



Full wwPDB EM Validation Report ⓘ

Oct 13, 2024 – 11:18 AM EDT

PDB ID : 7MUY
EMDB ID : EMD-24026
Title : Reconstruction of the Legionella pneumophila Dot/Icm T4SS 3DVA Map 5
Authors : Sheedlo, M.J.; Durie, C.L.; Swanson, M.; Lacy, D.B.; Ohi, M.D.
Deposited on : 2021-05-14
Resolution : 4.60 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

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:

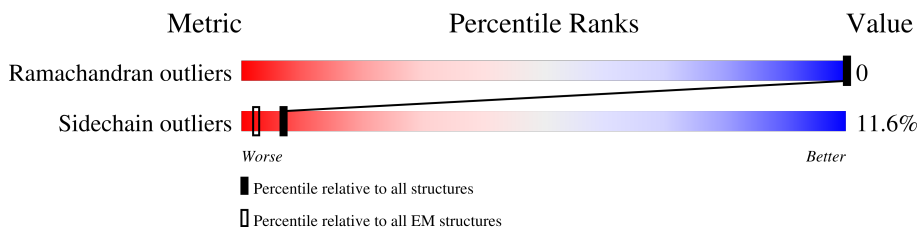
EMDB validation analysis : 0.0.1.dev113
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

1 Overall quality at a glance i

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

The reported resolution of this entry is 4.60 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.



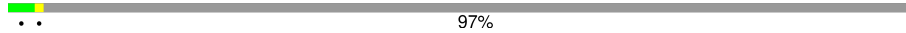

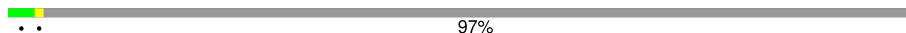
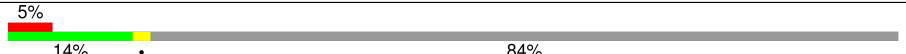
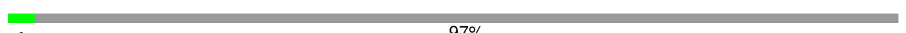
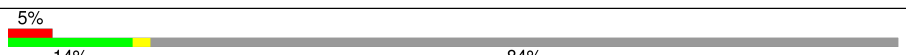

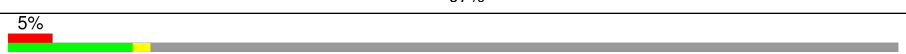

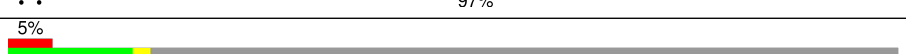

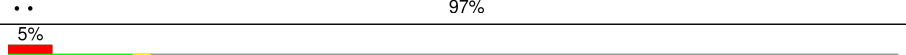

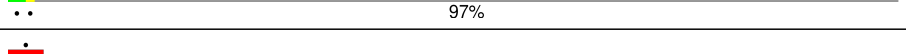

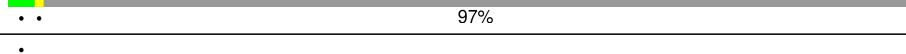

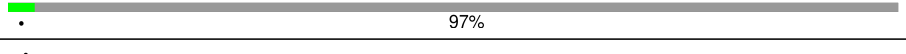




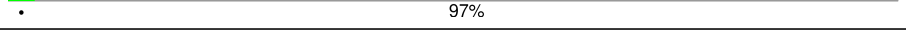
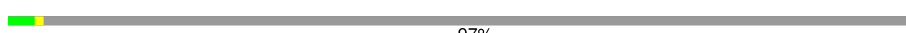

Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	AG	1048	14% 84%
1	Ag	1048	97%
1	BG	1048	14% 84%
1	Bg	1048	97%
1	CG	1048	14% 84%
1	Cg	1048	97%
1	DG	1048	14% 84%
1	Dg	1048	97%
1	EG	1048	14% 84%

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Mol	Chain	Length	Quality of chain
1	Eg	1048	 97%
1	FG	1048	 84%
1	Fg	1048	 97%
1	GG	1048	 84%
1	Gg	1048	 97%
1	HG	1048	 84%
1	Hg	1048	 97%
1	IG	1048	 84%
1	Ig	1048	 97%
1	JG	1048	 84%
1	Jg	1048	 97%
1	KG	1048	 84%
1	Kg	1048	 97%
1	LG	1048	 84%
1	Lg	1048	 97%
1	MG	1048	 84%
1	Mg	1048	 97%
1	NG	1048	 84%
1	OG	1048	 84%
1	PG	1048	 84%
1	VG	1048	 97%
1	WG	1048	 97%
1	XG	1048	 97%
1	YG	1048	 97%
1	ZG	1048	 97%







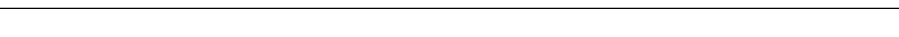
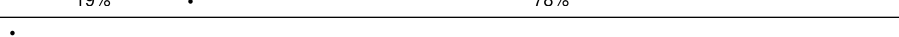
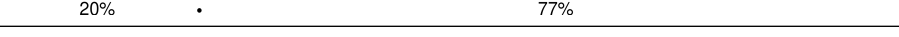












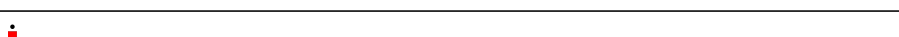



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Mol	Chain	Length	Quality of chain
2	AD	163	77% 9% 14%
2	Ad	163	77% 7% 16%
2	BD	163	81% 5% 14%
2	Bd	163	77% 7% 16%
2	CD	163	76% 10% 14%
2	Cd	163	75% 9% 16%
2	DD	163	80% 6% 14%
2	Dd	163	77% 7% 16%
2	ED	163	82% 14%
2	Ed	163	77% 7% 16%
2	FD	163	76% 10% 14%
2	Fd	163	79% 6% 16%
2	GD	163	79% 7% 14%
2	Gd	163	77% 7% 16%
2	HD	163	79% 7% 14%
2	Hd	163	79% 5% 16%
2	ID	163	80% 6% 14%
2	Id	163	78% 6% 16%
2	JD	163	80% 6% 14%
2	Jd	163	79% 5% 16%
2	KD	163	79% 7% 14%
2	Kd	163	78% 6% 16%
2	LD	163	77% 9% 14%
2	Ld	163	78% 6% 16%
2	MD	163	77% 9% 14%









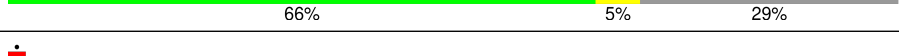
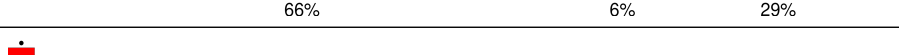
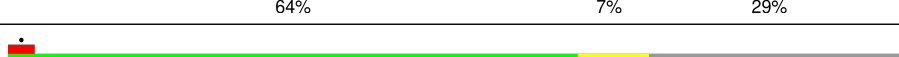
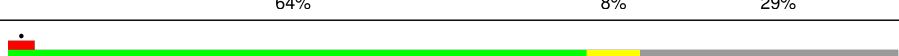

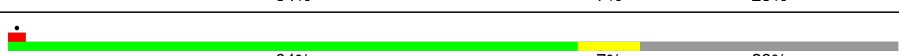
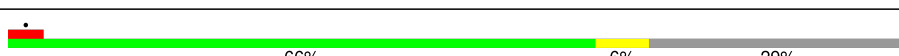
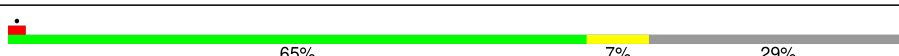





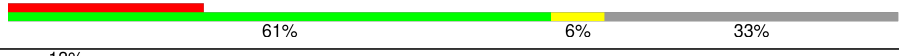

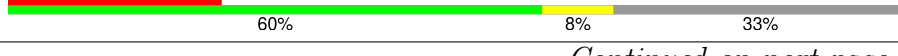

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Mol	Chain	Length	Quality of chain
2	Md	163	 77% 7% 16%
3	AF	269	 21% 77%
3	Af	269	 20% 78%
3	BF	269	 20% 77%
3	Bf	269	 20% 78%
3	CF	269	 22% 77%
3	Cf	269	 19% 78%
3	DF	269	 20% 77%
3	Df	269	 21% 78%
3	EF	269	 21% 77%
3	Ef	269	 22% 78%
3	FF	269	 20% 77%
3	Ff	269	 20% 78%
3	GF	269	 21% 77%
3	Gf	269	 20% 78%
3	HF	269	 20% 77%
3	Hf	269	 20% 78%
3	IF	269	 21% 77%
3	If	269	 20% 78%
3	JF	269	 20% 77%
3	Jf	269	 21% 78%
3	KF	269	 22% 77%
3	Kf	269	 21% 78%
3	LF	269	 21% 77%
3	Lf	269	 18% 78%













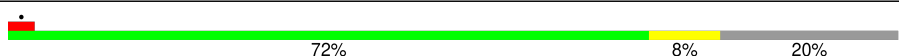
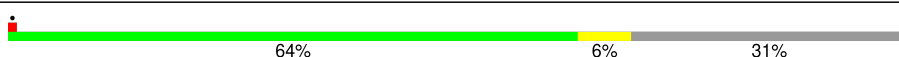
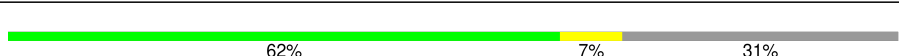

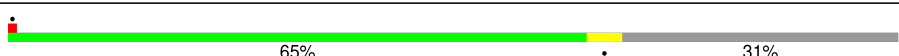
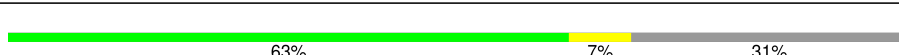
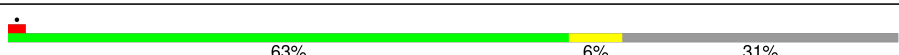
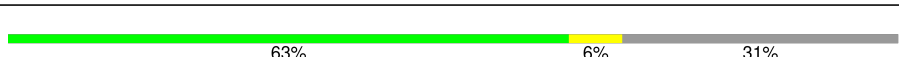
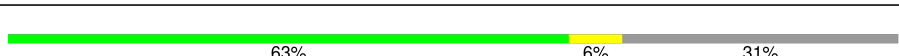



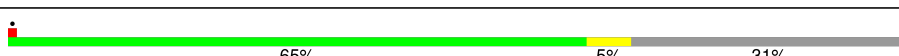
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Mol	Chain	Length	Quality of chain
3	MF	269	 20% 77%
3	Mf	269	 20% 78%
3	VF	269	 22% 77%
3	WF	269	 21% 77%
3	XF	269	 22% 77%
3	YF	269	 21% 77%
3	ZF	269	 22% 77%
4	AH	361	 64% 8% 29%
4	BH	361	 66% 5% 29%
4	CH	361	 66% 6% 29%
4	DH	361	 64% 7% 29%
4	EH	361	 64% 8% 29%
4	FH	361	 65% 6% 29%
4	GH	361	 64% 7% 29%
4	HH	361	 64% 7% 29%
4	IH	361	 66% 6% 29%
4	JH	361	 65% 7% 29%
4	KH	361	 66% 6% 29%
4	LH	361	 65% 6% 29%
4	MH	361	 65% 7% 29%
4	VH	361	 9% 60% 8% 33%
4	WH	361	 15% 58% 9% 33%
4	XH	361	 22% 61% 6% 33%
4	YH	361	 13% 60% 7% 33%
4	ZH	361	 24% 60% 8% 33%











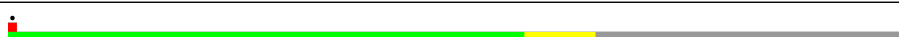


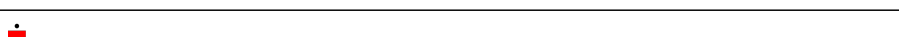
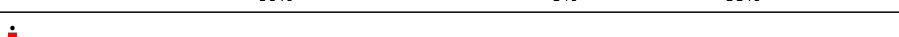
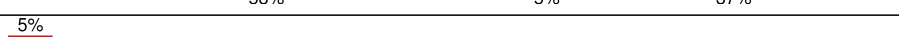



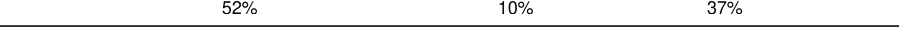





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Mol	Chain	Length	Quality of chain
5	AK	189	 70% 10% 20%
5	BK	189	 71% 9% 20%
5	CK	189	 74% 6% 20%
5	DK	189	 76% 6% 20%
5	EK	189	 74% 6% 20%
5	FK	189	 73% 7% 20%
5	GK	189	 76% 6% 20%
5	HK	189	 75% 5% 20%
5	IK	189	 71% 8% 20%
5	JK	189	 75% 5% 20%
5	KK	189	 72% 8% 20%
5	LK	189	 74% 6% 20%
5	MK	189	 72% 8% 20%
6	AL	249	 64% 6% 31%
6	BL	249	 62% 7% 31%
6	CL	249	 63% 6% 31%
6	DL	249	 65% 6% 31%
6	EL	249	 63% 7% 31%
6	FL	249	 63% 6% 31%
6	GL	249	 63% 6% 31%
6	HL	249	 63% 6% 31%
6	IL	249	 64% 6% 31%
6	JL	249	 63% 6% 31%
6	KL	249	 64% 6% 31%
6	LL	249	 65% 5% 31%

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Mol	Chain	Length	Quality of chain
6	ML	249	
7	AM	320	
7	BM	320	
7	CM	320	
7	DM	320	
7	EM	320	
7	FM	320	
7	GM	320	
7	HM	320	
7	IM	320	
7	JM	320	
7	KM	320	
7	LM	320	
7	MM	320	
8	AN	124	
8	BN	124	
8	CN	124	
8	DN	124	
8	EN	124	
8	FN	124	
8	GN	124	
8	HN	124	
8	IN	124	
8	JN	124	
8	KN	124	

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Mol	Chain	Length	Quality of chain
8	LN	124	 6% 57% 6% 37%
8	MN	124	 1% 54% 9% 37%
9	AU	9	 100%
9	BU	9	 100%
9	CU	9	 100%
9	DU	9	 100%
9	EU	9	 100%
9	FU	9	 100%
9	GU	9	 100%
9	HU	9	 100%
9	IU	9	 100%
9	JU	9	 100%
9	KU	9	 100%
9	LU	9	 100%
9	MU	9	 100%
10	AX	48	 38% 100%
10	BX	48	 42% 100%
10	CX	48	 38% 100%
10	DX	48	 21% 100%
10	EX	48	 48% 100%
10	FX	48	 27% 100%
10	GX	48	 17% 100%
10	HX	48	 33% 100%
10	IX	48	 42% 100%
10	JX	48	 40% 100%

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Mol	Chain	Length	Quality of chain
10	KX	48	
10	LX	48	
10	MX	48	
10	VX	48	
10	WX	48	
10	XX	48	
10	YX	48	
10	ZX	48	
11	AC	303	
11	BC	303	
11	CC	303	
11	DC	303	
11	EC	303	
11	FC	303	
11	GC	303	
11	HC	303	
11	IC	303	
11	JC	303	
11	KC	303	
11	LC	303	
11	MC	303	

2 Entry composition i

There are 11 unique types of molecules in this entry. The entry contains 192370 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 IcmE protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	AG	165	1229	780	203	242	4	0	0
1	Eg	34	276	168	47	60	1	0	0
1	Fg	34	276	168	47	60	1	0	0
1	BG	165	1229	780	203	242	4	0	0
1	Gg	34	276	168	47	60	1	0	0
1	Hg	34	276	168	47	60	1	0	0
1	CG	165	1229	780	203	242	4	0	0
1	Bg	34	276	168	47	60	1	0	0
1	Ig	34	276	168	47	60	1	0	0
1	Jg	34	276	168	47	60	1	0	0
1	DG	165	1229	780	203	242	4	0	0
1	Kg	34	276	168	47	60	1	0	0
1	Lg	34	276	168	47	60	1	0	0
1	EG	165	1229	780	203	242	4	0	0
1	Mg	34	276	168	47	60	1	0	0
1	VG	34	276	168	47	60	1	0	0
1	WG	34	276	168	47	60	1	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	XG	34	Total	C	N	O	S	0	0
			276	168	47	60	1		
1	FG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	YG	34	Total	C	N	O	S	0	0
			276	168	47	60	1		
1	ZG	34	Total	C	N	O	S	0	0
			276	168	47	60	1		
1	GG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	Cg	34	Total	C	N	O	S	0	0
			276	168	47	60	1		
1	Dg	34	Total	C	N	O	S	0	0
			276	168	47	60	1		
1	HG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	IG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	JG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	KG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	LG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	MG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	NG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	OG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	PG	165	Total	C	N	O	S	0	0
			1229	780	203	242	4		
1	Ag	34	Total	C	N	O	S	0	0
			276	168	47	60	1		

- Molecule 2 is a protein called DotD.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	ED	140	Total	C	N	O	S	0	0
			1086	692	185	206	3		
2	Ed	137	Total	C	N	O	S	0	0
			1058	672	182	202	2		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	FD	140	1086	692	185	206	3	0	0
2	Fd	137	1058	672	182	202	2	0	0
2	GD	140	1086	692	185	206	3	0	0
2	Gd	137	1058	672	182	202	2	0	0
2	HD	140	1086	692	185	206	3	0	0
2	Hd	137	1058	672	182	202	2	0	0
2	ID	140	1086	692	185	206	3	0	0
2	Id	137	1058	672	182	202	2	0	0
2	JD	140	1086	692	185	206	3	0	0
2	Jd	137	1058	672	182	202	2	0	0
2	KD	140	1086	692	185	206	3	0	0
2	Kd	137	1058	672	182	202	2	0	0
2	LD	140	1086	692	185	206	3	0	0
2	Ld	137	1058	672	182	202	2	0	0
2	MD	140	1086	692	185	206	3	0	0
2	Md	137	1058	672	182	202	2	0	0
2	Ad	137	1058	672	182	202	2	0	0
2	BD	140	1086	692	185	206	3	0	0
2	Bd	137	1058	672	182	202	2	0	0
2	CD	140	1086	692	185	206	3	0	0
2	Cd	137	1058	672	182	202	2	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	DD	140	Total	C	N	O	S	0	0
			1086	692	185	206	3		
2	Dd	137	Total	C	N	O	S	0	0
			1058	672	182	202	2		
2	AD	140	Total	C	N	O	S	0	0
			1086	692	185	206	3		

- Molecule 3 is a protein called DotF.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	EF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Ef	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	FF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Ff	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	AF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	GF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Gf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	HF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Hf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	IF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	If	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	JF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Jf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	KF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Kf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	LF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	Lf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	MF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Mf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	VF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	WF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	XF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	YF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	ZF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Af	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	BF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Bf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	CF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Cf	59	Total	C	N	O	S	0	0
			449	290	77	81	1		
3	DF	63	Total	C	N	O	S	0	0
			483	308	84	90	1		
3	Df	59	Total	C	N	O	S	0	0
			449	290	77	81	1		

- Molecule 4 is a protein called Type IV secretion protein IcmK.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	EH	258	Total	C	N	O	S	0	0
			1983	1268	336	371	8		
4	FH	258	Total	C	N	O	S	0	0
			1983	1268	336	371	8		
4	GH	258	Total	C	N	O	S	0	0
			1983	1268	336	371	8		
4	HH	258	Total	C	N	O	S	0	0
			1983	1268	336	371	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	IH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	JH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	AH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	KH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	LH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	MH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	VH	243	Total 1875	C 1201	N 319	O 348	S 7	0	0
4	WH	243	Total 1875	C 1201	N 319	O 348	S 7	0	0
4	XH	243	Total 1875	C 1201	N 319	O 348	S 7	0	0
4	YH	243	Total 1875	C 1201	N 319	O 348	S 7	0	0
4	ZH	243	Total 1875	C 1201	N 319	O 348	S 7	0	0
4	BH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	CH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0
4	DH	258	Total 1983	C 1268	N 336	O 371	S 8	0	0

- Molecule 5 is a protein called Inner membrane lipoprotein YiaD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	EK	151	Total 1175	C 747	N 209	O 215	S 4	0	0
5	FK	151	Total 1175	C 747	N 209	O 215	S 4	0	0
5	GK	151	Total 1175	C 747	N 209	O 215	S 4	0	0
5	HK	151	Total 1175	C 747	N 209	O 215	S 4	0	0
5	IK	151	Total 1175	C 747	N 209	O 215	S 4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	JK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	KK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	LK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	AK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	MK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	BK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	CK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		
5	DK	151	Total	C	N	O	S	0	0
			1175	747	209	215	4		

- Molecule 6 is a protein called Outer membrane protein, OmpA family protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	EL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	FL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	GL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	HL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	IL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	JL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	KL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	LL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	ML	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	AL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	BL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	CL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		
6	DL	173	Total	C	N	O	S	0	0
			1388	877	253	253	5		

- Molecule 7 is a protein called DUF2807 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	EM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	FM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	GM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	HM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	IM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	JM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	KM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	LM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	MM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	AM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	BM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	CM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		
7	DM	208	Total	C	N	O	S	0	0
			1650	1046	293	308	3		

- Molecule 8 is a protein called Neurogenic locus notch.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	EN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	FN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	GN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	HN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	IN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	JN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	KN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	LN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	MN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	AN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	BN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	CN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		
8	DN	78	Total	C	N	O	S	0	0
			582	357	99	113	13		

- Molecule 9 is a protein called Unknown protein fragment.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	EU	9	Total	C	N	O	0	0
			45	27	9	9		
9	FU	9	Total	C	N	O	0	0
			45	27	9	9		
9	GU	9	Total	C	N	O	0	0
			45	27	9	9		
9	HU	9	Total	C	N	O	0	0
			45	27	9	9		
9	IU	9	Total	C	N	O	0	0
			45	27	9	9		
9	JU	9	Total	C	N	O	0	0
			45	27	9	9		
9	KU	9	Total	C	N	O	0	0
			45	27	9	9		
9	LU	9	Total	C	N	O	0	0
			45	27	9	9		

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
9	MU	9	45	27	9	9	0	0
9	AU	9	45	27	9	9	0	0
9	BU	9	45	27	9	9	0	0
9	CU	9	45	27	9	9	0	0
9	DU	9	45	27	9	9	0	0

- Molecule 10 is a protein called Unknown protein fragment.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
10	EX	48	240	144	48	48	0	0
10	FX	48	240	144	48	48	0	0
10	GX	48	240	144	48	48	0	0
10	HX	48	240	144	48	48	0	0
10	IX	48	240	144	48	48	0	0
10	JX	48	240	144	48	48	0	0
10	KX	48	240	144	48	48	0	0
10	LX	48	240	144	48	48	0	0
10	MX	48	240	144	48	48	0	0
10	VX	48	240	144	48	48	0	0
10	WX	48	240	144	48	48	0	0
10	XX	48	240	144	48	48	0	0
10	YX	48	240	144	48	48	0	0
10	ZX	48	240	144	48	48	0	0

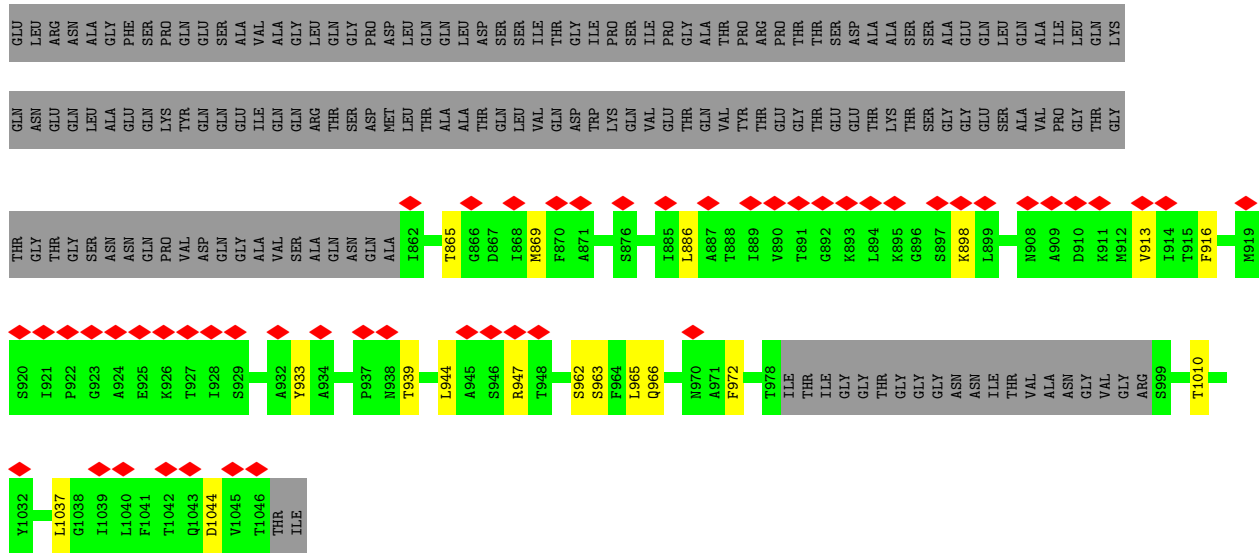
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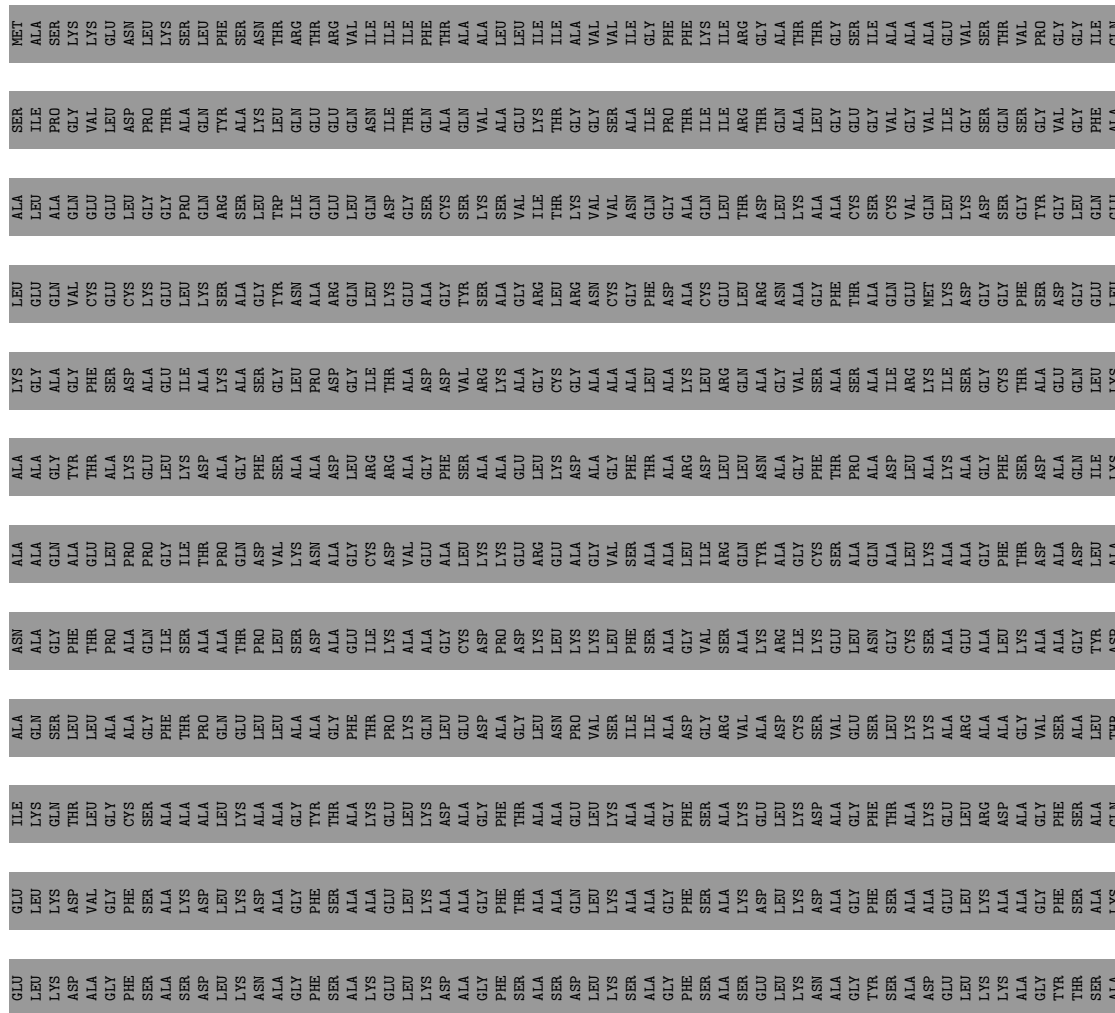
Mol	Chain	Residues	Atoms				AltConf	Trace
10	AX	48	Total	C	N	O	0	0
			240	144	48	48		
10	BX	48	Total	C	N	O	0	0
			240	144	48	48		
10	CX	48	Total	C	N	O	0	0
			240	144	48	48		
10	DX	48	Total	C	N	O	0	0
			240	144	48	48		

- Molecule 11 is a protein called DotC.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	CC	243	Total	C	N	O	S	0	0
			1921	1216	340	357	8		
11	BC	243	Total	C	N	O	S	0	0
			1921	1216	340	357	8		
11	GC	243	Total	C	N	O	S	0	0
			1921	1216	340	357	8		
11	KC	243	Total	C	N	O	S	0	0
			1921	1216	340	357	8		
11	DC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	EC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	FC	243	Total	C	N	O	S	0	0
			1921	1216	340	357	8		
11	HC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	IC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	JC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	LC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	MC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		
11	AC	209	Total	C	N	O	S	0	0
			1667	1061	292	309	5		

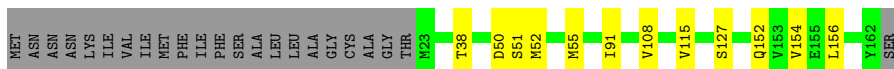
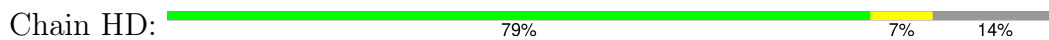


• Molecule 1: IcmE protein

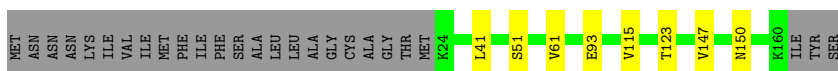




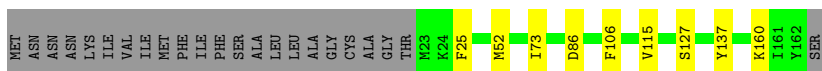
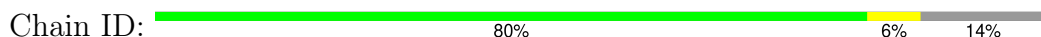
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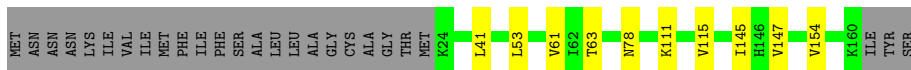
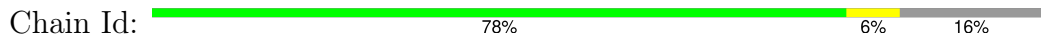
● Molecule 2: DotD



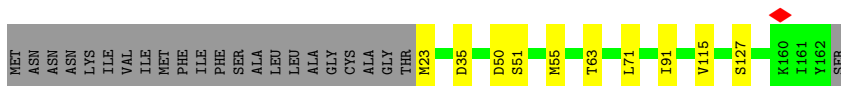
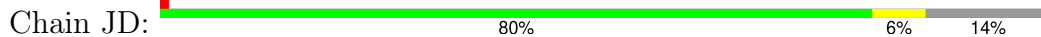
● Molecule 2: DotD



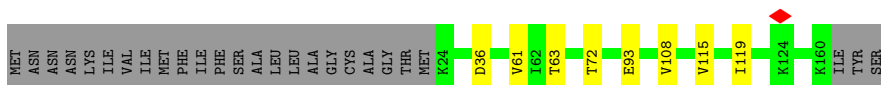
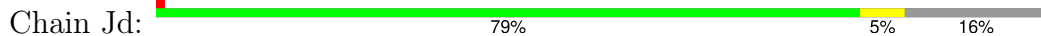
● Molecule 2: DotD



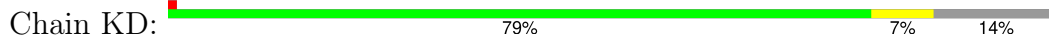
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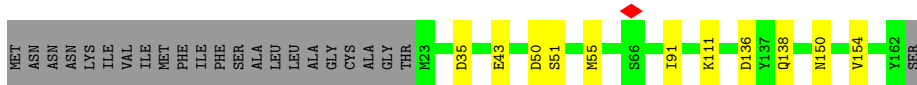


● Molecule 2: DotD

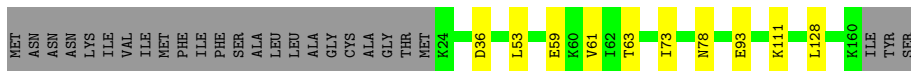
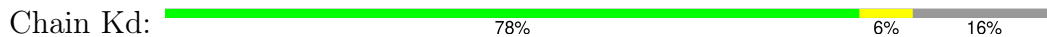


● Molecule 2: DotD

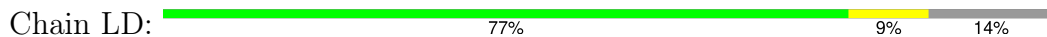




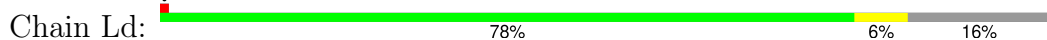
• Molecule 2: DotD



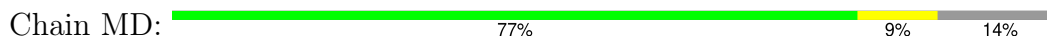
• Molecule 2: DotD



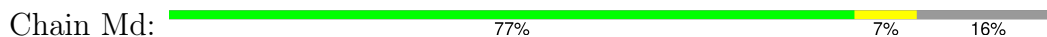
• Molecule 2: DotD



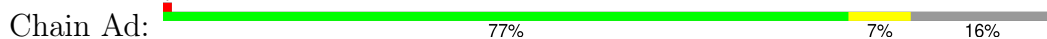
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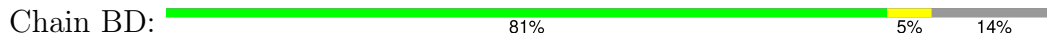
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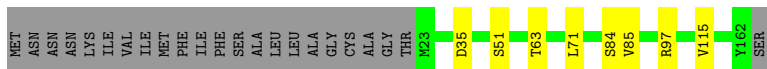


• Molecule 2: DotD

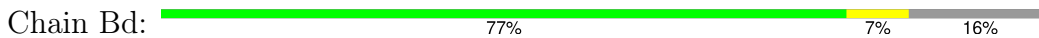


• Molecule 2: DotD

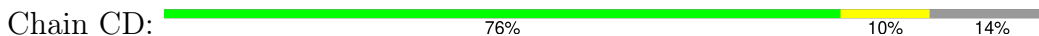




• Molecule 2: DotD



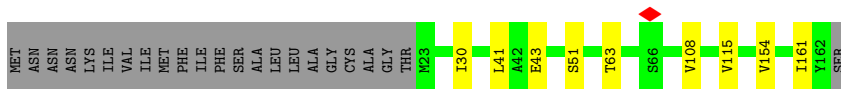
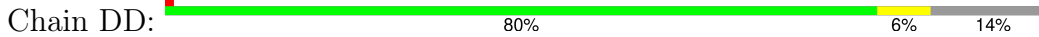
• Molecule 2: DotD



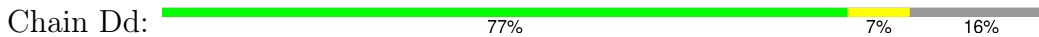
• Molecule 2: DotD



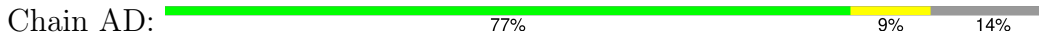
• Molecule 2: DotD



• Molecule 2: DotD

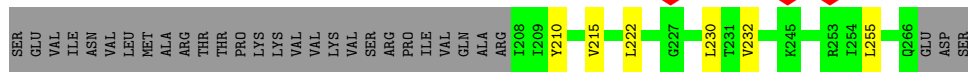


• Molecule 2: DotD

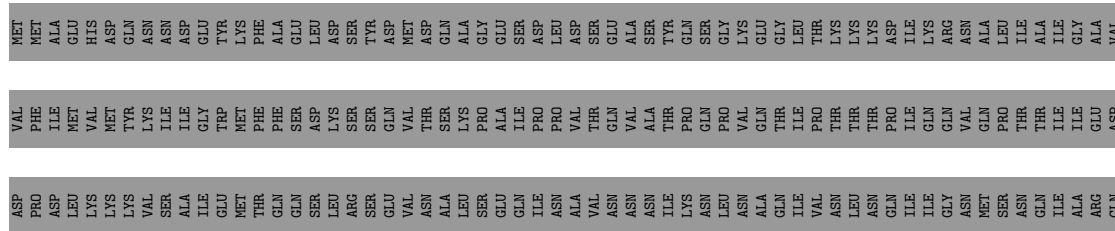


• Molecule 3: DotF

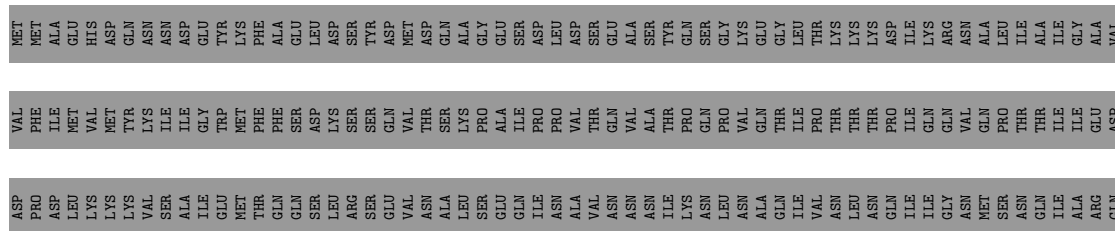




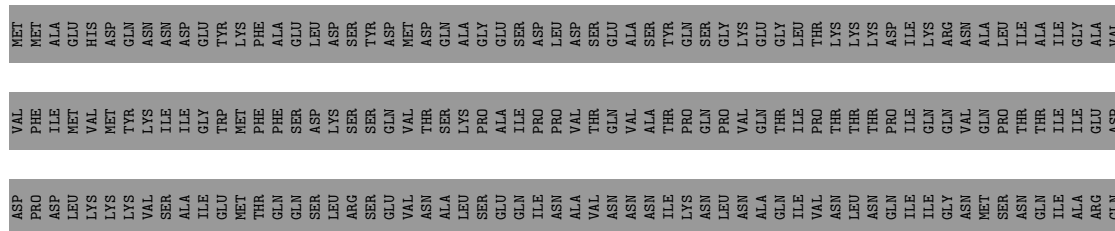
• Molecule 3: DotF



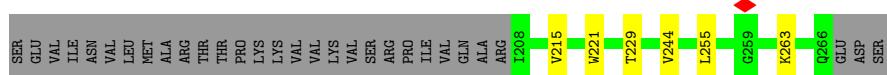
• Molecule 3: DotF



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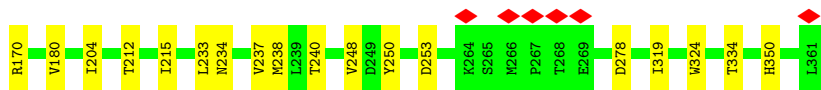


• Molecule 3: DotF

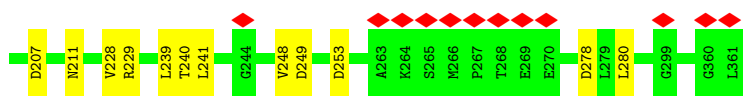
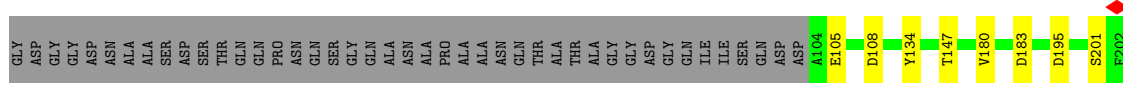




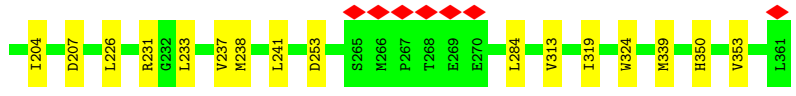
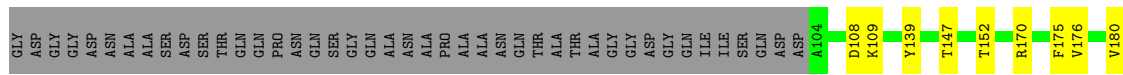
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VAL	PHE	ILE	LEU	VAL	MET	TYR	LYS	LYS	ILE	GLY	TRP	MET	PHE	PHE	GLN	SER	ASP	LEU	ASP	SER	SER	GLN	PRO	ALA	GLU	ILE	PRO	VAL	THR	THR	VAL	THR	THR	ASP						
ASP	PRO	ASP	LEU	LYS	LYS	VAL	VAL	SER	ALA	ASP	ILE	GLY	TRP	GLU	THR	GLN	GLN	LEU	LEU	ARG	SER	SER	GLU	SER	GLN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



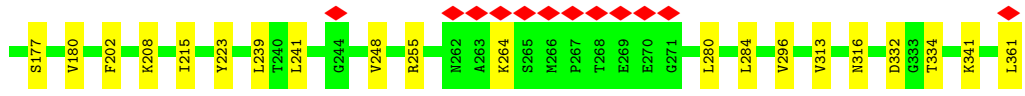
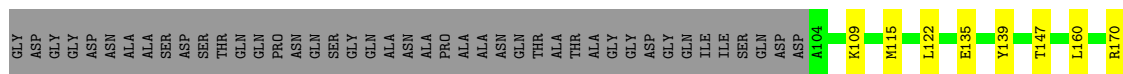
• Molecule 4: Type IV secretion protein IcmK



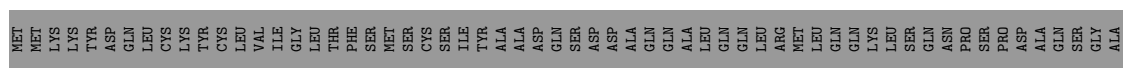
• Molecule 4: Type IV secretion protein IcmK

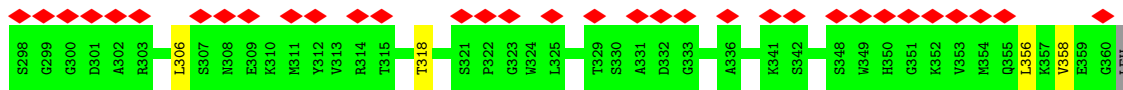


• Molecule 4: Type IV secretion protein IcmK

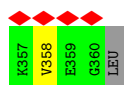
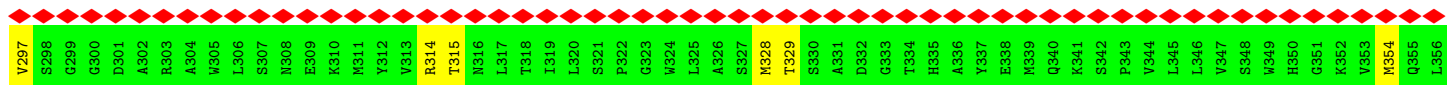
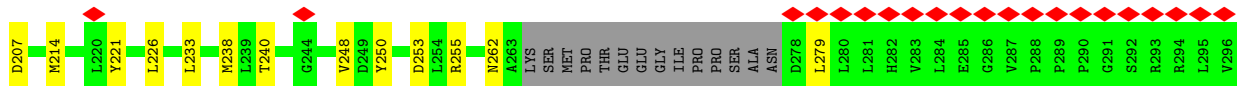
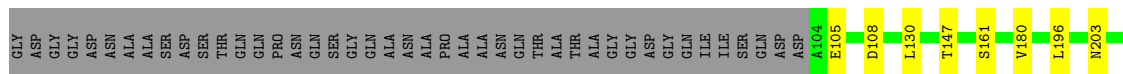
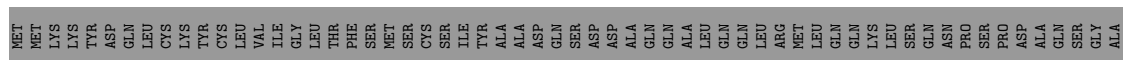


• Molecule 4: Type IV secretion protein IcmK

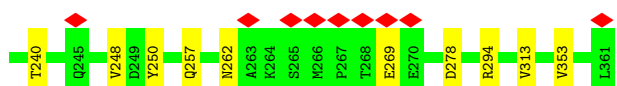
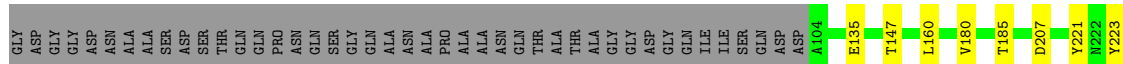
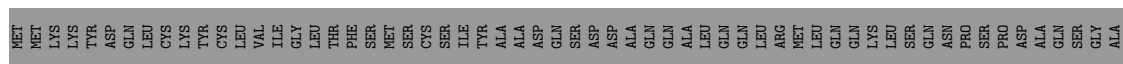




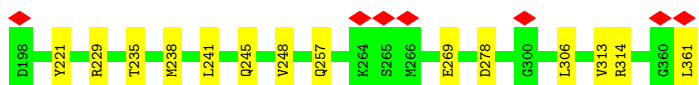
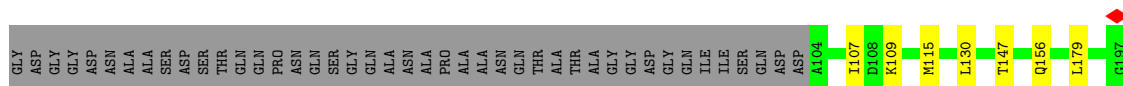
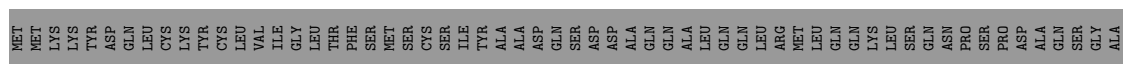
• Molecule 4: Type IV secretion protein IcmK



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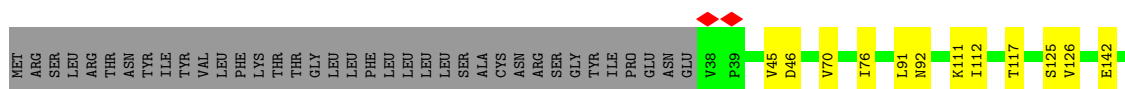


• Molecule 4: Type IV secretion protein IcmK

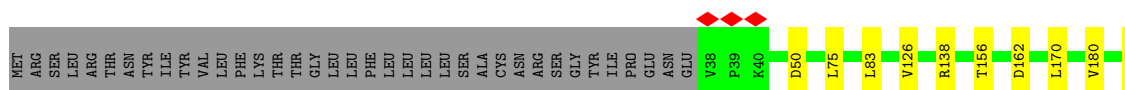
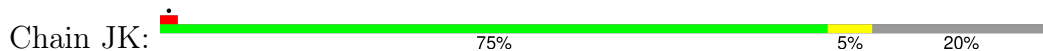




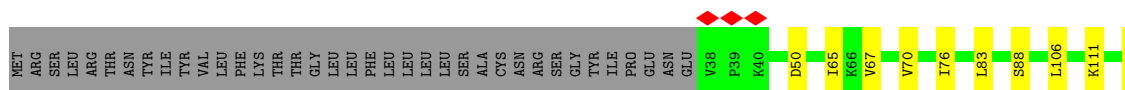
- Molecule 5: Inner membrane lipoprotein YiaD



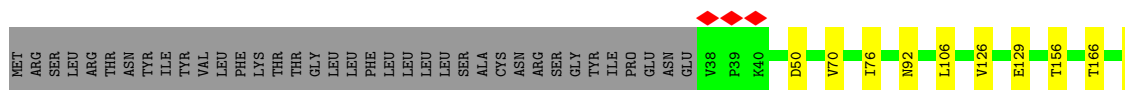
- Molecule 5: Inner membrane lipoprotein YiaD



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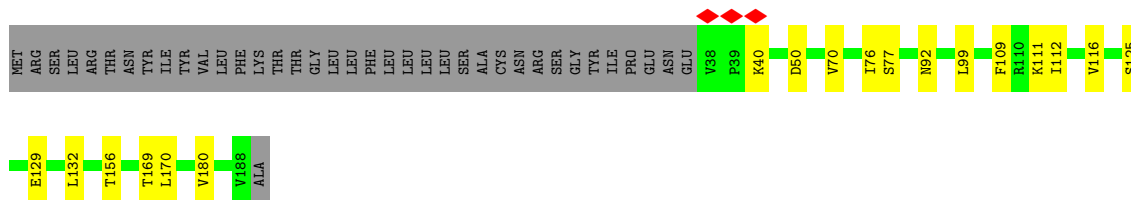


- Molecule 5: Inner membrane lipoprotein YiaD

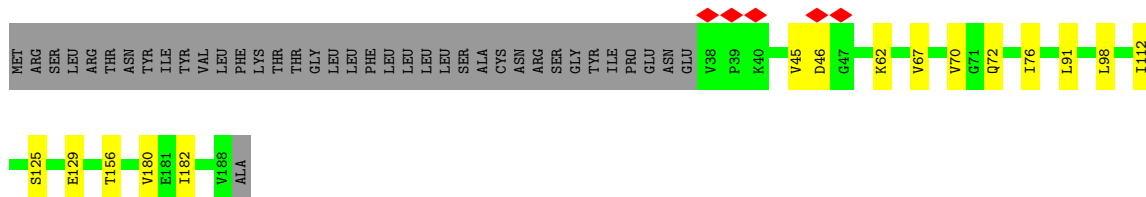
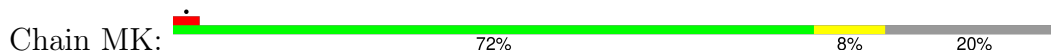


- Molecule 5: Inner membrane lipoprotein YiaD

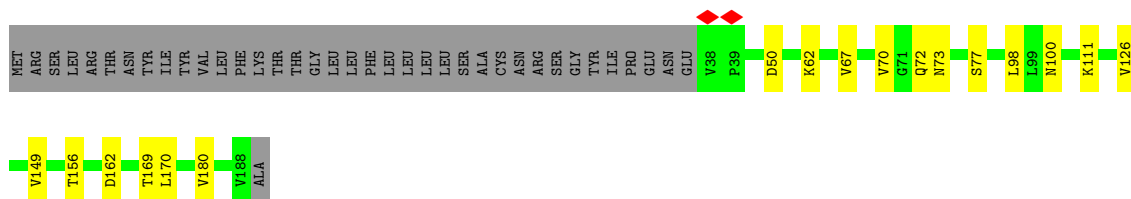




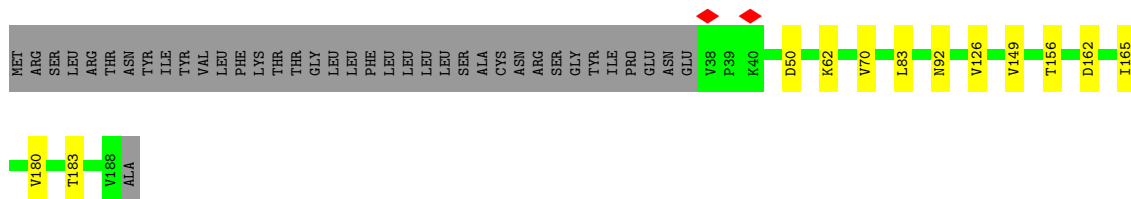
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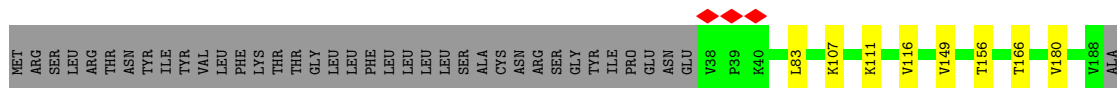
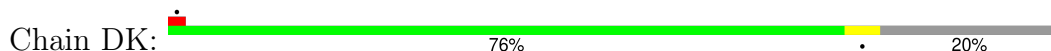
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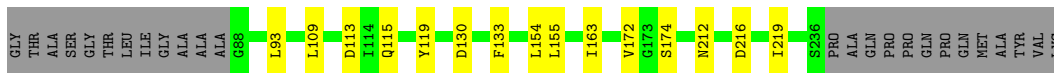
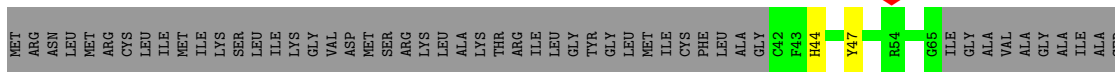


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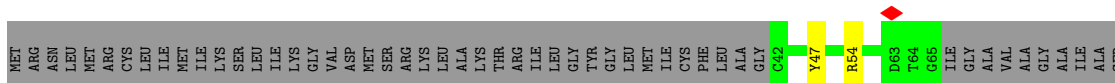


• Molecule 6: Outer membrane protein, OmpA family protein

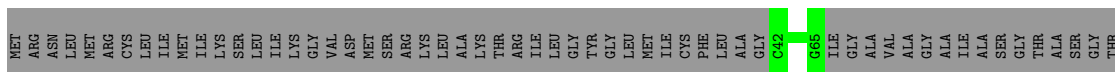




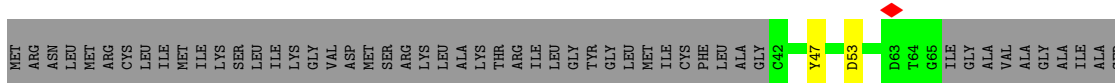
• Molecule 6: Outer membrane protein, OmpA family protein



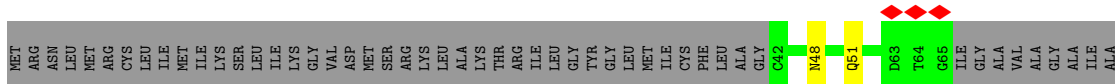
• Molecule 6: Outer membrane protein, OmpA family protein



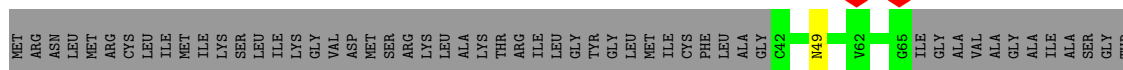
• Molecule 6: Outer membrane protein, OmpA family protein



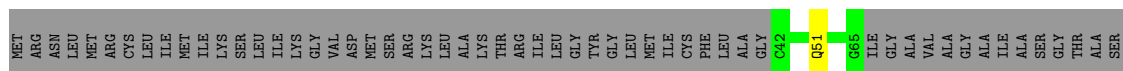
• Molecule 6: Outer membrane protein, OmpA family protein



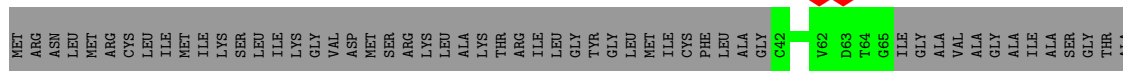
• Molecule 6: Outer membrane protein, OmpA family protein



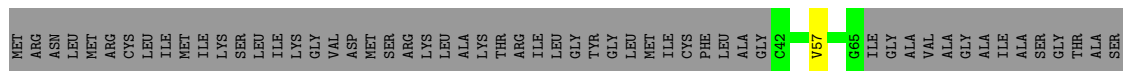
• Molecule 6: Outer membrane protein, OmpA family protein



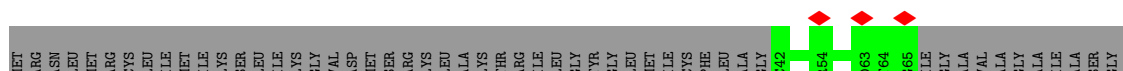
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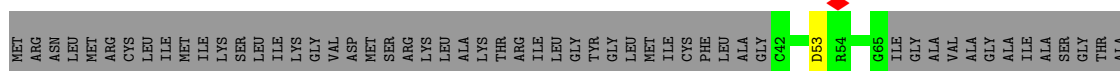


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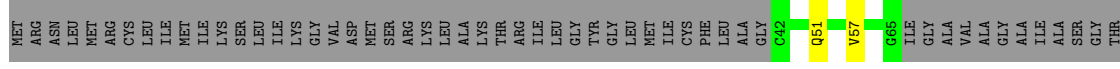




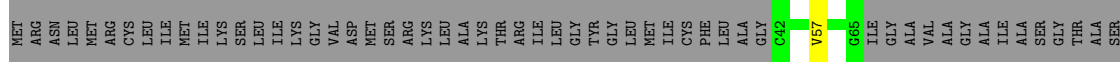
• Molecule 6: Outer membrane protein, OmpA family protein



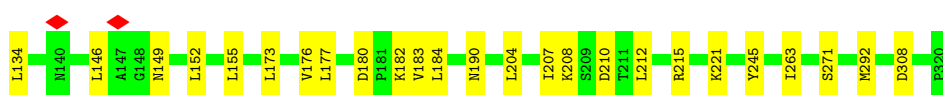
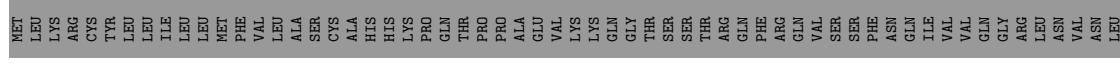
• Molecule 6: Outer membrane protein, OmpA family protein



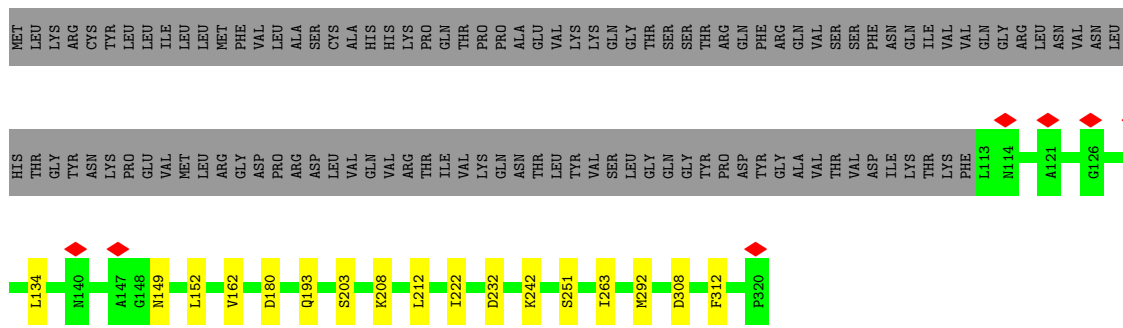
• Molecule 6: Outer membrane protein, OmpA family protein



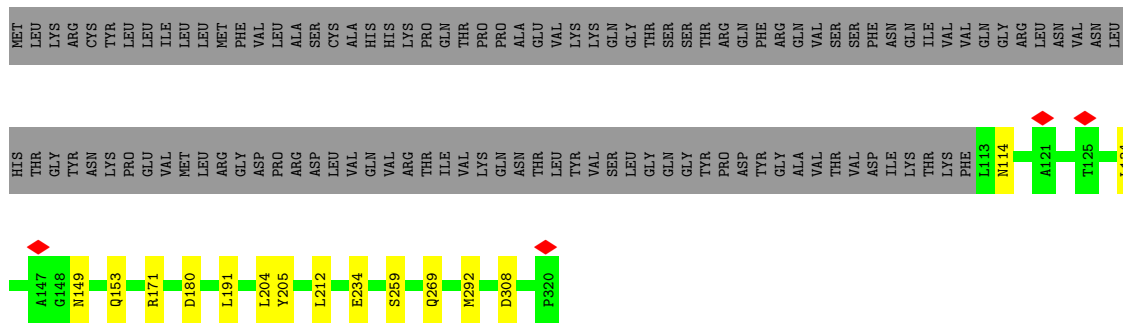
• Molecule 7: DUF2807 domain-containing protein



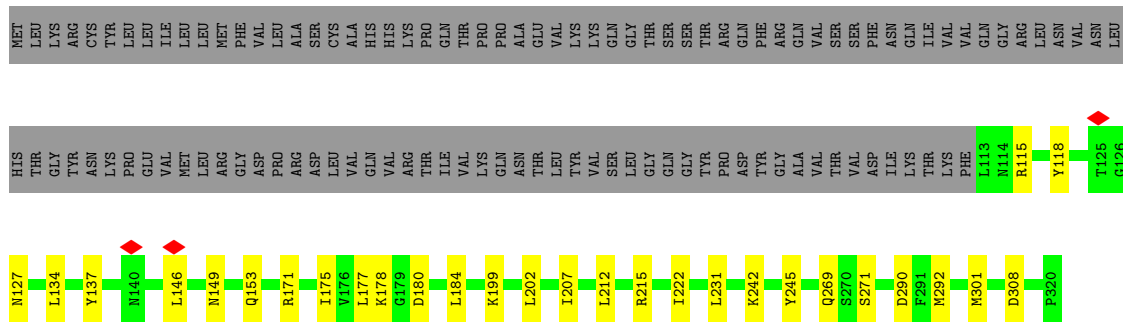
• Molecule 7: DUF2807 domain-containing protein



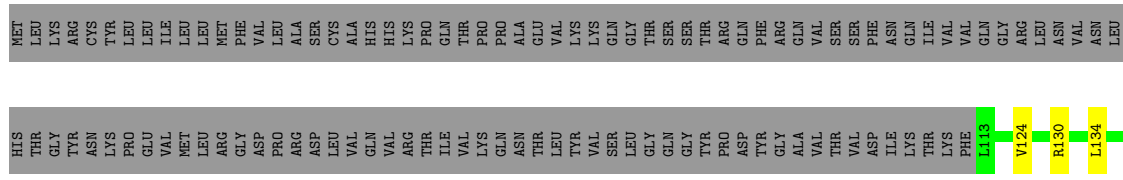
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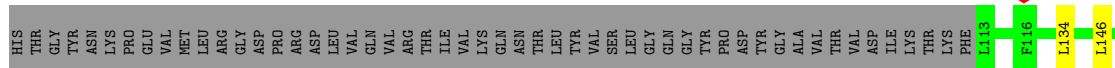
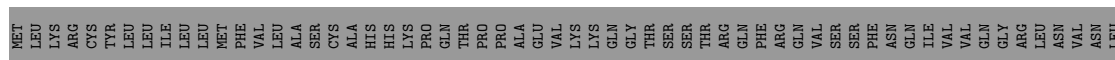


• Molecule 7: DUF2807 domain-containing protein

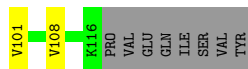
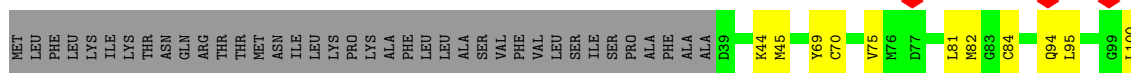




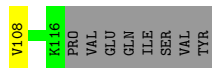
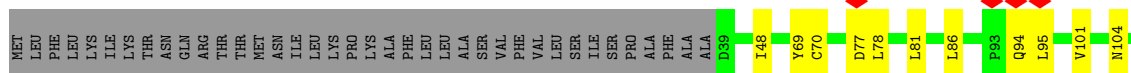
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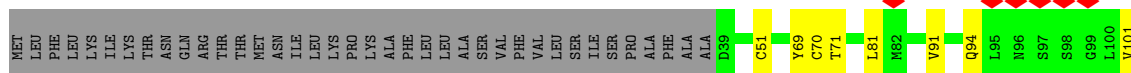
• Molecule 8: Neurogenic locus notch



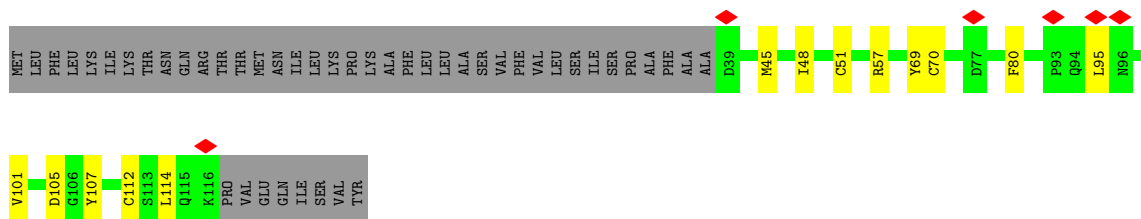
• Molecule 8: Neurogenic locus notch



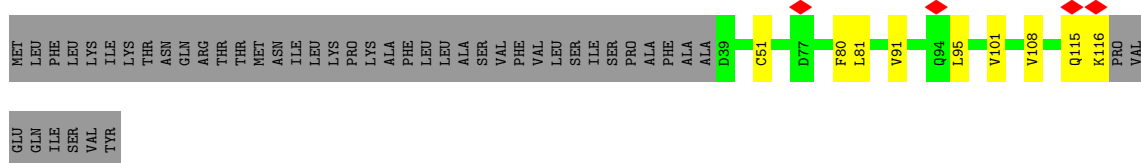
• Molecule 8: Neurogenic locus notch



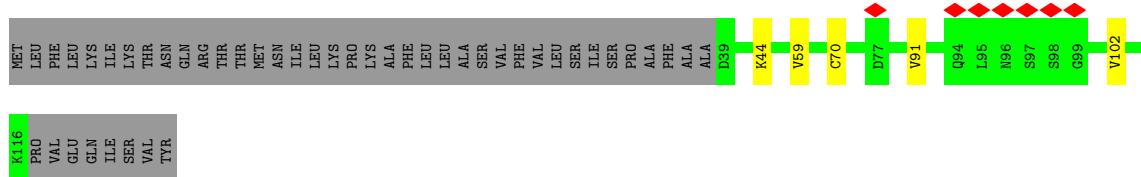
• Molecule 8: Neurogenic locus notch



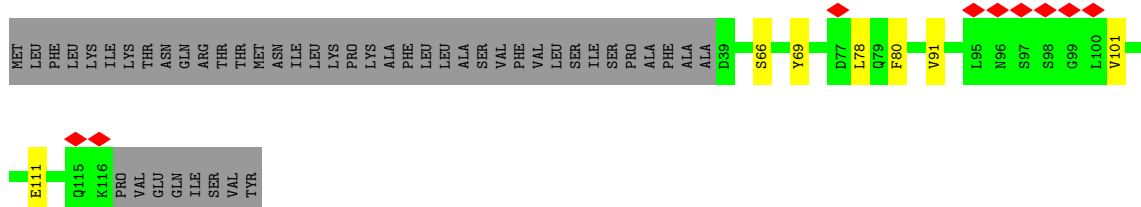
● Molecule 8: Neurogenic locus notch



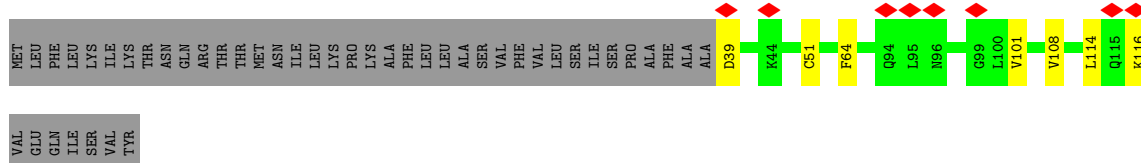
● Molecule 8: Neurogenic locus notch



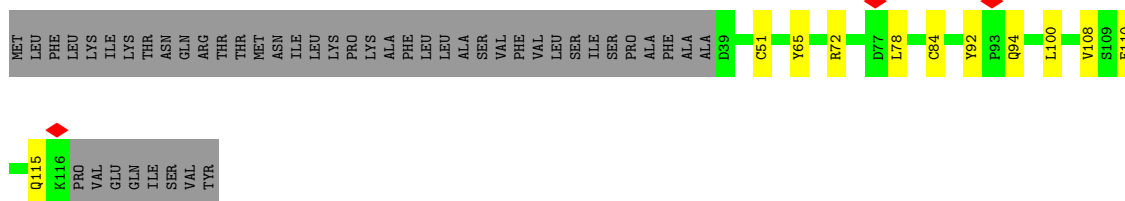
● Molecule 8: Neurogenic locus notch



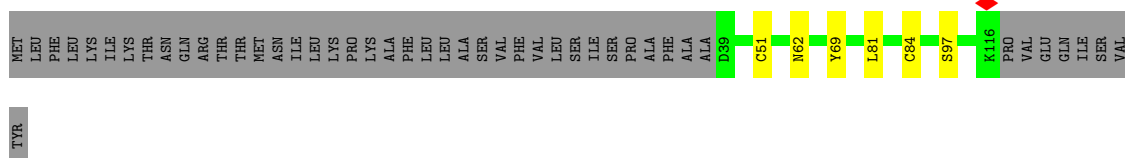
● Molecule 8: Neurogenic locus notch



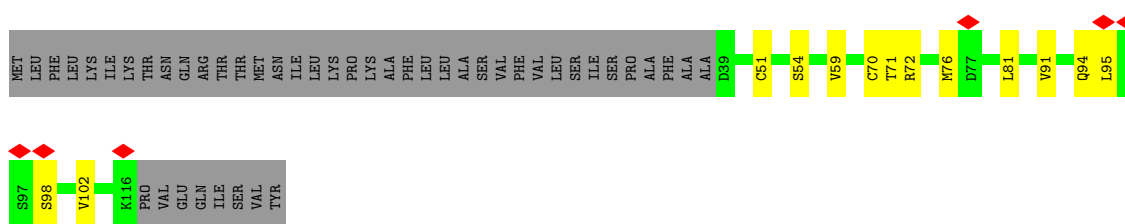
• Molecule 8: Neurogenic locus notch



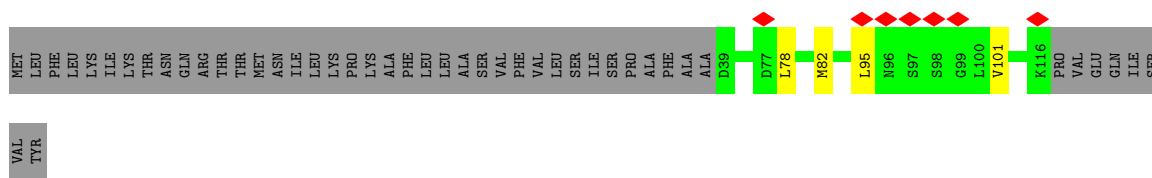
• Molecule 8: Neurogenic locus notch



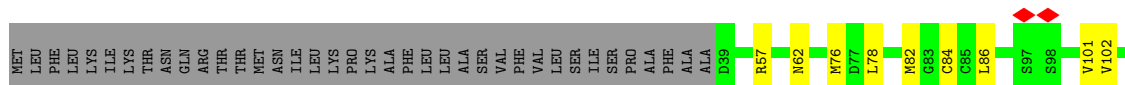
• Molecule 8: Neurogenic locus notch

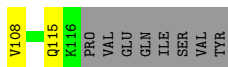


• Molecule 8: Neurogenic locus notch



• Molecule 8: Neurogenic locus notch





- Molecule 9: Unknown protein fragment

Chain EU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain FU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain GU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain HU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain IU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain JU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain KU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain LU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain MU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain AU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain BU:  100%

There are no outlier residues recorded for this chain.

- Molecule 9: Unknown protein fragment

Chain CU:  100%

There are no outlier residues recorded for this chain.

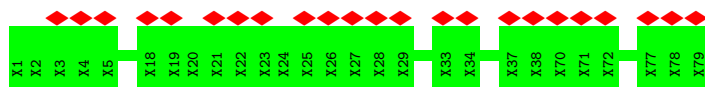
- Molecule 9: Unknown protein fragment

Chain DU:  100%

There are no outlier residues recorded for this chain.

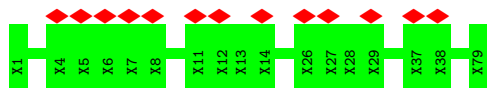
- Molecule 10: Unknown protein fragment

Chain EX:  48% 100%



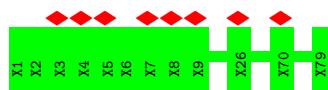
- Molecule 10: Unknown protein fragment

Chain FX:  27% 100%

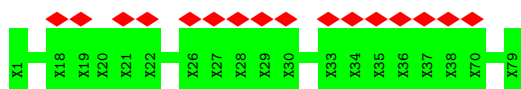


- Molecule 10: Unknown protein fragment

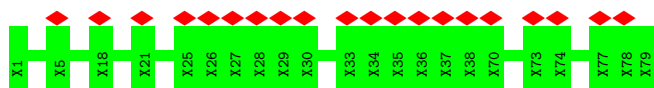
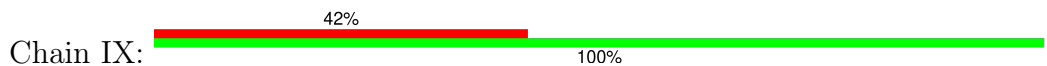
Chain GX:  17% 100%



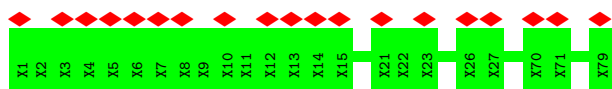
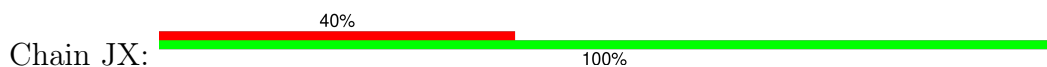
- Molecule 10: Unknown protein fragment



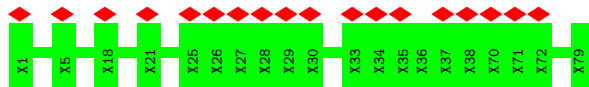
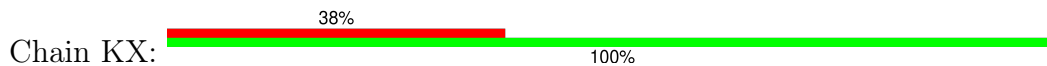
- Molecule 10: Unknown protein fragment



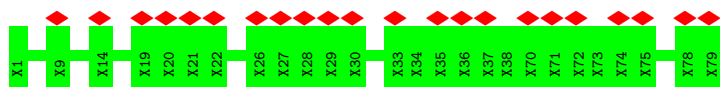
- Molecule 10: Unknown protein fragment



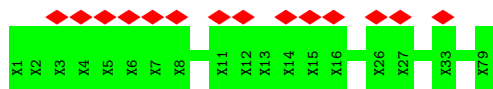
- Molecule 10: Unknown protein fragment



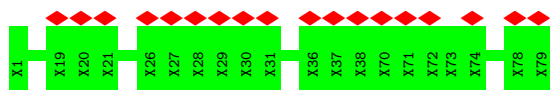
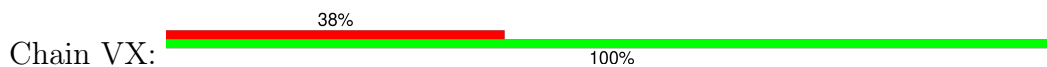
- Molecule 10: Unknown protein fragment



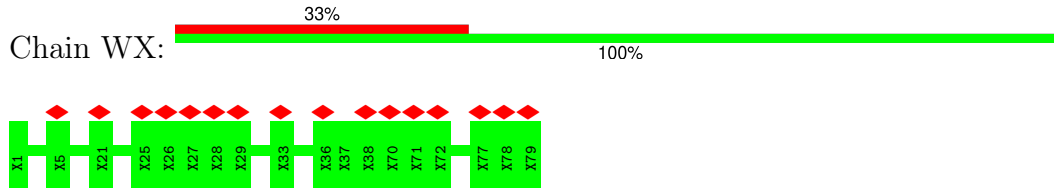
- Molecule 10: Unknown protein fragment



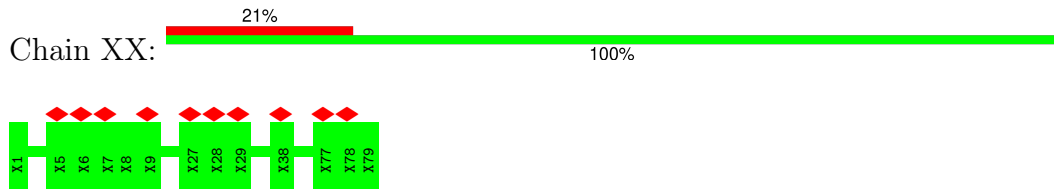
- Molecule 10: Unknown protein fragment



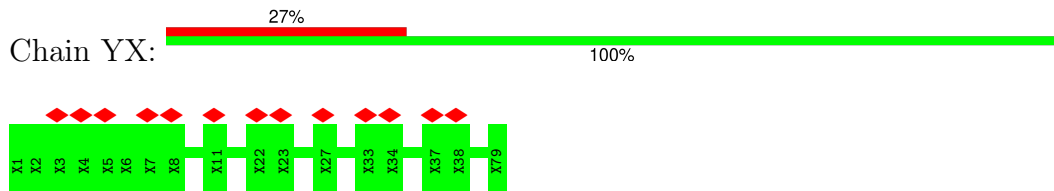
- Molecule 10: Unknown protein fragment



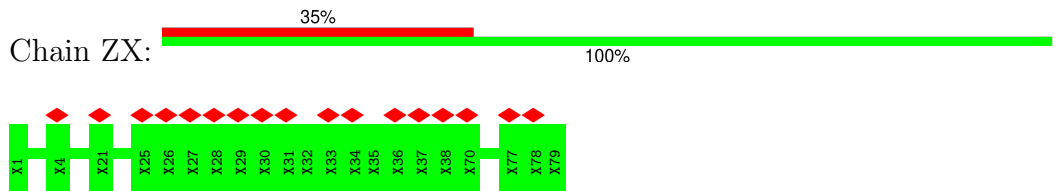
- Molecule 10: Unknown protein fragment



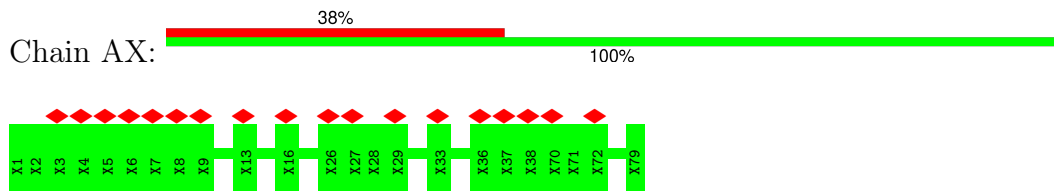
- Molecule 10: Unknown protein fragment



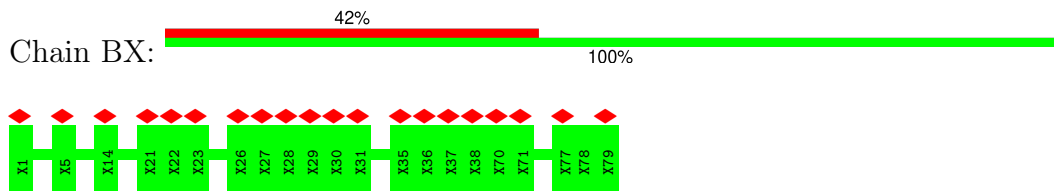
- Molecule 10: Unknown protein fragment



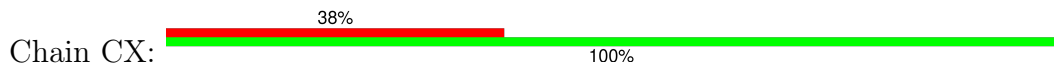
- Molecule 10: Unknown protein fragment

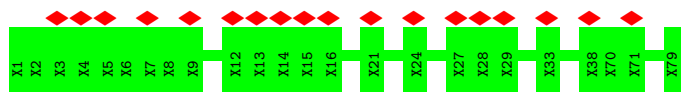


- Molecule 10: Unknown protein fragment

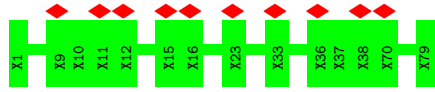


- Molecule 10: Unknown protein fragment

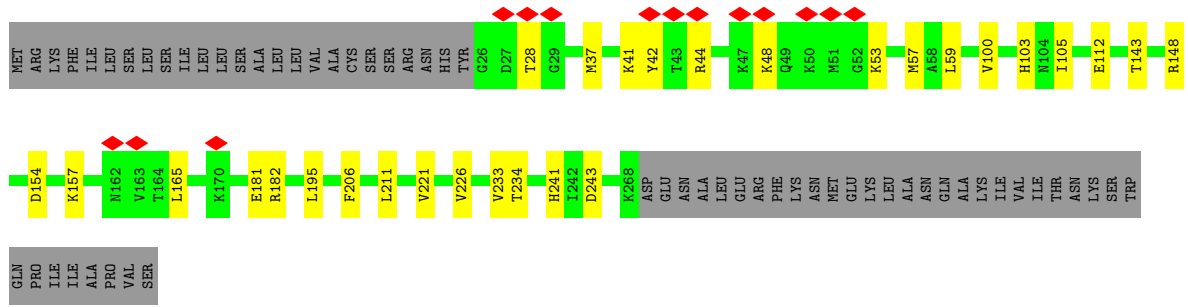




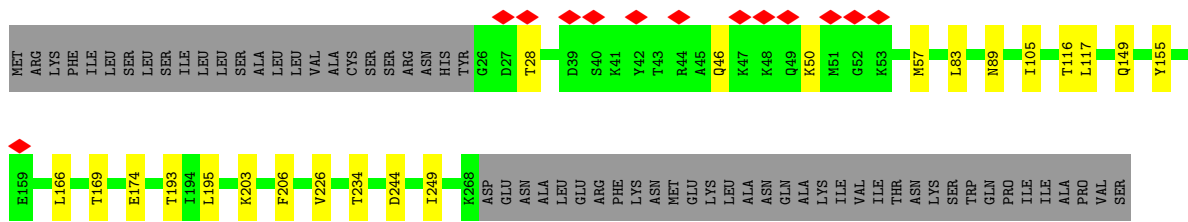
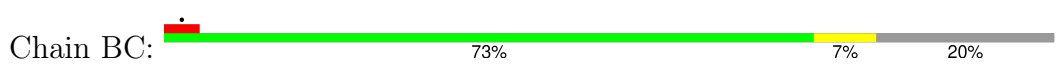
• Molecule 10: Unknown protein fragment



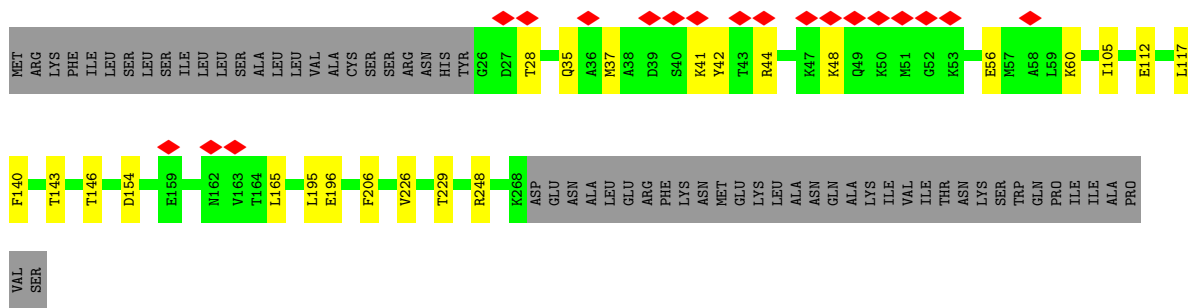
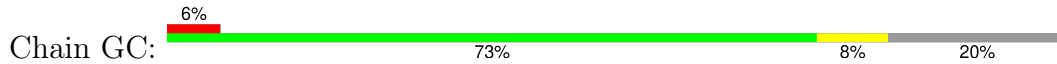
• Molecule 11: DotC



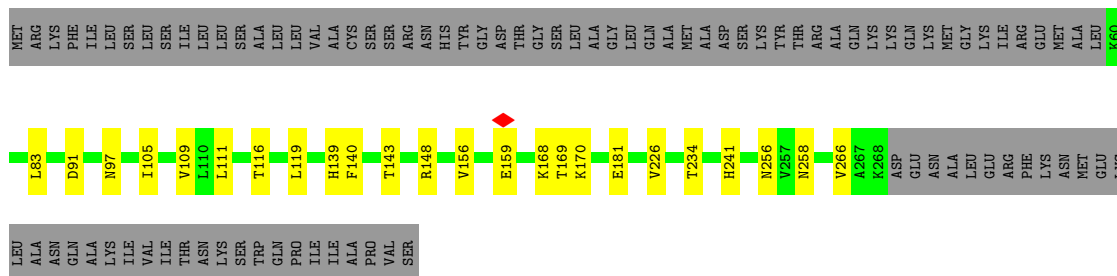
• Molecule 11: DotC



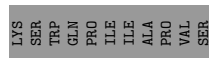
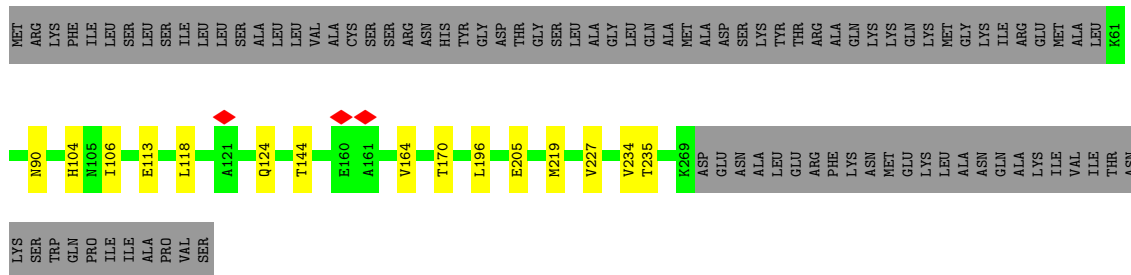
• Molecule 11: DotC



• Molecule 11: DotC



• Molecule 11: DotC



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	41057	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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	7.797	Depositor
Minimum map value	-2.782	Depositor
Average map value	0.094	Depositor
Map value standard deviation	0.545	Depositor
Recommended contour level	2.25	Depositor
Map size (\AA)	561.0, 561.0, 561.0	wwPDB
Map dimensions	250, 250, 250	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	2.244, 2.244, 2.244	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	AG	0.29	0/1250	0.56	0/1699
1	Ag	0.26	0/278	0.46	0/377
1	BG	0.29	0/1250	0.57	0/1699
1	Bg	0.25	0/278	0.48	0/377
1	CG	0.29	0/1250	0.57	0/1699
1	Cg	0.27	0/278	0.51	0/377
1	DG	0.28	0/1250	0.57	0/1699
1	Dg	0.27	0/278	0.47	0/377
1	EG	0.28	0/1250	0.58	1/1699 (0.1%)
1	Eg	0.26	0/278	0.48	0/377
1	FG	0.30	0/1250	0.57	0/1699
1	Fg	0.27	0/278	0.49	0/377
1	GG	0.29	0/1250	0.58	0/1699
1	Gg	0.26	0/278	0.48	0/377
1	HG	0.30	0/1250	0.58	0/1699
1	Hg	0.26	0/278	0.46	0/377
1	IG	0.29	0/1250	0.58	0/1699
1	Ig	0.26	0/278	0.48	0/377
1	JG	0.28	0/1250	0.57	0/1699
1	Jg	0.27	0/278	0.48	0/377
1	KG	0.29	0/1250	0.56	0/1699
1	Kg	0.25	0/278	0.48	0/377
1	LG	0.29	0/1250	0.57	1/1699 (0.1%)
1	Lg	0.27	0/278	0.49	0/377
1	MG	0.29	0/1250	0.56	0/1699
1	Mg	0.28	0/278	0.46	0/377
1	NG	0.29	0/1250	0.55	0/1699
1	OG	0.29	0/1250	0.56	0/1699
1	PG	0.29	0/1250	0.56	0/1699
1	VG	0.28	0/278	0.59	0/377
1	WG	0.26	0/278	0.52	0/377
1	XG	0.26	0/278	0.51	0/377
1	YG	0.28	0/278	0.51	0/377
1	ZG	0.28	0/278	0.50	0/377

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
2	AD	0.30	0/1107	0.52	0/1502
2	Ad	0.29	0/1078	0.51	0/1463
2	BD	0.31	0/1107	0.53	0/1502
2	Bd	0.28	0/1078	0.49	0/1463
2	CD	0.30	0/1107	0.53	0/1502
2	Cd	0.28	0/1078	0.51	0/1463
2	DD	0.30	0/1107	0.53	0/1502
2	Dd	0.30	0/1078	0.49	0/1463
2	ED	0.32	0/1107	0.53	0/1502
2	Ed	0.30	0/1078	0.50	0/1463
2	FD	0.31	0/1107	0.52	0/1502
2	Fd	0.29	0/1078	0.49	0/1463
2	GD	0.30	0/1107	0.53	0/1502
2	Gd	0.29	0/1078	0.51	0/1463
2	HD	0.30	0/1107	0.52	0/1502
2	Hd	0.29	0/1078	0.50	0/1463
2	ID	0.30	0/1107	0.53	0/1502
2	Id	0.29	0/1078	0.50	0/1463
2	JD	0.31	0/1107	0.53	0/1502
2	Jd	0.29	0/1078	0.49	0/1463
2	KD	0.30	0/1107	0.53	0/1502
2	Kd	0.29	0/1078	0.50	0/1463
2	LD	0.29	0/1107	0.52	0/1502
2	Ld	0.29	0/1078	0.50	0/1463
2	MD	0.30	0/1107	0.53	0/1502
2	Md	0.28	0/1078	0.49	0/1463
3	AF	0.26	0/490	0.55	0/660
3	Af	0.28	0/456	0.54	0/615
3	BF	0.27	0/490	0.52	0/660
3	Bf	0.27	0/456	0.55	0/615
3	CF	0.27	0/490	0.54	0/660
3	Cf	0.28	0/456	0.53	0/615
3	DF	0.27	0/490	0.55	0/660
3	Df	0.27	0/456	0.53	0/615
3	EF	0.27	0/490	0.54	0/660
3	Ef	0.28	0/456	0.52	0/615
3	FF	0.26	0/490	0.53	0/660
3	Ff	0.29	0/456	0.52	0/615
3	GF	0.26	0/490	0.54	0/660
3	Gf	0.28	0/456	0.51	0/615
3	HF	0.27	0/490	0.54	0/660
3	Hf	0.28	0/456	0.54	0/615
3	IF	0.27	0/490	0.53	0/660

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
3	If	0.26	0/456	0.55	0/615
3	JF	0.26	0/490	0.54	0/660
3	Jf	0.28	0/456	0.53	0/615
3	KF	0.26	0/490	0.54	0/660
3	Kf	0.27	0/456	0.54	0/615
3	LF	0.27	0/490	0.55	0/660
3	Lf	0.27	0/456	0.53	0/615
3	MF	0.27	0/490	0.54	0/660
3	Mf	0.28	0/456	0.52	0/615
3	VF	0.27	0/490	0.51	0/660
3	WF	0.27	0/490	0.55	0/660
3	XF	0.27	0/490	0.54	0/660
3	YF	0.25	0/490	0.55	0/660
3	ZF	0.27	0/490	0.53	0/660
4	AH	0.29	0/2033	0.52	0/2775
4	BH	0.30	0/2033	0.53	0/2775
4	CH	0.29	0/2033	0.51	0/2775
4	DH	0.29	0/2033	0.51	0/2775
4	EH	0.29	0/2033	0.51	0/2775
4	FH	0.29	0/2033	0.52	0/2775
4	GH	0.29	0/2033	0.51	0/2775
4	HH	0.30	0/2033	0.52	0/2775
4	IH	0.29	0/2033	0.52	0/2775
4	JH	0.29	0/2033	0.51	0/2775
4	KH	0.30	0/2033	0.53	0/2775
4	LH	0.29	0/2033	0.52	0/2775
4	MH	0.30	0/2033	0.53	0/2775
4	VH	0.27	0/1921	0.51	0/2620
4	WH	0.27	0/1921	0.54	0/2620
4	XH	0.27	0/1921	0.52	0/2620
4	YH	0.27	0/1921	0.53	0/2620
4	ZH	0.27	0/1921	0.52	0/2620
5	AK	0.30	0/1195	0.54	0/1616
5	BK	0.31	0/1195	0.55	0/1616
5	CK	0.30	0/1195	0.54	0/1616
5	DK	0.31	0/1195	0.54	0/1616
5	EK	0.29	0/1195	0.54	0/1616
5	FK	0.29	0/1195	0.55	0/1616
5	GK	0.30	0/1195	0.53	0/1616
5	HK	0.32	0/1195	0.55	0/1616
5	IK	0.29	0/1195	0.54	0/1616
5	JK	0.30	0/1195	0.53	0/1616
5	KK	0.30	0/1195	0.54	0/1616

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
5	LK	0.31	0/1195	0.54	0/1616
5	MK	0.30	0/1195	0.54	0/1616
6	AL	0.30	0/1417	0.54	0/1912
6	BL	0.30	0/1417	0.55	0/1912
6	CL	0.30	0/1417	0.54	0/1912
6	DL	0.30	0/1417	0.54	0/1912
6	EL	0.30	0/1417	0.54	0/1912
6	FL	0.30	0/1417	0.55	0/1912
6	GL	0.30	0/1417	0.55	0/1912
6	HL	0.30	0/1417	0.55	0/1912
6	IL	0.29	0/1417	0.56	0/1912
6	JL	0.30	0/1417	0.54	0/1912
6	KL	0.29	0/1417	0.56	0/1912
6	LL	0.31	0/1417	0.54	0/1912
6	ML	0.30	0/1417	0.55	0/1912
7	AM	0.29	0/1678	0.58	0/2262
7	BM	0.29	0/1678	0.58	0/2262
7	CM	0.29	0/1678	0.57	0/2262
7	DM	0.29	0/1678	0.57	0/2262
7	EM	0.28	0/1678	0.57	0/2262
7	FM	0.30	0/1678	0.58	0/2262
7	GM	0.29	0/1678	0.57	0/2262
7	HM	0.29	0/1678	0.58	0/2262
7	IM	0.29	0/1678	0.57	0/2262
7	JM	0.29	0/1678	0.57	0/2262
7	KM	0.28	0/1678	0.57	0/2262
7	LM	0.29	0/1678	0.58	0/2262
7	MM	0.28	0/1678	0.57	0/2262
8	AN	0.32	0/593	0.54	0/799
8	BN	0.31	0/593	0.56	0/799
8	CN	0.31	0/593	0.51	0/799
8	DN	0.31	0/593	0.53	0/799
8	EN	0.33	0/593	0.52	0/799
8	FN	0.33	0/593	0.52	0/799
8	GN	0.31	0/593	0.52	0/799
8	HN	0.31	0/593	0.53	0/799
8	IN	0.30	0/593	0.52	0/799
8	JN	0.31	0/593	0.53	0/799
8	KN	0.32	0/593	0.52	0/799
8	LN	0.32	0/593	0.51	0/799
8	MN	0.32	0/593	0.54	0/799
11	AC	0.30	0/1702	0.52	0/2315
11	BC	0.30	0/1957	0.52	0/2651

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
11	CC	0.29	0/1957	0.52	0/2651
11	DC	0.29	0/1702	0.51	0/2315
11	EC	0.30	0/1702	0.51	0/2315
11	FC	0.30	0/1957	0.50	0/2651
11	GC	0.29	0/1957	0.51	0/2651
11	HC	0.29	0/1702	0.50	0/2315
11	IC	0.29	0/1702	0.51	0/2315
11	JC	0.31	0/1702	0.52	0/2315
11	KC	0.29	0/1957	0.52	0/2651
11	LC	0.30	0/1702	0.55	0/2315
11	MC	0.30	0/1702	0.52	0/2315
All	All	0.29	0/191071	0.53	2/258997 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	LG	1040	LEU	CA-CB-CG	6.10	129.34	115.30
1	EG	965	LEU	CA-CB-CG	5.04	126.89	115.30

There are no chirality outliers.

There are no planarity outliers.

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	AG	161/1048 (15%)	154 (96%)	7 (4%)	0	100 100

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Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Ag	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	BG	161/1048 (15%)	155 (96%)	6 (4%)	0	100	100
1	Bg	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	CG	161/1048 (15%)	152 (94%)	9 (6%)	0	100	100
1	Cg	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	DG	161/1048 (15%)	154 (96%)	7 (4%)	0	100	100
1	Dg	32/1048 (3%)	32 (100%)	0	0	100	100
1	EG	161/1048 (15%)	156 (97%)	5 (3%)	0	100	100
1	Eg	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	FG	161/1048 (15%)	153 (95%)	8 (5%)	0	100	100
1	Fg	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	GG	161/1048 (15%)	151 (94%)	10 (6%)	0	100	100
1	Gg	32/1048 (3%)	32 (100%)	0	0	100	100
1	HG	161/1048 (15%)	153 (95%)	8 (5%)	0	100	100
1	Hg	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	IG	161/1048 (15%)	153 (95%)	8 (5%)	0	100	100
1	Ig	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	JG	161/1048 (15%)	156 (97%)	5 (3%)	0	100	100
1	Jg	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	KG	161/1048 (15%)	155 (96%)	6 (4%)	0	100	100
1	Kg	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	LG	161/1048 (15%)	149 (92%)	12 (8%)	0	100	100
1	Lg	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	MG	161/1048 (15%)	154 (96%)	7 (4%)	0	100	100
1	Mg	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	NG	161/1048 (15%)	153 (95%)	8 (5%)	0	100	100
1	OG	161/1048 (15%)	157 (98%)	4 (2%)	0	100	100
1	PG	161/1048 (15%)	156 (97%)	5 (3%)	0	100	100
1	VG	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100
1	WG	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	XG	32/1048 (3%)	31 (97%)	1 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	YG	32/1048 (3%)	30 (94%)	2 (6%)	0	100	100
1	ZG	32/1048 (3%)	32 (100%)	0	0	100	100
2	AD	138/163 (85%)	127 (92%)	11 (8%)	0	100	100
2	Ad	135/163 (83%)	128 (95%)	7 (5%)	0	100	100
2	BD	138/163 (85%)	133 (96%)	5 (4%)	0	100	100
2	Bd	135/163 (83%)	127 (94%)	8 (6%)	0	100	100
2	CD	138/163 (85%)	131 (95%)	7 (5%)	0	100	100
2	Cd	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
2	DD	138/163 (85%)	133 (96%)	5 (4%)	0	100	100
2	Dd	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
2	ED	138/163 (85%)	130 (94%)	8 (6%)	0	100	100
2	Ed	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
2	FD	138/163 (85%)	130 (94%)	8 (6%)	0	100	100
2	Fd	135/163 (83%)	127 (94%)	8 (6%)	0	100	100
2	GD	138/163 (85%)	130 (94%)	8 (6%)	0	100	100
2	Gd	135/163 (83%)	128 (95%)	7 (5%)	0	100	100
2	HD	138/163 (85%)	130 (94%)	8 (6%)	0	100	100
2	Hd	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
2	ID	138/163 (85%)	127 (92%)	11 (8%)	0	100	100
2	Id	135/163 (83%)	131 (97%)	4 (3%)	0	100	100
2	JD	138/163 (85%)	132 (96%)	6 (4%)	0	100	100
2	Jd	135/163 (83%)	126 (93%)	9 (7%)	0	100	100
2	KD	138/163 (85%)	126 (91%)	12 (9%)	0	100	100
2	Kd	135/163 (83%)	131 (97%)	4 (3%)	0	100	100
2	LD	138/163 (85%)	134 (97%)	4 (3%)	0	100	100
2	Ld	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
2	MD	138/163 (85%)	130 (94%)	8 (6%)	0	100	100
2	Md	135/163 (83%)	130 (96%)	5 (4%)	0	100	100
3	AF	61/269 (23%)	58 (95%)	3 (5%)	0	100	100
3	Af	57/269 (21%)	54 (95%)	3 (5%)	0	100	100
3	BF	61/269 (23%)	56 (92%)	5 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	Bf	57/269 (21%)	54 (95%)	3 (5%)	0	100	100
3	CF	61/269 (23%)	56 (92%)	5 (8%)	0	100	100
3	Cf	57/269 (21%)	53 (93%)	4 (7%)	0	100	100
3	DF	61/269 (23%)	59 (97%)	2 (3%)	0	100	100
3	Df	57/269 (21%)	52 (91%)	5 (9%)	0	100	100
3	EF	61/269 (23%)	57 (93%)	4 (7%)	0	100	100
3	Ef	57/269 (21%)	52 (91%)	5 (9%)	0	100	100
3	FF	61/269 (23%)	60 (98%)	1 (2%)	0	100	100
3	Ff	57/269 (21%)	53 (93%)	4 (7%)	0	100	100
3	GF	61/269 (23%)	59 (97%)	2 (3%)	0	100	100
3	Gf	57/269 (21%)	54 (95%)	3 (5%)	0	100	100
3	HF	61/269 (23%)	58 (95%)	3 (5%)	0	100	100
3	Hf	57/269 (21%)	51 (90%)	6 (10%)	0	100	100
3	IF	61/269 (23%)	56 (92%)	5 (8%)	0	100	100
3	If	57/269 (21%)	53 (93%)	4 (7%)	0	100	100
3	JF	61/269 (23%)	58 (95%)	3 (5%)	0	100	100
3	Jf	57/269 (21%)	54 (95%)	3 (5%)	0	100	100
3	KF	61/269 (23%)	55 (90%)	6 (10%)	0	100	100
3	Kf	57/269 (21%)	55 (96%)	2 (4%)	0	100	100
3	LF	61/269 (23%)	59 (97%)	2 (3%)	0	100	100
3	Lf	57/269 (21%)	53 (93%)	4 (7%)	0	100	100
3	MF	61/269 (23%)	60 (98%)	1 (2%)	0	100	100
3	Mf	57/269 (21%)	54 (95%)	3 (5%)	0	100	100
3	VF	61/269 (23%)	61 (100%)	0	0	100	100
3	WF	61/269 (23%)	58 (95%)	3 (5%)	0	100	100
3	XF	61/269 (23%)	60 (98%)	1 (2%)	0	100	100
3	YF	61/269 (23%)	58 (95%)	3 (5%)	0	100	100
3	ZF	61/269 (23%)	60 (98%)	1 (2%)	0	100	100
4	AH	256/361 (71%)	240 (94%)	16 (6%)	0	100	100
4	BH	256/361 (71%)	244 (95%)	12 (5%)	0	100	100
4	CH	256/361 (71%)	241 (94%)	15 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	DH	256/361 (71%)	241 (94%)	15 (6%)	0	100	100
4	EH	256/361 (71%)	248 (97%)	8 (3%)	0	100	100
4	FH	256/361 (71%)	246 (96%)	10 (4%)	0	100	100
4	GH	256/361 (71%)	238 (93%)	18 (7%)	0	100	100
4	HH	256/361 (71%)	244 (95%)	12 (5%)	0	100	100
4	IH	256/361 (71%)	239 (93%)	17 (7%)	0	100	100
4	JH	256/361 (71%)	245 (96%)	11 (4%)	0	100	100
4	KH	256/361 (71%)	239 (93%)	17 (7%)	0	100	100
4	LH	256/361 (71%)	239 (93%)	17 (7%)	0	100	100
4	MH	256/361 (71%)	244 (95%)	12 (5%)	0	100	100
4	VH	239/361 (66%)	229 (96%)	10 (4%)	0	100	100
4	WH	239/361 (66%)	230 (96%)	9 (4%)	0	100	100
4	XH	239/361 (66%)	232 (97%)	7 (3%)	0	100	100
4	YH	239/361 (66%)	229 (96%)	10 (4%)	0	100	100
4	ZH	239/361 (66%)	229 (96%)	10 (4%)	0	100	100
5	AK	149/189 (79%)	145 (97%)	4 (3%)	0	100	100
5	BK	149/189 (79%)	145 (97%)	4 (3%)	0	100	100
5	CK	149/189 (79%)	141 (95%)	8 (5%)	0	100	100
5	DK	149/189 (79%)	143 (96%)	6 (4%)	0	100	100
5	EK	149/189 (79%)	146 (98%)	3 (2%)	0	100	100
5	FK	149/189 (79%)	144 (97%)	5 (3%)	0	100	100
5	GK	149/189 (79%)	142 (95%)	7 (5%)	0	100	100
5	HK	149/189 (79%)	140 (94%)	9 (6%)	0	100	100
5	IK	149/189 (79%)	141 (95%)	8 (5%)	0	100	100
5	JK	149/189 (79%)	142 (95%)	7 (5%)	0	100	100
5	KK	149/189 (79%)	142 (95%)	7 (5%)	0	100	100
5	LK	149/189 (79%)	142 (95%)	7 (5%)	0	100	100
5	MK	149/189 (79%)	142 (95%)	7 (5%)	0	100	100
6	AL	169/249 (68%)	165 (98%)	4 (2%)	0	100	100
6	BL	169/249 (68%)	162 (96%)	7 (4%)	0	100	100
6	CL	169/249 (68%)	162 (96%)	7 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	DL	169/249 (68%)	158 (94%)	11 (6%)	0	100	100
6	EL	169/249 (68%)	158 (94%)	11 (6%)	0	100	100
6	FL	169/249 (68%)	162 (96%)	7 (4%)	0	100	100
6	GL	169/249 (68%)	160 (95%)	9 (5%)	0	100	100
6	HL	169/249 (68%)	158 (94%)	11 (6%)	0	100	100
6	IL	169/249 (68%)	163 (96%)	6 (4%)	0	100	100
6	JL	169/249 (68%)	159 (94%)	10 (6%)	0	100	100
6	KL	169/249 (68%)	158 (94%)	11 (6%)	0	100	100
6	LL	169/249 (68%)	160 (95%)	9 (5%)	0	100	100
6	ML	169/249 (68%)	161 (95%)	8 (5%)	0	100	100
7	AM	206/320 (64%)	190 (92%)	16 (8%)	0	100	100
7	BM	206/320 (64%)	191 (93%)	15 (7%)	0	100	100
7	CM	206/320 (64%)	194 (94%)	12 (6%)	0	100	100
7	DM	206/320 (64%)	196 (95%)	10 (5%)	0	100	100
7	EM	206/320 (64%)	193 (94%)	13 (6%)	0	100	100
7	FM	206/320 (64%)	188 (91%)	18 (9%)	0	100	100
7	GM	206/320 (64%)	193 (94%)	13 (6%)	0	100	100
7	HM	206/320 (64%)	191 (93%)	15 (7%)	0	100	100
7	IM	206/320 (64%)	188 (91%)	18 (9%)	0	100	100
7	JM	206/320 (64%)	189 (92%)	17 (8%)	0	100	100
7	KM	206/320 (64%)	189 (92%)	17 (8%)	0	100	100
7	LM	206/320 (64%)	192 (93%)	14 (7%)	0	100	100
7	MM	206/320 (64%)	191 (93%)	15 (7%)	0	100	100
8	AN	76/124 (61%)	66 (87%)	10 (13%)	0	100	100
8	BN	76/124 (61%)	68 (90%)	8 (10%)	0	100	100
8	CN	76/124 (61%)	70 (92%)	6 (8%)	0	100	100
8	DN	76/124 (61%)	71 (93%)	5 (7%)	0	100	100
8	EN	76/124 (61%)	68 (90%)	8 (10%)	0	100	100
8	FN	76/124 (61%)	68 (90%)	8 (10%)	0	100	100
8	GN	76/124 (61%)	71 (93%)	5 (7%)	0	100	100
8	HN	76/124 (61%)	70 (92%)	6 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	IN	76/124 (61%)	71 (93%)	5 (7%)	0	100	100
8	JN	76/124 (61%)	68 (90%)	8 (10%)	0	100	100
8	KN	76/124 (61%)	70 (92%)	6 (8%)	0	100	100
8	LN	76/124 (61%)	68 (90%)	8 (10%)	0	100	100
8	MN	76/124 (61%)	70 (92%)	6 (8%)	0	100	100
11	AC	207/303 (68%)	194 (94%)	13 (6%)	0	100	100
11	BC	241/303 (80%)	231 (96%)	10 (4%)	0	100	100
11	CC	241/303 (80%)	230 (95%)	11 (5%)	0	100	100
11	DC	207/303 (68%)	194 (94%)	13 (6%)	0	100	100
11	EC	207/303 (68%)	202 (98%)	5 (2%)	0	100	100
11	FC	241/303 (80%)	230 (95%)	11 (5%)	0	100	100
11	GC	241/303 (80%)	234 (97%)	7 (3%)	0	100	100
11	HC	207/303 (68%)	193 (93%)	14 (7%)	0	100	100
11	IC	207/303 (68%)	192 (93%)	15 (7%)	0	100	100
11	JC	207/303 (68%)	198 (96%)	9 (4%)	0	100	100
11	KC	241/303 (80%)	230 (95%)	11 (5%)	0	100	100
11	LC	207/303 (68%)	190 (92%)	17 (8%)	0	100	100
11	MC	207/303 (68%)	192 (93%)	15 (7%)	0	100	100
All	All	23724/70112 (34%)	22457 (95%)	1267 (5%)	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	AG	135/765 (18%)	120 (89%)	15 (11%)	5	18
1	Ag	31/765 (4%)	23 (74%)	8 (26%)	0	3
1	BG	135/765 (18%)	117 (87%)	18 (13%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Bg	31/765 (4%)	28 (90%)	3 (10%)	6	22
1	CG	135/765 (18%)	118 (87%)	17 (13%)	3	16
1	Cg	31/765 (4%)	27 (87%)	4 (13%)	3	15
1	DG	135/765 (18%)	118 (87%)	17 (13%)	3	16
1	Dg	31/765 (4%)	25 (81%)	6 (19%)	1	7
1	EG	135/765 (18%)	115 (85%)	20 (15%)	2	13
1	Eg	31/765 (4%)	24 (77%)	7 (23%)	1	5
1	FG	135/765 (18%)	120 (89%)	15 (11%)	5	18
1	Fg	31/765 (4%)	24 (77%)	7 (23%)	1	5
1	GG	135/765 (18%)	114 (84%)	21 (16%)	2	12
1	Gg	31/765 (4%)	26 (84%)	5 (16%)	2	11
1	HG	135/765 (18%)	117 (87%)	18 (13%)	3	15
1	Hg	31/765 (4%)	26 (84%)	5 (16%)	2	11
1	IG	135/765 (18%)	117 (87%)	18 (13%)	3	15
1	Ig	31/765 (4%)	25 (81%)	6 (19%)	1	7
1	JG	135/765 (18%)	118 (87%)	17 (13%)	3	16
1	Jg	31/765 (4%)	23 (74%)	8 (26%)	0	3
1	KG	135/765 (18%)	119 (88%)	16 (12%)	4	17
1	Kg	31/765 (4%)	22 (71%)	9 (29%)	0	2
1	LG	135/765 (18%)	116 (86%)	19 (14%)	3	14
1	Lg	31/765 (4%)	24 (77%)	7 (23%)	1	5
1	MG	135/765 (18%)	120 (89%)	15 (11%)	5	18
1	Mg	31/765 (4%)	27 (87%)	4 (13%)	3	15
1	NG	135/765 (18%)	124 (92%)	11 (8%)	9	29
1	OG	135/765 (18%)	115 (85%)	20 (15%)	2	13
1	PG	135/765 (18%)	116 (86%)	19 (14%)	3	14
1	VG	31/765 (4%)	28 (90%)	3 (10%)	6	22
1	WG	31/765 (4%)	24 (77%)	7 (23%)	1	5
1	XG	31/765 (4%)	27 (87%)	4 (13%)	3	15
1	YG	31/765 (4%)	24 (77%)	7 (23%)	1	5
1	ZG	31/765 (4%)	27 (87%)	4 (13%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AD	121/139 (87%)	107 (88%)	14 (12%)	4	17
2	Ad	118/139 (85%)	106 (90%)	12 (10%)	6	21
2	BD	121/139 (87%)	113 (93%)	8 (7%)	14	34
2	Bd	118/139 (85%)	107 (91%)	11 (9%)	7	23
2	CD	121/139 (87%)	105 (87%)	16 (13%)	3	15
2	Cd	118/139 (85%)	104 (88%)	14 (12%)	4	17
2	DD	121/139 (87%)	112 (93%)	9 (7%)	11	31
2	Dd	118/139 (85%)	107 (91%)	11 (9%)	7	23
2	ED	121/139 (87%)	114 (94%)	7 (6%)	17	38
2	Ed	118/139 (85%)	106 (90%)	12 (10%)	6	21
2	FD	121/139 (87%)	105 (87%)	16 (13%)	3	15
2	Fd	118/139 (85%)	109 (92%)	9 (8%)	11	30
2	GD	121/139 (87%)	110 (91%)	11 (9%)	7	24
2	Gd	118/139 (85%)	106 (90%)	12 (10%)	6	21
2	HD	121/139 (87%)	109 (90%)	12 (10%)	6	21
2	Hd	118/139 (85%)	110 (93%)	8 (7%)	13	34
2	ID	121/139 (87%)	112 (93%)	9 (7%)	11	31
2	Id	118/139 (85%)	108 (92%)	10 (8%)	8	27
2	JD	121/139 (87%)	111 (92%)	10 (8%)	9	28
2	Jd	118/139 (85%)	110 (93%)	8 (7%)	13	34
2	KD	121/139 (87%)	110 (91%)	11 (9%)	7	24
2	Kd	118/139 (85%)	108 (92%)	10 (8%)	8	27
2	LD	121/139 (87%)	106 (88%)	15 (12%)	4	16
2	Ld	118/139 (85%)	108 (92%)	10 (8%)	8	27
2	MD	121/139 (87%)	107 (88%)	14 (12%)	4	17
2	Md	118/139 (85%)	106 (90%)	12 (10%)	6	21
3	AF	53/237 (22%)	47 (89%)	6 (11%)	4	18
3	Af	49/237 (21%)	43 (88%)	6 (12%)	4	16
3	BF	53/237 (22%)	45 (85%)	8 (15%)	2	12
3	Bf	49/237 (21%)	45 (92%)	4 (8%)	9	28
3	CF	53/237 (22%)	49 (92%)	4 (8%)	11	31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	Cf	49/237 (21%)	42 (86%)	7 (14%)	2	13
3	DF	53/237 (22%)	45 (85%)	8 (15%)	2	12
3	Df	49/237 (21%)	46 (94%)	3 (6%)	15	37
3	EF	53/237 (22%)	46 (87%)	7 (13%)	3	15
3	Ef	49/237 (21%)	48 (98%)	1 (2%)	50	68
3	FF	53/237 (22%)	45 (85%)	8 (15%)	2	12
3	Ff	49/237 (21%)	43 (88%)	6 (12%)	4	16
3	GF	53/237 (22%)	46 (87%)	7 (13%)	3	15
3	Gf	49/237 (21%)	43 (88%)	6 (12%)	4	16
3	HF	53/237 (22%)	45 (85%)	8 (15%)	2	12
3	Hf	49/237 (21%)	44 (90%)	5 (10%)	6	21
3	IF	53/237 (22%)	47 (89%)	6 (11%)	4	18
3	If	49/237 (21%)	43 (88%)	6 (12%)	4	16
3	JF	53/237 (22%)	44 (83%)	9 (17%)	1	10
3	Jf	49/237 (21%)	46 (94%)	3 (6%)	15	37
3	KF	53/237 (22%)	48 (91%)	5 (9%)	7	23
3	Kf	49/237 (21%)	46 (94%)	3 (6%)	15	37
3	LF	53/237 (22%)	46 (87%)	7 (13%)	3	15
3	Lf	49/237 (21%)	39 (80%)	10 (20%)	1	6
3	MF	53/237 (22%)	45 (85%)	8 (15%)	2	12
3	Mf	49/237 (21%)	44 (90%)	5 (10%)	6	21
3	VF	53/237 (22%)	48 (91%)	5 (9%)	7	23
3	WF	53/237 (22%)	47 (89%)	6 (11%)	4	18
3	XF	53/237 (22%)	49 (92%)	4 (8%)	11	31
3	YF	53/237 (22%)	47 (89%)	6 (11%)	4	18
3	ZF	53/237 (22%)	49 (92%)	4 (8%)	11	31
4	AH	220/300 (73%)	192 (87%)	28 (13%)	3	15
4	BH	220/300 (73%)	202 (92%)	18 (8%)	9	28
4	CH	220/300 (73%)	199 (90%)	21 (10%)	7	22
4	DH	220/300 (73%)	193 (88%)	27 (12%)	4	16
4	EH	220/300 (73%)	192 (87%)	28 (13%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	FH	220/300 (73%)	197 (90%)	23 (10%)	5	20
4	GH	220/300 (73%)	193 (88%)	27 (12%)	4	16
4	HH	220/300 (73%)	194 (88%)	26 (12%)	4	17
4	IH	220/300 (73%)	200 (91%)	20 (9%)	7	24
4	JH	220/300 (73%)	195 (89%)	25 (11%)	4	17
4	KH	220/300 (73%)	199 (90%)	21 (10%)	7	22
4	LH	220/300 (73%)	197 (90%)	23 (10%)	5	20
4	MH	220/300 (73%)	195 (89%)	25 (11%)	4	17
4	VH	207/300 (69%)	179 (86%)	28 (14%)	3	15
4	WH	207/300 (69%)	174 (84%)	33 (16%)	2	11
4	XH	207/300 (69%)	185 (89%)	22 (11%)	5	19
4	YH	207/300 (69%)	181 (87%)	26 (13%)	3	16
4	ZH	207/300 (69%)	179 (86%)	28 (14%)	3	15
5	AK	129/163 (79%)	111 (86%)	18 (14%)	3	14
5	BK	129/163 (79%)	112 (87%)	17 (13%)	3	15
5	CK	129/163 (79%)	117 (91%)	12 (9%)	7	23
5	DK	129/163 (79%)	121 (94%)	8 (6%)	15	37
5	EK	129/163 (79%)	117 (91%)	12 (9%)	7	23
5	FK	129/163 (79%)	116 (90%)	13 (10%)	6	21
5	GK	129/163 (79%)	122 (95%)	7 (5%)	18	40
5	HK	129/163 (79%)	119 (92%)	10 (8%)	10	29
5	IK	129/163 (79%)	113 (88%)	16 (12%)	4	16
5	JK	129/163 (79%)	119 (92%)	10 (8%)	10	29
5	KK	129/163 (79%)	114 (88%)	15 (12%)	4	17
5	LK	129/163 (79%)	117 (91%)	12 (9%)	7	23
5	MK	129/163 (79%)	114 (88%)	15 (12%)	4	17
6	AL	148/203 (73%)	134 (90%)	14 (10%)	7	22
6	BL	148/203 (73%)	130 (88%)	18 (12%)	4	16
6	CL	148/203 (73%)	133 (90%)	15 (10%)	6	21
6	DL	148/203 (73%)	137 (93%)	11 (7%)	11	31
6	EL	148/203 (73%)	131 (88%)	17 (12%)	4	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	FL	148/203 (73%)	133 (90%)	15 (10%)	6	21
6	GL	148/203 (73%)	132 (89%)	16 (11%)	5	19
6	HL	148/203 (73%)	132 (89%)	16 (11%)	5	19
6	IL	148/203 (73%)	134 (90%)	14 (10%)	7	22
6	JL	148/203 (73%)	133 (90%)	15 (10%)	6	21
6	KL	148/203 (73%)	134 (90%)	14 (10%)	7	22
6	LL	148/203 (73%)	136 (92%)	12 (8%)	9	29
6	ML	148/203 (73%)	133 (90%)	15 (10%)	6	21
7	AM	175/276 (63%)	160 (91%)	15 (9%)	8	27
7	BM	175/276 (63%)	146 (83%)	29 (17%)	2	10
7	CM	175/276 (63%)	148 (85%)	27 (15%)	2	12
7	DM	175/276 (63%)	154 (88%)	21 (12%)	4	17
7	EM	175/276 (63%)	148 (85%)	27 (15%)	2	12
7	FM	175/276 (63%)	153 (87%)	22 (13%)	3	16
7	GM	175/276 (63%)	153 (87%)	22 (13%)	3	16
7	HM	175/276 (63%)	153 (87%)	22 (13%)	3	16
7	IM	175/276 (63%)	148 (85%)	27 (15%)	2	12
7	JM	175/276 (63%)	151 (86%)	24 (14%)	3	14
7	KM	175/276 (63%)	148 (85%)	27 (15%)	2	12
7	LM	175/276 (63%)	154 (88%)	21 (12%)	4	17
7	MM	175/276 (63%)	158 (90%)	17 (10%)	6	22
8	AN	66/107 (62%)	60 (91%)	6 (9%)	7	24
8	BN	66/107 (62%)	53 (80%)	13 (20%)	1	7
8	CN	66/107 (62%)	62 (94%)	4 (6%)	15	37
8	DN	66/107 (62%)	55 (83%)	11 (17%)	2	10
8	EN	66/107 (62%)	53 (80%)	13 (20%)	1	7
8	FN	66/107 (62%)	54 (82%)	12 (18%)	1	8
8	GN	66/107 (62%)	57 (86%)	9 (14%)	3	14
8	HN	66/107 (62%)	53 (80%)	13 (20%)	1	7
8	IN	66/107 (62%)	57 (86%)	9 (14%)	3	14
8	JN	66/107 (62%)	60 (91%)	6 (9%)	7	24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	KN	66/107 (62%)	58 (88%)	8 (12%)	4	16
8	LN	66/107 (62%)	59 (89%)	7 (11%)	5	19
8	MN	66/107 (62%)	55 (83%)	11 (17%)	2	10
11	AC	178/257 (69%)	163 (92%)	15 (8%)	9	28
11	BC	203/257 (79%)	181 (89%)	22 (11%)	5	19
11	CC	203/257 (79%)	174 (86%)	29 (14%)	2	13
11	DC	178/257 (69%)	154 (86%)	24 (14%)	3	15
11	EC	178/257 (69%)	164 (92%)	14 (8%)	10	29
11	FC	203/257 (79%)	181 (89%)	22 (11%)	5	19
11	GC	203/257 (79%)	180 (89%)	23 (11%)	4	18
11	HC	178/257 (69%)	161 (90%)	17 (10%)	7	22
11	IC	178/257 (69%)	149 (84%)	29 (16%)	2	11
11	JC	178/257 (69%)	160 (90%)	18 (10%)	6	21
11	KC	203/257 (79%)	173 (85%)	30 (15%)	2	13
11	LC	178/257 (69%)	159 (89%)	19 (11%)	5	19
11	MC	178/257 (69%)	154 (86%)	24 (14%)	3	15
All	All	20484/55449 (37%)	18117 (88%)	2367 (12%)	7	17

All (2367) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AG	873	LEU
1	AG	898	LYS
1	AG	900	ILE
1	AG	911	LYS
1	AG	916	PHE
1	AG	930	ILE
1	AG	933	TYR
1	AG	944	LEU
1	AG	947	ARG
1	AG	956	TYR
1	AG	962	SER
1	AG	965	LEU
1	AG	972	PHE
1	AG	1010	THR
1	AG	1028	THR

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Mol	Chain	Res	Type
2	ED	51	SER
2	ED	53	LEU
2	ED	85	VAL
2	ED	86	ASP
2	ED	108	VAL
2	ED	115	VAL
2	ED	150	ASN
3	EF	208	ILE
3	EF	215	VAL
3	EF	230	LEU
3	EF	231	THR
3	EF	238	ILE
3	EF	250	LEU
3	EF	263	LYS
1	Eg	797	ARG
1	Eg	801	MET
1	Eg	802	LEU
1	Eg	810	GLN
1	Eg	814	GLN
1	Eg	815	VAL
1	Eg	819	VAL
4	EH	107	ILE
4	EH	112	PHE
4	EH	134	TYR
4	EH	135	GLU
4	EH	147	THR
4	EH	160	LEU
4	EH	170	ARG
4	EH	176	VAL
4	EH	180	VAL
4	EH	184	SER
4	EH	207	ASP
4	EH	211	ASN
4	EH	213	LEU
4	EH	226	LEU
4	EH	233	LEU
4	EH	240	THR
4	EH	248	VAL
4	EH	249	ASP
4	EH	250	TYR
4	EH	253	ASP
4	EH	255	ARG

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Mol	Chain	Res	Type
4	EH	256	VAL
4	EH	262	ASN
4	EH	266	MET
4	EH	325	LEU
4	EH	329	THR
4	EH	344	VAL
4	EH	354	MET
5	EK	40	LYS
5	EK	70	VAL
5	EK	92	ASN
5	EK	93	TRP
5	EK	106	LEU
5	EK	111	LYS
5	EK	129	GLU
5	EK	149	VAL
5	EK	153	ILE
5	EK	156	THR
5	EK	180	VAL
5	EK	183	THR
6	EL	44	HIS
6	EL	47	TYR
6	EL	93	LEU
6	EL	109	LEU
6	EL	113	ASP
6	EL	115	GLN
6	EL	119	TYR
6	EL	130	ASP
6	EL	133	PHE
6	EL	154	LEU
6	EL	155	LEU
6	EL	163	ILE
6	EL	172	VAL
6	EL	174	SER
6	EL	212	ASN
6	EL	216	ASP
6	EL	219	ILE
7	EM	123	VAL
7	EM	131	THR
7	EM	134	LEU
7	EM	146	LEU
7	EM	149	ASN
7	EM	152	LEU

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Mol	Chain	Res	Type
7	EM	155	LEU
7	EM	173	LEU
7	EM	176	VAL
7	EM	177	LEU
7	EM	180	ASP
7	EM	182	LYS
7	EM	183	VAL
7	EM	184	LEU
7	EM	190	ASN
7	EM	204	LEU
7	EM	207	ILE
7	EM	208	LYS
7	EM	210	ASP
7	EM	212	LEU
7	EM	215	ARG
7	EM	221	LYS
7	EM	245	TYR
7	EM	263	ILE
7	EM	271	SER
7	EM	292	MET
7	EM	308	ASP
8	EN	44	LYS
8	EN	45	MET
8	EN	69	TYR
8	EN	70	CYS
8	EN	75	VAL
8	EN	81	LEU
8	EN	82	MET
8	EN	84	CYS
8	EN	94	GLN
8	EN	95	LEU
8	EN	100	LEU
8	EN	101	VAL
8	EN	108	VAL
2	Ed	41	LEU
2	Ed	53	LEU
2	Ed	61	VAL
2	Ed	70	THR
2	Ed	80	GLN
2	Ed	91	ILE
2	Ed	93	GLU
2	Ed	108	VAL

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Mol	Chain	Res	Type
2	Ed	115	VAL
2	Ed	126	GLU
2	Ed	154	VAL
2	Ed	156	LEU
3	Ef	255	LEU
2	FD	30	ILE
2	FD	47	SER
2	FD	63	THR
2	FD	70	THR
2	FD	73	ILE
2	FD	80	GLN
2	FD	85	VAL
2	FD	91	ILE
2	FD	108	VAL
2	FD	123	THR
2	FD	126	GLU
2	FD	136	ASP
2	FD	137	TYR
2	FD	155	GLU
2	FD	156	LEU
2	FD	160	LYS
3	FF	208	ILE
3	FF	215	VAL
3	FF	230	LEU
3	FF	231	THR
3	FF	238	ILE
3	FF	243	MET
3	FF	245	LYS
3	FF	261	VAL
1	Fg	796	GLN
1	Fg	802	LEU
1	Fg	807	GLN
1	Fg	808	LEU
1	Fg	809	VAL
1	Fg	815	VAL
1	Fg	819	VAL
11	CC	28	THR
11	CC	37	MET
11	CC	41	LYS
11	CC	42	TYR
11	CC	44	ARG
11	CC	48	LYS

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Mol	Chain	Res	Type
11	CC	53	LYS
11	CC	57	MET
11	CC	59	LEU
11	CC	100	VAL
11	CC	103	HIS
11	CC	105	ILE
11	CC	112	GLU
11	CC	143	THR
11	CC	148	ARG
11	CC	154	ASP
11	CC	157	LYS
11	CC	165	LEU
11	CC	181	GLU
11	CC	182	ARG
11	CC	195	LEU
11	CC	206	PHE
11	CC	211	LEU
11	CC	221	VAL
11	CC	226	VAL
11	CC	233	VAL
11	CC	234	THR
11	CC	241	HIS
11	CC	243	ASP
4	FH	105	GLU
4	FH	109	LYS
4	FH	115	MET
4	FH	130	LEU
4	FH	138	GLU
4	FH	139	TYR
4	FH	147	THR
4	FH	154	THR
4	FH	161	SER
4	FH	170	ARG
4	FH	180	VAL
4	FH	183	ASP
4	FH	203	ASN
4	FH	238	MET
4	FH	240	THR
4	FH	253	ASP
4	FH	257	GLN
4	FH	265	SER
4	FH	278	ASP

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Mol	Chain	Res	Type
4	FH	279	LEU
4	FH	296	VAL
4	FH	313	VAL
4	FH	353	VAL
5	FK	46	ASP
5	FK	67	VAL
5	FK	73	ASN
5	FK	75	LEU
5	FK	92	ASN
5	FK	111	LYS
5	FK	126	VAL
5	FK	129	GLU
5	FK	144	LEU
5	FK	149	VAL
5	FK	156	THR
5	FK	175	SER
5	FK	180	VAL
6	FL	47	TYR
6	FL	54	ARG
6	FL	93	LEU
6	FL	109	LEU
6	FL	113	ASP
6	FL	121	ASP
6	FL	125	LEU
6	FL	143	ILE
6	FL	165	VAL
6	FL	169	THR
6	FL	172	VAL
6	FL	177	HIS
6	FL	212	ASN
6	FL	225	GLN
6	FL	227	ARG
7	FM	131	THR
7	FM	134	LEU
7	FM	143	THR
7	FM	146	LEU
7	FM	152	LEU
7	FM	155	LEU
7	FM	162	VAL
7	FM	176	VAL
7	FM	177	LEU
7	FM	178	LYS

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Mol	Chain	Res	Type
7	FM	182	LYS
7	FM	183	VAL
7	FM	208	LYS
7	FM	215	ARG
7	FM	221	LYS
7	FM	222	ILE
7	FM	229	ASN
7	FM	231	LEU
7	FM	271	SER
7	FM	292	MET
7	FM	314	ARG
7	FM	316	ASN
8	FN	48	ILE
8	FN	69	TYR
8	FN	70	CYS
8	FN	77	ASP
8	FN	78	LEU
8	FN	81	LEU
8	FN	86	LEU
8	FN	94	GLN
8	FN	95	LEU
8	FN	101	VAL
8	FN	104	ASN
8	FN	108	VAL
2	Fd	41	LEU
2	Fd	53	LEU
2	Fd	63	THR
2	Fd	82	ARG
2	Fd	85	VAL
2	Fd	92	GLU
2	Fd	93	GLU
2	Fd	108	VAL
2	Fd	115	VAL
3	Ff	210	TYR
3	Ff	215	VAL
3	Ff	222	LEU
3	Ff	230	LEU
3	Ff	232	VAL
3	Ff	255	LEU
11	BC	28	THR
11	BC	46	GLN
11	BC	50	LYS

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Mol	Chain	Res	Type
11	BC	57	MET
11	BC	83	LEU
11	BC	89	ASN
11	BC	105	ILE
11	BC	116	THR
11	BC	117	LEU
11	BC	149	GLN
11	BC	155	TYR
11	BC	166	LEU
11	BC	169	THR
11	BC	174	GLU
11	BC	193	THR
11	BC	195	LEU
11	BC	203	LYS
11	BC	206	PHE
11	BC	226	VAL
11	BC	234	THR
11	BC	244	ASP
11	BC	249	ILE
1	BG	869	MET
1	BG	873	LEU
1	BG	911	LYS
1	BG	912	MET
1	BG	913	VAL
1	BG	915	THR
1	BG	916	PHE
1	BG	930	ILE
1	BG	938	ASN
1	BG	944	LEU
1	BG	949	ASN
1	BG	962	SER
1	BG	963	SER
1	BG	965	LEU
1	BG	972	PHE
1	BG	1001	LEU
1	BG	1010	THR
1	BG	1024	ASN
3	AF	215	VAL
3	AF	223	ILE
3	AF	230	LEU
3	AF	231	THR
3	AF	263	LYS

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Mol	Chain	Res	Type
3	AF	266	GLN
2	GD	30	ILE
2	GD	50	ASP
2	GD	53	LEU
2	GD	55	MET
2	GD	85	VAL
2	GD	86	ASP
2	GD	115	VAL
2	GD	119	ILE
2	GD	155	GLU
2	GD	156	LEU
2	GD	162	TYR
3	GF	223	ILE
3	GF	230	LEU
3	GF	231	THR
3	GF	233	ARG
3	GF	238	ILE
3	GF	250	LEU
3	GF	261	VAL
1	Gg	793	GLU
1	Gg	802	LEU
1	Gg	803	THR
1	Gg	815	VAL
1	Gg	819	VAL
4	GH	108	ASP
4	GH	109	LYS
4	GH	114	ASP
4	GH	115	MET
4	GH	117	ARG
4	GH	122	LEU
4	GH	125	GLU
4	GH	132	GLN
4	GH	135	GLU
4	GH	147	THR
4	GH	180	VAL
4	GH	185	THR
4	GH	220	LEU
4	GH	225	ASN
4	GH	233	LEU
4	GH	238	MET
4	GH	240	THR
4	GH	248	VAL

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Mol	Chain	Res	Type
4	GH	264	LYS
4	GH	266	MET
4	GH	278	ASP
4	GH	284	LEU
4	GH	294	ARG
4	GH	313	VAL
4	GH	314	ARG
4	GH	344	VAL
4	GH	355	GLN
5	GK	70	VAL
5	GK	75	LEU
5	GK	86	ASP
5	GK	92	ASN
5	GK	111	LYS
5	GK	126	VAL
5	GK	177	ASN
6	GL	99	ARG
6	GL	109	LEU
6	GL	110	GLN
6	GL	121	ASP
6	GL	129	THR
6	GL	130	ASP
6	GL	172	VAL
6	GL	174	SER
6	GL	177	HIS
6	GL	183	GLN
6	GL	198	ILE
6	GL	216	ASP
6	GL	227	ARG
6	GL	233	TRP
6	GL	234	PHE
6	GL	235	THR
7	GM	134	LEU
7	GM	152	LEU
7	GM	153	GLN
7	GM	160	ASN
7	GM	173	LEU
7	GM	175	ILE
7	GM	176	VAL
7	GM	180	ASP
7	GM	182	LYS
7	GM	184	LEU

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Mol	Chain	Res	Type
7	GM	191	LEU
7	GM	192	ARG
7	GM	194	LEU
7	GM	207	ILE
7	GM	212	LEU
7	GM	215	ARG
7	GM	221	LYS
7	GM	229	ASN
7	GM	259	SER
7	GM	292	MET
7	GM	303	GLU
7	GM	314	ARG
8	GN	51	CYS
8	GN	69	TYR
8	GN	70	CYS
8	GN	71	THR
8	GN	81	LEU
8	GN	91	VAL
8	GN	94	GLN
8	GN	101	VAL
8	GN	111	GLU
2	Gd	30	ILE
2	Gd	31	ASN
2	Gd	53	LEU
2	Gd	61	VAL
2	Gd	63	THR
2	Gd	94	LEU
2	Gd	108	VAL
2	Gd	119	ILE
2	Gd	128	LEU
2	Gd	145	ILE
2	Gd	147	VAL
2	Gd	150	ASN
3	Gf	215	VAL
3	Gf	221	TRP
3	Gf	229	THR
3	Gf	244	VAL
3	Gf	255	LEU
3	Gf	263	LYS
2	HD	38	THR
2	HD	50	ASP
2	HD	51	SER

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Mol	Chain	Res	Type
2	HD	52	MET
2	HD	55	MET
2	HD	91	ILE
2	HD	108	VAL
2	HD	115	VAL
2	HD	127	SER
2	HD	152	GLN
2	HD	154	VAL
2	HD	156	LEU
11	GC	28	THR
11	GC	35	GLN
11	GC	37	MET
11	GC	41	LYS
11	GC	42	TYR
11	GC	44	ARG
11	GC	48	LYS
11	GC	56	GLU
11	GC	60	LYS
11	GC	105	ILE
11	GC	112	GLU
11	GC	117	LEU
11	GC	140	PHE
11	GC	143	THR
11	GC	146	THR
11	GC	154	ASP
11	GC	165	LEU
11	GC	195	LEU
11	GC	196	GLU
11	GC	206	PHE
11	GC	226	VAL
11	GC	229	THR
11	GC	248	ARG
3	HF	215	VAL
3	HF	229	THR
3	HF	230	LEU
3	HF	238	ILE
3	HF	255	LEU
3	HF	261	VAL
3	HF	263	LYS
3	HF	267	GLU
1	Hg	793	GLU
1	Hg	801	MET

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Mol	Chain	Res	Type
1	Hg	808	LEU
1	Hg	815	VAL
1	Hg	819	VAL
4	HH	109	LYS
4	HH	116	THR
4	HH	125	GLU
4	HH	135	GLU
4	HH	136	THR
4	HH	139	TYR
4	HH	152	THR
4	HH	168	VAL
4	HH	170	ARG
4	HH	180	VAL
4	HH	204	ILE
4	HH	212	THR
4	HH	215	ILE
4	HH	233	LEU
4	HH	234	ASN
4	HH	237	VAL
4	HH	238	MET
4	HH	240	THR
4	HH	248	VAL
4	HH	250	TYR
4	HH	253	ASP
4	HH	278	ASP
4	HH	319	ILE
4	HH	324	TRP
4	HH	334	THR
4	HH	350	HIS
5	HK	40	LYS
5	HK	62	LYS
5	HK	70	VAL
5	HK	75	LEU
5	HK	106	LEU
5	HK	111	LYS
5	HK	156	THR
5	HK	166	THR
5	HK	180	VAL
5	HK	182	ILE
6	HL	47	TYR
6	HL	53	ASP
6	HL	100	ASP

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Mol	Chain	Res	Type
6	HL	108	ASP
6	HL	109	LEU
6	HL	122	THR
6	HL	130	ASP
6	HL	148	LEU
6	HL	160	GLN
6	HL	174	SER
6	HL	181	LEU
6	HL	193	LEU
6	HL	206	GLU
6	HL	210	ASP
6	HL	211	LYS
6	HL	212	ASN
7	HM	131	THR
7	HM	134	LEU
7	HM	152	LEU
7	HM	174	GLN
7	HM	176	VAL
7	HM	177	LEU
7	HM	178	LYS
7	HM	184	LEU
7	HM	191	LEU
7	HM	192	ARG
7	HM	199	LYS
7	HM	202	LEU
7	HM	212	LEU
7	HM	215	ARG
7	HM	222	ILE
7	HM	229	ASN
7	HM	242	LYS
7	HM	259	SER
7	HM	277	SER
7	HM	292	MET
7	HM	308	ASP
7	HM	318	GLN
8	HN	45	MET
8	HN	48	ILE
8	HN	51	CYS
8	HN	57	ARG
8	HN	69	TYR
8	HN	70	CYS
8	HN	80	PHE

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Mol	Chain	Res	Type
8	HN	95	LEU
8	HN	101	VAL
8	HN	105	ASP
8	HN	107	TYR
8	HN	112	CYS
8	HN	114	LEU
2	Hd	41	LEU
2	Hd	51	SER
2	Hd	61	VAL
2	Hd	93	GLU
2	Hd	115	VAL
2	Hd	123	THR
2	Hd	147	VAL
2	Hd	150	ASN
3	Hf	211	TYR
3	Hf	219	ARG
3	Hf	233	ARG
3	Hf	244	VAL
3	Hf	255	LEU
1	CG	869	MET
1	CG	886	LEU
1	CG	889	ILE
1	CG	895	LYS
1	CG	898	LYS
1	CG	911	LYS
1	CG	913	VAL
1	CG	916	PHE
1	CG	930	ILE
1	CG	944	LEU
1	CG	956	TYR
1	CG	962	SER
1	CG	965	LEU
1	CG	972	PHE
1	CG	1010	THR
1	CG	1017	GLN
1	CG	1044	ASP
1	Bg	795	GLN
1	Bg	815	VAL
1	Bg	819	VAL
2	ID	25	PHE
2	ID	52	MET
2	ID	73	ILE

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Mol	Chain	Res	Type
2	ID	86	ASP
2	ID	106	PHE
2	ID	115	VAL
2	ID	127	SER
2	ID	137	TYR
2	ID	160	LYS
3	IF	207	ARG
3	IF	215	VAL
3	IF	231	THR
3	IF	250	LEU
3	IF	255	LEU
3	IF	263	LYS
1	Ig	794	ILE
1	Ig	807	GLN
1	Ig	810	GLN
1	Ig	815	VAL
1	Ig	816	GLU
1	Ig	817	THR
4	IH	105	GLU
4	IH	108	ASP
4	IH	134	TYR
4	IH	147	THR
4	IH	180	VAL
4	IH	183	ASP
4	IH	195	ASP
4	IH	201	SER
4	IH	207	ASP
4	IH	211	ASN
4	IH	228	VAL
4	IH	229	ARG
4	IH	239	LEU
4	IH	240	THR
4	IH	241	LEU
4	IH	248	VAL
4	IH	249	ASP
4	IH	253	ASP
4	IH	278	ASP
4	IH	280	LEU
5	IK	45	VAL
5	IK	46	ASP
5	IK	70	VAL
5	IK	76	ILE

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Mol	Chain	Res	Type
5	IK	91	LEU
5	IK	92	ASN
5	IK	111	LYS
5	IK	112	ILE
5	IK	117	THR
5	IK	125	SER
5	IK	126	VAL
5	IK	142	GLU
5	IK	156	THR
5	IK	162	ASP
5	IK	177	ASN
5	IK	180	VAL
6	IL	48	ASN
6	IL	51	GLN
6	IL	93	LEU
6	IL	109	LEU
6	IL	123	ARG
6	IL	130	ASP
6	IL	154	LEU
6	IL	155	LEU
6	IL	163	ILE
6	IL	172	VAL
6	IL	174	SER
6	IL	185	GLN
6	IL	193	LEU
6	IL	203	LEU
7	IM	123	VAL
7	IM	127	ASN
7	IM	134	LEU
7	IM	136	LEU
7	IM	149	ASN
7	IM	152	LEU
7	IM	155	LEU
7	IM	170	SER
7	IM	171	ARG
7	IM	176	VAL
7	IM	184	LEU
7	IM	192	ARG
7	IM	194	LEU
7	IM	201	THR
7	IM	207	ILE
7	IM	212	LEU

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Mol	Chain	Res	Type
7	IM	221	LYS
7	IM	222	ILE
7	IM	232	ASP
7	IM	246	LEU
7	IM	251	SER
7	IM	255	THR
7	IM	263	ILE
7	IM	274	THR
7	IM	280	TYR
7	IM	292	MET
7	IM	301	MET
8	IN	51	CYS
8	IN	80	PHE
8	IN	81	LEU
8	IN	91	VAL
8	IN	95	LEU
8	IN	101	VAL
8	IN	108	VAL
8	IN	115	GLN
8	IN	116	LYS
2	Id	41	LEU
2	Id	53	LEU
2	Id	61	VAL
2	Id	63	THR
2	Id	78	ASN
2	Id	111	LYS
2	Id	115	VAL
2	Id	145	ILE
2	Id	147	VAL
2	Id	154	VAL
11	KC	28	THR
11	KC	30	SER
11	KC	37	MET
11	KC	41	LYS
11	KC	42	TYR
11	KC	48	LYS
11	KC	53	LYS
11	KC	56	GLU
11	KC	82	GLN
11	KC	86	GLN
11	KC	103	HIS
11	KC	105	ILE

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Mol	Chain	Res	Type
11	KC	112	GLU
11	KC	140	PHE
11	KC	143	THR
11	KC	149	GLN
11	KC	154	ASP
11	KC	170	LYS
11	KC	174	GLU
11	KC	193	THR
11	KC	195	LEU
11	KC	204	GLU
11	KC	211	LEU
11	KC	218	MET
11	KC	226	VAL
11	KC	230	ASP
11	KC	233	VAL
11	KC	234	THR
11	KC	240	ILE
11	KC	255	LEU
3	If	215	VAL
3	If	230	LEU
3	If	238	ILE
3	If	244	VAL
3	If	255	LEU
3	If	261	VAL
2	JD	23	MET
2	JD	35	ASP
2	JD	50	ASP
2	JD	51	SER
2	JD	55	MET
2	JD	63	THR
2	JD	71	LEU
2	JD	91	ILE
2	JD	115	VAL
2	JD	127	SER
3	JF	208	ILE
3	JF	215	VAL
3	JF	230	LEU
3	JF	231	THR
3	JF	233	ARG
3	JF	238	ILE
3	JF	246	LEU
3	JF	250	LEU

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Mol	Chain	Res	Type
3	JF	253	ARG
1	Jg	793	GLU
1	Jg	795	GLN
1	Jg	808	LEU
1	Jg	814	GLN
1	Jg	815	VAL
1	Jg	816	GLU
1	Jg	817	THR
1	Jg	819	VAL
4	JH	108	ASP
4	JH	109	LYS
4	JH	139	TYR
4	JH	147	THR
4	JH	152	THR
4	JH	170	ARG
4	JH	175	PHE
4	JH	176	VAL
4	JH	180	VAL
4	JH	204	ILE
4	JH	207	ASP
4	JH	226	LEU
4	JH	231	ARG
4	JH	233	LEU
4	JH	237	VAL
4	JH	238	MET
4	JH	241	LEU
4	JH	253	ASP
4	JH	284	LEU
4	JH	313	VAL
4	JH	319	ILE
4	JH	324	TRP
4	JH	339	MET
4	JH	350	HIS
4	JH	353	VAL
5	JK	50	ASP
5	JK	75	LEU
5	JK	83	LEU
5	JK	126	VAL
5	JK	138	ARG
5	JK	156	THR
5	JK	162	ASP
5	JK	170	LEU

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Mol	Chain	Res	Type
5	JK	180	VAL
5	JK	183	THR
6	JL	49	ASN
6	JL	93	LEU
6	JL	100	ASP
6	JL	113	ASP
6	JL	124	THR
6	JL	133	PHE
6	JL	139	ARG
6	JL	140	LEU
6	JL	163	ILE
6	JL	172	VAL
6	JL	175	ARG
6	JL	181	LEU
6	JL	201	LYS
6	JL	210	ASP
6	JL	212	ASN
7	JM	130	ARG
7	JM	131	THR
7	JM	134	LEU
7	JM	144	THR
7	JM	162	VAL
7	JM	173	LEU
7	JM	174	GLN
7	JM	175	ILE
7	JM	176	VAL
7	JM	180	ASP
7	JM	184	LEU
7	JM	191	LEU
7	JM	202	LEU
7	JM	208	LYS
7	JM	212	LEU
7	JM	221	LYS
7	JM	229	ASN
7	JM	275	ASP
7	JM	277	SER
7	JM	284	LEU
7	JM	292	MET
7	JM	310	LYS
7	JM	313	ASP
7	JM	316	ASN
8	JN	44	LYS

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Mol	Chain	Res	Type
8	JN	59	VAL
8	JN	70	CYS
8	JN	91	VAL
8	JN	102	VAL
8	JN	115	GLN
2	Jd	36	ASP
2	Jd	61	VAL
2	Jd	63	THR
2	Jd	72	THR
2	Jd	93	GLU
2	Jd	108	VAL
2	Jd	115	VAL
2	Jd	119	ILE
3	Jf	221	TRP
3	Jf	230	LEU
3	Jf	261	VAL
1	DG	873	LEU
1	DG	880	ASP
1	DG	910	ASP
1	DG	913	VAL
1	DG	916	PHE
1	DG	930	ILE
1	DG	935	ILE
1	DG	944	LEU
1	DG	962	SER
1	DG	963	SER
1	DG	965	LEU
1	DG	968	PHE
1	DG	972	PHE
1	DG	1010	THR
1	DG	1017	GLN
1	DG	1028	THR
1	DG	1040	LEU
4	AH	109	LYS
4	AH	115	MET
4	AH	122	LEU
4	AH	135	GLU
4	AH	139	TYR
4	AH	147	THR
4	AH	160	LEU
4	AH	170	ARG
4	AH	177	SER

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Mol	Chain	Res	Type
4	AH	180	VAL
4	AH	202	PHE
4	AH	208	LYS
4	AH	215	ILE
4	AH	223	TYR
4	AH	239	LEU
4	AH	241	LEU
4	AH	248	VAL
4	AH	255	ARG
4	AH	264	LYS
4	AH	280	LEU
4	AH	284	LEU
4	AH	296	VAL
4	AH	313	VAL
4	AH	316	ASN
4	AH	332	ASP
4	AH	334	THR
4	AH	341	LYS
4	AH	361	LEU
2	KD	35	ASP
2	KD	43	GLU
2	KD	50	ASP
2	KD	51	SER
2	KD	55	MET
2	KD	91	ILE
2	KD	111	LYS
2	KD	136	ASP
2	KD	138	GLN
2	KD	150	ASN
2	KD	154	VAL
3	KF	215	VAL
3	KF	230	LEU
3	KF	231	THR
3	KF	238	ILE
3	KF	261	VAL
1	Kg	793	GLU
1	Kg	794	ILE
1	Kg	801	MET
1	Kg	810	GLN
1	Kg	814	GLN
1	Kg	815	VAL
1	Kg	816	GLU

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Mol	Chain	Res	Type
1	Kg	819	VAL
1	Kg	821	THR
4	KH	105	GLU
4	KH	109	LYS
4	KH	115	MET
4	KH	134	TYR
4	KH	139	TYR
4	KH	141	LYS
4	KH	147	THR
4	KH	152	THR
4	KH	170	ARG
4	KH	180	VAL
4	KH	183	ASP
4	KH	218	THR
4	KH	221	TYR
4	KH	226	LEU
4	KH	238	MET
4	KH	257	GLN
4	KH	287	VAL
4	KH	306	LEU
4	KH	328	MET
4	KH	332	ASP
4	KH	334	THR
5	KK	50	ASP
5	KK	65	ILE
5	KK	67	VAL
5	KK	70	VAL
5	KK	76	ILE
5	KK	83	LEU
5	KK	88	SER
5	KK	106	LEU
5	KK	111	LYS
5	KK	126	VAL
5	KK	156	THR
5	KK	162	ASP
5	KK	170	LEU
5	KK	181	GLU
5	KK	183	THR
6	KL	51	GLN
6	KL	100	ASP
6	KL	121	ASP
6	KL	129	THR

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Mol	Chain	Res	Type
6	KL	130	ASP
6	KL	133	PHE
6	KL	140	LEU
6	KL	165	VAL
6	KL	169	THR
6	KL	174	SER
6	KL	175	ARG
6	KL	211	LYS
6	KL	212	ASN
6	KL	216	ASP
7	KM	123	VAL
7	KM	134	LEU
7	KM	135	ASP
7	KM	152	LEU
7	KM	160	ASN
7	KM	173	LEU
7	KM	176	VAL
7	KM	178	LYS
7	KM	180	ASP
7	KM	183	VAL
7	KM	184	LEU
7	KM	191	LEU
7	KM	194	LEU
7	KM	202	LEU
7	KM	205	TYR
7	KM	212	LEU
7	KM	215	ARG
7	KM	221	LYS
7	KM	233	VAL
7	KM	245	TYR
7	KM	249	GLN
7	KM	259	SER
7	KM	263	ILE
7	KM	270	SER
7	KM	292	MET
7	KM	299	LEU
7	KM	301	MET
8	KN	66	SER
8	KN	69	TYR
8	KN	78	LEU
8	KN	80	PHE
8	KN	91	VAL

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Mol	Chain	Res	Type
8	KN	101	VAL
8	KN	108	VAL
8	KN	111	GLU
2	Kd	36	ASP
2	Kd	53	LEU
2	Kd	59	GLU
2	Kd	61	VAL
2	Kd	63	THR
2	Kd	73	ILE
2	Kd	78	ASN
2	Kd	93	GLU
2	Kd	111	LYS
2	Kd	128	LEU
3	Kf	250	LEU
3	Kf	260	GLN
3	Kf	261	VAL
2	LD	23	MET
2	LD	32	ASN
2	LD	35	ASP
2	LD	51	SER
2	LD	52	MET
2	LD	55	MET
2	LD	70	THR
2	LD	71	LEU
2	LD	85	VAL
2	LD	91	ILE
2	LD	115	VAL
2	LD	126	GLU
2	LD	141	LYS
2	LD	147	VAL
2	LD	156	LEU
3	LF	215	VAL
3	LF	223	ILE
3	LF	230	LEU
3	LF	231	THR
3	LF	238	ILE
3	LF	256	THR
3	LF	263	LYS
1	Lg	798	THR
1	Lg	806	THR
1	Lg	808	LEU
1	Lg	809	VAL

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Mol	Chain	Res	Type
1	Lg	814	GLN
1	Lg	815	VAL
1	Lg	821	THR
4	LH	122	LEU
4	LH	138	GLU
4	LH	141	LYS
4	LH	147	THR
4	LH	160	LEU
4	LH	170	ARG
4	LH	180	VAL
4	LH	182	LEU
4	LH	207	ASP
4	LH	215	ILE
4	LH	221	TYR
4	LH	225	ASN
4	LH	228	VAL
4	LH	233	LEU
4	LH	248	VAL
4	LH	253	ASP
4	LH	256	VAL
4	LH	278	ASP
4	LH	284	LEU
4	LH	294	ARG
4	LH	301	ASP
4	LH	313	VAL
4	LH	332	ASP
5	LK	50	ASP
5	LK	70	VAL
5	LK	76	ILE
5	LK	92	ASN
5	LK	106	LEU
5	LK	126	VAL
5	LK	129	GLU
5	LK	156	THR
5	LK	166	THR
5	LK	180	VAL
5	LK	182	ILE
5	LK	183	THR
6	LL	93	LEU
6	LL	104	LYS
6	LL	109	LEU
6	LL	112	GLN

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Mol	Chain	Res	Type
6	LL	121	ASP
6	LL	130	ASP
6	LL	172	VAL
6	LL	177	HIS
6	LL	181	LEU
6	LL	190	MET
6	LL	193	LEU
6	LL	212	ASN
7	LM	136	LEU
7	LM	149	ASN
7	LM	152	LEU
7	LM	162	VAL
7	LM	176	VAL
7	LM	182	LYS
7	LM	184	LEU
7	LM	188	PHE
7	LM	191	LEU
7	LM	192	ARG
7	LM	202	LEU
7	LM	203	SER
7	LM	208	LYS
7	LM	210	ASP
7	LM	212	LEU
7	LM	215	ARG
7	LM	221	LYS
7	LM	275	ASP
7	LM	284	LEU
7	LM	298	VAL
7	LM	316	ASN
8	LN	39	ASP
8	LN	51	CYS
8	LN	64	PHE
8	LN	101	VAL
8	LN	108	VAL
8	LN	114	LEU
8	LN	116	LYS
2	Ld	41	LEU
2	Ld	53	LEU
2	Ld	61	VAL
2	Ld	63	THR
2	Ld	68	ASP
2	Ld	78	ASN

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Mol	Chain	Res	Type
2	Ld	93	GLU
2	Ld	115	VAL
2	Ld	124	LYS
2	Ld	147	VAL
3	Lf	212	ILE
3	Lf	215	VAL
3	Lf	222	LEU
3	Lf	223	ILE
3	Lf	238	ILE
3	Lf	250	LEU
3	Lf	253	ARG
3	Lf	260	GLN
3	Lf	261	VAL
3	Lf	262	ILE
5	AK	40	LYS
5	AK	50	ASP
5	AK	70	VAL
5	AK	76	ILE
5	AK	77	SER
5	AK	92	ASN
5	AK	99	LEU
5	AK	109	PHE
5	AK	111	LYS
5	AK	112	ILE
5	AK	116	VAL
5	AK	125	SER
5	AK	129	GLU
5	AK	132	LEU
5	AK	156	THR
5	AK	169	THR
5	AK	170	LEU
5	AK	180	VAL
1	EG	865	THR
1	EG	869	MET
1	EG	874	ASP
1	EG	890	VAL
1	EG	895	LYS
1	EG	898	LYS
1	EG	910	ASP
1	EG	911	LYS
1	EG	916	PHE
1	EG	930	ILE

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Mol	Chain	Res	Type
1	EG	944	LEU
1	EG	954	MET
1	EG	962	SER
1	EG	963	SER
1	EG	965	LEU
1	EG	972	PHE
1	EG	1010	THR
1	EG	1017	GLN
1	EG	1028	THR
1	EG	1037	LEU
2	MD	23	MET
2	MD	32	ASN
2	MD	38	THR
2	MD	41	LEU
2	MD	50	ASP
2	MD	61	VAL
2	MD	86	ASP
2	MD	91	ILE
2	MD	92	GLU
2	MD	108	VAL
2	MD	115	VAL
2	MD	128	LEU
2	MD	138	GLN
2	MD	154	VAL
3	MF	211	TYR
3	MF	215	VAL
3	MF	223	ILE
3	MF	231	THR
3	MF	233	ARG
3	MF	238	ILE
3	MF	250	LEU
3	MF	256	THR
1	Mg	795	GLN
1	Mg	809	VAL
1	Mg	810	GLN
1	Mg	815	VAL
4	MH	108	ASP
4	MH	125	GLU
4	MH	130	LEU
4	MH	147	THR
4	MH	170	ARG
4	MH	175	PHE

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Mol	Chain	Res	Type
4	MH	183	ASP
4	MH	203	ASN
4	MH	207	ASP
4	MH	218	THR
4	MH	221	TYR
4	MH	238	MET
4	MH	250	TYR
4	MH	252	VAL
4	MH	255	ARG
4	MH	264	LYS
4	MH	268	THR
4	MH	280	LEU
4	MH	287	VAL
4	MH	296	VAL
4	MH	301	ASP
4	MH	313	VAL
4	MH	316	ASN
4	MH	332	ASP
4	MH	353	VAL
5	MK	45	VAL
5	MK	46	ASP
5	MK	62	LYS
5	MK	67	VAL
5	MK	70	VAL
5	MK	72	GLN
5	MK	76	ILE
5	MK	91	LEU
5	MK	98	LEU
5	MK	112	ILE
5	MK	125	SER
5	MK	129	GLU
5	MK	156	THR
5	MK	180	VAL
5	MK	182	ILE
6	ML	57	VAL
6	ML	93	LEU
6	ML	109	LEU
6	ML	113	ASP
6	ML	130	ASP
6	ML	140	LEU
6	ML	165	VAL
6	ML	172	VAL

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Mol	Chain	Res	Type
6	ML	177	HIS
6	ML	185	GLN
6	ML	210	ASP
6	ML	212	ASN
6	ML	216	ASP
6	ML	225	GLN
6	ML	230	GLU
7	MM	134	LEU
7	MM	149	ASN
7	MM	152	LEU
7	MM	162	VAL
7	MM	180	ASP
7	MM	193	GLN
7	MM	203	SER
7	MM	208	LYS
7	MM	212	LEU
7	MM	222	ILE
7	MM	232	ASP
7	MM	242	LYS
7	MM	251	SER
7	MM	263	ILE
7	MM	292	MET
7	MM	308	ASP
7	MM	312	PHE
8	MN	51	CYS
8	MN	65	TYR
8	MN	72	ARG
8	MN	78	LEU
8	MN	84	CYS
8	MN	92	TYR
8	MN	94	GLN
8	MN	100	LEU
8	MN	108	VAL
8	MN	110	GLU
8	MN	115	GLN
2	Md	25	PHE
2	Md	41	LEU
2	Md	51	SER
2	Md	61	VAL
2	Md	63	THR
2	Md	67	LYS
2	Md	92	GLU

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Mol	Chain	Res	Type
2	Md	97	ARG
2	Md	108	VAL
2	Md	115	VAL
2	Md	147	VAL
2	Md	155	GLU
3	Mf	212	ILE
3	Mf	219	ARG
3	Mf	255	LEU
3	Mf	260	GLN
3	Mf	261	VAL
3	VF	215	VAL
3	VF	230	LEU
3	VF	231	THR
3	VF	238	ILE
3	VF	256	THR
1	VG	793	GLU
1	VG	800	ASP
1	VG	815	VAL
4	VH	105	GLU
4	VH	115	MET
4	VH	122	LEU
4	VH	138	GLU
4	VH	147	THR
4	VH	152	THR
4	VH	160	LEU
4	VH	170	ARG
4	VH	203	ASN
4	VH	204	ILE
4	VH	205	GLN
4	VH	218	THR
4	VH	225	ASN
4	VH	226	LEU
4	VH	231	ARG
4	VH	233	LEU
4	VH	234	ASN
4	VH	249	ASP
4	VH	253	ASP
4	VH	259	TYR
4	VH	287	VAL
4	VH	296	VAL
4	VH	297	VAL
4	VH	303	ARG

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Mol	Chain	Res	Type
4	VH	313	VAL
4	VH	314	ARG
4	VH	354	MET
4	VH	358	VAL
3	WF	215	VAL
3	WF	223	ILE
3	WF	230	LEU
3	WF	232	VAL
3	WF	238	ILE
3	WF	261	VAL
1	WG	795	GLN
1	WG	797	ARG
1	WG	800	ASP
1	WG	815	VAL
1	WG	816	GLU
1	WG	817	THR
1	WG	821	THR
4	WH	109	LYS
4	WH	134	TYR
4	WH	141	LYS
4	WH	147	THR
4	WH	170	ARG
4	WH	171	LEU
4	WH	180	VAL
4	WH	203	ASN
4	WH	218	THR
4	WH	220	LEU
4	WH	223	TYR
4	WH	237	VAL
4	WH	238	MET
4	WH	240	THR
4	WH	248	VAL
4	WH	249	ASP
4	WH	250	TYR
4	WH	253	ASP
4	WH	278	ASP
4	WH	297	VAL
4	WH	306	LEU
4	WH	311	MET
4	WH	312	TYR
4	WH	313	VAL
4	WH	315	THR

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Mol	Chain	Res	Type
4	WH	317	LEU
4	WH	318	THR
4	WH	324	TRP
4	WH	329	THR
4	WH	340	GLN
4	WH	354	MET
4	WH	356	LEU
4	WH	358	VAL
3	XF	215	VAL
3	XF	223	ILE
3	XF	230	LEU
3	XF	232	VAL
1	XG	794	ILE
1	XG	796	GLN
1	XG	815	VAL
1	XG	816	GLU
4	XH	134	TYR
4	XH	147	THR
4	XH	168	VAL
4	XH	170	ARG
4	XH	171	LEU
4	XH	175	PHE
4	XH	180	VAL
4	XH	195	ASP
4	XH	201	SER
4	XH	225	ASN
4	XH	233	LEU
4	XH	237	VAL
4	XH	238	MET
4	XH	240	THR
4	XH	241	LEU
4	XH	242	ILE
4	XH	253	ASP
4	XH	256	VAL
4	XH	313	VAL
4	XH	354	MET
4	XH	356	LEU
4	XH	357	LYS
3	YF	211	TYR
3	YF	230	LEU
3	YF	231	THR
3	YF	238	ILE

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Mol	Chain	Res	Type
3	YF	264	PHE
3	YF	267	GLU
6	AL	93	LEU
6	AL	100	ASP
6	AL	111	LYS
6	AL	113	ASP
6	AL	129	THR
6	AL	130	ASP
6	AL	141	ASN
6	AL	148	LEU
6	AL	154	LEU
6	AL	155	LEU
6	AL	172	VAL
6	AL	201	LYS
6	AL	204	LYS
6	AL	217	ASN
1	FG	867	ASP
1	FG	873	LEU
1	FG	885	ILE
1	FG	900	ILE
1	FG	913	VAL
1	FG	916	PHE
1	FG	930	ILE
1	FG	946	SER
1	FG	949	ASN
1	FG	962	SER
1	FG	965	LEU
1	FG	968	PHE
1	FG	972	PHE
1	FG	1010	THR
1	FG	1037	LEU
1	YG	795	GLN
1	YG	802	LEU
1	YG	808	LEU
1	YG	812	TRP
1	YG	814	GLN
1	YG	817	THR
1	YG	819	VAL
4	YH	108	ASP
4	YH	117	ARG
4	YH	120	TYR
4	YH	122	LEU

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Mol	Chain	Res	Type
4	YH	147	THR
4	YH	152	THR
4	YH	154	THR
4	YH	170	ARG
4	YH	176	VAL
4	YH	180	VAL
4	YH	195	ASP
4	YH	211	ASN
4	YH	225	ASN
4	YH	229	ARG
4	YH	237	VAL
4	YH	241	LEU
4	YH	248	VAL
4	YH	249	ASP
4	YH	253	ASP
4	YH	255	ARG
4	YH	283	VAL
4	YH	295	LEU
4	YH	306	LEU
4	YH	318	THR
4	YH	356	LEU
4	YH	358	VAL
11	DC	60	LYS
11	DC	84	ASN
11	DC	97	ASN
11	DC	105	ILE
11	DC	112	GLU
11	DC	116	THR
11	DC	119	LEU
11	DC	146	THR
11	DC	148	ARG
11	DC	153	MET
11	DC	157	LYS
11	DC	166	LEU
11	DC	184	TRP
11	DC	193	THR
11	DC	203	LYS
11	DC	204	GLU
11	DC	206	PHE
11	DC	211	LEU
11	DC	231	LEU
11	DC	233	VAL

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Mol	Chain	Res	Type
11	DC	248	ARG
11	DC	249	ILE
11	DC	254	GLU
11	DC	266	VAL
3	ZF	211	TYR
3	ZF	230	LEU
3	ZF	231	THR
3	ZF	264	PHE
1	ZG	792	GLN
1	ZG	815	VAL
1	ZG	819	VAL
1	ZG	821	THR
4	ZH	105	GLU
4	ZH	108	ASP
4	ZH	130	LEU
4	ZH	147	THR
4	ZH	161	SER
4	ZH	180	VAL
4	ZH	196	LEU
4	ZH	203	ASN
4	ZH	207	ASP
4	ZH	214	MET
4	ZH	221	TYR
4	ZH	226	LEU
4	ZH	233	LEU
4	ZH	238	MET
4	ZH	240	THR
4	ZH	248	VAL
4	ZH	250	TYR
4	ZH	253	ASP
4	ZH	255	ARG
4	ZH	262	ASN
4	ZH	279	LEU
4	ZH	297	VAL
4	ZH	314	ARG
4	ZH	315	THR
4	ZH	328	MET
4	ZH	329	THR
4	ZH	354	MET
4	ZH	358	VAL
7	AM	114	ASN
7	AM	134	LEU

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Mol	Chain	Res	Type
7	AM	149	ASN
7	AM	153	GLN
7	AM	171	ARG
7	AM	180	ASP
7	AM	191	LEU
7	AM	204	LEU
7	AM	205	TYR
7	AM	212	LEU
7	AM	234	GLU
7	AM	259	SER
7	AM	269	GLN
7	AM	292	MET
7	AM	308	ASP
8	AN	51	CYS
8	AN	62	ASN
8	AN	69	TYR
8	AN	81	LEU
8	AN	84	CYS
8	AN	97	SER
2	Ad	41	LEU
2	Ad	53	LEU
2	Ad	61	VAL
2	Ad	63	THR
2	Ad	68	ASP
2	Ad	73	ILE
2	Ad	85	VAL
2	Ad	94	LEU
2	Ad	115	VAL
2	Ad	123	THR
2	Ad	128	LEU
2	Ad	150	ASN
3	Af	238	ILE
3	Af	253	ARG
3	Af	261	VAL
3	Af	263	LYS
3	Af	264	PHE
3	Af	266	GLN
2	BD	35	ASP
2	BD	51	SER
2	BD	63	THR
2	BD	71	LEU
2	BD	84	SER

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Mol	Chain	Res	Type
2	BD	85	VAL
2	BD	97	ARG
2	BD	115	VAL
3	BF	207	ARG
3	BF	208	ILE
3	BF	215	VAL
3	BF	230	LEU
3	BF	231	THR
3	BF	238	ILE
3	BF	250	LEU
3	BF	264	PHE
4	BH	135	GLU
4	BH	147	THR
4	BH	160	LEU
4	BH	180	VAL
4	BH	185	THR
4	BH	207	ASP
4	BH	221	TYR
4	BH	223	TYR
4	BH	240	THR
4	BH	248	VAL
4	BH	250	TYR
4	BH	257	GLN
4	BH	262	ASN
4	BH	269	GLU
4	BH	278	ASP
4	BH	294	ARG
4	BH	313	VAL
4	BH	353	VAL
5	BK	50	ASP
5	BK	62	LYS
5	BK	67	VAL
5	BK	70	VAL
5	BK	72	GLN
5	BK	73	ASN
5	BK	77	SER
5	BK	98	LEU
5	BK	100	ASN
5	BK	111	LYS
5	BK	126	VAL
5	BK	149	VAL
5	BK	156	THR

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Mol	Chain	Res	Type
5	BK	162	ASP
5	BK	169	THR
5	BK	170	LEU
5	BK	180	VAL
6	BL	53	ASP
6	BL	93	LEU
6	BL	109	LEU
6	BL	113	ASP
6	BL	121	ASP
6	BL	123	ARG
6	BL	129	THR
6	BL	130	ASP
6	BL	134	MET
6	BL	165	VAL
6	BL	172	VAL
6	BL	177	HIS
6	BL	183	GLN
6	BL	190	MET
6	BL	206	GLU
6	BL	210	ASP
6	BL	212	ASN
6	BL	216	ASP
7	BM	115	ARG
7	BM	118	TYR
7	BM	127	ASN
7	BM	134	LEU
7	BM	137	TYR
7	BM	146	LEU
7	BM	149	ASN
7	BM	153	GLN
7	BM	171	ARG
7	BM	175	ILE
7	BM	177	LEU
7	BM	178	LYS
7	BM	180	ASP
7	BM	184	LEU
7	BM	199	LYS
7	BM	202	LEU
7	BM	207	ILE
7	BM	212	LEU
7	BM	215	ARG
7	BM	222	ILE

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Mol	Chain	Res	Type
7	BM	231	LEU
7	BM	242	LYS
7	BM	245	TYR
7	BM	269	GLN
7	BM	271	SER
7	BM	290	ASP
7	BM	292	MET
7	BM	301	MET
7	BM	308	ASP
8	BN	51	CYS
8	BN	54	SER
8	BN	59	VAL
8	BN	70	CYS
8	BN	71	THR
8	BN	72	ARG
8	BN	76	MET
8	BN	81	LEU
8	BN	91	VAL
8	BN	94	GLN
8	BN	95	LEU
8	BN	98	SER
8	BN	102	VAL
2	Bd	26	LYS
2	Bd	41	LEU
2	Bd	51	SER
2	Bd	52	MET
2	Bd	61	VAL
2	Bd	63	THR
2	Bd	78	ASN
2	Bd	115	VAL
2	Bd	145	ILE
2	Bd	146	HIS
2	Bd	150	ASN
3	Bf	232	VAL
3	Bf	247	ILE
3	Bf	250	LEU
3	Bf	253	ARG
11	EC	92	ASP
11	EC	117	THR
11	EC	118	LEU
11	EC	130	ASP
11	EC	140	HIS

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Mol	Chain	Res	Type
11	EC	147	THR
11	EC	164	VAL
11	EC	167	LEU
11	EC	177	TRP
11	EC	190	ASP
11	EC	222	VAL
11	EC	231	ASP
11	EC	235	THR
11	EC	267	VAL
1	GG	865	THR
1	GG	869	MET
1	GG	885	ILE
1	GG	895	LYS
1	GG	900	ILE
1	GG	910	ASP
1	GG	913	VAL
1	GG	918	THR
1	GG	930	ILE
1	GG	944	LEU
1	GG	956	TYR
1	GG	962	SER
1	GG	963	SER
1	GG	965	LEU
1	GG	966	GLN
1	GG	972	PHE
1	GG	1010	THR
1	GG	1017	GLN
1	GG	1028	THR
1	GG	1037	LEU
1	GG	1044	ASP
11	FC	28	THR
11	FC	31	LEU
11	FC	35	GLN
11	FC	51	MET
11	FC	56	GLU
11	FC	111	LEU
11	FC	116	THR
11	FC	119	LEU
11	FC	125	ILE
11	FC	146	THR
11	FC	154	ASP
11	FC	163	VAL

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Mol	Chain	Res	Type
11	FC	169	THR
11	FC	174	GLU
11	FC	195	LEU
11	FC	206	PHE
11	FC	221	VAL
11	FC	225	TYR
11	FC	226	VAL
11	FC	230	ASP
11	FC	234	THR
11	FC	255	LEU
11	HC	64	LEU
11	HC	97	ASN
11	HC	105	ILE
11	HC	118	ASN
11	HC	119	LEU
11	HC	127	ILE
11	HC	133	LYS
11	HC	143	THR
11	HC	151	LEU
11	HC	169	THR
11	HC	195	LEU
11	HC	226	VAL
11	HC	233	VAL
11	HC	241	HIS
11	HC	256	ASN
11	HC	263	ARG
11	HC	266	VAL
11	IC	65	SER
11	IC	81	GLU
11	IC	89	ASN
11	IC	91	ASP
11	IC	97	ASN
11	IC	105	ILE
11	IC	112	GLU
11	IC	116	THR
11	IC	123	GLN
11	IC	125	ILE
11	IC	127	ILE
11	IC	143	THR
11	IC	146	THR
11	IC	151	LEU
11	IC	163	VAL

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Mol	Chain	Res	Type
11	IC	165	LEU
11	IC	166	LEU
11	IC	170	LYS
11	IC	174	GLU
11	IC	176	TRP
11	IC	184	TRP
11	IC	204	GLU
11	IC	211	LEU
11	IC	226	VAL
11	IC	249	ILE
11	IC	256	ASN
11	IC	258	ASN
11	IC	263	ARG
11	IC	266	VAL
11	JC	65	LEU
11	JC	84	LEU
11	JC	91	LEU
11	JC	101	VAL
11	JC	106	ILE
11	JC	113	GLU
11	JC	120	LEU
11	JC	143	THR
11	JC	149	ARG
11	JC	163	ASN
11	JC	166	LEU
11	JC	170	THR
11	JC	196	LEU
11	JC	205	GLU
11	JC	207	PHE
11	JC	227	VAL
11	JC	234	VAL
11	JC	235	THR
11	LC	64	LEU
11	LC	95	ASP
11	LC	97	ASN
11	LC	105	ILE
11	LC	109	VAL
11	LC	119	LEU
11	LC	140	PHE
11	LC	143	THR
11	LC	146	THR
11	LC	148	ARG

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Mol	Chain	Res	Type
11	LC	149	GLN
11	LC	153	MET
11	LC	162	ASN
11	LC	195	LEU
11	LC	215	LEU
11	LC	226	VAL
11	LC	234	THR
11	LC	243	ASP
11	LC	245	ARG
11	MC	83	LEU
11	MC	91	ASP
11	MC	97	ASN
11	MC	105	ILE
11	MC	109	VAL
11	MC	111	LEU
11	MC	116	THR
11	MC	119	LEU
11	MC	139	HIS
11	MC	140	PHE
11	MC	143	THR
11	MC	148	ARG
11	MC	156	VAL
11	MC	159	GLU
11	MC	168	LYS
11	MC	169	THR
11	MC	170	LYS
11	MC	181	GLU
11	MC	226	VAL
11	MC	234	THR
11	MC	241	HIS
11	MC	256	ASN
11	MC	258	ASN
11	MC	266	VAL
2	CD	26	LYS
2	CD	30	ILE
2	CD	35	ASP
2	CD	50	ASP
2	CD	55	MET
2	CD	78	ASN
2	CD	84	SER
2	CD	85	VAL
2	CD	92	GLU

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Mol	Chain	Res	Type
2	CD	108	VAL
2	CD	111	LYS
2	CD	115	VAL
2	CD	123	THR
2	CD	154	VAL
2	CD	156	LEU
2	CD	161	ILE
3	CF	215	VAL
3	CF	230	LEU
3	CF	231	THR
3	CF	238	ILE
1	Cg	810	GLN
1	Cg	811	ASP
1	Cg	812	TRP
1	Cg	815	VAL
4	CH	107	ILE
4	CH	109	LYS
4	CH	115	MET
4	CH	130	LEU
4	CH	147	THR
4	CH	156	GLN
4	CH	179	LEU
4	CH	221	TYR
4	CH	229	ARG
4	CH	235	THR
4	CH	238	MET
4	CH	241	LEU
4	CH	245	GLN
4	CH	248	VAL
4	CH	257	GLN
4	CH	269	GLU
4	CH	278	ASP
4	CH	306	LEU
4	CH	313	VAL
4	CH	314	ARG
4	CH	361	LEU
5	CK	50	ASP
5	CK	62	LYS
5	CK	70	VAL
5	CK	83	LEU
5	CK	92	ASN
5	CK	126	VAL

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Mol	Chain	Res	Type
5	CK	149	VAL
5	CK	156	THR
5	CK	162	ASP
5	CK	165	ILE
5	CK	180	VAL
5	CK	183	THR
6	CL	51	GLN
6	CL	57	VAL
6	CL	93	LEU
6	CL	109	LEU
6	CL	121	ASP
6	CL	123	ARG
6	CL	129	THR
6	CL	163	ILE
6	CL	172	VAL
6	CL	174	SER
6	CL	177	HIS
6	CL	212	ASN
6	CL	216	ASP
6	CL	217	ASN
6	CL	225	GLN
7	CM	124	VAL
7	CM	130	ARG
7	CM	134	LEU
7	CM	152	LEU
7	CM	155	LEU
7	CM	175	ILE
7	CM	176	VAL
7	CM	180	ASP
7	CM	182	LYS
7	CM	184	LEU
7	CM	191	LEU
7	CM	192	ARG
7	CM	212	LEU
7	CM	215	ARG
7	CM	233	VAL
7	CM	245	TYR
7	CM	257	ASP
7	CM	263	ILE
7	CM	271	SER
7	CM	275	ASP
7	CM	290	ASP

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Mol	Chain	Res	Type
7	CM	292	MET
7	CM	301	MET
7	CM	308	ASP
7	CM	310	LYS
7	CM	312	PHE
7	CM	316	ASN
8	CN	78	LEU
8	CN	82	MET
8	CN	95	LEU
8	CN	101	VAL
2	Cd	30	ILE
2	Cd	41	LEU
2	Cd	51	SER
2	Cd	59	GLU
2	Cd	61	VAL
2	Cd	62	ILE
2	Cd	91	ILE
2	Cd	108	VAL
2	Cd	115	VAL
2	Cd	126	GLU
2	Cd	128	LEU
2	Cd	131	ILE
2	Cd	147	VAL
2	Cd	150	ASN
3	Cf	209	ILE
3	Cf	212	ILE
3	Cf	230	LEU
3	Cf	233	ARG
3	Cf	236	SER
3	Cf	250	LEU
3	Cf	263	LYS
2	DD	30	ILE
2	DD	41	LEU
2	DD	43	GLU
2	DD	51	SER
2	DD	63	THR
2	DD	108	VAL
2	DD	115	VAL
2	DD	154	VAL
2	DD	161	ILE
3	DF	209	ILE
3	DF	215	VAL

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Mol	Chain	Res	Type
3	DF	223	ILE
3	DF	230	LEU
3	DF	238	ILE
3	DF	250	LEU
3	DF	256	THR
3	DF	263	LYS
1	Dg	793	GLU
1	Dg	808	LEU
1	Dg	814	GLN
1	Dg	815	VAL
1	Dg	816	GLU
1	Dg	819	VAL
4	DH	108	ASP
4	DH	109	LYS
4	DH	115	MET
4	DH	120	TYR
4	DH	130	LEU
4	DH	147	THR
4	DH	180	VAL
4	DH	203	ASN
4	DH	207	ASP
4	DH	225	ASN
4	DH	226	LEU
4	DH	231	ARG
4	DH	240	THR
4	DH	241	LEU
4	DH	248	VAL
4	DH	250	TYR
4	DH	255	ARG
4	DH	262	ASN
4	DH	278	ASP
4	DH	285	GLU
4	DH	293	ARG
4	DH	314	ARG
4	DH	332	ASP
4	DH	344	VAL
4	DH	345	LEU
4	DH	356	LEU
4	DH	361	LEU
5	DK	83	LEU
5	DK	107	LYS
5	DK	111	LYS

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Mol	Chain	Res	Type
5	DK	116	VAL
5	DK	149	VAL
5	DK	156	THR
5	DK	166	THR
5	DK	180	VAL
1	HG	865	THR
1	HG	898	LYS
1	HG	910	ASP
1	HG	912	MET
1	HG	913	VAL
1	HG	916	PHE
1	HG	930	ILE
1	HG	939	THR
1	HG	944	LEU
1	HG	947	ARG
1	HG	962	SER
1	HG	963	SER
1	HG	965	LEU
1	HG	968	PHE
1	HG	972	PHE
1	HG	1010	THR
1	HG	1017	GLN
1	HG	1044	ASP
1	IG	865	THR
1	IG	869	MET
1	IG	886	LEU
1	IG	898	LYS
1	IG	913	VAL
1	IG	916	PHE
1	IG	933	TYR
1	IG	939	THR
1	IG	944	LEU
1	IG	947	ARG
1	IG	962	SER
1	IG	963	SER
1	IG	965	LEU
1	IG	966	GLN
1	IG	972	PHE
1	IG	1010	THR
1	IG	1037	LEU
1	IG	1044	ASP
1	JG	865	THR

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Mol	Chain	Res	Type
1	JG	867	ASP
1	JG	880	ASP
1	JG	885	ILE
1	JG	895	LYS
1	JG	898	LYS
1	JG	913	VAL
1	JG	916	PHE
1	JG	917	ASN
1	JG	930	ILE
1	JG	944	LEU
1	JG	962	SER
1	JG	968	PHE
1	JG	972	PHE
1	JG	1010	THR
1	JG	1028	THR
1	JG	1037	LEU
1	KG	864	LYS
1	KG	874	ASP
1	KG	885	ILE
1	KG	886	LEU
1	KG	913	VAL
1	KG	930	ILE
1	KG	944	LEU
1	KG	956	TYR
1	KG	962	SER
1	KG	963	SER
1	KG	965	LEU
1	KG	966	GLN
1	KG	972	PHE
1	KG	1010	THR
1	KG	1037	LEU
1	KG	1045	VAL
1	LG	867	ASP
1	LG	869	MET
1	LG	881	GLU
1	LG	886	LEU
1	LG	898	LYS
1	LG	911	LYS
1	LG	913	VAL
1	LG	916	PHE
1	LG	930	ILE
1	LG	944	LEU

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Mol	Chain	Res	Type
1	LG	956	TYR
1	LG	962	SER
1	LG	963	SER
1	LG	968	PHE
1	LG	972	PHE
1	LG	1010	THR
1	LG	1017	GLN
1	LG	1037	LEU
1	LG	1044	ASP
1	MG	869	MET
1	MG	886	LEU
1	MG	898	LYS
1	MG	911	LYS
1	MG	913	VAL
1	MG	916	PHE
1	MG	930	ILE
1	MG	944	LEU
1	MG	956	TYR
1	MG	962	SER
1	MG	963	SER
1	MG	965	LEU
1	MG	1010	THR
1	MG	1017	GLN
1	MG	1037	LEU
1	NG	869	MET
1	NG	898	LYS
1	NG	911	LYS
1	NG	916	PHE
1	NG	930	ILE
1	NG	944	LEU
1	NG	962	SER
1	NG	965	LEU
1	NG	972	PHE
1	NG	1010	THR
1	NG	1017	GLN
1	OG	867	ASP
1	OG	869	MET
1	OG	873	LEU
1	OG	886	LEU
1	OG	898	LYS
1	OG	912	MET
1	OG	916	PHE

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Mol	Chain	Res	Type
1	OG	930	ILE
1	OG	933	TYR
1	OG	944	LEU
1	OG	947	ARG
1	OG	956	TYR
1	OG	962	SER
1	OG	963	SER
1	OG	965	LEU
1	OG	966	GLN
1	OG	1010	THR
1	OG	1017	GLN
1	OG	1040	LEU
1	OG	1045	VAL
1	PG	867	ASP
1	PG	869	MET
1	PG	886	LEU
1	PG	898	LYS
1	PG	910	ASP
1	PG	911	LYS
1	PG	913	VAL
1	PG	916	PHE
1	PG	930	ILE
1	PG	944	LEU
1	PG	947	ARG
1	PG	956	TYR
1	PG	962	SER
1	PG	965	LEU
1	PG	972	PHE
1	PG	1010	THR
1	PG	1017	GLN
1	PG	1037	LEU
1	PG	1044	ASP
11	AC	90	ASN
11	AC	104	HIS
11	AC	106	ILE
11	AC	113	GLU
11	AC	118	LEU
11	AC	124	GLN
11	AC	144	THR
11	AC	164	VAL
11	AC	170	THR
11	AC	196	LEU

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Mol	Chain	Res	Type
11	AC	205	GLU
11	AC	219	MET
11	AC	227	VAL
11	AC	234	VAL
11	AC	235	THR
6	DL	57	VAL
6	DL	98	TYR
6	DL	104	LYS
6	DL	109	LEU
6	DL	113	ASP
6	DL	130	ASP
6	DL	133	PHE
6	DL	135	PHE
6	DL	172	VAL
6	DL	212	ASN
6	DL	217	ASN
7	DM	134	LEU
7	DM	146	LEU
7	DM	149	ASN
7	DM	152	LEU
7	DM	171	ARG
7	DM	178	LYS
7	DM	180	ASP
7	DM	183	VAL
7	DM	184	LEU
7	DM	192	ARG
7	DM	194	LEU
7	DM	201	THR
7	DM	205	TYR
7	DM	215	ARG
7	DM	245	TYR
7	DM	246	LEU
7	DM	255	THR
7	DM	274	THR
7	DM	292	MET
7	DM	310	LYS
7	DM	317	LYS
8	DN	57	ARG
8	DN	62	ASN
8	DN	76	MET
8	DN	78	LEU
8	DN	82	MET

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Mol	Chain	Res	Type
8	DN	84	CYS
8	DN	86	LEU
8	DN	101	VAL
8	DN	102	VAL
8	DN	108	VAL
8	DN	115	GLN
2	Dd	30	ILE
2	Dd	41	LEU
2	Dd	52	MET
2	Dd	54	GLU
2	Dd	61	VAL
2	Dd	78	ASN
2	Dd	108	VAL
2	Dd	115	VAL
2	Dd	126	GLU
2	Dd	147	VAL
2	Dd	154	VAL
1	Ag	793	GLU
1	Ag	794	ILE
1	Ag	801	MET
1	Ag	808	LEU
1	Ag	811	ASP
1	Ag	814	GLN
1	Ag	815	VAL
1	Ag	819	VAL
3	Df	230	LEU
3	Df	232	VAL
3	Df	246	LEU
2	AD	24	LYS
2	AD	32	ASN
2	AD	51	SER
2	AD	54	GLU
2	AD	70	THR
2	AD	71	LEU
2	AD	85	VAL
2	AD	115	VAL
2	AD	117	VAL
2	AD	138	GLN
2	AD	147	VAL
2	AD	154	VAL
2	AD	155	GLU
2	AD	156	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (50) such sidechains are listed below:

Mol	Chain	Res	Type
1	AG	1017	GLN
2	Ed	32	ASN
11	BC	69	GLN
1	BG	1020	GLN
1	Gg	810	GLN
1	Gg	818	GLN
7	GM	153	GLN
11	GC	149	GLN
6	HL	160	GLN
6	HL	196	ASN
7	HM	306	GLN
1	Bg	810	GLN
1	Ig	810	GLN
7	IM	269	GLN
8	IN	94	GLN
6	JL	196	ASN
7	JM	249	GLN
7	JM	267	ASN
1	DG	1017	GLN
1	DG	1020	GLN
2	KD	138	GLN
2	Kd	32	ASN
7	LM	153	GLN
2	Ld	32	ASN
1	EG	1020	GLN
1	Mg	795	GLN
7	MM	249	GLN
4	WH	205	GLN
4	WH	355	GLN
4	YH	205	GLN
11	DC	69	GLN
11	DC	84	ASN
4	ZH	205	GLN
4	ZH	225	ASN
8	AN	94	GLN
2	Ad	32	ASN
6	BL	196	ASN
6	BL	226	ASN
6	BL	232	GLN
7	BM	267	ASN
6	CL	225	GLN

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Mol	Chain	Res	Type
7	CM	306	GLN
3	Cf	251	GLN
1	HG	1020	GLN
1	IG	1017	GLN
1	JG	1020	GLN
1	KG	1017	GLN
1	OG	1017	GLN
1	PG	1020	GLN
1	Ag	818	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
10	JX	1
10	WX	1
10	YX	1

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Mol	Chain	Number of breaks
10	XX	1
10	GX	1
10	CX	1
10	MX	1
10	ZX	1
10	KX	1
10	HX	1
10	FX	1
10	EX	1
10	IX	1
10	DX	1
10	BX	1
10	AX	1
10	VX	1
10	LX	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	JX	38:UNK	C	70:UNK	N	25.78
1	WX	38:UNK	C	70:UNK	N	25.34
1	YX	38:UNK	C	70:UNK	N	25.23
1	XX	38:UNK	C	70:UNK	N	25.08
1	GX	38:UNK	C	70:UNK	N	24.81
1	CX	38:UNK	C	70:UNK	N	24.61
1	MX	38:UNK	C	70:UNK	N	24.45
1	ZX	38:UNK	C	70:UNK	N	24.28
1	KX	38:UNK	C	70:UNK	N	23.87
1	HX	38:UNK	C	70:UNK	N	23.68
1	FX	38:UNK	C	70:UNK	N	23.65
1	EX	38:UNK	C	70:UNK	N	23.35
1	IX	38:UNK	C	70:UNK	N	23.30
1	DX	38:UNK	C	70:UNK	N	23.06
1	BX	38:UNK	C	70:UNK	N	22.80
1	AX	38:UNK	C	70:UNK	N	22.26
1	VX	38:UNK	C	70:UNK	N	22.09
1	LX	38:UNK	C	70:UNK	N	21.21

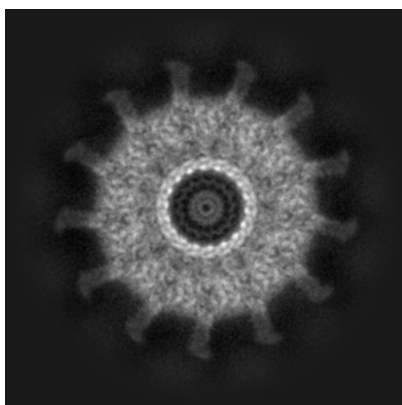
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-24026. These allow visual inspection of the internal detail of the map and identification of artifacts.

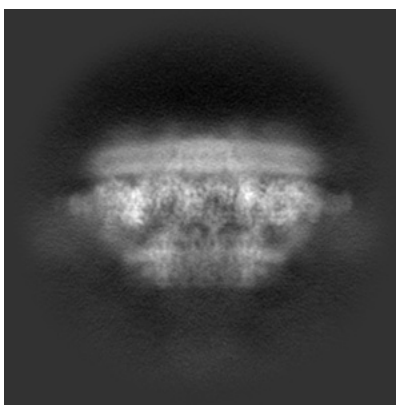
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

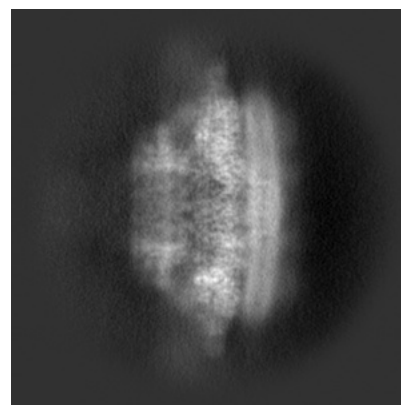
6.1.1 Primary map



X



Y

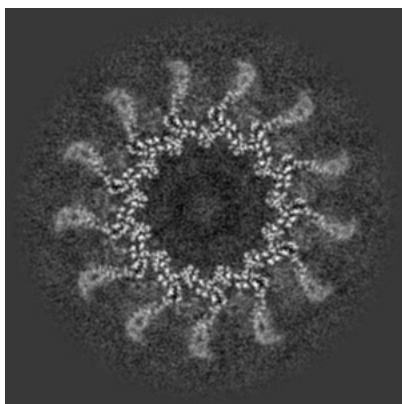


Z

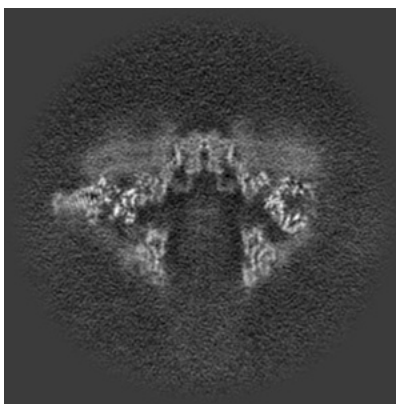
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

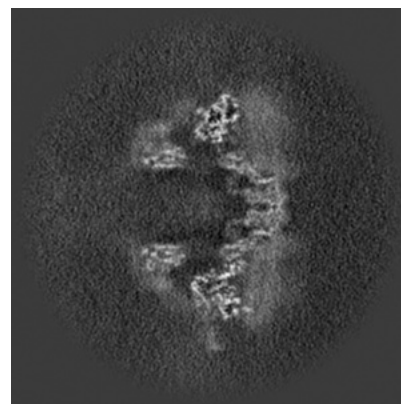
6.2.1 Primary map



X Index: 125



Y Index: 125

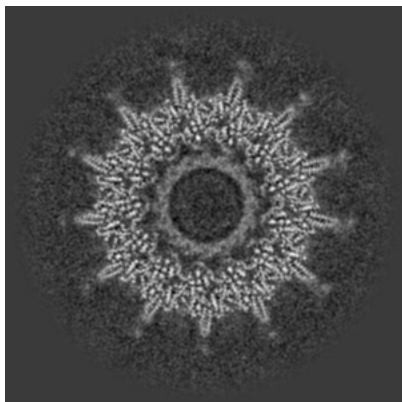


Z Index: 125

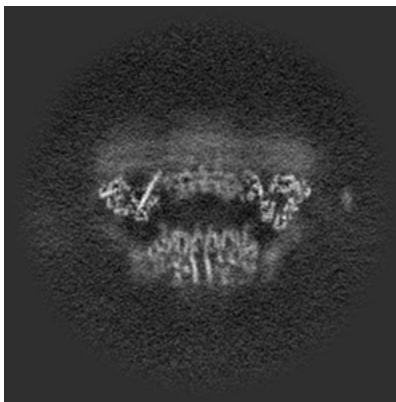
The images above show central slices of the map in three orthogonal directions.

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

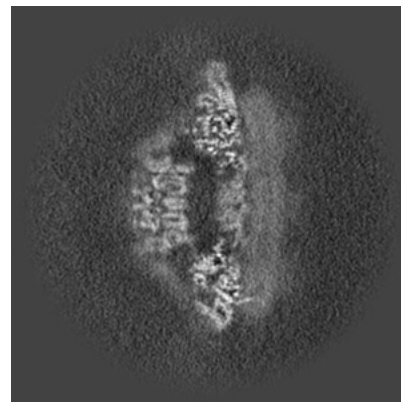
6.3.1 Primary map



X Index: 134



Y Index: 101

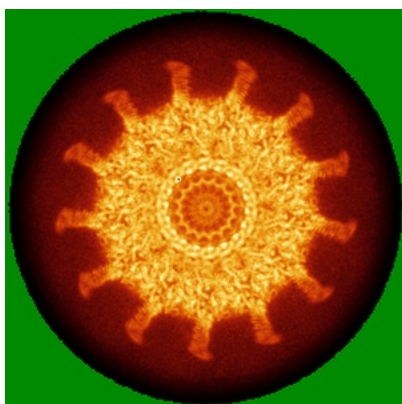


Z Index: 152

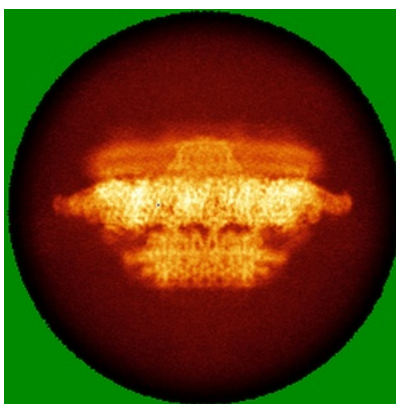
The images above show the largest variance slices of the map in three orthogonal directions.

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

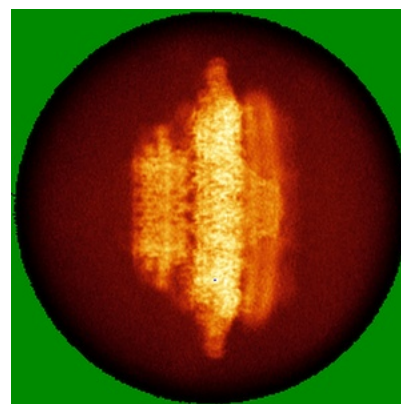
6.4.1 Primary map



X



Y

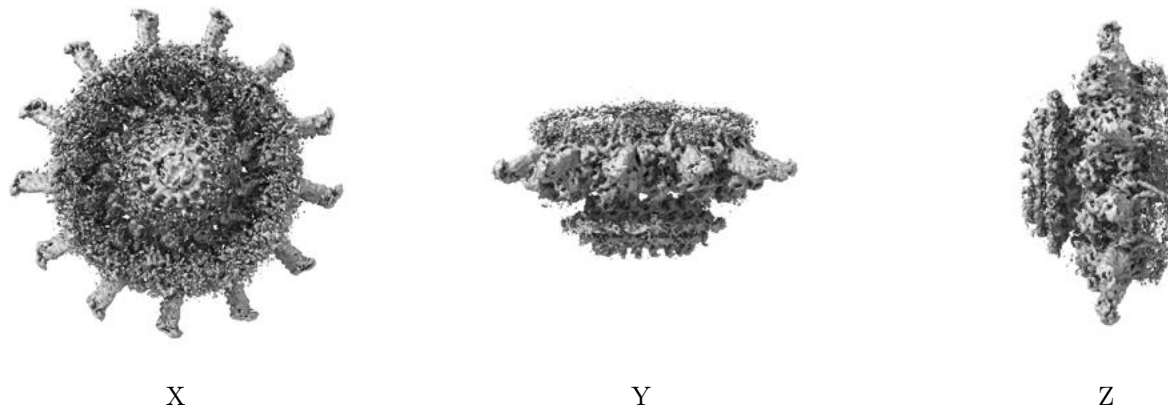


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 2.25. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

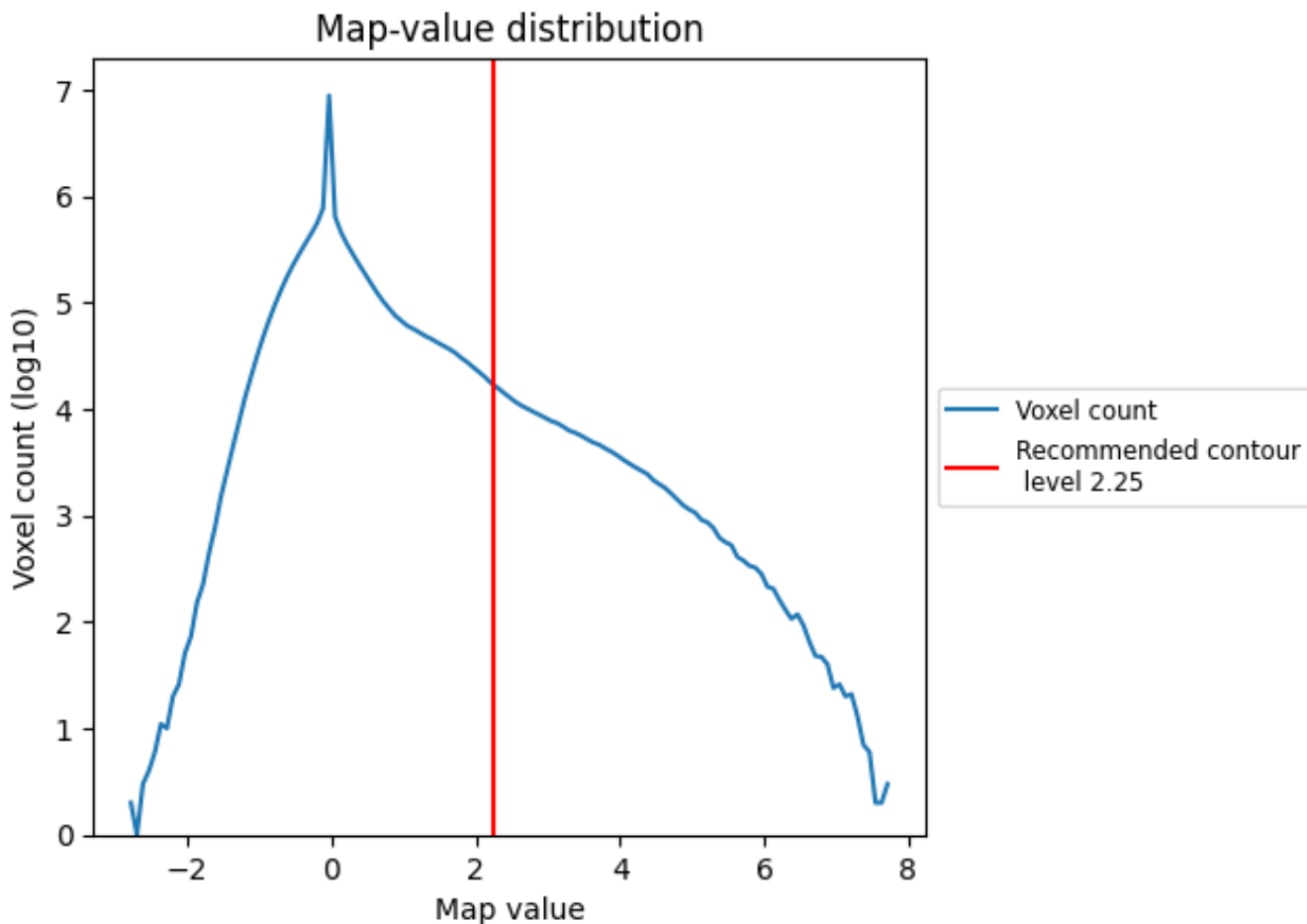
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

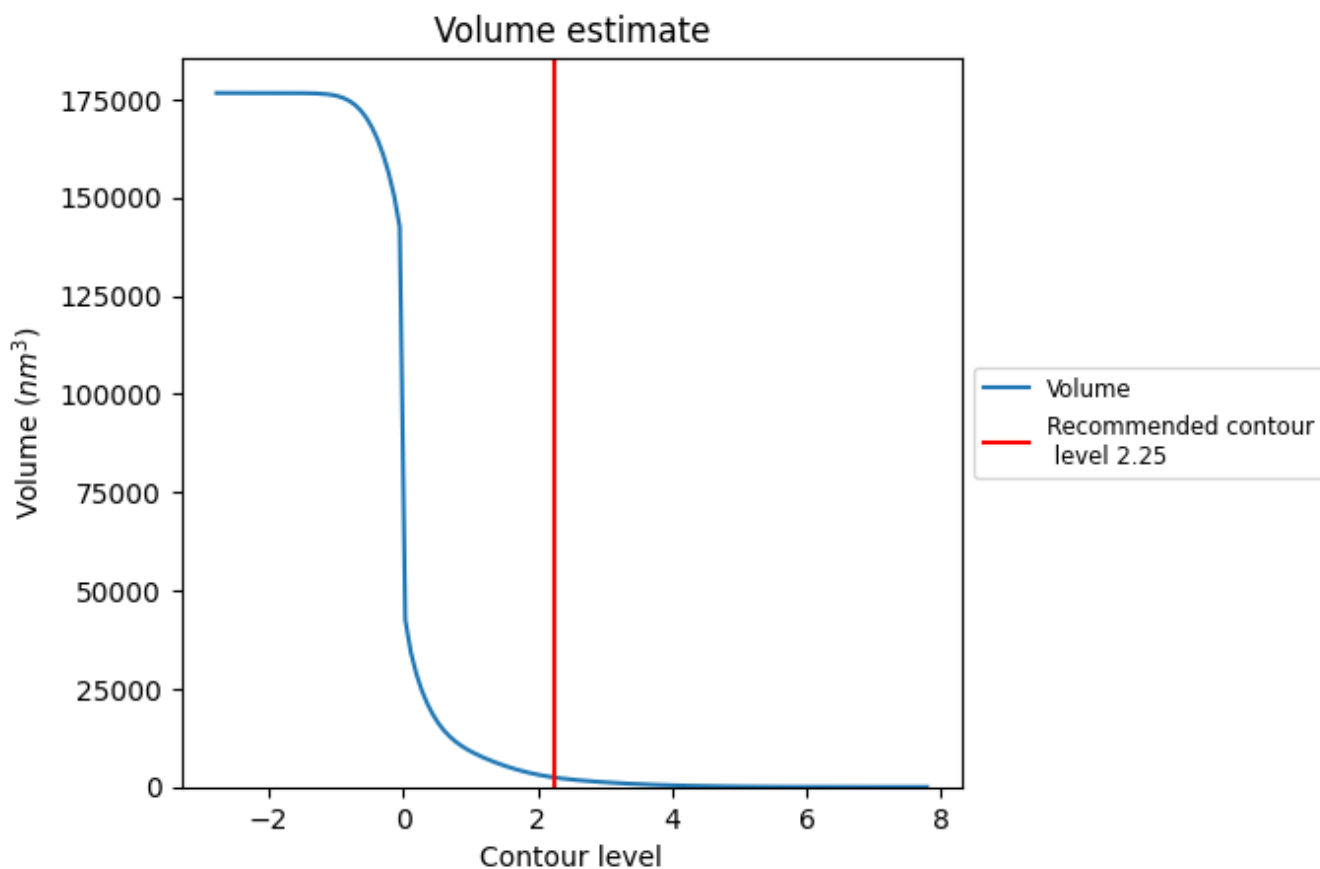
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

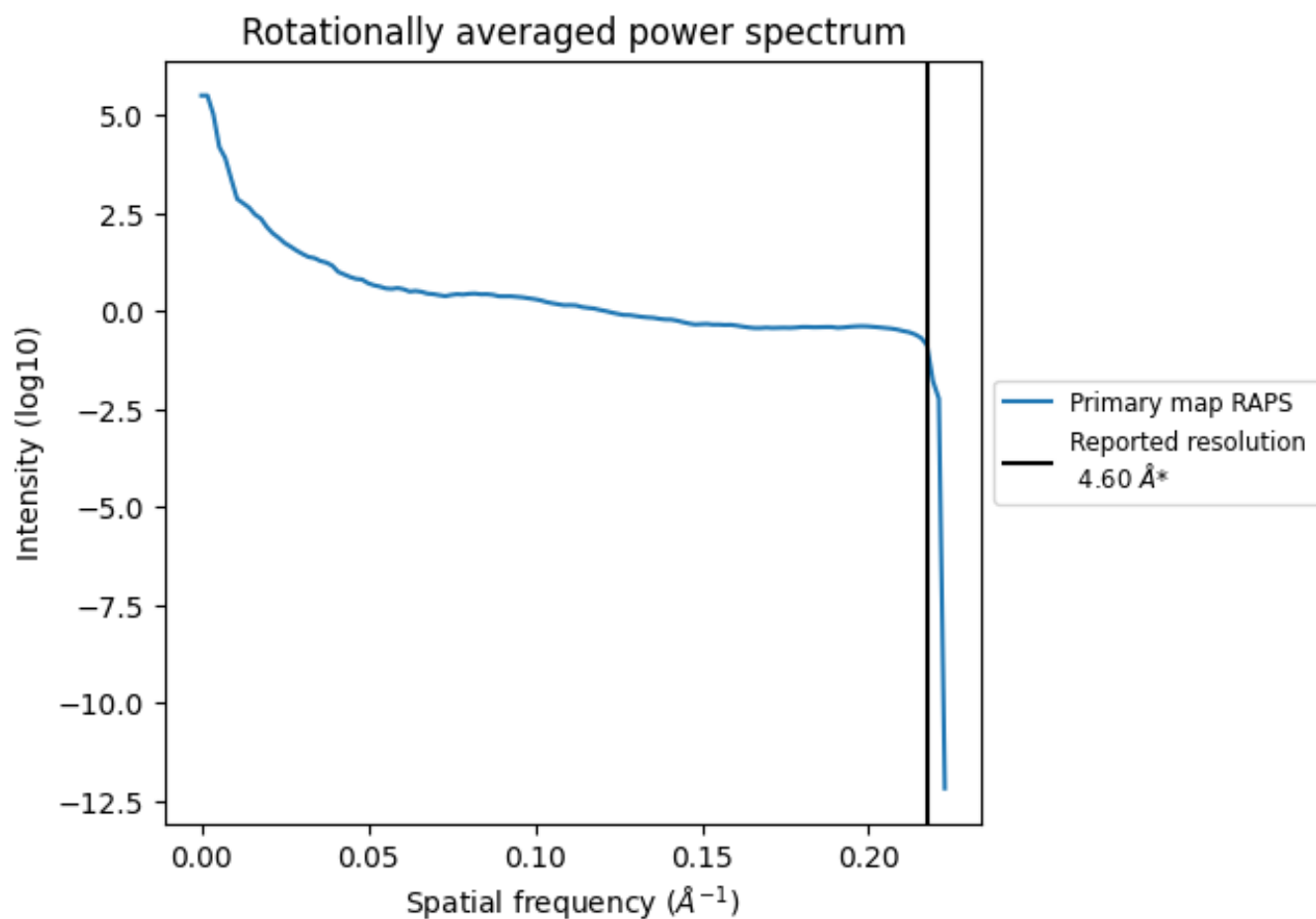
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 2412 nm³; this corresponds to an approximate mass of 2179 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 0.217 Å⁻¹

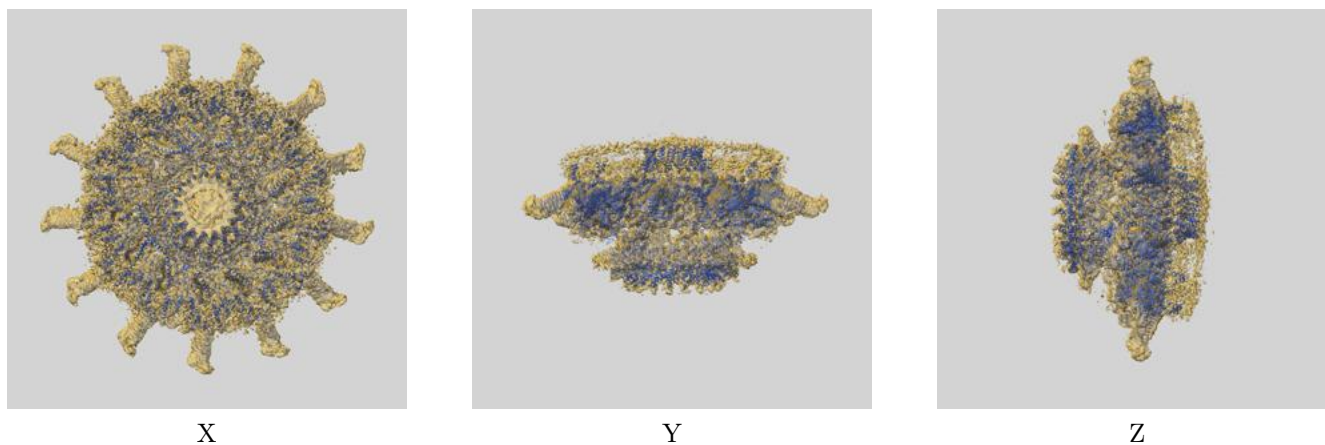
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

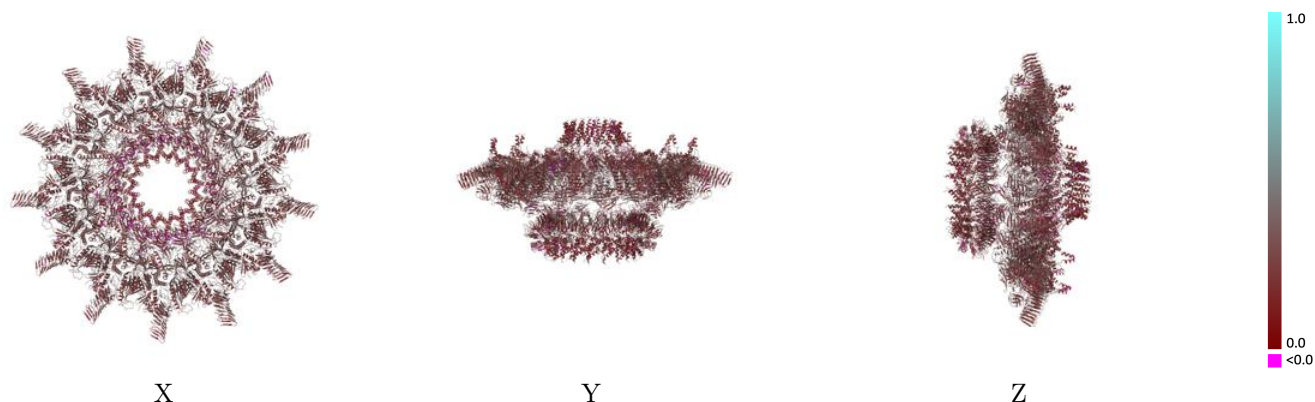
This section contains information regarding the fit between EMDB map EMD-24026 and PDB model 7MUY. Per-residue inclusion information can be found in section [3](#) on page [22](#).

9.1 Map-model overlay [i](#)



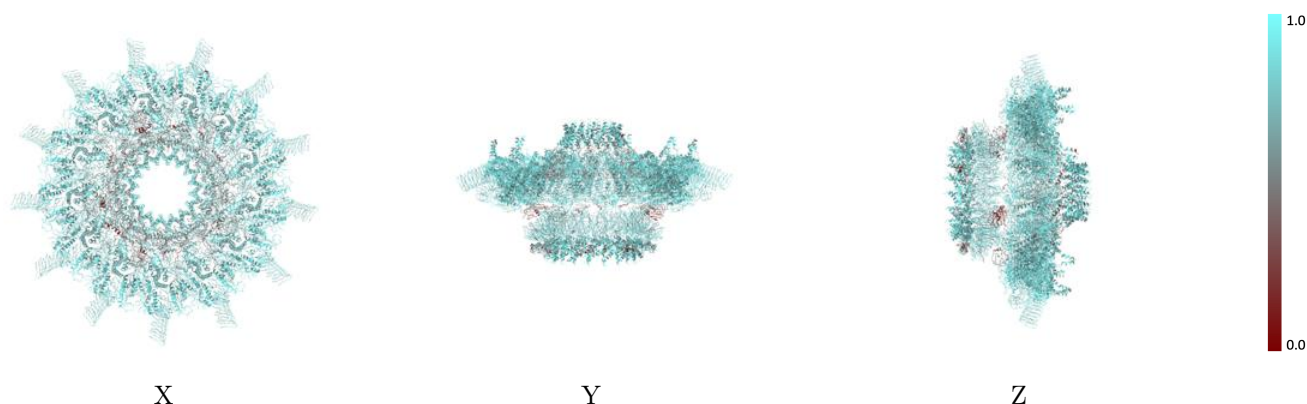
The images above show the 3D surface view of the map at the recommended contour level 2.25 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



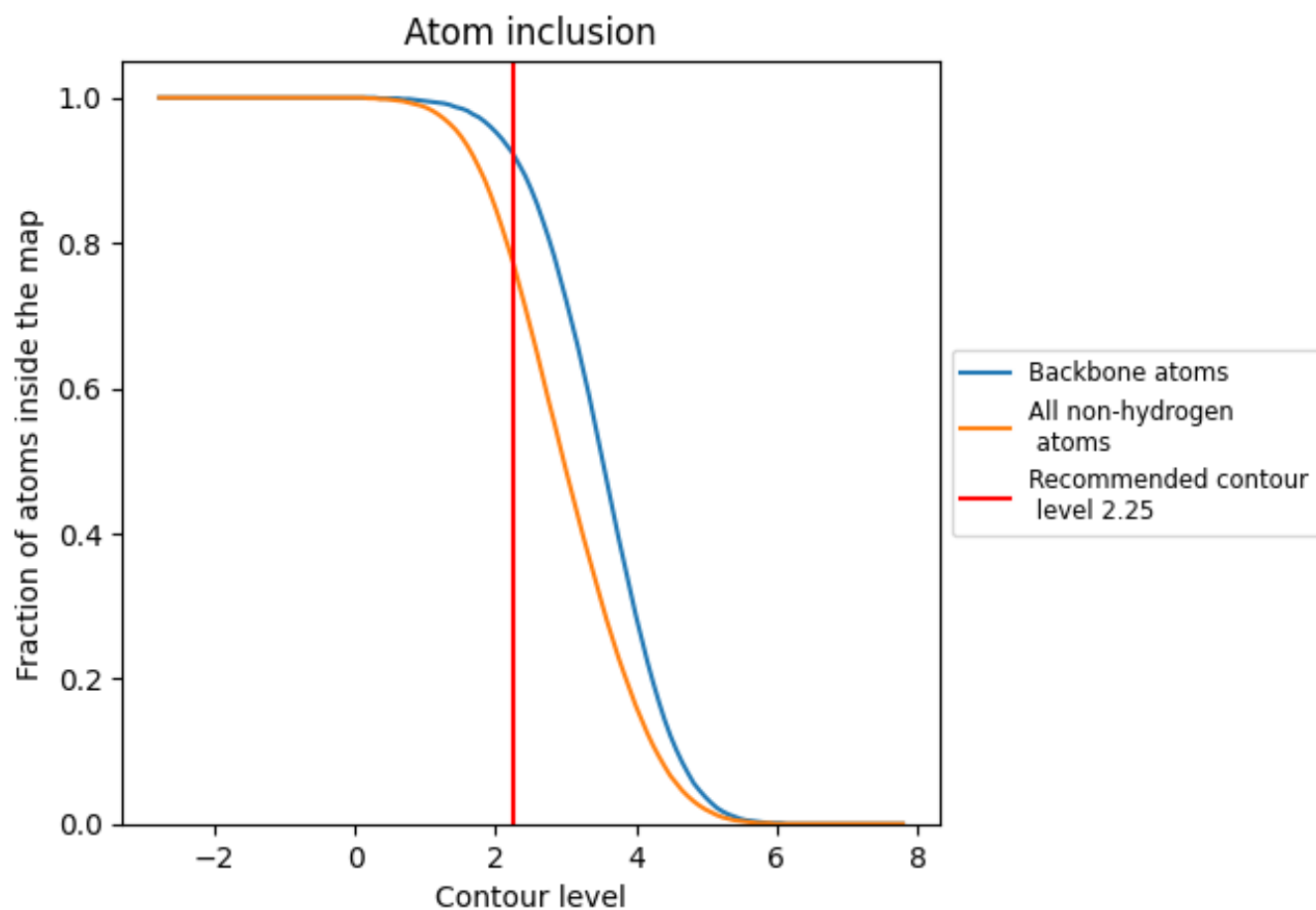
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (2.25).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 77% 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 (2.25) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7730	 0.2760
AC	 0.8090	 0.3010
AD	 0.8300	 0.3070
AF	 0.8070	 0.2390
AG	 0.6780	 0.1990
AH	 0.7930	 0.2780
AK	 0.8240	 0.3060
AL	 0.8320	 0.2870
AM	 0.8110	 0.2930
AN	 0.8060	 0.3290
AU	 0.9780	 0.4800
AX	 0.5620	 0.1910
Ad	 0.8360	 0.3050
Af	 0.8410	 0.2840
Ag	 0.8680	 0.2400
BC	 0.7680	 0.3000
BD	 0.8110	 0.3100
BF	 0.8000	 0.2210
BG	 0.5760	 0.1780
BH	 0.8040	 0.2840
BK	 0.8440	 0.3160
BL	 0.8480	 0.2920
BM	 0.8370	 0.2960
BN	 0.7730	 0.3370
BU	 1.0000	 0.4440
BX	 0.5170	 0.1940
Bd	 0.8270	 0.3040
Bf	 0.7950	 0.2670
Bg	 0.8420	 0.2520
CC	 0.7450	 0.2840
CD	 0.8220	 0.3190
CF	 0.7370	 0.2400
CG	 0.5850	 0.1750
CH	 0.8050	 0.2760
CK	 0.8270	 0.3190























































































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Chain	Atom inclusion	Q-score
CL	 0.8290	 0.2950
CM	 0.8100	 0.2900
CN	 0.7410	 0.3380
CU	 0.9780	 0.4570
CX	 0.6040	 0.2160
Cd	 0.8280	 0.2950
Cf	 0.8020	 0.2600
Cg	 0.8600	 0.2560
DC	 0.8220	 0.2960
DD	 0.8010	 0.3120
DF	 0.8000	 0.2370
DG	 0.5670	 0.1720
DH	 0.7900	 0.2790
DK	 0.8100	 0.3170
DL	 0.8220	 0.2850
DM	 0.8230	 0.2840
DN	 0.8110	 0.3340
DU	 0.8670	 0.4170
DX	 0.6920	 0.2460
Dd	 0.8110	 0.3070
Df	 0.7680	 0.2910
Dg	 0.8420	 0.2580
EC	 0.8140	 0.3010
ED	 0.8030	 0.3060
EF	 0.7660	 0.2310
EG	 0.5670	 0.1690
EH	 0.7830	 0.2780
EK	 0.8360	 0.3140
EL	 0.8290	 0.2990
EM	 0.8360	 0.2900
EN	 0.8080	 0.3250
EU	 1.0000	 0.4630
EX	 0.5000	 0.2210
Ed	 0.8310	 0.3090
Ef	 0.8060	 0.2840
Eg	 0.8090	 0.2370
FC	 0.7650	 0.2860
FD	 0.8060	 0.3090
FF	 0.7790	 0.2250
FG	 0.5720	 0.1640
FH	 0.7880	 0.2810
FK	 0.8230	 0.3110





















































































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Chain	Atom inclusion	Q-score
FL	 0.8180	 0.2830
FM	 0.8110	 0.2900
FN	 0.7920	 0.3320
FU	 0.8890	 0.4460
FX	 0.6830	 0.2640
Fd	 0.8220	 0.3010
Ff	 0.7630	 0.2770
Fg	 0.8200	 0.2510
GC	 0.7540	 0.2760
GD	 0.8070	 0.3110
GF	 0.7940	 0.2330
GG	 0.5490	 0.1540
GH	 0.7890	 0.2720
GK	 0.8290	 0.3170
GL	 0.8460	 0.2970
GM	 0.8060	 0.2900
GN	 0.7600	 0.3230
GU	 0.9780	 0.4930
GX	 0.7540	 0.2280
Gd	 0.8160	 0.3040
Gf	 0.7810	 0.2770
Gg	 0.8120	 0.2400
HC	 0.8190	 0.2870
HD	 0.7990	 0.3110
HF	 0.7560	 0.2290
HG	 0.5740	 0.1470
HH	 0.7900	 0.2830
HK	 0.8130	 0.3070
HL	 0.8350	 0.2900
HM	 0.8270	 0.2810
HN	 0.7430	 0.3150
HU	 0.9780	 0.4660
HX	 0.6330	 0.2130
Hd	 0.8340	 0.3130
Hf	 0.8090	 0.2770
Hg	 0.8240	 0.2530
IC	 0.8120	 0.3000
ID	 0.8130	 0.3190
IF	 0.7920	 0.2090
IG	 0.5890	 0.1470
IH	 0.7770	 0.2780
IK	 0.8200	 0.3100





















































































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Chain	Atom inclusion	Q-score
IL	 0.8190	 0.2860
IM	 0.8040	 0.2980
IN	 0.8200	 0.3340
IU	 0.9330	 0.4130
IX	 0.5330	 0.2020
Id	 0.8360	 0.3110
If	 0.7770	 0.2870
Ig	 0.8380	 0.2560
JC	 0.8140	 0.3040
JD	 0.8010	 0.3240
JF	 0.7920	 0.2260
JG	 0.5470	 0.1340
JH	 0.7970	 0.2810
JK	 0.8020	 0.3110
JL	 0.8260	 0.2990
JM	 0.8160	 0.2980
JN	 0.7760	 0.3380
JU	 0.9560	 0.4960
JX	 0.5920	 0.1790
Jd	 0.8250	 0.3120
Jf	 0.7860	 0.2530
Jg	 0.8380	 0.2630
KC	 0.7720	 0.2850
KD	 0.8220	 0.3120
KF	 0.7560	 0.2180
KG	 0.5580	 0.1490
KH	 0.8070	 0.2800
KK	 0.8140	 0.3140
KL	 0.8070	 0.2920
KM	 0.8060	 0.2860
KN	 0.7500	 0.3350
KU	 0.9560	 0.4320
KX	 0.6000	 0.2380
Kd	 0.8400	 0.3020
Kf	 0.8220	 0.2720
Kg	 0.8420	 0.2560
LC	 0.8150	 0.2930
LD	 0.8180	 0.3060
LF	 0.8090	 0.2360
LG	 0.6230	 0.1850
LH	 0.7910	 0.2780
LK	 0.8290	 0.3050




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Chain	Atom inclusion	Q-score
LL	 0.8360	 0.2980
LM	 0.8290	 0.2920
LN	 0.7920	 0.3200
LU	 0.9780	 0.4390
LX	 0.5710	 0.2220
Ld	 0.8140	 0.2990
Lf	 0.8180	 0.2670
Lg	 0.8380	 0.2540
MC	 0.8260	 0.3020
MD	 0.8240	 0.3130
MF	 0.7620	 0.2100
MG	 0.6430	 0.2100
MH	 0.7800	 0.2660
MK	 0.8150	 0.3140
ML	 0.8480	 0.2960
MM	 0.8180	 0.2790
MN	 0.8040	 0.3250
MU	 0.9560	 0.4300
MX	 0.7210	 0.2410
Md	 0.8450	 0.3040
Mf	 0.7520	 0.2790
Mg	 0.8090	 0.2380
NG	 0.6150	 0.1880
OG	 0.6430	 0.2060
PG	 0.6460	 0.1920
VF	 0.7880	 0.2260
VG	 0.8270	 0.2320
VH	 0.6910	 0.2720
VX	 0.5580	 0.2250
WF	 0.7580	 0.2210
WG	 0.7940	 0.2310
WH	 0.6340	 0.2520
WX	 0.6040	 0.2630
XF	 0.7330	 0.2210
XG	 0.8380	 0.2520
XH	 0.5360	 0.2570
XX	 0.7580	 0.2450
YF	 0.7880	 0.2220
YG	 0.8120	 0.2310
YH	 0.6780	 0.2530
YX	 0.6880	 0.2570
ZF	 0.7450	 0.2220

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Chain	Atom inclusion	Q-score
ZG	 0.8310	 0.2490
ZH	 0.5510	 0.2250
ZX	 0.6000	 0.2180