Full wwPDB EM Validation Report (i)

Mar 25, 2025 – 03:24 PM EDT

PDB ID	:	9N4Z
EMDB ID	:	EMD-48916
Title	:	CCW Flagellar Switch Complex - FliF, FliG, FliM, and FliN forming 34-mer C-ring from Salmonella
Authors	:	Singh, P.K.; Iverson, T.M.
Deposited on	:	2025-02-03
Resolution	:	3.00 Å(reported)

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

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

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

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

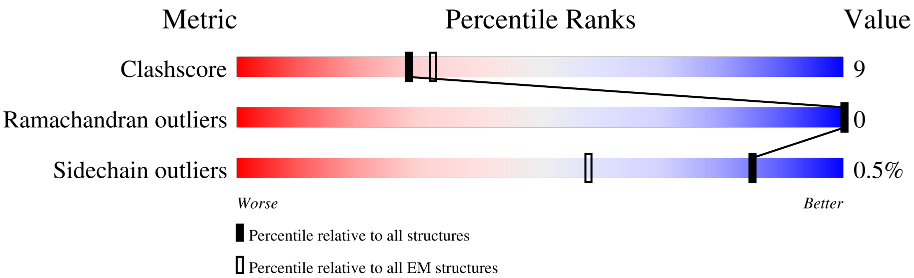
EMDB validation analysis	:	0.0.1.dev117
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.41.4

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	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	A	560	6% / 8% 92%
1	BC	560	7% / 8% 92%
1	BF	560	7% / 8% 92%
1	DB	560	7% / 8% 92%
1	DE	560	7% / 8% 92%
1	F	560	6% / 8% 92%
1	FA	560	6% / 8% 92%
1	FD	560	7% / 8% 92%

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Mol	Chain	Length	Quality of chain
1	FG	560	6% / 8% 92%
1	HC	560	7% / 8% 92%
1	HF	560	7% / 8% 92%
1	I	560	6% / 8% 92%
1	JB	560	6% / 8% 92%
1	JE	560	7% / 8% 92%
1	LA	560	6% / 8% 92%
1	LD	560	7% / 8% 92%
1	LG	560	6% / 8% 92%
1	NC	560	7% / 8% 92%
1	NF	560	6% / 8% 92%
1	PB	560	7% / 8% 92%
1	PE	560	7% / 8% 92%
1	RA	560	7% / 8% 92%
1	RD	560	7% / 8% 92%
1	RG	560	6% / 8% 92%
1	S	560	6% / 8% 92%
1	TC	560	7% / 8% 92%
1	TF	560	6% / 8% 92%
1	VB	560	7% / 8% 92%
1	VE	560	7% / 8% 92%
1	XA	560	7% / 8% 92%
1	XD	560	7% / 8% 92%
1	Z	560	6% / 8% 92%
1	ZC	560	7% / 8% 92%

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Mol	Chain	Length	Quality of chain
1	ZF	560	6% 8% 92%
2	AA	331	49% 85% 11% •
2	AD	331	49% 86% 10% •
2	AG	331	39% 86% 11% •
2	B	331	45% 86% 10% •
2	CC	331	51% 87% 10% •
2	CF	331	37% 87% 9% •
2	EB	331	50% 85% 11% •
2	EE	331	44% 87% 9% •
2	G	331	44% 87% 10% •
2	GA	331	50% 86% 10% •
2	GD	331	50% 86% 10% •
2	GG	331	40% 86% 11% •
2	IC	331	52% 87% 10% •
2	IF	331	36% 87% 9% •
2	J	331	46% 85% 11% •
2	KB	331	51% 86% 11% •
2	KE	331	42% 87% 10% •
2	MA	331	50% 87% 9% •
2	MD	331	47% 87% 10% •
2	MG	331	41% 87% 9% •
2	OC	331	51% 85% 11% •
2	OF	331	37% 86% 10% •
2	QB	331	51% 86% 10% •
2	QE	331	40% 86% 10% •

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Mol	Chain	Length	Quality of chain
2	SA	331	50% / 87% 9% •
2	SD	331	47% / 87% 9% •
2	SG	331	43% / 87% 10% •
2	T	331	48% / 85% 11% •
2	UC	331	50% / 86% 10% •
2	UF	331	37% / 86% 10% •
2	WB	331	51% / 87% 10% •
2	WE	331	38% / 86% 10% •
2	YA	331	50% / 85% 11% •
2	YD	331	45% / 87% 9% •
3	BA	334	25% / 75% 12% 13%
3	BD	334	27% / 75% 12% 13%
3	BG	334	• / 75% 12% 13%
3	C	334	19% / 76% 11% 13%
3	DC	334	29% / 75% 13% 13%
3	DF	334	6% / 75% 12% 13%
3	FB	334	29% / 75% 12% 13%
3	FE	334	15% / 75% 12% 13%
3	HA	334	26% / 76% 11% 13%
3	HD	334	25% / 75% 12% 13%
3	HG	334	6% / 75% 12% 13%
3	JC	334	29% / 75% 12% 13%
3	JF	334	6% / 75% 13% 13%
3	K	334	21% / 75% 12% 13%
3	LB	334	29% / 76% 11% 13%

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Mol	Chain	Length	Quality of chain
3	LE	334	13% / 74% 13% 13%
3	M	334	16% / 75% 12% 13%
3	NA	334	28% / 77% 10% 13%
3	ND	334	25% / 75% 12% 13%
3	NG	334	8% / 75% 12% 13%
3	PC	334	27% / 74% 13% 13%
3	PF	334	5% / 74% 13% 13%
3	RB	334	29% / 76% 11% 13%
3	RE	334	10% / 74% 13% 13%
3	TA	334	29% / 75% 12% 13%
3	TD	334	22% / 76% 11% 13%
3	TG	334	12% / 75% 13% 13%
3	V	334	22% / 75% 13% 13%
3	VC	334	27% / 75% 12% 13%
3	VF	334	• / 75% 12% 13%
3	XB	334	29% / 74% 13% 13%
3	XE	334	7% / 76% 11% 13%
3	ZA	334	28% / 76% 11% 13%
3	ZD	334	20% / 74% 13% 13%
4	AB	137	26% / 44% 19% 37%
4	AC	137	26% / 59% 14% 27%
4	AE	137	17% / 43% 20% 37%
4	AF	137	13% / 59% 14% 27%
4	BB	137	16% / 53% 7% 39%
4	BE	137	8% / 55% 6% 39%

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Mol	Chain	Length	Quality of chain
4	CA	137	31% / 44% 19% 37%
4	CB	137	22% / 59% 14% 27%
4	CD	137	23% / 44% 19% 37%
4	CE	137	19% / 59% 14% 27%
4	CG	137	18% / 45% 18% 37%
4	D	137	28% / 44% 19% 37%
4	DA	137	15% / 53% 7% 39%
4	DD	137	13% / 53% 7% 39%
4	DG	137	6% / 52% 9% 39%
4	E	137	12% / 53% 7% 39%
4	EA	137	20% / 59% 14% 27%
4	EC	137	25% / 43% 20% 37%
4	ED	137	26% / 58% 15% 27%
4	EF	137	15% / 45% 18% 37%
4	EG	137	13% / 59% 14% 27%
4	FC	137	13% / 53% 7% 39%
4	FF	137	5% / 52% 9% 39%
4	GB	137	26% / 44% 19% 37%
4	GC	137	24% / 59% 14% 27%
4	GE	137	17% / 45% 18% 37%
4	GF	137	12% / 59% 14% 27%
4	H	137	19% / 59% 14% 27%
4	HB	137	16% / 53% 7% 39%
4	HE	137	7% / 53% 7% 39%
4	IA	137	31% / 43% 20% 37%

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Mol	Chain	Length	Quality of chain
4	IB	137	23% / 59% 14% 27%
4	ID	137	19% / 45% 18% 37%
4	IE	137	17% / 60% 13% 27%
4	IG	137	21% / 43% 20% 37%
4	JA	137	15% / 53% 7% 39%
4	JD	137	12% / 53% 7% 39%
4	JG	137	5% / 52% 9% 39%
4	KA	137	22% / 59% 14% 27%
4	KC	137	24% / 45% 18% 37%
4	KD	137	25% / 59% 14% 27%
4	KF	137	14% / 43% 20% 37%
4	KG	137	15% / 59% 14% 27%
4	L	137	29% / 43% 20% 37%
4	LC	137	13% / 53% 7% 39%
4	LF	137	• / 52% 9% 39%
4	MB	137	27% / 43% 20% 37%
4	MC	137	27% / 59% 14% 27%
4	ME	137	17% / 43% 20% 37%
4	MF	137	13% / 61% 12% 27%
4	N	137	25% / 45% 18% 37%
4	NB	137	15% / 53% 7% 39%
4	NE	137	6% / 53% 7% 39%
4	O	137	12% / 53% 8% 39%
4	OA	137	31% / 44% 19% 37%
4	OB	137	24% / 59% 14% 27%

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Mol	Chain	Length	Quality of chain
4	OD	137	18% 43% 20% 37%
4	OE	137	16% 61% 12% 27%
4	OG	137	22% 45% 18% 37%
4	P	137	8% 53% 8% 39%
4	PA	137	16% 53% 7% 39%
4	PD	137	12% 53% 7% 39%
4	PG	137	6% 53% 8% 39%
4	Q	137	18% 59% 14% 27%
4	QA	137	20% 60% 13% 27%
4	QC	137	25% 43% 20% 37%
4	QD	137	23% 58% 15% 27%
4	QF	137	14% 44% 19% 37%
4	QG	137	17% 60% 13% 27%
4	R	137	20% 59% 14% 27%
4	RC	137	13% 53% 7% 39%
4	RF	137	• 52% 9% 39%
4	SB	137	26% 43% 20% 37%
4	SC	137	26% 58% 15% 27%
4	SE	137	15% 45% 18% 37%
4	SF	137	11% 59% 14% 27%
4	TB	137	13% 53% 7% 39%
4	TE	137	• 52% 9% 39%
4	UA	137	28% 43% 20% 37%
4	UB	137	26% 58% 15% 27%
4	UD	137	18% 45% 18% 37%

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Mol	Chain	Length	Quality of chain
4	UE	137	13% 59% 14% 27%
4	UG	137	23% 43% 20% 37%
4	VA	137	18% 53% 7% 39%
4	VD	137	11% 53% 7% 39%
4	VG	137	7% 52% 9% 39%
4	W	137	31% 44% 19% 37%
4	WA	137	21% 59% 14% 27%
4	WC	137	23% 45% 18% 37%
4	WD	137	20% 59% 14% 27%
4	WF	137	15% 44% 19% 37%
4	WG	137	18% 59% 14% 27%
4	X	137	12% 52% 9% 39%
4	XC	137	13% 52% 9% 39%
4	XF	137	5% 53% 7% 39%
4	Y	137	20% 59% 14% 27%
4	YB	137	25% 43% 20% 37%
4	YC	137	24% 59% 14% 27%
4	YE	137	14% 43% 20% 37%
4	YF	137	12% 59% 14% 27%
4	ZB	137	12% 53% 7% 39%
4	ZE	137	6% 53% 7% 39%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 218722 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Flagellar M-ring protein.

Mol	Chain	Residues	Atoms	AltConf	Trace
1	F	46	Total C N O 229 137 46 46	0	0
1	A	46	Total C N O 229 137 46 46	0	0
1	I	46	Total C N O 229 137 46 46	0	0
1	S	46	Total C N O 229 137 46 46	0	0
1	Z	46	Total C N O 229 137 46 46	0	0
1	FA	46	Total C N O 229 137 46 46	0	0
1	LA	46	Total C N O 229 137 46 46	0	0
1	RA	46	Total C N O 229 137 46 46	0	0
1	XA	46	Total C N O 229 137 46 46	0	0
1	DB	46	Total C N O 229 137 46 46	0	0
1	JB	46	Total C N O 229 137 46 46	0	0
1	PB	46	Total C N O 229 137 46 46	0	0
1	VB	46	Total C N O 229 137 46 46	0	0
1	BC	46	Total C N O 229 137 46 46	0	0
1	HC	46	Total C N O 229 137 46 46	0	0
1	NC	46	Total C N O 229 137 46 46	0	0
1	TC	46	Total C N O 229 137 46 46	0	0

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
1	ZC	46	229	137	46	46	0	0
1	FD	46	229	137	46	46	0	0
1	LD	46	229	137	46	46	0	0
1	RD	46	229	137	46	46	0	0
1	XD	46	229	137	46	46	0	0
1	DE	46	229	137	46	46	0	0
1	JE	46	229	137	46	46	0	0
1	PE	46	229	137	46	46	0	0
1	VE	46	229	137	46	46	0	0
1	BF	46	229	137	46	46	0	0
1	HF	46	229	137	46	46	0	0
1	NF	46	229	137	46	46	0	0
1	TF	46	229	137	46	46	0	0
1	ZF	46	229	137	46	46	0	0
1	FG	46	229	137	46	46	0	0
1	LG	46	229	137	46	46	0	0
1	RG	46	229	137	46	46	0	0

- Molecule 2 is a protein called Flagellar motor switch protein FliG.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	G	319	1893	1157	357	376	3	0	0
2	B	319	1893	1157	357	376	3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	J	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	T	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	AA	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	GA	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	MA	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	SA	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	YA	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	EB	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	KB	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	QB	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	WB	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	CC	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	IC	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	OC	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	UC	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	AD	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	GD	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	MD	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	SD	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	YD	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	EE	319	Total 1893	C 1157	N 357	O 376	S 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	KE	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	QE	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	WE	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	CF	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	IF	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	OF	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	UF	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	AG	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	GG	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	MG	319	Total 1893	C 1157	N 357	O 376	S 3	0	0
2	SG	319	Total 1893	C 1157	N 357	O 376	S 3	0	0

- Molecule 3 is a protein called Flagellar motor switch protein FliM.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	M	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	C	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	K	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	V	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	BA	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	HA	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	NA	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	TA	291	Total 2287	C 1456	N 407	O 420	S 4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	ZA	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	FB	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	LB	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	RB	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	XB	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	DC	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	JC	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	PC	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	VC	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	BD	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	HD	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	ND	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	TD	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	ZD	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	FE	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	LE	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	RE	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	XE	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	DF	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	JF	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	PF	291	Total 2287	C 1456	N 407	O 420	S 4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	VF	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	BG	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	HG	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	NG	291	Total 2287	C 1456	N 407	O 420	S 4	0	0
3	TG	291	Total 2287	C 1456	N 407	O 420	S 4	0	0

- Molecule 4 is a protein called Flagellar motor switch protein FliN.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	N	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	P	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	Q	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	D	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	E	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	H	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	L	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	O	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	R	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	W	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	X	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	Y	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	CA	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	DA	83	Total 629	C 399	N 107	O 120	S 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	EA	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	IA	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	JA	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	KA	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	OA	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	PA	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	QA	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	UA	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	VA	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	WA	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	AB	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	BB	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	CB	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	GB	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	HB	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	IB	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	MB	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	NB	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	OB	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	SB	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	TB	83	Total 629	C 399	N 107	O 120	S 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	UB	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	YB	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	ZB	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	AC	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	EC	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	FC	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	GC	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	KC	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	LC	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	MC	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	QC	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	RC	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	SC	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	WC	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	XC	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	YC	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	CD	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	DD	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	ED	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	ID	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	JD	83	Total 629	C 399	N 107	O 120	S 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	KD	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	OD	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	PD	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	QD	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	UD	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	VD	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	WD	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	AE	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	BE	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	CE	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	GE	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	HE	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	IE	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	ME	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	NE	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	OE	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	SE	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	TE	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	UE	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	YE	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	ZE	83	Total 629	C 399	N 107	O 120	S 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	AF	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	EF	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	FF	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	GF	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	KF	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	LF	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	MF	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	QF	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	RF	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	SF	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	WF	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	XF	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	YF	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	CG	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	DG	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	EG	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	IG	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	JG	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	KG	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	OG	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	PG	83	Total 629	C 399	N 107	O 120	S 3	0	0

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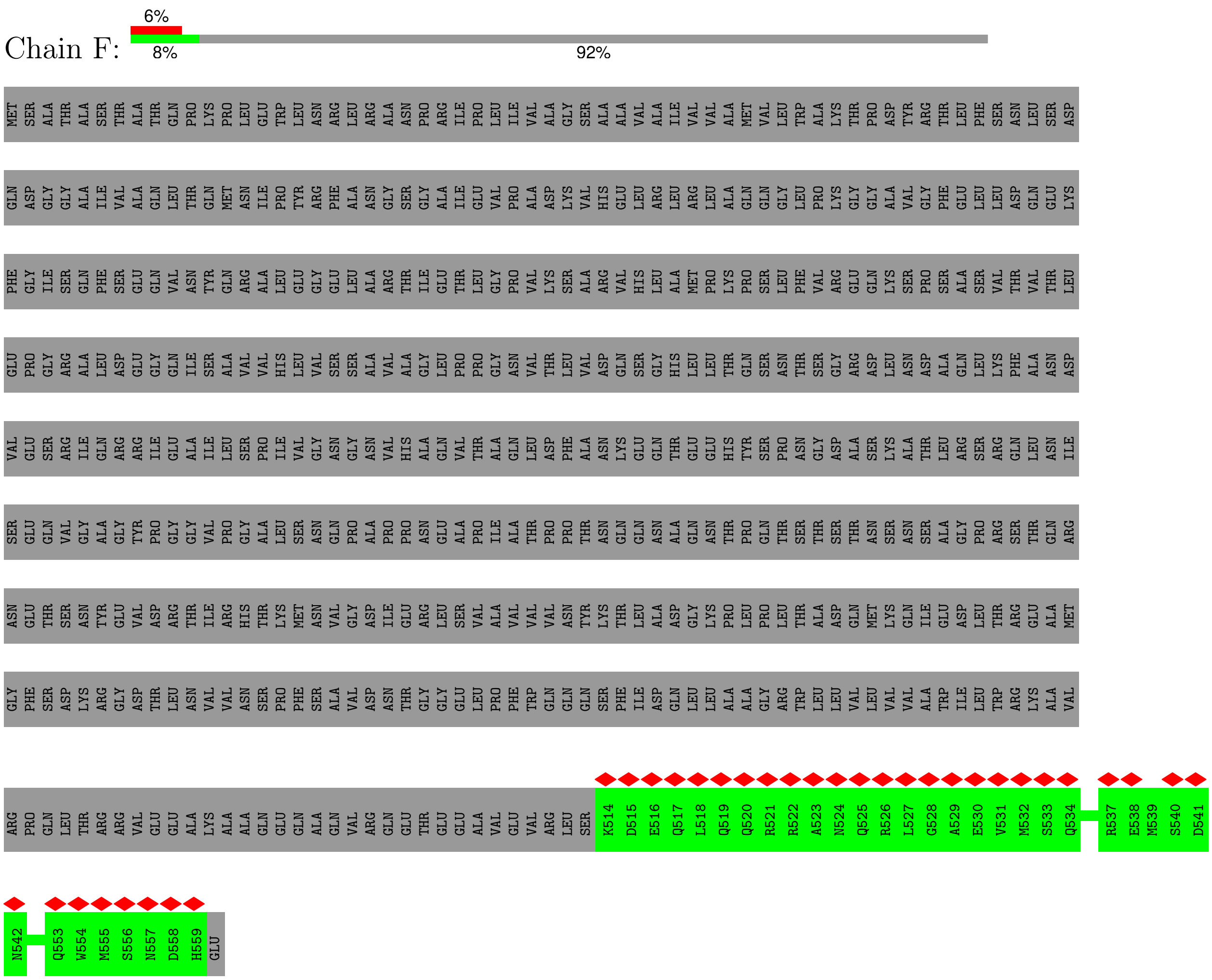
Mol	Chain	Residues	Atoms					AltConf	Trace
4	QG	100	Total 746	C 468	N 130	O 144	S 4	0	0
4	UG	86	Total 649	C 412	N 111	O 123	S 3	0	0
4	VG	83	Total 629	C 399	N 107	O 120	S 3	0	0
4	WG	100	Total 746	C 468	N 130	O 144	S 4	0	0

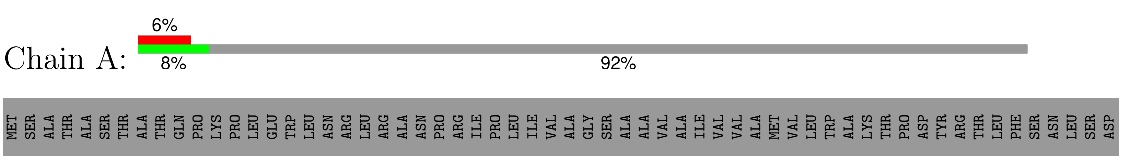
3 Residue-property plots

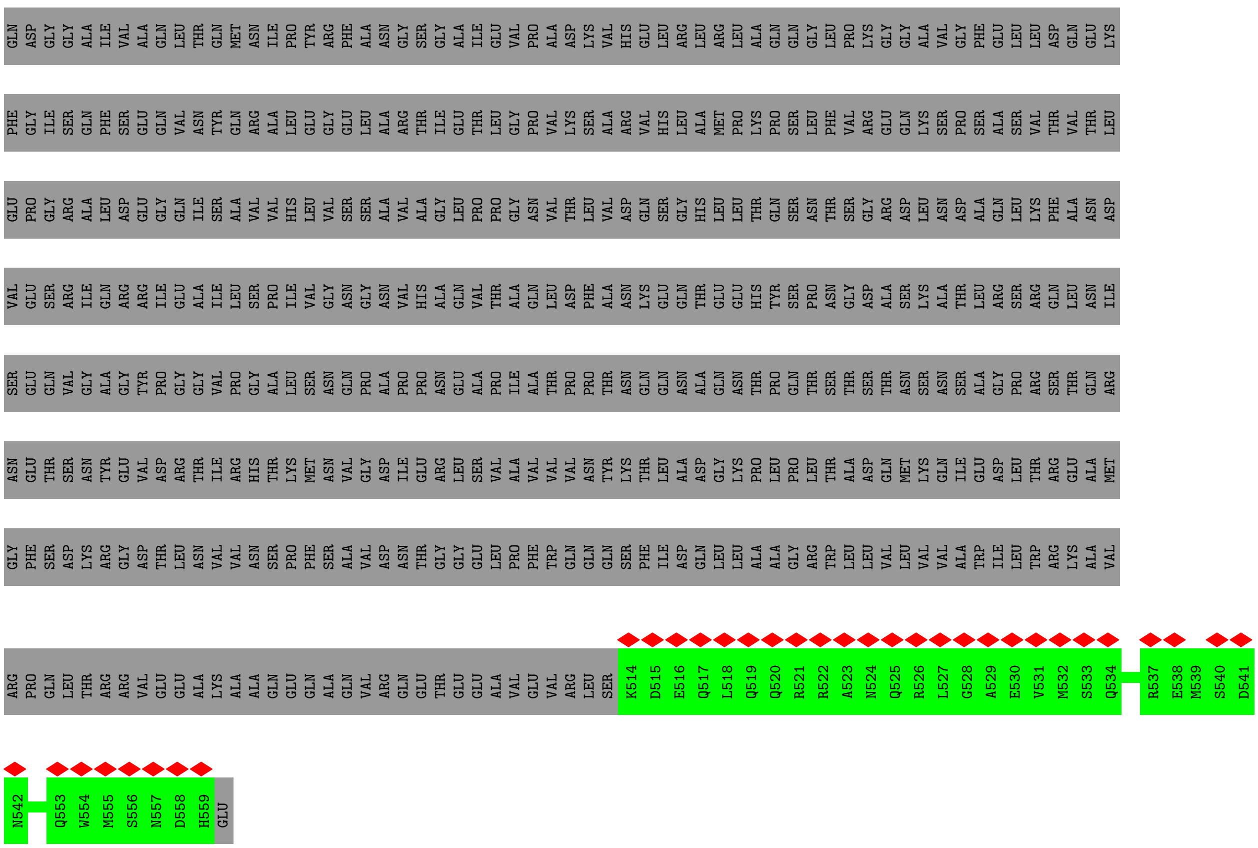
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

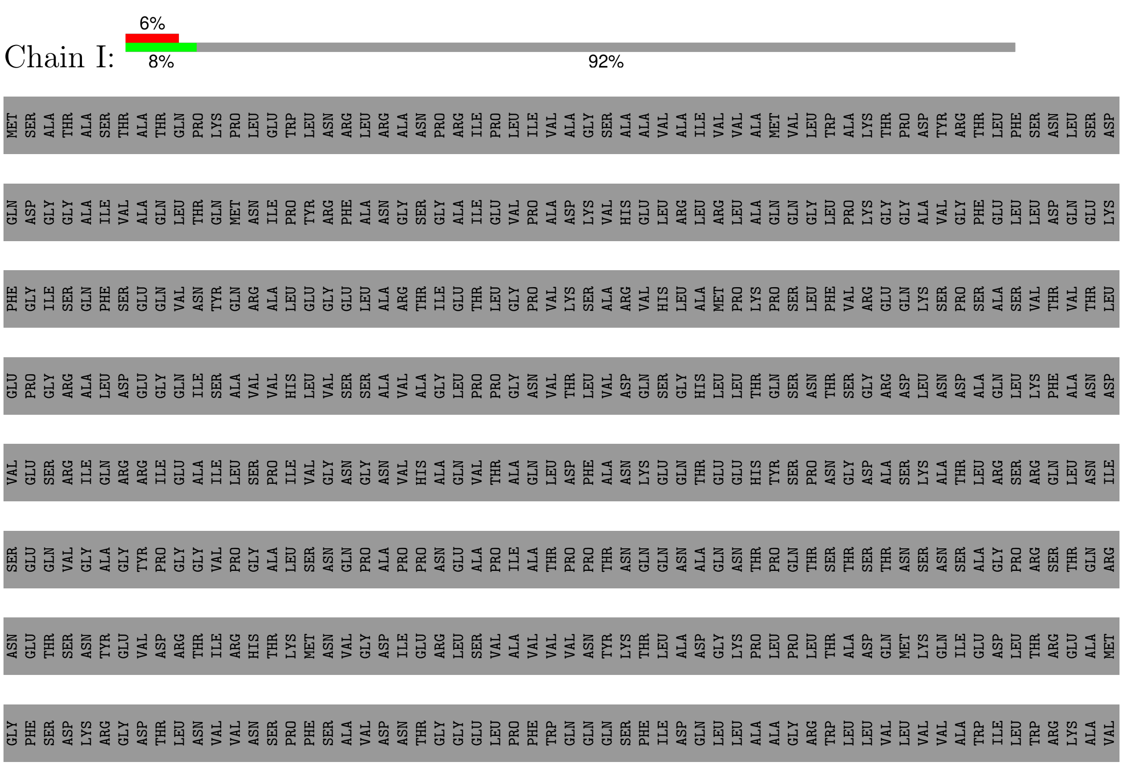


- Molecule 1: Flagellar M-ring protein





• Molecule 1: Flagellar M-ring protein



ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 S540 D541 N542 Q553

W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain S: 6% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 S540 D541 N542

Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain Z: 6% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain FA:

6%

8% 92%

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

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

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

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

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

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

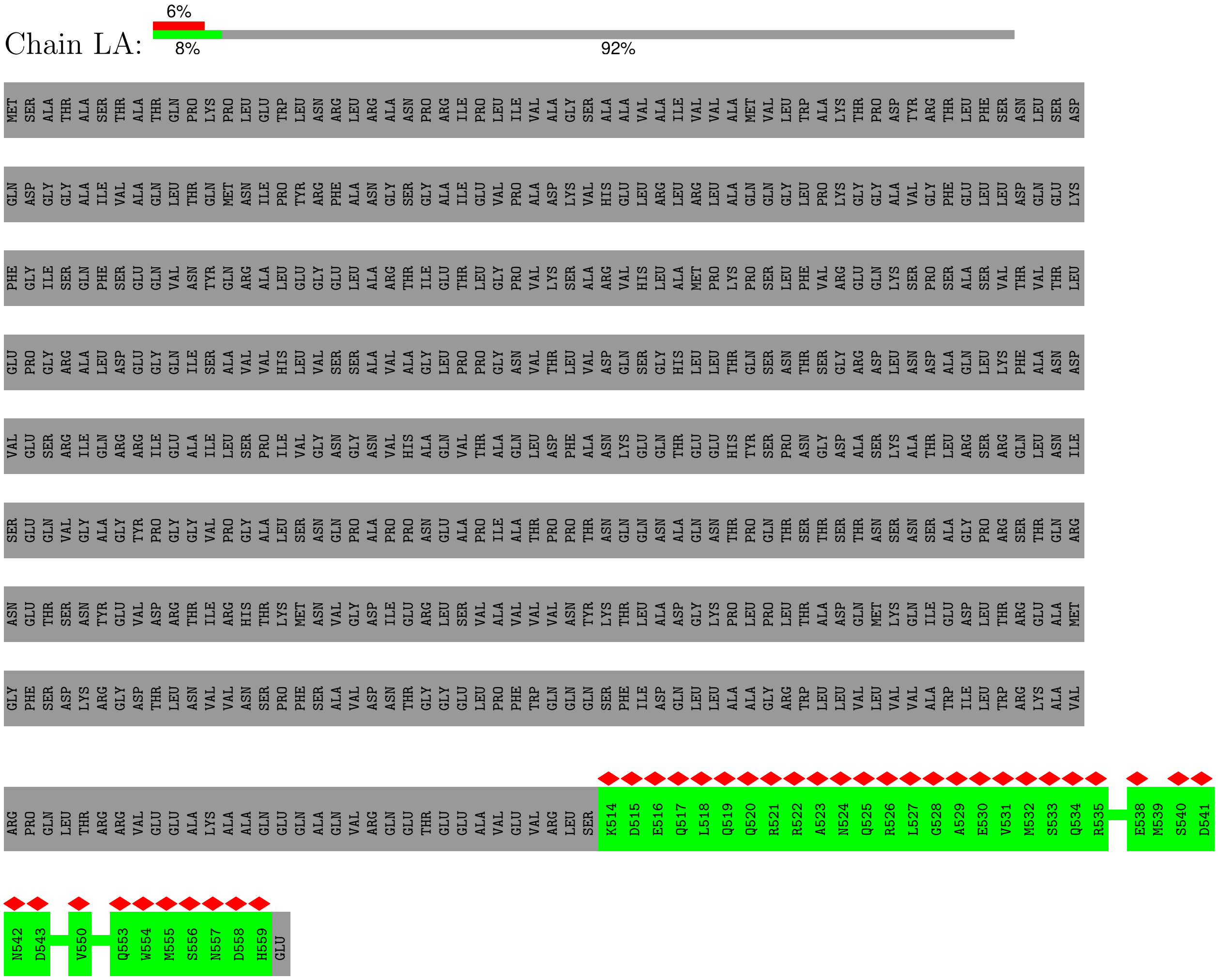
ASN GLU THR SER ASN TYR GLU VAL ASP ARG THR ILE ARG HIS THR LYS MET ASN VAL GLY ASP ILE GLU ARG LEU SER VAL ALA VAL VAL VAL ASN TYR LYS THR LEU ALA ASP GLY LYS PRO LEU PRO LEU THR ALA ASP GLN MET LYS GLN ILE GLU ASP LEU THR ARG GLU ALA MET

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

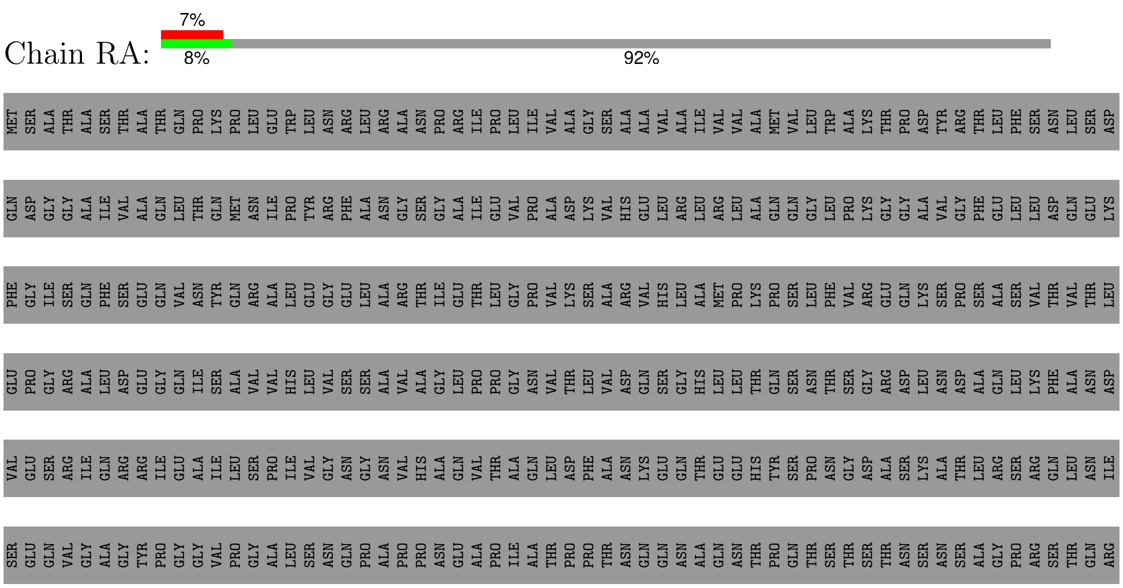
ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 V550 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein



• Molecule 1: Flagellar M-ring protein



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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain XA: 7% 8% 92%

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

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

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

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

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

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

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

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

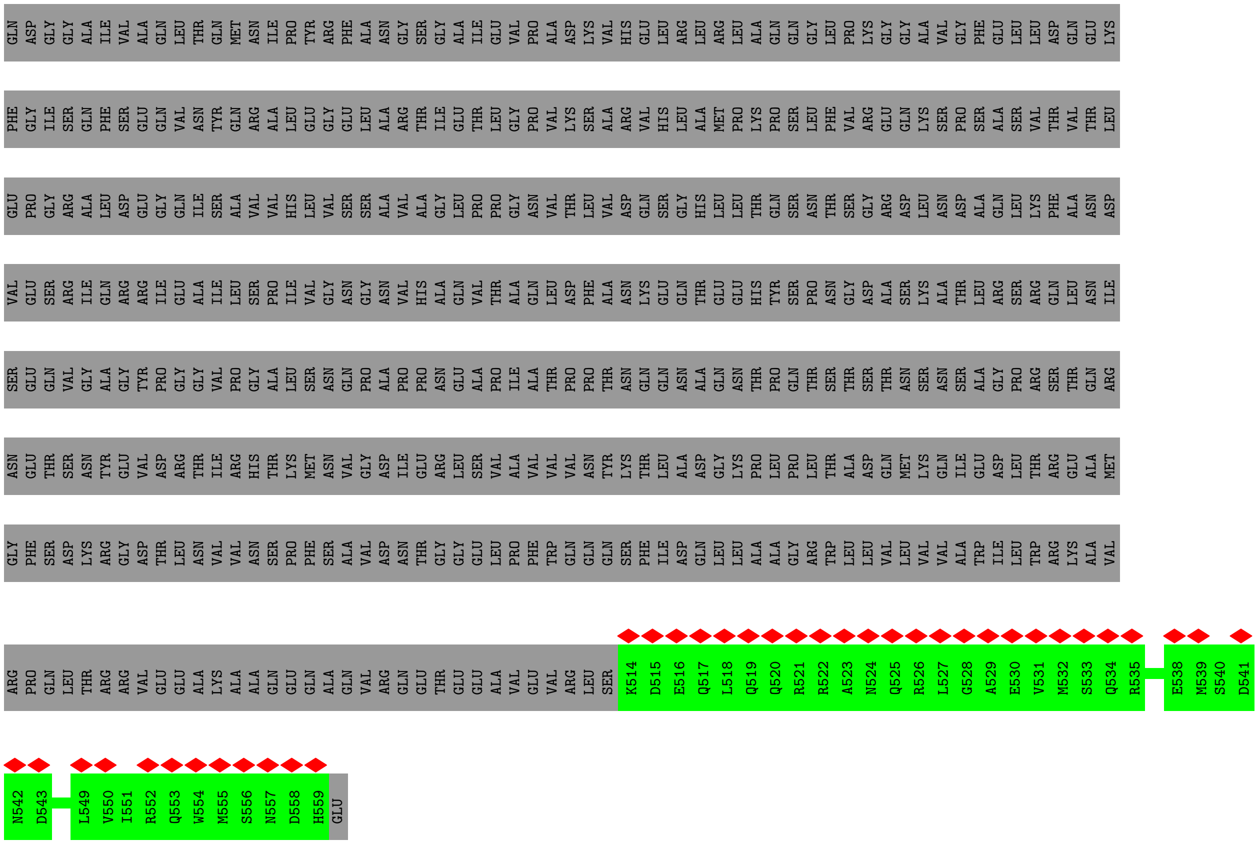
ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

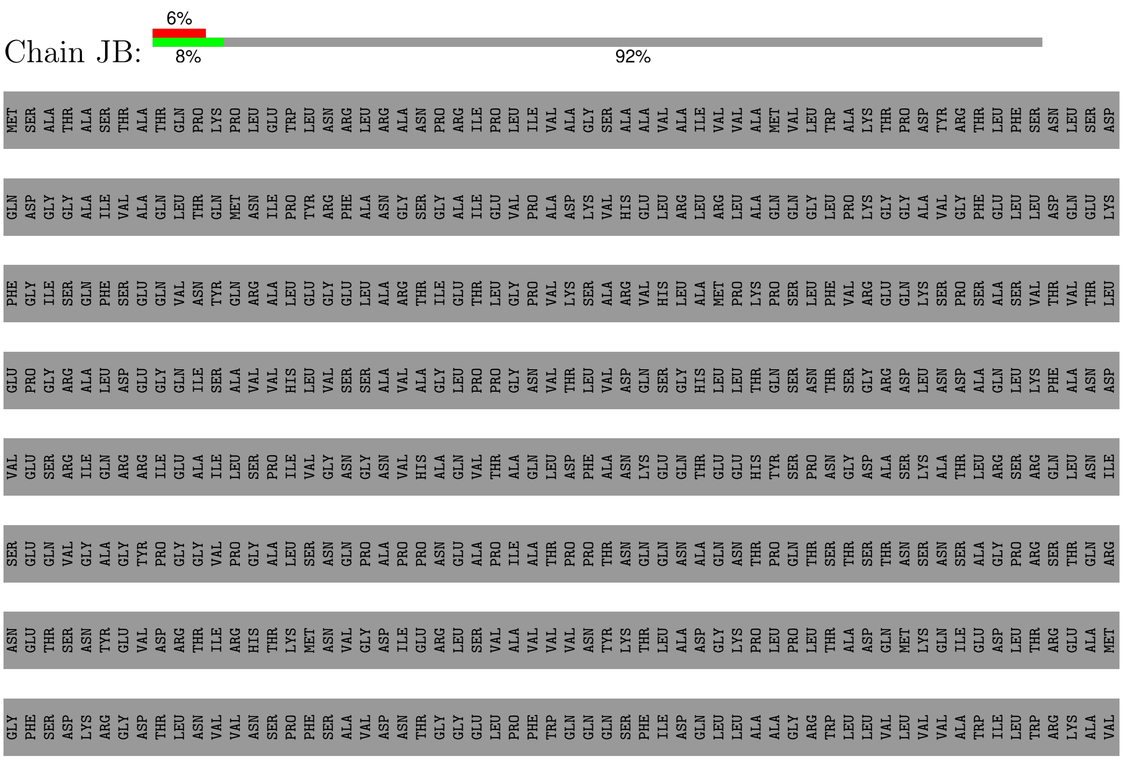
Chain DB: 7% 8% 92%

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



• Molecule 1: Flagellar M-ring protein

Chain JB:



ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain PB: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain VB: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain BC: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain HC: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain NC: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain TC: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain ZC: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain FD: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain LD: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain RD: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain XD: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 I536 R537 E538 M539 S540

D541 N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain DE: 7% 8% 92%

MET SER ALA THR ALA SER THR ALA THR GLN PRO LYS PRO LEU GLU TRP LEU ASN ARG LEU ARG ALA ASN PRO ARG ILE PRO LEU ILE VAL ALA GLY SER ALA ALA VAL ALA ILE VAL VAL ALA MET VAL LEU TRP ALA LYS THR PRO ASP TYR ARG THR LEU PHE SER ASN LEU SER ASP
GLN ASP GLY GLY ALA ILE VAL ALA GLN LEU THR GLN MET ASN ILE PRO TYR ARG PHE ALA ASN GLY SER GLY ALA ILE GLU VAL PRO ALA ASP LYS VAL HIS GLU LEU ARG LEU ARG LEU ALA GLN GLN GLY LEU PRO LYS GLY GLY ALA VAL GLY PHE GLU LEU LEU ASP GLN GLU LYS
PHE GLY ILE SER GLN PHE SER GLU GLN VAL ASN TYR GLN ARG ALA LEU GLU GLY GLU LEU ALA ARG THR ILE GLU THR LEU GLY PRO VAL LYS SER ALA ARG VAL HIS LEU ALA MET PRO LYS PRO SER LEU PHE VAL ARG GLU GLN LYS SER PRO SER ALA SER VAL THR VAL THR LEU
GLU PRO GLY ARG ALA LEU ASP GLU GLY GLN ILE SER ALA VAL VAL HIS LEU VAL SER SER ALA VAL ALA GLY LEU PRO PRO GLY ASN VAL THR LEU VAL ASP GLN SER GLY HIS LEU LEU THR GLN SER ASN THR SER GLY ARG ASP LEU ASN ASP ALA GLN LEU LYS PHE ALA ASN ASP
VAL GLU SER ARG ILE GLN ARG ARG ILE GLU ALA ILE LEU SER PRO ILE VAL GLY ASN GLY ASN VAL HIS ALA GLN VAL THR ALA GLN LEU ASP PHE ALA ASN LYS GLU GLN THR GLU GLU HIS TYR SER PRO ASN GLY ASP ALA SER LYS ALA THR LEU ARG SER ARG GLN LEU ASN ILE
SER GLU GLN VAL GLY ALA GLY TYR PRO GLY GLY VAL PRO GLY ALA LEU SER ASN GLN PRO ALA PRO PRO ASN GLU ALA PRO ILE ALA THR PRO PRO THR ASN GLN GLN ASN ALA GLN ASN THR PRO GLN THR SER THR SER THR ASN SER ASN SER ALA GLY PRO ARG SER THR GLN ARG
ASN GLU THR SER ASN TYR GLU VAL ASP ARG THR ILE ARG HIS THR LYS MET ASN VAL GLY ASP ILE GLU ARG LEU SER VAL ALA VAL VAL VAL ASN TYR LYS THR LEU ALA ASP GLY LYS PRO LEU PRO LEU THR ALA ASP GLN MET LYS GLN ILE GLU ASP LEU THR ARG GLU ALA MET
GLY PHE SER ASP LYS ARG GLY ASP THR LEU ASN VAL VAL ASN SER PRO PHE SER ALA VAL ASP ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL
ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 Q534 R535 I536 R537 E538 M539 S540 D541
N542 D543 P544 R545 V546 L549 V550 I551 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain JE: 7% 8% 92%

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 Q534 R535 I536 R537 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain PE: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 Q534 R535 I536 R537 E538 M539 S540 D541

N542 D543 P544 R545 V546 L549 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain VE: 7% 8% 92%

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

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

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

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

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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 I536 R537 E538 M539 S540

D541 N542 D543 P544 R545 V546 L549 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

• Molecule 1: Flagellar M-ring protein

Chain BF: 7% 8% 92%

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

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

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

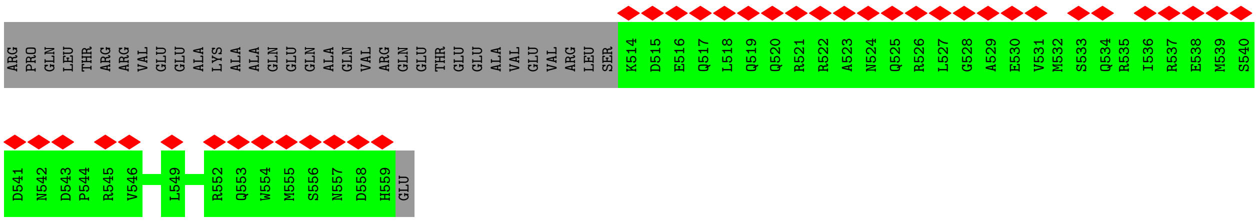
GLU PRO GLY ARG ALA LEU ASP GLU GLY GLN ILE SER ALA VAL VAL HIS LEU VAL SER SER ALA VAL ALA GLY LEU PRO PRO GLY ASN VAL THR LEU VAL ASP GLN SER GLY HIS LEU LEU THR GLN SER ASN THR SER GLY ARG ASP LEU ASN ASP ALA GLN LEU LYS PHE ALA ASN ASP

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

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

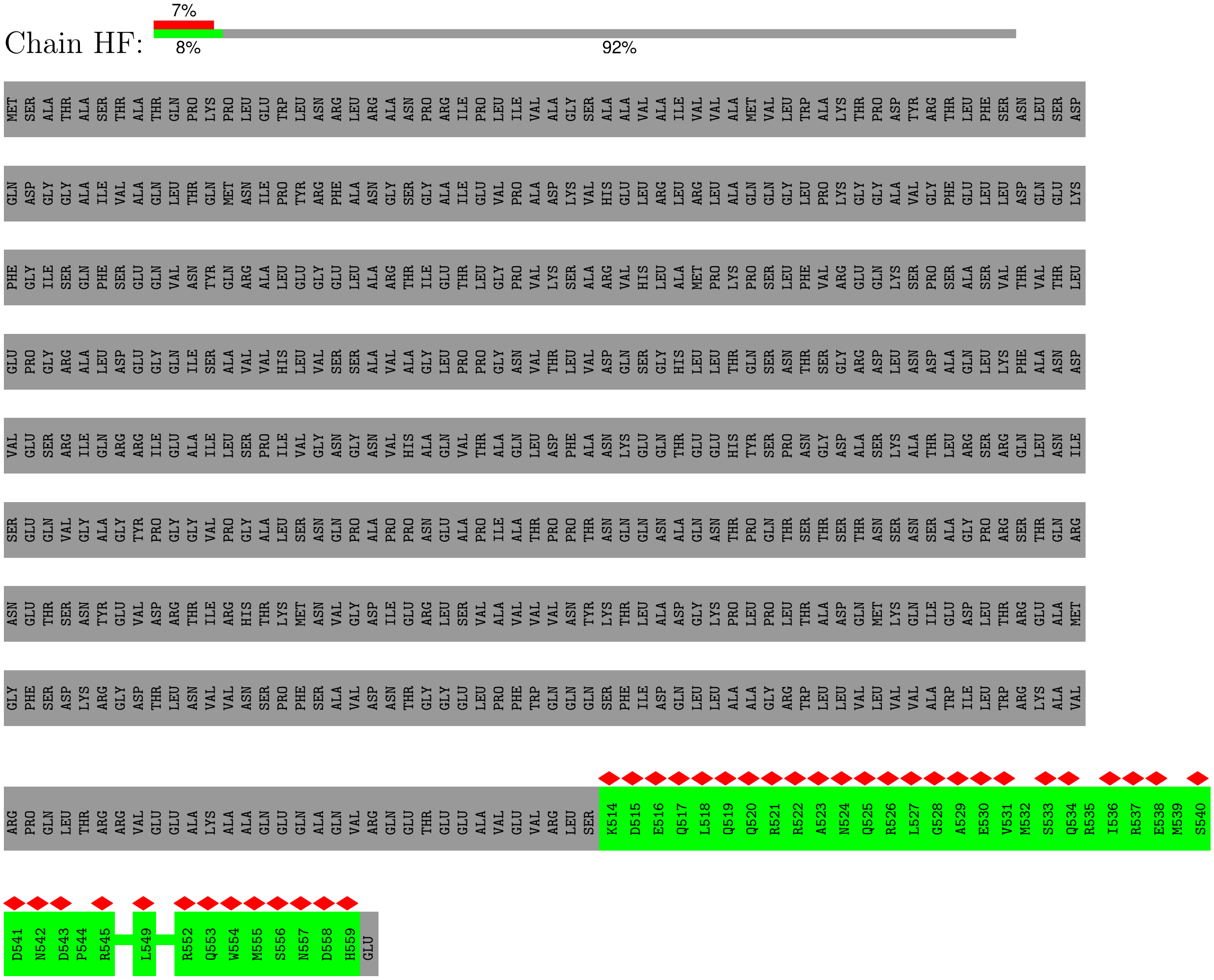
ASN GLU THR SER ASN TYR GLU VAL ASP ARG THR ILE ARG HIS THR LYS MET ASN VAL GLY ASP ILE GLU ARG LEU SER VAL ALA VAL VAL VAL ASN TYR LYS THR LEU ALA ASP GLY LYS PRO LEU PRO LEU THR ALA ASP GLN MET LYS GLN ILE GLU ASP LEU THR ARG GLU ALA MET

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



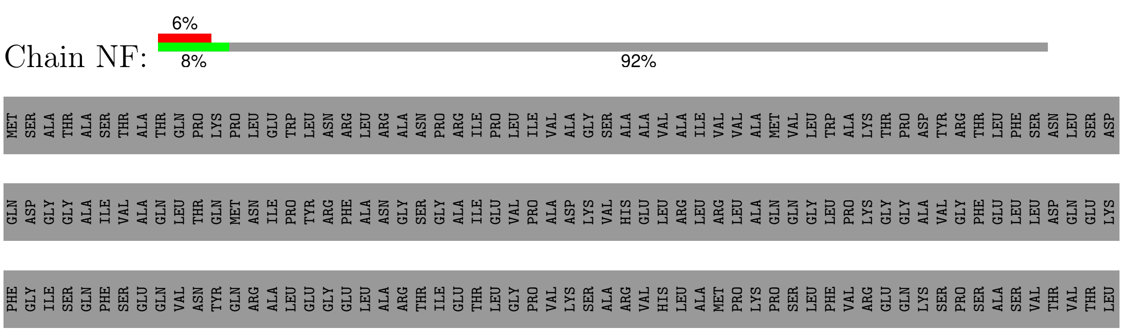
- Molecule 1: Flagellar M-ring protein

Chain HF:



- Molecule 1: Flagellar M-ring protein

Chain NF:



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

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

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

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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 I536 R537 E538 M539 S540

D541 N542 D543 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain TF: 6% 8% 92%

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

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

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

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

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

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

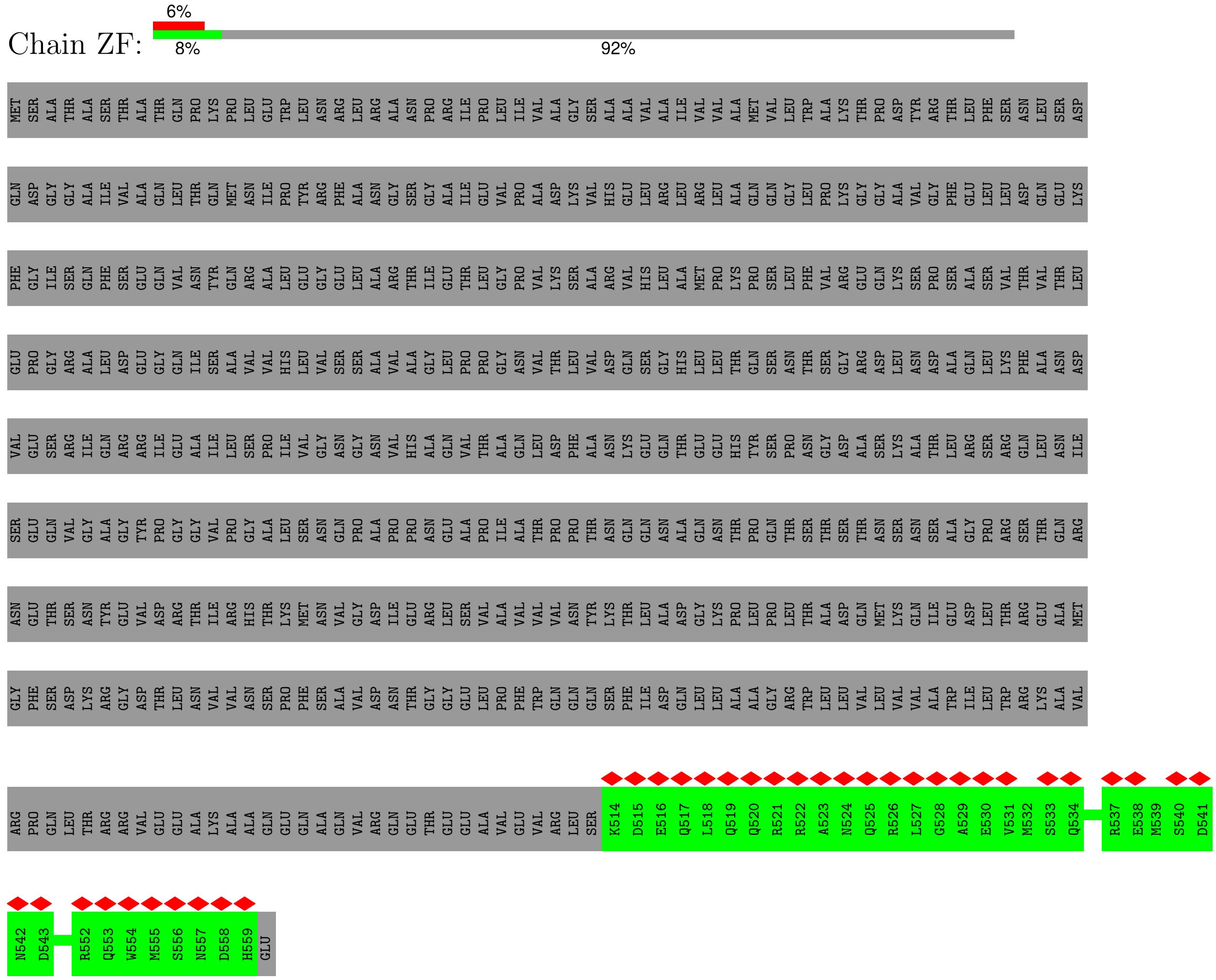
ASN GLU THR SER ASN TYR GLU VAL ASP ARG THR ILE ARG HIS THR LYS MET ASN VAL GLY ASP ILE GLU ARG LEU SER VAL ALA VAL VAL VAL ASN TYR LYS THR LEU ALA ASP GLY LYS PRO LEU PRO LEU THR ALA ASP GLN MET LYS GLN ILE GLU ASP LEU THR ARG GLU ALA MET

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

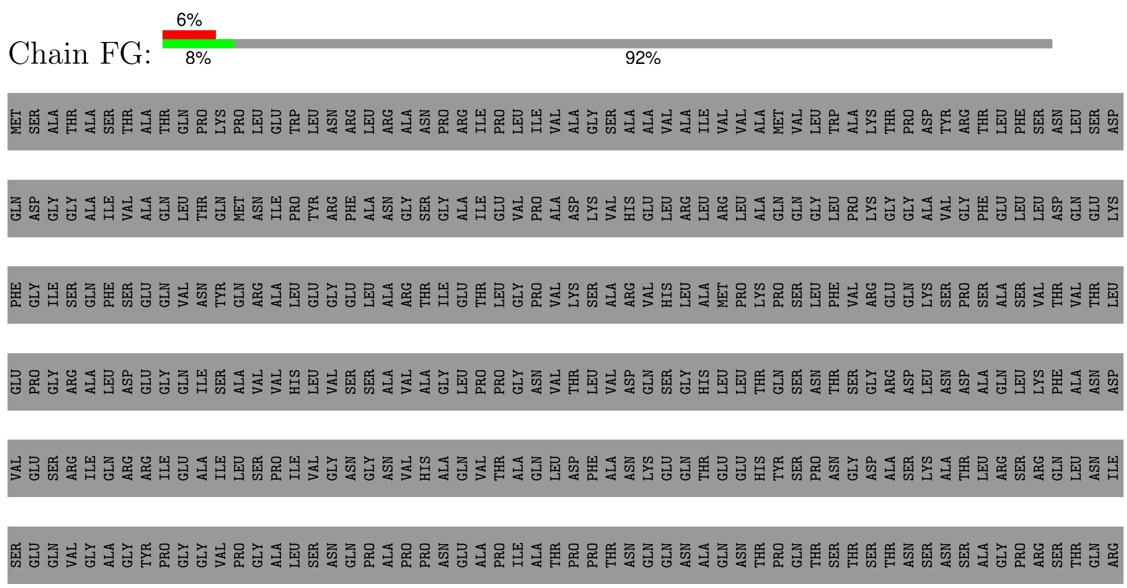
ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R535 I536 R537 E538 M539 S540

D541 N542 D543 R552 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein



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

ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R537 E538 M539 S540 D541

N542 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

Chain LG: 6% 8% 92%

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

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

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

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

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

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

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

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

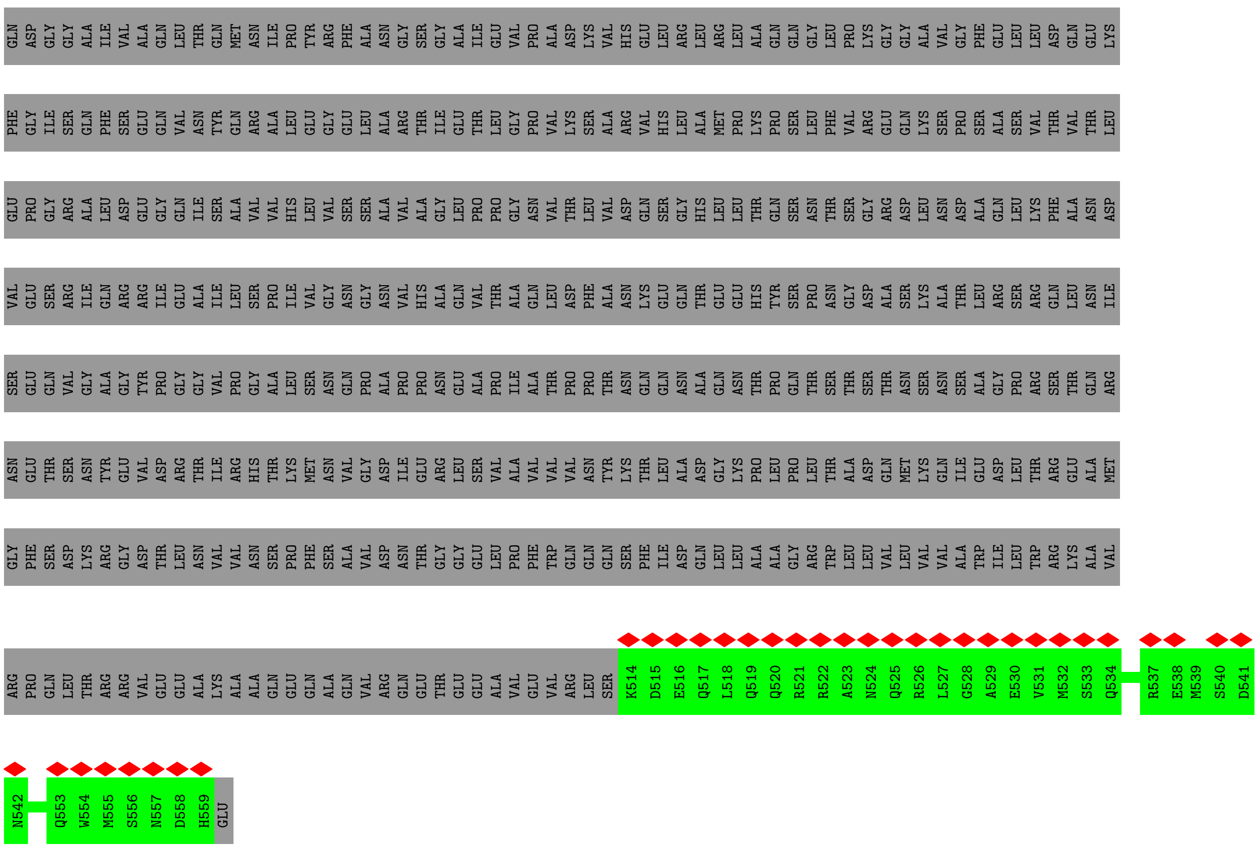
ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER K514 D515 E516 Q517 L518 Q519 Q520 R521 R522 A523 N524 Q525 R526 L527 G528 A529 E530 V531 M532 S533 Q534 R537 E538 M539 S540 D541

N542 Q553 W554 M555 S556 N557 D558 H559 GLU

- Molecule 1: Flagellar M-ring protein

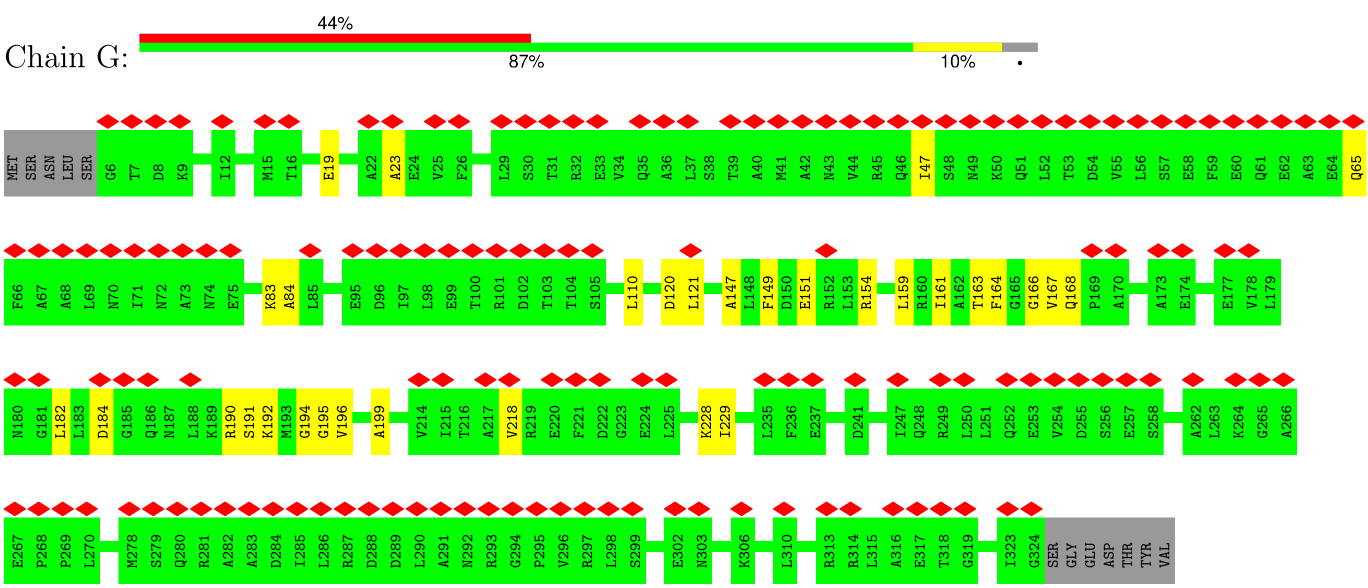
Chain RG: 6% 8% 92%

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



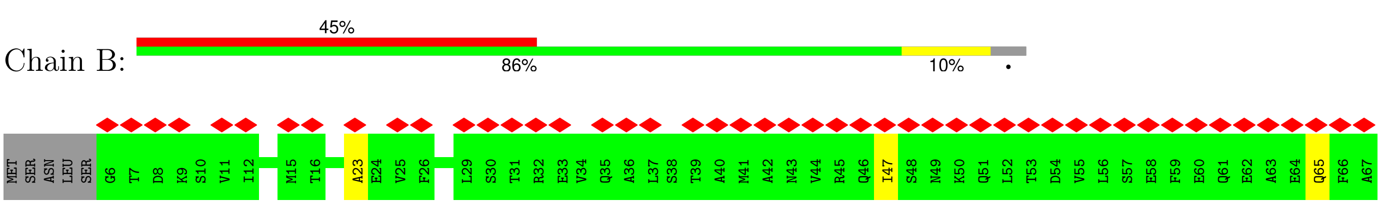
• Molecule 2: Flagellar motor switch protein FliG

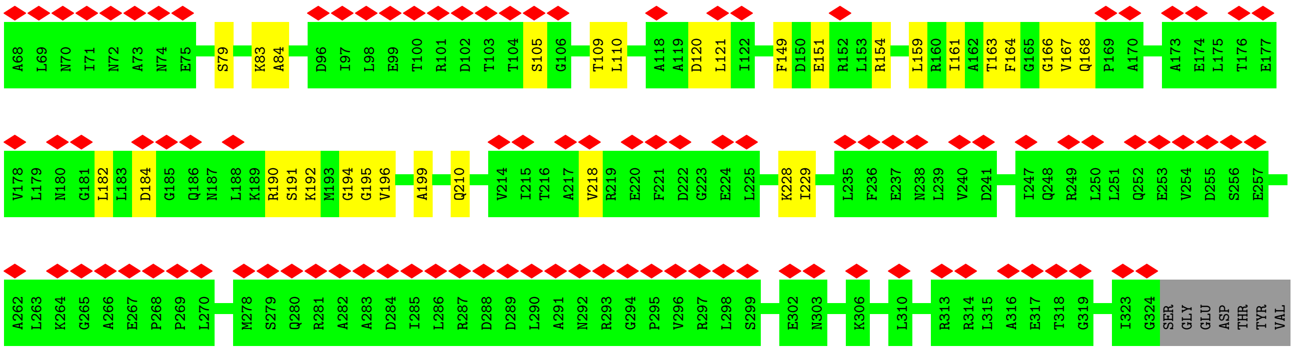
Chain G:



• Molecule 2: Flagellar motor switch protein FliG

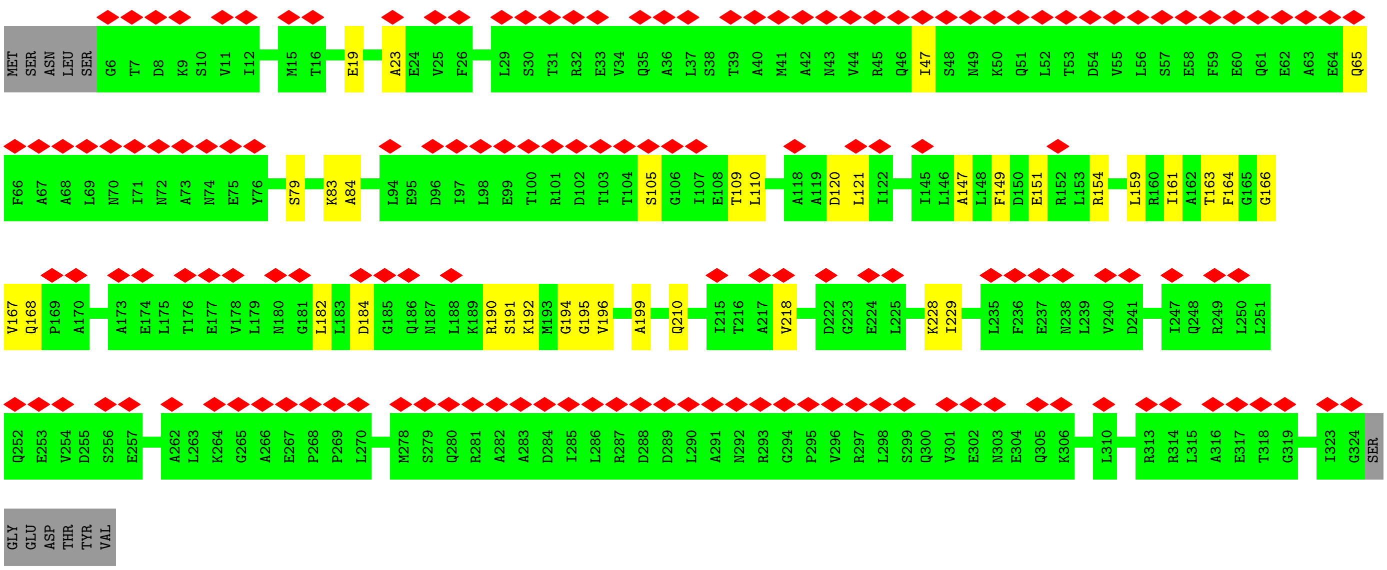
Chain B:





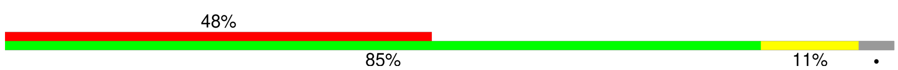
- Molecule 2: Flagellar motor switch protein FliG

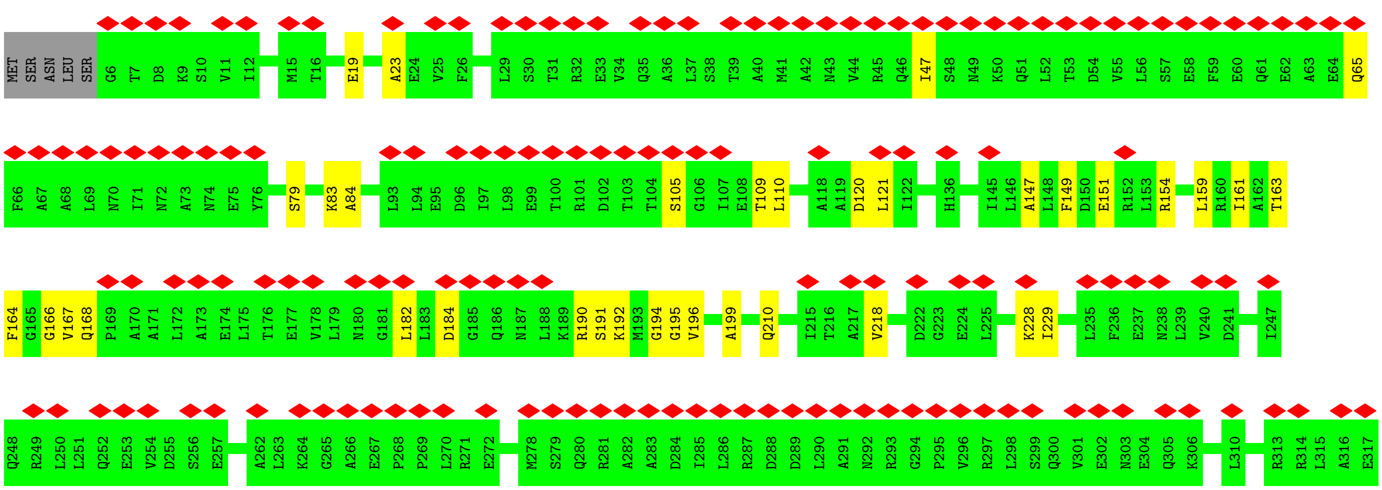
Chain J:

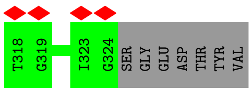


- Molecule 2: Flagellar motor switch protein FliG

Chain T:

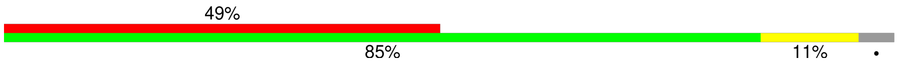


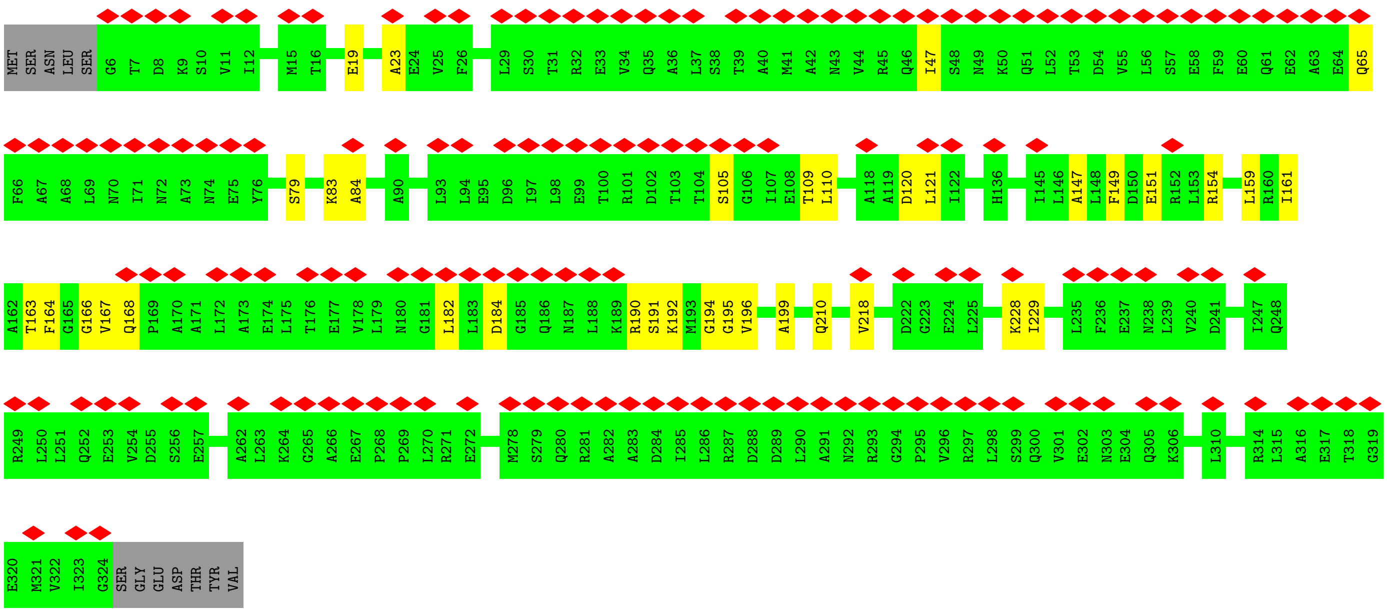




• Molecule 2: Flagellar motor switch protein FliG

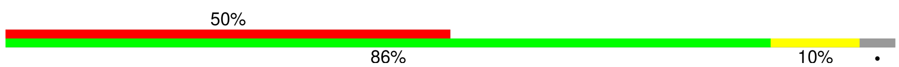
Chain AA:

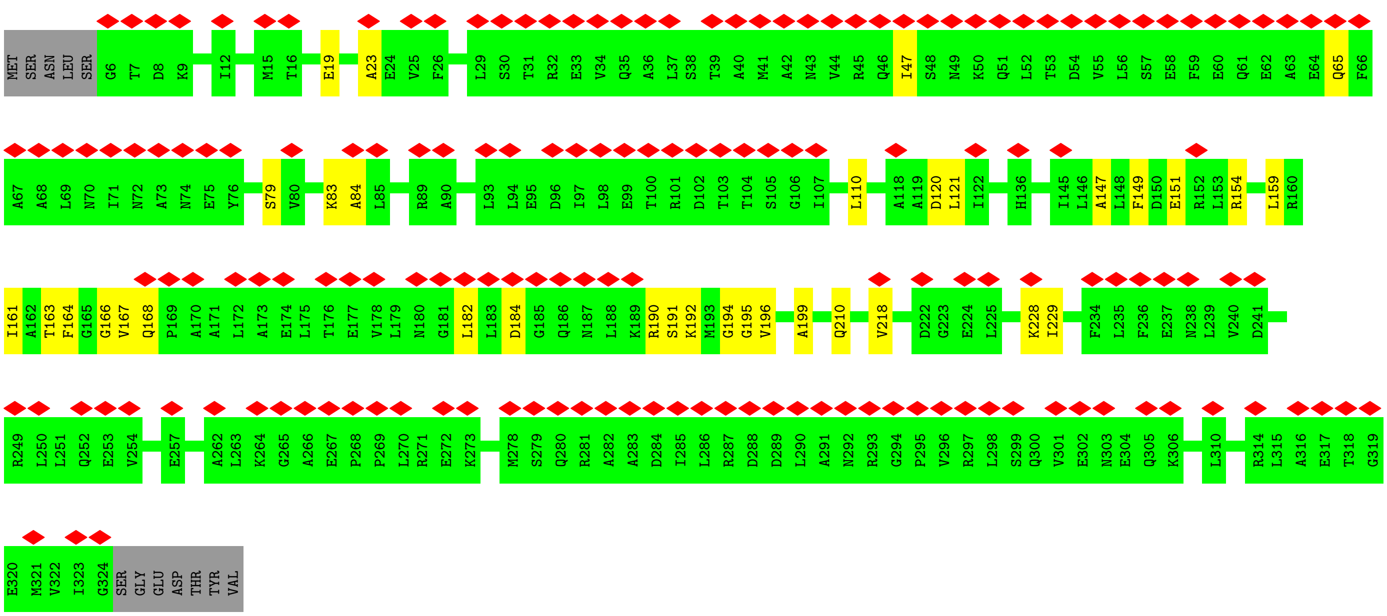




• Molecule 2: Flagellar motor switch protein FliG

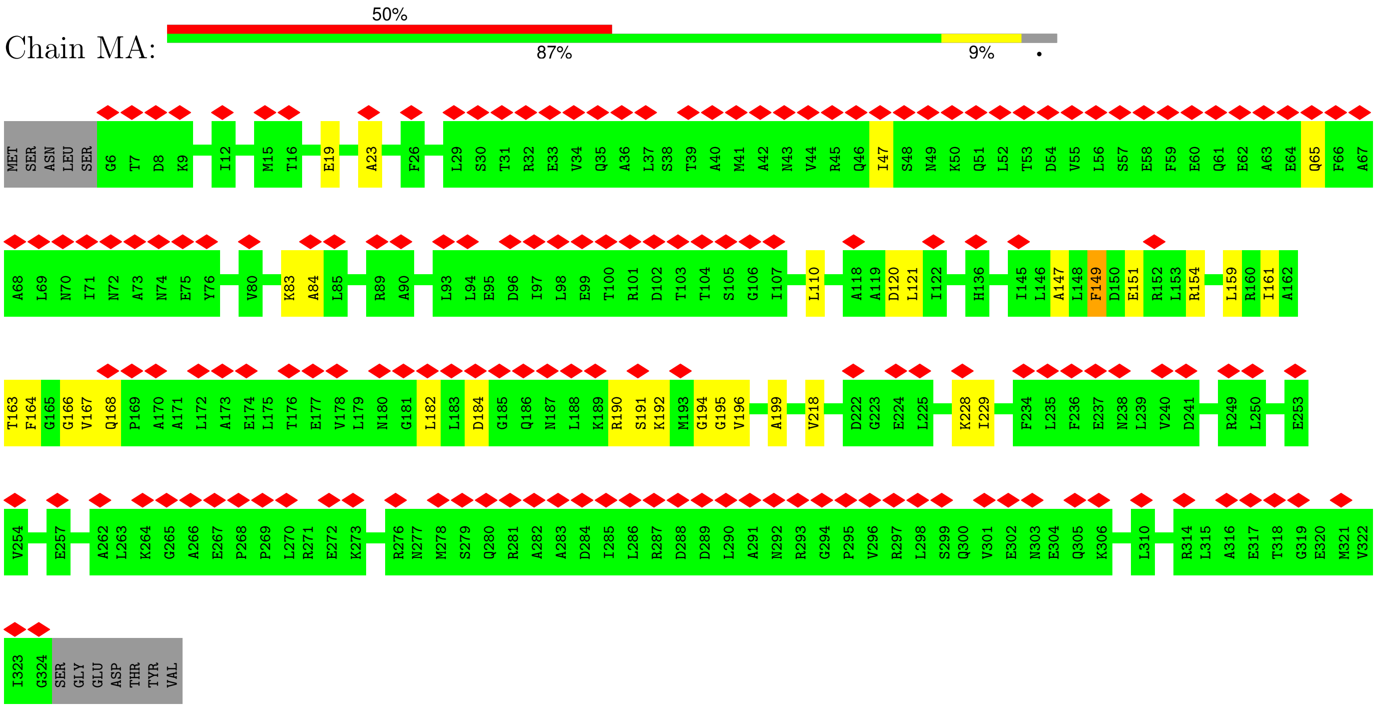
Chain GA:





• Molecule 2: Flagellar motor switch protein FliG

Chain MA:

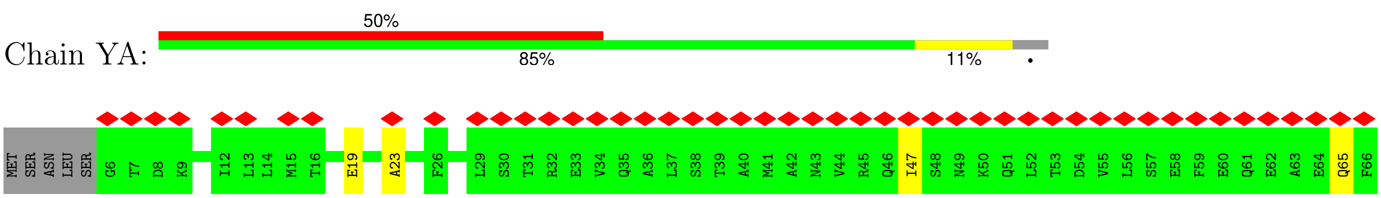


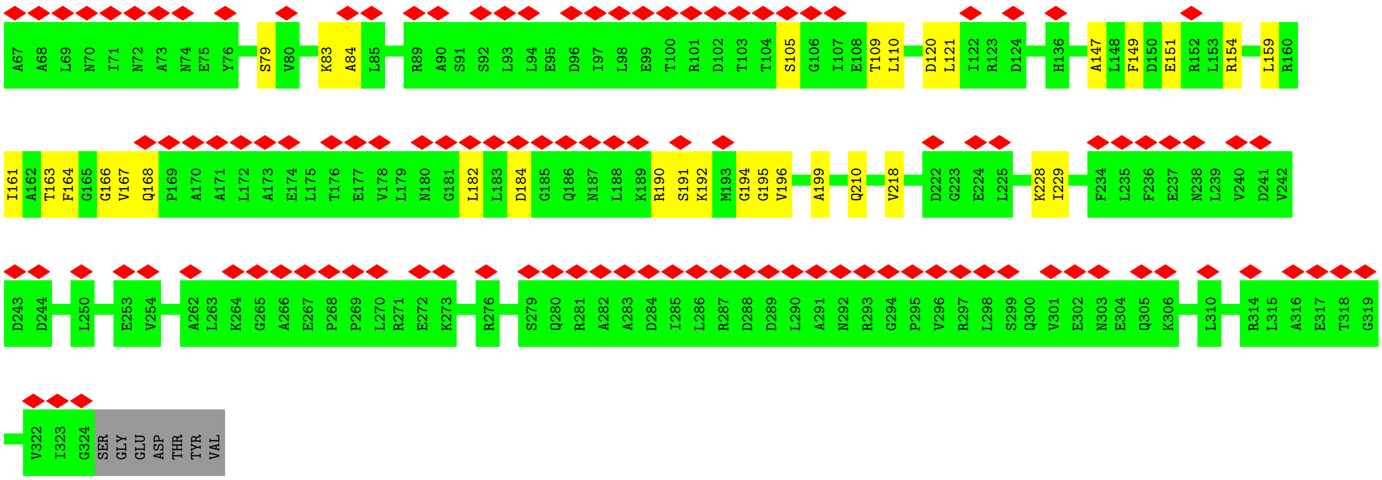
• Molecule 2: Flagellar motor switch protein FliG

Chain SA:

• Molecule 2: Flagellar motor switch protein FliG

Chain YA:





- Molecule 2: Flagellar motor switch protein FliG

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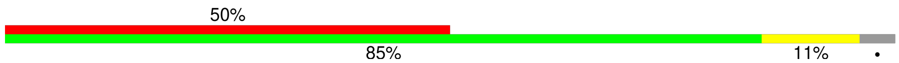
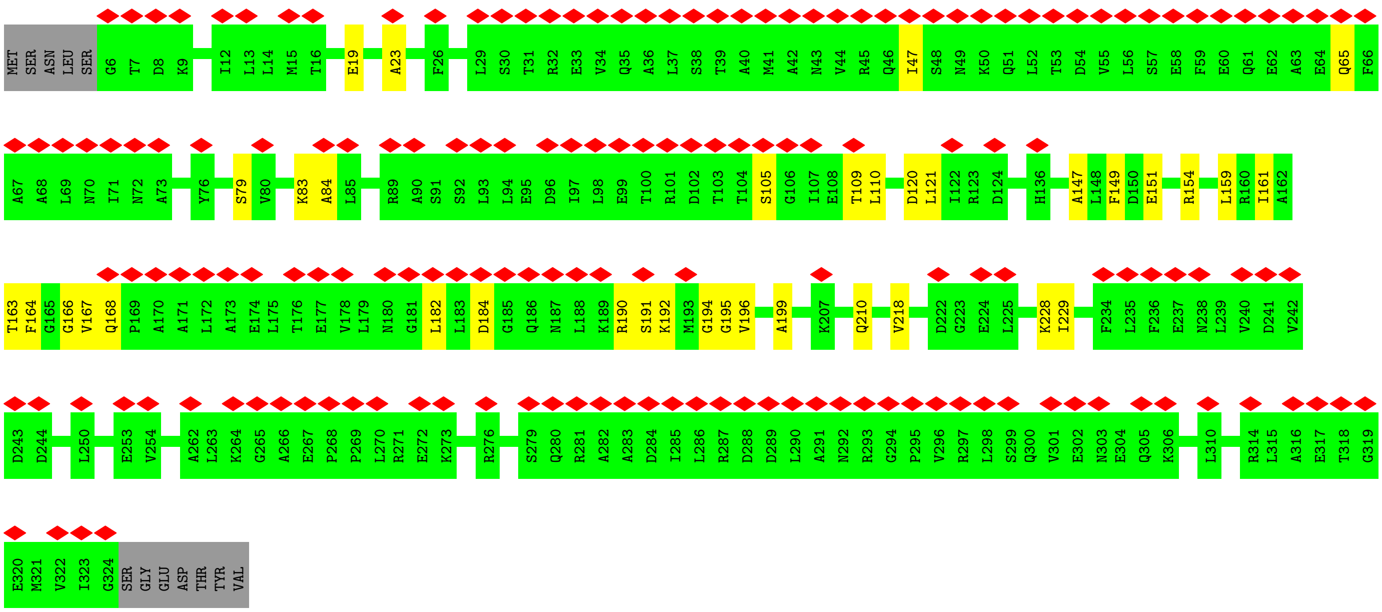
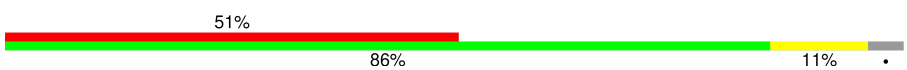
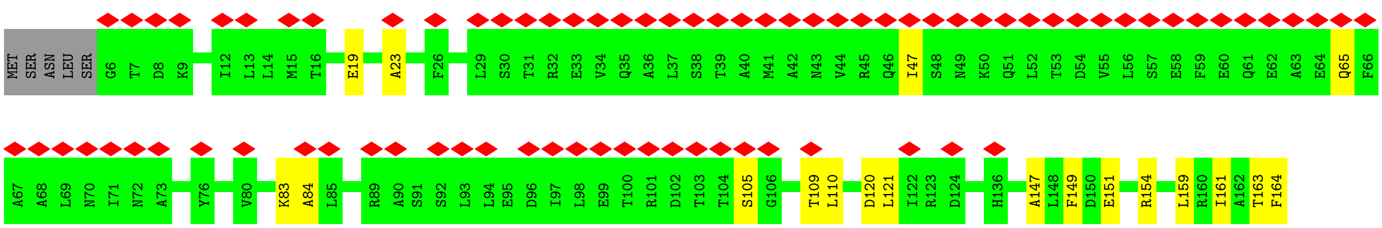




- Molecule 2: Flagellar motor switch protein FliG

Chain KB:





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V242 D243 D244 L250 E253 V254 A262 L263 K264 G265 A266 E267 P268 P269 L270 R271 E272 K273 R276 S279 Q280 R281 A282 A283 D284 I285 L286 R287 D288 D289 L290 A291 N292 R293 G294 P295 V296 R297 L298 S299 Q300 V301 E302 N303 K306 L310 R314 L315 A316 E317 T318 G319

E320 M321 V322 I323 G324 SER GLY GLU ASP THR TYR VAL

- Molecule 2: Flagellar motor switch protein FliG

Chain QB: 51% 86% 10% •

MET SER ASN LEU SER G6 T7 D8 K9 S10 V11 I12 L13 T16 R21 A22 A23 F26 L29 S30 T31 R32 E33 V34 Q35 A36 L37 S38 T39 A40 M41 A42 N43 V44 R45 Q46 I47 S48 N49 K50 Q51 L52 T53 D54 V55 L56 S57 E58 F59 E60 Q61 E62 A63 E64 Q65 F66

A67 A68 L69 N70 I71 N72 A73 Y76 V80 K83 A84 L85 R89 A90 S91 S92 L93 L94 E95 D96 I97 L98 E99 T100 R101 D102 T103 T104 S105 G106 T109 L110 D120 L121 I122 R123 D124 T132 H136 A147 L148 F149 D150 E151 R154 L159 R160 I161 A162

T163 F164 G165 G166 V167 Q168 P169 A170 A171 L172 A173 E174 L175 T176 E177 V178 L179 N180 G181 L182 L183 D184 G185 Q186 N187 L188 K189 R190 S191 K192 M193 G194 G195 V196 A199 K207 A217 V218 R219 E220 F221 D222 K228 I229 F234 L235 F236 E237 N238 L239 V240 D241 V242 D243 D244

R245 L250 E253 V254 A262 L263 K264 G265 A266 E267 P268 P269 L270 R271 E272 K273 R276 N277 M278 S279 Q280 R281 A282 A283 D284 I285 L286 R287 D288 D289 L290 A291 N292 R293 G294 P295 V296 R297 L298 S299 Q300 V301 E302 N303 K306 L310 R314 L315 A316 E317 T318 G319 E320

M321 V322 I323 G324 SER GLY GLU ASP THR TYR VAL

- Molecule 2: Flagellar motor switch protein FliG

Chain WB: 51% 87% 10% •

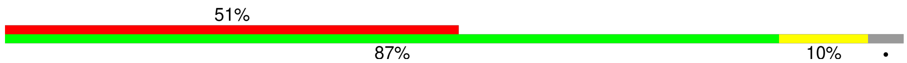
MET SER ASN LEU SER G6 T7 D8 K9 S10 L13 T16 R21 A22 A23 L29 S30 T31 R32 E33 V34 Q35 A36 L37 S38 T39 A40 M41 A42 N43 V44 R45 Q46 I47 S48 N49 K50 Q51 L52 T53 D54 V55 L56 S57 E58 F59 E60 Q61 E62 A63 E64 Q65 F66 A67 A68 L69

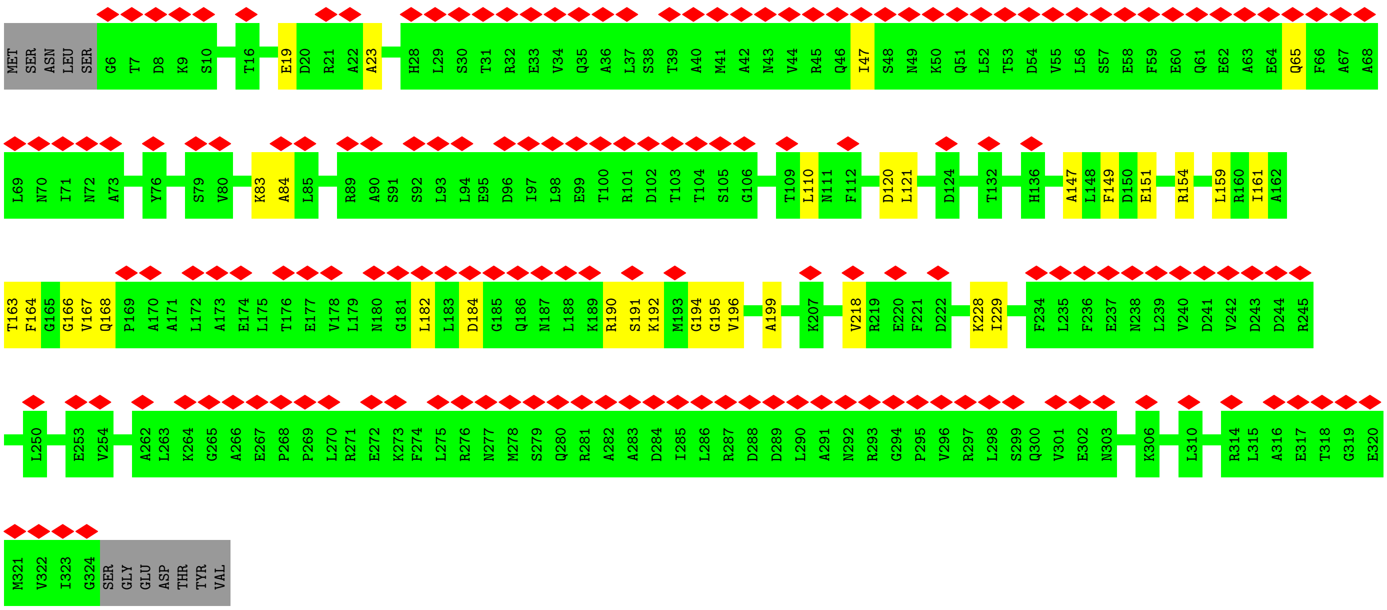
N70 I71 N72 A73 Y76 S79 V80 K83 A84 L85 R89 A90 S91 S92 L93 L94 E95 D96 I97 L98 E99 T100 R101 D102 T103 T104 S105 G106 T109 L110 D120 L121 I122 R123 D124 T132 H136 F149 D150 E151 R154 L159 R160 I161 A162 T163 F164 G165 G166

V167 Q168 P169 A170 A171 L172 A173 E174 L175 T176 E177 V178 L179 N180 G181 L182 L183 D184 G185 Q186 N187 L188 K189 R190 S191 K192 M193 G194 G195 V196 R197 T198 A199 K207 Q210 A217 V218 R219 E220 F221 D222 K228 I229 F234 L235 F236 E237 N238 L239 V240 D241 V242 D243 D244 R245

• Molecule 2: Flagellar motor switch protein FliG

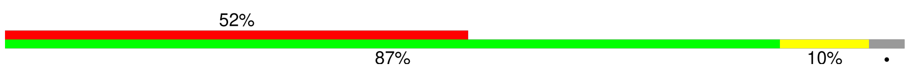
Chain CC:

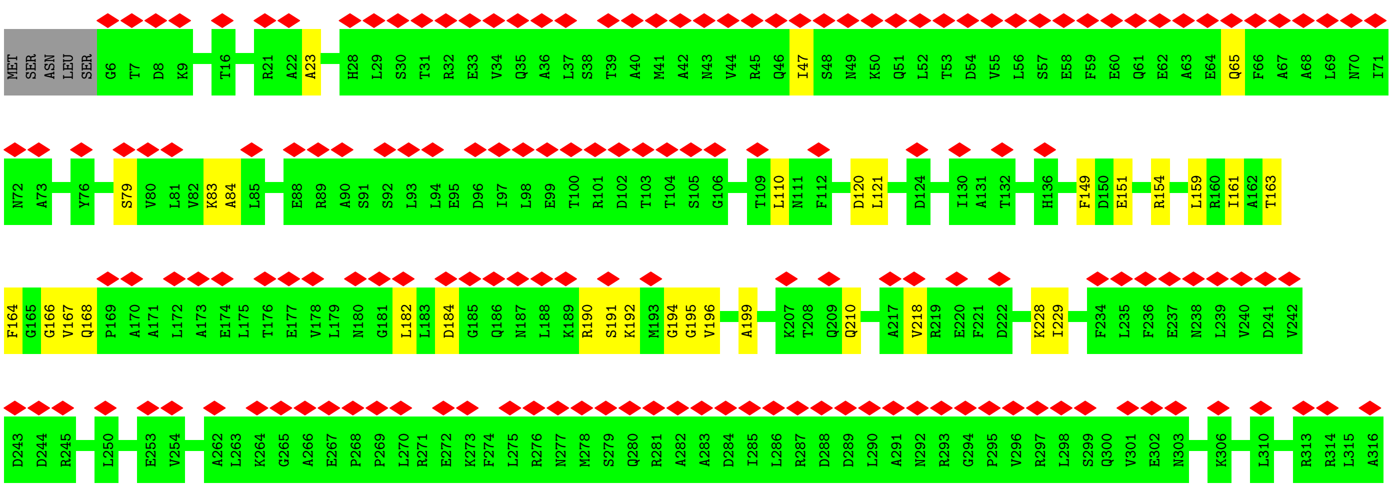


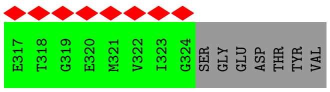


• Molecule 2: Flagellar motor switch protein FliG

Chain IC:

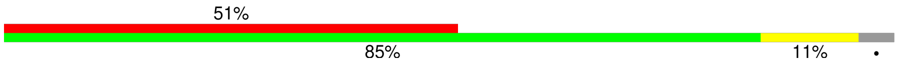


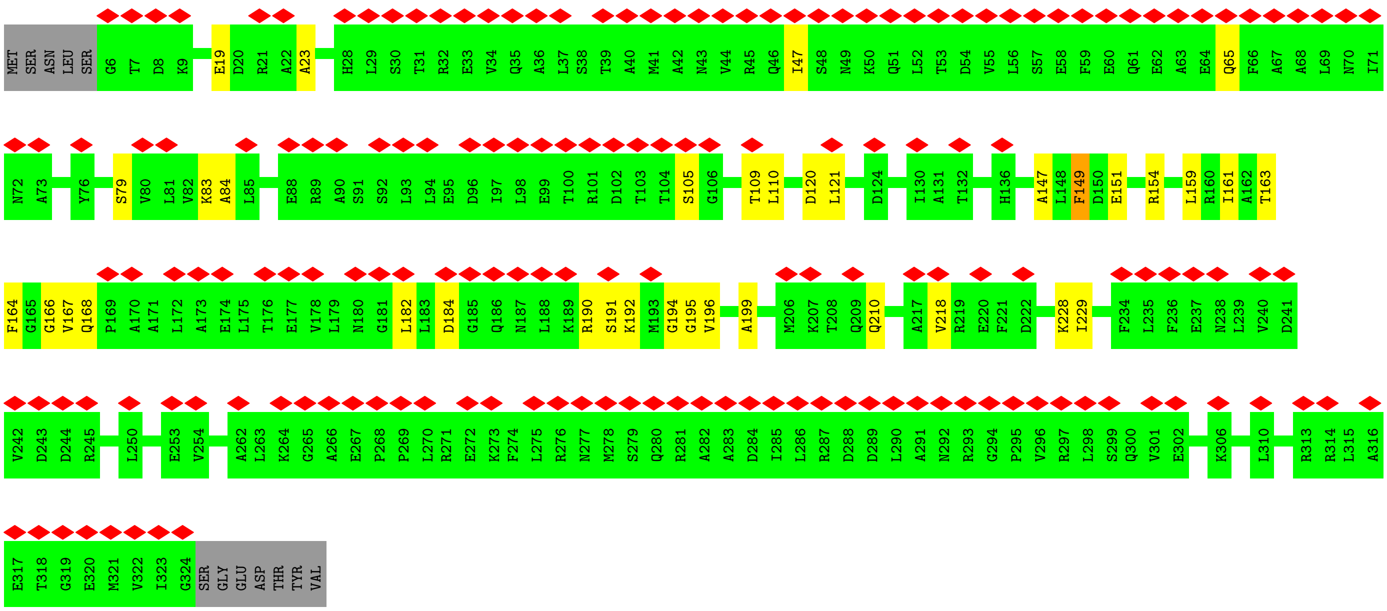




• Molecule 2: Flagellar motor switch protein FliG

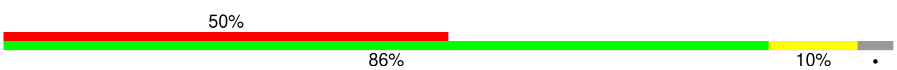
Chain OC:

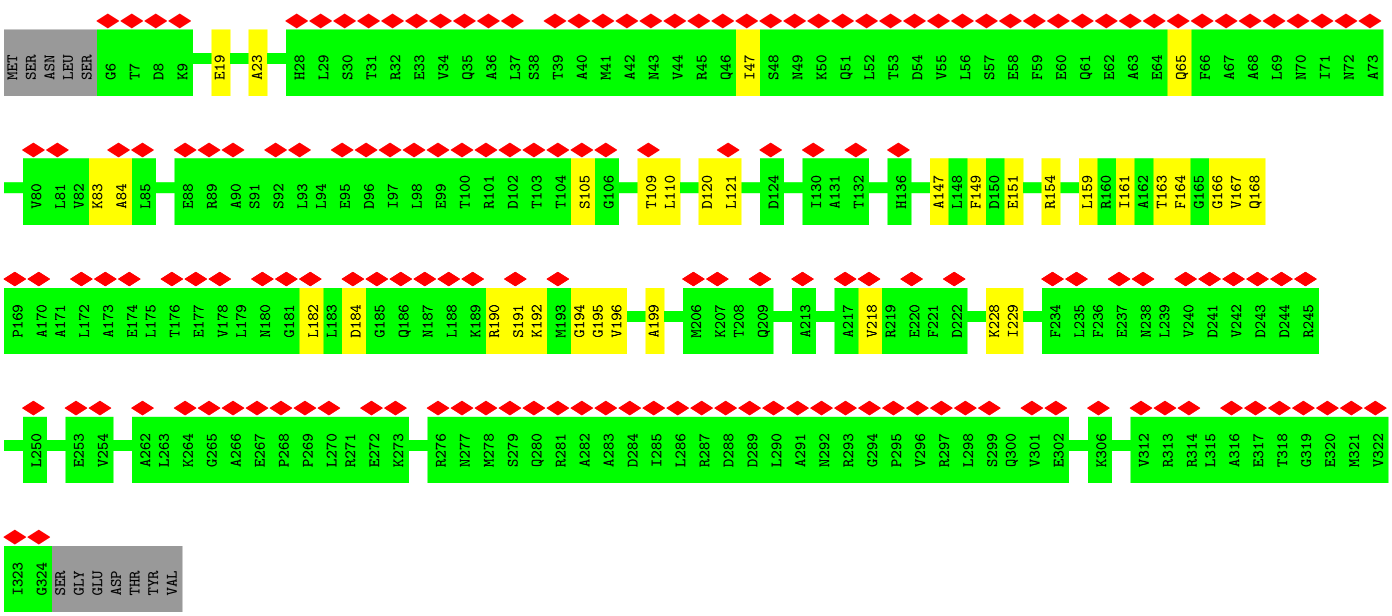




• Molecule 2: Flagellar motor switch protein FliG

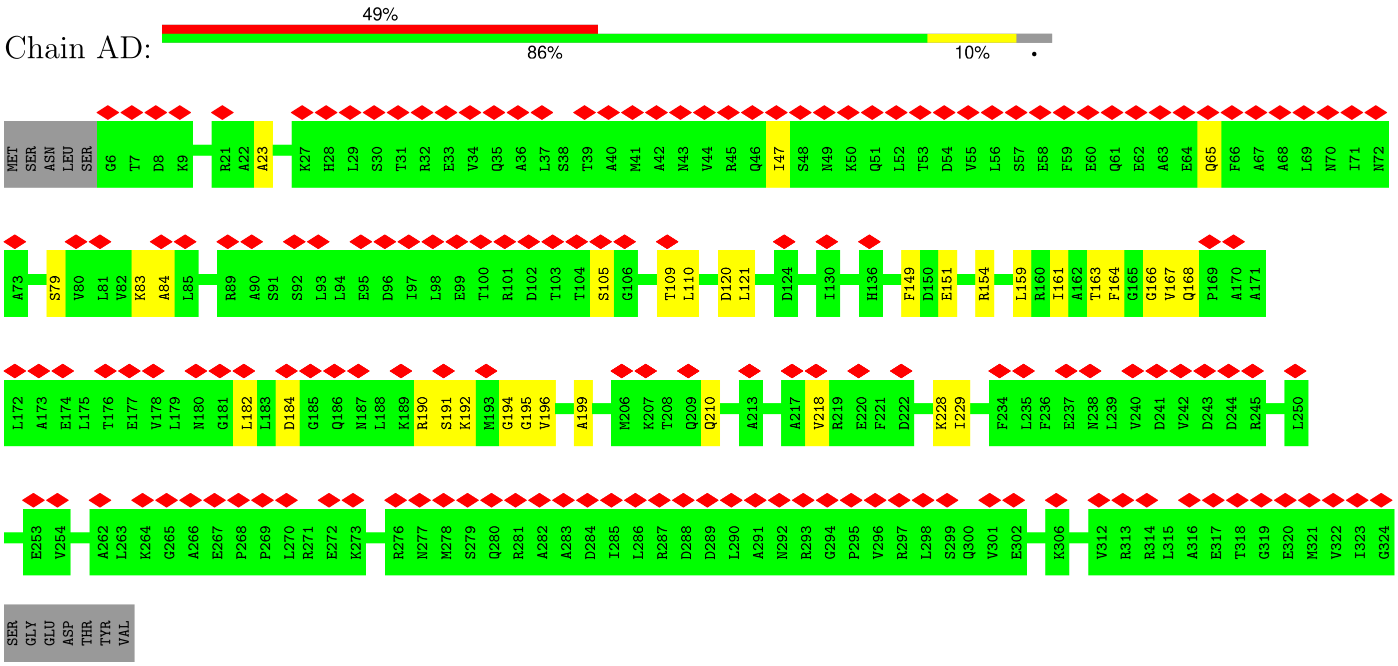
Chain UC:





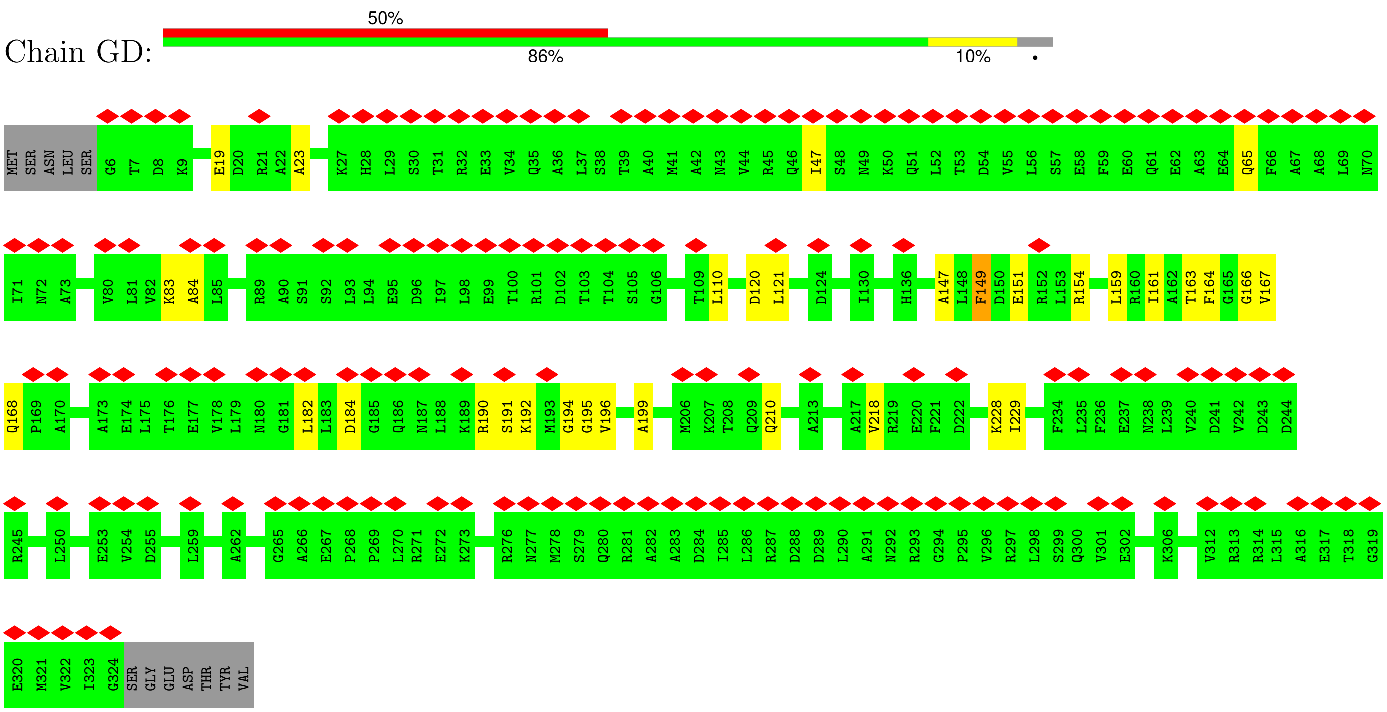
• Molecule 2: Flagellar motor switch protein FliG

Chain AD:



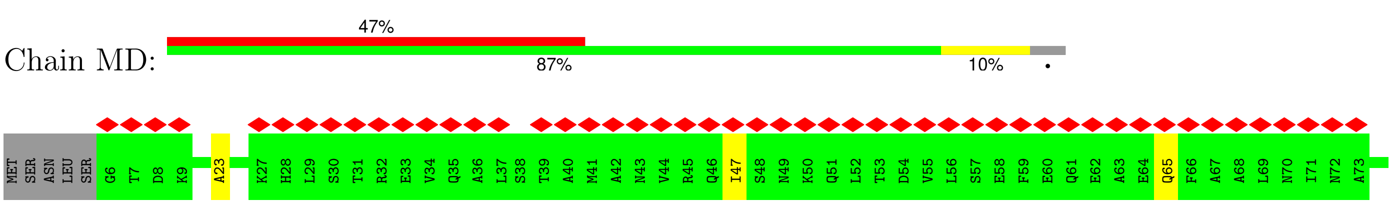
• Molecule 2: Flagellar motor switch protein FliG

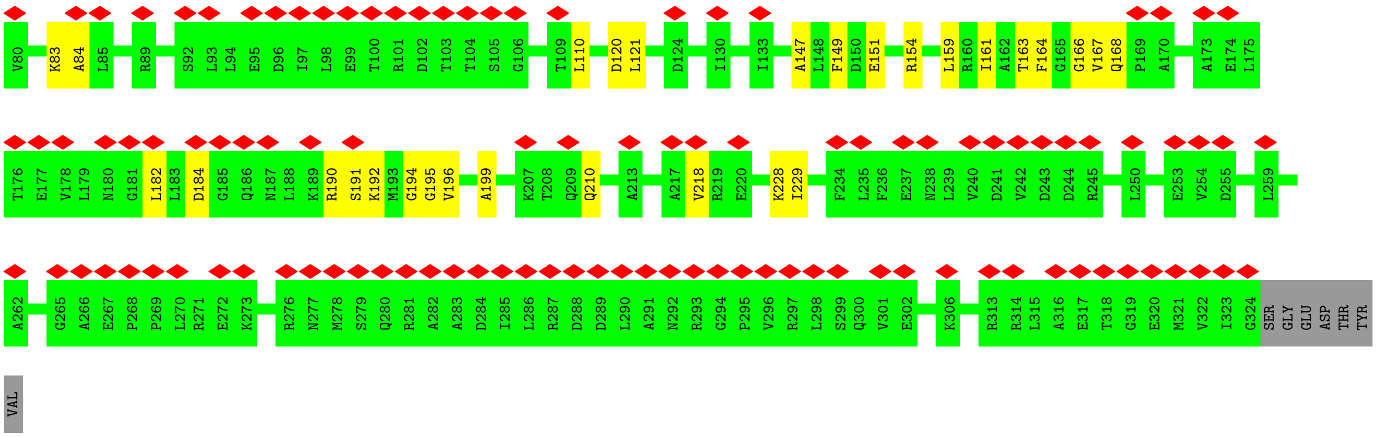
Chain GD:



• Molecule 2: Flagellar motor switch protein FliG

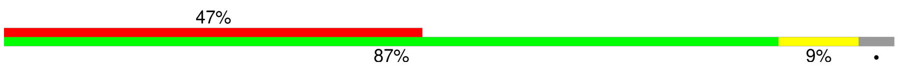
Chain MD:

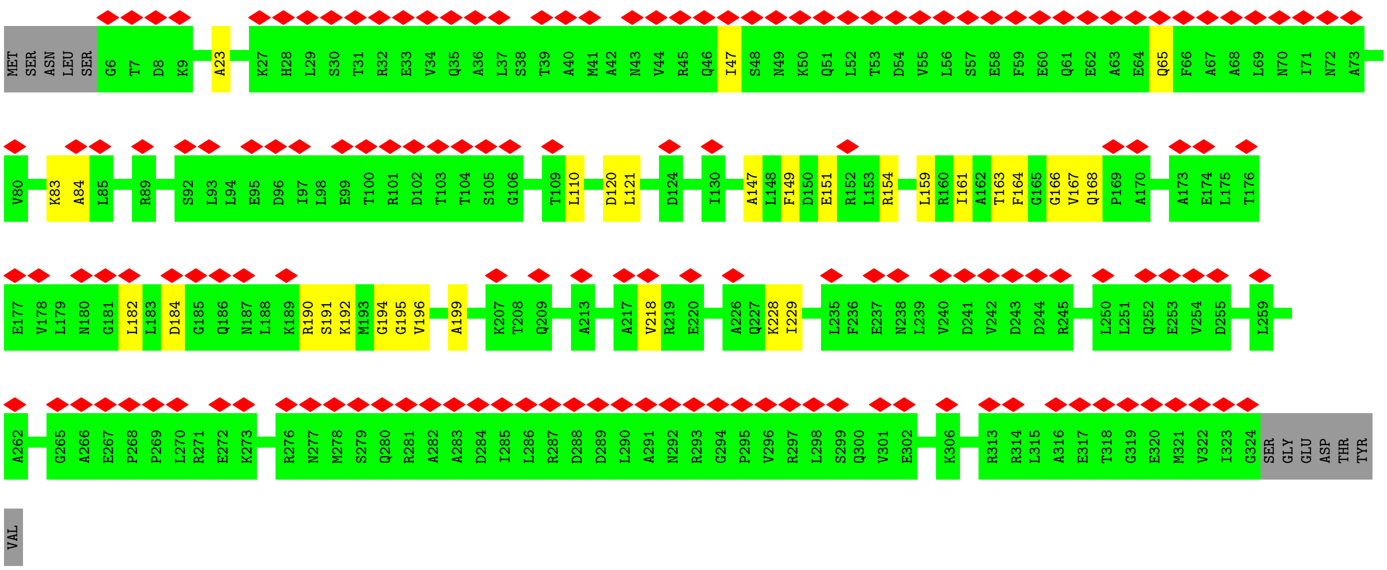




- Molecule 2: Flagellar motor switch protein FliG

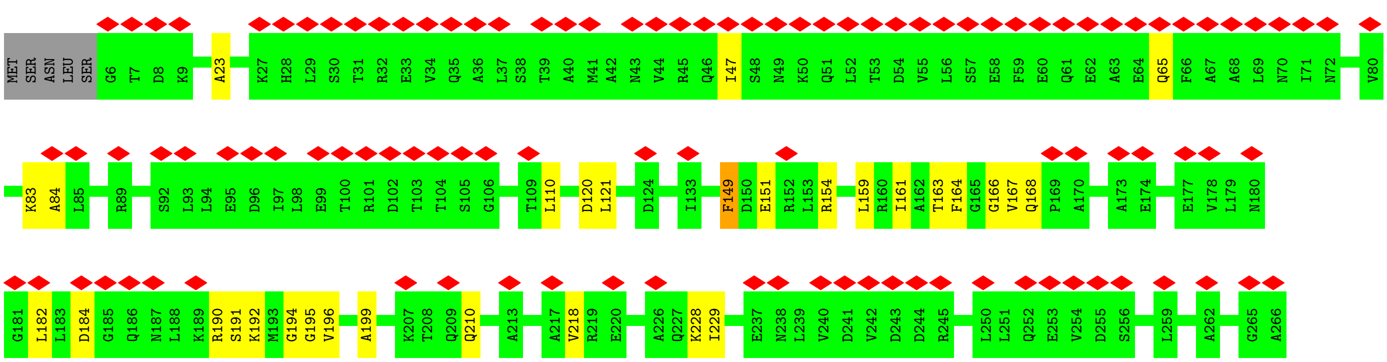
Chain SD:

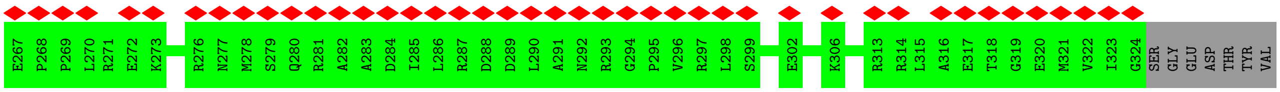




- Molecule 2: Flagellar motor switch protein FliG

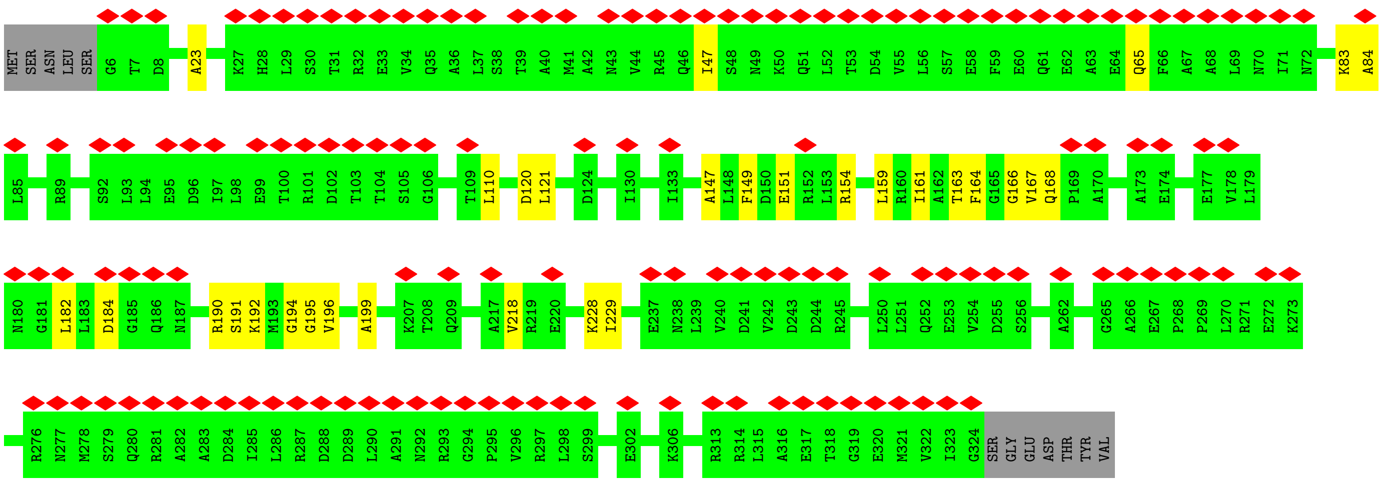
Chain YD:





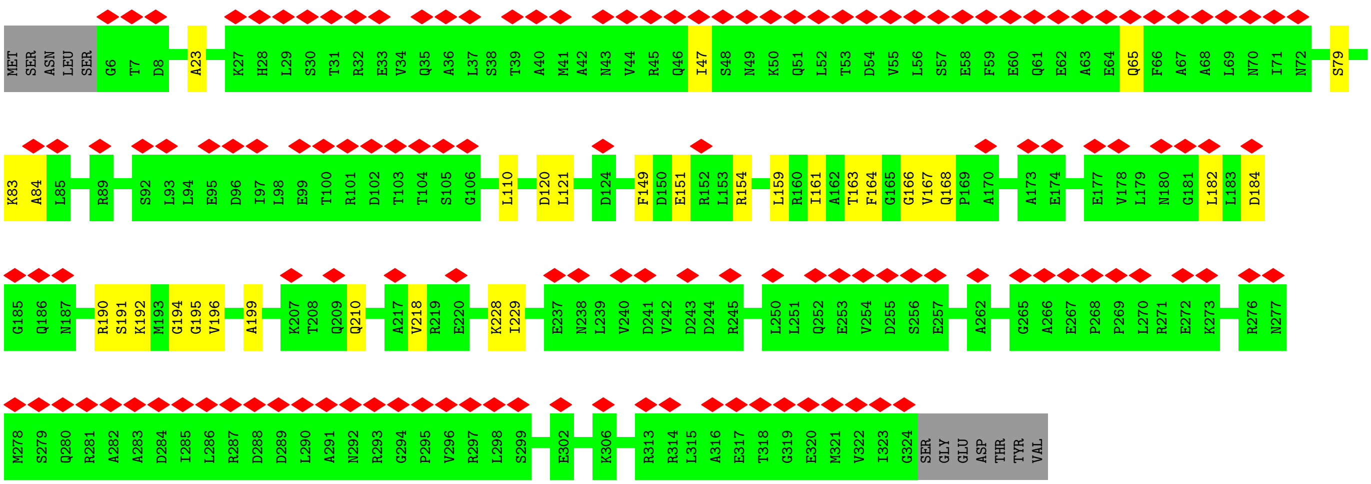
• Molecule 2: Flagellar motor switch protein FliG

Chain EE:



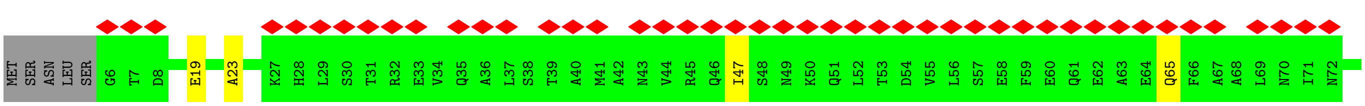
• Molecule 2: Flagellar motor switch protein FliG

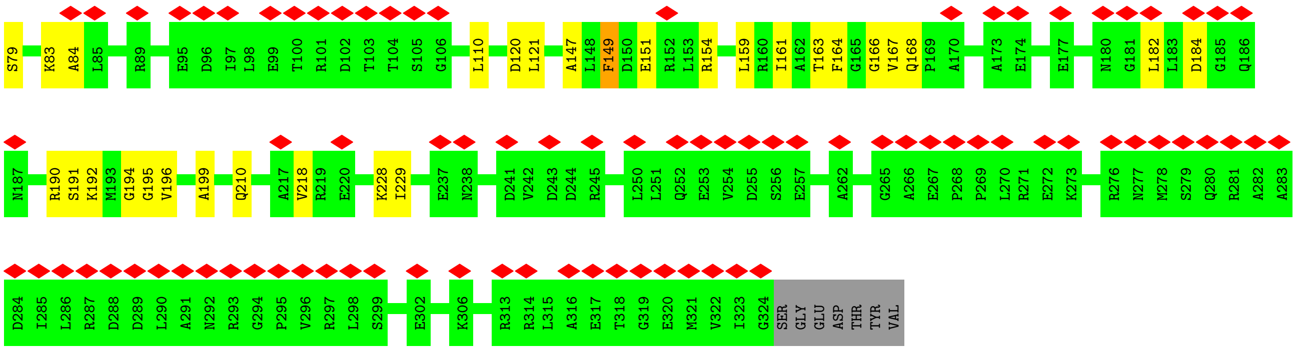
Chain KE:



• Molecule 2: Flagellar motor switch protein FliG

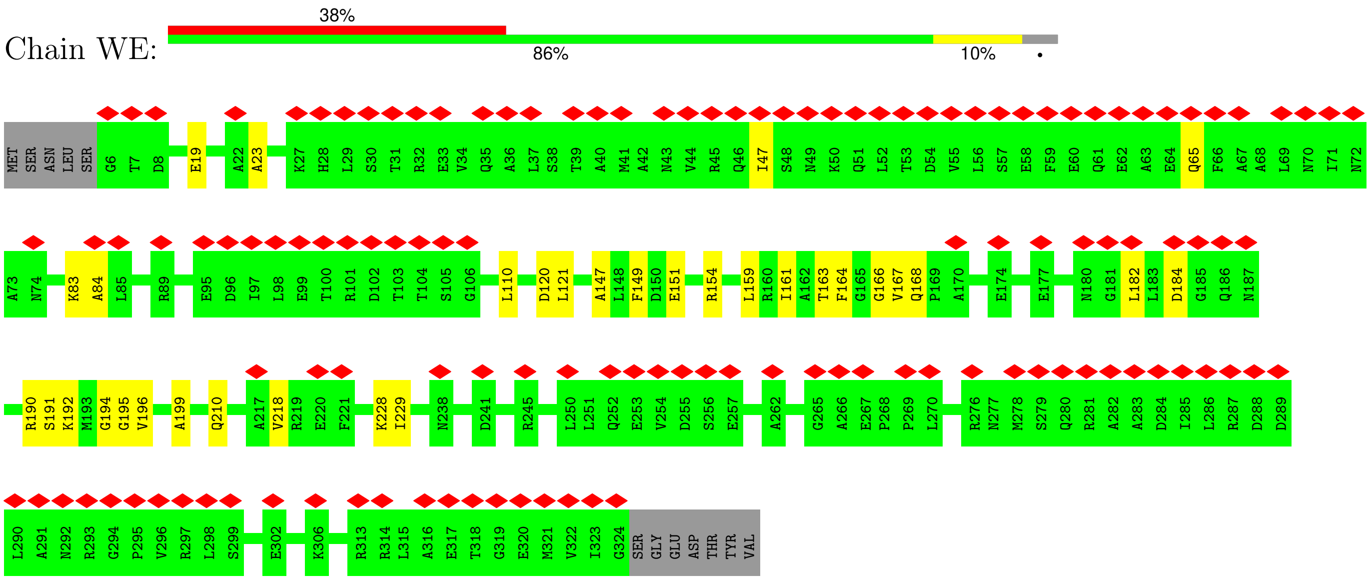
Chain QE:





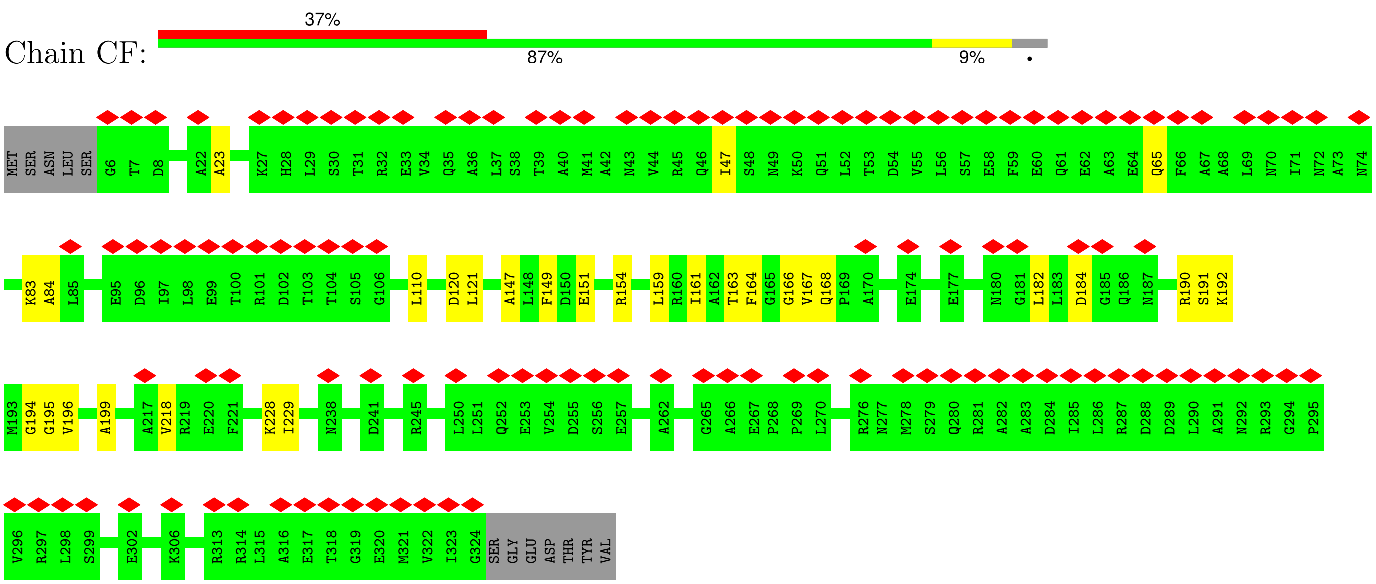
• Molecule 2: Flagellar motor switch protein FliG

Chain WE:



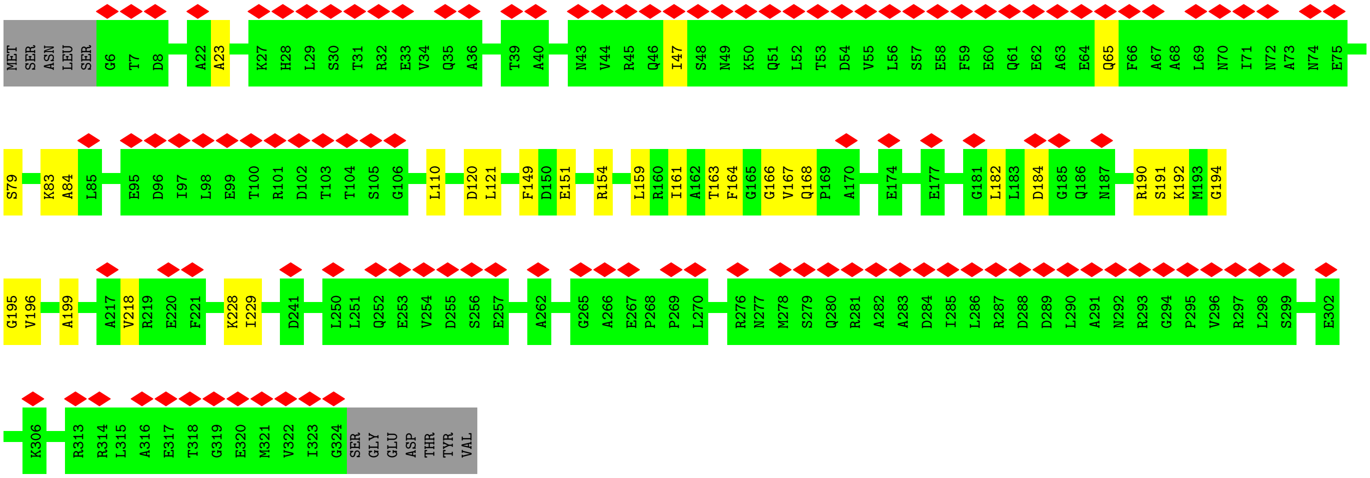
• Molecule 2: Flagellar motor switch protein FliG

Chain CF:



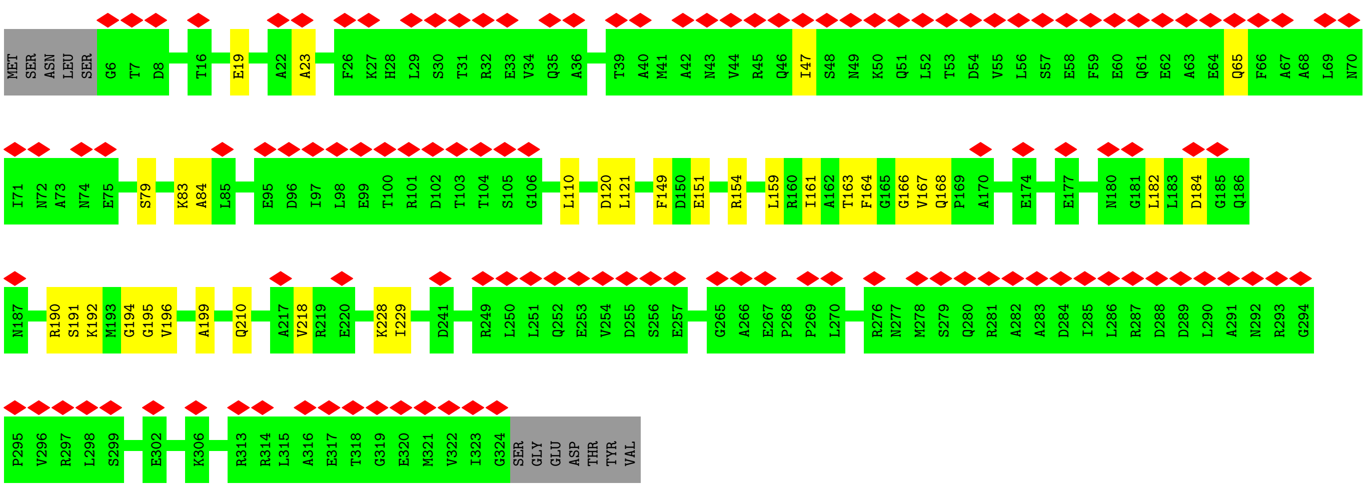
• Molecule 2: Flagellar motor switch protein FliG

Chain IF:



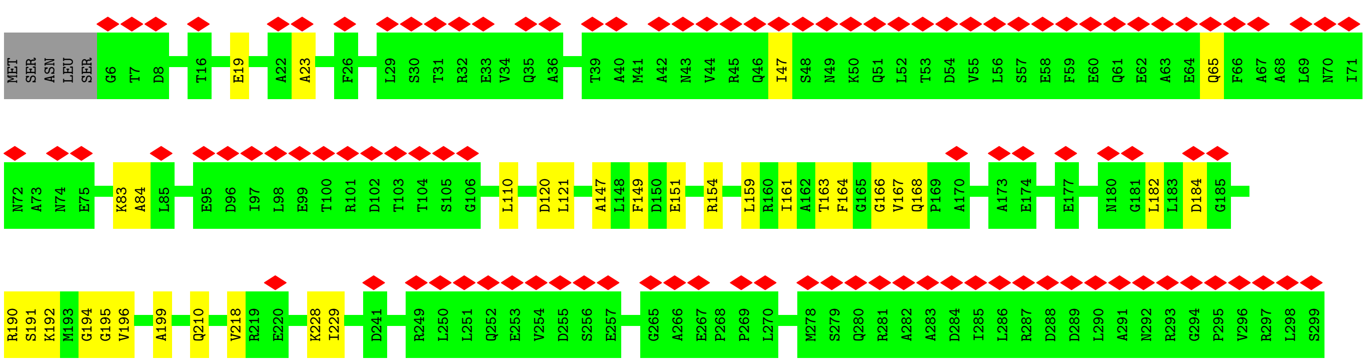
- Molecule 2: Flagellar motor switch protein FliG

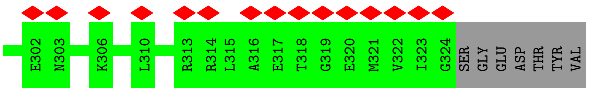
Chain OF:



- Molecule 2: Flagellar motor switch protein FliG

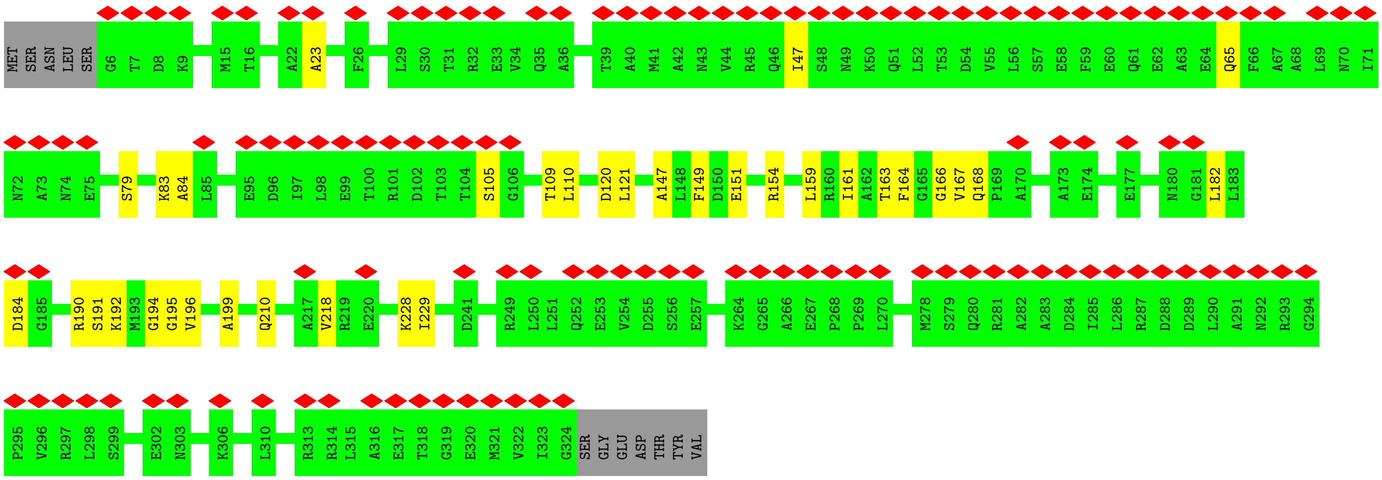
Chain UF:





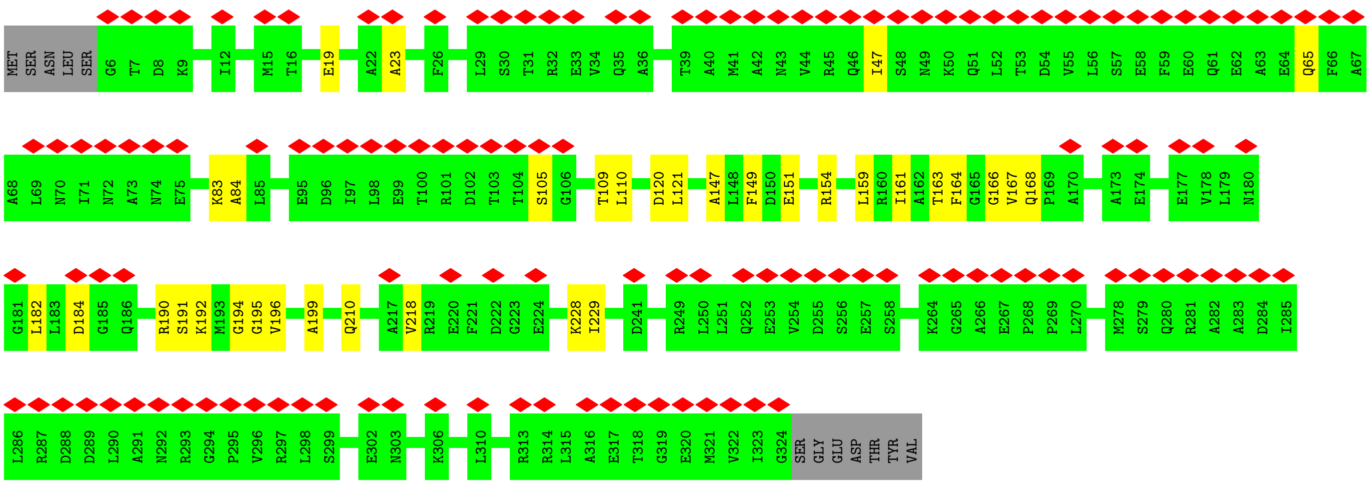
- Molecule 2: Flagellar motor switch protein FliG

Chain AG:



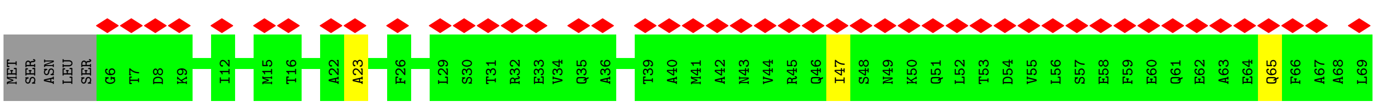
- Molecule 2: Flagellar motor switch protein FliG

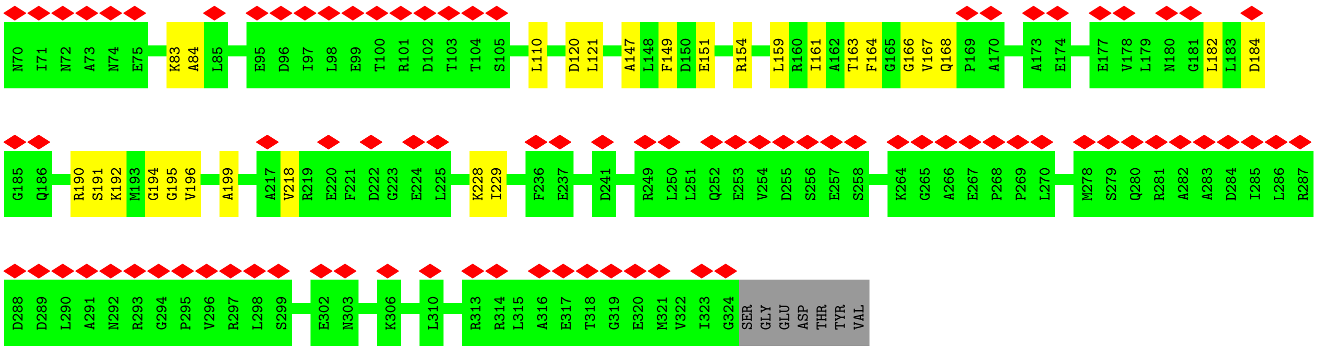
Chain GG:



- Molecule 2: Flagellar motor switch protein FliG

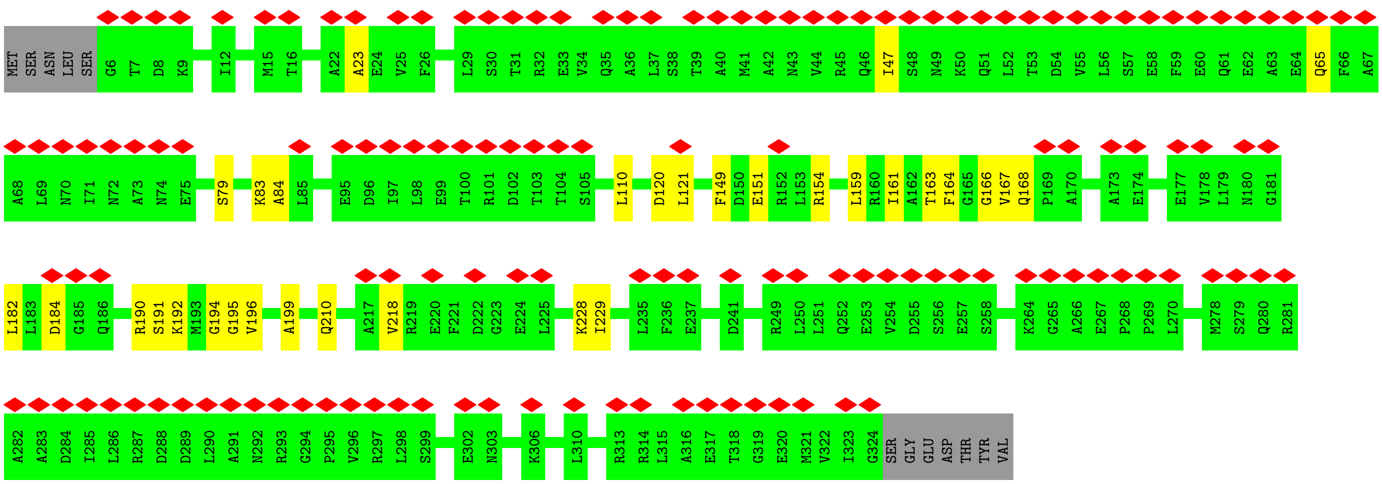
Chain MG:





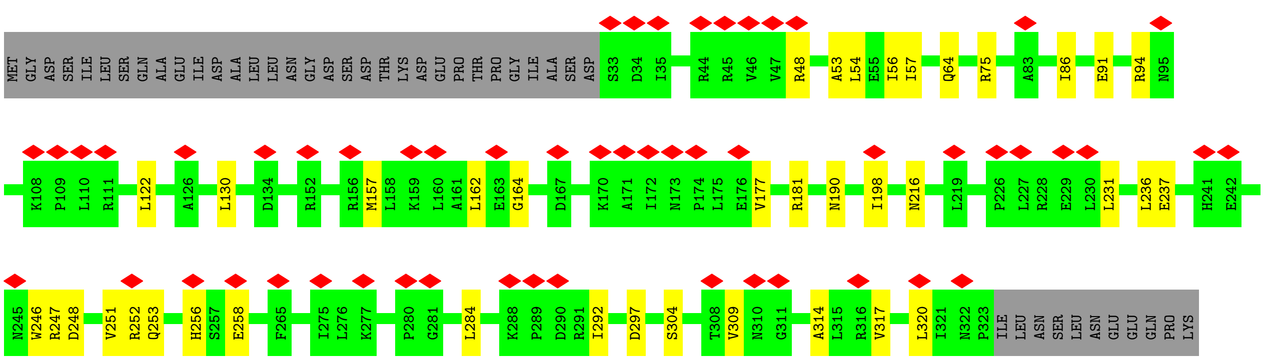
• Molecule 2: Flagellar motor switch protein FliG

Chain SG:



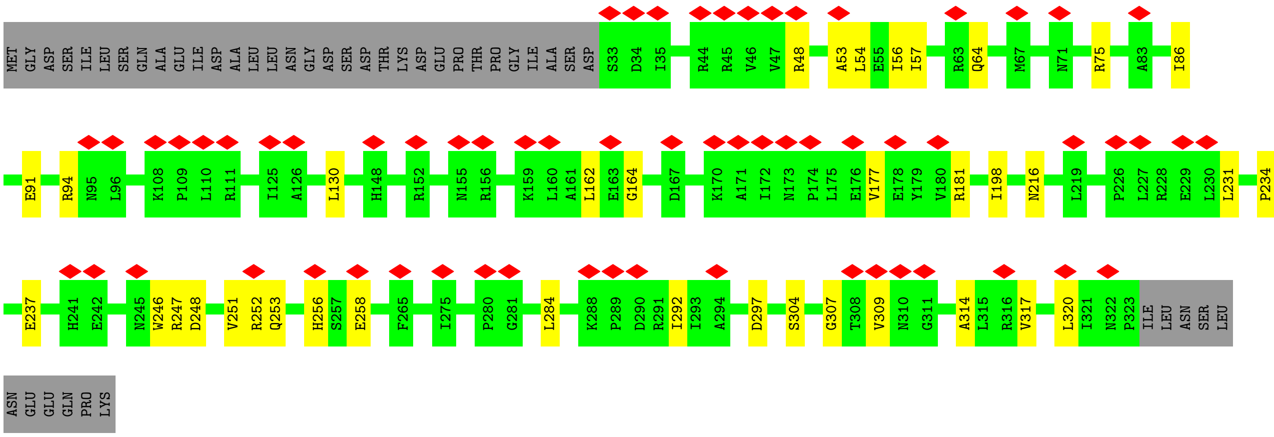
• Molecule 3: Flagellar motor switch protein FliM

Chain M:



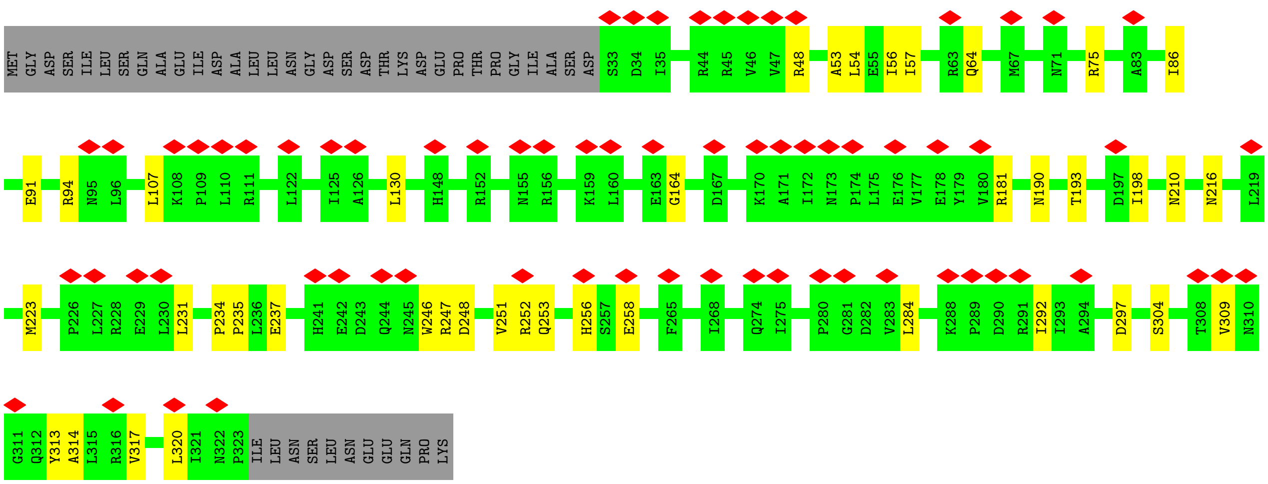
• Molecule 3: Flagellar motor switch protein FliM

Chain C:



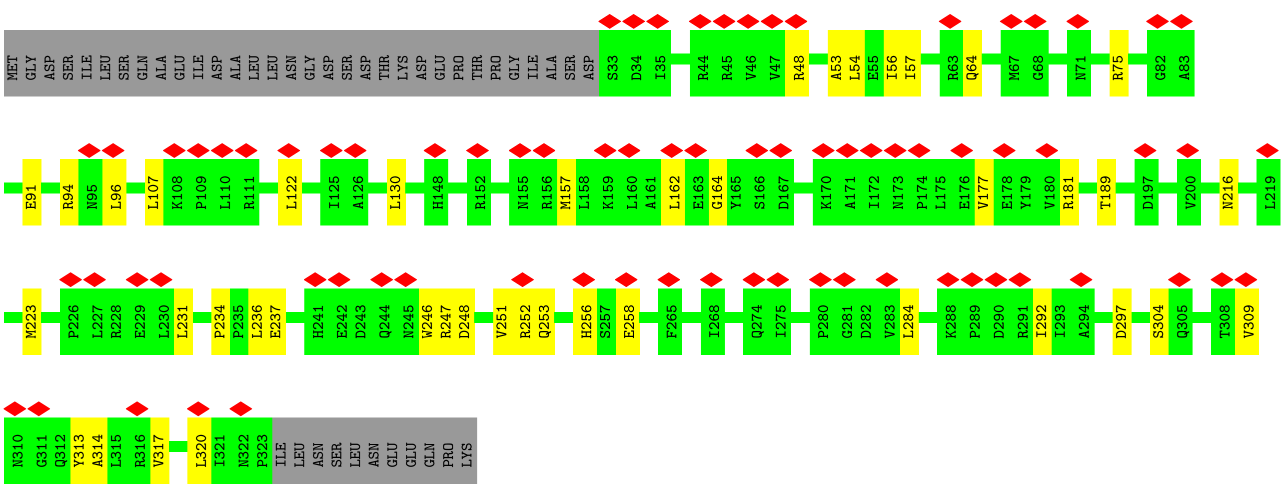
• Molecule 3: Flagellar motor switch protein FliM

Chain K:

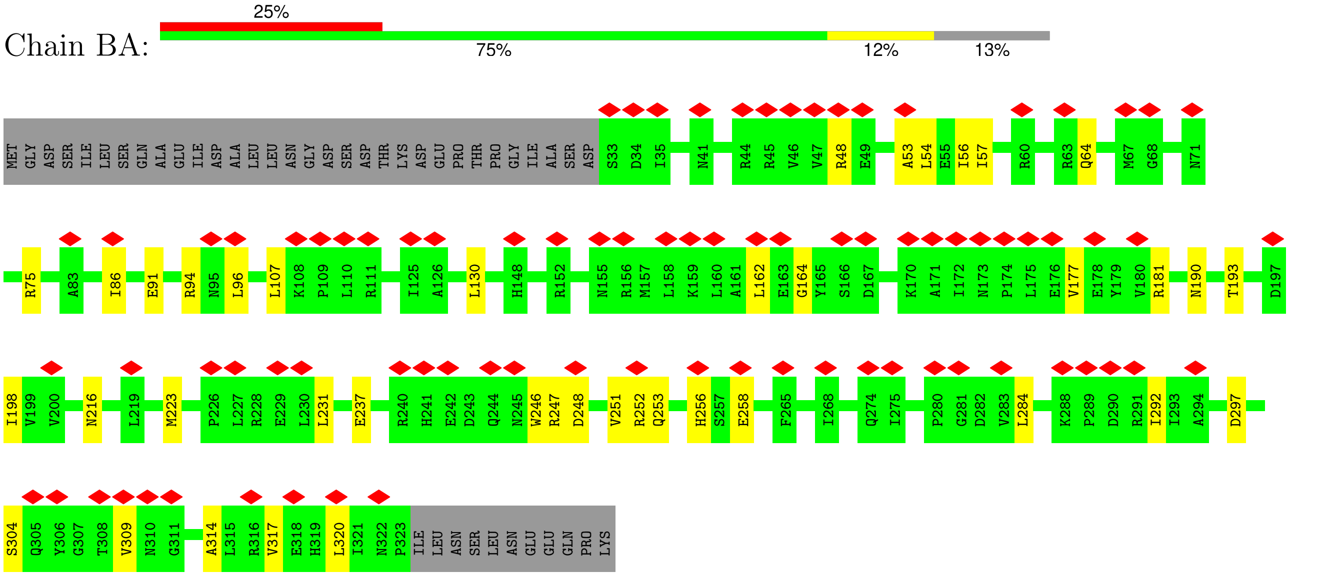


• Molecule 3: Flagellar motor switch protein FliM

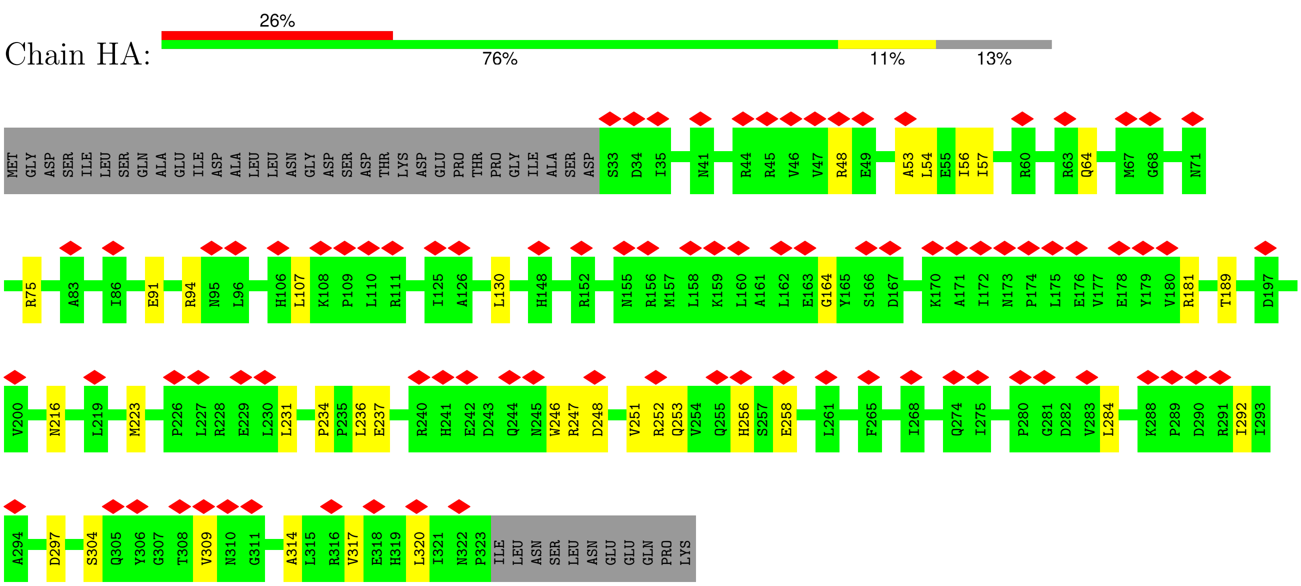
Chain V:



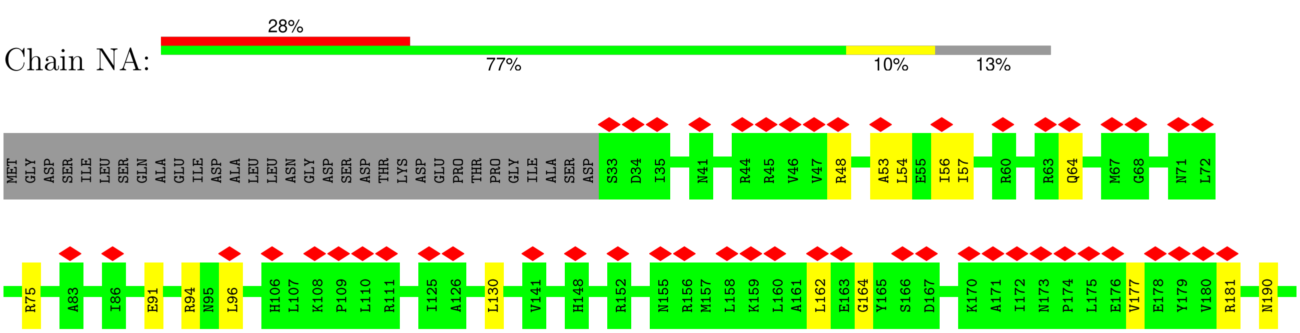
• Molecule 3: Flagellar motor switch protein FliM

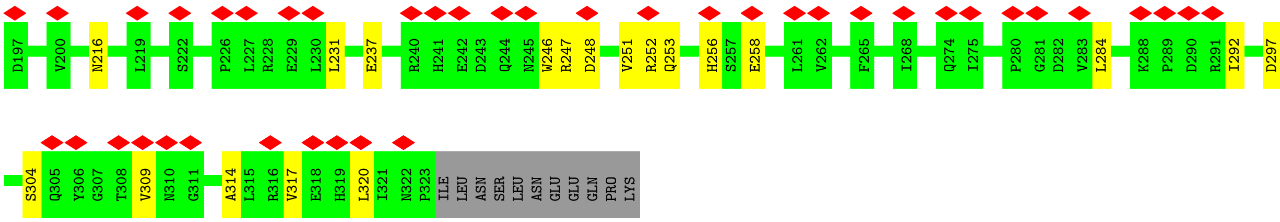


• Molecule 3: Flagellar motor switch protein FliM



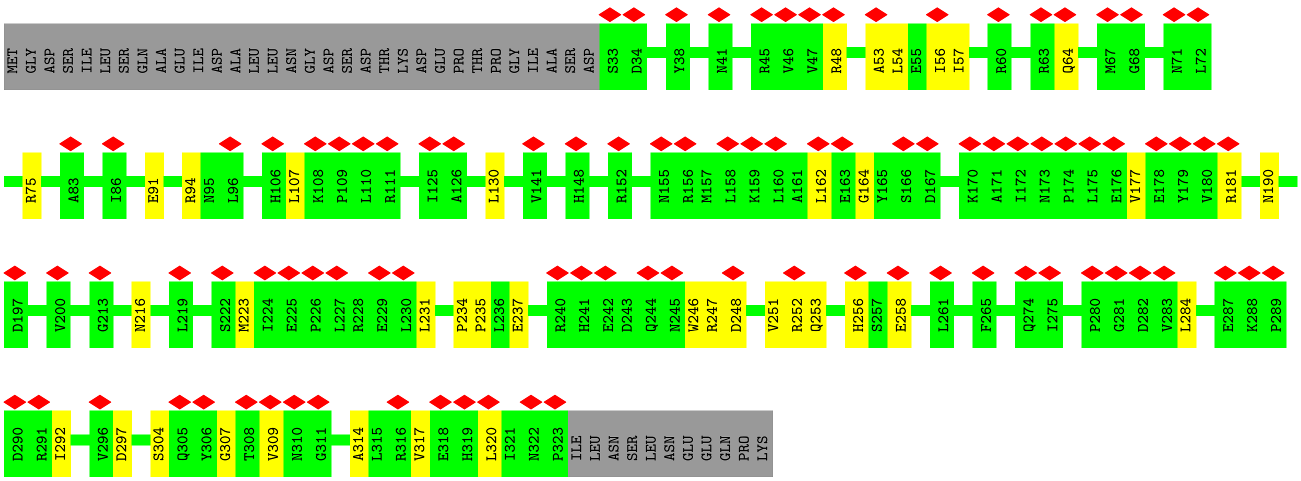
• Molecule 3: Flagellar motor switch protein FliM





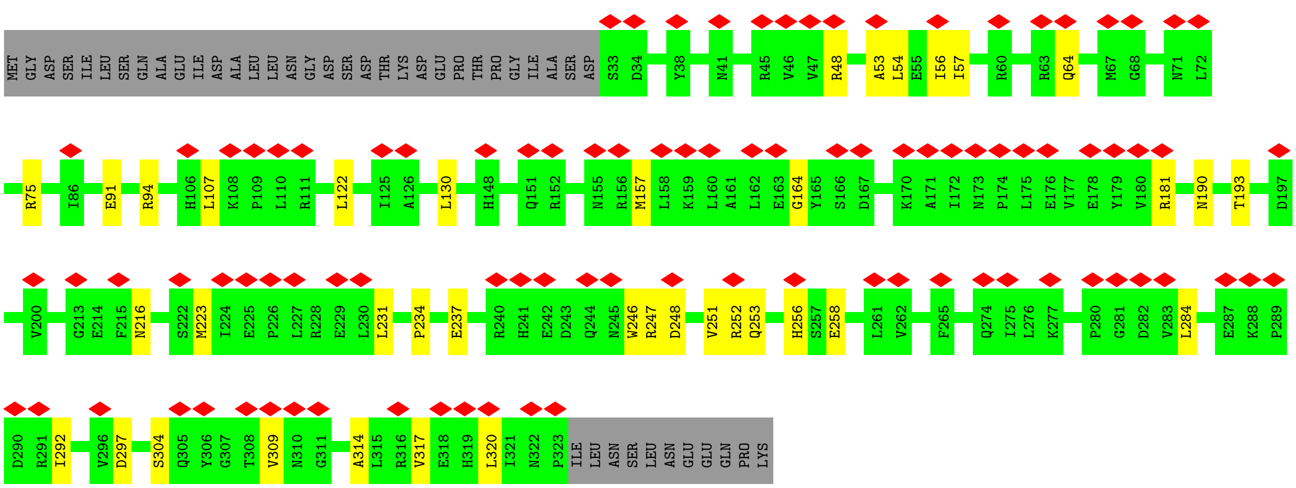
• Molecule 3: Flagellar motor switch protein FliM

Chain TA:



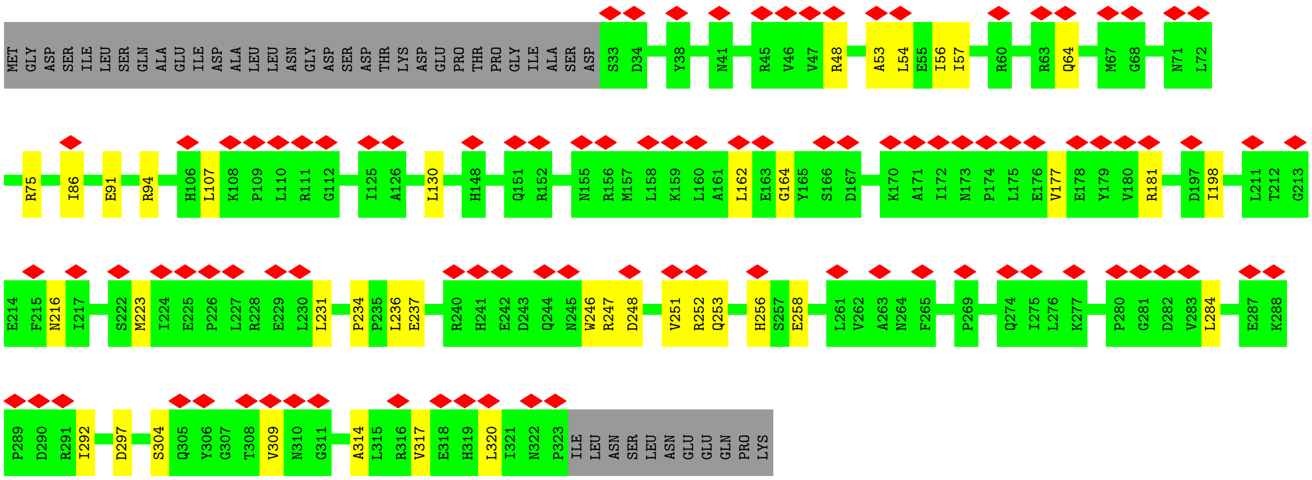
• Molecule 3: Flagellar motor switch protein FliM

Chain ZA:



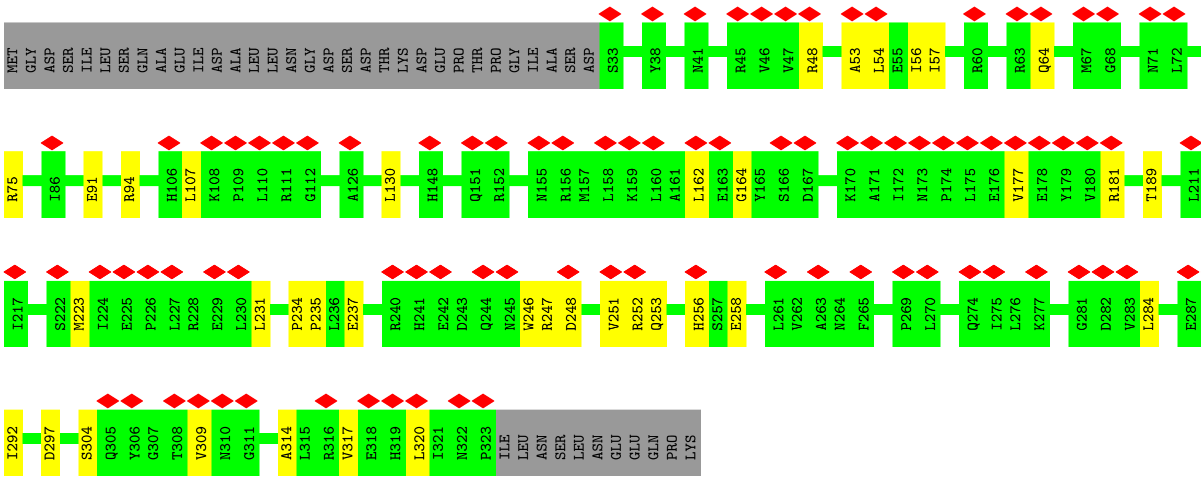
• Molecule 3: Flagellar motor switch protein FliM

Chain FB:



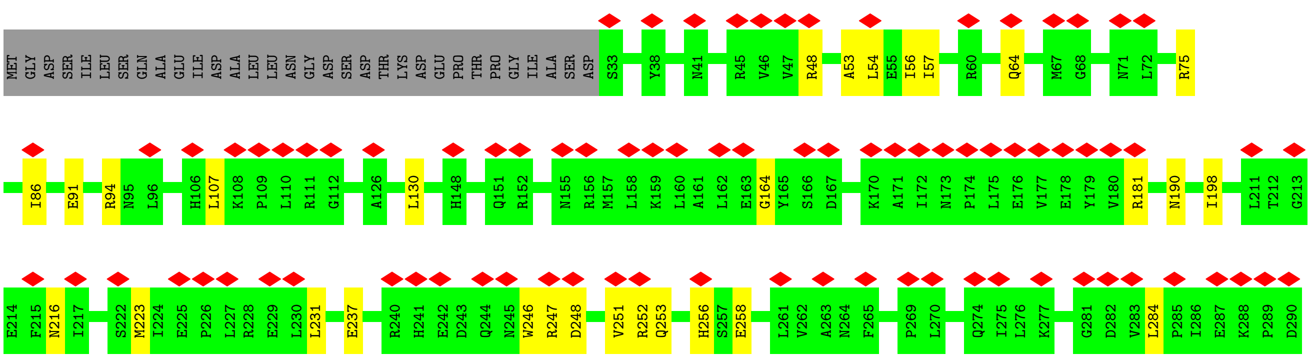
• Molecule 3: Flagellar motor switch protein FliM

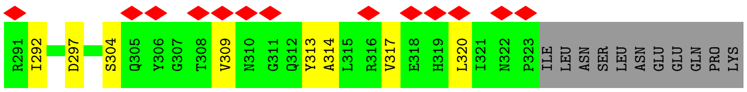
Chain LB:



• Molecule 3: Flagellar motor switch protein FliM

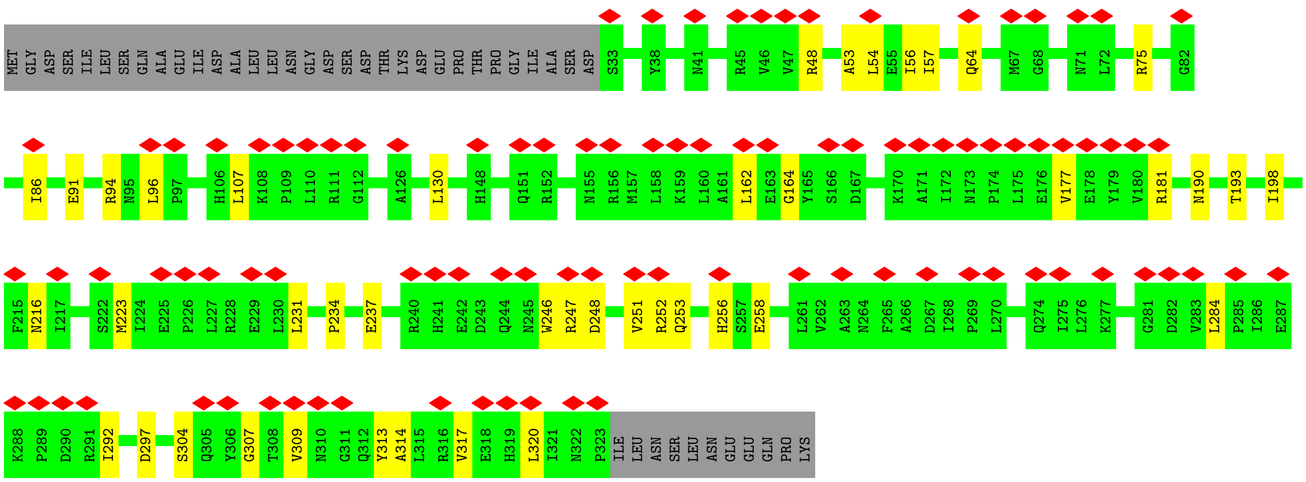
Chain RB:





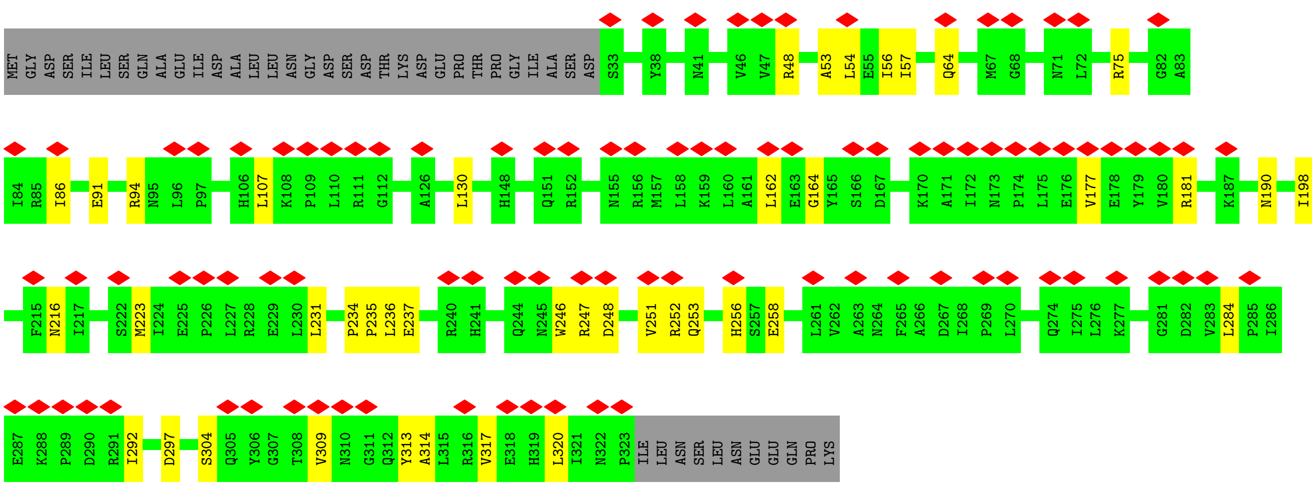
• Molecule 3: Flagellar motor switch protein FliM

Chain XB:



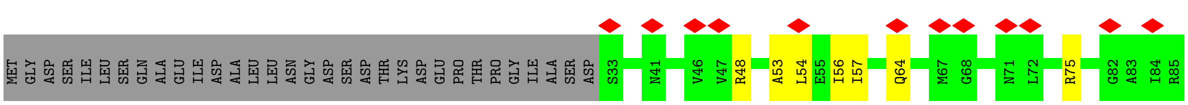
• Molecule 3: Flagellar motor switch protein FliM

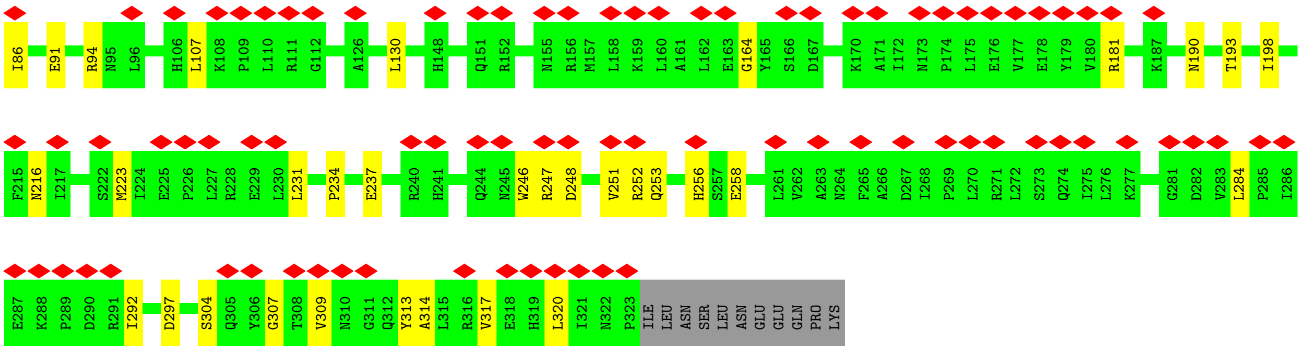
Chain DC:



• Molecule 3: Flagellar motor switch protein FliM

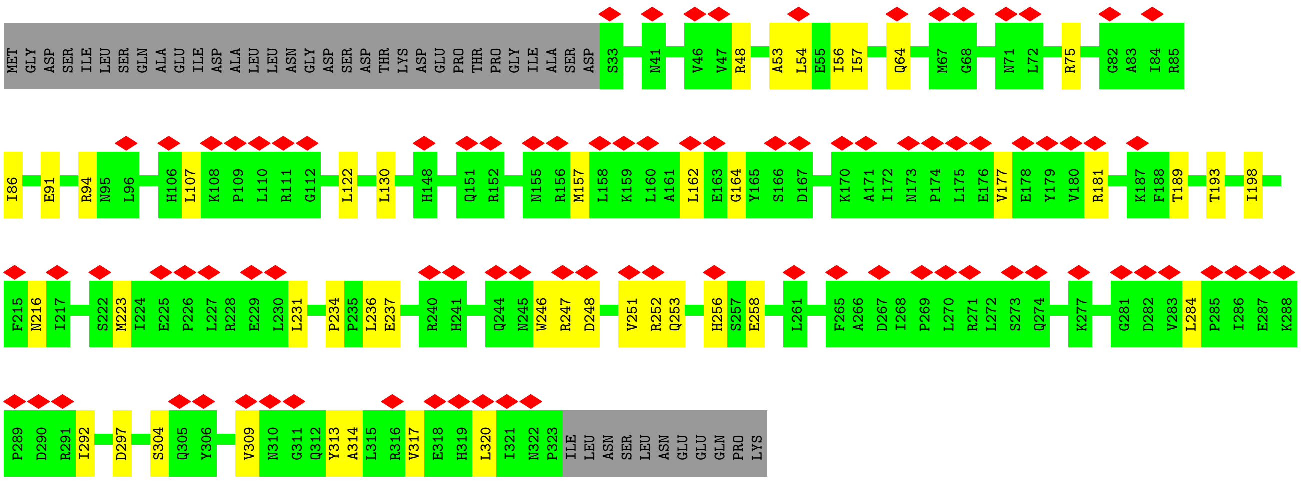
Chain JC:





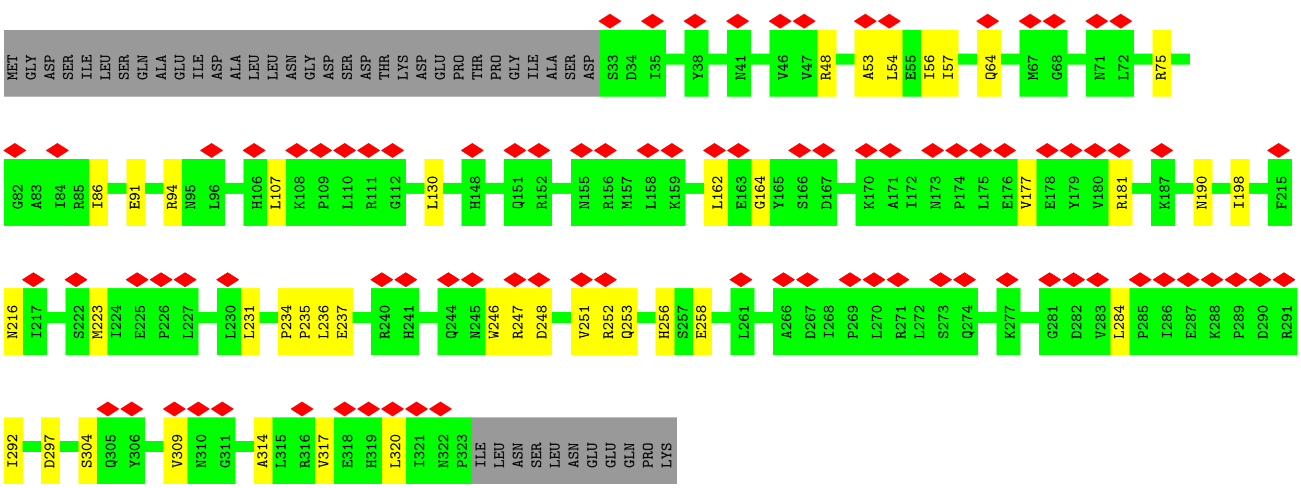
- Molecule 3: Flagellar motor switch protein FliM

Chain PC:



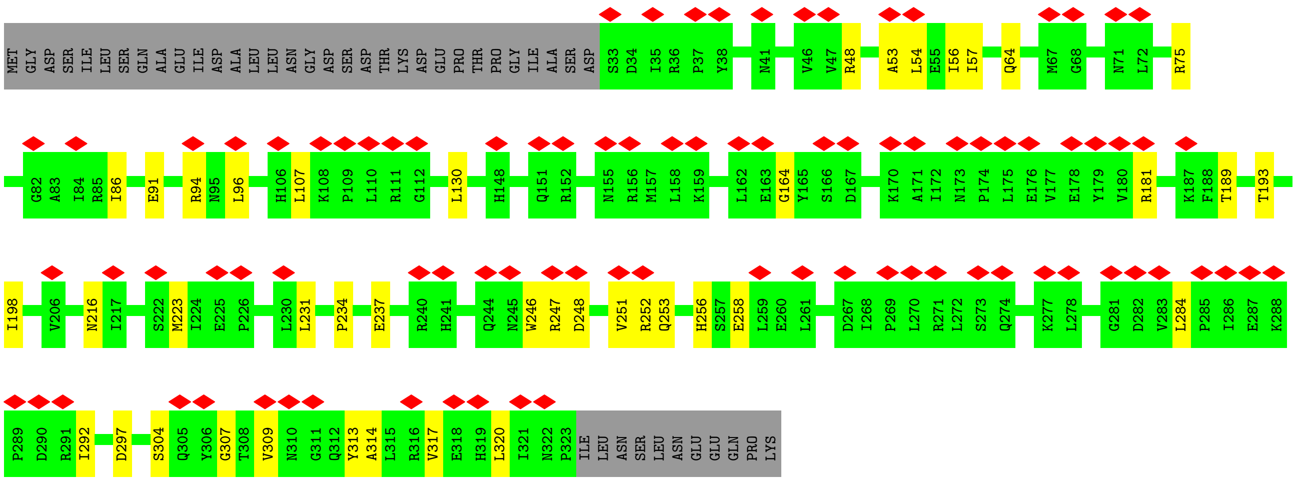
- Molecule 3: Flagellar motor switch protein FliM

Chain VC:



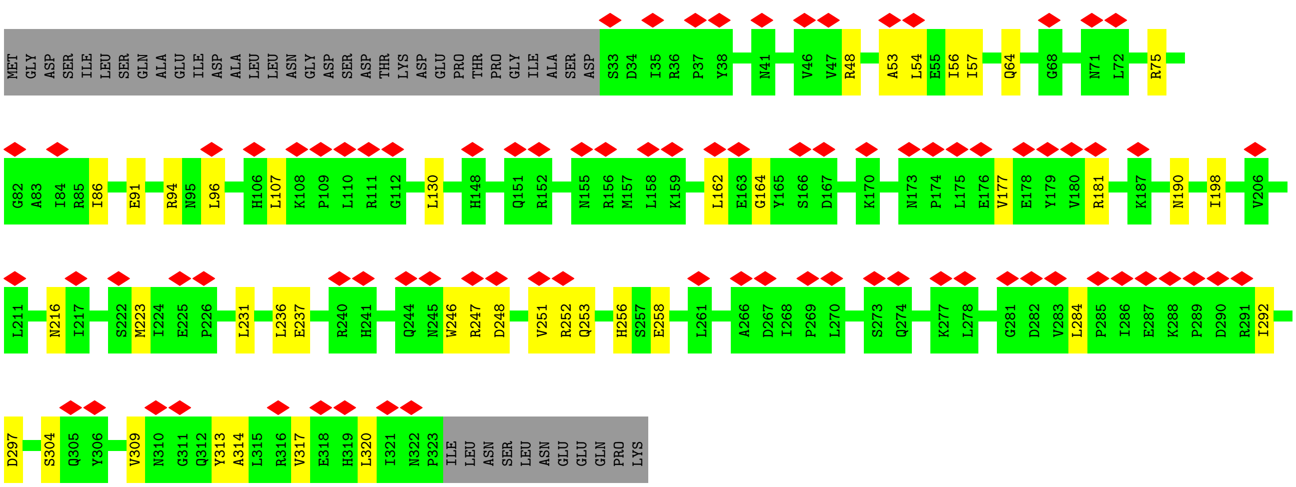
- Molecule 3: Flagellar motor switch protein FliM

Chain BD:

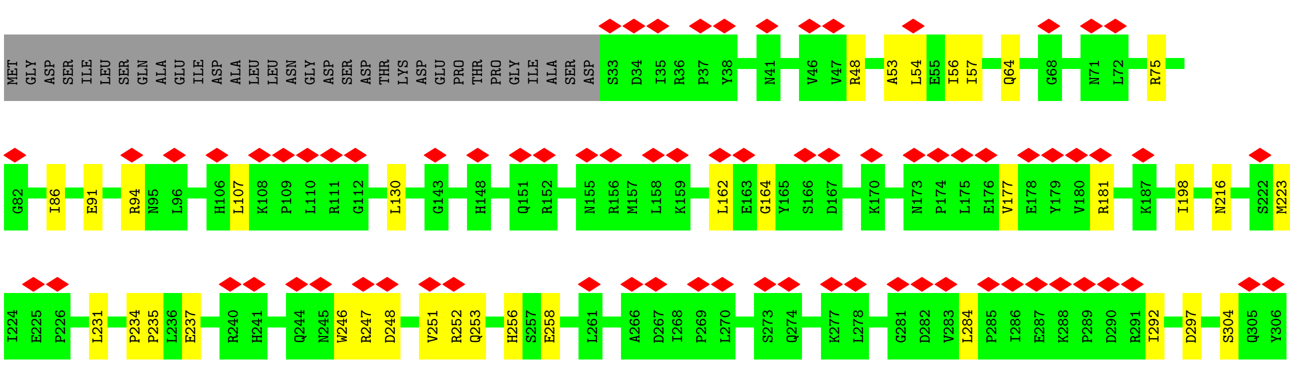
- Molecule 3: Flagellar motor switch protein FliM

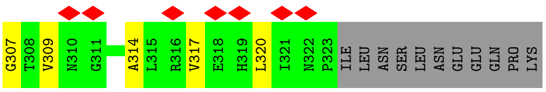
Chain HD:

- Molecule 3: Flagellar motor switch protein FliM

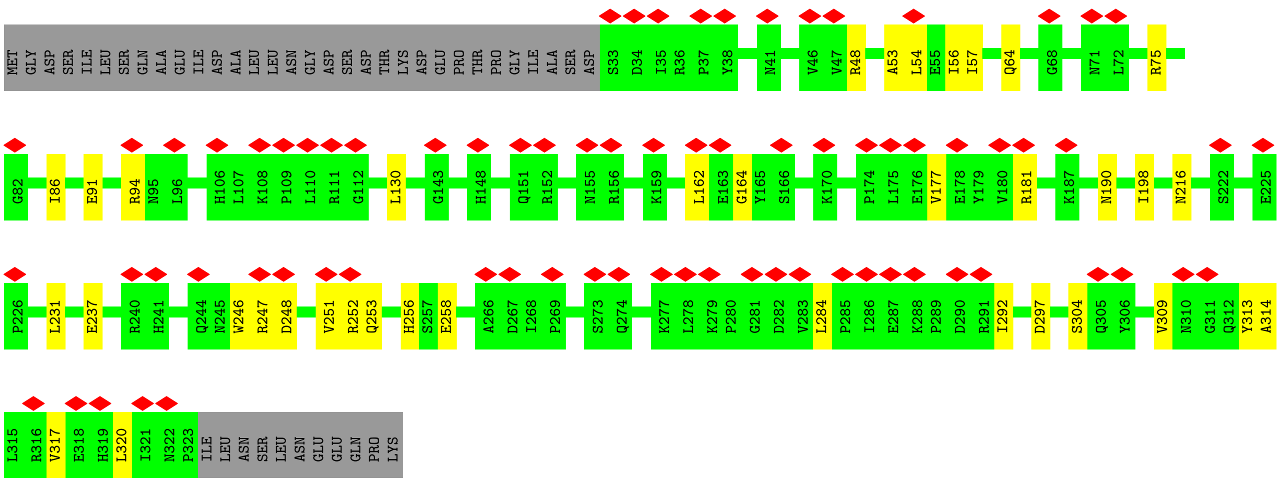
Chain ND:



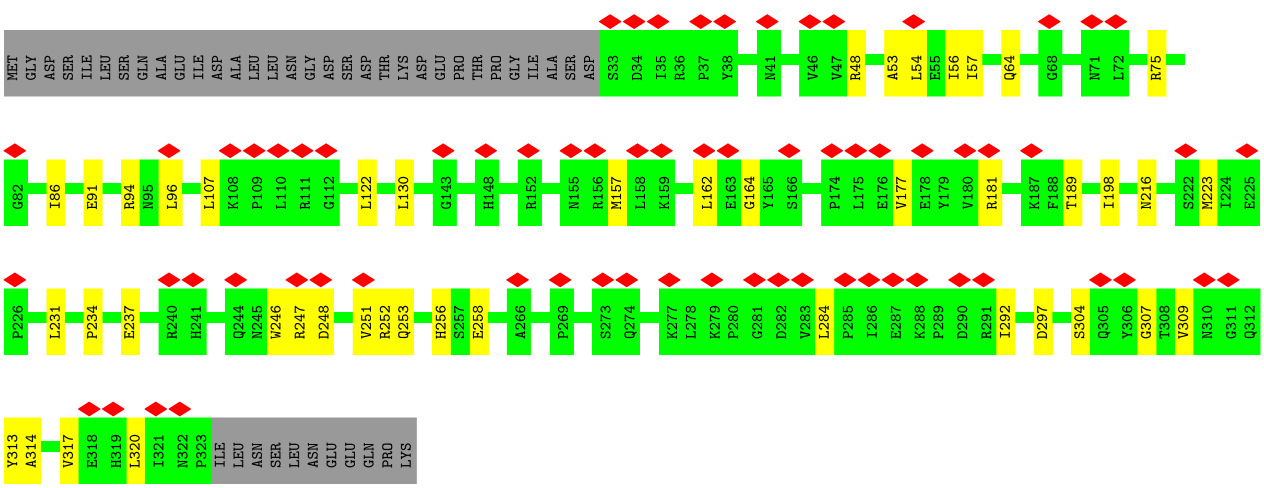
- Molecule 3: Flagellar motor switch protein FliM

Chain TD:



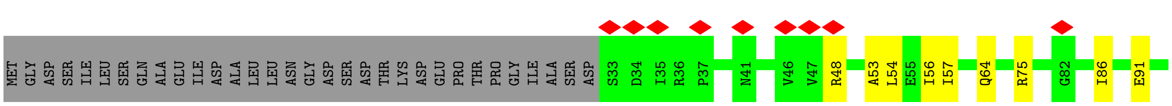
- Molecule 3: Flagellar motor switch protein FliM

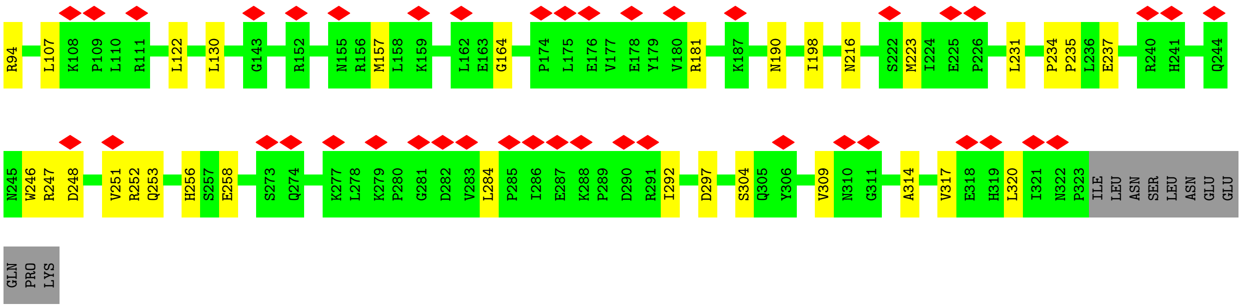
Chain ZD:



- Molecule 3: Flagellar motor switch protein FliM

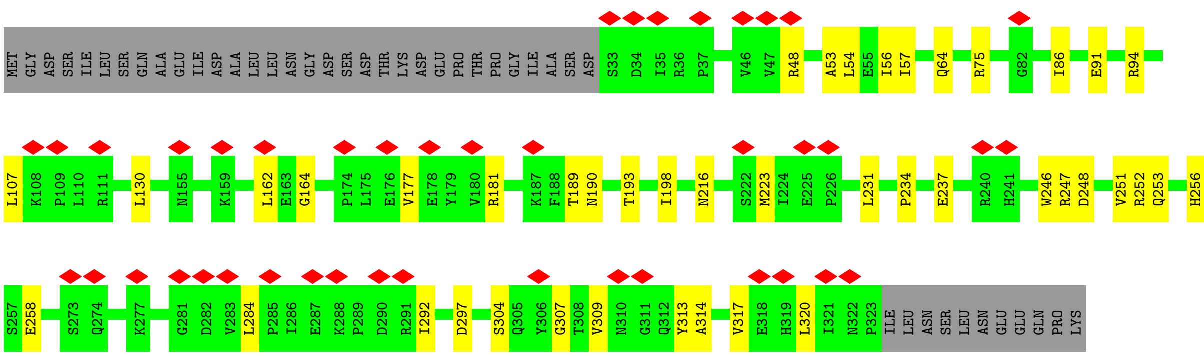
Chain FE:





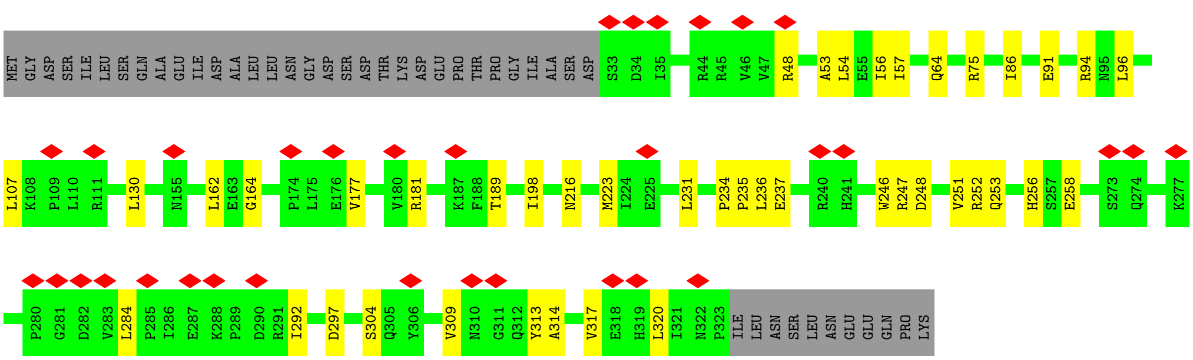
- Molecule 3: Flagellar motor switch protein FliM

Chain LE:



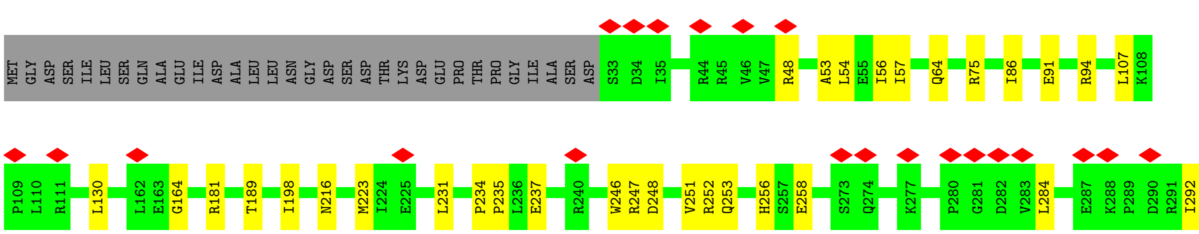
- Molecule 3: Flagellar motor switch protein FliM

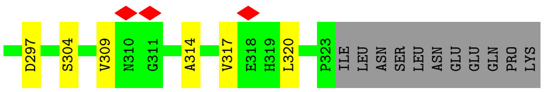
Chain RE:



- Molecule 3: Flagellar motor switch protein FliM

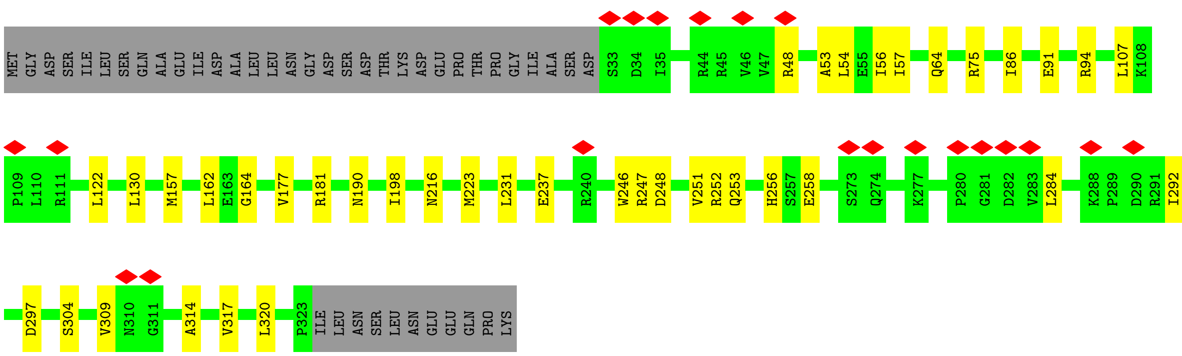
Chain XE:





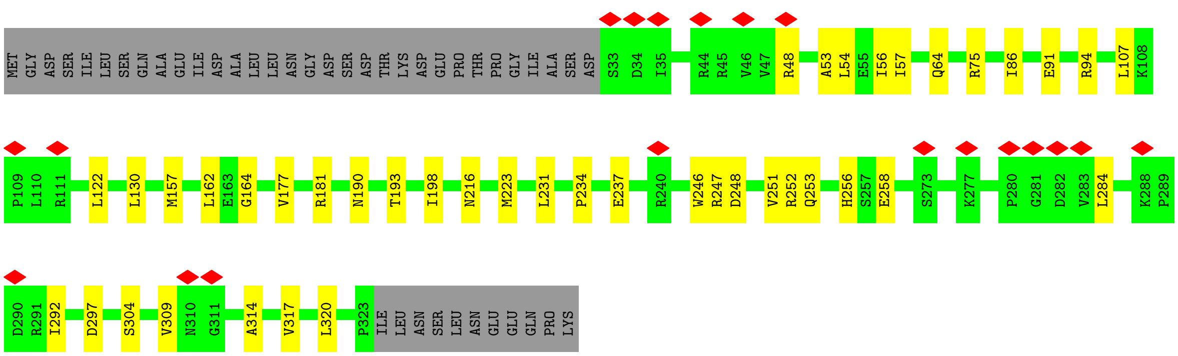
- Molecule 3: Flagellar motor switch protein FliM

Chain DF:



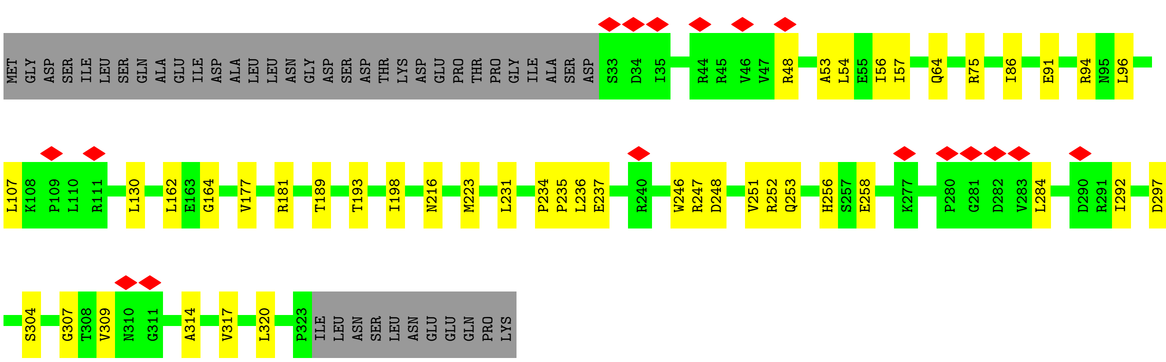
- Molecule 3: Flagellar motor switch protein FliM

Chain JF:

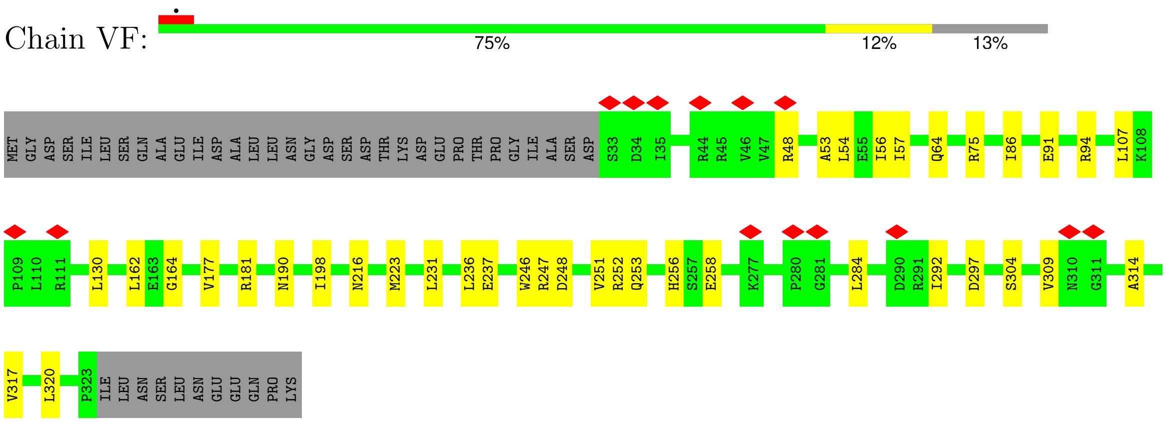


- Molecule 3: Flagellar motor switch protein FliM

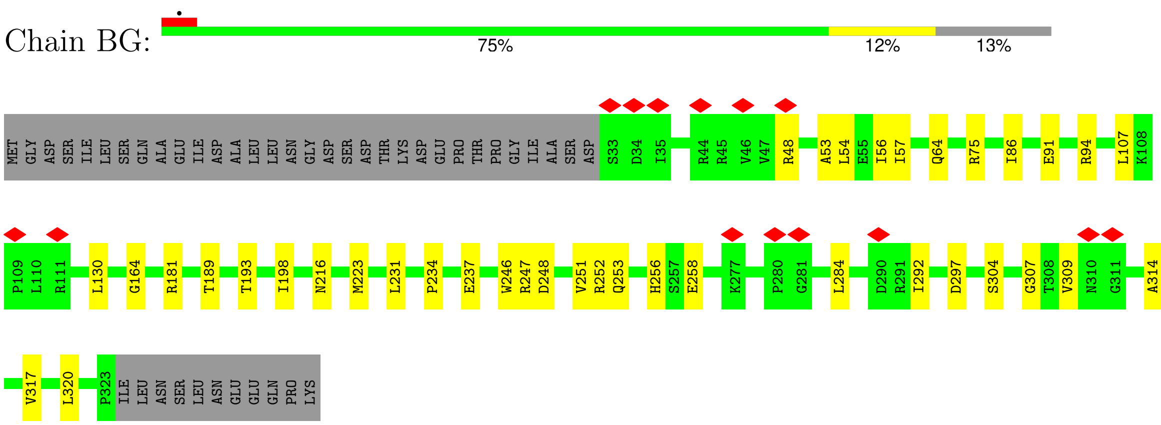
Chain PF:



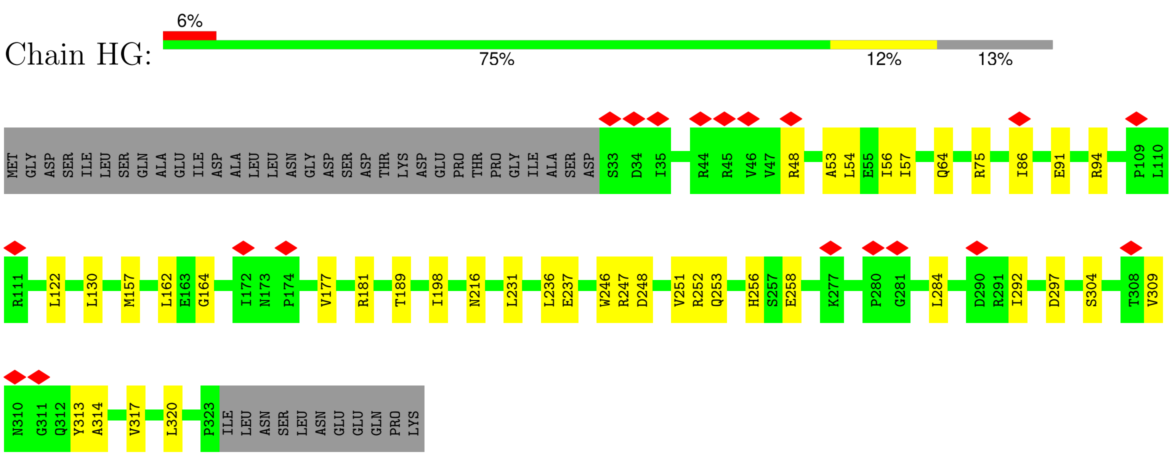
- Molecule 3: Flagellar motor switch protein FliM



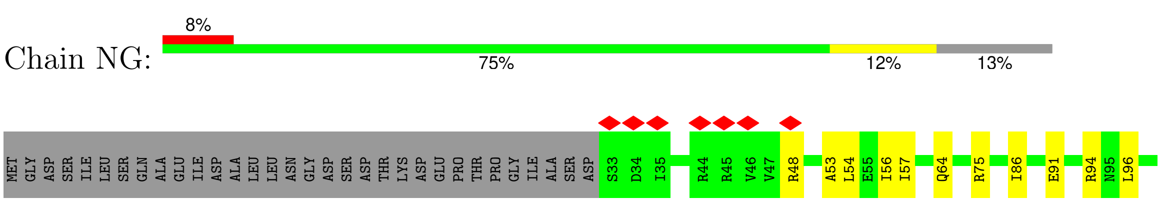
• Molecule 3: Flagellar motor switch protein FliM

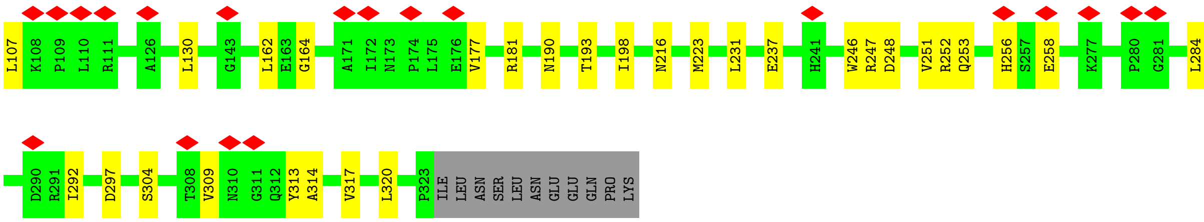


• Molecule 3: Flagellar motor switch protein FliM



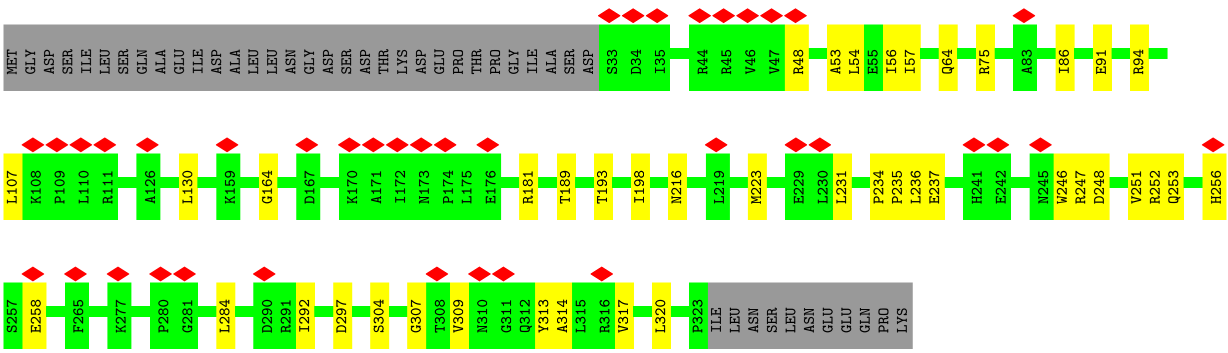
• Molecule 3: Flagellar motor switch protein FliM





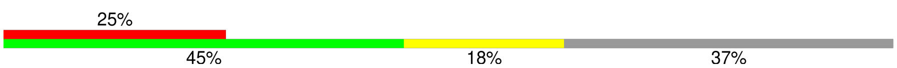
• Molecule 3: Flagellar motor switch protein FliM

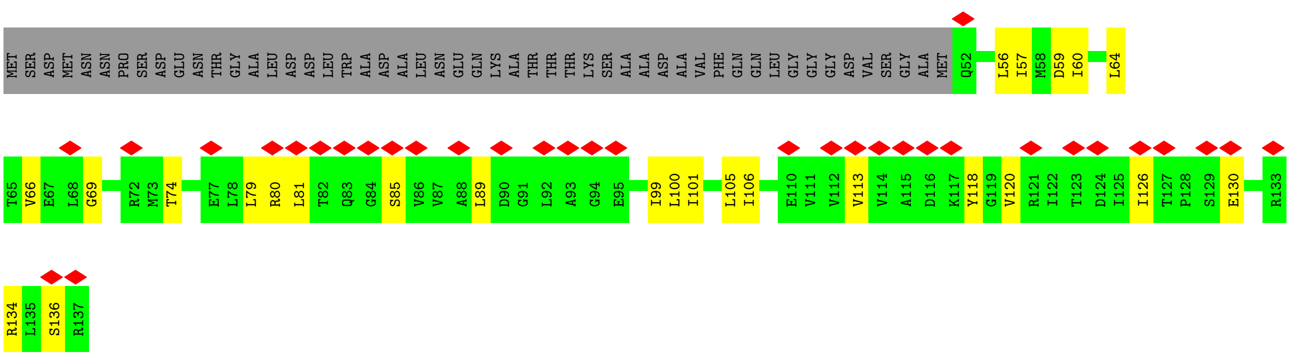
Chain TG:



• Molecule 4: Flagellar motor switch protein FliN

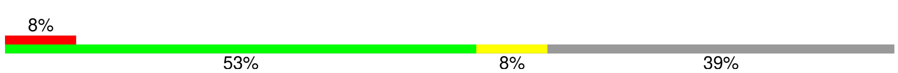
Chain N:

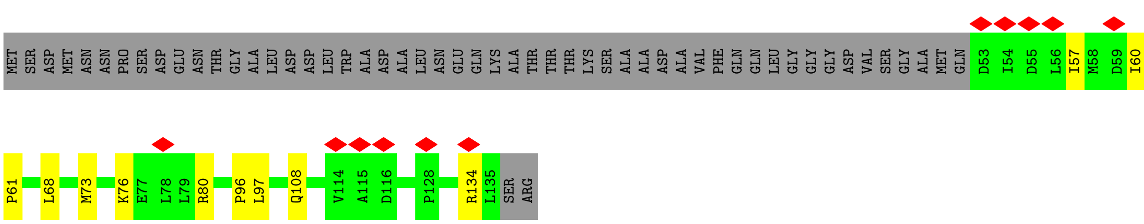




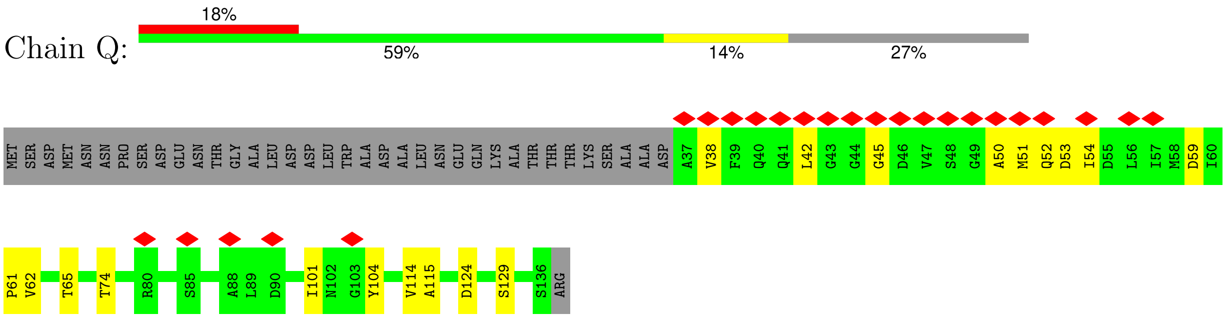
• Molecule 4: Flagellar motor switch protein FliN

Chain P:

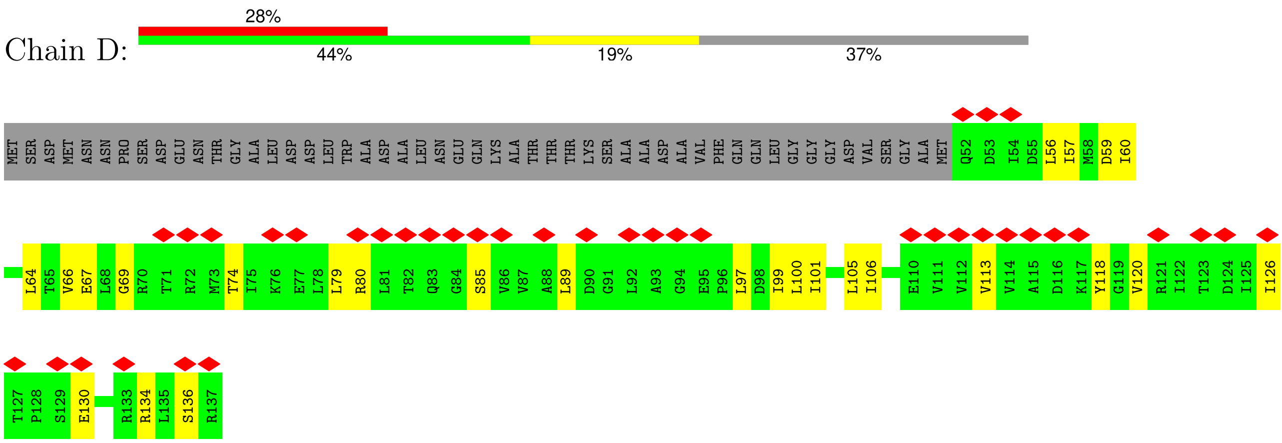




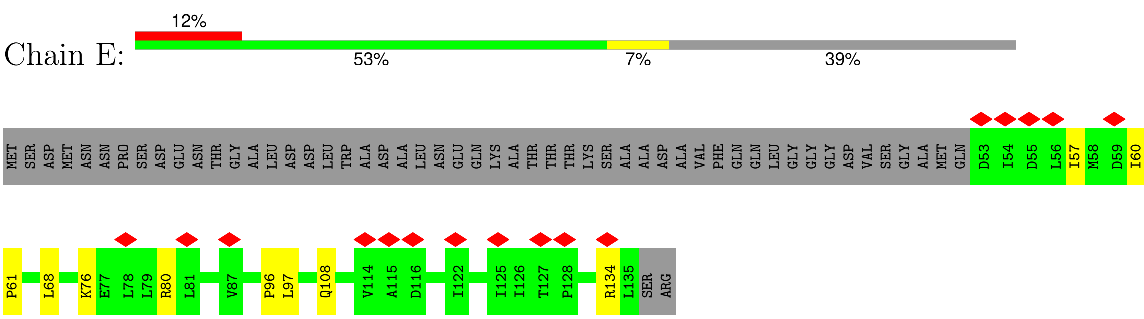
• Molecule 4: Flagellar motor switch protein FliN



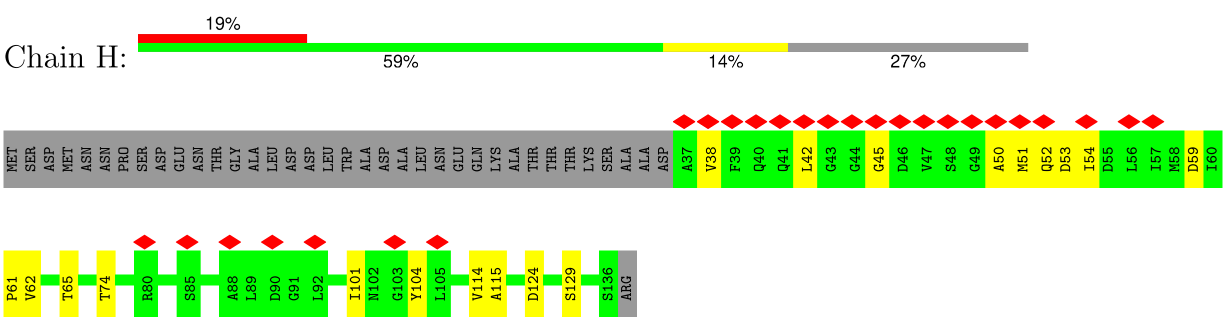
• Molecule 4: Flagellar motor switch protein FliN



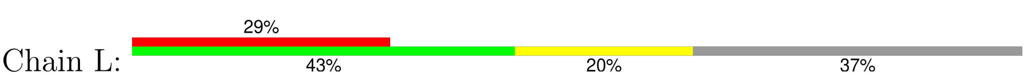
• Molecule 4: Flagellar motor switch protein FliN

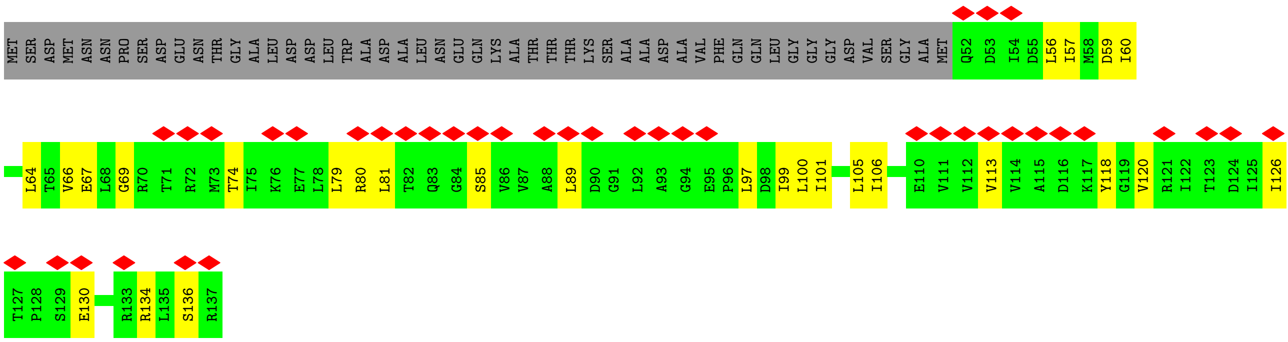


• Molecule 4: Flagellar motor switch protein FliN



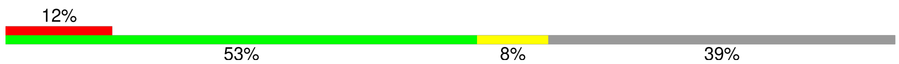
• Molecule 4: Flagellar motor switch protein FliN

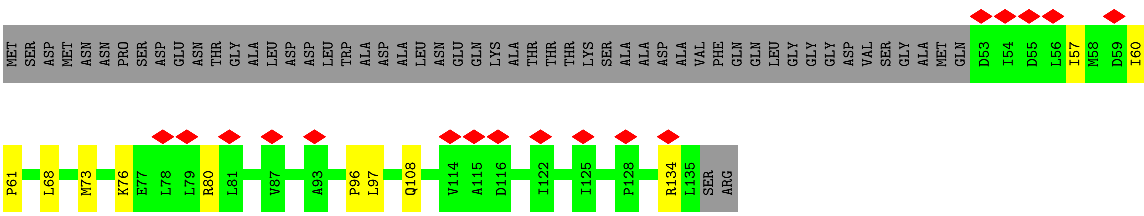




- Molecule 4: Flagellar motor switch protein FliN

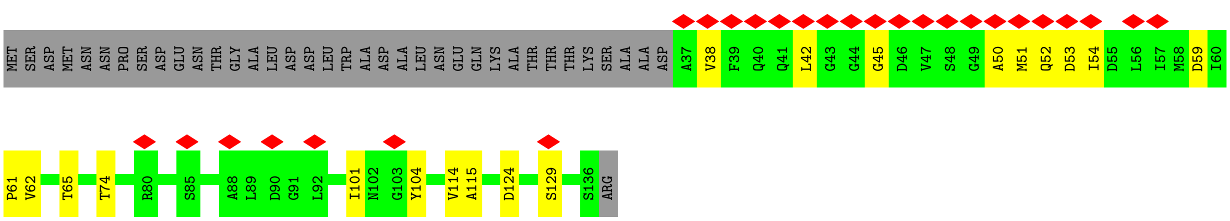
Chain O:





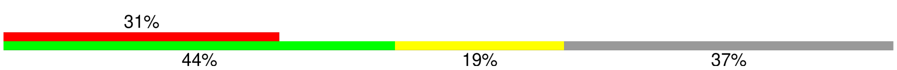
- Molecule 4: Flagellar motor switch protein FliN

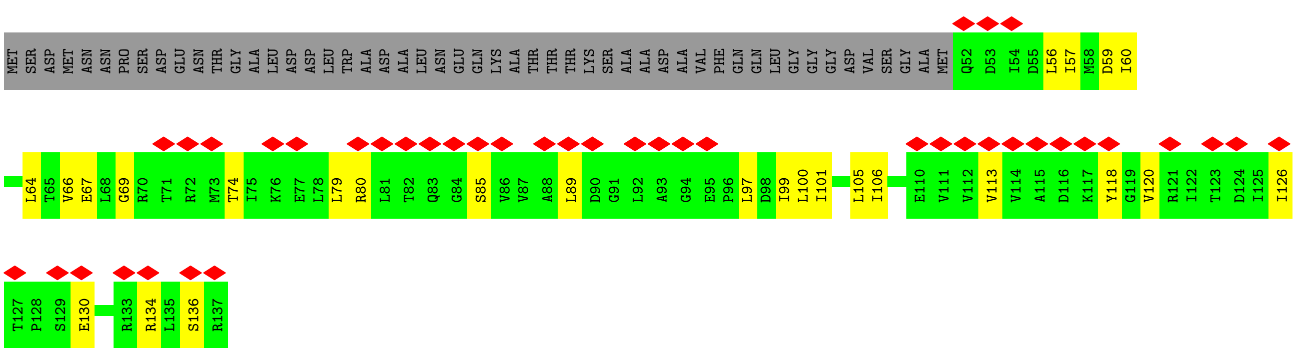
Chain R:



- Molecule 4: Flagellar motor switch protein FliN

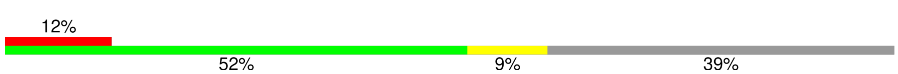
Chain W:

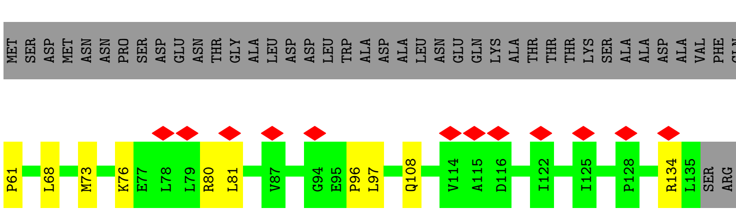




- Molecule 4: Flagellar motor switch protein FliN

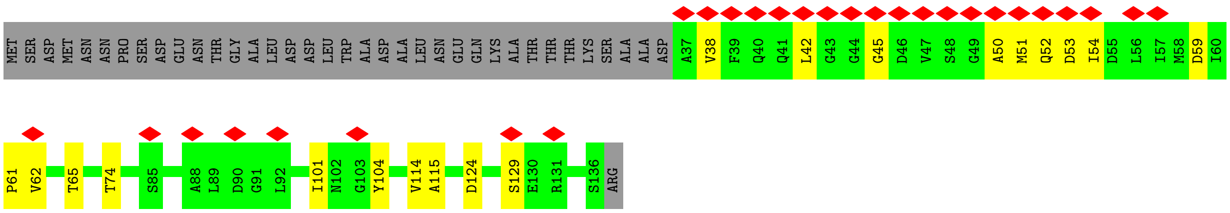
Chain X:





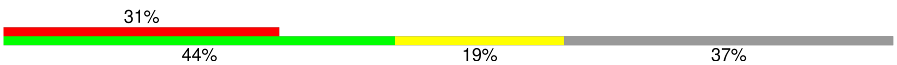
• Molecule 4: Flagellar motor switch protein FliN

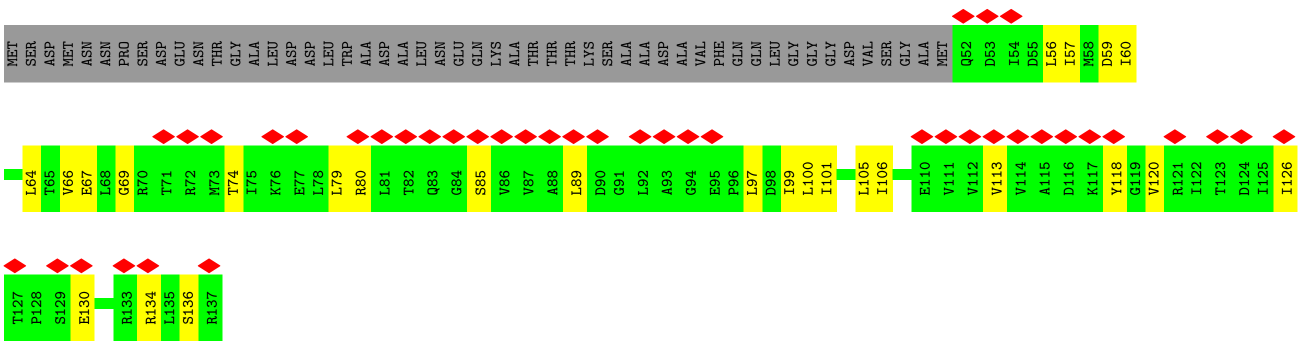
Chain Y:



• Molecule 4: Flagellar motor switch protein FliN

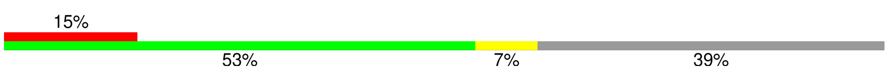
Chain CA:

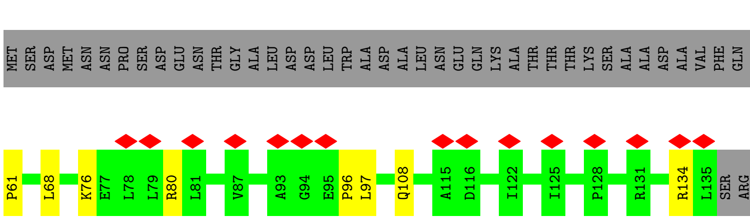




• Molecule 4: Flagellar motor switch protein FliN

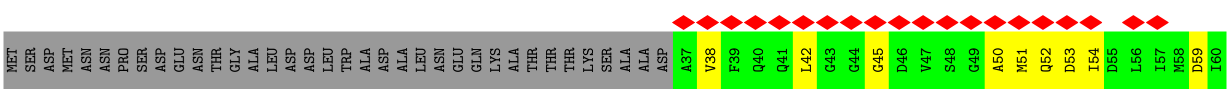
Chain DA:

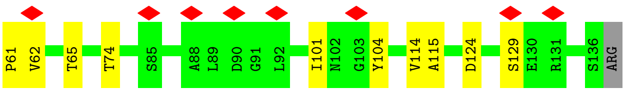




• Molecule 4: Flagellar motor switch protein FliN

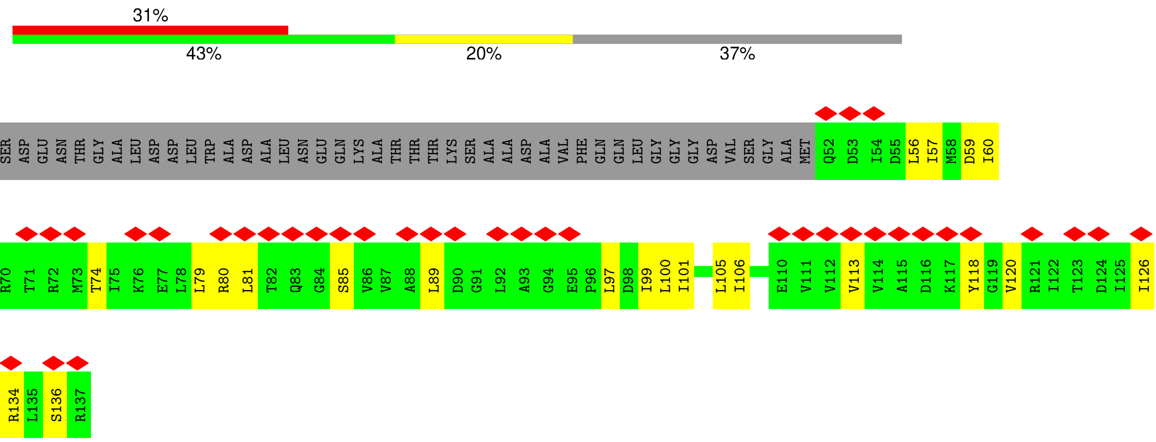
Chain EA:





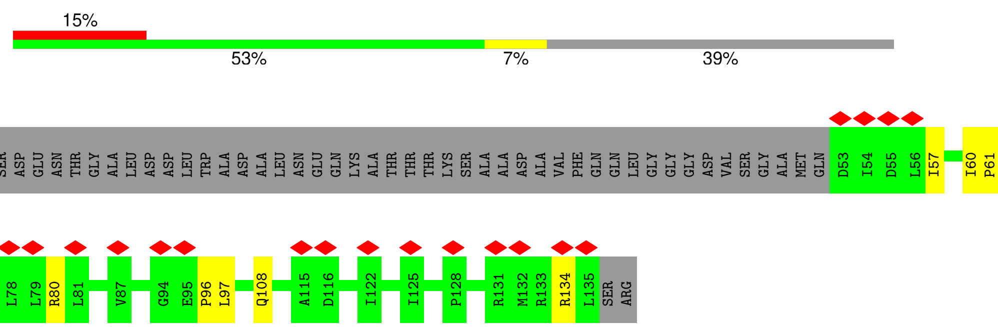
• Molecule 4: Flagellar motor switch protein FliN

Chain IA:



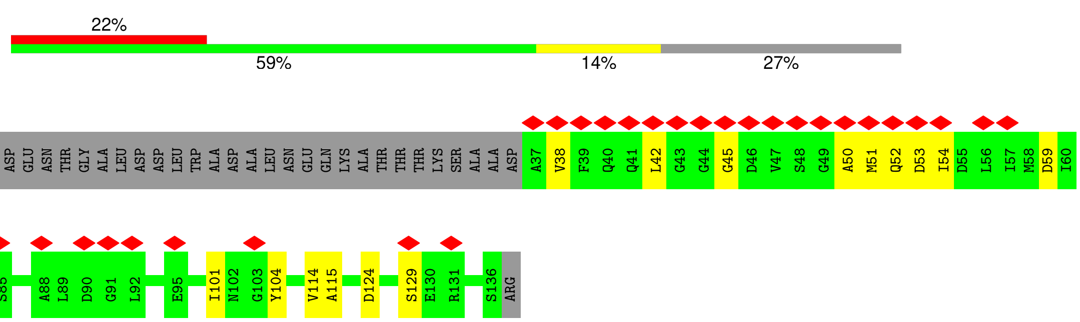
• Molecule 4: Flagellar motor switch protein FliN

Chain JA:



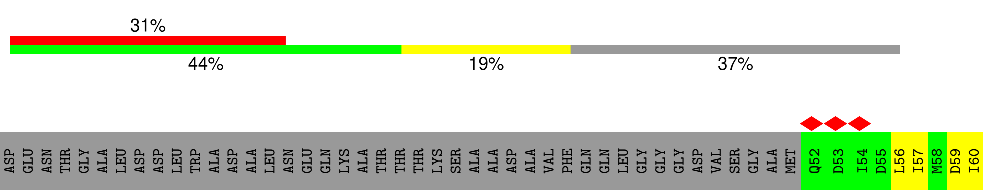
• Molecule 4: Flagellar motor switch protein FliN

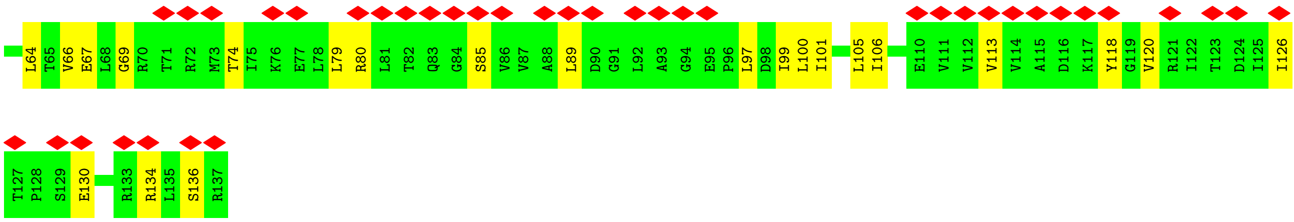
Chain KA:



• Molecule 4: Flagellar motor switch protein FliN

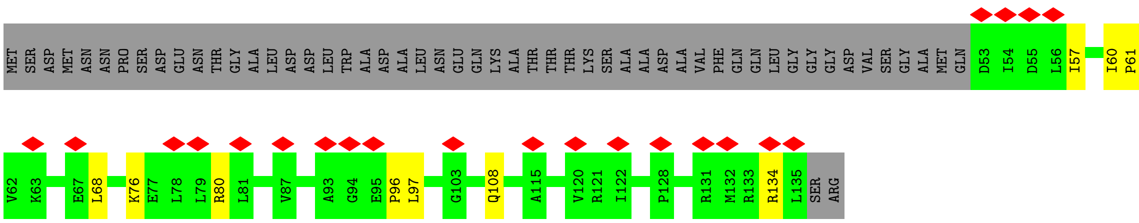
Chain OA:





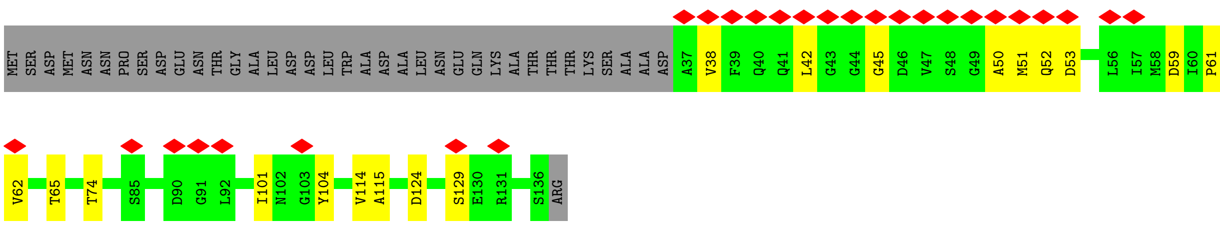
- Molecule 4: Flagellar motor switch protein FliN

Chain PA:



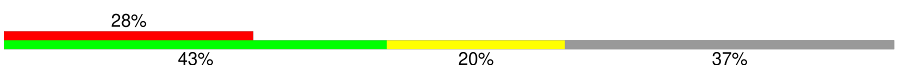
- Molecule 4: Flagellar motor switch protein FliN

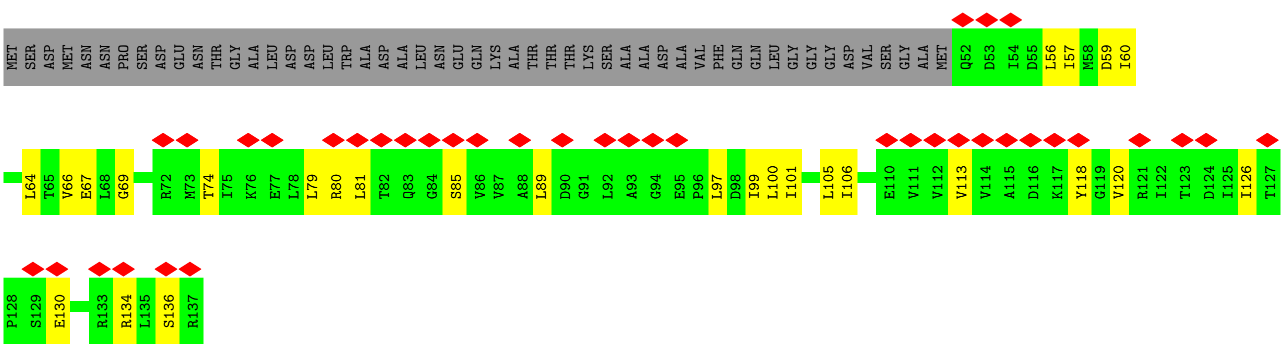
Chain QA:



- Molecule 4: Flagellar motor switch protein FliN

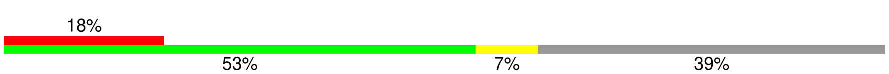
Chain UA:

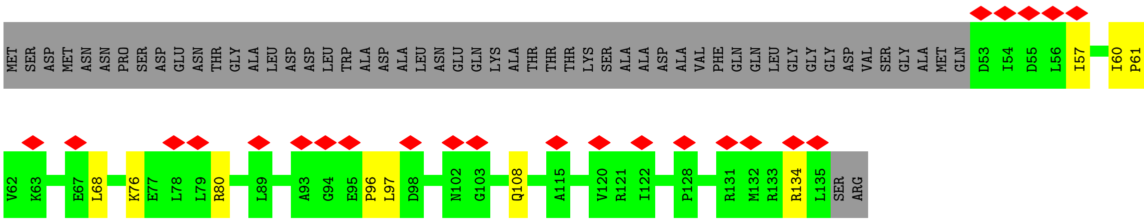




- Molecule 4: Flagellar motor switch protein FliN

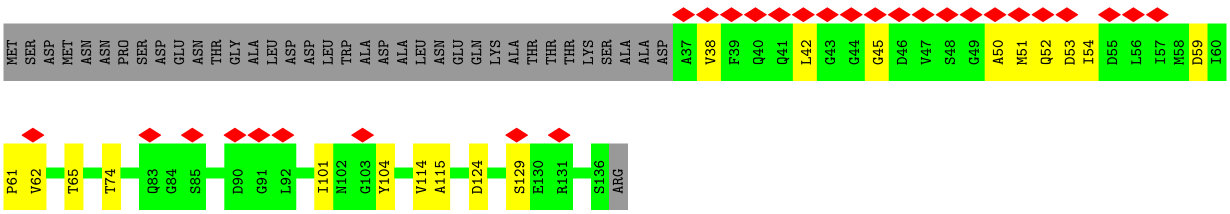
Chain VA:





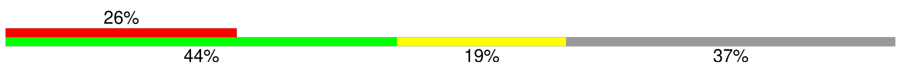
• Molecule 4: Flagellar motor switch protein FliN

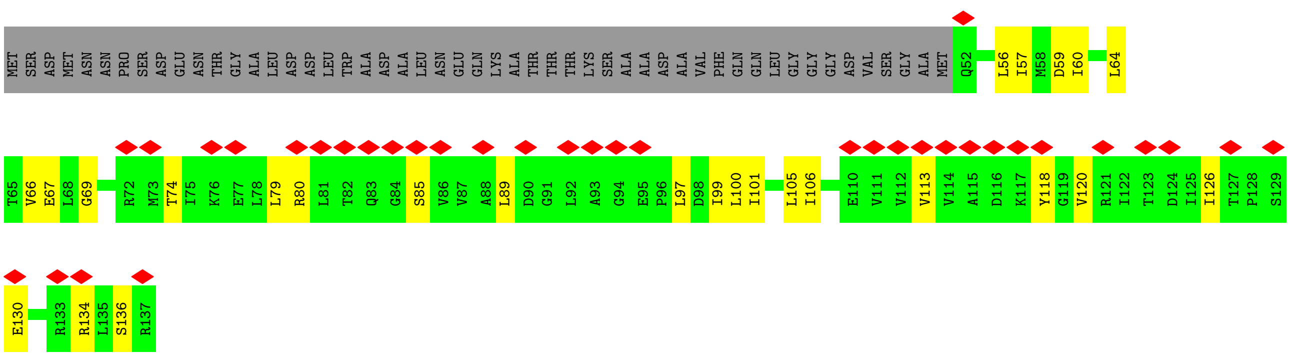
Chain WA:



• Molecule 4: Flagellar motor switch protein FliN

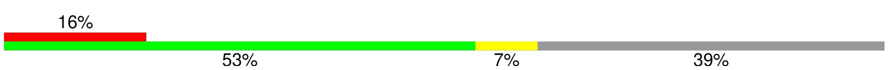
Chain AB:

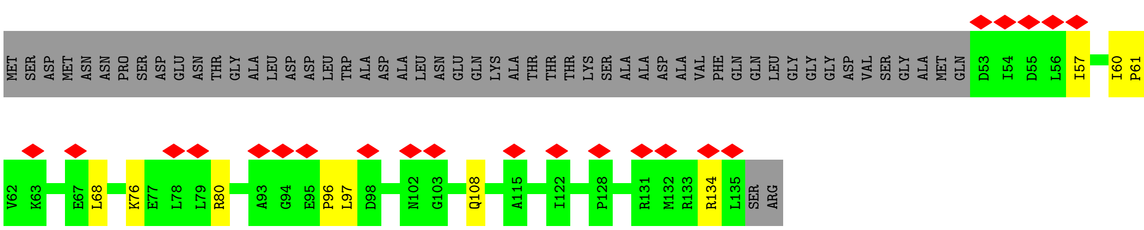




• Molecule 4: Flagellar motor switch protein FliN

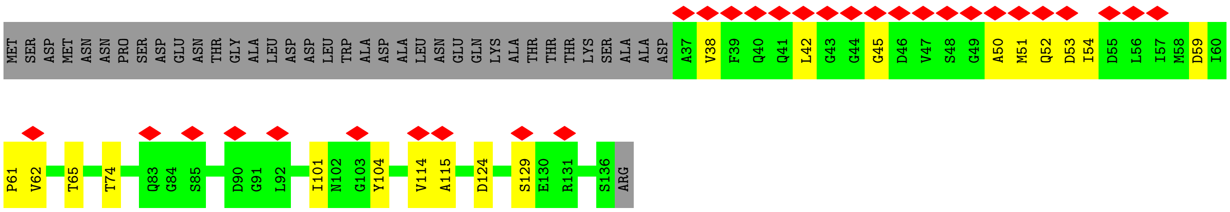
Chain BB:





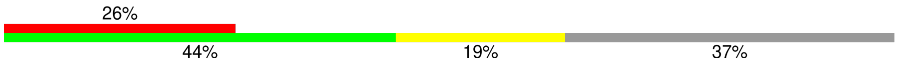
• Molecule 4: Flagellar motor switch protein FliN

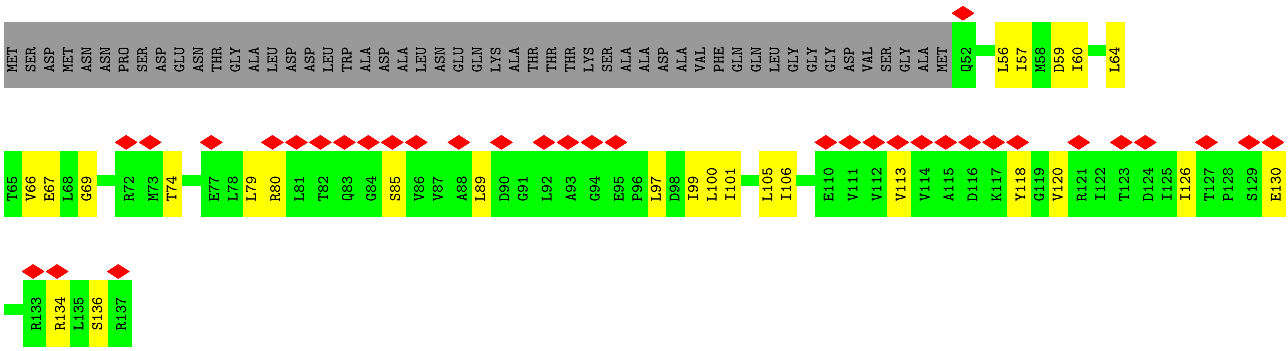
Chain CB:



• Molecule 4: Flagellar motor switch protein FliN

Chain GB:





• Molecule 4: Flagellar motor switch protein FliN

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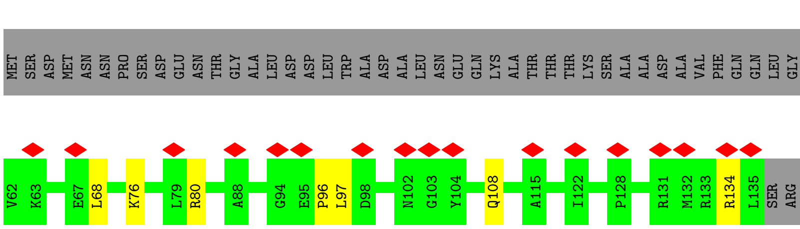
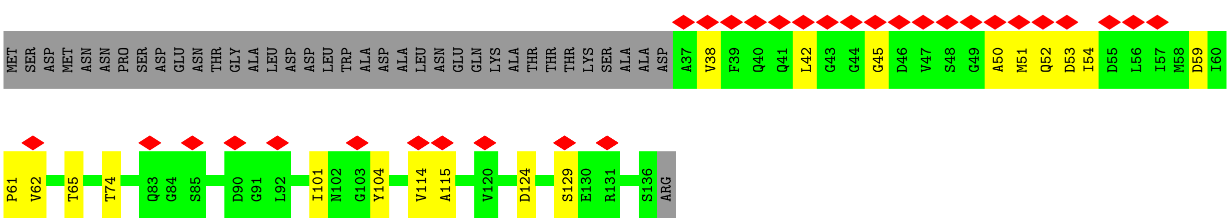


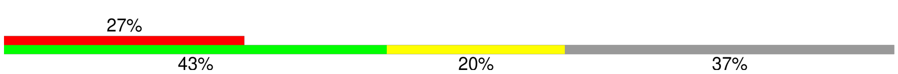
• Molecule 4: Flagellar motor switch protein FliN

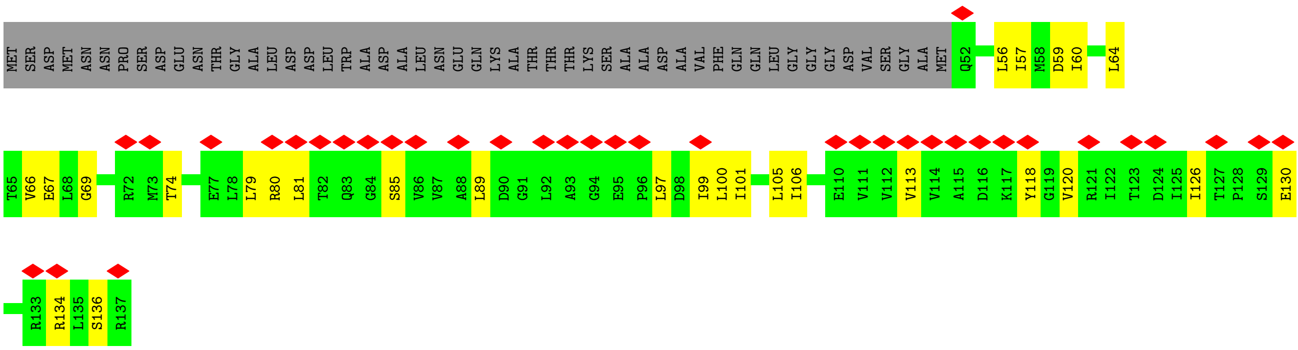
Chain IB:



• Molecule 4: Flagellar motor switch protein FliN

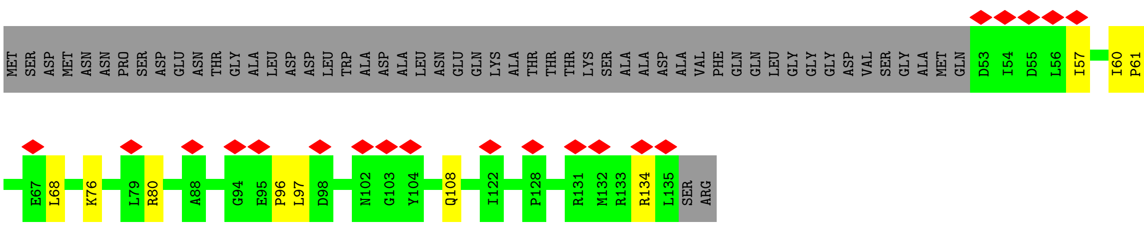
Chain MB:





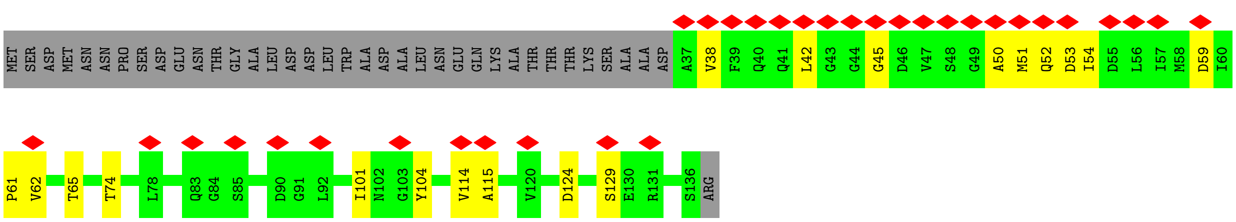
- Molecule 4: Flagellar motor switch protein FliN

Chain NB:



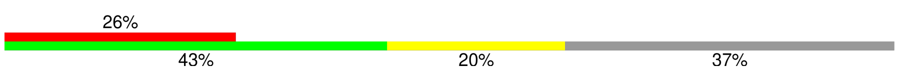
- Molecule 4: Flagellar motor switch protein FliN

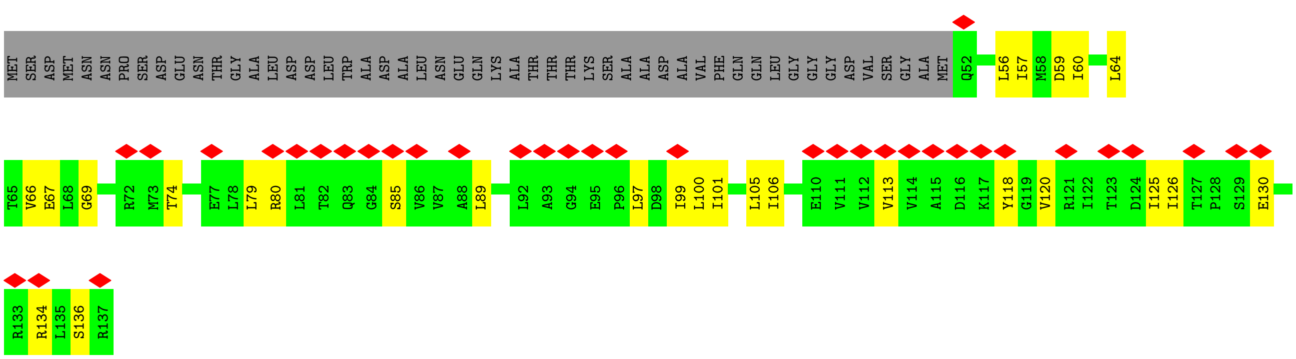
Chain OB:



- Molecule 4: Flagellar motor switch protein FliN

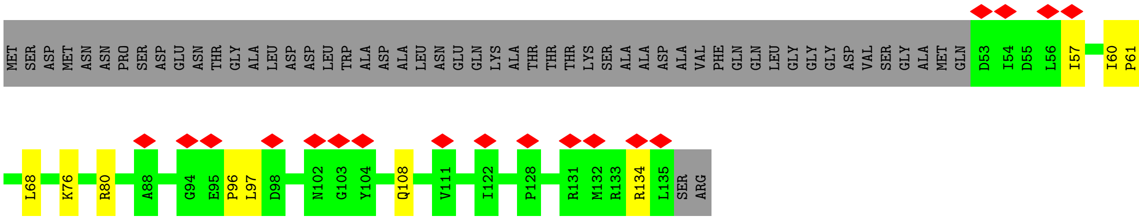
Chain SB:





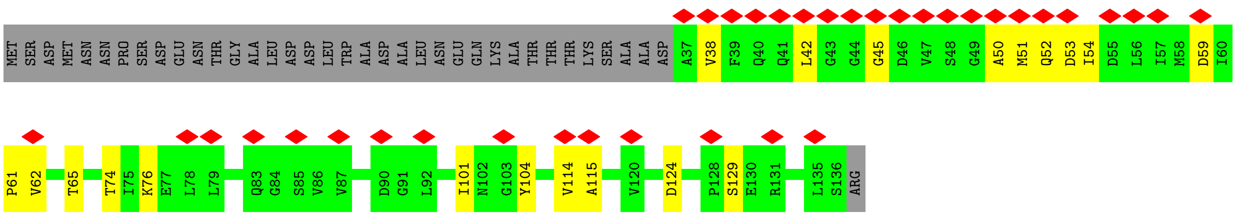
- Molecule 4: Flagellar motor switch protein FliN

Chain TB:



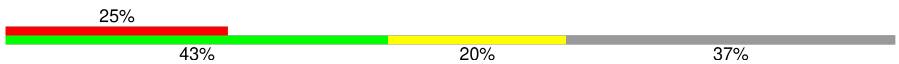
• Molecule 4: Flagellar motor switch protein FliN

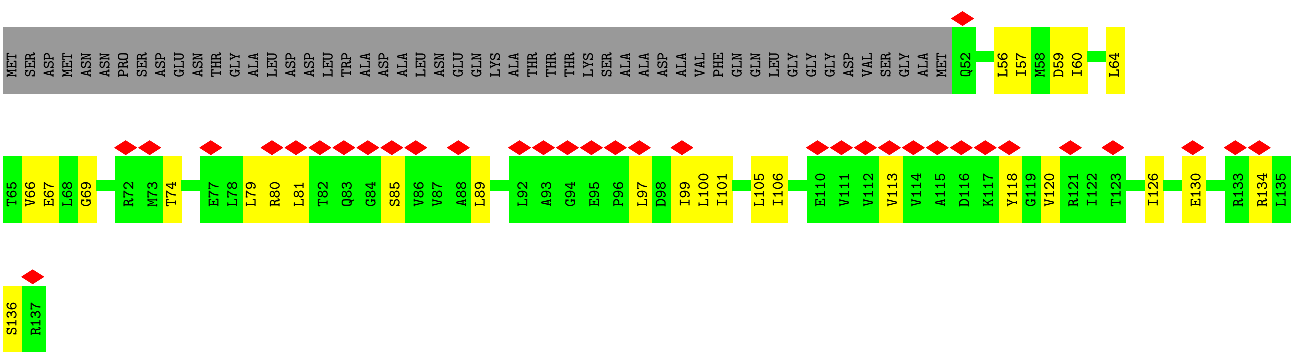
Chain UB:



• Molecule 4: Flagellar motor switch protein FliN

Chain YB:





• Molecule 4: Flagellar motor switch protein FliN

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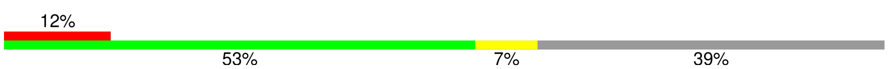
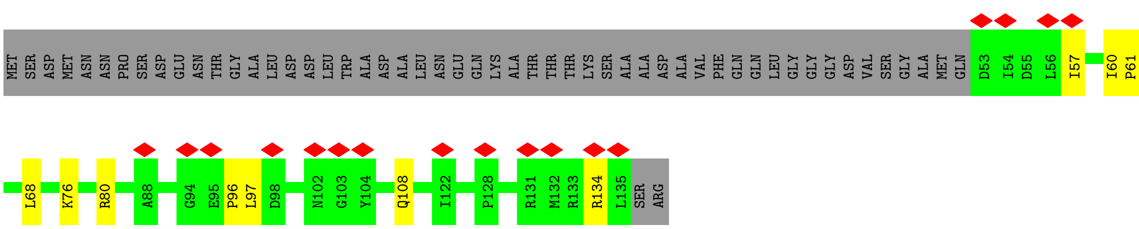
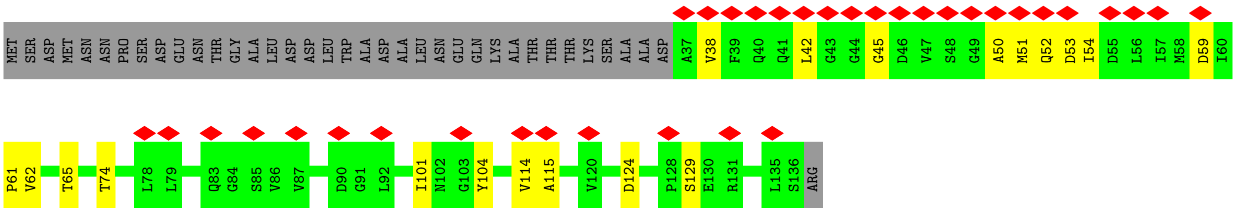




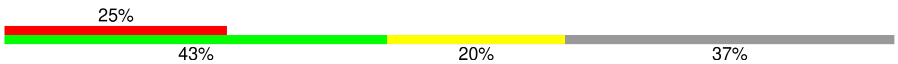
• Molecule 4: Flagellar motor switch protein FliN

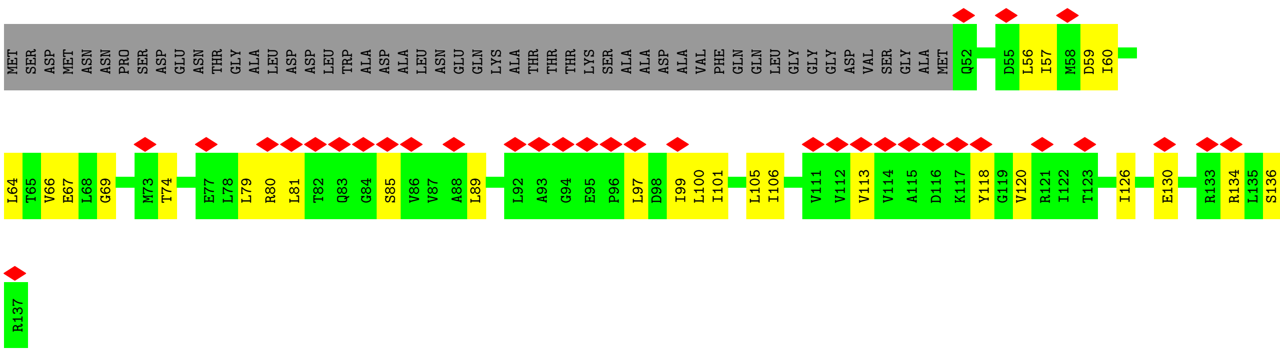
Chain AC:



• Molecule 4: Flagellar motor switch protein FliN

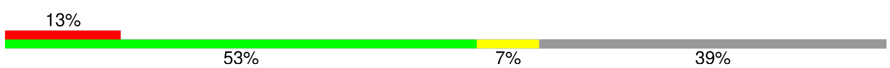
Chain EC:

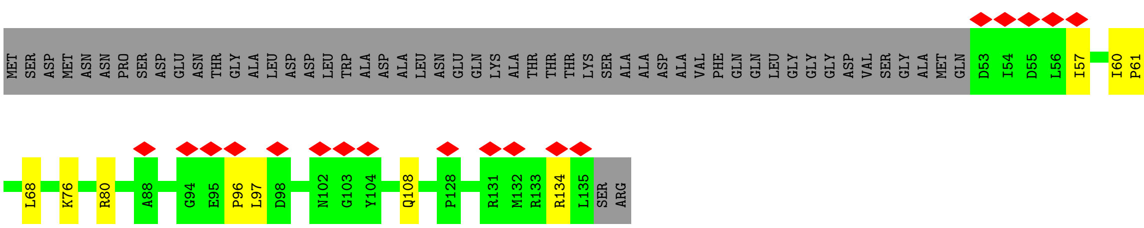




• Molecule 4: Flagellar motor switch protein FliN

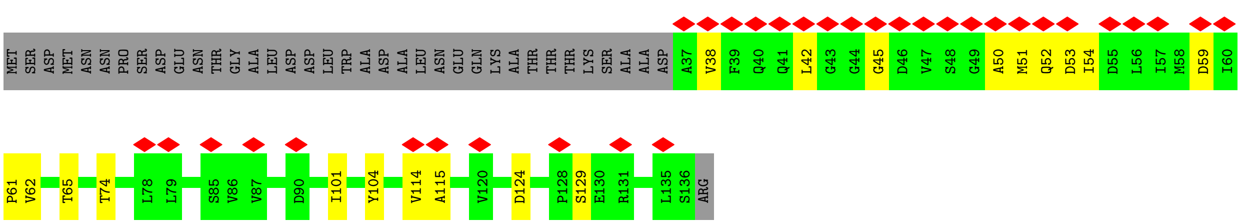
Chain FC:





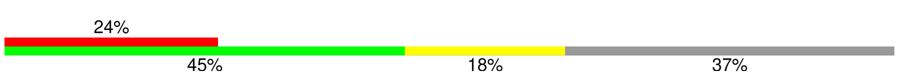
• Molecule 4: Flagellar motor switch protein FliN

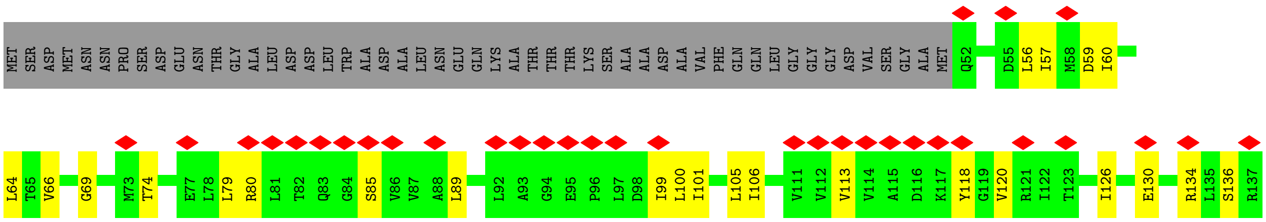
Chain GC:



• Molecule 4: Flagellar motor switch protein FliN

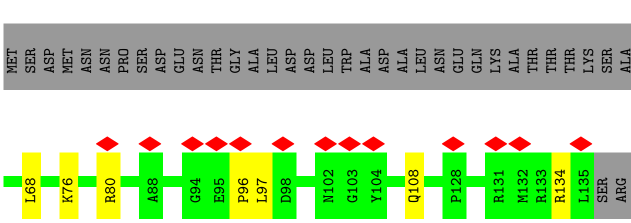
Chain KC:





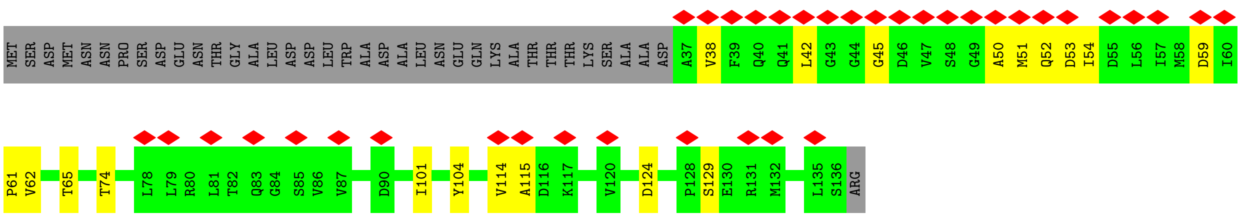
• Molecule 4: Flagellar motor switch protein FliN

Chain LC:



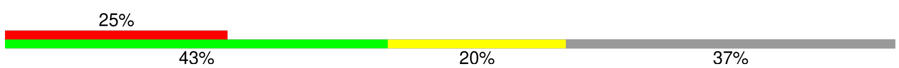
• Molecule 4: Flagellar motor switch protein FliN

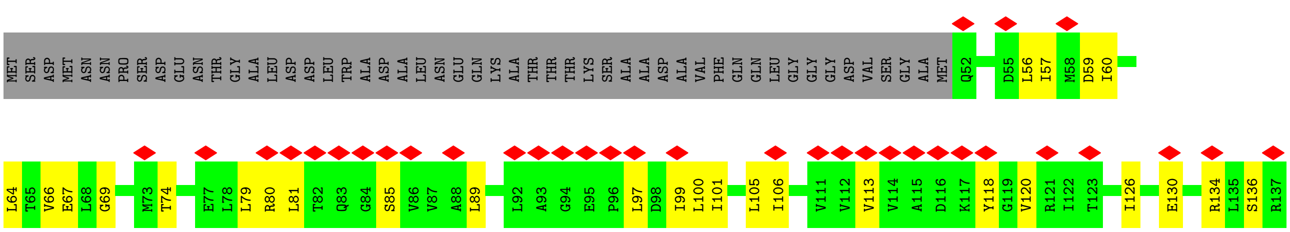
Chain MC:



• Molecule 4: Flagellar motor switch protein FliN

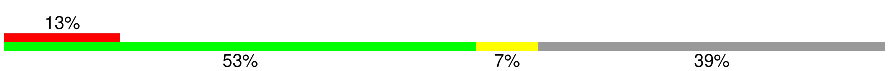
Chain QC:

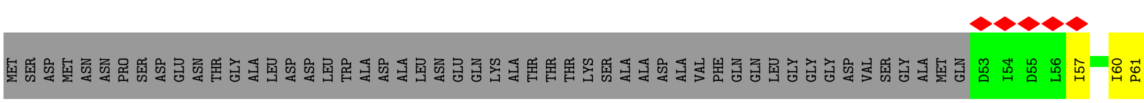


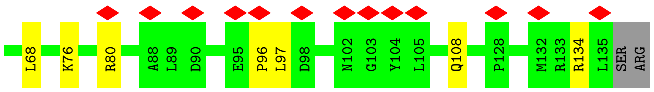


• Molecule 4: Flagellar motor switch protein FliN

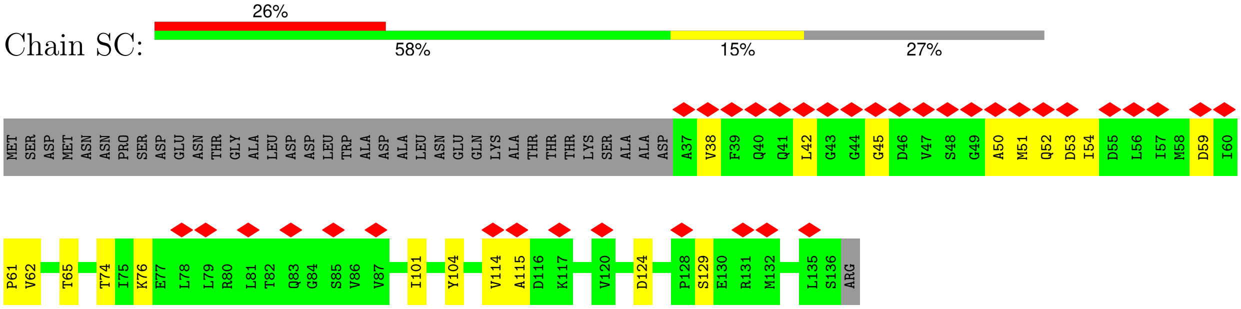
Chain RC:



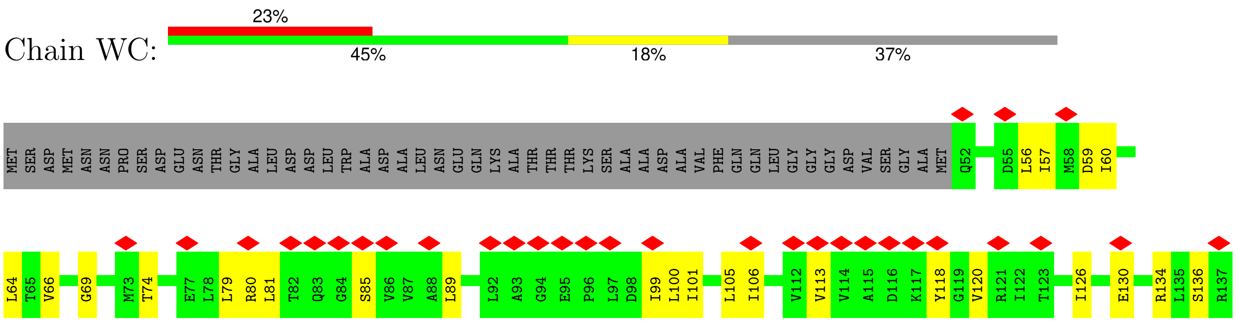




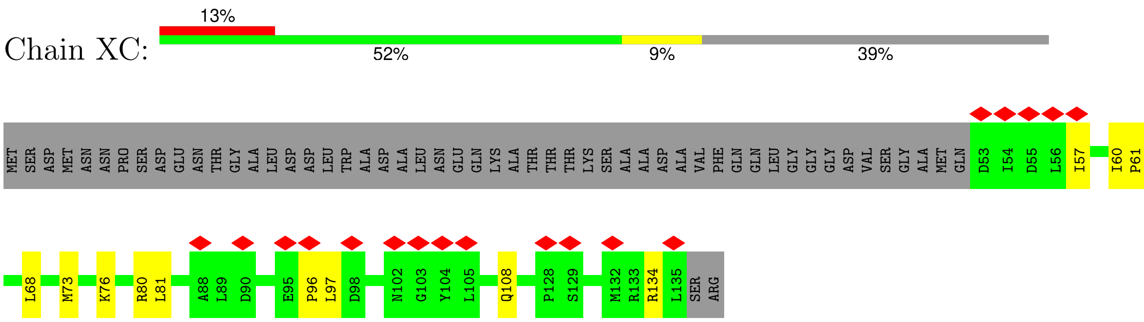
• Molecule 4: Flagellar motor switch protein FliN



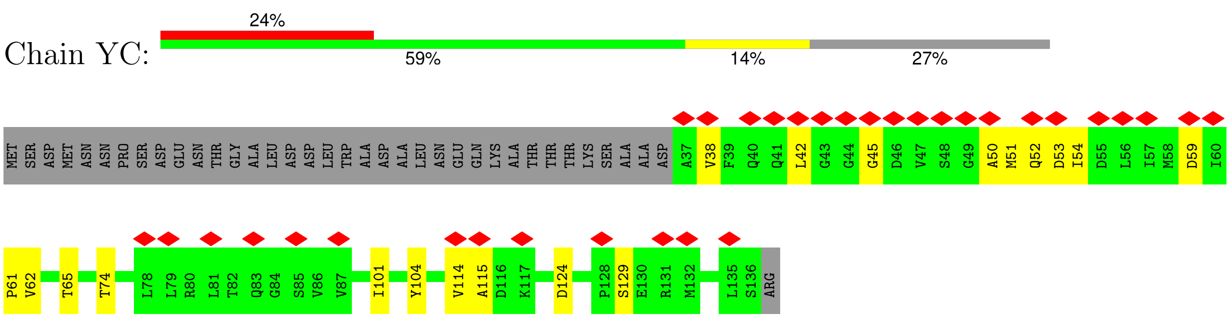
• Molecule 4: Flagellar motor switch protein FliN



• Molecule 4: Flagellar motor switch protein FliN



• Molecule 4: Flagellar motor switch protein FliN



• Molecule 4: Flagellar motor switch protein FliN

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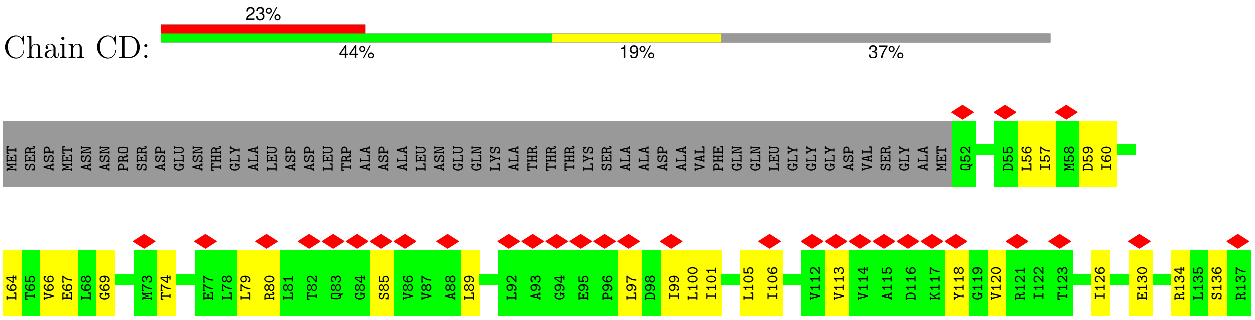
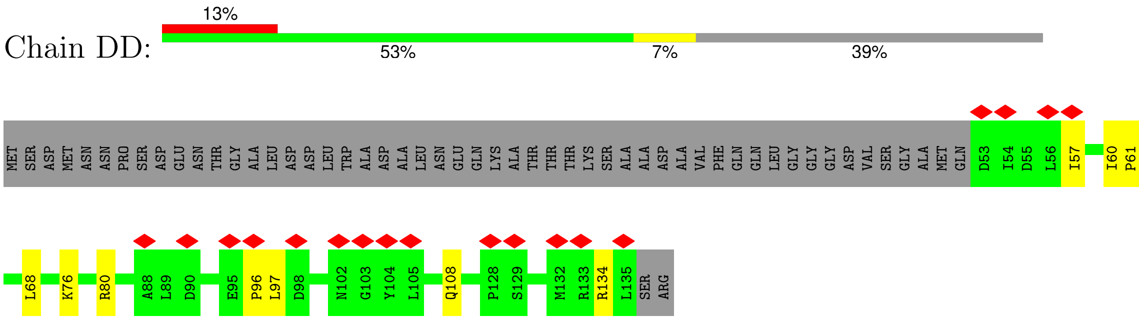


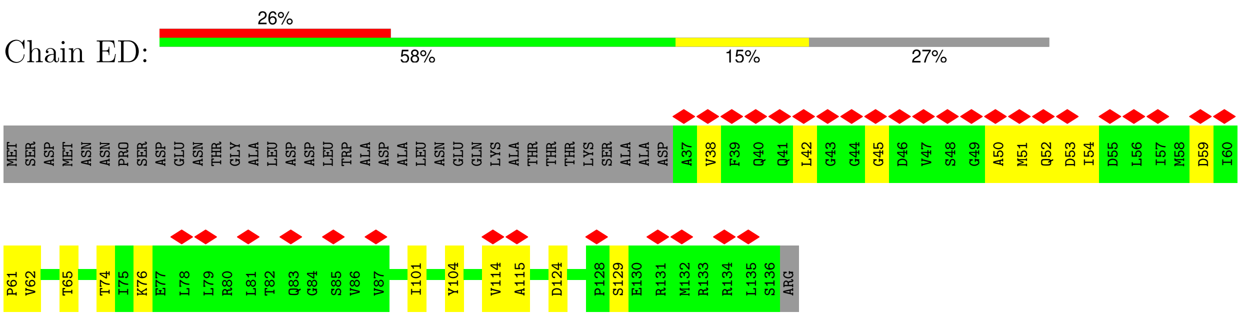
- Molecule 4: Flagellar motor switch protein FliN

Chain DD:



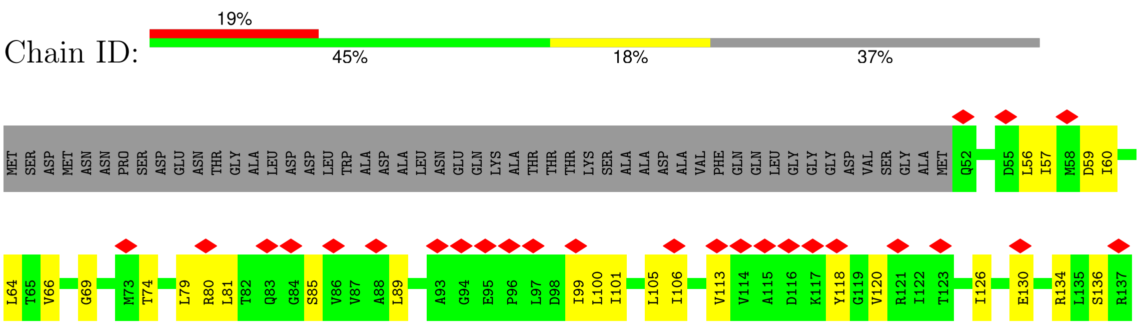
- Molecule 4: Flagellar motor switch protein FliN

Chain ED:



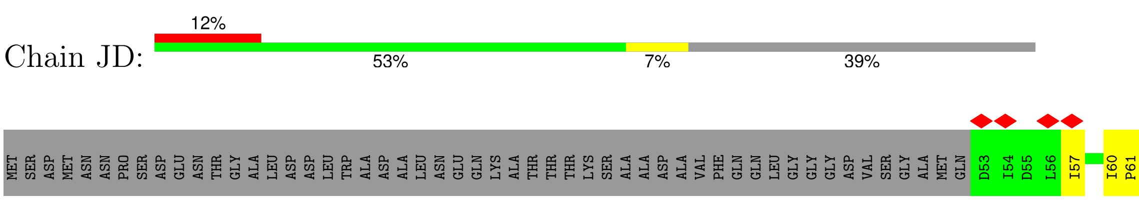
- Molecule 4: Flagellar motor switch protein FliN

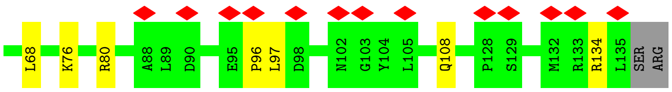
Chain ID:



- Molecule 4: Flagellar motor switch protein FliN

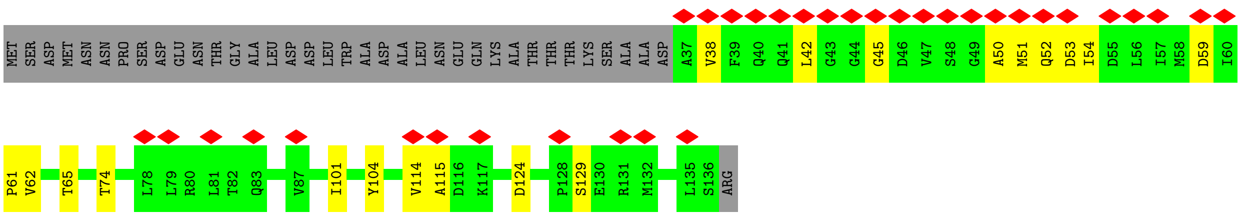
Chain JD:





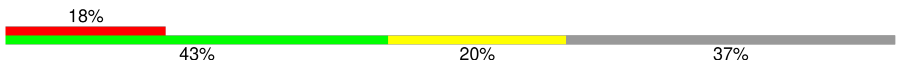
• Molecule 4: Flagellar motor switch protein FliN

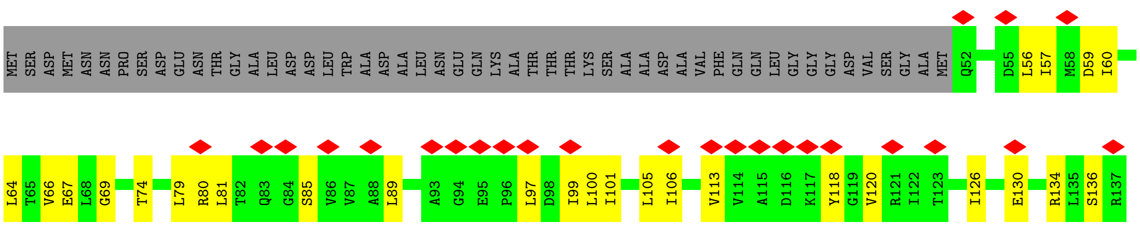
Chain KD:



• Molecule 4: Flagellar motor switch protein FliN

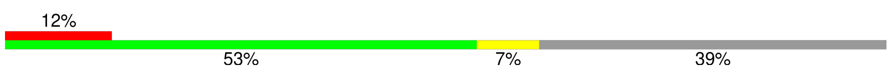
Chain OD:

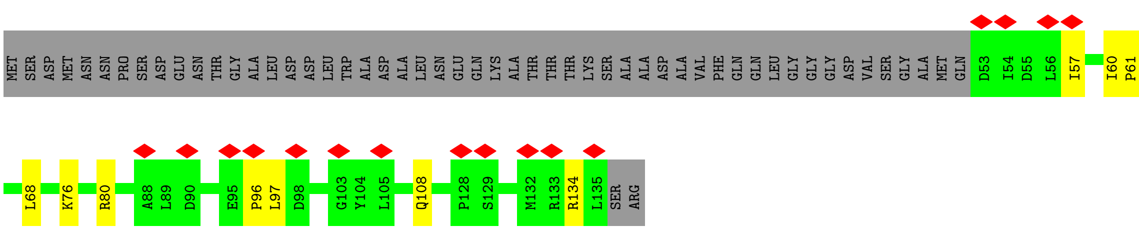




• Molecule 4: Flagellar motor switch protein FliN

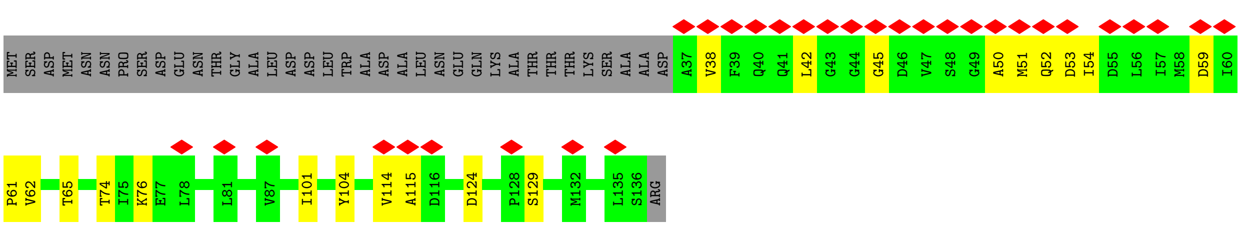
Chain PD:





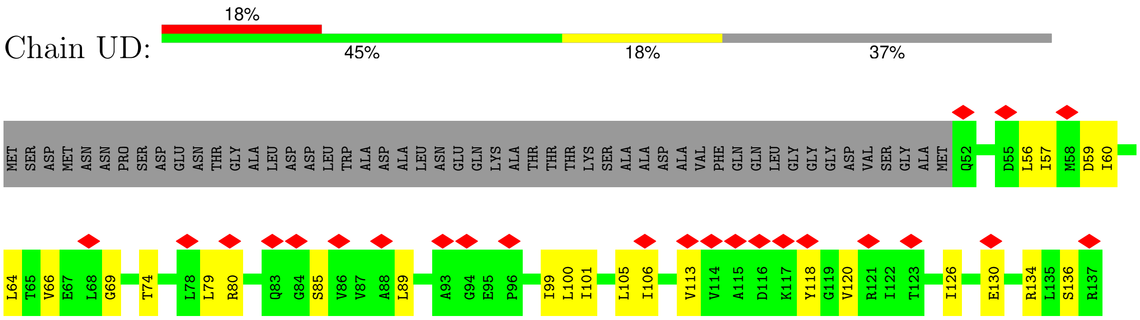
• Molecule 4: Flagellar motor switch protein FliN

Chain QD:



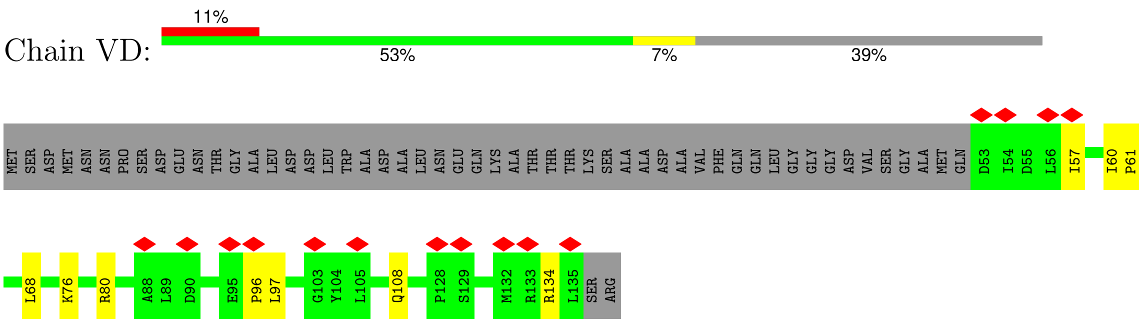
• Molecule 4: Flagellar motor switch protein FliN

Chain UD:



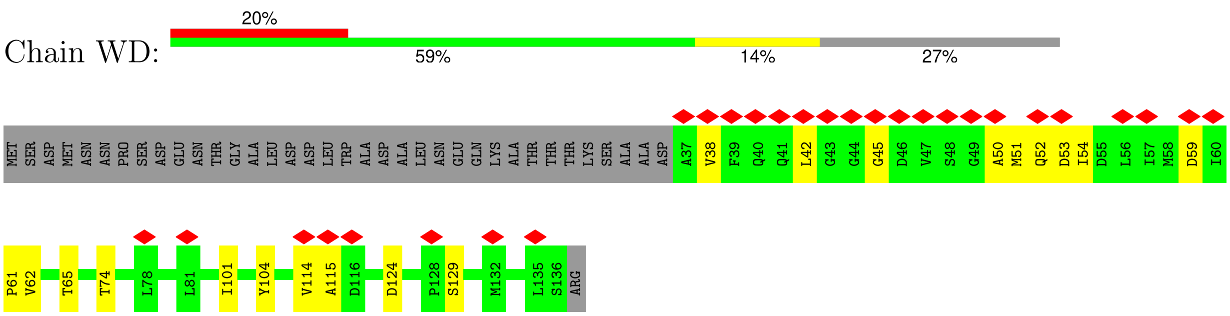
- Molecule 4: Flagellar motor switch protein FliN

Chain VD:



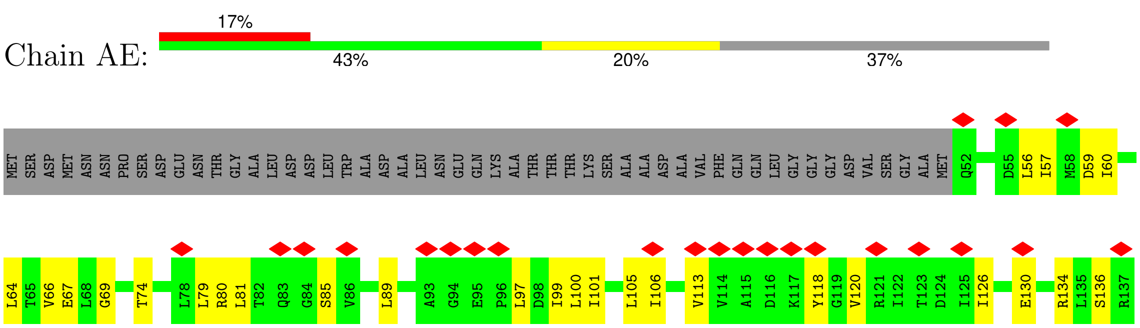
- Molecule 4: Flagellar motor switch protein FliN

Chain WD:



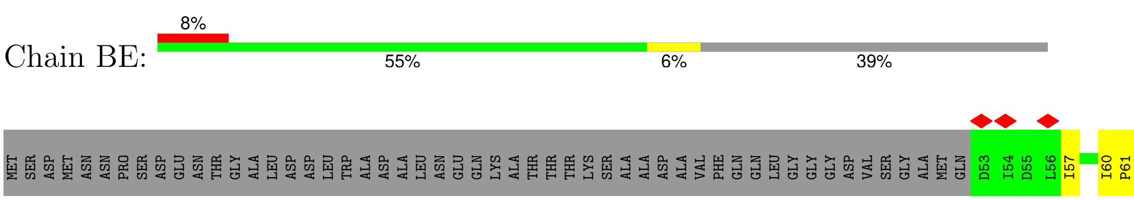
- Molecule 4: Flagellar motor switch protein FliN

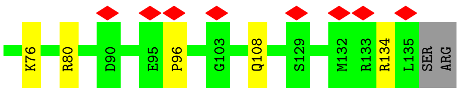
Chain AE:



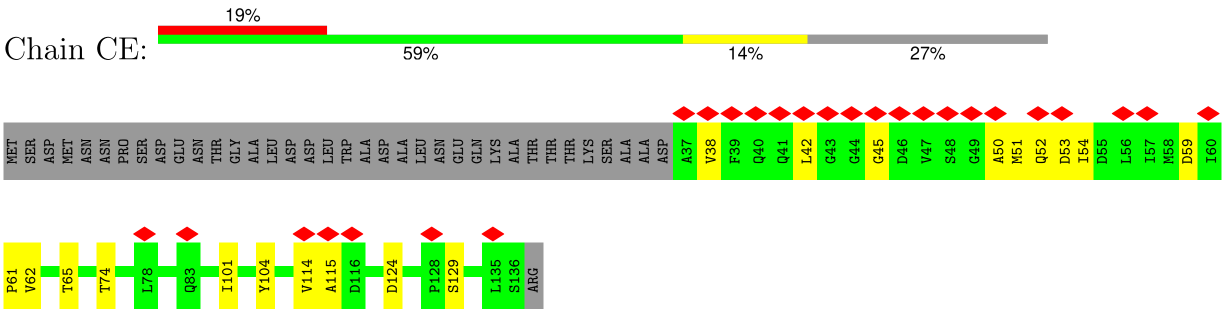
- Molecule 4: Flagellar motor switch protein FliN

Chain BE:

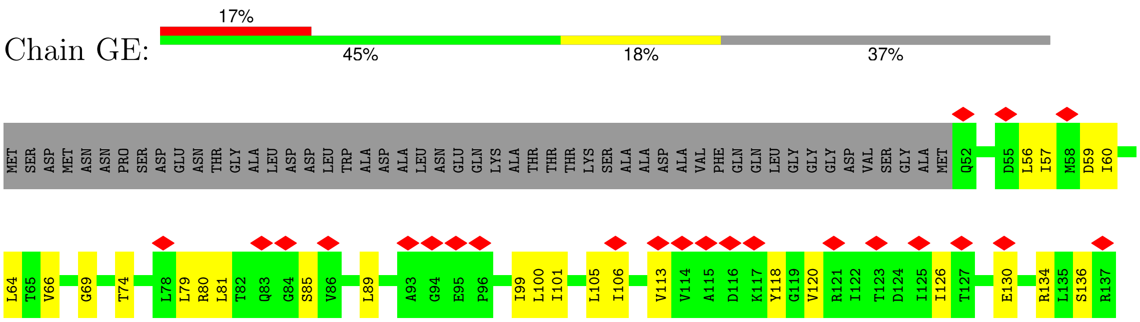




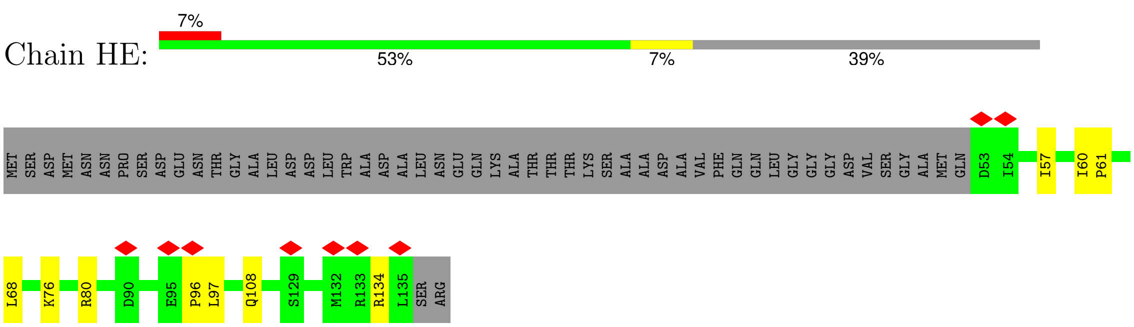
- Molecule 4: Flagellar motor switch protein FliN



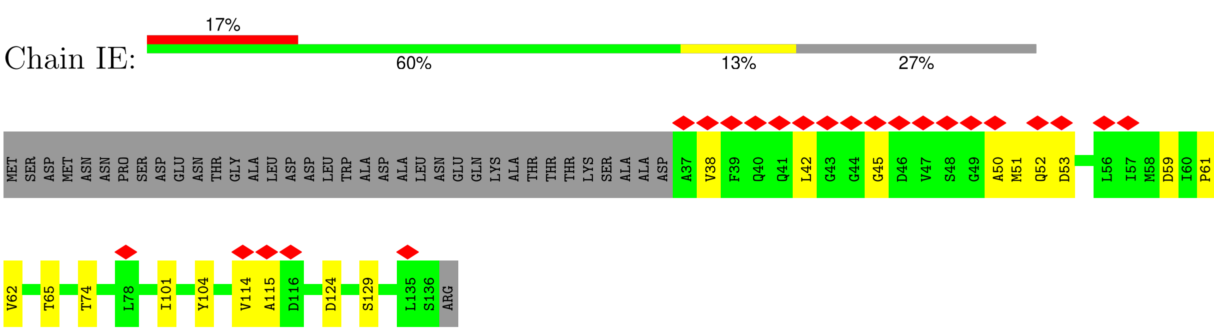
- Molecule 4: Flagellar motor switch protein FliN



- Molecule 4: Flagellar motor switch protein FliN

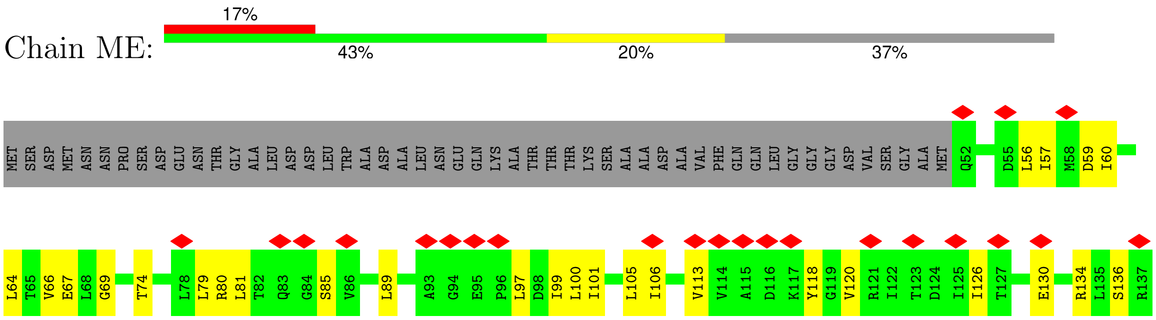


- Molecule 4: Flagellar motor switch protein FliN



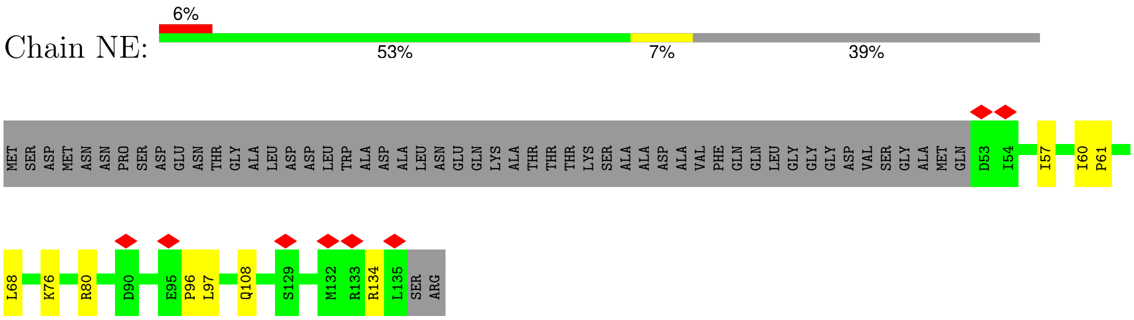
- Molecule 4: Flagellar motor switch protein FliN

Chain ME:



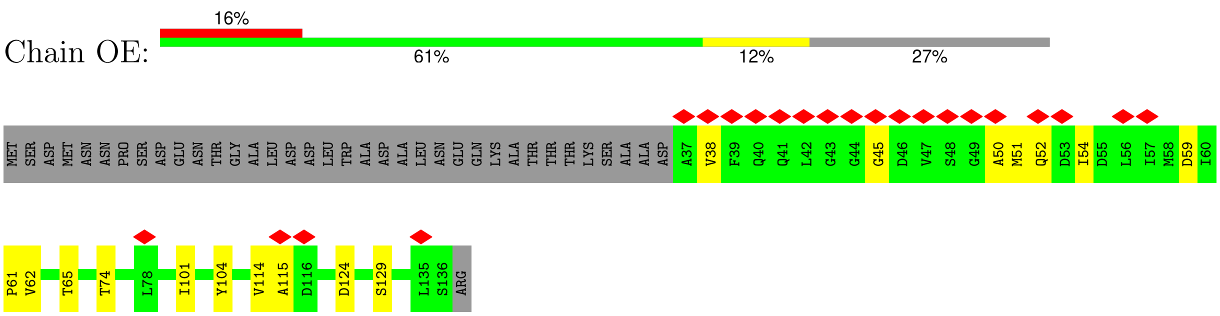
• Molecule 4: Flagellar motor switch protein FliN

Chain NE:



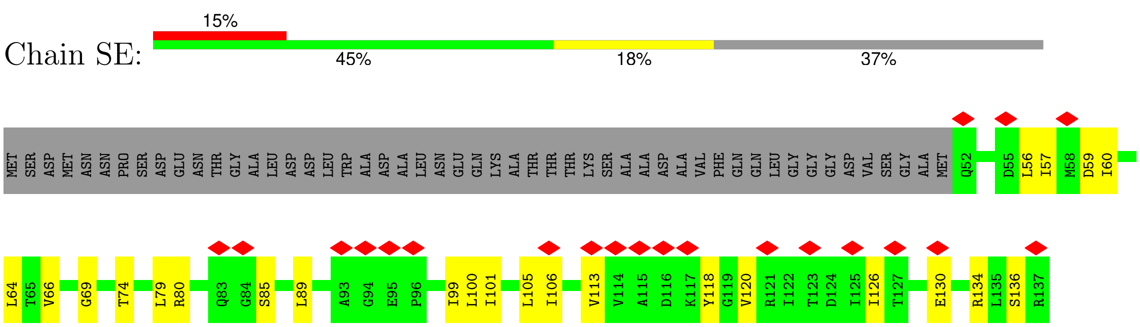
• Molecule 4: Flagellar motor switch protein FliN

Chain OE:



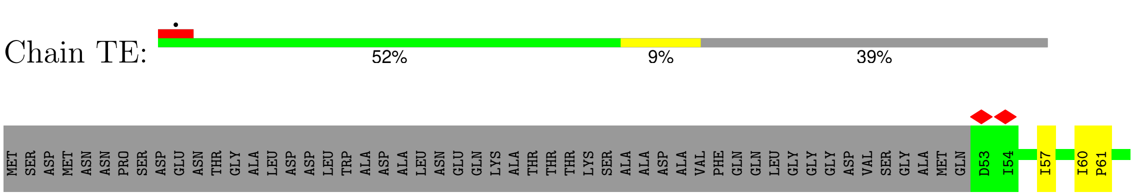
• Molecule 4: Flagellar motor switch protein FliN

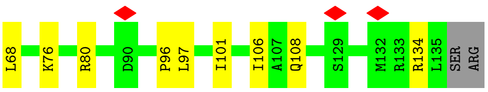
Chain SE:



• Molecule 4: Flagellar motor switch protein FliN

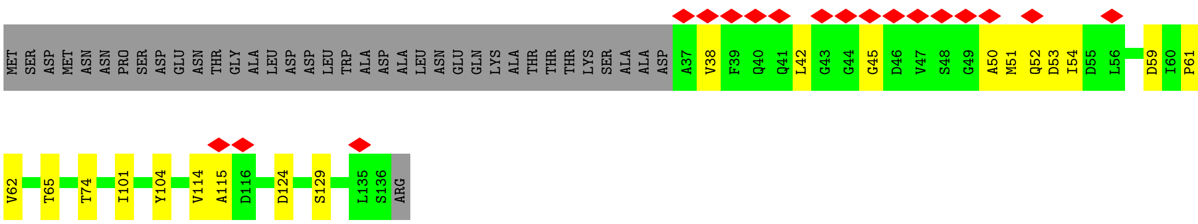
Chain TE:





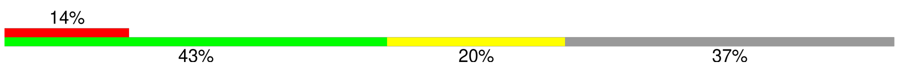
• Molecule 4: Flagellar motor switch protein FliN

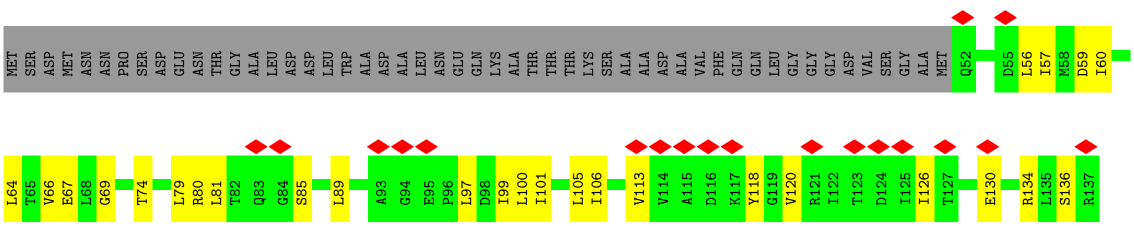
Chain UE:



• Molecule 4: Flagellar motor switch protein FliN

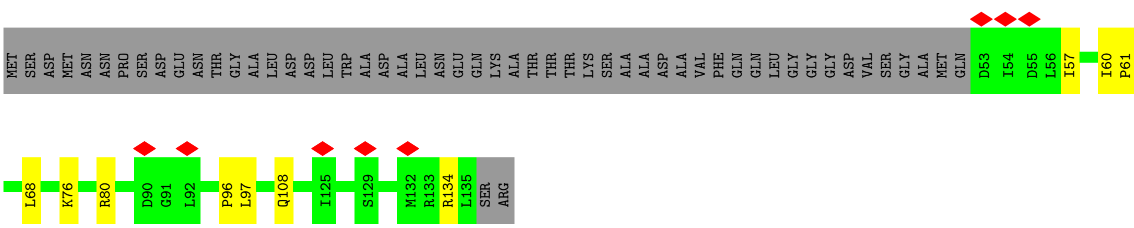
Chain YE:





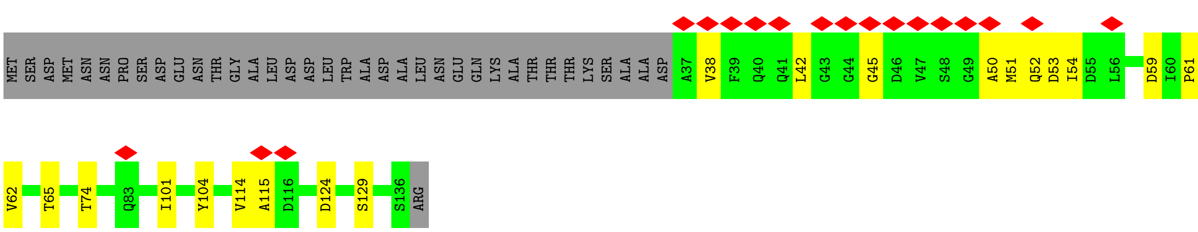
• Molecule 4: Flagellar motor switch protein FliN

Chain ZE:



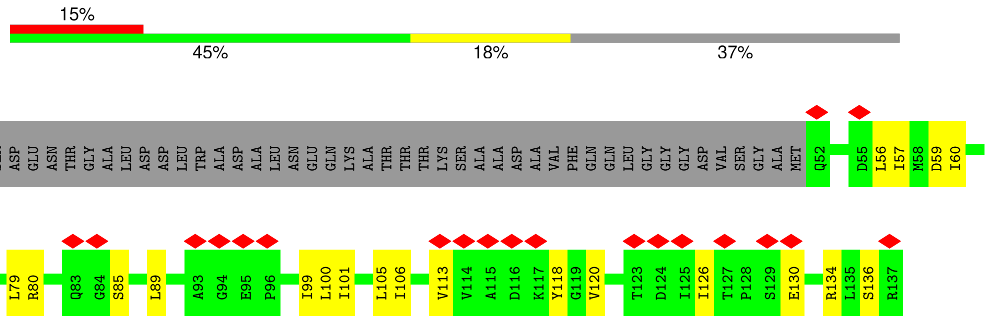
• Molecule 4: Flagellar motor switch protein FliN

Chain AF:



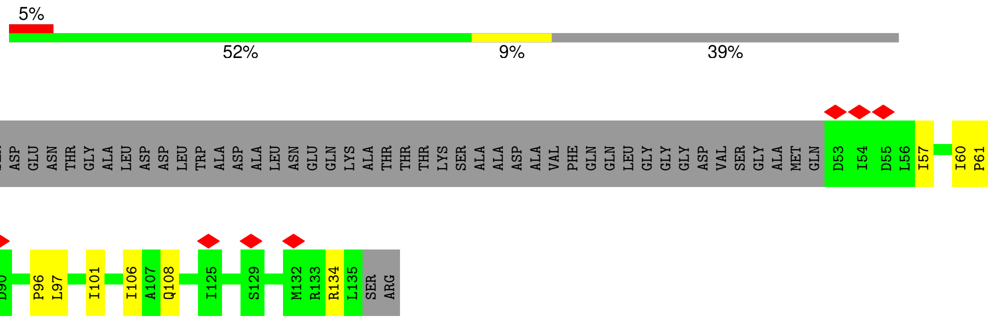
• Molecule 4: Flagellar motor switch protein FliN

Chain EF:



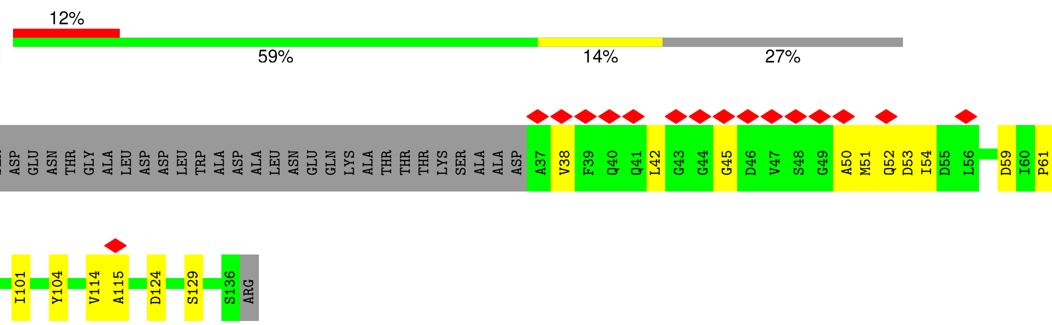
• Molecule 4: Flagellar motor switch protein FliN

Chain FF:



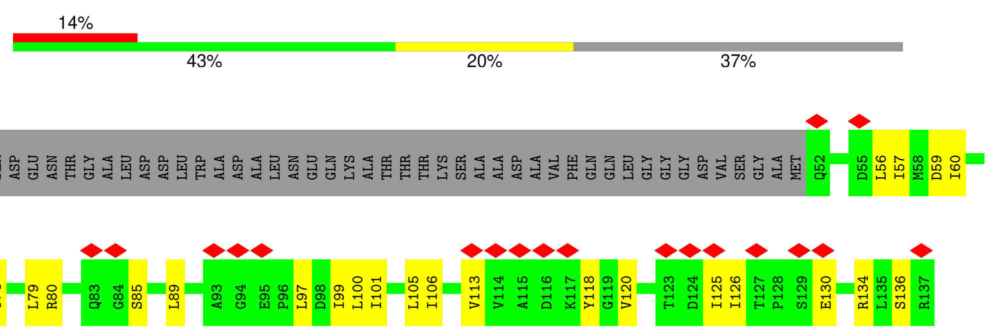
• Molecule 4: Flagellar motor switch protein FliN

Chain GF:



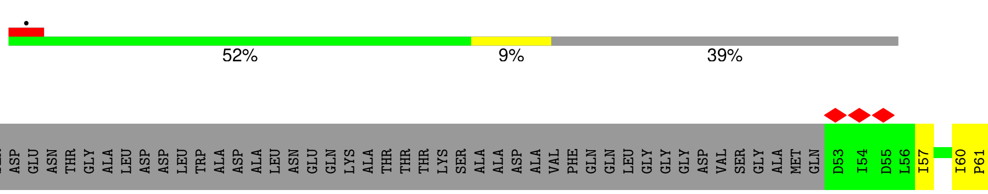
• Molecule 4: Flagellar motor switch protein FliN

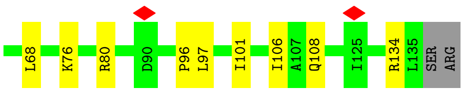
Chain KF:



• Molecule 4: Flagellar motor switch protein FliN

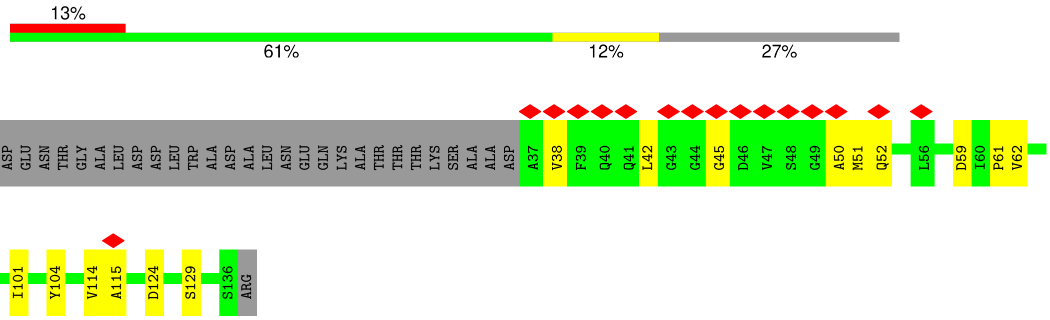
Chain LF:





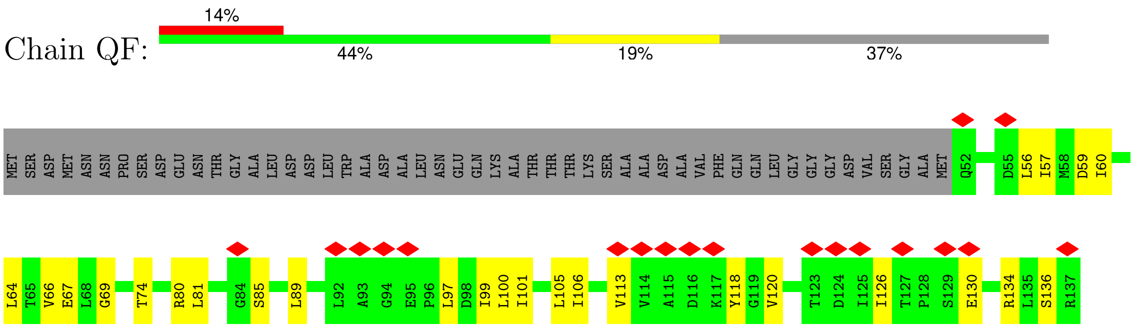
• Molecule 4: Flagellar motor switch protein FliN

Chain MF:



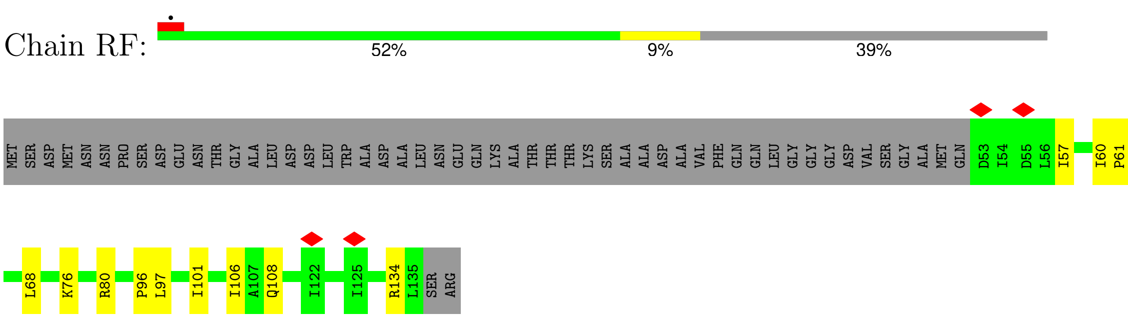
• Molecule 4: Flagellar motor switch protein FliN

Chain QF:



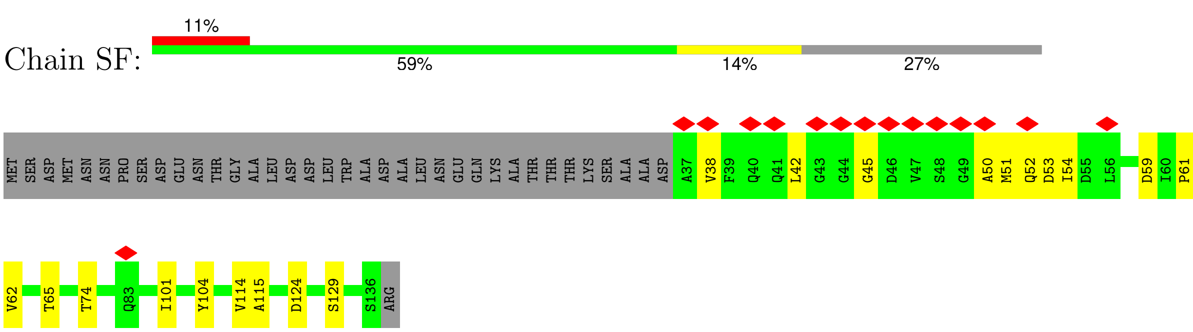
• Molecule 4: Flagellar motor switch protein FliN

Chain RF:



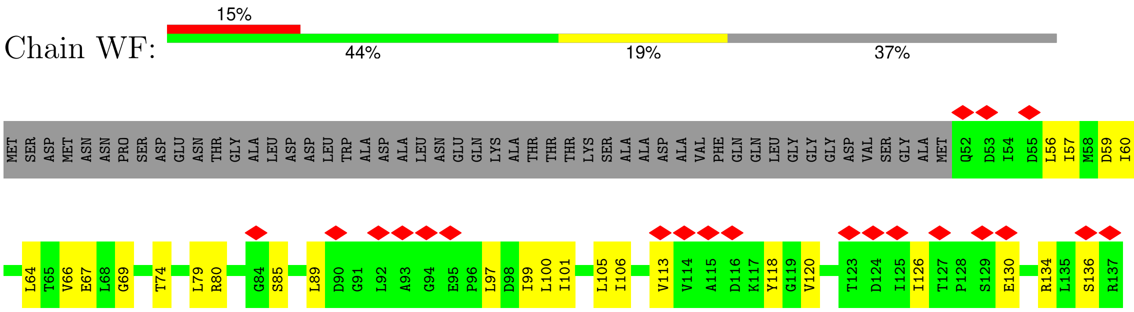
• Molecule 4: Flagellar motor switch protein FliN

Chain SF:



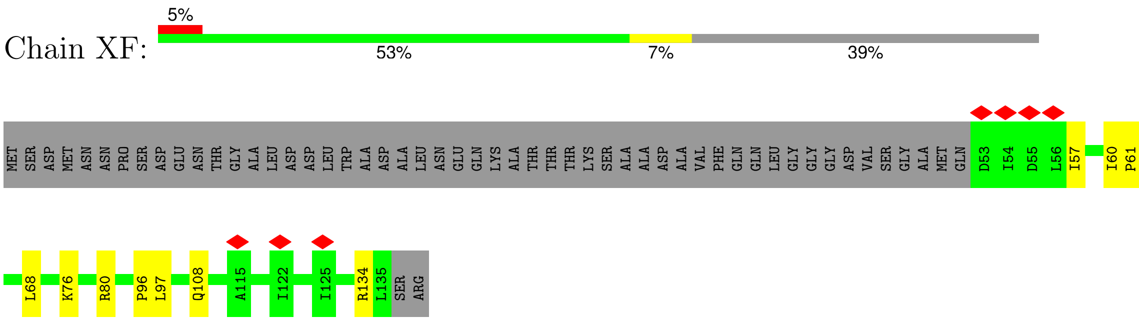
• Molecule 4: Flagellar motor switch protein FliN

Chain WF:



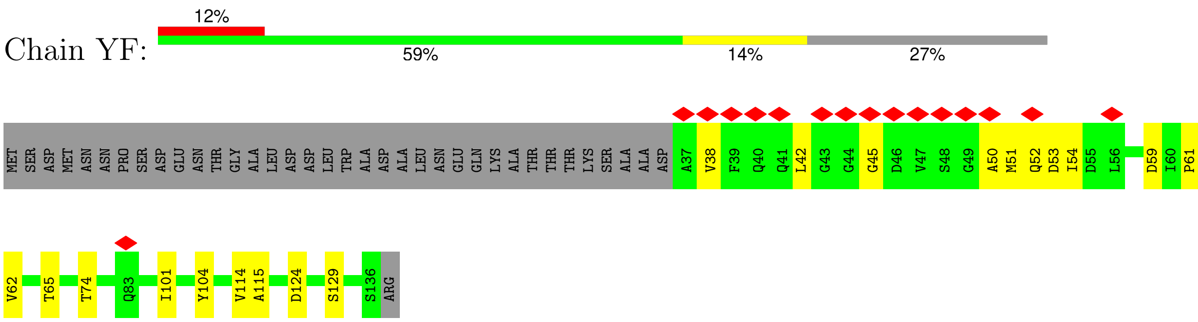
• Molecule 4: Flagellar motor switch protein FliN

Chain XF:



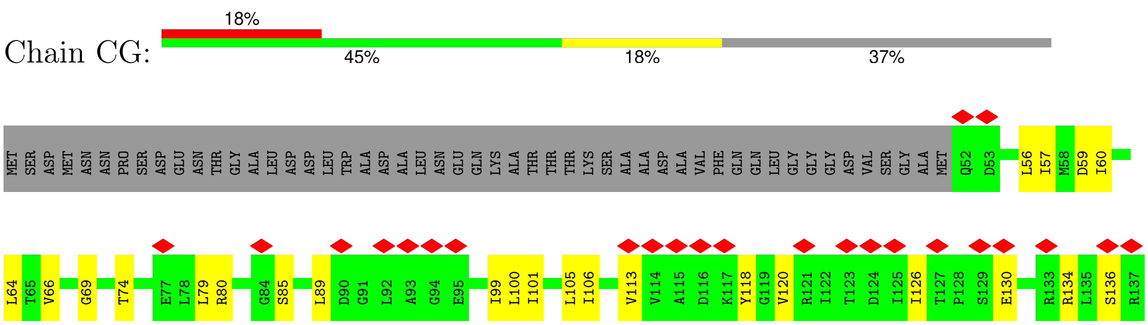
• Molecule 4: Flagellar motor switch protein FliN

Chain YF:



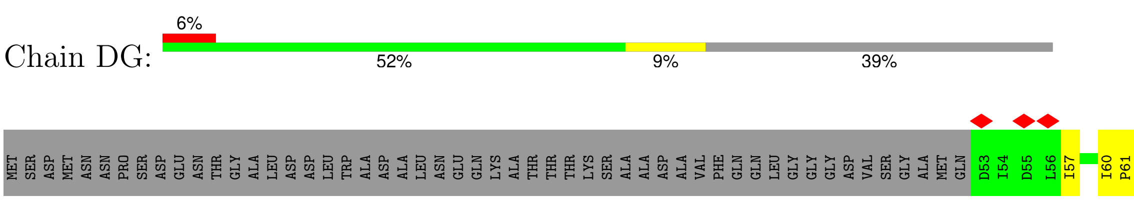
• Molecule 4: Flagellar motor switch protein FliN

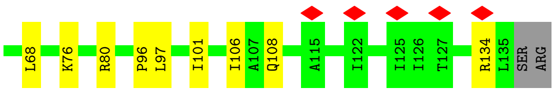
Chain CG:



• Molecule 4: Flagellar motor switch protein FliN

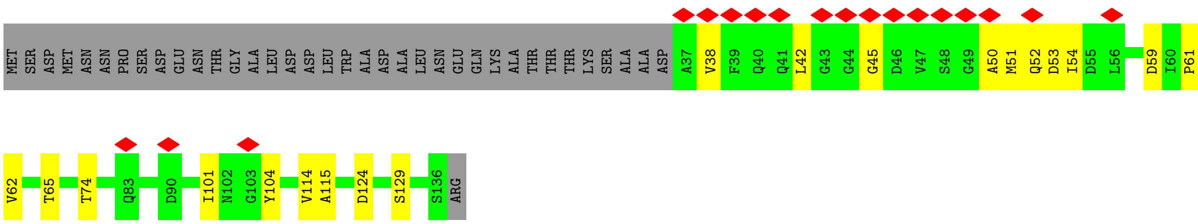
Chain DG:





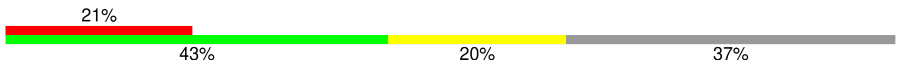
• Molecule 4: Flagellar motor switch protein FliN

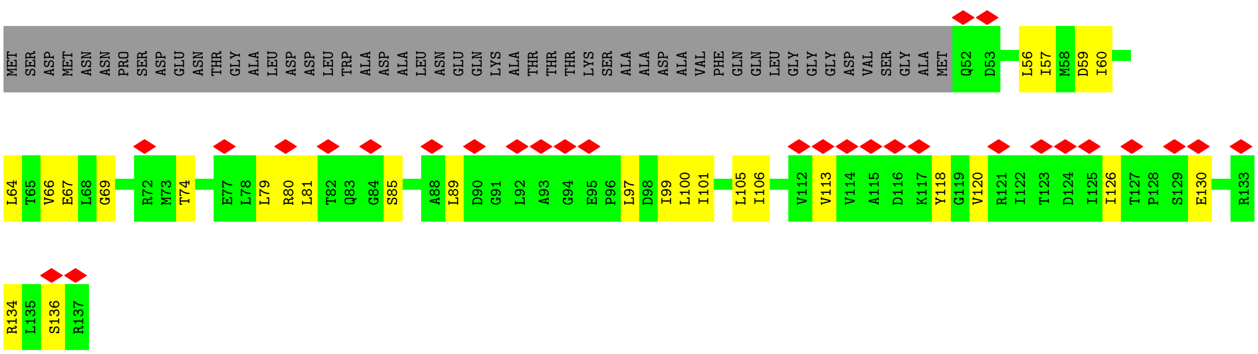
Chain EG:



• Molecule 4: Flagellar motor switch protein FliN

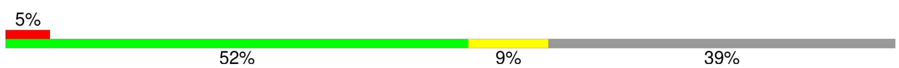
Chain IG:

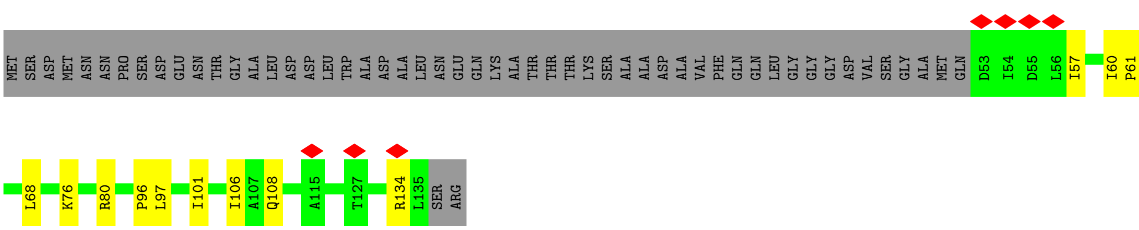




• Molecule 4: Flagellar motor switch protein FliN

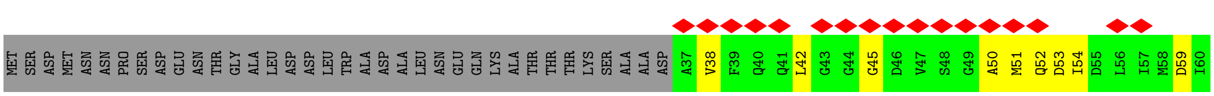
Chain JG:

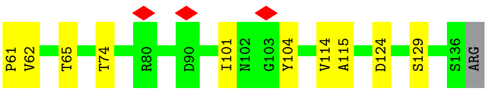




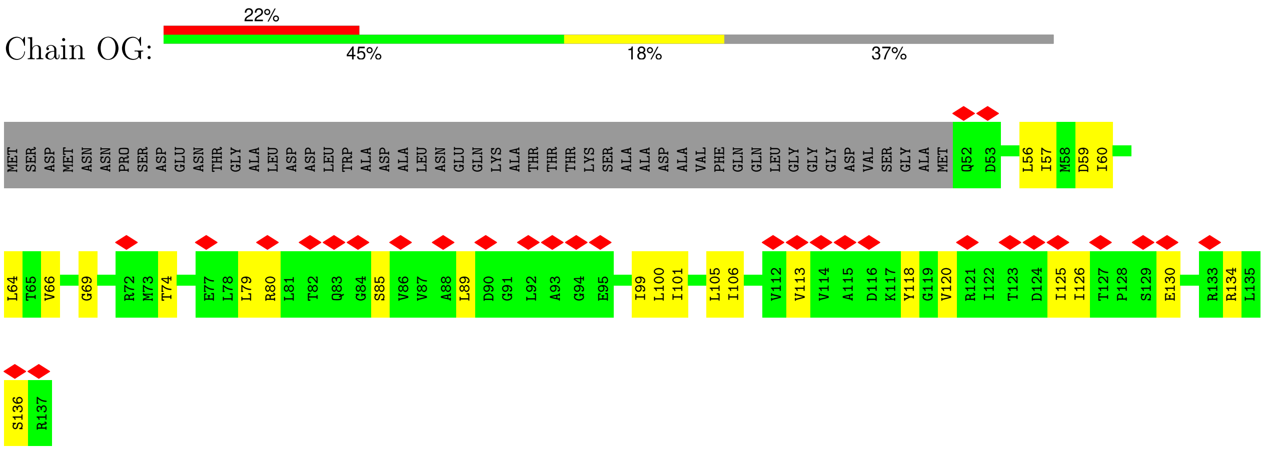
• Molecule 4: Flagellar motor switch protein FliN

Chain KG:

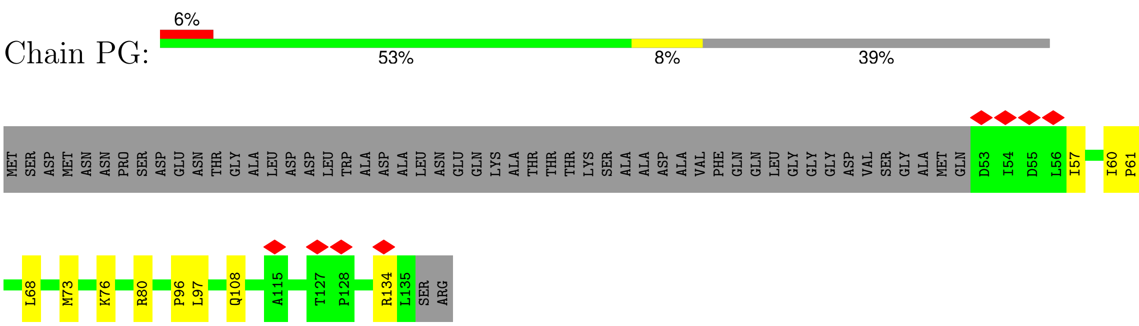




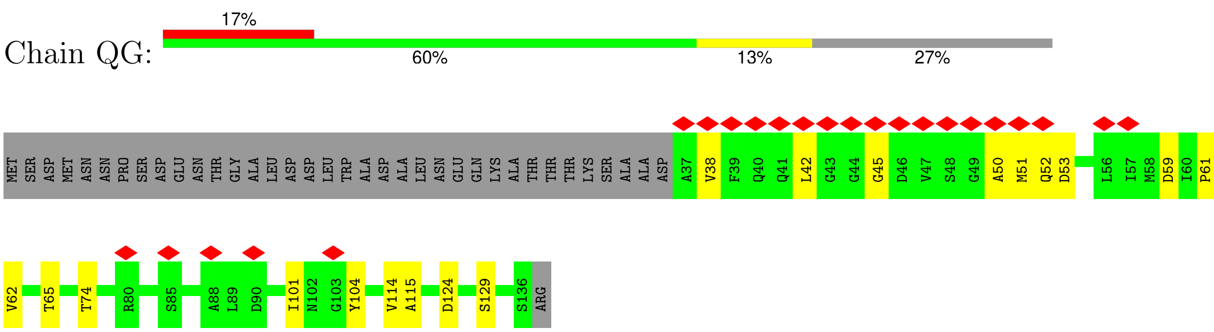
- Molecule 4: Flagellar motor switch protein FliN



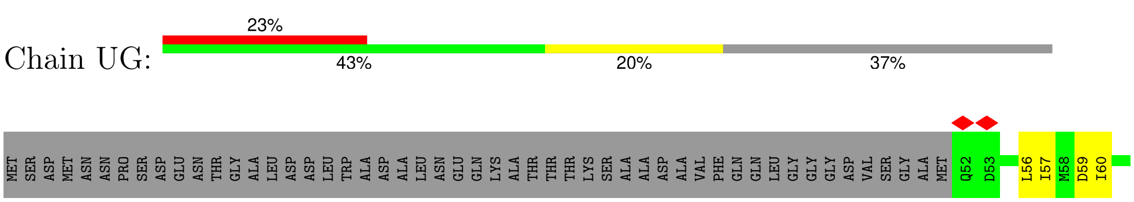
- Molecule 4: Flagellar motor switch protein FliN

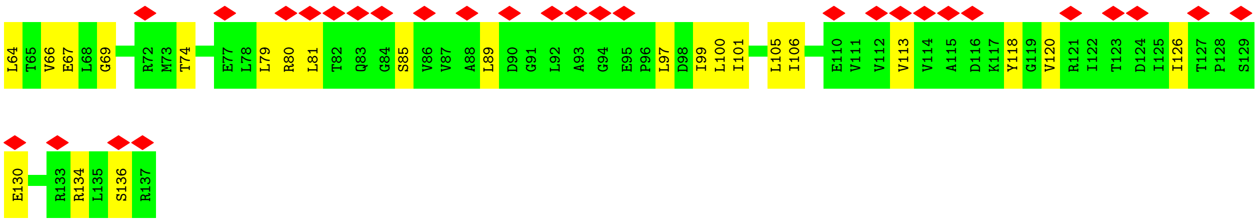


- Molecule 4: Flagellar motor switch protein FliN



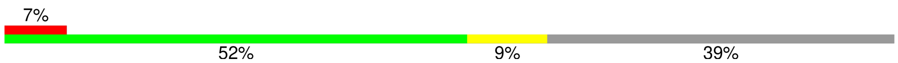
- Molecule 4: Flagellar motor switch protein FliN

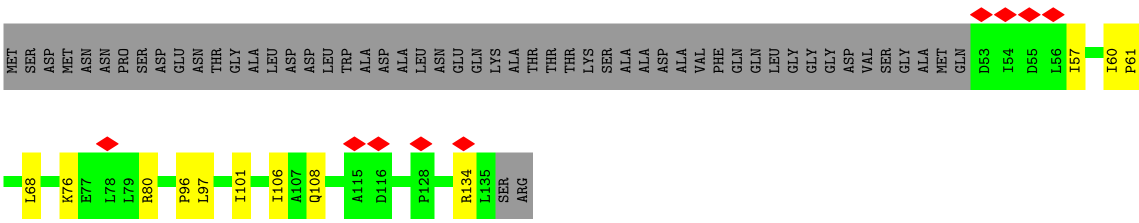




- Molecule 4: Flagellar motor switch protein FliN

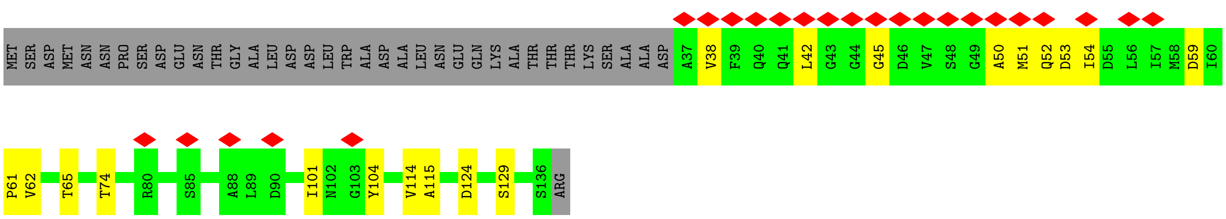
Chain VG:





- Molecule 4: Flagellar motor switch protein FliN

Chain WG:



4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	20863	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 $(e^-/\text{Å}^2)$	51.557	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.322	Depositor
Minimum map value	-0.054	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.135	Depositor
Map size (Å)	1044.48, 1044.48, 1044.48	wwPDB
Map dimensions	768, 768, 768	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.36, 1.36, 1.36	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| >5$	RMSZ	$\#\|Z\| >5$
1	A	0.42	0/228	0.46	0/317
1	BC	0.42	0/228	0.46	0/317
1	BF	0.43	0/228	0.46	0/317
1	DB	0.43	0/228	0.46	0/317
1	DE	0.42	0/228	0.46	0/317
1	F	0.42	0/228	0.46	0/317
1	FA	0.43	0/228	0.46	0/317
1	FD	0.42	0/228	0.46	0/317
1	FG	0.42	0/228	0.46	0/317
1	HC	0.42	0/228	0.46	0/317
1	HF	0.43	0/228	0.46	0/317
1	I	0.43	0/228	0.46	0/317
1	JB	0.42	0/228	0.46	0/317
1	JE	0.43	0/228	0.46	0/317
1	LA	0.42	0/228	0.46	0/317
1	LD	0.42	0/228	0.46	0/317
1	LG	0.42	0/228	0.46	0/317
1	NC	0.42	0/228	0.46	0/317
1	NF	0.42	0/228	0.46	0/317
1	PB	0.43	0/228	0.46	0/317
1	PE	0.42	0/228	0.46	0/317
1	RA	0.42	0/228	0.46	0/317
1	RD	0.42	0/228	0.46	0/317
1	RG	0.42	0/228	0.46	0/317
1	S	0.43	0/228	0.46	0/317
1	TC	0.42	0/228	0.46	0/317
1	TF	0.43	0/228	0.46	0/317
1	VB	0.42	0/228	0.46	0/317
1	VE	0.42	0/228	0.46	0/317
1	XA	0.42	0/228	0.46	0/317
1	XD	0.42	0/228	0.46	0/317
1	Z	0.42	0/228	0.46	0/317
1	ZC	0.42	0/228	0.46	0/317
1	ZF	0.42	0/228	0.46	0/317

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
2	AA	0.36	0/1902	0.51	0/2617
2	AD	0.36	0/1902	0.51	0/2617
2	AG	0.36	0/1902	0.51	0/2617
2	B	0.35	0/1902	0.51	0/2617
2	CC	0.36	0/1902	0.51	0/2617
2	CF	0.36	0/1902	0.51	0/2617
2	EB	0.36	0/1902	0.51	0/2617
2	EE	0.36	0/1902	0.51	0/2617
2	G	0.36	0/1902	0.51	0/2617
2	GA	0.36	0/1902	0.51	0/2617
2	GD	0.36	0/1902	0.51	0/2617
2	GG	0.36	0/1902	0.51	0/2617
2	IC	0.36	0/1902	0.51	0/2617
2	IF	0.36	0/1902	0.51	0/2617
2	J	0.36	0/1902	0.51	0/2617
2	KB	0.36	0/1902	0.51	0/2617
2	KE	0.36	0/1902	0.51	0/2617
2	MA	0.36	0/1902	0.51	0/2617
2	MD	0.36	0/1902	0.51	0/2617
2	MG	0.36	0/1902	0.51	0/2617
2	OC	0.36	0/1902	0.51	0/2617
2	OF	0.35	0/1902	0.51	0/2617
2	QB	0.36	0/1902	0.51	0/2617
2	QE	0.36	0/1902	0.51	0/2617
2	SA	0.36	0/1902	0.51	0/2617
2	SD	0.36	0/1902	0.51	0/2617
2	SG	0.36	0/1902	0.51	0/2617
2	T	0.36	0/1902	0.51	0/2617
2	UC	0.36	0/1902	0.51	0/2617
2	UF	0.36	0/1902	0.51	0/2617
2	WB	0.36	0/1902	0.51	0/2617
2	WE	0.36	0/1902	0.51	0/2617
2	YA	0.36	0/1902	0.51	0/2617
2	YD	0.36	0/1902	0.51	0/2617
3	BA	0.38	0/2339	0.61	0/3192
3	BD	0.38	0/2339	0.61	0/3192
3	BG	0.38	0/2339	0.61	0/3192
3	C	0.38	0/2339	0.61	0/3192
3	DC	0.38	0/2339	0.61	0/3192
3	DF	0.37	0/2339	0.61	0/3192
3	FB	0.38	0/2339	0.61	0/3192
3	FE	0.38	0/2339	0.61	0/3192
3	HA	0.38	0/2339	0.61	0/3192

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
3	HD	0.38	0/2339	0.61	0/3192
3	HG	0.38	0/2339	0.61	0/3192
3	JC	0.38	0/2339	0.61	0/3192
3	JF	0.38	0/2339	0.62	0/3192
3	K	0.38	0/2339	0.61	0/3192
3	LB	0.38	0/2339	0.61	0/3192
3	LE	0.38	0/2339	0.61	0/3192
3	M	0.37	0/2339	0.61	0/3192
3	NA	0.38	0/2339	0.61	0/3192
3	ND	0.38	0/2339	0.61	0/3192
3	NG	0.38	0/2339	0.61	0/3192
3	PC	0.38	0/2339	0.61	0/3192
3	PF	0.38	0/2339	0.61	0/3192
3	RB	0.38	0/2339	0.61	0/3192
3	RE	0.38	0/2339	0.61	0/3192
3	TA	0.38	0/2339	0.61	0/3192
3	TD	0.38	0/2339	0.61	0/3192
3	TG	0.38	0/2339	0.61	0/3192
3	V	0.38	0/2339	0.61	0/3192
3	VC	0.37	0/2339	0.61	0/3192
3	VF	0.38	0/2339	0.61	0/3192
3	XB	0.38	0/2339	0.61	0/3192
3	XE	0.38	0/2339	0.61	0/3192
3	ZA	0.38	0/2339	0.61	0/3192
3	ZD	0.38	0/2339	0.61	0/3192
4	AB	0.46	0/653	0.79	0/885
4	AC	0.37	0/751	0.74	0/1015
4	AE	0.47	0/653	0.78	0/885
4	AF	0.37	0/751	0.74	0/1015
4	BB	0.46	0/633	0.80	0/858
4	BE	0.46	0/633	0.80	0/858
4	CA	0.46	0/653	0.79	0/885
4	CB	0.37	0/751	0.74	0/1015
4	CD	0.46	0/653	0.78	0/885
4	CE	0.37	0/751	0.74	0/1015
4	CG	0.46	0/653	0.79	0/885
4	D	0.46	0/653	0.78	0/885
4	DA	0.46	0/633	0.80	0/858
4	DD	0.46	0/633	0.80	0/858
4	DG	0.46	0/633	0.80	0/858
4	E	0.46	0/633	0.80	0/858
4	EA	0.37	0/751	0.74	0/1015
4	EC	0.46	0/653	0.78	0/885

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
4	ED	0.37	0/751	0.74	0/1015
4	EF	0.46	0/653	0.79	0/885
4	EG	0.37	0/751	0.74	0/1015
4	FC	0.46	0/633	0.80	0/858
4	FF	0.46	0/633	0.80	0/858
4	GB	0.46	0/653	0.79	0/885
4	GC	0.37	0/751	0.74	0/1015
4	GE	0.46	0/653	0.78	0/885
4	GF	0.37	0/751	0.74	0/1015
4	H	0.37	0/751	0.74	0/1015
4	HB	0.46	0/633	0.80	0/858
4	HE	0.46	0/633	0.80	0/858
4	IA	0.46	0/653	0.78	0/885
4	IB	0.37	0/751	0.74	0/1015
4	ID	0.46	0/653	0.79	0/885
4	IE	0.37	0/751	0.74	0/1015
4	IG	0.46	0/653	0.79	0/885
4	JA	0.46	0/633	0.80	0/858
4	JD	0.46	0/633	0.80	0/858
4	JG	0.46	0/633	0.80	0/858
4	KA	0.37	0/751	0.74	0/1015
4	KC	0.46	0/653	0.78	0/885
4	KD	0.37	0/751	0.74	0/1015
4	KF	0.46	0/653	0.78	0/885
4	KG	0.37	0/751	0.74	0/1015
4	L	0.46	0/653	0.79	0/885
4	LC	0.46	0/633	0.80	0/858
4	LF	0.46	0/633	0.80	0/858
4	MB	0.46	0/653	0.79	0/885
4	MC	0.37	0/751	0.74	0/1015
4	ME	0.46	0/653	0.78	0/885
4	MF	0.37	0/751	0.74	0/1015
4	N	0.46	0/653	0.78	0/885
4	NB	0.46	0/633	0.80	0/858
4	NE	0.46	0/633	0.80	0/858
4	O	0.46	0/633	0.80	0/858
4	OA	0.46	0/653	0.78	0/885
4	OB	0.37	0/751	0.74	0/1015
4	OD	0.46	0/653	0.79	0/885
4	OE	0.37	0/751	0.74	0/1015
4	OG	0.46	0/653	0.78	0/885
4	P	0.46	0/633	0.80	0/858
4	PA	0.46	0/633	0.80	0/858

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
4	PD	0.46	0/633	0.80	0/858
4	PG	0.46	0/633	0.80	0/858
4	Q	0.37	0/751	0.74	0/1015
4	QA	0.37	0/751	0.74	0/1015
4	QC	0.46	0/653	0.78	0/885
4	QD	0.37	0/751	0.74	0/1015
4	QF	0.46	0/653	0.78	0/885
4	QG	0.37	0/751	0.74	0/1015
4	R	0.37	0/751	0.74	0/1015
4	RC	0.46	0/633	0.81	0/858
4	RF	0.46	0/633	0.80	0/858
4	SB	0.46	0/653	0.79	0/885
4	SC	0.37	0/751	0.74	0/1015
4	SE	0.46	0/653	0.79	0/885
4	SF	0.37	0/751	0.74	0/1015
4	TB	0.46	0/633	0.80	0/858
4	TE	0.46	0/633	0.81	0/858
4	UA	0.46	0/653	0.78	0/885
4	UB	0.37	0/751	0.74	0/1015
4	UD	0.46	0/653	0.78	0/885
4	UE	0.37	0/751	0.74	0/1015
4	UG	0.46	0/653	0.78	0/885
4	VA	0.46	0/633	0.80	0/858
4	VD	0.46	0/633	0.80	0/858
4	VG	0.46	0/633	0.80	0/858
4	W	0.46	0/653	0.78	0/885
4	WA	0.37	0/751	0.74	0/1015
4	WC	0.46	0/653	0.78	0/885
4	WD	0.37	0/751	0.74	0/1015
4	WF	0.46	0/653	0.78	0/885
4	WG	0.37	0/751	0.74	0/1015
4	X	0.46	0/633	0.80	0/858
4	XC	0.46	0/633	0.80	0/858
4	XF	0.46	0/633	0.80	0/858
4	Y	0.37	0/751	0.74	0/1015
4	YB	0.46	0/653	0.78	0/885
4	YC	0.37	0/751	0.74	0/1015
4	YE	0.46	0/653	0.78	0/885
4	YF	0.37	0/751	0.74	0/1015
4	ZB	0.46	0/633	0.80	0/858
4	ZE	0.46	0/633	0.80	0/858
All	All	0.39	0/221204	0.64	0/302056

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	229	0	100	0	0
1	BC	229	0	100	0	0
1	BF	229	0	100	0	0
1	DB	229	0	100	0	0
1	DE	229	0	100	0	0
1	F	229	0	100	0	0
1	FA	229	0	100	0	0
1	FD	229	0	100	0	0
1	FG	229	0	100	0	0
1	HC	229	0	100	0	0
1	HF	229	0	100	0	0
1	I	229	0	100	0	0
1	JB	229	0	100	0	0
1	JE	229	0	100	0	0
1	LA	229	0	100	0	0
1	LD	229	0	100	0	0
1	LG	229	0	100	0	0
1	NC	229	0	100	0	0
1	NF	229	0	100	0	0
1	PB	229	0	100	0	0
1	PE	229	0	100	0	0
1	RA	229	0	100	0	0
1	RD	229	0	100	0	0
1	RG	229	0	100	0	0
1	S	229	0	100	0	0
1	TC	229	0	100	0	0
1	TF	229	0	100	0	0
1	VB	229	0	100	0	0
1	VE	229	0	100	0	0
1	XA	229	0	100	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	XD	229	0	100	0	0
1	Z	229	0	100	0	0
1	ZC	229	0	100	0	0
1	ZF	229	0	100	0	0
2	AA	1893	0	1356	58	0
2	AD	1893	0	1356	55	0
2	AG	1893	0	1356	56	0
2	B	1893	0	1356	57	0
2	CC	1893	0	1356	56	0
2	CF	1893	0	1356	54	0
2	EB	1893	0	1356	59	0
2	EE	1893	0	1356	53	0
2	G	1893	0	1356	56	0
2	GA	1893	0	1356	57	0
2	GD	1893	0	1356	56	0
2	GG	1893	0	1356	56	0
2	IC	1893	0	1356	56	0
2	IF	1893	0	1356	57	0
2	J	1893	0	1356	59	0
2	KB	1893	0	1356	56	0
2	KE	1893	0	1356	54	0
2	MA	1893	0	1356	55	0
2	MD	1893	0	1356	54	0
2	MG	1893	0	1356	55	0
2	OC	1893	0	1356	58	0
2	OF	1893	0	1356	57	0
2	QB	1893	0	1356	55	0
2	QE	1893	0	1356	57	0
2	SA	1893	0	1356	57	0
2	SD	1893	0	1356	53	0
2	SG	1893	0	1356	57	0
2	T	1893	0	1356	58	0
2	UC	1893	0	1356	54	0
2	UF	1893	0	1356	54	0
2	WB	1893	0	1356	56	0
2	WE	1893	0	1356	55	0
2	YA	1893	0	1356	60	0
2	YD	1893	0	1356	54	0
3	BA	2287	0	2246	45	0
3	BD	2287	0	2246	46	0
3	BG	2287	0	2246	45	0
3	C	2287	0	2246	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	DC	2287	0	2246	48	0
3	DF	2287	0	2246	44	0
3	FB	2287	0	2246	46	0
3	FE	2287	0	2246	45	0
3	HA	2287	0	2246	45	0
3	HD	2287	0	2246	48	0
3	HG	2287	0	2246	46	0
3	JC	2287	0	2246	46	0
3	JF	2287	0	2246	47	0
3	K	2287	0	2246	46	0
3	LB	2287	0	2246	42	0
3	LE	2287	0	2246	52	0
3	M	2287	0	2246	45	0
3	NA	2287	0	2246	42	0
3	ND	2287	0	2246	44	0
3	NG	2287	0	2246	46	0
3	PC	2287	0	2246	51	0
3	PF	2287	0	2246	52	0
3	RB	2287	0	2246	43	0
3	RE	2287	0	2246	52	0
3	TA	2287	0	2246	44	0
3	TD	2287	0	2246	42	0
3	TG	2287	0	2246	50	0
3	V	2287	0	2246	48	0
3	VC	2287	0	2246	47	0
3	VF	2287	0	2246	45	0
3	XB	2287	0	2246	49	0
3	XE	2287	0	2246	43	0
3	ZA	2287	0	2246	46	0
3	ZD	2287	0	2246	49	0
4	AB	649	0	684	28	0
4	AC	746	0	771	36	0
4	AE	649	0	684	33	0
4	AF	746	0	771	34	0
4	BB	629	0	662	9	0
4	BE	629	0	662	8	0
4	CA	649	0	684	30	0
4	CB	746	0	771	36	0
4	CD	649	0	684	31	0
4	CE	746	0	771	33	0
4	CG	649	0	684	29	0
4	D	649	0	684	30	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	DA	629	0	662	9	0
4	DD	629	0	662	9	0
4	DG	629	0	662	10	0
4	E	629	0	662	9	0
4	EA	746	0	771	37	0
4	EC	649	0	684	32	0
4	ED	746	0	771	37	0
4	EF	649	0	684	29	0
4	EG	746	0	771	34	0
4	FC	629	0	662	9	0
4	FF	629	0	662	10	0
4	GB	649	0	684	30	0
4	GC	746	0	771	36	0
4	GE	649	0	684	29	0
4	GF	746	0	771	35	0
4	H	746	0	771	34	0
4	HB	629	0	662	9	0
4	HE	629	0	662	9	0
4	IA	649	0	684	31	0
4	IB	746	0	771	33	0
4	ID	649	0	684	31	0
4	IE	746	0	771	36	0
4	IG	649	0	684	31	0
4	JA	629	0	662	9	0
4	JD	629	0	662	9	0
4	JG	629	0	662	10	0
4	KA	746	0	771	33	0
4	KC	649	0	684	30	0
4	KD	746	0	771	34	0
4	KF	649	0	684	31	0
4	KG	746	0	771	34	0
4	L	649	0	684	31	0
4	LC	629	0	662	9	0
4	LF	629	0	662	10	0
4	MB	649	0	684	30	0
4	MC	746	0	771	37	0
4	ME	649	0	684	31	0
4	MF	746	0	771	38	0
4	N	649	0	684	29	0
4	NB	629	0	662	9	0
4	NE	629	0	662	9	0
4	O	629	0	662	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	OA	649	0	684	29	0
4	OB	746	0	771	34	0
4	OD	649	0	684	30	0
4	OE	746	0	771	36	0
4	OG	649	0	684	31	0
4	P	629	0	662	10	0
4	PA	629	0	662	9	0
4	PD	629	0	662	9	0
4	PG	629	0	662	10	0
4	Q	746	0	771	36	0
4	QA	746	0	771	34	0
4	QC	649	0	684	32	0
4	QD	746	0	771	35	0
4	QF	649	0	684	31	0
4	QG	746	0	771	40	0
4	R	746	0	771	37	0
4	RC	629	0	662	9	0
4	RF	629	0	662	10	0
4	SB	649	0	684	32	0
4	SC	746	0	771	37	0
4	SE	649	0	684	29	0
4	SF	746	0	771	33	0
4	TB	629	0	662	9	0
4	TE	629	0	662	10	0
4	UA	649	0	684	30	0
4	UB	746	0	771	37	0
4	UD	649	0	684	30	0
4	UE	746	0	771	33	0
4	UG	649	0	684	32	0
4	VA	629	0	662	9	0
4	VD	629	0	662	9	0
4	VG	629	0	662	10	0
4	W	649	0	684	31	0
4	WA	746	0	771	34	0
4	WC	649	0	684	29	0
4	WD	746	0	771	38	0
4	WF	649	0	684	29	0
4	WG	746	0	771	34	0
4	X	629	0	662	10	0
4	XC	629	0	662	10	0
4	XF	629	0	662	9	0
4	Y	746	0	771	34	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	YB	649	0	684	31	0
4	YC	746	0	771	35	0
4	YE	649	0	684	30	0
4	YF	746	0	771	36	0
4	ZB	629	0	662	9	0
4	ZE	629	0	662	9	0
All	All	218722	0	197846	3859	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 9.

All (3859) 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)
3:PC:309:VAL:HG12	3:PC:314:ALA:HB2	1.32	1.12
3:BD:309:VAL:HG12	3:BD:314:ALA:HB2	1.32	1.12
3:NA:309:VAL:HG12	3:NA:314:ALA:HB2	1.32	1.11
3:ZA:309:VAL:HG12	3:ZA:314:ALA:HB2	1.32	1.11
3:V:309:VAL:HG12	3:V:314:ALA:HB2	1.32	1.11
3:LB:309:VAL:HG12	3:LB:314:ALA:HB2	1.32	1.11
3:DC:309:VAL:HG12	3:DC:314:ALA:HB2	1.32	1.11
3:C:309:VAL:HG12	3:C:314:ALA:HB2	1.32	1.11
3:HA:309:VAL:HG12	3:HA:314:ALA:HB2	1.32	1.11
3:XB:309:VAL:HG12	3:XB:314:ALA:HB2	1.32	1.11
3:ND:309:VAL:HG12	3:ND:314:ALA:HB2	1.32	1.11
3:K:309:VAL:HG12	3:K:314:ALA:HB2	1.32	1.11
3:BA:309:VAL:HG12	3:BA:314:ALA:HB2	1.32	1.11
3:JC:309:VAL:HG12	3:JC:314:ALA:HB2	1.32	1.10
3:TG:309:VAL:HG12	3:TG:314:ALA:HB2	1.32	1.10
3:RB:309:VAL:HG12	3:RB:314:ALA:HB2	1.32	1.10
3:VC:309:VAL:HG12	3:VC:314:ALA:HB2	1.32	1.10
3:TA:309:VAL:HG12	3:TA:314:ALA:HB2	1.32	1.10
3:FB:309:VAL:HG12	3:FB:314:ALA:HB2	1.32	1.10
3:ZD:309:VAL:HG12	3:ZD:314:ALA:HB2	1.32	1.10
3:HG:309:VAL:HG12	3:HG:314:ALA:HB2	1.32	1.10
3:HD:309:VAL:HG12	3:HD:314:ALA:HB2	1.32	1.09
3:TD:309:VAL:HG12	3:TD:314:ALA:HB2	1.32	1.09
3:M:309:VAL:HG12	3:M:314:ALA:HB2	1.32	1.09
3:LE:309:VAL:HG12	3:LE:314:ALA:HB2	1.32	1.09
3:VF:309:VAL:HG12	3:VF:314:ALA:HB2	1.32	1.09
3:NG:309:VAL:HG12	3:NG:314:ALA:HB2	1.32	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:FE:309:VAL:HG12	3:FE:314:ALA:HB2	1.32	1.08
3:XE:309:VAL:HG12	3:XE:314:ALA:HB2	1.32	1.08
3:JF:309:VAL:HG12	3:JF:314:ALA:HB2	1.32	1.08
3:RE:309:VAL:HG12	3:RE:314:ALA:HB2	1.32	1.08
3:PF:309:VAL:HG12	3:PF:314:ALA:HB2	1.32	1.08
3:BG:309:VAL:HG12	3:BG:314:ALA:HB2	1.32	1.08
3:DF:309:VAL:HG12	3:DF:314:ALA:HB2	1.32	1.07
4:MF:115:ALA:HB1	3:PF:48:ARG:HH12	1.26	0.97
4:OE:115:ALA:HB1	3:RE:48:ARG:HH12	1.31	0.95
4:QG:115:ALA:HB1	3:TG:48:ARG:HH12	1.29	0.94
4:IE:115:ALA:HB1	3:LE:48:ARG:HH12	1.33	0.94
2:KE:65:GLN:CB	2:QE:47:ILE:O	2.16	0.94
4:EA:115:ALA:HB1	3:HA:48:ARG:HH12	1.33	0.93
4:WA:115:ALA:HB1	3:ZA:48:ARG:HH12	1.33	0.93
4:MC:115:ALA:HB1	3:PC:48:ARG:HH12	1.32	0.93
4:UB:115:ALA:HB1	3:XB:48:ARG:HH12	1.33	0.93
4:CB:115:ALA:HB1	3:FB:48:ARG:HH12	1.32	0.92
4:Q:115:ALA:HB1	3:C:48:ARG:HH12	1.32	0.91
4:H:115:ALA:HB1	3:K:48:ARG:HH12	1.34	0.91
4:ED:115:ALA:HB1	3:HD:48:ARG:HH12	1.34	0.91
4:GF:115:ALA:HB1	3:JF:48:ARG:HH12	1.34	0.91
4:GC:115:ALA:HB1	3:JC:48:ARG:HH12	1.34	0.91
4:WD:115:ALA:HB1	3:ZD:48:ARG:HH12	1.33	0.91
4:YF:115:ALA:HB1	3:BG:48:ARG:HH12	1.35	0.91
4:R:115:ALA:HB1	3:V:48:ARG:HH12	1.33	0.90
4:IB:115:ALA:HB1	3:LB:48:ARG:HH12	1.34	0.90
4:UE:115:ALA:HB1	3:XE:48:ARG:HH12	1.36	0.90
4:AC:115:ALA:HB1	3:DC:48:ARG:HH12	1.34	0.90
4:CE:115:ALA:HB1	3:FE:48:ARG:HH12	1.37	0.90
4:Y:115:ALA:HB1	3:BA:48:ARG:HH12	1.36	0.89
4:KD:115:ALA:HB1	3:ND:48:ARG:HH12	1.35	0.89
3:M:48:ARG:HH12	4:WG:115:ALA:HB1	1.35	0.89
2:OC:65:GLN:CB	2:UC:47:ILE:O	2.21	0.89
2:AD:65:GLN:CB	2:GD:47:ILE:O	2.21	0.89
2:YA:65:GLN:CB	2:EB:47:ILE:O	2.21	0.89
4:QA:115:ALA:HB1	3:TA:48:ARG:HH12	1.35	0.89
2:IF:65:GLN:CB	2:OF:47:ILE:O	2.21	0.89
4:SF:115:ALA:HB1	3:VF:48:ARG:HH12	1.38	0.89
2:J:65:GLN:CB	2:T:47:ILE:O	2.21	0.88
4:OB:115:ALA:HB1	3:RB:48:ARG:HH12	1.39	0.88
2:IC:65:GLN:CB	2:OC:47:ILE:O	2.22	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YC:115:ALA:HB1	3:BD:48:ARG:HH12	1.35	0.88
4:EG:115:ALA:HB1	3:HG:48:ARG:HH12	1.36	0.88
4:SC:115:ALA:HB1	3:VC:48:ARG:HH12	1.36	0.87
2:G:47:ILE:O	2:SG:65:GLN:CB	2.21	0.87
4:KA:115:ALA:HB1	3:NA:48:ARG:HH12	1.37	0.87
4:MF:59:ASP:OD2	4:SF:129:SER:HB2	1.74	0.87
2:WB:65:GLN:CB	2:CC:47:ILE:O	2.23	0.87
4:KG:115:ALA:HB1	3:NG:48:ARG:HH12	1.38	0.87
4:OE:104:TYR:CZ	3:RE:256:HIS:HB2	2.10	0.87
4:AF:115:ALA:HB1	3:DF:48:ARG:HH12	1.40	0.87
2:OF:65:GLN:CB	2:UF:47:ILE:O	2.23	0.86
2:AG:65:GLN:CB	2:GG:47:ILE:O	2.23	0.86
2:EB:65:GLN:CB	2:KB:47:ILE:O	2.24	0.86
2:AA:65:GLN:CB	2:GA:47:ILE:O	2.23	0.85
2:MG:192:LYS:HA	2:SG:166:GLY:HA2	1.58	0.85
4:QG:59:ASP:OD2	4:WG:129:SER:HB2	1.74	0.85
4:Q:59:ASP:OD2	4:H:129:SER:HB2	1.77	0.85
2:GA:65:GLN:CB	2:MA:47:ILE:O	2.24	0.85
2:QE:65:GLN:CB	2:WE:47:ILE:O	2.25	0.85
2:UF:192:LYS:HA	2:AG:166:GLY:HA2	1.59	0.85
2:SA:65:GLN:CB	2:YA:47:ILE:O	2.24	0.85
2:GG:192:LYS:HA	2:MG:166:GLY:HA2	1.59	0.85
2:EB:192:LYS:HA	2:KB:166:GLY:HA2	1.59	0.85
2:QE:192:LYS:HA	2:WE:166:GLY:HA2	1.59	0.85
4:QG:52:GLN:OE1	3:TG:320:LEU:HD13	1.77	0.85
2:GD:65:GLN:CB	2:MD:47:ILE:O	2.25	0.85
2:B:65:GLN:CB	2:J:47:ILE:O	2.24	0.84
4:WD:59:ASP:OD2	4:CE:129:SER:HB2	1.77	0.84
2:QB:192:LYS:HA	2:WB:166:GLY:HA2	1.59	0.84
2:MD:192:LYS:HA	2:SD:166:GLY:HA2	1.59	0.84
4:QD:115:ALA:HB1	3:TD:48:ARG:HH12	1.38	0.84
2:SD:192:LYS:HA	2:YD:166:GLY:HA2	1.59	0.84
2:T:192:LYS:HA	2:AA:166:GLY:HA2	1.59	0.84
4:UB:59:ASP:OD2	4:AC:129:SER:HB2	1.77	0.84
2:YD:65:GLN:CB	2:EE:47:ILE:O	2.26	0.84
2:WE:192:LYS:HA	2:CF:166:GLY:HA2	1.58	0.84
2:MA:192:LYS:HA	2:SA:166:GLY:HA2	1.58	0.84
2:T:65:GLN:CB	2:AA:47:ILE:O	2.25	0.84
2:AA:192:LYS:HA	2:GA:166:GLY:HA2	1.60	0.84
2:GD:192:LYS:HA	2:MD:166:GLY:HA2	1.59	0.84
2:IC:192:LYS:HA	2:OC:166:GLY:HA2	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QA:59:ASP:OD2	4:WA:129:SER:HB2	1.78	0.84
4:MC:59:ASP:OD2	4:SC:129:SER:HB2	1.78	0.84
2:CF:192:LYS:HA	2:IF:166:GLY:HA2	1.59	0.84
2:KB:192:LYS:HA	2:QB:166:GLY:HA2	1.59	0.84
2:SD:65:GLN:CB	2:YD:47:ILE:O	2.26	0.84
4:IE:59:ASP:OD2	4:OE:129:SER:HB2	1.76	0.84
2:CC:65:GLN:CB	2:IC:47:ILE:O	2.26	0.83
2:CC:192:LYS:HA	2:IC:166:GLY:HA2	1.59	0.83
2:CF:65:GLN:CB	2:IF:47:ILE:O	2.26	0.83
2:IF:192:LYS:HA	2:OF:166:GLY:HA2	1.60	0.83
2:AG:192:LYS:HA	2:GG:166:GLY:HA2	1.60	0.83
2:QB:65:GLN:CB	2:WB:47:ILE:O	2.26	0.83
2:UC:192:LYS:HA	2:AD:166:GLY:HA2	1.59	0.83
2:EE:192:LYS:HA	2:KE:166:GLY:HA2	1.59	0.83
2:B:192:LYS:HA	2:J:166:GLY:HA2	1.59	0.83
2:YA:192:LYS:HA	2:EB:166:GLY:HA2	1.60	0.83
2:OC:192:LYS:HA	2:UC:166:GLY:HA2	1.60	0.83
2:G:192:LYS:HA	2:B:166:GLY:HA2	1.58	0.83
2:J:192:LYS:HA	2:T:166:GLY:HA2	1.60	0.83
2:SA:192:LYS:HA	2:YA:166:GLY:HA2	1.59	0.83
4:CB:59:ASP:OD2	4:IB:129:SER:HB2	1.78	0.83
4:R:59:ASP:OD2	4:Y:129:SER:HB2	1.79	0.83
4:IE:52:GLN:OE1	3:LE:320:LEU:HD13	1.79	0.83
4:GF:59:ASP:OD2	4:MF:129:SER:HB2	1.79	0.83
2:OF:192:LYS:HA	2:UF:166:GLY:HA2	1.60	0.83
4:SF:104:TYR:CZ	3:VF:256:HIS:HB2	2.14	0.82
4:EA:59:ASP:OD2	4:KA:129:SER:HB2	1.78	0.82
2:YD:192:LYS:HA	2:EE:166:GLY:HA2	1.59	0.82
4:R:104:TYR:CZ	3:V:256:HIS:HB2	2.14	0.82
2:GA:192:LYS:HA	2:MA:166:GLY:HA2	1.60	0.82
4:WA:59:ASP:OD2	4:CB:129:SER:HB2	1.79	0.82
2:KB:65:GLN:CB	2:QB:47:ILE:O	2.27	0.82
4:GC:59:ASP:OD2	4:MC:129:SER:HB2	1.78	0.82
2:AD:192:LYS:HA	2:GD:166:GLY:HA2	1.60	0.82
4:QA:52:GLN:OE1	3:TA:320:LEU:HD13	1.79	0.82
2:EE:65:GLN:CB	2:KE:47:ILE:O	2.28	0.82
4:IB:59:ASP:OD2	4:OB:129:SER:HB2	1.80	0.82
4:AC:59:ASP:OD2	4:GC:129:SER:HB2	1.79	0.82
4:ED:104:TYR:CZ	3:HD:256:HIS:HB2	2.14	0.82
3:M:256:HIS:HB2	4:WG:104:TYR:CZ	2.14	0.82
4:SC:104:TYR:CZ	3:VC:256:HIS:HB2	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MF:52:GLN:OE1	3:PF:320:LEU:HD13	1.80	0.82
4:YF:59:ASP:OD2	4:EG:129:SER:HB2	1.79	0.82
2:WB:192:LYS:HA	2:CC:166:GLY:HA2	1.60	0.82
4:YC:59:ASP:OD2	4:ED:129:SER:HB2	1.79	0.82
4:CB:104:TYR:CZ	3:FB:256:HIS:HB2	2.15	0.82
2:UC:65:GLN:CB	2:AD:47:ILE:O	2.28	0.82
2:UF:65:GLN:CB	2:AG:47:ILE:O	2.28	0.82
2:MG:65:GLN:CB	2:SG:47:ILE:O	2.27	0.82
4:UB:52:GLN:OE1	3:XB:320:LEU:HD13	1.80	0.82
2:MD:65:GLN:CB	2:SD:47:ILE:O	2.28	0.82
2:KE:192:LYS:HA	2:QE:166:GLY:HA2	1.61	0.81
4:OE:59:ASP:OD2	4:UE:129:SER:HB2	1.80	0.81
4:WD:52:GLN:OE1	3:ZD:320:LEU:HD13	1.81	0.81
4:EG:104:TYR:CZ	3:HG:256:HIS:HB2	2.15	0.81
2:G:65:GLN:CB	2:B:47:ILE:O	2.27	0.81
4:Q:52:GLN:OE1	3:C:320:LEU:HD13	1.79	0.81
4:H:59:ASP:OD2	4:R:129:SER:HB2	1.79	0.81
3:TD:247:ARG:O	3:TD:251:VAL:HG23	1.81	0.81
3:BA:247:ARG:O	3:BA:251:VAL:HG23	1.81	0.81
3:LE:247:ARG:O	3:LE:251:VAL:HG23	1.81	0.81
4:UE:59:ASP:OD2	4:AF:129:SER:HB2	1.80	0.81
2:IF:65:GLN:HA	2:OF:47:ILE:CB	2.11	0.81
3:JF:247:ARG:O	3:JF:251:VAL:HG23	1.81	0.81
4:KG:59:ASP:OD2	4:QG:129:SER:HB2	1.81	0.81
3:FB:247:ARG:O	3:FB:251:VAL:HG23	1.81	0.81
4:YC:52:GLN:OE1	3:BD:320:LEU:HD13	1.80	0.81
4:ED:59:ASP:OD2	4:KD:129:SER:HB2	1.80	0.81
4:KD:59:ASP:OD2	4:QD:129:SER:HB2	1.79	0.81
4:Q:129:SER:HB2	4:WG:59:ASP:OD2	1.81	0.81
3:HA:247:ARG:O	3:HA:251:VAL:HG23	1.81	0.81
3:VC:247:ARG:O	3:VC:251:VAL:HG23	1.81	0.81
4:P:76:LYS:O	4:P:80:ARG:HG3	1.81	0.81
4:VA:76:LYS:O	4:VA:80:ARG:HG3	1.81	0.81
3:LB:247:ARG:O	3:LB:251:VAL:HG23	1.81	0.81
3:ND:247:ARG:O	3:ND:251:VAL:HG23	1.81	0.81
3:V:247:ARG:O	3:V:251:VAL:HG23	1.81	0.81
4:BB:76:LYS:O	4:BB:80:ARG:HG3	1.81	0.81
3:RE:247:ARG:O	3:RE:251:VAL:HG23	1.81	0.81
3:DF:247:ARG:O	3:DF:251:VAL:HG23	1.81	0.81
3:BG:247:ARG:O	3:BG:251:VAL:HG23	1.81	0.81
4:EG:59:ASP:OD2	4:KG:129:SER:HB2	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:76:LYS:O	4:E:80:ARG:HG3	1.81	0.80
4:GC:52:GLN:OE1	3:JC:320:LEU:HD13	1.81	0.80
2:IF:190:ARG:HD3	2:OF:166:GLY:O	1.82	0.80
3:TG:247:ARG:O	3:TG:251:VAL:HG23	1.81	0.80
4:PA:76:LYS:O	4:PA:80:ARG:HG3	1.81	0.80
4:AC:104:TYR:CZ	3:DC:256:HIS:HB2	2.16	0.80
3:BD:247:ARG:O	3:BD:251:VAL:HG23	1.81	0.80
4:VG:76:LYS:O	4:VG:80:ARG:HG3	1.81	0.80
3:HG:247:ARG:O	3:HG:251:VAL:HG23	1.81	0.80
2:G:166:GLY:HA2	2:SG:192:LYS:HA	1.60	0.80
4:RF:76:LYS:O	4:RF:80:ARG:HG3	1.81	0.80
2:GG:65:GLN:CB	2:MG:47:ILE:O	2.29	0.80
3:M:247:ARG:O	3:M:251:VAL:HG23	1.81	0.80
3:ZA:247:ARG:O	3:ZA:251:VAL:HG23	1.81	0.80
4:HB:76:LYS:O	4:HB:80:ARG:HG3	1.81	0.80
4:FC:76:LYS:O	4:FC:80:ARG:HG3	1.81	0.80
4:LC:76:LYS:O	4:LC:80:ARG:HG3	1.81	0.80
4:YF:52:GLN:OE1	3:BG:320:LEU:HD13	1.81	0.80
4:O:76:LYS:O	4:O:80:ARG:HG3	1.81	0.80
4:Y:59:ASP:OD2	4:EA:129:SER:HB2	1.81	0.80
3:RB:247:ARG:O	3:RB:251:VAL:HG23	1.81	0.80
3:XB:247:ARG:O	3:XB:251:VAL:HG23	1.81	0.80
3:DC:247:ARG:O	3:DC:251:VAL:HG23	1.81	0.80
3:ZD:247:ARG:O	3:ZD:251:VAL:HG23	1.81	0.80
4:CE:59:ASP:OD2	4:IE:129:SER:HB2	1.81	0.80
3:FE:247:ARG:O	3:FE:251:VAL:HG23	1.81	0.80
3:NG:247:ARG:O	3:NG:251:VAL:HG23	1.81	0.80
4:JA:76:LYS:O	4:JA:80:ARG:HG3	1.81	0.80
4:QD:59:ASP:OD2	4:WD:129:SER:HB2	1.81	0.80
4:LF:76:LYS:O	4:LF:80:ARG:HG3	1.81	0.80
3:PF:247:ARG:O	3:PF:251:VAL:HG23	1.81	0.80
4:XF:76:LYS:O	4:XF:80:ARG:HG3	1.81	0.80
4:PG:76:LYS:O	4:PG:80:ARG:HG3	1.81	0.80
4:Y:104:TYR:CZ	3:BA:256:HIS:HB2	2.17	0.80
3:NA:247:ARG:O	3:NA:251:VAL:HG23	1.81	0.80
3:JC:247:ARG:O	3:JC:251:VAL:HG23	1.81	0.80
3:PC:247:ARG:O	3:PC:251:VAL:HG23	1.81	0.80
2:WE:65:GLN:CB	2:CF:47:ILE:O	2.30	0.80
4:ZB:76:LYS:O	4:ZB:80:ARG:HG3	1.81	0.80
4:KA:104:TYR:CZ	3:NA:256:HIS:HB2	2.16	0.79
4:RC:76:LYS:O	4:RC:80:ARG:HG3	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:VF:247:ARG:O	3:VF:251:VAL:HG23	1.81	0.79
3:K:247:ARG:O	3:K:251:VAL:HG23	1.81	0.79
4:EA:104:TYR:CZ	3:HA:256:HIS:HB2	2.17	0.79
4:KA:59:ASP:OD2	4:QA:129:SER:HB2	1.82	0.79
3:C:247:ARG:O	3:C:251:VAL:HG23	1.81	0.79
4:MC:52:GLN:OE1	3:PC:320:LEU:HD13	1.82	0.79
4:X:76:LYS:O	4:X:80:ARG:HG3	1.81	0.79
4:WA:104:TYR:CZ	3:ZA:256:HIS:HB2	2.18	0.79
4:NB:76:LYS:O	4:NB:80:ARG:HG3	1.81	0.79
2:OC:199:ALA:HB2	2:UC:161:ILE:HG22	1.65	0.79
4:AF:52:GLN:OE1	3:DF:320:LEU:HD13	1.82	0.79
4:FF:76:LYS:O	4:FF:80:ARG:HG3	1.81	0.79
4:JG:76:LYS:O	4:JG:80:ARG:HG3	1.81	0.79
4:DA:76:LYS:O	4:DA:80:ARG:HG3	1.81	0.79
4:WA:52:GLN:OE1	3:ZA:320:LEU:HD13	1.82	0.79
4:MF:104:TYR:CZ	3:PF:256:HIS:HB2	2.17	0.79
4:DG:76:LYS:O	4:DG:80:ARG:HG3	1.81	0.79
4:H:104:TYR:CZ	3:K:256:HIS:HB2	2.17	0.79
4:IB:104:TYR:CZ	3:LB:256:HIS:HB2	2.17	0.79
4:TB:76:LYS:O	4:TB:80:ARG:HG3	1.81	0.79
4:MC:104:TYR:CZ	3:PC:256:HIS:HB2	2.17	0.79
3:HD:247:ARG:O	3:HD:251:VAL:HG23	1.81	0.79
4:JD:76:LYS:O	4:JD:80:ARG:HG3	1.81	0.79
4:NE:76:LYS:O	4:NE:80:ARG:HG3	1.81	0.79
4:UE:104:TYR:CZ	3:XE:256:HIS:HB2	2.17	0.79
3:XE:247:ARG:O	3:XE:251:VAL:HG23	1.81	0.79
4:AF:59:ASP:OD2	4:GF:129:SER:HB2	1.82	0.79
4:PD:76:LYS:O	4:PD:80:ARG:HG3	1.81	0.79
3:BA:258:GLU:HA	4:CA:74:THR:HG22	1.65	0.79
3:FB:258:GLU:HA	4:GB:74:THR:HG22	1.65	0.79
3:LB:258:GLU:HA	4:MB:74:THR:HG22	1.65	0.79
3:PC:258:GLU:HA	4:QC:74:THR:HG22	1.65	0.79
3:VC:258:GLU:HA	4:WC:74:THR:HG22	1.65	0.79
4:KG:52:GLN:OE1	3:NG:320:LEU:HD13	1.82	0.79
3:V:258:GLU:HA	4:W:74:THR:HG22	1.65	0.79
2:MA:65:GLN:CB	2:SA:47:ILE:O	2.30	0.79
3:TA:247:ARG:O	3:TA:251:VAL:HG23	1.81	0.79
4:HE:76:LYS:O	4:HE:80:ARG:HG3	1.81	0.79
4:TE:76:LYS:O	4:TE:80:ARG:HG3	1.81	0.79
4:GF:52:GLN:OE1	3:JF:320:LEU:HD13	1.82	0.79
4:DD:76:LYS:O	4:DD:80:ARG:HG3	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:52:GLN:OE1	3:TD:320:LEU:HD13	1.82	0.79
4:VD:76:LYS:O	4:VD:80:ARG:HG3	1.81	0.79
4:BE:76:LYS:O	4:BE:80:ARG:HG3	1.81	0.79
3:ZD:258:GLU:HA	4:AE:74:THR:HG22	1.65	0.78
2:KE:199:ALA:HB2	2:QE:161:ILE:HG22	1.64	0.78
3:JC:258:GLU:HA	4:KC:74:THR:HG22	1.65	0.78
4:XC:76:LYS:O	4:XC:80:ARG:HG3	1.81	0.78
2:KE:190:ARG:HD3	2:QE:166:GLY:O	1.83	0.78
4:OE:104:TYR:CD1	3:RE:256:HIS:O	2.36	0.78
4:EA:52:GLN:OE1	3:HA:320:LEU:HD13	1.83	0.78
3:HA:258:GLU:HA	4:IA:74:THR:HG22	1.65	0.78
3:ZA:258:GLU:HA	4:AB:74:THR:HG22	1.65	0.78
3:RB:258:GLU:HA	4:SB:74:THR:HG22	1.65	0.78
4:ZE:76:LYS:O	4:ZE:80:ARG:HG3	1.81	0.78
3:K:258:GLU:HA	4:L:74:THR:HG22	1.65	0.78
4:OB:59:ASP:OD2	4:UB:129:SER:HB2	1.83	0.78
4:H:52:GLN:OE1	3:K:320:LEU:HD13	1.83	0.78
3:BD:258:GLU:HA	4:CD:74:THR:HG22	1.65	0.78
3:TD:258:GLU:HA	4:UD:74:THR:HG22	1.65	0.78
4:UE:52:GLN:OE1	3:XE:320:LEU:HD13	1.84	0.78
3:NG:258:GLU:HA	4:OG:74:THR:HG22	1.65	0.78
4:KD:52:GLN:OE1	3:ND:320:LEU:HD13	1.83	0.78
3:TG:258:GLU:HA	4:UG:74:THR:HG22	1.65	0.78
2:AD:199:ALA:HB2	2:GD:161:ILE:HG22	1.66	0.78
4:KD:104:TYR:CZ	3:ND:256:HIS:HB2	2.18	0.78
3:FE:258:GLU:HA	4:GE:74:THR:HG22	1.65	0.78
3:DF:258:GLU:HA	4:EF:74:THR:HG22	1.65	0.78
3:JF:258:GLU:HA	4:KF:74:THR:HG22	1.65	0.78
3:HG:258:GLU:HA	4:IG:74:THR:HG22	1.65	0.78
4:SC:59:ASP:OD2	4:YC:129:SER:HB2	1.83	0.78
4:CB:52:GLN:OE1	3:FB:320:LEU:HD13	1.84	0.78
4:CE:104:TYR:CZ	3:FE:256:HIS:HB2	2.18	0.78
4:R:52:GLN:OE1	3:V:320:LEU:HD13	1.85	0.77
3:NA:258:GLU:HA	4:OA:74:THR:HG22	1.65	0.77
2:OF:199:ALA:HB2	2:UF:161:ILE:HG22	1.65	0.77
4:Y:52:GLN:OE1	3:BA:320:LEU:HD13	1.85	0.77
2:GA:199:ALA:HB2	2:MA:161:ILE:HG22	1.66	0.77
3:XB:258:GLU:HA	4:YB:74:THR:HG22	1.65	0.77
3:LE:258:GLU:HA	4:ME:74:THR:HG22	1.65	0.77
2:IF:120:ASP:OD2	3:PF:75:ARG:NE	2.15	0.77
3:M:258:GLU:HA	4:N:74:THR:HG22	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:TA:258:GLU:HA	4:UA:74:THR:HG22	1.65	0.77
2:WB:151:GLU:HG2	2:WB:154:ARG:HH11	1.50	0.77
3:ND:258:GLU:HA	4:OD:74:THR:HG22	1.65	0.77
2:YA:151:GLU:HG2	2:YA:154:ARG:HH11	1.50	0.77
3:DC:258:GLU:HA	4:EC:74:THR:HG22	1.65	0.77
2:UC:151:GLU:HG2	2:UC:154:ARG:HH11	1.50	0.77
2:MD:151:GLU:HG2	2:MD:154:ARG:HH11	1.50	0.77
2:KE:151:GLU:HG2	2:KE:154:ARG:HH11	1.50	0.77
3:PF:258:GLU:HA	4:QF:74:THR:HG22	1.65	0.77
4:SF:59:ASP:OD2	4:YF:129:SER:HB2	1.83	0.77
2:MG:65:GLN:HA	2:SG:47:ILE:CB	2.15	0.77
2:YA:199:ALA:HB2	2:EB:161:ILE:HG22	1.67	0.77
4:OB:104:TYR:CZ	3:RB:256:HIS:HB2	2.19	0.77
2:CC:151:GLU:HG2	2:CC:154:ARG:HH11	1.50	0.77
3:HD:258:GLU:HA	4:ID:74:THR:HG22	1.65	0.77
4:IB:52:GLN:OE1	3:LB:320:LEU:HD13	1.84	0.77
2:KB:199:ALA:HB2	2:QB:161:ILE:HG22	1.67	0.77
2:SD:151:GLU:HG2	2:SD:154:ARG:HH11	1.50	0.77
3:XE:258:GLU:HA	4:YE:74:THR:HG22	1.65	0.77
2:EB:151:GLU:HG2	2:EB:154:ARG:HH11	1.50	0.77
4:AC:52:GLN:OE1	3:DC:320:LEU:HD13	1.84	0.77
4:GF:104:TYR:CZ	3:JF:256:HIS:HB2	2.20	0.77
2:IF:151:GLU:HG2	2:IF:154:ARG:HH11	1.50	0.77
3:C:258:GLU:HA	4:D:74:THR:HG22	1.65	0.77
2:J:199:ALA:HB2	2:T:161:ILE:HG22	1.67	0.77
2:GA:151:GLU:HG2	2:GA:154:ARG:HH11	1.50	0.77
2:OC:151:GLU:HG2	2:OC:154:ARG:HH11	1.50	0.77
2:YD:199:ALA:HB2	2:EE:161:ILE:HG22	1.67	0.77
2:QE:151:GLU:HG2	2:QE:154:ARG:HH11	1.50	0.77
2:G:161:ILE:HG22	2:SG:199:ALA:HB2	1.66	0.76
2:GD:151:GLU:HG2	2:GD:154:ARG:HH11	1.50	0.76
3:BG:258:GLU:HA	4:CG:74:THR:HG22	1.65	0.76
2:B:151:GLU:HG2	2:B:154:ARG:HH11	1.50	0.76
2:AA:151:GLU:HG2	2:AA:154:ARG:HH11	1.50	0.76
2:MA:151:GLU:HG2	2:MA:154:ARG:HH11	1.50	0.76
2:EB:199:ALA:HB2	2:KB:161:ILE:HG22	1.67	0.76
4:OE:124:ASP:HA	3:RE:246:TRP:CZ3	2.20	0.76
2:QE:199:ALA:HB2	2:WE:161:ILE:HG22	1.67	0.76
2:WE:151:GLU:HG2	2:WE:154:ARG:HH11	1.50	0.76
2:GG:151:GLU:HG2	2:GG:154:ARG:HH11	1.50	0.76
2:QB:151:GLU:HG2	2:QB:154:ARG:HH11	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:WB:199:ALA:HB2	2:CC:161:ILE:HG22	1.67	0.76
4:GC:104:TYR:CZ	3:JC:256:HIS:HB2	2.20	0.76
2:IC:151:GLU:HG2	2:IC:154:ARG:HH11	1.50	0.76
4:CE:52:GLN:OE1	3:FE:320:LEU:HD13	1.84	0.76
2:CF:151:GLU:HG2	2:CF:154:ARG:HH11	1.50	0.76
2:T:199:ALA:HB2	2:AA:161:ILE:HG22	1.67	0.76
2:SA:151:GLU:HG2	2:SA:154:ARG:HH11	1.50	0.76
4:OB:52:GLN:OE1	3:RB:320:LEU:HD13	1.85	0.76
4:UB:104:TYR:CZ	3:XB:256:HIS:HB2	2.20	0.76
2:AG:199:ALA:HB2	2:GG:161:ILE:HG22	1.66	0.76
4:ED:52:GLN:OE1	3:HD:320:LEU:HD13	1.86	0.76
2:G:151:GLU:HG2	2:G:154:ARG:HH11	1.50	0.76
2:KE:65:GLN:HA	2:QE:47:ILE:CB	2.16	0.76
2:OF:151:GLU:HG2	2:OF:154:ARG:HH11	1.50	0.76
3:VF:258:GLU:HA	4:WF:74:THR:HG22	1.65	0.76
4:QG:45:GLY:O	4:UG:85:SER:HA	1.86	0.76
2:EE:151:GLU:HG2	2:EE:154:ARG:HH11	1.50	0.76
2:AG:151:GLU:HG2	2:AG:154:ARG:HH11	1.50	0.76
2:AA:199:ALA:HB2	2:GA:161:ILE:HG22	1.68	0.76
2:SA:199:ALA:HB2	2:YA:161:ILE:HG22	1.68	0.76
2:YA:190:ARG:HD3	2:EB:166:GLY:O	1.86	0.76
2:AD:151:GLU:HG2	2:AD:154:ARG:HH11	1.50	0.76
2:GD:199:ALA:HB2	2:MD:161:ILE:HG22	1.68	0.76
2:YD:151:GLU:HG2	2:YD:154:ARG:HH11	1.50	0.76
3:RE:258:GLU:HA	4:SE:74:THR:HG22	1.65	0.76
2:IC:190:ARG:HD3	2:OC:166:GLY:O	1.86	0.76
4:KG:104:TYR:CZ	3:NG:256:HIS:HB2	2.21	0.76
4:QG:52:GLN:OE1	3:TG:320:LEU:CD1	2.33	0.76
4:KA:52:GLN:OE1	3:NA:320:LEU:HD13	1.86	0.76
4:QD:104:TYR:CZ	3:TD:256:HIS:HB2	2.20	0.76
4:MF:52:GLN:OE1	3:PF:320:LEU:CD1	2.34	0.76
2:YA:65:GLN:HA	2:EB:47:ILE:CB	2.16	0.75
2:MG:151:GLU:HG2	2:MG:154:ARG:HH11	1.50	0.75
2:B:199:ALA:HB2	2:J:161:ILE:HG22	1.68	0.75
2:J:151:GLU:HG2	2:J:154:ARG:HH11	1.50	0.75
2:MD:199:ALA:HB2	2:SD:161:ILE:HG22	1.69	0.75
4:OE:104:TYR:CG	3:RE:256:HIS:O	2.39	0.75
2:IC:199:ALA:HB2	2:OC:161:ILE:HG22	1.68	0.75
4:WD:104:TYR:CZ	3:ZD:256:HIS:HB2	2.20	0.75
4:YF:104:TYR:CZ	3:BG:256:HIS:HB2	2.21	0.75
2:J:190:ARG:HD3	2:T:166:GLY:O	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:MG:190:ARG:HD3	2:SG:166:GLY:O	1.87	0.75
2:SG:151:GLU:HG2	2:SG:154:ARG:HH11	1.50	0.75
3:M:320:LEU:HD13	4:WG:52:GLN:OE1	1.86	0.75
2:T:151:GLU:HG2	2:T:154:ARG:HH11	1.50	0.75
2:IC:65:GLN:HA	2:OC:47:ILE:CB	2.17	0.75
4:SF:52:GLN:OE1	3:VF:320:LEU:HD13	1.87	0.75
2:KB:151:GLU:HG2	2:KB:154:ARG:HH11	1.50	0.75
4:IE:104:TYR:CZ	3:LE:256:HIS:HB2	2.22	0.75
2:CF:199:ALA:HB2	2:IF:161:ILE:HG22	1.69	0.75
2:WE:199:ALA:HB2	2:CF:161:ILE:HG22	1.69	0.74
2:J:65:GLN:HA	2:T:47:ILE:CB	2.17	0.74
4:R:104:TYR:CD1	3:V:256:HIS:O	2.41	0.74
4:IE:52:GLN:OE1	3:LE:320:LEU:CD1	2.34	0.74
4:Q:52:GLN:OE1	3:C:320:LEU:CD1	2.34	0.74
4:QA:52:GLN:OE1	3:TA:320:LEU:CD1	2.34	0.74
2:GG:199:ALA:HB2	2:MG:161:ILE:HG22	1.69	0.74
2:AA:65:GLN:HA	2:GA:47:ILE:CB	2.18	0.74
2:AD:190:ARG:HD3	2:GD:166:GLY:O	1.87	0.74
4:YF:52:GLN:OE1	3:BG:320:LEU:CD1	2.36	0.74
4:EG:52:GLN:OE1	3:HG:320:LEU:HD13	1.86	0.74
2:UF:151:GLU:HG2	2:UF:154:ARG:HH11	1.50	0.74
4:CB:104:TYR:CD1	3:FB:256:HIS:O	2.41	0.74
2:CC:199:ALA:HB2	2:IC:161:ILE:HG22	1.69	0.74
4:YC:104:TYR:CZ	3:BD:256:HIS:HB2	2.22	0.74
4:OE:52:GLN:OE1	3:RE:320:LEU:HD13	1.88	0.74
4:AF:104:TYR:CZ	3:DF:256:HIS:HB2	2.22	0.74
3:M:256:HIS:O	4:WG:104:TYR:CD1	2.41	0.74
2:AA:190:ARG:HD3	2:GA:166:GLY:O	1.87	0.74
4:UB:52:GLN:OE1	3:XB:320:LEU:CD1	2.35	0.74
2:WB:190:ARG:HD3	2:CC:166:GLY:O	1.88	0.74
4:YC:52:GLN:OE1	3:BD:320:LEU:CD1	2.35	0.74
2:SD:199:ALA:HB2	2:YD:161:ILE:HG22	1.70	0.74
2:UF:199:ALA:HB2	2:AG:161:ILE:HG22	1.69	0.74
4:QG:104:TYR:CZ	3:TG:256:HIS:HB2	2.23	0.74
2:QB:199:ALA:HB2	2:WB:161:ILE:HG22	1.70	0.74
4:MC:52:GLN:OE1	3:PC:320:LEU:CD1	2.36	0.74
4:SC:104:TYR:CG	3:VC:256:HIS:O	2.41	0.74
2:KE:120:ASP:OD2	3:RE:75:ARG:NE	2.16	0.74
4:Q:104:TYR:CZ	3:C:256:HIS:HB2	2.22	0.74
2:UC:199:ALA:HB2	2:AD:161:ILE:HG22	1.70	0.74
2:SD:65:GLN:HA	2:YD:47:ILE:CB	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MF:104:TYR:CD1	3:PF:256:HIS:O	2.41	0.74
2:IF:199:ALA:HB2	2:OF:161:ILE:HG22	1.70	0.73
2:QB:65:GLN:HA	2:WB:47:ILE:CB	2.18	0.73
4:GC:52:GLN:OE1	3:JC:320:LEU:CD1	2.35	0.73
4:KG:52:GLN:OE1	3:NG:320:LEU:CD1	2.36	0.73
2:G:166:GLY:O	2:SG:190:ARG:HD3	1.88	0.73
4:GF:52:GLN:OE1	3:JF:320:LEU:CD1	2.36	0.73
4:H:52:GLN:OE1	3:K:320:LEU:CD1	2.37	0.73
4:SC:104:TYR:CD1	3:VC:256:HIS:O	2.41	0.73
4:MF:45:GLY:O	4:QF:85:SER:HA	1.87	0.73
4:AF:52:GLN:OE1	3:DF:320:LEU:CD1	2.37	0.73
2:SA:190:ARG:HD3	2:YA:166:GLY:O	1.88	0.73
4:AC:52:GLN:OE1	3:DC:320:LEU:CD1	2.37	0.73
4:ED:104:TYR:CD1	3:HD:256:HIS:O	2.41	0.73
4:WD:52:GLN:OE1	3:ZD:320:LEU:CD1	2.35	0.73
2:G:199:ALA:HB2	2:B:161:ILE:HG22	1.71	0.73
4:WA:52:GLN:OE1	3:ZA:320:LEU:CD1	2.36	0.73
2:QB:190:ARG:HD3	2:WB:166:GLY:O	1.89	0.73
4:QD:52:GLN:OE1	3:TD:320:LEU:CD1	2.36	0.73
2:SD:190:ARG:HD3	2:YD:166:GLY:O	1.89	0.73
2:EE:199:ALA:HB2	2:KE:161:ILE:HG22	1.71	0.73
4:SC:52:GLN:OE1	3:VC:320:LEU:HD13	1.88	0.73
2:G:65:GLN:HA	2:B:47:ILE:CB	2.18	0.72
2:B:190:ARG:HD3	2:J:166:GLY:O	1.89	0.72
4:QA:104:TYR:CZ	3:TA:256:HIS:HB2	2.24	0.72
2:EB:190:ARG:HD3	2:KB:166:GLY:O	1.89	0.72
2:EE:65:GLN:HA	2:KE:47:ILE:CB	2.18	0.72
4:SF:104:TYR:CD1	3:VF:256:HIS:O	2.42	0.72
2:MG:120:ASP:OD2	3:TG:75:ARG:NE	2.20	0.72
2:MA:199:ALA:HB2	2:SA:161:ILE:HG22	1.71	0.72
2:SA:65:GLN:HA	2:YA:47:ILE:CB	2.19	0.72
2:EB:65:GLN:HA	2:KB:47:ILE:CB	2.20	0.72
2:AD:65:GLN:HA	2:GD:47:ILE:CB	2.19	0.72
4:ED:104:TYR:CG	3:HD:256:HIS:O	2.42	0.72
4:SF:104:TYR:CG	3:VF:256:HIS:O	2.42	0.72
4:IB:52:GLN:OE1	3:LB:320:LEU:CD1	2.37	0.72
4:IE:45:GLY:O	4:ME:85:SER:HA	1.89	0.72
4:EA:52:GLN:OE1	3:HA:320:LEU:CD1	2.36	0.72
2:CC:190:ARG:HD3	2:IC:166:GLY:O	1.90	0.72
2:OC:190:ARG:HD3	2:UC:166:GLY:O	1.89	0.72
4:CE:52:GLN:OE1	3:FE:320:LEU:CD1	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:256:HIS:O	4:WG:104:TYR:CG	2.42	0.72
4:EA:104:TYR:CD1	3:HA:256:HIS:O	2.43	0.72
4:MF:124:ASP:HA	3:PF:246:TRP:CZ3	2.25	0.72
4:EG:104:TYR:CD1	3:HG:256:HIS:O	2.43	0.72
2:G:190:ARG:HD3	2:B:166:GLY:O	1.90	0.72
4:R:104:TYR:CG	3:V:256:HIS:O	2.43	0.72
4:Y:52:GLN:OE1	3:BA:320:LEU:CD1	2.38	0.72
2:GD:190:ARG:HD3	2:MD:166:GLY:O	1.90	0.72
4:UE:52:GLN:OE1	3:XE:320:LEU:CD1	2.37	0.72
3:FB:309:VAL:HG12	3:FB:314:ALA:CB	2.18	0.72
4:ED:124:ASP:HA	3:HD:246:TRP:CZ3	2.25	0.72
4:KD:52:GLN:OE1	3:ND:320:LEU:CD1	2.37	0.72
3:TD:309:VAL:HG12	3:TD:314:ALA:CB	2.18	0.72
3:PF:309:VAL:HG12	3:PF:314:ALA:CB	2.18	0.72
2:AG:190:ARG:HD3	2:GG:166:GLY:O	1.90	0.72
4:CB:124:ASP:HA	3:FB:246:TRP:CZ3	2.25	0.72
4:UB:45:GLY:O	4:YB:85:SER:HA	1.90	0.72
4:MC:104:TYR:CD1	3:PC:256:HIS:O	2.42	0.72
2:EE:190:ARG:HD3	2:KE:166:GLY:O	1.90	0.72
2:CF:65:GLN:HA	2:IF:47:ILE:CB	2.20	0.72
3:M:246:TRP:CZ3	4:WG:124:ASP:HA	2.25	0.72
3:K:309:VAL:HG12	3:K:314:ALA:CB	2.18	0.72
4:AC:104:TYR:CD1	3:DC:256:HIS:O	2.43	0.72
3:RE:309:VAL:HG12	3:RE:314:ALA:CB	2.18	0.72
2:CF:190:ARG:HD3	2:IF:166:GLY:O	1.90	0.72
2:G:47:ILE:CB	2:SG:65:GLN:HA	2.20	0.72
4:R:124:ASP:HA	3:V:246:TRP:CZ3	2.25	0.72
2:WB:65:GLN:HA	2:CC:47:ILE:CB	2.19	0.72
2:CC:65:GLN:HA	2:IC:47:ILE:CB	2.19	0.72
2:B:65:GLN:HA	2:J:47:ILE:CB	2.19	0.71
4:CB:52:GLN:OE1	3:FB:320:LEU:CD1	2.37	0.71
4:SC:124:ASP:HA	3:VC:246:TRP:CZ3	2.25	0.71
3:M:320:LEU:CD1	4:WG:52:GLN:OE1	2.39	0.71
3:LE:258:GLU:CA	4:ME:74:THR:HG22	2.21	0.71
3:K:258:GLU:CA	4:L:74:THR:HG22	2.21	0.71
4:KA:104:TYR:CD1	3:NA:256:HIS:O	2.44	0.71
3:VF:258:GLU:CA	4:WF:74:THR:HG22	2.21	0.71
2:MG:199:ALA:HB2	2:SG:161:ILE:HG22	1.72	0.71
4:H:104:TYR:CD1	3:K:256:HIS:O	2.44	0.71
4:KA:52:GLN:OE1	3:NA:320:LEU:CD1	2.38	0.71
3:FE:258:GLU:CA	4:GE:74:THR:HG22	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QE:190:ARG:HD3	2:WE:166:GLY:O	1.90	0.71
4:R:52:GLN:OE1	3:V:320:LEU:CD1	2.38	0.71
3:V:258:GLU:CA	4:W:74:THR:HG22	2.21	0.71
4:WD:45:GLY:O	4:AE:85:SER:HA	1.90	0.71
3:BG:258:GLU:CA	4:CG:74:THR:HG22	2.21	0.71
4:Q:45:GLY:O	4:D:85:SER:HA	1.89	0.71
3:C:258:GLU:CA	4:D:74:THR:HG22	2.21	0.71
4:QA:45:GLY:O	4:UA:85:SER:HA	1.90	0.71
4:IB:104:TYR:CD1	3:LB:256:HIS:O	2.44	0.71
3:DC:309:VAL:HG12	3:DC:314:ALA:CB	2.18	0.71
3:RE:258:GLU:CA	4:SE:74:THR:HG22	2.21	0.71
3:PF:258:GLU:CA	4:QF:74:THR:HG22	2.21	0.71
4:EG:104:TYR:CG	3:HG:256:HIS:O	2.43	0.71
4:CB:104:TYR:CG	3:FB:256:HIS:O	2.44	0.71
4:OB:52:GLN:OE1	3:RB:320:LEU:CD1	2.38	0.71
4:WA:104:TYR:CD1	3:ZA:256:HIS:O	2.44	0.71
2:IC:120:ASP:OD2	3:PC:75:ARG:NE	2.20	0.71
3:VC:258:GLU:CA	4:WC:74:THR:HG22	2.21	0.71
4:ED:52:GLN:OE1	3:HD:320:LEU:CD1	2.38	0.71
3:ZD:258:GLU:CA	4:AE:74:THR:HG22	2.21	0.71
4:EG:52:GLN:OE1	3:HG:320:LEU:CD1	2.38	0.71
3:HG:258:GLU:CA	4:IG:74:THR:HG22	2.21	0.71
2:GA:190:ARG:HD3	2:MA:166:GLY:O	1.91	0.71
3:ZA:258:GLU:CA	4:AB:74:THR:HG22	2.21	0.71
3:FB:258:GLU:CA	4:GB:74:THR:HG22	2.21	0.71
3:BD:258:GLU:CA	4:CD:74:THR:HG22	2.21	0.71
4:OE:52:GLN:OE1	3:RE:320:LEU:CD1	2.39	0.71
2:OF:190:ARG:HD3	2:UF:166:GLY:O	1.91	0.71
3:M:258:GLU:CA	4:N:74:THR:HG22	2.21	0.71
3:NA:309:VAL:HG12	3:NA:314:ALA:CB	2.18	0.71
3:PC:258:GLU:CA	4:QC:74:THR:HG22	2.21	0.71
4:Y:104:TYR:CD1	3:BA:256:HIS:O	2.44	0.70
3:BA:258:GLU:CA	4:CA:74:THR:HG22	2.21	0.70
3:JF:258:GLU:CA	4:KF:74:THR:HG22	2.21	0.70
2:UF:190:ARG:HD3	2:AG:166:GLY:O	1.92	0.70
2:MA:65:GLN:HA	2:SA:47:ILE:CB	2.21	0.70
3:TA:258:GLU:CA	4:UA:74:THR:HG22	2.21	0.70
3:LB:258:GLU:CA	4:MB:74:THR:HG22	2.21	0.70
3:HD:258:GLU:CA	4:ID:74:THR:HG22	2.21	0.70
3:XE:258:GLU:CA	4:YE:74:THR:HG22	2.21	0.70
4:SF:52:GLN:OE1	3:VF:320:LEU:CD1	2.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:120:ASP:OD2	3:C:75:ARG:NE	2.23	0.70
2:T:190:ARG:HD3	2:AA:166:GLY:O	1.91	0.70
4:EA:124:ASP:HA	3:HA:246:TRP:CZ3	2.27	0.70
3:JC:258:GLU:CA	4:KC:74:THR:HG22	2.21	0.70
4:MC:45:GLY:O	4:QC:85:SER:HA	1.91	0.70
2:UC:65:GLN:HA	2:AD:47:ILE:CB	2.21	0.70
4:YC:45:GLY:O	4:CD:85:SER:HA	1.91	0.70
3:BD:309:VAL:HG12	3:BD:314:ALA:CB	2.18	0.70
4:GF:45:GLY:O	4:KF:85:SER:HA	1.92	0.70
3:NG:258:GLU:CA	4:OG:74:THR:HG22	2.21	0.70
2:T:65:GLN:HA	2:AA:47:ILE:CB	2.22	0.70
3:NA:258:GLU:CA	4:OA:74:THR:HG22	2.21	0.70
3:RB:258:GLU:CA	4:SB:74:THR:HG22	2.21	0.70
4:AC:124:ASP:HA	3:DC:246:TRP:CZ3	2.27	0.70
3:DC:258:GLU:CA	4:EC:74:THR:HG22	2.21	0.70
4:MC:124:ASP:HA	3:PC:246:TRP:CZ3	2.26	0.70
2:UC:190:ARG:HD3	2:AD:166:GLY:O	1.92	0.70
2:GD:65:GLN:HA	2:MD:47:ILE:CB	2.20	0.70
3:TD:258:GLU:CA	4:UD:74:THR:HG22	2.21	0.70
4:SF:124:ASP:HA	3:VF:246:TRP:CZ3	2.26	0.70
3:VF:309:VAL:HG12	3:VF:314:ALA:CB	2.18	0.70
3:TG:309:VAL:HG12	3:TG:314:ALA:CB	2.18	0.70
4:Y:104:TYR:CG	3:BA:256:HIS:O	2.45	0.70
4:KA:104:TYR:CG	3:NA:256:HIS:O	2.44	0.70
2:YD:190:ARG:HD3	2:EE:166:GLY:O	1.92	0.70
3:TG:258:GLU:CA	4:UG:74:THR:HG22	2.21	0.70
3:HA:258:GLU:CA	4:IA:74:THR:HG22	2.21	0.70
4:AC:104:TYR:CG	3:DC:256:HIS:O	2.45	0.70
2:OC:65:GLN:HA	2:UC:47:ILE:CB	2.22	0.70
2:YD:65:GLN:HA	2:EE:47:ILE:CB	2.22	0.70
4:EA:45:GLY:O	4:IA:85:SER:HA	1.92	0.70
3:ZD:309:VAL:HG12	3:ZD:314:ALA:CB	2.18	0.70
4:UE:104:TYR:CD1	3:XE:256:HIS:O	2.45	0.70
3:XE:309:VAL:HG12	3:XE:314:ALA:CB	2.18	0.70
3:DF:258:GLU:CA	4:EF:74:THR:HG22	2.21	0.70
2:UF:65:GLN:HA	2:AG:47:ILE:CB	2.21	0.70
2:AG:65:GLN:HA	2:GG:47:ILE:CB	2.21	0.70
4:WA:45:GLY:O	4:AB:85:SER:HA	1.92	0.70
4:IB:124:ASP:HA	3:LB:246:TRP:CZ3	2.27	0.70
3:ND:258:GLU:CA	4:OD:74:THR:HG22	2.21	0.70
3:XB:258:GLU:CA	4:YB:74:THR:HG22	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:OF:65:GLN:HA	2:UF:47:ILE:CB	2.23	0.69
3:LB:309:VAL:HG12	3:LB:314:ALA:CB	2.18	0.69
4:GC:45:GLY:O	4:KC:85:SER:HA	1.91	0.69
4:MC:104:TYR:CG	3:PC:256:HIS:O	2.45	0.69
2:YA:120:ASP:OD2	3:FB:75:ARG:NE	2.19	0.69
4:CB:45:GLY:O	4:GB:85:SER:HA	1.92	0.69
4:SC:52:GLN:OE1	3:VC:320:LEU:CD1	2.40	0.69
3:V:309:VAL:HG12	3:V:314:ALA:CB	2.18	0.69
2:WB:120:ASP:OD2	3:DC:75:ARG:NE	2.21	0.69
4:EG:124:ASP:HA	3:HG:246:TRP:CZ3	2.27	0.69
4:H:104:TYR:CG	3:K:256:HIS:O	2.46	0.69
4:MF:115:ALA:CB	3:PF:48:ARG:HH12	2.04	0.69
2:GA:65:GLN:HA	2:MA:47:ILE:CB	2.22	0.69
4:KA:124:ASP:HA	3:NA:246:TRP:CZ3	2.28	0.69
2:MA:190:ARG:HD3	2:SA:166:GLY:O	1.92	0.69
2:SD:120:ASP:OD2	3:ZD:75:ARG:NE	2.23	0.69
4:IB:104:TYR:CG	3:LB:256:HIS:O	2.45	0.69
4:KD:104:TYR:CD1	3:ND:256:HIS:O	2.45	0.69
2:KE:84:ALA:N	2:QE:23:ALA:HB1	2.08	0.69
2:QE:65:GLN:HA	2:WE:47:ILE:CB	2.21	0.69
4:YF:45:GLY:O	4:CG:85:SER:HA	1.92	0.69
4:KD:45:GLY:O	4:OD:85:SER:HA	1.93	0.69
4:CE:104:TYR:CG	3:FE:256:HIS:O	2.46	0.69
4:EA:104:TYR:CG	3:HA:256:HIS:O	2.46	0.69
4:UB:104:TYR:CD1	3:XB:256:HIS:O	2.46	0.69
4:OE:124:ASP:HA	3:RE:246:TRP:HZ3	1.58	0.69
4:GF:104:TYR:CD1	3:JF:256:HIS:O	2.46	0.69
4:MF:59:ASP:OD2	4:SF:129:SER:CB	2.40	0.69
4:Y:124:ASP:HA	3:BA:246:TRP:CZ3	2.28	0.68
4:WA:104:TYR:CG	3:ZA:256:HIS:O	2.46	0.68
4:OB:104:TYR:CG	3:RB:256:HIS:O	2.46	0.68
4:AC:45:GLY:O	4:EC:85:SER:HA	1.93	0.68
2:MD:190:ARG:HD3	2:SD:166:GLY:O	1.94	0.68
4:CE:104:TYR:CD1	3:FE:256:HIS:O	2.46	0.68
4:H:45:GLY:O	4:L:85:SER:HA	1.93	0.68
4:GC:104:TYR:CD1	3:JC:256:HIS:O	2.46	0.68
3:JC:309:VAL:HG12	3:JC:314:ALA:CB	2.18	0.68
4:KD:104:TYR:CG	3:ND:256:HIS:O	2.47	0.68
4:UE:104:TYR:CG	3:XE:256:HIS:O	2.45	0.68
4:MF:38:VAL:HG13	4:QF:118:TYR:HE1	1.57	0.68
2:MD:65:GLN:HA	2:SD:47:ILE:CB	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:KG:45:GLY:O	4:OG:85:SER:HA	1.94	0.68
3:FB:309:VAL:CG1	3:FB:314:ALA:HB2	2.20	0.68
2:EE:120:ASP:OD2	3:LE:75:ARG:NE	2.23	0.68
4:H:124:ASP:HA	3:K:246:TRP:CZ3	2.28	0.68
4:R:45:GLY:O	4:W:85:SER:HA	1.93	0.68
4:WA:124:ASP:HA	3:ZA:246:TRP:CZ3	2.28	0.68
4:QD:45:GLY:O	4:UD:85:SER:HA	1.94	0.68
2:GG:65:GLN:HA	2:MG:47:ILE:CB	2.24	0.68
4:QG:59:ASP:OD2	4:WG:129:SER:CB	2.42	0.68
4:QG:104:TYR:CD1	3:TG:256:HIS:O	2.47	0.68
4:IB:45:GLY:O	4:MB:85:SER:HA	1.93	0.68
4:OB:104:TYR:CD1	3:RB:256:HIS:O	2.47	0.68
2:GG:190:ARG:HD3	2:MG:166:GLY:O	1.94	0.68
4:WD:104:TYR:CD1	3:ZD:256:HIS:O	2.46	0.68
4:KD:124:ASP:HA	3:ND:246:TRP:CZ3	2.29	0.68
4:CE:124:ASP:HA	3:FE:246:TRP:CZ3	2.29	0.68
4:Q:104:TYR:CD1	3:C:256:HIS:O	2.47	0.68
2:KB:190:ARG:HD3	2:QB:166:GLY:O	1.94	0.68
3:BA:309:VAL:CG1	3:BA:314:ALA:HB2	2.20	0.67
3:TA:309:VAL:HG12	3:TA:314:ALA:CB	2.18	0.67
2:QB:151:GLU:CG	2:QB:154:ARG:HH11	2.07	0.67
2:IC:151:GLU:CG	2:IC:154:ARG:HH11	2.07	0.67
3:VC:309:VAL:CG1	3:VC:314:ALA:HB2	2.20	0.67
3:HD:309:VAL:HG12	3:HD:314:ALA:CB	2.18	0.67
2:OC:151:GLU:CG	2:OC:154:ARG:HH11	2.07	0.67
2:GD:151:GLU:CG	2:GD:154:ARG:HH11	2.08	0.67
2:YD:151:GLU:CG	2:YD:154:ARG:HH11	2.08	0.67
4:YF:104:TYR:CD1	3:BG:256:HIS:O	2.48	0.67
3:BG:309:VAL:HG12	3:BG:314:ALA:CB	2.18	0.67
3:ZA:309:VAL:CG1	3:ZA:314:ALA:HB2	2.20	0.67
3:RB:309:VAL:HG12	3:RB:314:ALA:CB	2.18	0.67
2:OC:84:ALA:N	2:UC:23:ALA:HB1	2.09	0.67
3:BD:309:VAL:CG1	3:BD:314:ALA:HB2	2.20	0.67
3:DF:309:VAL:HG12	3:DF:314:ALA:CB	2.18	0.67
2:SA:151:GLU:CG	2:SA:154:ARG:HH11	2.07	0.67
4:UB:124:ASP:HA	3:XB:246:TRP:CZ3	2.30	0.67
3:PC:309:VAL:CG1	3:PC:314:ALA:HB2	2.20	0.67
2:AD:151:GLU:CG	2:AD:154:ARG:HH11	2.08	0.67
4:UE:124:ASP:HA	3:XE:246:TRP:CZ3	2.28	0.67
4:AF:45:GLY:O	4:EF:85:SER:HA	1.94	0.67
2:YA:151:GLU:CG	2:YA:154:ARG:HH11	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:KB:151:GLU:CG	2:KB:154:ARG:HH11	2.08	0.67
2:EE:151:GLU:CG	2:EE:154:ARG:HH11	2.07	0.67
4:UE:45:GLY:O	4:YE:85:SER:HA	1.94	0.67
2:WE:151:GLU:CG	2:WE:154:ARG:HH11	2.07	0.67
4:GF:104:TYR:CG	3:JF:256:HIS:O	2.48	0.67
3:M:309:VAL:HG12	3:M:314:ALA:CB	2.18	0.67
3:HD:309:VAL:CG1	3:HD:314:ALA:HB2	2.20	0.67
3:FE:309:VAL:HG12	3:FE:314:ALA:CB	2.18	0.67
2:QE:151:GLU:CG	2:QE:154:ARG:HH11	2.07	0.67
3:V:309:VAL:CG1	3:V:314:ALA:HB2	2.20	0.67
2:CC:120:ASP:OD2	3:JC:75:ARG:NE	2.23	0.67
4:WD:124:ASP:HA	3:ZD:246:TRP:CZ3	2.30	0.67
4:GF:124:ASP:HA	3:JF:246:TRP:CZ3	2.30	0.67
4:QG:38:VAL:HG13	4:UG:118:TYR:HE1	1.60	0.67
2:AA:151:GLU:CG	2:AA:154:ARG:HH11	2.08	0.67
2:KB:65:GLN:HA	2:QB:47:ILE:CB	2.25	0.67
2:WB:151:GLU:CG	2:WB:154:ARG:HH11	2.07	0.67
2:AD:120:ASP:OD2	3:HD:75:ARG:NE	2.21	0.67
4:CE:45:GLY:O	4:GE:85:SER:HA	1.94	0.67
4:GC:104:TYR:CG	3:JC:256:HIS:O	2.48	0.67
3:JC:309:VAL:CG1	3:JC:314:ALA:HB2	2.20	0.67
2:MD:151:GLU:CG	2:MD:154:ARG:HH11	2.08	0.67
4:QD:104:TYR:CG	3:TD:256:HIS:O	2.48	0.67
4:MF:104:TYR:CG	3:PF:256:HIS:O	2.47	0.67
2:OF:151:GLU:CG	2:OF:154:ARG:HH11	2.07	0.67
2:EB:120:ASP:OD2	3:LB:75:ARG:NE	2.22	0.67
2:CC:151:GLU:CG	2:CC:154:ARG:HH11	2.08	0.67
2:SD:151:GLU:CG	2:SD:154:ARG:HH11	2.08	0.67
3:LE:309:VAL:HG12	3:LE:314:ALA:CB	2.18	0.66
2:B:151:GLU:CG	2:B:154:ARG:HH11	2.08	0.66
2:QB:120:ASP:OD2	3:XB:75:ARG:NE	2.23	0.66
3:ND:309:VAL:CG1	3:ND:314:ALA:HB2	2.20	0.66
4:IE:104:TYR:CD1	3:LE:256:HIS:O	2.48	0.66
2:GG:151:GLU:CG	2:GG:154:ARG:HH11	2.07	0.66
4:QG:124:ASP:HA	3:TG:246:TRP:CZ3	2.30	0.66
2:T:151:GLU:CG	2:T:154:ARG:HH11	2.07	0.66
2:GA:151:GLU:CG	2:GA:154:ARG:HH11	2.08	0.66
2:AD:84:ALA:N	2:GD:23:ALA:HB1	2.11	0.66
2:WE:65:GLN:HA	2:CF:47:ILE:CB	2.25	0.66
4:KG:104:TYR:CD1	3:NG:256:HIS:O	2.49	0.66
2:MA:151:GLU:CG	2:MA:154:ARG:HH11	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:GC:124:ASP:HA	3:JC:246:TRP:CZ3	2.30	0.66
4:ED:45:GLY:O	4:ID:85:SER:HA	1.95	0.66
4:KG:104:TYR:CG	3:NG:256:HIS:O	2.49	0.66
2:G:151:GLU:CG	2:G:154:ARG:HH11	2.08	0.66
4:Q:124:ASP:HA	3:C:246:TRP:CZ3	2.31	0.66
4:OB:124:ASP:HA	3:RB:246:TRP:CZ3	2.31	0.66
4:QD:104:TYR:CD1	3:TD:256:HIS:O	2.48	0.66
2:WE:190:ARG:HD3	2:CF:166:GLY:O	1.96	0.66
2:IF:151:GLU:CG	2:IF:154:ARG:HH11	2.08	0.66
2:UF:151:GLU:CG	2:UF:154:ARG:HH11	2.07	0.66
4:EG:45:GLY:O	4:IG:85:SER:HA	1.96	0.66
2:MG:151:GLU:CG	2:MG:154:ARG:HH11	2.07	0.66
4:QG:61:PRO:HG2	3:TG:297:ASP:HB3	1.78	0.66
2:J:120:ASP:OD2	3:V:75:ARG:NE	2.20	0.66
3:TA:309:VAL:CG1	3:TA:314:ALA:HB2	2.20	0.66
2:UC:151:GLU:CG	2:UC:154:ARG:HH11	2.07	0.66
4:WD:104:TYR:CG	3:ZD:256:HIS:O	2.49	0.66
3:K:309:VAL:CG1	3:K:314:ALA:HB2	2.20	0.66
4:Y:45:GLY:O	4:CA:85:SER:HA	1.95	0.66
3:VC:309:VAL:HG12	3:VC:314:ALA:CB	2.18	0.66
2:CF:151:GLU:CG	2:CF:154:ARG:HH11	2.07	0.66
2:OF:84:ALA:N	2:UF:23:ALA:HB1	2.10	0.66
2:G:23:ALA:HB1	2:SG:84:ALA:N	2.10	0.66
2:EB:151:GLU:CG	2:EB:154:ARG:HH11	2.08	0.66
4:UB:104:TYR:CG	3:XB:256:HIS:O	2.49	0.66
4:YC:104:TYR:CD1	3:BD:256:HIS:O	2.48	0.66
2:KE:151:GLU:CG	2:KE:154:ARG:HH11	2.07	0.66
2:QE:120:ASP:OD2	3:XE:75:ARG:NE	2.24	0.66
2:WE:194:GLY:O	2:CF:164:PHE:HB3	1.96	0.66
3:C:309:VAL:HG12	3:C:314:ALA:CB	2.18	0.66
3:DC:309:VAL:CG1	3:DC:314:ALA:HB2	2.20	0.66
4:MC:59:ASP:OD2	4:SC:129:SER:CB	2.44	0.66
2:UC:120:ASP:OD2	3:BD:75:ARG:NE	2.25	0.66
4:OE:45:GLY:O	4:SE:85:SER:HA	1.95	0.66
4:MF:61:PRO:HG2	3:PF:297:ASP:HB3	1.77	0.66
3:BA:309:VAL:HG12	3:BA:314:ALA:CB	2.18	0.66
3:XB:309:VAL:HG12	3:XB:314:ALA:CB	2.18	0.66
3:M:309:VAL:CG1	3:M:314:ALA:HB2	2.20	0.65
2:J:151:GLU:CG	2:J:154:ARG:HH11	2.07	0.65
4:KA:45:GLY:O	4:OA:85:SER:HA	1.96	0.65
2:SA:120:ASP:OD2	3:ZA:75:ARG:NE	2.22	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:TD:309:VAL:CG1	3:TD:314:ALA:HB2	2.20	0.65
4:IE:124:ASP:HA	3:LE:246:TRP:CZ3	2.31	0.65
3:TG:309:VAL:CG1	3:TG:314:ALA:HB2	2.20	0.65
4:YC:104:TYR:CG	3:BD:256:HIS:O	2.50	0.65
4:YC:124:ASP:HA	3:BD:246:TRP:CZ3	2.32	0.65
4:YF:124:ASP:HA	3:BG:246:TRP:CZ3	2.31	0.65
3:C:309:VAL:CG1	3:C:314:ALA:HB2	2.20	0.65
2:AG:151:GLU:CG	2:AG:154:ARG:HH11	2.08	0.65
2:SG:151:GLU:CG	2:SG:154:ARG:HH11	2.07	0.65
3:NG:309:VAL:CG1	3:NG:314:ALA:HB2	2.20	0.65
2:AA:120:ASP:OD2	3:HA:75:ARG:NE	2.21	0.65
4:SC:124:ASP:HA	3:VC:246:TRP:HZ3	1.62	0.65
2:CF:120:ASP:OD2	3:JF:75:ARG:NE	2.24	0.65
4:UB:59:ASP:OD2	4:AC:129:SER:CB	2.45	0.65
4:AF:104:TYR:CG	3:DF:256:HIS:O	2.49	0.65
4:QA:104:TYR:CD1	3:TA:256:HIS:O	2.50	0.65
2:J:84:ALA:N	2:T:23:ALA:HB1	2.11	0.65
2:GA:84:ALA:N	2:MA:23:ALA:HB1	2.11	0.65
3:PC:309:VAL:HG12	3:PC:314:ALA:CB	2.18	0.65
4:YF:104:TYR:CG	3:BG:256:HIS:O	2.49	0.65
3:HG:309:VAL:CG1	3:HG:314:ALA:HB2	2.20	0.65
2:KE:83:LYS:C	2:QE:23:ALA:HB1	2.17	0.65
3:LE:309:VAL:CG1	3:LE:314:ALA:HB2	2.20	0.65
4:N:85:SER:HA	4:WG:45:GLY:O	1.96	0.65
3:NA:309:VAL:CG1	3:NA:314:ALA:HB2	2.20	0.65
2:YA:84:ALA:N	2:EB:23:ALA:HB1	2.12	0.65
4:SC:45:GLY:O	4:WC:85:SER:HA	1.97	0.65
4:QD:124:ASP:HA	3:TD:246:TRP:CZ3	2.31	0.65
2:YD:120:ASP:OD2	3:FE:75:ARG:NE	2.25	0.65
3:RE:309:VAL:CG1	3:RE:314:ALA:HB2	2.20	0.65
3:NG:309:VAL:HG12	3:NG:314:ALA:CB	2.18	0.65
4:Q:61:PRO:HG2	3:C:297:ASP:HB3	1.79	0.64
4:MC:61:PRO:HG2	3:PC:297:ASP:HB3	1.80	0.64
2:GD:120:ASP:OD2	3:ND:75:ARG:NE	2.24	0.64
3:FE:309:VAL:CG1	3:FE:314:ALA:HB2	2.20	0.64
4:IE:61:PRO:HG2	3:LE:297:ASP:HB3	1.79	0.64
4:AF:104:TYR:CD1	3:DF:256:HIS:O	2.50	0.64
4:R:59:ASP:OD2	4:Y:129:SER:CB	2.45	0.64
3:XB:309:VAL:CG1	3:XB:314:ALA:HB2	2.20	0.64
3:XE:309:VAL:CG1	3:XE:314:ALA:HB2	2.20	0.64
2:GG:194:GLY:O	2:MG:164:PHE:HB3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:59:ASP:OD2	4:H:129:SER:CB	2.45	0.64
4:UB:61:PRO:HG2	3:XB:297:ASP:HB3	1.80	0.64
2:OC:83:LYS:C	2:UC:23:ALA:HB1	2.17	0.64
2:OC:120:ASP:OD2	3:VC:75:ARG:NE	2.22	0.64
4:WD:59:ASP:OD2	4:CE:129:SER:CB	2.45	0.64
3:ZD:309:VAL:CG1	3:ZD:314:ALA:HB2	2.20	0.64
4:OE:59:ASP:OD2	4:UE:129:SER:CB	2.45	0.64
4:KG:124:ASP:HA	3:NG:246:TRP:CZ3	2.32	0.64
3:K:53:ALA:HB3	3:K:231:LEU:HA	1.80	0.64
3:TA:53:ALA:HB3	3:TA:231:LEU:HA	1.80	0.64
3:ZA:309:VAL:HG12	3:ZA:314:ALA:CB	2.18	0.64
4:OB:45:GLY:O	4:SB:85:SER:HA	1.96	0.64
3:DF:309:VAL:CG1	3:DF:314:ALA:HB2	2.20	0.64
2:AG:84:ALA:N	2:GG:23:ALA:HB1	2.11	0.64
3:BG:309:VAL:CG1	3:BG:314:ALA:HB2	2.20	0.64
3:HG:309:VAL:HG12	3:HG:314:ALA:CB	2.18	0.64
4:Q:104:TYR:CG	3:C:256:HIS:O	2.50	0.64
3:BA:53:ALA:HB3	3:BA:231:LEU:HA	1.80	0.64
2:KB:84:ALA:N	2:QB:23:ALA:HB1	2.13	0.64
3:ND:309:VAL:HG12	3:ND:314:ALA:CB	2.18	0.64
4:IE:59:ASP:OD2	4:OE:129:SER:CB	2.45	0.64
4:IE:104:TYR:CG	3:LE:256:HIS:O	2.51	0.64
3:JF:309:VAL:HG12	3:JF:314:ALA:CB	2.18	0.64
3:TG:53:ALA:HB3	3:TG:231:LEU:HA	1.80	0.64
4:EA:61:PRO:HG2	3:HA:297:ASP:HB3	1.80	0.64
3:HA:53:ALA:HB3	3:HA:231:LEU:HA	1.80	0.64
3:LB:53:ALA:HB3	3:LB:231:LEU:HA	1.80	0.64
2:MD:194:GLY:O	2:SD:164:PHE:HB3	1.98	0.64
2:OF:83:LYS:C	2:UF:23:ALA:HB1	2.18	0.64
4:WA:59:ASP:OD2	4:CB:129:SER:CB	2.46	0.64
4:CB:59:ASP:OD2	4:IB:129:SER:CB	2.45	0.64
4:WD:61:PRO:HG2	3:ZD:297:ASP:HB3	1.80	0.64
3:M:75:ARG:NE	2:SG:120:ASP:OD2	2.22	0.64
3:M:246:TRP:HZ3	4:WG:124:ASP:HA	1.62	0.64
3:JF:309:VAL:CG1	3:JF:314:ALA:HB2	2.20	0.64
4:H:59:ASP:OD2	4:R:129:SER:CB	2.47	0.63
4:QA:61:PRO:HG2	3:TA:297:ASP:HB3	1.80	0.63
4:CB:124:ASP:HA	3:FB:246:TRP:HZ3	1.63	0.63
3:FB:53:ALA:HB3	3:FB:231:LEU:HA	1.80	0.63
4:MC:38:VAL:HG13	4:QC:118:TYR:HE1	1.63	0.63
3:VF:309:VAL:CG1	3:VF:314:ALA:HB2	2.20	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:53:ALA:HB3	3:M:231:LEU:HA	1.80	0.63
3:C:53:ALA:HB3	3:C:231:LEU:HA	1.80	0.63
2:GA:120:ASP:OD2	3:NA:75:ARG:NE	2.24	0.63
4:QA:59:ASP:OD2	4:WA:129:SER:CB	2.47	0.63
3:XB:53:ALA:HB3	3:XB:231:LEU:HA	1.80	0.63
4:GC:61:PRO:HG2	3:JC:297:ASP:HB3	1.80	0.63
2:IC:84:ALA:N	2:OC:23:ALA:HB1	2.13	0.63
3:HG:53:ALA:HB3	3:HG:231:LEU:HA	1.80	0.63
4:H:61:PRO:HG2	3:K:297:ASP:HB3	1.81	0.63
4:CB:61:PRO:HG2	3:FB:297:ASP:HB3	1.80	0.63
4:YC:61:PRO:HG2	3:BD:297:ASP:HB3	1.81	0.63
4:IE:38:VAL:HG13	4:ME:118:TYR:HE1	1.64	0.63
4:OE:61:PRO:HG2	3:RE:297:ASP:HB3	1.80	0.63
2:B:84:ALA:N	2:J:23:ALA:HB1	2.13	0.63
4:QA:124:ASP:HA	3:TA:246:TRP:CZ3	2.33	0.63
2:KB:194:GLY:O	2:QB:164:PHE:HB3	1.98	0.63
3:DC:53:ALA:HB3	3:DC:231:LEU:HA	1.80	0.63
3:BG:53:ALA:HB3	3:BG:231:LEU:HA	1.80	0.63
2:G:23:ALA:HB1	2:SG:83:LYS:C	2.19	0.63
4:O:57:ILE:HA	4:O:60:ILE:HD12	1.81	0.63
3:ZA:53:ALA:HB3	3:ZA:231:LEU:HA	1.80	0.63
4:Q:115:ALA:CB	3:C:48:ARG:HH12	2.11	0.63
4:E:57:ILE:HA	4:E:60:ILE:HD12	1.81	0.63
2:T:84:ALA:N	2:AA:23:ALA:HB1	2.12	0.63
4:EA:59:ASP:OD2	4:KA:129:SER:CB	2.45	0.63
4:IB:61:PRO:HG2	3:LB:297:ASP:HB3	1.81	0.63
2:WB:84:ALA:N	2:CC:23:ALA:HB1	2.13	0.63
4:ED:61:PRO:HG2	3:HD:297:ASP:HB3	1.81	0.63
4:OE:38:VAL:HG13	4:SE:118:TYR:HE1	1.63	0.63
3:PF:309:VAL:CG1	3:PF:314:ALA:HB2	2.20	0.63
4:DG:57:ILE:HA	4:DG:60:ILE:HD12	1.81	0.63
2:EB:84:ALA:N	2:KB:23:ALA:HB1	2.13	0.63
4:IB:59:ASP:OD2	4:OB:129:SER:CB	2.47	0.63
4:AC:59:ASP:OD2	4:GC:129:SER:CB	2.46	0.63
4:AC:61:PRO:HG2	3:DC:297:ASP:HB3	1.81	0.63
4:ZE:57:ILE:HA	4:ZE:60:ILE:HD12	1.81	0.63
4:AF:124:ASP:HA	3:DF:246:TRP:CZ3	2.34	0.63
3:PF:53:ALA:HB3	3:PF:231:LEU:HA	1.80	0.63
4:JG:57:ILE:HA	4:JG:60:ILE:HD12	1.81	0.63
3:HA:309:VAL:CG1	3:HA:314:ALA:HB2	2.20	0.63
3:RB:309:VAL:CG1	3:RB:314:ALA:HB2	2.20	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:GF:61:PRO:HG2	3:JF:297:ASP:HB3	1.80	0.63
4:SF:45:GLY:O	4:WF:85:SER:HA	1.97	0.63
4:EG:124:ASP:HA	3:HG:246:TRP:HZ3	1.64	0.63
3:NA:53:ALA:HB3	3:NA:231:LEU:HA	1.80	0.63
2:KB:120:ASP:OD2	3:RB:75:ARG:NE	2.27	0.63
3:PC:53:ALA:HB3	3:PC:231:LEU:HA	1.80	0.63
4:YC:59:ASP:OD2	4:ED:129:SER:CB	2.47	0.63
3:FE:53:ALA:HB3	3:FE:231:LEU:HA	1.80	0.63
4:TE:57:ILE:HA	4:TE:60:ILE:HD12	1.81	0.63
4:FF:57:ILE:HA	4:FF:60:ILE:HD12	1.81	0.63
4:GF:59:ASP:OD2	4:MF:129:SER:CB	2.47	0.63
2:AG:120:ASP:OD2	3:HG:75:ARG:NE	2.23	0.63
4:X:57:ILE:HA	4:X:60:ILE:HD12	1.81	0.62
2:MA:194:GLY:O	2:SA:164:PHE:HB3	1.98	0.62
4:WA:61:PRO:HG2	3:ZA:297:ASP:HB3	1.80	0.62
3:TD:53:ALA:HB3	3:TD:231:LEU:HA	1.80	0.62
3:ZD:53:ALA:HB3	3:ZD:231:LEU:HA	1.80	0.62
4:QG:104:TYR:CG	3:TG:256:HIS:O	2.52	0.62
4:R:61:PRO:HG2	3:V:297:ASP:HB3	1.80	0.62
3:V:53:ALA:HB3	3:V:231:LEU:HA	1.80	0.62
4:VA:57:ILE:HA	4:VA:60:ILE:HD12	1.81	0.62
2:AD:83:LYS:C	2:GD:23:ALA:HB1	2.20	0.62
3:ND:53:ALA:HB3	3:ND:231:LEU:HA	1.80	0.62
3:LE:53:ALA:HB3	3:LE:231:LEU:HA	1.80	0.62
4:XF:57:ILE:HA	4:XF:60:ILE:HD12	1.81	0.62
4:YF:61:PRO:HG2	3:BG:297:ASP:HB3	1.81	0.62
4:QG:115:ALA:CB	3:TG:48:ARG:HH12	2.06	0.62
4:P:57:ILE:HA	4:P:60:ILE:HD12	1.81	0.62
4:Q:38:VAL:HG13	4:D:118:TYR:HE1	1.64	0.62
2:B:120:ASP:OD2	3:K:75:ARG:NE	2.22	0.62
4:CB:38:VAL:HG13	4:GB:118:TYR:HE1	1.63	0.62
4:KD:59:ASP:OD2	4:QD:129:SER:CB	2.47	0.62
3:RE:53:ALA:HB3	3:RE:231:LEU:HA	1.80	0.62
4:PG:57:ILE:HA	4:PG:60:ILE:HD12	1.81	0.62
4:PA:57:ILE:HA	4:PA:60:ILE:HD12	1.81	0.62
4:GC:59:ASP:OD2	4:MC:129:SER:CB	2.46	0.62
3:VC:53:ALA:HB3	3:VC:231:LEU:HA	1.80	0.62
3:HD:53:ALA:HB3	3:HD:231:LEU:HA	1.80	0.62
2:YD:194:GLY:O	2:EE:164:PHE:HB3	1.99	0.62
2:QE:84:ALA:N	2:WE:23:ALA:HB1	2.13	0.62
3:XE:53:ALA:HB3	3:XE:231:LEU:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:OF:120:ASP:OD2	3:VF:75:ARG:NE	2.24	0.62
4:ED:59:ASP:OD2	4:KD:129:SER:CB	2.47	0.62
2:YD:84:ALA:N	2:EE:23:ALA:HB1	2.13	0.62
3:JF:53:ALA:HB3	3:JF:231:LEU:HA	1.80	0.62
4:R:38:VAL:HG13	4:W:118:TYR:HE1	1.64	0.62
2:T:120:ASP:OD2	3:BA:75:ARG:NE	2.24	0.62
2:T:194:GLY:O	2:AA:164:PHE:HB3	2.00	0.62
4:Y:61:PRO:HG2	3:BA:297:ASP:HB3	1.82	0.62
4:QA:104:TYR:CG	3:TA:256:HIS:O	2.52	0.62
4:PD:57:ILE:HA	4:PD:60:ILE:HD12	1.81	0.62
4:VD:57:ILE:HA	4:VD:60:ILE:HD12	1.81	0.62
4:LF:57:ILE:HA	4:LF:60:ILE:HD12	1.81	0.62
2:UF:194:GLY:O	2:AG:164:PHE:HB3	1.99	0.62
2:SA:84:ALA:N	2:YA:23:ALA:HB1	2.14	0.62
4:BB:57:ILE:HA	4:BB:60:ILE:HD12	1.81	0.62
3:RB:53:ALA:HB3	3:RB:231:LEU:HA	1.80	0.62
4:UB:38:VAL:HG13	4:YB:118:TYR:HE1	1.64	0.62
2:GD:84:ALA:N	2:MD:23:ALA:HB1	2.14	0.62
3:DF:53:ALA:HB3	3:DF:231:LEU:HA	1.80	0.62
3:NG:53:ALA:HB3	3:NG:231:LEU:HA	1.80	0.62
4:AC:124:ASP:HA	3:DC:246:TRP:HZ3	1.64	0.62
2:UC:194:GLY:O	2:AD:164:PHE:HB3	1.99	0.62
3:BD:53:ALA:HB3	3:BD:231:LEU:HA	1.80	0.62
4:NE:57:ILE:HA	4:NE:60:ILE:HD12	1.81	0.62
2:AA:84:ALA:N	2:GA:23:ALA:HB1	2.14	0.62
2:GA:194:GLY:O	2:MA:164:PHE:HB3	2.00	0.62
2:GD:194:GLY:O	2:MD:164:PHE:HB3	2.00	0.62
2:MD:120:ASP:OD2	3:TD:75:ARG:NE	2.27	0.62
4:BE:57:ILE:HA	4:BE:60:ILE:HD12	1.81	0.62
4:YF:59:ASP:OD2	4:EG:129:SER:CB	2.47	0.62
4:R:124:ASP:HA	3:V:246:TRP:HZ3	1.63	0.62
4:JA:57:ILE:HA	4:JA:60:ILE:HD12	1.81	0.62
4:QD:61:PRO:HG2	3:TD:297:ASP:HB3	1.82	0.62
2:UF:120:ASP:OD2	3:BG:75:ARG:NE	2.25	0.62
4:FC:57:ILE:HA	4:FC:60:ILE:HD12	1.81	0.61
4:JD:57:ILE:HA	4:JD:60:ILE:HD12	1.81	0.61
2:MD:84:ALA:N	2:SD:23:ALA:HB1	2.15	0.61
4:RF:57:ILE:HA	4:RF:60:ILE:HD12	1.81	0.61
4:DA:57:ILE:HA	4:DA:60:ILE:HD12	1.81	0.61
2:GA:83:LYS:C	2:MA:23:ALA:HB1	2.20	0.61
4:HB:57:ILE:HA	4:HB:60:ILE:HD12	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:ZB:57:ILE:HA	4:ZB:60:ILE:HD12	1.81	0.61
4:LC:57:ILE:HA	4:LC:60:ILE:HD12	1.81	0.61
4:IE:115:ALA:CB	3:LE:48:ARG:HH12	2.11	0.61
4:MC:124:ASP:HA	3:PC:246:TRP:HZ3	1.65	0.61
2:EE:194:GLY:O	2:KE:164:PHE:HB3	2.00	0.61
4:UE:59:ASP:OD2	4:AF:129:SER:CB	2.48	0.61
2:OF:194:GLY:O	2:UF:164:PHE:HB3	2.00	0.61
4:EG:59:ASP:OD2	4:KG:129:SER:CB	2.48	0.61
2:G:194:GLY:O	2:B:164:PHE:HB3	2.00	0.61
4:EA:38:VAL:HG13	4:IA:118:TYR:HE1	1.64	0.61
4:EA:124:ASP:HA	3:HA:246:TRP:HZ3	1.65	0.61
3:HA:309:VAL:HG12	3:HA:314:ALA:CB	2.18	0.61
4:KG:61:PRO:HG2	3:NG:297:ASP:HB3	1.82	0.61
2:MG:191:SER:O	2:SG:166:GLY:HA2	2.01	0.61
3:M:297:ASP:HB3	4:WG:61:PRO:HG2	1.82	0.61
4:Q:129:SER:CB	4:WG:59:ASP:OD2	2.48	0.61
2:QE:194:GLY:O	2:WE:164:PHE:HB3	2.00	0.61
2:CF:84:ALA:N	2:IF:23:ALA:HB1	2.15	0.61
4:MF:124:ASP:HA	3:PF:246:TRP:HZ3	1.65	0.61
4:SF:124:ASP:HA	3:VF:246:TRP:HZ3	1.63	0.61
4:Y:124:ASP:HA	3:BA:246:TRP:HZ3	1.65	0.61
2:CC:84:ALA:N	2:IC:23:ALA:HB1	2.16	0.61
2:CC:194:GLY:O	2:IC:164:PHE:HB3	2.00	0.61
4:ED:124:ASP:HA	3:HD:246:TRP:HZ3	1.62	0.61
2:CF:194:GLY:O	2:IF:164:PHE:HB3	2.00	0.61
2:IF:84:ALA:N	2:OF:23:ALA:HB1	2.15	0.61
3:VF:53:ALA:HB3	3:VF:231:LEU:HA	1.80	0.61
4:VG:57:ILE:HA	4:VG:60:ILE:HD12	1.81	0.61
4:WA:124:ASP:HA	3:ZA:246:TRP:HZ3	1.66	0.61
3:JC:53:ALA:HB3	3:JC:231:LEU:HA	1.80	0.61
4:RC:57:ILE:HA	4:RC:60:ILE:HD12	1.81	0.61
4:SC:59:ASP:OD2	4:YC:129:SER:CB	2.49	0.61
4:KD:61:PRO:HG2	3:ND:297:ASP:HB3	1.81	0.61
4:HE:57:ILE:HA	4:HE:60:ILE:HD12	1.81	0.61
4:KA:59:ASP:OD2	4:QA:129:SER:CB	2.49	0.61
3:LB:309:VAL:CG1	3:LB:314:ALA:HB2	2.20	0.61
4:WA:38:VAL:HG13	4:AB:118:TYR:HE1	1.65	0.61
4:TB:57:ILE:HA	4:TB:60:ILE:HD12	1.81	0.61
4:SC:61:PRO:HG2	3:VC:297:ASP:HB3	1.82	0.61
4:DD:57:ILE:HA	4:DD:60:ILE:HD12	1.81	0.61
4:GF:38:VAL:HG13	4:KF:118:TYR:HE1	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AG:83:LYS:C	2:GG:23:ALA:HB1	2.20	0.61
2:MA:192:LYS:HA	2:SA:166:GLY:CA	2.30	0.61
2:QB:194:GLY:O	2:WB:164:PHE:HB3	2.01	0.61
4:Y:59:ASP:OD2	4:EA:129:SER:CB	2.49	0.60
4:KA:61:PRO:HG2	3:NA:297:ASP:HB3	1.82	0.60
2:QB:84:ALA:N	2:WB:23:ALA:HB1	2.16	0.60
4:WD:38:VAL:HG13	4:AE:118:TYR:HE1	1.64	0.60
2:GG:84:ALA:N	2:MG:23:ALA:HB1	2.15	0.60
2:GG:192:LYS:HA	2:MG:166:GLY:CA	2.30	0.60
2:KB:83:LYS:C	2:QB:23:ALA:HB1	2.22	0.60
4:ED:38:VAL:HG13	4:ID:118:TYR:HE1	1.66	0.60
2:SD:84:ALA:N	2:YD:23:ALA:HB1	2.16	0.60
4:CE:59:ASP:OD2	4:IE:129:SER:CB	2.49	0.60
4:KD:38:VAL:HG13	4:OD:118:TYR:HE1	1.67	0.60
4:KD:124:ASP:HA	3:ND:246:TRP:HZ3	1.66	0.60
4:QD:59:ASP:OD2	4:WD:129:SER:CB	2.49	0.60
2:SD:194:GLY:O	2:YD:164:PHE:HB3	2.01	0.60
4:KG:59:ASP:OD2	4:QG:129:SER:CB	2.50	0.60
4:H:38:VAL:HG13	4:L:118:TYR:HE1	1.66	0.60
2:J:83:LYS:C	2:T:23:ALA:HB1	2.21	0.60
2:OC:194:GLY:O	2:UC:164:PHE:HB3	2.02	0.60
2:T:83:LYS:C	2:AA:23:ALA:HB1	2.21	0.60
2:EB:194:GLY:O	2:KB:164:PHE:HB3	2.01	0.60
4:NB:57:ILE:HA	4:NB:60:ILE:HD12	1.81	0.60
4:OB:124:ASP:HA	3:RB:246:TRP:HZ3	1.67	0.60
4:UE:124:ASP:HA	3:XE:246:TRP:HZ3	1.65	0.60
2:G:191:SER:O	2:B:167:VAL:N	2.34	0.60
4:KA:124:ASP:HA	3:NA:246:TRP:HZ3	1.64	0.60
2:SA:194:GLY:O	2:YA:164:PHE:HB3	2.01	0.60
4:XC:57:ILE:HA	4:XC:60:ILE:HD12	1.81	0.60
4:YC:38:VAL:HG13	4:CD:118:TYR:HE1	1.67	0.60
2:SD:191:SER:O	2:YD:167:VAL:N	2.34	0.60
2:WE:84:ALA:N	2:CF:23:ALA:HB1	2.16	0.60
4:AF:61:PRO:HG2	3:DF:297:ASP:HB3	1.83	0.60
2:MA:120:ASP:OD2	3:TA:75:ARG:NE	2.26	0.60
4:GC:38:VAL:HG13	4:KC:118:TYR:HE1	1.65	0.60
2:UC:84:ALA:N	2:AD:23:ALA:HB1	2.17	0.60
2:UF:84:ALA:N	2:AG:23:ALA:HB1	2.16	0.60
4:YF:38:VAL:HG13	4:CG:118:TYR:HE1	1.67	0.60
4:EG:61:PRO:HG2	3:HG:297:ASP:HB3	1.82	0.60
2:B:194:GLY:O	2:J:164:PHE:HB3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:MA:191:SER:O	2:SA:166:GLY:HA2	2.02	0.60
4:OB:61:PRO:HG2	3:RB:297:ASP:HB3	1.83	0.60
2:WB:83:LYS:C	2:CC:23:ALA:HB1	2.22	0.60
2:WB:194:GLY:O	2:CC:164:PHE:HB3	2.02	0.60
4:OE:104:TYR:OH	3:RE:256:HIS:HB2	2.02	0.60
4:UE:61:PRO:HG2	3:XE:297:ASP:HB3	1.81	0.60
2:MG:191:SER:O	2:SG:167:VAL:N	2.33	0.60
2:G:84:ALA:N	2:B:23:ALA:HB1	2.17	0.60
2:MA:191:SER:O	2:SA:167:VAL:N	2.33	0.60
4:H:124:ASP:HA	3:K:246:TRP:HZ3	1.65	0.59
4:IB:38:VAL:HG13	4:MB:118:TYR:HE1	1.66	0.59
2:UF:191:SER:O	2:AG:167:VAL:N	2.34	0.59
2:UF:192:LYS:HA	2:AG:166:GLY:CA	2.31	0.59
2:G:192:LYS:HA	2:B:166:GLY:CA	2.31	0.59
4:R:115:ALA:CB	3:V:48:ARG:HH12	2.12	0.59
4:CE:61:PRO:HG2	3:FE:297:ASP:HB3	1.82	0.59
2:WE:192:LYS:HA	2:CF:166:GLY:CA	2.29	0.59
2:IF:191:SER:O	2:OF:167:VAL:N	2.35	0.59
4:SF:61:PRO:HG2	3:VF:297:ASP:HB3	1.83	0.59
4:CE:124:ASP:HA	3:FE:246:TRP:HZ3	1.66	0.59
2:QE:83:LYS:C	2:WE:23:ALA:HB1	2.22	0.59
4:GF:115:ALA:CB	3:JF:48:ARG:HH12	2.13	0.59
4:OE:104:TYR:HE2	3:RE:253:GLN:O	1.85	0.59
2:AG:194:GLY:O	2:GG:164:PHE:HB3	2.01	0.59
4:N:118:TYR:HE1	4:WG:38:VAL:HG13	1.67	0.59
2:EB:83:LYS:C	2:KB:23:ALA:HB1	2.23	0.59
4:IB:124:ASP:HA	3:LB:246:TRP:HZ3	1.65	0.59
2:CC:191:SER:O	2:IC:167:VAL:N	2.35	0.59
2:OC:121:LEU:HD11	2:OC:182:LEU:HD13	1.85	0.59
4:UE:38:VAL:HG13	4:YE:118:TYR:HE1	1.68	0.59
2:GG:191:SER:O	2:MG:167:VAL:N	2.35	0.59
4:QA:38:VAL:HG13	4:UA:118:TYR:HE1	1.66	0.59
2:EB:121:LEU:HD11	2:EB:182:LEU:HD13	1.85	0.59
4:UB:124:ASP:HA	3:XB:246:TRP:HZ3	1.68	0.59
2:CC:121:LEU:HD11	2:CC:182:LEU:HD13	1.85	0.59
2:UC:121:LEU:HD11	2:UC:182:LEU:HD13	1.85	0.59
2:CF:191:SER:O	2:IF:167:VAL:N	2.35	0.59
2:T:192:LYS:HA	2:AA:166:GLY:CA	2.32	0.59
4:OB:59:ASP:OD2	4:UB:129:SER:CB	2.51	0.59
4:AC:38:VAL:HG13	4:EC:118:TYR:HE1	1.65	0.59
2:MD:121:LEU:HD11	2:MD:182:LEU:HD13	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:EE:191:SER:O	2:KE:166:GLY:HA2	2.02	0.59
2:IF:190:ARG:CD	2:OF:166:GLY:O	2.51	0.59
4:SF:59:ASP:OD2	4:YF:129:SER:CB	2.50	0.59
4:QA:51:MET:N	4:UA:80:ARG:HG2	2.18	0.59
2:YA:83:LYS:C	2:EB:23:ALA:HB1	2.22	0.59
2:KB:192:LYS:HA	2:QB:166:GLY:CA	2.31	0.59
2:WB:121:LEU:HD11	2:WB:182:LEU:HD13	1.85	0.59
2:GD:121:LEU:HD11	2:GD:182:LEU:HD13	1.85	0.59
2:EE:191:SER:O	2:KE:167:VAL:N	2.33	0.59
4:GF:124:ASP:HA	3:JF:246:TRP:HZ3	1.68	0.59
2:MG:192:LYS:HA	2:SG:166:GLY:CA	2.32	0.59
2:G:164:PHE:HB3	2:SG:194:GLY:O	2.02	0.59
2:B:192:LYS:HA	2:J:166:GLY:CA	2.33	0.59
2:YA:121:LEU:HD11	2:YA:182:LEU:HD13	1.85	0.59
2:KB:121:LEU:HD11	2:KB:182:LEU:HD13	1.85	0.59
2:QB:121:LEU:HD11	2:QB:182:LEU:HD13	1.85	0.59
4:QD:124:ASP:HA	3:TD:246:TRP:HZ3	1.68	0.59
4:EG:38:VAL:HG13	4:IG:118:TYR:HE1	1.68	0.59
2:G:191:SER:O	2:B:166:GLY:HA2	2.03	0.59
2:MA:121:LEU:HD11	2:MA:182:LEU:HD13	1.85	0.59
2:YA:194:GLY:O	2:EB:164:PHE:HB3	2.03	0.59
4:AF:59:ASP:OD2	4:GF:129:SER:CB	2.51	0.59
4:MF:38:VAL:HG22	4:QF:113:VAL:HB	1.84	0.59
2:B:191:SER:O	2:J:167:VAL:N	2.36	0.58
2:J:194:GLY:O	2:T:164:PHE:HB3	2.03	0.58
2:AA:194:GLY:O	2:GA:164:PHE:HB3	2.02	0.58
2:IC:121:LEU:HD11	2:IC:182:LEU:HD13	1.85	0.58
2:UC:191:SER:O	2:AD:167:VAL:N	2.34	0.58
2:SD:121:LEU:HD11	2:SD:182:LEU:HD13	1.85	0.58
2:EE:121:LEU:HD11	2:EE:182:LEU:HD13	1.85	0.58
4:KF:57:ILE:HB	4:KF:60:ILE:HD12	1.85	0.58
4:D:57:ILE:HB	4:D:60:ILE:HD12	1.86	0.58
4:CA:57:ILE:HB	4:CA:60:ILE:HD12	1.86	0.58
2:GA:192:LYS:HA	2:MA:166:GLY:CA	2.33	0.58
2:SA:121:LEU:HD11	2:SA:182:LEU:HD13	1.85	0.58
4:UA:57:ILE:HB	4:UA:60:ILE:HD12	1.85	0.58
2:AD:121:LEU:HD11	2:AD:182:LEU:HD13	1.85	0.58
2:GD:83:LYS:C	2:MD:23:ALA:HB1	2.24	0.58
4:WD:124:ASP:HA	3:ZD:246:TRP:HZ3	1.68	0.58
2:YD:121:LEU:HD11	2:YD:182:LEU:HD13	1.85	0.58
2:WE:191:SER:O	2:CF:167:VAL:N	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:83:LYS:C	2:J:23:ALA:HB1	2.23	0.58
2:AA:83:LYS:C	2:GA:23:ALA:HB1	2.24	0.58
2:GA:121:LEU:HD11	2:GA:182:LEU:HD13	1.85	0.58
2:IC:194:GLY:O	2:OC:164:PHE:HB3	2.03	0.58
2:AD:194:GLY:O	2:GD:164:PHE:HB3	2.02	0.58
2:YD:83:LYS:C	2:EE:23:ALA:HB1	2.23	0.58
4:CG:57:ILE:HB	4:CG:60:ILE:HD12	1.86	0.58
4:OG:57:ILE:HB	4:OG:60:ILE:HD12	1.85	0.58
4:UG:57:ILE:HB	4:UG:60:ILE:HD12	1.85	0.58
4:QA:115:ALA:CB	3:TA:48:ARG:HH12	2.13	0.58
4:GB:57:ILE:HB	4:GB:60:ILE:HD12	1.86	0.58
2:GD:191:SER:O	2:MD:167:VAL:N	2.36	0.58
2:EE:84:ALA:N	2:KE:23:ALA:HB1	2.18	0.58
4:SE:57:ILE:HB	4:SE:60:ILE:HD12	1.85	0.58
2:OC:218:VAL:HG22	2:UC:159:LEU:HD12	1.86	0.58
4:YE:57:ILE:HB	4:YE:60:ILE:HD12	1.85	0.58
4:AF:51:MET:N	4:EF:80:ARG:HG2	2.17	0.58
2:AA:192:LYS:HA	2:GA:166:GLY:CA	2.33	0.58
4:OA:57:ILE:HB	4:OA:60:ILE:HD12	1.86	0.58
2:SA:191:SER:O	2:YA:167:VAL:N	2.35	0.58
4:MB:57:ILE:HB	4:MB:60:ILE:HD12	1.85	0.58
2:QB:191:SER:O	2:WB:167:VAL:N	2.34	0.58
4:YB:57:ILE:HB	4:YB:60:ILE:HD12	1.86	0.58
2:KE:121:LEU:HD11	2:KE:182:LEU:HD13	1.85	0.58
4:MF:104:TYR:OH	3:PF:256:HIS:HB2	2.04	0.58
2:J:121:LEU:HD11	2:J:182:LEU:HD13	1.85	0.58
4:L:57:ILE:HB	4:L:60:ILE:HD12	1.85	0.58
4:CE:38:VAL:HG13	4:GE:118:TYR:HE1	1.69	0.58
4:GE:57:ILE:HB	4:GE:60:ILE:HD12	1.85	0.58
2:T:121:LEU:HD11	2:T:182:LEU:HD13	1.85	0.58
2:AA:121:LEU:HD11	2:AA:182:LEU:HD13	1.85	0.58
2:SA:192:LYS:HA	2:YA:166:GLY:CA	2.32	0.58
4:GC:115:ALA:CB	3:JC:48:ARG:HH12	2.13	0.58
4:QC:57:ILE:HB	4:QC:60:ILE:HD12	1.85	0.58
4:QF:57:ILE:HB	4:QF:60:ILE:HD12	1.86	0.58
2:GG:120:ASP:OD2	3:NG:75:ARG:NE	2.27	0.58
2:T:191:SER:O	2:AA:167:VAL:N	2.36	0.58
4:SC:38:VAL:HG13	4:WC:118:TYR:HE1	1.69	0.58
2:UC:192:LYS:HA	2:AD:166:GLY:CA	2.31	0.58
4:ID:57:ILE:HB	4:ID:60:ILE:HD12	1.85	0.58
4:AE:57:ILE:HB	4:AE:60:ILE:HD12	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QE:191:SER:O	2:WE:167:VAL:N	2.36	0.58
2:WE:121:LEU:HD11	2:WE:182:LEU:HD13	1.85	0.58
4:WF:57:ILE:HB	4:WF:60:ILE:HD12	1.85	0.58
4:KG:51:MET:N	4:OG:80:ARG:HG2	2.18	0.58
2:MG:194:GLY:O	2:SG:164:PHE:HB3	2.02	0.58
2:G:166:GLY:CA	2:SG:192:LYS:HA	2.34	0.58
2:IC:83:LYS:C	2:OC:23:ALA:HB1	2.24	0.58
2:MD:192:LYS:HA	2:SD:166:GLY:CA	2.30	0.58
2:CF:121:LEU:HD11	2:CF:182:LEU:HD13	1.85	0.58
4:W:57:ILE:HB	4:W:60:ILE:HD12	1.86	0.57
4:Y:38:VAL:HG13	4:CA:118:TYR:HE1	1.69	0.57
4:OB:51:MET:N	4:SB:80:ARG:HG2	2.19	0.57
4:EC:57:ILE:HB	4:EC:60:ILE:HD12	1.86	0.57
4:OD:57:ILE:HB	4:OD:60:ILE:HD12	1.86	0.57
4:QD:51:MET:N	4:UD:80:ARG:HG2	2.19	0.57
2:OF:218:VAL:HG22	2:UF:159:LEU:HD12	1.86	0.57
2:B:121:LEU:HD11	2:B:182:LEU:HD13	1.85	0.57
2:EB:192:LYS:HA	2:KB:166:GLY:CA	2.33	0.57
4:WC:57:ILE:HB	4:WC:60:ILE:HD12	1.85	0.57
2:MD:191:SER:O	2:SD:167:VAL:N	2.35	0.57
2:QE:121:LEU:HD11	2:QE:182:LEU:HD13	1.85	0.57
4:YF:51:MET:N	4:CG:80:ARG:HG2	2.19	0.57
2:GA:218:VAL:HG22	2:MA:159:LEU:HD12	1.86	0.57
2:QB:192:LYS:HA	2:WB:166:GLY:CA	2.32	0.57
2:KE:218:VAL:HG22	2:QE:159:LEU:HD12	1.87	0.57
4:IG:57:ILE:HB	4:IG:60:ILE:HD12	1.85	0.57
2:SG:121:LEU:HD11	2:SG:182:LEU:HD13	1.85	0.57
2:G:121:LEU:HD11	2:G:182:LEU:HD13	1.85	0.57
4:Q:51:MET:N	4:D:80:ARG:HG2	2.19	0.57
2:OF:121:LEU:HD11	2:OF:182:LEU:HD13	1.85	0.57
4:YF:115:ALA:CB	3:BG:48:ARG:HH12	2.14	0.57
4:UB:51:MET:N	4:YB:80:ARG:HG2	2.20	0.57
4:GC:51:MET:N	4:KC:80:ARG:HG2	2.20	0.57
4:YC:51:MET:N	4:CD:80:ARG:HG2	2.19	0.57
2:YD:191:SER:O	2:EE:167:VAL:N	2.36	0.57
4:IE:51:MET:N	4:ME:80:ARG:HG2	2.19	0.57
2:CF:192:LYS:HA	2:IF:166:GLY:CA	2.32	0.57
4:EF:57:ILE:HB	4:EF:60:ILE:HD12	1.86	0.57
4:GF:51:MET:N	4:KF:80:ARG:HG2	2.20	0.57
2:IF:121:LEU:HD11	2:IF:182:LEU:HD13	1.85	0.57
2:UF:121:LEU:HD11	2:UF:182:LEU:HD13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AG:192:LYS:HA	2:GG:166:GLY:CA	2.33	0.57
4:KG:38:VAL:HG13	4:OG:118:TYR:HE1	1.70	0.57
4:KG:124:ASP:HA	3:NG:246:TRP:HZ3	1.69	0.57
2:MG:121:LEU:HD11	2:MG:182:LEU:HD13	1.85	0.57
2:G:159:LEU:HD12	2:SG:218:VAL:HG22	1.86	0.57
2:G:167:VAL:N	2:SG:191:SER:O	2.38	0.57
2:T:218:VAL:HG22	2:AA:159:LEU:HD12	1.87	0.57
4:IA:57:ILE:HB	4:IA:60:ILE:HD12	1.86	0.57
2:KB:191:SER:O	2:QB:167:VAL:N	2.36	0.57
2:CC:192:LYS:HA	2:IC:166:GLY:CA	2.32	0.57
2:MD:83:LYS:C	2:SD:23:ALA:HB1	2.25	0.57
2:YD:218:VAL:HG22	2:EE:159:LEU:HD12	1.87	0.57
2:EE:192:LYS:HA	2:KE:166:GLY:CA	2.31	0.57
4:MF:104:TYR:CE1	3:PF:256:HIS:O	2.57	0.57
2:OF:192:LYS:HA	2:UF:166:GLY:CA	2.33	0.57
2:UF:191:SER:O	2:AG:166:GLY:HA2	2.05	0.57
4:QG:51:MET:N	4:UG:80:ARG:HG2	2.20	0.57
2:GA:191:SER:O	2:MA:167:VAL:N	2.37	0.57
2:YA:192:LYS:HA	2:EB:166:GLY:CA	2.34	0.57
2:WB:192:LYS:HA	2:CC:166:GLY:CA	2.33	0.57
4:GC:124:ASP:HA	3:JC:246:TRP:HZ3	1.68	0.57
4:YC:124:ASP:HA	3:BD:246:TRP:HZ3	1.69	0.57
2:YD:192:LYS:HA	2:EE:166:GLY:CA	2.32	0.57
4:SF:38:VAL:HG13	4:WF:118:TYR:HE1	1.70	0.57
2:AG:121:LEU:HD11	2:AG:182:LEU:HD13	1.85	0.57
2:J:192:LYS:HA	2:T:166:GLY:CA	2.34	0.57
2:MA:84:ALA:N	2:SA:23:ALA:HB1	2.18	0.57
2:SA:83:LYS:C	2:YA:23:ALA:HB1	2.24	0.57
4:SB:57:ILE:HB	4:SB:60:ILE:HD12	1.86	0.57
2:AD:218:VAL:HG22	2:GD:159:LEU:HD12	1.87	0.57
4:QD:38:VAL:HG13	4:UD:118:TYR:HE1	1.70	0.57
2:WE:194:GLY:O	2:CF:164:PHE:CB	2.53	0.57
4:N:57:ILE:HB	4:N:60:ILE:HD12	1.86	0.57
4:AB:57:ILE:HB	4:AB:60:ILE:HD12	1.85	0.57
2:WE:191:SER:O	2:CF:166:GLY:HA2	2.05	0.57
4:CB:104:TYR:OH	3:FB:256:HIS:HB2	2.05	0.57
2:UC:191:SER:O	2:AD:166:GLY:HA2	2.04	0.57
2:SD:191:SER:O	2:YD:166:GLY:HA2	2.04	0.57
2:SD:192:LYS:HA	2:YD:166:GLY:CA	2.32	0.57
4:OE:104:TYR:CE1	3:RE:256:HIS:O	2.57	0.57
2:GG:121:LEU:HD11	2:GG:182:LEU:HD13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QG:38:VAL:HG22	4:UG:113:VAL:HB	1.86	0.57
4:Q:124:ASP:HA	3:C:246:TRP:HZ3	1.69	0.56
2:J:218:VAL:HG22	2:T:159:LEU:HD12	1.87	0.56
2:AA:191:SER:O	2:GA:167:VAL:N	2.36	0.56
2:MA:194:GLY:O	2:SA:164:PHE:CB	2.53	0.56
2:YA:191:SER:O	2:EB:167:VAL:N	2.37	0.56
2:EB:191:SER:O	2:KB:167:VAL:N	2.36	0.56
2:QB:191:SER:O	2:WB:166:GLY:HA2	2.04	0.56
4:KC:57:ILE:HB	4:KC:60:ILE:HD12	1.86	0.56
4:WD:115:ALA:CB	3:ZD:48:ARG:HH12	2.12	0.56
4:ME:57:ILE:HB	4:ME:60:ILE:HD12	1.86	0.56
2:QE:218:VAL:HG22	2:WE:159:LEU:HD12	1.87	0.56
2:CF:83:LYS:C	2:IF:23:ALA:HB1	2.25	0.56
2:GG:191:SER:O	2:MG:166:GLY:HA2	2.05	0.56
2:MG:84:ALA:N	2:SG:23:ALA:HB1	2.19	0.56
2:IC:191:SER:O	2:OC:167:VAL:N	2.36	0.56
2:GD:192:LYS:HA	2:MD:166:GLY:CA	2.32	0.56
4:IE:124:ASP:HA	3:LE:246:TRP:HZ3	1.70	0.56
2:QE:192:LYS:HA	2:WE:166:GLY:CA	2.32	0.56
4:UE:51:MET:N	4:YE:80:ARG:HG2	2.20	0.56
4:CB:115:ALA:CB	3:FB:48:ARG:HH12	2.11	0.56
2:WB:191:SER:O	2:CC:167:VAL:N	2.36	0.56
2:IC:192:LYS:HA	2:OC:166:GLY:CA	2.33	0.56
4:CD:57:ILE:HB	4:CD:60:ILE:HD12	1.85	0.56
4:UD:57:ILE:HB	4:UD:60:ILE:HD12	1.86	0.56
4:WD:51:MET:N	4:AE:80:ARG:HG2	2.20	0.56
2:CF:191:SER:O	2:IF:166:GLY:HA2	2.06	0.56
4:YF:124:ASP:HA	3:BG:246:TRP:HZ3	1.69	0.56
4:WA:51:MET:N	4:AB:80:ARG:HG2	2.21	0.56
2:KB:218:VAL:HG22	2:QB:159:LEU:HD12	1.86	0.56
4:OE:115:ALA:CB	3:RE:48:ARG:HH12	2.12	0.56
4:AF:124:ASP:HA	3:DF:246:TRP:HZ3	1.70	0.56
4:KD:51:MET:N	4:OD:80:ARG:HG2	2.20	0.56
2:GG:194:GLY:O	2:MG:164:PHE:CB	2.54	0.56
4:H:51:MET:N	4:L:80:ARG:HG2	2.21	0.56
2:GD:218:VAL:HG22	2:MD:159:LEU:HD12	1.88	0.56
4:CE:51:MET:N	4:GE:80:ARG:HG2	2.20	0.56
2:IF:65:GLN:CB	2:OF:47:ILE:H	2.19	0.56
2:AG:218:VAL:HG22	2:GG:159:LEU:HD12	1.86	0.56
2:GG:83:LYS:C	2:MG:23:ALA:HB1	2.25	0.56
4:Y:51:MET:N	4:CA:80:ARG:HG2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:IB:51:MET:N	4:MB:80:ARG:HG2	2.21	0.56
2:WE:83:LYS:C	2:CF:23:ALA:HB1	2.26	0.56
2:IF:192:LYS:HA	2:OF:166:GLY:CA	2.35	0.56
2:UF:83:LYS:C	2:AG:23:ALA:HB1	2.26	0.56
2:GG:218:VAL:HG22	2:MG:159:LEU:HD12	1.88	0.56
2:J:191:SER:O	2:T:167:VAL:N	2.37	0.56
4:KA:38:VAL:HG13	4:OA:118:TYR:HE1	1.69	0.56
4:KA:51:MET:N	4:OA:80:ARG:HG2	2.21	0.56
2:EB:218:VAL:HG22	2:KB:159:LEU:HD12	1.88	0.56
2:WB:151:GLU:HG2	2:WB:154:ARG:NH1	2.21	0.56
2:CC:83:LYS:C	2:IC:23:ALA:HB1	2.26	0.56
2:UC:194:GLY:O	2:AD:164:PHE:CB	2.54	0.56
2:IF:83:LYS:C	2:OF:23:ALA:HB1	2.26	0.56
4:KF:59:ASP:OD1	4:QF:136:SER:HB2	2.06	0.56
4:EG:51:MET:N	4:IG:80:ARG:HG2	2.21	0.56
2:QB:83:LYS:C	2:WB:23:ALA:HB1	2.27	0.56
2:WB:218:VAL:HG22	2:CC:159:LEU:HD12	1.88	0.56
2:MD:218:VAL:HG22	2:SD:159:LEU:HD12	1.88	0.56
2:CF:218:VAL:HG22	2:IF:159:LEU:HD12	1.88	0.56
2:UF:194:GLY:O	2:AG:164:PHE:CB	2.54	0.56
2:YA:218:VAL:HG22	2:EB:159:LEU:HD12	1.88	0.55
2:CC:191:SER:O	2:IC:166:GLY:HA2	2.05	0.55
2:OC:192:LYS:HA	2:UC:166:GLY:CA	2.34	0.55
2:AD:191:SER:O	2:GD:167:VAL:N	2.37	0.55
2:KE:194:GLY:O	2:QE:164:PHE:HB3	2.06	0.55
4:SF:51:MET:N	4:WF:80:ARG:HG2	2.22	0.55
4:EA:51:MET:N	4:IA:80:ARG:HG2	2.22	0.55
2:OC:191:SER:O	2:UC:167:VAL:N	2.39	0.55
2:GD:151:GLU:HG2	2:GD:154:ARG:NH1	2.21	0.55
2:KE:191:SER:O	2:QE:167:VAL:N	2.39	0.55
2:UF:218:VAL:HG22	2:AG:159:LEU:HD12	1.89	0.55
2:G:194:GLY:O	2:B:164:PHE:CB	2.55	0.55
2:KB:194:GLY:O	2:QB:164:PHE:CB	2.55	0.55
2:QB:151:GLU:HG2	2:QB:154:ARG:NH1	2.21	0.55
4:AC:115:ALA:CB	3:DC:48:ARG:HH12	2.13	0.55
2:AD:192:LYS:HA	2:GD:166:GLY:CA	2.34	0.55
2:MD:121:LEU:HD11	2:MD:182:LEU:CD1	2.37	0.55
2:MD:194:GLY:O	2:SD:164:PHE:CB	2.54	0.55
2:WE:151:GLU:HG2	2:WE:154:ARG:NH1	2.21	0.55
2:WE:218:VAL:HG22	2:CF:159:LEU:HD12	1.88	0.55
4:AF:38:VAL:HG13	4:EF:118:TYR:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CF:151:GLU:HG2	2:CF:154:ARG:NH1	2.21	0.55
4:MF:124:ASP:HA	3:PF:246:TRP:CH2	2.42	0.55
2:YA:121:LEU:HD11	2:YA:182:LEU:CD1	2.37	0.55
2:EB:121:LEU:HD11	2:EB:182:LEU:CD1	2.37	0.55
2:UC:121:LEU:HD11	2:UC:182:LEU:CD1	2.37	0.55
2:MD:191:SER:O	2:SD:166:GLY:HA2	2.06	0.55
2:KE:190:ARG:CD	2:QE:166:GLY:O	2.55	0.55
2:WE:120:ASP:OD2	3:DF:75:ARG:NE	2.29	0.55
2:IF:151:GLU:HG2	2:IF:154:ARG:NH1	2.21	0.55
2:IF:191:SER:O	2:OF:166:GLY:HA2	2.06	0.55
2:IF:194:GLY:O	2:OF:164:PHE:HB3	2.06	0.55
4:MF:38:VAL:CG1	4:QF:118:TYR:HE1	2.19	0.55
3:M:256:HIS:HB2	4:WG:104:TYR:OH	2.07	0.55
2:MA:151:GLU:HG2	2:MA:154:ARG:NH1	2.21	0.55
2:SA:121:LEU:HD11	2:SA:182:LEU:CD1	2.37	0.55
2:KB:121:LEU:HD11	2:KB:182:LEU:CD1	2.37	0.55
2:QB:121:LEU:HD11	2:QB:182:LEU:CD1	2.37	0.55
2:WB:121:LEU:HD11	2:WB:182:LEU:CD1	2.37	0.55
2:OC:121:LEU:HD11	2:OC:182:LEU:CD1	2.37	0.55
2:UC:83:LYS:C	2:AD:23:ALA:HB1	2.27	0.55
2:B:218:VAL:HG22	2:J:159:LEU:HD12	1.88	0.55
4:R:104:TYR:HE2	3:V:253:GLN:O	1.90	0.55
4:EA:115:ALA:CB	3:HA:48:ARG:HH12	2.12	0.55
2:GA:121:LEU:HD11	2:GA:182:LEU:CD1	2.37	0.55
2:MA:121:LEU:HD11	2:MA:182:LEU:CD1	2.37	0.55
4:UB:115:ALA:CB	3:XB:48:ARG:HH12	2.11	0.55
4:CE:115:ALA:CB	3:FE:48:ARG:HH12	2.16	0.55
2:KE:121:LEU:HD11	2:KE:182:LEU:CD1	2.37	0.55
4:H:115:ALA:CB	3:K:48:ARG:HH12	2.13	0.55
4:EA:104:TYR:OH	3:HA:256:HIS:HB2	2.07	0.55
4:CB:104:TYR:CE1	3:FB:256:HIS:O	2.60	0.55
4:SC:104:TYR:HE2	3:VC:253:GLN:O	1.90	0.55
2:AD:151:GLU:HG2	2:AD:154:ARG:NH1	2.21	0.55
2:SD:83:LYS:C	2:YD:23:ALA:HB1	2.27	0.55
2:SD:121:LEU:HD11	2:SD:182:LEU:CD1	2.37	0.55
2:EE:194:GLY:O	2:KE:164:PHE:CB	2.54	0.55
4:R:104:TYR:OH	3:V:256:HIS:HB2	2.05	0.55
2:AA:121:LEU:HD11	2:AA:182:LEU:CD1	2.37	0.55
2:GA:151:GLU:HG2	2:GA:154:ARG:NH1	2.21	0.55
2:CC:121:LEU:HD11	2:CC:182:LEU:CD1	2.37	0.55
2:EE:121:LEU:HD11	2:EE:182:LEU:CD1	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:121:LEU:HD11	2:B:182:LEU:CD1	2.37	0.55
2:QB:194:GLY:O	2:WB:164:PHE:CB	2.55	0.55
4:SC:104:TYR:OH	3:VC:256:HIS:HB2	2.07	0.55
2:IF:121:LEU:HD11	2:IF:182:LEU:CD1	2.37	0.55
2:AG:191:SER:O	2:GG:167:VAL:N	2.37	0.55
4:R:104:TYR:CE1	3:V:256:HIS:O	2.60	0.55
2:IC:121:LEU:HD11	2:IC:182:LEU:CD1	2.37	0.55
2:GD:121:LEU:HD11	2:GD:182:LEU:CD1	2.37	0.55
2:QE:151:GLU:HG2	2:QE:154:ARG:NH1	2.21	0.55
2:MG:190:ARG:CD	2:SG:166:GLY:O	2.54	0.55
4:QG:124:ASP:HA	3:TG:246:TRP:HZ3	1.70	0.55
2:G:151:GLU:HG2	2:G:154:ARG:NH1	2.21	0.54
4:N:80:ARG:HG2	4:WG:51:MET:N	2.23	0.54
2:J:121:LEU:HD11	2:J:182:LEU:CD1	2.37	0.54
4:OB:38:VAL:HG13	4:SB:118:TYR:HE1	1.71	0.54
2:CC:194:GLY:O	2:IC:164:PHE:CB	2.55	0.54
2:IC:218:VAL:HG22	2:OC:159:LEU:HD12	1.89	0.54
2:CF:121:LEU:HD11	2:CF:182:LEU:CD1	2.37	0.54
2:GG:121:LEU:HD11	2:GG:182:LEU:CD1	2.37	0.54
2:SG:151:GLU:HG2	2:SG:154:ARG:NH1	2.21	0.54
2:KB:151:GLU:HG2	2:KB:154:ARG:NH1	2.21	0.54
4:AC:51:MET:N	4:EC:80:ARG:HG2	2.22	0.54
4:AC:104:TYR:OH	3:DC:256:HIS:HB2	2.08	0.54
4:MC:115:ALA:CB	3:PC:48:ARG:HH12	2.11	0.54
2:SD:194:GLY:O	2:YD:164:PHE:CB	2.55	0.54
2:YD:194:GLY:O	2:EE:164:PHE:CB	2.55	0.54
2:QE:121:LEU:HD11	2:QE:182:LEU:CD1	2.37	0.54
2:MG:194:GLY:O	2:SG:164:PHE:CB	2.55	0.54
2:G:121:LEU:HD11	2:G:182:LEU:CD1	2.37	0.54
2:SA:191:SER:O	2:YA:166:GLY:HA2	2.07	0.54
2:AD:121:LEU:HD11	2:AD:182:LEU:CD1	2.37	0.54
2:MG:151:GLU:HG2	2:MG:154:ARG:NH1	2.21	0.54
2:G:218:VAL:HG22	2:B:159:LEU:HD12	1.90	0.54
2:B:151:GLU:HG2	2:B:154:ARG:NH1	2.21	0.54
4:D:130:GLU:O	4:D:134:ARG:HG2	2.08	0.54
4:L:130:GLU:O	4:L:134:ARG:HG2	2.08	0.54
2:AA:151:GLU:HG2	2:AA:154:ARG:NH1	2.21	0.54
4:QA:124:ASP:HA	3:TA:246:TRP:HZ3	1.71	0.54
4:SC:104:TYR:CD2	3:VC:256:HIS:O	2.61	0.54
2:UC:151:GLU:HG2	2:UC:154:ARG:NH1	2.21	0.54
2:CF:194:GLY:O	2:IF:164:PHE:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AG:121:LEU:HD11	2:AG:182:LEU:CD1	2.37	0.54
4:CG:130:GLU:O	4:CG:134:ARG:HG2	2.08	0.54
2:G:83:LYS:C	2:B:23:ALA:HB1	2.28	0.54
2:T:121:LEU:HD11	2:T:182:LEU:CD1	2.37	0.54
2:T:194:GLY:O	2:AA:164:PHE:CB	2.56	0.54
2:AA:191:SER:O	2:GA:166:GLY:HA2	2.08	0.54
4:WA:115:ALA:CB	3:ZA:48:ARG:HH12	2.13	0.54
4:CB:38:VAL:HG22	4:GB:113:VAL:HB	1.89	0.54
4:SC:51:MET:N	4:WC:80:ARG:HG2	2.23	0.54
4:ED:51:MET:N	4:ID:80:ARG:HG2	2.22	0.54
4:ED:104:TYR:HE2	3:HD:253:GLN:O	1.90	0.54
2:GD:194:GLY:O	2:MD:164:PHE:CB	2.56	0.54
2:SD:218:VAL:HG22	2:YD:159:LEU:HD12	1.89	0.54
2:WE:121:LEU:HD11	2:WE:182:LEU:CD1	2.37	0.54
4:MF:104:TYR:HE2	3:PF:253:GLN:O	1.90	0.54
2:OF:121:LEU:HD11	2:OF:182:LEU:CD1	2.37	0.54
2:MG:121:LEU:HD11	2:MG:182:LEU:CD1	2.37	0.54
4:UA:130:GLU:O	4:UA:134:ARG:HG2	2.08	0.54
4:IB:115:ALA:CB	3:LB:48:ARG:HH12	2.14	0.54
4:IG:130:GLU:O	4:IG:134:ARG:HG2	2.08	0.54
2:B:191:SER:O	2:J:166:GLY:HA2	2.08	0.54
4:OA:130:GLU:O	4:OA:134:ARG:HG2	2.08	0.54
4:MC:51:MET:N	4:QC:80:ARG:HG2	2.22	0.54
2:KE:151:GLU:HG2	2:KE:154:ARG:NH1	2.21	0.54
4:OE:104:TYR:CD2	3:RE:256:HIS:O	2.60	0.54
4:WF:130:GLU:O	4:WF:134:ARG:HG2	2.08	0.54
2:GG:151:GLU:HG2	2:GG:154:ARG:NH1	2.21	0.54
2:B:194:GLY:O	2:J:164:PHE:CB	2.56	0.54
2:AA:218:VAL:HG22	2:GA:159:LEU:HD12	1.88	0.54
2:SA:194:GLY:O	2:YA:164:PHE:CB	2.56	0.54
4:CB:104:TYR:HE2	3:FB:253:GLN:O	1.90	0.54
4:YC:115:ALA:CB	3:BD:48:ARG:HH12	2.14	0.54
2:GD:191:SER:O	2:MD:166:GLY:HA2	2.07	0.54
2:YD:121:LEU:HD11	2:YD:182:LEU:CD1	2.37	0.54
4:YE:130:GLU:O	4:YE:134:ARG:HG2	2.08	0.54
2:MG:65:GLN:CB	2:SG:47:ILE:H	2.21	0.54
4:N:130:GLU:O	4:N:134:ARG:HG2	2.08	0.54
4:R:51:MET:N	4:W:80:ARG:HG2	2.23	0.54
4:W:130:GLU:O	4:W:134:ARG:HG2	2.08	0.54
2:MA:218:VAL:HG22	2:SA:159:LEU:HD12	1.90	0.54
4:MC:38:VAL:HG22	4:QC:113:VAL:HB	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MC:104:TYR:CE1	3:PC:256:HIS:O	2.61	0.54
4:MC:104:TYR:OH	3:PC:256:HIS:HB2	2.07	0.54
2:UC:218:VAL:HG22	2:AD:159:LEU:HD12	1.89	0.54
4:ED:104:TYR:OH	3:HD:256:HIS:HB2	2.06	0.54
2:KE:192:LYS:HA	2:QE:166:GLY:CA	2.37	0.54
4:UE:115:ALA:CB	3:XE:48:ARG:HH12	2.15	0.54
4:EG:104:TYR:OH	3:HG:256:HIS:HB2	2.08	0.54
2:EB:194:GLY:O	2:KB:164:PHE:CB	2.56	0.54
4:CD:130:GLU:O	4:CD:134:ARG:HG2	2.08	0.54
4:ID:130:GLU:O	4:ID:134:ARG:HG2	2.08	0.54
4:OD:130:GLU:O	4:OD:134:ARG:HG2	2.08	0.54
4:SE:130:GLU:O	4:SE:134:ARG:HG2	2.08	0.54
2:IF:190:ARG:CG	2:OF:166:GLY:O	2.56	0.54
4:UG:130:GLU:O	4:UG:134:ARG:HG2	2.08	0.54
4:EA:38:VAL:HG22	4:IA:113:VAL:HB	1.90	0.53
4:AB:130:GLU:O	4:AB:134:ARG:HG2	2.08	0.53
4:WC:130:GLU:O	4:WC:134:ARG:HG2	2.08	0.53
4:IE:38:VAL:HG22	4:ME:113:VAL:HB	1.89	0.53
4:OE:124:ASP:HA	3:RE:246:TRP:CH2	2.43	0.53
4:EF:130:GLU:O	4:EF:134:ARG:HG2	2.08	0.53
2:OF:191:SER:O	2:UF:167:VAL:N	2.38	0.53
2:UF:121:LEU:HD11	2:UF:182:LEU:CD1	2.37	0.53
2:T:151:GLU:HG2	2:T:154:ARG:NH1	2.21	0.53
4:CA:130:GLU:O	4:CA:134:ARG:HG2	2.08	0.53
4:EA:104:TYR:CE1	3:HA:256:HIS:O	2.62	0.53
2:SA:218:VAL:HG22	2:YA:159:LEU:HD12	1.88	0.53
2:EB:151:GLU:HG2	2:EB:154:ARG:NH1	2.21	0.53
2:QB:218:VAL:HG22	2:WB:159:LEU:HD12	1.89	0.53
4:YB:113:VAL:HG13	4:YB:113:VAL:O	2.08	0.53
4:EC:113:VAL:HG13	4:EC:113:VAL:O	2.08	0.53
2:GD:196:VAL:HG11	2:GD:228:LYS:HE2	1.91	0.53
2:MD:196:VAL:HG11	2:MD:228:LYS:HE2	1.91	0.53
2:QE:191:SER:O	2:WE:166:GLY:HA2	2.08	0.53
4:OG:130:GLU:O	4:OG:134:ARG:HG2	2.08	0.53
3:M:253:GLN:O	4:WG:104:TYR:HE2	1.90	0.53
4:EA:104:TYR:HE2	3:HA:253:GLN:O	1.92	0.53
2:GA:194:GLY:O	2:MA:164:PHE:CB	2.56	0.53
4:IA:130:GLU:O	4:IA:134:ARG:HG2	2.08	0.53
4:IB:104:TYR:OH	3:LB:256:HIS:HB2	2.08	0.53
4:UB:38:VAL:HG22	4:YB:113:VAL:HB	1.90	0.53
2:IC:190:ARG:CD	2:OC:166:GLY:O	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:130:GLU:O	4:UD:134:ARG:HG2	2.08	0.53
2:QE:194:GLY:O	2:WE:164:PHE:CB	2.56	0.53
2:QE:196:VAL:HG11	2:QE:228:LYS:HE2	1.91	0.53
4:MF:51:MET:N	4:QF:80:ARG:HG2	2.23	0.53
2:SG:121:LEU:HD11	2:SG:182:LEU:CD1	2.37	0.53
4:H:104:TYR:OH	3:K:256:HIS:HB2	2.09	0.53
4:CB:51:MET:N	4:GB:80:ARG:HG2	2.23	0.53
4:YB:130:GLU:O	4:YB:134:ARG:HG2	2.08	0.53
2:CC:218:VAL:HG22	2:IC:159:LEU:HD12	1.89	0.53
4:EC:130:GLU:O	4:EC:134:ARG:HG2	2.08	0.53
4:QC:130:GLU:O	4:QC:134:ARG:HG2	2.08	0.53
2:KE:196:VAL:HG11	2:KE:228:LYS:HE2	1.91	0.53
2:AG:151:GLU:HG2	2:AG:154:ARG:NH1	2.21	0.53
4:UA:113:VAL:HG13	4:UA:113:VAL:O	2.08	0.53
4:WA:104:TYR:OH	3:ZA:256:HIS:HB2	2.08	0.53
2:WB:194:GLY:O	2:CC:164:PHE:CB	2.57	0.53
4:KC:113:VAL:HG13	4:KC:113:VAL:O	2.08	0.53
4:CD:113:VAL:O	4:CD:113:VAL:HG13	2.08	0.53
4:AE:130:GLU:O	4:AE:134:ARG:HG2	2.08	0.53
4:SF:104:TYR:HE2	3:VF:253:GLN:O	1.91	0.53
4:Q:38:VAL:HG22	4:D:113:VAL:HB	1.90	0.53
4:AB:113:VAL:HG13	4:AB:113:VAL:O	2.08	0.53
2:CC:196:VAL:HG11	2:CC:228:LYS:HE2	1.91	0.53
2:IC:196:VAL:HG11	2:IC:228:LYS:HE2	1.91	0.53
2:OC:151:GLU:HG2	2:OC:154:ARG:NH1	2.21	0.53
4:QC:113:VAL:O	4:QC:113:VAL:HG13	2.08	0.53
4:WC:113:VAL:O	4:WC:113:VAL:HG13	2.08	0.53
4:ID:113:VAL:HG13	4:ID:113:VAL:O	2.08	0.53
4:OD:113:VAL:HG13	4:OD:113:VAL:O	2.08	0.53
2:SD:196:VAL:HG11	2:SD:228:LYS:HE2	1.90	0.53
2:YD:191:SER:O	2:EE:166:GLY:HA2	2.08	0.53
2:EE:151:GLU:HG2	2:EE:154:ARG:NH1	2.21	0.53
4:ME:130:GLU:O	4:ME:134:ARG:HG2	2.08	0.53
4:OE:38:VAL:CG1	4:SE:118:TYR:HE1	2.21	0.53
2:WE:196:VAL:HG11	2:WE:228:LYS:HE2	1.91	0.53
4:KF:130:GLU:O	4:KF:134:ARG:HG2	2.08	0.53
2:OF:194:GLY:O	2:UF:164:PHE:CB	2.57	0.53
4:QF:130:GLU:O	4:QF:134:ARG:HG2	2.08	0.53
2:AG:194:GLY:O	2:GG:164:PHE:CB	2.57	0.53
3:M:292:ILE:HB	3:M:304:SER:O	2.09	0.53
4:Q:61:PRO:CG	3:C:297:ASP:HB3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YA:190:ARG:CD	2:EB:166:GLY:O	2.56	0.53
4:GB:130:GLU:O	4:GB:134:ARG:HG2	2.08	0.53
4:SB:113:VAL:HG13	4:SB:113:VAL:O	2.08	0.53
4:SB:130:GLU:O	4:SB:134:ARG:HG2	2.08	0.53
2:IC:194:GLY:O	2:OC:164:PHE:CB	2.57	0.53
4:OA:113:VAL:HG13	4:OA:113:VAL:O	2.08	0.53
4:QA:50:ALA:O	4:UA:80:ARG:HA	2.09	0.53
2:EB:191:SER:O	2:KB:166:GLY:HA2	2.08	0.53
2:IC:191:SER:O	2:OC:166:GLY:HA2	2.08	0.53
4:KC:130:GLU:O	4:KC:134:ARG:HG2	2.08	0.53
2:AD:196:VAL:HG11	2:AD:228:LYS:HE2	1.91	0.53
3:HG:292:ILE:HB	3:HG:304:SER:O	2.09	0.53
4:QG:104:TYR:CE1	3:TG:256:HIS:O	2.62	0.53
3:M:256:HIS:O	4:WG:104:TYR:CD2	2.61	0.53
3:M:256:HIS:O	4:WG:104:TYR:CE1	2.62	0.53
3:C:292:ILE:HB	3:C:304:SER:O	2.09	0.53
3:K:292:ILE:HB	3:K:304:SER:O	2.09	0.53
2:T:191:SER:O	2:AA:166:GLY:HA2	2.09	0.53
4:AC:104:TYR:HE2	3:DC:253:GLN:O	1.92	0.53
4:UD:113:VAL:O	4:UD:113:VAL:HG13	2.08	0.53
2:EE:83:LYS:C	2:KE:23:ALA:HB1	2.29	0.53
4:GE:130:GLU:O	4:GE:134:ARG:HG2	2.08	0.53
3:JF:292:ILE:HB	3:JF:304:SER:O	2.09	0.53
3:PF:292:ILE:HB	3:PF:304:SER:O	2.09	0.53
4:RF:96:PRO:HB2	4:RF:108:GLN:HB3	1.91	0.53
2:UF:196:VAL:HG11	2:UF:228:LYS:HE2	1.91	0.53
3:BG:292:ILE:HB	3:BG:304:SER:O	2.09	0.53
4:EG:104:TYR:HE2	3:HG:253:GLN:O	1.92	0.53
4:JG:96:PRO:HB2	4:JG:108:GLN:HB3	1.91	0.53
3:NG:292:ILE:HB	3:NG:304:SER:O	2.09	0.53
4:QG:104:TYR:OH	3:TG:256:HIS:HB2	2.09	0.53
3:TG:292:ILE:HB	3:TG:304:SER:O	2.09	0.53
4:ED:104:TYR:CD2	3:HD:256:HIS:O	2.62	0.53
4:VD:96:PRO:HB2	4:VD:108:GLN:HB3	1.91	0.53
4:AE:113:VAL:HG13	4:AE:113:VAL:O	2.08	0.53
2:EE:196:VAL:HG11	2:EE:228:LYS:HE2	1.90	0.53
4:NE:96:PRO:HB2	4:NE:108:GLN:HB3	1.91	0.53
4:GF:61:PRO:CG	3:JF:297:ASP:HB3	2.39	0.53
2:OF:196:VAL:HG11	2:OF:228:LYS:HE2	1.91	0.53
3:VF:292:ILE:HB	3:VF:304:SER:O	2.09	0.53
4:H:61:PRO:CG	3:K:297:ASP:HB3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:292:ILE:HB	3:V:304:SER:O	2.09	0.52
2:AA:194:GLY:O	2:GA:164:PHE:CB	2.57	0.52
3:NA:292:ILE:HB	3:NA:304:SER:O	2.09	0.52
4:MB:113:VAL:O	4:MB:113:VAL:HG13	2.08	0.52
4:QD:61:PRO:CG	3:TD:297:ASP:HB3	2.39	0.52
4:WD:38:VAL:HG22	4:AE:113:VAL:HB	1.90	0.52
4:AF:61:PRO:CG	3:DF:297:ASP:HB3	2.39	0.52
2:UF:151:GLU:HG2	2:UF:154:ARG:NH1	2.21	0.52
4:YF:61:PRO:CG	3:BG:297:ASP:HB3	2.39	0.52
2:AG:196:VAL:HG11	2:AG:228:LYS:HE2	1.91	0.52
4:QG:50:ALA:O	4:UG:80:ARG:HA	2.09	0.52
4:VG:96:PRO:HB2	4:VG:108:GLN:HB3	1.91	0.52
4:R:38:VAL:HG22	4:W:113:VAL:HB	1.90	0.52
3:BA:292:ILE:HB	3:BA:304:SER:O	2.09	0.52
4:KA:104:TYR:HE2	3:NA:253:GLN:O	1.92	0.52
4:WA:38:VAL:HG22	4:AB:113:VAL:HB	1.91	0.52
4:GB:113:VAL:O	4:GB:113:VAL:HG13	2.08	0.52
2:WB:196:VAL:HG11	2:WB:228:LYS:HE2	1.91	0.52
4:AC:104:TYR:CE1	3:DC:256:HIS:O	2.62	0.52
2:OC:196:VAL:HG11	2:OC:228:LYS:HE2	1.91	0.52
4:JD:96:PRO:HB2	4:JD:108:GLN:HB3	1.91	0.52
4:GE:113:VAL:O	4:GE:113:VAL:HG13	2.08	0.52
4:OE:38:VAL:HG22	4:SE:113:VAL:HB	1.90	0.52
3:XE:181:ARG:NH1	3:DF:237:GLU:OE1	2.42	0.52
4:ZE:96:PRO:HB2	4:ZE:108:GLN:HB3	1.91	0.52
4:FF:96:PRO:HB2	4:FF:108:GLN:HB3	1.91	0.52
4:MF:61:PRO:CG	3:PF:297:ASP:HB3	2.39	0.52
4:SF:104:TYR:CD2	3:VF:256:HIS:O	2.61	0.52
2:J:151:GLU:HG2	2:J:154:ARG:NH1	2.21	0.52
2:J:190:ARG:CD	2:T:166:GLY:O	2.57	0.52
4:O:96:PRO:HB2	4:O:108:GLN:HB3	1.91	0.52
4:KA:104:TYR:OH	3:NA:256:HIS:HB2	2.09	0.52
3:TA:292:ILE:HB	3:TA:304:SER:O	2.09	0.52
2:KB:191:SER:O	2:QB:166:GLY:HA2	2.09	0.52
4:DD:96:PRO:HB2	4:DD:108:GLN:HB3	1.91	0.52
4:SF:115:ALA:CB	3:VF:48:ARG:HH12	2.18	0.52
4:DG:96:PRO:HB2	4:DG:108:GLN:HB3	1.91	0.52
2:MG:190:ARG:CG	2:SG:166:GLY:O	2.57	0.52
4:QG:61:PRO:CG	3:TG:297:ASP:HB3	2.38	0.52
4:P:96:PRO:HB2	4:P:108:GLN:HB3	1.91	0.52
4:R:61:PRO:CG	3:V:297:ASP:HB3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:MA:83:LYS:C	2:SA:23:ALA:HB1	2.29	0.52
4:QA:61:PRO:CG	3:TA:297:ASP:HB3	2.39	0.52
2:YA:151:GLU:HG2	2:YA:154:ARG:NH1	2.21	0.52
4:MB:130:GLU:O	4:MB:134:ARG:HG2	2.08	0.52
4:UB:61:PRO:CG	3:XB:297:ASP:HB3	2.39	0.52
4:UB:104:TYR:OH	3:XB:256:HIS:HB2	2.09	0.52
2:WB:191:SER:O	2:CC:166:GLY:HA2	2.09	0.52
4:GC:61:PRO:CG	3:JC:297:ASP:HB3	2.39	0.52
4:RC:96:PRO:HB2	4:RC:108:GLN:HB3	1.91	0.52
4:YC:61:PRO:CG	3:BD:297:ASP:HB3	2.39	0.52
4:BE:96:PRO:HB2	4:BE:108:GLN:HB3	1.91	0.52
2:EE:218:VAL:HG22	2:KE:159:LEU:HD12	1.90	0.52
4:IE:61:PRO:CG	3:LE:297:ASP:HB3	2.39	0.52
4:ME:59:ASP:OD1	4:SE:136:SER:HB2	2.10	0.52
4:ME:113:VAL:O	4:ME:113:VAL:HG13	2.08	0.52
4:SE:113:VAL:HG13	4:SE:113:VAL:O	2.08	0.52
4:AF:115:ALA:CB	3:DF:48:ARG:HH12	2.19	0.52
3:DF:292:ILE:HB	3:DF:304:SER:O	2.09	0.52
4:L:113:VAL:HG13	4:L:113:VAL:O	2.08	0.52
4:Y:104:TYR:OH	3:BA:256:HIS:HB2	2.10	0.52
3:HA:292:ILE:HB	3:HA:304:SER:O	2.09	0.52
4:IA:113:VAL:HG13	4:IA:113:VAL:O	2.08	0.52
4:QA:38:VAL:HG22	4:UA:113:VAL:HB	1.91	0.52
4:AC:38:VAL:HG22	4:EC:113:VAL:HB	1.91	0.52
3:XE:292:ILE:HB	3:XE:304:SER:O	2.09	0.52
2:CF:196:VAL:HG11	2:CF:228:LYS:HE2	1.91	0.52
4:SF:104:TYR:OH	3:VF:256:HIS:HB2	2.08	0.52
4:X:96:PRO:HB2	4:X:108:GLN:HB3	1.91	0.52
4:CA:113:VAL:O	4:CA:113:VAL:HG13	2.08	0.52
4:WA:61:PRO:CG	3:ZA:297:ASP:HB3	2.39	0.52
4:WA:104:TYR:CE1	3:ZA:256:HIS:O	2.63	0.52
3:ZA:292:ILE:HB	3:ZA:304:SER:O	2.09	0.52
4:GC:38:VAL:HG22	4:KC:113:VAL:HB	1.91	0.52
4:LC:96:PRO:HB2	4:LC:108:GLN:HB3	1.92	0.52
4:MC:104:TYR:HE2	3:PC:253:GLN:O	1.91	0.52
4:ED:104:TYR:CE1	3:HD:256:HIS:O	2.62	0.52
4:WD:61:PRO:CG	3:ZD:297:ASP:HB3	2.39	0.52
2:YD:196:VAL:HG11	2:YD:228:LYS:HE2	1.91	0.52
4:CE:61:PRO:CG	3:FE:297:ASP:HB3	2.40	0.52
4:EF:113:VAL:HG13	4:EF:113:VAL:O	2.08	0.52
4:KF:113:VAL:O	4:KF:113:VAL:HG13	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QF:113:VAL:O	4:QF:113:VAL:HG13	2.08	0.52
4:WF:113:VAL:HG13	4:WF:113:VAL:O	2.08	0.52
4:IG:113:VAL:HG13	4:IG:113:VAL:O	2.08	0.52
4:KG:61:PRO:CG	3:NG:297:ASP:HB3	2.39	0.52
2:T:196:VAL:HG11	2:T:228:LYS:HE2	1.91	0.52
4:W:113:VAL:HG13	4:W:113:VAL:O	2.08	0.52
4:Y:104:TYR:HE2	3:BA:253:GLN:O	1.93	0.52
4:JA:96:PRO:HB2	4:JA:108:GLN:HB3	1.92	0.52
4:TB:96:PRO:HB2	4:TB:108:GLN:HB3	1.91	0.52
4:ZB:96:PRO:HB2	4:ZB:108:GLN:HB3	1.91	0.52
4:YE:113:VAL:HG13	4:YE:113:VAL:O	2.08	0.52
2:IF:196:VAL:HG11	2:IF:228:LYS:HE2	1.90	0.52
4:SF:61:PRO:CG	3:VF:297:ASP:HB3	2.40	0.52
4:CG:113:VAL:O	4:CG:113:VAL:HG13	2.08	0.52
2:G:164:PHE:CB	2:SG:194:GLY:O	2.58	0.52
3:M:297:ASP:HB3	4:WG:61:PRO:CG	2.40	0.52
2:B:196:VAL:HG11	2:B:228:LYS:HE2	1.91	0.52
4:D:113:VAL:HG13	4:D:113:VAL:O	2.08	0.52
4:H:104:TYR:CE1	3:K:256:HIS:O	2.63	0.52
2:GA:196:VAL:HG11	2:GA:228:LYS:HE2	1.91	0.52
4:PA:96:PRO:HB2	4:PA:108:GLN:HB3	1.91	0.52
2:YA:196:VAL:HG11	2:YA:228:LYS:HE2	1.91	0.52
4:BB:96:PRO:HB2	4:BB:108:GLN:HB3	1.91	0.52
4:CB:61:PRO:CG	3:FB:297:ASP:HB3	2.40	0.52
3:FE:292:ILE:HB	3:FE:304:SER:O	2.09	0.52
4:HE:96:PRO:HB2	4:HE:108:GLN:HB3	1.92	0.52
3:RE:292:ILE:HB	3:RE:304:SER:O	2.09	0.52
2:IF:194:GLY:O	2:OF:164:PHE:CB	2.58	0.52
3:HG:181:ARG:NH1	3:NG:237:GLU:OE1	2.43	0.52
2:MG:83:LYS:C	2:SG:23:ALA:HB1	2.31	0.52
4:Q:104:TYR:OH	3:C:256:HIS:HB2	2.10	0.52
4:H:104:TYR:HE2	3:K:253:GLN:O	1.93	0.52
2:AA:190:ARG:CD	2:GA:166:GLY:O	2.57	0.52
4:KA:61:PRO:CG	3:NA:297:ASP:HB3	2.40	0.52
2:SA:196:VAL:HG11	2:SA:228:LYS:HE2	1.91	0.52
2:YA:194:GLY:O	2:EB:164:PHE:CB	2.58	0.52
2:EB:196:VAL:HG11	2:EB:228:LYS:HE2	1.91	0.52
4:HB:96:PRO:HB2	4:HB:108:GLN:HB3	1.91	0.52
4:IB:104:TYR:CE1	3:LB:256:HIS:O	2.63	0.52
4:OB:61:PRO:CG	3:RB:297:ASP:HB3	2.40	0.52
4:MC:61:PRO:CG	3:PC:297:ASP:HB3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:TD:292:ILE:HB	3:TD:304:SER:O	2.09	0.52
3:ZD:292:ILE:HB	3:ZD:304:SER:O	2.09	0.52
4:XF:96:PRO:HB2	4:XF:108:GLN:HB3	1.91	0.52
2:GG:196:VAL:HG11	2:GG:228:LYS:HE2	1.91	0.52
2:MG:218:VAL:HG22	2:SG:159:LEU:HD12	1.92	0.52
4:OG:113:VAL:HG13	4:OG:113:VAL:O	2.08	0.52
4:N:113:VAL:HG13	4:N:113:VAL:O	2.08	0.52
2:J:196:VAL:HG11	2:J:228:LYS:HE2	1.90	0.52
4:EA:61:PRO:CG	3:HA:297:ASP:HB3	2.39	0.52
4:WA:104:TYR:HE2	3:ZA:253:GLN:O	1.93	0.52
2:YA:191:SER:O	2:EB:166:GLY:HA2	2.10	0.52
4:GC:104:TYR:OH	3:JC:256:HIS:HB2	2.10	0.52
3:PC:292:ILE:HB	3:PC:304:SER:O	2.09	0.52
2:UC:196:VAL:HG11	2:UC:228:LYS:HE2	1.91	0.52
3:VC:292:ILE:HB	3:VC:304:SER:O	2.09	0.52
3:BD:292:ILE:HB	3:BD:304:SER:O	2.09	0.52
3:HD:292:ILE:HB	3:HD:304:SER:O	2.09	0.52
2:YD:151:GLU:HG2	2:YD:154:ARG:NH1	2.21	0.52
3:LE:292:ILE:HB	3:LE:304:SER:O	2.09	0.52
4:GF:38:VAL:HG22	4:KF:113:VAL:HB	1.92	0.52
4:OG:59:ASP:OD1	4:UG:136:SER:HB2	2.10	0.52
4:UG:113:VAL:O	4:UG:113:VAL:HG13	2.08	0.52
2:J:191:SER:O	2:T:166:GLY:HA2	2.10	0.51
4:Y:61:PRO:CG	3:BA:297:ASP:HB3	2.40	0.51
4:IB:38:VAL:HG22	4:MB:113:VAL:HB	1.92	0.51
2:QB:196:VAL:HG11	2:QB:228:LYS:HE2	1.91	0.51
4:AC:104:TYR:CD2	3:DC:256:HIS:O	2.63	0.51
2:IC:151:GLU:HG2	2:IC:154:ARG:NH1	2.21	0.51
2:AD:194:GLY:O	2:GD:164:PHE:CB	2.58	0.51
4:WD:104:TYR:OH	3:ZD:256:HIS:HB2	2.10	0.51
4:GF:104:TYR:OH	3:JF:256:HIS:HB2	2.10	0.51
2:IF:218:VAL:HG22	2:OF:159:LEU:HD12	1.91	0.51
4:LF:96:PRO:HB2	4:LF:108:GLN:HB3	1.91	0.51
2:G:196:VAL:HG11	2:G:228:LYS:HE2	1.91	0.51
2:GA:191:SER:O	2:MA:166:GLY:HA2	2.10	0.51
4:CB:104:TYR:CD2	3:FB:256:HIS:O	2.63	0.51
4:UB:104:TYR:CE1	3:XB:256:HIS:O	2.64	0.51
3:XB:292:ILE:HB	3:XB:304:SER:O	2.09	0.51
3:DC:292:ILE:HB	3:DC:304:SER:O	2.09	0.51
3:JC:292:ILE:HB	3:JC:304:SER:O	2.09	0.51
4:SC:104:TYR:CE1	3:VC:256:HIS:O	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AD:190:ARG:CD	2:GD:166:GLY:O	2.59	0.51
3:ND:292:ILE:HB	3:ND:304:SER:O	2.09	0.51
4:UE:61:PRO:CG	3:XE:297:ASP:HB3	2.40	0.51
2:AG:191:SER:O	2:GG:166:GLY:HA2	2.11	0.51
4:EG:104:TYR:CD2	3:HG:256:HIS:O	2.62	0.51
2:SG:196:VAL:HG11	2:SG:228:LYS:HE2	1.91	0.51
2:AA:196:VAL:HG11	2:AA:228:LYS:HE2	1.91	0.51
4:AC:61:PRO:CG	3:DC:297:ASP:HB3	2.40	0.51
4:SC:61:PRO:CG	3:VC:297:ASP:HB3	2.40	0.51
4:KD:61:PRO:CG	3:ND:297:ASP:HB3	2.39	0.51
4:KD:104:TYR:HE2	3:ND:253:GLN:O	1.93	0.51
4:IE:50:ALA:O	4:ME:80:ARG:HA	2.10	0.51
4:OE:61:PRO:CG	3:RE:297:ASP:HB3	2.40	0.51
4:TE:96:PRO:HB2	4:TE:108:GLN:HB3	1.91	0.51
4:EG:61:PRO:CG	3:HG:297:ASP:HB3	2.40	0.51
3:HG:258:GLU:N	4:IG:74:THR:HG22	2.26	0.51
2:J:194:GLY:O	2:T:164:PHE:CB	2.58	0.51
2:MA:196:VAL:HG11	2:MA:228:LYS:HE2	1.91	0.51
3:FB:292:ILE:HB	3:FB:304:SER:O	2.09	0.51
4:IB:61:PRO:CG	3:LB:297:ASP:HB3	2.39	0.51
2:WB:190:ARG:CD	2:CC:166:GLY:O	2.58	0.51
2:IC:65:GLN:CB	2:OC:47:ILE:H	2.24	0.51
2:OC:194:GLY:O	2:UC:164:PHE:CB	2.58	0.51
4:PD:96:PRO:HB2	4:PD:108:GLN:HB3	1.91	0.51
2:SD:190:ARG:CD	2:YD:166:GLY:O	2.58	0.51
2:EE:190:ARG:CD	2:KE:166:GLY:O	2.58	0.51
2:OF:151:GLU:HG2	2:OF:154:ARG:NH1	2.21	0.51
3:C:258:GLU:N	4:D:74:THR:HG22	2.26	0.51
4:CB:38:VAL:CG1	4:GB:118:TYR:HE1	2.23	0.51
2:KB:196:VAL:HG11	2:KB:228:LYS:HE2	1.91	0.51
3:LB:181:ARG:NH1	3:RB:237:GLU:OE1	2.42	0.51
4:ED:61:PRO:CG	3:HD:297:ASP:HB3	2.40	0.51
4:KD:104:TYR:OH	3:ND:256:HIS:HB2	2.09	0.51
3:TD:248:ASP:O	3:TD:252:ARG:HG3	2.11	0.51
4:UE:104:TYR:OH	3:XE:256:HIS:HB2	2.09	0.51
3:JF:258:GLU:N	4:KF:74:THR:HG22	2.26	0.51
3:NG:258:GLU:N	4:OG:74:THR:HG22	2.26	0.51
4:H:38:VAL:HG22	4:L:113:VAL:HB	1.92	0.51
3:V:248:ASP:O	3:V:252:ARG:HG3	2.11	0.51
4:KA:115:ALA:CB	3:NA:48:ARG:HH12	2.17	0.51
4:IB:104:TYR:HE2	3:LB:253:GLN:O	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LB:292:ILE:HB	3:LB:304:SER:O	2.09	0.51
4:ED:115:ALA:CB	3:HD:48:ARG:HH12	2.14	0.51
4:CE:104:TYR:CD2	3:FE:256:HIS:O	2.64	0.51
3:PF:258:GLU:N	4:QF:74:THR:HG22	2.26	0.51
4:PG:96:PRO:HB2	4:PG:108:GLN:HB3	1.91	0.51
4:QG:38:VAL:CG1	4:UG:118:TYR:HE1	2.23	0.51
2:G:190:ARG:CD	2:B:166:GLY:O	2.58	0.51
4:Q:50:ALA:O	4:D:80:ARG:HA	2.11	0.51
4:E:96:PRO:HB2	4:E:108:GLN:HB3	1.91	0.51
3:K:258:GLU:N	4:L:74:THR:HG22	2.26	0.51
3:NA:248:ASP:O	3:NA:252:ARG:HG3	2.11	0.51
4:IB:104:TYR:CD2	3:LB:256:HIS:O	2.64	0.51
2:QB:190:ARG:CD	2:WB:166:GLY:O	2.58	0.51
3:RB:292:ILE:HB	3:RB:304:SER:O	2.09	0.51
3:BD:248:ASP:O	3:BD:252:ARG:HG3	2.11	0.51
4:VD:108:GLN:HE21	4:VD:134:ARG:NH1	2.09	0.51
3:LE:248:ASP:O	3:LE:252:ARG:HG3	2.11	0.51
4:OE:51:MET:N	4:SE:80:ARG:HG2	2.26	0.51
4:UE:104:TYR:HE2	3:XE:253:GLN:O	1.93	0.51
3:PF:181:ARG:NH1	3:VF:237:GLU:OE1	2.44	0.51
3:K:248:ASP:O	3:K:252:ARG:HG3	2.11	0.51
3:HA:258:GLU:N	4:IA:74:THR:HG22	2.26	0.51
4:JD:108:GLN:HE21	4:JD:134:ARG:NH1	2.09	0.51
3:ND:181:ARG:NH1	3:TD:237:GLU:OE1	2.44	0.51
4:PD:108:GLN:HE21	4:PD:134:ARG:NH1	2.09	0.51
3:TD:258:GLU:N	4:UD:74:THR:HG22	2.26	0.51
4:WD:104:TYR:CE1	3:ZD:256:HIS:O	2.64	0.51
3:ZD:258:GLU:N	4:AE:74:THR:HG22	2.26	0.51
4:BE:108:GLN:HE21	4:BE:134:ARG:NH1	2.09	0.51
3:FE:258:GLU:N	4:GE:74:THR:HG22	2.26	0.51
4:HE:108:GLN:HE21	4:HE:134:ARG:NH1	2.09	0.51
4:IE:104:TYR:OH	3:LE:256:HIS:HB2	2.11	0.51
4:UE:104:TYR:CD2	3:XE:256:HIS:O	2.64	0.51
4:EG:104:TYR:CE1	3:HG:256:HIS:O	2.64	0.51
2:MG:196:VAL:HG11	2:MG:228:LYS:HE2	1.91	0.51
3:TG:248:ASP:O	3:TG:252:ARG:HG3	2.11	0.51
3:M:248:ASP:O	3:M:252:ARG:HG3	2.11	0.51
4:R:104:TYR:CD2	3:V:256:HIS:O	2.62	0.51
4:Y:104:TYR:CD2	3:BA:256:HIS:O	2.63	0.51
4:DA:96:PRO:HB2	4:DA:108:GLN:HB3	1.91	0.51
4:KA:104:TYR:CD2	3:NA:256:HIS:O	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CB:124:ASP:HA	3:FB:246:TRP:CH2	2.46	0.51
4:OB:104:TYR:CD2	3:RB:256:HIS:O	2.64	0.51
4:XC:96:PRO:HB2	4:XC:108:GLN:HB3	1.91	0.51
4:YC:50:ALA:O	4:CD:80:ARG:HA	2.11	0.51
3:LE:258:GLU:N	4:ME:74:THR:HG22	2.26	0.51
3:RE:258:GLU:N	4:SE:74:THR:HG22	2.26	0.51
3:BG:248:ASP:O	3:BG:252:ARG:HG3	2.11	0.51
2:MG:195:GLY:O	2:SG:161:ILE:O	2.29	0.51
4:Q:104:TYR:CE1	3:C:256:HIS:O	2.64	0.51
2:SA:151:GLU:HG2	2:SA:154:ARG:NH1	2.21	0.51
2:SA:190:ARG:CD	2:YA:166:GLY:O	2.58	0.51
3:FB:248:ASP:O	3:FB:252:ARG:HG3	2.11	0.51
3:RB:248:ASP:O	3:RB:252:ARG:HG3	2.11	0.51
3:JC:248:ASP:O	3:JC:252:ARG:HG3	2.11	0.51
4:CE:104:TYR:HE2	3:FE:253:GLN:O	1.94	0.51
2:KE:65:GLN:CB	2:QE:47:ILE:H	2.24	0.51
3:RE:248:ASP:O	3:RE:252:ARG:HG3	2.11	0.51
3:DF:248:ASP:O	3:DF:252:ARG:HG3	2.11	0.51
3:JF:248:ASP:O	3:JF:252:ARG:HG3	2.11	0.51
3:BG:258:GLU:N	4:CG:74:THR:HG22	2.26	0.51
3:M:258:GLU:N	4:N:74:THR:HG22	2.26	0.50
3:HA:248:ASP:O	3:HA:252:ARG:HG3	2.11	0.50
3:ZA:248:ASP:O	3:ZA:252:ARG:HG3	2.11	0.50
4:NB:108:GLN:HE21	4:NB:134:ARG:NH1	2.09	0.50
4:TB:108:GLN:HE21	4:TB:134:ARG:NH1	2.09	0.50
4:ZB:108:GLN:HE21	4:ZB:134:ARG:NH1	2.09	0.50
4:GC:104:TYR:CE1	3:JC:256:HIS:O	2.64	0.50
4:LC:108:GLN:HE21	4:LC:134:ARG:NH1	2.09	0.50
4:DD:108:GLN:HE21	4:DD:134:ARG:NH1	2.09	0.50
4:KD:104:TYR:CD2	3:ND:256:HIS:O	2.65	0.50
3:ZD:181:ARG:NH1	3:FE:237:GLU:OE1	2.44	0.50
2:EE:65:GLN:CB	2:KE:47:ILE:H	2.24	0.50
2:IF:195:GLY:O	2:OF:161:ILE:O	2.30	0.50
2:AA:65:GLN:CB	2:GA:47:ILE:H	2.25	0.50
3:DC:248:ASP:O	3:DC:252:ARG:HG3	2.11	0.50
4:FC:96:PRO:HB2	4:FC:108:GLN:HB3	1.91	0.50
3:VC:248:ASP:O	3:VC:252:ARG:HG3	2.11	0.50
3:ZD:248:ASP:O	3:ZD:252:ARG:HG3	2.11	0.50
4:NE:108:GLN:HE21	4:NE:134:ARG:NH1	2.09	0.50
4:EA:104:TYR:CD2	3:HA:256:HIS:O	2.64	0.50
3:NA:258:GLU:N	4:OA:74:THR:HG22	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:VA:96:PRO:HB2	4:VA:108:GLN:HB3	1.91	0.50
4:WA:104:TYR:CD2	3:ZA:256:HIS:O	2.64	0.50
2:YA:65:GLN:CB	2:EB:47:ILE:H	2.24	0.50
4:HB:108:GLN:HE21	4:HB:134:ARG:NH1	2.09	0.50
4:FC:108:GLN:HE21	4:FC:134:ARG:NH1	2.09	0.50
4:MC:104:TYR:CD2	3:PC:256:HIS:O	2.64	0.50
3:PC:248:ASP:O	3:PC:252:ARG:HG3	2.11	0.50
4:RC:108:GLN:HE21	4:RC:134:ARG:NH1	2.09	0.50
3:HD:248:ASP:O	3:HD:252:ARG:HG3	2.11	0.50
4:AF:50:ALA:O	4:EF:80:ARG:HA	2.11	0.50
3:DF:258:GLU:N	4:EF:74:THR:HG22	2.26	0.50
2:B:190:ARG:CD	2:J:166:GLY:O	2.59	0.50
3:BA:258:GLU:N	4:CA:74:THR:HG22	2.26	0.50
3:XB:248:ASP:O	3:XB:252:ARG:HG3	2.11	0.50
2:CC:190:ARG:CD	2:IC:166:GLY:O	2.59	0.50
4:MC:124:ASP:HA	3:PC:246:TRP:CH2	2.47	0.50
4:YC:38:VAL:HG22	4:CD:113:VAL:HB	1.92	0.50
4:ED:38:VAL:HG22	4:ID:113:VAL:HB	1.92	0.50
3:XE:258:GLU:N	4:YE:74:THR:HG22	2.26	0.50
4:YF:50:ALA:O	4:CG:80:ARG:HA	2.12	0.50
3:HG:248:ASP:O	3:HG:252:ARG:HG3	2.11	0.50
2:G:166:GLY:HA2	2:SG:191:SER:O	2.12	0.50
2:G:195:GLY:O	2:B:161:ILE:O	2.30	0.50
3:V:181:ARG:NH1	3:BA:237:GLU:OE1	2.45	0.50
4:KA:104:TYR:CE1	3:NA:256:HIS:O	2.65	0.50
3:FB:258:GLU:N	4:GB:74:THR:HG22	2.26	0.50
3:DC:258:GLU:N	4:EC:74:THR:HG22	2.26	0.50
3:PC:181:ARG:NH1	3:VC:237:GLU:OE1	2.45	0.50
3:ND:248:ASP:O	3:ND:252:ARG:HG3	2.11	0.50
2:SD:65:GLN:CB	2:YD:47:ILE:H	2.25	0.50
2:SD:151:GLU:HG2	2:SD:154:ARG:NH1	2.21	0.50
4:ZE:108:GLN:HE21	4:ZE:134:ARG:NH1	2.09	0.50
3:VF:248:ASP:O	3:VF:252:ARG:HG3	2.11	0.50
3:VF:258:GLU:N	4:WF:74:THR:HG22	2.26	0.50
3:TG:258:GLU:N	4:UG:74:THR:HG22	2.26	0.50
2:G:166:GLY:O	2:SG:190:ARG:CD	2.60	0.50
3:M:54:LEU:HG	3:M:231:LEU:HD22	1.94	0.50
4:R:38:VAL:CG1	4:W:118:TYR:HE1	2.24	0.50
4:Y:104:TYR:CE1	3:BA:256:HIS:O	2.65	0.50
3:LB:248:ASP:O	3:LB:252:ARG:HG3	2.11	0.50
4:NB:96:PRO:HB2	4:NB:108:GLN:HB3	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:JC:258:GLU:N	4:KC:74:THR:HG22	2.26	0.50
3:FE:248:ASP:O	3:FE:252:ARG:HG3	2.11	0.50
3:RE:54:LEU:HG	3:RE:231:LEU:HD22	1.94	0.50
3:DF:54:LEU:HG	3:DF:231:LEU:HD22	1.94	0.50
4:FF:108:GLN:HE21	4:FF:134:ARG:NH1	2.09	0.50
3:BG:54:LEU:HG	3:BG:231:LEU:HD22	1.94	0.50
3:HG:54:LEU:HG	3:HG:231:LEU:HD22	1.94	0.50
3:NG:54:LEU:HG	3:NG:231:LEU:HD22	1.94	0.50
3:NG:248:ASP:O	3:NG:252:ARG:HG3	2.11	0.50
3:TG:54:LEU:HG	3:TG:231:LEU:HD22	1.94	0.50
3:C:54:LEU:HG	3:C:231:LEU:HD22	1.94	0.50
3:V:258:GLU:N	4:W:74:THR:HG22	2.26	0.50
3:HA:181:ARG:NH1	3:NA:237:GLU:OE1	2.44	0.50
4:QA:42:LEU:O	3:TA:309:VAL:HB	2.11	0.50
3:TA:258:GLU:N	4:UA:74:THR:HG22	2.26	0.50
4:VA:108:GLN:HE21	4:VA:134:ARG:NH1	2.09	0.50
2:EB:190:ARG:CD	2:KB:166:GLY:O	2.59	0.50
2:QB:65:GLN:CB	2:WB:47:ILE:H	2.24	0.50
2:CC:151:GLU:HG2	2:CC:154:ARG:NH1	2.21	0.50
4:GC:104:TYR:HE2	3:JC:253:GLN:O	1.94	0.50
2:GD:190:ARG:CD	2:MD:166:GLY:O	2.60	0.50
3:FE:54:LEU:HG	3:FE:231:LEU:HD22	1.94	0.50
3:LE:54:LEU:HG	3:LE:231:LEU:HD22	1.94	0.50
3:XE:54:LEU:HG	3:XE:231:LEU:HD22	1.94	0.50
2:CF:195:GLY:O	2:IF:161:ILE:O	2.30	0.50
3:PF:54:LEU:HG	3:PF:231:LEU:HD22	1.94	0.50
3:PF:248:ASP:O	3:PF:252:ARG:HG3	2.11	0.50
4:SF:104:TYR:CE1	3:VF:256:HIS:O	2.65	0.50
3:VF:54:LEU:HG	3:VF:231:LEU:HD22	1.94	0.50
4:YF:104:TYR:OH	3:BG:256:HIS:HB2	2.11	0.50
4:QG:104:TYR:HE2	3:TG:253:GLN:O	1.95	0.50
4:H:104:TYR:CD2	3:K:256:HIS:O	2.64	0.50
3:K:54:LEU:HG	3:K:231:LEU:HD22	1.94	0.50
3:NA:258:GLU:HA	4:OA:74:THR:CG2	2.41	0.50
3:ZA:258:GLU:N	4:AB:74:THR:HG22	2.26	0.50
4:BB:108:GLN:HE21	4:BB:134:ARG:NH1	2.09	0.50
3:XB:258:GLU:N	4:YB:74:THR:HG22	2.26	0.50
3:ND:258:GLU:N	4:OD:74:THR:HG22	2.26	0.50
3:RE:181:ARG:NH1	3:XE:237:GLU:OE1	2.45	0.50
4:TE:108:GLN:HE21	4:TE:134:ARG:NH1	2.09	0.50
3:XE:248:ASP:O	3:XE:252:ARG:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:GF:104:TYR:HE2	3:JF:253:GLN:O	1.94	0.50
3:JF:54:LEU:HG	3:JF:231:LEU:HD22	1.94	0.50
4:Y:62:VAL:CG1	4:Y:101:ILE:HB	2.42	0.50
4:PA:108:GLN:HE21	4:PA:134:ARG:NH1	2.09	0.50
4:CB:62:VAL:CG1	4:CB:101:ILE:HB	2.42	0.50
4:UB:50:ALA:O	4:YB:80:ARG:HA	2.12	0.50
4:GC:62:VAL:CG1	4:GC:101:ILE:HB	2.42	0.50
4:SC:115:ALA:CB	3:VC:48:ARG:HH12	2.17	0.50
3:VC:258:GLU:N	4:WC:74:THR:HG22	2.26	0.50
4:YC:104:TYR:OH	3:BD:256:HIS:HB2	2.12	0.50
3:HD:258:GLU:N	4:ID:74:THR:HG22	2.26	0.50
4:KD:38:VAL:HG22	4:OD:113:VAL:HB	1.92	0.50
4:QD:50:ALA:O	4:UD:80:ARG:HA	2.12	0.50
2:SD:195:GLY:O	2:YD:161:ILE:O	2.30	0.50
3:TD:54:LEU:HG	3:TD:231:LEU:HD22	1.94	0.50
4:WD:104:TYR:HE2	3:ZD:253:GLN:O	1.94	0.50
3:ZD:54:LEU:HG	3:ZD:231:LEU:HD22	1.94	0.50
2:CF:190:ARG:CD	2:IF:166:GLY:O	2.60	0.50
2:OF:191:SER:O	2:UF:166:GLY:HA2	2.12	0.50
4:VG:108:GLN:HE21	4:VG:134:ARG:NH1	2.09	0.50
4:O:108:GLN:HE21	4:O:134:ARG:NH1	2.09	0.49
4:R:62:VAL:CG1	4:R:101:ILE:HB	2.42	0.49
3:BA:248:ASP:O	3:BA:252:ARG:HG3	2.11	0.49
4:WA:62:VAL:CG1	4:WA:101:ILE:HB	2.42	0.49
4:IB:62:VAL:CG1	4:IB:101:ILE:HB	2.42	0.49
3:BD:258:GLU:N	4:CD:74:THR:HG22	2.26	0.49
3:ND:54:LEU:HG	3:ND:231:LEU:HD22	1.94	0.49
4:CE:104:TYR:OH	3:FE:256:HIS:HB2	2.10	0.49
2:KE:194:GLY:O	2:QE:164:PHE:CB	2.61	0.49
4:XF:108:GLN:HE21	4:XF:134:ARG:NH1	2.09	0.49
2:GG:195:GLY:O	2:MG:161:ILE:O	2.30	0.49
2:G:65:GLN:CB	2:B:47:ILE:H	2.24	0.49
3:C:248:ASP:O	3:C:252:ARG:HG3	2.11	0.49
4:H:62:VAL:CG1	4:H:101:ILE:HB	2.42	0.49
3:V:54:LEU:HG	3:V:231:LEU:HD22	1.94	0.49
4:Y:115:ALA:CB	3:BA:48:ARG:HH12	2.16	0.49
2:AA:195:GLY:O	2:GA:161:ILE:O	2.30	0.49
3:BA:54:LEU:HG	3:BA:231:LEU:HD22	1.94	0.49
4:EA:38:VAL:CG1	4:IA:118:TYR:HE1	2.25	0.49
2:SA:65:GLN:CB	2:YA:47:ILE:H	2.25	0.49
4:AC:62:VAL:CG1	4:AC:101:ILE:HB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:PC:258:GLU:N	4:QC:74:THR:HG22	2.26	0.49
4:XC:108:GLN:HE21	4:XC:134:ARG:NH1	2.09	0.49
3:HD:54:LEU:HG	3:HD:231:LEU:HD22	1.94	0.49
4:KD:115:ALA:CB	3:ND:48:ARG:HH12	2.14	0.49
2:EE:195:GLY:O	2:KE:161:ILE:O	2.30	0.49
2:WE:195:GLY:O	2:CF:161:ILE:O	2.31	0.49
4:KG:115:ALA:CB	3:NG:48:ARG:HH12	2.17	0.49
4:P:108:GLN:HE21	4:P:134:ARG:NH1	2.09	0.49
4:X:108:GLN:HE21	4:X:134:ARG:NH1	2.09	0.49
4:EA:62:VAL:CG1	4:EA:101:ILE:HB	2.42	0.49
3:TA:248:ASP:O	3:TA:252:ARG:HG3	2.11	0.49
2:WB:65:GLN:CB	2:CC:47:ILE:H	2.26	0.49
3:DC:258:GLU:HA	4:EC:74:THR:CG2	2.41	0.49
4:GC:50:ALA:O	4:KC:80:ARG:HA	2.12	0.49
3:PC:304:SER:HB3	3:PC:317:VAL:HA	1.94	0.49
2:AD:191:SER:O	2:GD:166:GLY:HA2	2.11	0.49
2:GD:195:GLY:O	2:MD:161:ILE:O	2.30	0.49
2:MD:195:GLY:O	2:SD:161:ILE:O	2.30	0.49
4:WD:50:ALA:O	4:AE:80:ARG:HA	2.12	0.49
2:QE:195:GLY:O	2:WE:161:ILE:O	2.31	0.49
3:JF:304:SER:HB3	3:JF:317:VAL:HA	1.94	0.49
3:PF:304:SER:HB3	3:PF:317:VAL:HA	1.94	0.49
4:QG:124:ASP:HA	3:TG:246:TRP:CH2	2.47	0.49
4:R:124:ASP:HA	3:V:246:TRP:CH2	2.46	0.49
4:EA:124:ASP:HA	3:HA:246:TRP:CH2	2.47	0.49
3:LB:258:GLU:N	4:MB:74:THR:HG22	2.26	0.49
3:LB:304:SER:HB3	3:LB:317:VAL:HA	1.94	0.49
3:BD:54:LEU:HG	3:BD:231:LEU:HD22	1.94	0.49
4:UE:38:VAL:HG22	4:YE:113:VAL:HB	1.93	0.49
4:MF:115:ALA:HB1	3:PF:48:ARG:NH1	2.10	0.49
4:RF:108:GLN:HE21	4:RF:134:ARG:NH1	2.09	0.49
4:YF:104:TYR:HE2	3:BG:253:GLN:O	1.96	0.49
3:BG:181:ARG:NH1	3:HG:237:GLU:OE1	2.45	0.49
3:BG:304:SER:HB3	3:BG:317:VAL:HA	1.94	0.49
3:HG:304:SER:HB3	3:HG:317:VAL:HA	1.94	0.49
4:PG:108:GLN:HE21	4:PG:134:ARG:NH1	2.09	0.49
3:M:304:SER:HB3	3:M:317:VAL:HA	1.94	0.49
2:MA:195:GLY:O	2:SA:161:ILE:O	2.30	0.49
3:FB:304:SER:HB3	3:FB:317:VAL:HA	1.94	0.49
4:GC:104:TYR:CD2	3:JC:256:HIS:O	2.66	0.49
3:JC:304:SER:HB3	3:JC:317:VAL:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:SC:62:VAL:CG1	4:SC:101:ILE:HB	2.42	0.49
3:HD:181:ARG:NH1	3:ND:237:GLU:OE1	2.46	0.49
4:YF:38:VAL:HG22	4:CG:113:VAL:HB	1.92	0.49
4:JG:108:GLN:HE21	4:JG:134:ARG:NH1	2.09	0.49
4:QG:62:VAL:CG1	4:QG:101:ILE:HB	2.42	0.49
3:TG:304:SER:HB3	3:TG:317:VAL:HA	1.94	0.49
4:WG:62:VAL:CG1	4:WG:101:ILE:HB	2.42	0.49
2:G:218:VAL:HG11	2:G:229:ILE:HD12	1.95	0.49
4:E:108:GLN:HE21	4:E:134:ARG:NH1	2.09	0.49
2:GA:195:GLY:O	2:MA:161:ILE:O	2.31	0.49
2:GA:218:VAL:HG11	2:GA:229:ILE:HD12	1.95	0.49
3:HA:54:LEU:HG	3:HA:231:LEU:HD22	1.94	0.49
3:NA:54:LEU:HG	3:NA:231:LEU:HD22	1.94	0.49
3:NA:181:ARG:NH1	3:TA:237:GLU:OE1	2.46	0.49
2:KB:218:VAL:HG22	2:QB:159:LEU:CD1	2.43	0.49
4:OB:62:VAL:CG1	4:OB:101:ILE:HB	2.42	0.49
4:UB:62:VAL:CG1	4:UB:101:ILE:HB	2.42	0.49
4:MC:38:VAL:CG1	4:QC:118:TYR:HE1	2.24	0.49
3:VC:54:LEU:HG	3:VC:231:LEU:HD22	1.94	0.49
4:ED:124:ASP:HA	3:HD:246:TRP:CH2	2.48	0.49
4:KD:104:TYR:CE1	3:ND:256:HIS:O	2.65	0.49
4:QD:104:TYR:CD2	3:TD:256:HIS:O	2.66	0.49
2:KE:218:VAL:HG11	2:KE:229:ILE:HD12	1.95	0.49
4:UE:104:TYR:CE1	3:XE:256:HIS:O	2.65	0.49
2:GG:218:VAL:HG11	2:GG:229:ILE:HD12	1.95	0.49
4:KG:50:ALA:O	4:OG:80:ARG:HA	2.12	0.49
2:G:161:ILE:O	2:SG:195:GLY:O	2.31	0.49
4:N:113:VAL:HB	4:WG:38:VAL:HG22	1.93	0.49
4:Q:62:VAL:CG1	4:Q:101:ILE:HB	2.42	0.49
2:B:65:GLN:CB	2:J:47:ILE:H	2.26	0.49
2:B:195:GLY:O	2:J:161:ILE:O	2.30	0.49
2:J:65:GLN:CB	2:T:47:ILE:H	2.25	0.49
4:QA:62:VAL:CG1	4:QA:101:ILE:HB	2.42	0.49
4:MC:62:VAL:CG1	4:MC:101:ILE:HB	2.42	0.49
3:VC:304:SER:HB3	3:VC:317:VAL:HA	1.94	0.49
2:KE:83:LYS:CB	2:QE:23:ALA:CB	2.90	0.49
2:CF:218:VAL:HG11	2:CF:229:ILE:HD12	1.95	0.49
4:GF:104:TYR:CE1	3:JF:256:HIS:O	2.65	0.49
3:VF:304:SER:HB3	3:VF:317:VAL:HA	1.94	0.49
4:DG:108:GLN:HE21	4:DG:134:ARG:NH1	2.09	0.49
2:GG:218:VAL:HG22	2:MG:159:LEU:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:218:VAL:HG11	2:J:229:ILE:HD12	1.95	0.49
2:T:195:GLY:O	2:AA:161:ILE:O	2.31	0.49
2:T:218:VAL:HG11	2:T:229:ILE:HD12	1.95	0.49
3:ZA:304:SER:HB3	3:ZA:317:VAL:HA	1.94	0.49
4:AB:59:ASP:OD1	4:GB:136:SER:HB2	2.12	0.49
3:RB:258:GLU:N	4:SB:74:THR:HG22	2.26	0.49
4:UB:104:TYR:HE2	3:XB:253:GLN:O	1.94	0.49
4:AC:124:ASP:HA	3:DC:246:TRP:CH2	2.48	0.49
2:IC:195:GLY:O	2:OC:161:ILE:O	2.30	0.49
4:YC:62:VAL:CG1	4:YC:101:ILE:HB	2.42	0.49
4:CE:38:VAL:HG22	4:GE:113:VAL:HB	1.94	0.49
2:QE:190:ARG:CD	2:WE:166:GLY:O	2.61	0.49
3:RE:304:SER:HB3	3:RE:317:VAL:HA	1.94	0.49
3:XE:304:SER:HB3	3:XE:317:VAL:HA	1.94	0.49
2:OF:218:VAL:HG11	2:OF:229:ILE:HD12	1.95	0.49
2:UF:195:GLY:O	2:AG:161:ILE:O	2.30	0.49
2:UF:218:VAL:HG11	2:UF:229:ILE:HD12	1.95	0.49
2:AG:190:ARG:CD	2:GG:166:GLY:O	2.61	0.49
4:EG:38:VAL:HG22	4:IG:113:VAL:HB	1.94	0.49
3:C:304:SER:HB3	3:C:317:VAL:HA	1.94	0.49
4:Y:38:VAL:HG22	4:CA:113:VAL:HB	1.94	0.49
2:SA:195:GLY:O	2:YA:161:ILE:O	2.30	0.49
3:TA:54:LEU:HG	3:TA:231:LEU:HD22	1.94	0.49
2:YA:218:VAL:HG11	2:YA:229:ILE:HD12	1.95	0.49
3:ZA:54:LEU:HG	3:ZA:231:LEU:HD22	1.94	0.49
2:EB:195:GLY:O	2:KB:161:ILE:O	2.30	0.49
4:OB:104:TYR:HE2	3:RB:253:GLN:O	1.95	0.49
2:CC:65:GLN:CB	2:IC:47:ILE:H	2.25	0.49
2:CC:195:GLY:O	2:IC:161:ILE:O	2.30	0.49
3:DC:304:SER:HB3	3:DC:317:VAL:HA	1.94	0.49
3:VC:181:ARG:NH1	3:BD:237:GLU:OE1	2.45	0.49
4:QD:104:TYR:OH	3:TD:256:HIS:HB2	2.12	0.49
4:IE:62:VAL:CG1	4:IE:101:ILE:HB	2.42	0.49
4:OE:62:VAL:CG1	4:OE:101:ILE:HB	2.42	0.49
3:DF:304:SER:HB3	3:DF:317:VAL:HA	1.94	0.49
3:NG:304:SER:HB3	3:NG:317:VAL:HA	1.94	0.49
3:M:246:TRP:CH2	4:WG:124:ASP:HA	2.48	0.49
2:T:218:VAL:HG22	2:AA:159:LEU:CD1	2.43	0.49
3:HA:258:GLU:HA	4:IA:74:THR:CG2	2.41	0.49
2:EB:65:GLN:CB	2:KB:47:ILE:H	2.26	0.49
4:UB:104:TYR:CD2	3:XB:256:HIS:O	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:JC:54:LEU:HG	3:JC:231:LEU:HD22	1.94	0.49
4:KC:59:ASP:OD1	4:QC:136:SER:HB2	2.12	0.49
3:PC:54:LEU:HG	3:PC:231:LEU:HD22	1.94	0.49
2:UC:195:GLY:O	2:AD:161:ILE:O	2.30	0.49
2:MD:151:GLU:HG2	2:MD:154:ARG:NH1	2.21	0.49
2:SD:218:VAL:HG11	2:SD:229:ILE:HD12	1.95	0.49
4:GF:50:ALA:O	4:KF:80:ARG:HA	2.12	0.49
2:UF:190:ARG:CD	2:AG:166:GLY:O	2.61	0.49
3:VF:181:ARG:NH1	3:BG:237:GLU:OE1	2.45	0.49
4:KG:104:TYR:OH	3:NG:256:HIS:HB2	2.13	0.49
3:M:48:ARG:HH12	4:WG:115:ALA:CB	2.15	0.48
3:K:304:SER:HB3	3:K:317:VAL:HA	1.94	0.48
4:DA:108:GLN:HE21	4:DA:134:ARG:NH1	2.09	0.48
4:JA:108:GLN:HE21	4:JA:134:ARG:NH1	2.09	0.48
4:KA:38:VAL:HG22	4:OA:113:VAL:HB	1.95	0.48
4:KA:62:VAL:CG1	4:KA:101:ILE:HB	2.42	0.48
2:MA:65:GLN:CB	2:SA:47:ILE:H	2.26	0.48
2:QB:195:GLY:O	2:WB:161:ILE:O	2.30	0.48
2:QB:218:VAL:HG11	2:QB:229:ILE:HD12	1.95	0.48
3:RB:304:SER:HB3	3:RB:317:VAL:HA	1.94	0.48
3:XB:258:GLU:HA	4:YB:74:THR:CG2	2.41	0.48
2:UC:190:ARG:CD	2:AD:166:GLY:O	2.61	0.48
4:KD:50:ALA:O	4:OD:80:ARG:HA	2.13	0.48
3:ND:258:GLU:HA	4:OD:74:THR:CG2	2.41	0.48
4:WD:104:TYR:CD2	3:ZD:256:HIS:O	2.66	0.48
2:YD:195:GLY:O	2:EE:161:ILE:O	2.31	0.48
4:CE:62:VAL:CG1	4:CE:101:ILE:HB	2.42	0.48
4:IE:104:TYR:CE1	3:LE:256:HIS:O	2.65	0.48
2:WE:218:VAL:HG22	2:CF:159:LEU:CD1	2.43	0.48
4:LF:108:GLN:HE21	4:LF:134:ARG:NH1	2.09	0.48
4:YF:62:VAL:CG1	4:YF:101:ILE:HB	2.42	0.48
4:Q:104:TYR:HE2	3:C:253:GLN:O	1.95	0.48
3:V:304:SER:HB3	3:V:317:VAL:HA	1.94	0.48
2:MA:218:VAL:HG11	2:MA:229:ILE:HD12	1.95	0.48
2:EB:218:VAL:HG22	2:KB:159:LEU:CD1	2.43	0.48
3:FB:54:LEU:HG	3:FB:231:LEU:HD22	1.94	0.48
2:KB:195:GLY:O	2:QB:161:ILE:O	2.31	0.48
4:OB:104:TYR:OH	3:RB:256:HIS:HB2	2.12	0.48
4:AC:38:VAL:CG1	4:EC:118:TYR:HE1	2.26	0.48
2:IC:218:VAL:HG11	2:IC:229:ILE:HD12	1.95	0.48
2:AD:65:GLN:CB	2:GD:47:ILE:H	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AD:218:VAL:HG11	2:AD:229:ILE:HD12	1.95	0.48
4:ED:62:VAL:CG1	4:ED:101:ILE:HB	2.42	0.48
3:LE:304:SER:HB3	3:LE:317:VAL:HA	1.94	0.48
2:WE:218:VAL:HG11	2:WE:229:ILE:HD12	1.95	0.48
4:AF:42:LEU:O	3:DF:309:VAL:HB	2.13	0.48
4:MF:104:TYR:CD2	3:PF:256:HIS:O	2.65	0.48
4:SF:62:VAL:CG1	4:SF:101:ILE:HB	2.42	0.48
4:KG:62:VAL:CG1	4:KG:101:ILE:HB	2.42	0.48
4:QG:42:LEU:O	3:TG:309:VAL:HB	2.12	0.48
2:SG:218:VAL:HG11	2:SG:229:ILE:HD12	1.95	0.48
3:M:237:GLU:OE1	3:TG:181:ARG:NH1	2.46	0.48
2:J:195:GLY:O	2:T:161:ILE:O	2.31	0.48
3:LB:54:LEU:HG	3:LB:231:LEU:HD22	1.94	0.48
3:XB:54:LEU:HG	3:XB:231:LEU:HD22	1.94	0.48
3:DC:54:LEU:HG	3:DC:231:LEU:HD22	1.94	0.48
2:OC:195:GLY:O	2:UC:161:ILE:O	2.31	0.48
4:YC:104:TYR:CD2	3:BD:256:HIS:O	2.67	0.48
4:QD:115:ALA:CB	3:TD:48:ARG:HH12	2.17	0.48
3:TD:304:SER:HB3	3:TD:317:VAL:HA	1.94	0.48
4:WD:62:VAL:CG1	4:WD:101:ILE:HB	2.42	0.48
2:YD:218:VAL:HG11	2:YD:229:ILE:HD12	1.95	0.48
4:IE:42:LEU:O	3:LE:309:VAL:HB	2.12	0.48
3:DF:181:ARG:NH1	3:JF:237:GLU:OE1	2.46	0.48
4:GF:104:TYR:CD2	3:JF:256:HIS:O	2.65	0.48
4:MF:62:VAL:CG1	4:MF:101:ILE:HB	2.42	0.48
4:YF:104:TYR:CE1	3:BG:256:HIS:O	2.66	0.48
4:EG:62:VAL:CG1	4:EG:101:ILE:HB	2.42	0.48
2:MG:218:VAL:HG11	2:MG:229:ILE:HD12	1.95	0.48
4:Q:42:LEU:O	3:C:309:VAL:HB	2.13	0.48
2:B:218:VAL:HG22	2:J:159:LEU:CD1	2.43	0.48
2:J:218:VAL:HG22	2:T:159:LEU:CD1	2.44	0.48
4:QA:104:TYR:OH	3:TA:256:HIS:HB2	2.13	0.48
3:FB:181:ARG:NH1	3:LB:237:GLU:OE1	2.46	0.48
2:QB:218:VAL:HG22	2:WB:159:LEU:CD1	2.44	0.48
4:KD:62:VAL:CG1	4:KD:101:ILE:HB	2.42	0.48
2:YD:218:VAL:HG22	2:EE:159:LEU:CD1	2.43	0.48
3:ZD:304:SER:HB3	3:ZD:317:VAL:HA	1.94	0.48
3:FE:304:SER:HB3	3:FE:317:VAL:HA	1.94	0.48
2:KE:210:GLN:HE22	2:QE:147:ALA:HB1	1.79	0.48
2:QE:218:VAL:HG11	2:QE:229:ILE:HD12	1.95	0.48
2:IF:65:GLN:CA	2:OF:47:ILE:CB	2.88	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:YA:195:GLY:O	2:EB:161:ILE:O	2.30	0.48
2:OC:210:GLN:HE22	2:UC:147:ALA:HB1	1.78	0.48
2:OC:218:VAL:HG22	2:UC:159:LEU:CD1	2.43	0.48
2:UC:218:VAL:HG22	2:AD:159:LEU:CD1	2.43	0.48
4:YC:42:LEU:O	3:BD:309:VAL:HB	2.13	0.48
2:AD:218:VAL:HG22	2:GD:159:LEU:CD1	2.44	0.48
3:BD:304:SER:HB3	3:BD:317:VAL:HA	1.94	0.48
2:GD:218:VAL:HG22	2:MD:159:LEU:CD1	2.43	0.48
2:EE:190:ARG:CG	2:KE:166:GLY:O	2.61	0.48
2:EE:218:VAL:HG11	2:EE:229:ILE:HD12	1.95	0.48
4:UE:62:VAL:CG1	4:UE:101:ILE:HB	2.42	0.48
2:CF:218:VAL:HG22	2:IF:159:LEU:CD1	2.43	0.48
2:AG:195:GLY:O	2:GG:161:ILE:O	2.31	0.48
2:AG:218:VAL:HG22	2:GG:159:LEU:CD1	2.43	0.48
3:NG:258:GLU:HA	4:OG:74:THR:CG2	2.41	0.48
4:L:59:ASP:OD1	4:W:136:SER:HB2	2.12	0.48
2:AA:218:VAL:HG22	2:GA:159:LEU:CD1	2.44	0.48
3:BA:304:SER:HB3	3:BA:317:VAL:HA	1.94	0.48
2:MA:218:VAL:HG22	2:SA:159:LEU:CD1	2.43	0.48
2:SA:218:VAL:HG11	2:SA:229:ILE:HD12	1.95	0.48
3:TA:304:SER:HB3	3:TA:317:VAL:HA	1.94	0.48
4:WA:124:ASP:HA	3:ZA:246:TRP:CH2	2.49	0.48
2:EB:218:VAL:HG11	2:EB:229:ILE:HD12	1.95	0.48
3:RB:54:LEU:HG	3:RB:231:LEU:HD22	1.94	0.48
4:YC:104:TYR:HE2	3:BD:253:GLN:O	1.96	0.48
2:AD:195:GLY:O	2:GD:161:ILE:O	2.31	0.48
3:BD:181:ARG:NH1	3:HD:237:GLU:OE1	2.47	0.48
2:GD:218:VAL:HG11	2:GD:229:ILE:HD12	1.95	0.48
3:ND:304:SER:HB3	3:ND:317:VAL:HA	1.94	0.48
3:LE:193:THR:HA	3:RE:236:LEU:CD1	2.44	0.48
4:MF:50:ALA:O	4:QF:80:ARG:HA	2.14	0.48
2:OF:210:GLN:HE22	2:UF:147:ALA:HB1	1.79	0.48
4:EG:115:ALA:CB	3:HG:48:ARG:HH12	2.16	0.48
2:GA:218:VAL:HG22	2:MA:159:LEU:CD1	2.43	0.48
3:TA:181:ARG:NH1	3:ZA:237:GLU:OE1	2.47	0.48
2:GD:65:GLN:CB	2:MD:47:ILE:H	2.27	0.48
2:MD:218:VAL:HG22	2:SD:159:LEU:CD1	2.43	0.48
4:CE:50:ALA:O	4:GE:80:ARG:HA	2.14	0.48
2:EE:218:VAL:HG22	2:KE:159:LEU:CD1	2.44	0.48
4:GF:62:VAL:CG1	4:GF:101:ILE:HB	2.43	0.48
4:KG:42:LEU:O	3:NG:309:VAL:HB	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:KG:104:TYR:CD2	3:NG:256:HIS:O	2.66	0.48
4:H:38:VAL:CG1	4:L:118:TYR:HE1	2.27	0.48
3:HA:304:SER:HB3	3:HA:317:VAL:HA	1.94	0.48
2:YA:218:VAL:HG22	2:EB:159:LEU:CD1	2.44	0.48
2:KB:218:VAL:HG11	2:KB:229:ILE:HD12	1.95	0.48
4:OB:50:ALA:O	4:SB:80:ARG:HA	2.14	0.48
2:WB:195:GLY:O	2:CC:161:ILE:O	2.30	0.48
3:XB:181:ARG:NH1	3:DC:237:GLU:OE1	2.47	0.48
4:SC:38:VAL:HG22	4:WC:113:VAL:HB	1.95	0.48
4:CD:59:ASP:OD1	4:ID:136:SER:HB2	2.14	0.48
4:QD:62:VAL:CG1	4:QD:101:ILE:HB	2.42	0.48
4:WD:38:VAL:CG1	4:AE:118:TYR:HE1	2.26	0.48
2:OF:218:VAL:HG22	2:UF:159:LEU:CD1	2.43	0.48
2:AG:218:VAL:HG11	2:AG:229:ILE:HD12	1.95	0.48
3:C:181:ARG:NH1	3:K:237:GLU:OE1	2.46	0.48
2:AA:218:VAL:HG11	2:AA:229:ILE:HD12	1.95	0.48
4:QA:104:TYR:CE1	3:TA:256:HIS:O	2.67	0.48
4:WA:50:ALA:O	4:AB:80:ARG:HA	2.14	0.48
2:WB:218:VAL:HG11	2:WB:229:ILE:HD12	1.95	0.48
2:OC:218:VAL:HG11	2:OC:229:ILE:HD12	1.95	0.48
3:TD:181:ARG:NH1	3:ZD:237:GLU:OE1	2.47	0.48
2:YD:190:ARG:CD	2:EE:166:GLY:O	2.62	0.48
2:KE:79:SER:CB	2:QE:19:GLU:CB	2.92	0.48
4:AF:104:TYR:CD2	3:DF:256:HIS:O	2.66	0.48
2:CF:65:GLN:CB	2:IF:47:ILE:H	2.26	0.48
2:IF:218:VAL:HG11	2:IF:229:ILE:HD12	1.95	0.48
4:KG:38:VAL:HG22	4:OG:113:VAL:HB	1.95	0.48
2:G:190:ARG:CG	2:B:166:GLY:O	2.61	0.48
2:B:218:VAL:HG11	2:B:229:ILE:HD12	1.95	0.48
2:T:190:ARG:CD	2:AA:166:GLY:O	2.61	0.48
2:MA:190:ARG:CD	2:SA:166:GLY:O	2.61	0.48
4:IB:38:VAL:CG1	4:MB:118:TYR:HE1	2.27	0.48
2:WB:218:VAL:HG22	2:CC:159:LEU:CD1	2.44	0.48
3:XB:304:SER:HB3	3:XB:317:VAL:HA	1.94	0.48
2:CC:218:VAL:HG22	2:IC:159:LEU:CD1	2.43	0.48
2:CC:218:VAL:HG11	2:CC:229:ILE:HD12	1.95	0.48
2:UC:65:GLN:CB	2:AD:47:ILE:H	2.27	0.48
4:YC:104:TYR:CE1	3:BD:256:HIS:O	2.66	0.48
4:ED:38:VAL:CG1	4:ID:118:TYR:HE1	2.26	0.48
2:MD:218:VAL:HG11	2:MD:229:ILE:HD12	1.95	0.48
4:GE:59:ASP:OD1	4:ME:136:SER:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QE:218:VAL:HG22	2:WE:159:LEU:CD1	2.43	0.48
4:UE:50:ALA:O	4:YE:80:ARG:HA	2.14	0.48
3:XE:258:GLU:HA	4:YE:74:THR:CG2	2.41	0.48
2:UF:218:VAL:HG22	2:AG:159:LEU:CD1	2.43	0.48
3:VF:258:GLU:HA	4:WF:74:THR:CG2	2.41	0.48
2:G:159:LEU:CD1	2:SG:218:VAL:HG22	2.43	0.47
3:M:181:ARG:NH1	3:C:237:GLU:OE1	2.47	0.47
4:N:59:ASP:OD1	4:D:136:SER:HB2	2.14	0.47
3:NA:304:SER:HB3	3:NA:317:VAL:HA	1.94	0.47
2:SA:218:VAL:HG22	2:YA:159:LEU:CD1	2.44	0.47
3:RB:181:ARG:NH1	3:XB:237:GLU:OE1	2.47	0.47
2:UC:218:VAL:HG11	2:UC:229:ILE:HD12	1.95	0.47
3:HD:258:GLU:HA	4:ID:74:THR:CG2	2.41	0.47
2:KE:195:GLY:O	2:QE:161:ILE:O	2.31	0.47
2:OF:195:GLY:O	2:UF:161:ILE:O	2.31	0.47
3:BG:258:GLU:HA	4:CG:74:THR:CG2	2.41	0.47
4:EA:50:ALA:O	4:IA:80:ARG:HA	2.14	0.47
4:IB:50:ALA:O	4:MB:80:ARG:HA	2.14	0.47
3:DC:181:ARG:NH1	3:JC:237:GLU:OE1	2.46	0.47
4:UD:59:ASP:OD1	4:AE:136:SER:HB2	2.14	0.47
4:WD:124:ASP:HA	3:ZD:246:TRP:CH2	2.49	0.47
4:IE:104:TYR:HE2	3:LE:253:GLN:O	1.96	0.47
4:KG:104:TYR:HE2	3:NG:253:GLN:O	1.97	0.47
2:MG:218:VAL:HG22	2:SG:159:LEU:CD1	2.44	0.47
3:BA:258:GLU:HA	4:CA:74:THR:CG2	2.41	0.47
4:CA:59:ASP:OD1	4:IA:136:SER:HB2	2.13	0.47
4:UB:124:ASP:HA	3:XB:246:TRP:CH2	2.49	0.47
4:AF:62:VAL:CG1	4:AF:101:ILE:HB	2.42	0.47
4:YF:42:LEU:O	3:BG:309:VAL:HB	2.14	0.47
2:QB:190:ARG:CG	2:WB:166:GLY:O	2.62	0.47
3:RB:258:GLU:HA	4:SB:74:THR:CG2	2.41	0.47
2:IC:218:VAL:HG22	2:OC:159:LEU:CD1	2.44	0.47
3:HD:304:SER:HB3	3:HD:317:VAL:HA	1.94	0.47
4:QD:38:VAL:HG22	4:UD:113:VAL:HB	1.95	0.47
4:QD:104:TYR:HE2	3:TD:253:GLN:O	1.96	0.47
4:CE:104:TYR:CE1	3:FE:256:HIS:O	2.66	0.47
4:IE:104:TYR:CD2	3:LE:256:HIS:O	2.67	0.47
2:G:218:VAL:HG22	2:B:159:LEU:CD1	2.44	0.47
4:H:124:ASP:HA	3:K:246:TRP:CH2	2.49	0.47
3:BA:181:ARG:NH1	3:HA:237:GLU:OE1	2.48	0.47
4:QA:104:TYR:HE2	3:TA:253:GLN:O	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:WD:42:LEU:O	3:ZD:309:VAL:HB	2.14	0.47
2:QE:65:GLN:CB	2:WE:47:ILE:H	2.28	0.47
2:UF:65:GLN:CB	2:AG:47:ILE:H	2.27	0.47
4:Q:124:ASP:HA	3:C:246:TRP:CH2	2.50	0.47
4:H:50:ALA:O	4:L:80:ARG:HA	2.14	0.47
4:UA:59:ASP:OD1	4:AB:136:SER:HB2	2.14	0.47
4:OB:115:ALA:CB	3:RB:48:ARG:HH12	2.19	0.47
4:GC:124:ASP:HA	3:JC:246:TRP:CH2	2.50	0.47
2:SD:218:VAL:HG22	2:YD:159:LEU:CD1	2.44	0.47
3:FE:181:ARG:NH1	3:LE:237:GLU:OE1	2.47	0.47
4:YF:104:TYR:CD2	3:BG:256:HIS:O	2.66	0.47
2:MG:65:GLN:CA	2:SG:47:ILE:CB	2.91	0.47
2:G:47:ILE:H	2:SG:65:GLN:CB	2.27	0.47
4:Q:104:TYR:CD2	3:C:256:HIS:O	2.67	0.47
4:Y:50:ALA:O	4:CA:80:ARG:HA	2.15	0.47
4:SB:59:ASP:OD1	4:YB:136:SER:HB2	2.13	0.47
4:AC:50:ALA:O	4:EC:80:ARG:HA	2.15	0.47
4:GC:38:VAL:CG1	4:KC:118:TYR:HE1	2.27	0.47
4:MC:50:ALA:O	4:QC:80:ARG:HA	2.15	0.47
2:OC:191:SER:O	2:UC:166:GLY:HA2	2.14	0.47
4:QD:42:LEU:O	3:TD:309:VAL:HB	2.14	0.47
2:SD:190:ARG:CG	2:YD:166:GLY:O	2.62	0.47
3:LE:258:GLU:HA	4:ME:74:THR:CG2	2.41	0.47
4:OE:115:ALA:HB1	3:RE:48:ARG:NH1	2.14	0.47
3:PF:258:GLU:HA	4:QF:74:THR:CG2	2.41	0.47
3:HG:258:GLU:HA	4:IG:74:THR:CG2	2.41	0.47
4:WA:38:VAL:CG1	4:AB:118:TYR:HE1	2.26	0.47
4:GC:42:LEU:O	3:JC:309:VAL:HB	2.15	0.47
4:KD:65:THR:O	4:KD:65:THR:HG23	2.15	0.47
4:KD:124:ASP:HA	3:ND:246:TRP:CH2	2.50	0.47
4:QD:65:THR:HG23	4:QD:65:THR:O	2.15	0.47
4:WD:65:THR:HG23	4:WD:65:THR:O	2.15	0.47
4:AF:38:VAL:HG22	4:EF:113:VAL:HB	1.96	0.47
4:EF:59:ASP:OD1	4:KF:136:SER:HB2	2.15	0.47
3:ZA:181:ARG:NH1	3:FB:237:GLU:OE1	2.48	0.47
4:OB:38:VAL:HG22	4:SB:113:VAL:HB	1.97	0.47
4:OB:104:TYR:CE1	3:RB:256:HIS:O	2.68	0.47
4:YB:59:ASP:OD1	4:EC:136:SER:HB2	2.14	0.47
4:SC:124:ASP:HA	3:VC:246:TRP:CH2	2.49	0.47
4:ED:65:THR:HG23	4:ED:65:THR:O	2.15	0.47
4:CE:65:THR:HG23	4:CE:65:THR:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:IF:218:VAL:HG22	2:OF:159:LEU:CD1	2.45	0.47
4:YC:65:THR:HG23	4:YC:65:THR:O	2.15	0.47
4:IE:65:THR:HG23	4:IE:65:THR:O	2.15	0.47
2:KE:218:VAL:HG22	2:QE:159:LEU:CD1	2.44	0.47
4:GF:124:ASP:HA	3:JF:246:TRP:CH2	2.50	0.47
2:T:65:GLN:CB	2:AA:47:ILE:H	2.28	0.46
3:TA:56:ILE:HG13	3:TA:57:ILE:N	2.30	0.46
4:IB:124:ASP:HA	3:LB:246:TRP:CH2	2.49	0.46
3:JC:181:ARG:NH1	3:PC:237:GLU:OE1	2.48	0.46
4:SC:65:THR:HG23	4:SC:65:THR:O	2.15	0.46
4:IE:124:ASP:HA	3:LE:246:TRP:CH2	2.50	0.46
3:RE:258:GLU:HA	4:SE:74:THR:CG2	2.41	0.46
3:JF:258:GLU:HA	4:KF:74:THR:CG2	2.41	0.46
2:AG:65:GLN:CB	2:GG:47:ILE:H	2.28	0.46
4:KG:104:TYR:CE1	3:NG:256:HIS:O	2.68	0.46
3:NA:56:ILE:HG13	3:NA:57:ILE:N	2.31	0.46
4:QA:104:TYR:CD2	3:TA:256:HIS:O	2.68	0.46
3:ZA:56:ILE:HG13	3:ZA:57:ILE:N	2.31	0.46
3:FB:56:ILE:HG13	3:FB:57:ILE:N	2.31	0.46
3:LB:56:ILE:HG13	3:LB:57:ILE:N	2.31	0.46
3:RB:56:ILE:HG13	3:RB:57:ILE:N	2.31	0.46
4:GC:65:THR:HG23	4:GC:65:THR:O	2.15	0.46
2:IC:190:ARG:CG	2:OC:166:GLY:O	2.62	0.46
4:MC:65:THR:HG23	4:MC:65:THR:O	2.15	0.46
2:MD:190:ARG:CD	2:SD:166:GLY:O	2.63	0.46
2:YD:65:GLN:CB	2:EE:47:ILE:H	2.28	0.46
2:KE:191:SER:O	2:QE:166:GLY:HA2	2.15	0.46
4:OE:65:THR:HG23	4:OE:65:THR:O	2.15	0.46
2:G:147:ALA:HB1	2:SG:210:GLN:HE22	1.80	0.46
4:N:118:TYR:HE1	4:WG:38:VAL:CG1	2.27	0.46
4:D:59:ASP:OD1	4:L:136:SER:HB2	2.15	0.46
3:K:181:ARG:NH1	3:V:237:GLU:OE1	2.48	0.46
3:HA:56:ILE:HG13	3:HA:57:ILE:N	2.30	0.46
4:UB:38:VAL:CG1	4:YB:118:TYR:HE1	2.26	0.46
4:QD:104:TYR:CE1	3:TD:256:HIS:O	2.68	0.46
4:IE:38:VAL:CG1	4:ME:118:TYR:HE1	2.27	0.46
4:AF:104:TYR:OH	3:DF:256:HIS:HB2	2.14	0.46
4:SF:38:VAL:HG22	4:WF:113:VAL:HB	1.96	0.46
4:N:136:SER:HB2	4:UG:59:ASP:OD1	2.15	0.46
3:K:258:GLU:HA	4:L:74:THR:CG2	2.41	0.46
3:XB:56:ILE:HG13	3:XB:57:ILE:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AC:65:THR:O	4:AC:65:THR:HG23	2.15	0.46
3:DC:56:ILE:HG13	3:DC:57:ILE:N	2.31	0.46
4:SC:54:ILE:HD13	4:WC:79:LEU:HD11	1.98	0.46
3:FE:258:GLU:HA	4:GE:74:THR:CG2	2.41	0.46
4:UE:65:THR:O	4:UE:65:THR:HG23	2.15	0.46
4:AF:104:TYR:HE2	3:DF:253:GLN:O	1.98	0.46
4:EG:124:ASP:HA	3:HG:246:TRP:CH2	2.50	0.46
3:V:56:ILE:HG13	3:V:57:ILE:N	2.30	0.46
3:BA:56:ILE:HG13	3:BA:57:ILE:N	2.31	0.46
2:GA:190:ARG:CD	2:MA:166:GLY:O	2.62	0.46
4:UB:65:THR:O	4:UB:65:THR:HG23	2.15	0.46
2:OC:83:LYS:CB	2:UC:23:ALA:CB	2.93	0.46
4:ID:59:ASP:OD1	4:OD:136:SER:HB2	2.15	0.46
4:KF:100:LEU:HG	4:KF:105:LEU:HA	1.98	0.46
4:MF:38:VAL:CG2	4:QF:113:VAL:HB	2.44	0.46
4:KG:53:ASP:O	4:OG:79:LEU:HD22	2.16	0.46
4:OG:100:LEU:HG	4:OG:105:LEU:HA	1.98	0.46
4:QG:65:THR:HG23	4:QG:65:THR:O	2.15	0.46
3:C:258:GLU:HA	4:D:74:THR:CG2	2.41	0.46
3:V:258:GLU:HA	4:W:74:THR:CG2	2.41	0.46
4:CA:100:LEU:HG	4:CA:105:LEU:HA	1.98	0.46
4:KA:65:THR:O	4:KA:65:THR:HG23	2.15	0.46
2:MA:191:SER:O	2:SA:166:GLY:CA	2.63	0.46
4:QA:65:THR:HG23	4:QA:65:THR:O	2.15	0.46
3:LB:258:GLU:HA	4:MB:74:THR:CG2	2.41	0.46
4:UB:42:LEU:O	3:XB:309:VAL:HB	2.14	0.46
3:JC:56:ILE:HG13	3:JC:57:ILE:N	2.31	0.46
2:OC:84:ALA:CA	2:UC:23:ALA:HB1	2.45	0.46
3:BD:258:GLU:HA	4:CD:74:THR:CG2	2.41	0.46
4:UE:38:VAL:CG1	4:YE:118:TYR:HE1	2.28	0.46
4:UE:124:ASP:HA	3:XE:246:TRP:CH2	2.50	0.46
4:AF:65:THR:O	4:AF:65:THR:HG23	2.15	0.46
2:AG:210:GLN:HE22	2:GG:147:ALA:HB1	1.81	0.46
4:KG:65:THR:O	4:KG:65:THR:HG23	2.15	0.46
4:UG:100:LEU:HG	4:UG:105:LEU:HA	1.98	0.46
4:WG:65:THR:HG23	4:WG:65:THR:O	2.15	0.46
4:W:100:LEU:HG	4:W:105:LEU:HA	1.98	0.46
2:AA:190:ARG:CG	2:GA:166:GLY:O	2.63	0.46
4:EA:65:THR:HG23	4:EA:65:THR:O	2.15	0.46
2:MA:190:ARG:CG	2:SA:166:GLY:O	2.63	0.46
4:WA:65:THR:HG23	4:WA:65:THR:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:OB:65:THR:HG23	4:OB:65:THR:O	2.15	0.46
4:SC:38:VAL:CG1	4:WC:118:TYR:HE1	2.28	0.46
2:MD:65:GLN:CB	2:SD:47:ILE:H	2.29	0.46
4:GF:42:LEU:O	3:JF:309:VAL:HB	2.15	0.46
4:MF:115:ALA:HB2	3:PF:48:ARG:HH22	1.81	0.46
4:QF:100:LEU:HG	4:QF:105:LEU:HA	1.98	0.46
4:Q:65:THR:HG23	4:Q:65:THR:O	2.15	0.46
3:K:56:ILE:HG13	3:K:57:ILE:N	2.31	0.46
2:GA:210:GLN:HE22	2:MA:147:ALA:HB1	1.81	0.46
4:GB:100:LEU:HG	4:GB:105:LEU:HA	1.98	0.46
3:PC:56:ILE:HG13	3:PC:57:ILE:N	2.31	0.46
2:AD:210:GLN:HE22	2:GD:147:ALA:HB1	1.81	0.46
4:SE:59:ASP:OD1	4:YE:136:SER:HB2	2.16	0.46
4:EF:100:LEU:HG	4:EF:105:LEU:HA	1.98	0.46
4:GF:65:THR:HG23	4:GF:65:THR:O	2.15	0.46
4:SF:124:ASP:HA	3:VF:246:TRP:CH2	2.51	0.46
4:WF:59:ASP:OD1	4:CG:136:SER:HB2	2.16	0.46
2:GG:190:ARG:CD	2:MG:166:GLY:O	2.64	0.46
4:UG:106:ILE:CD1	4:VG:60:ILE:HD11	2.46	0.46
3:M:258:GLU:HA	4:N:74:THR:CG2	2.41	0.46
3:C:56:ILE:HG13	3:C:57:ILE:N	2.31	0.46
4:IA:100:LEU:HG	4:IA:105:LEU:HA	1.98	0.46
4:KA:38:VAL:CG1	4:OA:118:TYR:HE1	2.29	0.46
4:KA:124:ASP:HA	3:NA:246:TRP:CH2	2.51	0.46
4:CB:50:ALA:O	4:GB:80:ARG:HA	2.16	0.46
4:IB:65:THR:HG23	4:IB:65:THR:O	2.15	0.46
4:MB:100:LEU:HG	4:MB:105:LEU:HA	1.98	0.46
3:VC:56:ILE:HG13	3:VC:57:ILE:N	2.31	0.46
3:FE:56:ILE:HG13	3:FE:57:ILE:N	2.30	0.46
4:GE:100:LEU:HG	4:GE:105:LEU:HA	1.98	0.46
3:LE:56:ILE:HG13	3:LE:57:ILE:N	2.31	0.46
4:WF:106:ILE:CD1	4:XF:60:ILE:HD11	2.46	0.46
4:EG:50:ALA:O	4:IG:80:ARG:HA	2.16	0.46
4:EG:65:THR:HG23	4:EG:65:THR:O	2.15	0.46
2:MG:191:SER:O	2:SG:166:GLY:CA	2.64	0.46
4:OG:106:ILE:CD1	4:PG:60:ILE:HD11	2.46	0.46
4:N:100:LEU:HG	4:N:105:LEU:HA	1.98	0.46
4:L:106:ILE:CD1	4:O:60:ILE:HD11	2.46	0.46
4:Y:65:THR:HG23	4:Y:65:THR:O	2.15	0.46
4:KA:50:ALA:O	4:OA:80:ARG:HA	2.16	0.46
2:YA:190:ARG:CG	2:EB:166:GLY:O	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:OC:65:GLN:CB	2:UC:47:ILE:H	2.29	0.46
4:YE:106:ILE:CD1	4:ZE:60:ILE:HD11	2.46	0.46
2:CF:190:ARG:CG	2:IF:166:GLY:O	2.64	0.46
4:QF:106:ILE:CD1	4:RF:60:ILE:HD11	2.46	0.46
4:SF:54:ILE:HD13	4:WF:79:LEU:HD11	1.98	0.46
4:CG:59:ASP:OD1	4:IG:136:SER:HB2	2.16	0.46
4:IG:100:LEU:HG	4:IG:105:LEU:HA	1.98	0.46
4:IG:106:ILE:CD1	4:JG:60:ILE:HD11	2.46	0.46
4:N:106:ILE:CD1	4:P:60:ILE:HD11	2.46	0.45
4:AB:100:LEU:HG	4:AB:105:LEU:HA	1.98	0.45
4:CB:65:THR:HG23	4:CB:65:THR:O	2.15	0.45
4:GB:59:ASP:OD1	4:MB:136:SER:HB2	2.15	0.45
4:EC:59:ASP:OD1	4:KC:136:SER:HB2	2.15	0.45
4:QC:59:ASP:OD1	4:WC:136:SER:HB2	2.16	0.45
3:ZD:56:ILE:HG13	3:ZD:57:ILE:N	2.30	0.45
4:AE:100:LEU:HG	4:AE:105:LEU:HA	1.98	0.45
3:RE:56:ILE:HG13	3:RE:57:ILE:N	2.31	0.45
4:SE:106:ILE:CD1	4:TE:60:ILE:HD11	2.46	0.45
4:MF:65:THR:HG23	4:MF:65:THR:O	2.15	0.45
4:CG:106:ILE:CD1	4:DG:60:ILE:HD11	2.46	0.45
4:UG:81:LEU:HD23	4:UG:81:LEU:HA	1.89	0.45
2:G:23:ALA:HB1	2:SG:84:ALA:CA	2.47	0.45
2:G:23:ALA:CB	2:SG:83:LYS:CB	2.94	0.45
3:M:56:ILE:HG13	3:M:57:ILE:N	2.31	0.45
4:Q:38:VAL:CG1	4:D:118:TYR:HE1	2.27	0.45
4:H:65:THR:O	4:H:65:THR:HG23	2.15	0.45
4:W:106:ILE:CD1	4:X:60:ILE:HD11	2.46	0.45
2:OC:190:ARG:CD	2:UC:166:GLY:O	2.61	0.45
3:BD:56:ILE:HG13	3:BD:57:ILE:N	2.31	0.45
4:QD:53:ASP:O	4:UD:79:LEU:HD22	2.16	0.45
3:ZD:258:GLU:HA	4:AE:74:THR:CG2	2.41	0.45
4:ME:100:LEU:HG	4:ME:105:LEU:HA	1.98	0.45
4:OE:54:ILE:HD13	4:SE:79:LEU:HD11	1.98	0.45
3:XE:56:ILE:HG13	3:XE:57:ILE:N	2.31	0.45
3:DF:258:GLU:HA	4:EF:74:THR:CG2	2.41	0.45
2:OF:83:LYS:CB	2:UF:23:ALA:CB	2.95	0.45
2:OF:84:ALA:CA	2:UF:23:ALA:HB1	2.45	0.45
4:QG:104:TYR:CD2	3:TG:256:HIS:O	2.69	0.45
4:D:106:ILE:CD1	4:E:60:ILE:HD11	2.46	0.45
4:R:50:ALA:O	4:W:80:ARG:HA	2.16	0.45
4:OA:106:ILE:CD1	4:PA:60:ILE:HD11	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QC:100:LEU:HG	4:QC:105:LEU:HA	1.98	0.45
4:WC:100:LEU:HG	4:WC:105:LEU:HA	1.98	0.45
4:AE:106:ILE:CD1	4:BE:60:ILE:HD11	2.46	0.45
4:AF:53:ASP:O	4:EF:79:LEU:HD22	2.15	0.45
4:SF:65:THR:HG23	4:SF:65:THR:O	2.15	0.45
4:WF:100:LEU:HG	4:WF:105:LEU:HA	1.98	0.45
4:YF:65:THR:O	4:YF:65:THR:HG23	2.15	0.45
4:EG:38:VAL:CG1	4:IG:118:TYR:HE1	2.28	0.45
4:L:100:LEU:HG	4:L:105:LEU:HA	1.98	0.45
2:GA:84:ALA:CA	2:MA:23:ALA:HB1	2.46	0.45
4:KA:54:ILE:HD13	4:OA:79:LEU:HD11	1.99	0.45
4:QA:38:VAL:CG1	4:UA:118:TYR:HE1	2.29	0.45
2:CC:190:ARG:CG	2:IC:166:GLY:O	2.63	0.45
2:KE:190:ARG:CG	2:QE:166:GLY:O	2.65	0.45
3:DF:56:ILE:HG13	3:DF:57:ILE:N	2.31	0.45
3:TG:258:GLU:HA	4:UG:74:THR:CG2	2.41	0.45
2:J:83:LYS:CB	2:T:23:ALA:CB	2.95	0.45
2:J:190:ARG:CG	2:T:166:GLY:O	2.64	0.45
4:R:65:THR:HG23	4:R:65:THR:O	2.15	0.45
4:QA:53:ASP:O	4:UA:79:LEU:HD22	2.16	0.45
4:SB:100:LEU:HG	4:SB:105:LEU:HA	1.98	0.45
4:KC:100:LEU:HG	4:KC:105:LEU:HA	1.98	0.45
3:HD:56:ILE:HG13	3:HD:57:ILE:N	2.31	0.45
4:UD:100:LEU:HG	4:UD:105:LEU:HA	1.98	0.45
4:EF:64:LEU:HD23	4:EF:99:ILE:HG21	1.99	0.45
3:PF:189:THR:O	3:VF:237:GLU:HG2	2.17	0.45
3:TG:56:ILE:HG13	3:TG:57:ILE:N	2.31	0.45
4:N:79:LEU:HD11	4:WG:54:ILE:HD13	1.99	0.45
2:J:210:GLN:HE22	2:T:147:ALA:HB1	1.82	0.45
2:SA:190:ARG:CG	2:YA:166:GLY:O	2.64	0.45
4:OB:42:LEU:O	3:RB:309:VAL:HB	2.16	0.45
4:EC:106:ILE:CD1	4:FC:60:ILE:HD11	2.46	0.45
4:KD:38:VAL:CG1	4:OD:118:TYR:HE1	2.28	0.45
3:ND:56:ILE:HG13	3:ND:57:ILE:N	2.30	0.45
3:TD:56:ILE:HG13	3:TD:57:ILE:N	2.31	0.45
4:UD:106:ILE:CD1	4:VD:60:ILE:HD11	2.46	0.45
2:YD:84:ALA:CA	2:EE:23:ALA:HB1	2.47	0.45
4:CE:124:ASP:HA	3:FE:246:TRP:CH2	2.52	0.45
4:GE:69:GLY:N	4:GE:89:LEU:HD13	2.32	0.45
4:SE:64:LEU:HD23	4:SE:99:ILE:HG21	1.99	0.45
2:WE:84:ALA:CA	2:CF:23:ALA:HB1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YE:100:LEU:HG	4:YE:105:LEU:HA	1.98	0.45
2:OF:65:GLN:CB	2:UF:47:ILE:H	2.30	0.45
4:N:80:ARG:HA	4:WG:50:ALA:O	2.17	0.45
2:T:84:ALA:CA	2:AA:23:ALA:HB1	2.47	0.45
2:GA:65:GLN:CB	2:MA:47:ILE:H	2.29	0.45
4:OA:100:LEU:HG	4:OA:105:LEU:HA	1.98	0.45
4:UA:106:ILE:CD1	4:VA:60:ILE:HD11	2.46	0.45
4:YB:81:LEU:HD23	4:YB:81:LEU:HA	1.89	0.45
4:CD:100:LEU:HG	4:CD:105:LEU:HA	1.98	0.45
4:CD:106:ILE:CD1	4:DD:60:ILE:HD11	2.46	0.45
4:ID:69:GLY:N	4:ID:89:LEU:HD13	2.32	0.45
4:KD:42:LEU:O	3:ND:309:VAL:HB	2.16	0.45
4:AE:69:GLY:N	4:AE:89:LEU:HD13	2.32	0.45
4:EF:106:ILE:CD1	4:FF:60:ILE:HD11	2.46	0.45
4:KF:106:ILE:CD1	4:LF:60:ILE:HD11	2.46	0.45
4:QF:64:LEU:HD23	4:QF:99:ILE:HG21	1.99	0.45
4:CG:64:LEU:HD23	4:CG:99:ILE:HG21	1.99	0.45
4:CA:69:GLY:N	4:CA:89:LEU:HD13	2.32	0.45
4:IA:69:GLY:N	4:IA:89:LEU:HD13	2.32	0.45
4:SB:69:GLY:N	4:SB:89:LEU:HD13	2.32	0.45
4:SB:106:ILE:CD1	4:TB:60:ILE:HD11	2.46	0.45
4:YB:106:ILE:CD1	4:ZB:60:ILE:HD11	2.46	0.45
4:KC:106:ILE:CD1	4:LC:60:ILE:HD11	2.46	0.45
2:AD:83:LYS:CB	2:GD:23:ALA:CB	2.94	0.45
4:OD:69:GLY:N	4:OD:89:LEU:HD13	2.32	0.45
4:CE:42:LEU:O	3:FE:309:VAL:HB	2.17	0.45
4:GE:64:LEU:HD23	4:GE:99:ILE:HG21	1.99	0.45
4:GE:106:ILE:CD1	4:HE:60:ILE:HD11	2.46	0.45
3:LE:181:ARG:NH1	3:RE:237:GLU:OE1	2.49	0.45
4:SE:100:LEU:HG	4:SE:105:LEU:HA	1.98	0.45
3:JF:56:ILE:HG13	3:JF:57:ILE:N	2.31	0.45
2:UF:190:ARG:CG	2:AG:166:GLY:O	2.65	0.45
3:NG:56:ILE:HG13	3:NG:57:ILE:N	2.31	0.45
4:D:100:LEU:HG	4:D:105:LEU:HA	1.98	0.45
2:T:210:GLN:HE22	2:AA:147:ALA:HB1	1.82	0.45
4:Y:53:ASP:O	4:CA:79:LEU:HD22	2.17	0.45
4:Y:124:ASP:HA	3:BA:246:TRP:CH2	2.51	0.45
4:IA:106:ILE:CD1	4:JA:60:ILE:HD11	2.46	0.45
4:QA:50:ALA:C	4:UA:80:ARG:HG2	2.37	0.45
2:KB:84:ALA:CA	2:QB:23:ALA:HB1	2.46	0.45
4:MB:106:ILE:CD1	4:NB:60:ILE:HD11	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:WB:190:ARG:CG	2:CC:166:GLY:O	2.65	0.45
4:YB:69:GLY:N	4:YB:89:LEU:HD13	2.32	0.45
4:WC:59:ASP:OD1	4:CD:136:SER:HB2	2.17	0.45
4:YC:38:VAL:CG1	4:CD:118:TYR:HE1	2.29	0.45
4:CD:69:GLY:N	4:CD:89:LEU:HD13	2.32	0.45
4:UD:69:GLY:N	4:UD:89:LEU:HD13	2.32	0.45
4:ME:64:LEU:HD23	4:ME:99:ILE:HG21	1.99	0.45
4:ME:69:GLY:N	4:ME:89:LEU:HD13	2.32	0.45
4:ME:106:ILE:CD1	4:NE:60:ILE:HD11	2.46	0.45
4:YE:64:LEU:HD23	4:YE:99:ILE:HG21	1.99	0.45
4:KF:64:LEU:HD23	4:KF:99:ILE:HG21	1.99	0.45
4:YF:53:ASP:O	4:CG:79:LEU:HD22	2.17	0.45
4:YF:124:ASP:HA	3:BG:246:TRP:CH2	2.52	0.45
4:N:69:GLY:N	4:N:89:LEU:HD13	2.32	0.45
2:B:190:ARG:CG	2:J:166:GLY:O	2.65	0.45
4:D:69:GLY:N	4:D:89:LEU:HD13	2.32	0.45
4:CA:106:ILE:CD1	4:DA:60:ILE:HD11	2.46	0.45
4:UA:100:LEU:HG	4:UA:105:LEU:HA	1.98	0.45
2:YA:83:LYS:CB	2:EB:23:ALA:CB	2.95	0.45
4:OB:53:ASP:O	4:SB:79:LEU:HD22	2.16	0.45
2:IC:65:GLN:CA	2:OC:47:ILE:CB	2.93	0.45
2:UC:190:ARG:CG	2:AD:166:GLY:O	2.64	0.45
4:YC:53:ASP:O	4:CD:79:LEU:HD22	2.17	0.45
4:ED:54:ILE:HD13	4:ID:79:LEU:HD11	1.99	0.45
4:ID:106:ILE:CD1	4:JD:60:ILE:HD11	2.46	0.45
4:UD:64:LEU:HD23	4:UD:99:ILE:HG21	1.99	0.45
4:AE:59:ASP:OD1	4:GE:136:SER:HB2	2.17	0.45
4:AE:81:LEU:HD23	4:AE:81:LEU:HA	1.89	0.45
4:CE:53:ASP:O	4:GE:79:LEU:HD22	2.17	0.45
4:YE:69:GLY:N	4:YE:89:LEU:HD13	2.32	0.45
4:AF:104:TYR:CE1	3:DF:256:HIS:O	2.70	0.45
4:SF:50:ALA:O	4:WF:80:ARG:HA	2.17	0.45
4:WF:64:LEU:HD23	4:WF:99:ILE:HG21	1.99	0.45
2:GG:65:GLN:CB	2:MG:47:ILE:H	2.29	0.45
3:HG:56:ILE:HG13	3:HG:57:ILE:N	2.31	0.45
4:OG:64:LEU:HD23	4:OG:99:ILE:HG21	1.99	0.45
4:UG:69:GLY:N	4:UG:89:LEU:HD13	2.32	0.45
4:W:69:GLY:N	4:W:89:LEU:HD13	2.32	0.44
4:KA:53:ASP:O	4:OA:79:LEU:HD22	2.18	0.44
4:GB:106:ILE:CD1	4:HB:60:ILE:HD11	2.46	0.44
2:KB:210:GLN:HE22	2:QB:147:ALA:HB1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:MB:69:GLY:N	4:MB:89:LEU:HD13	2.32	0.44
4:EC:69:GLY:N	4:EC:89:LEU:HD13	2.32	0.44
4:EC:100:LEU:HG	4:EC:105:LEU:HA	1.98	0.44
4:QC:106:ILE:CD1	4:RC:60:ILE:HD11	2.46	0.44
2:MD:84:ALA:CA	2:SD:23:ALA:HB1	2.47	0.44
3:JF:190:ASN:ND2	3:PF:234:PRO:HB2	2.31	0.44
4:QF:59:ASP:OD1	4:WF:136:SER:HB2	2.17	0.44
4:SF:38:VAL:CG1	4:WF:118:TYR:HE1	2.29	0.44
2:AG:83:LYS:CB	2:GG:23:ALA:CB	2.96	0.44
2:AG:84:ALA:CA	2:GG:23:ALA:HB1	2.47	0.44
4:CG:100:LEU:HG	4:CG:105:LEU:HA	1.98	0.44
3:NG:181:ARG:NH1	3:TG:237:GLU:OE1	2.50	0.44
4:L:69:GLY:N	4:L:89:LEU:HD13	2.32	0.44
4:OA:59:ASP:OD1	4:UA:136:SER:HB2	2.16	0.44
4:OA:69:GLY:N	4:OA:89:LEU:HD13	2.32	0.44
4:UA:126:ILE:H	4:UA:126:ILE:HD12	1.83	0.44
3:FB:258:GLU:HA	4:GB:74:THR:CG2	2.41	0.44
4:GB:69:GLY:N	4:GB:89:LEU:HD13	2.32	0.44
4:SB:64:LEU:HD23	4:SB:99:ILE:HG21	1.99	0.44
3:PC:189:THR:O	3:VC:237:GLU:HG2	2.17	0.44
3:VC:258:GLU:HA	4:WC:74:THR:CG2	2.41	0.44
2:AD:84:ALA:CA	2:GD:23:ALA:HB1	2.47	0.44
4:ED:50:ALA:O	4:ID:80:ARG:HA	2.17	0.44
4:AE:64:LEU:HD23	4:AE:99:ILE:HG21	1.99	0.44
2:EE:191:SER:O	2:KE:166:GLY:CA	2.64	0.44
2:QE:84:ALA:CA	2:WE:23:ALA:HB1	2.47	0.44
4:SE:69:GLY:N	4:SE:89:LEU:HD13	2.32	0.44
3:PF:56:ILE:HG13	3:PF:57:ILE:N	2.31	0.44
4:IG:64:LEU:HD23	4:IG:99:ILE:HG21	1.99	0.44
3:NG:190:ASN:ND2	3:TG:234:PRO:HB2	2.32	0.44
4:OG:69:GLY:N	4:OG:89:LEU:HD13	2.32	0.44
2:G:191:SER:O	2:B:166:GLY:CA	2.65	0.44
4:N:64:LEU:HD23	4:N:99:ILE:HG21	1.99	0.44
4:N:126:ILE:HD12	4:N:126:ILE:H	1.83	0.44
4:Y:54:ILE:HD13	4:CA:79:LEU:HD11	2.00	0.44
4:UA:81:LEU:HD23	4:UA:81:LEU:HA	1.89	0.44
4:YB:100:LEU:HG	4:YB:105:LEU:HA	1.98	0.44
4:WC:106:ILE:CD1	4:XC:60:ILE:HD11	2.46	0.44
4:OD:64:LEU:HD23	4:OD:99:ILE:HG21	1.99	0.44
2:KE:84:ALA:CA	2:QE:23:ALA:HB1	2.47	0.44
4:OE:38:VAL:CG2	4:SE:113:VAL:HB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:OE:104:TYR:CE2	3:RE:253:GLN:O	2.69	0.44
4:EF:69:GLY:N	4:EF:89:LEU:HD13	2.32	0.44
4:KF:126:ILE:H	4:KF:126:ILE:HD12	1.83	0.44
3:BG:56:ILE:HG13	3:BG:57:ILE:N	2.31	0.44
4:EG:54:ILE:HD13	4:IG:79:LEU:HD11	1.99	0.44
2:GG:84:ALA:CA	2:MG:23:ALA:HB1	2.48	0.44
4:H:42:LEU:O	3:K:309:VAL:HB	2.17	0.44
4:CA:126:ILE:H	4:CA:126:ILE:HD12	1.83	0.44
4:OA:64:LEU:HD23	4:OA:99:ILE:HG21	1.99	0.44
4:AB:69:GLY:N	4:AB:89:LEU:HD13	2.32	0.44
2:EB:190:ARG:CG	2:KB:166:GLY:O	2.65	0.44
4:MB:64:LEU:HD23	4:MB:99:ILE:HG21	1.99	0.44
4:OB:54:ILE:HD13	4:SB:79:LEU:HD11	1.99	0.44
4:WC:69:GLY:N	4:WC:89:LEU:HD13	2.32	0.44
4:YC:124:ASP:HA	3:BD:246:TRP:CH2	2.52	0.44
4:ID:64:LEU:HD23	4:ID:99:ILE:HG21	1.99	0.44
4:OD:100:LEU:HG	4:OD:105:LEU:HA	1.98	0.44
4:OD:106:ILE:CD1	4:PD:60:ILE:HD11	2.46	0.44
4:OD:126:ILE:H	4:OD:126:ILE:HD12	1.83	0.44
3:TD:258:GLU:HA	4:UD:74:THR:CG2	2.41	0.44
4:CE:38:VAL:CG1	4:GE:118:TYR:HE1	2.29	0.44
4:ME:126:ILE:H	4:ME:126:ILE:HD12	1.83	0.44
4:AF:50:ALA:C	4:EF:80:ARG:HG2	2.37	0.44
4:GF:38:VAL:CG1	4:KF:118:TYR:HE1	2.28	0.44
4:MF:52:GLN:OE1	3:PF:320:LEU:HD12	2.17	0.44
4:YF:38:VAL:CG1	4:CG:118:TYR:HE1	2.29	0.44
4:IG:69:GLY:N	4:IG:89:LEU:HD13	2.32	0.44
4:R:54:ILE:HD13	4:W:79:LEU:HD11	2.00	0.44
4:W:126:ILE:H	4:W:126:ILE:HD12	1.83	0.44
2:GA:83:LYS:CB	2:MA:23:ALA:CB	2.96	0.44
4:IA:64:LEU:HD23	4:IA:99:ILE:HG21	1.99	0.44
4:QA:124:ASP:HA	3:TA:246:TRP:CH2	2.53	0.44
4:GC:53:ASP:O	4:KC:79:LEU:HD22	2.18	0.44
4:KC:126:ILE:H	4:KC:126:ILE:HD12	1.83	0.44
4:ID:100:LEU:HG	4:ID:105:LEU:HA	1.98	0.44
2:WE:190:ARG:CD	2:CF:166:GLY:O	2.65	0.44
3:VF:56:ILE:HG13	3:VF:57:ILE:N	2.31	0.44
4:CG:126:ILE:H	4:CG:126:ILE:HD12	1.83	0.44
4:Y:38:VAL:CG1	4:CA:118:TYR:HE1	2.29	0.44
4:WA:42:LEU:O	3:ZA:309:VAL:HB	2.17	0.44
4:AB:126:ILE:H	4:AB:126:ILE:HD12	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:SB:126:ILE:HD12	4:SB:126:ILE:H	1.83	0.44
4:WC:126:ILE:H	4:WC:126:ILE:HD12	1.83	0.44
2:GD:190:ARG:CG	2:MD:166:GLY:O	2.65	0.44
4:CE:54:ILE:HD13	4:GE:79:LEU:HD11	2.00	0.44
4:EF:64:LEU:HD23	4:EF:99:ILE:CG2	2.48	0.44
4:KF:64:LEU:HD23	4:KF:99:ILE:CG2	2.48	0.44
4:CG:69:GLY:N	4:CG:89:LEU:HD13	2.32	0.44
4:IG:64:LEU:HD23	4:IG:99:ILE:CG2	2.48	0.44
4:OG:64:LEU:HD23	4:OG:99:ILE:CG2	2.48	0.44
4:N:64:LEU:HD23	4:N:99:ILE:CG2	2.48	0.44
4:UA:64:LEU:HD23	4:UA:99:ILE:HG21	1.99	0.44
4:UA:69:GLY:N	4:UA:89:LEU:HD13	2.32	0.44
4:QC:81:LEU:HD23	4:QC:81:LEU:HA	1.89	0.44
4:QC:126:ILE:H	4:QC:126:ILE:HD12	1.83	0.44
4:SC:50:ALA:O	4:WC:80:ARG:HA	2.18	0.44
4:WC:64:LEU:HD23	4:WC:99:ILE:HG21	1.99	0.44
4:CD:64:LEU:HD23	4:CD:99:ILE:CG2	2.48	0.44
4:CD:64:LEU:HD23	4:CD:99:ILE:HG21	1.99	0.44
4:UD:64:LEU:HD23	4:UD:99:ILE:CG2	2.48	0.44
4:AE:64:LEU:HD23	4:AE:99:ILE:CG2	2.48	0.44
4:GE:64:LEU:HD23	4:GE:99:ILE:CG2	2.48	0.44
4:GE:126:ILE:H	4:GE:126:ILE:HD12	1.83	0.44
4:UE:42:LEU:O	3:XE:309:VAL:HB	2.17	0.44
2:WE:65:GLN:CB	2:CF:47:ILE:H	2.31	0.44
4:QF:64:LEU:HD23	4:QF:99:ILE:CG2	2.48	0.44
4:UG:64:LEU:HD23	4:UG:99:ILE:HG21	1.99	0.44
2:J:79:SER:CB	2:T:19:GLU:CB	2.96	0.44
4:IB:53:ASP:O	4:MB:79:LEU:HD22	2.18	0.44
4:UB:53:ASP:O	4:YB:79:LEU:HD22	2.18	0.44
4:YB:126:ILE:H	4:YB:126:ILE:HD12	1.83	0.44
4:KC:69:GLY:N	4:KC:89:LEU:HD13	2.32	0.44
2:GD:84:ALA:CA	2:MD:23:ALA:HB1	2.48	0.44
4:UD:126:ILE:H	4:UD:126:ILE:HD12	1.83	0.44
2:YD:210:GLN:HE22	2:EE:147:ALA:HB1	1.83	0.44
2:QE:210:GLN:HE22	2:WE:147:ALA:HB1	1.83	0.44
4:SE:126:ILE:HD12	4:SE:126:ILE:H	1.83	0.44
4:IG:126:ILE:HD12	4:IG:126:ILE:H	1.83	0.44
4:KG:50:ALA:C	4:OG:80:ARG:HG2	2.38	0.44
2:B:84:ALA:CA	2:J:23:ALA:HB1	2.48	0.44
4:H:53:ASP:O	4:L:79:LEU:HD22	2.18	0.44
4:AB:106:ILE:CD1	4:BB:60:ILE:HD11	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:GB:64:LEU:HD23	4:GB:99:ILE:HG21	1.99	0.44
4:YB:64:LEU:HD23	4:YB:99:ILE:HG21	1.99	0.44
4:WC:64:LEU:HD23	4:WC:99:ILE:CG2	2.48	0.44
4:CD:126:ILE:H	4:CD:126:ILE:HD12	1.83	0.44
4:ID:64:LEU:HD23	4:ID:99:ILE:CG2	2.48	0.44
4:ID:81:LEU:HD23	4:ID:81:LEU:HA	1.89	0.44
4:OD:64:LEU:HD23	4:OD:99:ILE:CG2	2.48	0.44
4:UE:53:ASP:O	4:YE:79:LEU:HD22	2.18	0.44
4:UE:54:ILE:HD13	4:YE:79:LEU:HD11	2.00	0.44
4:EF:126:ILE:H	4:EF:126:ILE:HD12	1.83	0.44
4:KF:69:GLY:N	4:KF:89:LEU:HD13	2.32	0.44
4:WF:64:LEU:HD23	4:WF:99:ILE:CG2	2.48	0.44
4:UG:64:LEU:HD23	4:UG:99:ILE:CG2	2.48	0.44
4:D:64:LEU:HD23	4:D:99:ILE:HG21	1.99	0.43
4:D:64:LEU:HD23	4:D:99:ILE:CG2	2.48	0.43
4:D:126:ILE:H	4:D:126:ILE:HD12	1.83	0.43
4:L:64:LEU:HD23	4:L:99:ILE:HG21	1.99	0.43
4:L:64:LEU:HD23	4:L:99:ILE:CG2	2.48	0.43
4:OA:126:ILE:HD12	4:OA:126:ILE:H	1.83	0.43
4:WA:53:ASP:O	4:AB:79:LEU:HD22	2.18	0.43
2:KB:65:GLN:CB	2:QB:47:ILE:H	2.31	0.43
4:MB:126:ILE:H	4:MB:126:ILE:HD12	1.83	0.43
4:EC:126:ILE:HD12	4:EC:126:ILE:H	1.83	0.43
4:MC:42:LEU:O	3:PC:309:VAL:HB	2.18	0.43
4:QC:64:LEU:HD23	4:QC:99:ILE:HG21	1.99	0.43
4:QD:124:ASP:HA	3:TD:246:TRP:CH2	2.53	0.43
4:WF:69:GLY:N	4:WF:89:LEU:HD13	2.32	0.43
4:Q:53:ASP:O	4:D:79:LEU:HD22	2.18	0.43
4:L:81:LEU:HD23	4:L:81:LEU:HA	1.89	0.43
4:W:64:LEU:HD23	4:W:99:ILE:CG2	2.48	0.43
4:Y:42:LEU:O	3:BA:309:VAL:HB	2.18	0.43
4:CA:64:LEU:HD23	4:CA:99:ILE:HG21	1.99	0.43
4:IA:59:ASP:OD1	4:OA:136:SER:HB2	2.17	0.43
3:ZA:258:GLU:HA	4:AB:74:THR:CG2	2.41	0.43
4:CB:54:ILE:HD13	4:GB:79:LEU:HD11	2.01	0.43
4:KC:64:LEU:HD23	4:KC:99:ILE:CG2	2.48	0.43
3:PC:258:GLU:HA	4:QC:74:THR:CG2	2.41	0.43
4:QC:69:GLY:N	4:QC:89:LEU:HD13	2.32	0.43
4:KD:53:ASP:O	4:OD:79:LEU:HD22	2.18	0.43
4:ME:64:LEU:HD23	4:ME:99:ILE:CG2	2.48	0.43
4:OE:115:ALA:HB2	3:RE:48:ARG:HH22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YE:64:LEU:HD23	4:YE:99:ILE:CG2	2.48	0.43
4:GF:53:ASP:O	4:KF:79:LEU:HD22	2.18	0.43
2:IF:79:SER:CB	2:OF:19:GLU:CB	2.96	0.43
2:G:19:GLU:CB	2:SG:79:SER:CB	2.96	0.43
2:EB:84:ALA:CA	2:KB:23:ALA:HB1	2.48	0.43
4:GB:126:ILE:H	4:GB:126:ILE:HD12	1.83	0.43
4:EC:64:LEU:HD23	4:EC:99:ILE:CG2	2.48	0.43
2:AD:79:SER:CB	2:GD:19:GLU:CB	2.96	0.43
4:IE:53:ASP:O	4:ME:79:LEU:HD22	2.18	0.43
4:CG:64:LEU:HD23	4:CG:99:ILE:CG2	2.48	0.43
4:UG:126:ILE:H	4:UG:126:ILE:HD12	1.83	0.43
4:YB:64:LEU:HD23	4:YB:99:ILE:CG2	2.48	0.43
4:KC:64:LEU:HD23	4:KC:99:ILE:HG21	1.99	0.43
2:OC:79:SER:CB	2:UC:19:GLU:CB	2.96	0.43
4:QC:64:LEU:HD23	4:QC:99:ILE:CG2	2.48	0.43
4:ID:126:ILE:HD12	4:ID:126:ILE:H	1.83	0.43
4:AE:126:ILE:H	4:AE:126:ILE:HD12	1.83	0.43
4:N:79:LEU:HD22	4:WG:53:ASP:O	2.19	0.43
3:TA:258:GLU:HA	4:UA:74:THR:CG2	2.41	0.43
4:UA:64:LEU:HD23	4:UA:99:ILE:CG2	2.48	0.43
4:IB:42:LEU:O	3:LB:309:VAL:HB	2.17	0.43
4:ZB:108:GLN:NE2	4:ZB:134:ARG:NH1	2.67	0.43
4:EC:64:LEU:HD23	4:EC:99:ILE:HG21	1.99	0.43
2:AD:190:ARG:CG	2:GD:166:GLY:O	2.66	0.43
3:BD:193:THR:HA	3:HD:236:LEU:CD1	2.49	0.43
3:LE:54:LEU:HD23	3:LE:54:LEU:HA	1.92	0.43
4:QF:126:ILE:H	4:QF:126:ILE:HD12	1.83	0.43
4:P:108:GLN:NE2	4:P:134:ARG:HH12	2.17	0.43
4:H:54:ILE:HD13	4:L:79:LEU:HD11	2.01	0.43
4:W:59:ASP:OD1	4:CA:136:SER:HB2	2.17	0.43
4:W:64:LEU:HD23	4:W:99:ILE:HG21	1.99	0.43
4:IA:126:ILE:H	4:IA:126:ILE:HD12	1.83	0.43
2:YA:65:GLN:CA	2:EB:47:ILE:CB	2.93	0.43
4:IB:54:ILE:HD13	4:MB:79:LEU:HD11	2.01	0.43
4:AC:54:ILE:HD13	4:EC:79:LEU:HD11	2.01	0.43
4:FC:61:PRO:HA	4:GC:74:THR:HA	2.00	0.43
4:FC:108:GLN:NE2	4:FC:134:ARG:NH1	2.67	0.43
3:PC:193:THR:HA	3:VC:236:LEU:CD1	2.49	0.43
4:DD:108:GLN:NE2	4:DD:134:ARG:NH1	2.67	0.43
4:JD:108:GLN:NE2	4:JD:134:ARG:NH1	2.67	0.43
4:OD:59:ASP:OD1	4:UD:136:SER:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:PD:108:GLN:NE2	4:PD:134:ARG:NH1	2.67	0.43
2:QE:190:ARG:CG	2:WE:166:GLY:O	2.66	0.43
2:WE:191:SER:O	2:CF:166:GLY:CA	2.65	0.43
2:IF:190:ARG:CG	2:OF:166:GLY:C	2.87	0.43
3:JF:193:THR:HG22	3:PF:236:LEU:HD13	2.00	0.43
4:LF:108:GLN:NE2	4:LF:134:ARG:HH12	2.17	0.43
4:QF:69:GLY:N	4:QF:89:LEU:HD13	2.32	0.43
4:JG:61:PRO:HA	4:KG:74:THR:HA	2.00	0.43
4:JG:108:GLN:NE2	4:JG:134:ARG:HH12	2.17	0.43
4:QG:115:ALA:HB1	3:TG:48:ARG:NH1	2.13	0.43
3:M:237:GLU:HG2	3:TG:189:THR:O	2.19	0.43
2:J:84:ALA:CA	2:T:23:ALA:HB1	2.48	0.43
2:AA:83:LYS:CB	2:GA:23:ALA:CB	2.97	0.43
4:DA:108:GLN:NE2	4:DA:134:ARG:HH12	2.17	0.43
4:OA:64:LEU:HD23	4:OA:99:ILE:CG2	2.48	0.43
4:VA:108:GLN:NE2	4:VA:134:ARG:HH12	2.17	0.43
4:AB:64:LEU:HD23	4:AB:99:ILE:CG2	2.48	0.43
4:TB:61:PRO:HA	4:UB:74:THR:HA	2.00	0.43
4:TB:108:GLN:NE2	4:TB:134:ARG:NH1	2.67	0.43
4:LC:61:PRO:HA	4:MC:74:THR:HA	2.00	0.43
2:UC:191:SER:O	2:AD:166:GLY:CA	2.65	0.43
4:XC:108:GLN:NE2	4:XC:134:ARG:NH1	2.67	0.43
4:VD:108:GLN:NE2	4:VD:134:ARG:NH1	2.67	0.43
4:HE:108:GLN:NE2	4:HE:134:ARG:NH1	2.67	0.43
4:ZE:61:PRO:HA	4:AF:74:THR:HA	2.00	0.43
2:IF:83:LYS:CB	2:OF:23:ALA:CB	2.97	0.43
2:IF:190:ARG:HG2	2:OF:166:GLY:C	2.39	0.43
2:UF:84:ALA:CA	2:AG:23:ALA:HB1	2.49	0.43
2:UF:191:SER:O	2:AG:166:GLY:CA	2.66	0.43
4:DG:108:GLN:NE2	4:DG:134:ARG:HH12	2.17	0.43
2:B:210:GLN:HE22	2:J:147:ALA:HB1	1.84	0.43
4:E:108:GLN:NE2	4:E:134:ARG:HH12	2.17	0.43
3:HA:107:LEU:HD12	3:HA:223:MET:HE1	2.01	0.43
4:IA:64:LEU:HD23	4:IA:99:ILE:CG2	2.48	0.43
3:TA:107:LEU:HD12	3:TA:223:MET:HE1	2.01	0.43
4:AB:64:LEU:HD23	4:AB:99:ILE:HG21	1.99	0.43
4:BB:108:GLN:NE2	4:BB:134:ARG:HH12	2.17	0.43
2:EB:210:GLN:HE22	2:KB:147:ALA:HB1	1.84	0.43
2:KB:190:ARG:CD	2:QB:166:GLY:O	2.65	0.43
4:NB:61:PRO:HA	4:OB:74:THR:HA	2.00	0.43
4:NB:108:GLN:NE2	4:NB:134:ARG:NH1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:SB:64:LEU:HD23	4:SB:99:ILE:CG2	2.48	0.43
4:ZB:61:PRO:HA	4:AC:74:THR:HA	2.00	0.43
4:LC:108:GLN:NE2	4:LC:134:ARG:NH1	2.67	0.43
4:XC:61:PRO:HA	4:YC:74:THR:HA	2.00	0.43
4:NE:108:GLN:NE2	4:NE:134:ARG:NH1	2.67	0.43
4:FF:61:PRO:HA	4:GF:74:THR:HA	2.00	0.43
4:FF:108:GLN:NE2	4:FF:134:ARG:HH12	2.17	0.43
3:JF:107:LEU:HD12	3:JF:223:MET:HE1	2.01	0.43
4:MF:38:VAL:CG1	4:QF:118:TYR:CE1	3.01	0.43
4:QF:81:LEU:HD23	4:QF:81:LEU:HA	1.89	0.43
2:GG:191:SER:O	2:MG:166:GLY:CA	2.66	0.43
4:PG:61:PRO:HA	4:QG:74:THR:HA	2.01	0.43
2:T:83:LYS:CB	2:AA:23:ALA:CB	2.97	0.43
4:CA:64:LEU:HD23	4:CA:99:ILE:CG2	2.48	0.43
4:EA:42:LEU:O	3:HA:309:VAL:HB	2.18	0.43
2:YA:84:ALA:CA	2:EB:23:ALA:HB1	2.49	0.43
3:JC:258:GLU:HA	4:KC:74:THR:CG2	2.41	0.43
4:RC:108:GLN:NE2	4:RC:134:ARG:NH1	2.67	0.43
4:SC:53:ASP:O	4:WC:79:LEU:HD22	2.19	0.43
4:DD:61:PRO:HA	4:ED:74:THR:HA	2.00	0.43
4:WD:53:ASP:O	4:AE:79:LEU:HD22	2.18	0.43
3:LE:64:GLN:HG2	3:LE:164:GLY:HA2	2.01	0.43
4:NE:108:GLN:NE2	4:NE:134:ARG:HH12	2.17	0.43
4:SE:64:LEU:HD23	4:SE:99:ILE:CG2	2.48	0.43
4:TE:108:GLN:NE2	4:TE:134:ARG:NH1	2.67	0.43
4:YE:126:ILE:H	4:YE:126:ILE:HD12	1.83	0.43
4:LF:61:PRO:HA	4:MF:74:THR:HA	2.00	0.43
4:EG:53:ASP:O	4:IG:79:LEU:HD22	2.18	0.43
4:N:56:LEU:HD12	4:N:56:LEU:O	2.19	0.43
2:AA:84:ALA:CA	2:GA:23:ALA:HB1	2.49	0.43
2:SA:84:ALA:CA	2:YA:23:ALA:HB1	2.49	0.43
4:VA:61:PRO:HA	4:WA:74:THR:HA	2.00	0.43
4:VA:108:GLN:NE2	4:VA:134:ARG:NH1	2.67	0.43
2:YA:79:SER:CB	2:EB:19:GLU:CB	2.96	0.43
4:BB:108:GLN:NE2	4:BB:134:ARG:NH1	2.67	0.43
4:HB:61:PRO:HA	4:IB:74:THR:HA	2.00	0.43
2:QB:110:LEU:HD11	2:QB:121:LEU:HD23	2.01	0.43
4:RC:61:PRO:HA	4:SC:74:THR:HA	2.00	0.43
4:QD:54:ILE:HD13	4:UD:79:LEU:HD11	2.01	0.43
4:BE:108:GLN:NE2	4:BE:134:ARG:NH1	2.67	0.43
4:CG:56:LEU:O	4:CG:56:LEU:HD12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:VG:61:PRO:HA	4:WG:74:THR:HA	2.00	0.43
4:VG:108:GLN:NE2	4:VG:134:ARG:HH12	2.17	0.43
4:L:56:LEU:HD12	4:L:56:LEU:O	2.19	0.42
4:O:108:GLN:NE2	4:O:134:ARG:HH12	2.17	0.42
4:X:108:GLN:NE2	4:X:134:ARG:HH12	2.17	0.42
4:EA:54:ILE:HD13	4:IA:79:LEU:HD11	2.01	0.42
3:HA:91:GLU:HA	3:HA:94:ARG:HD2	2.01	0.42
3:HA:189:THR:O	3:NA:237:GLU:HG2	2.18	0.42
4:JA:108:GLN:NE2	4:JA:134:ARG:HH12	2.17	0.42
2:YA:210:GLN:HE22	2:EB:147:ALA:HB1	1.83	0.42
4:CB:38:VAL:CG2	4:GB:113:VAL:HB	2.49	0.42
2:EB:83:LYS:CB	2:KB:23:ALA:CB	2.97	0.42
4:HB:108:GLN:NE2	4:HB:134:ARG:NH1	2.67	0.42
3:LB:189:THR:O	3:RB:237:GLU:HG2	2.18	0.42
3:RB:91:GLU:HA	3:RB:94:ARG:HD2	2.01	0.42
4:SB:56:LEU:HD12	4:SB:56:LEU:O	2.19	0.42
4:TB:108:GLN:NE2	4:TB:134:ARG:HH12	2.17	0.42
2:WB:83:LYS:CB	2:CC:23:ALA:CB	2.96	0.42
3:DC:107:LEU:HD12	3:DC:223:MET:HE1	2.01	0.42
2:IC:83:LYS:CB	2:OC:23:ALA:CB	2.97	0.42
4:KC:56:LEU:HD12	4:KC:56:LEU:O	2.19	0.42
4:RC:108:GLN:NE2	4:RC:134:ARG:HH12	2.17	0.42
3:VC:64:GLN:HG2	3:VC:164:GLY:HA2	2.01	0.42
3:VC:107:LEU:HD12	3:VC:223:MET:HE1	2.01	0.42
3:HD:64:GLN:HG2	3:HD:164:GLY:HA2	2.01	0.42
4:KD:54:ILE:HD13	4:OD:79:LEU:HD11	2.01	0.42
3:ZD:64:GLN:HG2	3:ZD:164:GLY:HA2	2.01	0.42
3:XE:64:GLN:HG2	3:XE:164:GLY:HA2	2.01	0.42
4:YE:81:LEU:HD23	4:YE:81:LEU:HA	1.89	0.42
4:EF:56:LEU:HD12	4:EF:56:LEU:O	2.19	0.42
3:JF:64:GLN:HG2	3:JF:164:GLY:HA2	2.01	0.42
3:JF:193:THR:HA	3:PF:236:LEU:CD1	2.49	0.42
4:QF:56:LEU:HD12	4:QF:56:LEU:O	2.19	0.42
4:SF:53:ASP:O	4:WF:79:LEU:HD22	2.18	0.42
3:VF:107:LEU:HD12	3:VF:223:MET:HE1	2.01	0.42
4:WF:126:ILE:H	4:WF:126:ILE:HD12	1.83	0.42
4:DG:61:PRO:HA	4:EG:74:THR:HA	2.01	0.42
3:NG:64:GLN:HG2	3:NG:164:GLY:HA2	2.01	0.42
4:OG:56:LEU:HD12	4:OG:56:LEU:O	2.19	0.42
3:K:193:THR:HA	3:V:236:LEU:CD1	2.48	0.42
4:L:126:ILE:H	4:L:126:ILE:HD12	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:56:LEU:HD12	4:CA:56:LEU:O	2.19	0.42
4:PA:108:GLN:NE2	4:PA:134:ARG:NH1	2.67	0.42
2:YA:110:LEU:HD11	2:YA:121:LEU:HD23	2.01	0.42
3:ZA:91:GLU:HA	3:ZA:94:ARG:HD2	2.02	0.42
3:ZA:107:LEU:HD12	3:ZA:223:MET:HE1	2.01	0.42
2:EB:168:GLN:OE1	3:FB:130:LEU:HD22	2.20	0.42
4:GB:64:LEU:HD23	4:GB:99:ILE:CG2	2.48	0.42
3:LB:91:GLU:HA	3:LB:94:ARG:HD2	2.01	0.42
4:SB:66:VAL:HB	4:SB:99:ILE:CD1	2.50	0.42
4:ZB:108:GLN:NE2	4:ZB:134:ARG:HH12	2.17	0.42
4:FC:108:GLN:NE2	4:FC:134:ARG:HH12	2.17	0.42
2:IC:168:GLN:OE1	3:JC:130:LEU:HD22	2.20	0.42
4:LC:108:GLN:NE2	4:LC:134:ARG:HH12	2.17	0.42
2:OC:168:GLN:OE1	3:PC:130:LEU:HD22	2.20	0.42
3:PC:107:LEU:HD12	3:PC:223:MET:HE1	2.00	0.42
4:CD:56:LEU:O	4:CD:56:LEU:HD12	2.19	0.42
3:ND:64:GLN:HG2	3:ND:164:GLY:HA2	2.01	0.42
3:ND:107:LEU:HD12	3:ND:223:MET:HE1	2.01	0.42
4:PD:108:GLN:NE2	4:PD:134:ARG:HH12	2.17	0.42
3:TD:64:GLN:HG2	3:TD:164:GLY:HA2	2.01	0.42
4:UD:66:VAL:HB	4:UD:99:ILE:CD1	2.50	0.42
3:ZD:107:LEU:HD12	3:ZD:223:MET:HE1	2.01	0.42
4:ME:66:VAL:HB	4:ME:99:ILE:CD1	2.50	0.42
4:TE:108:GLN:NE2	4:TE:134:ARG:HH12	2.17	0.42
3:XE:107:LEU:HD12	3:XE:223:MET:HE1	2.01	0.42
4:ZE:108:GLN:NE2	4:ZE:134:ARG:NH1	2.67	0.42
4:AF:54:ILE:HD13	4:EF:79:LEU:HD11	2.02	0.42
3:JF:181:ARG:NH1	3:PF:237:GLU:OE1	2.52	0.42
4:MF:42:LEU:O	3:PF:309:VAL:HB	2.18	0.42
2:OF:168:GLN:OE1	3:PF:130:LEU:HD22	2.19	0.42
3:PF:64:GLN:HG2	3:PF:164:GLY:HA2	2.02	0.42
3:PF:96:LEU:HD23	3:PF:96:LEU:HA	1.88	0.42
4:RF:108:GLN:NE2	4:RF:134:ARG:HH12	2.17	0.42
3:BG:64:GLN:HG2	3:BG:164:GLY:HA2	2.01	0.42
4:CG:66:VAL:HB	4:CG:99:ILE:CD1	2.49	0.42
4:IG:66:VAL:HB	4:IG:99:ILE:CD1	2.50	0.42
4:KG:38:VAL:CG1	4:OG:118:TYR:HE1	2.31	0.42
4:OG:126:ILE:H	4:OG:126:ILE:HD12	1.83	0.42
4:QG:53:ASP:O	4:UG:79:LEU:HD22	2.19	0.42
3:K:91:GLU:HA	3:K:94:ARG:HD2	2.01	0.42
4:X:61:PRO:HA	4:Y:74:THR:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AA:168:GLN:OE1	3:BA:130:LEU:HD22	2.20	0.42
3:BA:91:GLU:HA	3:BA:94:ARG:HD2	2.02	0.42
4:PA:61:PRO:HA	4:QA:74:THR:HA	2.00	0.42
4:WA:54:ILE:HD13	4:AB:79:LEU:HD11	2.01	0.42
2:YA:168:GLN:OE1	3:ZA:130:LEU:HD22	2.19	0.42
3:ZA:193:THR:HA	3:FB:236:LEU:CD1	2.49	0.42
4:AB:66:VAL:HB	4:AB:99:ILE:CD1	2.50	0.42
2:KB:168:GLN:OE1	3:LB:130:LEU:HD22	2.19	0.42
2:QB:191:SER:O	2:WB:166:GLY:CA	2.67	0.42
4:AC:42:LEU:O	3:DC:309:VAL:HB	2.18	0.42
2:CC:110:LEU:HD11	2:CC:121:LEU:HD23	2.01	0.42
3:JC:64:GLN:HG2	3:JC:164:GLY:HA2	2.01	0.42
4:KC:66:VAL:HB	4:KC:99:ILE:CD1	2.50	0.42
4:MC:115:ALA:HB2	3:PC:48:ARG:HH22	1.85	0.42
3:PC:54:LEU:HD23	3:PC:54:LEU:HA	1.92	0.42
3:PC:91:GLU:HA	3:PC:94:ARG:HD2	2.02	0.42
4:XC:108:GLN:NE2	4:XC:134:ARG:HH12	2.17	0.42
3:BD:64:GLN:HG2	3:BD:164:GLY:HA2	2.01	0.42
4:CD:66:VAL:HB	4:CD:99:ILE:CD1	2.50	0.42
4:CD:126:ILE:HG23	4:CD:130:GLU:HB3	2.02	0.42
4:JD:61:PRO:HA	4:KD:74:THR:HA	2.00	0.42
4:PD:61:PRO:HA	4:QD:74:THR:HA	2.00	0.42
4:UD:101:ILE:HG13	4:UD:106:ILE:HG21	2.02	0.42
4:HE:108:GLN:NE2	4:HE:134:ARG:HH12	2.17	0.42
3:RE:64:GLN:HG2	3:RE:164:GLY:HA2	2.01	0.42
4:SE:56:LEU:HD12	4:SE:56:LEU:O	2.19	0.42
3:DF:64:GLN:HG2	3:DF:164:GLY:HA2	2.01	0.42
2:OF:190:ARG:CD	2:UF:166:GLY:O	2.62	0.42
4:WF:66:VAL:HB	4:WF:99:ILE:CD1	2.50	0.42
4:IG:59:ASP:OD1	4:OG:136:SER:HB2	2.19	0.42
4:IG:101:ILE:HG13	4:IG:106:ILE:HG21	2.02	0.42
4:OG:66:VAL:HB	4:OG:99:ILE:CD1	2.50	0.42
4:PG:108:GLN:NE2	4:PG:134:ARG:HH12	2.17	0.42
4:QG:114:VAL:HG23	4:QG:114:VAL:O	2.20	0.42
4:UG:101:ILE:HG13	4:UG:106:ILE:HG21	2.02	0.42
2:G:166:GLY:O	2:SG:190:ARG:CG	2.67	0.42
2:J:65:GLN:CA	2:T:47:ILE:CB	2.94	0.42
4:L:101:ILE:HG13	4:L:106:ILE:HG21	2.02	0.42
4:O:61:PRO:HA	4:R:74:THR:HA	2.00	0.42
2:T:168:GLN:OE1	3:V:130:LEU:HD22	2.19	0.42
2:AA:65:GLN:CA	2:GA:47:ILE:CB	2.94	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DA:61:PRO:HA	4:EA:74:THR:HA	2.00	0.42
4:EA:114:VAL:O	4:EA:114:VAL:HG23	2.20	0.42
4:KA:114:VAL:HG23	4:KA:114:VAL:O	2.20	0.42
3:TA:91:GLU:HA	3:TA:94:ARG:HD2	2.02	0.42
3:TA:234:PRO:HA	3:TA:235:PRO:HD3	1.95	0.42
4:UA:66:VAL:HB	4:UA:99:ILE:CD1	2.50	0.42
3:ZA:54:LEU:HD23	3:ZA:54:LEU:HA	1.92	0.42
4:BB:61:PRO:HA	4:CB:74:THR:HA	2.00	0.42
4:CB:115:ALA:HB2	3:FB:48:ARG:HH22	1.84	0.42
2:WB:84:ALA:CA	2:CC:23:ALA:HB1	2.48	0.42
2:WB:210:GLN:HE22	2:CC:147:ALA:HB1	1.83	0.42
3:XB:91:GLU:HA	3:XB:94:ARG:HD2	2.02	0.42
3:JC:91:GLU:HA	3:JC:94:ARG:HD2	2.02	0.42
2:UC:110:LEU:HD11	2:UC:121:LEU:HD23	2.01	0.42
4:CD:101:ILE:HG13	4:CD:106:ILE:HG21	2.02	0.42
4:ID:101:ILE:HG13	4:ID:106:ILE:HG21	2.02	0.42
2:MD:168:GLN:OE1	3:ND:130:LEU:HD22	2.19	0.42
4:VD:61:PRO:HA	4:WD:74:THR:HA	2.00	0.42
4:VD:108:GLN:NE2	4:VD:134:ARG:HH12	2.17	0.42
2:YD:190:ARG:CG	2:EE:166:GLY:O	2.67	0.42
3:FE:107:LEU:HD12	3:FE:223:MET:HE1	2.01	0.42
4:GE:56:LEU:HD12	4:GE:56:LEU:O	2.19	0.42
3:LE:190:ASN:CB	3:RE:235:PRO:O	2.68	0.42
4:ME:101:ILE:HG13	4:ME:106:ILE:HG21	2.02	0.42
4:ME:126:ILE:HG23	4:ME:130:GLU:HB3	2.02	0.42
2:WE:168:GLN:OE1	3:XE:130:LEU:HD22	2.19	0.42
4:AF:114:VAL:HG23	4:AF:114:VAL:O	2.20	0.42
4:EF:66:VAL:HB	4:EF:99:ILE:CD1	2.50	0.42
4:FF:108:GLN:NE2	4:FF:134:ARG:NH1	2.67	0.42
4:GF:114:VAL:HG23	4:GF:114:VAL:O	2.20	0.42
4:QF:101:ILE:HG13	4:QF:106:ILE:HG21	2.02	0.42
3:VF:64:GLN:HG2	3:VF:164:GLY:HA2	2.02	0.42
2:GG:190:ARG:CG	2:MG:166:GLY:O	2.67	0.42
3:HG:64:GLN:HG2	3:HG:164:GLY:HA2	2.01	0.42
3:TG:234:PRO:HA	3:TG:235:PRO:HD3	1.95	0.42
4:WG:114:VAL:HG23	4:WG:114:VAL:O	2.20	0.42
4:N:101:ILE:HG13	4:N:106:ILE:HG21	2.02	0.42
3:C:91:GLU:HA	3:C:94:ARG:HD2	2.02	0.42
4:X:68:LEU:HD12	4:X:97:LEU:HD21	2.02	0.42
2:AA:210:GLN:HE22	2:GA:147:ALA:HB1	1.85	0.42
4:IA:66:VAL:HB	4:IA:99:ILE:CD1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:JA:68:LEU:HD12	4:JA:97:LEU:HD21	2.02	0.42
4:JA:108:GLN:NE2	4:JA:134:ARG:NH1	2.67	0.42
2:MA:110:LEU:HD11	2:MA:121:LEU:HD23	2.01	0.42
3:NA:91:GLU:HA	3:NA:94:ARG:HD2	2.01	0.42
4:OA:56:LEU:HD12	4:OA:56:LEU:O	2.19	0.42
4:OA:66:VAL:HB	4:OA:99:ILE:CD1	2.50	0.42
4:AB:56:LEU:HD12	4:AB:56:LEU:O	2.19	0.42
3:FB:91:GLU:HA	3:FB:94:ARG:HD2	2.02	0.42
4:GB:66:VAL:HB	4:GB:99:ILE:CD1	2.50	0.42
4:MB:81:LEU:HD23	4:MB:81:LEU:HA	1.89	0.42
2:CC:84:ALA:CA	2:IC:23:ALA:HB1	2.49	0.42
2:CC:168:GLN:OE1	3:DC:130:LEU:HD22	2.19	0.42
2:IC:110:LEU:HD11	2:IC:121:LEU:HD23	2.01	0.42
3:JC:107:LEU:HD12	3:JC:223:MET:HE1	2.02	0.42
4:QC:101:ILE:HG13	4:QC:106:ILE:HG21	2.02	0.42
4:WC:56:LEU:O	4:WC:56:LEU:HD12	2.19	0.42
3:BD:91:GLU:HA	3:BD:94:ARG:HD2	2.02	0.42
4:DD:108:GLN:NE2	4:DD:134:ARG:HH12	2.17	0.42
3:HD:91:GLU:HA	3:HD:94:ARG:HD2	2.02	0.42
4:ID:126:ILE:HG23	4:ID:130:GLU:HB3	2.02	0.42
4:OD:56:LEU:HD12	4:OD:56:LEU:O	2.19	0.42
2:SD:191:SER:O	2:YD:166:GLY:CA	2.66	0.42
3:FE:64:GLN:HG2	3:FE:164:GLY:HA2	2.02	0.42
3:FE:190:ASN:ND2	3:LE:234:PRO:HB2	2.35	0.42
4:GE:126:ILE:HG23	4:GE:130:GLU:HB3	2.02	0.42
3:LE:189:THR:O	3:RE:237:GLU:HG2	2.20	0.42
4:SE:126:ILE:HG23	4:SE:130:GLU:HB3	2.02	0.42
4:QF:66:VAL:HB	4:QF:99:ILE:CD1	2.50	0.42
4:RF:61:PRO:HA	4:SF:74:THR:HA	2.00	0.42
4:EG:42:LEU:O	3:HG:309:VAL:HB	2.19	0.42
4:KG:54:ILE:HD13	4:OG:79:LEU:HD11	2.01	0.42
4:KG:114:VAL:HG23	4:KG:114:VAL:O	2.20	0.42
2:MG:168:GLN:OE1	3:NG:130:LEU:HD22	2.19	0.42
3:M:64:GLN:HG2	3:M:164:GLY:HA2	2.01	0.42
3:M:190:ASN:ND2	3:C:234:PRO:HB2	2.35	0.42
4:P:68:LEU:HD12	4:P:97:LEU:HD21	2.02	0.42
4:Q:114:VAL:HG23	4:Q:114:VAL:O	2.20	0.42
2:B:83:LYS:CB	2:J:23:ALA:CB	2.97	0.42
4:E:68:LEU:HD12	4:E:97:LEU:HD21	2.02	0.42
3:V:91:GLU:HA	3:V:94:ARG:HD2	2.02	0.42
4:EA:53:ASP:O	4:IA:79:LEU:HD22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:GA:168:GLN:OE1	3:HA:130:LEU:HD22	2.19	0.42
2:YA:159:LEU:O	2:YA:163:THR:HG22	2.20	0.42
4:BB:68:LEU:HD12	4:BB:97:LEU:HD21	2.02	0.42
4:OB:124:ASP:HA	3:RB:246:TRP:CH2	2.54	0.42
3:XB:64:GLN:HG2	3:XB:164:GLY:HA2	2.01	0.42
3:DC:91:GLU:HA	3:DC:94:ARG:HD2	2.02	0.42
4:EC:66:VAL:HB	4:EC:99:ILE:CD1	2.50	0.42
3:VC:91:GLU:HA	3:VC:94:ARG:HD2	2.02	0.42
4:WC:126:ILE:HG23	4:WC:130:GLU:HB3	2.02	0.42
4:YC:50:ALA:C	4:CD:80:ARG:HG2	2.39	0.42
4:UD:56:LEU:HD12	4:UD:56:LEU:O	2.19	0.42
4:WD:52:GLN:OE1	3:ZD:320:LEU:HD12	2.19	0.42
3:ZD:91:GLU:HA	3:ZD:94:ARG:HD2	2.01	0.42
2:QE:168:GLN:OE1	3:RE:130:LEU:HD22	2.19	0.42
4:TE:61:PRO:HA	4:UE:74:THR:HA	2.00	0.42
4:UE:114:VAL:HG23	4:UE:114:VAL:O	2.20	0.42
4:YE:101:ILE:HG13	4:YE:106:ILE:HG21	2.02	0.42
2:CF:84:ALA:CA	2:IF:23:ALA:HB1	2.49	0.42
4:MF:114:VAL:HG23	4:MF:114:VAL:O	2.20	0.42
4:RF:108:GLN:NE2	4:RF:134:ARG:NH1	2.67	0.42
3:VF:54:LEU:HD23	3:VF:54:LEU:HA	1.92	0.42
4:XF:108:GLN:NE2	4:XF:134:ARG:HH12	2.17	0.42
3:BG:107:LEU:HD12	3:BG:223:MET:HE1	2.02	0.42
2:GG:168:GLN:OE1	3:HG:130:LEU:HD22	2.19	0.42
4:IG:81:LEU:HD23	4:IG:81:LEU:HA	1.89	0.42
4:JG:108:GLN:NE2	4:JG:134:ARG:NH1	2.67	0.42
4:KG:124:ASP:HA	3:NG:246:TRP:CH2	2.54	0.42
4:PG:108:GLN:NE2	4:PG:134:ARG:NH1	2.67	0.42
4:QG:38:VAL:CG2	4:UG:113:VAL:HB	2.48	0.42
4:QG:52:GLN:OE1	3:TG:320:LEU:HD12	2.18	0.42
4:QG:115:ALA:HB2	3:TG:48:ARG:HH22	1.83	0.42
4:UG:66:VAL:HB	4:UG:99:ILE:CD1	2.50	0.42
4:VG:108:GLN:NE2	4:VG:134:ARG:NH1	2.67	0.42
2:G:65:GLN:CA	2:B:47:ILE:CB	2.95	0.42
3:K:64:GLN:HG2	3:K:164:GLY:HA2	2.01	0.42
2:GA:110:LEU:HD11	2:GA:121:LEU:HD23	2.01	0.42
4:IA:101:ILE:HG13	4:IA:106:ILE:HG21	2.02	0.42
4:JA:61:PRO:HA	4:KA:74:THR:HA	2.00	0.42
4:PA:68:LEU:HD12	4:PA:97:LEU:HD21	2.02	0.42
4:QA:114:VAL:HG23	4:QA:114:VAL:O	2.20	0.42
2:EB:159:LEU:O	2:EB:163:THR:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:HB:108:GLN:NE2	4:HB:134:ARG:HH12	2.17	0.42
4:MB:66:VAL:HB	4:MB:99:ILE:CD1	2.50	0.42
4:OB:50:ALA:C	4:SB:80:ARG:HG2	2.40	0.42
3:RB:107:LEU:HD12	3:RB:223:MET:HE1	2.02	0.42
4:SB:101:ILE:HG13	4:SB:106:ILE:HG21	2.02	0.42
4:YB:101:ILE:HG13	4:YB:106:ILE:HG21	2.02	0.42
4:KC:101:ILE:HG13	4:KC:106:ILE:HG21	2.02	0.42
4:MC:54:ILE:HD13	4:QC:79:LEU:HD11	2.01	0.42
4:ED:53:ASP:O	4:ID:79:LEU:HD22	2.19	0.42
4:ID:66:VAL:HB	4:ID:99:ILE:CD1	2.49	0.42
4:OD:66:VAL:HB	4:OD:99:ILE:CD1	2.50	0.42
2:SD:168:GLN:OE1	3:TD:130:LEU:HD22	2.20	0.42
2:YD:168:GLN:OE1	3:ZD:130:LEU:HD22	2.19	0.42
4:AE:66:VAL:HB	4:AE:99:ILE:CD1	2.50	0.42
4:YE:66:VAL:HB	4:YE:99:ILE:CD1	2.50	0.42
4:EF:101:ILE:HG13	4:EF:106:ILE:HG21	2.02	0.42
4:GF:54:ILE:HD13	4:KF:79:LEU:HD11	2.02	0.42
4:LF:108:GLN:NE2	4:LF:134:ARG:NH1	2.67	0.42
4:MF:38:VAL:HG13	4:QF:118:TYR:CE1	2.46	0.42
2:UF:168:GLN:OE1	3:VF:130:LEU:HD22	2.19	0.42
3:BG:189:THR:O	3:HG:237:GLU:HG2	2.19	0.42
4:PG:68:LEU:HD12	4:PG:97:LEU:HD21	2.02	0.42
4:VG:68:LEU:HD12	4:VG:97:LEU:HD21	2.02	0.42
4:P:61:PRO:HA	4:Q:74:THR:HA	2.00	0.42
4:P:108:GLN:NE2	4:P:134:ARG:NH1	2.67	0.42
2:B:168:GLN:OE1	3:C:130:LEU:HD22	2.19	0.42
2:J:159:LEU:O	2:J:163:THR:HG22	2.20	0.42
4:O:68:LEU:HD12	4:O:97:LEU:HD21	2.02	0.42
2:T:159:LEU:O	2:T:163:THR:HG22	2.20	0.42
4:W:101:ILE:HG13	4:W:106:ILE:HG21	2.02	0.42
4:DA:68:LEU:HD12	4:DA:97:LEU:HD21	2.02	0.42
4:DA:108:GLN:NE2	4:DA:134:ARG:NH1	2.67	0.42
2:GA:159:LEU:O	2:GA:163:THR:HG22	2.20	0.42
2:SA:83:LYS:CB	2:YA:23:ALA:CB	2.98	0.42
2:SA:159:LEU:O	2:SA:163:THR:HG22	2.20	0.42
2:EB:110:LEU:HD11	2:EB:121:LEU:HD23	2.01	0.42
4:GB:56:LEU:HD12	4:GB:56:LEU:O	2.19	0.42
2:KB:110:LEU:HD11	2:KB:121:LEU:HD23	2.01	0.42
4:NB:108:GLN:NE2	4:NB:134:ARG:HH12	2.17	0.42
4:YB:56:LEU:HD12	4:YB:56:LEU:O	2.19	0.42
3:DC:64:GLN:HG2	3:DC:164:GLY:HA2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:EC:56:LEU:HD12	4:EC:56:LEU:O	2.19	0.42
3:PC:64:GLN:HG2	3:PC:164:GLY:HA2	2.01	0.42
2:UC:168:GLN:OE1	3:VC:130:LEU:HD22	2.19	0.42
4:WC:66:VAL:HB	4:WC:99:ILE:CD1	2.50	0.42
2:GD:168:GLN:OE1	3:HD:130:LEU:HD22	2.19	0.42
4:JD:108:GLN:NE2	4:JD:134:ARG:HH12	2.17	0.42
3:ND:91:GLU:HA	3:ND:94:ARG:HD2	2.02	0.42
3:ZD:96:LEU:HD23	3:ZD:96:LEU:HA	1.88	0.42
4:AE:101:ILE:HG13	4:AE:106:ILE:HG21	2.02	0.42
4:GE:66:VAL:HB	4:GE:99:ILE:CD1	2.50	0.42
3:DF:284:LEU:HB2	4:EF:120:VAL:HG22	2.02	0.42
2:IF:110:LEU:HD11	2:IF:121:LEU:HD23	2.01	0.42
3:JF:284:LEU:HB2	4:KF:120:VAL:HG22	2.02	0.42
3:VF:284:LEU:HB2	4:WF:120:VAL:HG22	2.02	0.42
4:XF:61:PRO:HA	4:YF:74:THR:HA	2.00	0.42
4:XF:108:GLN:NE2	4:XF:134:ARG:NH1	2.67	0.42
2:AG:190:ARG:CG	2:GG:166:GLY:O	2.68	0.42
4:CG:101:ILE:HG13	4:CG:106:ILE:HG21	2.02	0.42
4:DG:108:GLN:NE2	4:DG:134:ARG:NH1	2.67	0.42
4:QG:42:LEU:HD12	3:TG:307:GLY:HA3	2.01	0.42
3:TG:64:GLN:HG2	3:TG:164:GLY:HA2	2.01	0.42
3:M:91:GLU:HA	3:M:94:ARG:HD2	2.02	0.42
4:N:66:VAL:HB	4:N:99:ILE:CD1	2.50	0.42
4:D:56:LEU:HD12	4:D:56:LEU:O	2.19	0.42
4:E:108:GLN:NE2	4:E:134:ARG:NH1	2.67	0.42
4:O:108:GLN:NE2	4:O:134:ARG:NH1	2.67	0.42
4:W:56:LEU:HD12	4:W:56:LEU:O	2.19	0.42
4:Y:114:VAL:HG23	4:Y:114:VAL:O	2.20	0.42
2:AA:79:SER:CB	2:GA:19:GLU:CB	2.98	0.42
4:CA:66:VAL:HB	4:CA:99:ILE:CD1	2.50	0.42
4:IA:56:LEU:O	4:IA:56:LEU:HD12	2.19	0.42
2:MA:159:LEU:O	2:MA:163:THR:HG22	2.20	0.42
4:PA:108:GLN:NE2	4:PA:134:ARG:HH12	2.17	0.42
2:SA:168:GLN:OE1	3:TA:130:LEU:HD22	2.19	0.42
4:VA:68:LEU:HD12	4:VA:97:LEU:HD21	2.02	0.42
3:ZA:122:LEU:HD22	3:ZA:157:MET:HE1	2.02	0.42
4:AB:101:ILE:HG13	4:AB:106:ILE:HG21	2.02	0.42
3:LB:64:GLN:HG2	3:LB:164:GLY:HA2	2.02	0.42
4:MB:56:LEU:O	4:MB:56:LEU:HD12	2.19	0.42
4:MB:64:LEU:HD23	4:MB:99:ILE:CG2	2.48	0.42
2:QB:159:LEU:O	2:QB:163:THR:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YB:126:ILE:HG23	4:YB:130:GLU:HB3	2.02	0.42
2:CC:65:GLN:CA	2:IC:47:ILE:CB	2.96	0.42
2:OC:159:LEU:O	2:OC:163:THR:HG22	2.20	0.42
2:GD:149:PHE:HD1	2:GD:149:PHE:HA	1.76	0.42
4:ID:56:LEU:HD12	4:ID:56:LEU:O	2.19	0.42
4:OD:126:ILE:HG23	4:OD:130:GLU:HB3	2.02	0.42
4:QD:50:ALA:C	4:UD:80:ARG:HG2	2.39	0.42
4:QD:114:VAL:HG23	4:QD:114:VAL:O	2.20	0.42
3:TD:91:GLU:HA	3:TD:94:ARG:HD2	2.02	0.42
4:BE:61:PRO:HA	4:CE:74:THR:HA	2.00	0.42
2:EE:168:GLN:OE1	3:FE:130:LEU:HD22	2.19	0.42
3:LE:284:LEU:HB2	4:ME:120:VAL:HG22	2.02	0.42
4:OE:50:ALA:O	4:SE:80:ARG:HA	2.20	0.42
2:WE:110:LEU:HD11	2:WE:121:LEU:HD23	2.01	0.42
2:CF:110:LEU:HD11	2:CF:121:LEU:HD23	2.01	0.42
2:CF:191:SER:O	2:IF:166:GLY:CA	2.67	0.42
4:KF:66:VAL:HB	4:KF:99:ILE:CD1	2.50	0.42
4:MF:42:LEU:HD12	3:PF:307:GLY:HA3	2.02	0.42
2:OF:110:LEU:HD11	2:OF:121:LEU:HD23	2.01	0.42
4:QF:126:ILE:HG23	4:QF:130:GLU:HB3	2.02	0.42
3:BG:284:LEU:HB2	4:CG:120:VAL:HG22	2.02	0.42
4:DG:68:LEU:HD12	4:DG:97:LEU:HD21	2.02	0.42
3:NG:91:GLU:HA	3:NG:94:ARG:HD2	2.02	0.42
2:SG:168:GLN:OE1	3:TG:130:LEU:HD22	2.19	0.42
3:TG:91:GLU:HA	3:TG:94:ARG:HD2	2.02	0.42
2:B:159:LEU:O	2:B:163:THR:HG22	2.20	0.42
4:R:53:ASP:O	4:W:79:LEU:HD22	2.20	0.42
2:T:110:LEU:HD11	2:T:121:LEU:HD23	2.01	0.42
4:W:66:VAL:HB	4:W:99:ILE:CD1	2.50	0.42
4:X:108:GLN:NE2	4:X:134:ARG:NH1	2.67	0.42
2:AA:159:LEU:O	2:AA:163:THR:HG22	2.20	0.42
3:BA:64:GLN:HG2	3:BA:164:GLY:HA2	2.01	0.42
3:NA:64:GLN:HG2	3:NA:164:GLY:HA2	2.01	0.42
4:OA:101:ILE:HG13	4:OA:106:ILE:HG21	2.02	0.42
3:ZA:64:GLN:HG2	3:ZA:164:GLY:HA2	2.01	0.42
4:GB:101:ILE:HG13	4:GB:106:ILE:HG21	2.02	0.42
4:HB:68:LEU:HD12	4:HB:97:LEU:HD21	2.02	0.42
2:KB:159:LEU:O	2:KB:163:THR:HG22	2.20	0.42
4:NB:68:LEU:HD12	4:NB:97:LEU:HD21	2.02	0.42
2:QB:149:PHE:HD1	2:QB:149:PHE:HA	1.76	0.42
3:RB:190:ASN:ND2	3:XB:234:PRO:HB2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:SB:126:ILE:HG23	4:SB:130:GLU:HB3	2.02	0.42
3:XB:96:LEU:HD23	3:XB:96:LEU:HA	1.88	0.42
3:XB:107:LEU:HD12	3:XB:223:MET:HE1	2.01	0.42
4:YB:66:VAL:HB	4:YB:99:ILE:CD1	2.50	0.42
4:AC:53:ASP:O	4:EC:79:LEU:HD22	2.19	0.42
4:MC:38:VAL:CG2	4:QC:113:VAL:HB	2.49	0.42
4:QC:66:VAL:HB	4:QC:99:ILE:CD1	2.50	0.42
2:MD:110:LEU:HD11	2:MD:121:LEU:HD23	2.01	0.42
2:MD:190:ARG:CG	2:SD:166:GLY:O	2.67	0.42
3:TD:190:ASN:ND2	3:ZD:234:PRO:HB2	2.35	0.42
3:FE:91:GLU:HA	3:FE:94:ARG:HD2	2.02	0.42
4:GE:101:ILE:HG13	4:GE:106:ILE:HG21	2.02	0.42
4:HE:61:PRO:HA	4:IE:74:THR:HA	2.00	0.42
2:QE:83:LYS:CB	2:WE:23:ALA:CB	2.97	0.42
2:QE:110:LEU:HD11	2:QE:121:LEU:HD23	2.01	0.42
4:YE:126:ILE:HG23	4:YE:130:GLU:HB3	2.01	0.42
2:IF:168:GLN:OE1	3:JF:130:LEU:HD22	2.19	0.42
2:UF:110:LEU:HD11	2:UF:121:LEU:HD23	2.01	0.42
4:WF:126:ILE:HG23	4:WF:130:GLU:HB3	2.02	0.42
4:EG:114:VAL:HG23	4:EG:114:VAL:O	2.20	0.42
3:HG:91:GLU:HA	3:HG:94:ARG:HD2	2.02	0.42
3:NG:107:LEU:HD12	3:NG:223:MET:HE1	2.02	0.42
2:G:168:GLN:OE1	3:M:130:LEU:HD22	2.19	0.41
3:C:64:GLN:HG2	3:C:164:GLY:HA2	2.01	0.41
4:E:61:PRO:HA	4:H:74:THR:HA	2.00	0.41
2:J:168:GLN:OE1	3:K:130:LEU:HD22	2.19	0.41
4:L:66:VAL:HB	4:L:99:ILE:CD1	2.50	0.41
2:T:190:ARG:CG	2:AA:166:GLY:O	2.67	0.41
3:BA:107:LEU:HD12	3:BA:223:MET:HE1	2.02	0.41
4:KA:42:LEU:O	3:NA:309:VAL:HB	2.19	0.41
4:UA:56:LEU:HD12	4:UA:56:LEU:O	2.19	0.41
4:WA:114:VAL:HG23	4:WA:114:VAL:O	2.20	0.41
3:FB:284:LEU:HB2	4:GB:120:VAL:HG22	2.02	0.41
3:LB:284:LEU:HB2	4:MB:120:VAL:HG22	2.02	0.41
4:MB:126:ILE:HG23	4:MB:130:GLU:HB3	2.01	0.41
2:QB:65:GLN:CA	2:WB:47:ILE:CB	2.95	0.41
2:QB:84:ALA:CA	2:WB:23:ALA:HB1	2.50	0.41
4:AC:114:VAL:HG23	4:AC:114:VAL:O	2.20	0.41
2:CC:191:SER:O	2:IC:166:GLY:CA	2.67	0.41
2:IC:79:SER:CB	2:OC:19:GLU:CB	2.97	0.41
2:IC:84:ALA:CA	2:OC:23:ALA:HB1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:IC:159:LEU:O	2:IC:163:THR:HG22	2.20	0.41
4:QC:56:LEU:HD12	4:QC:56:LEU:O	2.19	0.41
2:UC:84:ALA:CA	2:AD:23:ALA:HB1	2.49	0.41
4:KD:114:VAL:HG23	4:KD:114:VAL:O	2.20	0.41
4:QD:38:VAL:CG1	4:UD:118:TYR:HE1	2.31	0.41
4:WD:114:VAL:HG23	4:WD:114:VAL:O	2.20	0.41
4:AE:126:ILE:HG23	4:AE:130:GLU:HB3	2.02	0.41
3:FE:234:PRO:HA	3:FE:235:PRO:HD3	1.95	0.41
4:GE:81:LEU:HD23	4:GE:81:LEU:HA	1.89	0.41
2:KE:110:LEU:HD11	2:KE:121:LEU:HD23	2.01	0.41
4:ME:56:LEU:O	4:ME:56:LEU:HD12	2.19	0.41
4:SE:66:VAL:HB	4:SE:99:ILE:CD1	2.50	0.41
3:XE:234:PRO:HA	3:XE:235:PRO:HD3	1.95	0.41
3:XE:284:LEU:HB2	4:YE:120:VAL:HG22	2.02	0.41
4:YE:56:LEU:HD12	4:YE:56:LEU:O	2.19	0.41
4:ZE:108:GLN:NE2	4:ZE:134:ARG:HH12	2.17	0.41
4:RF:68:LEU:HD12	4:RF:97:LEU:HD21	2.02	0.41
2:AG:79:SER:CB	2:GG:19:GLU:CB	2.98	0.41
4:JG:68:LEU:HD12	4:JG:97:LEU:HD21	2.02	0.41
3:NG:96:LEU:HD23	3:NG:96:LEU:HA	1.89	0.41
4:Q:42:LEU:HD12	3:C:307:GLY:HA3	2.02	0.41
4:D:66:VAL:HB	4:D:99:ILE:CD1	2.50	0.41
4:R:115:ALA:HB2	3:V:48:ARG:HH22	1.85	0.41
3:V:107:LEU:HD12	3:V:223:MET:HE1	2.01	0.41
4:EA:38:VAL:CG2	4:IA:113:VAL:HB	2.50	0.41
3:FB:64:GLN:HG2	3:FB:164:GLY:HA2	2.01	0.41
4:OB:38:VAL:CG1	4:SB:118:TYR:HE1	2.32	0.41
2:QB:168:GLN:OE1	3:RB:130:LEU:HD22	2.20	0.41
3:RB:64:GLN:HG2	3:RB:164:GLY:HA2	2.02	0.41
4:UB:114:VAL:HG23	4:UB:114:VAL:O	2.20	0.41
2:WB:65:GLN:CA	2:CC:47:ILE:CB	2.96	0.41
2:WB:159:LEU:O	2:WB:163:THR:HG22	2.20	0.41
3:DC:284:LEU:HB2	4:EC:120:VAL:HG22	2.02	0.41
3:BD:189:THR:O	3:HD:237:GLU:HG2	2.20	0.41
3:FE:86:ILE:HG22	3:FE:198:ILE:HD11	2.03	0.41
3:FE:284:LEU:HB2	4:GE:120:VAL:HG22	2.02	0.41
4:IE:42:LEU:HD12	3:LE:307:GLY:HA3	2.02	0.41
4:NE:61:PRO:HA	4:OE:74:THR:HA	2.00	0.41
4:OE:114:VAL:HG23	4:OE:114:VAL:O	2.20	0.41
2:QE:159:LEU:O	2:QE:163:THR:HG22	2.20	0.41
3:RE:91:GLU:HA	3:RE:94:ARG:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RE:96:LEU:HD23	3:RE:96:LEU:HA	1.88	0.41
3:RE:284:LEU:HB2	4:SE:120:VAL:HG22	2.02	0.41
2:CF:159:LEU:O	2:CF:163:THR:HG22	2.20	0.41
2:CF:168:GLN:OE1	3:DF:130:LEU:HD22	2.19	0.41
4:KF:56:LEU:HD12	4:KF:56:LEU:O	2.19	0.41
3:PF:91:GLU:HA	3:PF:94:ARG:HD2	2.02	0.41
3:PF:284:LEU:HB2	4:QF:120:VAL:HG22	2.02	0.41
3:VF:91:GLU:HA	3:VF:94:ARG:HD2	2.02	0.41
4:WF:101:ILE:HG13	4:WF:106:ILE:HG21	2.02	0.41
4:YF:54:ILE:HD13	4:CG:79:LEU:HD11	2.02	0.41
3:TG:284:LEU:HB2	4:UG:120:VAL:HG22	2.02	0.41
4:UG:56:LEU:HD12	4:UG:56:LEU:O	2.19	0.41
4:Q:50:ALA:C	4:D:80:ARG:HG2	2.40	0.41
4:H:114:VAL:HG23	4:H:114:VAL:O	2.20	0.41
4:R:52:GLN:OE1	3:V:320:LEU:HD12	2.19	0.41
3:V:64:GLN:HG2	3:V:164:GLY:HA2	2.01	0.41
3:V:189:THR:O	3:BA:237:GLU:HG2	2.20	0.41
4:EA:115:ALA:HB1	3:HA:48:ARG:NH1	2.16	0.41
2:MA:196:VAL:HG23	2:MA:229:ILE:HG12	2.03	0.41
3:NA:284:LEU:HB2	4:OA:120:VAL:HG22	2.02	0.41
3:XB:284:LEU:HB2	4:YB:120:VAL:HG22	2.02	0.41
4:ZB:68:LEU:HD12	4:ZB:97:LEU:HD21	2.02	0.41
2:CC:159:LEU:O	2:CC:163:THR:HG22	2.20	0.41
4:EC:126:ILE:HG23	4:EC:130:GLU:HB3	2.02	0.41
4:GC:114:VAL:HG23	4:GC:114:VAL:O	2.20	0.41
2:IC:196:VAL:HG23	2:IC:229:ILE:HG12	2.03	0.41
3:JC:190:ASN:ND2	3:PC:234:PRO:HB2	2.35	0.41
2:OC:149:PHE:HD1	2:OC:149:PHE:HA	1.76	0.41
4:SC:104:TYR:CE2	3:VC:253:GLN:O	2.72	0.41
2:UC:159:LEU:O	2:UC:163:THR:HG22	2.20	0.41
2:AD:110:LEU:HD11	2:AD:121:LEU:HD23	2.01	0.41
2:AD:168:GLN:OE1	3:BD:130:LEU:HD22	2.19	0.41
3:HD:107:LEU:HD12	3:HD:223:MET:HE1	2.01	0.41
2:MD:191:SER:O	2:SD:166:GLY:CA	2.67	0.41
3:ZD:189:THR:O	3:FE:237:GLU:HG2	2.20	0.41
2:KE:159:LEU:O	2:KE:163:THR:HG22	2.20	0.41
3:LE:91:GLU:HA	3:LE:94:ARG:HD2	2.01	0.41
3:LE:193:THR:HG22	3:RE:236:LEU:HD13	2.02	0.41
2:WE:159:LEU:O	2:WE:163:THR:HG22	2.20	0.41
3:XE:86:ILE:HG22	3:XE:198:ILE:HD11	2.03	0.41
3:XE:91:GLU:HA	3:XE:94:ARG:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:KF:101:ILE:HG13	4:KF:106:ILE:HG21	2.02	0.41
3:PF:86:ILE:HG22	3:PF:198:ILE:HD11	2.03	0.41
4:SF:114:VAL:O	4:SF:114:VAL:HG23	2.20	0.41
3:VF:86:ILE:HG22	3:VF:198:ILE:HD11	2.02	0.41
2:AG:110:LEU:HD11	2:AG:121:LEU:HD23	2.01	0.41
3:BG:91:GLU:HA	3:BG:94:ARG:HD2	2.01	0.41
2:GG:110:LEU:HD11	2:GG:121:LEU:HD23	2.01	0.41
2:SG:110:LEU:HD11	2:SG:121:LEU:HD23	2.01	0.41
3:M:236:LEU:CD1	3:TG:193:THR:HA	2.49	0.41
2:B:79:SER:CB	2:J:19:GLU:CB	2.99	0.41
3:C:54:LEU:HD23	3:C:54:LEU:HA	1.92	0.41
2:T:196:VAL:HG23	2:T:229:ILE:HG12	2.03	0.41
4:IA:81:LEU:HD23	4:IA:81:LEU:HA	1.89	0.41
4:QA:42:LEU:HD12	3:TA:307:GLY:HA3	2.02	0.41
3:TA:284:LEU:HB2	4:UA:120:VAL:HG22	2.02	0.41
3:ZA:190:ASN:ND2	3:FB:234:PRO:HB2	2.35	0.41
2:EB:196:VAL:HG23	2:EB:229:ILE:HG12	2.03	0.41
2:KB:196:VAL:HG23	2:KB:229:ILE:HG12	2.03	0.41
3:LB:234:PRO:HA	3:LB:235:PRO:HD3	1.95	0.41
4:OB:114:VAL:O	4:OB:114:VAL:HG23	2.20	0.41
3:RB:284:LEU:HB2	4:SB:120:VAL:HG22	2.02	0.41
2:WB:168:GLN:OE1	3:XB:130:LEU:HD22	2.19	0.41
3:XB:193:THR:HA	3:DC:236:LEU:CD1	2.51	0.41
2:CC:196:VAL:HG23	2:CC:229:ILE:HG12	2.03	0.41
2:OC:110:LEU:HD11	2:OC:121:LEU:HD23	2.01	0.41
4:QC:126:ILE:HG23	4:QC:130:GLU:HB3	2.02	0.41
2:UC:196:VAL:HG23	2:UC:229:ILE:HG12	2.03	0.41
4:ED:114:VAL:O	4:ED:114:VAL:HG23	2.20	0.41
2:GD:210:GLN:HE22	2:MD:147:ALA:HB1	1.85	0.41
3:HD:86:ILE:HG22	3:HD:198:ILE:HD11	2.03	0.41
3:ND:234:PRO:HA	3:ND:235:PRO:HD3	1.95	0.41
2:SD:84:ALA:CA	2:YD:23:ALA:HB1	2.50	0.41
3:TD:284:LEU:HB2	4:UD:120:VAL:HG22	2.02	0.41
2:YD:149:PHE:HD1	2:YD:149:PHE:HA	1.76	0.41
3:ZD:86:ILE:HG22	3:ZD:198:ILE:HD11	2.03	0.41
4:CE:114:VAL:HG23	4:CE:114:VAL:O	2.20	0.41
2:EE:110:LEU:HD11	2:EE:121:LEU:HD23	2.01	0.41
3:FE:54:LEU:HD23	3:FE:54:LEU:HA	1.92	0.41
2:KE:168:GLN:OE1	3:LE:130:LEU:HD22	2.19	0.41
3:RE:86:ILE:HG22	3:RE:198:ILE:HD11	2.03	0.41
4:FF:68:LEU:HD12	4:FF:97:LEU:HD21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:IF:159:LEU:O	2:IF:163:THR:HG22	2.20	0.41
4:KF:126:ILE:HG23	4:KF:130:GLU:HB3	2.02	0.41
2:OF:79:SER:CB	2:UF:19:GLU:CB	2.98	0.41
2:UF:159:LEU:O	2:UF:163:THR:HG22	2.20	0.41
4:WF:56:LEU:O	4:WF:56:LEU:HD12	2.20	0.41
4:XF:68:LEU:HD12	4:XF:97:LEU:HD21	2.02	0.41
4:YF:114:VAL:HG23	4:YF:114:VAL:O	2.20	0.41
2:GG:210:GLN:HE22	2:MG:147:ALA:HB1	1.86	0.41
3:HG:284:LEU:HB2	4:IG:120:VAL:HG22	2.02	0.41
4:IG:56:LEU:HD12	4:IG:56:LEU:O	2.19	0.41
2:MG:110:LEU:HD11	2:MG:121:LEU:HD23	2.01	0.41
2:G:47:ILE:CB	2:SG:65:GLN:CA	2.97	0.41
2:G:110:LEU:HD11	2:G:121:LEU:HD23	2.01	0.41
2:G:159:LEU:O	2:G:163:THR:HG22	2.20	0.41
3:M:122:LEU:HD22	3:M:157:MET:HE1	2.03	0.41
3:M:284:LEU:HB2	4:N:120:VAL:HG22	2.02	0.41
2:J:196:VAL:HG23	2:J:229:ILE:HG12	2.03	0.41
4:R:114:VAL:O	4:R:114:VAL:HG23	2.20	0.41
3:BA:190:ASN:ND2	3:HA:234:PRO:HB2	2.35	0.41
3:HA:64:GLN:HG2	3:HA:164:GLY:HA2	2.01	0.41
2:MA:84:ALA:CA	2:SA:23:ALA:HB1	2.50	0.41
2:MA:168:GLN:OE1	3:NA:130:LEU:HD22	2.19	0.41
2:SA:196:VAL:HG23	2:SA:229:ILE:HG12	2.03	0.41
3:ZA:284:LEU:HB2	4:AB:120:VAL:HG22	2.02	0.41
4:AC:52:GLN:OE1	3:DC:320:LEU:HD12	2.19	0.41
2:AD:196:VAL:HG23	2:AD:229:ILE:HG12	2.03	0.41
2:GD:83:LYS:CB	2:MD:23:ALA:CB	2.98	0.41
2:GD:110:LEU:HD11	2:GD:121:LEU:HD23	2.01	0.41
3:ND:86:ILE:HG22	3:ND:198:ILE:HD11	2.03	0.41
4:BE:108:GLN:NE2	4:BE:134:ARG:HH12	2.17	0.41
2:EE:159:LEU:O	2:EE:163:THR:HG22	2.20	0.41
4:IE:114:VAL:O	4:IE:114:VAL:HG23	2.20	0.41
3:LE:190:ASN:ND2	3:RE:234:PRO:HB2	2.35	0.41
4:SE:101:ILE:HG13	4:SE:106:ILE:HG21	2.02	0.41
2:WE:190:ARG:CG	2:CF:166:GLY:O	2.69	0.41
3:DF:86:ILE:HG22	3:DF:198:ILE:HD11	2.03	0.41
3:JF:122:LEU:HD22	3:JF:157:MET:HE1	2.03	0.41
2:OF:159:LEU:O	2:OF:163:THR:HG22	2.20	0.41
2:AG:159:LEU:O	2:AG:163:THR:HG22	2.20	0.41
4:CG:126:ILE:HG23	4:CG:130:GLU:HB3	2.02	0.41
3:HG:122:LEU:HD22	3:HG:157:MET:HE1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:NG:284:LEU:HB2	4:OG:120:VAL:HG22	2.02	0.41
4:QG:50:ALA:C	4:UG:80:ARG:HG2	2.41	0.41
2:J:110:LEU:HD11	2:J:121:LEU:HD23	2.01	0.41
4:R:42:LEU:O	3:V:309:VAL:HB	2.20	0.41
2:AA:196:VAL:HG23	2:AA:229:ILE:HG12	2.03	0.41
4:EA:115:ALA:HB2	3:HA:48:ARG:HH22	1.85	0.41
2:GA:79:SER:CB	2:MA:19:GLU:CB	2.99	0.41
2:GA:190:ARG:CG	2:MA:166:GLY:O	2.68	0.41
2:GA:196:VAL:HG23	2:GA:229:ILE:HG12	2.03	0.41
3:HA:284:LEU:HB2	4:IA:120:VAL:HG22	2.02	0.41
2:SA:110:LEU:HD11	2:SA:121:LEU:HD23	2.01	0.41
3:TA:64:GLN:HG2	3:TA:164:GLY:HA2	2.02	0.41
2:QB:196:VAL:HG23	2:QB:229:ILE:HG12	2.03	0.41
4:TB:68:LEU:HD12	4:TB:97:LEU:HD21	2.02	0.41
4:AC:115:ALA:HB2	3:DC:48:ARG:HH22	1.86	0.41
4:MC:52:GLN:OE1	3:PC:320:LEU:HD12	2.19	0.41
3:PC:86:ILE:HG22	3:PC:198:ILE:HD11	2.03	0.41
3:PC:284:LEU:HB2	4:QC:120:VAL:HG22	2.02	0.41
2:MD:210:GLN:HE22	2:SD:147:ALA:HB1	1.85	0.41
3:ND:284:LEU:HB2	4:OD:120:VAL:HG22	2.02	0.41
4:OD:101:ILE:HG13	4:OD:106:ILE:HG21	2.02	0.41
3:TD:86:ILE:HG22	3:TD:198:ILE:HD11	2.03	0.41
2:YD:110:LEU:HD11	2:YD:121:LEU:HD23	2.01	0.41
2:YD:159:LEU:O	2:YD:163:THR:HG22	2.20	0.41
3:ZD:284:LEU:HB2	4:AE:120:VAL:HG22	2.02	0.41
4:AE:56:LEU:HD12	4:AE:56:LEU:O	2.19	0.41
3:LE:86:ILE:HG22	3:LE:198:ILE:HD11	2.03	0.41
3:XE:189:THR:O	3:DF:237:GLU:HG2	2.21	0.41
3:DF:91:GLU:HA	3:DF:94:ARG:HD2	2.02	0.41
3:JF:86:ILE:HG22	3:JF:198:ILE:HD11	2.03	0.41
3:JF:91:GLU:HA	3:JF:94:ARG:HD2	2.02	0.41
3:PF:193:THR:HA	3:VF:236:LEU:CD1	2.50	0.41
4:SF:42:LEU:O	3:VF:309:VAL:HB	2.20	0.41
4:YF:50:ALA:C	4:CG:80:ARG:HG2	2.40	0.41
2:AG:168:GLN:OE1	3:BG:130:LEU:HD22	2.19	0.41
4:EG:52:GLN:OE1	3:HG:320:LEU:HD12	2.20	0.41
3:HG:86:ILE:HG22	3:HG:198:ILE:HD11	2.03	0.41
3:HG:162:LEU:HD13	3:HG:177:VAL:HG12	2.03	0.41
3:NG:86:ILE:HG22	3:NG:198:ILE:HD11	2.03	0.41
2:G:84:ALA:CA	2:B:23:ALA:HB1	2.51	0.41
2:G:196:VAL:HG23	2:G:229:ILE:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:162:LEU:HD13	3:M:177:VAL:HG12	2.03	0.41
4:OA:126:ILE:HG23	4:OA:130:GLU:HB3	2.02	0.41
2:YA:196:VAL:HG23	2:YA:229:ILE:HG12	2.03	0.41
4:CB:42:LEU:O	3:FB:309:VAL:HB	2.20	0.41
4:CB:114:VAL:HG23	4:CB:114:VAL:O	2.19	0.41
2:KB:83:LYS:CB	2:QB:23:ALA:CB	2.98	0.41
3:LB:162:LEU:HD13	3:LB:177:VAL:HG12	2.03	0.41
2:WB:110:LEU:HD11	2:WB:121:LEU:HD23	2.01	0.41
3:DC:162:LEU:HD13	3:DC:177:VAL:HG12	2.03	0.41
4:MC:114:VAL:HG23	4:MC:114:VAL:O	2.20	0.41
2:OC:196:VAL:HG23	2:OC:229:ILE:HG12	2.03	0.41
3:VC:162:LEU:HD13	3:VC:177:VAL:HG12	2.03	0.41
3:VC:284:LEU:HB2	4:WC:120:VAL:HG22	2.02	0.41
3:BD:96:LEU:HD23	3:BD:96:LEU:HA	1.88	0.41
3:HD:96:LEU:HD23	3:HD:96:LEU:HA	1.88	0.41
3:HD:162:LEU:HD13	3:HD:177:VAL:HG12	2.03	0.41
2:MD:196:VAL:HG23	2:MD:229:ILE:HG12	2.03	0.41
4:PD:68:LEU:HD12	4:PD:97:LEU:HD21	2.02	0.41
2:SD:196:VAL:HG23	2:SD:229:ILE:HG12	2.03	0.41
2:YD:83:LYS:CB	2:EE:23:ALA:CB	2.98	0.41
4:YE:59:ASP:OD1	4:EF:136:SER:HB2	2.21	0.41
4:AF:124:ASP:HA	3:DF:246:TRP:CH2	2.56	0.41
3:DF:162:LEU:HD13	3:DF:177:VAL:HG12	2.03	0.41
3:DF:190:ASN:ND2	3:JF:234:PRO:HB2	2.36	0.41
4:GF:52:GLN:OE1	3:JF:320:LEU:HD12	2.20	0.41
4:LF:68:LEU:HD12	4:LF:97:LEU:HD21	2.02	0.41
3:PF:107:LEU:HD12	3:PF:223:MET:HE1	2.03	0.41
3:VF:162:LEU:HD13	3:VF:177:VAL:HG12	2.03	0.41
2:SG:159:LEU:O	2:SG:163:THR:HG22	2.20	0.41
3:TG:107:LEU:HD12	3:TG:223:MET:HE1	2.03	0.41
3:M:320:LEU:HD12	4:WG:52:GLN:OE1	2.20	0.41
2:B:110:LEU:HD11	2:B:121:LEU:HD23	2.01	0.41
2:B:196:VAL:HG23	2:B:229:ILE:HG12	2.03	0.41
3:C:162:LEU:HD13	3:C:177:VAL:HG12	2.03	0.41
4:D:101:ILE:HG13	4:D:106:ILE:HG21	2.02	0.41
4:O:73:MET:O	4:R:62:VAL:N	2.42	0.41
3:V:162:LEU:HD13	3:V:177:VAL:HG12	2.03	0.41
2:MA:149:PHE:HD1	2:MA:149:PHE:HA	1.77	0.41
4:UB:42:LEU:HD12	3:XB:307:GLY:HA3	2.03	0.41
2:WB:196:VAL:HG23	2:WB:229:ILE:HG12	2.03	0.41
3:XB:162:LEU:HD13	3:XB:177:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:FC:68:LEU:HD12	4:FC:97:LEU:HD21	2.02	0.41
3:JC:284:LEU:HB2	4:KC:120:VAL:HG22	2.02	0.41
3:JC:313:TYR:HB3	4:KC:89:LEU:HD12	2.03	0.41
4:LC:68:LEU:HD12	4:LC:97:LEU:HD21	2.02	0.41
4:MC:53:ASP:O	4:QC:79:LEU:HD22	2.20	0.41
3:PC:162:LEU:HD13	3:PC:177:VAL:HG12	2.03	0.41
3:VC:86:ILE:HG22	3:VC:198:ILE:HD11	2.03	0.41
4:YC:42:LEU:HD12	3:BD:307:GLY:HA3	2.03	0.41
2:AD:159:LEU:O	2:AD:163:THR:HG22	2.20	0.41
3:BD:313:TYR:HB3	4:CD:89:LEU:HD12	2.03	0.41
2:GD:196:VAL:HG23	2:GD:229:ILE:HG12	2.03	0.41
2:SD:110:LEU:HD11	2:SD:121:LEU:HD23	2.01	0.41
4:WD:54:ILE:HD13	4:AE:79:LEU:HD11	2.03	0.41
3:ZD:162:LEU:HD13	3:ZD:177:VAL:HG12	2.03	0.41
3:NG:162:LEU:HD13	3:NG:177:VAL:HG12	2.03	0.41
4:N:126:ILE:HG23	4:N:130:GLU:HB3	2.02	0.41
3:C:86:ILE:HG22	3:C:198:ILE:HD11	2.03	0.41
3:C:284:LEU:HB2	4:D:120:VAL:HG22	2.02	0.41
4:D:67:GLU:O	4:D:97:LEU:HD13	2.21	0.41
3:K:190:ASN:ND2	3:V:234:PRO:HB2	2.36	0.41
3:K:284:LEU:HB2	4:L:120:VAL:HG22	2.02	0.41
3:V:284:LEU:HB2	4:W:120:VAL:HG22	2.02	0.41
3:BA:162:LEU:HD13	3:BA:177:VAL:HG12	2.03	0.41
3:BA:284:LEU:HB2	4:CA:120:VAL:HG22	2.02	0.41
4:CA:101:ILE:HG13	4:CA:106:ILE:HG21	2.02	0.41
4:IA:126:ILE:HG23	4:IA:130:GLU:HB3	2.02	0.41
3:NA:162:LEU:HD13	3:NA:177:VAL:HG12	2.03	0.41
4:OA:67:GLU:O	4:OA:97:LEU:HD13	2.21	0.41
2:SA:149:PHE:HD1	2:SA:149:PHE:HA	1.76	0.41
3:TA:162:LEU:HD13	3:TA:177:VAL:HG12	2.03	0.41
4:UA:126:ILE:HG23	4:UA:130:GLU:HB3	2.02	0.41
3:ZA:193:THR:HG22	3:FB:236:LEU:HD13	2.03	0.41
4:CB:52:GLN:OE1	3:FB:320:LEU:HD12	2.19	0.41
4:CB:53:ASP:O	4:GB:79:LEU:HD22	2.20	0.41
3:FB:162:LEU:HD13	3:FB:177:VAL:HG12	2.03	0.41
4:IB:114:VAL:HG23	4:IB:114:VAL:O	2.20	0.41
2:KB:105:SER:O	2:KB:109:THR:HG23	2.21	0.41
3:DC:234:PRO:HA	3:DC:235:PRO:HD3	1.95	0.41
4:EC:81:LEU:HD23	4:EC:81:LEU:HA	1.89	0.41
4:GC:42:LEU:HD12	3:JC:307:GLY:HA3	2.03	0.41
4:GC:54:ILE:HD13	4:KC:79:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:IC:210:GLN:HE22	2:OC:147:ALA:HB1	1.85	0.41
3:JC:86:ILE:HG22	3:JC:198:ILE:HD11	2.03	0.41
4:QC:67:GLU:O	4:QC:97:LEU:HD13	2.21	0.41
4:SC:52:GLN:OE1	3:VC:320:LEU:HD12	2.21	0.41
3:VC:234:PRO:HA	3:VC:235:PRO:HD3	1.95	0.41
4:WC:101:ILE:HG13	4:WC:106:ILE:HG21	2.02	0.41
4:YC:54:ILE:HD13	4:CD:79:LEU:HD11	2.03	0.41
4:YC:114:VAL:HG23	4:YC:114:VAL:O	2.20	0.41
3:BD:86:ILE:HG22	3:BD:198:ILE:HD11	2.03	0.41
3:BD:107:LEU:HD12	3:BD:223:MET:HE1	2.03	0.41
3:BD:284:LEU:HB2	4:CD:120:VAL:HG22	2.02	0.41
4:CD:67:GLU:O	4:CD:97:LEU:HD13	2.21	0.41
4:ED:42:LEU:O	3:HD:309:VAL:HB	2.20	0.41
3:HD:313:TYR:HB3	4:ID:89:LEU:HD12	2.03	0.41
4:OD:67:GLU:O	4:OD:97:LEU:HD13	2.21	0.41
2:SD:159:LEU:O	2:SD:163:THR:HG22	2.20	0.41
3:TD:313:TYR:HB3	4:UD:89:LEU:HD12	2.03	0.41
2:YD:196:VAL:HG23	2:YD:229:ILE:HG12	2.03	0.41
4:AE:67:GLU:O	4:AE:97:LEU:HD13	2.21	0.41
3:FE:122:LEU:HD22	3:FE:157:MET:HE1	2.03	0.41
4:HE:68:LEU:HD12	4:HE:97:LEU:HD21	2.02	0.41
3:LE:162:LEU:HD13	3:LE:177:VAL:HG12	2.03	0.41
4:ME:67:GLU:O	4:ME:97:LEU:HD13	2.21	0.41
4:TE:68:LEU:HD12	4:TE:97:LEU:HD21	2.02	0.41
2:WE:210:GLN:HE22	2:CF:147:ALA:HB1	1.85	0.41
4:YE:67:GLU:O	4:YE:97:LEU:HD13	2.21	0.41
4:GF:50:ALA:C	4:KF:80:ARG:HG2	2.41	0.41
4:KF:67:GLU:O	4:KF:97:LEU:HD13	2.21	0.41
3:PF:234:PRO:HA	3:PF:235:PRO:HD3	1.95	0.41
4:WF:67:GLU:O	4:WF:97:LEU:HD13	2.21	0.41
3:BG:86:ILE:HG22	3:BG:198:ILE:HD11	2.03	0.41
2:GG:159:LEU:O	2:GG:163:THR:HG22	2.20	0.41
2:MG:190:ARG:HG2	2:SG:166:GLY:C	2.42	0.41
3:NG:193:THR:HG22	3:TG:236:LEU:HD13	2.03	0.41
4:OG:101:ILE:HG13	4:OG:106:ILE:HG21	2.02	0.41
4:OG:125:ILE:HD13	4:OG:125:ILE:HA	1.95	0.41
2:SG:196:VAL:HG23	2:SG:229:ILE:HG12	2.03	0.41
3:TG:86:ILE:HG22	3:TG:198:ILE:HD11	2.03	0.41
4:UG:67:GLU:O	4:UG:97:LEU:HD13	2.21	0.41
3:M:86:ILE:HG22	3:M:198:ILE:HD11	2.03	0.41
4:D:126:ILE:HG23	4:D:130:GLU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:126:ILE:HG23	4:L:130:GLU:HB3	2.02	0.41
2:T:79:SER:CB	2:AA:19:GLU:CB	2.99	0.41
2:T:105:SER:O	2:T:109:THR:HG23	2.21	0.41
3:V:96:LEU:HD23	3:V:96:LEU:HA	1.88	0.41
4:CA:67:GLU:O	4:CA:97:LEU:HD13	2.21	0.41
4:CA:126:ILE:HG23	4:CA:130:GLU:HB3	2.02	0.41
2:SA:65:GLN:CA	2:YA:47:ILE:CB	2.95	0.41
2:SA:210:GLN:HE22	2:YA:147:ALA:HB1	1.85	0.41
4:AB:67:GLU:O	4:AB:97:LEU:HD13	2.21	0.41
4:SB:67:GLU:O	4:SB:97:LEU:HD13	2.21	0.41
2:WB:79:SER:CB	2:CC:19:GLU:CB	2.98	0.41
3:XB:86:ILE:HG22	3:XB:198:ILE:HD11	2.03	0.41
4:EC:67:GLU:O	4:EC:97:LEU:HD13	2.21	0.41
4:EC:101:ILE:HG13	4:EC:106:ILE:HG21	2.02	0.41
4:KC:126:ILE:HG23	4:KC:130:GLU:HB3	2.02	0.41
3:PC:313:TYR:HB3	4:QC:89:LEU:HD12	2.03	0.41
4:RC:68:LEU:HD12	4:RC:97:LEU:HD21	2.02	0.41
4:XC:68:LEU:HD12	4:XC:97:LEU:HD21	2.02	0.41
4:ED:52:GLN:OE1	3:HD:320:LEU:HD12	2.20	0.41
4:ED:104:TYR:CE2	3:HD:253:GLN:O	2.73	0.41
3:ND:162:LEU:HD13	3:ND:177:VAL:HG12	2.03	0.41
4:OD:81:LEU:HD23	4:OD:81:LEU:HA	1.89	0.41
4:UD:126:ILE:HG23	4:UD:130:GLU:HB3	2.02	0.41
4:WD:115:ALA:HB2	3:ZD:48:ARG:HH22	1.86	0.41
3:ZD:122:LEU:HD22	3:ZD:157:MET:HE1	2.03	0.41
3:ZD:313:TYR:HB3	4:AE:89:LEU:HD12	2.03	0.41
4:IE:50:ALA:C	4:ME:80:ARG:HG2	2.40	0.41
2:KE:196:VAL:HG23	2:KE:229:ILE:HG12	2.03	0.41
3:LE:107:LEU:HD12	3:LE:223:MET:HE1	2.02	0.41
3:RE:162:LEU:HD13	3:RE:177:VAL:HG12	2.03	0.41
4:ZE:68:LEU:HD12	4:ZE:97:LEU:HD21	2.02	0.41
3:PF:162:LEU:HD13	3:PF:177:VAL:HG12	2.03	0.41
2:AG:196:VAL:HG23	2:AG:229:ILE:HG12	2.03	0.41
2:MG:159:LEU:O	2:MG:163:THR:HG22	2.20	0.41
2:MG:190:ARG:CG	2:SG:166:GLY:C	2.90	0.41
4:UG:126:ILE:HG23	4:UG:130:GLU:HB3	2.02	0.41
4:P:73:MET:O	4:Q:62:VAL:N	2.42	0.40
2:J:105:SER:O	2:J:109:THR:HG23	2.21	0.40
3:V:313:TYR:HB3	4:W:89:LEU:HD12	2.03	0.40
2:AA:110:LEU:HD11	2:AA:121:LEU:HD23	2.01	0.40
3:NA:190:ASN:ND2	3:TA:234:PRO:HB2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:TA:190:ASN:ND2	3:ZA:234:PRO:HB2	2.36	0.40
2:EB:105:SER:O	2:EB:109:THR:HG23	2.22	0.40
4:GB:67:GLU:O	4:GB:97:LEU:HD13	2.21	0.40
3:RB:313:TYR:HB3	4:SB:89:LEU:HD12	2.03	0.40
4:UB:115:ALA:HB2	3:XB:48:ARG:HH22	1.86	0.40
3:DC:190:ASN:ND2	3:JC:234:PRO:HB2	2.36	0.40
4:GC:50:ALA:C	4:KC:80:ARG:HG2	2.41	0.40
3:JC:193:THR:HA	3:PC:236:LEU:CD1	2.50	0.40
3:HD:284:LEU:HB2	4:ID:120:VAL:HG22	2.02	0.40
4:JD:68:LEU:HD12	4:JD:97:LEU:HD21	2.02	0.40
2:MD:159:LEU:O	2:MD:163:THR:HG22	2.20	0.40
4:WD:42:LEU:HD12	3:ZD:307:GLY:HA3	2.03	0.40
2:EE:196:VAL:HG23	2:EE:229:ILE:HG12	2.03	0.40
2:QE:196:VAL:HG23	2:QE:229:ILE:HG12	2.03	0.40
3:RE:189:THR:O	3:XE:237:GLU:HG2	2.21	0.40
3:DF:107:LEU:HD12	3:DF:223:MET:HE1	2.02	0.40
4:YF:52:GLN:OE1	3:BG:320:LEU:HD12	2.20	0.40
3:BG:193:THR:HA	3:HG:236:LEU:CD1	2.51	0.40
4:IG:67:GLU:O	4:IG:97:LEU:HD13	2.21	0.40
2:MG:196:VAL:HG23	2:MG:229:ILE:HG12	2.03	0.40
3:NG:313:TYR:HB3	4:OG:89:LEU:HD12	2.03	0.40
2:B:65:GLN:CA	2:J:47:ILE:CB	2.96	0.40
4:H:115:ALA:HB2	3:K:48:ARG:HH22	1.86	0.40
3:K:234:PRO:HA	3:K:235:PRO:HD3	1.95	0.40
3:V:122:LEU:HD22	3:V:157:MET:HE1	2.04	0.40
2:AA:105:SER:O	2:AA:109:THR:HG23	2.21	0.40
3:BA:96:LEU:HD23	3:BA:96:LEU:HA	1.88	0.40
4:EA:52:GLN:OE1	3:HA:320:LEU:HD12	2.19	0.40
3:NA:96:LEU:HD23	3:NA:96:LEU:HA	1.88	0.40
4:UA:67:GLU:O	4:UA:97:LEU:HD13	2.21	0.40
4:GB:126:ILE:HG23	4:GB:130:GLU:HB3	2.02	0.40
2:QB:105:SER:O	2:QB:109:THR:HG23	2.21	0.40
4:SB:125:ILE:HD13	4:SB:125:ILE:HA	1.95	0.40
3:DC:86:ILE:HG22	3:DC:198:ILE:HD11	2.03	0.40
3:PC:122:LEU:HD22	3:PC:157:MET:HE1	2.03	0.40
2:UC:105:SER:O	2:UC:109:THR:HG23	2.21	0.40
4:WD:38:VAL:CG2	4:AE:113:VAL:HB	2.51	0.40
4:IE:52:GLN:OE1	3:LE:320:LEU:HD12	2.19	0.40
3:LE:313:TYR:HB3	4:ME:89:LEU:HD12	2.03	0.40
4:OE:52:GLN:OE1	3:RE:320:LEU:HD12	2.19	0.40
3:RE:313:TYR:HB3	4:SE:89:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:EF:126:ILE:HG23	4:EF:130:GLU:HB3	2.02	0.40
2:GG:196:VAL:HG23	2:GG:229:ILE:HG12	2.03	0.40
4:OG:126:ILE:HG23	4:OG:130:GLU:HB3	2.02	0.40
4:PG:73:MET:O	4:QG:62:VAL:N	2.42	0.40
3:M:309:VAL:HB	4:WG:42:LEU:O	2.21	0.40
2:B:105:SER:O	2:B:109:THR:HG23	2.21	0.40
3:K:313:TYR:HB3	4:L:89:LEU:HD12	2.03	0.40
4:R:38:VAL:CG2	4:W:113:VAL:HB	2.50	0.40
4:W:67:GLU:O	4:W:97:LEU:HD13	2.21	0.40
4:W:126:ILE:HG23	4:W:130:GLU:HB3	2.02	0.40
4:IA:67:GLU:O	4:IA:97:LEU:HD13	2.21	0.40
2:SA:79:SER:CB	2:YA:19:GLU:CB	2.99	0.40
2:SA:191:SER:O	2:YA:166:GLY:CA	2.69	0.40
4:UA:101:ILE:HG13	4:UA:106:ILE:HG21	2.02	0.40
4:WA:115:ALA:HB2	3:ZA:48:ARG:HH22	1.86	0.40
4:MB:67:GLU:O	4:MB:97:LEU:HD13	2.21	0.40
3:RB:86:ILE:HG22	3:RB:198:ILE:HD11	2.03	0.40
3:XB:313:TYR:HB3	4:YB:89:LEU:HD12	2.03	0.40
3:JC:193:THR:HG22	3:PC:236:LEU:HD13	2.04	0.40
2:OC:105:SER:O	2:OC:109:THR:HG23	2.21	0.40
4:WC:81:LEU:HD23	4:WC:81:LEU:HA	1.89	0.40
2:AD:105:SER:O	2:AD:109:THR:HG23	2.21	0.40
4:DD:68:LEU:HD12	4:DD:97:LEU:HD21	2.02	0.40
3:HD:190:ASN:ND2	3:ND:234:PRO:HB2	2.36	0.40
3:TD:162:LEU:HD13	3:TD:177:VAL:HG12	2.03	0.40
4:VD:68:LEU:HD12	4:VD:97:LEU:HD21	2.02	0.40
4:ME:81:LEU:HD23	4:ME:81:LEU:HA	1.89	0.40
4:NE:68:LEU:HD12	4:NE:97:LEU:HD21	2.02	0.40
4:AF:38:VAL:CG1	4:EF:118:TYR:HE1	2.33	0.40
2:CF:83:LYS:CB	2:IF:23:ALA:CB	2.99	0.40
3:DF:122:LEU:HD22	3:DF:157:MET:HE1	2.04	0.40
2:IF:196:VAL:HG23	2:IF:229:ILE:HG12	2.03	0.40
2:OF:196:VAL:HG23	2:OF:229:ILE:HG12	2.03	0.40
2:UF:210:GLN:HE22	2:AG:147:ALA:HB1	1.87	0.40
3:VF:190:ASN:ND2	3:BG:234:PRO:HB2	2.36	0.40
3:TG:313:TYR:HB3	4:UG:89:LEU:HD12	2.03	0.40
4:N:81:LEU:HD23	4:N:81:LEU:HA	1.89	0.40
3:K:86:ILE:HG22	3:K:198:ILE:HD11	2.03	0.40
3:K:107:LEU:HD12	3:K:223:MET:HE1	2.04	0.40
3:BA:193:THR:HA	3:HA:236:LEU:CD1	2.51	0.40
2:YA:105:SER:O	2:YA:109:THR:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:EB:65:GLN:CA	2:KB:47:ILE:CB	2.96	0.40
2:EB:79:SER:CB	2:KB:19:GLU:CB	2.98	0.40
4:MB:59:ASP:OD1	4:SB:136:SER:HB2	2.20	0.40
4:MB:101:ILE:HG13	4:MB:106:ILE:HG21	2.02	0.40
4:UB:54:ILE:HD13	4:YB:79:LEU:HD11	2.03	0.40
3:XB:190:ASN:ND2	3:DC:234:PRO:HB2	2.36	0.40
3:DC:313:TYR:HB3	4:EC:89:LEU:HD12	2.03	0.40
4:SC:54:ILE:HD12	4:SC:54:ILE:HA	1.93	0.40
4:SC:74:THR:HG23	4:SC:76:LYS:HB2	2.04	0.40
4:SC:114:VAL:O	4:SC:114:VAL:HG23	2.20	0.40
4:XC:73:MET:HE1	4:XC:81:LEU:HD11	2.04	0.40
4:ED:74:THR:HG23	4:ED:76:LYS:HB2	2.04	0.40
2:GD:159:LEU:O	2:GD:163:THR:HG22	2.20	0.40
4:QD:74:THR:HG23	4:QD:76:LYS:HB2	2.04	0.40
4:IE:115:ALA:HB2	3:LE:48:ARG:HH22	1.86	0.40
2:QE:79:SER:CB	2:WE:19:GLU:CB	2.99	0.40
2:QE:149:PHE:HD1	2:QE:149:PHE:HA	1.76	0.40
3:RE:107:LEU:HD12	3:RE:223:MET:HE1	2.03	0.40
2:WE:196:VAL:HG23	2:WE:229:ILE:HG12	2.03	0.40
2:CF:196:VAL:HG23	2:CF:229:ILE:HG12	2.03	0.40
2:IF:191:SER:O	2:OF:166:GLY:CA	2.70	0.40
4:KF:125:ILE:HD13	4:KF:125:ILE:HA	1.95	0.40
4:LF:101:ILE:HG13	4:LF:106:ILE:HD13	2.04	0.40
4:RF:101:ILE:HG13	4:RF:106:ILE:HD13	2.04	0.40
2:UF:196:VAL:HG23	2:UF:229:ILE:HG12	2.03	0.40
4:YF:42:LEU:HD12	3:BG:307:GLY:HA3	2.03	0.40
2:AG:105:SER:O	2:AG:109:THR:HG23	2.22	0.40
2:GG:105:SER:O	2:GG:109:THR:HG23	2.21	0.40
3:HG:189:THR:O	3:NG:237:GLU:HG2	2.21	0.40
3:HG:313:TYR:HB3	4:IG:89:LEU:HD12	2.03	0.40
4:IG:126:ILE:HG23	4:IG:130:GLU:HB3	2.02	0.40
4:JG:101:ILE:HG13	4:JG:106:ILE:HD13	2.04	0.40
4:QG:62:VAL:HG11	4:QG:101:ILE:HB	2.04	0.40
4:Q:54:ILE:HD13	4:D:79:LEU:HD11	2.04	0.40
3:K:210:ASN:OD1	3:K:210:ASN:N	2.50	0.40
4:L:67:GLU:O	4:L:97:LEU:HD13	2.21	0.40
4:X:73:MET:HE1	4:X:81:LEU:HD11	2.03	0.40
4:Y:50:ALA:C	4:CA:80:ARG:HG2	2.42	0.40
3:BA:86:ILE:HG22	3:BA:198:ILE:HD11	2.03	0.40
3:FB:86:ILE:HG22	3:FB:198:ILE:HD11	2.02	0.40
3:FB:107:LEU:HD12	3:FB:223:MET:HE1	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LB:107:LEU:HD12	3:LB:223:MET:HE1	2.03	0.40
4:UB:52:GLN:OE1	3:XB:320:LEU:HD12	2.19	0.40
4:UB:74:THR:HG23	4:UB:76:LYS:HB2	2.04	0.40
4:YB:67:GLU:O	4:YB:97:LEU:HD13	2.21	0.40
4:AC:38:VAL:CG2	4:EC:113:VAL:HB	2.51	0.40
4:GC:62:VAL:HG11	4:GC:101:ILE:HB	2.04	0.40
4:MC:62:VAL:HG11	4:MC:101:ILE:HB	2.04	0.40
4:SC:42:LEU:O	3:VC:309:VAL:HB	2.22	0.40
3:VC:190:ASN:ND2	3:BD:234:PRO:HB2	2.36	0.40
4:ED:38:VAL:CG2	4:ID:113:VAL:HB	2.51	0.40
4:KD:42:LEU:HD12	3:ND:307:GLY:HA3	2.04	0.40
4:WD:50:ALA:C	4:AE:80:ARG:HG2	2.41	0.40
2:EE:84:ALA:CA	2:KE:23:ALA:HB1	2.51	0.40
4:TE:101:ILE:HG13	4:TE:106:ILE:HD13	2.04	0.40
4:FF:101:ILE:HG13	4:FF:106:ILE:HD13	2.04	0.40
3:JF:162:LEU:HD13	3:JF:177:VAL:HG12	2.03	0.40
4:QF:67:GLU:O	4:QF:97:LEU:HD13	2.21	0.40
4:DG:101:ILE:HG13	4:DG:106:ILE:HD13	2.04	0.40
4:VG:101:ILE:HG13	4:VG:106:ILE:HD13	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	BC	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	BF	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	DB	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	DE	44/560 (8%)	43 (98%)	1 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	F	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	FA	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	FD	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	FG	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	HC	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	HF	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	I	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	JB	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	JE	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	LA	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	LD	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	LG	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	NC	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	NF	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	PB	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	PE	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	RA	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	RD	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	RG	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	S	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	TC	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	TF	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	VB	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	VE	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	XA	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	XD	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	Z	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	ZC	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
1	ZF	44/560 (8%)	43 (98%)	1 (2%)	0	100	100
2	AA	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	AD	317/331 (96%)	310 (98%)	7 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AG	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	B	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	CC	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	CF	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	EB	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	EE	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	G	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	GA	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	GD	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	GG	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	IC	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	IF	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	J	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	KB	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	KE	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	MA	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	MD	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	MG	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	OC	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	OF	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	QB	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	QE	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	SA	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	SD	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	SG	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	T	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	UC	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	UF	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	WB	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	WE	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
2	YA	317/331 (96%)	310 (98%)	7 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	YD	317/331 (96%)	310 (98%)	7 (2%)	0	100	100
3	BA	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	BD	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	BG	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	C	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	DC	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	DF	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	FB	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	FE	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	HA	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	HD	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	HG	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	JC	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	JF	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	K	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	LB	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	LE	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	M	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	NA	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	ND	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	NG	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	PC	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	PF	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	RB	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	RE	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	TA	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	TD	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	TG	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	V	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	VC	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	VF	289/334 (86%)	276 (96%)	13 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	XB	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	XE	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	ZA	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
3	ZD	289/334 (86%)	276 (96%)	13 (4%)	0	100	100
4	AB	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	AC	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	AE	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	AF	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	BB	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	BE	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	CA	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	CB	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	CD	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	CE	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	CG	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	D	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	DA	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	DD	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	DG	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	E	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	EA	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	EC	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	ED	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	EF	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	EG	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	FC	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	FF	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	GB	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	GC	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	GE	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	GF	98/137 (72%)	92 (94%)	6 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	H	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	HB	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	HE	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	IA	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	IB	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	ID	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	IE	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	IG	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	JA	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	JD	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	JG	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	KA	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	KC	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	KD	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	KF	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	KG	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	L	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	LC	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	LF	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	MB	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	MC	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	ME	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	MF	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	N	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	NB	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	NE	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	O	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	OA	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	OB	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	OD	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	OE	98/137 (72%)	92 (94%)	6 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	OG	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	P	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	PA	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	PD	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	PG	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	Q	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	QA	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	QC	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	QD	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	QF	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	QG	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	R	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	RC	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	RF	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	SB	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	SC	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	SE	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	SF	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	TB	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	TE	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	UA	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	UB	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	UD	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	UE	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	UG	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	VA	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	VD	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	VG	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	W	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	WA	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	WC	84/137 (61%)	76 (90%)	8 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	WD	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	WF	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	WG	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	X	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	XC	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	XF	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	Y	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	YB	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	YC	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	YE	84/137 (61%)	76 (90%)	8 (10%)	0	100	100
4	YF	98/137 (72%)	92 (94%)	6 (6%)	0	100	100
4	ZB	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
4	ZE	81/137 (59%)	76 (94%)	5 (6%)	0	100	100
All	All	31042/55624 (56%)	29682 (96%)	1360 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	
2	AA	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	AD	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	AG	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	B	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	CC	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	CF	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	EB	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	EE	92/282 (33%)	90 (98%)	2 (2%)	47	76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	G	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	GA	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	GD	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	GG	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	IC	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	IF	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	J	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	KB	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	KE	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	MA	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	MD	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	MG	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	OC	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	OF	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	QB	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	QE	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	SA	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	SD	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	SG	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	T	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	UC	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	UF	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	WB	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	WE	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	YA	92/282 (33%)	90 (98%)	2 (2%)	47	76
2	YD	92/282 (33%)	90 (98%)	2 (2%)	47	76
3	BA	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	BD	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	BG	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	C	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	DC	248/301 (82%)	247 (100%)	1 (0%)	89	95

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	DF	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	FB	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	FE	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	HA	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	HD	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	HG	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	JC	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	JF	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	K	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	LB	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	LE	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	M	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	NA	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	ND	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	NG	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	PC	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	PF	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	RB	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	RE	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	TA	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	TD	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	TG	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	V	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	VC	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	VF	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	XB	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	XE	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	ZA	248/301 (82%)	247 (100%)	1 (0%)	89	95
3	ZD	248/301 (82%)	247 (100%)	1 (0%)	89	95
4	AB	71/113 (63%)	71 (100%)	0	100	100
4	AC	80/113 (71%)	80 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AE	71/113 (63%)	71 (100%)	0	100	100
4	AF	80/113 (71%)	80 (100%)	0	100	100
4	BB	69/113 (61%)	69 (100%)	0	100	100
4	BE	69/113 (61%)	69 (100%)	0	100	100
4	CA	71/113 (63%)	71 (100%)	0	100	100
4	CB	80/113 (71%)	80 (100%)	0	100	100
4	CD	71/113 (63%)	71 (100%)	0	100	100
4	CE	80/113 (71%)	80 (100%)	0	100	100
4	CG	71/113 (63%)	71 (100%)	0	100	100
4	D	71/113 (63%)	71 (100%)	0	100	100
4	DA	69/113 (61%)	69 (100%)	0	100	100
4	DD	69/113 (61%)	69 (100%)	0	100	100
4	DG	69/113 (61%)	69 (100%)	0	100	100
4	E	69/113 (61%)	69 (100%)	0	100	100
4	EA	80/113 (71%)	80 (100%)	0	100	100
4	EC	71/113 (63%)	71 (100%)	0	100	100
4	ED	80/113 (71%)	80 (100%)	0	100	100
4	EF	71/113 (63%)	71 (100%)	0	100	100
4	EG	80/113 (71%)	80 (100%)	0	100	100
4	FC	69/113 (61%)	69 (100%)	0	100	100
4	FF	69/113 (61%)	69 (100%)	0	100	100
4	GB	71/113 (63%)	71 (100%)	0	100	100
4	GC	80/113 (71%)	80 (100%)	0	100	100
4	GE	71/113 (63%)	71 (100%)	0	100	100
4	GF	80/113 (71%)	80 (100%)	0	100	100
4	H	80/113 (71%)	80 (100%)	0	100	100
4	HB	69/113 (61%)	69 (100%)	0	100	100
4	HE	69/113 (61%)	69 (100%)	0	100	100
4	IA	71/113 (63%)	71 (100%)	0	100	100
4	IB	80/113 (71%)	80 (100%)	0	100	100
4	ID	71/113 (63%)	71 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	IE	80/113 (71%)	80 (100%)	0	100	100
4	IG	71/113 (63%)	71 (100%)	0	100	100
4	JA	69/113 (61%)	69 (100%)	0	100	100
4	JD	69/113 (61%)	69 (100%)	0	100	100
4	JG	69/113 (61%)	69 (100%)	0	100	100
4	KA	80/113 (71%)	80 (100%)	0	100	100
4	KC	71/113 (63%)	71 (100%)	0	100	100
4	KD	80/113 (71%)	80 (100%)	0	100	100
4	KF	71/113 (63%)	71 (100%)	0	100	100
4	KG	80/113 (71%)	80 (100%)	0	100	100
4	L	71/113 (63%)	71 (100%)	0	100	100
4	LC	69/113 (61%)	69 (100%)	0	100	100
4	LF	69/113 (61%)	69 (100%)	0	100	100
4	MB	71/113 (63%)	71 (100%)	0	100	100
4	MC	80/113 (71%)	80 (100%)	0	100	100
4	ME	71/113 (63%)	71 (100%)	0	100	100
4	MF	80/113 (71%)	80 (100%)	0	100	100
4	N	71/113 (63%)	71 (100%)	0	100	100
4	NB	69/113 (61%)	69 (100%)	0	100	100
4	NE	69/113 (61%)	69 (100%)	0	100	100
4	O	69/113 (61%)	69 (100%)	0	100	100
4	OA	71/113 (63%)	71 (100%)	0	100	100
4	OB	80/113 (71%)	80 (100%)	0	100	100
4	OD	71/113 (63%)	71 (100%)	0	100	100
4	OE	80/113 (71%)	80 (100%)	0	100	100
4	OG	71/113 (63%)	71 (100%)	0	100	100
4	P	69/113 (61%)	69 (100%)	0	100	100
4	PA	69/113 (61%)	69 (100%)	0	100	100
4	PD	69/113 (61%)	69 (100%)	0	100	100
4	PG	69/113 (61%)	69 (100%)	0	100	100
4	Q	80/113 (71%)	80 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	QA	80/113 (71%)	80 (100%)	0	100	100
4	QC	71/113 (63%)	71 (100%)	0	100	100
4	QD	80/113 (71%)	80 (100%)	0	100	100
4	QF	71/113 (63%)	71 (100%)	0	100	100
4	QG	80/113 (71%)	80 (100%)	0	100	100
4	R	80/113 (71%)	80 (100%)	0	100	100
4	RC	69/113 (61%)	69 (100%)	0	100	100
4	RF	69/113 (61%)	69 (100%)	0	100	100
4	SB	71/113 (63%)	71 (100%)	0	100	100
4	SC	80/113 (71%)	80 (100%)	0	100	100
4	SE	71/113 (63%)	71 (100%)	0	100	100
4	SF	80/113 (71%)	80 (100%)	0	100	100
4	TB	69/113 (61%)	69 (100%)	0	100	100
4	TE	69/113 (61%)	69 (100%)	0	100	100
4	UA	71/113 (63%)	71 (100%)	0	100	100
4	UB	80/113 (71%)	80 (100%)	0	100	100
4	UD	71/113 (63%)	71 (100%)	0	100	100
4	UE	80/113 (71%)	80 (100%)	0	100	100
4	UG	71/113 (63%)	71 (100%)	0	100	100
4	VA	69/113 (61%)	69 (100%)	0	100	100
4	VD	69/113 (61%)	69 (100%)	0	100	100
4	VG	69/113 (61%)	69 (100%)	0	100	100
4	W	71/113 (63%)	71 (100%)	0	100	100
4	WA	80/113 (71%)	80 (100%)	0	100	100
4	WC	71/113 (63%)	71 (100%)	0	100	100
4	WD	80/113 (71%)	80 (100%)	0	100	100
4	WF	71/113 (63%)	71 (100%)	0	100	100
4	WG	80/113 (71%)	80 (100%)	0	100	100
4	X	69/113 (61%)	69 (100%)	0	100	100
4	XC	69/113 (61%)	69 (100%)	0	100	100
4	XF	69/113 (61%)	69 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	Y	80/113 (71%)	80 (100%)	0	100	100
4	YB	71/113 (63%)	71 (100%)	0	100	100
4	YC	80/113 (71%)	80 (100%)	0	100	100
4	YE	71/113 (63%)	71 (100%)	0	100	100
4	YF	80/113 (71%)	80 (100%)	0	100	100
4	ZB	69/113 (61%)	69 (100%)	0	100	100
4	ZE	69/113 (61%)	69 (100%)	0	100	100
All	All	19040/31348 (61%)	18938 (100%)	102 (0%)	85	94

All (102) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	G	149	PHE
2	G	184	ASP
3	M	216	ASN
2	B	149	PHE
2	B	184	ASP
3	C	216	ASN
2	J	149	PHE
2	J	184	ASP
3	K	216	ASN
2	T	149	PHE
2	T	184	ASP
3	V	216	ASN
2	AA	149	PHE
2	AA	184	ASP
3	BA	216	ASN
2	GA	149	PHE
2	GA	184	ASP
3	HA	216	ASN
2	MA	149	PHE
2	MA	184	ASP
3	NA	216	ASN
2	SA	149	PHE
2	SA	184	ASP
3	TA	216	ASN
2	YA	149	PHE
2	YA	184	ASP
3	ZA	216	ASN
2	EB	149	PHE

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Mol	Chain	Res	Type
2	EB	184	ASP
3	FB	216	ASN
2	KB	149	PHE
2	KB	184	ASP
3	LB	216	ASN
2	QB	149	PHE
2	QB	184	ASP
3	RB	216	ASN
2	WB	149	PHE
2	WB	184	ASP
3	XB	216	ASN
2	CC	149	PHE
2	CC	184	ASP
3	DC	216	ASN
2	IC	149	PHE
2	IC	184	ASP
3	JC	216	ASN
2	OC	149	PHE
2	OC	184	ASP
3	PC	216	ASN
2	UC	149	PHE
2	UC	184	ASP
3	VC	216	ASN
2	AD	149	PHE
2	AD	184	ASP
3	BD	216	ASN
2	GD	149	PHE
2	GD	184	ASP
3	HD	216	ASN
2	MD	149	PHE
2	MD	184	ASP
3	ND	216	ASN
2	SD	149	PHE
2	SD	184	ASP
3	TD	216	ASN
2	YD	149	PHE
2	YD	184	ASP
3	ZD	216	ASN
2	EE	149	PHE
2	EE	184	ASP
3	FE	216	ASN
2	KE	149	PHE

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Mol	Chain	Res	Type
2	KE	184	ASP
3	LE	216	ASN
2	QE	149	PHE
2	QE	184	ASP
3	RE	216	ASN
2	WE	149	PHE
2	WE	184	ASP
3	XE	216	ASN
2	CF	149	PHE
2	CF	184	ASP
3	DF	216	ASN
2	IF	149	PHE
2	IF	184	ASP
3	JF	216	ASN
2	OF	149	PHE
2	OF	184	ASP
3	PF	216	ASN
2	UF	149	PHE
2	UF	184	ASP
3	VF	216	ASN
2	AG	149	PHE
2	AG	184	ASP
3	BG	216	ASN
2	GG	149	PHE
2	GG	184	ASP
3	HG	216	ASN
2	MG	149	PHE
2	MG	184	ASP
3	NG	216	ASN
2	SG	149	PHE
2	SG	184	ASP
3	TG	216	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (36) such sidechains are listed below:

Mol	Chain	Res	Type
4	P	108	GLN
4	E	108	GLN
3	K	58	ASN
4	O	108	GLN
4	X	108	GLN
4	DA	108	GLN

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Mol	Chain	Res	Type
3	HA	58	ASN
4	JA	108	GLN
4	PA	108	GLN
4	VA	108	GLN
4	BB	108	GLN
4	HB	108	GLN
4	NB	108	GLN
4	TB	108	GLN
4	ZB	108	GLN
4	FC	108	GLN
4	LC	108	GLN
4	RC	108	GLN
4	XC	108	GLN
4	DD	108	GLN
4	JD	108	GLN
4	PD	108	GLN
4	VD	108	GLN
4	BE	108	GLN
4	HE	108	GLN
4	NE	108	GLN
4	TE	108	GLN
4	ZE	108	GLN
4	FF	108	GLN
4	LF	108	GLN
4	RF	108	GLN
4	XF	108	GLN
4	DG	108	GLN
4	JG	108	GLN
4	PG	108	GLN
4	VG	108	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

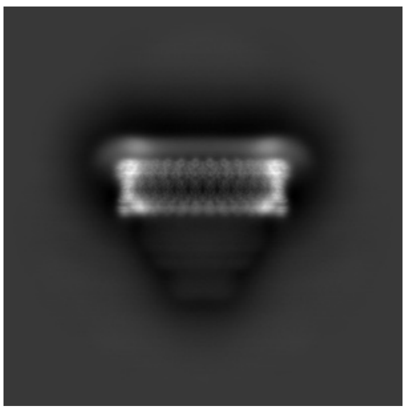
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-48916. These allow visual inspection of the internal detail of the map and identification of artifacts.

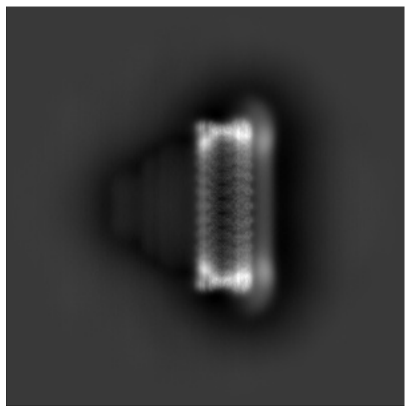
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

6.1.1 Primary map



X



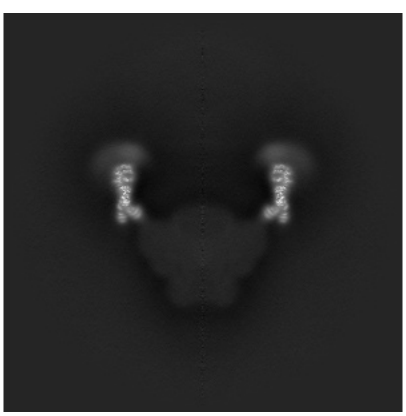
Y

Z

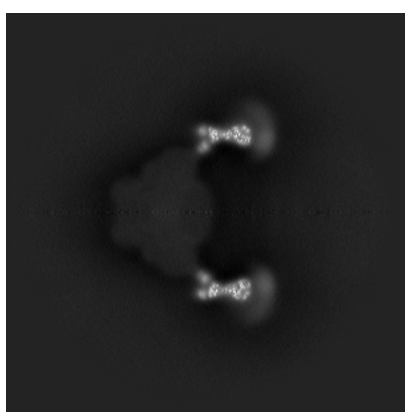
The images above show the map projected in three orthogonal directions.

6.2 Central slices

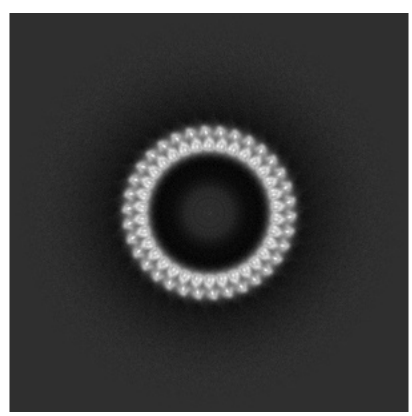
6.2.1 Primary map



X Index: 384



Y Index: 384

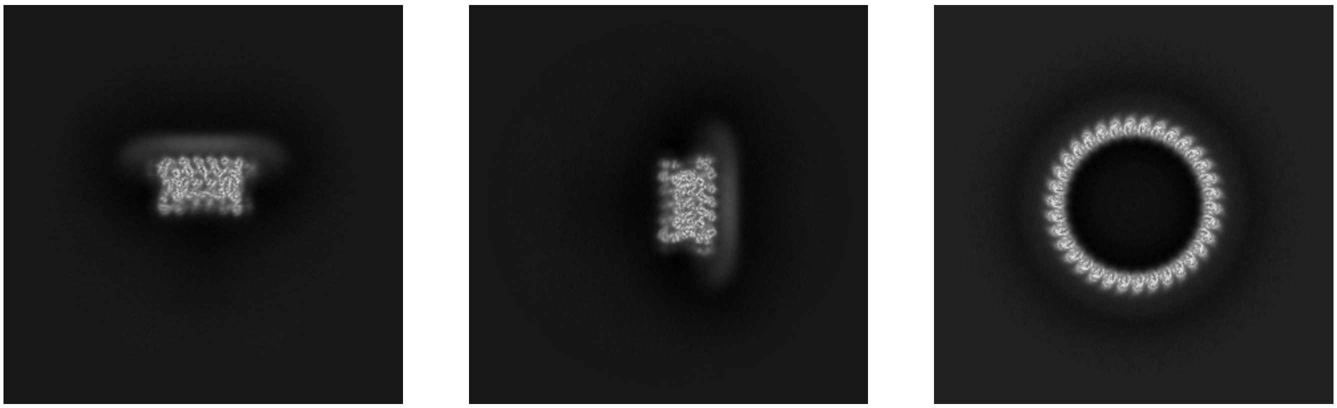


Z Index: 384

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

6.3 Largest variance slices ⓘ

6.3.1 Primary map

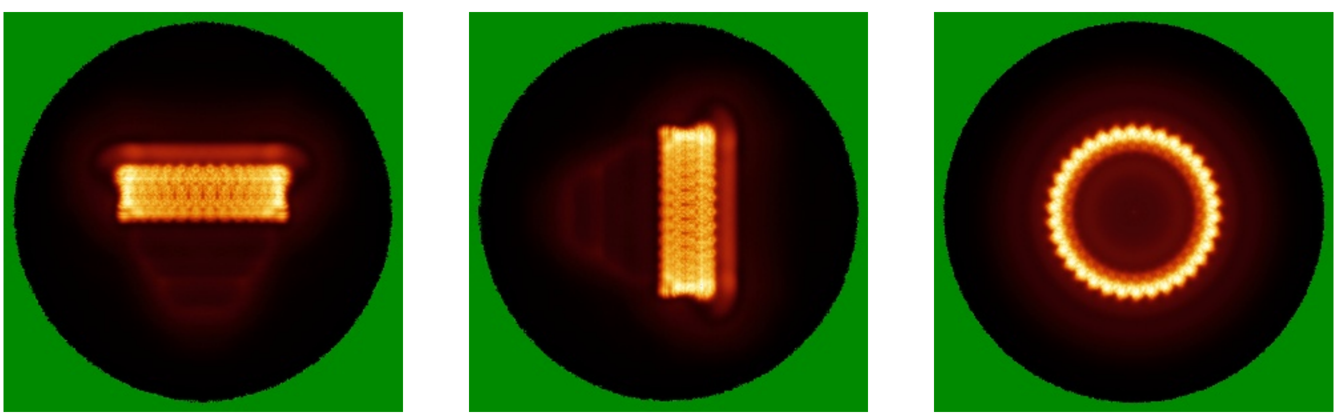


X Index: 242 Y Index: 527 Z Index: 447

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

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.135. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

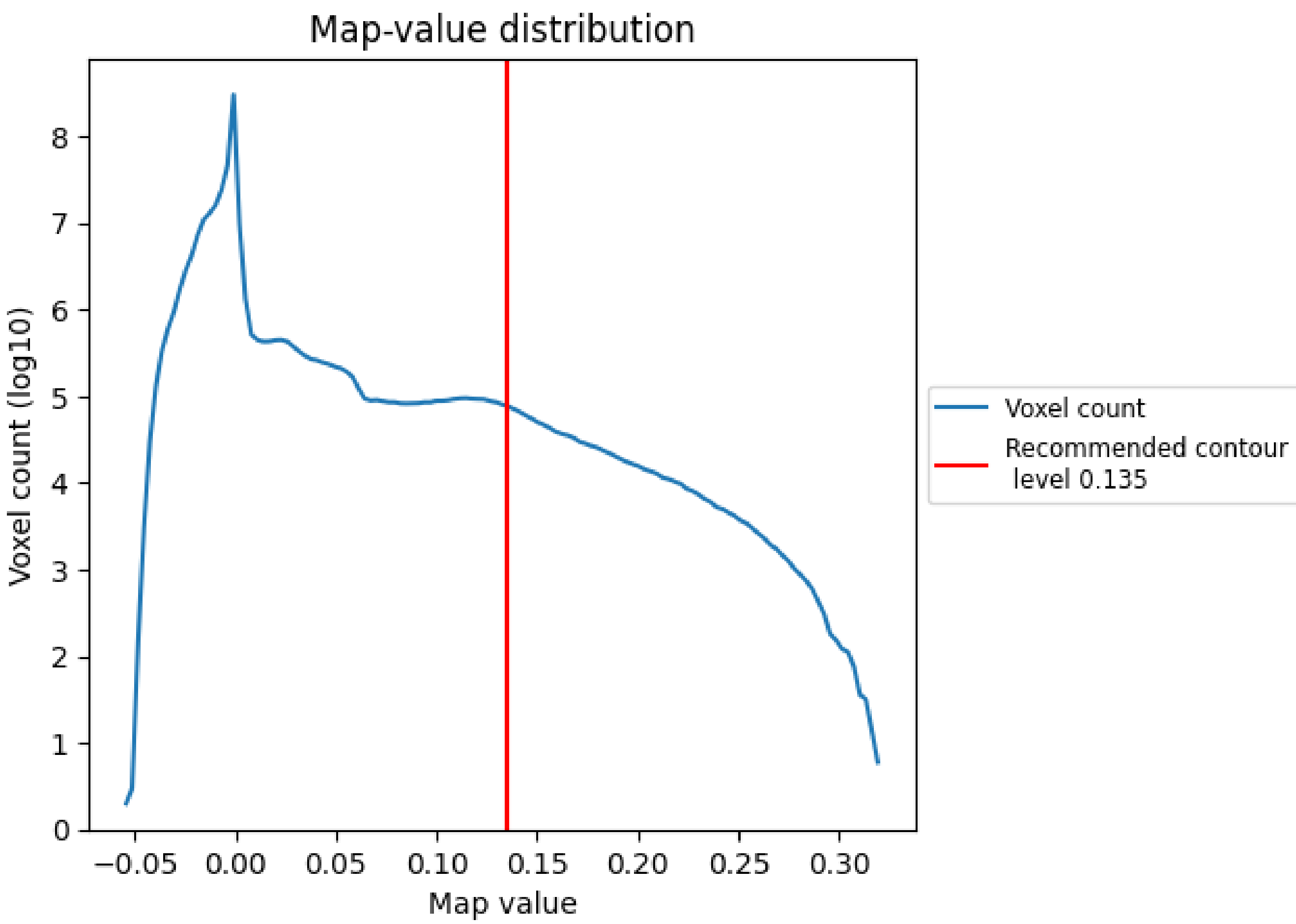
6.6 Mask visualisation (i)

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

7 Map analysis (i)

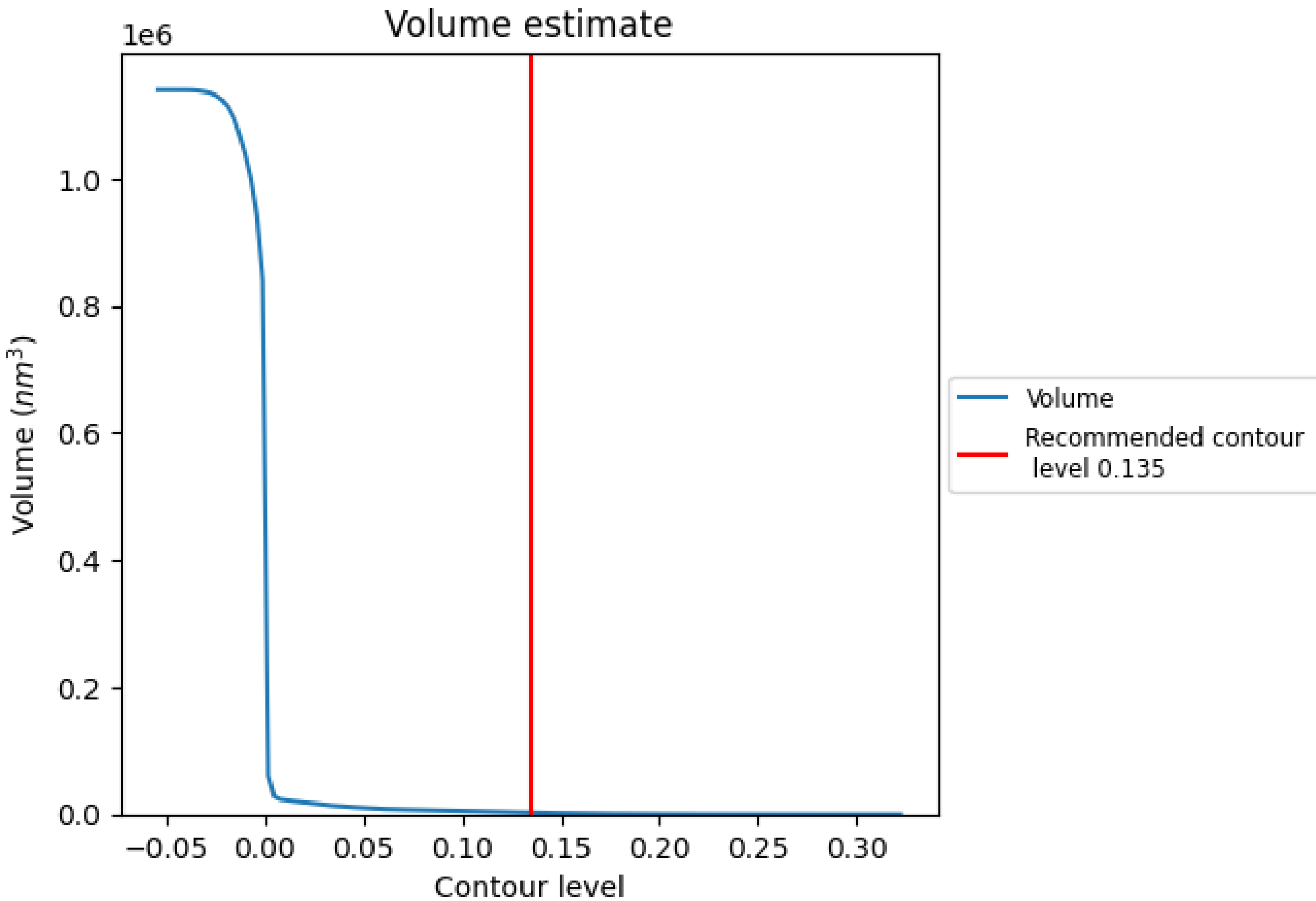
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution (i)



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

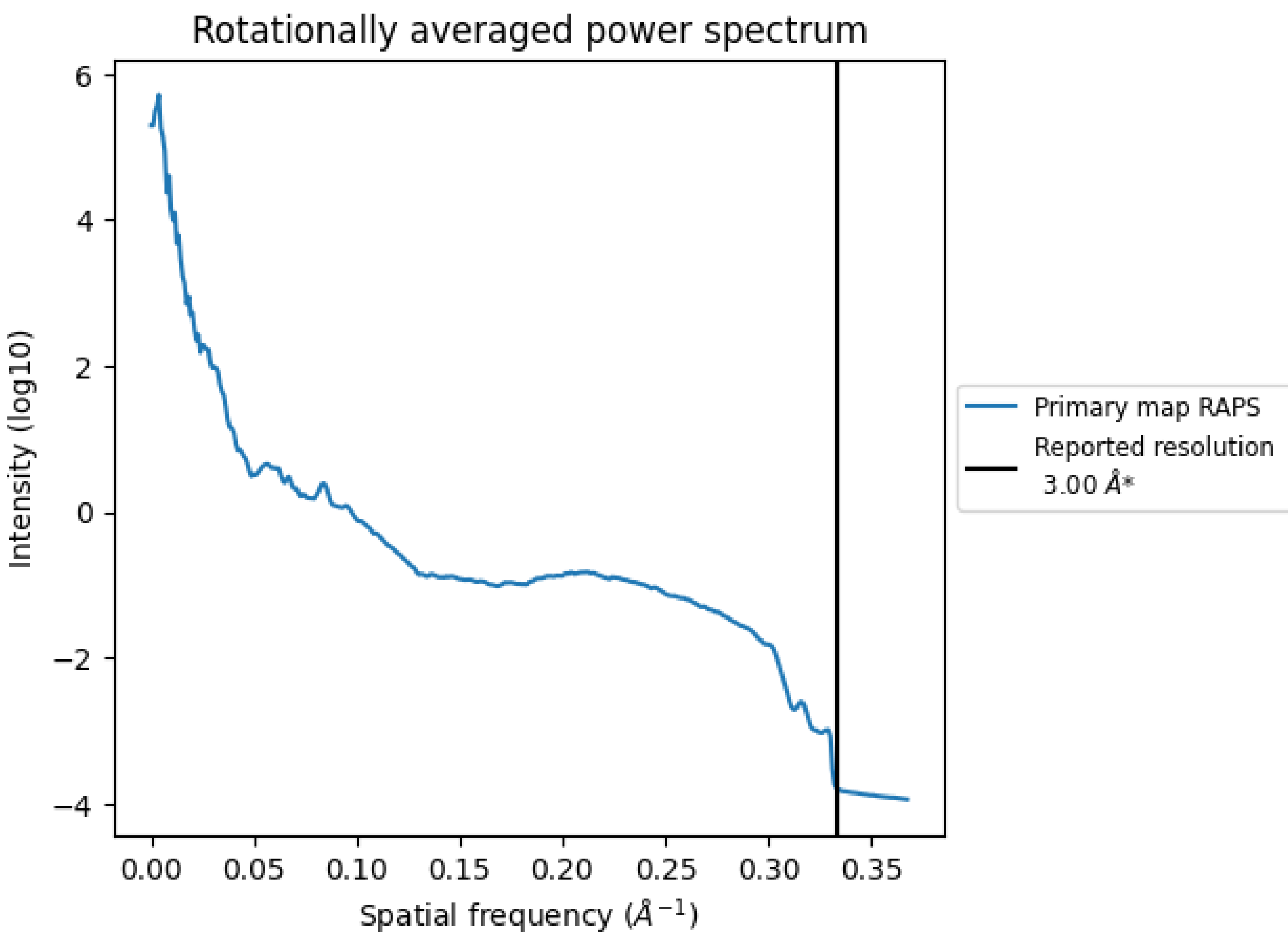
7.2 Volume estimate (i)



The volume at the recommended contour level is 2617 nm^3; this corresponds to an approximate mass of 2364 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.333 Å^{-1}

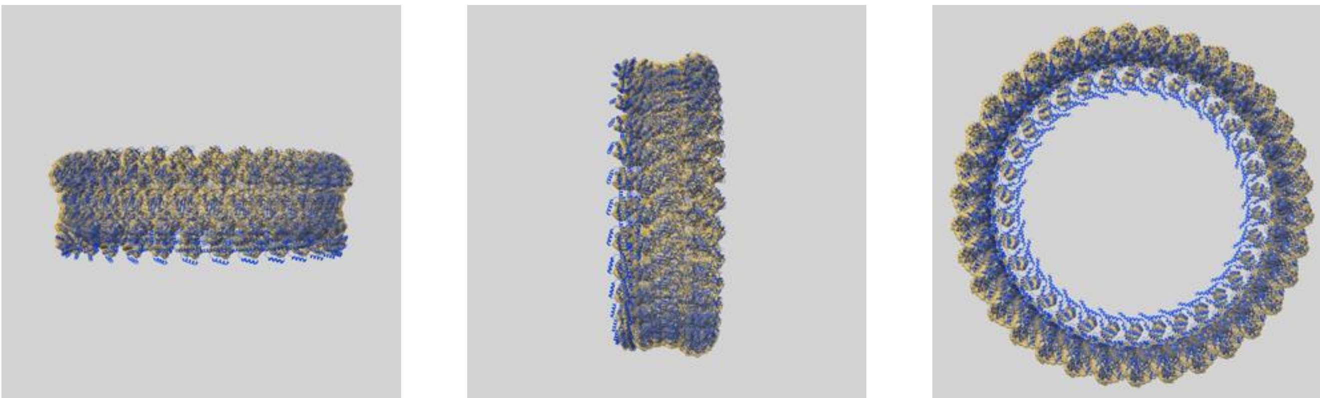
8 Fourier-Shell correlation (i)

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

9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-48916 and PDB model 9N4Z. Per-residue inclusion information can be found in section 3 on page 22.

9.1 Map-model overlay (i)



X Y Z

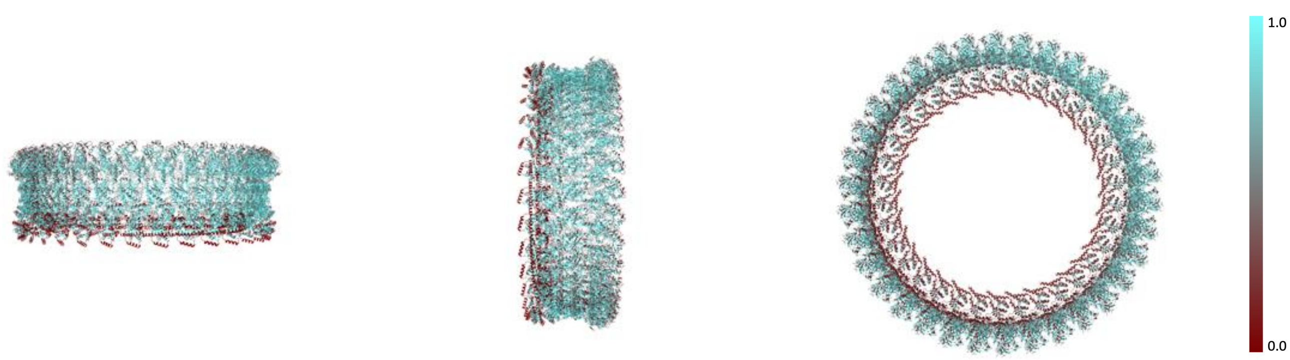
The images above show the 3D surface view of the map at the recommended contour level 0.135 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)

X Y Z

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

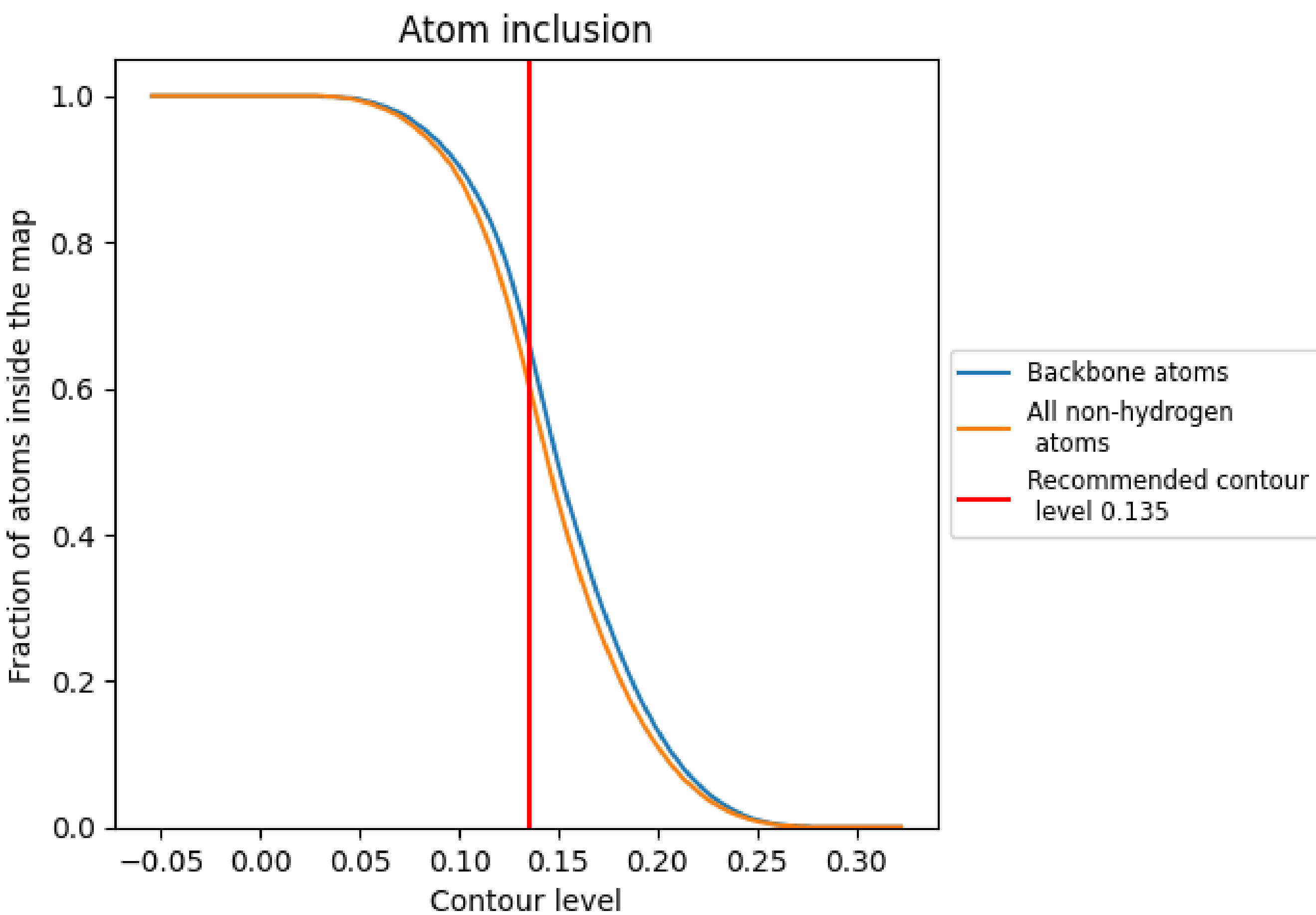
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.135).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 61% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.135) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6070	0.0700
A	0.2880	0.1670
AA	0.5040	0.0700
AB	0.4930	0.0520
AC	0.5960	0.0230
AD	0.4850	0.0540
AE	0.6190	0.0660
AF	0.7440	0.1720
AG	0.6090	0.1630
B	0.5320	0.0860
BA	0.6310	-0.0090
BB	0.6550	-0.0230
BC	0.1830	0.1060
BD	0.6140	-0.0150
BE	0.7040	0.0590
BF	0.1880	0.1510
BG	0.7950	0.1490
C	0.6730	0.0060
CA	0.4500	0.0420
CB	0.6230	0.0320
CC	0.4710	0.0460
CD	0.5810	0.0470
CE	0.6680	0.0490
CF	0.6200	0.1880
CG	0.6190	0.1390
D	0.4820	0.0500
DA	0.6670	-0.0230
DB	0.2100	0.1390
DC	0.5980	-0.0020
DD	0.6650	-0.0030
DE	0.1700	0.1080
DF	0.8030	0.1910
DG	0.7720	0.1610
E	0.7170	0.0160
EA	0.6140	0.0180

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Chain	Atom inclusion	Q-score
EB	0.4850	0.0500
EC	0.5530	0.0590
ED	0.6010	0.0040
EE	0.5570	0.1090
EF	0.6550	0.1440
EG	0.7340	0.1650
F	0.2800	0.1710
FA	0.2710	0.1600
FB	0.5940	0.0000
FC	0.6810	0.0010
FD	0.1750	0.0900
FE	0.7190	0.0490
FF	0.7800	0.1930
FG	0.2580	0.1780
G	0.5500	0.0970
GA	0.5020	0.0630
GB	0.5020	0.0550
GC	0.5960	0.0170
GD	0.5030	0.0590
GE	0.6280	0.0750
GF	0.7510	0.1910
GG	0.5940	0.1460
H	0.6250	0.0290
HA	0.6180	-0.0070
HB	0.6520	-0.0160
HC	0.1790	0.0920
HD	0.6260	-0.0140
HE	0.7190	0.0820
HF	0.2180	0.1600
HG	0.7820	0.1150
I	0.2930	0.1640
IA	0.4600	0.0470
IB	0.6140	0.0310
IC	0.4690	0.0460
ID	0.5940	0.0450
IE	0.6950	0.0750
IF	0.6240	0.1940
IG	0.5860	0.1200
J	0.5250	0.0800
JA	0.6540	-0.0280
JB	0.2180	0.1240
JC	0.5990	-0.0050

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Chain	Atom inclusion	Q-score
JD	0.6700	0.0070
JE	0.1830	0.1200
JF	0.8110	0.2050
JG	0.7670	0.1360
K	0.6600	-0.0030
KA	0.6080	0.0190
KB	0.4760	0.0490
KC	0.5570	0.0600
KD	0.6120	0.0110
KE	0.5730	0.1280
KF	0.6520	0.1530
KG	0.7120	0.1360
L	0.4720	0.0430
LA	0.2530	0.1580
LB	0.5930	0.0020
LC	0.6580	0.0000
LD	0.1750	0.1000
LE	0.7430	0.0820
LF	0.7970	0.2040
LG	0.2620	0.1740
M	0.6950	0.0230
MA	0.4930	0.0590
MB	0.5130	0.0560
MC	0.5950	0.0130
MD	0.5180	0.0680
ME	0.6350	0.0890
MF	0.7620	0.2050
MG	0.5830	0.1290
N	0.5050	0.0640
NA	0.6070	-0.0060
NB	0.6580	-0.0130
NC	0.1790	0.0910
ND	0.6400	-0.0090
NE	0.7420	0.1150
NF	0.2270	0.1710
NG	0.7580	0.0830
O	0.6960	-0.0010
OA	0.4710	0.0470
OB	0.6040	0.0330
OC	0.4740	0.0470
OD	0.6000	0.0500
OE	0.7110	0.1050

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Chain	Atom inclusion	Q-score
OF	0.6220	0.1910
OG	0.5650	0.1050
P	0.7380	0.0430
PA	0.6540	-0.0250
PB	0.2100	0.1120
PC	0.6040	-0.0080
PD	0.6850	0.0240
PE	0.1920	0.1290
PF	0.8120	0.1980
PG	0.7670	0.1090
Q	0.6470	0.0480
QA	0.6150	0.0250
QB	0.4780	0.0480
QC	0.5640	0.0570
QD	0.6290	0.0190
QE	0.5970	0.1550
QF	0.6420	0.1580
QG	0.6960	0.1050
R	0.6220	0.0230
RA	0.2400	0.1470
RB	0.5840	0.0010
RC	0.6730	-0.0010
RD	0.1620	0.0990
RE	0.7690	0.1330
RF	0.8000	0.2010
RG	0.2620	0.1730
S	0.2840	0.1610
SA	0.4880	0.0550
SB	0.5310	0.0590
SC	0.6010	0.0070
SD	0.5240	0.0750
SE	0.6440	0.1110
SF	0.7520	0.2020
SG	0.5590	0.1090
T	0.5120	0.0750
TA	0.6020	-0.0040
TB	0.6760	-0.0040
TC	0.1790	0.0890
TD	0.6600	0.0020
TE	0.7630	0.1520
TF	0.2310	0.1720
TG	0.7220	0.0450

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Chain	Atom inclusion	Q-score
UA	0.4800	0.0500
UB	0.6030	0.0290
UC	0.4810	0.0520
UD	0.6130	0.0540
UE	0.7340	0.1420
UF	0.6210	0.1810
UG	0.5290	0.0820
V	0.6460	-0.0060
VA	0.6410	-0.0280
VB	0.2100	0.1090
VC	0.6130	-0.0130
VD	0.6890	0.0380
VE	0.1750	0.1430
VF	0.8070	0.1800
VG	0.7530	0.0690
W	0.4570	0.0440
WA	0.6160	0.0300
WB	0.4750	0.0460
WC	0.5730	0.0540
WD	0.6470	0.0320
WE	0.6070	0.1740
WF	0.6310	0.1510
WG	0.6590	0.0730
X	0.6780	-0.0150
XA	0.2310	0.1440
XB	0.5900	-0.0000
XC	0.6700	-0.0040
XD	0.1530	0.1030
XE	0.7910	0.1690
XF	0.7870	0.1860
Y	0.6210	0.0180
YA	0.4890	0.0520
YB	0.5460	0.0600
YC	0.6040	0.0030
YD	0.5400	0.0900
YE	0.6530	0.1300
YF	0.7510	0.1900
Z	0.2800	0.1610
ZA	0.5970	-0.0020
ZB	0.6910	-0.0010
ZC	0.1830	0.0880
ZD	0.6870	0.0230

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Chain	Atom inclusion	Q-score
ZE	0.7770	0.1780
ZF	0.2440	0.1810