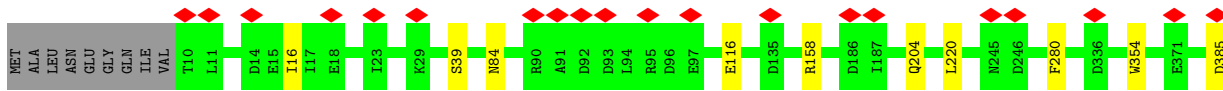




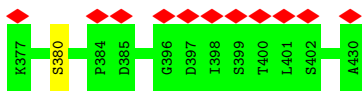
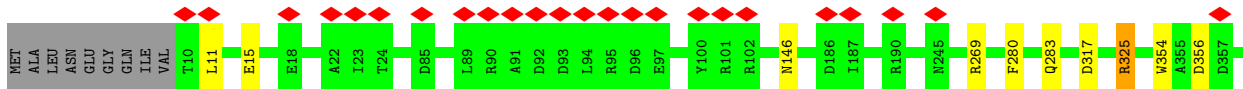
• Molecule 5: Major capsid protein



• Molecule 5: Major capsid protein



• Molecule 5: Major capsid protein





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	17944	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	1.08	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2100	Depositor
Magnification	29000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	23.428	Depositor
Minimum map value	-16.095	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	3.5	Depositor
Map size (Å)	512.9599, 512.9599, 512.9599	wwPDB
Map dimensions	440, 440, 440	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.165818, 1.165818, 1.165818	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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	0.35	0/3764	0.55	0/5097
1	2	0.36	0/3764	0.54	0/5097
1	3	0.34	0/3764	0.55	0/5097
1	4	0.36	0/3764	0.56	0/5097
1	5	0.34	0/3764	0.55	0/5097
1	6	0.34	0/3764	0.55	0/5097
2	10	0.33	0/953	0.53	1/1299 (0.1%)
2	11	0.36	0/953	0.51	0/1299
2	12	0.33	0/953	0.48	0/1299
2	13	0.33	0/953	0.49	0/1299
2	14	0.38	0/953	0.54	1/1299 (0.1%)
2	15	0.35	0/953	0.50	0/1299
2	16	0.33	0/953	0.50	0/1299
2	17	0.36	0/953	0.51	0/1299
2	18	0.34	0/953	0.49	0/1299
2	19	0.33	0/953	0.51	0/1299
2	20	0.36	0/953	0.50	0/1299
2	21	0.37	0/953	0.52	0/1299
2	22	0.32	0/953	0.48	0/1299
2	23	0.35	0/953	0.49	0/1299
2	24	0.35	0/953	0.49	0/1299
2	7	0.33	0/953	0.51	0/1299
2	8	0.37	0/953	0.60	1/1299 (0.1%)
2	9	0.37	0/953	0.54	0/1299
3	a	0.34	0/4512	0.51	0/6117
3	b	0.35	0/4512	0.52	0/6117
3	c	0.34	0/4512	0.54	3/6117 (0.0%)
3	d	0.34	0/4512	0.51	0/6117
3	e	0.34	0/4512	0.50	0/6117
3	f	0.34	0/4512	0.51	0/6117
3	g	0.34	0/4512	0.51	0/6117
3	h	0.34	0/4512	0.50	0/6117
3	i	0.34	0/4512	0.51	0/6117
3	j	0.34	0/4512	0.51	0/6117

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
3	k	0.34	0/4512	0.51	0/6117
3	l	0.34	0/4512	0.51	0/6117
4	m	0.34	0/1191	0.51	0/1614
4	n	0.35	0/1191	0.50	0/1614
4	o	0.35	0/1191	0.52	0/1614
4	p	0.36	0/1191	0.51	0/1614
4	q	0.36	0/1191	0.51	0/1614
4	r	0.36	0/1191	0.52	0/1614
4	s	0.37	0/1191	0.51	0/1614
4	t	0.36	0/1191	0.52	0/1614
4	u	0.36	0/1191	0.53	0/1614
4	v	0.37	0/1191	0.51	0/1614
4	x	0.37	0/1191	0.52	0/1614
4	y	0.35	0/1191	0.50	0/1614
5	A	0.36	0/3335	0.53	0/4535
5	B	0.37	0/3277	0.54	0/4456
5	C	0.35	0/3335	0.53	0/4535
5	D	0.36	0/3277	0.52	0/4456
5	E	0.35	0/3335	0.53	0/4535
5	F	0.38	0/3277	0.54	1/4456 (0.0%)
5	G	0.36	0/3335	0.54	0/4535
5	H	0.37	0/3277	0.54	1/4456 (0.0%)
5	I	0.37	0/3335	0.54	0/4535
5	J	0.38	0/3277	0.54	0/4456
All	All	0.35	0/141234	0.52	8/191691 (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
1	1	0	1
1	6	0	1
3	a	0	1
3	e	0	1
3	f	0	1
3	k	0	2
3	l	0	2
4	r	0	1
4	u	0	1
5	C	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
5	D	0	1
5	G	0	1
5	H	0	1
5	J	0	1
All	All	0	16

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	c	561	ASP	CB-CA-C	-10.45	89.51	110.40
3	c	89	ASP	CB-CG-OD1	5.60	123.34	118.30
5	H	401	LEU	CA-CB-CG	5.40	127.72	115.30
2	10	112	ASP	CB-CG-OD1	5.34	123.10	118.30
3	c	561	ASP	N-CA-CB	-5.31	101.03	110.60
2	8	39	ASP	CB-CG-OD1	5.28	123.05	118.30
2	14	39	ASP	CB-CG-OD1	5.18	122.96	118.30
5	F	89	LEU	CA-CB-CG	5.02	126.85	115.30

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	437	ARG	Sidechain
1	6	408	ARG	Sidechain
5	C	325	ARG	Sidechain
5	D	158	ARG	Sidechain
5	G	35	PRO	Peptide
5	H	158	ARG	Sidechain
5	J	325	ARG	Sidechain
3	a	376	ARG	Sidechain
3	e	37	ARG	Sidechain
3	f	37	ARG	Sidechain
3	k	209	PHE	Peptide
3	k	211	TRP	Peptide
3	l	209	PHE	Peptide
3	l	61	ARG	Sidechain
4	r	145	GLU	Peptide
4	u	125	ARG	Sidechain

## 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	
1	1	469/472 (99%)	427 (91%)	42 (9%)	0	100	100
1	2	469/472 (99%)	435 (93%)	34 (7%)	0	100	100
1	3	469/472 (99%)	428 (91%)	41 (9%)	0	100	100
1	4	469/472 (99%)	425 (91%)	44 (9%)	0	100	100
1	5	469/472 (99%)	425 (91%)	44 (9%)	0	100	100
1	6	469/472 (99%)	437 (93%)	32 (7%)	0	100	100
2	10	118/667 (18%)	108 (92%)	10 (8%)	0	100	100
2	11	118/667 (18%)	112 (95%)	6 (5%)	0	100	100
2	12	118/667 (18%)	114 (97%)	4 (3%)	0	100	100
2	13	118/667 (18%)	113 (96%)	5 (4%)	0	100	100
2	14	118/667 (18%)	112 (95%)	6 (5%)	0	100	100
2	15	118/667 (18%)	111 (94%)	7 (6%)	0	100	100
2	16	118/667 (18%)	111 (94%)	7 (6%)	0	100	100
2	17	118/667 (18%)	110 (93%)	8 (7%)	0	100	100
2	18	118/667 (18%)	108 (92%)	10 (8%)	0	100	100
2	19	118/667 (18%)	112 (95%)	6 (5%)	0	100	100
2	20	118/667 (18%)	111 (94%)	7 (6%)	0	100	100
2	21	118/667 (18%)	111 (94%)	7 (6%)	0	100	100
2	22	118/667 (18%)	110 (93%)	8 (7%)	0	100	100
2	23	118/667 (18%)	110 (93%)	8 (7%)	0	100	100
2	24	118/667 (18%)	114 (97%)	4 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	7	118/667 (18%)	111 (94%)	7 (6%)	0	100	100
2	8	118/667 (18%)	110 (93%)	8 (7%)	0	100	100
2	9	118/667 (18%)	113 (96%)	5 (4%)	0	100	100
3	a	538/725 (74%)	511 (95%)	27 (5%)	0	100	100
3	b	538/725 (74%)	512 (95%)	26 (5%)	0	100	100
3	c	538/725 (74%)	508 (94%)	28 (5%)	2 (0%)	34	69
3	d	538/725 (74%)	508 (94%)	30 (6%)	0	100	100
3	e	538/725 (74%)	511 (95%)	26 (5%)	1 (0%)	47	79
3	f	538/725 (74%)	507 (94%)	31 (6%)	0	100	100
3	g	538/725 (74%)	505 (94%)	33 (6%)	0	100	100
3	h	538/725 (74%)	510 (95%)	27 (5%)	1 (0%)	47	79
3	i	538/725 (74%)	513 (95%)	25 (5%)	0	100	100
3	j	538/725 (74%)	513 (95%)	25 (5%)	0	100	100
3	k	538/725 (74%)	507 (94%)	29 (5%)	2 (0%)	34	69
3	l	538/725 (74%)	508 (94%)	30 (6%)	0	100	100
4	m	150/166 (90%)	143 (95%)	7 (5%)	0	100	100
4	n	150/166 (90%)	147 (98%)	3 (2%)	0	100	100
4	o	150/166 (90%)	141 (94%)	9 (6%)	0	100	100
4	p	150/166 (90%)	147 (98%)	3 (2%)	0	100	100
4	q	150/166 (90%)	142 (95%)	8 (5%)	0	100	100
4	r	150/166 (90%)	142 (95%)	7 (5%)	1 (1%)	22	57
4	s	150/166 (90%)	147 (98%)	3 (2%)	0	100	100
4	t	150/166 (90%)	149 (99%)	1 (1%)	0	100	100
4	u	150/166 (90%)	141 (94%)	8 (5%)	1 (1%)	22	57
4	v	150/166 (90%)	145 (97%)	5 (3%)	0	100	100
4	x	150/166 (90%)	144 (96%)	5 (3%)	1 (1%)	22	57
4	y	150/166 (90%)	143 (95%)	7 (5%)	0	100	100
5	A	427/430 (99%)	392 (92%)	35 (8%)	0	100	100
5	B	419/430 (97%)	396 (94%)	22 (5%)	1 (0%)	47	79
5	C	427/430 (99%)	400 (94%)	25 (6%)	2 (0%)	29	64
5	D	419/430 (97%)	405 (97%)	13 (3%)	1 (0%)	47	79

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	E	427/430 (99%)	396 (93%)	31 (7%)	0	100	100
5	F	419/430 (97%)	397 (95%)	21 (5%)	1 (0%)	47	79
5	G	427/430 (99%)	387 (91%)	39 (9%)	1 (0%)	47	79
5	H	419/430 (97%)	398 (95%)	20 (5%)	1 (0%)	47	79
5	I	427/430 (99%)	396 (93%)	31 (7%)	0	100	100
5	J	419/430 (97%)	397 (95%)	21 (5%)	1 (0%)	47	79
All	All	17424/29830 (58%)	16386 (94%)	1021 (6%)	17 (0%)	54	83

All (17) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	r	145	GLU
3	k	209	PHE
3	h	209	PHE
5	C	37	ALA
5	F	283	GLN
5	J	283	GLN
3	e	50	THR
5	D	283	GLN
5	B	283	GLN
5	H	385	ASP
3	c	214	GLN
3	c	52	GLN
4	u	139	SER
5	C	140	ASN
3	k	217	ILE
4	x	66	PRO
5	G	366	ILE

### 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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	1	394/395 (100%)	384 (98%)	10 (2%)	47	75
1	2	394/395 (100%)	386 (98%)	8 (2%)	55	80
1	3	394/395 (100%)	383 (97%)	11 (3%)	43	73
1	4	394/395 (100%)	383 (97%)	11 (3%)	43	73
1	5	394/395 (100%)	383 (97%)	11 (3%)	43	73
1	6	394/395 (100%)	382 (97%)	12 (3%)	41	71
2	10	103/548 (19%)	99 (96%)	4 (4%)	32	65
2	11	103/548 (19%)	98 (95%)	5 (5%)	25	57
2	12	103/548 (19%)	100 (97%)	3 (3%)	42	72
2	13	103/548 (19%)	102 (99%)	1 (1%)	76	90
2	14	103/548 (19%)	96 (93%)	7 (7%)	16	45
2	15	103/548 (19%)	95 (92%)	8 (8%)	12	40
2	16	103/548 (19%)	102 (99%)	1 (1%)	76	90
2	17	103/548 (19%)	102 (99%)	1 (1%)	76	90
2	18	103/548 (19%)	103 (100%)	0	100	100
2	19	103/548 (19%)	99 (96%)	4 (4%)	32	65
2	20	103/548 (19%)	100 (97%)	3 (3%)	42	72
2	21	103/548 (19%)	97 (94%)	6 (6%)	20	51
2	22	103/548 (19%)	100 (97%)	3 (3%)	42	72
2	23	103/548 (19%)	99 (96%)	4 (4%)	32	65
2	24	103/548 (19%)	101 (98%)	2 (2%)	57	81
2	7	103/548 (19%)	101 (98%)	2 (2%)	57	81
2	8	103/548 (19%)	100 (97%)	3 (3%)	42	72
2	9	103/548 (19%)	98 (95%)	5 (5%)	25	57
3	a	480/630 (76%)	465 (97%)	15 (3%)	40	70
3	b	480/630 (76%)	466 (97%)	14 (3%)	42	72
3	c	480/630 (76%)	467 (97%)	13 (3%)	44	74
3	d	480/630 (76%)	468 (98%)	12 (2%)	47	75
3	e	480/630 (76%)	461 (96%)	19 (4%)	31	65
3	f	480/630 (76%)	466 (97%)	14 (3%)	42	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	g	480/630 (76%)	463 (96%)	17 (4%)	36	68
3	h	480/630 (76%)	461 (96%)	19 (4%)	31	65
3	i	480/630 (76%)	467 (97%)	13 (3%)	44	74
3	j	480/630 (76%)	463 (96%)	17 (4%)	36	68
3	k	480/630 (76%)	462 (96%)	18 (4%)	33	66
3	l	480/630 (76%)	462 (96%)	18 (4%)	33	66
4	m	120/131 (92%)	114 (95%)	6 (5%)	24	57
4	n	120/131 (92%)	114 (95%)	6 (5%)	24	57
4	o	120/131 (92%)	117 (98%)	3 (2%)	47	75
4	p	120/131 (92%)	117 (98%)	3 (2%)	47	75
4	q	120/131 (92%)	116 (97%)	4 (3%)	38	69
4	r	120/131 (92%)	120 (100%)	0	100	100
4	s	120/131 (92%)	112 (93%)	8 (7%)	16	46
4	t	120/131 (92%)	116 (97%)	4 (3%)	38	69
4	u	120/131 (92%)	114 (95%)	6 (5%)	24	57
4	v	120/131 (92%)	116 (97%)	4 (3%)	38	69
4	x	120/131 (92%)	116 (97%)	4 (3%)	38	69
4	y	120/131 (92%)	116 (97%)	4 (3%)	38	69
5	A	351/352 (100%)	338 (96%)	13 (4%)	34	66
5	B	345/352 (98%)	331 (96%)	14 (4%)	30	64
5	C	351/352 (100%)	342 (97%)	9 (3%)	46	74
5	D	345/352 (98%)	332 (96%)	13 (4%)	33	66
5	E	351/352 (100%)	328 (93%)	23 (7%)	16	47
5	F	345/352 (98%)	328 (95%)	17 (5%)	25	57
5	G	351/352 (100%)	340 (97%)	11 (3%)	40	70
5	H	345/352 (98%)	337 (98%)	8 (2%)	50	77
5	I	351/352 (100%)	344 (98%)	7 (2%)	55	80
5	J	345/352 (98%)	335 (97%)	10 (3%)	42	72
All	All	14898/24886 (60%)	14407 (97%)	491 (3%)	41	69

All (491) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1	5	GLN
1	1	23	ASP
1	1	37	LEU
1	1	146	ARG
1	1	174	ARG
1	1	180	ARG
1	1	232	LYS
1	1	356	SER
1	1	407	ASP
1	1	435	ASP
1	2	54	ASP
1	2	56	ASN
1	2	102	THR
1	2	169	GLU
1	2	232	LYS
1	2	356	SER
1	2	391	CYS
1	2	394	LEU
1	3	23	ASP
1	3	37	LEU
1	3	39	SER
1	3	63	GLU
1	3	232	LYS
1	3	265	SER
1	3	297	ARG
1	3	352	CYS
1	3	391	CYS
1	3	419	ASN
1	3	435	ASP
1	4	38	ASN
1	4	63	GLU
1	4	69	ASN
1	4	143	ASP
1	4	184	GLN
1	4	205	THR
1	4	297	ARG
1	4	299	ASP
1	4	335	ASP
1	4	372	ASP
1	4	409	LEU
1	5	23	ASP
1	5	46	PHE
1	5	97	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	5	104	GLN
1	5	143	ASP
1	5	146	ARG
1	5	186	ASP
1	5	297	ARG
1	5	327	CYS
1	5	373	LYS
1	5	391	CYS
1	6	18	ASN
1	6	23	ASP
1	6	38	ASN
1	6	55	MET
1	6	59	SER
1	6	101	ARG
1	6	196	ASP
1	6	267	GLN
1	6	297	ARG
1	6	322	ASN
1	6	408	ARG
1	6	436	LYS
2	7	22	SER
2	7	86	GLN
2	8	101	ASP
2	8	120	LYS
2	8	121	LYS
2	9	20	SER
2	9	22	SER
2	9	28	ASN
2	9	57	SER
2	9	78	GLN
2	10	24	LYS
2	10	35	GLN
2	10	42	ASN
2	10	105	ASN
2	11	24	LYS
2	11	39	ASP
2	11	86	GLN
2	11	119	ASP
2	11	120	LYS
2	12	28	ASN
2	12	55	ASP
2	12	89	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	13	57	SER
2	14	11	SER
2	14	45	ASN
2	14	55	ASP
2	14	58	HIS
2	14	94	ASP
2	14	110	ASP
2	14	114	TYR
2	15	7	ASN
2	15	20	SER
2	15	28	ASN
2	15	30	LYS
2	15	36	ILE
2	15	53	ASN
2	15	105	ASN
2	15	110	ASP
2	16	102	TYR
2	17	45	ASN
2	19	11	SER
2	19	20	SER
2	19	113	GLN
2	19	124	TYR
2	20	21	ARG
2	20	24	LYS
2	20	94	ASP
2	21	7	ASN
2	21	40	PRO
2	21	53	ASN
2	21	57	SER
2	21	94	ASP
2	21	105	ASN
2	22	58	HIS
2	22	90	MET
2	22	93	TYR
2	23	21	ARG
2	23	52	GLU
2	23	110	ASP
2	23	123	LYS
2	24	24	LYS
2	24	98	SER
3	a	9	GLU
3	a	16	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	a	48	TYR
3	a	61	ARG
3	a	77	ASP
3	a	136	SER
3	a	165	MET
3	a	257	ASP
3	a	283	CYS
3	a	314	GLU
3	a	387	GLN
3	a	413	LYS
3	a	507	LEU
3	a	541	LYS
3	a	557	PHE
4	y	94	ASP
4	y	112	GLU
4	y	139	SER
4	y	140	PHE
3	b	165	MET
3	b	166	ASP
3	b	178	SER
3	b	192	ASP
3	b	250	ASP
3	b	270	GLN
3	b	279	SER
3	b	283	CYS
3	b	354	GLU
3	b	410	SER
3	b	470	ASP
3	b	513	ARG
3	b	541	LYS
3	b	560	LEU
4	m	8	ASP
4	m	22	ASP
4	m	32	SER
4	m	112	GLU
4	m	121	SER
4	m	136	SER
3	c	36	SER
3	c	43	ASP
3	c	74	ASN
3	c	89	ASP
3	c	190	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	c	258	LEU
3	c	269	ARG
3	c	413	LYS
3	c	509	ASP
3	c	549	TYR
3	c	560	LEU
3	c	561	ASP
3	c	569	ARG
4	n	1	MET
4	n	69	GLU
4	n	73	HIS
4	n	84	PHE
4	n	140	PHE
4	n	146	TRP
3	d	7	ARG
3	d	140	ASN
3	d	165	MET
3	d	179	MET
3	d	187	PHE
3	d	200	SER
3	d	346	LYS
3	d	371	TYR
3	d	459	ARG
3	d	466	SER
3	d	477	ASN
3	d	507	LEU
4	o	27	ASP
4	o	77	SER
4	o	84	PHE
3	e	7	ARG
3	e	36	SER
3	e	44	TRP
3	e	48	TYR
3	e	74	ASN
3	e	128	LEU
3	e	136	SER
3	e	192	ASP
3	e	205	ASN
3	e	253	ASP
3	e	270	GLN
3	e	273	ARG
3	e	316	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	e	376	ARG
3	e	379	GLU
3	e	470	ASP
3	e	477	ASN
3	e	507	LEU
3	e	560	LEU
4	p	27	ASP
4	p	52	LYS
4	p	125	ARG
3	l	7	ARG
3	l	31	ASN
3	l	44	TRP
3	l	58	ASP
3	l	145	ARG
3	l	186	ASP
3	l	192	ASP
3	l	200	SER
3	l	211	TRP
3	l	218	GLN
3	l	273	ARG
3	l	283	CYS
3	l	371	TYR
3	l	387	GLN
3	l	459	ARG
3	l	519	ASP
3	l	560	LEU
3	l	567	MET
4	q	44	MET
4	q	77	SER
4	q	84	PHE
4	q	125	ARG
3	f	36	SER
3	f	37	ARG
3	f	58	ASP
3	f	128	LEU
3	f	162	SER
3	f	165	MET
3	f	273	ARG
3	f	291	GLN
3	f	378	ASP
3	f	404	MET
3	f	470	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	f	473	ASP
3	f	476	ARG
3	f	549	TYR
3	k	7	ARG
3	k	39	SER
3	k	42	ASP
3	k	134	ASP
3	k	171	ARG
3	k	192	ASP
3	k	197	ASP
3	k	211	TRP
3	k	250	ASP
3	k	273	ARG
3	k	371	TYR
3	k	376	ARG
3	k	450	GLN
3	k	470	ASP
3	k	498	ASP
3	k	507	LEU
3	k	560	LEU
3	k	566	GLU
4	s	8	ASP
4	s	39	ASP
4	s	72	ASP
4	s	77	SER
4	s	84	PHE
4	s	94	ASP
4	s	125	ARG
4	s	130	SER
3	i	7	ARG
3	i	61	ARG
3	i	77	ASP
3	i	128	LEU
3	i	270	GLN
3	i	283	CYS
3	i	290	LYS
3	i	371	TYR
3	i	383	ASP
3	i	466	SER
3	i	493	MET
3	i	507	LEU
3	i	560	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	t	44	MET
4	t	69	GLU
4	t	121	SER
4	t	136	SER
3	j	39	SER
3	j	56	GLN
3	j	89	ASP
3	j	116	ARG
3	j	128	LEU
3	j	134	ASP
3	j	171	ARG
3	j	247	PHE
3	j	253	ASP
3	j	257	ASP
3	j	258	LEU
3	j	273	ARG
3	j	290	LYS
3	j	314	GLU
3	j	396	GLU
3	j	473	ASP
3	j	507	LEU
4	u	22	ASP
4	u	26	THR
4	u	39	ASP
4	u	69	GLU
4	u	73	HIS
4	u	140	PHE
3	h	7	ARG
3	h	61	ARG
3	h	77	ASP
3	h	95	MET
3	h	197	ASP
3	h	203	ASN
3	h	206	ASP
3	h	212	LEU
3	h	215	ASP
3	h	224	GLU
3	h	270	GLN
3	h	290	LYS
3	h	367	ASP
3	h	371	TYR
3	h	381	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	h	406	GLU
3	h	413	LYS
3	h	513	ARG
3	h	550	GLN
4	v	1	MET
4	v	44	MET
4	v	121	SER
4	v	150	PRO
3	g	10	SER
3	g	36	SER
3	g	56	GLN
3	g	61	ARG
3	g	89	ASP
3	g	101	ASP
3	g	135	GLN
3	g	247	PHE
3	g	273	ARG
3	g	292	LEU
3	g	316	TYR
3	g	332	MET
3	g	367	ASP
3	g	387	GLN
3	g	476	ARG
3	g	507	LEU
3	g	561	ASP
4	x	65	ASN
4	x	72	ASP
4	x	84	PHE
4	x	121	SER
5	E	3	LEU
5	E	41	GLN
5	E	42	ARG
5	E	45	ASN
5	E	55	SER
5	E	86	PHE
5	E	92	ASP
5	E	106	SER
5	E	113	ASN
5	E	140	ASN
5	E	147	PHE
5	E	153	GLU
5	E	163	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	E	184	LYS
5	E	185	ARG
5	E	186	ASP
5	E	244	ASP
5	E	280	PHE
5	E	302	ASP
5	E	310	PRO
5	E	341	ASN
5	E	354	TRP
5	E	405	CYS
5	C	5	GLU
5	C	42	ARG
5	C	126	MET
5	C	210	ASP
5	C	268	LYS
5	C	280	PHE
5	C	350	THR
5	C	354	TRP
5	C	377	LYS
5	A	40	MET
5	A	118	LYS
5	A	140	ASN
5	A	147	PHE
5	A	185	ARG
5	A	198	ASP
5	A	214	SER
5	A	235	SER
5	A	280	PHE
5	A	302	ASP
5	A	336	ASP
5	A	347	ASP
5	A	354	TRP
5	G	86	PHE
5	G	103	ARG
5	G	135	ASP
5	G	147	PHE
5	G	268	LYS
5	G	280	PHE
5	G	317	ASP
5	G	354	TRP
5	G	364	GLN
5	G	369	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	G	405	CYS
5	I	106	SER
5	I	231	SER
5	I	268	LYS
5	I	280	PHE
5	I	292	ASP
5	I	347	ASP
5	I	354	TRP
5	D	11	LEU
5	D	90	ARG
5	D	93	ASP
5	D	147	PHE
5	D	152	GLU
5	D	162	ARG
5	D	203	ARG
5	D	235	SER
5	D	243	LEU
5	D	317	ASP
5	D	341	ASN
5	D	354	TRP
5	D	357	ASP
5	B	14	ASP
5	B	15	GLU
5	B	74	ASN
5	B	79	MET
5	B	146	ASN
5	B	186	ASP
5	B	245	ASN
5	B	280	PHE
5	B	336	ASP
5	B	338	MET
5	B	341	ASN
5	B	354	TRP
5	B	376	MET
5	B	382	SER
5	F	10	THR
5	F	13	VAL
5	F	14	ASP
5	F	29	LYS
5	F	40	MET
5	F	79	MET
5	F	86	PHE

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Mol	Chain	Res	Type
5	F	93	ASP
5	F	95	ARG
5	F	101	ARG
5	F	122	MET
5	F	128	SER
5	F	147	PHE
5	F	234	GLN
5	F	280	PHE
5	F	354	TRP
5	F	399	SER
5	H	16	ILE
5	H	39	SER
5	H	84	ASN
5	H	116	GLU
5	H	204	GLN
5	H	220	LEU
5	H	280	PHE
5	H	354	TRP
5	J	11	LEU
5	J	15	GLU
5	J	146	ASN
5	J	269	ARG
5	J	280	PHE
5	J	317	ASP
5	J	325	ARG
5	J	354	TRP
5	J	356	ASP
5	J	380	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (33) such sidechains are listed below:

Mol	Chain	Res	Type
1	1	126	ASN
1	2	126	ASN
1	4	370	GLN
1	5	126	ASN
1	5	311	HIS
1	6	104	GLN
2	7	46	GLN
2	8	46	GLN
2	8	99	GLN
2	9	58	HIS

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Mol	Chain	Res	Type
2	11	45	ASN
2	16	46	GLN
2	18	86	GLN
2	19	46	GLN
2	23	45	ASN
3	a	172	HIS
3	a	218	GLN
4	y	147	HIS
3	c	40	GLN
3	f	47	GLN
3	i	203	ASN
3	i	218	GLN
4	x	65	ASN
5	E	364	GLN
5	C	7	GLN
5	C	41	GLN
5	A	7	GLN
5	I	74	ASN
5	I	389	ASN
5	B	74	ASN
5	B	113	ASN
5	B	389	ASN
5	F	171	ASN

### 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 monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

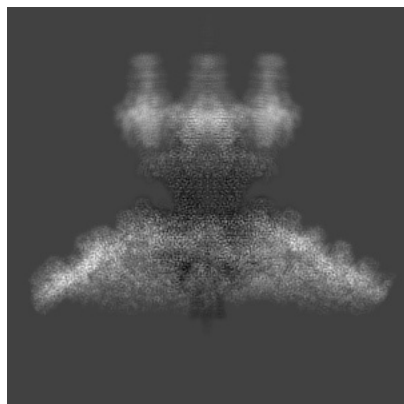
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-41792. These allow visual inspection of the internal detail of the map and identification of artifacts.

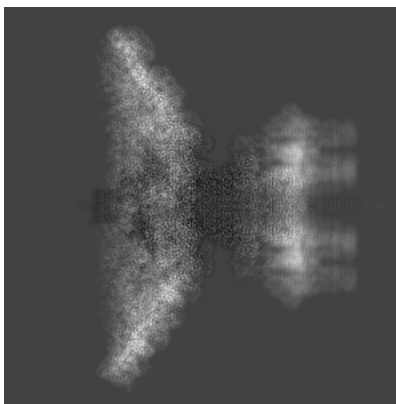
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

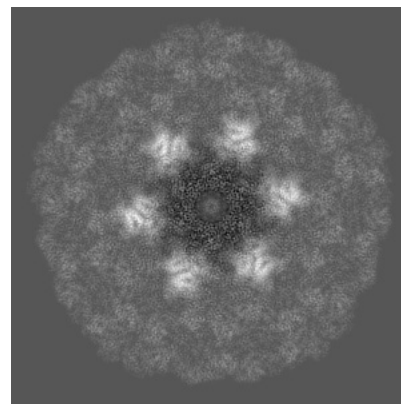
#### 6.1.1 Primary map



X

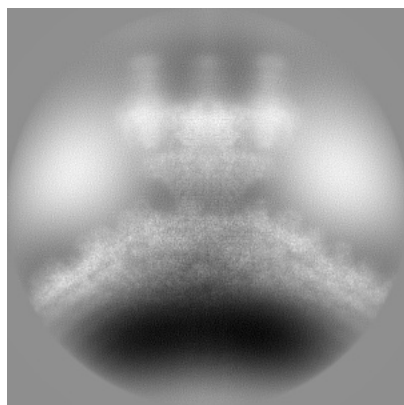


Y

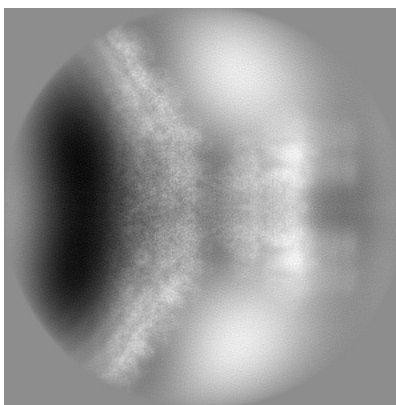


Z

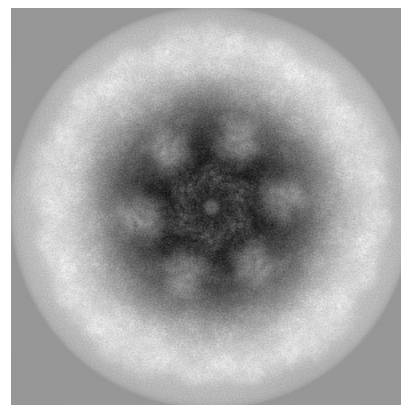
#### 6.1.2 Raw map



X



Y



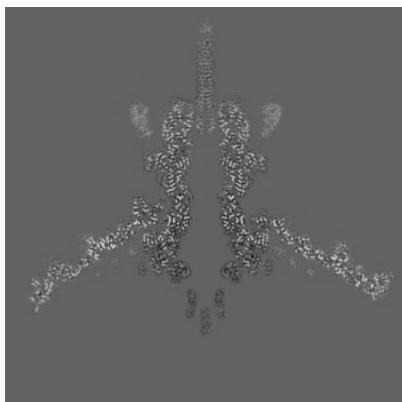
Z

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

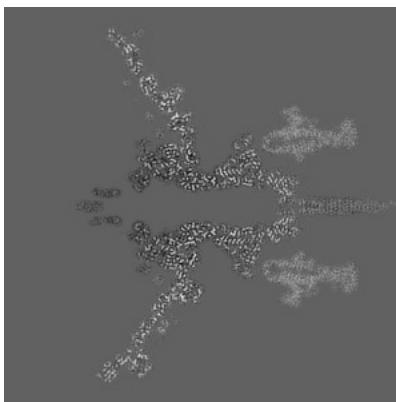


## 6.2 Central slices [i](#)

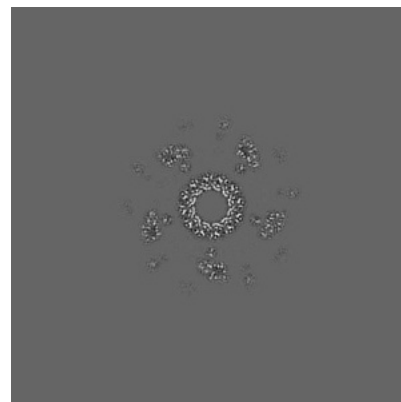
### 6.2.1 Primary map



X Index: 220

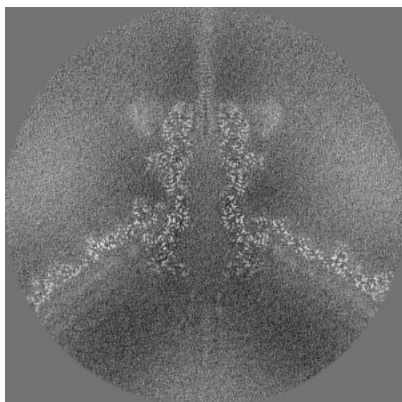


Y Index: 220

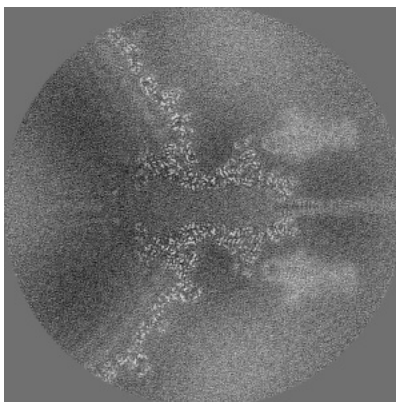


Z Index: 220

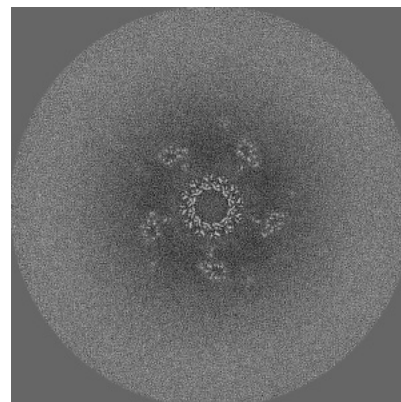
### 6.2.2 Raw map



X Index: 220



Y Index: 220

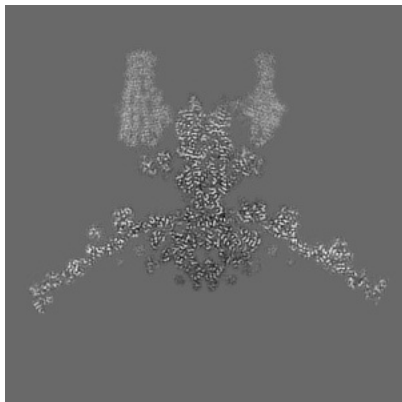


Z Index: 220

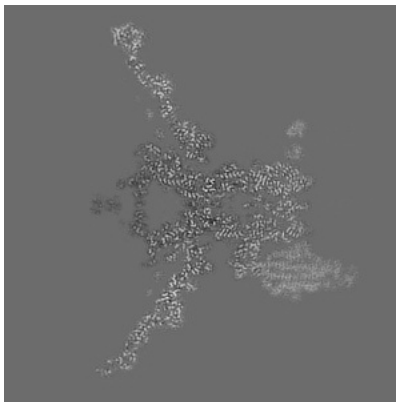
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

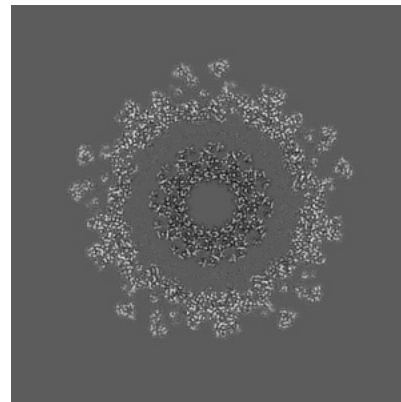
### 6.3.1 Primary map



X Index: 188

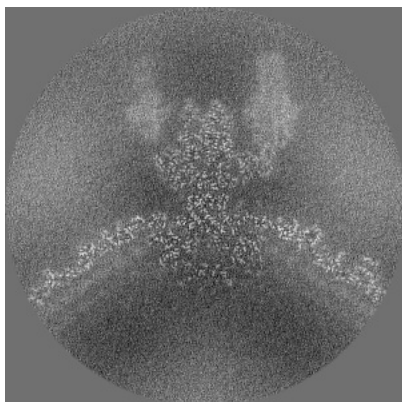


Y Index: 202

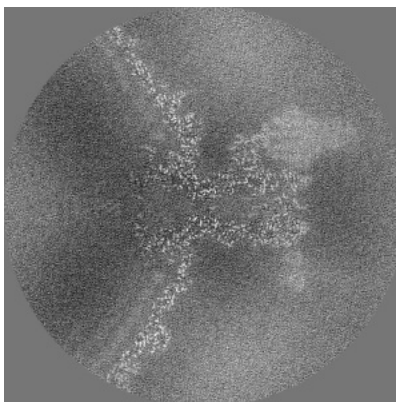


Z Index: 177

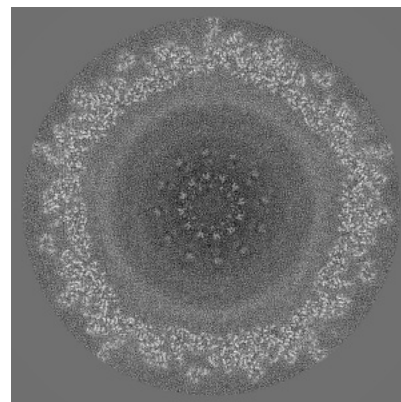
### 6.3.2 Raw map



X Index: 247



Y Index: 236

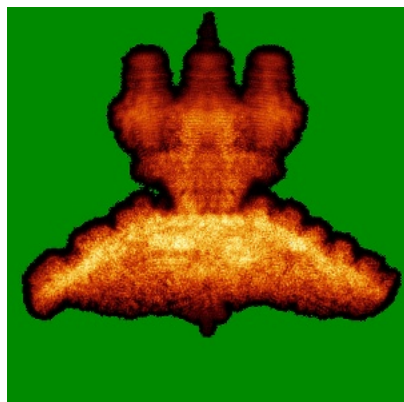


Z Index: 144

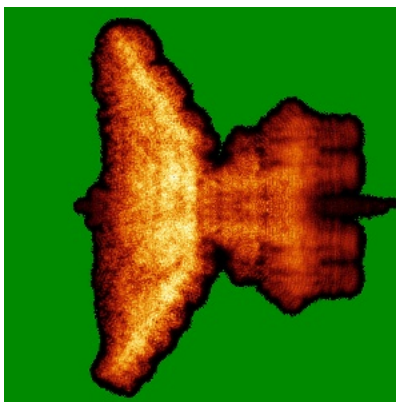
The images above show the largest variance slices of the map in three orthogonal directions.

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

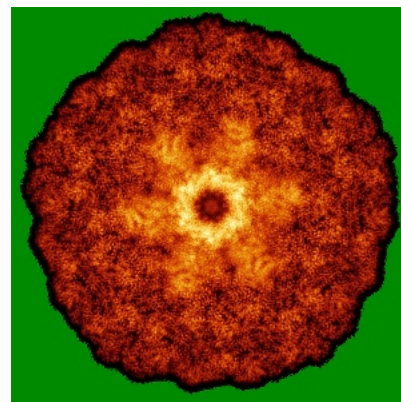
### 6.4.1 Primary map



X

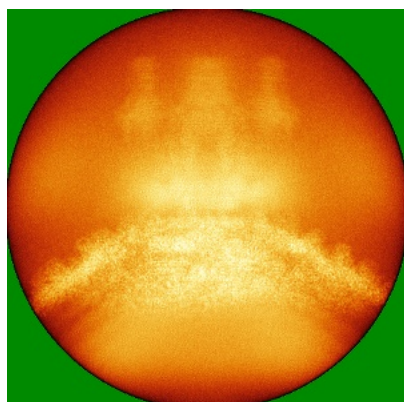


Y

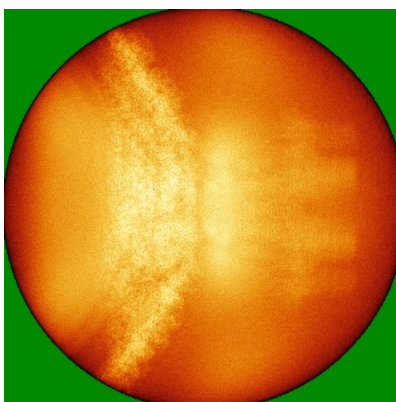


Z

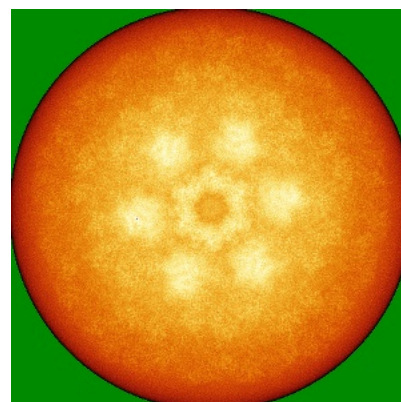
### 6.4.2 Raw map



X



Y

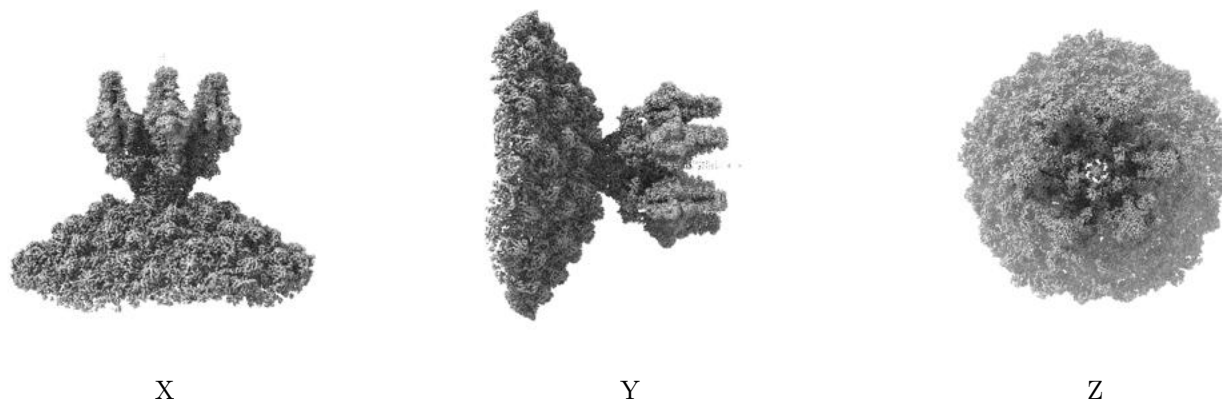


Z

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

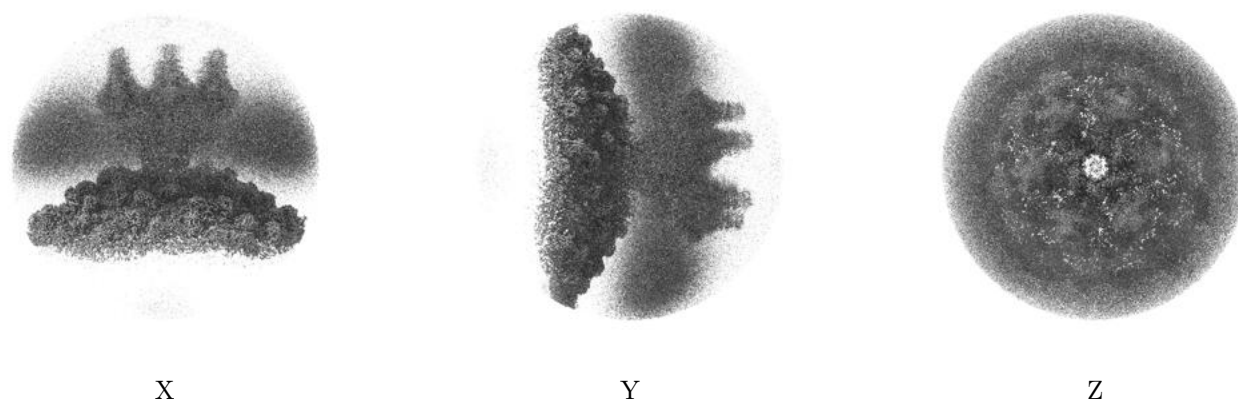
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 3.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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



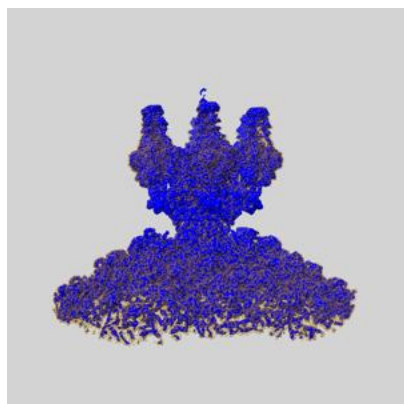
## 6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

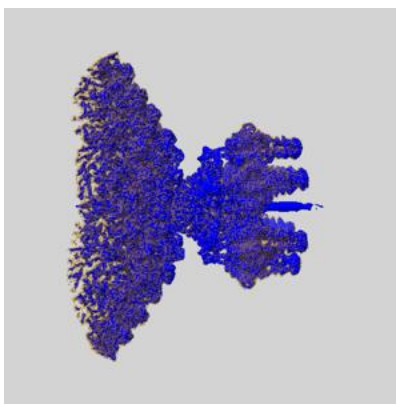
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

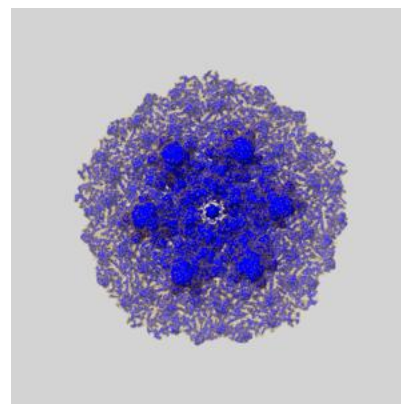
### 6.6.1 emd\_41792\_msk\_1.map [i](#)



X



Y

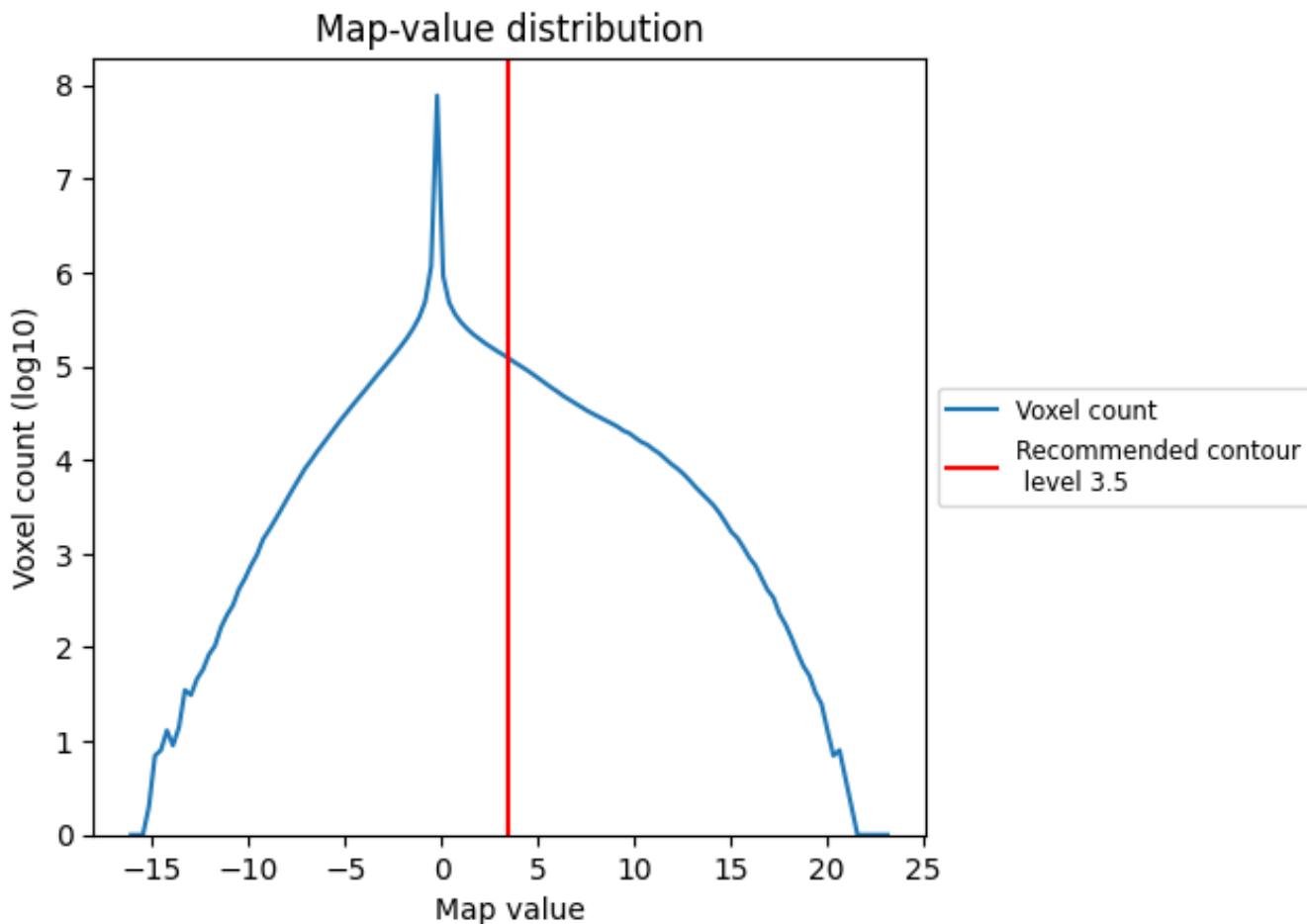


Z

## 7 Map analysis [i](#)

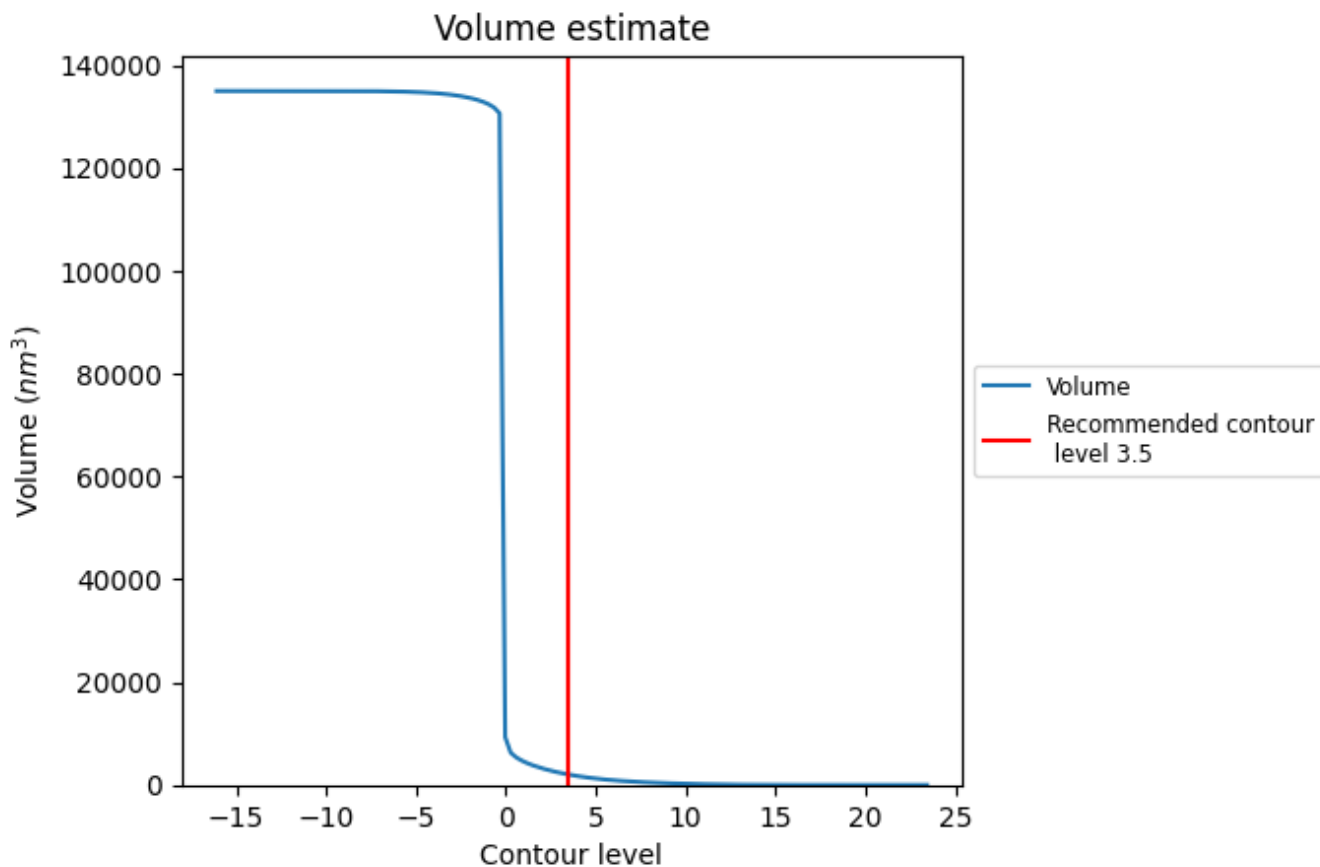
This section contains the results of statistical analysis of the map.

### 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.

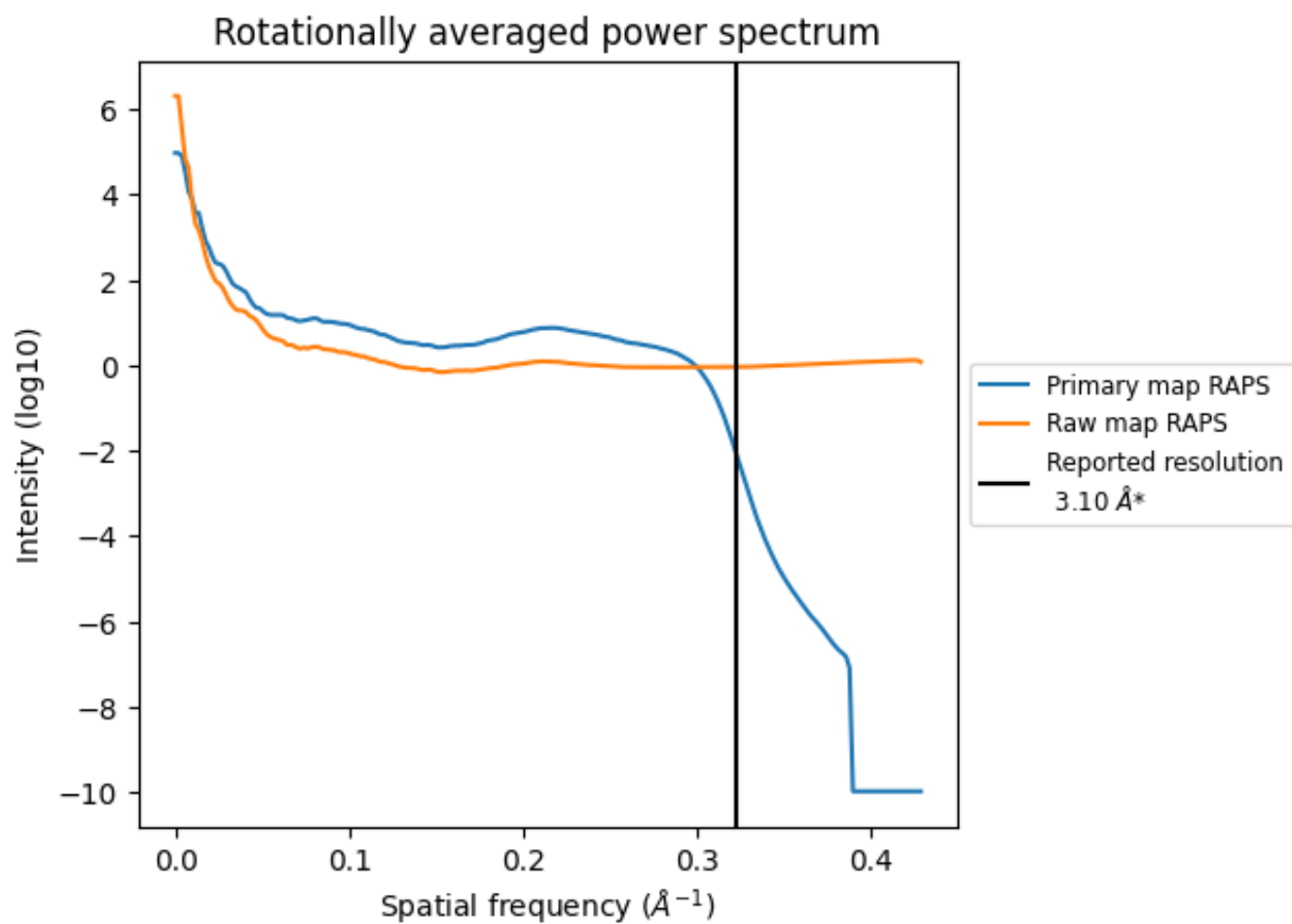
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2023 nm<sup>3</sup>; this corresponds to an approximate mass of 1827 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



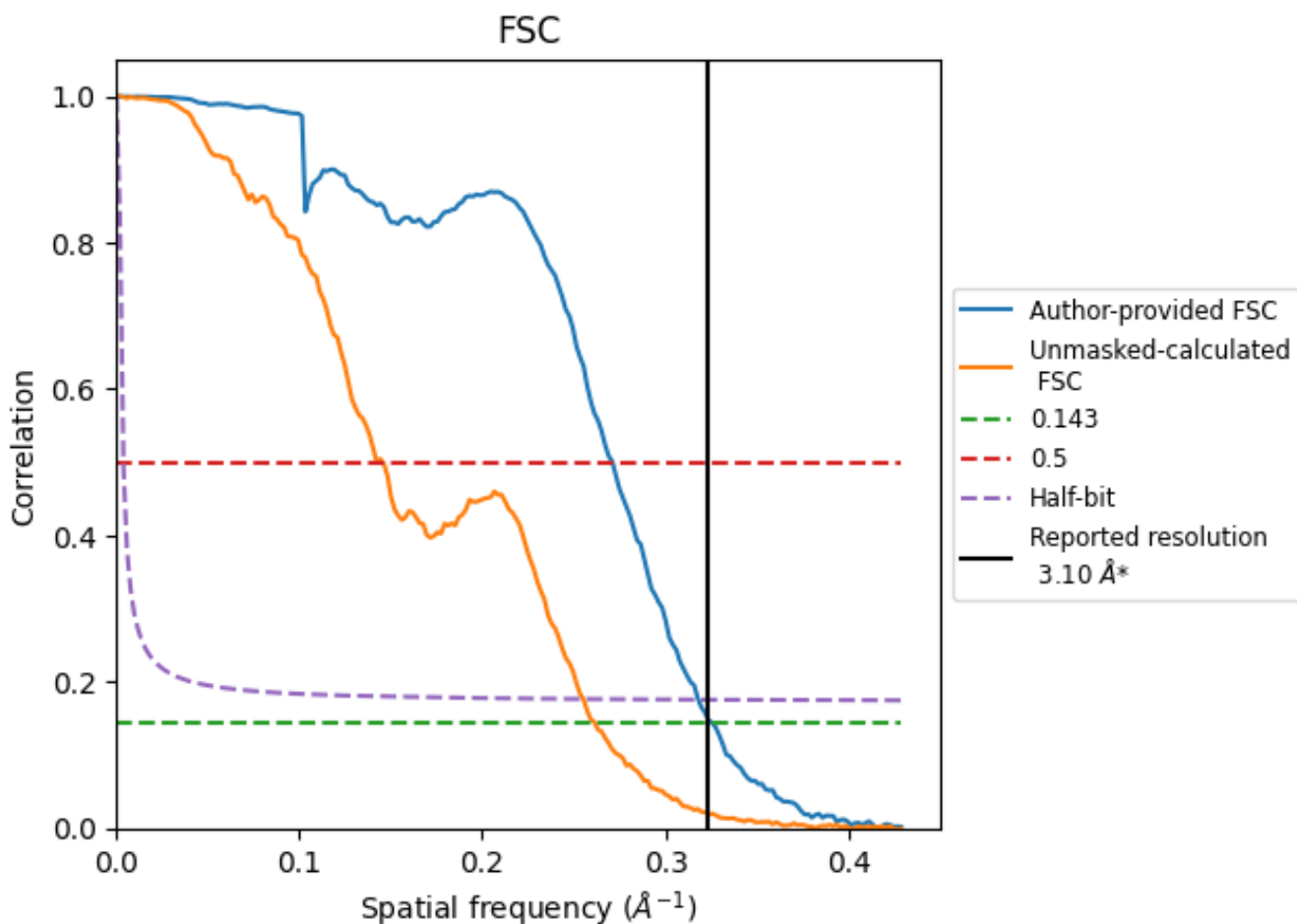
\*Reported resolution corresponds to spatial frequency of 0.323 Å<sup>-1</sup>



## 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 0.323 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

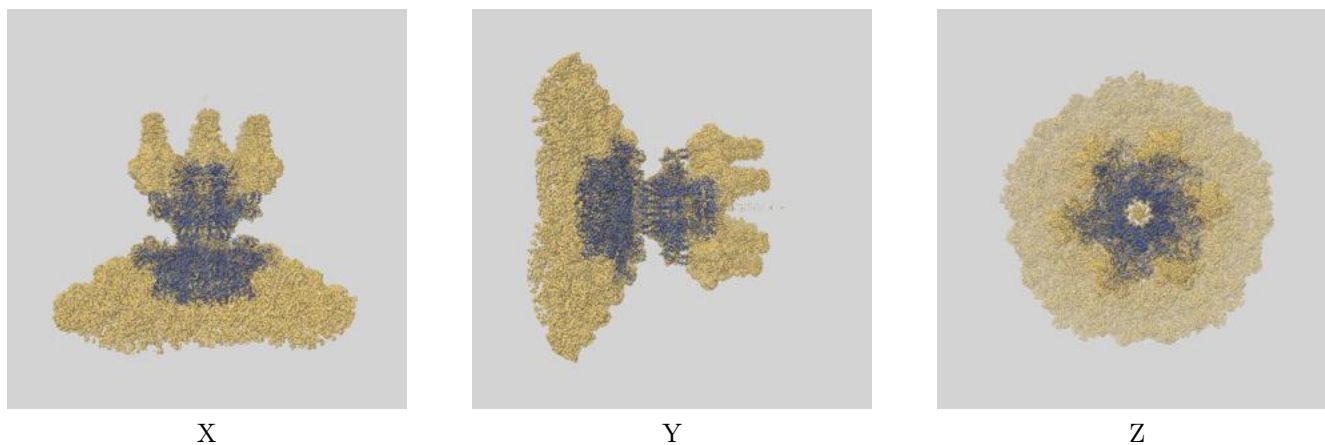
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.10	-	-
Author-provided FSC curve	3.07	3.69	3.14
Unmasked-calculated*	3.82	7.03	3.92

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.82 differs from the reported value 3.1 by more than 10 %

## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-41792 and PDB model 8U11. Per-residue inclusion information can be found in section 3 on page 9.

### 9.1 Map-model overlay [i](#)

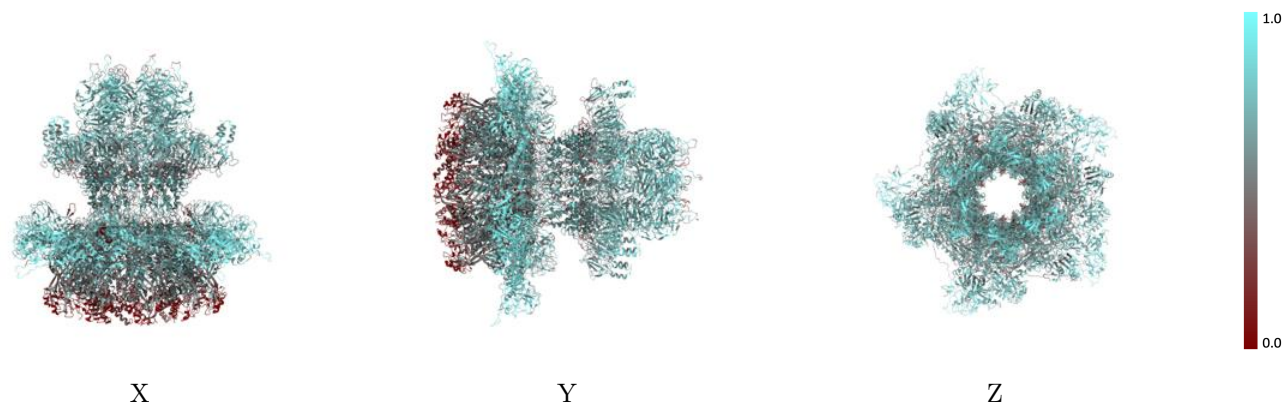


The images above show the 3D surface view of the map at the recommended contour level 3.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

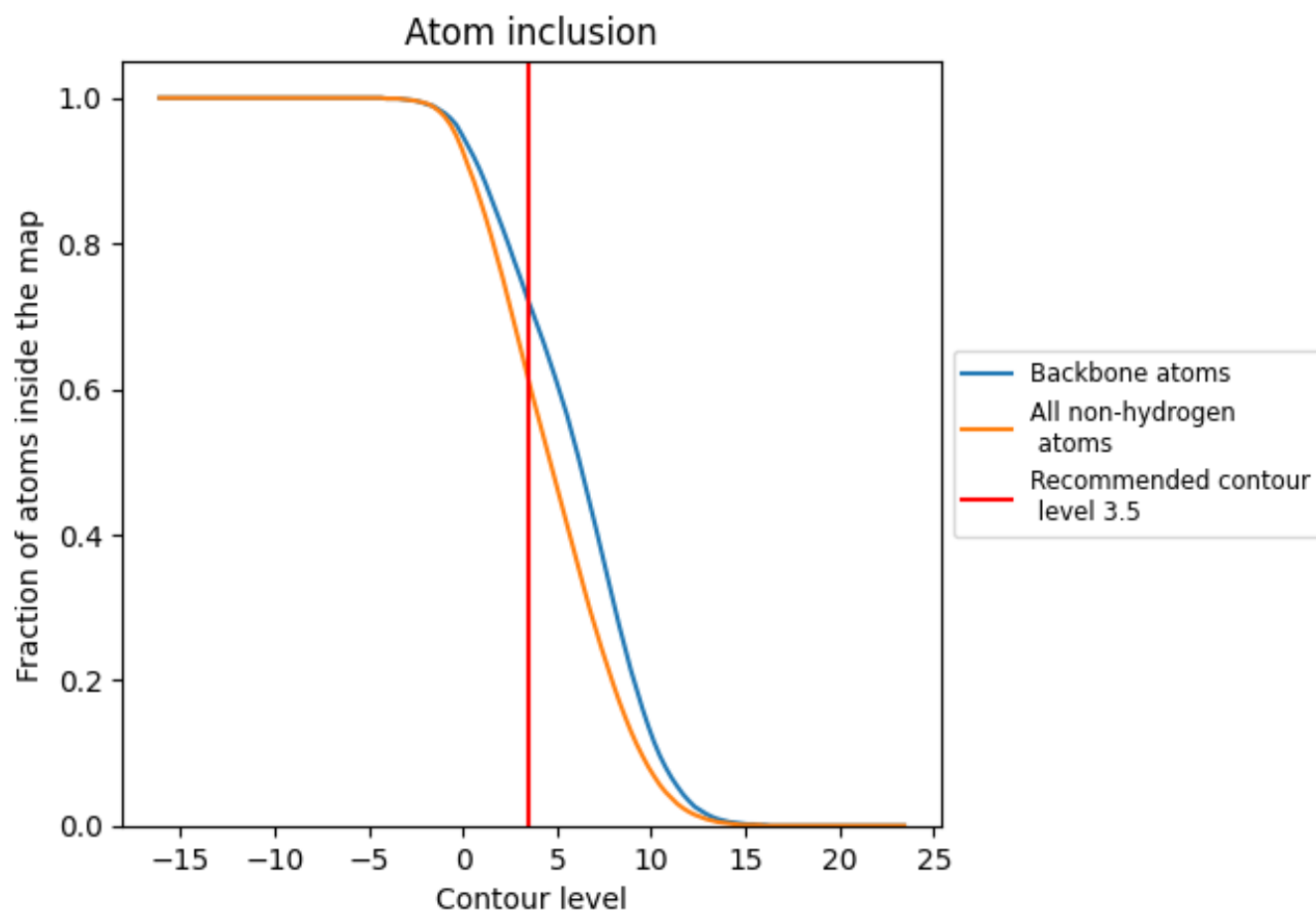
This section was not generated.

## 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 (3.5).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 72% of all backbone atoms, 61% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (3.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.6110
1	0.7130
10	0.6170
11	0.6600
12	0.6840
13	0.6150
14	0.6530
15	0.6830
16	0.6110
17	0.6710
18	0.6670
19	0.6320
2	0.6970
20	0.6600
21	0.7070
22	0.6040
23	0.6540
24	0.6910
3	0.7000
4	0.7100
5	0.7080
6	0.7110
7	0.6230
8	0.6570
9	0.6820
A	0.7100
B	0.7790
C	0.7020
D	0.7470
E	0.6770
F	0.7730
G	0.6870
H	0.7680
I	0.7040
J	0.7510



*Continued on next page...*

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Chain	Atom inclusion
a	0.4830
b	0.4930
c	0.5000
d	0.4880
e	0.4710
f	0.4900
g	0.4780
h	0.4800
i	0.4930
j	0.4770
k	0.4750
l	0.4620
m	0.5620
n	0.6170
o	0.6010
p	0.6320
q	0.6240
r	0.5800
s	0.6340
t	0.6250
u	0.6030
v	0.6120
x	0.6450
y	0.6320