Full wwPDB EM Validation Report ⓘ

Aug 27, 2024 – 12:57 AM JST

PDB ID	:	8WKQ
EMDB ID	:	EMD-37605
Title	:	Cryo-EM structure of the MS ring (C1) with export apparatus and proximal rod within the flagellar motor-hook complex in the CW state.
Authors	:	Tan, J.X.; Zhang, L.; Zhou, Y.; Zhu, Y.Q.
Deposited on	:	2023-09-28
Resolution	:	3.80 Å(reported)
Based on initial models	:	?, .

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

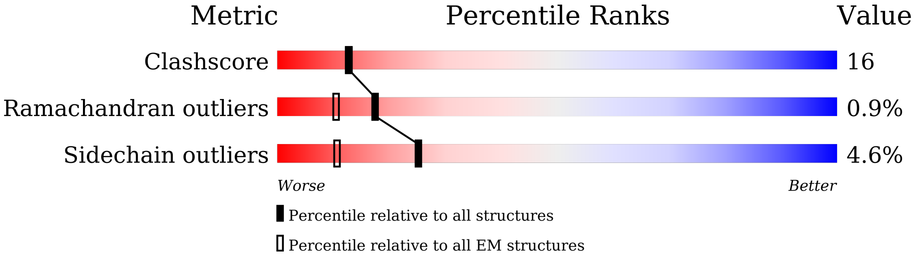
EMDB validation analysis	:	0.0.1.dev112
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.38.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.80 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	0	560	
1	1	560	
1	2	560	
1	3	560	
1	4	560	
1	5	560	
1	6	560	
1	7	560	

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Mol	Chain	Length	Quality of chain
1	8	560	23% 6% 71%
1	9	560	23% 6% 71%
1	AA	560	23% 6% 71%
1	AB	560	• 22% 6% 71%
1	AC	560	23% 6% 71%
1	AD	560	• 22% 7% 71%
1	AE	560	• 23% 6% 71%
1	AF	560	• 23% 6% 71%
1	AG	560	• 23% 6% 71%
1	AH	560	• 22% 6% 71%
1	AI	560	• 23% 6% 71%
1	AJ	560	23% 6% 71%
1	AK	560	• 23% 6% 71%
1	AL	560	23% 6% 71%
1	AM	560	• 23% 6% 71%
1	AN	560	• 23% 6% 71%
1	AO	560	• 22% 7% 71%
1	AP	560	22% 6% • 71%
1	AQ	560	23% 6% 71%
1	UI	560	8% 18% 8% • 72%
1	UJ	560	10% 17% 9% • 72%
1	UK	560	14% 18% 8% • 72%
1	UL	560	16% 17% 9% • 72%
1	UM	560	20% 17% 9% • 72%
1	UN	560	16% 17% 9% • 72%

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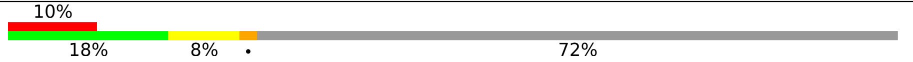
Mol	Chain	Length	Quality of chain
1	UO	560	
1	UP	560	
1	WA	560	
1	WB	560	
1	WC	560	
1	WD	560	
1	WE	560	
1	WF	560	
1	WG	560	
1	WH	560	
1	WI	560	
1	WJ	560	
1	WK	560	
1	WL	560	
1	WM	560	
1	WN	560	
1	WO	560	
1	WP	560	
1	WQ	560	
1	WR	560	
1	WS	560	
1	WT	560	
1	WU	560	
1	WV	560	
1	WW	560	

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Mol	Chain	Length	Quality of chain
1	b	560	• • 98%
1	c	560	• • 97%
1	d	560	• • 96%
1	e	560	• • 97%
1	f	560	• • 96%
1	g	560	• • 97%
1	h	560	• • 96%
1	i	560	• • 97%
1	j	560	• • 96%
1	k	560	• • 97%
1	l	560	• • 96%
1	t	560	28% • 71%
1	u	560	28% • 71%
1	v	560	28% • 71%
1	w	560	28% • 71%
1	x	560	28% • 71%
1	y	560	28% • 71%
1	z	560	28% • 71%
2	A	89	• 74% 26%
2	B	89	• 66% 34%
2	C	89	• 69% 31%
2	D	89	67% 33%
3	E	264	• 65% 28% • • •
4	F	245	• 53% 30% • 16%
4	G	245	61% 23% • 15%

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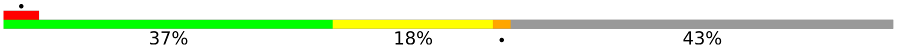
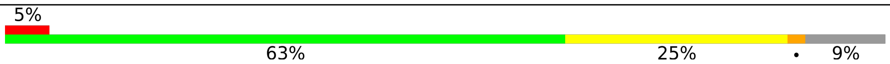
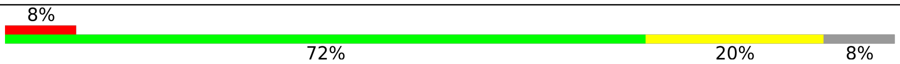
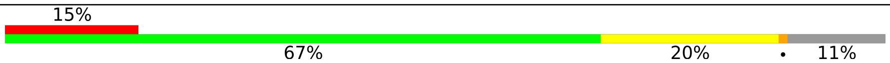
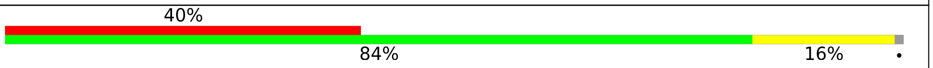
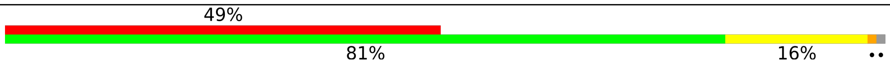
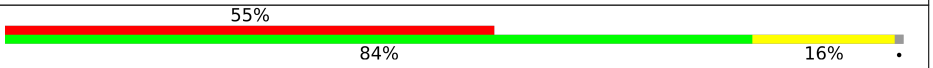
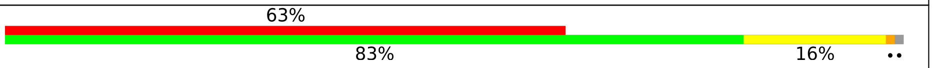
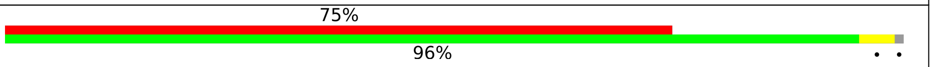
Mol	Chain	Length	Quality of chain
4	H	245	
4	I	245	
4	J	245	
5	K	104	
5	L	104	
5	M	104	
5	N	104	
5	O	104	
5	P	104	
6	Q	138	
6	R	138	
6	S	138	
6	T	138	
6	U	138	
7	V	134	
7	W	134	
7	X	134	
7	Y	134	
7	Z	134	
7	a	134	

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 99073 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	UI	155	Total C N O S 1172 733 211 226 2	0	0
1	UJ	155	Total C N O S 1172 733 211 226 2	0	0
1	UK	155	Total C N O S 1172 733 211 226 2	0	0
1	UL	155	Total C N O S 1172 733 211 226 2	0	0
1	UM	155	Total C N O S 1172 733 211 226 2	0	0
1	UN	155	Total C N O S 1172 733 211 226 2	0	0
1	UO	155	Total C N O S 1172 733 211 226 2	0	0
1	UP	155	Total C N O S 1172 733 211 226 2	0	0
1	WA	113	Total C N O S 849 534 148 166 1	0	0
1	WB	111	Total C N O S 836 526 146 163 1	0	0
1	WC	108	Total C N O S 812 510 142 159 1	0	0
1	WD	110	Total C N O S 827 522 144 160 1	0	0
1	WE	112	Total C N O S 843 531 147 164 1	0	0
1	WF	111	Total C N O S 834 526 145 162 1	0	0
1	WG	112	Total C N O S 843 531 147 164 1	0	0
1	WH	95	Total C N O S 703 439 126 137 1	0	0
1	WI	95	Total C N O S 703 439 126 137 1	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
1	WJ	99	Total C N O S 737 462 131 143 1	0	0
1	WK	98	Total C N O S 729 456 130 142 1	0	0
1	WL	85	Total C N O S 622 389 110 122 1	0	0
1	WM	82	Total C N O S 596 372 107 116 1	0	0
1	WN	84	Total C N O S 611 380 109 121 1	0	0
1	WO	96	Total C N O S 714 448 127 138 1	0	0
1	WP	100	Total C N O S 741 464 132 144 1	0	0
1	WQ	111	Total C N O S 834 526 145 162 1	0	0
1	WR	111	Total C N O S 834 526 145 162 1	0	0
1	WS	111	Total C N O S 834 526 145 162 1	0	0
1	WT	111	Total C N O S 834 526 145 162 1	0	0
1	WU	112	Total C N O S 843 531 147 164 1	0	0
1	WV	110	Total C N O S 827 521 144 161 1	0	0
1	WW	111	Total C N O S 834 526 145 162 1	0	0
1	b	13	Total C N O 81 50 15 16	0	0
1	c	16	Total C N O 103 64 19 20	0	0
1	d	20	Total C N O 133 83 23 27	0	0
1	e	16	Total C N O 103 64 19 20	0	0
1	f	21	Total C N O 140 88 24 28	0	0
1	g	16	Total C N O 103 64 19 20	0	0
1	h	21	Total C N O 140 88 24 28	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
1	i	16	Total C N O 103 64 19 20	0	0
1	j	20	Total C N O 133 83 23 27	0	0
1	k	16	Total C N O 103 64 19 20	0	0
1	l	21	Total C N O 140 88 24 28	0	0
1	t	164	Total C N O S 1275 776 237 259 3	0	0
1	u	164	Total C N O S 1275 776 237 259 3	0	0
1	v	164	Total C N O S 1275 776 237 259 3	0	0
1	w	164	Total C N O S 1275 776 237 259 3	0	0
1	x	164	Total C N O S 1275 776 237 259 3	0	0
1	y	164	Total C N O S 1275 776 237 259 3	0	0
1	z	164	Total C N O S 1275 776 237 259 3	0	0
1	1	164	Total C N O S 1275 776 237 259 3	0	0
1	2	164	Total C N O S 1275 776 237 259 3	0	0
1	3	164	Total C N O S 1275 776 237 259 3	0	0
1	4	164	Total C N O S 1275 776 237 259 3	0	0
1	5	164	Total C N O S 1275 776 237 259 3	0	0
1	6	164	Total C N O S 1275 776 237 259 3	0	0
1	7	164	Total C N O S 1275 776 237 259 3	0	0
1	8	164	Total C N O S 1275 776 237 259 3	0	0
1	9	164	Total C N O S 1275 776 237 259 3	0	0
1	0	164	Total C N O S 1275 776 237 259 3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AB	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AC	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AD	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AE	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AF	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AG	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AH	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AI	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AJ	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AK	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AL	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AM	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AN	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AO	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AP	164	Total 1275	C 776	N 237	O 259	S 3	0	0
1	AQ	164	Total 1275	C 776	N 237	O 259	S 3	0	0

- Molecule 2 is a protein called Flagellar biosynthetic protein FliQ.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	89	Total 670	C 449	N 100	O 114	S 7	0	0
2	B	89	Total 670	C 449	N 100	O 114	S 7	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	89	Total 670	C 449	N 100	O 114	S 7	0	0
2	D	89	Total 670	C 449	N 100	O 114	S 7	0	0

- Molecule 3 is a protein called Flagellar biosynthetic protein FliR.

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

- Molecule 4 is a protein called Flagellar biosynthetic protein FliP.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	F	207	Total 1605	C 1072	N 249	O 272	S 12	0	0
4	G	209	Total 1626	C 1086	N 252	O 276	S 12	0	0
4	H	208	Total 1614	C 1077	N 251	O 274	S 12	0	0
4	I	208	Total 1614	C 1077	N 251	O 274	S 12	0	0
4	J	209	Total 1623	C 1084	N 251	O 276	S 12	0	0

- Molecule 5 is a protein called Flagellar hook-basal body complex protein FliE.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	K	59	Total 429	C 265	N 74	O 83	S 7	0	0
5	L	91	Total 672	C 415	N 121	O 129	S 7	0	0
5	M	93	Total 686	C 424	N 123	O 132	S 7	0	0
5	N	93	Total 686	C 424	N 123	O 132	S 7	0	0
5	O	93	Total 686	C 424	N 123	O 132	S 7	0	0
5	P	92	Total 679	C 420	N 122	O 130	S 7	0	0

- Molecule 6 is a protein called Flagellar basal body rod protein FlgB.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Q	134	Total	C	N	O	S	0	0
			1030	633	189	203	5		
6	R	121	Total	C	N	O	S	0	0
			942	583	172	182	5		
6	S	125	Total	C	N	O	S	0	0
			967	598	177	187	5		
6	T	127	Total	C	N	O	S	0	0
			982	606	182	189	5		
6	U	123	Total	C	N	O	S	0	0
			950	588	172	185	5		

- Molecule 7 is a protein called Flagellar basal-body rod protein FlgC.

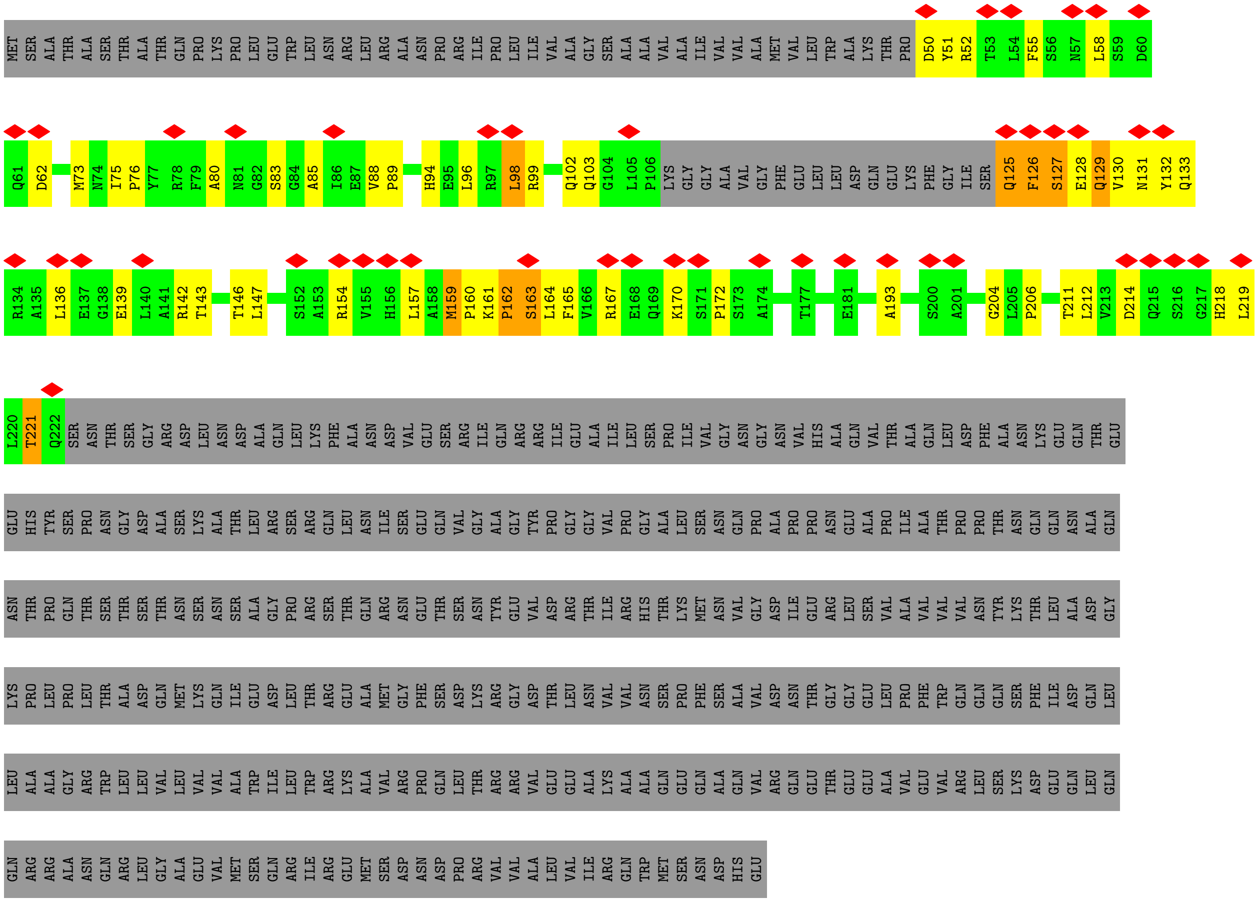
Mol	Chain	Residues	Atoms					AltConf	Trace
7	V	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
7	W	132	Total	C	N	O	S	0	0
			964	601	166	192	5		
7	X	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
7	Y	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
7	Z	133	Total	C	N	O	S	0	0
			969	604	167	193	5		
7	a	133	Total	C	N	O	S	0	0
			969	604	167	193	5		

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.

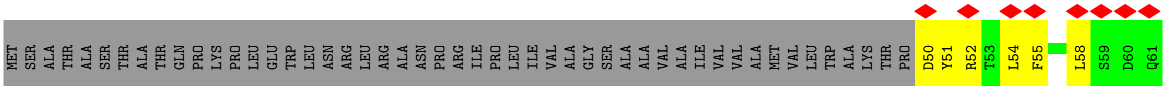
- Molecule 1: Flagellar M-ring protein

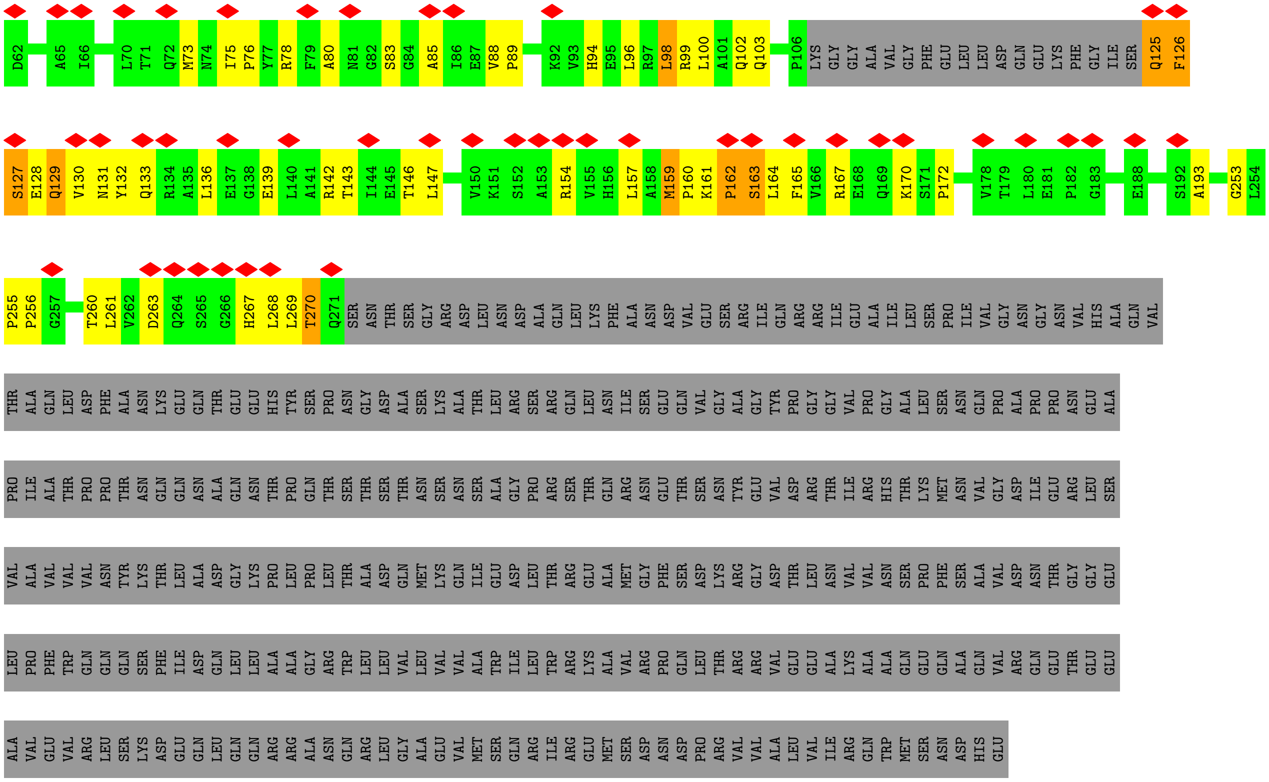
Chain UI:



- Molecule 1: Flagellar M-ring protein

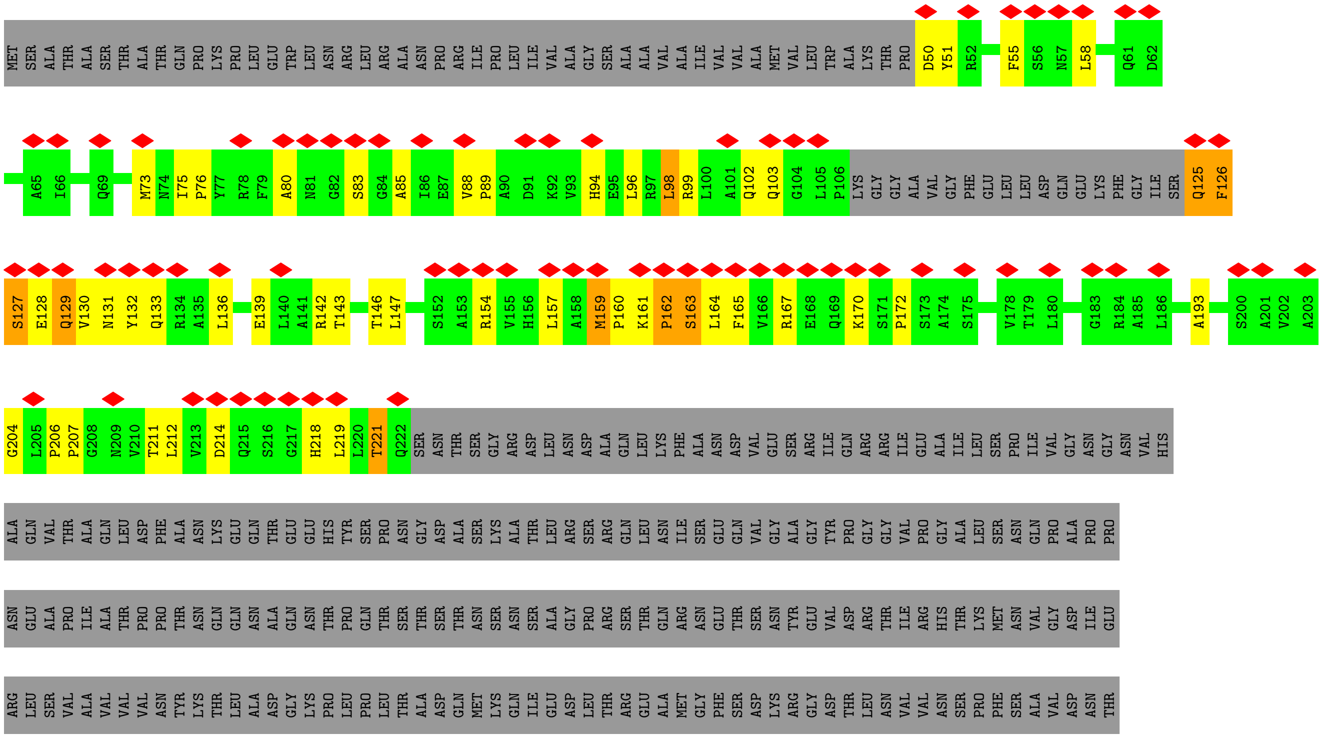
Chain UJ:

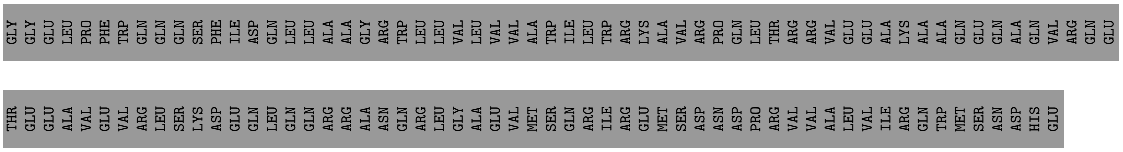




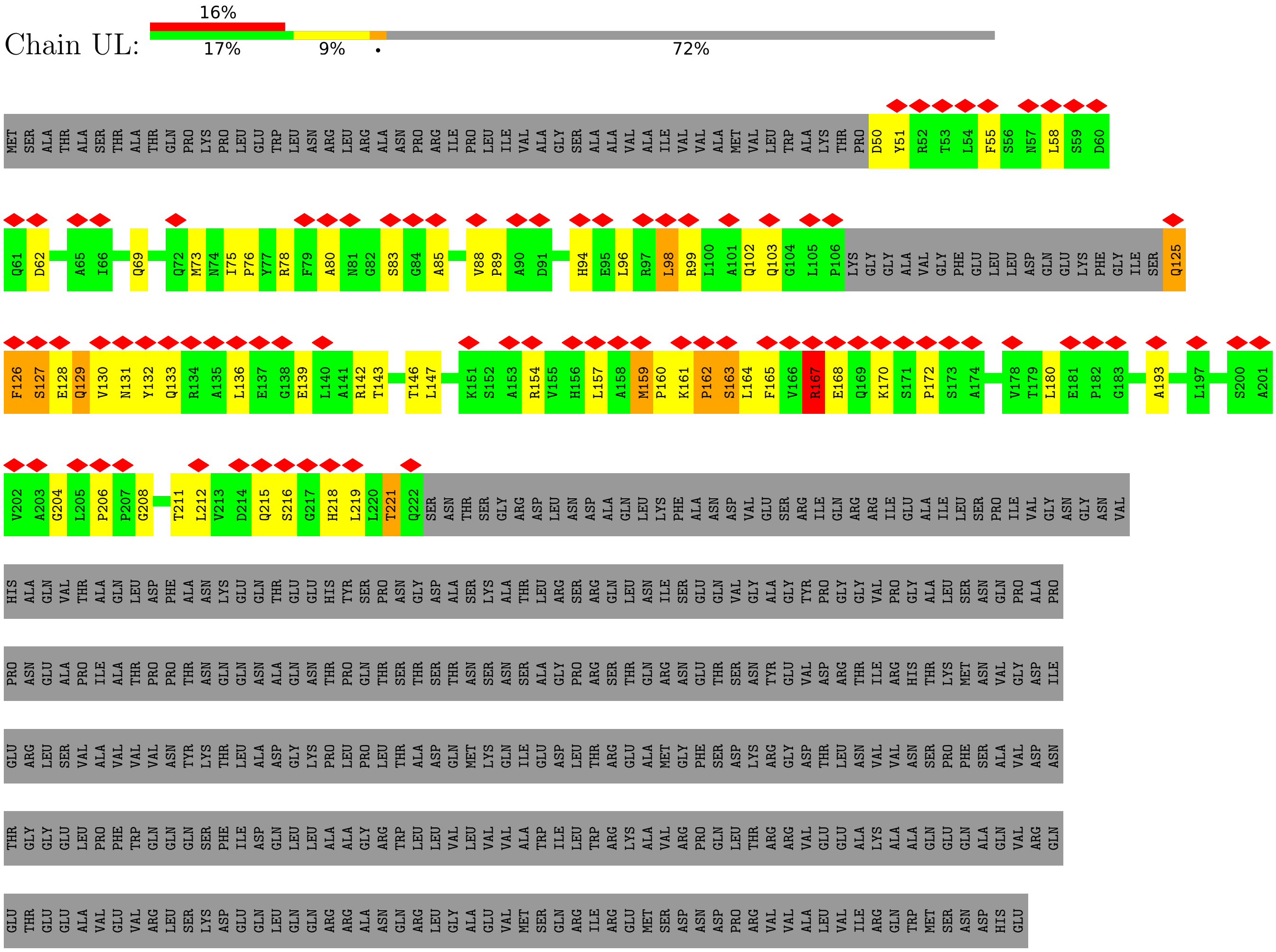
- Molecule 1: Flagellar M-ring protein

Chain UK:

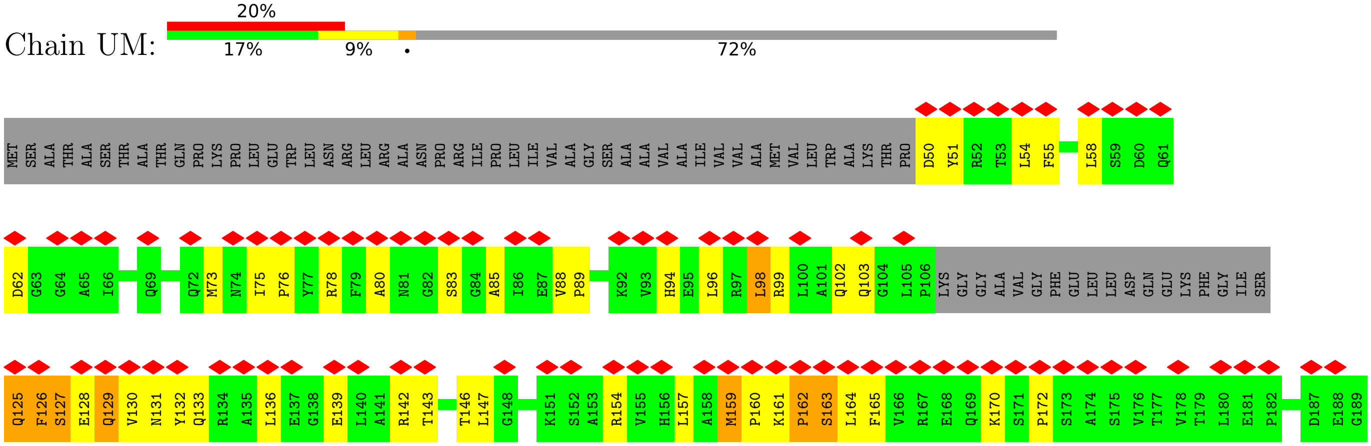


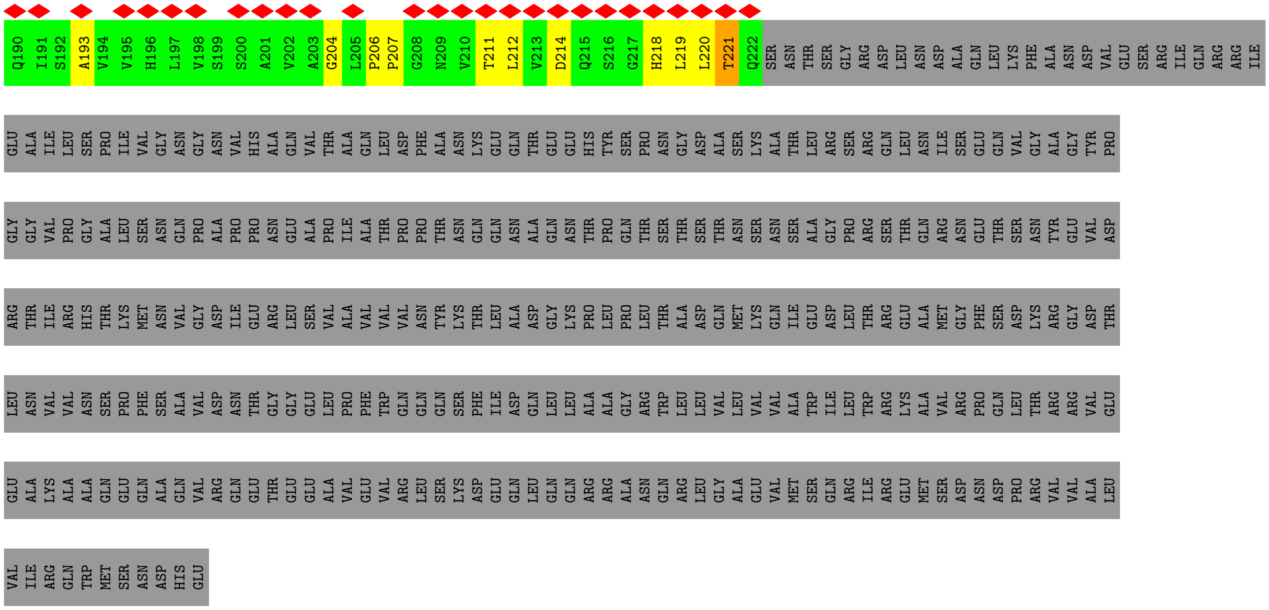


- Molecule 1: Flagellar M-ring protein



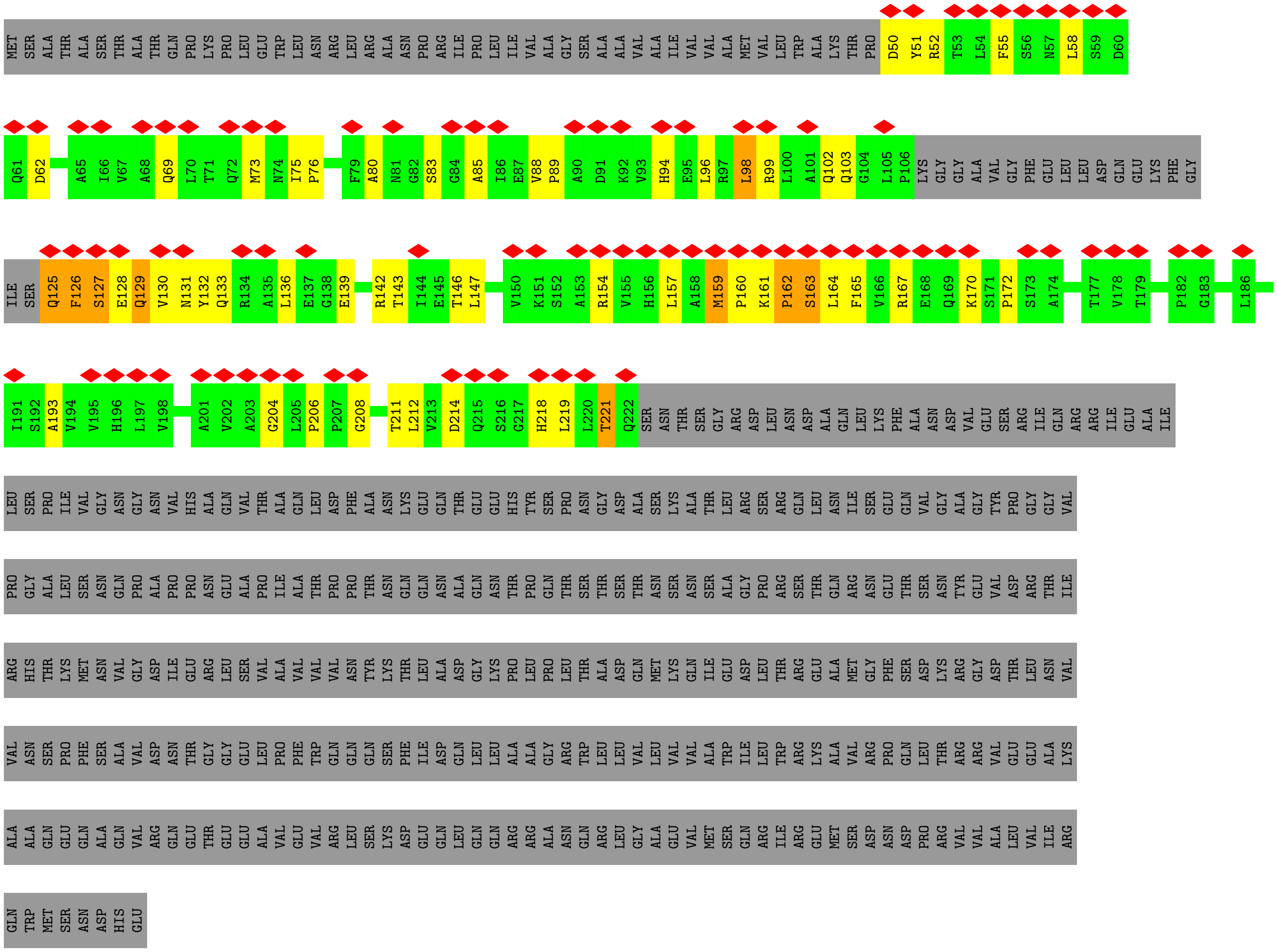
- Molecule 1: Flagellar M-ring protein



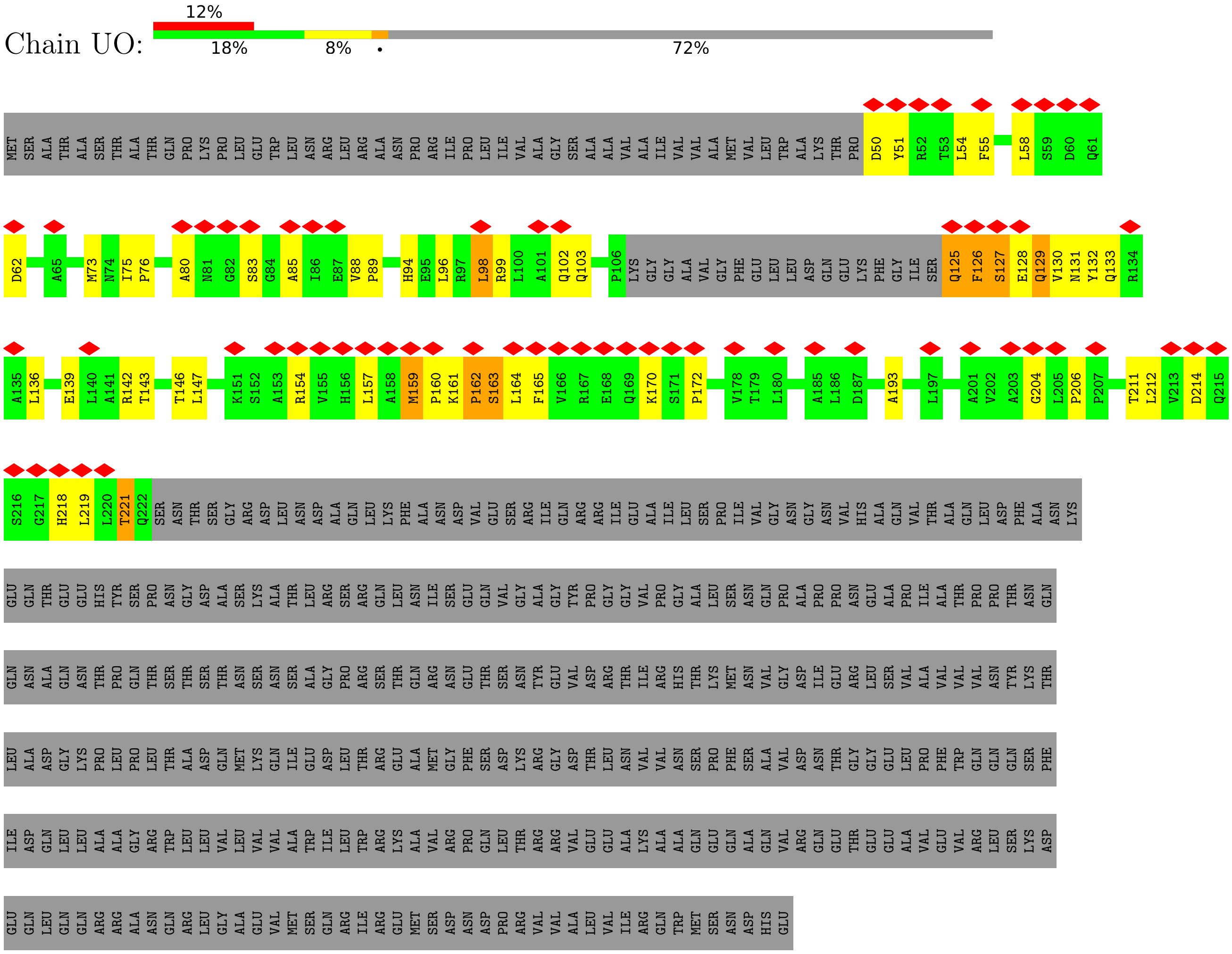


- Molecule 1: Flagellar M-ring protein

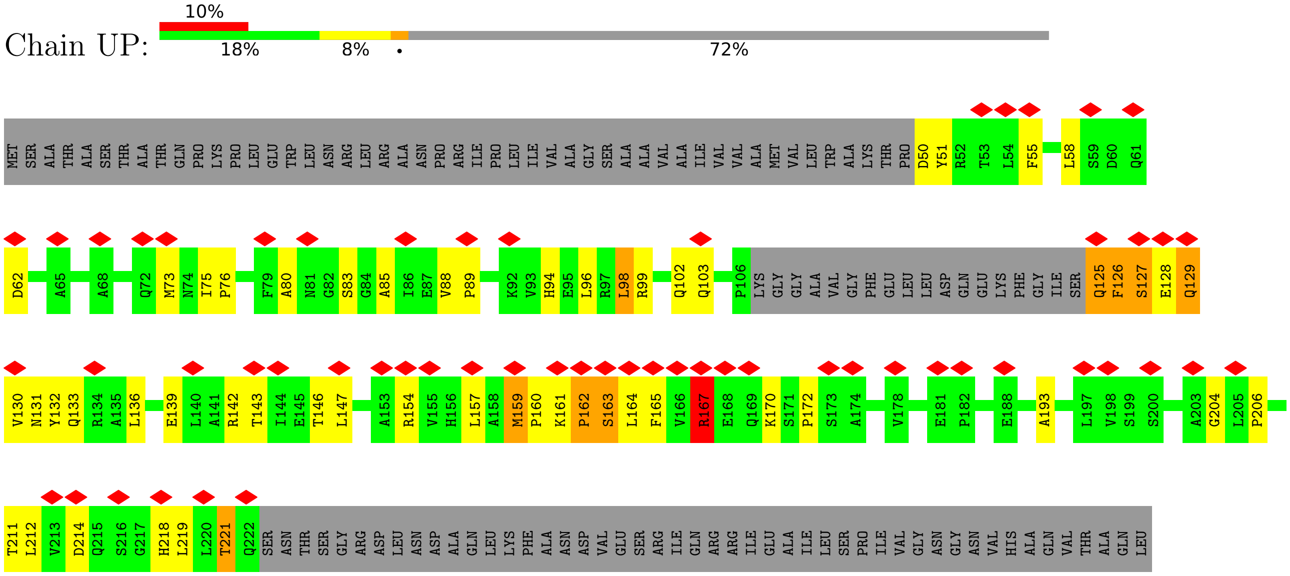
Chain UN:

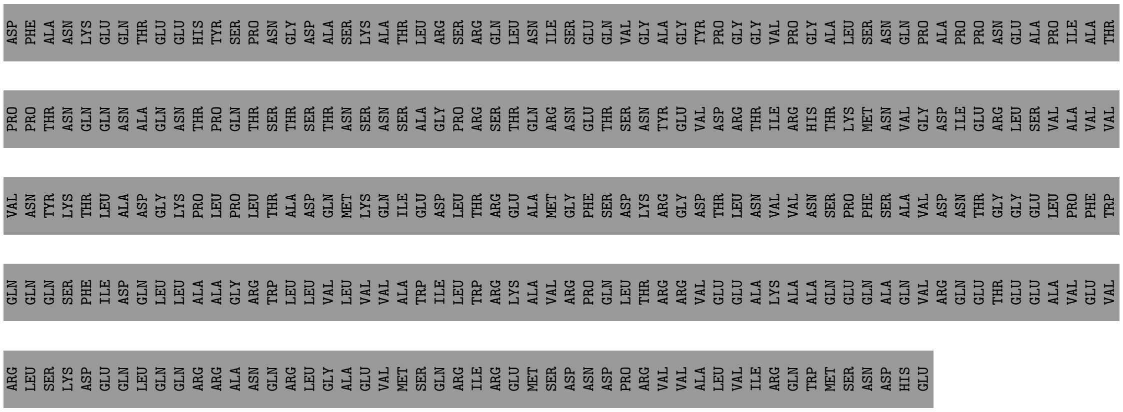


- Molecule 1: Flagellar M-ring protein

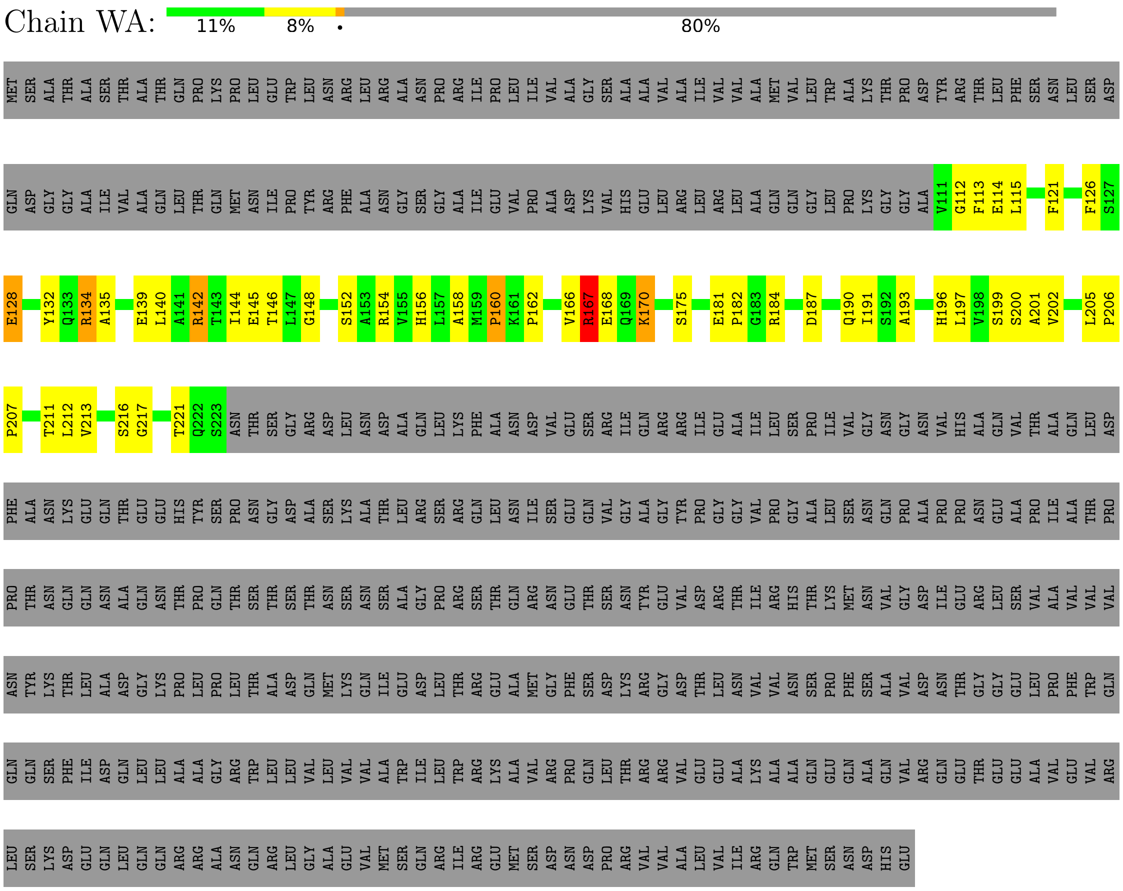


- Molecule 1: Flagellar M-ring protein

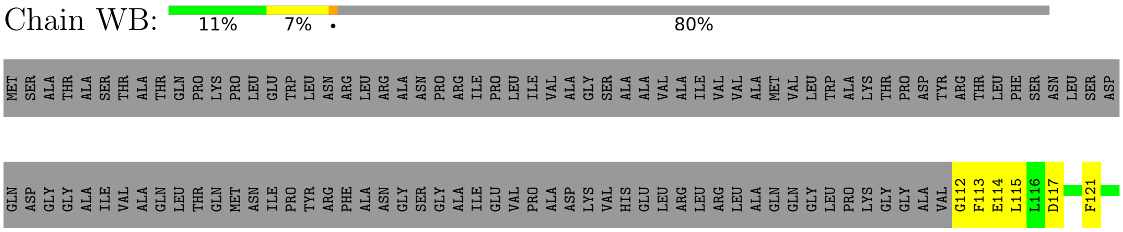


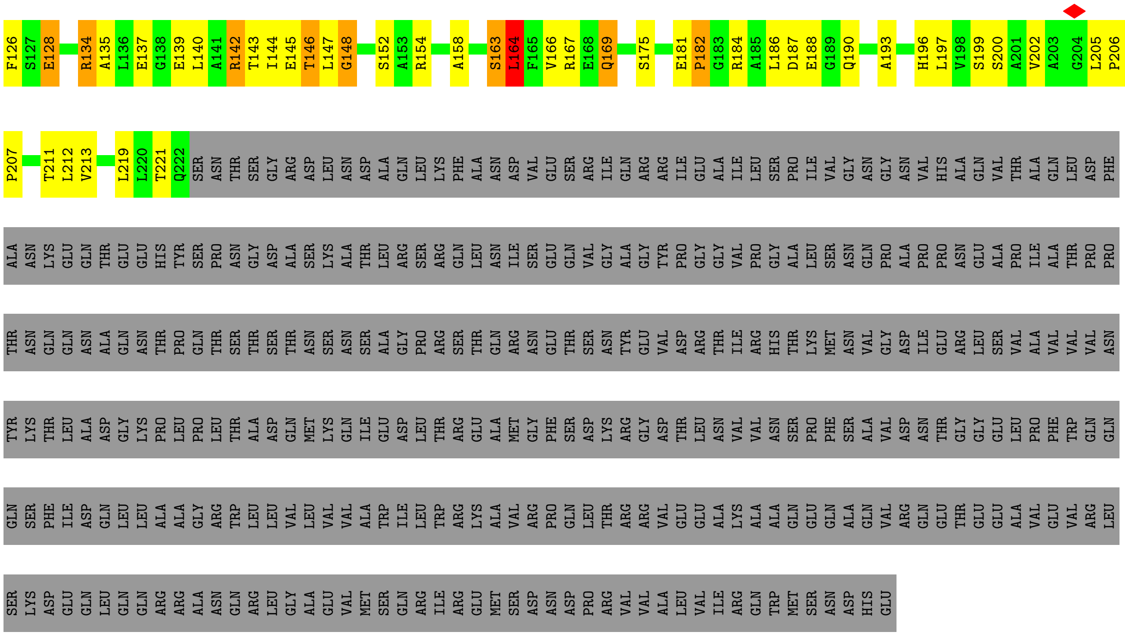


• Molecule 1: Flagellar M-ring protein



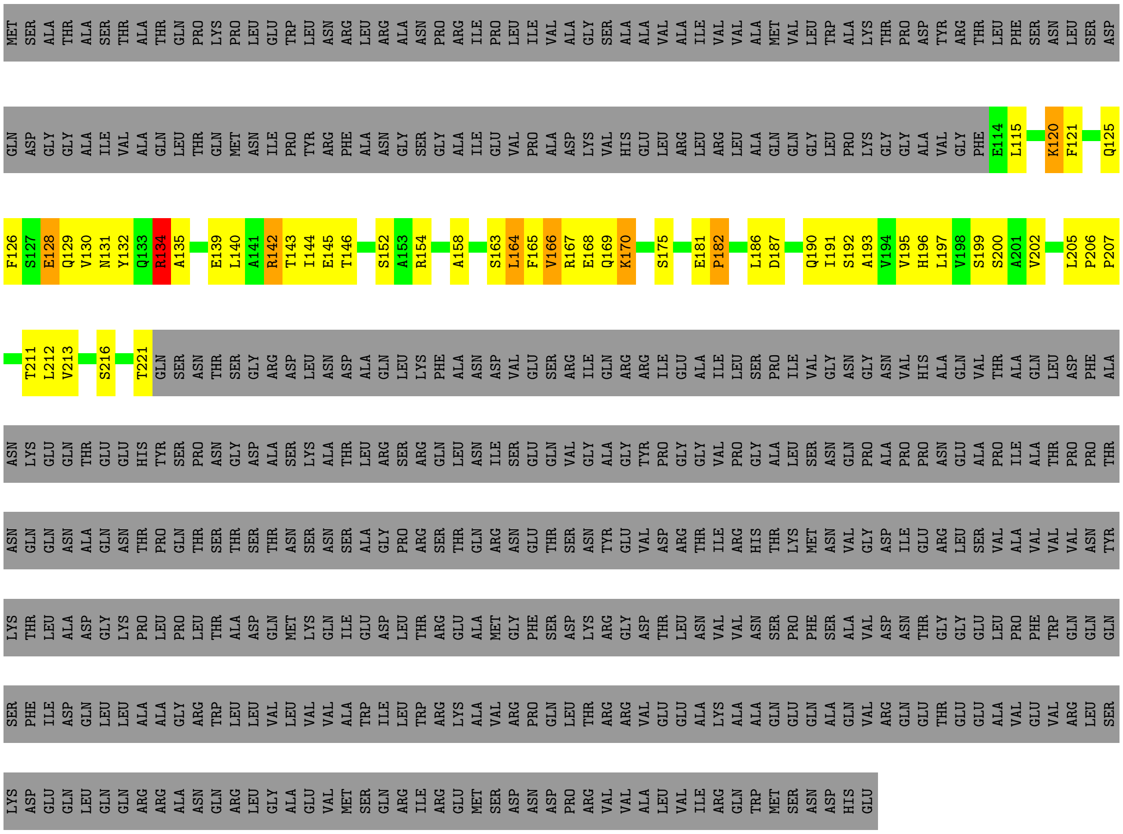
• Molecule 1: Flagellar M-ring protein





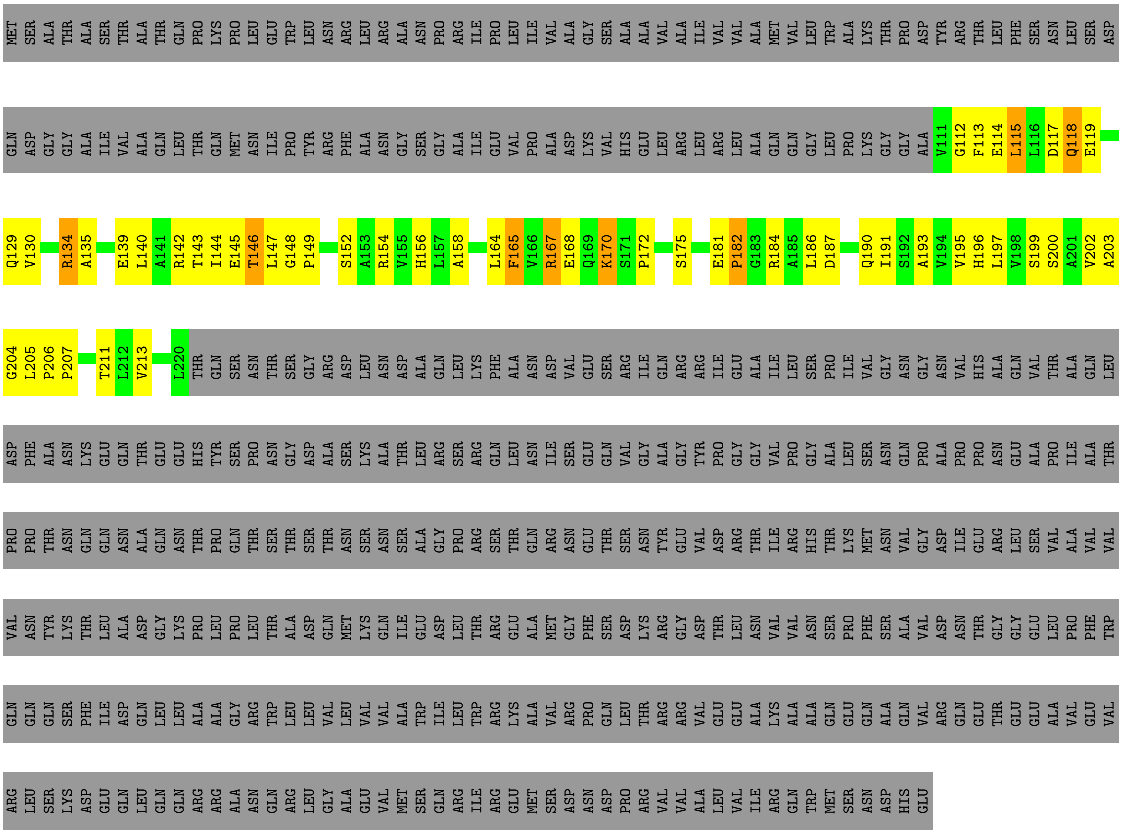
- Molecule 1: Flagellar M-ring protein

Chain WC:



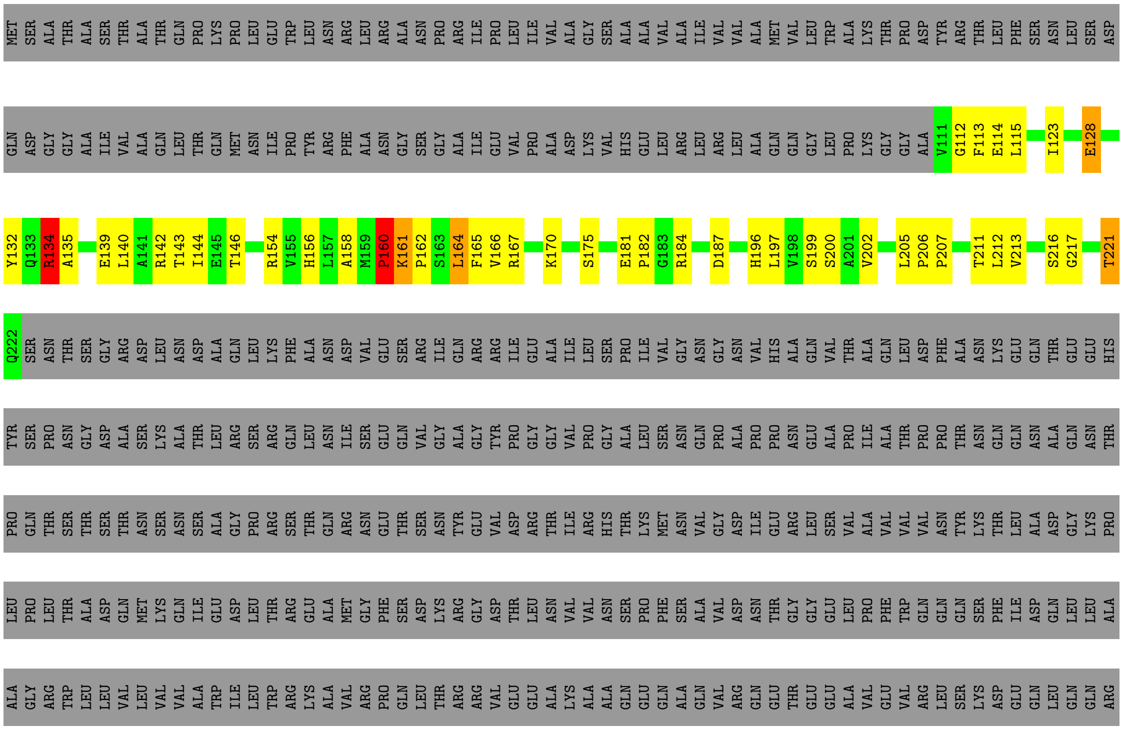
- Molecule 1: Flagellar M-ring protein

Chain WD:

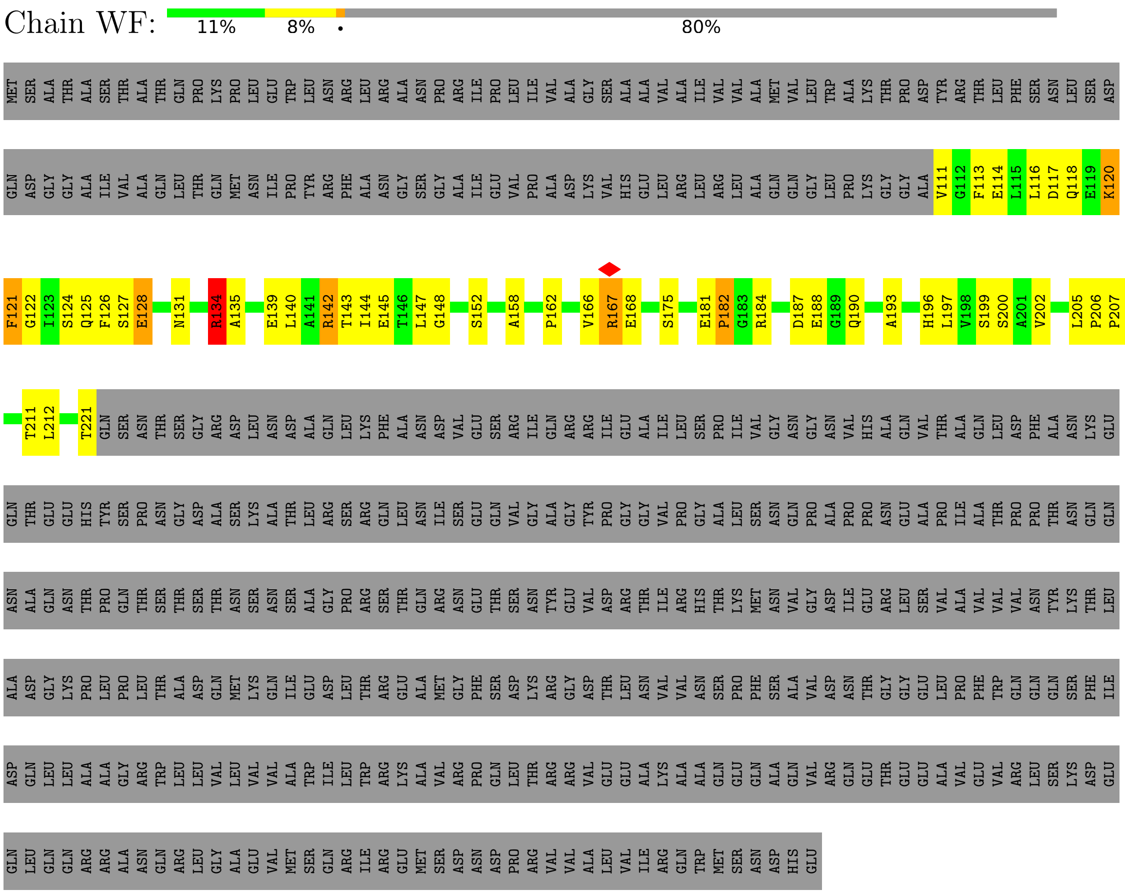


- Molecule 1: Flagellar M-ring protein

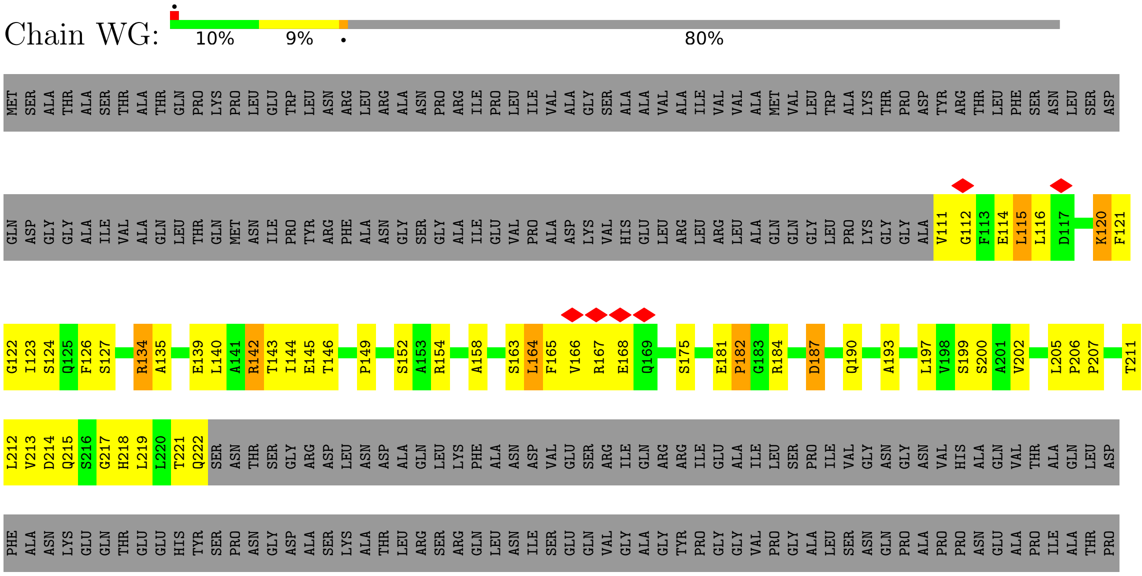
Chain WE:

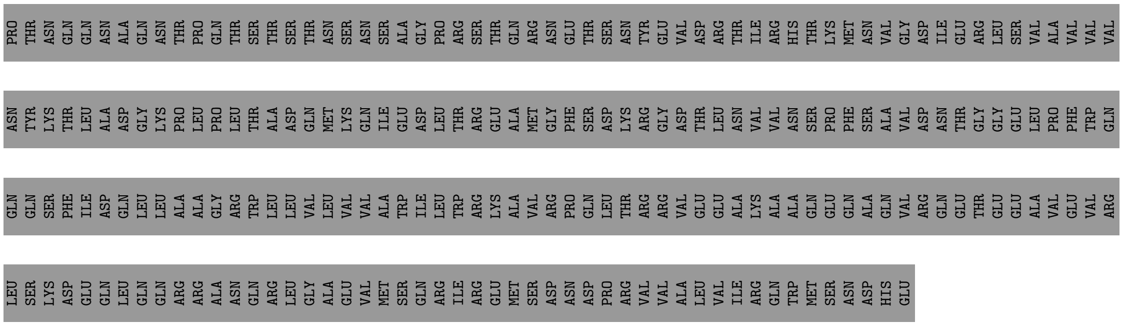


- Molecule 1: Flagellar M-ring protein

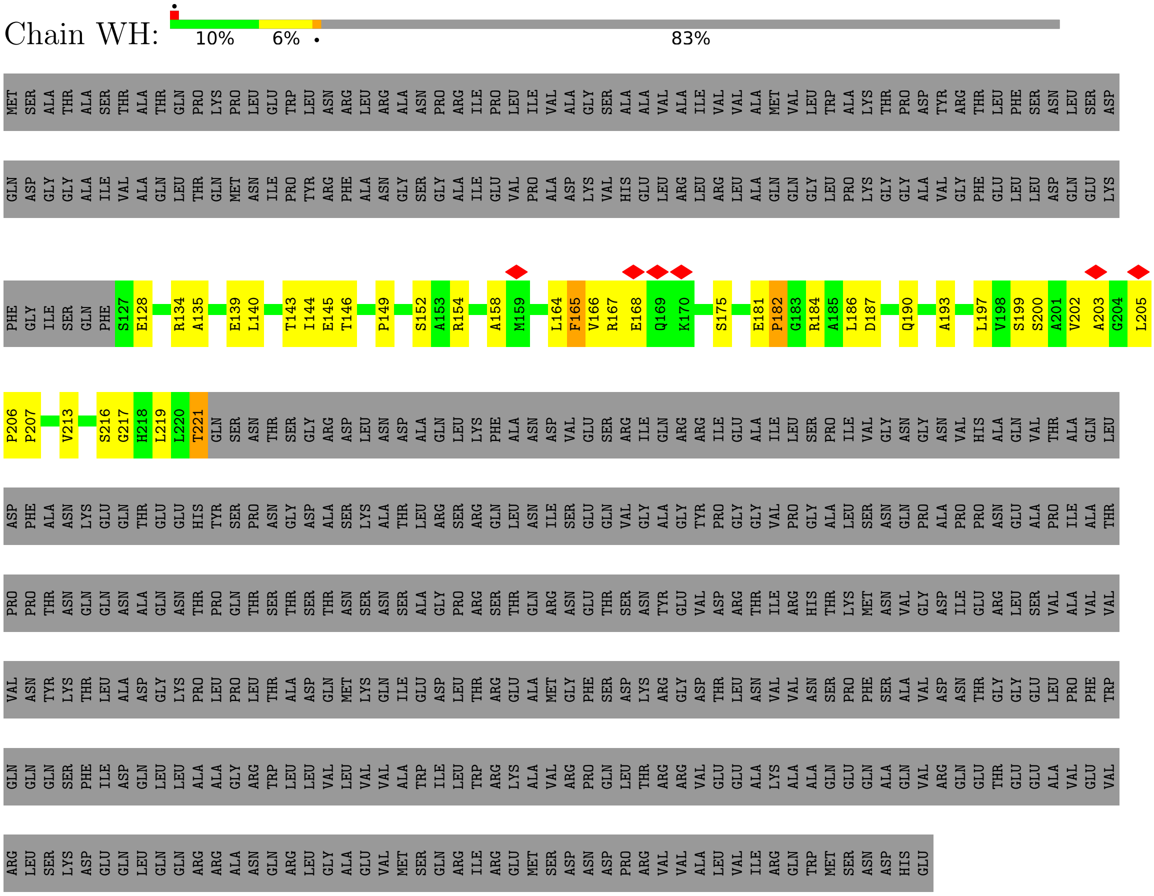


- Molecule 1: Flagellar M-ring protein

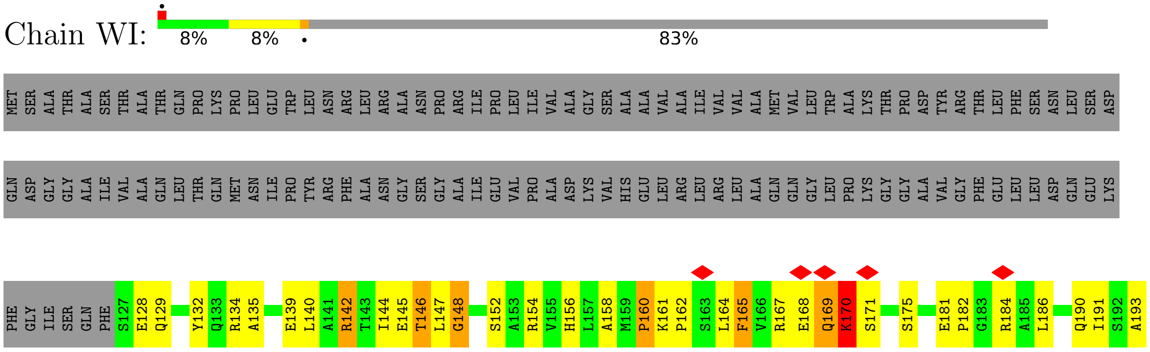




- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein

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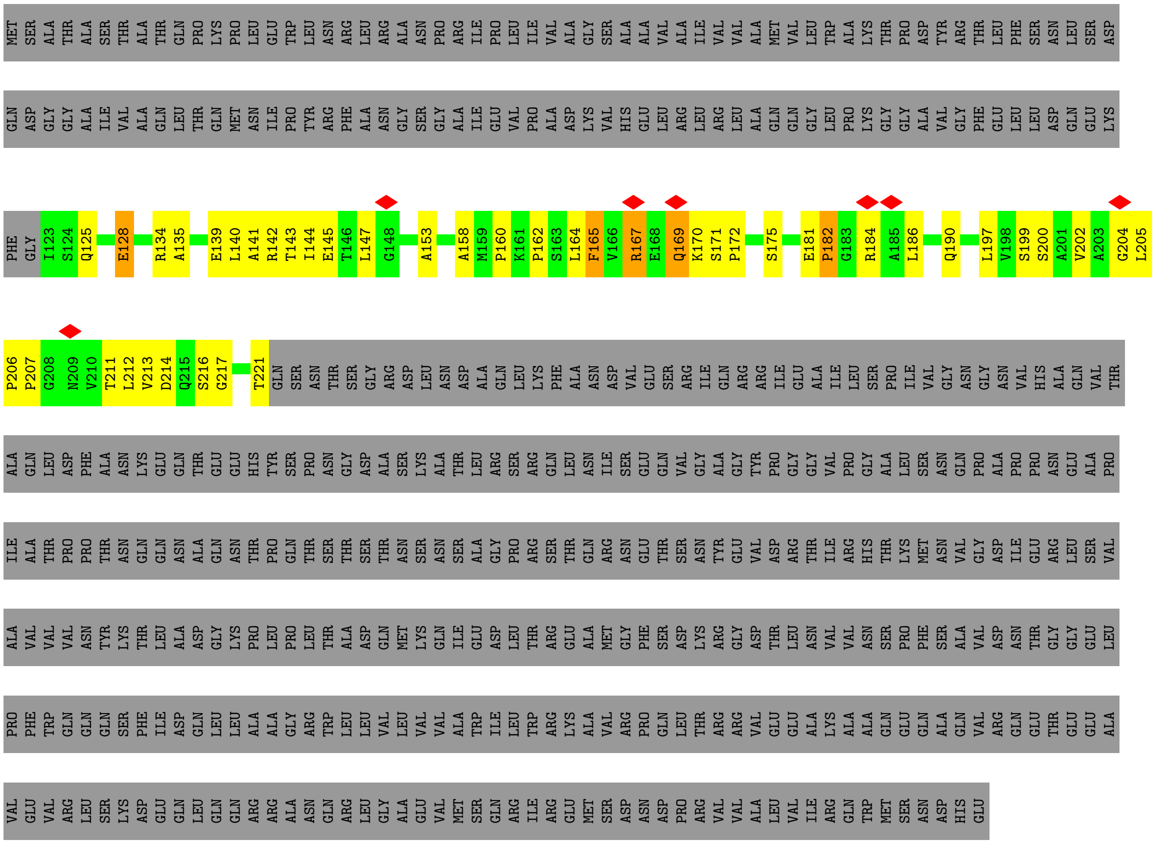

- Molecule 1: Flagellar M-ring protein

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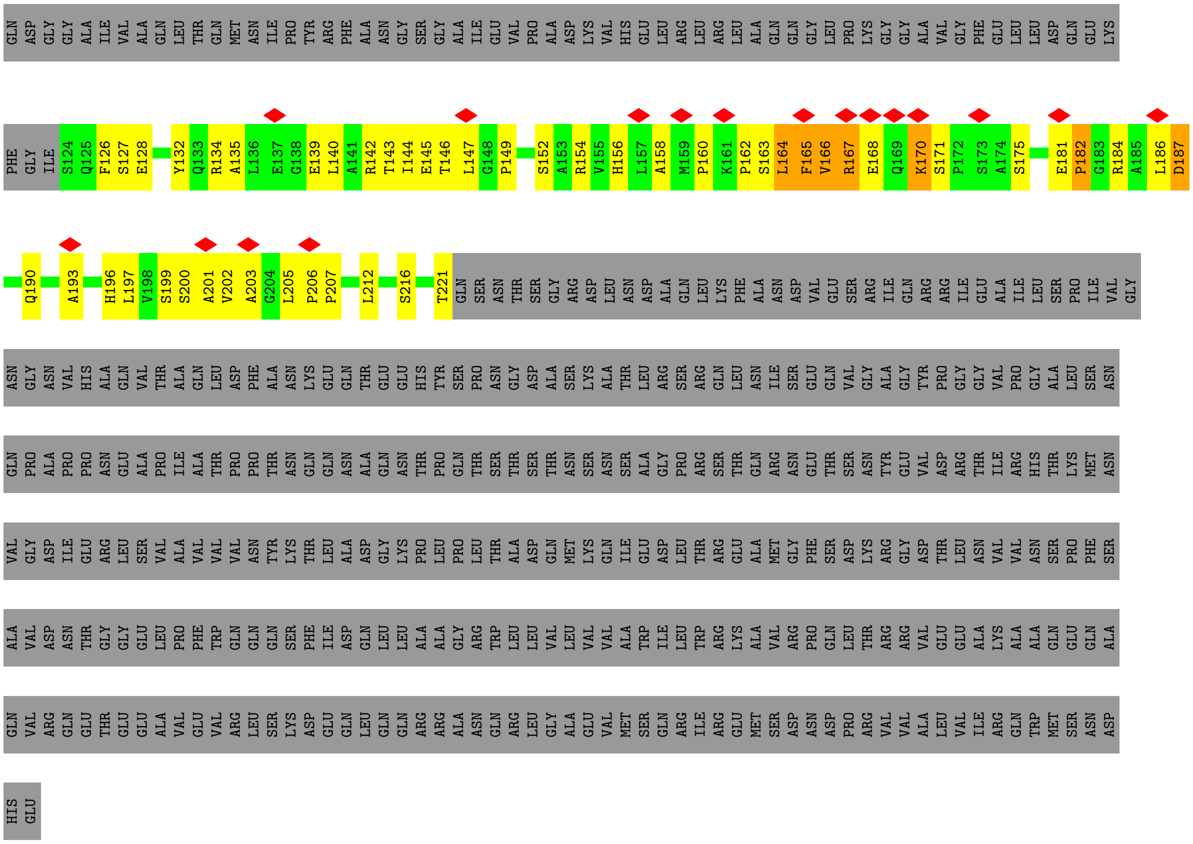

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PHE GLY ILE S124 Q125 F126 S127 E128 Y132 Q133 R134 A135 L136 E137 G138 E139 L140 A141 R142 T143 I144 E145 T146 L147 G148 P149 S152 A153 R154 V155 H156 L157 A158 M159 P160 K161 P162 S163 L164 F165 V166 R167 E168 Q169 K170 S171 P172 S173 A174 S175 E181 P182 G183 R184 A185 L186 D187

Q190 A193 H196 L197 V198 S199 S200 A201 V202 A203 G204 L205 P206 P207 L212 S216 T221 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 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

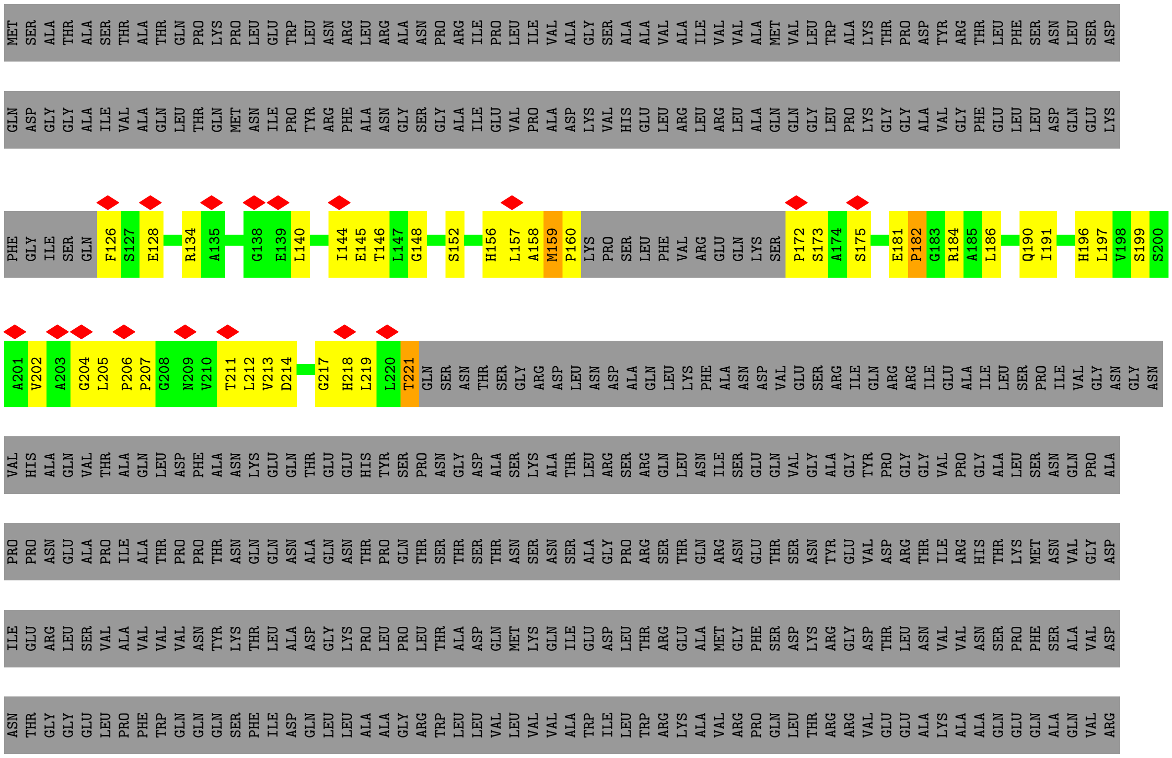
ALA VAL ASP ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA

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

HIS GLU

- Molecule 1: Flagellar M-ring protein

Chain WL:



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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 F126 S127 E128 R134 A135 G138 E139 L140 I144 E145 T146 L147 G148 S152 H156 L157 A158 M159 P160 LYS PRO SER LEU PHE VAL ARG GLU GLN LYS SER P172 S173 A174 S175 E181 P182 G183 R184 A185 L186 Q190 I191 H196 L197 V198 S199 S200

A201 V202 A203 G204 L205 P206 P207 G208 N209 V210 T211 L212 V213 D214 G217 H218 L219 L220 T221 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

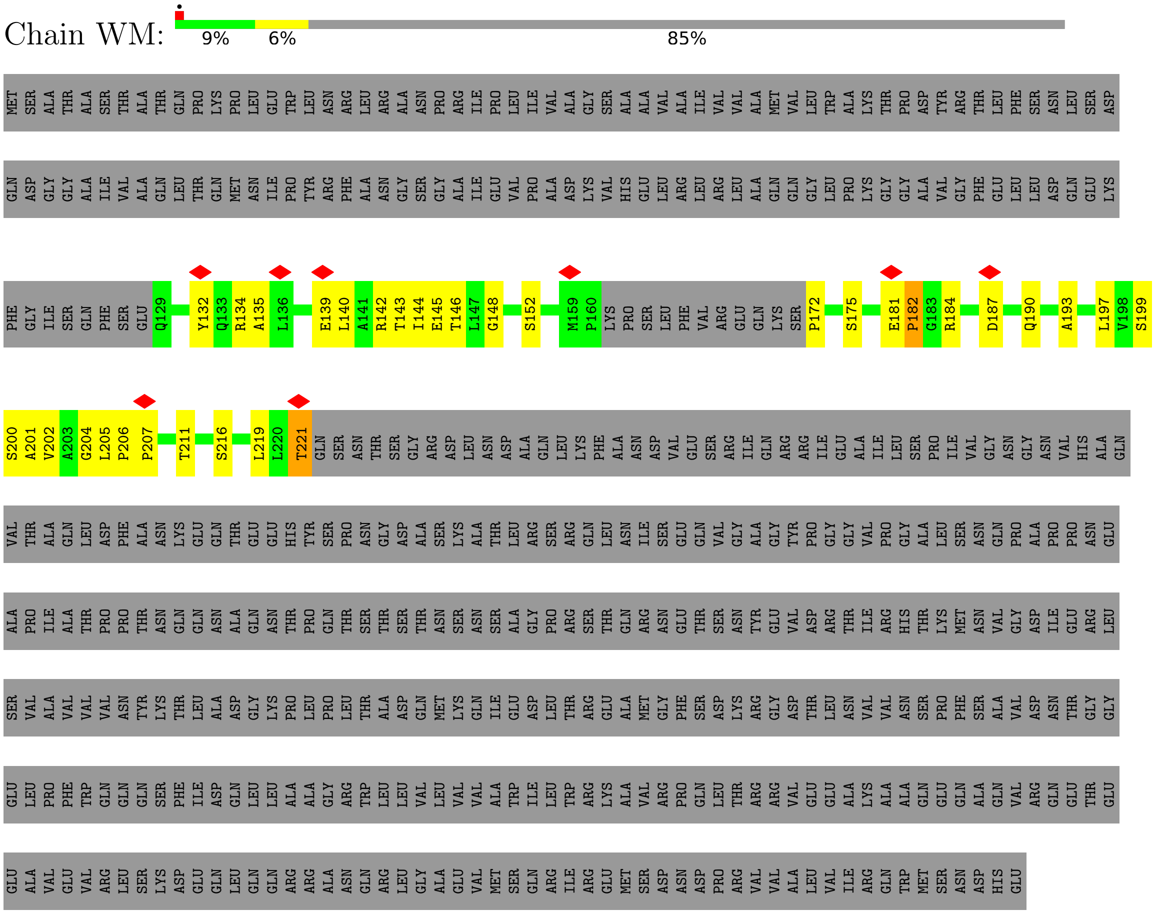
VAL HIS ALA GLN VAL THR ALA GLN LEU ASP PHE ALA ASN LYS GLU GLN THR GLU GLU HIS TYR SER PRO ASN GLY ASP ALA SER LYS ALA THR LEU ARG SER ARG GLN LEU ASN ILE SER GLU GLN VAL GLY ALA GLY TYR PRO GLY GLY VAL PRO GLY ALA LEU SER ASN GLN PRO ALA

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

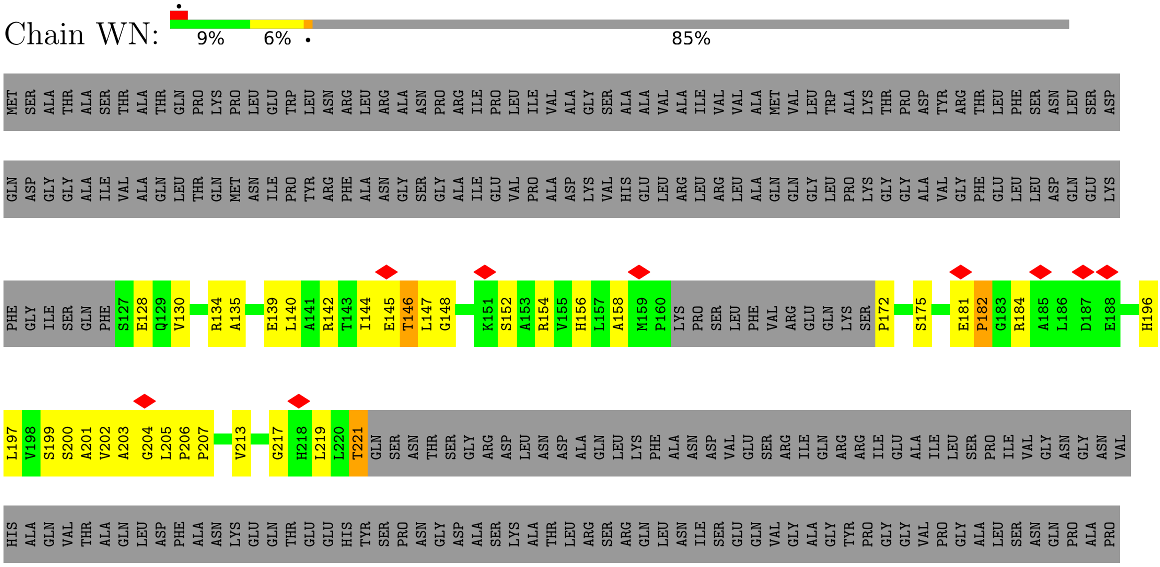
ILE GLU ARG LEU SER VAL ALA VAL VAL ASN TYR LYS THR LEU ALA ASP GLY LYS PRO LEU PRO LEU THR ALA ASP GLN MET LYS GLN ILE GLU ASP LEU THR ARG GLU ALA MET GLY PHE SER ASP LYS ARG GLY ASP THR LEU ASN VAL VAL ASN SER PRO PHE SER ALA VAL ASP

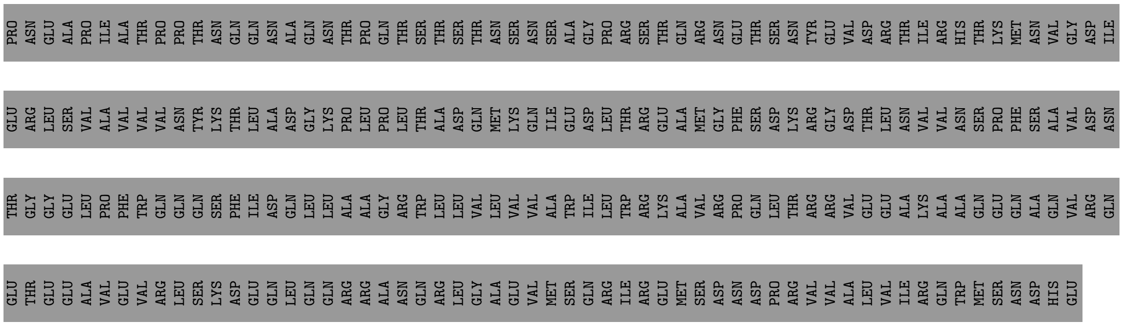
ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG

- Molecule 1: Flagellar M-ring protein



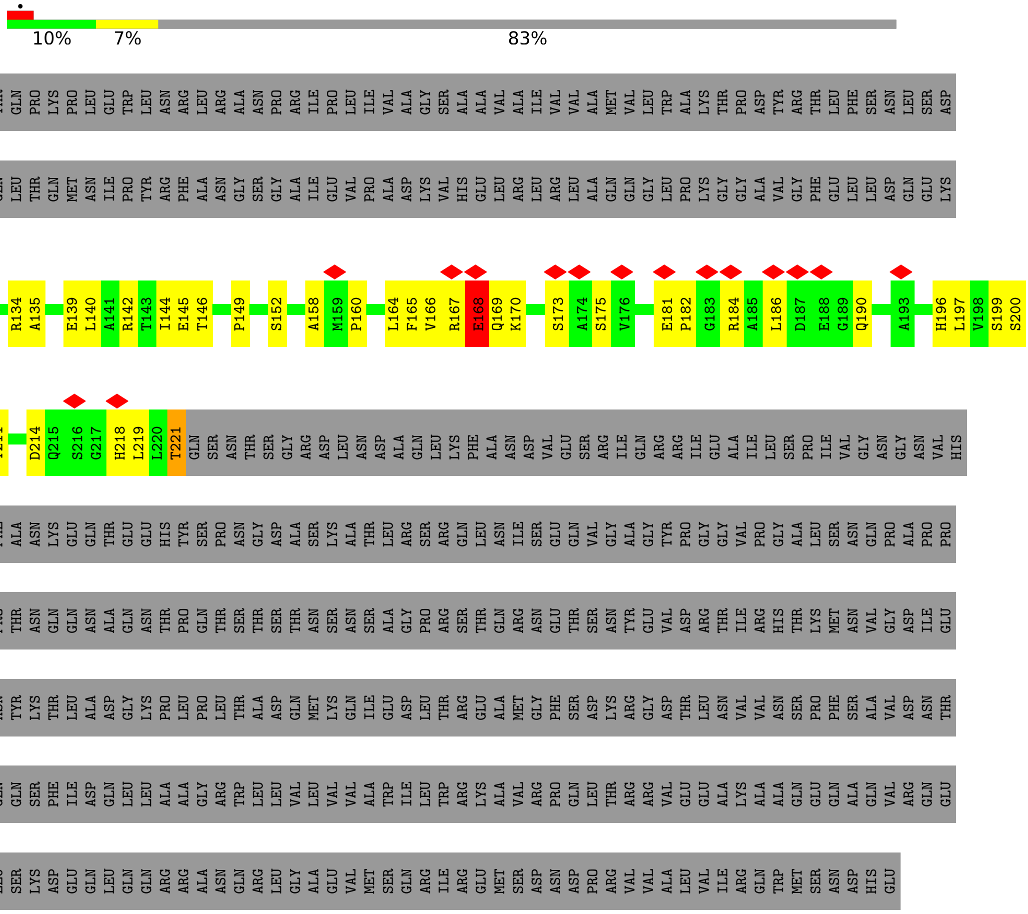
- Molecule 1: Flagellar M-ring protein





- Molecule 1: Flagellar M-ring protein

Chain WO:



- Molecule 1: Flagellar M-ring protein

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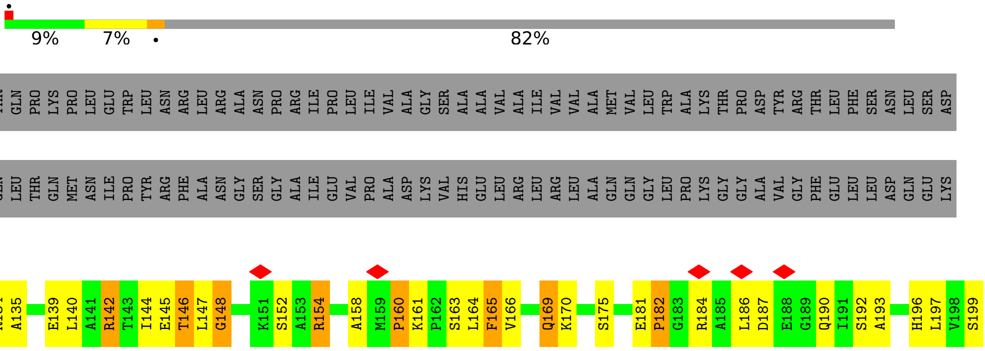
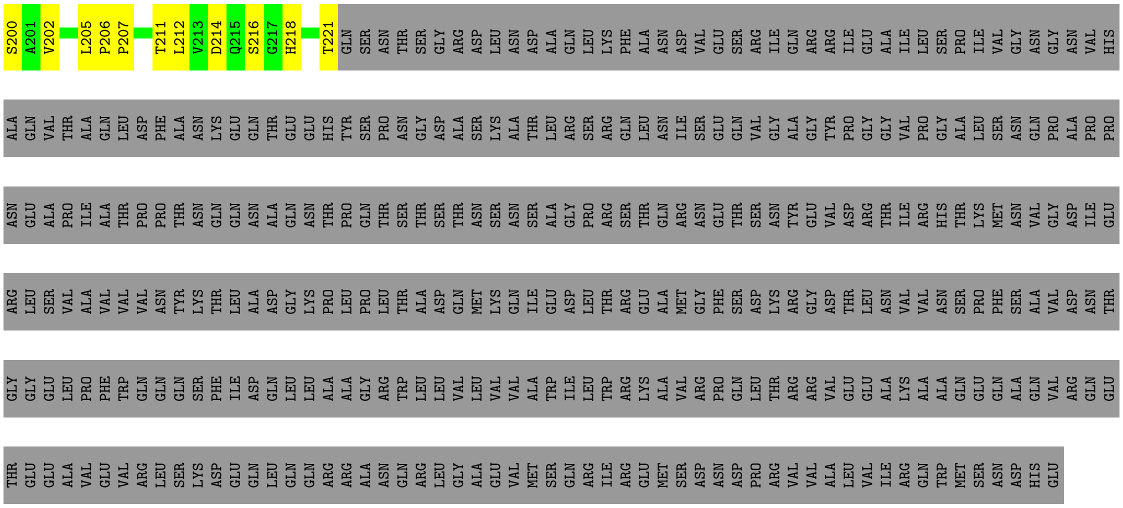
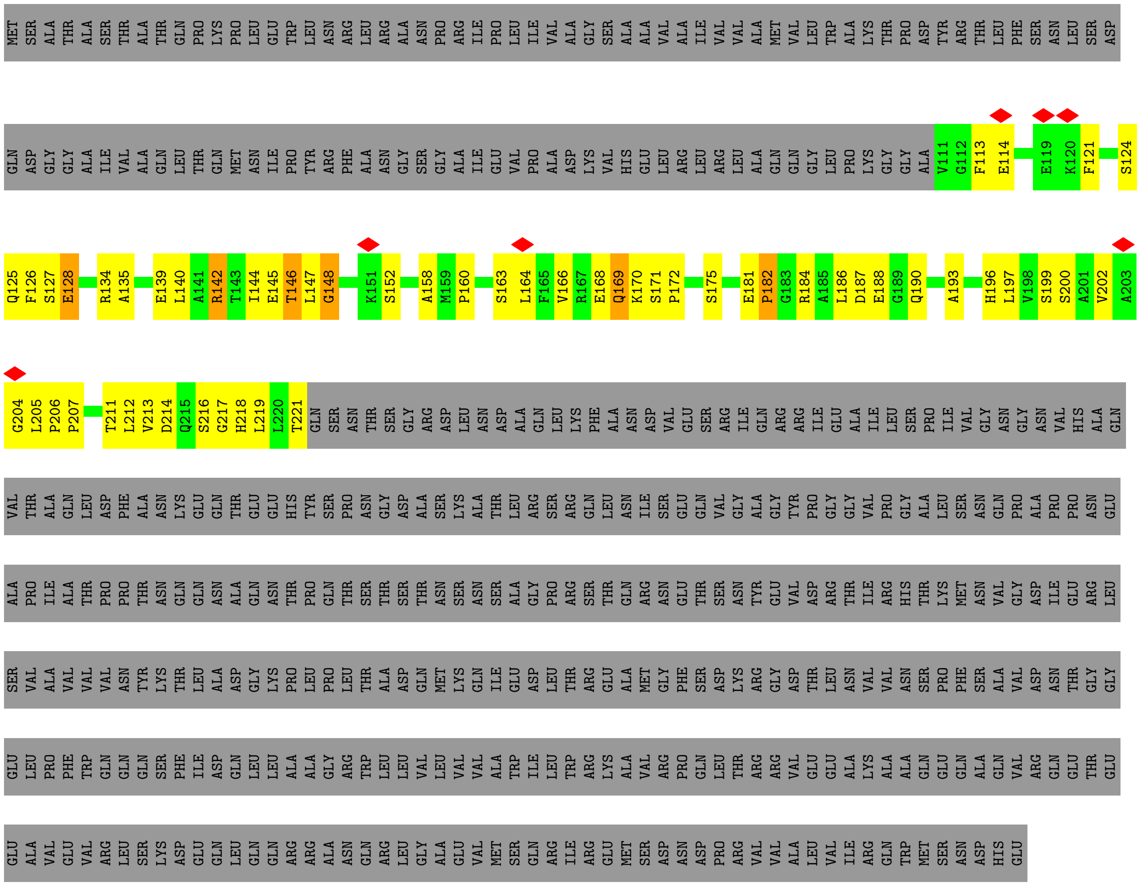




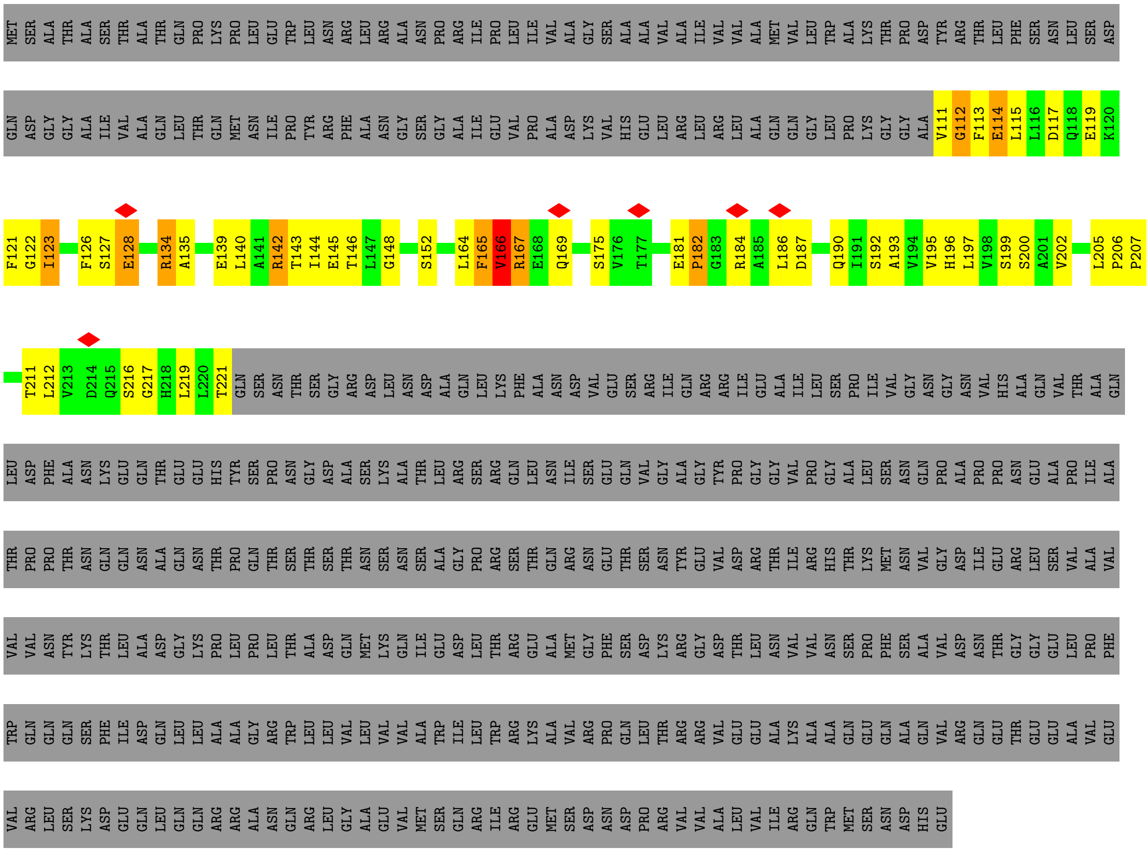
- Molecule 1: Flagellar M-ring protein

Chain WQ:

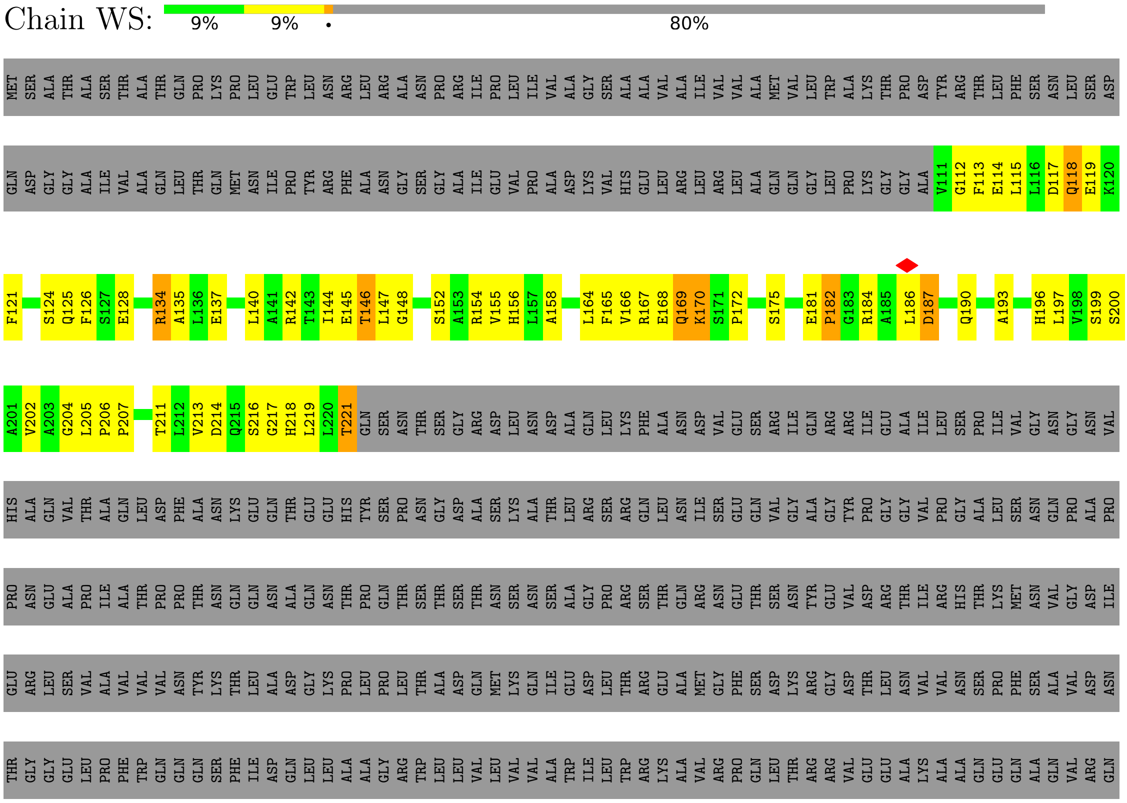


- Molecule 1: Flagellar M-ring protein

Chain WR:



- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein

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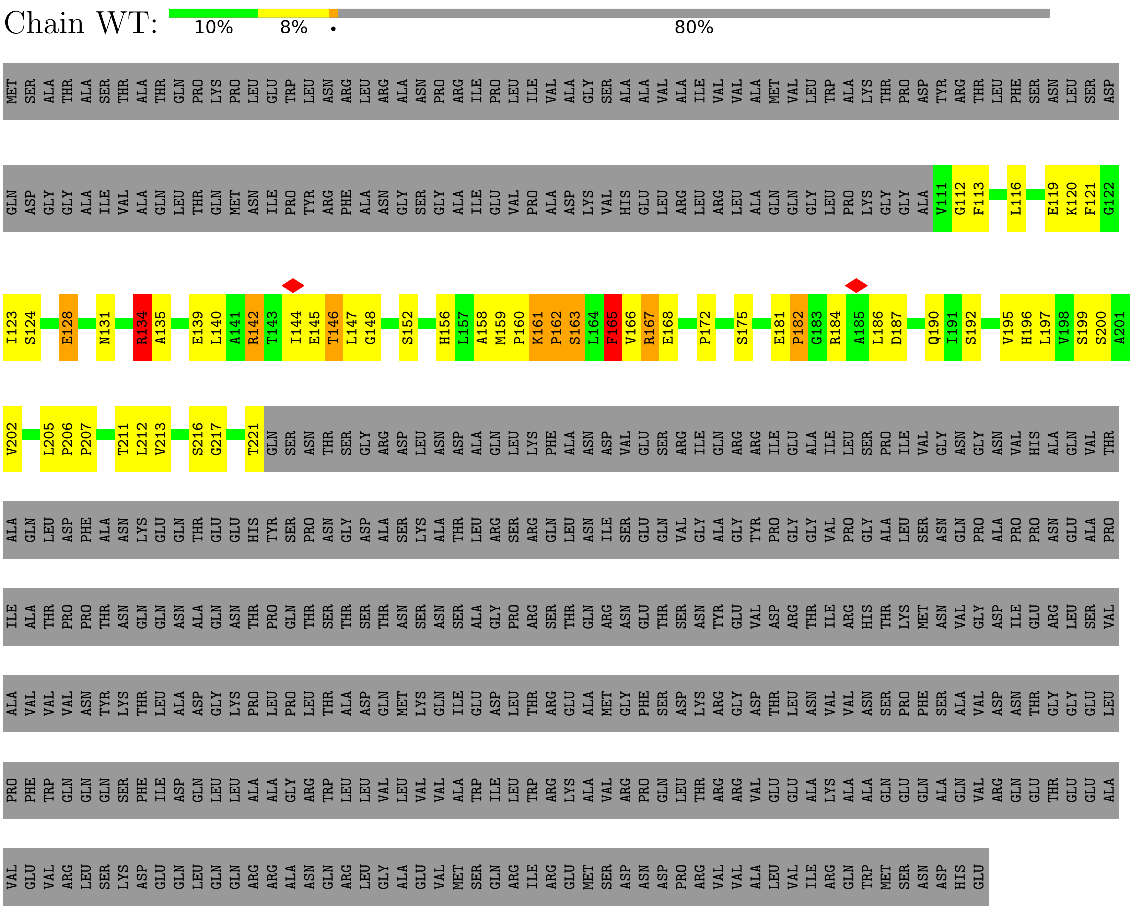

- Molecule 1: Flagellar M-ring protein

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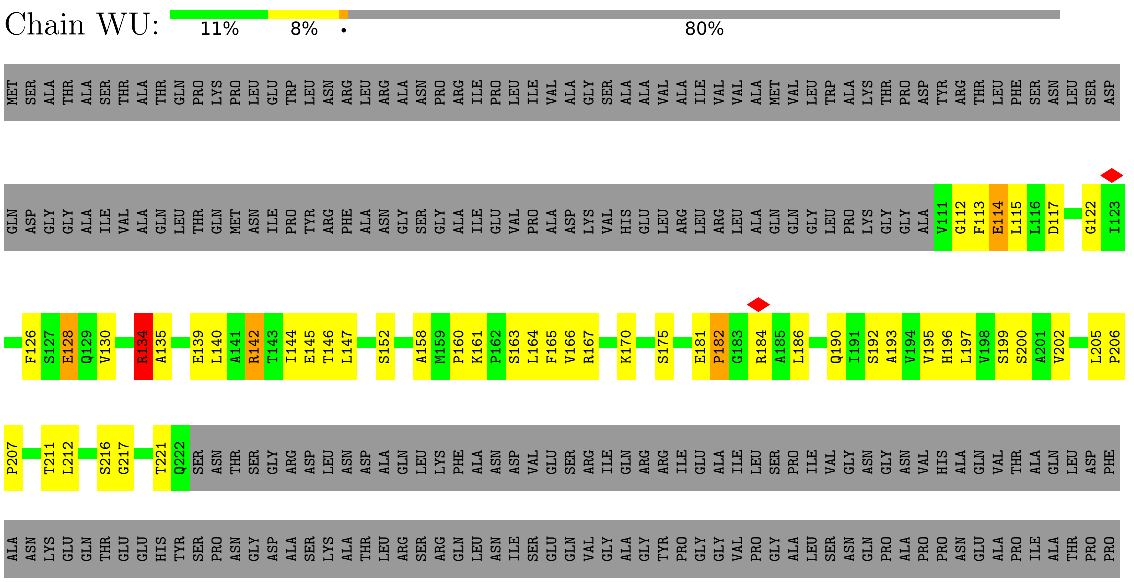
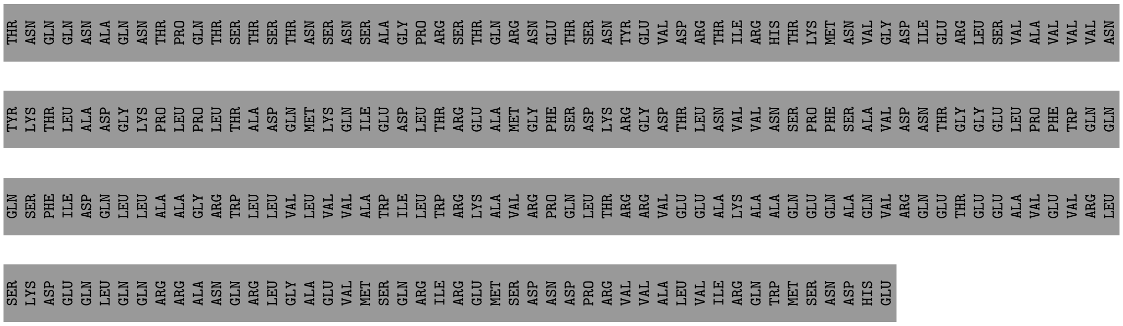
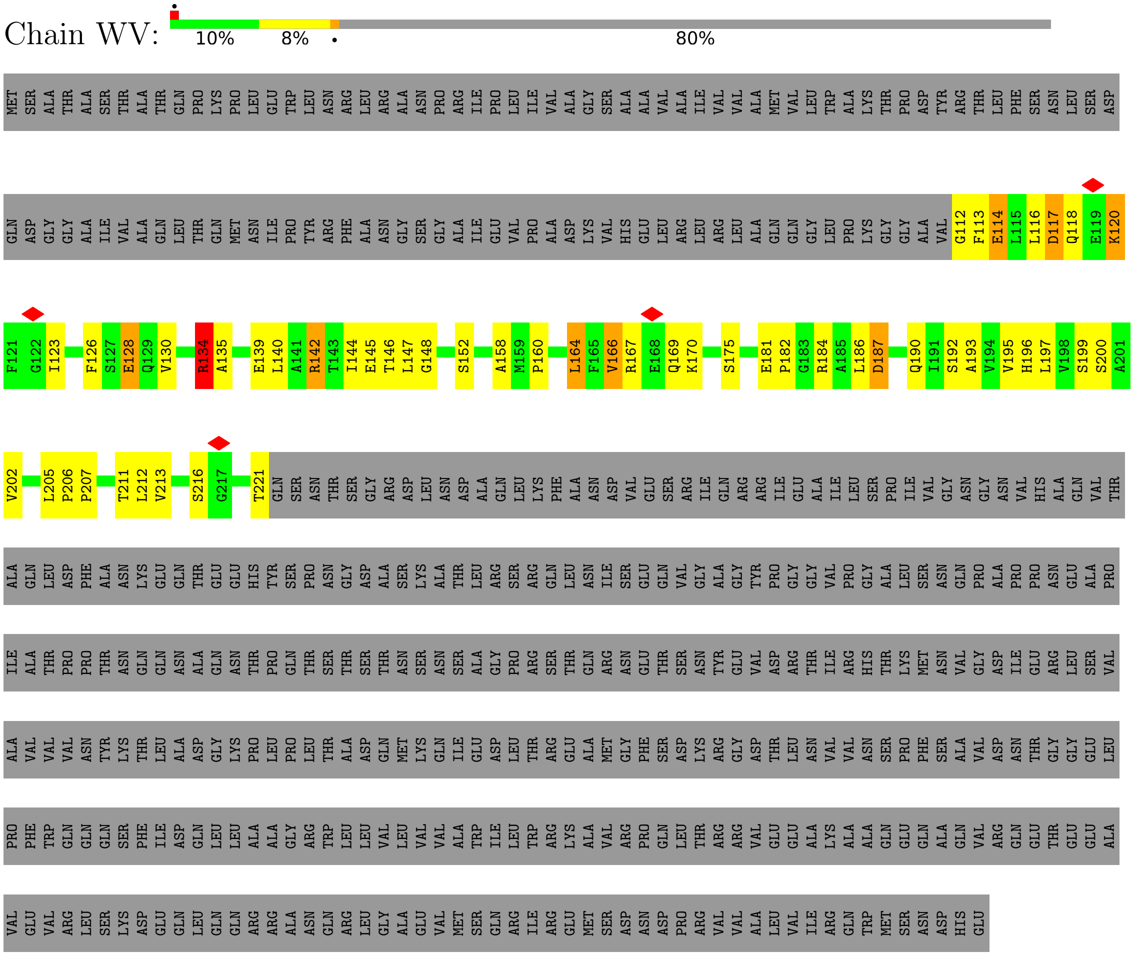
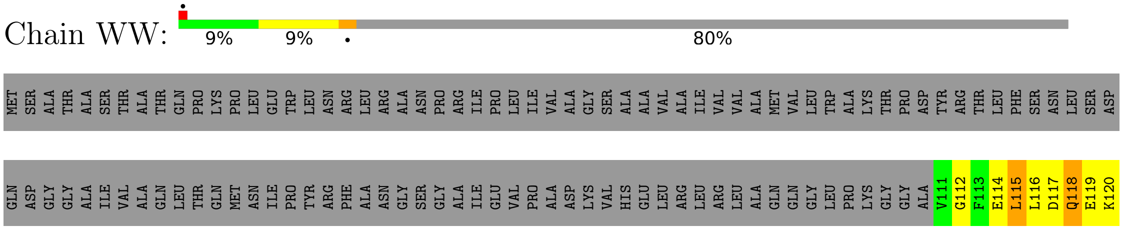


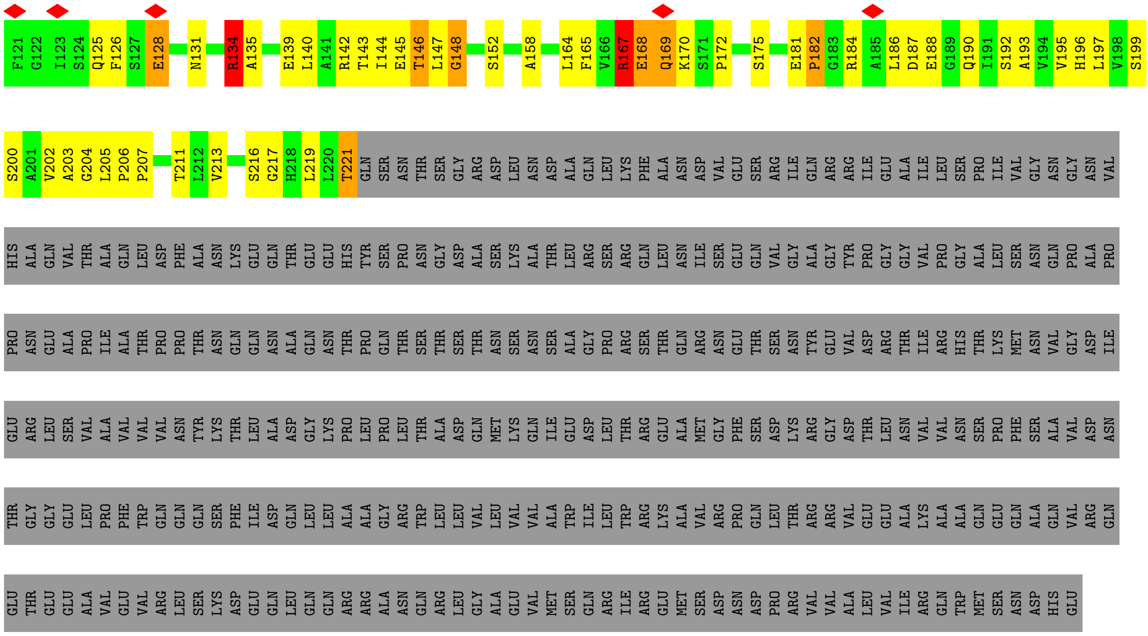


- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein





- Molecule 1: Flagellar M-ring protein

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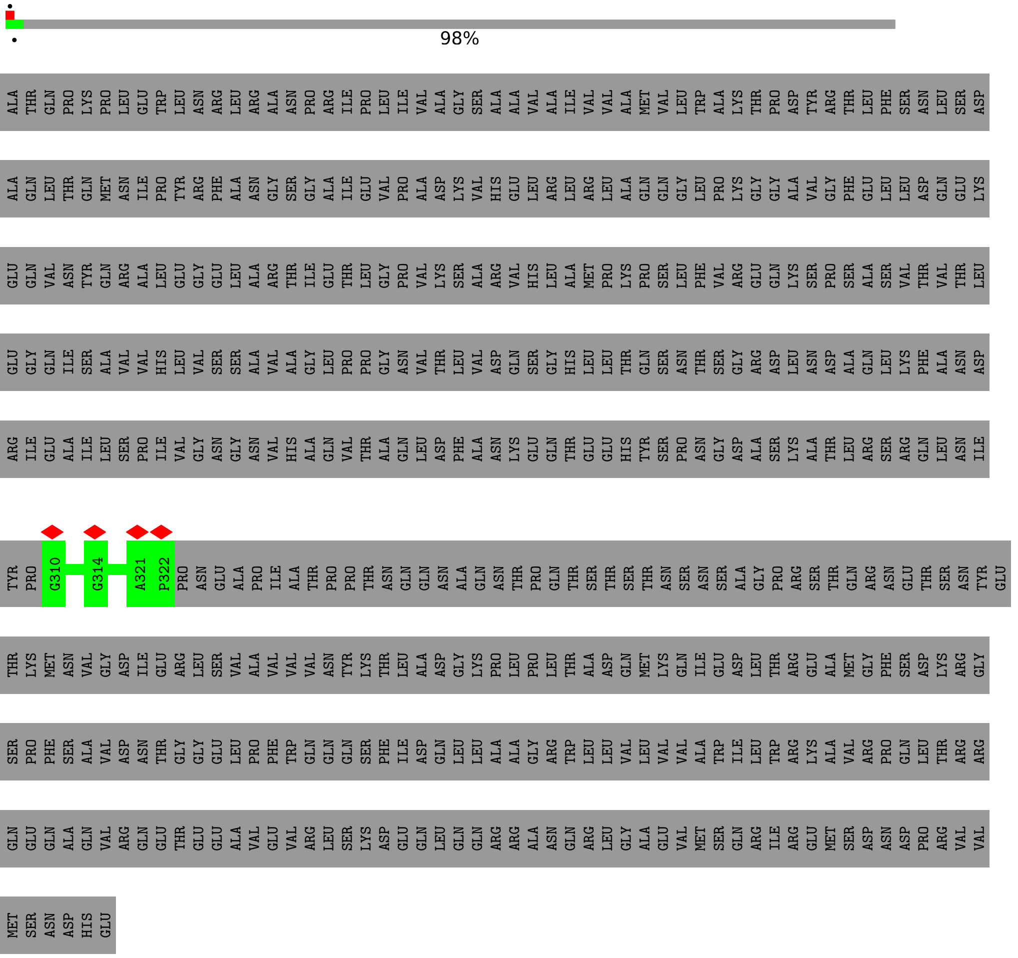
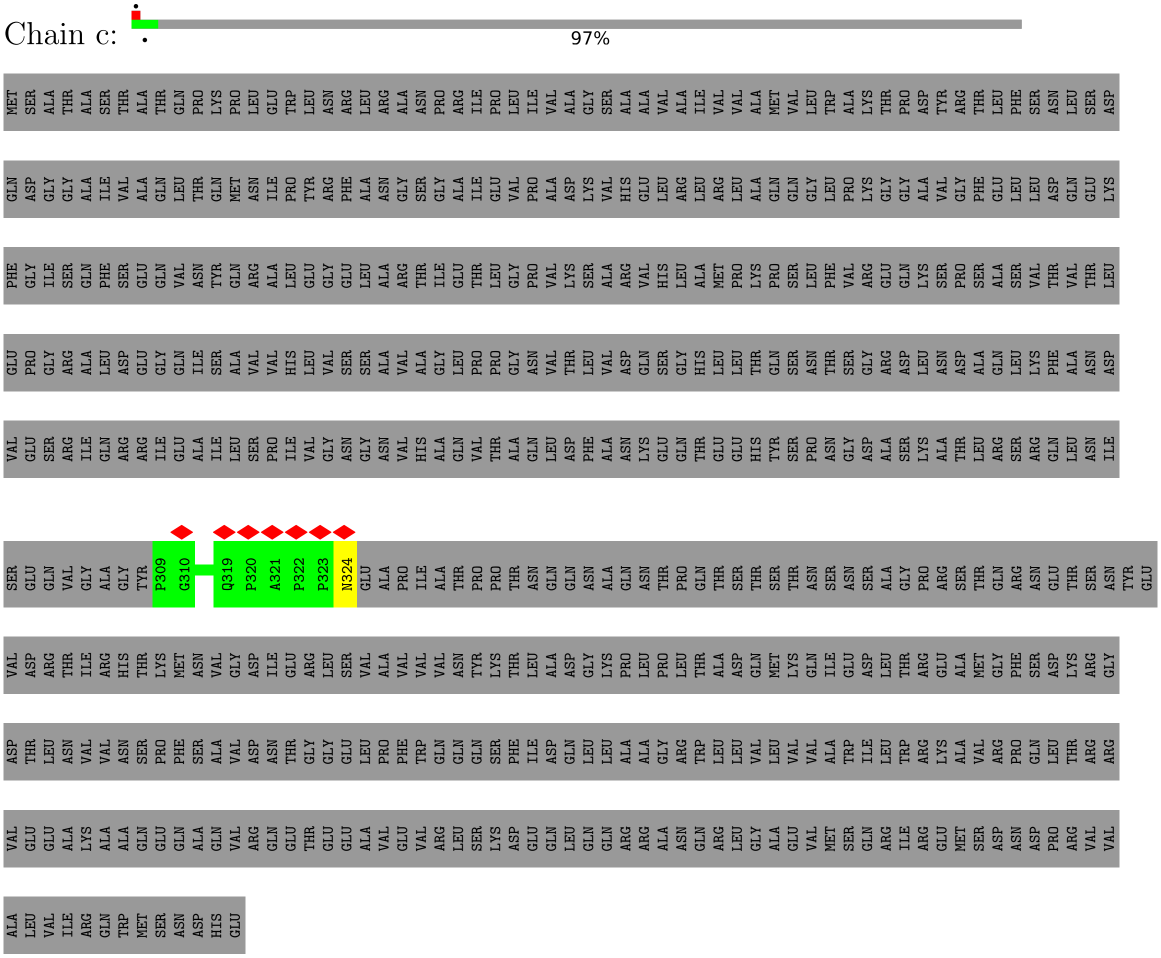


- Molecule 1: Flagellar M-ring protein

Chain c:



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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 P309 G310 Q319 P320 A321 P322 P323 N324 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

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

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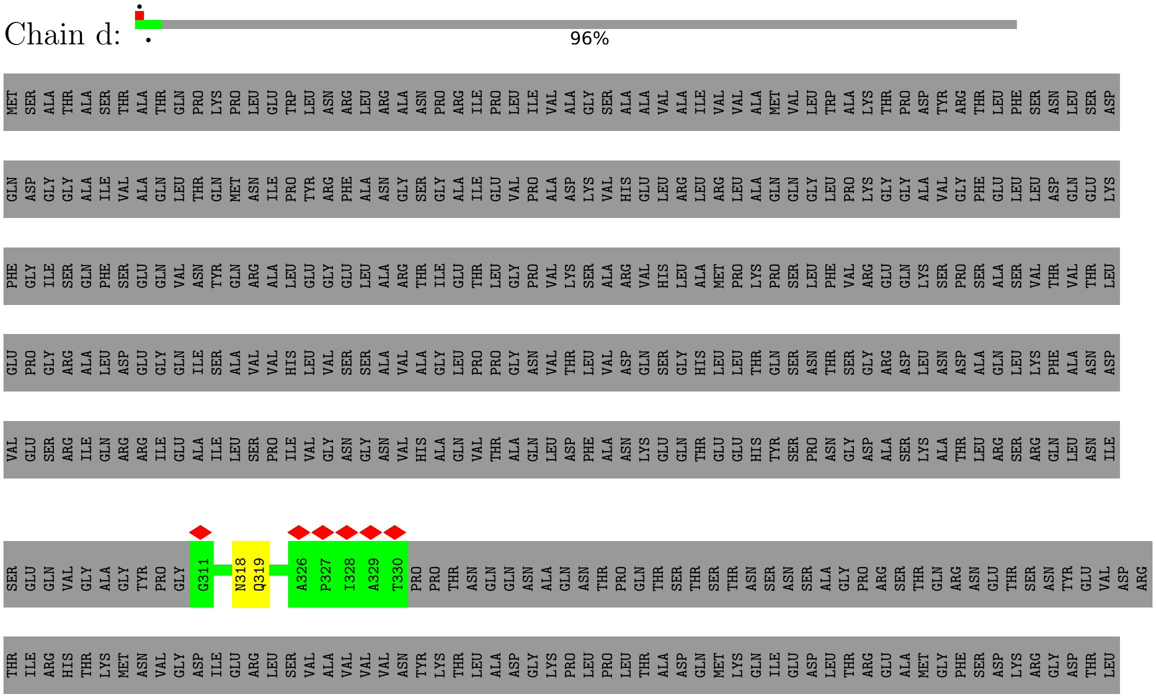
- Molecule 1: Flagellar M-ring protein

Chain d:



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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 G311 N318 Q319 A326 P327 I328 A329 T330 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

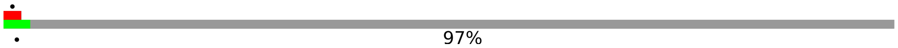
ASN VAL VAL ASN SER PRO PHE SER ALA VAL ASP ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL ARG PRO GLN LEU THR ARG ARG VAL GLU GLU

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

ILE ARG GLN TRP MET SER ASN ASP HIS GLU

- Molecule 1: Flagellar M-ring protein

Chain e:



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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

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SER GLU GLN VAL GLY ALA GLY TYR P309 G314 A315 L316 S317 N318 Q319 P320 A321 P322 P323 N324 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

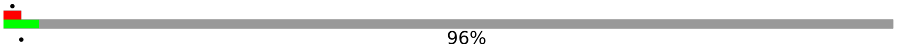
ASP LYS ARG GLY ASP THR LEU ASN VAL VAL ASN SER PRO PHE SER ALA VAL ASP ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL ARG PRO GLN

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

PRO ARG VAL VAL ALA LEU VAL ILE ARG GLN TRP MET SER ASN ASP HIS GLU

- Molecule 1: Flagellar M-ring protein

Chain f:



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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 GLN LEU ASN ILE

SER GLU GLN VAL GLY ALA GLY TYR PRO GLY G311 N324 E325 A326 P327 I328 A329 T330 P331 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

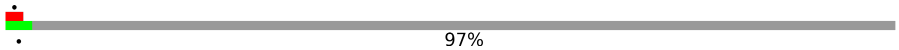
VAL VAL ASN SER PRO PHE SER ALA VAL ASP ASN THR GLY GLY GLU LEU PRO PHE TRP GLN GLN GLN SER PHE ILE ASP GLN LEU LEU ALA ALA GLY ARG TRP LEU LEU VAL LEU VAL VAL ALA TRP ILE LEU TRP ARG LYS ALA VAL ARG PRO GLN LEU THR ARG ARG VAL GLU GLU ALA

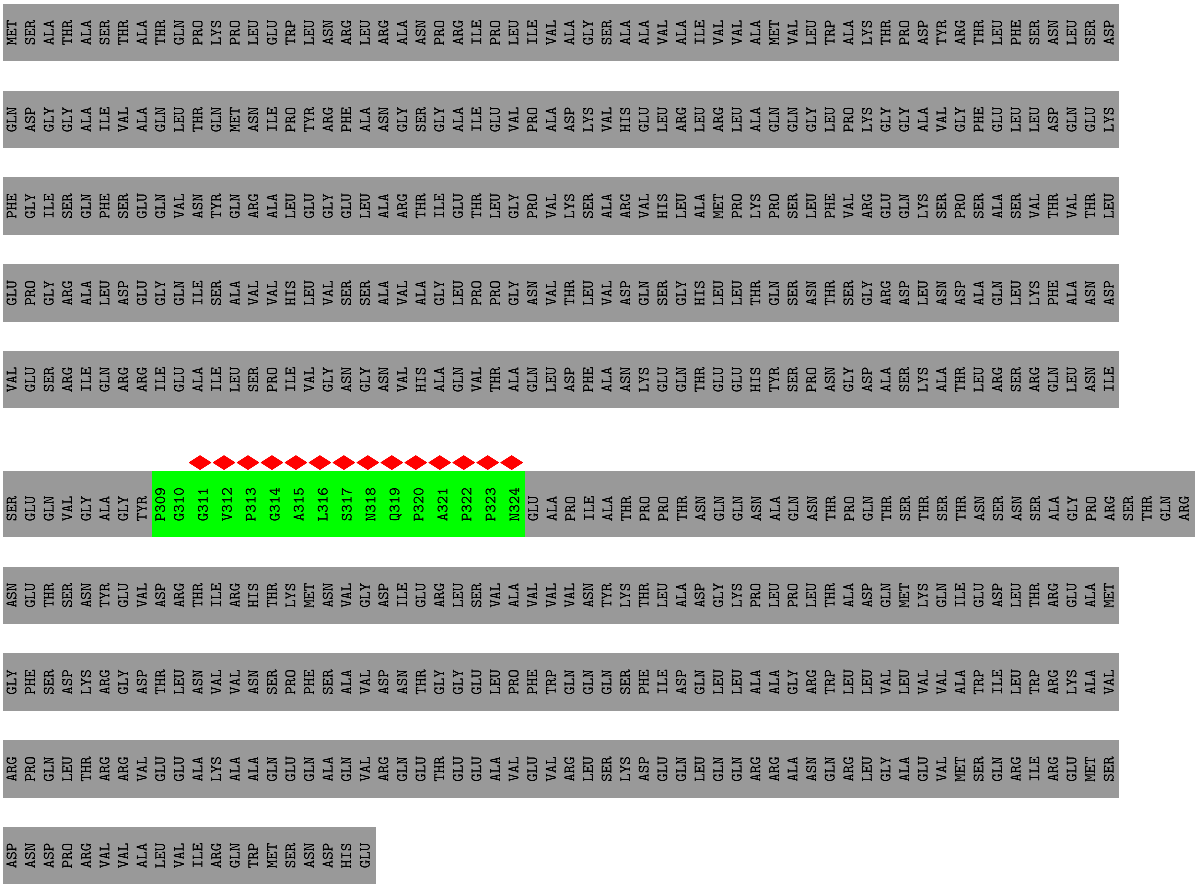
LYS ALA ALA GLN GLU GLN ALA GLN VAL ARG GLN GLU THR GLU GLU ALA VAL GLU VAL ARG LEU SER LYS ASP GLU GLN LEU GLN GLN ARG ARG ALA ASN GLN ARG LEU GLY ALA GLU VAL MET SER GLN ARG ILE ARG GLU MET SER ASP ASN ASP PRO ARG VAL VAL ALA LEU VAL ILE

ARG GLN TRP MET SER ASN ASP HIS GLU

- Molecule 1: Flagellar M-ring protein

Chain g:





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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 P309 G310 G311 V312 P313 G314 A315 L316 S317 N318 Q319 P320 A321 P322 P323 N324 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 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 LYS ASP GLU GLN LEU GLN GLN ARG ARG ALA ASN GLN ARG LEU GLY ALA GLU VAL MET SER GLN ARG ILE ARG GLU MET SER

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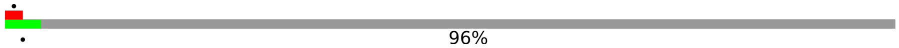
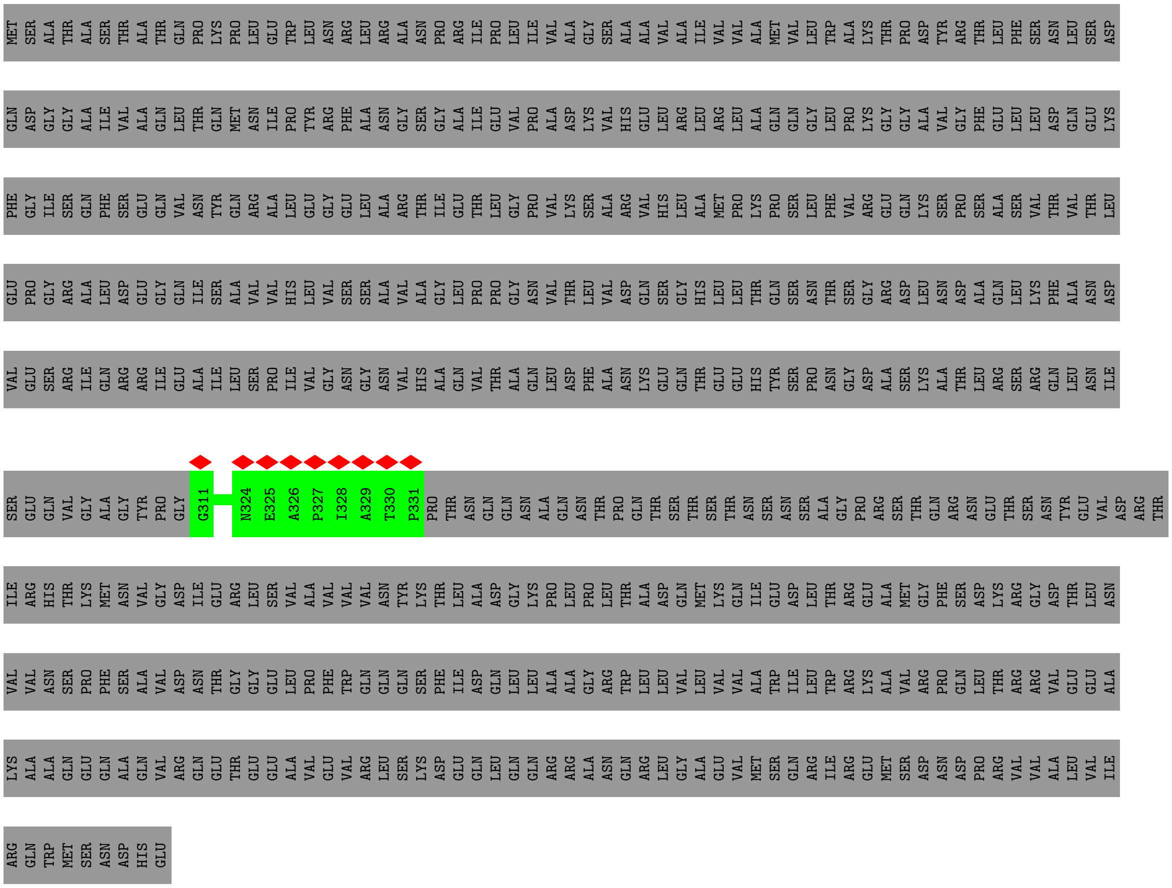
- Molecule 1: Flagellar M-ring protein

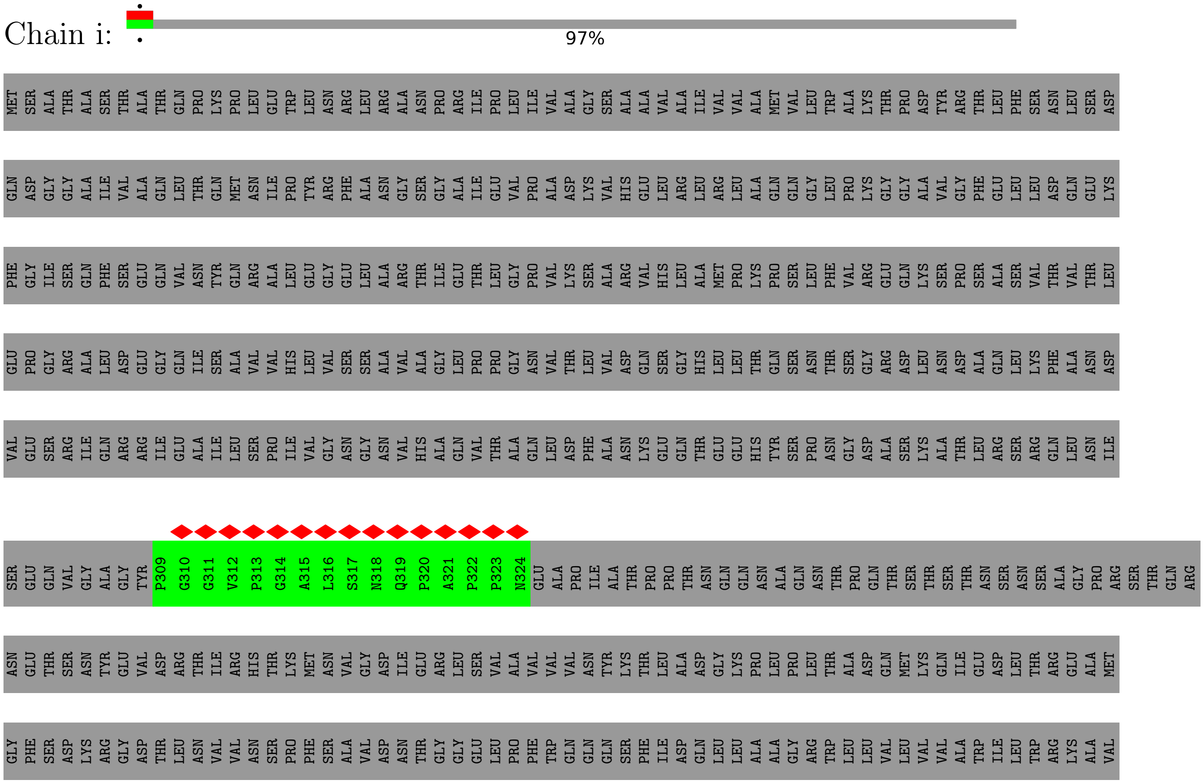
Chain h:

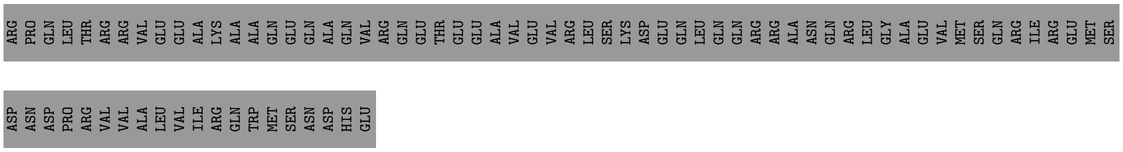




- Molecule 1: Flagellar M-ring protein

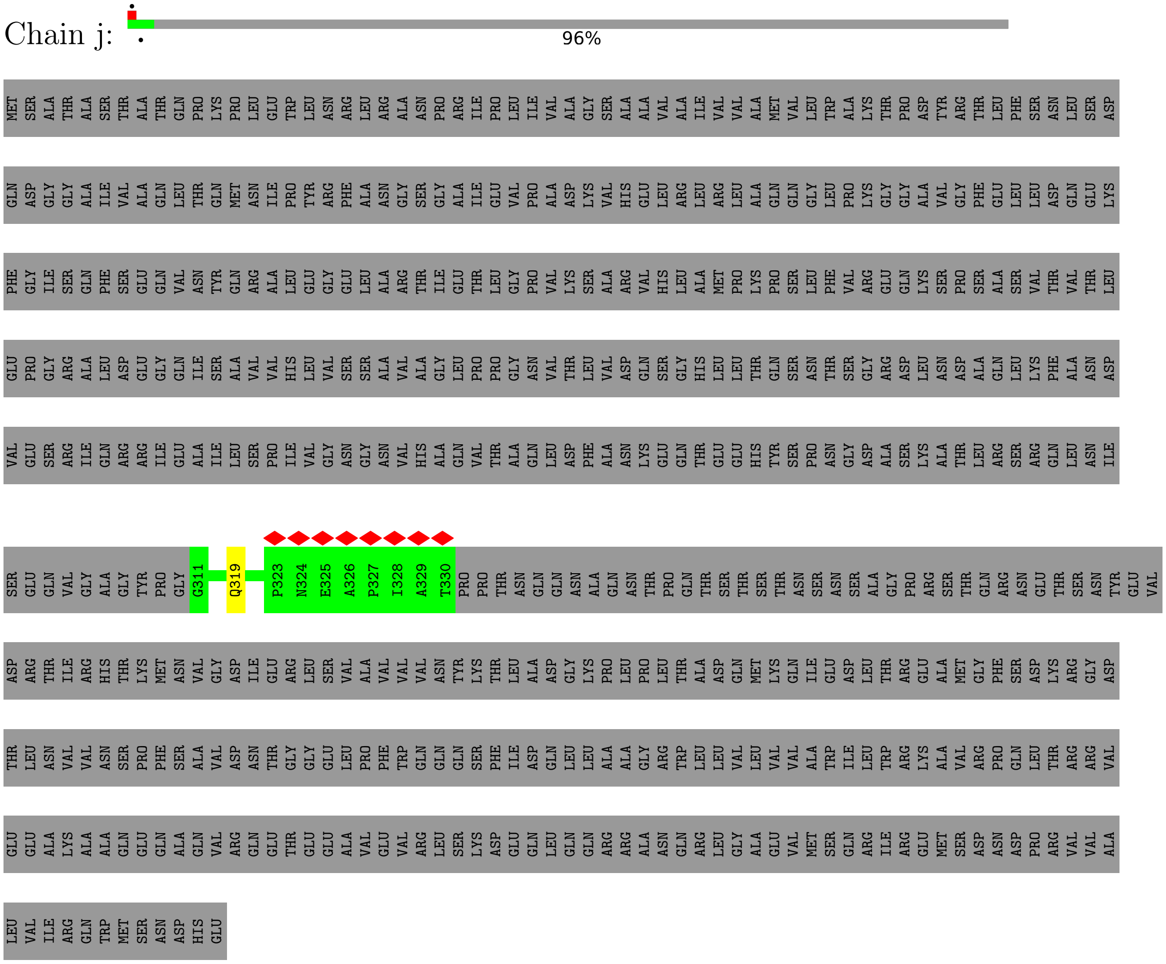
Chain i:





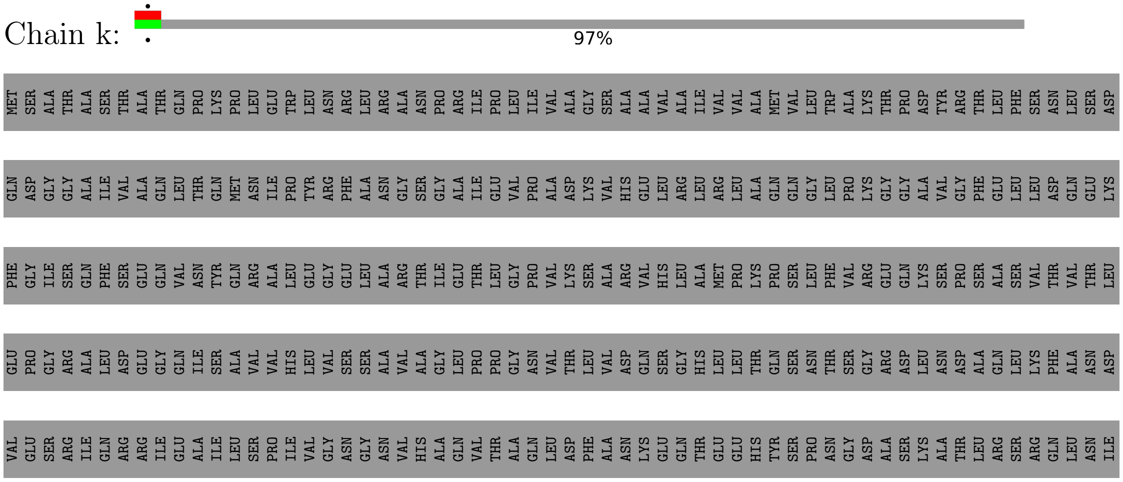
- Molecule 1: Flagellar M-ring protein

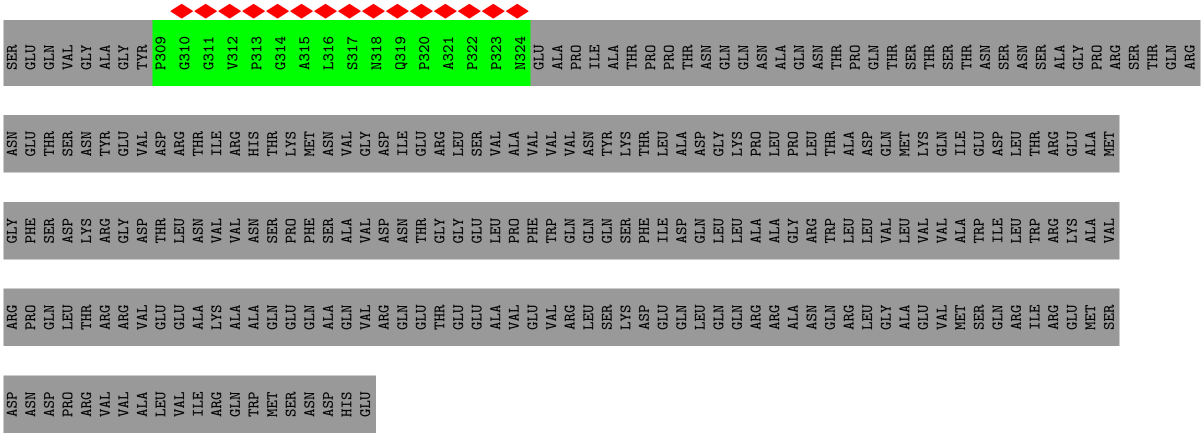
Chain j:



- Molecule 1: Flagellar M-ring protein

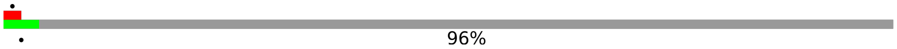
Chain k:

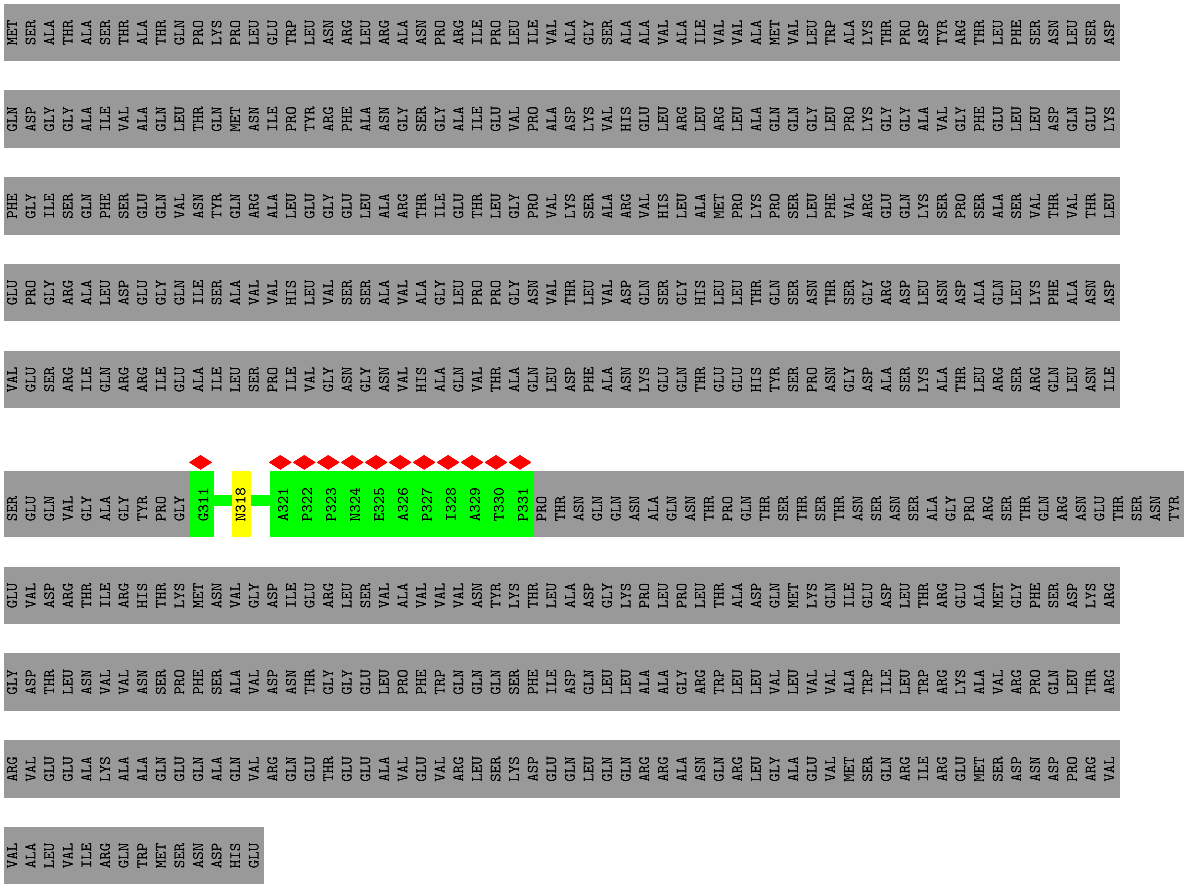




- Molecule 1: Flagellar M-ring protein

Chain l:



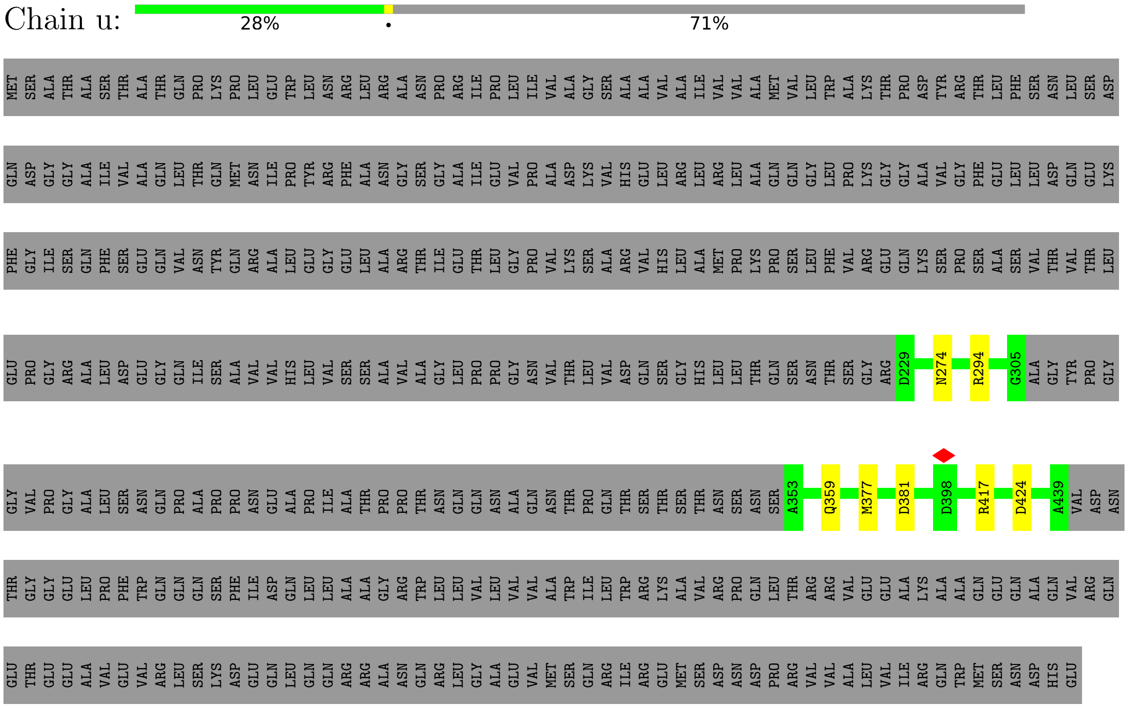


- Molecule 1: Flagellar M-ring protein

Chain t:

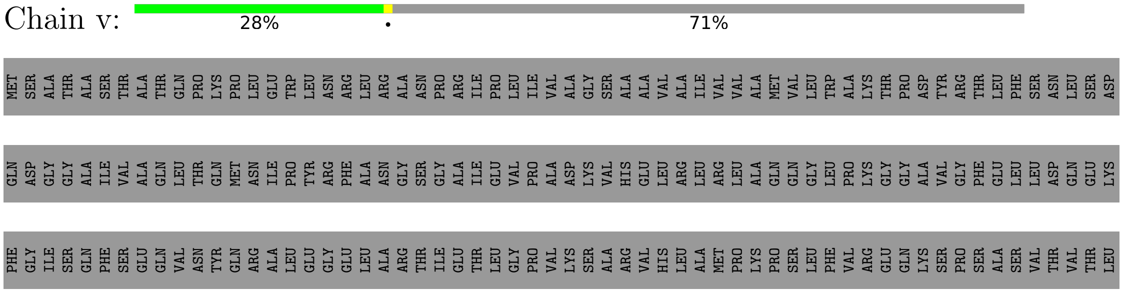
- Molecule 1: Flagellar M-ring protein

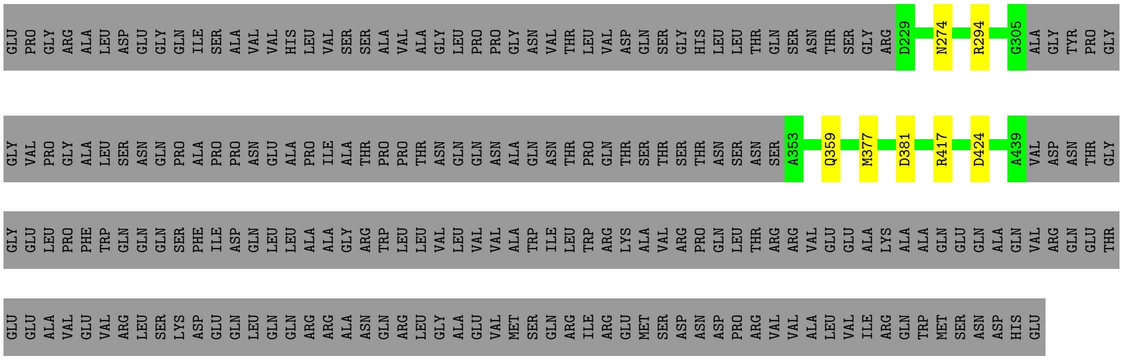
Chain u:



- Molecule 1: Flagellar M-ring protein

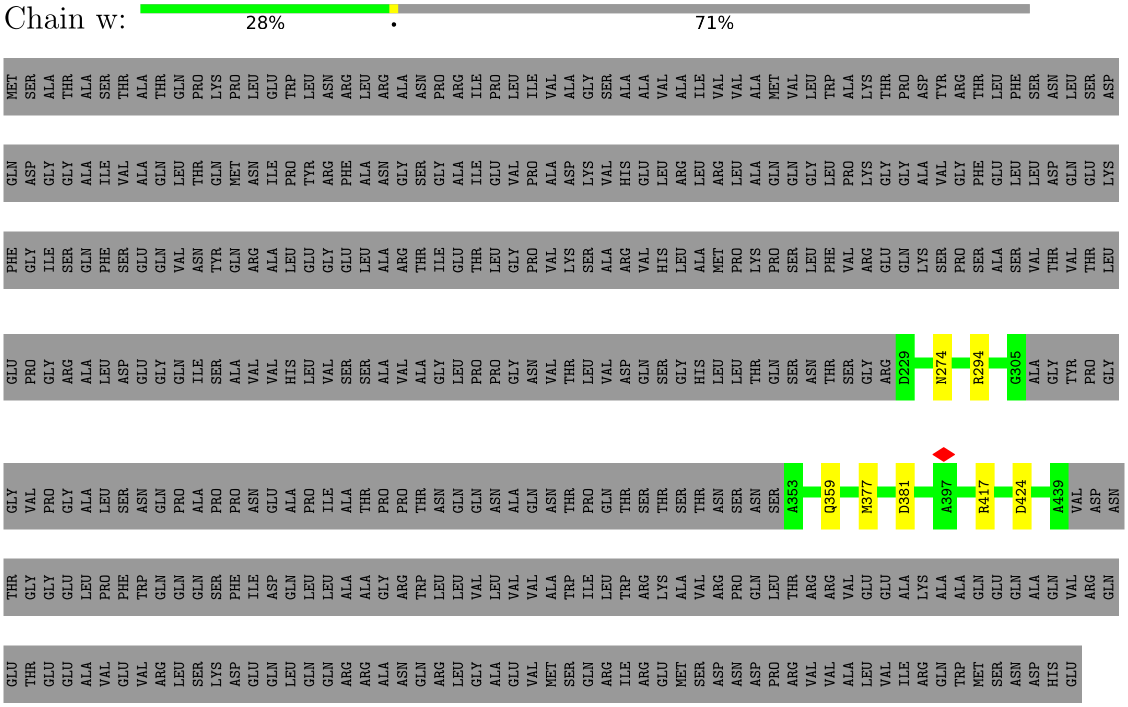
Chain v:





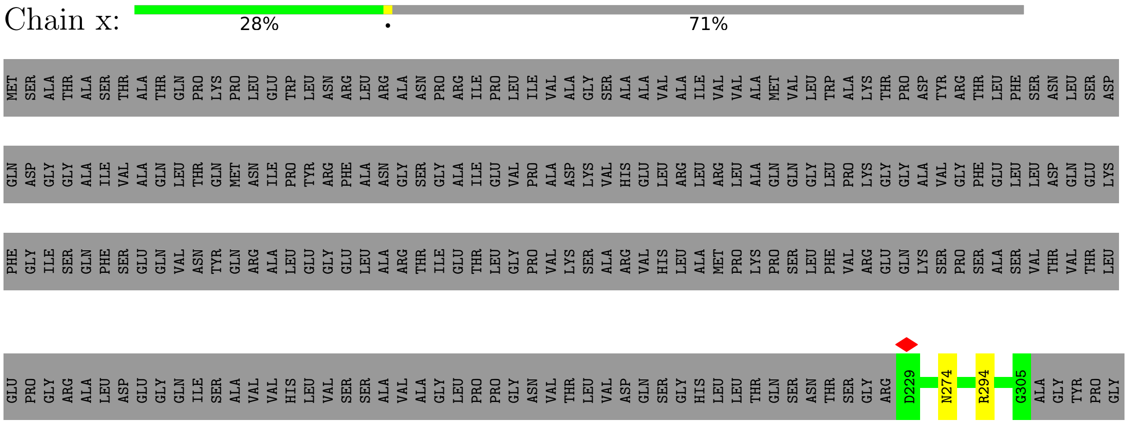
- Molecule 1: Flagellar M-ring protein

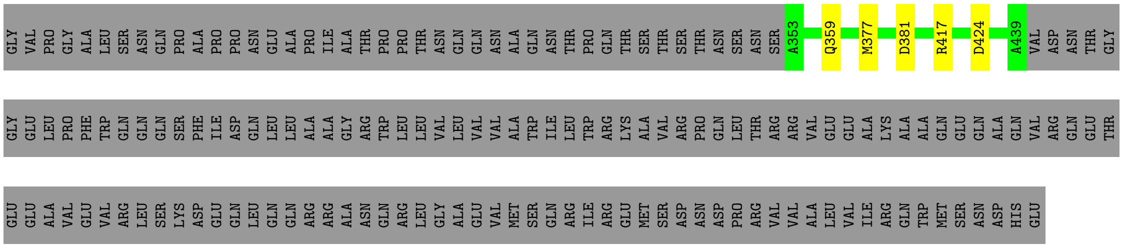
Chain w:



- Molecule 1: Flagellar M-ring protein

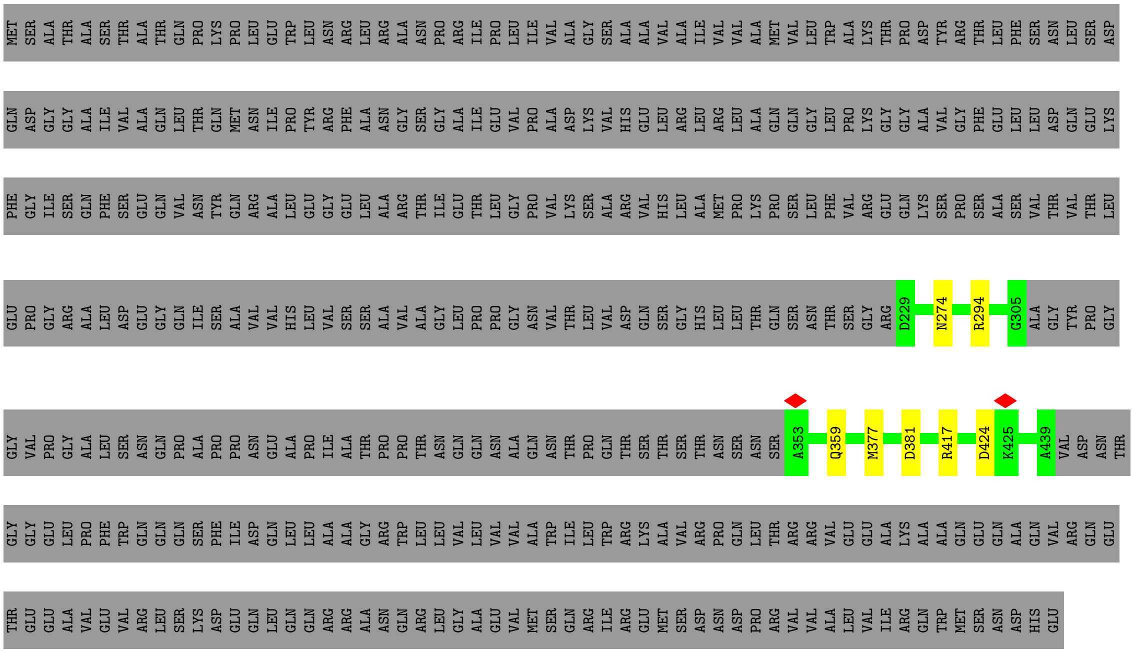
Chain x:





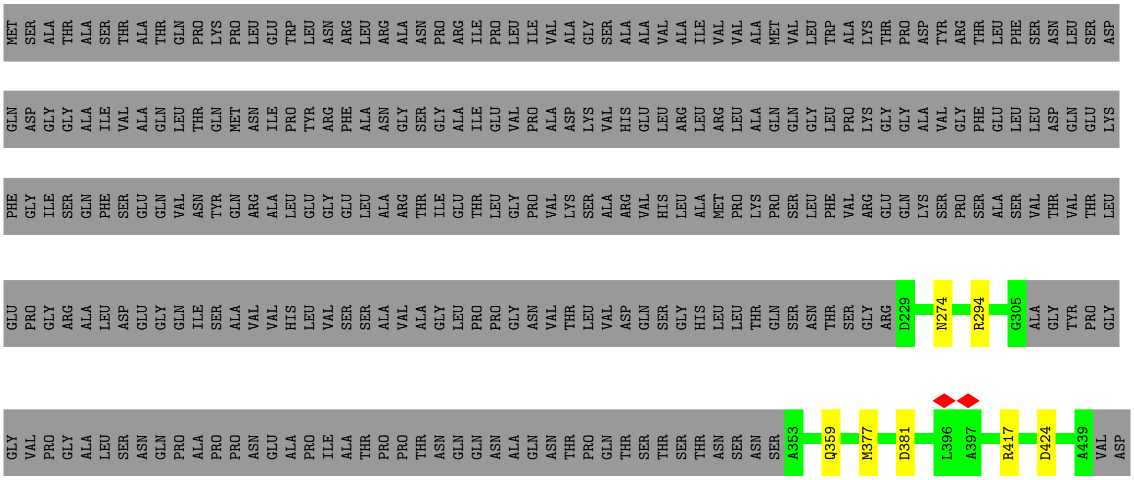
- Molecule 1: Flagellar M-ring protein

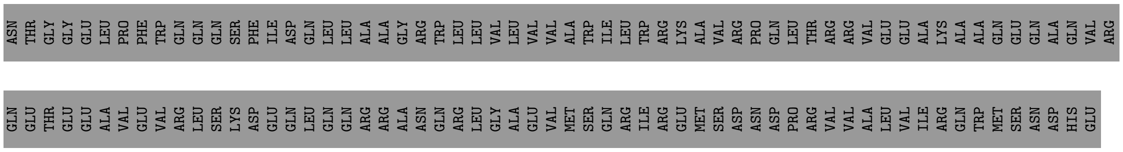
Chain y:



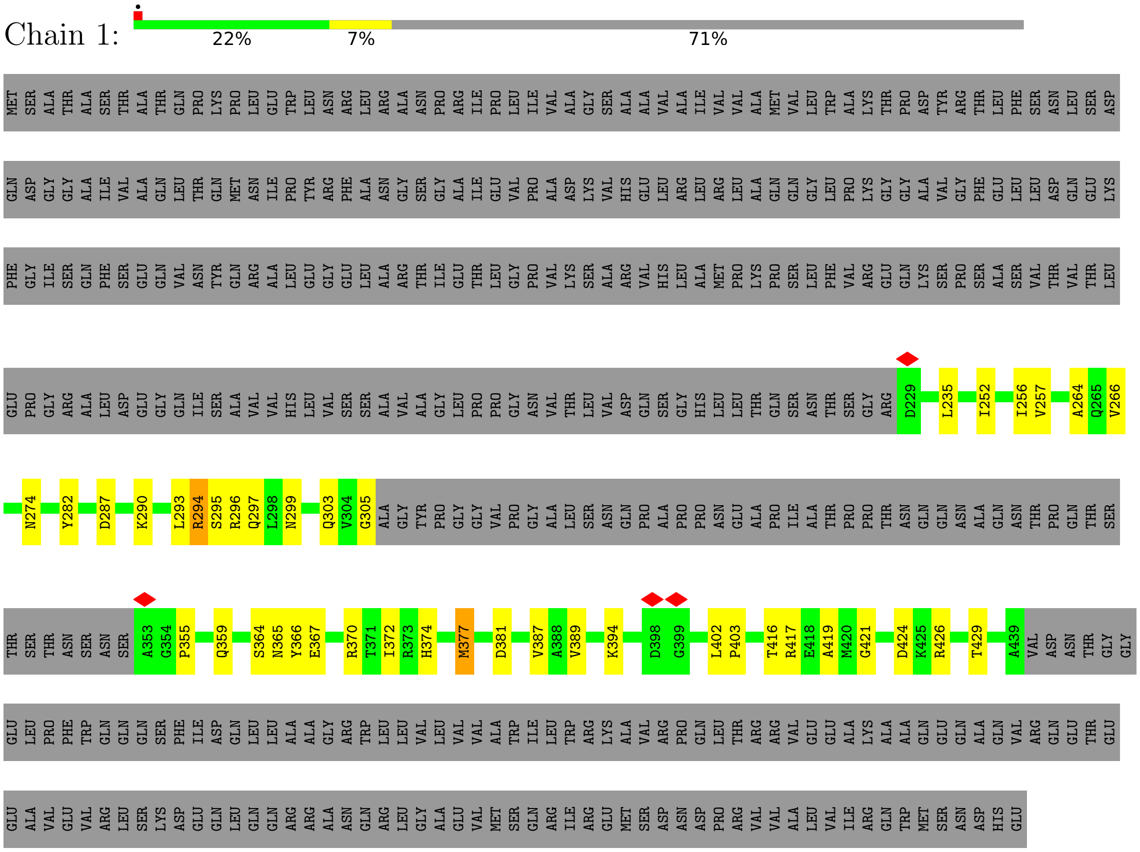
- Molecule 1: Flagellar M-ring protein

Chain z:

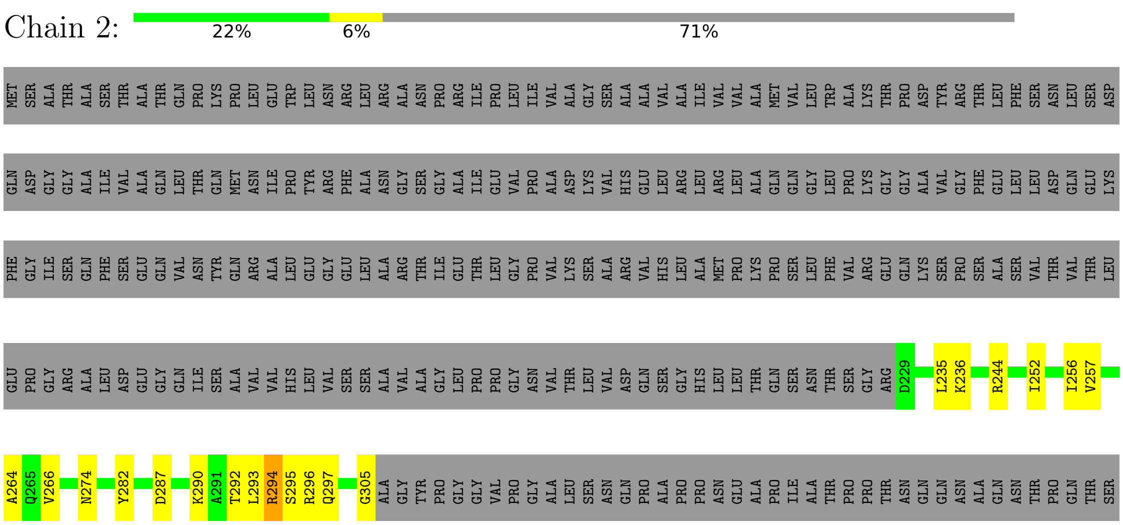


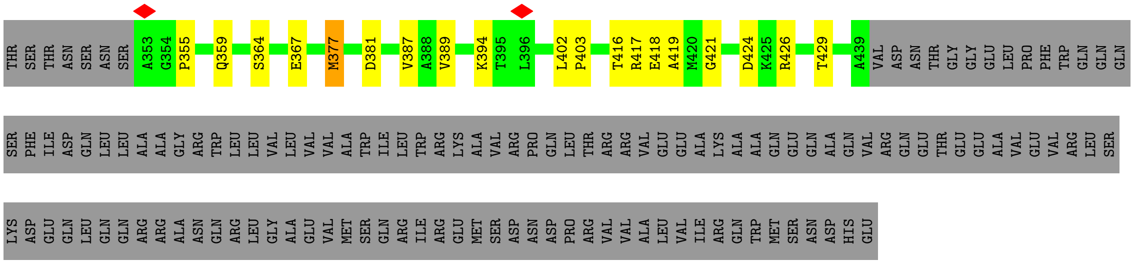


- Molecule 1: Flagellar M-ring protein



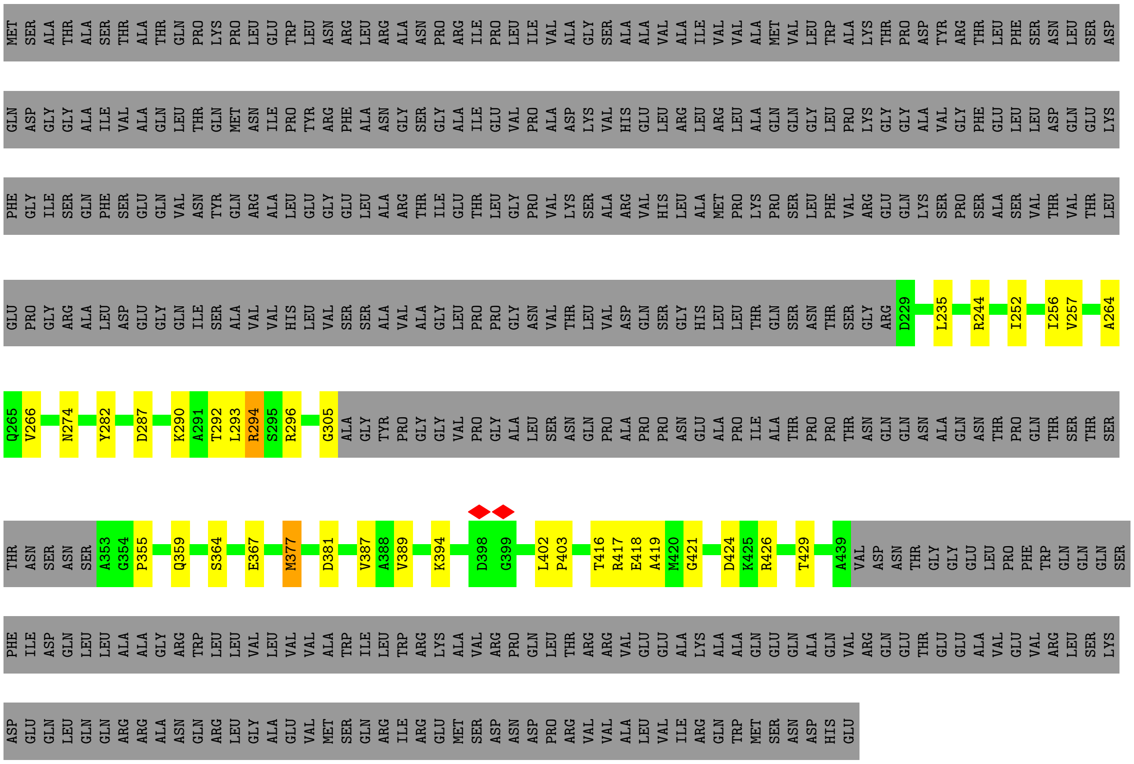
- Molecule 1: Flagellar M-ring protein





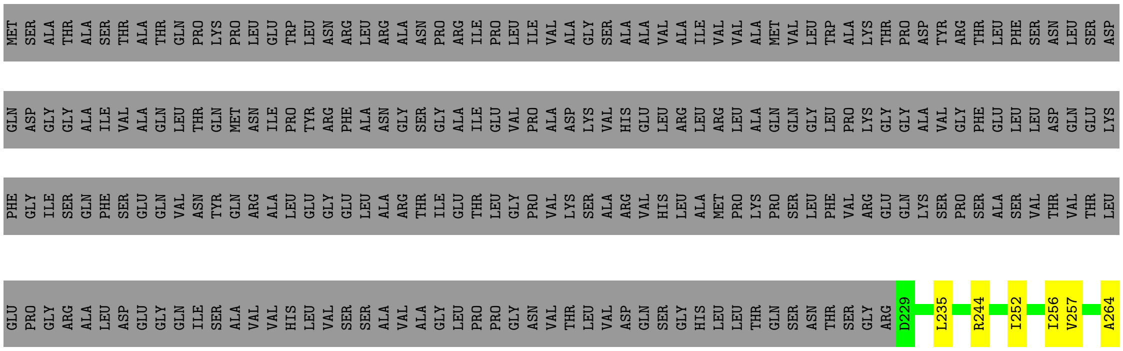
- Molecule 1: Flagellar M-ring protein

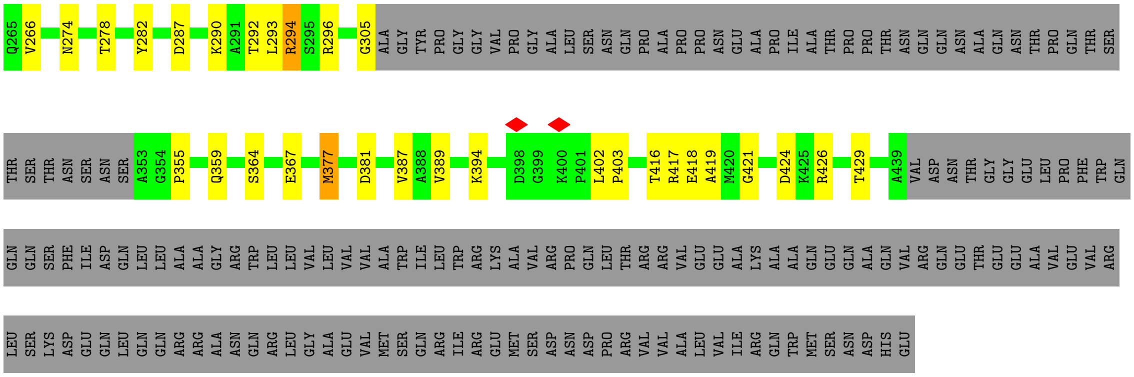
Chain 3:



- Molecule 1: Flagellar M-ring protein

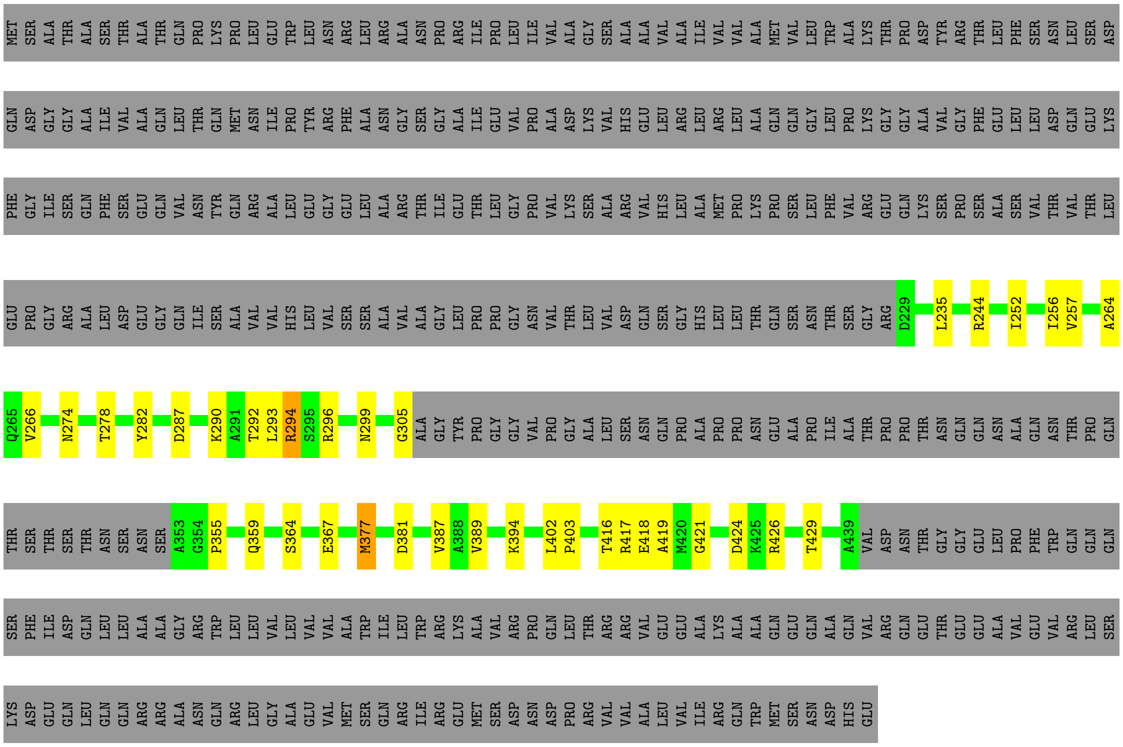
Chain 4:





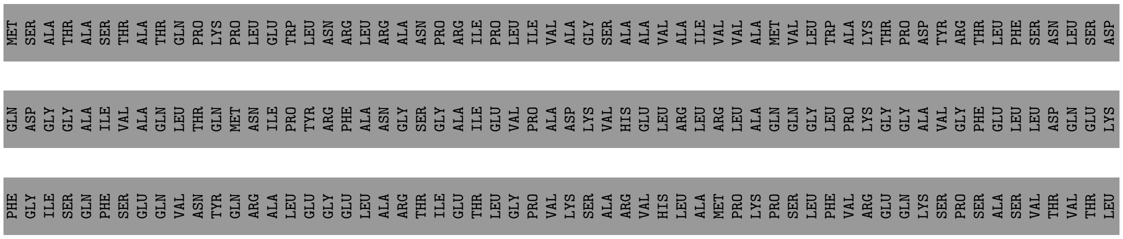
- Molecule 1: Flagellar M-ring protein

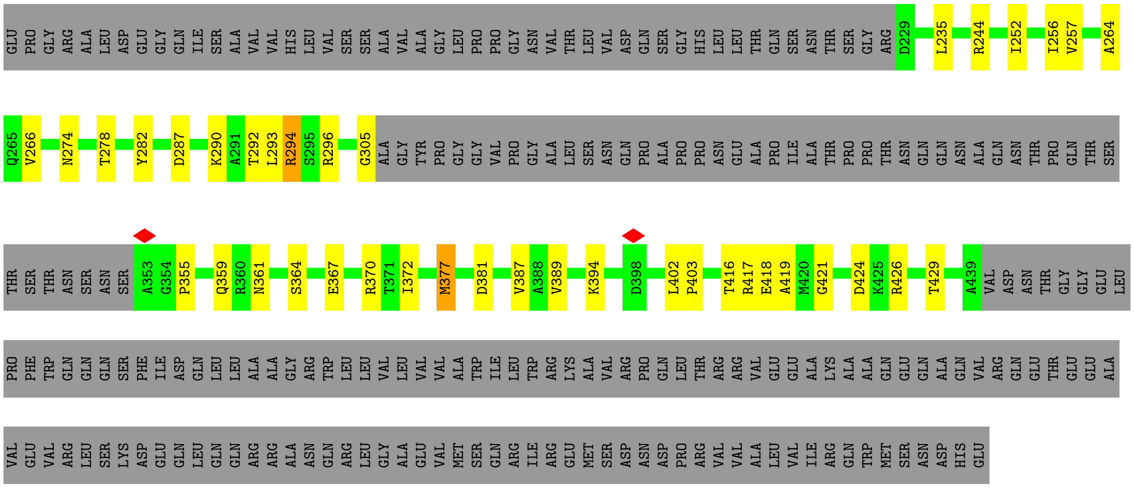
Chain 5:



- Molecule 1: Flagellar M-ring protein

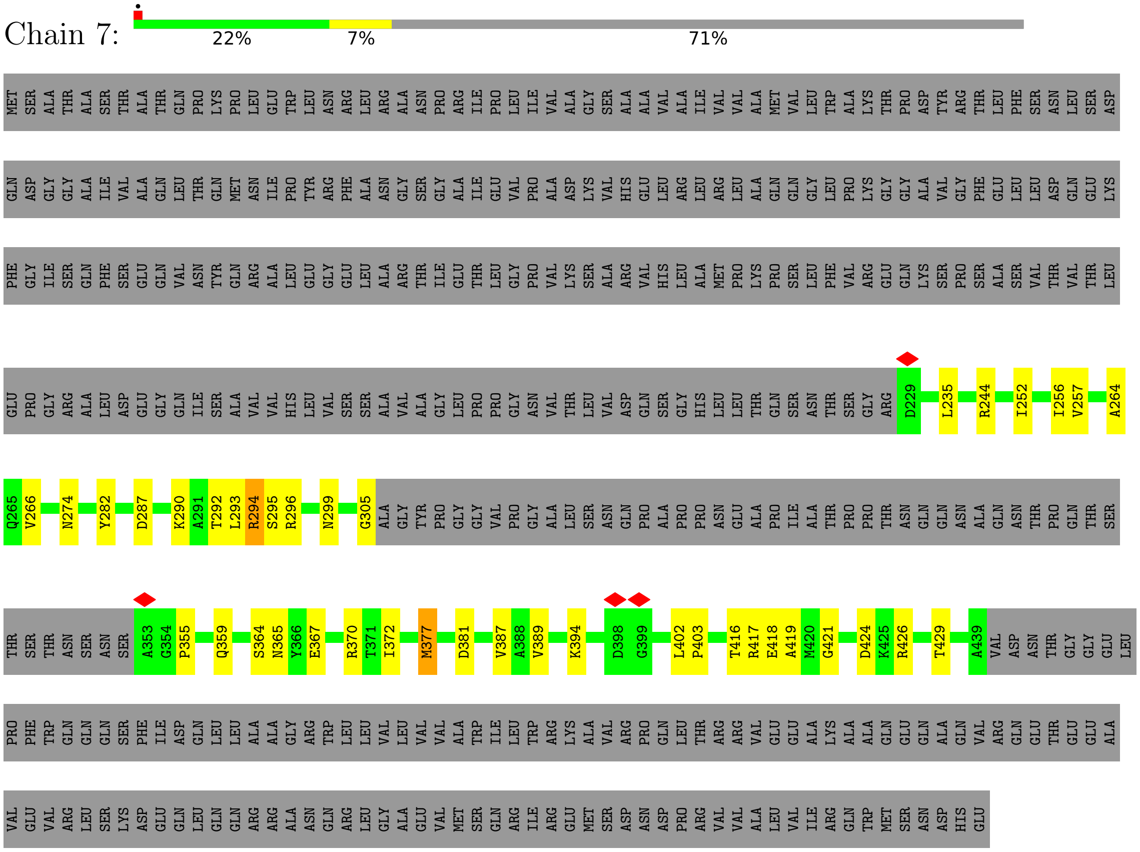
Chain 6:





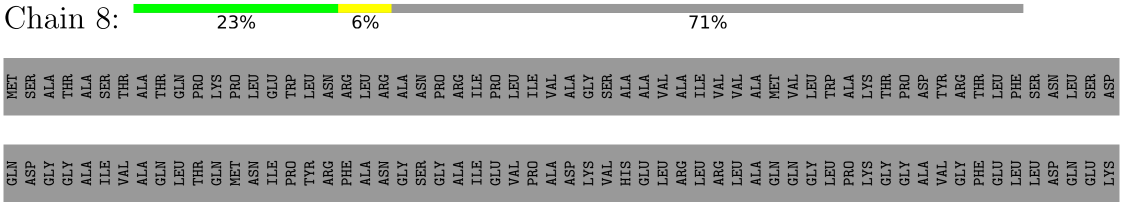
- Molecule 1: Flagellar M-ring protein

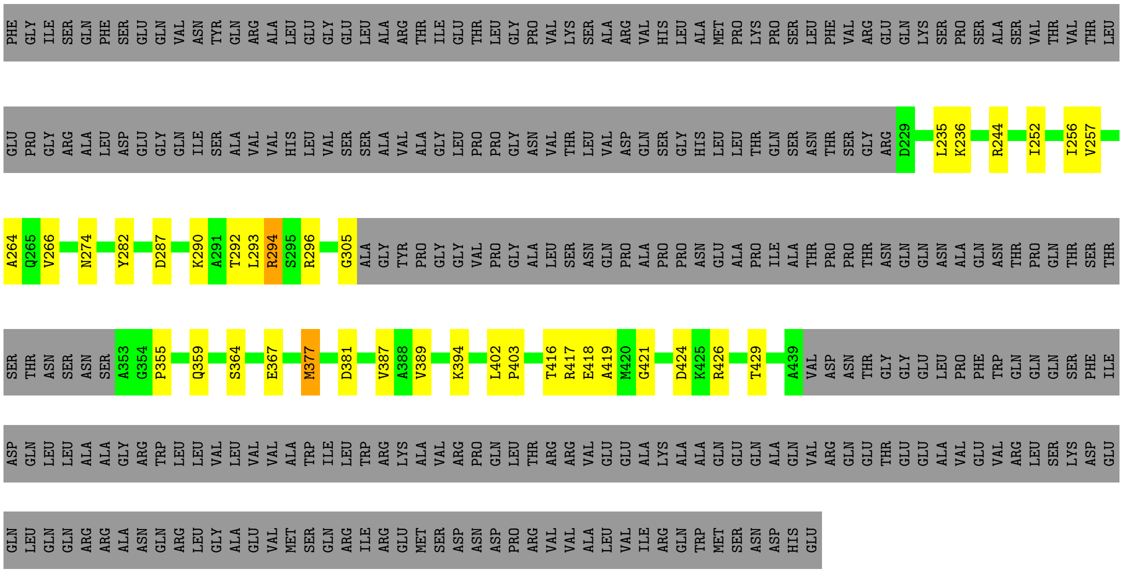
Chain 7:



- Molecule 1: Flagellar M-ring protein

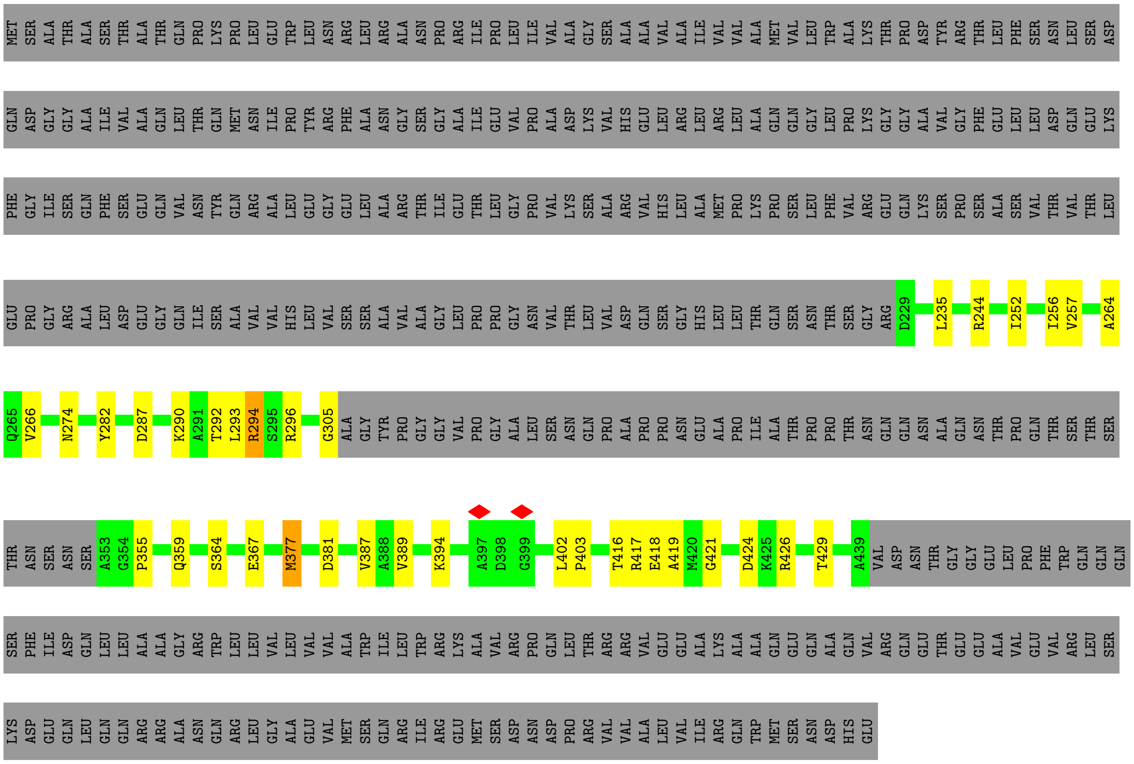
Chain 8:





- Molecule 1: Flagellar M-ring protein

Chain 9:



- Molecule 1: Flagellar M-ring protein

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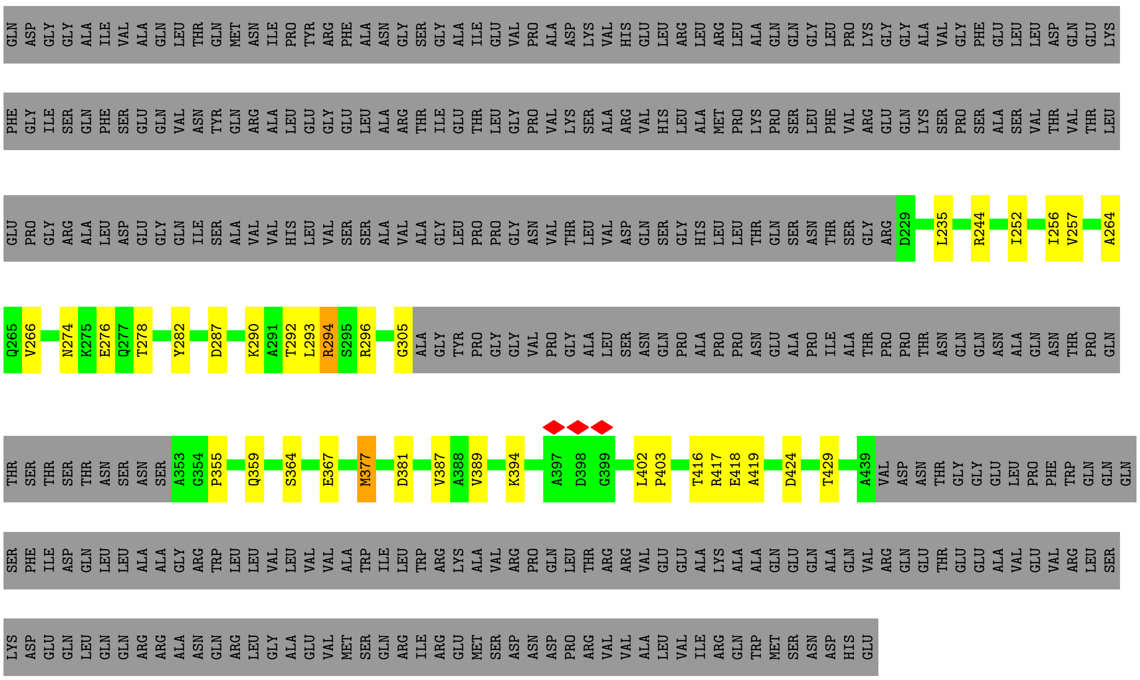

- Molecule 1: Flagellar M-ring protein

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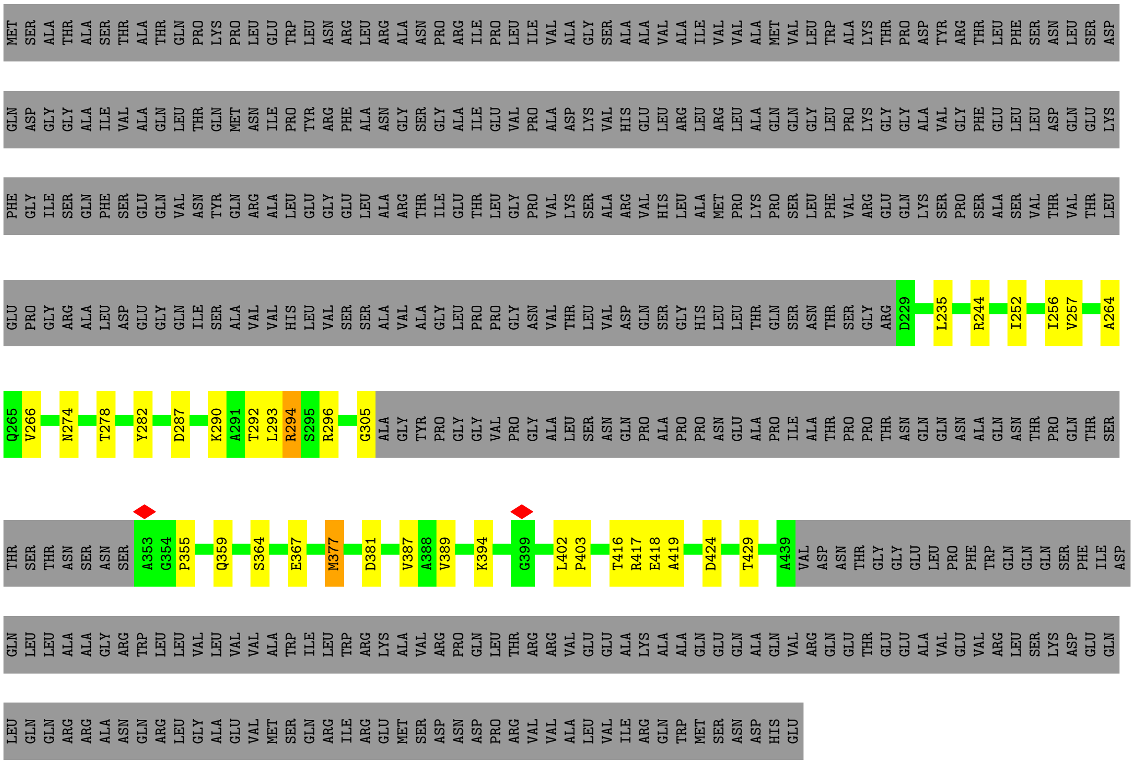
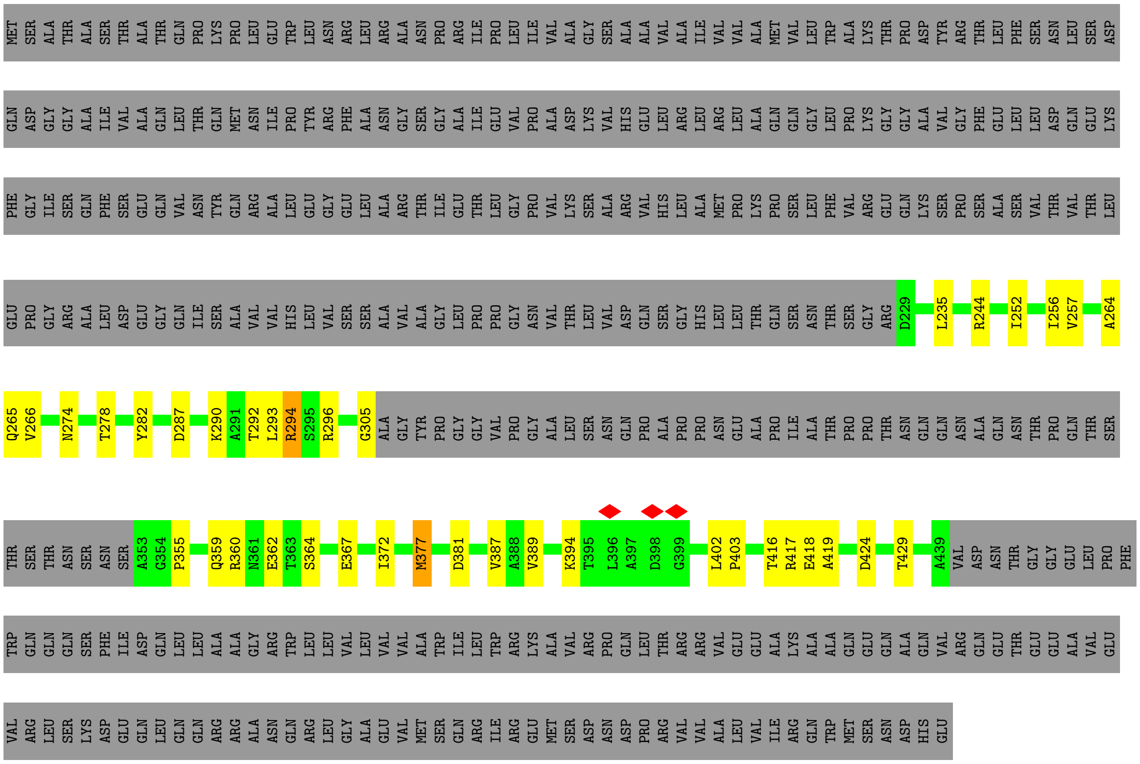


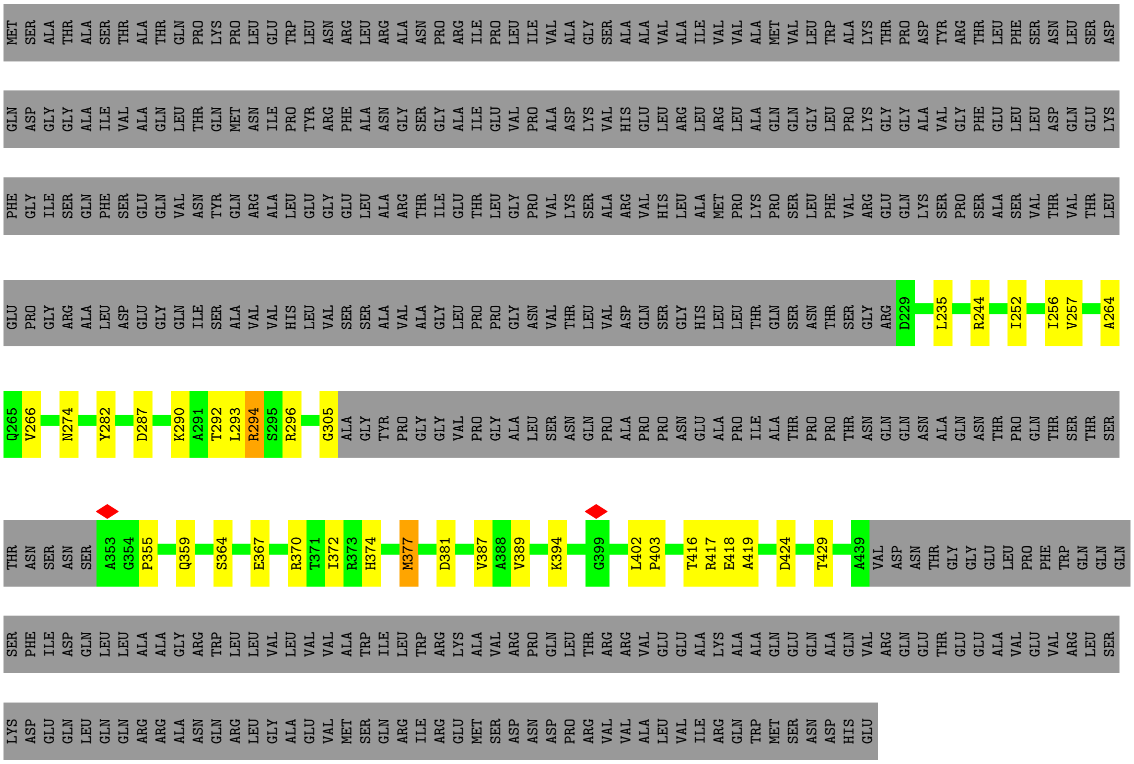
- Molecule 1: Flagellar M-ring protein

Chain AB:

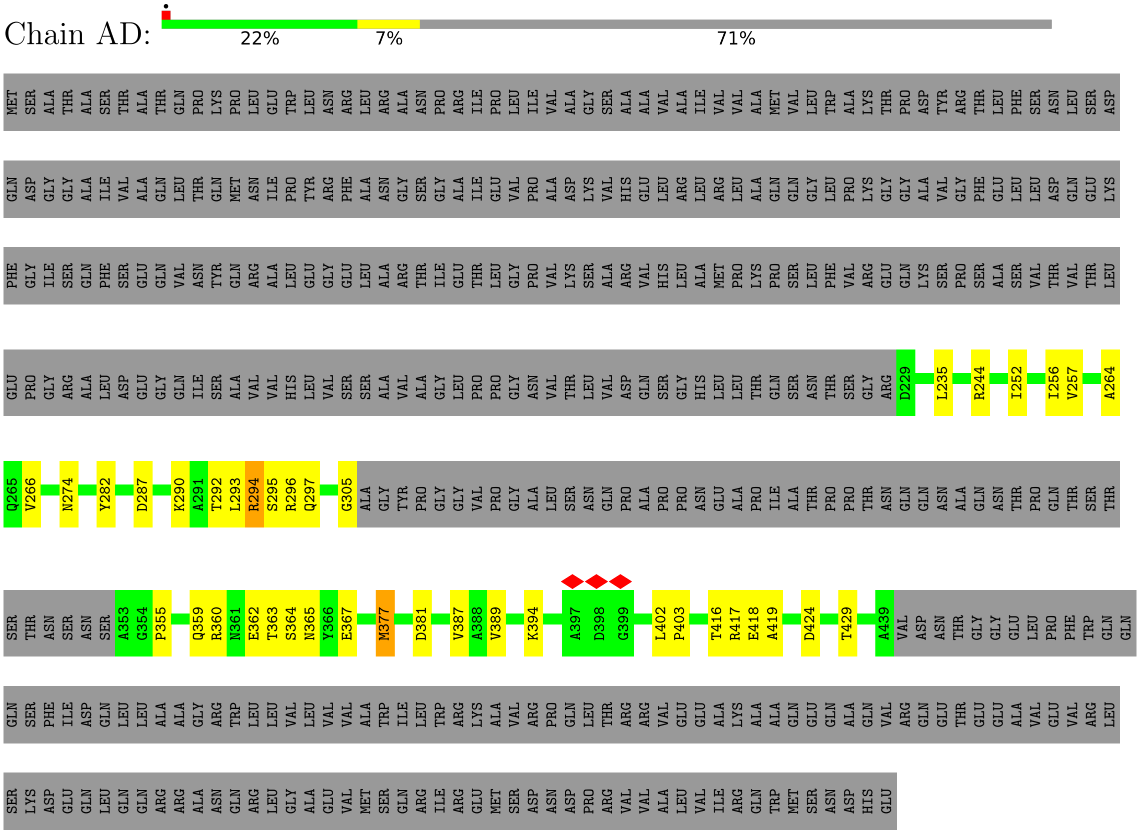


- Molecule 1: Flagellar M-ring protein

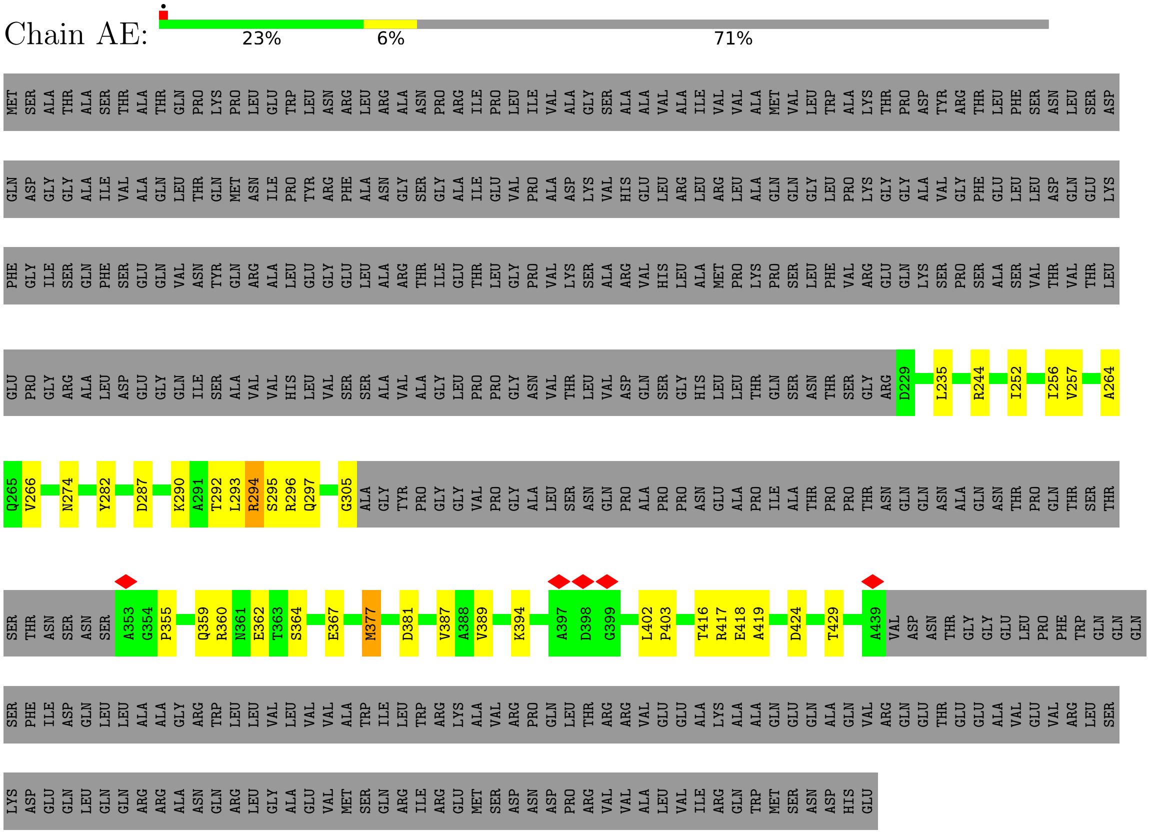
Chain AC:



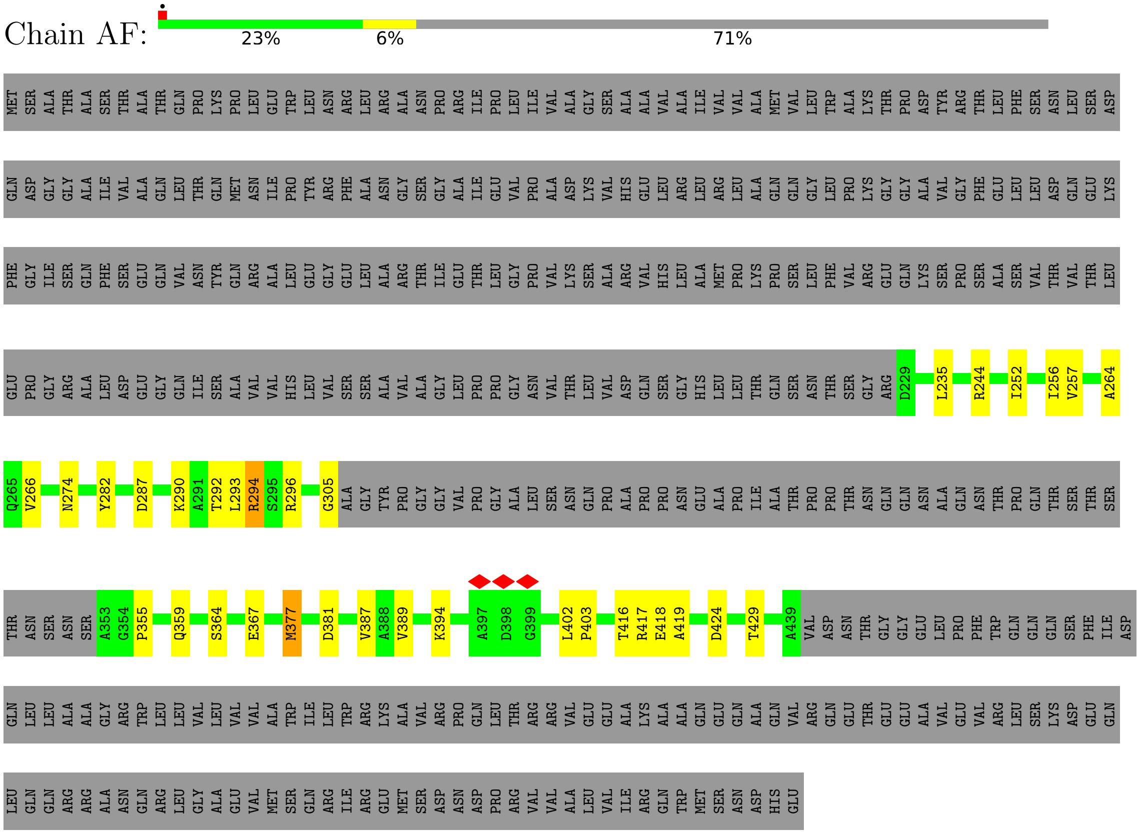
- Molecule 1: Flagellar M-ring protein



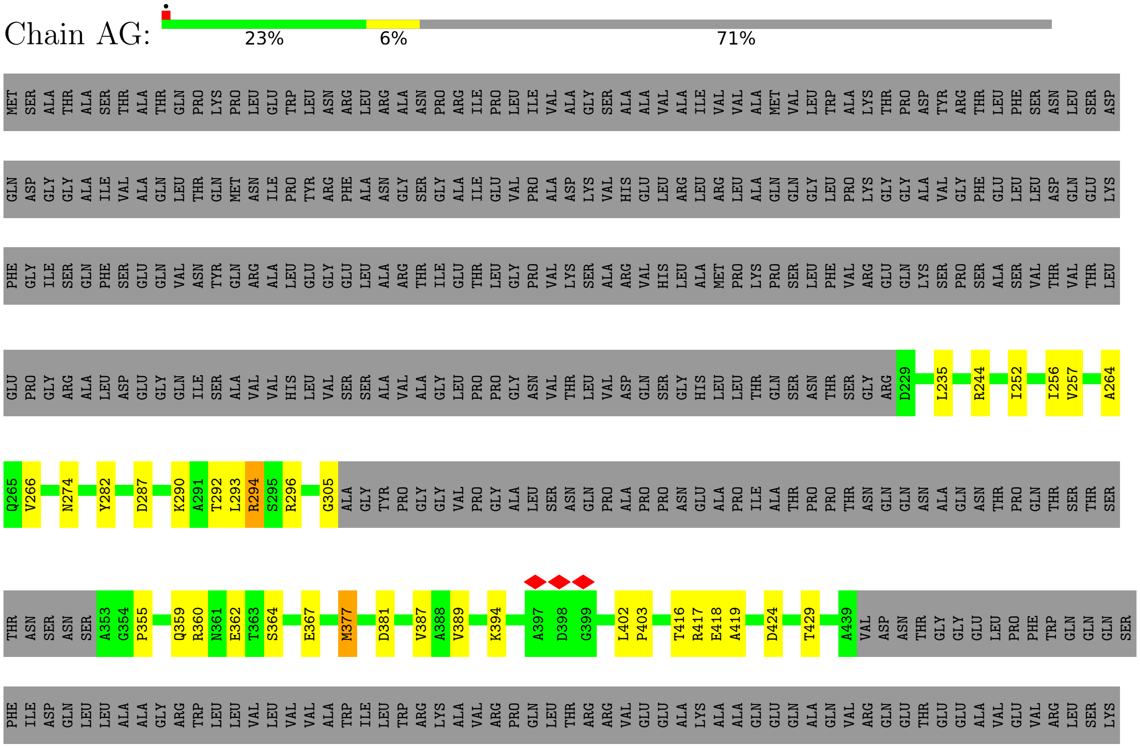
- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein

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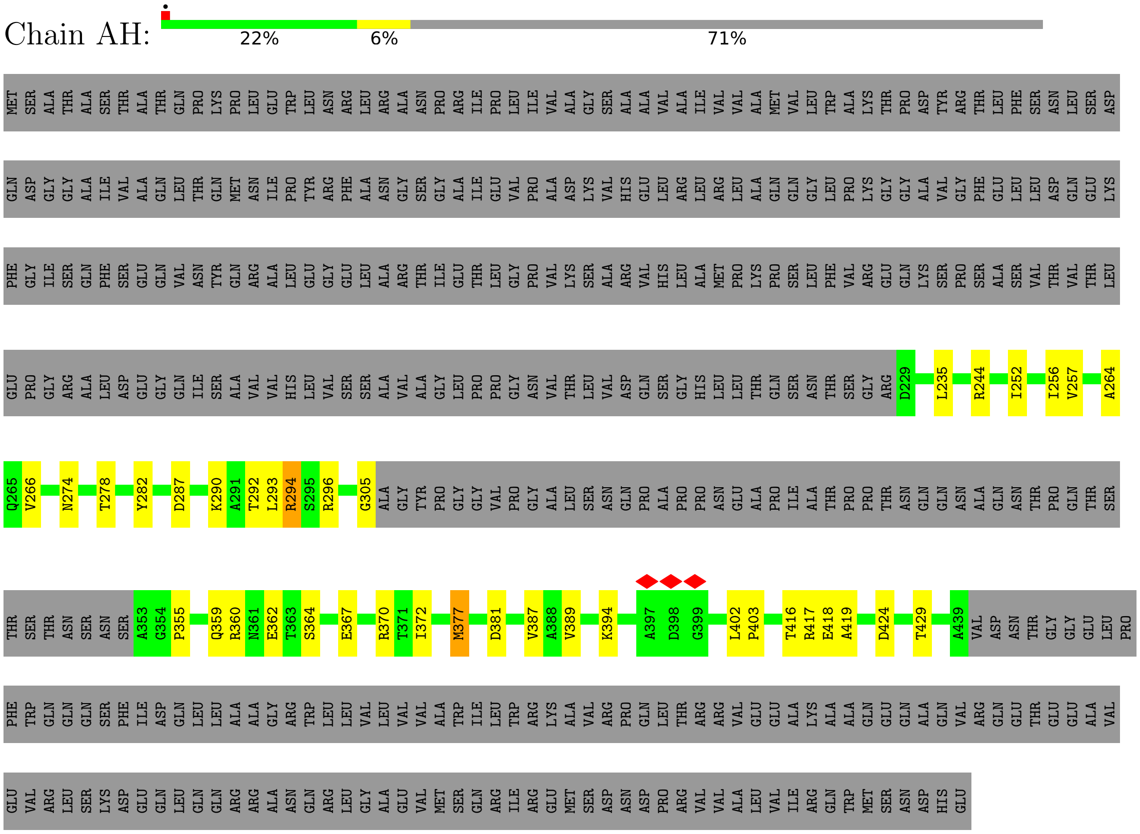

- Molecule 1: Flagellar M-ring protein

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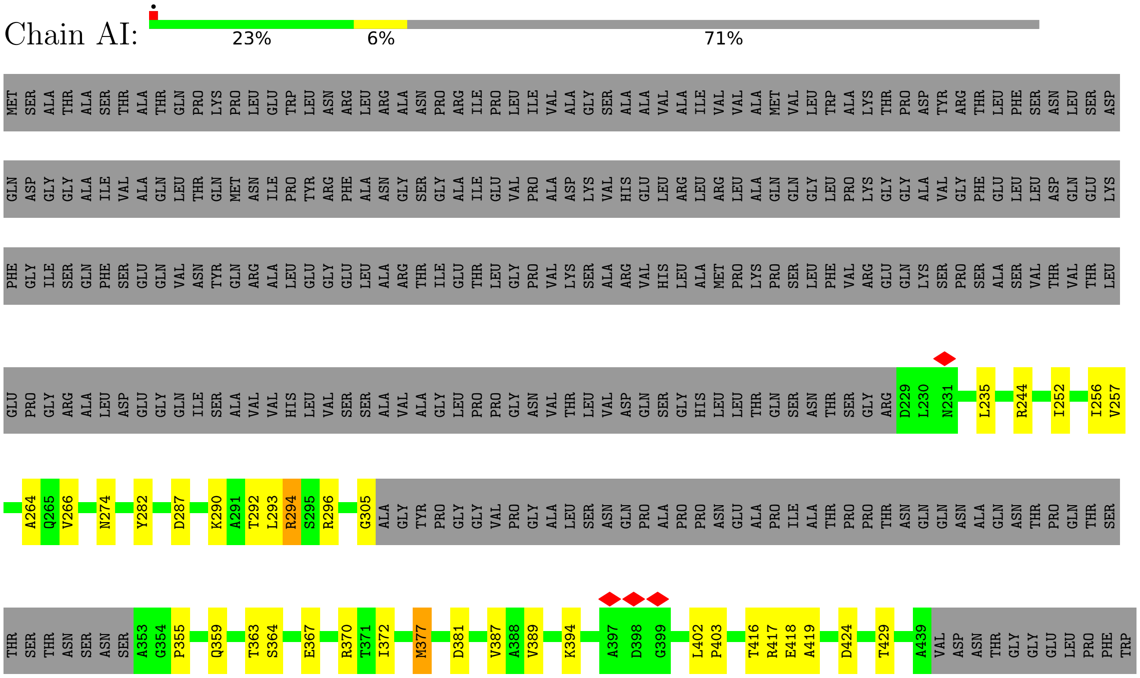
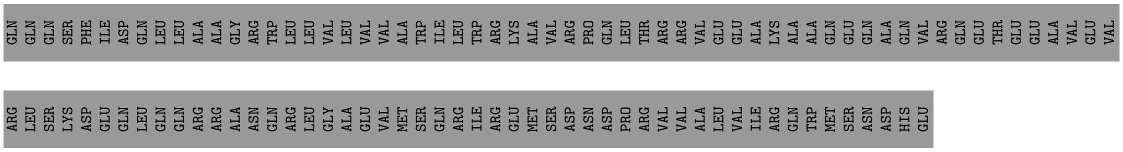
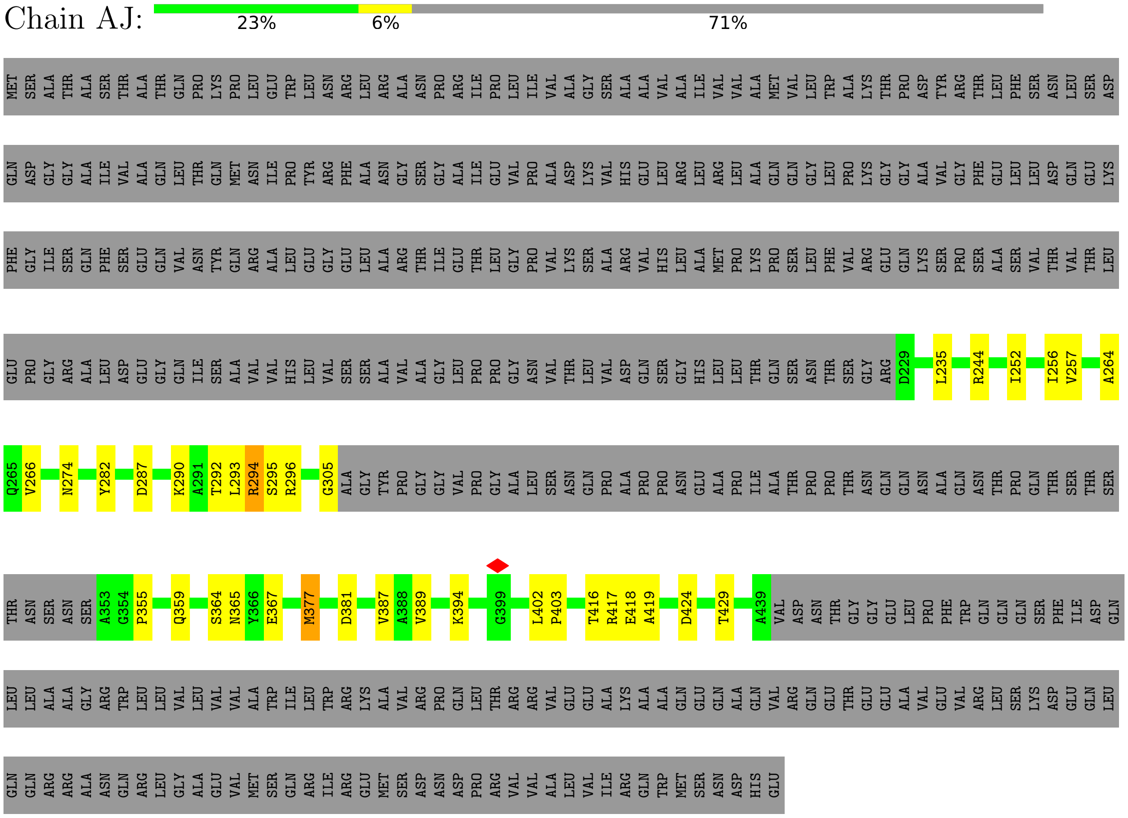
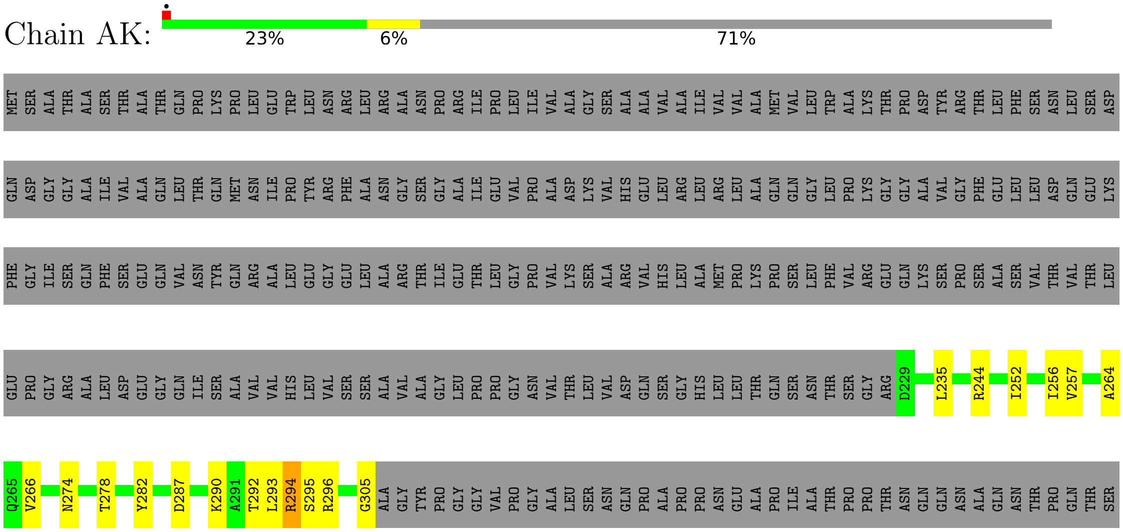


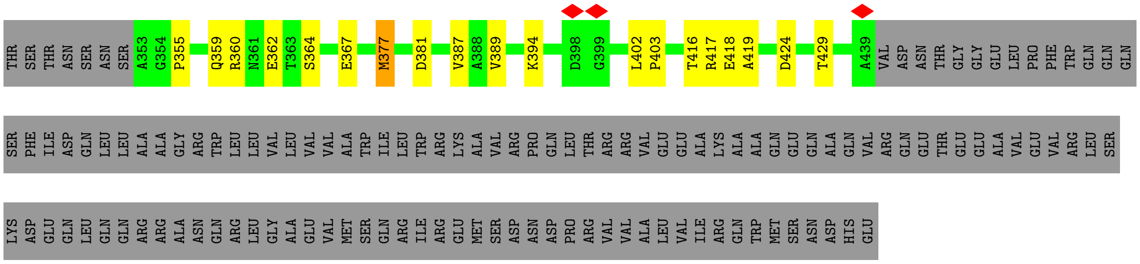


- Molecule 1: Flagellar M-ring protein



- Molecule 1: Flagellar M-ring protein





- Molecule 1: Flagellar M-ring protein

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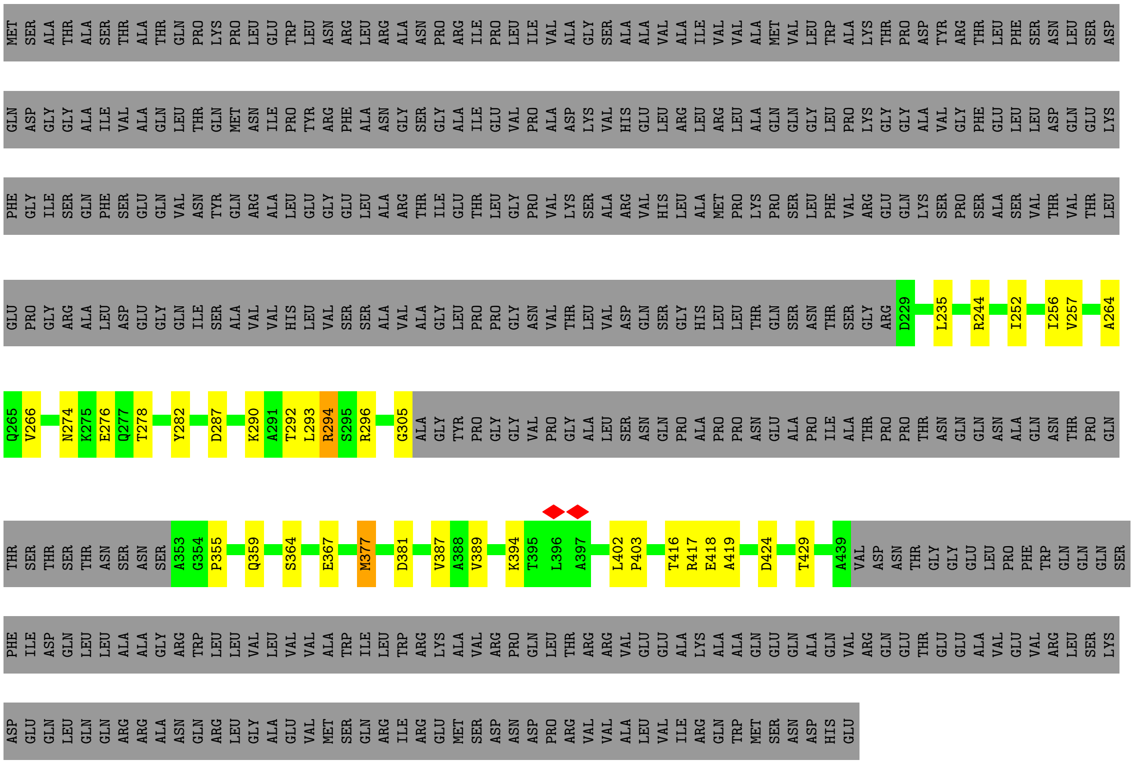
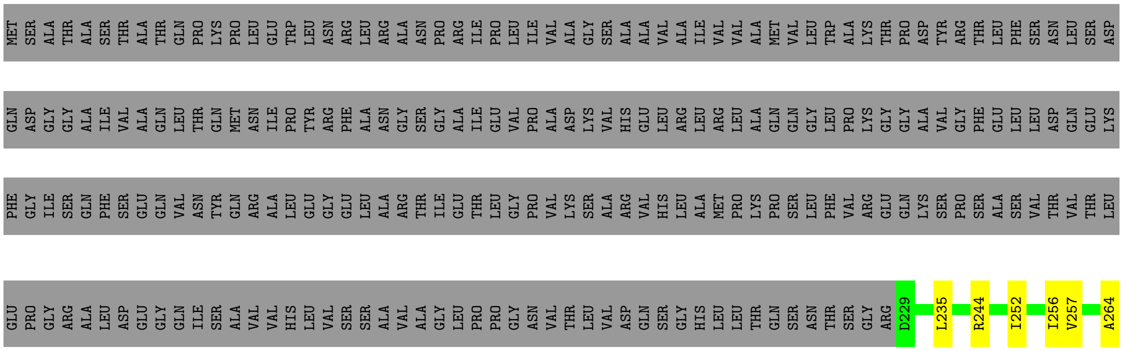
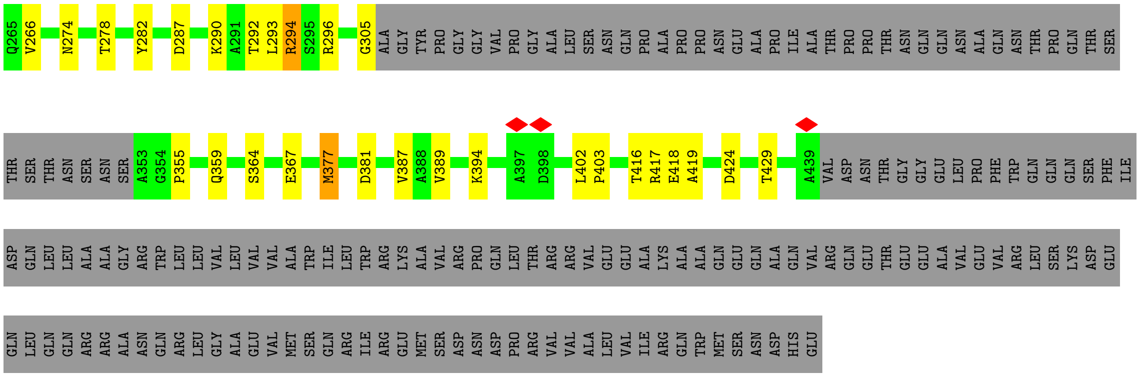


- Molecule 1: Flagellar M-ring protein

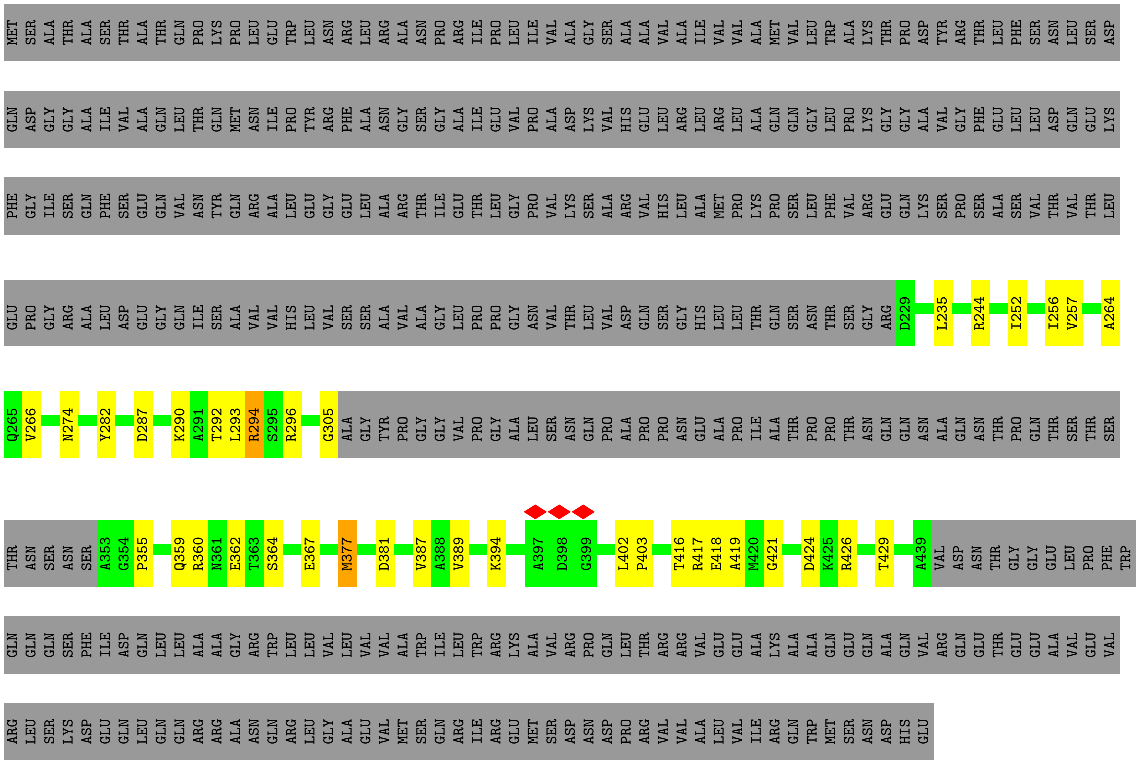
Chain AM:





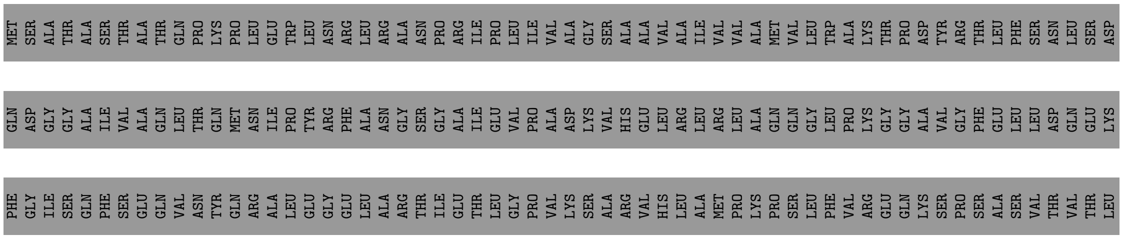
- Molecule 1: Flagellar M-ring protein

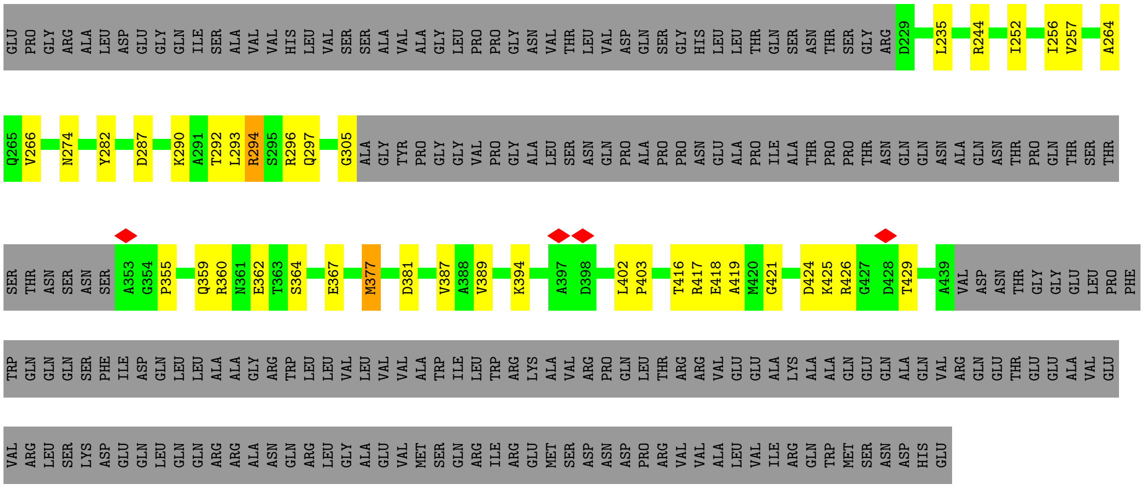
Chain AN:



- Molecule 1: Flagellar M-ring protein

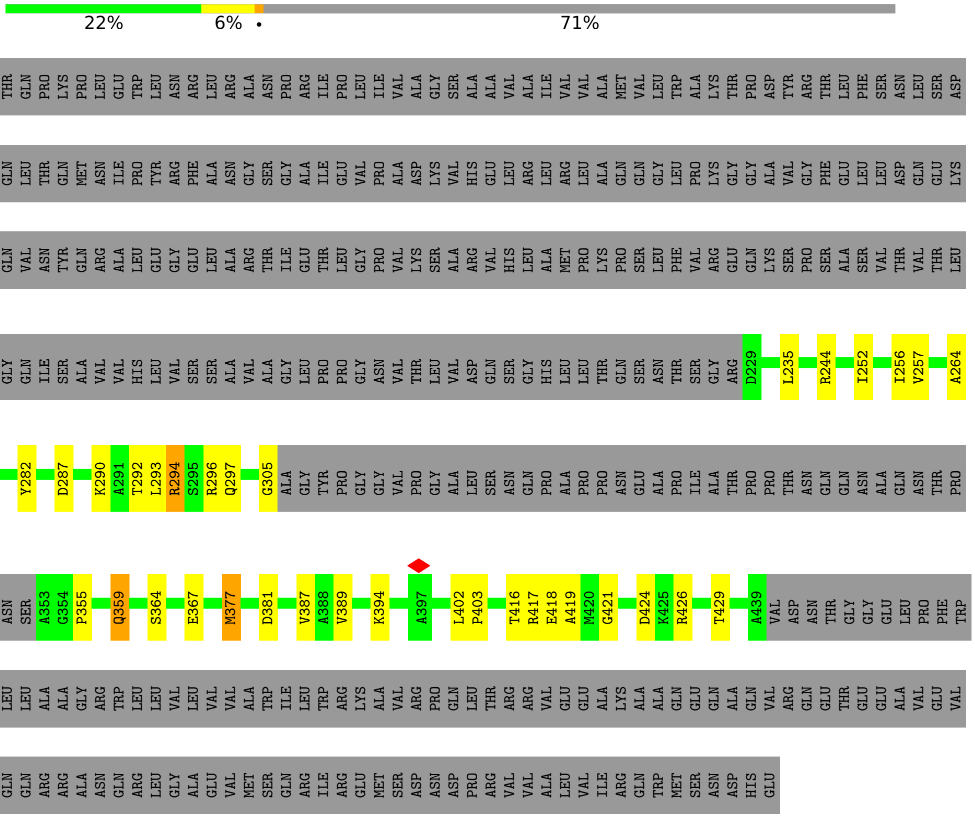
Chain AO:





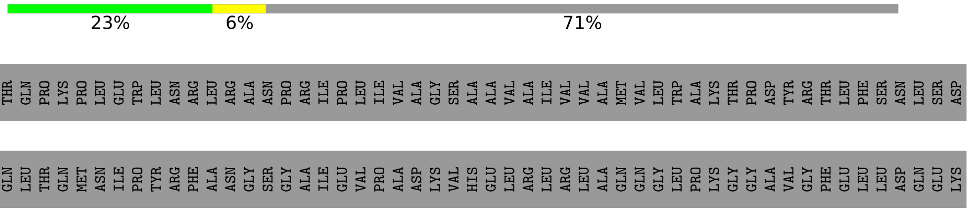
- Molecule 1: Flagellar M-ring protein

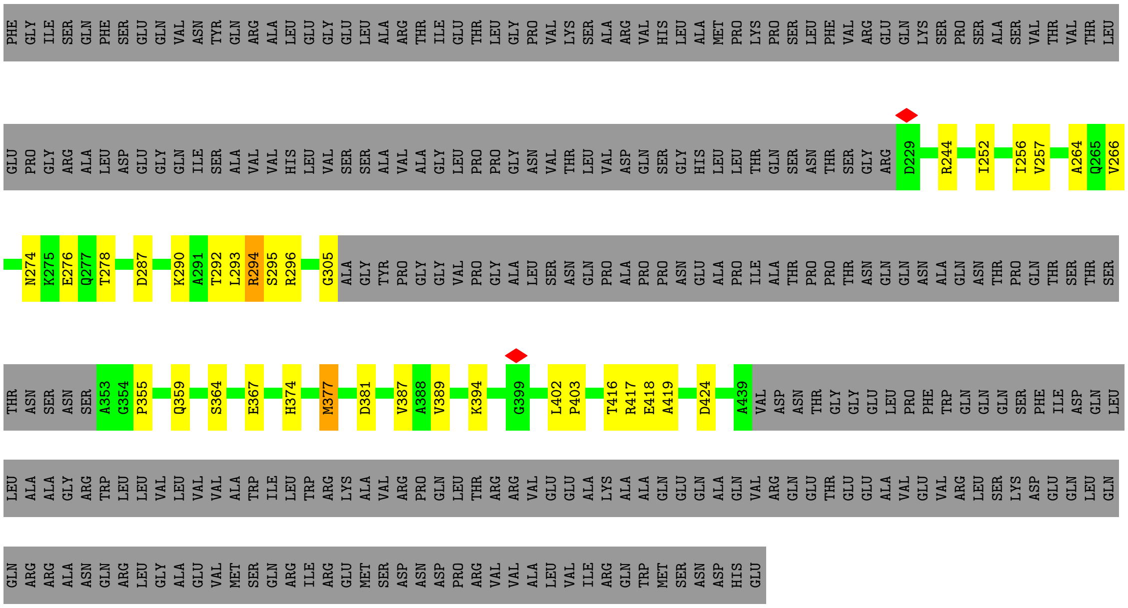
Chain AP:



- Molecule 1: Flagellar M-ring protein

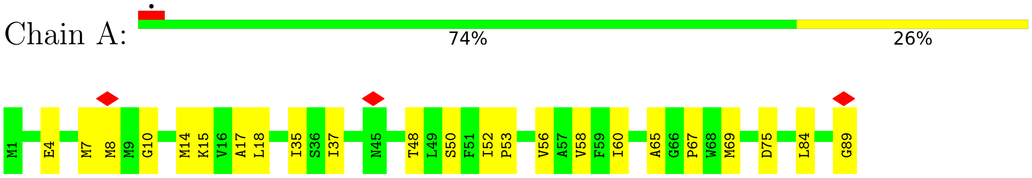
Chain AQ:





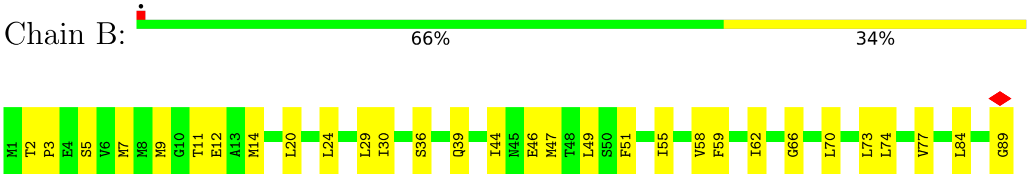
- Molecule 2: Flagellar biosynthetic protein FliQ

Chain A:



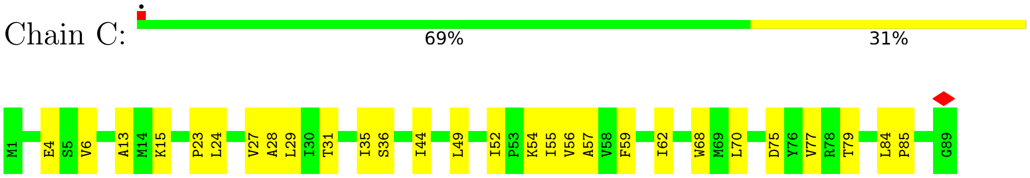
- Molecule 2: Flagellar biosynthetic protein FliQ

Chain B:



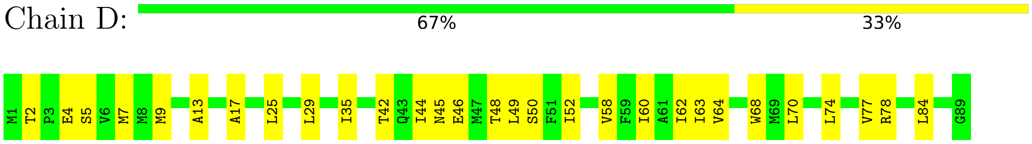
- Molecule 2: Flagellar biosynthetic protein FliQ

Chain C:

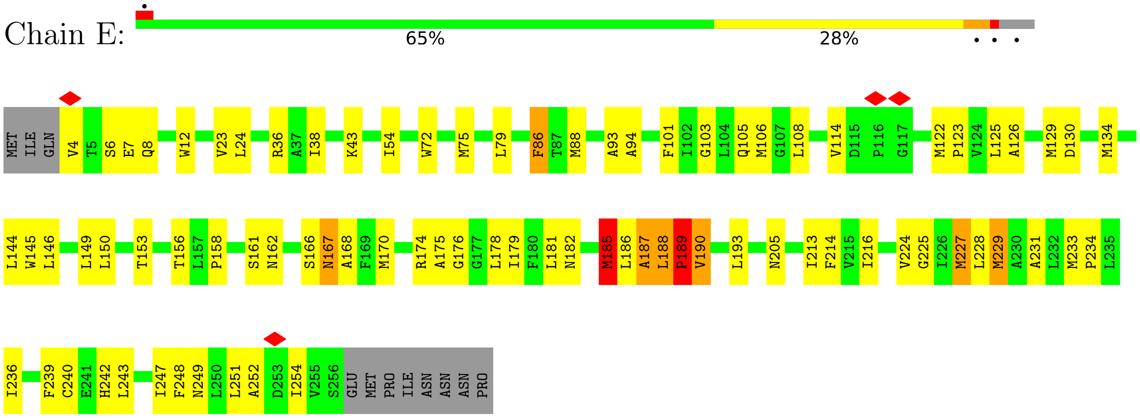


- Molecule 2: Flagellar biosynthetic protein FliQ

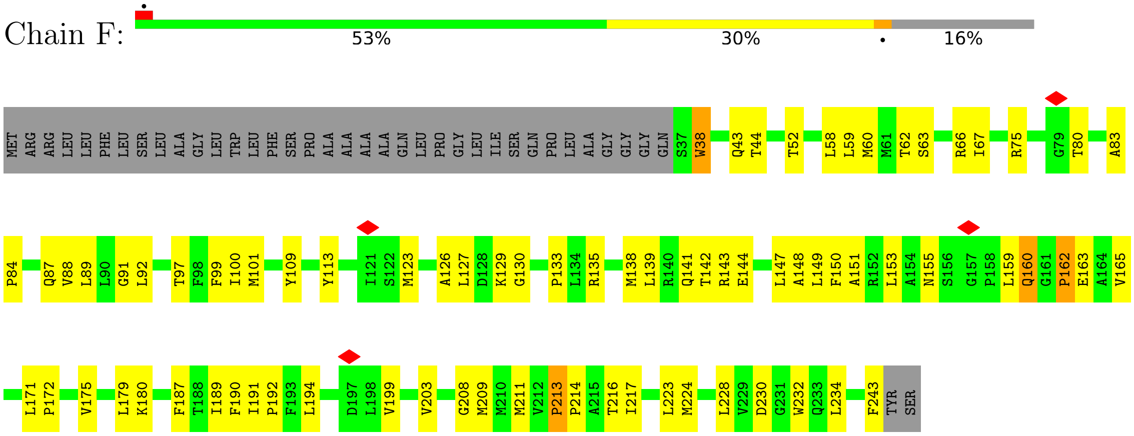
Chain D:



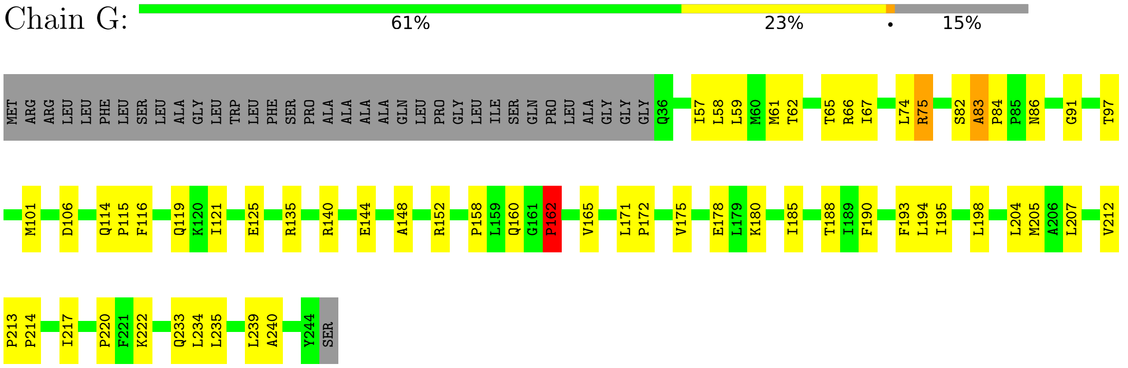
- Molecule 3: Flagellar biosynthetic protein FliR



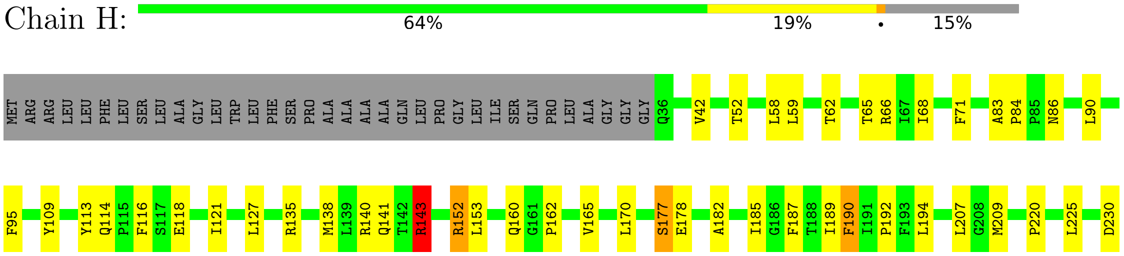
- Molecule 4: Flagellar biosynthetic protein FliP

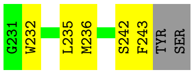


- Molecule 4: Flagellar biosynthetic protein FliP



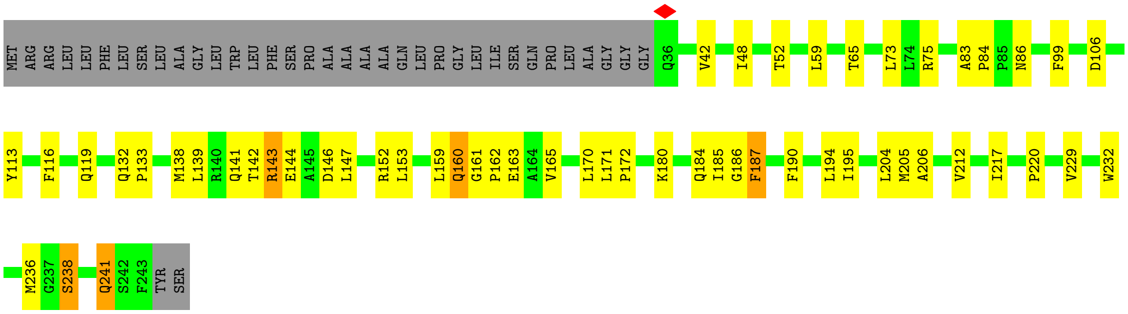
- Molecule 4: Flagellar biosynthetic protein FliP





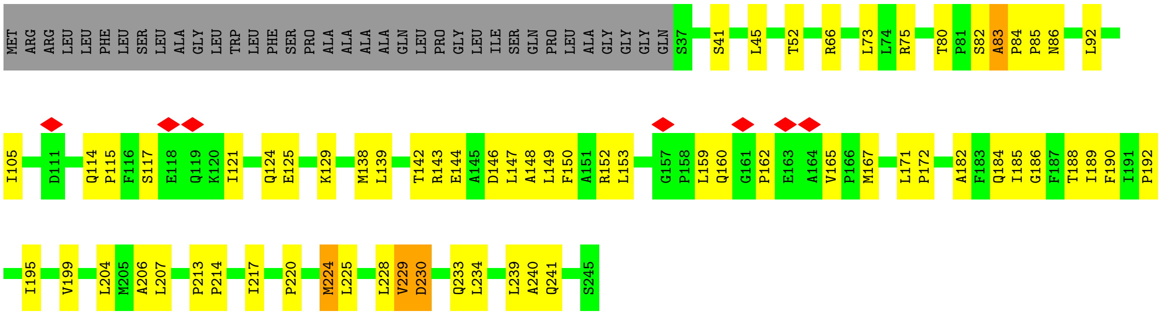
- Molecule 4: Flagellar biosynthetic protein FliP

Chain I:



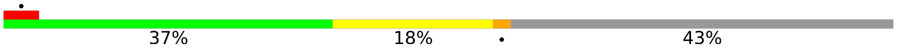
- Molecule 4: Flagellar biosynthetic protein FliP

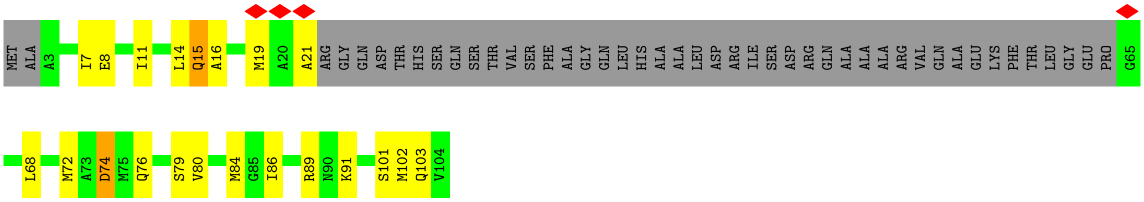
Chain J:



- Molecule 5: Flagellar hook-basal body complex protein FliE

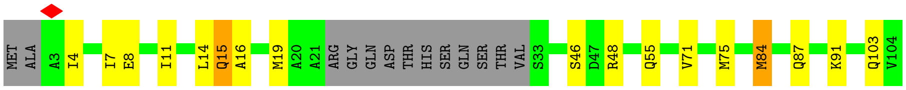
Chain K:





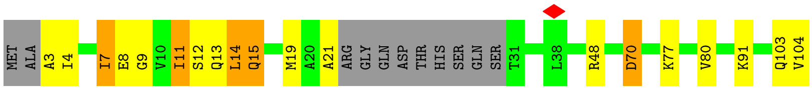
- Molecule 5: Flagellar hook-basal body complex protein FliE

Chain L:



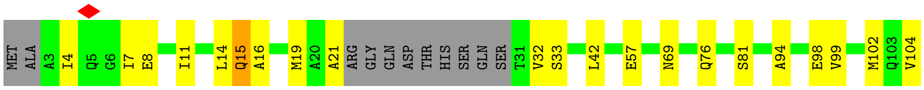
- Molecule 5: Flagellar hook-basal body complex protein FliE

Chain M:



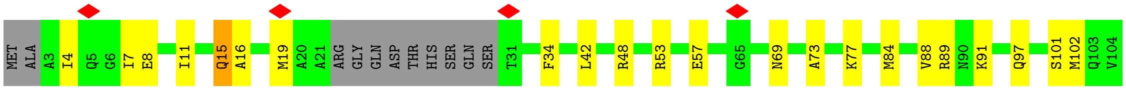
- Molecule 5: Flagellar hook-basal body complex protein FliE

Chain N:



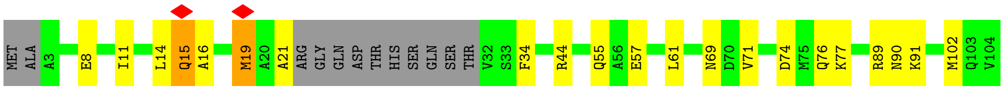
- Molecule 5: Flagellar hook-basal body complex protein FliE

Chain O:



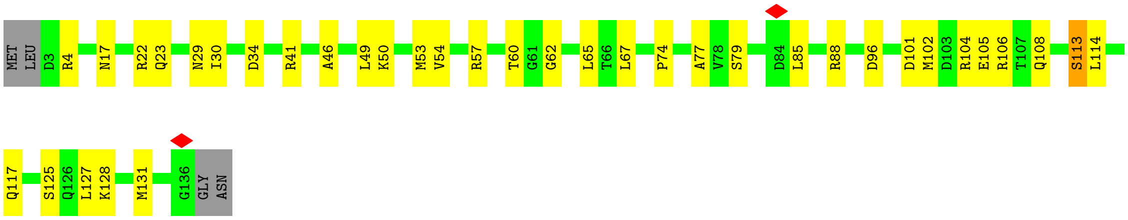
- Molecule 5: Flagellar hook-basal body complex protein FliE

Chain P:



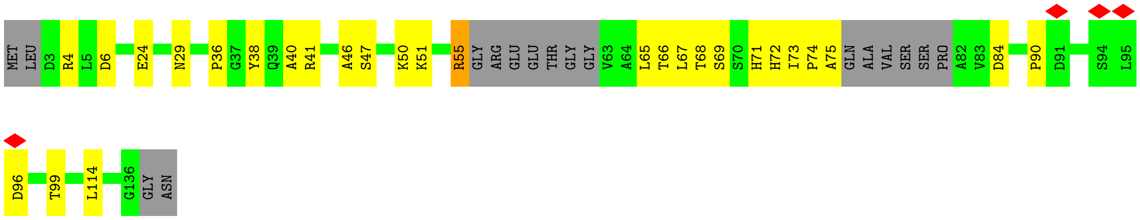
- Molecule 6: Flagellar basal body rod protein FlgB

Chain Q:

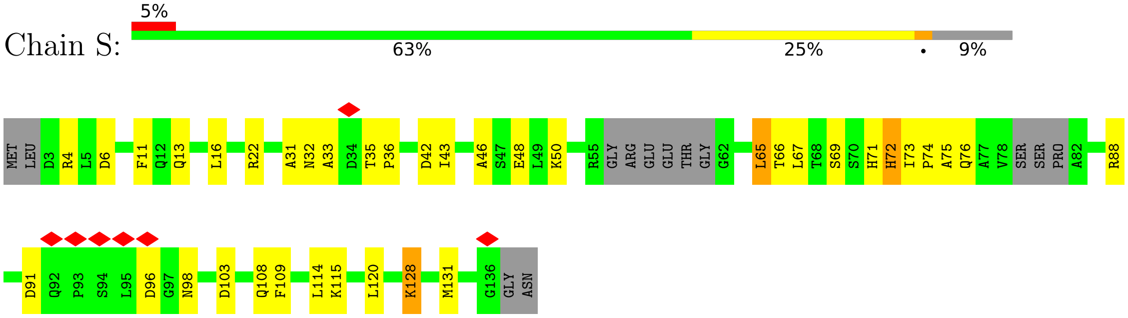


- Molecule 6: Flagellar basal body rod protein FlgB

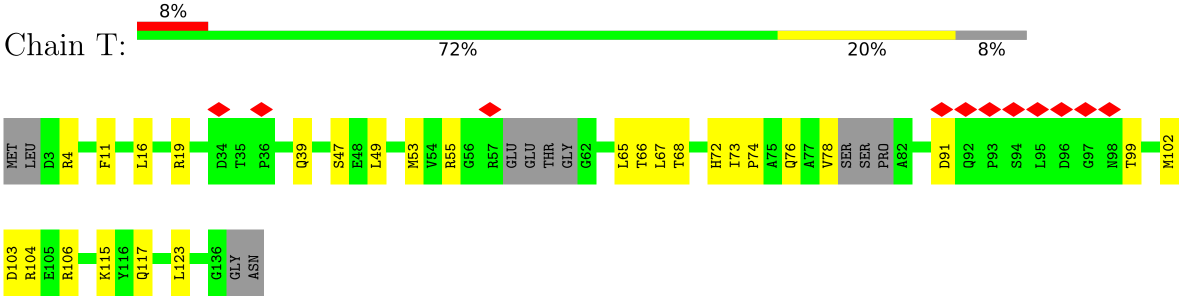
Chain R:



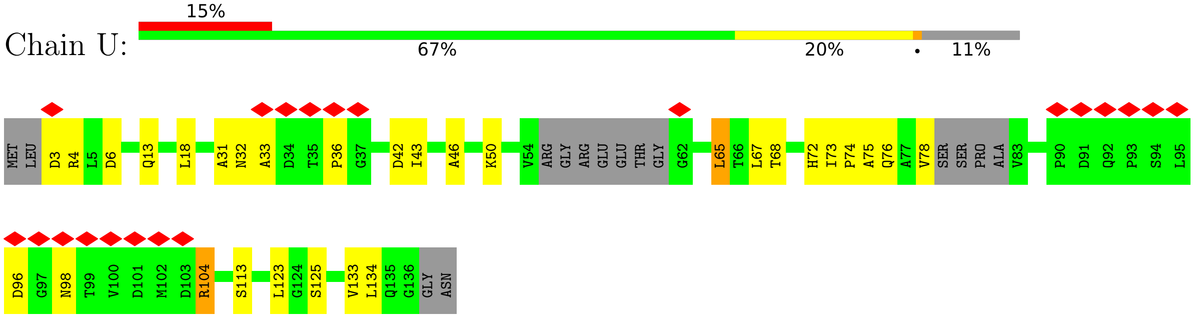
- Molecule 6: Flagellar basal body rod protein FlgB



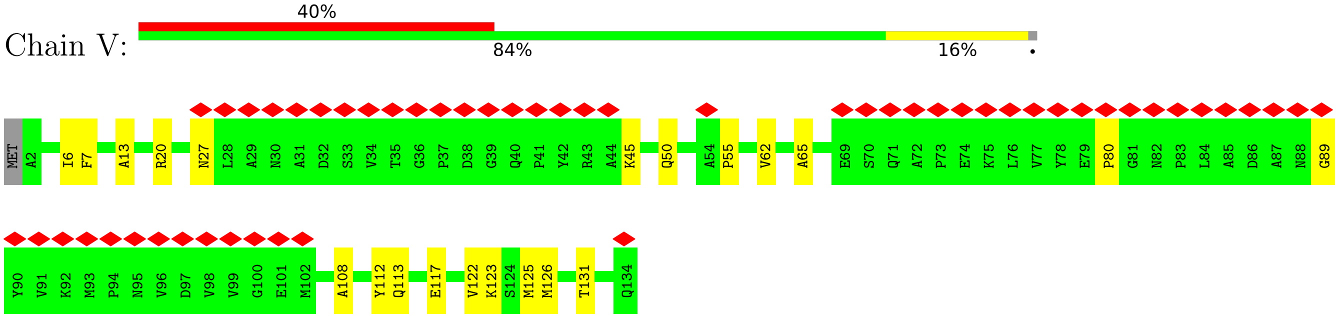
- Molecule 6: Flagellar basal body rod protein FlgB



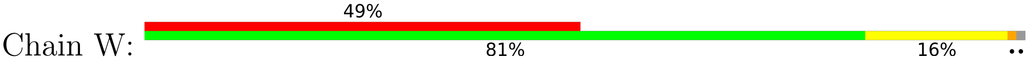
- Molecule 6: Flagellar basal body rod protein FlgB

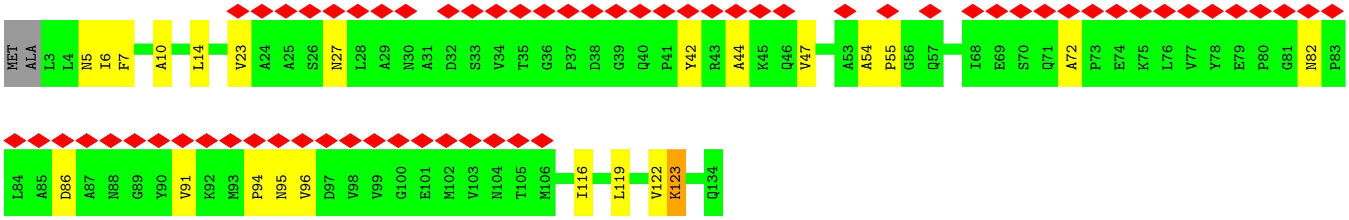


- Molecule 7: Flagellar basal-body rod protein FlgC



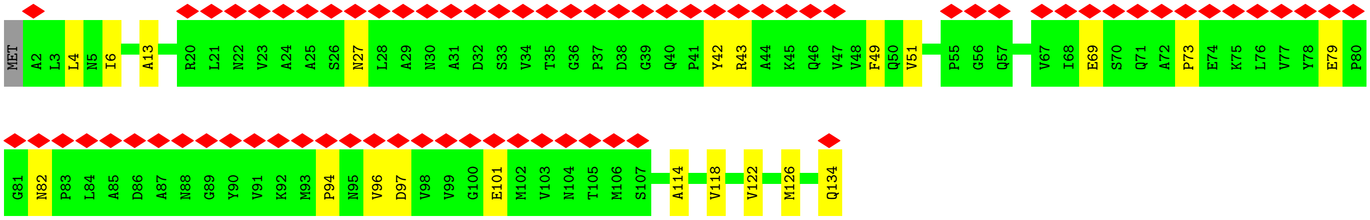
- Molecule 7: Flagellar basal-body rod protein FlgC





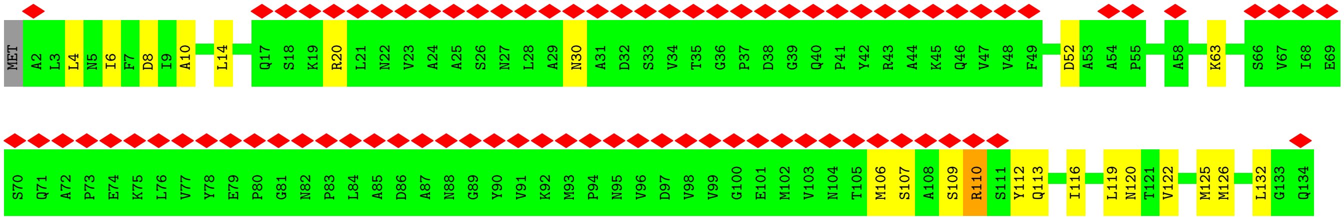
- Molecule 7: Flagellar basal-body rod protein FlgC

Chain X:



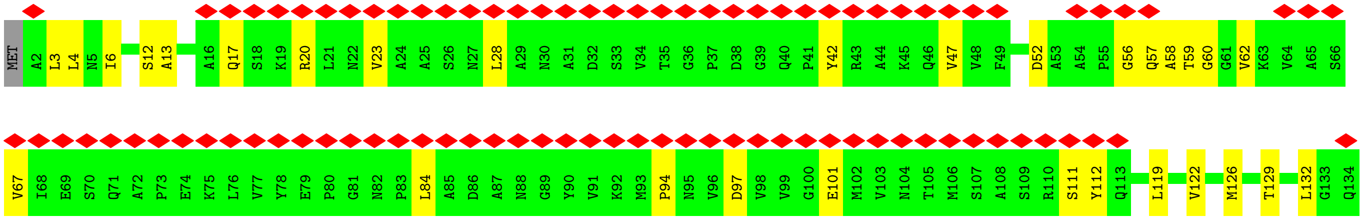
- Molecule 7: Flagellar basal-body rod protein FlgC

Chain Y:



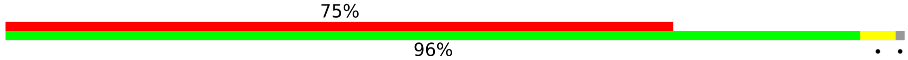
- Molecule 7: Flagellar basal-body rod protein FlgC

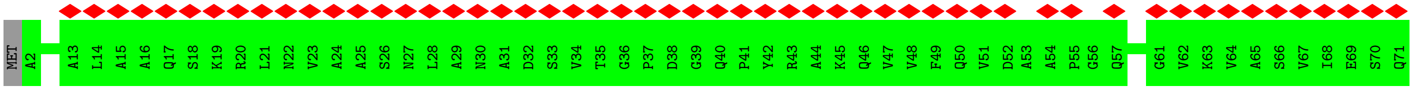
Chain Z:

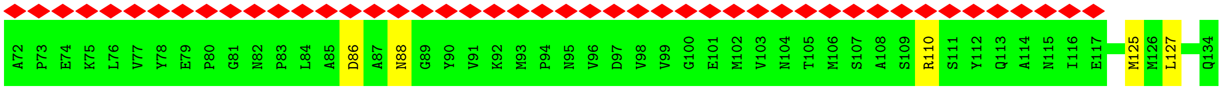


- Molecule 7: Flagellar basal-body rod protein FlgC

Chain a:






A72
P73
E74
K75
L76
V77
Y78
E79
P80
G81
N82
P83
L84
A85
D86
A87
N88
G89
Y90
V91
K92
M93
P94
N95
V96
D97
V98
V99
G100
E101
M102
V103
N104
T105
M106
S107
A108
S109
R110
S111
Y112
Q113
A114
N115
I116
E117
M125
M126
L127
Q134

4 Experimental information ⓘ

Property	**Value**	**Source**
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	24190	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{Å}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	105000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.867	Depositor
Minimum map value	-0.441	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.036	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	614.4, 614.4, 614.4	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.2, 1.2, 1.2	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	0	0.26	0/1289	0.53	0/1741
1	1	0.26	0/1289	0.53	0/1741
1	2	0.27	0/1289	0.53	0/1741
1	3	0.27	0/1289	0.53	0/1741
1	4	0.27	0/1289	0.53	0/1741
1	5	0.27	0/1289	0.53	0/1741
1	6	0.27	0/1289	0.53	0/1741
1	7	0.27	0/1289	0.53	0/1741
1	8	0.27	0/1289	0.53	0/1741
1	9	0.26	0/1289	0.53	0/1741
1	AA	0.27	0/1289	0.53	0/1741
1	AB	0.27	0/1289	0.53	0/1741
1	AC	0.27	0/1289	0.53	0/1741
1	AD	0.27	0/1289	0.53	0/1741
1	AE	0.27	0/1289	0.53	0/1741
1	AF	0.26	0/1289	0.53	0/1741
1	AG	0.27	0/1289	0.53	0/1741
1	AH	0.27	0/1289	0.53	0/1741
1	AI	0.26	0/1289	0.53	0/1741
1	AJ	0.27	0/1289	0.53	0/1741
1	AK	0.26	0/1289	0.53	0/1741
1	AL	0.27	0/1289	0.53	0/1741
1	AM	0.27	0/1289	0.53	0/1741
1	AN	0.26	0/1289	0.53	0/1741
1	AO	0.27	0/1289	0.53	0/1741
1	AP	0.27	0/1289	0.53	0/1741
1	AQ	0.26	0/1289	0.53	0/1741
1	UI	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UJ	0.84	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UK	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UL	0.82	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UM	0.84	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UN	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	UO	0.83	2/1191 (0.2%)	0.82	4/1618 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
1	UP	0.84	2/1191 (0.2%)	0.82	4/1618 (0.2%)
1	WA	0.60	0/863	0.72	1/1172 (0.1%)
1	WB	0.59	0/850	0.69	0/1154
1	WC	0.59	0/825	0.68	0/1121
1	WD	0.61	0/841	0.68	0/1142
1	WE	0.60	0/857	0.71	0/1164
1	WF	0.60	0/848	0.69	0/1152
1	WG	0.60	0/857	0.68	0/1164
1	WH	0.60	0/714	0.69	0/973
1	WI	0.59	0/714	0.74	0/973
1	WJ	0.61	0/749	0.72	1/1020 (0.1%)
1	WK	0.60	0/741	0.69	0/1009
1	WL	0.60	0/631	0.70	0/860
1	WM	0.59	0/604	0.70	0/824
1	WN	0.60	0/619	0.70	0/844
1	WO	0.60	0/726	0.72	1/989 (0.1%)
1	WP	0.60	0/753	0.69	0/1025
1	WQ	0.60	0/848	0.69	0/1152
1	WR	0.60	0/848	0.69	0/1152
1	WS	0.60	0/848	0.69	0/1152
1	WT	0.60	0/848	0.70	0/1152
1	WU	0.60	0/857	0.67	0/1164
1	WV	0.61	0/841	0.69	0/1142
1	WW	0.60	0/848	0.70	0/1152
1	b	0.52	0/83	0.63	0/114
1	c	0.26	0/107	0.38	0/148
1	d	0.31	0/137	0.49	0/191
1	e	0.28	0/107	0.56	0/148
1	f	1.36	1/145 (0.7%)	1.49	3/203 (1.5%)
1	g	0.33	0/107	0.51	0/148
1	h	0.26	0/145	0.44	0/203
1	i	0.30	0/107	0.38	0/148
1	j	0.30	0/137	0.57	0/191
1	k	0.30	0/107	0.37	0/148
1	l	0.29	0/145	0.45	0/203
1	t	0.26	0/1289	0.53	0/1741
1	u	0.26	0/1289	0.53	0/1741
1	v	0.27	0/1289	0.53	0/1741
1	w	0.27	0/1289	0.53	0/1741
1	x	0.27	0/1289	0.53	0/1741
1	y	0.26	0/1289	0.53	0/1741
1	z	0.27	0/1289	0.53	0/1741
2	A	0.29	0/681	0.47	0/930

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
2	B	0.26	0/681	0.49	0/930
2	C	0.28	0/681	0.48	0/930
2	D	0.29	0/681	0.49	0/930
3	E	0.38	1/1994 (0.1%)	0.56	1/2724 (0.0%)
4	F	0.36	0/1643	0.62	2/2237 (0.1%)
4	G	0.29	0/1665	0.49	1/2267 (0.0%)
4	H	0.29	0/1652	0.48	0/2249
4	I	0.28	0/1652	0.46	0/2249
4	J	0.30	0/1662	0.49	0/2263
5	K	0.42	0/428	0.53	0/572
5	L	0.36	0/675	0.49	0/905
5	M	0.36	0/689	0.52	0/925
5	N	0.36	0/689	0.50	0/925
5	O	0.37	0/689	0.53	0/925
5	P	0.37	0/682	0.51	0/915
6	Q	0.36	0/1042	0.55	0/1408
6	R	0.33	0/951	0.50	0/1282
6	S	0.35	0/976	0.56	0/1316
6	T	0.34	0/991	0.54	0/1335
6	U	0.34	0/959	0.50	0/1293
7	V	0.28	0/981	0.44	0/1334
7	W	0.26	0/976	0.46	0/1327
7	X	0.57	2/981 (0.2%)	0.95	3/1334 (0.2%)
7	Y	0.28	0/981	0.52	1/1334 (0.1%)
7	Z	0.26	0/981	0.47	0/1334
7	a	0.28	0/981	0.47	0/1334
All	All	0.44	20/100455 (0.0%)	0.60	46/136142 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	UI	0	2
1	UJ	0	2
1	UK	0	3
1	UL	0	3
1	UM	0	2
1	UN	0	2
1	UO	0	2
1	UP	0	3

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
1	WA	0	3
1	WB	0	4
1	WC	0	3
1	WD	0	1
1	WE	0	2
1	WF	0	3
1	WG	0	3
1	WI	0	1
1	WJ	0	3
1	WK	0	2
1	WL	0	2
1	WM	0	1
1	WN	0	1
1	WO	0	1
1	WP	0	3
1	WQ	0	2
1	WR	0	3
1	WS	0	1
1	WT	0	2
1	WU	0	2
1	WV	0	3
1	WW	0	2
4	H	0	1
6	Q	0	1
6	U	0	1
7	Y	0	1
7	a	0	1
All	All	0	72

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	f	331	PRO	CG-CD	-14.23	1.03	1.50
7	X	73	PRO	CG-CD	-12.74	1.08	1.50
1	UL	172	PRO	N-CD	-9.53	1.34	1.47
1	UM	172	PRO	N-CD	-9.52	1.34	1.47
1	UP	172	PRO	N-CD	-9.50	1.34	1.47
1	UN	172	PRO	N-CD	-9.47	1.34	1.47
1	UJ	172	PRO	N-CD	-9.47	1.34	1.47
1	UI	172	PRO	N-CD	-9.45	1.34	1.47
1	UO	172	PRO	N-CD	-9.44	1.34	1.47
1	UK	172	PRO	N-CD	-9.42	1.34	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UJ	125	GLN	C-N	7.66	1.51	1.34
1	UP	125	GLN	C-N	7.64	1.51	1.34
1	UK	125	GLN	C-N	7.64	1.51	1.34
7	X	73	PRO	CB-CG	-7.64	1.11	1.50
1	UO	125	GLN	C-N	7.62	1.51	1.34
1	UI	125	GLN	C-N	7.60	1.51	1.34
1	UM	125	GLN	C-N	7.60	1.51	1.34
1	UL	125	GLN	C-N	7.59	1.51	1.34
1	UN	125	GLN	C-N	7.56	1.51	1.34
3	E	185	MET	C-O	6.34	1.35	1.23

All (46) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	X	73	PRO	CB-CG-CD	18.81	179.86	106.50
7	X	73	PRO	N-CD-CG	-18.80	75.00	103.20
1	f	331	PRO	N-CD-CG	-16.10	79.05	103.20
7	X	73	PRO	CA-CB-CG	-14.00	77.40	104.00
4	F	162	PRO	CA-N-CD	-12.05	94.62	111.50
1	f	331	PRO	CA-CB-CG	-9.00	86.91	104.00
1	UO	126	PHE	O-C-N	8.82	136.82	122.70
1	UL	126	PHE	O-C-N	8.82	136.82	122.70
1	UK	126	PHE	O-C-N	8.81	136.79	122.70
1	UI	126	PHE	O-C-N	8.80	136.78	122.70
1	UN	126	PHE	O-C-N	8.79	136.77	122.70
1	UJ	126	PHE	O-C-N	8.79	136.76	122.70
1	UM	126	PHE	O-C-N	8.78	136.74	122.70
1	UP	126	PHE	O-C-N	8.76	136.72	122.70
1	f	331	PRO	N-CA-CB	-7.03	94.86	103.30
1	UK	126	PHE	CA-C-N	-6.79	102.26	117.20
1	UL	126	PHE	CA-C-N	-6.77	102.31	117.20
1	UJ	126	PHE	CA-C-N	-6.76	102.32	117.20
1	UM	126	PHE	CA-C-N	-6.76	102.33	117.20
1	UO	126	PHE	CA-C-N	-6.76	102.33	117.20
1	UI	126	PHE	CA-C-N	-6.75	102.36	117.20
1	UN	126	PHE	CA-C-N	-6.73	102.39	117.20
1	UP	126	PHE	CA-C-N	-6.73	102.40	117.20
4	F	162	PRO	N-CD-CG	-6.53	93.41	103.20
1	UK	129	GLN	O-C-N	6.38	132.90	122.70
1	UP	129	GLN	O-C-N	6.37	132.89	122.70
1	UO	129	GLN	O-C-N	6.33	132.83	122.70
1	UJ	129	GLN	O-C-N	6.31	132.79	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	UM	129	GLN	O-C-N	6.30	132.78	122.70
1	WA	162	PRO	N-CA-C	6.29	128.46	112.10
1	UI	129	GLN	O-C-N	6.29	132.76	122.70
1	UN	129	GLN	O-C-N	6.29	132.76	122.70
1	UL	129	GLN	O-C-N	6.28	132.75	122.70
1	UL	126	PHE	C-N-CA	-5.75	107.33	121.70
1	UO	126	PHE	C-N-CA	-5.74	107.36	121.70
1	UK	126	PHE	C-N-CA	-5.73	107.37	121.70
1	UM	126	PHE	C-N-CA	-5.73	107.37	121.70
1	UI	126	PHE	C-N-CA	-5.72	107.39	121.70
1	UN	126	PHE	C-N-CA	-5.72	107.39	121.70
1	UP	126	PHE	C-N-CA	-5.72	107.39	121.70
1	UJ	126	PHE	C-N-CA	-5.72	107.40	121.70
3	E	189	PRO	CA-N-CD	-5.50	103.80	111.50
4	G	162	PRO	N-CA-CB	-5.28	96.80	102.60
1	WJ	214	ASP	CB-CA-C	-5.21	99.99	110.40
7	Y	8	ASP	CB-CG-OD2	5.10	122.89	118.30
1	WO	168	GLU	CB-CA-C	-5.06	100.28	110.40

There are no chirality outliers.

All (72) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	H	143	ARG	Sidechain
6	Q	106	ARG	Sidechain
6	U	104	ARG	Sidechain
1	UI	221	THR	Mainchain
1	UI	50	ASP	Mainchain
1	UJ	270	THR	Mainchain
1	UJ	50	ASP	Mainchain
1	UK	167	ARG	Sidechain
1	UK	221	THR	Mainchain
1	UK	50	ASP	Mainchain
1	UL	167	ARG	Sidechain
1	UL	221	THR	Mainchain
1	UL	50	ASP	Mainchain
1	UM	221	THR	Mainchain
1	UM	50	ASP	Mainchain
1	UN	221	THR	Mainchain
1	UN	50	ASP	Mainchain
1	UO	221	THR	Mainchain
1	UO	50	ASP	Mainchain

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Mol	Chain	Res	Type	Group
1	UP	167	ARG	Sidechain
1	UP	221	THR	Mainchain
1	UP	50	ASP	Mainchain
1	WA	134	ARG	Sidechain
1	WA	142	ARG	Sidechain
1	WA	167	ARG	Sidechain
1	WB	134	ARG	Sidechain
1	WB	142	ARG	Sidechain
1	WB	154	ARG	Sidechain
1	WB	167	ARG	Sidechain
1	WC	134	ARG	Sidechain
1	WC	142	ARG	Sidechain
1	WC	167	ARG	Sidechain
1	WD	134	ARG	Sidechain
1	WE	134	ARG	Sidechain
1	WE	142	ARG	Sidechain
1	WF	134	ARG	Sidechain
1	WF	142	ARG	Sidechain
1	WF	167	ARG	Sidechain
1	WG	134	ARG	Sidechain
1	WG	142	ARG	Sidechain
1	WG	167	ARG	Sidechain
1	WI	142	ARG	Sidechain
1	WJ	134	ARG	Sidechain
1	WJ	142	ARG	Sidechain
1	WJ	167	ARG	Sidechain
1	WK	134	ARG	Sidechain
1	WK	142	ARG	Sidechain
1	WL	134	ARG	Sidechain
1	WL	157	LEU	Mainchain
1	WM	134	ARG	Sidechain
1	WN	134	ARG	Sidechain
1	WO	134	ARG	Sidechain
1	WP	134	ARG	Sidechain
1	WP	142	ARG	Sidechain
1	WP	154	ARG	Sidechain
1	WQ	134	ARG	Sidechain
1	WQ	142	ARG	Sidechain
1	WR	134	ARG	Sidechain
1	WR	142	ARG	Sidechain
1	WR	167	ARG	Sidechain
1	WS	167	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	WT	134	ARG	Sidechain
1	WT	142	ARG	Sidechain
1	WU	134	ARG	Sidechain
1	WU	142	ARG	Sidechain
1	WV	134	ARG	Sidechain
1	WV	142	ARG	Sidechain
1	WV	167	ARG	Sidechain
1	WW	134	ARG	Sidechain
1	WW	167	ARG	Sidechain
7	Y	110	ARG	Sidechain
7	a	110	ARG	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	1275	0	1254	30	0
1	1	1275	0	1254	50	0
1	2	1275	0	1254	36	0
1	3	1275	0	1254	27	0
1	4	1275	0	1254	33	0
1	5	1275	0	1254	35	0
1	6	1275	0	1254	46	0
1	7	1275	0	1254	50	0
1	8	1275	0	1254	30	0
1	9	1275	0	1254	28	0
1	AA	1275	0	1254	26	0
1	AB	1275	0	1254	40	0
1	AC	1275	0	1254	43	0
1	AD	1275	0	1254	43	0
1	AE	1275	0	1254	42	0
1	AF	1275	0	1254	25	0
1	AG	1275	0	1254	25	0
1	AH	1275	0	1254	48	0
1	AI	1275	0	1254	44	0
1	AJ	1275	0	1254	38	0
1	AK	1275	0	1254	37	0
1	AL	1275	0	1254	34	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AM	1275	0	1254	31	0
1	AN	1275	0	1254	27	0
1	AO	1275	0	1254	30	0
1	AP	1275	0	1254	35	0
1	AQ	1275	0	1254	24	0
1	UI	1172	0	1181	62	0
1	UJ	1172	0	1181	78	0
1	UK	1172	0	1181	71	0
1	UL	1172	0	1181	68	0
1	UM	1172	0	1181	67	0
1	UN	1172	0	1181	69	0
1	UO	1172	0	1181	62	0
1	UP	1172	0	1181	65	0
1	WA	849	0	860	79	0
1	WB	836	0	846	79	0
1	WC	812	0	826	68	0
1	WD	827	0	840	93	0
1	WE	843	0	855	88	0
1	WF	834	0	847	62	0
1	WG	843	0	855	71	0
1	WH	703	0	722	67	0
1	WI	703	0	722	74	0
1	WJ	737	0	755	90	0
1	WK	729	0	744	85	0
1	WL	622	0	632	59	0
1	WM	596	0	612	48	0
1	WN	611	0	623	56	0
1	WO	714	0	731	51	0
1	WP	741	0	758	71	0
1	WQ	834	0	847	72	0
1	WR	834	0	847	62	0
1	WS	834	0	847	78	0
1	WT	834	0	847	75	0
1	WU	843	0	855	68	0
1	WV	827	0	838	65	0
1	WW	834	0	847	86	0
1	b	81	0	78	0	0
1	c	103	0	99	0	0
1	d	133	0	129	0	0
1	e	103	0	99	0	0
1	f	140	0	136	0	0
1	g	103	0	99	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	h	140	0	136	0	0
1	i	103	0	99	0	0
1	j	133	0	129	0	0
1	k	103	0	99	0	0
1	l	140	0	136	0	0
1	t	1275	0	1254	0	0
1	u	1275	0	1254	0	0
1	v	1275	0	1254	0	0
1	w	1275	0	1254	0	0
1	x	1275	0	1254	0	0
1	y	1275	0	1254	0	0
1	z	1275	0	1254	0	0
2	A	670	0	739	34	0
2	B	670	0	739	35	0
2	C	670	0	739	31	0
2	D	670	0	739	32	0
3	E	1945	0	2063	113	0
4	F	1605	0	1701	78	0
4	G	1626	0	1718	58	0
4	H	1614	0	1709	52	0
4	I	1614	0	1709	71	0
4	J	1623	0	1715	83	0
5	K	429	0	445	37	0
5	L	672	0	684	49	0
5	M	686	0	700	52	0
5	N	686	0	700	43	0
5	O	686	0	700	22	0
5	P	679	0	693	28	0
6	Q	1030	0	1025	23	0
6	R	942	0	943	35	0
6	S	967	0	968	59	0
6	T	982	0	984	43	0
6	U	950	0	946	51	0
7	V	969	0	981	17	0
7	W	964	0	976	15	0
7	X	969	0	981	14	0
7	Y	969	0	981	15	0
7	Z	969	0	981	19	0
7	a	969	0	981	0	0
All	All	99073	0	99719	3015	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 16.

All (3015) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WD:168:GLU:CD	1:WD:170:LYS:HE3	1.40	1.38
1:WC:121:PHE:HZ	2:C:15:LYS:NZ	1.21	1.35
1:UP:103:GLN:HG2	1:WW:182:PRO:CB	1.58	1.33
1:UP:103:GLN:CG	1:WW:182:PRO:HB3	1.56	1.32
5:L:11:ILE:HG22	1:AH:372:ILE:CD1	1.58	1.32
6:U:72:HIS:CD2	1:1:365:ASN:HB3	1.64	1.32
6:S:73:ILE:CD1	1:AE:297:GLN:HB2	1.61	1.31
1:WJ:164:LEU:HD13	3:E:145:TRP:CD1	1.65	1.29
1:WD:168:GLU:CG	1:WD:170:LYS:HE3	1.64	1.28
1:WP:166:VAL:CG2	4:F:160:GLN:HB3	1.63	1.28
6:R:72:HIS:ND1	1:AJ:365:ASN:HB3	1.47	1.25
5:L:7:ILE:HD11	1:AI:370:ARG:NH2	1.54	1.23
1:WQ:197:LEU:HD12	1:WR:175:SER:OG	1.39	1.23
1:WF:197:LEU:HD12	1:WG:175:SER:OG	1.34	1.23
1:WR:197:LEU:HD12	1:WS:175:SER:OG	1.36	1.22
5:K:7:ILE:HG21	1:AM:278:THR:CG2	1.69	1.22
1:WA:128:GLU:HG2	1:WB:126:PHE:CD2	1.74	1.22
1:WA:128:GLU:CG	1:WB:126:PHE:CD2	2.23	1.21
5:L:11:ILE:CG2	1:AH:372:ILE:HG21	1.68	1.21
1:WD:165:PHE:HB2	4:I:142:THR:O	1.35	1.21
1:WK:167:ARG:HG2	3:E:156:THR:HG22	1.22	1.21
1:WA:128:GLU:CG	1:WB:126:PHE:HD2	1.56	1.19
1:WI:197:LEU:HD12	1:WJ:175:SER:CB	1.74	1.18
6:U:78:VAL:CG1	1:1:299:ASN:HD22	1.58	1.17
6:T:72:HIS:CD2	1:7:365:ASN:HB3	1.79	1.16
1:WJ:197:LEU:HD12	1:WK:175:SER:OG	1.42	1.16
5:L:11:ILE:HG21	1:AH:372:ILE:CG2	1.74	1.15
6:U:78:VAL:HG11	1:1:299:ASN:ND2	1.61	1.15
1:WA:158:ALA:HB2	1:WW:200:SER:O	1.44	1.15
1:WR:197:LEU:HD12	1:WS:175:SER:CB	1.75	1.14
1:WK:197:LEU:HD12	1:WL:175:SER:CB	1.77	1.14
1:UJ:103:GLN:HB3	1:WD:182:PRO:HB3	1.20	1.14
1:WI:197:LEU:HD12	1:WJ:175:SER:OG	1.47	1.13
1:WE:166:VAL:CG2	4:I:160:GLN:HA	1.78	1.13
1:WK:193:ALA:HB1	1:WL:213:VAL:HG21	1.28	1.13
6:T:68:THR:HG21	1:7:367:GLU:OE1	1.49	1.13
6:U:68:THR:HG21	1:1:367:GLU:OE1	1.49	1.13
1:WS:200:SER:O	1:WT:158:ALA:HB2	1.46	1.12
1:WA:128:GLU:HG2	1:WB:126:PHE:HD2	0.96	1.12
1:WO:181:GLU:HB2	1:WO:184:ARG:HG3	1.14	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WR:112:GLY:HA2	1:WR:135:ALA:HA	1.27	1.12
5:M:11:ILE:HD12	5:M:12:SER:N	1.64	1.12
1:WJ:164:LEU:HD22	3:E:145:TRP:CD1	1.83	1.12
1:WP:166:VAL:HG22	4:F:160:GLN:CB	1.79	1.12
5:K:14:LEU:HD23	1:AL:278:THR:CG2	1.78	1.12
1:WL:197:LEU:HD12	1:WM:175:SER:OG	1.49	1.11
1:WG:181:GLU:HB2	1:WG:184:ARG:HG3	1.14	1.11
1:WJ:164:LEU:HB2	3:E:145:TRP:NE1	1.65	1.11
1:WK:181:GLU:HB2	1:WK:184:ARG:HG3	1.14	1.11
1:WP:181:GLU:HB2	1:WP:184:ARG:HG3	1.14	1.11
6:U:78:VAL:CG1	1:1:299:ASN:ND2	2.13	1.11
1:WF:181:GLU:HB2	1:WF:184:ARG:HG3	1.14	1.10
1:WO:200:SER:OG	1:WP:175:SER:HB2	1.50	1.10
5:K:7:ILE:HG21	1:AM:278:THR:HG21	1.20	1.10
5:P:19:MET:HA	1:AP:276:GLU:OE2	1.51	1.10
1:WE:181:GLU:HB2	1:WE:184:ARG:HG3	1.14	1.10
1:WU:197:LEU:HD12	1:WV:175:SER:OG	1.51	1.10
5:P:21:ALA:CB	1:AP:278:THR:HG21	1.80	1.10
1:UN:167:ARG:NH2	1:WQ:188:GLU:HB3	1.68	1.09
5:L:14:LEU:HD21	1:AH:370:ARG:HH21	1.07	1.09
1:WA:197:LEU:HD12	1:WB:175:SER:OG	1.50	1.09
1:WD:168:GLU:CD	1:WD:170:LYS:CE	2.21	1.09
1:WU:181:GLU:HB2	1:WU:184:ARG:HG3	1.14	1.09
5:M:7:ILE:HB	1:AB:278:THR:HG21	1.16	1.09
1:WC:121:PHE:CZ	2:C:15:LYS:NZ	2.02	1.09
1:WA:181:GLU:HB2	1:WA:184:ARG:HG3	1.14	1.09
1:WR:181:GLU:HB2	1:WR:184:ARG:HG3	1.14	1.09
5:L:4:ILE:HG12	1:AI:372:ILE:CG2	1.81	1.09
1:WA:158:ALA:CB	1:WW:200:SER:O	2.00	1.08
1:WW:181:GLU:HB2	1:WW:184:ARG:HG3	1.14	1.08
1:WQ:181:GLU:HB2	1:WQ:184:ARG:HG3	1.13	1.08
1:WV:181:GLU:HB2	1:WV:184:ARG:HG3	1.14	1.08
5:P:21:ALA:HB1	1:AP:278:THR:HG21	1.29	1.08
1:WJ:197:LEU:HD12	1:WK:175:SER:CB	1.82	1.08
1:WN:181:GLU:HB2	1:WN:184:ARG:HG3	1.14	1.08
1:WT:181:GLU:HB2	1:WT:184:ARG:HG3	1.14	1.08
1:WE:112:GLY:HA2	1:WE:135:ALA:HA	1.31	1.08
1:WD:181:GLU:HB2	1:WD:184:ARG:HG3	1.14	1.08
1:WL:181:GLU:HB2	1:WL:184:ARG:HG3	1.14	1.08
1:WS:181:GLU:HB2	1:WS:184:ARG:HG3	1.13	1.07
1:WM:181:GLU:HB2	1:WM:184:ARG:HG3	1.14	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:11:ILE:HG22	1:AH:372:ILE:HD13	1.36	1.07
1:WE:166:VAL:HG22	4:I:160:GLN:HA	1.11	1.07
5:K:7:ILE:CG2	1:AM:278:THR:HG21	1.85	1.07
6:S:72:HIS:ND1	1:AD:365:ASN:HB3	1.67	1.07
1:WB:181:GLU:HB2	1:WB:184:ARG:HG3	1.14	1.07
1:WI:181:GLU:HB2	1:WI:184:ARG:HG3	1.14	1.07
5:K:21:ALA:CB	1:AK:278:THR:HG21	1.83	1.07
5:N:21:ALA:CB	1:4:278:THR:HG21	1.84	1.07
1:WN:196:HIS:HB3	1:WO:211:THR:HG21	1.34	1.07
1:UK:207:PRO:HB2	1:WE:187:ASP:OD1	1.56	1.06
1:WG:200:SER:OG	1:WH:175:SER:HB2	1.54	1.06
1:WH:181:GLU:HB2	1:WH:184:ARG:HG3	1.13	1.06
1:WJ:181:GLU:HB2	1:WJ:184:ARG:HG3	1.14	1.06
5:L:7:ILE:CD1	1:AI:370:ARG:HH21	1.67	1.06
1:WK:196:HIS:HB3	1:WL:211:THR:HG21	1.33	1.06
1:WS:164:LEU:HB2	2:A:89:GLY:O	1.54	1.06
6:S:65:LEU:HB2	1:AD:295:SER:HB2	1.35	1.06
1:WC:186:LEU:HD22	1:WC:190:GLN:HG2	1.38	1.05
6:T:68:THR:OG1	6:T:72:HIS:CE1	2.07	1.05
1:UK:207:PRO:CB	1:WE:187:ASP:OD1	2.04	1.05
5:K:14:LEU:HD23	1:AL:278:THR:HG21	1.37	1.05
1:WG:112:GLY:HA2	1:WG:135:ALA:HA	1.36	1.05
1:WS:112:GLY:HA2	1:WS:135:ALA:HA	1.12	1.05
1:UJ:103:GLN:HB3	1:WD:182:PRO:CB	1.85	1.05
1:WN:201:ALA:HA	1:WO:158:ALA:HB2	1.33	1.05
1:WM:143:THR:OG1	1:WN:154:ARG:HG2	1.57	1.04
6:S:72:HIS:CB	1:AE:295:SER:HB3	1.87	1.04
1:WJ:164:LEU:HB2	3:E:145:TRP:HE1	1.14	1.04
1:WF:122:GLY:HA2	2:D:68:TRP:HE1	1.20	1.04
5:M:11:ILE:HG22	1:AB:372:ILE:CG2	1.87	1.04
1:WD:200:SER:O	1:WE:158:ALA:HB2	1.58	1.04
5:L:11:ILE:HG22	1:AH:372:ILE:HD12	1.38	1.04
1:WJ:164:LEU:CD1	3:E:145:TRP:CD1	2.41	1.03
1:WM:200:SER:OG	1:WN:175:SER:HB2	1.58	1.03
5:L:7:ILE:HD11	1:AI:370:ARG:HH21	1.00	1.03
1:WE:166:VAL:HG22	4:I:160:GLN:CA	1.86	1.03
1:WK:197:LEU:HD12	1:WL:175:SER:HB3	1.07	1.03
6:T:55:ARG:NH2	1:5:299:ASN:ND2	2.06	1.03
1:WJ:128:GLU:HG2	1:WK:126:PHE:HD2	1.22	1.03
1:WL:197:LEU:HD12	1:WM:175:SER:CB	1.88	1.03
1:WV:112:GLY:HA2	1:WV:135:ALA:HA	1.40	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:73:ILE:HG13	1:AK:295:SER:HB2	1.38	1.02
1:WL:197:LEU:CD1	1:WM:175:SER:OG	2.06	1.02
1:WO:197:LEU:HD12	1:WP:175:SER:OG	1.58	1.02
1:WD:168:GLU:CG	1:WD:170:LYS:CE	2.37	1.02
1:WR:197:LEU:CD1	1:WS:175:SER:OG	2.07	1.02
1:WT:197:LEU:HD12	1:WU:175:SER:OG	1.57	1.02
1:WN:200:SER:O	1:WO:158:ALA:CB	2.07	1.02
1:UK:207:PRO:HD2	1:WE:187:ASP:CG	1.80	1.02
1:WF:197:LEU:HD12	1:WG:175:SER:CB	1.89	1.02
1:WH:203:ALA:HB1	1:WI:160:PRO:HB3	1.39	1.02
1:WA:128:GLU:HG3	1:WB:126:PHE:CE2	1.95	1.01
1:WW:165:PHE:HE1	2:B:89:GLY:HA2	1.20	1.01
6:U:65:LEU:CD2	1:1:297:GLN:HB2	1.90	1.01
1:UJ:103:GLN:OE1	1:WD:182:PRO:HB3	1.58	1.01
1:WW:164:LEU:HD12	2:B:89:GLY:O	1.60	1.01
1:WE:167:ARG:HD3	4:I:161:GLY:HA2	1.40	1.01
1:WG:164:LEU:O	4:J:241:GLN:HG2	1.58	1.01
1:WJ:164:LEU:HD22	3:E:145:TRP:HD1	1.26	1.01
1:WN:200:SER:O	1:WO:158:ALA:HB3	1.59	1.01
1:WT:196:HIS:HB3	1:WU:211:THR:HG21	1.41	1.01
1:WA:112:GLY:HA2	1:WA:135:ALA:HA	1.41	1.00
5:N:21:ALA:HB3	1:4:278:THR:HG21	1.43	1.00
1:WA:160:PRO:HB3	1:WW:203:ALA:HB1	1.38	1.00
1:WJ:164:LEU:CD2	3:E:145:TRP:HD1	1.74	1.00
6:U:78:VAL:HG11	1:1:299:ASN:HD22	0.86	1.00
1:UP:62:ASP:OD2	1:WV:184:ARG:NH2	1.95	1.00
1:WS:200:SER:O	1:WT:158:ALA:CB	2.09	1.00
1:WD:168:GLU:HG2	1:WD:170:LYS:HE3	1.42	0.99
5:M:11:ILE:CG2	1:AB:372:ILE:HG21	1.92	0.99
1:WC:164:LEU:O	4:I:241:GLN:HG2	1.61	0.99
1:WH:200:SER:O	1:WI:158:ALA:HB2	1.62	0.99
1:WJ:197:LEU:CD1	1:WK:175:SER:OG	2.11	0.99
1:WD:200:SER:OG	1:WE:175:SER:HB2	1.59	0.99
1:WM:193:ALA:HB1	1:WN:213:VAL:HG11	1.44	0.99
1:UK:207:PRO:HD2	1:WE:187:ASP:OD2	1.61	0.99
1:WA:128:GLU:HG3	1:WB:126:PHE:CD2	1.96	0.98
1:UM:125:GLN:O	1:UM:129:GLN:N	1.97	0.98
1:UK:73:MET:CE	1:UK:99:ARG:HD3	1.93	0.98
1:UN:125:GLN:O	1:UN:129:GLN:N	1.97	0.98
1:UO:125:GLN:O	1:UO:129:GLN:N	1.97	0.98
5:M:11:ILE:CG2	1:AB:372:ILE:CG2	2.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UN:73:MET:CE	1:UN:99:ARG:HD3	1.93	0.98
1:UP:125:GLN:O	1:UP:129:GLN:N	1.97	0.98
1:WF:197:LEU:CD1	1:WG:175:SER:OG	2.11	0.98
1:UJ:73:MET:CE	1:UJ:99:ARG:HD3	1.93	0.98
1:UP:73:MET:CE	1:UP:99:ARG:HD3	1.93	0.98
1:WK:164:LEU:HD12	3:E:248:PHE:HB3	1.46	0.98
3:E:185:MET:O	3:E:189:PRO:HD2	1.64	0.97
1:WC:164:LEU:O	4:I:241:GLN:CG	2.12	0.97
1:UL:73:MET:CE	1:UL:99:ARG:HD3	1.93	0.97
1:UO:73:MET:CE	1:UO:99:ARG:HD3	1.93	0.97
5:M:14:LEU:HB3	1:AA:278:THR:HG21	1.45	0.97
1:UI:73:MET:CE	1:UI:99:ARG:HD3	1.93	0.97
5:M:11:ILE:HD12	5:M:11:ILE:C	1.84	0.97
1:WI:197:LEU:CD1	1:WJ:175:SER:OG	2.12	0.97
5:L:11:ILE:HG21	1:AH:372:ILE:HG21	1.34	0.97
1:WT:197:LEU:HD12	1:WU:175:SER:CB	1.94	0.96
1:UI:125:GLN:O	1:UI:129:GLN:N	1.97	0.96
1:UM:73:MET:CE	1:UM:99:ARG:HD3	1.93	0.96
1:WC:121:PHE:HZ	2:C:15:LYS:CE	1.76	0.96
1:UK:125:GLN:O	1:UK:129:GLN:N	1.97	0.96
1:WI:196:HIS:HB3	1:WJ:211:THR:HG21	1.45	0.96
1:WP:166:VAL:HG22	4:F:160:GLN:HB3	0.99	0.96
6:T:78:VAL:O	1:7:299:ASN:ND2	1.99	0.96
1:UL:125:GLN:O	1:UL:129:GLN:N	1.97	0.96
1:WK:164:LEU:HD12	3:E:248:PHE:CB	1.96	0.96
1:WE:197:LEU:HD12	1:WF:175:SER:OG	1.63	0.96
5:M:11:ILE:HG22	1:AB:372:ILE:HG21	1.44	0.96
6:U:72:HIS:HD2	1:1:365:ASN:HB3	0.98	0.96
1:UJ:125:GLN:O	1:UJ:129:GLN:N	1.97	0.96
1:WT:112:GLY:HA2	1:WT:135:ALA:HA	1.48	0.95
1:WA:200:SER:OG	1:WB:175:SER:HB2	1.64	0.95
5:L:4:ILE:CG1	1:AI:372:ILE:CG2	2.44	0.95
1:WH:200:SER:OG	1:WI:175:SER:HB2	1.67	0.95
5:L:11:ILE:CG2	1:AH:372:ILE:CG2	2.38	0.95
6:R:72:HIS:CE1	1:AJ:365:ASN:HB3	2.02	0.95
1:UP:133:GLN:NE2	1:UP:157:LEU:O	2.00	0.95
1:WC:200:SER:O	1:WD:158:ALA:HB2	1.64	0.95
1:WD:165:PHE:HB3	4:I:143:ARG:HA	1.48	0.95
1:WK:197:LEU:CD1	1:WL:175:SER:HB3	1.96	0.95
1:UI:133:GLN:NE2	1:UI:157:LEU:O	2.00	0.94
1:UJ:133:GLN:NE2	1:UJ:157:LEU:O	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WE:200:SER:OG	1:WF:175:SER:HB2	1.67	0.94
1:WH:193:ALA:HB1	1:WI:213:VAL:HG11	1.46	0.94
1:UK:133:GLN:NE2	1:UK:157:LEU:O	2.00	0.94
1:UM:133:GLN:NE2	1:UM:157:LEU:O	2.00	0.94
1:UN:133:GLN:NE2	1:UN:157:LEU:O	2.00	0.94
1:UL:133:GLN:NE2	1:UL:157:LEU:O	2.00	0.94
1:UO:103:GLN:CD	1:WU:182:PRO:HB3	1.87	0.94
1:WI:197:LEU:HD12	1:WJ:175:SER:HB3	1.47	0.94
1:UM:62:ASP:OD2	1:WP:184:ARG:NH2	1.99	0.94
1:WS:112:GLY:CA	1:WS:135:ALA:HA	1.97	0.94
6:T:78:VAL:C	1:7:299:ASN:HD21	1.70	0.94
1:WT:200:SER:O	1:WU:158:ALA:CB	2.15	0.93
6:Q:65:LEU:HD22	1:AQ:295:SER:HB2	1.49	0.93
1:UO:133:GLN:NE2	1:UO:157:LEU:O	2.00	0.93
6:S:72:HIS:HB2	1:AE:295:SER:HB3	1.48	0.93
1:UK:207:PRO:CG	1:WE:187:ASP:OD1	2.16	0.93
5:L:4:ILE:HD11	1:AI:372:ILE:HG22	1.49	0.93
5:L:4:ILE:HG12	1:AI:372:ILE:CB	1.98	0.92
1:WP:200:SER:OG	1:WQ:175:SER:HB2	1.69	0.92
1:WS:112:GLY:HA2	1:WS:135:ALA:CA	1.99	0.92
6:T:72:HIS:HD2	1:7:365:ASN:HB3	1.15	0.92
1:WA:197:LEU:HD12	1:WB:175:SER:CB	1.99	0.92
1:WR:112:GLY:CA	1:WR:135:ALA:HA	2.00	0.92
1:WS:124:SER:HB2	2:A:8:MET:CE	2.00	0.92
1:UN:62:ASP:OD2	1:WR:184:ARG:NH2	2.02	0.92
1:WF:181:GLU:CB	1:WF:184:ARG:HG3	2.00	0.91
1:WP:181:GLU:CB	1:WP:184:ARG:HG3	2.01	0.91
1:WT:181:GLU:CB	1:WT:184:ARG:HG3	2.00	0.91
1:WA:181:GLU:CB	1:WA:184:ARG:HG3	2.01	0.91
1:WM:181:GLU:CB	1:WM:184:ARG:HG3	2.01	0.91
1:WE:181:GLU:CB	1:WE:184:ARG:HG3	2.01	0.91
1:WB:181:GLU:CB	1:WB:184:ARG:HG3	2.01	0.91
1:WI:164:LEU:HD22	4:J:148:ALA:HB2	1.50	0.91
1:WS:121:PHE:HE1	1:WT:120:LYS:HZ3	0.94	0.91
5:L:14:LEU:CD2	1:AH:370:ARG:HH21	1.83	0.90
1:WQ:181:GLU:CB	1:WQ:184:ARG:HG3	2.00	0.90
5:K:14:LEU:CD2	1:AL:278:THR:HG21	2.01	0.90
1:WU:181:GLU:CB	1:WU:184:ARG:HG3	2.00	0.90
1:WI:181:GLU:CB	1:WI:184:ARG:HG3	2.01	0.90
1:WG:181:GLU:CB	1:WG:184:ARG:HG3	2.01	0.90
1:WD:181:GLU:CB	1:WD:184:ARG:HG3	2.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S:73:ILE:HD13	1:AE:297:GLN:HB2	1.54	0.90
1:WJ:164:LEU:CD2	3:E:145:TRP:CD1	2.53	0.90
1:UM:103:GLN:CD	1:WQ:182:PRO:HB3	1.93	0.90
1:WG:165:PHE:CZ	4:I:153:LEU:HD21	2.07	0.90
1:WG:165:PHE:HE1	4:J:240:ALA:HB3	1.36	0.90
1:WH:181:GLU:CB	1:WH:184:ARG:HG3	2.00	0.89
1:WM:197:LEU:HD12	1:WN:175:SER:OG	1.72	0.89
1:WJ:128:GLU:CG	1:WK:126:PHE:HD2	1.84	0.89
1:WK:181:GLU:CB	1:WK:184:ARG:HG3	2.01	0.89
1:WD:168:GLU:HG2	1:WD:170:LYS:CE	2.00	0.89
1:WV:181:GLU:CB	1:WV:184:ARG:HG3	2.01	0.89
3:E:158:PRO:HG2	3:E:162:ASN:HD21	1.35	0.89
5:K:14:LEU:HD23	1:AL:278:THR:HG22	1.55	0.89
1:WB:197:LEU:HD12	1:WC:175:SER:OG	1.72	0.89
1:WD:115:LEU:HD22	1:WD:134:ARG:HD2	1.54	0.89
1:WR:197:LEU:HD12	1:WS:175:SER:HB3	1.54	0.89
1:WW:165:PHE:CE1	2:B:89:GLY:HA2	2.07	0.89
6:T:55:ARG:CZ	1:5:299:ASN:ND2	2.35	0.89
1:WD:200:SER:O	1:WE:158:ALA:CB	2.20	0.89
1:WI:164:LEU:HD22	4:J:148:ALA:CB	2.02	0.89
1:WO:181:GLU:CB	1:WO:184:ARG:HG3	2.00	0.89
1:WJ:181:GLU:CB	1:WJ:184:ARG:HG3	2.00	0.88
1:WR:181:GLU:CB	1:WR:184:ARG:HG3	2.01	0.88
1:WW:181:GLU:CB	1:WW:184:ARG:HG3	2.01	0.88
6:S:65:LEU:HB2	1:AD:295:SER:CB	2.03	0.88
1:UM:126:PHE:CE1	1:UM:130:VAL:HG21	2.09	0.88
1:WN:181:GLU:CB	1:WN:184:ARG:HG3	2.01	0.88
1:UN:126:PHE:O	1:UN:130:VAL:N	2.07	0.88
1:UP:126:PHE:CE1	1:UP:130:VAL:HG21	2.09	0.88
1:UK:126:PHE:CE1	1:UK:130:VAL:HG21	2.09	0.88
1:UM:126:PHE:O	1:UM:130:VAL:N	2.07	0.87
1:UO:126:PHE:CE1	1:UO:130:VAL:HG21	2.09	0.87
1:WS:181:GLU:CB	1:WS:184:ARG:HG3	2.00	0.87
6:T:72:HIS:HD2	1:7:365:ASN:CB	1.87	0.87
1:UO:126:PHE:O	1:UO:130:VAL:N	2.07	0.87
1:WT:121:PHE:CZ	1:WU:122:GLY:O	2.27	0.87
1:UI:126:PHE:CE1	1:UI:130:VAL:HG21	2.09	0.87
1:WL:181:GLU:CB	1:WL:184:ARG:HG3	2.01	0.87
5:L:4:ILE:HG12	1:AI:372:ILE:HB	1.54	0.87
1:UK:126:PHE:O	1:UK:130:VAL:N	2.07	0.87
1:WV:200:SER:O	1:WW:158:ALA:HB2	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UJ:126:PHE:CE1	1:UJ:130:VAL:HG21	2.09	0.87
1:UL:126:PHE:CE1	1:UL:130:VAL:HG21	2.09	0.87
1:WD:165:PHE:HE2	4:I:141:GLN:HA	1.39	0.87
1:UN:126:PHE:CE1	1:UN:130:VAL:HG21	2.09	0.87
1:UP:126:PHE:O	1:UP:130:VAL:N	2.07	0.87
1:UJ:126:PHE:O	1:UJ:130:VAL:N	2.07	0.86
1:WK:200:SER:O	1:WL:158:ALA:HB3	1.75	0.86
1:WC:121:PHE:CZ	2:C:15:LYS:CE	2.56	0.86
1:WD:203:ALA:HB1	1:WE:160:PRO:HB3	1.57	0.86
6:S:73:ILE:HD12	1:AE:297:GLN:HB2	1.57	0.86
1:WC:200:SER:O	1:WD:158:ALA:CB	2.23	0.86
1:WM:139:GLU:HB3	1:WN:154:ARG:HH21	1.39	0.86
5:L:4:ILE:HG12	1:AI:372:ILE:HG21	1.57	0.86
1:WK:132:TYR:HB2	1:WL:126:PHE:HZ	1.40	0.86
1:WA:196:HIS:HB3	1:WB:211:THR:HG21	1.57	0.86
1:WB:200:SER:OG	1:WC:175:SER:HB2	1.76	0.86
1:WK:193:ALA:HB1	1:WL:213:VAL:CG2	2.06	0.86
1:WS:124:SER:HB2	2:A:8:MET:HE2	1.57	0.86
1:WO:166:VAL:HG23	4:F:139:LEU:O	1.75	0.86
1:WS:121:PHE:HE1	1:WT:120:LYS:NZ	1.74	0.86
5:L:4:ILE:CG1	1:AI:372:ILE:HG21	2.04	0.86
1:UL:126:PHE:O	1:UL:130:VAL:N	2.07	0.85
1:UJ:103:GLN:CB	1:WD:182:PRO:HB3	2.04	0.85
1:WR:196:HIS:HB3	1:WS:211:THR:HG21	1.56	0.85
1:WR:200:SER:O	1:WS:158:ALA:CB	2.24	0.85
5:K:21:ALA:HB1	1:AK:278:THR:HG21	1.56	0.85
1:UI:126:PHE:O	1:UI:130:VAL:N	2.07	0.85
1:UJ:126:PHE:O	1:UJ:130:VAL:HG23	1.77	0.85
1:UM:103:GLN:CG	1:WQ:182:PRO:HB3	2.06	0.85
1:WH:200:SER:O	1:WI:158:ALA:CB	2.23	0.85
1:WK:167:ARG:CG	3:E:156:THR:HG22	2.04	0.85
6:U:65:LEU:HD22	1:1:297:GLN:HB2	1.57	0.85
1:UI:126:PHE:O	1:UI:130:VAL:HG23	1.77	0.85
1:WV:200:SER:O	1:WW:158:ALA:CB	2.25	0.85
1:WM:197:LEU:HD12	1:WN:175:SER:CB	2.05	0.84
1:WS:125:GLN:HB2	2:A:4:GLU:HB2	1.57	0.84
1:WJ:164:LEU:CD1	3:E:145:TRP:HD1	1.82	0.84
6:T:68:THR:HG1	6:T:72:HIS:CE1	1.94	0.84
1:UN:126:PHE:O	1:UN:130:VAL:HG23	1.77	0.84
1:WU:197:LEU:HD12	1:WV:175:SER:CB	2.07	0.84
6:T:78:VAL:HG12	1:6:361:ASN:HD22	1.40	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WC:165:PHE:HD2	4:H:152:ARG:HH21	1.21	0.84
1:WA:175:SER:HB2	1:WW:200:SER:OG	1.76	0.84
1:WA:175:SER:CB	1:WW:197:LEU:HD12	2.08	0.84
1:WF:122:GLY:HA2	2:D:68:TRP:NE1	1.93	0.84
1:UK:126:PHE:O	1:UK:130:VAL:HG23	1.77	0.84
1:UO:103:GLN:NE2	1:WU:182:PRO:HB3	1.92	0.84
1:UP:126:PHE:O	1:UP:130:VAL:HG23	1.77	0.84
1:UL:126:PHE:O	1:UL:130:VAL:HG23	1.77	0.84
5:L:4:ILE:CD1	1:AI:372:ILE:HG22	2.08	0.84
6:Q:88:ARG:NH1	6:Q:105:GLU:OE1	2.10	0.84
1:WT:200:SER:O	1:WU:158:ALA:HB2	1.77	0.84
6:S:76:GLN:O	1:AD:297:GLN:OE1	1.96	0.84
1:UJ:167:ARG:NH2	1:WB:188:GLU:HB3	1.92	0.83
3:E:182:ASN:HB3	3:E:239:PHE:HZ	1.43	0.83
5:M:7:ILE:HB	1:AB:278:THR:CG2	2.07	0.83
1:UO:126:PHE:O	1:UO:130:VAL:HG23	1.77	0.83
1:UJ:103:GLN:OE1	1:WD:182:PRO:CB	2.26	0.83
1:UM:126:PHE:O	1:UM:130:VAL:HG23	1.77	0.83
1:UN:94:HIS:HB3	1:UN:146:THR:HG21	1.60	0.83
1:WJ:164:LEU:CG	3:E:145:TRP:HD1	1.91	0.83
1:WQ:200:SER:OG	1:WR:175:SER:HB2	1.78	0.83
1:UP:94:HIS:HB3	1:UP:146:THR:HG21	1.61	0.83
1:UL:94:HIS:HB3	1:UL:146:THR:HG21	1.60	0.83
5:L:14:LEU:HD21	1:AH:370:ARG:NH2	1.91	0.83
1:UO:94:HIS:HB3	1:UO:146:THR:HG21	1.60	0.83
1:WP:166:VAL:CG2	4:F:160:GLN:CB	2.46	0.83
6:T:55:ARG:NH2	1:5:299:ASN:HD22	1.75	0.83
1:WG:200:SER:O	1:WH:158:ALA:HB2	1.79	0.83
1:WT:197:LEU:CD1	1:WU:175:SER:OG	2.27	0.82
1:WJ:164:LEU:CG	3:E:145:TRP:CD1	2.62	0.82
5:L:7:ILE:HD11	1:AI:370:ARG:CZ	2.08	0.82
1:UI:94:HIS:HB3	1:UI:146:THR:HG21	1.60	0.82
1:UJ:167:ARG:HH22	1:WB:188:GLU:HB3	1.44	0.82
1:UK:207:PRO:CD	1:WE:187:ASP:OD1	2.27	0.82
1:WW:125:GLN:OE1	2:B:2:THR:CG2	2.28	0.82
5:M:21:ALA:HB1	1:0:278:THR:HG21	1.62	0.82
5:N:11:ILE:HG22	1:6:372:ILE:HD12	1.62	0.82
7:Z:6:ILE:HG21	7:Z:122:VAL:HG11	1.59	0.82
6:U:78:VAL:HG12	1:1:299:ASN:ND2	1.93	0.82
1:UL:128:GLU:O	1:UL:132:TYR:N	2.13	0.81
1:UP:127:SER:O	1:UP:131:ASN:N	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UK:128:GLU:O	1:UK:132:TYR:N	2.13	0.81
1:UL:73:MET:HE1	1:UL:99:ARG:HD3	1.59	0.81
1:UO:127:SER:O	1:UO:131:ASN:N	2.13	0.81
1:WK:196:HIS:CB	1:WL:211:THR:HG21	2.10	0.81
1:UM:103:GLN:HG2	1:WQ:182:PRO:HB3	1.61	0.81
1:WJ:164:LEU:CD2	3:E:144:LEU:HB2	2.10	0.81
2:C:28:ALA:HB1	2:C:54:LYS:HE3	1.60	0.81
5:P:21:ALA:HB1	1:AP:278:THR:CG2	2.10	0.81
1:UI:127:SER:O	1:UI:131:ASN:N	2.13	0.81
1:UJ:94:HIS:HB3	1:UJ:146:THR:HG21	1.60	0.81
1:UL:127:SER:O	1:UL:131:ASN:N	2.13	0.81
1:UM:94:HIS:HB3	1:UM:146:THR:HG21	1.60	0.81
1:WI:200:SER:O	1:WJ:158:ALA:CB	2.29	0.81
6:U:33:ALA:O	6:U:98:ASN:ND2	2.13	0.81
1:UJ:128:GLU:O	1:UJ:132:TYR:N	2.13	0.81
1:UK:94:HIS:HB3	1:UK:146:THR:HG21	1.60	0.81
1:UN:127:SER:O	1:UN:131:ASN:N	2.13	0.81
1:UJ:127:SER:O	1:UJ:131:ASN:N	2.13	0.80
1:UK:127:SER:O	1:UK:131:ASN:N	2.13	0.80
1:UM:127:SER:O	1:UM:131:ASN:N	2.13	0.80
1:WA:197:LEU:CD1	1:WB:175:SER:OG	2.28	0.80
1:WK:143:THR:CB	1:WL:156:HIS:HE2	1.94	0.80
6:U:72:HIS:HD2	1:1:365:ASN:CB	1.88	0.80
1:WK:165:PHE:HA	3:E:149:LEU:HD13	1.62	0.80
1:WP:200:SER:O	1:WQ:158:ALA:HB2	1.80	0.80
1:UI:128:GLU:O	1:UI:132:TYR:N	2.13	0.80
1:WT:121:PHE:CE1	1:WU:122:GLY:O	2.34	0.80
4:F:100:ILE:HG23	4:F:101:MET:HE2	1.63	0.80
1:WG:165:PHE:CE1	4:J:240:ALA:HB3	2.17	0.80
1:WH:143:THR:OG1	1:WI:154:ARG:HG2	1.82	0.80
5:M:11:ILE:HG22	1:AB:372:ILE:CB	2.11	0.80
5:P:14:LEU:HB3	1:AQ:278:THR:HG21	1.64	0.80
1:UK:73:MET:HE3	1:UK:99:ARG:HD3	1.62	0.80
1:WJ:164:LEU:CD2	3:E:144:LEU:CB	2.60	0.80
5:M:7:ILE:HD11	1:AC:370:ARG:HE	1.46	0.80
1:WU:200:SER:OG	1:WV:175:SER:HB2	1.82	0.79
1:WV:197:LEU:HD12	1:WW:175:SER:CB	2.12	0.79
7:Y:6:ILE:HG21	7:Y:122:VAL:HG21	1.62	0.79
1:WG:197:LEU:HD12	1:WH:175:SER:OG	1.82	0.79
1:WH:181:GLU:HB2	1:WH:184:ARG:CG	2.07	0.79
1:UN:73:MET:HE1	1:UN:99:ARG:HD3	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WM:181:GLU:HB2	1:WM:184:ARG:CG	2.07	0.79
4:J:83:ALA:HB3	4:J:84:PRO:HD3	1.62	0.79
1:WB:164:LEU:O	4:H:152:ARG:HD3	1.81	0.79
1:WJ:181:GLU:HB2	1:WJ:184:ARG:CG	2.07	0.79
1:UK:207:PRO:CD	1:WE:187:ASP:CG	2.51	0.79
1:WF:200:SER:OG	1:WG:175:SER:HB2	1.81	0.79
1:WG:143:THR:OG1	1:WH:154:ARG:HG2	1.83	0.79
1:WO:181:GLU:HB2	1:WO:184:ARG:CG	2.07	0.79
1:UM:128:GLU:O	1:UM:132:TYR:N	2.13	0.79
1:WA:175:SER:OG	1:WW:197:LEU:HD12	1.83	0.79
1:WJ:197:LEU:HD12	1:WK:175:SER:HB3	1.63	0.79
1:WP:165:PHE:HB3	4:F:160:GLN:O	1.83	0.79
1:WN:201:ALA:CA	1:WO:158:ALA:HB2	2.13	0.79
1:WA:175:SER:HB3	1:WW:197:LEU:HD12	1.64	0.79
1:UO:128:GLU:O	1:UO:132:TYR:N	2.14	0.78
1:WI:181:GLU:HB2	1:WI:184:ARG:CG	2.07	0.78
1:UI:98:LEU:HD22	1:UI:147:LEU:HD21	1.66	0.78
1:UJ:98:LEU:HD22	1:UJ:147:LEU:HD21	1.66	0.78
1:WE:167:ARG:CD	4:I:161:GLY:HA2	2.12	0.78
1:WQ:113:PHE:HB3	1:WR:134:ARG:HE	1.48	0.78
2:B:39:GLN:NE2	2:B:46:GLU:O	2.13	0.78
6:S:35:THR:HG22	7:X:49:PHE:HB3	1.65	0.78
1:WL:181:GLU:HB2	1:WL:184:ARG:CG	2.07	0.78
1:UJ:103:GLN:HB3	1:WD:182:PRO:CA	2.13	0.78
1:WK:162:PRO:HB2	3:E:249:ASN:HB2	1.64	0.78
1:WP:197:LEU:HD12	1:WQ:175:SER:OG	1.84	0.78
1:WV:120:LYS:NZ	1:WV:123:ILE:HD11	1.99	0.78
5:N:11:ILE:HG22	1:6:372:ILE:CD1	2.14	0.78
1:UP:128:GLU:O	1:UP:132:TYR:N	2.13	0.78
4:F:141:GLN:HE22	4:F:243:PHE:HB3	1.48	0.78
6:R:67:LEU:HD11	6:R:74:PRO:HA	1.64	0.78
1:UK:207:PRO:CD	1:WE:187:ASP:OD2	2.31	0.78
1:WP:200:SER:O	1:WQ:158:ALA:CB	2.31	0.78
1:UL:73:MET:HE1	1:UL:99:ARG:CD	2.14	0.78
1:WS:200:SER:OG	1:WT:175:SER:HB2	1.83	0.78
1:WU:197:LEU:CD1	1:WV:175:SER:OG	2.29	0.78
1:WA:167:ARG:NH2	1:WA:168:GLU:OE2	2.17	0.78
1:UO:98:LEU:HD22	1:UO:147:LEU:HD21	1.66	0.77
6:S:72:HIS:HA	1:AE:295:SER:OG	1.83	0.77
1:WJ:143:THR:OG1	1:WK:154:ARG:HG2	1.83	0.77
1:UM:98:LEU:HD22	1:UM:147:LEU:HD21	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UP:73:MET:HE1	1:UP:99:ARG:HD3	1.65	0.77
1:WF:187:ASP:HB3	1:WF:190:GLN:HG3	1.66	0.77
1:WJ:128:GLU:CG	1:WK:126:PHE:CD2	2.67	0.77
1:UK:98:LEU:HD22	1:UK:147:LEU:HD21	1.66	0.77
1:UP:98:LEU:HD22	1:UP:147:LEU:HD21	1.66	0.77
1:WF:128:GLU:HG2	1:WG:126:PHE:HD2	1.48	0.77
1:WT:197:LEU:HD12	1:WU:175:SER:HB3	1.65	0.77
1:WD:197:LEU:HD12	1:WE:175:SER:OG	1.85	0.77
6:S:72:HIS:ND1	1:AD:365:ASN:CB	2.47	0.77
1:UJ:167:ARG:HH11	1:2:236:LYS:NZ	1.83	0.77
5:P:19:MET:CA	1:AP:276:GLU:OE2	2.32	0.77
1:UJ:261:LEU:HB3	1:UJ:270:THR:HG23	1.67	0.77
1:UL:98:LEU:HD22	1:UL:147:LEU:HD21	1.66	0.77
1:UN:128:GLU:O	1:UN:132:TYR:N	2.13	0.77
1:UN:167:ARG:HH22	1:WQ:188:GLU:HB3	1.47	0.77
1:WK:165:PHE:HA	3:E:149:LEU:CD1	2.15	0.77
1:WK:197:LEU:CD1	1:WL:175:SER:CB	2.59	0.77
1:WO:203:ALA:HB1	1:WP:160:PRO:HB3	1.66	0.77
6:S:73:ILE:HD11	1:AE:297:GLN:HB2	1.63	0.77
1:WJ:125:GLN:HG3	3:E:242:HIS:ND1	1.99	0.76
1:WM:197:LEU:HD12	1:WN:175:SER:HB3	1.67	0.76
5:N:21:ALA:HB1	1:4:278:THR:HG21	1.65	0.76
1:UP:212:LEU:HB3	1:UP:221:THR:HG23	1.67	0.76
1:WK:181:GLU:HB2	1:WK:184:ARG:CG	2.07	0.76
1:WQ:181:GLU:HB2	1:WQ:184:ARG:CG	2.07	0.76
1:WD:193:ALA:HB1	1:WE:213:VAL:HG11	1.67	0.76
1:WN:200:SER:HA	1:WO:173:SER:OG	1.85	0.76
1:WT:200:SER:O	1:WU:158:ALA:HB3	1.84	0.76
1:UL:167:ARG:NH1	1:WF:188:GLU:OE2	2.19	0.76
1:WQ:197:LEU:CD1	1:WR:175:SER:OG	2.26	0.76
1:WW:125:GLN:HB2	2:B:2:THR:HG21	1.66	0.76
5:M:21:ALA:CB	1:0:278:THR:HG21	2.15	0.76
1:WP:196:HIS:HB3	1:WQ:211:THR:HG21	1.66	0.76
6:U:73:ILE:HG13	1:2:295:SER:HB2	1.67	0.76
1:UM:73:MET:HE1	1:UM:99:ARG:HD3	1.66	0.76
6:R:73:ILE:HG13	1:AK:295:SER:CB	2.14	0.76
1:UM:212:LEU:HB3	1:UM:221:THR:HG23	1.67	0.76
1:UN:98:LEU:HD22	1:UN:147:LEU:HD21	1.66	0.76
1:WA:211:THR:HG21	1:WW:196:HIS:HB3	1.67	0.76
1:WN:197:LEU:HD12	1:WO:175:SER:HB3	1.68	0.76
1:WW:181:GLU:HB2	1:WW:184:ARG:CG	2.07	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UI:212:LEU:HB3	1:UI:221:THR:HG23	1.67	0.76
1:WA:181:GLU:HB2	1:WA:184:ARG:CG	2.07	0.76
1:WP:181:GLU:HB2	1:WP:184:ARG:CG	2.07	0.76
1:UN:212:LEU:HB3	1:UN:221:THR:HG23	1.67	0.76
1:WB:163:SER:HB2	1:WB:166:VAL:HG22	1.67	0.76
1:WT:160:PRO:HD3	1:WT:172:PRO:HA	1.66	0.76
1:UL:212:LEU:HB3	1:UL:221:THR:HG23	1.67	0.75
1:UO:212:LEU:HB3	1:UO:221:THR:HG23	1.67	0.75
1:WA:199:SER:HA	1:WA:205:LEU:HD23	1.69	0.75
1:WC:199:SER:HA	1:WC:205:LEU:HD23	1.69	0.75
1:WD:112:GLY:HA2	1:WD:135:ALA:HA	1.67	0.75
1:WD:199:SER:HA	1:WD:205:LEU:HD23	1.69	0.75
5:N:7:ILE:CG2	1:6:278:THR:HG21	2.17	0.75
1:WF:196:HIS:HB3	1:WG:211:THR:HG21	1.67	0.75
1:WN:199:SER:HA	1:WN:205:LEU:HD23	1.69	0.75
1:WE:199:SER:HA	1:WE:205:LEU:HD23	1.68	0.75
1:WP:199:SER:HA	1:WP:205:LEU:HD23	1.69	0.75
6:U:68:THR:CG2	1:1:294:ARG:CD	2.65	0.75
1:WF:199:SER:HA	1:WF:205:LEU:HD23	1.69	0.75
1:WC:200:SER:OG	1:WD:175:SER:HB2	1.86	0.75
1:WI:199:SER:HA	1:WI:205:LEU:HD23	1.69	0.75
1:WO:166:VAL:HG11	4:F:147:LEU:HD12	1.66	0.75
1:WW:199:SER:HA	1:WW:205:LEU:HD23	1.69	0.75
1:WO:199:SER:HA	1:WO:205:LEU:HD23	1.69	0.75
1:WR:181:GLU:HB2	1:WR:184:ARG:CG	2.07	0.75
1:UM:139:GLU:OE1	1:UM:142:ARG:NH2	2.20	0.75
1:WB:199:SER:HA	1:WB:205:LEU:HD23	1.68	0.75
1:WJ:128:GLU:HG2	1:WK:126:PHE:CD2	2.15	0.75
1:WW:125:GLN:OE1	2:B:2:THR:HG22	1.86	0.75
5:M:4:ILE:HD12	1:AC:374:HIS:HB2	1.68	0.75
5:N:7:ILE:HG21	1:6:278:THR:CG2	2.15	0.75
1:UK:212:LEU:HB3	1:UK:221:THR:HG23	1.67	0.74
1:WG:199:SER:HA	1:WG:205:LEU:HD23	1.69	0.74
6:T:55:ARG:CZ	1:5:299:ASN:HD21	1.97	0.74
1:WI:200:SER:O	1:WJ:158:ALA:HB3	1.87	0.74
1:WR:200:SER:O	1:WS:158:ALA:HB2	1.87	0.74
1:UK:94:HIS:CB	1:UK:146:THR:HG21	2.17	0.74
1:WC:193:ALA:HB1	1:WD:213:VAL:HG11	1.68	0.74
1:WD:149:PRO:HG2	1:WD:190:GLN:HE22	1.52	0.74
1:WJ:164:LEU:HB2	3:E:145:TRP:CD1	2.22	0.74
4:G:135:ARG:NH2	4:G:165:VAL:O	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:X:6:ILE:HG21	7:X:122:VAL:HG21	1.69	0.74
1:UO:94:HIS:CB	1:UO:146:THR:HG21	2.17	0.74
1:WT:199:SER:HA	1:WT:205:LEU:HD23	1.69	0.74
1:WV:197:LEU:HD12	1:WW:175:SER:OG	1.88	0.74
1:WN:197:LEU:HD12	1:WO:175:SER:CB	2.17	0.74
1:WO:164:LEU:O	4:F:144:GLU:N	2.21	0.74
5:K:21:ALA:HB1	1:AK:278:THR:CG2	2.17	0.74
1:UL:94:HIS:CB	1:UL:146:THR:HG21	2.17	0.74
1:WQ:199:SER:HA	1:WQ:205:LEU:HD23	1.69	0.74
1:WR:199:SER:HA	1:WR:205:LEU:HD23	1.69	0.74
1:WS:199:SER:HA	1:WS:205:LEU:HD23	1.69	0.74
1:WV:199:SER:HA	1:WV:205:LEU:HD23	1.69	0.74
3:E:23:VAL:HA	3:E:150:LEU:HD21	1.69	0.74
5:M:4:ILE:HG12	1:AC:372:ILE:HB	1.68	0.74
1:WJ:199:SER:HA	1:WJ:205:LEU:HD23	1.69	0.74
1:WN:181:GLU:HB2	1:WN:184:ARG:CG	2.07	0.74
1:UI:73:MET:HE3	1:UI:99:ARG:HD3	1.67	0.74
1:WB:163:SER:HB3	1:WB:169:GLN:HG2	1.70	0.74
1:WK:199:SER:HA	1:WK:205:LEU:HD23	1.69	0.74
1:UN:94:HIS:CB	1:UN:146:THR:HG21	2.17	0.74
1:UO:139:GLU:OE1	1:UO:142:ARG:NH2	2.20	0.74
1:WH:199:SER:HA	1:WH:205:LEU:HD23	1.69	0.74
1:WP:164:LEU:HD13	4:F:148:ALA:HA	1.69	0.74
1:UJ:94:HIS:CB	1:UJ:146:THR:HG21	2.17	0.73
1:UL:139:GLU:OE1	1:UL:142:ARG:NH2	2.20	0.73
1:WC:197:LEU:HD12	1:WD:175:SER:OG	1.88	0.73
1:WK:143:THR:HG1	1:WL:156:HIS:CE1	2.04	0.73
6:U:65:LEU:HB2	1:1:295:SER:HB2	1.69	0.73
1:UJ:73:MET:HE1	1:UJ:99:ARG:HD3	1.69	0.73
1:UK:103:GLN:NE2	1:WF:182:PRO:HB3	2.01	0.73
1:UM:94:HIS:CB	1:UM:146:THR:HG21	2.17	0.73
1:WE:166:VAL:HG21	4:I:160:GLN:HG2	1.69	0.73
5:K:89:ARG:NH1	5:P:102:MET:SD	2.61	0.73
5:N:94:ALA:O	5:N:98:GLU:HG3	1.88	0.73
1:UL:73:MET:CE	1:UL:99:ARG:CD	2.66	0.73
1:UN:73:MET:CE	1:UN:99:ARG:CD	2.66	0.73
1:WB:197:LEU:HD12	1:WC:175:SER:CB	2.18	0.73
1:UI:94:HIS:CB	1:UI:146:THR:HG21	2.17	0.73
1:WB:181:GLU:HB2	1:WB:184:ARG:CG	2.07	0.73
1:WW:167:ARG:HD2	4:H:140:ARG:O	1.87	0.73
7:X:79:GLU:HG2	7:X:82:ASN:HB2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Z:6:ILE:HD13	7:Z:122:VAL:HG21	1.71	0.73
1:UK:73:MET:CE	1:UK:99:ARG:CD	2.66	0.73
1:WA:158:ALA:HB3	1:WW:200:SER:O	1.87	0.73
1:WJ:164:LEU:HD21	3:E:144:LEU:CB	2.17	0.73
1:WR:200:SER:OG	1:WS:175:SER:HB2	1.88	0.73
1:WU:199:SER:HA	1:WU:205:LEU:HD23	1.69	0.73
7:V:55:PRO:HG3	1:AP:359:GLN:NE2	2.04	0.73
1:UN:139:GLU:OE1	1:UN:142:ARG:NH2	2.20	0.73
1:WD:164:LEU:O	4:I:144:GLU:HG2	1.88	0.73
1:WP:123:ILE:HG23	2:A:67:PRO:HB3	1.70	0.73
2:C:29:LEU:HB2	2:D:52:ILE:HG13	1.71	0.73
6:S:73:ILE:CD1	1:AE:297:GLN:CB	2.56	0.73
1:UN:73:MET:HE1	1:UN:99:ARG:CD	2.17	0.73
1:UP:94:HIS:CB	1:UP:146:THR:HG21	2.17	0.73
1:WT:200:SER:OG	1:WU:175:SER:HB2	1.88	0.73
1:UK:139:GLU:OE1	1:UK:142:ARG:NH2	2.20	0.73
1:UP:73:MET:CE	1:UP:99:ARG:CD	2.66	0.73
1:WK:193:ALA:CB	1:WL:213:VAL:HG21	2.13	0.73
5:K:21:ALA:CB	1:AK:278:THR:CG2	2.64	0.73
6:S:42:ASP:OD2	6:S:43:ILE:N	2.22	0.73
2:B:11:THR:HA	2:B:14:MET:HE3	1.69	0.73
1:UP:139:GLU:OE1	1:UP:142:ARG:NH2	2.20	0.73
1:WM:200:SER:O	1:WN:158:ALA:CB	2.37	0.73
1:UI:139:GLU:OE1	1:UI:142:ARG:NH2	2.20	0.72
1:WK:132:TYR:HB2	1:WL:126:PHE:CZ	2.23	0.72
1:UM:73:MET:CE	1:UM:99:ARG:CD	2.66	0.72
1:UI:73:MET:CE	1:UI:99:ARG:CD	2.66	0.72
1:WL:199:SER:HA	1:WL:205:LEU:HD23	1.69	0.72
1:WM:199:SER:HA	1:WM:205:LEU:HD23	1.69	0.72
1:WS:181:GLU:HB2	1:WS:184:ARG:CG	2.07	0.72
1:WC:197:LEU:HD12	1:WD:175:SER:CB	2.18	0.72
1:WU:181:GLU:HB2	1:WU:184:ARG:CG	2.07	0.72
5:L:11:ILE:CG2	1:AH:372:ILE:HD13	2.16	0.72
1:WM:197:LEU:HA	1:WN:175:SER:OG	1.89	0.72
5:M:4:ILE:HG13	1:AC:372:ILE:CG2	2.20	0.72
1:WG:181:GLU:HB2	1:WG:184:ARG:CG	2.07	0.72
5:L:11:ILE:CG2	1:AH:372:ILE:CB	2.67	0.72
1:UO:73:MET:CE	1:UO:99:ARG:CD	2.66	0.72
5:L:11:ILE:HG21	1:AH:372:ILE:CB	2.18	0.72
5:M:11:ILE:C	5:M:11:ILE:CD1	2.57	0.72
6:R:46:ALA:O	6:R:50:LYS:HG3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UJ:73:MET:CE	1:UJ:99:ARG:CD	2.66	0.72
1:WD:197:LEU:HA	1:WE:175:SER:OG	1.89	0.72
1:WV:181:GLU:HB2	1:WV:184:ARG:CG	2.07	0.72
5:K:7:ILE:CG2	1:AM:278:THR:CG2	2.53	0.72
7:W:6:ILE:HG21	7:W:122:VAL:HG21	1.72	0.72
1:UJ:98:LEU:CD1	1:UJ:146:THR:OG1	2.38	0.71
1:WE:181:GLU:HB2	1:WE:184:ARG:CG	2.07	0.71
1:UL:98:LEU:CD1	1:UL:146:THR:OG1	2.39	0.71
1:UJ:139:GLU:OE1	1:UJ:142:ARG:NH2	2.20	0.71
1:WJ:164:LEU:HD21	3:E:144:LEU:HB3	1.72	0.71
5:P:76:GLN:HE21	7:V:123:LYS:HB2	1.54	0.71
1:UM:98:LEU:CD1	1:UM:146:THR:OG1	2.39	0.71
1:WC:165:PHE:CD2	4:H:152:ARG:NH2	2.52	0.71
6:U:72:HIS:CE1	1:2:294:ARG:HG3	2.25	0.71
1:UI:62:ASP:OD2	1:WA:184:ARG:NH2	2.24	0.71
1:UI:98:LEU:CD1	1:UI:146:THR:OG1	2.38	0.71
1:UN:126:PHE:CD1	1:UN:130:VAL:HG21	2.26	0.71
1:WC:165:PHE:HD2	4:H:152:ARG:NH2	1.88	0.71
1:UP:126:PHE:CD1	1:UP:130:VAL:HG21	2.26	0.71
1:WT:181:GLU:HB2	1:WT:184:ARG:CG	2.07	0.71
1:WV:197:LEU:HD12	1:WW:175:SER:HB3	1.71	0.71
4:J:139:LEU:O	4:J:142:THR:HG22	1.89	0.71
5:K:21:ALA:HB3	1:AK:278:THR:HG21	1.71	0.71
5:M:4:ILE:CD1	1:AC:374:HIS:HB2	2.20	0.71
1:WH:193:ALA:HB1	1:WI:213:VAL:CG1	2.18	0.71
2:D:48:THR:OG1	4:I:206:ALA:O	2.08	0.71
1:UK:126:PHE:CD1	1:UK:130:VAL:HG21	2.26	0.71
1:UP:73:MET:HE1	1:UP:99:ARG:CD	2.20	0.71
1:WD:181:GLU:HB2	1:WD:184:ARG:CG	2.07	0.71
6:R:72:HIS:ND1	1:AJ:365:ASN:CB	2.40	0.71
1:UN:98:LEU:CD1	1:UN:146:THR:OG1	2.39	0.71
1:WF:181:GLU:HB2	1:WF:184:ARG:CG	2.07	0.71
1:WK:200:SER:HA	1:WL:173:SER:OG	1.91	0.71
2:B:39:GLN:HE21	2:B:49:LEU:HD12	1.56	0.71
6:T:78:VAL:HG12	1:6:361:ASN:ND2	2.06	0.71
1:WR:200:SER:O	1:WS:158:ALA:HB3	1.90	0.71
6:U:68:THR:HG22	1:1:294:ARG:HD3	1.73	0.71
1:UK:98:LEU:CD1	1:UK:146:THR:OG1	2.38	0.70
1:UL:103:GLN:HG2	1:WH:182:PRO:HB3	1.72	0.70
1:UM:126:PHE:CD1	1:UM:130:VAL:HG21	2.26	0.70
1:UP:98:LEU:CD1	1:UP:146:THR:OG1	2.38	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WJ:164:LEU:C	4:J:152:ARG:HH22	1.95	0.70
1:UK:126:PHE:O	1:UK:130:VAL:CG2	2.40	0.70
1:WD:190:GLN:HG3	1:WE:217:GLY:HA3	1.72	0.70
1:WE:128:GLU:HB3	1:WF:126:PHE:CE2	2.25	0.70
2:D:84:LEU:HD21	4:J:185:ILE:HG23	1.72	0.70
6:U:68:THR:HG21	1:1:294:ARG:HD2	1.71	0.70
1:UJ:73:MET:HE3	1:UJ:99:ARG:HD3	1.73	0.70
1:UO:126:PHE:CD1	1:UO:130:VAL:HG21	2.26	0.70
1:WE:197:LEU:HD12	1:WF:175:SER:CB	2.21	0.70
1:WM:139:GLU:HB3	1:WN:154:ARG:NH2	2.06	0.70
1:UI:126:PHE:O	1:UI:130:VAL:CG2	2.40	0.70
1:UJ:126:PHE:O	1:UJ:130:VAL:CG2	2.40	0.70
1:WA:200:SER:O	1:WB:158:ALA:CB	2.40	0.70
1:UO:73:MET:HE1	1:UO:99:ARG:HD3	1.71	0.70
1:WB:200:SER:O	1:WC:158:ALA:HB2	1.91	0.70
1:WD:165:PHE:CE2	4:I:141:GLN:HA	2.26	0.70
1:WP:193:ALA:HB1	1:WQ:213:VAL:HG11	1.74	0.70
6:R:71:HIS:HB2	1:AK:294:ARG:HG2	1.74	0.70
1:UN:126:PHE:O	1:UN:130:VAL:CG2	2.40	0.70
1:UO:98:LEU:CD1	1:UO:146:THR:OG1	2.38	0.70
2:D:13:ALA:HB1	4:J:195:ILE:HD11	1.73	0.70
1:UI:167:ARG:HH22	1:WW:188:GLU:HB3	1.57	0.70
1:WD:165:PHE:CB	4:I:143:ARG:HA	2.22	0.70
1:WW:167:ARG:CD	4:H:140:ARG:O	2.40	0.70
1:WR:112:GLY:HA2	1:WR:135:ALA:CA	2.16	0.70
3:E:182:ASN:HB3	3:E:239:PHE:CZ	2.26	0.70
5:K:14:LEU:HB3	1:AL:278:THR:HG21	1.72	0.70
1:WS:121:PHE:CE1	1:WT:120:LYS:NZ	2.55	0.69
1:UL:62:ASP:OD2	1:WG:184:ARG:NH2	2.25	0.69
1:UL:126:PHE:CD1	1:UL:130:VAL:HG21	2.26	0.69
1:WM:193:ALA:HB1	1:WN:213:VAL:CG1	2.22	0.69
6:T:91:ASP:OD2	6:T:104:ARG:NH1	2.25	0.69
1:UJ:126:PHE:CD1	1:UJ:130:VAL:HG21	2.26	0.69
1:WJ:164:LEU:CB	3:E:145:TRP:HE1	1.99	0.69
1:UI:126:PHE:CD1	1:UI:130:VAL:HG21	2.26	0.69
1:UL:126:PHE:O	1:UL:130:VAL:CG2	2.40	0.69
6:S:72:HIS:HB3	1:AE:295:SER:HB3	1.72	0.69
1:UL:126:PHE:O	1:UL:130:VAL:CB	2.41	0.69
1:WA:175:SER:OG	1:WW:197:LEU:HA	1.93	0.69
1:WE:166:VAL:HG21	4:I:160:GLN:CG	2.23	0.69
1:UI:126:PHE:O	1:UI:130:VAL:CB	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UN:126:PHE:O	1:UN:130:VAL:CB	2.41	0.69
1:UO:73:MET:HE3	1:UO:99:ARG:HD3	1.71	0.69
1:UO:126:PHE:O	1:UO:130:VAL:CG2	2.40	0.69
3:E:188:LEU:HB3	3:E:189:PRO:CD	2.22	0.69
4:J:143:ARG:HB3	4:J:146:ASP:OD2	1.92	0.69
1:UJ:126:PHE:O	1:UJ:130:VAL:CB	2.41	0.69
1:WL:197:LEU:HD13	1:WM:175:SER:OG	1.91	0.69
5:M:77:LYS:NZ	6:S:13:GLN:OE1	2.26	0.69
1:UM:126:PHE:O	1:UM:130:VAL:CB	2.41	0.69
1:WK:164:LEU:HD12	3:E:248:PHE:HB2	1.74	0.69
1:WN:200:SER:CA	1:WO:173:SER:OG	2.41	0.69
2:C:13:ALA:HB1	4:I:195:ILE:HD11	1.75	0.69
5:M:11:ILE:HG22	1:AB:372:ILE:HB	1.74	0.69
1:WA:167:ARG:HH21	4:H:162:PRO:CD	2.06	0.69
4:H:153:LEU:HD22	4:I:99:PHE:HB3	1.75	0.69
6:U:76:GLN:N	1:1:297:GLN:HE22	1.91	0.69
1:WA:128:GLU:HG3	1:WB:126:PHE:HE2	1.54	0.69
1:WA:213:VAL:HG11	1:WW:193:ALA:HB1	1.73	0.69
1:WG:165:PHE:CZ	4:I:153:LEU:CD2	2.75	0.69
1:WK:197:LEU:HA	1:WL:175:SER:HB2	1.74	0.69
1:WP:190:GLN:HG2	1:WQ:217:GLY:HA3	1.75	0.69
5:M:4:ILE:CG1	1:AC:372:ILE:CG2	2.70	0.69
1:UM:126:PHE:O	1:UM:130:VAL:CG2	2.40	0.68
1:UO:126:PHE:O	1:UO:130:VAL:CB	2.41	0.68
1:UP:126:PHE:O	1:UP:130:VAL:CG2	2.40	0.68
1:WD:196:HIS:HB3	1:WE:211:THR:HG21	1.75	0.68
1:UM:73:MET:HE1	1:UM:99:ARG:CD	2.21	0.68
6:R:68:THR:CG2	1:AJ:294:ARG:HD3	2.23	0.68
1:UJ:167:ARG:HH11	1:2:236:LYS:HZ3	1.40	0.68
1:UP:126:PHE:O	1:UP:130:VAL:CB	2.41	0.68
1:WC:197:LEU:HD12	1:WD:175:SER:HB3	1.76	0.68
1:UK:73:MET:HE3	1:UK:99:ARG:CD	2.22	0.68
1:WA:167:ARG:HH21	4:H:162:PRO:HD3	1.58	0.68
4:F:109:TYR:HA	4:F:113:TYR:HB2	1.74	0.68
1:WB:193:ALA:HB1	1:WC:213:VAL:HG11	1.76	0.68
1:WD:197:LEU:HD12	1:WE:175:SER:CB	2.23	0.68
1:UK:126:PHE:O	1:UK:130:VAL:CB	2.41	0.68
1:WS:197:LEU:HD12	1:WT:175:SER:OG	1.94	0.68
1:WS:197:LEU:HD12	1:WT:175:SER:CB	2.24	0.68
1:UJ:125:GLN:HA	1:UJ:128:GLU:HB2	1.76	0.68
1:UL:98:LEU:HD12	1:UL:146:THR:OG1	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WD:193:ALA:HB1	1:WE:213:VAL:CG1	2.23	0.68
1:WJ:125:GLN:CB	3:E:242:HIS:HB2	2.23	0.68
1:WA:128:GLU:CG	1:WB:126:PHE:CE2	2.64	0.67
1:WD:165:PHE:CB	4:I:142:THR:O	2.29	0.67
1:WN:200:SER:O	1:WO:173:SER:OG	2.12	0.67
1:WW:164:LEU:CD1	2:B:89:GLY:O	2.40	0.67
2:B:58:VAL:HG21	4:H:207:LEU:HD11	1.75	0.67
1:UM:125:GLN:HA	1:UM:128:GLU:HB2	1.76	0.67
1:WE:134:ARG:HB3	1:WE:134:ARG:HH21	1.57	0.67
1:UM:98:LEU:HD12	1:UM:146:THR:OG1	1.94	0.67
1:UP:98:LEU:HD12	1:UP:146:THR:OG1	1.94	0.67
5:L:4:ILE:CG1	1:AI:372:ILE:HG22	2.25	0.67
1:WP:197:LEU:HD12	1:WQ:175:SER:CB	2.25	0.67
1:WV:120:LYS:HZ2	1:WV:123:ILE:HD11	1.58	0.67
1:UL:125:GLN:HA	1:UL:128:GLU:HB2	1.76	0.67
1:UO:125:GLN:HA	1:UO:128:GLU:HB2	1.76	0.67
1:WE:166:VAL:CG2	4:I:160:GLN:HG2	2.25	0.67
1:WQ:197:LEU:HD12	1:WR:175:SER:CB	2.23	0.67
1:UN:98:LEU:HD12	1:UN:146:THR:OG1	1.94	0.67
1:UN:103:GLN:HG2	1:WS:182:PRO:HB3	1.75	0.67
1:WG:200:SER:O	1:WH:158:ALA:CB	2.42	0.67
2:B:14:MET:HG3	2:C:59:PHE:HE1	1.58	0.67
1:UJ:98:LEU:HD12	1:UJ:146:THR:OG1	1.94	0.67
1:WE:112:GLY:HA3	1:WE:139:GLU:OE1	1.95	0.67
1:WF:197:LEU:HD12	1:WG:175:SER:HB3	1.74	0.67
5:O:7:ILE:HD11	1:1:370:ARG:HE	1.58	0.67
1:UJ:73:MET:HE1	1:UJ:99:ARG:CD	2.24	0.67
1:WA:197:LEU:HD12	1:WB:175:SER:HB3	1.75	0.67
1:WD:115:LEU:CD2	1:WD:134:ARG:HD2	2.24	0.67
1:WH:164:LEU:O	4:J:143:ARG:HG3	1.95	0.67
1:UI:125:GLN:HA	1:UI:128:GLU:HB2	1.76	0.67
1:UK:98:LEU:HD12	1:UK:146:THR:OG1	1.94	0.67
1:WA:200:SER:O	1:WB:158:ALA:HB3	1.95	0.67
1:WO:167:ARG:O	1:WO:168:GLU:HB2	1.93	0.67
1:WR:113:PHE:HA	1:WS:134:ARG:HH12	1.58	0.67
3:E:166:SER:O	3:E:168:ALA:N	2.26	0.67
5:P:21:ALA:HB3	1:AP:278:THR:HG21	1.73	0.67
6:U:36:PRO:HB3	6:U:96:ASP:HB2	1.77	0.67
1:WW:186:LEU:HA	1:WW:190:GLN:OE1	1.96	0.66
4:H:68:ILE:HD11	5:M:104:VAL:HG22	1.76	0.66
6:U:65:LEU:HD21	1:1:297:GLN:HB2	1.73	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UI:73:MET:HE1	1:UI:99:ARG:HD3	1.76	0.66
1:UO:98:LEU:HD12	1:UO:146:THR:OG1	1.94	0.66
1:WB:190:GLN:HG2	1:WC:216:SER:O	1.94	0.66
1:WD:168:GLU:OE2	1:WD:170:LYS:HE3	1.94	0.66
1:WE:112:GLY:HA2	1:WE:135:ALA:CA	2.18	0.66
4:F:43:GLN:OE1	6:Q:4:ARG:NH1	2.28	0.66
1:UO:62:ASP:OD2	1:WT:184:ARG:NH2	2.28	0.66
1:UP:125:GLN:HA	1:UP:128:GLU:HB2	1.76	0.66
1:WS:124:SER:HB2	2:A:8:MET:HE3	1.75	0.66
3:E:193:LEU:HD22	3:E:228:LEU:HD11	1.77	0.66
5:N:14:LEU:HB3	1:5:278:THR:HG21	1.77	0.66
5:P:15:GLN:HB2	1:AQ:374:HIS:CD2	2.30	0.66
3:E:187:ALA:O	3:E:188:LEU:C	2.34	0.66
5:K:7:ILE:CB	1:AM:278:THR:HG21	2.24	0.66
4:I:194:LEU:HD11	4:J:220:PRO:HG2	1.77	0.66
7:V:6:ILE:HG21	7:V:122:VAL:HG21	1.76	0.66
1:WF:167:ARG:C	4:I:152:ARG:NH1	2.49	0.66
1:WA:112:GLY:HA3	1:WA:139:GLU:OE1	1.95	0.66
6:U:123:LEU:HD23	7:Z:132:LEU:HD11	1.77	0.66
1:UM:73:MET:HE3	1:UM:99:ARG:HD3	1.76	0.65
5:N:7:ILE:HG21	1:6:278:THR:HG21	1.76	0.65
1:WF:128:GLU:HG2	1:WG:126:PHE:CD2	2.29	0.65
1:WU:167:ARG:HH12	4:G:158:PRO:HD3	1.61	0.65
1:UI:98:LEU:HD12	1:UI:146:THR:OG1	1.94	0.65
1:WH:203:ALA:CB	1:WI:160:PRO:HB3	2.19	0.65
1:WO:197:LEU:HD12	1:WP:175:SER:CB	2.26	0.65
1:UK:125:GLN:HA	1:UK:128:GLU:HB2	1.76	0.65
1:UM:139:GLU:CD	1:UM:142:ARG:HH21	2.00	0.65
1:WS:124:SER:CB	2:A:8:MET:HE2	2.26	0.65
4:H:66:ARG:NH2	4:H:242:SER:OG	2.30	0.65
5:N:7:ILE:HD11	1:7:370:ARG:HH21	1.61	0.65
1:1:389:VAL:HG21	1:1:416:THR:HG21	1.79	0.65
1:3:389:VAL:HG21	1:3:416:THR:HG21	1.79	0.65
1:4:389:VAL:HG21	1:4:416:THR:HG21	1.79	0.65
1:AM:389:VAL:HG21	1:AM:416:THR:HG21	1.79	0.65
1:AI:389:VAL:HG21	1:AI:416:THR:HG21	1.79	0.65
1:AK:389:VAL:HG21	1:AK:416:THR:HG21	1.79	0.65
6:S:72:HIS:HA	1:AE:295:SER:CB	2.27	0.65
6:U:72:HIS:CD2	1:1:365:ASN:CB	2.60	0.65
1:2:389:VAL:HG21	1:2:416:THR:HG21	1.79	0.65
1:AN:389:VAL:HG21	1:AN:416:THR:HG21	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UN:125:GLN:HA	1:UN:128:GLU:HB2	1.76	0.65
1:WP:128:GLU:HG3	1:WQ:126:PHE:HE2	1.62	0.65
1:WW:134:ARG:HB3	1:WW:134:ARG:HH21	1.61	0.65
6:U:76:GLN:H	1:1:297:GLN:NE2	1.95	0.65
1:AJ:389:VAL:HG21	1:AJ:416:THR:HG21	1.79	0.65
1:AL:389:VAL:HG21	1:AL:416:THR:HG21	1.79	0.65
1:WM:200:SER:O	1:WN:158:ALA:HB2	1.97	0.65
1:WT:128:GLU:HG2	1:WU:126:PHE:HD2	1.60	0.65
1:6:389:VAL:HG21	1:6:416:THR:HG21	1.79	0.65
1:AG:389:VAL:HG21	1:AG:416:THR:HG21	1.79	0.65
4:F:58:LEU:O	4:F:62:THR:OG1	2.14	0.64
4:H:135:ARG:NH1	4:H:165:VAL:O	2.30	0.64
1:5:389:VAL:HG21	1:5:416:THR:HG21	1.79	0.64
1:7:389:VAL:HG21	1:7:416:THR:HG21	1.79	0.64
1:WA:154:ARG:HG2	1:WW:143:THR:OG1	1.97	0.64
1:WF:167:ARG:C	4:I:152:ARG:HH12	2.00	0.64
1:AP:389:VAL:HG21	1:AP:416:THR:HG21	1.79	0.64
1:UO:139:GLU:CD	1:UO:142:ARG:HH21	2.00	0.64
1:UP:139:GLU:CD	1:UP:142:ARG:HH21	2.00	0.64
1:WE:123:ILE:HB	1:WE:128:GLU:OE1	1.95	0.64
1:WE:166:VAL:CG2	4:I:160:GLN:CA	2.60	0.64
1:WI:167:ARG:HG3	4:J:160:GLN:O	1.98	0.64
1:WP:164:LEU:HD21	4:F:151:ALA:HB2	1.79	0.64
5:M:4:ILE:HG13	1:AC:372:ILE:HG21	1.79	0.64
6:R:36:PRO:HB3	6:R:96:ASP:HB2	1.79	0.64
6:U:68:THR:CG2	1:1:294:ARG:HD2	2.25	0.64
1:AO:389:VAL:HG21	1:AO:416:THR:HG21	1.79	0.64
1:UJ:139:GLU:CD	1:UJ:142:ARG:HH21	2.00	0.64
1:UN:139:GLU:CD	1:UN:142:ARG:HH21	2.00	0.64
1:WR:143:THR:OG1	1:WS:154:ARG:HG2	1.97	0.64
1:8:389:VAL:HG21	1:8:416:THR:HG21	1.79	0.64
1:AE:389:VAL:HG21	1:AE:416:THR:HG21	1.79	0.64
1:AH:389:VAL:HG21	1:AH:416:THR:HG21	1.79	0.64
1:UI:139:GLU:CD	1:UI:142:ARG:HH21	2.00	0.64
1:UP:73:MET:HE3	1:UP:99:ARG:HD3	1.78	0.64
1:AJ:235:LEU:HD22	1:AK:244:ARG:HH12	1.63	0.64
1:AL:235:LEU:HD22	1:AM:244:ARG:HH12	1.63	0.64
1:AM:287:ASP:HB3	1:AM:290:LYS:HE2	1.80	0.64
1:UO:73:MET:HE1	1:UO:99:ARG:CD	2.26	0.64
1:WH:197:LEU:HD11	1:WI:156:HIS:HD2	1.63	0.64
1:WH:197:LEU:HD12	1:WI:175:SER:OG	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:55:GLN:NE2	5:P:74:ASP:OD2	2.31	0.64
1:5:394:LYS:HA	1:5:394:LYS:HE3	1.80	0.64
1:8:394:LYS:HA	1:8:394:LYS:HE3	1.80	0.64
1:9:389:VAL:HG21	1:9:416:THR:HG21	1.79	0.64
1:0:394:LYS:HA	1:0:394:LYS:HE3	1.80	0.64
1:AE:394:LYS:HA	1:AE:394:LYS:HE3	1.80	0.64
1:AN:235:LEU:HD22	1:AO:244:ARG:HH12	1.63	0.64
1:AQ:389:VAL:HG21	1:AQ:416:THR:HG21	1.79	0.64
1:WN:196:HIS:CB	1:WO:211:THR:HG21	2.19	0.64
5:N:7:ILE:HD11	1:7:370:ARG:HE	1.62	0.64
1:6:394:LYS:HA	1:6:394:LYS:HE3	1.80	0.64
1:0:235:LEU:HD22	1:AA:244:ARG:HH12	1.63	0.64
1:AB:235:LEU:HD22	1:AC:244:ARG:HH12	1.63	0.64
1:AC:394:LYS:HA	1:AC:394:LYS:HE3	1.80	0.64
1:WH:166:VAL:HG11	4:J:147:LEU:HD12	1.80	0.64
3:E:24:LEU:HB3	5:K:89:ARG:NH2	2.12	0.64
5:P:21:ALA:CB	1:AP:278:THR:CG2	2.67	0.64
6:T:72:HIS:CD2	1:7:365:ASN:CB	2.66	0.64
1:1:235:LEU:HD22	1:2:244:ARG:HH12	1.63	0.64
1:3:394:LYS:HE3	1:3:394:LYS:HA	1.80	0.64
1:7:394:LYS:HA	1:7:394:LYS:HE3	1.80	0.64
1:8:235:LEU:HD22	1:9:244:ARG:HH12	1.63	0.64
1:AA:394:LYS:HE3	1:AA:394:LYS:HA	1.80	0.64
1:AF:389:VAL:HG21	1:AF:416:THR:HG21	1.79	0.64
1:AG:394:LYS:HA	1:AG:394:LYS:HE3	1.80	0.64
1:WF:167:ARG:O	4:I:152:ARG:NH1	2.31	0.64
1:4:287:ASP:HB3	1:4:290:LYS:HE2	1.80	0.64
1:5:287:ASP:HB3	1:5:290:LYS:HE2	1.80	0.64
1:AA:389:VAL:HG21	1:AA:416:THR:HG21	1.79	0.64
1:AB:394:LYS:HA	1:AB:394:LYS:HE3	1.80	0.64
1:AC:389:VAL:HG21	1:AC:416:THR:HG21	1.79	0.64
1:AL:287:ASP:HB3	1:AL:290:LYS:HE2	1.80	0.64
1:WG:139:GLU:HB3	1:WH:154:ARG:HH21	1.63	0.63
4:I:204:LEU:HD22	4:I:212:VAL:HG11	1.78	0.63
5:N:11:ILE:CG2	1:6:372:ILE:HG21	2.28	0.63
1:3:235:LEU:HD22	1:4:244:ARG:HH12	1.63	0.63
1:0:389:VAL:HG21	1:0:416:THR:HG21	1.79	0.63
1:AB:389:VAL:HG21	1:AB:416:THR:HG21	1.79	0.63
1:AD:389:VAL:HG21	1:AD:416:THR:HG21	1.79	0.63
1:AN:287:ASP:HB3	1:AN:290:LYS:HE2	1.80	0.63
1:AP:235:LEU:HD22	1:AQ:244:ARG:HH12	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WL:197:LEU:HD12	1:WM:175:SER:HB3	1.80	0.63
2:C:75:ASP:O	2:C:79:THR:HG23	1.98	0.63
3:E:158:PRO:CG	3:E:162:ASN:HD21	2.09	0.63
1:3:287:ASP:HB3	1:3:290:LYS:HE2	1.80	0.63
1:9:394:LYS:HA	1:9:394:LYS:HE3	1.80	0.63
1:AD:394:LYS:HE3	1:AD:394:LYS:HA	1.80	0.63
1:AE:235:LEU:HD22	1:AF:244:ARG:HH12	1.63	0.63
1:UL:139:GLU:CD	1:UL:142:ARG:HH21	2.00	0.63
1:WB:200:SER:O	1:WC:158:ALA:CB	2.45	0.63
1:WH:197:LEU:HD12	1:WI:175:SER:CB	2.28	0.63
1:WH:197:LEU:HA	1:WI:175:SER:OG	1.97	0.63
2:D:58:VAL:HG11	4:J:207:LEU:HD11	1.79	0.63
6:T:66:THR:OG1	1:7:294:ARG:HG2	1.98	0.63
1:1:394:LYS:HA	1:1:394:LYS:HE3	1.80	0.63
1:5:235:LEU:HD22	1:6:244:ARG:HH12	1.63	0.63
1:AD:235:LEU:HD22	1:AE:244:ARG:HH12	1.63	0.63
1:AF:394:LYS:HA	1:AF:394:LYS:HE3	1.80	0.63
1:AH:235:LEU:HD22	1:AI:244:ARG:HH12	1.63	0.63
1:AH:394:LYS:HA	1:AH:394:LYS:HE3	1.80	0.63
1:WB:166:VAL:O	4:H:152:ARG:HD2	1.97	0.63
1:WJ:164:LEU:CD2	3:E:144:LEU:HB3	2.27	0.63
5:K:14:LEU:CD2	1:AL:278:THR:CG2	2.62	0.63
6:S:22:ARG:NH2	6:S:108:GLN:OE1	2.31	0.63
1:2:394:LYS:HA	1:2:394:LYS:HE3	1.80	0.63
1:4:394:LYS:HA	1:4:394:LYS:HE3	1.80	0.63
1:6:235:LEU:HD22	1:7:244:ARG:HH12	1.63	0.63
1:9:287:ASP:HB3	1:9:290:LYS:HE2	1.80	0.63
1:AC:235:LEU:HD22	1:AD:244:ARG:HH12	1.63	0.63
1:AG:235:LEU:HD22	1:AH:244:ARG:HH12	1.63	0.63
1:WO:196:HIS:HB3	1:WP:211:THR:HG21	1.80	0.63
6:U:72:HIS:HE1	1:2:294:ARG:HE	1.43	0.63
1:0:287:ASP:HB3	1:0:290:LYS:HE2	1.80	0.63
1:AO:235:LEU:HD22	1:AP:244:ARG:HH12	1.63	0.63
1:WH:166:VAL:CG1	4:J:147:LEU:HD12	2.28	0.63
1:WP:214:ASP:OD1	1:WP:218:HIS:HB2	1.99	0.63
1:WU:128:GLU:HG2	1:WV:126:PHE:HD2	1.64	0.63
1:6:287:ASP:HB3	1:6:290:LYS:HE2	1.80	0.63
1:7:235:LEU:HD22	1:8:244:ARG:HH12	1.63	0.63
1:9:235:LEU:HD22	1:0:244:ARG:HH12	1.63	0.63
1:AF:235:LEU:HD22	1:AG:244:ARG:HH12	1.63	0.63
1:AH:287:ASP:HB3	1:AH:290:LYS:HE2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AI:394:LYS:HA	1:AI:394:LYS:HE3	1.80	0.63
1:WG:139:GLU:HB3	1:WH:154:ARG:NH2	2.14	0.63
1:WH:166:VAL:HG11	4:J:147:LEU:CD1	2.28	0.63
1:AA:287:ASP:HB3	1:AA:290:LYS:HE2	1.80	0.63
1:AK:287:ASP:HB3	1:AK:290:LYS:HE2	1.80	0.63
1:AO:287:ASP:HB3	1:AO:290:LYS:HE2	1.80	0.63
1:WG:193:ALA:HB1	1:WH:213:VAL:HG11	1.81	0.63
1:4:235:LEU:HD22	1:5:244:ARG:HH12	1.63	0.63
1:8:287:ASP:HB3	1:8:290:LYS:HE2	1.80	0.63
1:AJ:394:LYS:HA	1:AJ:394:LYS:HE3	1.80	0.63
1:UK:139:GLU:CD	1:UK:142:ARG:HH21	2.00	0.63
1:WS:168:GLU:HB3	1:WS:170:LYS:HE3	1.81	0.63
4:H:116:PHE:O	6:S:4:ARG:NH2	2.30	0.63
6:R:65:LEU:HD21	1:AI:363:THR:HG23	1.80	0.63
1:2:287:ASP:HB3	1:2:290:LYS:HE2	1.80	0.63
1:AA:235:LEU:HD22	1:AB:244:ARG:HH12	1.63	0.63
1:AI:235:LEU:HD22	1:AJ:244:ARG:HH12	1.63	0.63
1:AI:287:ASP:HB3	1:AI:290:LYS:HE2	1.80	0.63
1:AM:235:LEU:HD22	1:AN:244:ARG:HH12	1.63	0.63
1:WL:186:LEU:HA	1:WL:190:GLN:OE1	1.99	0.62
6:R:73:ILE:CG1	1:AK:295:SER:HB2	2.22	0.62
6:S:76:GLN:H	1:AD:297:GLN:HE22	1.46	0.62
1:WI:200:SER:OG	1:WJ:175:SER:HB2	1.99	0.62
1:WU:165:PHE:HA	4:G:148:ALA:HB1	1.80	0.62
1:AG:287:ASP:HB3	1:AG:290:LYS:HE2	1.80	0.62
1:AO:394:LYS:HE3	1:AO:394:LYS:HA	1.80	0.62
2:C:23:PRO:O	2:C:27:VAL:HG12	1.99	0.62
5:L:11:ILE:HG23	1:AH:372:ILE:HG21	1.76	0.62
5:M:4:ILE:CG1	1:AC:372:ILE:HG22	2.29	0.62
1:AD:287:ASP:HB3	1:AD:290:LYS:HE2	1.80	0.62
1:AK:235:LEU:HD22	1:AL:244:ARG:HH12	1.63	0.62
1:AK:394:LYS:HA	1:AK:394:LYS:HE3	1.80	0.62
1:UI:167:ARG:NH2	1:WW:188:GLU:HB3	2.13	0.62
1:WQ:128:GLU:HG2	1:WR:126:PHE:CD2	2.34	0.62
6:S:72:HIS:CB	1:AE:295:SER:CB	2.73	0.62
4:F:162:PRO:HD2	4:F:163:GLU:N	2.14	0.62
1:2:235:LEU:HD22	1:3:244:ARG:HH12	1.63	0.62
1:WS:197:LEU:HD12	1:WT:175:SER:HB3	1.81	0.62
3:E:105:GLN:NE2	4:F:216:THR:O	2.33	0.62
4:G:67:ILE:HD12	4:G:239:LEU:HD13	1.81	0.62
4:J:45:LEU:HG	5:P:89:ARG:HD3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AE:287:ASP:HB3	1:AE:290:LYS:HE2	1.80	0.62
1:AP:394:LYS:HA	1:AP:394:LYS:HE3	1.80	0.62
1:WQ:128:GLU:HG2	1:WR:126:PHE:HD2	1.65	0.62
2:B:24:LEU:HD22	2:B:58:VAL:HG13	1.81	0.62
6:U:78:VAL:HG12	1:1:299:ASN:HD21	1.62	0.62
1:7:287:ASP:HB3	1:7:290:LYS:HE2	1.80	0.62
1:AC:287:ASP:HB3	1:AC:290:LYS:HE2	1.80	0.62
1:WE:166:VAL:CG2	4:I:160:GLN:CG	2.78	0.62
1:AJ:287:ASP:HB3	1:AJ:290:LYS:HE2	1.80	0.62
1:WK:197:LEU:HD11	1:WL:156:HIS:HD2	1.63	0.62
4:H:52:THR:OG1	5:M:91:LYS:NZ	2.28	0.62
5:L:4:ILE:HG13	1:AI:372:ILE:HG21	1.82	0.62
6:S:72:HIS:CE1	1:AD:365:ASN:HB3	2.33	0.62
1:AL:394:LYS:HA	1:AL:394:LYS:HE3	1.80	0.62
1:UO:103:GLN:NE2	1:WU:182:PRO:CB	2.63	0.62
1:UP:167:ARG:HH11	1:8:236:LYS:HE2	1.63	0.62
1:AP:287:ASP:HB3	1:AP:290:LYS:HE2	1.80	0.62
1:AQ:394:LYS:HA	1:AQ:394:LYS:HE3	1.80	0.62
1:1:287:ASP:HB3	1:1:290:LYS:HE2	1.80	0.61
1:AB:287:ASP:HB3	1:AB:290:LYS:HE2	1.80	0.61
1:AN:394:LYS:HA	1:AN:394:LYS:HE3	1.80	0.61
1:UI:73:MET:HE3	1:UI:99:ARG:CD	2.27	0.61
1:WT:128:GLU:HG2	1:WU:126:PHE:CD2	2.35	0.61
2:D:46:GLU:HB2	2:D:49:LEU:HD23	1.82	0.61
2:D:70:LEU:O	2:D:74:LEU:HG	2.01	0.61
1:UK:73:MET:HE1	1:UK:99:ARG:HD3	1.80	0.61
1:UN:73:MET:HE3	1:UN:99:ARG:HD3	1.81	0.61
1:WO:197:LEU:CD1	1:WP:175:SER:OG	2.42	0.61
1:AF:287:ASP:HB3	1:AF:290:LYS:HE2	1.80	0.61
1:AM:394:LYS:HA	1:AM:394:LYS:HE3	1.80	0.61
1:AQ:287:ASP:HB3	1:AQ:290:LYS:HE2	1.80	0.61
1:UK:207:PRO:CG	1:WE:187:ASP:CG	2.68	0.61
1:WI:190:GLN:HG2	1:WJ:217:GLY:HA3	1.82	0.61
3:E:114:VAL:HG12	4:G:213:PRO:HB3	1.81	0.61
1:UL:208:GLY:N	1:WG:187:ASP:OD2	2.33	0.61
1:WB:212:LEU:HB3	1:WB:221:THR:HG23	1.81	0.61
1:WI:190:GLN:NE2	1:WJ:216:SER:O	2.33	0.61
1:WO:128:GLU:HG2	1:WP:126:PHE:HD2	1.64	0.61
4:G:82:SER:HA	5:K:103:GLN:NE2	2.15	0.61
5:M:11:ILE:CD1	5:M:12:SER:N	2.55	0.61
1:WW:125:GLN:OE1	2:B:2:THR:HG21	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:11:ILE:HD12	5:M:12:SER:CA	2.31	0.61
1:WP:128:GLU:HG3	1:WQ:126:PHE:CE2	2.35	0.61
1:WP:190:GLN:NE2	1:WQ:216:SER:O	2.33	0.61
4:F:52:THR:OG1	5:K:91:LYS:NZ	2.34	0.61
6:R:51:LYS:NZ	6:R:84:ASP:OD1	2.34	0.61
7:W:27:ASN:OD1	7:W:42:TYR:OH	2.19	0.61
1:WJ:164:LEU:CB	3:E:145:TRP:CD1	2.83	0.61
1:WJ:186:LEU:HA	1:WJ:190:GLN:OE1	2.00	0.61
1:WR:212:LEU:HB3	1:WR:221:THR:HG23	1.82	0.61
2:A:56:VAL:O	2:A:60:ILE:HG12	2.01	0.61
4:G:66:ARG:NE	4:G:178:GLU:OE1	2.33	0.61
1:WC:193:ALA:HB1	1:WD:213:VAL:CG1	2.30	0.60
1:WH:197:LEU:HD12	1:WI:175:SER:HB3	1.83	0.60
1:WM:200:SER:O	1:WN:158:ALA:HB3	2.01	0.60
1:UK:103:GLN:CD	1:WF:182:PRO:HB3	2.21	0.60
1:WI:164:LEU:HD23	1:WI:165:PHE:HB3	1.83	0.60
3:E:106:MET:SD	3:E:225:GLY:HA3	2.40	0.60
7:Z:12:SER:OG	7:Z:62:VAL:O	2.19	0.60
1:UI:73:MET:HE1	1:UI:99:ARG:CD	2.31	0.60
1:UM:126:PHE:CE1	1:UM:130:VAL:CG2	2.84	0.60
1:WA:197:LEU:HA	1:WB:175:SER:OG	2.00	0.60
4:I:83:ALA:HB3	4:I:84:PRO:HD3	1.83	0.60
1:WA:175:SER:CB	1:WW:197:LEU:HA	2.31	0.60
1:UK:127:SER:O	1:UK:131:ASN:CB	2.50	0.60
1:UP:103:GLN:HG2	1:WW:182:PRO:HB3	0.71	0.60
1:WE:197:LEU:CD1	1:WF:175:SER:OG	2.44	0.60
1:WV:164:LEU:HB3	4:G:152:ARG:NH1	2.17	0.60
1:UM:103:GLN:NE2	1:WQ:182:PRO:HB3	2.17	0.60
1:WF:190:GLN:HA	1:WG:217:GLY:O	2.01	0.60
1:WK:197:LEU:HA	1:WL:175:SER:CB	2.32	0.60
1:WR:186:LEU:HA	1:WR:190:GLN:OE1	2.00	0.60
1:4:402:LEU:HD12	1:4:403:PRO:HD2	1.84	0.60
1:AM:402:LEU:HD12	1:AM:403:PRO:HD2	1.84	0.60
1:UP:167:ARG:NH1	1:8:236:LYS:HE2	2.15	0.60
1:WH:193:ALA:CB	1:WI:213:VAL:HG11	2.26	0.60
2:B:14:MET:HG3	2:C:59:PHE:CE1	2.36	0.60
2:D:74:LEU:HD11	4:J:228:LEU:HD13	1.83	0.60
1:5:402:LEU:HD12	1:5:403:PRO:HD2	1.84	0.60
1:WK:197:LEU:HD11	1:WL:156:HIS:CD2	2.35	0.60
1:1:402:LEU:HD12	1:1:403:PRO:HD2	1.84	0.60
1:UI:127:SER:O	1:UI:131:ASN:CB	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WH:167:ARG:HH22	4:J:162:PRO:CG	2.14	0.60
1:WJ:212:LEU:HB3	1:WJ:221:THR:HG23	1.84	0.60
4:J:83:ALA:CB	4:J:84:PRO:HD3	2.30	0.60
6:T:55:ARG:NH2	1:5:299:ASN:HD21	1.91	0.60
1:7:402:LEU:HD12	1:7:403:PRO:HD2	1.84	0.60
1:UK:126:PHE:CE1	1:UK:130:VAL:CG2	2.84	0.60
1:WI:200:SER:O	1:WJ:158:ALA:HB2	2.02	0.60
1:WM:143:THR:OG1	1:WN:154:ARG:CG	2.41	0.60
4:J:184:GLN:O	4:J:188:THR:HG23	2.02	0.60
1:2:402:LEU:HD12	1:2:403:PRO:HD2	1.84	0.60
1:8:402:LEU:HD12	1:8:403:PRO:HD2	1.84	0.60
1:AL:402:LEU:HD12	1:AL:403:PRO:HD2	1.84	0.60
1:UI:126:PHE:CE1	1:UI:130:VAL:CG2	2.84	0.59
1:UN:127:SER:O	1:UN:131:ASN:CB	2.50	0.59
1:UN:208:GLY:N	1:WR:187:ASP:OD1	2.35	0.59
1:UO:126:PHE:CE1	1:UO:130:VAL:CG2	2.84	0.59
1:UP:127:SER:O	1:UP:131:ASN:CB	2.50	0.59
1:WD:168:GLU:CG	1:WD:170:LYS:HE2	2.31	0.59
6:U:32:ASN:ND2	7:Z:60:GLY:O	2.35	0.59
7:Y:109:SER:O	7:Y:113:GLN:HG3	2.02	0.59
1:3:402:LEU:HD12	1:3:403:PRO:HD2	1.84	0.59
1:AG:402:LEU:HD12	1:AG:403:PRO:HD2	1.84	0.59
1:AN:402:LEU:HD12	1:AN:403:PRO:HD2	1.84	0.59
1:UL:127:SER:O	1:UL:131:ASN:CB	2.50	0.59
1:UM:127:SER:O	1:UM:131:ASN:CB	2.50	0.59
1:WG:212:LEU:HB3	1:WG:221:THR:HG23	1.83	0.59
2:C:52:ILE:O	2:C:56:VAL:HG22	2.02	0.59
5:M:11:ILE:CG2	1:AB:372:ILE:HG22	2.31	0.59
6:U:68:THR:CG2	1:1:294:ARG:HD3	2.30	0.59
7:V:20:ARG:HD3	7:V:108:ALA:HB2	1.84	0.59
1:6:402:LEU:HD12	1:6:403:PRO:HD2	1.84	0.59
1:AH:402:LEU:HD12	1:AH:403:PRO:HD2	1.84	0.59
1:WB:197:LEU:CD1	1:WC:175:SER:OG	2.48	0.59
1:WS:193:ALA:HB1	1:WT:213:VAL:HG11	1.84	0.59
1:WV:190:GLN:NE2	1:WW:216:SER:O	2.34	0.59
4:I:232:TRP:O	4:I:236:MET:HG2	2.02	0.59
6:T:65:LEU:HB2	1:7:295:SER:CB	2.32	0.59
1:UJ:127:SER:O	1:UJ:131:ASN:CB	2.50	0.59
1:UO:127:SER:O	1:UO:131:ASN:CB	2.50	0.59
1:WI:186:LEU:HA	1:WI:190:GLN:OE1	2.02	0.59
1:WJ:128:GLU:OE2	1:WK:127:SER:OG	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WJ:164:LEU:HD13	3:E:145:TRP:CG	2.33	0.59
1:WP:128:GLU:HG2	1:WQ:126:PHE:CD2	2.37	0.59
1:WP:212:LEU:HB3	1:WP:221:THR:HG23	1.85	0.59
1:WR:122:GLY:O	1:WR:123:ILE:C	2.39	0.59
6:R:74:PRO:O	6:R:75:ALA:C	2.40	0.59
6:S:115:LYS:HE3	7:Y:4:LEU:HD11	1.84	0.59
1:9:402:LEU:HD12	1:9:403:PRO:HD2	1.84	0.59
1:AF:402:LEU:HD12	1:AF:403:PRO:HD2	1.84	0.59
1:WC:212:LEU:HB3	1:WC:221:THR:HG23	1.84	0.59
1:WD:197:LEU:HD12	1:WE:175:SER:HB3	1.85	0.59
1:WP:193:ALA:HB1	1:WQ:213:VAL:CG1	2.32	0.59
6:Q:46:ALA:O	6:Q:50:LYS:HG3	2.02	0.59
6:R:68:THR:CG2	1:AJ:294:ARG:CD	2.80	0.59
1:0:402:LEU:HD12	1:0:403:PRO:HD2	1.84	0.59
2:B:51:PHE:CZ	2:B:55:ILE:HD11	2.38	0.59
4:F:66:ARG:NH2	4:F:243:PHE:O	2.36	0.59
5:M:3:ALA:C	1:AC:372:ILE:CD1	2.70	0.59
1:AI:402:LEU:HD12	1:AI:403:PRO:HD2	1.84	0.59
1:AO:402:LEU:HD12	1:AO:403:PRO:HD2	1.84	0.59
1:UL:126:PHE:CE1	1:UL:130:VAL:CG2	2.84	0.59
1:WA:212:LEU:HB3	1:WA:221:THR:HG23	1.84	0.59
1:WI:212:LEU:HB3	1:WI:221:THR:HG23	1.84	0.59
1:WS:190:GLN:NE2	1:WT:216:SER:O	2.36	0.59
2:A:84:LEU:HD13	4:G:188:THR:HG21	1.84	0.59
1:AA:402:LEU:HD12	1:AA:403:PRO:HD2	1.84	0.59
1:AK:402:LEU:HD12	1:AK:403:PRO:HD2	1.84	0.59
1:WK:196:HIS:HB3	1:WL:211:THR:CG2	2.22	0.59
5:L:7:ILE:CG2	1:AH:278:THR:HG21	2.33	0.59
1:7:377:MET:SD	1:7:377:MET:N	2.76	0.59
1:WK:197:LEU:CD1	1:WL:175:SER:OG	2.51	0.59
1:9:377:MET:N	1:9:377:MET:SD	2.76	0.59
1:AJ:252:ILE:HD11	1:AJ:419:ALA:HB2	1.85	0.59
1:WK:203:ALA:HB1	1:WL:160:PRO:HA	1.84	0.58
1:AC:252:ILE:HD11	1:AC:419:ALA:HB2	1.85	0.58
1:AD:377:MET:N	1:AD:377:MET:SD	2.76	0.58
1:AF:377:MET:N	1:AF:377:MET:SD	2.76	0.58
1:AH:252:ILE:HD11	1:AH:419:ALA:HB2	1.85	0.58
1:AI:252:ILE:HD11	1:AI:419:ALA:HB2	1.85	0.58
1:WJ:164:LEU:CB	3:E:145:TRP:NE1	2.54	0.58
1:WS:196:HIS:HB3	1:WT:211:THR:HG21	1.84	0.58
1:WT:116:LEU:HD13	1:WT:135:ALA:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:377:MET:N	1:5:377:MET:SD	2.76	0.58
1:AH:377:MET:SD	1:AH:377:MET:N	2.76	0.58
1:AQ:377:MET:N	1:AQ:377:MET:SD	2.76	0.58
1:WE:128:GLU:HB3	1:WF:126:PHE:CD2	2.38	0.58
1:WT:212:LEU:HB3	1:WT:221:THR:HG23	1.84	0.58
5:L:7:ILE:HD11	1:AI:370:ARG:NE	2.17	0.58
5:L:11:ILE:CG2	1:AH:372:ILE:HB	2.33	0.58
6:T:65:LEU:HB2	1:7:295:SER:HB2	1.84	0.58
7:V:55:PRO:HG3	1:AP:359:GLN:CD	2.23	0.58
1:1:252:ILE:HD11	1:1:419:ALA:HB2	1.85	0.58
1:9:305:GLY:HA3	1:9:355:PRO:HG2	1.86	0.58
1:AA:377:MET:N	1:AA:377:MET:SD	2.76	0.58
1:AB:402:LEU:HD12	1:AB:403:PRO:HD2	1.84	0.58
1:AC:377:MET:N	1:AC:377:MET:SD	2.76	0.58
1:AD:252:ILE:HD11	1:AD:419:ALA:HB2	1.85	0.58
1:AE:305:GLY:HA3	1:AE:355:PRO:HG2	1.86	0.58
1:AE:402:LEU:HD12	1:AE:403:PRO:HD2	1.84	0.58
1:AN:377:MET:N	1:AN:377:MET:SD	2.76	0.58
1:AO:252:ILE:HD11	1:AO:419:ALA:HB2	1.85	0.58
1:AP:377:MET:SD	1:AP:377:MET:N	2.76	0.58
1:AQ:402:LEU:HD12	1:AQ:403:PRO:HD2	1.84	0.58
1:WK:212:LEU:HB3	1:WK:221:THR:HG23	1.84	0.58
4:F:44:THR:HG23	5:K:84:MET:HE1	1.86	0.58
6:S:67:LEU:HA	6:S:72:HIS:NE2	2.18	0.58
1:3:252:ILE:HD11	1:3:419:ALA:HB2	1.85	0.58
1:4:305:GLY:HA3	1:4:355:PRO:HG2	1.86	0.58
1:AB:377:MET:SD	1:AB:377:MET:N	2.76	0.58
1:AD:305:GLY:HA3	1:AD:355:PRO:HG2	1.86	0.58
1:AK:252:ILE:HD11	1:AK:419:ALA:HB2	1.85	0.58
1:WA:175:SER:OG	1:WW:197:LEU:CD1	2.51	0.58
1:WO:166:VAL:HG22	4:F:142:THR:O	2.03	0.58
6:R:66:THR:OG1	1:AJ:294:ARG:HG2	2.02	0.58
1:3:377:MET:N	1:3:377:MET:SD	2.76	0.58
1:4:252:ILE:HD11	1:4:419:ALA:HB2	1.85	0.58
1:5:305:GLY:HA3	1:5:355:PRO:HG2	1.86	0.58
1:0:305:GLY:HA3	1:0:355:PRO:HG2	1.86	0.58
1:AJ:402:LEU:HD12	1:AJ:403:PRO:HD2	1.84	0.58
1:AP:402:LEU:HD12	1:AP:403:PRO:HD2	1.84	0.58
6:Q:127:LEU:O	6:Q:131:MET:HG2	2.03	0.58
6:S:42:ASP:OD1	6:S:88:ARG:NH2	2.36	0.58
1:AB:252:ILE:HD11	1:AB:419:ALA:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AE:252:ILE:HD11	1:AE:419:ALA:HB2	1.85	0.58
1:AN:252:ILE:HD11	1:AN:419:ALA:HB2	1.85	0.58
1:AO:377:MET:N	1:AO:377:MET:SD	2.76	0.58
1:WE:212:LEU:HB3	1:WE:221:THR:HG23	1.85	0.58
1:WW:125:GLN:CB	2:B:2:THR:HG21	2.34	0.58
2:A:35:ILE:HD11	2:A:53:PRO:HB2	1.85	0.58
1:4:377:MET:SD	1:4:377:MET:N	2.76	0.58
1:6:252:ILE:HD11	1:6:419:ALA:HB2	1.85	0.58
1:AE:377:MET:SD	1:AE:377:MET:N	2.76	0.58
1:AL:377:MET:N	1:AL:377:MET:SD	2.76	0.58
1:AP:252:ILE:HD11	1:AP:419:ALA:HB2	1.85	0.58
1:WU:164:LEU:HA	4:G:152:ARG:HG3	1.84	0.58
1:WU:212:LEU:HB3	1:WU:221:THR:HG23	1.84	0.58
1:WV:134:ARG:HB3	1:WV:134:ARG:HH21	1.69	0.58
2:C:29:LEU:HD22	2:D:52:ILE:HG21	1.84	0.58
4:J:82:SER:OG	5:N:104:VAL:O	2.20	0.58
5:K:11:ILE:CD1	1:AL:276:GLU:OE2	2.52	0.58
5:L:11:ILE:HG22	1:AH:372:ILE:CB	2.32	0.58
5:M:7:ILE:CB	1:AB:278:THR:HG21	2.11	0.58
1:UJ:167:ARG:CZ	1:WB:188:GLU:OE2	2.52	0.58
1:WA:187:ASP:CG	1:WA:190:GLN:HG3	2.24	0.58
1:WE:200:SER:O	1:WF:158:ALA:CB	2.52	0.58
1:WH:167:ARG:NH2	4:J:162:PRO:HG2	2.18	0.58
3:E:187:ALA:O	3:E:190:VAL:HG12	2.04	0.58
4:H:83:ALA:HB3	4:H:84:PRO:HD3	1.85	0.58
7:V:50:GLN:HG3	7:V:65:ALA:HB2	1.85	0.58
1:2:252:ILE:HD11	1:2:419:ALA:HB2	1.85	0.58
1:5:252:ILE:HD11	1:5:419:ALA:HB2	1.85	0.58
1:6:377:MET:N	1:6:377:MET:SD	2.76	0.58
1:0:377:MET:N	1:0:377:MET:SD	2.76	0.58
1:AA:305:GLY:HA3	1:AA:355:PRO:HG2	1.86	0.58
1:AG:252:ILE:HD11	1:AG:419:ALA:HB2	1.85	0.58
1:AI:305:GLY:HA3	1:AI:355:PRO:HG2	1.86	0.58
1:UP:126:PHE:CE1	1:UP:130:VAL:CG2	2.84	0.58
1:WA:213:VAL:CG1	1:WW:193:ALA:HB1	2.32	0.58
1:WB:186:LEU:HA	1:WB:190:GLN:OE1	2.04	0.58
4:I:146:ASP:OD1	4:J:233:GLN:NE2	2.37	0.58
4:J:229:VAL:O	4:J:230:ASP:C	2.41	0.58
1:7:252:ILE:HD11	1:7:419:ALA:HB2	1.85	0.58
1:8:305:GLY:HA3	1:8:355:PRO:HG2	1.86	0.58
1:AC:402:LEU:HD12	1:AC:403:PRO:HD2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AJ:305:GLY:HA3	1:AJ:355:PRO:HG2	1.86	0.58
1:AJ:377:MET:N	1:AJ:377:MET:SD	2.76	0.58
1:AM:252:ILE:HD11	1:AM:419:ALA:HB2	1.85	0.58
1:WG:166:VAL:HG12	1:WG:168:GLU:HB3	1.86	0.57
3:E:167:ASN:HD21	3:E:174:ARG:HH12	1.52	0.57
1:3:305:GLY:HA3	1:3:355:PRO:HG2	1.86	0.57
1:6:305:GLY:HA3	1:6:355:PRO:HG2	1.86	0.57
1:AF:305:GLY:HA3	1:AF:355:PRO:HG2	1.86	0.57
1:WD:168:GLU:OE1	1:WD:170:LYS:CE	2.51	0.57
3:E:176:GLY:HA2	3:E:179:ILE:HD12	1.86	0.57
5:M:19:MET:HA	1:0:276:GLU:OE2	2.04	0.57
1:2:377:MET:N	1:2:377:MET:SD	2.76	0.57
1:AD:402:LEU:HD12	1:AD:403:PRO:HD2	1.84	0.57
1:AG:377:MET:N	1:AG:377:MET:SD	2.76	0.57
1:AK:305:GLY:HA3	1:AK:355:PRO:HG2	1.85	0.57
1:WV:212:LEU:HB3	1:WV:221:THR:HG23	1.84	0.57
6:Q:67:LEU:HD11	6:Q:74:PRO:HA	1.85	0.57
1:1:377:MET:N	1:1:377:MET:SD	2.76	0.57
1:AC:305:GLY:HA3	1:AC:355:PRO:HG2	1.86	0.57
1:UN:208:GLY:HA3	1:WR:187:ASP:OD1	2.05	0.57
1:8:377:MET:N	1:8:377:MET:SD	2.76	0.57
1:AH:305:GLY:HA3	1:AH:355:PRO:HG2	1.86	0.57
1:AL:252:ILE:HD11	1:AL:419:ALA:HB2	1.85	0.57
1:AQ:305:GLY:HA3	1:AQ:355:PRO:HG2	1.85	0.57
1:UJ:126:PHE:CE1	1:UJ:130:VAL:CG2	2.84	0.57
1:UL:69:GLN:HE22	1:WH:182:PRO:HG2	1.69	0.57
1:WE:166:VAL:HG22	4:I:160:GLN:N	2.18	0.57
1:WE:167:ARG:CD	4:I:161:GLY:CA	2.81	0.57
1:WG:149:PRO:HG2	1:WG:190:GLN:NE2	2.19	0.57
1:WG:197:LEU:HD12	1:WH:175:SER:CB	2.35	0.57
1:WK:193:ALA:CB	1:WL:213:VAL:CG2	2.76	0.57
1:WV:197:LEU:CD1	1:WW:175:SER:OG	2.53	0.57
3:E:170:MET:O	3:E:174:ARG:N	2.26	0.57
5:M:4:ILE:HG12	1:AC:372:ILE:CB	2.34	0.57
5:P:76:GLN:HG3	7:V:123:LYS:HD2	1.86	0.57
6:T:103:ASP:OD1	7:Z:112:TYR:OH	2.14	0.57
6:U:42:ASP:OD1	6:U:43:ILE:N	2.38	0.57
6:U:72:HIS:HE1	1:2:294:ARG:NE	2.01	0.57
1:AK:377:MET:N	1:AK:377:MET:SD	2.76	0.57
1:UO:73:MET:HE3	1:UO:99:ARG:CD	2.32	0.57
6:S:65:LEU:C	6:S:65:LEU:HD12	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AF:252:ILE:HD11	1:AF:419:ALA:HB2	1.85	0.57
1:AP:305:GLY:HA3	1:AP:355:PRO:HG2	1.86	0.57
1:WM:197:LEU:CD1	1:WN:175:SER:OG	2.48	0.57
3:E:185:MET:O	3:E:186:LEU:C	2.42	0.57
1:8:252:ILE:HD11	1:8:419:ALA:HB2	1.85	0.57
1:AA:252:ILE:HD11	1:AA:419:ALA:HB2	1.85	0.57
1:AI:377:MET:N	1:AI:377:MET:SD	2.76	0.57
1:UK:161:LYS:O	1:UK:162:PRO:C	2.43	0.57
1:UP:126:PHE:O	1:UP:130:VAL:HB	2.05	0.57
6:S:65:LEU:CD1	1:AD:365:ASN:ND2	2.67	0.57
1:AG:305:GLY:HA3	1:AG:355:PRO:HG2	1.86	0.57
1:WC:196:HIS:HB3	1:WD:211:THR:HG21	1.87	0.57
1:WQ:196:HIS:CD2	1:WR:219:LEU:HD22	2.40	0.57
5:L:11:ILE:HG21	1:AH:372:ILE:HB	1.87	0.57
1:UK:207:PRO:HG2	1:WE:187:ASP:OD2	2.05	0.57
1:UM:161:LYS:O	1:UM:162:PRO:C	2.43	0.57
1:WG:197:LEU:HA	1:WH:175:SER:OG	2.05	0.57
1:WO:200:SER:O	1:WP:158:ALA:HB2	2.04	0.57
1:WU:200:SER:O	1:WV:158:ALA:CB	2.52	0.57
6:R:65:LEU:HD22	1:AJ:295:SER:HB2	1.86	0.57
1:AB:305:GLY:HA3	1:AB:355:PRO:HG2	1.86	0.57
1:AM:377:MET:N	1:AM:377:MET:SD	2.76	0.57
1:AO:305:GLY:HA3	1:AO:355:PRO:HG2	1.86	0.57
1:AQ:252:ILE:HD11	1:AQ:419:ALA:HB2	1.85	0.57
1:UJ:126:PHE:O	1:UJ:130:VAL:HB	2.05	0.56
1:UO:126:PHE:O	1:UO:130:VAL:HB	2.05	0.56
1:WE:167:ARG:HD3	4:I:161:GLY:CA	2.27	0.56
1:WK:187:ASP:OD1	1:WK:187:ASP:N	2.38	0.56
1:WQ:124:SER:O	1:WQ:127:SER:N	2.37	0.56
1:WV:160:PRO:HB2	1:WV:170:LYS:HB2	1.87	0.56
3:E:149:LEU:O	3:E:153:THR:HG23	2.05	0.56
4:J:83:ALA:O	4:J:84:PRO:C	2.39	0.56
7:W:94:PRO:HB2	7:W:96:VAL:HG23	1.86	0.56
1:7:305:GLY:HA3	1:7:355:PRO:HG2	1.86	0.56
1:UI:126:PHE:O	1:UI:130:VAL:HB	2.05	0.56
2:B:9:MET:HA	2:B:12:GLU:OE1	2.05	0.56
5:L:8:GLU:O	5:L:11:ILE:HG13	2.05	0.56
5:O:8:GLU:O	5:O:11:ILE:HG13	2.06	0.56
1:9:252:ILE:HD11	1:9:419:ALA:HB2	1.85	0.56
1:AN:305:GLY:HA3	1:AN:355:PRO:HG2	1.86	0.56
1:UJ:73:MET:HE3	1:UJ:99:ARG:CD	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UN:51:TYR:OH	1:UN:76:PRO:HB2	2.05	0.56
1:UN:126:PHE:O	1:UN:130:VAL:HB	2.05	0.56
1:UO:161:LYS:O	1:UO:162:PRO:C	2.43	0.56
1:WA:121:PHE:HB3	2:C:68:TRP:CD1	2.40	0.56
1:WI:164:LEU:HD13	4:J:148:ALA:HB1	1.88	0.56
5:P:8:GLU:O	5:P:11:ILE:HG13	2.06	0.56
6:R:114:LEU:HD21	7:X:126:MET:SD	2.45	0.56
1:1:305:GLY:HA3	1:1:355:PRO:HG2	1.86	0.56
1:UL:161:LYS:O	1:UL:162:PRO:C	2.43	0.56
1:WA:213:VAL:HG21	1:WW:193:ALA:HB1	1.86	0.56
1:WC:170:LYS:H	1:WC:170:LYS:HD2	1.69	0.56
1:WN:203:ALA:HB2	1:WO:160:PRO:HA	1.86	0.56
1:WU:197:LEU:HD12	1:WV:175:SER:HB3	1.87	0.56
5:K:8:GLU:O	5:K:11:ILE:HG13	2.05	0.56
1:2:305:GLY:HA3	1:2:355:PRO:HG2	1.86	0.56
1:0:252:ILE:HD11	1:0:419:ALA:HB2	1.85	0.56
1:AL:305:GLY:HA3	1:AL:355:PRO:HG2	1.86	0.56
1:UM:51:TYR:OH	1:UM:76:PRO:HB2	2.06	0.56
1:WI:170:LYS:O	1:WI:171:SER:OG	2.21	0.56
2:D:25:LEU:HD23	4:J:206:ALA:HB2	1.86	0.56
5:L:11:ILE:HG22	1:AH:372:ILE:CG1	2.32	0.56
1:UK:73:MET:HE1	1:UK:99:ARG:CD	2.35	0.56
5:M:3:ALA:C	1:AC:372:ILE:HD13	2.26	0.56
1:UI:51:TYR:OH	1:UI:76:PRO:HB2	2.05	0.56
1:UJ:55:PHE:HB2	1:UJ:58:LEU:HD11	1.88	0.56
1:UP:161:LYS:O	1:UP:162:PRO:C	2.43	0.56
1:WR:123:ILE:HB	1:WR:127:SER:OG	2.06	0.56
3:E:205:ASN:HD21	4:F:211:MET:HB2	1.71	0.56
1:UP:51:TYR:OH	1:UP:76:PRO:HB2	2.06	0.56
1:UP:55:PHE:HB2	1:UP:58:LEU:HD11	1.88	0.56
1:WA:216:SER:O	1:WW:190:GLN:NE2	2.39	0.56
1:WB:143:THR:OG1	1:WC:154:ARG:HG2	2.06	0.56
1:WU:200:SER:O	1:WV:158:ALA:HB2	2.06	0.56
4:H:66:ARG:HG3	4:H:182:ALA:HB2	1.87	0.56
7:W:72:ALA:O	7:W:95:ASN:ND2	2.38	0.56
1:AM:305:GLY:HA3	1:AM:355:PRO:HG2	1.86	0.56
1:UI:161:LYS:O	1:UI:162:PRO:C	2.43	0.56
1:UJ:161:LYS:O	1:UJ:162:PRO:C	2.43	0.56
1:UO:51:TYR:OH	1:UO:76:PRO:HB2	2.05	0.56
1:WD:117:ASP:O	1:WD:118:GLN:C	2.44	0.56
1:WJ:200:SER:O	1:WK:158:ALA:CB	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WL:190:GLN:NE2	1:WM:216:SER:O	2.39	0.56
1:WM:190:GLN:HG3	1:WN:217:GLY:HA3	1.88	0.56
1:WT:187:ASP:OD1	1:WT:190:GLN:N	2.39	0.56
3:E:93:ALA:HB2	4:F:88:VAL:HG21	1.87	0.56
1:UI:55:PHE:HB2	1:UI:58:LEU:HD11	1.88	0.56
1:UM:126:PHE:O	1:UM:130:VAL:HB	2.05	0.56
1:UO:55:PHE:HB2	1:UO:58:LEU:HD11	1.88	0.56
1:WS:117:ASP:O	1:WS:118:GLN:C	2.44	0.56
1:WS:165:PHE:CE1	2:A:89:GLY:C	2.79	0.56
5:K:14:LEU:CB	1:AL:278:THR:HG21	2.35	0.56
5:N:14:LEU:HD11	1:6:370:ARG:HH21	1.71	0.56
1:UL:126:PHE:O	1:UL:130:VAL:HB	2.05	0.55
1:UO:102:GLN:HG2	1:UO:193:ALA:HB2	1.88	0.55
1:UP:102:GLN:HG2	1:UP:193:ALA:HB2	1.89	0.55
1:WB:197:LEU:HD12	1:WC:175:SER:HB3	1.87	0.55
1:WJ:139:GLU:HB3	1:WK:154:ARG:HH21	1.70	0.55
1:WV:120:LYS:HZ3	1:WV:123:ILE:HD11	1.71	0.55
1:UJ:126:PHE:CD1	1:UJ:130:VAL:CG2	2.90	0.55
1:UL:126:PHE:CD1	1:UL:130:VAL:CG2	2.90	0.55
1:WA:156:HIS:HD2	1:WW:197:LEU:HD11	1.71	0.55
1:WD:143:THR:OG1	1:WE:154:ARG:HG2	2.06	0.55
1:WG:190:GLN:NE2	1:WH:216:SER:O	2.39	0.55
1:WJ:190:GLN:HG2	1:WK:216:SER:O	2.07	0.55
4:H:58:LEU:O	4:H:62:THR:OG1	2.23	0.55
4:I:59:LEU:HD11	5:N:102:MET:HE1	1.88	0.55
4:J:75:ARG:NH1	4:J:86:ASN:OD1	2.36	0.55
5:L:87:GLN:O	5:L:91:LYS:HG2	2.06	0.55
1:8:264:ALA:HB2	1:8:389:VAL:HG13	1.89	0.55
1:UN:55:PHE:HB2	1:UN:58:LEU:HD11	1.88	0.55
1:WL:197:LEU:CD1	1:WM:175:SER:CB	2.72	0.55
1:WO:128:GLU:HG2	1:WP:126:PHE:CD2	2.40	0.55
1:WO:166:VAL:CG2	4:F:139:LEU:O	2.50	0.55
5:M:12:SER:O	5:M:15:GLN:HG3	2.06	0.55
1:UI:102:GLN:HG2	1:UI:193:ALA:HB2	1.89	0.55
1:UN:126:PHE:CE1	1:UN:130:VAL:CG2	2.84	0.55
1:UN:161:LYS:O	1:UN:162:PRO:C	2.43	0.55
1:WR:197:LEU:HA	1:WS:175:SER:OG	2.07	0.55
1:WS:172:PRO:HD2	1:WS:204:GLY:O	2.07	0.55
4:F:38:TRP:HB2	5:L:46:SER:OG	2.06	0.55
5:P:89:ARG:NH2	5:P:90:ASN:OD1	2.39	0.55
1:AQ:264:ALA:HB2	1:AQ:389:VAL:HG13	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WO:165:PHE:HE1	4:F:143:ARG:HH11	1.54	0.55
1:WV:128:GLU:HG3	1:WW:126:PHE:CE2	2.42	0.55
5:N:21:ALA:HB1	1:4:278:THR:CG2	2.35	0.55
1:UI:211:THR:HG23	1:UI:219:LEU:HD11	1.89	0.55
1:UK:51:TYR:OH	1:UK:76:PRO:HB2	2.05	0.55
1:UM:102:GLN:HG2	1:UM:193:ALA:HB2	1.89	0.55
1:WM:197:LEU:HD11	1:WN:156:HIS:HD2	1.71	0.55
1:WP:123:ILE:CG2	2:A:67:PRO:HB3	2.35	0.55
3:E:233:MET:O	3:E:236:ILE:HG12	2.06	0.55
4:J:230:ASP:OD2	4:J:230:ASP:N	2.40	0.55
5:L:11:ILE:HG21	1:AH:372:ILE:HG22	1.82	0.55
1:5:264:ALA:HB2	1:5:389:VAL:HG13	1.89	0.55
1:AA:264:ALA:HB2	1:AA:389:VAL:HG13	1.89	0.55
1:UJ:51:TYR:OH	1:UJ:76:PRO:HB2	2.06	0.55
1:UK:126:PHE:O	1:UK:130:VAL:HB	2.05	0.55
1:UM:211:THR:HG23	1:UM:219:LEU:HD11	1.89	0.55
1:UN:102:GLN:HG2	1:UN:193:ALA:HB2	1.88	0.55
1:UO:211:THR:HG23	1:UO:219:LEU:HD11	1.89	0.55
5:N:8:GLU:O	5:N:11:ILE:HG13	2.05	0.55
1:6:264:ALA:HB2	1:6:389:VAL:HG13	1.89	0.55
1:UI:126:PHE:CD1	1:UI:130:VAL:CG2	2.90	0.55
1:UJ:102:GLN:HG2	1:UJ:193:ALA:HB2	1.88	0.55
1:UN:126:PHE:CD1	1:UN:130:VAL:CG2	2.90	0.55
1:WP:197:LEU:HD12	1:WQ:175:SER:HB3	1.89	0.55
1:WP:197:LEU:HA	1:WQ:175:SER:OG	2.07	0.55
7:Z:17:GLN:NE2	7:Z:111:SER:OG	2.39	0.55
1:2:264:ALA:HB2	1:2:389:VAL:HG13	1.89	0.55
1:UK:126:PHE:CD1	1:UK:130:VAL:CG2	2.90	0.55
1:WW:117:ASP:O	1:WW:118:GLN:C	2.44	0.55
4:J:80:THR:HB	4:J:83:ALA:HB2	1.88	0.55
1:AN:264:ALA:HB2	1:AN:389:VAL:HG13	1.89	0.55
1:AP:264:ALA:HB2	1:AP:389:VAL:HG13	1.89	0.55
1:UP:211:THR:HG23	1:UP:219:LEU:HD11	1.89	0.55
1:WB:193:ALA:HB1	1:WC:213:VAL:CG1	2.36	0.55
1:WC:121:PHE:CZ	2:C:15:LYS:HE3	2.40	0.55
1:WF:200:SER:O	1:WG:158:ALA:CB	2.55	0.55
1:WP:165:PHE:CB	4:F:160:GLN:O	2.54	0.55
1:WQ:172:PRO:HD2	1:WQ:204:GLY:O	2.07	0.55
1:9:264:ALA:HB2	1:9:389:VAL:HG13	1.89	0.55
1:UP:103:GLN:CB	1:WW:182:PRO:HB3	2.33	0.54
1:WA:193:ALA:HB1	1:WB:213:VAL:HG11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WT:190:GLN:NE2	1:WU:216:SER:O	2.39	0.54
5:K:72:MET:O	5:K:76:GLN:HG2	2.06	0.54
1:UL:51:TYR:OH	1:UL:76:PRO:HB2	2.05	0.54
1:UL:102:GLN:HG2	1:UL:193:ALA:HB2	1.88	0.54
1:UN:211:THR:HG23	1:UN:219:LEU:HD11	1.89	0.54
1:WA:200:SER:O	1:WB:158:ALA:HB2	2.08	0.54
1:WO:197:LEU:HA	1:WP:175:SER:OG	2.07	0.54
1:UP:126:PHE:CD1	1:UP:130:VAL:CG2	2.90	0.54
1:WS:124:SER:CA	2:A:8:MET:HE2	2.37	0.54
1:WS:145:GLU:O	1:WS:147:LEU:N	2.39	0.54
1:WU:130:VAL:O	1:WU:134:ARG:HG3	2.07	0.54
5:N:21:ALA:CB	1:4:278:THR:CG2	2.74	0.54
6:R:90:PRO:HB3	6:R:99:THR:HB	1.88	0.54
7:V:113:GLN:O	7:V:117:GLU:HG2	2.07	0.54
1:1:264:ALA:HB2	1:1:389:VAL:HG13	1.89	0.54
1:3:264:ALA:HB2	1:3:389:VAL:HG13	1.89	0.54
1:0:264:ALA:HB2	1:0:389:VAL:HG13	1.89	0.54
1:UK:102:GLN:HG2	1:UK:193:ALA:HB2	1.88	0.54
1:UL:55:PHE:HB2	1:UL:58:LEU:HD11	1.88	0.54
1:UL:211:THR:HG23	1:UL:219:LEU:HD11	1.89	0.54
1:WH:167:ARG:HH22	4:J:162:PRO:HG3	1.72	0.54
1:WK:171:SER:HB3	1:WK:206:PRO:HG3	1.89	0.54
1:WV:128:GLU:HG3	1:WW:126:PHE:CD2	2.43	0.54
4:F:83:ALA:HB3	4:F:84:PRO:HD3	1.89	0.54
5:O:77:LYS:HE3	6:U:13:GLN:HE22	1.73	0.54
1:UK:55:PHE:HB2	1:UK:58:LEU:HD11	1.88	0.54
1:UM:55:PHE:HB2	1:UM:58:LEU:HD11	1.88	0.54
1:WK:186:LEU:HD22	1:WK:190:GLN:CD	2.28	0.54
6:S:36:PRO:HB3	6:S:96:ASP:HB2	1.89	0.54
1:4:264:ALA:HB2	1:4:389:VAL:HG13	1.89	0.54
1:7:264:ALA:HB2	1:7:389:VAL:HG13	1.89	0.54
1:WM:193:ALA:CB	1:WN:213:VAL:HG11	2.27	0.54
1:WV:113:PHE:O	1:WV:116:LEU:HB3	2.07	0.54
2:B:36:SER:HB3	2:C:44:ILE:HG23	1.89	0.54
1:UJ:260:THR:HG23	1:UJ:268:LEU:HD11	1.89	0.54
1:UK:211:THR:HG23	1:UK:219:LEU:HD11	1.89	0.54
1:UM:103:GLN:NE2	1:WQ:182:PRO:CB	2.71	0.54
1:UM:126:PHE:CD1	1:UM:130:VAL:CG2	2.90	0.54
1:WS:186:LEU:HA	1:WS:190:GLN:OE1	2.08	0.54
3:E:38:ILE:HB	3:E:43:LYS:HE2	1.90	0.54
3:E:236:ILE:O	3:E:240:CYS:N	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:N:11:ILE:HG22	1:6:372:ILE:HB	1.88	0.54
5:O:77:LYS:HE3	6:U:13:GLN:NE2	2.23	0.54
1:AC:264:ALA:HB2	1:AC:389:VAL:HG13	1.89	0.54
1:AD:264:ALA:HB2	1:AD:389:VAL:HG13	1.89	0.54
1:UL:73:MET:HE3	1:UL:99:ARG:HD3	1.84	0.54
1:UL:88:VAL:HB	1:UL:89:PRO:HD2	1.90	0.54
1:WI:145:GLU:O	1:WI:147:LEU:N	2.41	0.54
1:WT:166:VAL:HG21	4:G:158:PRO:CB	2.38	0.54
1:WU:114:GLU:O	1:WU:117:ASP:N	2.41	0.54
1:AF:282:TYR:HB3	1:AG:292:THR:HG21	1.90	0.54
1:AK:264:ALA:HB2	1:AK:389:VAL:HG13	1.89	0.54
1:UK:88:VAL:HB	1:UK:89:PRO:HD2	1.90	0.54
1:WE:196:HIS:HB3	1:WF:211:THR:HG21	1.90	0.54
1:WT:145:GLU:O	1:WT:147:LEU:N	2.40	0.54
1:AD:282:TYR:HB3	1:AE:292:THR:HG21	1.90	0.54
1:AE:282:TYR:HB3	1:AF:292:THR:HG21	1.90	0.54
1:AO:264:ALA:HB2	1:AO:389:VAL:HG13	1.89	0.54
1:WF:193:ALA:HB1	1:WG:213:VAL:CG1	2.38	0.54
1:WF:212:LEU:HB3	1:WF:221:THR:HG23	1.90	0.54
1:WK:196:HIS:CG	1:WL:211:THR:HG21	2.42	0.54
5:N:76:GLN:NE2	7:Y:132:LEU:O	2.41	0.54
1:AF:264:ALA:HB2	1:AF:389:VAL:HG13	1.89	0.54
5:N:7:ILE:CG2	1:6:278:THR:CG2	2.80	0.53
6:S:65:LEU:HD13	1:AD:365:ASN:ND2	2.23	0.53
1:AB:282:TYR:HB3	1:AC:292:THR:HG21	1.90	0.53
1:AC:282:TYR:HB3	1:AD:292:THR:HG21	1.90	0.53
1:AG:282:TYR:HB3	1:AH:292:THR:HG21	1.90	0.53
1:AI:264:ALA:HB2	1:AI:389:VAL:HG13	1.89	0.53
1:UN:80:ALA:HB3	1:UN:83:SER:HB3	1.91	0.53
1:WP:145:GLU:HG2	1:WP:152:SER:HA	1.91	0.53
1:WU:196:HIS:HB3	1:WV:211:THR:HG21	1.89	0.53
3:E:186:LEU:HD21	3:E:236:ILE:HG22	1.90	0.53
3:E:188:LEU:O	3:E:190:VAL:N	2.39	0.53
4:I:139:LEU:HG	4:I:170:LEU:HD21	1.90	0.53
1:AB:264:ALA:HB2	1:AB:389:VAL:HG13	1.89	0.53
1:AH:264:ALA:HB2	1:AH:389:VAL:HG13	1.89	0.53
1:AM:264:ALA:HB2	1:AM:389:VAL:HG13	1.89	0.53
1:WE:200:SER:O	1:WF:158:ALA:HB2	2.09	0.53
1:WS:145:GLU:HG2	1:WS:152:SER:HA	1.91	0.53
1:WT:145:GLU:HG2	1:WT:152:SER:HA	1.91	0.53
1:AL:264:ALA:HB2	1:AL:389:VAL:HG13	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UP:80:ALA:HB3	1:UP:83:SER:HB3	1.91	0.53
1:WA:166:VAL:HG11	4:H:160:GLN:HE22	1.74	0.53
1:WA:201:ALA:C	1:WB:158:ALA:HB2	2.28	0.53
1:WD:200:SER:OG	1:WE:175:SER:CB	2.47	0.53
1:WI:164:LEU:HD22	4:J:148:ALA:CA	2.39	0.53
1:WJ:190:GLN:NE2	1:WK:216:SER:O	2.41	0.53
1:WU:145:GLU:HG2	1:WU:152:SER:HA	1.91	0.53
2:D:42:THR:HG22	2:D:44:ILE:HG12	1.91	0.53
4:I:163:GLU:N	4:I:163:GLU:OE2	2.39	0.53
6:R:65:LEU:HB3	1:AJ:295:SER:HB2	1.90	0.53
1:1:282:TYR:HB3	1:2:292:THR:HG21	1.90	0.53
1:AA:282:TYR:HB3	1:AB:292:THR:HG21	1.90	0.53
1:AG:264:ALA:HB2	1:AG:389:VAL:HG13	1.89	0.53
1:AH:282:TYR:HB3	1:AI:292:THR:HG21	1.90	0.53
1:UO:126:PHE:CD1	1:UO:130:VAL:CG2	2.90	0.53
1:UP:88:VAL:HB	1:UP:89:PRO:HD2	1.90	0.53
1:WO:145:GLU:HG2	1:WO:152:SER:HA	1.91	0.53
1:WQ:145:GLU:HG2	1:WQ:152:SER:HA	1.91	0.53
4:F:75:ARG:HD2	4:F:84:PRO:HD2	1.89	0.53
5:M:4:ILE:HG12	1:AC:372:ILE:CG2	2.37	0.53
1:3:282:TYR:HB3	1:4:292:THR:HG21	1.90	0.53
1:UN:88:VAL:HB	1:UN:89:PRO:HD2	1.90	0.53
1:UO:80:ALA:HB3	1:UO:83:SER:HB3	1.91	0.53
1:WO:149:PRO:HB3	1:WO:184:ARG:HB3	1.90	0.53
1:WV:145:GLU:HG2	1:WV:152:SER:HA	1.91	0.53
1:0:282:TYR:HB3	1:AA:292:THR:HG21	1.90	0.53
1:AI:282:TYR:HB3	1:AJ:292:THR:HG21	1.90	0.53
1:AJ:264:ALA:HB2	1:AJ:389:VAL:HG13	1.89	0.53
1:UI:159:MET:N	1:UI:159:MET:SD	2.82	0.53
1:UL:80:ALA:HB3	1:UL:83:SER:HB3	1.91	0.53
1:WQ:212:LEU:HB3	1:WQ:221:THR:HG23	1.90	0.53
1:WR:145:GLU:HG2	1:WR:152:SER:HA	1.91	0.53
1:WW:145:GLU:HG2	1:WW:152:SER:HA	1.90	0.53
2:B:77:VAL:HG21	4:H:225:LEU:HD11	1.91	0.53
5:M:11:ILE:HG21	1:AB:372:ILE:HG22	1.91	0.53
1:AJ:282:TYR:HB3	1:AK:292:THR:HG21	1.90	0.53
1:UK:80:ALA:HB3	1:UK:83:SER:HB3	1.91	0.53
1:UM:80:ALA:HB3	1:UM:83:SER:HB3	1.91	0.53
1:WK:163:SER:O	3:E:252:ALA:CB	2.57	0.53
1:WU:160:PRO:HG2	1:WU:170:LYS:O	2.08	0.53
1:WV:193:ALA:HB1	1:WW:213:VAL:HG11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:62:ILE:O	2:B:66:GLY:N	2.39	0.53
3:E:54:ILE:HD11	4:J:153:LEU:HB3	1.91	0.53
3:E:101:PHE:CE2	4:F:223:LEU:HD11	2.43	0.53
5:N:11:ILE:CG2	1:6:372:ILE:CG2	2.87	0.53
6:Q:50:LYS:O	6:Q:54:VAL:HG22	2.09	0.53
1:1:293:LEU:HD21	1:1:364:SER:HB3	1.91	0.53
1:3:293:LEU:HD21	1:3:364:SER:HB3	1.91	0.53
1:9:282:TYR:HB3	1:0:292:THR:HG21	1.90	0.53
1:0:293:LEU:HD21	1:0:364:SER:HB3	1.91	0.53
1:AE:264:ALA:HB2	1:AE:389:VAL:HG13	1.89	0.53
1:AK:282:TYR:HB3	1:AL:292:THR:HG21	1.90	0.53
1:UK:207:PRO:HG2	1:WE:187:ASP:CG	2.29	0.53
7:W:23:VAL:HG21	7:W:47:VAL:HG13	1.91	0.53
7:Z:57:GLN:O	7:Z:59:THR:N	2.40	0.53
1:UO:159:MET:N	1:UO:159:MET:SD	2.82	0.53
1:WO:200:SER:O	1:WP:158:ALA:CB	2.56	0.53
1:8:293:LEU:HD21	1:8:364:SER:HB3	1.91	0.53
1:AA:293:LEU:HD21	1:AA:364:SER:HB3	1.91	0.53
1:AC:293:LEU:HD21	1:AC:364:SER:HB3	1.91	0.53
1:UJ:88:VAL:HB	1:UJ:89:PRO:HD2	1.90	0.52
1:WB:145:GLU:HG2	1:WB:152:SER:HA	1.91	0.52
1:WN:145:GLU:HG2	1:WN:152:SER:HA	1.90	0.52
1:WT:145:GLU:C	1:WT:147:LEU:H	2.12	0.52
4:H:194:LEU:HD11	4:I:217:ILE:HA	1.91	0.52
4:I:180:LYS:O	4:I:184:GLN:HG3	2.09	0.52
7:Y:10:ALA:HB3	7:Y:119:LEU:HD13	1.89	0.52
1:5:293:LEU:HD21	1:5:364:SER:HB3	1.91	0.52
1:AE:293:LEU:HD21	1:AE:364:SER:HB3	1.91	0.52
1:UM:88:VAL:HB	1:UM:89:PRO:HD2	1.90	0.52
1:WA:145:GLU:HG2	1:WA:152:SER:HA	1.90	0.52
1:WD:145:GLU:HG2	1:WD:152:SER:HA	1.91	0.52
1:WG:165:PHE:CE1	4:J:240:ALA:CB	2.89	0.52
1:WR:111:VAL:HB	1:WR:114:GLU:HB3	1.92	0.52
3:E:188:LEU:HB3	3:E:189:PRO:HD2	1.91	0.52
4:H:232:TRP:O	4:H:236:MET:HG3	2.10	0.52
4:J:41:SER:HB3	6:U:133:VAL:HG21	1.91	0.52
5:P:76:GLN:NE2	7:V:123:LYS:HB2	2.24	0.52
1:4:293:LEU:HD21	1:4:364:SER:HB3	1.91	0.52
1:6:282:TYR:HB3	1:7:292:THR:HG21	1.90	0.52
1:6:293:LEU:HD21	1:6:364:SER:HB3	1.91	0.52
1:AB:293:LEU:HD21	1:AB:364:SER:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AL:282:TYR:HB3	1:AM:292:THR:HG21	1.90	0.52
1:WB:164:LEU:O	4:H:152:ARG:CD	2.54	0.52
1:WJ:125:GLN:HB2	3:E:242:HIS:HB2	1.92	0.52
1:WT:124:SER:CB	2:A:4:GLU:OE2	2.57	0.52
4:I:116:PHE:O	6:T:4:ARG:NH2	2.42	0.52
7:V:80:PRO:HB3	7:V:89:GLY:HA3	1.90	0.52
1:2:282:TYR:HB3	1:3:292:THR:HG21	1.90	0.52
1:2:293:LEU:HD21	1:2:364:SER:HB3	1.91	0.52
1:5:282:TYR:HB3	1:6:292:THR:HG21	1.90	0.52
1:AD:293:LEU:HD21	1:AD:364:SER:HB3	1.91	0.52
1:AM:282:TYR:HB3	1:AN:292:THR:HG21	1.90	0.52
1:UM:159:MET:N	1:UM:159:MET:SD	2.82	0.52
1:WJ:141:ALA:O	1:WJ:145:GLU:HG3	2.09	0.52
1:WP:145:GLU:O	1:WP:147:LEU:N	2.42	0.52
1:WV:142:ARG:O	1:WV:146:THR:HG23	2.10	0.52
1:WV:164:LEU:HD23	4:G:152:ARG:HH12	1.75	0.52
4:F:149:LEU:HD22	4:G:233:GLN:HG3	1.92	0.52
4:G:58:LEU:O	4:G:62:THR:OG1	2.22	0.52
4:J:52:THR:OG1	5:O:91:LYS:NZ	2.32	0.52
5:O:73:ALA:HB1	6:U:13:GLN:HE21	1.74	0.52
1:4:282:TYR:HB3	1:5:292:THR:HG21	1.90	0.52
1:8:282:TYR:HB3	1:9:292:THR:HG21	1.90	0.52
1:AG:293:LEU:HD21	1:AG:364:SER:HB3	1.91	0.52
1:UO:88:VAL:HB	1:UO:89:PRO:HD2	1.90	0.52
1:WF:116:LEU:HD21	1:WF:134:ARG:CZ	2.38	0.52
1:WI:145:GLU:HG2	1:WI:152:SER:HA	1.91	0.52
1:WK:145:GLU:HG2	1:WK:152:SER:HA	1.90	0.52
5:N:7:ILE:HG21	1:6:278:THR:HG22	1.91	0.52
1:7:293:LEU:HD21	1:7:364:SER:HB3	1.92	0.52
1:9:293:LEU:HD21	1:9:364:SER:HB3	1.91	0.52
1:UJ:159:MET:N	1:UJ:159:MET:SD	2.82	0.52
1:UK:207:PRO:CG	1:WE:187:ASP:OD2	2.57	0.52
1:WJ:162:PRO:HA	1:WJ:169:GLN:CD	2.30	0.52
1:WP:200:SER:O	1:WQ:158:ALA:HB3	2.09	0.52
7:V:131:THR:O	7:V:131:THR:HG22	2.09	0.52
1:1:235:LEU:HB3	1:2:244:ARG:HH22	1.75	0.52
1:AF:293:LEU:HD21	1:AF:364:SER:HB3	1.91	0.52
1:AO:282:TYR:HB3	1:AP:292:THR:HG21	1.90	0.52
1:UI:80:ALA:HB3	1:UI:83:SER:HB3	1.91	0.52
1:WD:142:ARG:O	1:WD:146:THR:HG23	2.10	0.52
1:WK:170:LYS:O	1:WK:171:SER:C	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WS:145:GLU:C	1:WS:147:LEU:H	2.12	0.52
1:WU:186:LEU:HA	1:WU:190:GLN:OE1	2.10	0.52
2:B:3:PRO:O	2:B:7:MET:HG2	2.09	0.52
7:Y:20:ARG:NH2	7:Y:107:SER:HB2	2.24	0.52
1:AM:235:LEU:HB3	1:AN:244:ARG:HH22	1.75	0.52
1:UJ:80:ALA:HB3	1:UJ:83:SER:HB3	1.91	0.52
1:UK:159:MET:N	1:UK:159:MET:SD	2.82	0.52
1:WK:162:PRO:CB	3:E:249:ASN:HB2	2.35	0.52
1:WL:145:GLU:HG2	1:WL:152:SER:HA	1.91	0.52
1:WQ:145:GLU:O	1:WQ:147:LEU:N	2.43	0.52
1:WU:113:PHE:HB3	1:WV:134:ARG:CZ	2.39	0.52
2:D:35:ILE:HG21	2:D:50:SER:HA	1.92	0.52
2:D:77:VAL:HG11	4:J:229:VAL:HG21	1.90	0.52
4:F:199:VAL:O	4:F:203:VAL:HG23	2.10	0.52
5:O:48:ARG:NH1	6:U:3:ASP:OD2	2.43	0.52
1:4:235:LEU:HB3	1:5:244:ARG:HH22	1.75	0.52
1:AH:235:LEU:HB3	1:AI:244:ARG:HH22	1.75	0.52
1:UI:88:VAL:HB	1:UI:89:PRO:HD2	1.90	0.52
1:WB:187:ASP:CG	1:WB:190:GLN:HG3	2.30	0.52
1:WF:125:GLN:O	1:WF:128:GLU:N	2.43	0.52
1:WV:186:LEU:HA	1:WV:190:GLN:OE1	2.10	0.52
6:S:46:ALA:O	6:S:50:LYS:HG3	2.09	0.52
1:AN:282:TYR:HB3	1:AO:292:THR:HG21	1.90	0.52
1:AP:282:TYR:HB3	1:AQ:292:THR:HG21	1.90	0.52
1:WD:149:PRO:CG	1:WD:190:GLN:HE22	2.23	0.52
1:WD:168:GLU:OE1	1:WD:170:LYS:NZ	2.42	0.52
1:WD:197:LEU:HA	1:WE:175:SER:CB	2.40	0.52
1:WM:132:TYR:CD1	1:WN:130:VAL:HG22	2.45	0.52
1:WN:200:SER:HB2	1:WO:173:SER:HB2	1.92	0.52
1:WS:190:GLN:HG2	1:WT:217:GLY:HA3	1.91	0.52
4:G:74:LEU:HD22	4:G:235:LEU:HD22	1.91	0.52
4:I:73:LEU:HD13	4:I:186:GLY:HA3	1.92	0.52
1:AE:235:LEU:HB3	1:AF:244:ARG:HH22	1.75	0.52
1:AJ:235:LEU:HB3	1:AK:244:ARG:HH22	1.75	0.52
1:AL:235:LEU:HB3	1:AM:244:ARG:HH22	1.75	0.52
1:AO:235:LEU:HB3	1:AP:244:ARG:HH22	1.75	0.52
1:AP:235:LEU:HB3	1:AQ:244:ARG:HH22	1.75	0.52
1:UJ:103:GLN:CD	1:WD:182:PRO:HB3	2.28	0.51
1:WG:145:GLU:HG2	1:WG:152:SER:HA	1.91	0.51
1:WM:201:ALA:C	1:WN:158:ALA:HB2	2.30	0.51
1:WQ:145:GLU:C	1:WQ:147:LEU:H	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WT:160:PRO:HD3	1:WT:172:PRO:CA	2.38	0.51
1:WT:161:LYS:HB3	1:WT:162:PRO:HD2	1.91	0.51
2:A:65:ALA:O	2:A:69:MET:HG3	2.09	0.51
2:C:4:GLU:C	2:C:6:VAL:H	2.13	0.51
4:G:83:ALA:HB1	4:G:84:PRO:HD2	1.92	0.51
6:R:67:LEU:HG	6:R:72:HIS:HB3	1.92	0.51
1:7:282:TYR:HB3	1:8:292:THR:HG21	1.90	0.51
1:AH:293:LEU:HD21	1:AH:364:SER:HB3	1.91	0.51
1:AI:293:LEU:HD21	1:AI:364:SER:HB3	1.91	0.51
1:WD:118:GLN:O	1:WD:119:GLU:C	2.49	0.51
1:WF:197:LEU:HA	1:WG:175:SER:OG	2.10	0.51
1:WH:145:GLU:HG2	1:WH:152:SER:HA	1.91	0.51
1:WP:145:GLU:C	1:WP:147:LEU:H	2.14	0.51
1:WP:166:VAL:HA	1:WP:169:GLN:HB2	1.91	0.51
1:WQ:125:GLN:O	1:WQ:128:GLU:N	2.43	0.51
3:E:227:MET:SD	3:E:228:LEU:N	2.82	0.51
7:Z:23:VAL:HG21	7:Z:47:VAL:HG13	1.91	0.51
1:2:235:LEU:HB3	1:3:244:ARG:HH22	1.75	0.51
1:AC:235:LEU:HB3	1:AD:244:ARG:HH22	1.75	0.51
1:AK:235:LEU:HB3	1:AL:244:ARG:HH22	1.75	0.51
1:WC:145:GLU:HG2	1:WC:152:SER:HA	1.91	0.51
1:WC:197:LEU:HA	1:WD:175:SER:OG	2.11	0.51
1:WM:145:GLU:HG2	1:WM:152:SER:HA	1.91	0.51
1:WR:190:GLN:NE2	1:WS:216:SER:O	2.43	0.51
6:Q:29:ASN:ND2	6:Q:41:ARG:O	2.36	0.51
1:5:256:ILE:HG13	1:5:257:VAL:N	2.26	0.51
1:0:235:LEU:HB3	1:AA:244:ARG:HH22	1.75	0.51
1:AO:293:LEU:HD21	1:AO:364:SER:HB3	1.91	0.51
1:UP:204:GLY:O	1:UP:206:PRO:HD3	2.11	0.51
1:WC:197:LEU:CD1	1:WD:175:SER:OG	2.58	0.51
1:WJ:128:GLU:HG3	1:WK:126:PHE:CD2	2.43	0.51
2:D:78:ARG:HG3	4:J:234:LEU:HD11	1.91	0.51
4:F:67:ILE:H	4:F:67:ILE:HD12	1.75	0.51
6:Q:62:GLY:HA2	6:Q:79:SER:HB3	1.91	0.51
6:R:68:THR:HG21	1:AJ:294:ARG:HD2	1.92	0.51
7:W:7:PHE:HZ	7:W:123:LYS:HB2	1.76	0.51
7:Z:28:LEU:HD21	7:Z:101:GLU:HB2	1.91	0.51
1:3:235:LEU:HB3	1:4:244:ARG:HH22	1.75	0.51
1:6:235:LEU:HB3	1:7:244:ARG:HH22	1.75	0.51
1:7:235:LEU:HB3	1:8:244:ARG:HH22	1.75	0.51
1:UO:204:GLY:O	1:UO:206:PRO:HD3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WA:132:TYR:HB2	1:WB:126:PHE:HZ	1.76	0.51
2:B:59:PHE:HZ	4:G:198:LEU:HD21	1.75	0.51
3:E:130:ASP:O	3:E:134:MET:HG2	2.10	0.51
4:H:42:VAL:HG13	5:N:42:LEU:HD22	1.93	0.51
5:M:8:GLU:O	5:M:11:ILE:HG13	2.09	0.51
5:O:53:ARG:O	5:O:57:GLU:HG2	2.11	0.51
6:U:65:LEU:CB	1:1:295:SER:HB2	2.39	0.51
1:7:256:ILE:HG13	1:7:257:VAL:N	2.26	0.51
1:AA:256:ILE:HG13	1:AA:257:VAL:N	2.26	0.51
1:AG:235:LEU:HB3	1:AH:244:ARG:HH22	1.75	0.51
1:AJ:256:ILE:HG13	1:AJ:257:VAL:N	2.26	0.51
1:AL:256:ILE:HG13	1:AL:257:VAL:N	2.26	0.51
1:UJ:253:GLY:O	1:UJ:255:PRO:HD3	2.11	0.51
1:UL:159:MET:SD	1:UL:159:MET:N	2.82	0.51
1:UL:216:SER:C	1:UL:218:HIS:H	2.14	0.51
1:UM:103:GLN:CD	1:WQ:182:PRO:CB	2.71	0.51
1:WK:200:SER:CA	1:WL:173:SER:OG	2.59	0.51
1:WN:203:ALA:HB1	1:WO:160:PRO:HB3	1.93	0.51
2:D:17:ALA:HB2	4:J:195:ILE:HG23	1.92	0.51
6:S:67:LEU:HA	6:S:72:HIS:HE2	1.74	0.51
1:9:235:LEU:HB3	1:0:244:ARG:HH22	1.75	0.51
1:9:256:ILE:HG13	1:9:257:VAL:N	2.26	0.51
1:AB:235:LEU:HB3	1:AC:244:ARG:HH22	1.75	0.51
1:AL:293:LEU:HD21	1:AL:364:SER:HB3	1.91	0.51
1:UM:73:MET:HE3	1:UM:99:ARG:CD	2.36	0.51
1:WI:145:GLU:C	1:WI:147:LEU:H	2.13	0.51
5:L:7:ILE:CD1	1:AI:370:ARG:HE	2.24	0.51
1:AH:256:ILE:HG13	1:AH:257:VAL:N	2.26	0.51
1:AM:256:ILE:HG13	1:AM:257:VAL:N	2.26	0.51
1:UI:98:LEU:HD22	1:UI:147:LEU:CD2	2.39	0.51
1:UN:204:GLY:O	1:UN:206:PRO:HD3	2.11	0.51
1:WF:116:LEU:CD2	1:WF:134:ARG:HD3	2.41	0.51
1:WR:115:LEU:HD22	1:WR:134:ARG:HH11	1.75	0.51
3:E:88:MET:HG2	3:E:146:LEU:HD11	1.93	0.51
4:F:135:ARG:NH2	4:F:165:VAL:O	2.44	0.51
4:I:75:ARG:NH1	4:I:86:ASN:OD1	2.36	0.51
1:8:256:ILE:HG13	1:8:257:VAL:N	2.26	0.51
1:AF:235:LEU:HB3	1:AG:244:ARG:HH22	1.75	0.51
1:AJ:293:LEU:HD21	1:AJ:364:SER:HB3	1.91	0.51
1:AK:293:LEU:HD21	1:AK:364:SER:HB3	1.91	0.51
1:AN:256:ILE:HG13	1:AN:257:VAL:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AN:293:LEU:HD21	1:AN:364:SER:HB3	1.92	0.51
1:AQ:293:LEU:HD21	1:AQ:364:SER:HB3	1.91	0.51
1:UI:204:GLY:O	1:UI:206:PRO:HD3	2.11	0.51
1:WP:128:GLU:CG	1:WQ:126:PHE:CE2	2.93	0.51
2:D:2:THR:HG23	2:D:5:SER:H	1.76	0.51
3:E:86:PHE:CZ	4:F:91:GLY:HA3	2.45	0.51
4:G:193:PHE:HB3	4:G:222:LYS:HD3	1.92	0.51
1:2:256:ILE:HG13	1:2:257:VAL:N	2.26	0.51
1:3:256:ILE:HG13	1:3:257:VAL:N	2.26	0.51
1:AF:256:ILE:HG13	1:AF:257:VAL:N	2.26	0.51
1:AO:256:ILE:HG13	1:AO:257:VAL:N	2.26	0.51
1:UM:204:GLY:O	1:UM:206:PRO:HD3	2.11	0.51
1:UO:98:LEU:HD22	1:UO:147:LEU:CD2	2.39	0.51
1:WB:190:GLN:NE2	1:WC:216:SER:O	2.44	0.51
1:WI:193:ALA:HB1	1:WJ:213:VAL:HG21	1.93	0.51
1:WS:118:GLN:O	1:WS:119:GLU:C	2.49	0.51
3:E:166:SER:C	3:E:168:ALA:N	2.64	0.51
1:4:256:ILE:HG13	1:4:257:VAL:N	2.26	0.51
1:AC:256:ILE:HG13	1:AC:257:VAL:N	2.26	0.51
1:WQ:190:GLN:HG2	1:WR:216:SER:O	2.11	0.50
2:D:58:VAL:O	2:D:62:ILE:HD12	2.11	0.50
1:AM:293:LEU:HD21	1:AM:364:SER:HB3	1.91	0.50
1:AP:256:ILE:HG13	1:AP:257:VAL:N	2.26	0.50
1:UL:204:GLY:O	1:UL:206:PRO:HD3	2.11	0.50
1:WG:200:SER:OG	1:WH:175:SER:CB	2.45	0.50
1:WJ:139:GLU:HB3	1:WK:156:HIS:HE1	1.76	0.50
1:WK:160:PRO:HB3	1:WK:170:LYS:HB2	1.94	0.50
3:E:205:ASN:ND2	4:F:211:MET:HB2	2.25	0.50
4:H:65:THR:O	4:H:68:ILE:HG22	2.12	0.50
5:O:84:MET:O	5:O:88:VAL:HG23	2.11	0.50
7:Z:56:GLY:HA3	1:1:303:GLN:HE22	1.76	0.50
1:5:235:LEU:HB3	1:6:244:ARG:HH22	1.75	0.50
1:AD:256:ILE:HG13	1:AD:257:VAL:N	2.26	0.50
1:AI:256:ILE:HG13	1:AI:257:VAL:N	2.26	0.50
1:WE:167:ARG:HH21	4:I:162:PRO:HD2	1.75	0.50
1:WF:116:LEU:HD21	1:WF:134:ARG:HD3	1.93	0.50
4:I:119:GLN:HG3	6:T:4:ARG:HE	1.76	0.50
5:N:11:ILE:HG22	1:6:372:ILE:CB	2.40	0.50
1:AA:235:LEU:HB3	1:AB:244:ARG:HH22	1.75	0.50
1:AE:256:ILE:HG13	1:AE:257:VAL:N	2.26	0.50
1:AN:235:LEU:HB3	1:AO:244:ARG:HH22	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AP:293:LEU:HD21	1:AP:364:SER:HB3	1.92	0.50
1:UK:204:GLY:O	1:UK:206:PRO:HD3	2.11	0.50
1:WD:145:GLU:C	1:WD:147:LEU:H	2.15	0.50
1:WT:162:PRO:O	1:WT:163:SER:HB3	2.11	0.50
2:D:2:THR:O	2:D:5:SER:OG	2.24	0.50
4:I:204:LEU:HD11	4:I:217:ILE:HD12	1.93	0.50
1:6:256:ILE:HG13	1:6:257:VAL:N	2.26	0.50
1:AI:235:LEU:HB3	1:AJ:244:ARG:HH22	1.75	0.50
1:UK:98:LEU:HD22	1:UK:147:LEU:CD2	2.39	0.50
1:WG:115:LEU:HG	1:WG:116:LEU:N	2.25	0.50
1:WV:196:HIS:HB3	1:WW:211:THR:HG21	1.93	0.50
7:W:54:ALA:HB3	7:W:55:PRO:HD3	1.93	0.50
1:AB:256:ILE:HG13	1:AB:257:VAL:N	2.26	0.50
1:AD:235:LEU:HB3	1:AE:244:ARG:HH22	1.75	0.50
1:WD:197:LEU:CD1	1:WE:175:SER:OG	2.59	0.50
1:WH:186:LEU:HD22	1:WH:190:GLN:CD	2.32	0.50
1:WT:166:VAL:HG21	4:G:158:PRO:HB2	1.93	0.50
4:G:180:LYS:NZ	4:H:230:ASP:OD1	2.27	0.50
5:N:57:GLU:HG2	6:S:11:PHE:CE2	2.47	0.50
7:Y:10:ALA:O	7:Y:14:LEU:HG	2.12	0.50
1:1:256:ILE:HG13	1:1:257:VAL:N	2.26	0.50
1:WA:112:GLY:O	1:WA:115:LEU:HB3	2.12	0.50
1:WP:165:PHE:HA	4:F:160:GLN:O	2.12	0.50
3:E:229:MET:O	3:E:233:MET:HG2	2.12	0.50
4:F:143:ARG:HH21	4:F:180:LYS:HB3	1.77	0.50
4:F:224:MET:O	4:F:228:LEU:HB2	2.11	0.50
6:T:123:LEU:HD23	7:Y:132:LEU:HD11	1.92	0.50
1:WC:143:THR:OG1	1:WD:154:ARG:HG2	2.12	0.50
3:E:166:SER:O	3:E:167:ASN:C	2.49	0.50
4:G:75:ARG:NH2	4:G:84:PRO:O	2.44	0.50
4:G:86:ASN:HD21	5:L:103:GLN:HA	1.77	0.50
1:UP:159:MET:SD	1:UP:159:MET:N	2.82	0.50
1:WQ:163:SER:HB3	1:WQ:166:VAL:HG23	1.94	0.50
1:WS:166:VAL:HG22	4:G:144:GLU:HG2	1.94	0.50
1:WU:202:VAL:HB	1:WU:205:LEU:HB2	1.94	0.50
1:WV:200:SER:OG	1:WW:175:SER:HB2	2.11	0.50
4:J:167:MET:HG3	4:J:171:LEU:HG	1.93	0.50
7:Y:106:MET:O	7:Y:110:ARG:HG2	2.12	0.50
1:2:294:ARG:HD2	1:2:367:GLU:OE1	2.12	0.50
1:8:235:LEU:HB3	1:9:244:ARG:HH22	1.75	0.50
1:0:256:ILE:HG13	1:0:257:VAL:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UN:159:MET:N	1:UN:159:MET:SD	2.82	0.49
1:WQ:142:ARG:O	1:WQ:146:THR:HG23	2.13	0.49
1:WQ:202:VAL:HB	1:WQ:205:LEU:HB2	1.94	0.49
1:WS:197:LEU:HA	1:WT:175:SER:OG	2.11	0.49
1:1:294:ARG:HD2	1:1:367:GLU:OE1	2.12	0.49
1:AO:294:ARG:HD2	1:AO:367:GLU:OE1	2.12	0.49
1:AP:294:ARG:HD2	1:AP:367:GLU:OE1	2.12	0.49
1:UP:98:LEU:HD22	1:UP:147:LEU:CD2	2.39	0.49
1:WB:187:ASP:OD1	1:WB:190:GLN:HG3	2.12	0.49
1:WD:149:PRO:HG2	1:WD:190:GLN:NE2	2.23	0.49
5:P:55:GLN:HG2	5:P:71:VAL:HG22	1.94	0.49
6:U:46:ALA:O	6:U:50:LYS:HG2	2.11	0.49
1:AK:256:ILE:HG13	1:AK:257:VAL:N	2.26	0.49
1:AM:294:ARG:HD2	1:AM:367:GLU:OE1	2.13	0.49
1:AN:294:ARG:HD2	1:AN:367:GLU:OE1	2.12	0.49
1:AQ:256:ILE:HG13	1:AQ:257:VAL:N	2.26	0.49
1:AQ:294:ARG:HD2	1:AQ:367:GLU:OE1	2.13	0.49
1:UM:98:LEU:HD22	1:UM:147:LEU:CD2	2.39	0.49
1:UN:69:GLN:HE22	1:WS:182:PRO:HG2	1.77	0.49
1:WH:202:VAL:HB	1:WH:205:LEU:HB2	1.95	0.49
1:WN:202:VAL:HB	1:WN:205:LEU:HB2	1.94	0.49
6:S:66:THR:OG1	1:AD:294:ARG:HG2	2.11	0.49
1:3:294:ARG:HD2	1:3:367:GLU:OE1	2.12	0.49
1:UN:73:MET:HE1	1:UN:99:ARG:HD2	1.95	0.49
1:UN:208:GLY:CA	1:WR:187:ASP:OD1	2.60	0.49
1:UO:103:GLN:CG	1:WU:182:PRO:HB3	2.42	0.49
1:WN:145:GLU:O	1:WN:147:LEU:N	2.46	0.49
1:WA:112:GLY:HA2	1:WA:135:ALA:CA	2.27	0.49
1:WD:200:SER:O	1:WE:158:ALA:HB3	2.10	0.49
1:WE:202:VAL:HB	1:WE:205:LEU:HB2	1.95	0.49
1:WG:219:LEU:HD21	1:WG:222:GLN:O	2.13	0.49
1:WO:142:ARG:O	1:WO:146:THR:HG23	2.11	0.49
1:WP:164:LEU:HD11	4:F:151:ALA:HB3	1.93	0.49
4:I:59:LEU:O	4:I:65:THR:OG1	2.28	0.49
6:S:76:GLN:N	1:AD:297:GLN:HE22	2.08	0.49
1:AL:294:ARG:HD2	1:AL:367:GLU:OE1	2.13	0.49
1:WC:128:GLU:HG2	1:WC:129:GLN:N	2.28	0.49
1:WD:145:GLU:O	1:WD:147:LEU:N	2.46	0.49
1:WF:202:VAL:HB	1:WF:205:LEU:HB2	1.94	0.49
1:WK:202:VAL:HB	1:WK:205:LEU:HB2	1.95	0.49
1:WM:197:LEU:HA	1:WN:175:SER:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WS:202:VAL:HB	1:WS:205:LEU:HB2	1.94	0.49
2:D:77:VAL:CG1	4:J:229:VAL:HG21	2.42	0.49
4:G:66:ARG:NH2	4:G:178:GLU:OE1	2.45	0.49
1:UI:129:GLN:O	1:UI:133:GLN:N	2.29	0.49
1:UL:167:ARG:O	1:UL:168:GLU:C	2.49	0.49
1:UN:80:ALA:CB	1:UN:83:SER:HB3	2.43	0.49
1:WA:213:VAL:CG2	1:WW:193:ALA:HB1	2.42	0.49
1:WF:193:ALA:HB1	1:WG:213:VAL:HG11	1.94	0.49
1:WN:145:GLU:C	1:WN:147:LEU:H	2.15	0.49
3:E:12:TRP:CZ3	5:P:34:PHE:HB2	2.48	0.49
6:T:68:THR:CG2	1:7:294:ARG:CD	2.91	0.49
1:4:294:ARG:HD2	1:4:367:GLU:OE1	2.12	0.49
1:UJ:98:LEU:HD22	1:UJ:147:LEU:CD2	2.39	0.49
1:UK:80:ALA:CB	1:UK:83:SER:HB3	2.43	0.49
1:WA:167:ARG:HH21	4:H:162:PRO:HD2	1.78	0.49
1:WE:112:GLY:O	1:WE:115:LEU:HB3	2.12	0.49
1:WF:116:LEU:HD22	1:WF:131:ASN:HA	1.94	0.49
1:WG:164:LEU:O	4:J:241:GLN:CG	2.47	0.49
1:WL:202:VAL:HB	1:WL:205:LEU:HB2	1.95	0.49
1:WP:144:ILE:O	1:WP:147:LEU:HB2	2.13	0.49
1:WQ:124:SER:O	1:WQ:125:GLN:C	2.50	0.49
2:C:36:SER:OG	2:D:44:ILE:HG23	2.12	0.49
4:F:126:ALA:O	4:F:127:LEU:C	2.48	0.49
6:Q:17:ASN:HD22	6:Q:57:ARG:NH1	2.10	0.49
6:T:102:MET:HB3	6:T:106:ARG:HH21	1.77	0.49
1:AG:256:ILE:HG13	1:AG:257:VAL:N	2.26	0.49
1:AK:294:ARG:HD2	1:AK:367:GLU:OE1	2.12	0.49
1:UJ:80:ALA:CB	1:UJ:83:SER:HB3	2.43	0.49
1:UL:80:ALA:CB	1:UL:83:SER:HB3	2.43	0.49
1:UP:80:ALA:CB	1:UP:83:SER:HB3	2.43	0.49
1:WC:197:LEU:HD11	1:WD:156:HIS:HD2	1.78	0.49
1:WD:186:LEU:HD22	1:WD:190:GLN:CD	2.32	0.49
1:WF:145:GLU:HG2	1:WF:152:SER:HA	1.95	0.49
1:WH:193:ALA:CB	1:WI:213:VAL:CG1	2.88	0.49
6:R:68:THR:HG21	1:AJ:294:ARG:CD	2.42	0.49
1:AB:266:VAL:HG22	1:AB:387:VAL:HG22	1.95	0.49
1:UN:98:LEU:HD22	1:UN:147:LEU:CD2	2.39	0.49
1:WK:143:THR:OG1	1:WL:156:HIS:NE2	1.94	0.49
1:WS:197:LEU:HD11	1:WT:156:HIS:HD2	1.78	0.49
1:WW:115:LEU:HA	1:WW:118:GLN:OE1	2.13	0.49
5:K:7:ILE:HG21	1:AM:278:THR:HG22	1.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:86:ILE:HG12	5:P:102:MET:HE2	1.95	0.49
5:L:11:ILE:CG2	1:AH:372:ILE:HD12	2.28	0.49
1:AA:266:VAL:HG22	1:AA:387:VAL:HG22	1.95	0.49
1:AC:266:VAL:HG22	1:AC:387:VAL:HG22	1.95	0.49
1:UL:73:MET:HE1	1:UL:99:ARG:HD2	1.92	0.48
1:UM:80:ALA:CB	1:UM:83:SER:HB3	2.43	0.48
1:WB:202:VAL:HB	1:WB:205:LEU:HB2	1.94	0.48
1:WV:120:LYS:NZ	1:WV:123:ILE:CD1	2.74	0.48
4:F:179:LEU:HD22	4:G:84:PRO:HG3	1.95	0.48
1:4:266:VAL:HG22	1:4:387:VAL:HG22	1.95	0.48
1:5:294:ARG:HD2	1:5:367:GLU:OE1	2.13	0.48
1:AJ:294:ARG:HD2	1:AJ:367:GLU:OE1	2.12	0.48
1:WJ:200:SER:OG	1:WK:175:SER:HB2	2.13	0.48
2:A:48:THR:HG21	4:F:208:GLY:HA2	1.95	0.48
4:F:92:LEU:HD13	4:F:232:TRP:HZ2	1.77	0.48
4:F:130:GLY:O	4:F:133:PRO:HD2	2.13	0.48
4:J:73:LEU:HD13	4:J:186:GLY:HA3	1.94	0.48
5:N:4:ILE:HG12	1:7:372:ILE:CG2	2.43	0.48
6:R:68:THR:HG21	1:AJ:294:ARG:HH11	1.78	0.48
6:T:49:LEU:O	6:T:53:MET:HG2	2.13	0.48
6:T:67:LEU:HD21	6:T:74:PRO:HB3	1.94	0.48
7:X:94:PRO:HB2	7:X:96:VAL:HG23	1.94	0.48
1:AA:294:ARG:HD2	1:AA:367:GLU:OE1	2.12	0.48
1:AB:294:ARG:HD2	1:AB:367:GLU:OE1	2.12	0.48
1:AC:294:ARG:HD2	1:AC:367:GLU:OE1	2.12	0.48
1:UI:127:SER:O	1:UI:131:ASN:HB2	2.14	0.48
1:UL:98:LEU:HD22	1:UL:147:LEU:CD2	2.39	0.48
1:WD:168:GLU:CD	1:WD:170:LYS:NZ	2.67	0.48
1:WR:165:PHE:HZ	4:G:240:ALA:HB1	1.78	0.48
1:WS:200:SER:O	1:WT:158:ALA:HB3	2.05	0.48
4:I:42:VAL:HG13	5:O:42:LEU:HD22	1.95	0.48
7:X:97:ASP:O	7:X:101:GLU:HG2	2.13	0.48
1:9:294:ARG:HD2	1:9:367:GLU:OE1	2.12	0.48
1:0:294:ARG:HD2	1:0:367:GLU:OE1	2.12	0.48
1:AD:294:ARG:HD2	1:AD:367:GLU:OE1	2.12	0.48
1:AE:294:ARG:HD2	1:AE:367:GLU:OE1	2.12	0.48
1:AG:266:VAL:HG22	1:AG:387:VAL:HG22	1.95	0.48
1:AH:266:VAL:HG22	1:AH:387:VAL:HG22	1.95	0.48
1:UI:80:ALA:CB	1:UI:83:SER:HB3	2.43	0.48
1:WJ:202:VAL:HB	1:WJ:205:LEU:HB2	1.95	0.48
1:WK:132:TYR:CB	1:WL:126:PHE:HZ	2.19	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WM:202:VAL:HB	1:WM:205:LEU:HB2	1.94	0.48
1:WP:202:VAL:HB	1:WP:205:LEU:HB2	1.95	0.48
5:N:99:VAL:O	5:N:102:MET:HG2	2.13	0.48
6:S:32:ASN:ND2	7:X:51:VAL:HG12	2.28	0.48
6:S:65:LEU:HD11	1:AD:365:ASN:HD21	1.78	0.48
1:3:266:VAL:HG22	1:3:387:VAL:HG22	1.95	0.48
1:5:266:VAL:HG22	1:5:387:VAL:HG22	1.95	0.48
1:8:294:ARG:HD2	1:8:367:GLU:OE1	2.13	0.48
1:AD:266:VAL:HG22	1:AD:387:VAL:HG22	1.95	0.48
1:AG:294:ARG:HD2	1:AG:367:GLU:OE1	2.12	0.48
1:UJ:256:PRO:HD2	1:WC:187:ASP:HB3	1.94	0.48
1:UK:127:SER:O	1:UK:131:ASN:HB2	2.14	0.48
1:WC:164:LEU:O	4:I:241:GLN:HG3	2.08	0.48
1:WK:193:ALA:CB	1:WL:213:VAL:HG11	2.44	0.48
1:WW:202:VAL:HB	1:WW:205:LEU:HB2	1.95	0.48
1:6:266:VAL:HG22	1:6:387:VAL:HG22	1.95	0.48
1:7:294:ARG:HD2	1:7:367:GLU:OE1	2.13	0.48
1:0:266:VAL:HG22	1:0:387:VAL:HG22	1.95	0.48
1:UJ:127:SER:O	1:UJ:131:ASN:HB2	2.14	0.48
1:WA:142:ARG:O	1:WA:146:THR:HG23	2.13	0.48
1:WA:196:HIS:CD2	1:WB:219:LEU:HD22	2.49	0.48
1:WI:202:VAL:HB	1:WI:205:LEU:HB2	1.94	0.48
1:WV:164:LEU:CB	4:G:152:ARG:HH12	2.27	0.48
3:E:178:LEU:HD13	3:E:181:LEU:HD23	1.95	0.48
4:J:150:PHE:CE1	4:J:172:PRO:HB2	2.48	0.48
5:O:4:ILE:HG12	1:1:372:ILE:CG2	2.42	0.48
1:6:294:ARG:HD2	1:6:367:GLU:OE1	2.13	0.48
1:AI:294:ARG:HD2	1:AI:367:GLU:OE1	2.12	0.48
1:AP:266:VAL:HG22	1:AP:387:VAL:HG22	1.95	0.48
1:UO:80:ALA:CB	1:UO:83:SER:HB3	2.43	0.48
1:WA:193:ALA:HB1	1:WB:213:VAL:CG1	2.43	0.48
1:WC:202:VAL:HB	1:WC:205:LEU:HB2	1.95	0.48
1:WD:167:ARG:HH21	1:WD:168:GLU:HA	1.77	0.48
1:WF:124:SER:O	1:WF:127:SER:N	2.46	0.48
1:WG:142:ARG:O	1:WG:146:THR:HG23	2.14	0.48
1:WR:202:VAL:HB	1:WR:205:LEU:HB2	1.95	0.48
1:WV:192:SER:O	1:WV:195:VAL:N	2.47	0.48
2:C:54:LYS:NZ	2:D:48:THR:HG21	2.29	0.48
3:E:101:PHE:CE2	4:F:80:THR:HG21	2.48	0.48
4:I:159:LEU:O	4:I:160:GLN:HB2	2.14	0.48
6:T:55:ARG:CZ	1:5:299:ASN:HD22	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:X:27:ASN:OD1	7:X:42:TYR:OH	2.27	0.48
1:2:266:VAL:HG22	1:2:387:VAL:HG22	1.95	0.48
1:AF:266:VAL:HG22	1:AF:387:VAL:HG22	1.95	0.48
1:UK:127:SER:O	1:UK:131:ASN:CG	2.52	0.48
1:UL:127:SER:O	1:UL:131:ASN:CG	2.52	0.48
1:UN:98:LEU:HD12	1:UN:146:THR:HG1	1.78	0.48
1:UN:127:SER:O	1:UN:131:ASN:CG	2.52	0.48
1:UP:167:ARG:NH1	1:8:236:LYS:CE	2.76	0.48
1:WB:128:GLU:HG2	1:WC:126:PHE:HD2	1.79	0.48
1:WB:197:LEU:HA	1:WC:175:SER:OG	2.13	0.48
1:WC:187:ASP:O	1:WC:190:GLN:HB3	2.14	0.48
1:WQ:164:LEU:HD23	4:F:149:LEU:HB2	1.95	0.48
5:L:55:GLN:HG2	5:L:71:VAL:HG22	1.95	0.48
1:AF:294:ARG:HD2	1:AF:367:GLU:OE1	2.13	0.48
1:AH:294:ARG:HD2	1:AH:367:GLU:OE1	2.13	0.48
1:AI:266:VAL:HG22	1:AI:387:VAL:HG22	1.95	0.48
1:AQ:266:VAL:HG22	1:AQ:387:VAL:HG22	1.95	0.48
1:WA:202:VAL:HB	1:WA:205:LEU:HB2	1.94	0.48
1:WJ:171:SER:HB3	1:WJ:206:PRO:HG3	1.96	0.48
1:WV:202:VAL:HB	1:WV:205:LEU:HB2	1.95	0.48
3:E:86:PHE:CZ	4:F:88:VAL:HA	2.48	0.48
5:M:11:ILE:HG23	1:AB:372:ILE:HG21	1.89	0.48
1:AO:266:VAL:HG22	1:AO:387:VAL:HG22	1.95	0.48
1:UJ:103:GLN:HB3	1:WD:182:PRO:HA	1.91	0.48
1:UJ:127:SER:O	1:UJ:131:ASN:CG	2.52	0.48
1:WN:200:SER:CB	1:WO:173:SER:HB2	2.44	0.48
2:D:60:ILE:HA	2:D:63:ILE:HG12	1.96	0.48
3:E:158:PRO:HG2	3:E:162:ASN:ND2	2.16	0.48
7:V:27:ASN:ND2	7:V:45:LYS:O	2.33	0.48
1:AK:296:ARG:HH11	1:AK:296:ARG:HG2	1.79	0.48
1:UJ:129:GLN:O	1:UJ:133:GLN:N	2.29	0.47
1:UO:127:SER:O	1:UO:131:ASN:CG	2.52	0.47
1:WA:216:SER:O	1:WW:190:GLN:HG2	2.14	0.47
1:WH:187:ASP:OD2	1:WH:190:GLN:HB2	2.14	0.47
1:WI:193:ALA:HB1	1:WJ:213:VAL:HG11	1.94	0.47
1:WN:142:ARG:O	1:WN:146:THR:HG23	2.14	0.47
1:WO:202:VAL:HB	1:WO:205:LEU:HB2	1.95	0.47
1:WP:163:SER:C	1:WP:165:PHE:H	2.17	0.47
1:WS:165:PHE:HE1	2:A:89:GLY:C	2.17	0.47
1:WU:113:PHE:CE2	1:WU:139:GLU:HG3	2.48	0.47
2:B:44:ILE:HD13	2:B:44:ILE:HA	1.75	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:94:ALA:HB2	3:E:179:ILE:HA	1.96	0.47
5:K:7:ILE:CD1	1:AM:278:THR:HG21	2.44	0.47
6:R:29:ASN:HD21	6:R:41:ARG:H	1.61	0.47
7:W:44:ALA:HB2	7:W:96:VAL:HG22	1.96	0.47
7:Z:42:TYR:O	7:Z:94:PRO:HB3	2.14	0.47
1:9:296:ARG:HG2	1:9:296:ARG:HH11	1.79	0.47
1:AE:266:VAL:HG22	1:AE:387:VAL:HG22	1.95	0.47
1:WB:187:ASP:OD1	1:WB:190:GLN:N	2.41	0.47
1:WG:202:VAL:HB	1:WG:205:LEU:HB2	1.95	0.47
1:WQ:168:GLU:O	1:WQ:169:GLN:C	2.52	0.47
6:T:72:HIS:HD2	1:7:365:ASN:CG	2.16	0.47
1:AD:296:ARG:HG2	1:AD:296:ARG:HH11	1.80	0.47
1:AG:296:ARG:HG2	1:AG:296:ARG:HH11	1.79	0.47
1:AL:266:VAL:HG22	1:AL:387:VAL:HG22	1.95	0.47
1:AN:296:ARG:HG2	1:AN:296:ARG:HH11	1.79	0.47
1:AQ:296:ARG:HG2	1:AQ:296:ARG:HH11	1.79	0.47
1:UL:180:LEU:HB2	1:UL:215:GLN:HE22	1.79	0.47
1:WA:167:ARG:NH2	4:H:162:PRO:HD3	2.26	0.47
1:WH:165:PHE:O	4:J:144:GLU:HG2	2.14	0.47
1:WT:202:VAL:HB	1:WT:205:LEU:HB2	1.95	0.47
1:WU:115:LEU:HD21	1:WU:134:ARG:HD3	1.95	0.47
1:WW:142:ARG:O	1:WW:146:THR:HG23	2.14	0.47
4:G:82:SER:HA	5:K:103:GLN:HE21	1.79	0.47
1:7:266:VAL:HG22	1:7:387:VAL:HG22	1.95	0.47
1:UM:127:SER:O	1:UM:131:ASN:HB2	2.14	0.47
1:UP:127:SER:O	1:UP:131:ASN:CG	2.52	0.47
1:WA:196:HIS:HB3	1:WB:211:THR:CG2	2.36	0.47
1:WD:202:VAL:HB	1:WD:205:LEU:HB2	1.95	0.47
1:WI:193:ALA:HB1	1:WJ:213:VAL:CG2	2.45	0.47
1:WV:112:GLY:HA2	1:WV:135:ALA:CA	2.28	0.47
2:B:70:LEU:O	2:B:74:LEU:HG	2.14	0.47
4:H:190:PHE:CD1	4:I:220:PRO:HG3	2.49	0.47
6:R:24:GLU:OE1	7:W:5:ASN:HB2	2.15	0.47
1:4:296:ARG:HG2	1:4:296:ARG:HH11	1.79	0.47
1:7:296:ARG:HG2	1:7:296:ARG:HH11	1.80	0.47
1:AB:296:ARG:HG2	1:AB:296:ARG:HH11	1.79	0.47
1:AP:296:ARG:HG2	1:AP:296:ARG:HH11	1.79	0.47
1:UL:103:GLN:CG	1:WH:182:PRO:HB3	2.43	0.47
1:WU:142:ARG:O	1:WU:146:THR:HG23	2.14	0.47
2:D:2:THR:OG1	2:D:4:GLU:OE1	2.29	0.47
7:Y:52:ASP:OD1	7:Y:63:LYS:HD3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:266:VAL:HG22	1:1:387:VAL:HG22	1.95	0.47
1:6:296:ARG:HG2	1:6:296:ARG:HH11	1.79	0.47
1:AH:296:ARG:HG2	1:AH:296:ARG:HH11	1.80	0.47
1:AK:266:VAL:HG22	1:AK:387:VAL:HG22	1.95	0.47
1:AM:266:VAL:HG22	1:AM:387:VAL:HG22	1.95	0.47
1:UN:127:SER:O	1:UN:131:ASN:HB2	2.14	0.47
2:B:7:MET:SD	2:C:70:LEU:HD22	2.54	0.47
5:M:4:ILE:HG13	1:AC:372:ILE:HG22	1.92	0.47
1:9:266:VAL:HG22	1:9:387:VAL:HG22	1.95	0.47
1:0:296:ARG:HG2	1:0:296:ARG:HH11	1.79	0.47
1:AA:296:ARG:HG2	1:AA:296:ARG:HH11	1.79	0.47
1:AJ:266:VAL:HG22	1:AJ:387:VAL:HG22	1.95	0.47
1:AJ:296:ARG:HG2	1:AJ:296:ARG:HH11	1.80	0.47
1:UL:98:LEU:HD12	1:UL:146:THR:HG1	1.78	0.47
1:UM:127:SER:O	1:UM:131:ASN:CG	2.52	0.47
1:WF:147:LEU:HA	1:WG:215:GLN:O	2.14	0.47
1:WI:196:HIS:HB3	1:WJ:211:THR:CG2	2.32	0.47
1:WI:197:LEU:HA	1:WJ:175:SER:OG	2.15	0.47
1:WT:186:LEU:HA	1:WT:190:GLN:OE1	2.15	0.47
1:WW:118:GLN:O	1:WW:119:GLU:C	2.49	0.47
1:WW:145:GLU:O	1:WW:147:LEU:N	2.48	0.47
4:F:138:MET:O	4:F:142:THR:OG1	2.16	0.47
4:F:189:ILE:O	4:F:192:PRO:HD2	2.15	0.47
4:G:205:MET:CE	4:H:209:MET:HA	2.45	0.47
5:K:80:VAL:HG22	6:Q:131:MET:SD	2.54	0.47
6:R:96:ASP:OD1	6:R:96:ASP:N	2.39	0.47
6:T:55:ARG:HH22	1:5:299:ASN:HD22	1.59	0.47
6:T:73:ILE:HD12	6:T:74:PRO:HD2	1.95	0.47
1:1:296:ARG:HG2	1:1:296:ARG:HH11	1.80	0.47
1:AC:296:ARG:HG2	1:AC:296:ARG:HH11	1.79	0.47
1:UL:127:SER:O	1:UL:131:ASN:HB2	2.14	0.47
3:E:72:TRP:HE1	3:E:161:SER:HB2	1.80	0.47
5:N:4:ILE:HG12	1:7:372:ILE:HB	1.96	0.47
6:S:72:HIS:CA	1:AE:295:SER:CB	2.93	0.47
6:U:72:HIS:CE1	1:2:294:ARG:CG	2.96	0.47
1:AN:266:VAL:HG22	1:AN:387:VAL:HG22	1.95	0.47
1:UI:127:SER:O	1:UI:131:ASN:CG	2.52	0.47
1:UL:167:ARG:HA	1:UL:167:ARG:HD3	1.74	0.47
1:UO:127:SER:O	1:UO:131:ASN:HB2	2.14	0.47
1:WJ:164:LEU:HD23	3:E:144:LEU:CB	2.43	0.47
6:S:73:ILE:HG22	6:S:75:ALA:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:8:266:VAL:HG22	1:8:387:VAL:HG22	1.95	0.47
1:AE:296:ARG:HG2	1:AE:296:ARG:HH11	1.80	0.47
1:AL:296:ARG:HG2	1:AL:296:ARG:HH11	1.80	0.47
1:UM:136:LEU:HD23	1:UM:157:LEU:CD1	2.45	0.47
1:UO:129:GLN:O	1:UO:133:GLN:N	2.29	0.47
1:WB:145:GLU:O	1:WB:147:LEU:N	2.48	0.47
1:WF:125:GLN:O	1:WF:126:PHE:C	2.53	0.47
1:WJ:125:GLN:HB2	3:E:242:HIS:CG	2.50	0.47
2:C:31:THR:O	2:C:35:ILE:HG12	2.14	0.47
4:J:138:MET:HB3	4:J:138:MET:HE2	1.61	0.47
5:M:48:ARG:NH2	6:S:6:ASP:OD2	2.48	0.47
6:Q:22:ARG:NH2	6:Q:108:GLN:OE1	2.47	0.47
1:AI:296:ARG:HG2	1:AI:296:ARG:HH11	1.80	0.47
1:AM:296:ARG:HG2	1:AM:296:ARG:HH11	1.79	0.47
1:AO:296:ARG:HG2	1:AO:296:ARG:HH11	1.80	0.47
1:WI:193:ALA:HB1	1:WJ:213:VAL:CG1	2.45	0.46
2:C:4:GLU:C	2:C:6:VAL:N	2.67	0.46
3:E:103:GLY:O	3:E:106:MET:HB2	2.16	0.46
4:F:59:LEU:HD21	5:K:102:MET:HE3	1.97	0.46
5:M:7:ILE:O	5:M:11:ILE:HG23	2.16	0.46
5:N:4:ILE:CG1	1:7:372:ILE:HG21	2.45	0.46
6:U:67:LEU:HD11	6:U:74:PRO:HA	1.97	0.46
7:W:14:LEU:HD21	7:W:116:ILE:HG13	1.97	0.46
1:UJ:98:LEU:HD12	1:UJ:146:THR:HG1	1.80	0.46
1:UO:136:LEU:HD23	1:UO:157:LEU:CD1	2.45	0.46
1:UP:73:MET:HE3	1:UP:99:ARG:CD	2.38	0.46
1:WE:134:ARG:HB3	1:WE:134:ARG:NH2	2.27	0.46
1:WG:112:GLY:HA3	1:WG:139:GLU:OE1	2.15	0.46
1:WG:149:PRO:HG2	1:WG:190:GLN:HE22	1.79	0.46
1:WP:164:LEU:HD21	4:F:151:ALA:CB	2.43	0.46
1:WQ:125:GLN:O	1:WQ:126:PHE:C	2.53	0.46
1:WU:190:GLN:NE2	1:WV:216:SER:O	2.47	0.46
2:A:17:ALA:HB2	4:G:195:ILE:HD12	1.96	0.46
2:B:29:LEU:HD23	2:B:30:ILE:HD13	1.96	0.46
4:I:161:GLY:C	4:I:163:GLU:N	2.69	0.46
5:K:21:ALA:HB3	1:AK:278:THR:CG2	2.39	0.46
6:S:65:LEU:HD13	1:AD:295:SER:OG	2.14	0.46
6:S:114:LEU:HD21	7:Y:126:MET:CE	2.45	0.46
1:3:296:ARG:HG2	1:3:296:ARG:HH11	1.80	0.46
1:WA:170:LYS:H	1:WA:170:LYS:HD2	1.80	0.46
1:WD:187:ASP:OD1	1:WD:190:GLN:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WJ:164:LEU:HD11	3:E:145:TRP:HA	1.97	0.46
1:WK:201:ALA:HA	1:WL:158:ALA:HB2	1.98	0.46
1:WN:197:LEU:CD1	1:WO:175:SER:HB3	2.42	0.46
1:WU:190:GLN:HG2	1:WV:216:SER:O	2.15	0.46
4:F:230:ASP:O	4:F:234:LEU:HG	2.15	0.46
4:J:105:ILE:HD13	5:O:34:PHE:HZ	1.80	0.46
1:2:296:ARG:HH11	1:2:296:ARG:HG2	1.79	0.46
1:UJ:136:LEU:HD23	1:UJ:157:LEU:CD1	2.46	0.46
1:UN:73:MET:HE3	1:UN:99:ARG:CD	2.41	0.46
1:UP:73:MET:HE1	1:UP:99:ARG:HD2	1.97	0.46
1:UP:127:SER:O	1:UP:131:ASN:HB2	2.14	0.46
1:WF:143:THR:OG1	1:WG:154:ARG:HG2	2.14	0.46
1:WJ:200:SER:O	1:WK:158:ALA:HB2	2.15	0.46
1:WN:135:ALA:O	1:WN:139:GLU:HG2	2.16	0.46
4:J:83:ALA:HB3	4:J:84:PRO:CD	2.38	0.46
5:L:15:GLN:HG3	5:L:16:ALA:N	2.30	0.46
1:5:296:ARG:HG2	1:5:296:ARG:HH11	1.79	0.46
1:WD:190:GLN:NE2	1:WE:216:SER:O	2.49	0.46
1:WE:143:THR:HA	1:WE:146:THR:HG23	1.97	0.46
4:F:75:ARG:HD3	4:F:89:LEU:HD11	1.97	0.46
5:O:48:ARG:NH2	6:U:6:ASP:OD1	2.48	0.46
6:S:76:GLN:H	1:AD:297:GLN:NE2	2.12	0.46
7:X:114:ALA:O	7:X:118:VAL:HG23	2.16	0.46
7:Z:47:VAL:HG12	7:Z:67:VAL:HG22	1.96	0.46
1:AF:296:ARG:HG2	1:AF:296:ARG:HH11	1.80	0.46
1:UN:136:LEU:HD23	1:UN:157:LEU:CD1	2.45	0.46
1:WK:135:ALA:O	1:WK:139:GLU:HG2	2.16	0.46
1:WO:135:ALA:O	1:WO:139:GLU:HG2	2.16	0.46
1:WQ:147:LEU:O	1:WQ:148:GLY:C	2.54	0.46
4:J:159:LEU:HD13	4:J:165:VAL:HG22	1.98	0.46
6:R:51:LYS:O	6:R:55:ARG:HG2	2.16	0.46
1:8:235:LEU:HD13	1:9:244:ARG:HH22	1.81	0.46
1:UP:136:LEU:HD23	1:UP:157:LEU:CD1	2.45	0.46
1:WC:135:ALA:O	1:WC:139:GLU:HG2	2.16	0.46
1:WD:135:ALA:O	1:WD:139:GLU:HG2	2.16	0.46
1:WR:165:PHE:C	1:WR:167:ARG:H	2.18	0.46
4:G:59:LEU:O	4:G:65:THR:OG1	2.21	0.46
1:8:296:ARG:HG2	1:8:296:ARG:HH11	1.80	0.46
1:0:235:LEU:HD13	1:AA:244:ARG:HH22	1.81	0.46
1:AH:235:LEU:HD13	1:AI:244:ARG:HH22	1.81	0.46
1:AK:235:LEU:HD13	1:AL:244:ARG:HH22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UJ:98:LEU:HD11	1:UJ:143:THR:O	2.16	0.46
1:UM:98:LEU:HD12	1:UM:146:THR:HG1	1.80	0.46
1:WT:197:LEU:HA	1:WU:175:SER:OG	2.16	0.46
4:I:138:MET:O	4:I:142:THR:OG1	2.28	0.46
5:N:11:ILE:CG2	1:6:372:ILE:HB	2.45	0.46
6:Q:113:SER:O	6:Q:117:GLN:HG3	2.15	0.46
6:T:78:VAL:C	1:7:299:ASN:ND2	2.48	0.46
6:U:76:GLN:OE1	1:2:297:GLN:OE1	2.33	0.46
7:X:43:ARG:HD2	7:X:69:GLU:OE2	2.14	0.46
1:3:235:LEU:HD13	1:4:244:ARG:HH22	1.81	0.46
1:AN:235:LEU:HD13	1:AO:244:ARG:HH22	1.81	0.46
1:WH:197:LEU:HA	1:WI:175:SER:CB	2.46	0.46
1:WK:197:LEU:HD13	1:WL:175:SER:OG	2.16	0.46
1:WU:167:ARG:NH1	4:G:158:PRO:HD3	2.30	0.46
1:WW:187:ASP:N	1:WW:190:GLN:HB2	2.31	0.46
2:C:85:PRO:HG3	4:I:238:SER:HA	1.97	0.46
3:E:86:PHE:HZ	4:F:87:GLN:O	1.97	0.46
4:F:150:PHE:CZ	4:F:172:PRO:HB2	2.51	0.46
4:G:97:THR:O	4:G:101:MET:HG2	2.16	0.46
4:G:171:LEU:HB3	4:G:172:PRO:HD3	1.97	0.46
6:U:65:LEU:HG	6:U:75:ALA:CA	2.46	0.46
1:1:235:LEU:HD13	1:2:244:ARG:HH22	1.81	0.46
1:5:235:LEU:HD13	1:6:244:ARG:HH22	1.81	0.46
1:AO:235:LEU:HD13	1:AP:244:ARG:HH22	1.81	0.46
1:UK:136:LEU:HD23	1:UK:157:LEU:CD1	2.45	0.46
1:UL:98:LEU:HD11	1:UL:143:THR:O	2.16	0.46
1:UL:136:LEU:HD23	1:UL:157:LEU:CD1	2.45	0.46
1:UN:103:GLN:CG	1:WS:182:PRO:HB3	2.43	0.46
1:WF:196:HIS:CD2	1:WG:219:LEU:HD22	2.51	0.46
1:WF:200:SER:O	1:WG:158:ALA:HB2	2.16	0.46
1:WI:165:PHE:HB2	4:J:159:LEU:O	2.16	0.46
1:WM:145:GLU:O	1:WM:146:THR:C	2.54	0.46
1:WW:135:ALA:O	1:WW:139:GLU:HG2	2.16	0.46
2:C:15:LYS:HB2	2:C:15:LYS:HE2	1.70	0.46
2:C:24:LEU:HD11	2:C:62:ILE:HD11	1.96	0.46
6:R:66:THR:OG1	1:AJ:294:ARG:CG	2.64	0.46
1:AC:235:LEU:HD13	1:AD:244:ARG:HH22	1.81	0.46
1:WP:142:ARG:O	1:WP:146:THR:HG23	2.16	0.45
1:WP:197:LEU:CD1	1:WQ:175:SER:OG	2.58	0.45
1:WS:124:SER:CB	2:A:8:MET:CE	2.82	0.45
2:A:84:LEU:HD21	4:G:185:ILE:HG23	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:235:LEU:HD13	1:AC:244:ARG:HH22	1.81	0.45
1:AE:235:LEU:HD13	1:AF:244:ARG:HH22	1.81	0.45
1:UO:162:PRO:O	1:UO:163:SER:C	2.55	0.45
1:UP:162:PRO:O	1:UP:163:SER:C	2.55	0.45
1:WE:135:ALA:O	1:WE:139:GLU:HG2	2.16	0.45
1:WG:135:ALA:O	1:WG:139:GLU:HG2	2.16	0.45
1:WK:145:GLU:O	1:WK:147:LEU:N	2.49	0.45
1:WN:200:SER:HB2	1:WO:173:SER:CB	2.45	0.45
1:WP:135:ALA:O	1:WP:139:GLU:HG2	2.16	0.45
3:E:108:LEU:HA	3:E:108:LEU:HD23	1.76	0.45
4:H:109:TYR:HA	4:H:113:TYR:HB3	1.98	0.45
4:I:48:ILE:HD11	5:O:89:ARG:HH12	1.81	0.45
6:T:115:LYS:HE2	7:Z:4:LEU:HD21	1.97	0.45
1:6:235:LEU:HD13	1:7:244:ARG:HH22	1.81	0.45
1:UI:94:HIS:HB2	1:UI:146:THR:HG21	1.97	0.45
1:UO:94:HIS:HB2	1:UO:146:THR:HG21	1.97	0.45
1:UP:98:LEU:HD11	1:UP:143:THR:O	2.16	0.45
1:WU:112:GLY:HA2	1:WU:139:GLU:OE1	2.17	0.45
1:WU:114:GLU:O	1:WU:115:LEU:C	2.54	0.45
1:WW:145:GLU:C	1:WW:147:LEU:H	2.19	0.45
4:I:190:PHE:CD1	4:J:220:PRO:HG3	2.52	0.45
5:N:7:ILE:HD11	1:7:370:ARG:NH2	2.30	0.45
5:N:69:ASN:HB2	6:T:16:LEU:HD23	1.98	0.45
1:AA:235:LEU:HD13	1:AB:244:ARG:HH22	1.81	0.45
1:AI:235:LEU:HD13	1:AJ:244:ARG:HH22	1.81	0.45
1:UI:162:PRO:O	1:UI:163:SER:C	2.55	0.45
1:UK:98:LEU:HD11	1:UK:143:THR:O	2.16	0.45
1:WA:217:GLY:HA3	1:WW:190:GLN:HG2	1.98	0.45
1:WC:181:GLU:O	1:WC:182:PRO:C	2.54	0.45
1:WH:139:GLU:HB3	1:WI:154:ARG:HH21	1.80	0.45
1:WM:135:ALA:O	1:WM:139:GLU:HG2	2.16	0.45
1:WQ:160:PRO:HG2	1:WQ:170:LYS:O	2.16	0.45
1:WV:190:GLN:HG2	1:WW:217:GLY:HA3	1.97	0.45
3:E:158:PRO:HD2	3:E:162:ASN:ND2	2.32	0.45
4:H:66:ARG:HB2	4:H:178:GLU:OE1	2.17	0.45
5:K:86:ILE:HG12	5:P:102:MET:CE	2.46	0.45
6:Q:104:ARG:O	6:Q:108:GLN:HG2	2.17	0.45
6:S:33:ALA:O	6:S:98:ASN:ND2	2.50	0.45
1:AL:235:LEU:HD13	1:AM:244:ARG:HH22	1.81	0.45
1:UI:136:LEU:HD23	1:UI:157:LEU:CD1	2.45	0.45
1:UK:162:PRO:O	1:UK:163:SER:C	2.55	0.45

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:UK:207:PRO:HG2	1:WE:187:ASP:OD1	2.10	0.45
1:UL:162:PRO:O	1:UL:163:SER:C	2.55	0.45
1:UL:164:LEU:HD22	1:UL:164:LEU:H	1.81	0.45
1:UM:164:LEU:HD22	1:UM:164:LEU:H	1.82	0.45
1:WC:164:LEU:HB3	4:H:152:ARG:NH2	2.30	0.45
1:WC:193:ALA:HB1	1:WD:213:VAL:HG21	1.98	0.45
1:WQ:135:ALA:O	1:WQ:139:GLU:HG2	2.16	0.45
1:WT:135:ALA:O	1:WT:139:GLU:HG2	2.16	0.45
1:WT:190:GLN:HG2	1:WU:217:GLY:HA3	1.99	0.45
2:A:58:VAL:HG21	4:G:207:LEU:HD21	1.97	0.45
4:F:60:MET:CE	4:G:91:GLY:HA3	2.47	0.45
6:S:128:LYS:HE2	7:X:134:GLN:HG2	1.98	0.45
1:2:235:LEU:HD13	1:3:244:ARG:HH22	1.81	0.45
1:7:235:LEU:HD13	1:8:244:ARG:HH22	1.81	0.45
1:AG:235:LEU:HD13	1:AH:244:ARG:HH22	1.81	0.45
1:AJ:235:LEU:HD13	1:AK:244:ARG:HH22	1.81	0.45
1:UK:80:ALA:N	1:UK:85:ALA:O	2.49	0.45
1:WB:164:LEU:HD23	1:WB:164:LEU:HA	1.75	0.45
1:WF:114:GLU:HA	1:WF:117:ASP:HB2	1.99	0.45
1:WG:190:GLN:HG3	1:WH:217:GLY:HA3	1.99	0.45
1:WI:197:LEU:HD13	1:WJ:175:SER:OG	2.09	0.45
1:WV:135:ALA:O	1:WV:139:GLU:HG2	2.16	0.45
5:N:15:GLN:HG3	5:N:16:ALA:N	2.30	0.45
5:O:15:GLN:HG3	5:O:16:ALA:N	2.30	0.45
5:P:15:GLN:HG3	5:P:16:ALA:N	2.30	0.45
5:P:61:LEU:HD21	6:U:50:LYS:NZ	2.31	0.45
6:T:78:VAL:CG1	1:6:361:ASN:ND2	2.78	0.45
1:UM:94:HIS:HB2	1:UM:146:THR:HG21	1.97	0.45
1:UN:52:ARG:O	1:UN:88:VAL:N	2.38	0.45
1:WA:187:ASP:OD2	1:WA:190:GLN:HG3	2.16	0.45
1:WF:128:GLU:CG	1:WG:126:PHE:CD2	2.98	0.45
1:WJ:135:ALA:O	1:WJ:139:GLU:HG2	2.16	0.45
1:WS:137:GLU:HG3	1:WS:155:VAL:O	2.16	0.45
1:WT:167:ARG:HG2	1:WT:168:GLU:N	2.31	0.45
1:WW:219:LEU:HG	1:WW:221:THR:H	1.82	0.45
4:G:204:LEU:HD12	4:G:214:PRO:HB3	1.99	0.45
4:G:205:MET:HE3	4:H:209:MET:HA	1.99	0.45
7:X:4:LEU:N	7:X:126:MET:HE3	2.31	0.45
1:UJ:162:PRO:O	1:UJ:163:SER:C	2.55	0.45
1:UM:162:PRO:O	1:UM:163:SER:C	2.55	0.45
1:UN:162:PRO:O	1:UN:163:SER:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WB:112:GLY:HA2	1:WB:139:GLU:OE1	2.17	0.45
1:WC:169:GLN:NE2	1:WC:170:LYS:O	2.44	0.45
1:WH:167:ARG:HH22	4:J:162:PRO:HG2	1.80	0.45
1:WK:193:ALA:HB1	1:WL:213:VAL:HG11	1.98	0.45
1:WL:145:GLU:O	1:WL:146:THR:C	2.53	0.45
1:WS:219:LEU:HG	1:WS:221:THR:H	1.82	0.45
1:WV:164:LEU:HB3	4:G:152:ARG:HH12	1.82	0.45
2:D:60:ILE:O	2:D:64:VAL:HG22	2.17	0.45
4:J:239:LEU:HD12	4:J:239:LEU:HA	1.84	0.45
1:9:235:LEU:HD13	1:0:244:ARG:HH22	1.81	0.45
1:UL:129:GLN:O	1:UL:133:GLN:N	2.29	0.45
1:UM:80:ALA:N	1:UM:85:ALA:O	2.49	0.45
1:UP:167:ARG:HH11	1:8:236:LYS:CE	2.29	0.45
1:WB:113:PHE:CE2	1:WB:139:GLU:HG3	2.52	0.45
1:WB:114:GLU:O	1:WB:115:LEU:C	2.55	0.45
1:WE:164:LEU:CD2	4:I:159:LEU:HD22	2.46	0.45
1:WG:206:PRO:O	1:WG:207:PRO:C	2.56	0.45
1:WO:206:PRO:O	1:WO:207:PRO:C	2.56	0.45
1:WU:164:LEU:CA	4:G:152:ARG:HG3	2.47	0.45
2:A:10:GLY:O	2:A:14:MET:HG2	2.16	0.45
4:H:90:LEU:HG	5:M:104:VAL:CG2	2.47	0.45
1:AF:235:LEU:HD13	1:AG:244:ARG:HH22	1.81	0.45
1:UM:98:LEU:HD11	1:UM:143:THR:O	2.16	0.45
1:UN:80:ALA:N	1:UN:85:ALA:O	2.49	0.45
1:UO:164:LEU:HD22	1:UO:164:LEU:H	1.82	0.45
1:WE:206:PRO:O	1:WE:207:PRO:C	2.56	0.45
1:WF:135:ALA:O	1:WF:139:GLU:HG2	2.16	0.45
1:WO:219:LEU:HG	1:WO:221:THR:H	1.82	0.45
3:E:8:GLN:O	3:E:12:TRP:HD1	2.00	0.45
3:E:144:LEU:HB3	4:J:149:LEU:HD22	1.98	0.45
4:J:114:GLN:HB3	4:J:115:PRO:HD3	1.99	0.45
6:Q:30:ILE:HG23	6:Q:102:MET:HE1	1.99	0.45
1:AM:235:LEU:HD13	1:AN:244:ARG:HH22	1.81	0.45
1:WH:135:ALA:O	1:WH:139:GLU:HG2	2.16	0.44
1:WI:165:PHE:CE2	4:J:162:PRO:HA	2.53	0.44
1:WQ:206:PRO:O	1:WQ:207:PRO:C	2.56	0.44
1:WU:135:ALA:O	1:WU:139:GLU:HG2	2.16	0.44
1:WW:192:SER:O	1:WW:195:VAL:HB	2.17	0.44
2:C:27:VAL:HG22	2:C:57:ALA:HB1	1.99	0.44
6:S:31:ALA:HB1	7:X:13:ALA:HB2	1.98	0.44
6:S:73:ILE:HD12	1:AD:363:THR:HG23	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:W:86:ASP:OD1	7:W:86:ASP:N	2.41	0.44
1:UI:103:GLN:NE2	1:WB:182:PRO:HB3	2.32	0.44
1:UJ:55:PHE:O	1:UJ:85:ALA:HA	2.18	0.44
1:UJ:103:GLN:OE1	1:WD:182:PRO:CG	2.65	0.44
1:UN:98:LEU:HD11	1:UN:143:THR:O	2.16	0.44
1:WB:166:VAL:O	4:H:152:ARG:CD	2.63	0.44
1:WC:131:ASN:O	1:WC:134:ARG:N	2.51	0.44
1:WE:161:LYS:H	1:WE:161:LYS:HD3	1.82	0.44
1:WL:159:MET:HE3	1:WL:159:MET:HB2	1.94	0.44
1:WV:187:ASP:N	1:WV:190:GLN:HB2	2.31	0.44
1:WW:206:PRO:O	1:WW:207:PRO:C	2.56	0.44
2:B:2:THR:HG23	2:B:5:SER:H	1.82	0.44
2:B:20:LEU:HD11	2:B:73:LEU:HD13	2.00	0.44
5:K:15:GLN:HG3	5:K:16:ALA:N	2.30	0.44
5:L:7:ILE:CG1	1:AI:370:ARG:HH21	2.26	0.44
5:M:70:ASP:OD1	6:S:13:GLN:NE2	2.50	0.44
6:S:65:LEU:HD11	1:AD:365:ASN:ND2	2.32	0.44
6:S:73:ILE:HD13	1:AE:297:GLN:CB	2.35	0.44
6:S:109:PHE:CZ	7:X:118:VAL:HG13	2.53	0.44
1:4:235:LEU:HD13	1:5:244:ARG:HH22	1.81	0.44
1:AP:235:LEU:HD13	1:AQ:244:ARG:HH22	1.81	0.44
1:UI:98:LEU:HD11	1:UI:143:THR:O	2.16	0.44
1:UK:164:LEU:H	1:UK:164:LEU:HD22	1.82	0.44
1:UL:55:PHE:O	1:UL:85:ALA:HA	2.18	0.44
1:UM:75:ILE:HG21	1:UM:96:LEU:HD11	2.00	0.44
1:UN:164:LEU:H	1:UN:164:LEU:HD22	1.82	0.44
1:WH:206:PRO:O	1:WH:207:PRO:C	2.55	0.44
1:WJ:206:PRO:O	1:WJ:207:PRO:C	2.56	0.44
1:WP:186:LEU:HA	1:WP:190:GLN:OE1	2.17	0.44
1:WR:142:ARG:O	1:WR:146:THR:HG23	2.16	0.44
3:E:75:MET:O	3:E:79:LEU:HG	2.17	0.44
4:G:57:ILE:O	4:G:61:MET:HB2	2.17	0.44
4:J:204:LEU:HD11	4:J:217:ILE:HD12	1.99	0.44
6:Q:23:GLN:HE22	7:V:125:MET:HE1	1.82	0.44
1:UJ:94:HIS:HB2	1:UJ:146:THR:HG21	1.97	0.44
1:UK:98:LEU:HD12	1:UK:146:THR:HG1	1.79	0.44
1:WD:206:PRO:O	1:WD:207:PRO:C	2.56	0.44
1:WF:166:VAL:HG22	1:WF:168:GLU:H	1.82	0.44
1:WO:190:GLN:NE2	1:WP:216:SER:O	2.50	0.44
1:WQ:187:ASP:OD1	1:WQ:188:GLU:N	2.51	0.44
1:WR:135:ALA:O	1:WR:139:GLU:HG2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WS:206:PRO:O	1:WS:207:PRO:C	2.56	0.44
1:WT:134:ARG:HH21	1:WT:134:ARG:HB3	1.83	0.44
1:WU:158:ALA:O	1:WU:160:PRO:HD3	2.18	0.44
1:WU:206:PRO:O	1:WU:207:PRO:C	2.55	0.44
6:S:72:HIS:CA	1:AE:295:SER:HB3	2.45	0.44
1:UM:160:PRO:HG2	1:UM:170:LYS:HB3	2.00	0.44
1:WA:196:HIS:NE2	1:WB:219:LEU:HD22	2.33	0.44
1:WF:206:PRO:O	1:WF:207:PRO:C	2.56	0.44
1:WI:206:PRO:O	1:WI:207:PRO:C	2.56	0.44
1:WQ:171:SER:HB3	1:WQ:206:PRO:HD3	2.00	0.44
1:WS:197:LEU:CD1	1:WT:175:SER:OG	2.64	0.44
1:WT:128:GLU:CG	1:WU:126:PHE:CD2	2.99	0.44
4:H:127:LEU:HD23	4:H:127:LEU:HA	1.88	0.44
5:M:21:ALA:HB3	1:0:278:THR:HG21	1.97	0.44
1:AD:235:LEU:HD13	1:AE:244:ARG:HH22	1.81	0.44
1:UI:55:PHE:O	1:UI:85:ALA:HA	2.18	0.44
1:UJ:100:LEU:HD23	1:UJ:103:GLN:HE21	1.83	0.44
1:UK:55:PHE:O	1:UK:85:ALA:HA	2.18	0.44
1:UN:75:ILE:HG21	1:UN:96:LEU:HD11	2.00	0.44
1:UP:80:ALA:N	1:UP:85:ALA:O	2.49	0.44
1:WF:148:GLY:N	1:WG:215:GLN:O	2.39	0.44
1:WI:167:ARG:CG	4:J:160:GLN:O	2.65	0.44
3:E:123:PRO:HB2	3:E:126:ALA:HB3	1.99	0.44
4:F:213:PRO:HA	4:F:214:PRO:HD3	1.91	0.44
4:I:147:LEU:HD21	4:I:165:VAL:HG11	2.00	0.44
6:Q:49:LEU:O	6:Q:53:MET:HG2	2.17	0.44
1:UL:160:PRO:HG2	1:UL:170:LYS:HB3	2.00	0.44
1:WB:113:PHE:HB3	1:WC:134:ARG:CZ	2.48	0.44
1:WB:142:ARG:O	1:WB:146:THR:HG23	2.17	0.44
1:WD:191:ILE:O	1:WD:195:VAL:HG23	2.17	0.44
1:WE:200:SER:O	1:WF:158:ALA:HB3	2.18	0.44
1:WH:219:LEU:HG	1:WH:221:THR:H	1.82	0.44
1:WJ:145:GLU:HG2	1:WJ:153:ALA:N	2.33	0.44
1:WN:219:LEU:HG	1:WN:221:THR:H	1.82	0.44
1:WP:196:HIS:CD2	1:WQ:219:LEU:HD13	2.52	0.44
1:WS:168:GLU:O	1:WS:169:GLN:HB3	2.18	0.44
1:WT:206:PRO:O	1:WT:207:PRO:C	2.56	0.44
1:UL:94:HIS:HB2	1:UL:146:THR:HG21	1.97	0.44
1:UO:55:PHE:O	1:UO:85:ALA:HA	2.18	0.44
1:UO:75:ILE:HG21	1:UO:96:LEU:HD11	2.00	0.44
1:WA:206:PRO:O	1:WA:207:PRO:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WC:130:VAL:HG12	1:WC:134:ARG:HD2	1.99	0.44
1:WC:200:SER:O	1:WD:158:ALA:HB3	2.14	0.44
1:WE:164:LEU:HD13	1:WE:165:PHE:H	1.82	0.44
1:WG:164:LEU:HD13	1:WG:164:LEU:HA	1.80	0.44
1:WS:125:GLN:CB	2:A:4:GLU:HB2	2.40	0.44
1:WW:134:ARG:HH21	1:WW:134:ARG:CB	2.30	0.44
4:I:161:GLY:C	4:I:163:GLU:H	2.20	0.44
4:I:212:VAL:HG21	4:I:217:ILE:HD11	2.00	0.44
5:N:21:ALA:HB3	1:4:278:THR:CG2	2.31	0.44
6:S:72:HIS:ND1	1:AD:365:ASN:CG	2.70	0.44
1:AP:429:THR:OG1	1:AQ:418:GLU:OE2	2.36	0.44
1:UI:80:ALA:N	1:UI:85:ALA:O	2.49	0.44
1:UK:160:PRO:HG2	1:UK:170:LYS:HB3	2.00	0.44
1:UM:55:PHE:O	1:UM:85:ALA:HA	2.18	0.44
1:UO:160:PRO:HG2	1:UO:170:LYS:HB3	2.00	0.44
1:UP:55:PHE:O	1:UP:85:ALA:HA	2.18	0.44
1:WJ:125:GLN:HB3	3:E:242:HIS:HB2	1.97	0.44
1:WL:219:LEU:HG	1:WL:221:THR:H	1.82	0.44
1:WM:187:ASP:OD1	1:WM:190:GLN:N	2.44	0.44
1:WR:190:GLN:HG2	1:WS:217:GLY:HA3	2.00	0.44
1:WS:193:ALA:HB1	1:WT:213:VAL:CG1	2.48	0.44
6:S:67:LEU:HD21	6:S:74:PRO:HA	2.00	0.44
7:Z:97:ASP:O	7:Z:101:GLU:HG2	2.18	0.44
1:3:429:THR:OG1	1:4:418:GLU:OE2	2.36	0.44
1:AC:429:THR:OG1	1:AD:418:GLU:OE2	2.36	0.44
1:UI:160:PRO:HG2	1:UI:170:LYS:HB3	2.00	0.43
1:UI:164:LEU:HD22	1:UI:164:LEU:H	1.82	0.43
1:UP:75:ILE:HG21	1:UP:96:LEU:HD11	2.00	0.43
1:UP:164:LEU:H	1:UP:164:LEU:HD22	1.81	0.43
1:WE:167:ARG:HH21	4:I:162:PRO:CD	2.30	0.43
1:WK:206:PRO:O	1:WK:207:PRO:C	2.55	0.43
1:WM:219:LEU:HG	1:WM:221:THR:H	1.82	0.43
1:WT:192:SER:O	1:WT:195:VAL:HB	2.18	0.43
1:WV:117:ASP:OD1	1:WW:120:LYS:NZ	2.51	0.43
1:WV:192:SER:O	1:WV:195:VAL:HB	2.18	0.43
3:E:251:LEU:HD23	3:E:251:LEU:HA	1.84	0.43
4:J:80:THR:CB	4:J:83:ALA:HB2	2.48	0.43
5:N:14:LEU:HD11	1:6:370:ARG:NH2	2.32	0.43
5:P:11:ILE:HD11	1:AQ:276:GLU:CD	2.38	0.43
6:S:88:ARG:HH12	6:S:108:GLN:HG3	1.83	0.43
6:U:73:ILE:HG13	1:2:295:SER:CB	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UJ:160:PRO:HG2	1:UJ:170:LYS:HB3	2.00	0.43
1:UN:160:PRO:HG2	1:UN:170:LYS:HB3	2.00	0.43
1:UO:98:LEU:HD12	1:UO:146:THR:HG1	1.80	0.43
1:WB:145:GLU:C	1:WB:147:LEU:H	2.22	0.43
1:WH:139:GLU:HB3	1:WI:154:ARG:NH2	2.33	0.43
1:WM:206:PRO:O	1:WM:207:PRO:C	2.56	0.43
2:D:52:ILE:HD13	2:D:52:ILE:HA	1.83	0.43
4:J:195:ILE:O	4:J:199:VAL:HG13	2.18	0.43
1:UJ:103:GLN:CB	1:WD:182:PRO:HA	2.48	0.43
1:UJ:167:ARG:NH1	1:2:236:LYS:NZ	2.60	0.43
1:UM:129:GLN:O	1:UM:133:GLN:N	2.29	0.43
1:UN:218:HIS:NE2	1:AB:265:GLN:NE2	2.65	0.43
1:UO:98:LEU:HD11	1:UO:143:THR:O	2.16	0.43
1:UP:129:GLN:O	1:UP:133:GLN:N	2.29	0.43
1:WB:206:PRO:O	1:WB:207:PRO:C	2.56	0.43
1:WM:142:ARG:O	1:WM:146:THR:HG23	2.18	0.43
1:WS:113:PHE:HB3	1:WT:134:ARG:CZ	2.49	0.43
2:A:37:ILE:HD13	2:B:44:ILE:HD11	2.00	0.43
4:J:124:GLN:H	4:J:124:GLN:HG2	1.67	0.43
5:L:84:MET:HE2	5:L:84:MET:HB2	1.91	0.43
6:R:68:THR:CG2	1:AJ:294:ARG:HD2	2.49	0.43
1:2:429:THR:OG1	1:3:418:GLU:OE2	2.36	0.43
1:AA:429:THR:OG1	1:AB:418:GLU:OE2	2.36	0.43
1:AE:429:THR:OG1	1:AF:418:GLU:OE2	2.36	0.43
1:AF:429:THR:OG1	1:AG:418:GLU:OE2	2.36	0.43
1:UK:129:GLN:O	1:UK:133:GLN:N	2.29	0.43
1:UO:80:ALA:N	1:UO:85:ALA:O	2.49	0.43
1:WC:206:PRO:O	1:WC:207:PRO:C	2.56	0.43
1:WD:172:PRO:HD2	1:WD:204:GLY:O	2.18	0.43
1:WP:145:GLU:C	1:WP:147:LEU:N	2.72	0.43
2:C:77:VAL:HG12	4:I:229:VAL:HG11	2.00	0.43
3:E:179:ILE:H	3:E:179:ILE:HG13	1.69	0.43
3:E:205:ASN:HB3	4:F:209:MET:HG3	2.00	0.43
5:N:7:ILE:HD11	1:7:370:ARG:NE	2.32	0.43
1:UJ:164:LEU:HD22	1:UJ:164:LEU:H	1.81	0.43
1:UP:160:PRO:HG2	1:UP:170:LYS:HB3	2.00	0.43
1:WC:190:GLN:C	1:WC:192:SER:N	2.72	0.43
1:WD:193:ALA:HB1	1:WE:213:VAL:HG21	2.00	0.43
1:WE:132:TYR:HB2	1:WF:126:PHE:HZ	1.83	0.43
1:WL:172:PRO:HD2	1:WL:204:GLY:O	2.19	0.43
1:WR:206:PRO:O	1:WR:207:PRO:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WT:131:ASN:HA	1:WT:134:ARG:HD3	1.99	0.43
1:WU:128:GLU:HG2	1:WV:126:PHE:CD2	2.48	0.43
4:H:143:ARG:HH22	4:H:177:SER:HA	1.83	0.43
6:T:19:ARG:NH2	6:T:115:LYS:HD3	2.33	0.43
6:T:117:GLN:HE22	7:Y:125:MET:CG	2.32	0.43
1:AH:429:THR:OG1	1:AI:418:GLU:OE2	2.36	0.43
1:AM:429:THR:OG1	1:AN:418:GLU:OE2	2.36	0.43
1:UL:75:ILE:HG21	1:UL:96:LEU:HD11	2.00	0.43
1:UN:129:GLN:O	1:UN:133:GLN:N	2.29	0.43
1:WD:197:LEU:HD11	1:WE:156:HIS:HD2	1.84	0.43
1:WT:145:GLU:C	1:WT:147:LEU:N	2.72	0.43
1:WV:113:PHE:HB3	1:WW:134:ARG:NH1	2.33	0.43
1:WV:200:SER:O	1:WW:158:ALA:HB3	2.16	0.43
2:D:29:LEU:HD12	3:E:216:ILE:HG13	2.01	0.43
4:F:63:SER:HB2	4:F:66:ARG:HH21	1.84	0.43
4:F:99:PHE:C	4:F:99:PHE:CD2	2.91	0.43
4:G:119:GLN:HE22	6:R:4:ARG:HG2	1.84	0.43
4:G:217:ILE:O	4:G:220:PRO:HD2	2.18	0.43
4:H:121:ILE:HD12	4:H:121:ILE:HA	1.89	0.43
6:T:11:PHE:CD1	6:T:53:MET:HE2	2.53	0.43
1:AN:429:THR:OG1	1:AO:418:GLU:OE2	2.36	0.43
1:UI:75:ILE:HG21	1:UI:96:LEU:HD11	2.00	0.43
1:UN:55:PHE:O	1:UN:85:ALA:HA	2.18	0.43
1:WG:166:VAL:HG12	1:WG:168:GLU:H	1.83	0.43
1:WH:166:VAL:HG12	4:J:147:LEU:HD12	2.00	0.43
1:WP:166:VAL:HG21	4:F:160:GLN:HB3	1.82	0.43
1:WP:206:PRO:O	1:WP:207:PRO:C	2.56	0.43
1:WR:192:SER:O	1:WR:195:VAL:HB	2.19	0.43
3:E:224:VAL:O	3:E:228:LEU:HB2	2.18	0.43
4:H:114:GLN:O	4:H:118:GLU:HG2	2.19	0.43
1:1:429:THR:OG1	1:2:418:GLU:OE2	2.36	0.43
1:UJ:102:GLN:CG	1:UJ:193:ALA:HB2	2.49	0.43
1:UL:103:GLN:HG2	1:WH:182:PRO:CB	2.46	0.43
1:WE:164:LEU:HD21	4:I:159:LEU:HD22	2.00	0.43
1:WH:186:LEU:HD22	1:WH:190:GLN:HG2	2.00	0.43
1:WH:200:SER:O	1:WI:158:ALA:HB3	2.13	0.43
1:WM:172:PRO:HD2	1:WM:204:GLY:O	2.18	0.43
1:WN:206:PRO:O	1:WN:207:PRO:C	2.56	0.43
1:WS:142:ARG:O	1:WS:146:THR:HG23	2.17	0.43
1:WV:206:PRO:O	1:WV:207:PRO:C	2.56	0.43
4:F:147:LEU:HD23	4:F:147:LEU:HA	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:G:190:PHE:CD1	4:H:220:PRO:HG3	2.54	0.43
4:H:141:GLN:NE2	4:H:243:PHE:HA	2.33	0.43
5:K:11:ILE:CD1	1:AL:276:GLU:CD	2.87	0.43
6:T:68:THR:HG21	1:7:294:ARG:HD2	2.01	0.43
6:T:68:THR:CG2	1:7:294:ARG:HD2	2.48	0.43
7:W:7:PHE:CD2	7:W:119:LEU:HD11	2.54	0.43
7:W:82:ASN:HD22	7:W:91:VAL:HG21	1.83	0.43
1:5:429:THR:OG1	1:6:418:GLU:OE2	2.36	0.43
1:0:429:THR:OG1	1:AA:418:GLU:OE2	2.36	0.43
1:AJ:429:THR:OG1	1:AK:418:GLU:OE2	2.36	0.43
1:AO:429:THR:OG1	1:AP:418:GLU:OE2	2.36	0.43
1:UJ:80:ALA:N	1:UJ:85:ALA:O	2.49	0.43
1:WA:187:ASP:OD1	1:WA:190:GLN:N	2.42	0.43
1:WB:166:VAL:CG2	1:WB:169:GLN:HA	2.49	0.43
1:WG:165:PHE:HE1	4:J:240:ALA:CB	2.18	0.43
1:WN:172:PRO:HD2	1:WN:204:GLY:O	2.18	0.43
1:WT:161:LYS:CB	1:WT:162:PRO:HD2	2.49	0.43
1:WV:130:VAL:HG12	1:WV:134:ARG:HD2	1.99	0.43
1:WV:164:LEU:O	1:WV:166:VAL:N	2.49	0.43
1:WW:112:GLY:HA3	1:WW:135:ALA:HA	2.00	0.43
4:F:97:THR:HA	4:F:100:ILE:HG22	2.00	0.43
4:I:106:ASP:OD2	5:N:32:VAL:HG23	2.19	0.43
5:N:14:LEU:HD23	1:5:278:THR:CG2	2.49	0.43
7:V:122:VAL:O	7:V:126:MET:HG2	2.18	0.43
1:6:429:THR:OG1	1:7:418:GLU:OE2	2.36	0.43
1:9:429:THR:OG1	1:0:418:GLU:OE2	2.36	0.43
1:AD:429:THR:OG1	1:AE:418:GLU:OE2	2.36	0.43
1:AG:429:THR:OG1	1:AH:418:GLU:OE2	2.36	0.43
1:WA:190:GLN:O	1:WA:191:ILE:C	2.57	0.43
1:WJ:197:LEU:HD13	1:WK:175:SER:OG	2.09	0.43
1:WT:124:SER:OG	2:A:4:GLU:OE2	2.33	0.43
1:WW:115:LEU:O	1:WW:116:LEU:C	2.57	0.43
3:E:88:MET:HA	3:E:247:ILE:HG21	1.99	0.43
5:K:74:ASP:N	5:K:74:ASP:OD2	2.52	0.43
5:O:4:ILE:HG12	1:1:372:ILE:HB	2.00	0.43
6:S:65:LEU:HD23	6:S:75:ALA:CB	2.49	0.43
1:4:290:LYS:HE3	1:4:290:LYS:HB2	1.93	0.43
1:4:421:GLY:O	1:4:426:ARG:NH2	2.51	0.43
1:UJ:52:ARG:O	1:UJ:88:VAL:N	2.38	0.42
1:UK:94:HIS:HB2	1:UK:146:THR:HG21	1.97	0.42
1:UK:102:GLN:CG	1:UK:193:ALA:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UL:102:GLN:CG	1:UL:193:ALA:HB2	2.49	0.42
1:WC:142:ARG:O	1:WC:146:THR:HG23	2.18	0.42
1:WC:145:GLU:O	1:WC:146:THR:C	2.56	0.42
1:WI:161:LYS:HA	1:WI:162:PRO:HD3	1.89	0.42
1:WI:201:ALA:C	1:WJ:158:ALA:HB2	2.39	0.42
1:WL:206:PRO:O	1:WL:207:PRO:C	2.56	0.42
1:WQ:124:SER:CB	2:A:75:ASP:OD1	2.67	0.42
1:WQ:124:SER:HA	2:A:75:ASP:OD1	2.19	0.42
1:WQ:193:ALA:CB	1:WR:217:GLY:O	2.67	0.42
2:D:45:ASN:OD1	2:D:45:ASN:N	2.49	0.42
5:P:15:GLN:HB2	1:AQ:374:HIS:CG	2.53	0.42
1:3:421:GLY:O	1:3:426:ARG:NH2	2.51	0.42
1:AB:429:THR:OG1	1:AC:418:GLU:OE2	2.36	0.42
1:UK:75:ILE:HG21	1:UK:96:LEU:HD11	2.00	0.42
1:WI:191:ILE:O	1:WI:195:VAL:HG23	2.19	0.42
1:WJ:160:PRO:HG2	1:WJ:170:LYS:O	2.18	0.42
1:WU:192:SER:O	1:WU:195:VAL:HB	2.19	0.42
4:F:63:SER:O	4:F:67:ILE:HD12	2.19	0.42
4:J:82:SER:OG	4:J:82:SER:O	2.37	0.42
6:Q:77:ALA:HB3	1:AP:297:GLN:HE22	1.84	0.42
6:U:31:ALA:HB1	7:Z:13:ALA:HB2	2.00	0.42
7:Z:3:LEU:HD12	7:Z:3:LEU:HA	1.92	0.42
1:2:421:GLY:O	1:2:426:ARG:NH2	2.51	0.42
1:5:421:GLY:O	1:5:426:ARG:NH2	2.51	0.42
1:8:429:THR:OG1	1:9:418:GLU:OE2	2.36	0.42
1:UN:99:ARG:O	1:UN:103:GLN:HG3	2.18	0.42
1:UP:98:LEU:CD1	1:UP:146:THR:HG1	2.31	0.42
1:WA:113:PHE:CE2	1:WA:139:GLU:HG3	2.54	0.42
1:WF:140:LEU:O	1:WF:144:ILE:HG13	2.19	0.42
1:WG:122:GLY:O	1:WG:123:ILE:C	2.58	0.42
1:WK:128:GLU:OE1	1:WL:126:PHE:CE2	2.73	0.42
1:WS:140:LEU:O	1:WS:144:ILE:HG13	2.20	0.42
1:WT:140:LEU:O	1:WT:144:ILE:HG13	2.20	0.42
2:C:84:LEU:HD21	4:I:185:ILE:HG23	2.01	0.42
3:E:243:LEU:HD23	3:E:243:LEU:HA	1.81	0.42
4:G:114:GLN:HB3	4:G:115:PRO:HD3	2.01	0.42
5:N:7:ILE:CB	1:6:278:THR:HG21	2.50	0.42
5:O:4:ILE:CD1	1:1:374:HIS:HB2	2.50	0.42
6:Q:114:LEU:HD21	7:W:123:LYS:HG3	2.00	0.42
6:R:69:SER:OG	1:AK:294:ARG:HD3	2.19	0.42
7:V:13:ALA:HA	7:V:62:VAL:HG12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:4:429:THR:OG1	1:5:418:GLU:OE2	2.36	0.42
1:6:421:GLY:O	1:6:426:ARG:NH2	2.51	0.42
1:AJ:290:LYS:HE3	1:AJ:290:LYS:HB2	1.93	0.42
1:AP:296:ARG:HG2	1:AP:296:ARG:NH1	2.35	0.42
1:UL:73:MET:HE3	1:UL:99:ARG:CD	2.44	0.42
1:UL:80:ALA:N	1:UL:85:ALA:O	2.49	0.42
1:WI:142:ARG:O	1:WI:146:THR:HG23	2.19	0.42
1:WI:164:LEU:HD22	4:J:148:ALA:HA	2.01	0.42
1:WN:140:LEU:O	1:WN:144:ILE:HG13	2.20	0.42
1:WQ:124:SER:OG	2:A:75:ASP:OD1	2.33	0.42
1:WR:165:PHE:O	1:WR:166:VAL:HG22	2.19	0.42
1:WT:113:PHE:CE1	1:WU:134:ARG:HG2	2.54	0.42
5:L:7:ILE:HG22	1:AH:278:THR:HG21	2.01	0.42
6:S:103:ASP:OD1	7:Y:112:TYR:OH	2.36	0.42
1:5:296:ARG:HG2	1:5:296:ARG:NH1	2.35	0.42
1:AQ:296:ARG:HG2	1:AQ:296:ARG:NH1	2.35	0.42
1:UN:69:GLN:HG3	1:UN:103:GLN:OE1	2.19	0.42
1:UP:94:HIS:HB2	1:UP:146:THR:HG21	1.97	0.42
1:WA:140:LEU:O	1:WA:144:ILE:HG13	2.19	0.42
1:WB:135:ALA:O	1:WB:139:GLU:HG2	2.18	0.42
1:WC:120:LYS:HE2	1:WC:120:LYS:HA	2.00	0.42
1:WC:191:ILE:O	1:WC:195:VAL:HG23	2.20	0.42
1:WD:190:GLN:HA	1:WE:217:GLY:O	2.19	0.42
1:WE:140:LEU:O	1:WE:144:ILE:HG13	2.20	0.42
1:WH:140:LEU:O	1:WH:144:ILE:HG13	2.20	0.42
1:WK:149:PRO:HD2	1:WK:190:GLN:HE22	1.84	0.42
1:WM:190:GLN:HA	1:WN:217:GLY:HA3	2.00	0.42
1:WQ:140:LEU:O	1:WQ:144:ILE:HG13	2.20	0.42
1:WR:140:LEU:O	1:WR:144:ILE:HG13	2.20	0.42
1:WT:196:HIS:HB3	1:WU:211:THR:CG2	2.30	0.42
1:WW:169:GLN:NE2	1:WW:170:LYS:O	2.53	0.42
2:C:52:ILE:O	2:C:55:ILE:HG22	2.18	0.42
3:E:125:LEU:O	3:E:129:MET:HG3	2.20	0.42
3:E:167:ASN:ND2	3:E:174:ARG:HH12	2.18	0.42
4:F:214:PRO:HG2	4:G:212:VAL:HG22	2.01	0.42
4:I:171:LEU:HB3	4:I:172:PRO:HD3	2.01	0.42
5:M:7:ILE:HD11	1:AC:370:ARG:NE	2.23	0.42
5:M:9:GLY:O	5:M:13:GLN:HG3	2.18	0.42
5:O:73:ALA:HB1	6:U:13:GLN:NE2	2.33	0.42
7:Y:112:TYR:CE2	7:Y:116:ILE:HD11	2.55	0.42
1:4:296:ARG:HG2	1:4:296:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:296:ARG:HG2	1:6:296:ARG:NH1	2.35	0.42
1:0:296:ARG:HG2	1:0:296:ARG:NH1	2.35	0.42
1:AA:296:ARG:HG2	1:AA:296:ARG:NH1	2.35	0.42
1:AB:296:ARG:HG2	1:AB:296:ARG:NH1	2.35	0.42
1:AK:429:THR:OG1	1:AL:418:GLU:OE2	2.36	0.42
1:UM:73:MET:HE1	1:UM:99:ARG:HD2	1.98	0.42
1:WB:164:LEU:O	4:H:152:ARG:HG3	2.18	0.42
1:WI:165:PHE:O	1:WI:165:PHE:CG	2.73	0.42
1:WJ:140:LEU:O	1:WJ:144:ILE:HG13	2.20	0.42
1:WJ:164:LEU:HD23	3:E:144:LEU:HB2	1.98	0.42
1:WL:214:ASP:OD1	1:WL:218:HIS:N	2.49	0.42
1:WT:142:ARG:O	1:WT:146:THR:HG23	2.20	0.42
1:WV:114:GLU:O	1:WV:118:GLN:HG3	2.20	0.42
1:WV:187:ASP:O	1:WV:190:GLN:HB2	2.20	0.42
4:H:59:LEU:O	4:H:65:THR:OG1	2.30	0.42
4:J:121:ILE:HG23	4:J:125:GLU:HB3	2.02	0.42
5:M:4:ILE:CD1	1:AC:374:HIS:CB	2.93	0.42
6:Q:85:LEU:HA	6:Q:85:LEU:HD23	1.81	0.42
1:AL:429:THR:OG1	1:AM:418:GLU:OE2	2.36	0.42
1:UJ:75:ILE:HG21	1:UJ:96:LEU:HD11	2.00	0.42
1:WA:115:LEU:HD22	1:WA:134:ARG:HD2	2.01	0.42
1:WA:126:PHE:HD2	1:WW:128:GLU:HG2	1.84	0.42
1:WG:140:LEU:O	1:WG:144:ILE:HG13	2.20	0.42
1:WJ:164:LEU:CD1	3:E:145:TRP:HA	2.50	0.42
1:WK:165:PHE:O	1:WK:166:VAL:HB	2.19	0.42
1:WP:140:LEU:O	1:WP:144:ILE:HG13	2.20	0.42
1:WP:147:LEU:O	1:WP:148:GLY:C	2.58	0.42
1:WR:192:SER:O	1:WR:195:VAL:N	2.53	0.42
1:WW:172:PRO:HD2	1:WW:204:GLY:O	2.19	0.42
3:E:122:MET:HG3	4:J:214:PRO:HG2	2.01	0.42
4:F:162:PRO:CD	4:F:163:GLU:N	2.82	0.42
4:G:121:ILE:HG12	4:G:125:GLU:HB3	2.02	0.42
4:H:86:ASN:HD22	5:M:103:GLN:HA	1.83	0.42
4:H:138:MET:HE2	4:H:170:LEU:HG	2.01	0.42
4:J:66:ARG:HA	4:J:182:ALA:HB2	2.02	0.42
6:T:68:THR:HG22	1:7:294:ARG:HD3	2.01	0.42
1:1:421:GLY:O	1:1:426:ARG:NH2	2.51	0.42
1:AC:296:ARG:HG2	1:AC:296:ARG:NH1	2.35	0.42
1:AO:296:ARG:HG2	1:AO:296:ARG:NH1	2.35	0.42
1:UI:102:GLN:CG	1:UI:193:ALA:HB2	2.49	0.42
1:UM:207:PRO:HD2	1:WP:187:ASP:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WE:113:PHE:CE2	1:WE:139:GLU:HG3	2.54	0.42
1:WG:166:VAL:CG1	1:WG:168:GLU:HB3	2.49	0.42
1:WI:129:GLN:HE22	1:WI:132:TYR:HD2	1.68	0.42
1:WI:140:LEU:O	1:WI:144:ILE:HG13	2.20	0.42
1:WJ:172:PRO:HD2	1:WJ:204:GLY:O	2.19	0.42
1:WO:140:LEU:O	1:WO:144:ILE:HG13	2.20	0.42
1:WO:214:ASP:OD1	1:WO:218:HIS:N	2.49	0.42
1:WQ:196:HIS:HB3	1:WR:211:THR:HG21	2.02	0.42
1:WW:140:LEU:O	1:WW:144:ILE:HG13	2.19	0.42
3:E:175:ALA:HA	3:E:178:LEU:HD23	2.02	0.42
3:E:254:ILE:HD13	3:E:254:ILE:HA	1.86	0.42
4:F:171:LEU:HB3	4:F:172:PRO:HD3	2.01	0.42
4:J:92:LEU:HD12	4:J:92:LEU:HA	1.78	0.42
5:L:48:ARG:HH22	6:R:6:ASP:CG	2.22	0.42
1:2:296:ARG:HG2	1:2:296:ARG:NH1	2.35	0.42
1:7:421:GLY:O	1:7:426:ARG:NH2	2.51	0.42
1:UM:102:GLN:CG	1:UM:193:ALA:HB2	2.49	0.42
1:WD:113:PHE:HB3	1:WE:134:ARG:NH1	2.34	0.42
1:WD:140:LEU:O	1:WD:144:ILE:HG13	2.19	0.42
1:WE:166:VAL:HG23	4:I:160:GLN:HA	1.84	0.42
1:WF:187:ASP:H	1:WF:190:GLN:CD	2.22	0.42
1:WH:200:SER:OG	1:WI:175:SER:CB	2.54	0.42
1:WU:140:LEU:O	1:WU:144:ILE:HG13	2.20	0.42
1:WW:147:LEU:O	1:WW:148:GLY:C	2.59	0.42
2:C:54:LYS:HB3	2:C:54:LYS:HE2	1.84	0.42
5:O:69:ASN:OD1	5:O:69:ASN:N	2.52	0.42
5:O:84:MET:SD	6:U:134:LEU:HD21	2.59	0.42
1:1:296:ARG:HG2	1:1:296:ARG:NH1	2.35	0.42
1:9:296:ARG:HG2	1:9:296:ARG:NH1	2.35	0.42
1:AK:296:ARG:HG2	1:AK:296:ARG:NH1	2.35	0.42
1:WE:164:LEU:HD13	1:WE:165:PHE:N	2.35	0.42
1:WK:145:GLU:O	1:WK:146:THR:C	2.58	0.42
1:WP:165:PHE:CA	4:F:160:GLN:O	2.68	0.42
1:WQ:121:PHE:HZ	2:A:15:LYS:HD3	1.85	0.42
1:WV:140:LEU:O	1:WV:144:ILE:HG13	2.20	0.42
4:J:189:ILE:O	4:J:192:PRO:HD2	2.19	0.42
7:W:10:ALA:HB3	7:W:119:LEU:HD13	2.02	0.42
1:0:290:LYS:HE3	1:0:290:LYS:HB2	1.93	0.42
1:AI:429:THR:OG1	1:AJ:418:GLU:OE2	2.36	0.42
1:AO:290:LYS:HE3	1:AO:290:LYS:HB2	1.93	0.42
1:UO:102:GLN:CG	1:UO:193:ALA:HB2	2.49	0.41

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:UO:214:ASP:OD2	1:UO:218:HIS:HB2	2.20	0.41
1:WC:140:LEU:O	1:WC:144:ILE:HG13	2.20	0.41
1:WI:145:GLU:C	1:WI:147:LEU:N	2.74	0.41
1:WU:164:LEU:HA	4:G:152:ARG:NH2	2.35	0.41
1:7:296:ARG:HG2	1:7:296:ARG:NH1	2.35	0.41
1:8:421:GLY:O	1:8:426:ARG:NH2	2.51	0.41
1:AD:296:ARG:HG2	1:AD:296:ARG:NH1	2.35	0.41
1:AL:296:ARG:HG2	1:AL:296:ARG:NH1	2.35	0.41
1:WH:190:GLN:HG3	1:WI:217:GLY:HA3	2.02	0.41
1:WR:145:GLU:O	1:WR:146:THR:C	2.59	0.41
1:WS:125:GLN:N	2:A:4:GLU:HB3	2.34	0.41
1:WS:214:ASP:OD1	1:WS:218:HIS:N	2.49	0.41
4:J:129:LYS:HB3	4:J:129:LYS:HE3	1.87	0.41
4:J:225:LEU:HD12	4:J:229:VAL:HG22	2.01	0.41
6:T:39:GLN:HA	6:T:99:THR:HB	2.02	0.41
1:3:296:ARG:HG2	1:3:296:ARG:NH1	2.35	0.41
1:7:429:THR:OG1	1:8:418:GLU:OE2	2.36	0.41
1:AE:296:ARG:HG2	1:AE:296:ARG:NH1	2.35	0.41
1:UP:102:GLN:CG	1:UP:193:ALA:HB2	2.49	0.41
1:UP:214:ASP:OD2	1:UP:218:HIS:HB2	2.20	0.41
1:WB:114:GLU:O	1:WB:117:ASP:N	2.54	0.41
1:WK:140:LEU:O	1:WK:144:ILE:HG13	2.20	0.41
1:WN:145:GLU:C	1:WN:147:LEU:N	2.74	0.41
1:WV:128:GLU:CG	1:WW:126:PHE:CE2	3.03	0.41
4:I:190:PHE:CG	4:J:220:PRO:HG3	2.55	0.41
4:J:217:ILE:O	4:J:220:PRO:HD2	2.20	0.41
6:R:29:ASN:ND2	6:R:40:ALA:HA	2.35	0.41
1:AF:296:ARG:HG2	1:AF:296:ARG:NH1	2.35	0.41
1:WI:162:PRO:HG2	1:WJ:165:PHE:HZ	1.86	0.41
1:WP:164:LEU:O	4:F:159:LEU:O	2.38	0.41
1:WR:128:GLU:HB3	1:WS:126:PHE:CE2	2.55	0.41
1:WR:165:PHE:O	1:WR:167:ARG:N	2.53	0.41
1:WR:197:LEU:HA	1:WS:175:SER:CB	2.50	0.41
3:E:176:GLY:HA2	3:E:179:ILE:CD1	2.49	0.41
4:J:83:ALA:O	4:J:85:PRO:N	2.54	0.41
5:M:80:VAL:HG22	6:S:131:MET:HG2	2.01	0.41
7:Z:119:LEU:HA	7:Z:119:LEU:HD23	1.67	0.41
1:AG:296:ARG:HG2	1:AG:296:ARG:NH1	2.35	0.41
1:AM:296:ARG:HG2	1:AM:296:ARG:NH1	2.35	0.41
1:UI:214:ASP:OD2	1:UI:218:HIS:HB2	2.20	0.41
1:UK:207:PRO:CA	1:WE:187:ASP:OD1	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:WA:196:HIS:CD2	1:WB:219:LEU:HD13	2.56	0.41
1:WB:140:LEU:O	1:WB:144:ILE:HG13	2.20	0.41
1:WB:147:LEU:O	1:WB:148:GLY:C	2.58	0.41
1:WB:166:VAL:HG21	1:WB:169:GLN:HA	2.01	0.41
1:WB:196:HIS:HB3	1:WC:211:THR:HG21	2.01	0.41
1:WJ:125:GLN:HG3	3:E:242:HIS:CG	2.54	0.41
1:WK:190:GLN:CG	1:WL:217:GLY:HA3	2.51	0.41
1:WK:190:GLN:HA	1:WL:217:GLY:O	2.20	0.41
2:A:18:LEU:HD12	2:A:18:LEU:HA	1.91	0.41
2:D:7:MET:HE1	3:E:236:ILE:HD11	2.01	0.41
4:F:217:ILE:HD13	4:F:217:ILE:HA	1.89	0.41
5:M:3:ALA:HA	1:AC:372:ILE:HD13	2.02	0.41
5:N:4:ILE:HG12	1:7:372:ILE:HG21	2.02	0.41
1:AJ:296:ARG:HG2	1:AJ:296:ARG:NH1	2.35	0.41
1:AN:296:ARG:HG2	1:AN:296:ARG:NH1	2.35	0.41
1:AP:421:GLY:O	1:AP:426:ARG:NH2	2.51	0.41
1:UI:98:LEU:HD12	1:UI:146:THR:HG1	1.83	0.41
1:UN:94:HIS:HB2	1:UN:146:THR:HG21	1.97	0.41
1:WG:214:ASP:OD1	1:WG:218:HIS:N	2.51	0.41
1:WH:145:GLU:O	1:WH:146:THR:C	2.57	0.41
1:WI:135:ALA:O	1:WI:139:GLU:HG2	2.21	0.41
1:WT:128:GLU:HG3	1:WU:126:PHE:CE2	2.55	0.41
4:G:171:LEU:HD23	4:H:95:PHE:CZ	2.55	0.41
4:G:194:LEU:HD23	4:G:194:LEU:HA	1.83	0.41
4:I:52:THR:HG23	5:O:97:GLN:HE21	1.85	0.41
5:M:7:ILE:CD1	1:AC:370:ARG:HE	2.24	0.41
6:S:16:LEU:HD11	6:S:120:LEU:HG	2.02	0.41
1:AE:290:LYS:HE3	1:AE:290:LYS:HB2	1.93	0.41
1:AH:296:ARG:HG2	1:AH:296:ARG:NH1	2.35	0.41
1:WG:193:ALA:HB1	1:WH:213:VAL:CG1	2.48	0.41
1:WI:144:ILE:O	1:WI:147:LEU:HB2	2.20	0.41
1:WI:181:GLU:CB	1:WI:184:ARG:CG	2.85	0.41
1:WL:140:LEU:O	1:WL:144:ILE:HG13	2.20	0.41
1:WL:190:GLN:HG2	1:WM:216:SER:O	2.21	0.41
1:WM:140:LEU:O	1:WM:144:ILE:HG13	2.20	0.41
1:WO:181:GLU:CB	1:WO:184:ARG:CG	2.85	0.41
1:WT:165:PHE:HZ	4:G:144:GLU:HG2	1.86	0.41
1:WW:131:ASN:HA	1:WW:134:ARG:HD3	2.01	0.41
4:F:194:LEU:HD12	4:G:220:PRO:HG2	2.03	0.41
1:AE:235:LEU:HB3	1:AF:244:ARG:NH2	2.36	0.41
1:UN:214:ASP:OD2	1:UN:218:HIS:HB2	2.20	0.41

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:WA:168:GLU:OE1	1:WW:169:GLN:HB2	2.21	0.41
1:WH:166:VAL:HG11	4:J:147:LEU:HD11	2.01	0.41
1:WL:196:HIS:HB3	1:WM:211:THR:HG21	2.03	0.41
1:WM:181:GLU:CB	1:WM:184:ARG:CG	2.85	0.41
1:WQ:186:LEU:HD23	1:WQ:186:LEU:HA	1.92	0.41
1:WR:165:PHE:CE2	4:F:153:LEU:HD23	2.55	0.41
2:A:52:ILE:N	2:A:52:ILE:HD12	2.35	0.41
2:B:51:PHE:CE2	2:B:55:ILE:HD11	2.56	0.41
3:E:231:ALA:O	3:E:234:PRO:HD2	2.21	0.41
4:F:175:VAL:O	4:F:179:LEU:HG	2.20	0.41
4:G:234:LEU:HD12	4:G:234:LEU:HA	1.92	0.41
1:8:296:ARG:HG2	1:8:296:ARG:NH1	2.35	0.41
1:9:235:LEU:HB3	1:0:244:ARG:NH2	2.36	0.41
1:UJ:263:ASP:OD2	1:UJ:267:HIS:HB2	2.20	0.41
1:WA:213:VAL:HG11	1:WW:193:ALA:CB	2.48	0.41
1:WB:190:GLN:CG	1:WC:216:SER:O	2.67	0.41
1:WG:121:PHE:CE2	1:WG:123:ILE:HA	2.55	0.41
1:WI:147:LEU:O	1:WI:148:GLY:C	2.60	0.41
1:WK:181:GLU:CB	1:WK:184:ARG:CG	2.85	0.41
1:WO:186:LEU:HA	1:WO:190:GLN:OE1	2.21	0.41
1:WP:190:GLN:C	1:WP:192:SER:N	2.73	0.41
1:WQ:164:LEU:CD2	4:F:149:LEU:HD13	2.51	0.41
1:WQ:164:LEU:HD21	4:F:149:LEU:HD13	2.02	0.41
1:WU:163:SER:O	1:WU:166:VAL:HG22	2.20	0.41
1:WU:193:ALA:HB1	1:WV:213:VAL:HG11	2.03	0.41
1:WV:145:GLU:O	1:WV:147:LEU:N	2.54	0.41
2:B:39:GLN:NE2	2:B:49:LEU:HD12	2.31	0.41
2:B:59:PHE:CZ	4:G:198:LEU:HD21	2.55	0.41
4:G:171:LEU:O	4:G:175:VAL:HG23	2.21	0.41
4:G:204:LEU:HD11	4:G:217:ILE:HD12	2.01	0.41
4:I:187:PHE:CD2	4:J:224:MET:HB2	2.56	0.41
4:J:213:PRO:HA	4:J:214:PRO:HD3	1.91	0.41
6:Q:60:THR:O	1:AO:297:GLN:NE2	2.52	0.41
6:R:29:ASN:HD22	6:R:38:TYR:HE2	1.68	0.41
6:U:72:HIS:CE1	1:1:366:TYR:O	2.74	0.41
7:Z:126:MET:O	7:Z:129:THR:HG22	2.21	0.41
1:6:235:LEU:HB3	1:7:244:ARG:NH2	2.36	0.41
1:8:235:LEU:HB3	1:9:244:ARG:NH2	2.36	0.41
1:9:290:LYS:HE3	1:9:290:LYS:HB2	1.93	0.41
1:9:421:GLY:O	1:9:426:ARG:NH2	2.51	0.41
1:AB:235:LEU:HB3	1:AC:244:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AH:235:LEU:HB3	1:AI:244:ARG:NH2	2.36	0.41
1:AI:296:ARG:HG2	1:AI:296:ARG:NH1	2.35	0.41
1:AK:235:LEU:HB3	1:AL:244:ARG:NH2	2.36	0.41
1:AO:421:GLY:O	1:AO:426:ARG:NH2	2.51	0.41
1:WE:197:LEU:HA	1:WF:175:SER:OG	2.21	0.41
1:WH:149:PRO:CD	1:WH:190:GLN:HE22	2.33	0.41
1:WK:167:ARG:CB	3:E:156:THR:HG22	2.50	0.41
1:WU:145:GLU:O	1:WU:147:LEU:N	2.54	0.41
2:D:35:ILE:HD13	2:D:35:ILE:HA	1.98	0.41
6:U:68:THR:HG22	1:1:294:ARG:CD	2.36	0.41
1:UL:69:GLN:NE2	1:WH:182:PRO:CG	2.84	0.40
1:WJ:165:PHE:N	4:J:152:ARG:HH22	2.18	0.40
1:WJ:181:GLU:O	1:WJ:182:PRO:C	2.60	0.40
1:WK:181:GLU:O	1:WK:182:PRO:C	2.60	0.40
1:WM:181:GLU:O	1:WM:182:PRO:C	2.60	0.40
1:WS:115:LEU:HA	1:WS:118:GLN:OE1	2.21	0.40
1:WT:181:GLU:CB	1:WT:184:ARG:CG	2.85	0.40
1:WU:181:GLU:O	1:WU:182:PRO:C	2.60	0.40
2:D:77:VAL:HG11	4:J:225:LEU:HD11	2.03	0.40
4:F:187:PHE:CZ	4:F:191:ILE:HD11	2.56	0.40
4:H:189:ILE:HD13	4:H:235:LEU:HD11	2.03	0.40
5:O:7:ILE:O	5:O:11:ILE:HG23	2.21	0.40
5:P:69:ASN:OD1	7:V:112:TYR:OH	2.11	0.40
1:3:290:LYS:HE3	1:3:290:LYS:HB2	1.93	0.40
1:5:235:LEU:HB3	1:6:244:ARG:NH2	2.36	0.40
1:AO:425:LYS:HE3	1:AO:425:LYS:HB3	1.96	0.40
1:UI:98:LEU:CD1	1:UI:146:THR:HG1	2.32	0.40
1:UJ:88:VAL:O	1:UJ:89:PRO:C	2.60	0.40
1:UK:214:ASP:OD2	1:UK:218:HIS:HB2	2.20	0.40
1:UL:51:TYR:HB2	1:UL:78:ARG:CZ	2.51	0.40
1:UN:102:GLN:CG	1:UN:193:ALA:HB2	2.49	0.40
1:WC:125:GLN:O	1:WC:128:GLU:HG2	2.20	0.40
1:WD:145:GLU:C	1:WD:147:LEU:N	2.74	0.40
1:WL:181:GLU:O	1:WL:182:PRO:C	2.60	0.40
1:WM:193:ALA:CB	1:WN:213:VAL:CG1	2.94	0.40
1:WR:193:ALA:HB1	1:WS:213:VAL:HG21	2.03	0.40
3:E:4:VAL:HB	5:P:44:ARG:HH12	1.86	0.40
4:G:75:ARG:HB2	4:G:83:ALA:CB	2.52	0.40
5:K:68:LEU:H	5:K:68:LEU:HD12	1.85	0.40
6:Q:96:ASP:N	6:Q:96:ASP:OD1	2.53	0.40
6:Q:128:LYS:HD2	6:Q:128:LYS:HA	1.62	0.40

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:3:235:LEU:HB3	1:4:244:ARG:NH2	2.36	0.40
1:AA:235:LEU:HB3	1:AB:244:ARG:NH2	2.36	0.40
1:AH:360:ARG:NH1	1:AH:362:GLU:OE1	2.55	0.40
1:AN:421:GLY:O	1:AN:426:ARG:NH2	2.51	0.40
1:UI:52:ARG:O	1:UI:88:VAL:N	2.38	0.40
1:UI:88:VAL:O	1:UI:89:PRO:C	2.60	0.40
1:UJ:51:TYR:HB2	1:UJ:78:ARG:CZ	2.51	0.40
1:UJ:54:LEU:HG	1:UJ:55:PHE:CD2	2.57	0.40
1:UJ:261:LEU:HG	1:UJ:269:LEU:HD12	2.04	0.40
1:UM:212:LEU:HG	1:UM:220:LEU:HD12	2.04	0.40
1:UM:214:ASP:OD2	1:UM:218:HIS:HB2	2.20	0.40
1:UO:54:LEU:HG	1:UO:55:PHE:CD2	2.57	0.40
1:WC:131:ASN:O	1:WC:132:TYR:C	2.60	0.40
1:WQ:181:GLU:O	1:WQ:182:PRO:C	2.60	0.40
1:WR:181:GLU:O	1:WR:182:PRO:C	2.60	0.40
1:WT:181:GLU:O	1:WT:182:PRO:C	2.60	0.40
2:A:15:LYS:HE2	2:A:15:LYS:HB3	1.88	0.40
2:A:50:SER:OG	2:B:46:GLU:OE2	2.25	0.40
2:B:84:LEU:HD22	4:H:185:ILE:HG23	2.03	0.40
2:C:49:LEU:HD23	2:C:49:LEU:HA	1.94	0.40
4:F:153:LEU:HD23	4:F:153:LEU:HA	1.91	0.40
4:H:71:PHE:HD1	4:H:71:PHE:HA	1.80	0.40
4:H:189:ILE:O	4:H:192:PRO:HD2	2.21	0.40
4:I:132:GLN:HB2	4:I:133:PRO:HD3	2.04	0.40
1:AB:360:ARG:NH1	1:AB:362:GLU:OE1	2.55	0.40
1:AG:360:ARG:NH1	1:AG:362:GLU:OE1	2.55	0.40
1:AK:360:ARG:NH1	1:AK:362:GLU:OE1	2.55	0.40
1:AO:360:ARG:NH1	1:AO:362:GLU:OE1	2.55	0.40
1:UM:51:TYR:HB2	1:UM:78:ARG:CZ	2.52	0.40
1:UM:54:LEU:HG	1:UM:55:PHE:CD2	2.57	0.40
1:UO:88:VAL:O	1:UO:89:PRO:C	2.60	0.40
1:WD:129:GLN:O	1:WD:130:VAL:C	2.60	0.40
1:WD:193:ALA:HB1	1:WE:213:VAL:CG2	2.50	0.40
1:WF:124:SER:O	1:WF:125:GLN:C	2.59	0.40
1:WG:120:LYS:HA	1:WG:120:LYS:HE2	2.03	0.40
1:WP:181:GLU:O	1:WP:182:PRO:C	2.60	0.40
1:WR:139:GLU:HB3	1:WS:156:HIS:HE1	1.87	0.40
1:WR:181:GLU:CB	1:WR:184:ARG:CG	2.85	0.40
1:WS:197:LEU:HA	1:WT:175:SER:CB	2.52	0.40
5:L:4:ILE:HA	1:AI:372:ILE:HD12	2.03	0.40
5:L:7:ILE:O	5:L:11:ILE:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:N:7:ILE:HB	1:6:278:THR:HG21	2.02	0.40
1:AD:360:ARG:NH1	1:AD:362:GLU:OE1	2.55	0.40
1:AE:360:ARG:NH1	1:AE:362:GLU:OE1	2.55	0.40
1:AN:360:ARG:NH1	1:AN:362:GLU:OE1	2.55	0.40
1:WC:163:SER:OG	1:WC:166:VAL:O	2.38	0.40
1:WF:120:LYS:HB3	1:WF:121:PHE:H	1.66	0.40
1:WG:124:SER:O	1:WG:127:SER:N	2.55	0.40
1:WG:181:GLU:O	1:WG:182:PRO:C	2.60	0.40
1:WG:187:ASP:HB3	1:WG:190:GLN:H	1.87	0.40
1:WH:181:GLU:O	1:WH:182:PRO:C	2.60	0.40
1:WJ:144:ILE:O	1:WJ:147:LEU:HB2	2.21	0.40
1:WL:191:ILE:HG23	1:WL:212:LEU:HD23	2.03	0.40
1:WN:181:GLU:O	1:WN:182:PRO:C	2.60	0.40
1:WQ:214:ASP:OD1	1:WQ:218:HIS:N	2.49	0.40
1:WW:181:GLU:O	1:WW:182:PRO:C	2.60	0.40
3:E:6:SER:OG	3:E:7:GLU:N	2.55	0.40
3:E:146:LEU:HD23	3:E:146:LEU:HA	1.80	0.40
5:M:3:ALA:C	1:AC:372:ILE:HD12	2.42	0.40
5:P:77:LYS:HE2	7:V:7:PHE:HB3	2.04	0.40
6:U:72:HIS:HA	1:2:295:SER:HB3	2.02	0.40
7:Y:119:LEU:HD12	7:Y:119:LEU:HA	1.84	0.40
1:AD:235:LEU:HB3	1:AE:244:ARG:NH2	2.36	0.40
1:AN:235:LEU:HB3	1:AO:244:ARG:NH2	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	1	160/560 (29%)	158 (99%)	2 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	2	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	3	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	4	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	5	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	6	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	7	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	8	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	9	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AA	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AB	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AC	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AD	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AE	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AF	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AG	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AH	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AI	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AJ	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AK	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AL	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AM	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AN	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AO	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AP	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	AQ	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	UI	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	UJ	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	UK	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	UL	151/560 (27%)	142 (94%)	7 (5%)	2 (1%)	10	39
1	UM	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	UN	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	UO	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	UP	151/560 (27%)	146 (97%)	3 (2%)	2 (1%)	10	39
1	WA	111/560 (20%)	99 (89%)	9 (8%)	3 (3%)	4	27
1	WB	109/560 (20%)	94 (86%)	10 (9%)	5 (5%)	2	19
1	WC	106/560 (19%)	96 (91%)	9 (8%)	1 (1%)	14	45
1	WD	108/560 (19%)	99 (92%)	4 (4%)	5 (5%)	2	19
1	WE	110/560 (20%)	98 (89%)	8 (7%)	4 (4%)	3	23
1	WF	109/560 (20%)	98 (90%)	8 (7%)	3 (3%)	4	27
1	WG	110/560 (20%)	98 (89%)	10 (9%)	2 (2%)	7	34
1	WH	93/560 (17%)	86 (92%)	5 (5%)	2 (2%)	5	30
1	WI	93/560 (17%)	82 (88%)	5 (5%)	6 (6%)	1	14
1	WJ	97/560 (17%)	89 (92%)	7 (7%)	1 (1%)	13	44
1	WK	96/560 (17%)	84 (88%)	9 (9%)	3 (3%)	3	25
1	WL	81/560 (14%)	75 (93%)	4 (5%)	2 (2%)	4	28
1	WM	78/560 (14%)	72 (92%)	4 (5%)	2 (3%)	4	28
1	WN	80/560 (14%)	75 (94%)	2 (2%)	3 (4%)	2	21
1	WO	94/560 (17%)	85 (90%)	7 (7%)	2 (2%)	5	32
1	WP	98/560 (18%)	87 (89%)	6 (6%)	5 (5%)	1	17
1	WQ	109/560 (20%)	100 (92%)	5 (5%)	4 (4%)	2	22
1	WR	109/560 (20%)	94 (86%)	8 (7%)	7 (6%)	1	14
1	WS	109/560 (20%)	96 (88%)	7 (6%)	6 (6%)	1	16
1	WT	109/560 (20%)	97 (89%)	5 (5%)	7 (6%)	1	14
1	WU	110/560 (20%)	101 (92%)	8 (7%)	1 (1%)	14	45
1	WV	108/560 (19%)	97 (90%)	9 (8%)	2 (2%)	6	33
1	WW	109/560 (20%)	95 (87%)	9 (8%)	5 (5%)	2	19
1	b	11/560 (2%)	10 (91%)	1 (9%)	0	100	100
1	c	14/560 (2%)	12 (86%)	2 (14%)	0	100	100
1	d	18/560 (3%)	18 (100%)	0	0	100	100
1	e	14/560 (2%)	14 (100%)	0	0	100	100
1	f	19/560 (3%)	19 (100%)	0	0	100	100
1	g	14/560 (2%)	12 (86%)	2 (14%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	h	19/560 (3%)	19 (100%)	0	0	100	100
1	i	14/560 (2%)	14 (100%)	0	0	100	100
1	j	18/560 (3%)	17 (94%)	1 (6%)	0	100	100
1	k	14/560 (2%)	14 (100%)	0	0	100	100
1	l	19/560 (3%)	19 (100%)	0	0	100	100
1	t	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	u	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	v	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	w	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	x	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	y	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
1	z	160/560 (29%)	158 (99%)	2 (1%)	0	100	100
2	A	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
2	B	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
2	C	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
2	D	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
3	E	251/264 (95%)	231 (92%)	14 (6%)	6 (2%)	5	29
4	F	205/245 (84%)	195 (95%)	10 (5%)	0	100	100
4	G	207/245 (84%)	199 (96%)	6 (3%)	2 (1%)	13	44
4	H	206/245 (84%)	201 (98%)	5 (2%)	0	100	100
4	I	206/245 (84%)	199 (97%)	6 (3%)	1 (0%)	25	58
4	J	207/245 (84%)	201 (97%)	4 (2%)	2 (1%)	13	44
5	K	55/104 (53%)	53 (96%)	2 (4%)	0	100	100
5	L	87/104 (84%)	87 (100%)	0	0	100	100
5	M	89/104 (86%)	87 (98%)	2 (2%)	0	100	100
5	N	89/104 (86%)	89 (100%)	0	0	100	100
5	O	89/104 (86%)	89 (100%)	0	0	100	100
5	P	88/104 (85%)	88 (100%)	0	0	100	100
6	Q	132/138 (96%)	128 (97%)	4 (3%)	0	100	100
6	R	115/138 (83%)	114 (99%)	1 (1%)	0	100	100
6	S	119/138 (86%)	116 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	T	121/138 (88%)	118 (98%)	3 (2%)	0	100	100
6	U	117/138 (85%)	115 (98%)	2 (2%)	0	100	100
7	V	131/134 (98%)	123 (94%)	8 (6%)	0	100	100
7	W	130/134 (97%)	124 (95%)	6 (5%)	0	100	100
7	X	131/134 (98%)	126 (96%)	5 (4%)	0	100	100
7	Y	131/134 (98%)	127 (97%)	4 (3%)	0	100	100
7	Z	131/134 (98%)	125 (95%)	5 (4%)	1 (1%)	16	49
7	a	131/134 (98%)	125 (95%)	6 (5%)	0	100	100
All	All	12674/46523 (27%)	12203 (96%)	362 (3%)	109 (1%)	17	45

All (109) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	WO	168	GLU
1	WR	123	ILE
1	WR	165	PHE
1	WR	166	VAL
1	WS	187	ASP
3	E	188	LEU
3	E	190	VAL
4	J	83	ALA
1	WB	148	GLY
1	WB	163	SER
1	WD	146	THR
1	WD	148	GLY
1	WF	118	GLN
1	WI	146	THR
1	WI	160	PRO
1	WI	170	LYS
1	WK	166	VAL
1	WM	148	GLY
1	WN	146	THR
1	WN	148	GLY
1	WP	146	THR
1	WQ	146	THR
1	WQ	148	GLY
1	WQ	169	GLN
1	WS	146	THR
1	WT	146	THR

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Mol	Chain	Res	Type
1	WT	162	PRO
1	WW	146	THR
1	WW	148	GLY
3	E	167	ASN
3	E	213	ILE
4	G	83	ALA
4	I	160	GLN
1	UI	162	PRO
1	UJ	162	PRO
1	UK	162	PRO
1	UL	162	PRO
1	UM	162	PRO
1	UN	162	PRO
1	UO	162	PRO
1	UP	162	PRO
1	WB	146	THR
1	WB	164	LEU
1	WD	118	GLN
1	WE	160	PRO
1	WE	162	PRO
1	WI	148	GLY
1	WP	148	GLY
1	WS	118	GLN
1	WS	169	GLN
1	WT	165	PHE
1	WW	118	GLN
1	WW	168	GLU
3	E	189	PRO
1	UI	163	SER
1	UJ	163	SER
1	UK	163	SER
1	UL	163	SER
1	UM	163	SER
1	UN	163	SER
1	UO	163	SER
1	UP	163	SER
1	WA	182	PRO
1	WB	182	PRO
1	WD	165	PHE
1	WD	182	PRO
1	WE	182	PRO
1	WF	182	PRO

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Mol	Chain	Res	Type
1	WG	182	PRO
1	WH	165	PHE
1	WH	182	PRO
1	WI	169	GLN
1	WI	182	PRO
1	WJ	182	PRO
1	WK	182	PRO
1	WL	182	PRO
1	WM	182	PRO
1	WN	182	PRO
1	WO	182	PRO
1	WP	182	PRO
1	WQ	182	PRO
1	WR	112	GLY
1	WR	182	PRO
1	WS	182	PRO
1	WT	182	PRO
1	WU	182	PRO
1	WV	148	GLY
1	WV	182	PRO
1	WW	182	PRO
1	WK	168	GLU
1	WR	121	PHE
1	WT	163	SER
4	G	162	PRO
1	WC	182	PRO
1	WE	221	THR
1	WG	163	SER
3	E	187	ALA
7	Z	58	ALA
1	WA	160	PRO
1	WF	162	PRO
1	WL	148	GLY
1	WS	148	GLY
1	WT	148	GLY
1	WA	148	GLY
1	WP	123	ILE
1	WR	148	GLY
1	WP	160	PRO
1	WT	161	LYS
4	J	229	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	1	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	2	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	3	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	4	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	5	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	6	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	7	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	8	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	9	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AA	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AB	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AC	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AD	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AE	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AF	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AG	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AH	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AI	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AJ	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AK	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AL	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AM	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AN	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AO	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	AP	141/467 (30%)	134 (95%)	7 (5%)	20	45

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AQ	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	UI	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UJ	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UK	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UL	128/467 (27%)	122 (95%)	6 (5%)	22	46
1	UM	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UN	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UO	128/467 (27%)	123 (96%)	5 (4%)	27	51
1	UP	128/467 (27%)	122 (95%)	6 (5%)	22	46
1	WA	95/467 (20%)	91 (96%)	4 (4%)	25	49
1	WB	93/467 (20%)	87 (94%)	6 (6%)	14	39
1	WC	91/467 (20%)	83 (91%)	8 (9%)	8	30
1	WD	92/467 (20%)	88 (96%)	4 (4%)	25	49
1	WE	94/467 (20%)	87 (93%)	7 (7%)	11	35
1	WF	93/467 (20%)	86 (92%)	7 (8%)	11	35
1	WG	94/467 (20%)	87 (93%)	7 (7%)	11	35
1	WH	79/467 (17%)	75 (95%)	4 (5%)	20	45
1	WI	79/467 (17%)	73 (92%)	6 (8%)	11	34
1	WJ	83/467 (18%)	79 (95%)	4 (5%)	21	46
1	WK	82/467 (18%)	77 (94%)	5 (6%)	15	41
1	WL	69/467 (15%)	66 (96%)	3 (4%)	25	49
1	WM	66/467 (14%)	65 (98%)	1 (2%)	60	74
1	WN	68/467 (15%)	66 (97%)	2 (3%)	37	58
1	WO	80/467 (17%)	76 (95%)	4 (5%)	20	45
1	WP	83/467 (18%)	77 (93%)	6 (7%)	12	36
1	WQ	93/467 (20%)	91 (98%)	2 (2%)	47	64
1	WR	93/467 (20%)	86 (92%)	7 (8%)	11	35
1	WS	93/467 (20%)	87 (94%)	6 (6%)	14	39
1	WT	93/467 (20%)	86 (92%)	7 (8%)	11	35
1	WU	94/467 (20%)	90 (96%)	4 (4%)	25	49
1	WV	92/467 (20%)	83 (90%)	9 (10%)	6	25

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	WW	93/467 (20%)	85 (91%)	8 (9%)	8	31
1	b	8/467 (2%)	8 (100%)	0	100	100
1	c	11/467 (2%)	10 (91%)	1 (9%)	7	28
1	d	14/467 (3%)	12 (86%)	2 (14%)	2	16
1	e	11/467 (2%)	11 (100%)	0	100	100
1	f	15/467 (3%)	15 (100%)	0	100	100
1	g	11/467 (2%)	11 (100%)	0	100	100
1	h	15/467 (3%)	15 (100%)	0	100	100
1	i	11/467 (2%)	11 (100%)	0	100	100
1	j	14/467 (3%)	13 (93%)	1 (7%)	12	36
1	k	11/467 (2%)	11 (100%)	0	100	100
1	l	15/467 (3%)	14 (93%)	1 (7%)	13	38
1	t	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	u	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	v	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	w	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	x	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	y	141/467 (30%)	134 (95%)	7 (5%)	20	45
1	z	141/467 (30%)	134 (95%)	7 (5%)	20	45
2	A	74/74 (100%)	73 (99%)	1 (1%)	62	75
2	B	74/74 (100%)	73 (99%)	1 (1%)	62	75
2	C	74/74 (100%)	74 (100%)	0	100	100
2	D	74/74 (100%)	73 (99%)	1 (1%)	62	75
3	E	210/221 (95%)	204 (97%)	6 (3%)	37	58
4	F	177/204 (87%)	170 (96%)	7 (4%)	27	50
4	G	179/204 (88%)	173 (97%)	6 (3%)	32	55
4	H	178/204 (87%)	173 (97%)	5 (3%)	38	59
4	I	178/204 (87%)	172 (97%)	6 (3%)	32	55
4	J	179/204 (88%)	175 (98%)	4 (2%)	47	64
5	K	45/79 (57%)	40 (89%)	5 (11%)	5	21
5	L	68/79 (86%)	64 (94%)	4 (6%)	16	41

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	M	70/79 (89%)	65 (93%)	5 (7%)	12	36
5	N	70/79 (89%)	66 (94%)	4 (6%)	17	43
5	O	70/79 (89%)	66 (94%)	4 (6%)	17	43
5	P	69/79 (87%)	65 (94%)	4 (6%)	17	42
6	Q	110/113 (97%)	106 (96%)	4 (4%)	30	54
6	R	101/113 (89%)	99 (98%)	2 (2%)	50	68
6	S	103/113 (91%)	96 (93%)	7 (7%)	13	38
6	T	104/113 (92%)	102 (98%)	2 (2%)	52	69
6	U	102/113 (90%)	96 (94%)	6 (6%)	16	41
7	V	104/105 (99%)	104 (100%)	0	100	100
7	W	104/105 (99%)	103 (99%)	1 (1%)	73	80
7	X	104/105 (99%)	104 (100%)	0	100	100
7	Y	104/105 (99%)	102 (98%)	2 (2%)	52	69
7	Z	104/105 (99%)	101 (97%)	3 (3%)	37	58
7	a	104/105 (99%)	100 (96%)	4 (4%)	28	52
All	All	10879/38698 (28%)	10379 (95%)	500 (5%)	25	47

All (500) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	UI	98	LEU
1	UI	127	SER
1	UI	154	ARG
1	UI	159	MET
1	UI	165	PHE
1	UJ	98	LEU
1	UJ	127	SER
1	UJ	154	ARG
1	UJ	159	MET
1	UJ	165	PHE
1	UK	98	LEU
1	UK	127	SER
1	UK	154	ARG
1	UK	159	MET
1	UK	165	PHE
1	UL	98	LEU
1	UL	127	SER

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Mol	Chain	Res	Type
1	UL	154	ARG
1	UL	159	MET
1	UL	165	PHE
1	UL	167	ARG
1	UM	98	LEU
1	UM	127	SER
1	UM	154	ARG
1	UM	159	MET
1	UM	165	PHE
1	UN	98	LEU
1	UN	127	SER
1	UN	154	ARG
1	UN	159	MET
1	UN	165	PHE
1	UO	98	LEU
1	UO	127	SER
1	UO	154	ARG
1	UO	159	MET
1	UO	165	PHE
1	UP	98	LEU
1	UP	127	SER
1	UP	154	ARG
1	UP	159	MET
1	UP	165	PHE
1	UP	167	ARG
1	WA	114	GLU
1	WA	128	GLU
1	WA	167	ARG
1	WA	170	LYS
1	WB	121	PHE
1	WB	128	GLU
1	WB	134	ARG
1	WB	137	GLU
1	WB	164	LEU
1	WB	169	GLN
1	WC	115	LEU
1	WC	120	LYS
1	WC	128	GLU
1	WC	134	ARG
1	WC	164	LEU
1	WC	166	VAL
1	WC	168	GLU

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Mol	Chain	Res	Type
1	WC	170	LYS
1	WD	114	GLU
1	WD	115	LEU
1	WD	167	ARG
1	WD	170	LYS
1	WE	114	GLU
1	WE	128	GLU
1	WE	134	ARG
1	WE	160	PRO
1	WE	161	LYS
1	WE	164	LEU
1	WE	170	LYS
1	WF	111	VAL
1	WF	113	PHE
1	WF	120	LYS
1	WF	121	PHE
1	WF	128	GLU
1	WF	134	ARG
1	WF	142	ARG
1	WG	111	VAL
1	WG	114	GLU
1	WG	115	LEU
1	WG	120	LYS
1	WG	134	ARG
1	WG	164	LEU
1	WG	187	ASP
1	WH	128	GLU
1	WH	134	ARG
1	WH	168	GLU
1	WH	221	THR
1	WI	128	GLU
1	WI	134	ARG
1	WI	165	PHE
1	WI	168	GLU
1	WI	169	GLN
1	WI	170	LYS
1	WJ	128	GLU
1	WJ	165	PHE
1	WJ	167	ARG
1	WJ	169	GLN
1	WK	164	LEU
1	WK	165	PHE

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Mol	Chain	Res	Type
1	WK	167	ARG
1	WK	170	LYS
1	WK	187	ASP
1	WL	128	GLU
1	WL	159	MET
1	WL	221	THR
1	WM	221	THR
1	WN	128	GLU
1	WN	221	THR
1	WO	128	GLU
1	WO	169	GLN
1	WO	170	LYS
1	WO	221	THR
1	WP	128	GLU
1	WP	154	ARG
1	WP	161	LYS
1	WP	165	PHE
1	WP	169	GLN
1	WP	170	LYS
1	WQ	114	GLU
1	WQ	128	GLU
1	WR	114	GLU
1	WR	117	ASP
1	WR	119	GLU
1	WR	128	GLU
1	WR	164	LEU
1	WR	166	VAL
1	WR	169	GLN
1	WS	114	GLU
1	WS	128	GLU
1	WS	134	ARG
1	WS	170	LYS
1	WS	187	ASP
1	WS	221	THR
1	WT	119	GLU
1	WT	123	ILE
1	WT	128	GLU
1	WT	134	ARG
1	WT	159	MET
1	WT	165	PHE
1	WT	167	ARG
1	WU	114	GLU

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Mol	Chain	Res	Type
1	WU	128	GLU
1	WU	134	ARG
1	WU	161	LYS
1	WV	114	GLU
1	WV	117	ASP
1	WV	120	LYS
1	WV	128	GLU
1	WV	134	ARG
1	WV	164	LEU
1	WV	166	VAL
1	WV	169	GLN
1	WV	187	ASP
1	WW	114	GLU
1	WW	115	LEU
1	WW	128	GLU
1	WW	134	ARG
1	WW	167	ARG
1	WW	168	GLU
1	WW	169	GLN
1	WW	221	THR
2	A	7	MET
2	B	47	MET
2	D	9	MET
3	E	36	ARG
3	E	86	PHE
3	E	185	MET
3	E	214	PHE
3	E	227	MET
3	E	229	MET
4	F	38	TRP
4	F	123	MET
4	F	129	LYS
4	F	155	ASN
4	F	160	GLN
4	F	190	PHE
4	F	213	PRO
4	G	75	ARG
4	G	106	ASP
4	G	116	PHE
4	G	140	ARG
4	G	160	GLN
4	G	162	PRO

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Mol	Chain	Res	Type
4	H	143	ARG
4	H	152	ARG
4	H	177	SER
4	H	187	PHE
4	H	190	PHE
4	I	113	TYR
4	I	143	ARG
4	I	187	PHE
4	I	205	MET
4	I	238	SER
4	I	241	GLN
4	J	117	SER
4	J	190	PHE
4	J	224	MET
4	J	230	ASP
5	K	15	GLN
5	K	19	MET
5	K	74	ASP
5	K	79	SER
5	K	101	SER
5	L	15	GLN
5	L	19	MET
5	L	75	MET
5	L	84	MET
5	M	7	ILE
5	M	11	ILE
5	M	14	LEU
5	M	15	GLN
5	M	70	ASP
5	N	15	GLN
5	N	19	MET
5	N	33	SER
5	N	81	SER
5	O	15	GLN
5	O	19	MET
5	O	101	SER
5	O	102	MET
5	P	15	GLN
5	P	19	MET
5	P	57	GLU
5	P	91	LYS
6	Q	34	ASP

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Mol	Chain	Res	Type
6	Q	101	ASP
6	Q	113	SER
6	Q	125	SER
6	R	47	SER
6	R	55	ARG
6	S	48	GLU
6	S	65	LEU
6	S	69	SER
6	S	71	HIS
6	S	72	HIS
6	S	91	ASP
6	S	128	LYS
6	T	47	SER
6	T	76	GLN
6	U	4	ARG
6	U	18	LEU
6	U	65	LEU
6	U	104	ARG
6	U	113	SER
6	U	125	SER
7	W	123	LYS
7	Y	30	ASN
7	Y	120	ASN
7	Z	20	ARG
7	Z	52	ASP
7	Z	84	LEU
7	a	86	ASP
7	a	88	ASN
7	a	125	MET
7	a	127	LEU
1	c	324	ASN
1	d	318	ASN
1	d	319	GLN
1	j	319	GLN
1	l	318	ASN
1	t	274	ASN
1	t	294	ARG
1	t	359	GLN
1	t	377	MET
1	t	381	ASP
1	t	417	ARG
1	t	424	ASP

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Mol	Chain	Res	Type
1	u	274	ASN
1	u	294	ARG
1	u	359	GLN
1	u	377	MET
1	u	381	ASP
1	u	417	ARG
1	u	424	ASP
1	v	274	ASN
1	v	294	ARG
1	v	359	GLN
1	v	377	MET
1	v	381	ASP
1	v	417	ARG
1	v	424	ASP
1	w	274	ASN
1	w	294	ARG
1	w	359	GLN
1	w	377	MET
1	w	381	ASP
1	w	417	ARG
1	w	424	ASP
1	x	274	ASN
1	x	294	ARG
1	x	359	GLN
1	x	377	MET
1	x	381	ASP
1	x	417	ARG
1	x	424	ASP
1	y	274	ASN
1	y	294	ARG
1	y	359	GLN
1	y	377	MET
1	y	381	ASP
1	y	417	ARG
1	y	424	ASP
1	z	274	ASN
1	z	294	ARG
1	z	359	GLN
1	z	377	MET
1	z	381	ASP
1	z	417	ARG
1	z	424	ASP

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Mol	Chain	Res	Type
1	1	274	ASN
1	1	294	ARG
1	1	359	GLN
1	1	377	MET
1	1	381	ASP
1	1	417	ARG
1	1	424	ASP
1	2	274	ASN
1	2	294	ARG
1	2	359	GLN
1	2	377	MET
1	2	381	ASP
1	2	417	ARG
1	2	424	ASP
1	3	274	ASN
1	3	294	ARG
1	3	359	GLN
1	3	377	MET
1	3	381	ASP
1	3	417	ARG
1	3	424	ASP
1	4	274	ASN
1	4	294	ARG
1	4	359	GLN
1	4	377	MET
1	4	381	ASP
1	4	417	ARG
1	4	424	ASP
1	5	274	ASN
1	5	294	ARG
1	5	359	GLN
1	5	377	MET
1	5	381	ASP
1	5	417	ARG
1	5	424	ASP
1	6	274	ASN
1	6	294	ARG
1	6	359	GLN
1	6	377	MET
1	6	381	ASP
1	6	417	ARG
1	6	424	ASP

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Mol	Chain	Res	Type
1	7	274	ASN
1	7	294	ARG
1	7	359	GLN
1	7	377	MET
1	7	381	ASP
1	7	417	ARG
1	7	424	ASP
1	8	274	ASN
1	8	294	ARG
1	8	359	GLN
1	8	377	MET
1	8	381	ASP
1	8	417	ARG
1	8	424	ASP
1	9	274	ASN
1	9	294	ARG
1	9	359	GLN
1	9	377	MET
1	9	381	ASP
1	9	417	ARG
1	9	424	ASP
1	0	274	ASN
1	0	294	ARG
1	0	359	GLN
1	0	377	MET
1	0	381	ASP
1	0	417	ARG
1	0	424	ASP
1	AA	274	ASN
1	AA	294	ARG
1	AA	359	GLN
1	AA	377	MET
1	AA	381	ASP
1	AA	417	ARG
1	AA	424	ASP
1	AB	274	ASN
1	AB	294	ARG
1	AB	359	GLN
1	AB	377	MET
1	AB	381	ASP
1	AB	417	ARG
1	AB	424	ASP

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Mol	Chain	Res	Type
1	AC	274	ASN
1	AC	294	ARG
1	AC	359	GLN
1	AC	377	MET
1	AC	381	ASP
1	AC	417	ARG
1	AC	424	ASP
1	AD	274	ASN
1	AD	294	ARG
1	AD	359	GLN
1	AD	377	MET
1	AD	381	ASP
1	AD	417	ARG
1	AD	424	ASP
1	AE	274	ASN
1	AE	294	ARG
1	AE	359	GLN
1	AE	377	MET
1	AE	381	ASP
1	AE	417	ARG
1	AE	424	ASP
1	AF	274	ASN
1	AF	294	ARG
1	AF	359	GLN
1	AF	377	MET
1	AF	381	ASP
1	AF	417	ARG
1	AF	424	ASP
1	AG	274	ASN
1	AG	294	ARG
1	AG	359	GLN
1	AG	377	MET
1	AG	381	ASP
1	AG	417	ARG
1	AG	424	ASP
1	AH	274	ASN
1	AH	294	ARG
1	AH	359	GLN
1	AH	377	MET
1	AH	381	ASP
1	AH	417	ARG
1	AH	424	ASP

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Mol	Chain	Res	Type
1	AI	274	ASN
1	AI	294	ARG
1	AI	359	GLN
1	AI	377	MET
1	AI	381	ASP
1	AI	417	ARG
1	AI	424	ASP
1	AJ	274	ASN
1	AJ	294	ARG
1	AJ	359	GLN
1	AJ	377	MET
1	AJ	381	ASP
1	AJ	417	ARG
1	AJ	424	ASP
1	AK	274	ASN
1	AK	294	ARG
1	AK	359	GLN
1	AK	377	MET
1	AK	381	ASP
1	AK	417	ARG
1	AK	424	ASP
1	AL	274	ASN
1	AL	294	ARG
1	AL	359	GLN
1	AL	377	MET
1	AL	381	ASP
1	AL	417	ARG
1	AL	424	ASP
1	AM	274	ASN
1	AM	294	ARG
1	AM	359	GLN
1	AM	377	MET
1	AM	381	ASP
1	AM	417	ARG
1	AM	424	ASP
1	AN	274	ASN
1	AN	294	ARG
1	AN	359	GLN
1	AN	377	MET
1	AN	381	ASP
1	AN	417	ARG
1	AN	424	ASP

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Mol	Chain	Res	Type
1	AO	274	ASN
1	AO	294	ARG
1	AO	359	GLN
1	AO	377	MET
1	AO	381	ASP
1	AO	417	ARG
1	AO	424	ASP
1	AP	274	ASN
1	AP	294	ARG
1	AP	359	GLN
1	AP	377	MET
1	AP	381	ASP
1	AP	417	ARG
1	AP	424	ASP
1	AQ	274	ASN
1	AQ	294	ARG
1	AQ	359	GLN
1	AQ	377	MET
1	AQ	381	ASP
1	AQ	417	ARG
1	AQ	424	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (165) such sidechains are listed below:

Mol	Chain	Res	Type
1	UI	196	HIS
1	UJ	245	HIS
1	UK	196	HIS
1	UL	69	GLN
1	UL	196	HIS
1	UM	196	HIS
1	UN	69	GLN
1	UN	196	HIS
1	UO	196	HIS
1	UP	196	HIS
1	WB	169	GLN
1	WE	156	HIS
1	WE	209	ASN
1	WF	118	GLN
1	WH	156	HIS
1	WI	129	GLN
1	WI	156	HIS

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Mol	Chain	Res	Type
1	WJ	169	GLN
1	WJ	209	ASN
1	WO	209	ASN
1	WP	209	ASN
1	WV	169	GLN
1	WW	169	GLN
2	D	39	GLN
3	E	162	ASN
3	E	182	ASN
3	E	205	ASN
4	F	119	GLN
4	F	141	GLN
4	H	36	GLN
4	H	160	GLN
4	H	233	GLN
4	I	160	GLN
4	I	184	GLN
4	J	114	GLN
4	J	155	ASN
5	K	103	GLN
5	L	15	GLN
5	L	90	ASN
5	M	83	GLN
5	M	103	GLN
5	N	87	GLN
5	O	39	HIS
5	O	55	GLN
5	O	97	GLN
5	P	76	GLN
6	Q	17	ASN
6	Q	23	GLN
6	R	23	GLN
6	R	29	ASN
6	R	92	GLN
6	R	117	GLN
6	S	32	ASN
6	S	76	GLN
6	S	92	GLN
6	S	135	GLN
6	T	17	ASN
6	T	21	GLN
6	T	32	ASN

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Mol	Chain	Res	Type
6	T	72	HIS
6	T	76	GLN
6	T	117	GLN
6	U	13	GLN
6	U	72	HIS
6	U	76	GLN
6	U	92	GLN
6	U	112	ASN
7	V	30	ASN
7	X	50	GLN
7	X	57	GLN
7	X	134	GLN
7	Z	17	GLN
7	a	5	ASN
7	a	57	GLN
7	a	115	ASN
1	b	319	GLN
1	j	318	ASN
1	l	318	ASN
1	t	303	GLN
1	t	374	HIS
1	u	303	GLN
1	u	374	HIS
1	v	303	GLN
1	v	374	HIS
1	w	303	GLN
1	w	374	HIS
1	x	303	GLN
1	x	374	HIS
1	y	374	HIS
1	z	297	GLN
1	z	303	GLN
1	z	374	HIS
1	1	297	GLN
1	1	299	ASN
1	1	303	GLN
1	1	374	HIS
1	2	303	GLN
1	2	374	HIS
1	3	303	GLN
1	3	374	HIS
1	4	303	GLN

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Mol	Chain	Res	Type
1	4	374	HIS
1	5	299	ASN
1	5	303	GLN
1	5	374	HIS
1	6	303	GLN
1	6	374	HIS
1	7	299	ASN
1	7	303	GLN
1	7	374	HIS
1	8	303	GLN
1	8	374	HIS
1	9	303	GLN
1	9	374	HIS
1	0	303	GLN
1	0	374	HIS
1	AA	303	GLN
1	AB	265	GLN
1	AB	303	GLN
1	AB	374	HIS
1	AC	303	GLN
1	AC	374	HIS
1	AD	297	GLN
1	AD	303	GLN
1	AD	365	ASN
1	AD	374	HIS
1	AE	297	GLN
1	AE	303	GLN
1	AE	374	HIS
1	AF	303	GLN
1	AF	374	HIS
1	AG	303	GLN
1	AG	374	HIS
1	AG	434	ASN
1	AH	303	GLN
1	AH	374	HIS
1	AH	434	ASN
1	AI	303	GLN
1	AI	374	HIS
1	AI	434	ASN
1	AJ	303	GLN
1	AJ	374	HIS
1	AJ	434	ASN

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Mol	Chain	Res	Type
1	AK	303	GLN
1	AK	374	HIS
1	AK	434	ASN
1	AL	303	GLN
1	AL	374	HIS
1	AL	434	ASN
1	AM	303	GLN
1	AM	374	HIS
1	AM	434	ASN
1	AN	374	HIS
1	AN	434	ASN
1	AO	297	GLN
1	AO	303	GLN
1	AO	374	HIS
1	AO	434	ASN
1	AP	297	GLN
1	AP	303	GLN
1	AP	359	GLN
1	AP	374	HIS
1	AP	434	ASN
1	AQ	303	GLN
1	AQ	374	HIS

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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

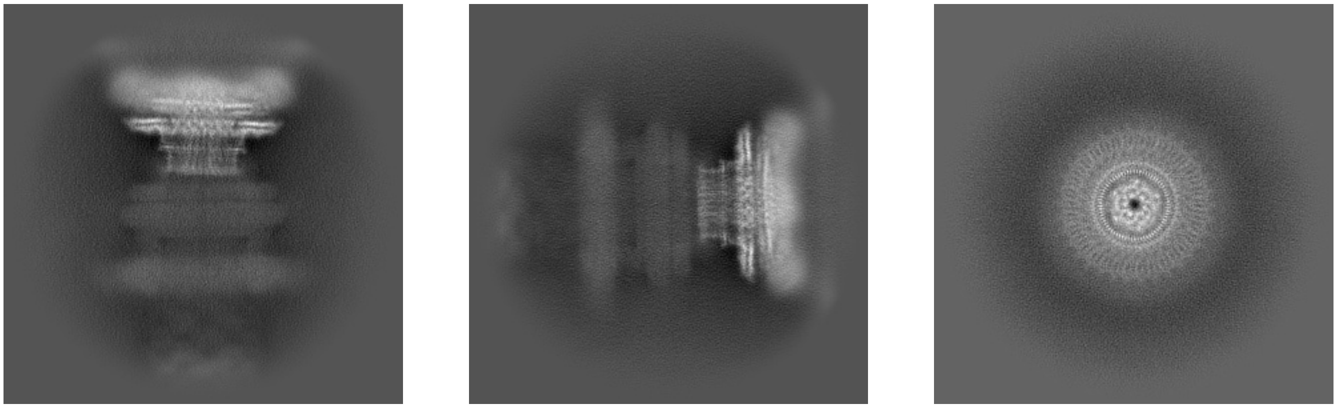
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-37605. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

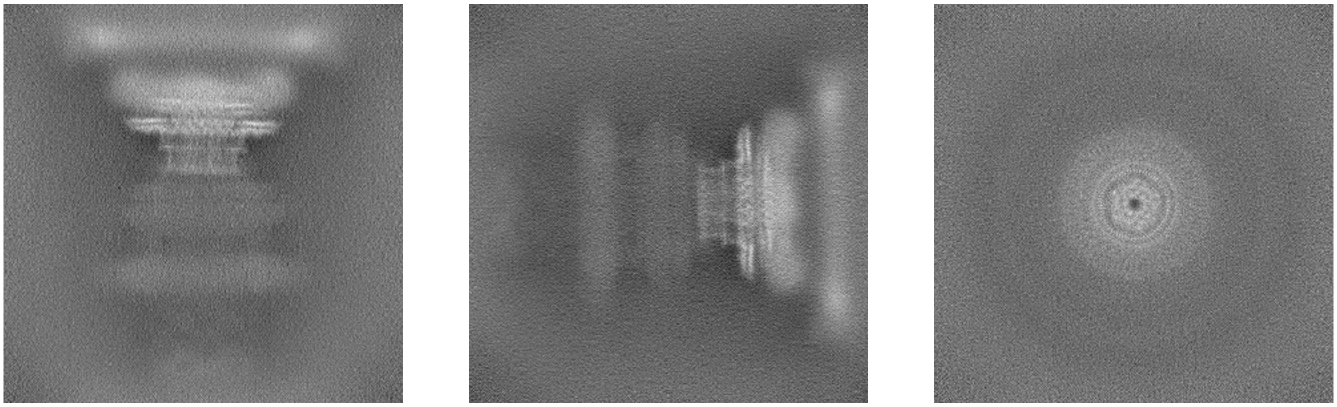
6.1 Orthogonal projections

6.1.1 Primary map



X Y Z

6.1.2 Raw map

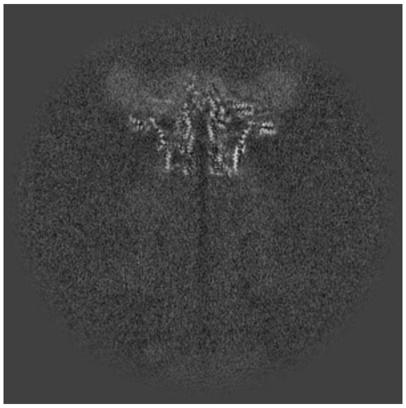


X Y Z

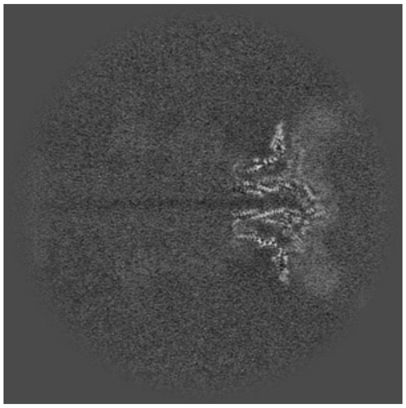
The images above show the map projected in three orthogonal directions.

6.2 Central slices

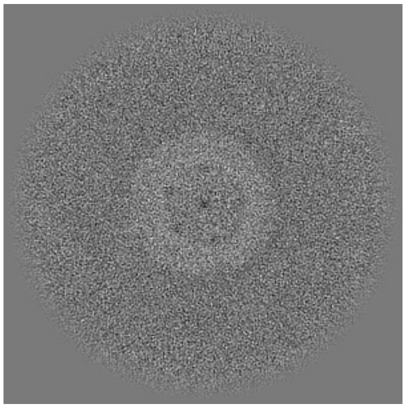
6.2.1 Primary map



X Index: 256

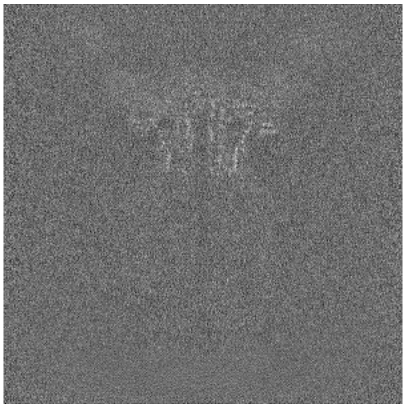


Y Index: 256

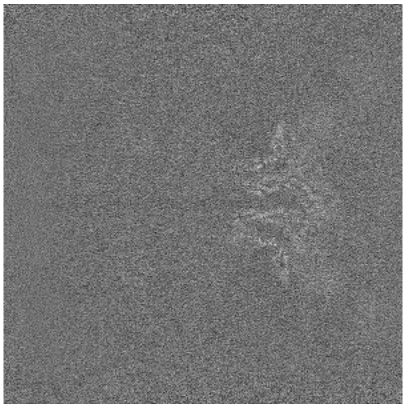


Z Index: 256

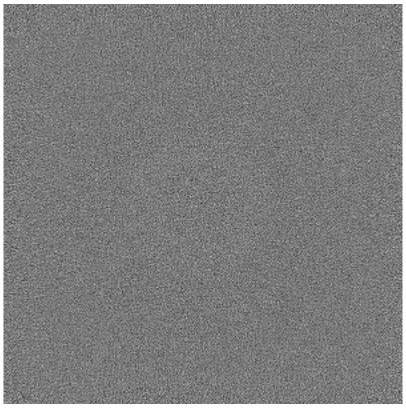
6.2.2 Raw map



X Index: 256



Y Index: 256

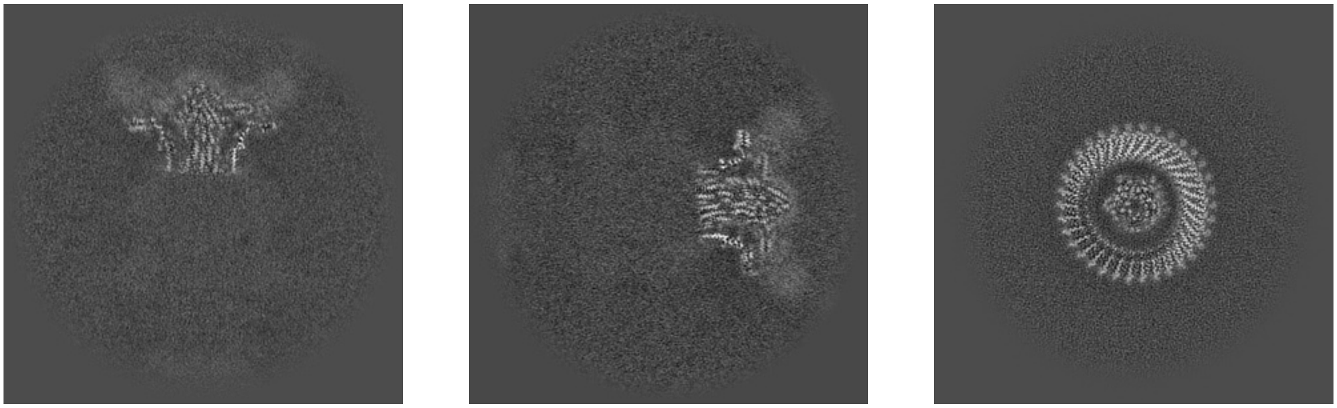


Z Index: 256

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

6.3 Largest variance slices

6.3.1 Primary map

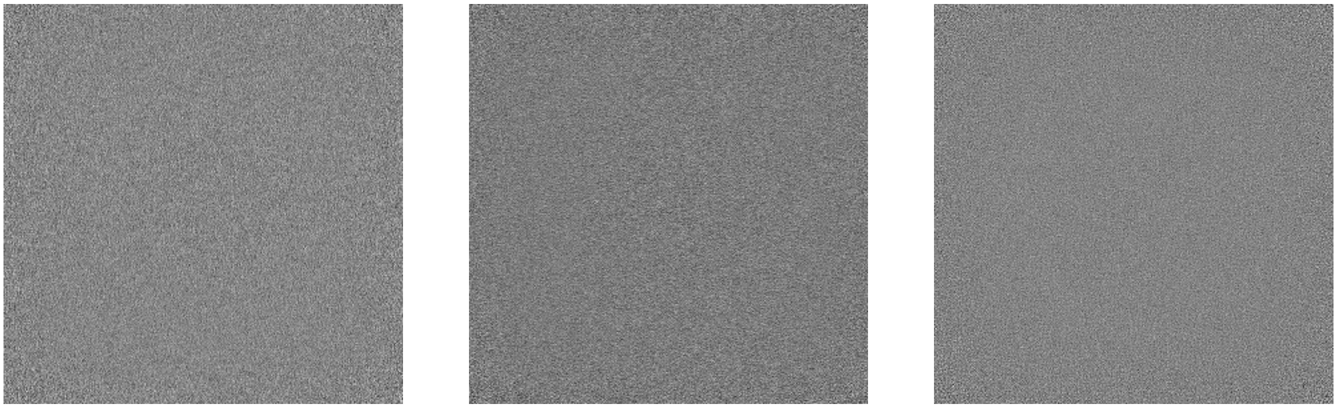


X Index: 244

Y Index: 265

Z Index: 358

6.3.2 Raw map



X Index: 0

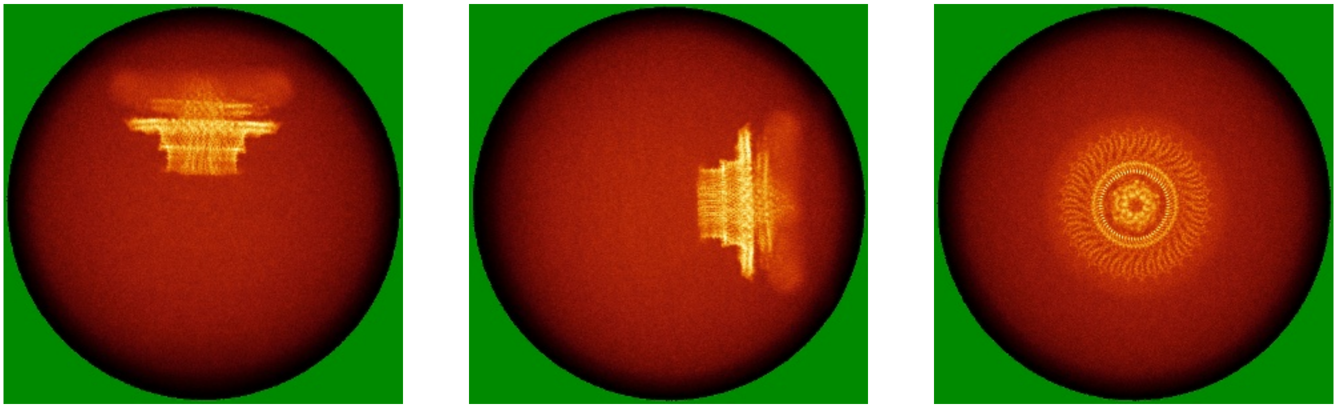
Y Index: 0

Z Index: 0

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

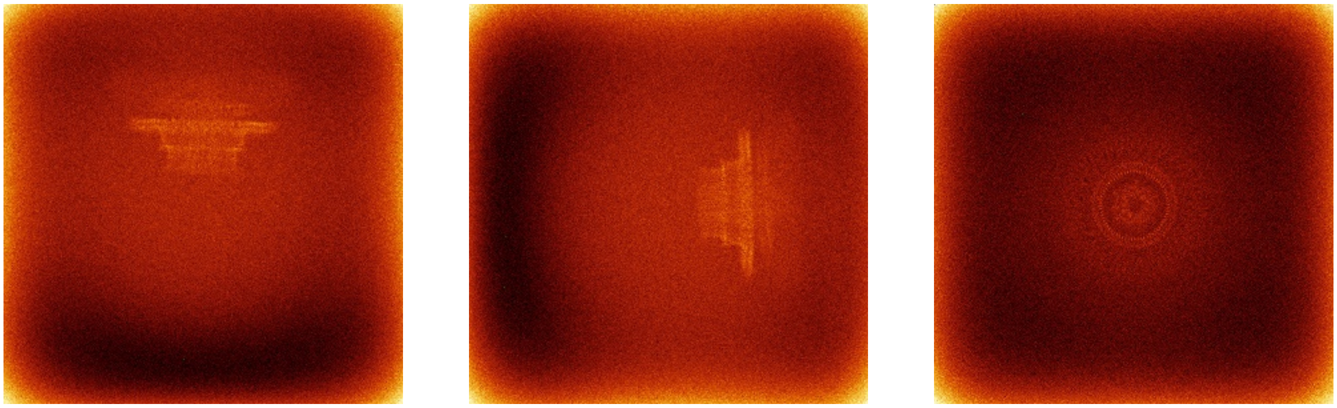
6.4 Orthogonal standard-deviation projections (False-color) ⓘ

6.4.1 Primary map



X Y Z

6.4.2 Raw map

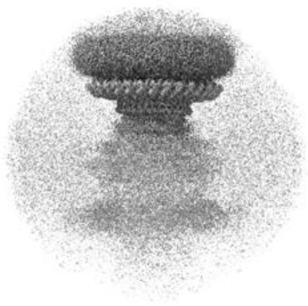


X Y Z

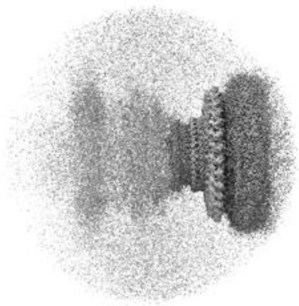
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views

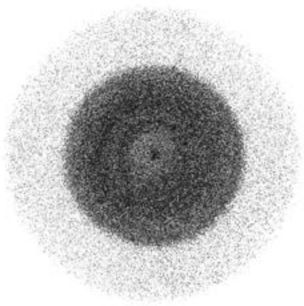
6.5.1 Primary map



X



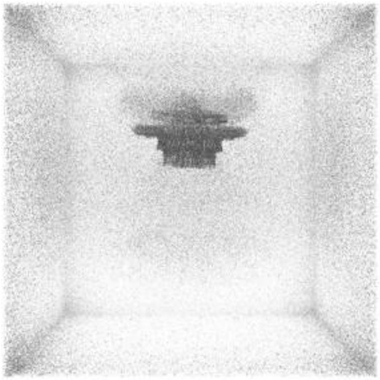
Y



Z

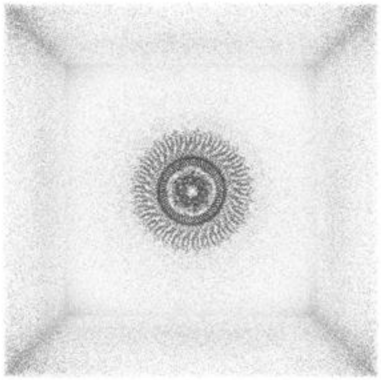
The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X

Y



Z

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

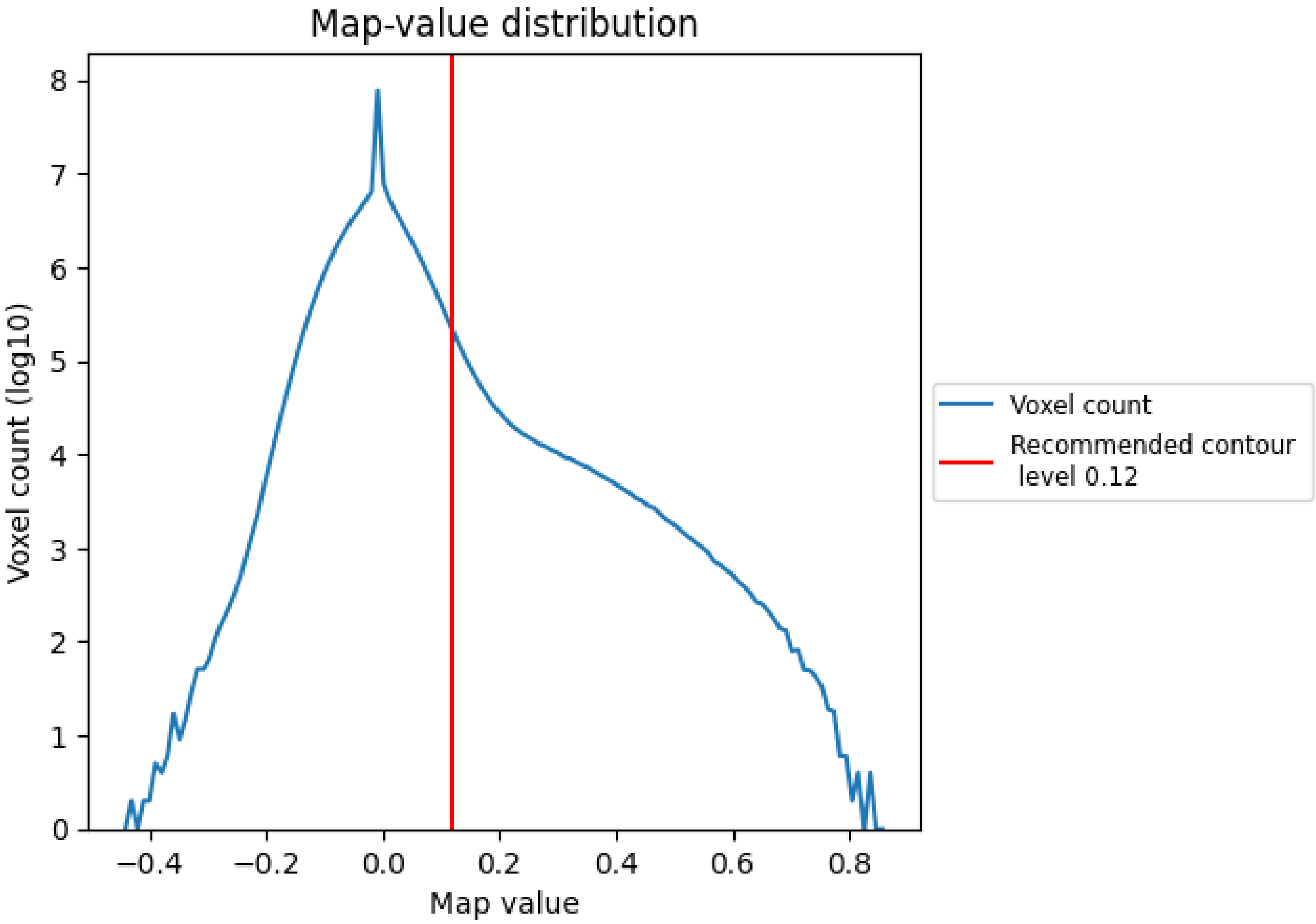
6.6 Mask visualisation

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

7 Map analysis ⓘ

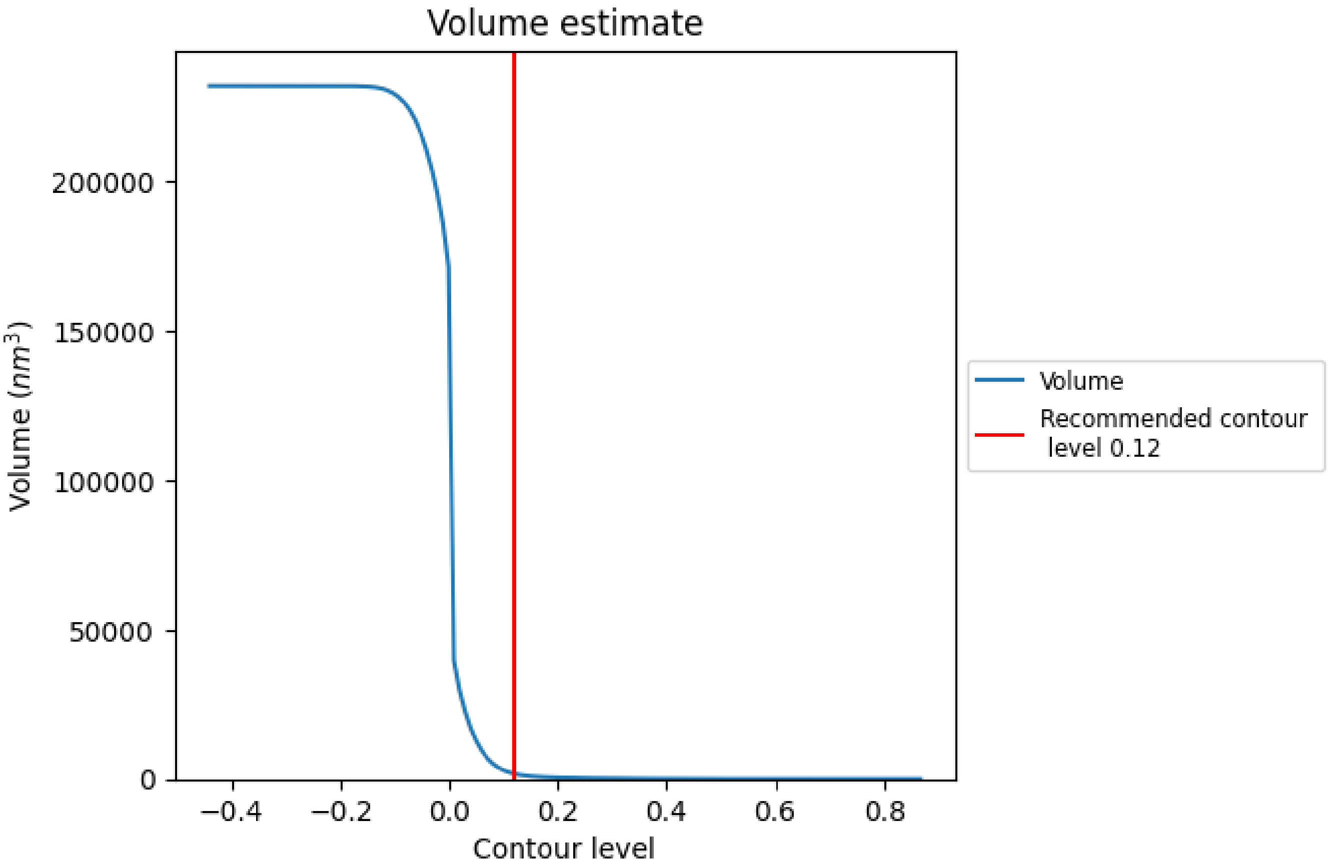
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution ⓘ



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

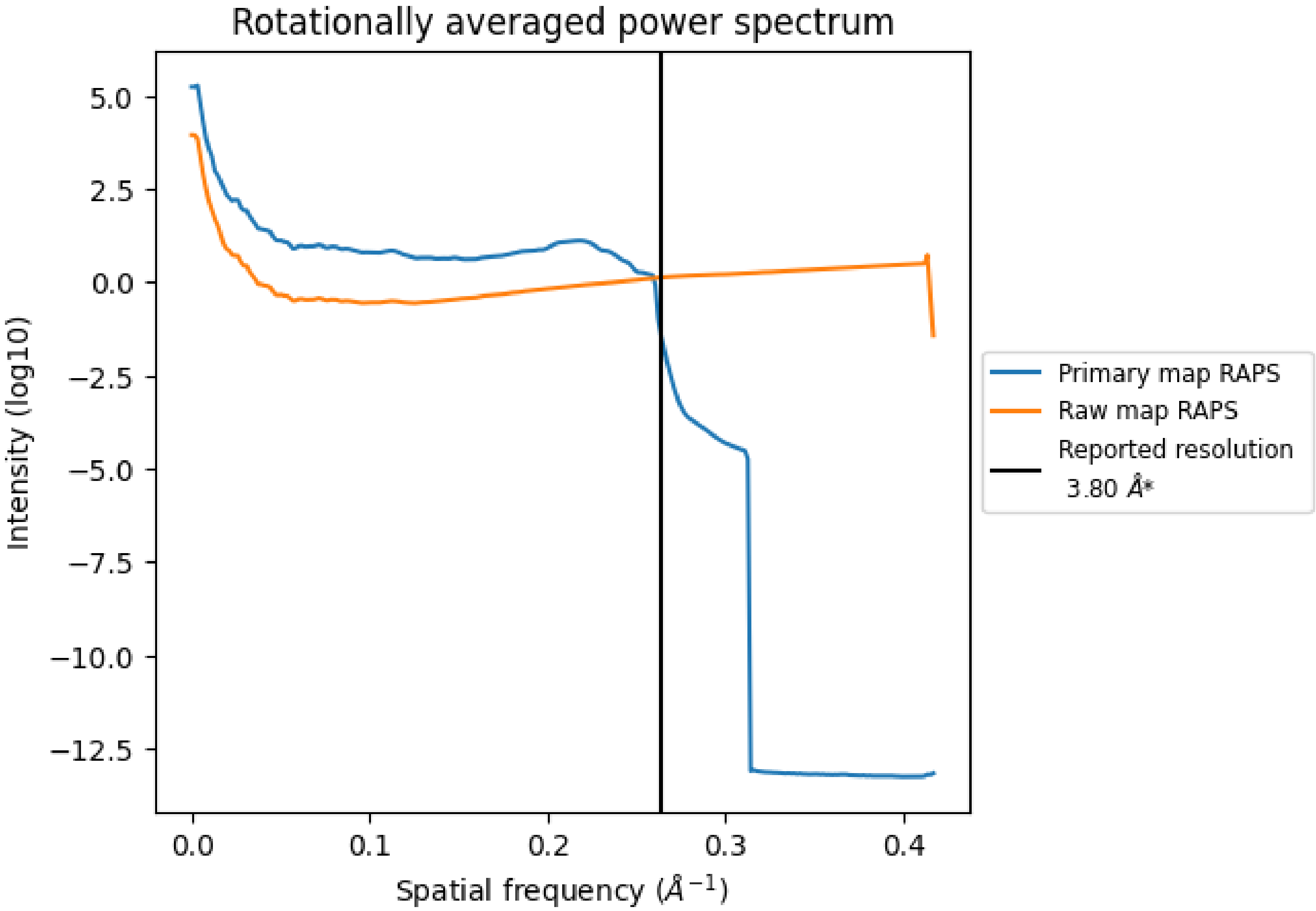
7.2 Volume estimate ⓘ



The volume at the recommended contour level is 1782 nm^3; this corresponds to an approximate mass of 1610 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

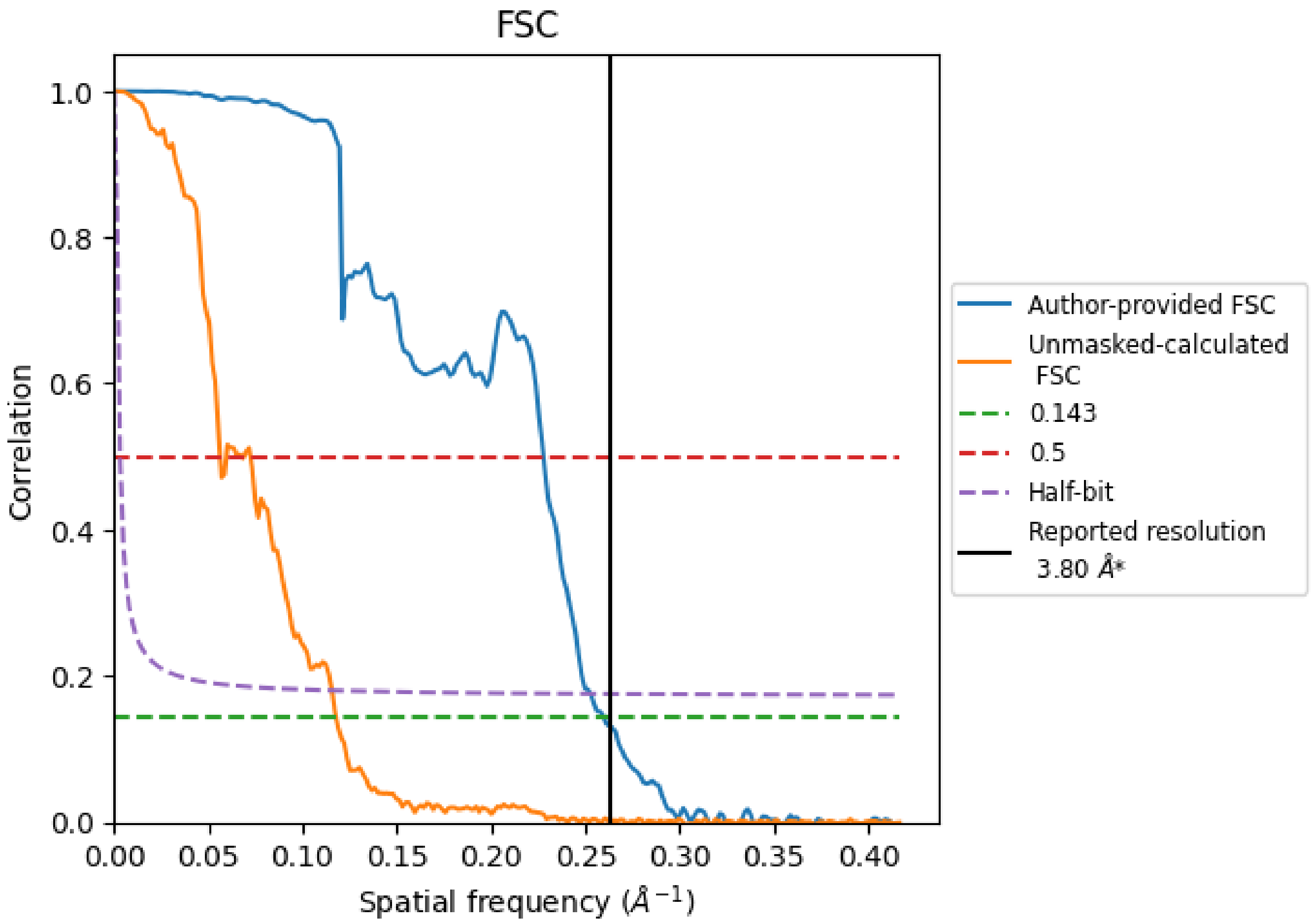


*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8 Fourier-Shell correlation ⓘ

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

8.1 FSC ⓘ



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8.2 Resolution estimates ⓘ

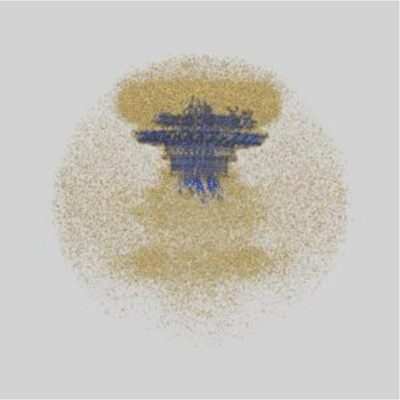
Resolution estimate (Å)	**Estimation criterion (FSC cut-off)**		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	3.85	4.39	3.96
Unmasked-calculated*	8.49	17.76	8.65

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.49 differs from the reported value 3.8 by more than 10 %

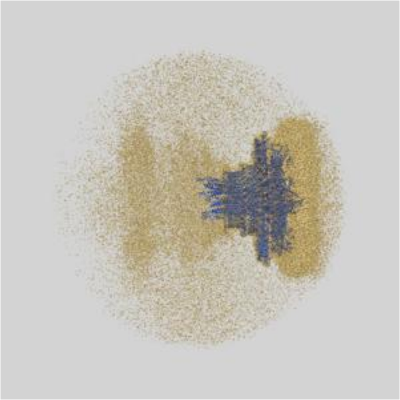
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-37605 and PDB model 8WKQ. Per-residue inclusion information can be found in section 3 on page 13.

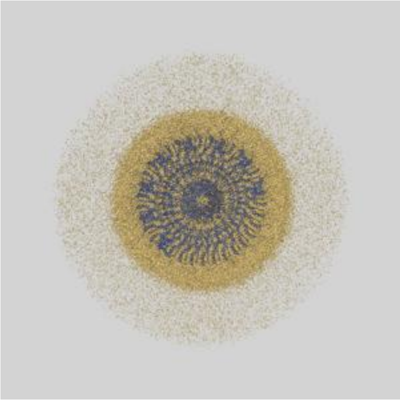
9.1 Map-model overlay



X



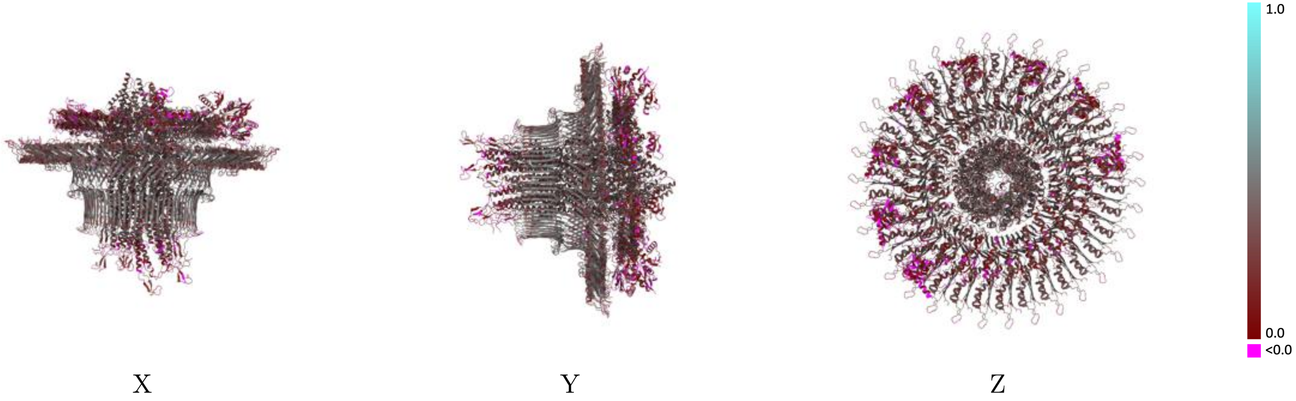
Y



Z

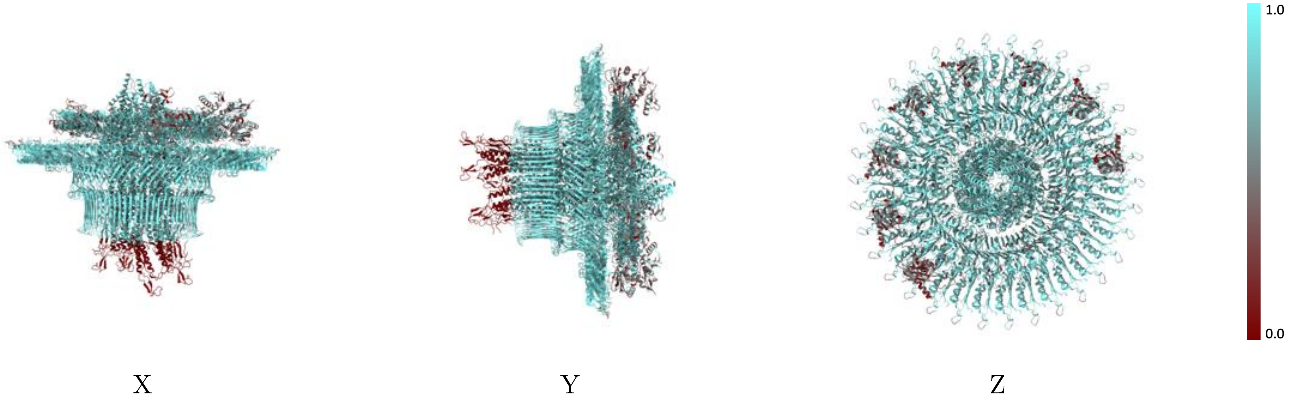
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ



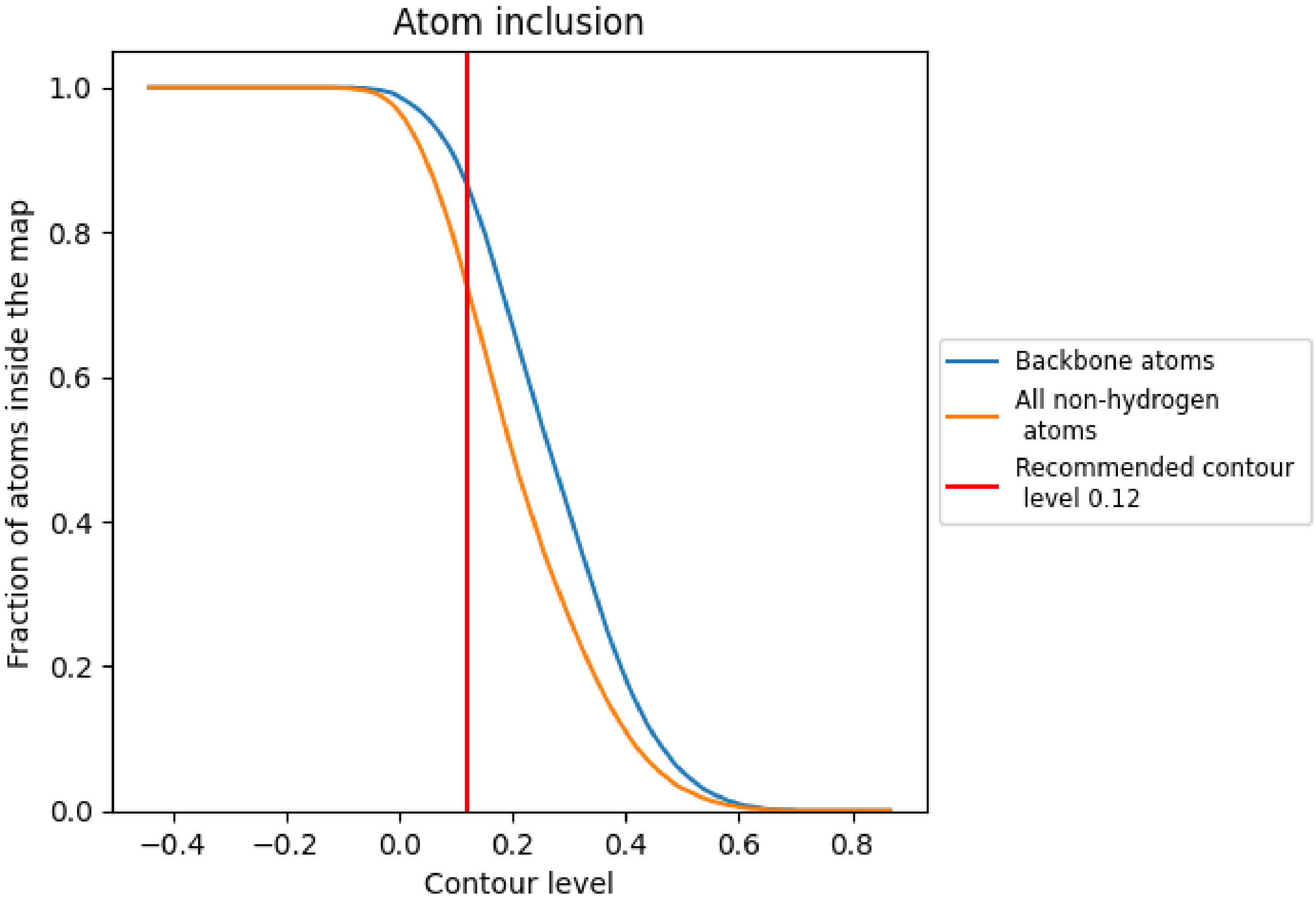
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



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 (0.12).

9.4 Atom inclusion ⓘ



At the recommended contour level, 87% of all backbone atoms, 72% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7250	0.3190
0	0.8170	0.3700
1	0.8140	0.3590
2	0.8250	0.3680
3	0.8290	0.3720
4	0.8250	0.3740
5	0.8190	0.3730
6	0.8280	0.3770
7	0.8200	0.3750
8	0.8340	0.3860
9	0.8330	0.3850
A	0.7670	0.3160
AA	0.8140	0.3660
AB	0.8210	0.3660
AC	0.8210	0.3690
AD	0.8240	0.3640
AE	0.8180	0.3720
AF	0.8290	0.3590
AG	0.8120	0.3470
AH	0.8200	0.3540
AI	0.8010	0.3490
AJ	0.8220	0.3610
AK	0.8270	0.3650
AL	0.8140	0.3620
AM	0.8110	0.3650
AN	0.8040	0.3640
AO	0.8250	0.3750
AP	0.8220	0.3740
AQ	0.8160	0.3700
B	0.8150	0.3480
C	0.8200	0.3510
D	0.8090	0.3460
E	0.7840	0.3500
F	0.7940	0.3610
G	0.8120	0.3750

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Chain	Atom inclusion	Q-score
H	0.7990	0.3690
I	0.7870	0.3680
J	0.7640	0.3640
K	0.7300	0.3590
L	0.7890	0.3540
M	0.7750	0.3500
N	0.7680	0.3580
O	0.7610	0.3430
P	0.7660	0.3520
Q	0.7750	0.3790
R	0.7740	0.3690
S	0.7420	0.3670
T	0.7260	0.3610
U	0.6610	0.3390
UI	0.5160	0.2040
UJ	0.4890	0.1640
UK	0.4160	0.1540
UL	0.3670	0.1180
UM	0.2850	0.0510
UN	0.3590	0.0800
UO	0.4200	0.1310
UP	0.4760	0.1390
V	0.5020	0.3110
W	0.4120	0.2850
WA	0.7920	0.3380
WB	0.7910	0.3290
WC	0.8040	0.3460
WD	0.7890	0.3400
WE	0.7680	0.3210
WF	0.7780	0.3230
WG	0.7460	0.2860
WH	0.7690	0.2810
WI	0.7200	0.2360
WJ	0.6920	0.2170
WK	0.6500	0.1970
WL	0.6770	0.1880
WM	0.7090	0.2250
WN	0.6880	0.1660
WO	0.6630	0.1650
WP	0.7480	0.2330
WQ	0.7300	0.2510
WR	0.7300	0.2820

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Chain	Atom inclusion	Q-score
WS	0.7870	0.2910
WT	0.7950	0.3240
WU	0.7600	0.2930
WV	0.7590	0.2860
WW	0.7790	0.3220
X	0.3500	0.2540
Y	0.2900	0.2230
Z	0.2590	0.2420
a	0.2050	0.2240
b	0.6670	0.3370
c	0.5050	0.3570
d	0.5640	0.3320
e	0.2430	0.2510
f	0.4930	0.2610
g	0.0870	0.1150
h	0.4360	0.2610
i	0.0680	0.1250
j	0.4510	0.2720
k	0.0780	0.1940
l	0.3360	0.2730
t	0.8270	0.3780
u	0.8270	0.3630
v	0.8240	0.3710
w	0.8280	0.3750
x	0.8300	0.3680
y	0.8260	0.3730
z	0.8250	0.3740