



wwPDB EM Validation Summary Report ⓘ

Nov 15, 2022 – 11:58 PM EST

PDB ID : 6X6L
EMDB ID : EMD-22077
Title : Cryo-EM Structure of CagX and CagY within the dCag3 Helicobacter pylori PR
Authors : Sheedlo, M.J.; Chung, J.M.; Sawhney, N.; Durie, C.L.; Cover, T.L.; Ohi, M.D.; Lacy, D.B.
Deposited on : 2020-05-28
Resolution : 3.00 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

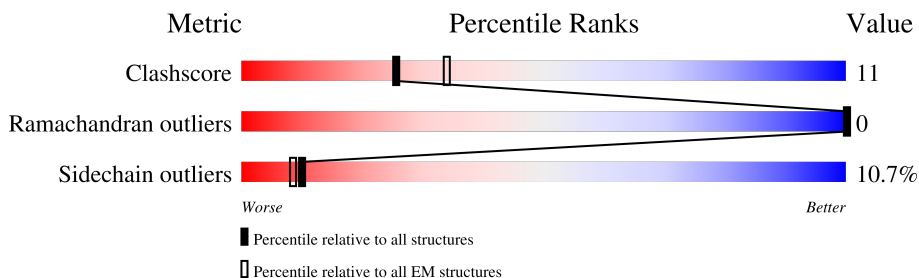
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.00 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.




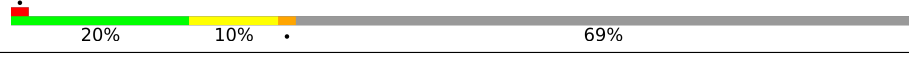



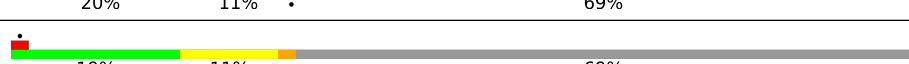
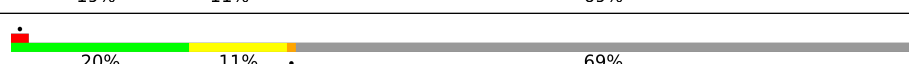

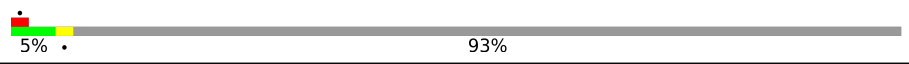
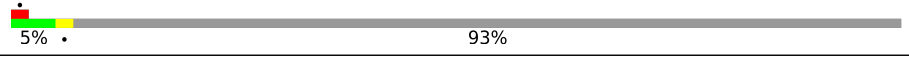
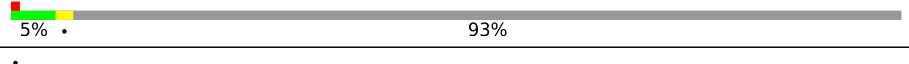
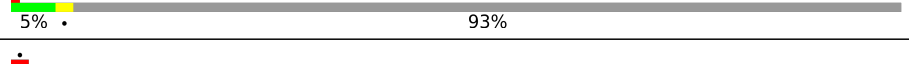
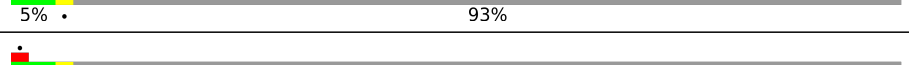
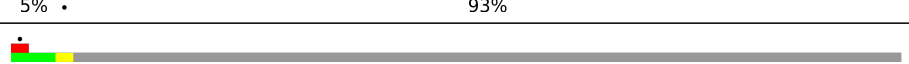
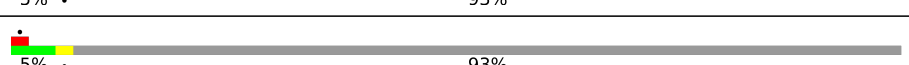
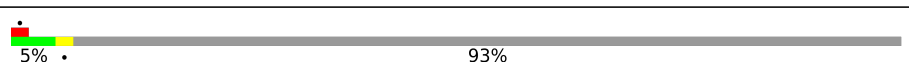
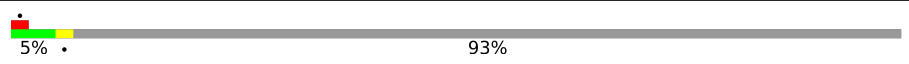
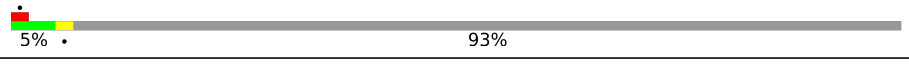
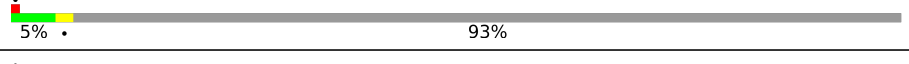
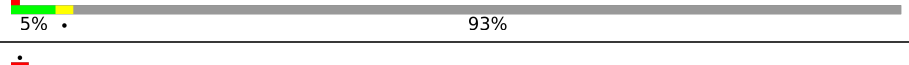
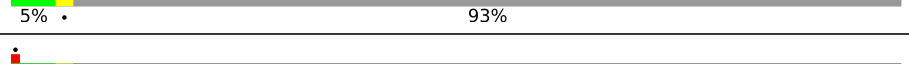
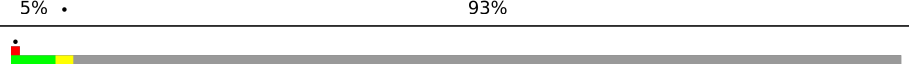
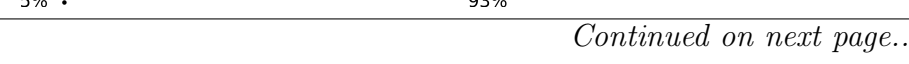


Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	AX	521	 19% 11% 69%
1	BX	521	 20% 11% 69%
1	CX	521	 20% 10% 69%
1	DX	521	 20% 10% 69%
1	EX	521	 20% 10% 69%
1	FX	521	 19% 10% 69%
1	GX	521	 19% 11% 69%
1	HX	521	 20% 11% 69%

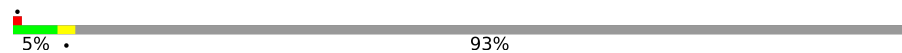
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Mol	Chain	Length	Quality of chain
1	IX	521	 20% 10% 69%
1	JX	521	 20% 10% 69%
1	KX	521	 19% 11% 69%
1	LX	521	 19% 11% 69%
1	MX	521	 21% 10% 69%
1	NX	521	 20% 11% 69%
1	OX	521	 19% 11% 69%
1	PX	521	 20% 11% 69%
1	QX	521	 20% 11% 69%
2	AY	1927	 5% 93%
2	BY	1927	 5% 93%
2	CY	1927	 5% 93%
2	DY	1927	 5% 93%
2	EY	1927	 5% 93%
2	FY	1927	 5% 93%
2	GY	1927	 5% 93%
2	HY	1927	 5% 93%
2	IY	1927	 5% 93%
2	JY	1927	 5% 93%
2	KY	1927	 5% 93%
2	LY	1927	 5% 93%
2	MY	1927	 5% 93%
2	NY	1927	 5% 93%
2	OY	1927	 5% 93%
2	PY	1927	 5% 93%

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Mol	Chain	Length	Quality of chain
2	QY	1927	 5% . 93%

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 40613 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 Cag pathogenicity island protein (Cag8).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	AX	164	1339	858	227	252	2	0	0
1	BX	164	1339	858	227	252	2	0	0
1	CX	164	1339	858	227	252	2	0	0
1	DX	164	1339	858	227	252	2	0	0
1	EX	164	1339	858	227	252	2	0	0
1	FX	164	1339	858	227	252	2	0	0
1	GX	164	1339	858	227	252	2	0	0
1	HX	164	1339	858	227	252	2	0	0
1	IX	164	1339	858	227	252	2	0	0
1	JX	164	1339	858	227	252	2	0	0
1	KX	164	1339	858	227	252	2	0	0
1	LX	164	1339	858	227	252	2	0	0
1	MX	164	1339	858	227	252	2	0	0
1	NX	164	1339	858	227	252	2	0	0
1	OX	164	1339	858	227	252	2	0	0
1	PX	164	1339	858	227	252	2	0	0
1	QX	164	1339	858	227	252	2	0	0

There are 34 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AX	?	-	GLU	deletion	UNP O25263
AX	516	GLU	LEU	conflict	UNP O25263
BX	?	-	GLU	deletion	UNP O25263
BX	516	GLU	LEU	conflict	UNP O25263
CX	?	-	GLU	deletion	UNP O25263
CX	516	GLU	LEU	conflict	UNP O25263
DX	?	-	GLU	deletion	UNP O25263
DX	516	GLU	LEU	conflict	UNP O25263
EX	?	-	GLU	deletion	UNP O25263
EX	516	GLU	LEU	conflict	UNP O25263
FX	?	-	GLU	deletion	UNP O25263
FX	516	GLU	LEU	conflict	UNP O25263
GX	?	-	GLU	deletion	UNP O25263
GX	516	GLU	LEU	conflict	UNP O25263
HX	?	-	GLU	deletion	UNP O25263
HX	516	GLU	LEU	conflict	UNP O25263
IX	?	-	GLU	deletion	UNP O25263
IX	516	GLU	LEU	conflict	UNP O25263
JX	?	-	GLU	deletion	UNP O25263
JX	516	GLU	LEU	conflict	UNP O25263
KX	?	-	GLU	deletion	UNP O25263
KX	516	GLU	LEU	conflict	UNP O25263
LX	?	-	GLU	deletion	UNP O25263
LX	516	GLU	LEU	conflict	UNP O25263
MX	?	-	GLU	deletion	UNP O25263
MX	516	GLU	LEU	conflict	UNP O25263
NX	?	-	GLU	deletion	UNP O25263
NX	516	GLU	LEU	conflict	UNP O25263
OX	?	-	GLU	deletion	UNP O25263
OX	516	GLU	LEU	conflict	UNP O25263
PX	?	-	GLU	deletion	UNP O25263
PX	516	GLU	LEU	conflict	UNP O25263
QX	?	-	GLU	deletion	UNP O25263
QX	516	GLU	LEU	conflict	UNP O25263

- Molecule 2 is a protein called Cag pathogenicity island protein (Cag7).

Mol	Chain	Residues	Atoms				AltConf	Trace	
2	AY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	BY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		

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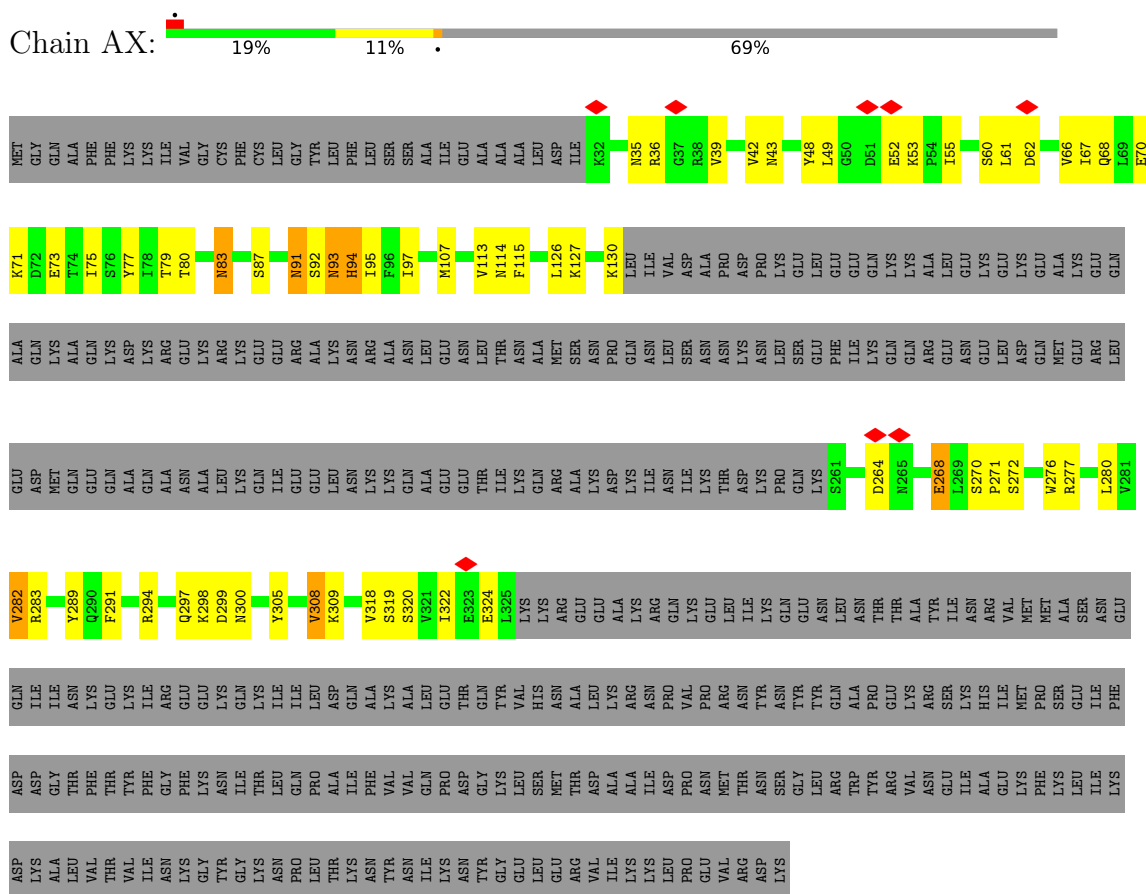
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Mol	Chain	Residues	Atoms					AltConf	Trace
2	CY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	DY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	EY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	FY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	GY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	HY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	IY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	JY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	KY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	LY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	MY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	NY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	OY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	PY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		
2	QY	135	Total	C	N	O	S	0	0
			1050	649	177	220	4		

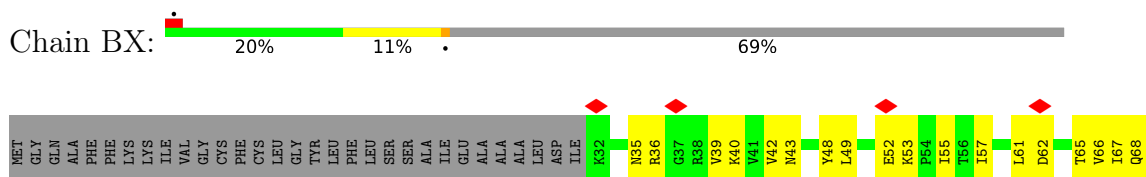
3 Residue-property plots [i](#)

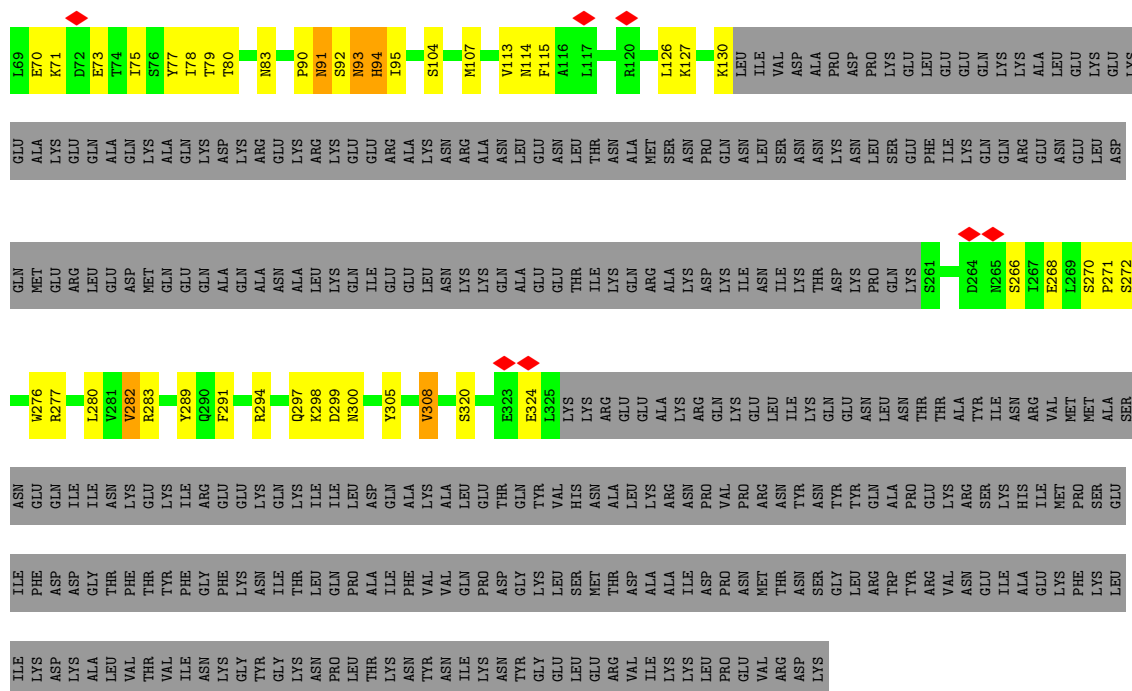
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Cag pathogenicity island protein (Cag8)

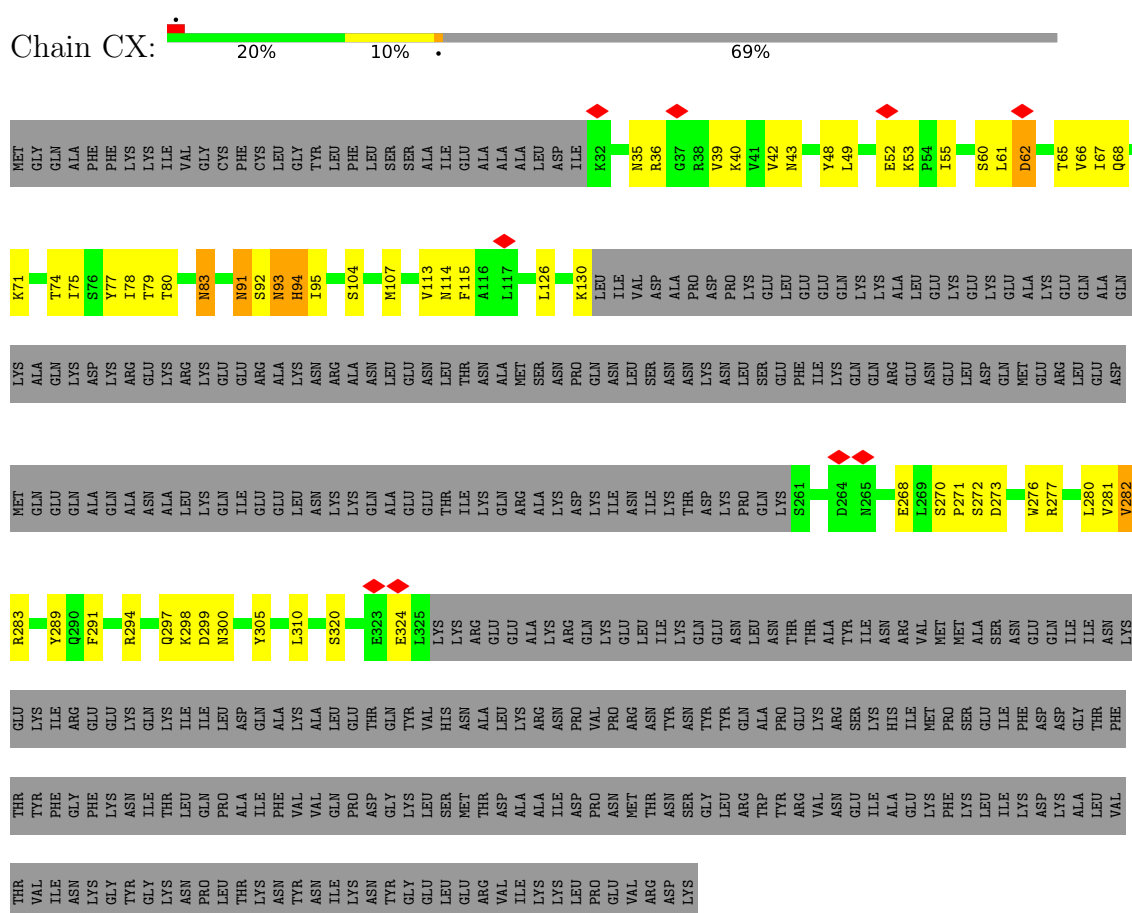


- Molecule 1: Cag pathogenicity island protein (Cag8)



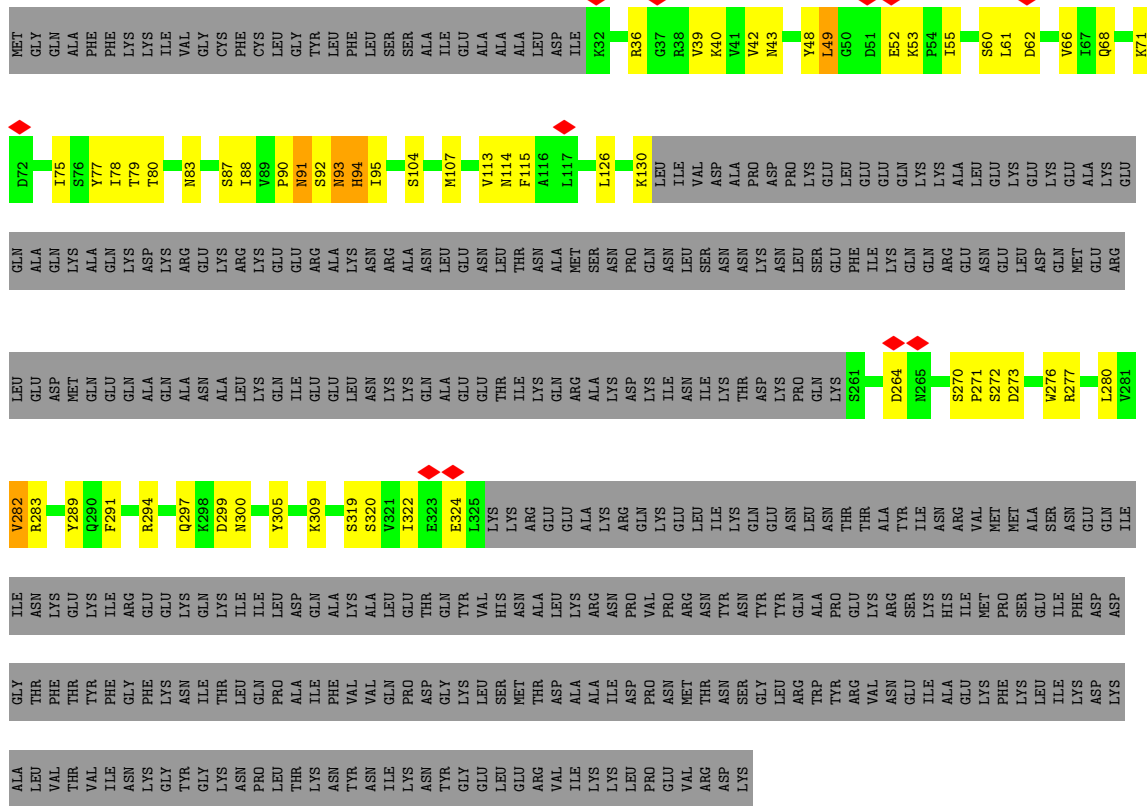


• Molecule 1: Cag pathogenicity island protein (Cag8)



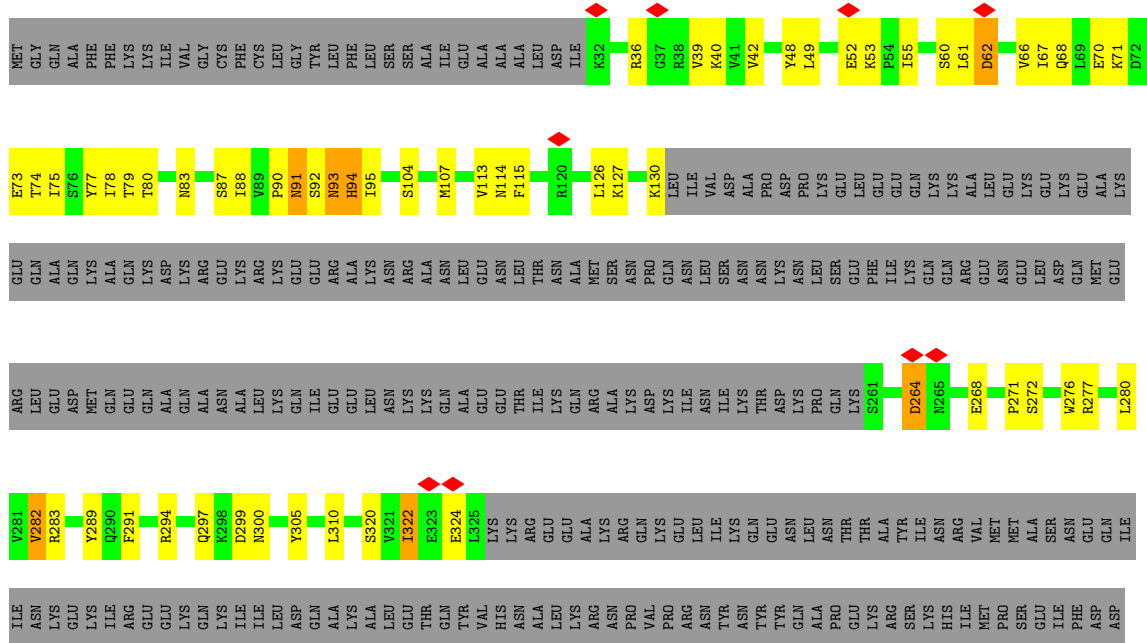
• Molecule 1: Cag pathogenicity island protein (Cag8)

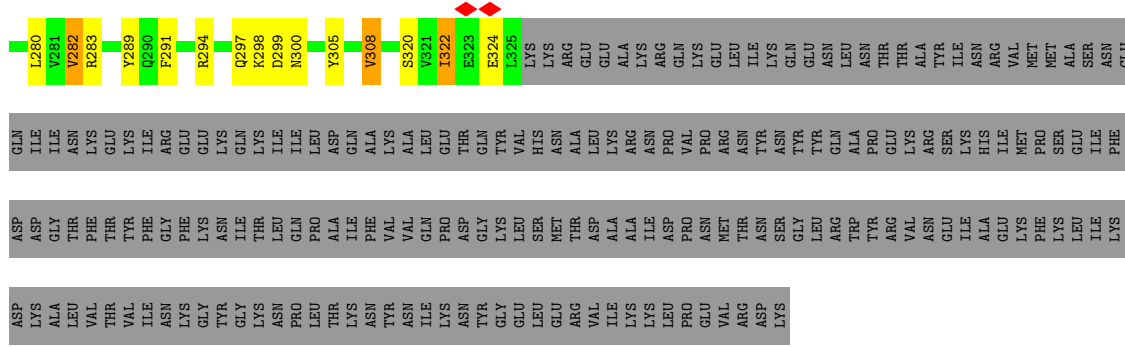
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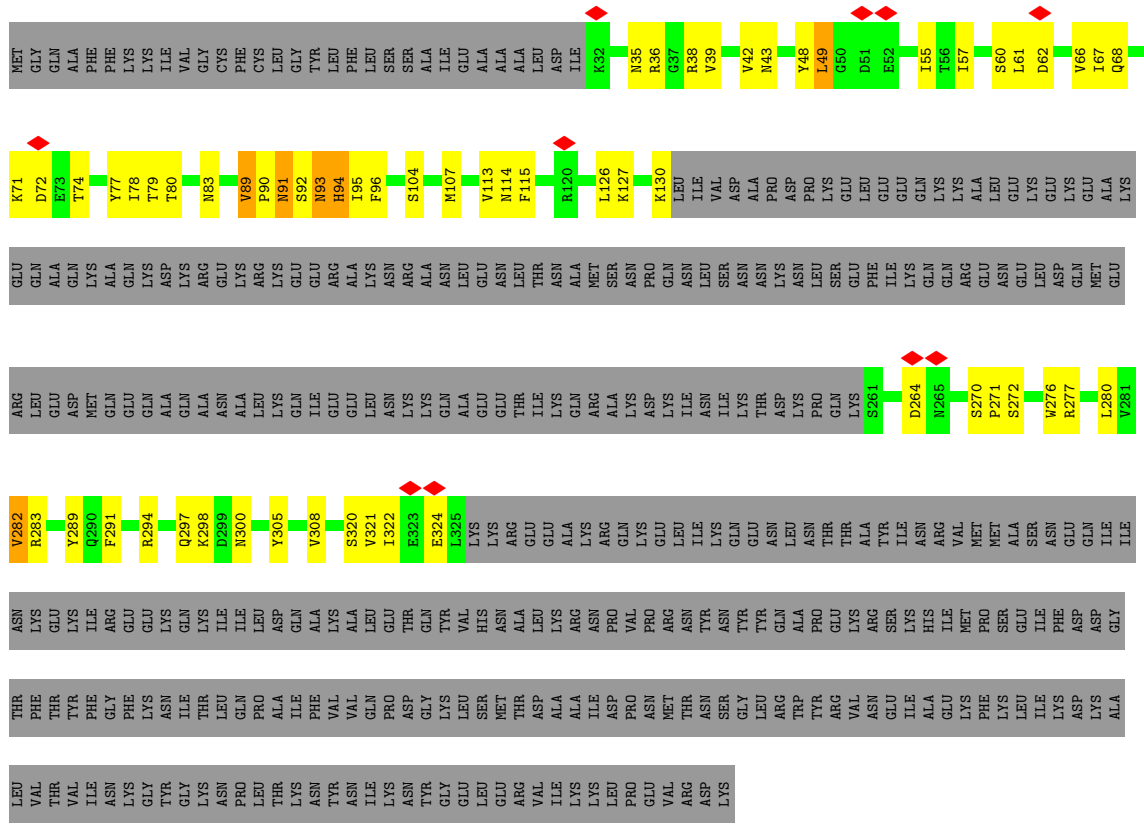
• Molecule 1: Cag pathogenicity island protein (Cag8)

Chain EX:

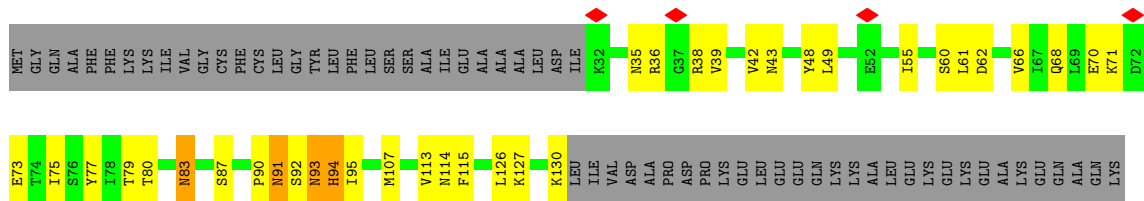


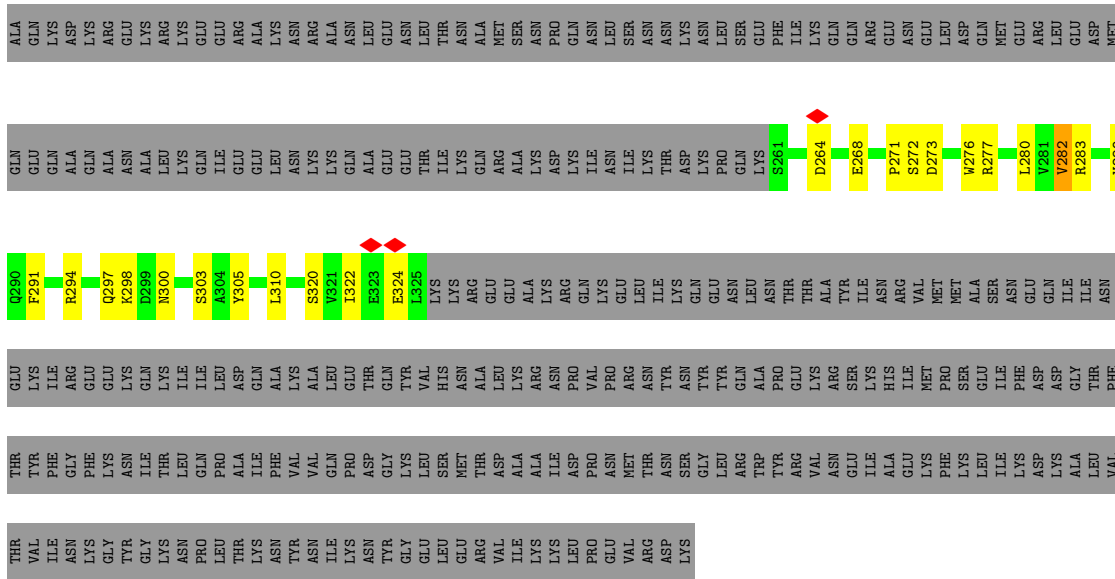


● Molecule 1: Cag pathogenicity island protein (Cag8)

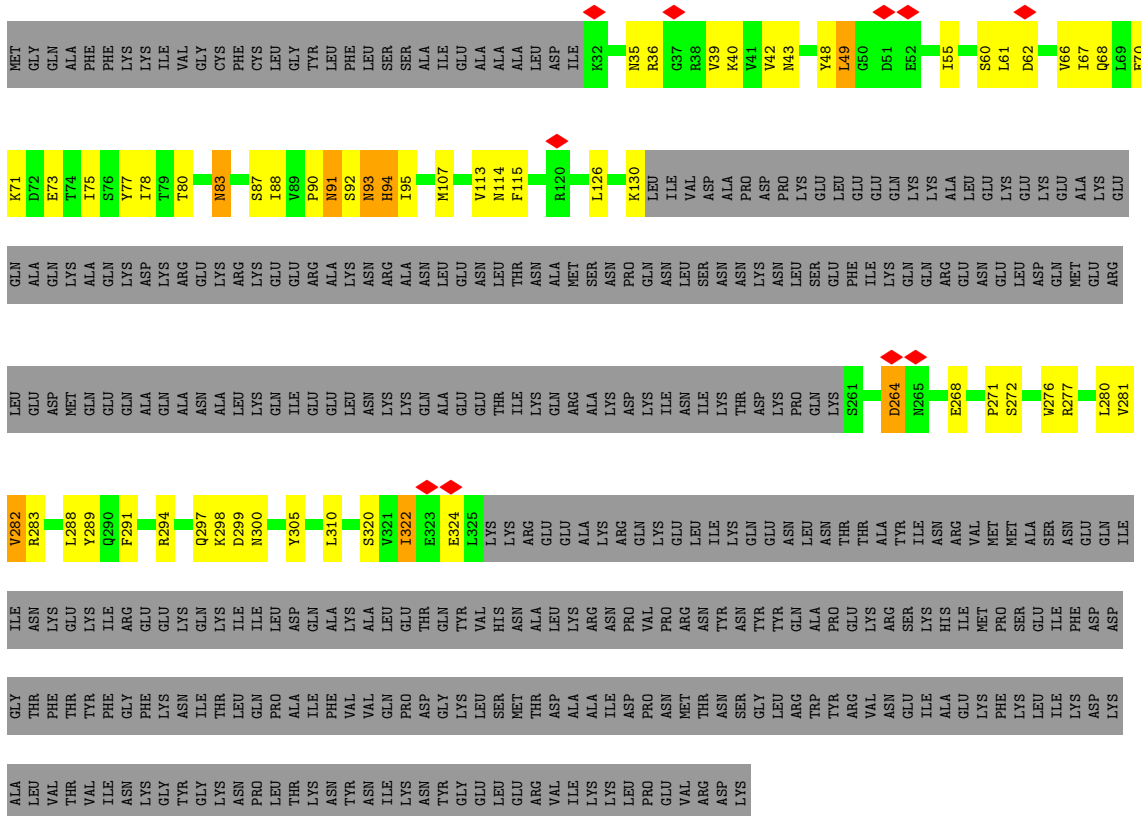


● Molecule 1: Cag pathogenicity island protein (Cag8)



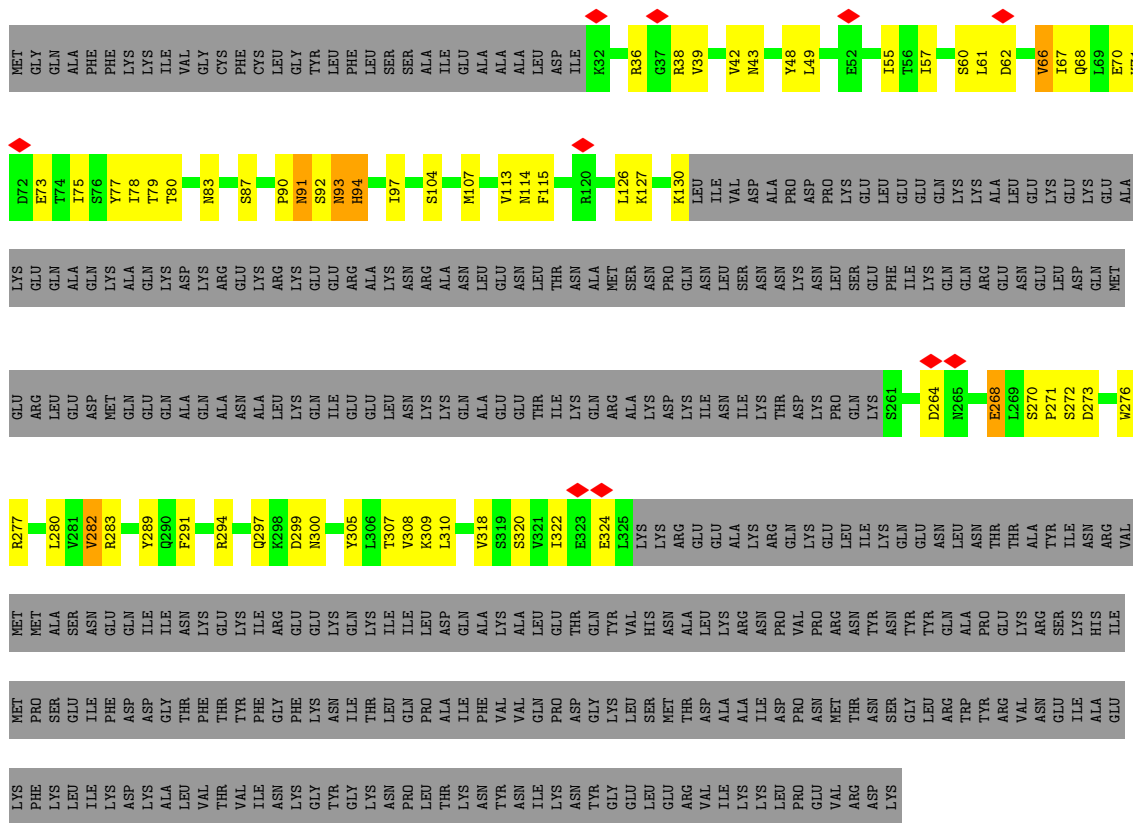


• Molecule 1: Cag pathogenicity island protein (Cag8)

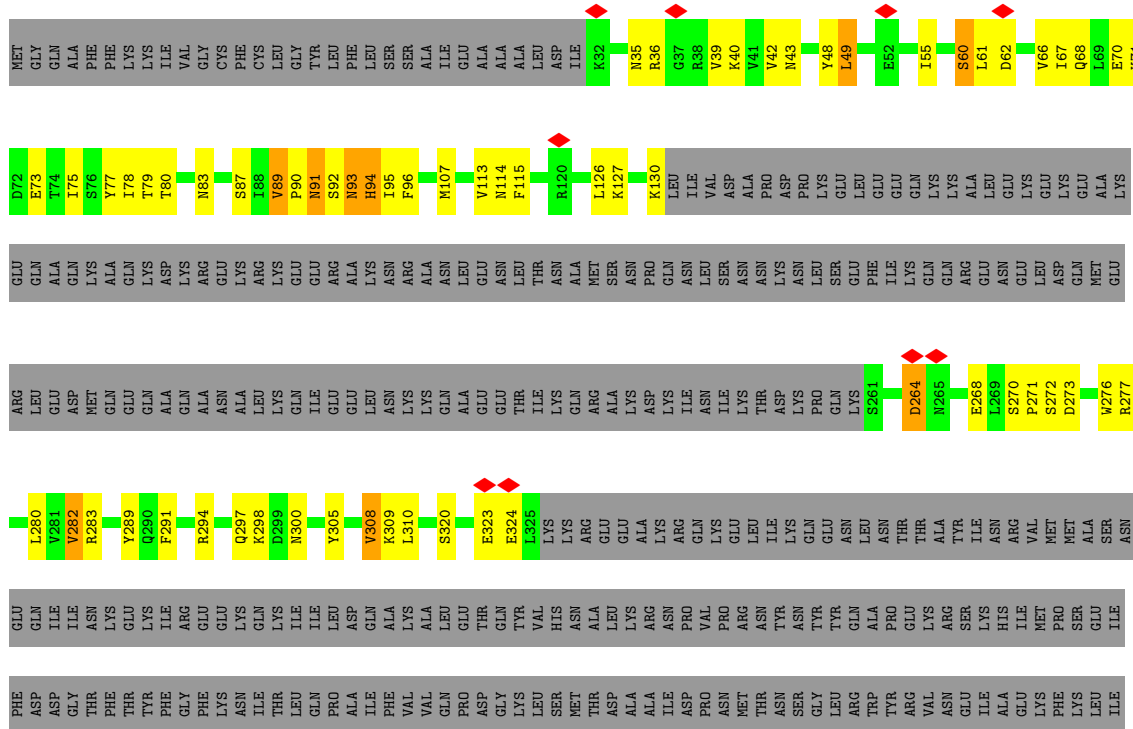


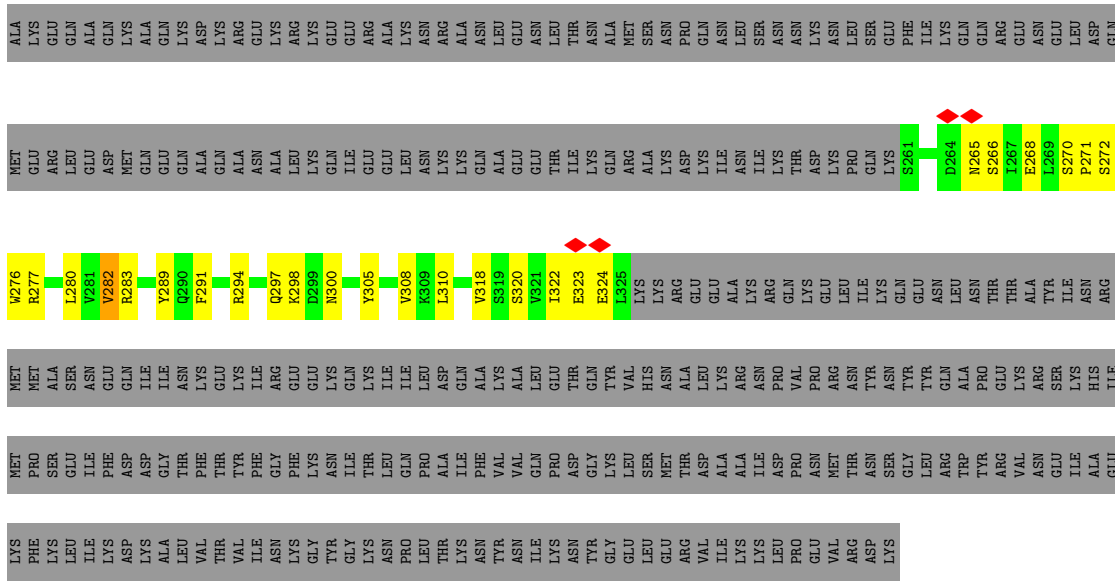
• Molecule 1: Cag pathogenicity island protein (Cag8)



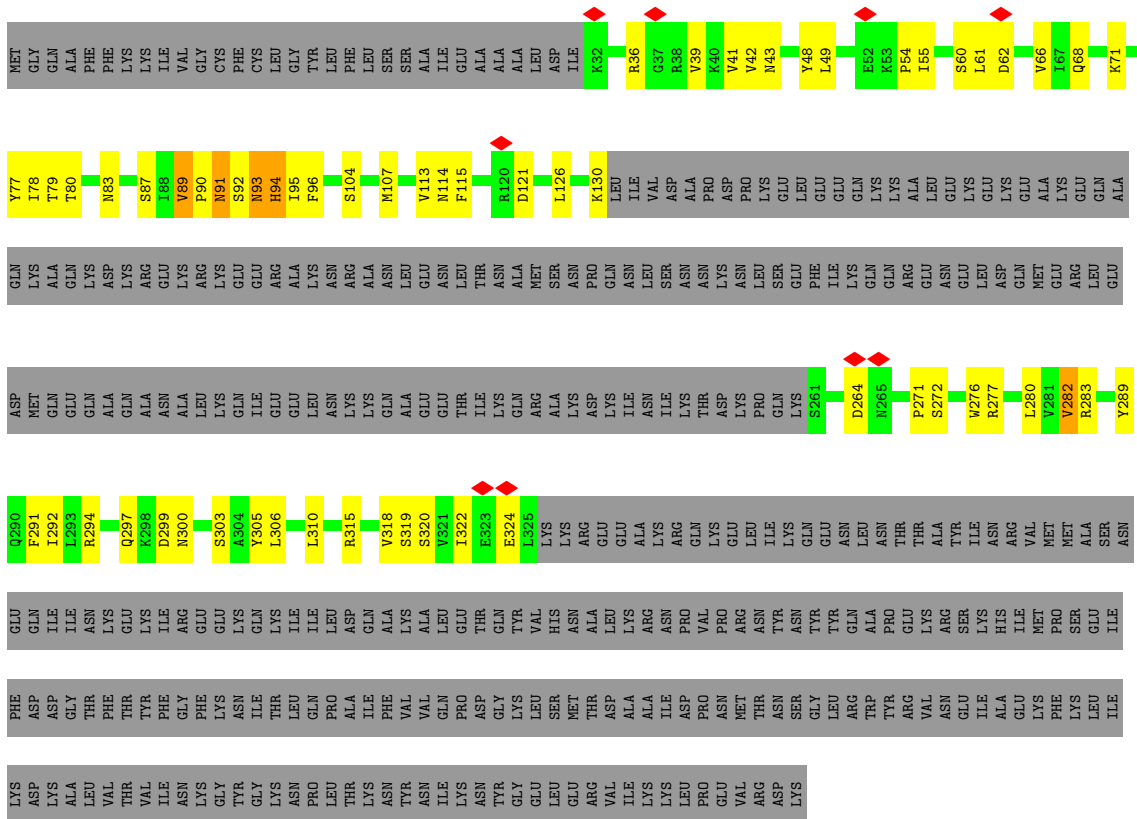


• Molecule 1: Cag pathogenicity island protein (Cag8)





• Molecule 1: Cag pathogenicity island protein (Cag8)



• Molecule 2: Cag pathogenicity island protein (Cag7)



ILE	ASN	GLY	GLN	SER	MET	GLN	SER	LEU	ALA	GLU	THR	LEU	GLU	GLY	ILE	GLN	GLY	GLY	ASN
ILE	LYS	GLN	GLN	SER	THR	LYS	THR	LEU	LEU	GLU	THR	LEU	GLU	GLY	ILE	GLN	GLY	GLY	ASN

● Molecule 2: Cag pathogenicity island protein (Cag7)



MET	ASN	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ASP	LYS	SER	GLU	ASN	ASN	GLU	THR	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN

ASP	GLN	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ASP	LYS	SER	GLU	ASN	ASN	GLU	THR	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN

PRO	THR	GLU	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
GLU	THR	GLN	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

LYS	GLU	SER	SER	GLU	HIS	HIS	LEU	ASP	ASP	PRO	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ARG	SER	ILE	PHE	ASN	HIS	TYR	PHE	MET	ASP	PRO	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU

ARG	THR	LEU	TYR	TYR	ASN	ASN	LEU	ASN	ASP	ILE	ASP	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ALA	LYS	THR	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

PHE	ARG	LYS	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
GLU	CYS	LEU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS

ASN	ALA	LYS	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

GLU	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

CYS	VAL	SER	GLN	ALA	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ARG	LYS	LEU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

ARG	LYS	LEU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

LYS	THR	GLU	ALA	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
LYS	THR	GLU	ALA	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

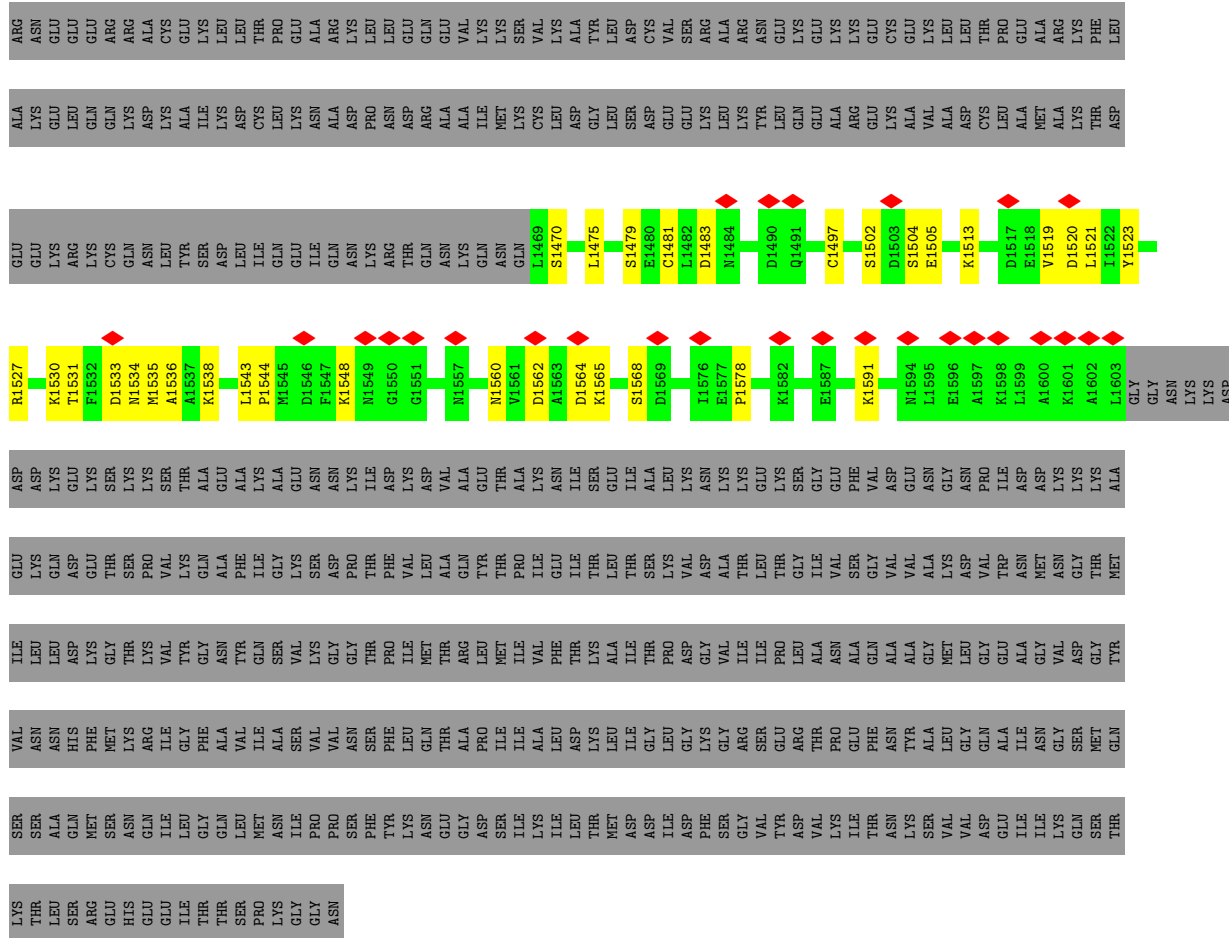
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LYS	GLU	THR	GLN	ASN	HIS	LEU	THR	ASN	ASP	GLY	ASP	GLY	ASP	GLY	ASP	GLY	ASP	GLY	ASP
ARG	SER	ILE	PHE	HIS	TYR	THR	ASP	PHE	MET	LEU	PRO	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
ARG	THR	LEU	TYR	ASN	TYR	LEU	ASN	GLN	ASP	LEU	ILE	GLU	GLY	ASP	GLY	ASP	GLY	ASP	GLY
ALA	LYS	THR	GLU	GLU	GLU	GLU	ARG	ILE	GLN	LEU	LEU	GLN	GLY	ASP	GLY	ASP	GLY	ASP	GLY
PHE	ARG	LYS	THR	GLN	LYS	LEU	ILE	LYS	THR	LYS	LEU	GLN	GLY	ASP	GLY	ASP	GLY	ASP	GLY
GLU	CYS	LEU	GLN	ASN	PRO	GLN	GLU	GLY	ASN	LEU	LEU	GLN	GLY	ASP	GLY	ASP	GLY	ASP	GLY
ASN	ALA	THR	THR	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
GLU	GLU	GLU	ALA	GLY	GLU	THR	GLU	ALA	ALA	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
GLU	LYS	LYS	GLY	CYS	LYS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
CYS	VAL	SER	GLN	ALA	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
ARG	LYS	LEU	GLU	GLY	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU
LYS	THR	GLU	ALA	CYS	LYS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
ALA	TYR	LYS	ASP	VAL	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
THR	PRO	GLU	ALA	ARG	LYS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
ALA	ASP	LYS	LYS	VAL	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
SER	LEU	LYS	ALA	VAL	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
GLU	LYS	LEU	THR	VAL	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
ARG	ASN	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU

D1517	E1518	Y1519	D1520	L1521	Y1522	Y1523	R1527	K1530	T1531	F1532	D1533	M1534	M1535	A1536	A1537	K1538	L1543	P1544	M1545	D1546	F1547	K1548	M1549	G1550	G1551	T1555	I1556	H1557	M1560	D1562	M1563	D1564	S1568	I1576	E1577	A1581	K1582	K1591	M1594	L1595	E1596	A1597	K1598	L1599	A1600	K1601	A1602	L1603		
GLY	GLY	ASN	LYS	LYS	ASP	ASP	LYS	LYS	LYS	SER	LYS	SER	LYS	ALA	ALA	LYS	ALA	GLU	ASN	LYS	ILE	ASP	ASP	LYS	VAL	GLU	THR	ALA	ILE	ILE	LYS	GLY	LYS	ASP	LYS	ASN	LYS	PHE	GLY	VAL	ASP	GLY	GLY	ASP	ASP	ASP	ASP	ASP	GLU	ILE
ASP	ASP	LYS	LYS	LYS	ALA	GLY	LYS	GLN	GLU	THR	SER	LYS	VAL	GLN	PHE	ILE	LYS	LYS	SER	ASP	PRO	THR	PHE	LYS	VAL	LEU	ALA	VAL	ILE	ILE	GLY	LYS	VAL	ASP	VAL	ASP	ALA	ALA	THR	GLY	GLY	THR	VAL	GLY	GLY	GLY	TRP			
ASN	MET	ASN	GLN	THR	MET	ILE	LEU	ASN	ASN	ASP	LYS	TYR	GLY	GLN	ASN	GLN	SER	VAL	LYS	GLY	GLY	THR	PRO	ILE	LEU	ARG	LEU	VAL	ILE	ILE	THR	PRO	GLY	ASP	GLY	VAL	VAL	ILE	ILE	THR	GLN	ALA	GLY	GLY	GLU					
ALA	GLY	VAL	GLY	TYR	VAL	ASN	ASN	ASN	HIS	PHE	MET	LYS	ARG	GLY	ALA	ILE	ALA	SER	VAL	VAL	PRO	SER	PHE	THR	THR	GLY	ALA	PRO	LEU	ILE	ILE	VAL	PHI	LEU	ASP	GLY	GLY	ARG	ARG	VAL	GLY	THR	GLY	THR	GLY	ALA				
ILE	ASN	GLY	SER	MET	GLN	SER	SER	ALA	GLN	ASN	GLN	ILE	ILE	GLY	GLY	THR	ASN	PRO	ILE	PRO	ASN	PHE	TYR	LYS	ASN	GLY	ALA	GLY	ASP	ILE	ILE	THR	ASP	ASP	PHE	SER	SER	GLY	GLY	VAL	ILE	THR	THR	GLY	GLU					
ILE	ILE	LYS	GLN	SER	THR	LYS	THR	LEU	ASN	SER	ARG	GLY	ILE	ILE	THR	SER	PRO	GLY	GLY	GLY	ASN	THR	ASN	TYR	LYS	PRO	GLY	ASP	THR	MET	THR	ASP	ASP	PHE	SER	GLY	THR	ILE	ILE	THR	ASN	THR	THR	ASN	GLU					

● Molecule 2: Cag pathogenicity island protein (Cag7)

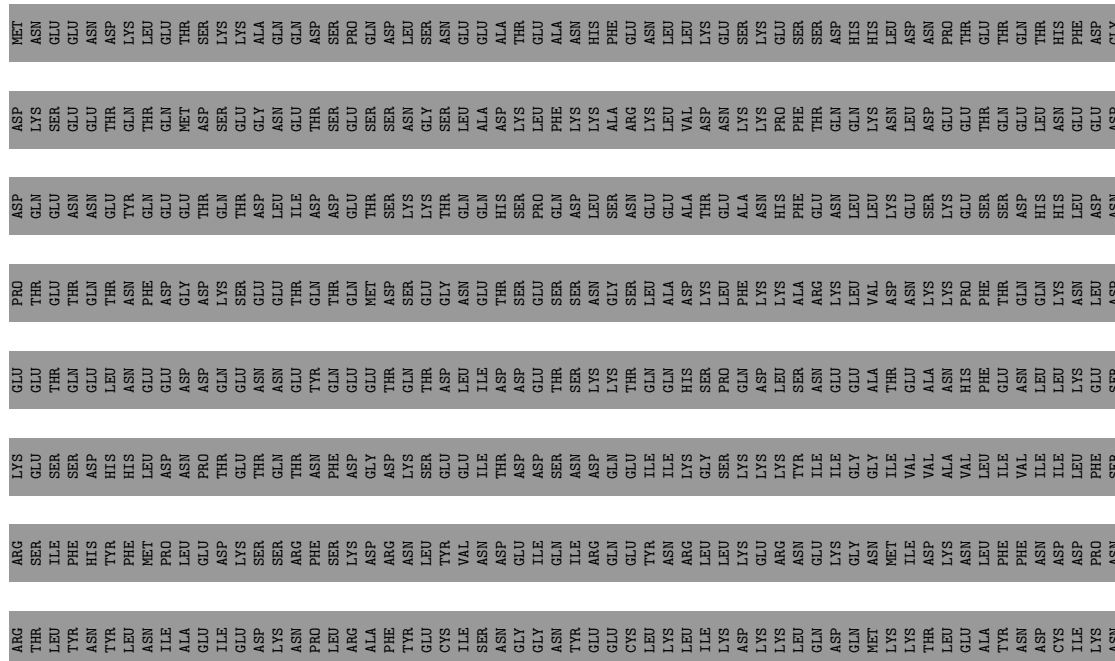


MET	ASN	GLU	GLY	ASN	LYS	LYS	LEU	GLY	GLN	THR	LYS	LEU	GLY	GLN	GLN	GLN	ASP	ALA	ALA	GLY	GLY	GLY	ALA	GLY	HIS	HIS	PHI	GLY	ARG	GLY	LYS	SER	SER	THR	ASP	ASP	GLN	GLN	HIS	HIS	THR	THR	THR	GLY	GLY			
ASP	LYS	SER	GLY	ASN	GLY	THR	THR	GLN	THR	THR	SER	GLN	GLY	GLY	SER	SER	GLY	GLY	ASP	ASP	ASP	ALA	ALA	GLY	HIS	LYS	VAL	THR	THR	ASN	ASN	PRO	PHE	THR	THR	THR	GLN	GLY	GLY	GLY	GLY	GLY	THR	THR	THR	ASP		
ASP	GLN	GLU	GLN	ASN	THR	GLY	GLN	THR	THR	THR	GLY	GLY	GLY	THR	GLN	GLN	GLY	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASN		
PRO	THR	GLY	THR	GLN	GLY	THR	THR	ASN	PHE	ASN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASP		
GLY	GLY	THR	GLN	ASN	GLY	ASN	GLY	ASN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	SER		
LYS	GLY	SER	THR	HIS	HIS	LEU	ASN	ASP	PRO	THR	GLY	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	SER
ARG	SER	ILE	PHE	HIS	TYR	PHE	LEU	ASN	PRO	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASN		
ARG	THR	LEU	TYR	ASN	TYR	ASN	ILE	ASN	ASN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASN		
ALA	LYS	THR	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASN		
PHE	ARG	LYS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	ASN		
GLU	CYS	LEU	LYS	ASN	ILE	PRO	GLN	LEU	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	LYS	



- Molecule 2: Cag pathogenicity island protein (Cag7)

Chain MY: 5% . 93%



SER MET GLN SER GLN SER SER SER SER ALA ALA GLN MET SER SER ASN GLN GLN ILE ILE LEU LEU GLY GLN GLN LEU MET MET ASN ASN ILE ILE PRO PRO PHE PHE TYR LYS ASN ASN GLY GLY ASP ASP SER SER ILE ILE LYS LYS ILE ILE LEU THR THR MET MET ASP ASP ILE ILE ASP ASP PHE PHE SER SER GLY VAL VAL TYR ASP VAL VAL LYS LYS ILE THR THR ASN ASN LYS SER VAL VAL ASP GLU ILE ILE LYS

GLN SER THR LYS THR LEU SER ARG GLU HIS GLU ILE THR THR SER PRO LYS GLY ASN

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	10477	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 ($e^-/\text{\AA}^2$)	59.7	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.042	Depositor
Minimum map value	-0.026	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	510.0, 510.0, 510.0	wwPDB
Map dimensions	510, 510, 510	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0, 1.0, 1.0	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	AX	0.41	0/1365	0.55	0/1845
1	BX	0.41	0/1365	0.54	0/1845
1	CX	0.40	0/1365	0.54	0/1845
1	DX	0.40	0/1365	0.54	0/1845
1	EX	0.41	0/1365	0.54	0/1845
1	FX	0.40	0/1365	0.54	0/1845
1	GX	0.41	0/1365	0.54	0/1845
1	HX	0.41	0/1365	0.55	0/1845
1	IX	0.40	0/1365	0.54	0/1845
1	JX	0.41	0/1365	0.54	0/1845
1	KX	0.41	0/1365	0.54	0/1845
1	LX	0.41	0/1365	0.54	0/1845
1	MX	0.40	0/1365	0.54	0/1845
1	NX	0.41	0/1365	0.54	0/1845
1	OX	0.41	0/1365	0.54	0/1845
1	PX	0.41	0/1365	0.54	0/1845
1	QX	0.41	0/1365	0.54	0/1845
2	AY	0.32	0/1061	0.48	0/1432
2	BY	0.32	0/1061	0.48	0/1432
2	CY	0.31	0/1061	0.49	0/1432
2	DY	0.32	0/1061	0.49	0/1432
2	EY	0.31	0/1061	0.49	0/1432
2	FY	0.32	0/1061	0.48	0/1432
2	GY	0.32	0/1061	0.51	0/1432
2	HY	0.32	0/1061	0.51	0/1432
2	IY	0.31	0/1061	0.47	0/1432
2	JY	0.32	0/1061	0.50	0/1432
2	KY	0.32	0/1061	0.52	1/1432 (0.1%)
2	LY	0.31	0/1061	0.48	0/1432
2	MY	0.31	0/1061	0.48	0/1432
2	NY	0.31	0/1061	0.51	1/1432 (0.1%)
2	OY	0.31	0/1061	0.49	0/1432
2	PY	0.31	0/1061	0.51	0/1432
2	QY	0.32	0/1061	0.50	0/1432

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
All	All	0.37	0/41242	0.52	2/55709 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	KY	1521	LEU	CA-CB-CG	6.10	129.33	115.30
2	NY	1521	LEU	CA-CB-CG	5.59	128.16	115.30

There are no chirality outliers.

There are no planarity outliers.

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	AX	1339	0	1355	40	0
1	BX	1339	0	1355	43	0
1	CX	1339	0	1355	42	0
1	DX	1339	0	1355	40	0
1	EX	1339	0	1355	44	0
1	FX	1339	0	1355	43	0
1	GX	1339	0	1355	42	0
1	HX	1339	0	1355	42	0
1	IX	1339	0	1355	37	0
1	JX	1339	0	1355	42	0
1	KX	1339	0	1355	49	0
1	LX	1339	0	1355	46	0
1	MX	1339	0	1355	35	0
1	NX	1339	0	1355	43	0
1	OX	1339	0	1355	45	0
1	PX	1339	0	1355	41	0
1	QX	1339	0	1355	42	0
2	AY	1050	0	1038	26	0
2	BY	1050	0	1038	31	0
2	CY	1050	0	1038	29	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	DY	1050	0	1038	28	0
2	EY	1050	0	1038	27	0
2	FY	1050	0	1038	22	0
2	GY	1050	0	1038	25	0
2	HY	1050	0	1038	27	0
2	IY	1050	0	1038	28	0
2	JY	1050	0	1038	28	0
2	KY	1050	0	1038	31	0
2	LY	1050	0	1038	21	0
2	MY	1050	0	1038	29	0
2	NY	1050	0	1038	31	0
2	OY	1050	0	1038	26	0
2	PY	1050	0	1038	27	0
2	QY	1050	0	1038	24	0
All	All	40613	0	40681	925	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 11.

The worst 5 of 925 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:BX:126:LEU:O	1:BX:130:LYS:HB2	1.66	0.95
1:AX:126:LEU:O	1:AX:130:LYS:HB2	1.66	0.94
1:KX:126:LEU:O	1:KX:130:LYS:HB2	1.67	0.94
1:IX:126:LEU:O	1:IX:130:LYS:HB2	1.68	0.93
1:HX:126:LEU:O	1:HX:130:LYS:HB2	1.68	0.93

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	AX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	BX	160/521 (31%)	156 (98%)	4 (2%)	0	100	100
1	CX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	DX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	EX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	FX	160/521 (31%)	153 (96%)	7 (4%)	0	100	100
1	GX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	HX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	IX	160/521 (31%)	153 (96%)	7 (4%)	0	100	100
1	JX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	KX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	LX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	MX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	NX	160/521 (31%)	155 (97%)	5 (3%)	0	100	100
1	OX	160/521 (31%)	153 (96%)	7 (4%)	0	100	100
1	PX	160/521 (31%)	154 (96%)	6 (4%)	0	100	100
1	QX	160/521 (31%)	153 (96%)	7 (4%)	0	100	100
2	AY	133/1927 (7%)	127 (96%)	6 (4%)	0	100	100
2	BY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	CY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	DY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	EY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	FY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	GY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	HY	133/1927 (7%)	127 (96%)	6 (4%)	0	100	100
2	IY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	JY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	KY	133/1927 (7%)	129 (97%)	4 (3%)	0	100	100
2	LY	133/1927 (7%)	129 (97%)	4 (3%)	0	100	100
2	MY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	NY	133/1927 (7%)	129 (97%)	4 (3%)	0	100	100
2	OY	133/1927 (7%)	129 (97%)	4 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	PY	133/1927 (7%)	128 (96%)	5 (4%)	0	100	100
2	QY	133/1927 (7%)	129 (97%)	4 (3%)	0	100	100
All	All	4981/41616 (12%)	4801 (96%)	180 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	AX	152/469 (32%)	134 (88%)	18 (12%)	5	22
1	BX	152/469 (32%)	137 (90%)	15 (10%)	8	30
1	CX	152/469 (32%)	137 (90%)	15 (10%)	8	30
1	DX	152/469 (32%)	136 (90%)	16 (10%)	7	27
1	EX	152/469 (32%)	137 (90%)	15 (10%)	8	30
1	FX	152/469 (32%)	133 (88%)	19 (12%)	4	20
1	GX	152/469 (32%)	134 (88%)	18 (12%)	5	22
1	HX	152/469 (32%)	135 (89%)	17 (11%)	6	24
1	IX	152/469 (32%)	135 (89%)	17 (11%)	6	24
1	JX	152/469 (32%)	136 (90%)	16 (10%)	7	27
1	KX	152/469 (32%)	135 (89%)	17 (11%)	6	24
1	LX	152/469 (32%)	134 (88%)	18 (12%)	5	22
1	MX	152/469 (32%)	137 (90%)	15 (10%)	8	30
1	NX	152/469 (32%)	137 (90%)	15 (10%)	8	30
1	OX	152/469 (32%)	134 (88%)	18 (12%)	5	22
1	PX	152/469 (32%)	134 (88%)	18 (12%)	5	22
1	QX	152/469 (32%)	136 (90%)	16 (10%)	7	27
2	AY	115/1724 (7%)	102 (89%)	13 (11%)	6	24
2	BY	115/1724 (7%)	100 (87%)	15 (13%)	4	19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	CY	115/1724 (7%)	103 (90%)	12 (10%)	7	27
2	DY	115/1724 (7%)	103 (90%)	12 (10%)	7	27
2	EY	115/1724 (7%)	103 (90%)	12 (10%)	7	27
2	FY	115/1724 (7%)	100 (87%)	15 (13%)	4	19
2	GY	115/1724 (7%)	100 (87%)	15 (13%)	4	19
2	HY	115/1724 (7%)	104 (90%)	11 (10%)	8	32
2	IY	115/1724 (7%)	103 (90%)	12 (10%)	7	27
2	JY	115/1724 (7%)	105 (91%)	10 (9%)	10	37
2	KY	115/1724 (7%)	103 (90%)	12 (10%)	7	27
2	LY	115/1724 (7%)	106 (92%)	9 (8%)	12	42
2	MY	115/1724 (7%)	104 (90%)	11 (10%)	8	32
2	NY	115/1724 (7%)	106 (92%)	9 (8%)	12	42
2	OY	115/1724 (7%)	102 (89%)	13 (11%)	6	24
2	PY	115/1724 (7%)	107 (93%)	8 (7%)	15	47
2	QY	115/1724 (7%)	102 (89%)	13 (11%)	6	24
All	All	4539/37281 (12%)	4054 (89%)	485 (11%)	10	26

5 of 485 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	OX	32	LYS
2	NY	1481	CYS
2	AY	1503	ASP
2	MY	1555	THR
2	QY	1481	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 61 such sidechains are listed below:

Mol	Chain	Res	Type
2	FY	1549	ASN
2	PY	1476	HIS
2	HY	1583	GLN
2	OY	1594	ASN
2	QY	1549	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 [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

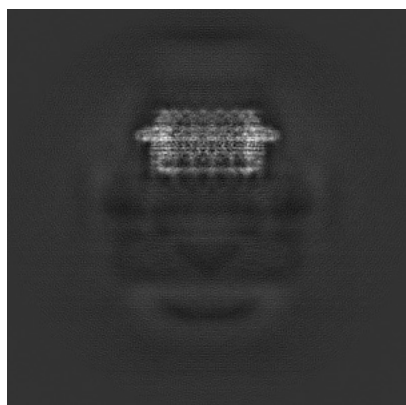
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22077. These allow visual inspection of the internal detail of the map and identification of artifacts.

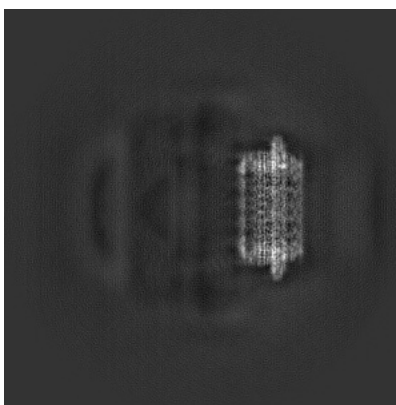
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

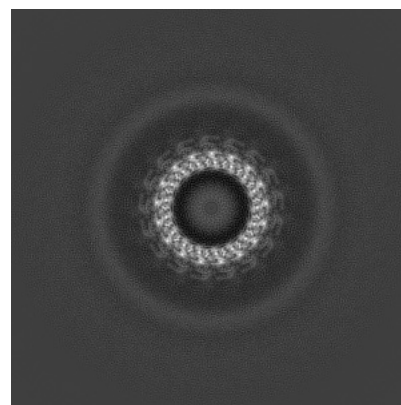
6.1.1 Primary map



X



Y

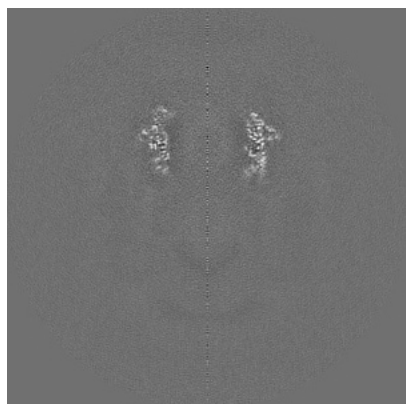


Z

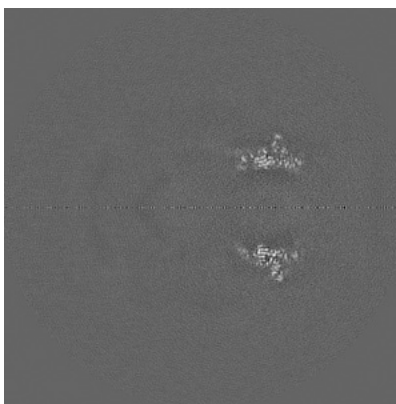
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

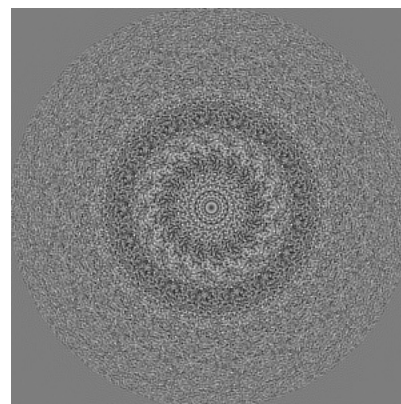
6.2.1 Primary map



X Index: 255



Y Index: 255



Z Index: 255

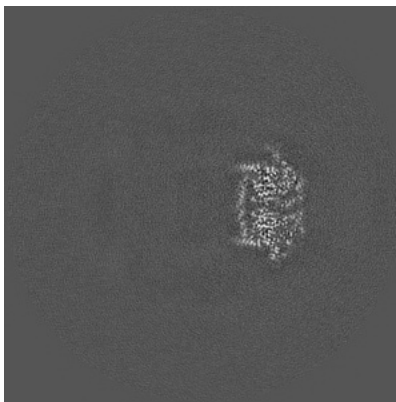
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

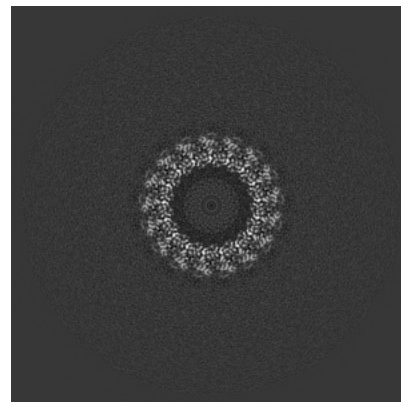
6.3.1 Primary map



X Index: 309



Y Index: 307



Z Index: 342

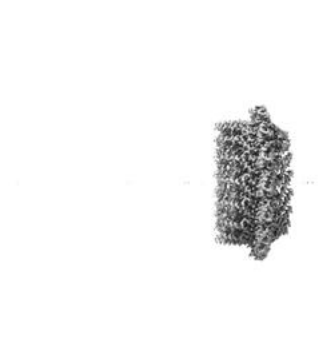
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

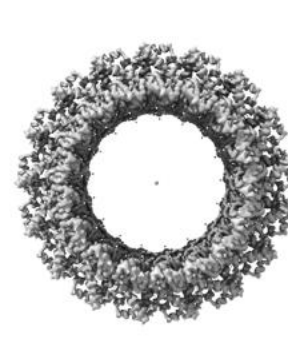
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

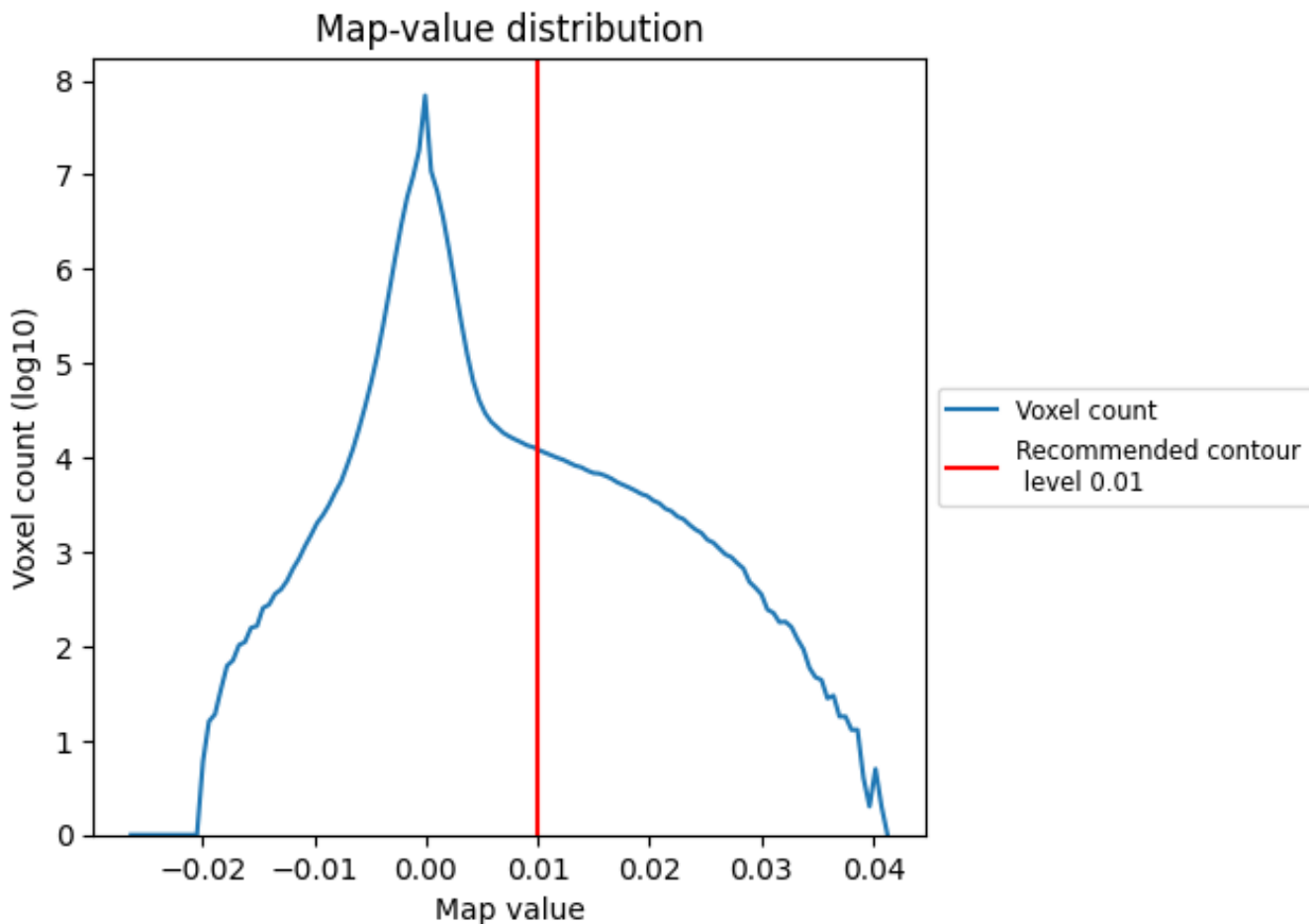
6.5 Mask visualisation

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

7 Map analysis [i](#)

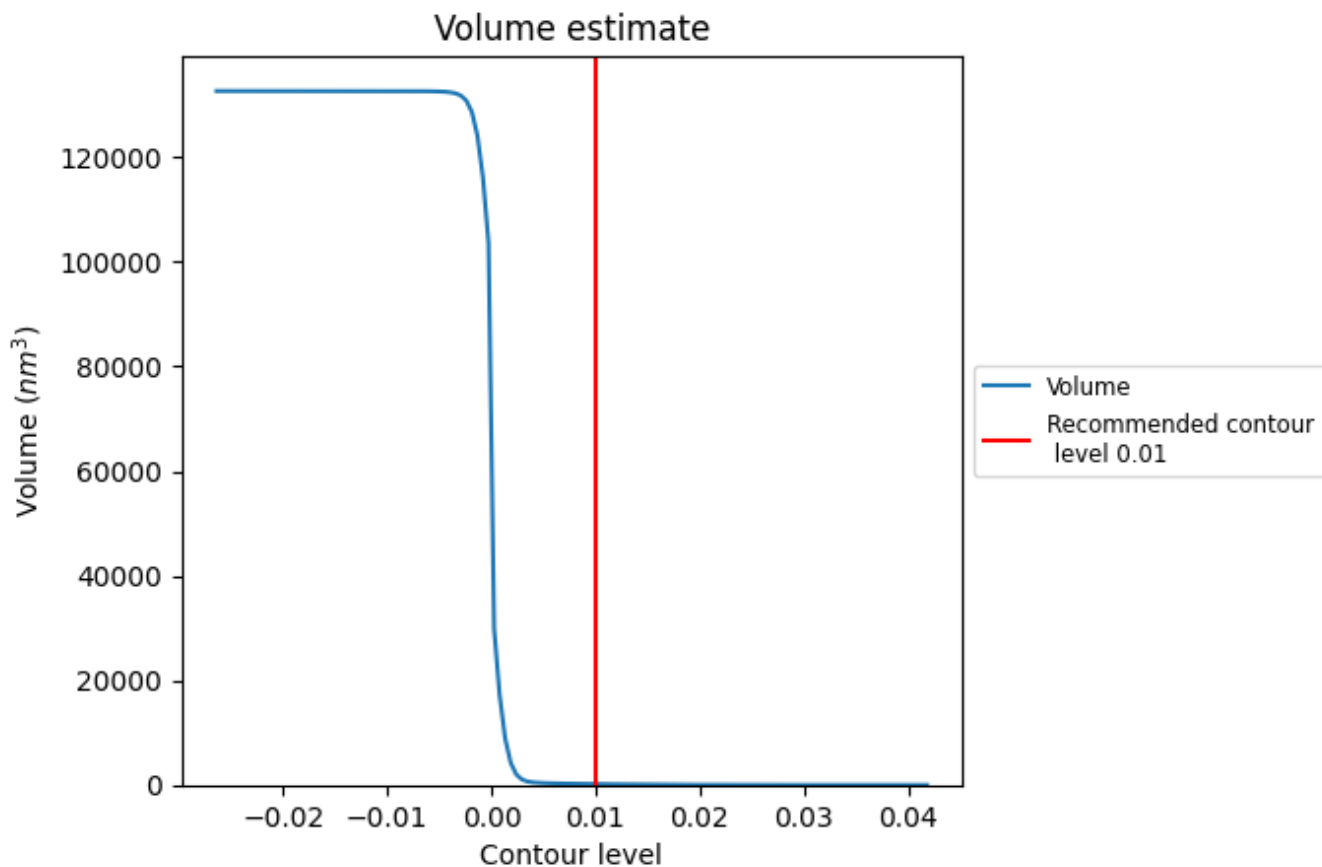
This section contains the results of statistical analysis of the map.

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.

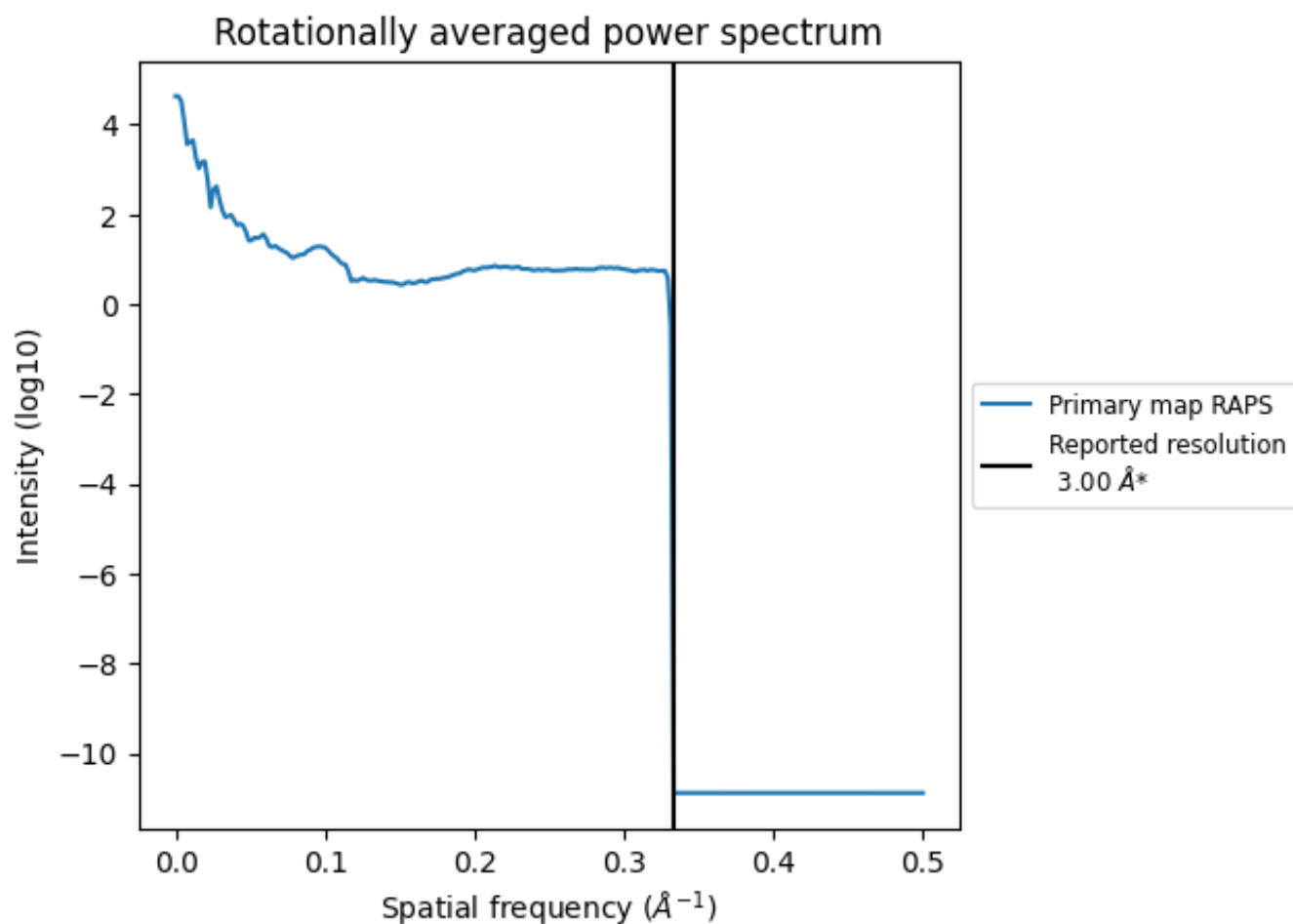
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 175 nm^3 ; this corresponds to an approximate mass of 158 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 [\(i\)](#)

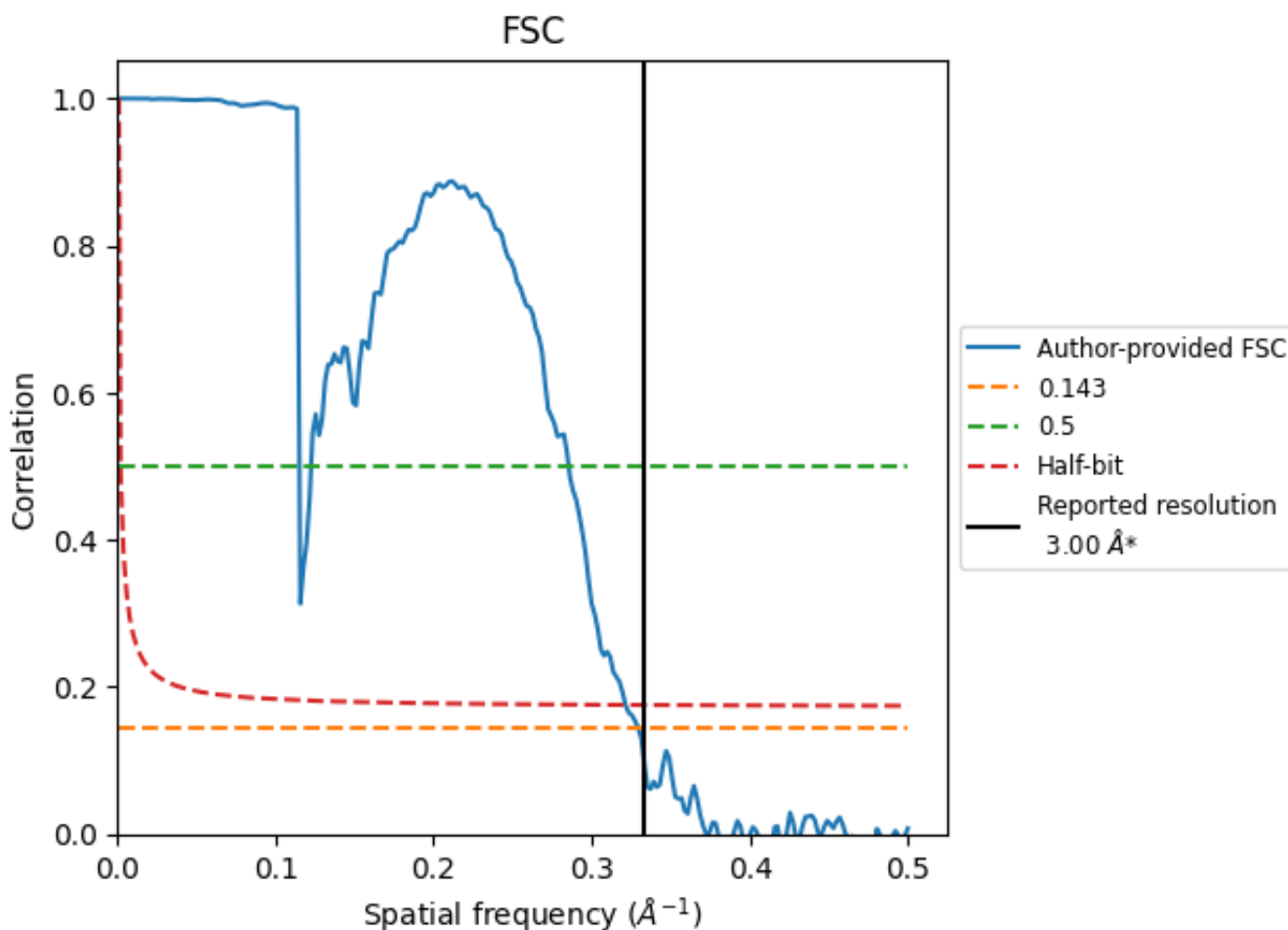


*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	3.03	8.69	3.11
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

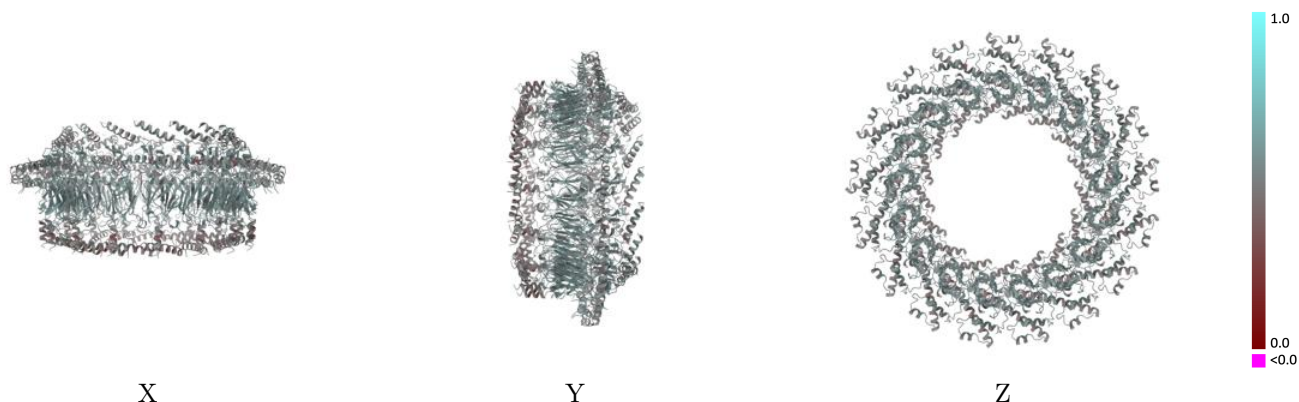
This section contains information regarding the fit between EMDB map EMD-22077 and PDB model 6X6L. Per-residue inclusion information can be found in section 3 on page 8.

9.1 Map-model overlay [i](#)



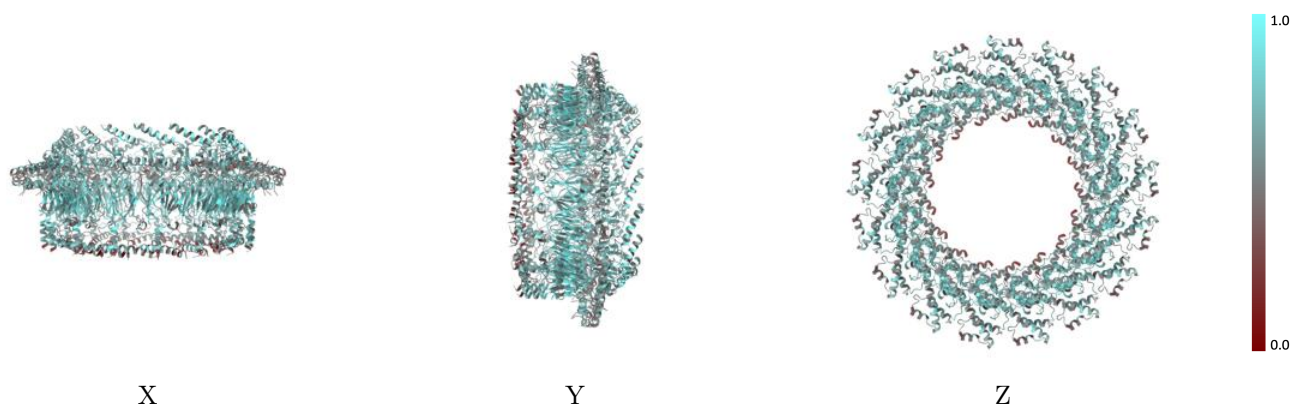
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



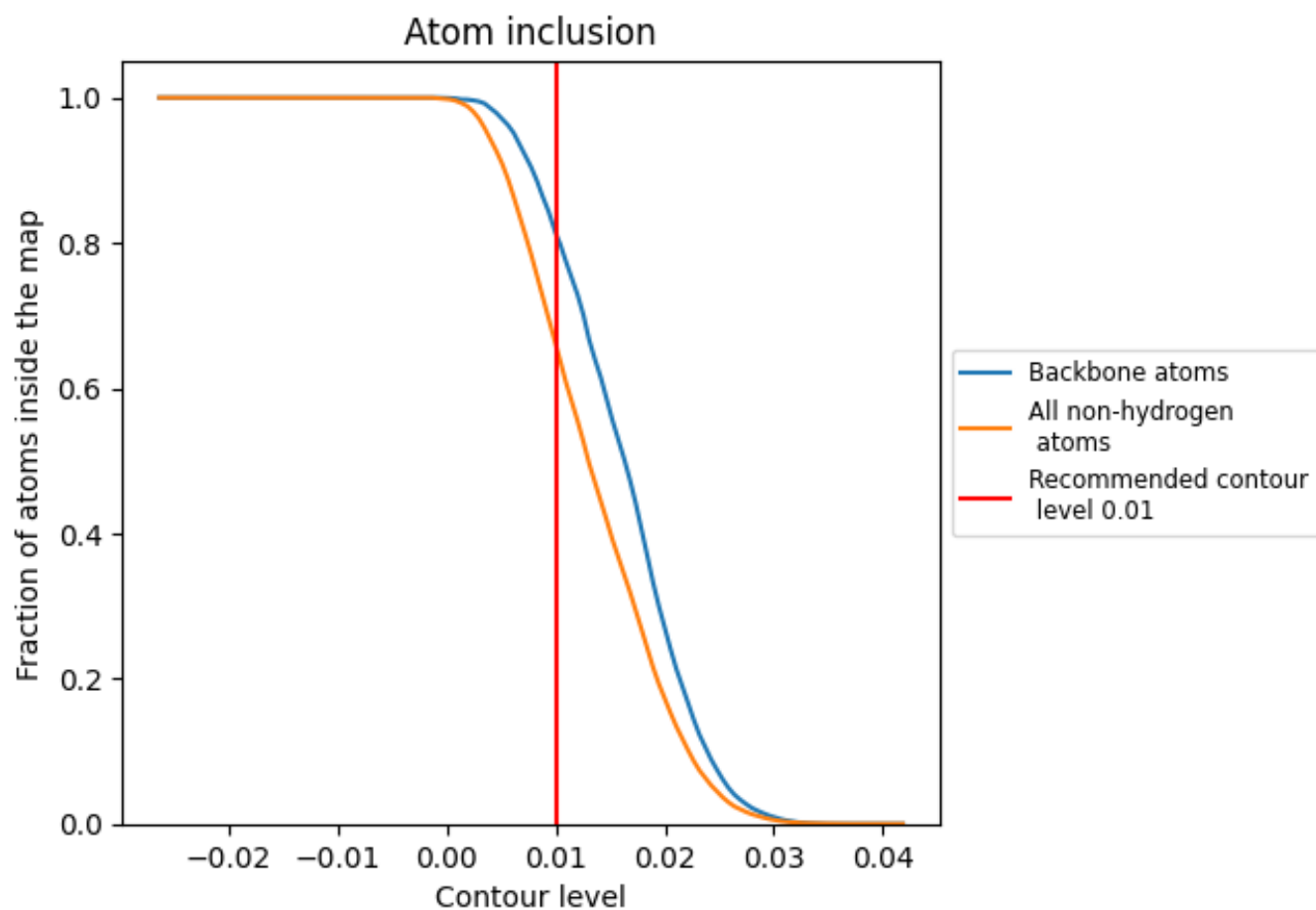
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.01).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 81% of all backbone atoms, 66% 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 (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6592	 0.5180
AX	 0.7295	 0.5370
AY	 0.5763	 0.4950
BX	 0.7264	 0.5360
BY	 0.5743	 0.4950
CX	 0.7264	 0.5370
CY	 0.5724	 0.4940
DX	 0.7226	 0.5340
DY	 0.5763	 0.4950
EX	 0.7242	 0.5360
EY	 0.5782	 0.4920
FX	 0.7302	 0.5340
FY	 0.5714	 0.4930
GX	 0.7181	 0.5330
GY	 0.5724	 0.4920
HX	 0.7272	 0.5340
HY	 0.5840	 0.4940
IX	 0.7249	 0.5350
IY	 0.5676	 0.4940
JX	 0.7287	 0.5360
JY	 0.5695	 0.4950
KX	 0.7242	 0.5370
KY	 0.5734	 0.4940
LX	 0.7287	 0.5360
LY	 0.5724	 0.4930
MX	 0.7242	 0.5370
MY	 0.5743	 0.4940
NX	 0.7242	 0.5390
NY	 0.5734	 0.4950
OX	 0.7295	 0.5400
OY	 0.5743	 0.4960
PX	 0.7272	 0.5380
PY	 0.5801	 0.4940
QX	 0.7264	 0.5380
QY	 0.5734	 0.4950

