wwPDB EM Validation Summary Report

Oct 22, 2024 – 09:41 AM JST

PDB ID	:	8WOE
EMDB ID	:	EMD-37684
Title	:	Cryo-EM structure of the intact flagellar motor-hook complex in the CW state
Authors	:	Tan, J.X.; Zhang, L.; Zhou, Y.; Zhu, Y.Q.
Deposited on	:	2023-10-07
Resolution	:	4.30 Å(reported)
Based on initial models	:	?, .

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

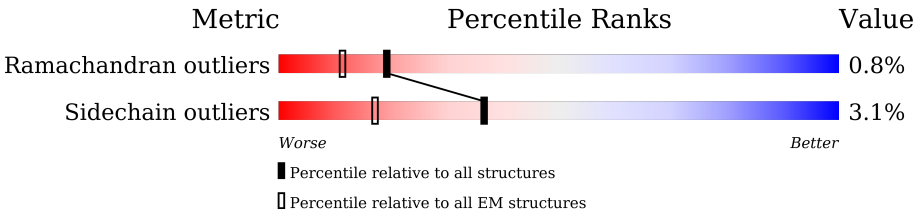
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	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 4.30 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 <=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	0	260	92% 5%
1	1	260	93%
1	2	260	98%
1	3	260	98%
1	4	260	97%
1	5	260	97%
1	6	260	97%
1	7	260	98%
1	8	260	98%

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Mol	Chain	Length	Quality of chain
1	9	260	97%
1	AF	260	95%
1	AG	260	95%
1	AH	260	94%
1	AI	260	93% 5%
1	AJ	260	95%
1	AK	260	92% 7%
1	AL	260	92% 5%
1	AM	260	92% 5%
1	AN	260	93% 5%
1	ZA	260	98%
1	ZB	260	96%
1	ZC	260	98%
1	ZD	260	98%
1	ZE	260	99%
2	A	232	88% 9%
2	B	232	88% 9%
2	C	232	88% 9%
2	D	232	88% 9%
2	E	232	88% 9%
2	F	232	87% 9%
2	G	232	88% 9%
2	H	232	88% 9%
2	I	232	88% 9%
2	J	232	88% 9%

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Mol	Chain	Length	Quality of chain
2	K	232	88% 9%
2	L	232	88% 9%
2	M	232	88% 9%
2	N	232	88% 9%
2	O	232	88% 9%
2	P	232	88% 9%
2	Q	232	88% 9%
2	R	232	88% 9%
2	S	232	88% 9%
2	T	232	88% 9%
2	U	232	88% 9%
2	V	232	88% 9%
2	W	232	88% 9%
2	X	232	88% 9%
2	Y	232	88% 9%
2	Z	232	88% 9%
3	A0	138	85% 11%
3	A6	138	12% 93%
3	A7	138	7% 86% 12%
3	A8	138	8% 86% 5% 9%
3	A9	138	7% 91% 8%
4	A1	104	7% 84% 12%
4	A2	104	85% 5% 11%
4	A3	104	86% 11%
4	A4	104	86% 11%

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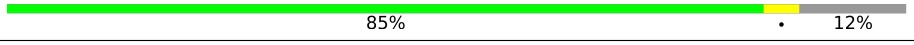
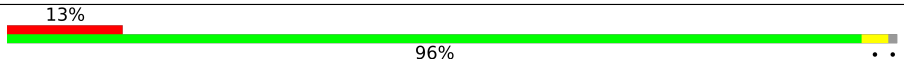
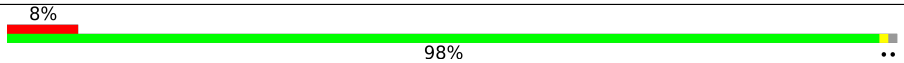
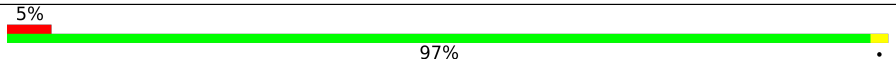
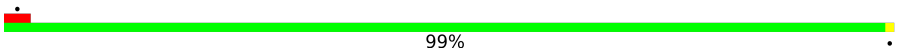
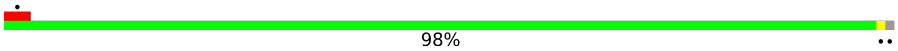
Mol	Chain	Length	Quality of chain
4	A5	104	
4	Az	104	
5	AA	251	
5	AB	251	
5	AC	251	
5	AD	251	
5	AE	251	
6	AO	560	
6	AP	560	
6	AQ	560	
6	AR	560	
6	AS	560	
6	AT	560	
6	AU	560	
6	AV	560	
6	AW	560	
6	AX	560	
6	AY	560	
6	AZ	560	
6	Aa	560	
6	Ac	560	
6	Ad	560	
6	Ae	560	
6	Af	560	
6	Ag	560	

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Mol	Chain	Length	Quality of chain
6	Ah	560	28% 71%
6	Ai	560	28% 71%
6	Aj	560	28% 71%
6	Ak	560	28% 71%
6	Al	560	28% 71%
6	Am	560	28% 71%
6	An	560	28% 71%
6	Ao	560	28% 71%
6	Ap	560	28% 71%
6	B0	560	5% 95%
6	B3	560	5% 95%
6	BG	560	98%
6	BH	560	97%
6	BI	560	96%
6	BJ	560	97%
6	BK	560	96%
6	BL	560	97%
6	BM	560	96%
6	BN	560	97%
6	BO	560	96%
6	BP	560	97%
6	BQ	560	96%
6	BR	560	28% 71%
6	BS	560	28% 71%
6	BT	560	28% 71%

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Mol	Chain	Length	Quality of chain
6	BU	560	28% 71%
6	BV	560	28% 71%
6	BW	560	28% 71%
6	BX	560	28% 71%
6	Ba	560	5% 95%
6	Bh	560	5% 95%
6	Bo	560	5% 95%
6	Bv	560	5% 95%
6	CG	560	5% 95%
6	CN	560	5% 95%
6	CU	560	5% 95%
6	Cb	560	5% 95%
6	Ci	560	5% 95%
6	Cp	560	5% 95%
6	Cw	560	5% 95%
6	DE	560	5% 95%
6	DL	560	5% 95%
6	EH	560	5% 95%
6	EO	560	5% 95%
6	EV	560	5% 95%
6	Ea	560	5% 95%
6	Eb	560	5% 95%
6	Ec	560	5% 95%
6	Ed	560	5% 95%
6	Ee	560	5% 95%

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Mol	Chain	Length	Quality of chain
6	Ef	560	5% 95%
6	Eg	560	5% 95%
6	Eh	560	5% 95%
6	Ei	560	5% 95%
6	Ej	560	5% 95%
6	Ek	560	5% 95%
6	El	560	5% 95%
6	Em	560	5% 95%
6	En	560	5% 95%
6	Eo	560	5% 95%
6	Ep	560	5% 95%
6	UI	560	25% 72%
6	UJ	560	25% 72%
6	UK	560	25% 72%
6	UL	560	25% 72%
6	UM	560	25% 72%
6	UN	560	25% 72%
6	UO	560	25% 72%
6	UP	560	25% 72%
6	WA	560	18% 80%
6	WB	560	18% 80%
6	WC	560	17% 81%
6	WD	560	18% 80%
6	WE	560	18% 80%
6	WF	560	18% 80%

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Mol	Chain	Length	Quality of chain
6	WG	560	18% 80%
6	WH	560	16% 83%
6	WI	560	15% 83%
6	WJ	560	16% 82%
6	WK	560	16% 82%
6	WL	560	14% 85%
6	WM	560	14% 85%
6	WN	560	14% 85%
6	WO	560	16% 83%
6	WP	560	16% 82%
6	WQ	560	18% 80%
6	WR	560	17% 80%
6	WS	560	18% 80%
6	WT	560	17% 80%
6	WU	560	19% 80%
6	WV	560	17% 80%
6	WW	560	18% 80%
7	Ab	89	99%
7	Aq	89	99%
7	Ar	89	100%
7	As	89	99%
8	At	264	91%
9	Au	245	81% 16%
9	Av	245	82% 15%
9	Aw	245	83% 15%

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Mol	Chain	Length	Quality of chain
9	Ax	245	82% 15%
9	Ay	245	5% 83% 15%
10	BA	134	5% 99%
10	BB	134	5% 98%
10	BC	134	99%
10	BD	134	96%
10	BE	134	96%
10	BF	134	96%
11	ZF	403	28% 97%
11	ZG	403	24% 95%
11	ZH	403	22% 97%
11	ZI	403	17% 97%
11	ZJ	403	9% 98%
11	ZK	403	5% 98%
11	ZL	403	97%
11	ZM	403	97%
11	ZN	403	97%
11	ZO	403	97%
11	ZP	403	95%
11	ZQ	403	97%
11	ZR	403	97%
11	ZS	403	98%
11	ZT	403	98%
11	ZU	403	99%
11	ZV	403	98%

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Mol	Chain	Length	Quality of chain
11	ZW	403	96%
11	ZX	403	7% 99%
11	ZY	403	10% 98%
11	ZZ	403	13% 98%
11	Za	403	17% 98%
11	Zb	403	20% 98%
11	Zc	403	24% 97%
11	Zd	403	29% 98%
11	Ze	403	31% 97%
11	Zf	403	34% 98%
11	Zg	403	37% 98%
11	Zh	403	38% 98%
12	a	365	80% 17%
12	b	365	80% 17%
12	c	365	80% 17%
12	d	365	80% 17%
12	e	365	80% 17%
12	f	365	80% 17%
12	g	365	80% 17%
12	h	365	80% 17%
12	i	365	80% 17%
12	j	365	81% 17%
12	k	365	80% 17%
12	l	365	80% 17%
12	m	365	80% 17%

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Mol	Chain	Length	Quality of chain
12	n	365	80% · 17%
12	o	365	80% · 17%
12	p	365	80% · 17%
12	q	365	80% · 17%
12	r	365	80% · 17%
12	s	365	80% · 17%
12	t	365	80% · 17%
12	u	365	80% · 17%
12	v	365	80% · 17%
12	w	365	80% · 17%
12	x	365	80% · 17%
12	y	365	80% · 17%
12	z	365	80% · 17%
13	B1	137	61% · 36%
13	B2	137	61% · 36%
13	B7	137	57% 7% 36%
13	B8	137	61% · 36%
13	B9	137	61% · 36%
13	BY	137	61% · 36%
13	BZ	137	61% · 36%
13	Be	137	57% 7% 36%
13	Bf	137	61% · 36%
13	Bg	137	61% · 36%
13	Bl	137	57% 7% 36%
13	Bm	137	61% · 36%

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Mol	Chain	Length	Quality of chain
13	Bn	137	61% · 36%
13	Bs	137	57% 7% 36%
13	Bt	137	61% · 36%
13	Bu	137	61% · 36%
13	Bz	137	57% 7% 36%
13	C1	137	57% 7% 36%
13	C2	137	61% · 36%
13	C3	137	61% · 36%
13	C4	137	57% 7% 36%
13	C5	137	61% · 36%
13	C8	137	57% 7% 36%
13	C9	137	61% · 36%
13	CD	137	57% 7% 36%
13	CE	137	61% · 36%
13	CF	137	61% · 36%
13	CK	137	57% 7% 36%
13	CL	137	61% · 36%
13	CM	137	61% · 36%
13	CR	137	57% 7% 36%
13	CS	137	61% · 36%
13	CT	137	61% · 36%
13	CY	137	57% 7% 36%
13	CZ	137	61% · 36%
13	Ca	137	61% · 36%
13	Cf	137	57% 7% 36%

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Mol	Chain	Length	Quality of chain
13	Cg	137	61% · 36%
13	Ch	137	61% · 36%
13	Cm	137	57% 7% 36%
13	Cn	137	61% · 36%
13	Co	137	61% · 36%
13	Ct	137	57% 7% 36%
13	Cu	137	61% · 36%
13	Cv	137	61% · 36%
13	D1	137	61% · 36%
13	D5	137	57% 7% 36%
13	D6	137	61% · 36%
13	D7	137	61% · 36%
13	DD	137	61% · 36%
13	DI	137	57% 7% 36%
13	DJ	137	61% · 36%
13	DK	137	61% · 36%
13	DM	137	61% · 36%
13	DN	137	61% · 36%
13	DO	137	61% · 36%
13	DP	137	61% · 36%
13	DQ	137	61% · 36%
13	DR	137	61% · 36%
13	DS	137	61% · 36%
13	DT	137	61% · 36%
13	DU	137	57% 7% 36%

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Mol	Chain	Length	Quality of chain
13	DV	137	61% · 36%
13	DW	137	61% · 36%
13	Da	137	57% 7% 36%
13	Db	137	61% · 36%
13	Dc	137	61% · 36%
13	Dg	137	57% 7% 36%
13	Dh	137	61% · 36%
13	Di	137	61% · 36%
13	Dm	137	57% 7% 36%
13	Dn	137	61% · 36%
13	Do	137	61% · 36%
13	Ds	137	57% 7% 36%
13	Dt	137	61% · 36%
13	Du	137	61% · 36%
13	Dy	137	57% 7% 36%
13	Dz	137	61% · 36%
13	EA	137	57% 7% 36%
13	EB	137	61% · 36%
13	EE	137	57% 7% 36%
13	EF	137	61% · 36%
13	EG	137	61% · 36%
13	EL	137	57% 7% 36%
13	EM	137	61% · 36%
13	EN	137	61% · 36%
13	ES	137	57% 7% 36%

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Mol	Chain	Length	Quality of chain
13	ET	137	61% • 36%
13	EU	137	61% • 36%
13	EZ	137	57% 7% 36%
13	FC	137	57% 7% 36%
13	FD	137	57% 7% 36%
13	FE	137	57% 7% 36%
13	FF	137	57% 7% 36%
13	FG	137	57% 7% 36%
13	FH	137	57% 7% 36%
13	FI	137	61% • 36%
13	FJ	137	61% • 36%
13	FK	137	61% • 36%
13	FL	137	61% • 36%
13	FM	137	61% • 36%
13	FN	137	61% • 36%
14	B5	331	91% • 6%
14	Bc	331	91% • 6%
14	Bj	331	91% • 6%
14	Bq	331	91% • 6%
14	Bx	331	91% • 6%
14	C6	331	91% • 6%
14	CB	331	91% • 6%
14	CI	331	91% • 6%
14	CP	331	91% • 6%
14	CW	331	91% • 6%

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Mol	Chain	Length	Quality of chain
14	Cd	331	91% 6%
14	Ck	331	91% 6%
14	Cr	331	91% 6%
14	Cy	331	91% 6%
14	D3	331	91% 6%
14	D9	331	91% 6%
14	DA	331	91% 6%
14	DG	331	91% 6%
14	DY	331	91% 6%
14	De	331	91% 6%
14	Dk	331	91% 6%
14	Dq	331	91% 6%
14	Dw	331	91% 6%
14	E1	331	91% 6%
14	E2	331	91% 6%
14	E3	331	91% 6%
14	E4	331	91% 6%
14	EC	331	91% 6%
14	EJ	331	91% 6%
14	EQ	331	91% 6%
14	EX	331	91% 6%
14	Ex	331	91% 6%
14	Ey	331	91% 6%
14	Ez	331	91% 6%
15	B6	129	8% 100%

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Mol	Chain	Length	Quality of chain
15	Bd	129	8% 100%
15	Bk	129	7% 100%
15	Br	129	8% 100%
15	By	129	8% 100%
15	C7	129	8% 100%
15	CC	129	8% 100%
15	CJ	129	8% 100%
15	CQ	129	8% 100%
15	CX	129	9% 100%
15	Ce	129	8% 100%
15	Cl	129	9% 100%
15	Cs	129	8% 100%
15	Cz	129	8% 100%
15	D0	129	8% 100%
15	D4	129	9% 100%
15	DB	129	9% 100%
15	DH	129	8% 100%
15	DZ	129	8% 100%
15	Df	129	8% 100%
15	Dl	129	8% 100%
15	Dr	129	8% 100%
15	Dx	129	8% 100%
15	E0	129	9% 100%
15	E6	129	8% 100%
15	E7	129	8% 100%

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Mol	Chain	Length	Quality of chain
15	E8	129	9% 100%
15	E9	129	9% 100%
15	ED	129	8% 100%
15	EK	129	8% 100%
15	ER	129	8% 100%
15	EY	129	9% 100%
15	FA	129	8% 100%
15	FB	129	9% 100%
16	B4	334	87% 10%
16	Bb	334	87% 10%
16	Bi	334	87% 10%
16	Bp	334	87% 10%
16	Bw	334	87% 10%
16	C0	334	87% 10%
16	CA	334	87% 10%
16	CH	334	87% 10%
16	CO	334	87% 10%
16	CV	334	87% 10%
16	Cc	334	87% 10%
16	Cj	334	87% 10%
16	Cq	334	87% 10%
16	Cx	334	87% 10%
16	D2	334	87% 10%
16	D8	334	87% 10%
16	DC	334	87% 10%

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Mol	Chain	Length	Quality of chain
16	DF	334	87% 10%
16	DX	334	87% 10%
16	Dd	334	87% 10%
16	Dj	334	87% 10%
16	Dp	334	87% 10%
16	Dv	334	87% 10%
16	E5	334	87% 10%
16	EI	334	87% 10%
16	EP	334	87% 10%
16	EW	334	87% 10%
16	Eq	334	87% 10%
16	Er	334	87% 10%
16	Es	334	87% 10%
16	Et	334	87% 10%
16	Eu	334	87% 10%
16	Ev	334	87% 10%
16	Ew	334	87% 10%

2 Entry composition (i)

There are 16 unique types of molecules in this entry. The entry contains 614043 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 Flagellar basal-body rod protein FlgG.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	0	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		
1	1	252	Total	C	N	O	S	0	0
			1894	1172	331	385	6		
1	2	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	3	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	4	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	5	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	6	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	7	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	8	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	9	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	AF	254	Total	C	N	O	S	0	0
			1903	1175	334	389	5		
1	AG	255	Total	C	N	O	S	0	0
			1911	1181	335	390	5		
1	AH	256	Total	C	N	O	S	0	0
			1919	1186	336	391	6		
1	AI	254	Total	C	N	O	S	0	0
			1903	1175	334	389	5		
1	AJ	255	Total	C	N	O	S	0	0
			1911	1181	335	390	5		
1	AK	243	Total	C	N	O	S	0	0
			1823	1127	318	373	5		
1	AL	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	AM	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		
1	AN	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		
1	ZA	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	ZB	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	ZC	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	ZD	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		
1	ZE	260	Total	C	N	O	S	0	0
			1949	1202	341	400	6		

- Molecule 2 is a protein called Flagellar L-ring protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	B	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	C	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	D	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	E	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	F	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	G	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	H	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	I	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	J	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	K	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	L	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	M	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	N	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	O	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	P	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	Q	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	R	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	S	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	T	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	U	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	V	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	W	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	X	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	Y	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		
2	Z	211	Total	C	N	O	S	0	0
			1580	985	282	309	4		

- Molecule 3 is a protein called Flagellar basal body rod protein FlgB.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A0	123	Total	C	N	O	S	0	0
			950	588	172	185	5		
3	A6	134	Total	C	N	O	S	0	0
			1030	633	189	203	5		
3	A7	121	Total	C	N	O	S	0	0
			942	583	172	182	5		
3	A8	125	Total	C	N	O	S	0	0
			967	598	177	187	5		
3	A9	127	Total	C	N	O	S	0	0
			982	606	182	189	5		

- Molecule 4 is a protein called Flagellar hook-basal body complex protein FliE.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A1	91	Total	C	N	O	S	0	0
			672	415	121	129	7		
4	A2	93	Total	C	N	O	S	0	0
			686	424	123	132	7		
4	A3	93	Total	C	N	O	S	0	0
			686	424	123	132	7		
4	A4	93	Total	C	N	O	S	0	0
			686	424	123	132	7		
4	A5	92	Total	C	N	O	S	0	0
			679	420	122	130	7		
4	Az	59	Total	C	N	O	S	0	0
			429	265	74	83	7		

- Molecule 5 is a protein called Flagellar basal-body rod protein FlgF.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AA	248	Total	C	N	O	S	0	0
			1804	1106	324	367	7		
5	AB	249	Total	C	N	O	S	0	0
			1812	1111	325	368	8		
5	AC	250	Total	C	N	O	S	0	0
			1820	1116	326	369	9		
5	AD	250	Total	C	N	O	S	0	0
			1820	1116	326	369	9		
5	AE	249	Total	C	N	O	S	0	0
			1812	1111	325	368	8		

- Molecule 6 is a protein called Flagellar M-ring protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AO	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AP	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AQ	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AR	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AS	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AT	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	AU	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AV	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AW	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AX	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AY	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	AZ	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Aa	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ac	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ad	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ae	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Af	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ag	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ah	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ai	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Aj	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ak	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Al	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Am	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	An	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ao	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		
6	Ap	164	Total	C	N	O	S	0	0
			1275	776	237	259	3		

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Mol	Chain	Residues	Atoms	AltConf	Trace
6	BG	13	Total C N O 81 50 15 16	0	0
6	BH	16	Total C N O 103 64 19 20	0	0
6	BI	20	Total C N O 133 83 23 27	0	0
6	BJ	16	Total C N O 103 64 19 20	0	0
6	BK	21	Total C N O 140 88 24 28	0	0
6	BL	16	Total C N O 103 64 19 20	0	0
6	BM	21	Total C N O 140 88 24 28	0	0
6	BN	16	Total C N O 103 64 19 20	0	0
6	BO	20	Total C N O 133 83 23 27	0	0
6	BP	16	Total C N O 103 64 19 20	0	0
6	BQ	21	Total C N O 140 88 24 28	0	0
6	BR	164	Total C N O S 1275 776 237 259 3	0	0
6	BS	164	Total C N O S 1275 776 237 259 3	0	0
6	BT	164	Total C N O S 1275 776 237 259 3	0	0
6	BU	164	Total C N O S 1275 776 237 259 3	0	0
6	BV	164	Total C N O S 1275 776 237 259 3	0	0
6	BW	164	Total C N O S 1275 776 237 259 3	0	0
6	BX	164	Total C N O S 1275 776 237 259 3	0	0
6	UI	155	Total C N O S 1172 733 211 226 2	0	0
6	UJ	155	Total C N O S 1172 733 211 226 2	0	0
6	UK	155	Total C N O S 1172 733 211 226 2	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	UL	155	Total	C	N	O	S	0	0
			1172	733	211	226	2		
6	UM	155	Total	C	N	O	S	0	0
			1172	733	211	226	2		
6	UN	155	Total	C	N	O	S	0	0
			1172	733	211	226	2		
6	UO	155	Total	C	N	O	S	0	0
			1172	733	211	226	2		
6	UP	155	Total	C	N	O	S	0	0
			1172	733	211	226	2		
6	WA	113	Total	C	N	O	S	0	0
			849	534	148	166	1		
6	WB	111	Total	C	N	O	S	0	0
			836	526	146	163	1		
6	WC	108	Total	C	N	O	S	0	0
			812	510	142	159	1		
6	WD	110	Total	C	N	O	S	0	0
			827	522	144	160	1		
6	WE	112	Total	C	N	O	S	0	0
			843	531	147	164	1		
6	WF	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	WG	112	Total	C	N	O	S	0	0
			843	531	147	164	1		
6	WH	95	Total	C	N	O	S	0	0
			703	439	126	137	1		
6	WI	95	Total	C	N	O	S	0	0
			703	439	126	137	1		
6	WJ	99	Total	C	N	O	S	0	0
			737	462	131	143	1		
6	WK	98	Total	C	N	O	S	0	0
			729	456	130	142	1		
6	WL	85	Total	C	N	O	S	0	0
			622	389	110	122	1		
6	WM	82	Total	C	N	O	S	0	0
			596	372	107	116	1		
6	WN	84	Total	C	N	O	S	0	0
			611	380	109	121	1		
6	WO	96	Total	C	N	O	S	0	0
			714	448	127	138	1		
6	WP	100	Total	C	N	O	S	0	0
			741	464	132	144	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	WQ	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	WR	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	WS	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	WT	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	WU	112	Total	C	N	O	S	0	0
			843	531	147	164	1		
6	WV	110	Total	C	N	O	S	0	0
			827	521	144	161	1		
6	WW	111	Total	C	N	O	S	0	0
			834	526	145	162	1		
6	DE	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	DL	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	B0	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	B3	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	EH	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	EO	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	EV	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ba	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Bh	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Bo	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Bv	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ea	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	CG	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	CN	27	Total	C	N	O	S	0	0
			224	135	44	42	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	CU	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Cb	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ci	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Cp	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Cw	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Eb	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ec	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ed	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ee	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ef	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Eg	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Eh	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ei	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ej	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ek	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	El	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Em	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	En	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Eo	27	Total	C	N	O	S	0	0
			224	135	44	42	3		
6	Ep	27	Total	C	N	O	S	0	0
			224	135	44	42	3		

- Molecule 7 is a protein called Flagellar biosynthetic protein FliQ.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	Ab	89	Total	C	N	O	S	0	0
			670	449	100	114	7		
7	Aq	89	Total	C	N	O	S	0	0
			670	449	100	114	7		
7	Ar	89	Total	C	N	O	S	0	0
			670	449	100	114	7		
7	As	89	Total	C	N	O	S	0	0
			670	449	100	114	7		

- Molecule 8 is a protein called Flagellar biosynthetic protein FliR.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	At	253	Total	C	N	O	S	0	0
			1945	1305	307	318	15		

- Molecule 9 is a protein called Flagellar biosynthetic protein FliP.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	Au	207	Total	C	N	O	S	0	0
			1605	1072	249	272	12		
9	Av	209	Total	C	N	O	S	0	0
			1626	1086	252	276	12		
9	Aw	208	Total	C	N	O	S	0	0
			1614	1077	251	274	12		
9	Ax	208	Total	C	N	O	S	0	0
			1614	1077	251	274	12		
9	Ay	209	Total	C	N	O	S	0	0
			1623	1084	251	276	12		

- Molecule 10 is a protein called Flagellar basal-body rod protein FlgC.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	BA	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
10	BB	132	Total	C	N	O	S	0	0
			964	601	166	192	5		
10	BC	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
10	BD	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
10	BE	133	Total	C	N	O	S	0	0
			969	604	167	193	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	BF	133	Total	C	N	O	S	0	0
			969	604	167	193	5		

- Molecule 11 is a protein called Flagellar hook protein FlgE.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	ZF	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZG	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZH	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZI	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZJ	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZK	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZL	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZM	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZN	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZO	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZP	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZQ	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZR	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZS	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZT	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZU	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZV	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZW	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
11	ZX	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZY	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	ZZ	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Za	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zb	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zc	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zd	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Ze	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zf	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zg	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		
11	Zh	401	Total	C	N	O	S	0	0
			2947	1814	507	618	8		

- Molecule 12 is a protein called Flagellar P-ring protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	a	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	b	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	c	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	d	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	e	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	f	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	g	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	h	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		

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Mol	Chain	Residues	Atoms					AltConf	Trace
12	i	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	j	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	k	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	l	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	m	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	n	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	o	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	p	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	q	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	r	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	s	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	t	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	u	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	v	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	w	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	x	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	y	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		
12	z	303	Total	C	N	O	S	0	0
			2228	1364	405	446	13		

- Molecule 13 is a protein called Flagellar motor switch protein FliN.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	C3	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	C4	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	C5	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	C8	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	C9	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DD	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DI	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DJ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DK	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DM	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DN	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DO	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DP	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DQ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DR	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DS	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DT	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DU	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DV	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	DW	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Da	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Db	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	Dc	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dg	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dh	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Di	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dm	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dn	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Do	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Ds	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dt	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Du	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dy	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Dz	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	D1	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	D5	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	D6	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	D7	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EA	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EB	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	B1	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	B2	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	B7	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	B8	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	B9	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EE	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EF	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EG	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EL	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EM	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EN	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	ES	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	ET	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EU	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	EZ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	BY	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	BZ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Be	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bf	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bg	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bl	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bm	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bn	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bs	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	Bt	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bu	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Bz	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	C1	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	C2	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CD	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CE	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CF	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CK	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CL	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CM	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CR	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CS	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CT	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CY	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	CZ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Ca	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Cf	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Cg	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Ch	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Cm	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	Cn	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Co	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Ct	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Cu	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	Cv	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FC	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FD	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FE	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FF	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FG	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FH	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FI	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FJ	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FK	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FL	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FM	87	Total	C	N	O	S	0	0
			675	427	118	126	4		
13	FN	87	Total	C	N	O	S	0	0
			675	427	118	126	4		

- Molecule 14 is a protein called Flagellar motor switch protein FliG.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	C6	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	DA	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
14	DG	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	DY	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	De	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Dk	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Dq	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Dw	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	D3	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	D9	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	B5	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	EC	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	EJ	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	EQ	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	EX	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Bc	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Bj	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Bq	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Bx	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	CB	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	CI	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	CP	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	CW	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
14	Cd	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Ck	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Cr	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Cy	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Ex	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Ey	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	Ez	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	E1	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	E2	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	E3	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		
14	E4	310	Total	C	N	O	S	0	0
			2428	1515	430	474	9		

- Molecule 15 is a protein called Chemotaxis protein CheY.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	C7	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	DB	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	DH	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	DZ	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Df	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Dl	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Dr	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Dx	129	Total	C	N	O	S	0	0
			991	634	165	185	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
15	D4	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	D0	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	B6	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	ED	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	EK	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	ER	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	EY	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Bd	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Bk	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Br	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	By	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	CC	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	CJ	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	CQ	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	CX	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Ce	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Cl	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Cs	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	Cz	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	E6	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	E7	129	Total	C	N	O	S	0	0
			991	634	165	185	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
15	E8	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	E9	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	E0	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	FA	129	Total	C	N	O	S	0	0
			991	634	165	185	7		
15	FB	129	Total	C	N	O	S	0	0
			991	634	165	185	7		

There are 68 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C7	13	LYS	ASP	engineered mutation	UNP P0A2D5
C7	106	TRP	TYR	engineered mutation	UNP P0A2D5
DB	13	LYS	ASP	engineered mutation	UNP P0A2D5
DB	106	TRP	TYR	engineered mutation	UNP P0A2D5
DH	13	LYS	ASP	engineered mutation	UNP P0A2D5
DH	106	TRP	TYR	engineered mutation	UNP P0A2D5
DZ	13	LYS	ASP	engineered mutation	UNP P0A2D5
DZ	106	TRP	TYR	engineered mutation	UNP P0A2D5
Df	13	LYS	ASP	engineered mutation	UNP P0A2D5
Df	106	TRP	TYR	engineered mutation	UNP P0A2D5
Dl	13	LYS	ASP	engineered mutation	UNP P0A2D5
Dl	106	TRP	TYR	engineered mutation	UNP P0A2D5
Dr	13	LYS	ASP	engineered mutation	UNP P0A2D5
Dr	106	TRP	TYR	engineered mutation	UNP P0A2D5
Dx	13	LYS	ASP	engineered mutation	UNP P0A2D5
Dx	106	TRP	TYR	engineered mutation	UNP P0A2D5
D4	13	LYS	ASP	engineered mutation	UNP P0A2D5
D4	106	TRP	TYR	engineered mutation	UNP P0A2D5
D0	13	LYS	ASP	engineered mutation	UNP P0A2D5
D0	106	TRP	TYR	engineered mutation	UNP P0A2D5
B6	13	LYS	ASP	engineered mutation	UNP P0A2D5
B6	106	TRP	TYR	engineered mutation	UNP P0A2D5
ED	13	LYS	ASP	engineered mutation	UNP P0A2D5
ED	106	TRP	TYR	engineered mutation	UNP P0A2D5
EK	13	LYS	ASP	engineered mutation	UNP P0A2D5
EK	106	TRP	TYR	engineered mutation	UNP P0A2D5
ER	13	LYS	ASP	engineered mutation	UNP P0A2D5
ER	106	TRP	TYR	engineered mutation	UNP P0A2D5
EY	13	LYS	ASP	engineered mutation	UNP P0A2D5

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Chain	Residue	Modelled	Actual	Comment	Reference
EY	106	TRP	TYR	engineered mutation	UNP P0A2D5
Bd	13	LYS	ASP	engineered mutation	UNP P0A2D5
Bd	106	TRP	TYR	engineered mutation	UNP P0A2D5
Bk	13	LYS	ASP	engineered mutation	UNP P0A2D5
Bk	106	TRP	TYR	engineered mutation	UNP P0A2D5
Br	13	LYS	ASP	engineered mutation	UNP P0A2D5
Br	106	TRP	TYR	engineered mutation	UNP P0A2D5
By	13	LYS	ASP	engineered mutation	UNP P0A2D5
By	106	TRP	TYR	engineered mutation	UNP P0A2D5
CC	13	LYS	ASP	engineered mutation	UNP P0A2D5
CC	106	TRP	TYR	engineered mutation	UNP P0A2D5
CJ	13	LYS	ASP	engineered mutation	UNP P0A2D5
CJ	106	TRP	TYR	engineered mutation	UNP P0A2D5
CQ	13	LYS	ASP	engineered mutation	UNP P0A2D5
CQ	106	TRP	TYR	engineered mutation	UNP P0A2D5
CX	13	LYS	ASP	engineered mutation	UNP P0A2D5
CX	106	TRP	TYR	engineered mutation	UNP P0A2D5
Ce	13	LYS	ASP	engineered mutation	UNP P0A2D5
Ce	106	TRP	TYR	engineered mutation	UNP P0A2D5
Cl	13	LYS	ASP	engineered mutation	UNP P0A2D5
Cl	106	TRP	TYR	engineered mutation	UNP P0A2D5
Cs	13	LYS	ASP	engineered mutation	UNP P0A2D5
Cs	106	TRP	TYR	engineered mutation	UNP P0A2D5
Cz	13	LYS	ASP	engineered mutation	UNP P0A2D5
Cz	106	TRP	TYR	engineered mutation	UNP P0A2D5
E6	13	LYS	ASP	engineered mutation	UNP P0A2D5
E6	106	TRP	TYR	engineered mutation	UNP P0A2D5
E7	13	LYS	ASP	engineered mutation	UNP P0A2D5
E7	106	TRP	TYR	engineered mutation	UNP P0A2D5
E8	13	LYS	ASP	engineered mutation	UNP P0A2D5
E8	106	TRP	TYR	engineered mutation	UNP P0A2D5
E9	13	LYS	ASP	engineered mutation	UNP P0A2D5
E9	106	TRP	TYR	engineered mutation	UNP P0A2D5
E0	13	LYS	ASP	engineered mutation	UNP P0A2D5
E0	106	TRP	TYR	engineered mutation	UNP P0A2D5
FA	13	LYS	ASP	engineered mutation	UNP P0A2D5
FA	106	TRP	TYR	engineered mutation	UNP P0A2D5
FB	13	LYS	ASP	engineered mutation	UNP P0A2D5
FB	106	TRP	TYR	engineered mutation	UNP P0A2D5

- Molecule 16 is a protein called Flagellar motor switch protein FliM.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	C0	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	DC	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	DF	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	DX	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Dd	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Dj	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Dp	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Dv	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	D2	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	D8	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	B4	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	EI	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	EP	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	EW	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Bb	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Bi	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Bp	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Bw	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	CA	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	CH	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	CO	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	CV	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		

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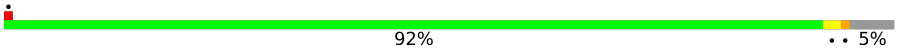
Mol	Chain	Residues	Atoms					AltConf	Trace
16	Cc	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Cj	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Cq	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Cx	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Eq	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Er	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Es	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Et	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Eu	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Ev	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	Ew	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		
16	E5	301	Total	C	N	O	S	0	0
			2431	1549	437	440	5		

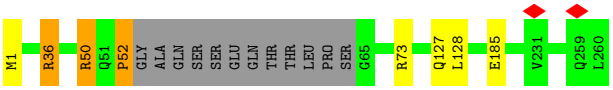
3 Residue-property plots (i)

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

• Molecule 1: Flagellar basal-body rod protein FlgG

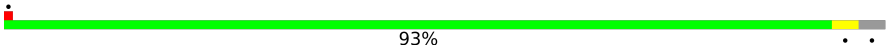
Chain 0:

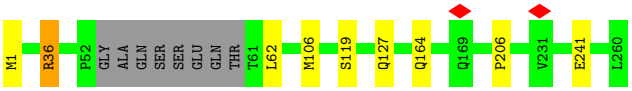




• Molecule 1: Flagellar basal-body rod protein FlgG

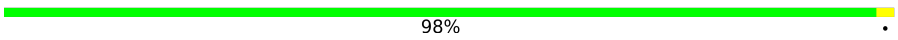
Chain 1:

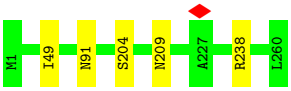




• Molecule 1: Flagellar basal-body rod protein FlgG

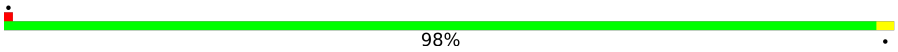
Chain 2:

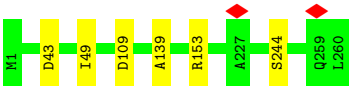




• Molecule 1: Flagellar basal-body rod protein FlgG

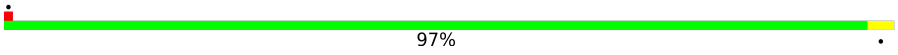
Chain 3:

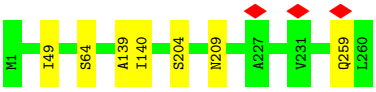




• Molecule 1: Flagellar basal-body rod protein FlgG

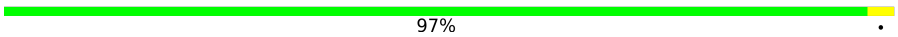
Chain 4:

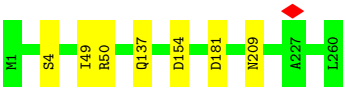




• Molecule 1: Flagellar basal-body rod protein FlgG

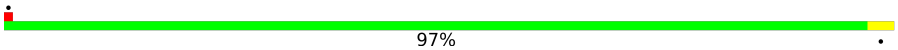
Chain 5:





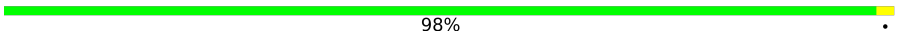
• Molecule 1: Flagellar basal-body rod protein FlgG

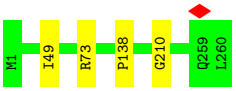
Chain 6:



• Molecule 1: Flagellar basal-body rod protein FlgG

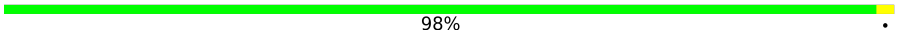
Chain 7:

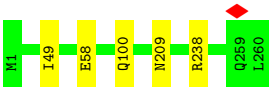




• Molecule 1: Flagellar basal-body rod protein FlgG

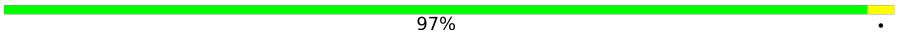
Chain 8:





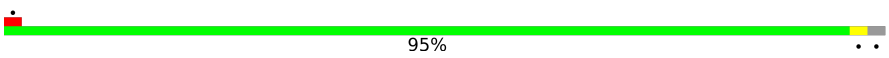
• Molecule 1: Flagellar basal-body rod protein FlgG

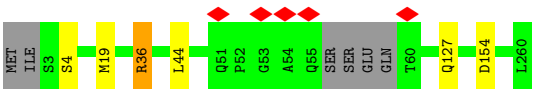
Chain 9:



• Molecule 1: Flagellar basal-body rod protein FlgG

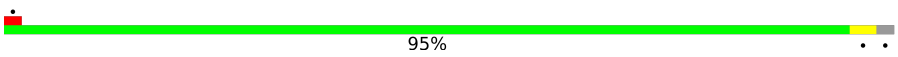
Chain AF:

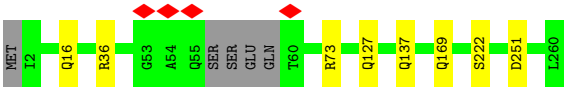




• Molecule 1: Flagellar basal-body rod protein FlgG

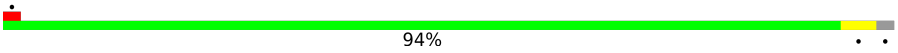
Chain AG:

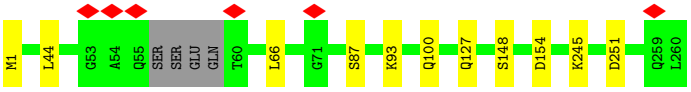




• Molecule 1: Flagellar basal-body rod protein FlgG

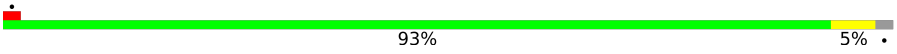
Chain AH:

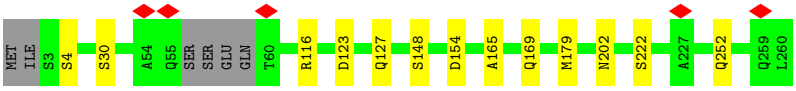




• Molecule 1: Flagellar basal-body rod protein FlgG

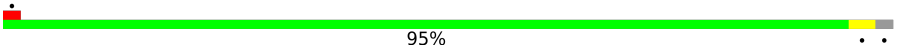
Chain AI:





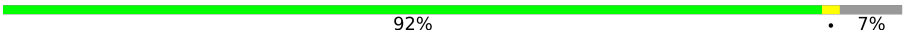
• Molecule 1: Flagellar basal-body rod protein FlgG

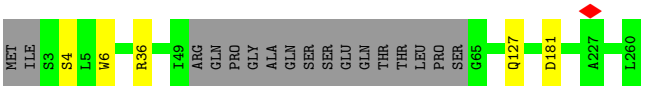
Chain AJ:



• Molecule 1: Flagellar basal-body rod protein FlgG

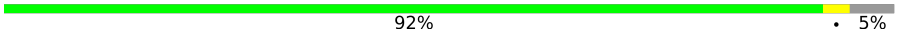
Chain AK:

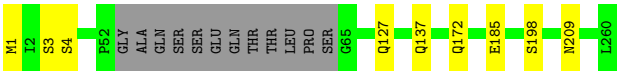




• Molecule 1: Flagellar basal-body rod protein FlgG

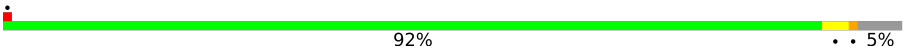
Chain AL:

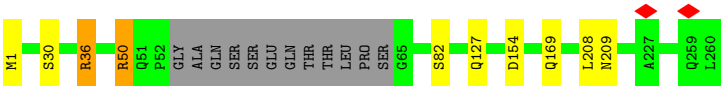




• Molecule 1: Flagellar basal-body rod protein FlgG

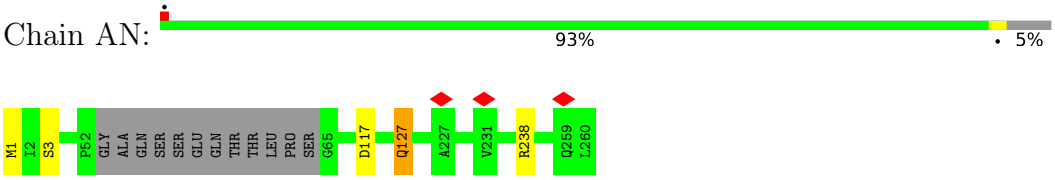
Chain AM:





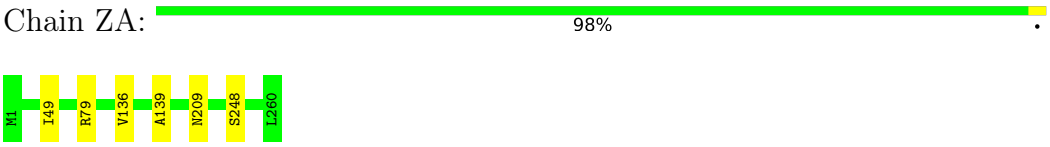
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain AN:



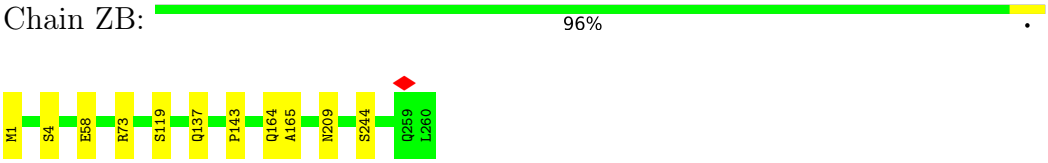
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain ZA:



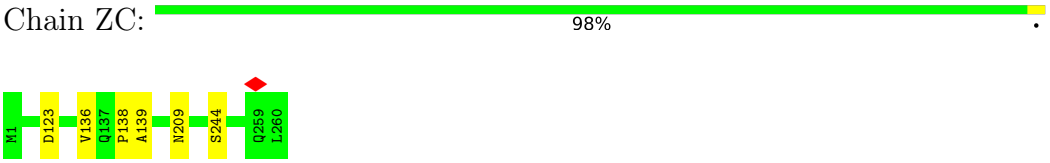
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain ZB:



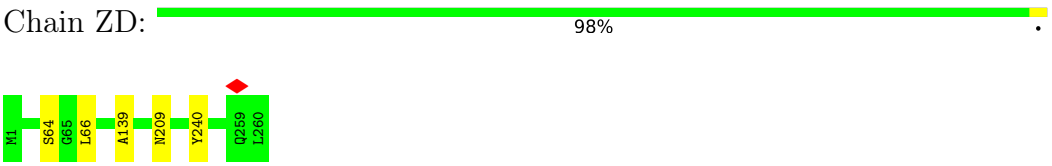
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain ZC:



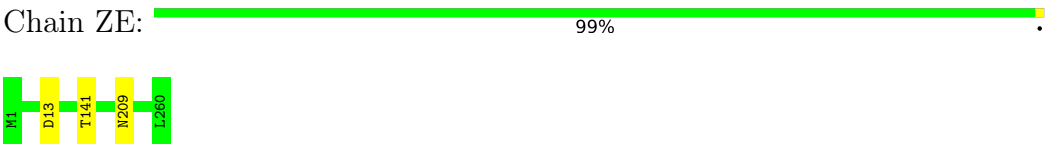
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain ZD:



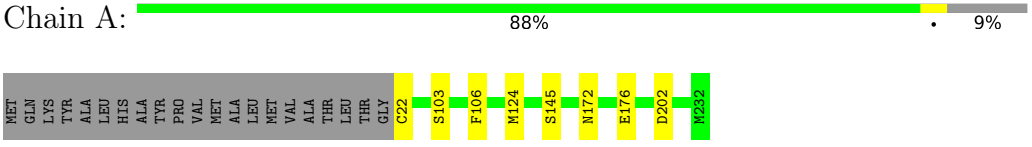
• Molecule 1: Flagellar basal-body rod protein FlgG

Chain ZE:



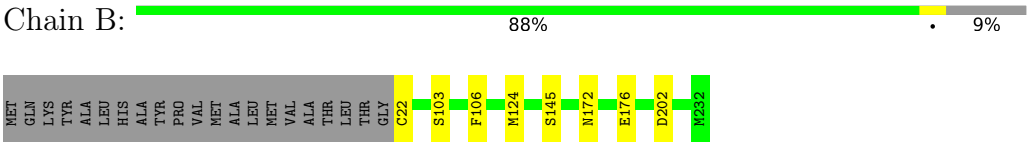
• Molecule 2: Flagellar L-ring protein

Chain A:



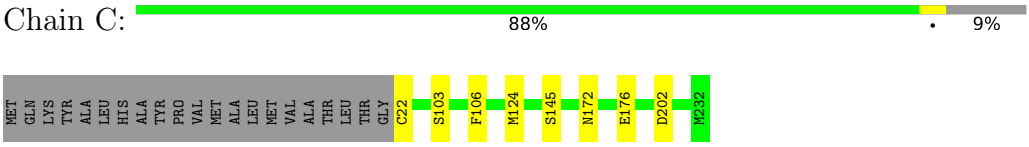
• Molecule 2: Flagellar L-ring protein

Chain B:



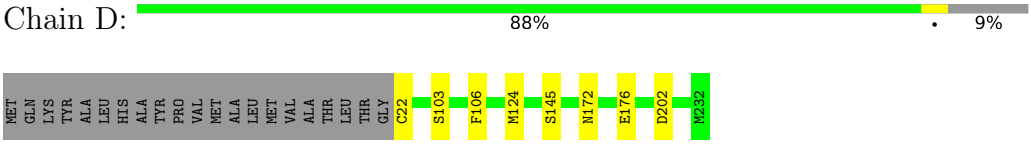
• Molecule 2: Flagellar L-ring protein

Chain C:



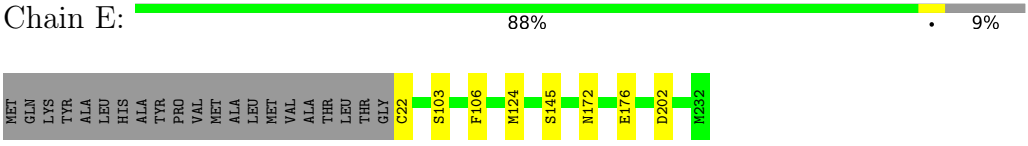
• Molecule 2: Flagellar L-ring protein

Chain D:



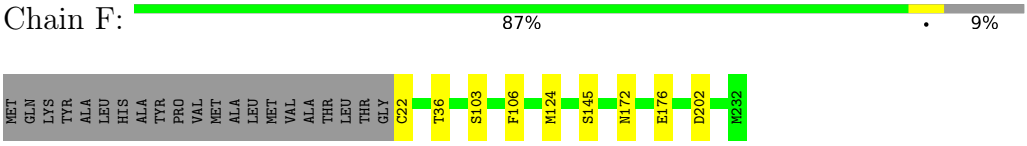
• Molecule 2: Flagellar L-ring protein

Chain E:



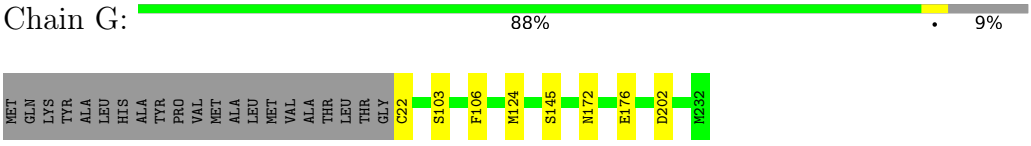
• Molecule 2: Flagellar L-ring protein

Chain F:



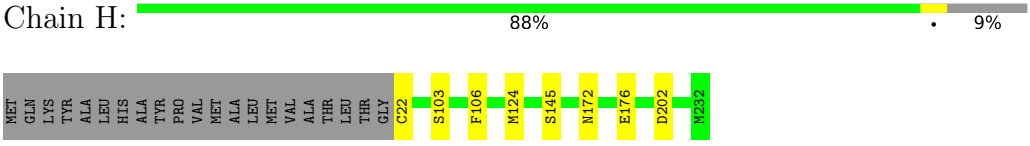
• Molecule 2: Flagellar L-ring protein

Chain G:



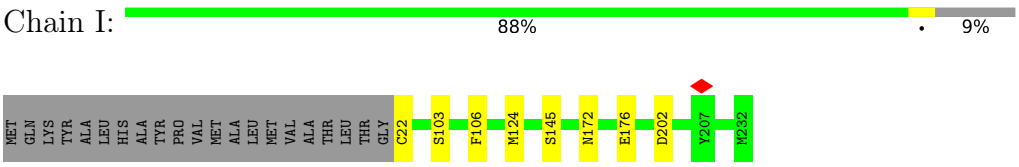
• Molecule 2: Flagellar L-ring protein

Chain H:



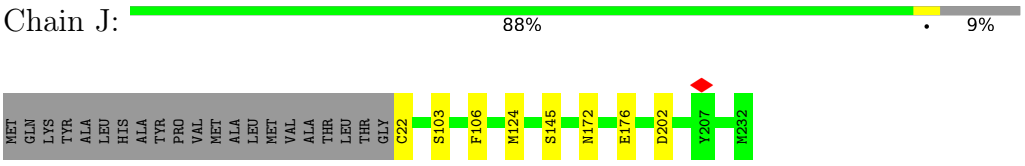
• Molecule 2: Flagellar L-ring protein

Chain I:



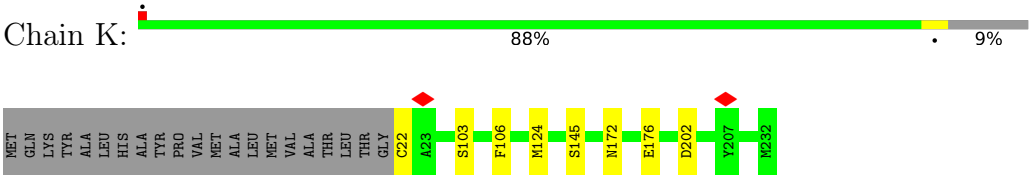
• Molecule 2: Flagellar L-ring protein

Chain J:



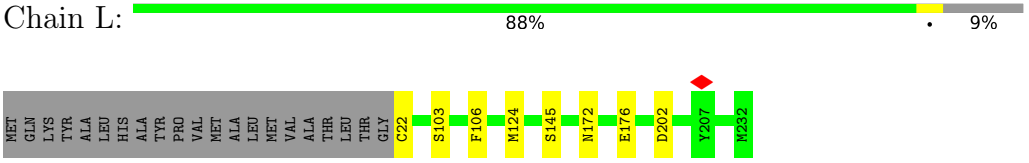
• Molecule 2: Flagellar L-ring protein

Chain K:



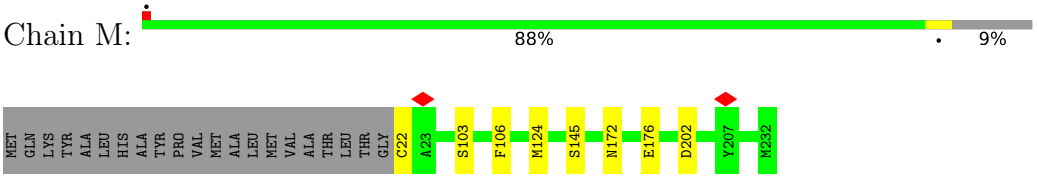
• Molecule 2: Flagellar L-ring protein

Chain L:



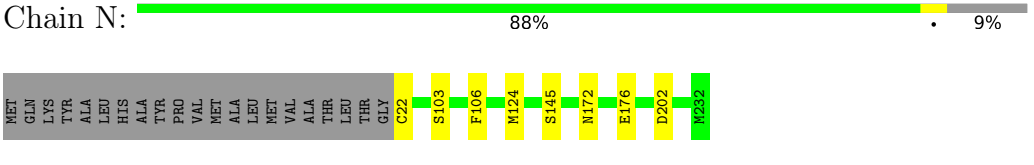
• Molecule 2: Flagellar L-ring protein

Chain M:



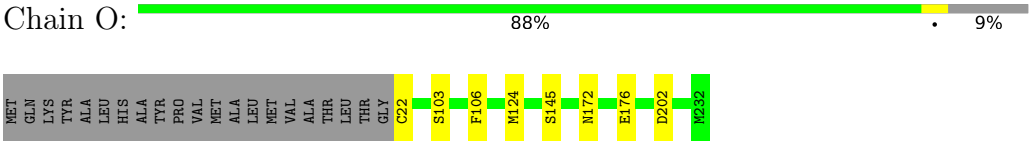
• Molecule 2: Flagellar L-ring protein

Chain N:



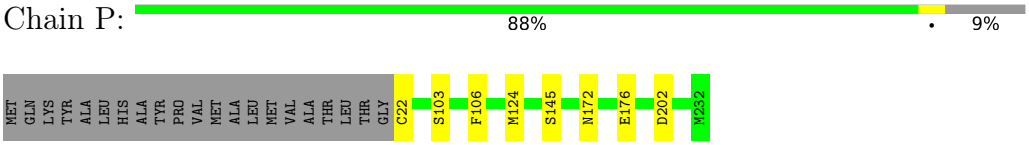
• Molecule 2: Flagellar L-ring protein

Chain O:



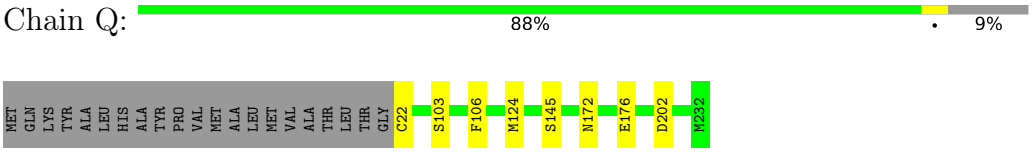
• Molecule 2: Flagellar L-ring protein

Chain P:



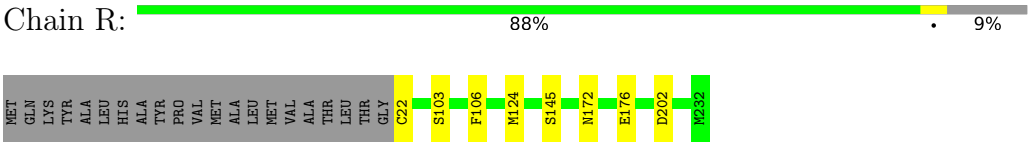
• Molecule 2: Flagellar L-ring protein

Chain Q:



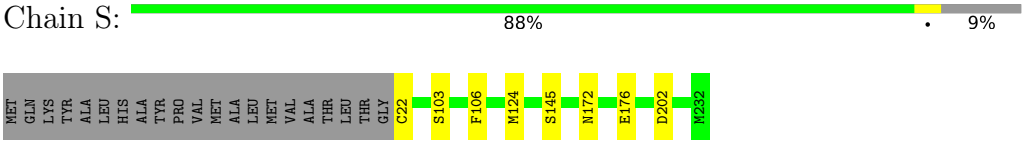
• Molecule 2: Flagellar L-ring protein

Chain R:



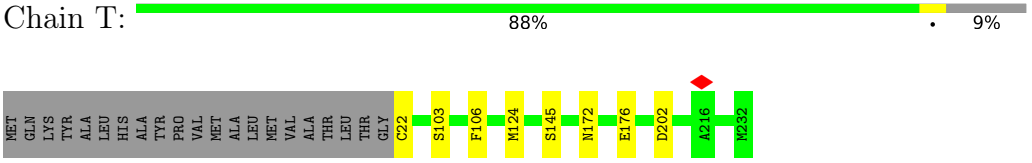
• Molecule 2: Flagellar L-ring protein

Chain S:



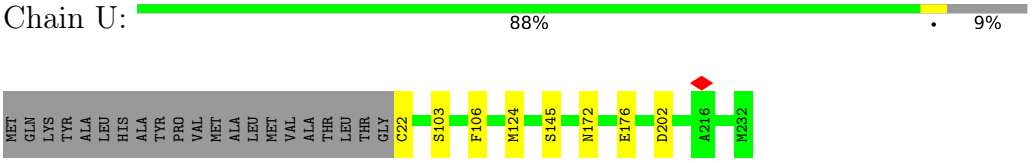
• Molecule 2: Flagellar L-ring protein

Chain T:



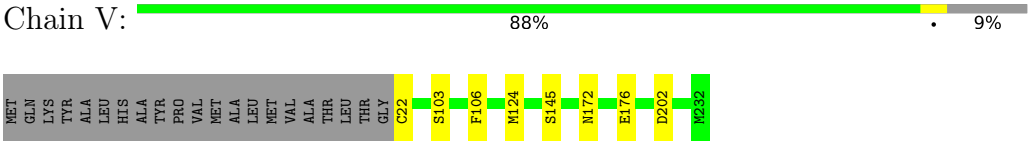
• Molecule 2: Flagellar L-ring protein

Chain U:



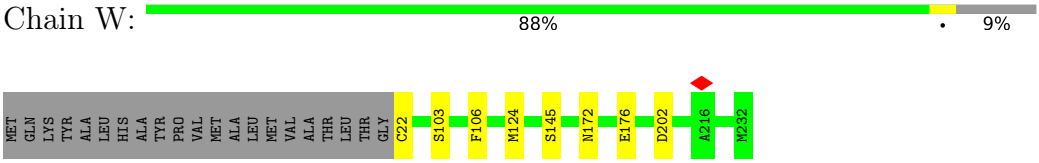
• Molecule 2: Flagellar L-ring protein

Chain V:



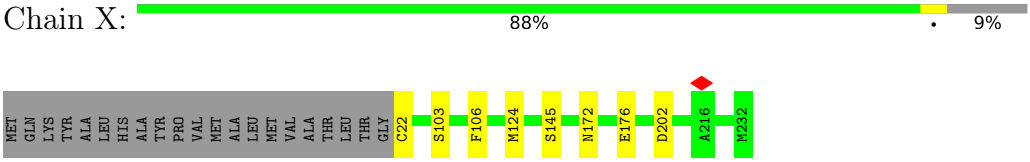
• Molecule 2: Flagellar L-ring protein

Chain W:



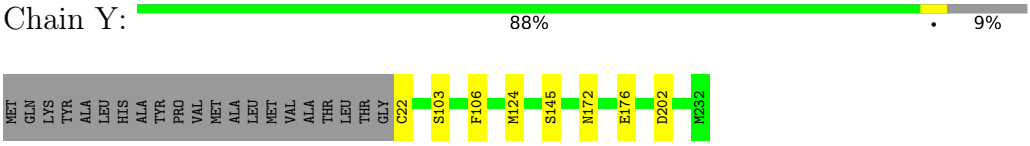
• Molecule 2: Flagellar L-ring protein

Chain X:



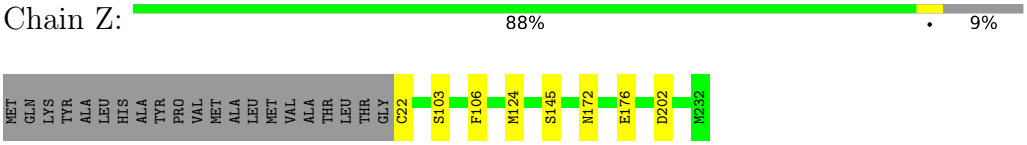
• Molecule 2: Flagellar L-ring protein

Chain Y:



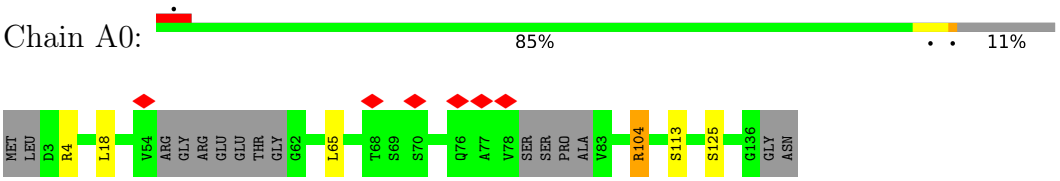
• Molecule 2: Flagellar L-ring protein

Chain Z:



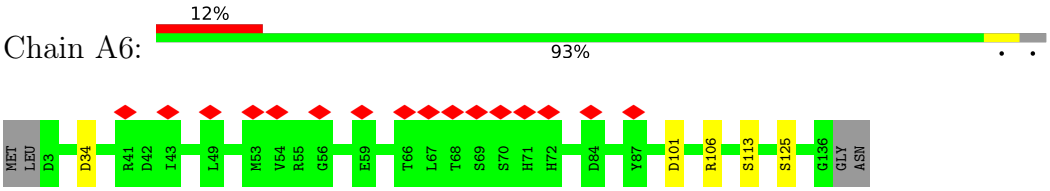
• Molecule 3: Flagellar basal body rod protein FlgB

Chain A0:



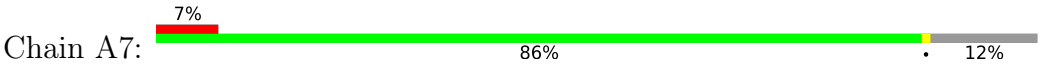
• Molecule 3: Flagellar basal body rod protein FlgB

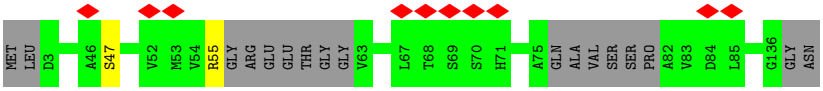
Chain A6:



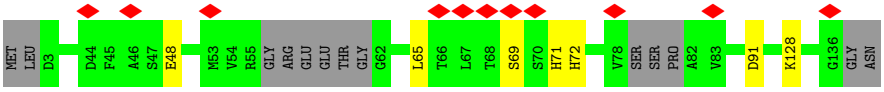
• Molecule 3: Flagellar basal body rod protein FlgB

Chain A7:

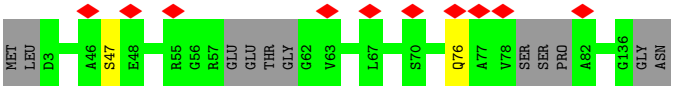




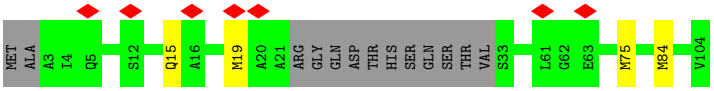
• Molecule 3: Flagellar basal body rod protein FlgB



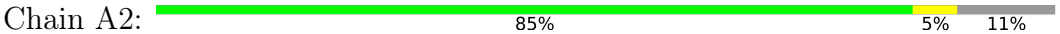
• Molecule 3: Flagellar basal body rod protein FlgB

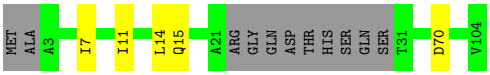


• Molecule 4: Flagellar hook-basal body complex protein FliE

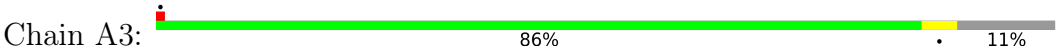


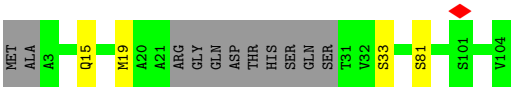
• Molecule 4: Flagellar hook-basal body complex protein FliE



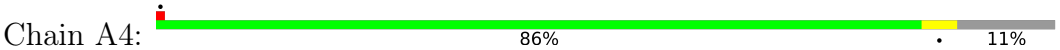


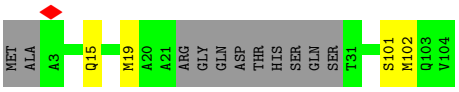
• Molecule 4: Flagellar hook-basal body complex protein FliE





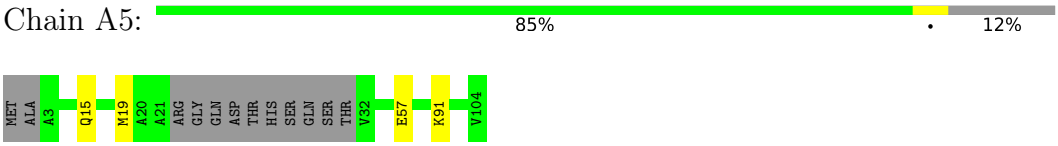
• Molecule 4: Flagellar hook-basal body complex protein FliE





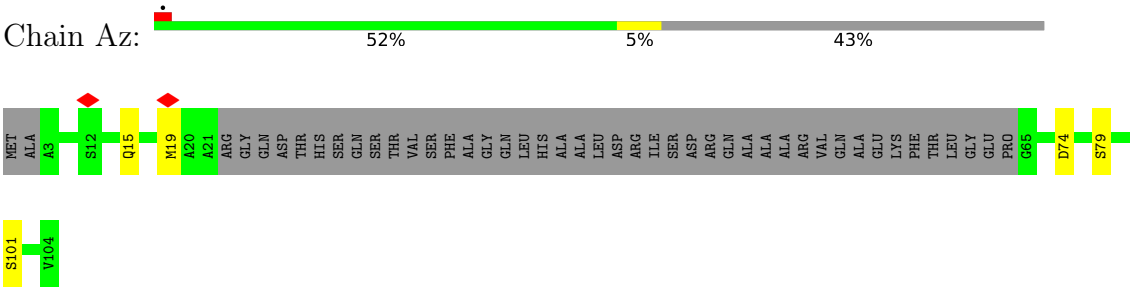
• Molecule 4: Flagellar hook-basal body complex protein FliE

Chain A5:



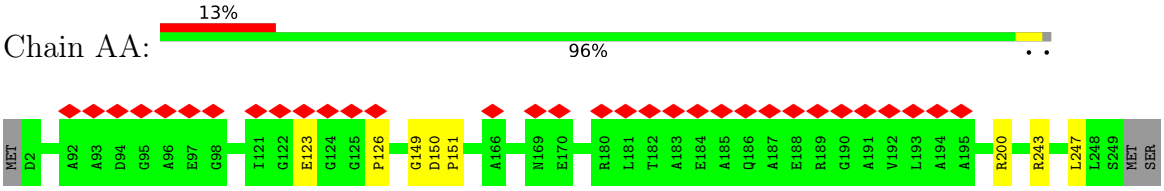
• Molecule 4: Flagellar hook-basal body complex protein FliE

Chain Az:



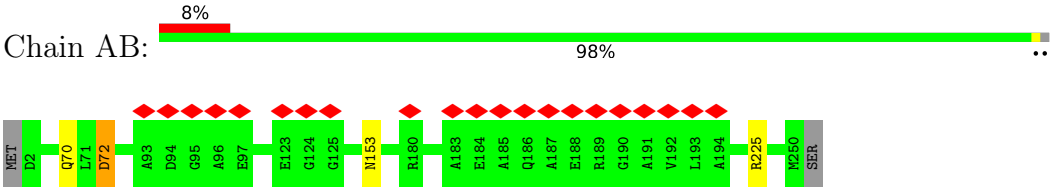
• Molecule 5: Flagellar basal-body rod protein FlgF

Chain AA:



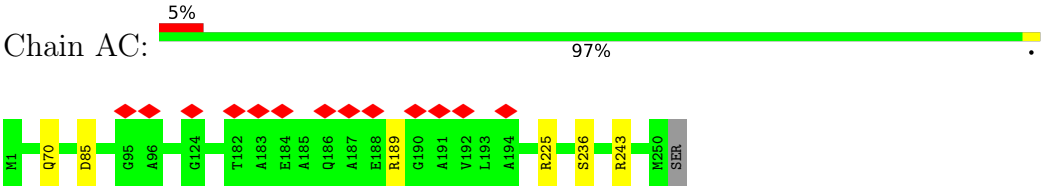
• Molecule 5: Flagellar basal-body rod protein FlgF

Chain AB:



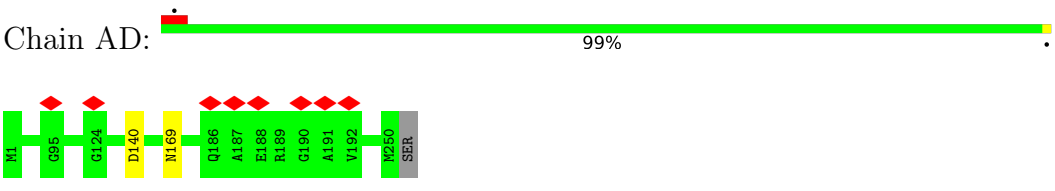
• Molecule 5: Flagellar basal-body rod protein FlgF

Chain AC:



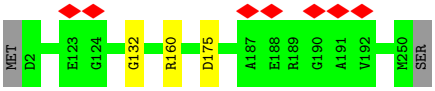
• Molecule 5: Flagellar basal-body rod protein FlgF

Chain AD:



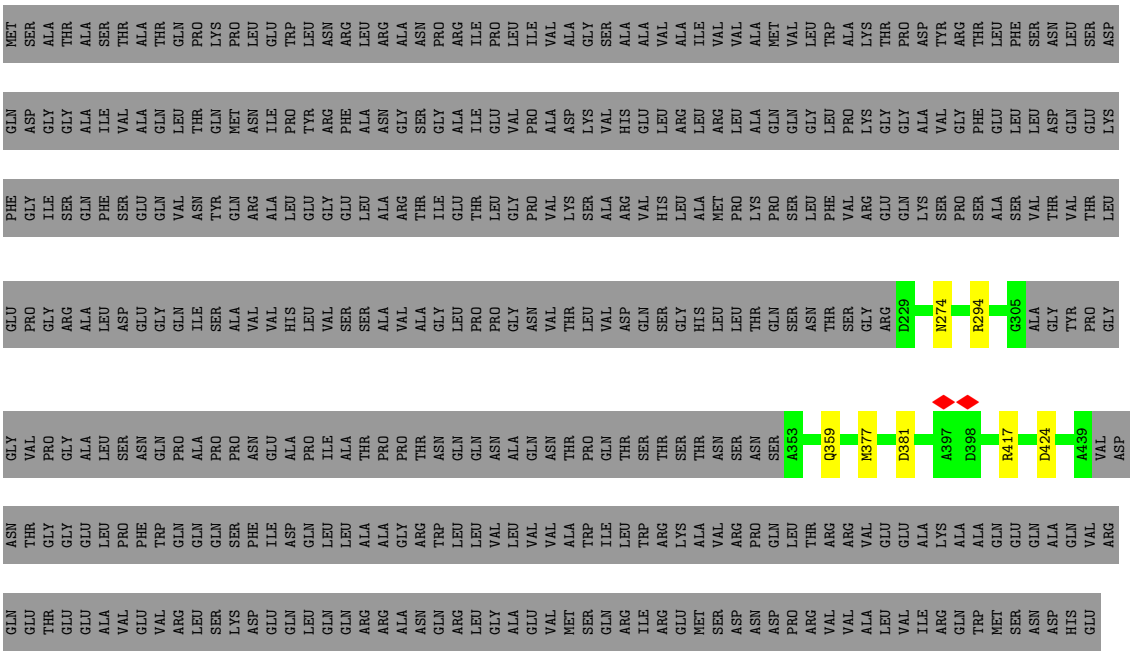
• Molecule 5: Flagellar basal-body rod protein FlgF

Chain AE:



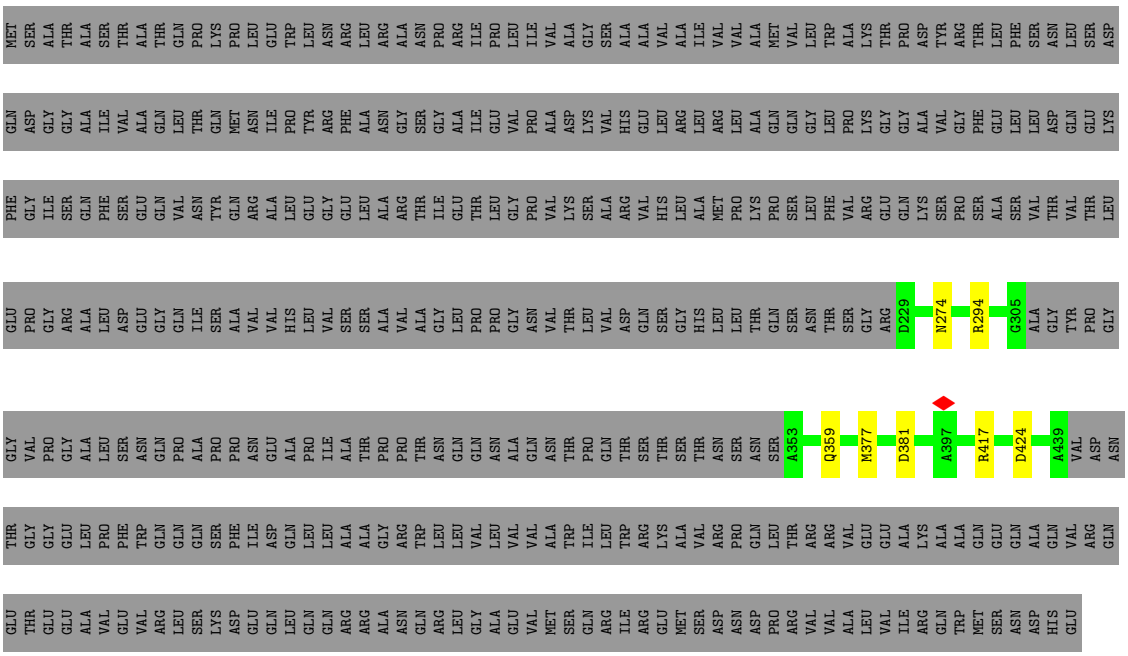
• Molecule 6: Flagellar M-ring protein

Chain AO:



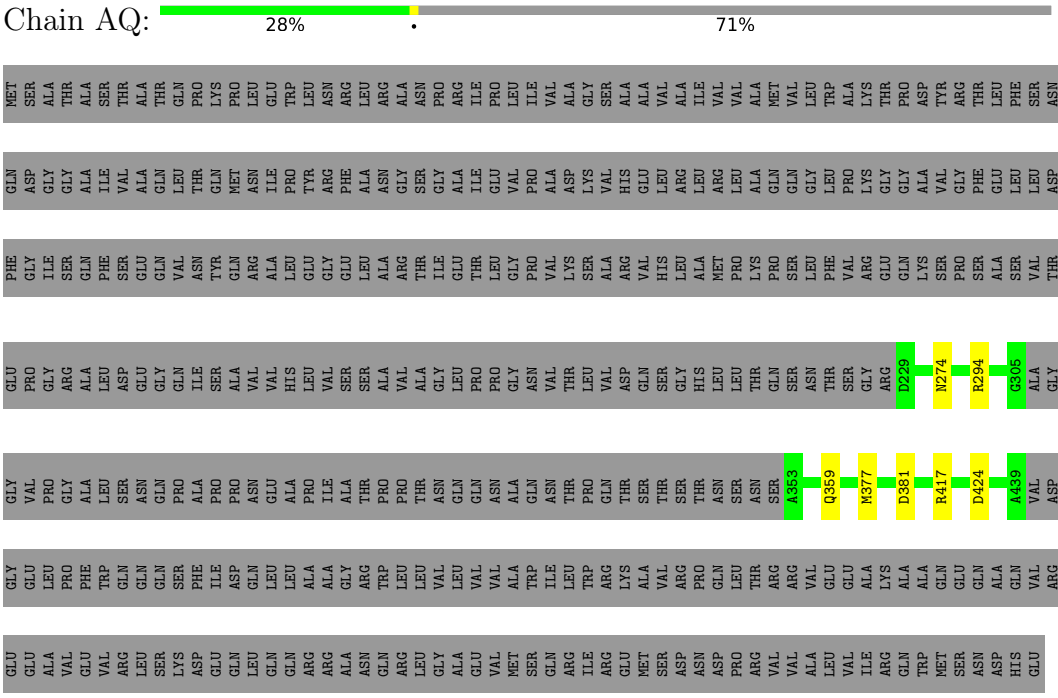
• Molecule 6: Flagellar M-ring protein

Chain AP:



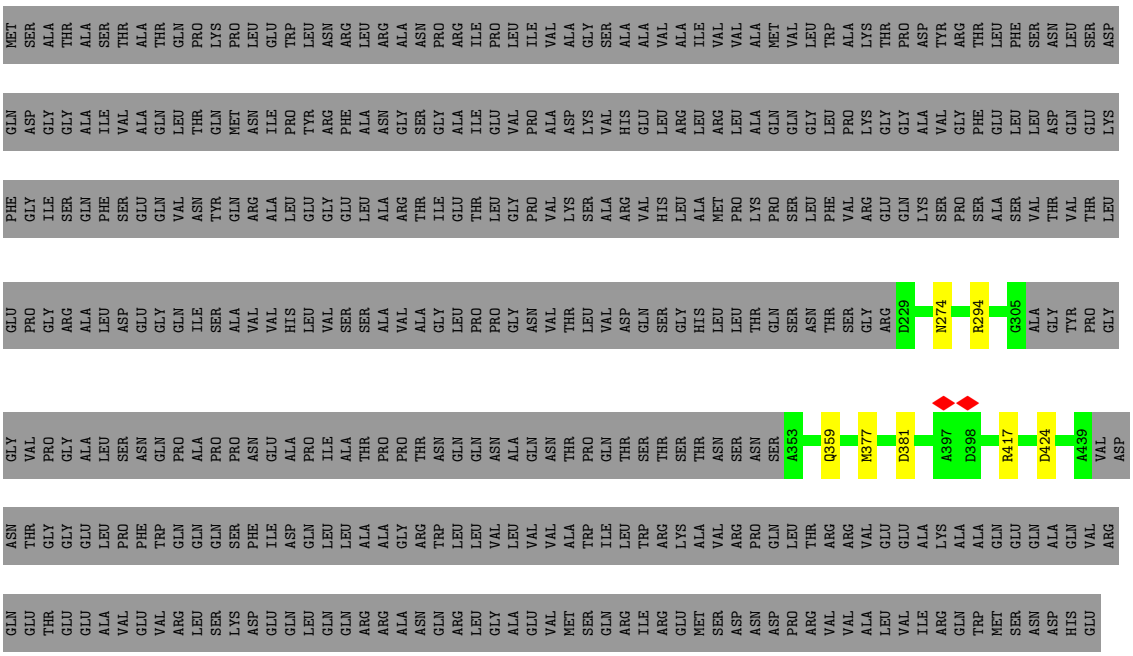
• Molecule 6: Flagellar M-ring protein

Chain AQ:



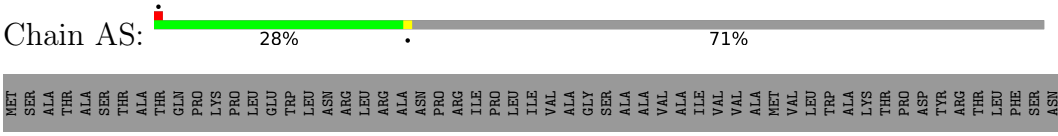
• Molecule 6: Flagellar M-ring protein

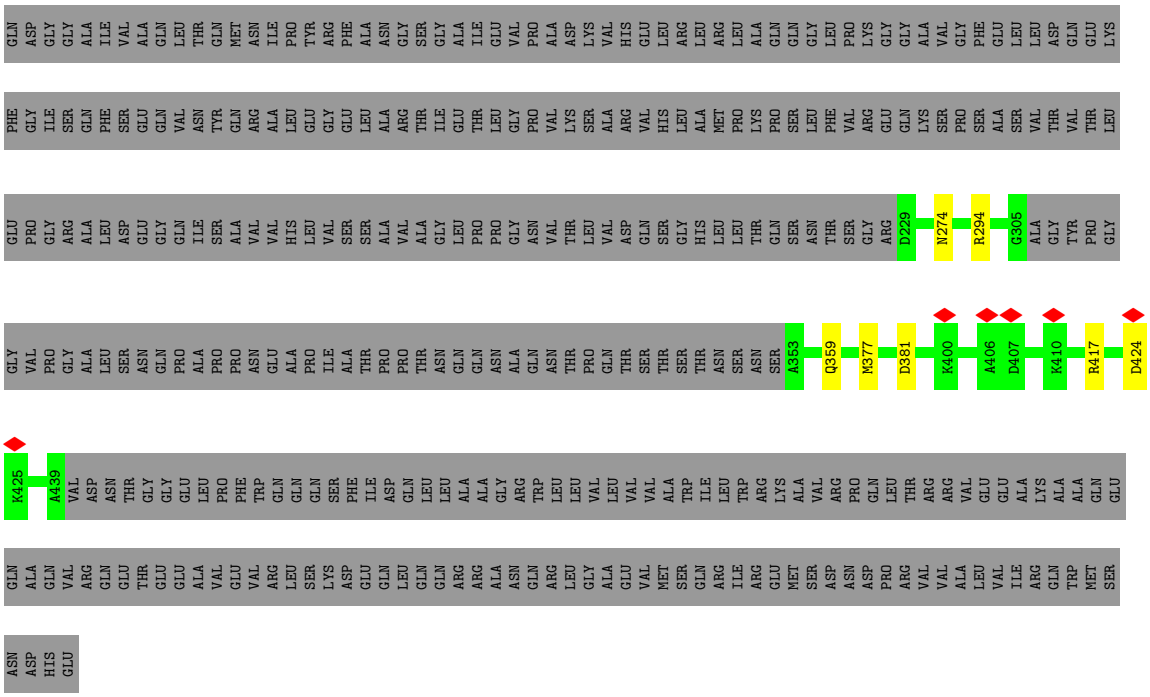
Chain AR:



• Molecule 6: Flagellar M-ring protein

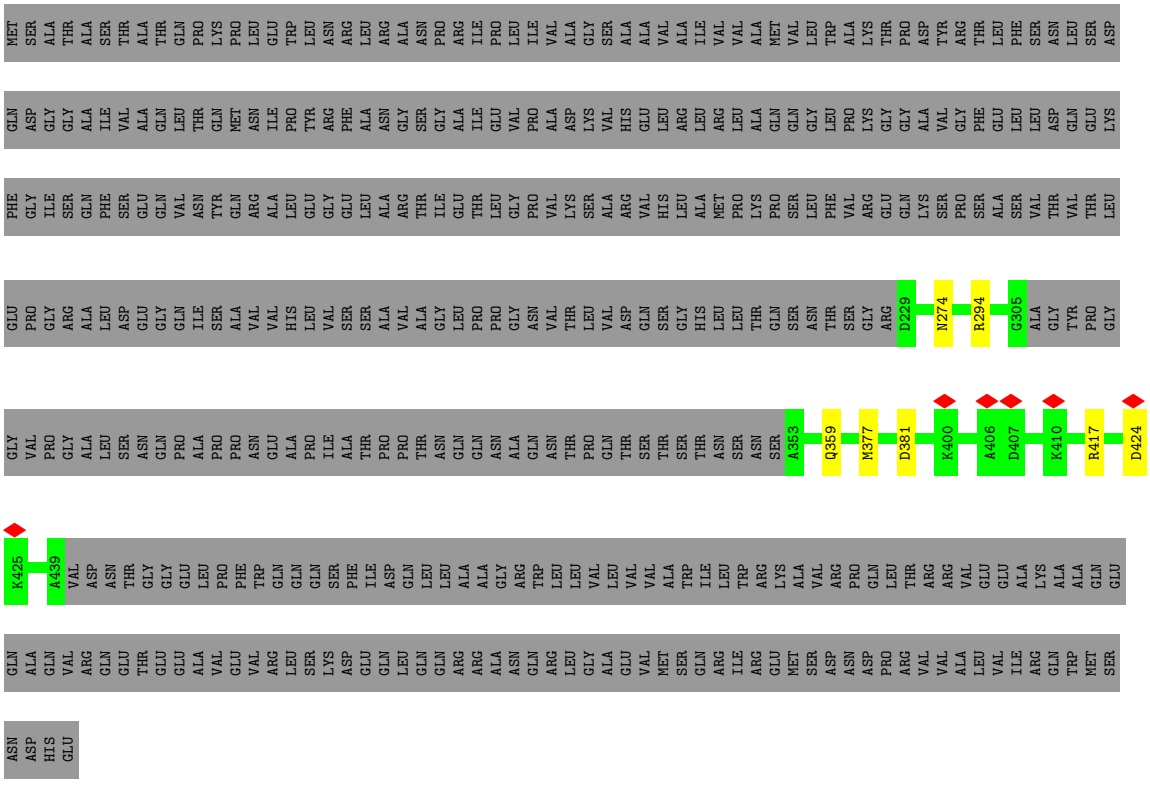
Chain AS:





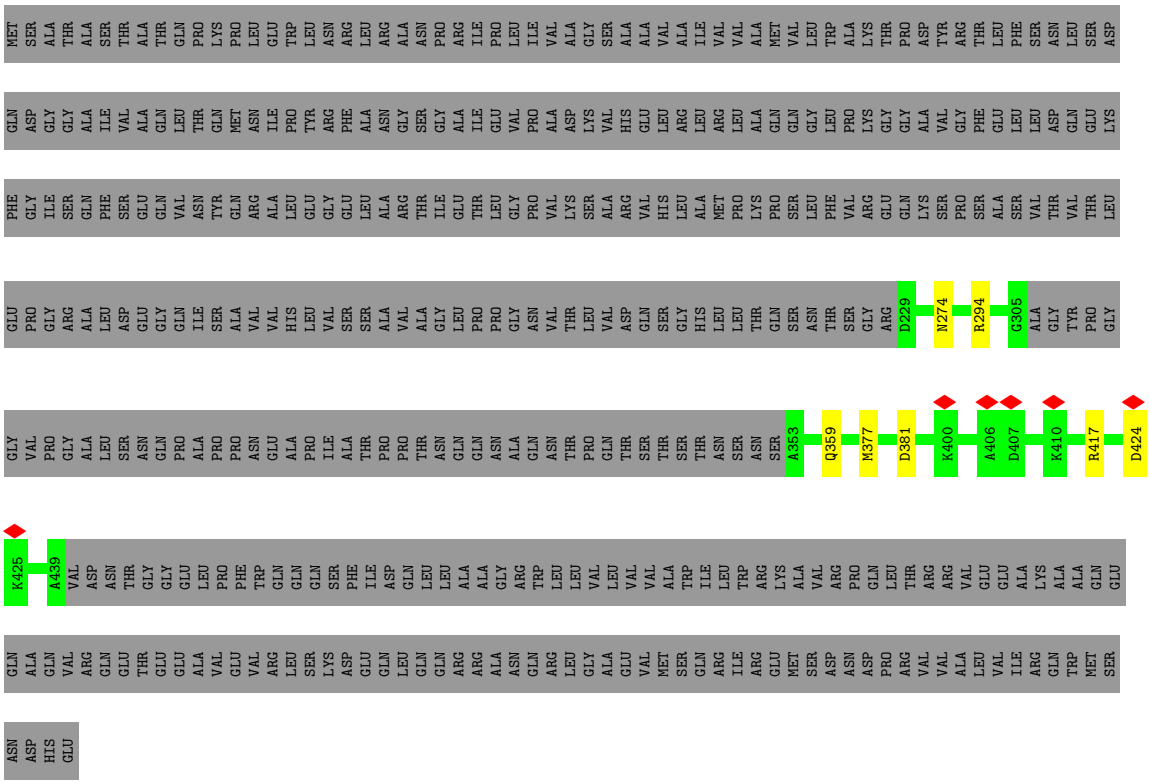
• Molecule 6: Flagellar M-ring protein

Chain AT:



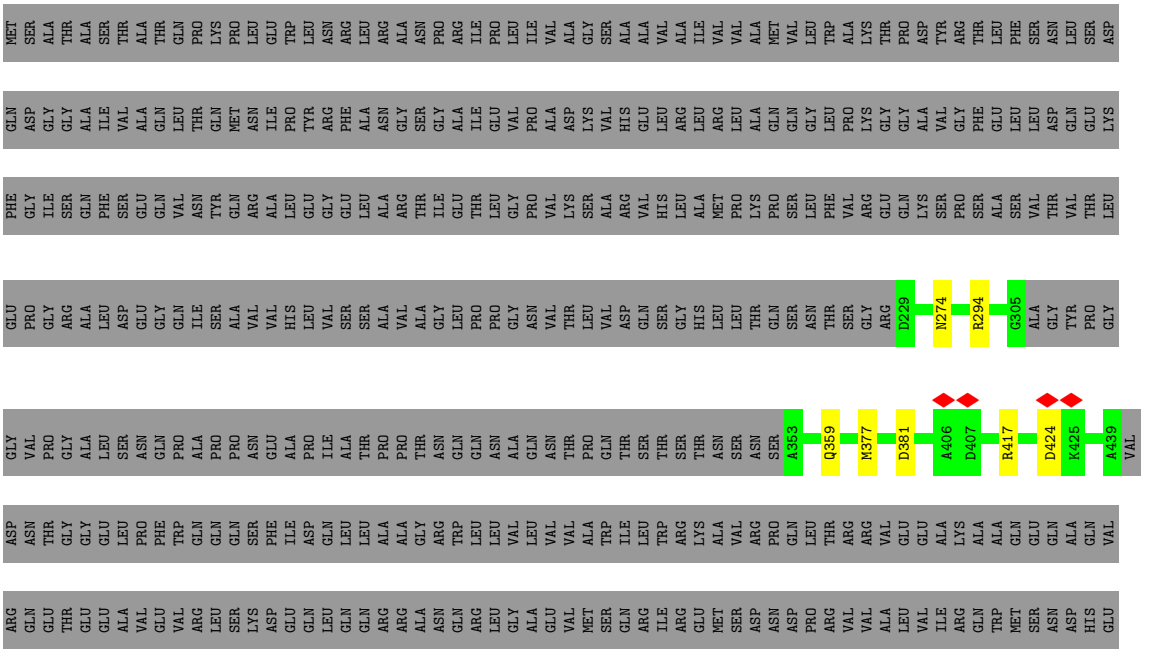
• Molecule 6: Flagellar M-ring protein

Chain AU:



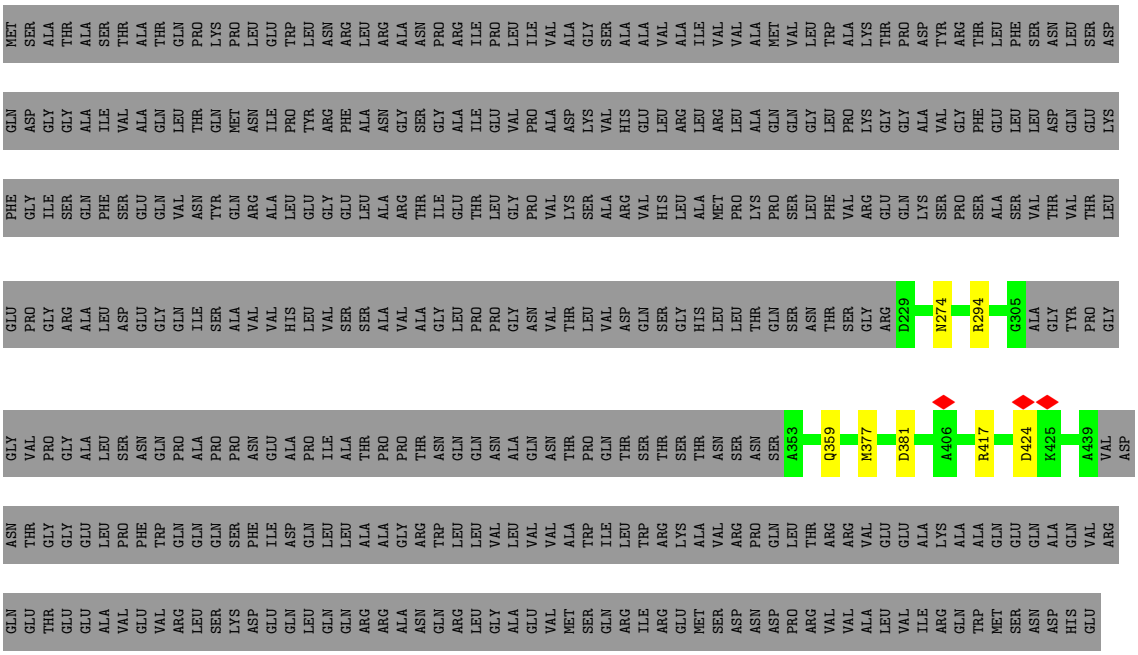
• Molecule 6: Flagellar M-ring protein

Chain AV:



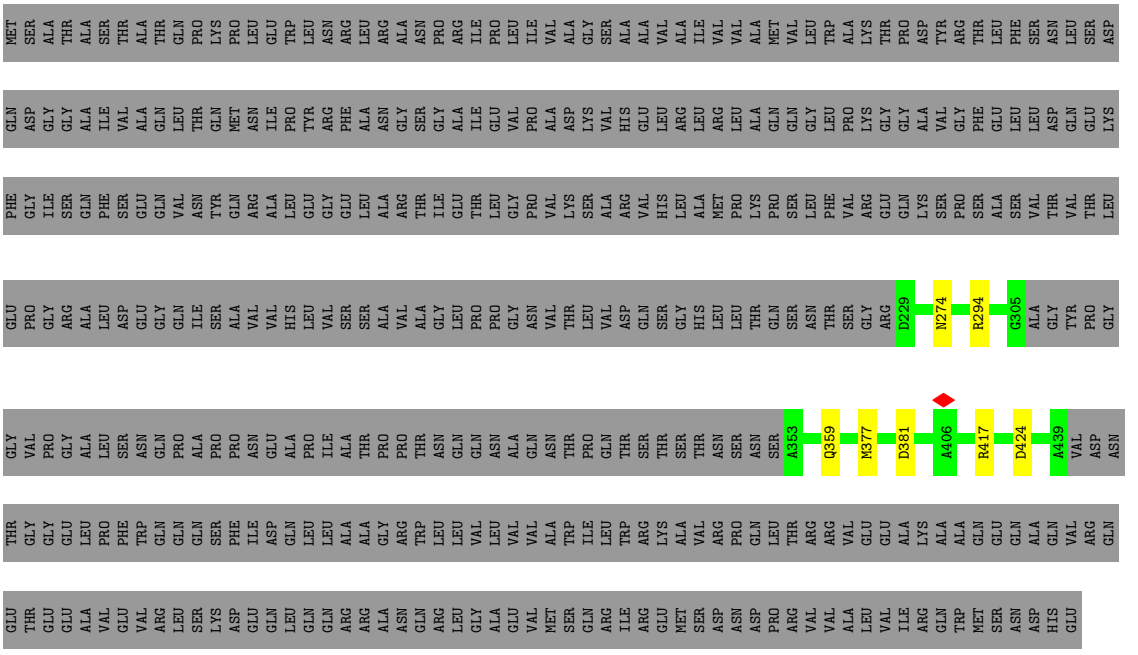
• Molecule 6: Flagellar M-ring protein

Chain AW:



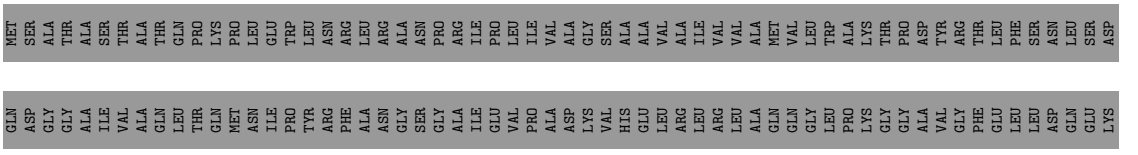
• Molecule 6: Flagellar M-ring protein

Chain AX:



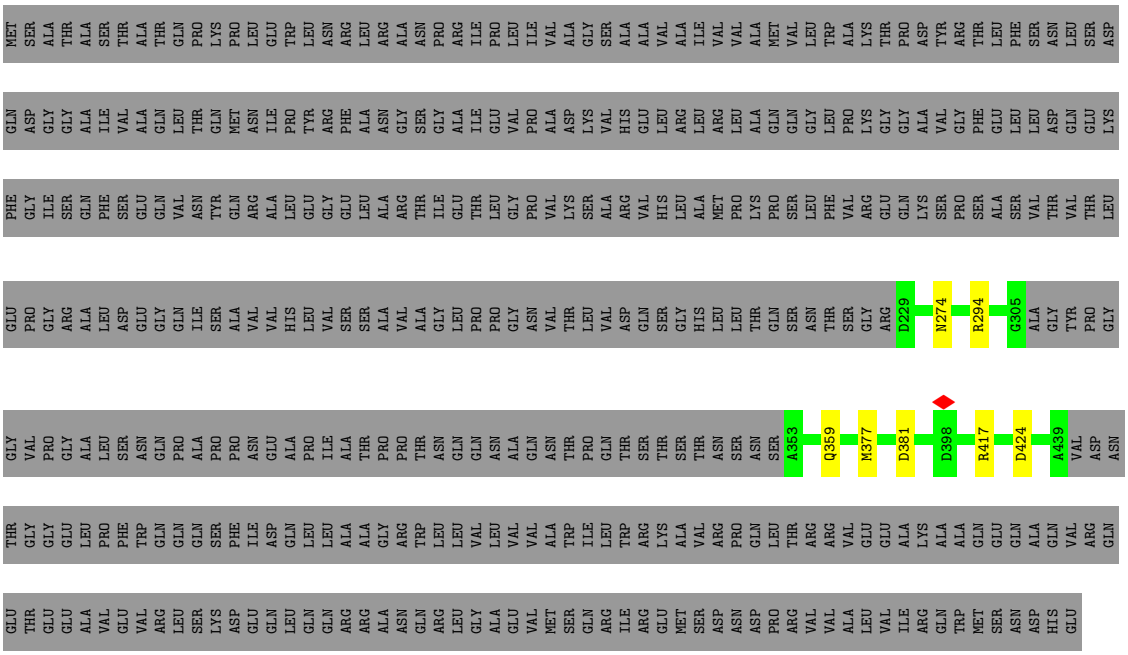
• Molecule 6: Flagellar M-ring protein

Chain AY:



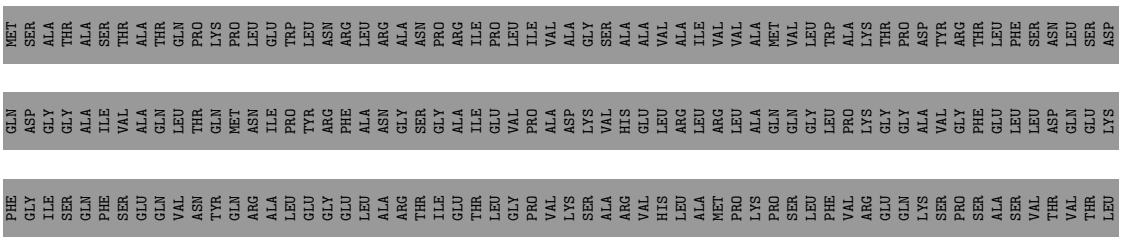
• Molecule 6: Flagellar M-ring protein

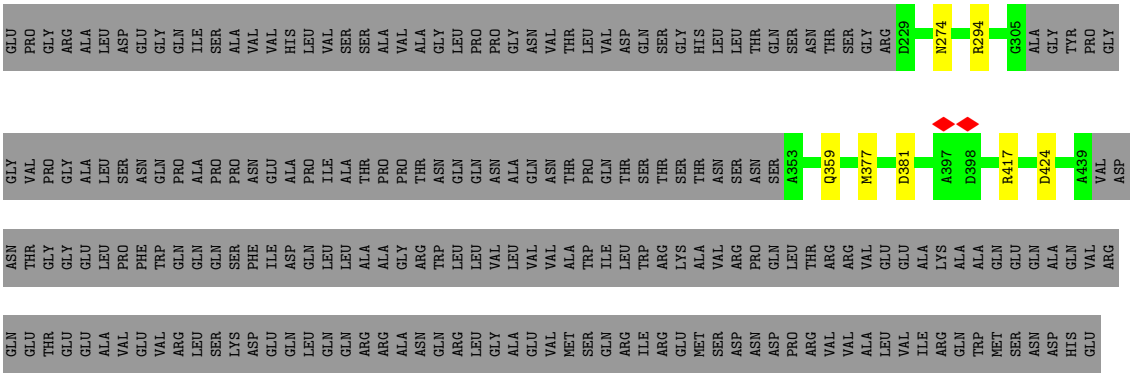
Chain AZ:



• Molecule 6: Flagellar M-ring protein

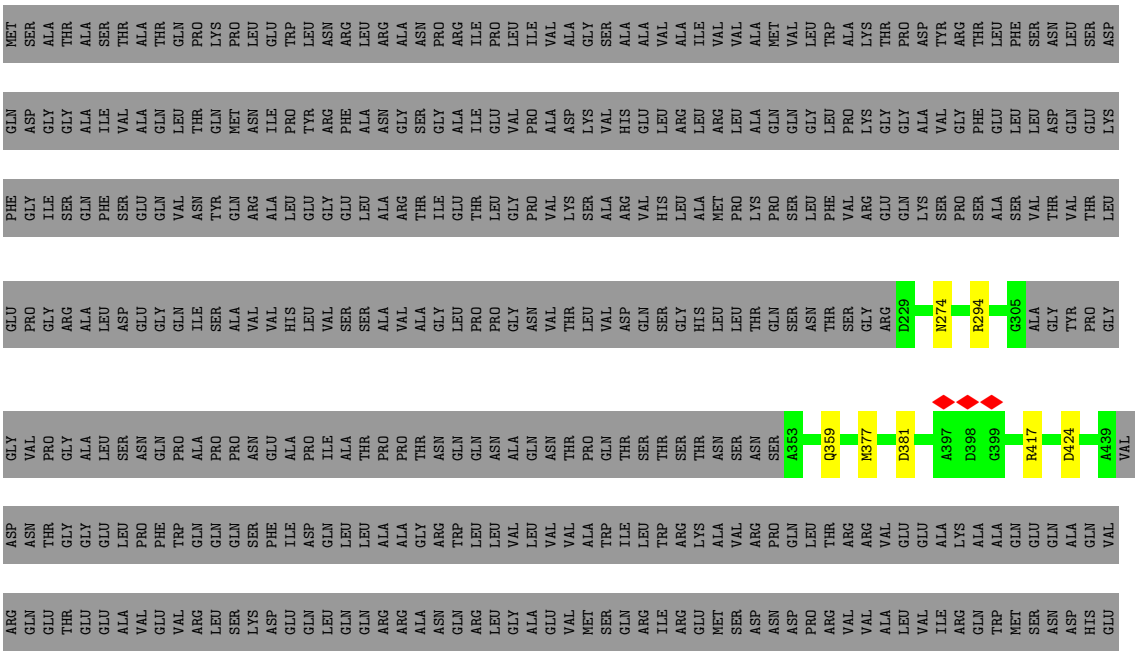
Chain Aa:





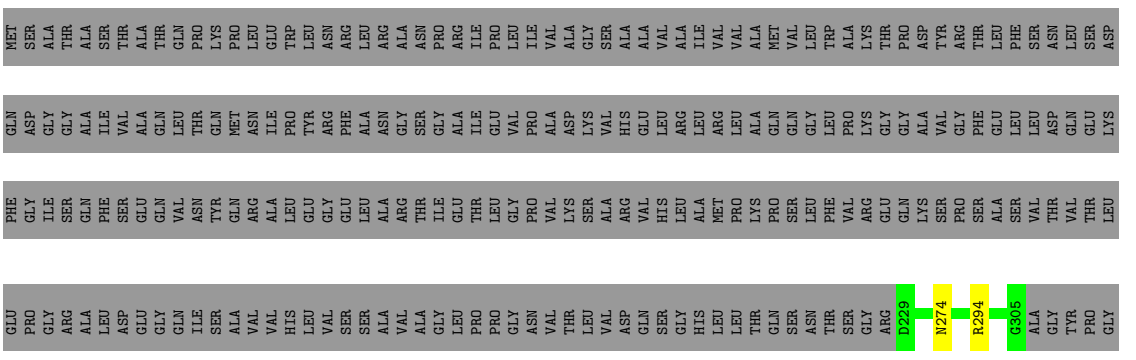
• Molecule 6: Flagellar M-ring protein

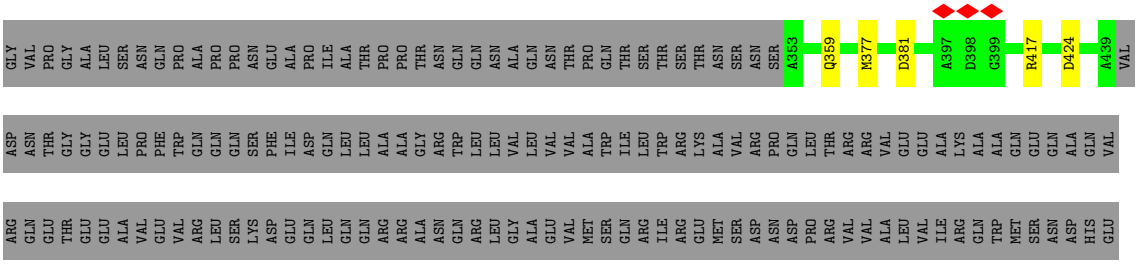
Chain Ac:



• Molecule 6: Flagellar M-ring protein

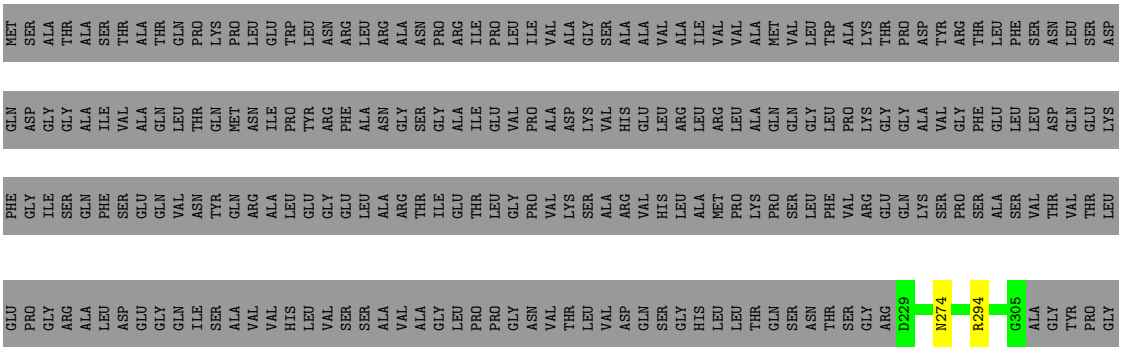
Chain Ad:

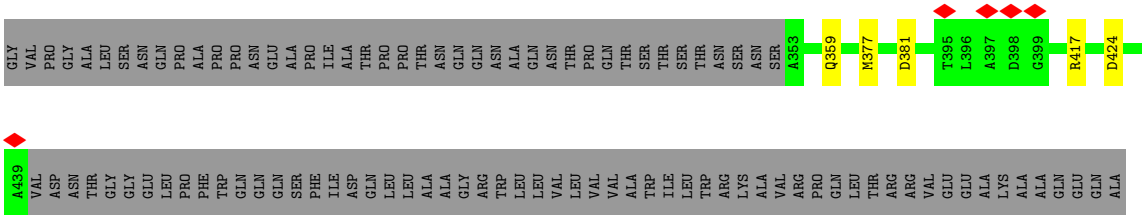


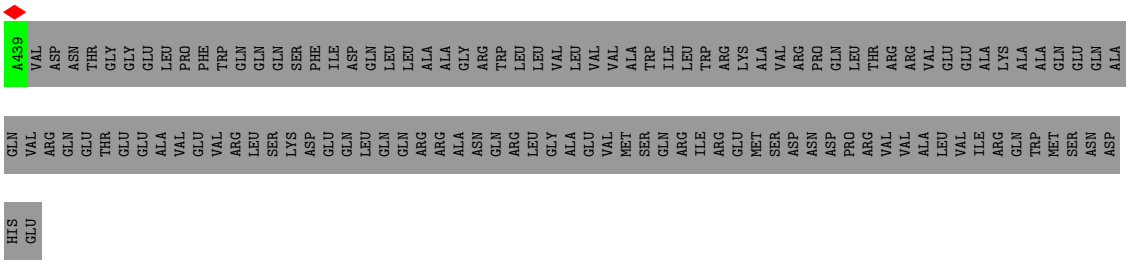


• Molecule 6: Flagellar M-ring protein

Chain Ae:







• Molecule 6: Flagellar M-ring protein

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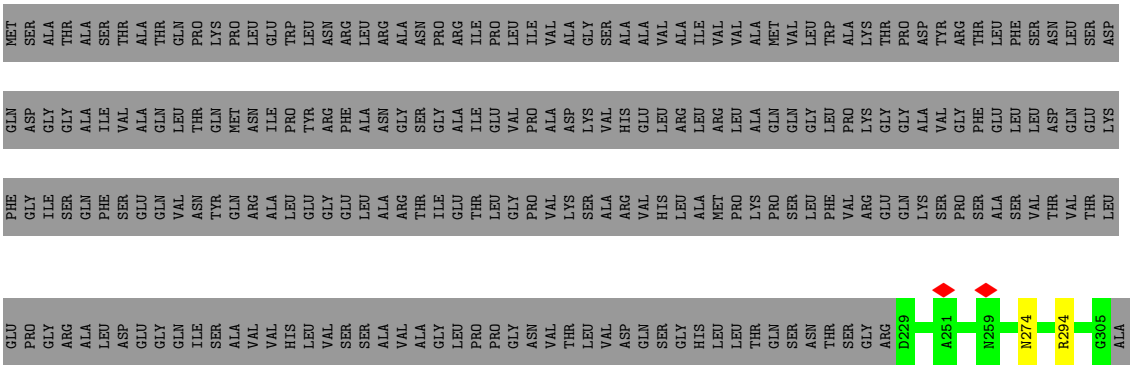

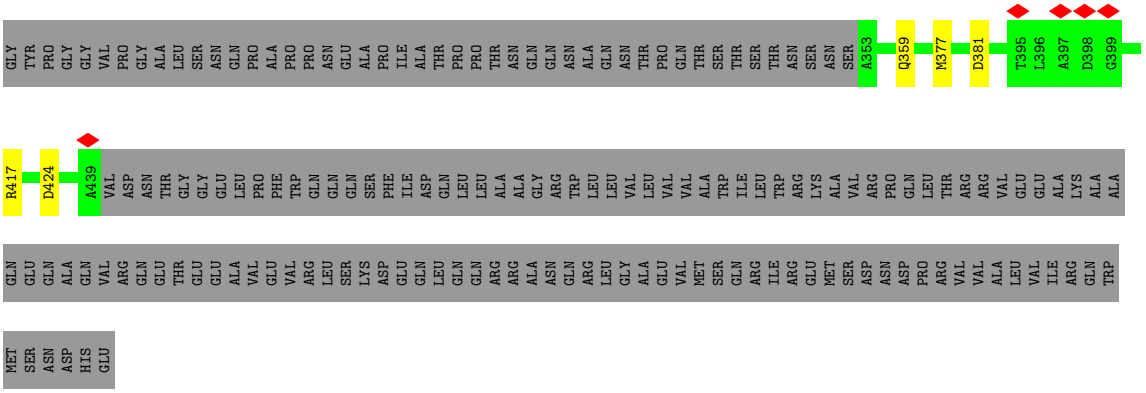

• Molecule 6: Flagellar M-ring protein

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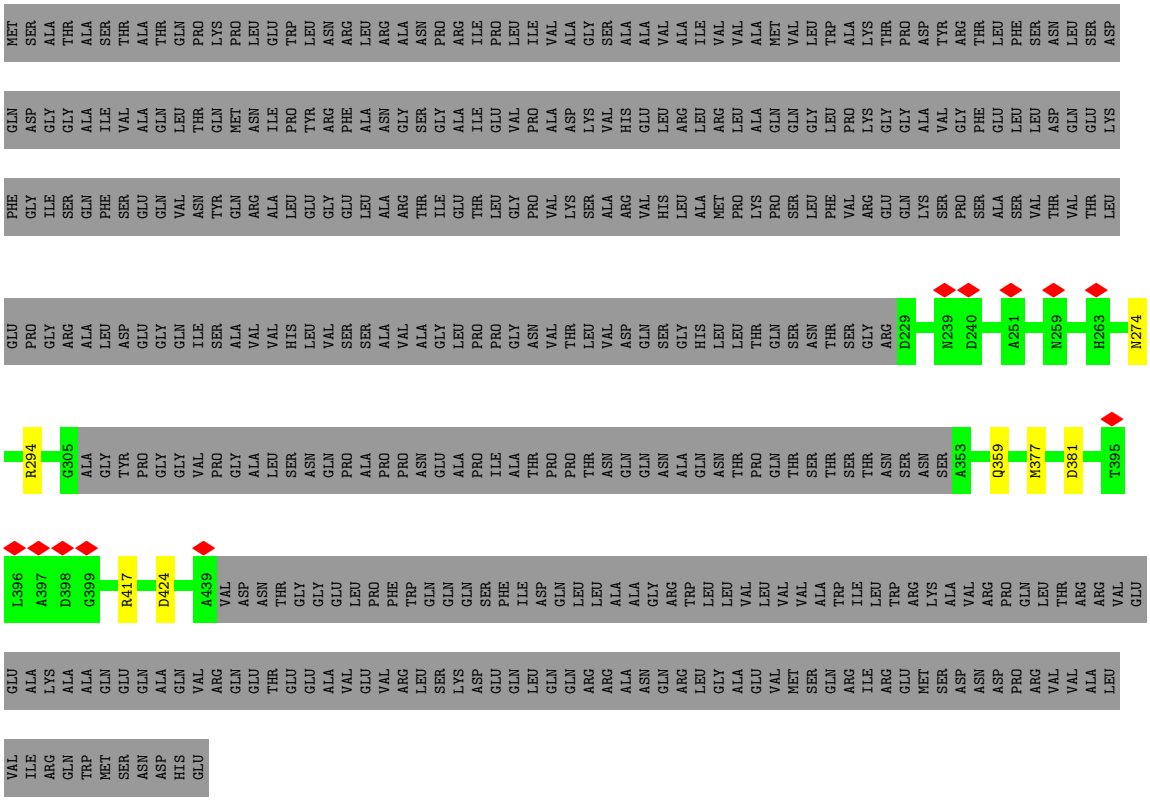

• Molecule 6: Flagellar M-ring protein

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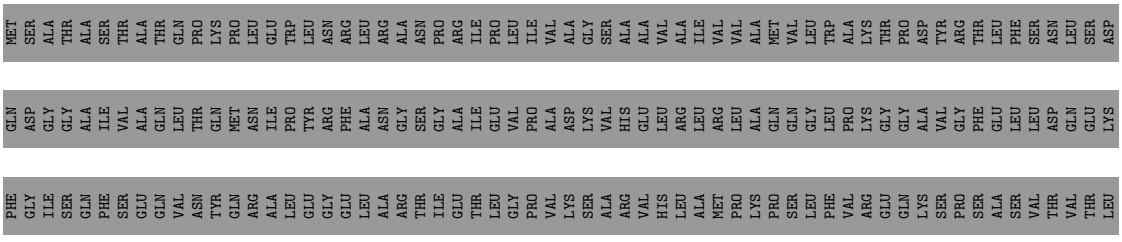

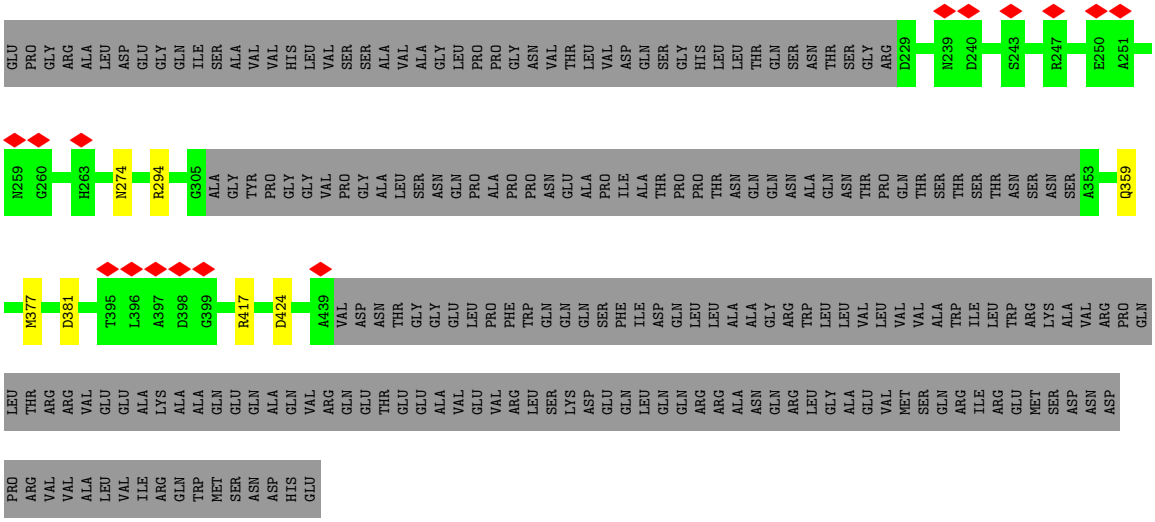

• Molecule 6: Flagellar M-ring protein

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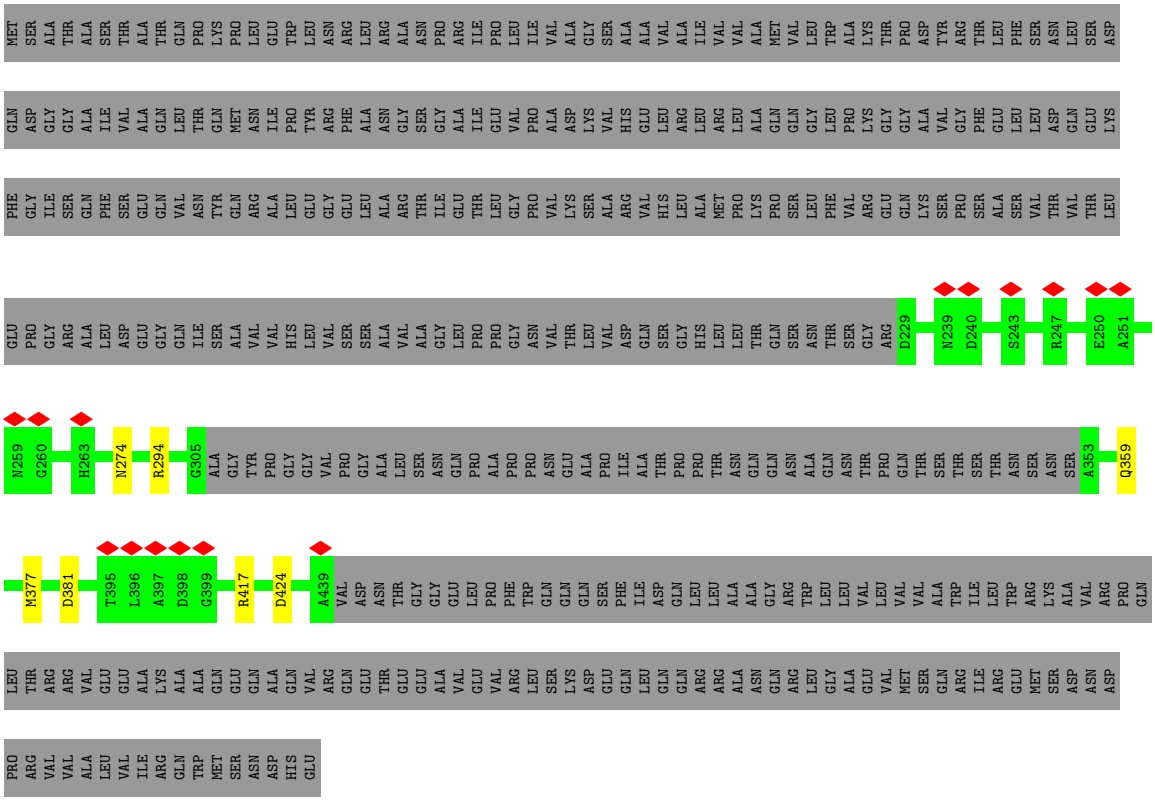

• Molecule 6: Flagellar M-ring protein

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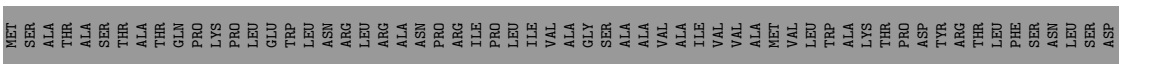

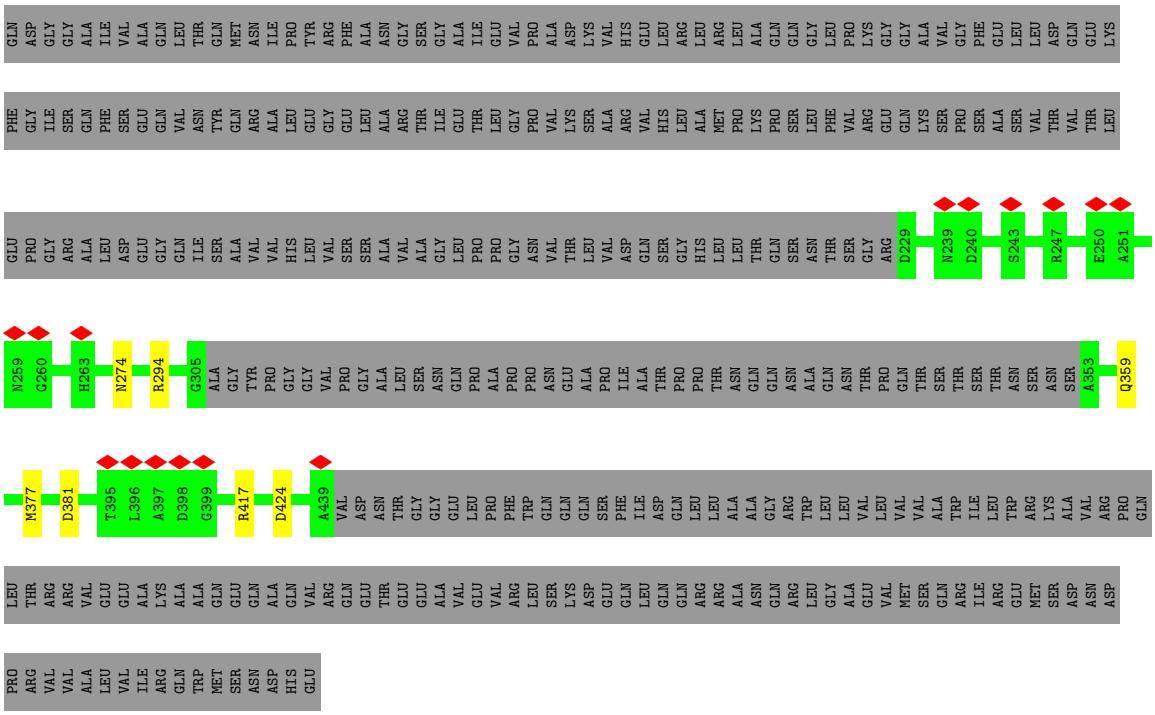

• Molecule 6: Flagellar M-ring protein

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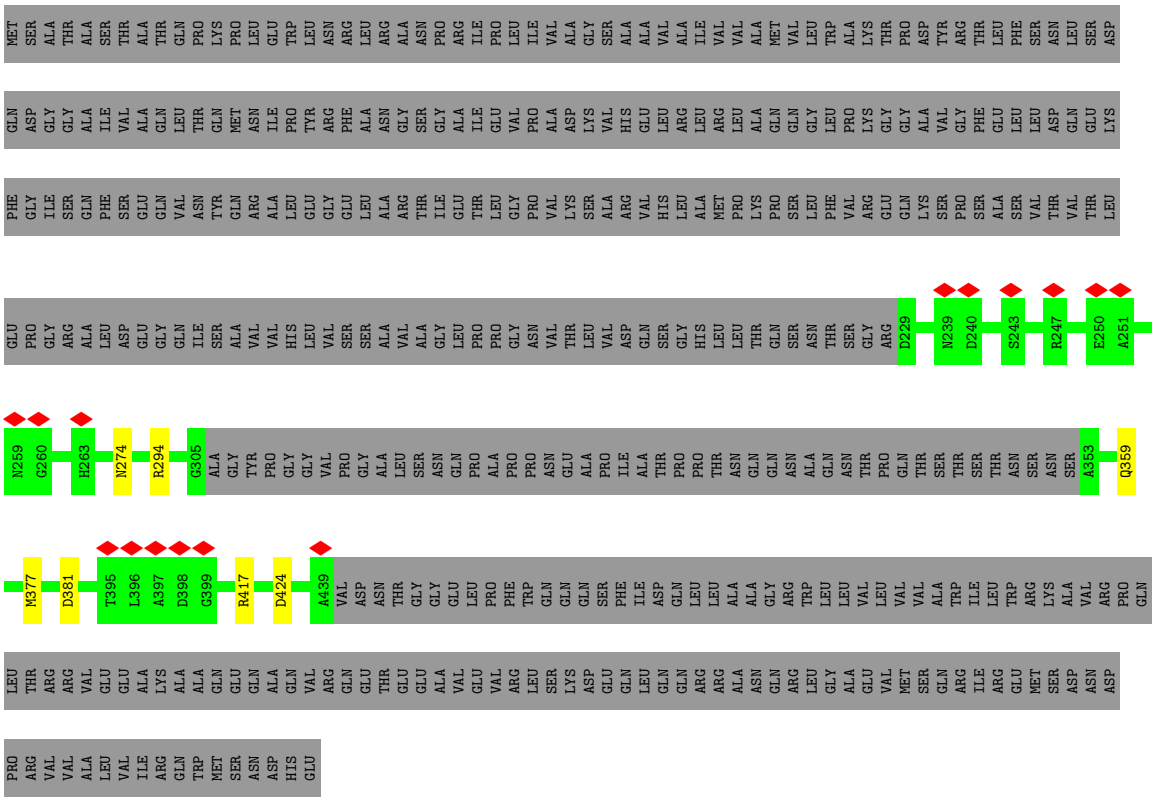

• Molecule 6: Flagellar M-ring protein

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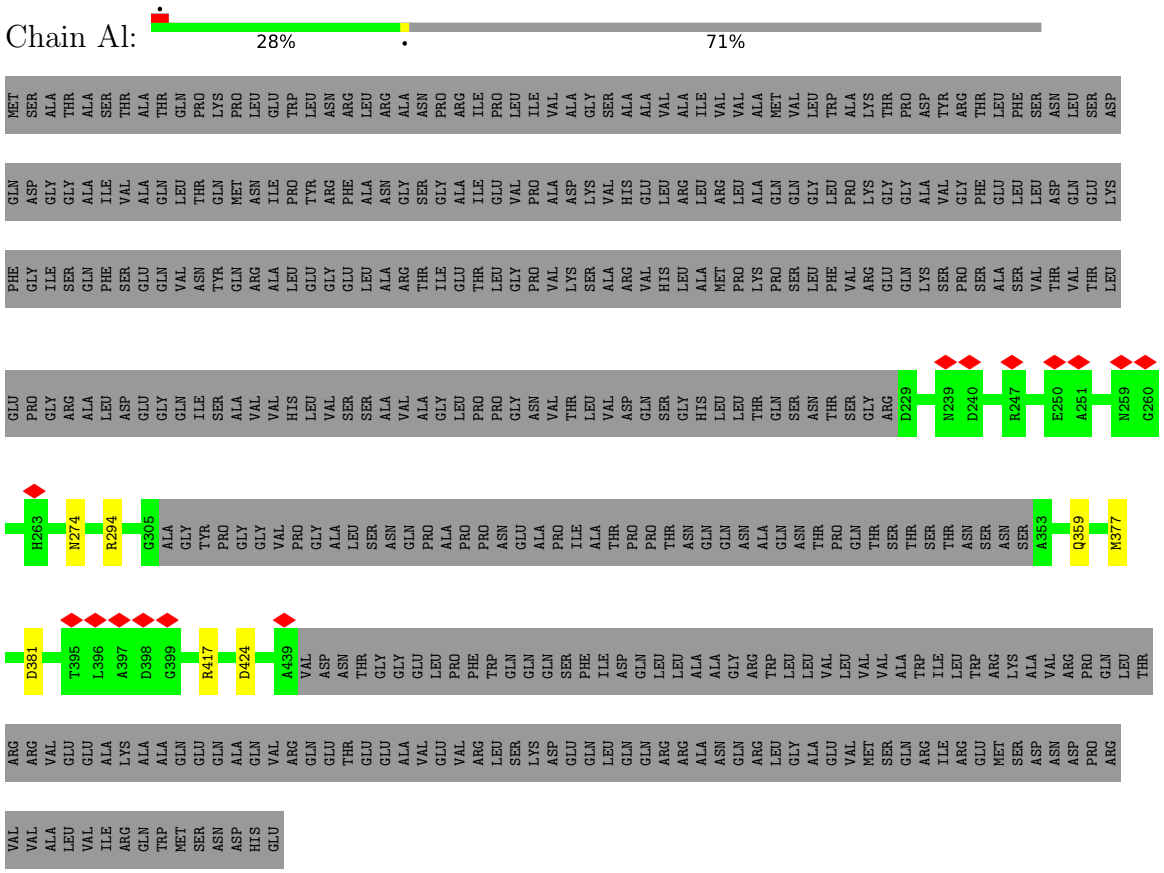

• Molecule 6: Flagellar M-ring protein

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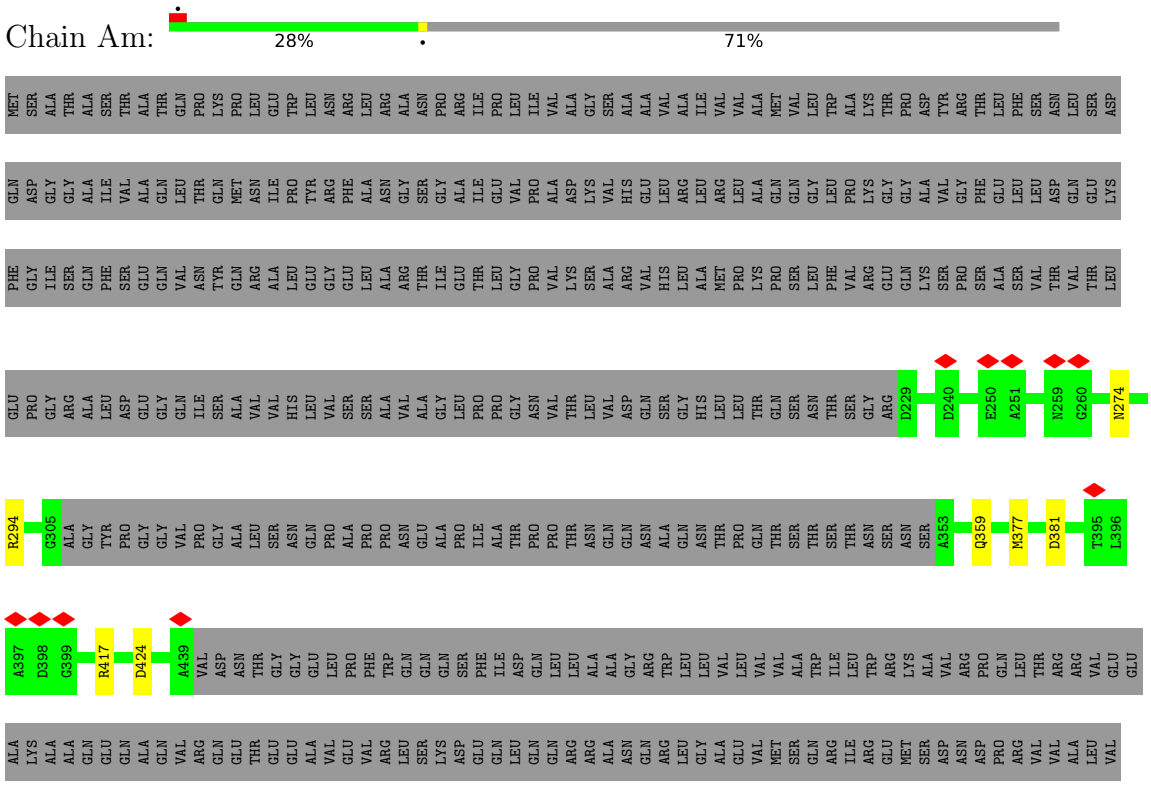

• Molecule 6: Flagellar M-ring protein

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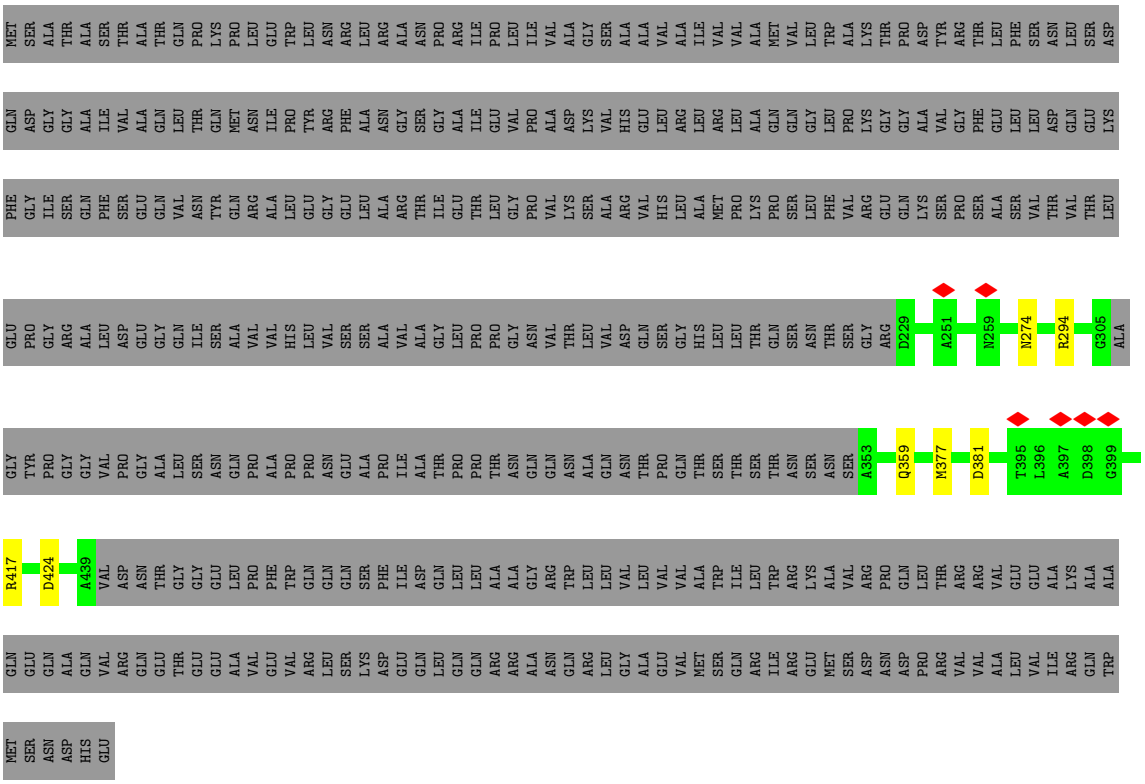

• Molecule 6: Flagellar M-ring protein

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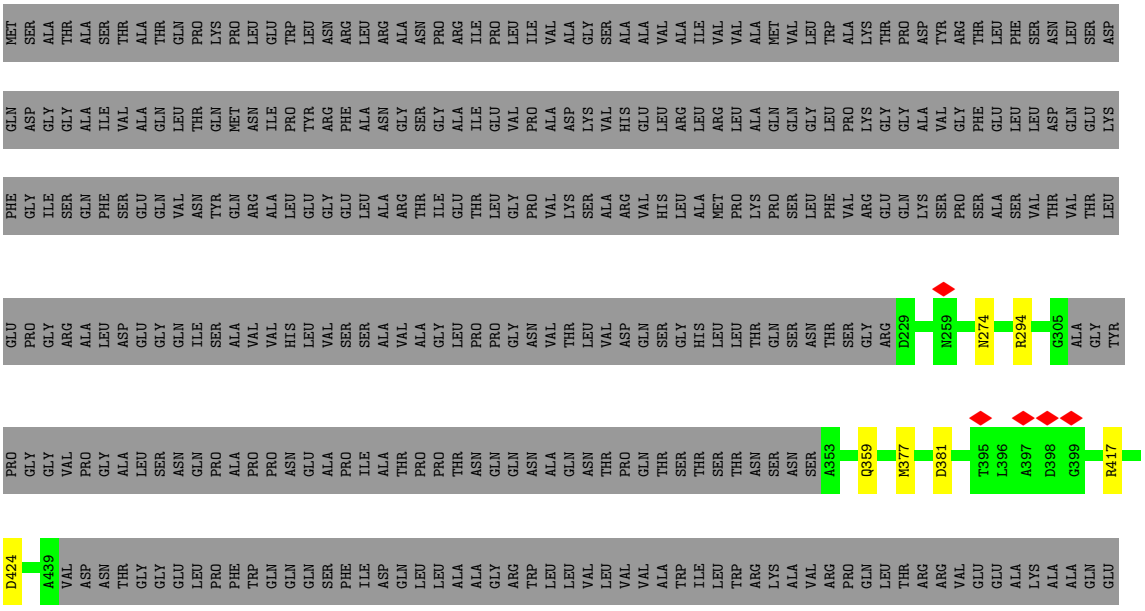

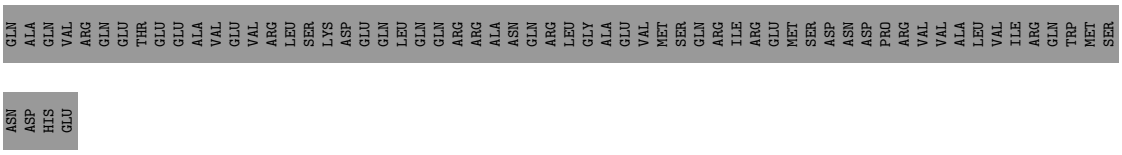

• Molecule 6: Flagellar M-ring protein

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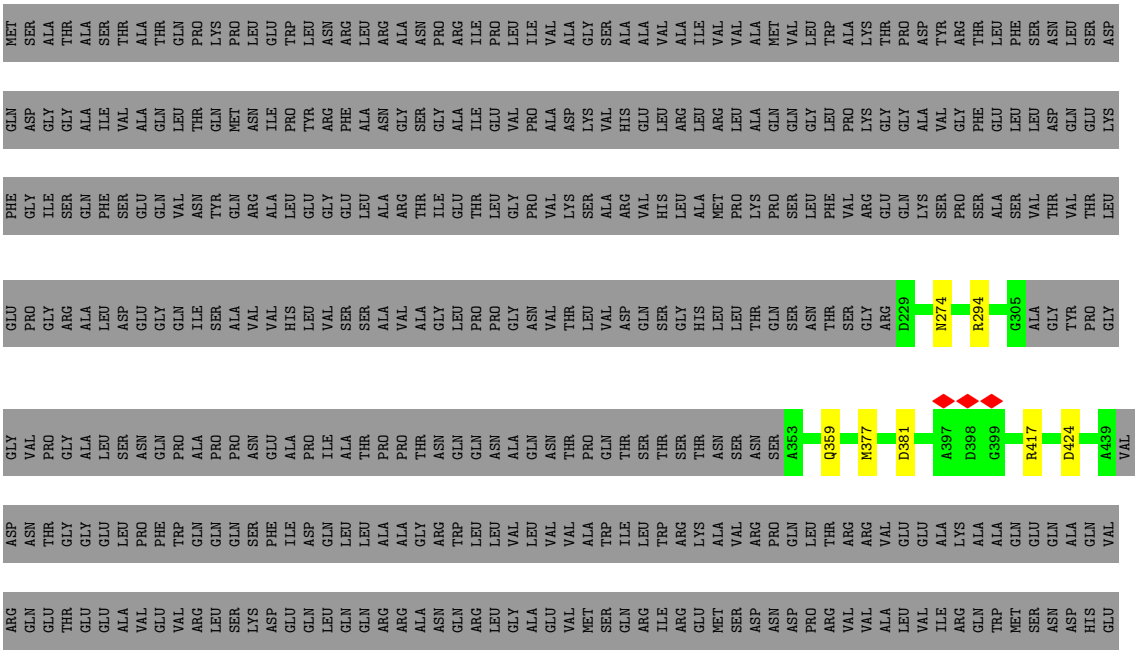

• Molecule 6: Flagellar M-ring protein

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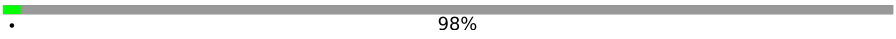

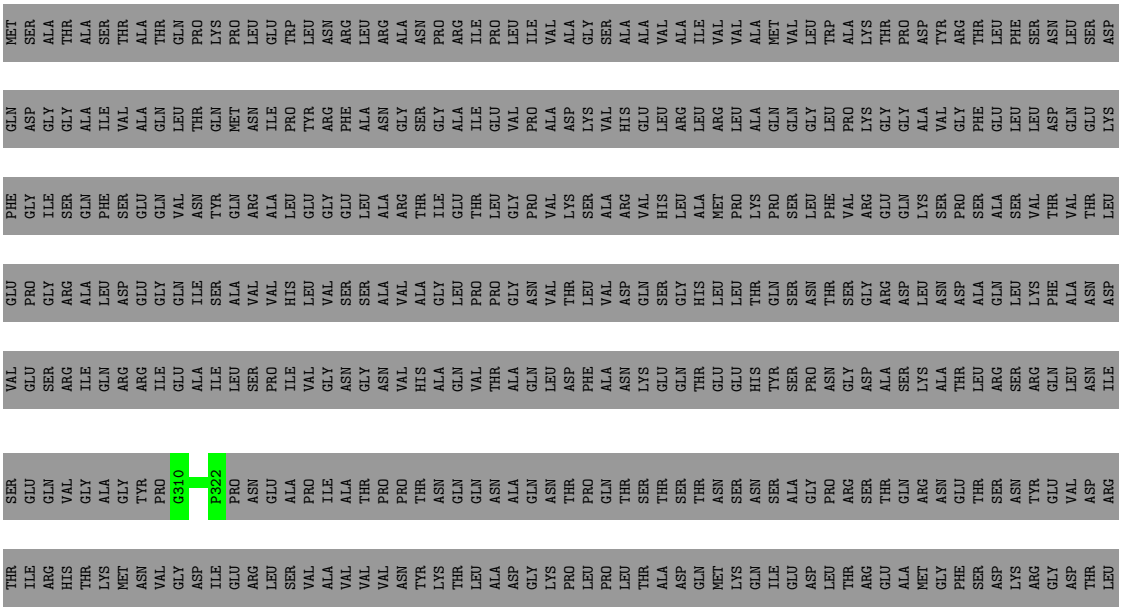

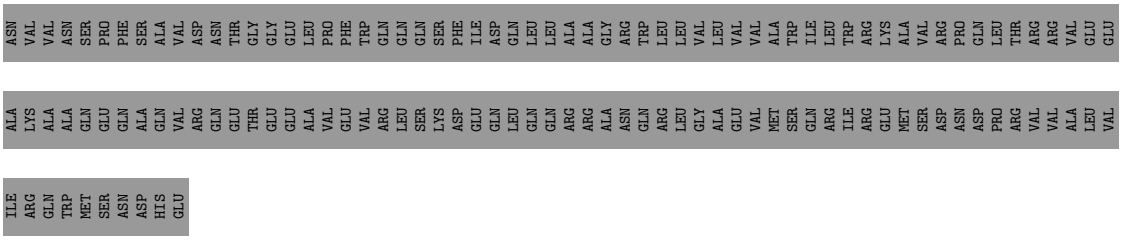

• Molecule 6: Flagellar M-ring protein

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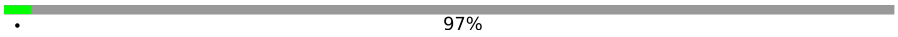

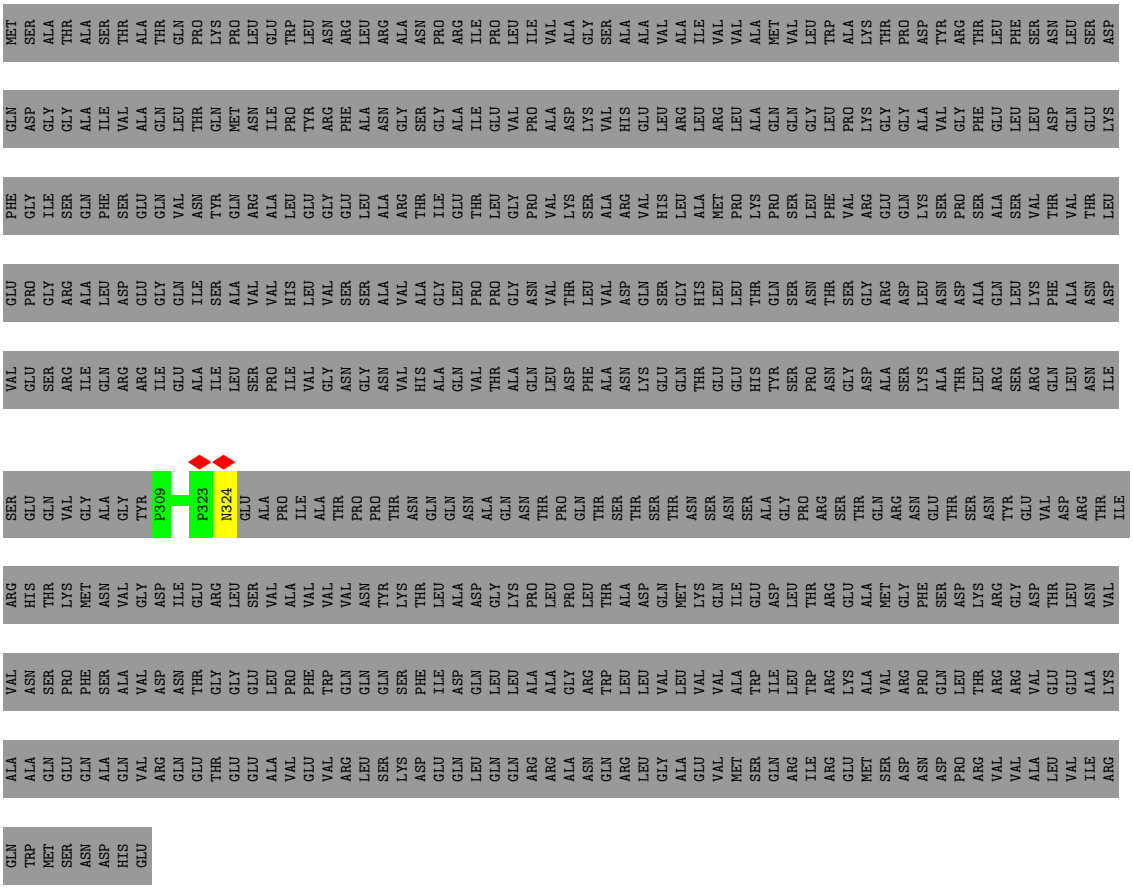

• Molecule 6: Flagellar M-ring protein

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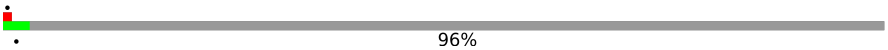
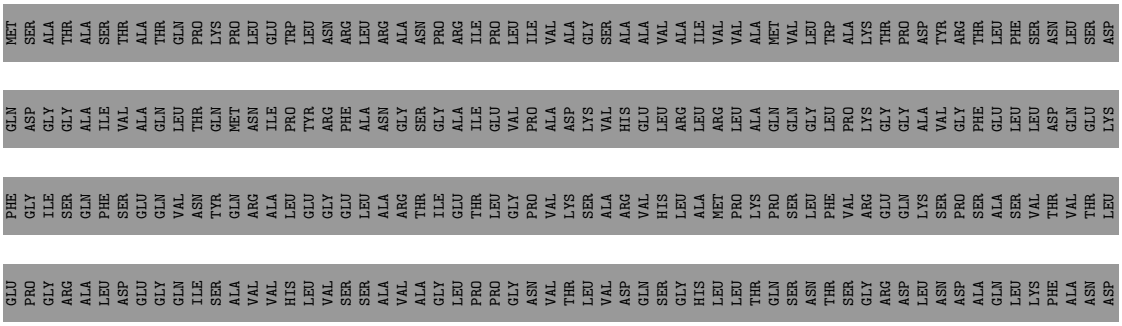
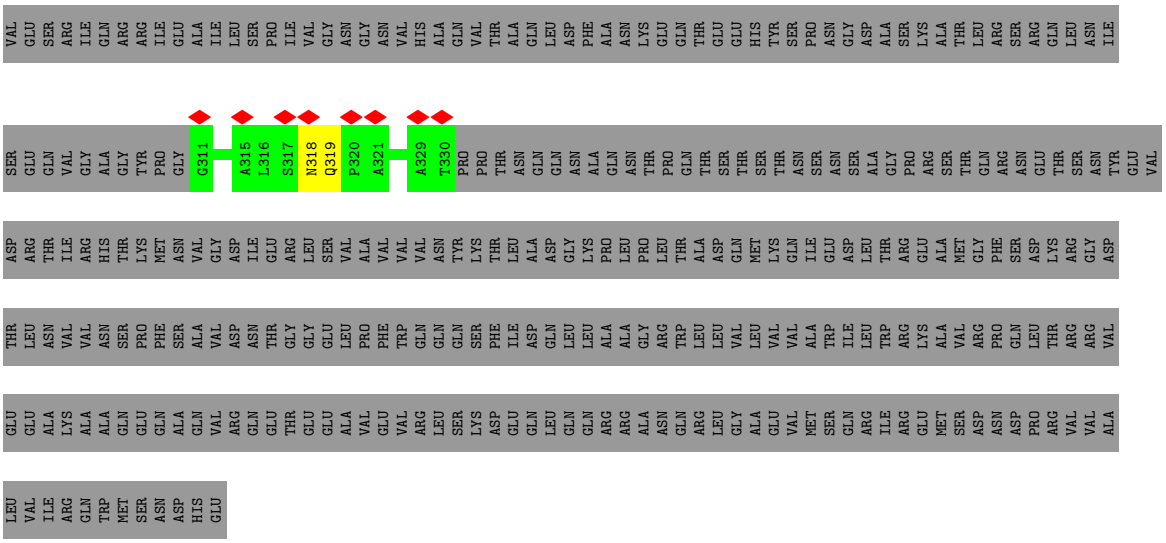
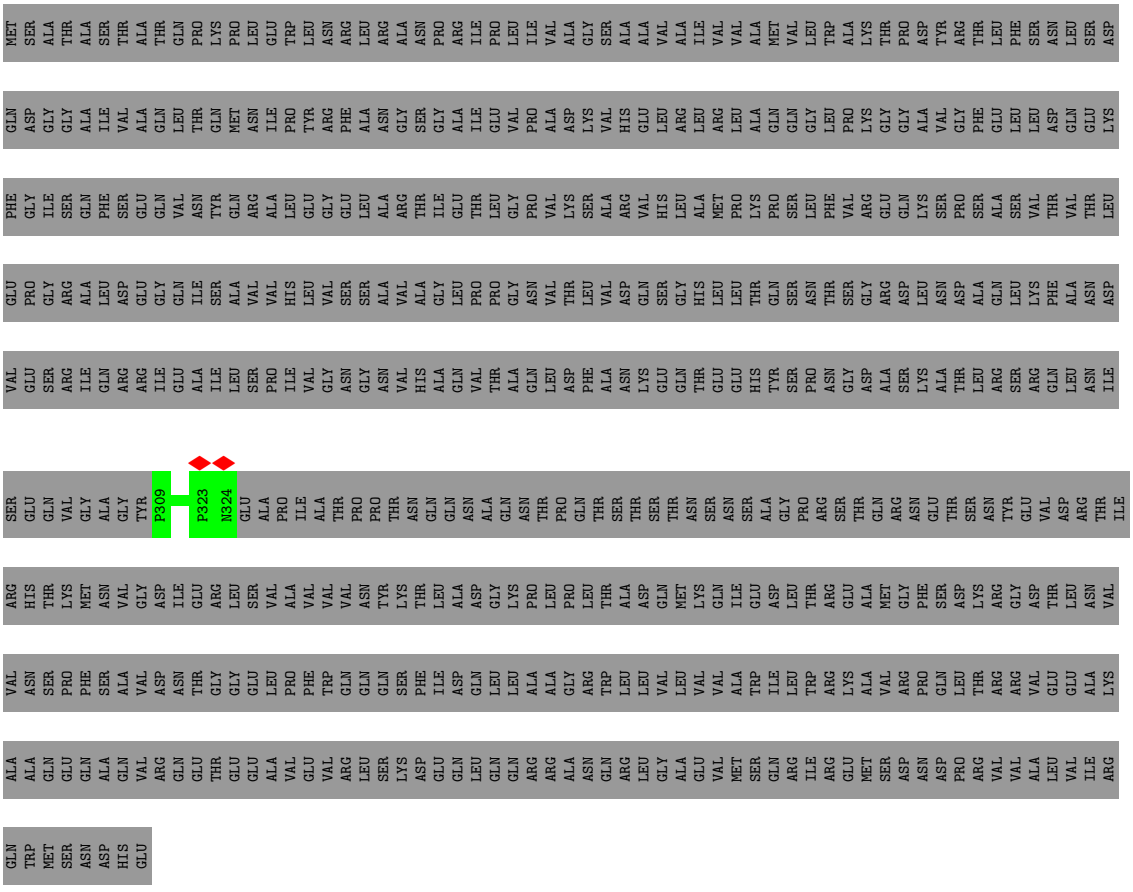






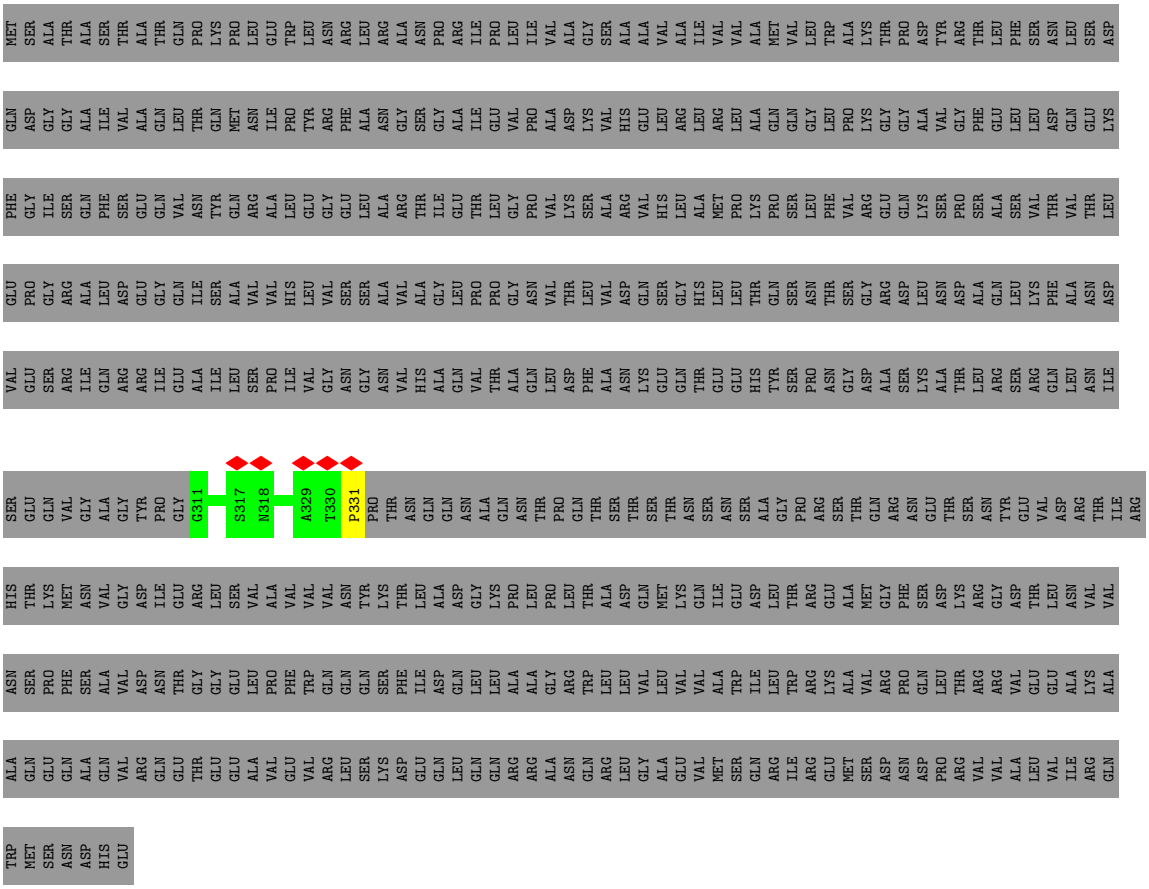
• Molecule 6: Flagellar M-ring protein

Chain BJ: 97%



• Molecule 6: Flagellar M-ring protein

Chain BK: 96%



• Molecule 6: Flagellar M-ring protein

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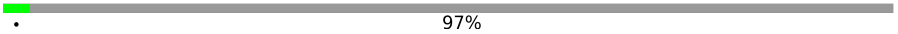
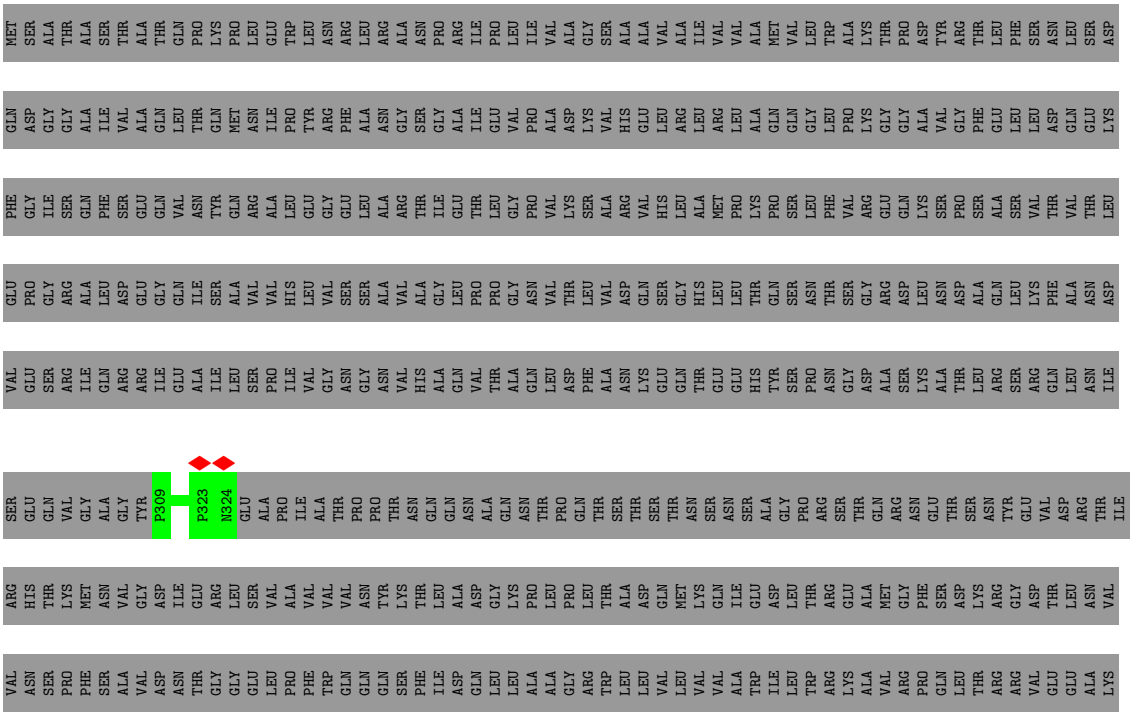
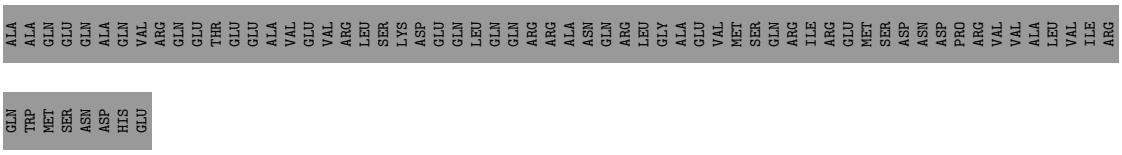
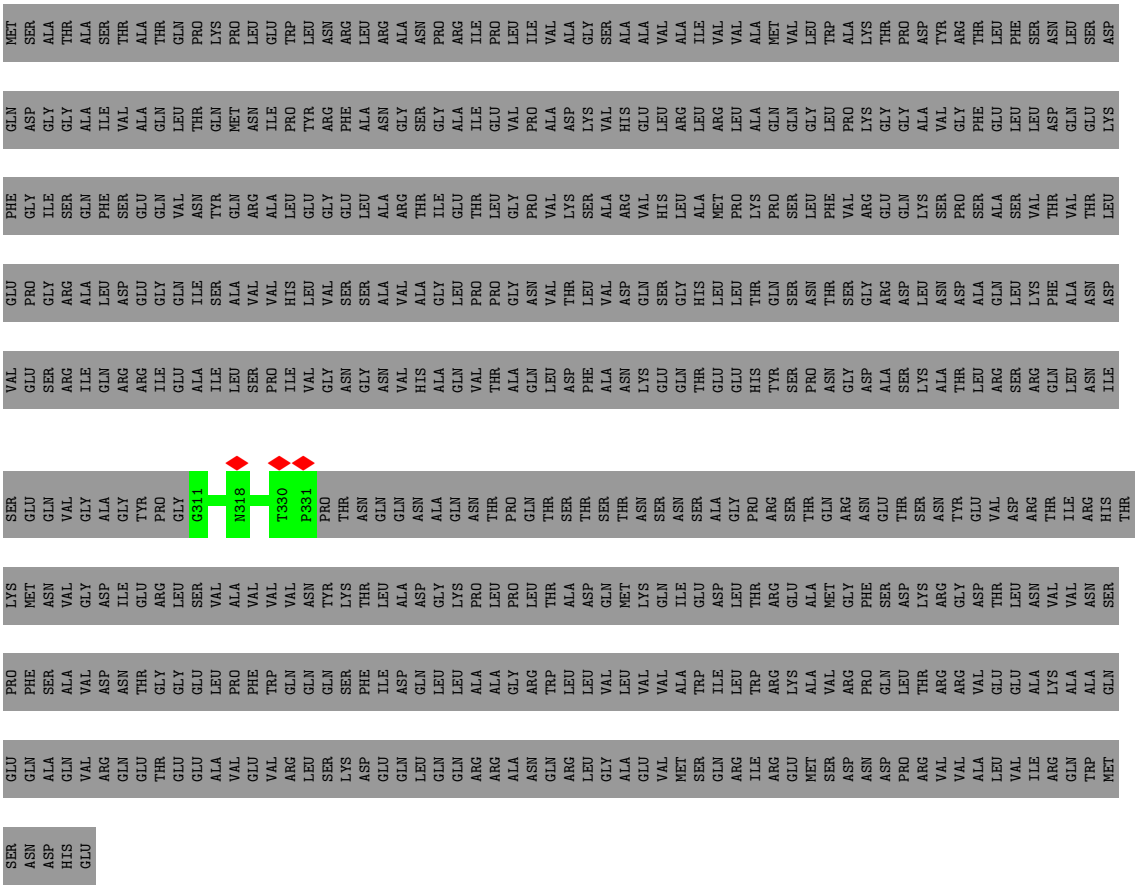






• Molecule 6: Flagellar M-ring protein

Chain BM: 96%



• Molecule 6: Flagellar M-ring protein

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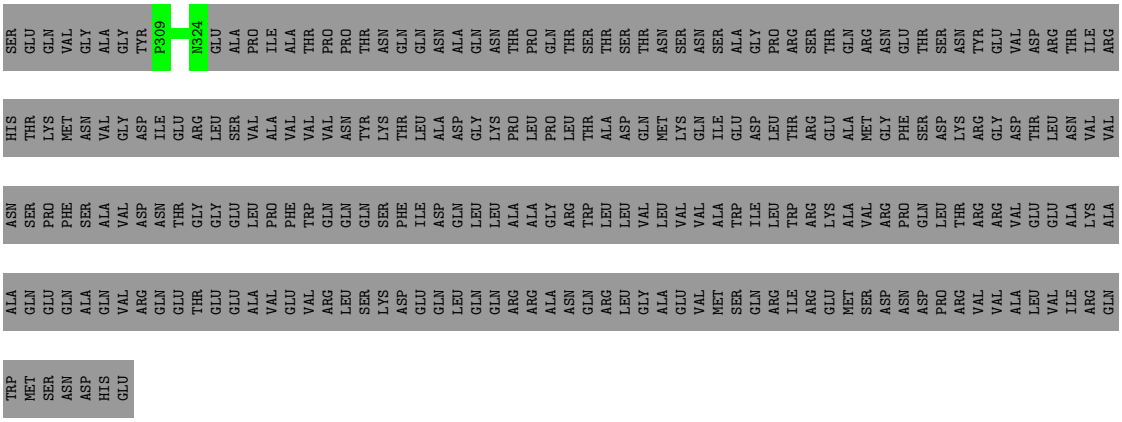
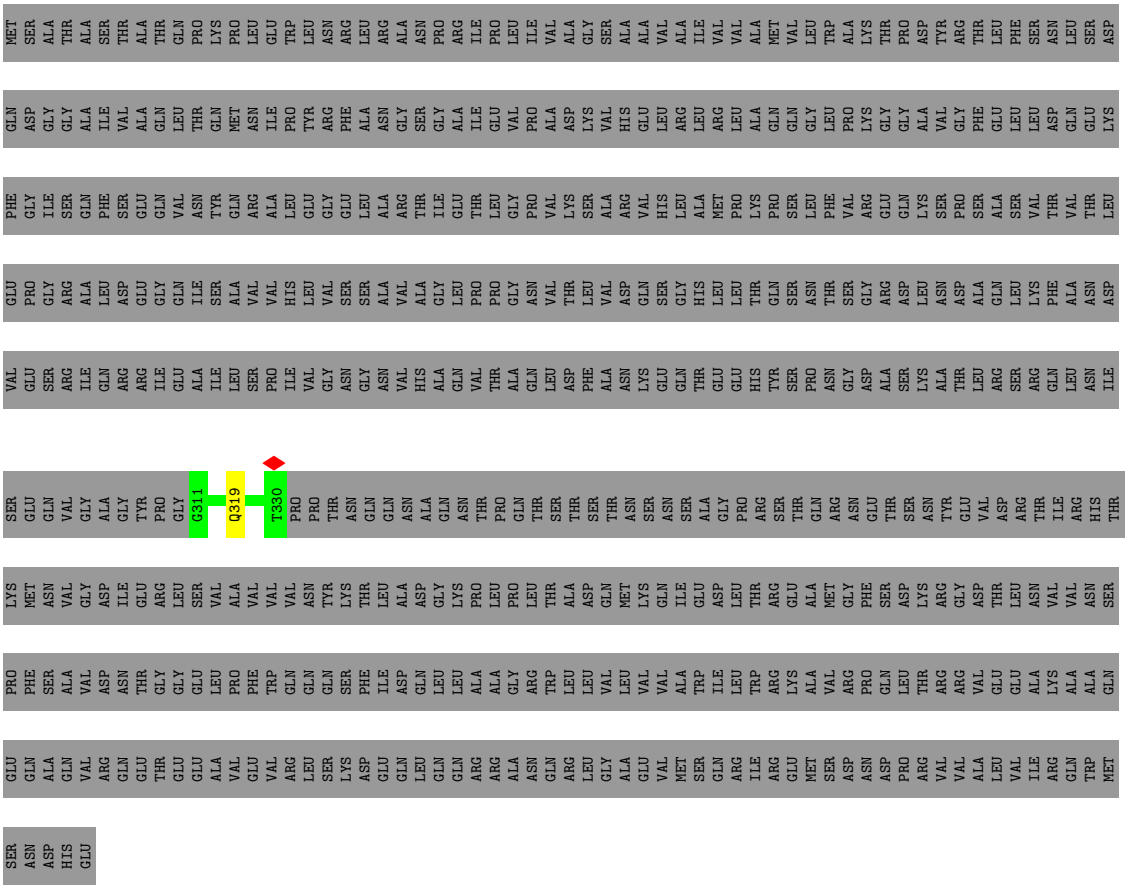


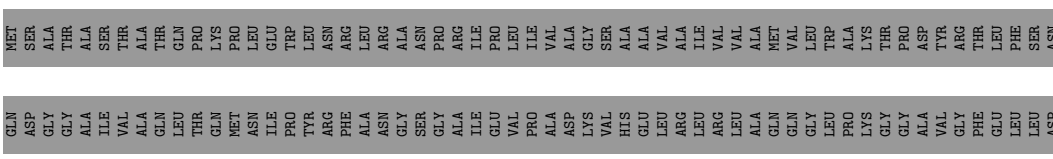
• Molecule 6: Flagellar M-ring protein

Chain BO: 96%



• Molecule 6: Flagellar M-ring protein

Chain BP: 97%



• Molecule 6: Flagellar M-ring protein

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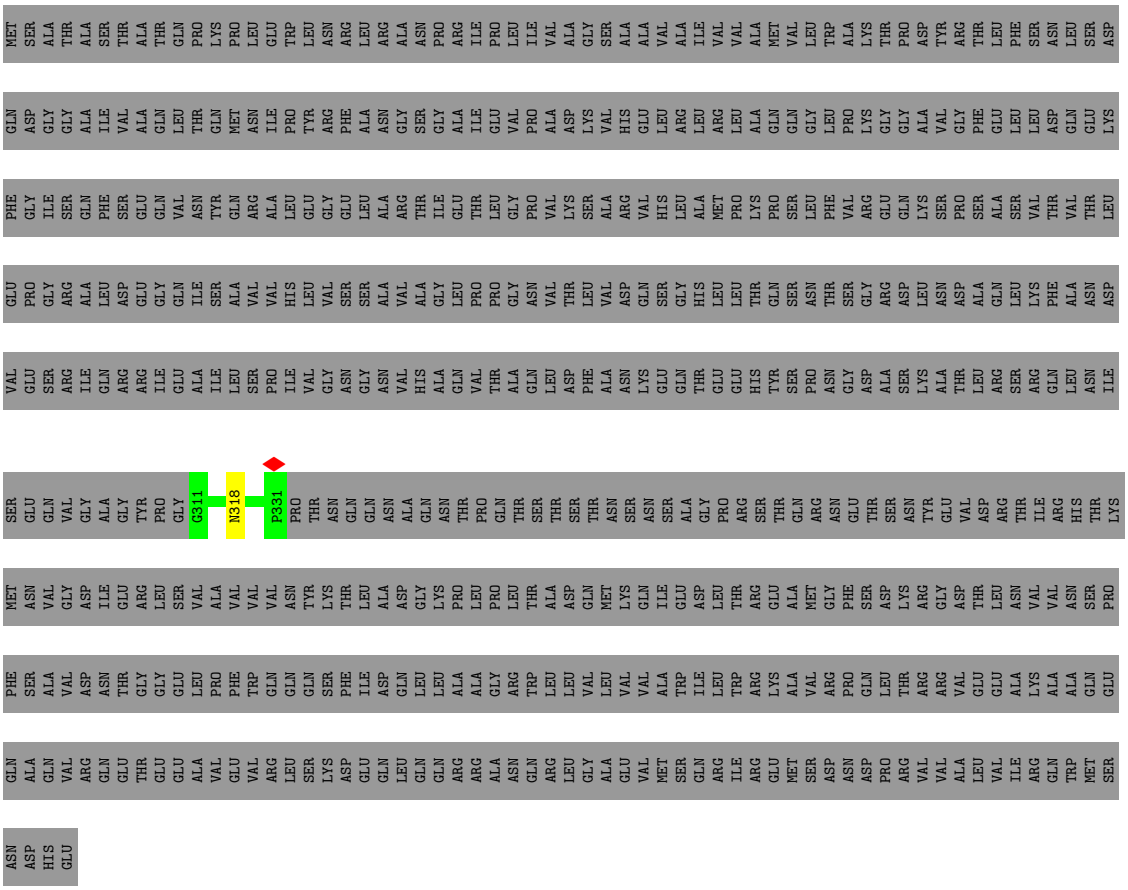


• Molecule 6: Flagellar M-ring protein

Chain BR:

• Molecule 6: Flagellar M-ring protein

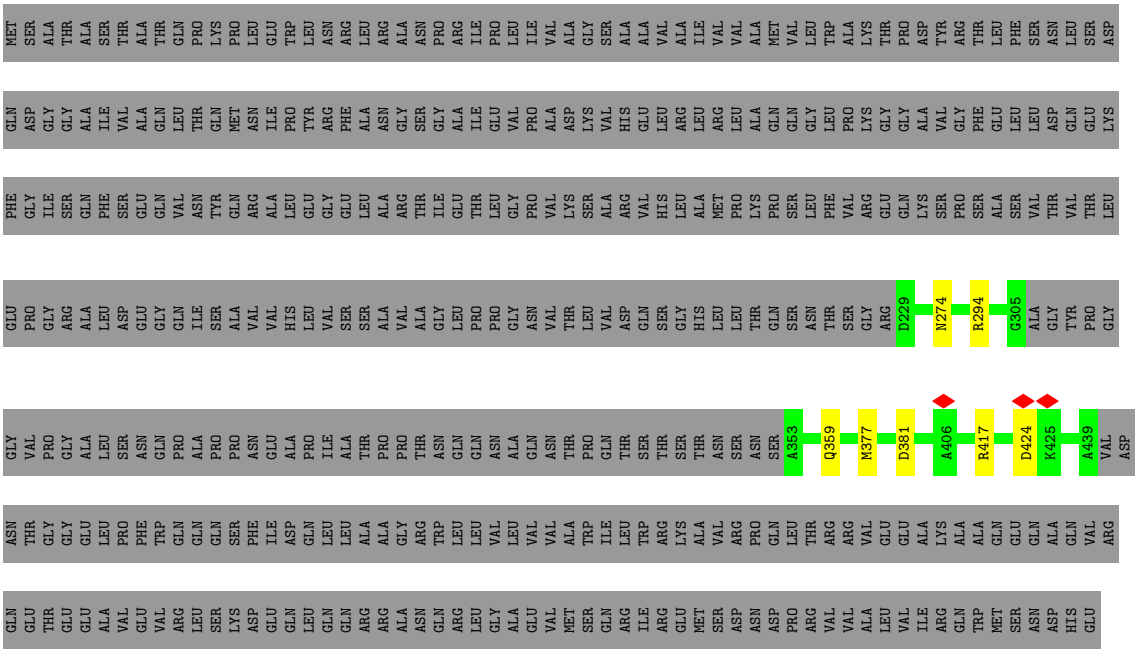
Chain BS:

• Molecule 6: Flagellar M-ring protein

Chain BT:

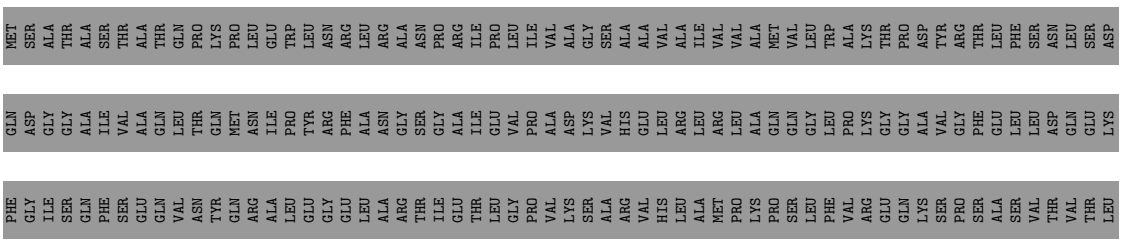
• Molecule 6: Flagellar M-ring protein

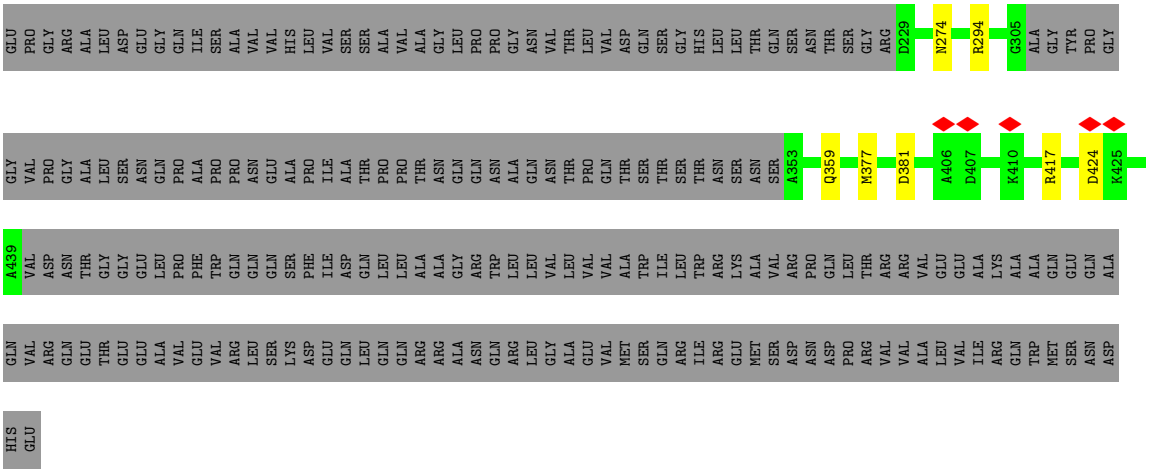
Chain BU:



• Molecule 6: Flagellar M-ring protein

Chain BV:





• Molecule 6: Flagellar M-ring protein

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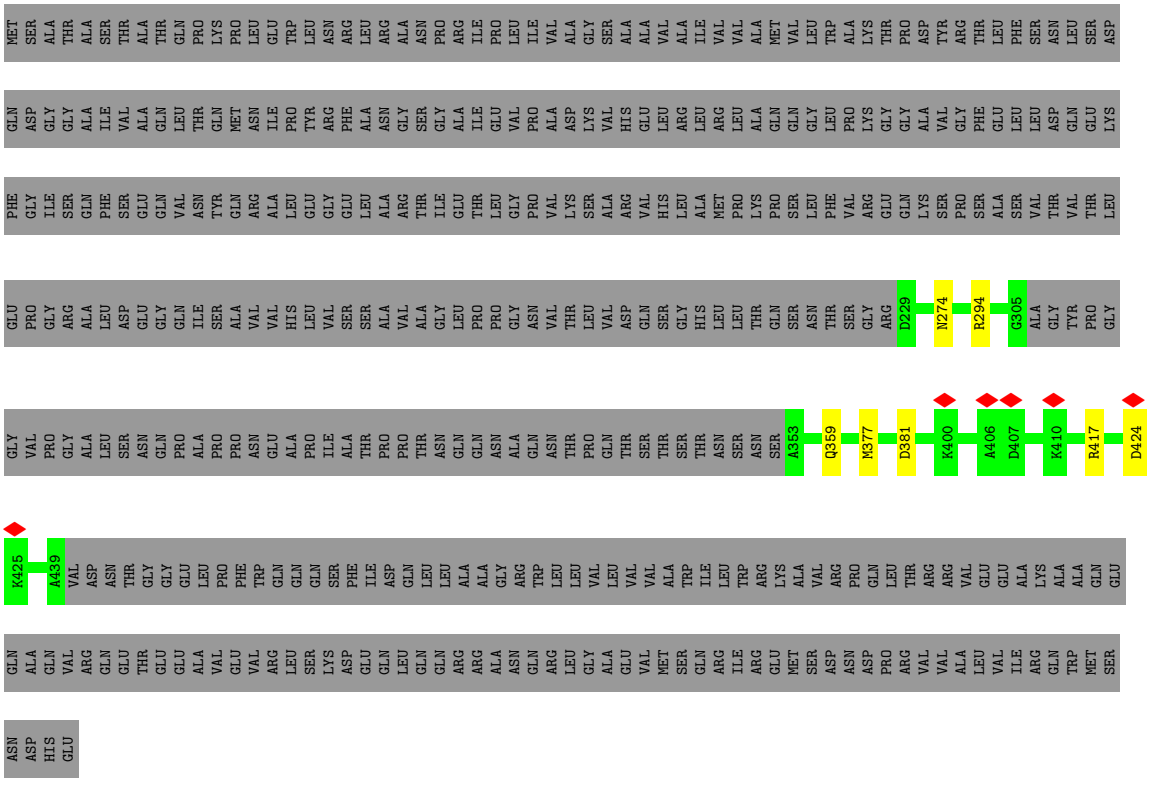

• Molecule 6: Flagellar M-ring protein

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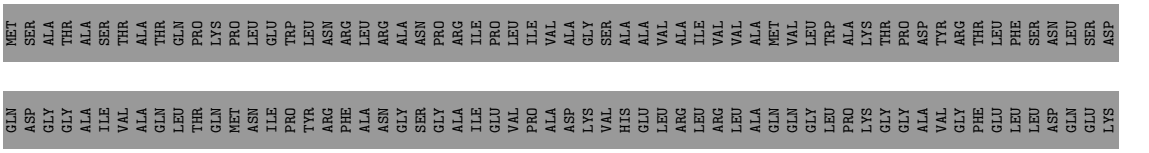
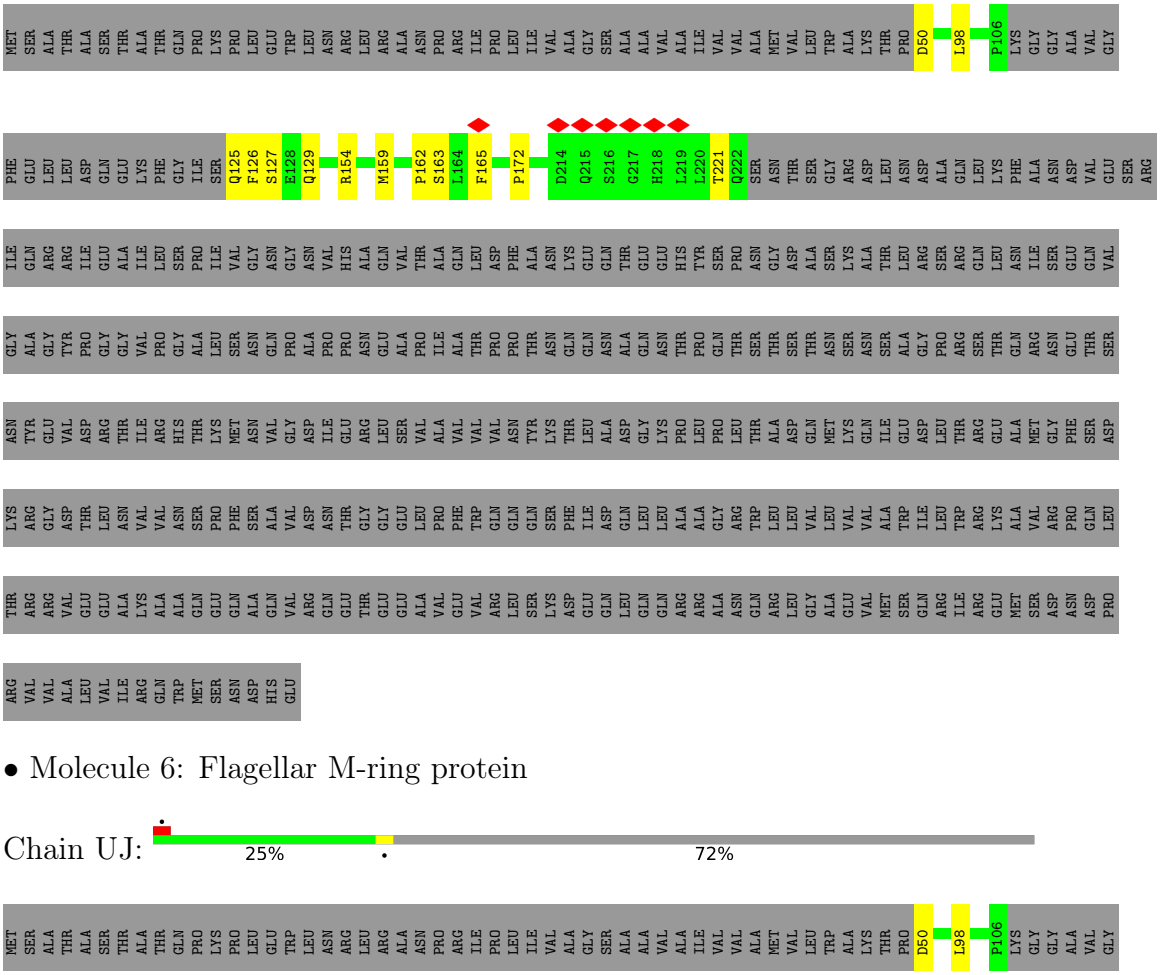
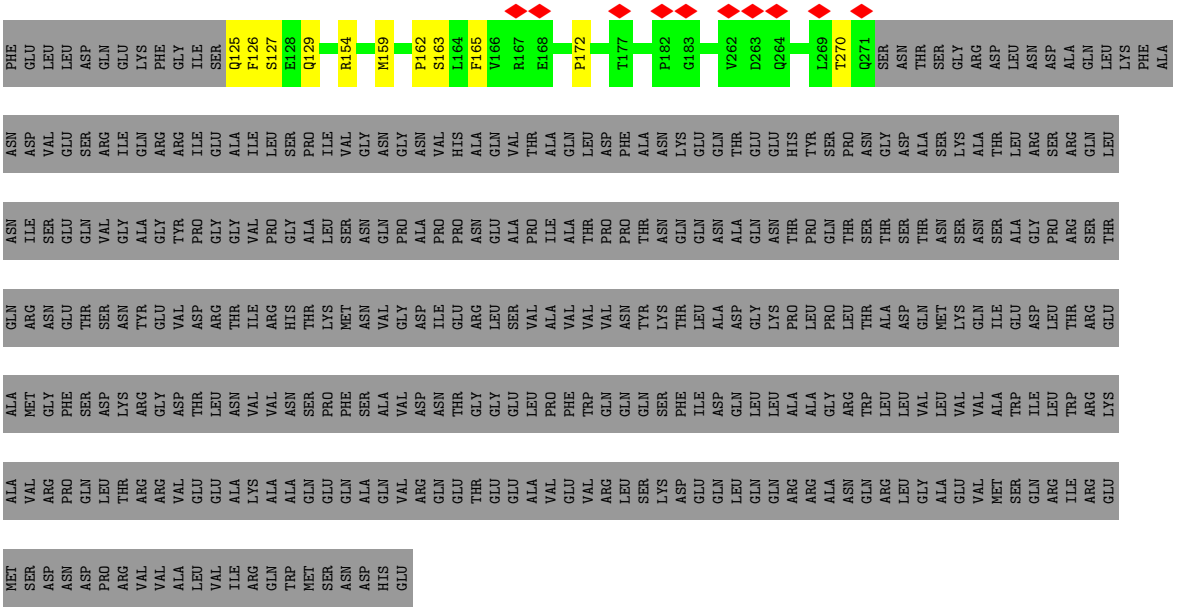


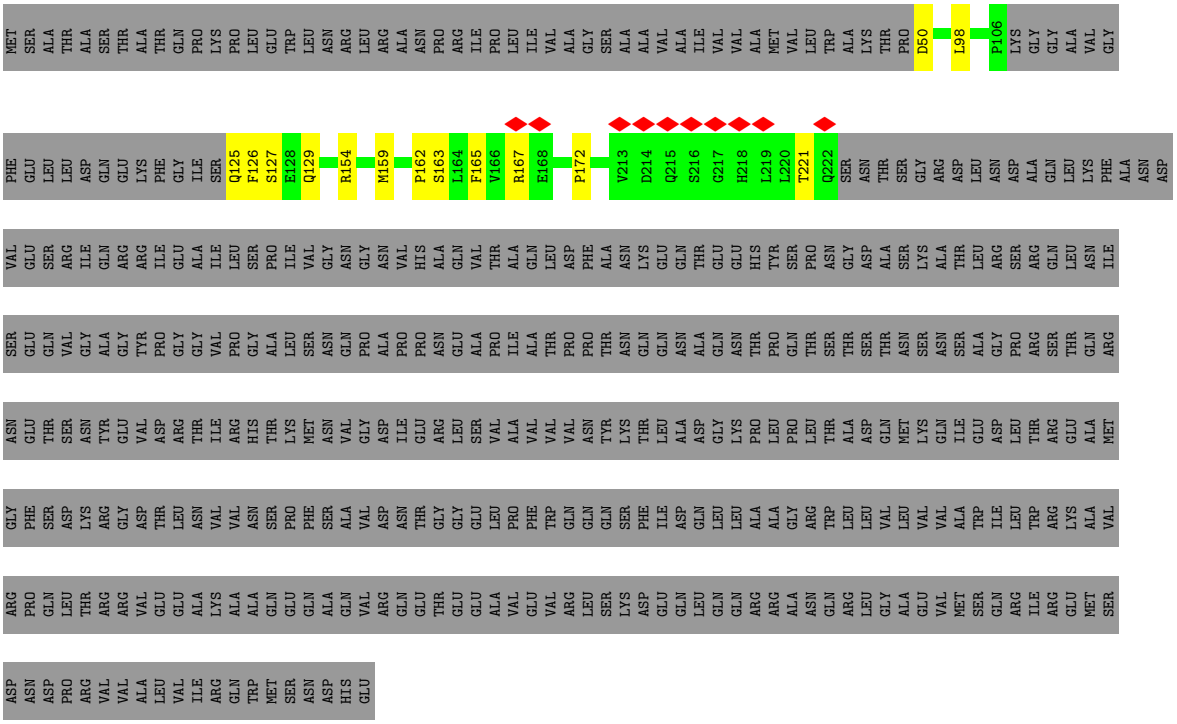
• Molecule 6: Flagellar M-ring protein



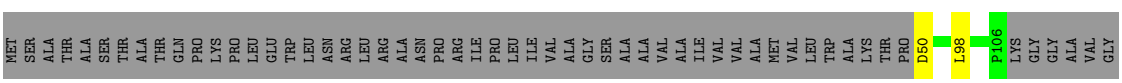
• Molecule 6: Flagellar M-ring protein

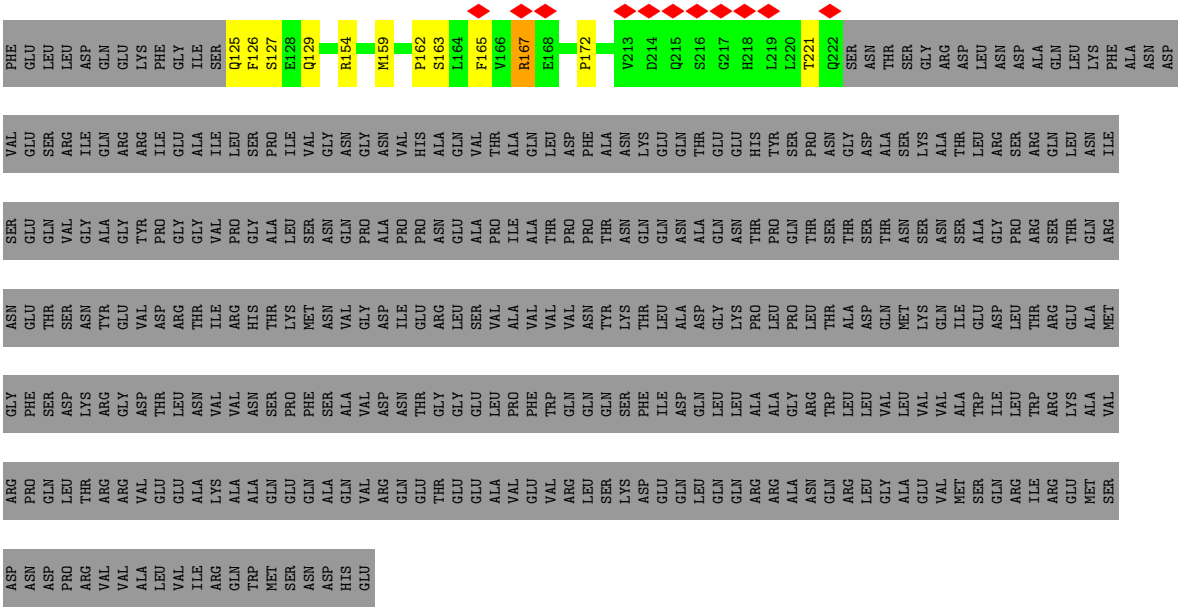


• Molecule 6: Flagellar M-ring protein



• Molecule 6: Flagellar M-ring protein





• Molecule 6: Flagellar M-ring protein

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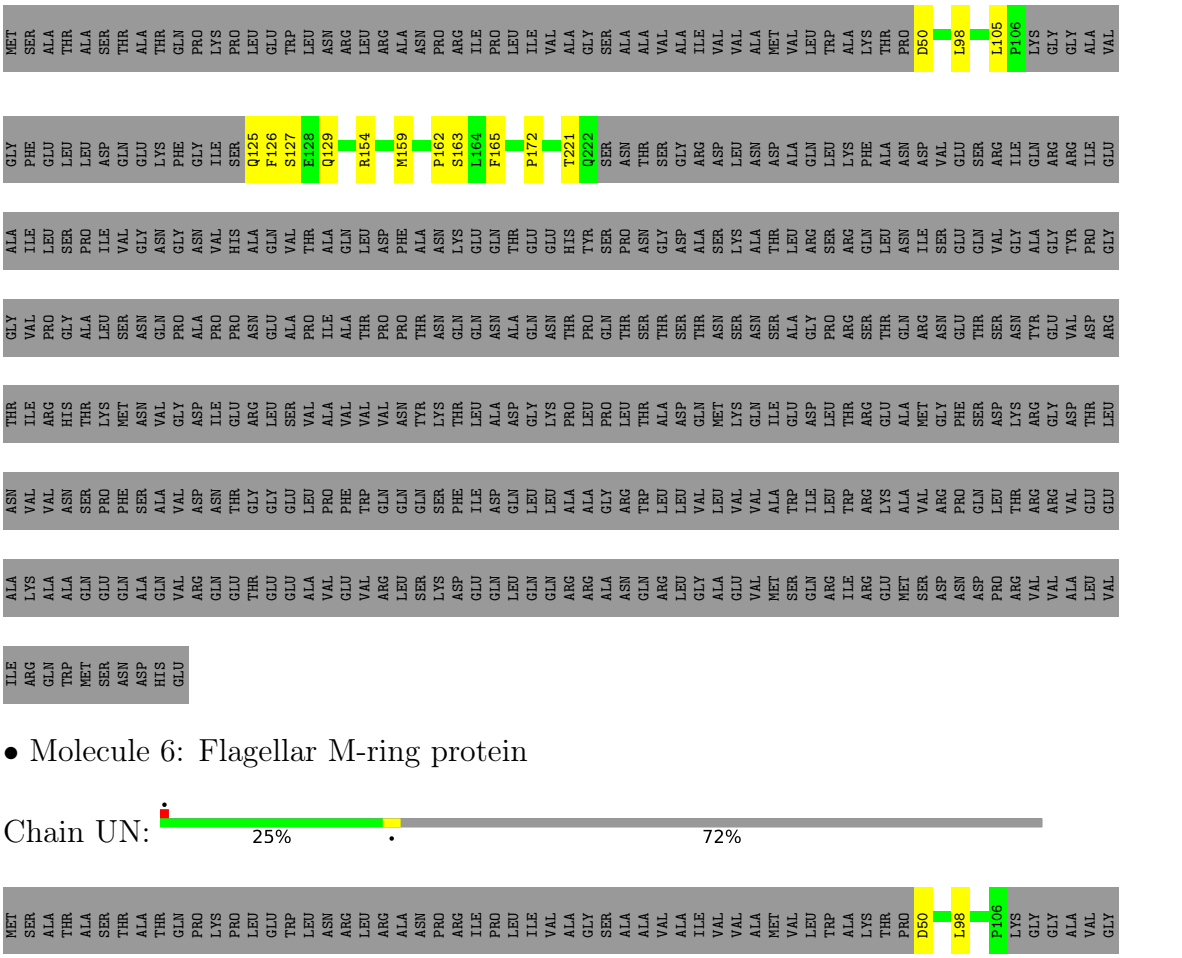
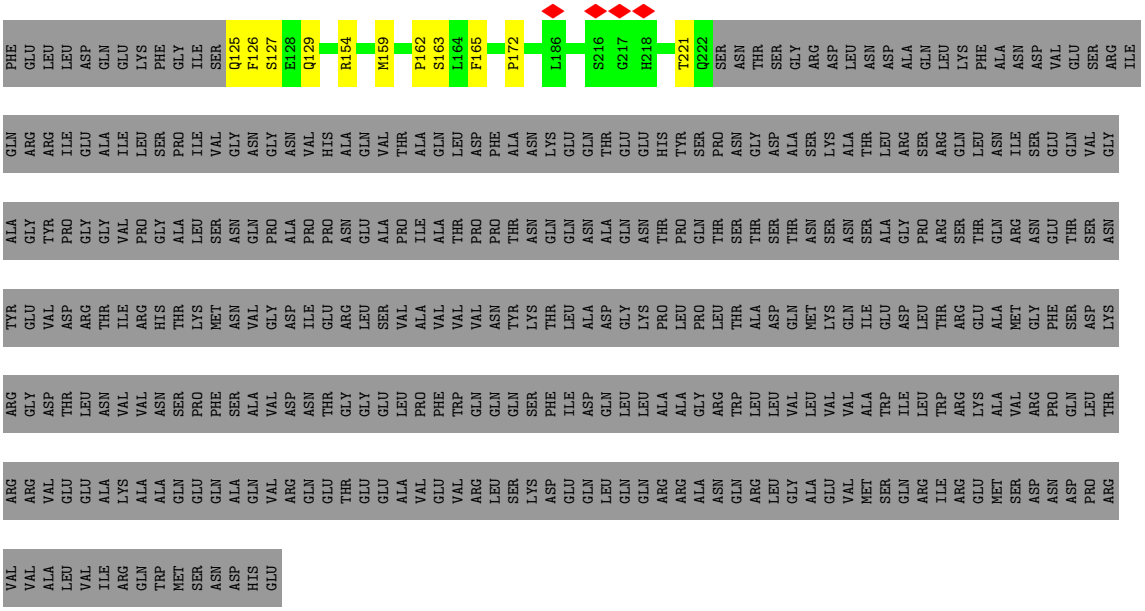
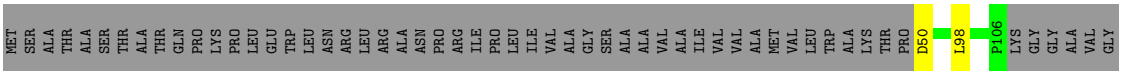


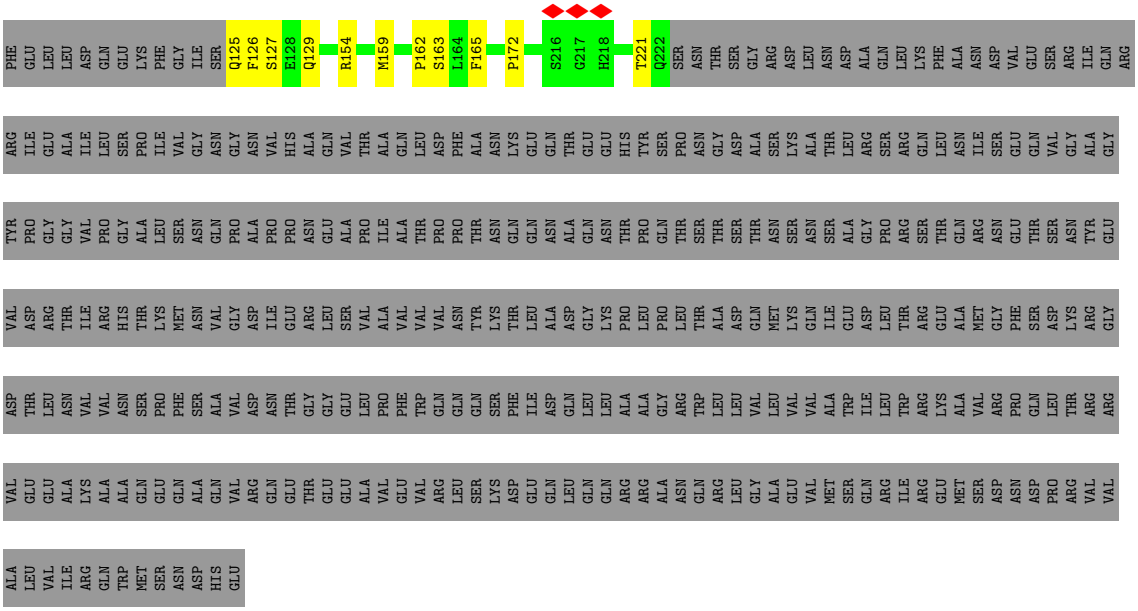
• Molecule 6: Flagellar M-ring protein

Chain UN:

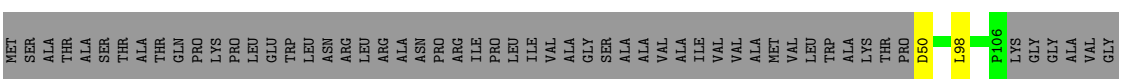


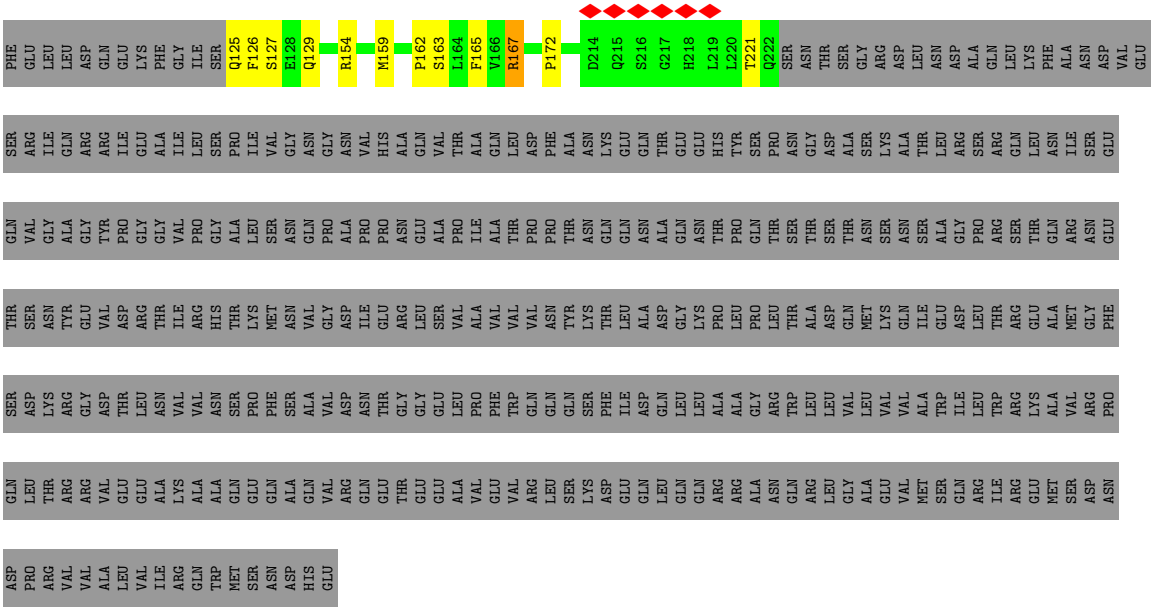
• Molecule 6: Flagellar M-ring protein





• Molecule 6: Flagellar M-ring protein



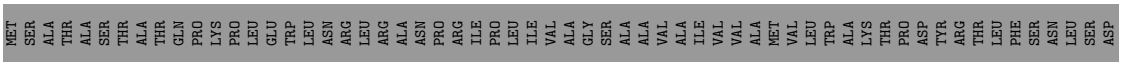


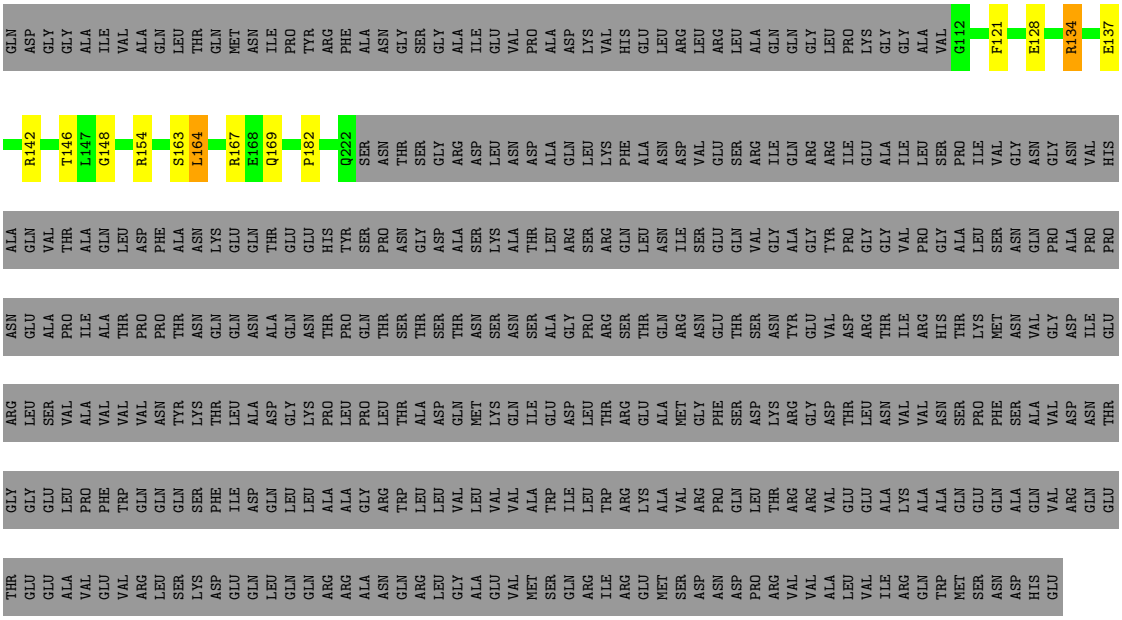
• Molecule 6: Flagellar M-ring protein

Chain WA:

• Molecule 6: Flagellar M-ring protein

Chain WB:



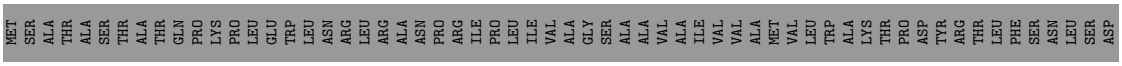


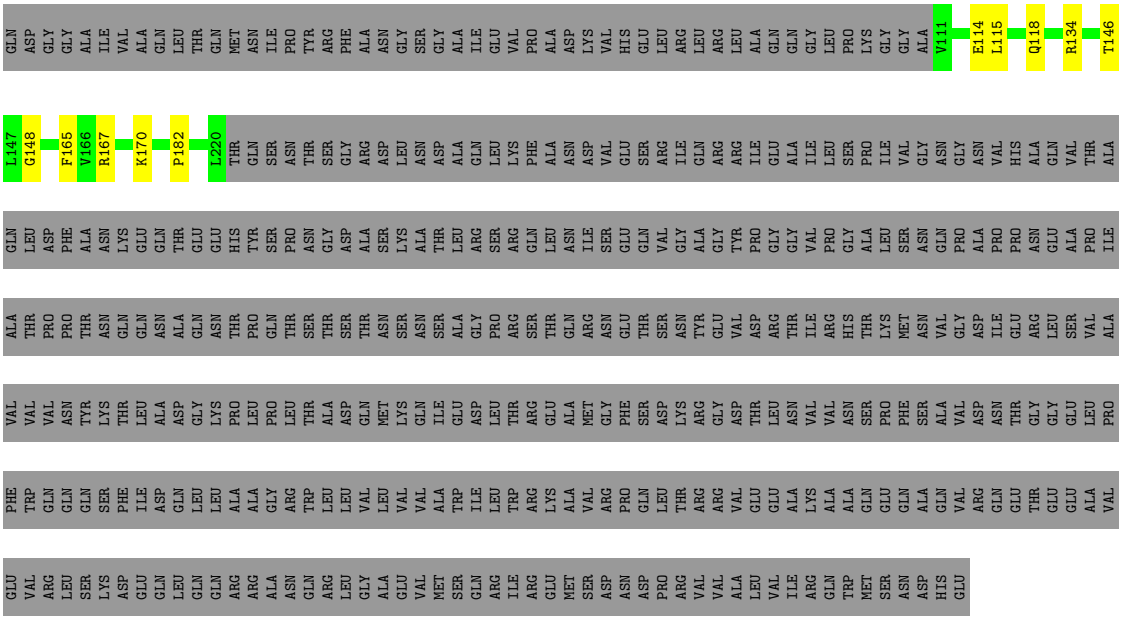
• Molecule 6: Flagellar M-ring protein

Chain WC:

• Molecule 6: Flagellar M-ring protein

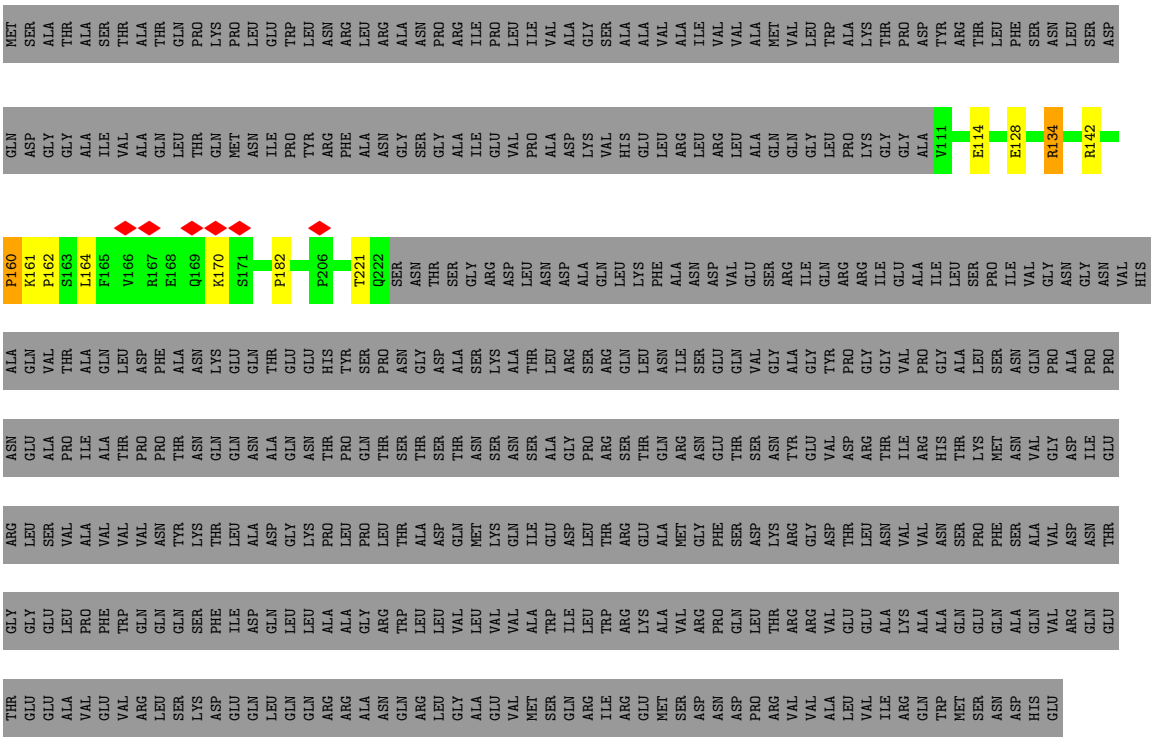
Chain WD:





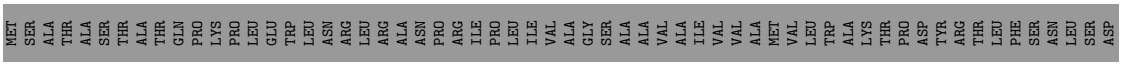
• Molecule 6: Flagellar M-ring protein

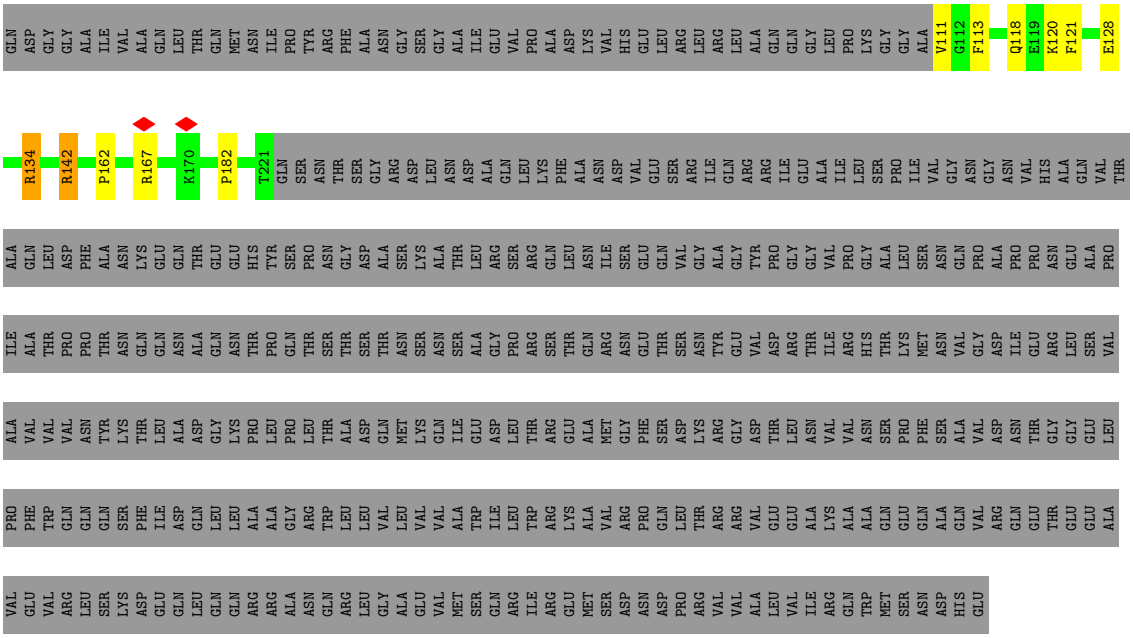
Chain WE:



• Molecule 6: Flagellar M-ring protein

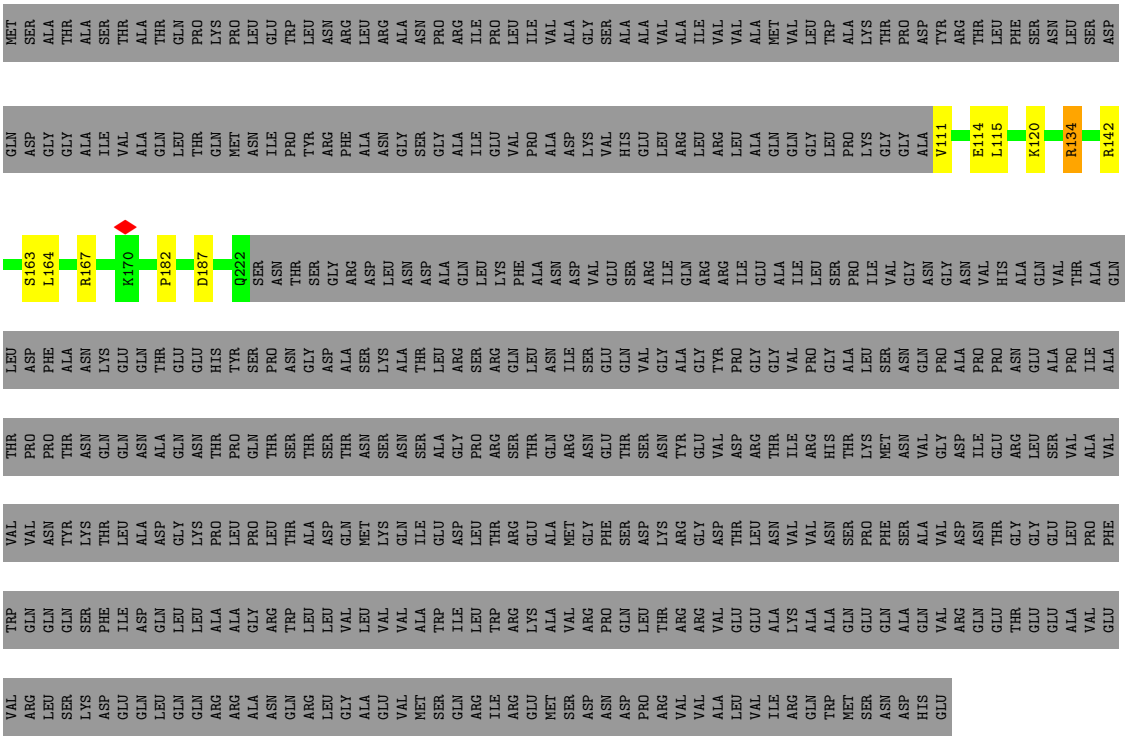
Chain WF:





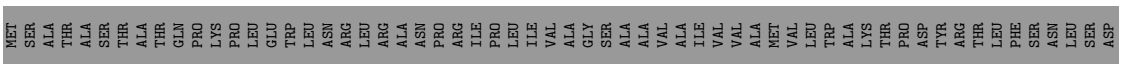
• Molecule 6: Flagellar M-ring protein

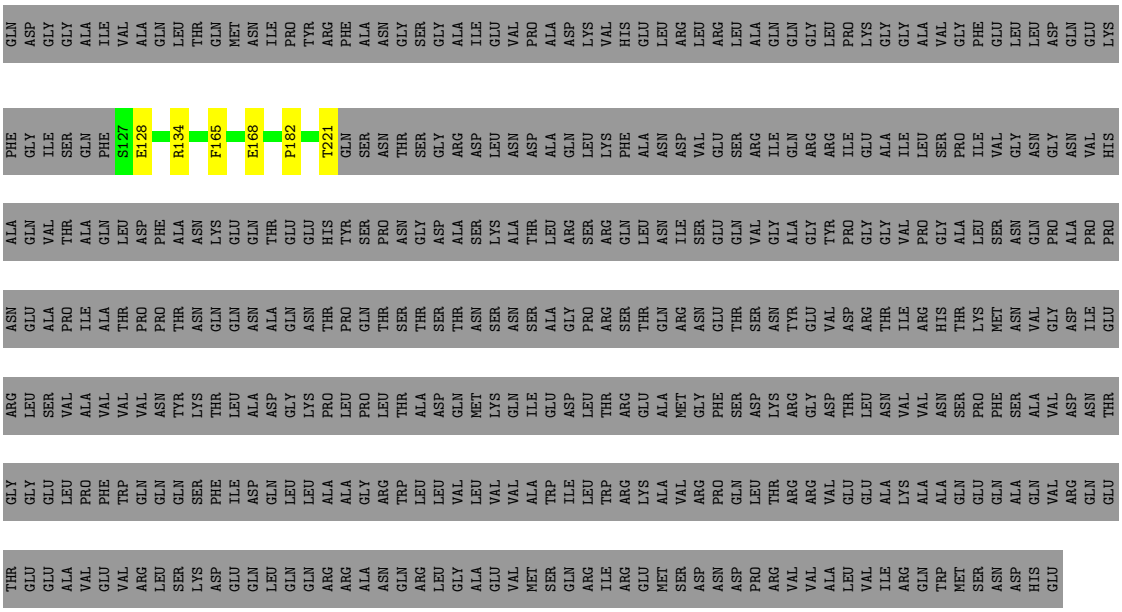
Chain WG:



• Molecule 6: Flagellar M-ring protein

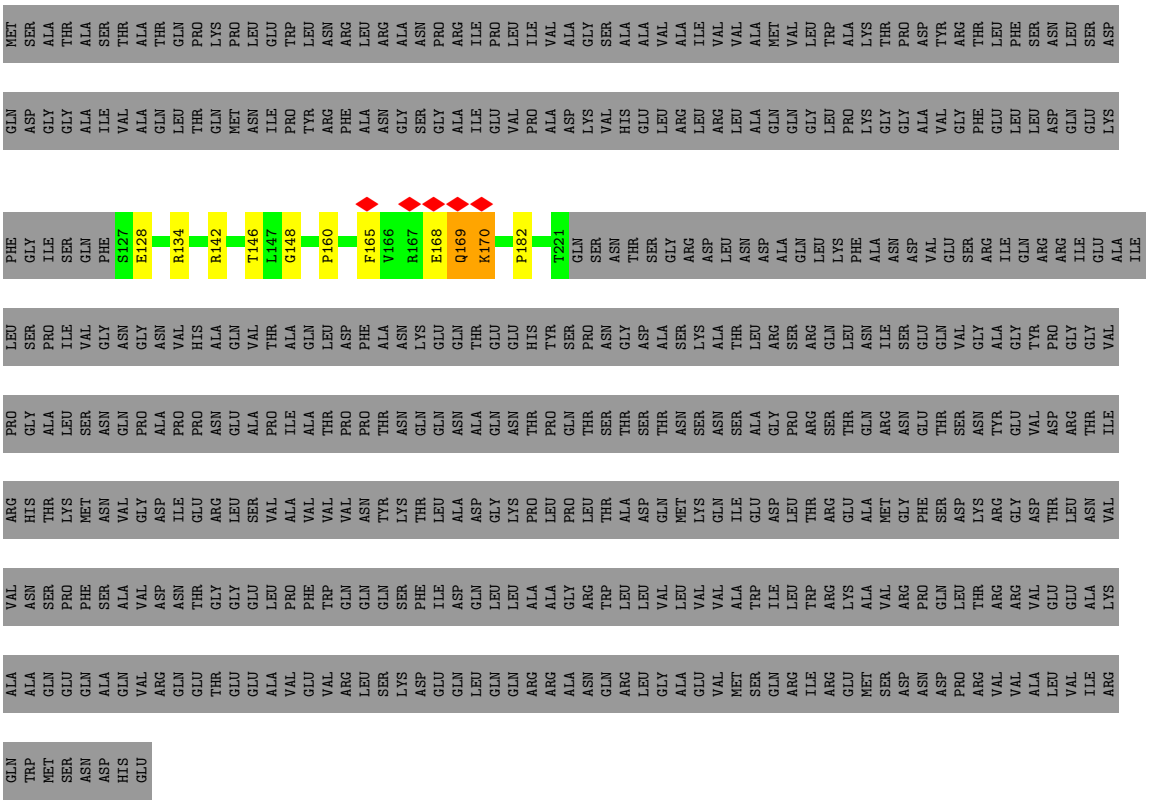
Chain WH:





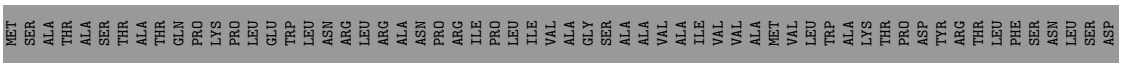
• Molecule 6: Flagellar M-ring protein

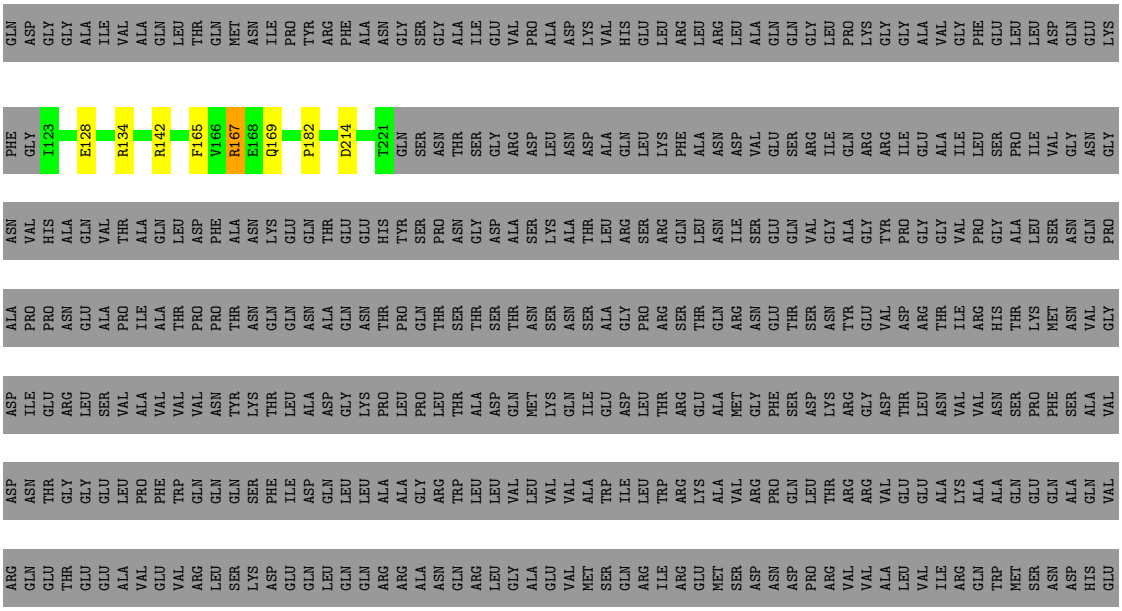
Chain WI:



• Molecule 6: Flagellar M-ring protein

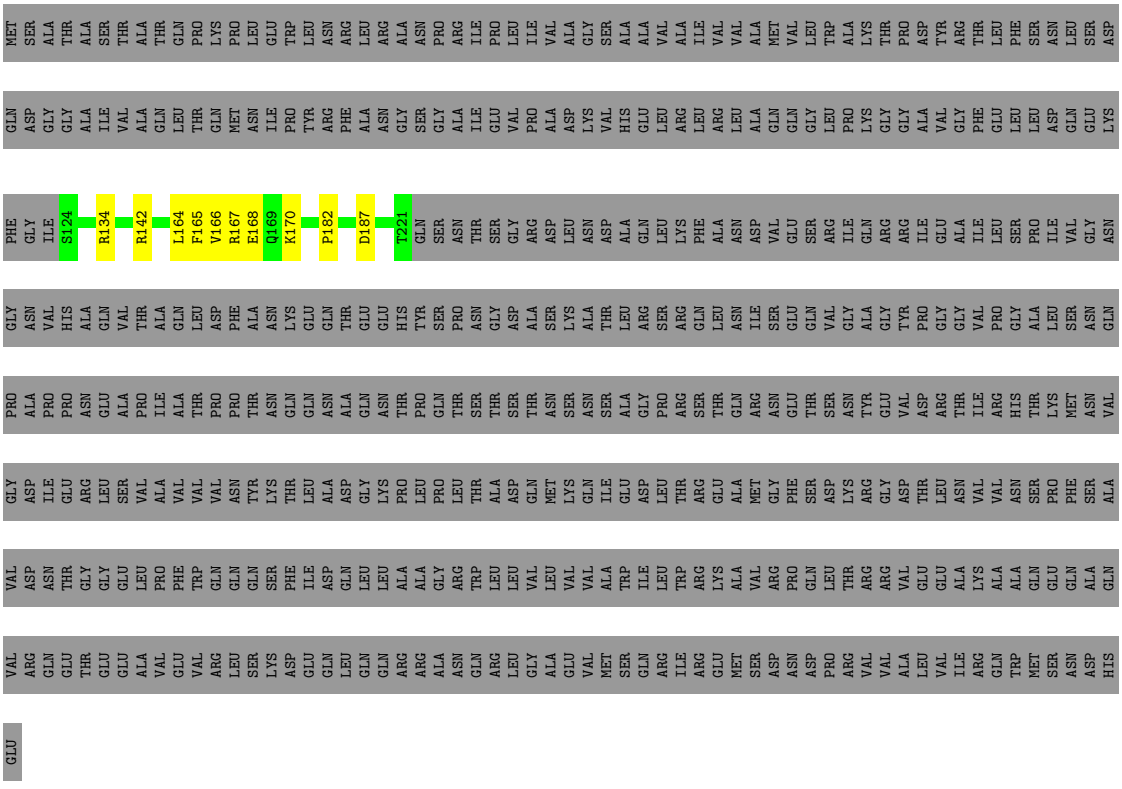
Chain WJ:





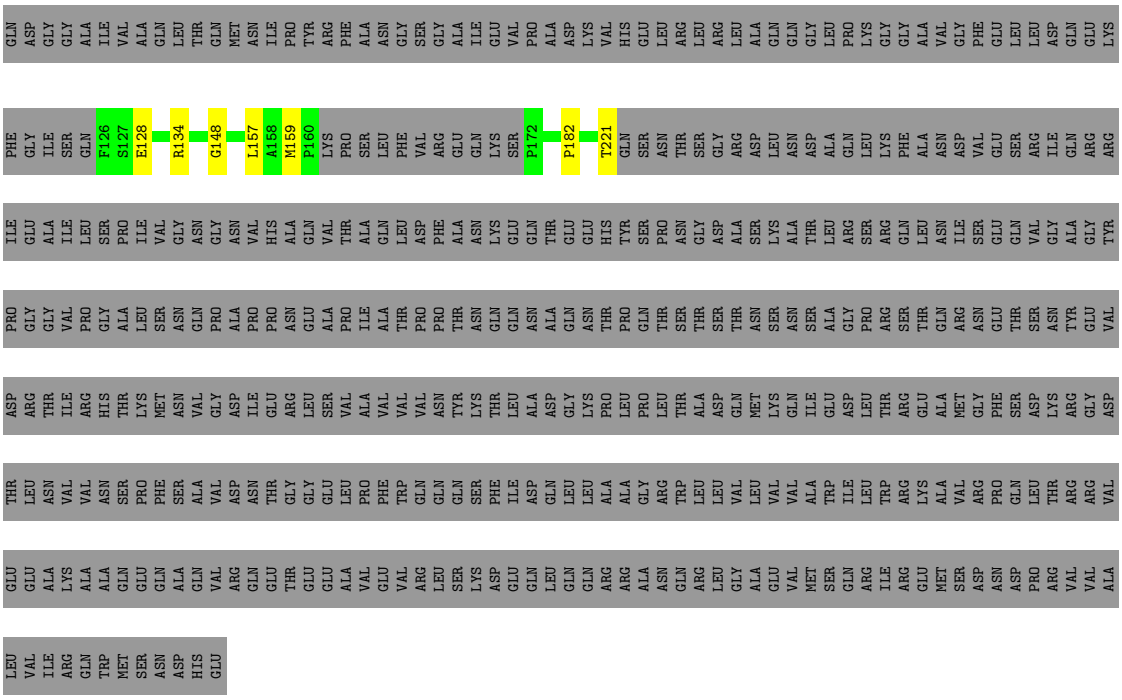
• Molecule 6: Flagellar M-ring protein

Chain WK:



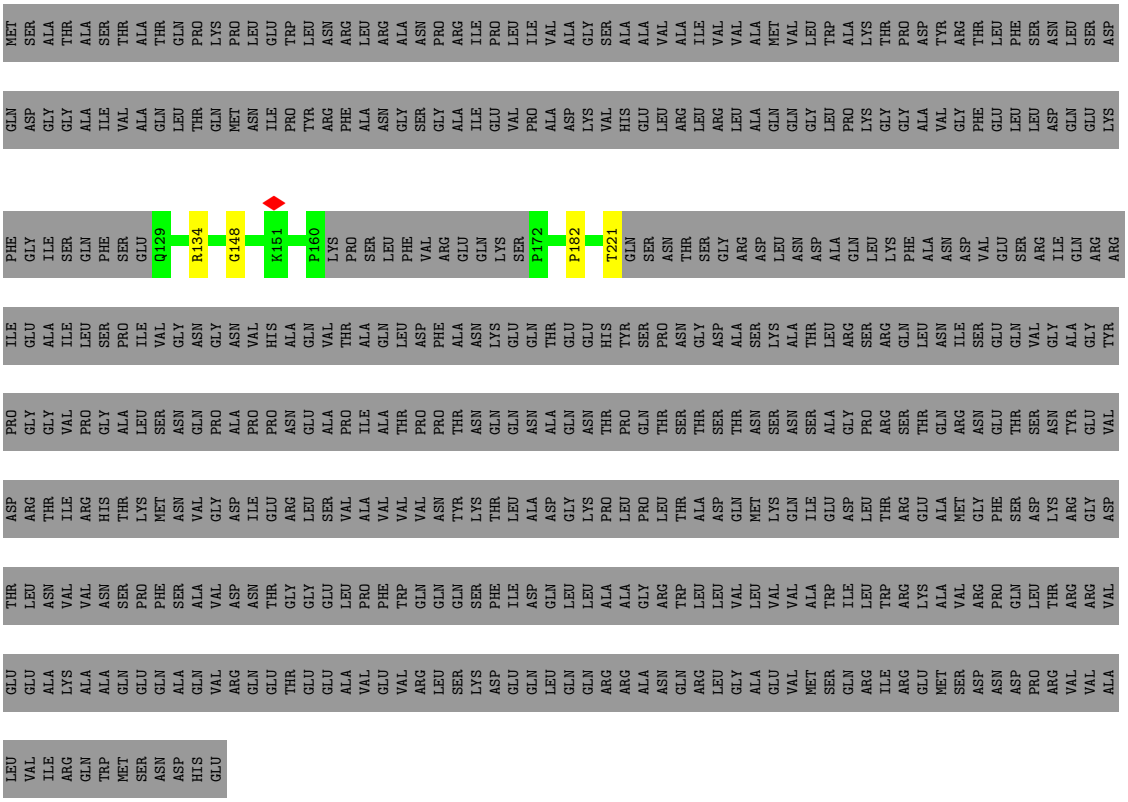
• Molecule 6: Flagellar M-ring protein

Chain WL:



• Molecule 6: Flagellar M-ring protein

Chain WM:



• Molecule 6: Flagellar M-ring protein

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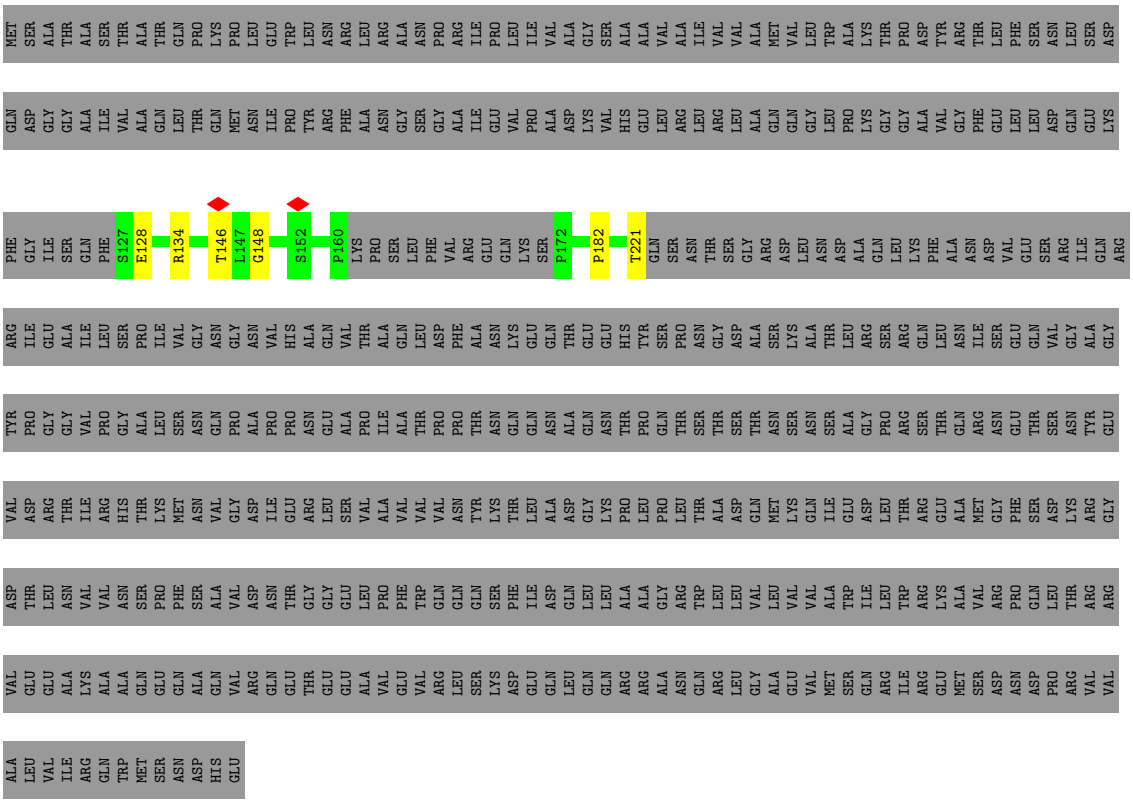
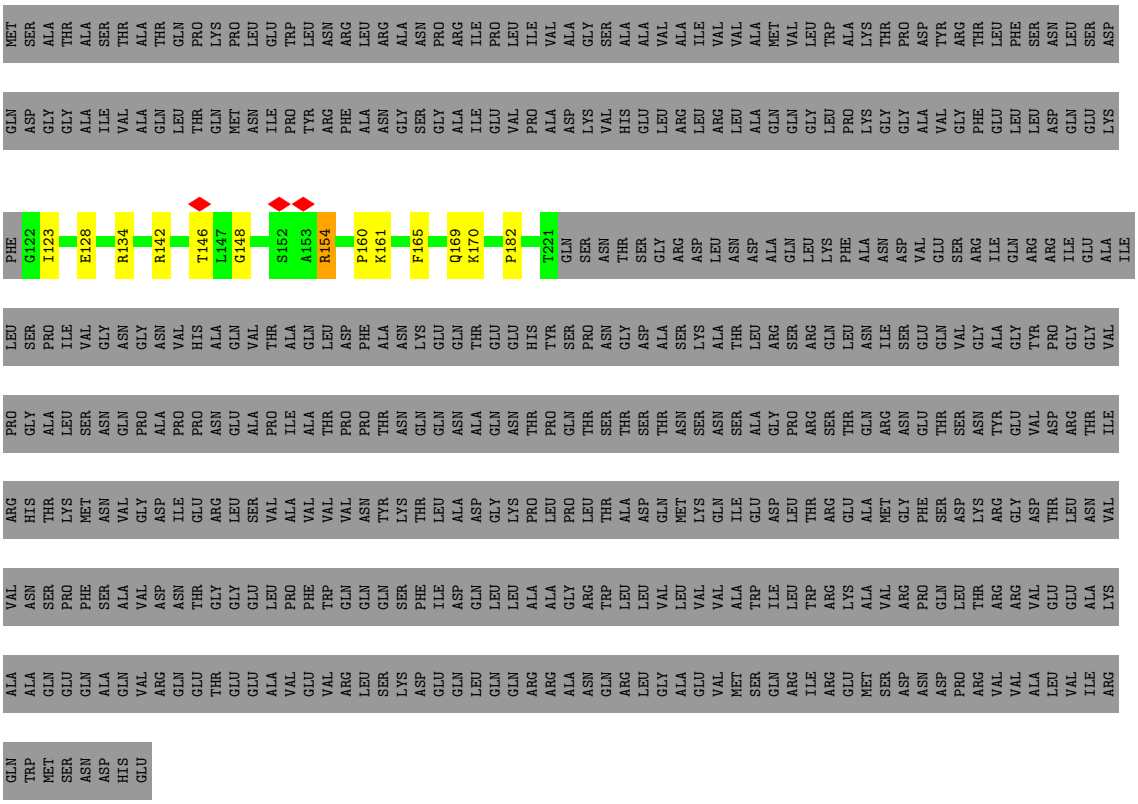


• Molecule 6: Flagellar M-ring protein

Chain WO:

• Molecule 6: Flagellar M-ring protein

Chain WP:

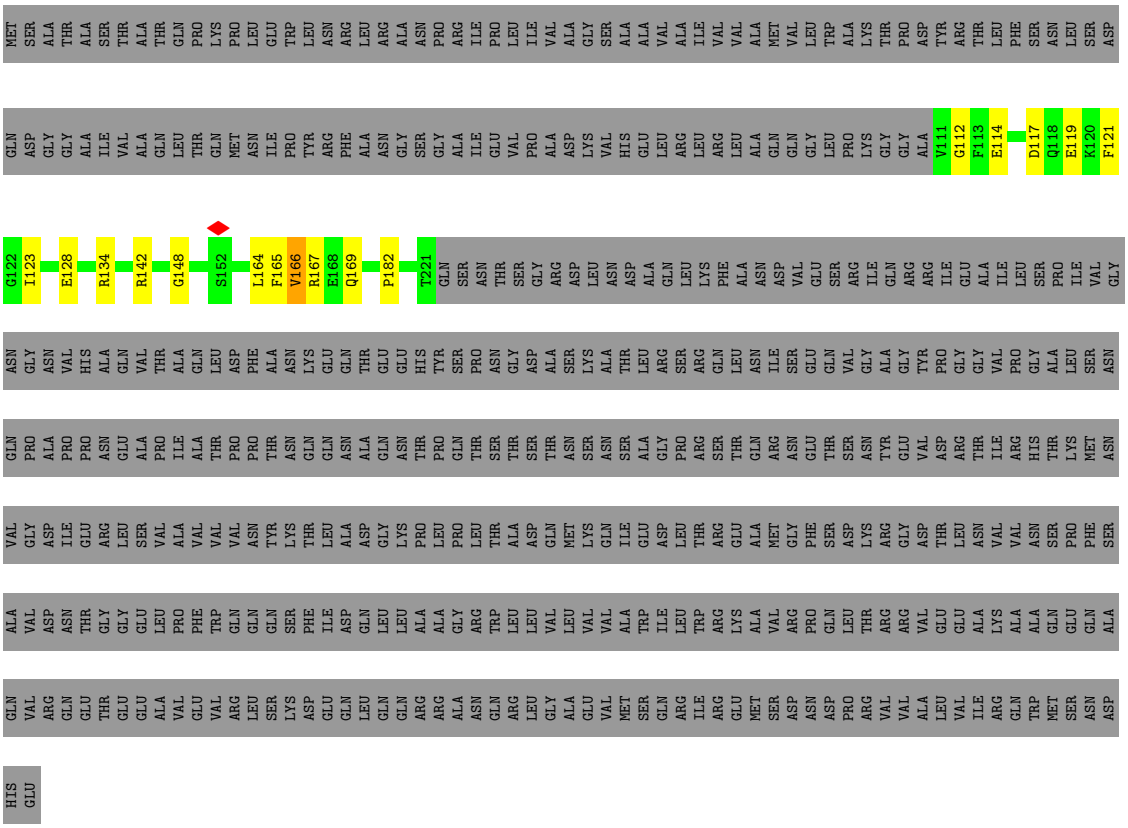


• Molecule 6: Flagellar M-ring protein

Chain WQ:

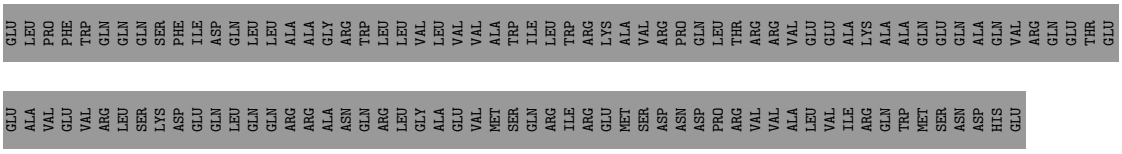
• Molecule 6: Flagellar M-ring protein

Chain WR:



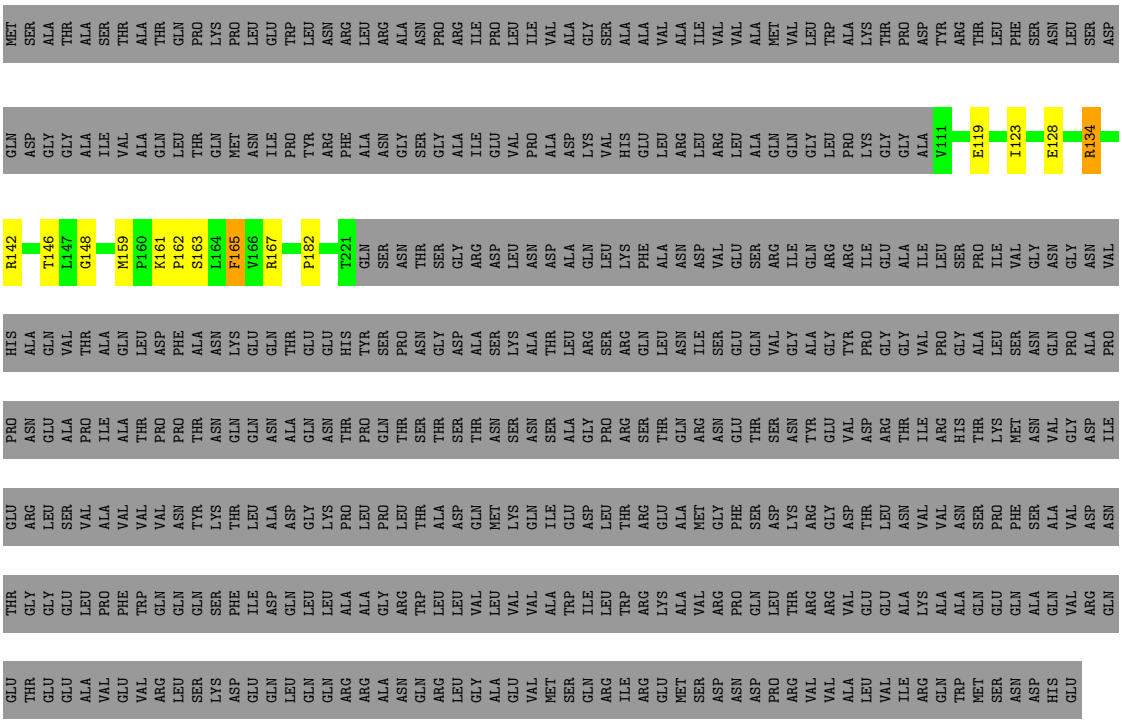
• Molecule 6: Flagellar M-ring protein

Chain WS:



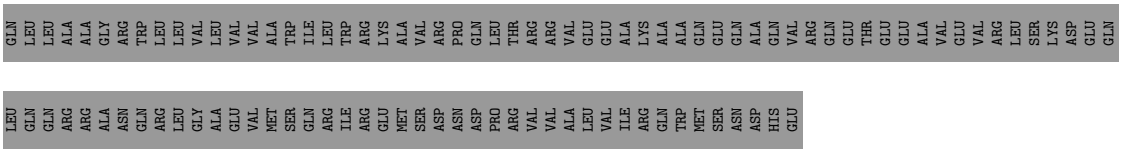
• Molecule 6: Flagellar M-ring protein

Chain WT:



• Molecule 6: Flagellar M-ring protein

Chain WU:

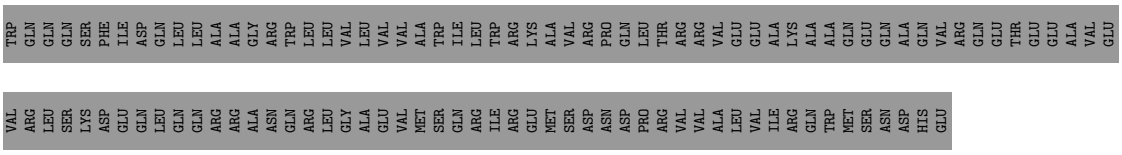


• Molecule 6: Flagellar M-ring protein

Chain WV: 17% 80%

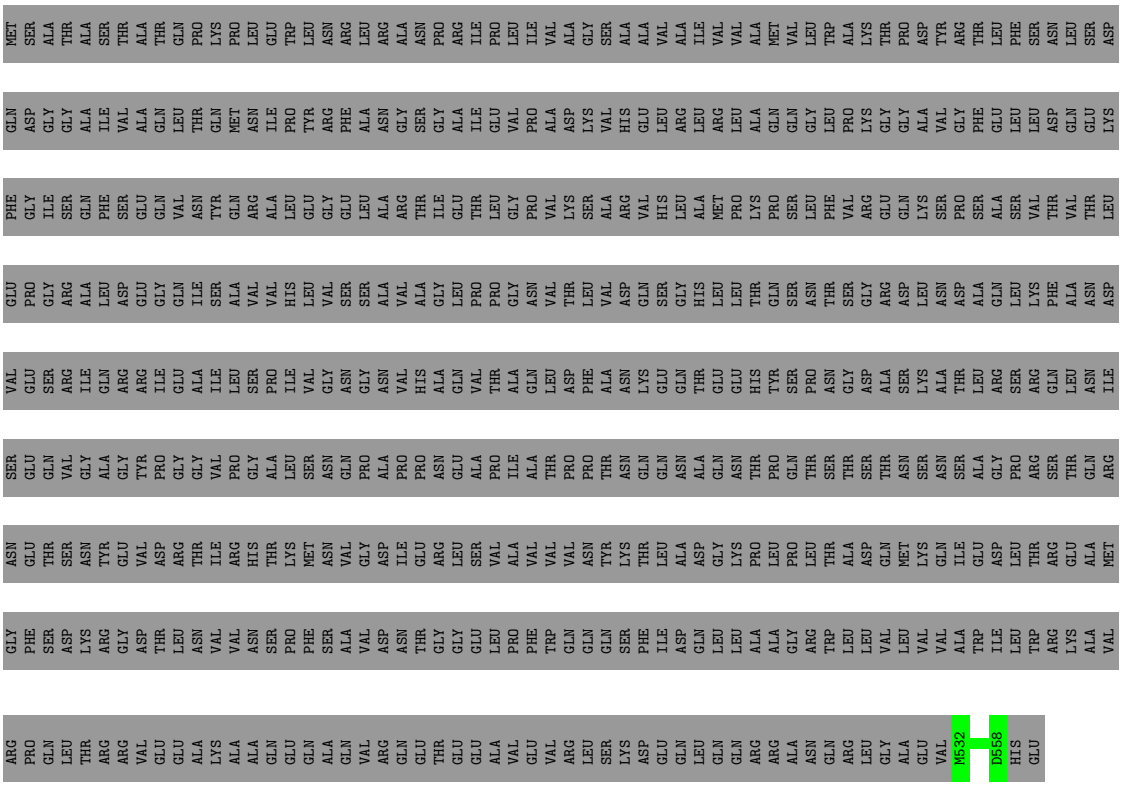
• Molecule 6: Flagellar M-ring protein

Chain WW: 18% 80%



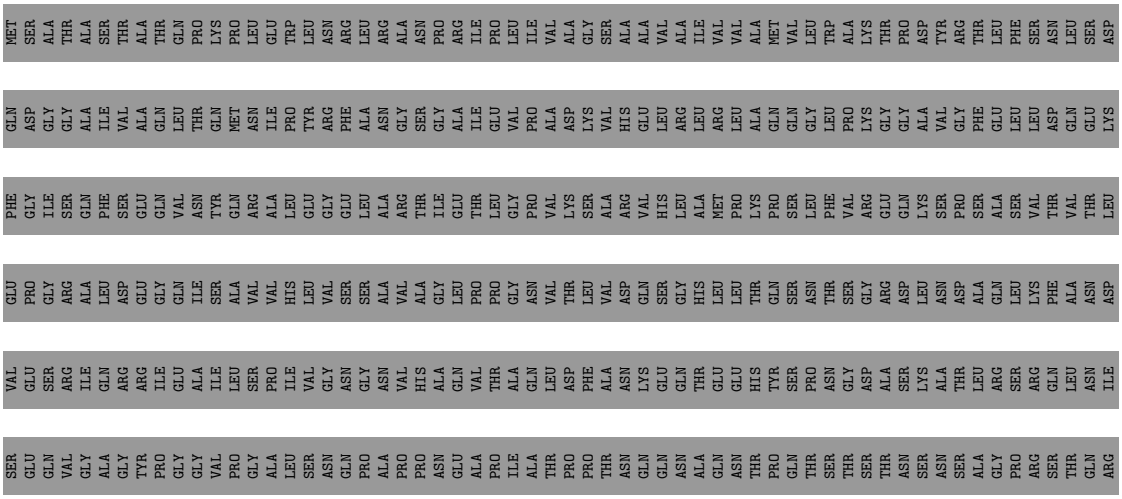
• Molecule 6: Flagellar M-ring protein

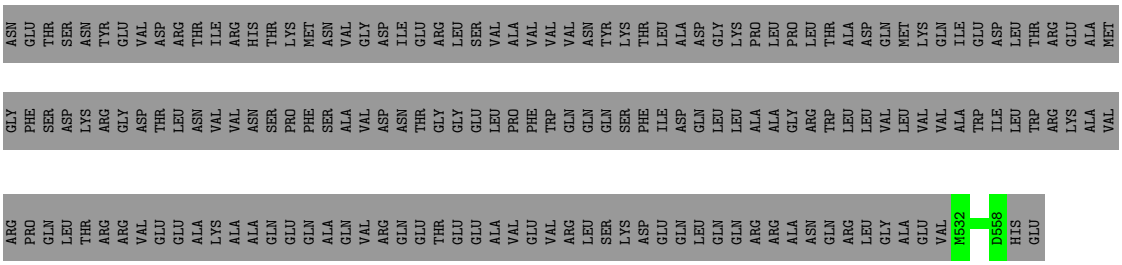
Chain DE: 5% 95%



• Molecule 6: Flagellar M-ring protein

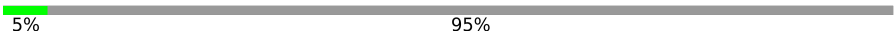
Chain DL: 5% 95%

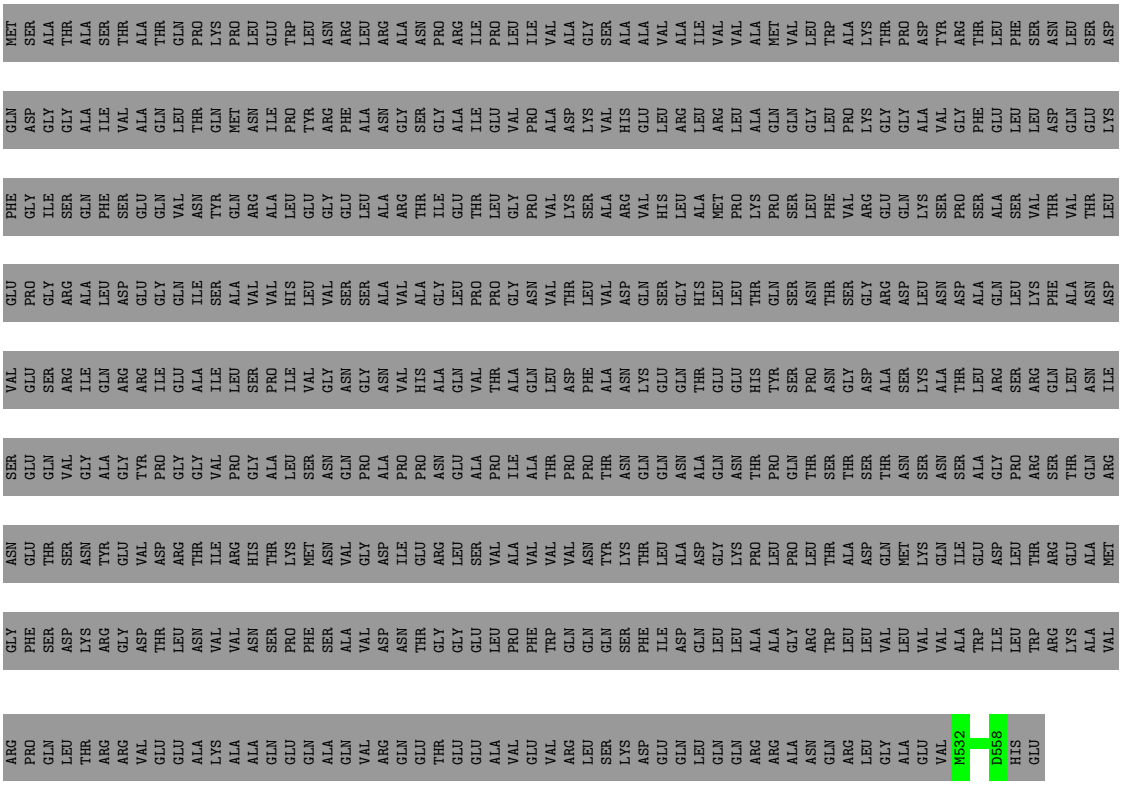




• Molecule 6: Flagellar M-ring protein

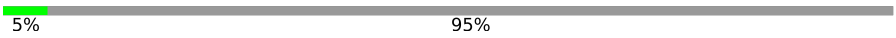
Chain B0:

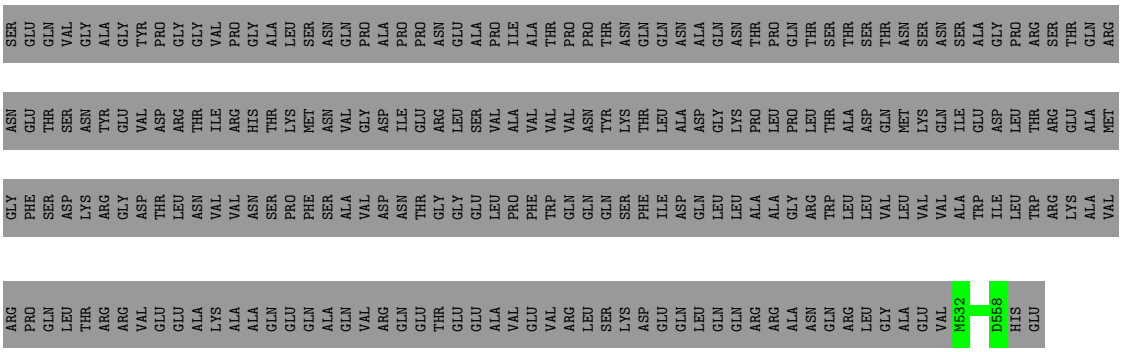




• Molecule 6: Flagellar M-ring protein

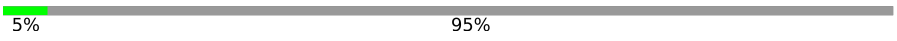
Chain B3:

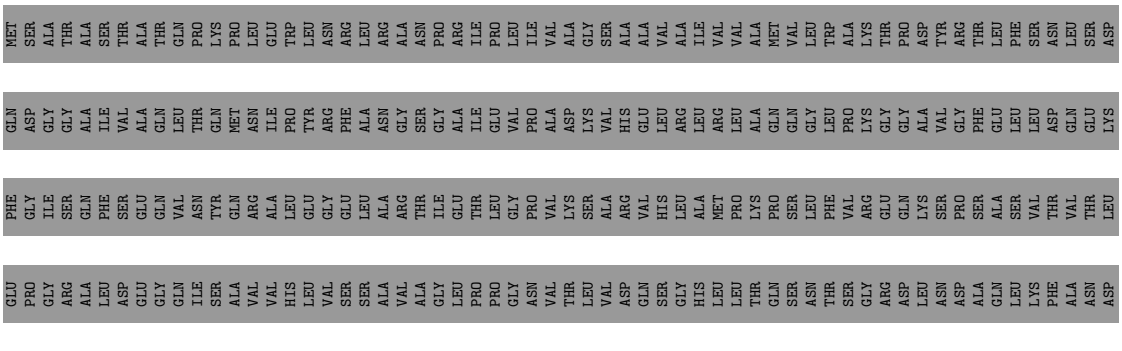




• Molecule 6: Flagellar M-ring protein

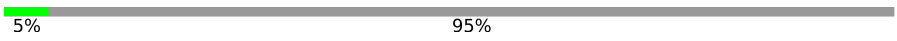
Chain EH:

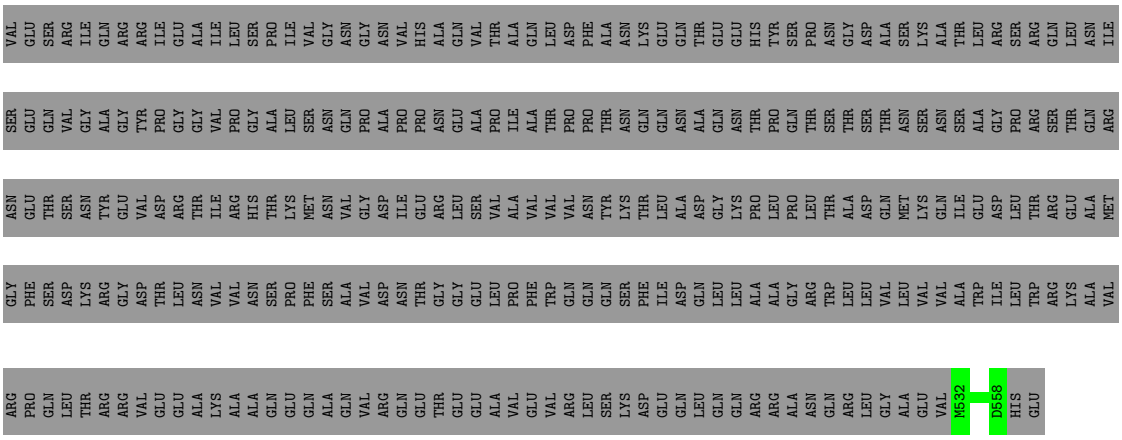




• Molecule 6: Flagellar M-ring protein

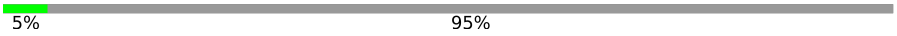
Chain EO:





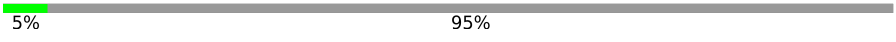
• Molecule 6: Flagellar M-ring protein

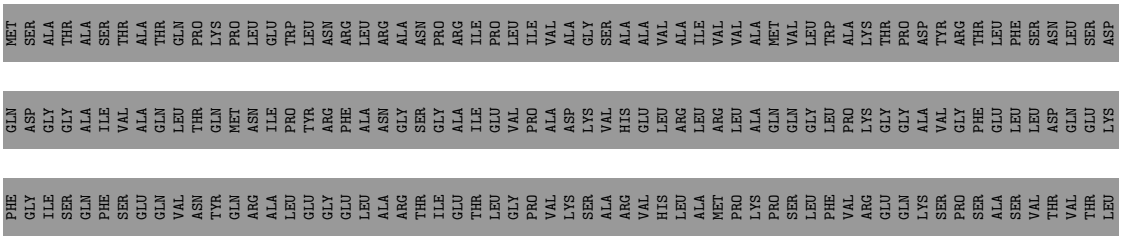
Chain EV:

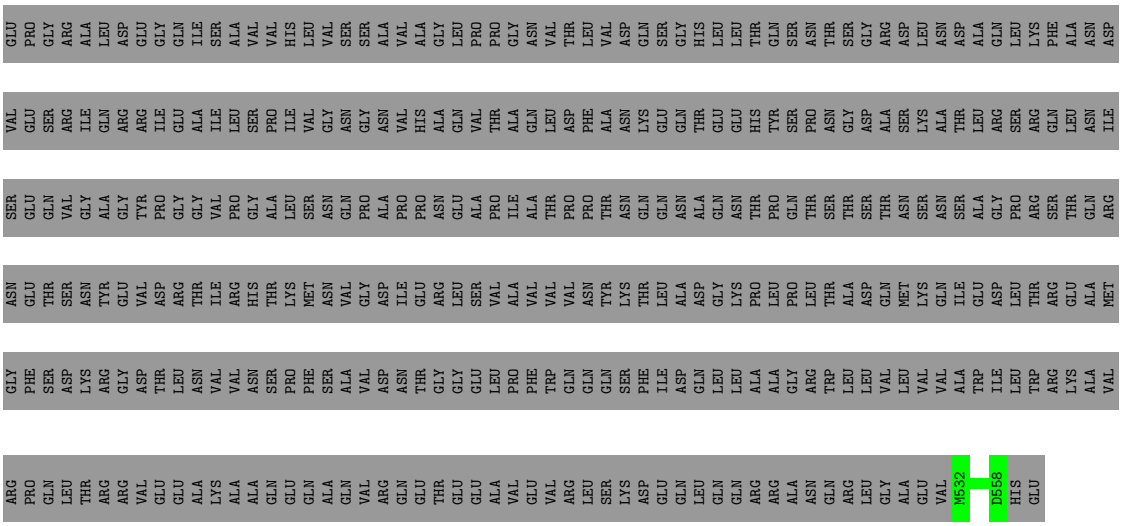


• Molecule 6: Flagellar M-ring protein

Chain Ba:

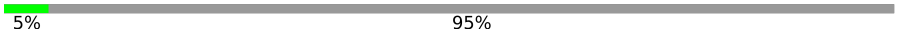


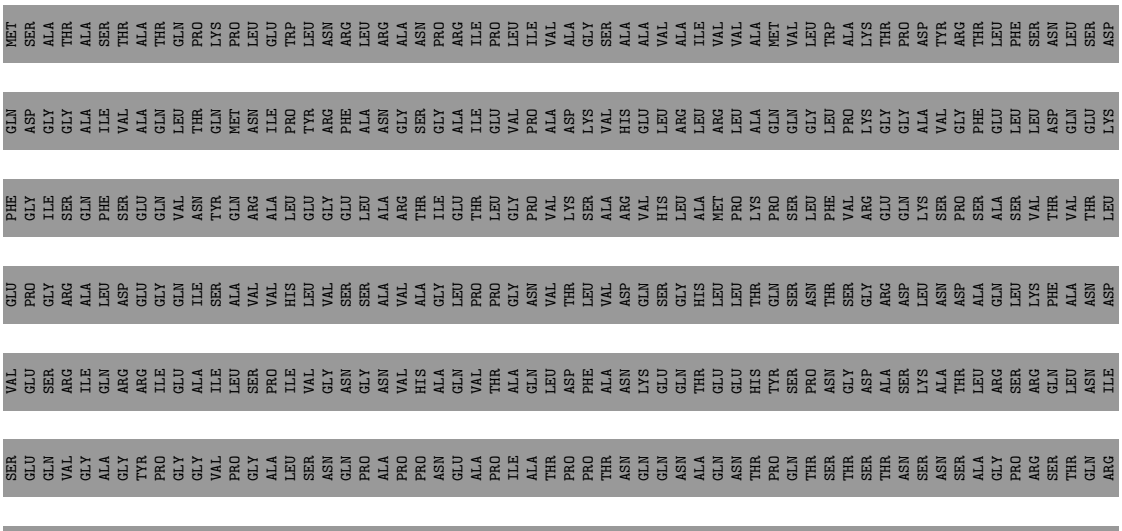




• Molecule 6: Flagellar M-ring protein

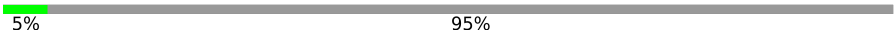
Chain Bh:

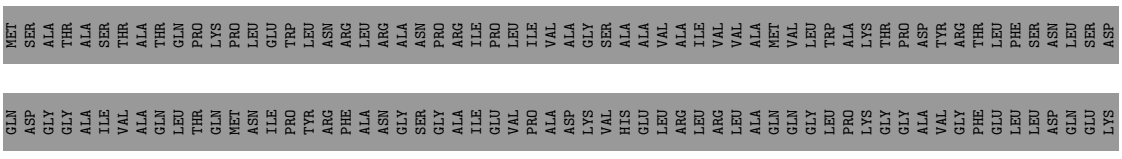




• Molecule 6: Flagellar M-ring protein

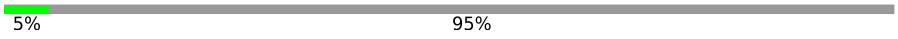
Chain Bo:

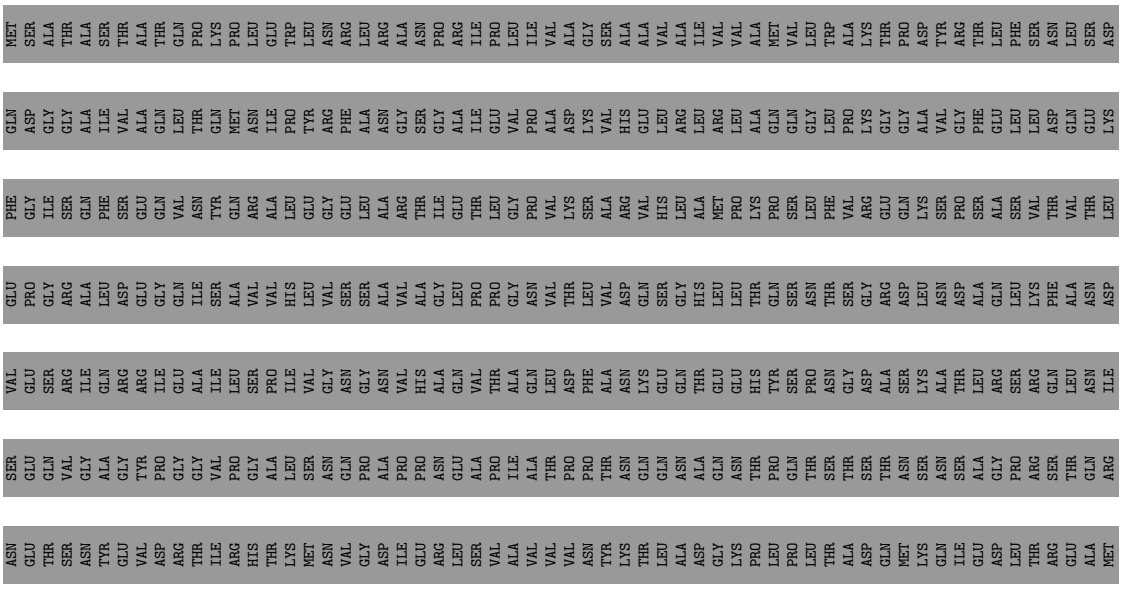




• Molecule 6: Flagellar M-ring protein

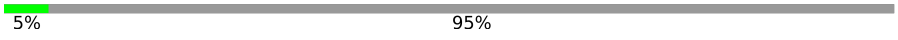
Chain Bv:

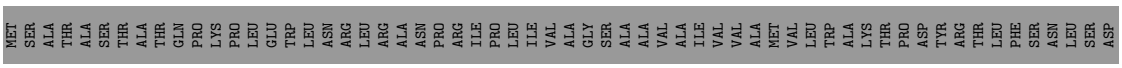


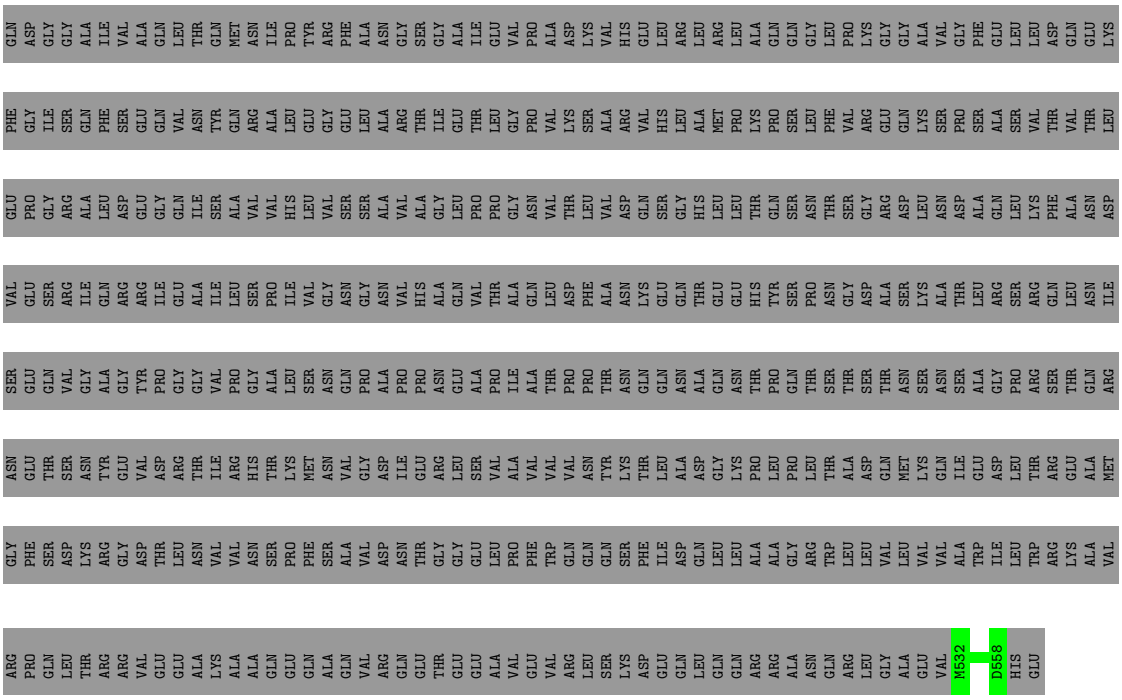


• Molecule 6: Flagellar M-ring protein

Chain Ea:

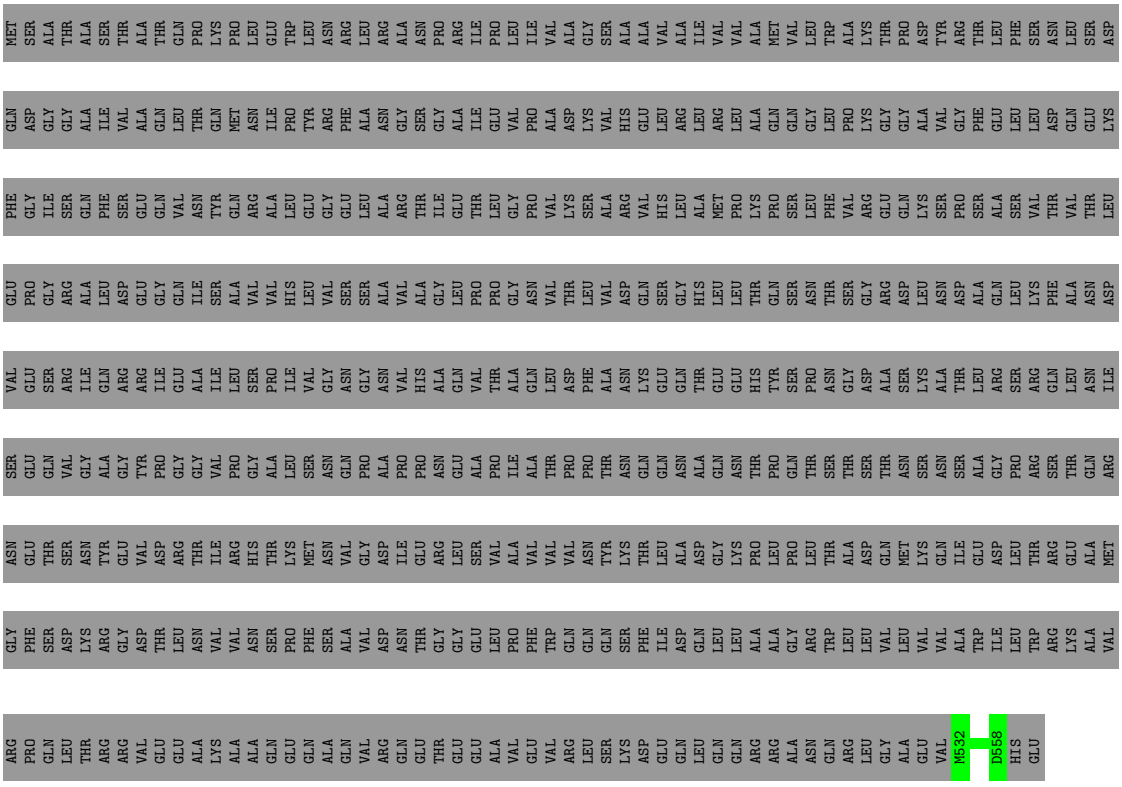






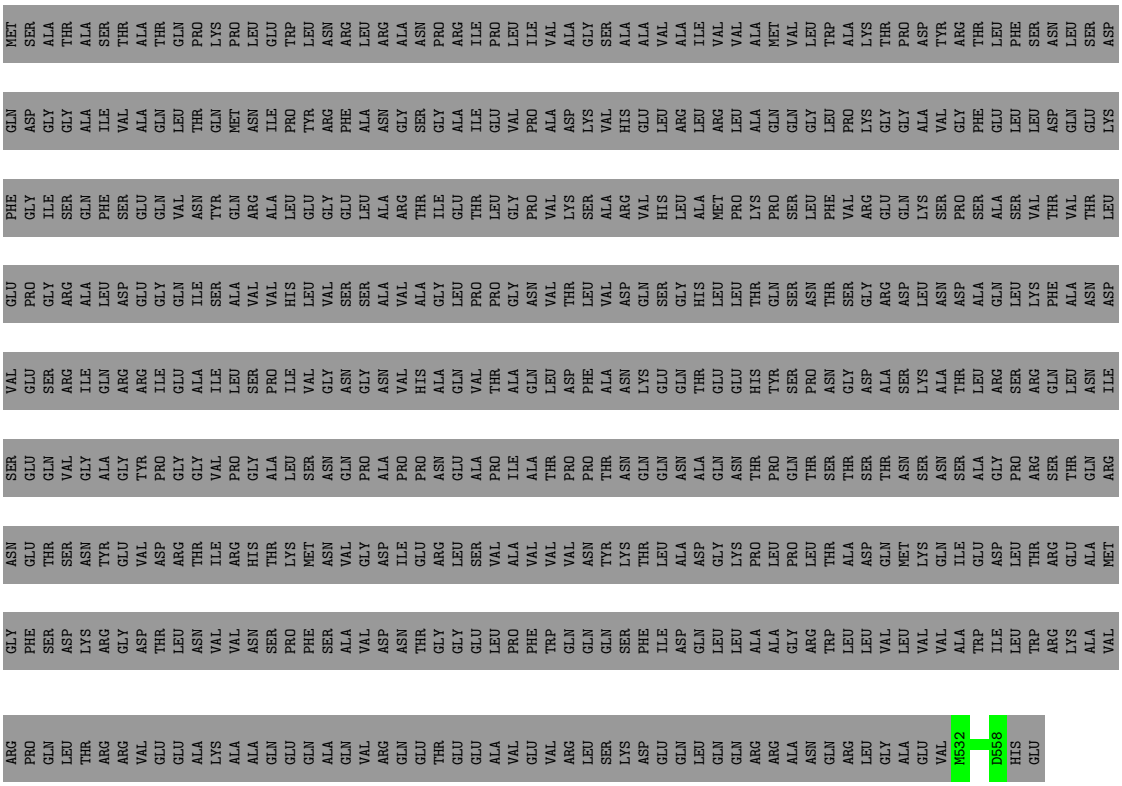
• Molecule 6: Flagellar M-ring protein

Chain CG: 5% 95%



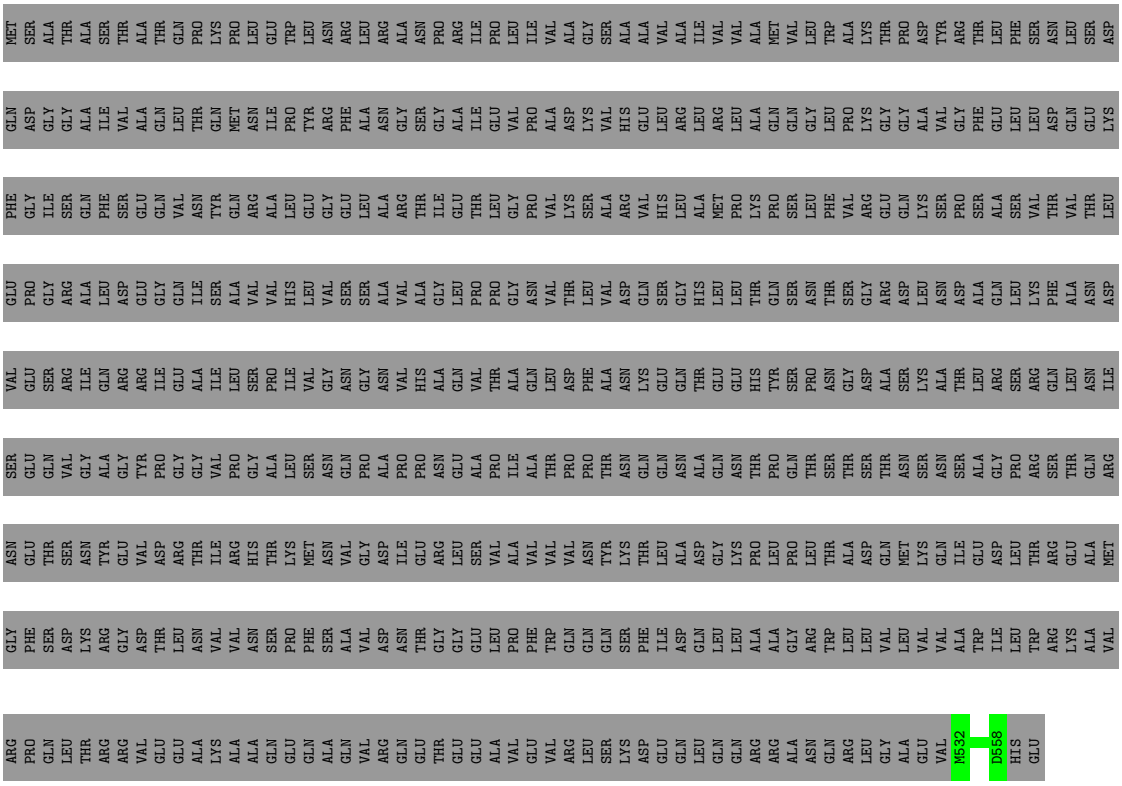
• Molecule 6: Flagellar M-ring protein

Chain CN: 5% 95%



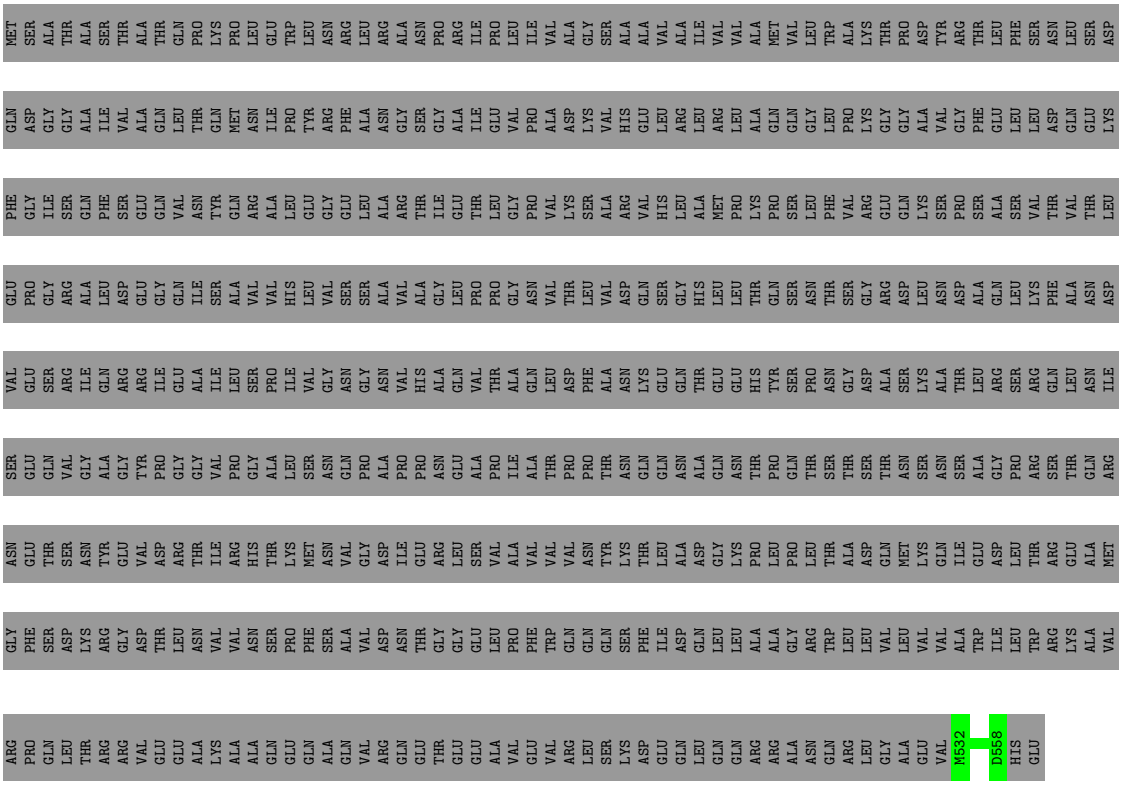
• Molecule 6: Flagellar M-ring protein

Chain CU: 5% 95%



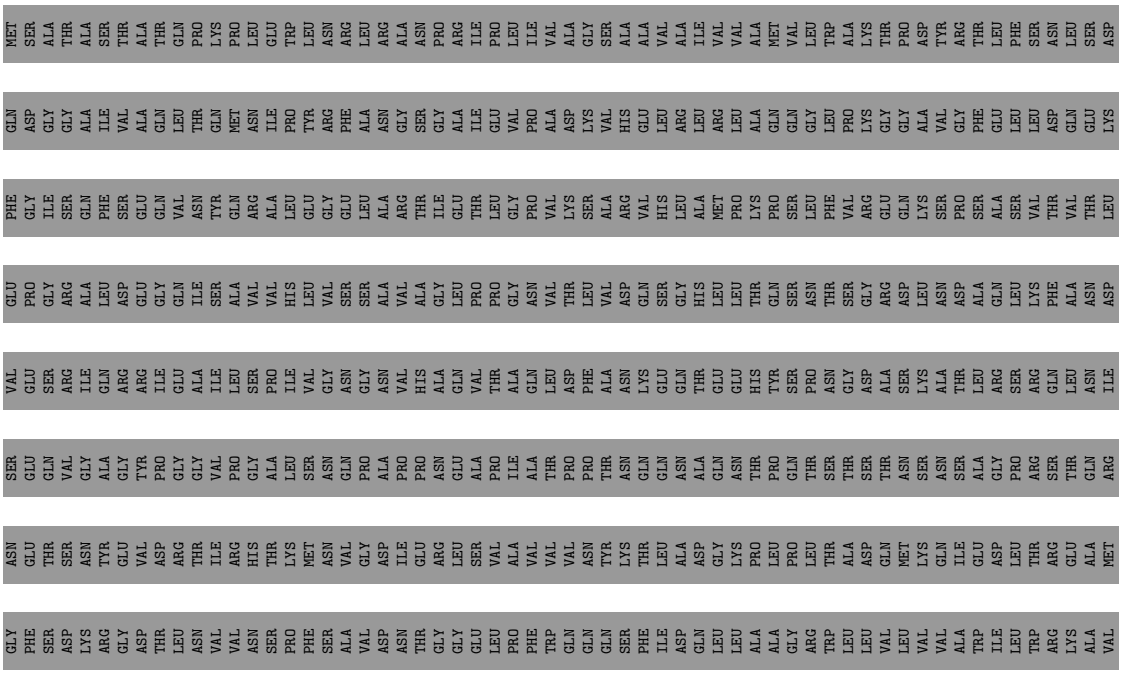
• Molecule 6: Flagellar M-ring protein

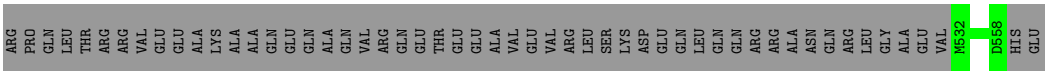
Chain Cb: 5% 95%



• Molecule 6: Flagellar M-ring protein

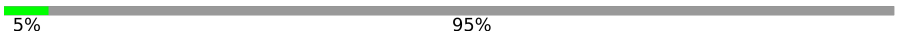
Chain Ci: 5% 95%

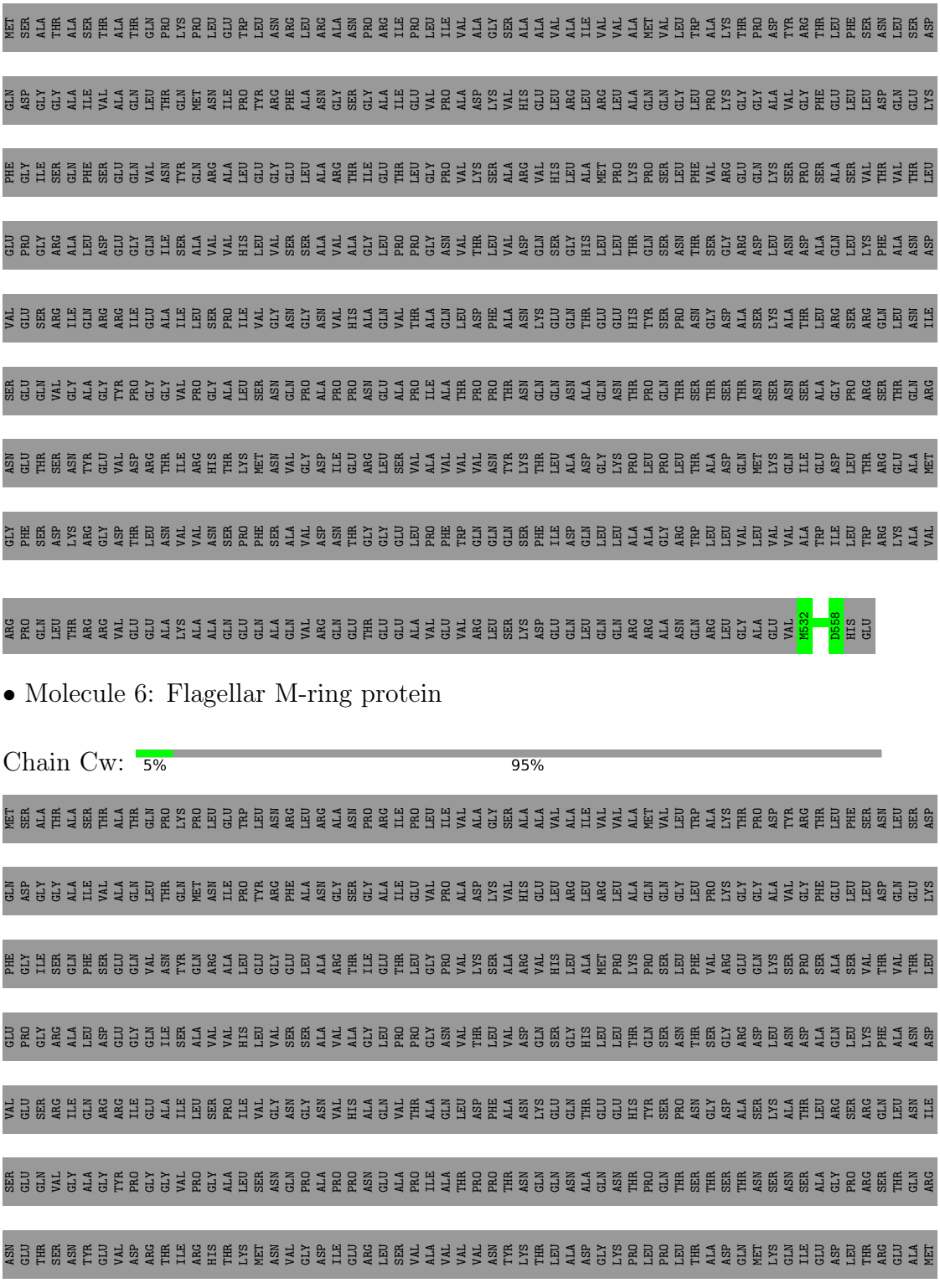




• Molecule 6: Flagellar M-ring protein

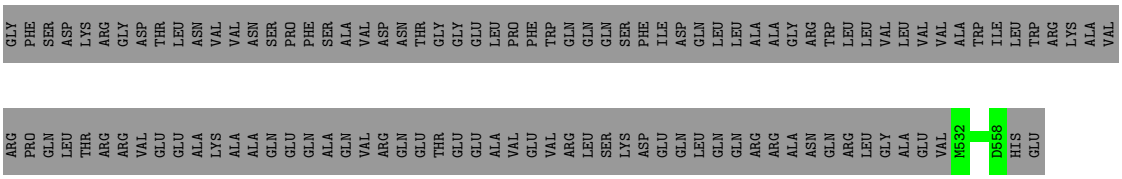
Chain Cp:





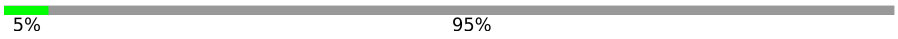
• Molecule 6: Flagellar M-ring protein

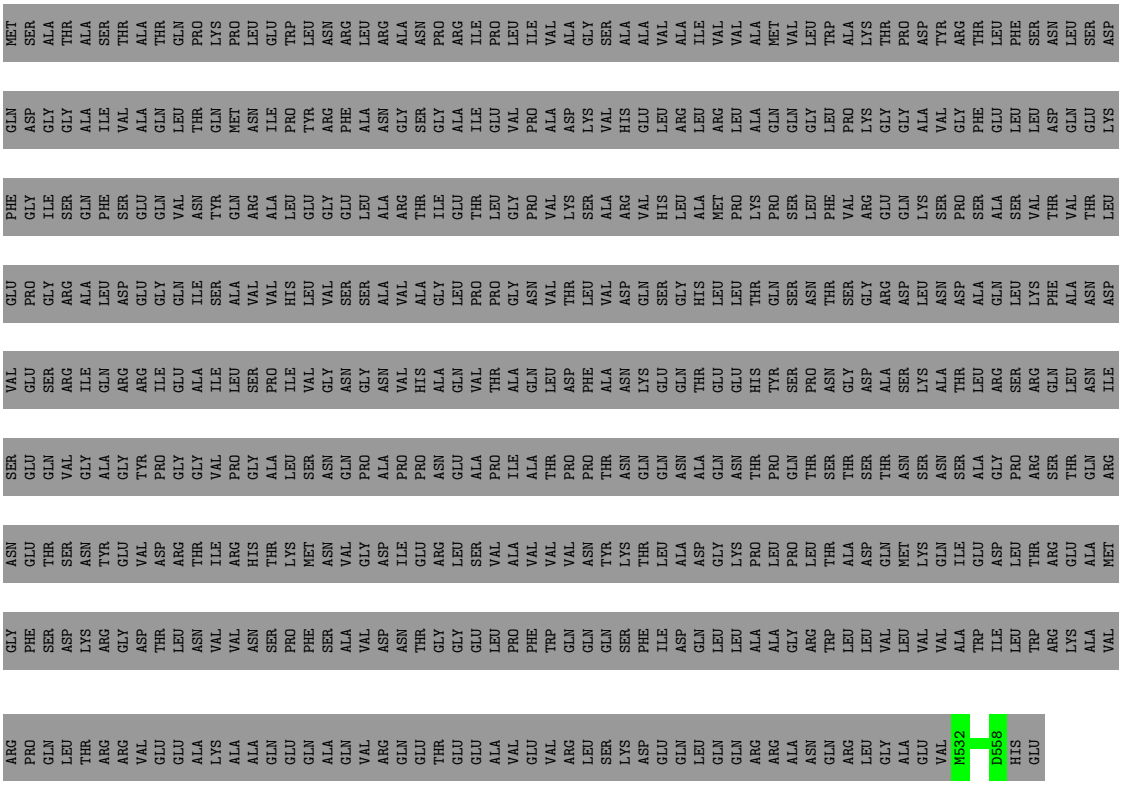
Chain Cw:



• Molecule 6: Flagellar M-ring protein

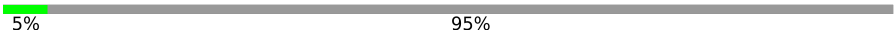
Chain Eb:

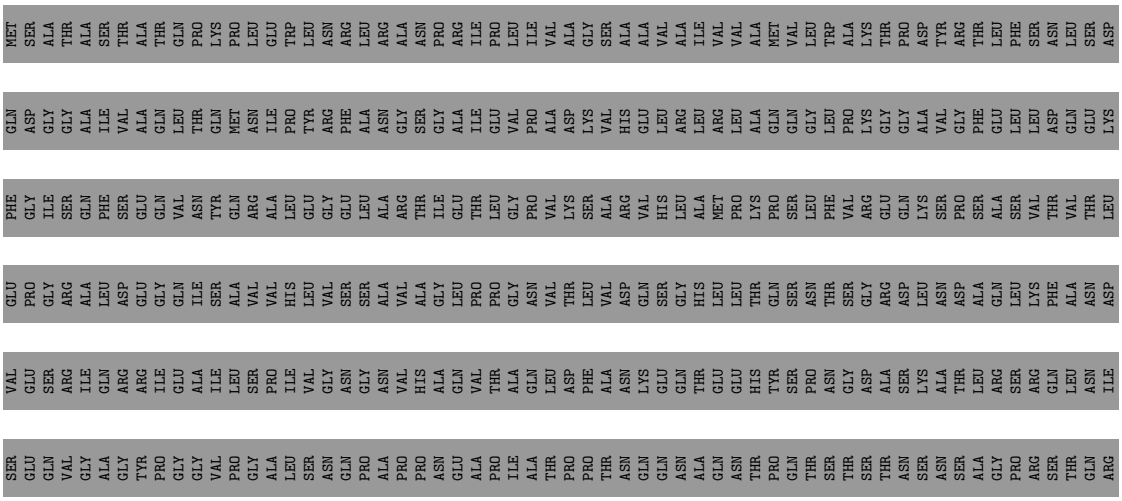


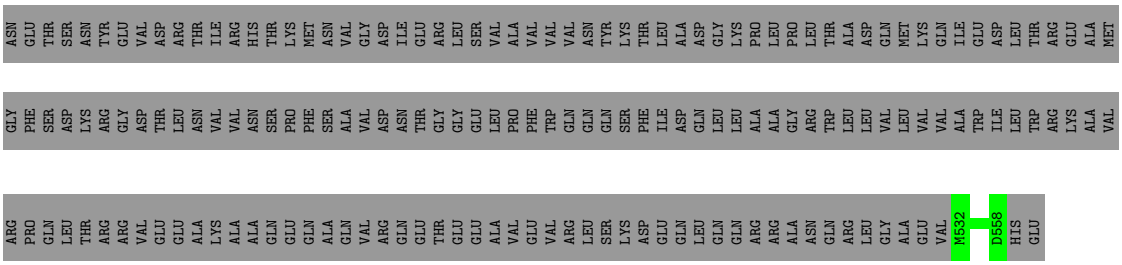


• Molecule 6: Flagellar M-ring protein

Chain Ec:

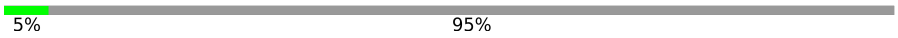


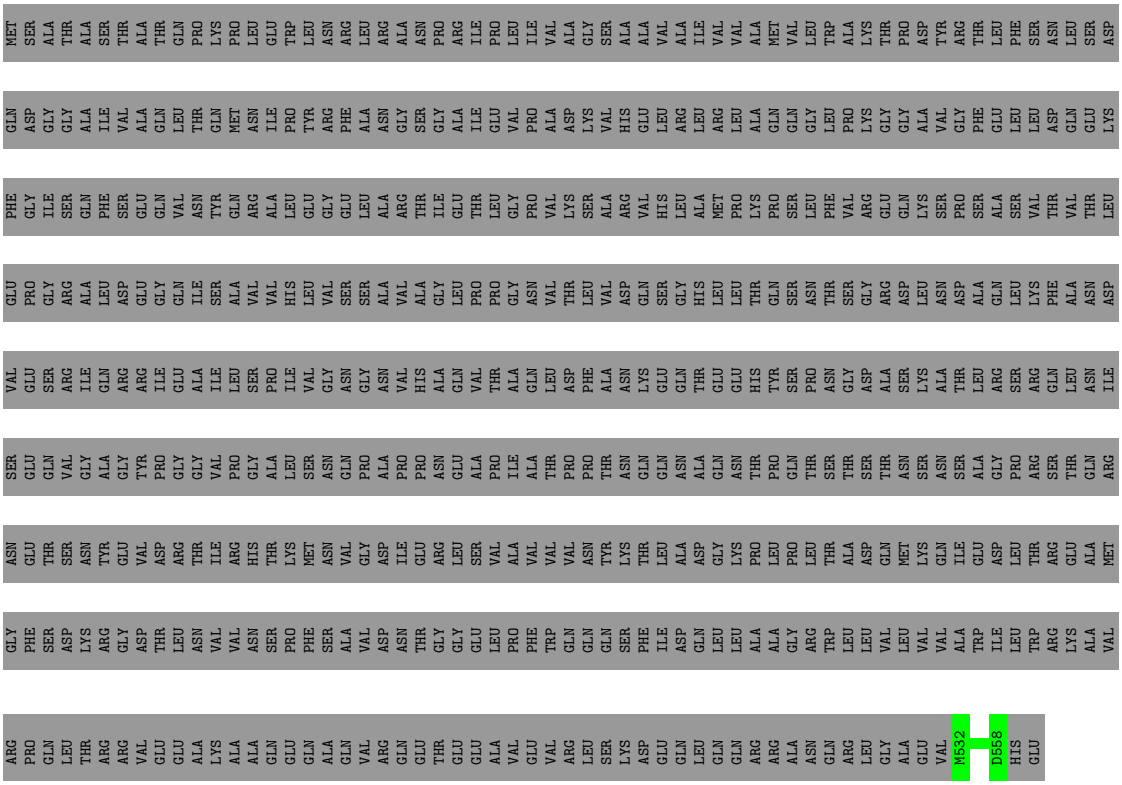




• Molecule 6: Flagellar M-ring protein

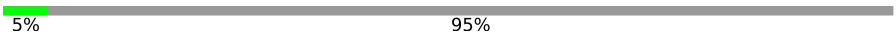
Chain Ed:

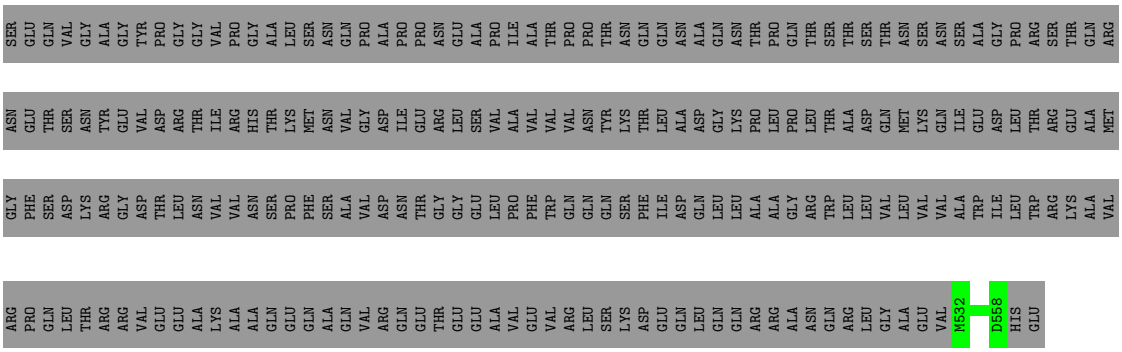




• Molecule 6: Flagellar M-ring protein

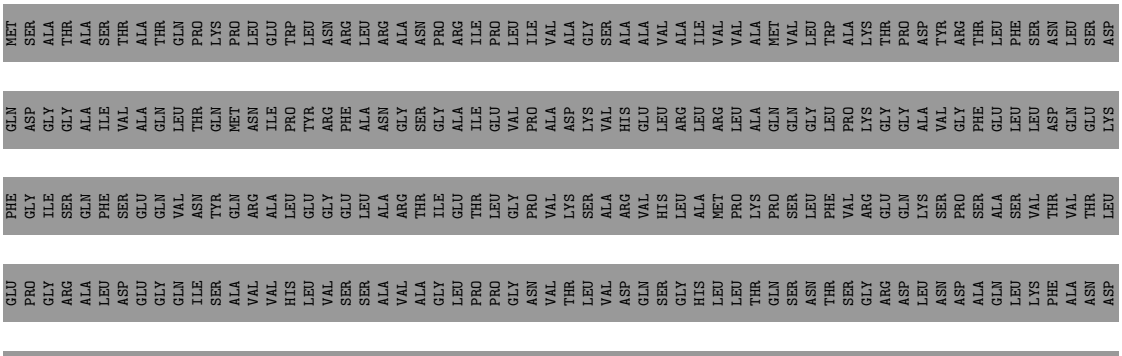
Chain Ee:





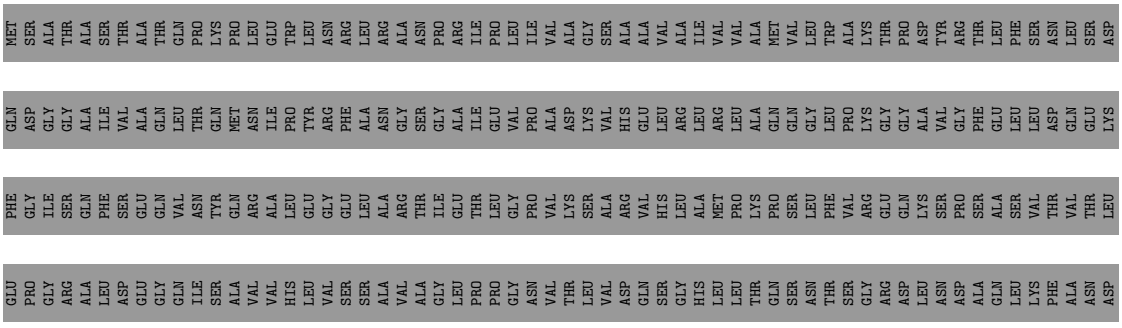
• Molecule 6: Flagellar M-ring protein

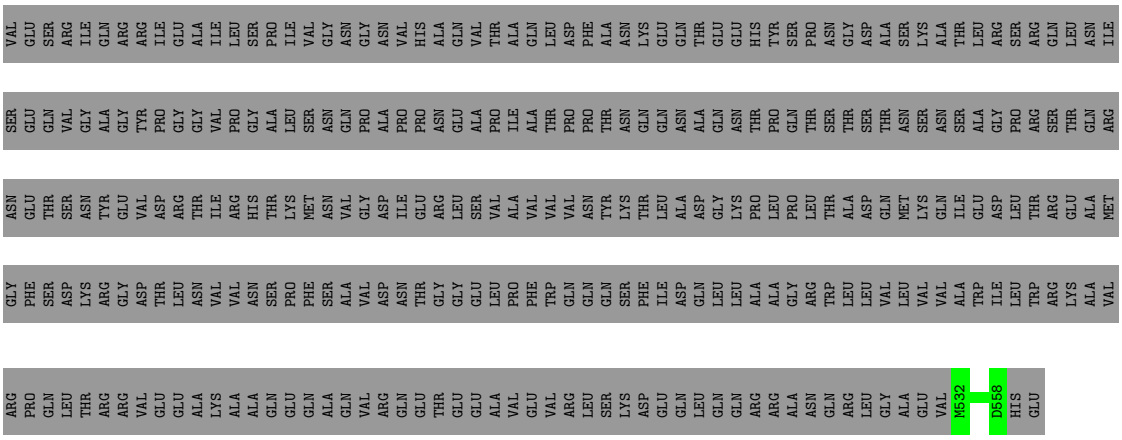
Chain Ef: 5% 95%



• Molecule 6: Flagellar M-ring protein

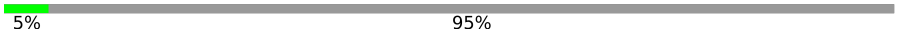
Chain Eg: 5% 95%





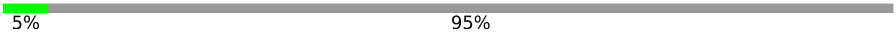
• Molecule 6: Flagellar M-ring protein

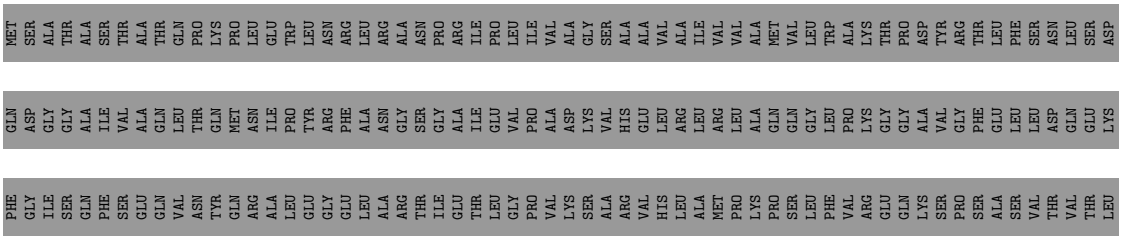
Chain Eh:

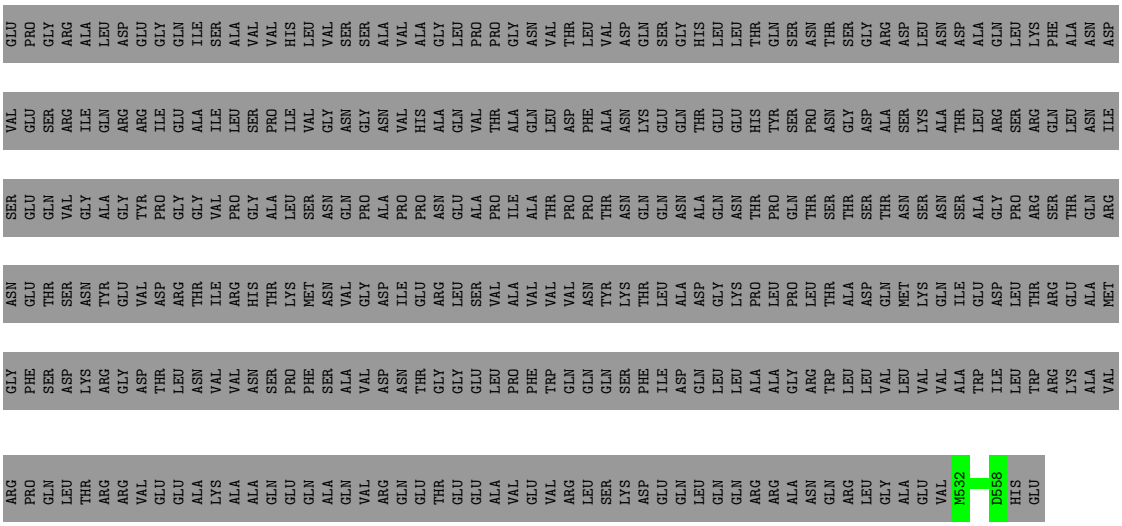


• Molecule 6: Flagellar M-ring protein

Chain Ei:

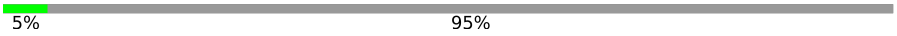


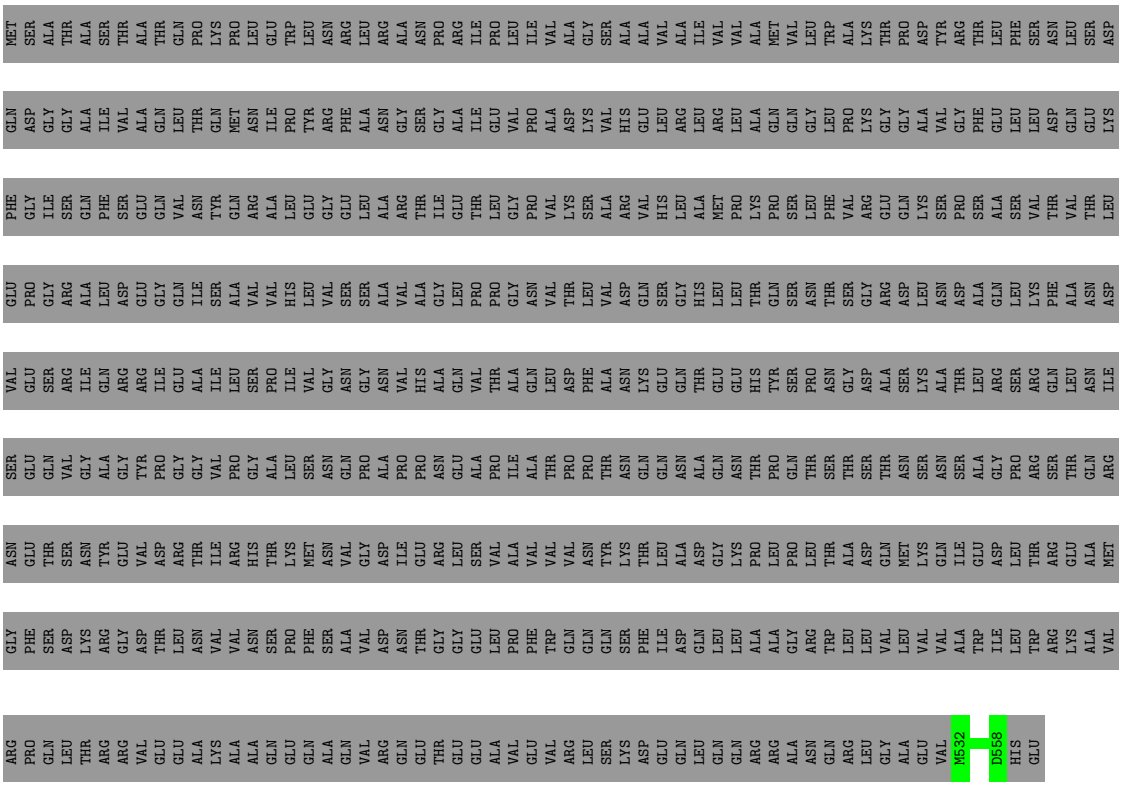




• Molecule 6: Flagellar M-ring protein

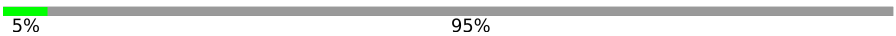
Chain Ej:

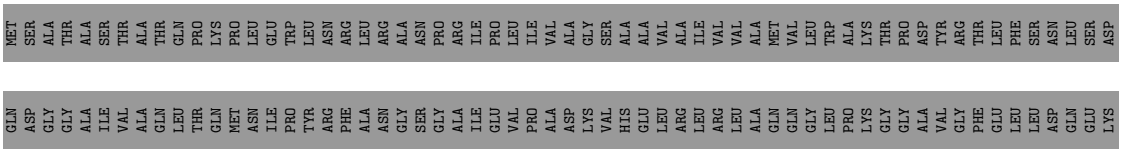




• Molecule 6: Flagellar M-ring protein

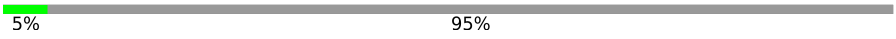
Chain Ek:





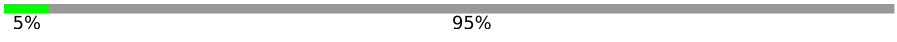
• Molecule 6: Flagellar M-ring protein

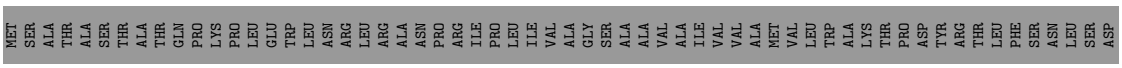
Chain El:

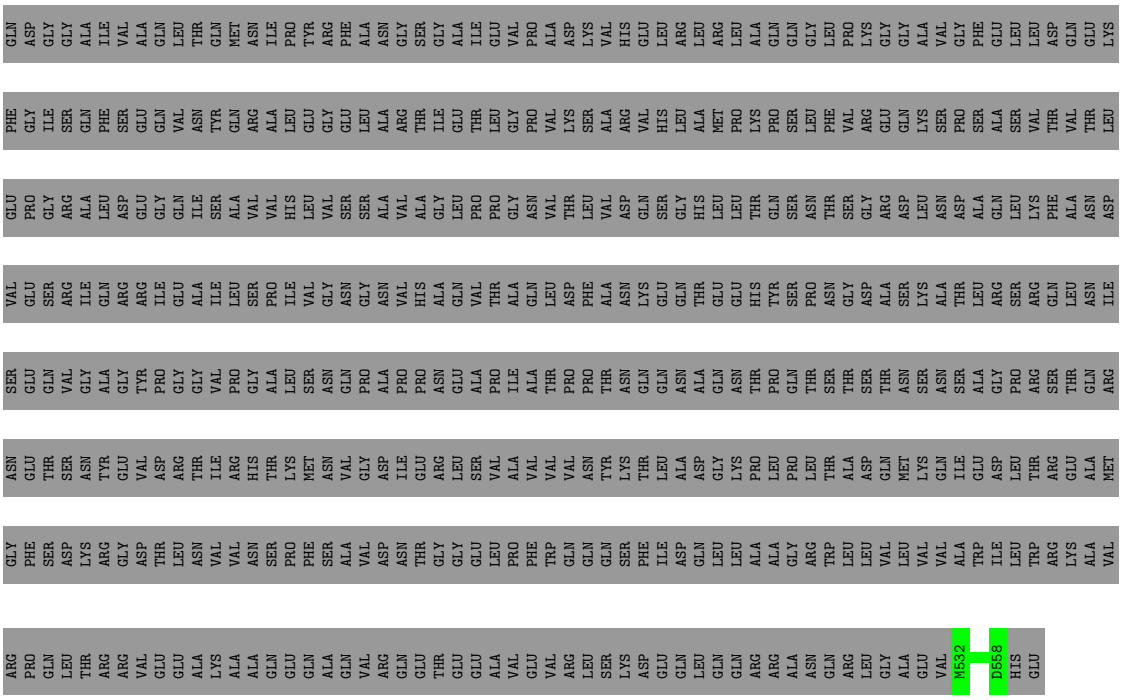


• Molecule 6: Flagellar M-ring protein

Chain Em:

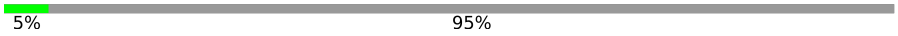


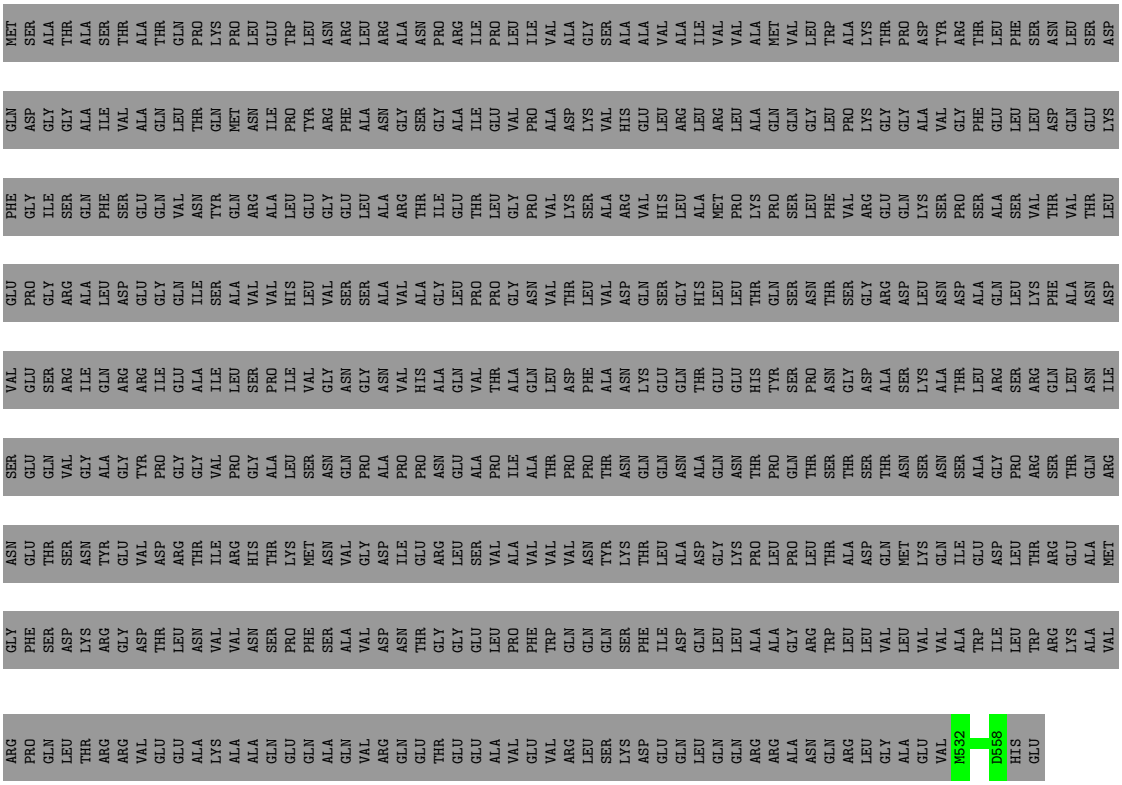




• Molecule 6: Flagellar M-ring protein

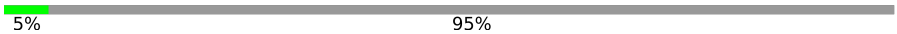
Chain En:

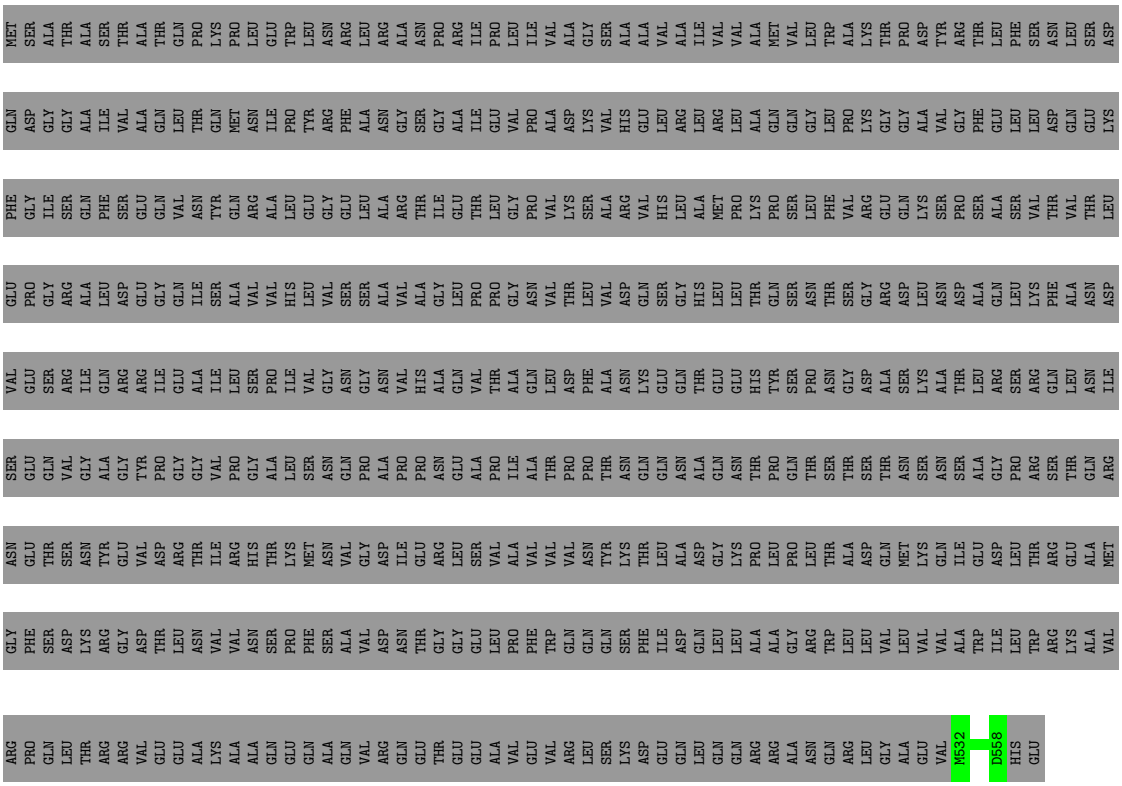




• Molecule 6: Flagellar M-ring protein

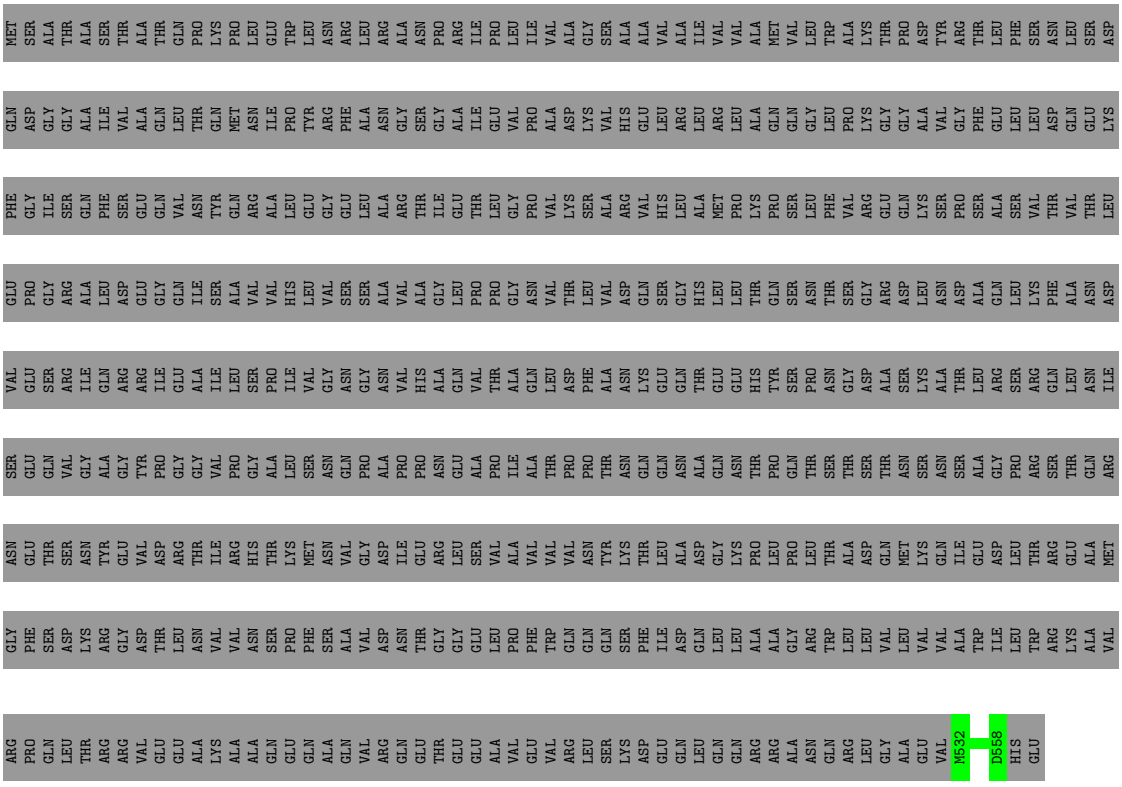
Chain Eo:





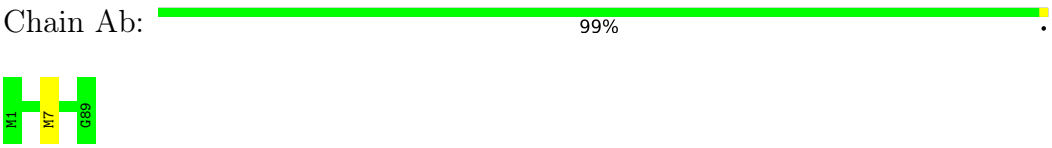
• Molecule 6: Flagellar M-ring protein

Chain Ep: 5% 95%



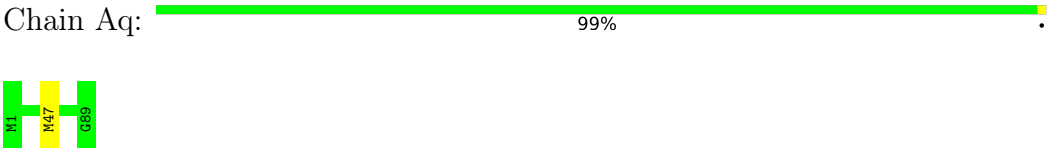
• Molecule 7: Flagellar biosynthetic protein FliQ

Chain Ab:



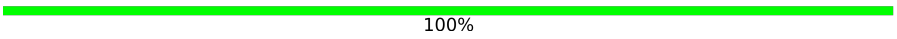
• Molecule 7: Flagellar biosynthetic protein FliQ

Chain Aq:



• Molecule 7: Flagellar biosynthetic protein FliQ

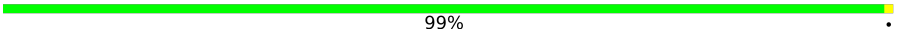
Chain Ar:



There are no outlier residues recorded for this chain.

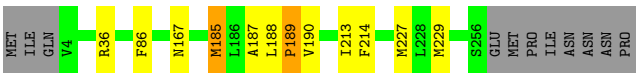
• Molecule 7: Flagellar biosynthetic protein FliQ

Chain As:



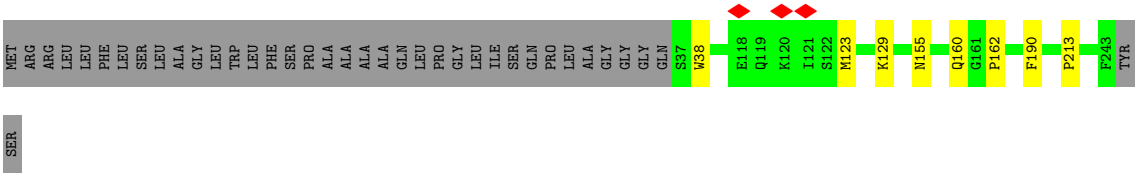
• Molecule 8: Flagellar biosynthetic protein FliR

Chain At:



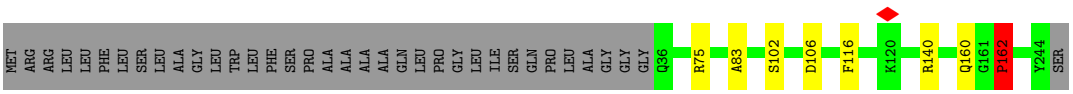
• Molecule 9: Flagellar biosynthetic protein FliP

Chain Au:



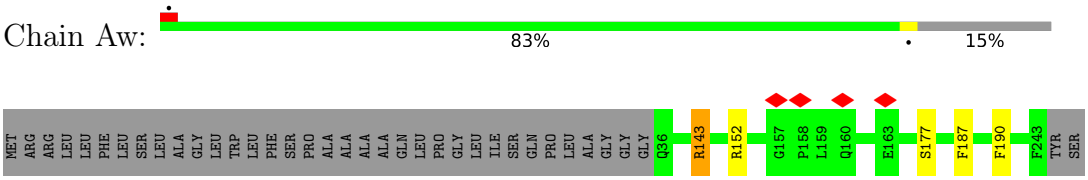
• Molecule 9: Flagellar biosynthetic protein FliP

Chain Av:



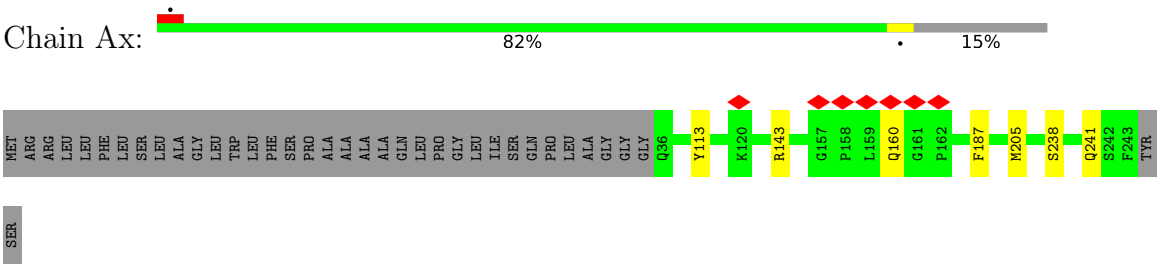
• Molecule 9: Flagellar biosynthetic protein FliP

Chain Aw:



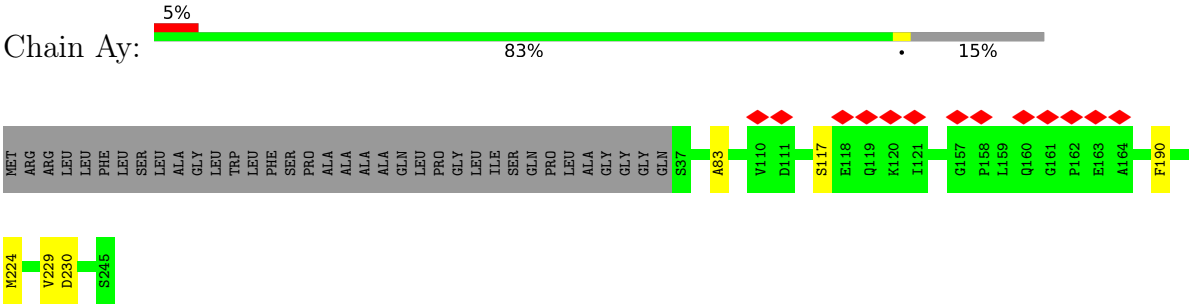
• Molecule 9: Flagellar biosynthetic protein FliP

Chain Ax:



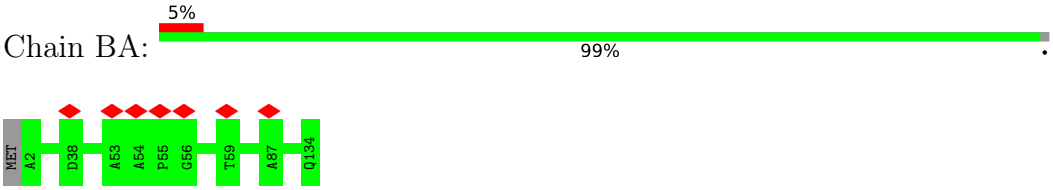
• Molecule 9: Flagellar biosynthetic protein FliP

Chain Ay:



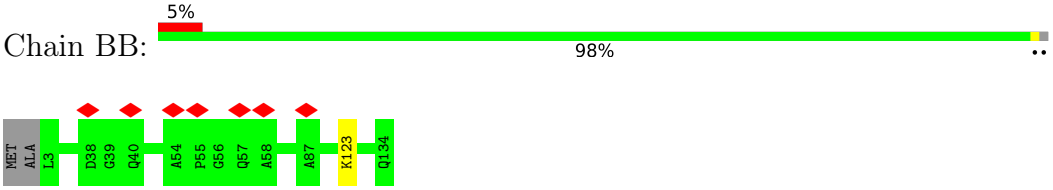
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BA:



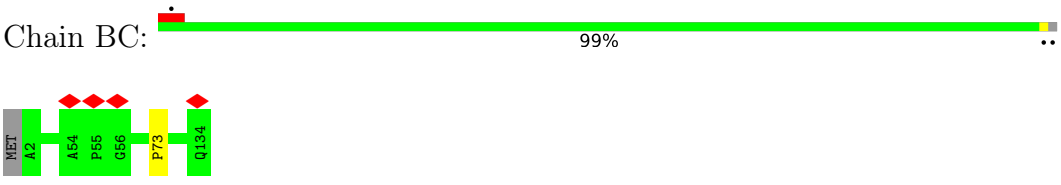
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BB:



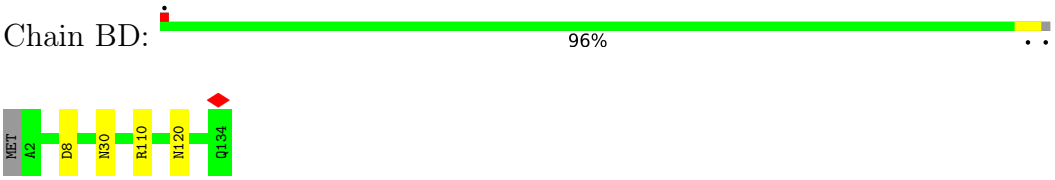
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BC:



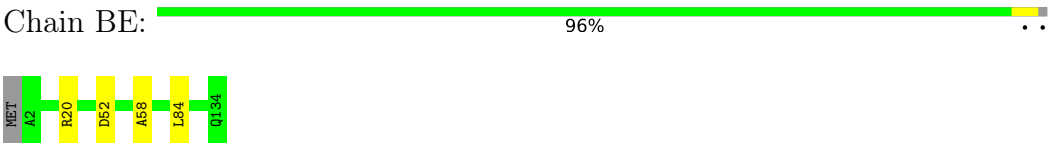
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BD:



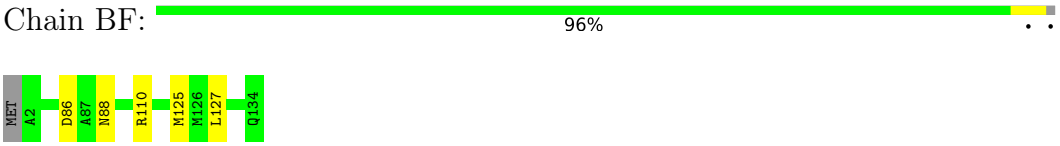
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BE:



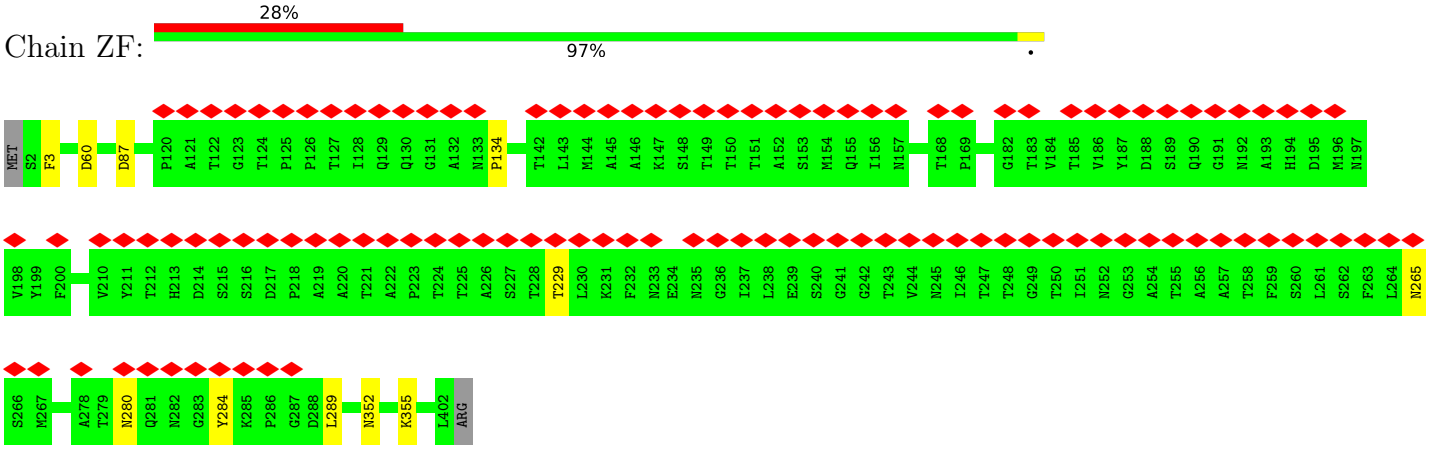
• Molecule 10: Flagellar basal-body rod protein FlgC

Chain BF:



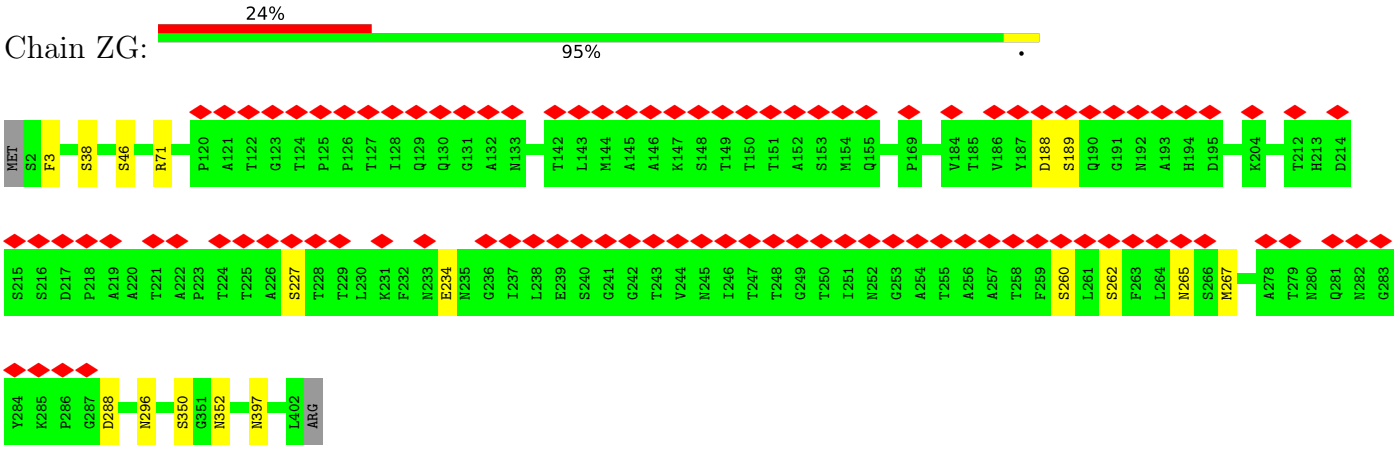
• Molecule 11: Flagellar hook protein FlgE

Chain ZF:



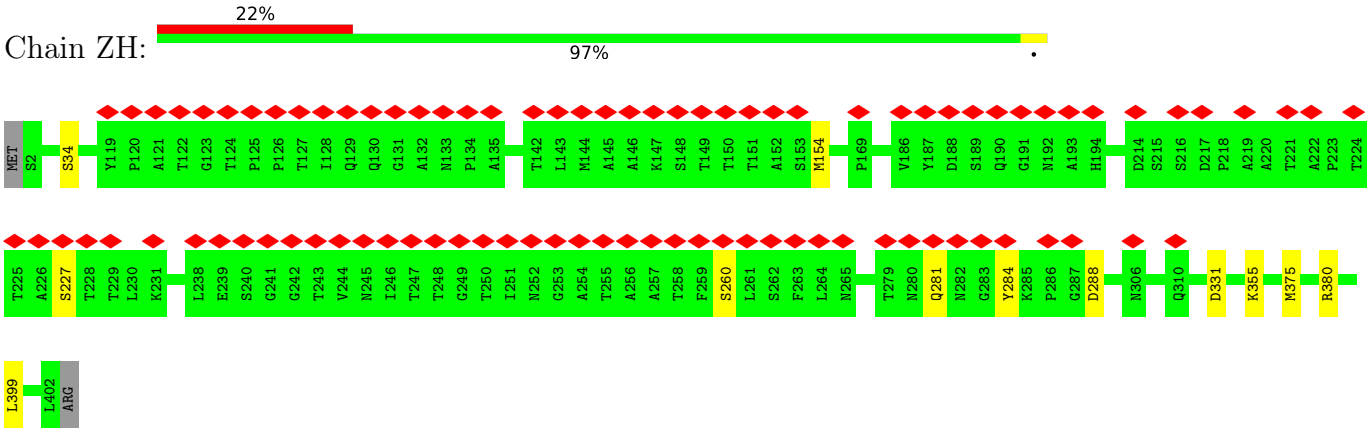
• Molecule 11: Flagellar hook protein FlgE

Chain ZG:



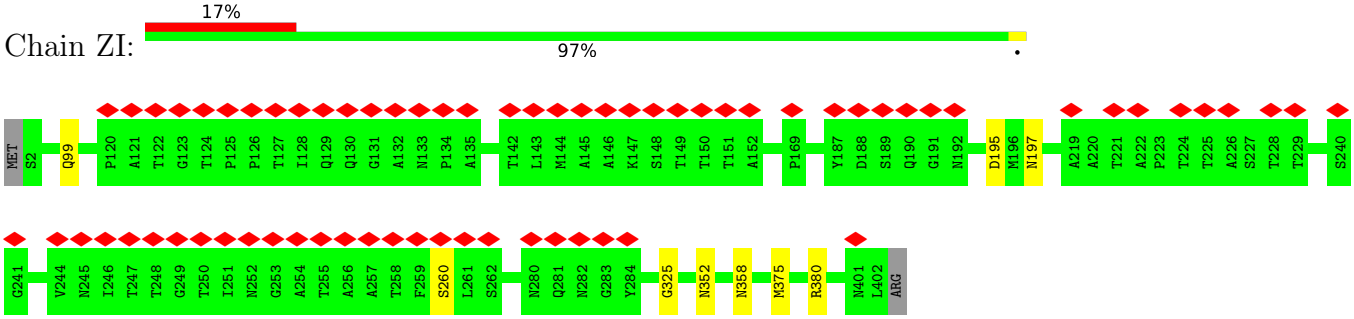
• Molecule 11: Flagellar hook protein FlgE

Chain ZH:



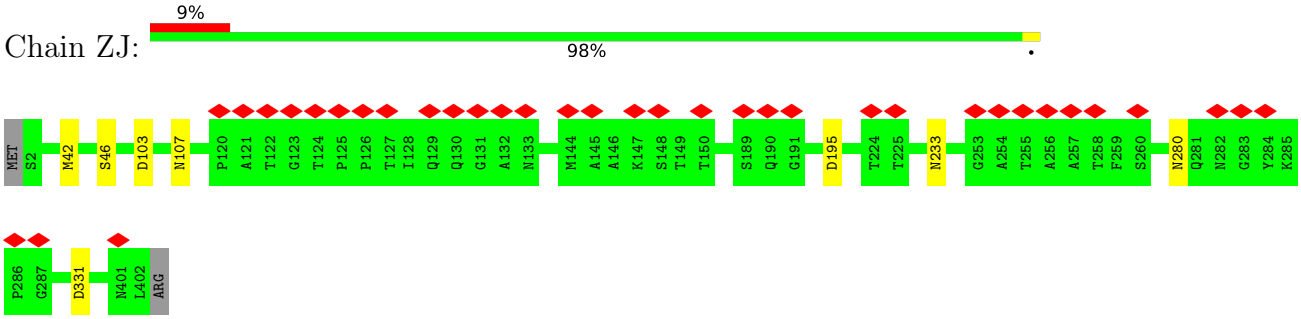
• Molecule 11: Flagellar hook protein FlgE

Chain ZI:



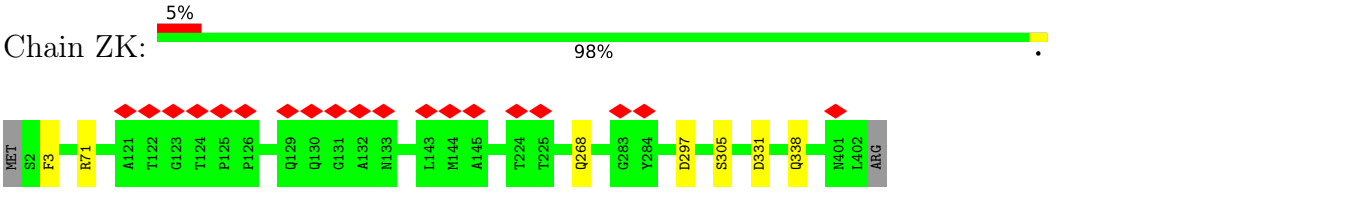
• Molecule 11: Flagellar hook protein FlgE

Chain ZJ:



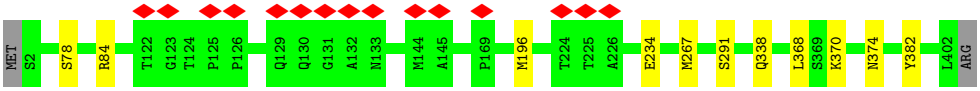
• Molecule 11: Flagellar hook protein FlgE

Chain ZK:



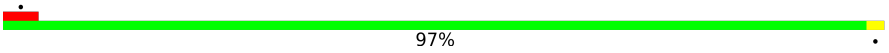
• Molecule 11: Flagellar hook protein FlgE

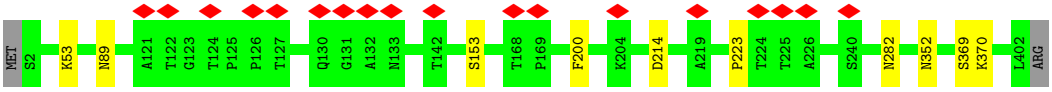
Chain ZL:



• Molecule 11: Flagellar hook protein FlgE

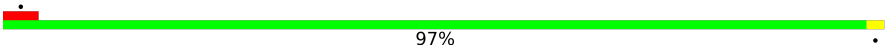
Chain ZM:

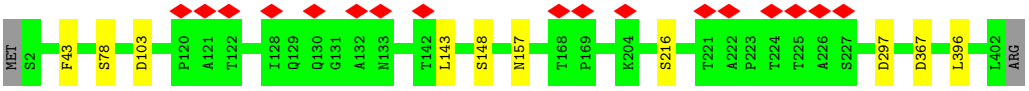




• Molecule 11: Flagellar hook protein FlgE

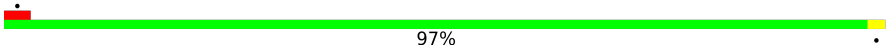
Chain ZN:

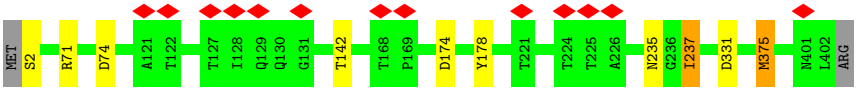




• Molecule 11: Flagellar hook protein FlgE

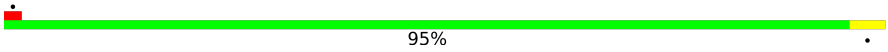
Chain ZO:

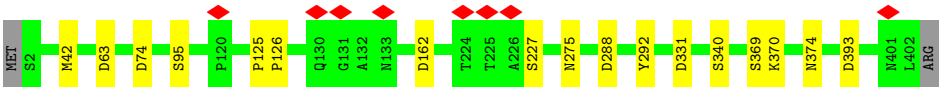




• Molecule 11: Flagellar hook protein FlgE

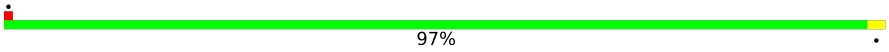
Chain ZP:

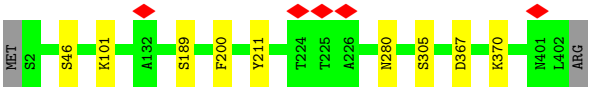




• Molecule 11: Flagellar hook protein FlgE

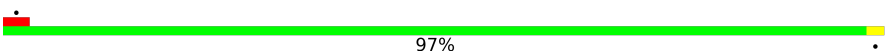
Chain ZQ:

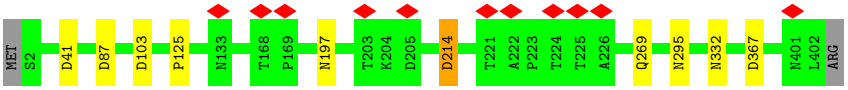




• Molecule 11: Flagellar hook protein FlgE

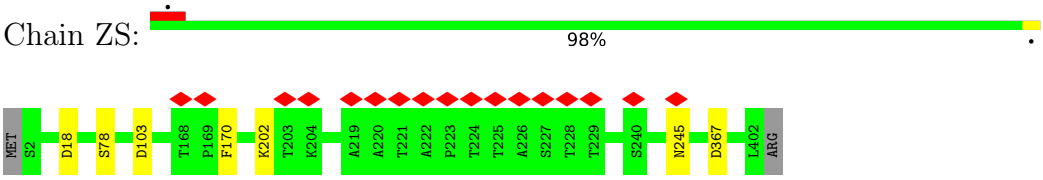
Chain ZR:





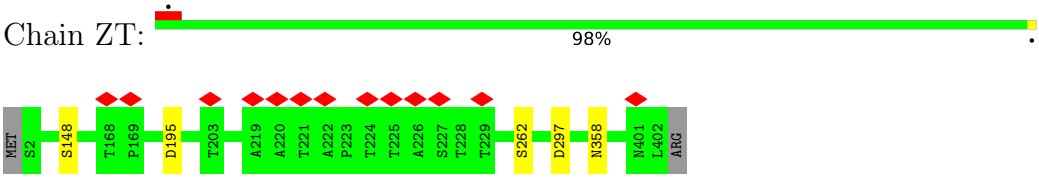
• Molecule 11: Flagellar hook protein FlgE

Chain ZS:



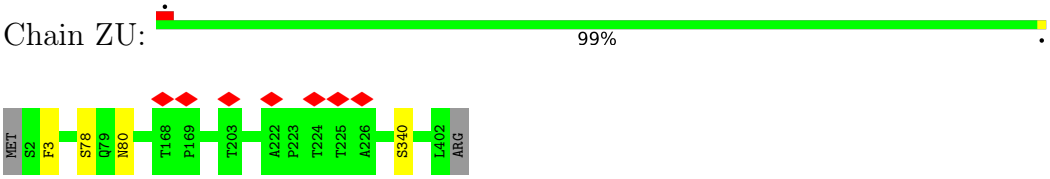
• Molecule 11: Flagellar hook protein FlgE

Chain ZT:



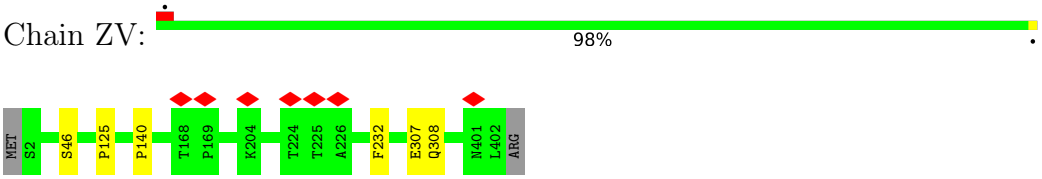
• Molecule 11: Flagellar hook protein FlgE

Chain ZU:



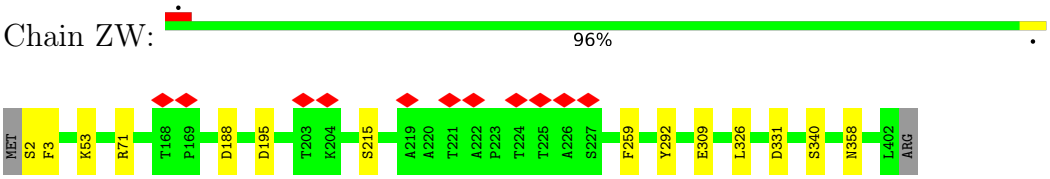
• Molecule 11: Flagellar hook protein FlgE

Chain ZV:



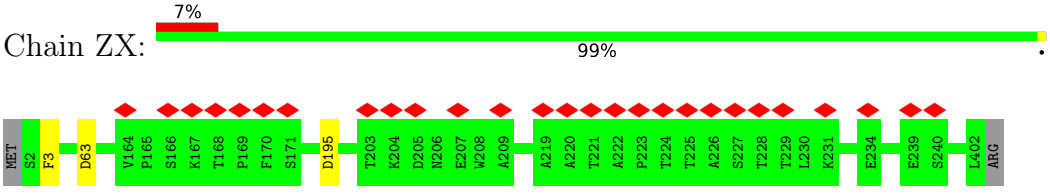
• Molecule 11: Flagellar hook protein FlgE

Chain ZW:



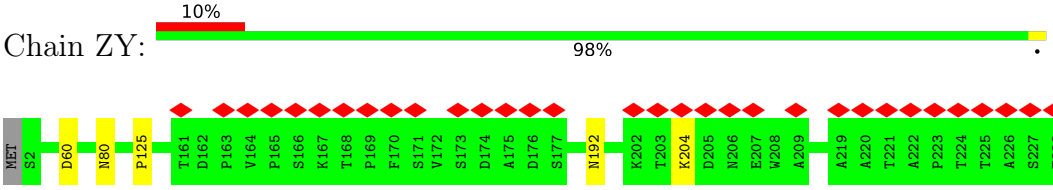
• Molecule 11: Flagellar hook protein FlgE

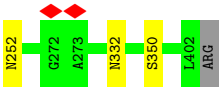
Chain ZX:



• Molecule 11: Flagellar hook protein FlgE

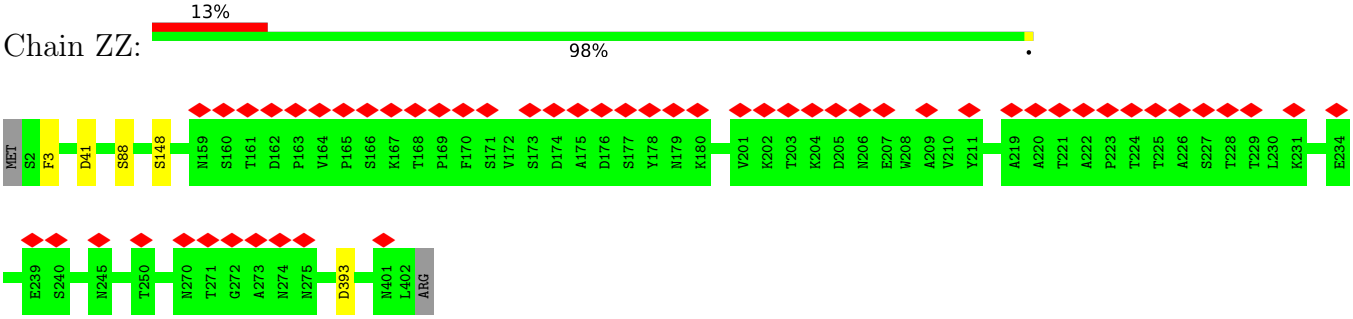
Chain ZY:





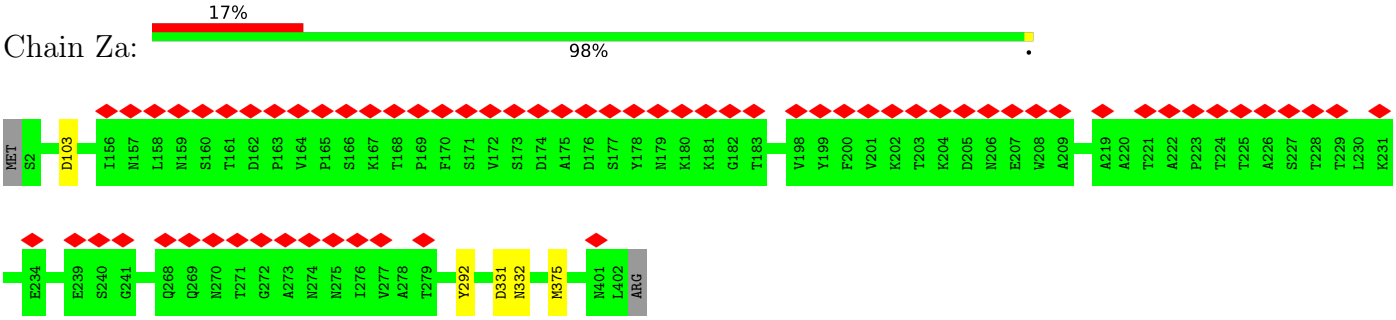
• Molecule 11: Flagellar hook protein FlgE

Chain ZZ:



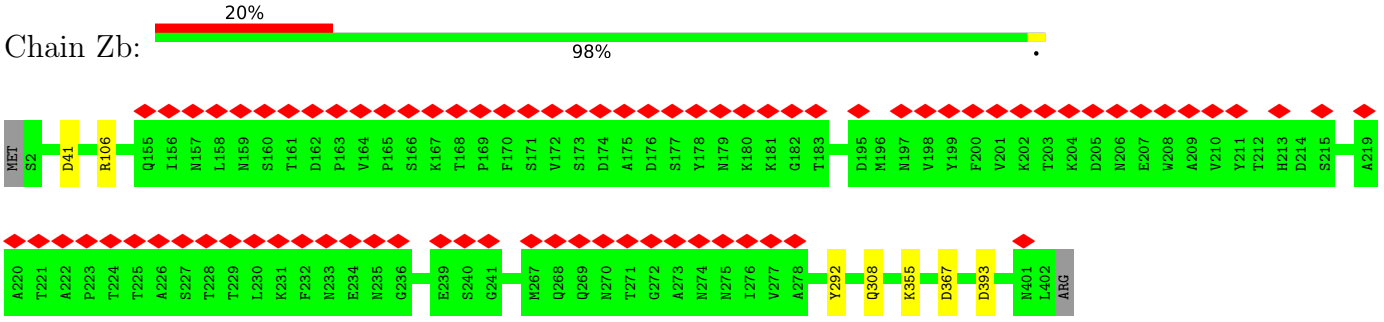
• Molecule 11: Flagellar hook protein FlgE

Chain Za:



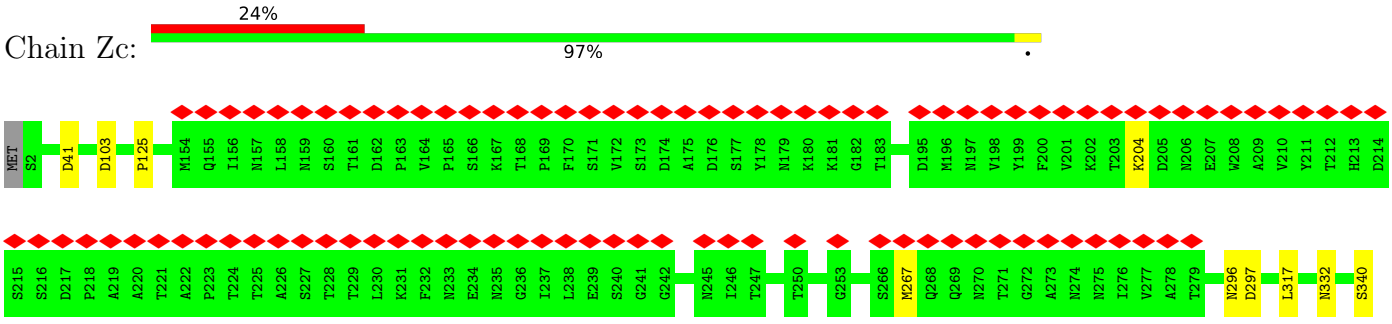
• Molecule 11: Flagellar hook protein FlgE

Chain Zb:



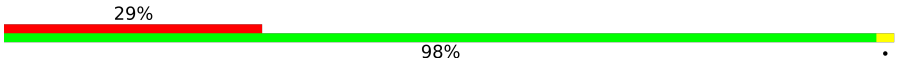
• Molecule 11: Flagellar hook protein FlgE

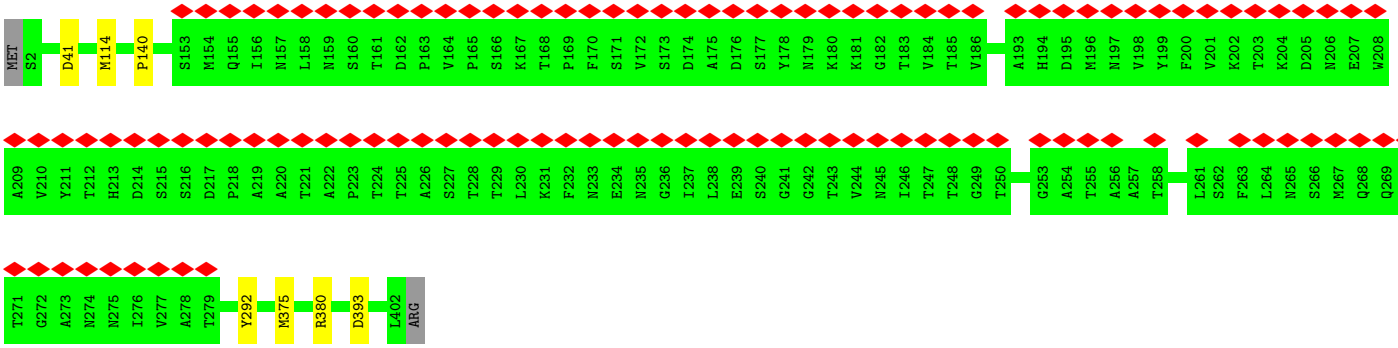
Chain Zc:



• Molecule 11: Flagellar hook protein FlgE

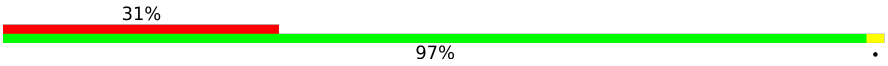
Chain Zd:

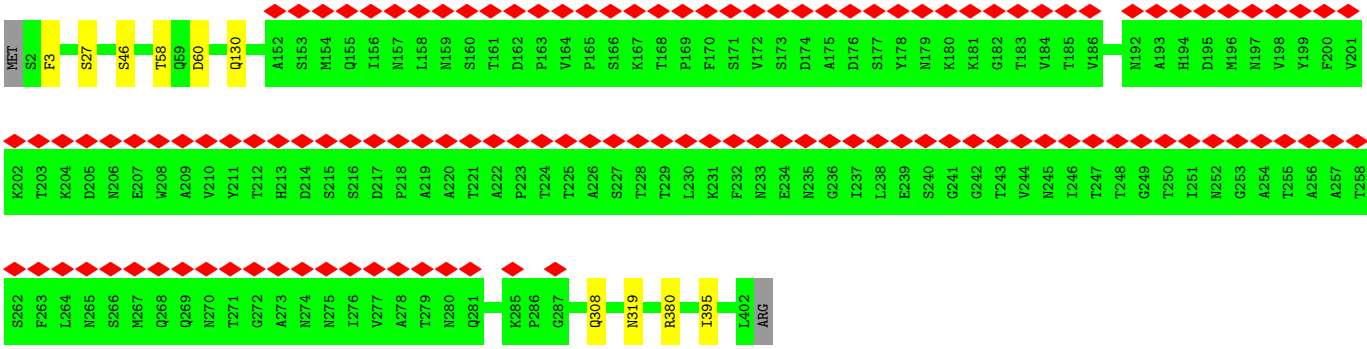




• Molecule 11: Flagellar hook protein FlgE

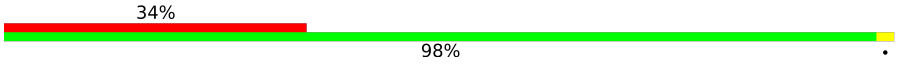
Chain Ze:

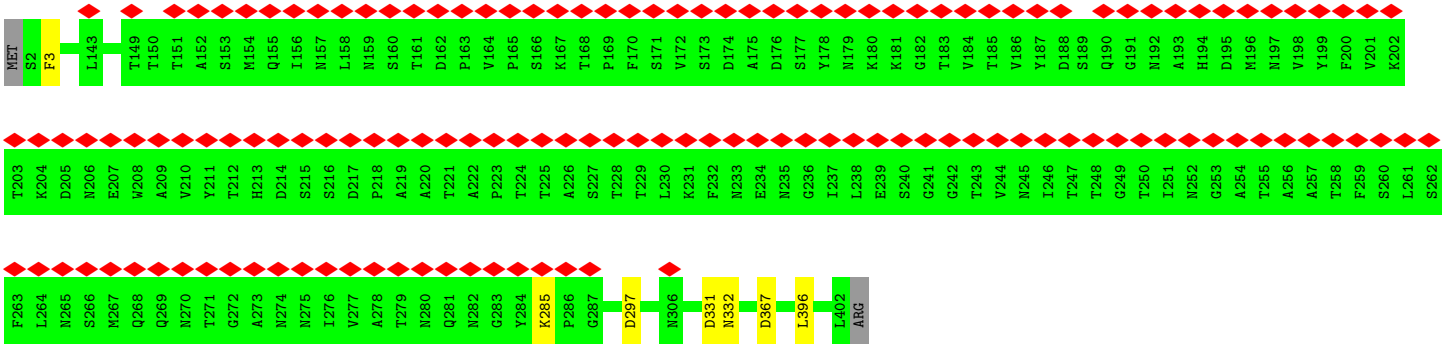




• Molecule 11: Flagellar hook protein FlgE

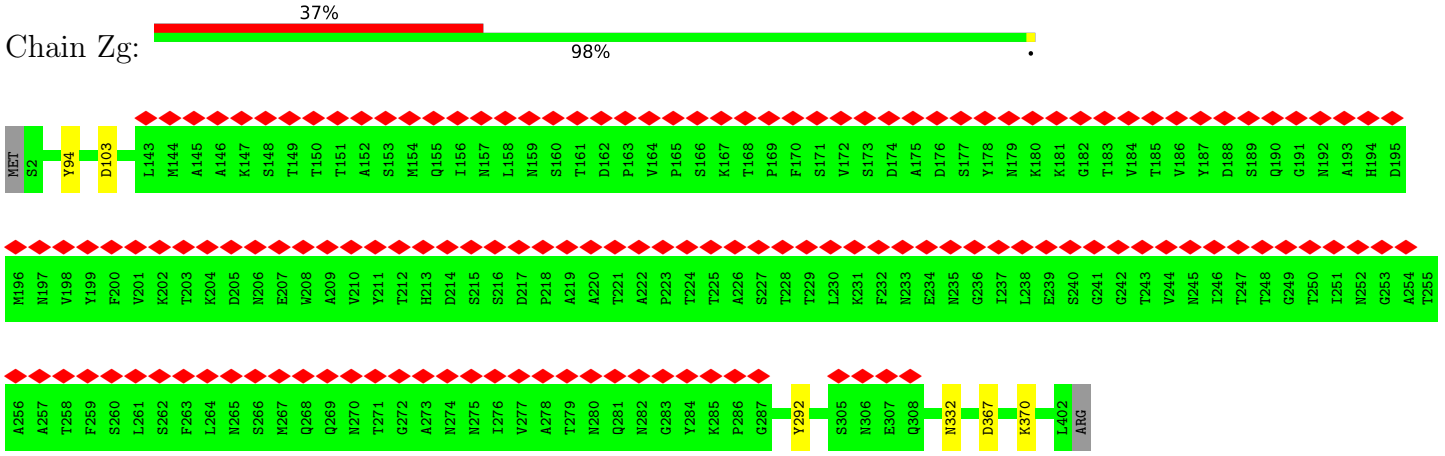
Chain Zf:





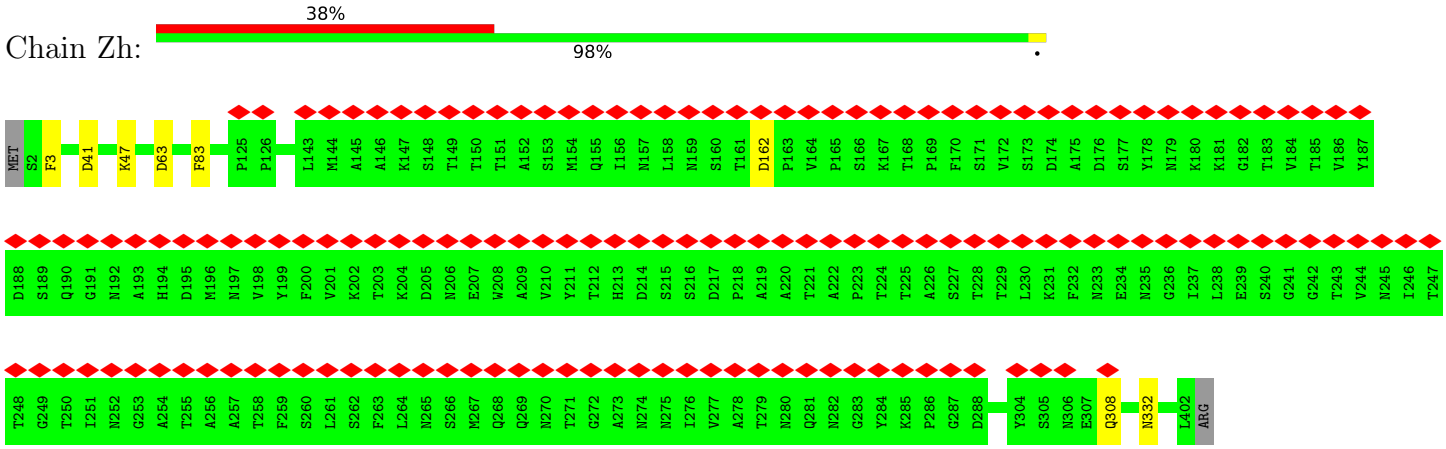
• Molecule 11: Flagellar hook protein FlgE

Chain Zg:



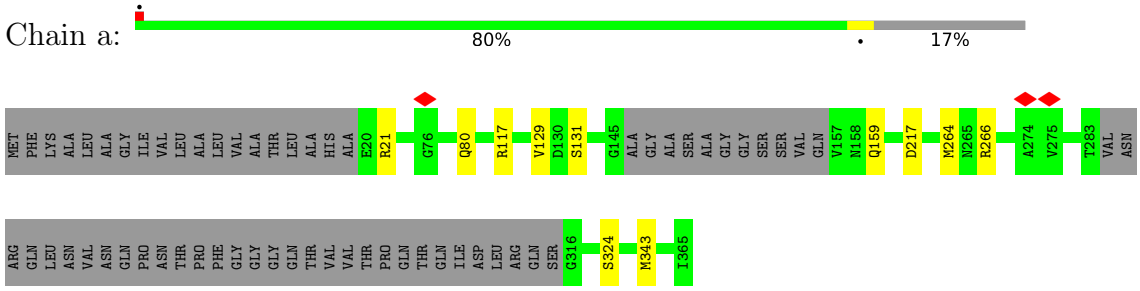
• Molecule 11: Flagellar hook protein FlgE

Chain Zh:



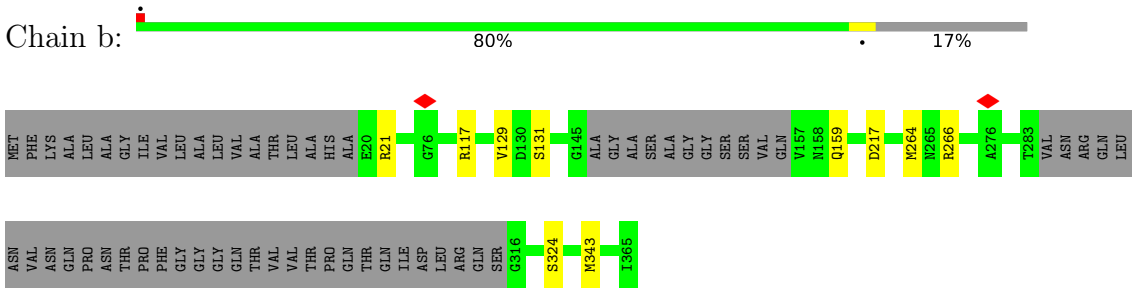
• Molecule 12: Flagellar P-ring protein

Chain a:



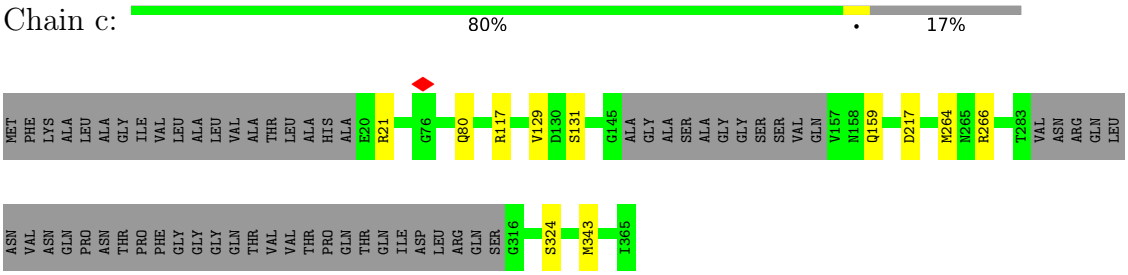
• Molecule 12: Flagellar P-ring protein

Chain b:



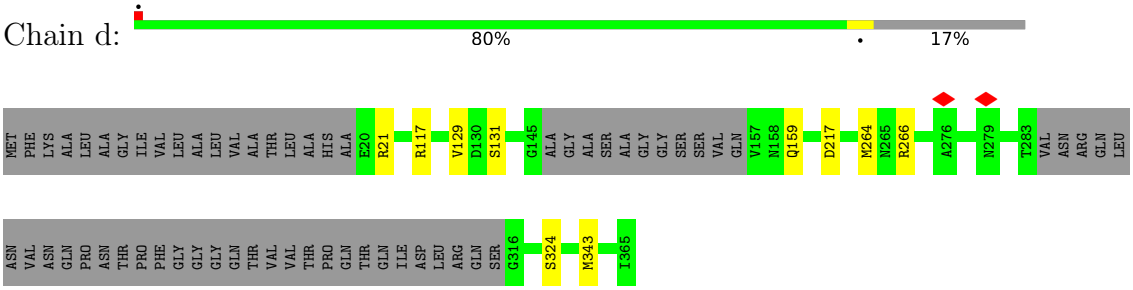
• Molecule 12: Flagellar P-ring protein

Chain c:



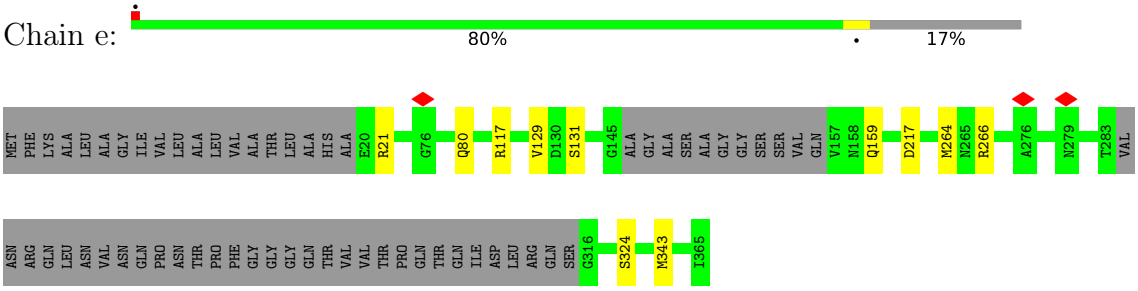
• Molecule 12: Flagellar P-ring protein

Chain d:



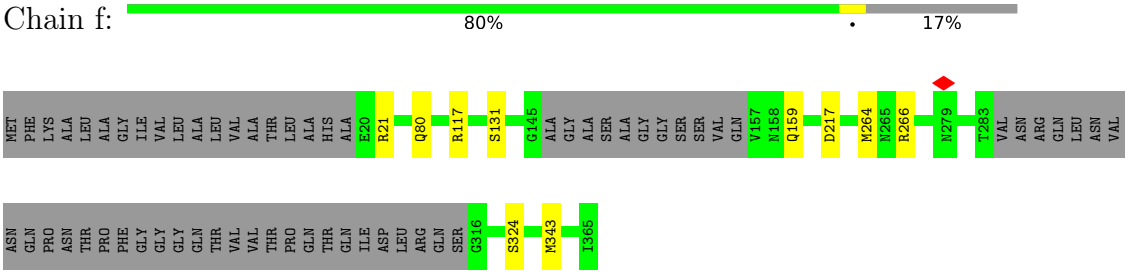
• Molecule 12: Flagellar P-ring protein

Chain e:



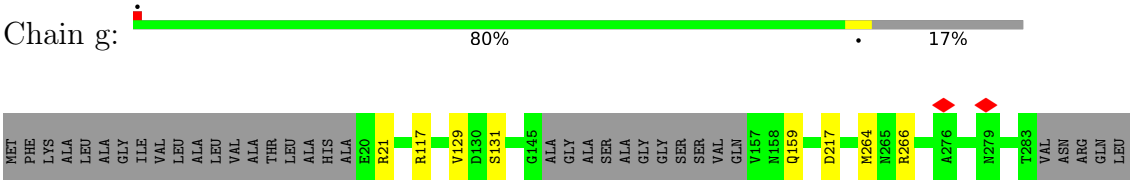
• Molecule 12: Flagellar P-ring protein

Chain f:



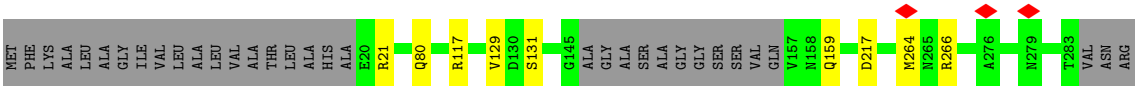
• Molecule 12: Flagellar P-ring protein

Chain g:



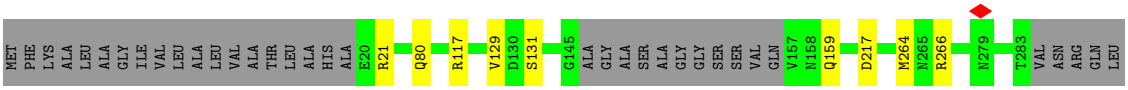
• Molecule 12: Flagellar P-ring protein

Chain h:



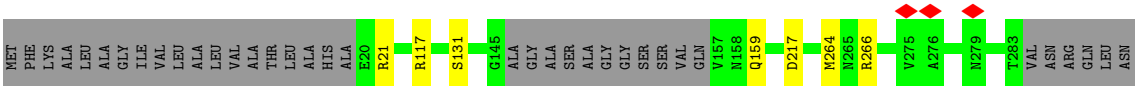
• Molecule 12: Flagellar P-ring protein

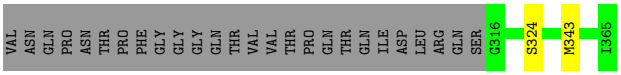
Chain i:



• Molecule 12: Flagellar P-ring protein

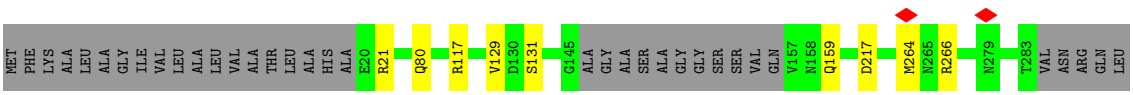
Chain j:

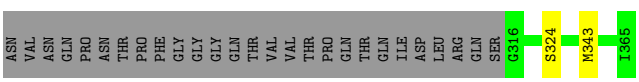




• Molecule 12: Flagellar P-ring protein

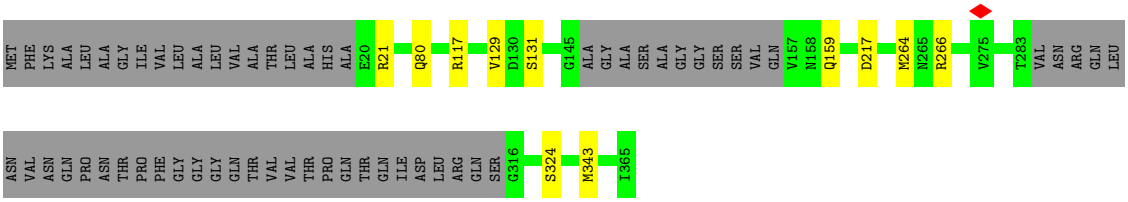
Chain k:





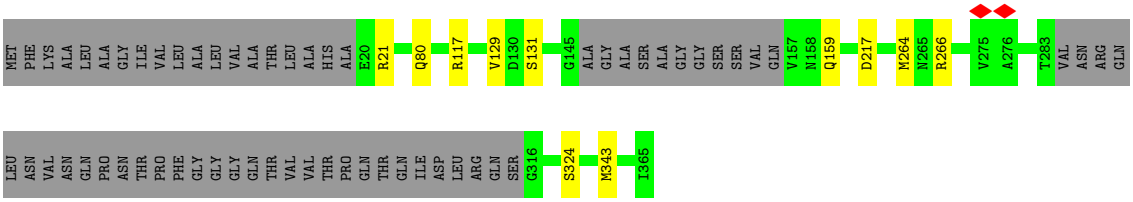
• Molecule 12: Flagellar P-ring protein

Chain l:



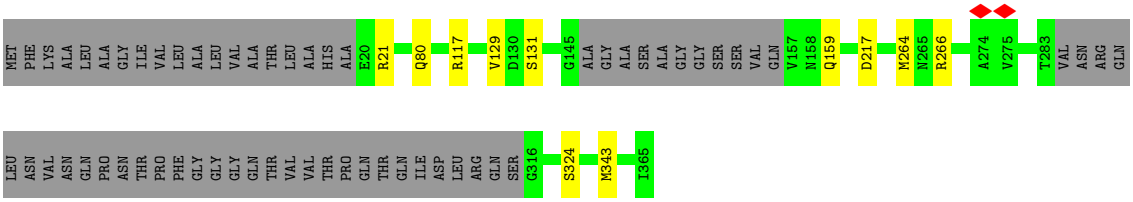
• Molecule 12: Flagellar P-ring protein

Chain m:



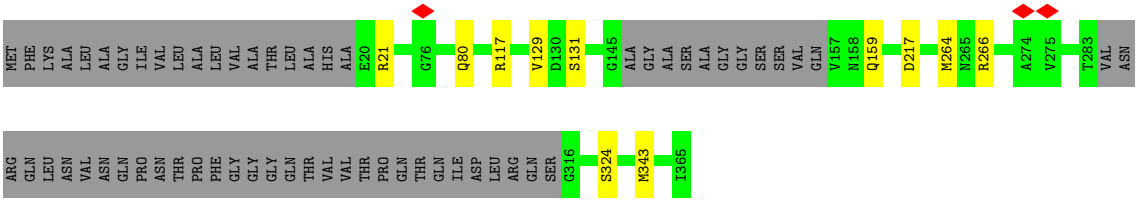
• Molecule 12: Flagellar P-ring protein

Chain n:



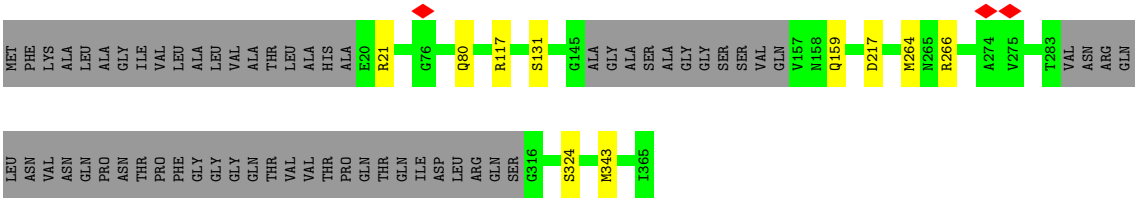
• Molecule 12: Flagellar P-ring protein

Chain o:



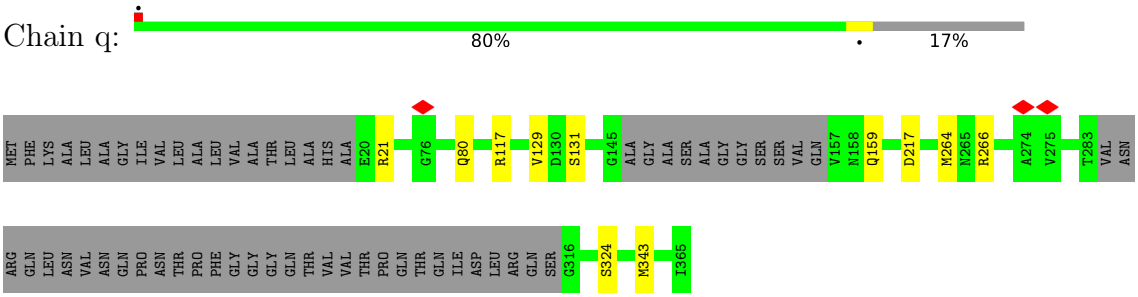
• Molecule 12: Flagellar P-ring protein

Chain p:



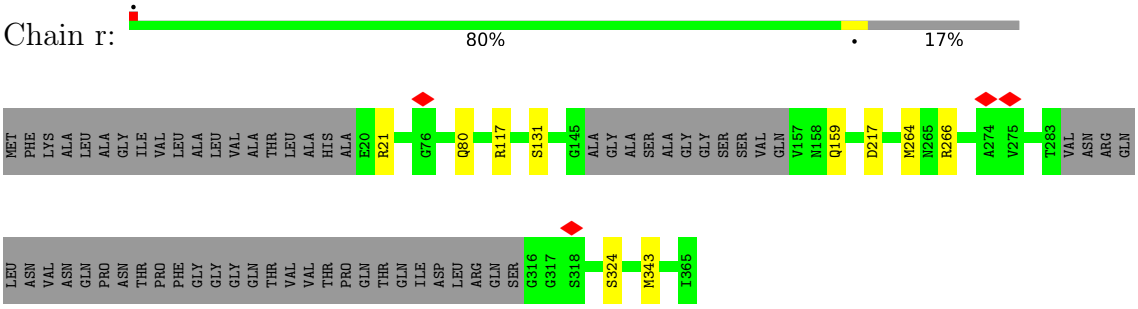
• Molecule 12: Flagellar P-ring protein

Chain q:



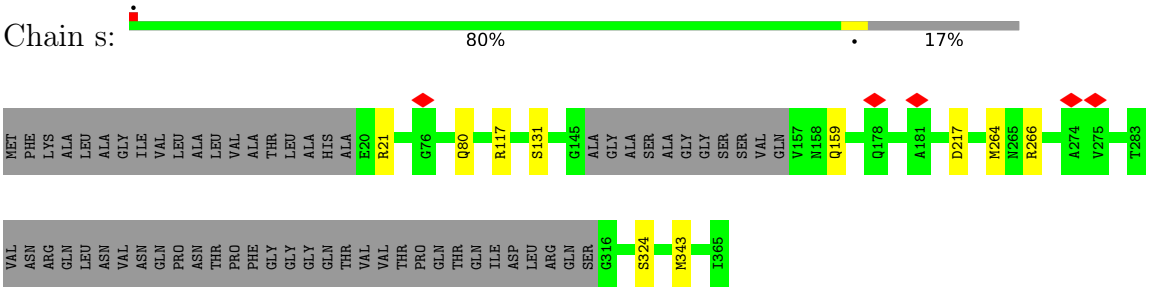
• Molecule 12: Flagellar P-ring protein

Chain r:



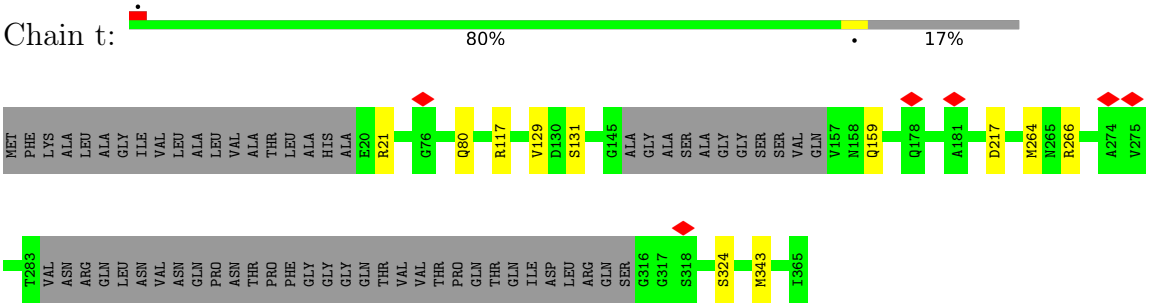
• Molecule 12: Flagellar P-ring protein

Chain s:



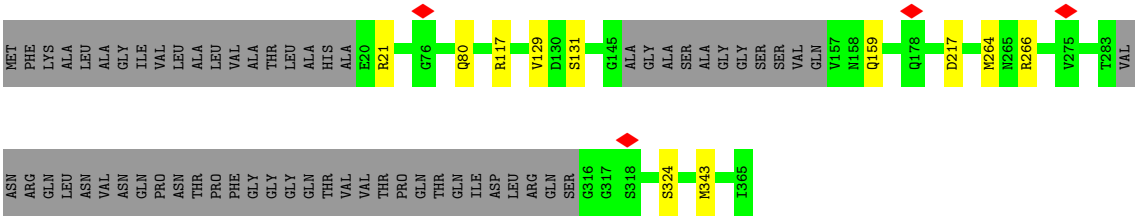
• Molecule 12: Flagellar P-ring protein

Chain t:

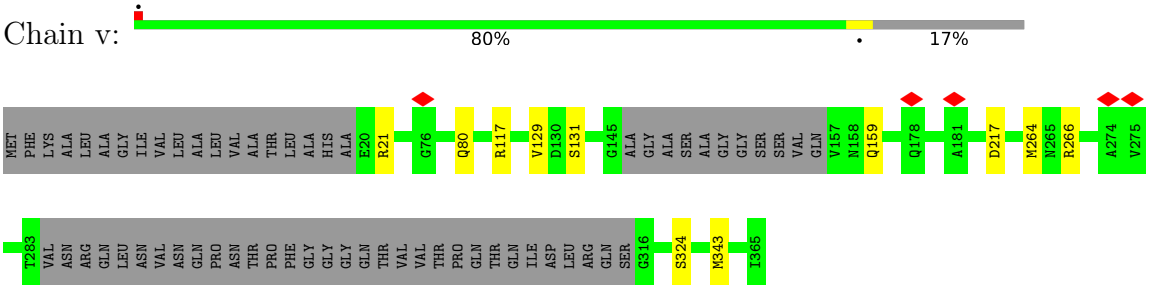


• Molecule 12: Flagellar P-ring protein

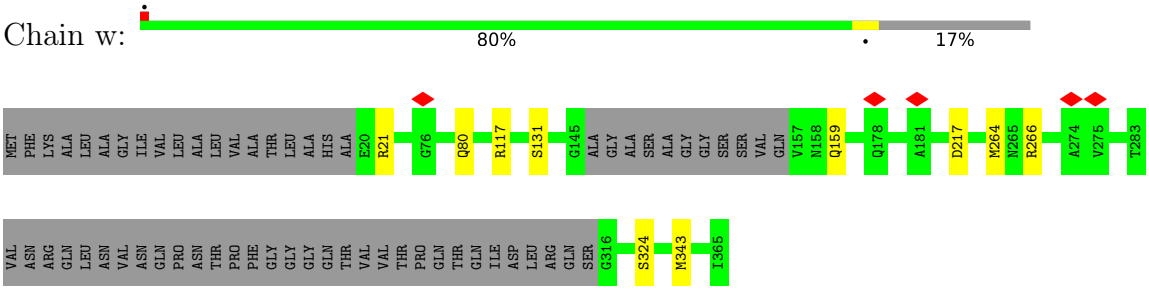
Chain u:



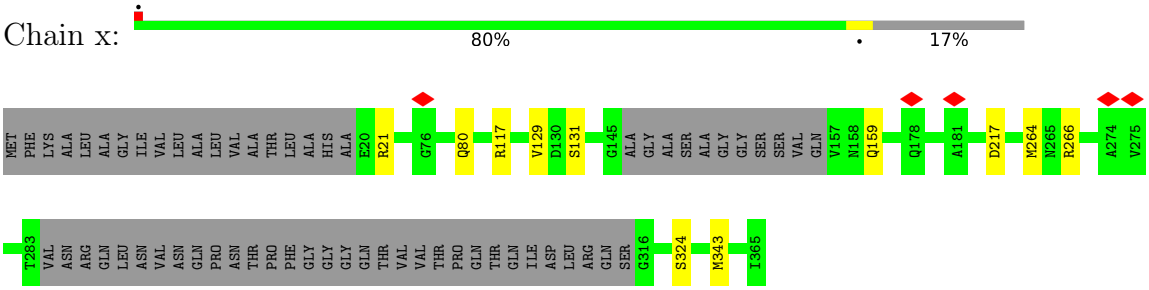
• Molecule 12: Flagellar P-ring protein



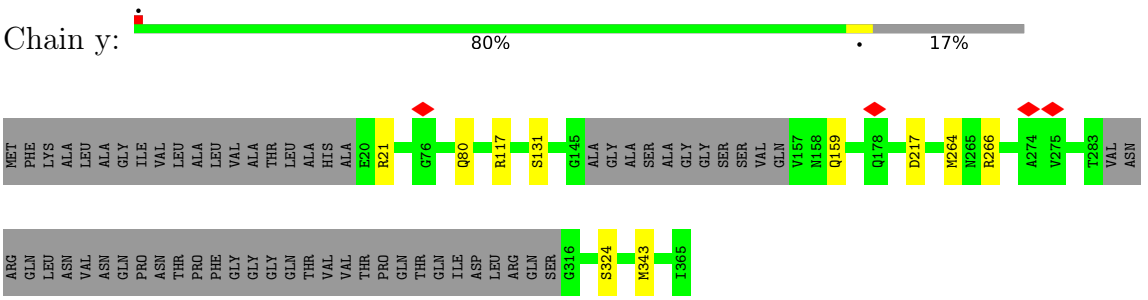
• Molecule 12: Flagellar P-ring protein



• Molecule 12: Flagellar P-ring protein

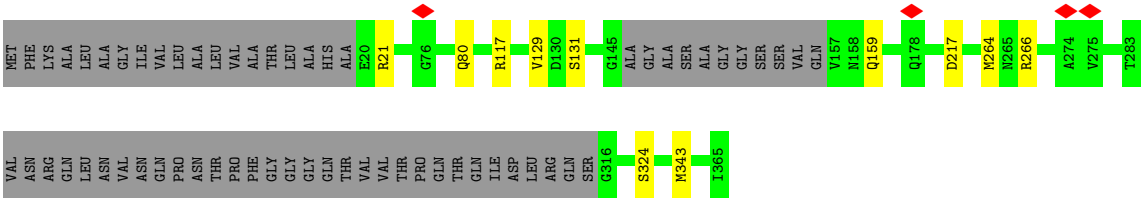


• Molecule 12: Flagellar P-ring protein



• Molecule 12: Flagellar P-ring protein

Chain z:

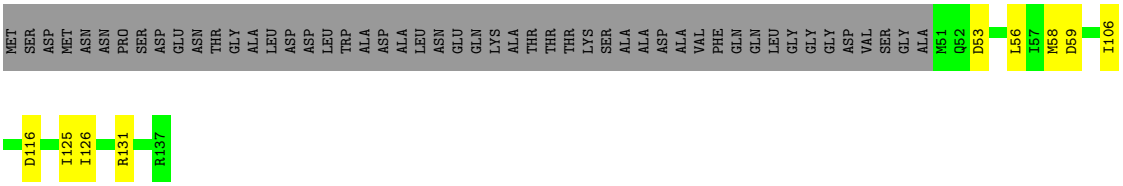


• Molecule 13: Flagellar motor switch protein FliN

Chain C3:

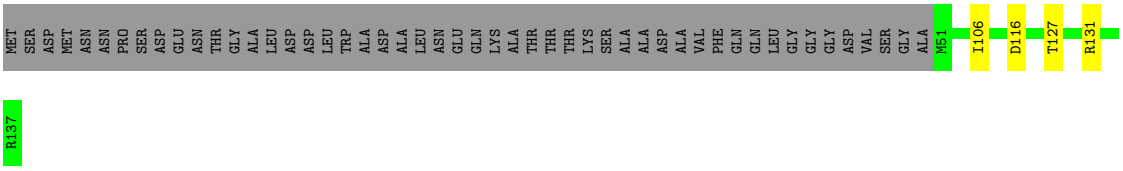
• Molecule 13: Flagellar motor switch protein FliN

Chain C4:



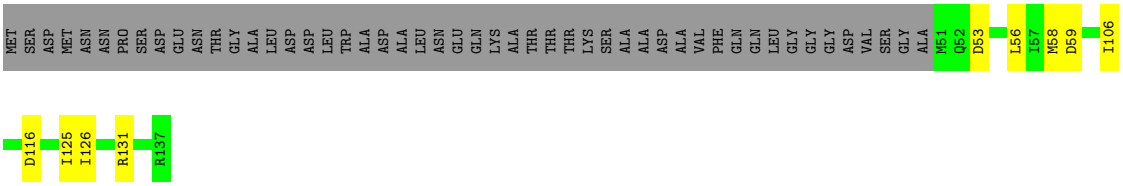
• Molecule 13: Flagellar motor switch protein FliN

Chain C5:



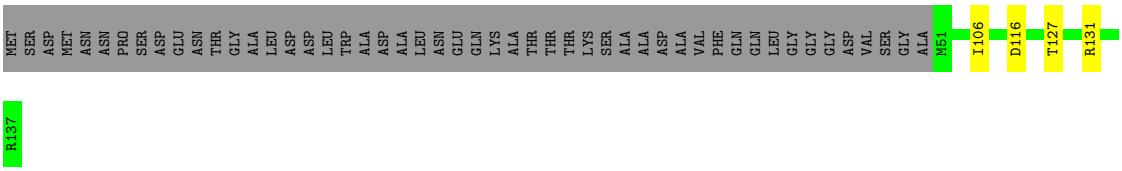
• Molecule 13: Flagellar motor switch protein FliN

Chain C8:



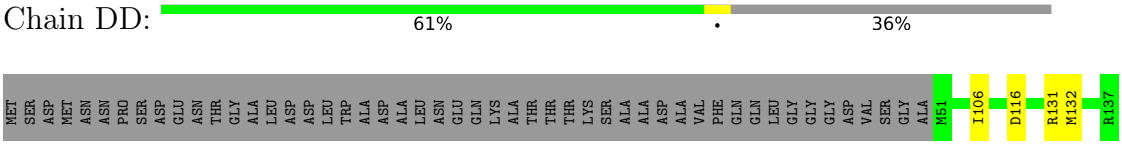
• Molecule 13: Flagellar motor switch protein FliN

Chain C9:



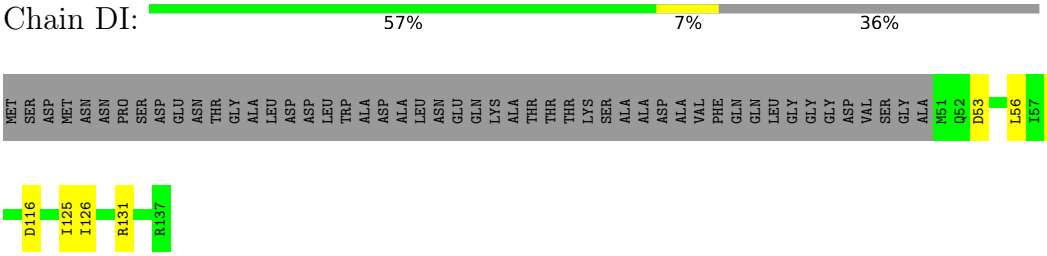
• Molecule 13: Flagellar motor switch protein FliN

Chain DD:



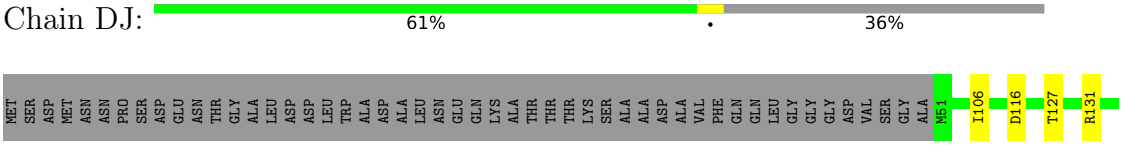
• Molecule 13: Flagellar motor switch protein FliN

Chain DI:



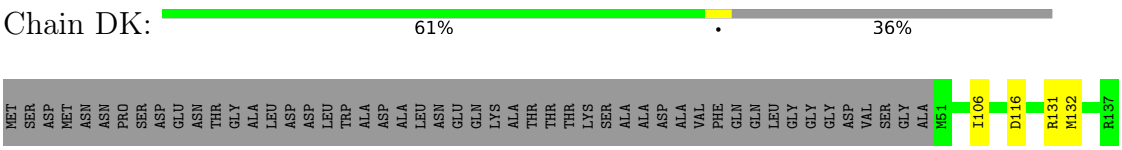
• Molecule 13: Flagellar motor switch protein FliN

Chain DJ:



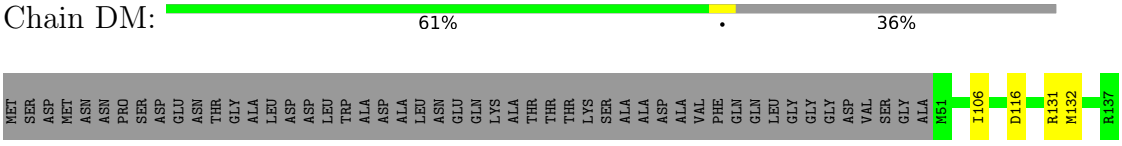
• Molecule 13: Flagellar motor switch protein FliN

Chain DK:



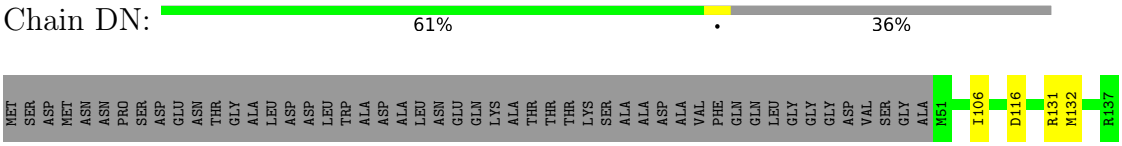
• Molecule 13: Flagellar motor switch protein FliN

Chain DM:



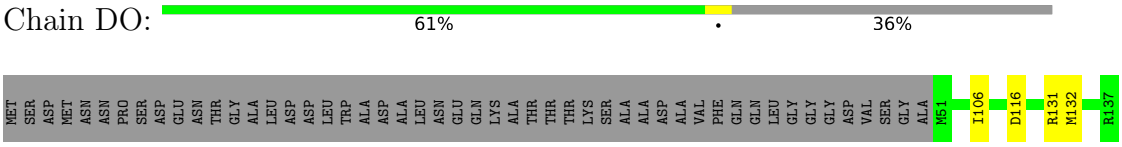
• Molecule 13: Flagellar motor switch protein FliN

Chain DN:



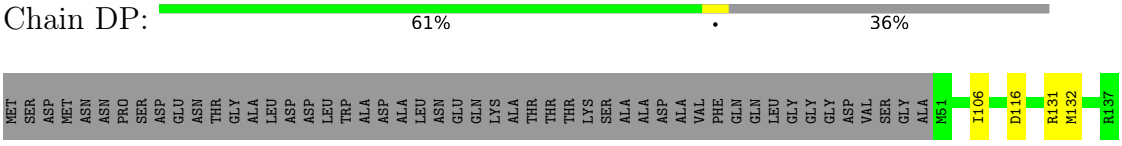
• Molecule 13: Flagellar motor switch protein FliN

Chain DO:



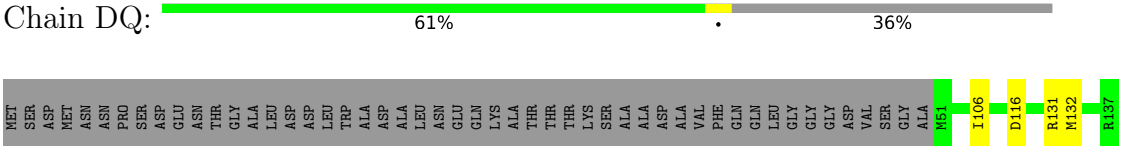
• Molecule 13: Flagellar motor switch protein FliN

Chain DP:



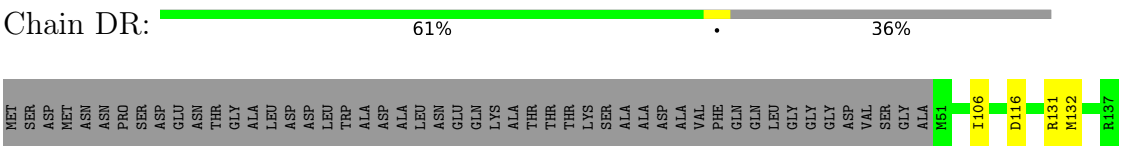
• Molecule 13: Flagellar motor switch protein FliN

Chain DQ:



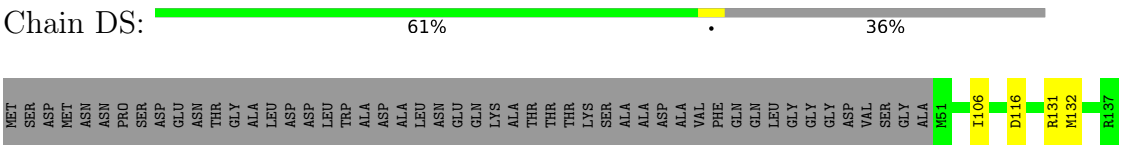
• Molecule 13: Flagellar motor switch protein FliN

Chain DR:



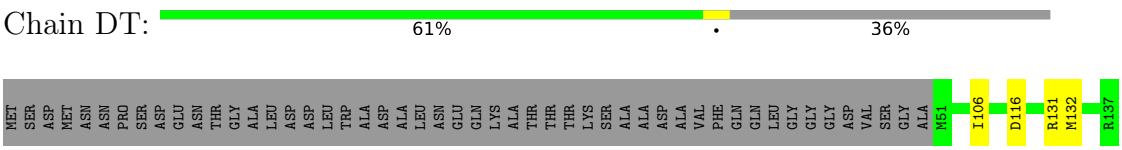
• Molecule 13: Flagellar motor switch protein FliN

Chain DS:



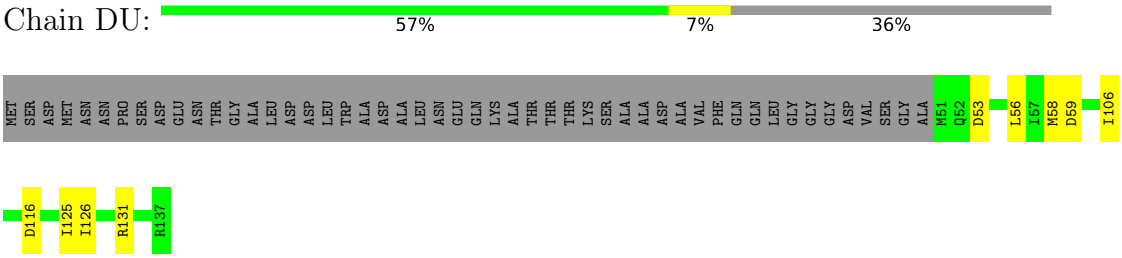
• Molecule 13: Flagellar motor switch protein FliN

Chain DT:



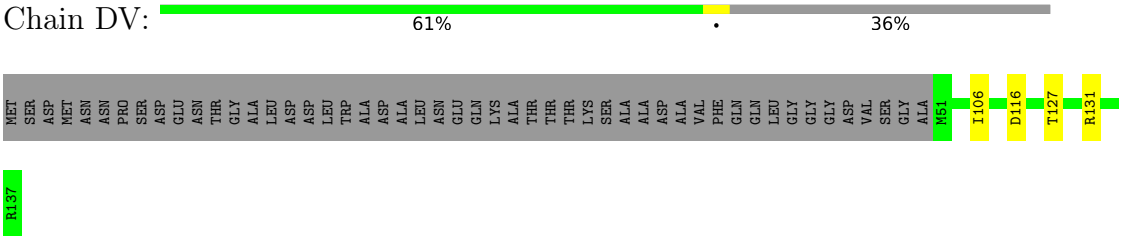
• Molecule 13: Flagellar motor switch protein FliN

Chain DU:



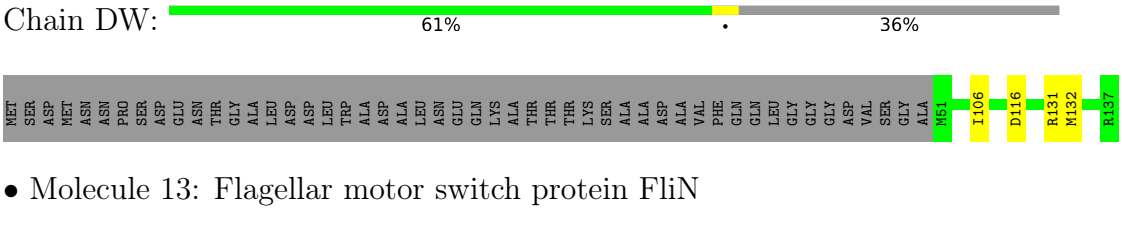
• Molecule 13: Flagellar motor switch protein FliN

Chain DV:



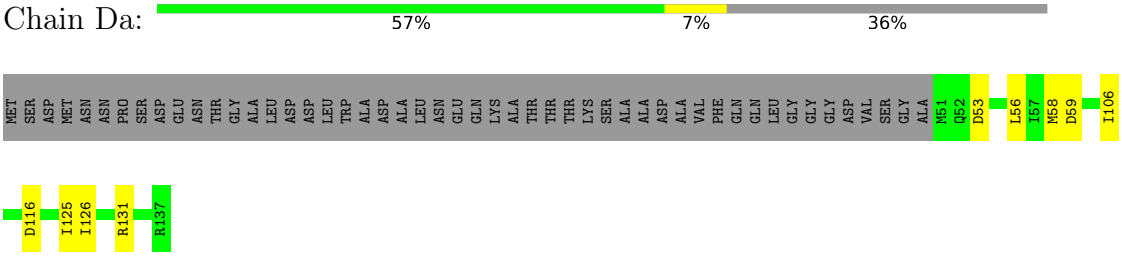
• Molecule 13: Flagellar motor switch protein FliN

Chain DW:



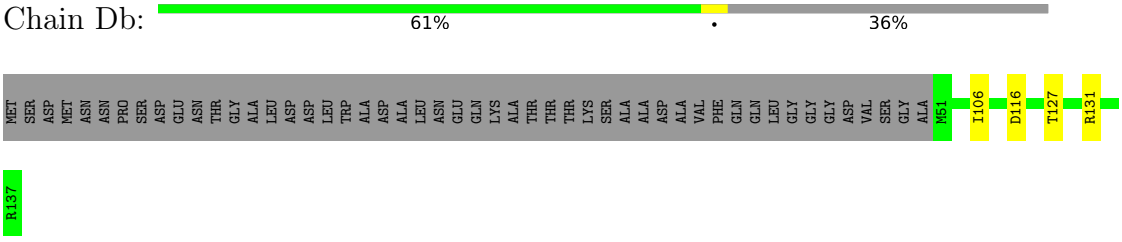
• Molecule 13: Flagellar motor switch protein FliN

Chain Da:



• Molecule 13: Flagellar motor switch protein FliN

Chain Db:

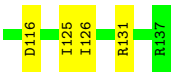


• Molecule 13: Flagellar motor switch protein FliN

Chain Dc:

• Molecule 13: Flagellar motor switch protein FliN

Chain Dg:



• Molecule 13: Flagellar motor switch protein FliN

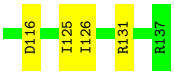
Chain Dh:

• Molecule 13: Flagellar motor switch protein FliN

Chain Di:

• Molecule 13: Flagellar motor switch protein FliN

Chain Dm:

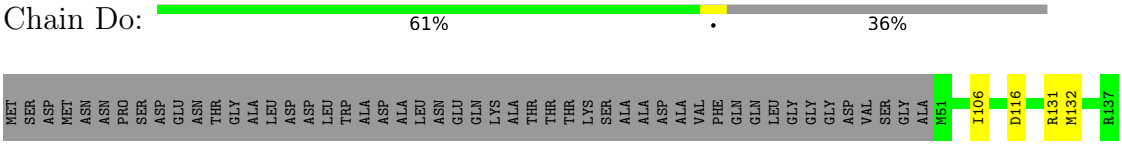


• Molecule 13: Flagellar motor switch protein FliN

Chain Dn:

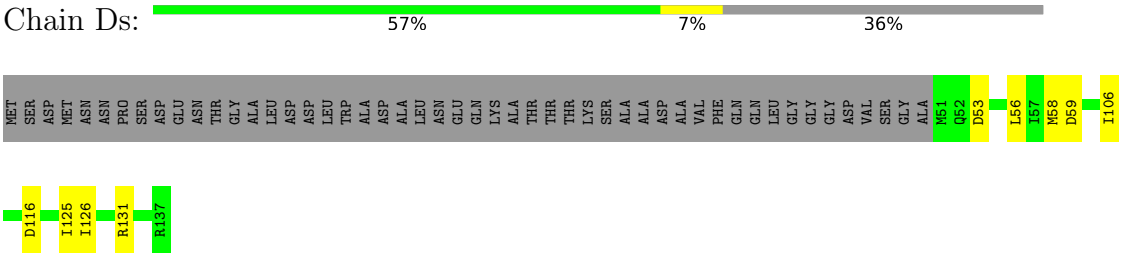
• Molecule 13: Flagellar motor switch protein FliN

Chain Do:



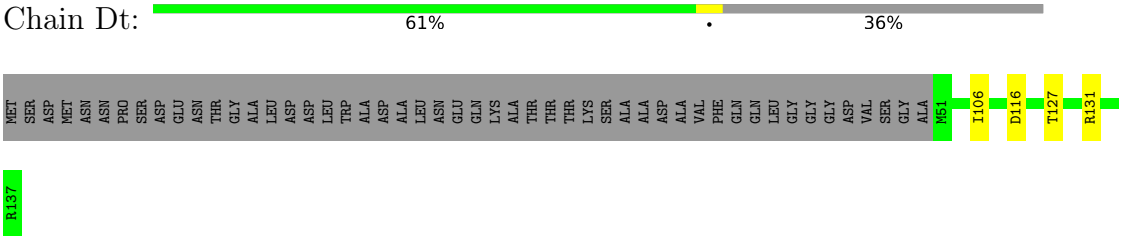
• Molecule 13: Flagellar motor switch protein FliN

Chain Ds:



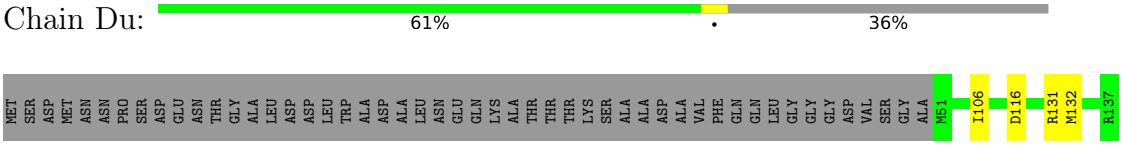
• Molecule 13: Flagellar motor switch protein FliN

Chain Dt:



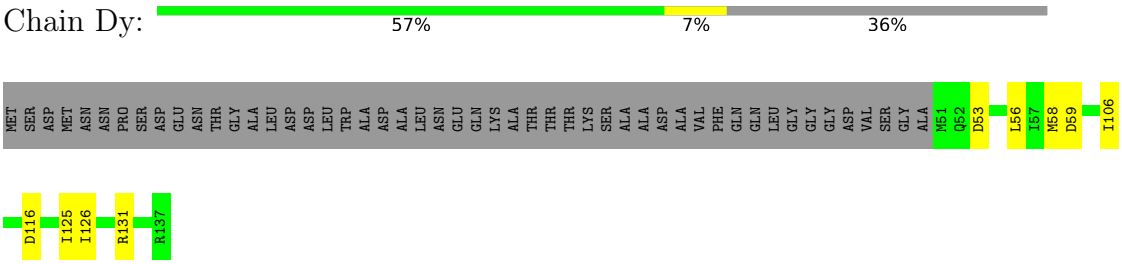
• Molecule 13: Flagellar motor switch protein FliN

Chain Du:



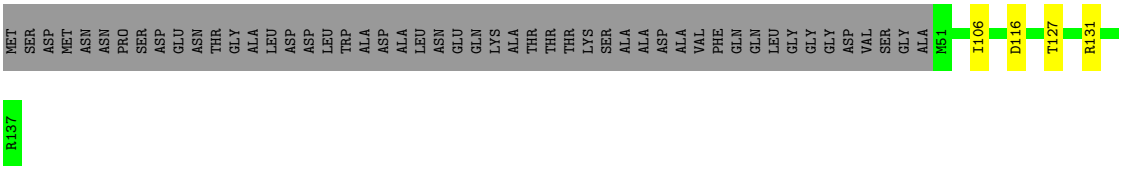
• Molecule 13: Flagellar motor switch protein FliN

Chain Dy:



• Molecule 13: Flagellar motor switch protein FliN

Chain Dz:

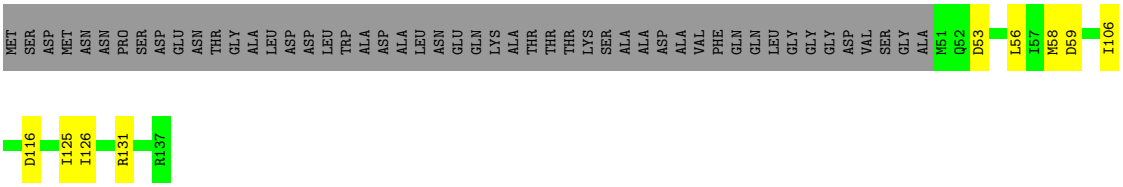


• Molecule 13: Flagellar motor switch protein FliN

Chain D1:

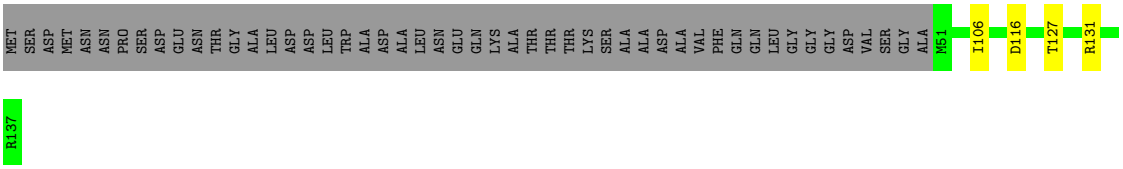
• Molecule 13: Flagellar motor switch protein FliN

Chain D5:



• Molecule 13: Flagellar motor switch protein FliN

Chain D6:

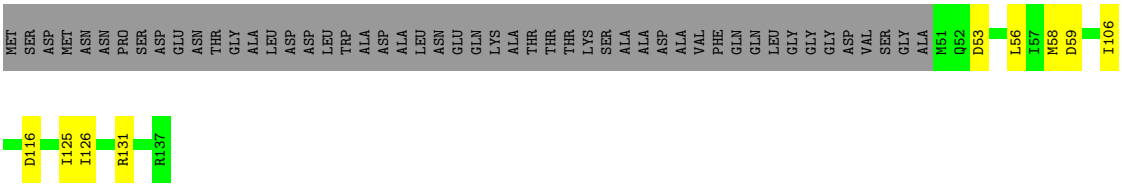


• Molecule 13: Flagellar motor switch protein FliN

Chain D7:

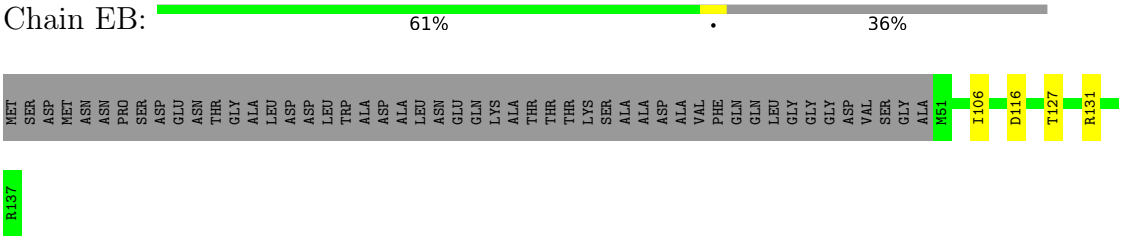
• Molecule 13: Flagellar motor switch protein FliN

Chain EA:



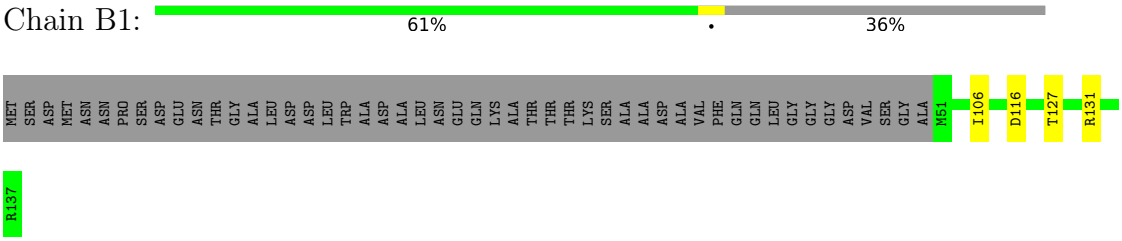
• Molecule 13: Flagellar motor switch protein FliN

Chain EB:



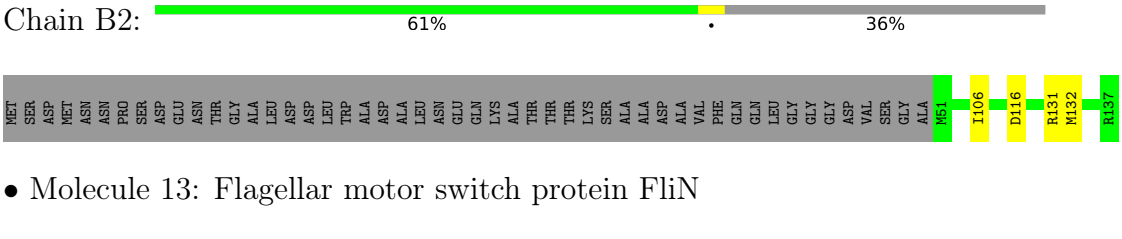
• Molecule 13: Flagellar motor switch protein FliN

Chain B1:



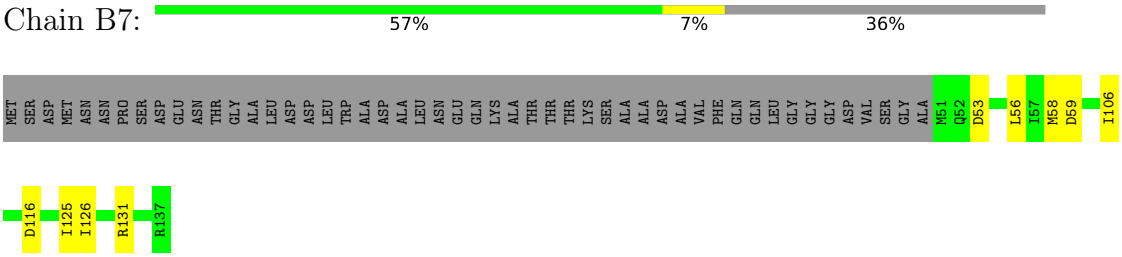
• Molecule 13: Flagellar motor switch protein FliN

Chain B2:



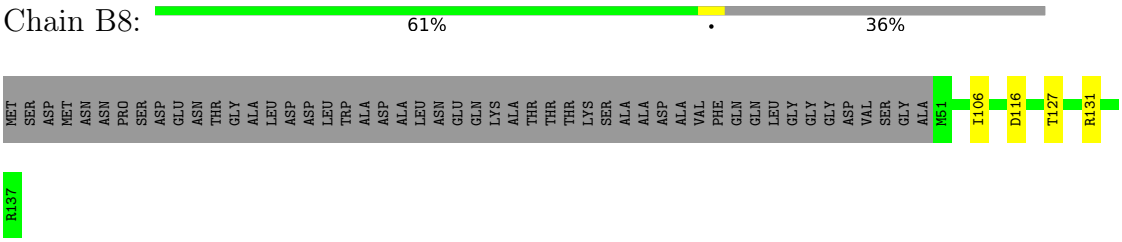
• Molecule 13: Flagellar motor switch protein FliN

Chain B7:



• Molecule 13: Flagellar motor switch protein FliN

Chain B8:



• Molecule 13: Flagellar motor switch protein FliN

Chain B9:

• Molecule 13: Flagellar motor switch protein FliN

Chain EE:

• Molecule 13: Flagellar motor switch protein FliN

Chain EF:

• Molecule 13: Flagellar motor switch protein FliN

Chain EG:

• Molecule 13: Flagellar motor switch protein FliN

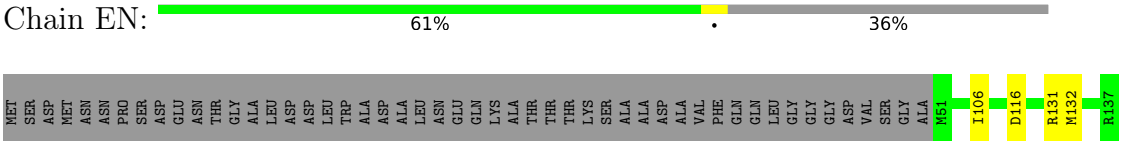
Chain EL:

• Molecule 13: Flagellar motor switch protein FliN

Chain EM:

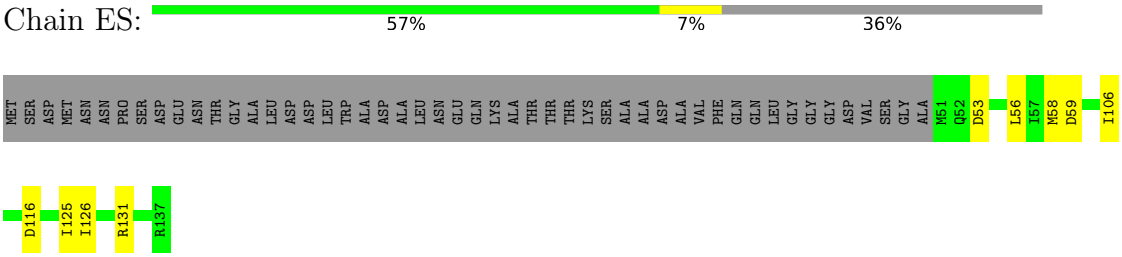
• Molecule 13: Flagellar motor switch protein FliN

Chain EN:



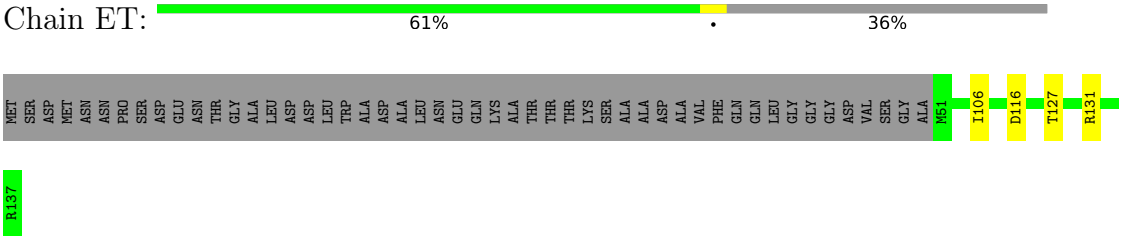
• Molecule 13: Flagellar motor switch protein FliN

Chain ES:



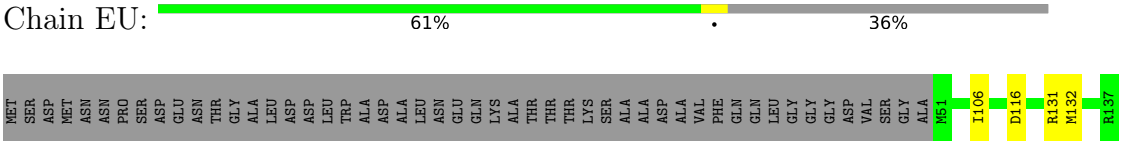
• Molecule 13: Flagellar motor switch protein FliN

Chain ET:



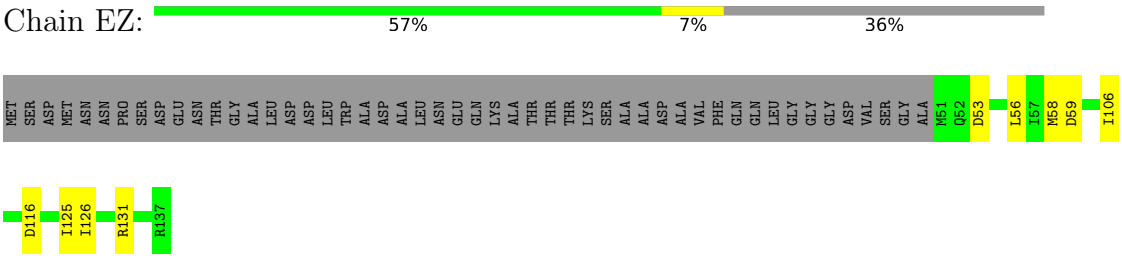
• Molecule 13: Flagellar motor switch protein FliN

Chain EU:



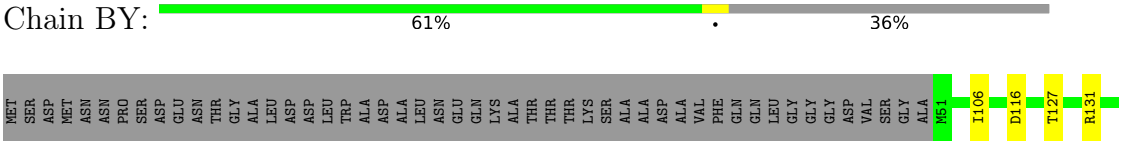
• Molecule 13: Flagellar motor switch protein FliN

Chain EZ:



• Molecule 13: Flagellar motor switch protein FliN

Chain BY:

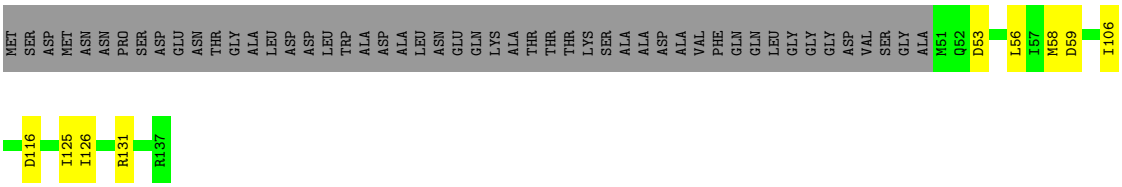


• Molecule 13: Flagellar motor switch protein FliN

Chain BZ:

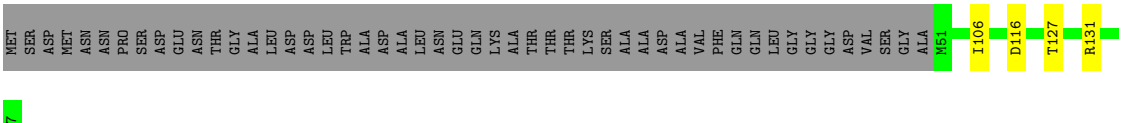
• Molecule 13: Flagellar motor switch protein FliN

Chain Be:



• Molecule 13: Flagellar motor switch protein FliN

Chain Bf:

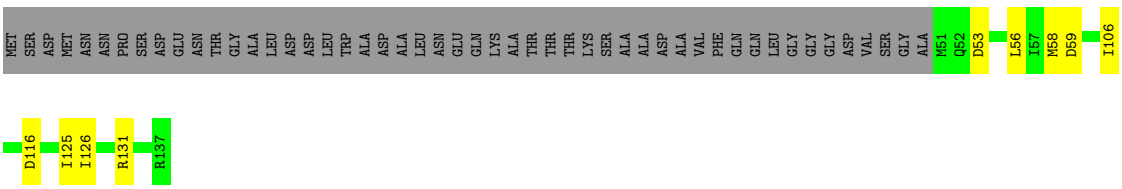


• Molecule 13: Flagellar motor switch protein FliN

Chain Bg:

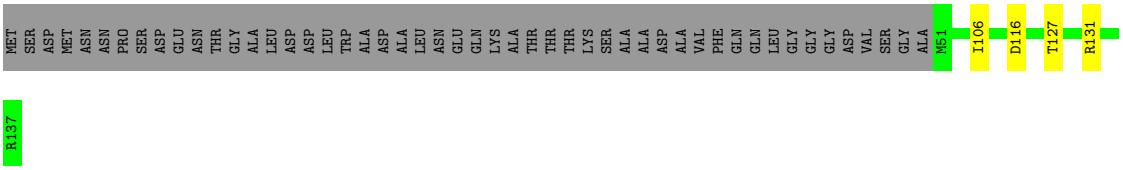
• Molecule 13: Flagellar motor switch protein FliN

Chain Bl:



• Molecule 13: Flagellar motor switch protein FliN

Chain Bm:

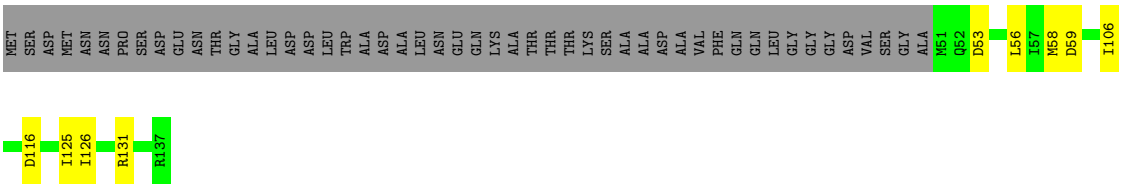


• Molecule 13: Flagellar motor switch protein FliN

Chain Bn:

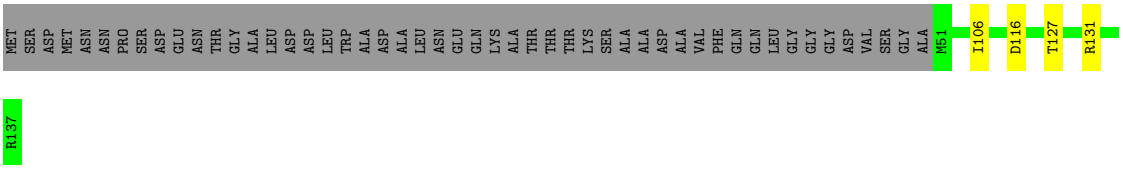
• Molecule 13: Flagellar motor switch protein FliN

Chain Bs:



• Molecule 13: Flagellar motor switch protein FliN

Chain Bt:

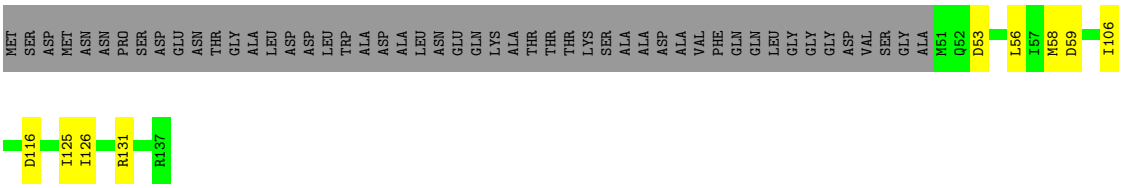


• Molecule 13: Flagellar motor switch protein FliN

Chain Bu:

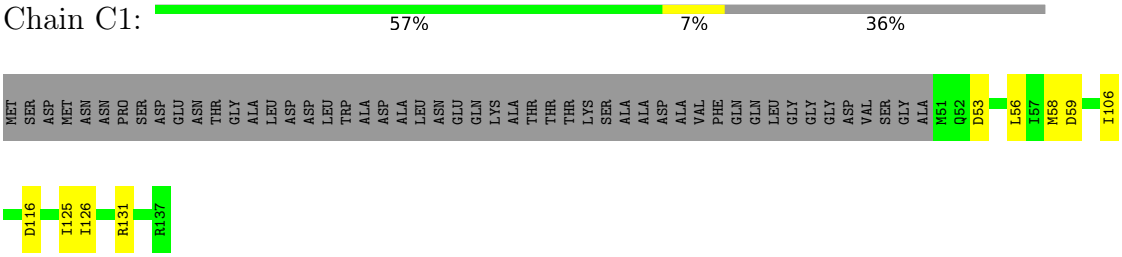
• Molecule 13: Flagellar motor switch protein FliN

Chain Bz:



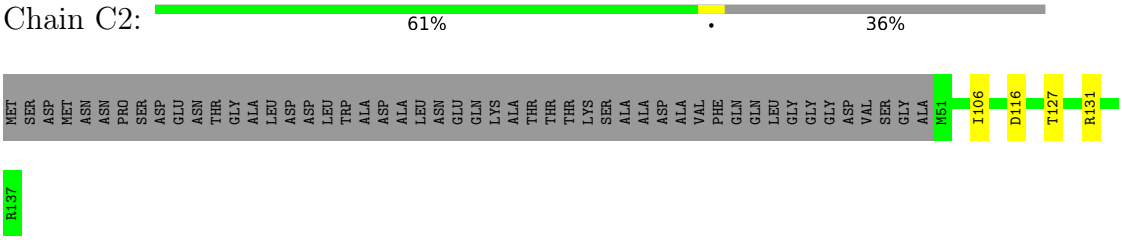
• Molecule 13: Flagellar motor switch protein FliN

Chain C1:



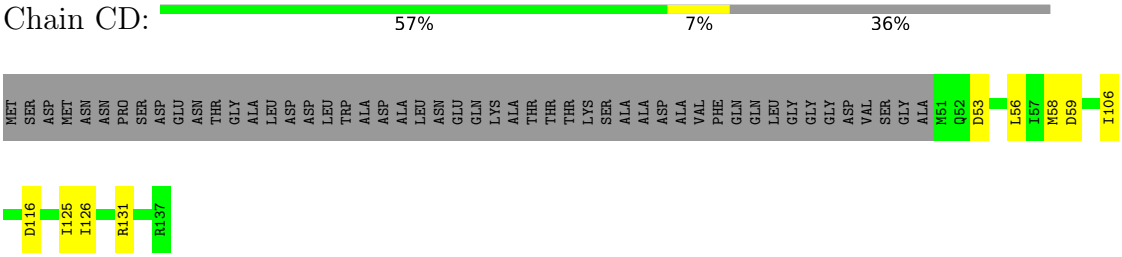
• Molecule 13: Flagellar motor switch protein FliN

Chain C2:



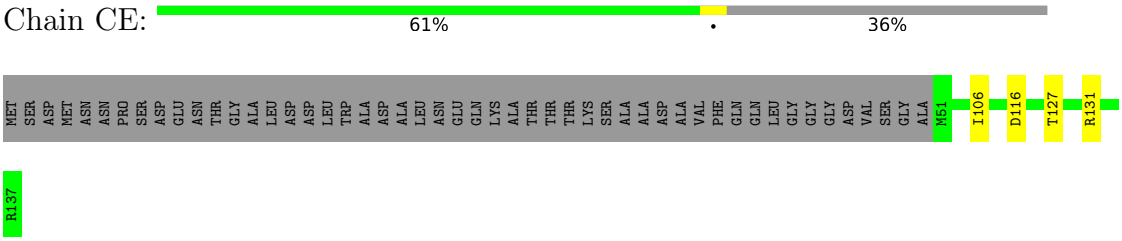
• Molecule 13: Flagellar motor switch protein FliN

Chain CD:



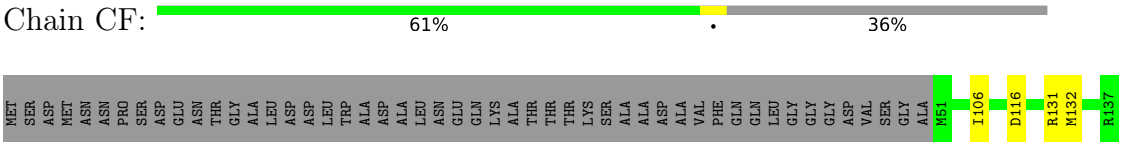
• Molecule 13: Flagellar motor switch protein FliN

Chain CE:



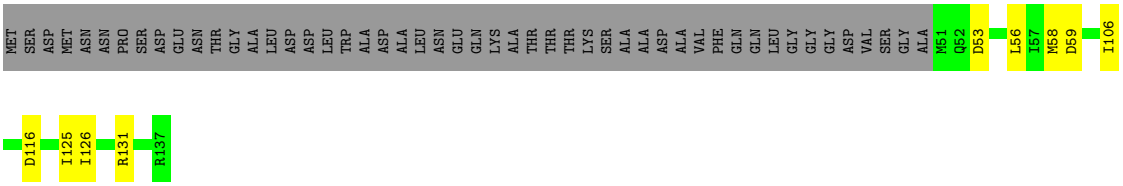
• Molecule 13: Flagellar motor switch protein FliN

Chain CF:



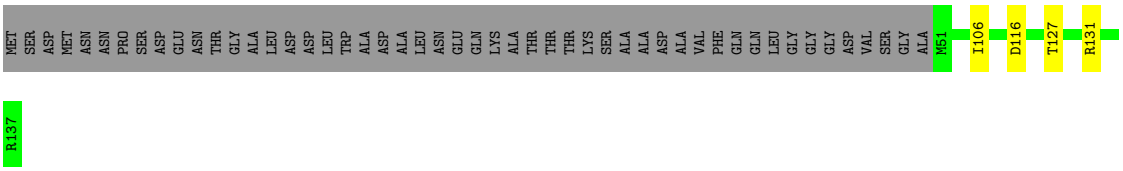
• Molecule 13: Flagellar motor switch protein FliN

Chain CK:



• Molecule 13: Flagellar motor switch protein FliN

Chain CL:

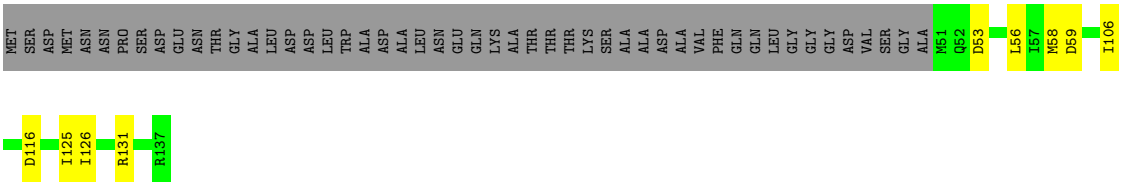


• Molecule 13: Flagellar motor switch protein FliN

Chain CM:

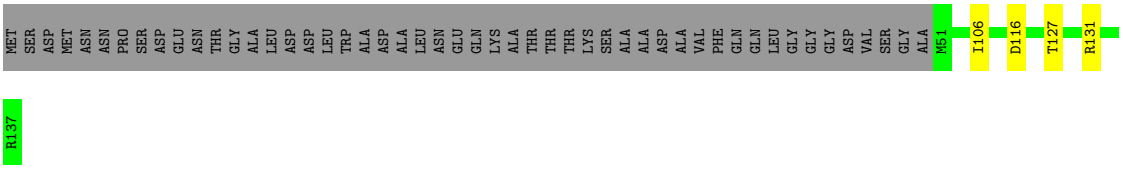
• Molecule 13: Flagellar motor switch protein FliN

Chain CR:



• Molecule 13: Flagellar motor switch protein FliN

Chain CS:

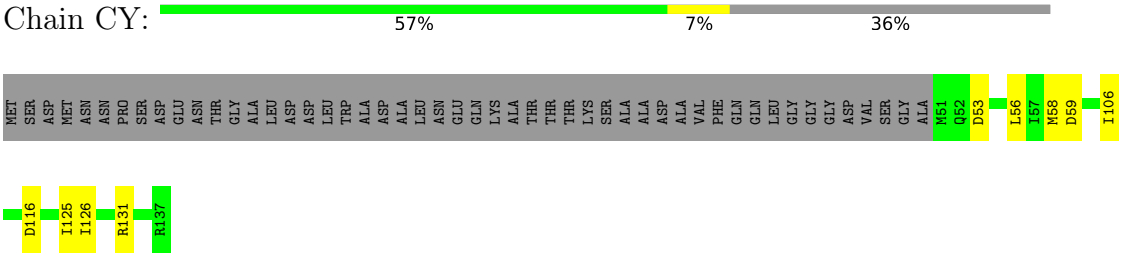


• Molecule 13: Flagellar motor switch protein FliN

Chain CT:

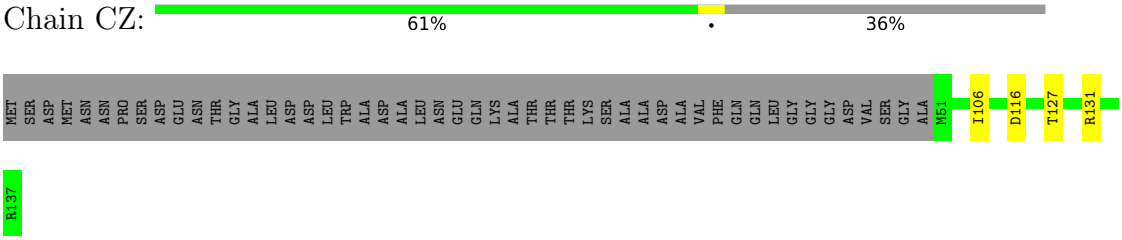
• Molecule 13: Flagellar motor switch protein FliN

Chain CY:



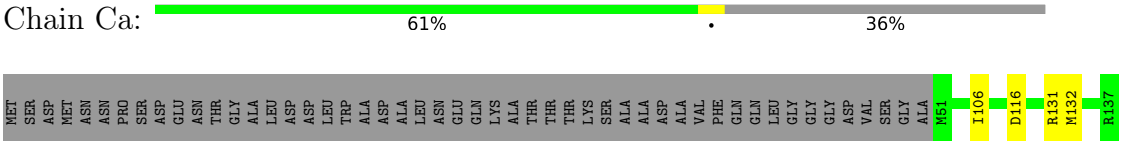
• Molecule 13: Flagellar motor switch protein FliN

Chain CZ:



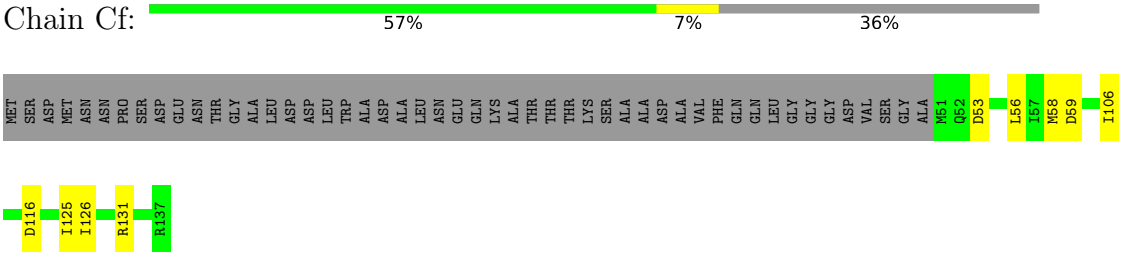
• Molecule 13: Flagellar motor switch protein FliN

Chain Ca:



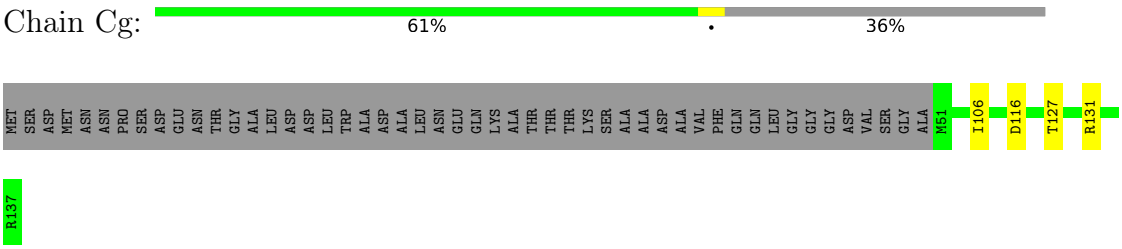
• Molecule 13: Flagellar motor switch protein FliN

Chain Cf:



• Molecule 13: Flagellar motor switch protein FliN

Chain Cg:



• Molecule 13: Flagellar motor switch protein FliN

Chain Ch:

• Molecule 13: Flagellar motor switch protein FliN

Chain Cm:

• Molecule 13: Flagellar motor switch protein FliN

Chain Cn:

• Molecule 13: Flagellar motor switch protein FliN

Chain Co:

• Molecule 13: Flagellar motor switch protein FliN

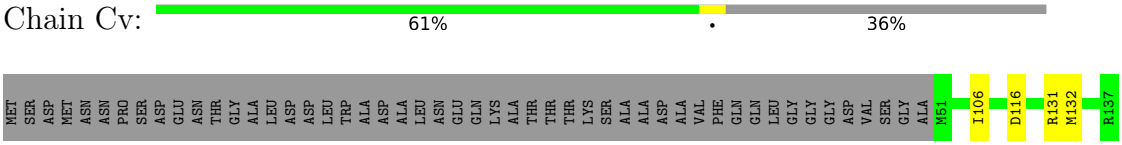
Chain Ct:

• Molecule 13: Flagellar motor switch protein FliN

Chain Cu:

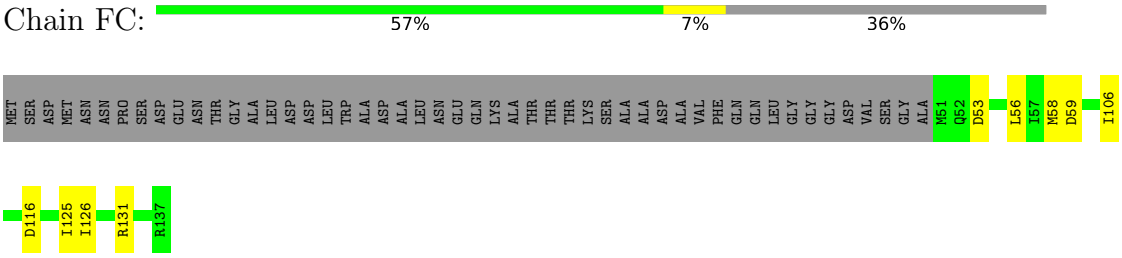
• Molecule 13: Flagellar motor switch protein FliN

Chain Cv:



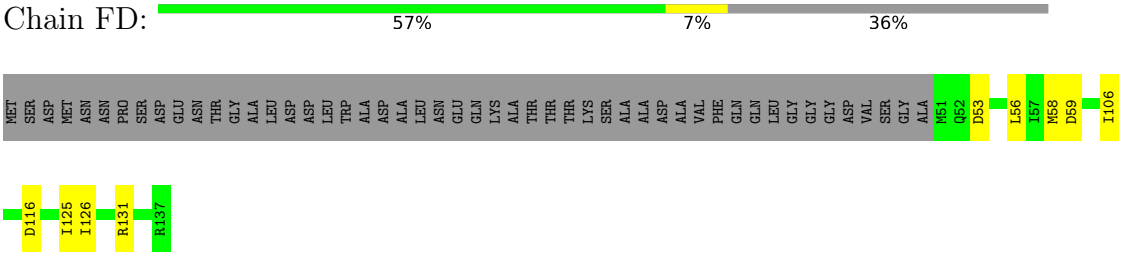
• Molecule 13: Flagellar motor switch protein FliN

Chain FC:



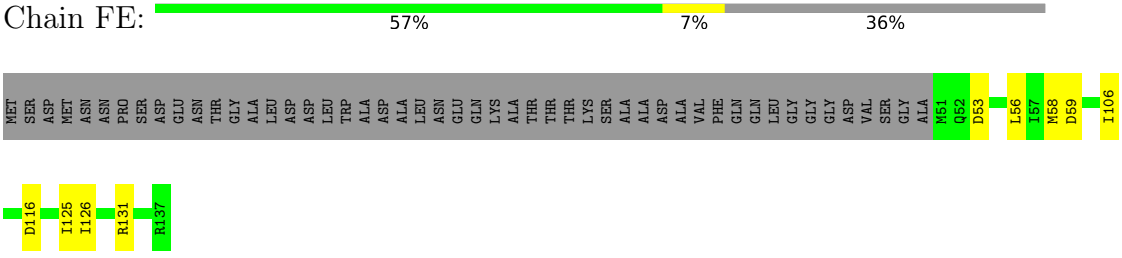
• Molecule 13: Flagellar motor switch protein FliN

Chain FD:



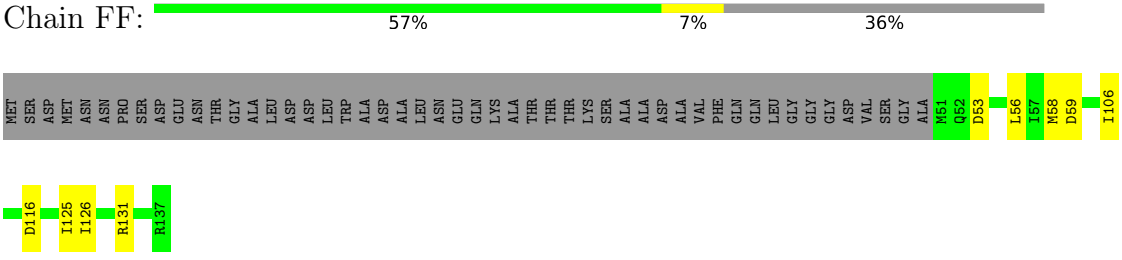
• Molecule 13: Flagellar motor switch protein FliN

Chain FE:



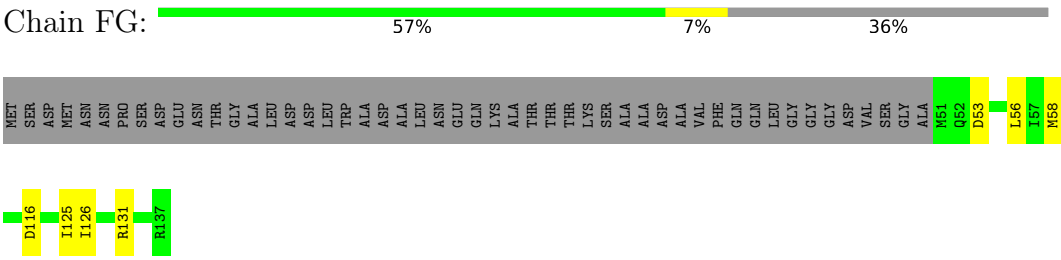
• Molecule 13: Flagellar motor switch protein FliN

Chain FF:



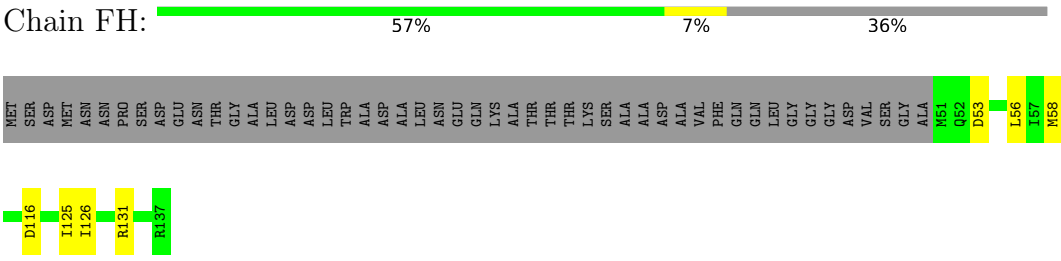
• Molecule 13: Flagellar motor switch protein FliN

Chain FG:



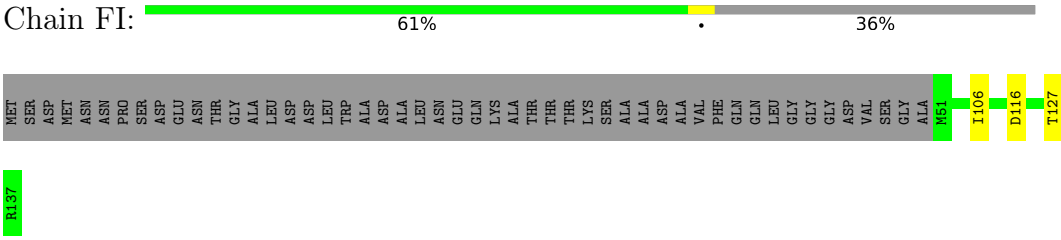
• Molecule 13: Flagellar motor switch protein FliN

Chain FH:



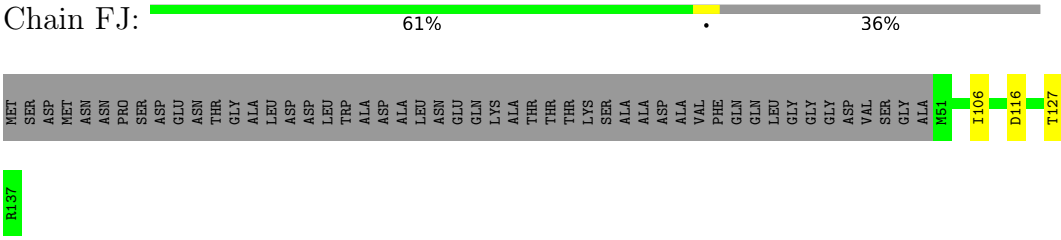
• Molecule 13: Flagellar motor switch protein FliN

Chain FI:



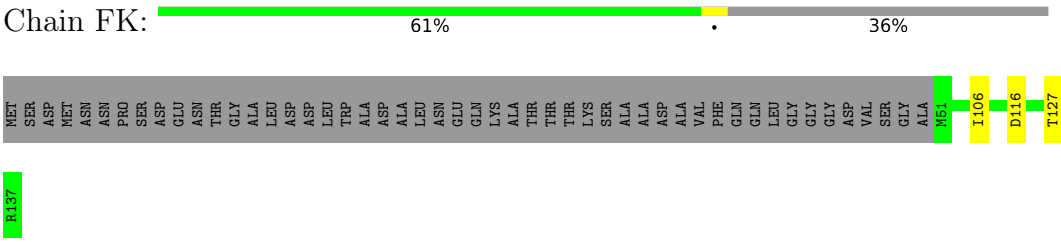
• Molecule 13: Flagellar motor switch protein FliN

Chain FJ:



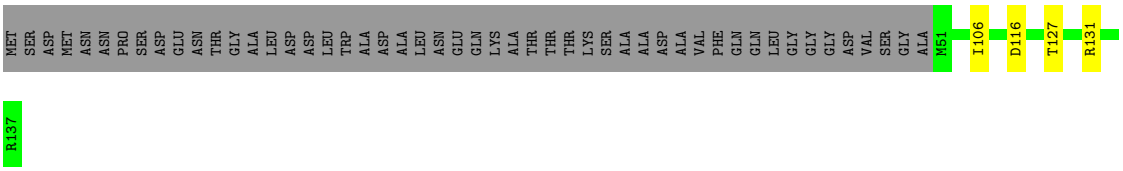
• Molecule 13: Flagellar motor switch protein FliN

Chain FK:



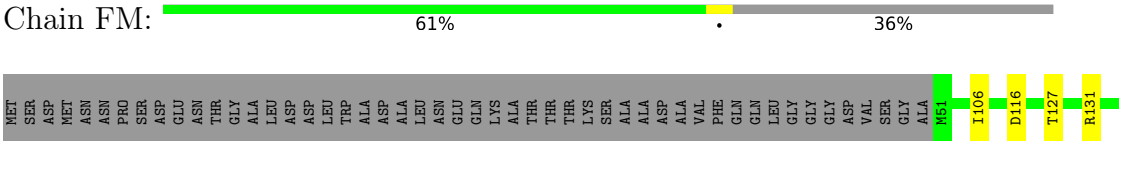
• Molecule 13: Flagellar motor switch protein FliN

Chain FL:



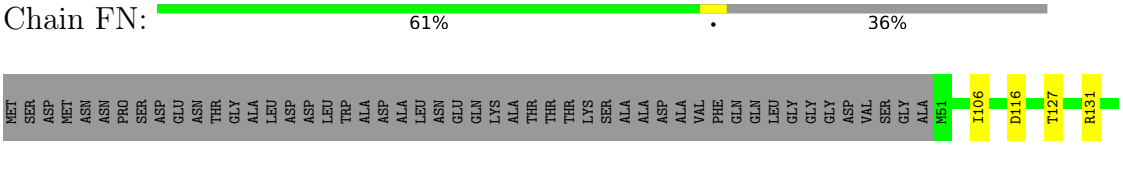
• Molecule 13: Flagellar motor switch protein FliN

Chain FM:



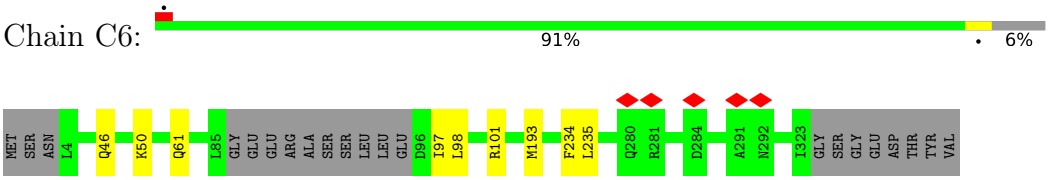
• Molecule 13: Flagellar motor switch protein FliN

Chain FN:



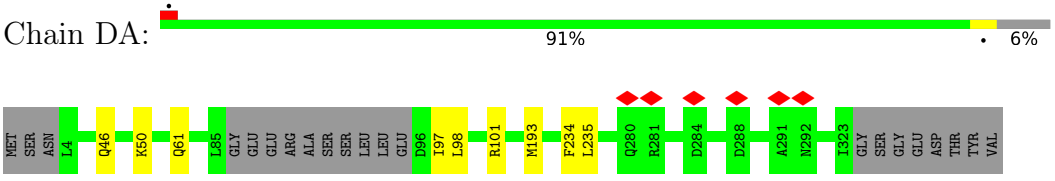
• Molecule 14: Flagellar motor switch protein FliG

Chain C6:



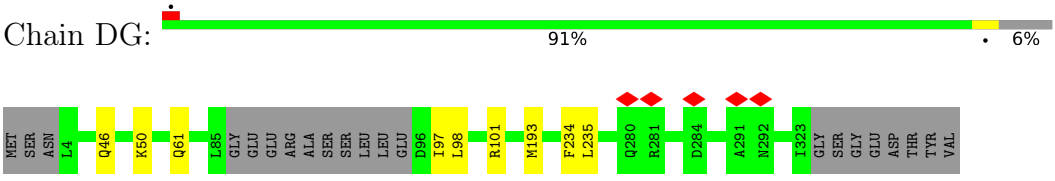
• Molecule 14: Flagellar motor switch protein FliG

Chain DA:



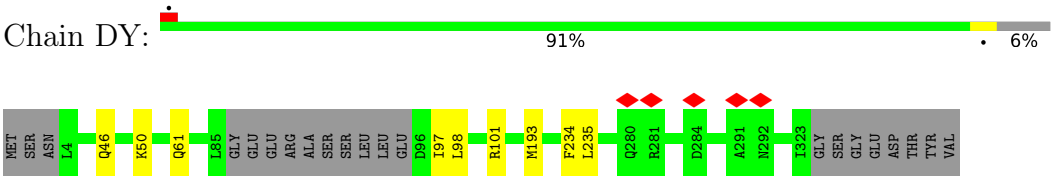
• Molecule 14: Flagellar motor switch protein FliG

Chain DG:



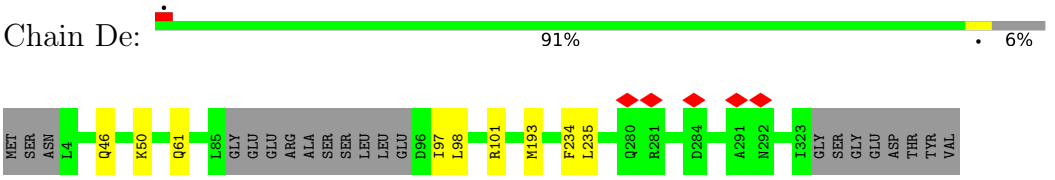
• Molecule 14: Flagellar motor switch protein FliG

Chain DY:



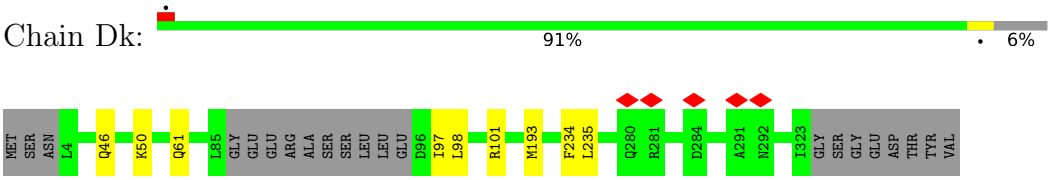
• Molecule 14: Flagellar motor switch protein FliG

Chain De:



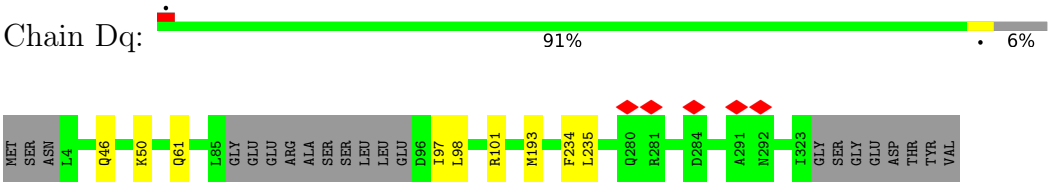
• Molecule 14: Flagellar motor switch protein FliG

Chain Dk:



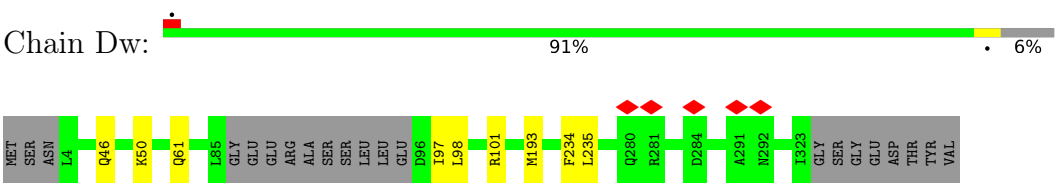
• Molecule 14: Flagellar motor switch protein FliG

Chain Dq:



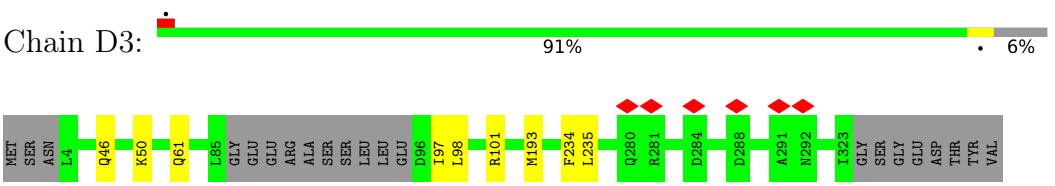
• Molecule 14: Flagellar motor switch protein FliG

Chain Dw:



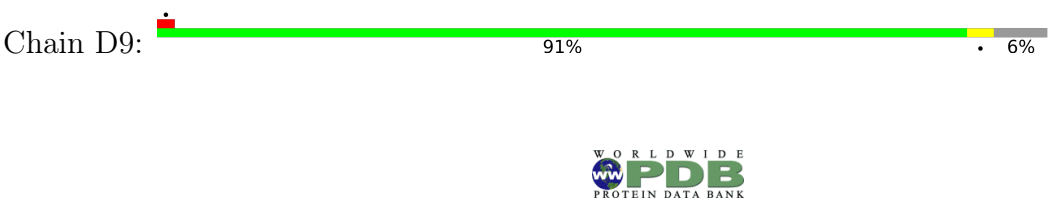
• Molecule 14: Flagellar motor switch protein FliG

Chain D3:



• Molecule 14: Flagellar motor switch protein FliG

Chain D9:

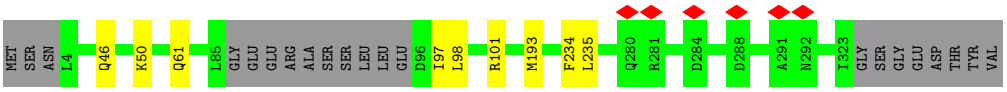


• Molecule 14: Flagellar motor switch protein FliG

Chain B5:

• Molecule 14: Flagellar motor switch protein FliG

Chain EC:

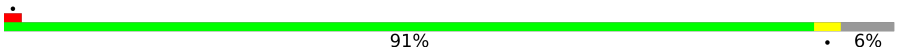


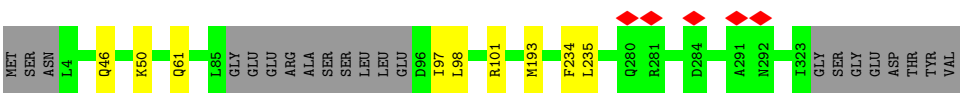
• Molecule 14: Flagellar motor switch protein FliG

Chain EJ:

• Molecule 14: Flagellar motor switch protein FliG

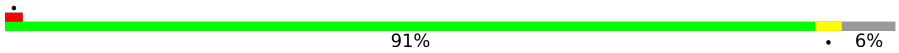
Chain EQ:





• Molecule 14: Flagellar motor switch protein FliG

Chain EX:

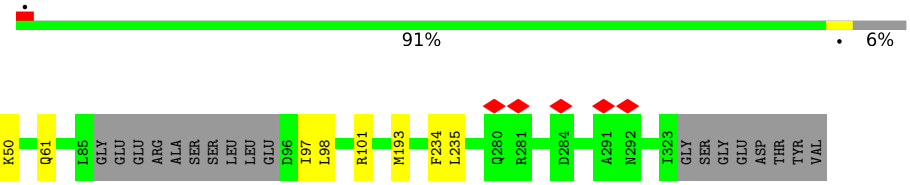


• Molecule 14: Flagellar motor switch protein FliG

Chain Bc:

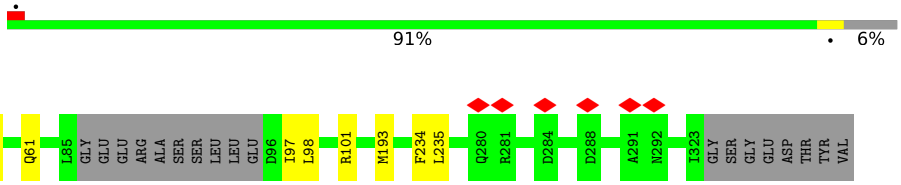
• Molecule 14: Flagellar motor switch protein FliG

Chain Bj:



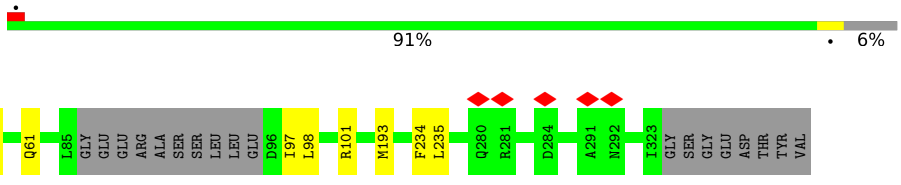
• Molecule 14: Flagellar motor switch protein FliG

Chain Bq:



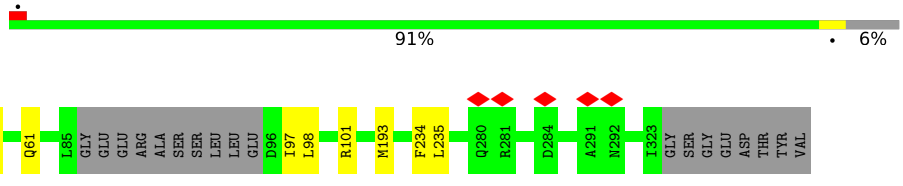
• Molecule 14: Flagellar motor switch protein FliG

Chain Bx:



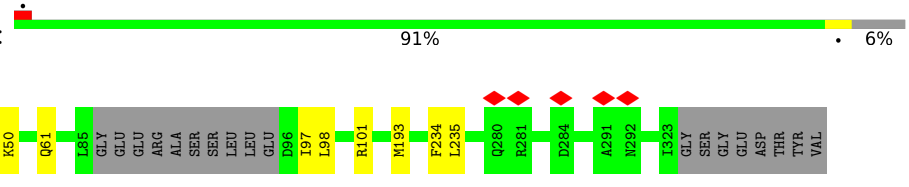
• Molecule 14: Flagellar motor switch protein FliG

Chain CB:



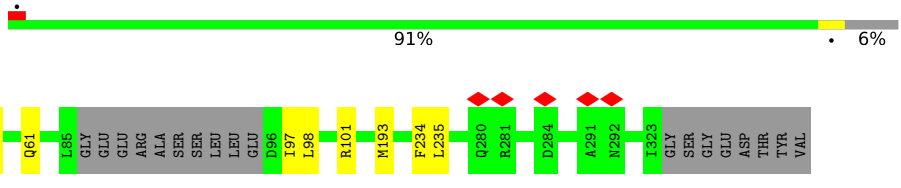
• Molecule 14: Flagellar motor switch protein FliG

Chain CI:



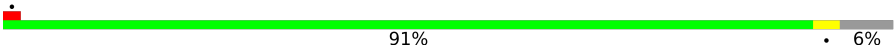
• Molecule 14: Flagellar motor switch protein FliG

Chain CP:



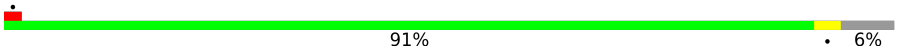
• Molecule 14: Flagellar motor switch protein FliG

Chain CW:



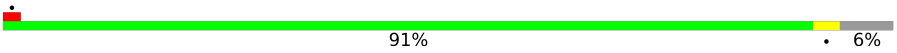
• Molecule 14: Flagellar motor switch protein FliG

Chain Cd:



• Molecule 14: Flagellar motor switch protein FliG

Chain Ck:

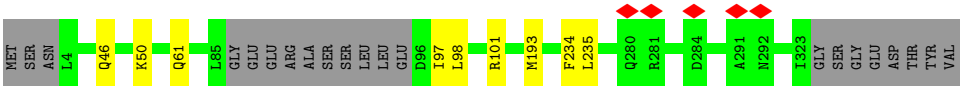


• Molecule 14: Flagellar motor switch protein FliG

Chain Cr:

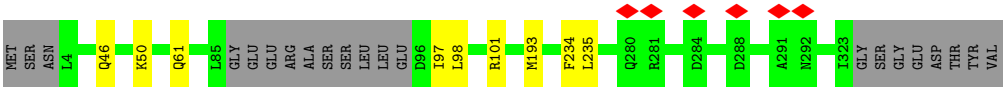
• Molecule 14: Flagellar motor switch protein FliG

Chain Cy:



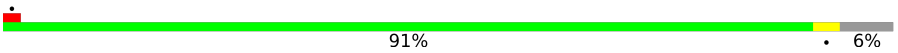
• Molecule 14: Flagellar motor switch protein FliG

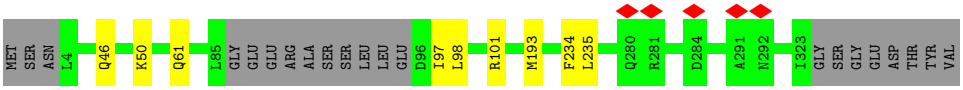
Chain Ex:



• Molecule 14: Flagellar motor switch protein FliG

Chain Ey:



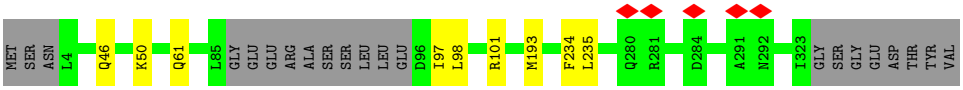


• Molecule 14: Flagellar motor switch protein FliG

Chain Ez:

• Molecule 14: Flagellar motor switch protein FliG

Chain E1:

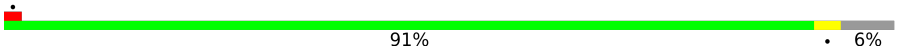


• Molecule 14: Flagellar motor switch protein FliG

Chain E2:

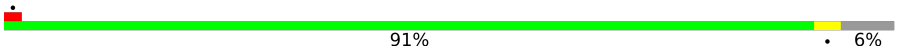
• Molecule 14: Flagellar motor switch protein FliG

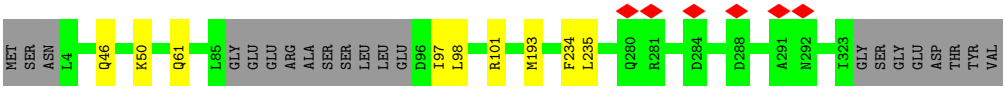
Chain E3:



• Molecule 14: Flagellar motor switch protein FliG

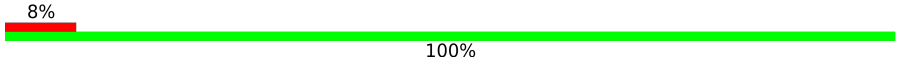
Chain E4:

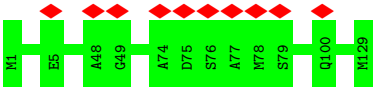




• Molecule 15: Chemotaxis protein CheY

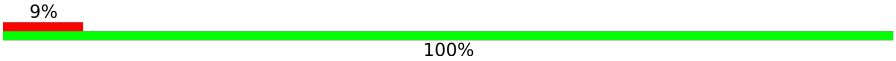
Chain C7:

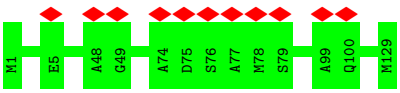




• Molecule 15: Chemotaxis protein CheY

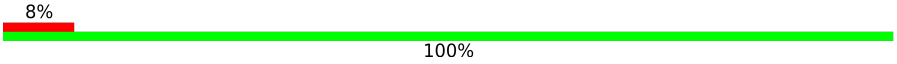
Chain DB:

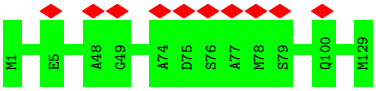




• Molecule 15: Chemotaxis protein CheY

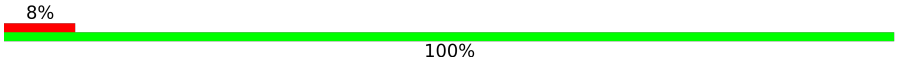
Chain DH:

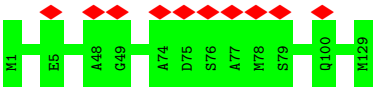




• Molecule 15: Chemotaxis protein CheY

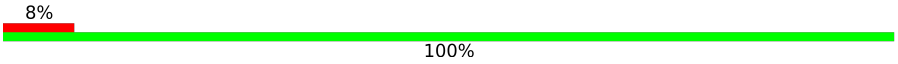
Chain DZ:

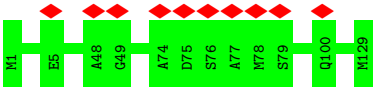




• Molecule 15: Chemotaxis protein CheY

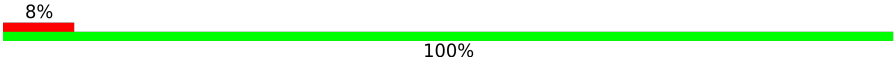
Chain Df:

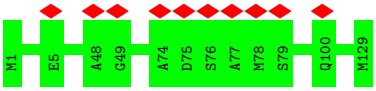




• Molecule 15: Chemotaxis protein CheY

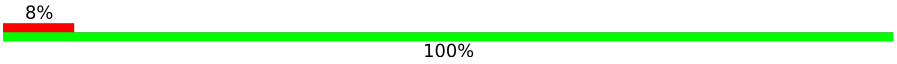
Chain Dl:

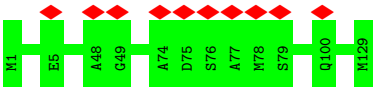




• Molecule 15: Chemotaxis protein CheY

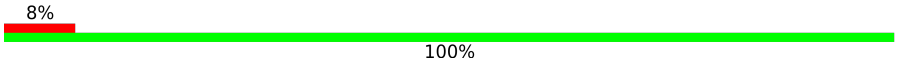
Chain Dr:

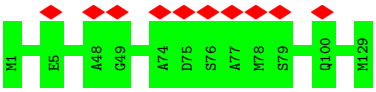




• Molecule 15: Chemotaxis protein CheY

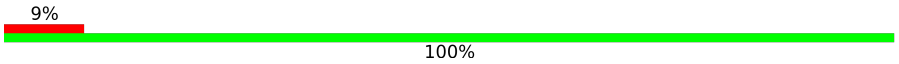
Chain Dx:

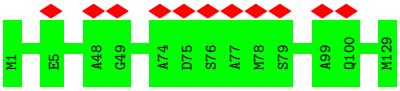




• Molecule 15: Chemotaxis protein CheY

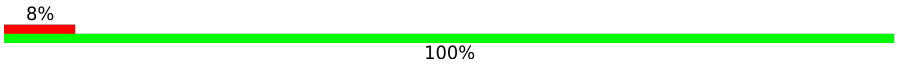
Chain D4:

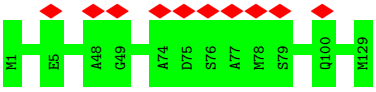




• Molecule 15: Chemotaxis protein CheY

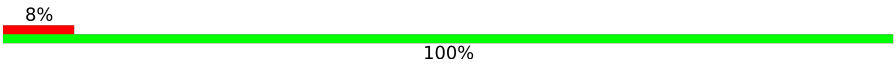
Chain D0:

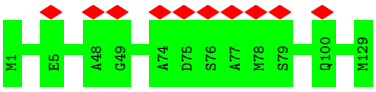




• Molecule 15: Chemotaxis protein CheY

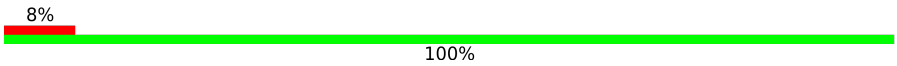
Chain B6:

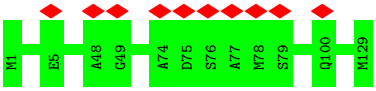




• Molecule 15: Chemotaxis protein CheY

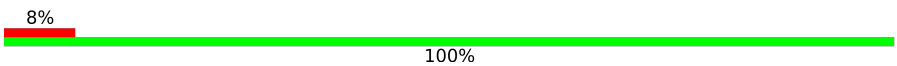
Chain ED:

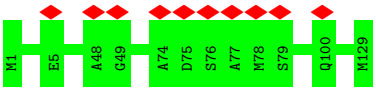




• Molecule 15: Chemotaxis protein CheY

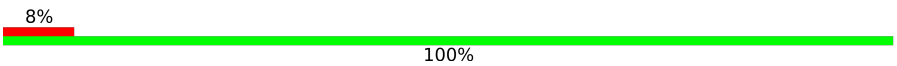
Chain EK:

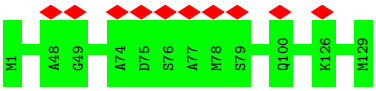




• Molecule 15: Chemotaxis protein CheY

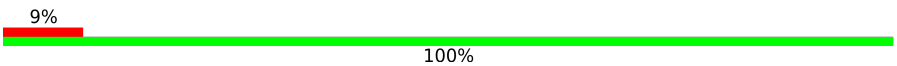
Chain ER:

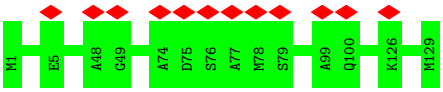




• Molecule 15: Chemotaxis protein CheY

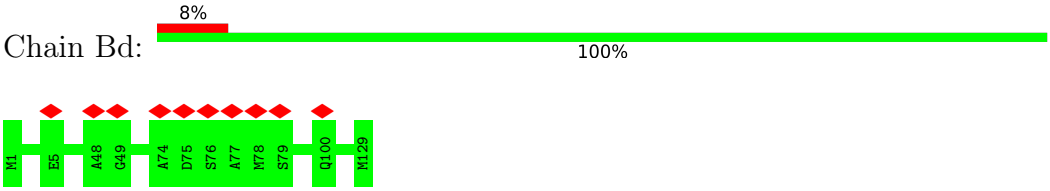
Chain EY:





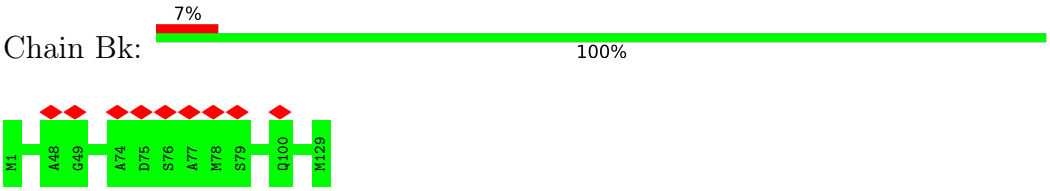
• Molecule 15: Chemotaxis protein CheY

Chain Bd:



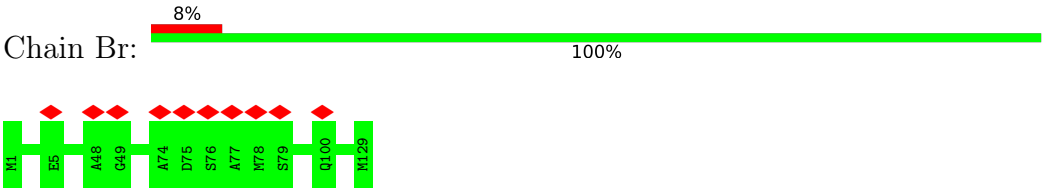
• Molecule 15: Chemotaxis protein CheY

Chain Bk:



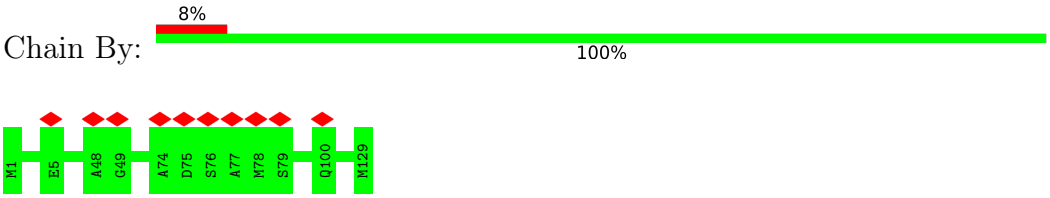
• Molecule 15: Chemotaxis protein CheY

Chain Br:



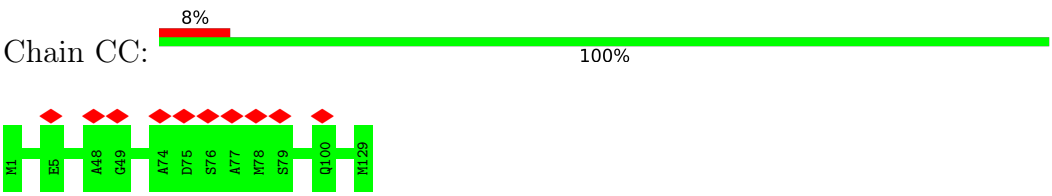
• Molecule 15: Chemotaxis protein CheY

Chain By:



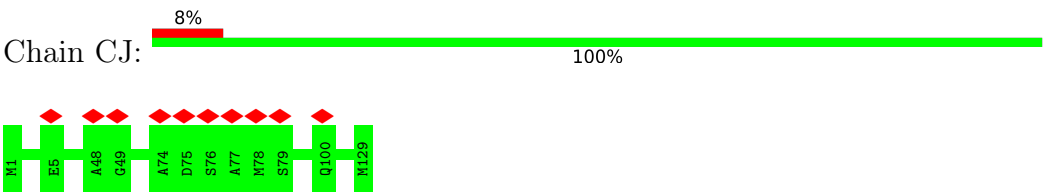
• Molecule 15: Chemotaxis protein CheY

Chain CC:



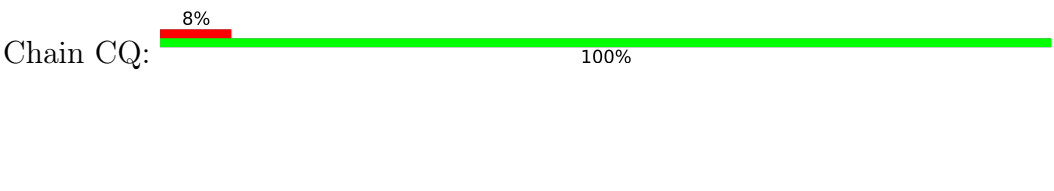
• Molecule 15: Chemotaxis protein CheY

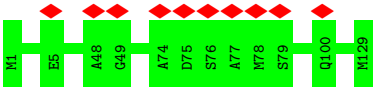
Chain CJ:



• Molecule 15: Chemotaxis protein CheY

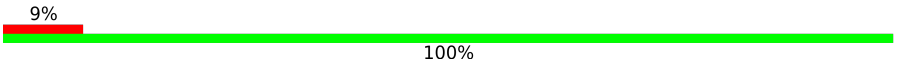
Chain CQ:

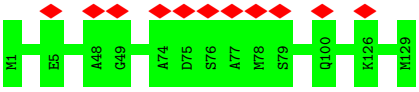




• Molecule 15: Chemotaxis protein CheY

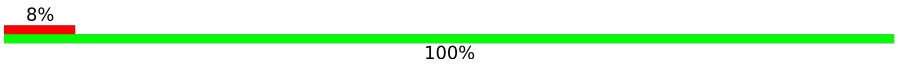
Chain CX:

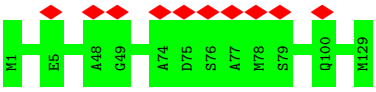




• Molecule 15: Chemotaxis protein CheY

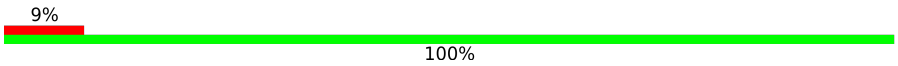
Chain Ce:

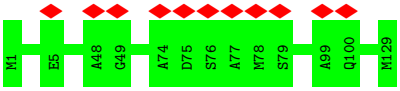




• Molecule 15: Chemotaxis protein CheY

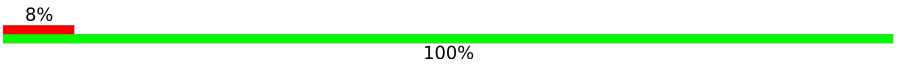
Chain Cl:

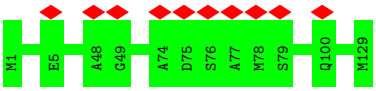




• Molecule 15: Chemotaxis protein CheY

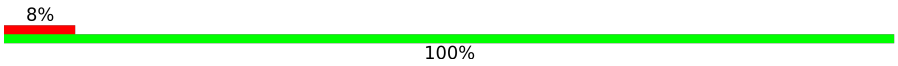
Chain Cs:

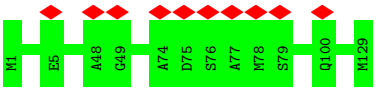




• Molecule 15: Chemotaxis protein CheY

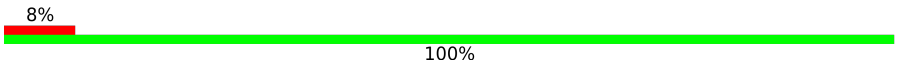
Chain Cz:

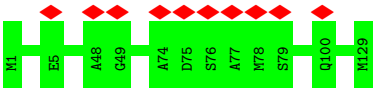




• Molecule 15: Chemotaxis protein CheY

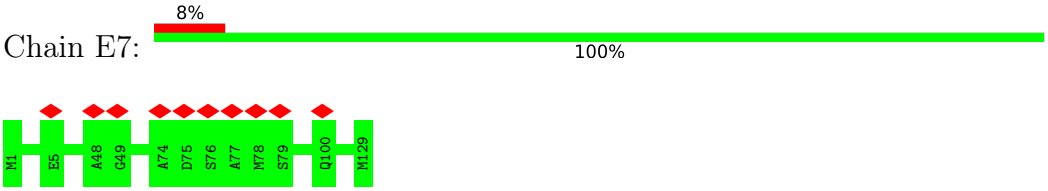
Chain E6:





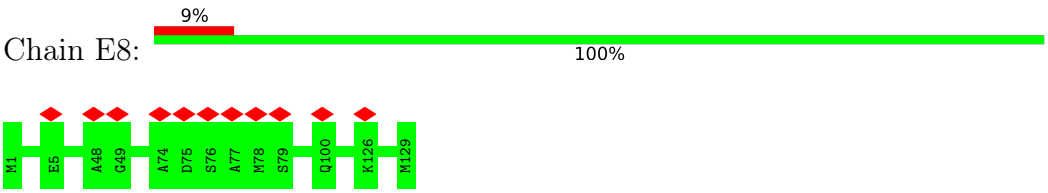
• Molecule 15: Chemotaxis protein CheY

Chain E7:



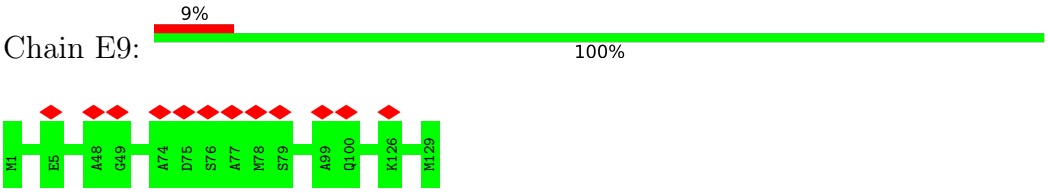
• Molecule 15: Chemotaxis protein CheY

Chain E8:



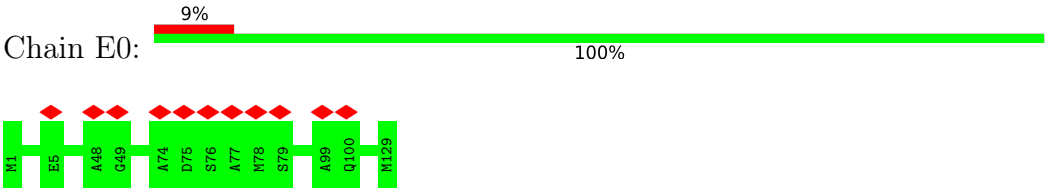
• Molecule 15: Chemotaxis protein CheY

Chain E9:



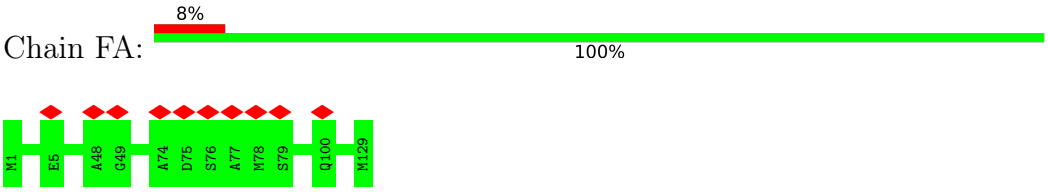
• Molecule 15: Chemotaxis protein CheY

Chain E0:



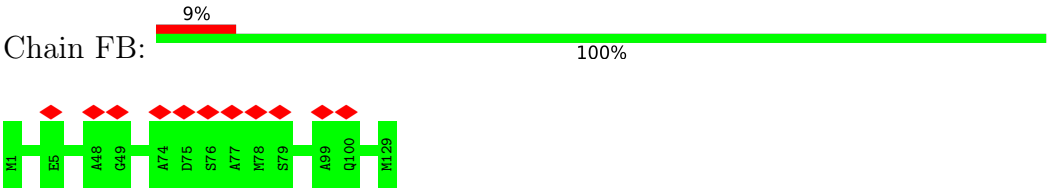
• Molecule 15: Chemotaxis protein CheY

Chain FA:



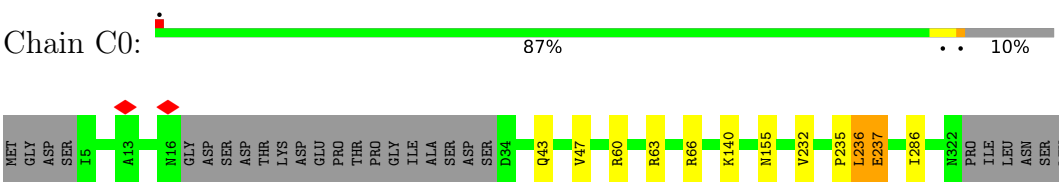
• Molecule 15: Chemotaxis protein CheY

Chain FB:



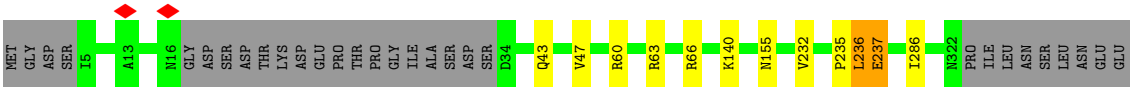
• Molecule 16: Flagellar motor switch protein FliM

Chain C0:



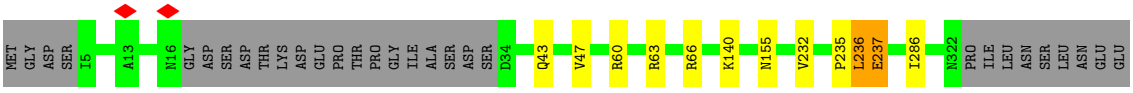
• Molecule 16: Flagellar motor switch protein FliM

Chain DC:



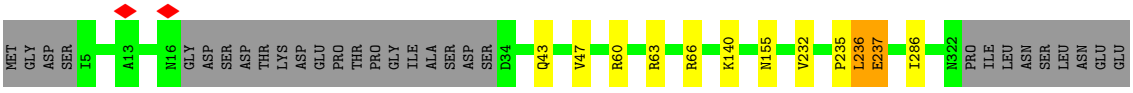
• Molecule 16: Flagellar motor switch protein FliM

Chain DF:



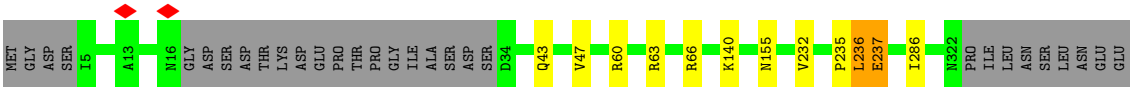
• Molecule 16: Flagellar motor switch protein FliM

Chain DX:



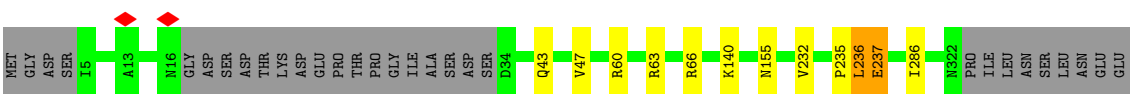
• Molecule 16: Flagellar motor switch protein FliM

Chain Dd:



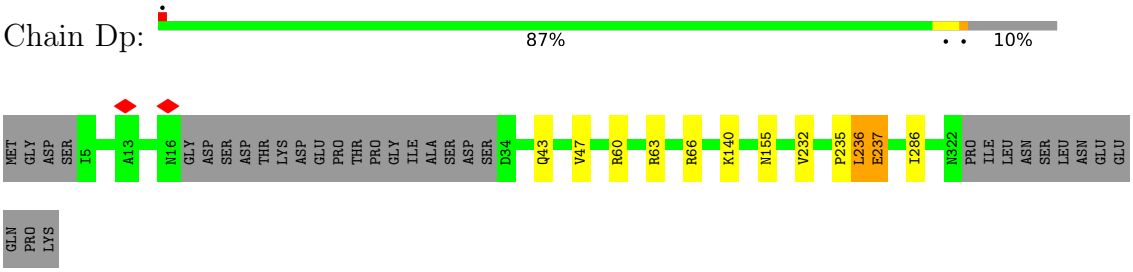
• Molecule 16: Flagellar motor switch protein FliM

Chain Dj:



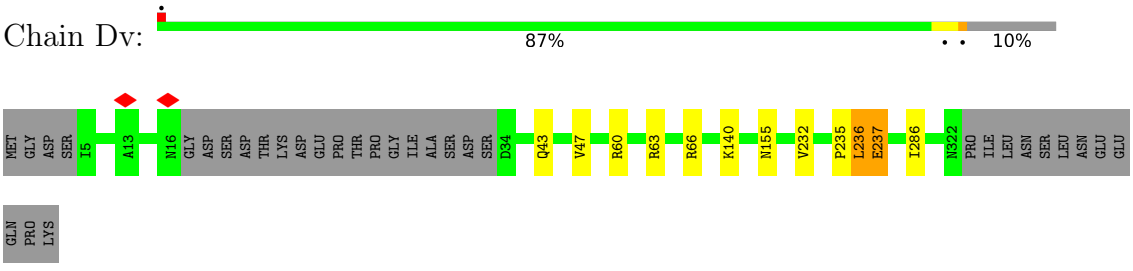
• Molecule 16: Flagellar motor switch protein FliM

Chain Dp:



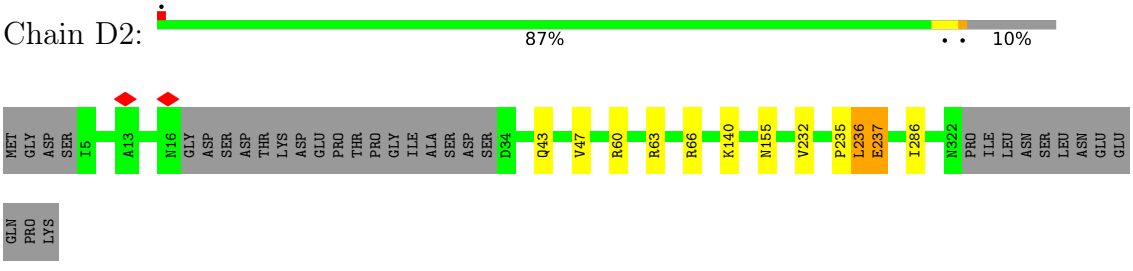
• Molecule 16: Flagellar motor switch protein FliM

Chain Dv:



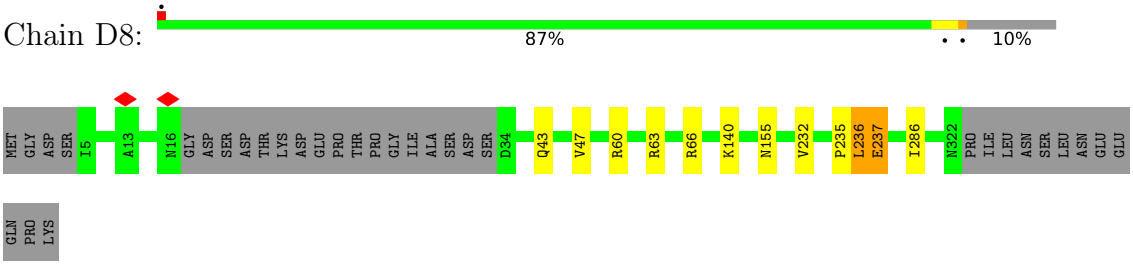
• Molecule 16: Flagellar motor switch protein FliM

Chain D2:



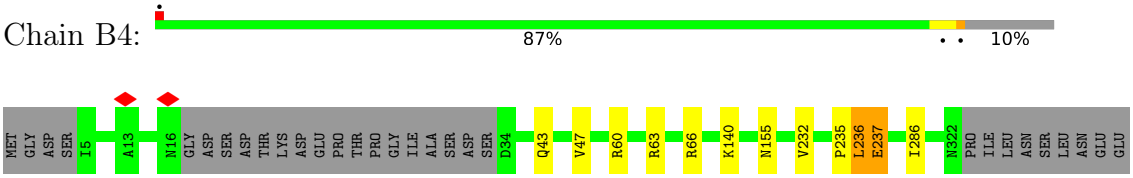
• Molecule 16: Flagellar motor switch protein FliM

Chain D8:



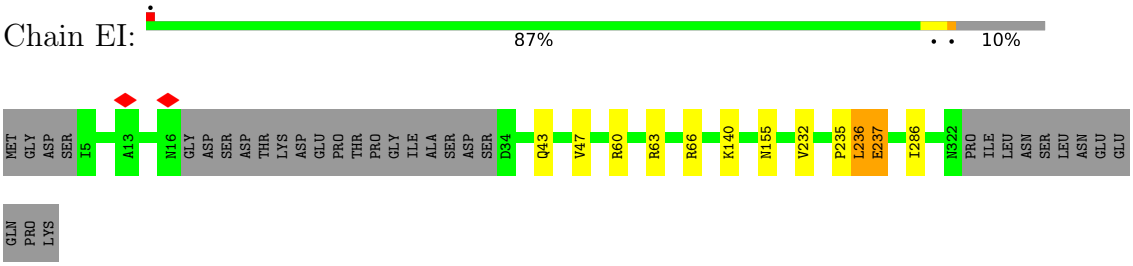
• Molecule 16: Flagellar motor switch protein FliM

Chain B4:



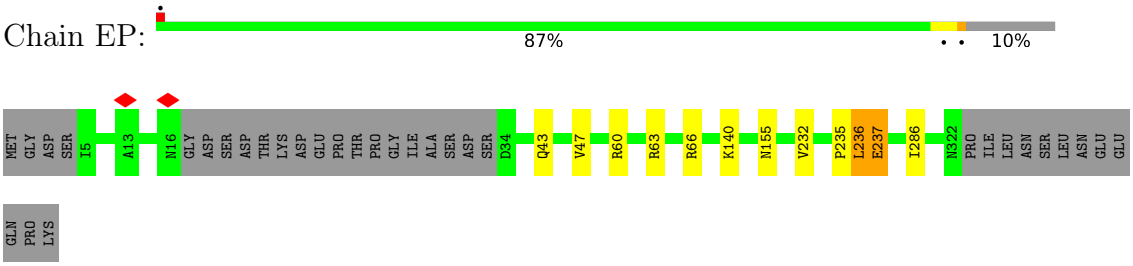
• Molecule 16: Flagellar motor switch protein FliM

Chain EI:



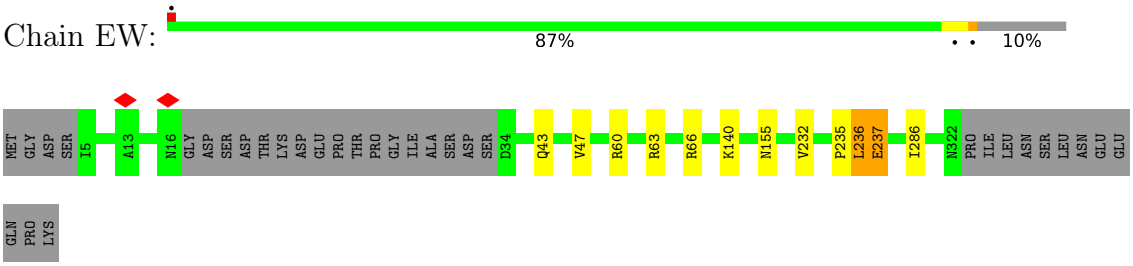
• Molecule 16: Flagellar motor switch protein FliM

Chain EP:



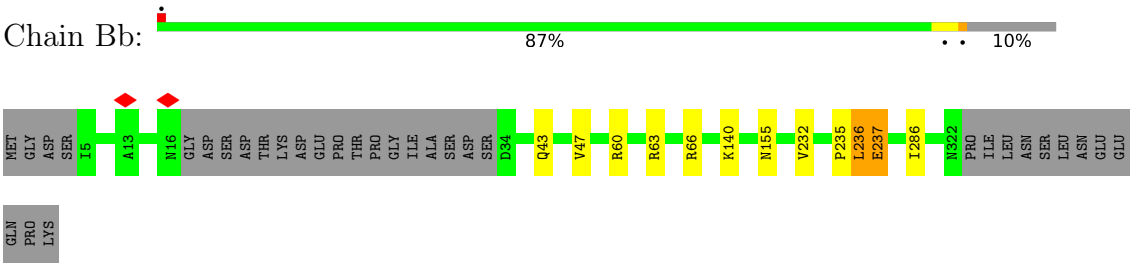
• Molecule 16: Flagellar motor switch protein FliM

Chain EW:



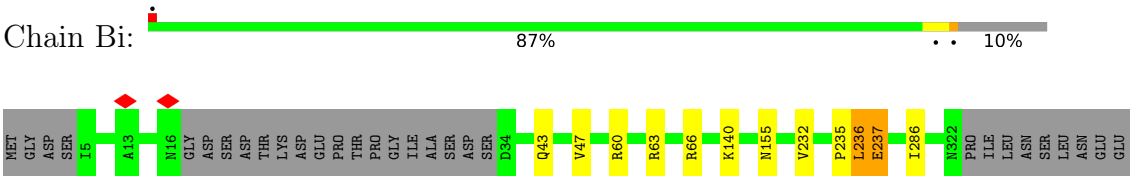
• Molecule 16: Flagellar motor switch protein FliM

Chain Bb:



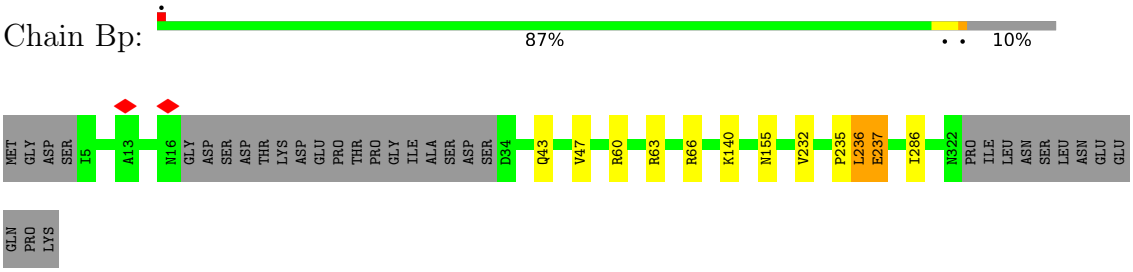
• Molecule 16: Flagellar motor switch protein FliM

Chain Bi:



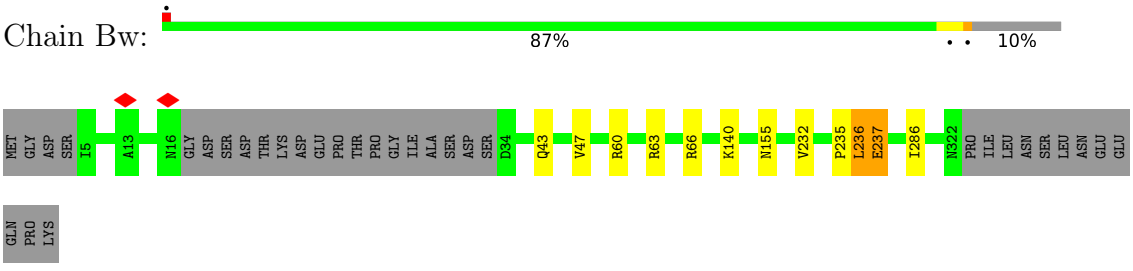
• Molecule 16: Flagellar motor switch protein FliM

Chain Bp:



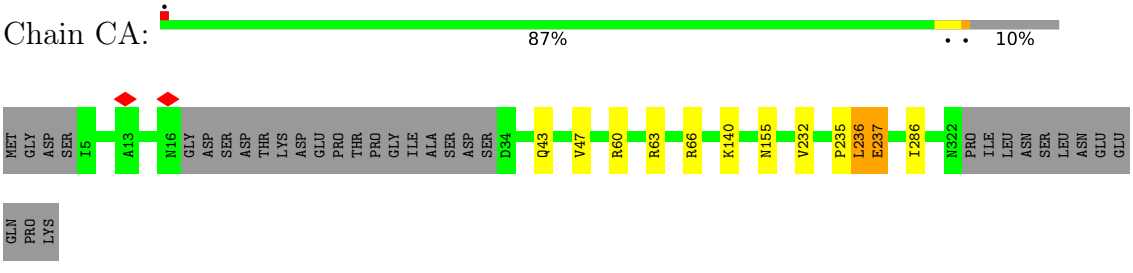
• Molecule 16: Flagellar motor switch protein FliM

Chain Bw:



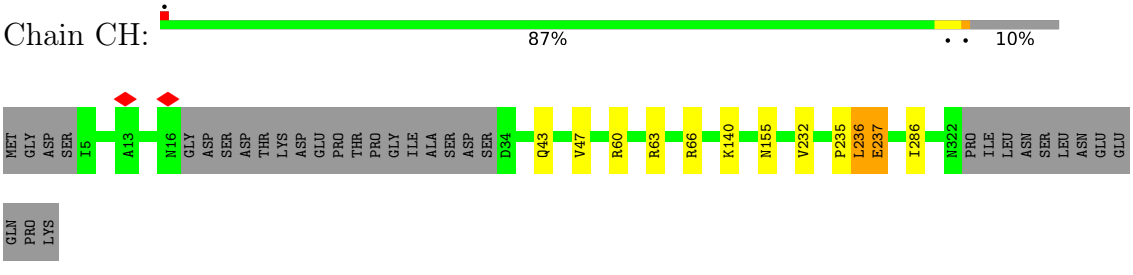
• Molecule 16: Flagellar motor switch protein FliM

Chain CA:



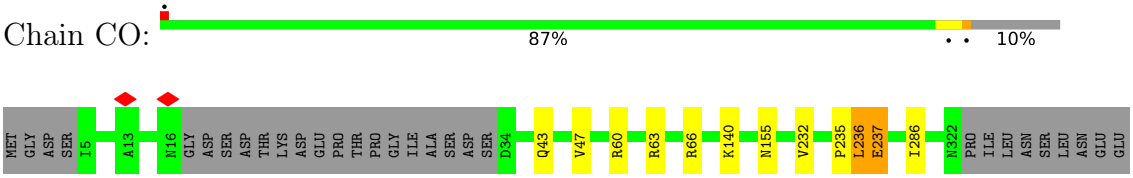
• Molecule 16: Flagellar motor switch protein FliM

Chain CH:



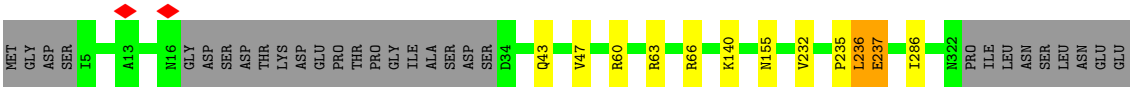
• Molecule 16: Flagellar motor switch protein FliM

Chain CO:



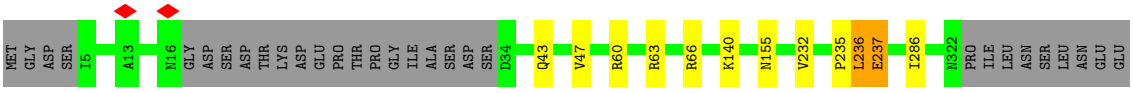
• Molecule 16: Flagellar motor switch protein FliM

Chain CV:



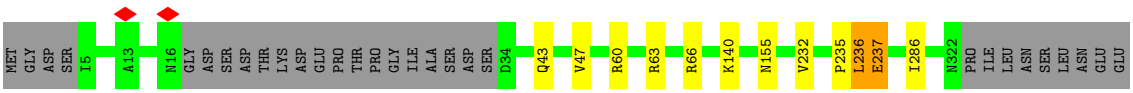
• Molecule 16: Flagellar motor switch protein FliM

Chain Cc:



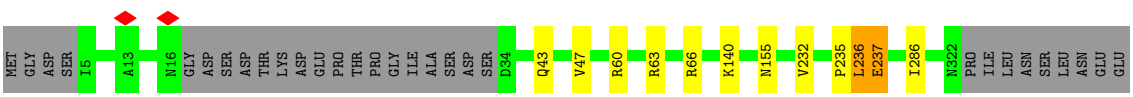
• Molecule 16: Flagellar motor switch protein FliM

Chain Cj:



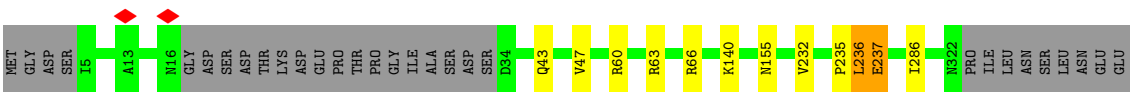
• Molecule 16: Flagellar motor switch protein FliM

Chain Cq:



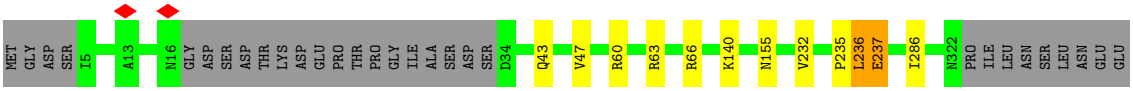
• Molecule 16: Flagellar motor switch protein FliM

Chain Cx:



• Molecule 16: Flagellar motor switch protein FliM

Chain Eq:



• Molecule 16: Flagellar motor switch protein FliM

Chain Er:

• Molecule 16: Flagellar motor switch protein FliM

Chain Es:

• Molecule 16: Flagellar motor switch protein FliM

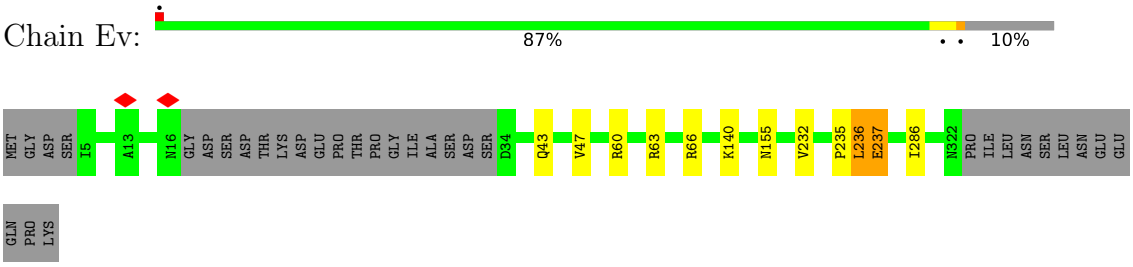
Chain Et:

• Molecule 16: Flagellar motor switch protein FliM

Chain Eu:

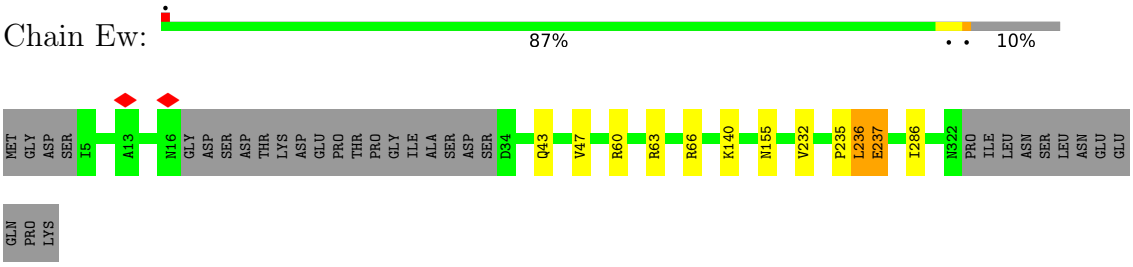
• Molecule 16: Flagellar motor switch protein FliM

Chain Ev:



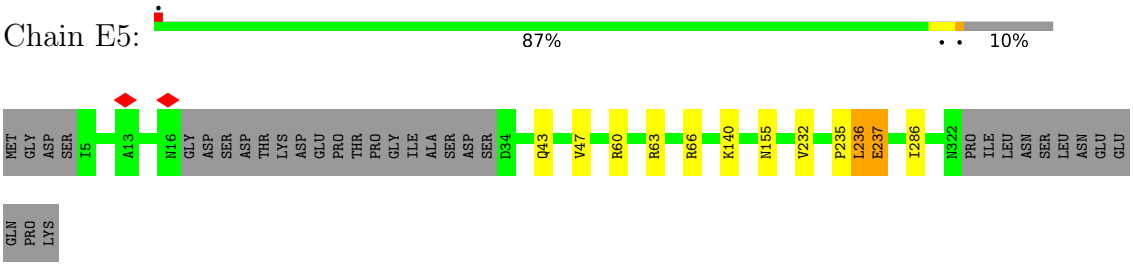
• Molecule 16: Flagellar motor switch protein FliM

Chain Ew:



• Molecule 16: Flagellar motor switch protein FliM

Chain E5:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C34	Depositor
Number of particles used	26921	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 ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	105000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.415	Depositor
Minimum map value	-0.224	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.018	Depositor
Recommended contour level	0.04	Depositor
Map size (Å)	1008.00006, 1008.00006, 1008.00006	wwPDB
Map dimensions	840, 840, 840	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.2, 1.2, 1.2	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	0	0.30	0/1888	0.52	1/2564 (0.0%)
1	1	0.31	0/1917	0.50	0/2605
1	2	0.27	0/1973	0.48	0/2682
1	3	0.28	0/1973	0.50	0/2682
1	4	0.28	0/1973	0.50	0/2682
1	5	0.32	0/1973	0.52	0/2682
1	6	0.31	0/1973	0.52	0/2682
1	7	0.28	0/1973	0.51	0/2682
1	8	0.30	0/1973	0.52	0/2682
1	9	0.29	0/1973	0.54	1/2682 (0.0%)
1	AF	0.33	0/1926	0.53	0/2618
1	AG	0.36	0/1934	0.56	0/2629
1	AH	0.33	0/1942	0.55	0/2639
1	AI	0.33	0/1926	0.57	1/2618 (0.0%)
1	AJ	0.30	0/1934	0.51	0/2629
1	AK	0.32	0/1844	0.51	0/2505
1	AL	0.31	0/1888	0.51	0/2564
1	AM	0.30	0/1888	0.54	1/2564 (0.0%)
1	AN	0.30	0/1888	0.51	0/2564
1	ZA	0.29	0/1973	0.52	0/2682
1	ZB	0.29	0/1973	0.49	0/2682
1	ZC	0.28	0/1973	0.51	0/2682
1	ZD	0.28	0/1973	0.51	0/2682
1	ZE	0.28	0/1973	0.50	1/2682 (0.0%)
2	A	0.27	0/1613	0.51	0/2194
2	B	0.27	0/1613	0.51	0/2194
2	C	0.27	0/1613	0.51	0/2194
2	D	0.27	0/1613	0.51	0/2194
2	E	0.27	0/1613	0.51	0/2194
2	F	0.27	0/1613	0.51	0/2194
2	G	0.27	0/1613	0.51	0/2194
2	H	0.27	0/1613	0.51	0/2194
2	I	0.27	0/1613	0.51	0/2194
2	J	0.27	0/1613	0.51	0/2194

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
2	K	0.27	0/1613	0.51	0/2194
2	L	0.27	0/1613	0.51	0/2194
2	M	0.27	0/1613	0.51	0/2194
2	N	0.27	0/1613	0.51	0/2194
2	O	0.27	0/1613	0.51	0/2194
2	P	0.27	0/1613	0.51	0/2194
2	Q	0.27	0/1613	0.51	0/2194
2	R	0.27	0/1613	0.51	0/2194
2	S	0.27	0/1613	0.51	0/2194
2	T	0.27	0/1613	0.51	0/2194
2	U	0.27	0/1613	0.51	0/2194
2	V	0.27	0/1613	0.51	0/2194
2	W	0.27	0/1613	0.51	0/2194
2	X	0.27	0/1613	0.51	0/2194
2	Y	0.27	0/1613	0.51	0/2194
2	Z	0.27	0/1613	0.51	0/2194
3	A0	0.34	0/959	0.50	0/1293
3	A6	0.36	0/1042	0.55	0/1408
3	A7	0.33	0/951	0.50	0/1282
3	A8	0.35	0/976	0.57	0/1316
3	A9	0.34	0/991	0.54	0/1335
4	A1	0.36	0/675	0.49	0/905
4	A2	0.37	0/689	0.52	0/925
4	A3	0.36	0/689	0.51	0/925
4	A4	0.37	0/689	0.53	0/925
4	A5	0.37	0/682	0.51	0/915
4	Az	0.42	0/428	0.53	0/572
5	AA	0.33	0/1828	0.56	0/2492
5	AB	0.29	0/1836	0.54	1/2502 (0.0%)
5	AC	0.28	0/1844	0.54	0/2512
5	AD	0.27	0/1844	0.53	0/2512
5	AE	0.31	0/1836	0.55	0/2502
6	AO	0.27	0/1289	0.53	0/1741
6	AP	0.27	0/1289	0.53	0/1741
6	AQ	0.27	0/1289	0.53	0/1741
6	AR	0.27	0/1289	0.53	0/1741
6	AS	0.27	0/1289	0.53	0/1741
6	AT	0.27	0/1289	0.53	0/1741
6	AU	0.27	0/1289	0.53	0/1741
6	AV	0.27	0/1289	0.53	0/1741
6	AW	0.27	0/1289	0.53	0/1741
6	AX	0.27	0/1289	0.53	0/1741
6	AY	0.27	0/1289	0.53	0/1741

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
6	AZ	0.27	0/1289	0.53	0/1741
6	Aa	0.27	0/1289	0.53	0/1741
6	Ac	0.27	0/1289	0.53	0/1741
6	Ad	0.27	0/1289	0.53	0/1741
6	Ae	0.27	0/1289	0.53	0/1741
6	Af	0.27	0/1289	0.53	0/1741
6	Ag	0.27	0/1289	0.53	0/1741
6	Ah	0.27	0/1289	0.53	0/1741
6	Ai	0.27	0/1289	0.53	0/1741
6	Aj	0.27	0/1289	0.53	0/1741
6	Ak	0.27	0/1289	0.53	0/1741
6	Al	0.27	0/1289	0.53	0/1741
6	Am	0.27	0/1289	0.53	0/1741
6	An	0.27	0/1289	0.53	0/1741
6	Ao	0.27	0/1289	0.53	0/1741
6	Ap	0.26	0/1289	0.53	0/1741
6	B0	0.22	0/226	0.50	0/303
6	B3	0.22	0/226	0.48	0/303
6	BG	0.52	0/83	0.63	0/114
6	BH	0.27	0/107	0.38	0/148
6	BI	0.30	0/137	0.49	0/191
6	BJ	0.28	0/107	0.56	0/148
6	BK	1.36	1/145 (0.7%)	1.49	3/203 (1.5%)
6	BL	0.33	0/107	0.51	0/148
6	BM	0.26	0/145	0.44	0/203
6	BN	0.30	0/107	0.38	0/148
6	BO	0.30	0/137	0.57	0/191
6	BP	0.30	0/107	0.37	0/148
6	BQ	0.29	0/145	0.45	0/203
6	BR	0.27	0/1289	0.52	0/1741
6	BS	0.27	0/1289	0.53	0/1741
6	BT	0.27	0/1289	0.53	0/1741
6	BU	0.27	0/1289	0.53	0/1741
6	BV	0.27	0/1289	0.53	0/1741
6	BW	0.26	0/1289	0.53	0/1741
6	BX	0.27	0/1289	0.53	0/1741
6	Ba	0.22	0/226	0.49	0/303
6	Bh	0.22	0/226	0.49	0/303
6	Bo	0.22	0/226	0.49	0/303
6	Bv	0.22	0/226	0.49	0/303
6	CG	0.22	0/226	0.49	0/303
6	CN	0.22	0/226	0.49	0/303
6	CU	0.22	0/226	0.49	0/303

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
6	Cb	0.22	0/226	0.49	0/303
6	Ci	0.22	0/226	0.49	0/303
6	Cp	0.22	0/226	0.49	0/303
6	Cw	0.22	0/226	0.49	0/303
6	DE	0.22	0/226	0.49	0/303
6	DL	0.22	0/226	0.49	0/303
6	EH	0.22	0/226	0.49	0/303
6	EO	0.22	0/226	0.49	0/303
6	EV	0.22	0/226	0.49	0/303
6	Ea	0.22	0/226	0.49	0/303
6	Eb	0.22	0/226	0.48	0/303
6	Ec	0.22	0/226	0.49	0/303
6	Ed	0.22	0/226	0.49	0/303
6	Ee	0.23	0/226	0.49	0/303
6	Ef	0.22	0/226	0.48	0/303
6	Eg	0.22	0/226	0.49	0/303
6	Eh	0.22	0/226	0.49	0/303
6	Ei	0.22	0/226	0.49	0/303
6	Ej	0.22	0/226	0.50	0/303
6	Ek	0.22	0/226	0.49	0/303
6	El	0.22	0/226	0.49	0/303
6	Em	0.22	0/226	0.48	0/303
6	En	0.22	0/226	0.49	0/303
6	Eo	0.22	0/226	0.49	0/303
6	Ep	0.22	0/226	0.49	0/303
6	UI	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UJ	0.84	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UK	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UL	0.82	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UM	0.84	3/1191 (0.3%)	0.82	4/1618 (0.2%)
6	UN	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UO	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	UP	0.84	2/1191 (0.2%)	0.82	4/1618 (0.2%)
6	WA	0.61	0/863	0.72	1/1172 (0.1%)
6	WB	0.59	0/850	0.69	0/1154
6	WC	0.59	0/825	0.68	0/1121
6	WD	0.61	0/841	0.68	0/1142
6	WE	0.60	0/857	0.71	0/1164
6	WF	0.60	0/848	0.69	0/1152
6	WG	0.60	0/857	0.68	0/1164
6	WH	0.60	0/714	0.69	0/973
6	WI	0.60	0/714	0.74	0/973
6	WJ	0.61	0/749	0.72	1/1020 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
6	WK	0.60	0/741	0.69	0/1009
6	WL	0.60	0/631	0.70	0/860
6	WM	0.59	0/604	0.70	0/824
6	WN	0.60	0/619	0.70	0/844
6	WO	0.60	0/726	0.72	1/989 (0.1%)
6	WP	0.60	0/753	0.69	0/1025
6	WQ	0.60	0/848	0.69	0/1152
6	WR	0.60	0/848	0.69	0/1152
6	WS	0.61	0/848	0.69	0/1152
6	WT	0.60	0/848	0.70	0/1152
6	WU	0.60	0/857	0.67	0/1164
6	WV	0.61	0/841	0.69	0/1142
6	WW	0.60	0/848	0.70	0/1152
7	Ab	0.29	0/681	0.47	0/930
7	Aq	0.26	0/681	0.49	0/930
7	Ar	0.28	0/681	0.48	0/930
7	As	0.29	0/681	0.49	0/930
8	At	0.38	1/1994 (0.1%)	0.55	1/2724 (0.0%)
9	Au	0.36	0/1643	0.62	2/2237 (0.1%)
9	Av	0.30	0/1665	0.49	1/2267 (0.0%)
9	Aw	0.29	0/1652	0.48	0/2249
9	Ax	0.28	0/1652	0.46	0/2249
9	Ay	0.31	0/1662	0.49	0/2263
10	BA	0.28	0/981	0.44	0/1334
10	BB	0.26	0/976	0.46	0/1327
10	BC	0.57	2/981 (0.2%)	0.95	3/1334 (0.2%)
10	BD	0.28	0/981	0.52	1/1334 (0.1%)
10	BE	0.26	0/981	0.47	0/1334
10	BF	0.28	0/981	0.47	0/1334
11	ZF	0.28	0/2991	0.49	0/4076
11	ZG	0.31	0/2991	0.50	0/4076
11	ZH	0.28	0/2991	0.50	0/4076
11	ZI	0.30	0/2991	0.51	0/4076
11	ZJ	0.31	0/2991	0.51	0/4076
11	ZK	0.26	0/2991	0.48	0/4076
11	ZL	0.28	0/2991	0.49	0/4076
11	ZM	0.29	0/2991	0.53	1/4076 (0.0%)
11	ZN	0.28	0/2991	0.51	0/4076
11	ZO	0.30	0/2991	0.50	0/4076
11	ZP	0.28	0/2991	0.50	1/4076 (0.0%)
11	ZQ	0.29	0/2991	0.51	0/4076
11	ZR	0.30	1/2991 (0.0%)	0.55	3/4076 (0.1%)
11	ZS	0.29	0/2991	0.52	1/4076 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
11	ZT	0.26	0/2991	0.47	0/4076
11	ZU	0.28	0/2991	0.50	0/4076
11	ZV	0.50	4/2991 (0.1%)	0.67	6/4076 (0.1%)
11	ZW	0.26	0/2991	0.48	0/4076
11	ZX	0.28	0/2991	0.48	0/4076
11	ZY	0.30	1/2991 (0.0%)	0.54	2/4076 (0.0%)
11	ZZ	0.25	0/2991	0.46	0/4076
11	Za	0.28	0/2991	0.49	0/4076
11	Zb	0.29	0/2991	0.50	0/4076
11	Zc	0.29	0/2991	0.53	2/4076 (0.0%)
11	Zd	0.29	0/2991	0.50	0/4076
11	Ze	0.27	0/2991	0.48	0/4076
11	Zf	0.27	0/2991	0.48	0/4076
11	Zg	0.27	0/2991	0.49	0/4076
11	Zh	0.26	0/2991	0.48	0/4076
12	a	0.26	0/2243	0.51	0/3041
12	b	0.26	0/2243	0.51	0/3041
12	c	0.26	0/2243	0.51	0/3041
12	d	0.26	0/2243	0.51	0/3041
12	e	0.26	0/2243	0.51	0/3041
12	f	0.26	0/2243	0.51	0/3041
12	g	0.26	0/2243	0.51	0/3041
12	h	0.26	0/2243	0.51	0/3041
12	i	0.26	0/2243	0.51	0/3041
12	j	0.26	0/2243	0.51	0/3041
12	k	0.26	0/2243	0.51	0/3041
12	l	0.26	0/2243	0.51	0/3041
12	m	0.26	0/2243	0.51	0/3041
12	n	0.26	0/2243	0.51	0/3041
12	o	0.26	0/2243	0.51	0/3041
12	p	0.26	0/2243	0.51	0/3041
12	q	0.26	0/2243	0.51	0/3041
12	r	0.26	0/2243	0.51	0/3041
12	s	0.26	0/2243	0.51	0/3041
12	t	0.26	0/2243	0.51	0/3041
12	u	0.26	0/2243	0.51	0/3041
12	v	0.26	0/2243	0.51	0/3041
12	w	0.26	0/2243	0.51	0/3041
12	x	0.26	0/2243	0.51	0/3041
12	y	0.26	0/2243	0.51	0/3041
12	z	0.26	0/2243	0.51	0/3041
13	B1	0.31	0/679	0.54	0/917
13	B2	0.29	0/679	0.53	0/917

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
13	B7	0.39	0/679	0.57	0/917
13	B8	0.31	0/679	0.55	0/917
13	B9	0.29	0/679	0.53	0/917
13	BY	0.31	0/679	0.54	0/917
13	BZ	0.29	0/679	0.53	0/917
13	Be	0.39	0/679	0.57	0/917
13	Bf	0.31	0/679	0.54	0/917
13	Bg	0.29	0/679	0.53	0/917
13	Bl	0.39	0/679	0.57	0/917
13	Bm	0.31	0/679	0.54	0/917
13	Bn	0.29	0/679	0.53	0/917
13	Bs	0.39	0/679	0.57	0/917
13	Bt	0.31	0/679	0.54	0/917
13	Bu	0.30	0/679	0.53	0/917
13	Bz	0.39	0/679	0.57	0/917
13	C1	0.39	0/679	0.57	0/917
13	C2	0.31	0/679	0.54	0/917
13	C3	0.29	0/679	0.53	0/917
13	C4	0.39	0/679	0.57	0/917
13	C5	0.31	0/679	0.54	0/917
13	C8	0.39	0/679	0.57	0/917
13	C9	0.31	0/679	0.54	0/917
13	CD	0.39	0/679	0.57	0/917
13	CE	0.31	0/679	0.54	0/917
13	CF	0.29	0/679	0.53	0/917
13	CK	0.39	0/679	0.57	0/917
13	CL	0.31	0/679	0.54	0/917
13	CM	0.29	0/679	0.53	0/917
13	CR	0.39	0/679	0.57	0/917
13	CS	0.31	0/679	0.54	0/917
13	CT	0.29	0/679	0.53	0/917
13	CY	0.39	0/679	0.57	0/917
13	CZ	0.31	0/679	0.54	0/917
13	Ca	0.29	0/679	0.53	0/917
13	Cf	0.39	0/679	0.57	0/917
13	Cg	0.31	0/679	0.54	0/917
13	Ch	0.29	0/679	0.53	0/917
13	Cm	0.39	0/679	0.57	0/917
13	Cn	0.32	0/679	0.54	0/917
13	Co	0.30	0/679	0.53	0/917
13	Ct	0.39	0/679	0.57	0/917
13	Cu	0.31	0/679	0.55	0/917
13	Cv	0.29	0/679	0.53	0/917

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
13	D1	0.29	0/679	0.53	0/917
13	D5	0.39	0/679	0.57	0/917
13	D6	0.31	0/679	0.54	0/917
13	D7	0.29	0/679	0.53	0/917
13	DD	0.30	0/679	0.53	0/917
13	DI	0.39	0/679	0.57	0/917
13	DJ	0.31	0/679	0.54	0/917
13	DK	0.29	0/679	0.53	0/917
13	DM	0.29	0/679	0.53	0/917
13	DN	0.29	0/679	0.53	0/917
13	DO	0.29	0/679	0.53	0/917
13	DP	0.29	0/679	0.53	0/917
13	DQ	0.29	0/679	0.53	0/917
13	DR	0.29	0/679	0.53	0/917
13	DS	0.29	0/679	0.53	0/917
13	DT	0.29	0/679	0.53	0/917
13	DU	0.39	0/679	0.57	0/917
13	DV	0.31	0/679	0.54	0/917
13	DW	0.29	0/679	0.53	0/917
13	Da	0.39	0/679	0.57	0/917
13	Db	0.31	0/679	0.54	0/917
13	Dc	0.29	0/679	0.53	0/917
13	Dg	0.39	0/679	0.57	0/917
13	Dh	0.31	0/679	0.54	0/917
13	Di	0.29	0/679	0.53	0/917
13	Dm	0.39	0/679	0.57	0/917
13	Dn	0.31	0/679	0.54	0/917
13	Do	0.29	0/679	0.53	0/917
13	Ds	0.39	0/679	0.57	0/917
13	Dt	0.31	0/679	0.54	0/917
13	Du	0.29	0/679	0.53	0/917
13	Dy	0.39	0/679	0.57	0/917
13	Dz	0.31	0/679	0.54	0/917
13	EA	0.39	0/679	0.57	0/917
13	EB	0.31	0/679	0.54	0/917
13	EE	0.39	0/679	0.57	0/917
13	EF	0.31	0/679	0.54	0/917
13	EG	0.30	0/679	0.53	0/917
13	EL	0.39	0/679	0.57	0/917
13	EM	0.31	0/679	0.54	0/917
13	EN	0.29	0/679	0.53	0/917
13	ES	0.39	0/679	0.57	0/917
13	ET	0.31	0/679	0.54	0/917

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
13	EU	0.29	0/679	0.53	0/917
13	EZ	0.39	0/679	0.57	0/917
13	FC	0.39	0/679	0.57	0/917
13	FD	0.39	0/679	0.57	0/917
13	FE	0.39	0/679	0.57	0/917
13	FF	0.39	0/679	0.57	0/917
13	FG	0.39	0/679	0.57	0/917
13	FH	0.39	0/679	0.57	0/917
13	FI	0.31	0/679	0.54	0/917
13	FJ	0.31	0/679	0.54	0/917
13	FK	0.31	0/679	0.54	0/917
13	FL	0.31	0/679	0.54	0/917
13	FM	0.31	0/679	0.54	0/917
13	FN	0.31	0/679	0.54	0/917
14	B5	0.24	0/2447	0.46	0/3300
14	Bc	0.23	0/2447	0.46	0/3300
14	Bj	0.23	0/2447	0.46	0/3300
14	Bq	0.23	0/2447	0.46	0/3300
14	Bx	0.24	0/2447	0.46	0/3300
14	C6	0.23	0/2447	0.46	0/3300
14	CB	0.23	0/2447	0.46	0/3300
14	CI	0.23	0/2447	0.46	0/3300
14	CP	0.23	0/2447	0.46	0/3300
14	CW	0.23	0/2447	0.46	0/3300
14	Cd	0.23	0/2447	0.46	0/3300
14	Ck	0.23	0/2447	0.46	0/3300
14	Cr	0.23	0/2447	0.46	0/3300
14	Cy	0.23	0/2447	0.46	0/3300
14	D3	0.23	0/2447	0.46	0/3300
14	D9	0.23	0/2447	0.46	0/3300
14	DA	0.24	0/2447	0.46	0/3300
14	DG	0.23	0/2447	0.46	0/3300
14	DY	0.23	0/2447	0.46	0/3300
14	De	0.23	0/2447	0.46	0/3300
14	Dk	0.23	0/2447	0.46	0/3300
14	Dq	0.23	0/2447	0.46	0/3300
14	Dw	0.24	0/2447	0.46	0/3300
14	E1	0.23	0/2447	0.46	0/3300
14	E2	0.23	0/2447	0.46	0/3300
14	E3	0.23	0/2447	0.46	0/3300
14	E4	0.23	0/2447	0.46	0/3300
14	EC	0.23	0/2447	0.46	0/3300
14	EJ	0.23	0/2447	0.46	0/3300

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
14	EQ	0.23	0/2447	0.46	0/3300
14	EX	0.23	0/2447	0.46	0/3300
14	Ex	0.23	0/2447	0.46	0/3300
14	Ey	0.23	0/2447	0.46	0/3300
14	Ez	0.23	0/2447	0.46	0/3300
15	B6	0.24	0/1004	0.41	0/1349
15	Bd	0.24	0/1004	0.41	0/1349
15	Bk	0.24	0/1004	0.40	0/1349
15	Br	0.24	0/1004	0.41	0/1349
15	By	0.24	0/1004	0.41	0/1349
15	C7	0.24	0/1004	0.41	0/1349
15	CC	0.24	0/1004	0.41	0/1349
15	CJ	0.24	0/1004	0.40	0/1349
15	CQ	0.24	0/1004	0.41	0/1349
15	CX	0.24	0/1004	0.41	0/1349
15	Ce	0.24	0/1004	0.41	0/1349
15	Cl	0.24	0/1004	0.41	0/1349
15	Cs	0.24	0/1004	0.41	0/1349
15	Cz	0.24	0/1004	0.41	0/1349
15	D0	0.24	0/1004	0.41	0/1349
15	D4	0.24	0/1004	0.41	0/1349
15	DB	0.24	0/1004	0.41	0/1349
15	DH	0.24	0/1004	0.40	0/1349
15	DZ	0.24	0/1004	0.41	0/1349
15	Df	0.24	0/1004	0.41	0/1349
15	Dl	0.24	0/1004	0.41	0/1349
15	Dr	0.24	0/1004	0.41	0/1349
15	Dx	0.24	0/1004	0.41	0/1349
15	E0	0.24	0/1004	0.41	0/1349
15	E6	0.24	0/1004	0.41	0/1349
15	E7	0.23	0/1004	0.41	0/1349
15	E8	0.24	0/1004	0.41	0/1349
15	E9	0.24	0/1004	0.41	0/1349
15	ED	0.24	0/1004	0.41	0/1349
15	EK	0.24	0/1004	0.41	0/1349
15	ER	0.24	0/1004	0.41	0/1349
15	EY	0.24	0/1004	0.40	0/1349
15	FA	0.24	0/1004	0.40	0/1349
15	FB	0.24	0/1004	0.41	0/1349
16	B4	0.27	0/2482	0.50	0/3375
16	Bb	0.28	0/2482	0.50	0/3375
16	Bi	0.28	0/2482	0.50	0/3375
16	Bp	0.28	0/2482	0.50	0/3375

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
16	Bw	0.27	0/2482	0.50	0/3375
16	C0	0.27	0/2482	0.50	0/3375
16	CA	0.27	0/2482	0.50	0/3375
16	CH	0.28	0/2482	0.50	0/3375
16	CO	0.28	0/2482	0.50	0/3375
16	CV	0.28	0/2482	0.50	0/3375
16	Cc	0.28	0/2482	0.50	0/3375
16	Cj	0.28	0/2482	0.50	0/3375
16	Cq	0.27	0/2482	0.50	0/3375
16	Cx	0.28	0/2482	0.50	0/3375
16	D2	0.27	0/2482	0.50	0/3375
16	D8	0.27	0/2482	0.50	0/3375
16	DC	0.28	0/2482	0.50	0/3375
16	DF	0.28	0/2482	0.50	0/3375
16	DX	0.28	0/2482	0.50	0/3375
16	Dd	0.28	0/2482	0.50	0/3375
16	Dj	0.28	0/2482	0.50	0/3375
16	Dp	0.28	0/2482	0.50	0/3375
16	Dv	0.28	0/2482	0.50	0/3375
16	E5	0.27	0/2482	0.50	0/3375
16	EI	0.28	0/2482	0.50	0/3375
16	EP	0.28	0/2482	0.50	0/3375
16	EW	0.28	0/2482	0.50	0/3375
16	Eq	0.27	0/2482	0.50	0/3375
16	Er	0.28	0/2482	0.50	0/3375
16	Es	0.28	0/2482	0.50	0/3375
16	Et	0.27	0/2482	0.50	0/3375
16	Eu	0.27	0/2482	0.50	0/3375
16	Ev	0.27	0/2482	0.50	0/3375
16	Ew	0.28	0/2482	0.50	0/3375
All	All	0.31	27/621926 (0.0%)	0.52	68/842993 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	2
1	1	0	1
1	5	0	1
1	6	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	8	0	1
1	AF	0	1
1	AI	0	1
1	AM	0	2
1	AN	0	1
1	ZA	0	1
3	A0	0	1
3	A6	0	1
5	AA	0	2
5	AB	0	1
5	AC	0	1
5	AE	0	1
6	UI	0	2
6	UJ	0	2
6	UK	0	3
6	UL	0	3
6	UM	0	2
6	UN	0	2
6	UO	0	2
6	UP	0	3
6	WA	0	3
6	WB	0	4
6	WC	0	3
6	WD	0	1
6	WE	0	2
6	WF	0	3
6	WG	0	3
6	WI	0	1
6	WJ	0	3
6	WK	0	2
6	WL	0	2
6	WM	0	1
6	WN	0	1
6	WO	0	1
6	WP	0	3
6	WQ	0	2
6	WR	0	3
6	WS	0	1
6	WT	0	2
6	WU	0	2
6	WV	0	3
6	WW	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
9	Aw	0	1
10	BD	0	1
10	BF	0	1
11	ZG	0	1
11	ZI	0	1
11	ZK	0	1
11	ZO	0	1
11	ZW	0	1
11	Zb	0	1
11	Zd	0	1
11	Ze	0	1
12	a	0	1
12	b	0	1
12	c	0	1
12	d	0	1
12	e	0	1
12	f	0	1
12	g	0	1
12	h	0	1
12	i	0	1
12	j	0	1
12	k	0	1
12	l	0	1
12	m	0	1
12	n	0	1
12	o	0	1
12	p	0	1
12	q	0	1
12	r	0	1
12	s	0	1
12	t	0	1
12	u	0	1
12	v	0	1
12	w	0	1
12	x	0	1
12	y	0	1
12	z	0	1
13	B1	0	1
13	B2	0	1
13	B7	0	1
13	B8	0	1
13	B9	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	BY	0	1
13	BZ	0	1
13	Be	0	1
13	Bf	0	1
13	Bg	0	1
13	Bl	0	1
13	Bm	0	1
13	Bn	0	1
13	Bs	0	1
13	Bt	0	1
13	Bu	0	1
13	Bz	0	1
13	C1	0	1
13	C2	0	1
13	C3	0	1
13	C4	0	1
13	C5	0	1
13	C8	0	1
13	C9	0	1
13	CD	0	1
13	CE	0	1
13	CF	0	1
13	CK	0	1
13	CL	0	1
13	CM	0	1
13	CR	0	1
13	CS	0	1
13	CT	0	1
13	CY	0	1
13	CZ	0	1
13	Ca	0	1
13	Cf	0	1
13	Cg	0	1
13	Ch	0	1
13	Cm	0	1
13	Cn	0	1
13	Co	0	1
13	Ct	0	1
13	Cu	0	1
13	Cv	0	1
13	D1	0	1
13	D5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	D6	0	1
13	D7	0	1
13	DD	0	1
13	DI	0	1
13	DJ	0	1
13	DK	0	1
13	DM	0	1
13	DN	0	1
13	DO	0	1
13	DP	0	1
13	DQ	0	1
13	DR	0	1
13	DS	0	1
13	DT	0	1
13	DU	0	1
13	DV	0	1
13	DW	0	1
13	Da	0	1
13	Db	0	1
13	Dc	0	1
13	Dg	0	1
13	Dh	0	1
13	Di	0	1
13	Dm	0	1
13	Dn	0	1
13	Do	0	1
13	Ds	0	1
13	Dt	0	1
13	Du	0	1
13	Dy	0	1
13	Dz	0	1
13	EA	0	1
13	EB	0	1
13	EE	0	1
13	EF	0	1
13	EG	0	1
13	EL	0	1
13	EM	0	1
13	EN	0	1
13	ES	0	1
13	ET	0	1
13	EU	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	EZ	0	1
13	FC	0	1
13	FD	0	1
13	FE	0	1
13	FF	0	1
13	FG	0	1
13	FH	0	1
13	FI	0	1
13	FJ	0	1
13	FK	0	1
13	FL	0	1
13	FM	0	1
13	FN	0	1
16	B4	0	2
16	Bb	0	2
16	Bi	0	2
16	Bp	0	2
16	Bw	0	2
16	C0	0	2
16	CA	0	2
16	CH	0	2
16	CO	0	2
16	CV	0	2
16	Cc	0	2
16	Cj	0	2
16	Cq	0	2
16	Cx	0	2
16	D2	0	2
16	D8	0	2
16	DC	0	2
16	DF	0	2
16	DX	0	2
16	Dd	0	2
16	Dj	0	2
16	Dp	0	2
16	Dv	0	2
16	E5	0	2
16	EI	0	2
16	EP	0	2
16	EW	0	2
16	Eq	0	2
16	Er	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
16	Es	0	2
16	Et	0	2
16	Eu	0	2
16	Ev	0	2
16	Ew	0	2
All	All	0	293

The worst 5 of 27 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	ZV	140	PRO	CG-CD	-16.08	0.97	1.50
6	BK	331	PRO	CG-CD	-14.23	1.03	1.50
10	BC	73	PRO	CG-CD	-12.74	1.08	1.50
11	ZV	125	PRO	CG-CD	-10.17	1.17	1.50
6	UM	172	PRO	N-CD	-9.56	1.34	1.47

The worst 5 of 68 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	BC	73	PRO	N-CD-CG	-18.84	74.94	103.20
10	BC	73	PRO	CB-CG-CD	18.81	179.84	106.50
11	ZV	140	PRO	N-CD-CG	-17.35	77.18	103.20
6	BK	331	PRO	N-CD-CG	-16.11	79.04	103.20
10	BC	73	PRO	CA-CB-CG	-14.02	77.37	104.00

There are no chirality outliers.

5 of 293 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	36	ARG	Sidechain
1	0	50	ARG	Sidechain
1	1	36	ARG	Sidechain
1	5	50	ARG	Sidechain
1	6	153	ARG	Sidechain

5.2 Too-close contacts (i)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	244/260 (94%)	237 (97%)	6 (2%)	1 (0%)	30	67
1	1	248/260 (95%)	238 (96%)	9 (4%)	1 (0%)	30	67
1	2	258/260 (99%)	247 (96%)	9 (4%)	2 (1%)	16	53
1	3	258/260 (99%)	248 (96%)	8 (3%)	2 (1%)	16	53
1	4	258/260 (99%)	248 (96%)	7 (3%)	3 (1%)	11	43
1	5	258/260 (99%)	242 (94%)	14 (5%)	2 (1%)	16	53
1	6	258/260 (99%)	244 (95%)	12 (5%)	2 (1%)	16	53
1	7	258/260 (99%)	245 (95%)	10 (4%)	3 (1%)	11	43
1	8	258/260 (99%)	247 (96%)	9 (4%)	2 (1%)	16	53
1	9	258/260 (99%)	245 (95%)	11 (4%)	2 (1%)	16	53
1	AF	250/260 (96%)	238 (95%)	11 (4%)	1 (0%)	30	67
1	AG	251/260 (96%)	237 (94%)	13 (5%)	1 (0%)	30	67
1	AH	252/260 (97%)	241 (96%)	10 (4%)	1 (0%)	30	67
1	AI	250/260 (96%)	241 (96%)	7 (3%)	2 (1%)	16	53
1	AJ	251/260 (96%)	241 (96%)	9 (4%)	1 (0%)	30	67
1	AK	239/260 (92%)	232 (97%)	6 (2%)	1 (0%)	30	67
1	AL	244/260 (94%)	237 (97%)	4 (2%)	3 (1%)	11	43
1	AM	244/260 (94%)	237 (97%)	6 (2%)	1 (0%)	30	67
1	AN	244/260 (94%)	240 (98%)	3 (1%)	1 (0%)	30	67
1	ZA	258/260 (99%)	243 (94%)	12 (5%)	3 (1%)	11	43
1	ZB	258/260 (99%)	243 (94%)	12 (5%)	3 (1%)	11	43
1	ZC	258/260 (99%)	243 (94%)	12 (5%)	3 (1%)	11	43
1	ZD	258/260 (99%)	244 (95%)	12 (5%)	2 (1%)	16	53
1	ZE	258/260 (99%)	245 (95%)	12 (5%)	1 (0%)	30	67
2	A	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	B	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	C	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	D	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	E	209/232 (90%)	204 (98%)	4 (2%)	1 (0%)	25	63
2	F	209/232 (90%)	204 (98%)	4 (2%)	1 (0%)	25	63
2	G	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	H	209/232 (90%)	204 (98%)	4 (2%)	1 (0%)	25	63
2	I	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	J	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	K	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	L	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	M	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	N	209/232 (90%)	204 (98%)	4 (2%)	1 (0%)	25	63
2	O	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	P	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	Q	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	R	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	S	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	T	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	U	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	V	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	W	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	X	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
2	Y	209/232 (90%)	204 (98%)	4 (2%)	1 (0%)	25	63
2	Z	209/232 (90%)	205 (98%)	3 (1%)	1 (0%)	25	63
3	A0	117/138 (85%)	115 (98%)	2 (2%)	0	100	100
3	A6	132/138 (96%)	128 (97%)	4 (3%)	0	100	100
3	A7	115/138 (83%)	114 (99%)	1 (1%)	0	100	100
3	A8	119/138 (86%)	116 (98%)	3 (2%)	0	100	100
3	A9	121/138 (88%)	118 (98%)	3 (2%)	0	100	100
4	A1	87/104 (84%)	87 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	A2	89/104 (86%)	87 (98%)	2 (2%)	0	100	100
4	A3	89/104 (86%)	89 (100%)	0	0	100	100
4	A4	89/104 (86%)	89 (100%)	0	0	100	100
4	A5	88/104 (85%)	88 (100%)	0	0	100	100
4	Az	55/104 (53%)	53 (96%)	2 (4%)	0	100	100
5	AA	246/251 (98%)	232 (94%)	11 (4%)	3 (1%)	11	43
5	AB	247/251 (98%)	241 (98%)	6 (2%)	0	100	100
5	AC	248/251 (99%)	239 (96%)	9 (4%)	0	100	100
5	AD	248/251 (99%)	239 (96%)	9 (4%)	0	100	100
5	AE	247/251 (98%)	233 (94%)	13 (5%)	1 (0%)	30	67
6	AO	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AP	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AQ	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AR	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AS	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AT	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AU	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AV	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AW	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AX	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AY	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	AZ	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Aa	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ac	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ad	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ae	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Af	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ag	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ah	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ai	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Aj	160/560 (29%)	158 (99%)	2 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	Ak	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Al	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Am	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	An	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ao	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ap	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	B0	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	B3	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	BG	11/560 (2%)	10 (91%)	1 (9%)	0	100	100
6	BH	14/560 (2%)	12 (86%)	2 (14%)	0	100	100
6	BI	18/560 (3%)	18 (100%)	0	0	100	100
6	BJ	14/560 (2%)	14 (100%)	0	0	100	100
6	BK	19/560 (3%)	19 (100%)	0	0	100	100
6	BL	14/560 (2%)	13 (93%)	1 (7%)	0	100	100
6	BM	19/560 (3%)	19 (100%)	0	0	100	100
6	BN	14/560 (2%)	14 (100%)	0	0	100	100
6	BO	18/560 (3%)	17 (94%)	1 (6%)	0	100	100
6	BP	14/560 (2%)	14 (100%)	0	0	100	100
6	BQ	19/560 (3%)	19 (100%)	0	0	100	100
6	BR	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BS	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BT	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BU	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BV	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BW	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	BX	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
6	Ba	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Bh	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Bo	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Bv	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	CG	25/560 (4%)	24 (96%)	1 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	CN	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	CU	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Cb	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ci	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Cp	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Cw	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	DE	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	DL	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	EH	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	EO	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	EV	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ea	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Eb	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ec	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ed	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ee	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ef	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Eg	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Eh	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ei	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ej	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ek	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	El	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Em	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	En	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Eo	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	Ep	25/560 (4%)	24 (96%)	1 (4%)	0	100	100
6	UI	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UJ	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UK	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UL	151/560 (27%)	142 (94%)	7 (5%)	2 (1%)	10	42

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	UM	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UN	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UO	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	UP	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	42
6	WA	111/560 (20%)	99 (89%)	9 (8%)	3 (3%)	4	26
6	WB	109/560 (20%)	94 (86%)	10 (9%)	5 (5%)	2	18
6	WC	106/560 (19%)	96 (91%)	9 (8%)	1 (1%)	14	50
6	WD	108/560 (19%)	99 (92%)	4 (4%)	5 (5%)	2	18
6	WE	110/560 (20%)	98 (89%)	8 (7%)	4 (4%)	3	21
6	WF	109/560 (20%)	98 (90%)	8 (7%)	3 (3%)	4	25
6	WG	110/560 (20%)	98 (89%)	10 (9%)	2 (2%)	7	34
6	WH	93/560 (17%)	86 (92%)	5 (5%)	2 (2%)	5	30
6	WI	93/560 (17%)	82 (88%)	5 (5%)	6 (6%)	1	13
6	WJ	97/560 (17%)	89 (92%)	7 (7%)	1 (1%)	13	48
6	WK	96/560 (17%)	84 (88%)	9 (9%)	3 (3%)	3	23
6	WL	81/560 (14%)	75 (93%)	4 (5%)	2 (2%)	4	27
6	WM	78/560 (14%)	72 (92%)	4 (5%)	2 (3%)	4	26
6	WN	80/560 (14%)	75 (94%)	2 (2%)	3 (4%)	2	20
6	WO	94/560 (17%)	85 (90%)	7 (7%)	2 (2%)	5	31
6	WP	98/560 (18%)	87 (89%)	6 (6%)	5 (5%)	1	16
6	WQ	109/560 (20%)	100 (92%)	5 (5%)	4 (4%)	2	21
6	WR	109/560 (20%)	94 (86%)	8 (7%)	7 (6%)	1	13
6	WS	109/560 (20%)	96 (88%)	7 (6%)	6 (6%)	1	15
6	WT	109/560 (20%)	97 (89%)	5 (5%)	7 (6%)	1	13
6	WU	110/560 (20%)	101 (92%)	8 (7%)	1 (1%)	14	50
6	WV	108/560 (19%)	97 (90%)	9 (8%)	2 (2%)	6	33
6	WW	109/560 (20%)	95 (87%)	9 (8%)	5 (5%)	2	18
7	Ab	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
7	Aq	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
7	Ar	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
7	As	87/89 (98%)	85 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	At	251/264 (95%)	232 (92%)	13 (5%)	6 (2%)	5 28
9	Au	205/245 (84%)	195 (95%)	10 (5%)	0	100 100
9	Av	207/245 (84%)	199 (96%)	6 (3%)	2 (1%)	13 48
9	Aw	206/245 (84%)	201 (98%)	5 (2%)	0	100 100
9	Ax	206/245 (84%)	199 (97%)	6 (3%)	1 (0%)	25 63
9	Ay	207/245 (84%)	201 (97%)	4 (2%)	2 (1%)	13 48
10	BA	131/134 (98%)	123 (94%)	8 (6%)	0	100 100
10	BB	130/134 (97%)	124 (95%)	6 (5%)	0	100 100
10	BC	131/134 (98%)	126 (96%)	5 (4%)	0	100 100
10	BD	131/134 (98%)	127 (97%)	4 (3%)	0	100 100
10	BE	131/134 (98%)	125 (95%)	5 (4%)	1 (1%)	16 53
10	BF	131/134 (98%)	125 (95%)	6 (5%)	0	100 100
11	ZF	399/403 (99%)	388 (97%)	11 (3%)	0	100 100
11	ZG	399/403 (99%)	392 (98%)	6 (2%)	1 (0%)	37 72
11	ZH	399/403 (99%)	388 (97%)	11 (3%)	0	100 100
11	ZI	399/403 (99%)	387 (97%)	10 (2%)	2 (0%)	25 63
11	ZJ	399/403 (99%)	387 (97%)	12 (3%)	0	100 100
11	ZK	399/403 (99%)	390 (98%)	9 (2%)	0	100 100
11	ZL	399/403 (99%)	389 (98%)	9 (2%)	1 (0%)	37 72
11	ZM	399/403 (99%)	388 (97%)	11 (3%)	0	100 100
11	ZN	399/403 (99%)	388 (97%)	11 (3%)	0	100 100
11	ZO	399/403 (99%)	381 (96%)	15 (4%)	3 (1%)	16 53
11	ZP	399/403 (99%)	385 (96%)	13 (3%)	1 (0%)	37 72
11	ZQ	399/403 (99%)	389 (98%)	10 (2%)	0	100 100
11	ZR	399/403 (99%)	390 (98%)	8 (2%)	1 (0%)	37 72
11	ZS	399/403 (99%)	390 (98%)	9 (2%)	0	100 100
11	ZT	399/403 (99%)	389 (98%)	10 (2%)	0	100 100
11	ZU	399/403 (99%)	387 (97%)	12 (3%)	0	100 100
11	ZV	399/403 (99%)	390 (98%)	9 (2%)	0	100 100
11	ZW	399/403 (99%)	385 (96%)	14 (4%)	0	100 100
11	ZX	399/403 (99%)	388 (97%)	11 (3%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	ZY	399/403 (99%)	384 (96%)	15 (4%)	0	100	100
11	ZZ	399/403 (99%)	389 (98%)	10 (2%)	0	100	100
11	Za	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
11	Zb	399/403 (99%)	392 (98%)	7 (2%)	0	100	100
11	Zc	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
11	Zd	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
11	Ze	399/403 (99%)	385 (96%)	14 (4%)	0	100	100
11	Zf	399/403 (99%)	386 (97%)	13 (3%)	0	100	100
11	Zg	399/403 (99%)	387 (97%)	12 (3%)	0	100	100
11	Zh	399/403 (99%)	393 (98%)	6 (2%)	0	100	100
12	a	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	b	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	c	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	d	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	e	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	f	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	g	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	h	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	i	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	j	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	k	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	l	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	m	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	n	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	o	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	p	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	q	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	r	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	s	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	t	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	u	297/365 (81%)	293 (99%)	4 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	v	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	w	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	x	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	y	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
12	z	297/365 (81%)	293 (99%)	4 (1%)	0	100	100
13	B1	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	B2	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	B7	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	B8	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	B9	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	BY	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	BZ	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Be	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Bf	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Bg	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Bl	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Bm	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Bn	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Bs	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Bt	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Bu	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Bz	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	C1	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	C2	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	C3	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	C4	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	C5	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	C8	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	C9	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	CD	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	CE	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
13	CF	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	CK	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	CL	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	CM	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	CR	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	CS	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	CT	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	CY	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	CZ	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	Ca	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	Cf	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	Cg	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	Ch	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	Cm	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	Cn	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	Co	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	Ct	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	Cu	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	Cv	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	D1	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	D5	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	D6	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	D7	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DD	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DI	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2 17
13	DJ	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5 28
13	DK	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DM	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DN	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DO	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43
13	DP	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11 43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	DQ	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	DR	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	DS	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	DT	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	DU	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	DV	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	DW	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Da	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Db	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Dc	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Dg	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Dh	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Di	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Dm	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Dn	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Do	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Ds	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Dt	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	Du	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	Dy	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	Dz	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	EA	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	EB	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	EE	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	EF	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	EG	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	EL	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	EM	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	EN	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	ES	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	ET	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	EU	85/137 (62%)	80 (94%)	4 (5%)	1 (1%)	11	43
13	EZ	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FC	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FD	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FE	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FF	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FG	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FH	85/137 (62%)	78 (92%)	3 (4%)	4 (5%)	2	17
13	FI	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	FJ	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	FK	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	FL	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	FM	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
13	FN	85/137 (62%)	81 (95%)	2 (2%)	2 (2%)	5	28
14	B5	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Bc	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Bj	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Bq	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Bx	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	C6	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	CB	306/331 (92%)	296 (97%)	9 (3%)	1 (0%)	37	72
14	CI	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	CP	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	CW	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Cd	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Ck	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Cr	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Cy	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	D3	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	D9	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	DA	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	DG	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	DY	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	De	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Dk	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Dq	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Dw	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	E1	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	E2	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	E3	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	E4	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	EC	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	EJ	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	EQ	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	EX	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Ex	306/331 (92%)	296 (97%)	9 (3%)	1 (0%)	37	72
14	Ey	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
14	Ez	306/331 (92%)	295 (96%)	10 (3%)	1 (0%)	37	72
15	B6	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Bd	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Bk	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Br	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	By	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	C7	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	CC	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	CJ	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	CQ	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	CX	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Ce	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Cl	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Cs	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Cz	127/129 (98%)	125 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	D0	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	D4	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	DB	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	DH	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	DZ	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Df	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Dl	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Dr	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	Dx	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	E0	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	E6	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	E7	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	E8	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	E9	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	ED	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	EK	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	ER	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	EY	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	FA	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
15	FB	127/129 (98%)	125 (98%)	2 (2%)	0	100	100
16	B4	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Bb	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Bi	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Bp	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Bw	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	C0	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	CA	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	CH	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	CO	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	CV	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Cc	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	Cj	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Cq	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Cx	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	D2	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	D8	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	DC	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	DF	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	DX	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Dd	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Dj	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Dp	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Dv	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	E5	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	EI	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	EP	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	EW	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Eq	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Er	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Es	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Et	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Eu	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Ev	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
16	Ew	297/334 (89%)	285 (96%)	8 (3%)	4 (1%)	10	42
All	All	79048/141237 (56%)	76302 (96%)	2146 (3%)	600 (1%)	19	53

5 of 600 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	2	209	ASN
1	5	209	ASN
1	8	209	ASN
5	AA	123	GLU
8	At	188	LEU

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	0	205/215 (95%)	198 (97%)	7 (3%)	32	54
1	1	209/215 (97%)	201 (96%)	8 (4%)	28	50
1	2	215/215 (100%)	212 (99%)	3 (1%)	62	76
1	3	215/215 (100%)	211 (98%)	4 (2%)	52	70
1	4	215/215 (100%)	211 (98%)	4 (2%)	52	70
1	5	215/215 (100%)	211 (98%)	4 (2%)	52	70
1	6	215/215 (100%)	210 (98%)	5 (2%)	45	65
1	7	215/215 (100%)	214 (100%)	1 (0%)	86	90
1	8	215/215 (100%)	213 (99%)	2 (1%)	75	83
1	9	215/215 (100%)	211 (98%)	4 (2%)	52	70
1	AF	209/215 (97%)	204 (98%)	5 (2%)	44	64
1	AG	210/215 (98%)	203 (97%)	7 (3%)	33	55
1	AH	211/215 (98%)	201 (95%)	10 (5%)	22	45
1	AI	209/215 (97%)	200 (96%)	9 (4%)	25	48
1	AJ	210/215 (98%)	202 (96%)	8 (4%)	28	50
1	AK	200/215 (93%)	196 (98%)	4 (2%)	50	69
1	AL	205/215 (95%)	199 (97%)	6 (3%)	37	58
1	AM	205/215 (95%)	197 (96%)	8 (4%)	27	50
1	AN	205/215 (95%)	201 (98%)	4 (2%)	50	69
1	ZA	215/215 (100%)	213 (99%)	2 (1%)	75	83
1	ZB	215/215 (100%)	207 (96%)	8 (4%)	29	51
1	ZC	215/215 (100%)	212 (99%)	3 (1%)	62	76
1	ZD	215/215 (100%)	212 (99%)	3 (1%)	62	76
1	ZE	215/215 (100%)	214 (100%)	1 (0%)	86	90
2	A	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	B	170/186 (91%)	163 (96%)	7 (4%)	26	49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	C	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	D	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	E	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	F	170/186 (91%)	162 (95%)	8 (5%)	22	45
2	G	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	H	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	I	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	J	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	K	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	L	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	M	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	N	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	O	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	P	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	Q	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	R	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	S	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	T	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	U	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	V	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	W	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	X	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	Y	170/186 (91%)	163 (96%)	7 (4%)	26	49
2	Z	170/186 (91%)	163 (96%)	7 (4%)	26	49
3	A0	102/113 (90%)	96 (94%)	6 (6%)	16	39
3	A6	110/113 (97%)	106 (96%)	4 (4%)	30	52
3	A7	101/113 (89%)	99 (98%)	2 (2%)	50	69
3	A8	103/113 (91%)	96 (93%)	7 (7%)	13	34
3	A9	104/113 (92%)	102 (98%)	2 (2%)	52	70
4	A1	68/79 (86%)	64 (94%)	4 (6%)	16	39
4	A2	70/79 (89%)	65 (93%)	5 (7%)	12	33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	A3	70/79 (89%)	66 (94%)	4 (6%)	17	40
4	A4	70/79 (89%)	66 (94%)	4 (6%)	17	40
4	A5	69/79 (87%)	65 (94%)	4 (6%)	17	39
4	Az	45/79 (57%)	40 (89%)	5 (11%)	5	19
5	AA	190/193 (98%)	187 (98%)	3 (2%)	58	74
5	AB	191/193 (99%)	188 (98%)	3 (2%)	58	74
5	AC	192/193 (100%)	187 (97%)	5 (3%)	41	61
5	AD	192/193 (100%)	190 (99%)	2 (1%)	73	82
5	AE	191/193 (99%)	190 (100%)	1 (0%)	86	90
6	AO	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AP	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AQ	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AR	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AS	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AT	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AU	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AV	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AW	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AX	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AY	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	AZ	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Aa	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ac	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ad	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ae	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Af	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ag	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ah	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ai	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Aj	141/467 (30%)	134 (95%)	7 (5%)	20	43
6	Ak	141/467 (30%)	134 (95%)	7 (5%)	20	43

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	Al	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	Am	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	An	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	Ao	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	Ap	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	B0	26/467 (6%)	26 (100%)	0	100 100
6	B3	26/467 (6%)	26 (100%)	0	100 100
6	BG	8/467 (2%)	8 (100%)	0	100 100
6	BH	11/467 (2%)	10 (91%)	1 (9%)	7 25
6	BI	14/467 (3%)	12 (86%)	2 (14%)	2 14
6	BJ	11/467 (2%)	11 (100%)	0	100 100
6	BK	15/467 (3%)	15 (100%)	0	100 100
6	BL	11/467 (2%)	11 (100%)	0	100 100
6	BM	15/467 (3%)	15 (100%)	0	100 100
6	BN	11/467 (2%)	11 (100%)	0	100 100
6	BO	14/467 (3%)	13 (93%)	1 (7%)	12 33
6	BP	11/467 (2%)	11 (100%)	0	100 100
6	BQ	15/467 (3%)	14 (93%)	1 (7%)	13 35
6	BR	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BS	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BT	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BU	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BV	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BW	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	BX	141/467 (30%)	134 (95%)	7 (5%)	20 43
6	Ba	26/467 (6%)	26 (100%)	0	100 100
6	Bh	26/467 (6%)	26 (100%)	0	100 100
6	Bo	26/467 (6%)	26 (100%)	0	100 100
6	Bv	26/467 (6%)	26 (100%)	0	100 100
6	CG	26/467 (6%)	26 (100%)	0	100 100
6	CN	26/467 (6%)	26 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	CU	26/467 (6%)	26 (100%)	0	100	100
6	Cb	26/467 (6%)	26 (100%)	0	100	100
6	Ci	26/467 (6%)	26 (100%)	0	100	100
6	Cp	26/467 (6%)	26 (100%)	0	100	100
6	Cw	26/467 (6%)	26 (100%)	0	100	100
6	DE	26/467 (6%)	26 (100%)	0	100	100
6	DL	26/467 (6%)	26 (100%)	0	100	100
6	EH	26/467 (6%)	26 (100%)	0	100	100
6	EO	26/467 (6%)	26 (100%)	0	100	100
6	EV	26/467 (6%)	26 (100%)	0	100	100
6	Ea	26/467 (6%)	26 (100%)	0	100	100
6	Eb	26/467 (6%)	26 (100%)	0	100	100
6	Ec	26/467 (6%)	26 (100%)	0	100	100
6	Ed	26/467 (6%)	26 (100%)	0	100	100
6	Ee	26/467 (6%)	26 (100%)	0	100	100
6	Ef	26/467 (6%)	26 (100%)	0	100	100
6	Eg	26/467 (6%)	26 (100%)	0	100	100
6	Eh	26/467 (6%)	26 (100%)	0	100	100
6	Ei	26/467 (6%)	26 (100%)	0	100	100
6	Ej	26/467 (6%)	26 (100%)	0	100	100
6	Ek	26/467 (6%)	26 (100%)	0	100	100
6	El	26/467 (6%)	26 (100%)	0	100	100
6	Em	26/467 (6%)	26 (100%)	0	100	100
6	En	26/467 (6%)	26 (100%)	0	100	100
6	Eo	26/467 (6%)	26 (100%)	0	100	100
6	Ep	26/467 (6%)	26 (100%)	0	100	100
6	UI	128/467 (27%)	123 (96%)	5 (4%)	27	50
6	UJ	128/467 (27%)	123 (96%)	5 (4%)	27	50
6	UK	128/467 (27%)	123 (96%)	5 (4%)	27	50
6	UL	128/467 (27%)	122 (95%)	6 (5%)	22	45
6	UM	128/467 (27%)	123 (96%)	5 (4%)	27	50

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	UN	128/467 (27%)	123 (96%)	5 (4%)	27 50
6	UO	128/467 (27%)	123 (96%)	5 (4%)	27 50
6	UP	128/467 (27%)	122 (95%)	6 (5%)	22 45
6	WA	95/467 (20%)	91 (96%)	4 (4%)	25 48
6	WB	93/467 (20%)	87 (94%)	6 (6%)	14 36
6	WC	91/467 (20%)	83 (91%)	8 (9%)	8 26
6	WD	92/467 (20%)	88 (96%)	4 (4%)	25 48
6	WE	94/467 (20%)	87 (93%)	7 (7%)	11 31
6	WF	93/467 (20%)	86 (92%)	7 (8%)	11 31
6	WG	94/467 (20%)	87 (93%)	7 (7%)	11 31
6	WH	79/467 (17%)	75 (95%)	4 (5%)	20 43
6	WI	79/467 (17%)	73 (92%)	6 (8%)	11 31
6	WJ	83/467 (18%)	79 (95%)	4 (5%)	21 44
6	WK	82/467 (18%)	77 (94%)	5 (6%)	15 38
6	WL	69/467 (15%)	66 (96%)	3 (4%)	25 48
6	WM	66/467 (14%)	65 (98%)	1 (2%)	60 75
6	WN	68/467 (15%)	66 (97%)	2 (3%)	37 58
6	WO	80/467 (17%)	76 (95%)	4 (5%)	20 43
6	WP	83/467 (18%)	77 (93%)	6 (7%)	12 32
6	WQ	93/467 (20%)	91 (98%)	2 (2%)	47 66
6	WR	93/467 (20%)	86 (92%)	7 (8%)	11 31
6	WS	93/467 (20%)	87 (94%)	6 (6%)	14 36
6	WT	93/467 (20%)	86 (92%)	7 (8%)	11 31
6	WU	94/467 (20%)	90 (96%)	4 (4%)	25 48
6	WV	92/467 (20%)	83 (90%)	9 (10%)	6 22
6	WW	93/467 (20%)	85 (91%)	8 (9%)	8 27
7	Ab	74/74 (100%)	73 (99%)	1 (1%)	62 76
7	Aq	74/74 (100%)	73 (99%)	1 (1%)	62 76
7	Ar	74/74 (100%)	74 (100%)	0	100 100
7	As	74/74 (100%)	73 (99%)	1 (1%)	62 76
8	At	210/221 (95%)	204 (97%)	6 (3%)	37 58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	Au	177/204 (87%)	170 (96%)	7 (4%)	27	49
9	Av	179/204 (88%)	172 (96%)	7 (4%)	27	50
9	Aw	178/204 (87%)	173 (97%)	5 (3%)	38	59
9	Ax	178/204 (87%)	172 (97%)	6 (3%)	32	54
9	Ay	179/204 (88%)	175 (98%)	4 (2%)	47	66
10	BA	104/105 (99%)	104 (100%)	0	100	100
10	BB	104/105 (99%)	103 (99%)	1 (1%)	73	82
10	BC	104/105 (99%)	104 (100%)	0	100	100
10	BD	104/105 (99%)	102 (98%)	2 (2%)	52	70
10	BE	104/105 (99%)	101 (97%)	3 (3%)	37	58
10	BF	104/105 (99%)	100 (96%)	4 (4%)	28	50
11	ZF	321/323 (99%)	310 (97%)	11 (3%)	32	54
11	ZG	321/323 (99%)	306 (95%)	15 (5%)	22	45
11	ZH	321/323 (99%)	309 (96%)	12 (4%)	29	51
11	ZI	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	ZJ	321/323 (99%)	313 (98%)	8 (2%)	42	63
11	ZK	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	ZL	321/323 (99%)	311 (97%)	10 (3%)	35	56
11	ZM	321/323 (99%)	312 (97%)	9 (3%)	38	59
11	ZN	321/323 (99%)	311 (97%)	10 (3%)	35	56
11	ZO	321/323 (99%)	313 (98%)	8 (2%)	42	63
11	ZP	321/323 (99%)	306 (95%)	15 (5%)	22	45
11	ZQ	321/323 (99%)	312 (97%)	9 (3%)	38	59
11	ZR	321/323 (99%)	313 (98%)	8 (2%)	42	63
11	ZS	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	ZT	321/323 (99%)	316 (98%)	5 (2%)	58	74
11	ZU	321/323 (99%)	317 (99%)	4 (1%)	67	79
11	ZV	321/323 (99%)	317 (99%)	4 (1%)	67	79
11	ZW	321/323 (99%)	308 (96%)	13 (4%)	27	49
11	ZX	321/323 (99%)	318 (99%)	3 (1%)	75	83
11	ZY	321/323 (99%)	314 (98%)	7 (2%)	47	66

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	ZZ	321/323 (99%)	316 (98%)	5 (2%)	58	74
11	Za	321/323 (99%)	316 (98%)	5 (2%)	58	74
11	Zb	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	Zc	321/323 (99%)	310 (97%)	11 (3%)	32	54
11	Zd	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	Ze	321/323 (99%)	312 (97%)	9 (3%)	38	59
11	Zf	321/323 (99%)	314 (98%)	7 (2%)	47	66
11	Zg	321/323 (99%)	315 (98%)	6 (2%)	52	70
11	Zh	321/323 (99%)	313 (98%)	8 (2%)	42	63
12	a	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	b	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	c	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	d	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	e	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	f	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	g	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	h	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	i	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	j	248/294 (84%)	240 (97%)	8 (3%)	34	55
12	k	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	l	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	m	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	n	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	o	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	p	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	q	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	r	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	s	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	t	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	u	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	v	248/294 (84%)	238 (96%)	10 (4%)	27	49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	w	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	x	248/294 (84%)	238 (96%)	10 (4%)	27	49
12	y	248/294 (84%)	239 (96%)	9 (4%)	30	52
12	z	248/294 (84%)	238 (96%)	10 (4%)	27	49
13	B1	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	B2	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	B7	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	B8	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	B9	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	BY	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	BZ	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Be	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Bf	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Bg	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Bl	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Bm	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Bn	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Bs	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Bt	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Bu	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Bz	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	C1	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	C2	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	C3	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	C4	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	C5	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	C8	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	C9	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	CD	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	CE	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	CF	76/113 (67%)	74 (97%)	2 (3%)	41	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	CK	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	CL	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	CM	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	CR	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	CS	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	CT	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	CY	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	CZ	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Ca	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Cf	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Cg	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Ch	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Cm	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Cn	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Co	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Ct	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Cu	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Cv	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	D1	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	D5	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	D6	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	D7	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DD	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DI	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	DJ	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	DK	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DM	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DN	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DO	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DP	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DQ	76/113 (67%)	74 (97%)	2 (3%)	41	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	DR	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DS	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DT	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	DU	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	DV	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	DW	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Da	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Db	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Dc	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Dg	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Dh	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Di	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Dm	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Dn	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Do	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Ds	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Dt	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	Du	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	Dy	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	Dz	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	EA	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	EB	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	EE	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	EF	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	EG	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	EL	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	EM	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	EN	76/113 (67%)	74 (97%)	2 (3%)	41	61
13	ES	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	ET	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	EU	76/113 (67%)	74 (97%)	2 (3%)	41	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	EZ	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FC	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FD	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FE	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FF	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FG	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FH	76/113 (67%)	72 (95%)	4 (5%)	19	42
13	FI	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	FJ	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	FK	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	FL	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	FM	76/113 (67%)	75 (99%)	1 (1%)	65	77
13	FN	76/113 (67%)	75 (99%)	1 (1%)	65	77
14	B5	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Bc	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Bj	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Bq	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Bx	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	C6	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	CB	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	CI	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	CP	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	CW	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Cd	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Ck	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Cr	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Cy	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	D3	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	D9	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	DA	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	DG	265/282 (94%)	257 (97%)	8 (3%)	36	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	DY	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	De	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Dk	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Dq	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Dw	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	E1	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	E2	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	E3	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	E4	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	EC	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	EJ	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	EQ	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	EX	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Ex	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Ey	265/282 (94%)	257 (97%)	8 (3%)	36	57
14	Ez	265/282 (94%)	257 (97%)	8 (3%)	36	57
15	B6	104/104 (100%)	104 (100%)	0	100	100
15	Bd	104/104 (100%)	104 (100%)	0	100	100
15	Bk	104/104 (100%)	104 (100%)	0	100	100
15	Br	104/104 (100%)	104 (100%)	0	100	100
15	By	104/104 (100%)	104 (100%)	0	100	100
15	C7	104/104 (100%)	104 (100%)	0	100	100
15	CC	104/104 (100%)	104 (100%)	0	100	100
15	CJ	104/104 (100%)	104 (100%)	0	100	100
15	CQ	104/104 (100%)	104 (100%)	0	100	100
15	CX	104/104 (100%)	104 (100%)	0	100	100
15	Ce	104/104 (100%)	104 (100%)	0	100	100
15	Cl	104/104 (100%)	104 (100%)	0	100	100
15	Cs	104/104 (100%)	104 (100%)	0	100	100
15	Cz	104/104 (100%)	104 (100%)	0	100	100
15	D0	104/104 (100%)	104 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	D4	104/104 (100%)	104 (100%)	0	100	100
15	DB	104/104 (100%)	104 (100%)	0	100	100
15	DH	104/104 (100%)	104 (100%)	0	100	100
15	DZ	104/104 (100%)	104 (100%)	0	100	100
15	Df	104/104 (100%)	104 (100%)	0	100	100
15	Dl	104/104 (100%)	104 (100%)	0	100	100
15	Dr	104/104 (100%)	104 (100%)	0	100	100
15	Dx	104/104 (100%)	104 (100%)	0	100	100
15	E0	104/104 (100%)	104 (100%)	0	100	100
15	E6	104/104 (100%)	104 (100%)	0	100	100
15	E7	104/104 (100%)	104 (100%)	0	100	100
15	E8	104/104 (100%)	104 (100%)	0	100	100
15	E9	104/104 (100%)	104 (100%)	0	100	100
15	ED	104/104 (100%)	104 (100%)	0	100	100
15	EK	104/104 (100%)	104 (100%)	0	100	100
15	ER	104/104 (100%)	104 (100%)	0	100	100
15	EY	104/104 (100%)	104 (100%)	0	100	100
15	FA	104/104 (100%)	104 (100%)	0	100	100
15	FB	104/104 (100%)	104 (100%)	0	100	100
16	B4	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Bb	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Bi	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Bp	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Bw	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	C0	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	CA	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	CH	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	CO	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	CV	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Cc	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Cj	272/301 (90%)	264 (97%)	8 (3%)	37	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	Cq	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Cx	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	D2	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	D8	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	DC	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	DF	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	DX	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Dd	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Dj	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Dp	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Dv	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	E5	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	EI	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	EP	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	EW	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Eq	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Er	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Es	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Et	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Eu	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Ev	272/301 (90%)	264 (97%)	8 (3%)	37	58
16	Ew	272/301 (90%)	264 (97%)	8 (3%)	37	58
All	All	67515/117432 (58%)	65434 (97%)	2081 (3%)	37	56

5 of 2081 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
16	Cc	237	GLU
14	Cr	235	LEU
16	Cc	155	ASN
13	FN	106	ILE
6	WW	168	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 1341 such sidechains are listed below:

Mol	Chain	Res	Type
12	j	178	GLN
16	DC	245	ASN
12	l	178	GLN
12	j	161	ASN
12	s	54	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

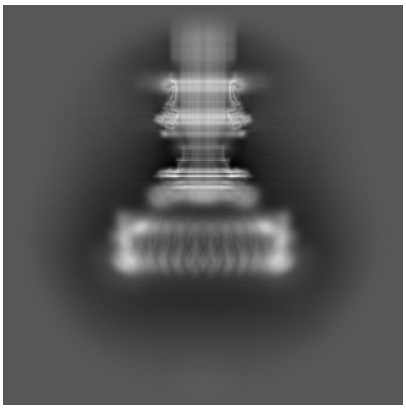
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-37684. These allow visual inspection of the internal detail of the map and identification of artifacts.

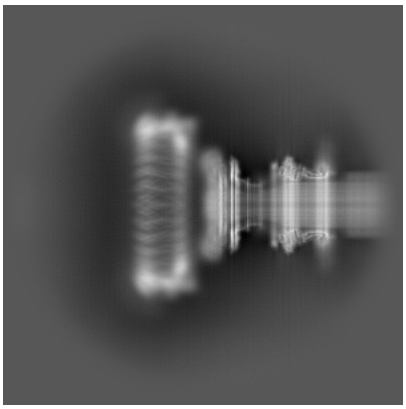
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

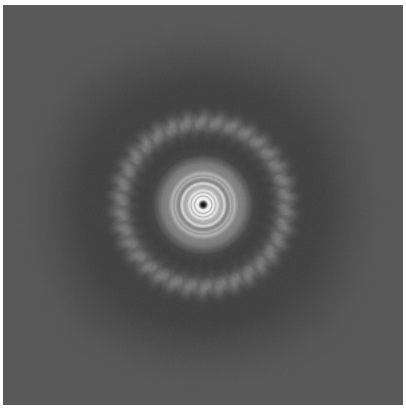
6.1.1 Primary map



X

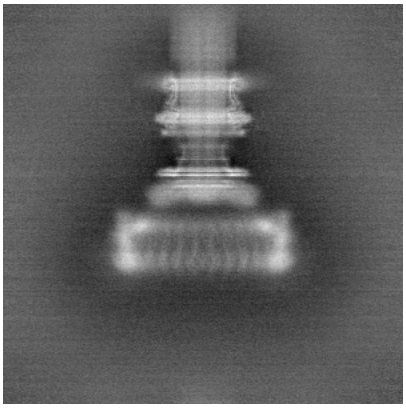


Y

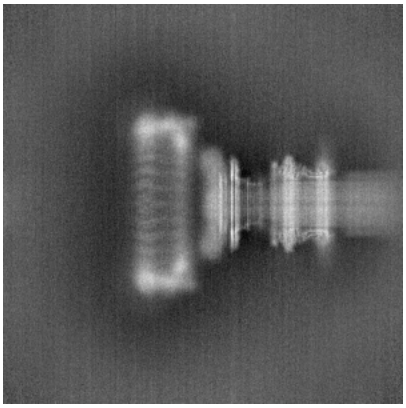


Z

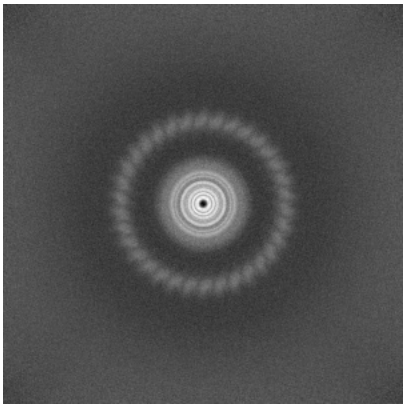
6.1.2 Raw map



X



Y

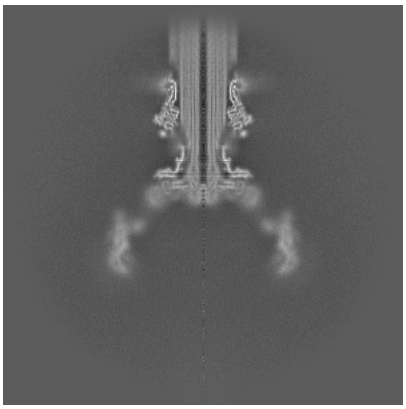


Z

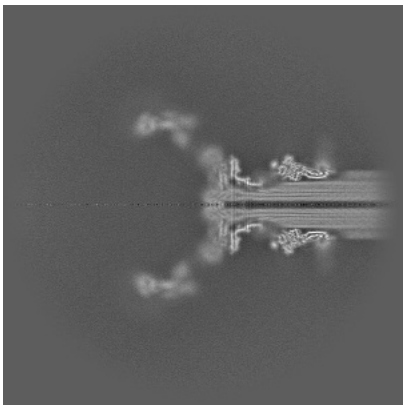
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

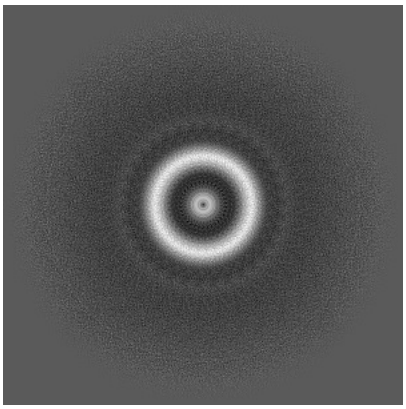
6.2.1 Primary map



X Index: 420

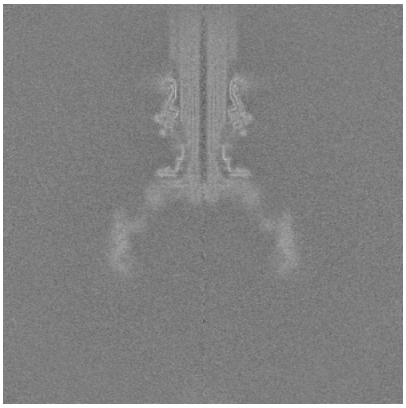


Y Index: 420

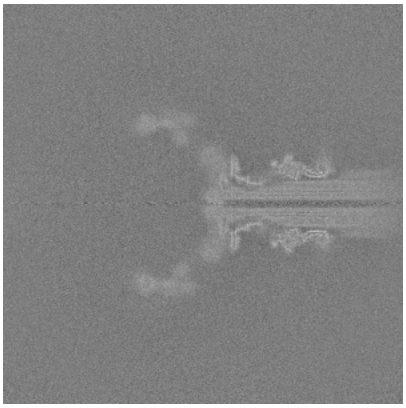


Z Index: 420

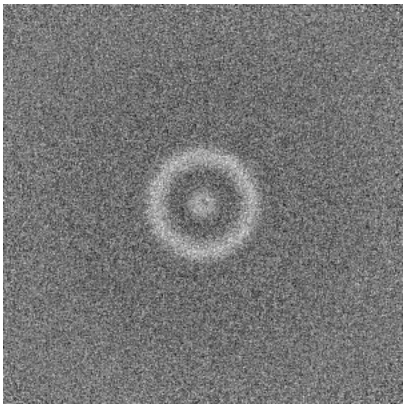
6.2.2 Raw map



X Index: 420



Y Index: 420

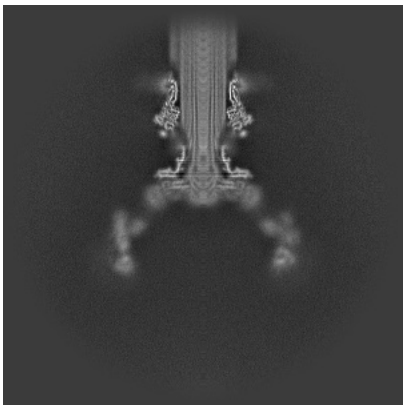


Z Index: 420

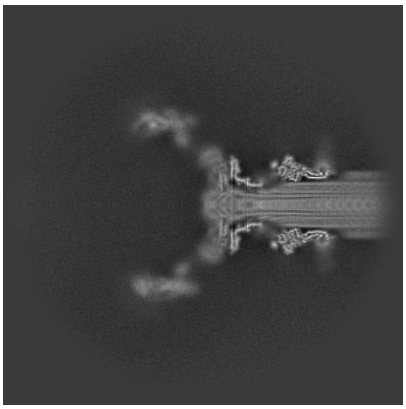
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

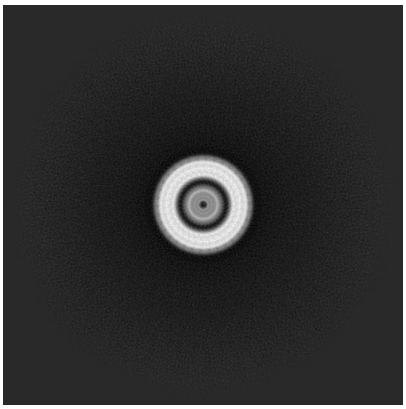
6.3.1 Primary map



X Index: 431

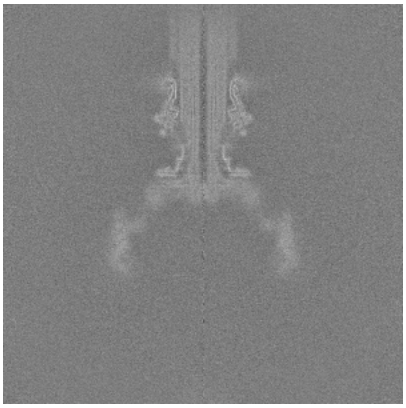


Y Index: 431

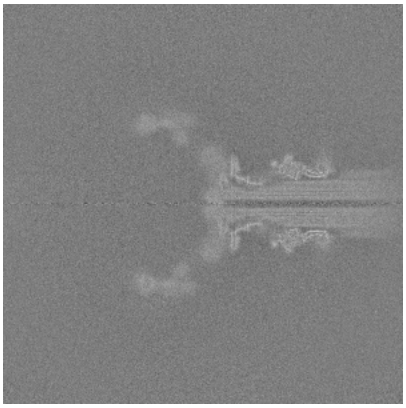


Z Index: 481

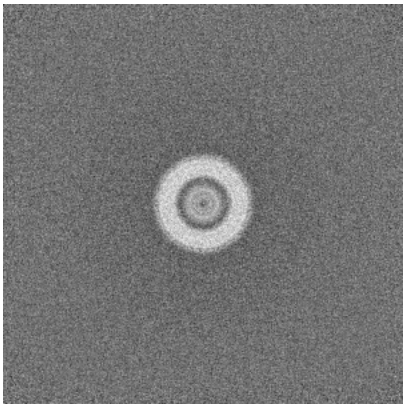
6.3.2 Raw map



X Index: 420



Y Index: 420

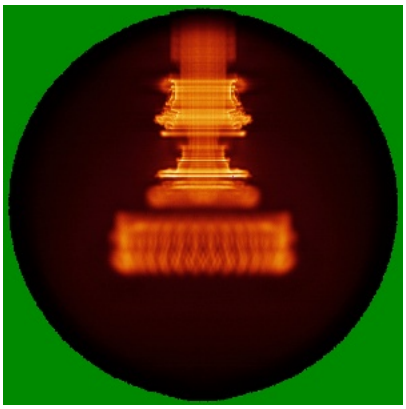


Z Index: 481

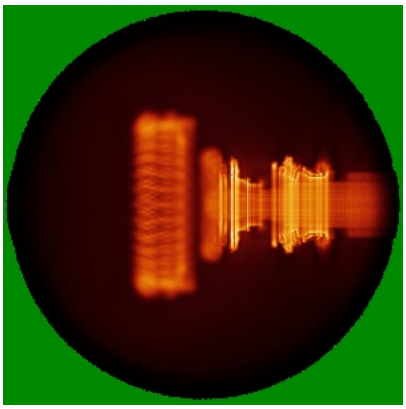
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

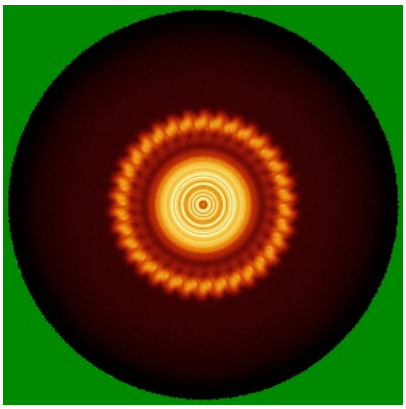
6.4.1 Primary map



X

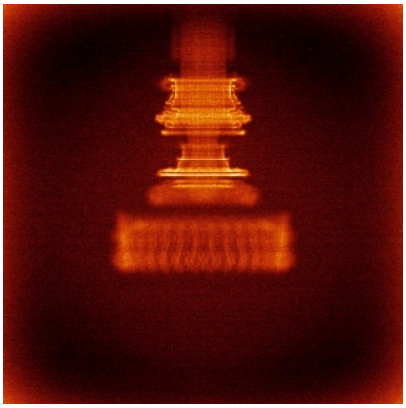


Y

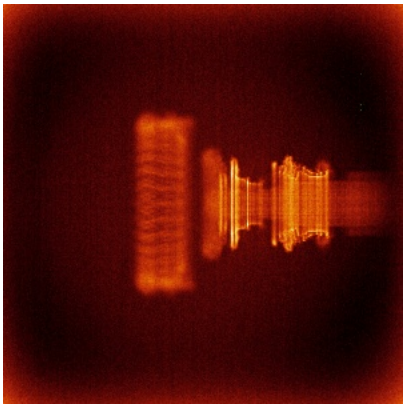


Z

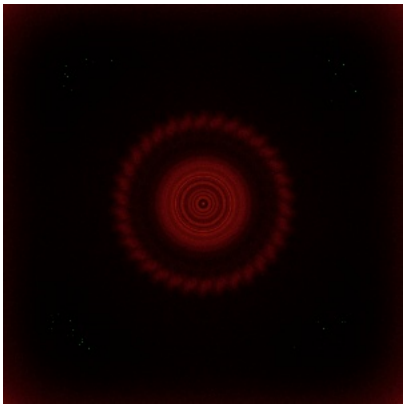
6.4.2 Raw map



X



Y



Z

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

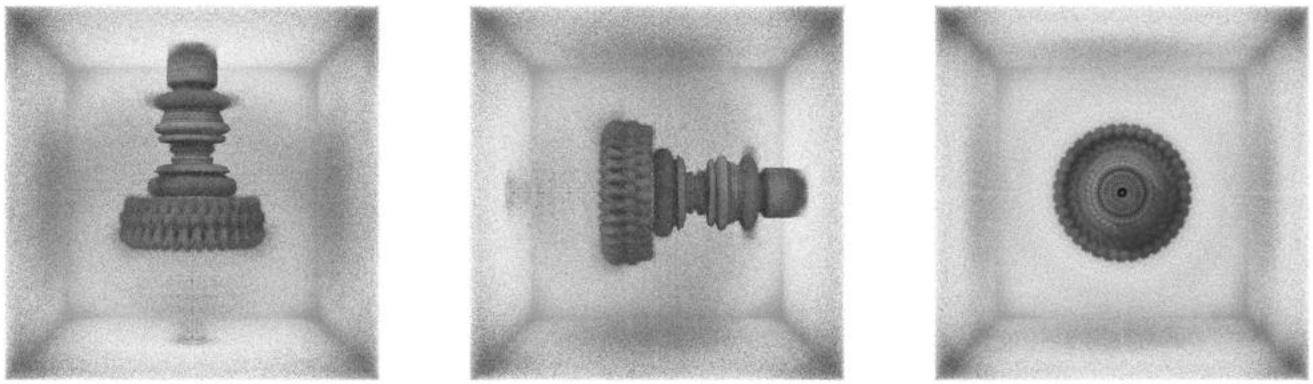
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.04. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

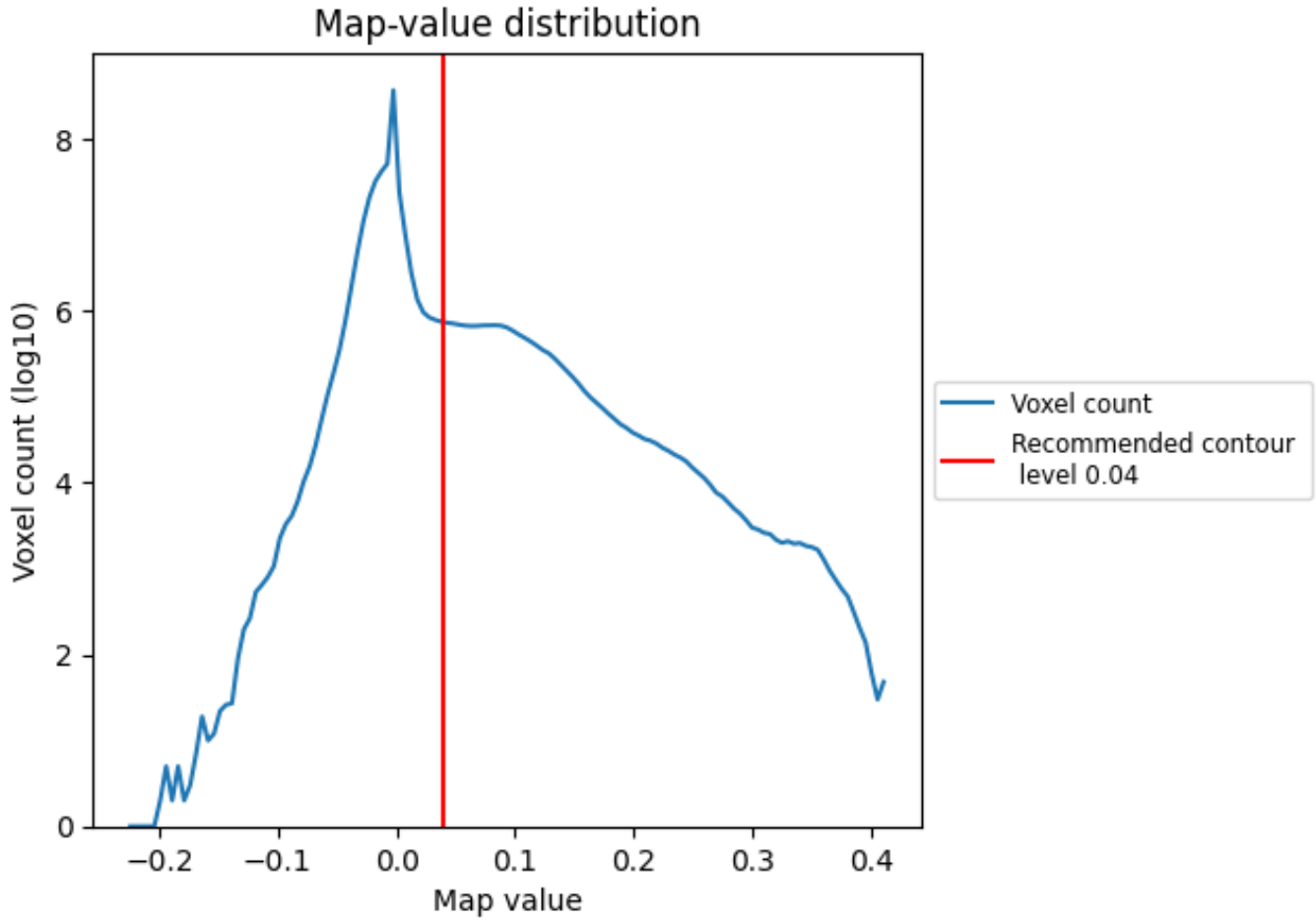
6.6 Mask visualisation (i)

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

7 Map analysis

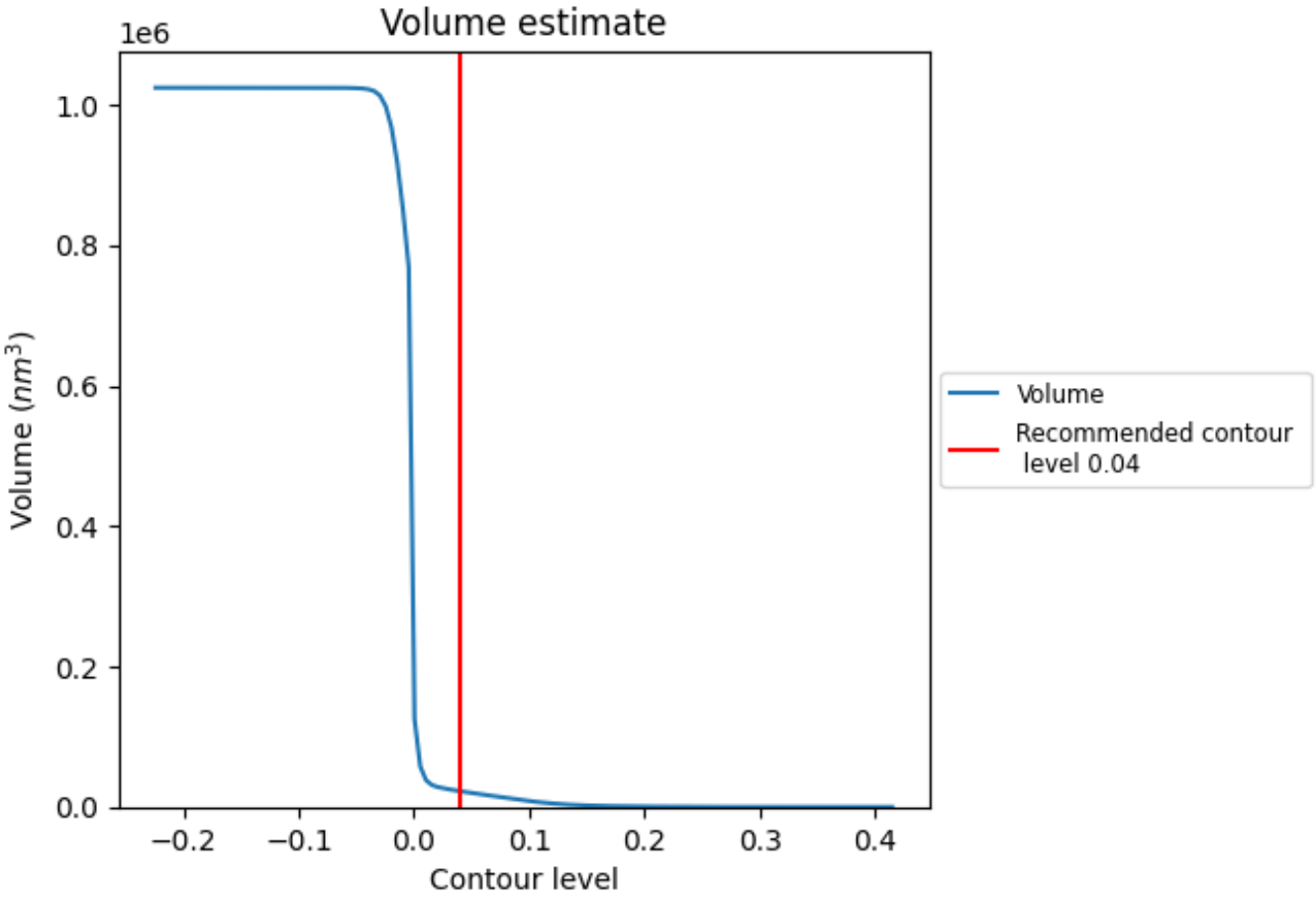
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

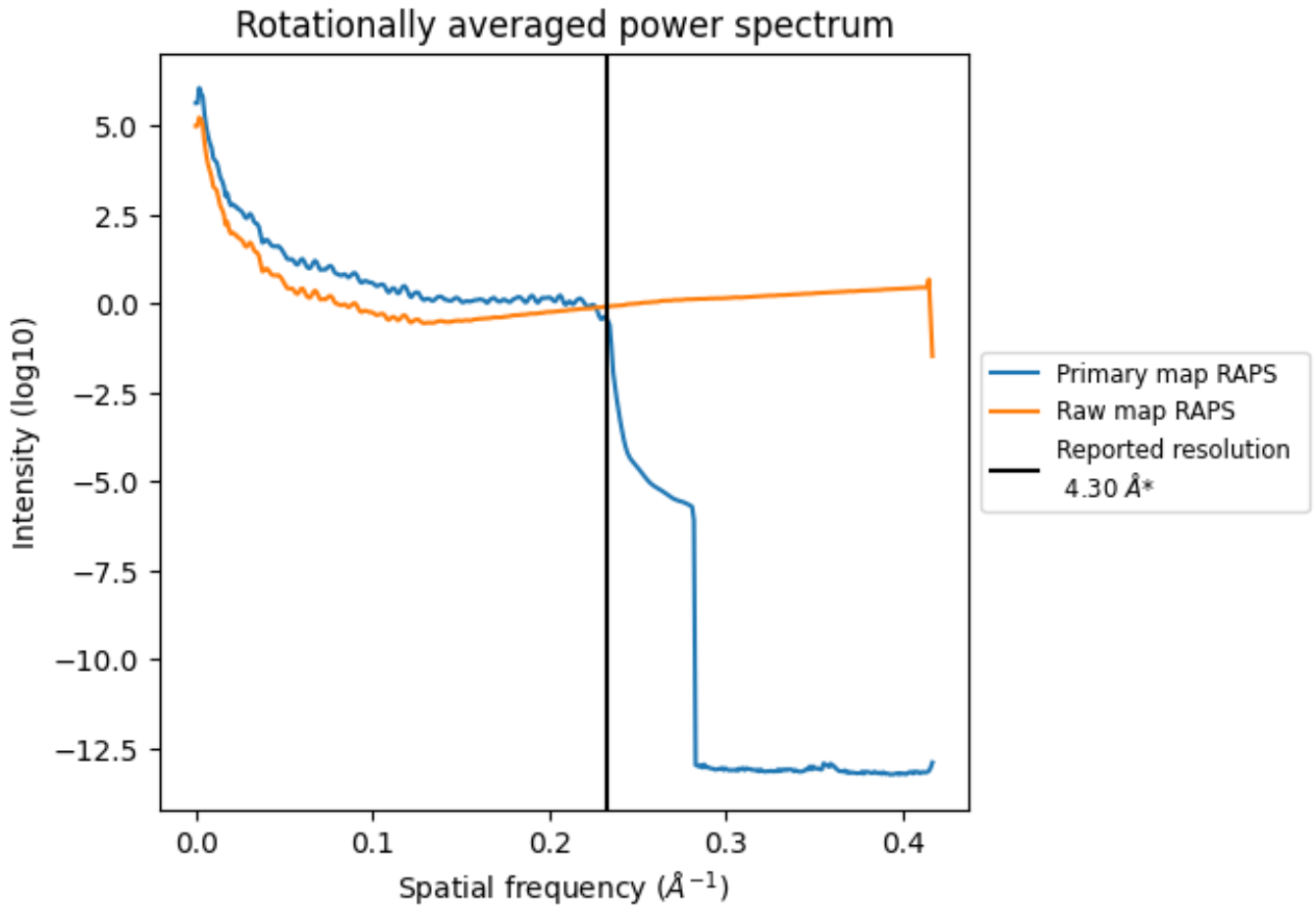
7.2 Volume estimate (i)



The volume at the recommended contour level is 22548 nm^3; this corresponds to an approximate mass of 20368 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)

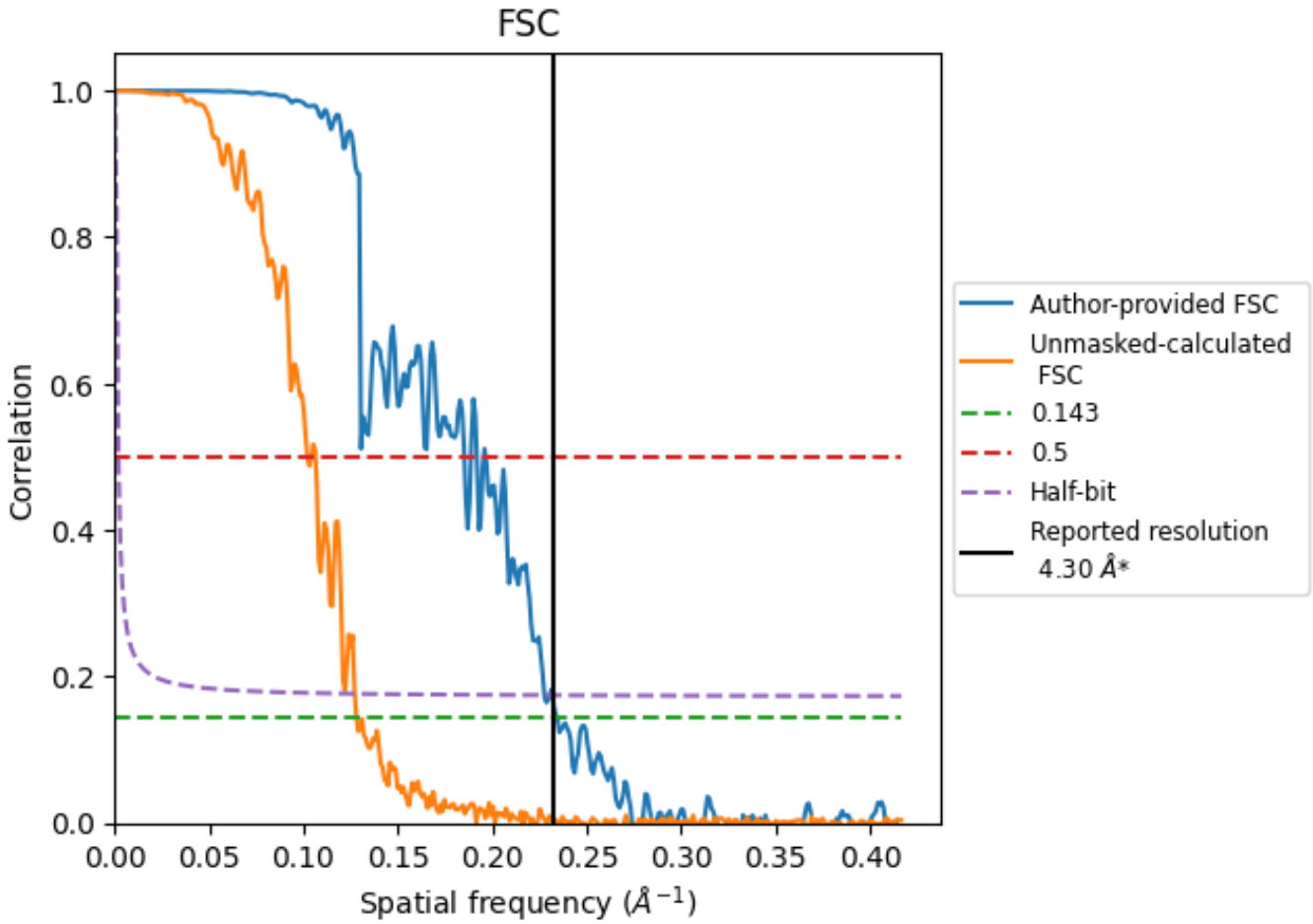


*Reported resolution corresponds to spatial frequency of 0.233 $Å^{-1}$

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.233 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.30	-	-
Author-provided FSC curve	4.27	5.40	4.39
Unmasked-calculated*	7.81	9.80	7.86

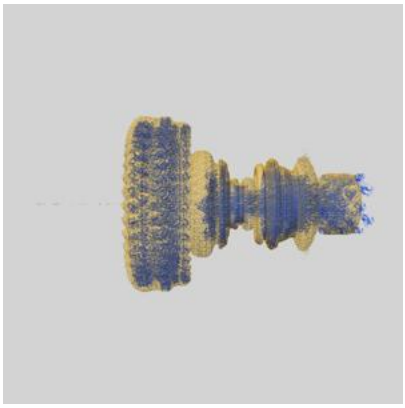
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.81 differs from the reported value 4.3 by more than 10 %

9 Map-model fit

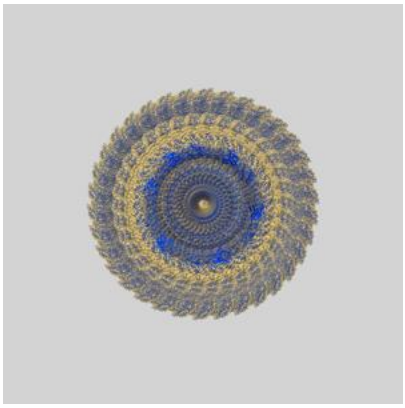
This section contains information regarding the fit between EMDB map EMD-37684 and PDB model 8WOE. Per-residue inclusion information can be found in section 3 on page 46.

9.1 Map-model overlay

X



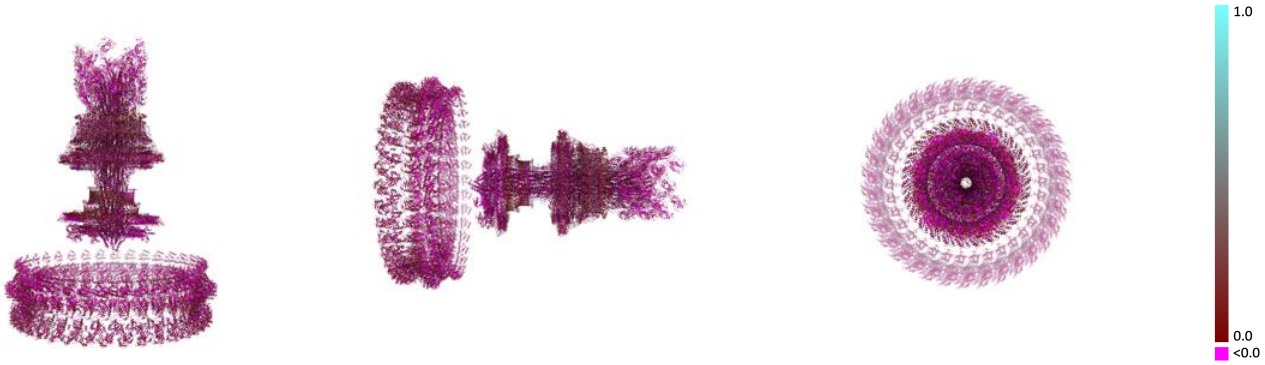
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.04 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.

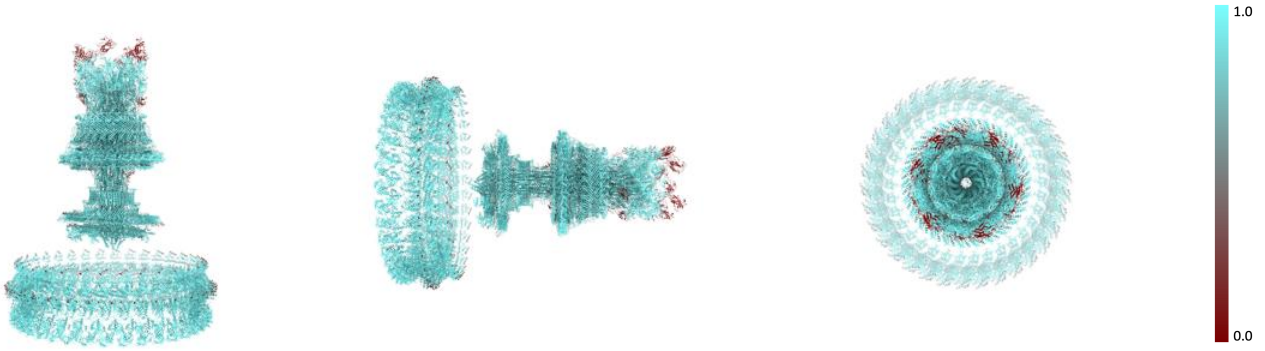
9.2 Q-score mapped to coordinate model (i)



X Y Z

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.

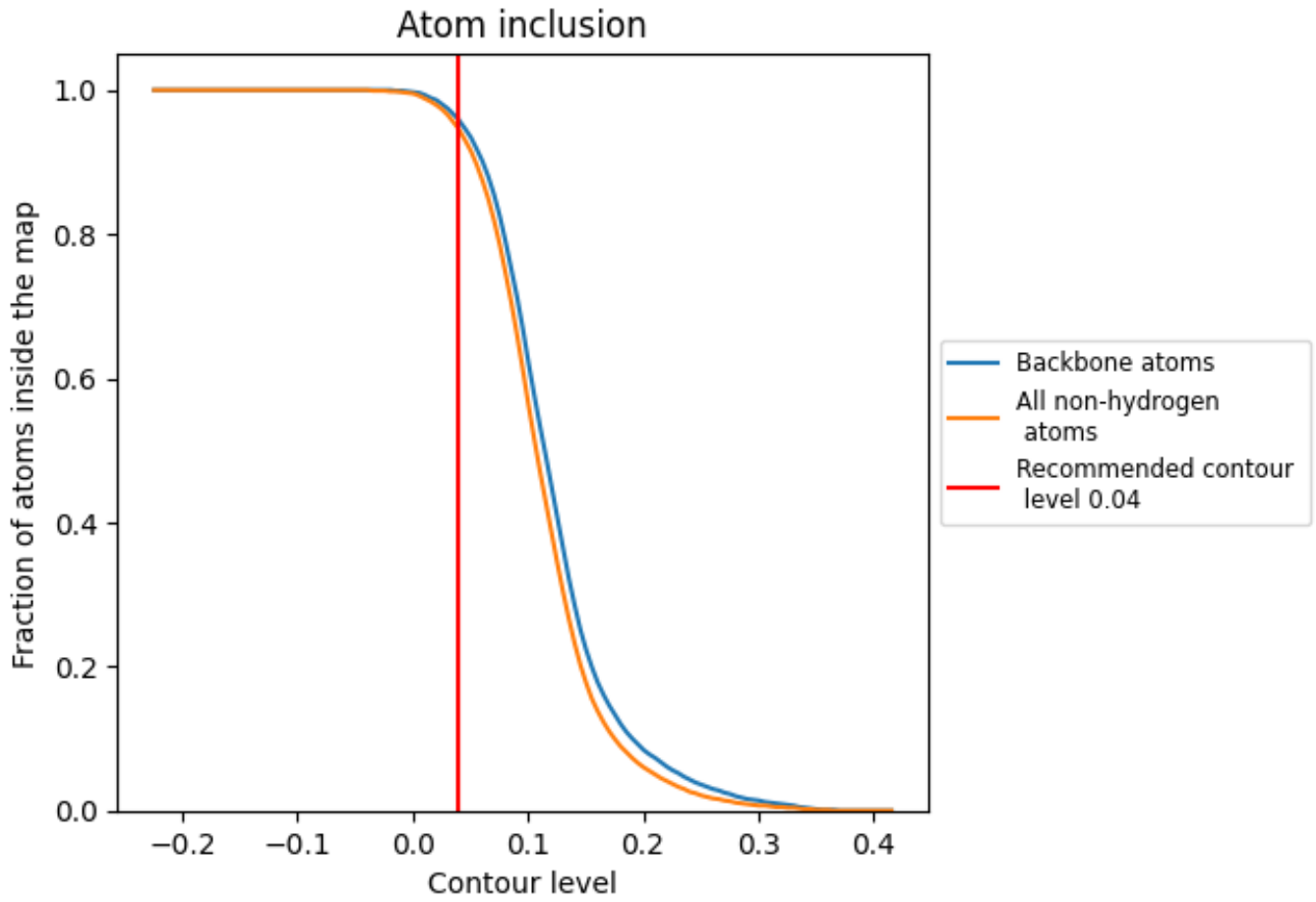
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.04).

9.4 Atom inclusion (i)



At the recommended contour level, 96% of all backbone atoms, 95% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9460	0.0660
0	0.9630	0.0640
1	0.9600	0.0700
2	0.9620	0.0710
3	0.9620	0.0670
4	0.9560	0.0560
5	0.9560	0.0480
6	0.9570	0.0700
7	0.9660	0.0710
8	0.9720	0.0770
9	0.9740	0.0690
A	0.9370	0.1470
A0	0.9020	0.0500
A1	0.8930	0.0440
A2	0.9510	0.0550
A3	0.9540	0.0720
A4	0.9590	0.1040
A5	0.9510	0.0930
A6	0.8340	0.0610
A7	0.8770	0.0350
A8	0.8850	0.0360
A9	0.8790	0.0380
AA	0.8630	0.0360
AB	0.8980	0.0310
AC	0.9290	0.0380
AD	0.9510	0.0550
AE	0.9590	0.0710
AF	0.9670	0.0760
AG	0.9660	0.0660
AH	0.9710	0.0590
AI	0.9670	0.0480
AJ	0.9690	0.0690
AK	0.9730	0.0660
AL	0.9680	0.0800
AM	0.9690	0.0620

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Chain	Atom inclusion	Q-score
AN	0.9590	0.0450
AO	0.9620	0.0790
AP	0.9750	0.1060
AQ	0.9780	0.1230
AR	0.9740	0.1190
AS	0.9290	0.0700
AT	0.9320	0.0710
AU	0.9330	0.0790
AV	0.9450	0.0910
AW	0.9550	0.1070
AX	0.9680	0.1250
AY	0.9730	0.1440
AZ	0.9770	0.1450
Aa	0.9770	0.1370
Ab	0.9870	0.0060
Ac	0.9650	0.0970
Ad	0.9540	0.0750
Ae	0.9420	0.0550
Af	0.9220	0.0390
Ag	0.9110	0.0280
Ah	0.8980	0.0200
Ai	0.8930	0.0130
Aj	0.8920	0.0120
Ak	0.8960	0.0120
Al	0.9010	0.0150
Am	0.9110	0.0190
An	0.9210	0.0240
Ao	0.9380	0.0320
Ap	0.9470	0.0510
Aq	1.0000	-0.0100
Ar	1.0000	0.0070
As	0.9940	0.0470
At	0.9950	0.0390
Au	0.9690	0.0360
Av	0.9840	0.0330
Aw	0.9770	0.0160
Ax	0.9580	0.0210
Ay	0.9240	0.0430
Az	0.9110	0.0700
B	0.9360	0.1430
B0	0.9910	0.0380
B1	0.9940	0.1100

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Chain	Atom inclusion	Q-score
B2	0.9920	0.0680
B3	0.9910	0.0420
B4	0.9880	0.0820
B5	0.9740	0.0320
B6	0.8860	0.0460
B7	0.9970	0.0820
B8	0.9940	0.1080
B9	0.9920	0.0710
BA	0.9450	0.0370
BB	0.9490	0.0440
BC	0.9530	0.0250
BD	0.9790	0.0710
BE	0.9890	0.0930
BF	0.9940	0.0690
BG	1.0000	0.0830
BH	0.8450	0.0020
BI	0.5710	-0.0320
BJ	0.8350	-0.0060
BK	0.6860	-0.0090
BL	0.8640	-0.0320
BM	0.8210	0.0250
BN	0.9710	0.0730
BO	0.9320	0.1020
BP	0.9610	0.0190
BQ	0.8570	0.0660
BR	0.9820	0.1300
BS	0.9740	0.1260
BT	0.9660	0.1160
BU	0.9480	0.1040
BV	0.9380	0.0920
BW	0.9330	0.0800
BX	0.9290	0.0720
BY	0.9940	0.1110
BZ	0.9920	0.0700
Ba	0.9910	0.0390
Bb	0.9870	0.0820
Bc	0.9730	0.0320
Bd	0.8770	0.0430
Be	0.9950	0.0790
Bf	0.9940	0.1120
Bg	0.9920	0.0670
Bh	0.9910	0.0380

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Chain	Atom inclusion	Q-score
Bi	0.9870	0.0820
Bj	0.9730	0.0320
Bk	0.8760	0.0440
Bl	0.9950	0.0790
Bm	0.9940	0.1080
Bn	0.9920	0.0690
Bo	0.9910	0.0370
Bp	0.9870	0.0830
Bq	0.9720	0.0310
Br	0.8730	0.0450
Bs	0.9970	0.0810
Bt	0.9940	0.1050
Bu	0.9920	0.0700
Bv	0.9910	0.0420
Bw	0.9870	0.0830
Bx	0.9730	0.0330
By	0.8770	0.0450
Bz	0.9950	0.0810
C	0.9410	0.1460
C0	0.9880	0.0800
C1	0.9970	0.0790
C2	0.9940	0.1060
C3	0.9920	0.0720
C4	0.9970	0.0790
C5	0.9940	0.1050
C6	0.9720	0.0320
C7	0.8770	0.0370
C8	0.9950	0.0780
C9	0.9940	0.1080
CA	0.9880	0.0820
CB	0.9740	0.0320
CC	0.8820	0.0450
CD	0.9950	0.0810
CE	0.9940	0.1100
CF	0.9920	0.0700
CG	0.9910	0.0360
CH	0.9880	0.0820
CI	0.9720	0.0300
CJ	0.8800	0.0420
CK	0.9970	0.0810
CL	0.9940	0.1100
CM	0.9920	0.0710

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Chain	Atom inclusion	Q-score
CN	0.9910	0.0410
CO	0.9880	0.0820
CP	0.9730	0.0310
CQ	0.8810	0.0420
CR	0.9970	0.0790
CS	0.9940	0.1110
CT	0.9920	0.0730
CU	0.9910	0.0430
CV	0.9870	0.0810
CW	0.9730	0.0310
CX	0.8730	0.0430
CY	0.9970	0.0820
CZ	0.9940	0.1070
Ca	0.9920	0.0710
Cb	0.9910	0.0410
Cc	0.9870	0.0810
Cd	0.9730	0.0320
Ce	0.8770	0.0420
Cf	0.9970	0.0810
Cg	0.9920	0.1080
Ch	0.9920	0.0700
Ci	0.9910	0.0380
Cj	0.9870	0.0820
Ck	0.9730	0.0310
Cl	0.8740	0.0420
Cm	0.9940	0.0780
Cn	0.9920	0.1070
Co	0.9920	0.0710
Cp	0.9910	0.0360
Cq	0.9870	0.0820
Cr	0.9730	0.0330
Cs	0.8780	0.0400
Ct	0.9950	0.0790
Cu	0.9940	0.1080
Cv	0.9920	0.0720
Cw	0.9910	0.0420
Cx	0.9870	0.0810
Cy	0.9740	0.0320
Cz	0.8770	0.0410
D	0.9350	0.1440
D0	0.8770	0.0380
D1	0.9920	0.0690

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Chain	Atom inclusion	Q-score
D2	0.9870	0.0810
D3	0.9730	0.0300
D4	0.8730	0.0380
D5	0.9940	0.0790
D6	0.9940	0.1060
D7	0.9920	0.0690
D8	0.9870	0.0820
D9	0.9730	0.0310
DA	0.9740	0.0300
DB	0.8840	0.0370
DC	0.9880	0.0810
DD	0.9920	0.0700
DE	0.9910	0.0410
DF	0.9880	0.0810
DG	0.9740	0.0310
DH	0.8800	0.0420
DI	0.9950	0.0800
DJ	0.9940	0.1070
DK	0.9920	0.0690
DL	0.9910	0.0360
DM	0.9920	0.0700
DN	0.9920	0.0720
DO	0.9920	0.0710
DP	0.9920	0.0720
DQ	0.9920	0.0690
DR	0.9920	0.0710
DS	0.9920	0.0710
DT	0.9920	0.0670
DU	0.9970	0.0800
DV	0.9940	0.1040
DW	0.9920	0.0710
DX	0.9880	0.0810
DY	0.9730	0.0300
DZ	0.8800	0.0410
Da	0.9970	0.0800
Db	0.9940	0.1060
Dc	0.9920	0.0700
Dd	0.9880	0.0810
De	0.9720	0.0290
Df	0.8810	0.0370
Dg	0.9950	0.0800
Dh	0.9940	0.1030

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Chain	Atom inclusion	Q-score
Di	0.9920	0.0700
Dj	0.9870	0.0820
Dk	0.9730	0.0300
Dl	0.8800	0.0380
Dm	0.9970	0.0820
Dn	0.9920	0.1060
Do	0.9920	0.0720
Dp	0.9870	0.0800
Dq	0.9720	0.0290
Dr	0.8760	0.0390
Ds	0.9970	0.0830
Dt	0.9940	0.1050
Du	0.9920	0.0700
Dv	0.9870	0.0790
Dw	0.9730	0.0310
Dx	0.8790	0.0380
Dy	0.9970	0.0820
Dz	0.9920	0.1060
E	0.9410	0.1370
E0	0.8750	0.0390
E1	0.9730	0.0310
E2	0.9730	0.0310
E3	0.9730	0.0310
E4	0.9720	0.0300
E5	0.9870	0.0810
E6	0.8810	0.0390
E7	0.8790	0.0390
E8	0.8780	0.0380
E9	0.8720	0.0400
EA	0.9950	0.0810
EB	0.9940	0.1080
EC	0.9720	0.0330
ED	0.8820	0.0420
EE	0.9970	0.0800
EF	0.9940	0.1080
EG	0.9920	0.0680
EH	0.9910	0.0400
EI	0.9880	0.0810
EJ	0.9720	0.0320
EK	0.8830	0.0410
EL	0.9970	0.0820
EM	0.9940	0.1080

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Chain	Atom inclusion	Q-score
EN	0.9920	0.0710
EO	0.9910	0.0380
EP	0.9880	0.0820
EQ	0.9730	0.0300
ER	0.8790	0.0430
ES	0.9970	0.0810
ET	0.9940	0.1050
EU	0.9920	0.0700
EV	0.9910	0.0380
EW	0.9870	0.0810
EX	0.9740	0.0310
EY	0.8730	0.0440
EZ	0.9970	0.0820
Ea	0.9910	0.0400
Eb	0.9910	0.0390
Ec	0.9910	0.0370
Ed	0.9910	0.0410
Ee	0.9910	0.0430
Ef	0.9910	0.0420
Eg	0.9910	0.0400
Eh	0.9910	0.0410
Ei	0.9910	0.0430
Ej	0.9910	0.0430
Ek	0.9910	0.0420
El	0.9910	0.0420
Em	0.9910	0.0370
En	0.9910	0.0390
Eo	0.9910	0.0390
Ep	0.9910	0.0410
Eq	0.9870	0.0800
Er	0.9870	0.0810
Es	0.9880	0.0820
Et	0.9870	0.0820
Eu	0.9870	0.0810
Ev	0.9870	0.0820
Ew	0.9870	0.0820
Ex	0.9720	0.0310
Ey	0.9730	0.0310
Ez	0.9730	0.0290
F	0.9400	0.1370
FA	0.8750	0.0390
FB	0.8720	0.0370

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Chain	Atom inclusion	Q-score
FC	0.9970	0.0770
FD	0.9970	0.0810
FE	0.9970	0.0780
FF	0.9970	0.0780
FG	0.9950	0.0780
FH	0.9950	0.0760
FI	0.9940	0.1080
FJ	0.9940	0.1060
FK	0.9940	0.1040
FL	0.9940	0.1060
FM	0.9940	0.1060
FN	0.9910	0.1050
G	0.9380	0.1350
H	0.9270	0.1260
I	0.9320	0.1250
J	0.9320	0.1310
K	0.9250	0.1270
L	0.9310	0.1300
M	0.9320	0.1390
N	0.9280	0.1400
O	0.9320	0.1430
P	0.9300	0.1450
Q	0.9270	0.1460
R	0.9320	0.1450
S	0.9280	0.1430
T	0.9260	0.1340
U	0.9260	0.1350
UI	0.9360	0.0490
UJ	0.8960	0.0090
UK	0.9260	0.0530
UL	0.9260	0.0540
UM	0.9890	-0.0010
UN	0.9710	0.0110
UO	0.9670	0.0410
UP	0.9440	0.0470
V	0.9310	0.1360
W	0.9290	0.1290
WA	0.9710	0.0730
WB	0.9830	0.0770
WC	0.9800	0.0500
WD	0.9770	0.0590
WE	0.9280	0.0460

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Chain	Atom inclusion	Q-score
WF	0.9610	0.0770
WG	0.9650	0.0590
WH	0.9710	0.0900
WI	0.9160	0.0950
WJ	0.9780	0.0620
WK	0.9900	0.0270
WL	0.9870	-0.0210
WM	0.9630	-0.0210
WN	0.9470	-0.0240
WO	0.9390	-0.0120
WP	0.9550	-0.0220
WQ	0.9670	-0.0370
WR	0.9790	0.0110
WS	0.9840	-0.0140
WT	0.9850	0.0440
WU	0.9930	0.0540
WV	0.9940	0.0760
WW	0.9990	0.0740
X	0.9310	0.1380
Y	0.9320	0.1400
Z	0.9380	0.1440
ZA	0.9800	0.0510
ZB	0.9730	0.0500
ZC	0.9800	0.0600
ZD	0.9840	0.0610
ZE	0.9850	0.0580
ZF	0.7050	0.0240
ZG	0.7380	0.0300
ZH	0.7700	0.0230
ZI	0.8220	0.0400
ZJ	0.9000	0.0460
ZK	0.9360	0.0390
ZL	0.9480	0.0130
ZM	0.9360	0.0410
ZN	0.9380	0.0410
ZO	0.9600	0.0390
ZP	0.9680	0.0320
ZQ	0.9760	0.0280
ZR	0.9660	0.0280
ZS	0.9540	0.0280
ZT	0.9630	0.0360
ZU	0.9720	0.0270

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Chain	Atom inclusion	Q-score
ZV	0.9710	0.0330
ZW	0.9530	0.0160
ZX	0.9180	0.0250
ZY	0.8790	0.0320
ZZ	0.8510	0.0130
Za	0.8220	0.0190
Zb	0.7790	0.0210
Zc	0.7410	0.0330
Zd	0.7020	0.0120
Ze	0.6730	0.0270
Zf	0.6350	0.0300
Zg	0.6210	0.0330
Zh	0.6050	0.0180
a	0.9660	0.1240
b	0.9680	0.1300
c	0.9660	0.1280
d	0.9640	0.1270
e	0.9650	0.1130
f	0.9640	0.1140
g	0.9650	0.1160
h	0.9610	0.1030
i	0.9630	0.1090
j	0.9620	0.1150
k	0.9620	0.1130
l	0.9670	0.1210
m	0.9640	0.1210
n	0.9620	0.1290
o	0.9640	0.1300
p	0.9620	0.1220
q	0.9660	0.1240
r	0.9610	0.1200
s	0.9580	0.1080
t	0.9570	0.1070
u	0.9580	0.1040
v	0.9550	0.0950
w	0.9550	0.0960
x	0.9630	0.1090
y	0.9590	0.1170
z	0.9620	0.1170