Full wwPDB EM Validation Report ⓘ

May 5, 2025 – 10:55 pm BST

PDB ID	:	9F4A / pdb_00009f4a
EMDB ID	:	EMD-50186
Title	:	Interface between baseplate cup and extended tail tube/sheath of Klebsiella phage KP1 variant vB_Kpn_Lilla1
Authors	:	Orlova, E.V.; Isupov, M.N.
Deposited on	:	2024-04-26
Resolution	:	3.95 Å(reported)

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

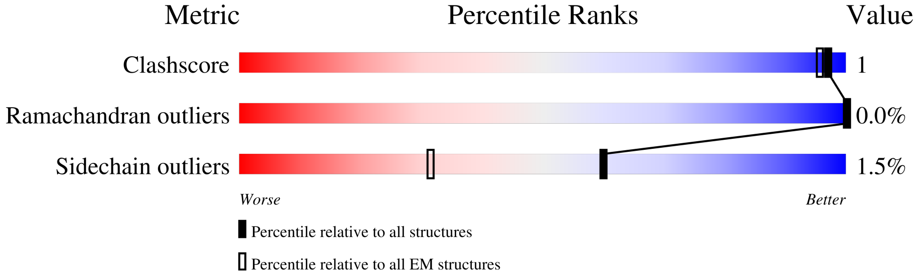
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 3.95 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
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	LS	1281	
1	LT	1281	
1	LU	1281	
1	LV	1281	
1	LW	1281	
1	LX	1281	
1	LY	1281	
1	LZ	1281	

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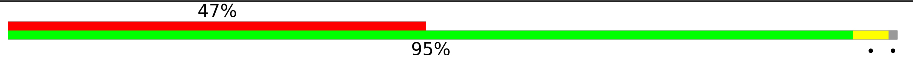
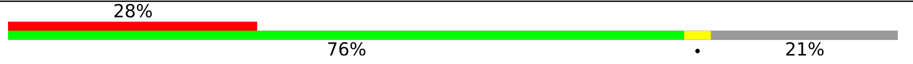
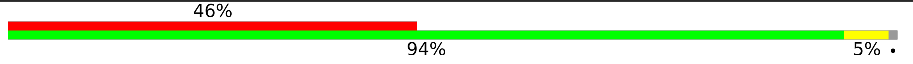
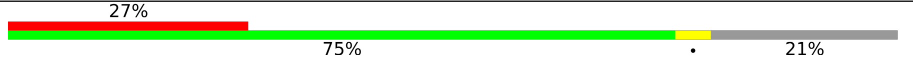
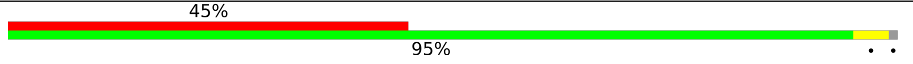
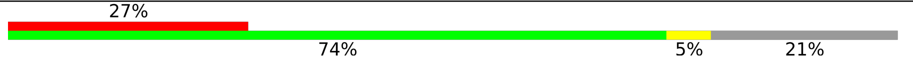
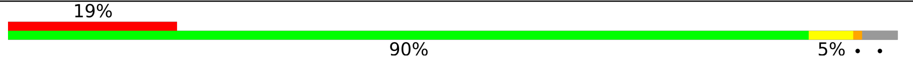
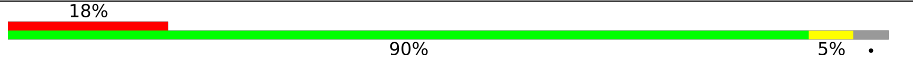
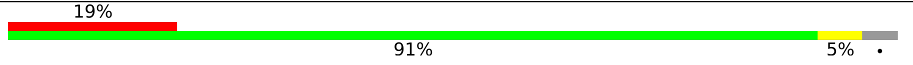
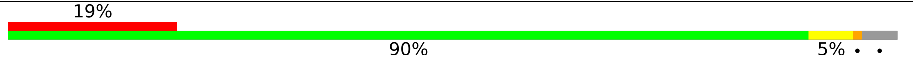
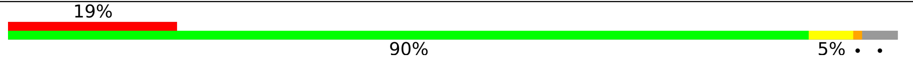
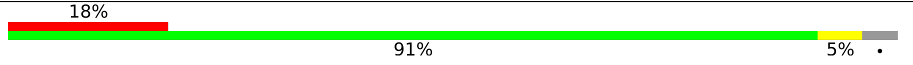
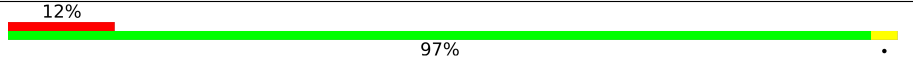
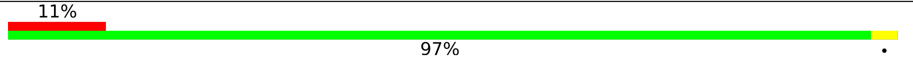
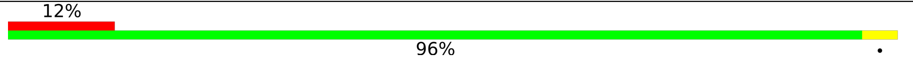
Mol	Chain	Length	Quality of chain
1	La	1281	
1	Lb	1281	
1	Lc	1281	
1	Ld	1281	
1	Le	1281	
1	Lf	1281	
1	Lg	1281	
1	Lh	1281	
1	Li	1281	
1	Lj	1281	
2	BK	350	
2	BL	350	
2	BM	350	
2	BN	350	
2	BO	350	
2	BP	350	
3	BQ	308	
3	BR	308	
3	BS	308	
3	BT	308	
3	BU	308	
3	BV	308	
4	AM	655	
4	AN	655	
4	AO	655	

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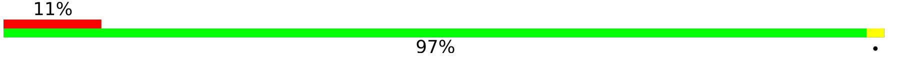
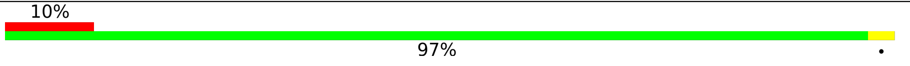
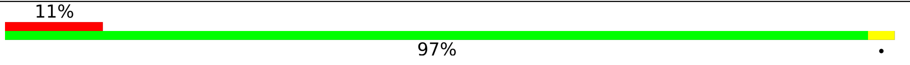
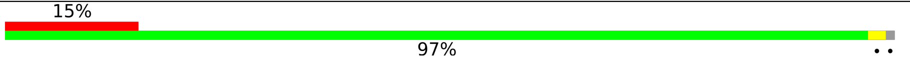
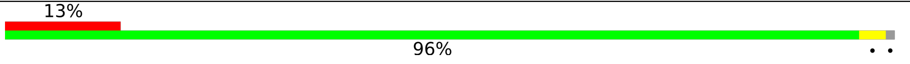
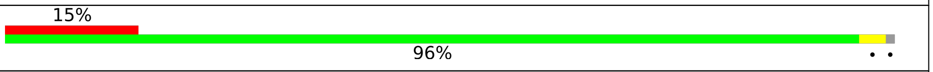
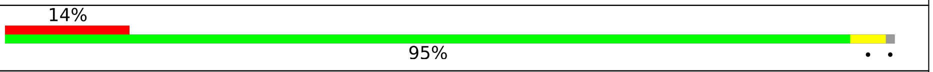
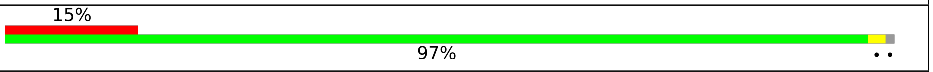
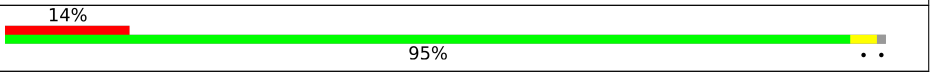
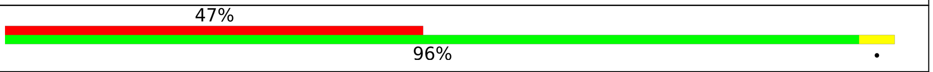
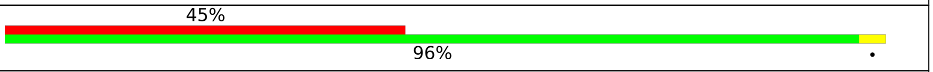
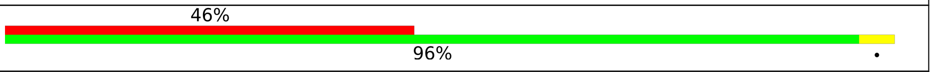
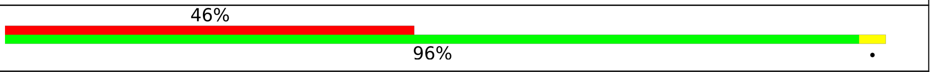
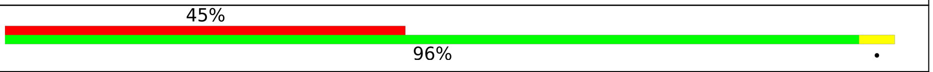
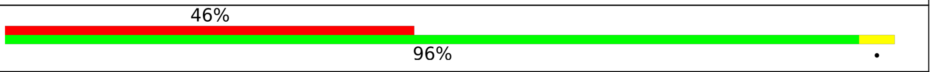
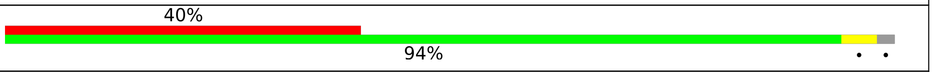
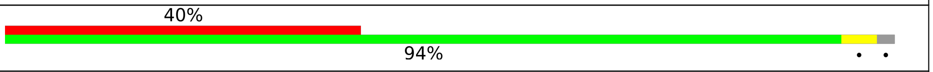
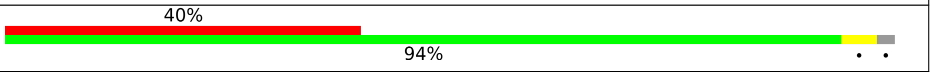
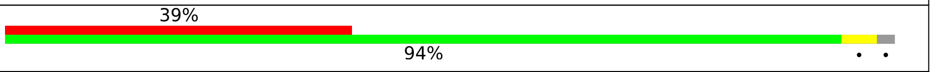
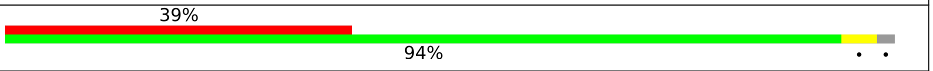
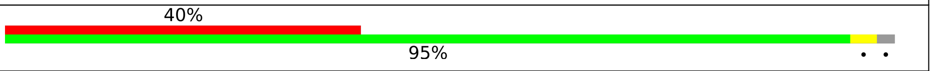
Mol	Chain	Length	Quality of chain
4	AP	655	
4	AQ	655	
4	AR	655	
4	AS	655	
4	AT	655	
4	AU	655	
4	AV	655	
4	AW	655	
4	AX	655	
5	A0	1032	
5	A1	1032	
5	A2	1032	
5	A3	1032	
5	AY	1032	
5	AZ	1032	
6	A4	341	
6	A5	341	
6	A6	341	
6	A7	341	
6	A8	341	
6	A9	341	
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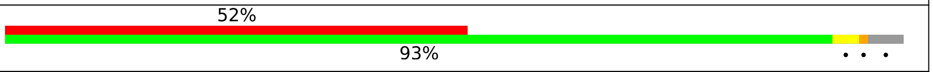
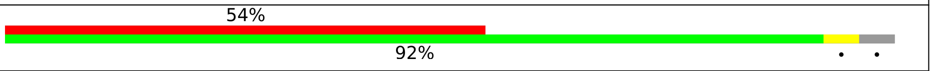
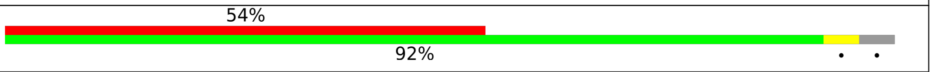
6	Ab	341	
6	Ac	341	
6	Ad	341	

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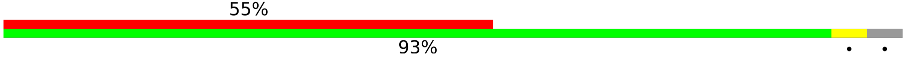
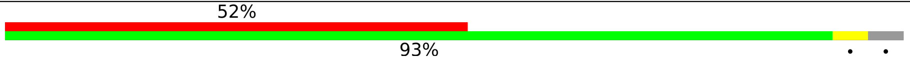
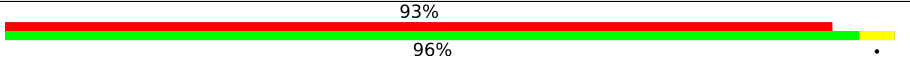
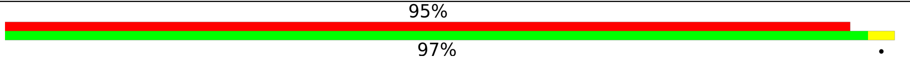
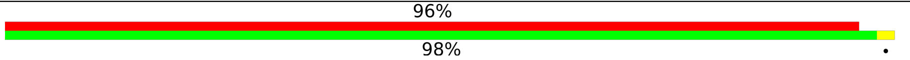
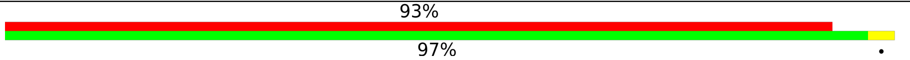
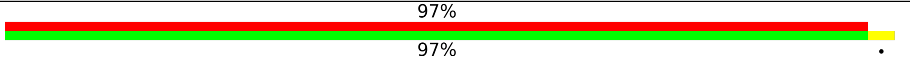
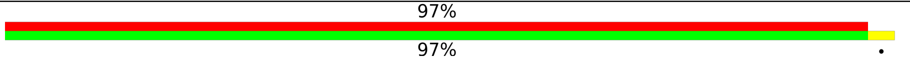
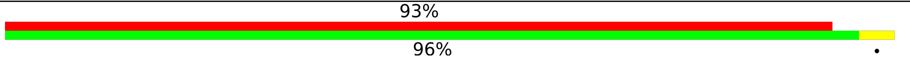
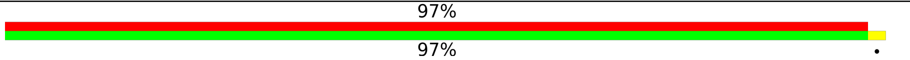
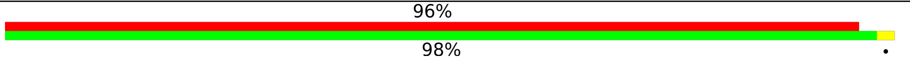
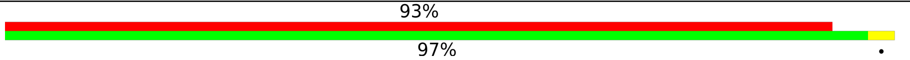
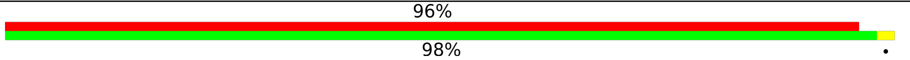
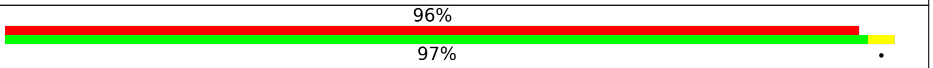
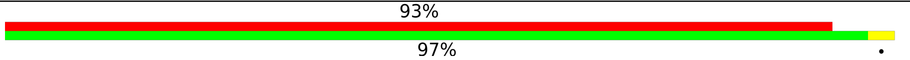
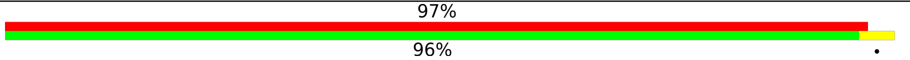
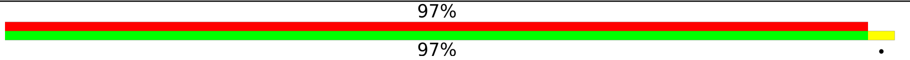
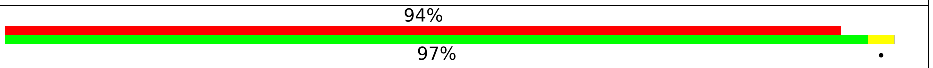
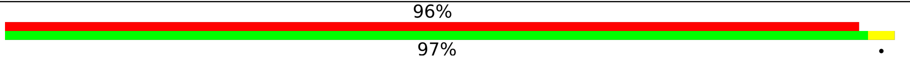
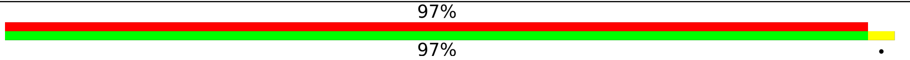
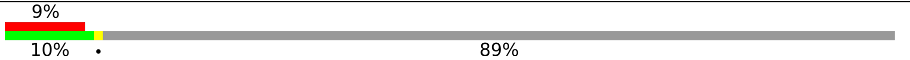
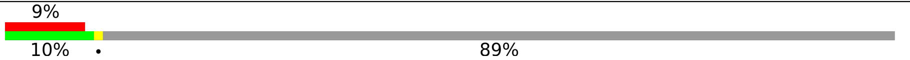
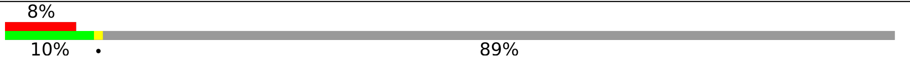
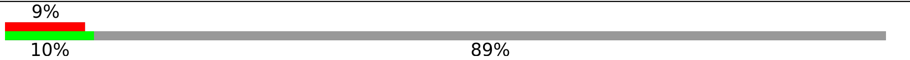
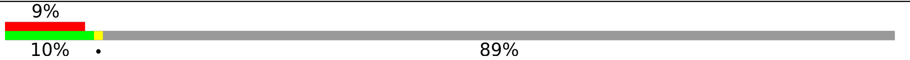
Mol	Chain	Length	Quality of chain
6	Ae	341	
6	Af	341	
7	LA	303	
7	LB	303	
7	LC	303	
7	LD	303	
7	LE	303	
7	LF	303	
7	LG	303	
7	LH	303	
7	LI	303	
7	LJ	303	
7	LK	303	
7	LL	303	
7	LM	303	
7	LN	303	
7	LO	303	
7	LP	303	
7	LQ	303	
7	LR	303	
8	FA	607	
8	FB	607	
8	FC	607	
8	FJ	607	
8	FK	607	

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Mol	Chain	Length	Quality of chain
8	FL	607	9% 10% • 89%
8	FS	607	9% 10% 89%
8	FT	607	10% 10% • 89%
8	FU	607	9% 10% • 89%
8	Fb	607	9% 10% 89%
8	Fc	607	9% 10% • 89%
8	Fd	607	8% 10% • 89%
8	Fk	607	9% 10% • 89%
8	Fl	607	10% 10% • 89%
8	Fm	607	9% 10% • 89%
8	Ft	607	9% 10% • 89%
8	Fu	607	10% 10% • 89%
8	Fv	607	9% 10% • 89%
9	SA	656	16% 95% • •
9	SB	656	17% 95% • •
9	SC	656	16% 96% • •
9	SD	656	17% 96% • •
9	SE	656	16% 96% • •
9	SF	656	17% 96% • •
9	SG	656	11% 95% •
9	SH	656	11% 96% •
9	SI	656	11% 95% •
9	SJ	656	11% 96% •
9	SK	656	11% 96% •
9	SL	656	11% 95% •

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Mol	Chain	Length	Quality of chain
9	SM	656	11% 96% •
9	SN	656	12% 97% •
9	SO	656	13% 96% •
9	SP	656	12% 96% •
9	SQ	656	12% 98% •
9	SR	656	12% 96% •
9	SS	656	13% 97% •
9	ST	656	14% 97% •
9	SU	656	13% 98% •
9	SV	656	13% 97% •
9	SW	656	14% 97% •
9	SX	656	13% 98% •
9	SY	656	16% 98% •
9	SZ	656	17% 98% ••
9	Sa	656	16% 98% •
9	Sb	656	16% 98% •
9	Sc	656	17% 98% •
9	Sd	656	16% 99% •
9	Se	656	20% 97% •
9	Sf	656	19% 97% •
9	Sg	656	19% 97% •
9	Sh	656	20% 97% •
9	Si	656	19% 97% •
9	Sj	656	19% 97% •
9	Sk	656	55% 98% •

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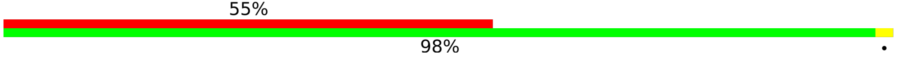
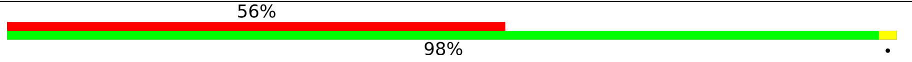
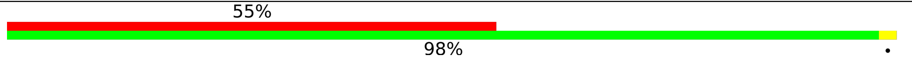
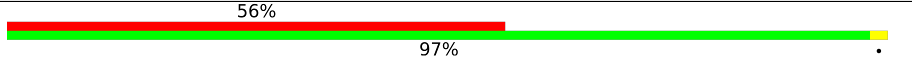
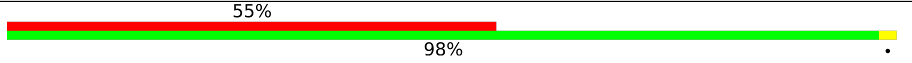
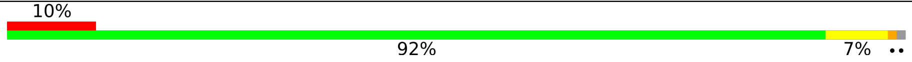
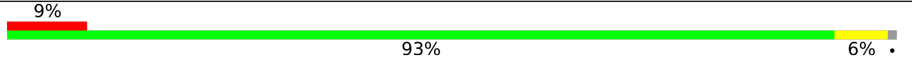
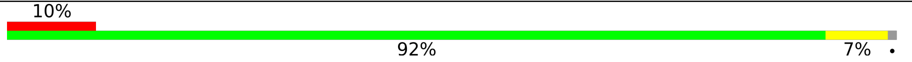
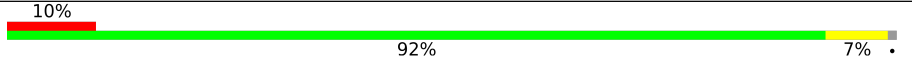
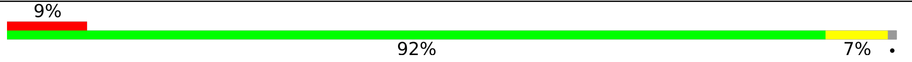
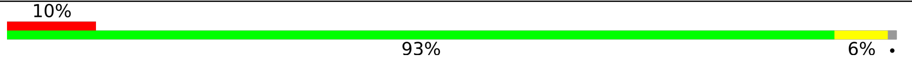
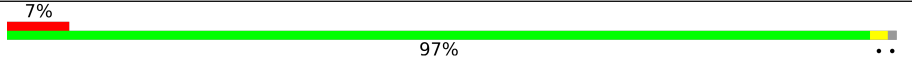
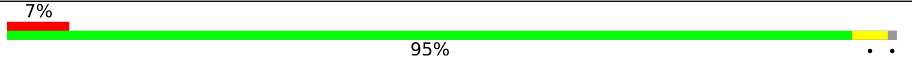
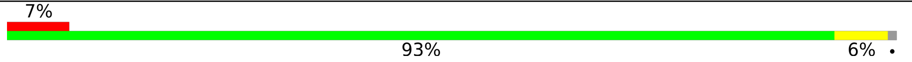
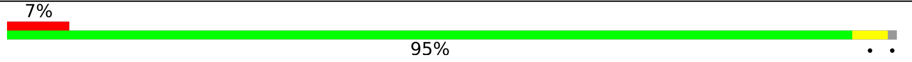
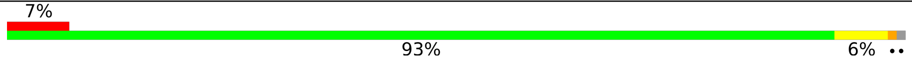
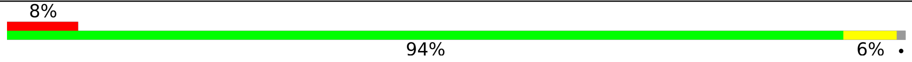
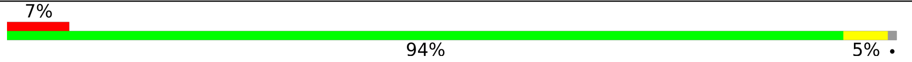
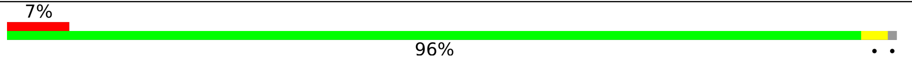
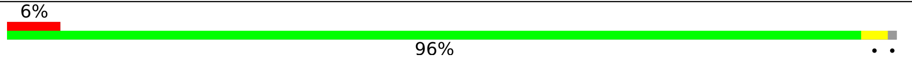
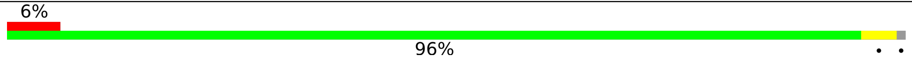
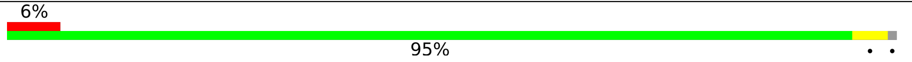
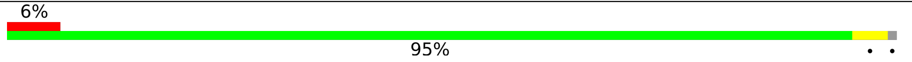
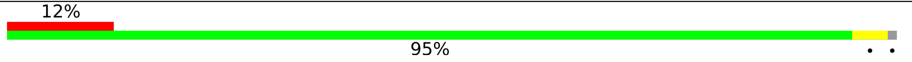
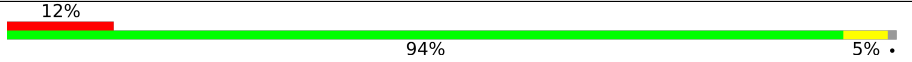
Mol	Chain	Length	Quality of chain
9	Sl	656	
9	Sm	656	
9	Sn	656	
9	So	656	
9	Sp	656	
10	TM	163	
10	TN	163	
10	TO	163	
10	TP	163	
10	TQ	163	
10	TR	163	
10	TS	163	
10	TT	163	
10	TU	163	
10	TV	163	
10	TW	163	
10	TX	163	
10	TY	163	
10	TZ	163	
10	Ta	163	
10	Tb	163	
10	Tc	163	
10	Td	163	
10	Te	163	
10	Tf	163	

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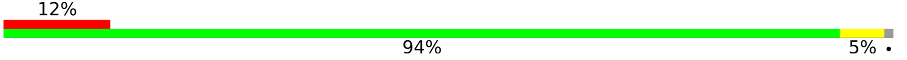
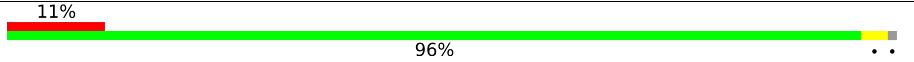
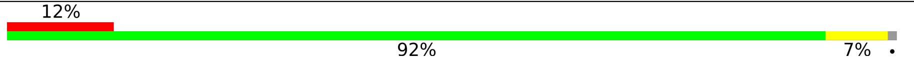
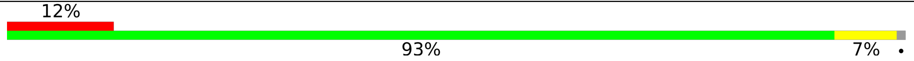
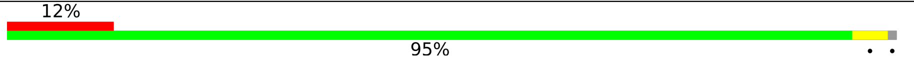
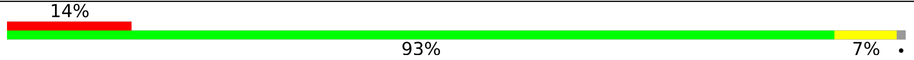
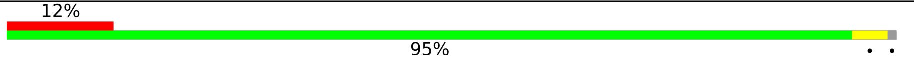
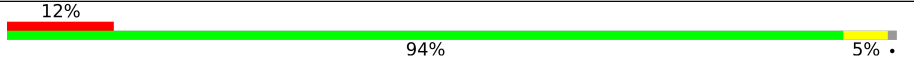
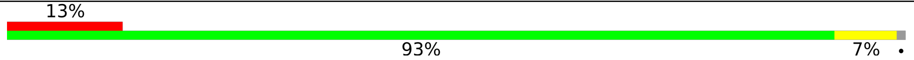
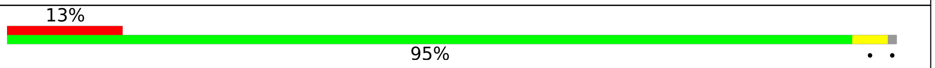
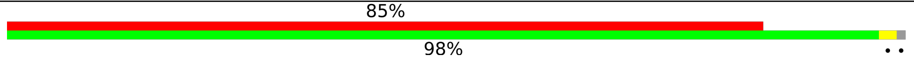
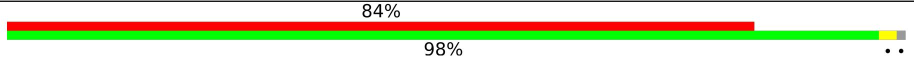
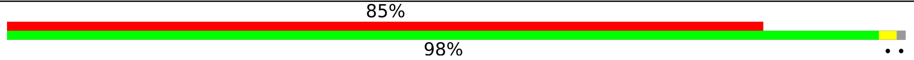
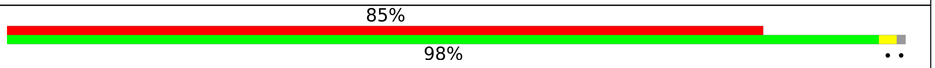
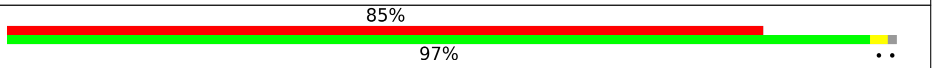
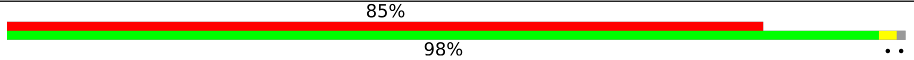
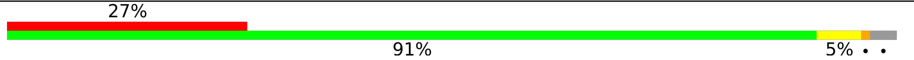
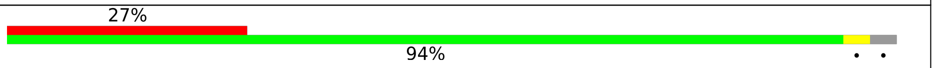
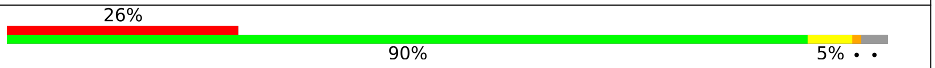
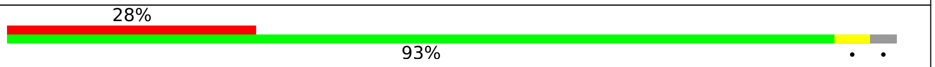
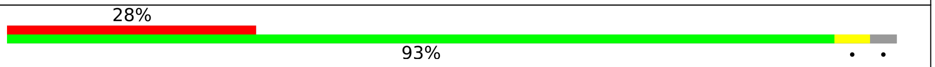
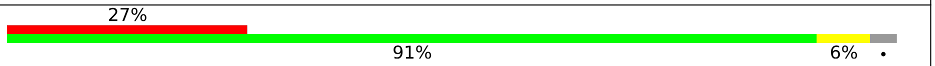
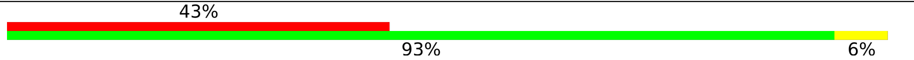
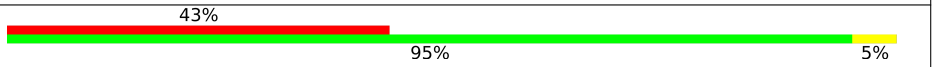
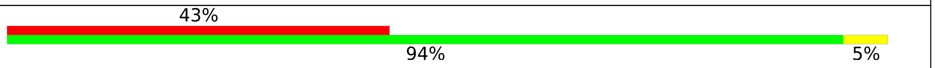
Mol	Chain	Length	Quality of chain
10	Tg	163	
10	Th	163	
10	Ti	163	
10	Tj	163	
10	Tk	163	
10	Tl	163	
10	Tm	163	
10	Tn	163	
10	To	163	
10	Tp	163	
10	Tq	163	
10	Tr	163	
10	Ts	163	
10	Tt	163	
10	Tu	163	
10	Tv	163	
11	AA	136	
11	AB	136	
11	AC	136	
11	AD	136	
11	AE	136	
11	AF	136	
12	BE	380	
12	BF	380	
12	BG	380	

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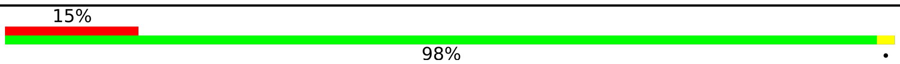
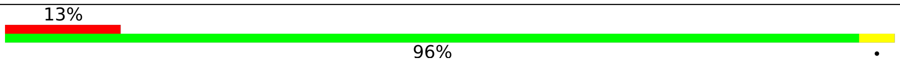
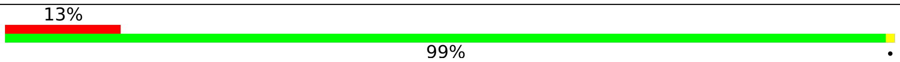
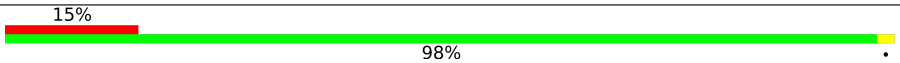
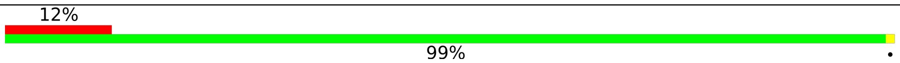
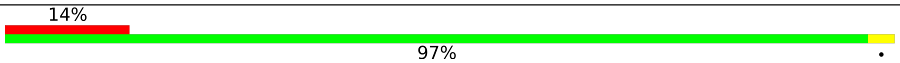
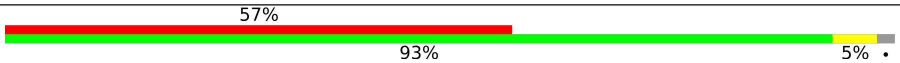
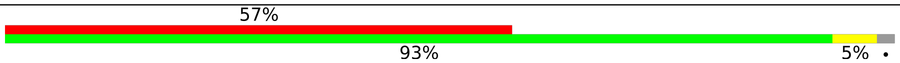
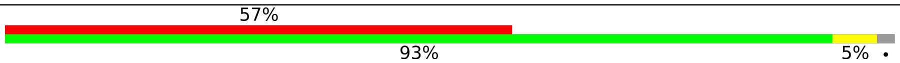
Mol	Chain	Length	Quality of chain
13	AG	212	
13	AH	212	
13	AI	212	
13	AJ	212	
13	AK	212	
13	AL	212	
14	BB	576	
14	BC	576	
14	BD	576	

2 Entry composition

There are 15 unique types of molecules in this entry. The entry contains 605128 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 Long tail fiber proximal subunit.

Mol	Chain	Residues	Atoms	AltConf	Trace
1	Le	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lf	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lg	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lh	617	Total C N O S 4752 2963 834 947 8	0	0
1	Li	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lj	617	Total C N O S 4752 2963 834 947 8	0	0
1	LS	617	Total C N O S 4752 2963 834 947 8	0	0
1	LT	617	Total C N O S 4752 2963 834 947 8	0	0
1	LU	617	Total C N O S 4752 2963 834 947 8	0	0
1	LV	617	Total C N O S 4752 2963 834 947 8	0	0
1	LW	617	Total C N O S 4752 2963 834 947 8	0	0
1	LX	617	Total C N O S 4752 2963 834 947 8	0	0
1	LY	617	Total C N O S 4752 2963 834 947 8	0	0
1	LZ	617	Total C N O S 4752 2963 834 947 8	0	0
1	La	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lb	617	Total C N O S 4752 2963 834 947 8	0	0
1	Lc	617	Total C N O S 4752 2963 834 947 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	Ld	617	4752	2963	834	947	8	0	0

There are 306 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Le	217	SER	ALA	conflict	UNP A0A5B9NKG2
Le	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Le	328	THR	ALA	conflict	UNP A0A5B9NKG2
Le	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Le	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Le	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Le	422	THR	SER	conflict	UNP A0A5B9NKG2
Le	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Le	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Le	535	SER	THR	conflict	UNP A0A5B9NKG2
Le	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Le	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Le	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Le	964	SER	THR	conflict	UNP A0A5B9NKG2
Le	973	PRO	THR	conflict	UNP A0A5B9NKG2
Le	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Le	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lf	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lf	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Lf	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lf	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lf	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lf	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lf	422	THR	SER	conflict	UNP A0A5B9NKG2
Lf	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lf	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lf	535	SER	THR	conflict	UNP A0A5B9NKG2
Lf	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lf	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lf	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lf	964	SER	THR	conflict	UNP A0A5B9NKG2
Lf	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lf	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Lf	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lg	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lg	278	ILE	VAL	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
Lg	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lg	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lg	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lg	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lg	422	THR	SER	conflict	UNP A0A5B9NKG2
Lg	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lg	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lg	535	SER	THR	conflict	UNP A0A5B9NKG2
Lg	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lg	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lg	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lg	964	SER	THR	conflict	UNP A0A5B9NKG2
Lg	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lg	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Lg	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lh	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lh	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Lh	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lh	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lh	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lh	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lh	422	THR	SER	conflict	UNP A0A5B9NKG2
Lh	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lh	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lh	535	SER	THR	conflict	UNP A0A5B9NKG2
Lh	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lh	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lh	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lh	964	SER	THR	conflict	UNP A0A5B9NKG2
Lh	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lh	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Lh	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Li	217	SER	ALA	conflict	UNP A0A5B9NKG2
Li	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Li	328	THR	ALA	conflict	UNP A0A5B9NKG2
Li	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Li	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Li	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Li	422	THR	SER	conflict	UNP A0A5B9NKG2
Li	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Li	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Li	535	SER	THR	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
Li	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Li	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Li	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Li	964	SER	THR	conflict	UNP A0A5B9NKG2
Li	973	PRO	THR	conflict	UNP A0A5B9NKG2
Li	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Li	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lj	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lj	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Lj	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lj	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lj	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lj	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lj	422	THR	SER	conflict	UNP A0A5B9NKG2
Lj	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lj	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lj	535	SER	THR	conflict	UNP A0A5B9NKG2
Lj	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lj	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lj	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lj	964	SER	THR	conflict	UNP A0A5B9NKG2
Lj	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lj	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Lj	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LS	217	SER	ALA	conflict	UNP A0A5B9NKG2
LS	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LS	328	THR	ALA	conflict	UNP A0A5B9NKG2
LS	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LS	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LS	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LS	422	THR	SER	conflict	UNP A0A5B9NKG2
LS	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LS	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LS	535	SER	THR	conflict	UNP A0A5B9NKG2
LS	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LS	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LS	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LS	964	SER	THR	conflict	UNP A0A5B9NKG2
LS	973	PRO	THR	conflict	UNP A0A5B9NKG2
LS	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LS	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LT	217	SER	ALA	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
LT	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LT	328	THR	ALA	conflict	UNP A0A5B9NKG2
LT	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LT	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LT	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LT	422	THR	SER	conflict	UNP A0A5B9NKG2
LT	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LT	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LT	535	SER	THR	conflict	UNP A0A5B9NKG2
LT	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LT	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LT	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LT	964	SER	THR	conflict	UNP A0A5B9NKG2
LT	973	PRO	THR	conflict	UNP A0A5B9NKG2
LT	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LT	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LU	217	SER	ALA	conflict	UNP A0A5B9NKG2
LU	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LU	328	THR	ALA	conflict	UNP A0A5B9NKG2
LU	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LU	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LU	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LU	422	THR	SER	conflict	UNP A0A5B9NKG2
LU	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LU	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LU	535	SER	THR	conflict	UNP A0A5B9NKG2
LU	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LU	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LU	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LU	964	SER	THR	conflict	UNP A0A5B9NKG2
LU	973	PRO	THR	conflict	UNP A0A5B9NKG2
LU	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LU	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LV	217	SER	ALA	conflict	UNP A0A5B9NKG2
LV	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LV	328	THR	ALA	conflict	UNP A0A5B9NKG2
LV	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LV	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LV	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LV	422	THR	SER	conflict	UNP A0A5B9NKG2
LV	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LV	467	ALA	PRO	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
LV	535	SER	THR	conflict	UNP A0A5B9NKG2
LV	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LV	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LV	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LV	964	SER	THR	conflict	UNP A0A5B9NKG2
LV	973	PRO	THR	conflict	UNP A0A5B9NKG2
LV	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LV	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LW	217	SER	ALA	conflict	UNP A0A5B9NKG2
LW	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LW	328	THR	ALA	conflict	UNP A0A5B9NKG2
LW	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LW	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LW	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LW	422	THR	SER	conflict	UNP A0A5B9NKG2
LW	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LW	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LW	535	SER	THR	conflict	UNP A0A5B9NKG2
LW	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LW	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LW	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LW	964	SER	THR	conflict	UNP A0A5B9NKG2
LW	973	PRO	THR	conflict	UNP A0A5B9NKG2
LW	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LW	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LX	217	SER	ALA	conflict	UNP A0A5B9NKG2
LX	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LX	328	THR	ALA	conflict	UNP A0A5B9NKG2
LX	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LX	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LX	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LX	422	THR	SER	conflict	UNP A0A5B9NKG2
LX	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LX	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LX	535	SER	THR	conflict	UNP A0A5B9NKG2
LX	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LX	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LX	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LX	964	SER	THR	conflict	UNP A0A5B9NKG2
LX	973	PRO	THR	conflict	UNP A0A5B9NKG2
LX	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LX	1180	ILE	VAL	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
LY	217	SER	ALA	conflict	UNP A0A5B9NKG2
LY	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LY	328	THR	ALA	conflict	UNP A0A5B9NKG2
LY	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LY	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LY	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LY	422	THR	SER	conflict	UNP A0A5B9NKG2
LY	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LY	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LY	535	SER	THR	conflict	UNP A0A5B9NKG2
LY	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LY	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LY	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LY	964	SER	THR	conflict	UNP A0A5B9NKG2
LY	973	PRO	THR	conflict	UNP A0A5B9NKG2
LY	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LY	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
LZ	217	SER	ALA	conflict	UNP A0A5B9NKG2
LZ	278	ILE	VAL	conflict	UNP A0A5B9NKG2
LZ	328	THR	ALA	conflict	UNP A0A5B9NKG2
LZ	369	GLY	ASP	conflict	UNP A0A5B9NKG2
LZ	413	GLU	GLY	conflict	UNP A0A5B9NKG2
LZ	419	GLU	ASP	conflict	UNP A0A5B9NKG2
LZ	422	THR	SER	conflict	UNP A0A5B9NKG2
LZ	429	ILE	VAL	conflict	UNP A0A5B9NKG2
LZ	467	ALA	PRO	conflict	UNP A0A5B9NKG2
LZ	535	SER	THR	conflict	UNP A0A5B9NKG2
LZ	567	VAL	ILE	conflict	UNP A0A5B9NKG2
LZ	580	ASN	ALA	conflict	UNP A0A5B9NKG2
LZ	727	GLY	ASP	conflict	UNP A0A5B9NKG2
LZ	964	SER	THR	conflict	UNP A0A5B9NKG2
LZ	973	PRO	THR	conflict	UNP A0A5B9NKG2
LZ	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
LZ	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
La	217	SER	ALA	conflict	UNP A0A5B9NKG2
La	278	ILE	VAL	conflict	UNP A0A5B9NKG2
La	328	THR	ALA	conflict	UNP A0A5B9NKG2
La	369	GLY	ASP	conflict	UNP A0A5B9NKG2
La	413	GLU	GLY	conflict	UNP A0A5B9NKG2
La	419	GLU	ASP	conflict	UNP A0A5B9NKG2
La	422	THR	SER	conflict	UNP A0A5B9NKG2
La	429	ILE	VAL	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
La	467	ALA	PRO	conflict	UNP A0A5B9NKG2
La	535	SER	THR	conflict	UNP A0A5B9NKG2
La	567	VAL	ILE	conflict	UNP A0A5B9NKG2
La	580	ASN	ALA	conflict	UNP A0A5B9NKG2
La	727	GLY	ASP	conflict	UNP A0A5B9NKG2
La	964	SER	THR	conflict	UNP A0A5B9NKG2
La	973	PRO	THR	conflict	UNP A0A5B9NKG2
La	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
La	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lb	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lb	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Lb	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lb	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lb	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lb	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lb	422	THR	SER	conflict	UNP A0A5B9NKG2
Lb	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lb	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lb	535	SER	THR	conflict	UNP A0A5B9NKG2
Lb	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lb	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lb	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lb	964	SER	THR	conflict	UNP A0A5B9NKG2
Lb	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lb	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Lb	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Lc	217	SER	ALA	conflict	UNP A0A5B9NKG2
Lc	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Lc	328	THR	ALA	conflict	UNP A0A5B9NKG2
Lc	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Lc	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Lc	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Lc	422	THR	SER	conflict	UNP A0A5B9NKG2
Lc	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Lc	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Lc	535	SER	THR	conflict	UNP A0A5B9NKG2
Lc	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Lc	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Lc	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Lc	964	SER	THR	conflict	UNP A0A5B9NKG2
Lc	973	PRO	THR	conflict	UNP A0A5B9NKG2
Lc	1141	LYS	GLN	conflict	UNP A0A5B9NKG2

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Chain	Residue	Modelled	Actual	Comment	Reference
Lc	1180	ILE	VAL	conflict	UNP A0A5B9NKG2
Ld	217	SER	ALA	conflict	UNP A0A5B9NKG2
Ld	278	ILE	VAL	conflict	UNP A0A5B9NKG2
Ld	328	THR	ALA	conflict	UNP A0A5B9NKG2
Ld	369	GLY	ASP	conflict	UNP A0A5B9NKG2
Ld	413	GLU	GLY	conflict	UNP A0A5B9NKG2
Ld	419	GLU	ASP	conflict	UNP A0A5B9NKG2
Ld	422	THR	SER	conflict	UNP A0A5B9NKG2
Ld	429	ILE	VAL	conflict	UNP A0A5B9NKG2
Ld	467	ALA	PRO	conflict	UNP A0A5B9NKG2
Ld	535	SER	THR	conflict	UNP A0A5B9NKG2
Ld	567	VAL	ILE	conflict	UNP A0A5B9NKG2
Ld	580	ASN	ALA	conflict	UNP A0A5B9NKG2
Ld	727	GLY	ASP	conflict	UNP A0A5B9NKG2
Ld	964	SER	THR	conflict	UNP A0A5B9NKG2
Ld	973	PRO	THR	conflict	UNP A0A5B9NKG2
Ld	1141	LYS	GLN	conflict	UNP A0A5B9NKG2
Ld	1180	ILE	VAL	conflict	UNP A0A5B9NKG2

- Molecule 2 is a protein called Baseplate tail tube cap.

Mol	Chain	Residues	Atoms	AltConf	Trace
2	BM	347	Total C N O S 2664 1664 459 533 8	0	0
2	BK	347	Total C N O S 2664 1664 459 533 8	0	0
2	BO	347	Total C N O S 2664 1664 459 533 8	0	0
2	BP	277	Total C N O S 2180 1373 377 424 6	0	0
2	BL	277	Total C N O S 2180 1373 377 424 6	0	0
2	BN	277	Total C N O S 2180 1373 377 424 6	0	0

- Molecule 3 is a protein called Baseplate subunit.

Mol	Chain	Residues	Atoms	AltConf	Trace
3	BQ	295	Total C N O S 2263 1426 385 436 16	0	0
3	BV	295	Total C N O S 2263 1426 385 436 16	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	BS	295	Total 2263	C 1426	N 385	O 436	S 16	0	0
3	BR	295	Total 2263	C 1426	N 385	O 436	S 16	0	0
3	BT	295	Total 2263	C 1426	N 385	O 436	S 16	0	0
3	BU	295	Total 2263	C 1426	N 385	O 436	S 16	0	0

- Molecule 4 is a protein called Baseplate wedge protein gp6.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AX	646	Total 5125	C 3252	N 853	O 1009	S 11	0	0
4	AW	648	Total 5145	C 3265	N 856	O 1013	S 11	0	0
4	AT	646	Total 5125	C 3252	N 853	O 1009	S 11	0	0
4	AS	648	Total 5145	C 3265	N 856	O 1013	S 11	0	0
4	AV	646	Total 5125	C 3252	N 853	O 1009	S 11	0	0
4	AU	648	Total 5145	C 3265	N 856	O 1013	S 11	0	0
4	AR	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0
4	AQ	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0
4	AN	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0
4	AM	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0
4	AP	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0
4	AO	654	Total 5191	C 3296	N 863	O 1021	S 11	0	0

- Molecule 5 is a protein called Baseplate wedge protein gp7.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AY	1031	Total 8438	C 5377	N 1416	O 1617	S 28	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
5	AZ	1031	Total C N O S 8438 5377 1416 1617 28	0	0
5	A0	1031	Total C N O S 8438 5377 1416 1617 28	0	0
5	A1	1031	Total C N O S 8438 5377 1416 1617 28	0	0
5	A2	1031	Total C N O S 8438 5377 1416 1617 28	0	0
5	A3	1031	Total C N O S 8438 5377 1416 1617 28	0	0

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	530	ALA	SER	conflict	UNP A0A2K9V5T9
AY	532	HIS	ASN	conflict	UNP A0A2K9V5T9
AY	536	ILE	VAL	conflict	UNP A0A2K9V5T9
AZ	530	ALA	SER	conflict	UNP A0A2K9V5T9
AZ	532	HIS	ASN	conflict	UNP A0A2K9V5T9
AZ	536	ILE	VAL	conflict	UNP A0A2K9V5T9
A0	530	ALA	SER	conflict	UNP A0A2K9V5T9
A0	532	HIS	ASN	conflict	UNP A0A2K9V5T9
A0	536	ILE	VAL	conflict	UNP A0A2K9V5T9
A1	530	ALA	SER	conflict	UNP A0A2K9V5T9
A1	532	HIS	ASN	conflict	UNP A0A2K9V5T9
A1	536	ILE	VAL	conflict	UNP A0A2K9V5T9
A2	530	ALA	SER	conflict	UNP A0A2K9V5T9
A2	532	HIS	ASN	conflict	UNP A0A2K9V5T9
A2	536	ILE	VAL	conflict	UNP A0A2K9V5T9
A3	530	ALA	SER	conflict	UNP A0A2K9V5T9
A3	532	HIS	ASN	conflict	UNP A0A2K9V5T9
A3	536	ILE	VAL	conflict	UNP A0A2K9V5T9

- Molecule 6 is a protein called Baseplate wedge subunit.

Mol	Chain	Residues	Atoms	AltConf	Trace
6	A4	334	Total C N O S 2669 1693 446 513 17	0	0
6	A9	334	Total C N O S 2669 1693 446 513 17	0	0
6	A6	334	Total C N O S 2669 1693 446 513 17	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	A5	334	Total 2669	C 1693	N 446	O 513	S 17	0	0
6	A8	334	Total 2669	C 1693	N 446	O 513	S 17	0	0
6	A7	334	Total 2669	C 1693	N 446	O 513	S 17	0	0
6	Ad	329	Total 2633	C 1674	N 438	O 504	S 17	0	0
6	Ac	329	Total 2633	C 1674	N 438	O 504	S 17	0	0
6	Af	329	Total 2633	C 1674	N 438	O 504	S 17	0	0
6	Ae	329	Total 2633	C 1674	N 438	O 504	S 17	0	0
6	Ab	329	Total 2633	C 1674	N 438	O 504	S 17	0	0
6	Aa	329	Total 2633	C 1674	N 438	O 504	S 17	0	0

- Molecule 7 is a protein called Baseplate wedge tail fiber connector.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LN	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LO	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LM	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LQ	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LR	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LP	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LB	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LC	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LA	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LE	303	Total 2270	C 1412	N 386	O 461	S 11	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
7	LF	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LD	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LH	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LI	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LG	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LK	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LL	303	Total 2270	C 1412	N 386	O 461	S 11	0	0
7	LJ	303	Total 2270	C 1412	N 386	O 461	S 11	0	0

- Molecule 8 is a protein called Baseplate wedge protein gp10.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	FA	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FB	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FC	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FJ	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FK	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FL	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FS	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FT	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	FU	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fb	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fc	66	Total 499	C 311	N 85	O 101	S 2	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	Fd	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fk	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fl	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fm	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Ft	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fu	66	Total 499	C 311	N 85	O 101	S 2	0	0
8	Fv	66	Total 499	C 311	N 85	O 101	S 2	0	0

- Molecule 9 is a protein called Tail sheath protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	SA	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SB	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SC	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SD	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SE	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SF	649	Total 4993	C 3142	N 850	O 985	S 16	0	0
9	SK	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	SG	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	SL	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	SH	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	SI	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	SJ	655	Total 5037	C 3170	N 856	O 995	S 16	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	SQ	655	5037	3170	856	995	16	0	0
9	SP	655	5037	3170	856	995	16	0	0
9	SM	655	5037	3170	856	995	16	0	0
9	SN	655	5037	3170	856	995	16	0	0
9	SO	655	5037	3170	856	995	16	0	0
9	SR	655	5037	3170	856	995	16	0	0
9	SW	655	5037	3170	856	995	16	0	0
9	SS	655	5037	3170	856	995	16	0	0
9	ST	655	5037	3170	856	995	16	0	0
9	SU	655	5037	3170	856	995	16	0	0
9	SV	655	5037	3170	856	995	16	0	0
9	SX	655	5037	3170	856	995	16	0	0
9	SY	655	5037	3170	856	995	16	0	0
9	SZ	655	5037	3170	856	995	16	0	0
9	Sa	655	5037	3170	856	995	16	0	0
9	Sb	655	5037	3170	856	995	16	0	0
9	Sc	655	5037	3170	856	995	16	0	0
9	Sd	655	5037	3170	856	995	16	0	0
9	Se	655	5037	3170	856	995	16	0	0
9	Sf	655	5037	3170	856	995	16	0	0
9	Sg	655	5037	3170	856	995	16	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	Sh	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Si	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sj	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sk	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sl	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sm	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sn	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	So	655	Total 5037	C 3170	N 856	O 995	S 16	0	0
9	Sp	655	Total 5037	C 3170	N 856	O 995	S 16	0	0

There are 42 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SA	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SB	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SC	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SD	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SE	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SF	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SK	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SG	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SL	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SH	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SI	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SJ	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SQ	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SP	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SM	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SN	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SO	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SR	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SW	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SS	482	ILE	VAL	conflict	UNP A0A2K9V5S7
ST	482	ILE	VAL	conflict	UNP A0A2K9V5S7

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Chain	Residue	Modelled	Actual	Comment	Reference
SU	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SV	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SX	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SY	482	ILE	VAL	conflict	UNP A0A2K9V5S7
SZ	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sa	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sb	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sc	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sd	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Se	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sf	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sg	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sh	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Si	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sj	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sk	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sl	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sm	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sn	482	ILE	VAL	conflict	UNP A0A2K9V5S7
So	482	ILE	VAL	conflict	UNP A0A2K9V5S7
Sp	482	ILE	VAL	conflict	UNP A0A2K9V5S7

- Molecule 10 is a protein called Tail tube protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	TM	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TN	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TO	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TP	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TQ	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TR	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TW	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TS	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TT	162	Total 1305	C 825	N 222	O 253	S 5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	TU	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TV	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TX	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TY	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	TZ	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Ta	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tb	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tc	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Td	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Te	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tf	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tg	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Th	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Ti	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tj	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tk	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tl	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tm	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tn	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	To	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tp	162	Total 1305	C 825	N 222	O 253	S 5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	Tq	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tr	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Ts	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tt	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tu	162	Total 1305	C 825	N 222	O 253	S 5	0	0
10	Tv	162	Total 1305	C 825	N 222	O 253	S 5	0	0

- Molecule 11 is a protein called IraD/Gp25-like domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AA	132	Total 1044	C 648	N 183	O 209	S 4	0	0
11	AB	132	Total 1044	C 648	N 183	O 209	S 4	0	0
11	AD	132	Total 1044	C 648	N 183	O 209	S 4	0	0
11	AC	132	Total 1044	C 648	N 183	O 209	S 4	0	0
11	AE	132	Total 1044	C 648	N 183	O 209	S 4	0	0
11	AF	132	Total 1044	C 648	N 183	O 209	S 4	0	0

- Molecule 12 is a protein called Putative baseplate hub subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	BE	379	Total 3055	C 1945	N 511	O 583	S 16	0	0
12	BF	379	Total 3055	C 1945	N 511	O 583	S 16	0	0
12	BG	379	Total 3055	C 1945	N 511	O 583	S 16	0	0

- Molecule 13 is a protein called Baseplate wedge subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	AL	212	1747	1123	279	340	5	0	0
13	AI	212	1747	1123	279	340	5	0	0
13	AG	212	1747	1123	279	340	5	0	0
13	AK	212	1747	1123	279	340	5	0	0
13	AH	212	1747	1123	279	340	5	0	0
13	AJ	212	1747	1123	279	340	5	0	0

- Molecule 14 is a protein called Baseplate central spike protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	BB	564	4354	2709	753	871	21	0	0
14	BC	564	4354	2709	753	871	21	0	0
14	BD	564	4354	2709	753	871	21	0	0

- Molecule 15 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

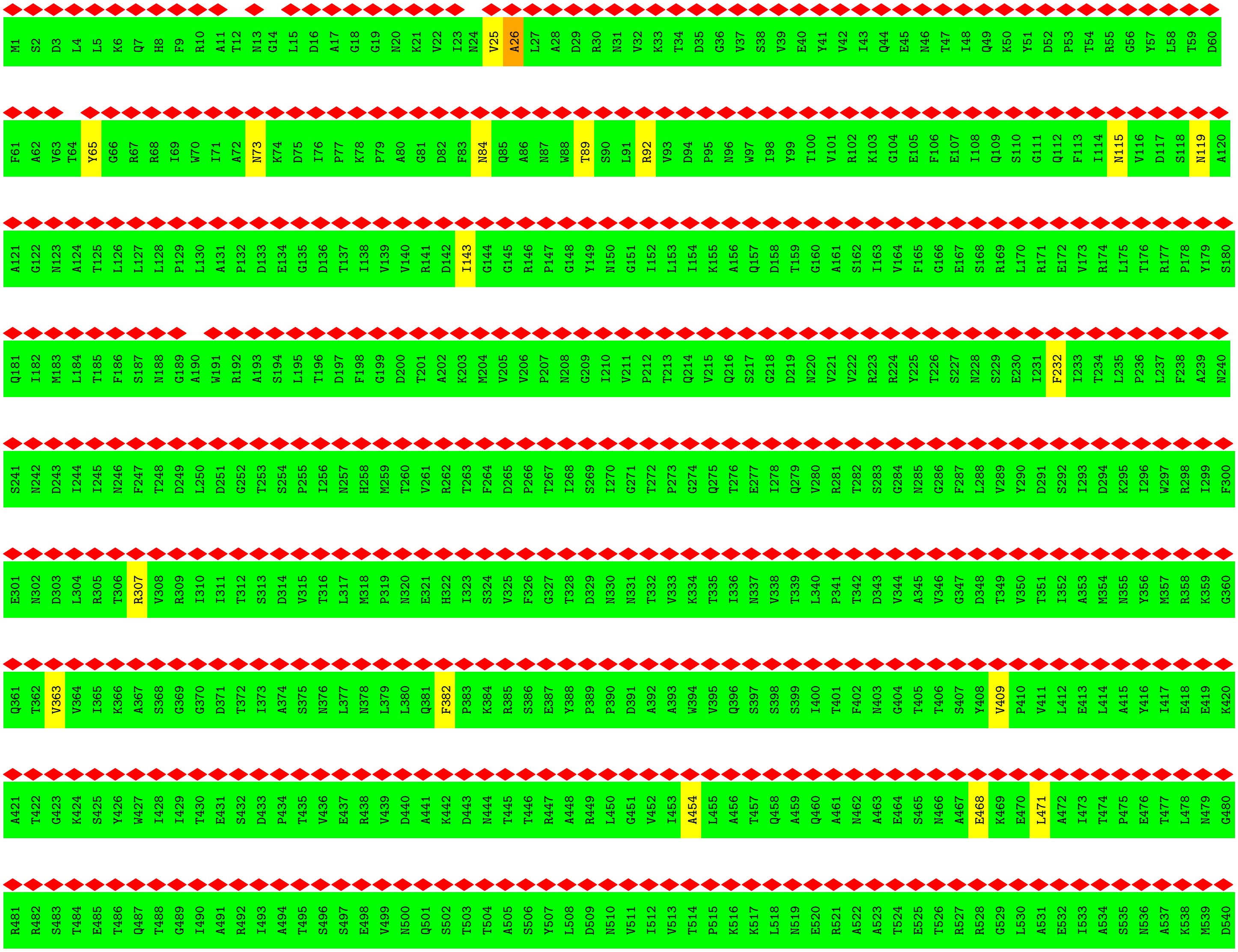
Mol	Chain	Residues	Atoms		AltConf
			Total	Cl	
15	BB	1	1	1	0

3 Residue-property plots ⓘ

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: Long tail fiber proximal subunit

Chain Le:



A541 G542 T543 D544 D545 F546 T547 I548 V549 T550 P551 K552 K553 L554 L555 Y556 R557 T558 T559 S560 D561 S562 R563 L564 G565 V566 V567 Q568 L569 V570 K571 T572 G573 G574 A575 P576 N577 T578 T579 N580 D581 R582 S583 S584 A585 G586 T587 G588 I589 F590 D591 H592 S593 D594 Y595 K596 N597 A598 V599 T600

P601 K602 T603 L604 R605 E606 Y607 K608 A609 T610 V611 N612 Q613 S614 G615 I616 V617 TRP LEU ALA THR ASP SER GLU VAL ARG ASN GLY THR PRO ALA SER SER ASN ILE PRO THR VAL VAL THR PRO GLU ALA LEU HIS LYS LYS VAL ALA THR ASP GLY ALA ILE GLY LEU ILE GLN ILE ALA

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

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

THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR

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

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

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

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

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

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

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

GLY PRO VAL LYS ILE TRP PRO ASP ARG PRO ASN GLN THR LEU LYS PHE GLU TRP VAL GLY ASP

- Molecule 1: Long tail fiber proximal subunit

Chain Lf:

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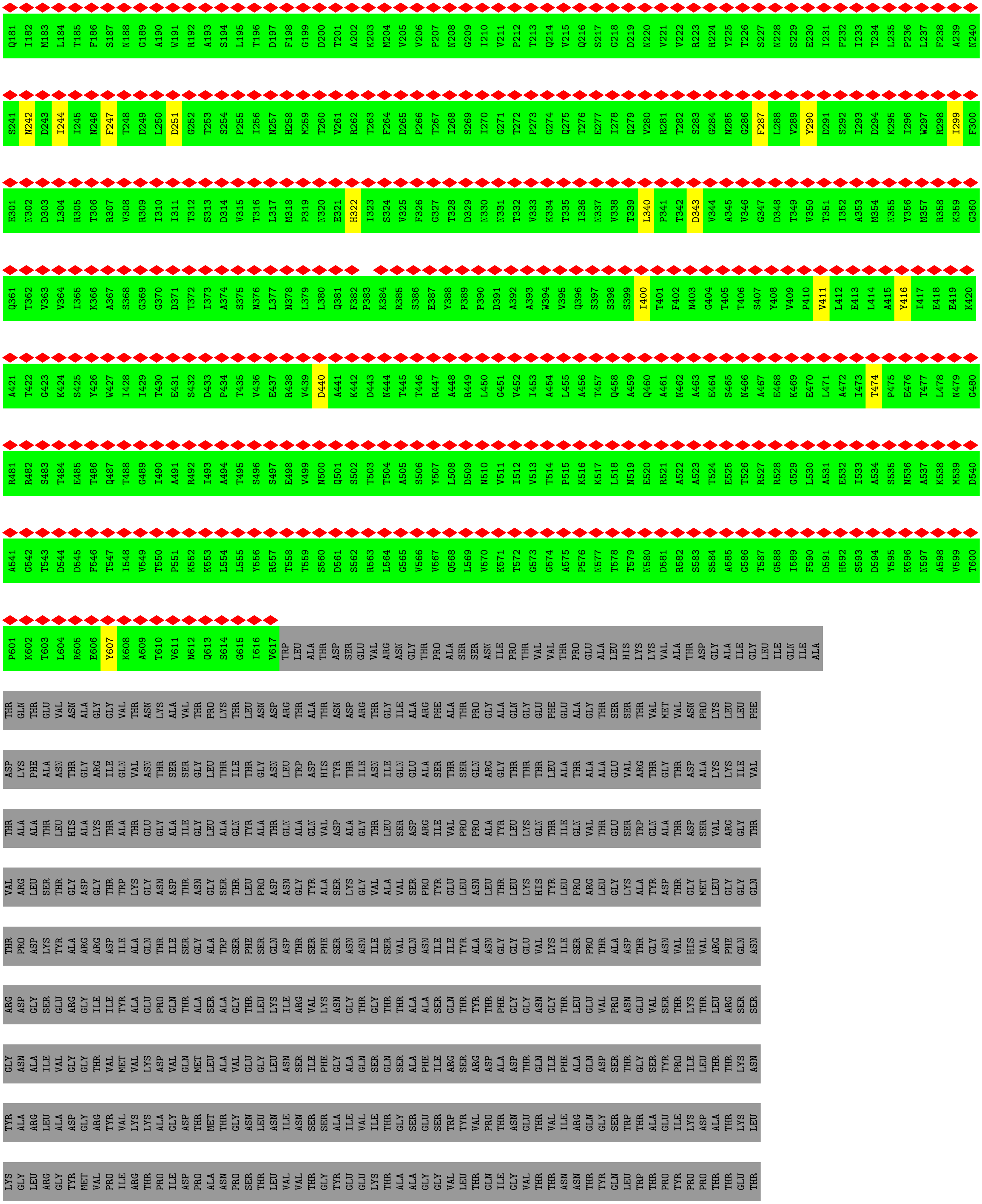
F61 A62 V63 T64 Y65 G66 R67 R68 I69 W70 I71 A72 N73 K74 D75 I76 P77 K78 P79 A80 G81 D82 F83 N84 Q85 A86 N87 W88 T89 S90 L91 R92 V93 D94 P95 N96 W97 I98 Y99 T100 V101 R102 K103 G104 E105 F106 E107 I108 Q109 S110 G111 Q112 F113 I114 N115 V116 D117 S118 N119 A120

A121 G122 N123 A124 T125 L126 L127 L128 P129 L130 A131 P132 D133 E134 G135 D136 T137 I138 V139 V140 R141 D142 I143 G144 G145 R146 P147 G148 Y149 N150 G151 I152 L153 I154 K155 A156 Q157 D158 T159 G160 A161 S162 I163 V164 F165 G166 E167 S168 R169 L170 R171 E172 V173 R174 L175 T176 R177 P178 Y179 S180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E301 N302 D303 L304 R305 T306 R307 V308 R309 I310 I311 T312 S313 D314 V315 T316 L317 M318 P319 N320 E321 H322 I323 S324 V325 F326 G327 T328 D329 N330 N331 T332 V333 K334 T335 I336 N337 V338 T339 L340 P341 T342 D343 V344 A345 V346 G347 D348 T349 V350 T351 I352 A353 M354 N355 Y356 M357 R358 K359 G360
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A541 G542 T543 D544 D545 F546 T547 I548 V549 T550 P551 K552 K553 L554 L555 Y556 R557 T558 T559 S560 D561 S562 R563 L564 G565 V566 V567 Q568 L569 V570 K571 T572 G573 G574 A575 P576 N577 T578 T579 N580 D581 R582 S583 S584 A585 G586 T587 G588 I589 F590 D591 H592 S593 D594 Y595 K596 N597 A598 V599 T600
P601 K602 T603 L604 R605 E606 Y607 K608 A609 T610 V611 N612 Q613 S614 G615 I616 V617 TRP LEU ALA THR ASP SER GLU VAL ARG ASN GLY THR PRO ALA SER SER ASN ILE PRO THR VAL VAL THR PRO GLU ALA LEU HIS LYS LYS VAL ALA THR ASP GLY ALA ILE GLY LEU GLN ILE ALA
THR GLN THR GLU VAL ASN ALA GLY GLY VAL THR ASN LYS ALA VAL THR PRO LYS THR LEU ASN ASP ARG THR ALA THR ASN ASP ARG THR GLY ILE ALA ARG PHE ALA THR PRO GLY ALA GLN GLY GLU PHE GLU ALA GLY THR SER SER THR VAL MET VAL ASN PRO LYS LEU LEU PHE
ASP LYS PHE ALA ASN THR GLY ARG ILE GLN VAL ASN THR SER SER GLY LEU THR ILE THR GLY ASN LEU TRP ASP HIS TYR THR ILE ASN ILE GLN GLU ALA SER THR SER GLN ARG GLY THR THR LEU ALA THR ALA ALA GLU VAL ARG THR GLY THR ASP ALA LYS LYS ILE VAL
THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR
VAL ARG LEU SER THR GLY ASP GLY THR TRP LYS GLY ASN ASP THR ASN GLY SER THR LEU PRO ASP ASN GLY TYR ALA SER LYS GLY VAL ALA VAL SER PRO TYR GLU LEU ASN LEU THR LEU LYS HIS TYR LEU PRO ARG LEU GLY LYS ALA TYR ASP THR GLY MET LEU GLY GLN
THR PRO ASP LYS TYR ALA ARG ARG ASP ILE ALA GLN THR ILE SER GLY ALA TRP SER PHE SER GLN ASP THR SER PHE SER ASN ASN ILE SER VAL GLN ASN ILE ILE TYR ALA ASN GLY GLY GLU VAL LYS ILE SER PRO THR ALA ASP THR GLY ASN VAL HIS VAL ARG PHE GLN ASN
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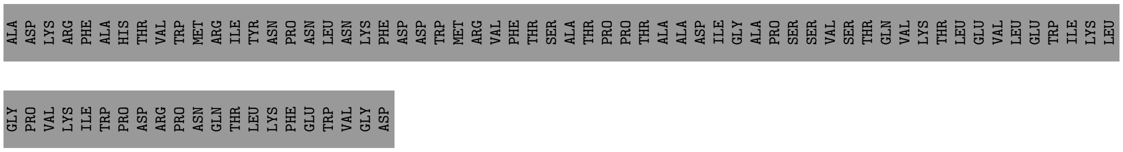
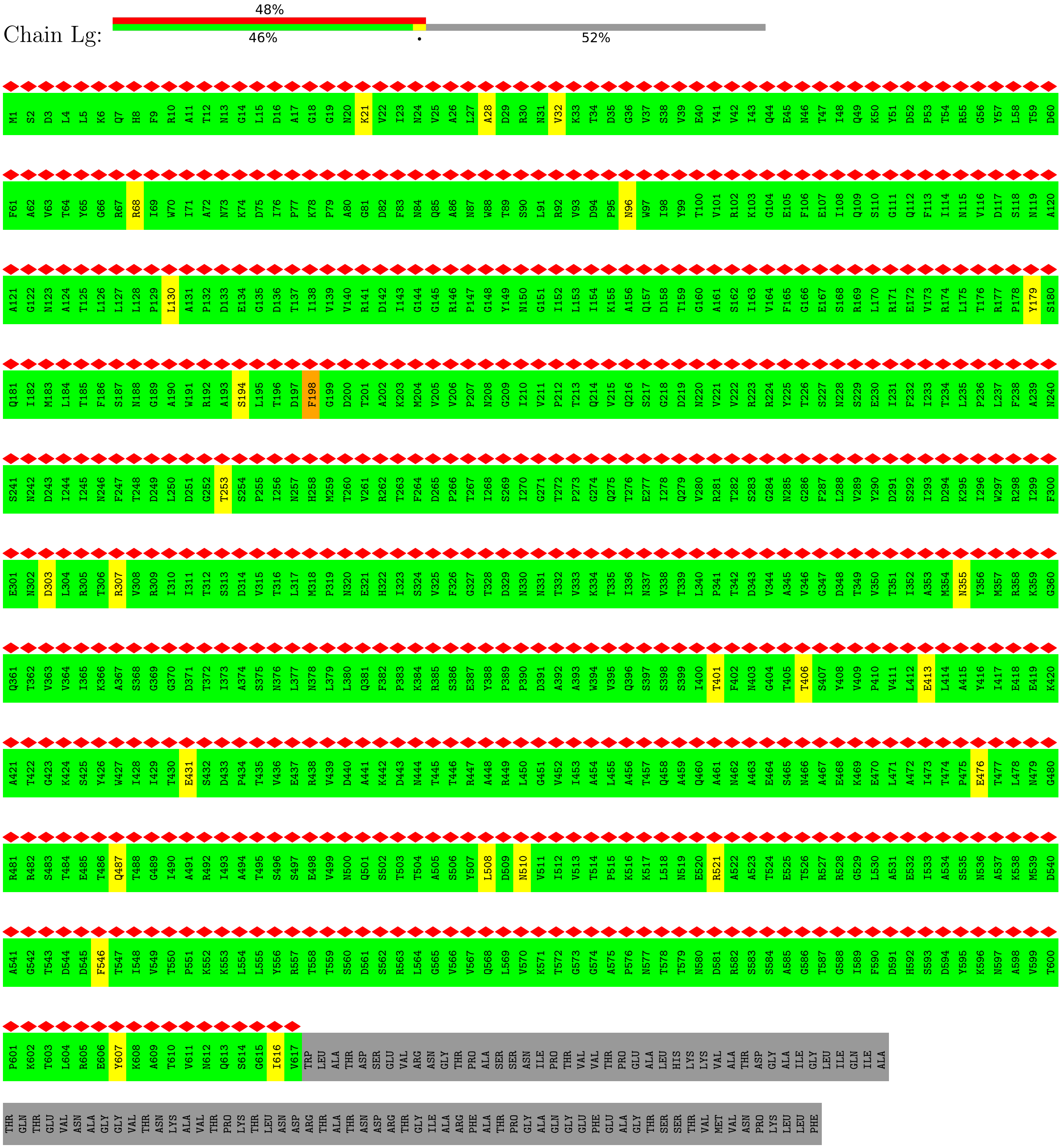
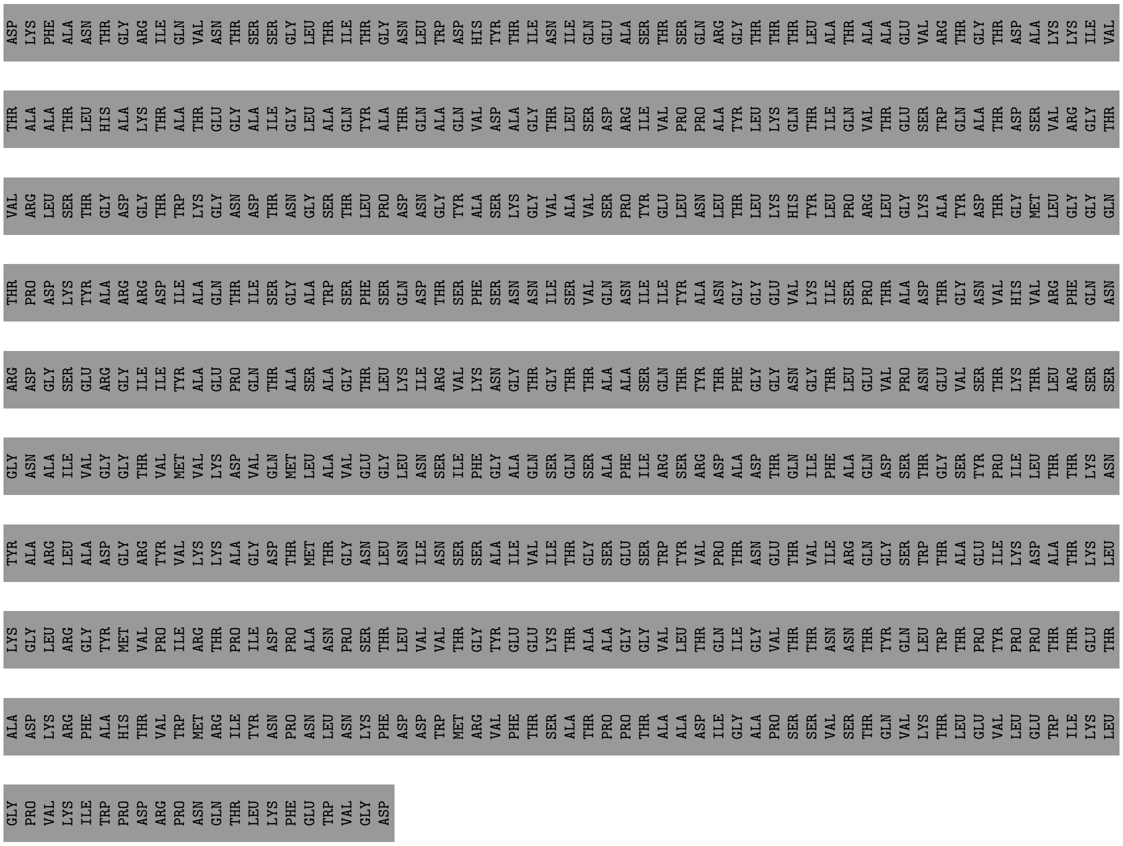
GLY ASN ALA ILE VAL GLY GLY THR VAL MET VAL LYS ASP VAL GLN MET LEU ALA VAL GLU GLY LEU ASN SER ILE PHE GLY ALA GLN SER GLN SER ALA PHE ILE ARG SER ARG ASP ALA ASP THR GLN ILE PHE ALA GLN ASP SER THR GLY SER TYR PRO ILE LEU THR THR LYS ASN
TYR ALA ARG LEU ALA ASP GLY GLY ARG TYR VAL LYS LYS ALA GLY ASP THR MET THR GLY ASN LEU ASN ILE ASN SER SER ALA ILE VAL ILE THR GLY SER GLU SER TRP TYR VAL PRO THR ASN GLU THR VAL ILE ARG GLN GLY SER TRP THR ALA GLU ILE LYS ASP ALA THR LYS LEU
LYS GLY LEU ARG GLY TYR MET VAL PRO ILE ARG THR PRO ILE ASP PRO ALA ASN PRO SER THR LEU VAL VAL THR GLY TYR GLU GLU LYS THR ALA ALA GLY GLY VAL LEU THR GLN ILE GLY VAL THR THR ASN ASN THR TYR GLN LEU TRP THR THR PRO TYR PRO PRO THR THR GLU THR



• Molecule 1: Long tail fiber proximal subunit





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THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR

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

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

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

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

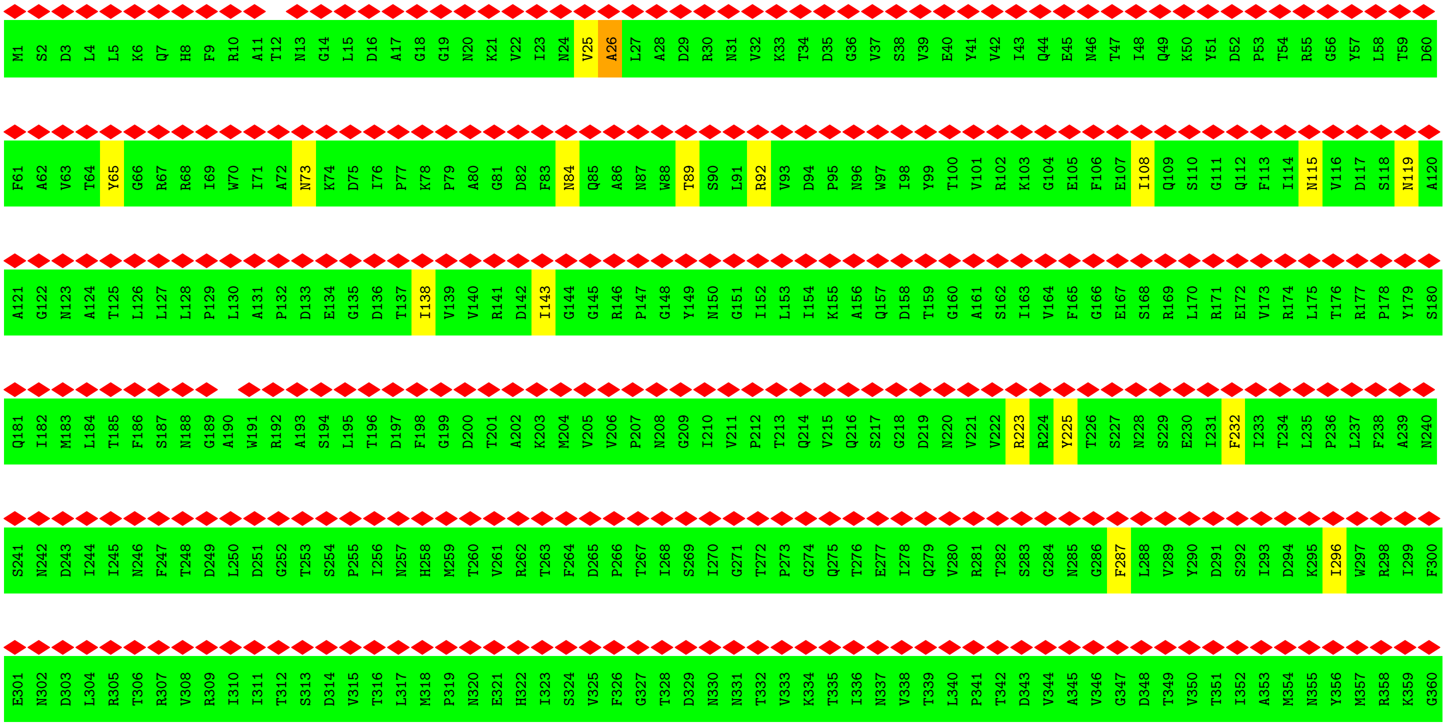
TYR ALA ARG LEU ALA ASP GLY ARG TYR VAL LYS LYS ALA GLY ASP THR MET THR GLY ASN LEU ASN ILE ASN SER SER ALA ILE VAL ILE THR GLY SER GLU SER TRP TYR VAL PRO THR ASN GLU THR VAL ILE ARG GLN GLY SER TRP THR ALA GLU ILE LYS ASP ALA THR LYS LEU

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

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

GLY PRO VAL LYS ILE TRP PRO ASP ARG PRO ASN GLN THR LEU LYS PHE GLU TRP VAL GLY ASP

• Molecule 1: Long tail fiber proximal subunit



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F61 A62 V63 T64 Y65 G66 R67 R68 I69 W70 I71 A72 N73 K74 D75 I76 P77 K78 P79 A80 G81 D82 F83 N84 Q85 A86 N87 W88 T89 S90 L91 R92 V93 D94 P95 N96 W97 I98 Y99 T100 V101 R102 K103 G104 E105 F106 E107 I108 Q109 S110 G111 Q112 F113 I114 N115 V116 D117 S118 N119 A120

A121 G122 N123 A124 T125 L126 L127 L128 P129 L130 A131 P132 D133 E134 G135 D136 T137 I138 V139 V140 R141 D142 I143 G144 G145 R146 P147 G148 Y149 N150 G151 I152 L153 I154 K155 A156 Q157 D158 T159 G160 A161 S162 I163 V164 F165 G166 E167 S168 R169 L170 R171 E172 V173 R174 L175 T176 R177 P178 Y179 S180

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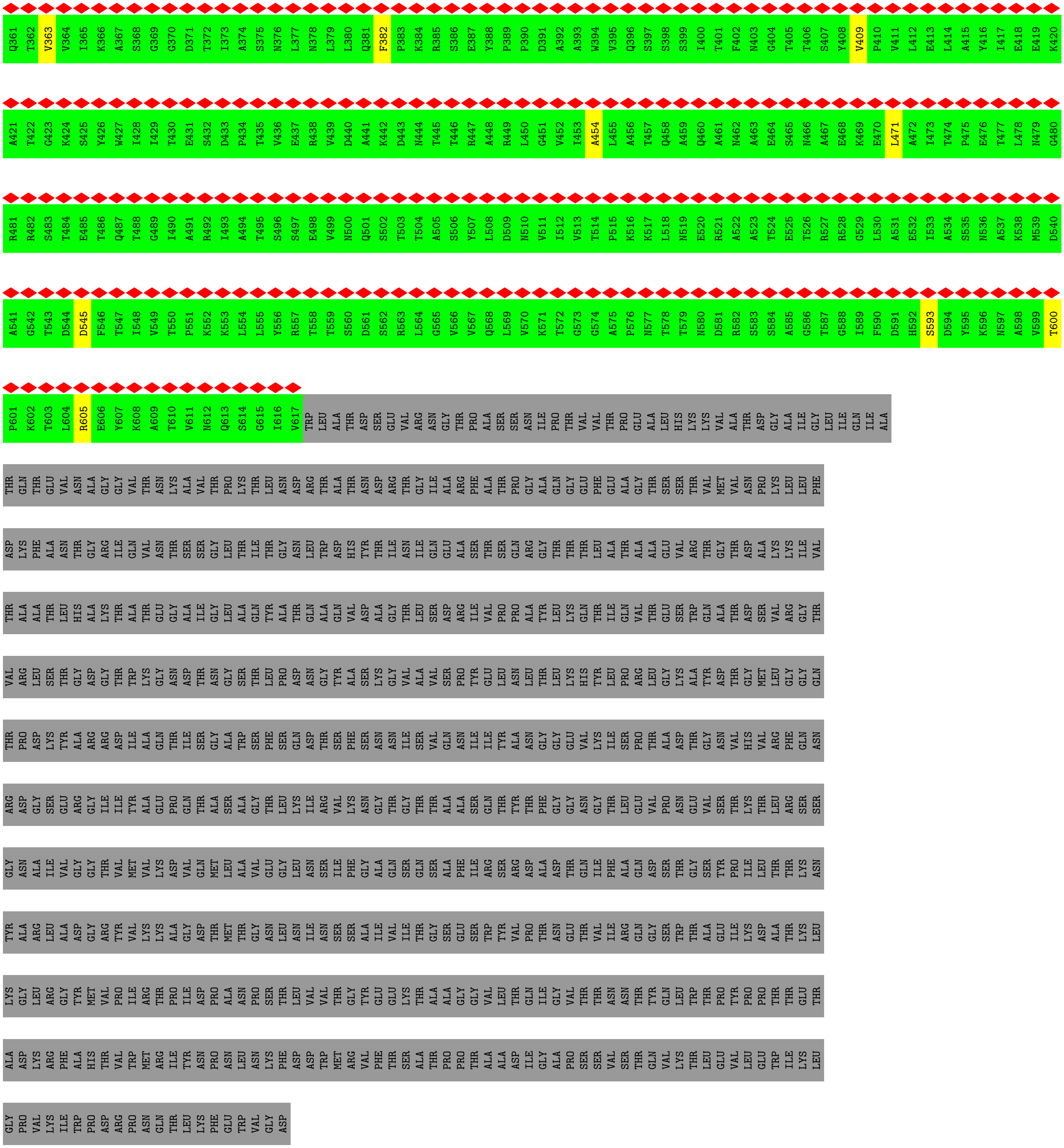

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P601 K602 T603 L604 R605 E606 Y607 K608 A609 T610 V611 N612 Q613 S614 G615 I616 V617 TRP LEU ALA THR ASP SER GLU VAL ARG ASN GLY THR PRO ALA SER SER ASN ILE PRO THR VAL VAL THR PRO GLU ALA LEU HIS LYS LYS VAL ALA THR ASP GLY ALA ILE GLY LEU ILE GLN ILE ALA

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

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

THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR

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

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

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

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

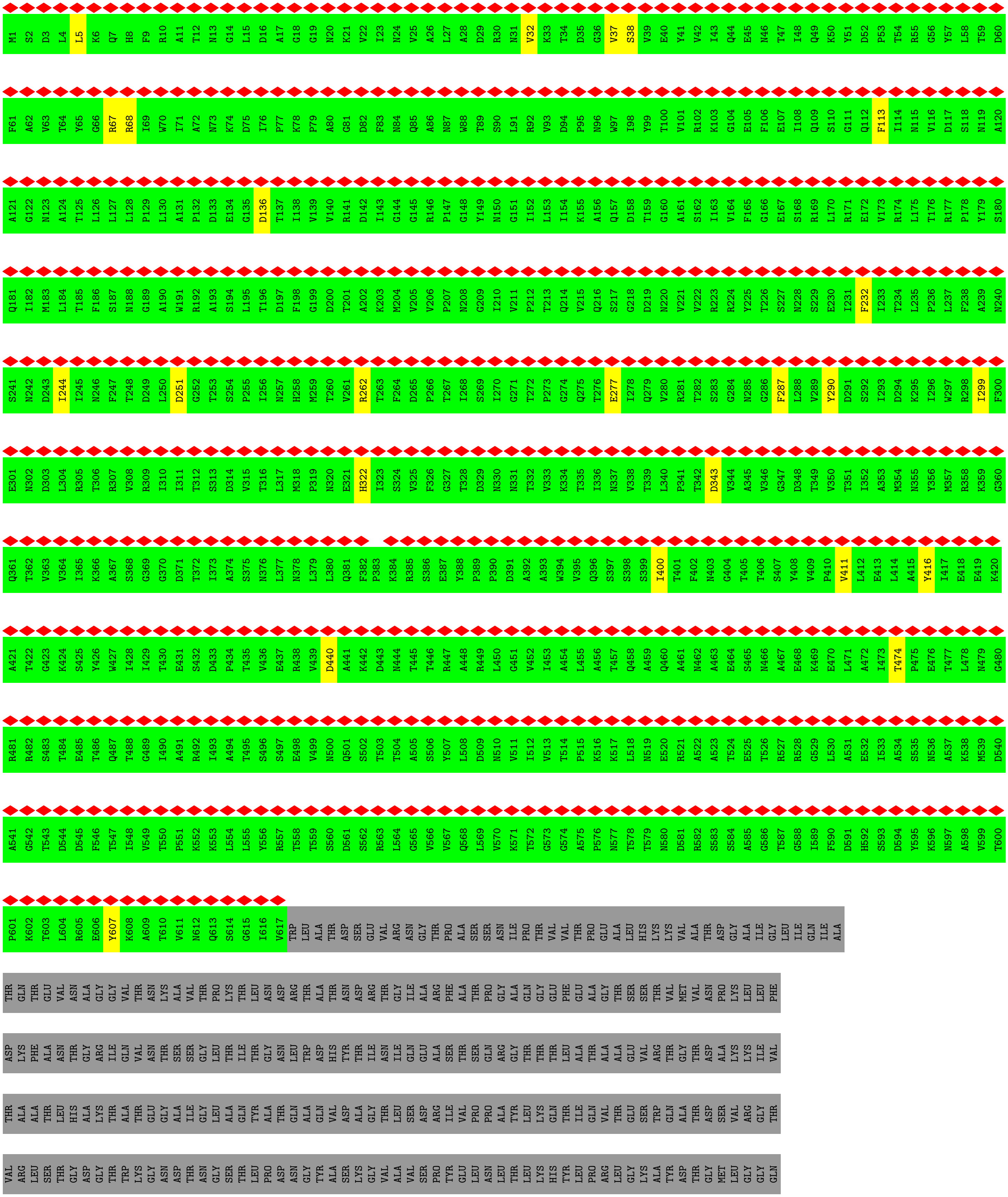
TYR ALA ARG LEU ALA ASP GLY ARG TYR VAL LYS LYS ALA GLY ASP THR MET THR GLY ASN LEU ASN ILE ASN SER SER ALA ILE VAL ILE THR GLY SER GLU SER TRP TYR VAL PRO THR ASN GLU THR VAL ILE ARG GLN GLY SER TRP THR ALA GLU ILE LYS ASP ALA THR LYS LEU

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

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

GLY PRO VAL LYS ILE TRP PRO ASP ARG PRO ASN GLN THR LEU LYS PHE GLU TRP VAL GLY ASP

- Molecule 1: Long tail fiber proximal subunit



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THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR

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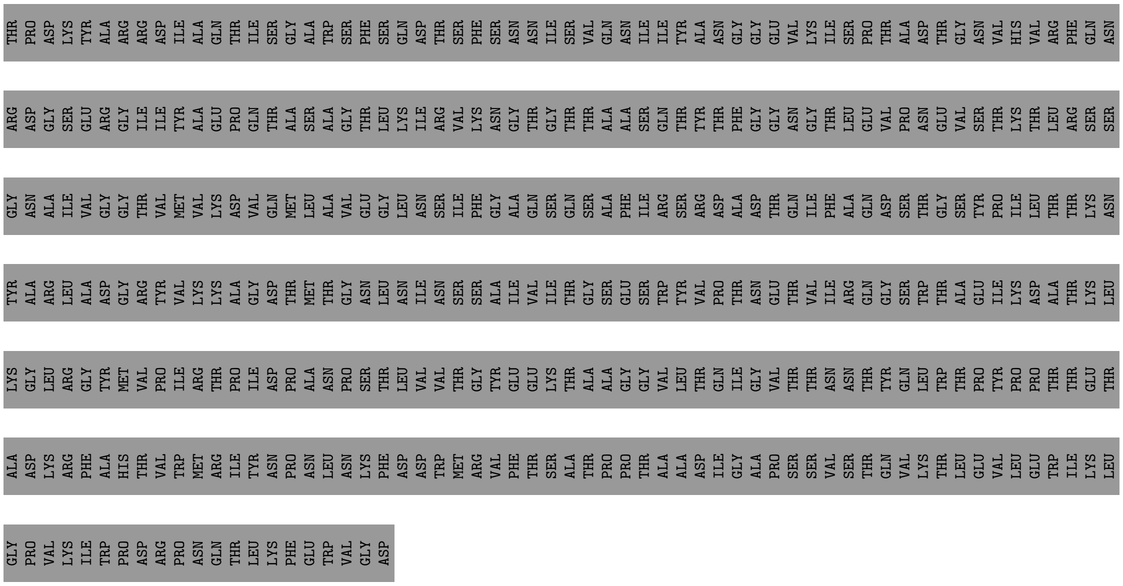

- Molecule 1: Long tail fiber proximal subunit

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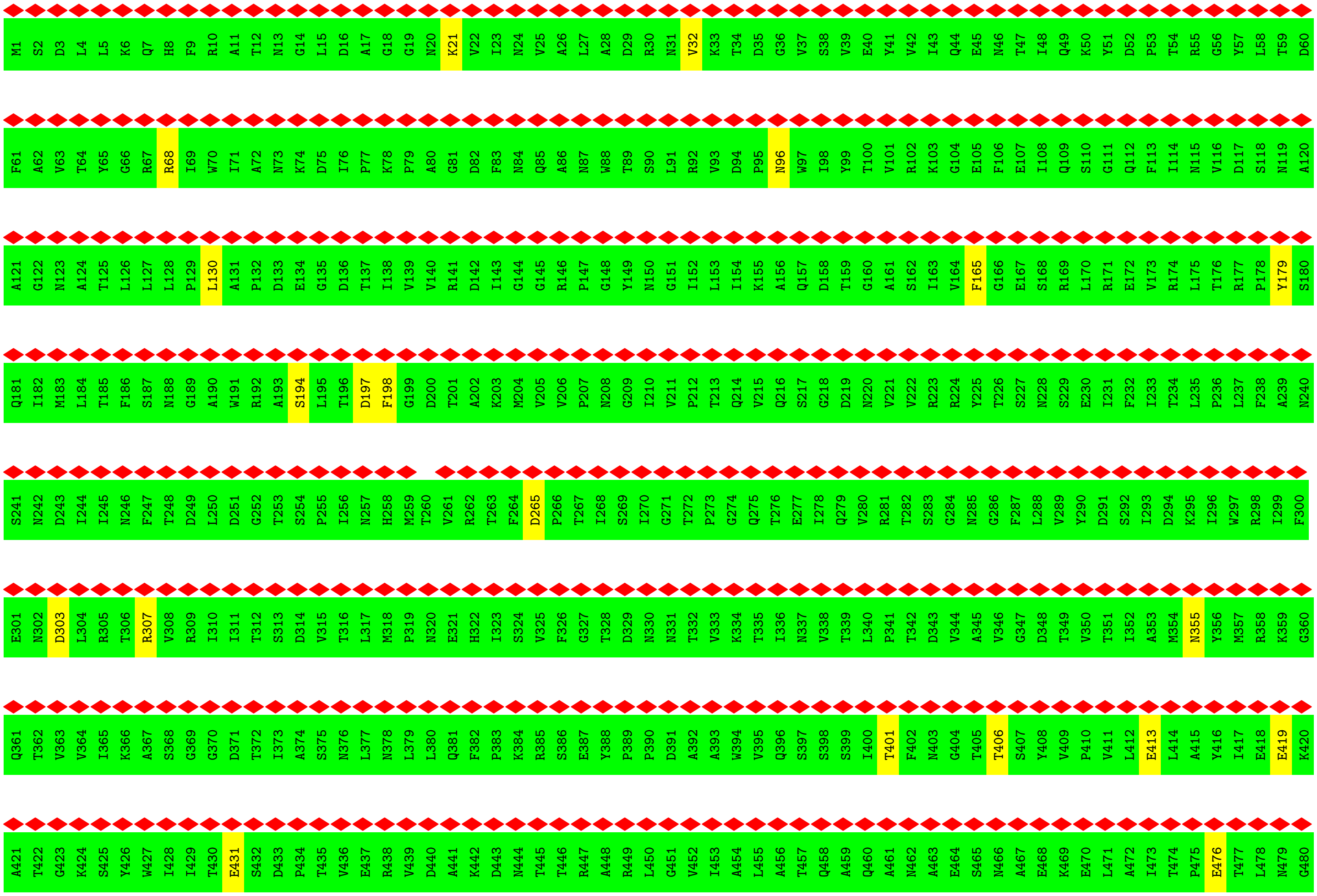
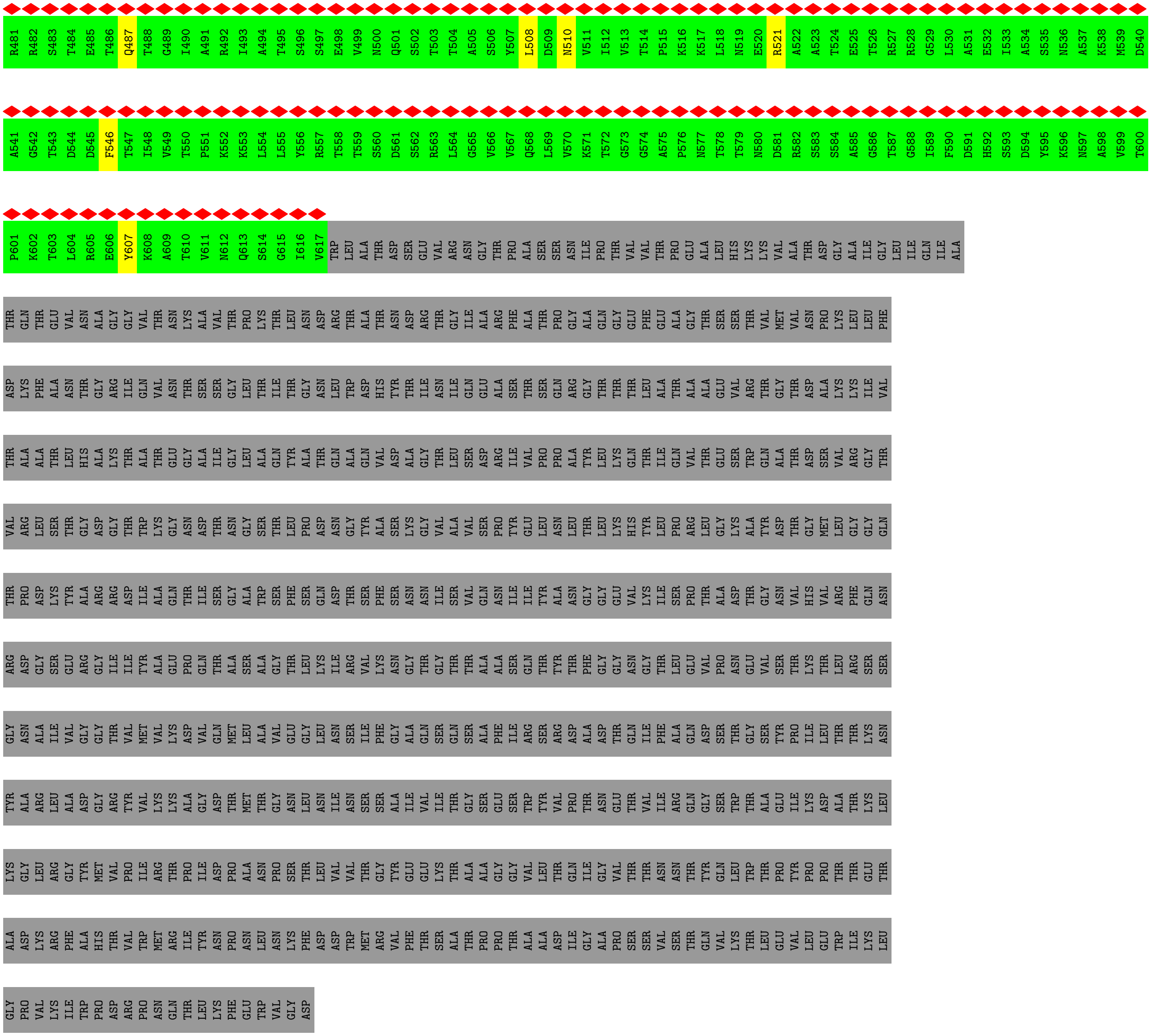
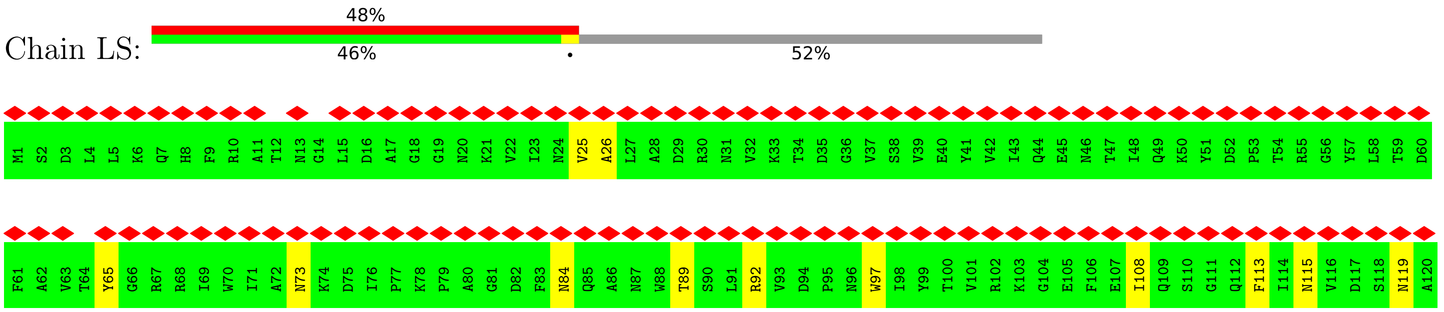
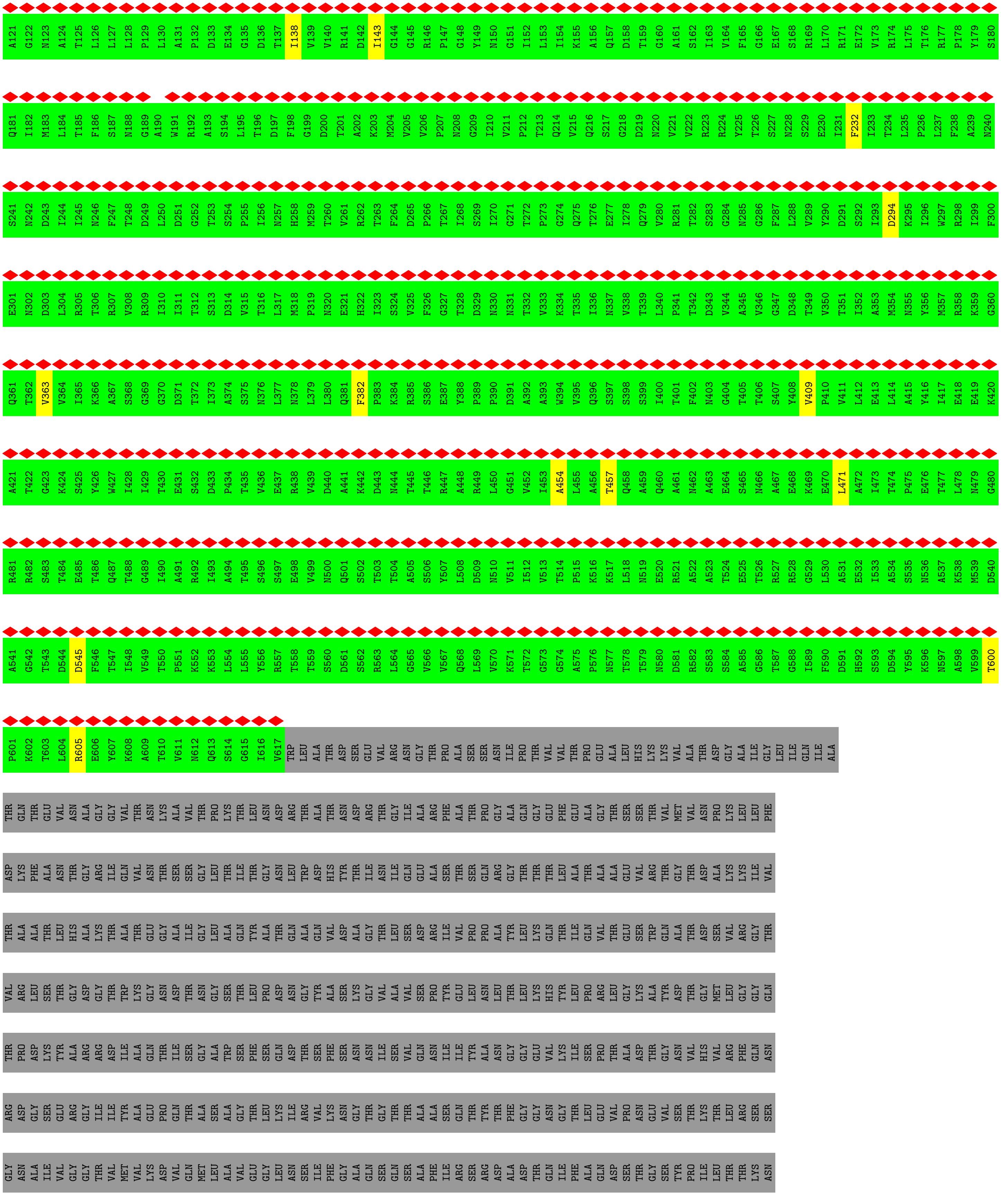




- Molecule 1: Long tail fiber proximal subunit

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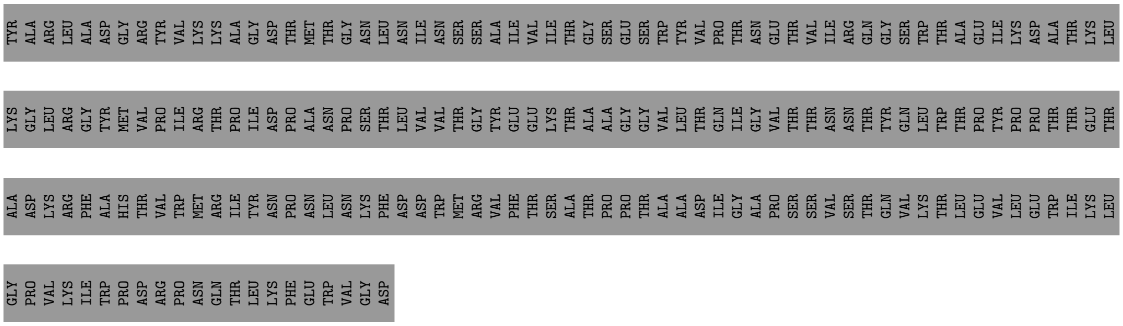
ARG ASP GLY SER GLU ARG GLY ILE ILE TYR ALA GLU PRO GLN THR ALA SER ALA GLY THR LEU LYS ILE ARG VAL LYS ASN GLY THR GLY THR THR ALA ALA SER GLN THR TYR THR PHE GLY GLY ASN GLY THR LEU GLU VAL PRO ASN GLU VAL SER THR LYS THR LEU ARG SER SER
GLY ASN ALA ILE VAL GLY GLY THR VAL MET VAL LYS ASP VAL GLN MET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



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

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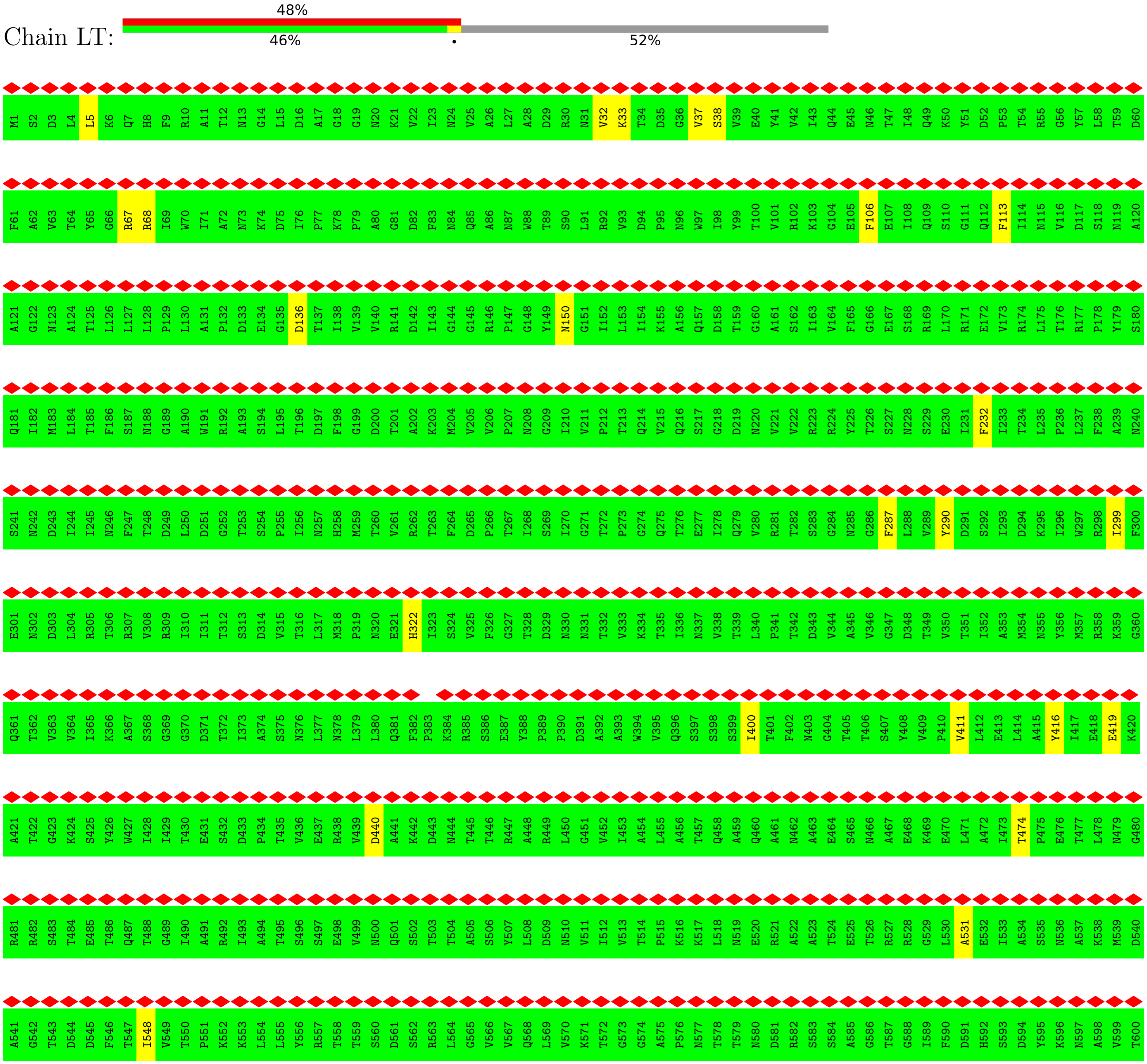
- Molecule 1: Long tail fiber proximal subunit



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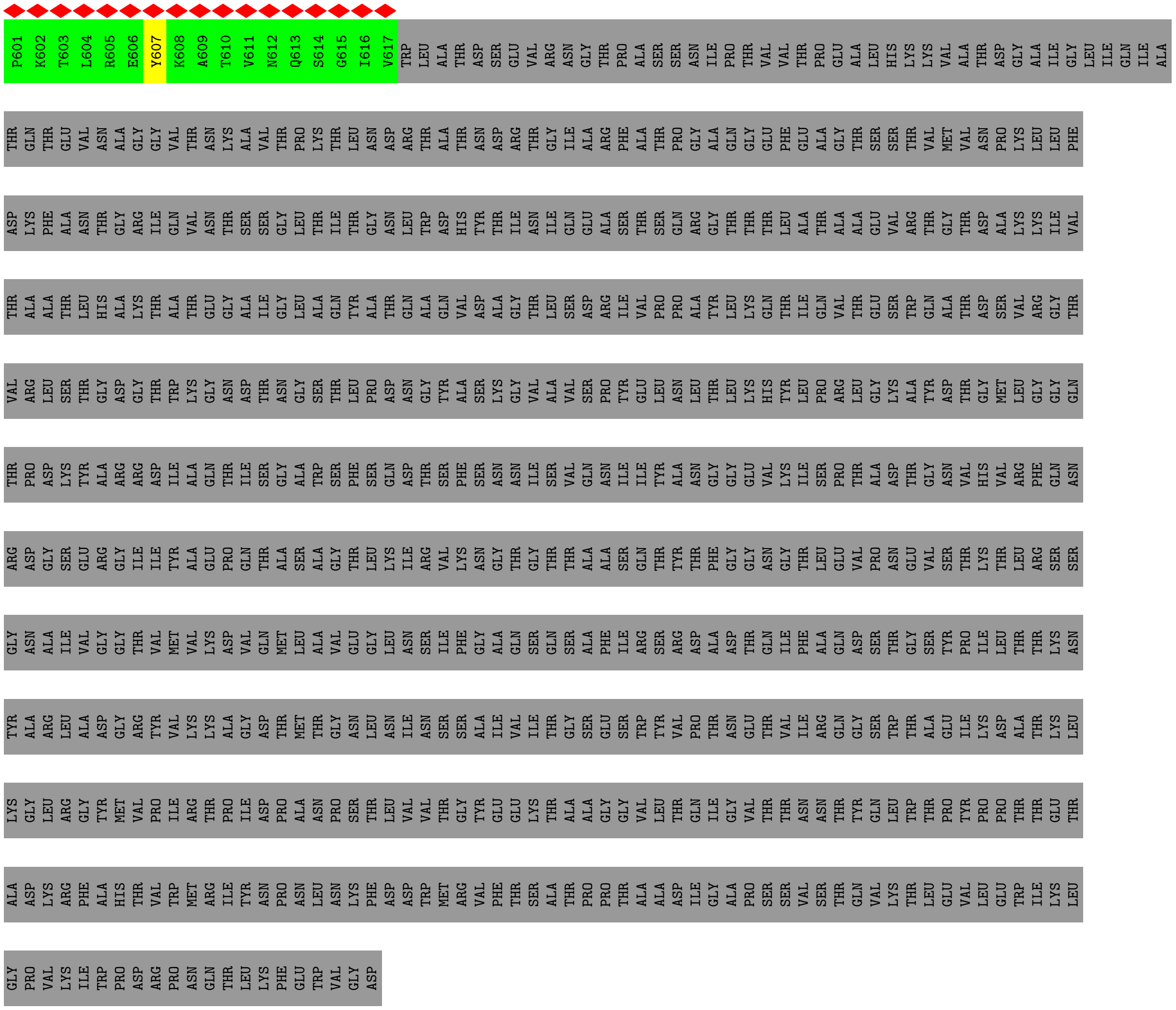
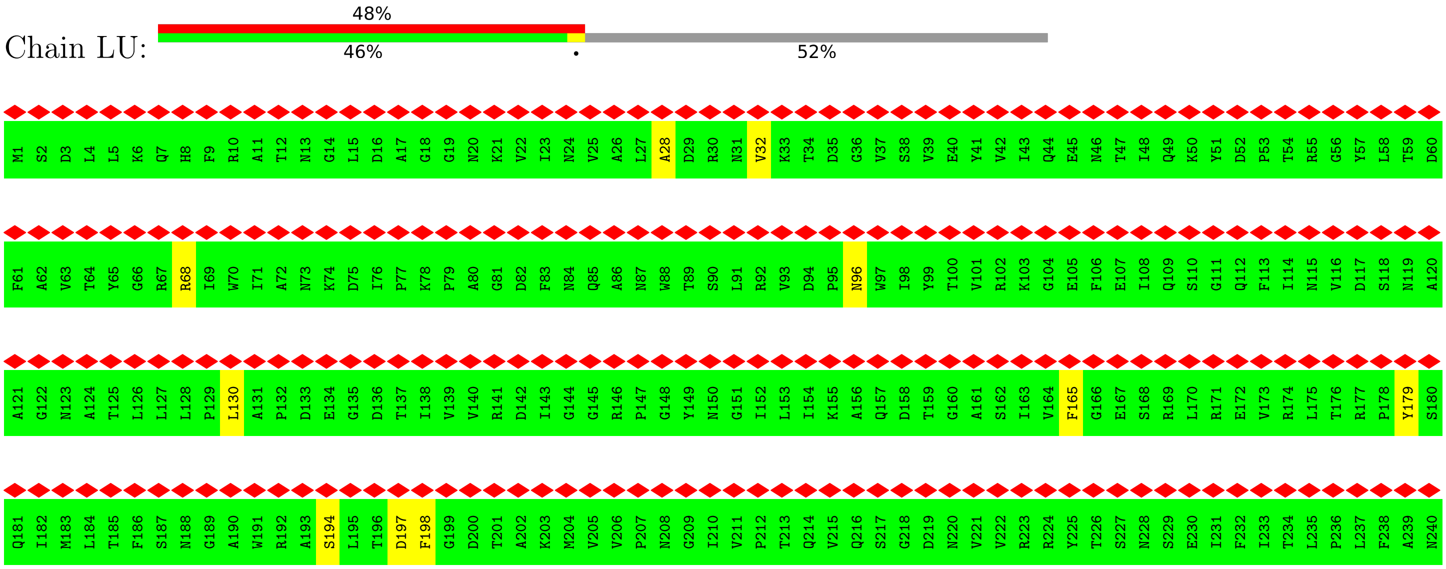
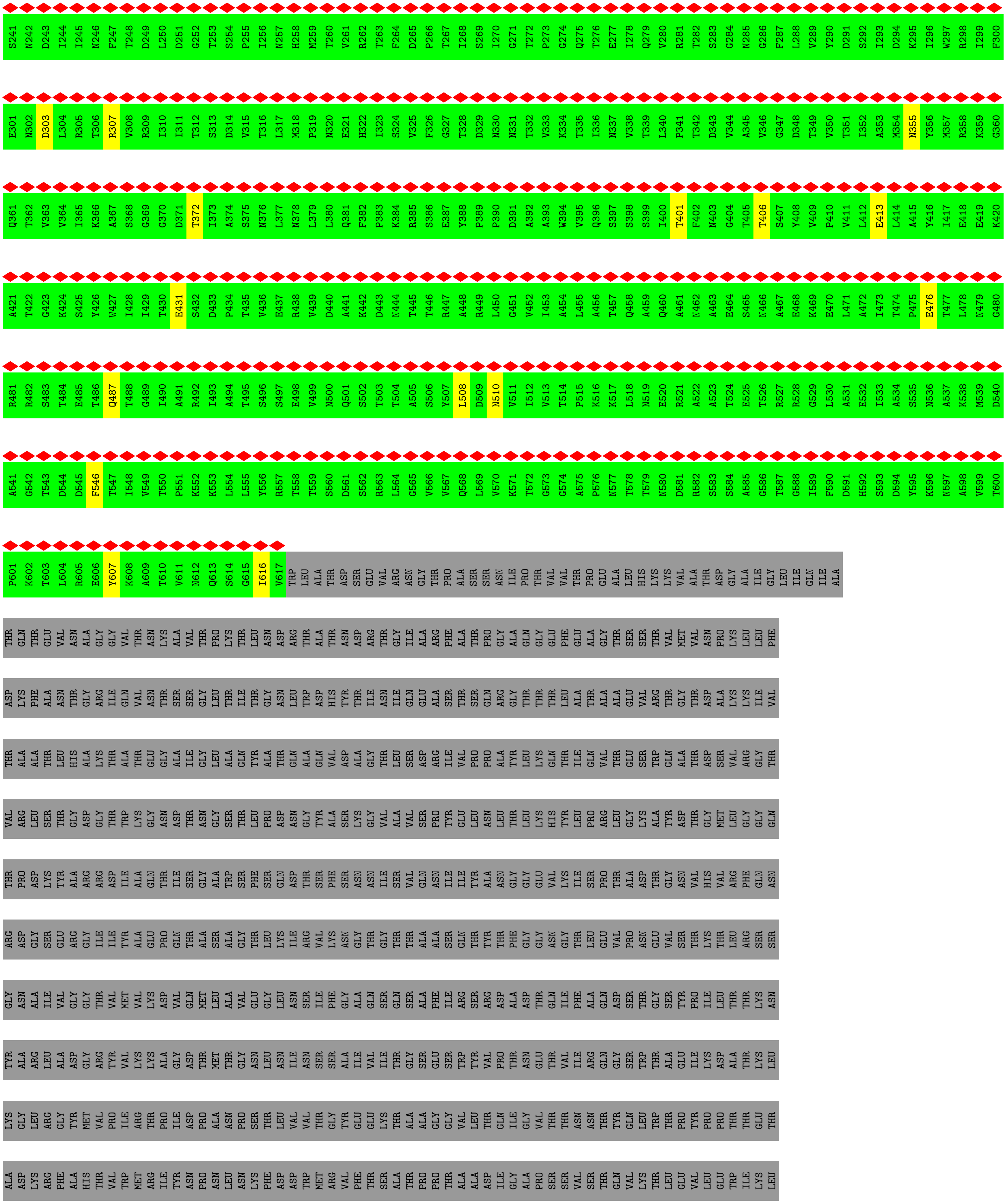


• Molecule 1: Long tail fiber proximal subunit

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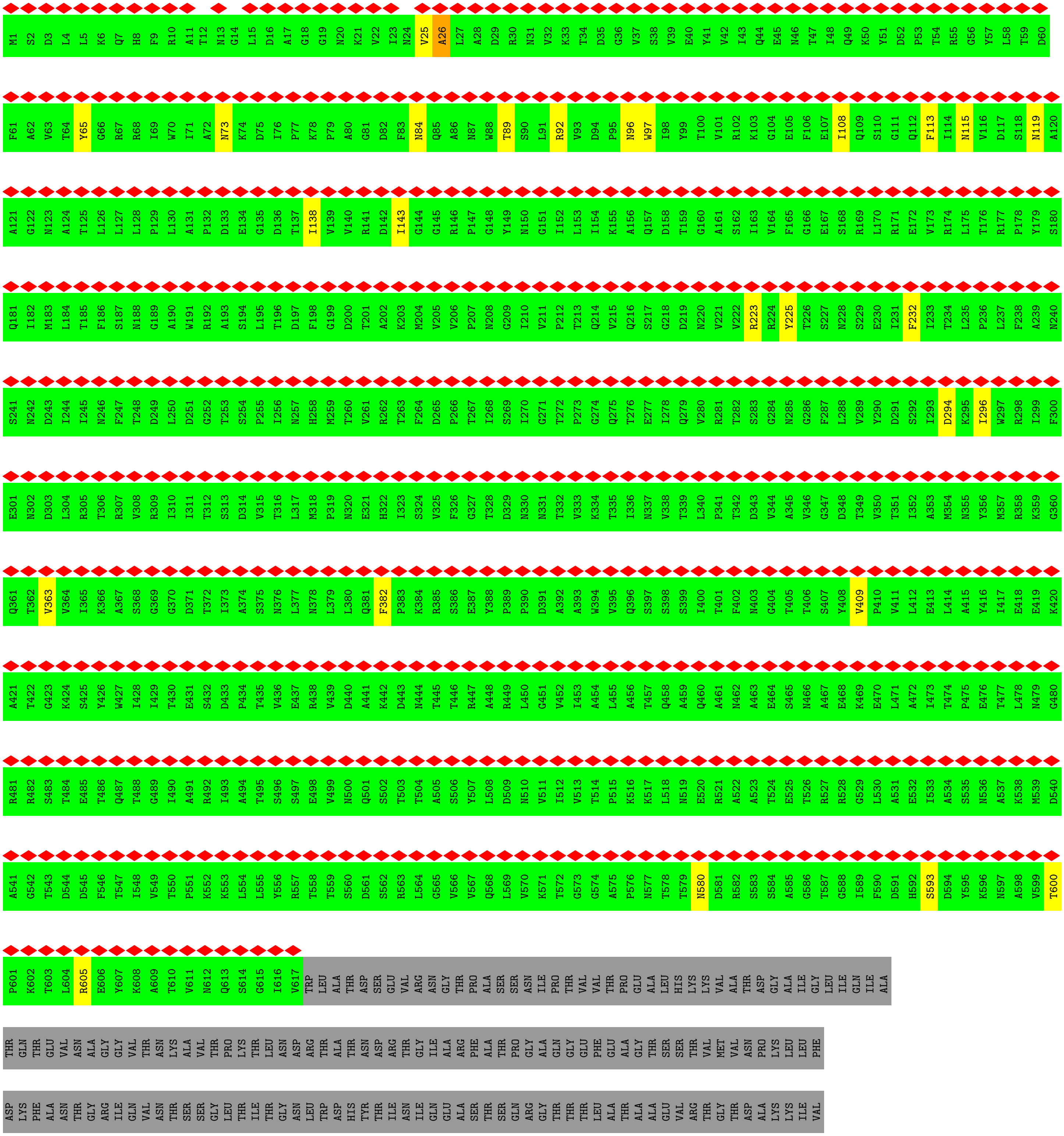
- Molecule 1: Long tail fiber proximal subunit

Chain LV:



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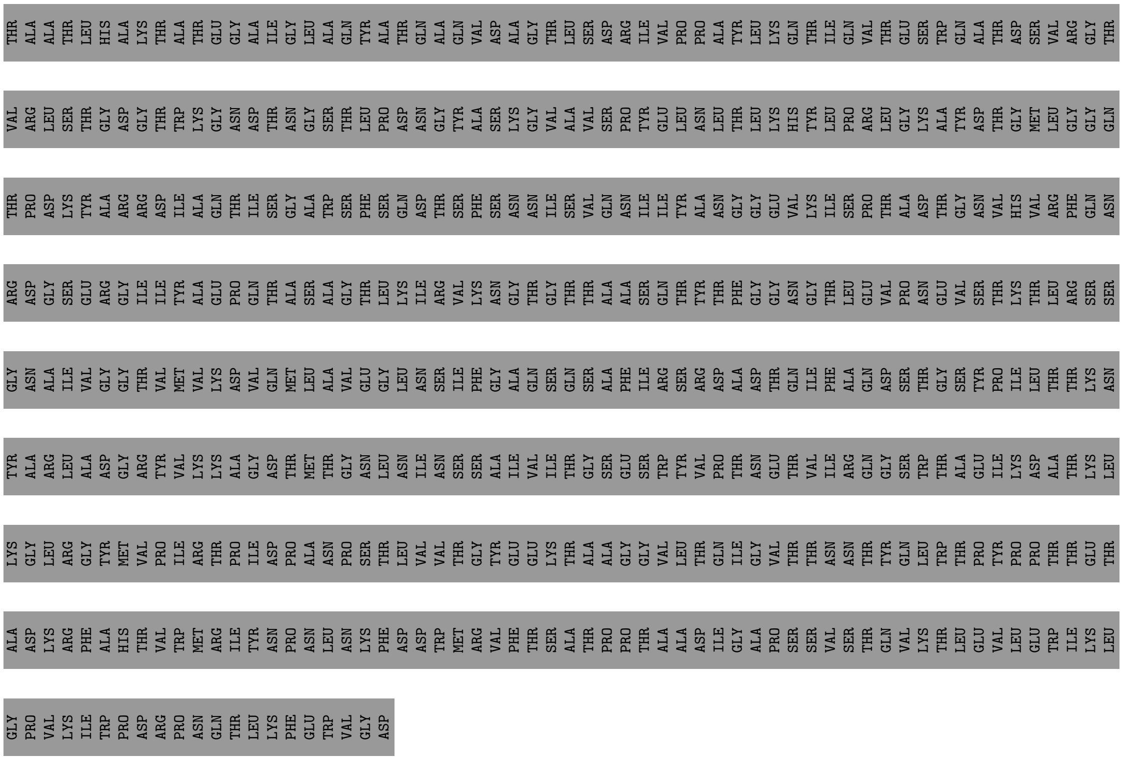
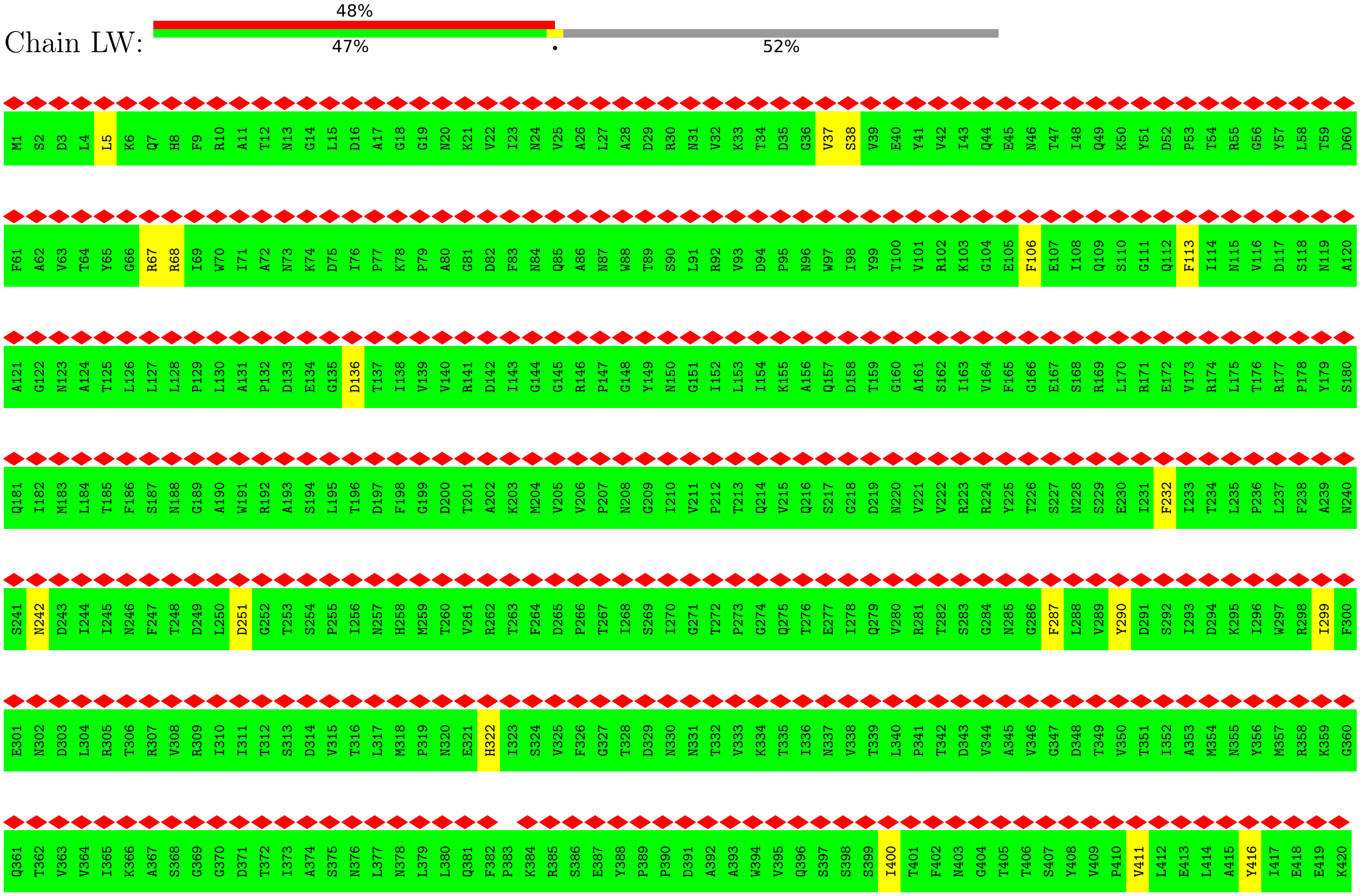
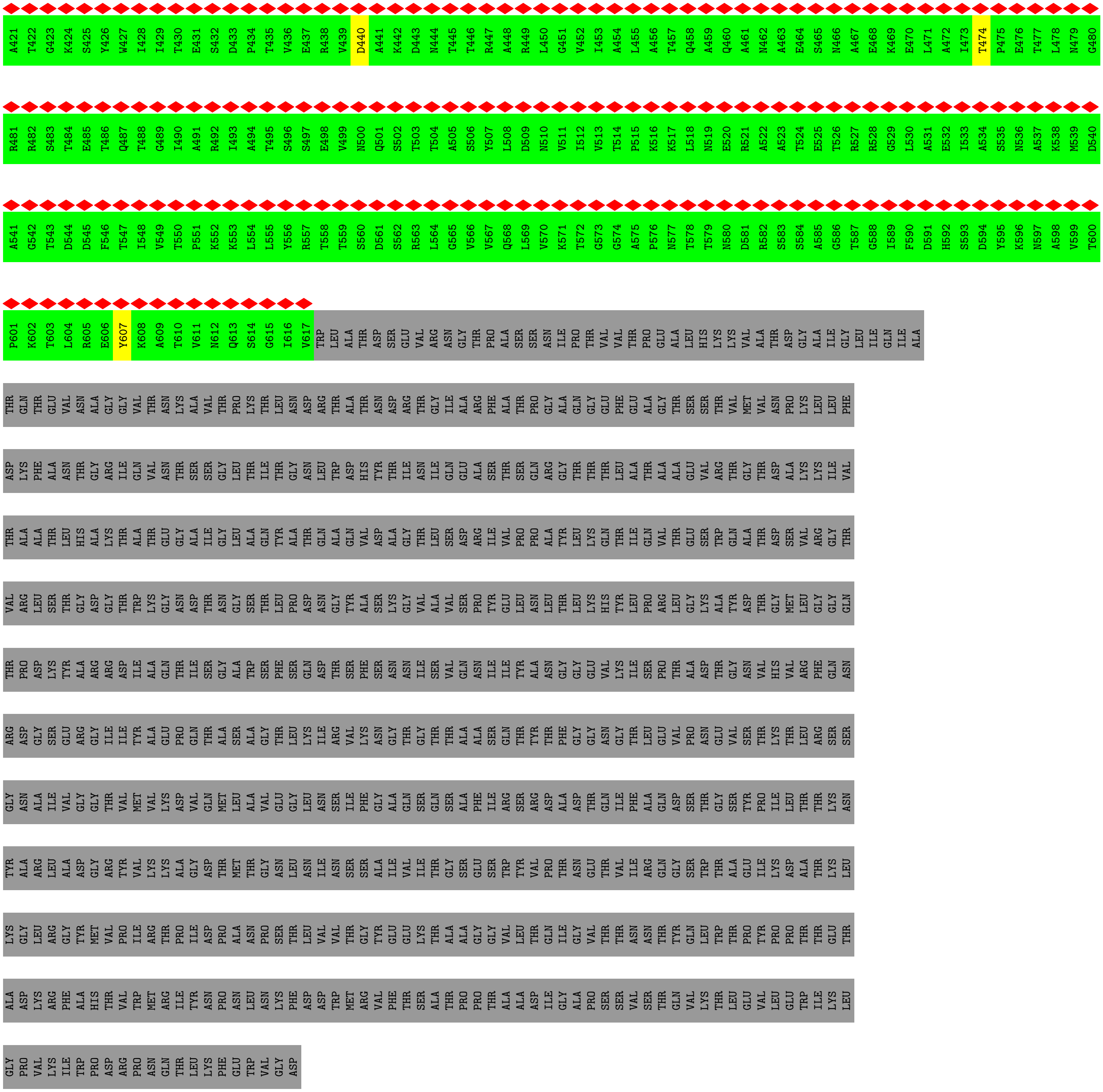


- Molecule 1: Long tail fiber proximal subunit





- Molecule 1: Long tail fiber proximal subunit

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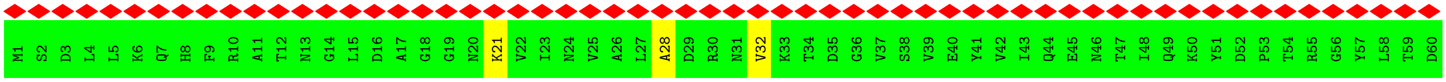

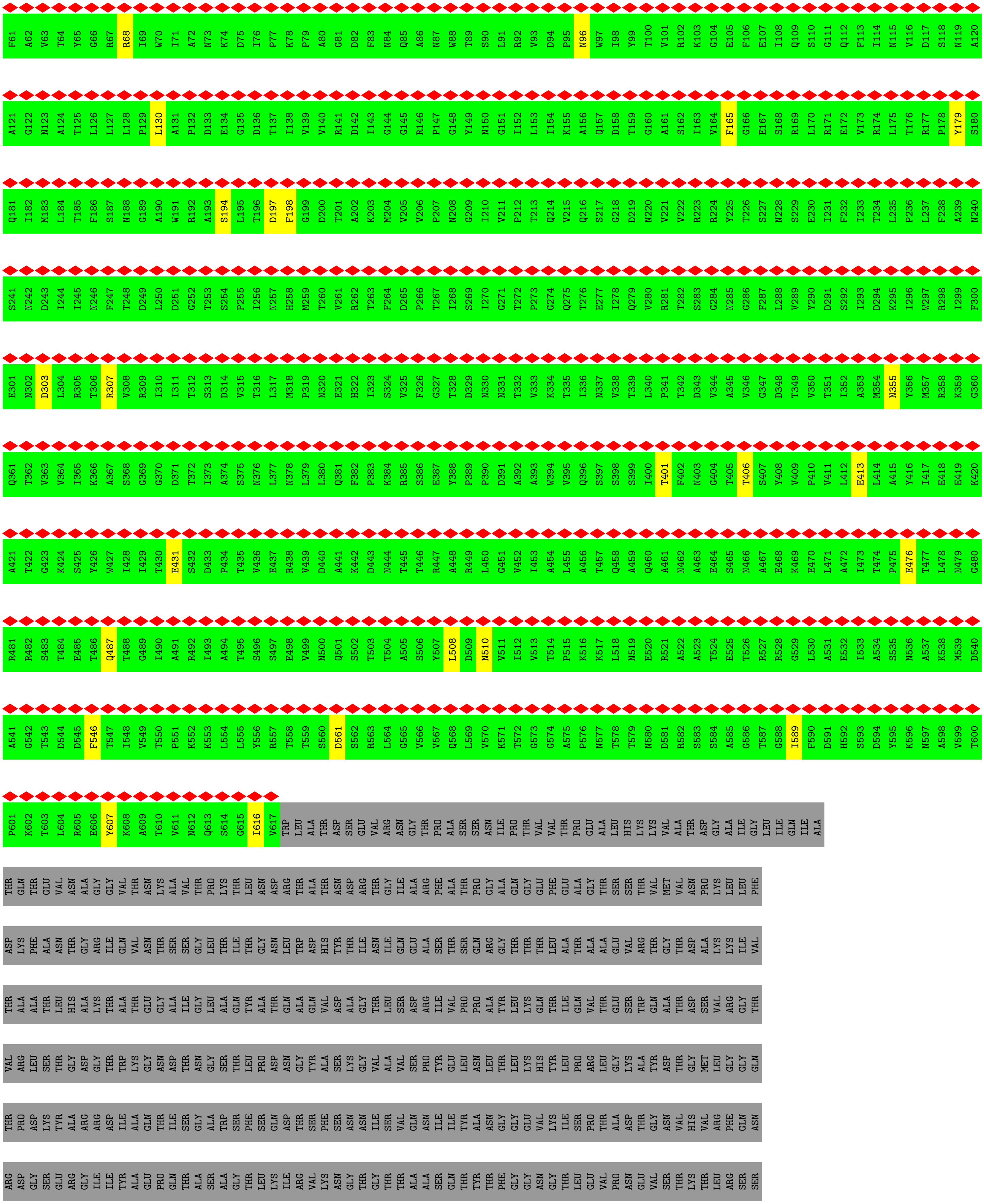

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THR PRO ASP LYS TYR ALA ARG ARG ASP ILE ALA GLN THR ILE SER GLY ALA TRP SER PHE SER GLN ASP THR SER PHE SER ASN ASN ILE SER VAL GLN ASN ILE ILE TYR ALA ASN GLY GLY GLU VAL LYS ILE SER PRO THR ALA ASP THR GLY ASN VAL HIS VAL ARG PHE GLN ASN

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

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

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

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

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- Molecule 1: Long tail fiber proximal subunit

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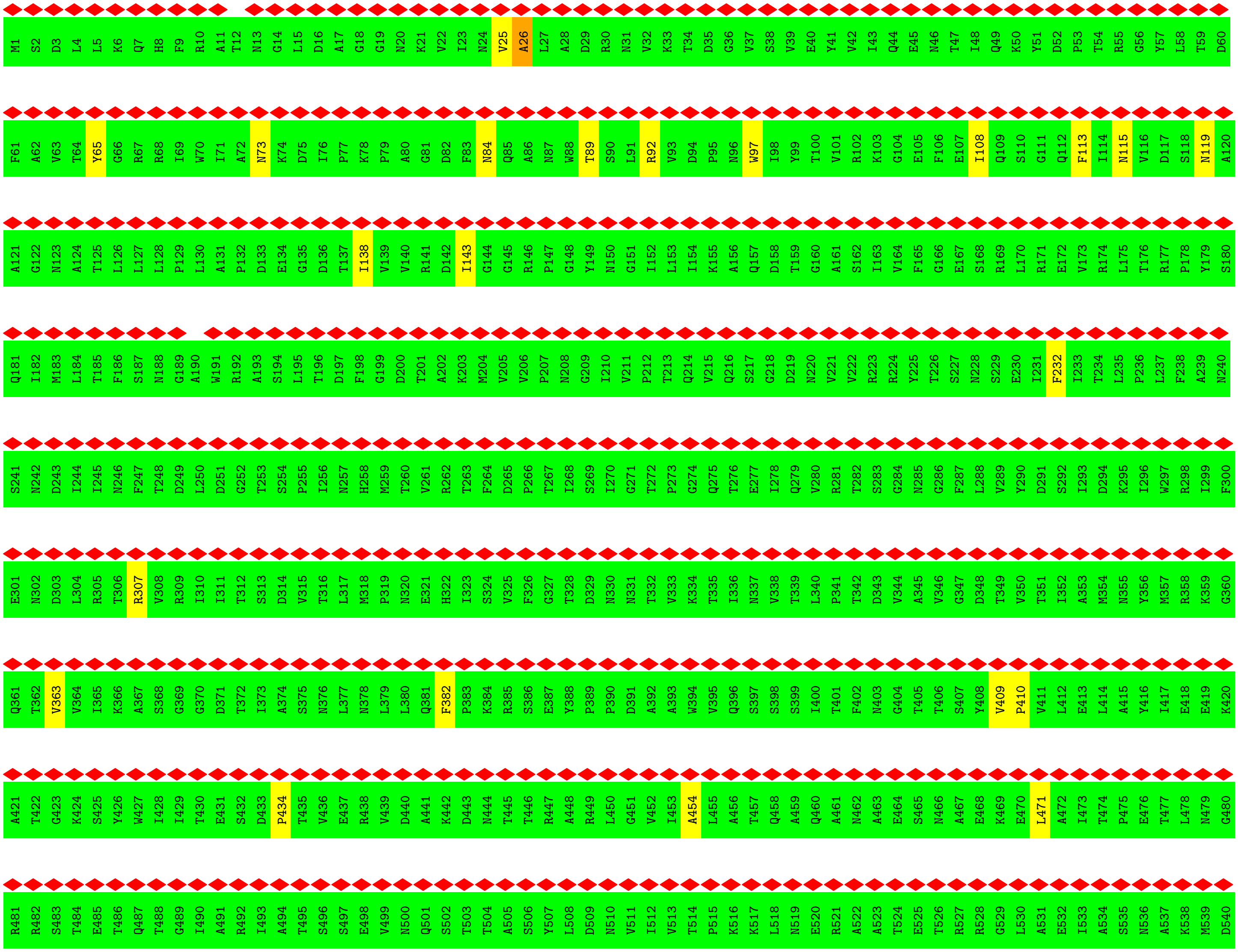

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A121 G122 N123 A124 T125 L126 L127 L128 P129 L130 A131 P132 D133 E134 G135 D136 T137 I138 V139 V140 R141 D142 I143 G144 G145 R146 P147 G148 Y149 N150 G151 I152 L153 I154 K155 A156 Q157 D158 T159 G160 A161 S162 I163 V164 F165 G166 E167 S168 R169 L170 R171 E172 V173 R174 L175 T176 R177 P178 Y179 S180

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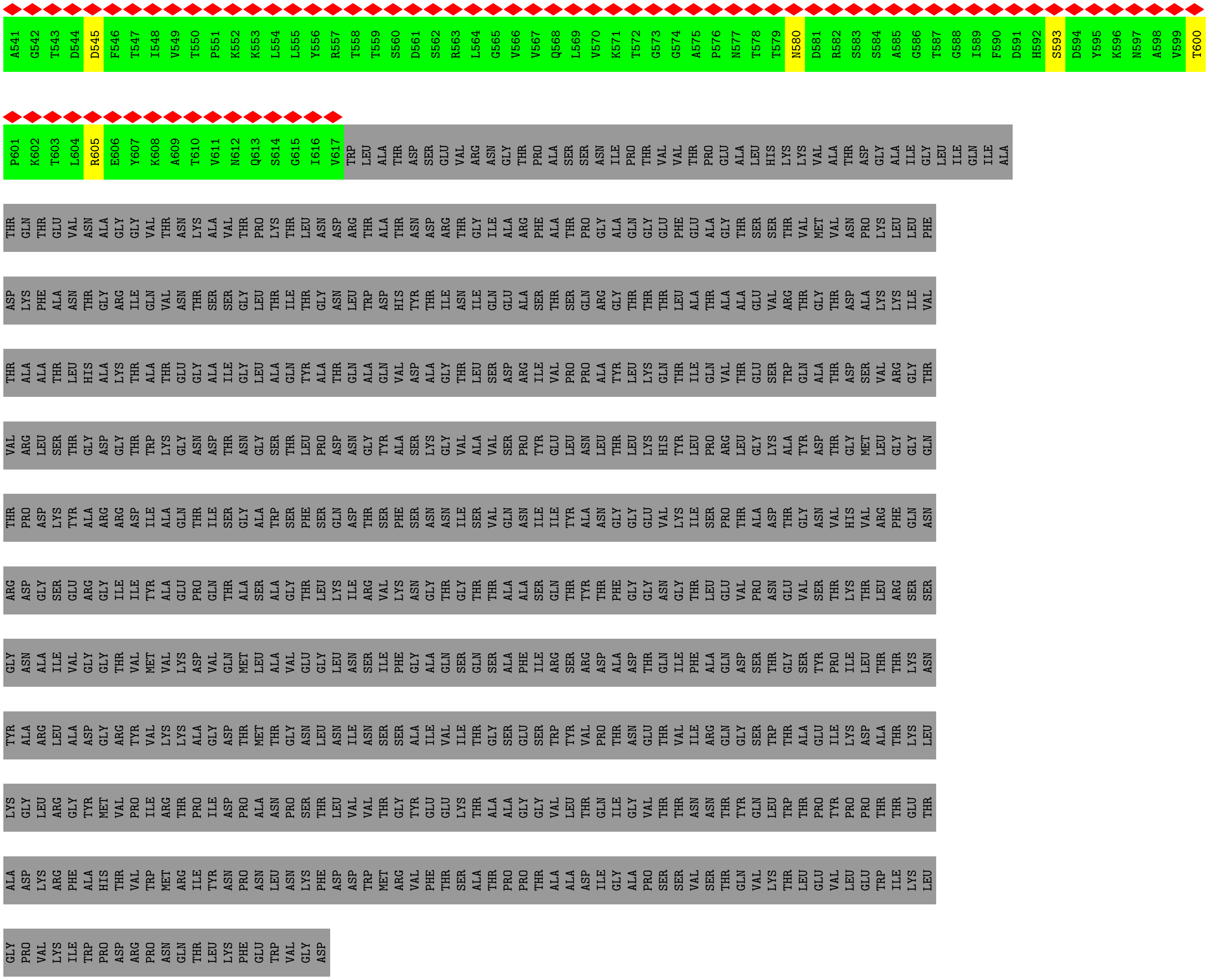

• Molecule 1: Long tail fiber proximal subunit

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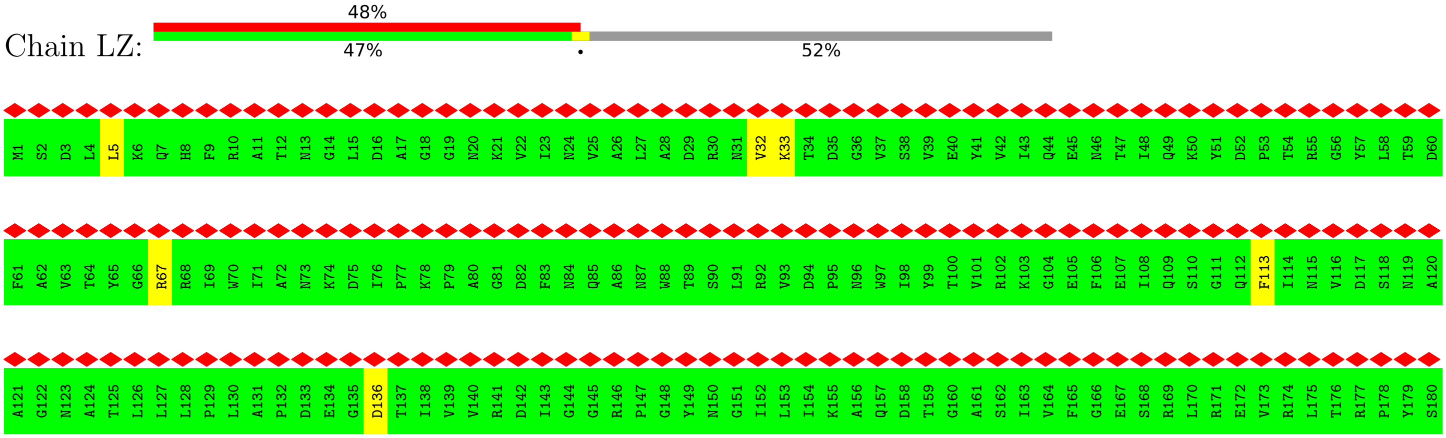

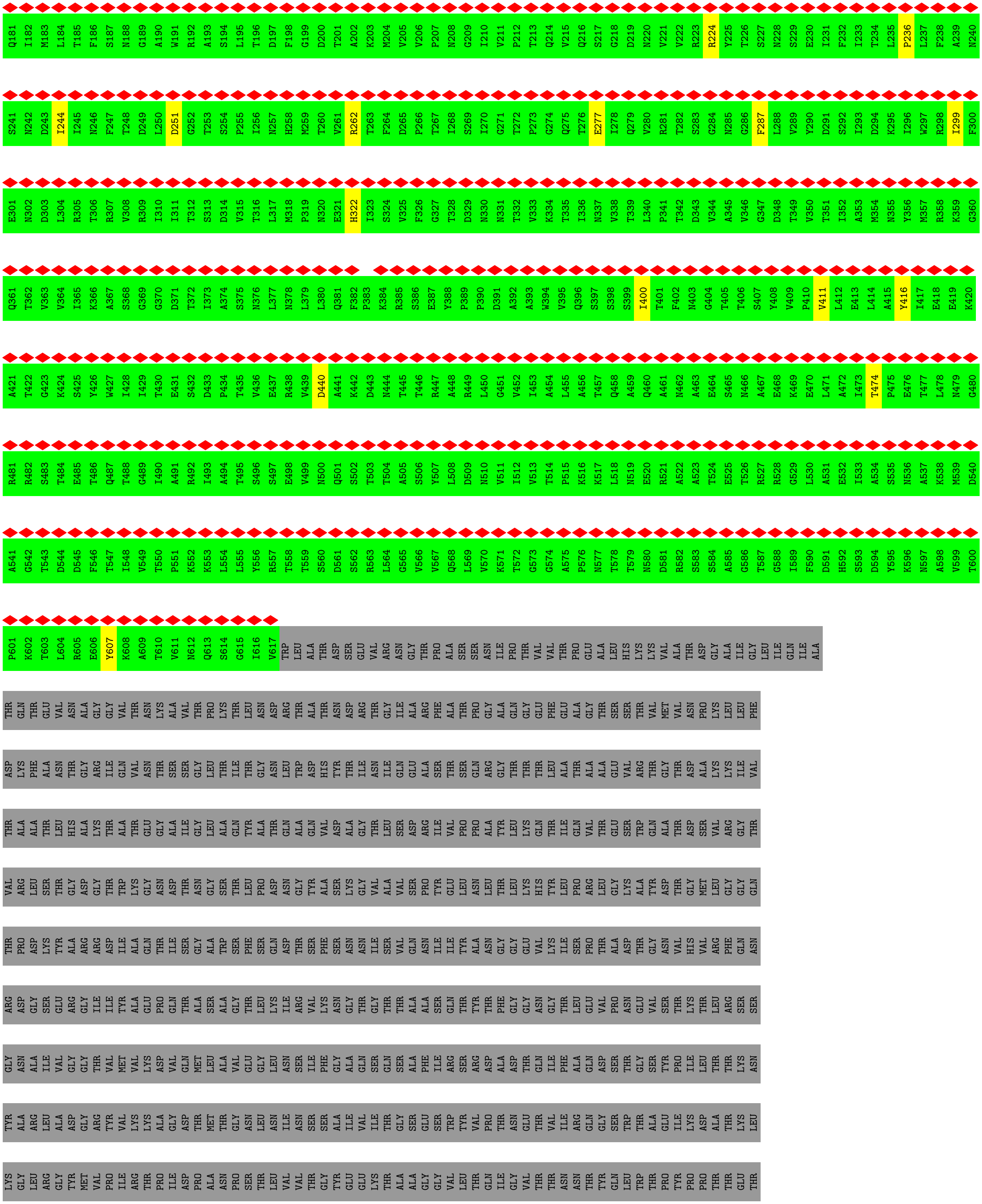

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ASP LYS PHE ALA ASN THR GLY ARG ILE GLN VAL ASN THR SER SER GLY LEU THR ILE THR GLY ASN LEU TRP ASP HIS TYR THR ILE ASN ILE GLN GLU ALA SER THR SER GLN ARG GLY THR THR THR LEU ALA THR ALA ALA GLU VAL ARG THR GLY THR ASP ALA LYS LYS ILE VAL

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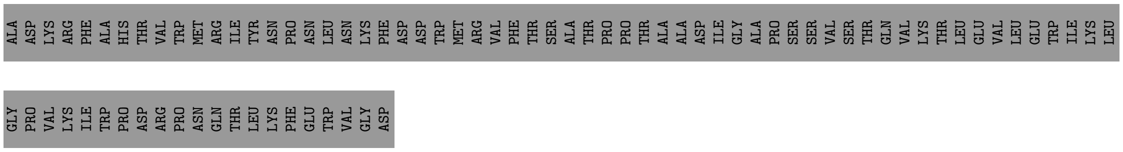

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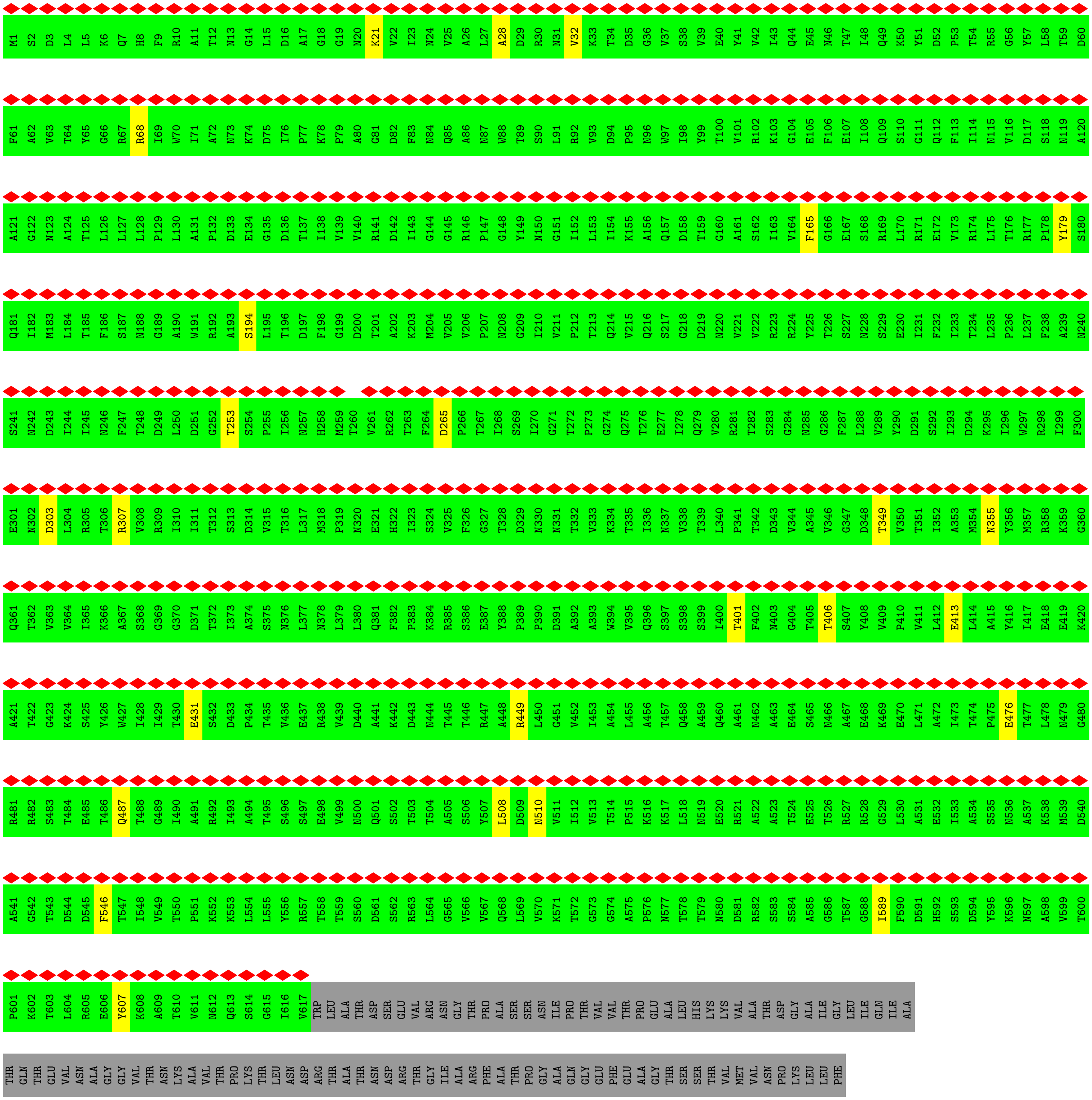
GLY PRO VAL LYS ILE TRP PRO ASP ARG PRO ASN GLN THR LEU LYS PHE GLU TRP VAL GLY ASP

- Molecule 1: Long tail fiber proximal subunit

Chain La:



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

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

THR ALA ALA THR LEU HIS ALA LYS THR ALA THR GLU GLY ALA ILE GLY LEU ALA GLN TYR ALA THR GLN ALA GLN VAL ASP ALA GLY THR LEU SER ASP ARG ILE VAL PRO PRO ALA TYR LEU LYS GLN THR ILE GLN VAL THR GLU SER TRP GLN ALA THR ASP SER VAL ARG GLY THR

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

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

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

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

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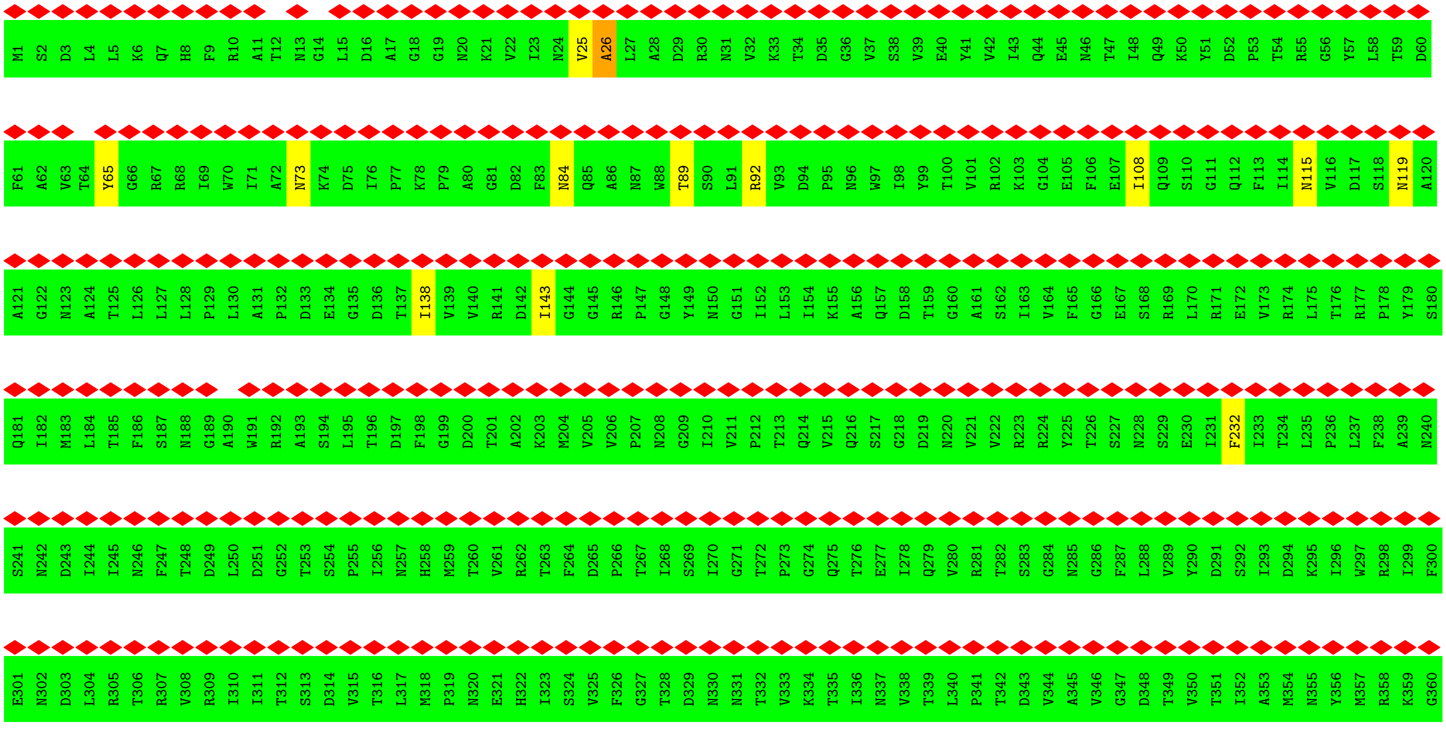
- Molecule 1: Long tail fiber proximal subunit

Chain Lb:



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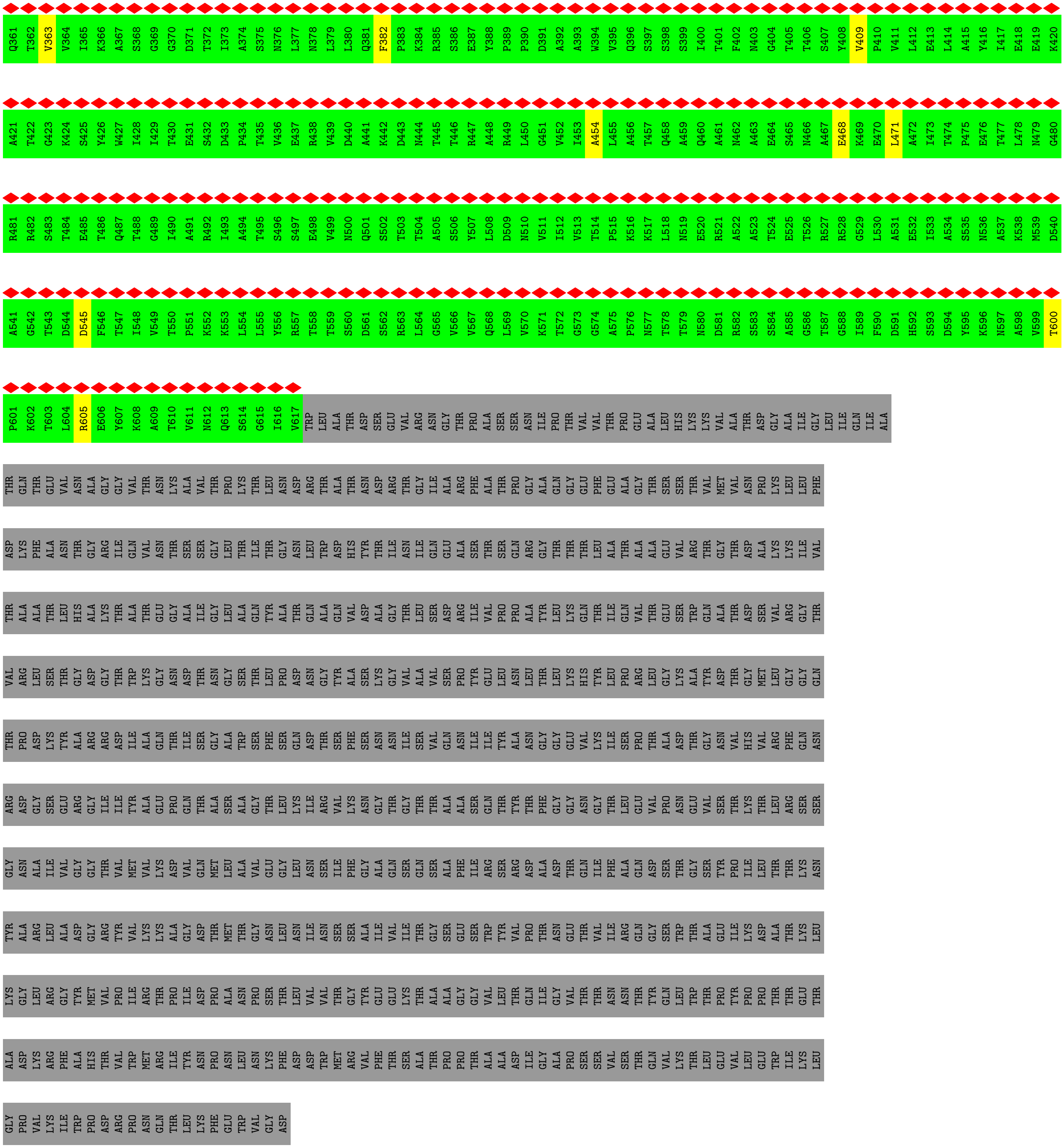
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ARG ASP GLY SER GLU ARG GLY ILE ILE TYR ALA GLU PRO GLN THR ALA SER ALA GLY THR LEU LYS ILE ARG VAL LYS ASN GLY THR GLY THR THR ALA ALA SER GLN THR TYR THR PHE GLY GLY ASN GLY THR LEU GLU VAL PRO ASN GLU VAL SER THR LYS THR LEU ARG SER SER

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

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

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

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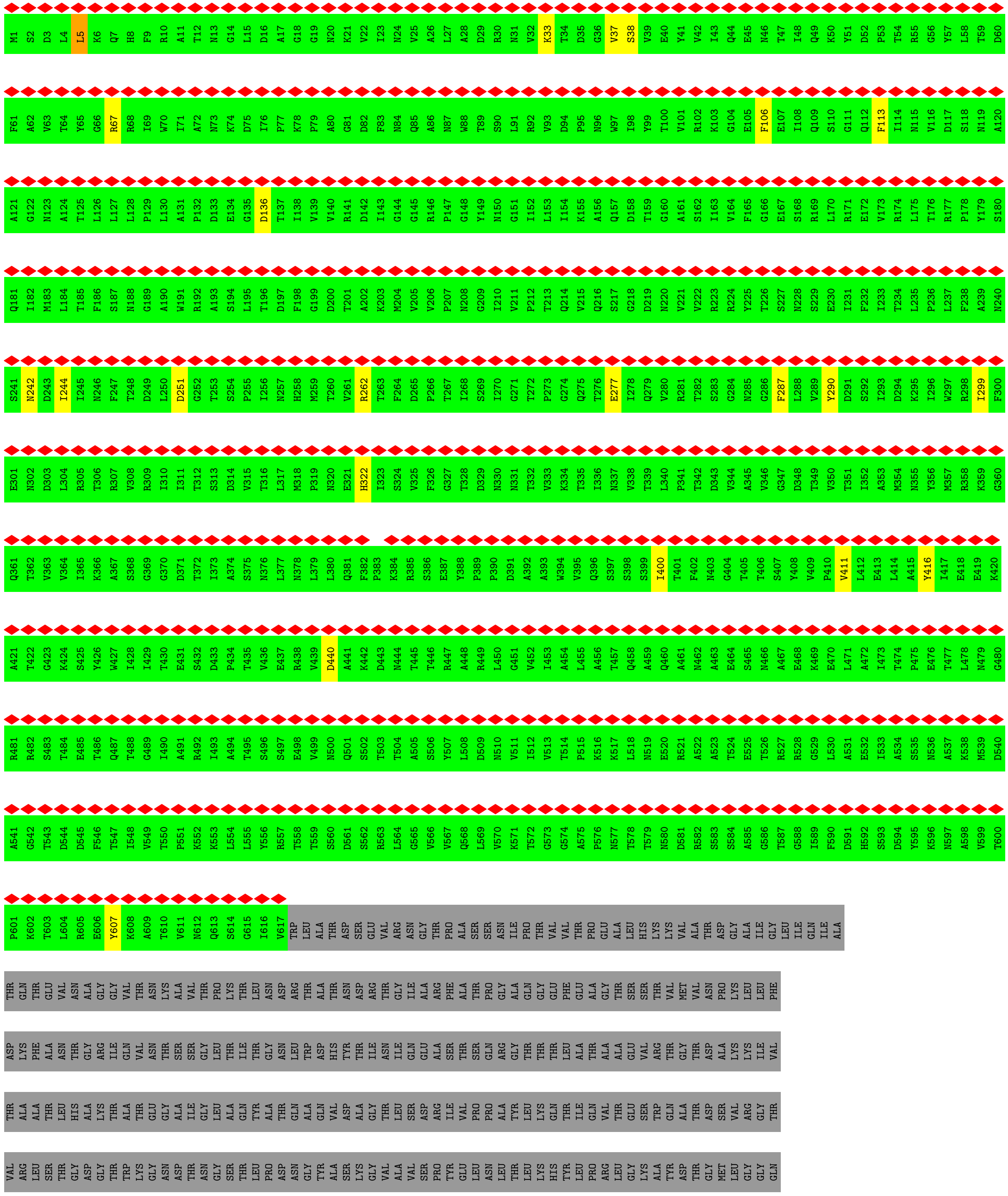
- Molecule 1: Long tail fiber proximal subunit

Chain Lc: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F61 A62 V63 T64 Y65 G66 R67 R68 I69 W70 I71 A72 N73 K74 D75 I76 P77 K78 P79 A80 G81 D82 F83 N84 Q85 A86 N87 W88 T89 S90 L91 R92 V93 D94 P95 N96 W97 I98 Y99 T100 V101 R102 K103 G104 E105 F106 E107 I108 Q109 S110 G111 Q112 F113 I114 N115 V116 D117 S118 N119 A120
A121 G122 N123 A124 T125 L126 L127 L128 P129 L130 A131 P132 D133 E134 G135 D136 T137 I138 V139 V140 R141 D142 I143 G144 G145 R146 P147 G148 Y149 N150 G151 I152 L153 I154 K155 A156 Q157 D158 T159 G160 A161 S162 I163 V164 F165 G166 E167 S168 R169 L170 R171 E172 V173 R174 L175 T176 R177 P178 Y179 S180
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P601 K602 T603 L604 R605 E606 Y607 K608 A609 T610 V611 N612 Q613 S614 G615 I616 V617 TRP LEU ALA THR ASP SER GLU VAL ARG ASN GLY THR PRO ALA SER SER ASN ILE PRO THR VAL VAL THR PRO GLU ALA LEU HIS LYS VAL ALA THR ASP GLY ALA ILE GLY LEU ILE GLN ILE ALA
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ASP LYS PHE ALA ASN THR GLY ARG ILE GLN VAL ASN THR SER SER GLY LEU THR ILE THR GLY ASN LEU TRP ASP HIS TYR THR ILE ASN ILE GLN GLU ALA SER THR SER GLN ARG GLY THR THR THR LEU ALA THR ALA ALA GLU VAL ARG THR GLY THR ASP ALA LYS LYS ILE VAL
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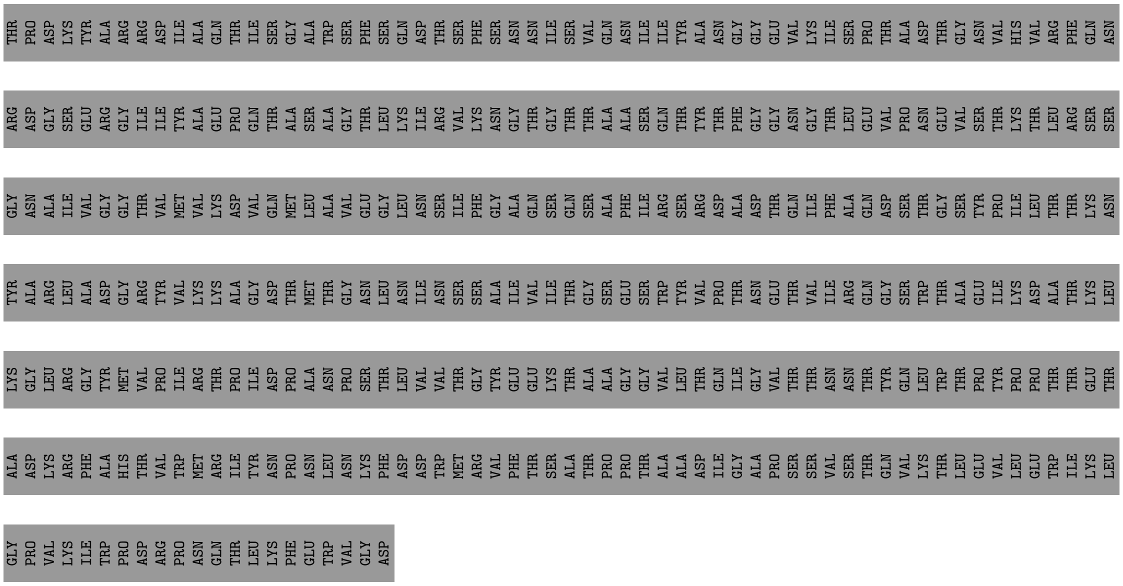

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GLY ASN ALA ILE VAL GLY GLY THR VAL MET VAL LYS ASP VAL GLN MET LEU ALA VAL GLU GLY LEU ASN SER ILE PHE GLY ALA GLN SER GLN SER ALA PHE ILE ARG SER ARG ASP ALA ASP THR GLN ILE PHE ALA GLN ASP SER THR GLY SER TYR PRO ILE LEU THR THR LYS ASN

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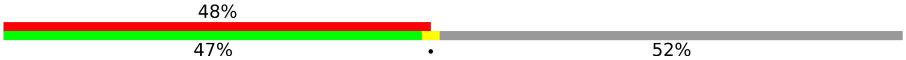
LYS GLY LEU ARG GLY TYR MET VAL PRO ILE ARG THR PRO ILE ASP PRO ALA ASN PRO SER THR LEU VAL VAL THR GLY TYR GLU GLU LYS THR ALA ALA GLY GLY VAL LEU THR GLN ILE GLY VAL THR THR ASN ASN THR TYR GLN LEU TRP THR PRO TYR PRO PRO THR THR GLU THR

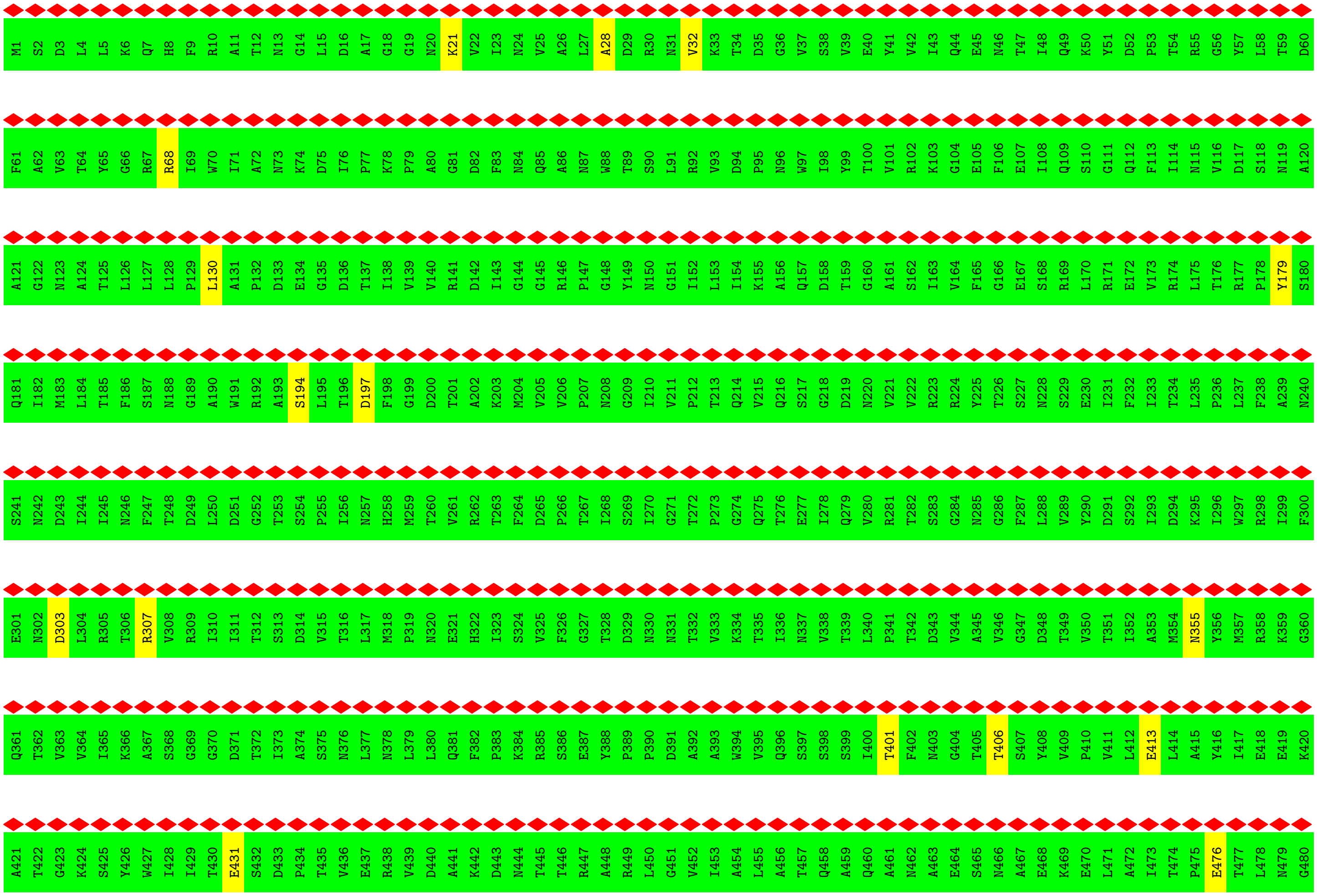
ALA ASP LYS ARG PHE ALA HIS THR VAL TRP MET ARG ILE TYR ASN PRO ASN LEU ASN LYS PHE ASP ASP TRP MET ARG VAL PHE THR SER ALA THR PRO PRO THR ALA ALA ASP ILE GLY ALA PRO SER SER VAL SER THR GLN VAL LYS THR LEU GLU VAL LEU GLU TRP ILE LYS LEU

GLY PRO VAL LYS ILE TRP PRO ASP ARG PRO ASN GLN THR LEU LYS PHE GLU TRP VAL GLY ASP

- Molecule 1: Long tail fiber proximal subunit

Chain Ld:





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F61 A62 V63 T64 Y65 G66 R67 R68 I69 W70 I71 A72 N73 K74 D75 I76 P77 K78 P79 A80 G81 D82 F83 N84 Q85 A86 N87 W88 T89 S90 L91 R92 V93 D94 P95 N96 W97 I98 Y99 T100 V101 R102 K103 G104 E105 F106 E107 I108 Q109 S110 G111 Q112 F113 I114 N115 V116 D117 S118 N119 A120

A121 G122 N123 A124 T125 L126 L127 L128 P129 L130 A131 P132 D133 E134 G135 D136 T137 I138 V139 V140 R141 D142 I143 G144 G145 R146 P147 G148 Y149 N150 G151 I152 L153 I154 K155 A156 Q157 D158 T159 G160 A161 S162 I163 V164 F165 G166 E167 S168 R169 L170 R171 E172 V173 R174 L175 T176 R177 P178 Y179 S180

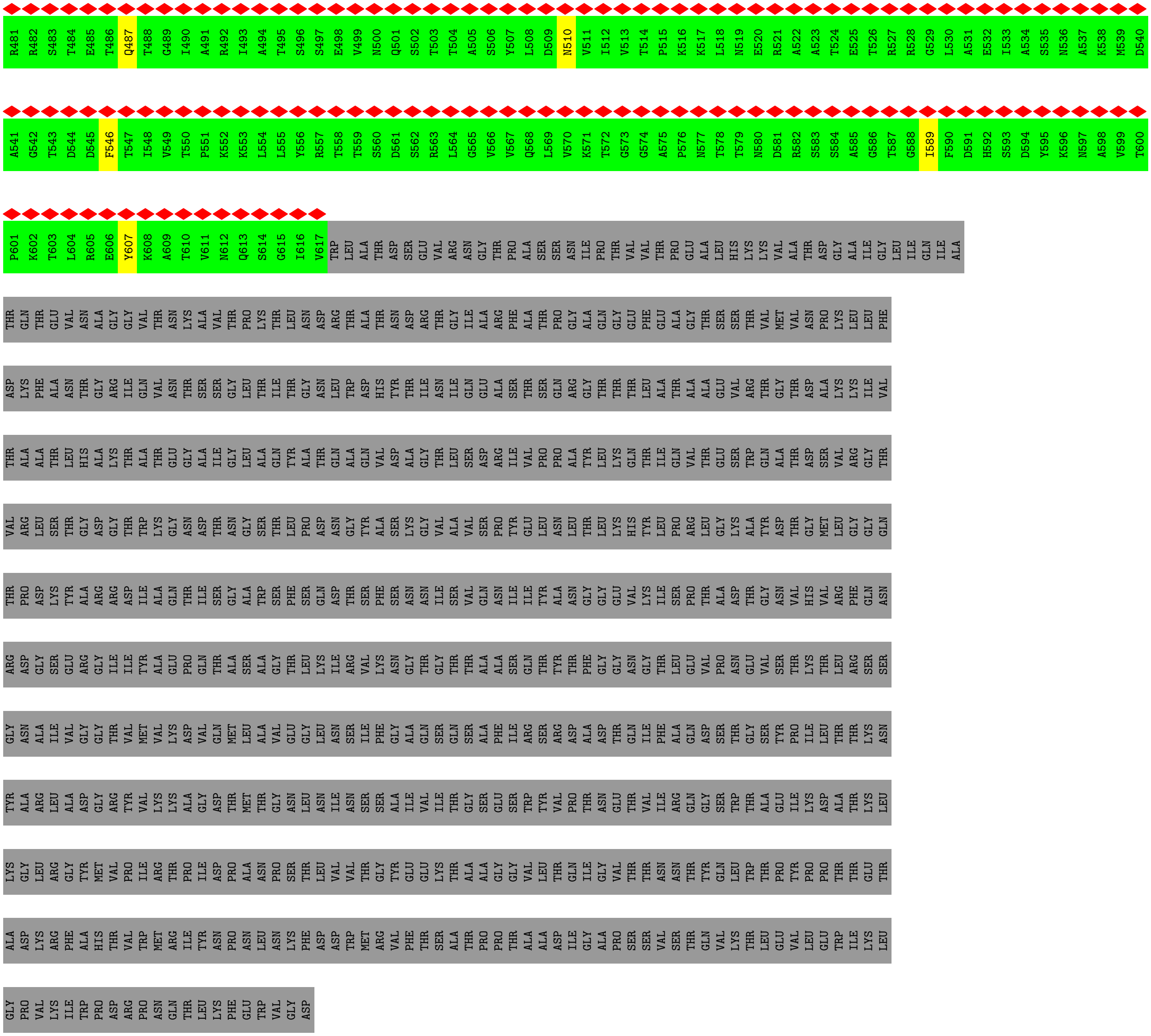
Q181 I182 M183 L184 T185 F186 S187 N188 G189 A190 W191 R192 A193 S194 L195 T196 D197 F198 G199 D200 T201 A202 K203 M204 V205 V206 P207 N208 G209 I210 V211 P212 T213 Q214 V215 Q216 S217 G218 D219 N220 V221 V222 R223 R224 Y225 T226 S227 N228 S229 E230 I231 F232 I233 T234 L235 P236 L237 F238 A239 N240

S241 N242 D243 I244 I245 N246 F247 T248 D249 L250 D251 G252 T253 S254 P255 I256 N257 H258 M259 T260 V261 R262 T263 F264 D265 P266 T267 I268 S269 I270 G271 T272 P273 G274 Q275 T276 E277 I278 Q279 V280 R281 T282 S283 G284 N285 G286 F287 L288 V289 Y290 D291 S292 I293 D294 K295 I296 W297 R298 I299 F300

E301 N302 D303 L304 R305 T306 R307 V308 R309 I310 I311 T312 S313 D314 V315 T316 L317 M318 P319 N320 E321 H322 I323 S324 V325 F326 G327 T328 D329 N330 N331 T332 V333 K334 T335 I336 N337 V338 T339 L340 P341 T342 D343 V344 A345 V346 G347 D348 T349 V350 T351 I352 A353 M354 N355 Y356 M357 R358 K359 G360

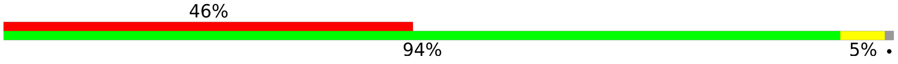
Q361 T362 V363 V364 I365 K366 A367 S368 G369 G370 D371 T372 I373 A374 S375 N376 L377 N378 L379 L380 Q381 F382 P383 K384 R385 S386 E387 Y388 P389 P390 D391 A392 A393 W394 V395 Q396 S397 S398 S399 I400 T401 F402 N403 G404 T405 T406 S407 Y408 V409 P410 V411 L412 E413 L414 A415 Y416 I417 E418 E419 K420

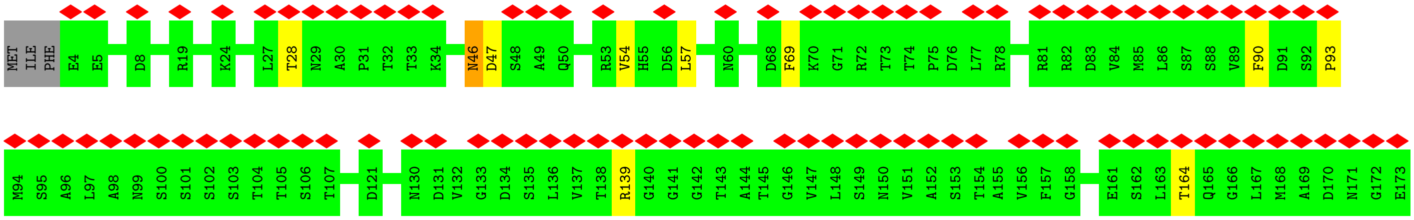
A421 T422 G423 K424 S425 Y426 W427 I428 I429 T430 E431 S432 D433 P434 T435 V436 E437 R438 V439 D440 A441 K442 D443 N444 T445 T446 R447 A448 R449 L450 G451 V452 I453 A454 L455 A456 T457 Q458 A459 Q460 A461 N462 A463 E464 S465 N466 A467 E468 K469 E470 L471 A472 I473 T474 P475 E476 T477 L478 N479 G480

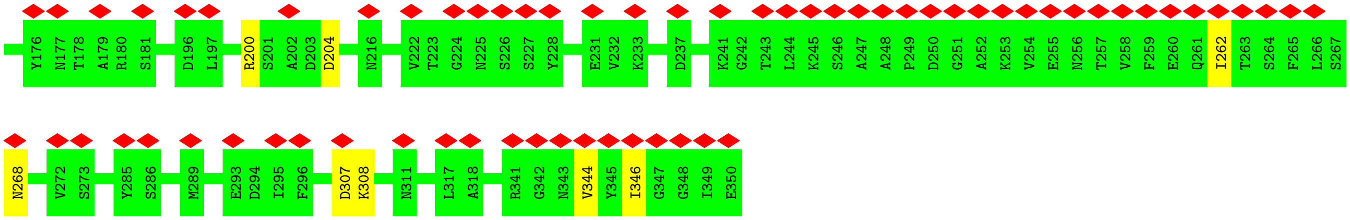


- Molecule 2: Baseplate tail tube cap

Chain BM:

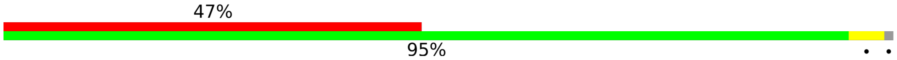


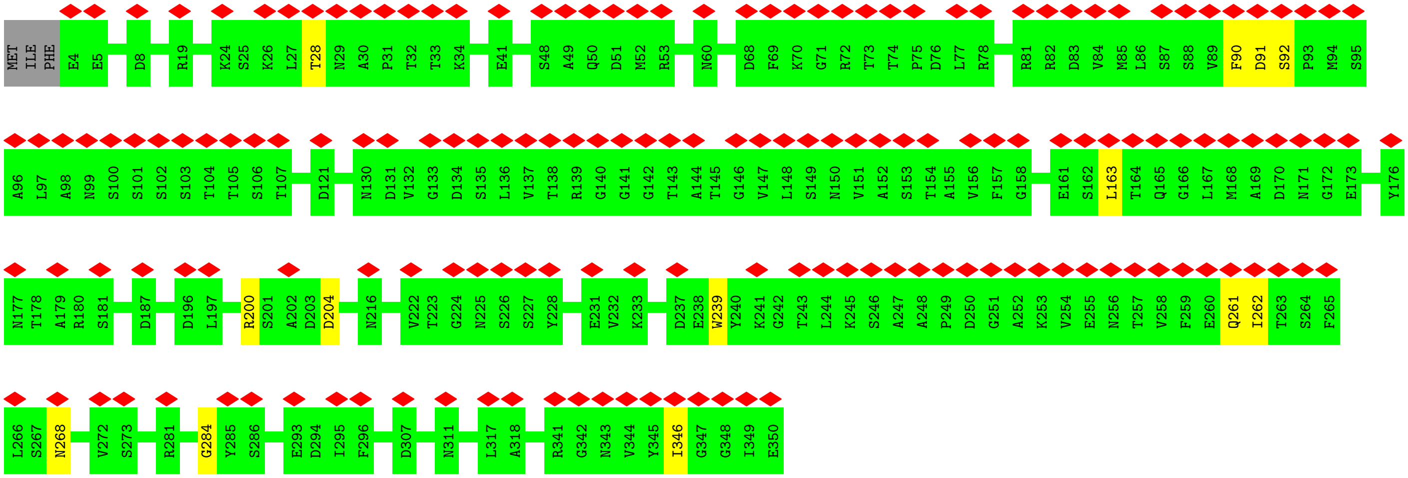




- Molecule 2: Baseplate tail tube cap

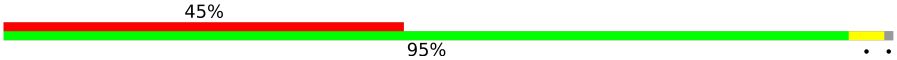
Chain BK:

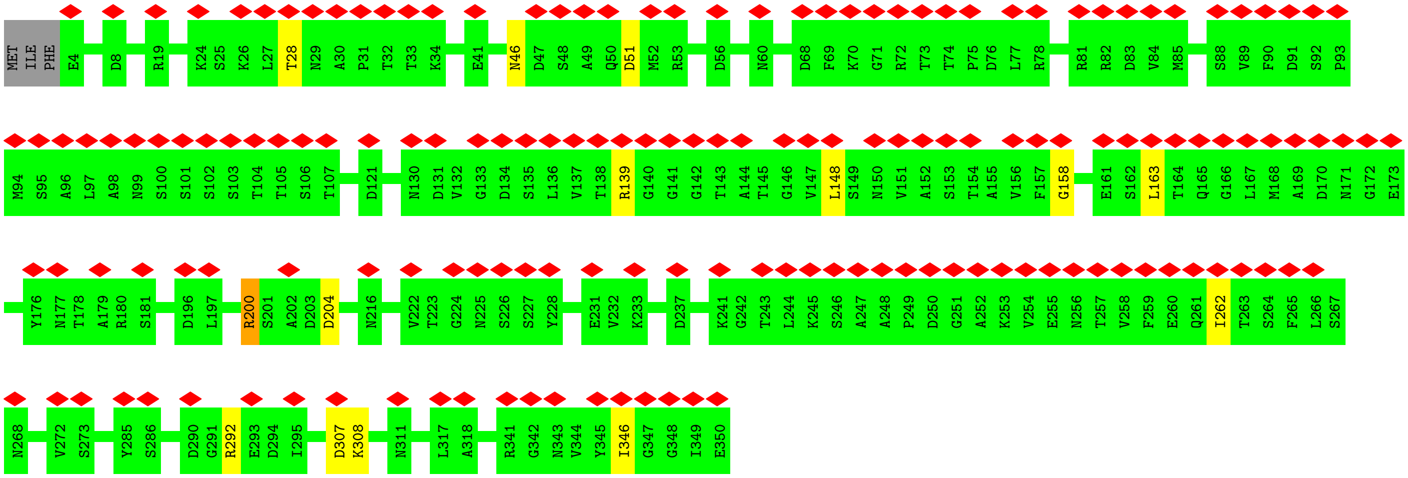




- Molecule 2: Baseplate tail tube cap

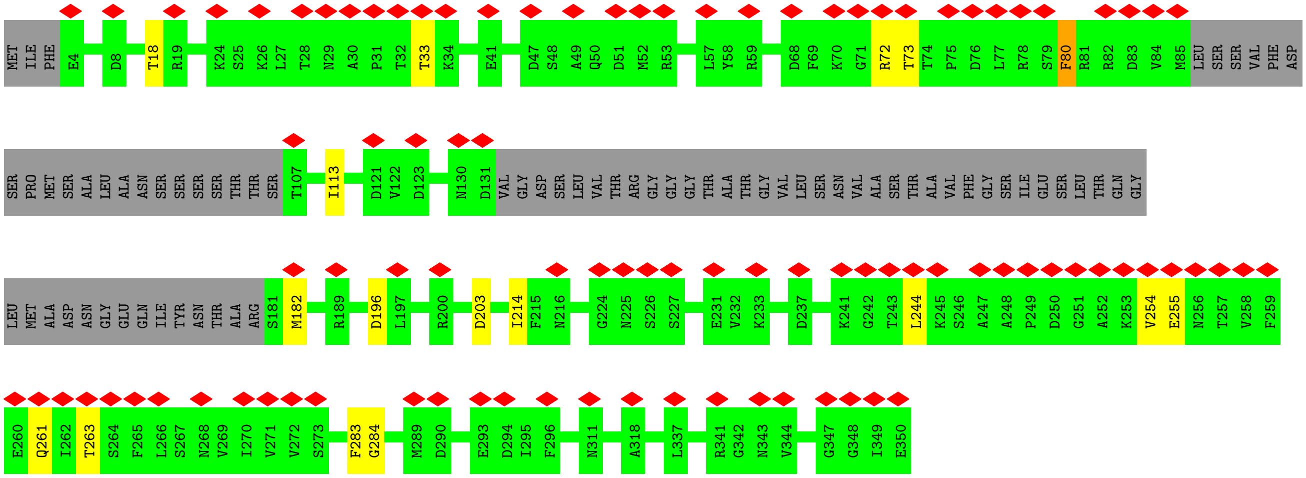
Chain BO:





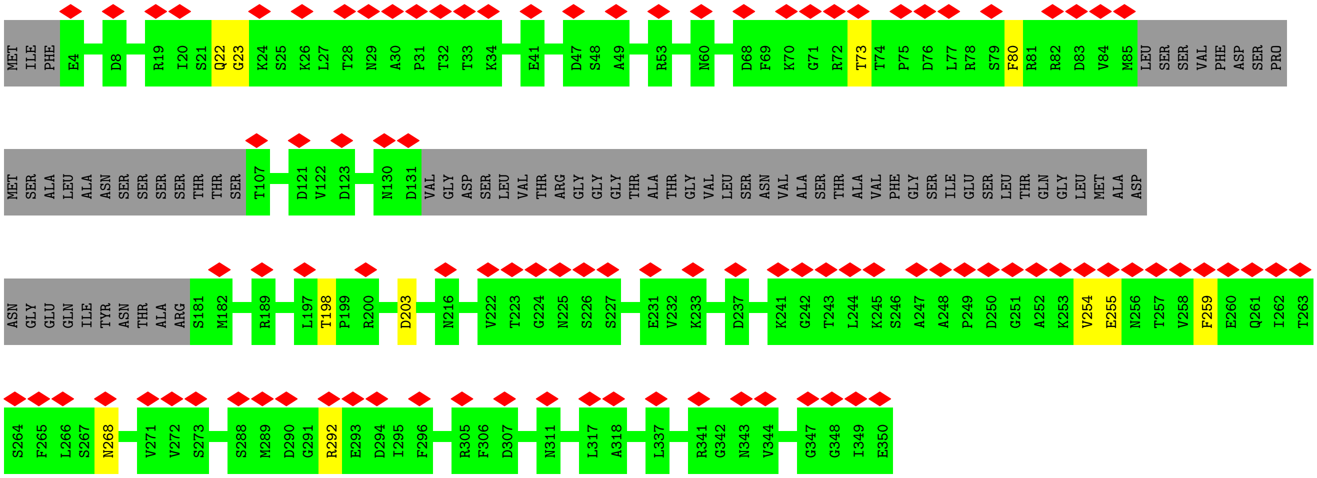
- Molecule 2: Baseplate tail tube cap

Chain BP:



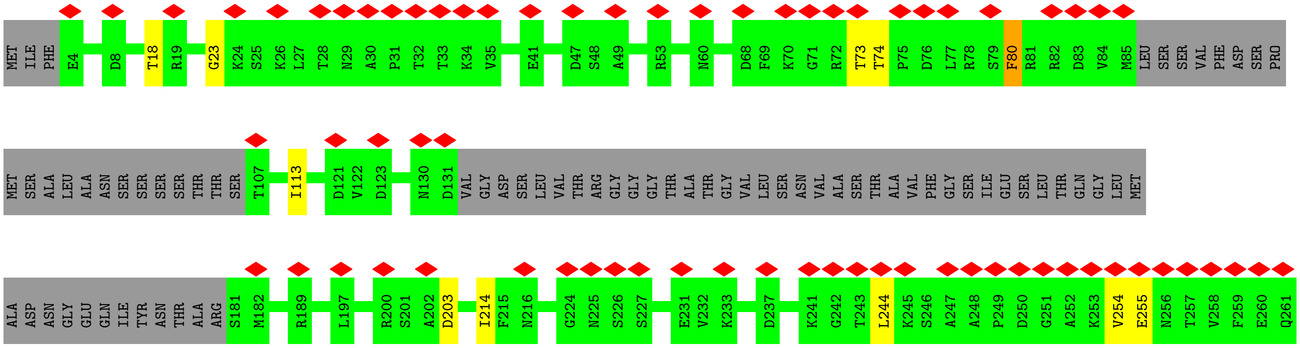
- Molecule 2: Baseplate tail tube cap

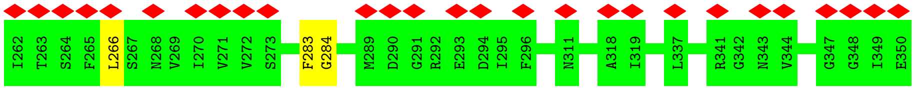
Chain BL:



- Molecule 2: Baseplate tail tube cap

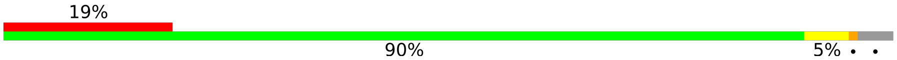
Chain BN:

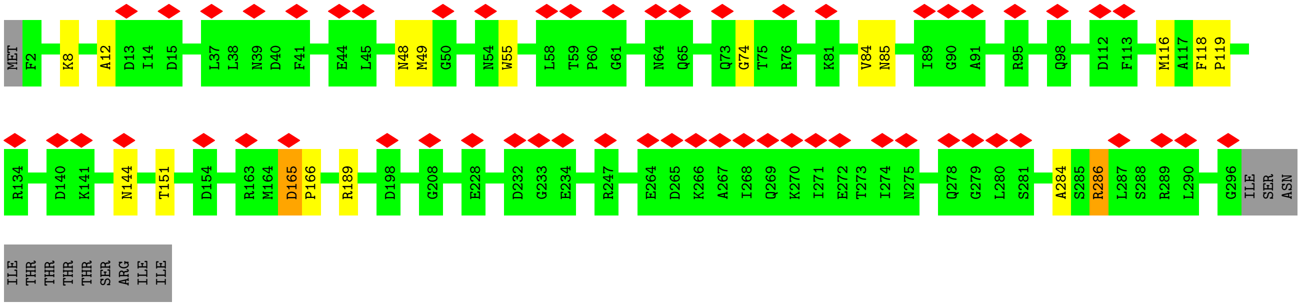




- Molecule 3: Baseplate subunit

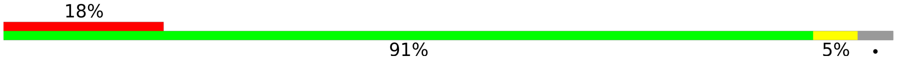
Chain BQ:

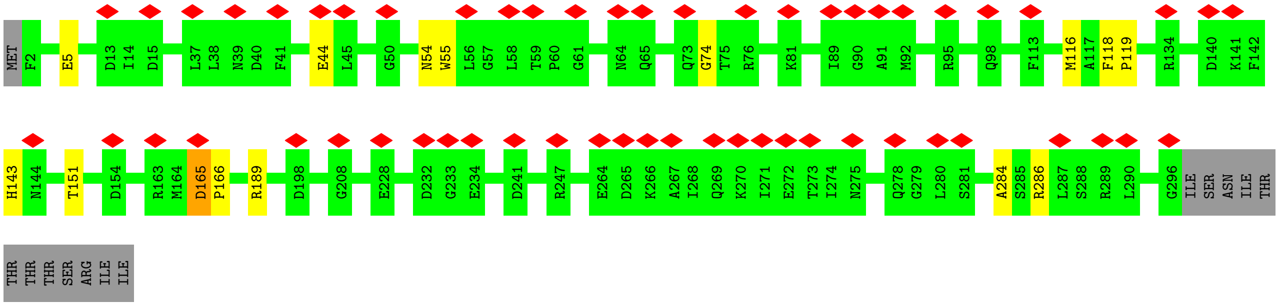




- Molecule 3: Baseplate subunit

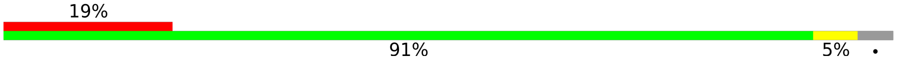
Chain BV:

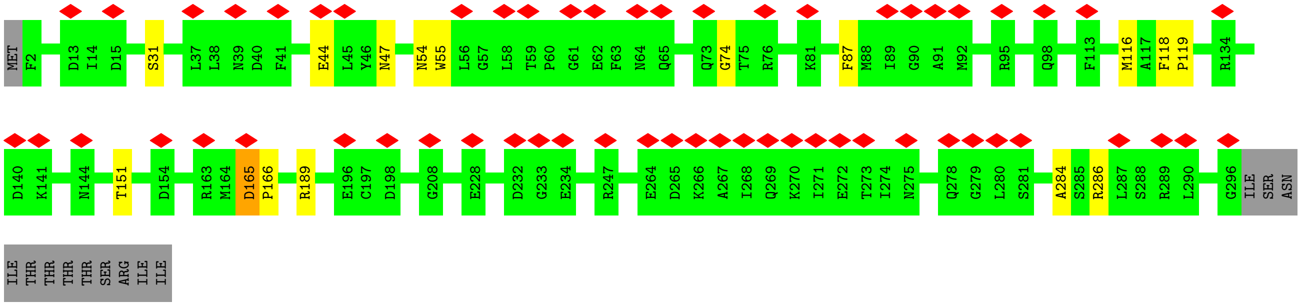




- Molecule 3: Baseplate subunit

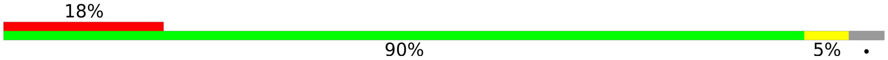
Chain BS:

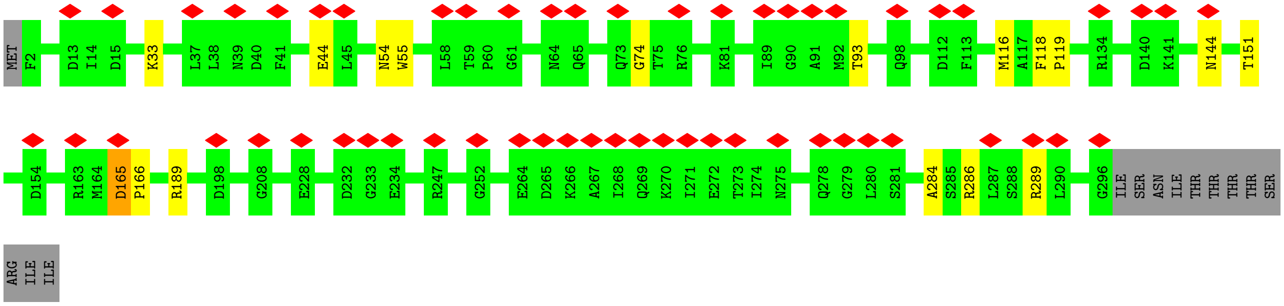




- Molecule 3: Baseplate subunit

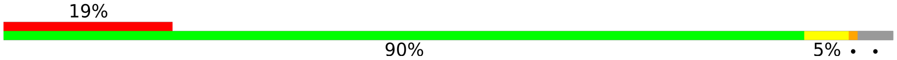
Chain BR:

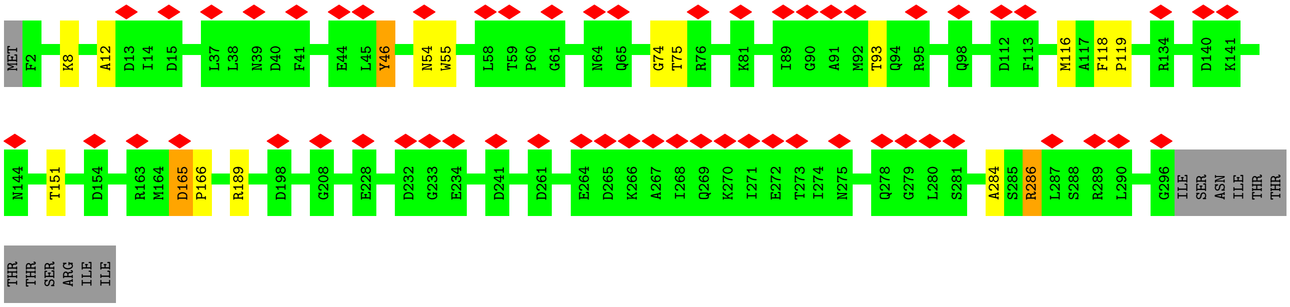




- Molecule 3: Baseplate subunit

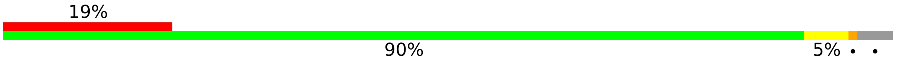
Chain BT:

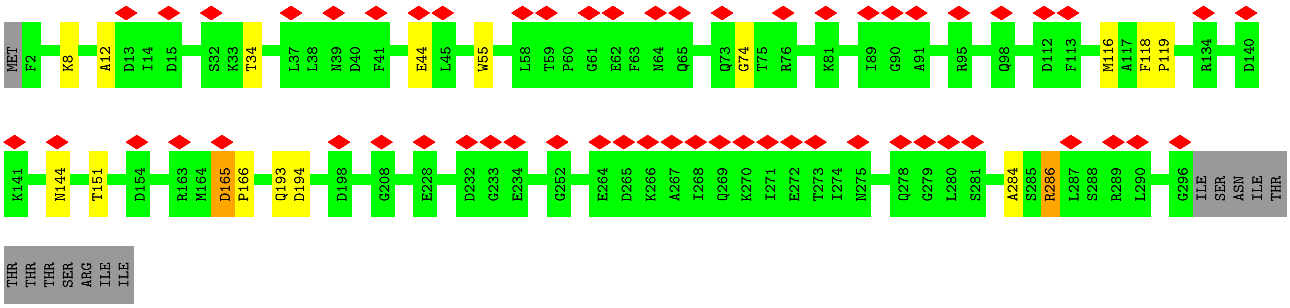




- Molecule 3: Baseplate subunit

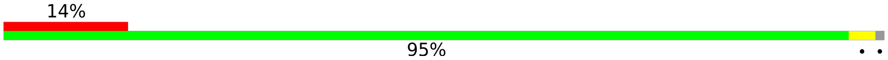
Chain BU:

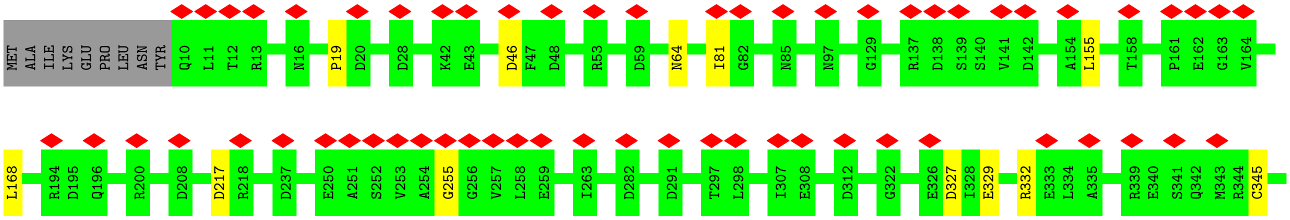


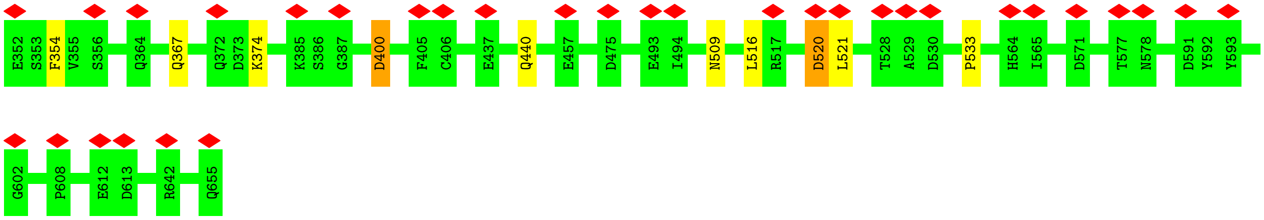


- Molecule 4: Baseplate wedge protein gp6

Chain AX:

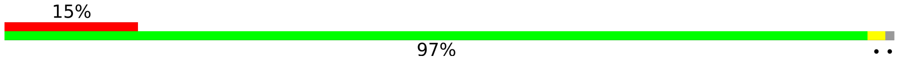


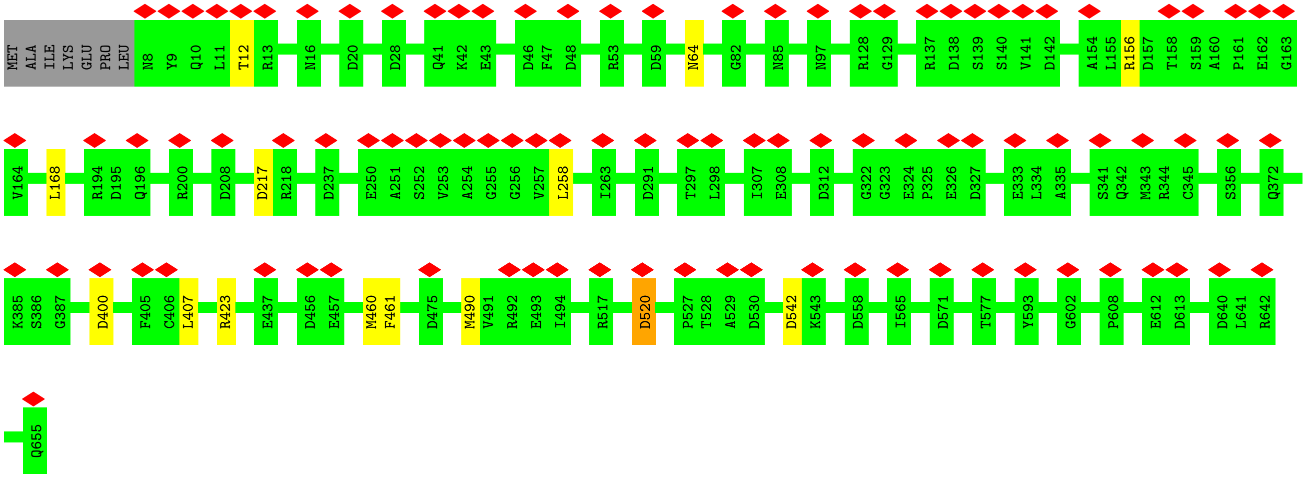




- Molecule 4: Baseplate wedge protein gp6

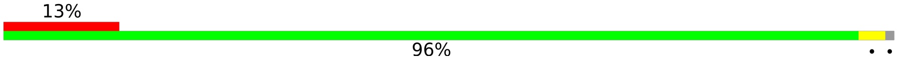
Chain AW:

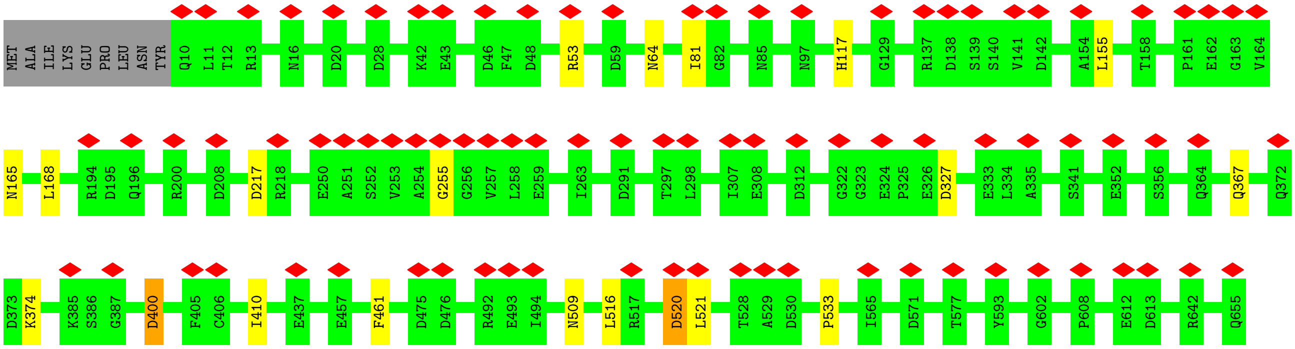




- Molecule 4: Baseplate wedge protein gp6

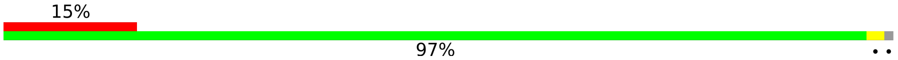
Chain AT:

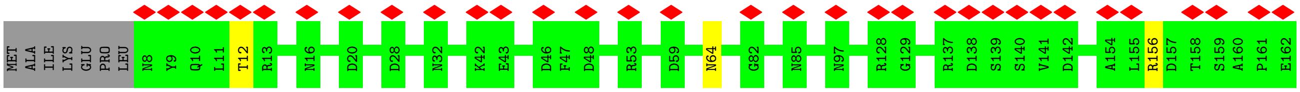


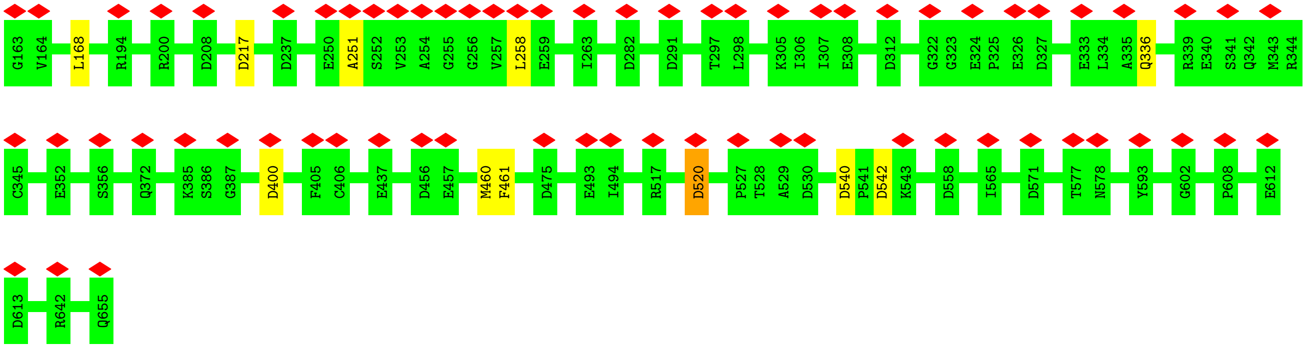


- Molecule 4: Baseplate wedge protein gp6

Chain AS:

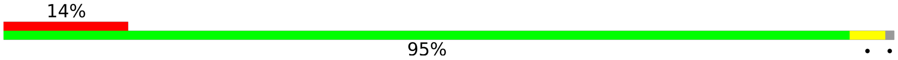


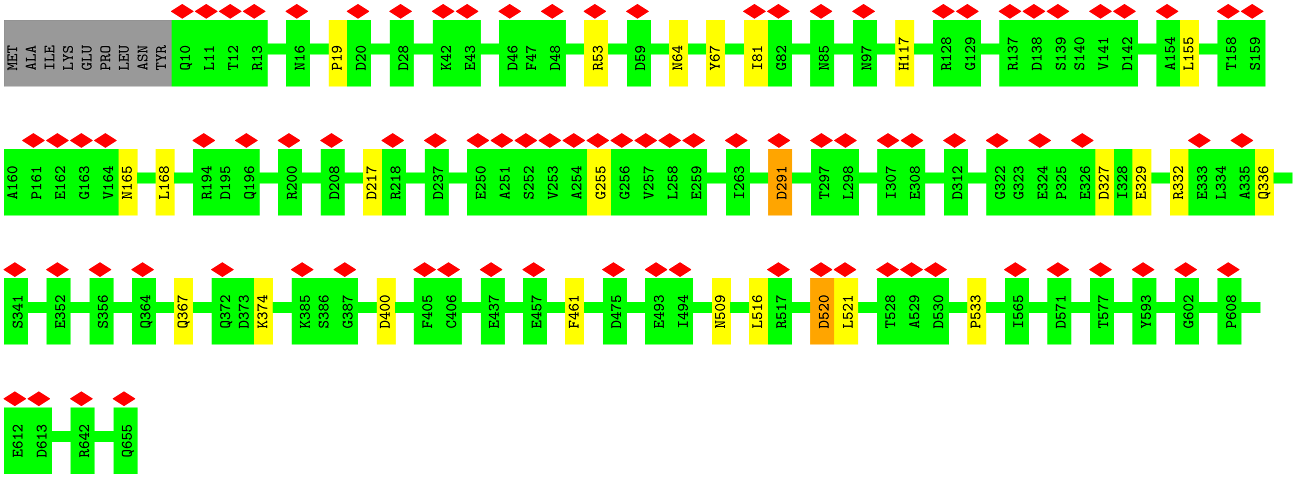




- Molecule 4: Baseplate wedge protein gp6

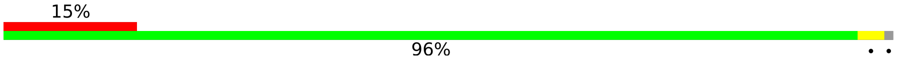
Chain AV:

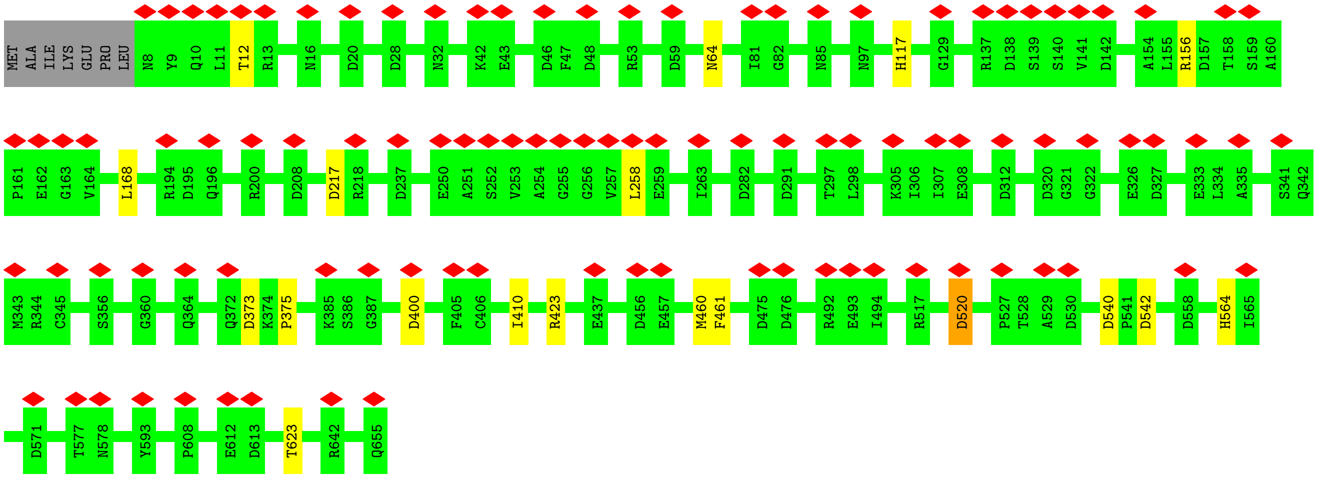




- Molecule 4: Baseplate wedge protein gp6

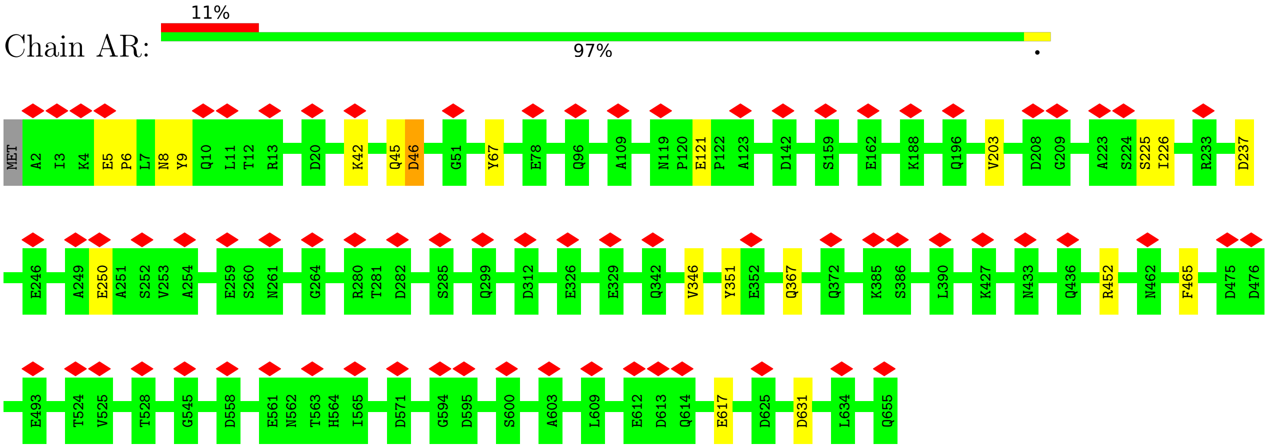
Chain AU:





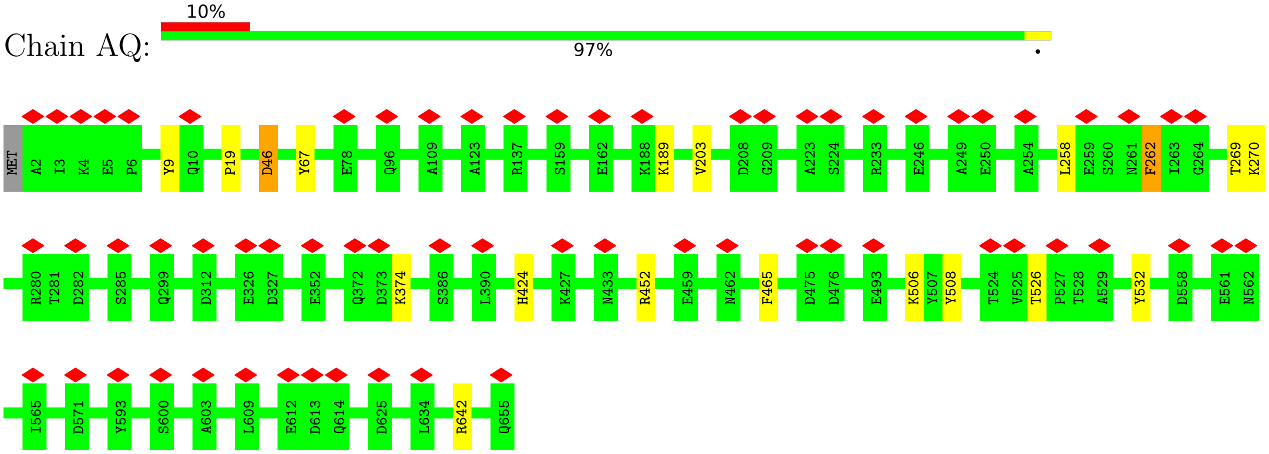
- Molecule 4: Baseplate wedge protein gp6

Chain AR:



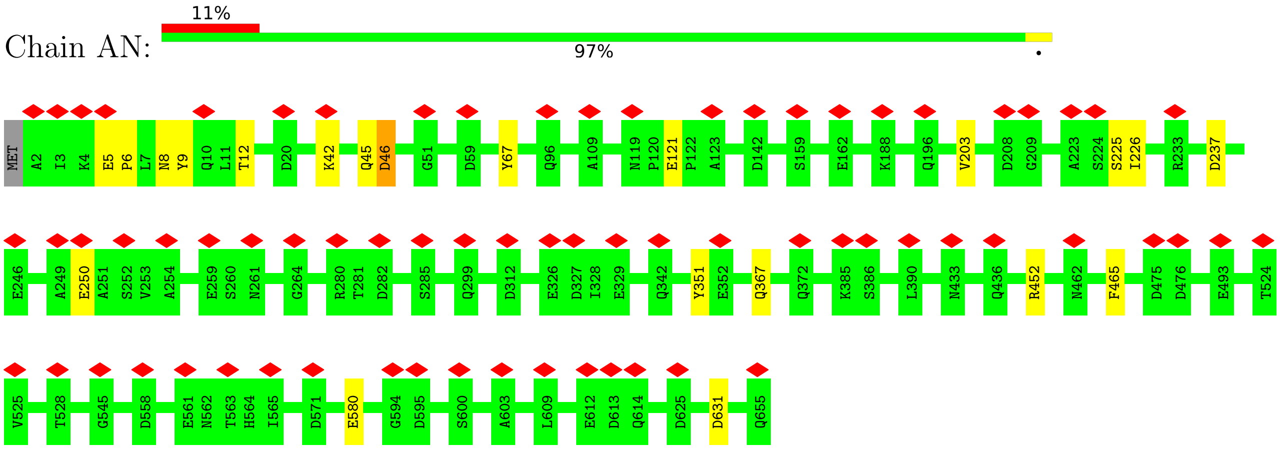
- Molecule 4: Baseplate wedge protein gp6

Chain AQ:



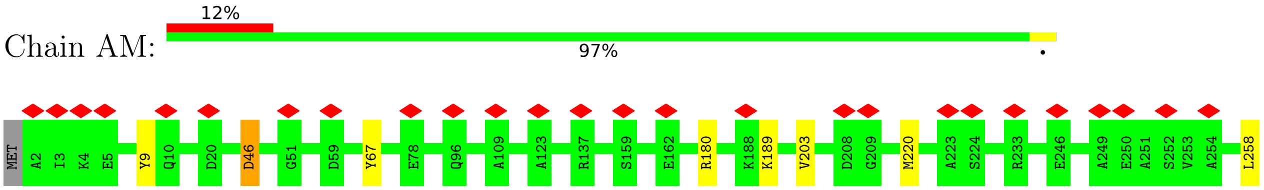
- Molecule 4: Baseplate wedge protein gp6

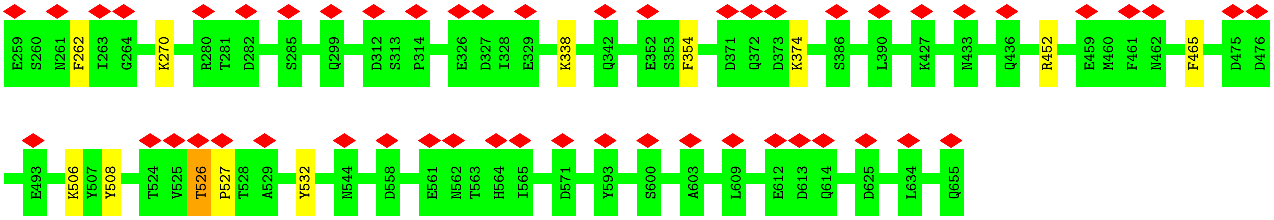
Chain AN:



- Molecule 4: Baseplate wedge protein gp6

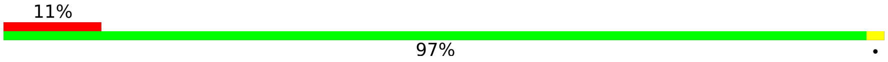
Chain AM:

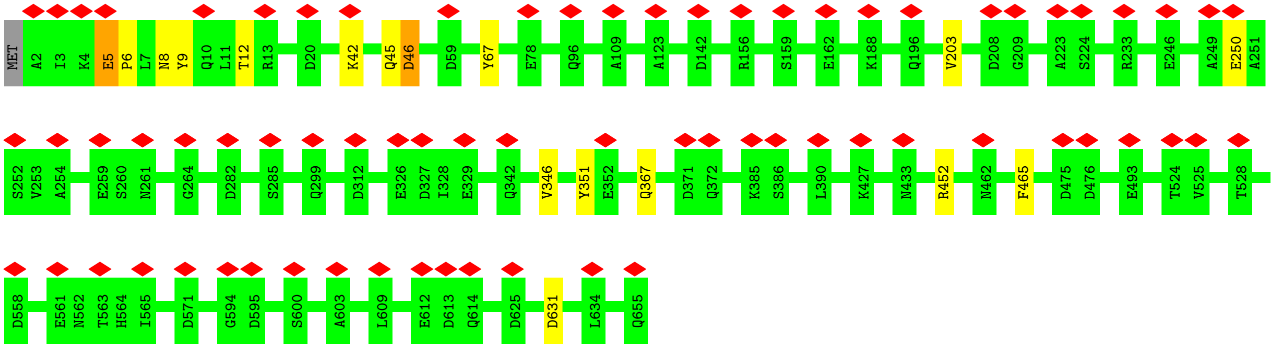




- Molecule 4: Baseplate wedge protein gp6

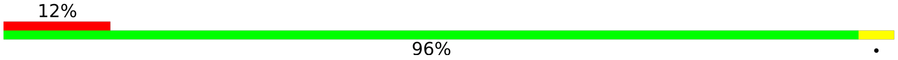
Chain AP:

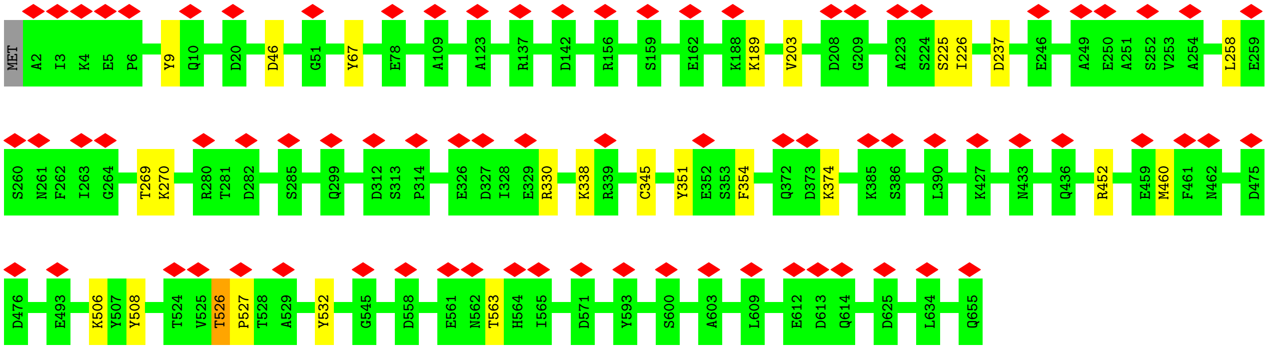




- Molecule 4: Baseplate wedge protein gp6

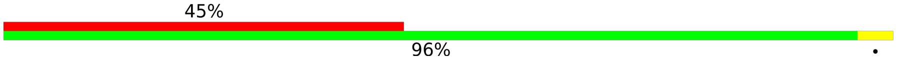
Chain AO:

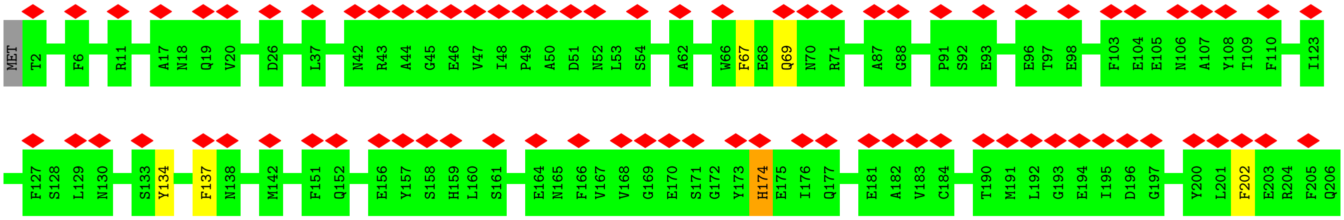


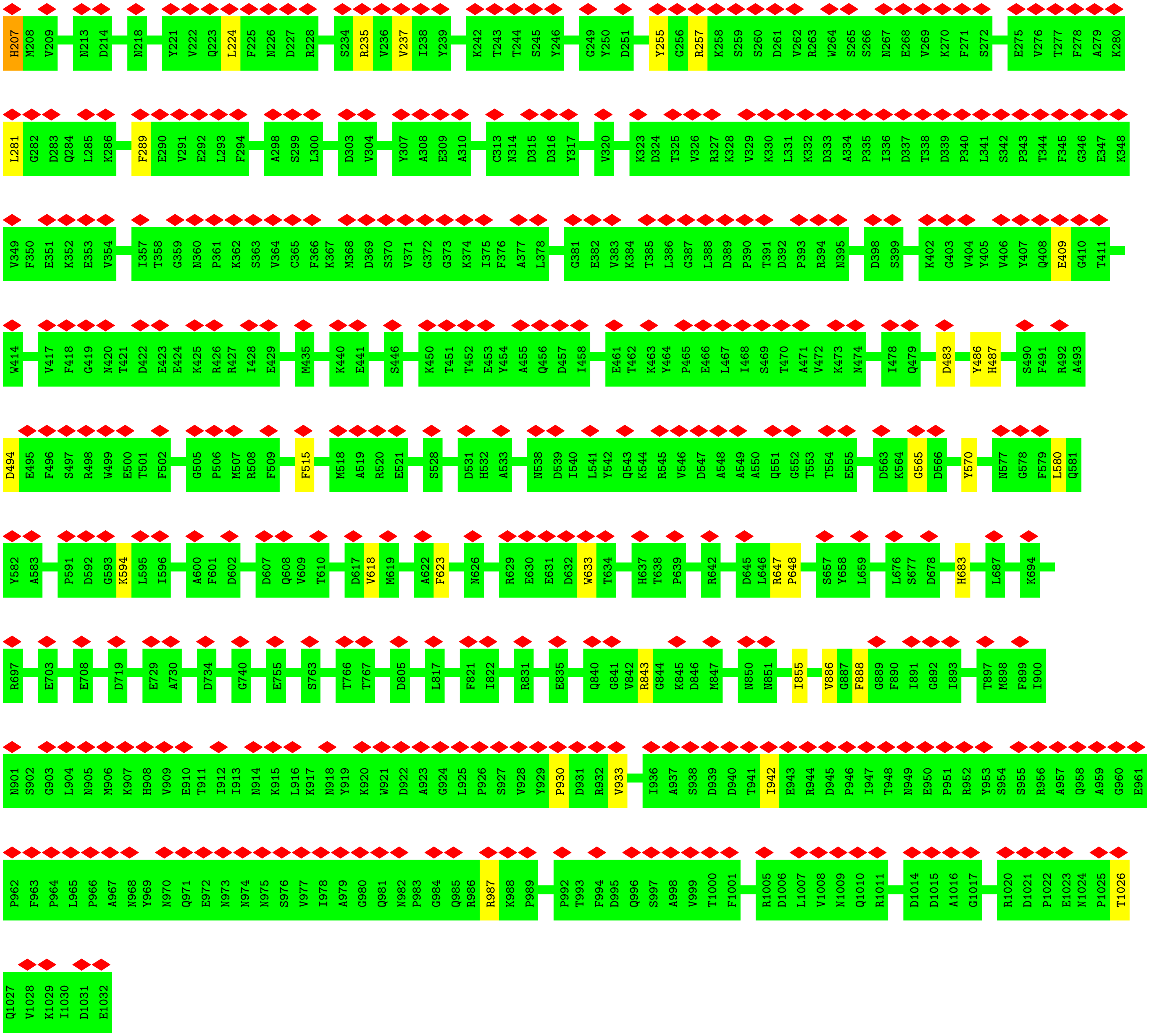


- Molecule 5: Baseplate wedge protein gp7

Chain AY:

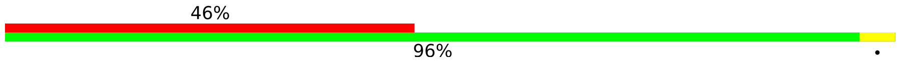


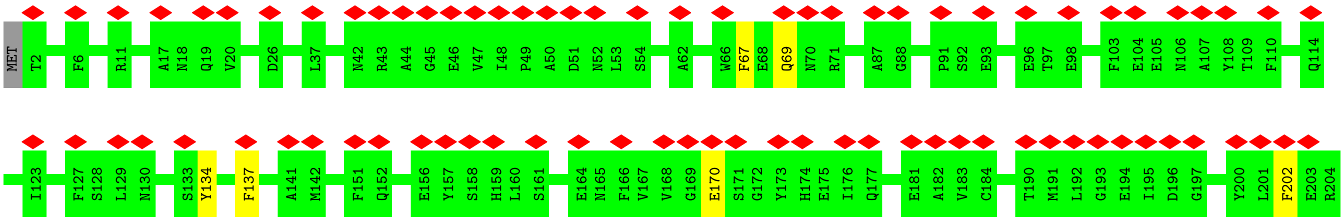


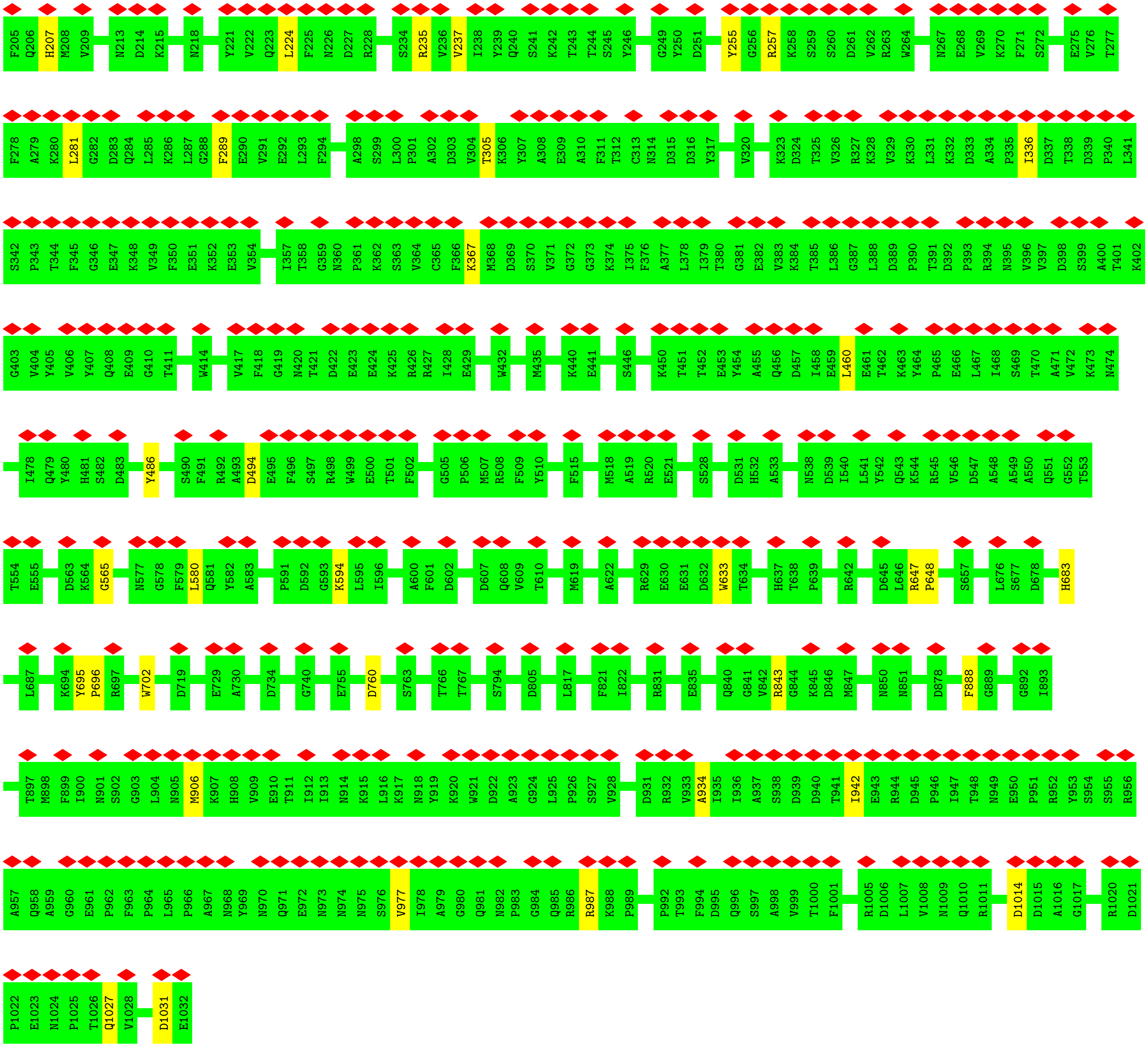


- Molecule 5: Baseplate wedge protein gp7

Chain AZ:

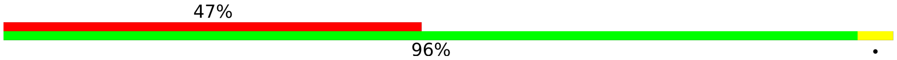


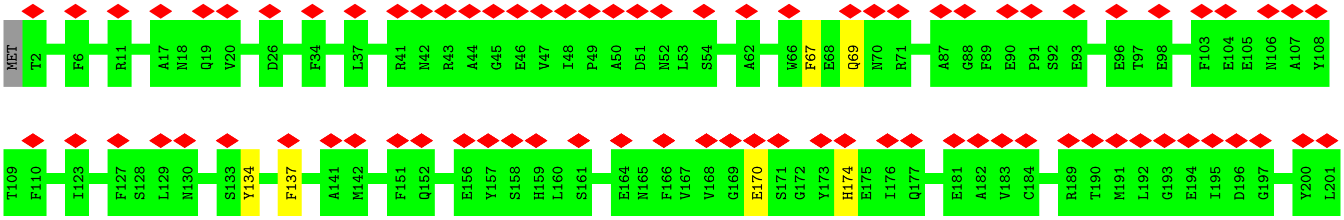


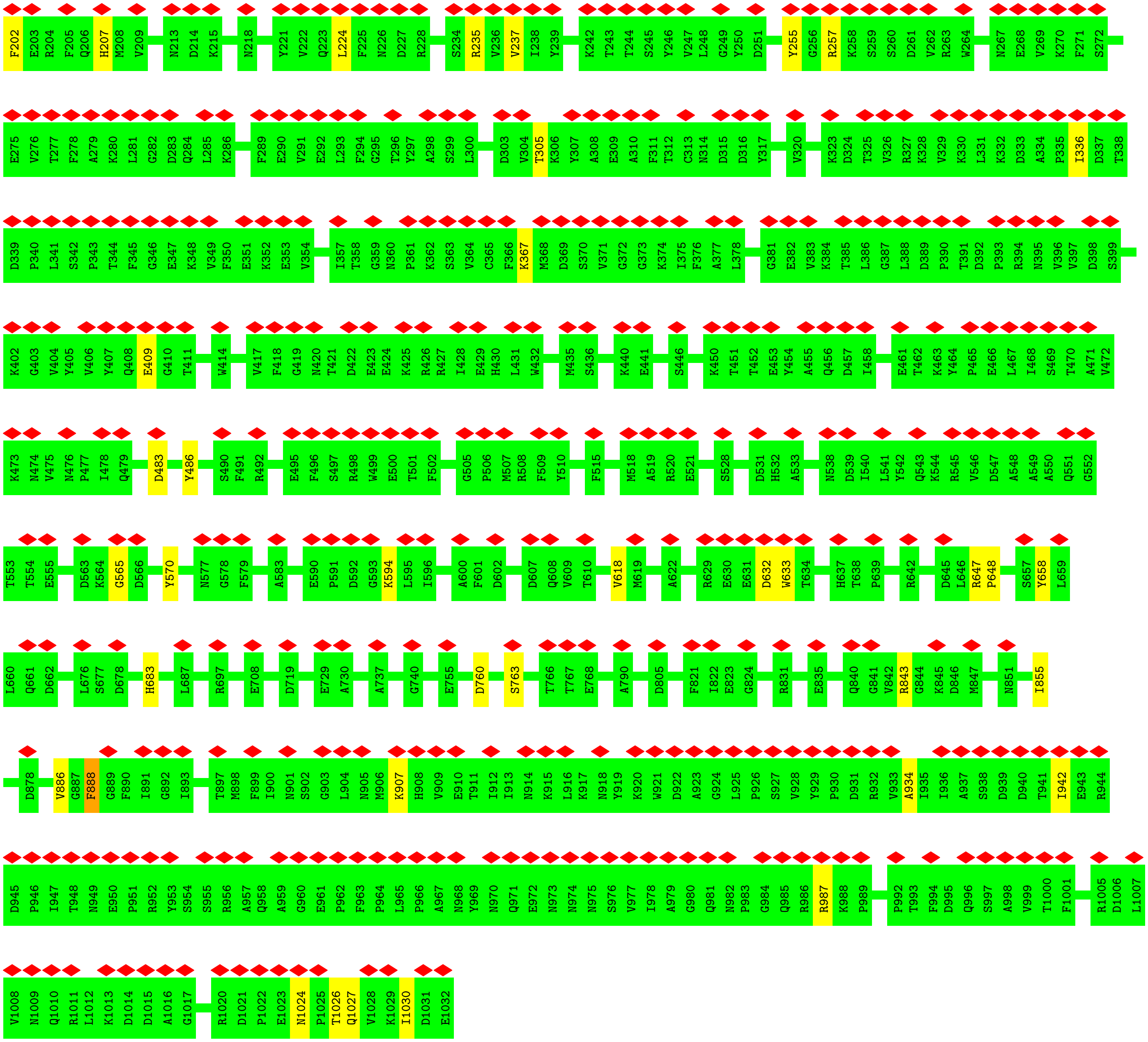


- Molecule 5: Baseplate wedge protein gp7

Chain A0:

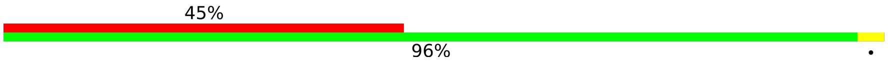


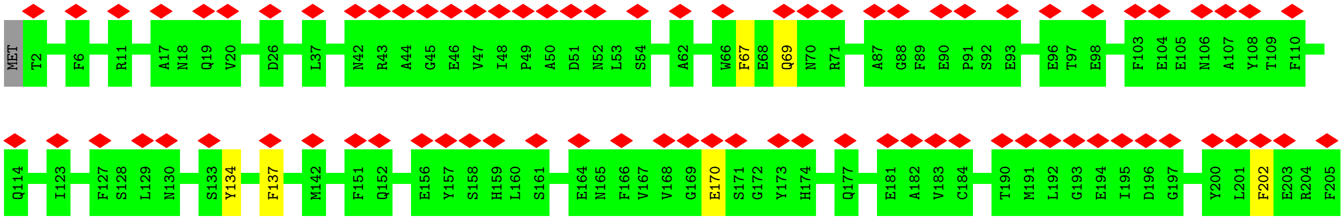


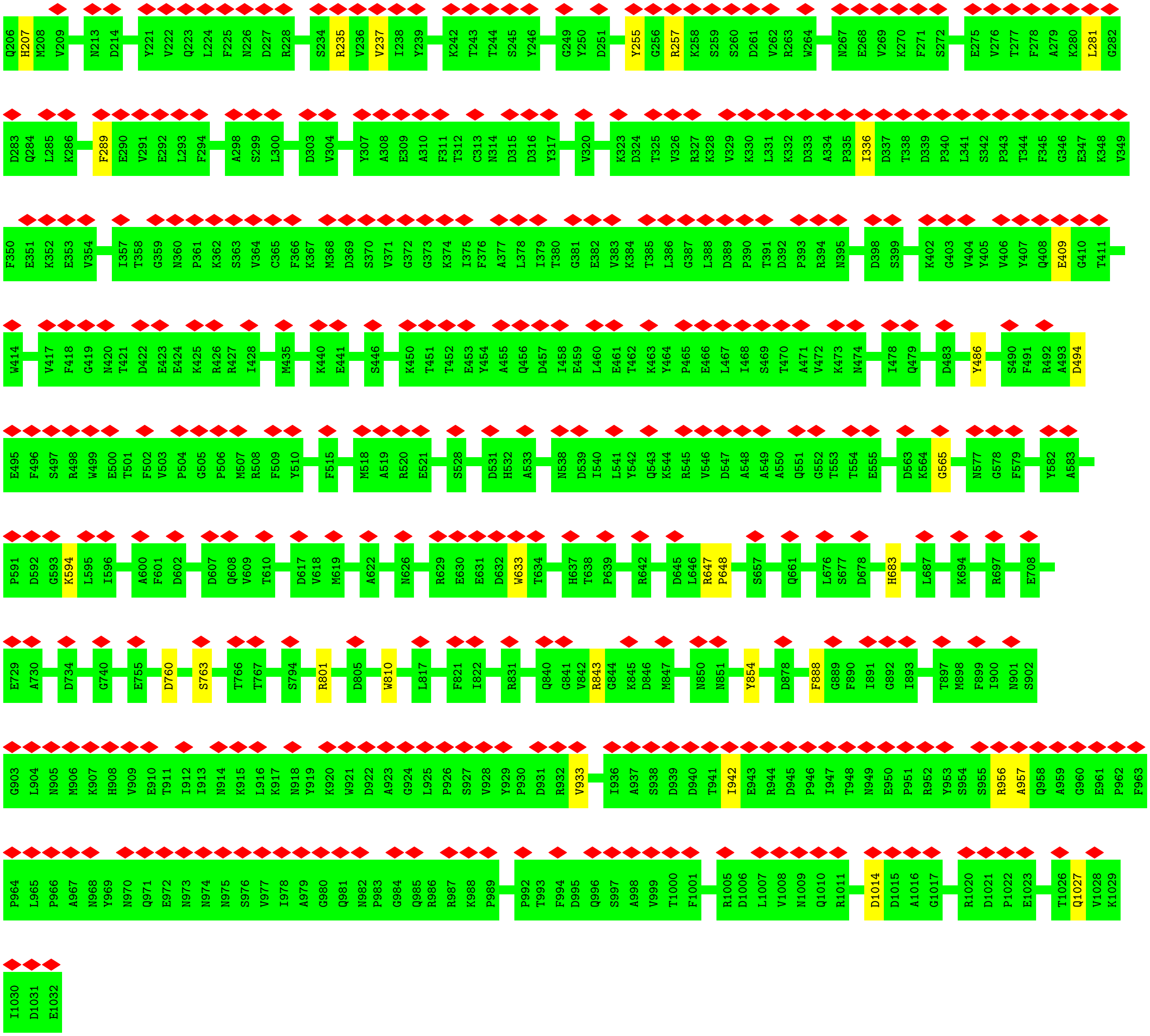


- Molecule 5: Baseplate wedge protein gp7

Chain A1:

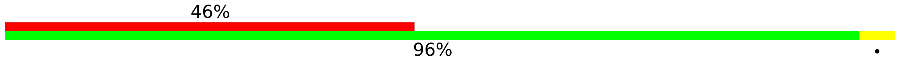


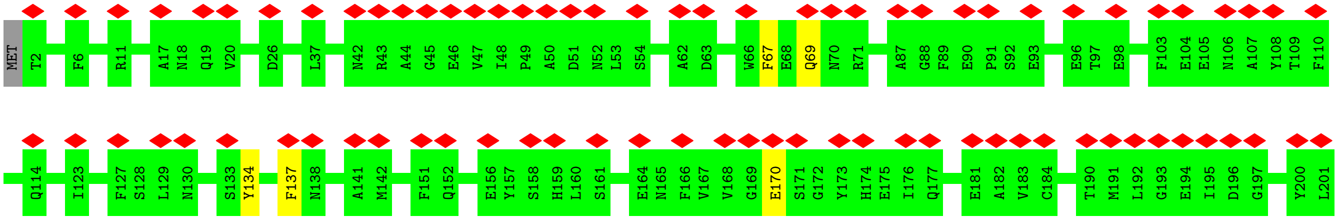


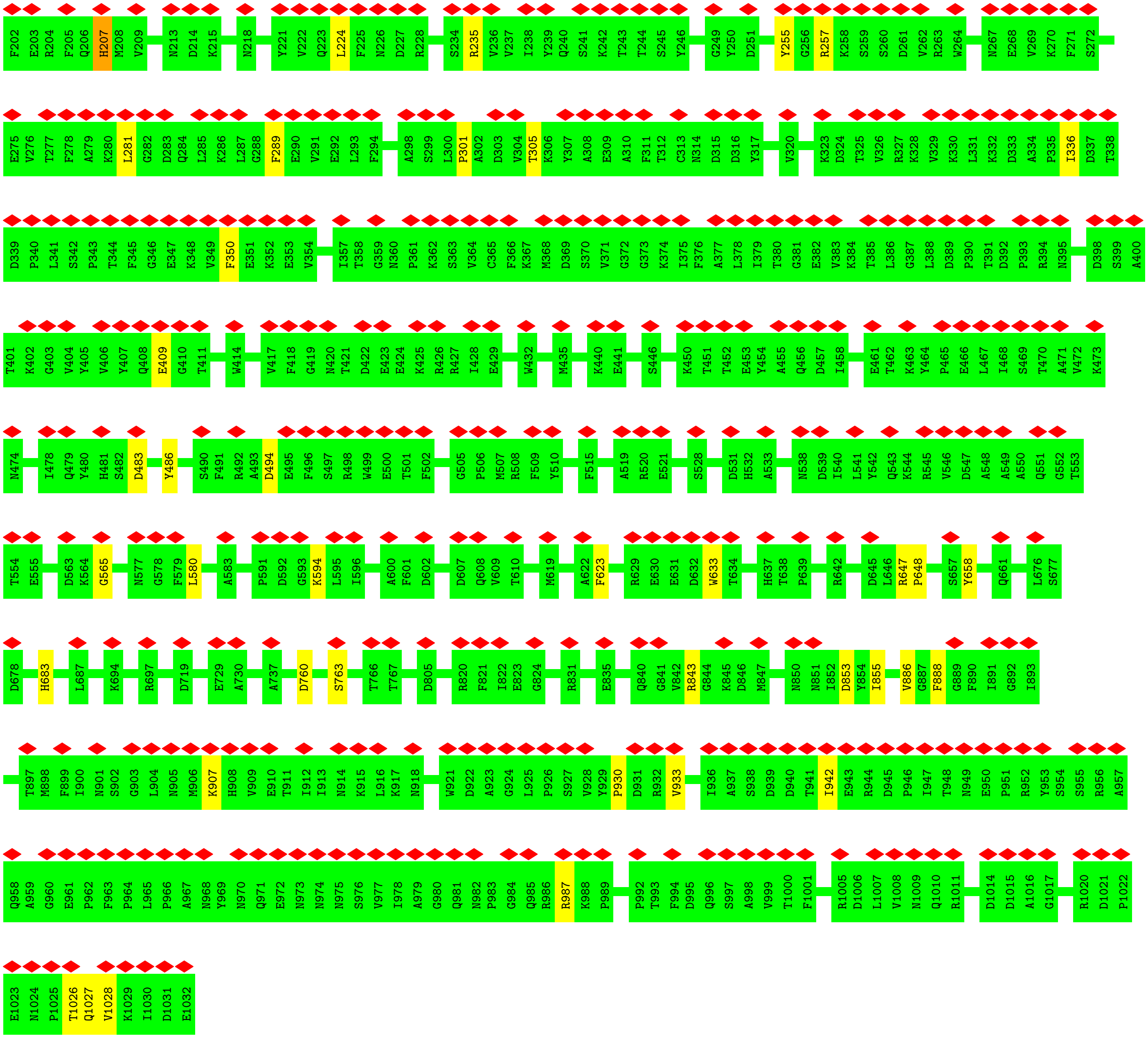


- Molecule 5: Baseplate wedge protein gp7

Chain A2:

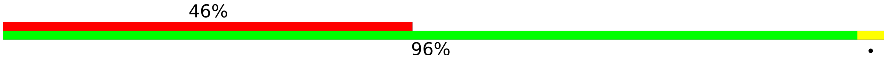


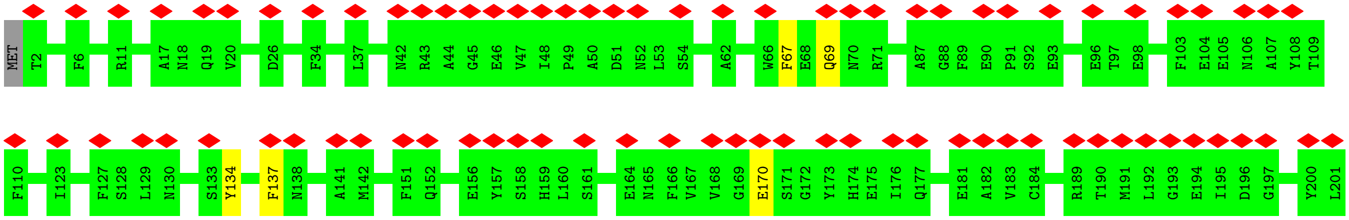


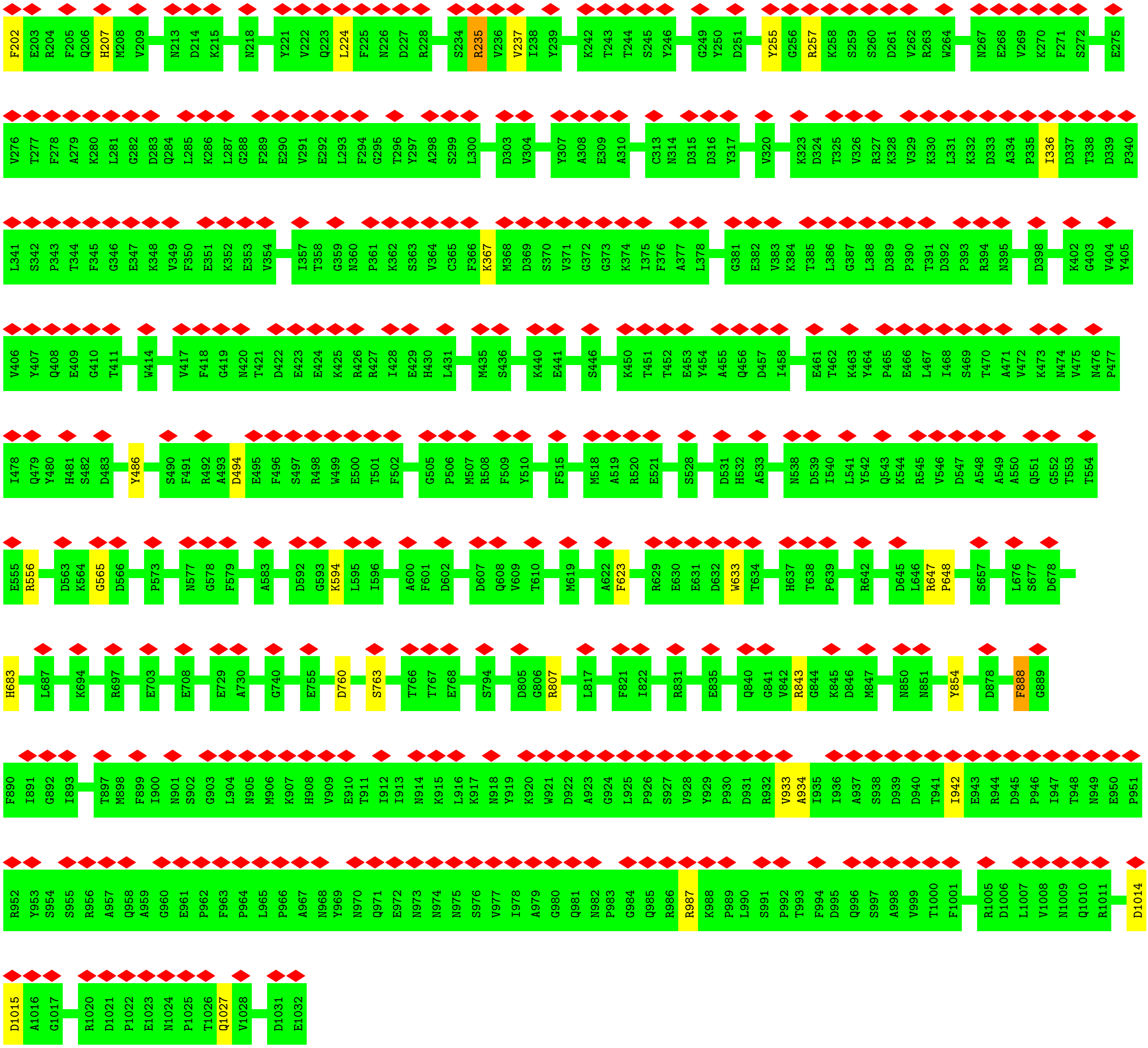


- Molecule 5: Baseplate wedge protein gp7

Chain A3:

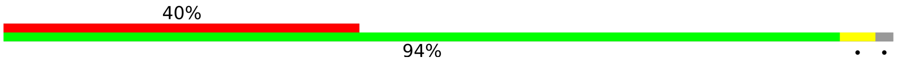


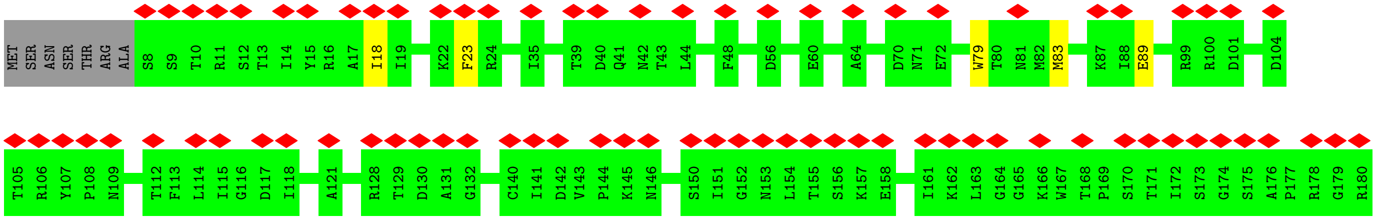


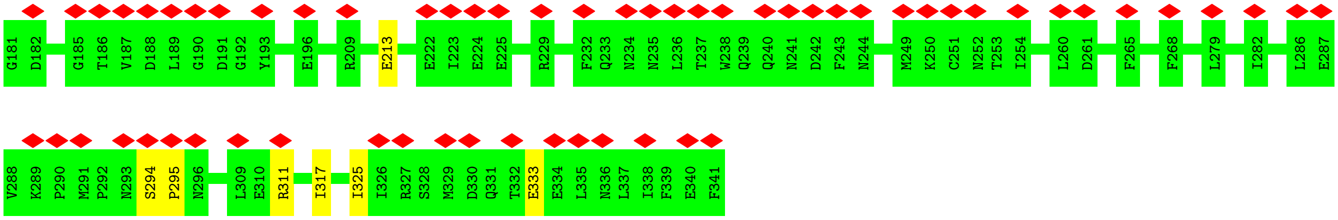


- Molecule 6: Baseplate wedge subunit

Chain A4:

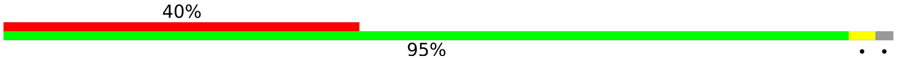


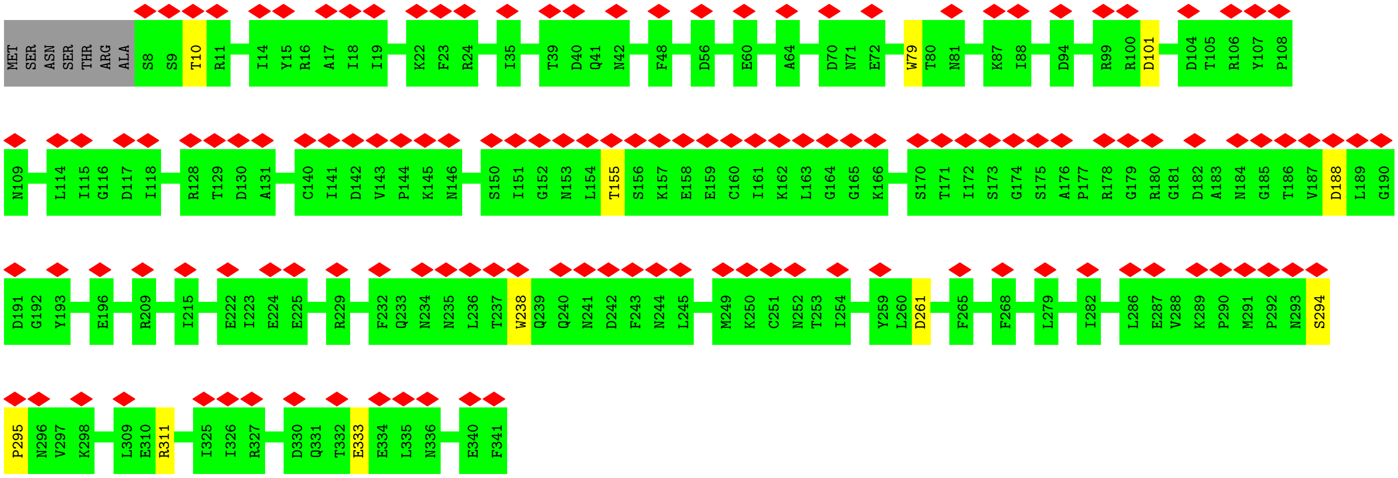




- Molecule 6: Baseplate wedge subunit

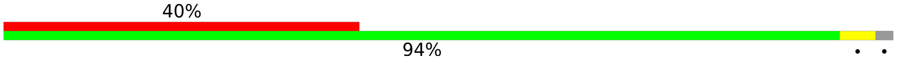
Chain A9:

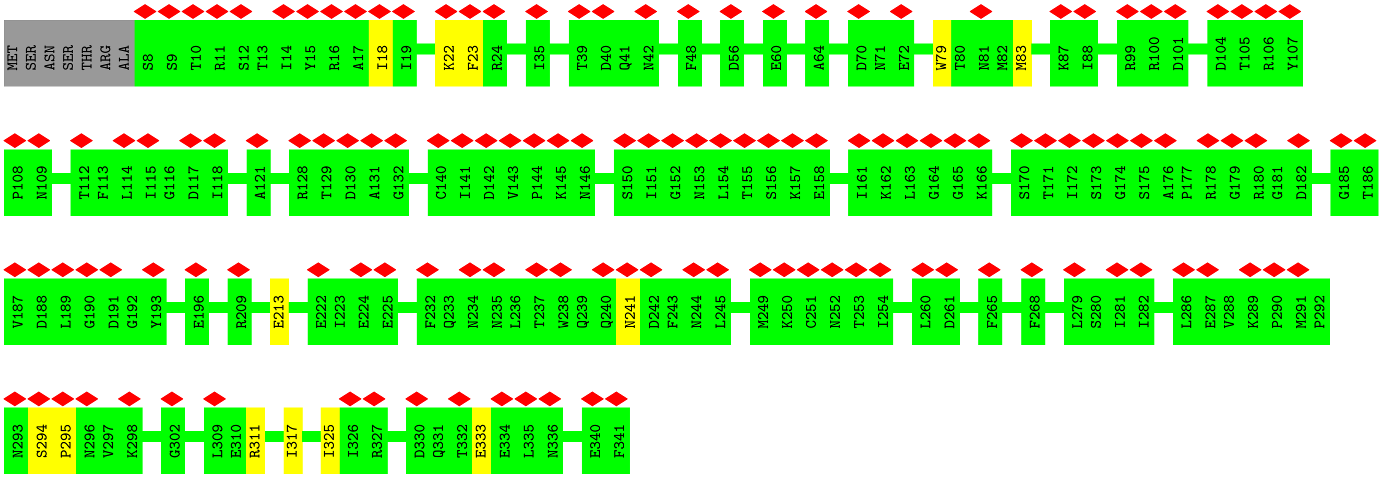




- Molecule 6: Baseplate wedge subunit

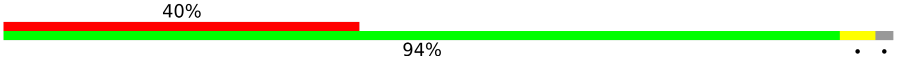
Chain A6:

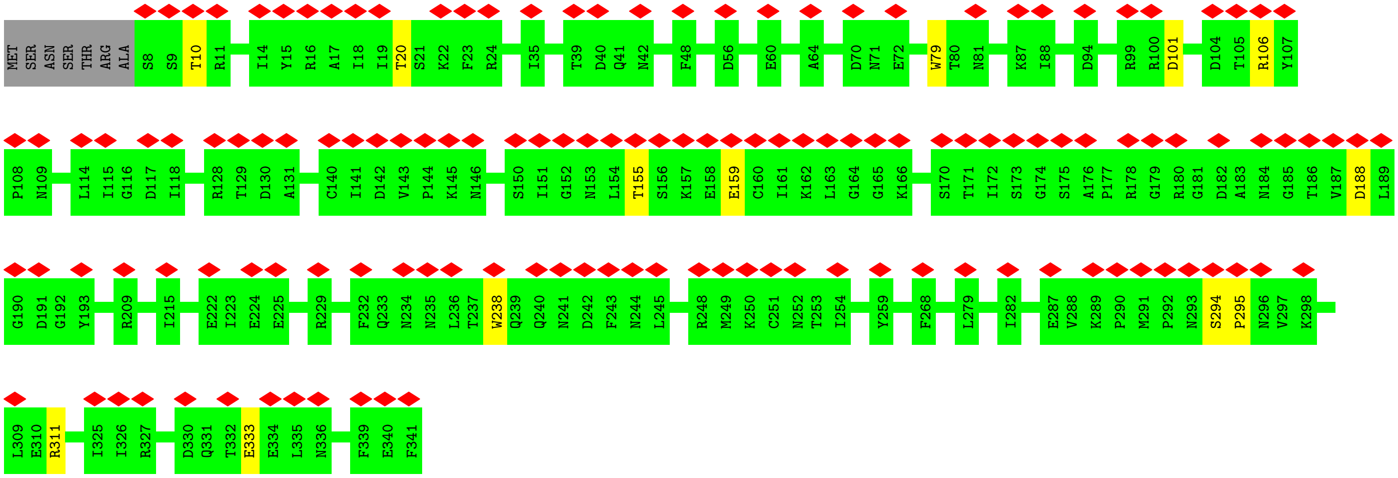




- Molecule 6: Baseplate wedge subunit

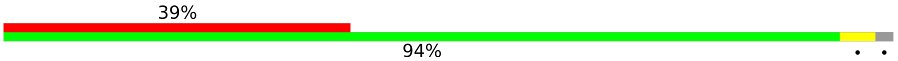
Chain A5:

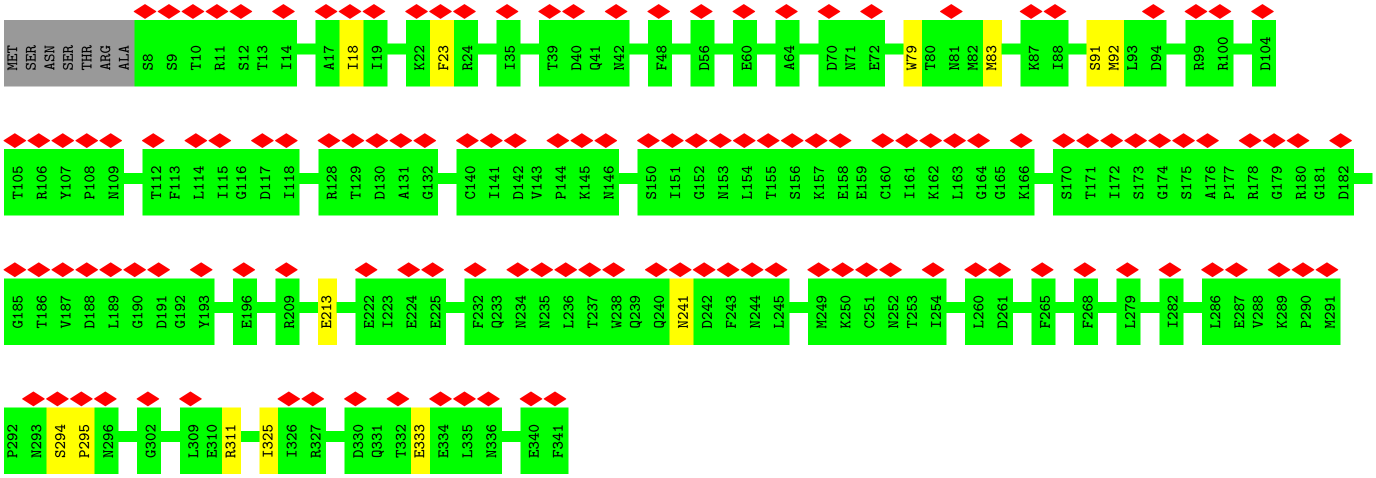




- Molecule 6: Baseplate wedge subunit

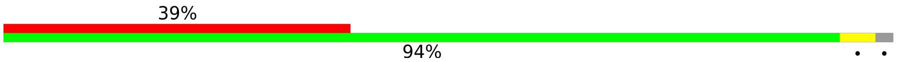
Chain A8:

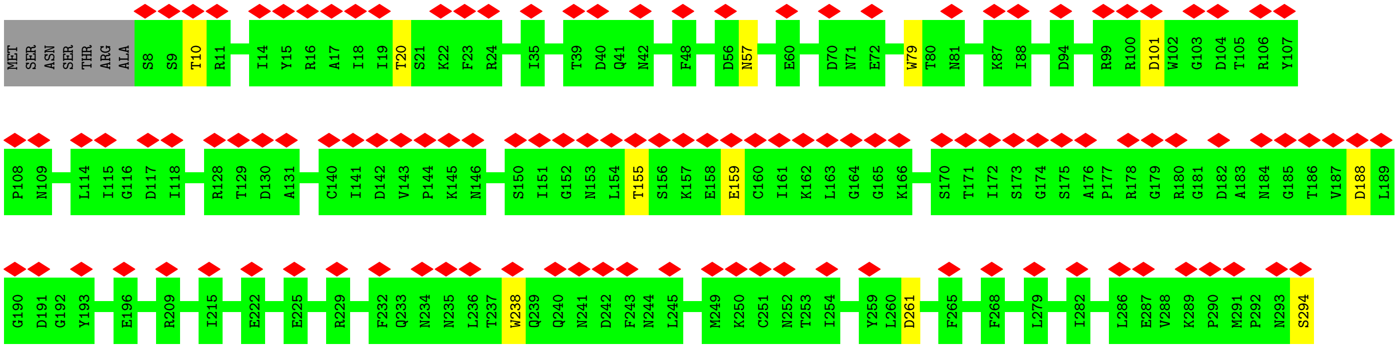


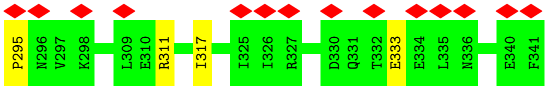


- Molecule 6: Baseplate wedge subunit

Chain A7:

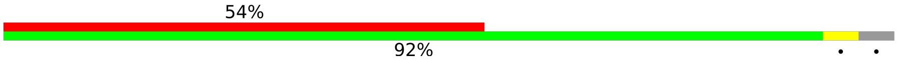


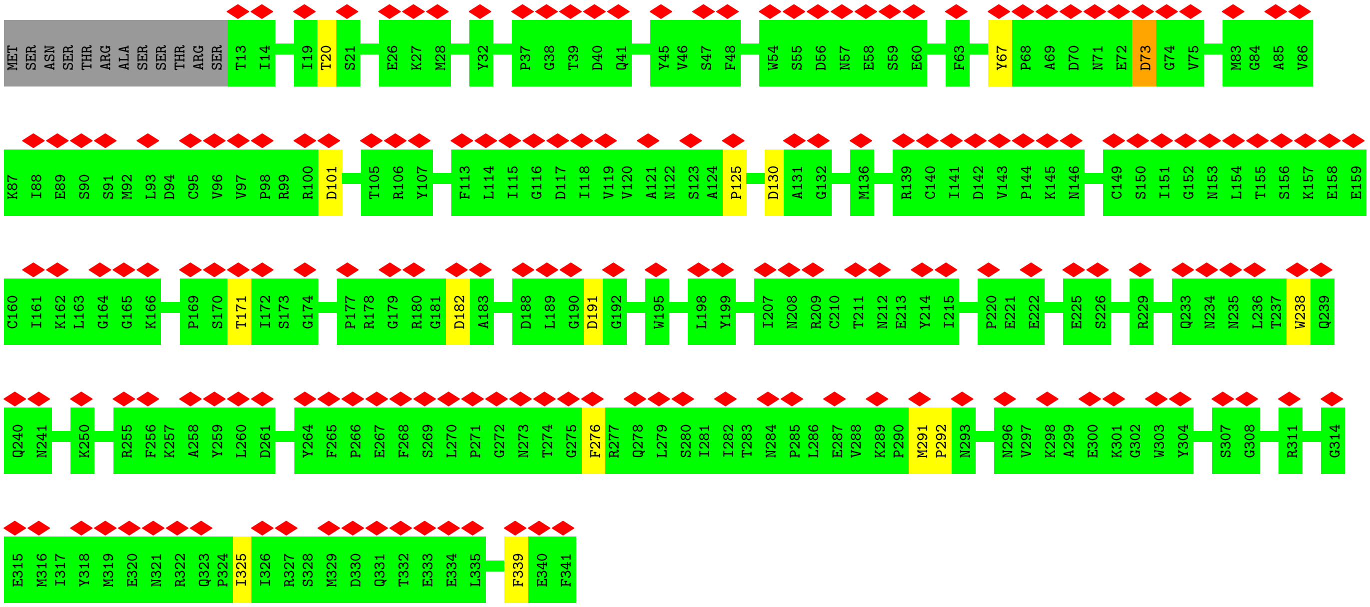




- Molecule 6: Baseplate wedge subunit

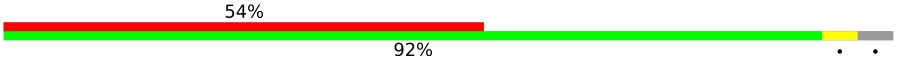
Chain Ad:

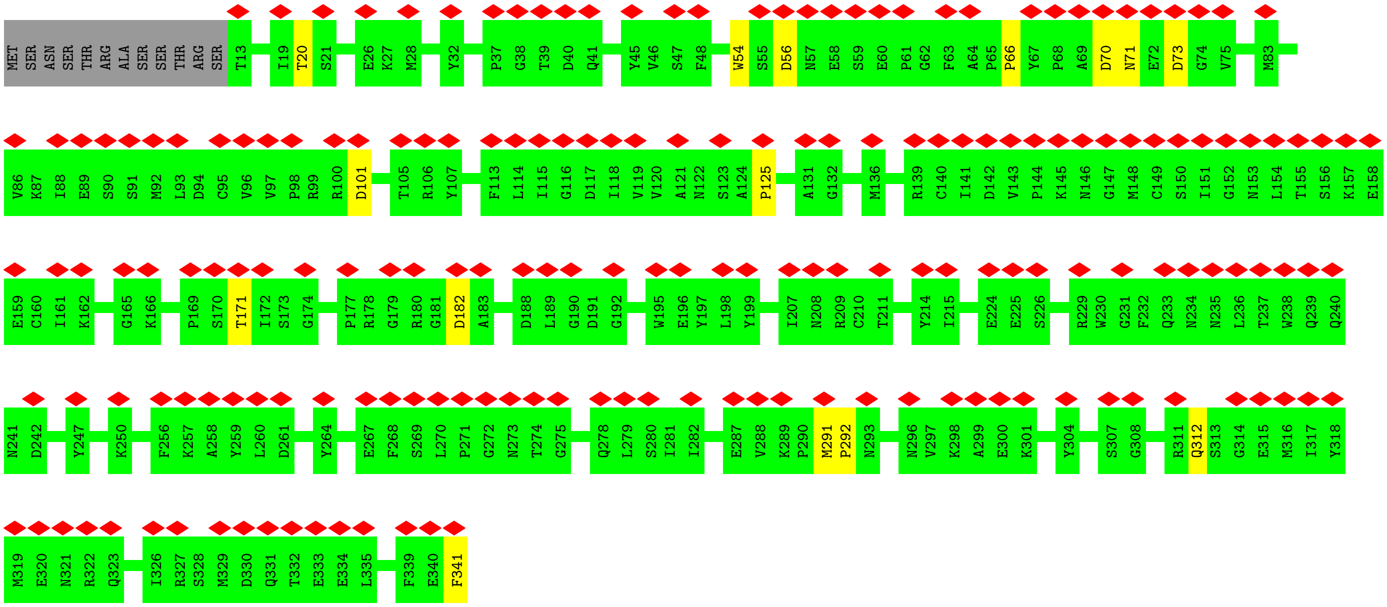




- Molecule 6: Baseplate wedge subunit

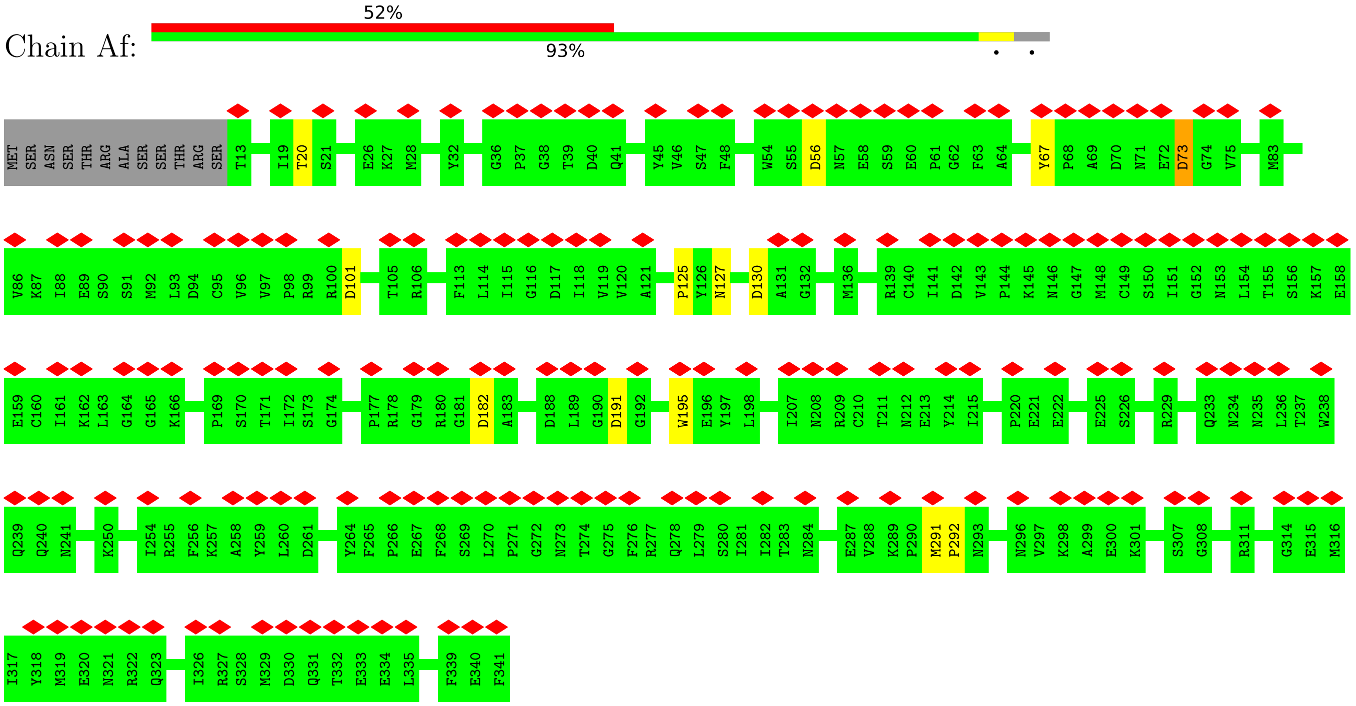
Chain Ac:





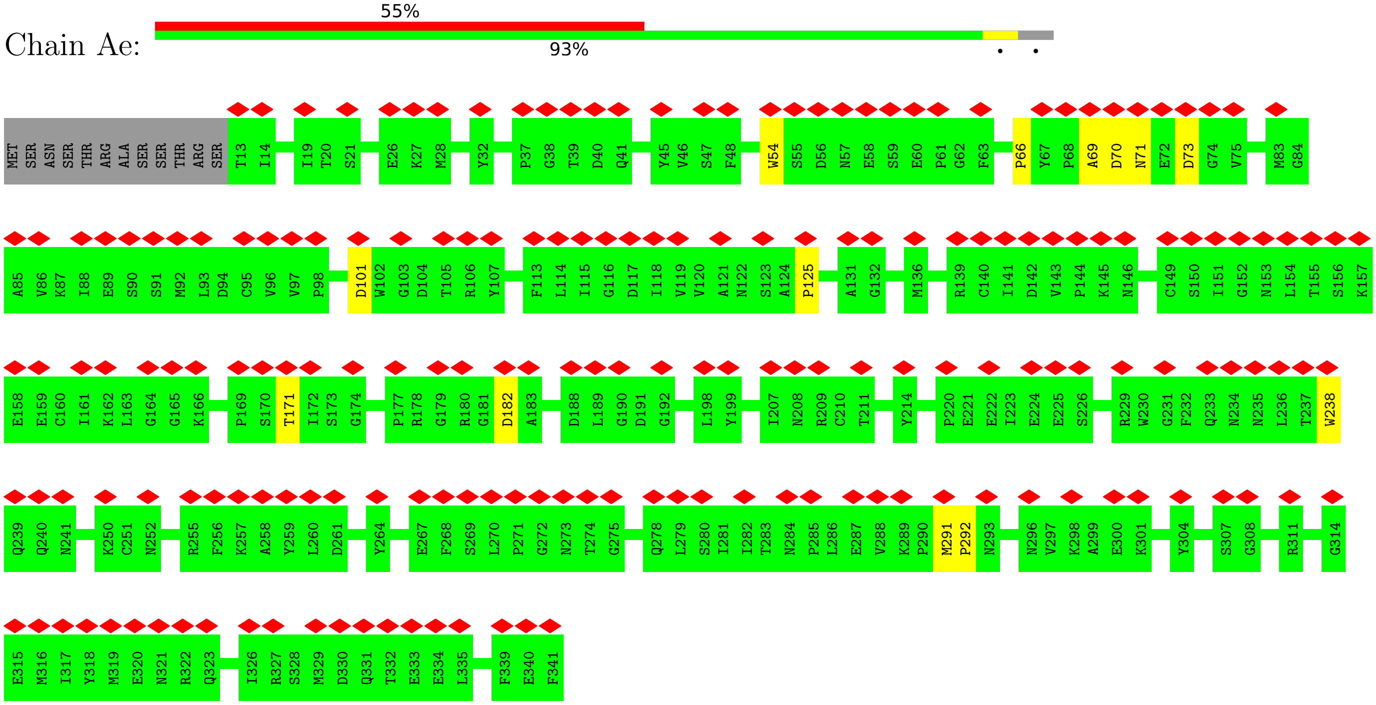
- Molecule 6: Baseplate wedge subunit

Chain Af:



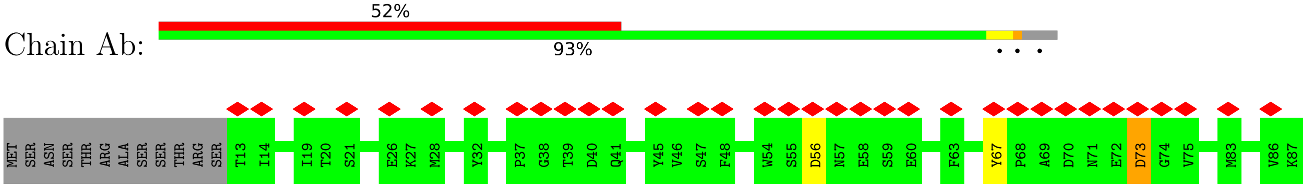
- Molecule 6: Baseplate wedge subunit

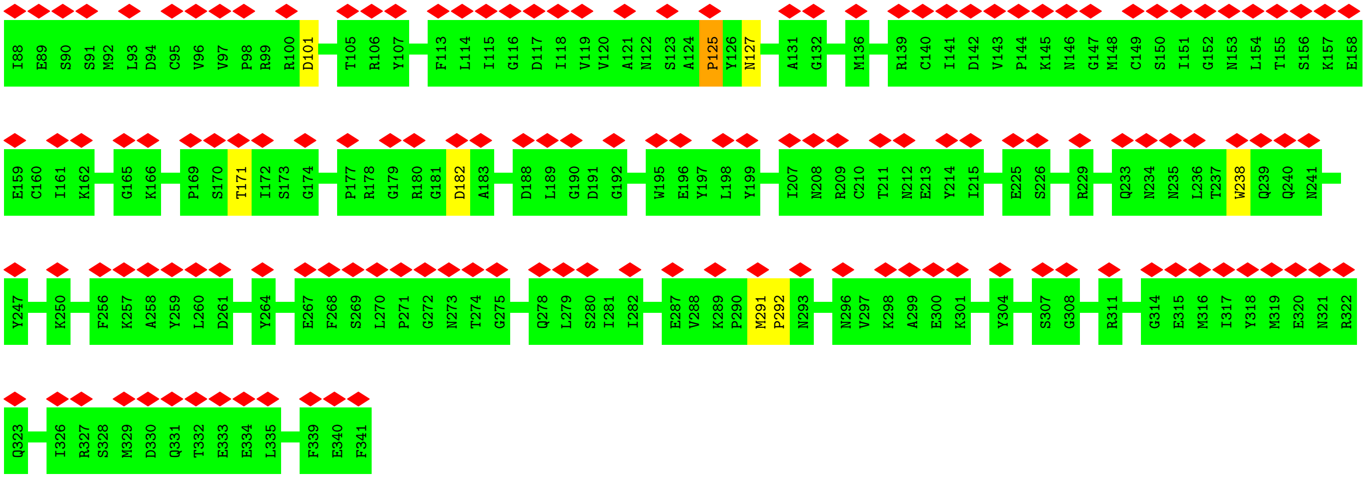
Chain Ae:



- Molecule 6: Baseplate wedge subunit

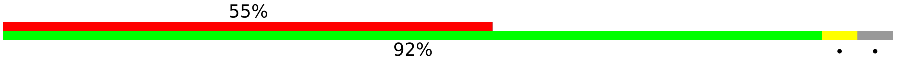
Chain Ab:

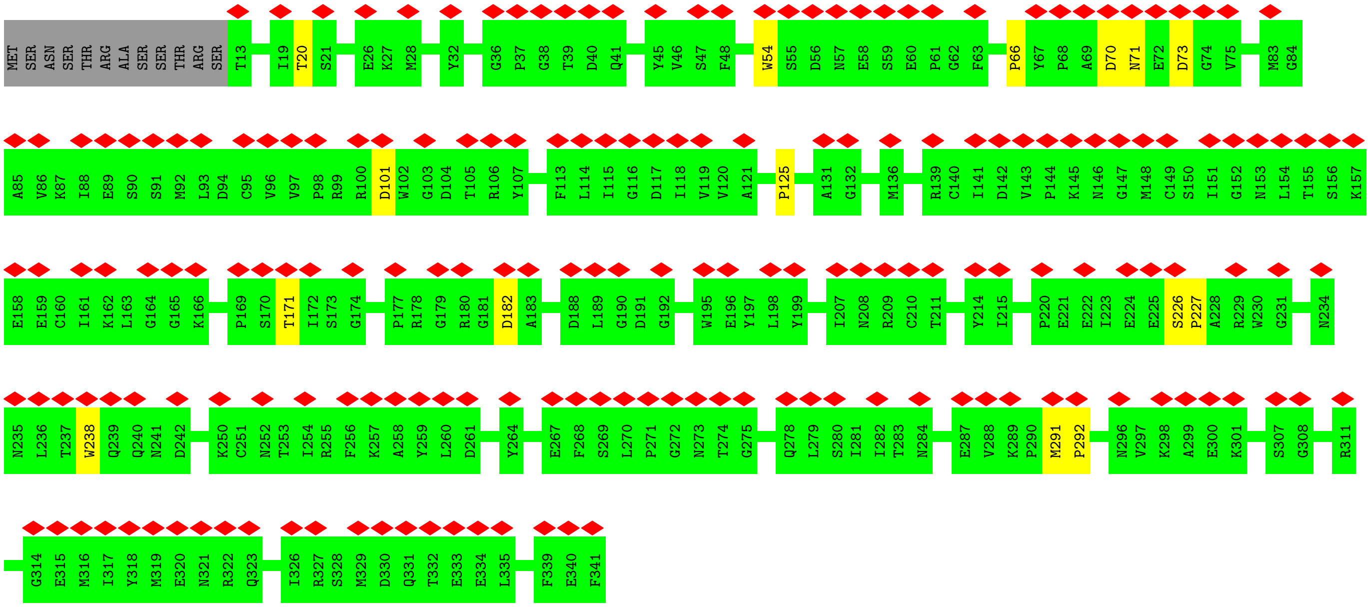




- Molecule 6: Baseplate wedge subunit

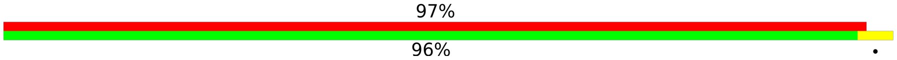
Chain Aa:

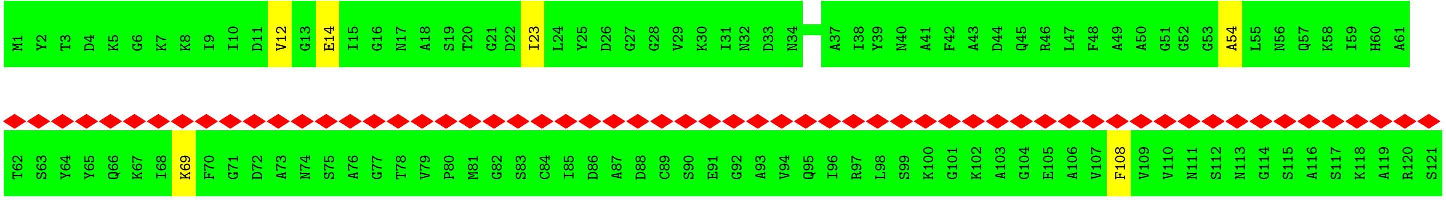


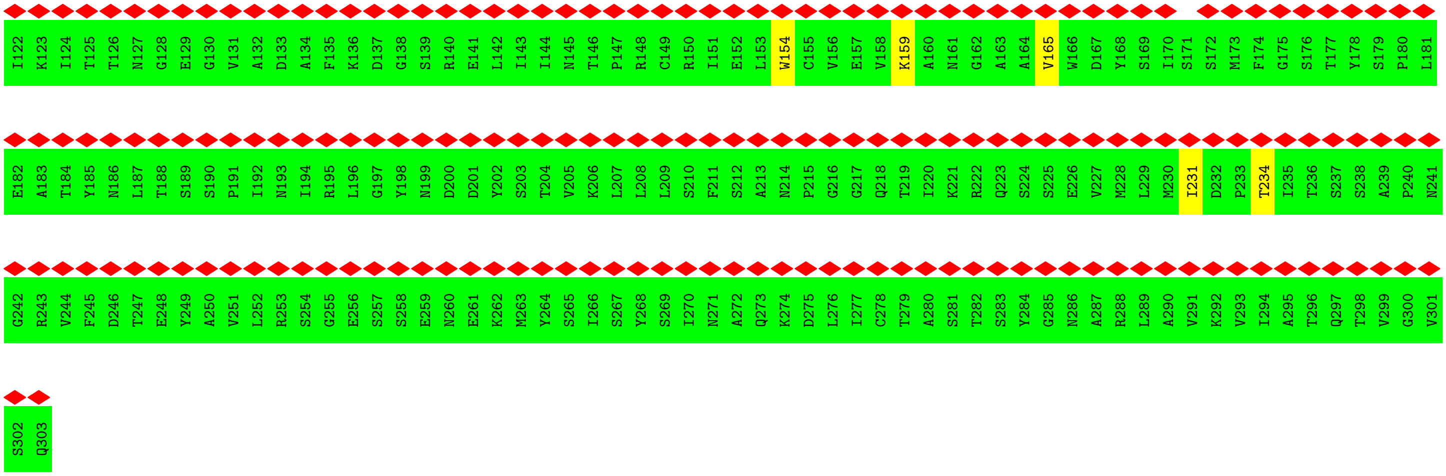


- Molecule 7: Baseplate wedge tail fiber connector

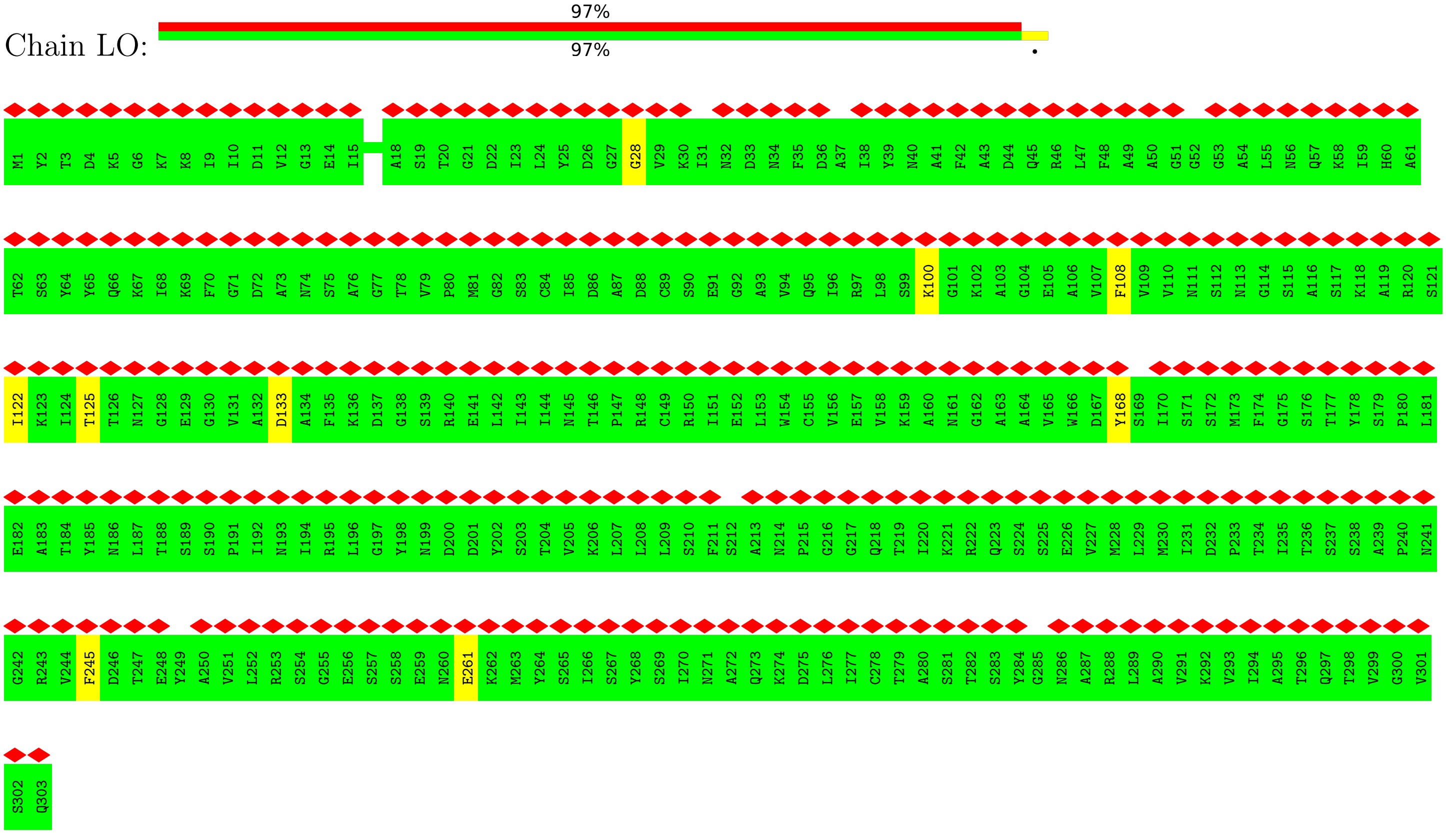
Chain LN:



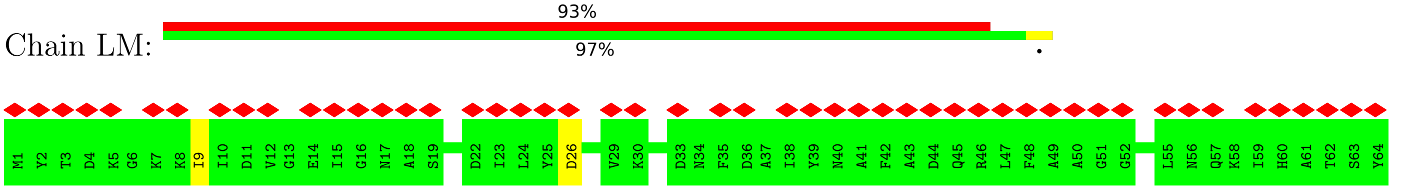


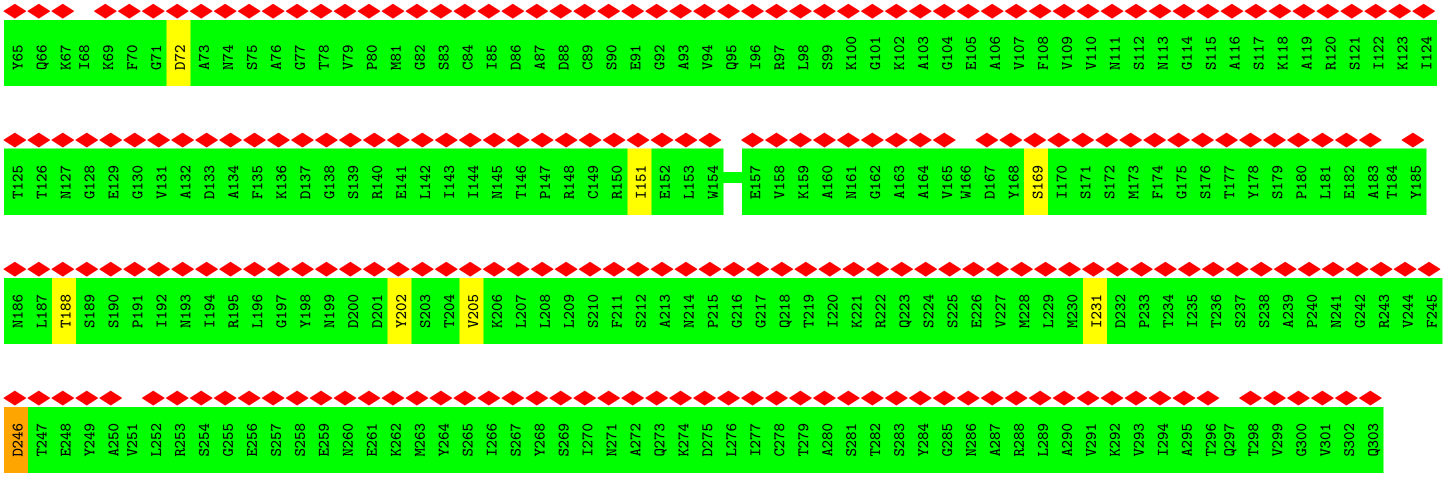


- Molecule 7: Baseplate wedge tail fiber connector



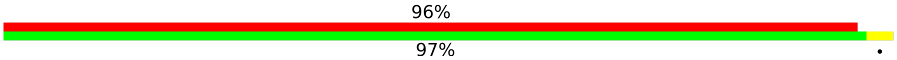
- Molecule 7: Baseplate wedge tail fiber connector

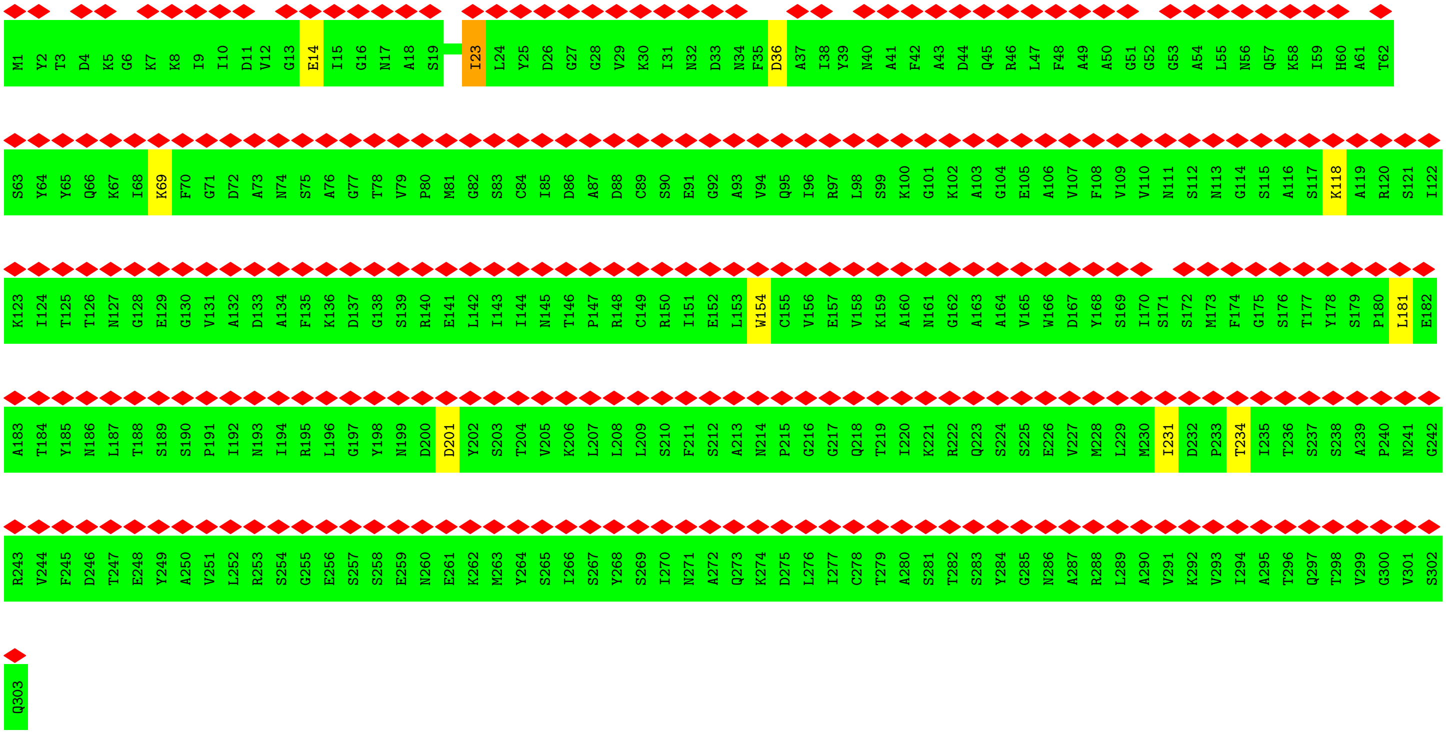




- Molecule 7: Baseplate wedge tail fiber connector

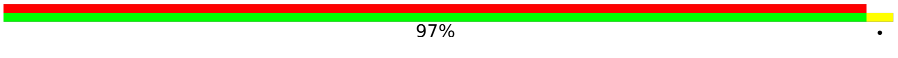
Chain LQ:

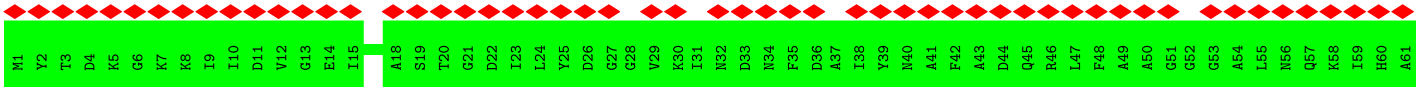




- Molecule 7: Baseplate wedge tail fiber connector

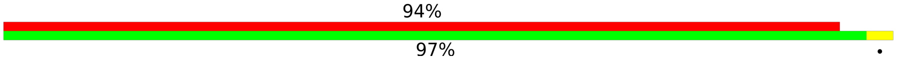
Chain LR:

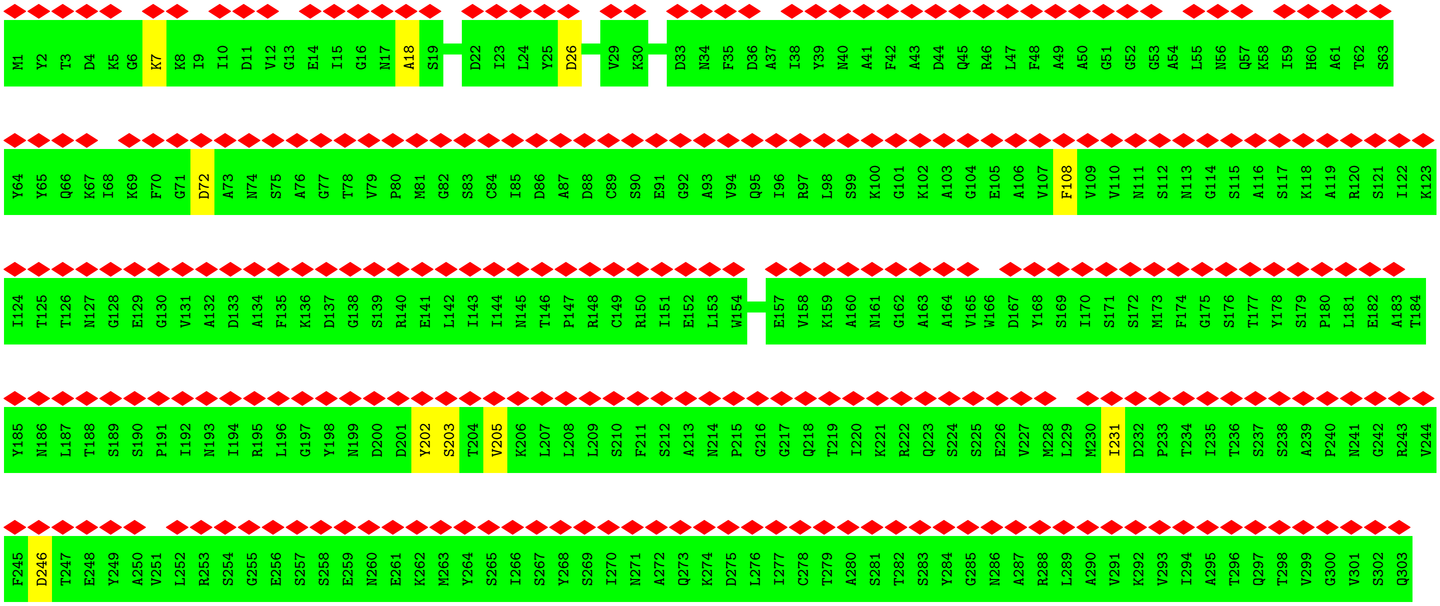




• Molecule 7: Baseplate wedge tail fiber connector

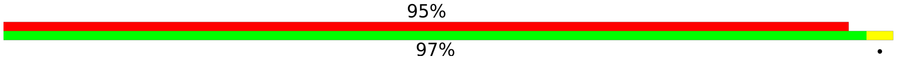
Chain LP:

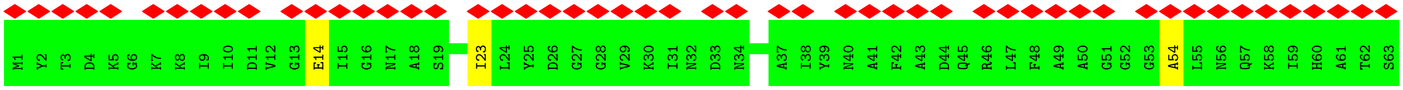


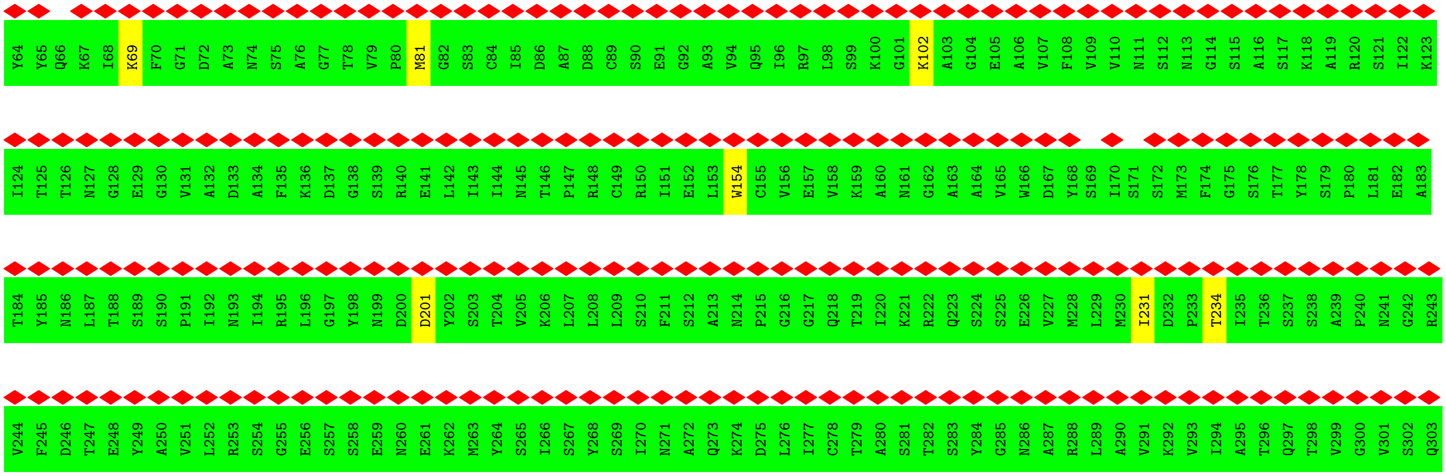


• Molecule 7: Baseplate wedge tail fiber connector

Chain LB:

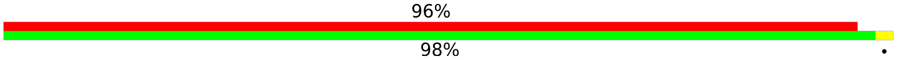


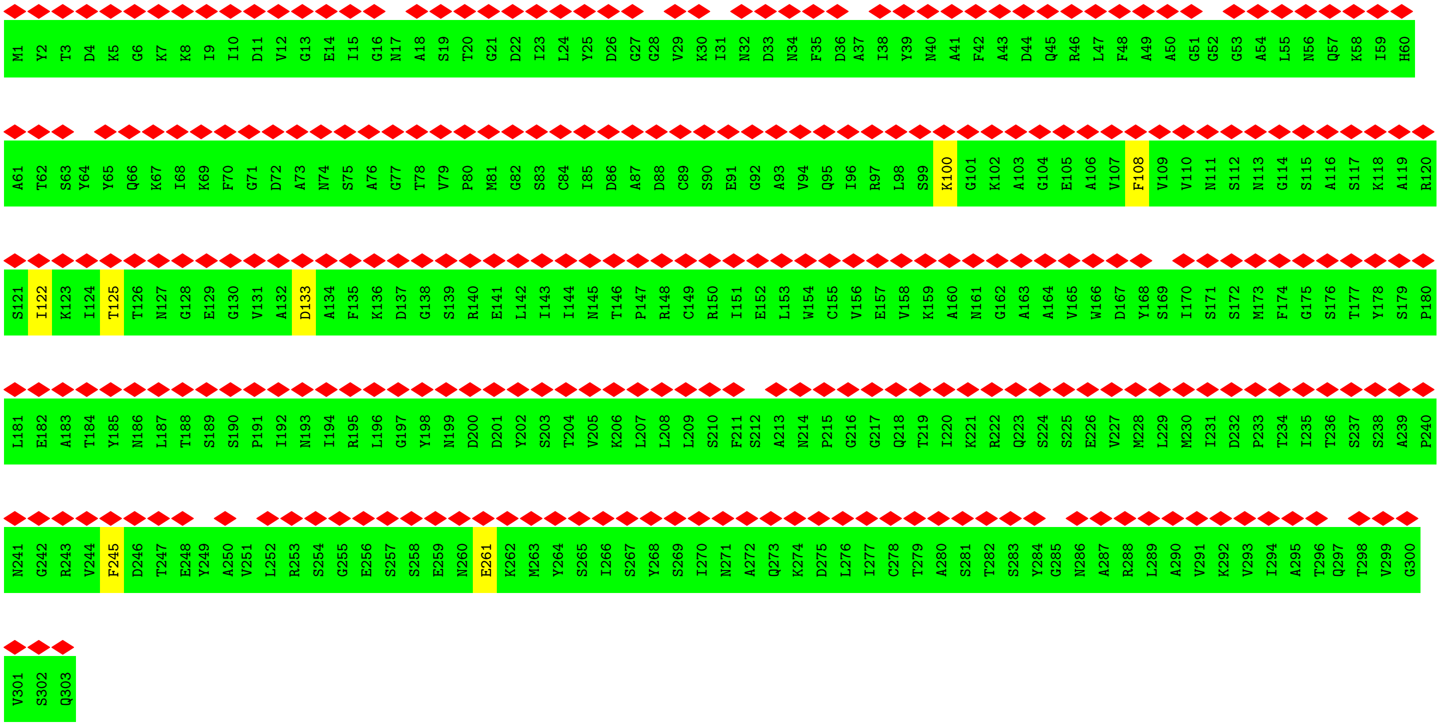




- Molecule 7: Baseplate wedge tail fiber connector

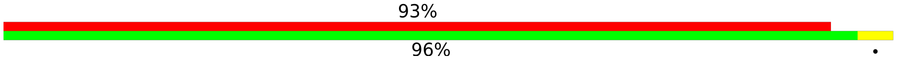
Chain LC:

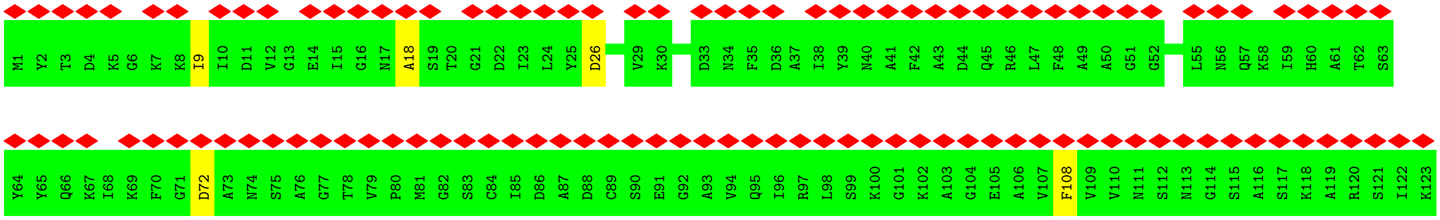


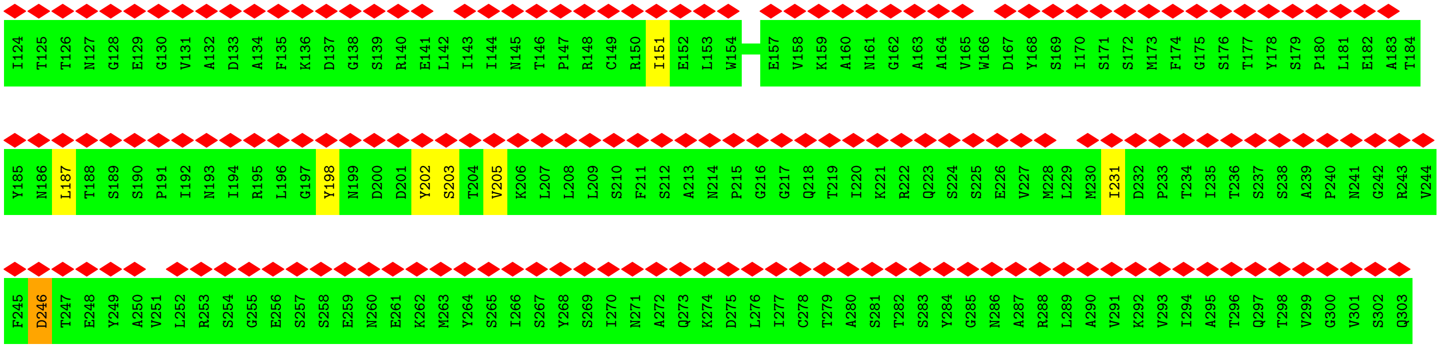


- Molecule 7: Baseplate wedge tail fiber connector

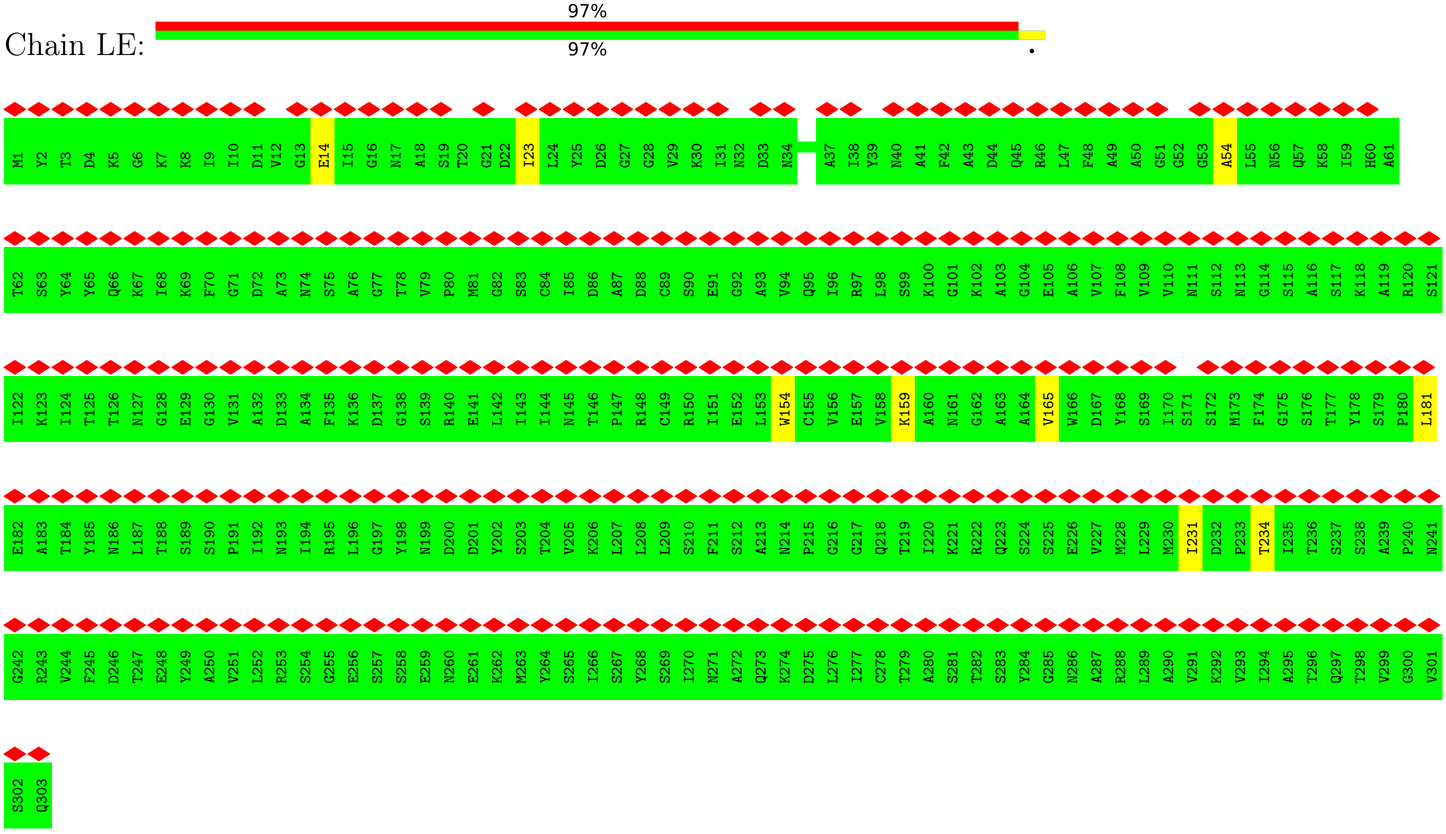
Chain LA:



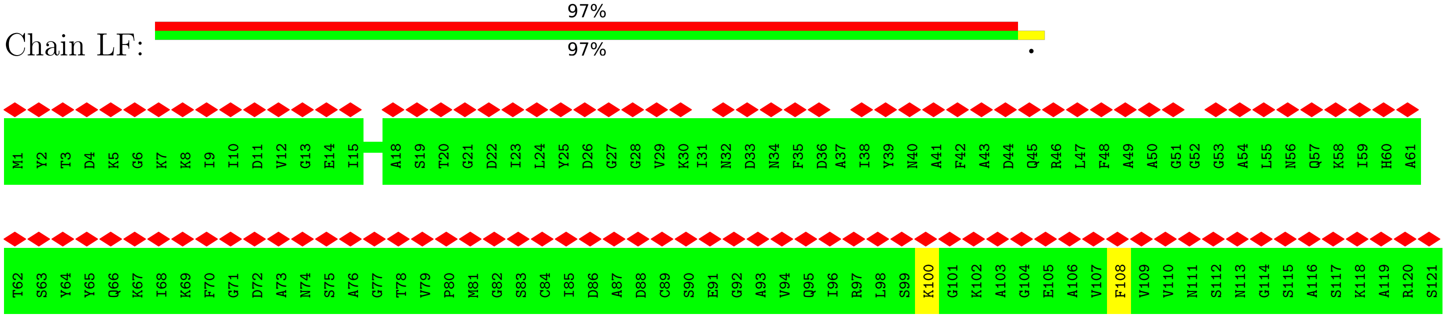


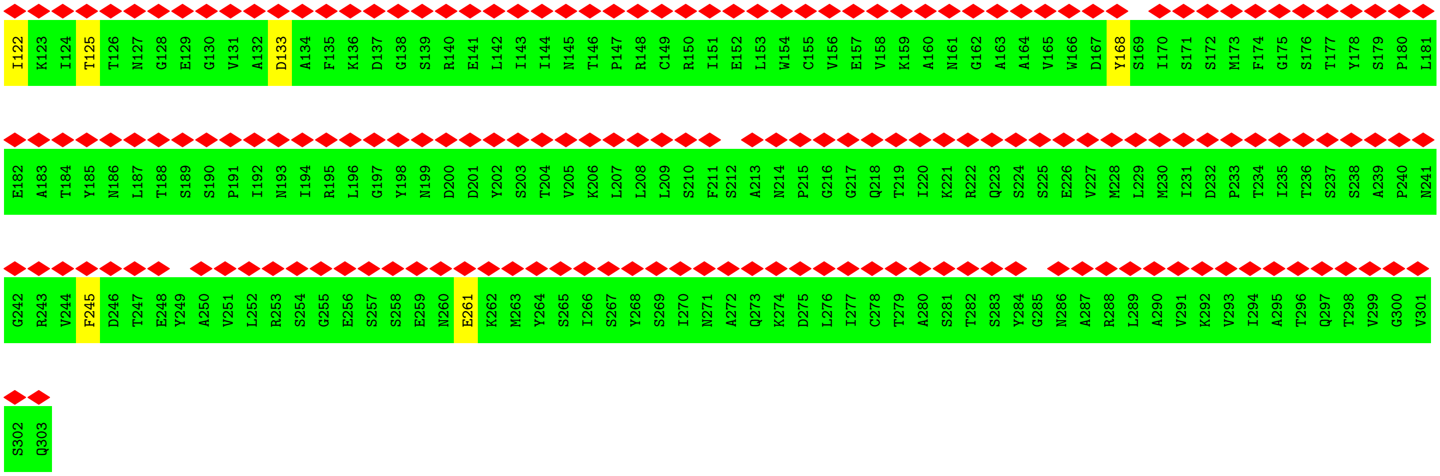


- Molecule 7: Baseplate wedge tail fiber connector



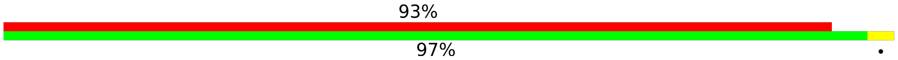
- Molecule 7: Baseplate wedge tail fiber connector

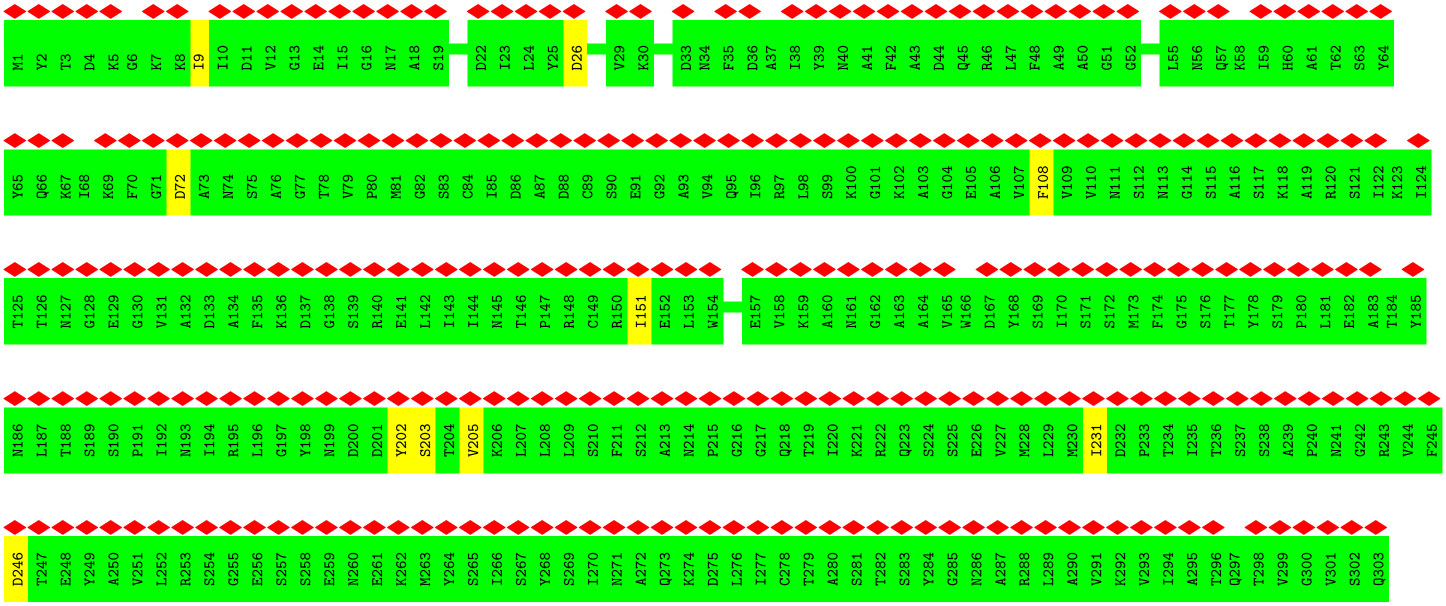




- Molecule 7: Baseplate wedge tail fiber connector

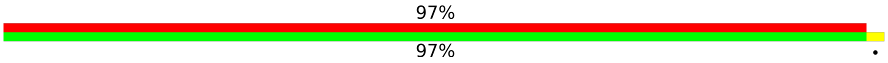
Chain LD:

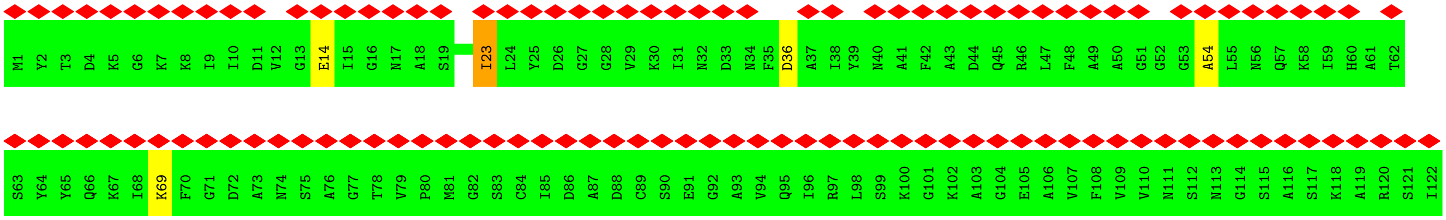


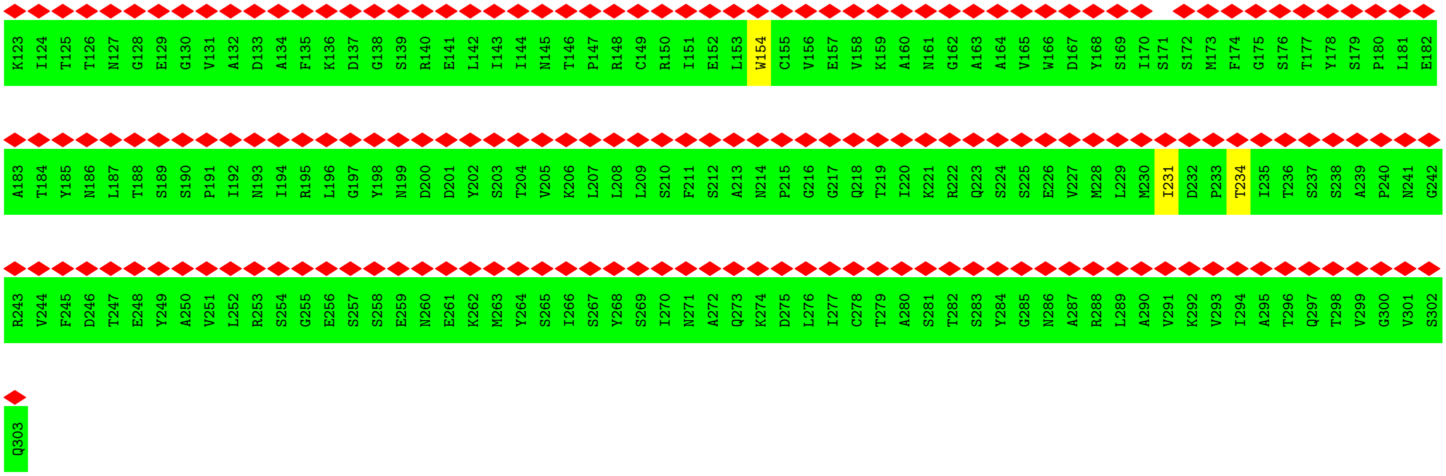


- Molecule 7: Baseplate wedge tail fiber connector

Chain LH:

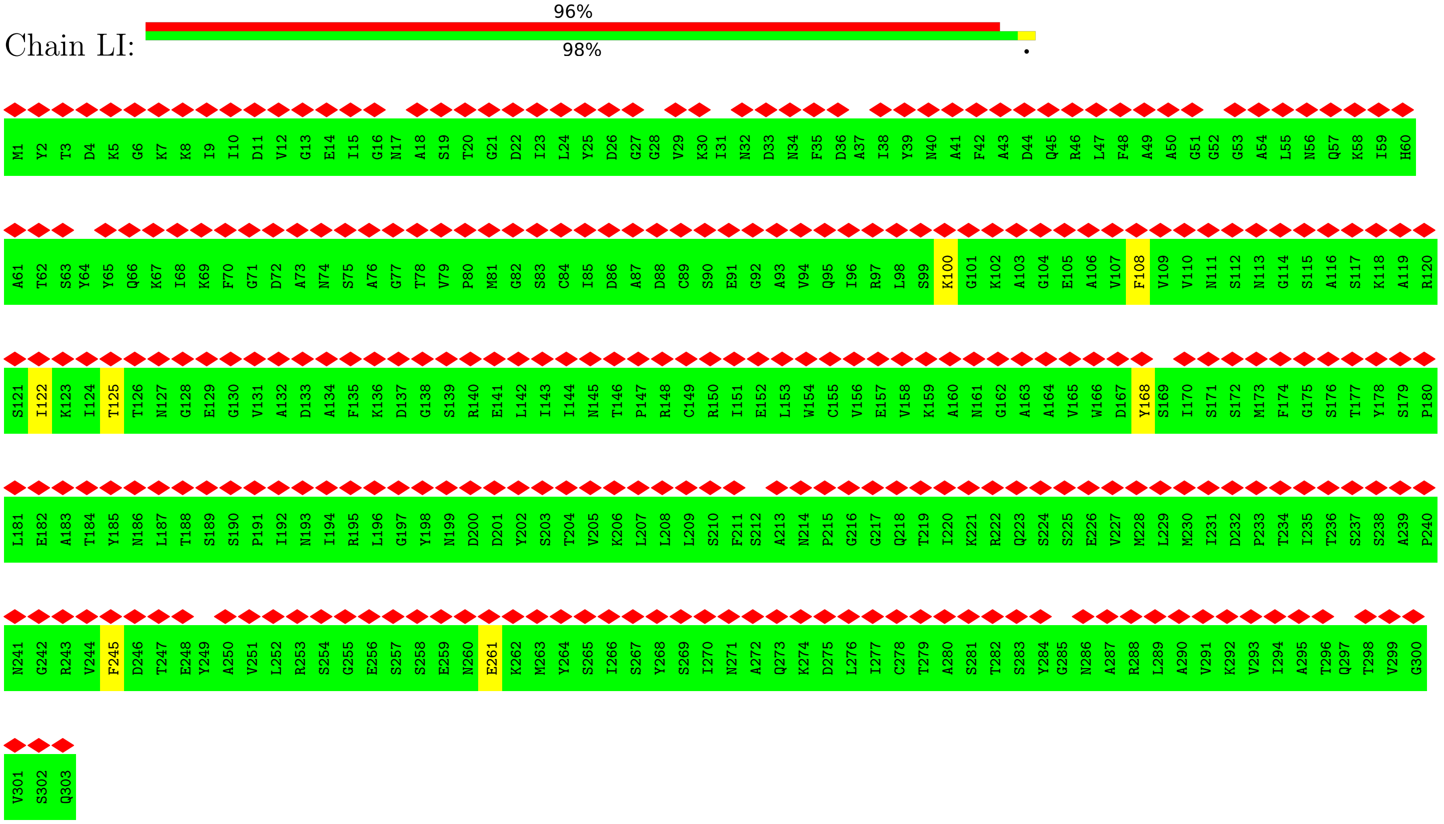






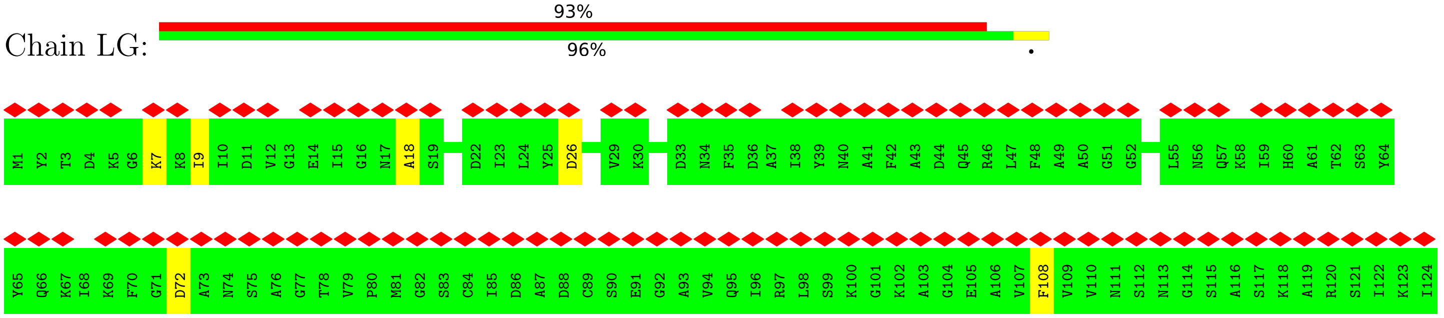
- Molecule 7: Baseplate wedge tail fiber connector

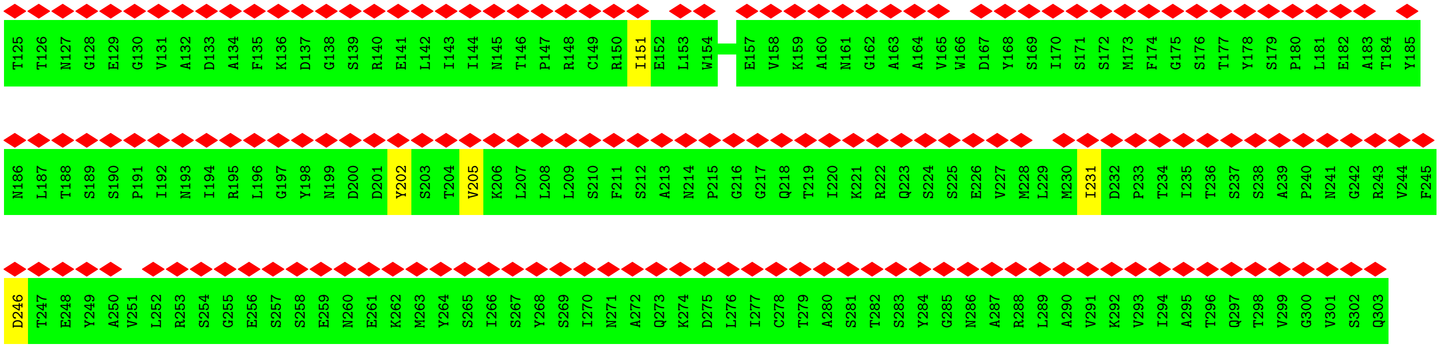
Chain LI:



- Molecule 7: Baseplate wedge tail fiber connector

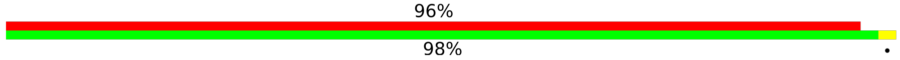
Chain LG:

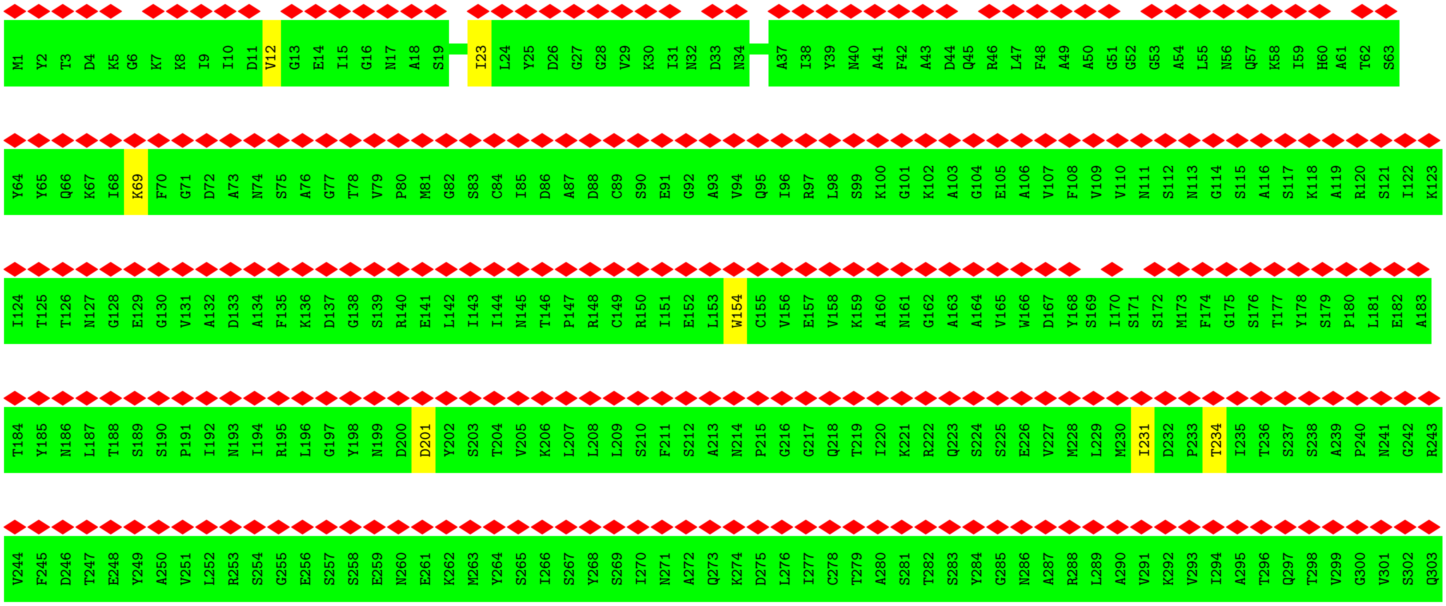




- Molecule 7: Baseplate wedge tail fiber connector

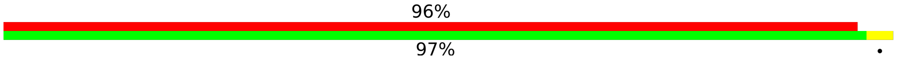
Chain LK:

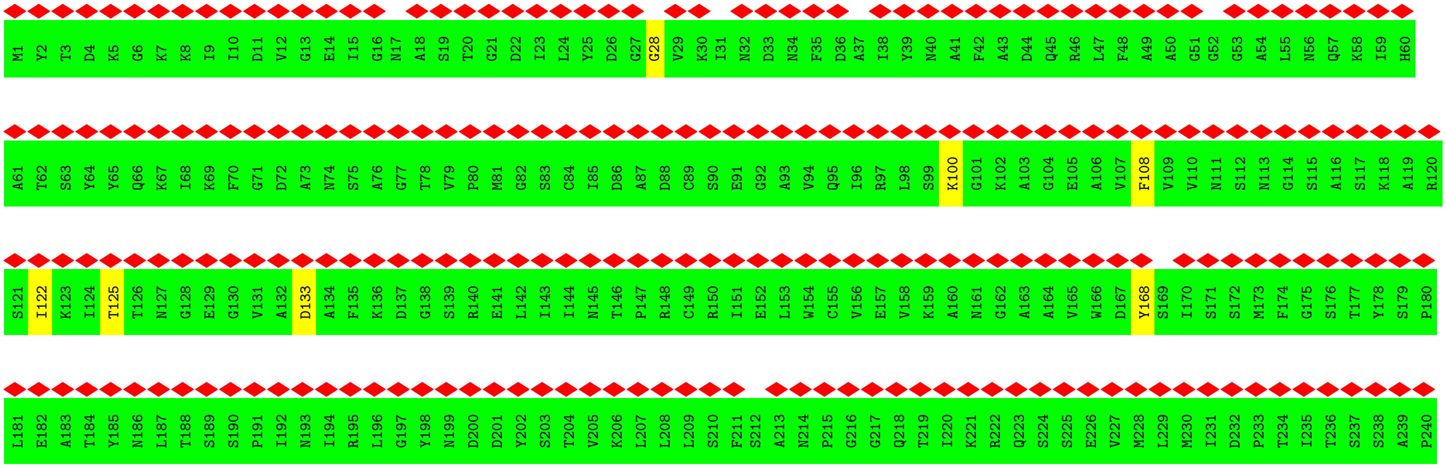




- Molecule 7: Baseplate wedge tail fiber connector

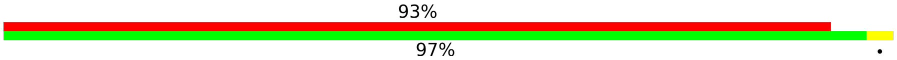
Chain LL:

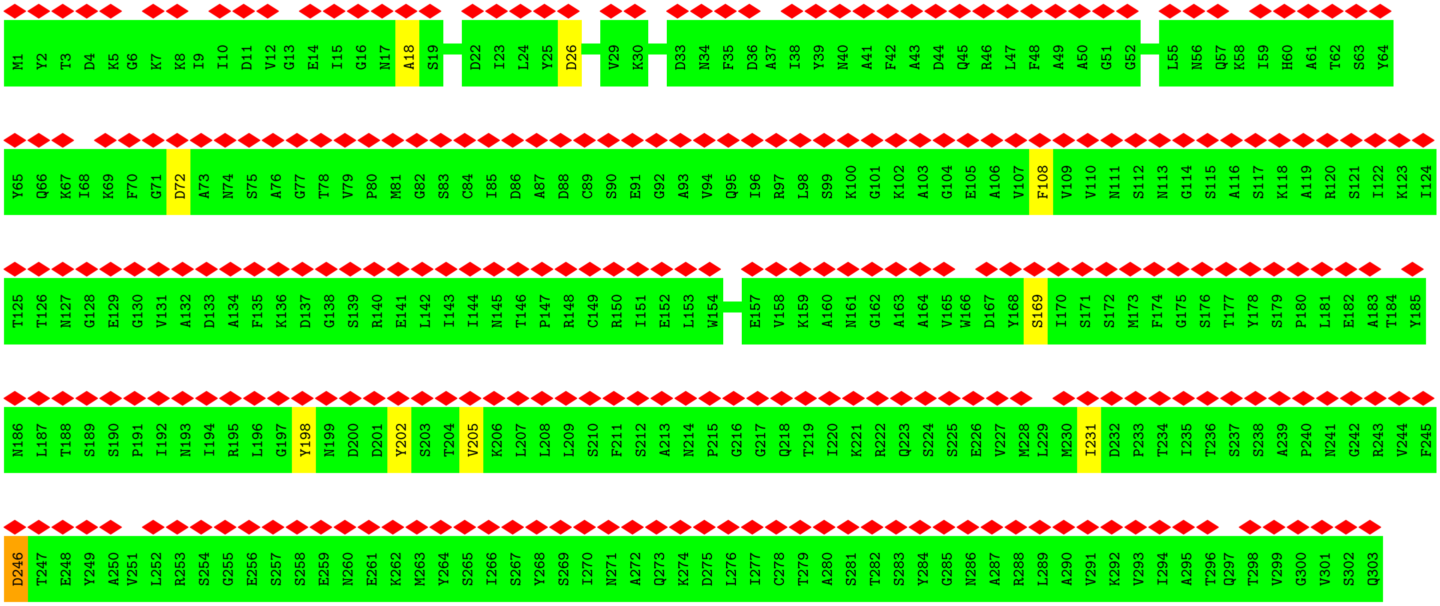




- Molecule 7: Baseplate wedge tail fiber connector

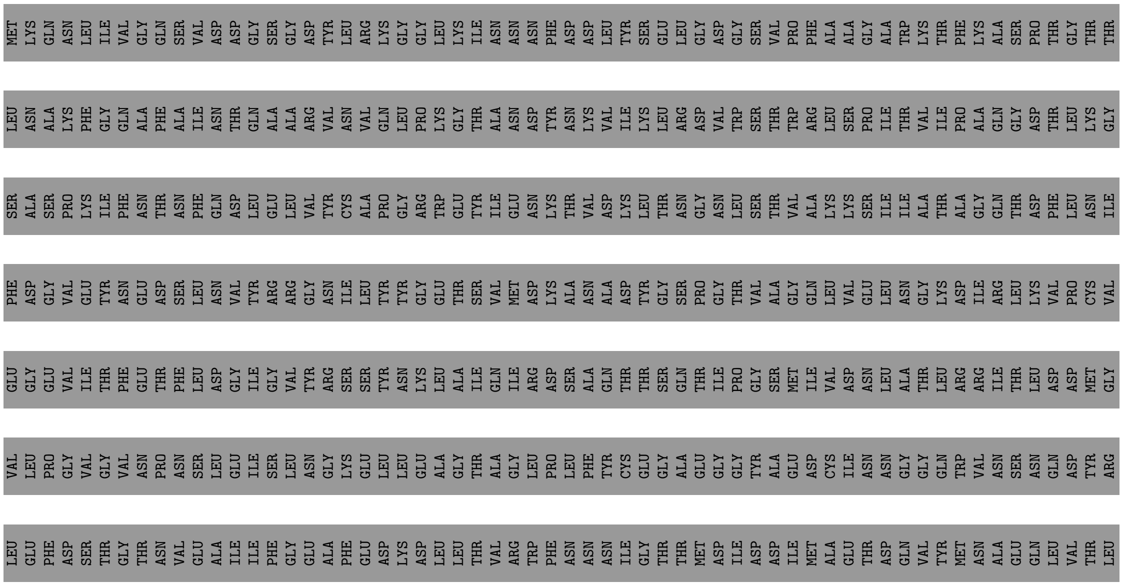
Chain LJ:

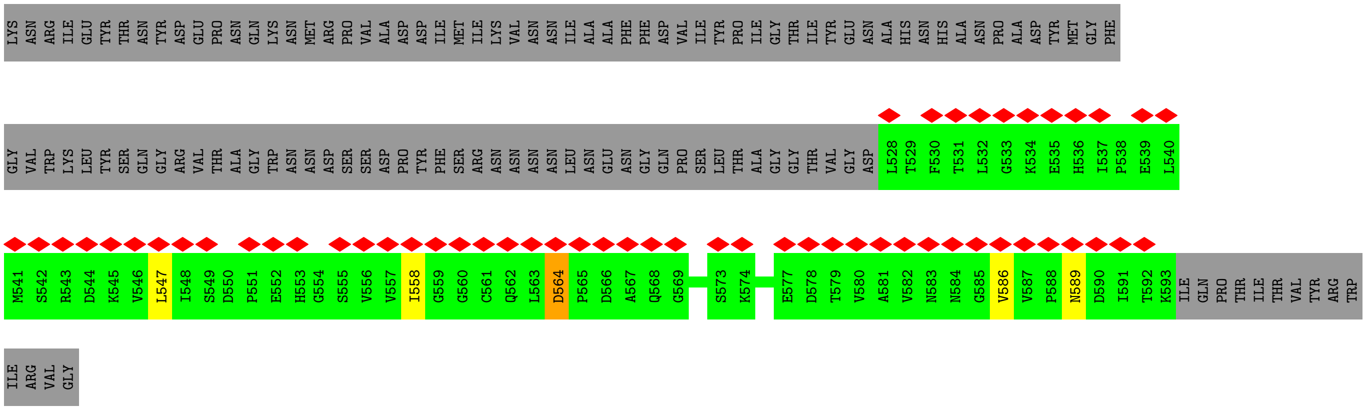




- Molecule 8: Baseplate wedge protein gp10

Chain FA:





- Molecule 8: Baseplate wedge protein gp10

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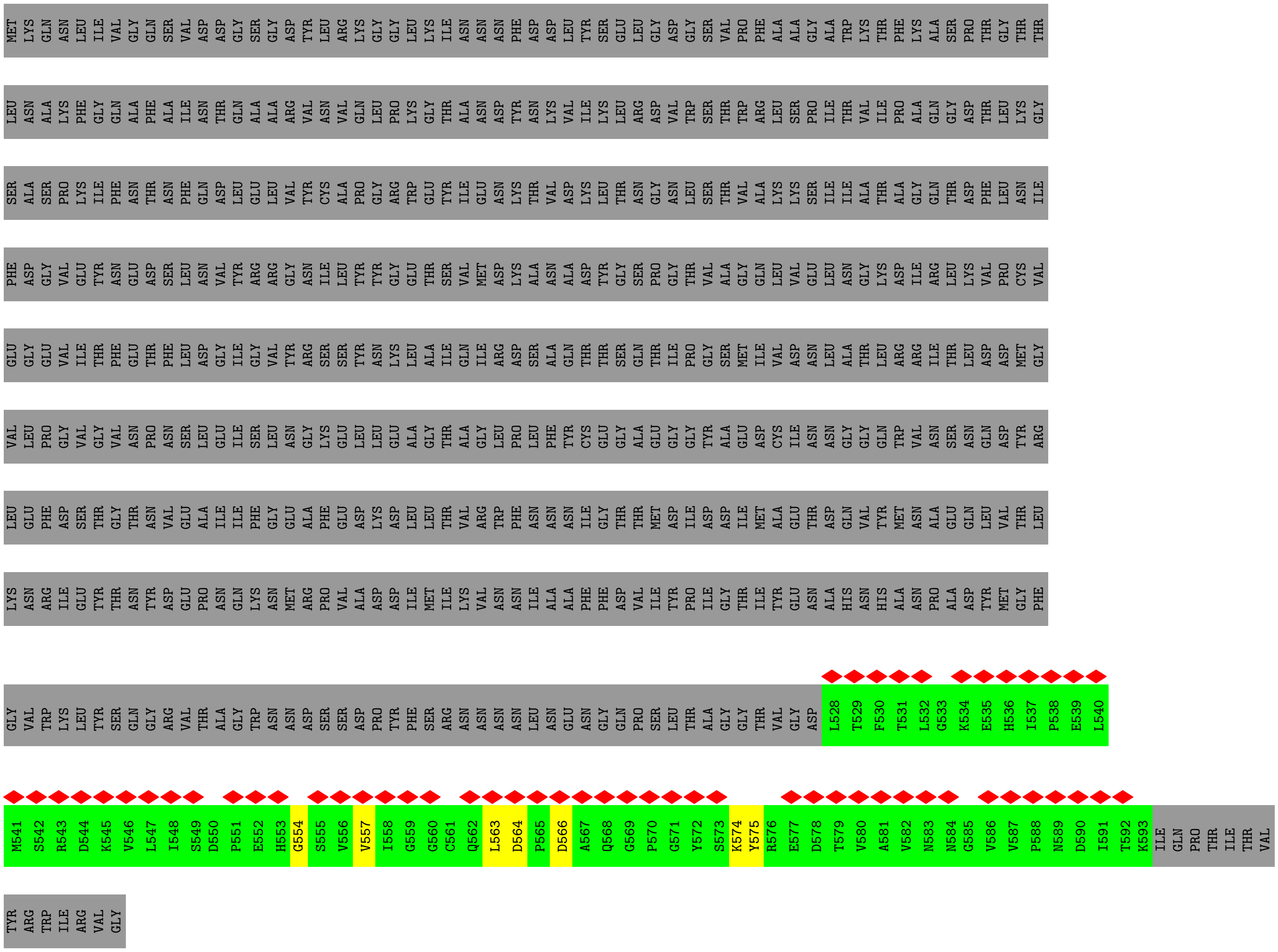

- Molecule 8: Baseplate wedge protein gp10

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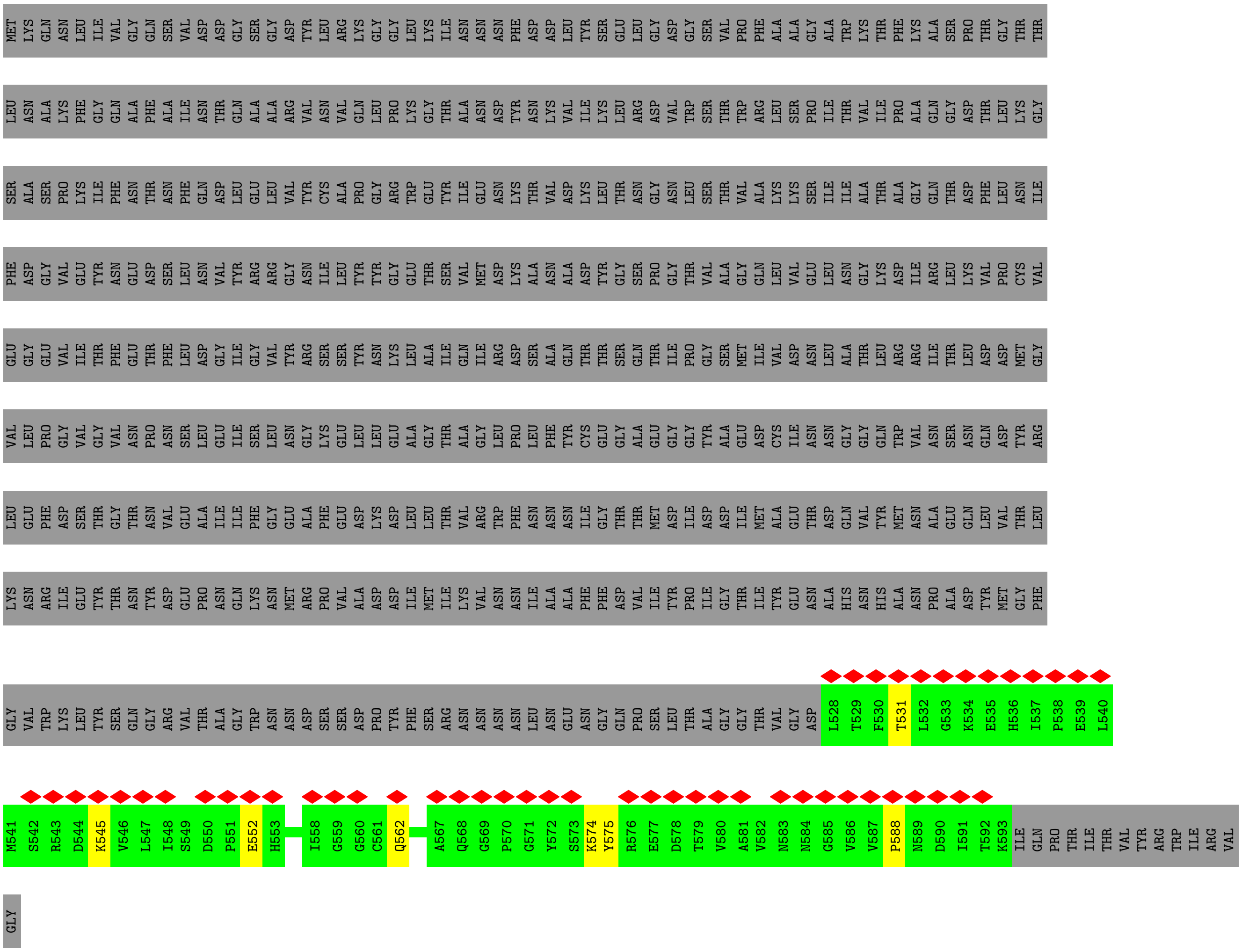
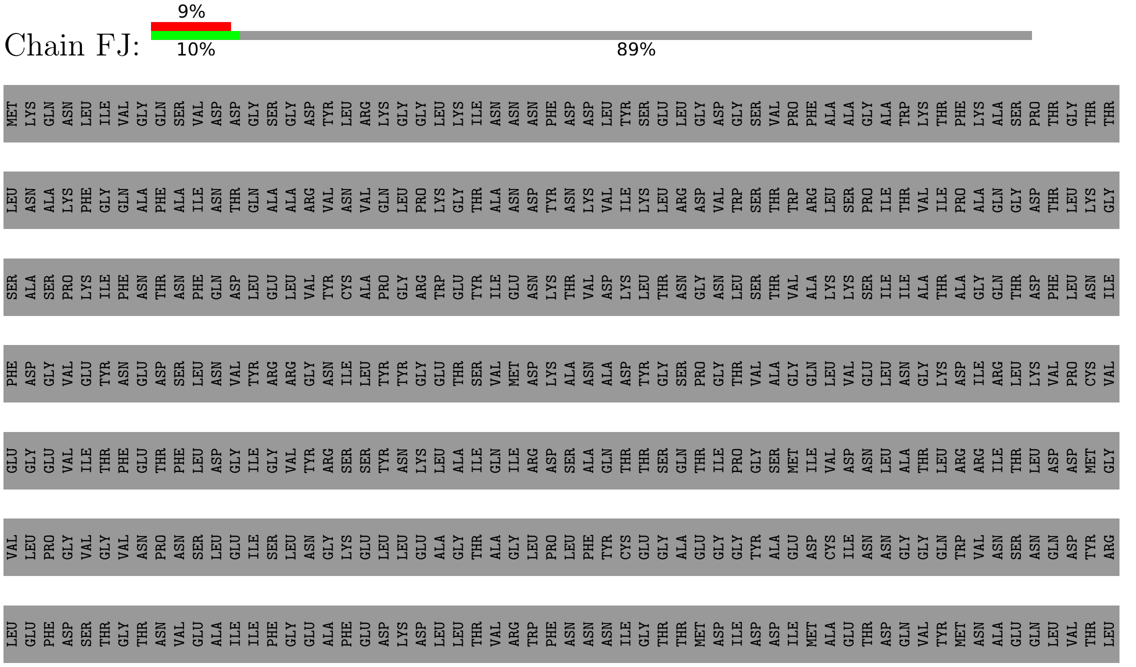
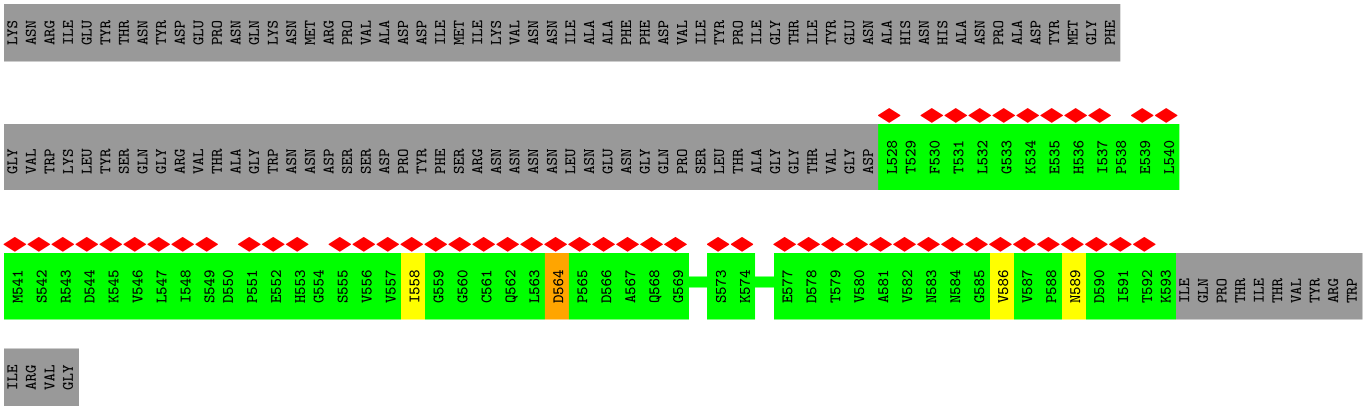
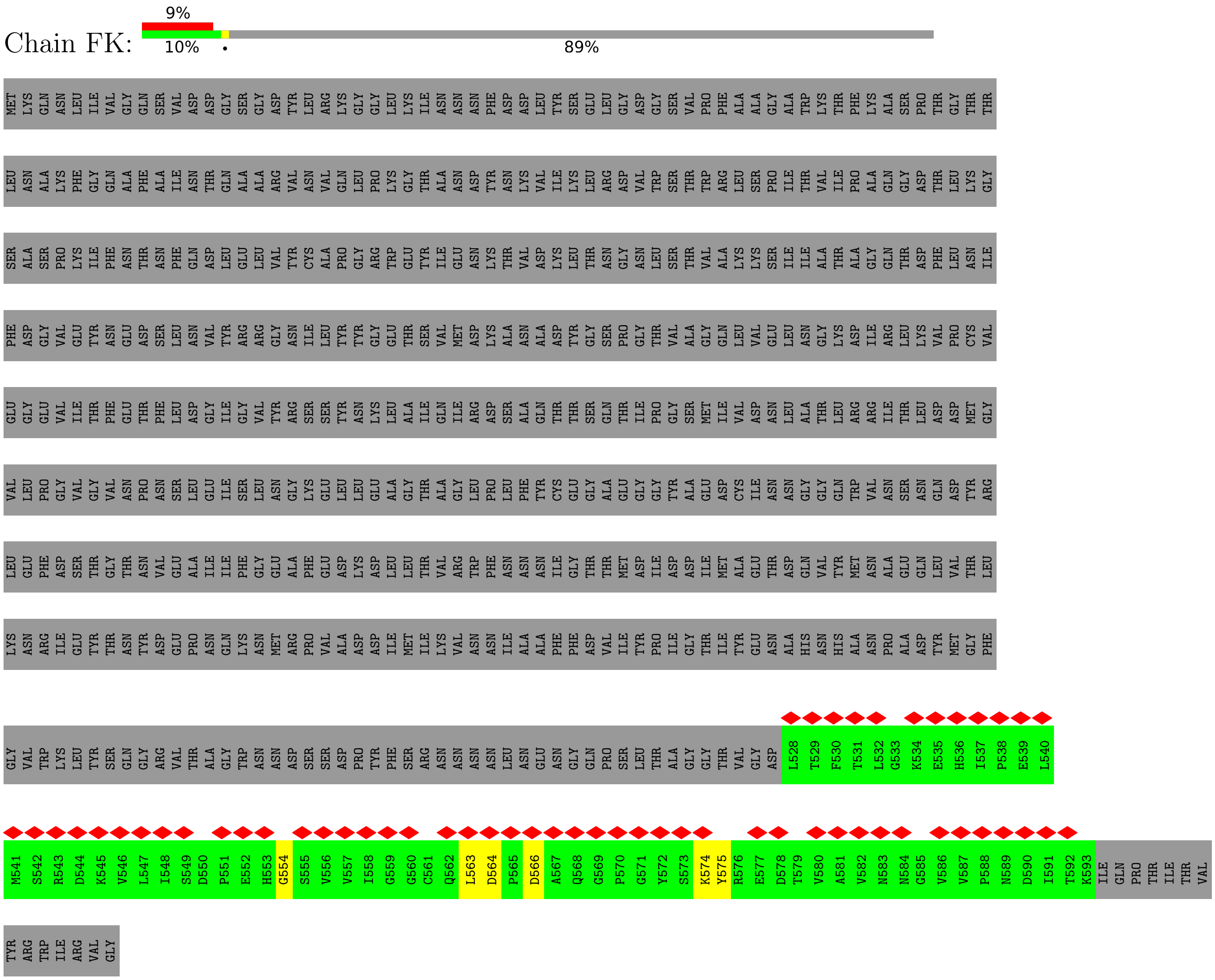


- Molecule 8: Baseplate wedge protein gp10

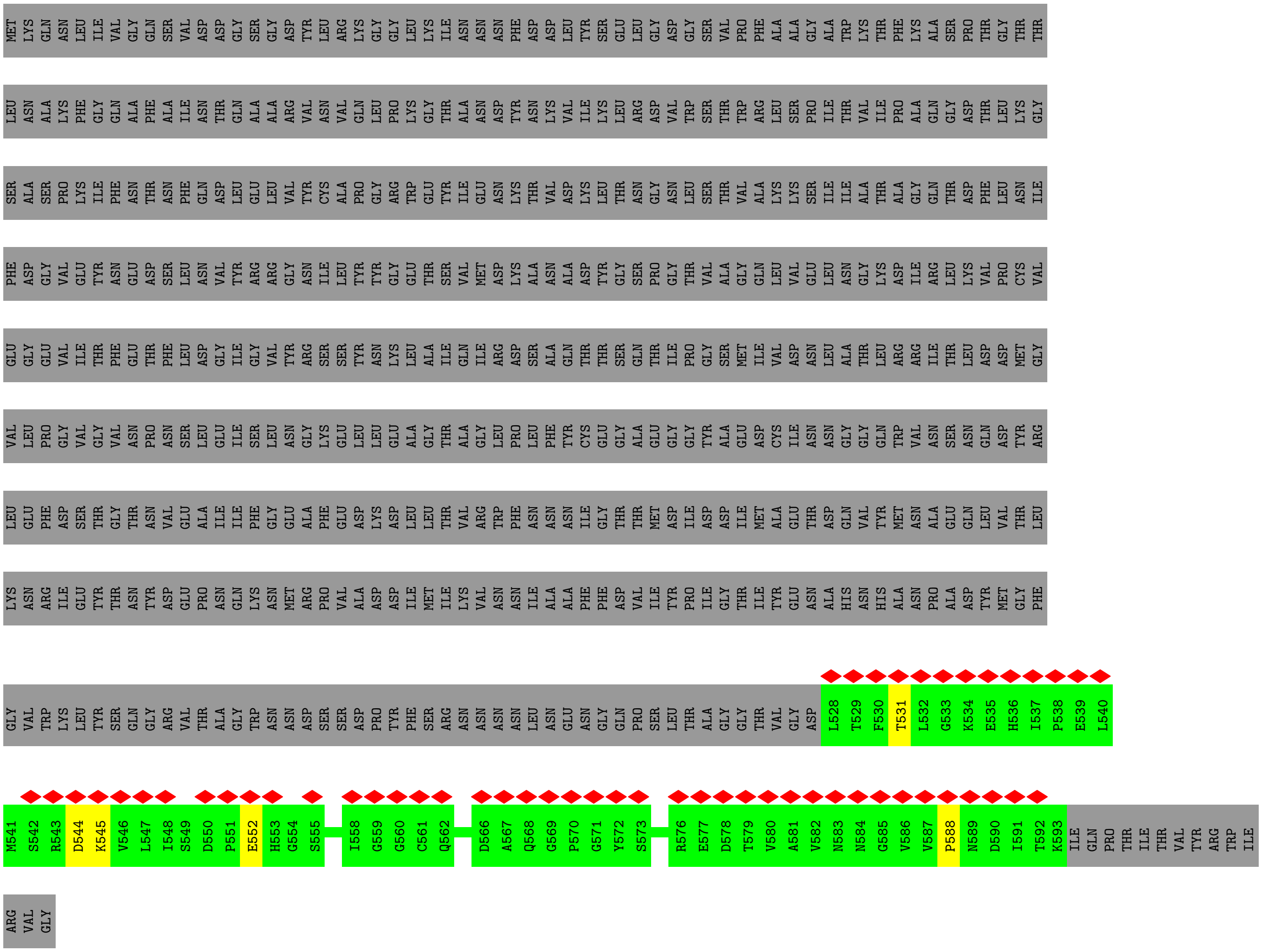




- Molecule 8: Baseplate wedge protein gp10



- Molecule 8: Baseplate wedge protein gp10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LEU ASN ALA LYS PHE GLY GLN ALA PHE ALA ILE ASN THR GLN ALA ALA ARG VAL ASN VAL GLN LEU PRO LYS GLY THR ALA ASN ASP TYR ASN LYS VAL ILE LYS LEU ARG ASP VAL TRP SER THR TRP ARG LEU SER PRO ILE THR VAL ILE PRO ALA GLN GLY ASP THR LEU LYS GLY

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

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

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

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

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

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

GLY VAL TRP LYS LEU TYR SER GLN GLY ARG VAL THR ALA GLY TRP ASN ASN ASP SER SER ASP PRO TYR PHE SER ARG ASN ASN ASN ASN LEU ASN GLU ASN GLY GLN PRO SER LEU THR ALA GLY GLY THR VAL GLY ASP L528 T529 F530 T531 L532 G533 K534 E535 H536 I537 P538 E539 L540

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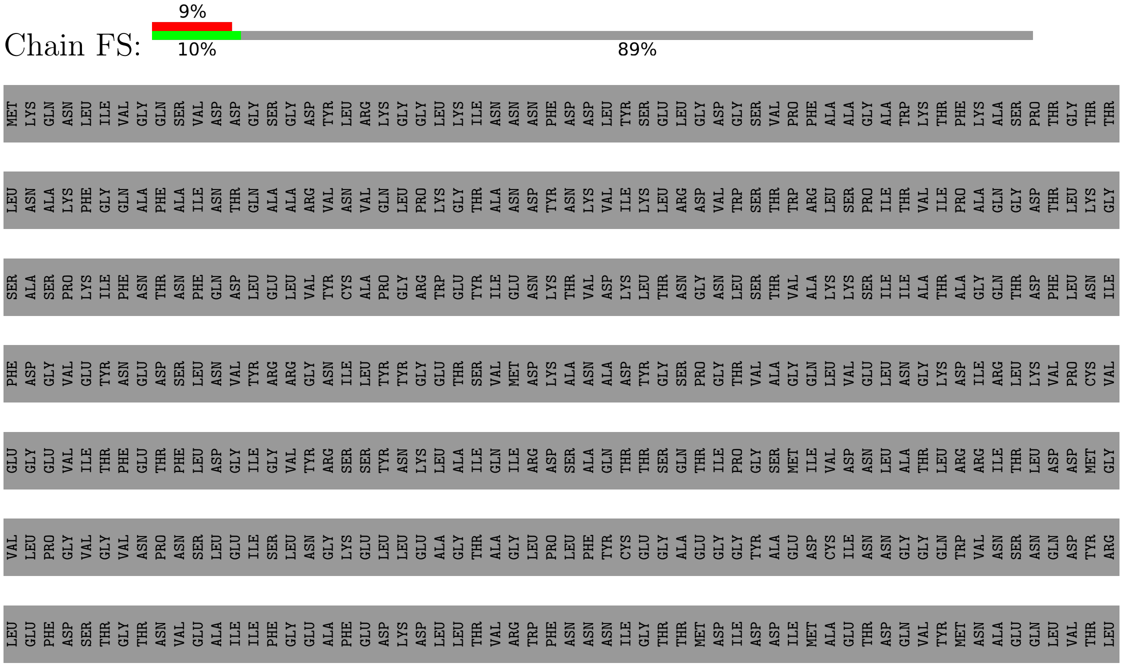
ARG VAL GLY

- Molecule 8: Baseplate wedge protein gp10



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

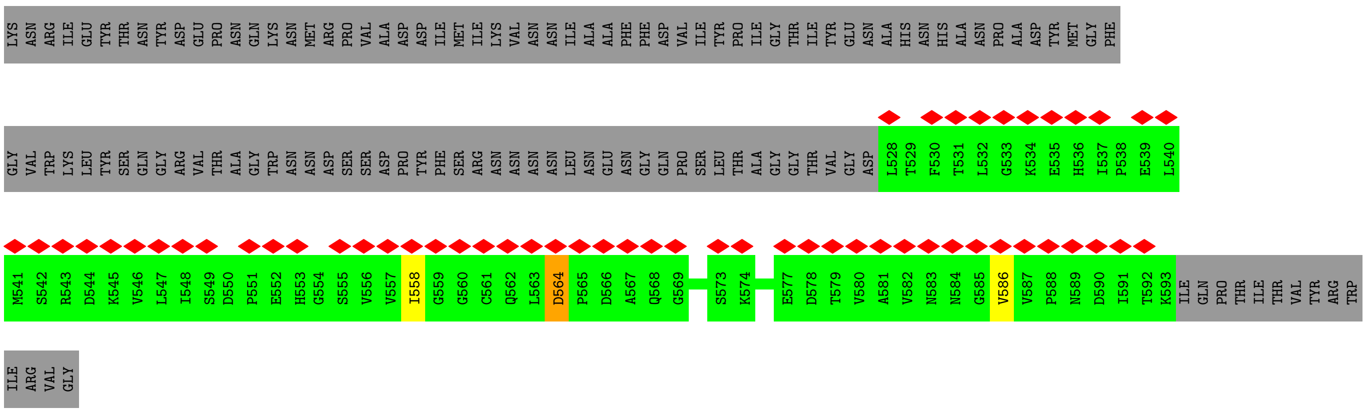
SER ALA SER PRO LYS ILE PHE ASN THR ASN PHE GLN ASP LEU GLU LEU VAL TYR CYS ALA PRO GLY ARG TRP GLU TYR ILE GLU ASN LYS THR VAL ASP LYS LEU THR ASN GLY ASN LEU SER THR VAL ALA LYS LYS SER ILE ILE ALA THR ALA GLY GLN THR ASP PHE LEU ASN ILE

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

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

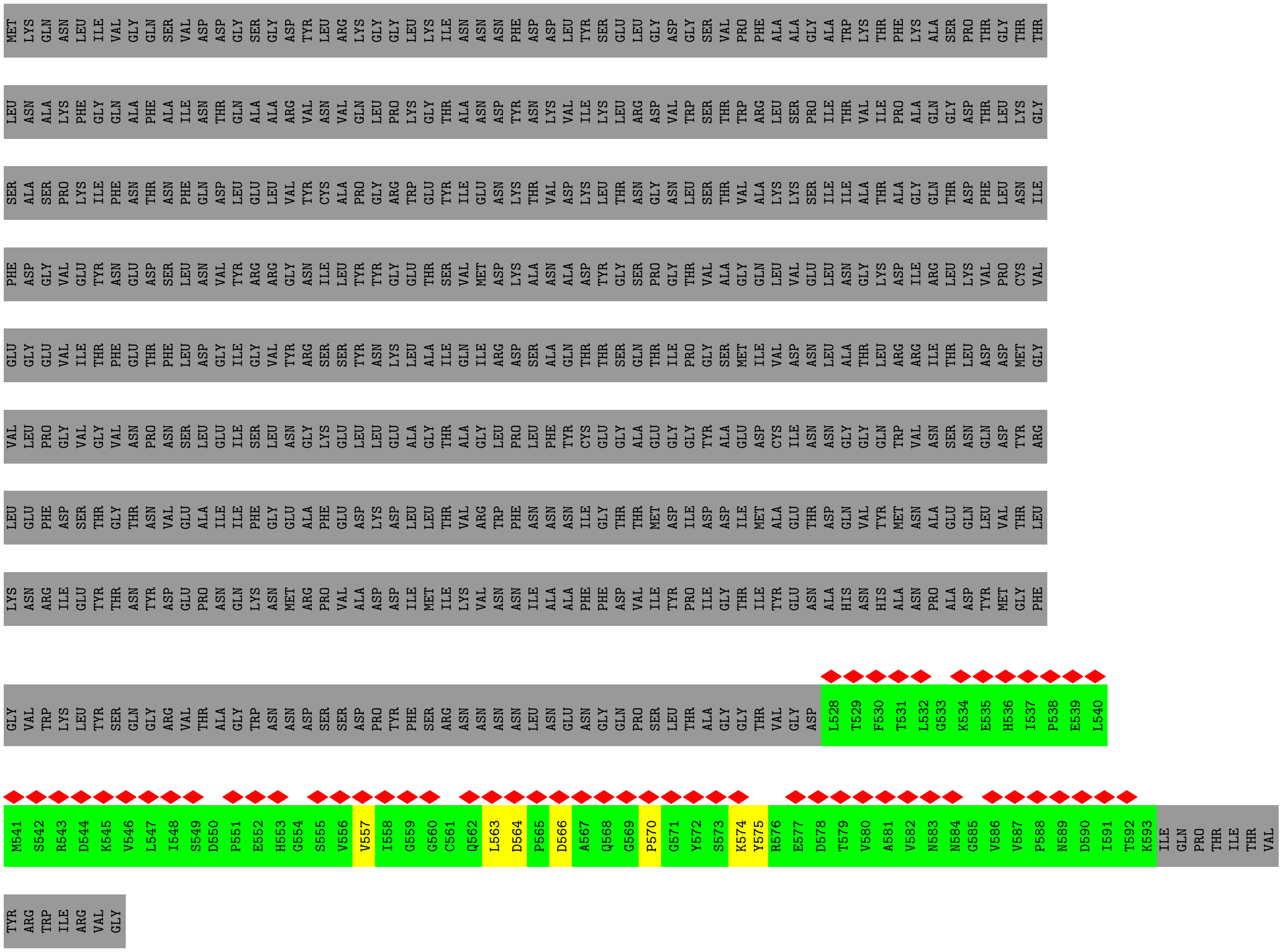
VAL LEU PRO GLY VAL GLY VAL ASN PRO ASN SER LEU GLU ILE SER LEU ASN GLY LYS GLU LEU LEU GLU ALA GLY THR ALA GLY LEU PRO LEU PHE TYR CYS GLU GLY ALA GLU GLY GLY TYR ALA GLU ASP CYS ILE ASN ASN GLY GLY GLN TRP VAL ASN SER ASN GLN ASP TYR ARG

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



- Molecule 8: Baseplate wedge protein gp10

Chain FT:



- Molecule 8: Baseplate wedge protein gp10

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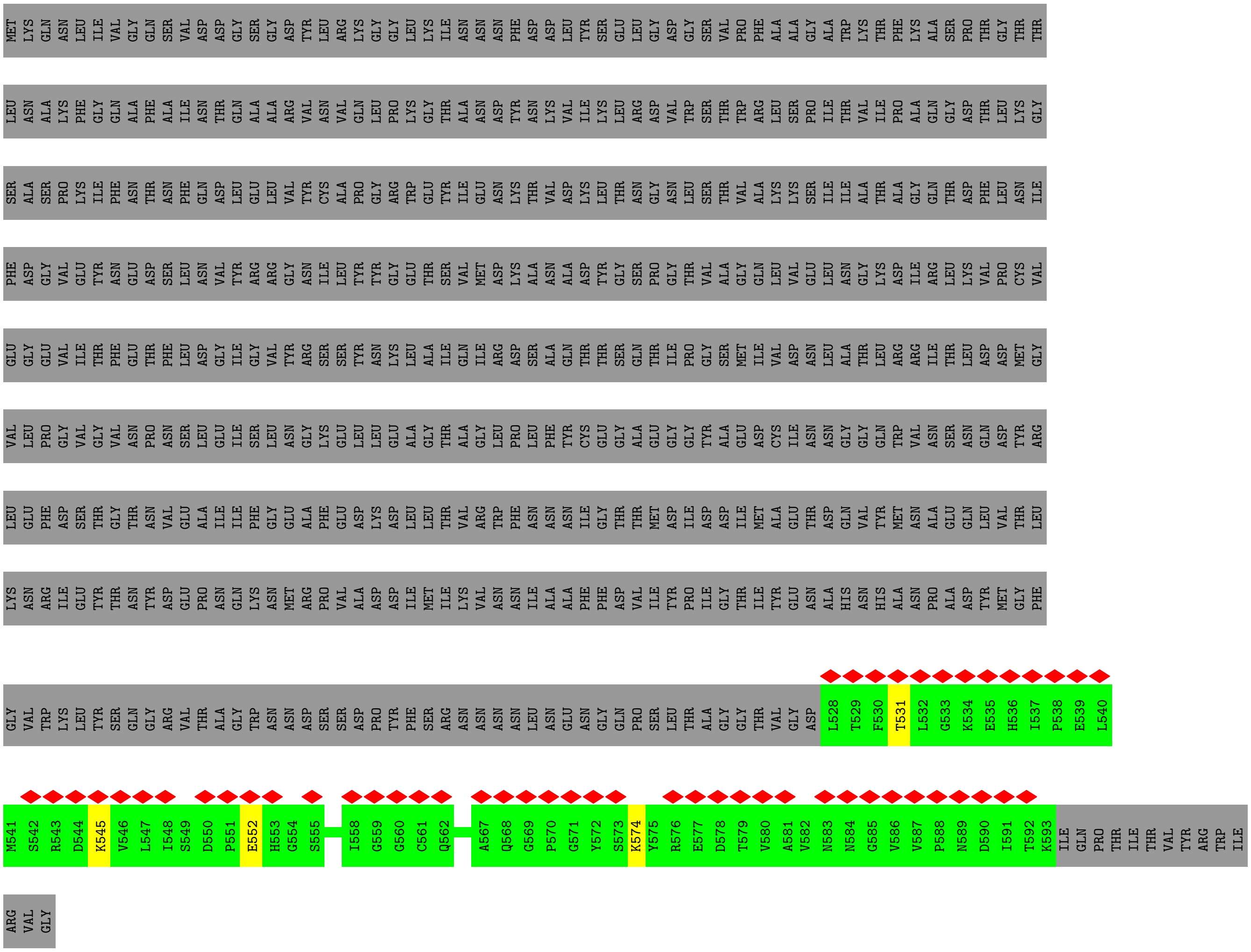

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LEU ASN ALA LYS PHE GLY GLN ALA PHE ALA ILE ASN THR GLN ALA ALA ARG VAL ASN VAL GLN LEU PRO LYS GLY THR ALA ASN ASP TYR ASN LYS VAL ILE LYS LEU ARG ASP VAL TRP SER THR TRP ARG LEU SER PRO ILE THR VAL ILE PRO ALA GLN GLY ASP THR THR LEU LYS GLY

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

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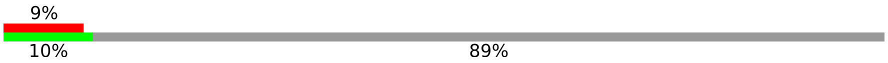
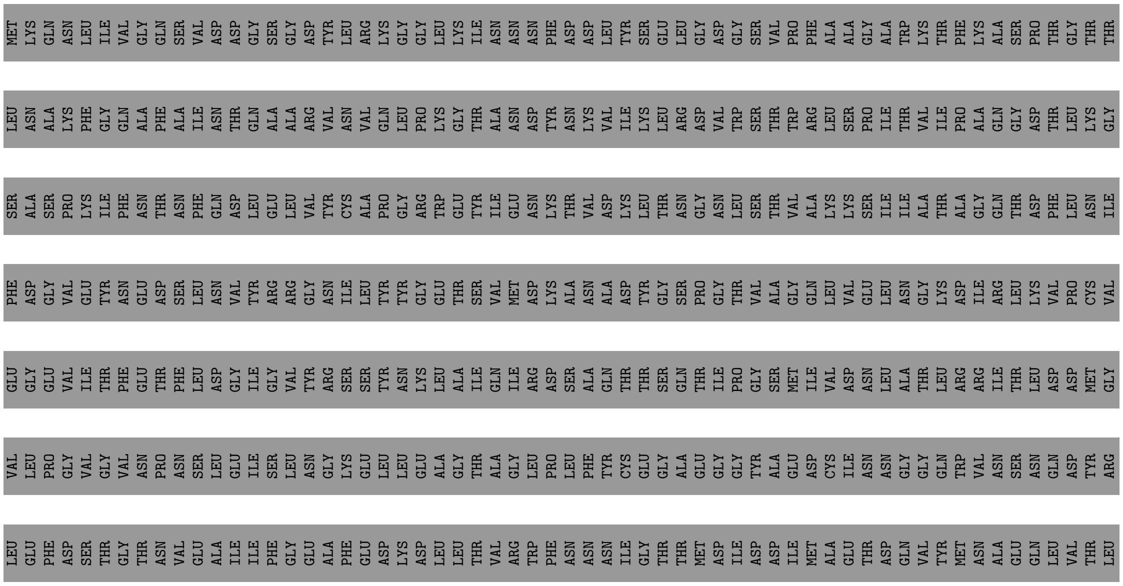
ARG VAL GLY

- Molecule 8: Baseplate wedge protein gp10

Chain Fb:





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

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

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

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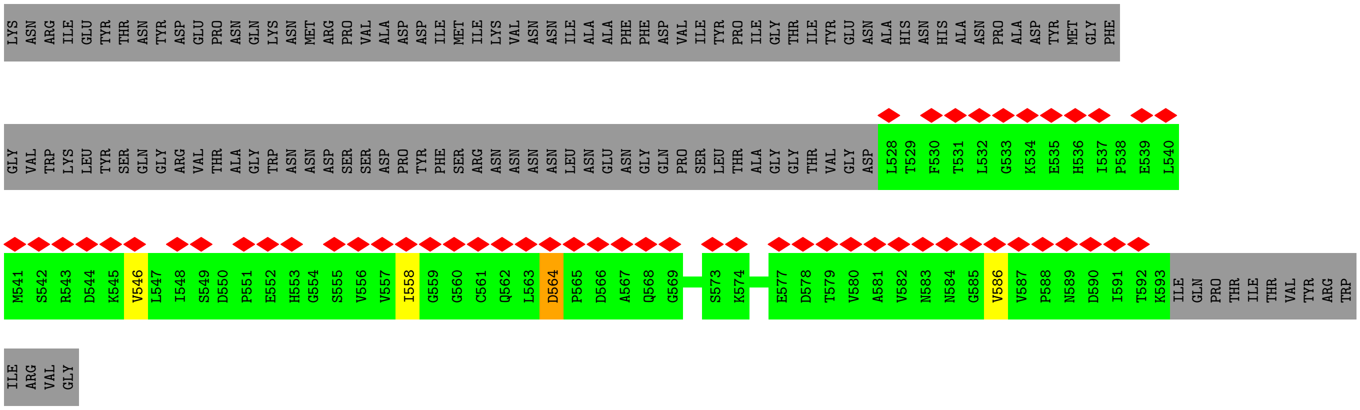

- Molecule 8: Baseplate wedge protein gp10

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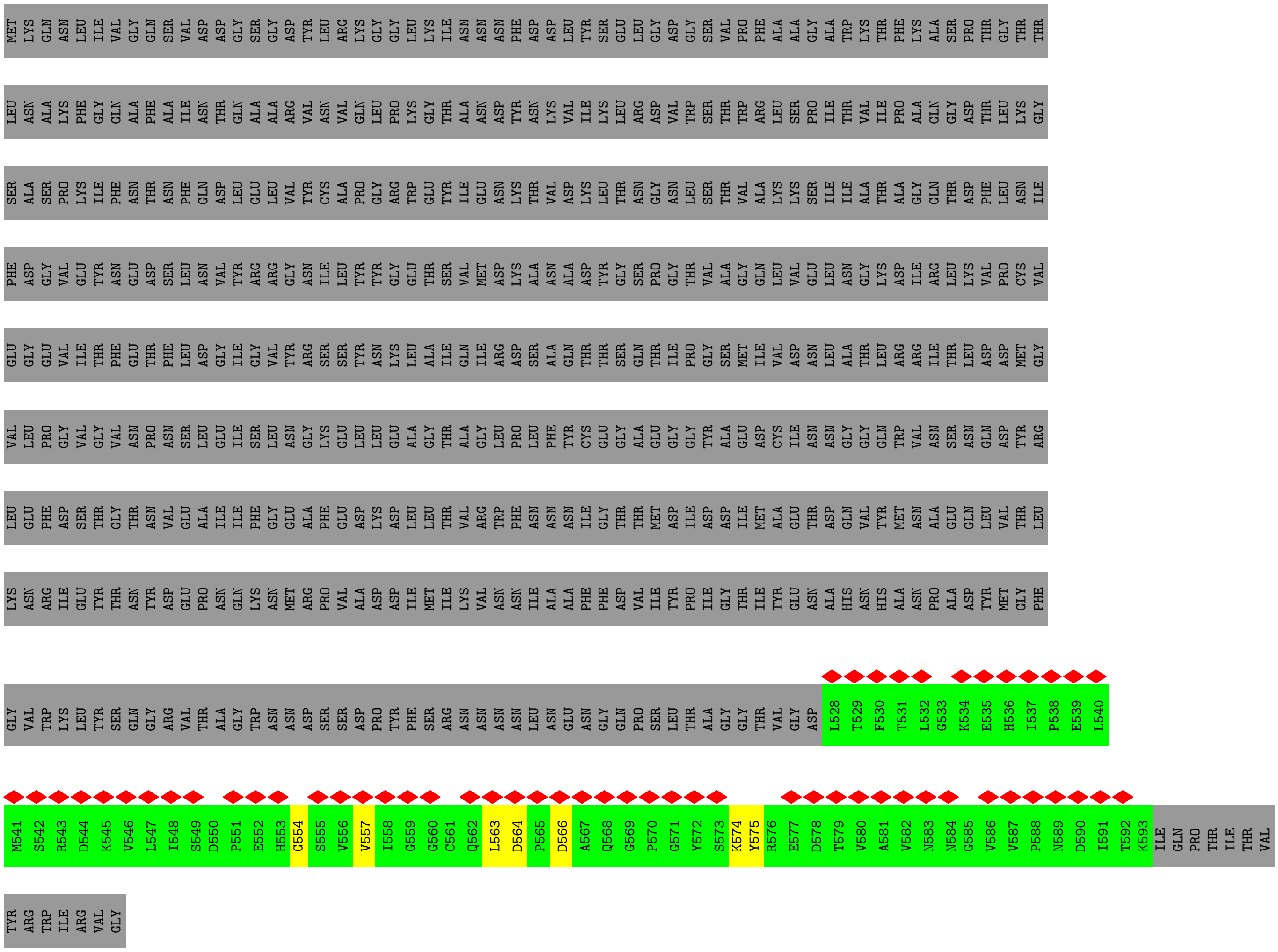

- Molecule 8: Baseplate wedge protein gp10

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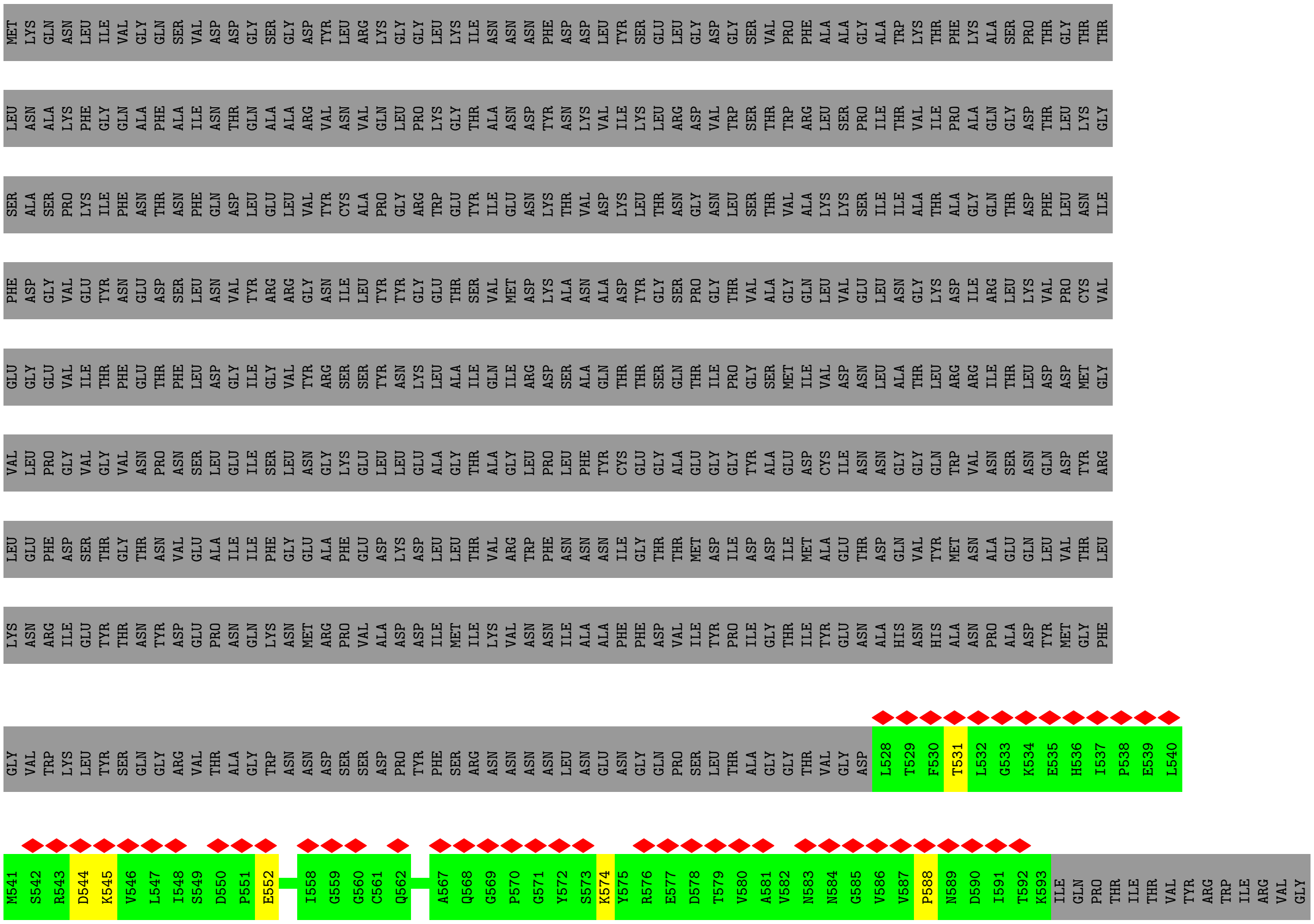

- Molecule 8: Baseplate wedge protein gp10

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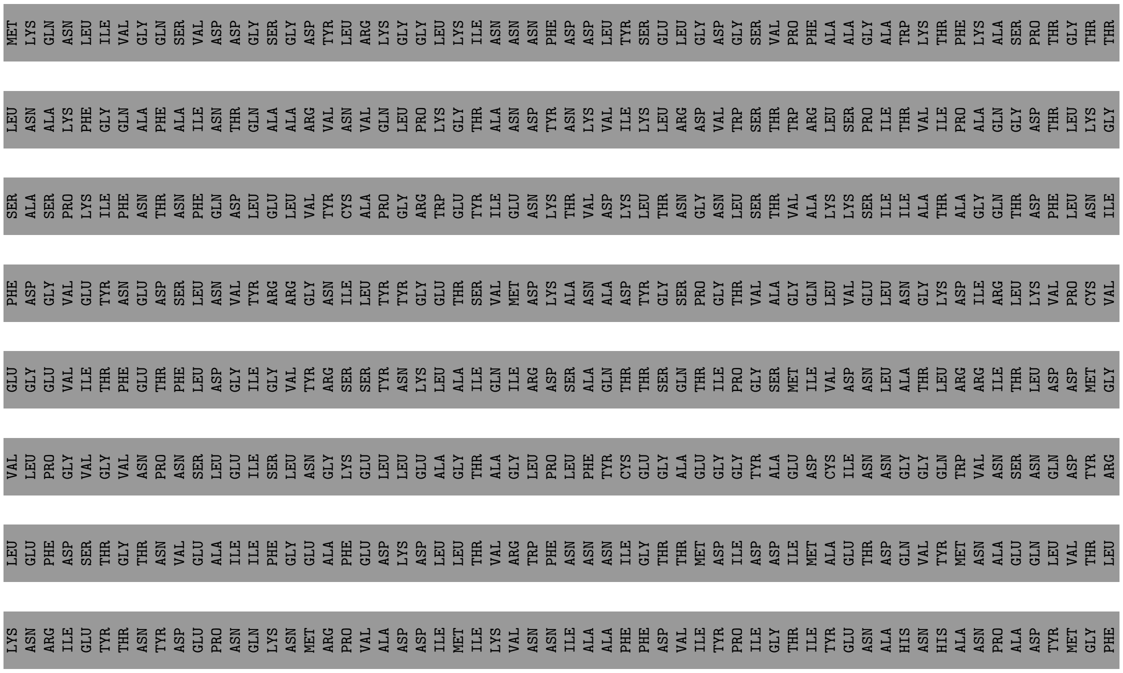

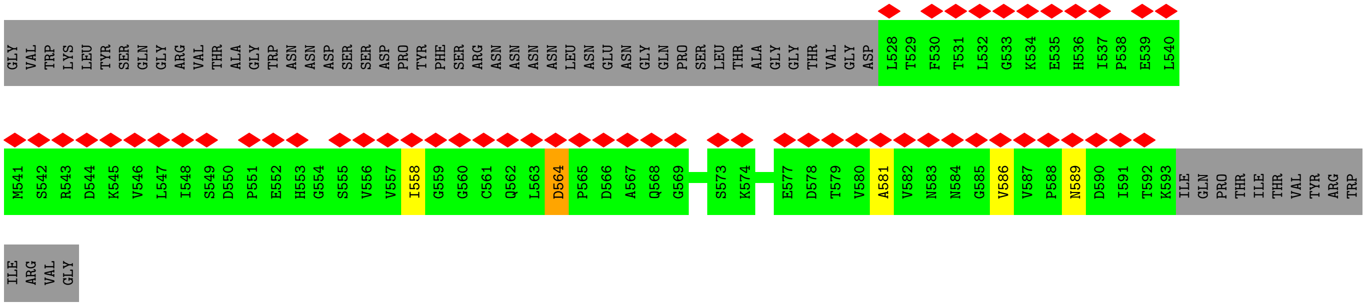

- Molecule 8: Baseplate wedge protein gp10

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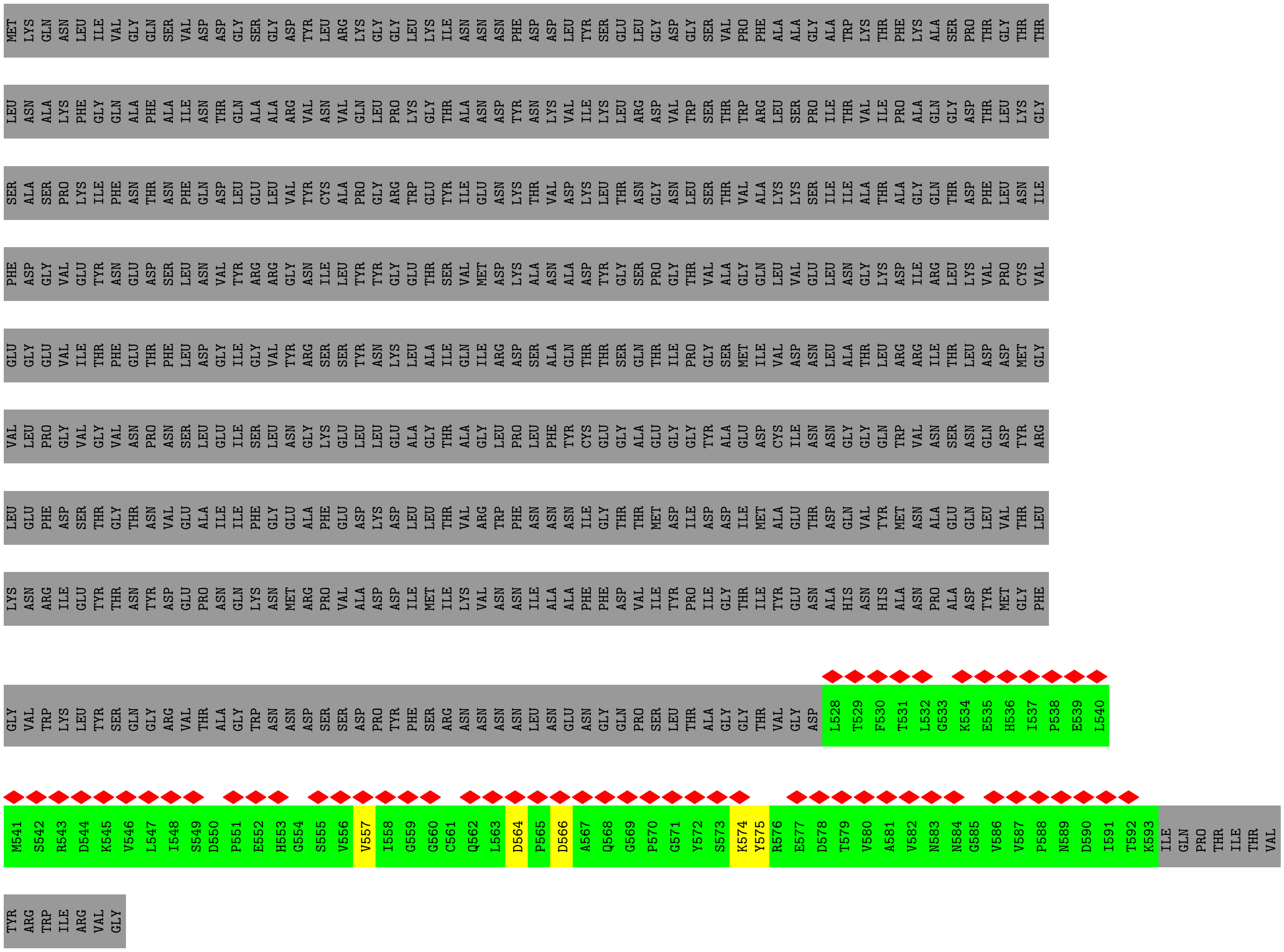

- Molecule 8: Baseplate wedge protein gp10

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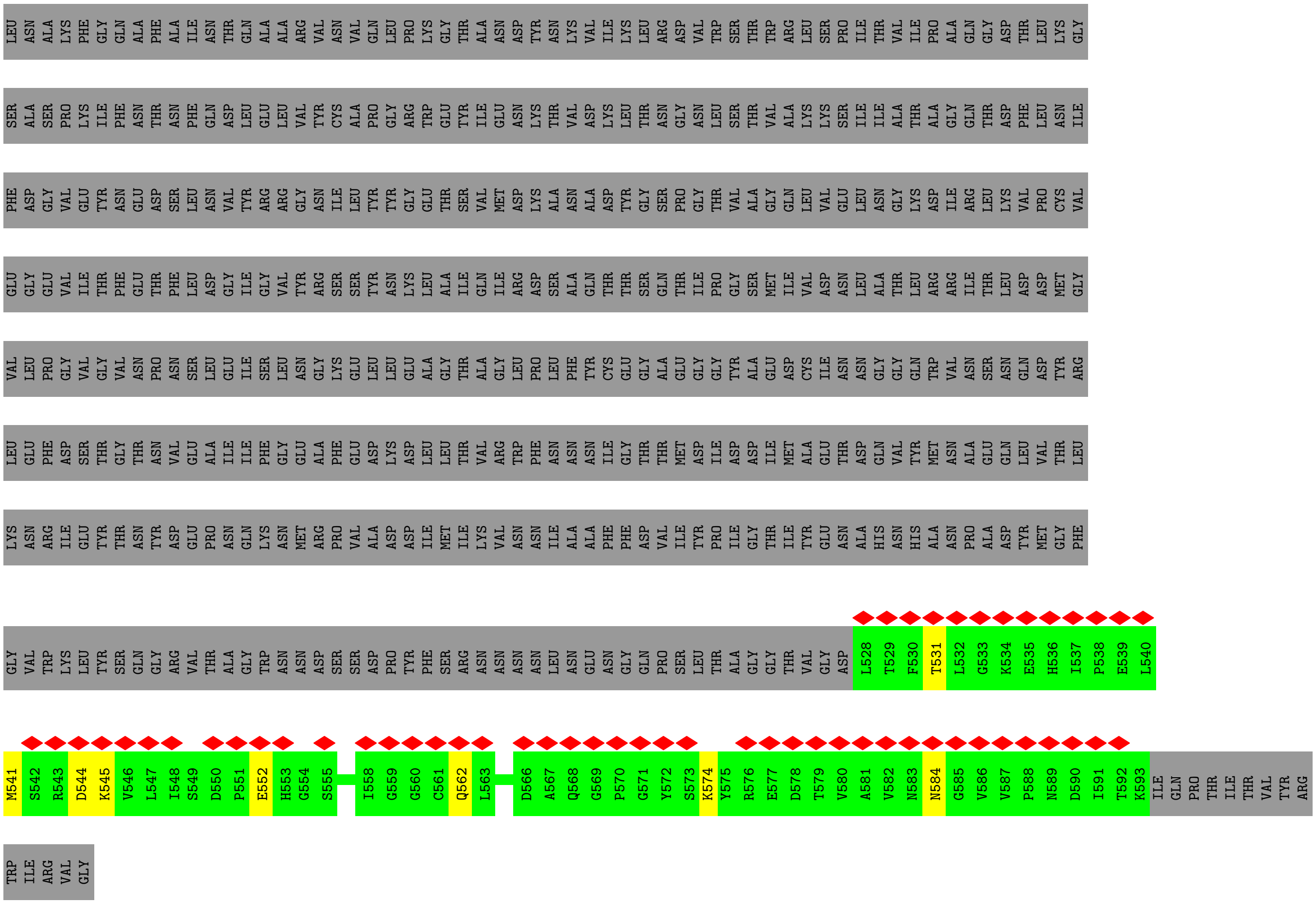

- Molecule 8: Baseplate wedge protein gp10

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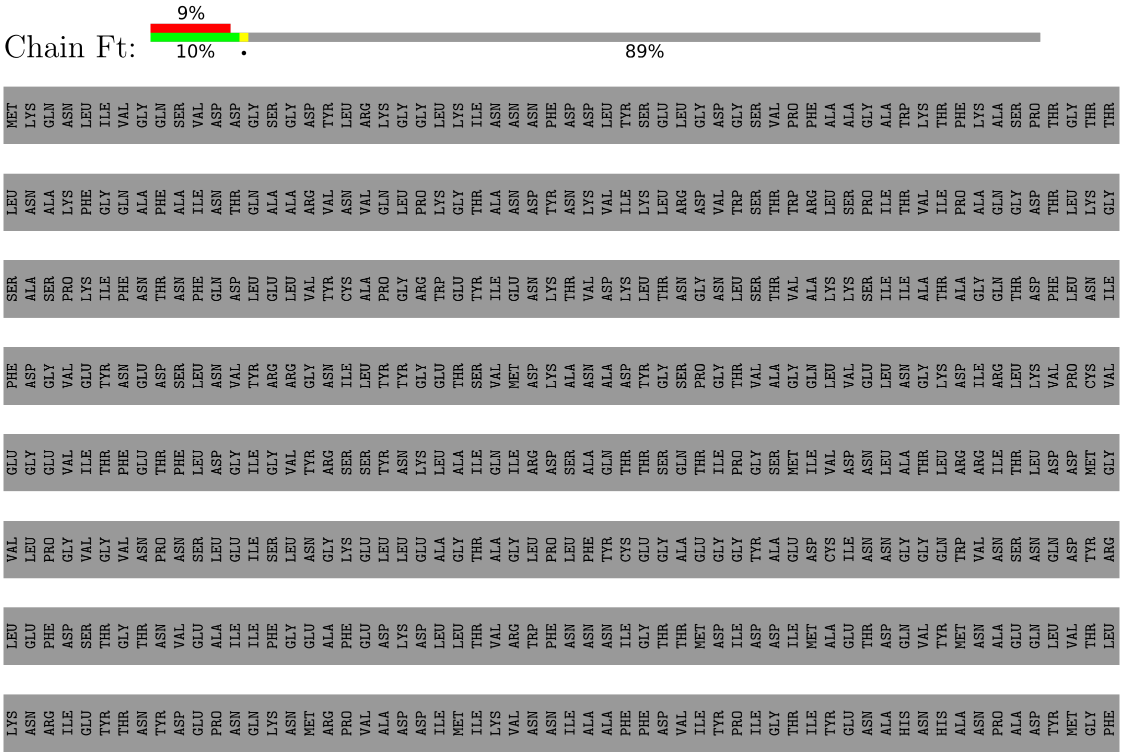
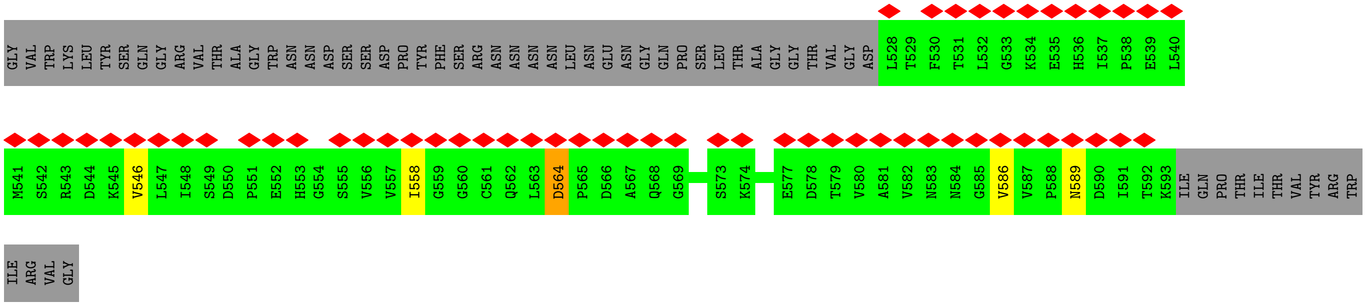
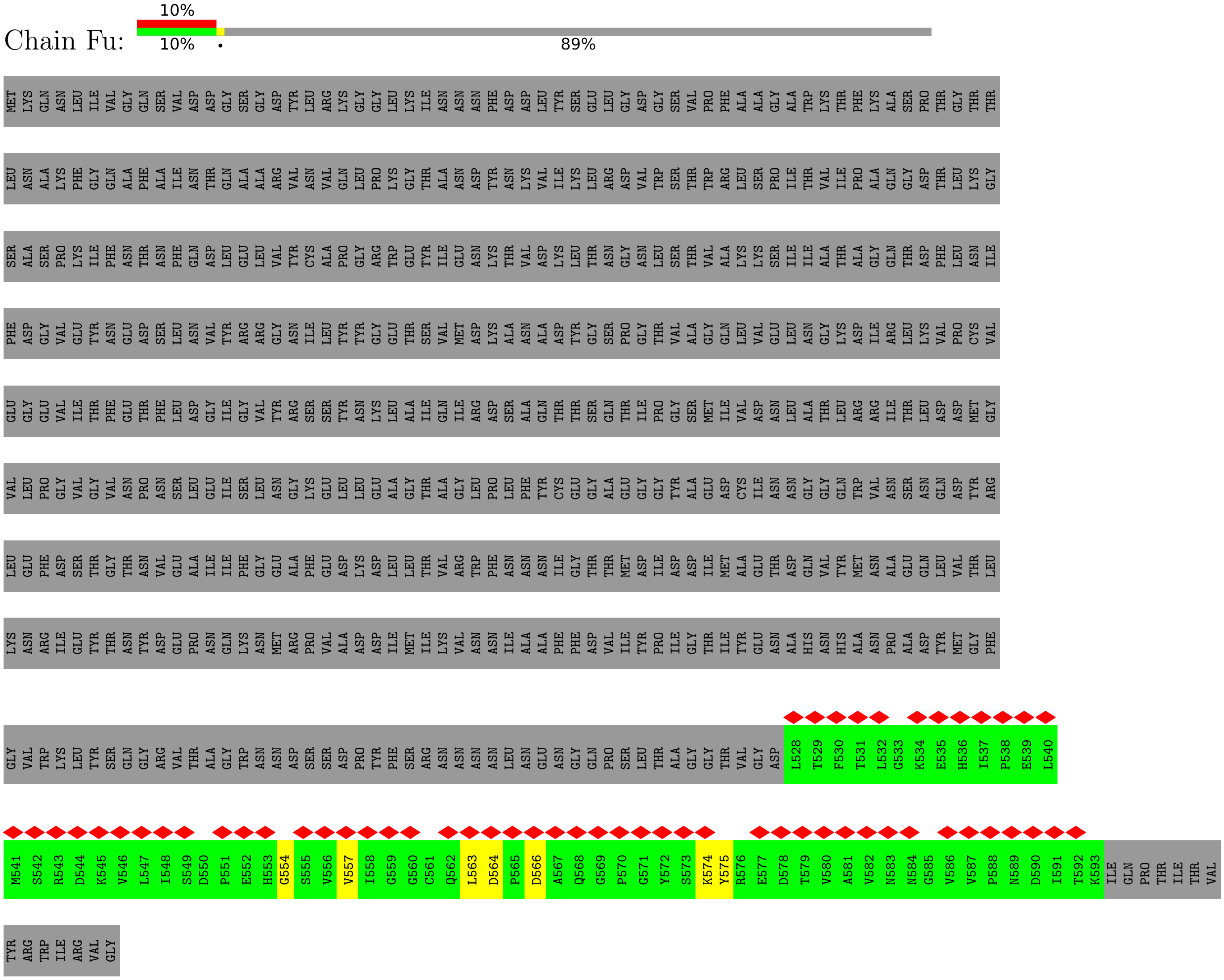
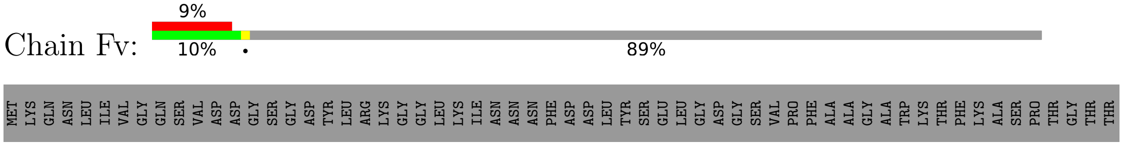


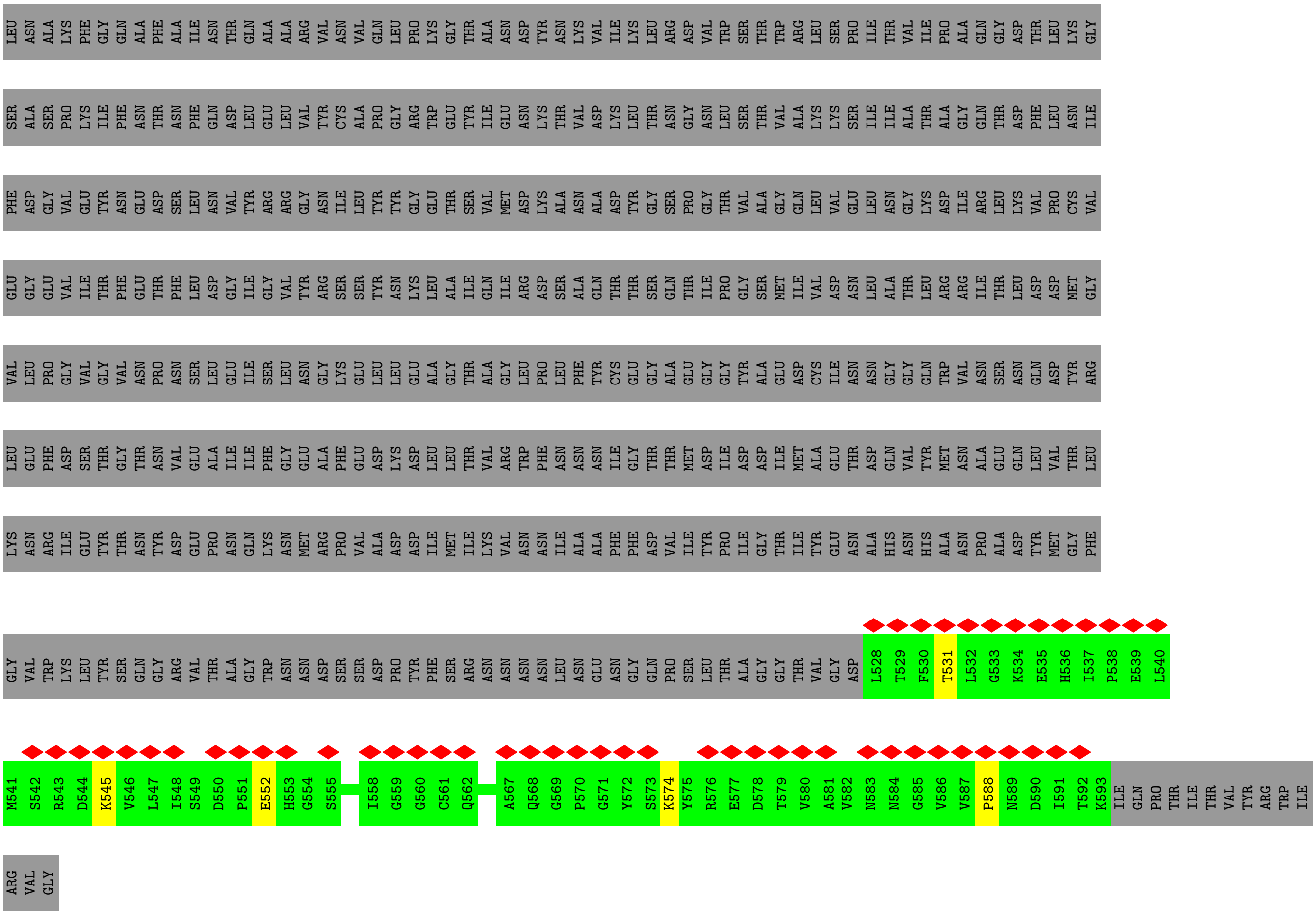


- Molecule 8: Baseplate wedge protein gp10



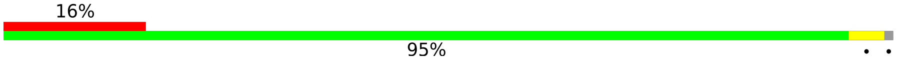
- Molecule 8: Baseplate wedge protein gp10

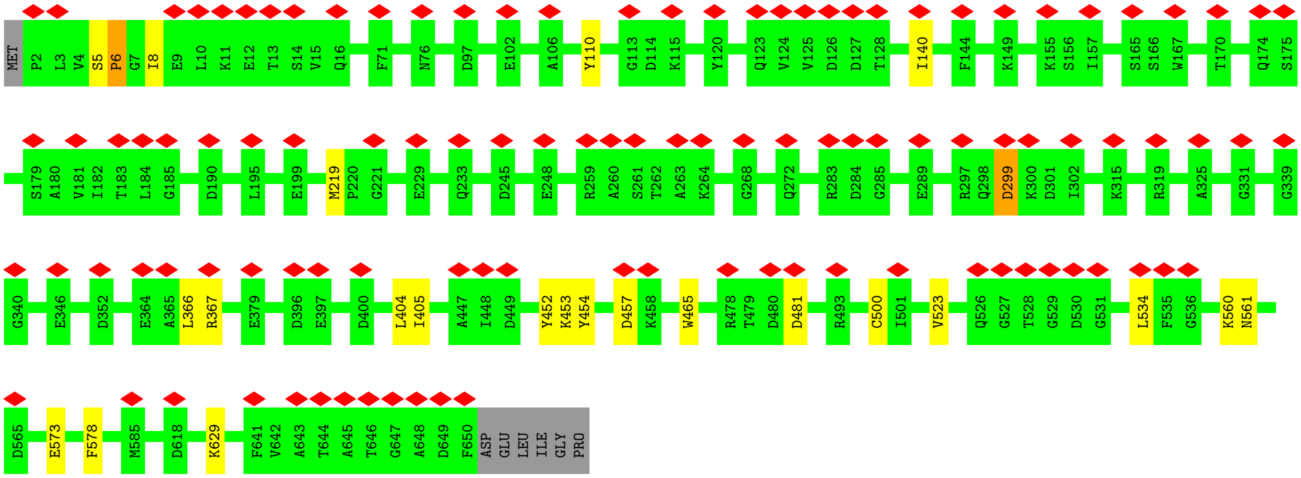




- Molecule 9: Tail sheath protein

Chain SA:





- Molecule 9: Tail sheath protein

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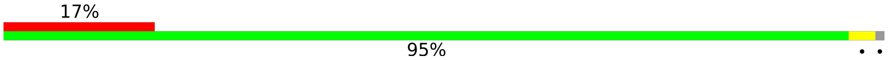

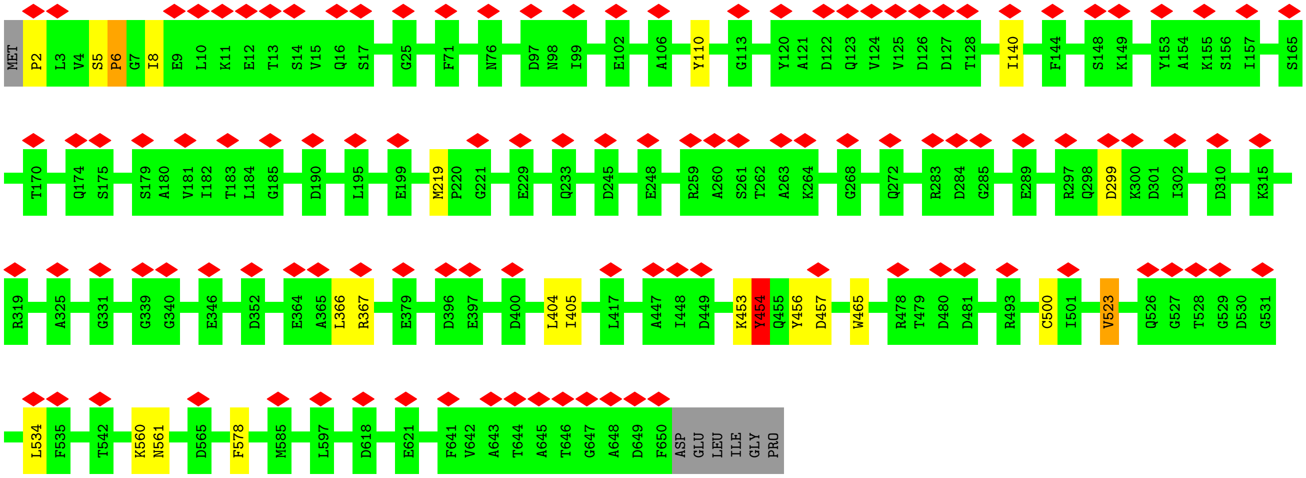

- Molecule 9: Tail sheath protein

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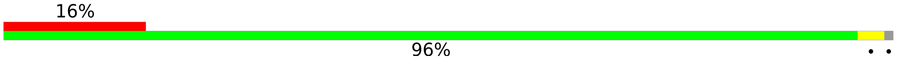

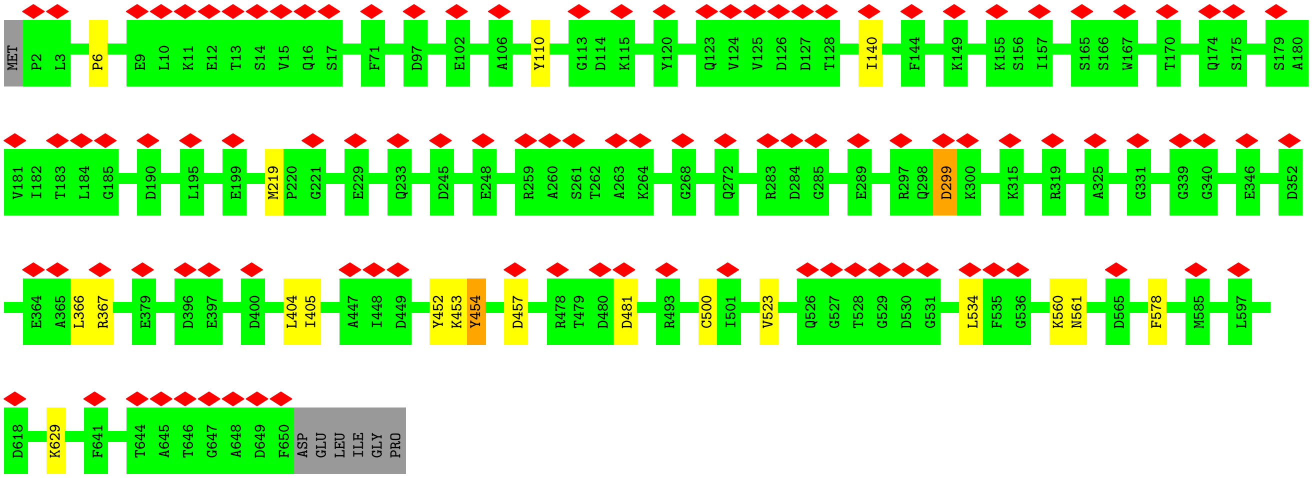

- Molecule 9: Tail sheath protein

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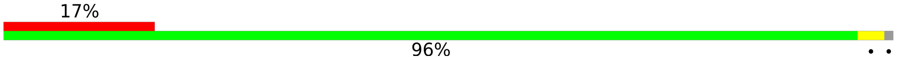

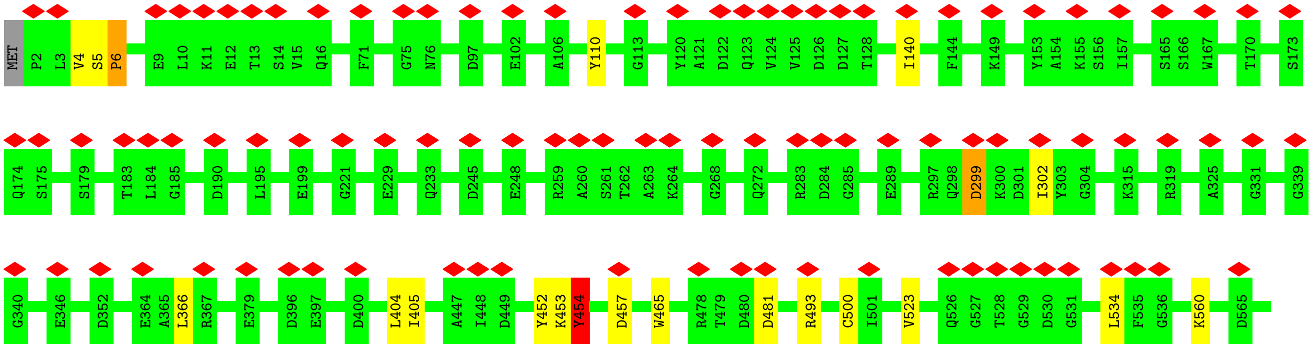

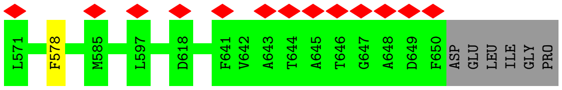

- Molecule 9: Tail sheath protein

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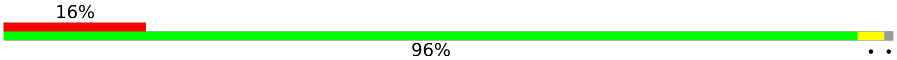
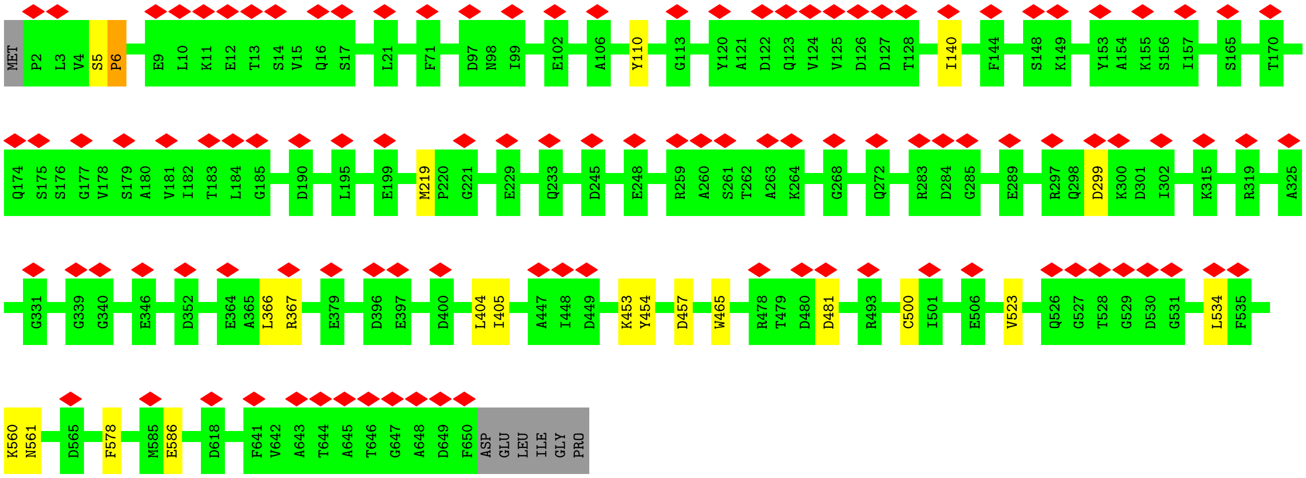
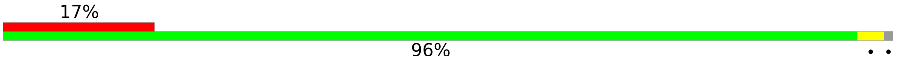
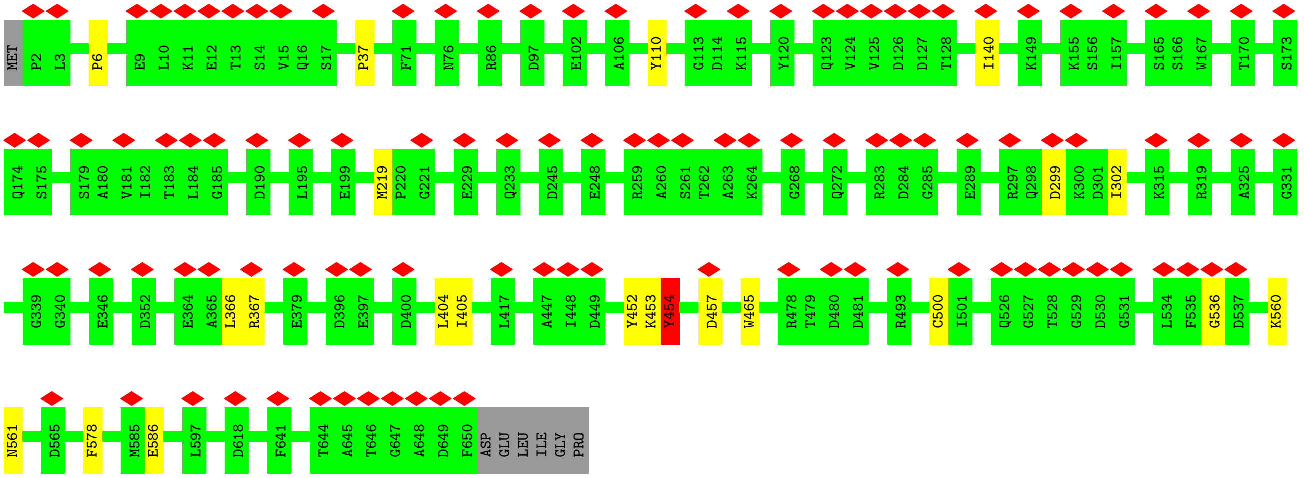




- Molecule 9: Tail sheath protein

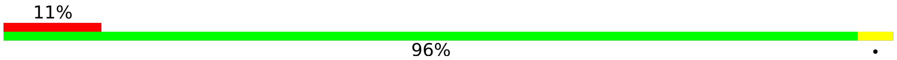
Chain SF:

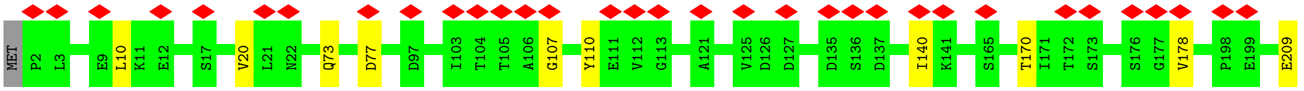


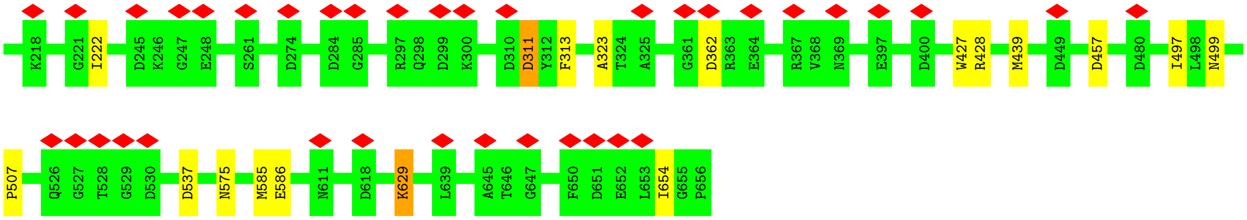


- Molecule 9: Tail sheath protein

Chain SK:

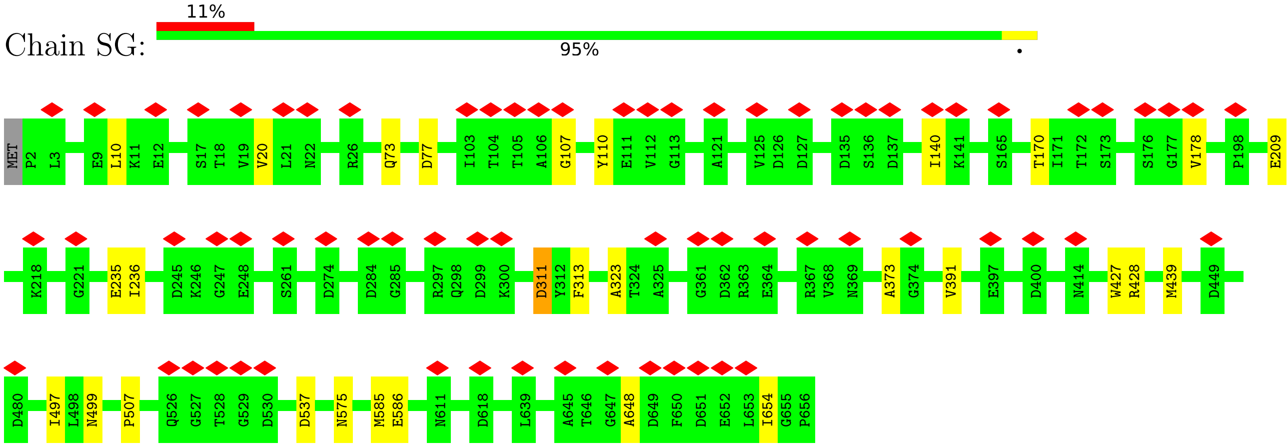






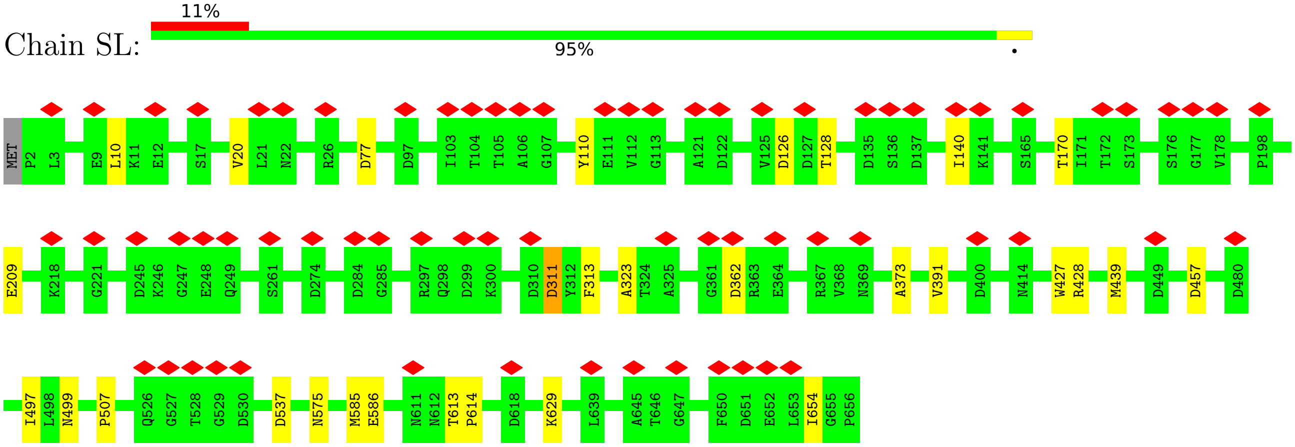
- Molecule 9: Tail sheath protein

Chain SG:



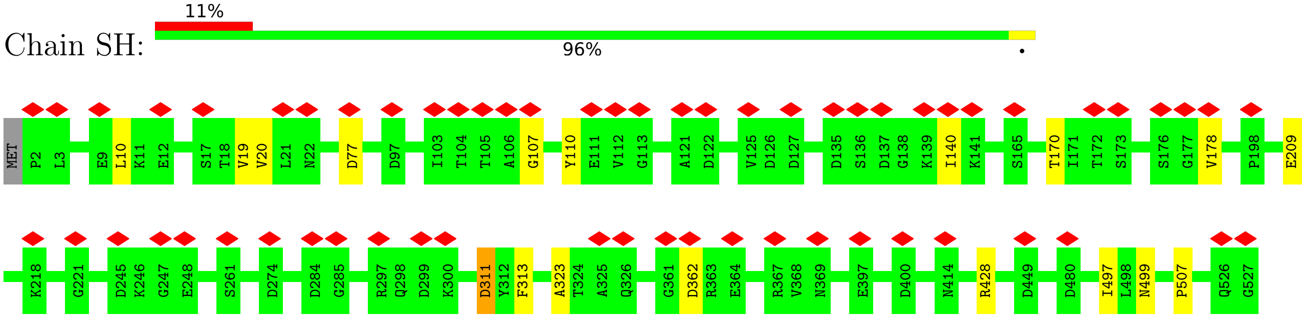
- Molecule 9: Tail sheath protein

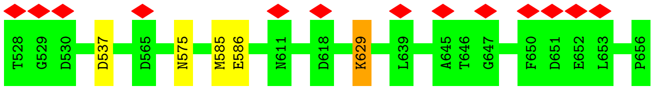
Chain SL:



- Molecule 9: Tail sheath protein

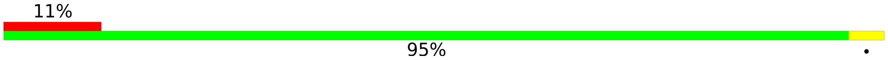
Chain SH:

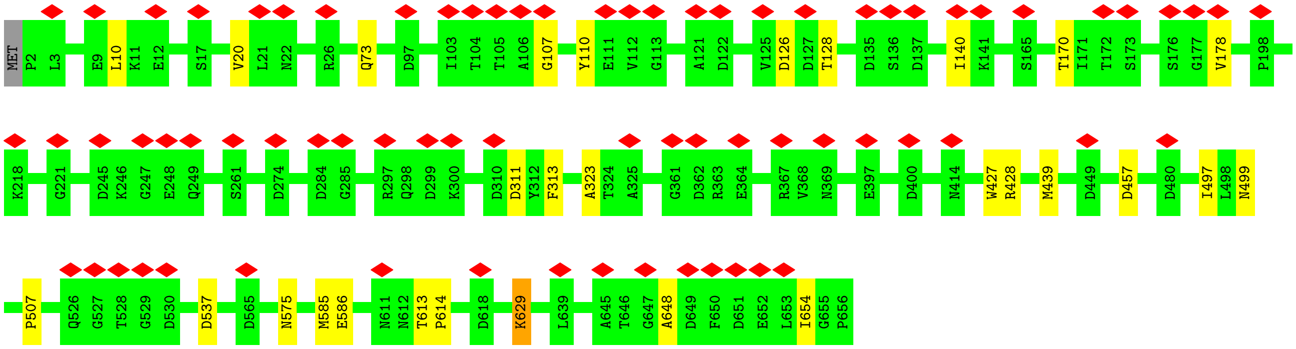




- Molecule 9: Tail sheath protein

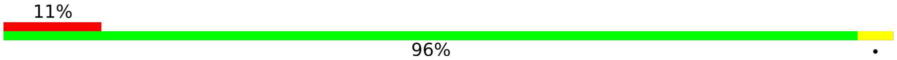
Chain SI:

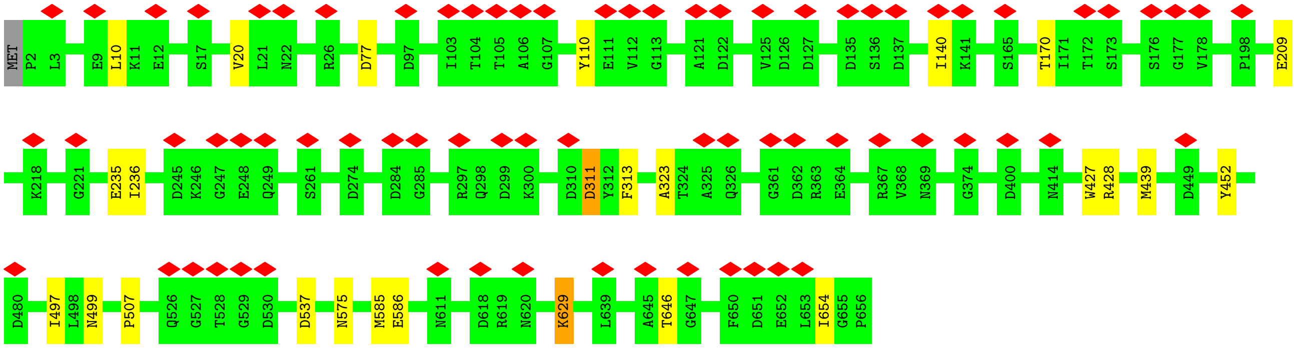




- Molecule 9: Tail sheath protein

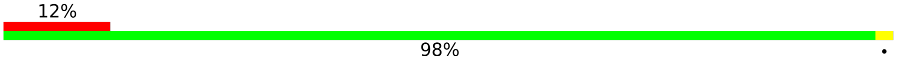
Chain SJ:

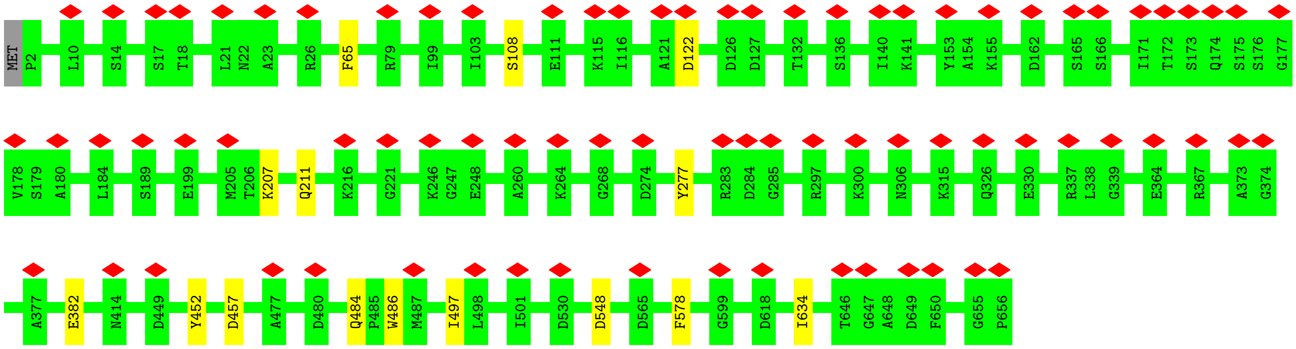




- Molecule 9: Tail sheath protein

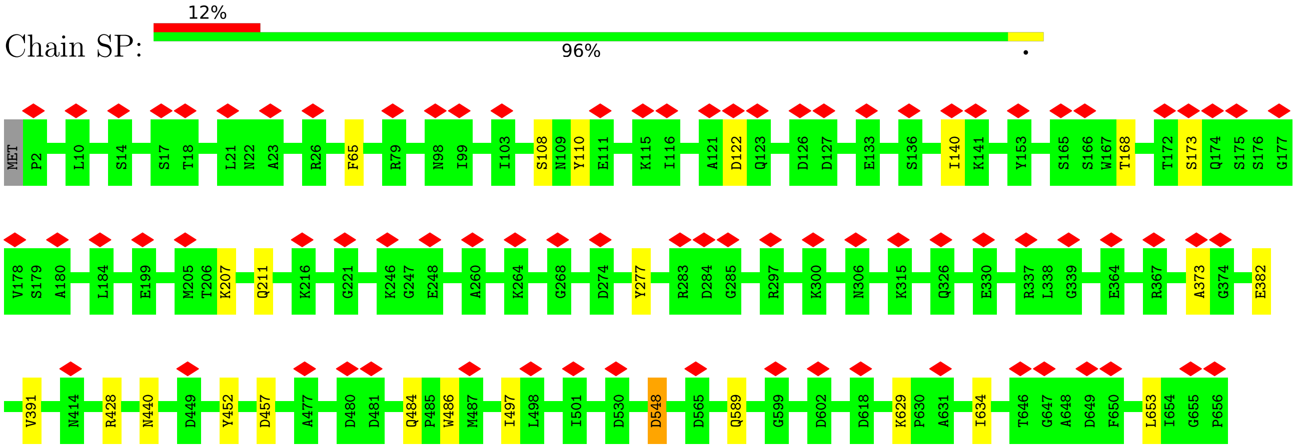
Chain SQ:





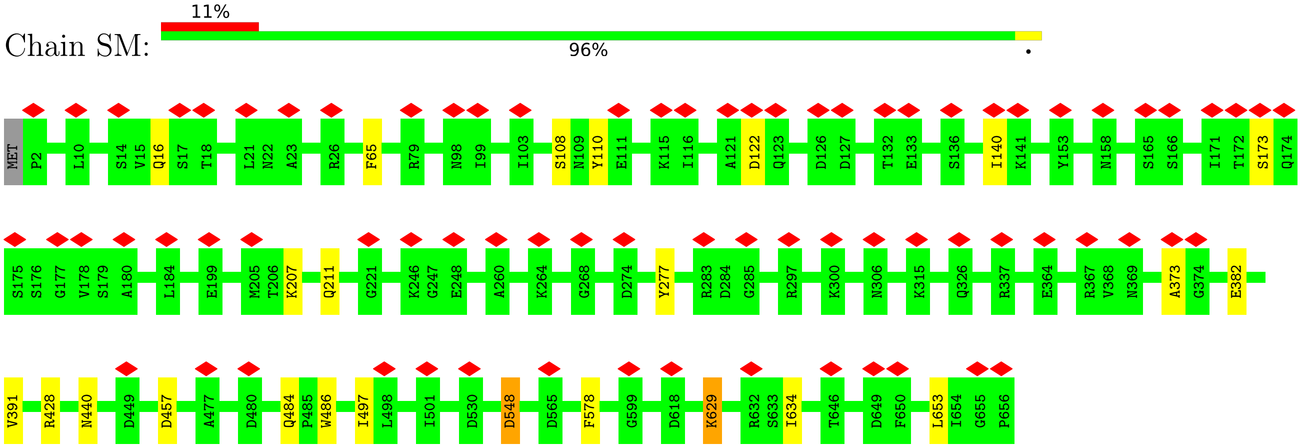
- Molecule 9: Tail sheath protein

Chain SP:



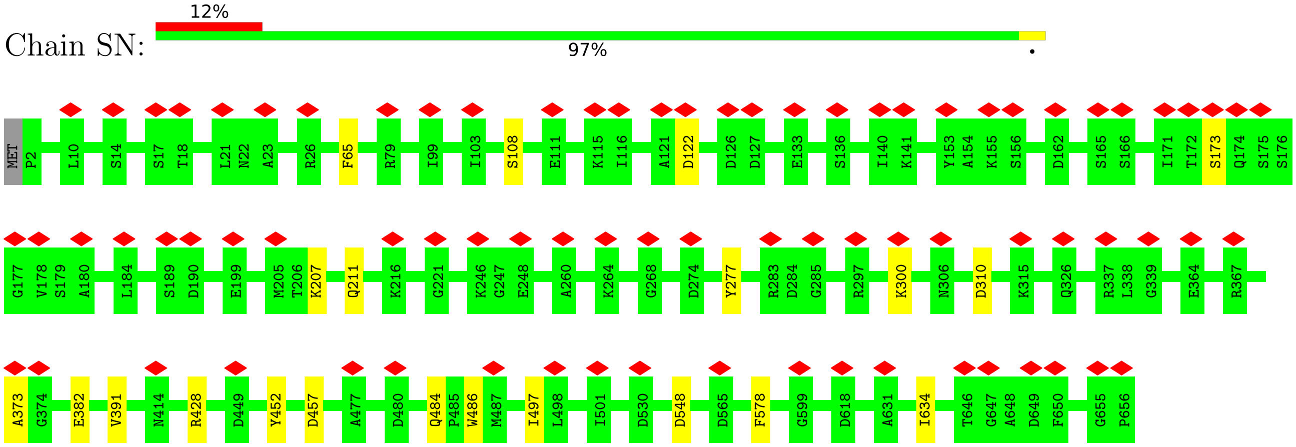
- Molecule 9: Tail sheath protein

Chain SM:



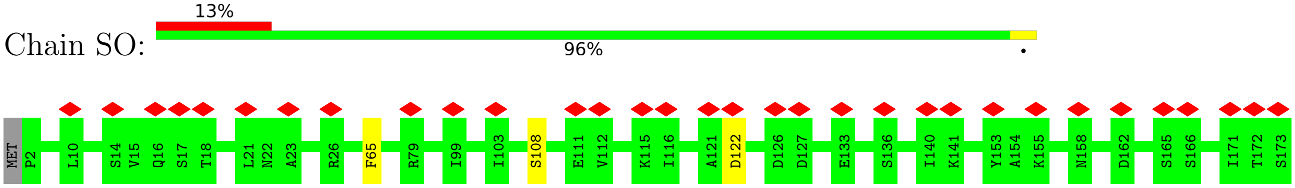
- Molecule 9: Tail sheath protein

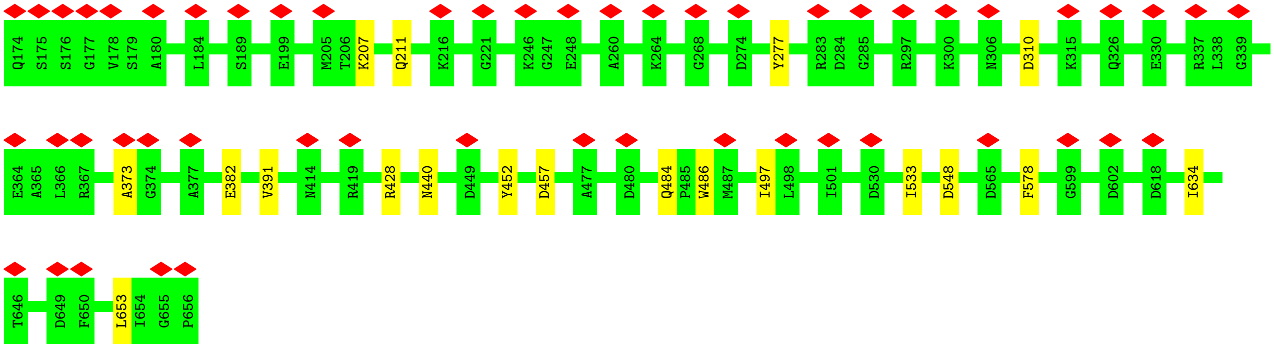
Chain SN:



- Molecule 9: Tail sheath protein

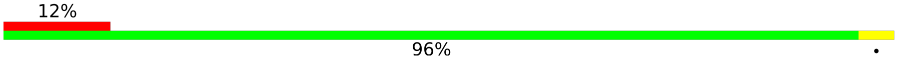
Chain SO:

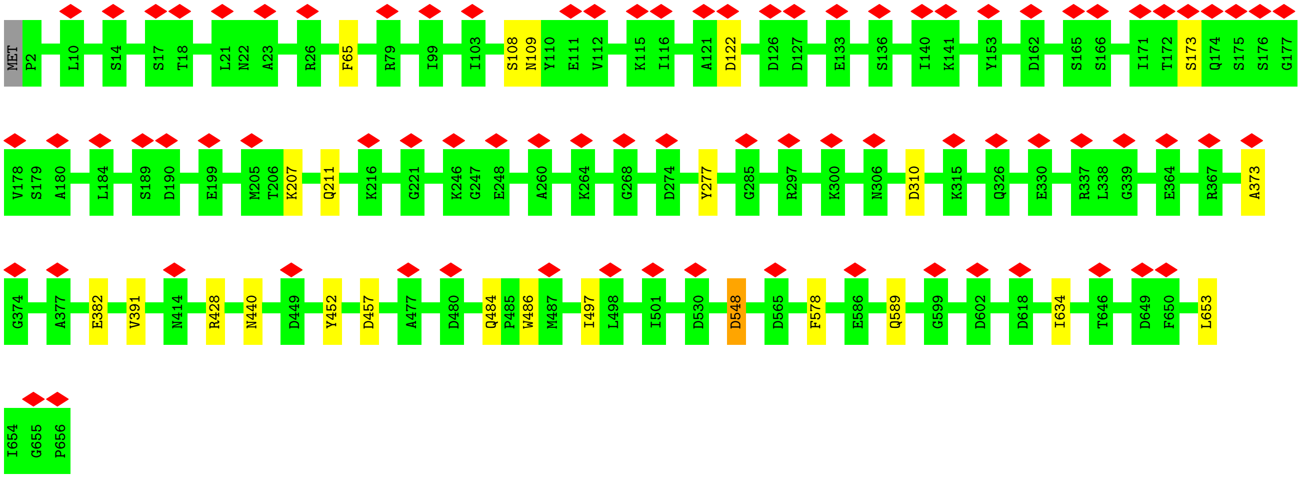




- Molecule 9: Tail sheath protein

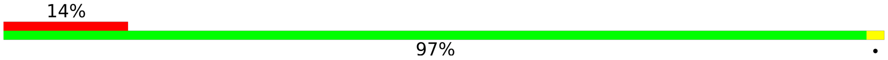
Chain SR:

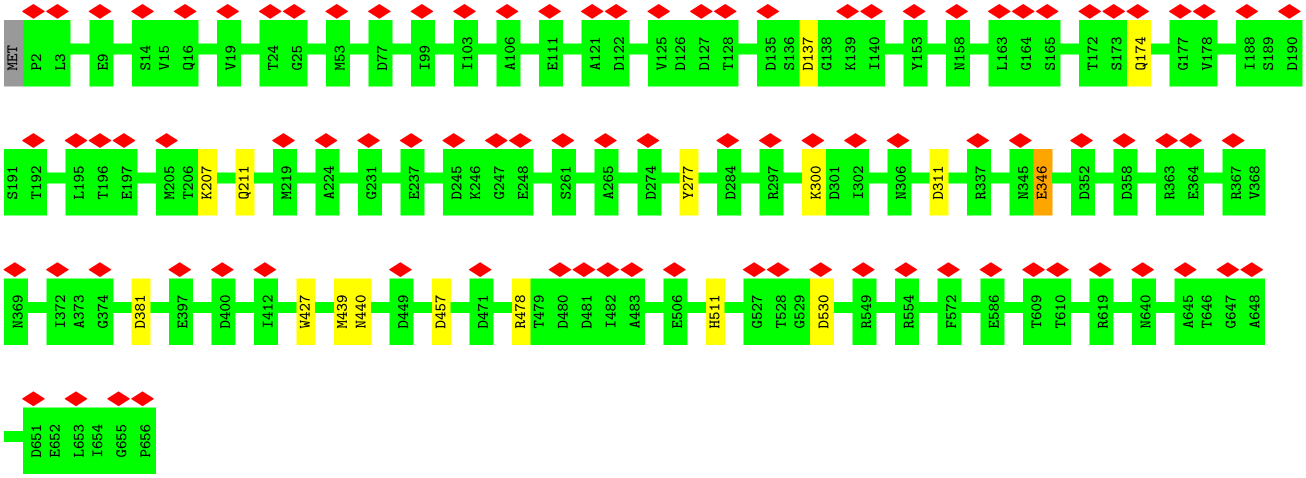




- Molecule 9: Tail sheath protein

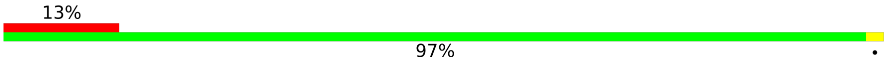
Chain SW:

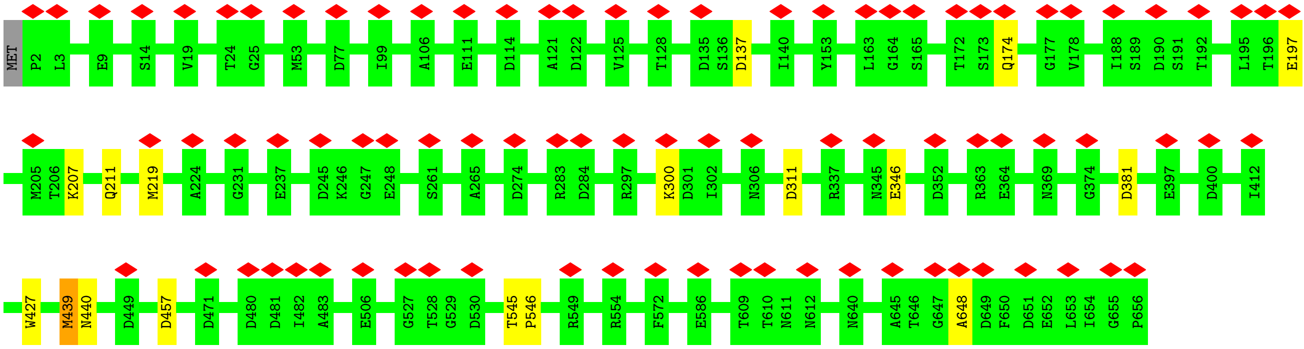




- Molecule 9: Tail sheath protein

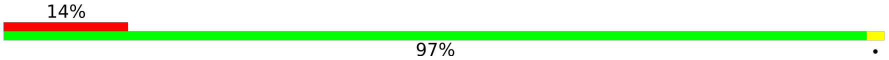
Chain SS:

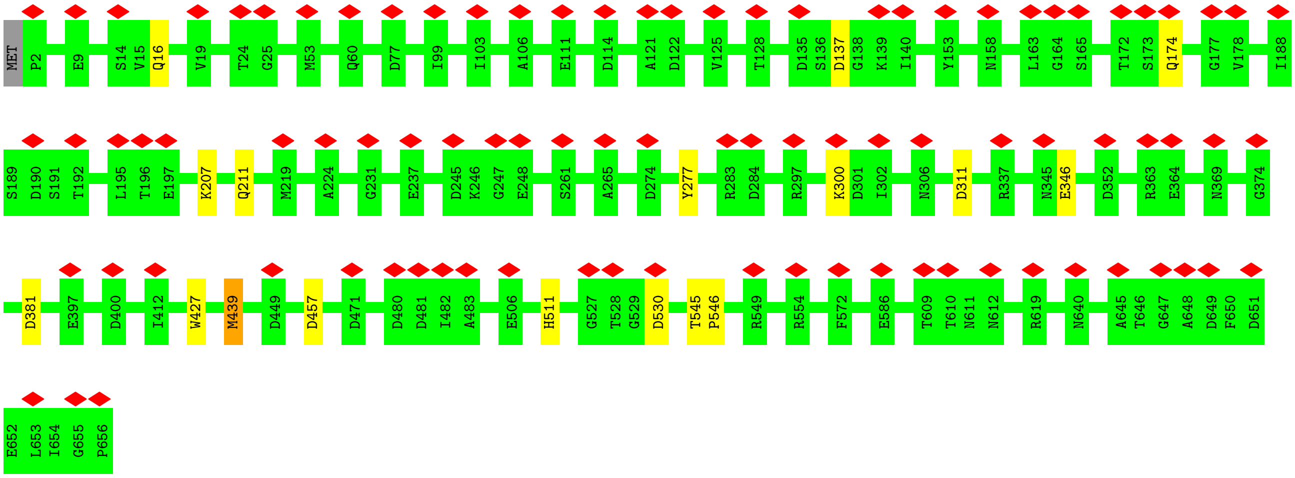




- Molecule 9: Tail sheath protein

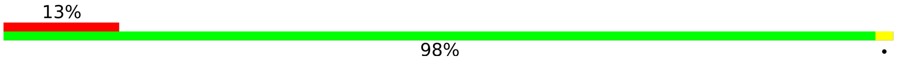
Chain ST:

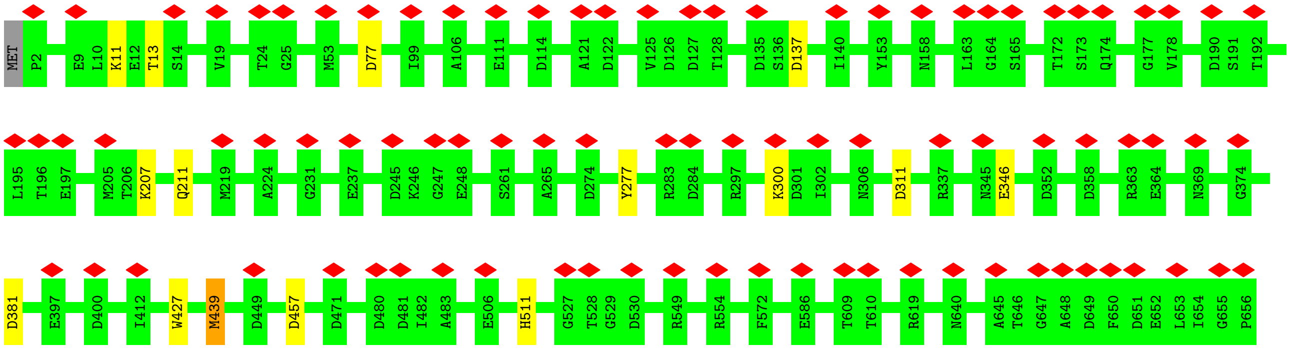




- Molecule 9: Tail sheath protein

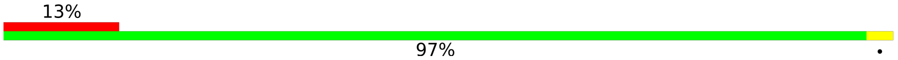
Chain SU:

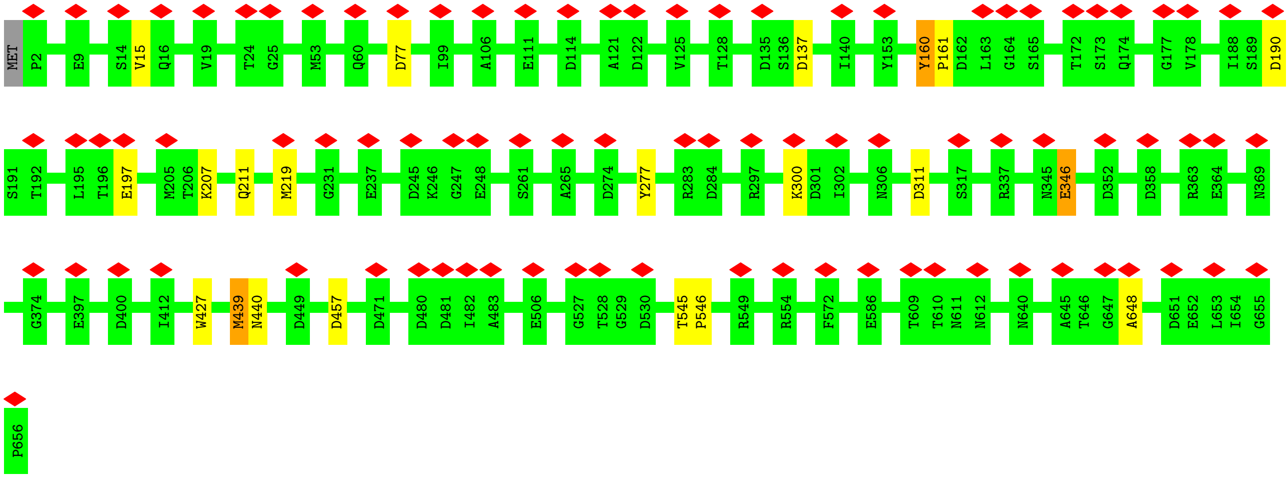




- Molecule 9: Tail sheath protein

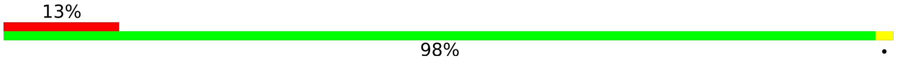
Chain SV:

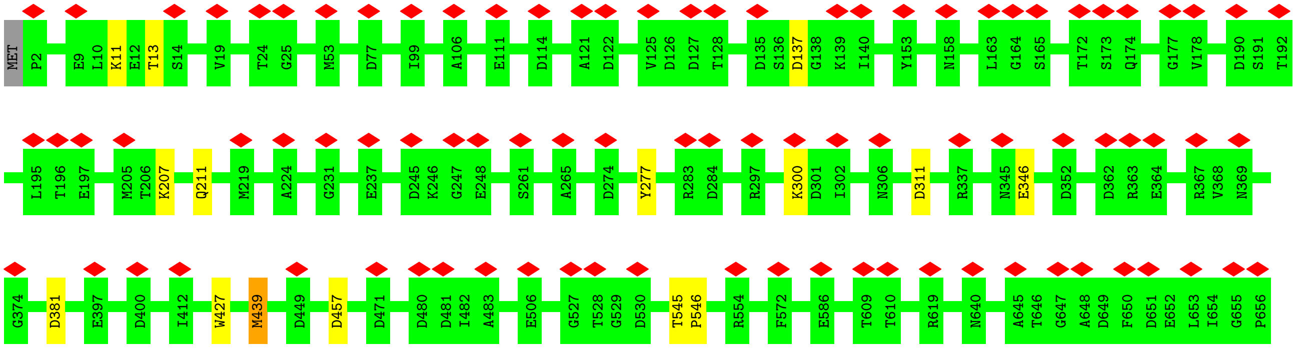




• Molecule 9: Tail sheath protein

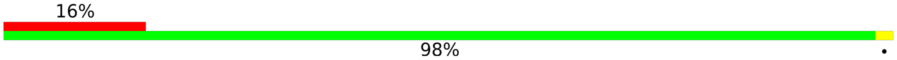
Chain SX:

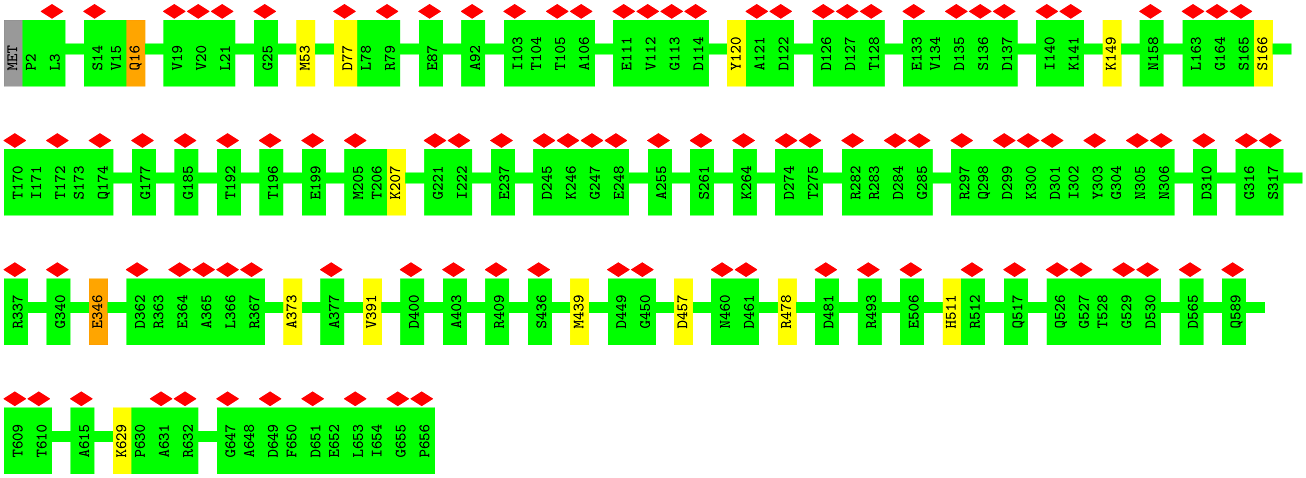




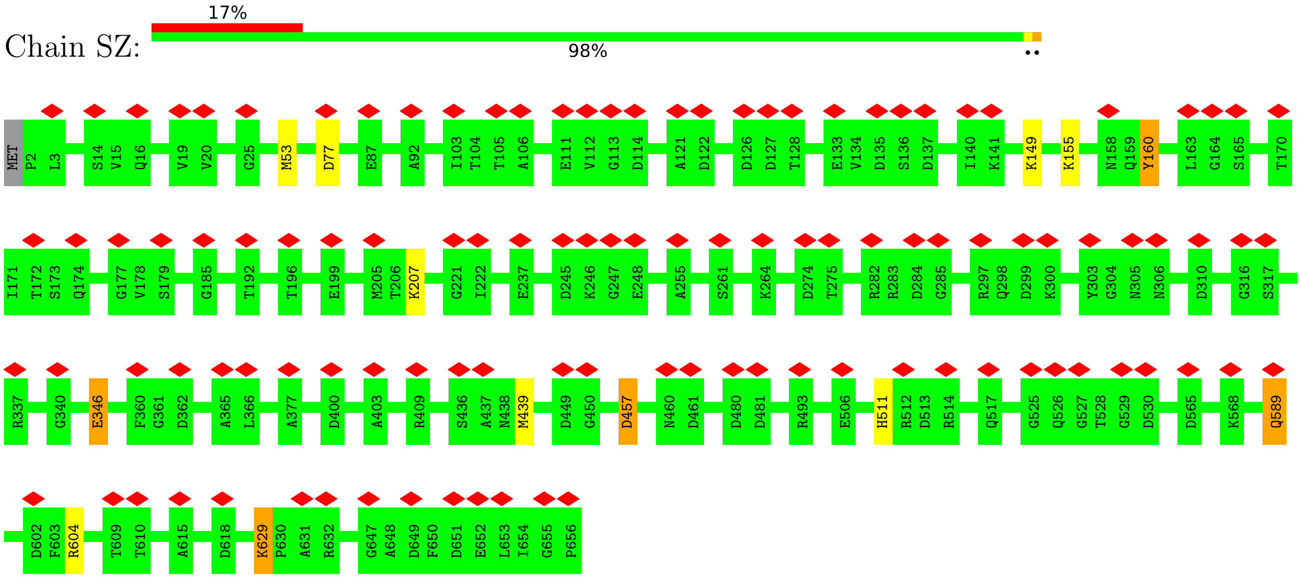
• Molecule 9: Tail sheath protein

Chain SY:

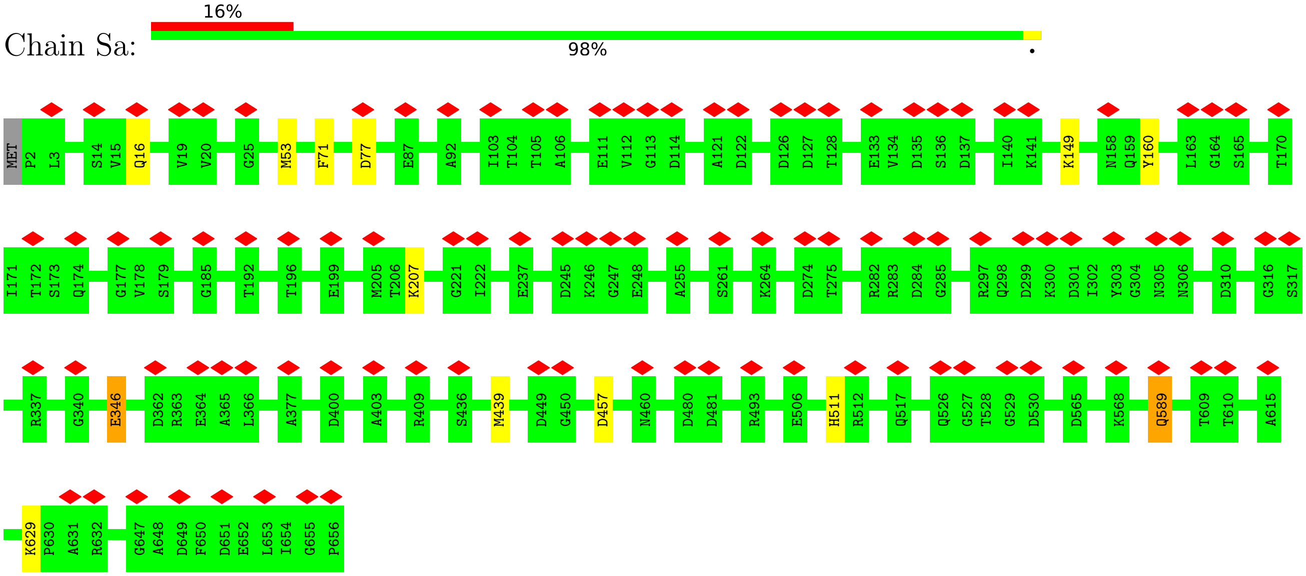




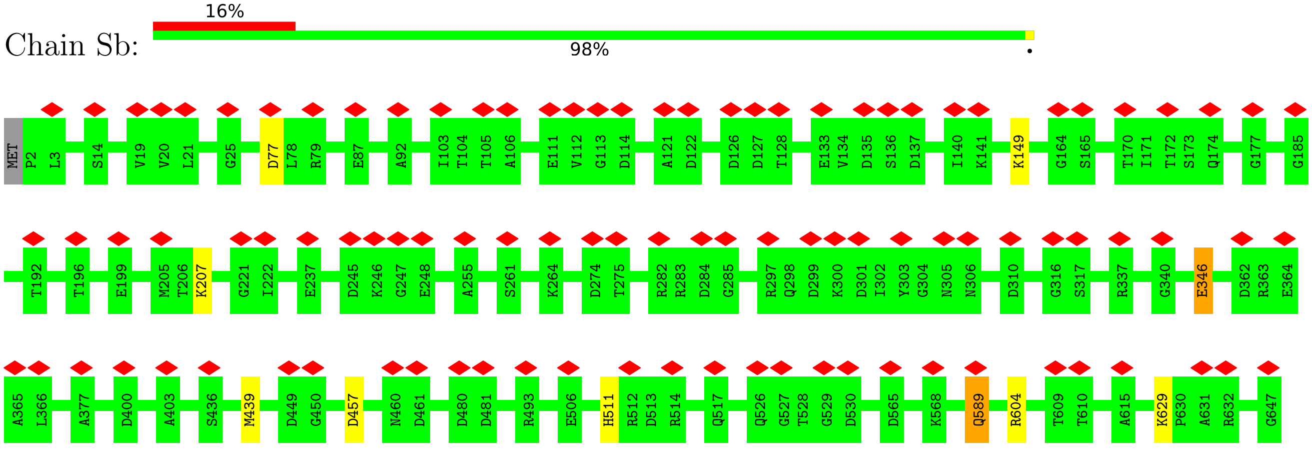
• Molecule 9: Tail sheath protein

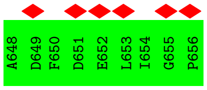


- Molecule 9: Tail sheath protein



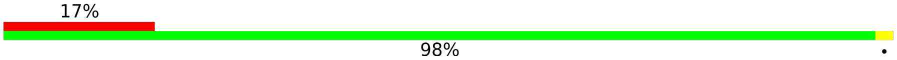
- Molecule 9: Tail sheath protein

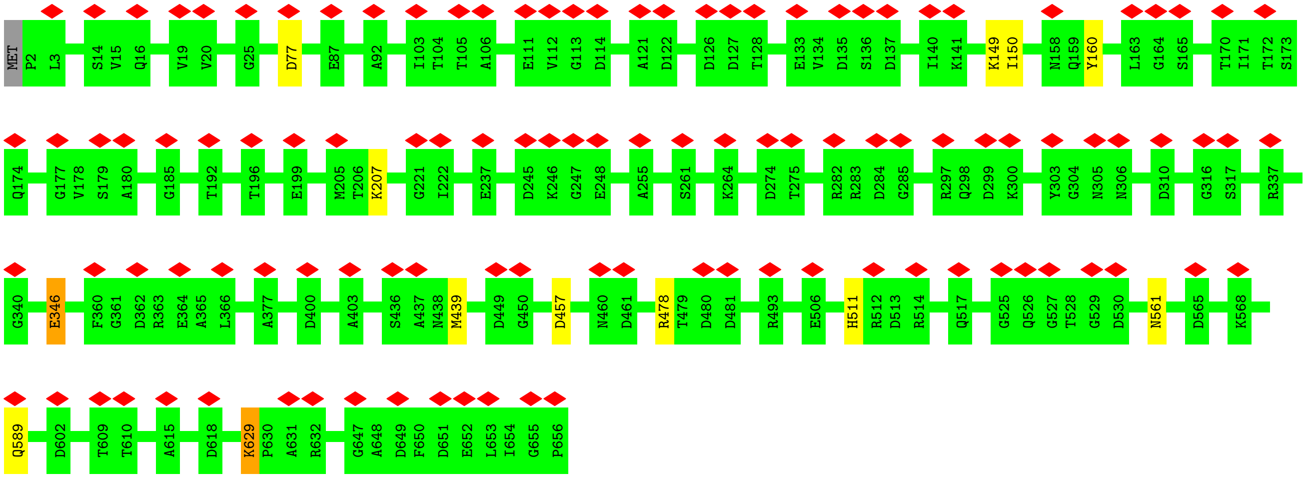




- Molecule 9: Tail sheath protein

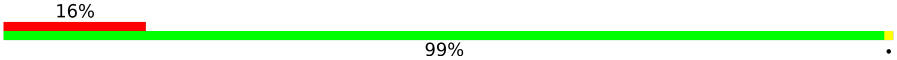
Chain Sc:

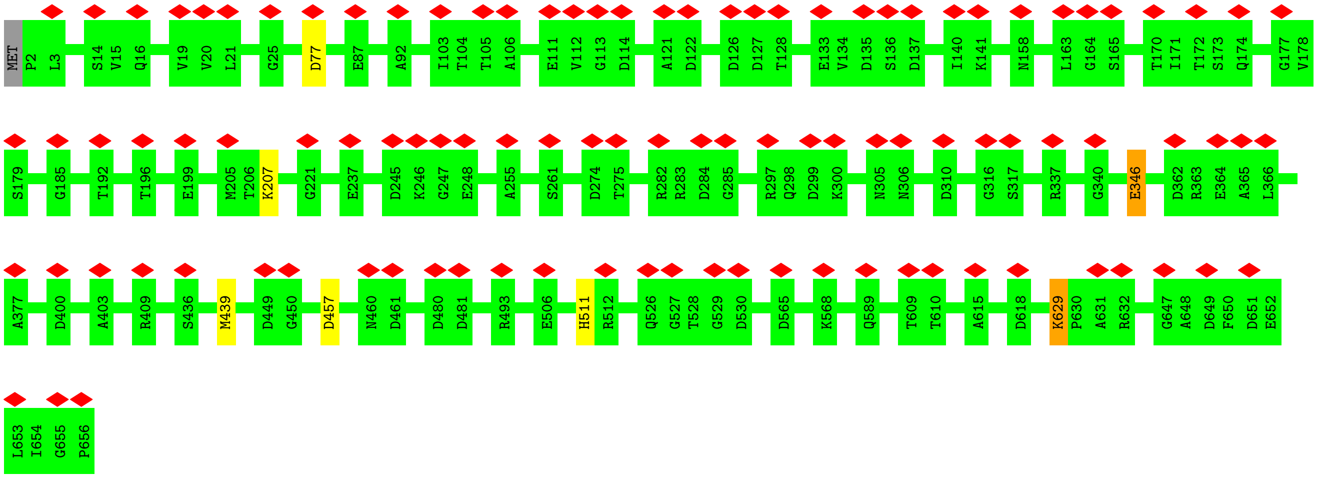




- Molecule 9: Tail sheath protein

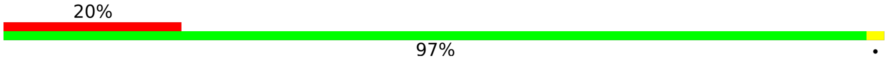
Chain Sd:

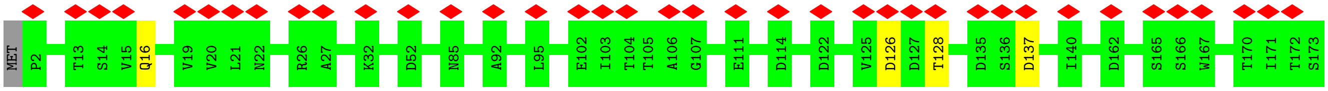


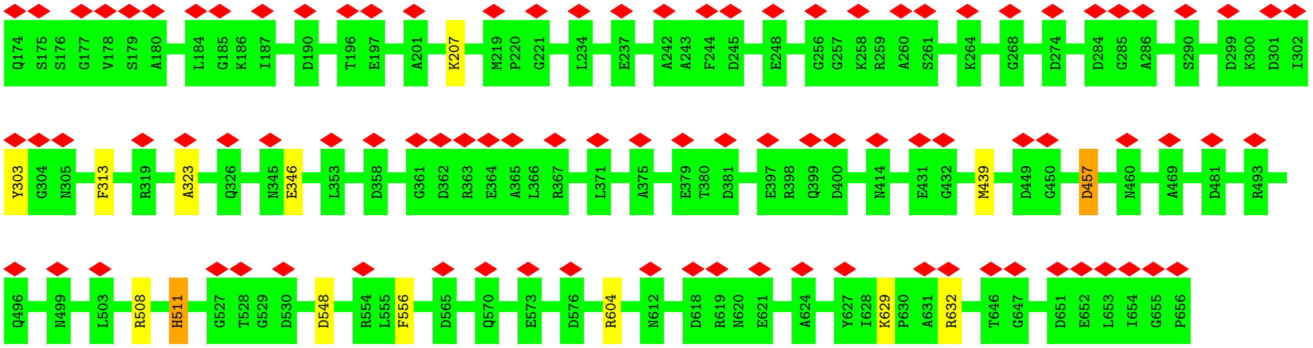


- Molecule 9: Tail sheath protein

Chain Se:

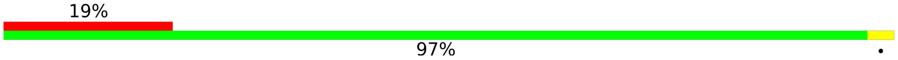


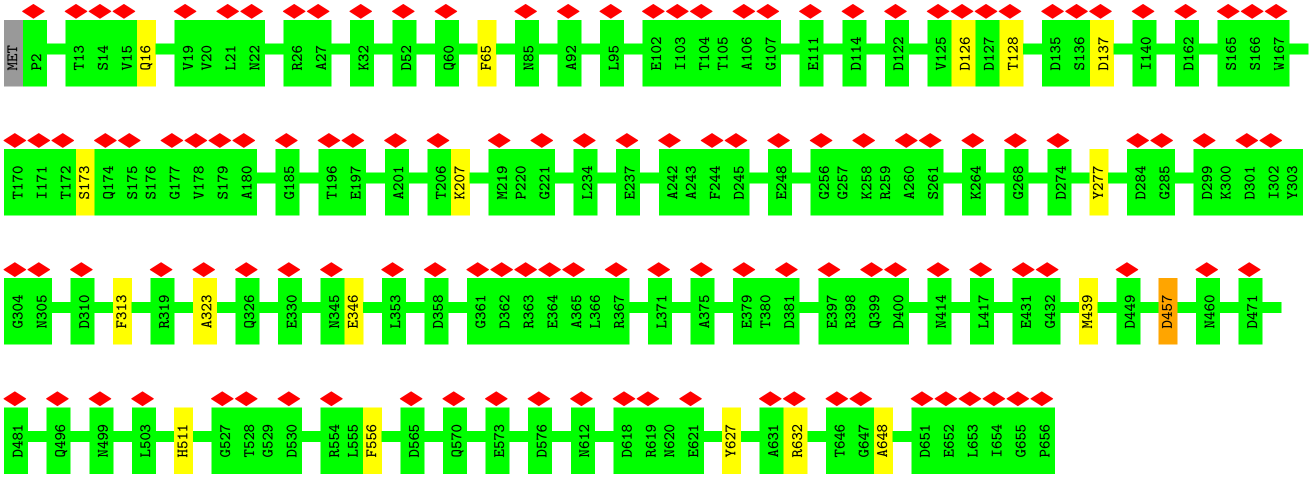




- Molecule 9: Tail sheath protein

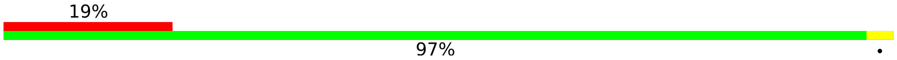
Chain Sf:

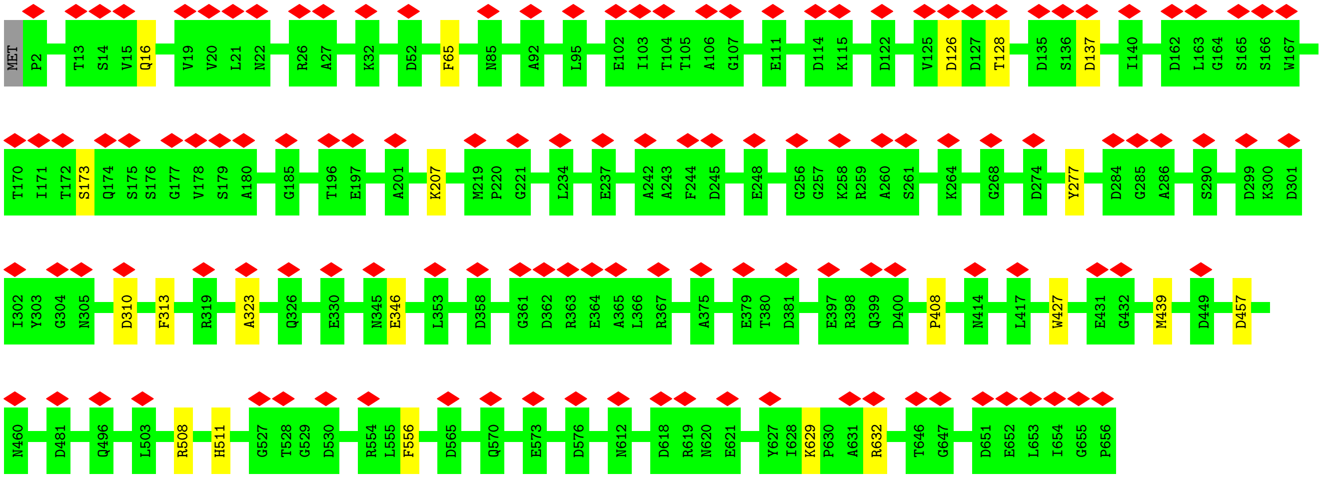




- Molecule 9: Tail sheath protein

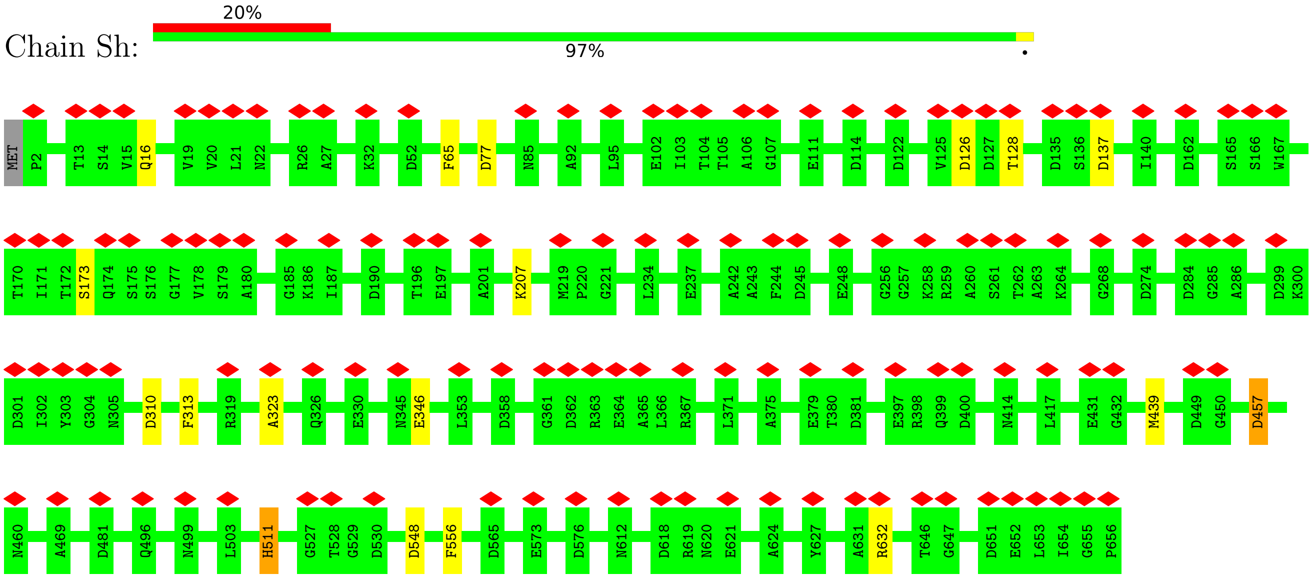
Chain Sg:





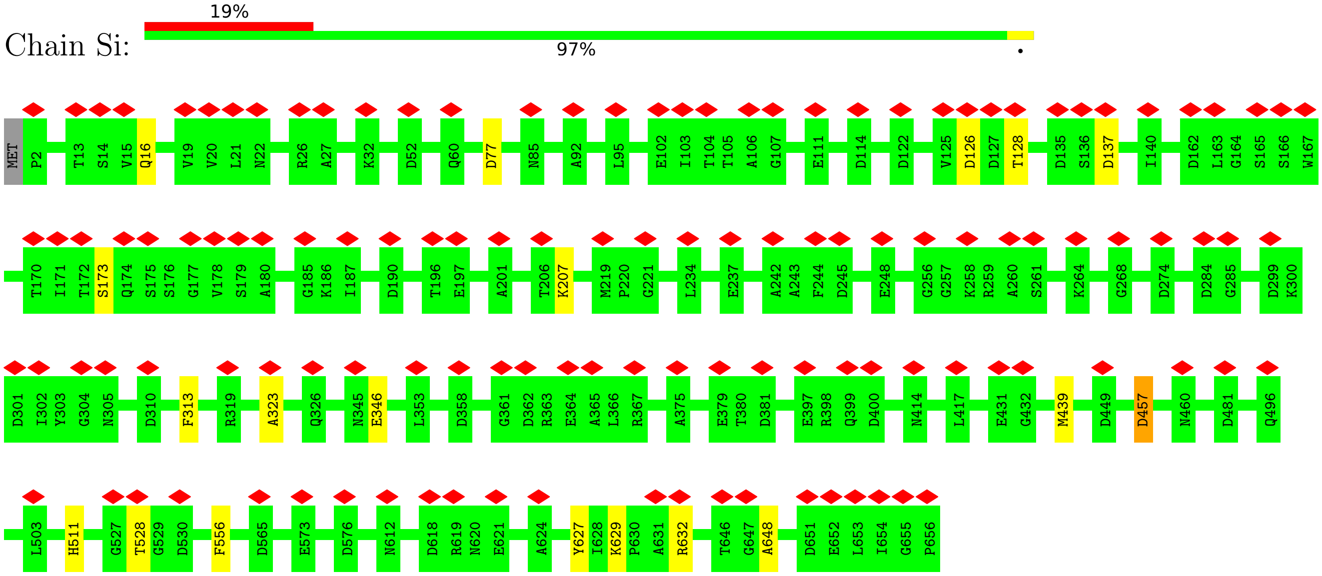
- Molecule 9: Tail sheath protein

Chain Sh:



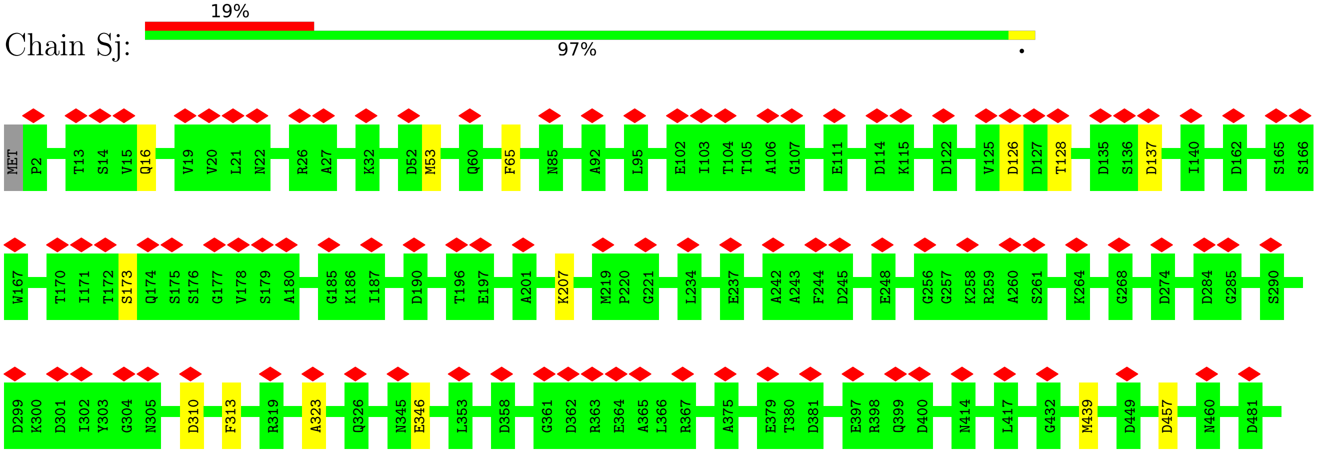
- Molecule 9: Tail sheath protein

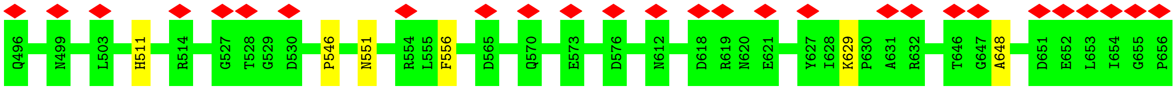
Chain Si:



- Molecule 9: Tail sheath protein

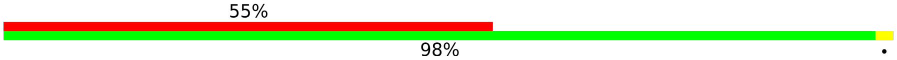
Chain Sj:

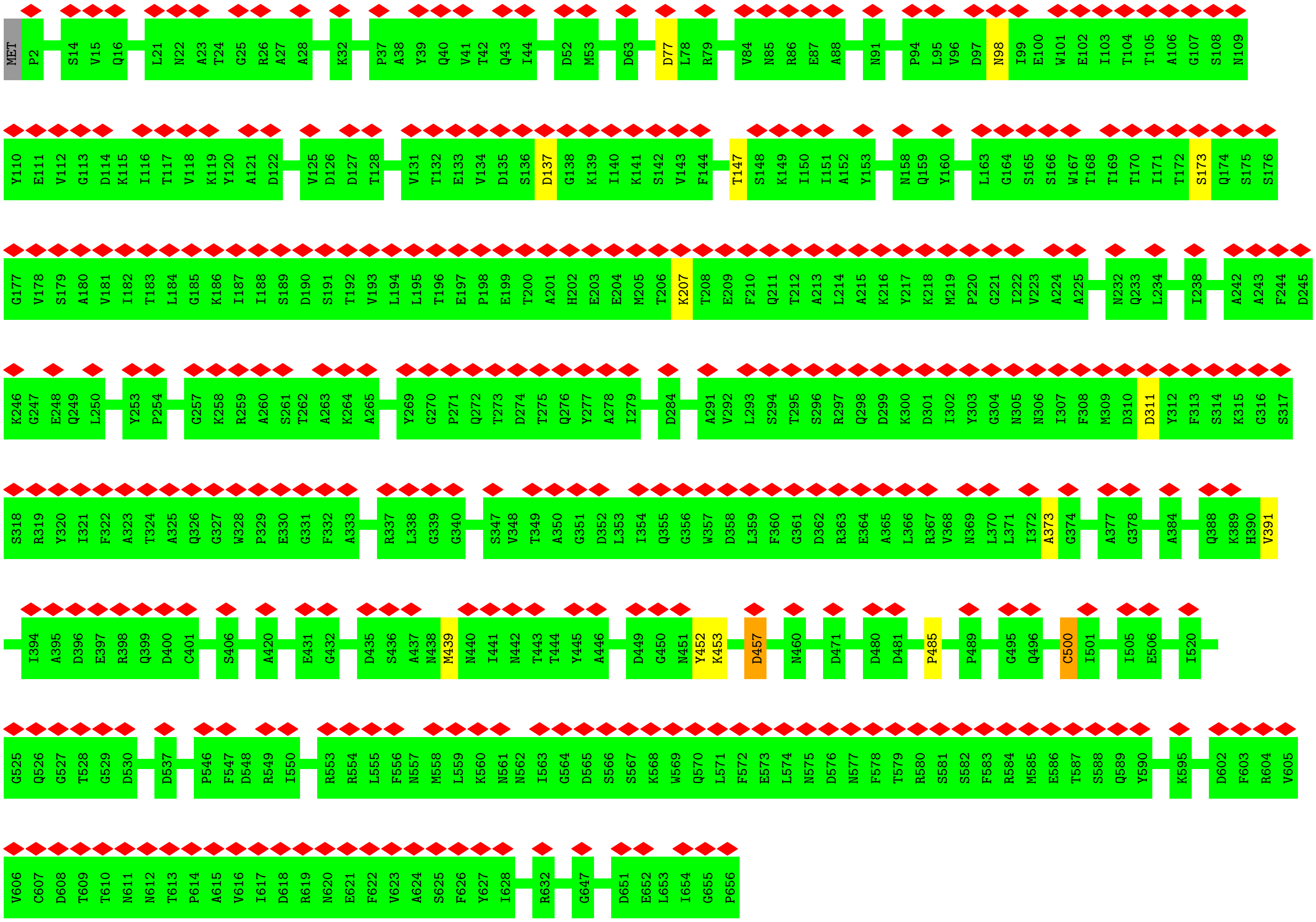




- Molecule 9: Tail sheath protein

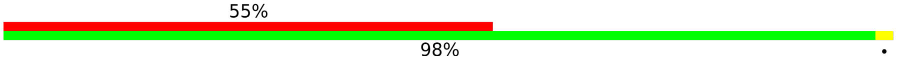
Chain Sk:

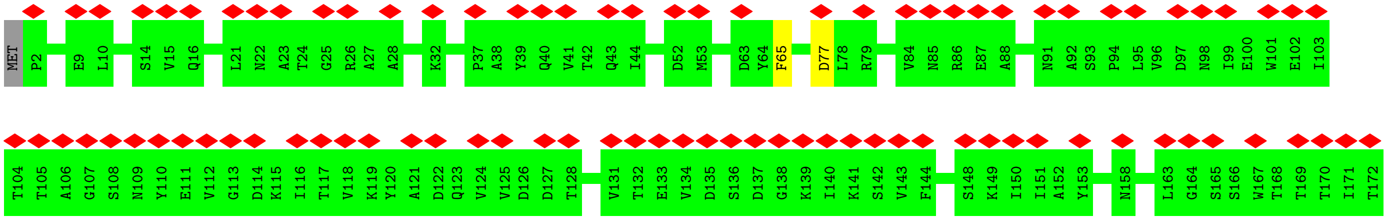


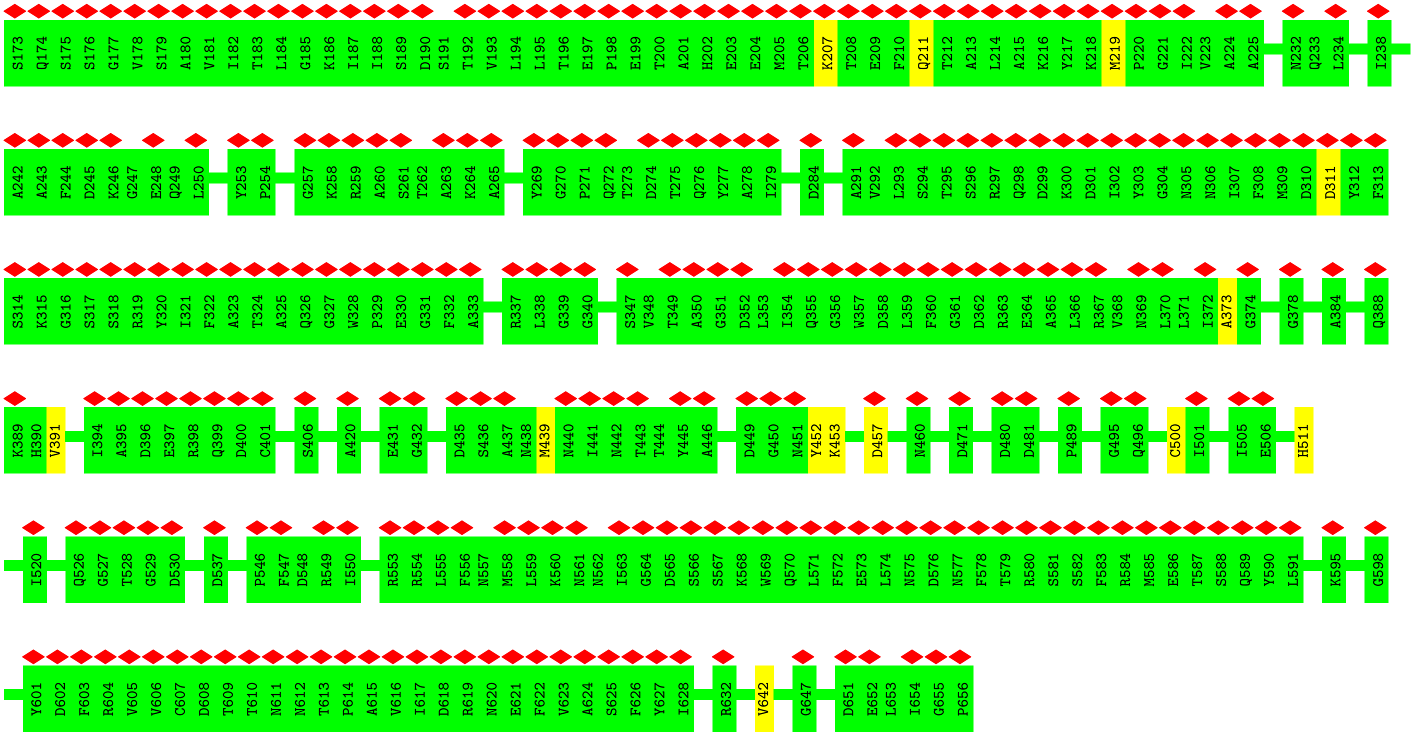


- Molecule 9: Tail sheath protein

Chain Sl:

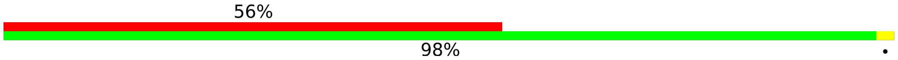


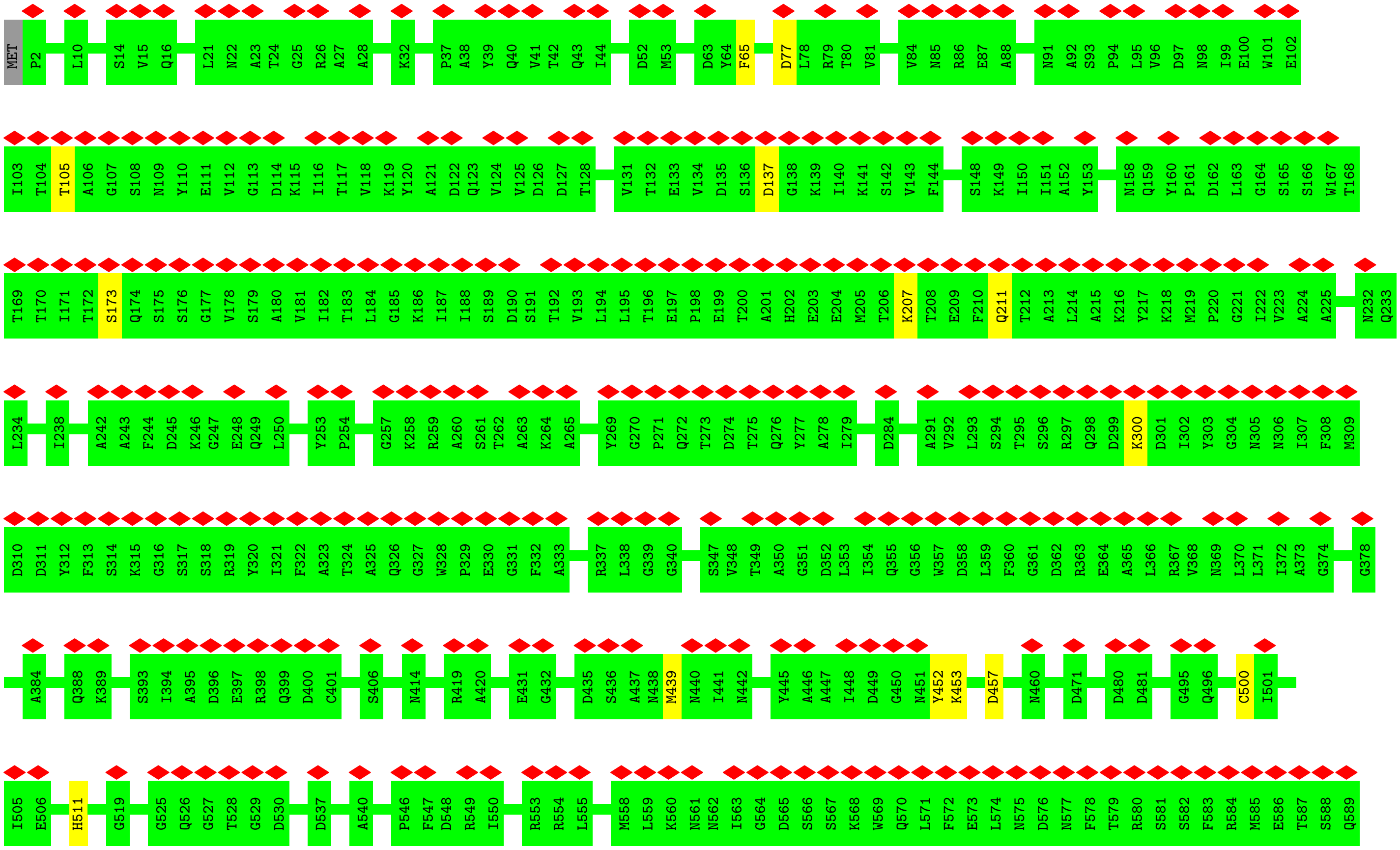


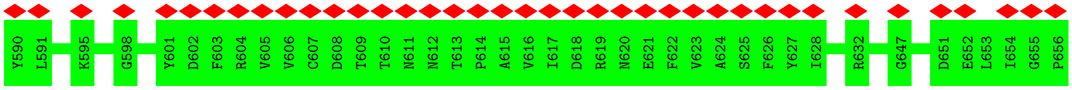


- Molecule 9: Tail sheath protein

Chain Sm:

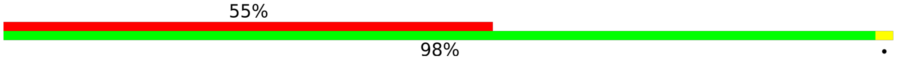


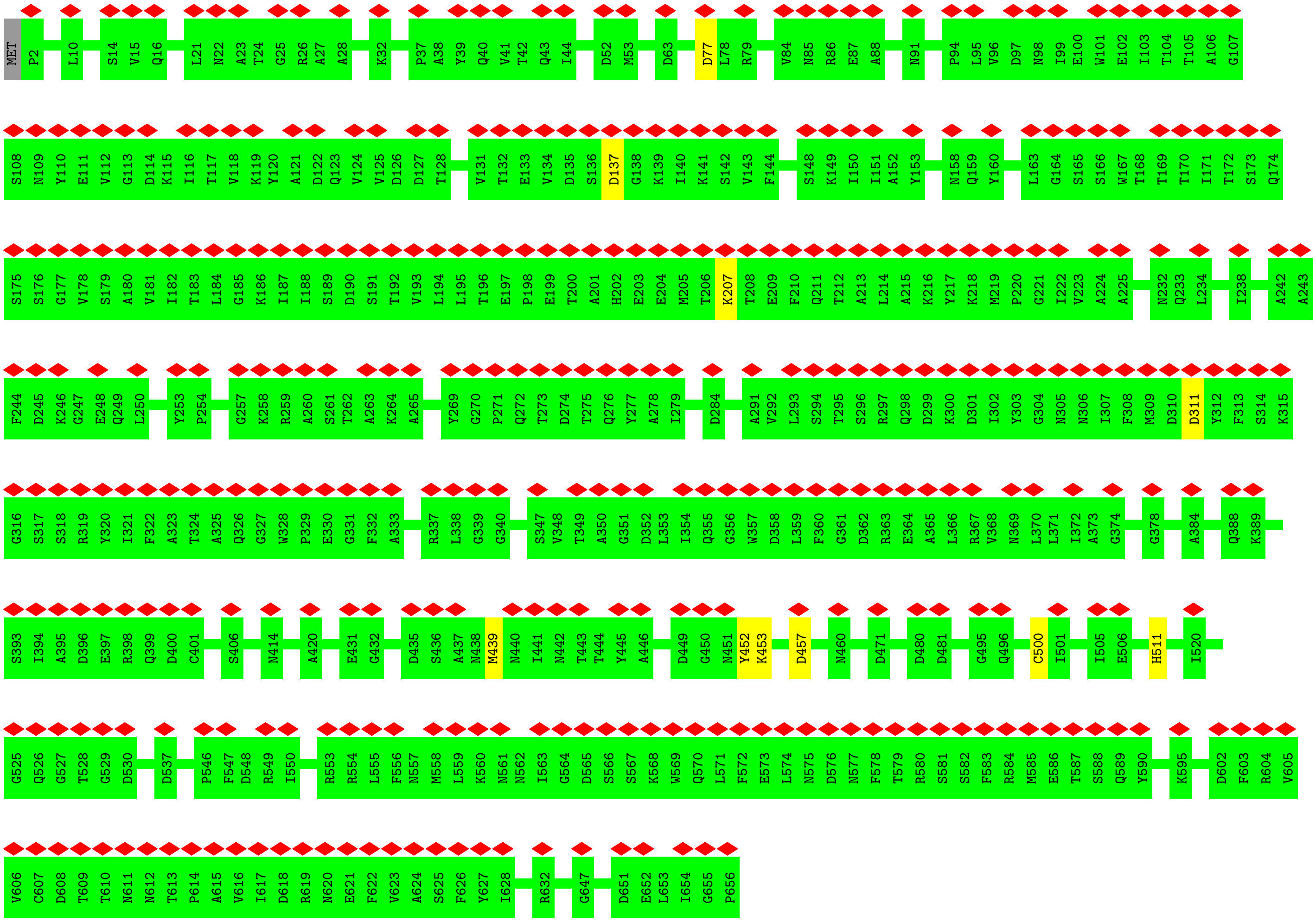




- Molecule 9: Tail sheath protein

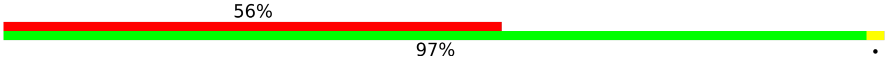
Chain Sn:

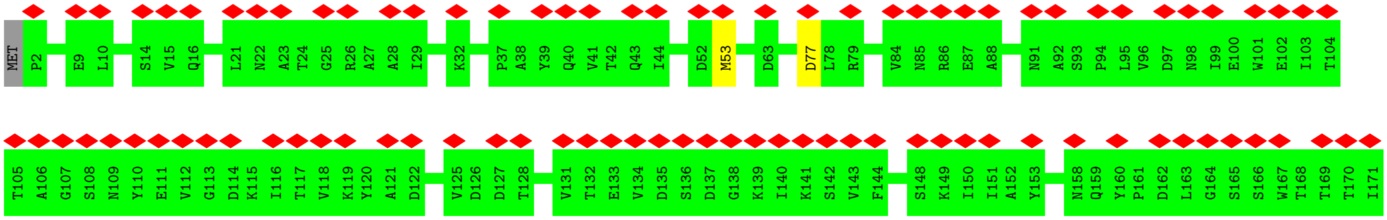


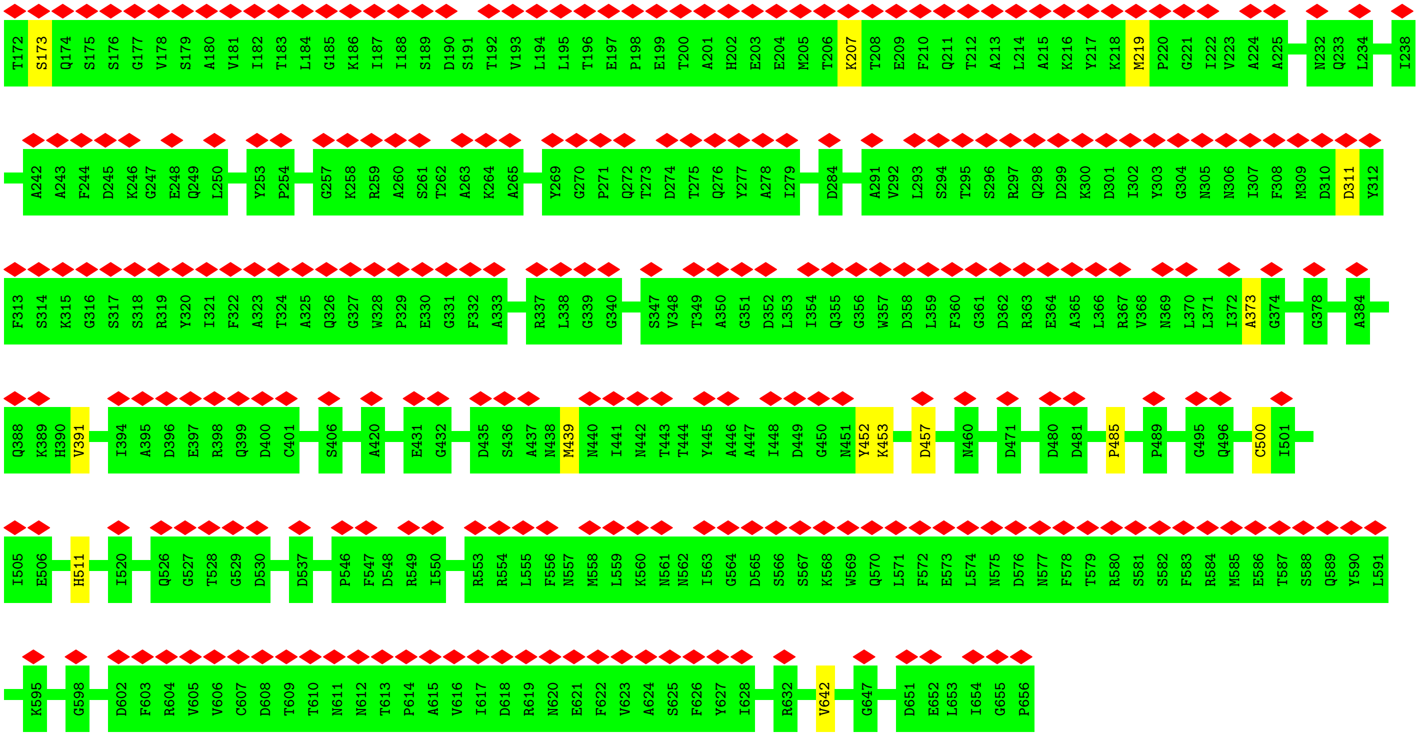


- Molecule 9: Tail sheath protein

Chain So:

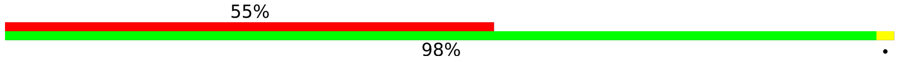


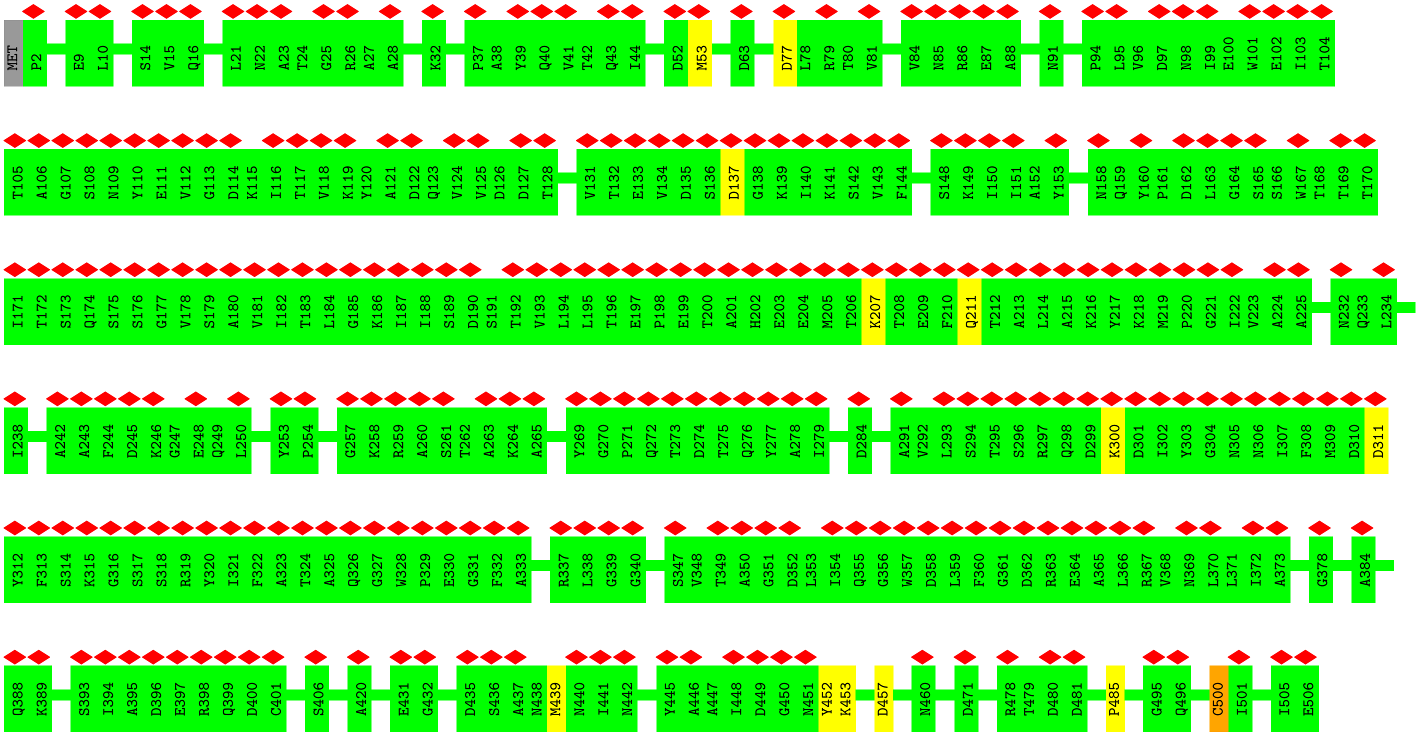


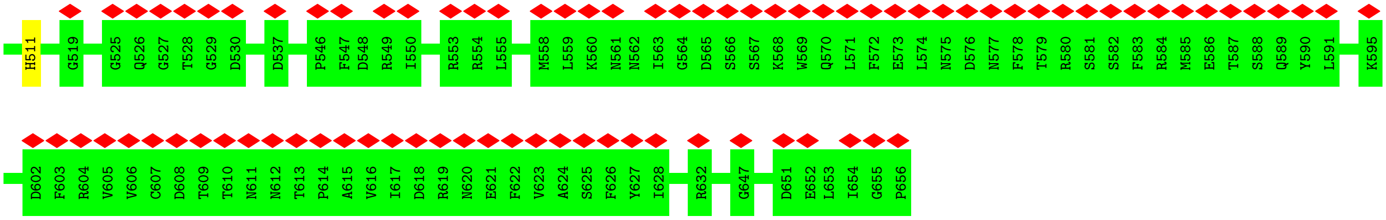


- Molecule 9: Tail sheath protein

Chain Sp:

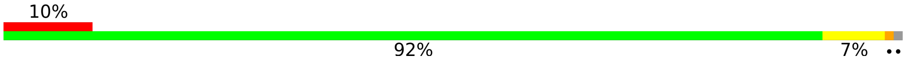


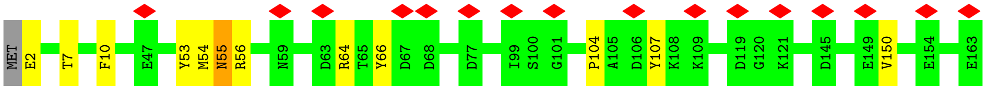




- Molecule 10: Tail tube protein

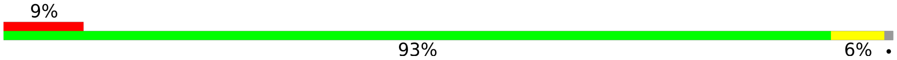
Chain TM:

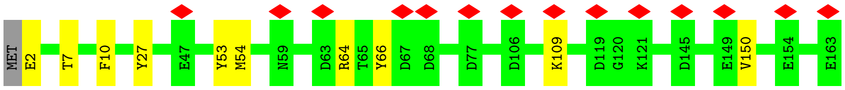




- Molecule 10: Tail tube protein

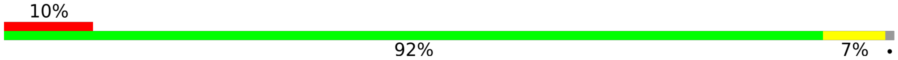
Chain TN:

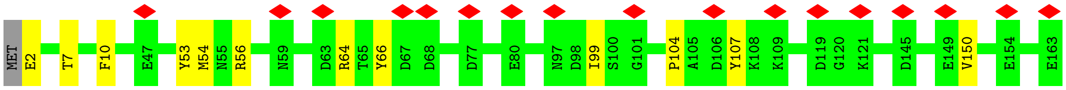




- Molecule 10: Tail tube protein

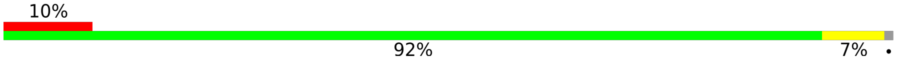
Chain TO:

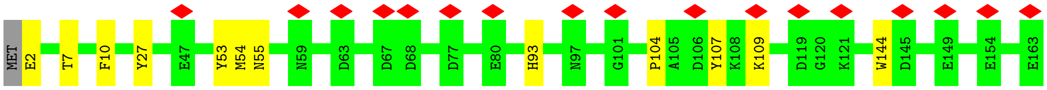




- Molecule 10: Tail tube protein

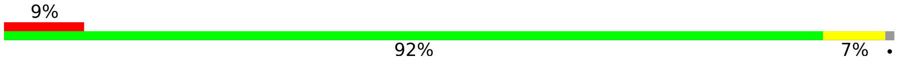
Chain TP:

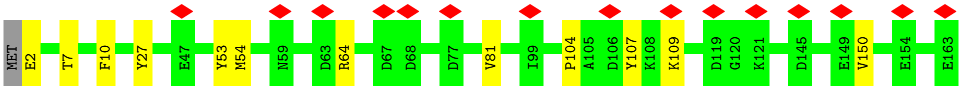




- Molecule 10: Tail tube protein

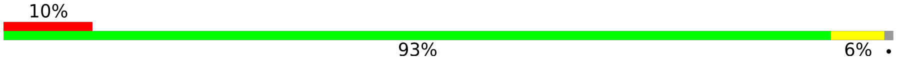
Chain TQ:

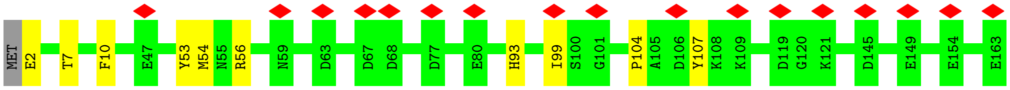




- Molecule 10: Tail tube protein

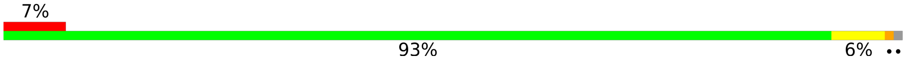
Chain TR:

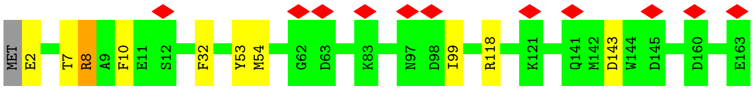




- Molecule 10: Tail tube protein

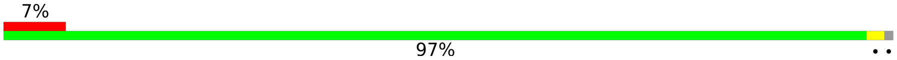
Chain TW:

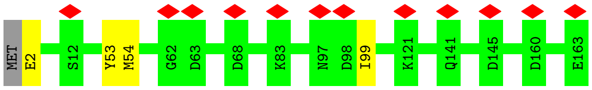




- Molecule 10: Tail tube protein

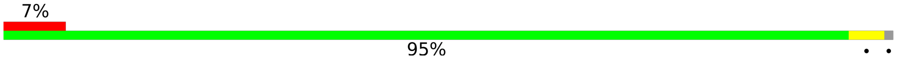
Chain TS:

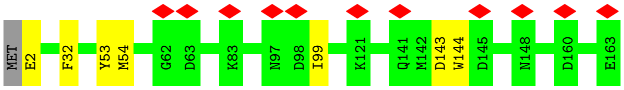




- Molecule 10: Tail tube protein

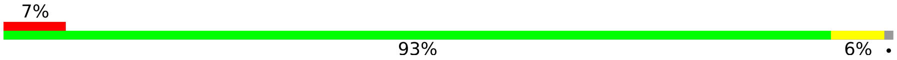
Chain TT:

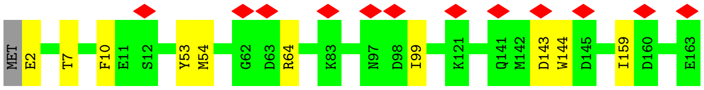




- Molecule 10: Tail tube protein

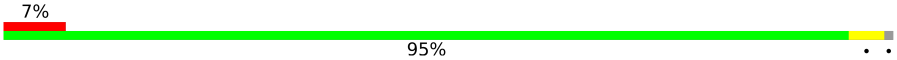
Chain TU:

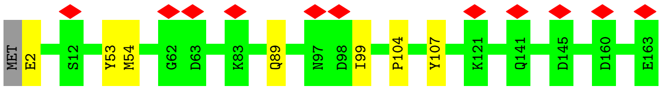




- Molecule 10: Tail tube protein

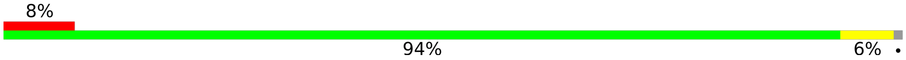
Chain TV:

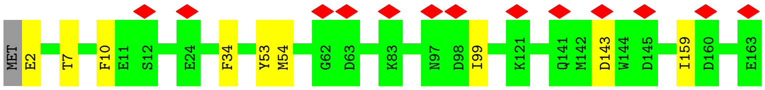




- Molecule 10: Tail tube protein

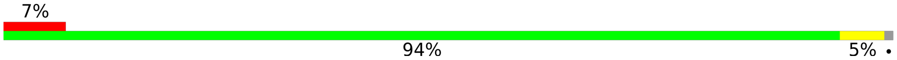
Chain TX:

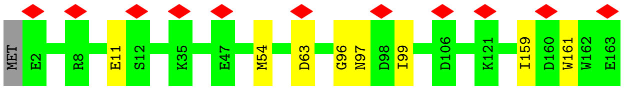




- Molecule 10: Tail tube protein

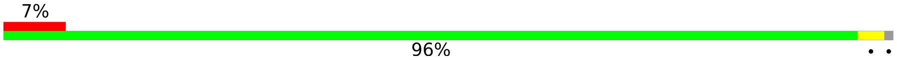
Chain TY:

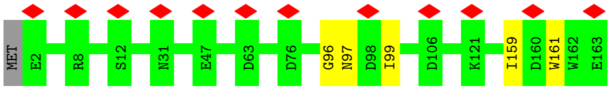




- Molecule 10: Tail tube protein

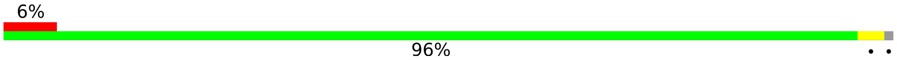
Chain TZ:

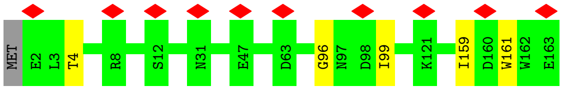




- Molecule 10: Tail tube protein

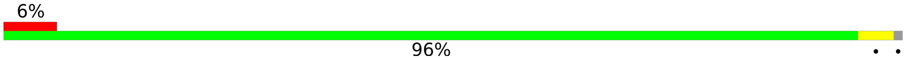
Chain Ta:

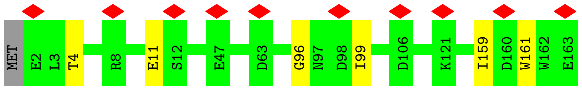




- Molecule 10: Tail tube protein

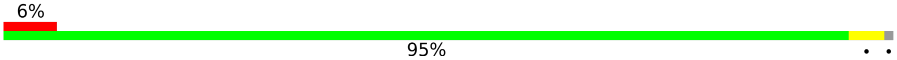
Chain Tb:

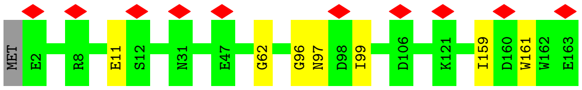




- Molecule 10: Tail tube protein

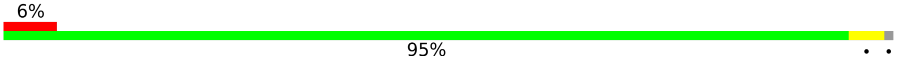
Chain Tc:

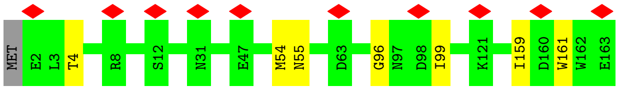




- Molecule 10: Tail tube protein

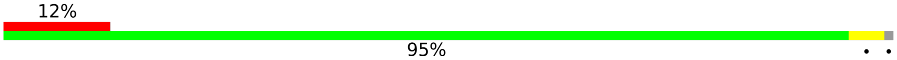
Chain Td:

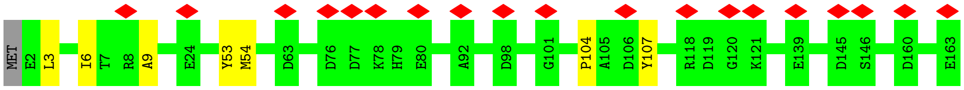




- Molecule 10: Tail tube protein

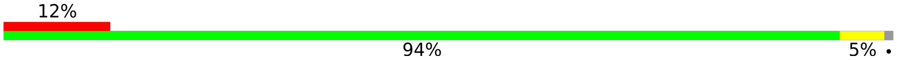
Chain Te:

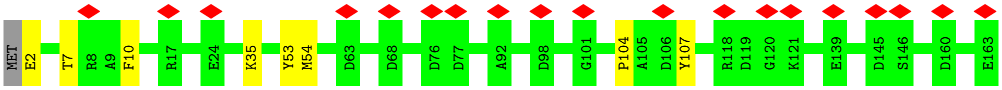




- Molecule 10: Tail tube protein

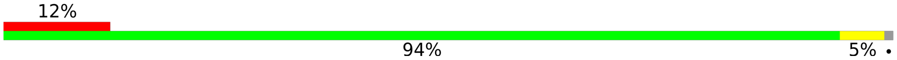
Chain Tf:

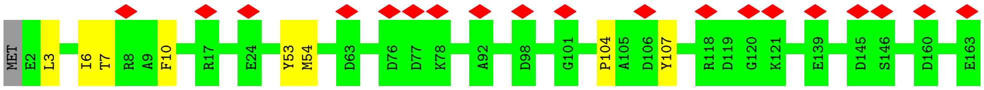




- Molecule 10: Tail tube protein

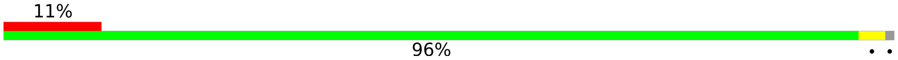
Chain Tg:

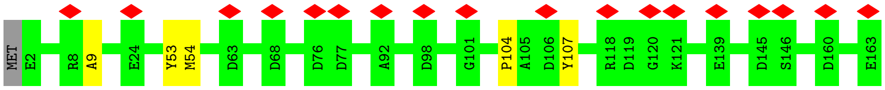




- Molecule 10: Tail tube protein

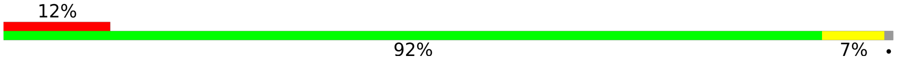
Chain Th:

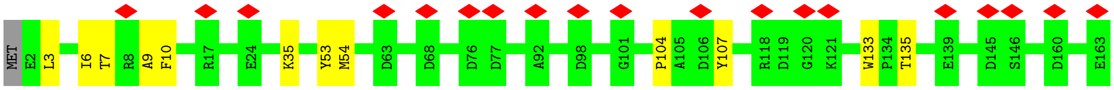




- Molecule 10: Tail tube protein

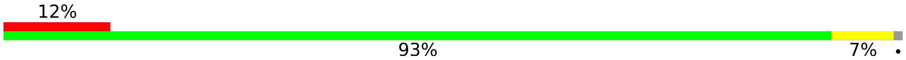
Chain Ti:

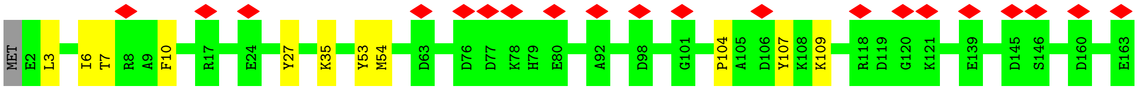




- Molecule 10: Tail tube protein

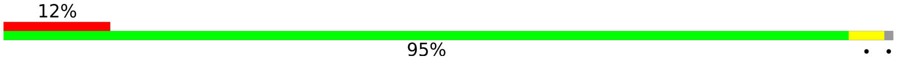
Chain Tj:

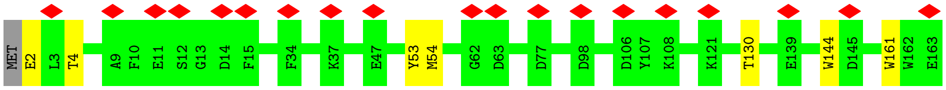




- Molecule 10: Tail tube protein

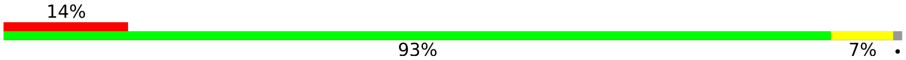
Chain Tk:

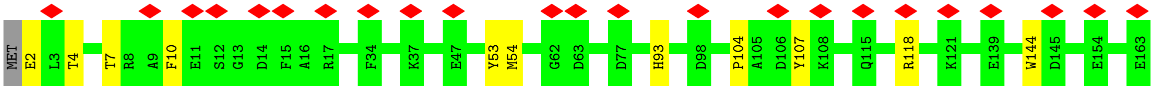




- Molecule 10: Tail tube protein

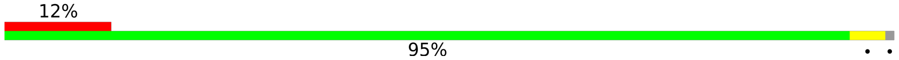
Chain Tl:

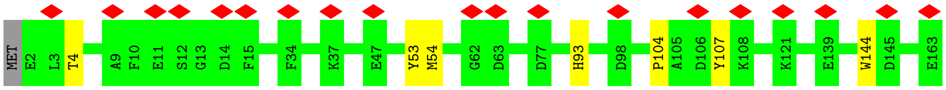




- Molecule 10: Tail tube protein

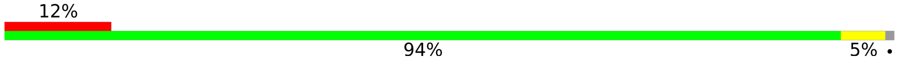
Chain Tm:

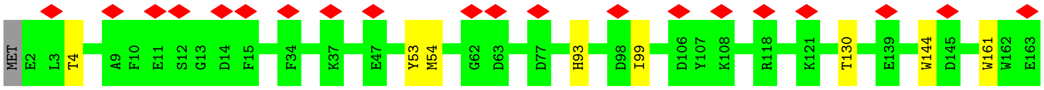




- Molecule 10: Tail tube protein

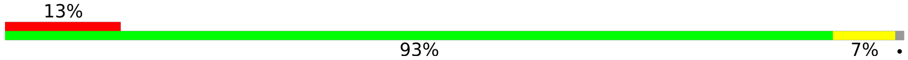
Chain Tn:

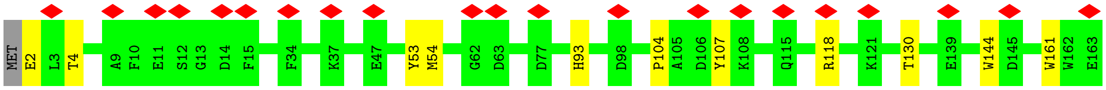




- Molecule 10: Tail tube protein

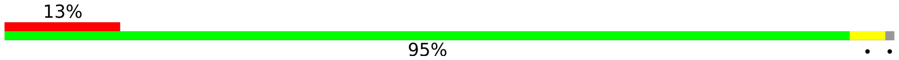
Chain To:

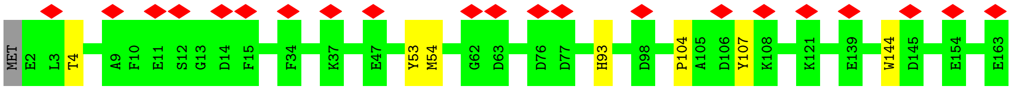




- Molecule 10: Tail tube protein

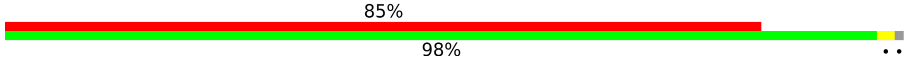
Chain Tp:

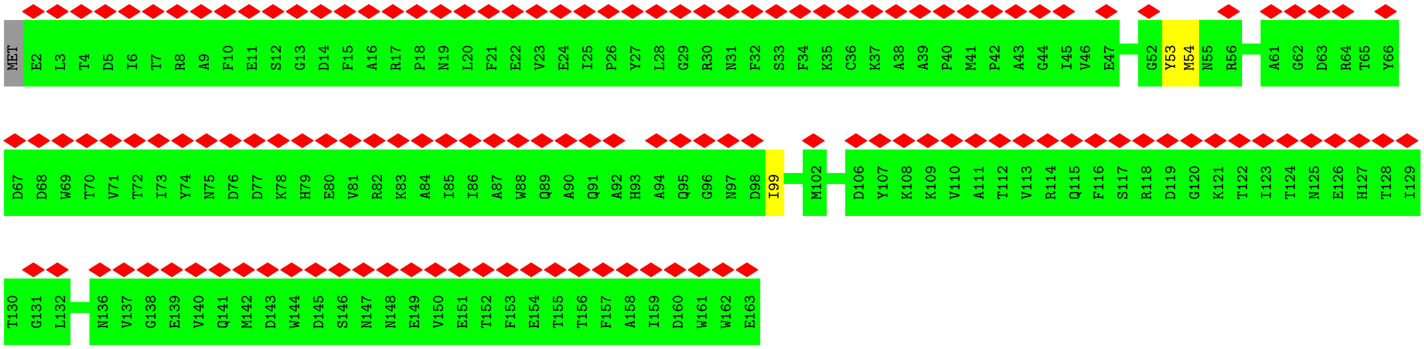




- Molecule 10: Tail tube protein

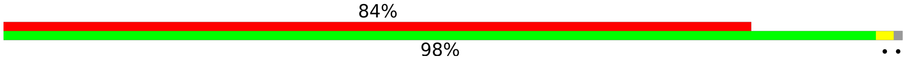
Chain Tq:

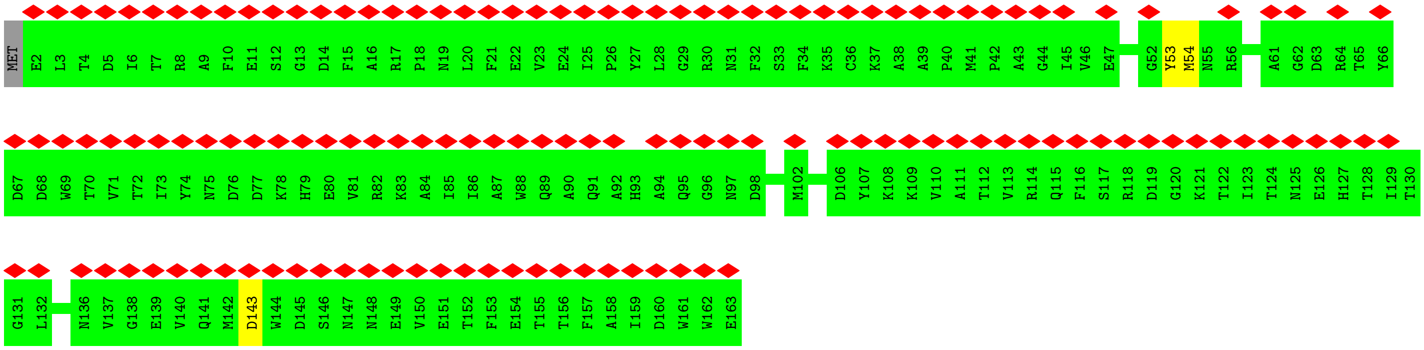




- Molecule 10: Tail tube protein

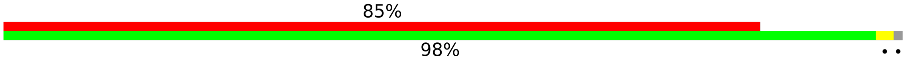
Chain Tr:

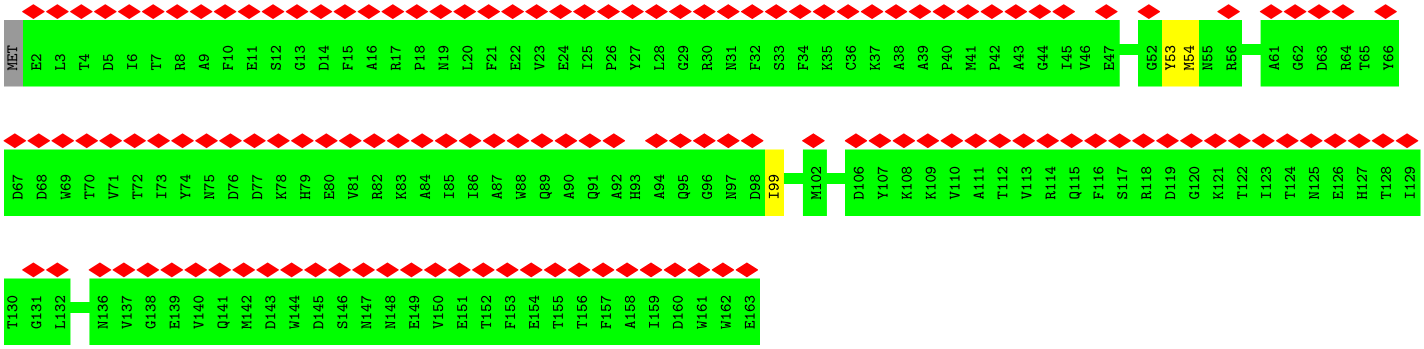




- Molecule 10: Tail tube protein

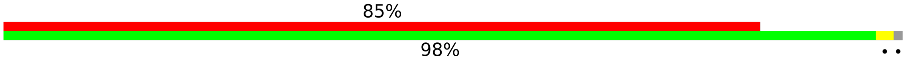
Chain Ts:

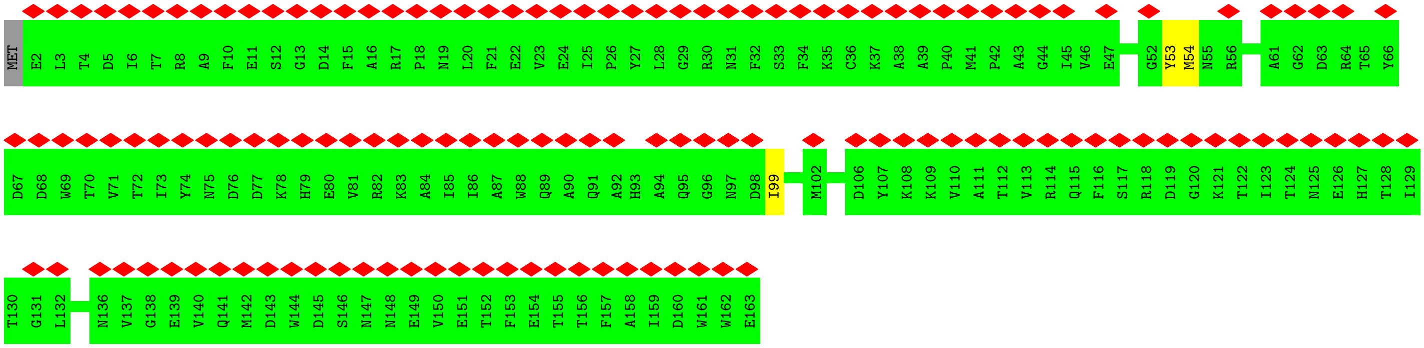




- Molecule 10: Tail tube protein

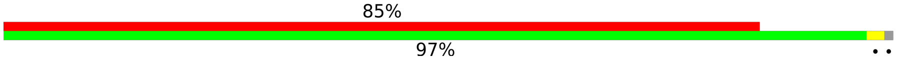
Chain Tt:

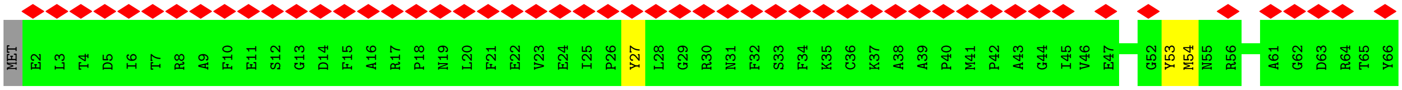


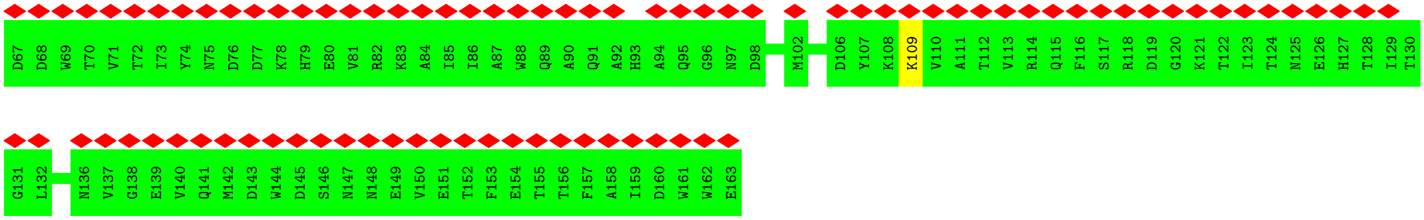


- Molecule 10: Tail tube protein

Chain Tu:

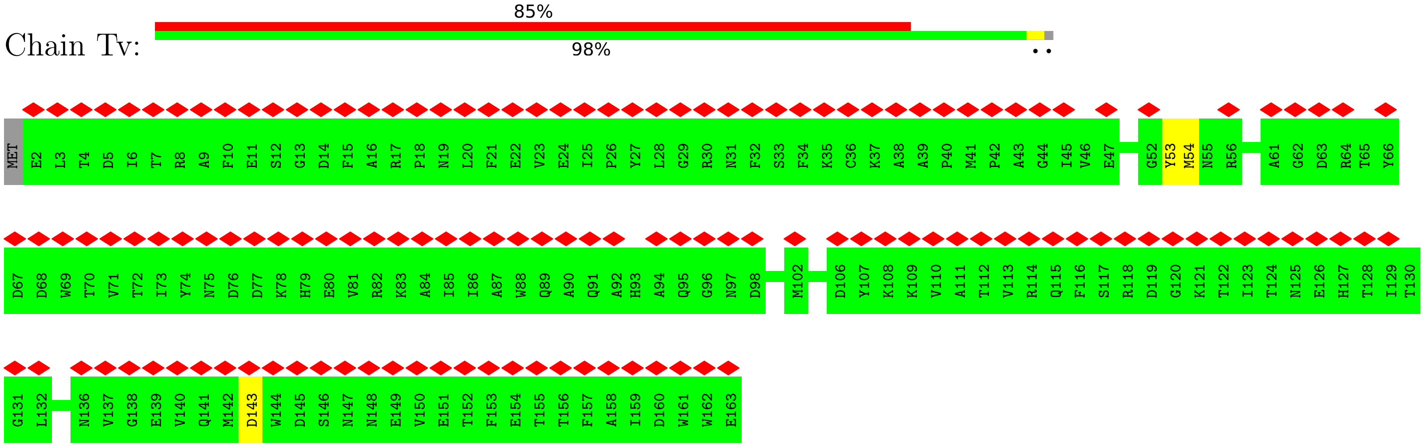






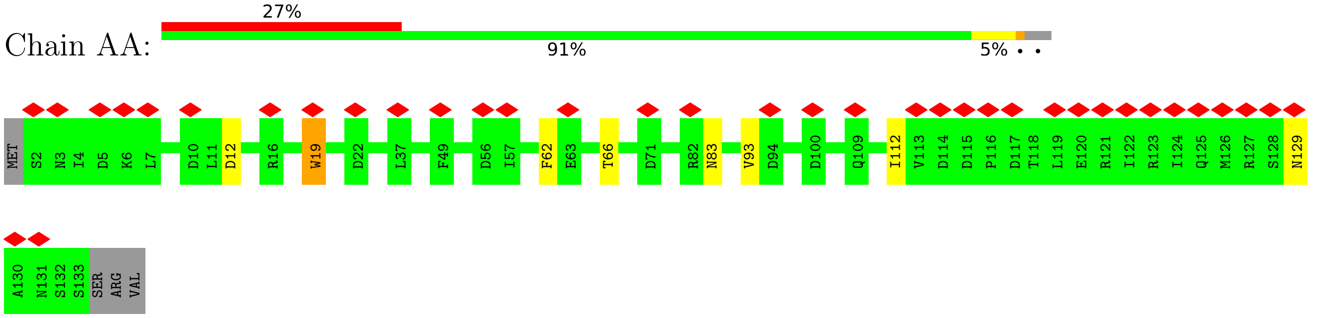
- Molecule 10: Tail tube protein

Chain Tv:



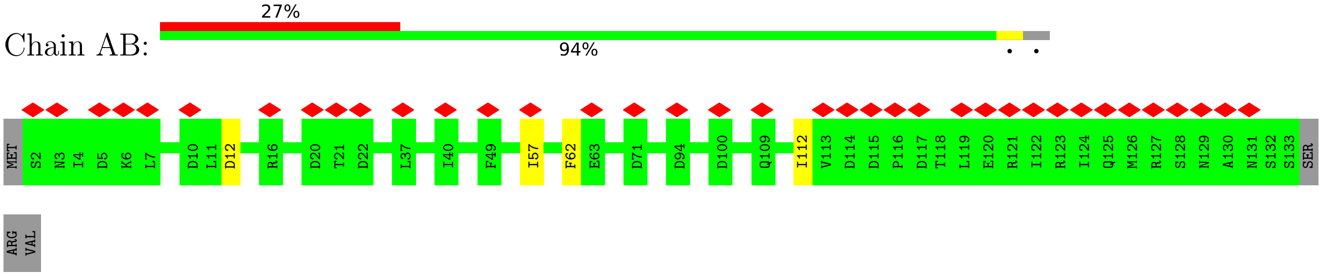
- Molecule 11: IraD/Gp25-like domain-containing protein

Chain AA:



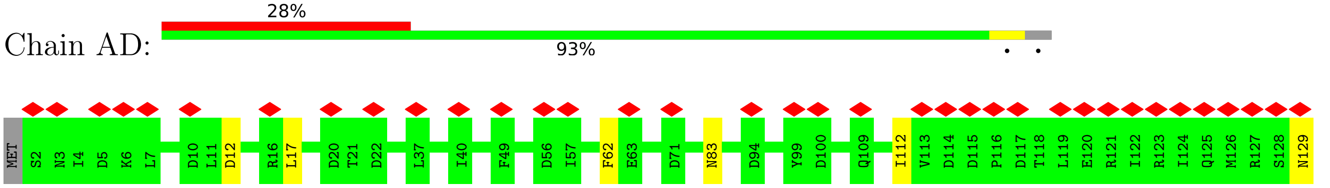
- Molecule 11: IraD/Gp25-like domain-containing protein

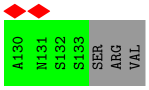
Chain AB:



- Molecule 11: IraD/Gp25-like domain-containing protein

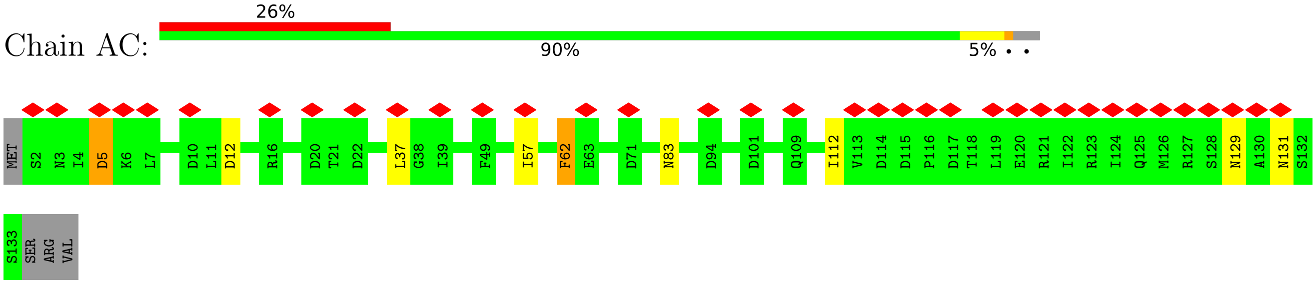
Chain AD:





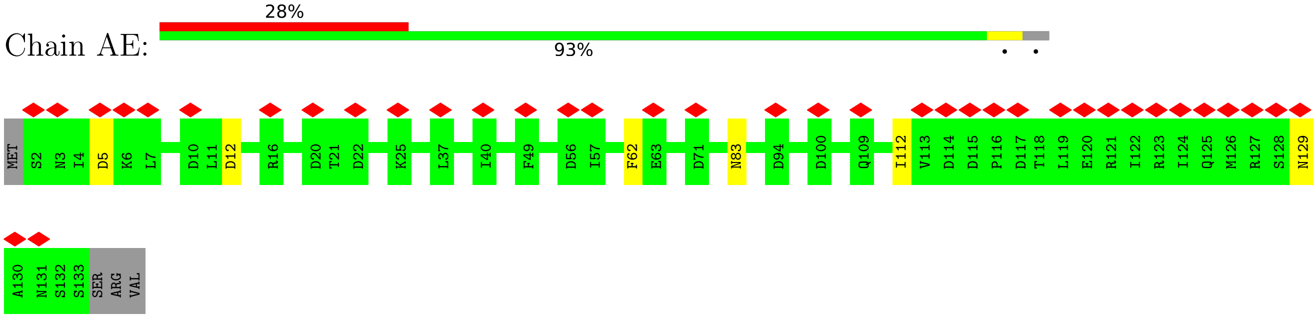
- Molecule 11: IraD/Gp25-like domain-containing protein

Chain AC:



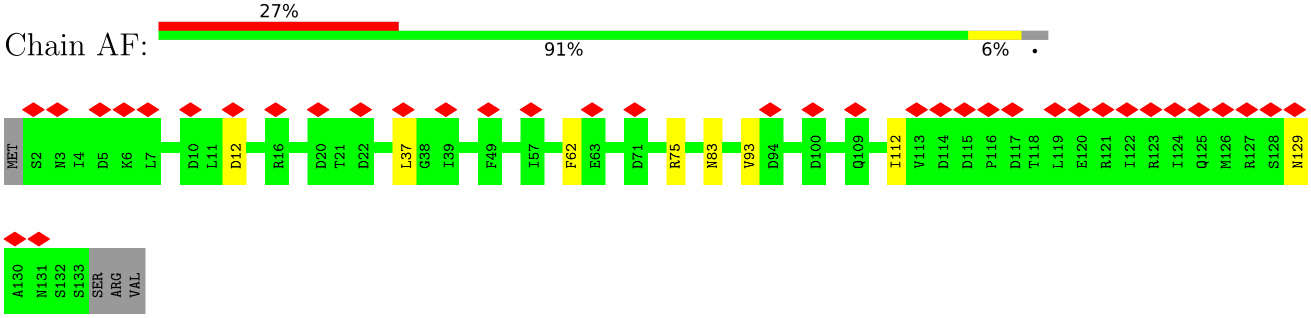
- Molecule 11: IraD/Gp25-like domain-containing protein

Chain AE:



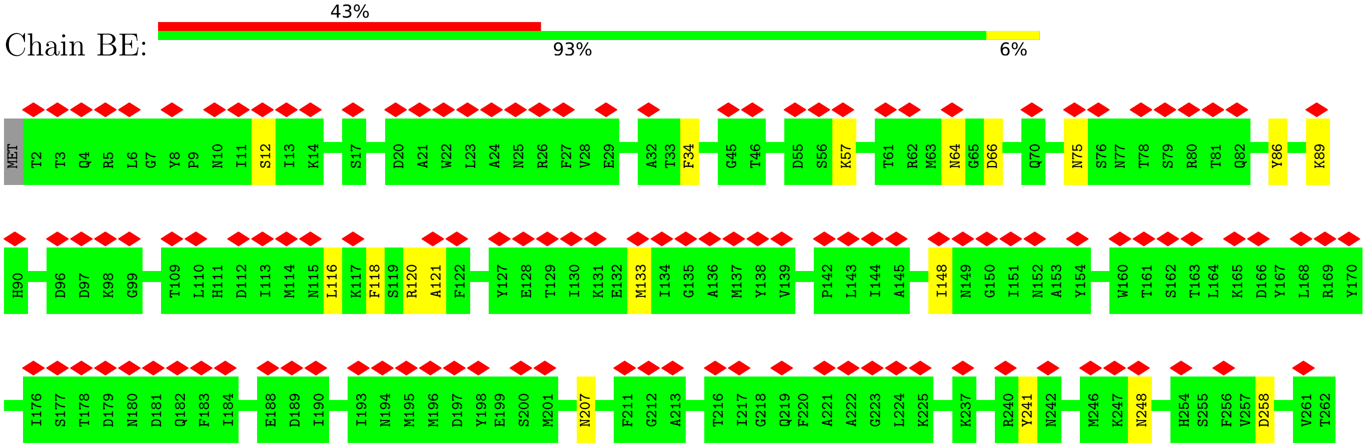
- Molecule 11: IraD/Gp25-like domain-containing protein

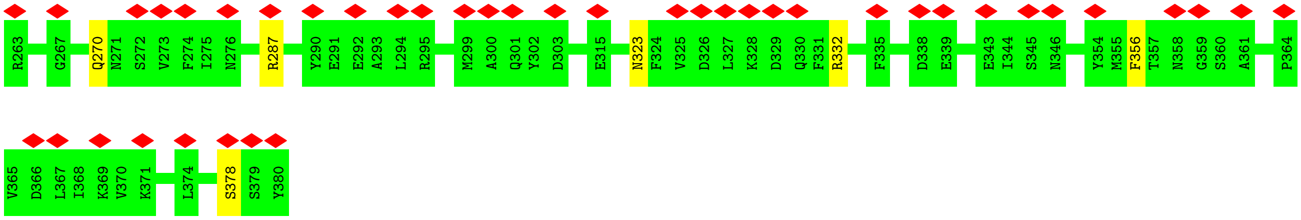
Chain AF:



- Molecule 12: Putative baseplate hub subunit

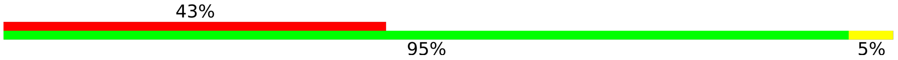
Chain BE:

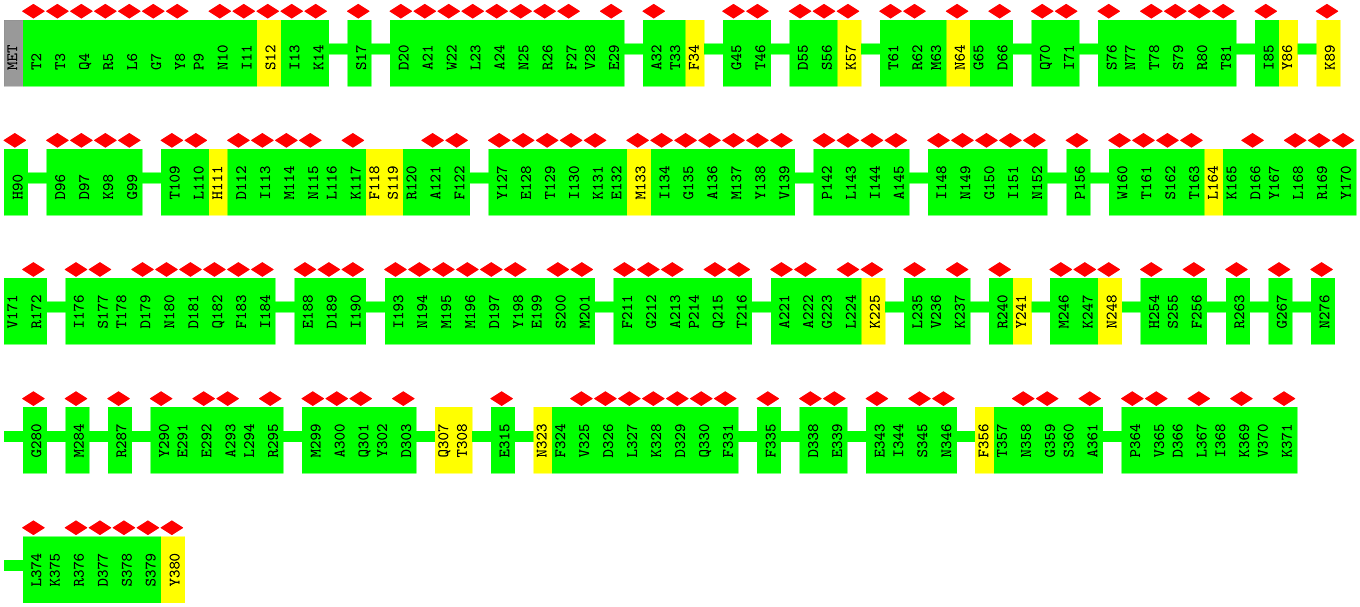




- Molecule 12: Putative baseplate hub subunit

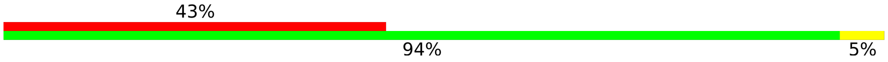
Chain BF:

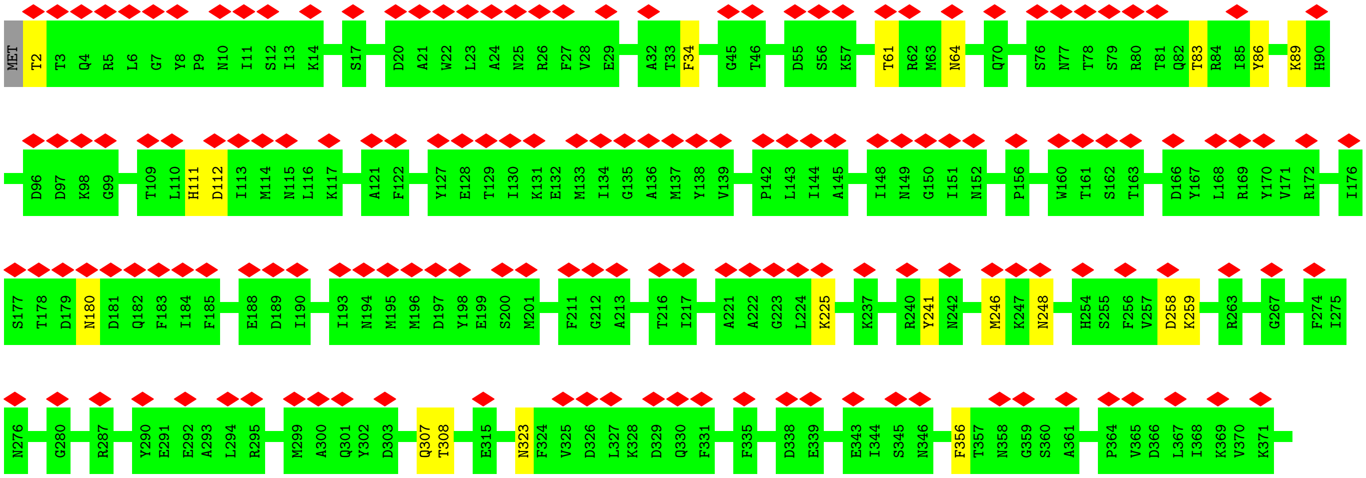


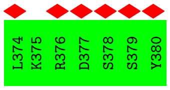


- Molecule 12: Putative baseplate hub subunit

Chain BG:

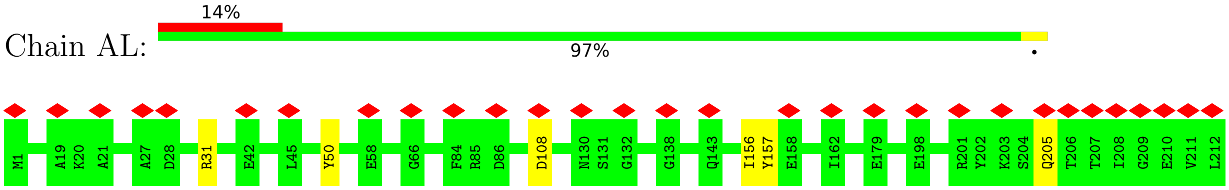






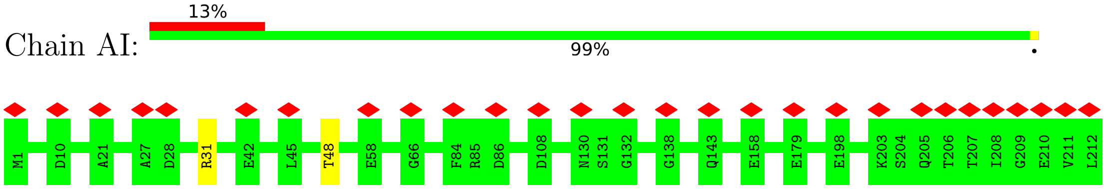
- Molecule 13: Baseplate wedge subunit

Chain AL:



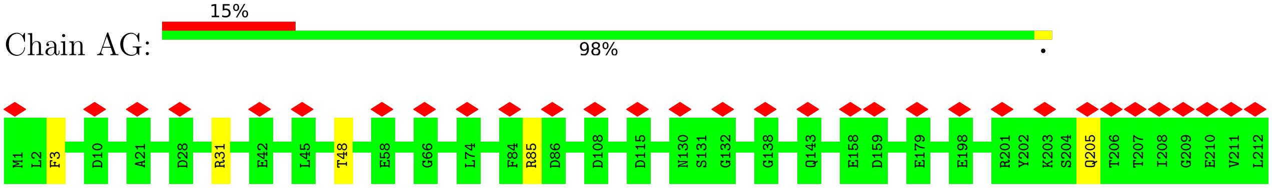
- Molecule 13: Baseplate wedge subunit

Chain AI:



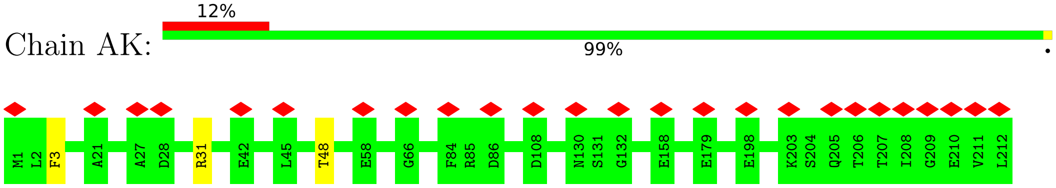
- Molecule 13: Baseplate wedge subunit

Chain AG:



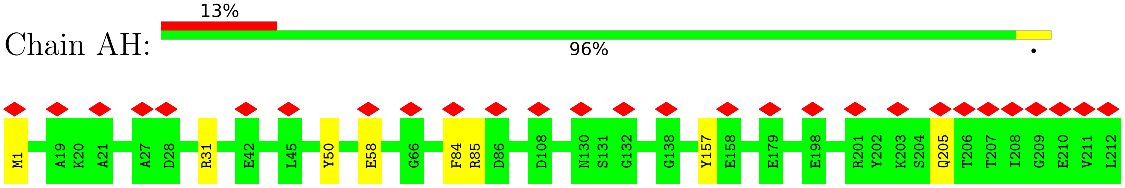
- Molecule 13: Baseplate wedge subunit

Chain AK:



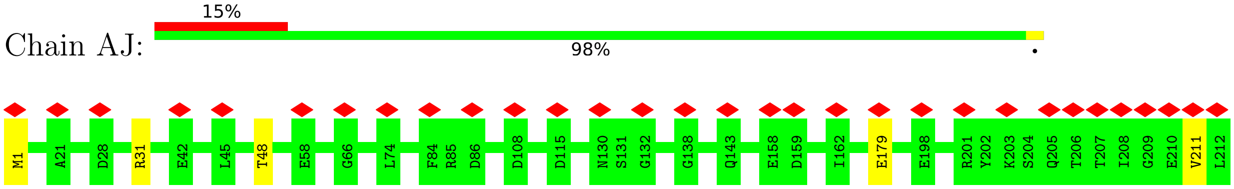
- Molecule 13: Baseplate wedge subunit

Chain AH:



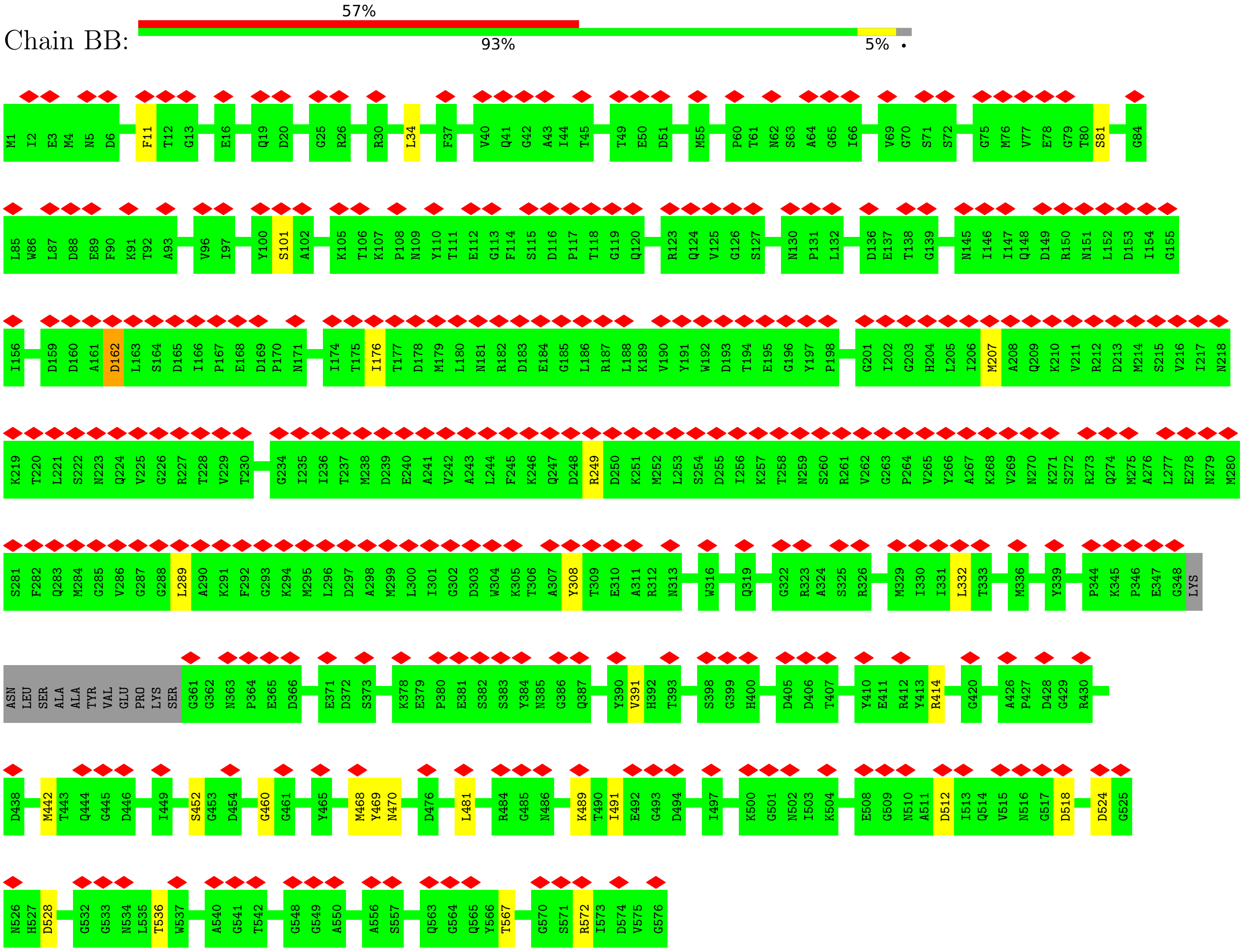
- Molecule 13: Baseplate wedge subunit

Chain AJ:



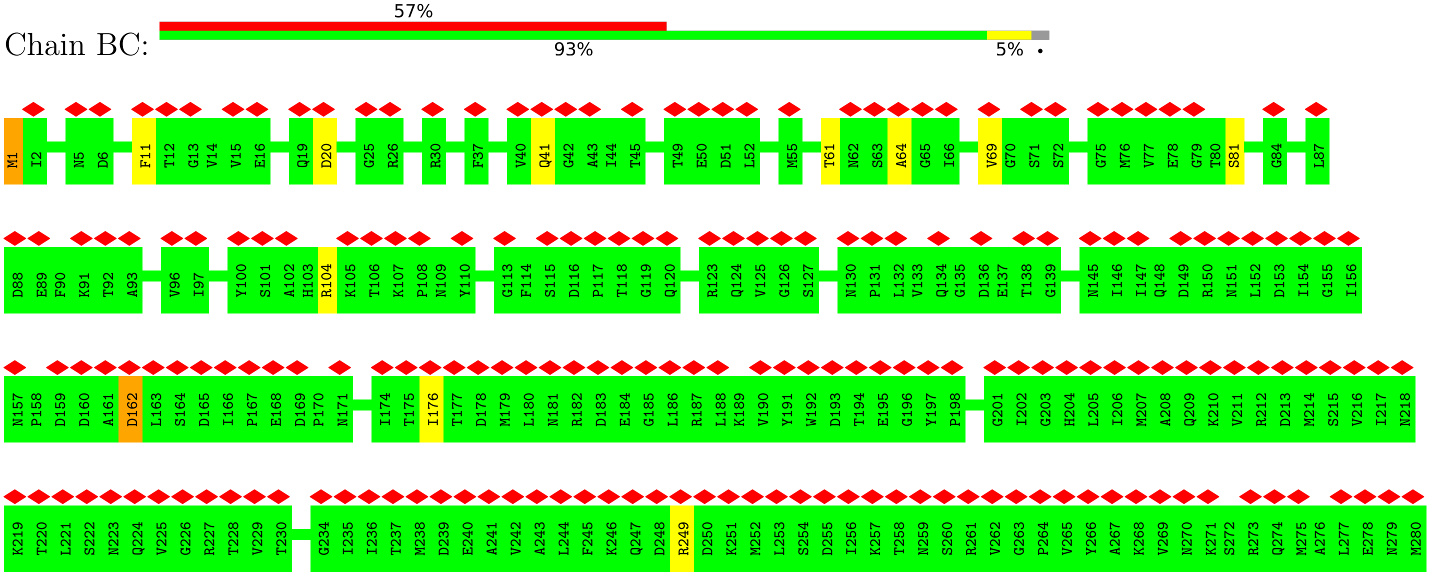
- Molecule 14: Baseplate central spike protein

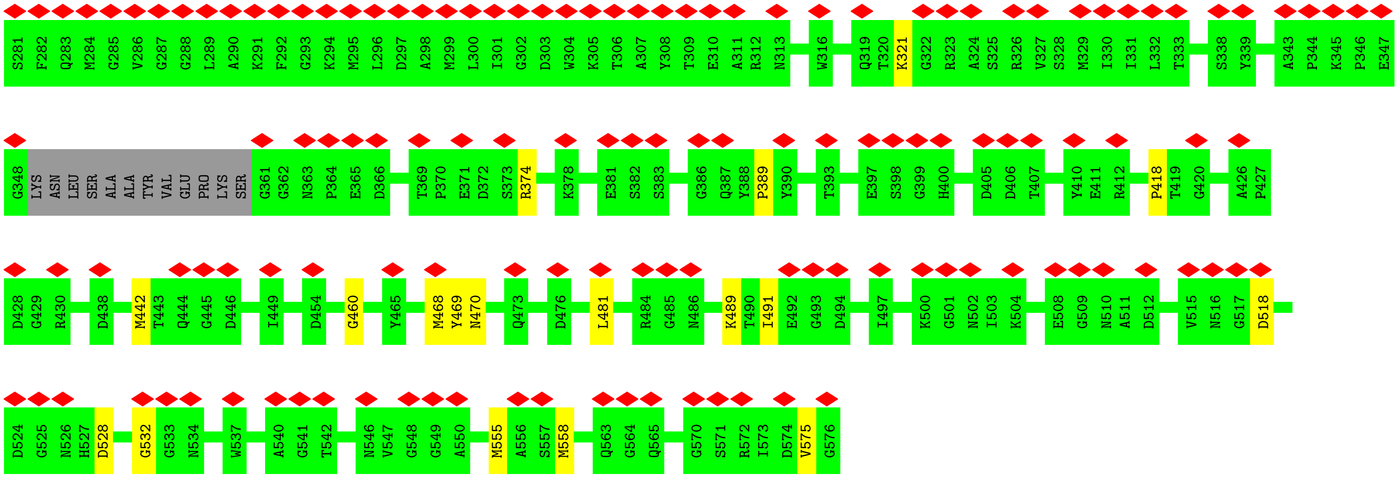
Chain BB:



- Molecule 14: Baseplate central spike protein

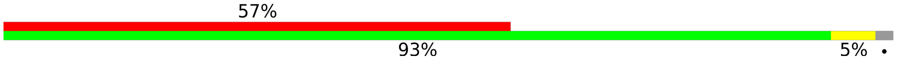
Chain BC:

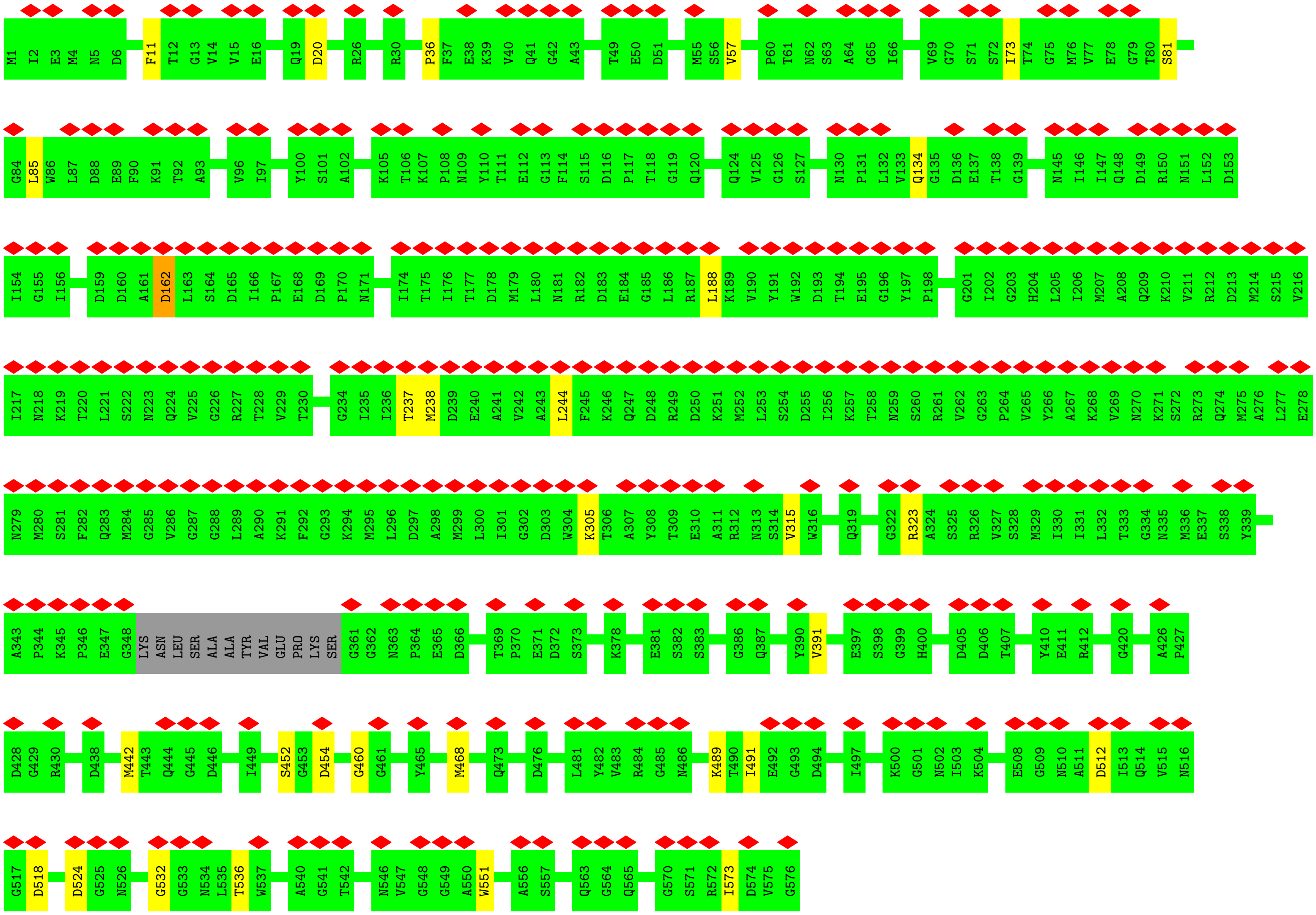




- Molecule 14: Baseplate central spike protein

Chain BD:





4 Experimental information ⓘ

Property	**Value**	**Source**
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C6	Depositor
Number of particles used	2415	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	40	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	83505	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.544	Depositor
Minimum map value	-0.295	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.040	Depositor
Recommended contour level	0.16	Depositor
Map size (Å)	546.304, 546.304, 546.304	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.067, 1.067, 1.067	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: CL

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	LS	0.71	0/4832	1.21	8/6581 (0.1%)
1	LT	0.74	0/4832	1.27	14/6581 (0.2%)
1	LU	0.71	0/4832	1.23	5/6581 (0.1%)
1	LV	0.71	0/4832	1.21	7/6581 (0.1%)
1	LW	0.74	0/4832	1.28	10/6581 (0.2%)
1	LX	0.71	0/4832	1.23	6/6581 (0.1%)
1	LY	0.72	0/4832	1.21	6/6581 (0.1%)
1	LZ	0.74	0/4832	1.28	10/6581 (0.2%)
1	La	0.71	0/4832	1.22	7/6581 (0.1%)
1	Lb	0.72	0/4832	1.21	8/6581 (0.1%)
1	Lc	0.74	0/4832	1.27	11/6581 (0.2%)
1	Ld	0.71	0/4832	1.23	3/6581 (0.0%)
1	Le	0.71	0/4832	1.21	8/6581 (0.1%)
1	Lf	0.74	0/4832	1.28	11/6581 (0.2%)
1	Lg	0.71	0/4832	1.23	5/6581 (0.1%)
1	Lh	0.72	0/4832	1.21	6/6581 (0.1%)
1	Li	0.74	0/4832	1.28	9/6581 (0.1%)
1	Lj	0.71	0/4832	1.23	6/6581 (0.1%)
2	BK	0.64	0/2714	1.21	11/3681 (0.3%)
2	BL	0.61	0/2224	1.11	3/3011 (0.1%)
2	BM	0.64	0/2714	1.21	7/3681 (0.2%)
2	BN	0.61	0/2224	1.11	1/3011 (0.0%)
2	BO	0.64	0/2714	1.19	7/3681 (0.2%)
2	BP	0.62	0/2224	1.13	2/3011 (0.1%)
3	BQ	0.60	0/2309	1.10	4/3130 (0.1%)
3	BR	0.60	0/2309	1.10	3/3130 (0.1%)
3	BS	0.60	0/2309	1.11	5/3130 (0.2%)
3	BT	0.60	0/2309	1.09	4/3130 (0.1%)
3	BU	0.60	0/2309	1.09	3/3130 (0.1%)
3	BV	0.61	0/2309	1.09	4/3130 (0.1%)
4	AM	0.55	0/5307	1.02	3/7218 (0.0%)
4	AN	0.55	0/5307	1.01	3/7218 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
4	AO	0.56	0/5307	1.02	2/7218 (0.0%)
4	AP	0.55	0/5307	1.02	4/7218 (0.1%)
4	AQ	0.55	0/5307	1.02	4/7218 (0.1%)
4	AR	0.55	0/5307	1.02	2/7218 (0.0%)
4	AS	0.55	0/5260	1.03	6/7154 (0.1%)
4	AT	0.56	0/5239	1.05	8/7125 (0.1%)
4	AU	0.56	0/5260	1.02	6/7154 (0.1%)
4	AV	0.56	0/5239	1.05	9/7125 (0.1%)
4	AW	0.56	0/5260	1.03	5/7154 (0.1%)
4	AX	0.56	0/5239	1.04	7/7125 (0.1%)
5	A0	0.61	0/8656	1.12	11/11738 (0.1%)
5	A1	0.60	0/8656	1.11	10/11738 (0.1%)
5	A2	0.61	0/8656	1.12	15/11738 (0.1%)
5	A3	0.60	0/8656	1.12	12/11738 (0.1%)
5	AY	0.61	0/8656	1.12	13/11738 (0.1%)
5	AZ	0.60	0/8656	1.12	9/11738 (0.1%)
6	A4	0.60	0/2743	1.11	1/3730 (0.0%)
6	A5	0.61	0/2743	1.11	5/3730 (0.1%)
6	A6	0.61	0/2743	1.12	1/3730 (0.0%)
6	A7	0.61	0/2743	1.11	8/3730 (0.2%)
6	A8	0.61	0/2743	1.11	1/3730 (0.0%)
6	A9	0.61	0/2743	1.11	3/3730 (0.1%)
6	Aa	0.63	0/2707	1.17	4/3682 (0.1%)
6	Ab	0.63	0/2707	1.18	6/3682 (0.2%)
6	Ac	0.63	0/2707	1.17	5/3682 (0.1%)
6	Ad	0.64	0/2707	1.18	7/3682 (0.2%)
6	Ae	0.63	0/2707	1.19	6/3682 (0.2%)
6	Af	0.64	0/2707	1.18	8/3682 (0.2%)
7	LA	0.68	0/2304	1.12	3/3114 (0.1%)
7	LB	0.69	0/2304	1.12	2/3114 (0.1%)
7	LC	0.68	0/2304	1.16	4/3114 (0.1%)
7	LD	0.68	0/2304	1.12	2/3114 (0.1%)
7	LE	0.69	0/2304	1.12	0/3114
7	LF	0.68	0/2304	1.16	4/3114 (0.1%)
7	LG	0.67	0/2304	1.11	2/3114 (0.1%)
7	LH	0.68	0/2304	1.12	1/3114 (0.0%)
7	LI	0.67	0/2304	1.16	3/3114 (0.1%)
7	LJ	0.68	0/2304	1.12	3/3114 (0.1%)
7	LK	0.68	0/2304	1.11	2/3114 (0.1%)
7	LL	0.68	0/2304	1.16	4/3114 (0.1%)
7	LM	0.67	0/2304	1.12	2/3114 (0.1%)
7	LN	0.68	0/2304	1.12	2/3114 (0.1%)
7	LO	0.68	0/2304	1.16	4/3114 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
7	LP	0.67	0/2304	1.12	2/3114 (0.1%)
7	LQ	0.68	0/2304	1.12	2/3114 (0.1%)
7	LR	0.67	0/2304	1.15	4/3114 (0.1%)
8	FA	0.72	0/508	1.29	2/690 (0.3%)
8	FB	0.75	0/508	1.34	6/690 (0.9%)
8	FC	0.75	0/508	1.27	1/690 (0.1%)
8	FJ	0.72	0/508	1.28	2/690 (0.3%)
8	FK	0.75	0/508	1.36	6/690 (0.9%)
8	FL	0.74	0/508	1.28	2/690 (0.3%)
8	FS	0.71	0/508	1.26	1/690 (0.1%)
8	FT	0.76	0/508	1.38	6/690 (0.9%)
8	FU	0.75	0/508	1.26	0/690
8	Fb	0.71	0/508	1.28	1/690 (0.1%)
8	Fc	0.75	0/508	1.33	6/690 (0.9%)
8	Fd	0.75	0/508	1.25	2/690 (0.3%)
8	Fk	0.72	0/508	1.29	1/690 (0.1%)
8	Fl	0.74	0/508	1.30	2/690 (0.3%)
8	Fm	0.73	0/508	1.24	1/690 (0.1%)
8	Ft	0.71	0/508	1.27	2/690 (0.3%)
8	Fu	0.75	0/508	1.35	6/690 (0.9%)
8	Fv	0.73	0/508	1.25	1/690 (0.1%)
9	SA	0.58	0/5090	1.08	4/6921 (0.1%)
9	SB	0.57	0/5090	1.08	5/6921 (0.1%)
9	SC	0.58	0/5090	1.08	5/6921 (0.1%)
9	SD	0.57	0/5090	1.08	6/6921 (0.1%)
9	SE	0.57	0/5090	1.08	4/6921 (0.1%)
9	SF	0.57	0/5090	1.08	5/6921 (0.1%)
9	SG	0.57	0/5135	1.08	5/6983 (0.1%)
9	SH	0.57	0/5135	1.07	7/6983 (0.1%)
9	SI	0.57	0/5135	1.07	5/6983 (0.1%)
9	SJ	0.57	0/5135	1.07	6/6983 (0.1%)
9	SK	0.57	0/5135	1.07	8/6983 (0.1%)
9	SL	0.57	0/5135	1.08	7/6983 (0.1%)
9	SM	0.57	0/5135	1.08	4/6983 (0.1%)
9	SN	0.57	0/5135	1.08	3/6983 (0.0%)
9	SO	0.57	0/5135	1.08	3/6983 (0.0%)
9	SP	0.57	0/5135	1.08	4/6983 (0.1%)
9	SQ	0.57	0/5135	1.08	1/6983 (0.0%)
9	SR	0.57	0/5135	1.08	5/6983 (0.1%)
9	SS	0.58	0/5135	1.09	7/6983 (0.1%)
9	ST	0.57	0/5135	1.08	5/6983 (0.1%)
9	SU	0.58	0/5135	1.08	5/6983 (0.1%)
9	SV	0.58	0/5135	1.08	8/6983 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
9	SW	0.57	0/5135	1.08	6/6983 (0.1%)
9	SX	0.58	0/5135	1.07	4/6983 (0.1%)
9	SY	0.57	0/5135	1.05	3/6983 (0.0%)
9	SZ	0.57	0/5135	1.05	3/6983 (0.0%)
9	Sa	0.56	0/5135	1.05	4/6983 (0.1%)
9	Sb	0.57	0/5135	1.05	3/6983 (0.0%)
9	Sc	0.56	0/5135	1.06	3/6983 (0.0%)
9	Sd	0.57	0/5135	1.05	3/6983 (0.0%)
9	Se	0.56	0/5135	1.07	5/6983 (0.1%)
9	Sf	0.57	0/5135	1.07	5/6983 (0.1%)
9	Sg	0.57	0/5135	1.06	7/6983 (0.1%)
9	Sh	0.56	0/5135	1.07	8/6983 (0.1%)
9	Si	0.56	0/5135	1.07	7/6983 (0.1%)
9	Sj	0.56	0/5135	1.06	7/6983 (0.1%)
9	Sk	0.59	0/5135	1.11	7/6983 (0.1%)
9	Sl	0.59	0/5135	1.11	3/6983 (0.0%)
9	Sm	0.59	0/5135	1.10	5/6983 (0.1%)
9	Sn	0.59	0/5135	1.10	4/6983 (0.1%)
9	So	0.59	0/5135	1.10	6/6983 (0.1%)
9	Sp	0.59	0/5135	1.10	5/6983 (0.1%)
10	TM	0.60	0/1339	0.99	2/1821 (0.1%)
10	TN	0.59	0/1339	0.97	0/1821
10	TO	0.60	0/1339	1.00	1/1821 (0.1%)
10	TP	0.59	0/1339	0.99	0/1821
10	TQ	0.59	0/1339	0.98	0/1821
10	TR	0.59	0/1339	0.98	1/1821 (0.1%)
10	TS	0.58	0/1339	0.98	0/1821
10	TT	0.58	0/1339	0.99	2/1821 (0.1%)
10	TU	0.58	0/1339	0.99	1/1821 (0.1%)
10	TV	0.58	0/1339	0.98	0/1821
10	TW	0.68	2/1339 (0.1%)	1.00	3/1821 (0.2%)
10	TX	0.58	0/1339	0.99	1/1821 (0.1%)
10	TY	0.57	0/1339	0.99	0/1821
10	TZ	0.57	0/1339	0.99	0/1821
10	Ta	0.57	0/1339	0.99	0/1821
10	Tb	0.56	0/1339	0.98	0/1821
10	Tc	0.56	0/1339	0.99	0/1821
10	Td	0.56	0/1339	0.99	0/1821
10	Te	0.56	0/1339	0.96	0/1821
10	Tf	0.56	0/1339	0.96	0/1821
10	Tg	0.56	0/1339	0.98	0/1821
10	Th	0.56	0/1339	0.96	0/1821
10	Ti	0.56	0/1339	0.96	0/1821

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
10	Tj	0.56	0/1339	0.97	0/1821
10	Tk	0.52	0/1339	0.95	0/1821
10	Tl	0.52	0/1339	0.95	0/1821
10	Tm	0.52	0/1339	0.95	0/1821
10	Tn	0.52	0/1339	0.95	0/1821
10	To	0.52	0/1339	0.94	0/1821
10	Tp	0.52	0/1339	0.95	0/1821
10	Tq	0.60	0/1339	1.05	0/1821
10	Tr	0.61	0/1339	1.05	1/1821 (0.1%)
10	Ts	0.61	0/1339	1.04	0/1821
10	Tt	0.60	0/1339	1.04	0/1821
10	Tu	0.61	0/1339	1.04	0/1821
10	Tv	0.61	0/1339	1.03	1/1821 (0.1%)
11	AA	0.58	0/1059	1.15	5/1438 (0.3%)
11	AB	0.57	0/1059	1.13	2/1438 (0.1%)
11	AC	0.57	0/1059	1.16	4/1438 (0.3%)
11	AD	0.57	0/1059	1.13	3/1438 (0.2%)
11	AE	0.57	0/1059	1.16	4/1438 (0.3%)
11	AF	0.58	0/1059	1.17	5/1438 (0.3%)
12	BE	0.62	0/3125	1.21	7/4232 (0.2%)
12	BF	0.62	0/3125	1.18	5/4232 (0.1%)
12	BG	0.63	0/3125	1.20	6/4232 (0.1%)
13	AG	0.53	0/1794	1.00	1/2435 (0.0%)
13	AH	0.53	0/1794	0.98	1/2435 (0.0%)
13	AI	0.53	0/1794	0.99	0/2435
13	AJ	0.53	0/1794	0.98	1/2435 (0.0%)
13	AK	0.53	0/1794	0.98	0/2435
13	AL	0.53	0/1794	0.97	0/2435
14	BB	0.64	0/4441	1.19	5/6025 (0.1%)
14	BC	0.64	0/4441	1.16	6/6025 (0.1%)
14	BD	0.64	0/4441	1.17	5/6025 (0.1%)
All	All	0.61	2/617655 (0.0%)	1.11	755/839310 (0.1%)

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	LS	0	3
1	LU	0	2
1	LV	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	LX	0	2
1	LY	0	5
1	LZ	0	1
1	La	0	2
1	Lb	0	3
1	Ld	0	1
1	Le	0	5
1	Lf	0	1
1	Lg	0	2
1	Lh	0	4
1	Lj	0	1
2	BM	0	1
2	BO	0	2
2	BP	0	1
3	BQ	0	1
3	BR	0	1
3	BS	0	2
3	BT	0	2
3	BU	0	1
3	BV	0	1
4	AM	0	1
4	AO	0	1
4	AQ	0	1
4	AS	0	1
5	A0	0	4
5	A1	0	2
5	A2	0	4
5	A3	0	3
5	AY	0	2
5	AZ	0	5
7	LE	0	1
7	LQ	0	1
8	FC	0	1
8	FL	0	1
8	FU	0	1
8	Fd	0	1
8	Fm	0	1
8	Fv	0	1
9	SM	0	1
9	SN	0	1
9	SO	0	1
9	SP	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
9	SQ	0	1
9	SR	0	2
9	ST	0	1
9	SU	0	1
9	SV	0	1
9	SW	0	1
9	SX	0	1
9	Se	0	1
9	Sf	0	2
9	Sg	0	2
9	Sh	0	1
9	Si	0	1
All	All	0	100

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	TW	8	ARG	CD-NE	9.59	1.59	1.46
10	TW	8	ARG	NE-CZ	7.99	1.41	1.33

All (755) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SA	6	PRO	CB-CA-C	-8.81	99.44	110.98
2	BK	200	ARG	NE-CZ-NH1	-7.98	113.52	121.50
8	Fb	564	ASP	CA-CB-CG	7.70	120.30	112.60
8	FA	564	ASP	CA-CB-CG	7.67	120.27	112.60
12	BE	34	PHE	CA-CB-CG	7.59	121.39	113.80
8	Fk	564	ASP	CA-CB-CG	7.55	120.15	112.60
2	BM	200	ARG	NE-CZ-NH1	-7.48	114.02	121.50
11	AF	62	PHE	CA-CB-CG	-7.44	106.36	113.80
8	Ft	564	ASP	CA-CB-CG	7.36	119.96	112.60
4	AS	400	ASP	CA-CB-CG	7.30	119.91	112.60
12	BG	34	PHE	CA-CB-CG	7.30	121.10	113.80
4	AP	46	ASP	CA-CB-CG	7.28	119.88	112.60
2	BP	80	PHE	CA-CB-CG	-7.28	106.52	113.80
8	FS	564	ASP	CA-CB-CG	7.25	119.85	112.60
9	SC	299	ASP	CA-CB-CG	7.24	119.84	112.60
12	BF	34	PHE	CA-CB-CG	7.24	121.04	113.80
11	AB	62	PHE	CA-CB-CG	-7.16	106.64	113.80
11	AE	62	PHE	CA-CB-CG	-7.12	106.68	113.80
8	FJ	564	ASP	CA-CB-CG	7.09	119.69	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SA	299	ASP	CA-CB-CG	7.08	119.68	112.60
4	AS	520	ASP	CA-CB-CG	7.04	119.64	112.60
4	AW	520	ASP	CA-CB-CG	7.03	119.63	112.60
1	LW	136	ASP	CA-CB-CG	7.02	119.62	112.60
4	AU	400	ASP	CA-CB-CG	7.02	119.62	112.60
1	LZ	136	ASP	CA-CB-CG	6.98	119.58	112.60
2	BO	200	ARG	NE-CZ-NH1	-6.98	114.52	121.50
9	SD	299	ASP	CA-CB-CG	6.98	119.58	112.60
9	SD	6	PRO	CB-CA-C	-6.96	101.86	110.98
4	AV	400	ASP	CA-CB-CG	6.93	119.53	112.60
1	Lb	25	VAL	CA-C-N	6.90	130.63	120.90
1	Lb	25	VAL	C-N-CA	6.90	130.63	120.90
9	Sa	629	LYS	CB-CA-C	6.89	117.36	110.33
1	Lf	136	ASP	CA-CB-CG	6.89	119.49	112.60
4	AV	520	ASP	CA-CB-CG	6.89	119.49	112.60
11	AC	62	PHE	CA-CB-CG	-6.86	106.94	113.80
9	SU	457	ASP	CA-CB-CG	6.84	119.44	112.60
1	LT	136	ASP	CA-CB-CG	6.83	119.43	112.60
9	SV	190	ASP	CA-CB-CG	6.83	119.43	112.60
9	ST	457	ASP	CA-CB-CG	6.83	119.43	112.60
1	Lh	25	VAL	CA-C-N	6.82	130.52	120.90
1	Lh	25	VAL	C-N-CA	6.82	130.52	120.90
9	SS	457	ASP	CA-CB-CG	6.81	119.41	112.60
4	AX	520	ASP	CA-CB-CG	6.81	119.41	112.60
4	AU	520	ASP	CA-CB-CG	6.81	119.41	112.60
9	SE	299	ASP	CA-CB-CG	6.79	119.39	112.60
1	Li	136	ASP	CA-CB-CG	6.79	119.39	112.60
4	AT	520	ASP	CA-CB-CG	6.78	119.38	112.60
7	LI	108	PHE	CA-CB-CG	6.78	120.58	113.80
7	LO	108	PHE	CA-CB-CG	6.77	120.57	113.80
1	Lf	287	PHE	CA-CB-CG	6.76	120.56	113.80
9	SV	457	ASP	CA-CB-CG	6.76	119.36	112.60
9	SF	299	ASP	CA-CB-CG	6.75	119.35	112.60
9	SW	457	ASP	CA-CB-CG	6.75	119.35	112.60
4	AX	400	ASP	CA-CB-CG	6.72	119.32	112.60
9	SJ	311	ASP	CA-CB-CG	6.70	119.30	112.60
1	LV	25	VAL	CA-C-N	6.70	130.35	120.90
1	LV	25	VAL	C-N-CA	6.70	130.35	120.90
1	Lc	136	ASP	CA-CB-CG	6.69	119.29	112.60
9	Sl	77	ASP	CA-CB-CG	6.69	119.29	112.60
9	SE	6	PRO	CB-CA-C	-6.69	102.22	110.98
7	LR	108	PHE	CA-CB-CG	6.68	120.48	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	BR	165	ASP	CA-CB-CG	6.68	119.28	112.60
9	SB	299	ASP	CA-CB-CG	6.67	119.28	112.60
4	AW	400	ASP	CA-CB-CG	6.67	119.27	112.60
3	BV	165	ASP	CA-CB-CG	6.67	119.27	112.60
4	AN	46	ASP	CA-CB-CG	6.66	119.26	112.60
4	AM	46	ASP	CA-CB-CG	6.65	119.25	112.60
1	LZ	287	PHE	CA-CB-CG	6.64	120.44	113.80
9	Sn	77	ASP	CA-CB-CG	6.64	119.24	112.60
9	Sc	629	LYS	CB-CA-C	6.63	117.10	110.33
9	SX	457	ASP	CA-CB-CG	6.59	119.19	112.60
1	Li	287	PHE	CA-CB-CG	6.58	120.38	113.80
2	BK	200	ARG	NE-CZ-NH2	6.57	125.11	119.20
4	AV	255	GLY	CA-C-N	6.56	126.33	120.10
4	AV	255	GLY	C-N-CA	6.56	126.33	120.10
2	BK	200	ARG	CG-CD-NE	-6.55	97.58	112.00
9	SZ	629	LYS	CB-CA-C	6.55	117.01	110.33
2	BM	200	ARG	CG-CD-NE	-6.55	97.59	112.00
7	LL	108	PHE	CA-CB-CG	6.55	120.35	113.80
6	Ae	101	ASP	CA-CB-CG	6.53	119.13	112.60
1	Lc	287	PHE	CA-CB-CG	6.53	120.33	113.80
1	LU	510	ASN	CA-CB-CG	6.52	119.12	112.60
9	Sp	77	ASP	CA-CB-CG	6.51	119.11	112.60
5	A0	137	PHE	CA-CB-CG	6.50	120.30	113.80
3	BS	165	ASP	CA-CB-CG	6.49	119.09	112.60
9	Sk	77	ASP	CA-CB-CG	6.49	119.09	112.60
11	AA	62	PHE	CA-CB-CG	-6.48	107.32	113.80
1	LZ	322	HIS	CA-CB-CG	6.47	120.27	113.80
9	SP	457	ASP	CA-CB-CG	6.47	119.07	112.60
9	SL	311	ASP	CA-CB-CG	6.46	119.06	112.60
9	SF	6	PRO	CB-CA-C	-6.46	102.52	110.98
9	SZ	457	ASP	CA-CB-CG	6.46	119.06	112.60
4	AT	255	GLY	CA-C-N	6.45	126.23	120.10
4	AT	255	GLY	C-N-CA	6.45	126.23	120.10
9	SA	481	ASP	CA-CB-CG	6.45	119.05	112.60
4	AT	400	ASP	CA-CB-CG	6.44	119.04	112.60
9	Sd	629	LYS	CB-CA-C	6.44	116.90	110.33
5	A2	137	PHE	CA-CB-CG	6.43	120.23	113.80
5	A1	137	PHE	CA-CB-CG	6.42	120.22	113.80
1	Le	25	VAL	CA-C-N	6.41	129.94	120.90
1	Le	25	VAL	C-N-CA	6.41	129.94	120.90
4	AR	46	ASP	CA-CB-CG	6.41	119.01	112.60
6	Ac	101	ASP	CA-CB-CG	6.41	119.00	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	SO	457	ASP	CA-CB-CG	6.41	119.01	112.60
3	BT	165	ASP	CA-CB-CG	6.40	119.00	112.60
9	Sc	77	ASP	CA-CB-CG	6.39	118.99	112.60
4	AS	64	ASN	CA-CB-CG	-6.38	106.22	112.60
9	SC	6	PRO	CB-CA-C	-6.38	102.63	110.98
9	SG	311	ASP	CA-CB-CG	6.37	118.97	112.60
2	BM	200	ARG	NE-CZ-NH2	6.35	124.91	119.20
3	BQ	165	ASP	CA-CB-CG	6.35	118.95	112.60
1	LT	287	PHE	CA-CB-CG	6.33	120.13	113.80
8	FT	566	ASP	CA-CB-CG	6.33	118.93	112.60
9	So	77	ASP	CA-CB-CG	6.32	118.92	112.60
9	SH	311	ASP	CA-CB-CG	6.31	118.91	112.60
11	AF	75	ARG	NE-CZ-NH1	-6.30	115.20	121.50
9	Si	457	ASP	CA-CB-CG	6.30	118.90	112.60
3	BU	165	ASP	CA-CB-CG	6.29	118.89	112.60
4	AX	64	ASN	CA-CB-CG	-6.28	106.32	112.60
9	SB	6	PRO	CB-CA-C	-6.27	102.77	110.98
8	FK	566	ASP	CA-CB-CG	6.27	118.87	112.60
1	Lj	510	ASN	CA-CB-CG	6.26	118.86	112.60
5	A3	137	PHE	CA-CB-CG	6.25	120.05	113.80
1	LX	510	ASN	CA-CB-CG	6.25	118.85	112.60
9	Se	457	ASP	CA-CB-CG	6.25	118.84	112.60
9	Sj	629	LYS	CB-CA-C	6.24	117.10	110.17
9	Sb	77	ASP	CA-CB-CG	6.24	118.84	112.60
9	Sm	77	ASP	CA-CB-CG	6.23	118.83	112.60
14	BC	518	ASP	CA-CB-CG	6.23	118.83	112.60
9	Sd	457	ASP	CA-CB-CG	6.21	118.81	112.60
1	LY	25	VAL	CA-C-N	6.21	129.66	120.90
1	LY	25	VAL	C-N-CA	6.21	129.66	120.90
2	BO	200	ARG	CG-CD-NE	-6.20	98.36	112.00
1	LS	25	VAL	CA-C-N	6.19	129.63	120.90
1	LS	25	VAL	C-N-CA	6.19	129.63	120.90
9	Sa	457	ASP	CA-CB-CG	6.18	118.78	112.60
5	A0	486	TYR	CB-CA-C	6.18	121.61	112.09
5	AZ	137	PHE	CA-CB-CG	6.18	119.98	113.80
1	LW	607	TYR	CA-CB-CG	6.18	125.02	113.90
9	Sc	457	ASP	CA-CB-CG	6.17	118.77	112.60
9	Sb	629	LYS	CB-CA-C	6.17	116.62	110.33
14	BD	162	ASP	CA-CB-CG	6.17	118.77	112.60
9	SM	457	ASP	CA-CB-CG	6.16	118.76	112.60
9	Sf	556	PHE	CA-CB-CG	-6.16	107.64	113.80
6	A5	101	ASP	CA-CB-CG	6.16	118.76	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	LW	287	PHE	CA-CB-CG	6.16	119.96	113.80
9	SE	481	ASP	CA-CB-CG	6.16	118.76	112.60
9	Sk	457	ASP	CA-CB-CG	6.15	118.75	112.60
4	AQ	46	ASP	CA-CB-CG	6.14	118.74	112.60
1	Ld	510	ASN	CA-CB-CG	6.12	118.72	112.60
7	LF	108	PHE	CA-CB-CG	6.12	119.92	113.80
1	LT	322	HIS	CA-CB-CG	6.12	119.92	113.80
9	SQ	457	ASP	CA-CB-CG	6.12	118.72	112.60
9	SC	481	ASP	CA-CB-CG	6.10	118.70	112.60
12	BE	270	GLN	N-CA-C	6.10	118.01	111.36
9	So	457	ASP	CA-CB-CG	6.09	118.69	112.60
14	BC	162	ASP	CA-CB-CG	6.09	118.69	112.60
9	SY	457	ASP	CA-CB-CG	6.09	118.69	112.60
1	LW	113	PHE	CA-CB-CG	6.09	119.89	113.80
4	AW	461	PHE	N-CA-C	6.09	118.71	111.71
1	Lg	510	ASN	CA-CB-CG	6.08	118.68	112.60
9	Sm	457	ASP	CA-CB-CG	6.08	118.68	112.60
12	BG	356	PHE	CA-CB-CG	6.08	119.88	113.80
9	Sh	457	ASP	CA-CB-CG	6.07	118.67	112.60
12	BG	248	ASN	CA-CB-CG	6.06	118.66	112.60
1	Lc	607	TYR	CA-CB-CG	6.06	124.80	113.90
9	Sb	457	ASP	CA-CB-CG	6.05	118.65	112.60
9	SR	457	ASP	CA-CB-CG	6.05	118.65	112.60
1	Lg	546	PHE	CA-CB-CG	6.05	119.85	113.80
7	LD	72	ASP	CA-CB-CG	6.05	118.65	112.60
4	AO	374	LYS	O-C-N	-6.05	118.75	121.53
12	BG	258	ASP	CA-CB-CG	6.05	118.65	112.60
6	Aa	101	ASP	CA-CB-CG	6.03	118.63	112.60
9	SN	457	ASP	CA-CB-CG	6.03	118.63	112.60
1	Li	607	TYR	CA-CB-CG	6.03	124.75	113.90
7	LA	72	ASP	CA-CB-CG	6.02	118.62	112.60
9	SY	77	ASP	CA-CB-CG	6.02	118.62	112.60
9	Sn	457	ASP	CA-CB-CG	6.02	118.62	112.60
2	BP	196	ASP	CA-CB-CG	6.01	118.61	112.60
1	LZ	113	PHE	CA-CB-CG	6.01	119.81	113.80
4	AV	64	ASN	CA-CB-CG	-6.01	106.59	112.60
7	LC	108	PHE	CA-CB-CG	6.01	119.81	113.80
9	SY	629	LYS	CB-CA-C	6.01	116.46	110.33
9	SK	311	ASP	CA-CB-CG	6.00	118.60	112.60
4	AT	64	ASN	CA-CB-CG	-6.00	106.60	112.60
5	AY	137	PHE	CA-CB-CG	5.99	119.79	113.80
7	LJ	72	ASP	CA-CB-CG	5.99	118.59	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Lf	322	HIS	CA-CB-CG	5.98	119.78	113.80
7	LR	100	LYS	CA-C-N	5.98	125.78	120.10
7	LR	100	LYS	C-N-CA	5.98	125.78	120.10
4	AX	255	GLY	CA-C-N	5.97	125.65	119.92
4	AX	255	GLY	C-N-CA	5.97	125.65	119.92
9	Se	629	LYS	CB-CA-C	5.97	116.80	110.17
8	Fl	566	ASP	CA-CB-CG	5.97	118.57	112.60
4	AU	461	PHE	N-CA-C	5.96	118.57	111.71
10	TW	8	ARG	CG-CD-NE	-5.96	98.88	112.00
1	LT	607	TYR	CA-CB-CG	5.96	124.63	113.90
6	Ab	101	ASP	CA-CB-CG	5.96	118.56	112.60
9	Sh	556	PHE	CA-CB-CG	-5.95	107.85	113.80
3	BS	118	PHE	CA-CB-CG	5.94	119.74	113.80
9	SZ	77	ASP	CA-CB-CG	5.94	118.54	112.60
3	BQ	118	PHE	CA-CB-CG	5.94	119.74	113.80
7	LL	100	LYS	CA-C-N	5.94	125.74	120.10
7	LL	100	LYS	C-N-CA	5.94	125.74	120.10
9	Sf	457	ASP	CA-CB-CG	5.94	118.54	112.60
6	Ae	70	ASP	CA-CB-CG	5.93	118.53	112.60
8	FK	564	ASP	CA-CB-CG	5.93	118.53	112.60
6	A7	101	ASP	CA-CB-CG	5.92	118.52	112.60
7	LI	100	LYS	CA-C-N	5.92	125.73	120.10
7	LI	100	LYS	C-N-CA	5.92	125.73	120.10
7	LJ	108	PHE	CA-CB-CG	5.92	119.72	113.80
1	La	510	ASN	CA-CB-CG	5.92	118.52	112.60
5	A0	1026	THR	CB-CA-C	5.92	120.61	111.02
9	Sa	77	ASP	CA-CB-CG	5.91	118.51	112.60
5	A0	633	TRP	N-CA-C	5.91	117.53	111.14
8	Fc	564	ASP	CA-CB-CG	5.91	118.51	112.60
8	Fl	564	ASP	CA-CB-CG	5.91	118.51	112.60
9	Sj	457	ASP	CA-CB-CG	5.91	118.51	112.60
9	SU	311	ASP	CA-CB-CG	5.90	118.50	112.60
6	Ac	70	ASP	CA-CB-CG	5.90	118.50	112.60
4	AS	461	PHE	N-CA-C	5.90	118.50	111.71
6	A9	101	ASP	CA-CB-CG	5.90	118.50	112.60
8	FB	566	ASP	CA-CB-CG	5.89	118.49	112.60
1	Lf	113	PHE	CA-CB-CG	5.89	119.69	113.80
4	AM	262	PHE	CA-CB-CG	5.89	119.69	113.80
6	Ab	125	PRO	N-CA-C	5.89	124.60	112.47
6	Ad	101	ASP	CA-CB-CG	5.88	118.47	112.60
4	AU	64	ASN	CA-CB-CG	-5.87	106.73	112.60
9	Sl	457	ASP	CA-CB-CG	5.87	118.47	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	Li	322	HIS	CA-CB-CG	5.86	119.66	113.80
14	BB	11	PHE	CA-CB-CG	5.86	119.66	113.80
9	So	173	SER	CA-C-N	5.86	128.41	120.38
9	So	173	SER	C-N-CA	5.86	128.41	120.38
9	Sd	77	ASP	CA-CB-CG	5.86	118.46	112.60
1	Lc	113	PHE	CA-CB-CG	5.86	119.66	113.80
9	SS	311	ASP	CA-CB-CG	5.86	118.46	112.60
3	BU	118	PHE	CA-CB-CG	5.86	119.66	113.80
6	Af	101	ASP	CA-CB-CG	5.85	118.45	112.60
3	BT	118	PHE	CA-CB-CG	5.85	119.65	113.80
11	AF	12	ASP	CA-CB-CG	5.85	118.45	112.60
1	Lb	84	ASN	CA-C-N	5.85	128.11	120.28
1	Lb	84	ASN	C-N-CA	5.85	128.11	120.28
1	Lj	546	PHE	CA-CB-CG	5.84	119.64	113.80
2	BM	268	ASN	CA-CB-CG	5.84	118.44	112.60
9	Se	556	PHE	CA-CB-CG	-5.84	107.96	113.80
11	AC	12	ASP	CA-CB-CG	5.84	118.44	112.60
1	LS	382	PHE	CA-CB-CG	5.84	119.64	113.80
14	BB	518	ASP	CA-CB-CG	5.84	118.44	112.60
1	Ld	546	PHE	CA-CB-CG	5.84	119.64	113.80
9	Sp	457	ASP	CA-CB-CG	5.84	118.44	112.60
1	LU	546	PHE	CA-CB-CG	5.83	119.63	113.80
8	Fm	544	ASP	CA-CB-CG	5.83	118.43	112.60
9	SC	457	ASP	CA-CB-CG	5.83	118.43	112.60
9	Sg	556	PHE	CA-CB-CG	-5.83	107.97	113.80
2	BO	307	ASP	CA-CB-CG	5.83	118.43	112.60
9	SV	311	ASP	CA-CB-CG	5.83	118.43	112.60
9	Sg	457	ASP	CA-CB-CG	5.83	118.43	112.60
9	Sj	556	PHE	CA-CB-CG	-5.83	107.97	113.80
7	LP	108	PHE	CA-CB-CG	5.82	119.62	113.80
1	Lb	545	ASP	CA-CB-CG	5.82	118.42	112.60
5	A2	486	TYR	CB-CA-C	5.81	121.04	112.09
7	LD	108	PHE	CA-CB-CG	5.80	119.60	113.80
5	A2	633	TRP	N-CA-C	5.80	117.41	111.14
8	FT	564	ASP	CA-CB-CG	5.80	118.40	112.60
5	AY	486	TYR	CB-CA-C	5.79	121.01	112.09
7	LF	100	LYS	CA-C-N	5.79	125.60	120.10
7	LF	100	LYS	C-N-CA	5.79	125.60	120.10
1	LV	382	PHE	CA-CB-CG	5.78	119.58	113.80
7	LO	100	LYS	CA-C-N	5.78	125.59	120.10
7	LO	100	LYS	C-N-CA	5.78	125.59	120.10
9	Sg	629	LYS	CB-CA-C	5.78	116.58	110.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	BF	356	PHE	CA-CB-CG	5.77	119.57	113.80
7	LM	72	ASP	CA-CB-CG	5.77	118.37	112.60
2	BK	92	SER	CA-C-N	5.77	125.77	119.89
2	BK	92	SER	C-N-CA	5.77	125.77	119.89
6	Ad	182	ASP	CA-CB-CG	5.76	118.36	112.60
9	SF	457	ASP	CA-CB-CG	5.76	118.36	112.60
11	AF	75	ARG	CG-CD-NE	5.76	124.67	112.00
9	Si	556	PHE	CA-CB-CG	-5.75	108.05	113.80
8	FL	588	PRO	N-CA-C	5.75	120.26	111.11
1	Lf	607	TYR	CA-CB-CG	5.75	124.25	113.90
2	BK	284	GLY	CA-C-N	5.75	129.88	120.63
2	BK	284	GLY	C-N-CA	5.75	129.88	120.63
11	AD	12	ASP	CA-CB-CG	5.73	118.33	112.60
9	SD	457	ASP	CA-CB-CG	5.73	118.33	112.60
6	Af	125	PRO	N-CA-C	5.72	124.25	112.47
6	Ab	182	ASP	CA-CB-CG	5.71	118.31	112.60
9	ST	137	ASP	CA-CB-CG	5.71	118.31	112.60
2	BN	80	PHE	CA-CB-CG	-5.71	108.09	113.80
9	SA	457	ASP	CA-CB-CG	5.71	118.31	112.60
1	LZ	607	TYR	CA-CB-CG	5.71	124.18	113.90
2	BO	200	ARG	NE-CZ-NH2	5.71	124.34	119.20
7	LA	108	PHE	CA-CB-CG	5.71	119.51	113.80
2	BO	51	ASP	CA-CB-CG	5.69	118.29	112.60
6	Ae	182	ASP	CA-CB-CG	5.69	118.29	112.60
1	Le	382	PHE	CA-CB-CG	5.68	119.48	113.80
6	A4	23	PHE	CA-CB-CG	5.68	119.48	113.80
8	FL	544	ASP	CA-CB-CG	5.68	118.28	112.60
1	Le	84	ASN	CA-C-N	5.68	127.89	120.28
1	Le	84	ASN	C-N-CA	5.68	127.89	120.28
4	AO	46	ASP	CA-CB-CG	5.68	118.28	112.60
1	LW	322	HIS	CA-CB-CG	5.67	119.47	113.80
6	Ad	125	PRO	N-CA-C	5.67	124.16	112.47
6	Ab	73	ASP	CA-CB-CG	5.67	118.27	112.60
12	BE	356	PHE	CA-CB-CG	5.66	119.46	113.80
1	LZ	33	LYS	CA-C-N	5.66	128.65	120.38
1	LZ	33	LYS	C-N-CA	5.66	128.65	120.38
5	AZ	987	ARG	NE-CZ-NH2	5.66	124.30	119.20
1	LW	251	ASP	CA-CB-CG	5.66	118.26	112.60
12	BF	248	ASN	CA-CB-CG	5.66	118.26	112.60
6	Aa	182	ASP	CA-CB-CG	5.65	118.25	112.60
9	SU	381	ASP	CA-CB-CG	5.64	118.24	112.60
1	Lf	251	ASP	CA-CB-CG	5.63	118.23	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AX	327	ASP	CA-CB-CG	5.62	118.22	112.60
9	SI	629	LYS	CB-CA-C	5.62	115.50	110.44
9	Sf	137	ASP	CA-CB-CG	5.62	118.22	112.60
9	Sn	311	ASP	CA-CB-CG	5.61	118.21	112.60
1	Lc	322	HIS	CA-CB-CG	5.61	119.41	113.80
3	BV	118	PHE	CA-CB-CG	5.60	119.40	113.80
4	AQ	374	LYS	CB-CA-C	5.60	115.18	111.20
7	LG	72	ASP	CA-CB-CG	5.60	118.20	112.60
9	Sh	77	ASP	CA-CB-CG	5.60	118.20	112.60
5	A1	683	HIS	CA-CB-CG	-5.59	108.20	113.80
8	FC	588	PRO	N-CA-C	5.59	120.01	111.34
1	LT	33	LYS	CA-C-N	5.59	128.54	120.38
1	LT	33	LYS	C-N-CA	5.59	128.54	120.38
1	Li	343	ASP	CA-CB-CG	5.59	118.19	112.60
3	BR	118	PHE	CA-CB-CG	5.59	119.39	113.80
6	A9	188	ASP	CA-CB-CG	5.59	118.19	112.60
8	FB	564	ASP	CA-CB-CG	5.58	118.19	112.60
9	Si	137	ASP	CA-CB-CG	5.58	118.18	112.60
1	La	546	PHE	CA-CB-CG	5.58	119.38	113.80
4	AT	117	HIS	CA-CB-CG	5.57	119.37	113.80
6	Ac	182	ASP	CA-CB-CG	5.57	118.17	112.60
1	Li	251	ASP	CA-CB-CG	5.57	118.17	112.60
1	Lc	33	LYS	CA-C-N	5.57	128.51	120.38
1	Lc	33	LYS	C-N-CA	5.57	128.51	120.38
11	AE	12	ASP	CA-CB-CG	5.57	118.17	112.60
6	Ac	125	PRO	N-CA-C	5.56	123.92	112.47
6	Aa	125	PRO	N-CA-C	5.55	123.91	112.47
7	LG	108	PHE	CA-CB-CG	5.55	119.36	113.80
9	SW	381	ASP	CA-CB-CG	5.55	118.15	112.60
9	Sl	311	ASP	CA-CB-CG	5.55	118.15	112.60
6	A9	261	ASP	CA-CB-CG	5.55	118.15	112.60
6	Af	182	ASP	CA-CB-CG	5.55	118.15	112.60
7	LF	133	ASP	CA-CB-CG	5.54	118.14	112.60
6	Ae	125	PRO	N-CA-C	5.54	123.89	112.47
5	A3	987	ARG	NE-CZ-NH2	5.54	124.18	119.20
7	LP	72	ASP	CA-CB-CG	5.53	118.13	112.60
9	SX	311	ASP	CA-CB-CG	5.53	118.13	112.60
11	AC	83	ASN	CA-CB-CG	5.52	118.12	112.60
2	BM	204	ASP	CA-CB-CG	5.52	118.12	112.60
5	A2	1026	THR	CB-CA-C	5.52	120.05	110.72
1	Lh	84	ASN	CA-C-N	5.52	127.67	120.28
1	Lh	84	ASN	C-N-CA	5.52	127.67	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	Ad	73	ASP	CA-CB-CG	5.52	118.12	112.60
7	LH	69	LYS	CB-CA-C	5.50	121.38	110.42
9	SU	137	ASP	CA-CB-CG	5.50	118.11	112.60
5	A2	987	ARG	NE-CZ-NH2	5.50	124.15	119.20
1	LY	84	ASN	CA-C-N	5.50	127.65	120.28
1	LY	84	ASN	C-N-CA	5.50	127.65	120.28
9	Si	629	LYS	CB-CA-C	5.50	116.27	110.17
9	Sh	137	ASP	CA-CB-CG	5.50	118.09	112.60
5	AY	683	HIS	CA-CB-CG	-5.49	108.31	113.80
1	Lh	382	PHE	CA-CB-CG	5.49	119.28	113.80
1	Li	113	PHE	CA-CB-CG	5.48	119.28	113.80
2	BK	268	ASN	CA-CB-CG	5.48	118.08	112.60
1	Lc	251	ASP	CA-CB-CG	5.48	118.08	112.60
9	Sp	311	ASP	CA-CB-CG	5.48	118.08	112.60
1	LX	197	ASP	CA-CB-CG	5.47	118.07	112.60
1	LS	84	ASN	CA-C-N	5.47	127.61	120.28
1	LS	84	ASN	C-N-CA	5.47	127.61	120.28
1	LW	106	PHE	CA-CB-CG	5.47	119.27	113.80
5	AY	483	ASP	CA-CB-CG	5.47	118.07	112.60
9	SB	457	ASP	CA-CB-CG	5.46	118.06	112.60
14	BB	162	ASP	CA-CB-CG	5.46	118.06	112.60
1	Lj	165	PHE	CA-CB-CG	5.46	119.26	113.80
1	Lh	545	ASP	CA-CB-CG	5.46	118.06	112.60
4	AT	327	ASP	CA-CB-CG	5.45	118.05	112.60
3	BU	286	ARG	NE-CZ-NH1	-5.45	116.05	121.50
5	AY	494	ASP	CA-C-N	5.45	127.85	120.38
5	AY	494	ASP	C-N-CA	5.45	127.85	120.38
7	LK	69	LYS	CB-CA-C	5.45	121.27	110.42
8	Fc	566	ASP	CA-CB-CG	5.45	118.05	112.60
8	Fu	564	ASP	CA-CB-CG	5.45	118.05	112.60
4	AV	327	ASP	CA-CB-CG	5.45	118.05	112.60
3	BS	47	ASN	CA-CB-CG	-5.44	107.16	112.60
11	AB	12	ASP	CA-CB-CG	5.44	118.04	112.60
5	AY	289	PHE	CA-CB-CG	5.44	119.24	113.80
9	SJ	537	ASP	CA-CB-CG	5.44	118.04	112.60
6	Af	127	ASN	CA-CB-CG	5.44	118.04	112.60
9	Si	173	SER	CA-C-N	5.43	128.31	120.38
9	Si	173	SER	C-N-CA	5.43	128.31	120.38
10	TT	32	PHE	CA-CB-CG	-5.43	108.37	113.80
1	Li	232	PHE	CA-CB-CG	5.43	119.23	113.80
9	SE	457	ASP	CA-CB-CG	5.43	118.03	112.60
6	Af	73	ASP	CA-CB-CG	5.43	118.03	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	LX	546	PHE	CA-CB-CG	5.43	119.23	113.80
5	AZ	494	ASP	CA-C-N	5.43	127.81	120.38
5	AZ	494	ASP	C-N-CA	5.43	127.81	120.38
9	SL	362	ASP	CA-CB-CG	5.43	118.03	112.60
9	SW	137	ASP	CA-CB-CG	5.42	118.03	112.60
9	Sj	137	ASP	CA-CB-CG	5.42	118.02	112.60
12	BE	66	ASP	CA-CB-CG	5.42	118.02	112.60
5	A3	235	ARG	CA-C-N	5.42	126.74	121.65
5	A3	235	ARG	C-N-CA	5.42	126.74	121.65
9	Sk	485	PRO	N-CA-C	5.42	120.97	113.98
13	AH	85	ARG	CG-CD-NE	5.41	123.91	112.00
7	LQ	69	LYS	CB-CA-C	5.41	121.19	110.42
9	SG	537	ASP	CA-CB-CG	5.41	118.01	112.60
9	SH	537	ASP	CA-CB-CG	5.41	118.01	112.60
1	LY	382	PHE	CA-CB-CG	5.40	119.20	113.80
4	AQ	262	PHE	CA-CB-CG	5.40	119.20	113.80
7	LC	100	LYS	CA-C-N	5.40	125.23	120.10
7	LC	100	LYS	C-N-CA	5.40	125.23	120.10
9	SR	548	ASP	CA-CB-CG	5.40	118.00	112.60
12	BG	112	ASP	CA-CB-CG	5.40	118.00	112.60
4	AM	374	LYS	CB-CA-C	5.40	115.03	111.20
11	AD	62	PHE	CA-CB-CG	-5.40	108.40	113.80
2	BK	261	GLN	CA-C-N	5.39	128.13	120.53
2	BK	261	GLN	C-N-CA	5.39	128.13	120.53
5	AY	1026	THR	CB-CA-C	5.39	119.28	110.17
1	LT	150	ASN	CA-C-N	5.39	125.09	119.92
1	LT	150	ASN	C-N-CA	5.39	125.09	119.92
1	Lf	343	ASP	CA-CB-CG	5.38	117.98	112.60
9	SM	548	ASP	CA-CB-CG	5.38	117.98	112.60
9	Sh	310	ASP	CA-CB-CG	5.38	117.98	112.60
1	LV	84	ASN	CA-C-N	5.38	127.49	120.28
1	LV	84	ASN	C-N-CA	5.38	127.49	120.28
8	Fu	563	LEU	CA-C-N	5.38	130.72	124.21
8	Fu	563	LEU	C-N-CA	5.38	130.72	124.21
1	LS	545	ASP	CA-CB-CG	5.37	117.97	112.60
7	LB	69	LYS	CB-CA-C	5.37	121.11	110.42
9	SH	629	LYS	CB-CA-C	5.37	115.81	110.33
11	AC	5	ASP	CA-CB-CG	5.37	117.97	112.60
1	LY	545	ASP	CA-CB-CG	5.37	117.97	112.60
5	A0	683	HIS	CA-CB-CG	-5.36	108.44	113.80
1	Lf	440	ASP	CA-CB-CG	5.36	117.96	112.60
5	A1	494	ASP	CA-C-N	5.36	127.72	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	A1	494	ASP	C-N-CA	5.36	127.72	120.38
1	Lb	382	PHE	CA-CB-CG	5.36	119.16	113.80
11	AA	66	THR	CB-CA-C	-5.36	103.15	110.22
3	BS	87	PHE	CA-CB-CG	-5.35	108.45	113.80
9	SL	537	ASP	CA-CB-CG	5.35	117.95	112.60
4	AW	64	ASN	CA-CB-CG	-5.35	107.25	112.60
5	A2	289	PHE	CA-CB-CG	5.35	119.15	113.80
9	SS	137	ASP	CA-CB-CG	5.35	117.95	112.60
9	Sm	137	ASP	CA-CB-CG	5.35	117.95	112.60
8	FT	570	PRO	N-CA-C	5.34	120.87	113.98
9	ST	381	ASP	CA-CB-CG	5.34	117.94	112.60
4	AU	540	ASP	CA-CB-CG	5.34	117.94	112.60
2	BK	204	ASP	CA-CB-CG	5.34	117.94	112.60
9	SC	454	TYR	CB-CA-C	5.34	119.47	109.71
9	SJ	629	LYS	CB-CA-C	5.34	115.77	110.33
9	SX	381	ASP	CA-CB-CG	5.33	117.93	112.60
9	SI	537	ASP	CA-CB-CG	5.33	117.93	112.60
5	A2	683	HIS	CA-CB-CG	-5.32	108.48	113.80
11	AA	19	TRP	CA-CB-CG	5.32	123.72	113.60
5	A3	760	ASP	CA-CB-CG	5.32	117.92	112.60
8	Fu	566	ASP	CA-CB-CG	5.32	117.92	112.60
9	Sp	137	ASP	CA-CB-CG	5.32	117.92	112.60
4	AV	117	HIS	CA-CB-CG	5.31	119.11	113.80
7	LO	133	ASP	CA-CB-CG	5.31	117.91	112.60
5	A1	1014	ASP	CA-CB-CG	5.31	117.91	112.60
6	A5	188	ASP	CA-CB-CG	5.31	117.91	112.60
7	LN	69	LYS	CB-CA-C	5.31	120.99	110.42
9	So	311	ASP	CA-CB-CG	5.31	117.91	112.60
2	BL	80	PHE	CA-CB-CG	-5.30	108.50	113.80
1	LT	106	PHE	CA-CB-CG	5.30	119.10	113.80
4	AP	631	ASP	CA-CB-CG	5.30	117.90	112.60
7	LL	133	ASP	CA-CB-CG	5.30	117.90	112.60
6	A7	159	GLU	CA-C-N	5.30	127.83	120.63
6	A7	159	GLU	C-N-CA	5.30	127.83	120.63
12	BE	248	ASN	CA-CB-CG	5.30	117.90	112.60
1	Le	545	ASP	CA-CB-CG	5.29	117.89	112.60
1	LX	198	PHE	CA-CB-CG	5.29	119.09	113.80
6	Ab	56	ASP	CA-CB-CG	5.29	117.89	112.60
3	BQ	286	ARG	NE-CZ-NH1	-5.29	116.21	121.50
5	A3	486	TYR	CB-CA-C	5.29	119.83	112.11
8	Fd	544	ASP	CA-CB-CG	5.29	117.89	112.60
9	SK	77	ASP	CA-CB-CG	5.29	117.89	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	BM	307	ASP	CA-CB-CG	5.28	117.88	112.60
8	Fc	554	GLY	CA-C-N	5.28	127.89	120.28
8	Fc	554	GLY	C-N-CA	5.28	127.89	120.28
7	LA	246	ASP	CA-CB-CG	5.28	117.88	112.60
1	La	165	PHE	CA-CB-CG	5.28	119.08	113.80
14	BB	512	ASP	CA-CB-CG	5.28	117.88	112.60
9	SO	440	ASN	CA-CB-CG	5.27	117.87	112.60
9	SD	4	VAL	CB-CA-C	5.27	116.19	111.71
8	Fd	588	PRO	N-CA-C	5.26	119.50	111.34
9	SP	548	ASP	CA-CB-CG	5.26	117.86	112.60
12	BG	258	ASP	CB-CA-C	5.26	118.78	111.51
5	AZ	289	PHE	CA-CB-CG	5.26	119.06	113.80
1	Li	440	ASP	CA-CB-CG	5.26	117.86	112.60
14	BB	528	ASP	CA-CB-CG	5.26	117.86	112.60
1	Lc	242	ASN	CA-CB-CG	5.26	117.86	112.60
9	SK	362	ASP	CA-CB-CG	5.26	117.86	112.60
9	Sp	485	PRO	N-CA-C	5.26	120.76	113.98
7	LQ	201	ASP	CA-CB-CG	5.25	117.86	112.60
8	FK	554	GLY	CA-C-N	5.25	127.84	120.28
8	FK	554	GLY	C-N-CA	5.25	127.84	120.28
9	SH	77	ASP	CA-CB-CG	5.25	117.85	112.60
1	Lc	440	ASP	CA-CB-CG	5.25	117.85	112.60
4	AP	12	THR	CB-CA-C	5.25	118.65	110.67
5	A0	760	ASP	CA-CB-CG	5.25	117.85	112.60
6	Aa	70	ASP	CA-CB-CG	5.25	117.85	112.60
1	LU	198	PHE	CA-CB-CG	5.25	119.05	113.80
5	A2	760	ASP	CA-CB-CG	5.25	117.84	112.60
1	LT	113	PHE	CA-CB-CG	5.24	119.04	113.80
2	BL	268	ASN	CA-CB-CG	5.24	117.84	112.60
1	Lf	242	ASN	CA-CB-CG	5.24	117.84	112.60
13	AJ	179	GLU	CB-CG-CD	5.24	121.51	112.60
5	AZ	760	ASP	CA-CB-CG	5.24	117.84	112.60
8	FB	563	LEU	CA-C-N	5.24	130.54	124.21
8	FB	563	LEU	C-N-CA	5.24	130.54	124.21
1	LV	96	ASN	CA-CB-CG	5.23	117.83	112.60
5	A1	760	ASP	CA-CB-CG	5.23	117.83	112.60
6	Ac	56	ASP	CA-CB-CG	5.23	117.83	112.60
9	Sh	173	SER	CA-C-N	5.23	128.02	120.38
9	Sh	173	SER	C-N-CA	5.23	128.02	120.38
7	LK	201	ASP	CA-CB-CG	5.23	117.83	112.60
8	FT	563	LEU	CA-C-N	5.23	130.54	124.21
8	FT	563	LEU	C-N-CA	5.23	130.54	124.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	Lb	468	GLU	CA-C-N	5.23	128.26	120.31
1	Lb	468	GLU	C-N-CA	5.23	128.26	120.31
9	Se	511	HIS	CA-CB-CG	5.23	119.03	113.80
11	AA	83	ASN	CA-CB-CG	5.23	117.83	112.60
3	BV	189	ARG	CD-NE-CZ	5.23	131.72	124.40
5	A0	987	ARG	NE-CZ-NH2	5.22	123.90	119.20
1	La	253	THR	CA-C-N	5.22	127.47	120.58
1	La	253	THR	C-N-CA	5.22	127.47	120.58
6	A8	23	PHE	CA-CB-CG	5.22	119.02	113.80
5	A1	289	PHE	CA-CB-CG	5.22	119.02	113.80
9	SD	454	TYR	CB-CA-C	5.22	119.15	109.70
1	LU	197	ASP	CA-CB-CG	5.22	117.82	112.60
9	SL	77	ASP	CA-CB-CG	5.22	117.82	112.60
9	SI	457	ASP	CA-CB-CG	5.22	117.82	112.60
11	AF	83	ASN	CA-CB-CG	5.22	117.82	112.60
1	LU	165	PHE	CA-CB-CG	5.22	119.02	113.80
1	LW	440	ASP	CA-CB-CG	5.22	117.82	112.60
3	BQ	189	ARG	NE-CZ-NH1	-5.22	116.28	121.50
9	SW	440	ASN	CA-CB-CG	5.22	117.82	112.60
5	A2	483	ASP	CA-CB-CG	5.21	117.81	112.60
14	BC	11	PHE	CA-CB-CG	5.21	119.01	113.80
1	LS	457	THR	N-CA-C	5.21	113.05	108.78
1	LX	165	PHE	CA-CB-CG	5.21	119.01	113.80
9	SH	507	PRO	CA-C-N	5.21	128.48	120.82
9	SH	507	PRO	C-N-CA	5.21	128.48	120.82
10	TX	143	ASP	CA-CB-CG	5.21	117.81	112.60
11	AE	83	ASN	CA-CB-CG	5.21	117.81	112.60
9	SB	454	TYR	CB-CA-C	5.21	119.24	109.71
9	Sm	173	SER	CA-C-N	5.21	127.98	120.38
9	Sm	173	SER	C-N-CA	5.21	127.98	120.38
6	Ad	130	ASP	CA-CB-CG	5.20	117.80	112.60
9	SK	507	PRO	CA-C-N	5.20	128.47	120.82
9	SK	507	PRO	C-N-CA	5.20	128.47	120.82
4	AW	542	ASP	CA-CB-CG	5.20	117.80	112.60
6	Ad	191	ASP	CA-CB-CG	5.20	117.80	112.60
9	SM	440	ASN	CA-CB-CG	5.20	117.80	112.60
9	ST	311	ASP	CA-CB-CG	5.20	117.80	112.60
2	BO	204	ASP	CA-CB-CG	5.20	117.80	112.60
6	A7	188	ASP	CA-CB-CG	5.20	117.80	112.60
5	A3	494	ASP	CA-C-N	5.20	127.50	120.38
5	A3	494	ASP	C-N-CA	5.20	127.50	120.38
10	TW	32	PHE	CA-CB-CG	-5.20	108.60	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	BM	90	PHE	CA-CB-CG	5.19	118.99	113.80
1	Lc	106	PHE	CA-CB-CG	5.19	118.99	113.80
9	SP	440	ASN	CA-CB-CG	5.19	117.79	112.60
5	A3	1014	ASP	CA-CB-CG	5.19	117.79	112.60
6	A7	261	ASP	CA-CB-CG	5.19	117.79	112.60
9	SK	537	ASP	CA-CB-CG	5.19	117.79	112.60
9	SJ	77	ASP	CA-CB-CG	5.19	117.79	112.60
9	Sk	311	ASP	CA-CB-CG	5.19	117.79	112.60
9	SH	362	ASP	CA-CB-CG	5.18	117.78	112.60
9	SW	530	ASP	CA-CB-CG	5.18	117.78	112.60
9	ST	530	ASP	CA-CB-CG	5.18	117.78	112.60
14	BD	11	PHE	CA-CB-CG	5.18	118.98	113.80
1	Lj	198	PHE	CA-CB-CG	5.18	118.98	113.80
9	SL	457	ASP	CA-CB-CG	5.18	117.78	112.60
6	Ad	339	PHE	CA-CB-CG	5.17	118.97	113.80
9	Sj	173	SER	CA-C-N	5.17	127.73	120.28
9	Sj	173	SER	C-N-CA	5.17	127.73	120.28
5	AY	409	GLU	CA-C-N	5.17	125.82	120.03
5	AY	409	GLU	C-N-CA	5.17	125.82	120.03
9	SN	173	SER	N-CA-C	5.17	115.07	108.24
4	AU	542	ASP	CA-CB-CG	5.17	117.77	112.60
7	LB	201	ASP	CA-CB-CG	5.17	117.77	112.60
1	Lf	33	LYS	CA-C-N	5.17	127.72	120.28
1	Lf	33	LYS	C-N-CA	5.17	127.72	120.28
9	SG	77	ASP	CA-CB-CG	5.17	117.77	112.60
5	A3	556	ARG	NE-CZ-NH2	5.16	123.85	119.20
6	A7	57	ASN	CA-C-N	5.16	127.92	120.38
6	A7	57	ASN	C-N-CA	5.16	127.92	120.38
11	AE	5	ASP	CA-CB-CG	5.16	117.76	112.60
9	SL	507	PRO	CA-C-N	5.16	128.41	120.82
9	SL	507	PRO	C-N-CA	5.16	128.41	120.82
13	AG	85	ARG	CG-CD-NE	5.16	123.36	112.00
14	BC	418	PRO	N-CA-C	5.16	120.62	113.65
3	BT	286	ARG	NE-CZ-NH1	-5.16	116.34	121.50
9	SF	454	TYR	CB-CA-C	5.16	119.15	109.71
9	SJ	507	PRO	CA-C-N	5.16	128.40	120.82
9	SJ	507	PRO	C-N-CA	5.16	128.40	120.82
9	SG	507	PRO	CA-C-N	5.16	128.40	120.82
9	SG	507	PRO	C-N-CA	5.16	128.40	120.82
4	AR	631	ASP	CA-CB-CG	5.15	117.75	112.60
9	SI	507	PRO	CA-C-N	5.15	128.40	120.82
9	SI	507	PRO	C-N-CA	5.15	128.40	120.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SV	440	ASN	CA-CB-CG	5.15	117.75	112.60
1	LT	440	ASP	CA-CB-CG	5.15	117.75	112.60
1	LZ	224	ARG	CB-CG-CD	5.15	123.14	111.30
10	TO	56	ARG	CG-CD-NE	-5.15	100.67	112.00
10	Tr	143	ASP	CA-CB-CG	5.15	117.75	112.60
14	BD	20	ASP	CA-CB-CG	5.14	117.74	112.60
10	TU	143	ASP	CA-CB-CG	5.14	117.74	112.60
14	BC	20	ASP	CA-CB-CG	5.14	117.74	112.60
7	LN	108	PHE	CA-CB-CG	5.13	118.94	113.80
4	AV	291	ASP	CA-CB-CG	5.13	117.73	112.60
5	AZ	683	HIS	CA-CB-CG	-5.13	108.67	113.80
9	SM	173	SER	N-CA-C	5.13	115.02	108.24
1	Lg	253	THR	CA-C-N	5.13	127.35	120.58
1	Lg	253	THR	C-N-CA	5.13	127.35	120.58
5	A0	409	GLU	CA-C-N	5.13	125.78	120.03
5	A0	409	GLU	C-N-CA	5.13	125.78	120.03
9	SS	381	ASP	CA-CB-CG	5.13	117.73	112.60
9	SS	197	GLU	CA-C-N	5.13	125.42	119.47
9	SS	197	GLU	C-N-CA	5.13	125.42	119.47
5	A0	1024	ASN	CA-CB-CG	5.13	117.73	112.60
9	SP	173	SER	N-CA-C	5.13	115.01	108.24
9	SK	629	LYS	CB-CA-C	5.13	115.56	110.33
2	BL	259	PHE	N-CA-C	5.12	116.59	108.96
9	SV	137	ASP	CA-CB-CG	5.12	117.72	112.60
9	Sn	137	ASP	CA-CB-CG	5.12	117.72	112.60
9	So	485	PRO	N-CA-C	5.12	120.58	113.98
7	LM	246	ASP	CA-CB-CG	5.12	117.72	112.60
9	Se	137	ASP	CA-CB-CG	5.12	117.72	112.60
9	SR	440	ASN	CA-CB-CG	5.12	117.72	112.60
7	LR	133	ASP	CA-CB-CG	5.11	117.71	112.60
9	SR	173	SER	N-CA-C	5.11	114.99	108.24
6	A5	159	GLU	CA-C-N	5.11	127.58	120.63
6	A5	159	GLU	C-N-CA	5.11	127.58	120.63
9	SD	481	ASP	CA-CB-CG	5.11	117.71	112.60
8	Fc	563	LEU	CA-C-N	5.11	130.39	124.21
8	Fc	563	LEU	C-N-CA	5.11	130.39	124.21
8	Fu	554	GLY	CA-C-N	5.11	127.64	120.28
8	Fu	554	GLY	C-N-CA	5.11	127.64	120.28
9	SU	77	ASP	CA-CB-CG	5.11	117.71	112.60
8	FJ	589	ASN	CB-CA-C	5.11	118.76	109.62
9	Sg	310	ASP	CA-CB-CG	5.11	117.71	112.60
9	Sk	173	SER	CA-C-N	5.11	127.84	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	Sk	173	SER	C-N-CA	5.11	127.84	120.38
1	LZ	251	ASP	CA-CB-CG	5.11	117.71	112.60
5	AZ	1014	ASP	CA-CB-CG	5.10	117.70	112.60
8	Fv	588	PRO	N-CA-C	5.10	119.32	111.21
10	TM	55	ASN	CA-CB-CG	-5.10	107.50	112.60
1	Lj	197	ASP	CA-CB-CG	5.10	117.70	112.60
10	TT	143	ASP	CA-CB-CG	5.10	117.70	112.60
1	LV	294	ASP	CA-CB-CG	5.10	117.70	112.60
10	TR	56	ARG	CG-CD-NE	-5.10	100.79	112.00
3	BV	5	GLU	CB-CA-C	-5.09	102.02	110.68
4	AV	461	PHE	N-CA-C	5.09	117.57	111.71
4	AN	12	THR	CB-CA-C	5.09	118.41	110.67
6	A5	20	THR	CB-CA-C	5.09	118.14	109.53
4	AT	461	PHE	N-CA-C	5.09	117.57	111.71
6	A6	23	PHE	CA-CB-CG	5.09	118.89	113.80
6	Ae	69	ALA	CA-C-N	5.09	127.61	120.28
6	Ae	69	ALA	C-N-CA	5.09	127.61	120.28
8	FB	554	GLY	CA-C-N	5.09	127.61	120.28
8	FB	554	GLY	C-N-CA	5.09	127.61	120.28
9	SV	197	GLU	CA-C-N	5.09	125.38	119.47
9	SV	197	GLU	C-N-CA	5.09	125.38	119.47
11	AD	83	ASN	CA-CB-CG	5.09	117.69	112.60
12	BF	164	LEU	CA-C-N	5.09	127.36	120.38
12	BF	164	LEU	C-N-CA	5.09	127.36	120.38
3	BT	189	ARG	CD-NE-CZ	5.09	131.53	124.40
11	AA	12	ASP	CA-CB-CG	5.09	117.69	112.60
9	Sf	173	SER	CA-C-N	5.09	127.81	120.38
9	Sf	173	SER	C-N-CA	5.09	127.81	120.38
9	Sh	511	HIS	CA-CB-CG	5.09	118.89	113.80
5	AZ	486	TYR	CB-CA-C	5.09	119.54	112.11
9	SB	2	PRO	CA-N-CD	-5.09	104.88	112.00
1	LW	232	PHE	CA-CB-CG	5.08	118.89	113.80
8	FK	563	LEU	CA-C-N	5.08	130.36	124.21
8	FK	563	LEU	C-N-CA	5.08	130.36	124.21
9	Sj	310	ASP	CA-CB-CG	5.08	117.69	112.60
14	BC	528	ASP	CA-CB-CG	5.08	117.69	112.60
9	SF	37	PRO	CB-CA-C	-5.08	104.91	111.46
9	Sg	137	ASP	CA-CB-CG	5.08	117.68	112.60
4	AS	542	ASP	CA-CB-CG	5.08	117.68	112.60
9	SW	311	ASP	CA-CB-CG	5.08	117.67	112.60
5	A3	683	HIS	CA-CB-CG	-5.07	108.73	113.80
5	A2	494	ASP	CA-C-N	5.07	127.33	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A2	494	ASP	C-N-CA	5.07	127.33	120.38
10	TM	56	ARG	CG-CD-NE	-5.07	100.85	112.00
5	A0	483	ASP	CA-CB-CG	5.07	117.67	112.60
4	AN	631	ASP	CA-CB-CG	5.06	117.66	112.60
6	Af	56	ASP	CA-CB-CG	5.06	117.66	112.60
9	SO	310	ASP	CA-CB-CG	5.06	117.66	112.60
1	LT	232	PHE	CA-CB-CG	5.06	118.86	113.80
9	SV	77	ASP	CA-CB-CG	5.06	117.66	112.60
14	BD	518	ASP	CA-CB-CG	5.05	117.65	112.60
9	Sa	71	PHE	CA-CB-CG	-5.05	108.75	113.80
9	Sg	173	SER	CA-C-N	5.05	127.55	120.28
9	Sg	173	SER	C-N-CA	5.05	127.55	120.28
9	Sk	137	ASP	CA-CB-CG	5.05	117.65	112.60
2	BO	158	GLY	N-CA-C	5.04	117.84	110.63
4	AQ	642	ARG	CG-CD-NE	-5.04	100.90	112.00
4	AX	46	ASP	CA-CB-CG	5.04	117.64	112.60
1	Lj	265	ASP	CA-CB-CG	5.04	117.64	112.60
4	AP	5	GLU	CB-CA-C	5.04	116.70	109.09
6	Af	130	ASP	CA-CB-CG	5.04	117.64	112.60
8	FT	564	ASP	CB-CA-C	5.04	114.78	111.20
5	A1	409	GLU	CA-C-N	5.04	125.67	120.03
5	A1	409	GLU	C-N-CA	5.04	125.67	120.03
10	TW	143	ASP	CA-CB-CG	5.04	117.64	112.60
3	BS	189	ARG	NE-CZ-NH1	-5.04	116.46	121.50
5	A2	409	GLU	CA-C-N	5.04	125.67	120.03
5	A2	409	GLU	C-N-CA	5.04	125.67	120.03
5	AY	633	TRP	N-CA-C	5.04	116.62	111.03
1	Le	468	GLU	CA-C-N	5.03	127.96	120.31
1	Le	468	GLU	C-N-CA	5.03	127.96	120.31
1	La	449	ARG	NE-CZ-NH2	5.03	123.73	119.20
9	SK	457	ASP	CA-CB-CG	5.03	117.63	112.60
9	SS	440	ASN	CA-CB-CG	5.03	117.63	112.60
7	LC	133	ASP	CA-CB-CG	5.03	117.63	112.60
10	Tv	143	ASP	CA-CB-CG	5.03	117.63	112.60
1	LZ	440	ASP	CA-CB-CG	5.03	117.63	112.60
9	SN	310	ASP	CA-CB-CG	5.03	117.63	112.60
5	A1	486	TYR	CB-CA-C	5.03	119.45	112.11
9	SR	310	ASP	CA-CB-CG	5.03	117.63	112.60
1	Lg	198	PHE	CA-CB-CG	5.03	118.83	113.80
5	A2	853	ASP	CA-C-N	5.03	127.72	120.38
5	A2	853	ASP	C-N-CA	5.03	127.72	120.38
1	LX	561	ASP	CA-CB-CG	5.02	117.62	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	Af	191	ASP	CA-CB-CG	5.02	117.62	112.60
8	FA	589	ASN	CB-CA-C	5.02	118.61	109.62
9	SX	137	ASP	CA-CB-CG	5.02	117.62	112.60
1	La	265	ASP	CA-CB-CG	5.02	117.62	112.60
5	A3	1015	ASP	CA-CB-CG	5.02	117.62	112.60
6	A7	20	THR	CB-CA-C	5.02	117.81	109.53
1	LW	242	ASN	CA-CB-CG	5.01	117.61	112.60
5	AY	987	ARG	NE-CZ-NH2	5.01	123.71	119.20
4	AS	540	ASP	CA-CB-CG	5.01	117.61	112.60
1	LT	419	GLU	CA-C-N	5.01	126.99	120.28
1	LT	419	GLU	C-N-CA	5.01	126.99	120.28
9	Si	77	ASP	CA-CB-CG	5.01	117.61	112.60
1	Ld	197	ASP	CA-CB-CG	5.01	117.61	112.60
5	AY	515	PHE	CA-CB-CG	5.01	118.81	113.80
6	Ab	127	ASN	CA-CB-CG	5.01	117.61	112.60
1	LS	294	ASP	CA-CB-CG	5.00	117.60	112.60
14	BD	512	ASP	CA-CB-CG	5.00	117.60	112.60
3	BR	189	ARG	CD-NE-CZ	5.00	131.40	124.40
7	LJ	246	ASP	CA-CB-CG	5.00	117.60	112.60
8	Ft	589	ASN	CB-CA-C	5.00	118.57	109.62
12	BE	75	ASN	CA-C-N	5.00	128.68	120.63
12	BE	75	ASN	C-N-CA	5.00	128.68	120.63

There are no chirality outliers.

All (100) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	A0	305	THR	Peptide
5	A0	69	GLN	Peptide
5	A0	907	LYS	Peptide
5	A0	934	ALA	Peptide
5	A1	633	TRP	Peptide
5	A1	69	GLN	Peptide
5	A2	305	THR	Peptide
5	A2	69	GLN	Peptide
5	A2	907	LYS	Peptide
5	A2	930	PRO	Peptide
5	A3	633	TRP	Peptide
5	A3	69	GLN	Peptide
5	A3	934	ALA	Peptide
4	AM	532	TYR	Sidechain
4	AO	532	TYR	Sidechain

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Mol	Chain	Res	Type	Group
4	AQ	532	TYR	Sidechain
4	AS	251	ALA	Peptide
5	AY	69	GLN	Peptide
5	AY	930	PRO	Peptide
5	AZ	305	THR	Peptide
5	AZ	633	TRP	Peptide
5	AZ	69	GLN	Peptide
5	AZ	934	ALA	Peptide
5	AZ	977	VAL	Peptide
2	BM	93	PRO	Peptide
2	BO	148	LEU	Peptide
2	BO	292	ARG	Peptide
2	BP	72	ARG	Peptide
3	BQ	74	GLY	Peptide
3	BR	74	GLY	Peptide
3	BS	31	SER	Peptide
3	BS	74	GLY	Peptide
3	BT	46	TYR	Peptide
3	BT	74	GLY	Peptide
3	BU	74	GLY	Peptide
3	BV	74	GLY	Peptide
8	FC	552	GLU	Peptide
8	FL	552	GLU	Peptide
8	FU	552	GLU	Peptide
8	Fd	552	GLU	Peptide
8	Fm	552	GLU	Peptide
8	Fv	552	GLU	Peptide
7	LE	181	LEU	Peptide
7	LQ	181	LEU	Peptide
1	LS	26	ALA	Peptide
1	LS	605	ARG	Peptide
1	LS	92	ARG	Peptide
1	LU	28	ALA	Peptide
1	LU	508	LEU	Peptide
1	LV	26	ALA	Peptide
1	LV	593	SER	Peptide
1	LV	605	ARG	Peptide
1	LV	92	ARG	Peptide
1	LX	28	ALA	Peptide
1	LX	508	LEU	Peptide
1	LY	26	ALA	Peptide
1	LY	307	ARG	Peptide

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Mol	Chain	Res	Type	Group
1	LY	593	SER	Peptide
1	LY	605	ARG	Peptide
1	LY	92	ARG	Peptide
1	LZ	236	PRO	Peptide
1	La	28	ALA	Peptide
1	La	508	LEU	Peptide
1	Lb	26	ALA	Peptide
1	Lb	605	ARG	Peptide
1	Lb	92	ARG	Peptide
1	Ld	28	ALA	Peptide
1	Le	26	ALA	Peptide
1	Le	307	ARG	Peptide
1	Le	593	SER	Peptide
1	Le	605	ARG	Peptide
1	Le	92	ARG	Peptide
1	Lf	247	PHE	Sidechain
1	Lg	28	ALA	Peptide
1	Lg	508	LEU	Peptide
1	Lh	26	ALA	Peptide
1	Lh	593	SER	Peptide
1	Lh	605	ARG	Peptide
1	Lh	92	ARG	Peptide
1	Lj	508	LEU	Peptide
9	SM	277	TYR	Sidechain
9	SN	277	TYR	Sidechain
9	SO	277	TYR	Sidechain
9	SP	168	THR	Peptide
9	SP	277	TYR	Sidechain
9	SQ	277	TYR	Sidechain
9	SR	109	ASN	Peptide
9	SR	277	TYR	Sidechain
9	ST	277	TYR	Sidechain
9	SU	277	TYR	Sidechain
9	SV	277	TYR	Sidechain
9	SW	277	TYR	Sidechain
9	SX	277	TYR	Sidechain
9	Se	632	ARG	Peptide
9	Sf	277	TYR	Sidechain
9	Sf	632	ARG	Peptide
9	Sg	277	TYR	Sidechain
9	Sg	632	ARG	Peptide
9	Sh	632	ARG	Peptide

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Mol	Chain	Res	Type	Group
9	Si	632	ARG	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	LS	4752	0	4730	5	0
1	LT	4752	0	4730	5	0
1	LU	4752	0	4730	3	0
1	LV	4752	0	4730	6	0
1	LW	4752	0	4730	4	0
1	LX	4752	0	4730	5	0
1	LY	4752	0	4730	7	0
1	LZ	4752	0	4730	3	0
1	La	4752	0	4730	4	0
1	Lb	4752	0	4730	5	0
1	Lc	4752	0	4730	4	0
1	Ld	4752	0	4730	4	0
1	Le	4752	0	4730	4	0
1	Lf	4752	0	4730	4	0
1	Lg	4752	0	4730	5	0
1	Lh	4752	0	4730	6	0
1	Li	4752	0	4730	5	0
1	Lj	4752	0	4730	4	0
2	BK	2664	0	2609	3	0
2	BL	2180	0	2138	7	0
2	BM	2664	0	2609	5	0
2	BN	2180	0	2138	7	0
2	BO	2664	0	2609	2	0
2	BP	2180	0	2138	11	0
3	BQ	2263	0	2203	9	0
3	BR	2263	0	2203	8	0
3	BS	2263	0	2203	7	0
3	BT	2263	0	2203	7	0
3	BU	2263	0	2203	8	0
3	BV	2263	0	2203	8	0
4	AM	5191	0	5061	5	0
4	AN	5191	0	5061	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	AO	5191	0	5061	7	0
4	AP	5191	0	5061	3	0
4	AQ	5191	0	5061	3	0
4	AR	5191	0	5061	5	0
4	AS	5145	0	5008	1	0
4	AT	5125	0	4993	6	0
4	AU	5145	0	5008	3	0
4	AV	5125	0	4993	8	0
4	AW	5145	0	5008	0	0
4	AX	5125	0	4993	8	0
5	A0	8438	0	8098	13	0
5	A1	8438	0	8098	8	0
5	A2	8438	0	8098	11	0
5	A3	8438	0	8098	8	0
5	AY	8438	0	8098	14	0
5	AZ	8438	0	8098	10	0
6	A4	2669	0	2557	4	0
6	A5	2669	0	2557	3	0
6	A6	2669	0	2557	5	0
6	A7	2669	0	2557	4	0
6	A8	2669	0	2557	4	0
6	A9	2669	0	2557	3	0
6	Aa	2633	0	2522	5	0
6	Ab	2633	0	2522	3	0
6	Ac	2633	0	2522	5	0
6	Ad	2633	0	2522	7	0
6	Ae	2633	0	2522	4	0
6	Af	2633	0	2522	4	0
7	LA	2270	0	2236	3	0
7	LB	2270	0	2236	2	0
7	LC	2270	0	2236	1	0
7	LD	2270	0	2236	2	0
7	LE	2270	0	2236	2	0
7	LF	2270	0	2236	1	0
7	LG	2270	0	2236	4	0
7	LH	2270	0	2236	3	0
7	LI	2270	0	2236	1	0
7	LJ	2270	0	2236	2	0
7	LK	2270	0	2236	1	0
7	LL	2270	0	2236	2	0
7	LM	2270	0	2236	2	0
7	LN	2270	0	2236	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	LO	2270	0	2236	2	0
7	LP	2270	0	2236	4	0
7	LQ	2270	0	2236	4	0
7	LR	2270	0	2236	2	0
8	FA	499	0	490	1	0
8	FB	499	0	490	2	0
8	FC	499	0	490	3	0
8	FJ	499	0	490	0	0
8	FK	499	0	490	1	0
8	FL	499	0	490	0	0
8	FS	499	0	490	0	0
8	FT	499	0	490	2	0
8	FU	499	0	490	1	0
8	Fb	499	0	490	0	0
8	Fc	499	0	490	2	0
8	Fd	499	0	490	1	0
8	Fk	499	0	490	1	0
8	Fl	499	0	490	2	0
8	Fm	499	0	490	3	0
8	Ft	499	0	490	0	0
8	Fu	499	0	490	2	0
8	Fv	499	0	490	1	0
9	SA	4993	0	4889	13	0
9	SB	4993	0	4889	13	0
9	SC	4993	0	4889	8	0
9	SD	4993	0	4889	9	0
9	SE	4993	0	4889	9	0
9	SF	4993	0	4889	10	0
9	SG	5037	0	4931	11	0
9	SH	5037	0	4931	7	0
9	SI	5037	0	4931	10	0
9	SJ	5037	0	4931	9	0
9	SK	5037	0	4931	9	0
9	SL	5037	0	4931	10	0
9	SM	5037	0	4931	11	0
9	SN	5037	0	4931	8	0
9	SO	5037	0	4931	9	0
9	SP	5037	0	4931	10	0
9	SQ	5037	0	4931	6	0
9	SR	5037	0	4931	9	0
9	SS	5037	0	4931	4	0
9	ST	5037	0	4931	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	SU	5037	0	4931	2	0
9	SV	5037	0	4931	7	0
9	SW	5037	0	4931	2	0
9	SX	5037	0	4931	4	0
9	SY	5037	0	4931	4	0
9	SZ	5037	0	4931	4	0
9	Sa	5037	0	4931	3	0
9	Sb	5037	0	4931	2	0
9	Sc	5037	0	4931	3	0
9	Sd	5037	0	4931	2	0
9	Se	5037	0	4931	3	0
9	Sf	5037	0	4931	6	0
9	Sg	5037	0	4931	4	0
9	Sh	5037	0	4931	3	0
9	Si	5037	0	4931	6	0
9	Sj	5037	0	4931	5	0
9	Sk	5037	0	4931	4	0
9	Sl	5037	0	4931	7	0
9	Sm	5037	0	4931	3	0
9	Sn	5037	0	4931	2	0
9	So	5037	0	4931	7	0
9	Sp	5037	0	4931	3	0
10	TM	1305	0	1235	9	0
10	TN	1305	0	1235	6	0
10	TO	1305	0	1235	9	0
10	TP	1305	0	1235	10	0
10	TQ	1305	0	1235	7	0
10	TR	1305	0	1235	7	0
10	TS	1305	0	1235	5	0
10	TT	1305	0	1235	6	0
10	TU	1305	0	1235	9	0
10	TV	1305	0	1235	7	0
10	TW	1305	0	1235	7	0
10	TX	1305	0	1235	8	0
10	TY	1305	0	1235	7	0
10	TZ	1305	0	1235	5	0
10	Ta	1305	0	1235	4	0
10	Tb	1305	0	1235	4	0
10	Tc	1305	0	1235	6	0
10	Td	1305	0	1235	7	0
10	Te	1305	0	1235	4	0
10	Tf	1305	0	1235	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	Tg	1305	0	1235	4	0
10	Th	1305	0	1235	3	0
10	Ti	1305	0	1235	7	0
10	Tj	1305	0	1235	6	0
10	Tk	1305	0	1235	4	0
10	Tl	1305	0	1235	5	0
10	Tm	1305	0	1235	3	0
10	Tn	1305	0	1235	4	0
10	To	1305	0	1235	5	0
10	Tp	1305	0	1235	3	0
10	Tq	1305	0	1235	3	0
10	Tr	1305	0	1235	2	0
10	Ts	1305	0	1235	3	0
10	Tt	1305	0	1235	3	0
10	Tu	1305	0	1235	3	0
10	Tv	1305	0	1235	2	0
11	AA	1044	0	1042	1	0
11	AB	1044	0	1042	4	0
11	AC	1044	0	1042	7	0
11	AD	1044	0	1042	1	0
11	AE	1044	0	1042	1	0
11	AF	1044	0	1042	1	0
12	BE	3055	0	2962	9	0
12	BF	3055	0	2962	7	0
12	BG	3055	0	2962	7	0
13	AG	1747	0	1652	0	0
13	AH	1747	0	1652	3	0
13	AI	1747	0	1652	0	0
13	AJ	1747	0	1652	3	0
13	AK	1747	0	1652	0	0
13	AL	1747	0	1652	2	0
14	BB	4354	0	4218	7	0
14	BC	4354	0	4218	15	0
14	BD	4354	0	4218	15	0
15	BB	1	0	0	0	0
All	All	605128	0	590112	710	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 1.

All (710) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BG:246:MET:HE1	14:BC:1:MET:HE1	1.56	0.86
10:TP:2:GLU:CG	10:TX:99:ILE:HD12	2.14	0.77
5:A3:235:ARG:NH2	6:Ad:291:MET:HE1	2.01	0.74
10:TM:2:GLU:CG	10:TU:99:ILE:HD12	2.18	0.74
5:A0:235:ARG:NH2	6:Ae:291:MET:HE1	2.03	0.73
12:BG:246:MET:CE	14:BC:1:MET:HE1	2.20	0.71
10:TU:2:GLU:HG3	10:Tc:99:ILE:HD12	1.74	0.70
3:BV:116:MET:HE2	3:BU:284:ALA:HB3	1.73	0.69
2:BM:262:ILE:HD12	2:BM:262:ILE:H	1.60	0.67
4:AR:346:VAL:O	5:AY:886:VAL:HG23	1.96	0.66
6:A8:18:ILE:HD12	6:Ab:67:TYR:CZ	2.32	0.65
6:A4:18:ILE:HD12	6:Ad:67:TYR:CZ	2.33	0.64
10:TX:2:GLU:HG3	10:TZ:99:ILE:HD12	1.80	0.64
10:TP:55:ASN:HB3	10:TR:99:ILE:HD13	1.81	0.62
10:TP:2:GLU:HG3	10:TX:99:ILE:HD12	1.82	0.62
10:To:144:TRP:CD1	10:Ts:54:MET:HA	2.35	0.61
10:Tp:144:TRP:CD1	10:Tt:54:MET:HA	2.37	0.60
10:TM:2:GLU:HG3	10:TU:99:ILE:HD12	1.84	0.60
1:Lb:108:ILE:HD12	1:Lb:138:ILE:HD13	1.83	0.59
9:SA:8:ILE:HG21	11:AC:57:ILE:CD1	2.33	0.59
7:LN:159:LYS:HE2	7:LN:165:VAL:HG22	1.85	0.59
10:TM:55:ASN:HB3	10:TO:99:ILE:HD13	1.83	0.59
9:Sd:629:LYS:NZ	9:Sj:648:ALA:O	2.32	0.58
4:AX:155:LEU:H	4:AX:155:LEU:HD23	1.69	0.58
4:AV:155:LEU:HD23	4:AV:155:LEU:H	1.67	0.58
14:BC:61:THR:HG21	14:BD:57:VAL:HG13	1.86	0.57
9:SA:8:ILE:HG21	11:AC:57:ILE:HD12	1.85	0.57
2:BL:73:THR:HG21	12:BF:57:LYS:HE3	1.86	0.57
9:SX:427:TRP:CZ2	9:SX:439:MET:HG3	2.40	0.57
10:TU:2:GLU:CG	10:Tc:99:ILE:HD12	2.33	0.57
2:BP:73:THR:HG21	12:BE:57:LYS:HE3	1.87	0.57
2:BL:254:VAL:HG12	2:BL:255:GLU:H	1.70	0.57
4:AT:155:LEU:HD23	4:AT:155:LEU:H	1.70	0.57
10:Tl:144:TRP:CD1	10:Tv:54:MET:HA	2.39	0.57
10:Tk:144:TRP:CD1	10:Tu:54:MET:HA	2.40	0.57
5:AY:235:ARG:NH2	6:Ac:291:MET:HE1	2.19	0.56
14:BC:558:MET:HE1	14:BD:551:TRP:CD2	2.41	0.56
10:Tn:144:TRP:CD1	10:Tr:54:MET:HA	2.41	0.56
10:TN:2:GLU:CG	10:TV:99:ILE:HD12	2.35	0.56
9:ST:427:TRP:CZ2	9:ST:439:MET:HG3	2.41	0.56
10:TO:2:GLU:HG3	10:TW:99:ILE:HD12	1.88	0.56
12:BE:89:LYS:HE3	12:BF:241:TYR:CD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BP:263:THR:HG23	12:BF:225:LYS:HD3	1.88	0.55
5:A1:134:TYR:CE1	5:A1:594:LYS:HE3	2.41	0.55
7:LE:159:LYS:HE2	7:LE:165:VAL:HG22	1.87	0.55
8:Fc:574:LYS:C	8:Fc:575:TYR:CD1	2.84	0.55
11:AD:112:ILE:H	11:AD:112:ILE:HD12	1.72	0.55
12:BF:89:LYS:HE3	12:BG:241:TYR:CD1	2.42	0.55
2:BO:262:ILE:HD12	2:BO:262:ILE:H	1.70	0.55
2:BP:80:PHE:CE1	13:AJ:1:MET:HE3	2.41	0.55
3:BV:286:ARG:CA	3:BV:286:ARG:HE	2.20	0.55
10:Tm:144:TRP:CD1	10:Tq:54:MET:HA	2.41	0.55
9:SA:629:LYS:NZ	9:SG:648:ALA:O	2.40	0.55
3:BS:286:ARG:HE	3:BS:286:ARG:CA	2.20	0.55
8:FK:574:LYS:C	8:FK:575:TYR:CD1	2.85	0.55
10:TO:2:GLU:CG	10:TW:99:ILE:HD12	2.37	0.55
8:FT:574:LYS:C	8:FT:575:TYR:CD1	2.86	0.54
9:SS:427:TRP:CZ2	9:SS:439:MET:HG3	2.42	0.54
9:SU:427:TRP:CZ2	9:SU:439:MET:HG3	2.42	0.54
9:SW:427:TRP:CZ2	9:SW:439:MET:HG3	2.42	0.54
9:Sf:627:TYR:CD2	9:Sl:642:VAL:HG11	2.42	0.54
8:Fl:574:LYS:C	8:Fl:575:TYR:CD1	2.85	0.54
10:TM:2:GLU:HG2	10:TU:99:ILE:HD12	1.90	0.54
3:BQ:284:ALA:HB3	3:BR:116:MET:HE2	1.89	0.54
3:BT:286:ARG:HE	3:BT:286:ARG:C	2.16	0.54
3:BQ:286:ARG:HE	3:BQ:286:ARG:C	2.16	0.53
3:BU:286:ARG:HE	3:BU:286:ARG:C	2.16	0.53
8:FB:574:LYS:C	8:FB:575:TYR:CD1	2.86	0.53
10:TQ:2:GLU:CG	10:TS:99:ILE:HD12	2.37	0.53
11:AC:112:ILE:HD12	11:AC:112:ILE:H	1.73	0.53
2:BN:254:VAL:HG12	2:BN:255:GLU:H	1.73	0.53
8:Fu:574:LYS:C	8:Fu:575:TYR:CD1	2.86	0.53
5:A1:235:ARG:NH2	6:Ab:291:MET:HE1	2.23	0.53
9:SC:453:LYS:HE3	9:SC:500:CYS:SG	2.48	0.53
10:TP:2:GLU:HG2	10:TX:99:ILE:HD12	1.89	0.53
3:BV:286:ARG:HE	3:BV:286:ARG:HA	1.74	0.53
9:SV:427:TRP:CZ2	9:SV:439:MET:HG3	2.43	0.53
9:SV:160:TYR:CD2	9:SV:161:PRO:HD3	2.44	0.52
9:Sf:313:PHE:CE2	9:Sf:323:ALA:HB3	2.45	0.52
9:SH:575:ASN:HB2	9:SN:634:ILE:HD11	1.92	0.52
9:Si:313:PHE:CE2	9:Si:323:ALA:HB3	2.45	0.52
10:Tk:53:TYR:CG	10:Tk:54:MET:N	2.77	0.52
3:BR:286:ARG:CA	3:BR:286:ARG:HE	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A6:18:ILE:HD12	6:Af:67:TYR:CZ	2.45	0.52
10:Th:53:TYR:CG	10:Th:54:MET:N	2.78	0.52
9:SA:453:LYS:HE3	9:SA:500:CYS:SG	2.50	0.52
10:Tj:104:PRO:HA	10:Tj:107:TYR:CE2	2.46	0.51
3:BS:286:ARG:HE	3:BS:286:ARG:HA	1.75	0.51
5:A0:235:ARG:HH22	6:Ae:291:MET:HE1	1.71	0.51
10:TR:53:TYR:CG	10:TR:54:MET:N	2.78	0.51
10:Tn:53:TYR:CG	10:Tn:54:MET:N	2.78	0.51
3:BR:286:ARG:HE	3:BR:286:ARG:C	2.19	0.51
4:AX:440:GLN:CD	4:AX:440:GLN:H	2.18	0.51
4:AR:351:TYR:HD2	5:AY:886:VAL:HG21	1.76	0.51
1:LV:108:ILE:HD12	1:LV:138:ILE:HD13	1.93	0.51
10:TN:2:GLU:HG3	10:TV:99:ILE:HD12	1.92	0.51
10:TP:53:TYR:CG	10:TP:54:MET:N	2.79	0.51
9:Sj:313:PHE:CE2	9:Sj:323:ALA:HB3	2.46	0.51
10:TR:2:GLU:CG	10:TT:99:ILE:HD12	2.41	0.51
5:A3:235:ARG:HH22	6:Ad:291:MET:HE1	1.73	0.50
9:SL:575:ASN:HB2	9:SR:634:ILE:HD11	1.92	0.50
3:BS:284:ALA:HB3	3:BT:116:MET:HE2	1.93	0.50
10:Tp:53:TYR:CG	10:Tp:54:MET:N	2.78	0.50
10:TX:2:GLU:CG	10:TZ:99:ILE:HD12	2.39	0.50
2:BM:47:ASP:HB2	2:BM:57:LEU:HD21	1.92	0.50
10:TQ:53:TYR:CG	10:TQ:54:MET:N	2.79	0.50
4:AR:351:TYR:CD2	5:AY:886:VAL:HG21	2.46	0.50
6:A7:79:TRP:CE3	6:A7:311:ARG:HA	2.47	0.50
9:SF:560:LYS:HE3	9:SG:10:LEU:HD13	1.93	0.50
10:TM:53:TYR:CG	10:TM:54:MET:N	2.78	0.50
9:SK:313:PHE:CE2	9:SK:323:ALA:HB3	2.47	0.50
9:SR:484:GLN:HB2	9:SR:486:TRP:CH2	2.47	0.50
9:Sg:313:PHE:CE2	9:Sg:323:ALA:HB3	2.47	0.50
10:TQ:27:TYR:CD1	10:TQ:109:LYS:HE3	2.47	0.50
10:Te:104:PRO:HA	10:Te:107:TYR:CE2	2.47	0.50
4:AP:346:VAL:O	5:A2:886:VAL:HG23	2.12	0.50
11:AB:112:ILE:HD12	11:AB:112:ILE:H	1.76	0.50
4:AV:67:TYR:HB3	13:AH:84:PHE:CZ	2.46	0.50
10:Tl:53:TYR:CG	10:Tl:54:MET:N	2.77	0.50
9:SA:560:LYS:HE3	9:SH:10:LEU:HD13	1.94	0.49
10:Ti:53:TYR:CG	10:Ti:54:MET:N	2.80	0.49
10:Tm:53:TYR:CG	10:Tm:54:MET:N	2.79	0.49
4:AP:351:TYR:CD2	5:A2:886:VAL:HG21	2.47	0.49
10:Tf:104:PRO:HA	10:Tf:107:TYR:CE2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Tg:104:PRO:HA	10:Tg:107:TYR:CE2	2.47	0.49
1:LV:26:ALA:HB2	1:LX:21:LYS:HA	1.94	0.49
2:BP:33:THR:HB	9:SD:493:ARG:HH21	1.78	0.49
9:SA:8:ILE:CG2	11:AC:57:ILE:HD12	2.42	0.49
9:SO:484:GLN:HB2	9:SO:486:TRP:CH2	2.47	0.49
4:AN:351:TYR:CD2	5:A0:886:VAL:HG21	2.47	0.49
1:LS:115:ASN:HB3	1:LS:143:ILE:HD13	1.94	0.49
6:Af:291:MET:SD	6:Af:292:PRO:HD2	2.53	0.49
9:SM:484:GLN:HB2	9:SM:486:TRP:CH2	2.47	0.49
3:BT:284:ALA:HB3	3:BU:116:MET:HE2	1.94	0.49
9:SF:536:GLY:CA	11:AC:62:PHE:CZ	2.95	0.49
9:Sn:453:LYS:HE3	9:Sn:500:CYS:SG	2.52	0.49
10:Tg:53:TYR:CG	10:Tg:54:MET:N	2.80	0.49
5:A2:134:TYR:CE1	5:A2:594:LYS:HE3	2.48	0.49
6:A5:294:SER:HB2	6:A5:295:PRO:HD2	1.95	0.49
9:SI:575:ASN:HB2	9:SO:634:ILE:HD11	1.95	0.49
9:So:453:LYS:HE3	9:So:500:CYS:SG	2.53	0.48
10:TM:55:ASN:CB	10:TO:99:ILE:HD13	2.42	0.48
10:Ti:104:PRO:HA	10:Ti:107:TYR:CE2	2.48	0.48
10:Tj:53:TYR:CG	10:Tj:54:MET:N	2.79	0.48
14:BD:489:LYS:HD3	14:BD:491:ILE:HD11	1.95	0.48
4:AV:155:LEU:H	4:AV:155:LEU:CD2	2.26	0.48
9:SD:110:TYR:CD2	9:SD:140:ILE:HD11	2.48	0.48
9:SP:382:GLU:CD	9:SP:382:GLU:H	2.21	0.48
9:SM:653:LEU:HD23	9:SM:653:LEU:H	1.77	0.48
10:Th:104:PRO:HA	10:Th:107:TYR:CE2	2.48	0.48
12:BE:241:TYR:CD2	12:BG:89:LYS:HE3	2.48	0.48
5:AZ:134:TYR:CE1	5:AZ:594:LYS:HE3	2.49	0.48
9:SC:560:LYS:HE3	9:SJ:10:LEU:HD13	1.95	0.48
9:SN:484:GLN:HB2	9:SN:486:TRP:CH2	2.48	0.48
10:TQ:2:GLU:HG3	10:TS:99:ILE:HD12	1.96	0.48
1:Lb:115:ASN:HB3	1:Lb:143:ILE:HD13	1.96	0.48
5:AZ:906:MET:HE3	6:Ac:341:PHE:HA	1.95	0.48
1:Li:5:LEU:HD23	7:LR:245:PHE:HA	1.94	0.48
9:SF:453:LYS:HE3	9:SF:500:CYS:SG	2.52	0.48
3:BT:286:ARG:HE	3:BT:286:ARG:CA	2.27	0.48
9:SQ:484:GLN:HB2	9:SQ:486:TRP:CH2	2.48	0.48
12:BE:241:TYR:CG	12:BG:89:LYS:HE3	2.48	0.48
3:BT:119:PRO:HA	9:SB:578:PHE:CZ	2.49	0.48
4:AT:155:LEU:H	4:AT:155:LEU:CD2	2.27	0.48
9:SE:453:LYS:HE3	9:SE:500:CYS:SG	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SH:313:PHE:CE2	9:SH:323:ALA:HB3	2.48	0.48
9:SM:382:GLU:CD	9:SM:382:GLU:H	2.22	0.48
6:A5:79:TRP:CE3	6:A5:311:ARG:HA	2.48	0.48
5:A1:67:PHE:CZ	5:A1:565:GLY:HA3	2.49	0.48
7:LQ:118:LYS:HZ1	7:LR:198:TYR:HB2	1.79	0.48
9:SD:404:LEU:C	9:SD:405:ILE:HD12	2.39	0.48
9:SE:367:ARG:HG3	9:SE:561:ASN:HD21	1.79	0.48
10:TU:53:TYR:CG	10:TU:54:MET:N	2.82	0.48
2:BK:262:ILE:HD12	2:BK:262:ILE:H	1.78	0.47
9:SH:497:ILE:HG22	9:SH:497:ILE:O	2.14	0.47
9:SZ:589:GLN:HE21	9:SZ:589:GLN:HA	1.79	0.47
9:Se:313:PHE:CE2	9:Se:323:ALA:HB3	2.49	0.47
10:Tc:161:TRP:CD1	10:Td:96:GLY:HA2	2.49	0.47
1:LY:26:ALA:HB2	1:La:21:LYS:HA	1.96	0.47
9:Sh:313:PHE:CE2	9:Sh:323:ALA:HB3	2.48	0.47
10:TN:53:TYR:CG	10:TN:54:MET:N	2.78	0.47
10:TX:53:TYR:CG	10:TX:54:MET:N	2.82	0.47
10:To:53:TYR:CG	10:To:54:MET:N	2.77	0.47
1:LT:5:LEU:HD23	7:LC:245:PHE:HA	1.94	0.47
3:BV:119:PRO:HA	9:SD:578:PHE:CZ	2.49	0.47
9:SB:453:LYS:HE3	9:SB:500:CYS:SG	2.54	0.47
9:SF:404:LEU:C	9:SF:405:ILE:HD12	2.38	0.47
9:SG:497:ILE:HG22	9:SG:497:ILE:O	2.14	0.47
9:Si:627:TYR:CD2	9:So:642:VAL:HG11	2.49	0.47
4:AX:155:LEU:H	4:AX:155:LEU:CD2	2.25	0.47
5:AY:134:TYR:CE1	5:AY:594:LYS:HE3	2.49	0.47
5:A3:134:TYR:CE1	5:A3:594:LYS:HE3	2.49	0.47
9:SK:575:ASN:HB2	9:SQ:634:ILE:HD11	1.97	0.47
9:SE:454:TYR:HB2	9:SE:465:TRP:CE3	2.50	0.47
9:SL:613:THR:OG1	9:SL:614:PRO:HD2	2.14	0.47
9:SM:629:LYS:NZ	9:SS:648:ALA:O	2.47	0.47
10:TN:27:TYR:CD1	10:TN:109:LYS:HE3	2.49	0.47
14:BB:308:TYR:CD1	14:BB:332:LEU:HD21	2.50	0.47
14:BC:489:LYS:HD3	14:BC:491:ILE:HD11	1.97	0.47
1:Lc:411:VAL:HG22	1:Ld:431:GLU:HG3	1.96	0.47
2:BK:90:PHE:CG	2:BK:91:ASP:N	2.82	0.47
2:BN:113:ILE:HD11	2:BN:214:ILE:HG21	1.97	0.47
5:A0:134:TYR:CE1	5:A0:594:LYS:HE3	2.50	0.47
5:A2:235:ARG:NH2	6:Aa:291:MET:HE1	2.29	0.47
7:LH:36:ASP:HA	7:LG:7:LYS:HZ1	1.79	0.47
8:FB:557:VAL:HG12	8:FC:574:LYS:HG2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SD:453:LYS:HE3	9:SD:500:CYS:SG	2.54	0.47
9:SG:313:PHE:CE2	9:SG:323:ALA:HB3	2.49	0.47
9:SI:497:ILE:O	9:SI:497:ILE:HG22	2.15	0.47
9:SN:382:GLU:H	9:SN:382:GLU:CD	2.23	0.47
9:Sm:453:LYS:CE	9:Sm:500:CYS:SG	3.03	0.47
10:TM:64:ARG:HD3	10:TM:66:TYR:CZ	2.50	0.47
10:TO:53:TYR:CG	10:TO:54:MET:N	2.79	0.47
1:LW:5:LEU:HD23	7:LF:245:PHE:HA	1.97	0.47
6:A8:79:TRP:CE3	6:A8:311:ARG:HA	2.50	0.47
1:LY:108:ILE:HD12	1:LY:138:ILE:HD13	1.97	0.47
2:BP:254:VAL:HG12	2:BP:255:GLU:H	1.79	0.47
3:BS:116:MET:HE2	3:BR:284:ALA:HB3	1.96	0.47
14:BB:460:GLY:HA2	14:BD:468:MET:HE2	1.96	0.47
6:A9:79:TRP:CE3	6:A9:311:ARG:HA	2.50	0.47
9:SG:575:ASN:HB2	9:SM:634:ILE:HD11	1.96	0.47
9:SI:313:PHE:CE2	9:SI:323:ALA:HB3	2.49	0.47
9:Sn:453:LYS:CE	9:Sn:500:CYS:SG	3.03	0.47
1:Lf:5:LEU:HD23	7:LO:245:PHE:HA	1.97	0.46
1:LT:68:ARG:HH12	1:LU:96:ASN:HB2	1.80	0.46
10:TT:2:GLU:HG3	10:Tb:99:ILE:HD12	1.98	0.46
10:TY:96:GLY:HA2	10:Td:161:TRP:CD1	2.50	0.46
14:BC:575:VAL:HG13	14:BD:573:ILE:HD13	1.97	0.46
1:LS:65:TYR:CD2	1:LS:65:TYR:C	2.94	0.46
9:SL:497:ILE:O	9:SL:497:ILE:HG22	2.15	0.46
11:AE:112:ILE:HD12	11:AE:112:ILE:H	1.81	0.46
10:TP:7:THR:HA	10:TP:10:PHE:CE1	2.51	0.46
9:SA:404:LEU:C	9:SA:405:ILE:HD12	2.40	0.46
9:SC:629:LYS:NZ	9:SI:648:ALA:O	2.48	0.46
9:Sa:346:GLU:CD	9:Sa:346:GLU:H	2.24	0.46
10:TR:2:GLU:HG3	10:TT:99:ILE:HD12	1.98	0.46
1:LS:108:ILE:HD12	1:LS:138:ILE:HD13	1.97	0.46
5:AZ:460:LEU:HD11	5:A0:1030:ILE:HG23	1.98	0.46
10:Tv:53:TYR:CG	10:Tv:54:MET:N	2.84	0.46
4:AT:374:LYS:HE2	5:A0:855:ILE:O	2.15	0.46
9:SA:5:SER:HB2	9:SA:6:PRO:HD2	1.97	0.46
9:SB:560:LYS:HE3	9:SI:10:LEU:HD13	1.97	0.46
9:SX:11:LYS:HE2	9:SX:13:THR:HG22	1.98	0.46
9:Sf:627:TYR:HA	9:Sl:642:VAL:HB	1.98	0.46
10:TV:2:GLU:CG	10:Td:99:ILE:HD12	2.46	0.46
14:BB:468:MET:HE2	14:BC:460:GLY:HA2	1.98	0.46
1:Lb:26:ALA:HB2	1:Ld:21:LYS:HA	1.98	0.46

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
2:BL:254:VAL:CG1	2:BL:255:GLU:H	2.27	0.46
4:AS:336:GLN:HB3	4:AM:220:MET:HE1	1.97	0.46
9:SA:110:TYR:CD2	9:SA:140:ILE:HD11	2.51	0.46
9:SC:110:TYR:CD2	9:SC:140:ILE:HD11	2.51	0.46
9:SK:110:TYR:CD1	9:SK:140:ILE:HD11	2.51	0.46
9:SH:110:TYR:CG	9:SH:140:ILE:HD11	2.50	0.46
10:TW:8:ARG:HD2	10:TX:34:PHE:CE2	2.51	0.46
9:SB:404:LEU:C	9:SB:405:ILE:HD12	2.41	0.46
9:SK:107:GLY:HA2	9:SK:178:VAL:HG13	1.97	0.46
10:TS:2:GLU:HG3	10:Ta:99:ILE:HD12	1.98	0.46
10:TT:53:TYR:CG	10:TT:54:MET:N	2.83	0.46
10:Ts:53:TYR:CG	10:Ts:54:MET:N	2.84	0.46
14:BB:489:LYS:HD3	14:BB:491:ILE:HD11	1.98	0.46
14:BC:64:ALA:HB3	14:BC:69:VAL:HG12	1.98	0.46
2:BP:80:PHE:CZ	13:AJ:1:MET:HE3	2.51	0.46
3:BQ:286:ARG:HE	3:BQ:286:ARG:CA	2.29	0.46
9:SA:367:ARG:HG3	9:SA:561:ASN:HD21	1.81	0.46
9:SP:484:GLN:HB2	9:SP:486:TRP:CH2	2.51	0.46
9:Si:627:TYR:HA	9:So:642:VAL:HB	1.97	0.46
9:Sm:453:LYS:HE3	9:Sm:500:CYS:SG	2.56	0.46
12:BE:258:ASP:CG	12:BE:287:ARG:HH11	2.24	0.46
14:BC:555:MET:HG2	14:BD:551:TRP:HB2	1.97	0.46
9:SD:454:TYR:HB2	9:SD:465:TRP:CE3	2.51	0.46
9:SK:497:ILE:HG22	9:SK:497:ILE:O	2.16	0.46
9:SJ:575:ASN:HB2	9:SP:634:ILE:HD11	1.96	0.46
1:Lf:68:ARG:HH12	1:Lg:96:ASN:HB2	1.81	0.45
2:BO:200:ARG:HD2	3:BV:143:HIS:CD2	2.51	0.45
9:SC:404:LEU:C	9:SC:405:ILE:HD12	2.42	0.45
9:SR:653:LEU:H	9:SR:653:LEU:HD23	1.82	0.45
9:SJ:497:ILE:HG22	9:SJ:497:ILE:O	2.17	0.45
9:SM:497:ILE:O	9:SM:497:ILE:HG22	2.16	0.45
9:Sl:453:LYS:HE3	9:Sl:500:CYS:SG	2.56	0.45
10:TW:53:TYR:CG	10:TW:54:MET:N	2.83	0.45
10:To:104:PRO:HA	10:To:107:TYR:CZ	2.51	0.45
1:LV:115:ASN:HB3	1:LV:143:ILE:HD13	1.97	0.45
2:BL:23:GLY:HA2	13:AL:50:TYR:CG	2.51	0.45
4:AV:374:LYS:HE2	5:A2:855:ILE:O	2.17	0.45
9:SV:15:VAL:O	9:SV:15:VAL:HG13	2.16	0.45
10:Tf:53:TYR:CG	10:Tf:54:MET:N	2.79	0.45
1:LV:65:TYR:CD2	1:LV:65:TYR:C	2.94	0.45
1:LZ:5:LEU:HD23	7:LI:245:PHE:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:BR:119:PRO:HA	9:SF:578:PHE:CZ	2.52	0.45
4:AO:225:SER:C	4:AO:226:ILE:HG13	2.41	0.45
5:AY:202:PHE:CD1	5:AY:237:VAL:HG11	2.51	0.45
9:SF:110:TYR:CD2	9:SF:140:ILE:HD11	2.51	0.45
9:SJ:313:PHE:CE2	9:SJ:323:ALA:HB3	2.52	0.45
10:TW:2:GLU:HG3	10:TY:99:ILE:HD12	1.99	0.45
1:LW:68:ARG:HH12	1:LX:96:ASN:HB2	1.81	0.45
4:AP:5:GLU:HG2	4:AP:6:PRO:HD2	1.99	0.45
5:A3:202:PHE:CD1	5:A3:237:VAL:HG11	2.51	0.45
9:SF:536:GLY:HA2	11:AC:62:PHE:CZ	2.51	0.45
9:SO:382:GLU:CD	9:SO:382:GLU:H	2.23	0.45
9:SR:497:ILE:HG22	9:SR:497:ILE:O	2.17	0.45
9:Sd:346:GLU:H	9:Sd:346:GLU:CD	2.25	0.45
5:A2:67:PHE:CZ	5:A2:565:GLY:HA3	2.52	0.45
9:SR:382:GLU:H	9:SR:382:GLU:CD	2.23	0.45
10:Ta:161:TRP:CD1	10:Tb:96:GLY:HA2	2.52	0.45
1:Le:454:ALA:HB3	1:Le:471:LEU:CD2	2.47	0.45
3:BR:33:LYS:HD2	3:BR:33:LYS:O	2.16	0.45
6:Ad:276:PHE:CZ	6:Ad:325:ILE:HD13	2.51	0.45
9:SD:5:SER:HB2	9:SD:6:PRO:HD2	1.99	0.45
9:SL:313:PHE:CE2	9:SL:323:ALA:HB3	2.52	0.45
12:BF:119:SER:HB3	14:BD:36:PRO:HD3	1.98	0.45
10:TU:144:TRP:CD1	10:TY:54:MET:HA	2.51	0.45
1:Le:26:ALA:HB2	1:Lg:21:LYS:HA	1.99	0.45
2:BN:80:PHE:HE1	13:AH:1:MET:HE2	1.82	0.45
3:BT:8:LYS:HA	3:BT:12:ALA:HB3	1.98	0.45
6:A8:92:MET:HA	6:A8:92:MET:HE3	1.98	0.45
7:LJ:202:TYR:CD2	7:LJ:205:VAL:CG2	3.00	0.45
9:So:453:LYS:CE	9:So:500:CYS:SG	3.05	0.45
10:Tt:53:TYR:CG	10:Tt:54:MET:N	2.84	0.45
4:AX:19:PRO:HG3	4:AQ:269:THR:HG21	1.99	0.45
5:AY:487:HIS:HD2	6:Ac:312:GLN:OE1	1.99	0.45
5:A0:647:ARG:N	5:A0:648:PRO:CD	2.80	0.45
9:SB:5:SER:HB2	9:SB:6:PRO:HD2	1.98	0.45
9:SE:404:LEU:C	9:SE:405:ILE:HD12	2.41	0.45
9:SI:613:THR:OG1	9:SI:614:PRO:HD2	2.16	0.45
9:SY:346:GLU:CD	9:SY:346:GLU:H	2.25	0.45
9:Sp:453:LYS:CE	9:Sp:500:CYS:SG	3.05	0.45
14:BC:61:THR:HG21	14:BD:57:VAL:CG1	2.47	0.45
1:Le:115:ASN:HB3	1:Le:143:ILE:HD13	1.98	0.44
1:LW:411:VAL:HG22	1:LX:431:GLU:HG3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LZ:411:VAL:HG22	1:La:431:GLU:HG3	1.98	0.44
3:BU:119:PRO:HA	9:SC:578:PHE:CZ	2.51	0.44
6:Ad:325:ILE:HD12	6:Ad:325:ILE:N	2.32	0.44
9:SE:110:TYR:CD2	9:SE:140:ILE:HD11	2.52	0.44
9:SK:427:TRP:CZ2	9:SK:439:MET:HG3	2.52	0.44
9:SA:454:TYR:HB2	9:SA:465:TRP:CE3	2.52	0.44
9:SO:497:ILE:HG22	9:SO:497:ILE:O	2.17	0.44
10:TO:7:THR:HA	10:TO:10:PHE:CE1	2.53	0.44
1:LY:115:ASN:HB3	1:LY:143:ILE:HD13	1.99	0.44
5:AY:67:PHE:CZ	5:AY:565:GLY:HA3	2.52	0.44
5:A0:202:PHE:CD1	5:A0:237:VAL:HG11	2.52	0.44
7:LQ:23:ILE:HD13	7:LQ:23:ILE:H	1.82	0.44
9:SG:110:TYR:CG	9:SG:140:ILE:HD11	2.52	0.44
9:Sl:453:LYS:CE	9:Sl:500:CYS:SG	3.05	0.44
1:Lh:115:ASN:HB3	1:Lh:143:ILE:HD13	1.98	0.44
1:Lb:65:TYR:CD2	1:Lb:65:TYR:C	2.95	0.44
9:SJ:110:TYR:CG	9:SJ:140:ILE:HD11	2.53	0.44
9:SP:653:LEU:HD23	9:SP:653:LEU:H	1.83	0.44
2:BP:254:VAL:CG1	2:BP:255:GLU:H	2.31	0.44
3:BQ:116:MET:HE2	3:BV:284:ALA:HB3	1.98	0.44
5:AY:281:LEU:HD21	7:LG:18:ALA:HA	2.00	0.44
9:SF:536:GLY:HA3	11:AC:62:PHE:CZ	2.52	0.44
9:SQ:497:ILE:O	9:SQ:497:ILE:HG22	2.18	0.44
6:A8:294:SER:HB2	6:A8:295:PRO:HD2	1.99	0.44
9:SB:454:TYR:HB2	9:SB:465:TRP:CE3	2.53	0.44
9:SQ:382:GLU:CD	9:SQ:382:GLU:H	2.23	0.44
10:Tr:53:TYR:CG	10:Tr:54:MET:N	2.84	0.44
12:BF:118:PHE:CE2	12:BF:133:MET:SD	3.11	0.44
1:LU:303:ASP:CG	1:LU:307:ARG:HH22	2.26	0.44
10:TR:104:PRO:HA	10:TR:107:TYR:CE2	2.53	0.44
10:TS:53:TYR:CG	10:TS:54:MET:N	2.84	0.44
10:TT:144:TRP:CD1	10:Td:54:MET:HA	2.53	0.44
10:Tq:53:TYR:CG	10:Tq:54:MET:N	2.86	0.44
14:BD:188:LEU:HD21	14:BD:238:MET:HG3	1.98	0.44
1:Lh:108:ILE:HD12	1:Lh:138:ILE:HD13	2.00	0.44
3:BQ:119:PRO:HA	9:SE:578:PHE:CZ	2.53	0.44
4:AO:345:CYS:HB3	4:AO:351:TYR:CE1	2.53	0.44
6:A6:22:LYS:HB2	6:A6:22:LYS:HE2	1.69	0.44
9:SE:560:LYS:HE3	9:SL:10:LEU:HD13	1.99	0.44
10:TO:104:PRO:HA	10:TO:107:TYR:CE2	2.53	0.44
1:Le:65:TYR:CD2	1:Le:65:TYR:C	2.96	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BL:254:VAL:HG12	2:BL:255:GLU:N	2.31	0.44
2:BN:254:VAL:HG12	2:BN:255:GLU:N	2.32	0.44
4:AR:5:GLU:HG2	4:AR:6:PRO:HD2	2.00	0.44
5:A1:647:ARG:N	5:A1:648:PRO:CD	2.81	0.44
5:A3:647:ARG:N	5:A3:648:PRO:CD	2.81	0.44
7:LQ:36:ASP:HA	7:LP:7:LYS:HZ1	1.82	0.44
9:SN:373:ALA:HB2	9:SN:391:VAL:HG11	1.99	0.44
10:TW:118:ARG:NH1	10:Tc:62:GLY:O	2.51	0.44
1:Li:411:VAL:HG22	1:Lj:431:GLU:HG3	2.00	0.43
2:BN:254:VAL:CG1	2:BN:255:GLU:H	2.30	0.43
5:AY:647:ARG:N	5:AY:648:PRO:CD	2.81	0.43
6:A6:79:TRP:CE3	6:A6:311:ARG:HA	2.53	0.43
7:LP:202:TYR:CD2	7:LP:205:VAL:CG2	3.00	0.43
9:SZ:346:GLU:CD	9:SZ:346:GLU:H	2.25	0.43
9:Sk:453:LYS:HE3	9:Sk:500:CYS:SG	2.58	0.43
4:AQ:19:PRO:HD3	5:AZ:702:TRP:CE3	2.53	0.43
4:AM:180:ARG:HH12	13:AJ:211:VAL:HA	1.82	0.43
5:AZ:235:ARG:NH2	6:Af:291:MET:HE1	2.33	0.43
7:LN:54:ALA:HB2	7:LM:9:ILE:HD12	2.00	0.43
8:Fu:557:VAL:HG12	8:Fv:574:LYS:HG2	2.00	0.43
10:TY:63:ASP:CG	10:Td:55:ASN:HD21	2.26	0.43
10:Tf:2:GLU:HG3	10:Tn:99:ILE:HD12	2.00	0.43
1:LS:454:ALA:HB3	1:LS:471:LEU:CD2	2.48	0.43
4:AU:564:HIS:CE1	5:A3:807:ARG:HG2	2.54	0.43
5:A1:281:LEU:HD21	7:LP:18:ALA:HA	2.00	0.43
5:A3:67:PHE:CZ	5:A3:565:GLY:HA3	2.53	0.43
6:A4:79:TRP:CE3	6:A4:311:ARG:HA	2.54	0.43
7:LD:202:TYR:CD2	7:LD:205:VAL:CG2	3.02	0.43
3:BS:286:ARG:HE	3:BS:286:ARG:C	2.27	0.43
5:A0:67:PHE:CZ	5:A0:565:GLY:HA3	2.54	0.43
6:A6:294:SER:HB2	6:A6:295:PRO:HD2	2.00	0.43
6:A7:238:TRP:CZ3	6:Aa:292:PRO:HG2	2.53	0.43
7:LG:202:TYR:CD2	7:LG:205:VAL:CG2	3.00	0.43
9:SN:497:ILE:HG22	9:SN:497:ILE:O	2.17	0.43
10:TZ:161:TRP:CD1	10:Ta:96:GLY:HA2	2.54	0.43
1:La:303:ASP:CG	1:La:307:ARG:HH22	2.26	0.43
1:Lc:37:VAL:HG22	1:Lc:38:SER:H	1.84	0.43
3:BV:165:ASP:HB3	3:BV:166:PRO:HD2	2.00	0.43
3:BV:286:ARG:HE	3:BV:286:ARG:C	2.27	0.43
3:BR:165:ASP:HB3	3:BR:166:PRO:HD2	2.00	0.43
6:Ac:54:TRP:CZ3	6:Ac:66:PRO:HD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SP:373:ALA:HB2	9:SP:391:VAL:HG11	1.99	0.43
9:Sk:453:LYS:CE	9:Sk:500:CYS:SG	3.06	0.43
10:Tu:53:TYR:CG	10:Tu:54:MET:N	2.85	0.43
1:Lj:303:ASP:CG	1:Lj:307:ARG:HH22	2.27	0.43
2:BK:239:TRP:CE3	2:BL:292:ARG:HD2	2.54	0.43
4:AX:374:LYS:HE2	5:AY:855:ILE:O	2.18	0.43
4:AV:19:PRO:HG3	4:AO:269:THR:HG21	1.99	0.43
9:SD:560:LYS:HE3	9:SK:10:LEU:HD13	2.00	0.43
9:SM:578:PHE:C	9:SM:578:PHE:CD1	2.97	0.43
10:TR:7:THR:HA	10:TR:10:PHE:CE1	2.53	0.43
10:Tg:7:THR:HA	10:Tg:10:PHE:CE2	2.54	0.43
1:LT:411:VAL:HG22	1:LU:431:GLU:HG3	1.99	0.43
1:LT:531:ALA:CB	1:LT:548:ILE:HD11	2.49	0.43
5:A0:570:TYR:CE2	5:A0:618:VAL:HG22	2.54	0.43
8:Fc:557:VAL:HG12	8:Fd:574:LYS:HG2	2.01	0.43
9:SK:110:TYR:CG	9:SK:140:ILE:HD11	2.54	0.43
10:TM:7:THR:HA	10:TM:10:PHE:CE1	2.53	0.43
10:TV:2:GLU:HG3	10:Td:99:ILE:HD12	2.01	0.43
1:Lf:411:VAL:HG22	1:Lg:431:GLU:HG3	2.01	0.43
1:LY:454:ALA:HB3	1:LY:471:LEU:CD2	2.49	0.43
5:A2:647:ARG:N	5:A2:648:PRO:CD	2.82	0.43
6:Ad:291:MET:SD	6:Ad:292:PRO:HD2	2.59	0.43
9:SX:11:LYS:HE2	9:SX:13:THR:CG2	2.49	0.43
9:Sb:589:GLN:HE21	9:Sb:589:GLN:HA	1.84	0.43
10:Tu:27:TYR:CD1	10:Tu:109:LYS:HE3	2.53	0.43
2:BP:113:ILE:HD11	2:BP:214:ILE:HG21	2.00	0.43
5:AZ:67:PHE:CZ	5:AZ:565:GLY:HA3	2.53	0.43
9:SS:219:MET:HE2	9:SS:219:MET:HA	2.01	0.43
9:SS:545:THR:HB	9:SS:546:PRO:HD2	2.01	0.43
9:Sc:629:LYS:NZ	9:Si:648:ALA:O	2.37	0.43
9:Sl:373:ALA:HB2	9:Sl:391:VAL:HG11	2.01	0.43
10:Tl:104:PRO:HA	10:Tl:107:TYR:CZ	2.54	0.43
1:Lh:26:ALA:HB2	1:Lj:21:LYS:HA	2.00	0.43
1:Lb:454:ALA:HB3	1:Lb:471:LEU:CD2	2.48	0.43
5:AZ:647:ARG:N	5:AZ:648:PRO:CD	2.81	0.43
9:Sg:126:ASP:CG	9:Sg:128:THR:H	2.26	0.43
9:Sk:373:ALA:HB2	9:Sk:391:VAL:HG11	2.01	0.43
9:So:219:MET:HE2	9:So:219:MET:HA	2.00	0.43
9:So:373:ALA:HB2	9:So:391:VAL:HG11	2.01	0.43
10:Tj:3:LEU:O	10:Tj:6:ILE:HG22	2.19	0.43
4:AN:5:GLU:HG2	4:AN:6:PRO:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AO:526:THR:HB	4:AO:527:PRO:HD2	2.00	0.42
5:A1:801:ARG:HG2	5:A1:810:TRP:CZ3	2.54	0.42
6:A7:294:SER:HB2	6:A7:295:PRO:HD2	2.01	0.42
9:SI:427:TRP:CZ2	9:SI:439:MET:HG3	2.54	0.42
9:SJ:427:TRP:CZ2	9:SJ:439:MET:HG3	2.54	0.42
9:SY:373:ALA:HB2	9:SY:391:VAL:HG11	2.01	0.42
9:Sf:126:ASP:CG	9:Sf:128:THR:H	2.27	0.42
14:BC:468:MET:HE2	14:BD:460:GLY:HA2	2.00	0.42
7:LA:202:TYR:CD2	7:LA:205:VAL:CG2	3.02	0.42
9:SF:454:TYR:HB2	9:SF:465:TRP:CE3	2.54	0.42
9:SN:65:PHE:CD1	9:SN:65:PHE:C	2.98	0.42
9:SZ:155:LYS:HD3	9:SZ:160:TYR:CG	2.54	0.42
9:Sa:589:GLN:HA	9:Sa:589:GLN:HE21	1.84	0.42
12:BG:259:LYS:HD3	14:BD:81:SER:OG	2.18	0.42
14:BB:469:TYR:CG	14:BB:470:ASN:N	2.87	0.42
1:Li:68:ARG:HH12	1:Lj:96:ASN:HB2	1.85	0.42
1:LX:303:ASP:CG	1:LX:307:ARG:HH22	2.27	0.42
4:AM:338:LYS:HE2	4:AM:354:PHE:CE1	2.54	0.42
9:SG:107:GLY:HA2	9:SG:178:VAL:HG13	2.00	0.42
9:SL:110:TYR:CG	9:SL:140:ILE:HD11	2.53	0.42
9:SO:653:LEU:HD23	9:SO:653:LEU:H	1.85	0.42
9:Sb:346:GLU:CD	9:Sb:346:GLU:H	2.27	0.42
9:Sj:126:ASP:CG	9:Sj:128:THR:H	2.27	0.42
12:BE:120:ARG:HG2	12:BE:121:ALA:N	2.35	0.42
2:BN:23:GLY:HA2	13:AH:50:TYR:CG	2.54	0.42
3:BU:286:ARG:HE	3:BU:286:ARG:CA	2.32	0.42
9:Si:627:TYR:CE2	9:So:642:VAL:HG11	2.54	0.42
10:TN:7:THR:HA	10:TN:10:PHE:CE1	2.55	0.42
10:TW:7:THR:HA	10:TW:10:PHE:CE1	2.54	0.42
4:AU:373:ASP:C	4:AU:375:PRO:HD3	2.45	0.42
5:A2:207:HIS:CG	8:Fm:562:GLN:HE22	2.37	0.42
6:Ae:54:TRP:CZ3	6:Ae:66:PRO:HD2	2.54	0.42
7:LB:81:MET:HE2	7:LB:102:LYS:H	1.84	0.42
9:SG:235:GLU:C	9:SG:236:ILE:HD12	2.43	0.42
9:SV:219:MET:HA	9:SV:219:MET:HE2	2.00	0.42
9:Se:303:TYR:CE1	9:Sj:546:PRO:HB3	2.55	0.42
10:TQ:104:PRO:HA	10:TQ:107:TYR:CE2	2.54	0.42
2:BP:261:GLN:OE1	12:BF:225:LYS:HE2	2.19	0.42
4:AQ:506:LYS:HE3	4:AQ:508:TYR:CE1	2.55	0.42
6:A9:294:SER:HB2	6:A9:295:PRO:HD2	2.00	0.42
9:SH:110:TYR:CD1	9:SH:140:ILE:HD11	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:SU:11:LYS:HE2	9:SU:13:THR:HG22	2.00	0.42
10:TY:161:TRP:CD1	10:TZ:96:GLY:HA2	2.55	0.42
12:BE:118:PHE:CE2	12:BE:133:MET:SD	3.13	0.42
6:A4:294:SER:HB2	6:A4:295:PRO:HD2	2.02	0.42
10:TU:64:ARG:NH2	10:TV:89:GLN:OE1	2.53	0.42
10:Te:53:TYR:CG	10:Te:54:MET:N	2.80	0.42
14:BB:101:SER:HB2	14:BD:73:ILE:HD11	2.02	0.42
2:BM:46:ASN:C	2:BM:46:ASN:HD22	2.28	0.42
2:BP:283:PHE:CG	2:BP:284:GLY:N	2.88	0.42
4:AV:53:ARG:HD3	5:A2:658:TYR:CD2	2.55	0.42
4:AN:351:TYR:CE2	5:A0:886:VAL:HG21	2.55	0.42
9:SI:107:GLY:HA2	9:SI:178:VAL:HG13	2.02	0.42
9:SY:16:GLN:CD	9:SY:16:GLN:H	2.28	0.42
10:Tb:161:TRP:CD1	10:Tc:96:GLY:HA2	2.54	0.42
3:BS:119:PRO:HA	9:SA:578:PHE:CZ	2.55	0.42
6:A9:238:TRP:CZ3	6:Ac:292:PRO:HG2	2.55	0.42
7:LN:12:VAL:CG1	7:LO:28:GLY:HA3	2.50	0.42
7:LE:54:ALA:HB2	7:LD:9:ILE:HD12	2.01	0.42
9:SP:65:PHE:CD1	9:SP:65:PHE:C	2.97	0.42
9:Sp:453:LYS:HE2	9:Sp:500:CYS:SG	2.60	0.42
10:Tg:3:LEU:O	10:Tg:6:ILE:HG22	2.20	0.42
10:To:2:GLU:HG3	10:Tq:99:ILE:HD12	2.02	0.42
1:Lh:223:ARG:HD2	1:Lh:225:TYR:CE2	2.55	0.42
2:BM:69:PHE:O	12:BG:2:THR:HA	2.20	0.42
2:BM:344:VAL:O	2:BM:344:VAL:HG22	2.20	0.42
5:A2:301:PRO:HD3	5:A2:350:PHE:CZ	2.55	0.42
8:Fk:581:ALA:HB2	8:Fm:541:MET:HE3	2.02	0.42
9:SM:428:ARG:HD3	9:SM:428:ARG:C	2.45	0.42
9:Sc:346:GLU:CD	9:Sc:346:GLU:H	2.28	0.42
9:Sp:453:LYS:HE3	9:Sp:500:CYS:SG	2.60	0.42
1:Lh:65:TYR:CD2	1:Lh:65:TYR:C	2.97	0.41
2:BP:254:VAL:HG12	2:BP:255:GLU:N	2.34	0.41
3:BR:286:ARG:HE	3:BR:286:ARG:HA	1.85	0.41
4:AR:225:SER:C	4:AR:226:ILE:HG13	2.45	0.41
4:AO:506:LYS:HE3	4:AO:508:TYR:CE1	2.55	0.41
9:SG:427:TRP:CZ2	9:SG:439:MET:HG3	2.54	0.41
10:TQ:7:THR:HA	10:TQ:10:PHE:CE1	2.55	0.41
10:TS:2:GLU:CG	10:Ta:99:ILE:HD12	2.50	0.41
10:Ti:9:ALA:O	10:Tj:35:LYS:HE2	2.20	0.41
13:AL:108:ASP:HA	13:AL:156:ILE:HD12	2.02	0.41
1:Lg:303:ASP:CG	1:Lg:307:ARG:HH22	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LT:37:VAL:HG22	1:LT:38:SER:H	1.85	0.41
6:Ab:291:MET:SD	6:Ab:292:PRO:HD2	2.60	0.41
9:SB:523:VAL:HG22	9:SB:534:LEU:HA	2.01	0.41
9:SR:428:ARG:C	9:SR:428:ARG:HD3	2.46	0.41
10:Ti:7:THR:HA	10:Ti:10:PHE:CE1	2.55	0.41
10:Tj:7:THR:HA	10:Tj:10:PHE:CE1	2.55	0.41
1:LV:97:TRP:CE3	1:LV:113:PHE:HB3	2.55	0.41
3:BQ:8:LYS:HA	3:BQ:12:ALA:HB3	2.01	0.41
5:AY:207:HIS:CG	8:FC:562:GLN:HE22	2.38	0.41
5:A1:202:PHE:CD1	5:A1:237:VAL:HG11	2.55	0.41
9:SI:126:ASP:CG	9:SI:128:THR:H	2.29	0.41
9:SP:428:ARG:HD3	9:SP:428:ARG:C	2.45	0.41
9:SO:65:PHE:CD1	9:SO:65:PHE:C	2.97	0.41
9:SO:578:PHE:CD1	9:SO:578:PHE:C	2.99	0.41
10:TN:64:ARG:HD3	10:TN:66:TYR:CZ	2.55	0.41
10:Tl:2:GLU:HG3	10:Tt:99:ILE:HD12	2.02	0.41
14:BC:469:TYR:CG	14:BC:470:ASN:N	2.87	0.41
2:BN:283:PHE:CG	2:BN:284:GLY:N	2.88	0.41
6:A6:317:ILE:C	6:Af:20:THR:HG22	2.45	0.41
8:Fl:557:VAL:HG12	8:Fm:574:LYS:HG2	2.02	0.41
9:SM:65:PHE:CD1	9:SM:65:PHE:C	2.98	0.41
9:SR:65:PHE:CD1	9:SR:65:PHE:C	2.98	0.41
9:SV:346:GLU:CD	9:SV:346:GLU:H	2.28	0.41
9:Sc:150:ILE:HD12	9:Sc:150:ILE:H	1.85	0.41
9:Se:126:ASP:CG	9:Se:128:THR:H	2.27	0.41
9:Sg:65:PHE:CD1	9:Sg:65:PHE:C	2.98	0.41
10:Ti:133:TRP:CH2	10:Ti:135:THR:HG22	2.55	0.41
12:BE:332:ARG:HH21	12:BE:332:ARG:HB2	1.86	0.41
1:Lf:37:VAL:HG22	1:Lf:38:SER:H	1.86	0.41
1:Lc:5:LEU:HD23	7:LL:245:PHE:HA	2.02	0.41
3:BT:165:ASP:HB3	3:BT:166:PRO:HD2	2.02	0.41
3:BU:165:ASP:HB3	3:BU:166:PRO:HD2	2.01	0.41
3:BU:193:GLN:O	3:BU:194:ASP:HB2	2.20	0.41
4:AM:526:THR:HB	4:AM:527:PRO:HD2	2.01	0.41
9:SL:427:TRP:CZ2	9:SL:439:MET:HG3	2.55	0.41
9:SJ:110:TYR:CD1	9:SJ:140:ILE:HD11	2.56	0.41
9:SP:497:ILE:HG22	9:SP:497:ILE:O	2.19	0.41
9:SR:578:PHE:CD1	9:SR:578:PHE:C	2.99	0.41
9:Sh:65:PHE:CD1	9:Sh:65:PHE:C	2.98	0.41
9:Si:126:ASP:CG	9:Si:128:THR:H	2.28	0.41
10:TV:53:TYR:CG	10:TV:54:MET:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Tk:2:GLU:HG3	10:Ts:99:ILE:HD12	2.03	0.41
1:LV:223:ARG:HD2	1:LV:225:TYR:CE2	2.56	0.41
1:LW:37:VAL:HG22	1:LW:38:SER:H	1.85	0.41
1:LY:65:TYR:CD2	1:LY:65:TYR:C	2.97	0.41
5:AZ:202:PHE:CD1	5:AZ:237:VAL:HG11	2.55	0.41
6:Aa:226:SER:N	6:Aa:227:PRO:HD3	2.34	0.41
7:LM:202:TYR:CD2	7:LM:205:VAL:CG2	3.03	0.41
9:SB:8:ILE:CD1	11:AB:57:ILE:HD11	2.51	0.41
9:SO:373:ALA:HB2	9:SO:391:VAL:HG11	2.02	0.41
9:Sa:16:GLN:H	9:Sa:16:GLN:CD	2.28	0.41
9:Sg:408:PRO:HD3	9:Sg:427:TRP:CZ2	2.56	0.41
10:TX:7:THR:HA	10:TX:10:PHE:CE1	2.55	0.41
10:To:130:THR:HG21	10:To:161:TRP:CZ2	2.56	0.41
11:AF:112:ILE:HD12	11:AF:112:ILE:H	1.85	0.41
14:BB:524:ASP:O	14:BD:532:GLY:HA3	2.20	0.41
3:BQ:49:MET:HE2	9:SJ:646:THR:HG22	2.03	0.41
3:BU:8:LYS:HA	3:BU:12:ALA:HB3	2.03	0.41
5:AY:570:TYR:CE2	5:AY:618:VAL:HG22	2.56	0.41
5:AZ:281:LEU:HD21	7:LJ:18:ALA:HA	2.03	0.41
9:SB:8:ILE:HG12	11:AB:57:ILE:CD1	2.51	0.41
9:SB:367:ARG:HG3	9:SB:561:ASN:HD21	1.85	0.41
9:SE:5:SER:HB2	9:SE:6:PRO:HD2	2.01	0.41
9:ST:545:THR:HB	9:ST:546:PRO:HD2	2.02	0.41
9:Sf:65:PHE:CD1	9:Sf:65:PHE:C	2.99	0.41
9:Sj:65:PHE:CD1	9:Sj:65:PHE:C	2.98	0.41
10:TM:104:PRO:HA	10:TM:107:TYR:CE2	2.55	0.41
10:TP:27:TYR:CD1	10:TP:109:LYS:HE3	2.56	0.41
10:TY:97:ASN:ND2	10:Td:161:TRP:CH2	2.88	0.41
10:Te:3:LEU:O	10:Te:6:ILE:HG22	2.21	0.41
10:Th:9:ALA:O	10:Ti:35:LYS:HE2	2.21	0.41
10:Tm:104:PRO:HA	10:Tm:107:TYR:CZ	2.55	0.41
1:LX:589:ILE:C	1:LX:589:ILE:HD12	2.46	0.41
4:AT:53:ARG:HD3	5:A0:658:TYR:CD2	2.56	0.41
9:SC:523:VAL:HG22	9:SC:534:LEU:HA	2.02	0.41
9:SN:428:ARG:HD3	9:SN:428:ARG:C	2.46	0.41
9:SO:428:ARG:HD3	9:SO:428:ARG:C	2.45	0.41
9:SZ:629:LYS:NZ	9:Sf:648:ALA:O	2.37	0.41
10:Tb:161:TRP:CH2	10:Tc:97:ASN:ND2	2.88	0.41
1:Lh:454:ALA:HB3	1:Lh:471:LEU:CD2	2.50	0.41
1:LY:97:TRP:CE3	1:LY:113:PHE:HB3	2.56	0.41
4:AX:521:LEU:O	4:AX:533:PRO:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AT:410:ILE:HD11	5:A0:888:PHE:CZ	2.55	0.41
4:AV:329:GLU:CD	4:AV:332:ARG:HH22	2.29	0.41
4:AO:330:ARG:HA	4:AO:460:MET:HE1	2.03	0.41
5:AY:174:HIS:CD2	5:AY:174:HIS:H	2.36	0.41
6:A4:317:ILE:C	6:Ad:20:THR:HG22	2.45	0.41
7:LQ:36:ASP:HA	7:LP:7:LYS:NZ	2.34	0.41
9:SB:110:TYR:CD2	9:SB:140:ILE:HD11	2.56	0.41
9:SD:523:VAL:HG22	9:SD:534:LEU:HA	2.02	0.41
9:SF:367:ARG:HG3	9:SF:561:ASN:HD21	1.86	0.41
9:SK:222:ILE:HG12	9:SK:323:ALA:HB2	2.02	0.41
9:SH:107:GLY:HA2	9:SH:178:VAL:HG13	2.03	0.41
9:SI:110:TYR:CG	9:SI:140:ILE:HD11	2.56	0.41
9:SJ:235:GLU:C	9:SJ:236:ILE:HD12	2.46	0.41
9:SP:110:TYR:CD2	9:SP:140:ILE:HD11	2.56	0.41
9:SM:373:ALA:HB2	9:SM:391:VAL:HG11	2.02	0.41
9:SR:373:ALA:HB2	9:SR:391:VAL:HG11	2.03	0.41
9:Sh:126:ASP:CG	9:Sh:128:THR:H	2.28	0.41
10:Tl:7:THR:HA	10:Tl:10:PHE:CE1	2.56	0.41
10:Tn:130:THR:HG21	10:Tn:161:TRP:CZ2	2.56	0.41
11:AA:112:ILE:H	11:AA:112:ILE:HD12	1.86	0.41
14:BC:176:ILE:H	14:BC:176:ILE:HG13	1.71	0.41
1:LS:97:TRP:CE3	1:LS:113:PHE:HB3	2.56	0.41
4:AX:345:CYS:HB3	4:AX:354:PHE:CE2	2.55	0.41
4:AU:410:ILE:HD11	5:A3:888:PHE:CZ	2.56	0.41
6:A5:238:TRP:CZ3	6:Ae:292:PRO:HG2	2.56	0.41
7:LB:54:ALA:HB2	7:LA:9:ILE:HD12	2.02	0.41
7:LK:12:VAL:CG1	7:LL:28:GLY:HA3	2.51	0.41
9:SC:367:ARG:HG3	9:SC:561:ASN:HD21	1.85	0.41
9:SE:523:VAL:HG22	9:SE:534:LEU:HA	2.03	0.41
9:SL:373:ALA:HB2	9:SL:391:VAL:HG11	2.03	0.41
9:SN:578:PHE:CD1	9:SN:578:PHE:C	2.99	0.41
10:TO:64:ARG:HD3	10:TO:66:TYR:CZ	2.56	0.41
10:TP:144:TRP:CD1	10:TT:54:MET:HA	2.55	0.41
10:Tp:104:PRO:HA	10:Tp:107:TYR:CZ	2.55	0.41
1:LZ:262:ARG:HE	1:LZ:277:GLU:CD	2.29	0.40
3:BQ:84:VAL:C	3:BQ:85:ASN:HD22	2.29	0.40
4:AM:506:LYS:HE3	4:AM:508:TYR:CE1	2.56	0.40
9:SG:373:ALA:HB2	9:SG:391:VAL:HG11	2.03	0.40
9:SP:629:LYS:NZ	9:SV:648:ALA:O	2.53	0.40
9:Sl:65:PHE:CD1	9:Sl:65:PHE:C	2.99	0.40
9:Sm:65:PHE:CD1	9:Sm:65:PHE:C	3.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:TQ:64:ARG:H	10:TR:93:HIS:CE1	2.38	0.40
10:TU:7:THR:HA	10:TU:10:PHE:CE1	2.56	0.40
1:Lg:198:PHE:CD1	1:Lg:198:PHE:C	2.99	0.40
1:Li:37:VAL:HG22	1:Li:38:SER:H	1.86	0.40
1:Lc:262:ARG:HE	1:Lc:277:GLU:CD	2.28	0.40
4:AN:225:SER:C	4:AN:226:ILE:HG13	2.46	0.40
5:A2:281:LEU:HD21	7:LA:18:ALA:HA	2.03	0.40
8:FT:557:VAL:HG12	8:FU:574:LYS:HG2	2.03	0.40
9:SA:523:VAL:HG22	9:SA:534:LEU:HA	2.03	0.40
9:SM:110:TYR:CD2	9:SM:140:ILE:HD11	2.56	0.40
9:SW:346:GLU:CD	9:SW:346:GLU:H	2.29	0.40
10:TO:64:ARG:H	10:TP:93:HIS:CE1	2.38	0.40
10:TV:104:PRO:HA	10:TV:107:TYR:CZ	2.57	0.40
10:TY:161:TRP:CH2	10:TZ:97:ASN:ND2	2.89	0.40
14:BC:321:LYS:HE2	14:BD:454:ASP:OD2	2.21	0.40
1:LY:410:PRO:HA	1:LY:434:PRO:HA	2.04	0.40
4:AV:521:LEU:O	4:AV:533:PRO:HA	2.21	0.40
5:AZ:695:TYR:HA	5:AZ:696:PRO:HD3	1.95	0.40
7:LH:23:ILE:HD13	7:LH:23:ILE:H	1.85	0.40
7:LH:54:ALA:HB2	7:LG:9:ILE:HD12	2.04	0.40
9:SQ:65:PHE:CD1	9:SQ:65:PHE:C	2.98	0.40
9:SV:545:THR:HB	9:SV:546:PRO:HD2	2.03	0.40
9:SX:545:THR:HB	9:SX:546:PRO:HD2	2.03	0.40
9:SY:120:TYR:CE1	9:SY:166:SER:HB3	2.56	0.40
9:Sl:219:MET:HE2	9:Sl:219:MET:HA	2.03	0.40
10:Tf:7:THR:HA	10:Tf:10:PHE:CE1	2.57	0.40
10:Ti:3:LEU:O	10:Ti:6:ILE:HG22	2.21	0.40
10:Tj:27:TYR:CE1	10:Tj:109:LYS:HE3	2.57	0.40
1:Li:262:ARG:HE	1:Li:277:GLU:CD	2.29	0.40
1:La:589:ILE:HD12	1:La:589:ILE:C	2.46	0.40
4:AX:329:GLU:CD	4:AX:332:ARG:HH22	2.28	0.40
4:AT:521:LEU:O	4:AT:533:PRO:HA	2.21	0.40
4:AO:338:LYS:HE2	4:AO:354:PHE:CE1	2.57	0.40
5:A1:956:ARG:HG2	5:A1:957:ALA:H	1.87	0.40
6:A7:317:ILE:C	6:Aa:20:THR:HG22	2.46	0.40
6:Aa:54:TRP:CZ3	6:Aa:66:PRO:HD2	2.56	0.40
8:FA:547:LEU:HD21	8:FC:575:TYR:CE1	2.56	0.40
9:SB:8:ILE:HG12	11:AB:57:ILE:HD11	2.03	0.40
9:SL:110:TYR:CD1	9:SL:140:ILE:HD11	2.57	0.40
10:Te:9:ALA:O	10:Tf:35:LYS:HE2	2.20	0.40
12:BE:332:ARG:HB2	12:BE:332:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Ld:303:ASP:CG	1:Ld:307:ARG:HH22	2.29	0.40
1:Ld:589:ILE:HD12	1:Ld:589:ILE:C	2.46	0.40
2:BL:22:GLN:HB3	9:SB:456:TYR:CE1	2.57	0.40
3:BQ:165:ASP:HB3	3:BQ:166:PRO:HD2	2.03	0.40
3:BS:165:ASP:HB3	3:BS:166:PRO:HD2	2.03	0.40
9:SG:110:TYR:CD1	9:SG:140:ILE:HD11	2.56	0.40
9:SL:126:ASP:CG	9:SL:128:THR:H	2.30	0.40
9:SQ:578:PHE:CD1	9:SQ:578:PHE:C	2.99	0.40
9:Sk:98:ASN:HA	9:Sk:147:THR:HG21	2.04	0.40
10:TP:104:PRO:HA	10:TP:107:TYR:CE2	2.56	0.40
10:Tk:130:THR:HG21	10:Tk:161:TRP:CZ2	2.56	0.40
14:BC:532:GLY:HA3	14:BD:524:ASP:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	LS	615/1281 (48%)	553 (90%)	62 (10%)	0	100	100
1	LT	615/1281 (48%)	555 (90%)	60 (10%)	0	100	100
1	LU	615/1281 (48%)	554 (90%)	61 (10%)	0	100	100
1	LV	615/1281 (48%)	555 (90%)	60 (10%)	0	100	100
1	LW	615/1281 (48%)	551 (90%)	64 (10%)	0	100	100
1	LX	615/1281 (48%)	557 (91%)	58 (9%)	0	100	100
1	LY	615/1281 (48%)	554 (90%)	61 (10%)	0	100	100
1	LZ	615/1281 (48%)	561 (91%)	54 (9%)	0	100	100
1	La	615/1281 (48%)	552 (90%)	63 (10%)	0	100	100
1	Lb	615/1281 (48%)	554 (90%)	61 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Lc	615/1281 (48%)	558 (91%)	57 (9%)	0	100	100
1	Ld	615/1281 (48%)	562 (91%)	53 (9%)	0	100	100
1	Le	615/1281 (48%)	548 (89%)	67 (11%)	0	100	100
1	Lf	615/1281 (48%)	560 (91%)	55 (9%)	0	100	100
1	Lg	615/1281 (48%)	552 (90%)	63 (10%)	0	100	100
1	Lh	615/1281 (48%)	554 (90%)	61 (10%)	0	100	100
1	Li	615/1281 (48%)	556 (90%)	59 (10%)	0	100	100
1	Lj	615/1281 (48%)	550 (89%)	65 (11%)	0	100	100
2	BK	345/350 (99%)	304 (88%)	41 (12%)	0	100	100
2	BL	271/350 (77%)	236 (87%)	35 (13%)	0	100	100
2	BM	345/350 (99%)	301 (87%)	44 (13%)	0	100	100
2	BN	271/350 (77%)	239 (88%)	32 (12%)	0	100	100
2	BO	345/350 (99%)	307 (89%)	38 (11%)	0	100	100
2	BP	271/350 (77%)	233 (86%)	38 (14%)	0	100	100
3	BQ	293/308 (95%)	265 (90%)	28 (10%)	0	100	100
3	BR	293/308 (95%)	266 (91%)	27 (9%)	0	100	100
3	BS	293/308 (95%)	268 (92%)	25 (8%)	0	100	100
3	BT	293/308 (95%)	266 (91%)	27 (9%)	0	100	100
3	BU	293/308 (95%)	274 (94%)	19 (6%)	0	100	100
3	BV	293/308 (95%)	271 (92%)	22 (8%)	0	100	100
4	AM	652/655 (100%)	624 (96%)	28 (4%)	0	100	100
4	AN	652/655 (100%)	617 (95%)	35 (5%)	0	100	100
4	AO	652/655 (100%)	624 (96%)	28 (4%)	0	100	100
4	AP	652/655 (100%)	616 (94%)	36 (6%)	0	100	100
4	AQ	652/655 (100%)	618 (95%)	34 (5%)	0	100	100
4	AR	652/655 (100%)	617 (95%)	35 (5%)	0	100	100
4	AS	646/655 (99%)	606 (94%)	40 (6%)	0	100	100
4	AT	644/655 (98%)	611 (95%)	33 (5%)	0	100	100
4	AU	646/655 (99%)	607 (94%)	39 (6%)	0	100	100
4	AV	644/655 (98%)	609 (95%)	35 (5%)	0	100	100
4	AW	646/655 (99%)	608 (94%)	38 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	AX	644/655 (98%)	609 (95%)	35 (5%)	0	100	100
5	A0	1029/1032 (100%)	952 (92%)	77 (8%)	0	100	100
5	A1	1029/1032 (100%)	951 (92%)	78 (8%)	0	100	100
5	A2	1029/1032 (100%)	950 (92%)	79 (8%)	0	100	100
5	A3	1029/1032 (100%)	952 (92%)	77 (8%)	0	100	100
5	AY	1029/1032 (100%)	954 (93%)	75 (7%)	0	100	100
5	AZ	1029/1032 (100%)	941 (91%)	88 (9%)	0	100	100
6	A4	332/341 (97%)	302 (91%)	30 (9%)	0	100	100
6	A5	332/341 (97%)	308 (93%)	24 (7%)	0	100	100
6	A6	332/341 (97%)	300 (90%)	32 (10%)	0	100	100
6	A7	332/341 (97%)	308 (93%)	24 (7%)	0	100	100
6	A8	332/341 (97%)	304 (92%)	28 (8%)	0	100	100
6	A9	332/341 (97%)	308 (93%)	24 (7%)	0	100	100
6	Aa	327/341 (96%)	300 (92%)	27 (8%)	0	100	100
6	Ab	327/341 (96%)	299 (91%)	27 (8%)	1 (0%)	37	70
6	Ac	327/341 (96%)	300 (92%)	27 (8%)	0	100	100
6	Ad	327/341 (96%)	301 (92%)	26 (8%)	0	100	100
6	Ae	327/341 (96%)	297 (91%)	30 (9%)	0	100	100
6	Af	327/341 (96%)	302 (92%)	25 (8%)	0	100	100
7	LA	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
7	LB	301/303 (99%)	278 (92%)	23 (8%)	0	100	100
7	LC	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
7	LD	301/303 (99%)	291 (97%)	10 (3%)	0	100	100
7	LE	301/303 (99%)	281 (93%)	20 (7%)	0	100	100
7	LF	301/303 (99%)	290 (96%)	11 (4%)	0	100	100
7	LG	301/303 (99%)	288 (96%)	13 (4%)	0	100	100
7	LH	301/303 (99%)	279 (93%)	22 (7%)	0	100	100
7	LI	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
7	LJ	301/303 (99%)	291 (97%)	10 (3%)	0	100	100
7	LK	301/303 (99%)	277 (92%)	24 (8%)	0	100	100
7	LL	301/303 (99%)	289 (96%)	12 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	LM	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
7	LN	301/303 (99%)	278 (92%)	23 (8%)	0	100	100
7	LO	301/303 (99%)	290 (96%)	11 (4%)	0	100	100
7	LP	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
7	LQ	301/303 (99%)	279 (93%)	22 (7%)	0	100	100
7	LR	301/303 (99%)	289 (96%)	12 (4%)	0	100	100
8	FA	64/607 (10%)	57 (89%)	7 (11%)	0	100	100
8	FB	64/607 (10%)	61 (95%)	3 (5%)	0	100	100
8	FC	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	FJ	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	FK	64/607 (10%)	59 (92%)	5 (8%)	0	100	100
8	FL	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	FS	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	FT	64/607 (10%)	60 (94%)	4 (6%)	0	100	100
8	FU	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	Fb	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	Fc	64/607 (10%)	60 (94%)	4 (6%)	0	100	100
8	Fd	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	Fk	64/607 (10%)	57 (89%)	7 (11%)	0	100	100
8	Fl	64/607 (10%)	60 (94%)	4 (6%)	0	100	100
8	Fm	64/607 (10%)	59 (92%)	5 (8%)	0	100	100
8	Ft	64/607 (10%)	58 (91%)	6 (9%)	0	100	100
8	Fu	64/607 (10%)	60 (94%)	4 (6%)	0	100	100
8	Fv	64/607 (10%)	59 (92%)	5 (8%)	0	100	100
9	SA	647/656 (99%)	607 (94%)	40 (6%)	0	100	100
9	SB	647/656 (99%)	607 (94%)	40 (6%)	0	100	100
9	SC	647/656 (99%)	609 (94%)	38 (6%)	0	100	100
9	SD	647/656 (99%)	608 (94%)	39 (6%)	0	100	100
9	SE	647/656 (99%)	609 (94%)	38 (6%)	0	100	100
9	SF	647/656 (99%)	608 (94%)	39 (6%)	0	100	100
9	SG	653/656 (100%)	606 (93%)	47 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	SH	653/656 (100%)	612 (94%)	41 (6%)	0	100	100
9	SI	653/656 (100%)	609 (93%)	44 (7%)	0	100	100
9	SJ	653/656 (100%)	605 (93%)	48 (7%)	0	100	100
9	SK	653/656 (100%)	604 (92%)	49 (8%)	0	100	100
9	SL	653/656 (100%)	604 (92%)	49 (8%)	0	100	100
9	SM	653/656 (100%)	616 (94%)	37 (6%)	0	100	100
9	SN	653/656 (100%)	617 (94%)	36 (6%)	0	100	100
9	SO	653/656 (100%)	614 (94%)	39 (6%)	0	100	100
9	SP	653/656 (100%)	615 (94%)	38 (6%)	0	100	100
9	SQ	653/656 (100%)	616 (94%)	37 (6%)	0	100	100
9	SR	653/656 (100%)	613 (94%)	40 (6%)	0	100	100
9	SS	653/656 (100%)	618 (95%)	35 (5%)	0	100	100
9	ST	653/656 (100%)	618 (95%)	35 (5%)	0	100	100
9	SU	653/656 (100%)	616 (94%)	37 (6%)	0	100	100
9	SV	653/656 (100%)	620 (95%)	33 (5%)	0	100	100
9	SW	653/656 (100%)	621 (95%)	32 (5%)	0	100	100
9	SX	653/656 (100%)	615 (94%)	38 (6%)	0	100	100
9	SY	653/656 (100%)	621 (95%)	32 (5%)	0	100	100
9	SZ	653/656 (100%)	620 (95%)	32 (5%)	1 (0%)	44	76
9	Sa	653/656 (100%)	622 (95%)	30 (5%)	1 (0%)	44	76
9	Sb	653/656 (100%)	623 (95%)	30 (5%)	0	100	100
9	Sc	653/656 (100%)	620 (95%)	32 (5%)	1 (0%)	44	76
9	Sd	653/656 (100%)	621 (95%)	32 (5%)	0	100	100
9	Se	653/656 (100%)	620 (95%)	33 (5%)	0	100	100
9	Sf	653/656 (100%)	620 (95%)	33 (5%)	0	100	100
9	Sg	653/656 (100%)	619 (95%)	34 (5%)	0	100	100
9	Sh	653/656 (100%)	616 (94%)	37 (6%)	0	100	100
9	Si	653/656 (100%)	617 (94%)	36 (6%)	0	100	100
9	Sj	653/656 (100%)	620 (95%)	33 (5%)	0	100	100
9	Sk	653/656 (100%)	624 (96%)	29 (4%)	0	100	100
9	Sl	653/656 (100%)	621 (95%)	32 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	Sm	653/656 (100%)	621 (95%)	32 (5%)	0	100	100
9	Sn	653/656 (100%)	627 (96%)	26 (4%)	0	100	100
9	So	653/656 (100%)	627 (96%)	26 (4%)	0	100	100
9	Sp	653/656 (100%)	625 (96%)	28 (4%)	0	100	100
10	TM	160/163 (98%)	152 (95%)	8 (5%)	0	100	100
10	TN	160/163 (98%)	153 (96%)	7 (4%)	0	100	100
10	TO	160/163 (98%)	151 (94%)	9 (6%)	0	100	100
10	TP	160/163 (98%)	151 (94%)	9 (6%)	0	100	100
10	TQ	160/163 (98%)	152 (95%)	8 (5%)	0	100	100
10	TR	160/163 (98%)	152 (95%)	8 (5%)	0	100	100
10	TS	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	TT	160/163 (98%)	156 (98%)	4 (2%)	0	100	100
10	TU	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	TV	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	TW	160/163 (98%)	155 (97%)	5 (3%)	0	100	100
10	TX	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	TY	160/163 (98%)	155 (97%)	5 (3%)	0	100	100
10	TZ	160/163 (98%)	153 (96%)	7 (4%)	0	100	100
10	Ta	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Tb	160/163 (98%)	153 (96%)	7 (4%)	0	100	100
10	Tc	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Td	160/163 (98%)	152 (95%)	8 (5%)	0	100	100
10	Te	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Tf	160/163 (98%)	153 (96%)	7 (4%)	0	100	100
10	Tg	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Th	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Ti	160/163 (98%)	153 (96%)	7 (4%)	0	100	100
10	Tj	160/163 (98%)	157 (98%)	3 (2%)	0	100	100
10	Tk	160/163 (98%)	150 (94%)	10 (6%)	0	100	100
10	Tl	160/163 (98%)	151 (94%)	9 (6%)	0	100	100
10	Tm	160/163 (98%)	151 (94%)	9 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	Tn	160/163 (98%)	151 (94%)	9 (6%)	0	100	100
10	To	160/163 (98%)	151 (94%)	9 (6%)	0	100	100
10	Tp	160/163 (98%)	149 (93%)	11 (7%)	0	100	100
10	Tq	160/163 (98%)	155 (97%)	5 (3%)	0	100	100
10	Tr	160/163 (98%)	154 (96%)	6 (4%)	0	100	100
10	Ts	160/163 (98%)	156 (98%)	4 (2%)	0	100	100
10	Tt	160/163 (98%)	157 (98%)	3 (2%)	0	100	100
10	Tu	160/163 (98%)	156 (98%)	4 (2%)	0	100	100
10	Tv	160/163 (98%)	156 (98%)	4 (2%)	0	100	100
11	AA	130/136 (96%)	119 (92%)	11 (8%)	0	100	100
11	AB	130/136 (96%)	122 (94%)	8 (6%)	0	100	100
11	AC	130/136 (96%)	119 (92%)	11 (8%)	0	100	100
11	AD	130/136 (96%)	121 (93%)	9 (7%)	0	100	100
11	AE	130/136 (96%)	118 (91%)	12 (9%)	0	100	100
11	AF	130/136 (96%)	117 (90%)	13 (10%)	0	100	100
12	BE	377/380 (99%)	342 (91%)	35 (9%)	0	100	100
12	BF	377/380 (99%)	352 (93%)	25 (7%)	0	100	100
12	BG	377/380 (99%)	346 (92%)	31 (8%)	0	100	100
13	AG	210/212 (99%)	201 (96%)	9 (4%)	0	100	100
13	AH	210/212 (99%)	203 (97%)	7 (3%)	0	100	100
13	AI	210/212 (99%)	199 (95%)	11 (5%)	0	100	100
13	AJ	210/212 (99%)	202 (96%)	8 (4%)	0	100	100
13	AK	210/212 (99%)	202 (96%)	8 (4%)	0	100	100
13	AL	210/212 (99%)	204 (97%)	6 (3%)	0	100	100
14	BB	560/576 (97%)	531 (95%)	29 (5%)	0	100	100
14	BC	560/576 (97%)	531 (95%)	29 (5%)	0	100	100
14	BD	560/576 (97%)	536 (96%)	24 (4%)	0	100	100
All	All	77157/99906 (77%)	72069 (93%)	5084 (7%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	Ab	125	PRO

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Mol	Chain	Res	Type
9	Sa	160	TYR
9	SZ	160	TYR
9	Sc	160	TYR

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	LS	525/1065 (49%)	518 (99%)	7 (1%)	65	76
1	LT	525/1065 (49%)	518 (99%)	7 (1%)	65	76
1	LU	525/1065 (49%)	511 (97%)	14 (3%)	40	60
1	LV	525/1065 (49%)	516 (98%)	9 (2%)	56	72
1	LW	525/1065 (49%)	519 (99%)	6 (1%)	70	79
1	LX	525/1065 (49%)	512 (98%)	13 (2%)	42	61
1	LY	525/1065 (49%)	517 (98%)	8 (2%)	60	74
1	LZ	525/1065 (49%)	518 (99%)	7 (1%)	65	76
1	La	525/1065 (49%)	513 (98%)	12 (2%)	45	63
1	Lb	525/1065 (49%)	518 (99%)	7 (1%)	65	76
1	Lc	525/1065 (49%)	518 (99%)	7 (1%)	65	76
1	Ld	525/1065 (49%)	513 (98%)	12 (2%)	45	63
1	Le	525/1065 (49%)	517 (98%)	8 (2%)	60	74
1	Lf	525/1065 (49%)	516 (98%)	9 (2%)	56	72
1	Lg	525/1065 (49%)	511 (97%)	14 (3%)	40	60
1	Lh	525/1065 (49%)	516 (98%)	9 (2%)	56	72
1	Li	525/1065 (49%)	517 (98%)	8 (2%)	60	74
1	Lj	525/1065 (49%)	511 (97%)	14 (3%)	40	60
2	BK	294/297 (99%)	291 (99%)	3 (1%)	73	81
2	BL	239/297 (80%)	237 (99%)	2 (1%)	79	84
2	BM	294/297 (99%)	287 (98%)	7 (2%)	44	62

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	BN	239/297 (80%)	233 (98%)	6 (2%)	42	61
2	BO	294/297 (99%)	288 (98%)	6 (2%)	50	68
2	BP	239/297 (80%)	235 (98%)	4 (2%)	56	72
3	BQ	243/256 (95%)	239 (98%)	4 (2%)	58	73
3	BR	243/256 (95%)	236 (97%)	7 (3%)	37	58
3	BS	243/256 (95%)	239 (98%)	4 (2%)	58	73
3	BT	243/256 (95%)	237 (98%)	6 (2%)	42	61
3	BU	243/256 (95%)	238 (98%)	5 (2%)	48	66
3	BV	243/256 (95%)	239 (98%)	4 (2%)	58	73
4	AM	570/571 (100%)	560 (98%)	10 (2%)	54	71
4	AN	570/571 (100%)	556 (98%)	14 (2%)	42	61
4	AO	570/571 (100%)	560 (98%)	10 (2%)	54	71
4	AP	570/571 (100%)	559 (98%)	11 (2%)	52	69
4	AQ	570/571 (100%)	558 (98%)	12 (2%)	48	66
4	AR	570/571 (100%)	556 (98%)	14 (2%)	42	61
4	AS	565/571 (99%)	558 (99%)	7 (1%)	67	78
4	AT	563/571 (99%)	554 (98%)	9 (2%)	58	73
4	AU	565/571 (99%)	555 (98%)	10 (2%)	54	71
4	AV	563/571 (99%)	553 (98%)	10 (2%)	54	71
4	AW	565/571 (99%)	555 (98%)	10 (2%)	54	71
4	AX	563/571 (99%)	555 (99%)	8 (1%)	62	75
5	A0	923/924 (100%)	909 (98%)	14 (2%)	60	74
5	A1	923/924 (100%)	911 (99%)	12 (1%)	65	76
5	A2	923/924 (100%)	908 (98%)	15 (2%)	58	73
5	A3	923/924 (100%)	908 (98%)	15 (2%)	58	73
5	AY	923/924 (100%)	912 (99%)	11 (1%)	67	78
5	AZ	923/924 (100%)	910 (99%)	13 (1%)	62	75
6	A4	293/299 (98%)	288 (98%)	5 (2%)	56	72
6	A5	293/299 (98%)	289 (99%)	4 (1%)	62	75
6	A6	293/299 (98%)	288 (98%)	5 (2%)	56	72
6	A7	293/299 (98%)	290 (99%)	3 (1%)	73	81

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	A8	293/299 (98%)	287 (98%)	6 (2%)	50	68
6	A9	293/299 (98%)	290 (99%)	3 (1%)	73	81
6	Aa	288/299 (96%)	284 (99%)	4 (1%)	62	75
6	Ab	288/299 (96%)	285 (99%)	3 (1%)	73	81
6	Ac	288/299 (96%)	284 (99%)	4 (1%)	62	75
6	Ad	288/299 (96%)	285 (99%)	3 (1%)	73	81
6	Ae	288/299 (96%)	284 (99%)	4 (1%)	62	75
6	Af	288/299 (96%)	286 (99%)	2 (1%)	81	86
7	LA	245/245 (100%)	238 (97%)	7 (3%)	37	58
7	LB	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LC	245/245 (100%)	242 (99%)	3 (1%)	67	78
7	LD	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LE	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LF	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LG	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LH	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LI	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LJ	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LK	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LL	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LM	245/245 (100%)	239 (98%)	6 (2%)	44	62
7	LN	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LO	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LP	245/245 (100%)	241 (98%)	4 (2%)	58	73
7	LQ	245/245 (100%)	240 (98%)	5 (2%)	50	68
7	LR	245/245 (100%)	241 (98%)	4 (2%)	58	73
8	FA	57/509 (11%)	54 (95%)	3 (5%)	19	42
8	FB	57/509 (11%)	57 (100%)	0	100	100
8	FC	57/509 (11%)	55 (96%)	2 (4%)	31	52
8	FJ	57/509 (11%)	54 (95%)	3 (5%)	19	42
8	FK	57/509 (11%)	57 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	FL	57/509 (11%)	55 (96%)	2 (4%)	31	52
8	FS	57/509 (11%)	54 (95%)	3 (5%)	19	42
8	FT	57/509 (11%)	57 (100%)	0	100	100
8	FU	57/509 (11%)	55 (96%)	2 (4%)	31	52
8	Fb	57/509 (11%)	53 (93%)	4 (7%)	12	35
8	Fc	57/509 (11%)	57 (100%)	0	100	100
8	Fd	57/509 (11%)	55 (96%)	2 (4%)	31	52
8	Fk	57/509 (11%)	53 (93%)	4 (7%)	12	35
8	Fl	57/509 (11%)	57 (100%)	0	100	100
8	Fm	57/509 (11%)	54 (95%)	3 (5%)	19	42
8	Ft	57/509 (11%)	53 (93%)	4 (7%)	12	35
8	Fu	57/509 (11%)	57 (100%)	0	100	100
8	Fv	57/509 (11%)	55 (96%)	2 (4%)	31	52
9	SA	534/540 (99%)	529 (99%)	5 (1%)	75	83
9	SB	534/540 (99%)	530 (99%)	4 (1%)	81	86
9	SC	534/540 (99%)	529 (99%)	5 (1%)	75	83
9	SD	534/540 (99%)	529 (99%)	5 (1%)	75	83
9	SE	534/540 (99%)	531 (99%)	3 (1%)	84	88
9	SF	534/540 (99%)	528 (99%)	6 (1%)	70	79
9	SG	539/540 (100%)	529 (98%)	10 (2%)	52	69
9	SH	539/540 (100%)	529 (98%)	10 (2%)	52	69
9	SI	539/540 (100%)	529 (98%)	10 (2%)	52	69
9	SJ	539/540 (100%)	528 (98%)	11 (2%)	50	68
9	SK	539/540 (100%)	528 (98%)	11 (2%)	50	68
9	SL	539/540 (100%)	529 (98%)	10 (2%)	52	69
9	SM	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	SN	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	SO	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	SP	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	SQ	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	SR	539/540 (100%)	532 (99%)	7 (1%)	65	76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	SS	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	ST	539/540 (100%)	531 (98%)	8 (2%)	60	74
9	SU	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	SV	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	SW	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	SX	539/540 (100%)	534 (99%)	5 (1%)	75	83
9	SY	539/540 (100%)	531 (98%)	8 (2%)	60	74
9	SZ	539/540 (100%)	530 (98%)	9 (2%)	56	72
9	Sa	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Sb	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Sc	539/540 (100%)	531 (98%)	8 (2%)	60	74
9	Sd	539/540 (100%)	535 (99%)	4 (1%)	81	86
9	Se	539/540 (100%)	530 (98%)	9 (2%)	56	72
9	Sf	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	Sg	539/540 (100%)	533 (99%)	6 (1%)	70	79
9	Sh	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Si	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Sj	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Sk	539/540 (100%)	534 (99%)	5 (1%)	75	83
9	Sl	539/540 (100%)	534 (99%)	5 (1%)	75	83
9	Sm	539/540 (100%)	532 (99%)	7 (1%)	65	76
9	Sn	539/540 (100%)	535 (99%)	4 (1%)	81	86
9	So	539/540 (100%)	534 (99%)	5 (1%)	75	83
9	Sp	539/540 (100%)	531 (98%)	8 (2%)	60	74
10	TM	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	TN	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	TO	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	TP	138/139 (99%)	138 (100%)	0	100	100
10	TQ	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	TR	138/139 (99%)	138 (100%)	0	100	100
10	TS	138/139 (99%)	138 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	TT	138/139 (99%)	138 (100%)	0	100	100
10	TU	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	TV	138/139 (99%)	138 (100%)	0	100	100
10	TW	138/139 (99%)	138 (100%)	0	100	100
10	TX	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	TY	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	TZ	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	Ta	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	Tb	138/139 (99%)	135 (98%)	3 (2%)	47	65
10	Tc	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	Td	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	Te	138/139 (99%)	138 (100%)	0	100	100
10	Tf	138/139 (99%)	138 (100%)	0	100	100
10	Tg	138/139 (99%)	138 (100%)	0	100	100
10	Th	138/139 (99%)	138 (100%)	0	100	100
10	Ti	138/139 (99%)	138 (100%)	0	100	100
10	Tj	138/139 (99%)	138 (100%)	0	100	100
10	Tk	138/139 (99%)	137 (99%)	1 (1%)	81	86
10	Tl	138/139 (99%)	135 (98%)	3 (2%)	47	65
10	Tm	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	Tn	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	To	138/139 (99%)	135 (98%)	3 (2%)	47	65
10	Tp	138/139 (99%)	136 (99%)	2 (1%)	62	75
10	Tq	138/139 (99%)	138 (100%)	0	100	100
10	Tr	138/139 (99%)	138 (100%)	0	100	100
10	Ts	138/139 (99%)	138 (100%)	0	100	100
10	Tt	138/139 (99%)	138 (100%)	0	100	100
10	Tu	138/139 (99%)	138 (100%)	0	100	100
10	Tv	138/139 (99%)	138 (100%)	0	100	100
11	AA	122/126 (97%)	119 (98%)	3 (2%)	42	61
11	AB	122/126 (97%)	122 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AC	122/126 (97%)	118 (97%)	4 (3%)	33	54
11	AD	122/126 (97%)	120 (98%)	2 (2%)	58	73
11	AE	122/126 (97%)	121 (99%)	1 (1%)	79	84
11	AF	122/126 (97%)	119 (98%)	3 (2%)	42	61
12	BE	333/334 (100%)	325 (98%)	8 (2%)	44	62
12	BF	333/334 (100%)	325 (98%)	8 (2%)	44	62
12	BG	333/334 (100%)	323 (97%)	10 (3%)	36	57
13	AG	184/184 (100%)	180 (98%)	4 (2%)	47	65
13	AH	184/184 (100%)	180 (98%)	4 (2%)	47	65
13	AI	184/184 (100%)	182 (99%)	2 (1%)	70	79
13	AJ	184/184 (100%)	182 (99%)	2 (1%)	70	79
13	AK	184/184 (100%)	181 (98%)	3 (2%)	58	73
13	AL	184/184 (100%)	181 (98%)	3 (2%)	58	73
14	BB	474/484 (98%)	459 (97%)	15 (3%)	34	55
14	BC	474/484 (98%)	464 (98%)	10 (2%)	48	66
14	BD	474/484 (98%)	462 (98%)	12 (2%)	42	61
All	All	65604/84042 (78%)	64593 (98%)	1011 (2%)	60	74

All (1011) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Le	73	ASN
1	Le	89	THR
1	Le	119	ASN
1	Le	232	PHE
1	Le	363	VAL
1	Le	409	VAL
1	Le	579	THR
1	Le	600	THR
1	Lf	32	VAL
1	Lf	67	ARG
1	Lf	244	ILE
1	Lf	290	TYR
1	Lf	299	ILE
1	Lf	340	LEU
1	Lf	400	ILE

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Mol	Chain	Res	Type
1	Lf	416	TYR
1	Lf	474	THR
1	Lg	32	VAL
1	Lg	68	ARG
1	Lg	130	LEU
1	Lg	179	TYR
1	Lg	194	SER
1	Lg	355	ASN
1	Lg	401	THR
1	Lg	406	THR
1	Lg	413	GLU
1	Lg	476	GLU
1	Lg	487	GLN
1	Lg	521	ARG
1	Lg	607	TYR
1	Lg	616	ILE
1	Lh	73	ASN
1	Lh	89	THR
1	Lh	119	ASN
1	Lh	232	PHE
1	Lh	287	PHE
1	Lh	296	ILE
1	Lh	363	VAL
1	Lh	409	VAL
1	Lh	600	THR
1	Li	32	VAL
1	Li	67	ARG
1	Li	244	ILE
1	Li	290	TYR
1	Li	299	ILE
1	Li	400	ILE
1	Li	416	TYR
1	Li	474	THR
1	Lj	32	VAL
1	Lj	68	ARG
1	Lj	130	LEU
1	Lj	179	TYR
1	Lj	194	SER
1	Lj	355	ASN
1	Lj	401	THR
1	Lj	406	THR
1	Lj	413	GLU

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Mol	Chain	Res	Type
1	Lj	419	GLU
1	Lj	476	GLU
1	Lj	487	GLN
1	Lj	521	ARG
1	Lj	607	TYR
1	LS	73	ASN
1	LS	89	THR
1	LS	119	ASN
1	LS	232	PHE
1	LS	363	VAL
1	LS	409	VAL
1	LS	600	THR
1	LT	32	VAL
1	LT	67	ARG
1	LT	290	TYR
1	LT	299	ILE
1	LT	400	ILE
1	LT	416	TYR
1	LT	474	THR
1	LU	32	VAL
1	LU	68	ARG
1	LU	130	LEU
1	LU	179	TYR
1	LU	194	SER
1	LU	355	ASN
1	LU	372	THR
1	LU	401	THR
1	LU	406	THR
1	LU	413	GLU
1	LU	476	GLU
1	LU	487	GLN
1	LU	607	TYR
1	LU	616	ILE
1	LV	73	ASN
1	LV	89	THR
1	LV	119	ASN
1	LV	232	PHE
1	LV	296	ILE
1	LV	363	VAL
1	LV	409	VAL
1	LV	580	ASN
1	LV	600	THR

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Mol	Chain	Res	Type
1	LW	67	ARG
1	LW	290	TYR
1	LW	299	ILE
1	LW	400	ILE
1	LW	416	TYR
1	LW	474	THR
1	LX	32	VAL
1	LX	68	ARG
1	LX	130	LEU
1	LX	179	TYR
1	LX	194	SER
1	LX	355	ASN
1	LX	401	THR
1	LX	406	THR
1	LX	413	GLU
1	LX	476	GLU
1	LX	487	GLN
1	LX	607	TYR
1	LX	616	ILE
1	LY	73	ASN
1	LY	89	THR
1	LY	119	ASN
1	LY	232	PHE
1	LY	363	VAL
1	LY	409	VAL
1	LY	580	ASN
1	LY	600	THR
1	LZ	32	VAL
1	LZ	67	ARG
1	LZ	244	ILE
1	LZ	299	ILE
1	LZ	400	ILE
1	LZ	416	TYR
1	LZ	474	THR
1	La	32	VAL
1	La	68	ARG
1	La	179	TYR
1	La	194	SER
1	La	349	THR
1	La	355	ASN
1	La	401	THR
1	La	406	THR

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Mol	Chain	Res	Type
1	La	413	GLU
1	La	476	GLU
1	La	487	GLN
1	La	607	TYR
1	Lb	73	ASN
1	Lb	89	THR
1	Lb	119	ASN
1	Lb	232	PHE
1	Lb	363	VAL
1	Lb	409	VAL
1	Lb	600	THR
1	Lc	5	LEU
1	Lc	67	ARG
1	Lc	244	ILE
1	Lc	290	TYR
1	Lc	299	ILE
1	Lc	400	ILE
1	Lc	416	TYR
1	Ld	32	VAL
1	Ld	68	ARG
1	Ld	130	LEU
1	Ld	179	TYR
1	Ld	194	SER
1	Ld	355	ASN
1	Ld	401	THR
1	Ld	406	THR
1	Ld	413	GLU
1	Ld	476	GLU
1	Ld	487	GLN
1	Ld	607	TYR
2	BM	28	THR
2	BM	46	ASN
2	BM	54	VAL
2	BM	139	ARG
2	BM	164	THR
2	BM	308	LYS
2	BM	346	ILE
2	BK	28	THR
2	BK	163	LEU
2	BK	346	ILE
2	BO	28	THR
2	BO	46	ASN

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Mol	Chain	Res	Type
2	BO	139	ARG
2	BO	163	LEU
2	BO	308	LYS
2	BO	346	ILE
2	BP	18	THR
2	BP	182	MET
2	BP	203	ASP
2	BP	244	LEU
2	BL	198	THR
2	BL	203	ASP
2	BN	18	THR
2	BN	73	THR
2	BN	74	THR
2	BN	203	ASP
2	BN	244	LEU
2	BN	266	LEU
3	BQ	48	ASN
3	BQ	55	TRP
3	BQ	144	ASN
3	BQ	151	THR
3	BV	44	GLU
3	BV	54	ASN
3	BV	55	TRP
3	BV	151	THR
3	BS	44	GLU
3	BS	54	ASN
3	BS	55	TRP
3	BS	151	THR
3	BR	44	GLU
3	BR	54	ASN
3	BR	55	TRP
3	BR	93	THR
3	BR	144	ASN
3	BR	151	THR
3	BR	289	ARG
3	BT	46	TYR
3	BT	54	ASN
3	BT	55	TRP
3	BT	75	THR
3	BT	93	THR
3	BT	151	THR
3	BU	34	THR

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Mol	Chain	Res	Type
3	BU	44	GLU
3	BU	55	TRP
3	BU	144	ASN
3	BU	151	THR
4	AX	81	ILE
4	AX	168	LEU
4	AX	217	ASP
4	AX	367	GLN
4	AX	400	ASP
4	AX	509	ASN
4	AX	516	LEU
4	AX	520	ASP
4	AW	12	THR
4	AW	156	ARG
4	AW	168	LEU
4	AW	217	ASP
4	AW	258	LEU
4	AW	407	LEU
4	AW	423	ARG
4	AW	460	MET
4	AW	490	MET
4	AW	520	ASP
4	AT	81	ILE
4	AT	165	ASN
4	AT	168	LEU
4	AT	217	ASP
4	AT	367	GLN
4	AT	400	ASP
4	AT	509	ASN
4	AT	516	LEU
4	AT	520	ASP
4	AS	12	THR
4	AS	156	ARG
4	AS	168	LEU
4	AS	217	ASP
4	AS	258	LEU
4	AS	460	MET
4	AS	520	ASP
4	AV	81	ILE
4	AV	165	ASN
4	AV	168	LEU
4	AV	217	ASP

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Mol	Chain	Res	Type
4	AV	291	ASP
4	AV	336	GLN
4	AV	367	GLN
4	AV	509	ASN
4	AV	516	LEU
4	AV	520	ASP
4	AU	12	THR
4	AU	117	HIS
4	AU	156	ARG
4	AU	168	LEU
4	AU	217	ASP
4	AU	258	LEU
4	AU	423	ARG
4	AU	460	MET
4	AU	520	ASP
4	AU	623	THR
4	AR	8	ASN
4	AR	9	TYR
4	AR	42	LYS
4	AR	45	GLN
4	AR	46	ASP
4	AR	67	TYR
4	AR	121	GLU
4	AR	203	VAL
4	AR	237	ASP
4	AR	250	GLU
4	AR	367	GLN
4	AR	452	ARG
4	AR	465	PHE
4	AR	617	GLU
4	AQ	9	TYR
4	AQ	46	ASP
4	AQ	67	TYR
4	AQ	189	LYS
4	AQ	203	VAL
4	AQ	258	LEU
4	AQ	262	PHE
4	AQ	270	LYS
4	AQ	424	HIS
4	AQ	452	ARG
4	AQ	465	PHE
4	AQ	526	THR

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Mol	Chain	Res	Type
4	AN	8	ASN
4	AN	9	TYR
4	AN	42	LYS
4	AN	45	GLN
4	AN	46	ASP
4	AN	67	TYR
4	AN	121	GLU
4	AN	203	VAL
4	AN	237	ASP
4	AN	250	GLU
4	AN	367	GLN
4	AN	452	ARG
4	AN	465	PHE
4	AN	580	GLU
4	AM	9	TYR
4	AM	46	ASP
4	AM	67	TYR
4	AM	189	LYS
4	AM	203	VAL
4	AM	258	LEU
4	AM	270	LYS
4	AM	452	ARG
4	AM	465	PHE
4	AM	526	THR
4	AP	8	ASN
4	AP	9	TYR
4	AP	42	LYS
4	AP	45	GLN
4	AP	46	ASP
4	AP	67	TYR
4	AP	203	VAL
4	AP	250	GLU
4	AP	367	GLN
4	AP	452	ARG
4	AP	465	PHE
4	AO	9	TYR
4	AO	67	TYR
4	AO	189	LYS
4	AO	203	VAL
4	AO	237	ASP
4	AO	258	LEU
4	AO	270	LYS

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Mol	Chain	Res	Type
4	AO	452	ARG
4	AO	526	THR
4	AO	563	THR
5	AY	174	HIS
5	AY	207	HIS
5	AY	224	LEU
5	AY	255	TYR
5	AY	257	ARG
5	AY	580	LEU
5	AY	623	PHE
5	AY	843	ARG
5	AY	888	PHE
5	AY	933	VAL
5	AY	942	ILE
5	AZ	170	GLU
5	AZ	207	HIS
5	AZ	224	LEU
5	AZ	255	TYR
5	AZ	257	ARG
5	AZ	336	ILE
5	AZ	367	LYS
5	AZ	580	LEU
5	AZ	843	ARG
5	AZ	888	PHE
5	AZ	942	ILE
5	AZ	1027	GLN
5	AZ	1031	ASP
5	A0	170	GLU
5	A0	174	HIS
5	A0	207	HIS
5	A0	224	LEU
5	A0	255	TYR
5	A0	257	ARG
5	A0	336	ILE
5	A0	367	LYS
5	A0	632	ASP
5	A0	763	SER
5	A0	843	ARG
5	A0	888	PHE
5	A0	942	ILE
5	A0	1027	GLN
5	A1	170	GLU

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Mol	Chain	Res	Type
5	A1	207	HIS
5	A1	255	TYR
5	A1	257	ARG
5	A1	336	ILE
5	A1	763	SER
5	A1	843	ARG
5	A1	854	TYR
5	A1	888	PHE
5	A1	933	VAL
5	A1	942	ILE
5	A1	1027	GLN
5	A2	170	GLU
5	A2	207	HIS
5	A2	224	LEU
5	A2	255	TYR
5	A2	257	ARG
5	A2	336	ILE
5	A2	580	LEU
5	A2	623	PHE
5	A2	763	SER
5	A2	843	ARG
5	A2	888	PHE
5	A2	933	VAL
5	A2	942	ILE
5	A2	1027	GLN
5	A2	1028	VAL
5	A3	170	GLU
5	A3	207	HIS
5	A3	224	LEU
5	A3	255	TYR
5	A3	257	ARG
5	A3	336	ILE
5	A3	367	LYS
5	A3	623	PHE
5	A3	763	SER
5	A3	843	ARG
5	A3	854	TYR
5	A3	888	PHE
5	A3	933	VAL
5	A3	942	ILE
5	A3	1027	GLN
6	A4	83	MET

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Mol	Chain	Res	Type
6	A4	89	GLU
6	A4	213	GLU
6	A4	325	ILE
6	A4	333	GLU
6	A9	10	THR
6	A9	155	THR
6	A9	333	GLU
6	A6	83	MET
6	A6	213	GLU
6	A6	241	ASN
6	A6	325	ILE
6	A6	333	GLU
6	A5	10	THR
6	A5	106	ARG
6	A5	155	THR
6	A5	333	GLU
6	A8	83	MET
6	A8	91	SER
6	A8	213	GLU
6	A8	241	ASN
6	A8	325	ILE
6	A8	333	GLU
6	A7	10	THR
6	A7	155	THR
6	A7	333	GLU
6	Ad	73	ASP
6	Ad	171	THR
6	Ad	238	TRP
6	Ac	20	THR
6	Ac	71	ASN
6	Ac	73	ASP
6	Ac	171	THR
6	Af	73	ASP
6	Af	195	TRP
6	Ae	71	ASN
6	Ae	73	ASP
6	Ae	171	THR
6	Ae	238	TRP
6	Ab	73	ASP
6	Ab	171	THR
6	Ab	238	TRP
6	Aa	71	ASN

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Mol	Chain	Res	Type
6	Aa	73	ASP
6	Aa	171	THR
6	Aa	238	TRP
7	LN	14	GLU
7	LN	23	ILE
7	LN	154	TRP
7	LN	231	ILE
7	LN	234	THR
7	LO	122	ILE
7	LO	125	THR
7	LO	168	TYR
7	LO	261	GLU
7	LM	26	ASP
7	LM	151	ILE
7	LM	169	SER
7	LM	188	THR
7	LM	231	ILE
7	LM	246	ASP
7	LQ	14	GLU
7	LQ	23	ILE
7	LQ	154	TRP
7	LQ	231	ILE
7	LQ	234	THR
7	LR	122	ILE
7	LR	125	THR
7	LR	168	TYR
7	LR	261	GLU
7	LP	26	ASP
7	LP	203	SER
7	LP	231	ILE
7	LP	246	ASP
7	LB	14	GLU
7	LB	23	ILE
7	LB	154	TRP
7	LB	231	ILE
7	LB	234	THR
7	LC	122	ILE
7	LC	125	THR
7	LC	261	GLU
7	LA	26	ASP
7	LA	151	ILE
7	LA	187	LEU

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Mol	Chain	Res	Type
7	LA	198	TYR
7	LA	203	SER
7	LA	231	ILE
7	LA	246	ASP
7	LE	14	GLU
7	LE	23	ILE
7	LE	154	TRP
7	LE	231	ILE
7	LE	234	THR
7	LF	122	ILE
7	LF	125	THR
7	LF	168	TYR
7	LF	261	GLU
7	LD	26	ASP
7	LD	151	ILE
7	LD	203	SER
7	LD	231	ILE
7	LD	246	ASP
7	LH	14	GLU
7	LH	23	ILE
7	LH	154	TRP
7	LH	231	ILE
7	LH	234	THR
7	LI	122	ILE
7	LI	125	THR
7	LI	168	TYR
7	LI	261	GLU
7	LG	26	ASP
7	LG	151	ILE
7	LG	231	ILE
7	LG	246	ASP
7	LK	23	ILE
7	LK	154	TRP
7	LK	231	ILE
7	LK	234	THR
7	LL	122	ILE
7	LL	125	THR
7	LL	168	TYR
7	LL	261	GLU
7	LJ	26	ASP
7	LJ	169	SER
7	LJ	198	TYR

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Mol	Chain	Res	Type
7	LJ	231	ILE
7	LJ	246	ASP
8	FA	558	ILE
8	FA	564	ASP
8	FA	586	VAL
8	FC	531	THR
8	FC	545	LYS
8	FJ	558	ILE
8	FJ	564	ASP
8	FJ	586	VAL
8	FL	531	THR
8	FL	545	LYS
8	FS	558	ILE
8	FS	564	ASP
8	FS	586	VAL
8	FU	531	THR
8	FU	545	LYS
8	Fb	546	VAL
8	Fb	558	ILE
8	Fb	564	ASP
8	Fb	586	VAL
8	Fd	531	THR
8	Fd	545	LYS
8	Fk	558	ILE
8	Fk	564	ASP
8	Fk	586	VAL
8	Fk	589	ASN
8	Fm	531	THR
8	Fm	545	LYS
8	Fm	584	ASN
8	Ft	546	VAL
8	Ft	558	ILE
8	Ft	564	ASP
8	Ft	586	VAL
8	Fv	531	THR
8	Fv	545	LYS
9	SA	219	MET
9	SA	299	ASP
9	SA	366	LEU
9	SA	452	TYR
9	SA	573	GLU
9	SB	219	MET

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Mol	Chain	Res	Type
9	SB	366	LEU
9	SB	454	TYR
9	SB	523	VAL
9	SC	219	MET
9	SC	299	ASP
9	SC	366	LEU
9	SC	452	TYR
9	SC	454	TYR
9	SD	299	ASP
9	SD	302	ILE
9	SD	366	LEU
9	SD	452	TYR
9	SD	454	TYR
9	SE	219	MET
9	SE	366	LEU
9	SE	586	GLU
9	SF	219	MET
9	SF	302	ILE
9	SF	366	LEU
9	SF	452	TYR
9	SF	454	TYR
9	SF	586	GLU
9	SK	20	VAL
9	SK	73	GLN
9	SK	170	THR
9	SK	209	GLU
9	SK	311	ASP
9	SK	428	ARG
9	SK	499	ASN
9	SK	585	MET
9	SK	586	GLU
9	SK	629	LYS
9	SK	654	ILE
9	SG	20	VAL
9	SG	73	GLN
9	SG	170	THR
9	SG	209	GLU
9	SG	311	ASP
9	SG	428	ARG
9	SG	499	ASN
9	SG	585	MET
9	SG	586	GLU

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Mol	Chain	Res	Type
9	SG	654	ILE
9	SL	20	VAL
9	SL	170	THR
9	SL	209	GLU
9	SL	311	ASP
9	SL	428	ARG
9	SL	499	ASN
9	SL	585	MET
9	SL	586	GLU
9	SL	629	LYS
9	SL	654	ILE
9	SH	19	VAL
9	SH	20	VAL
9	SH	170	THR
9	SH	209	GLU
9	SH	311	ASP
9	SH	428	ARG
9	SH	499	ASN
9	SH	585	MET
9	SH	586	GLU
9	SH	629	LYS
9	SI	20	VAL
9	SI	73	GLN
9	SI	170	THR
9	SI	311	ASP
9	SI	428	ARG
9	SI	499	ASN
9	SI	585	MET
9	SI	586	GLU
9	SI	629	LYS
9	SI	654	ILE
9	SJ	20	VAL
9	SJ	170	THR
9	SJ	209	GLU
9	SJ	311	ASP
9	SJ	428	ARG
9	SJ	452	TYR
9	SJ	499	ASN
9	SJ	585	MET
9	SJ	586	GLU
9	SJ	629	LYS
9	SJ	654	ILE

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Mol	Chain	Res	Type
9	SQ	108	SER
9	SQ	122	ASP
9	SQ	207	LYS
9	SQ	211	GLN
9	SQ	452	TYR
9	SQ	548	ASP
9	SP	108	SER
9	SP	122	ASP
9	SP	207	LYS
9	SP	211	GLN
9	SP	452	TYR
9	SP	548	ASP
9	SP	589	GLN
9	SM	16	GLN
9	SM	108	SER
9	SM	122	ASP
9	SM	207	LYS
9	SM	211	GLN
9	SM	548	ASP
9	SM	629	LYS
9	SN	108	SER
9	SN	122	ASP
9	SN	207	LYS
9	SN	211	GLN
9	SN	300	LYS
9	SN	452	TYR
9	SN	548	ASP
9	SO	108	SER
9	SO	122	ASP
9	SO	207	LYS
9	SO	211	GLN
9	SO	452	TYR
9	SO	533	ILE
9	SO	548	ASP
9	SR	108	SER
9	SR	122	ASP
9	SR	207	LYS
9	SR	211	GLN
9	SR	452	TYR
9	SR	548	ASP
9	SR	589	GLN
9	SW	174	GLN

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Mol	Chain	Res	Type
9	SW	207	LYS
9	SW	211	GLN
9	SW	300	LYS
9	SW	346	GLU
9	SW	478	ARG
9	SW	511	HIS
9	SS	174	GLN
9	SS	207	LYS
9	SS	211	GLN
9	SS	300	LYS
9	SS	346	GLU
9	SS	439	MET
9	ST	16	GLN
9	ST	174	GLN
9	ST	207	LYS
9	ST	211	GLN
9	ST	300	LYS
9	ST	346	GLU
9	ST	439	MET
9	ST	511	HIS
9	SU	207	LYS
9	SU	211	GLN
9	SU	300	LYS
9	SU	346	GLU
9	SU	439	MET
9	SU	511	HIS
9	SV	160	TYR
9	SV	207	LYS
9	SV	211	GLN
9	SV	300	LYS
9	SV	346	GLU
9	SV	439	MET
9	SX	207	LYS
9	SX	211	GLN
9	SX	300	LYS
9	SX	346	GLU
9	SX	439	MET
9	SY	16	GLN
9	SY	53	MET
9	SY	149	LYS
9	SY	207	LYS
9	SY	346	GLU

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Mol	Chain	Res	Type
9	SY	439	MET
9	SY	478	ARG
9	SY	511	HIS
9	SZ	53	MET
9	SZ	149	LYS
9	SZ	207	LYS
9	SZ	346	GLU
9	SZ	439	MET
9	SZ	457	ASP
9	SZ	511	HIS
9	SZ	589	GLN
9	SZ	604	ARG
9	Sa	53	MET
9	Sa	149	LYS
9	Sa	207	LYS
9	Sa	346	GLU
9	Sa	439	MET
9	Sa	511	HIS
9	Sa	589	GLN
9	Sb	149	LYS
9	Sb	207	LYS
9	Sb	346	GLU
9	Sb	439	MET
9	Sb	511	HIS
9	Sb	589	GLN
9	Sb	604	ARG
9	Sc	149	LYS
9	Sc	207	LYS
9	Sc	346	GLU
9	Sc	439	MET
9	Sc	478	ARG
9	Sc	511	HIS
9	Sc	561	ASN
9	Sc	589	GLN
9	Sd	207	LYS
9	Sd	346	GLU
9	Sd	439	MET
9	Sd	511	HIS
9	Se	16	GLN
9	Se	207	LYS
9	Se	346	GLU
9	Se	439	MET

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Mol	Chain	Res	Type
9	Se	457	ASP
9	Se	508	ARG
9	Se	511	HIS
9	Se	548	ASP
9	Se	604	ARG
9	Sf	16	GLN
9	Sf	207	LYS
9	Sf	346	GLU
9	Sf	439	MET
9	Sf	457	ASP
9	Sf	511	HIS
9	Sg	16	GLN
9	Sg	207	LYS
9	Sg	346	GLU
9	Sg	439	MET
9	Sg	508	ARG
9	Sg	511	HIS
9	Sh	16	GLN
9	Sh	207	LYS
9	Sh	346	GLU
9	Sh	439	MET
9	Sh	457	ASP
9	Sh	511	HIS
9	Sh	548	ASP
9	Si	16	GLN
9	Si	207	LYS
9	Si	346	GLU
9	Si	439	MET
9	Si	457	ASP
9	Si	511	HIS
9	Si	528	THR
9	Sj	16	GLN
9	Sj	53	MET
9	Sj	207	LYS
9	Sj	346	GLU
9	Sj	439	MET
9	Sj	511	HIS
9	Sj	551	ASN
9	Sk	207	LYS
9	Sk	439	MET
9	Sk	452	TYR
9	Sk	457	ASP

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Mol	Chain	Res	Type
9	Sk	500	CYS
9	Sl	207	LYS
9	Sl	211	GLN
9	Sl	439	MET
9	Sl	452	TYR
9	Sl	511	HIS
9	Sm	105	THR
9	Sm	207	LYS
9	Sm	211	GLN
9	Sm	300	LYS
9	Sm	439	MET
9	Sm	452	TYR
9	Sm	511	HIS
9	Sn	207	LYS
9	Sn	439	MET
9	Sn	452	TYR
9	Sn	511	HIS
9	So	53	MET
9	So	207	LYS
9	So	439	MET
9	So	452	TYR
9	So	511	HIS
9	Sp	53	MET
9	Sp	207	LYS
9	Sp	211	GLN
9	Sp	300	LYS
9	Sp	439	MET
9	Sp	452	TYR
9	Sp	500	CYS
9	Sp	511	HIS
10	TM	150	VAL
10	TN	150	VAL
10	TO	150	VAL
10	TQ	81	VAL
10	TQ	150	VAL
10	TU	159	ILE
10	TX	159	ILE
10	TY	11	GLU
10	TY	159	ILE
10	TZ	159	ILE
10	Ta	4	THR
10	Ta	159	ILE

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Mol	Chain	Res	Type
10	Tb	4	THR
10	Tb	11	GLU
10	Tb	159	ILE
10	Tc	11	GLU
10	Tc	159	ILE
10	Td	4	THR
10	Td	159	ILE
10	Tk	4	THR
10	Tl	4	THR
10	Tl	93	HIS
10	Tl	118	ARG
10	Tm	4	THR
10	Tm	93	HIS
10	Tn	4	THR
10	Tn	93	HIS
10	To	4	THR
10	To	93	HIS
10	To	118	ARG
10	Tp	4	THR
10	Tp	93	HIS
11	AA	19	TRP
11	AA	93	VAL
11	AA	129	ASN
11	AD	17	LEU
11	AD	129	ASN
11	AC	5	ASP
11	AC	37	LEU
11	AC	129	ASN
11	AC	131	ASN
11	AE	129	ASN
11	AF	37	LEU
11	AF	93	VAL
11	AF	129	ASN
12	BE	12	SER
12	BE	64	ASN
12	BE	86	TYR
12	BE	116	LEU
12	BE	148	ILE
12	BE	207	ASN
12	BE	323	ASN
12	BE	378	SER
12	BF	12	SER

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Mol	Chain	Res	Type
12	BF	64	ASN
12	BF	86	TYR
12	BF	111	HIS
12	BF	307	GLN
12	BF	308	THR
12	BF	323	ASN
12	BF	380	TYR
12	BG	61	THR
12	BG	64	ASN
12	BG	83	THR
12	BG	86	TYR
12	BG	111	HIS
12	BG	180	ASN
12	BG	225	LYS
12	BG	307	GLN
12	BG	308	THR
12	BG	323	ASN
13	AL	31	ARG
13	AL	157	TYR
13	AL	205	GLN
13	AI	31	ARG
13	AI	48	THR
13	AG	3	PHE
13	AG	31	ARG
13	AG	48	THR
13	AG	205	GLN
13	AK	3	PHE
13	AK	31	ARG
13	AK	48	THR
13	AH	31	ARG
13	AH	58	GLU
13	AH	157	TYR
13	AH	205	GLN
13	AJ	31	ARG
13	AJ	48	THR
14	BB	34	LEU
14	BB	81	SER
14	BB	162	ASP
14	BB	176	ILE
14	BB	207	MET
14	BB	249	ARG
14	BB	289	LEU

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Mol	Chain	Res	Type
14	BB	391	VAL
14	BB	414	ARG
14	BB	442	MET
14	BB	452	SER
14	BB	481	LEU
14	BB	536	THR
14	BB	567	THR
14	BB	572	ARG
14	BC	1	MET
14	BC	41	GLN
14	BC	81	SER
14	BC	104	ARG
14	BC	162	ASP
14	BC	249	ARG
14	BC	374	ARG
14	BC	389	PRO
14	BC	442	MET
14	BC	481	LEU
14	BD	85	LEU
14	BD	134	GLN
14	BD	162	ASP
14	BD	237	THR
14	BD	244	LEU
14	BD	305	LYS
14	BD	315	VAL
14	BD	323	ARG
14	BD	391	VAL
14	BD	442	MET
14	BD	452	SER
14	BD	536	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (693) such sidechains are listed below:

Mol	Chain	Res	Type
1	Le	44	GLN
1	Le	285	ASN
1	Le	302	ASN
1	Le	487	GLN
1	Le	519	ASN
1	Le	597	ASN
1	Lf	181	GLN
1	Lf	220	ASN

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Mol	Chain	Res	Type
1	Lf	246	ASN
1	Lf	403	ASN
1	Lf	597	ASN
1	Lg	85	GLN
1	Lg	337	ASN
1	Lg	381	GLN
1	Lg	462	ASN
1	Lg	536	ASN
1	Lg	597	ASN
1	Lh	44	GLN
1	Lh	279	GLN
1	Lh	285	ASN
1	Lh	302	ASN
1	Lh	378	ASN
1	Lh	487	GLN
1	Lh	519	ASN
1	Lh	597	ASN
1	Li	157	GLN
1	Li	181	GLN
1	Li	220	ASN
1	Li	242	ASN
1	Li	246	ASN
1	Li	403	ASN
1	Li	597	ASN
1	Lj	381	GLN
1	Lj	462	ASN
1	Lj	536	ASN
1	Lj	597	ASN
1	LS	44	GLN
1	LS	242	ASN
1	LS	279	GLN
1	LS	285	ASN
1	LS	302	ASN
1	LS	487	GLN
1	LS	519	ASN
1	LS	597	ASN
1	LT	157	GLN
1	LT	181	GLN
1	LT	220	ASN
1	LT	242	ASN
1	LT	246	ASN
1	LT	597	ASN

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Mol	Chain	Res	Type
1	LU	381	GLN
1	LU	462	ASN
1	LU	536	ASN
1	LU	597	ASN
1	LV	44	GLN
1	LV	242	ASN
1	LV	285	ASN
1	LV	302	ASN
1	LV	361	GLN
1	LV	487	GLN
1	LV	519	ASN
1	LW	157	GLN
1	LW	181	GLN
1	LW	220	ASN
1	LW	242	ASN
1	LW	246	ASN
1	LW	403	ASN
1	LW	597	ASN
1	LX	381	GLN
1	LX	462	ASN
1	LX	597	ASN
1	LY	302	ASN
1	LY	361	GLN
1	LY	487	GLN
1	LY	519	ASN
1	LY	597	ASN
1	LY	612	ASN
1	LZ	181	GLN
1	LZ	220	ASN
1	LZ	242	ASN
1	LZ	246	ASN
1	LZ	597	ASN
1	La	381	GLN
1	La	462	ASN
1	La	536	ASN
1	La	597	ASN
1	Lb	44	GLN
1	Lb	240	ASN
1	Lb	285	ASN
1	Lb	302	ASN
1	Lb	519	ASN
1	Lb	597	ASN

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Mol	Chain	Res	Type
1	Lc	181	GLN
1	Lc	220	ASN
1	Lc	246	ASN
1	Lc	403	ASN
1	Lc	597	ASN
1	Ld	228	ASN
1	Ld	240	ASN
1	Ld	257	ASN
1	Ld	337	ASN
1	Ld	381	GLN
1	Ld	462	ASN
1	Ld	536	ASN
1	Ld	597	ASN
2	BM	46	ASN
2	BM	127	HIS
2	BM	268	ASN
2	BM	343	ASN
2	BK	46	ASN
2	BK	112	ASN
2	BK	127	HIS
2	BK	268	ASN
2	BO	127	HIS
2	BO	177	ASN
2	BO	302	GLN
2	BP	22	GLN
2	BP	127	HIS
2	BP	268	ASN
2	BP	300	GLN
2	BP	340	ASN
2	BL	207	GLN
2	BL	268	ASN
2	BL	300	GLN
2	BL	340	ASN
2	BL	343	ASN
2	BN	22	GLN
2	BN	50	GLN
2	BN	300	GLN
2	BN	340	ASN
2	BN	343	ASN
3	BQ	133	ASN
3	BS	35	GLN
3	BS	77	GLN

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Mol	Chain	Res	Type
3	BS	85	ASN
3	BS	115	ASN
3	BS	179	ASN
3	BR	77	GLN
3	BR	85	ASN
3	BR	115	ASN
3	BR	133	ASN
3	BR	179	ASN
3	BT	77	GLN
3	BT	115	ASN
3	BU	64	ASN
3	BU	85	ASN
3	BU	115	ASN
4	AX	33	GLN
4	AX	45	GLN
4	AX	92	GLN
4	AX	96	GLN
4	AX	399	GLN
4	AX	451	ASN
4	AX	462	ASN
4	AW	10	GLN
4	AW	45	GLN
4	AW	95	GLN
4	AW	261	ASN
4	AW	464	ASN
4	AW	564	HIS
4	AW	624	GLN
4	AW	655	GLN
4	AT	45	GLN
4	AT	55	ASN
4	AT	97	ASN
4	AT	451	ASN
4	AT	462	ASN
4	AT	548	ASN
4	AS	10	GLN
4	AS	45	GLN
4	AS	55	ASN
4	AS	261	ASN
4	AS	464	ASN
4	AS	564	HIS
4	AS	655	GLN
4	AV	36	ASN

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Mol	Chain	Res	Type
4	AV	45	GLN
4	AV	462	ASN
4	AU	10	GLN
4	AU	16	ASN
4	AU	45	GLN
4	AU	95	GLN
4	AU	261	ASN
4	AU	451	ASN
4	AU	464	ASN
4	AU	564	HIS
4	AU	655	GLN
4	AR	10	GLN
4	AR	64	ASN
4	AR	165	ASN
4	AR	182	GLN
4	AR	273	GLN
4	AR	389	GLN
4	AR	425	ASN
4	AR	464	ASN
4	AR	548	ASN
4	AR	655	GLN
4	AQ	64	ASN
4	AQ	92	GLN
4	AQ	97	ASN
4	AQ	172	ASN
4	AQ	273	GLN
4	AQ	614	GLN
4	AN	8	ASN
4	AN	64	ASN
4	AN	145	ASN
4	AN	182	GLN
4	AN	425	ASN
4	AN	464	ASN
4	AN	548	ASN
4	AM	92	GLN
4	AM	172	ASN
4	AM	372	GLN
4	AM	496	ASN
4	AM	614	GLN
4	AM	639	ASN
4	AP	8	ASN
4	AP	64	ASN

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Mol	Chain	Res	Type
4	AP	119	ASN
4	AP	182	GLN
4	AP	202	GLN
4	AP	389	GLN
4	AP	425	ASN
4	AP	464	ASN
4	AP	548	ASN
4	AP	655	GLN
4	AO	64	ASN
4	AO	92	GLN
4	AO	97	ASN
4	AO	172	ASN
4	AO	273	GLN
4	AO	496	ASN
4	AO	614	GLN
5	AY	21	ASN
5	AY	206	GLN
5	AY	267	ASN
5	AY	408	GLN
5	AY	476	ASN
5	AY	487	HIS
5	AY	577	ASN
5	AY	627	GLN
5	AY	664	ASN
5	AY	825	GLN
5	AY	851	ASN
5	AY	905	ASN
5	AY	981	GLN
5	AY	1018	ASN
5	AZ	21	ASN
5	AZ	174	HIS
5	AZ	207	HIS
5	AZ	267	ASN
5	AZ	408	GLN
5	AZ	487	HIS
5	AZ	577	ASN
5	AZ	627	GLN
5	AZ	664	ASN
5	AZ	905	ASN
5	AZ	981	GLN
5	A0	21	ASN
5	A0	218	ASN

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Mol	Chain	Res	Type
5	A0	267	ASN
5	A0	408	GLN
5	A0	474	ASN
5	A0	476	ASN
5	A0	487	HIS
5	A0	627	GLN
5	A0	664	ASN
5	A0	689	ASN
5	A0	905	ASN
5	A0	981	GLN
5	A0	1018	ASN
5	A1	21	ASN
5	A1	174	HIS
5	A1	206	GLN
5	A1	207	HIS
5	A1	220	GLN
5	A1	267	ASN
5	A1	408	GLN
5	A1	476	ASN
5	A1	481	HIS
5	A1	487	HIS
5	A1	627	GLN
5	A1	664	ASN
5	A1	689	ASN
5	A1	825	GLN
5	A1	905	ASN
5	A1	908	HIS
5	A1	981	GLN
5	A1	1018	ASN
5	A2	206	GLN
5	A2	207	HIS
5	A2	267	ASN
5	A2	430	HIS
5	A2	476	ASN
5	A2	487	HIS
5	A2	577	ASN
5	A2	627	GLN
5	A2	905	ASN
5	A2	975	ASN
5	A2	981	GLN
5	A2	1010	GLN
5	A2	1018	ASN

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Mol	Chain	Res	Type
5	A3	21	ASN
5	A3	83	GLN
5	A3	174	HIS
5	A3	267	ASN
5	A3	408	GLN
5	A3	476	ASN
5	A3	487	HIS
5	A3	627	GLN
5	A3	664	ASN
5	A3	825	GLN
5	A3	905	ASN
5	A3	981	GLN
6	A4	81	ASN
6	A4	321	ASN
6	A9	81	ASN
6	A9	278	GLN
6	A9	321	ASN
6	A9	323	GLN
6	A9	336	ASN
6	A6	81	ASN
6	A6	321	ASN
6	A5	81	ASN
6	A5	278	GLN
6	A5	321	ASN
6	A5	323	GLN
6	A5	336	ASN
6	A8	81	ASN
6	A8	278	GLN
6	A7	81	ASN
6	A7	278	GLN
6	A7	321	ASN
6	A7	323	GLN
6	A7	336	ASN
6	Ad	240	GLN
6	Ac	109	ASN
6	Af	109	ASN
6	Af	240	GLN
6	Ab	109	ASN
6	Aa	239	GLN
7	LN	186	ASN
7	LN	297	GLN
7	LO	145	ASN

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Mol	Chain	Res	Type
7	LO	241	ASN
7	LM	40	ASN
7	LM	57	GLN
7	LM	145	ASN
7	LM	186	ASN
7	LR	145	ASN
7	LR	241	ASN
7	LP	40	ASN
7	LP	57	GLN
7	LP	95	GLN
7	LP	145	ASN
7	LP	186	ASN
7	LB	95	GLN
7	LB	186	ASN
7	LB	297	GLN
7	LC	95	GLN
7	LC	241	ASN
7	LA	40	ASN
7	LA	57	GLN
7	LA	95	GLN
7	LA	145	ASN
7	LA	186	ASN
7	LA	218	GLN
7	LE	186	ASN
7	LE	297	GLN
7	LF	145	ASN
7	LF	241	ASN
7	LD	40	ASN
7	LD	57	GLN
7	LD	145	ASN
7	LD	186	ASN
7	LH	297	GLN
7	LI	145	ASN
7	LI	241	ASN
7	LG	40	ASN
7	LG	57	GLN
7	LG	95	GLN
7	LG	145	ASN
7	LG	186	ASN
7	LG	218	GLN
7	LK	186	ASN
7	LK	297	GLN

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Mol	Chain	Res	Type
7	LL	145	ASN
7	LL	241	ASN
7	LJ	40	ASN
7	LJ	56	ASN
7	LJ	57	GLN
7	LJ	145	ASN
7	LJ	186	ASN
7	LJ	218	GLN
8	FA	553	HIS
8	FJ	553	HIS
8	FL	562	GLN
8	FS	553	HIS
8	Fb	553	HIS
8	Fb	583	ASN
8	Fd	562	GLN
8	Fk	553	HIS
8	Fm	562	GLN
9	SA	34	GLN
9	SA	345	ASN
9	SA	499	ASN
9	SB	34	GLN
9	SB	345	ASN
9	SB	429	GLN
9	SB	499	ASN
9	SC	34	GLN
9	SC	345	ASN
9	SC	355	GLN
9	SC	429	GLN
9	SC	499	ASN
9	SD	34	GLN
9	SD	305	ASN
9	SD	345	ASN
9	SD	355	GLN
9	SD	429	GLN
9	SE	34	GLN
9	SE	305	ASN
9	SE	345	ASN
9	SE	355	GLN
9	SE	429	GLN
9	SE	499	ASN
9	SF	34	GLN
9	SF	305	ASN

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Mol	Chain	Res	Type
9	SF	345	ASN
9	SF	499	ASN
9	SK	16	GLN
9	SK	34	GLN
9	SK	43	GLN
9	SK	570	GLN
9	SK	589	GLN
9	SG	16	GLN
9	SG	34	GLN
9	SG	43	GLN
9	SG	570	GLN
9	SG	589	GLN
9	SL	16	GLN
9	SL	34	GLN
9	SL	326	GLN
9	SL	570	GLN
9	SL	589	GLN
9	SH	34	GLN
9	SH	43	GLN
9	SH	570	GLN
9	SH	589	GLN
9	SI	16	GLN
9	SI	34	GLN
9	SI	43	GLN
9	SI	249	GLN
9	SI	326	GLN
9	SI	570	GLN
9	SI	589	GLN
9	SI	640	ASN
9	SJ	16	GLN
9	SJ	34	GLN
9	SJ	43	GLN
9	SJ	249	GLN
9	SJ	326	GLN
9	SJ	570	GLN
9	SJ	589	GLN
9	SJ	640	ASN
9	SQ	463	ASN
9	SQ	551	ASN
9	SQ	570	GLN
9	SQ	589	GLN
9	SP	463	ASN

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Mol	Chain	Res	Type
9	SP	570	GLN
9	SP	589	GLN
9	SM	463	ASN
9	SM	551	ASN
9	SM	570	GLN
9	SM	589	GLN
9	SN	463	ASN
9	SN	551	ASN
9	SN	570	GLN
9	SN	589	GLN
9	SO	463	ASN
9	SO	551	ASN
9	SO	570	GLN
9	SO	589	GLN
9	SR	463	ASN
9	SR	551	ASN
9	SR	570	GLN
9	SR	589	GLN
9	SW	34	GLN
9	SW	463	ASN
9	SW	484	GLN
9	SS	463	ASN
9	SS	570	GLN
9	ST	34	GLN
9	ST	40	GLN
9	ST	272	GLN
9	ST	463	ASN
9	SU	34	GLN
9	SU	233	GLN
9	SU	463	ASN
9	SV	34	GLN
9	SV	463	ASN
9	SX	34	GLN
9	SX	272	GLN
9	SX	463	ASN
9	SY	34	GLN
9	SY	423	ASN
9	SY	484	GLN
9	SY	589	GLN
9	SZ	34	GLN
9	SZ	484	GLN
9	SZ	570	GLN

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Mol	Chain	Res	Type
9	SZ	589	GLN
9	SZ	640	ASN
9	Sa	34	GLN
9	Sa	484	GLN
9	Sa	570	GLN
9	Sa	589	GLN
9	Sb	34	GLN
9	Sb	484	GLN
9	Sb	570	GLN
9	Sb	589	GLN
9	Sc	34	GLN
9	Sc	484	GLN
9	Sc	561	ASN
9	Sc	570	GLN
9	Sc	589	GLN
9	Sd	34	GLN
9	Sd	423	ASN
9	Sd	484	GLN
9	Sd	570	GLN
9	Sd	589	GLN
9	Sd	640	ASN
9	Se	60	GLN
9	Se	73	GLN
9	Se	463	ASN
9	Se	499	ASN
9	Se	551	ASN
9	Sf	34	GLN
9	Sf	73	GLN
9	Sf	272	GLN
9	Sf	463	ASN
9	Sf	499	ASN
9	Sf	551	ASN
9	Sf	570	GLN
9	Sg	34	GLN
9	Sg	73	GLN
9	Sg	298	GLN
9	Sg	463	ASN
9	Sg	499	ASN
9	Sg	551	ASN
9	Sh	34	GLN
9	Sh	40	GLN
9	Sh	60	GLN

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Mol	Chain	Res	Type
9	Sh	73	GLN
9	Sh	463	ASN
9	Sh	499	ASN
9	Sh	551	ASN
9	Sh	570	GLN
9	Si	34	GLN
9	Si	73	GLN
9	Si	272	GLN
9	Si	463	ASN
9	Si	499	ASN
9	Si	551	ASN
9	Sj	34	GLN
9	Sj	73	GLN
9	Sj	249	GLN
9	Sj	298	GLN
9	Sj	463	ASN
9	Sj	499	ASN
9	Sj	551	ASN
9	Sj	570	GLN
9	Sk	59	ASN
9	Sk	70	ASN
9	Sk	73	GLN
9	Sk	272	GLN
9	Sk	440	ASN
9	Sk	455	GLN
9	Sk	463	ASN
9	Sk	499	ASN
9	Sl	70	ASN
9	Sl	73	GLN
9	Sl	202	HIS
9	Sl	455	GLN
9	Sl	463	ASN
9	Sl	499	ASN
9	Sm	40	GLN
9	Sm	59	ASN
9	Sm	70	ASN
9	Sm	73	GLN
9	Sm	272	GLN
9	Sm	440	ASN
9	Sm	455	GLN
9	Sm	463	ASN
9	Sm	499	ASN

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Mol	Chain	Res	Type
9	Sn	34	GLN
9	Sn	59	ASN
9	Sn	70	ASN
9	Sn	73	GLN
9	Sn	272	GLN
9	Sn	455	GLN
9	Sn	463	ASN
9	Sn	499	ASN
9	So	40	GLN
9	So	59	ASN
9	So	70	ASN
9	So	73	GLN
9	So	440	ASN
9	So	455	GLN
9	So	463	ASN
9	So	499	ASN
9	Sp	59	ASN
9	Sp	70	ASN
9	Sp	73	GLN
9	Sp	272	GLN
9	Sp	455	GLN
9	Sp	463	ASN
9	Sp	499	ASN
10	TZ	55	ASN
10	Tb	59	ASN
10	Tc	55	ASN
10	Td	55	ASN
10	Te	89	GLN
10	Tf	89	GLN
10	Tj	89	GLN
10	Tk	59	ASN
10	Tk	89	GLN
10	Tl	59	ASN
10	Tl	89	GLN
10	Tm	59	ASN
10	Tm	97	ASN
10	Tn	59	ASN
10	To	59	ASN
10	Tp	59	ASN
10	Tp	89	GLN
10	Tp	125	ASN
10	Tq	125	ASN

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Mol	Chain	Res	Type
10	Tr	125	ASN
10	Ts	125	ASN
10	Tt	125	ASN
10	Tu	125	ASN
10	Tv	125	ASN
11	AA	129	ASN
11	AA	131	ASN
11	AB	129	ASN
11	AD	102	ASN
11	AD	129	ASN
11	AD	131	ASN
11	AE	129	ASN
11	AE	131	ASN
11	AF	131	ASN
12	BE	52	GLN
12	BE	182	GLN
12	BE	352	ASN
12	BF	52	GLN
12	BF	352	ASN
12	BG	4	GLN
12	BG	10	ASN
12	BG	52	GLN
12	BG	77	ASN
12	BG	194	ASN
12	BG	352	ASN
13	AL	99	GLN
13	AL	113	HIS
13	AL	119	ASN
13	AL	130	ASN
13	AL	141	ASN
13	AI	43	ASN
13	AI	47	GLN
13	AI	119	ASN
13	AI	143	GLN
13	AG	119	ASN
13	AG	171	ASN
13	AK	113	HIS
13	AK	119	ASN
13	AH	113	HIS
13	AH	119	ASN
13	AJ	113	HIS
13	AJ	117	ASN

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Mol	Chain	Res	Type
13	AJ	119	ASN
13	AJ	141	ASN
13	AJ	143	GLN
14	BB	120	GLN
14	BB	157	ASN
14	BB	232	ASN
14	BB	444	GLN
14	BB	448	ASN
14	BB	462	ASN
14	BB	479	ASN
14	BC	448	ASN
14	BC	479	ASN
14	BD	448	ASN

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 ⓘ

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

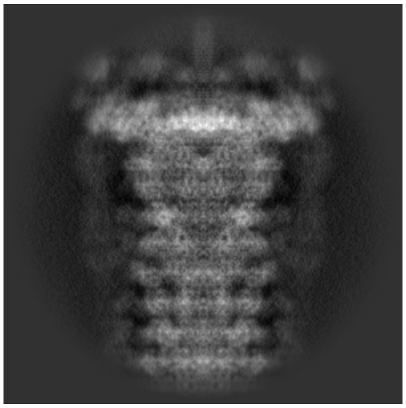
6 Map visualisation ⓘ

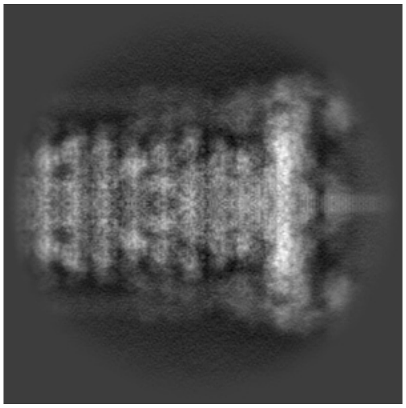
This section contains visualisations of the EMDB entry EMD-50186. These allow visual inspection of the internal detail of the map and identification of artifacts.

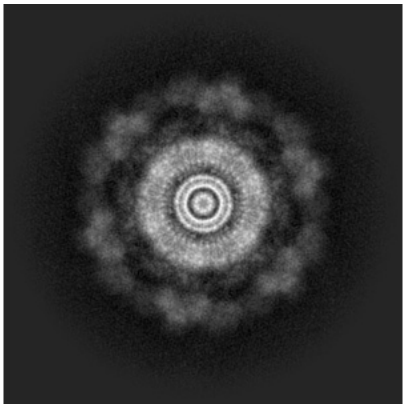
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections ⓘ

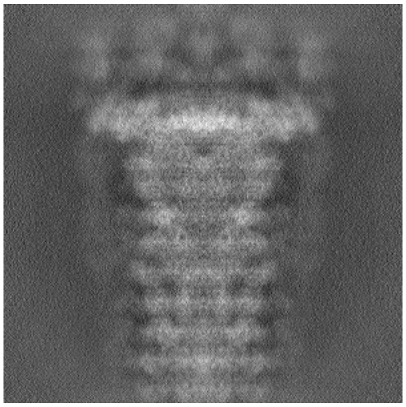
6.1.1 Primary map

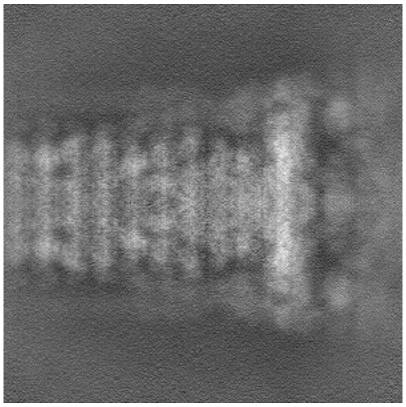

X

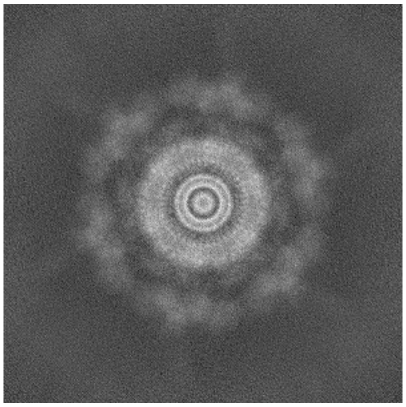

Y


Z

6.1.2 Raw map


X

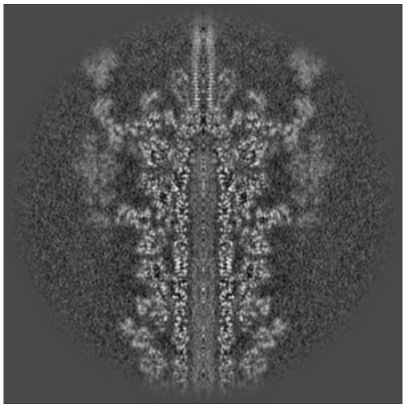

Y


Z

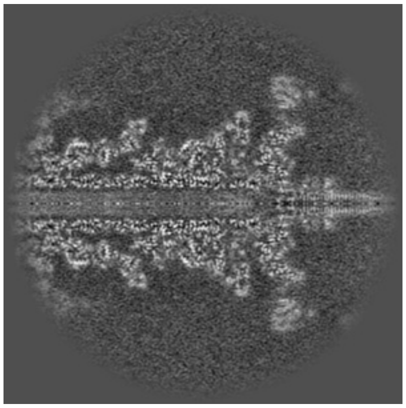
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ

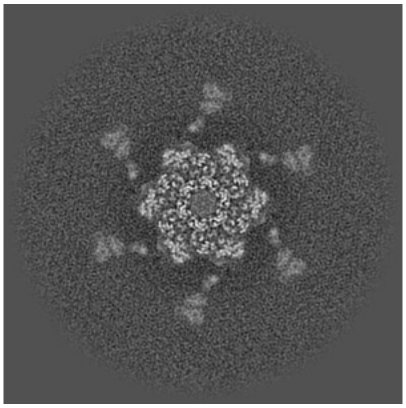
6.2.1 Primary map



X Index: 256

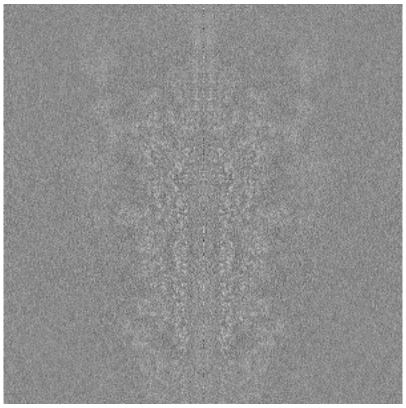


Y Index: 256

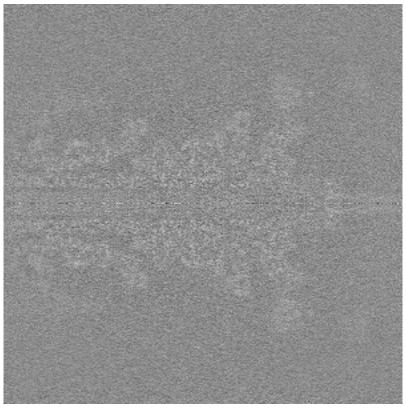


Z Index: 256

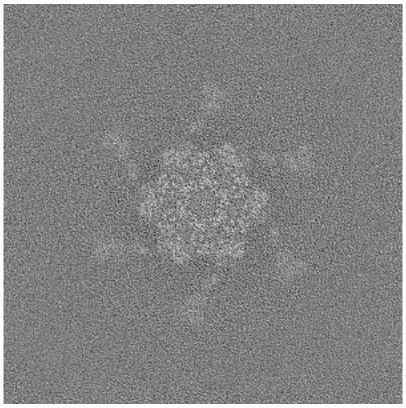
6.2.2 Raw map



X Index: 256



Y Index: 256

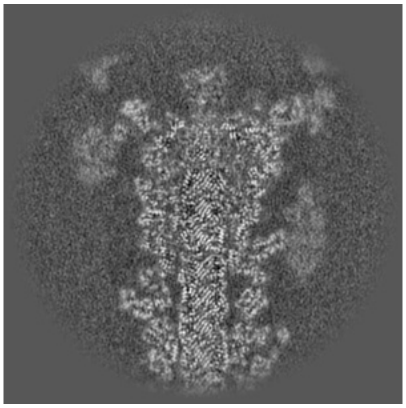


Z Index: 256

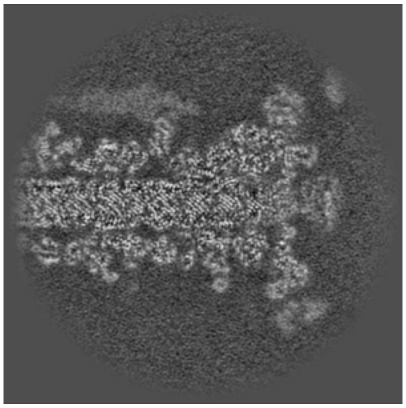
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices ⓘ

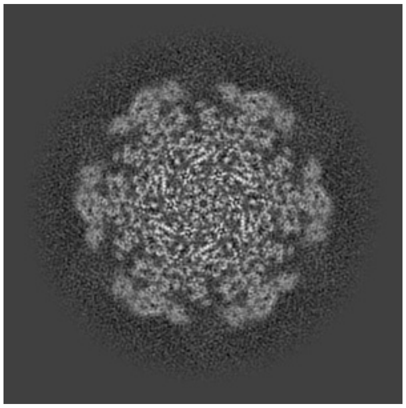
6.3.1 Primary map



X Index: 279

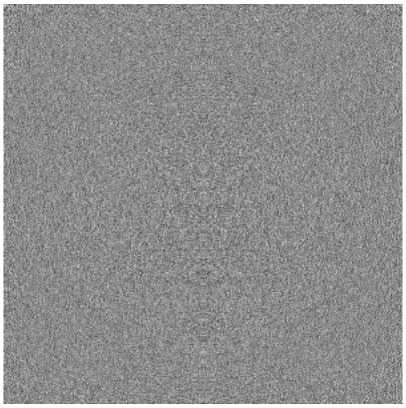


Y Index: 278

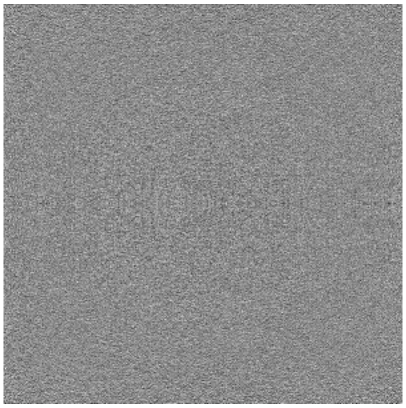


Z Index: 356

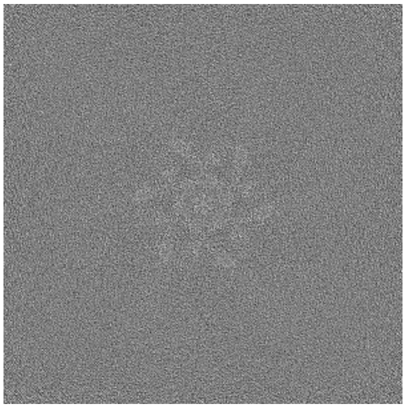
6.3.2 Raw map



X Index: 0



Y Index: 0

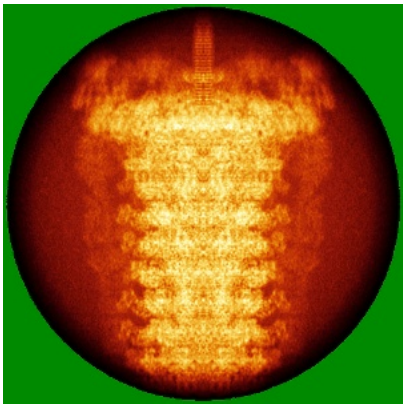


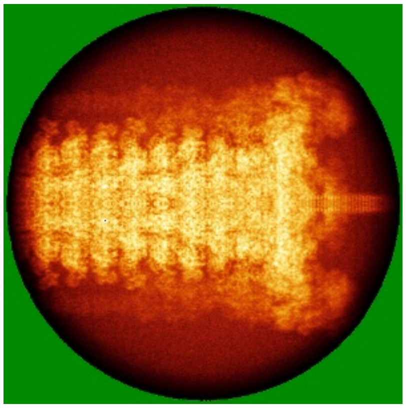
Z Index: 0

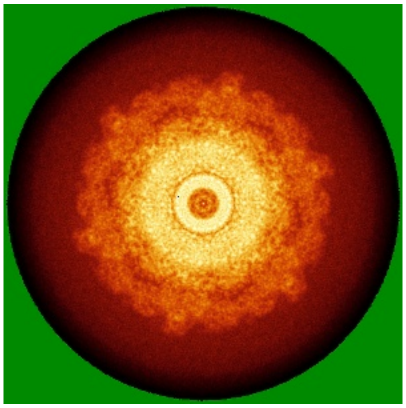
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color)

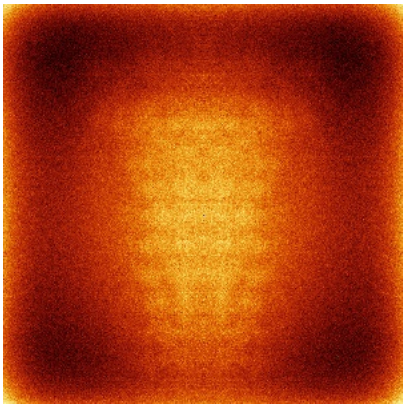
6.4.1 Primary map

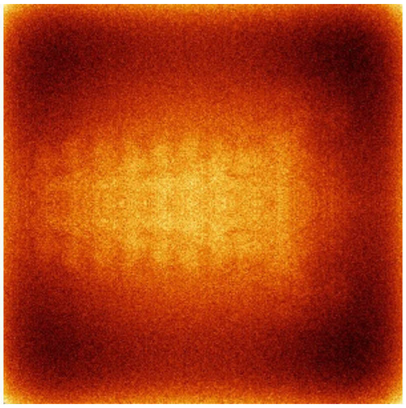

X

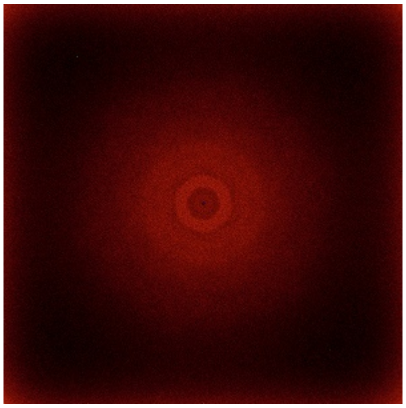

Y


Z

6.4.2 Raw map


X

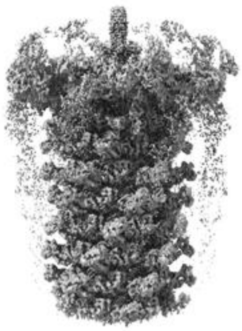

Y


Z

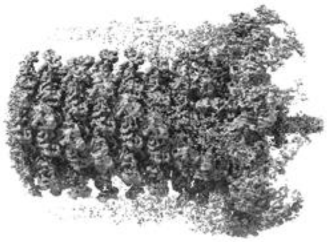
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views

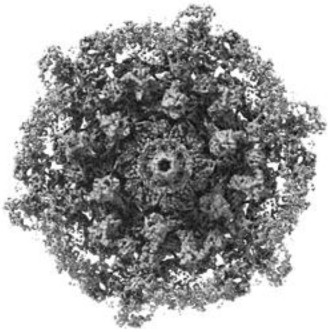
6.5.1 Primary map



X



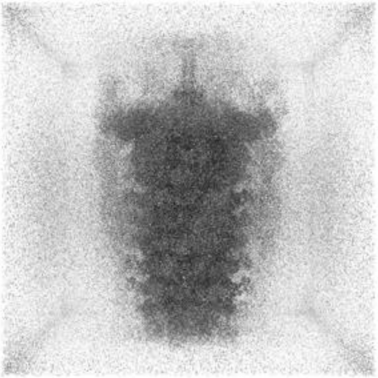
Y



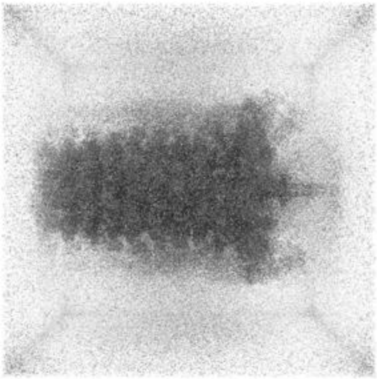
Z

The images above show the 3D surface view of the map at the recommended contour level 0.16. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

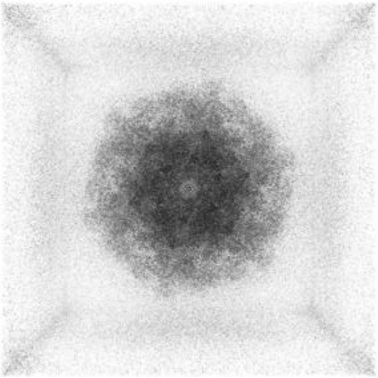
6.5.2 Raw map



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.

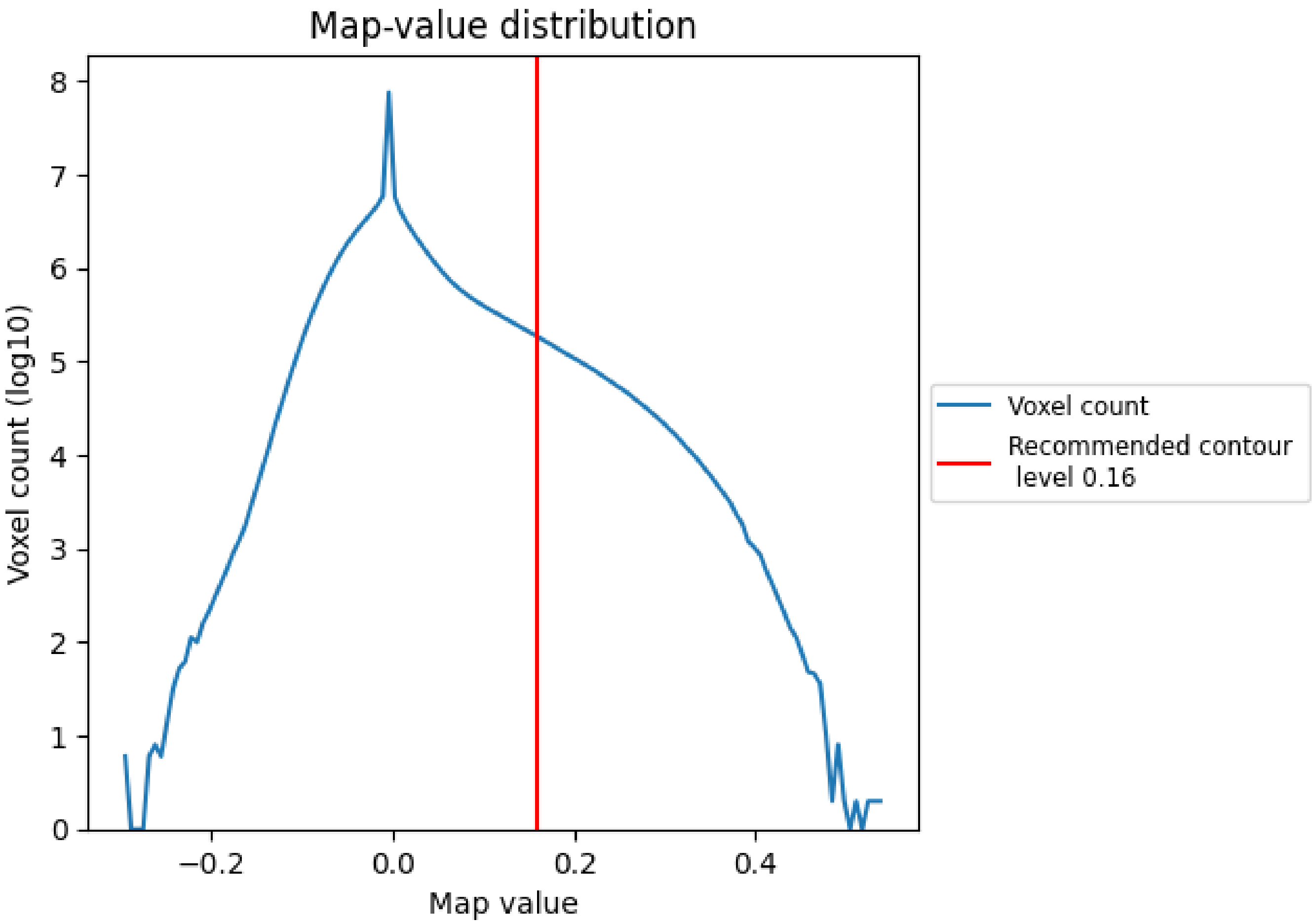
6.6 Mask visualisation

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

7 Map analysis ⓘ

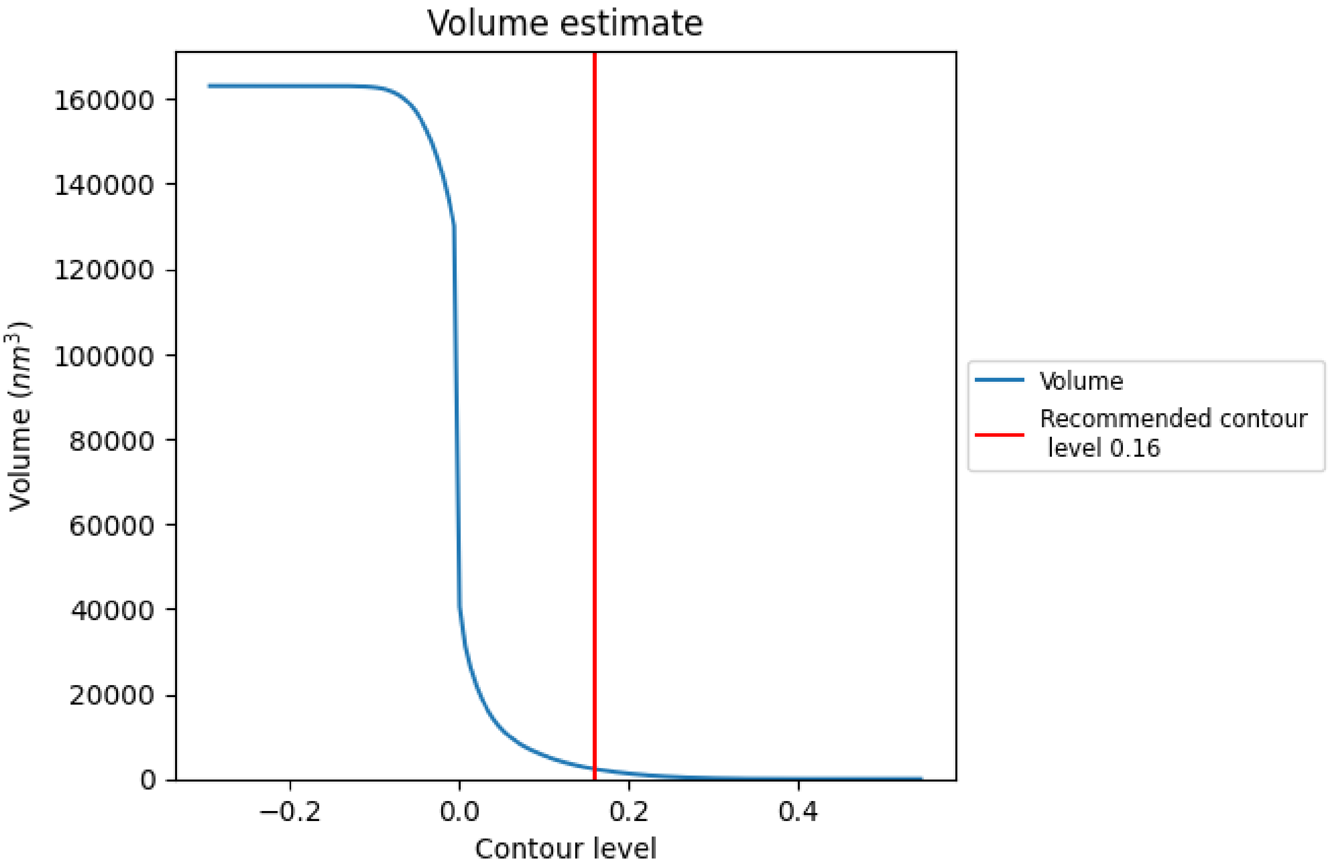
This section contains the results of statistical analysis of the map.

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.

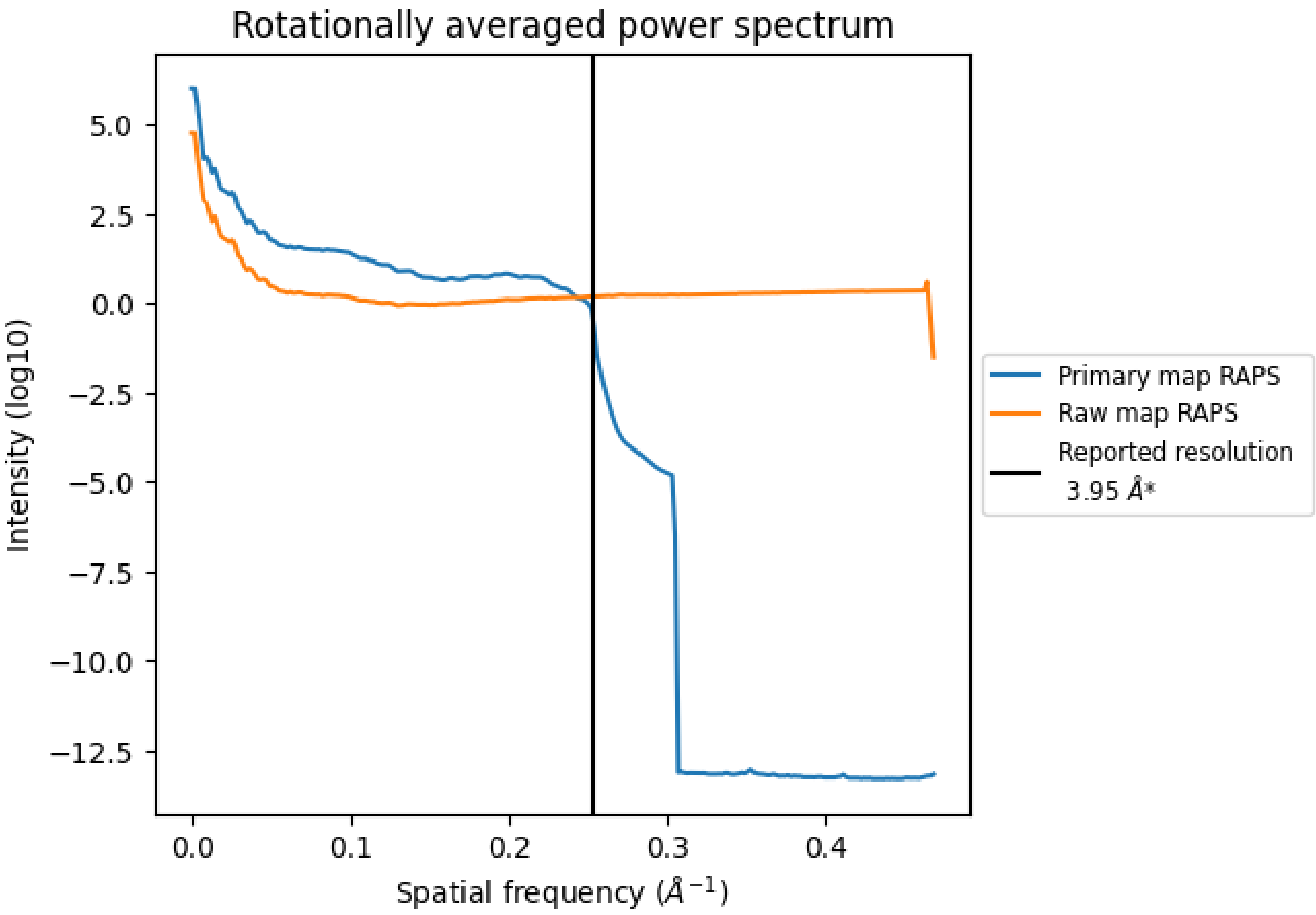
7.2 Volume estimate ⓘ



The volume at the recommended contour level is 2352 nm^3; this corresponds to an approximate mass of 2125 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

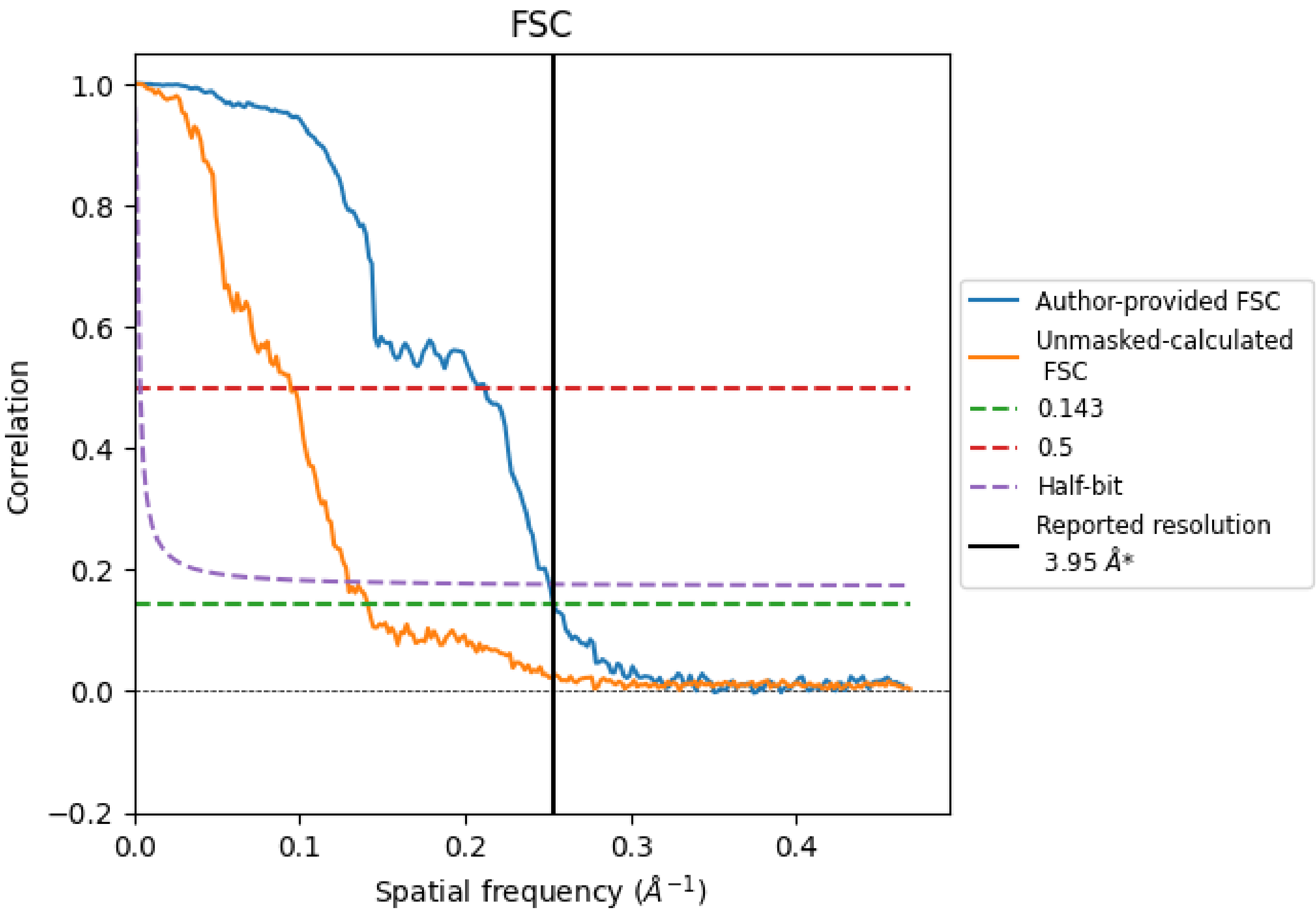


*Reported resolution corresponds to spatial frequency of 0.253 Å^{-1}

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 0.253 Å^{-1}

8.2 Resolution estimates ⓘ

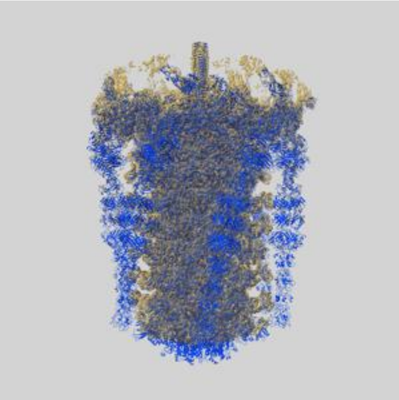
Resolution estimate (Å)	**Estimation criterion (FSC cut-off)**		
	0.143	0.5	Half-bit
Reported by author	3.95	-	-
Author-provided FSC curve	3.95	4.72	3.99
Unmasked-calculated*	7.09	10.56	7.74

*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 7.09 differs from the reported value 3.95 by more than 10 %

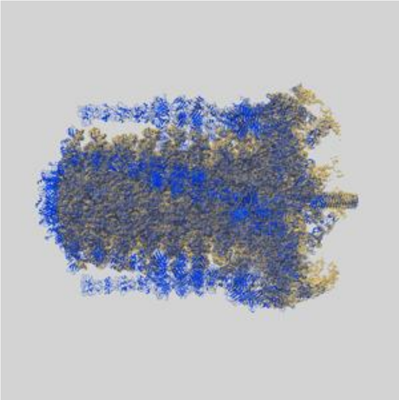
9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-50186 and PDB model 9F4A. Per-residue inclusion information can be found in section 3 on page 31.

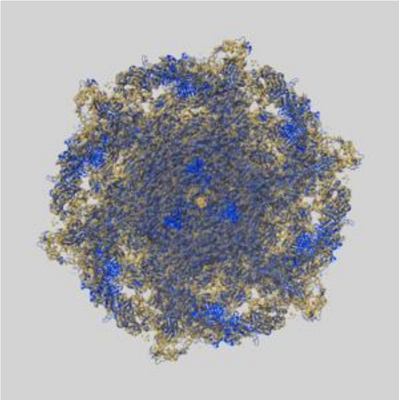
9.1 Map-model overlay ⓘ



X



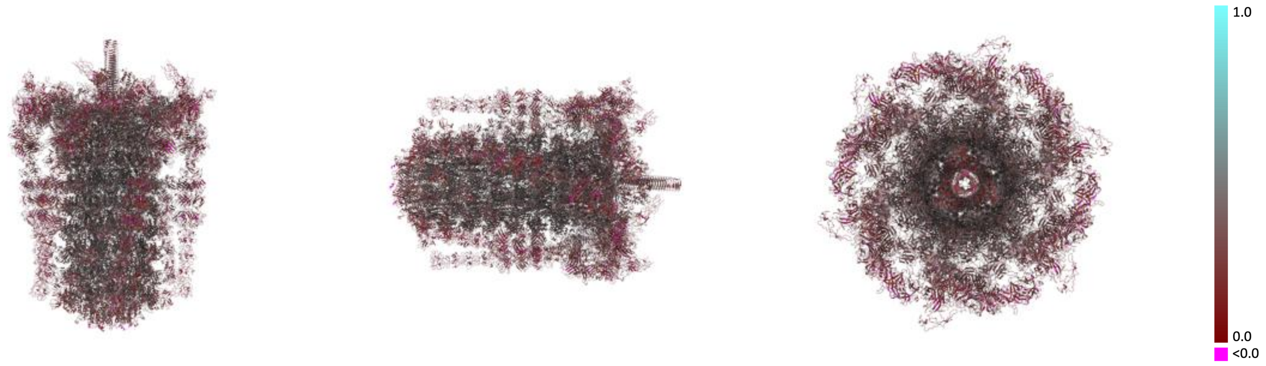
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.16 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.

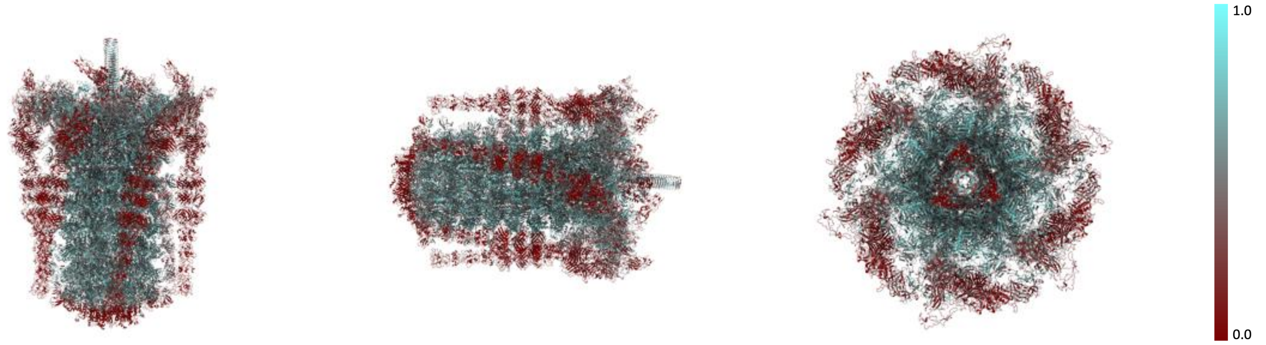
9.2 Q-score mapped to coordinate model ⓘ



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.

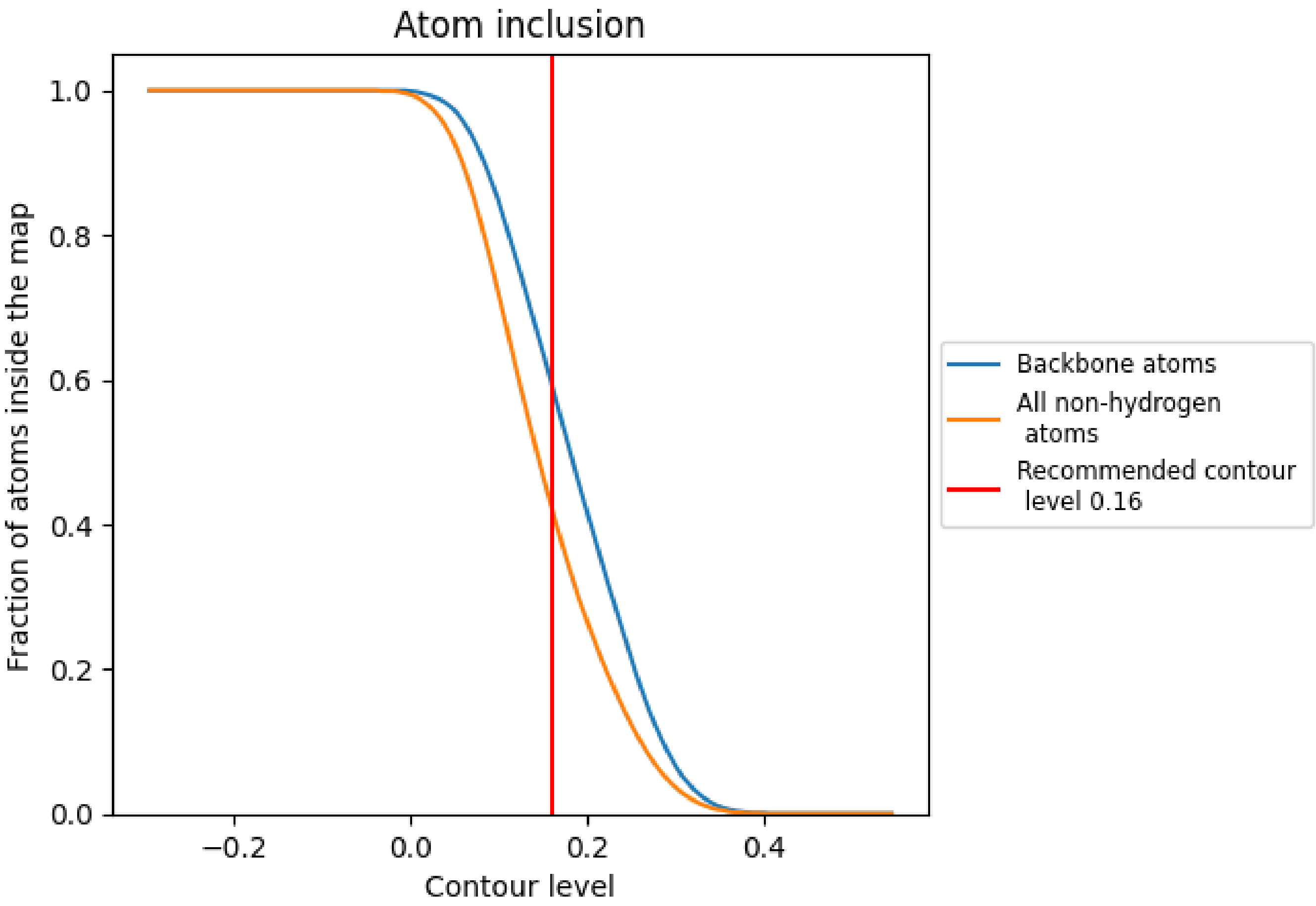
9.3 Atom inclusion mapped to coordinate model ⓘ



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 (0.16).

9.4 Atom inclusion ⓘ



At the recommended contour level, 59% of all backbone atoms, 42% 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 (0.16) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	■ 0.4220	■ 0.3380
A0	■ 0.4220	■ 0.2960
A1	■ 0.4250	■ 0.2950
A2	■ 0.4270	■ 0.2950
A3	■ 0.4200	■ 0.2950
A4	■ 0.4580	■ 0.3220
A5	■ 0.4560	■ 0.3200
A6	■ 0.4630	■ 0.3220
A7	■ 0.4600	■ 0.3210
A8	■ 0.4620	■ 0.3200
A9	■ 0.4670	■ 0.3200
AA	■ 0.4760	■ 0.3900
AB	■ 0.4730	■ 0.3910
AC	■ 0.4740	■ 0.3920
AD	■ 0.4740	■ 0.3910
AE	■ 0.4700	■ 0.3910
AF	■ 0.4740	■ 0.3970
AG	■ 0.5890	■ 0.4020
AH	■ 0.5870	■ 0.4020
AI	■ 0.5890	■ 0.4010
AJ	■ 0.5890	■ 0.3990
AK	■ 0.5890	■ 0.3960
AL	■ 0.5870	■ 0.4010
AM	■ 0.6240	■ 0.3900
AN	■ 0.6280	■ 0.3900
AO	■ 0.6250	■ 0.3890
AP	■ 0.6270	■ 0.3910
AQ	■ 0.6270	■ 0.3900
AR	■ 0.6290	■ 0.3890
AS	■ 0.5990	■ 0.3760
AT	■ 0.6050	■ 0.3790
AU	■ 0.6000	■ 0.3770
AV	■ 0.6070	■ 0.3780
AW	■ 0.6030	■ 0.3770
AX	■ 0.6030	■ 0.3790

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Chain	Atom inclusion	Q-score
AY	0.4240	0.2960
AZ	0.4280	0.2960
Aa	0.3770	0.2560
Ab	0.3810	0.2550
Ac	0.3800	0.2520
Ad	0.3720	0.2510
Ae	0.3730	0.2520
Af	0.3760	0.2530
BB	0.3640	0.3020
BC	0.3600	0.3010
BD	0.3600	0.3000
BE	0.4220	0.3580
BF	0.4260	0.3590
BG	0.4230	0.3600
BK	0.4090	0.3770
BL	0.4670	0.3840
BM	0.4090	0.3740
BN	0.4680	0.3860
BO	0.4070	0.3720
BP	0.4690	0.3860
BQ	0.5340	0.4280
BR	0.5290	0.4300
BS	0.5330	0.4300
BT	0.5310	0.4300
BU	0.5310	0.4310
BV	0.5330	0.4280
FA	0.1640	0.2180
FB	0.1580	0.2200
FC	0.1800	0.2390
FJ	0.1540	0.2200
FK	0.1680	0.2180
FL	0.1740	0.2340
FS	0.1540	0.2180
FT	0.1540	0.2190
FU	0.1760	0.2370
Fb	0.1680	0.2240
Fc	0.1640	0.2200
Fd	0.1850	0.2400
Fk	0.1600	0.2210
Fl	0.1680	0.2210
Fm	0.1700	0.2390
Ft	0.1500	0.2220

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Chain	Atom inclusion	Q-score
Fu	0.1540	0.2180
Fv	0.1780	0.2350
LA	0.0870	0.2620
LB	0.0650	0.2510
LC	0.0630	0.2530
LD	0.0890	0.2620
LE	0.0600	0.2500
LF	0.0610	0.2540
LG	0.0870	0.2610
LH	0.0630	0.2530
LI	0.0620	0.2530
LJ	0.0880	0.2630
LK	0.0660	0.2510
LL	0.0610	0.2520
LM	0.0840	0.2630
LN	0.0570	0.2520
LO	0.0600	0.2540
LP	0.0890	0.2620
LQ	0.0620	0.2520
LR	0.0610	0.2540
LS	0.0130	0.2710
LT	0.0120	0.2410
LU	0.0220	0.2630
LV	0.0130	0.2730
LW	0.0120	0.2410
LX	0.0230	0.2620
LY	0.0130	0.2710
LZ	0.0120	0.2390
La	0.0260	0.2600
Lb	0.0130	0.2710
Lc	0.0130	0.2380
Ld	0.0220	0.2620
Le	0.0150	0.2710
Lf	0.0130	0.2400
Lg	0.0230	0.2620
Lh	0.0130	0.2690
Li	0.0120	0.2400
Lj	0.0250	0.2610
SA	0.5870	0.4010
SB	0.5870	0.4010
SC	0.5900	0.4010
SD	0.5880	0.4010

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Chain	Atom inclusion	Q-score
SE	0.5860	0.4010
SF	0.5860	0.4010
SG	0.6340	0.3990
SH	0.6340	0.3990
SI	0.6300	0.3990
SJ	0.6320	0.3990
SK	0.6330	0.3980
SL	0.6320	0.3980
SM	0.6200	0.3850
SN	0.6190	0.3850
SO	0.6160	0.3850
SP	0.6190	0.3850
SQ	0.6190	0.3840
SR	0.6180	0.3850
SS	0.6100	0.3800
ST	0.6090	0.3790
SU	0.6110	0.3790
SV	0.6130	0.3800
SW	0.6110	0.3800
SX	0.6110	0.3800
SY	0.5940	0.3600
SZ	0.5930	0.3600
Sa	0.5950	0.3590
Sb	0.5970	0.3610
Sc	0.5910	0.3600
Sd	0.5950	0.3610
Se	0.5670	0.3440
Sf	0.5730	0.3430
Sg	0.5710	0.3440
Sh	0.5700	0.3430
Si	0.5730	0.3440
Sj	0.5700	0.3440
Sk	0.3440	0.3000
Sl	0.3440	0.3000
Sm	0.3430	0.3000
Sn	0.3450	0.3000
So	0.3420	0.3010
Sp	0.3440	0.3000
TM	0.6350	0.4510
TN	0.6400	0.4490
TO	0.6350	0.4480
TP	0.6410	0.4500

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Chain	Atom inclusion	Q-score
TQ	0.6420	0.4500
TR	0.6320	0.4490
TS	0.6450	0.4420
TT	0.6440	0.4430
TU	0.6520	0.4440
TV	0.6480	0.4440
TW	0.6470	0.4450
TX	0.6490	0.4430
TY	0.6500	0.4440
TZ	0.6470	0.4420
Ta	0.6500	0.4440
Tb	0.6560	0.4460
Tc	0.6500	0.4440
Td	0.6530	0.4440
Te	0.6340	0.4360
Tf	0.6310	0.4370
Tg	0.6290	0.4370
Th	0.6310	0.4360
Ti	0.6270	0.4350
Tj	0.6310	0.4350
Tk	0.6170	0.4040
Tl	0.6190	0.4030
Tm	0.6190	0.4050
Tn	0.6210	0.4050
To	0.6200	0.4030
Tp	0.6150	0.4060
Tq	0.1420	0.2930
Tr	0.1430	0.2900
Ts	0.1450	0.2900
Tt	0.1420	0.2900
Tu	0.1420	0.2920
Tv	0.1450	0.2920