



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 06:47 PM UTC

PDB ID : 8WKK / pdb_00008wkk
EMDB ID : EMD-37601
Title : Cryo-EM structure of the whole rod with export apparatus and hook 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 : 3.30 Å(reported)
Based on initial model : .

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

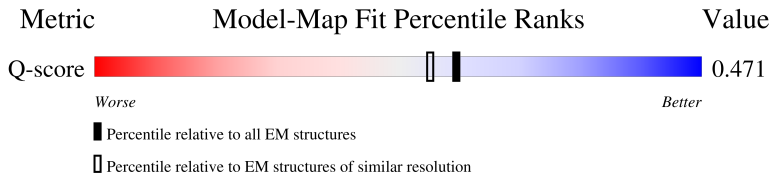
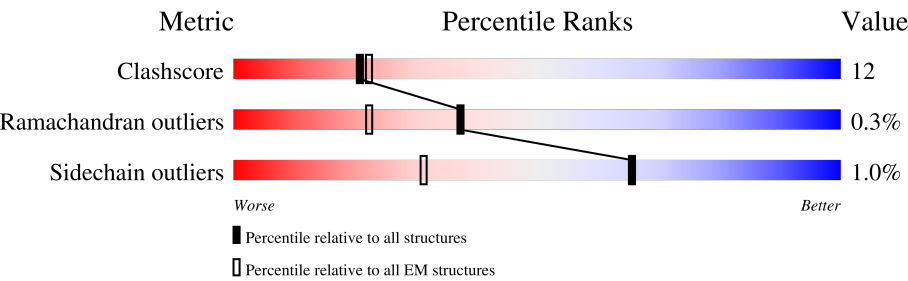
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

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 3.30 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	15087 (2.80 - 3.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	89	89% 79% 20% .
1	B	89	75% 67% 33%
1	C	89	71% 67% 33%
1	D	89	87% 64% 34% .

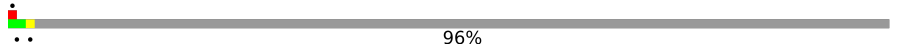
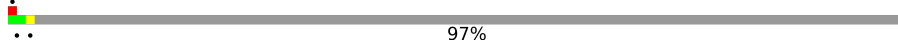
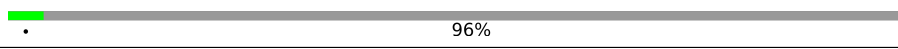
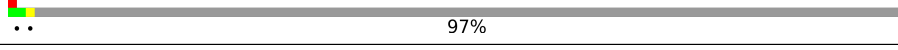
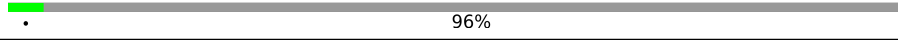
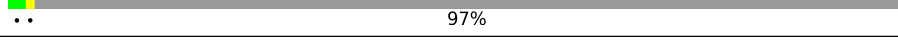
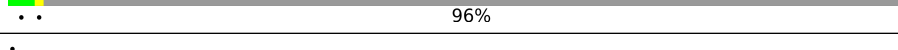
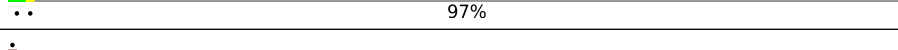
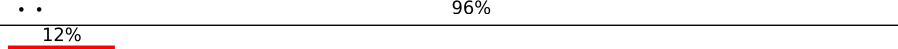
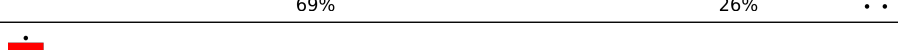
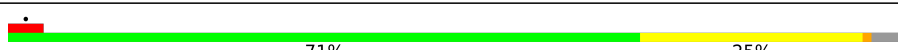
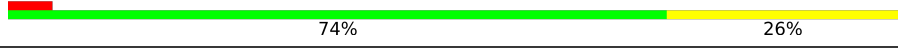
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Mol	Chain	Length	Quality of chain
2	E	264	
3	F	245	
3	G	245	
3	H	245	
3	I	245	
3	J	245	
4	K	104	
4	L	104	
4	M	104	
4	N	104	
4	O	104	
4	P	104	
5	Q	138	
5	R	138	
5	S	138	
5	T	138	
5	U	138	
6	V	134	
6	W	134	
6	X	134	
6	Y	134	
6	Z	134	
6	a	134	
7	b	560	
7	c	560	

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Mol	Chain	Length	Quality of chain
7	d	560	 96%
7	e	560	 97%
7	f	560	 96%
7	g	560	 97%
7	h	560	 96%
7	i	560	 97%
7	j	560	 96%
7	k	560	 97%
7	l	560	 96%
8	m	251	 12% 69% 26%
8	n	251	 66% 32%
8	o	251	 69% 29%
8	p	251	 68% 31%
8	q	251	 6% 70% 29%
9	0	260	 64% 30% 5%
9	1	260	 71% 25%
9	2	260	 76% 23%
9	3	260	 72% 27%
9	4	260	 69% 31%
9	5	260	 5% 69% 30%
9	6	260	 70% 29%
9	7	260	 5% 74% 26%
9	8	260	 71% 28%
9	9	260	 72% 27%
9	ZA	260	 73% 26%

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Mol	Chain	Length	Quality of chain
9	ZB	260	
9	ZC	260	
9	ZD	260	
9	ZE	260	
9	r	260	
9	s	260	
9	t	260	
9	u	260	
9	v	260	
9	w	260	
9	x	260	
9	y	260	
9	z	260	
10	ZF	403	
10	ZG	403	
10	ZH	403	
10	ZI	403	
10	ZJ	403	
10	ZK	403	
10	ZL	403	
10	ZM	403	
10	ZN	403	
10	ZO	403	
10	ZP	403	
10	ZQ	403	

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Mol	Chain	Length	Quality of chain
10	ZR	403	
10	ZS	403	
10	ZT	403	
10	ZU	403	
10	ZV	403	
10	ZW	403	
10	ZX	403	
10	ZY	403	
10	ZZ	403	
10	Za	403	
10	Zb	403	
10	Zc	403	
10	Zd	403	
10	Ze	403	
10	Zf	403	
10	Zg	403	
10	Zh	403	

2 Entry composition [i](#)

There are 10 unique types of molecules in this entry. The entry contains 167771 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 biosynthetic protein FliQ.

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	K	40	Total	C	N	O	S	0	0
			300	185	52	57	6		
4	L	72	Total	C	N	O	S	0	0
			543	335	99	103	6		
4	M	74	Total	C	N	O	S	0	0
			557	344	101	106	6		
4	N	74	Total	C	N	O	S	0	0
			557	344	101	106	6		
4	O	74	Total	C	N	O	S	0	0
			557	344	101	106	6		
4	P	73	Total	C	N	O	S	0	0
			550	340	100	104	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Q	119	Total	C	N	O	S	0	0
			922	565	169	183	5		
5	R	108	Total	C	N	O	S	0	0
			848	523	155	165	5		
5	S	108	Total	C	N	O	S	0	0
			848	523	155	165	5		
5	T	110	Total	C	N	O	S	0	0
			863	531	160	167	5		
5	U	106	Total	C	N	O	S	0	0
			832	514	150	163	5		

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

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

- Molecule 7 is a protein called Flagellar M-ring protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	b	13	Total	C	N	O	0	0
			81	50	15	16		
7	c	16	Total	C	N	O	0	0
			103	64	19	20		
7	d	20	Total	C	N	O	0	0
			133	83	23	27		
7	e	16	Total	C	N	O	0	0
			103	64	19	20		
7	f	21	Total	C	N	O	0	0
			140	88	24	28		
7	g	16	Total	C	N	O	0	0
			103	64	19	20		
7	h	21	Total	C	N	O	0	0
			140	88	24	28		
7	i	16	Total	C	N	O	0	0
			103	64	19	20		
7	j	20	Total	C	N	O	0	0
			133	83	23	27		
7	k	16	Total	C	N	O	0	0
			103	64	19	20		
7	l	21	Total	C	N	O	0	0
			140	88	24	28		

- Molecule 8 is a protein called Flagellar basal-body rod protein FlgF.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	m	248	Total	C	N	O	S	0	0
			1804	1106	324	367	7		
8	n	249	Total	C	N	O	S	0	0
			1812	1111	325	368	8		
8	o	250	Total	C	N	O	S	0	0
			1820	1116	326	369	9		
8	p	250	Total	C	N	O	S	0	0
			1820	1116	326	369	9		
8	q	249	Total	C	N	O	S	0	0
			1812	1111	325	368	8		

- Molecule 9 is a protein called Flagellar basal-body rod protein FlgG.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	0	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		
9	1	252	Total	C	N	O	S	0	0
			1894	1172	331	385	6		

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	2	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	3	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	4	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	5	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	6	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	7	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	8	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	9	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	ZA	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	ZB	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	ZC	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	ZD	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	ZE	260	Total 1949	C 1202	N 341	O 400	S 6	0	0
9	r	254	Total 1903	C 1175	N 334	O 389	S 5	0	0
9	s	255	Total 1911	C 1181	N 335	O 390	S 5	0	0
9	t	256	Total 1919	C 1186	N 336	O 391	S 6	0	0
9	u	254	Total 1903	C 1175	N 334	O 389	S 5	0	0
9	v	255	Total 1911	C 1181	N 335	O 390	S 5	0	0
9	w	243	Total 1823	C 1127	N 318	O 373	S 5	0	0
9	x	248	Total 1866	C 1154	N 327	O 379	S 6	0	0
9	y	248	Total 1866	C 1154	N 327	O 379	S 6	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	z	248	Total	C	N	O	S	0	0
			1866	1154	327	379	6		

- Molecule 10 is a protein called Flagellar hook protein FlgE.

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

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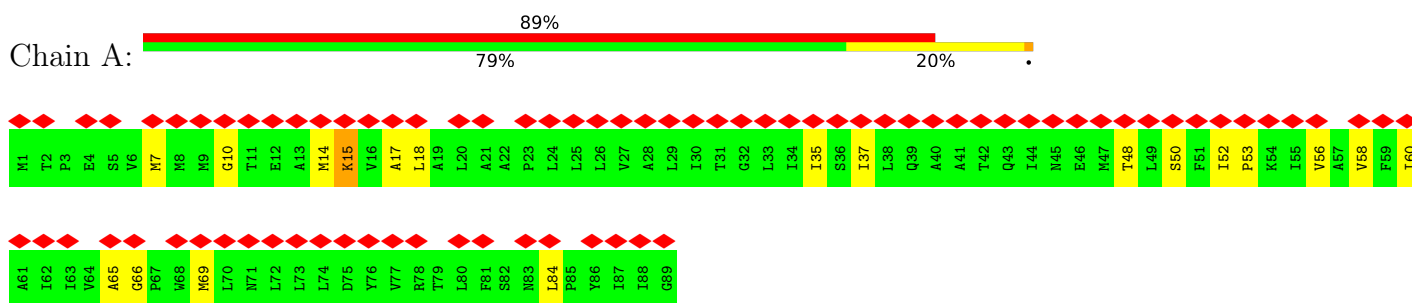
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Mol	Chain	Residues	Atoms					AltConf	Trace
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10	ZY	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	ZZ	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Za	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Zb	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Zc	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Zd	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Ze	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Zf	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
10	Zg	401	Total 2947	C 1814	N 507	O 618	S 8	0	0
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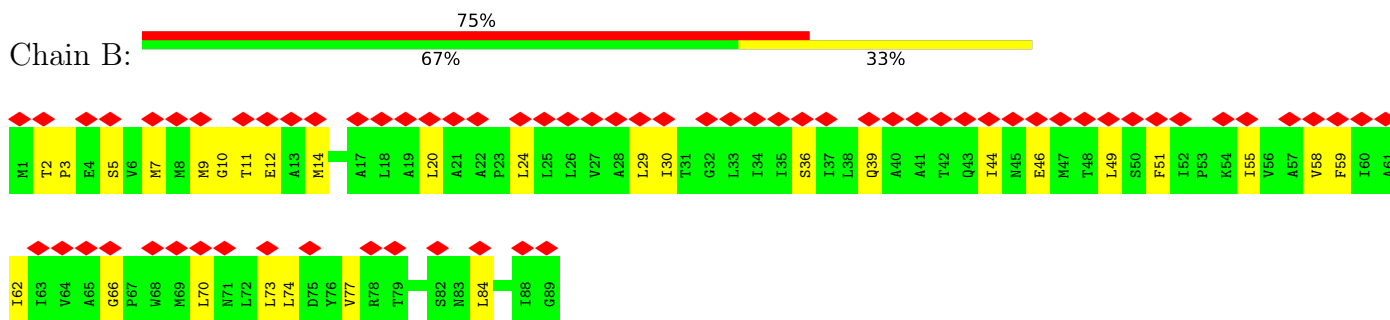
3 Residue-property plots

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.

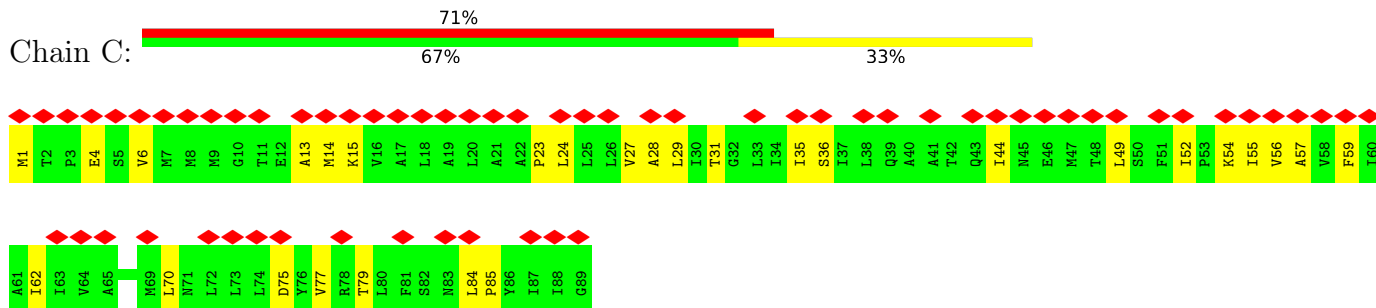
- Molecule 1: Flagellar biosynthetic protein FliQ



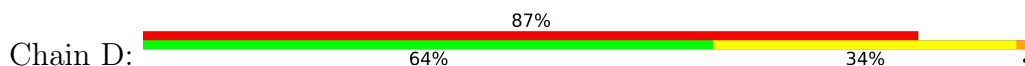
- Molecule 1: Flagellar biosynthetic protein FliQ

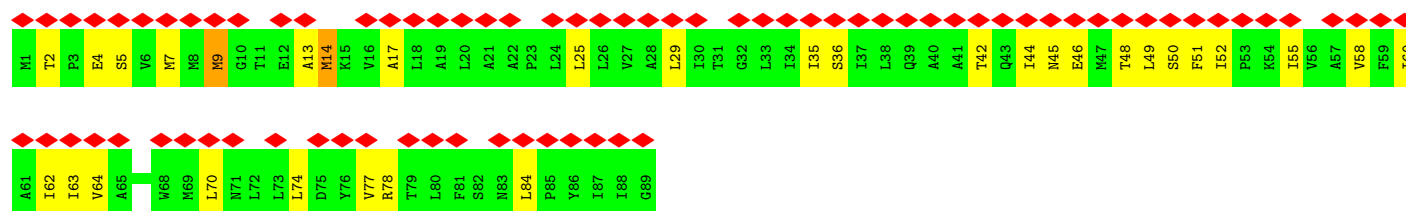


- Molecule 1: Flagellar biosynthetic protein FliQ

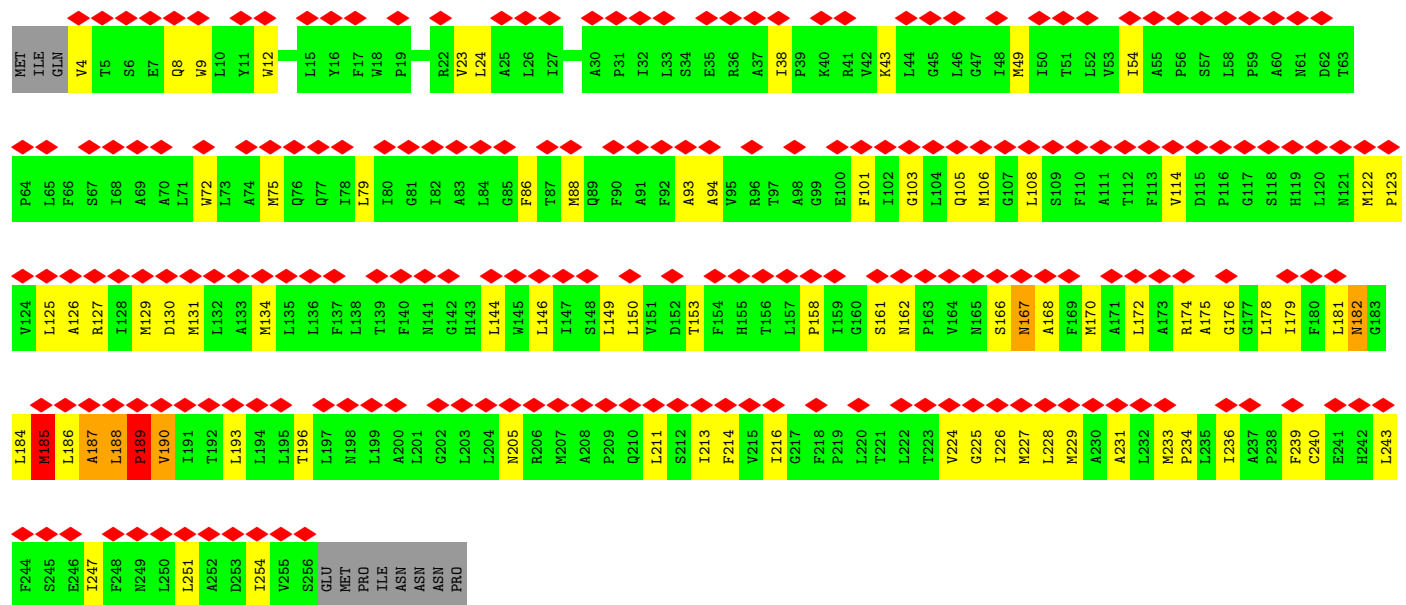
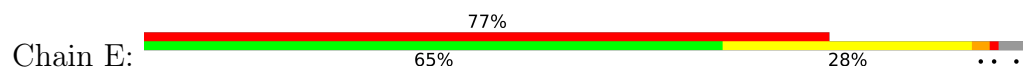


- Molecule 1: Flagellar biosynthetic protein FliQ

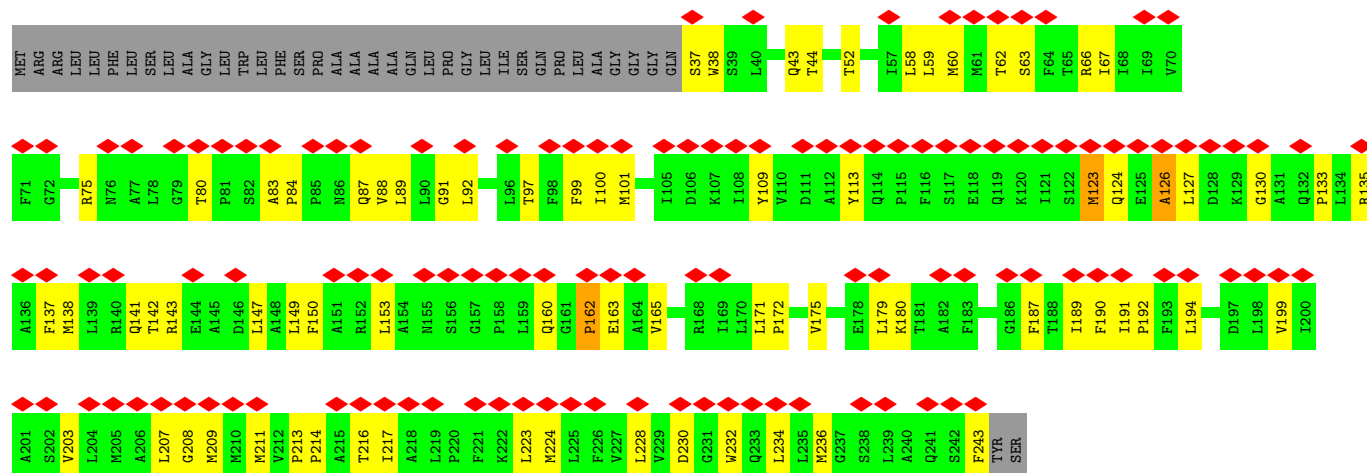




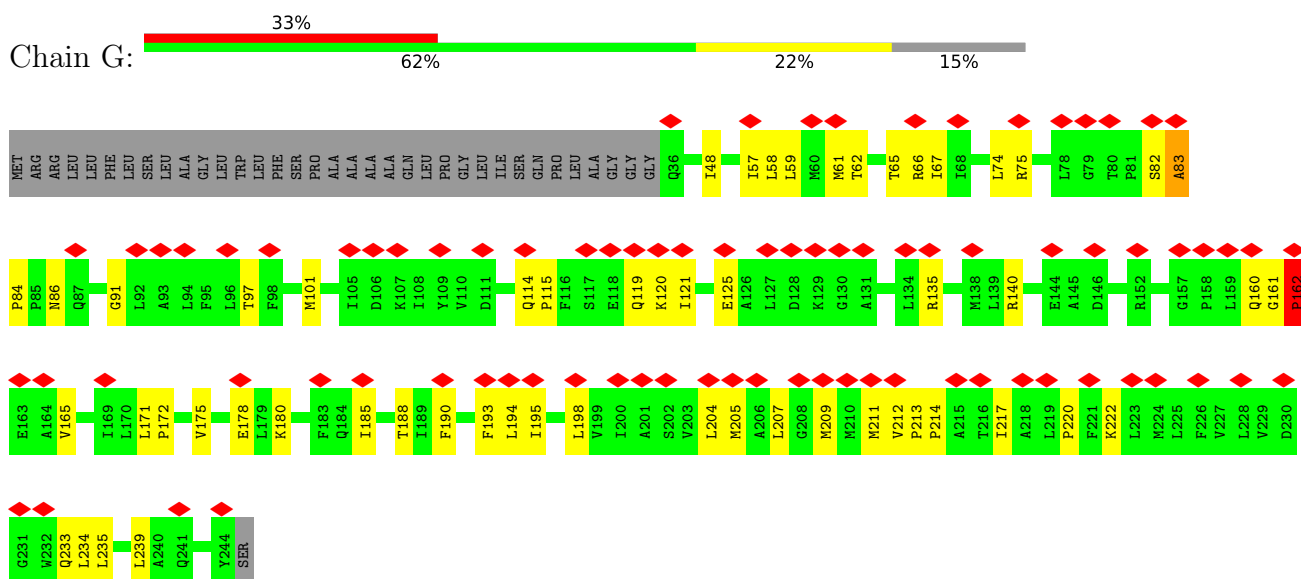
• Molecule 2: Flagellar biosynthetic protein FlIR



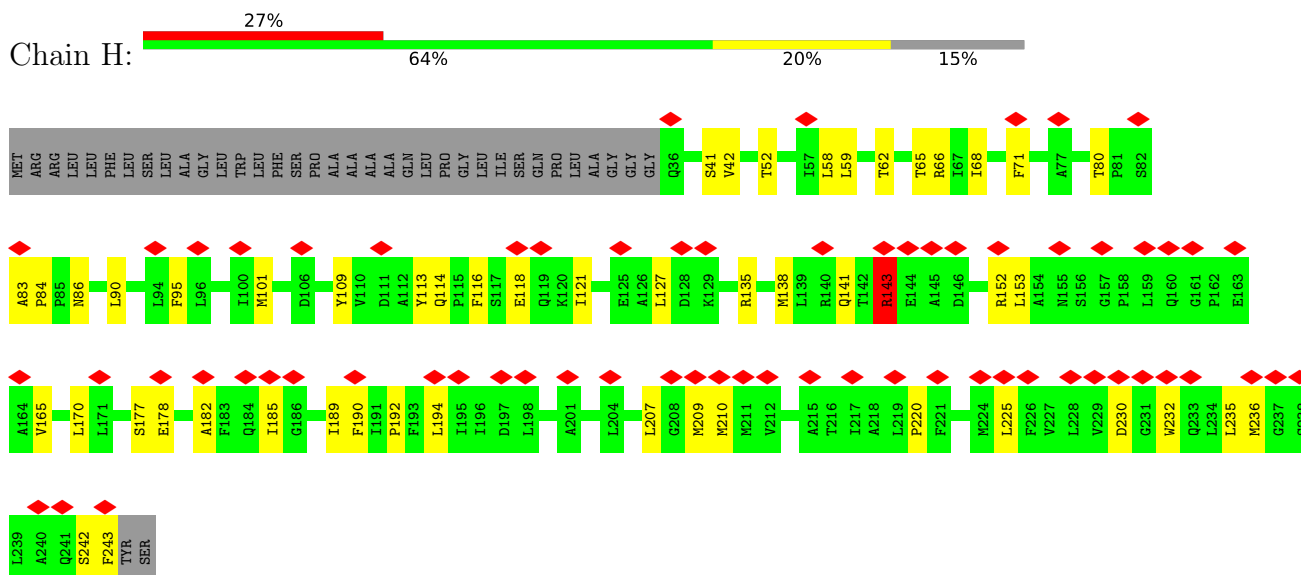
• Molecule 3: Flagellar biosynthetic protein FlIP



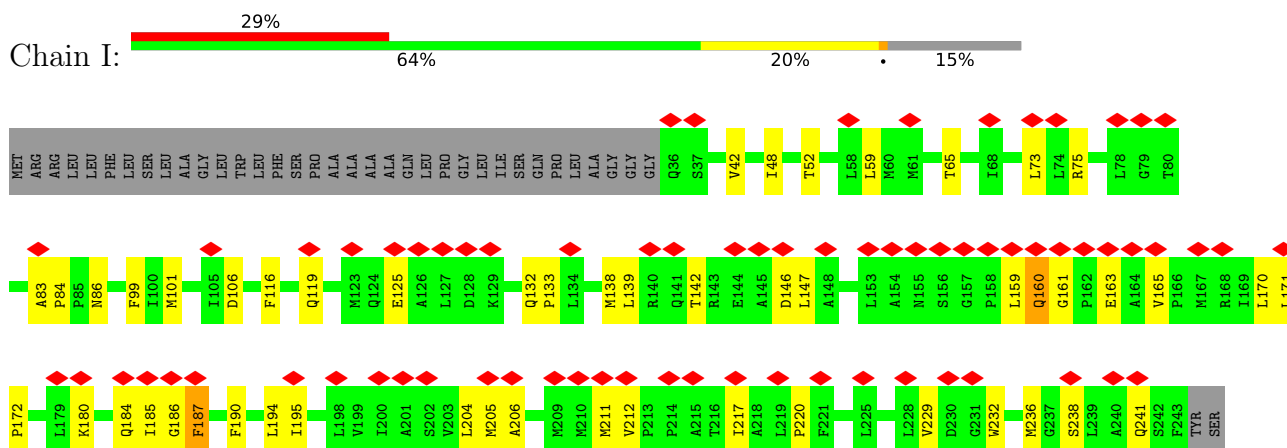
• Molecule 3: Flagellar biosynthetic protein FlIP



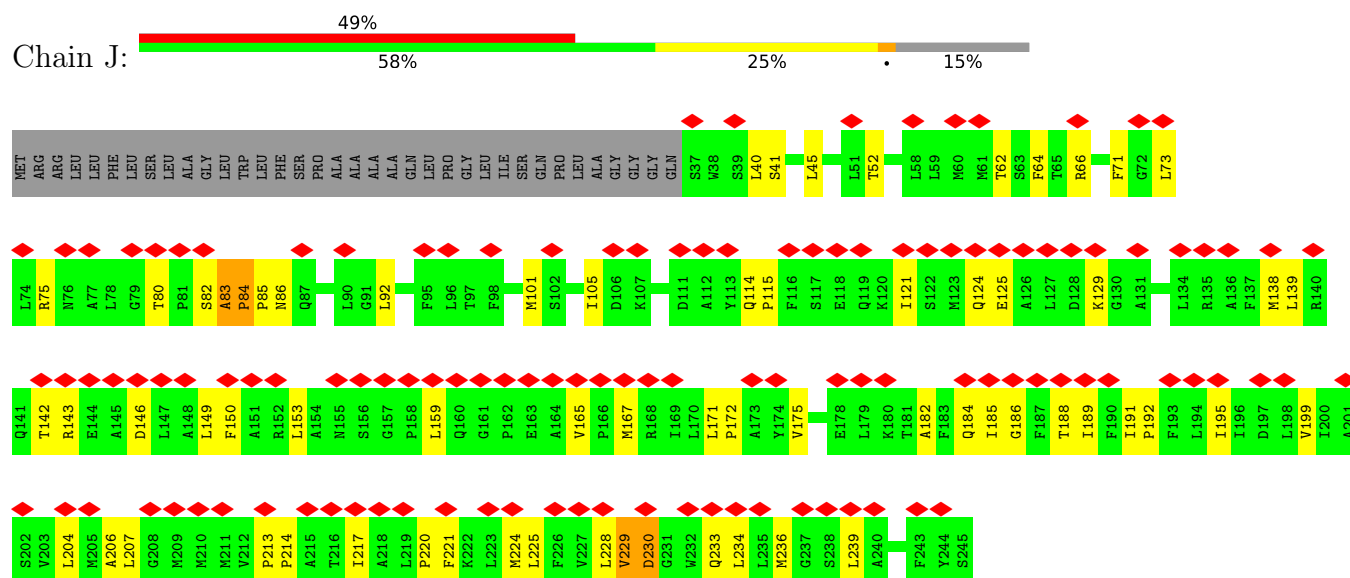
- Molecule 3: Flagellar biosynthetic protein FlpP



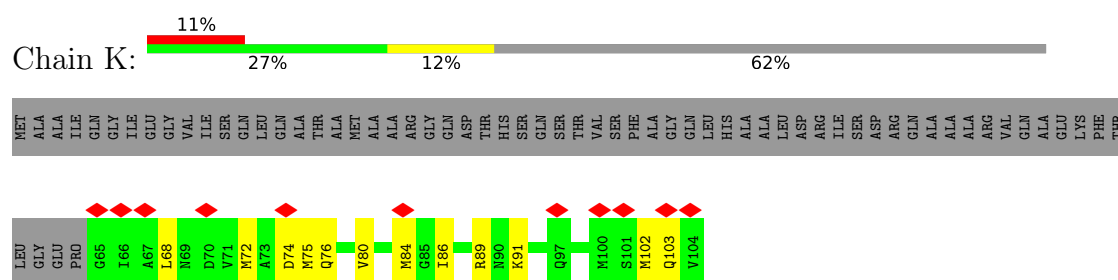
- Molecule 3: Flagellar biosynthetic protein FlpP



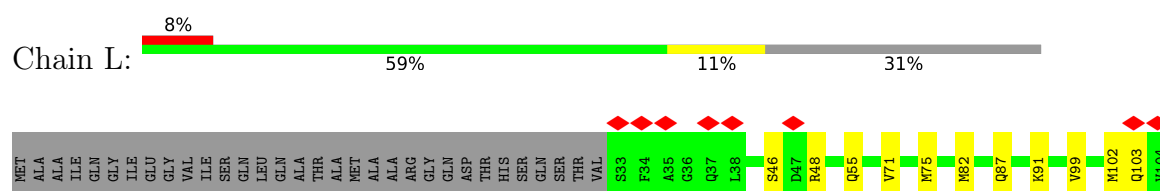
- Molecule 3: Flagellar biosynthetic protein FliP



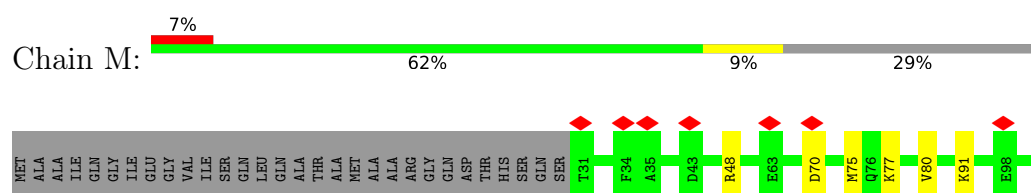
- Molecule 4: Flagellar hook-basal body complex protein FliE



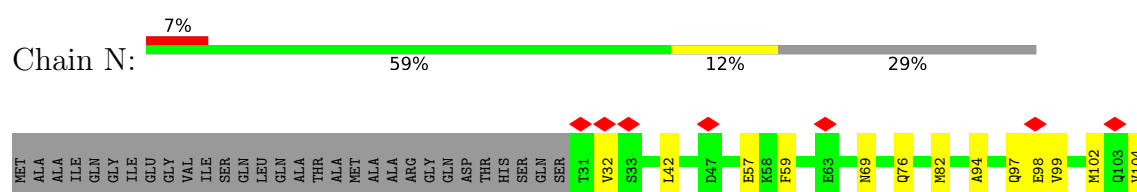
- Molecule 4: Flagellar hook-basal body complex protein FliE



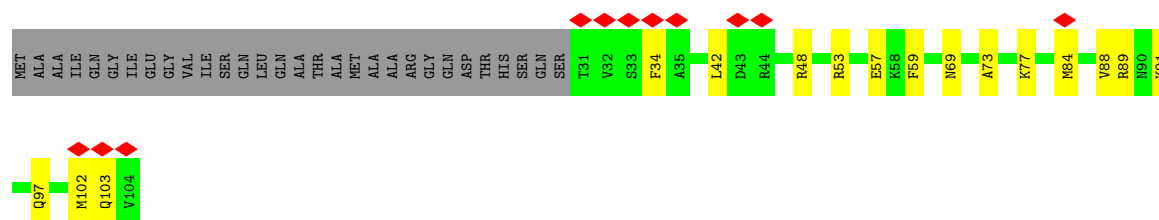
- Molecule 4: Flagellar hook-basal body complex protein FliE



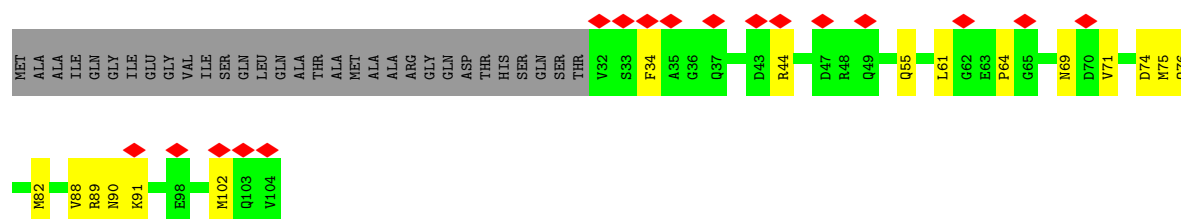
- Molecule 4: Flagellar hook-basal body complex protein FliE



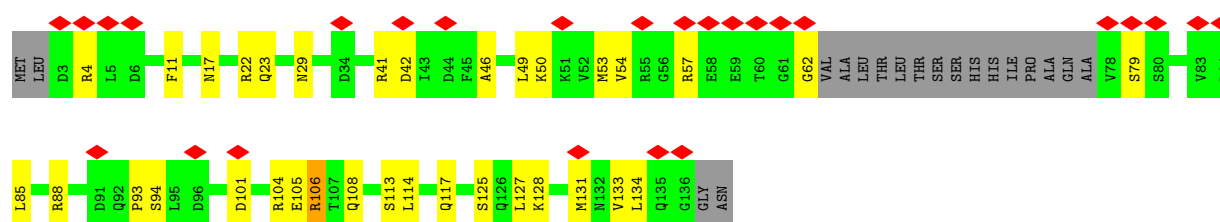
- Molecule 4: Flagellar hook-basal body complex protein FliE



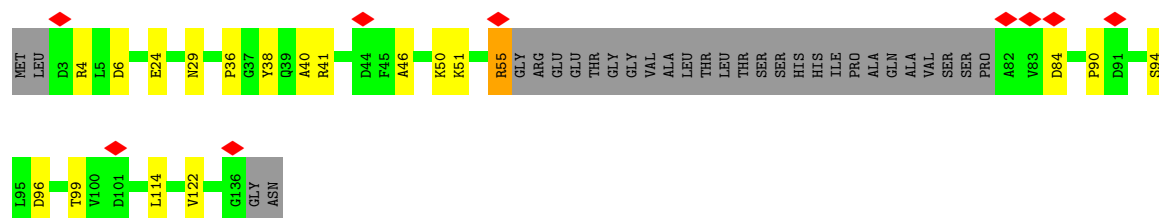
- Molecule 4: Flagellar hook-basal body complex protein FliE



- Molecule 5: Flagellar basal body rod protein FlgB



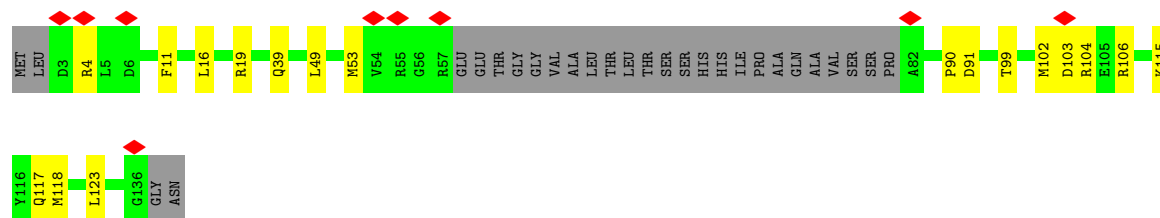
- Molecule 5: Flagellar basal body rod protein FlgB



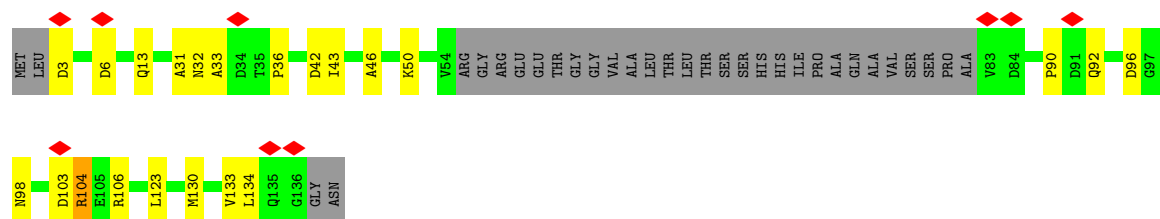
- Molecule 5: Flagellar basal body rod protein FlgB



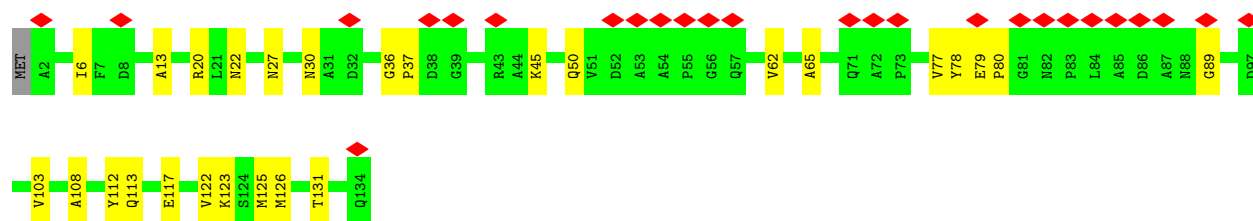
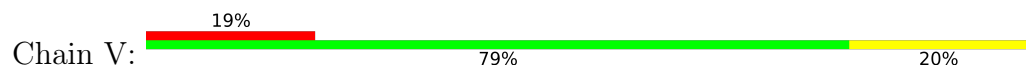
- Molecule 5: Flagellar basal body rod protein FlgB



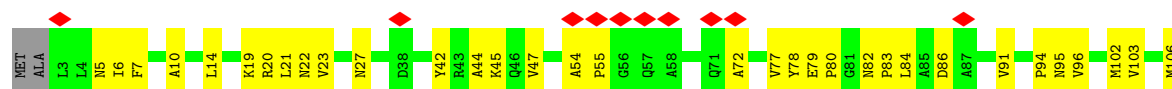
- Molecule 5: Flagellar basal body rod protein FlgB



- Molecule 6: Flagellar basal-body rod protein FlgC

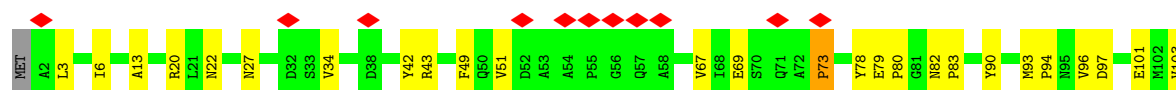
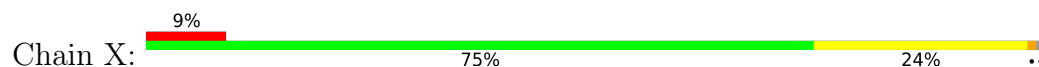


- Molecule 6: Flagellar basal-body rod protein FlgC

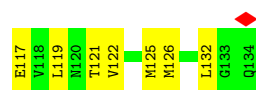
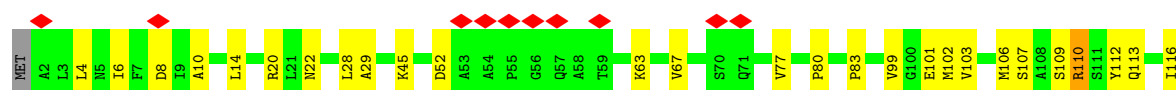
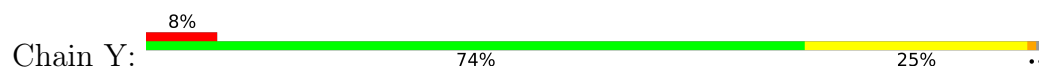




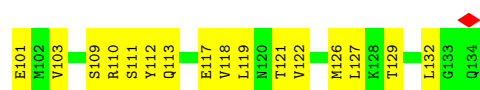
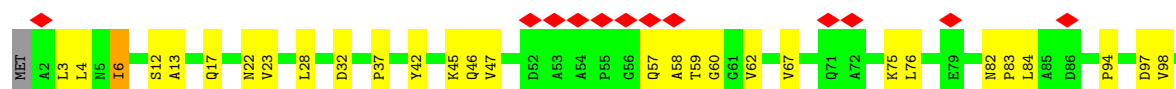
- Molecule 6: Flagellar basal-body rod protein FlgC



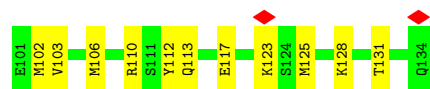
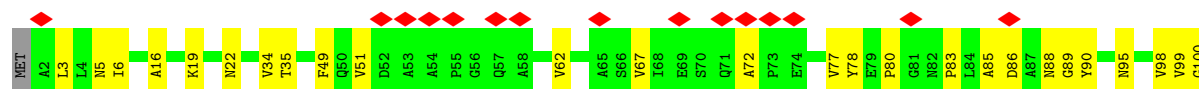
- Molecule 6: Flagellar basal-body rod protein FlgC



- Molecule 6: Flagellar basal-body rod protein FlgC



- Molecule 6: Flagellar basal-body rod protein FlgC



- Molecule 7: Flagellar M-ring protein

98%

SER	GLN	GLU	VAL	GLY	ALA	GLY	TYR	PRO	G310	G311	G312	G313	G314	A315	N318	Q319	P320	A321	P322	PRO	ASN	GLU	ALA	PRO	PRO	ILE	ALA	THR	PRO	PRO	THR	THR	GLN	GLN	ASN	ALA	GLN	ASN	THR	THR	GLN	THR	SER	SER	SER	THR	ASN	SER	ASN	GLY	PRO	ARG	SER	THR	GLN	ARG	ASN
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97%

SER	GLU	GLN	VAL	GLY	ALA	GLY	TYR	P309	A315	P323	N324	GLU	ALA	ALA	PRO	ILE	ALA	ALA	THR	PRO	PRO	THR	ASN	GLN	GLN	ASN	ALA	GLN	ASN	SER	THR	THR	THR	ASN	ASN	SER	SER	ALA	GLY	PRO	ARG	SER	SER	THR	THR	GLN	ARG	ASN	GLU	THR	THR	SER	ASN	TYR	GLU	VAL	ASP	ASP
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[illegible]

- Molecule 7: Flagellar M-ring protein

Chain d:  96%

[illegible]

- Molecule 7: Flagellar M-ring protein

Chain e: 97%

[illegible]

ASN	ASN	GLN	GLN	ALA	ARG	GLN	GLU	THR	GLU	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	GLU	MET	SER	ASN	ASP	PRO	ARG	VAL	VAL	ALA	LEU	VAL	ILE	ARG	GLN	TRP	MET	SER
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- Molecule 7: Flagellar M-ring protein

Chain i: 97%

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

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GLU	PRO	GLY	ARG	ALA	LEU	ASP	GLU	GLY	GLN	ILE	SER	ALA	VAL	VAL	HIS	LEU	VAL	SER	SER	ALA	ALA	ALA	GLY	ALA	LEU	PRO	PRO	GLY	ASN	VAL	THR	THR	LEU	VAL	ASP	GLN	SER	GLY	HIS	LEU	LEU	THR	GLN	SER	ASN	ASN	ASP	ALA	GLN	LEU	LYS	PHE	ALA	ASN	ASP
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VAL	GLU	SER	ARG	ILE	GLN	ARG	ARG	GLU	ILE	ALA	ALA	LEU	SER	PRO	ILE	VAL	GLY	ASN	GLY	GLY	ASN	VAL	VAL	HIS	ALA	ALA	GLN	GLN	LEU	ASP	PHE	ALA	ALA	ASN	ASN	LYS	GLU	GLN	THR	THR	GLU	GLU	GLY	ASP	ALA	SER	LYS	PRO	SER	TYR	HIS	THR	LEU	ARG	ARG	GLN	LEU	ASN	ILE
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Sequence logo for the 1000bp upstream region of the P309 gene. The y-axis represents information content in bits, ranging from 0.00 to 0.12. The x-axis shows amino acid positions from -1000 to 0. The sequence is: SER, GLU, GLN, VAL, GLY, ALA, GLY, THR, P309, P313, G314, A315, P322, P323, N324, GLU, ALA, PRO, ILE, ALA, THR, PRO, THR, ASN, GLN, ASN, ALA, GLN, ASN, THR, PRO, GLN, THR, SER, THR, THR, THR, ASN, SER, ASN, SER, ALA, GLY, PRO, ARG, SER, THR, ARG, ASN, GLU, THR, SER, ASN, THR. Mutations are indicated by red diamonds above the sequence: P309, P322, P323, and N324.

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

- Molecule 7: Flagellar M-ring protein

Chain j:  96%

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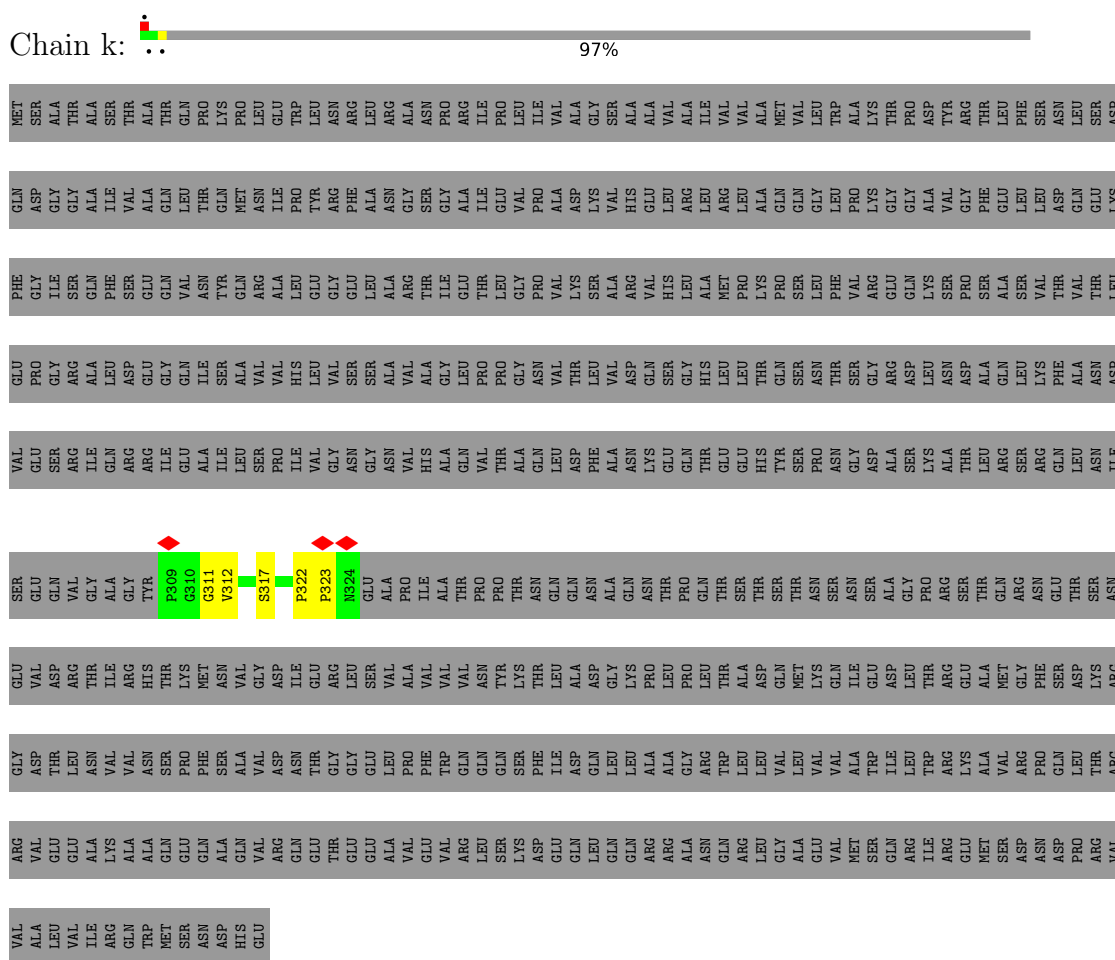
GLN ASP GLY GLY GLY ALA ALA ILE VAL ALA VAL GLN LEU LEU THR THR MET MET ASN ILE ASN PRO PRO TYR TYR ARG ARG PHE PHE ALA ALA ALA GLY GLY SER SER GLY GLY ALA ALA ILE ILE GLU GLU VAL VAL PRO PRO ASP ASP LYS LYS VAL VAL HIS HIS GLU GLU LEU LEU ARG ARG LEU LEU LEU LEU VAL VAL GLY GLY PHE PHE GLU GLU LEU LEU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

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

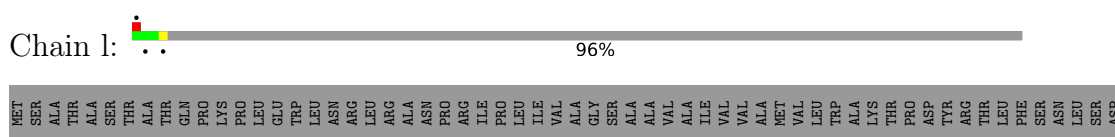
GLU	PRO	GLY	ARG	ALA	LEU	ASP	GLU	GLY	GLN	ILE	SER	ALA	VAL	VAL	HIS	LEU	VAL	SER	SER	ALA	VAL	ALA	ALA	GLY	LEU	PRO	PRO	GLY	ASN	ASN	VAL	THR	THR	LEU	THR	GLN	SER	ASN	THR	THR	GLY	ARG	ASP	LEU	ASN	ASN	ALA	ALA	ASN	ASP
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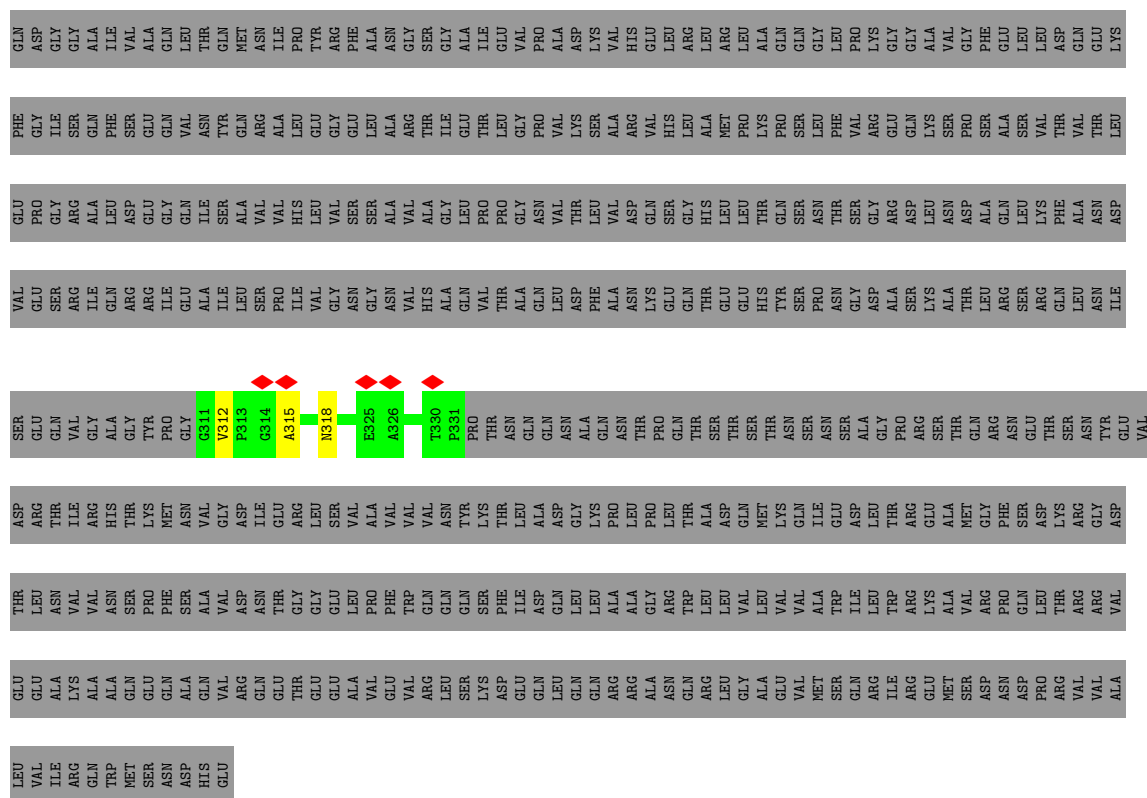
VAL	GLU	SER	ARG	ILE	GLN	ARG	ARG	ILE	GLU	ALA	ALA	ILE	LEU	SER	PRO	ILE	VAL	GLY	ASN	GLY	GLY	VAL	THR	ALA	ALA	ALA	GLN	LEU	ASP	PHE	ALA	ASN	LYS	ASN	ASP	GLY	GLU	GLN	THR	GLU	GLU	GLY	TYR	SER	PRO	ASN	GLY	GLY	THR	ALA	ALA	LEU	ARG	SER	GLN	ARG	ASN	ILE
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- Molecule 7: Flagellar M-ring protein

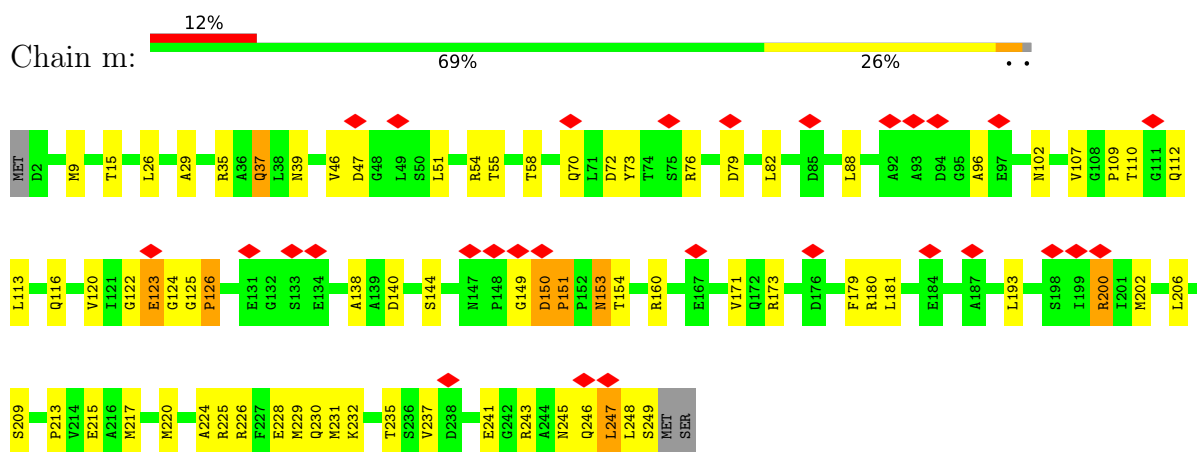


- Molecule 7: Flagellar M-ring protein

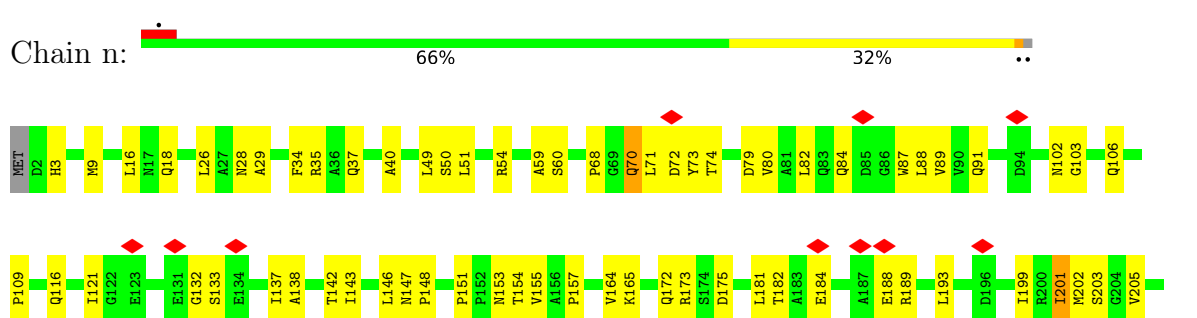




- Molecule 8: Flagellar basal-body rod protein FlgF

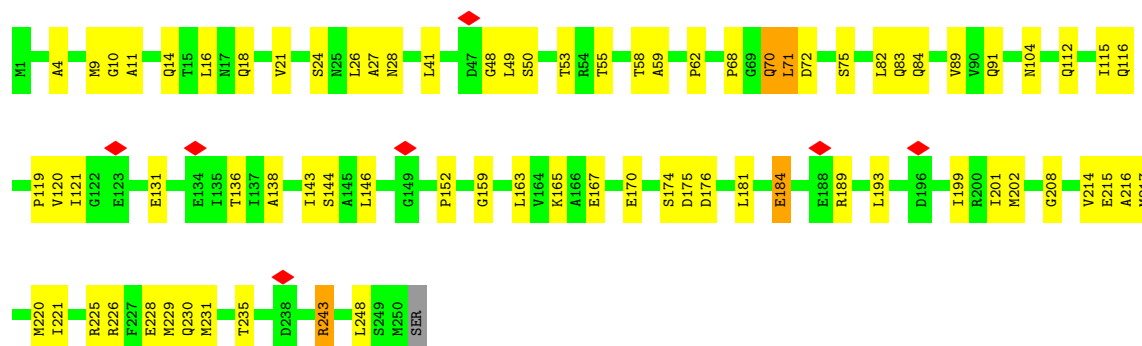


- Molecule 8: Flagellar basal-body rod protein FlgF

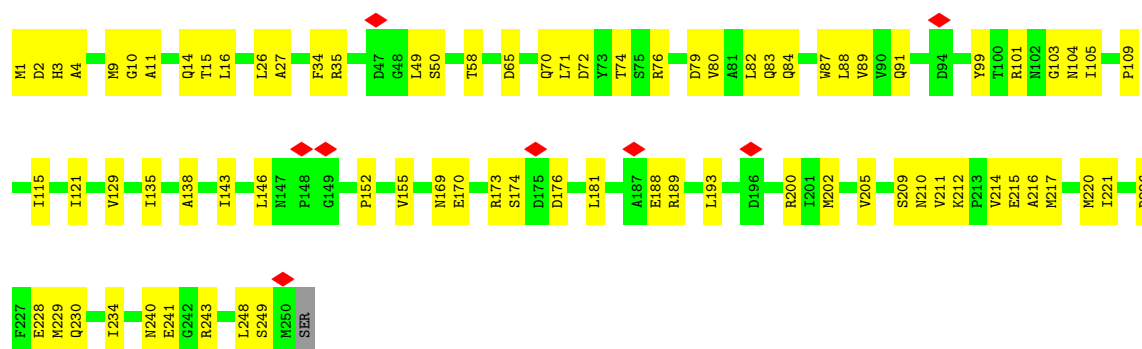




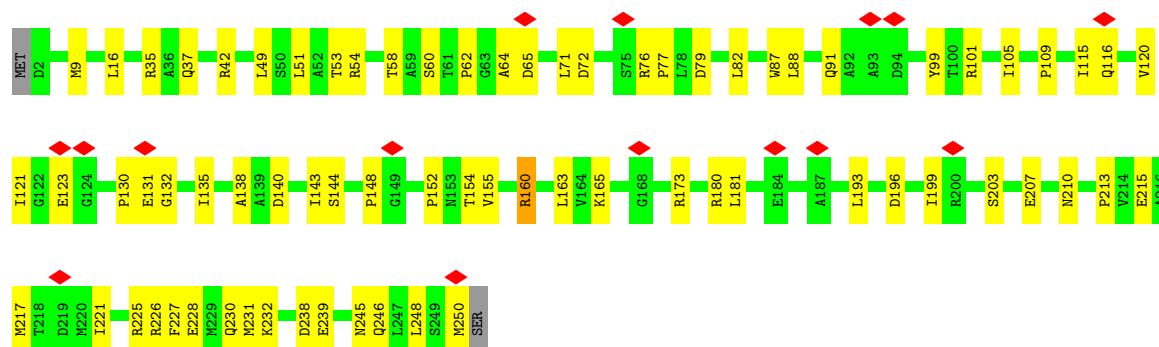
• Molecule 8: Flagellar basal-body rod protein FlgF



• Molecule 8: Flagellar basal-body rod protein FlgF

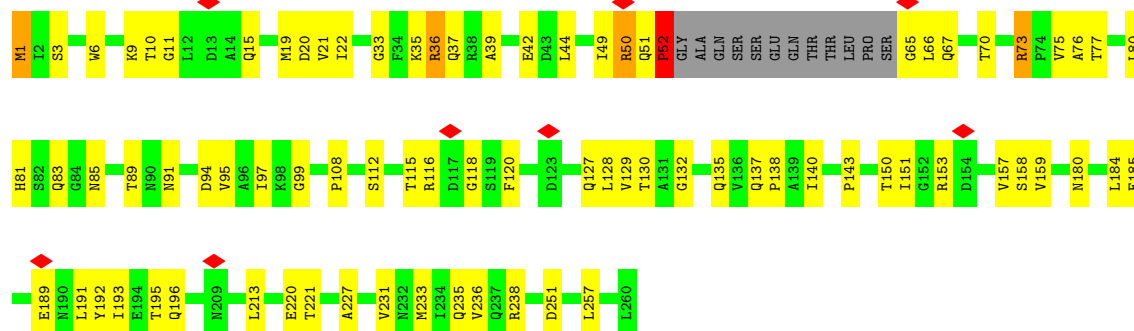


• Molecule 8: Flagellar basal-body rod protein FlgF



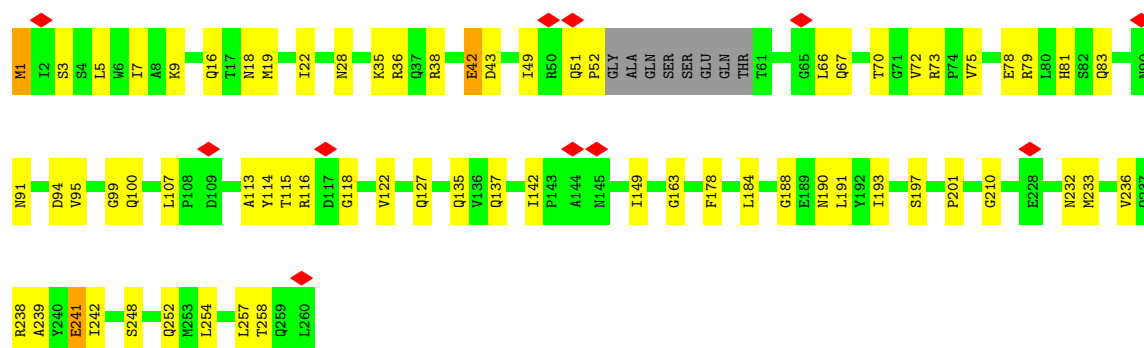
• Molecule 9: Flagellar basal-body rod protein FlgG

Chain 0:  64% 30% 5%



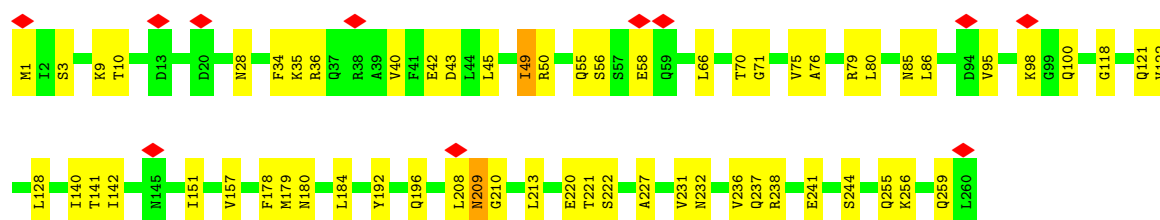
• Molecule 9: Flagellar basal-body rod protein FlgG

Chain 1:  71% 25% 2%



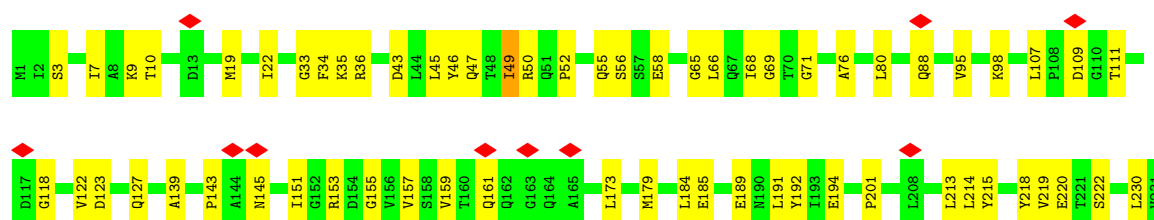
• Molecule 9: Flagellar basal-body rod protein FlgG

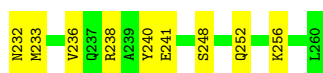
Chain 2:  76% 23% 1%



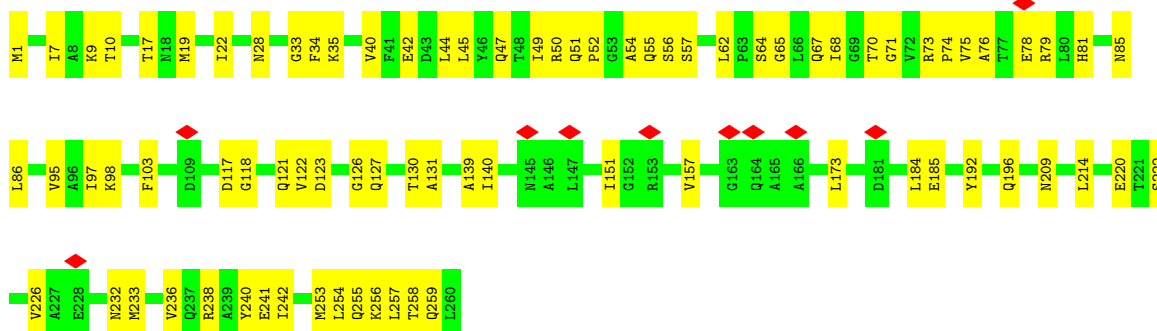
• Molecule 9: Flagellar basal-body rod protein FlgG

Chain 3:  72% 27% 1%

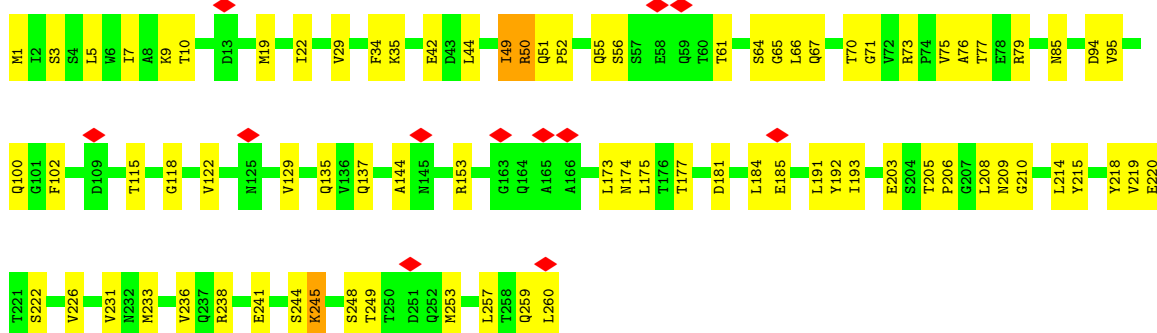




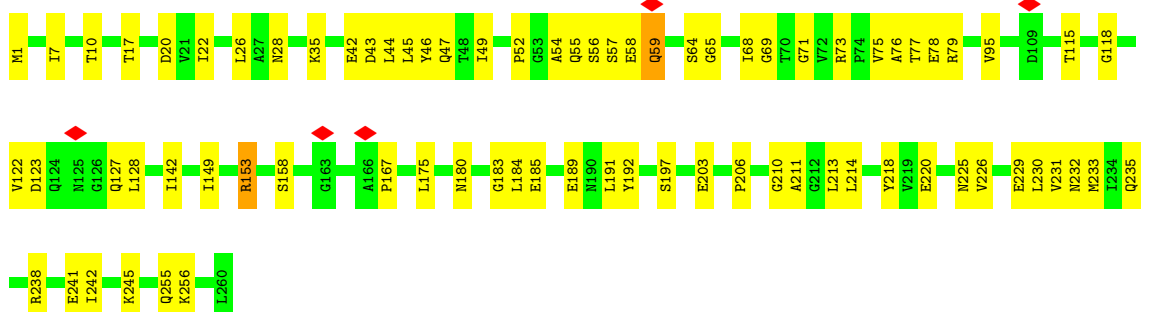
• Molecule 9: Flagellar basal-body rod protein FlgG



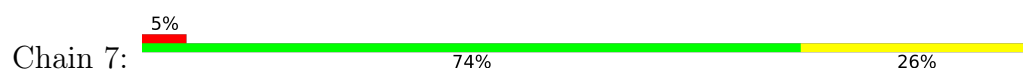
• Molecule 9: Flagellar basal-body rod protein FlgG

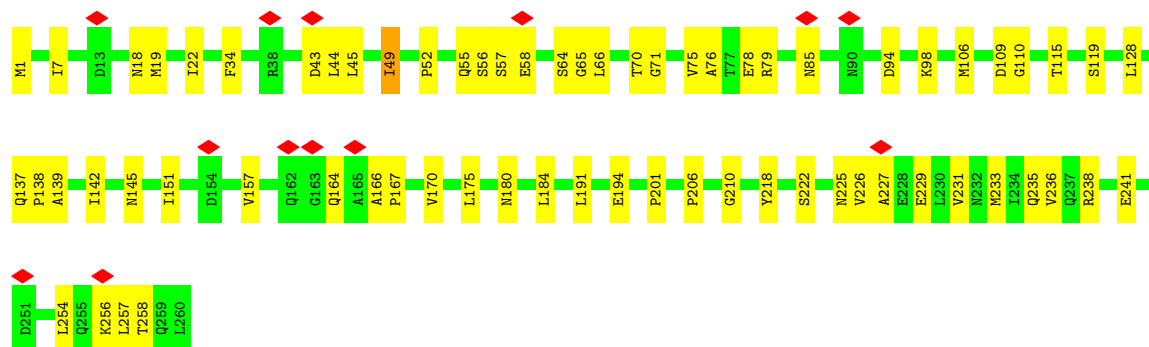


• Molecule 9: Flagellar basal-body rod protein FlgG



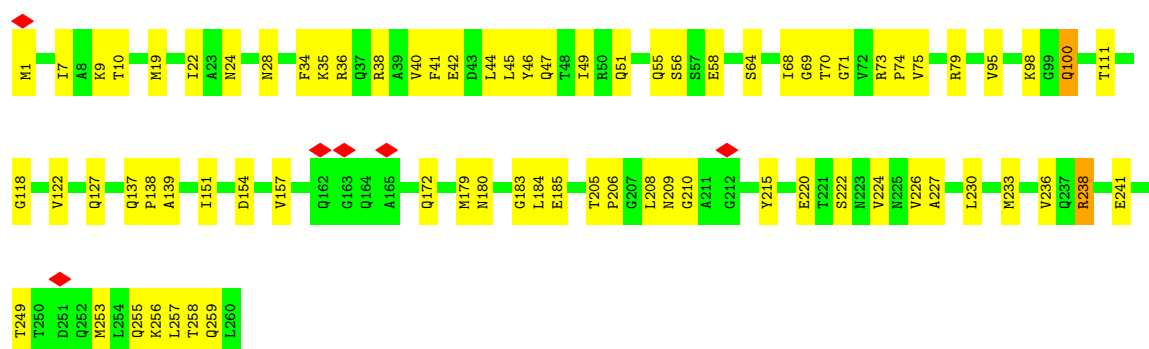
• Molecule 9: Flagellar basal-body rod protein FlgG





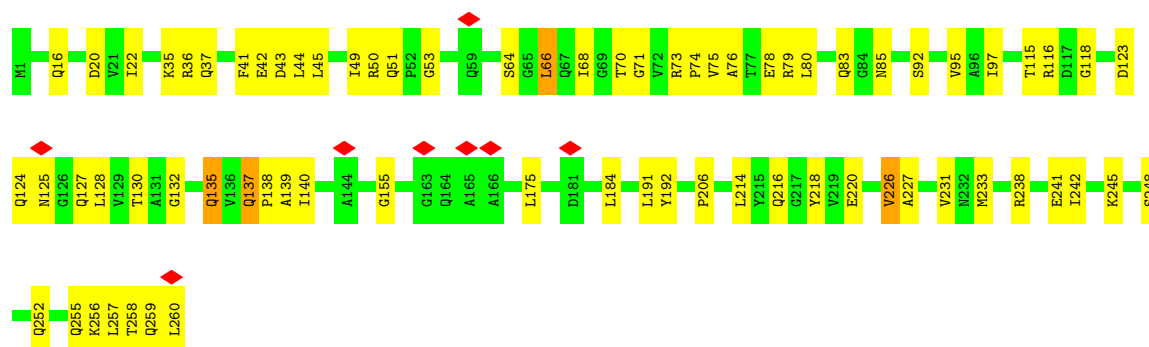
• Molecule 9: Flagellar basal-body rod protein FlgG

Chain 8: 71% 28%



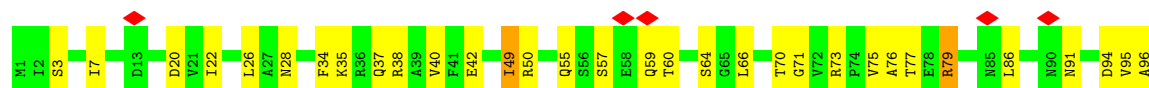
• Molecule 9: Flagellar basal-body rod protein FlgG

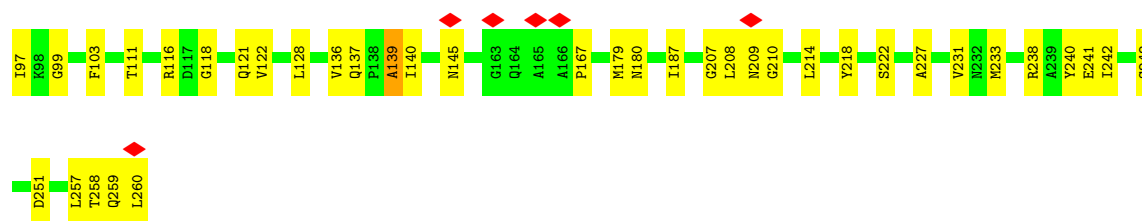
Chain 9: 72% 27%



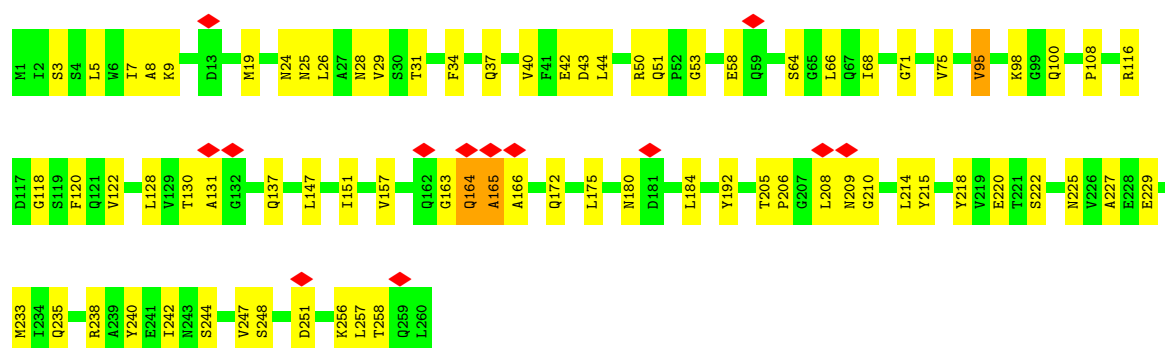
• Molecule 9: Flagellar basal-body rod protein FlgG

Chain ZA: 73% 26%

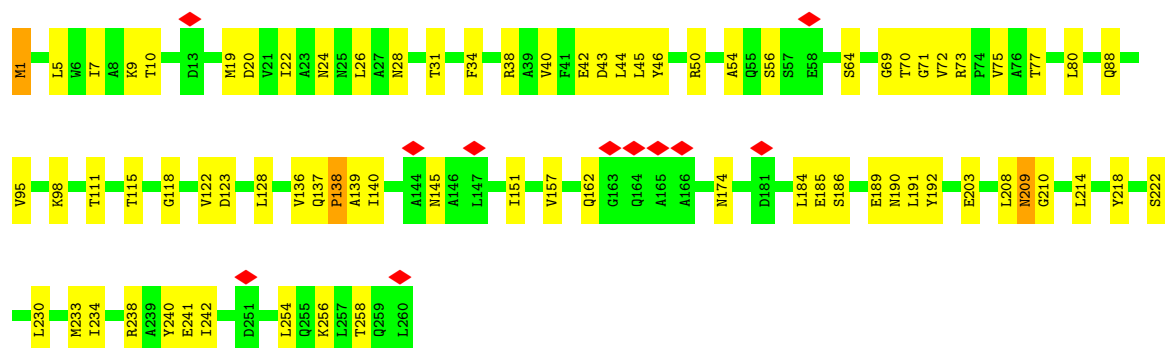




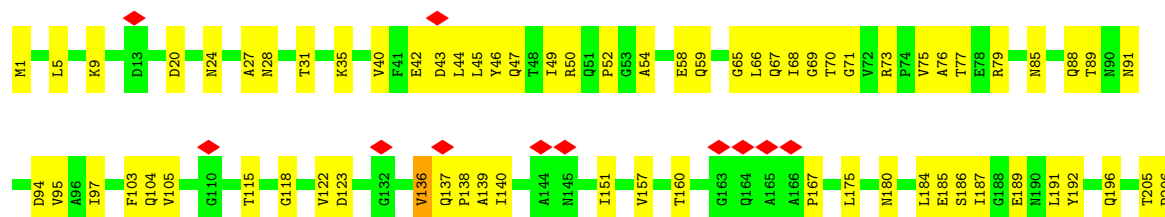
• Molecule 9: Flagellar basal-body rod protein FlgG



• Molecule 9: Flagellar basal-body rod protein FlgG

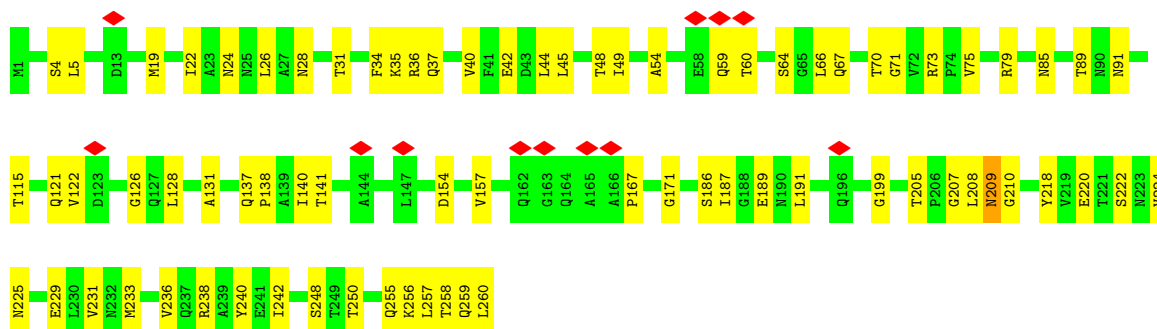
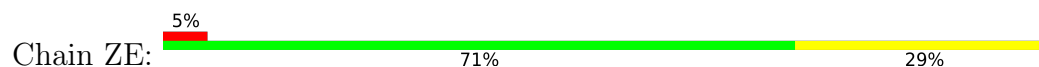


• Molecule 9: Flagellar basal-body rod protein FlgG

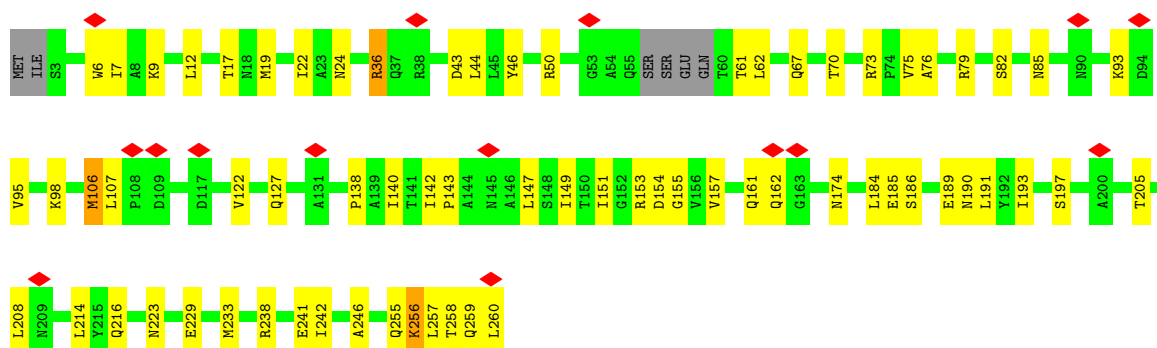




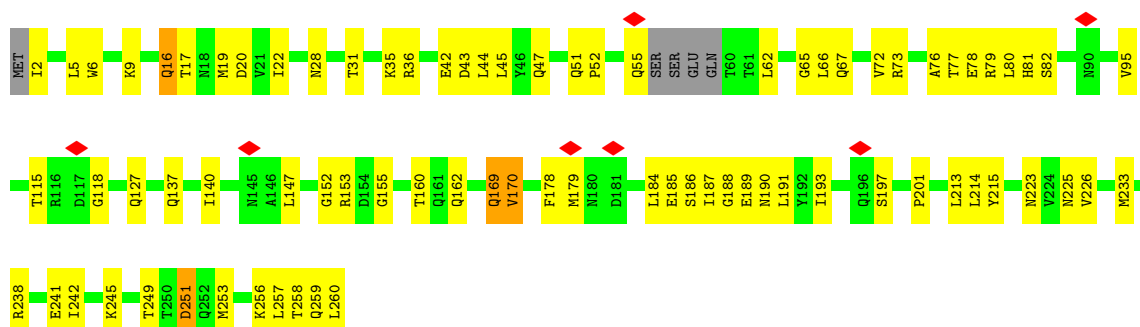
- Molecule 9: Flagellar basal-body rod protein FlgG



- Molecule 9: Flagellar basal-body rod protein FlgG

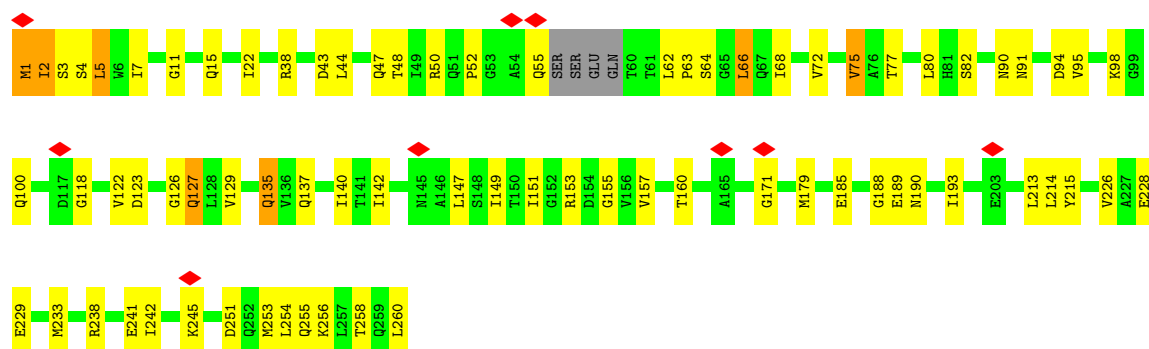


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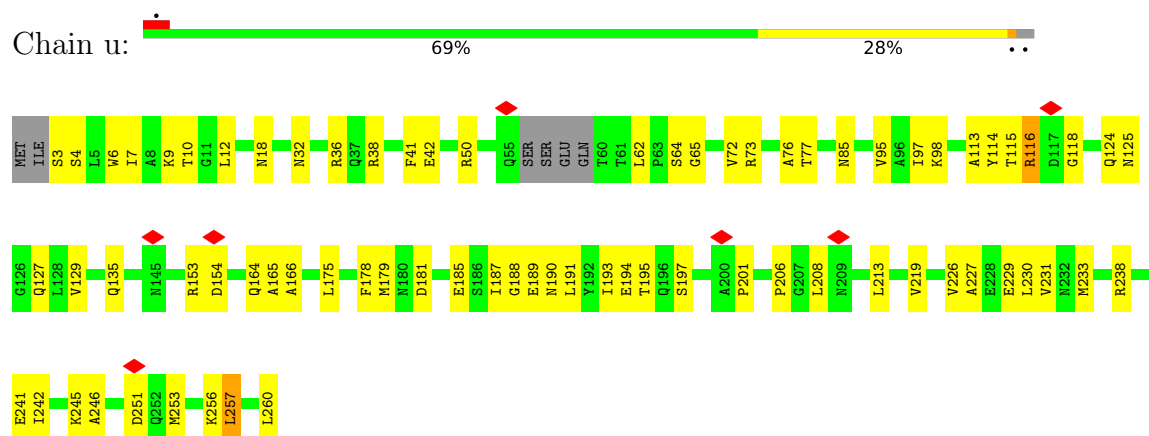


- Molecule 9: Flagellar basal-body rod protein FlgG

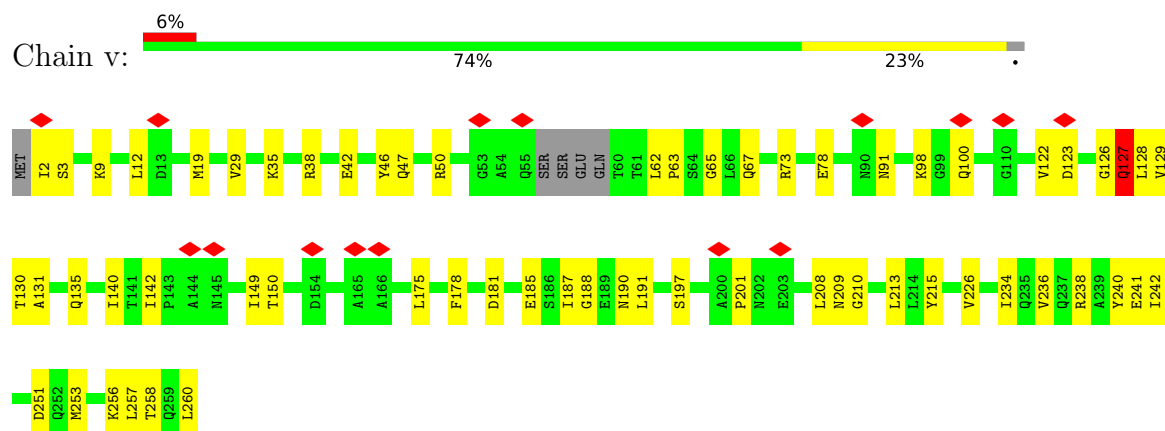




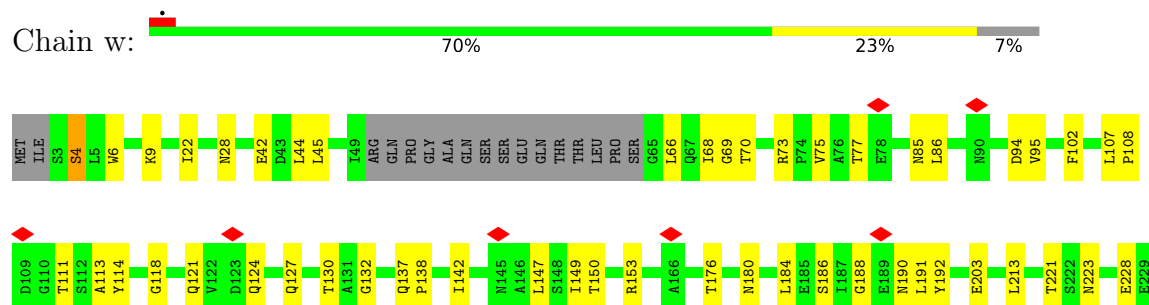
• Molecule 9: Flagellar basal-body rod protein FlgG



• Molecule 9: Flagellar basal-body rod protein FlgG

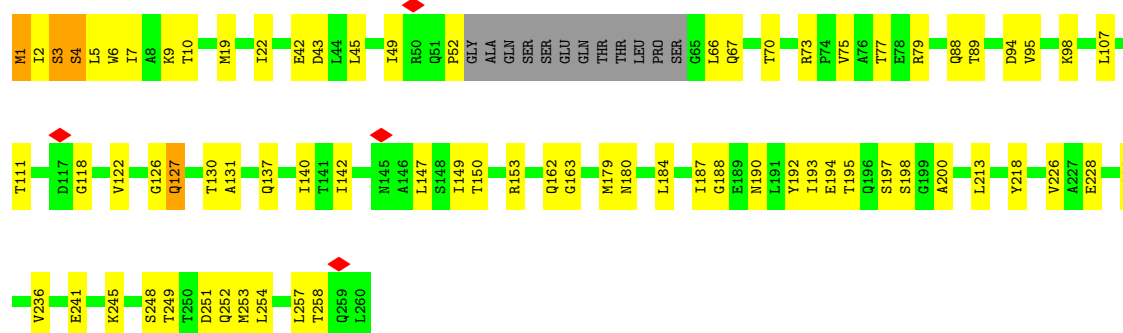


• Molecule 9: Flagellar basal-body rod protein FlgG

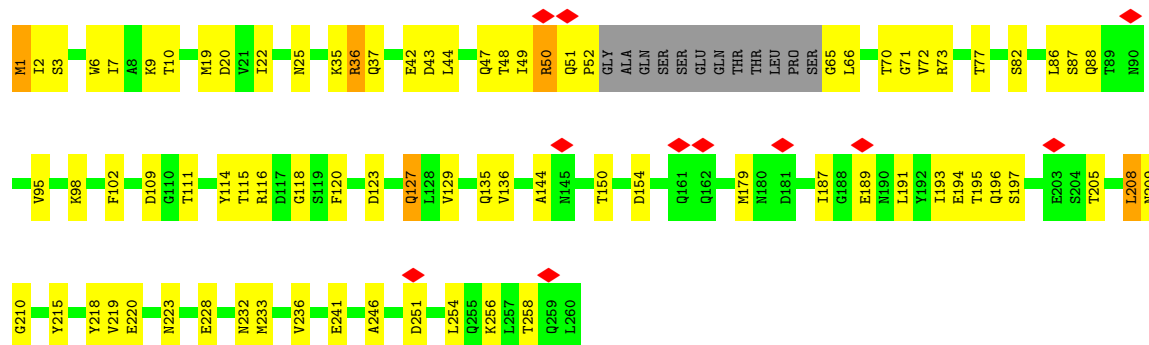




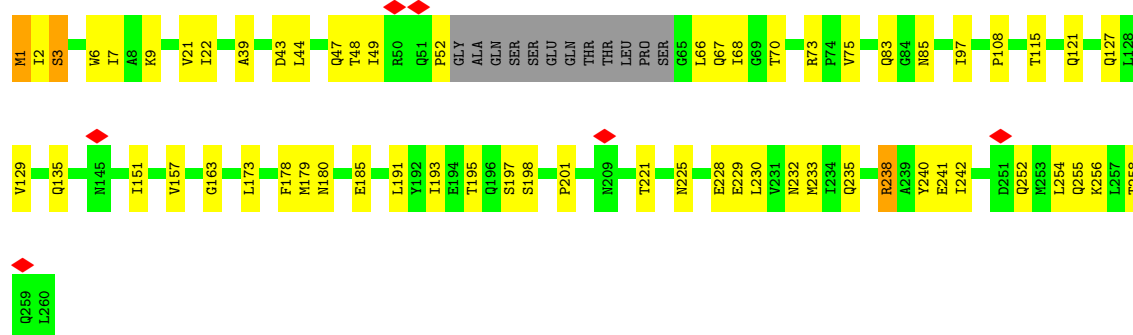
• Molecule 9: Flagellar basal-body rod protein FlgG



• Molecule 9: Flagellar basal-body rod protein FlgG

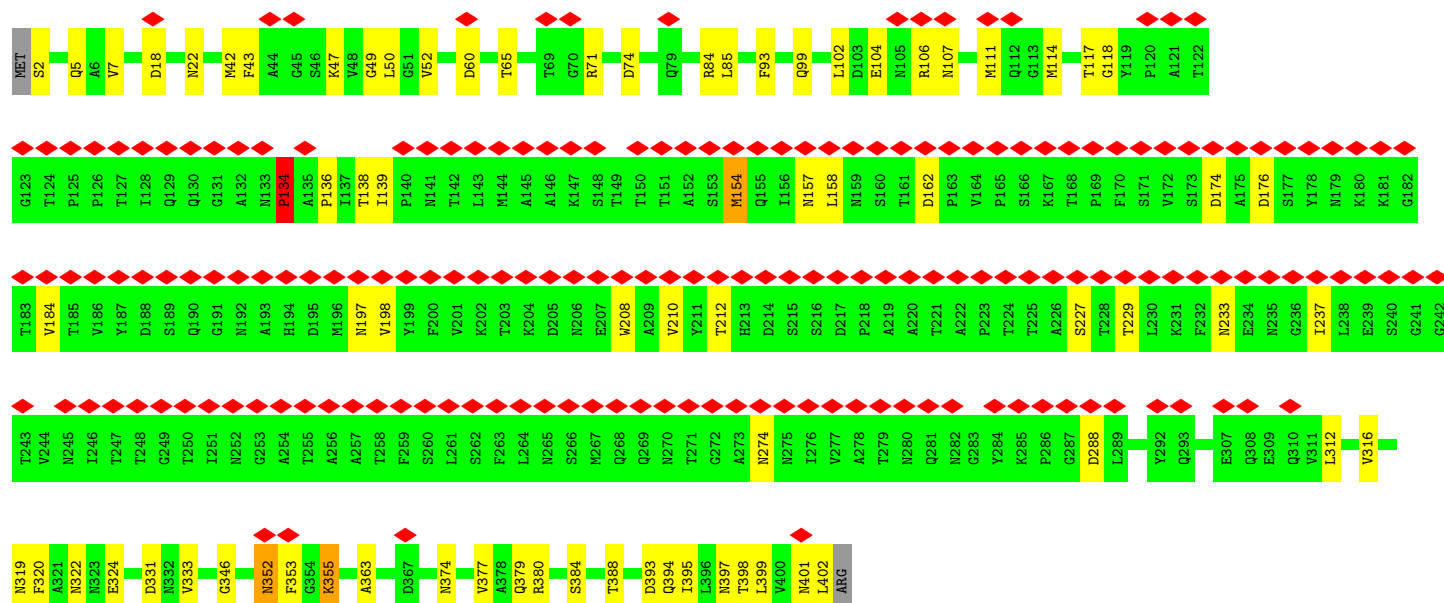


• Molecule 9: Flagellar basal-body rod protein FlgG



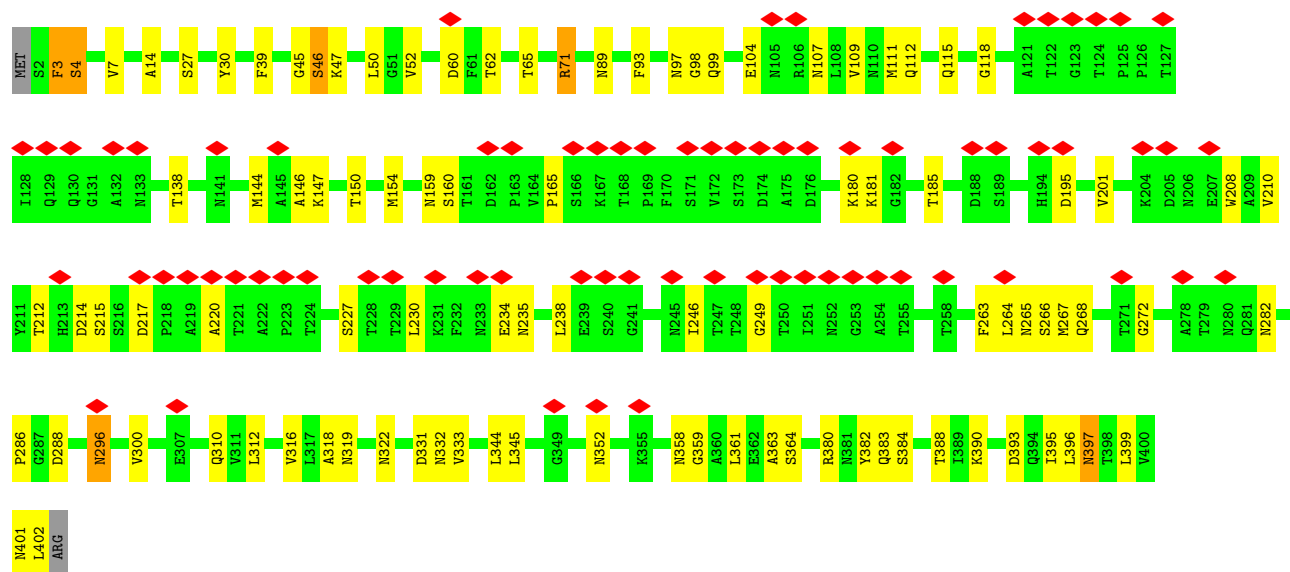
• Molecule 10: Flagellar hook protein FlgE

Chain ZF: 



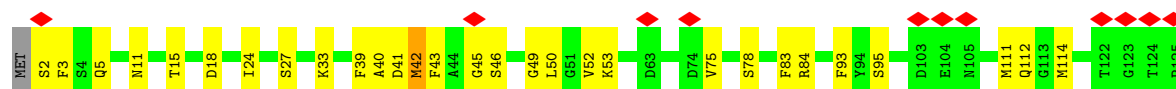
• Molecule 10: Flagellar hook protein FlgE

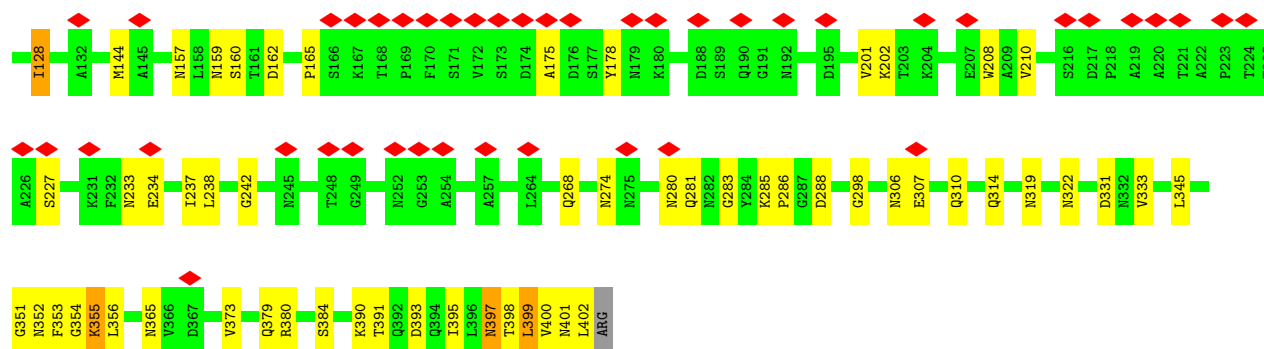
Chain ZG: 



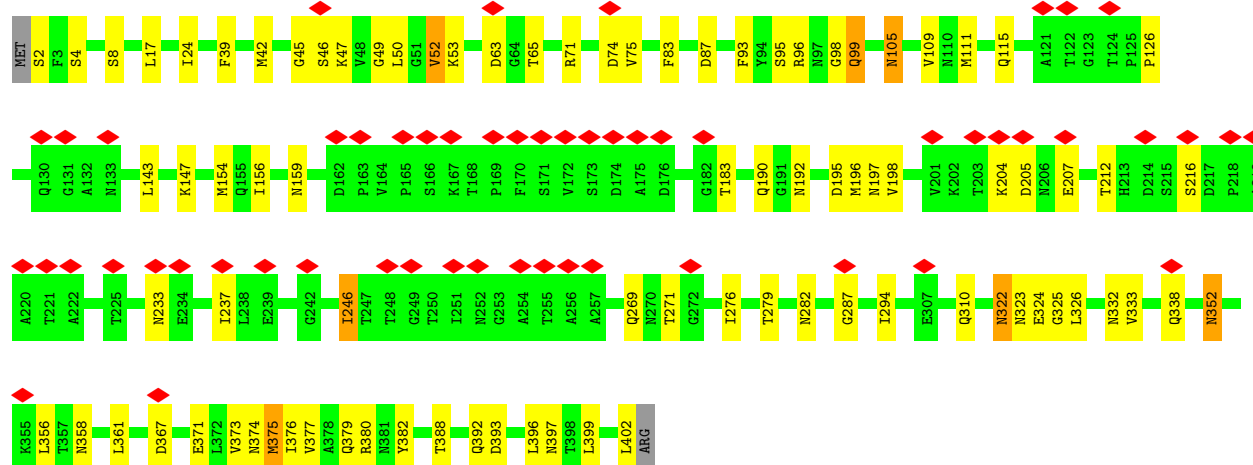
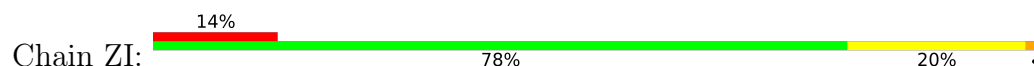
• Molecule 10: Flagellar hook protein FlgE

Chain ZH: 

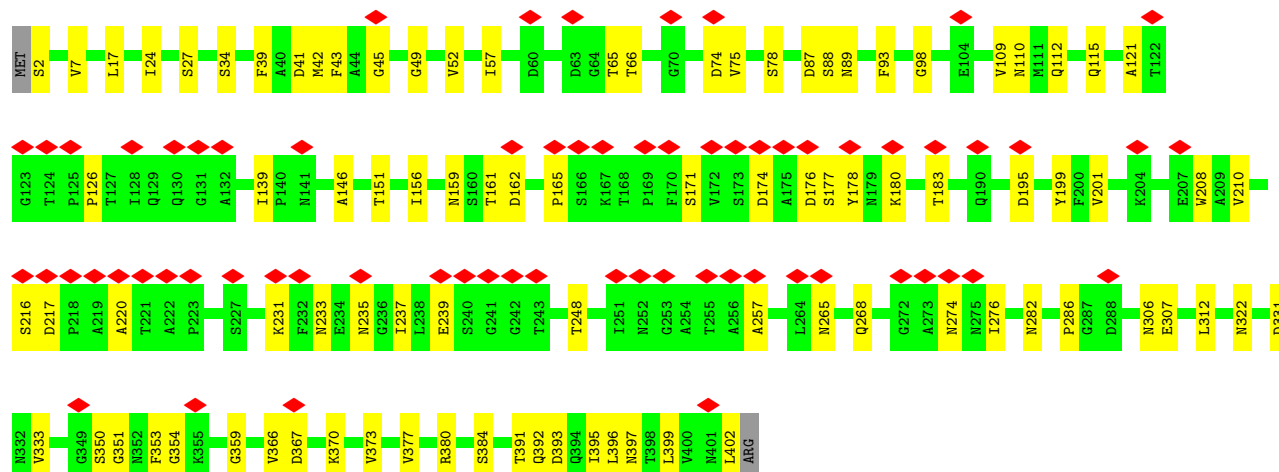
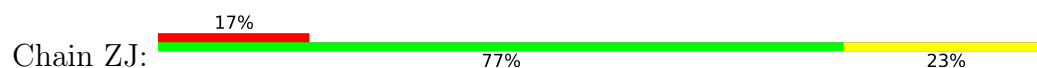




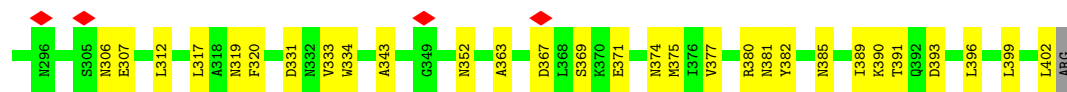
• Molecule 10: Flagellar hook protein FlgE



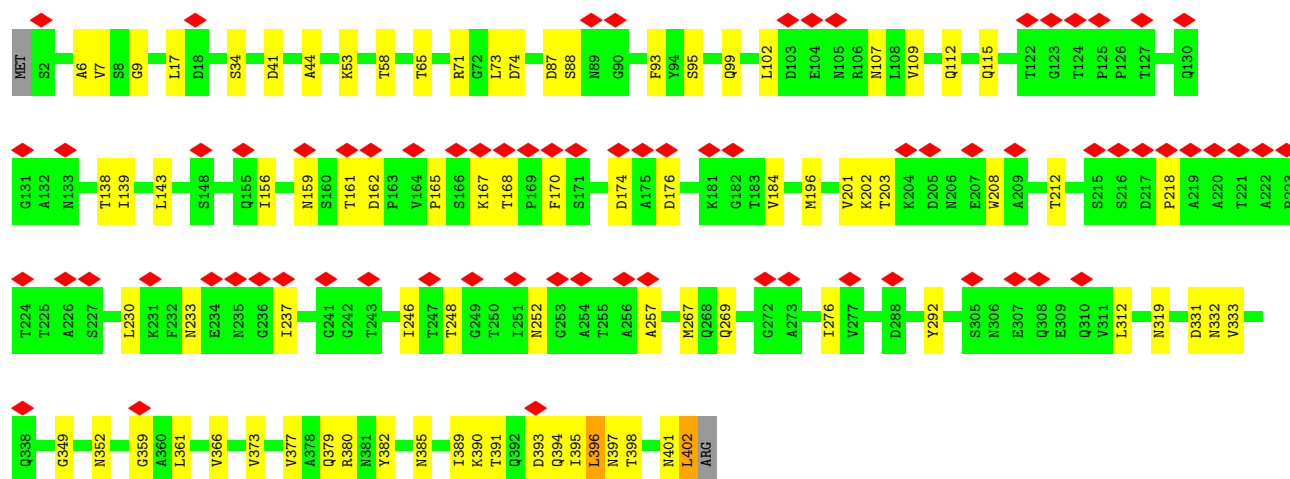
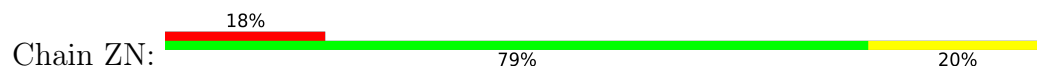
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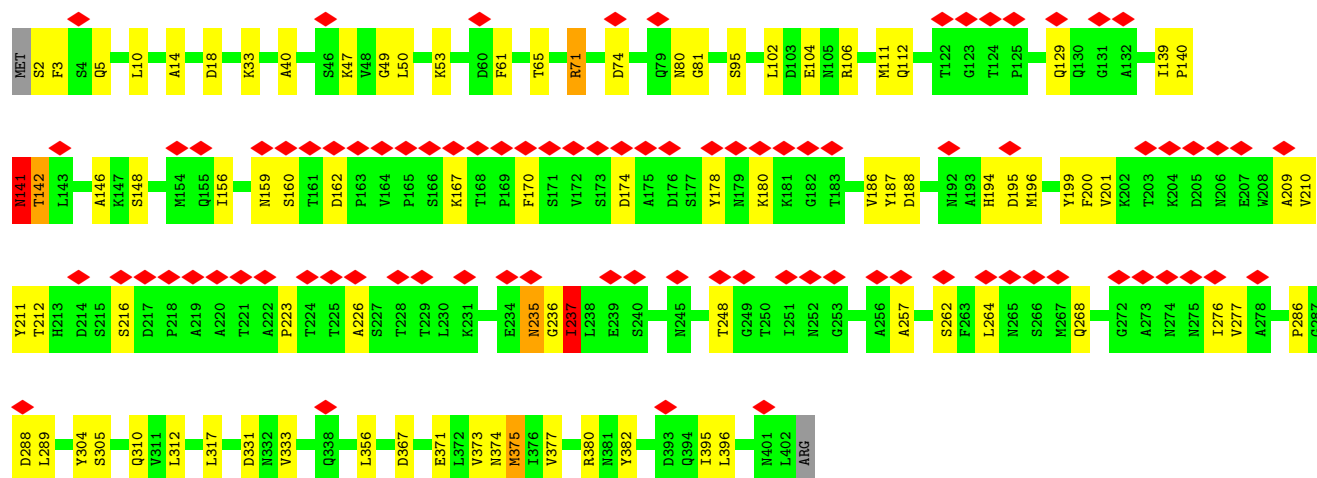
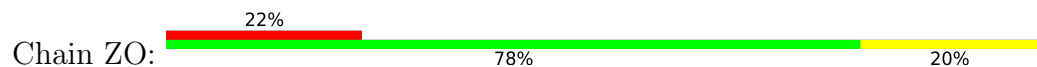
• Molecule 10: Flagellar hook protein FlgE



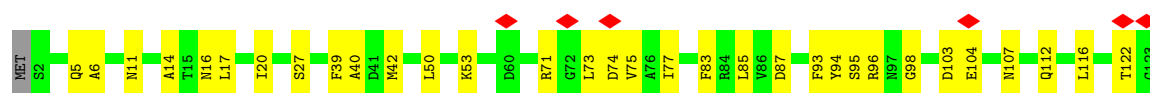
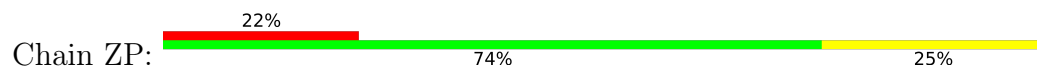
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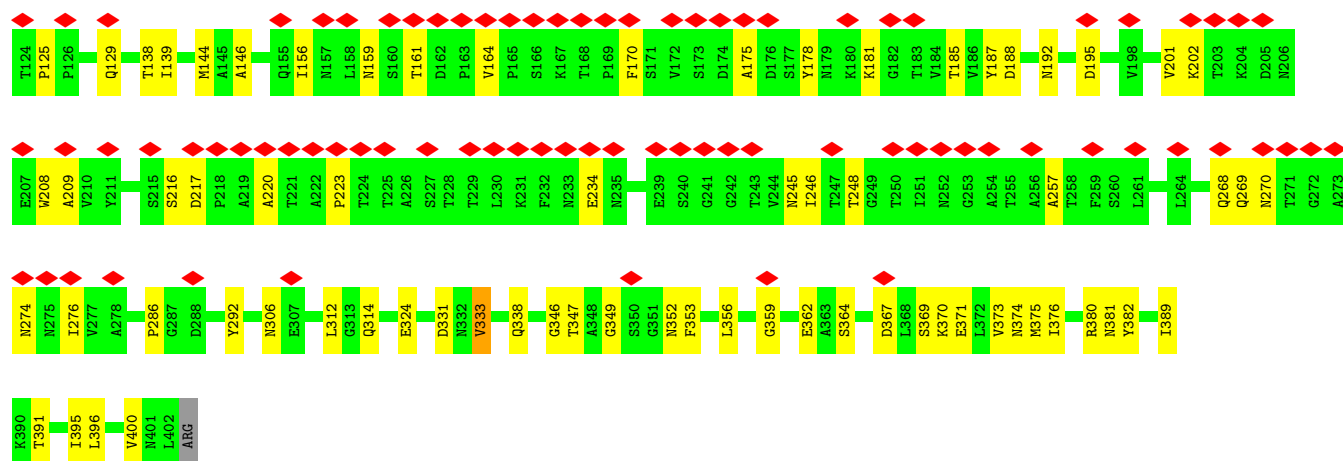


• Molecule 10: Flagellar hook protein FlgE

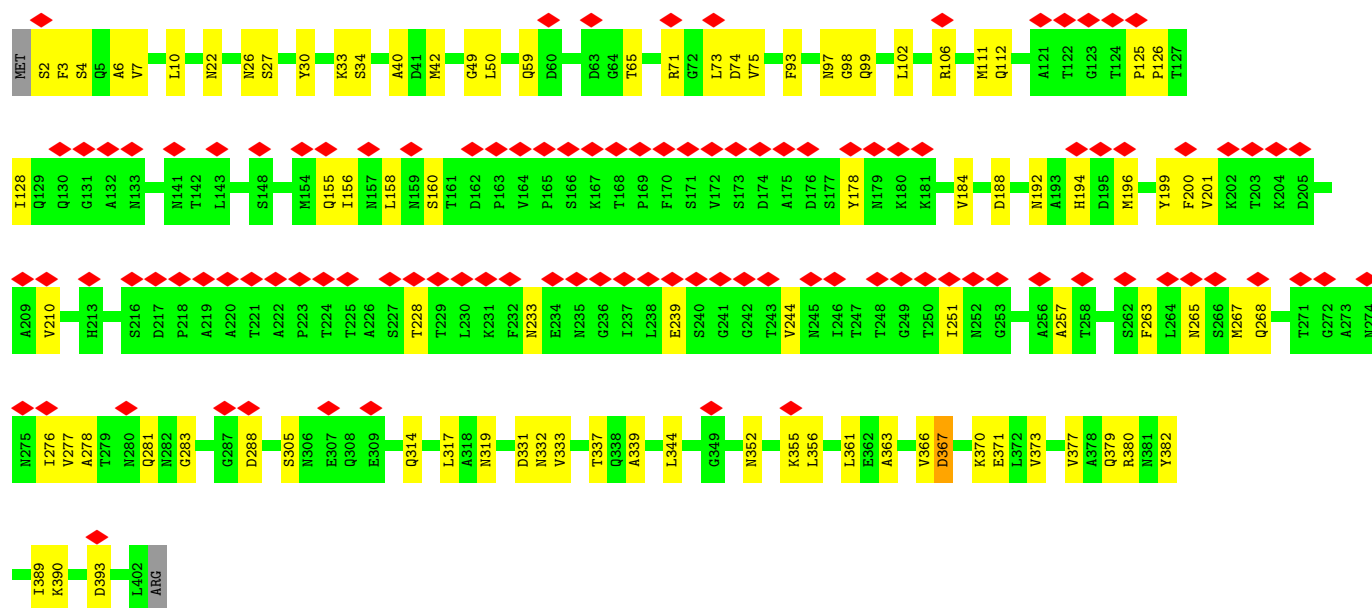
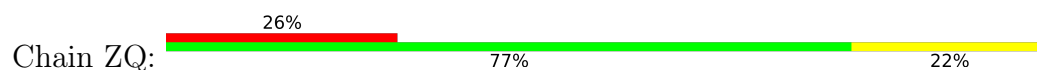


• Molecule 10: Flagellar hook protein FlgE

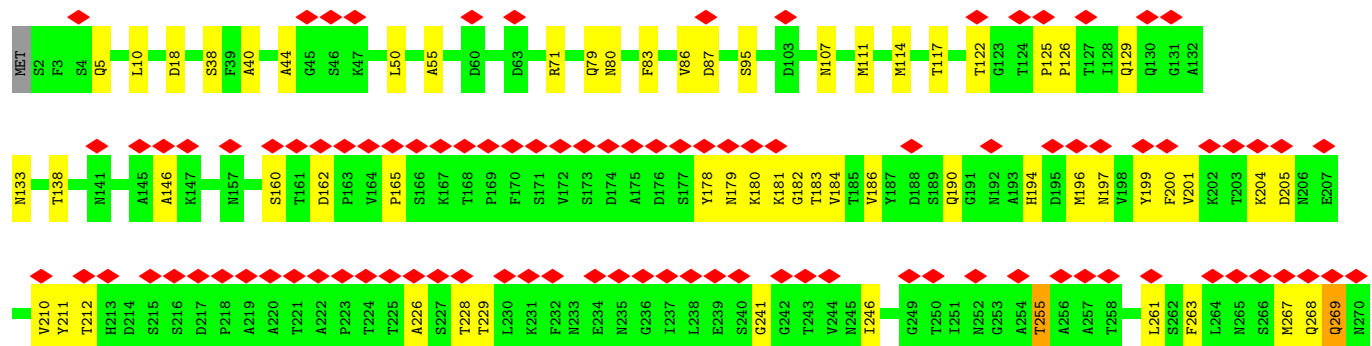
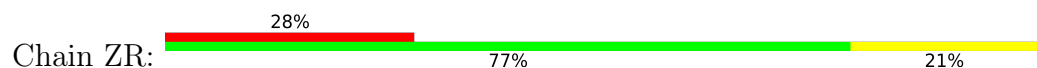


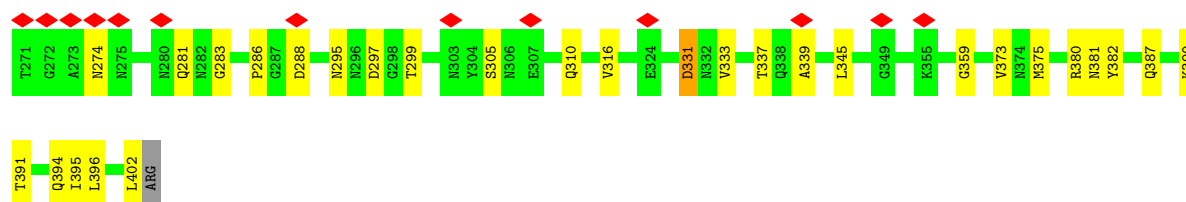


• Molecule 10: Flagellar hook protein FlgE

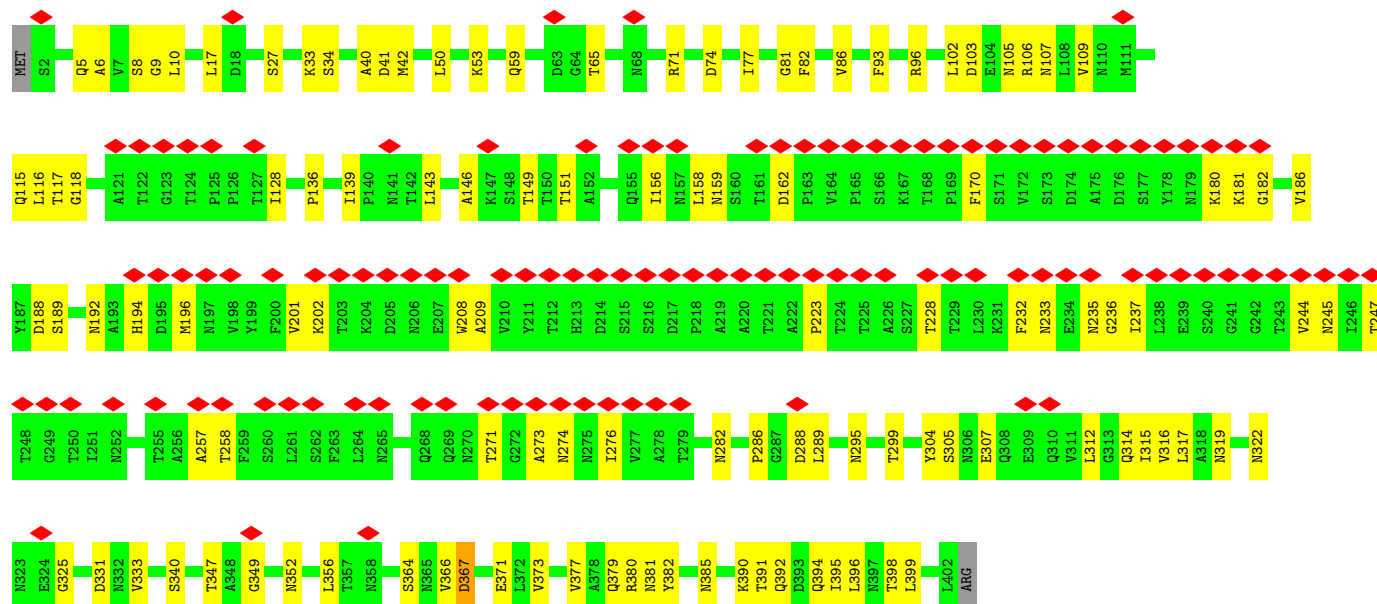


• Molecule 10: Flagellar hook protein FlgE

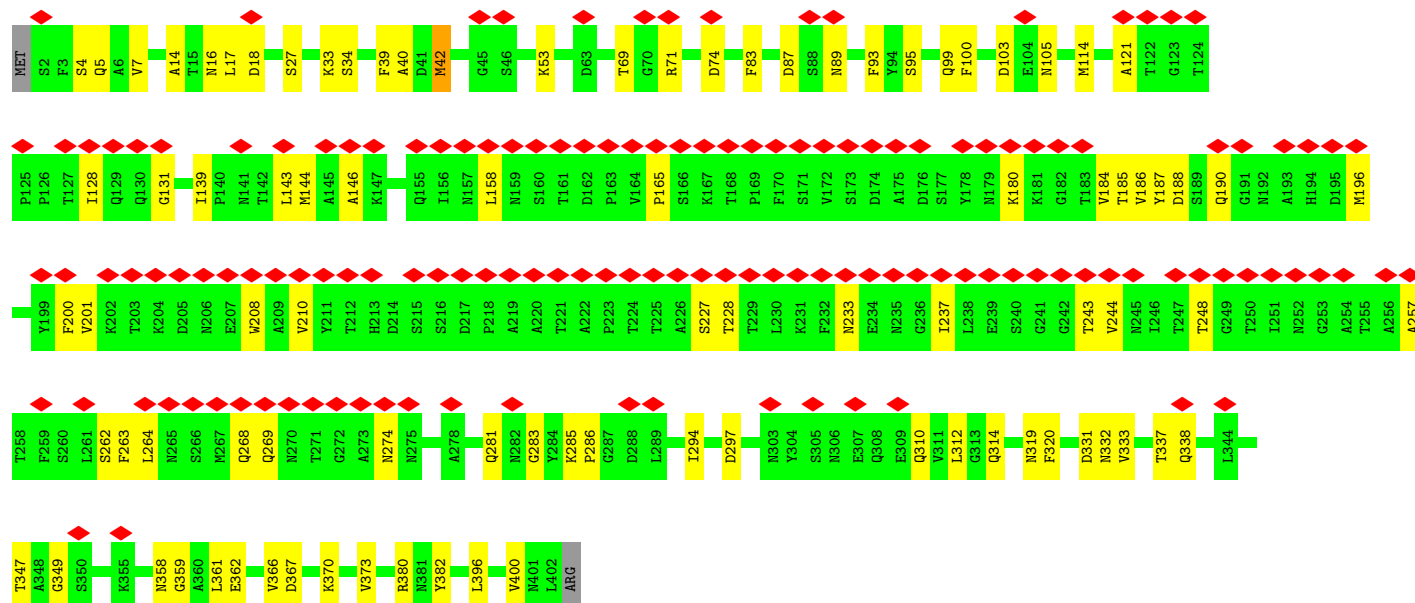
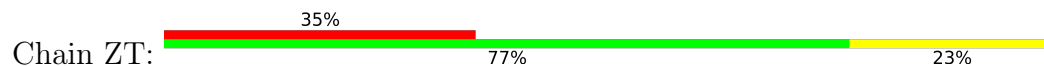




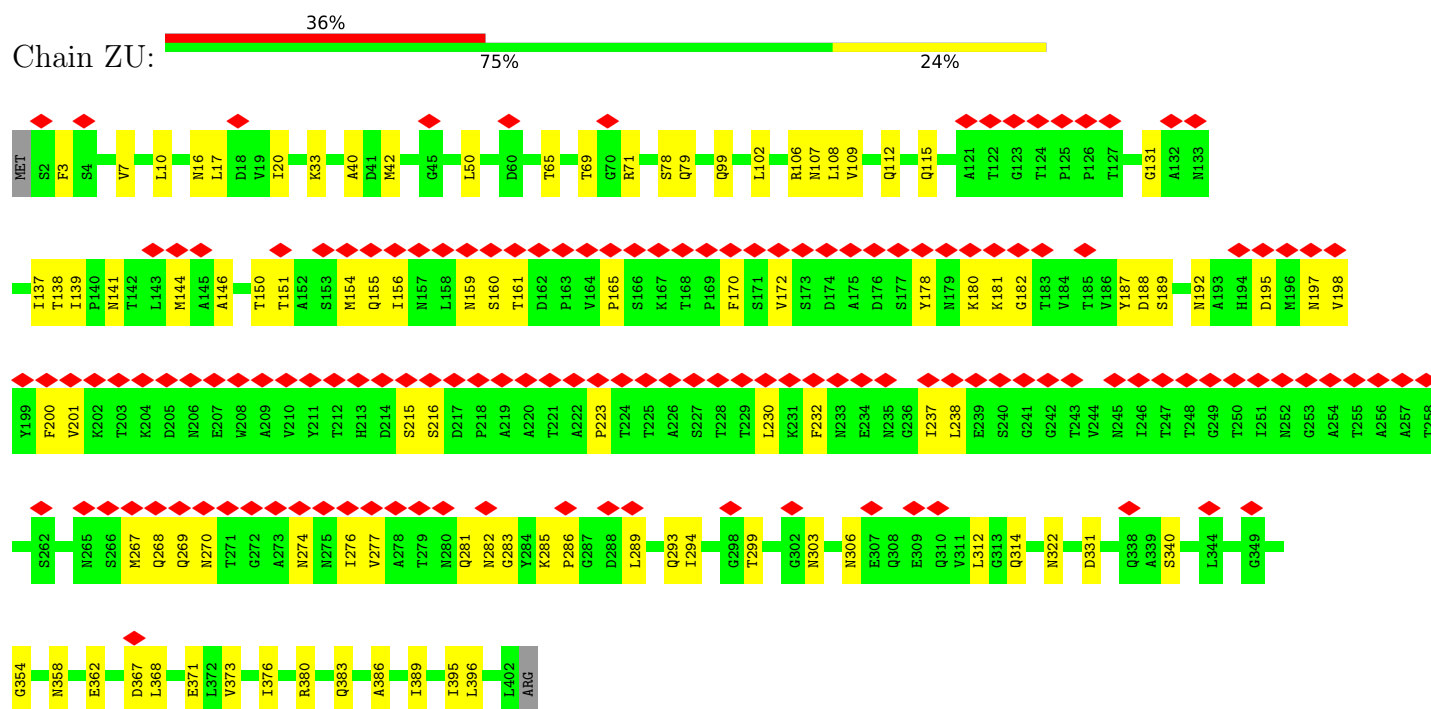
• Molecule 10: Flagellar hook protein FlgE



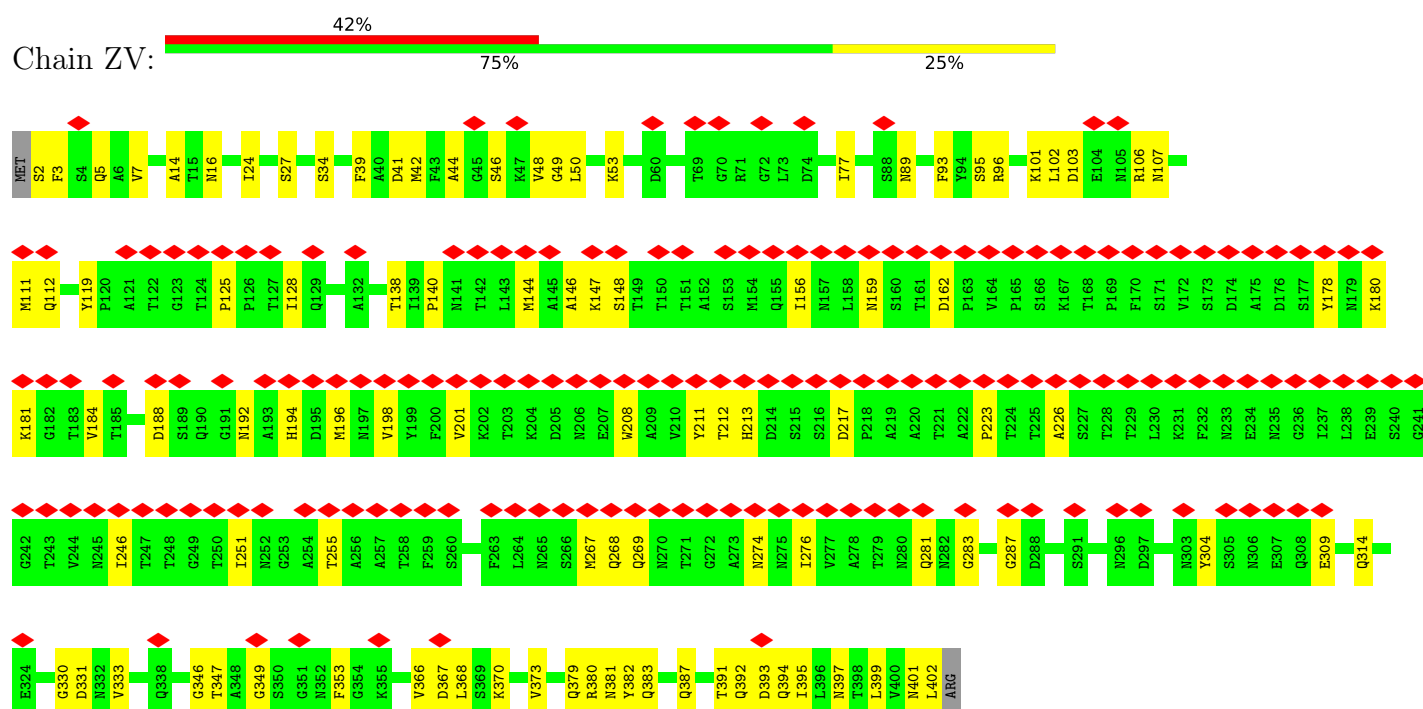
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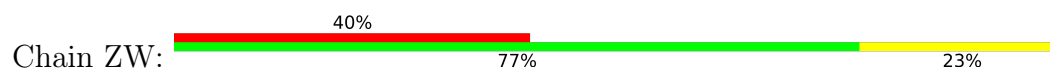
- Molecule 10: Flagellar hook protein FlgE

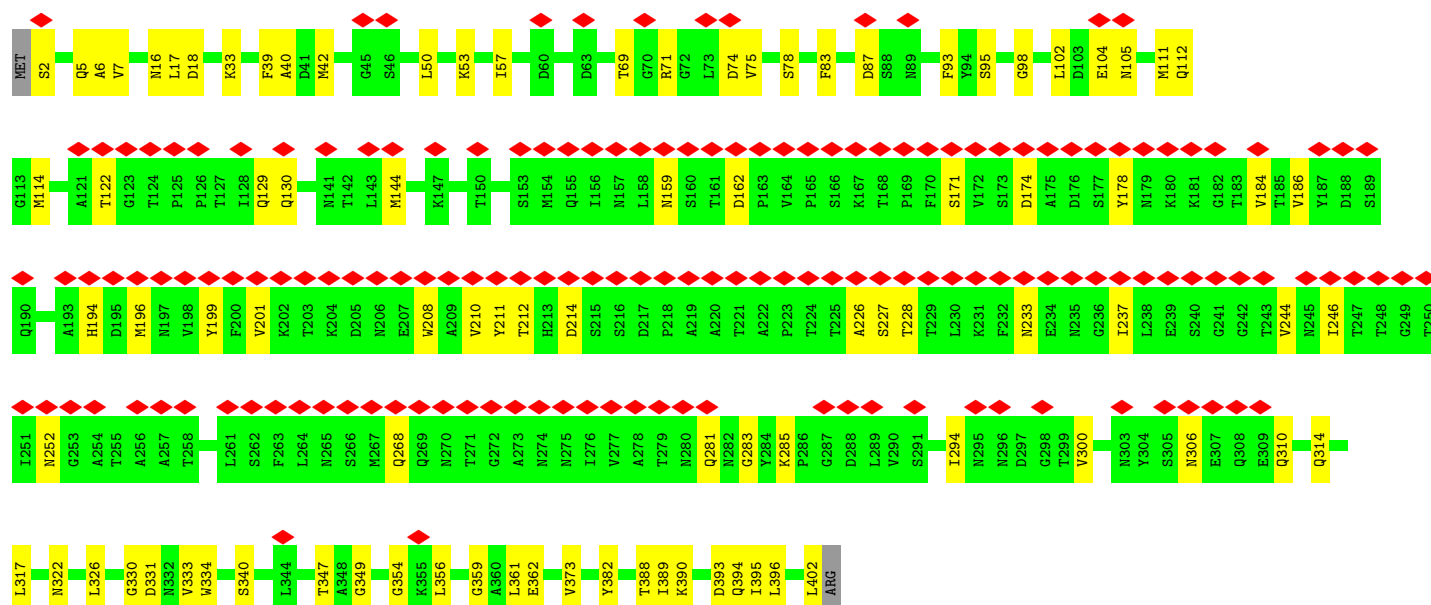


- Molecule 10: Flagellar hook protein FlgE



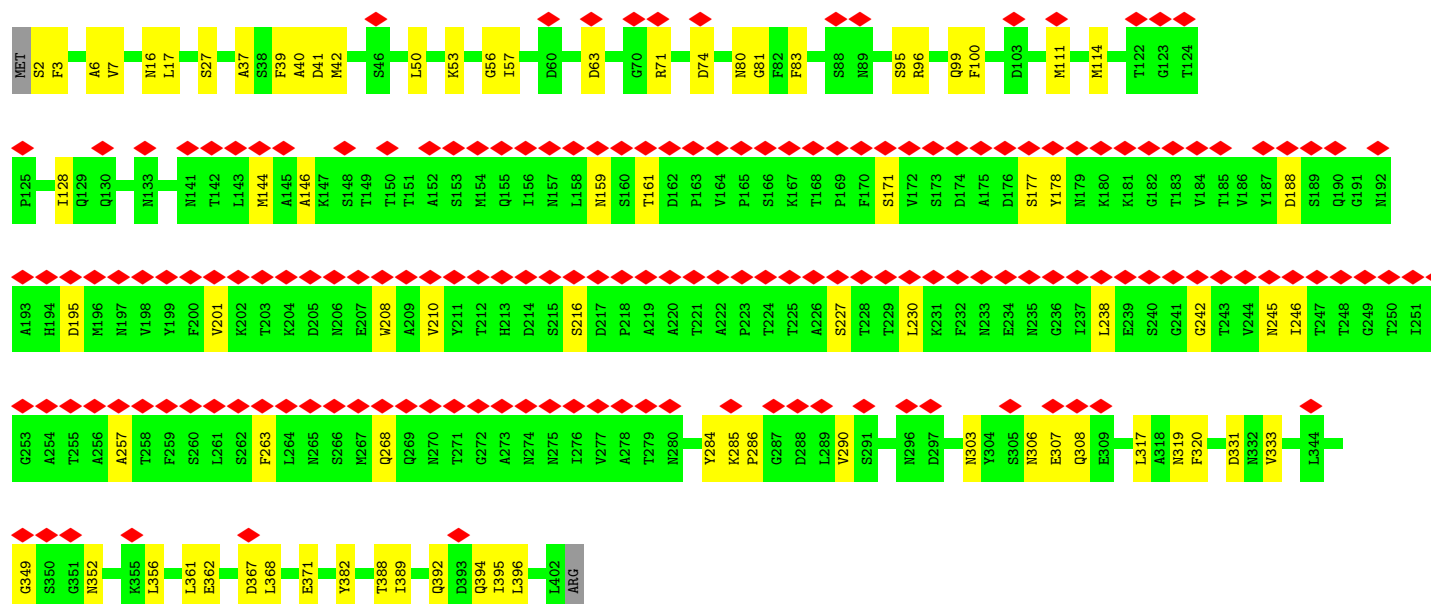
- Molecule 10: Flagellar hook protein FlgE





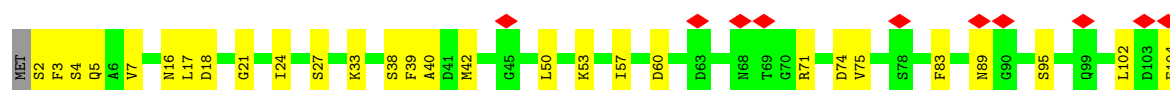
• Molecule 10: Flagellar hook protein FlgE

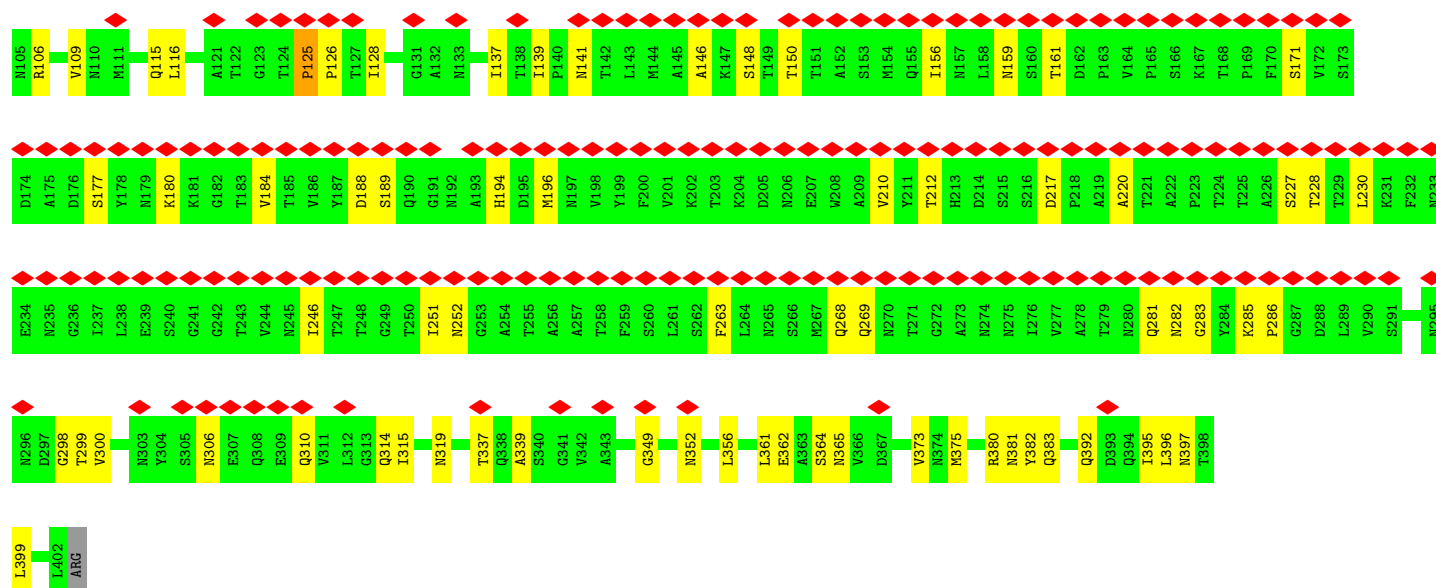
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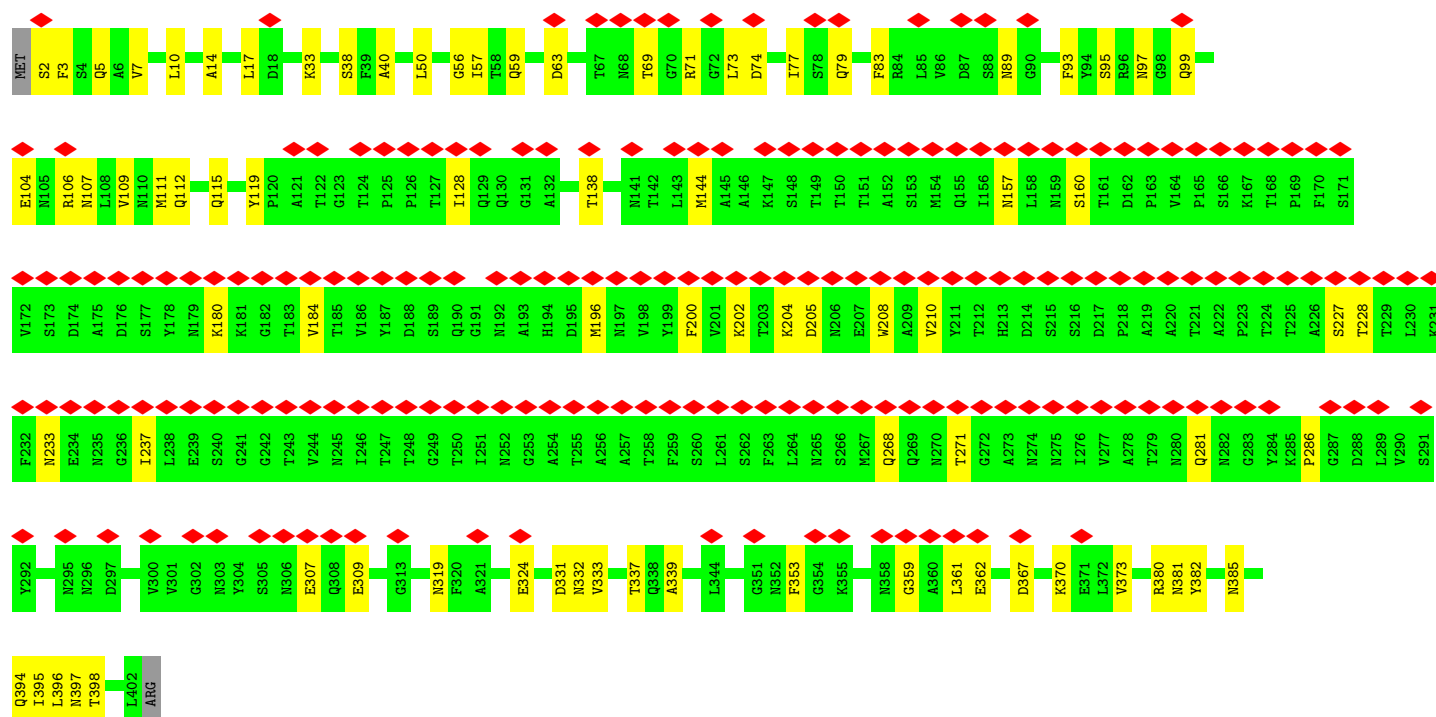
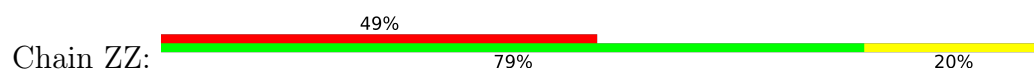
• Molecule 10: Flagellar hook protein FlgE

Chain ZY:

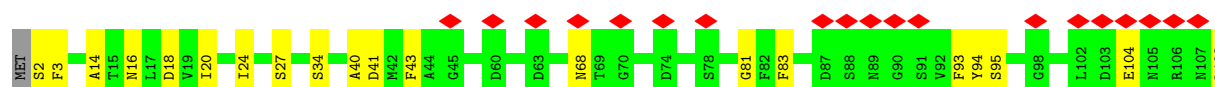
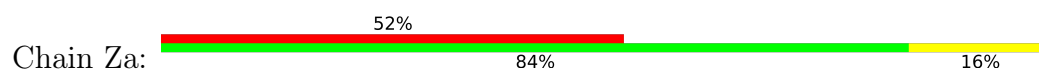


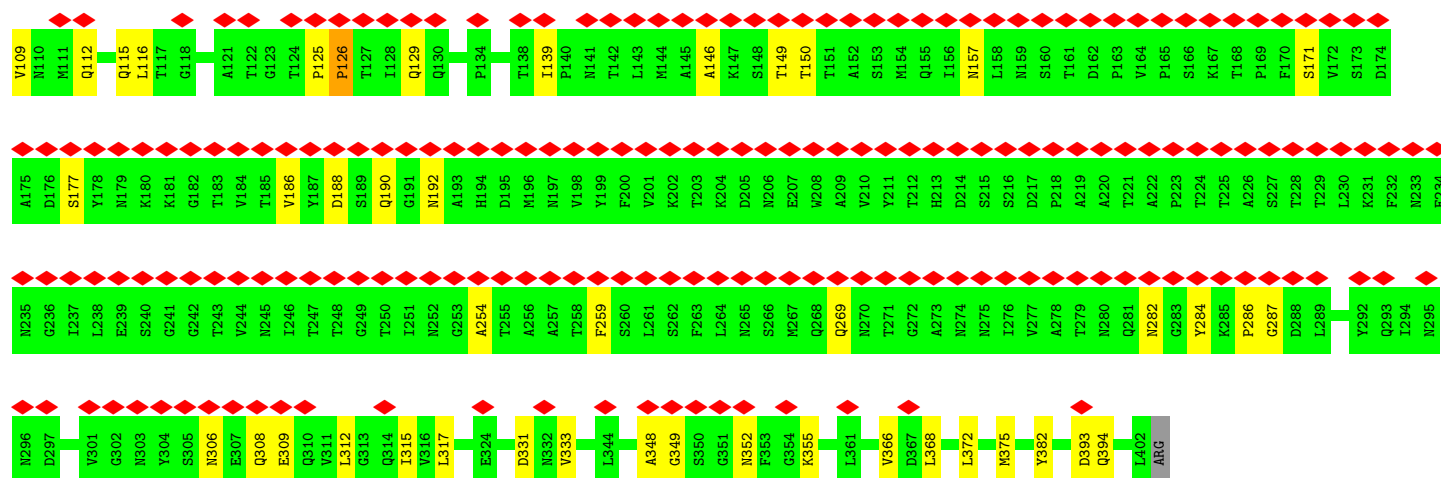


• Molecule 10: Flagellar hook protein FlgE

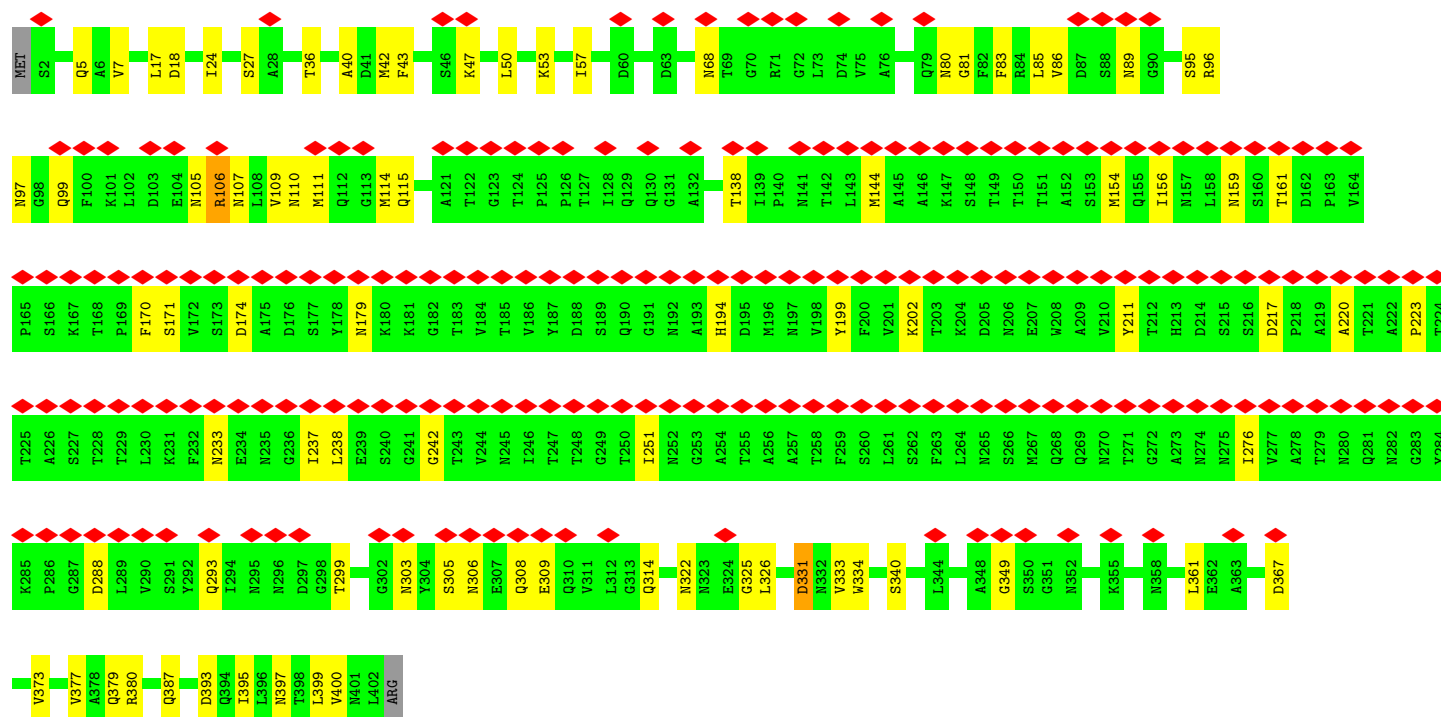
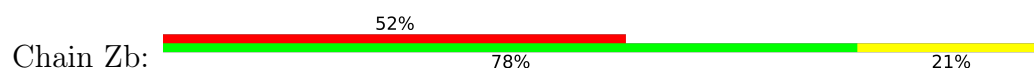


• Molecule 10: Flagellar hook protein FlgE

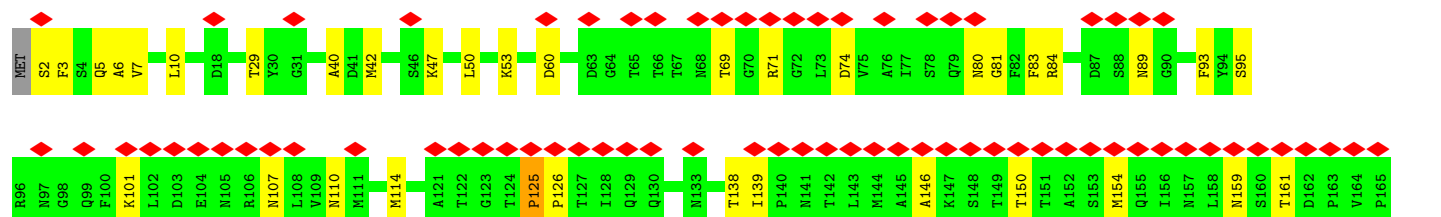
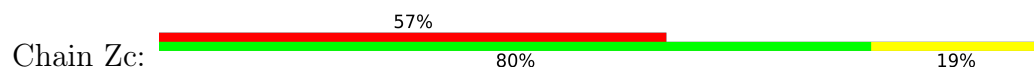


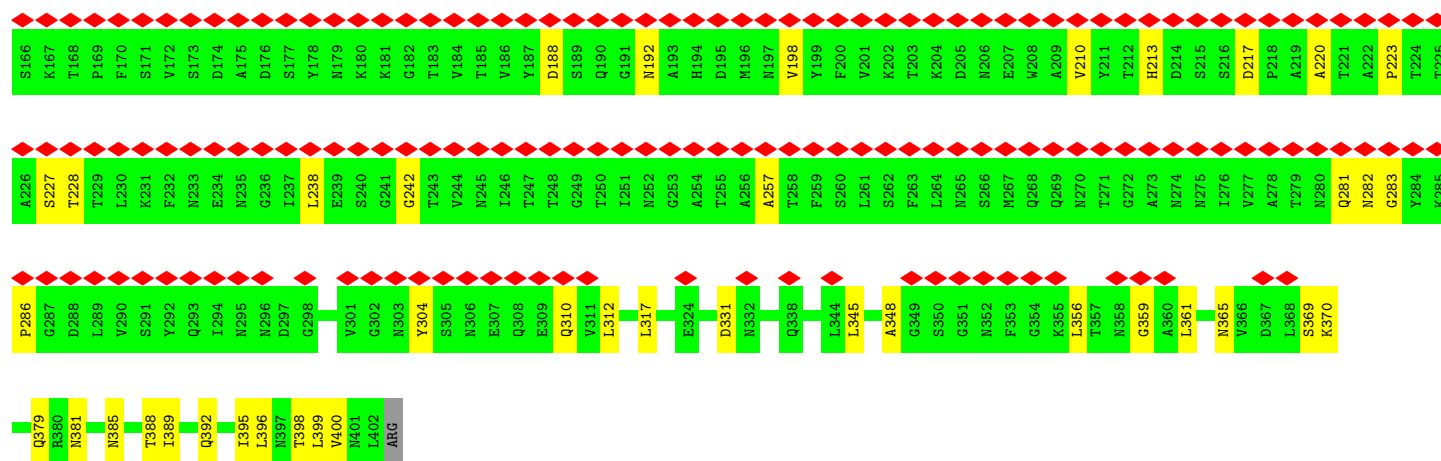


• Molecule 10: Flagellar hook protein FlgE

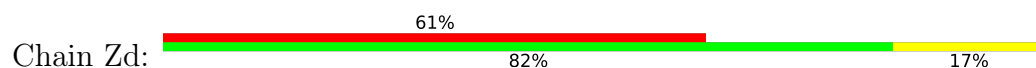


• Molecule 10: Flagellar hook protein FlgE

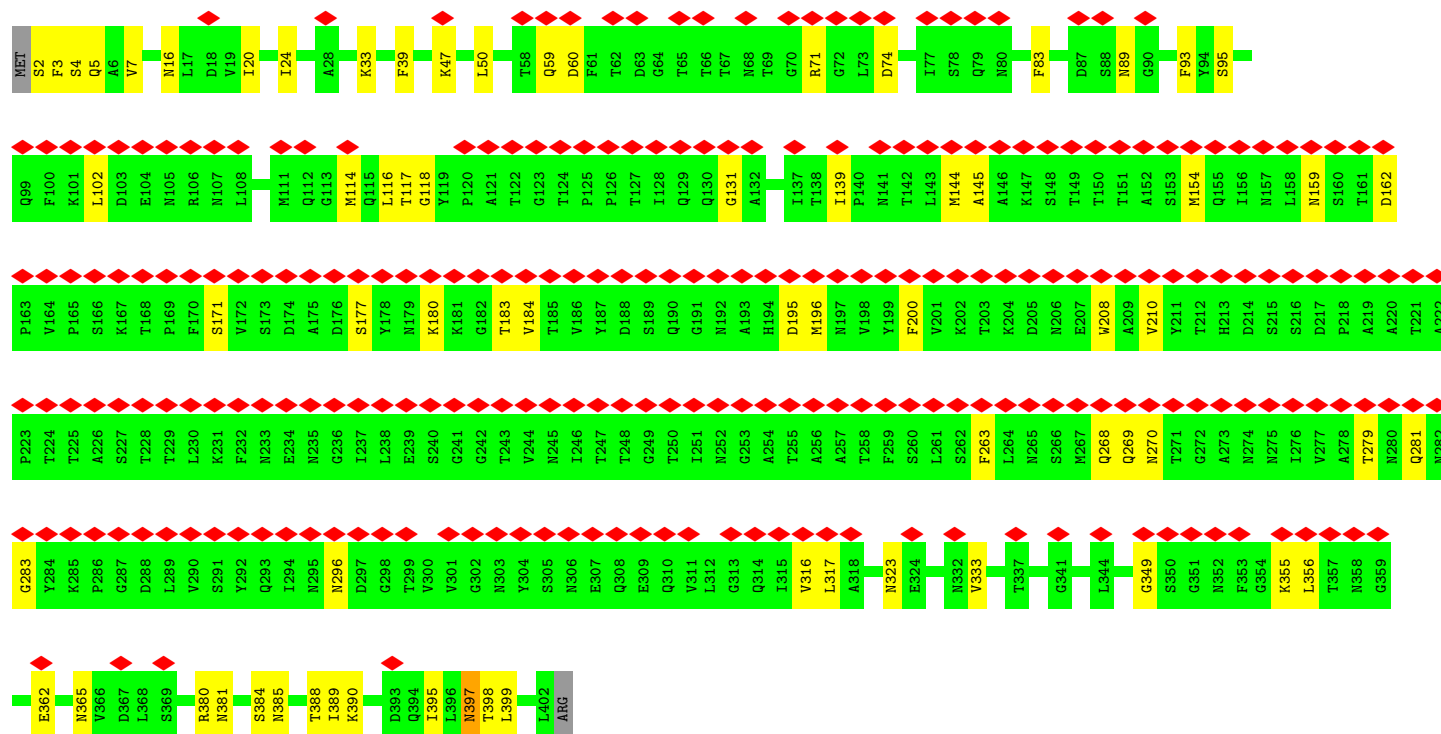




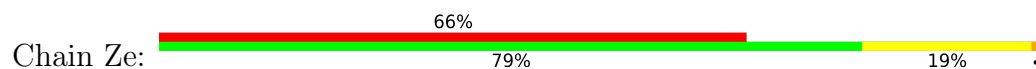
• Molecule 10: Flagellar hook protein FlgE



Chain Zd:

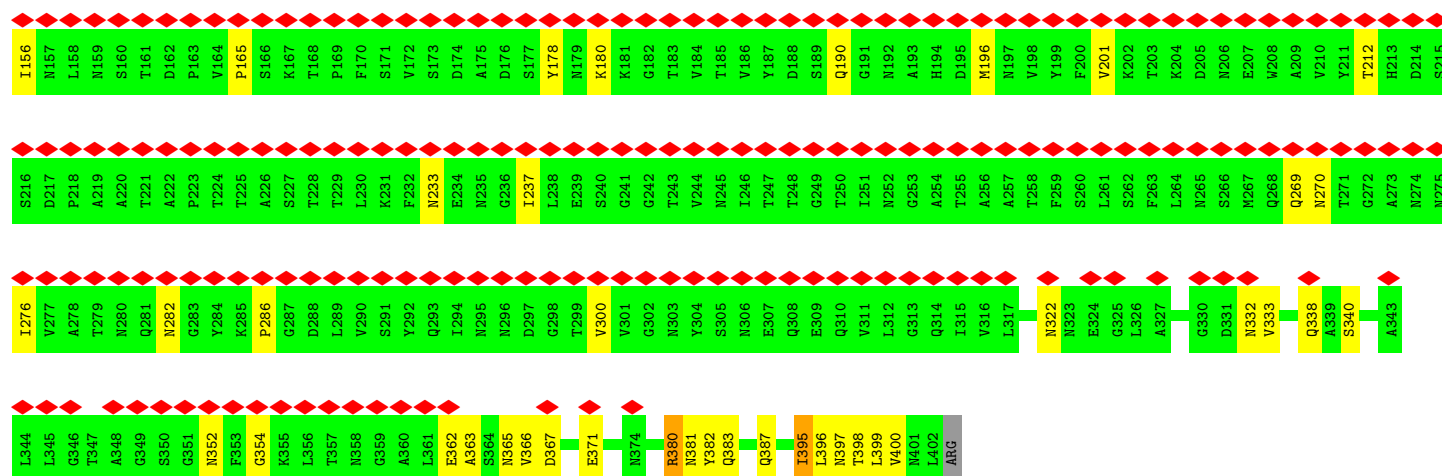


• Molecule 10: Flagellar hook protein FlgE

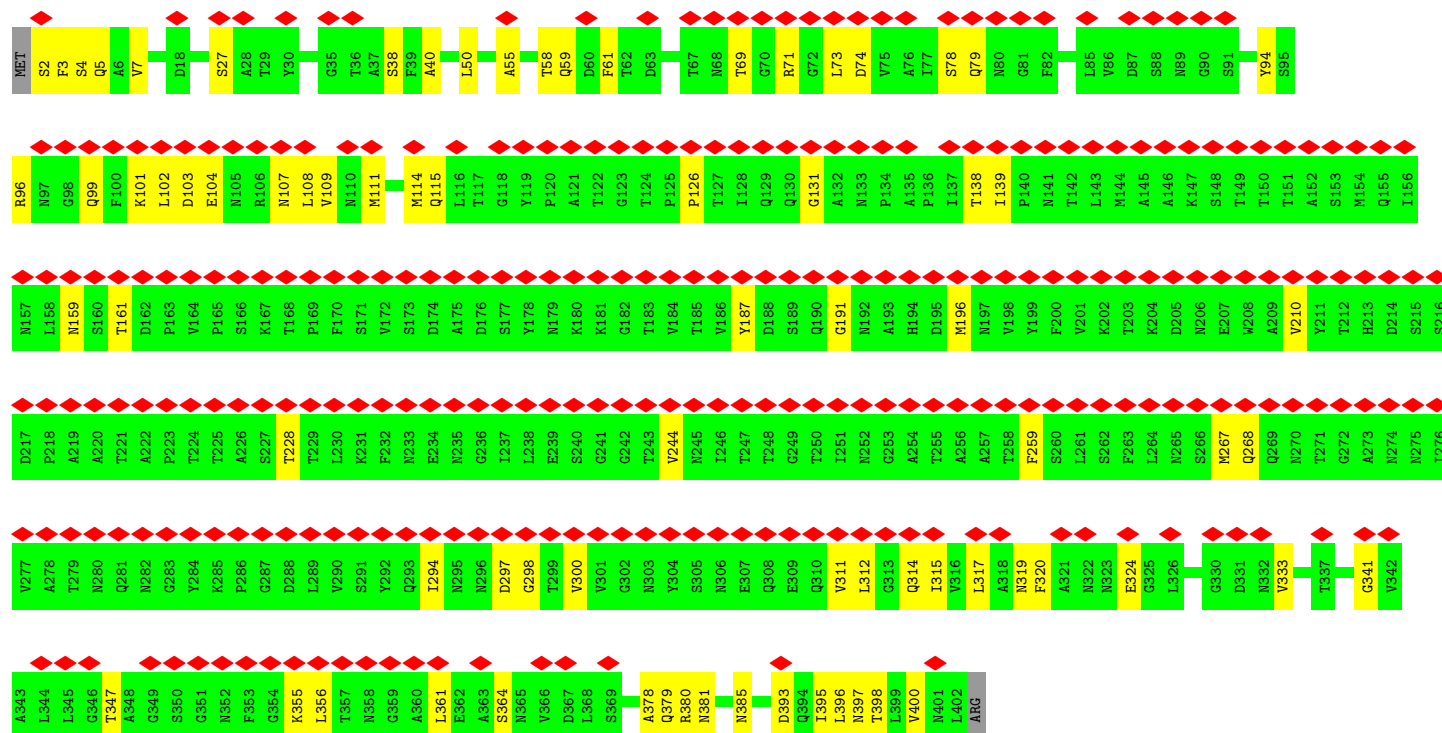
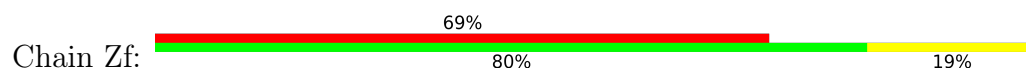


Chain Ze:

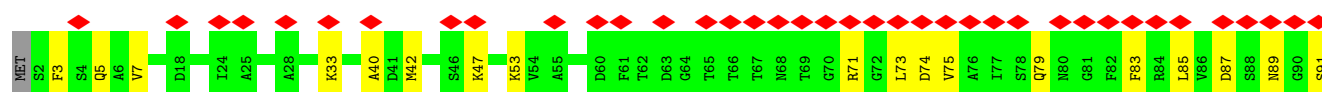
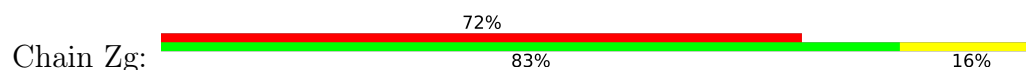


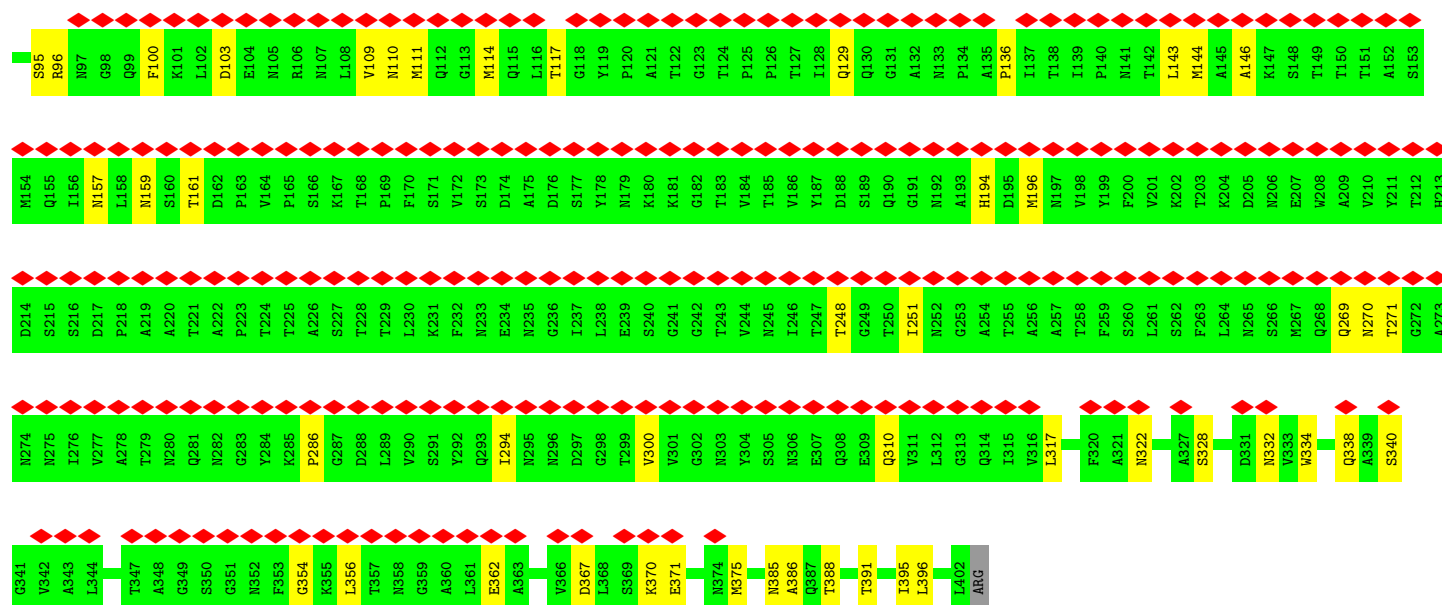


• Molecule 10: Flagellar hook protein FlgE

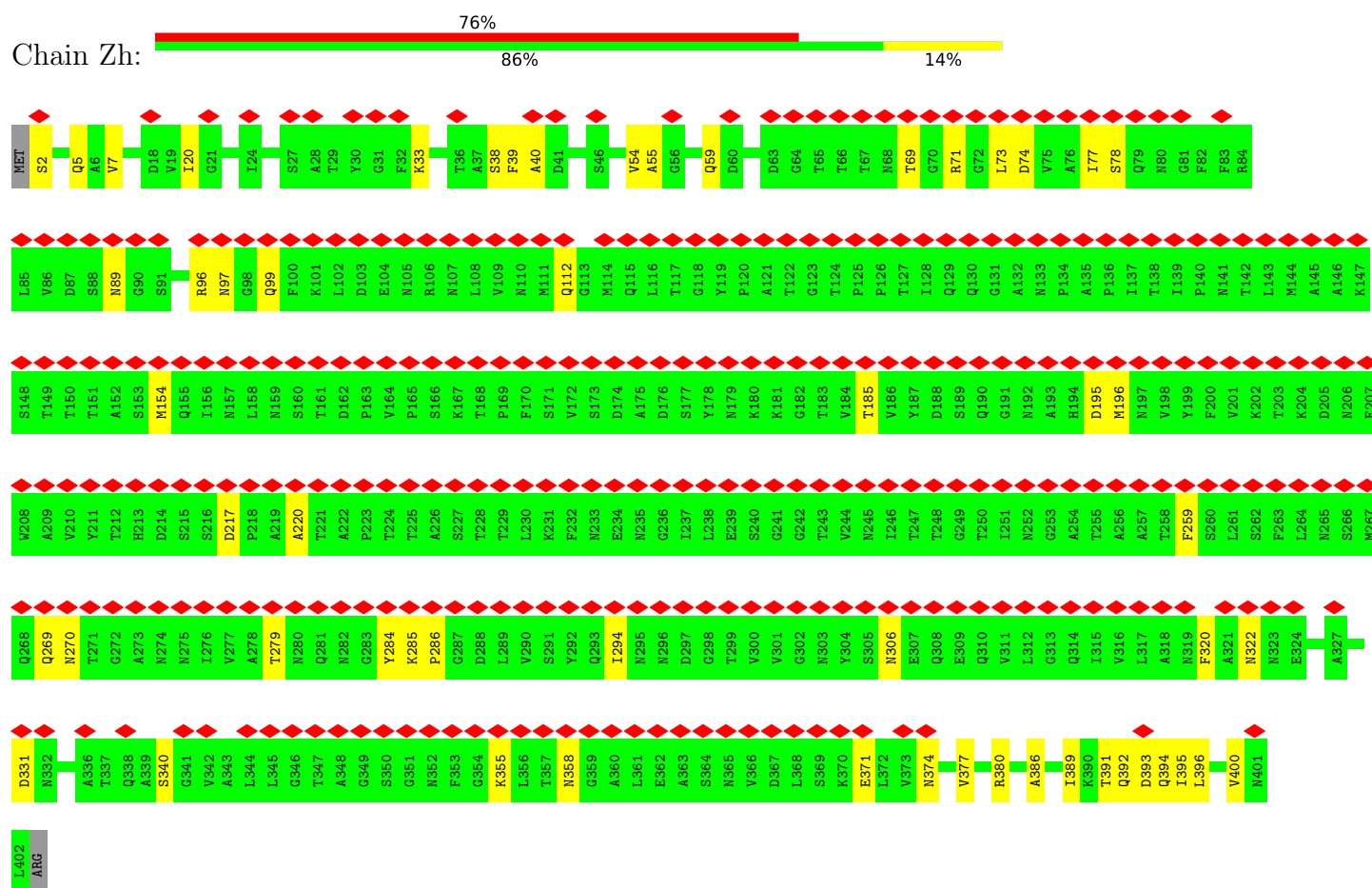


• Molecule 10: Flagellar hook protein FlgE





• Molecule 10: Flagellar hook protein FlgE



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 ($e^-/\text{\AA}^2$)	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	1.715	Depositor
Minimum map value	-1.213	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.080	Depositor
Recommended contour level	0.35	Depositor
Map size ($\text{\AA}$)	614.4, 614.4, 614.4	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	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	A	0.26	0/681	0.49	0/930
1	B	0.16	0/681	0.42	0/930
1	C	0.23	0/681	0.44	0/930
1	D	0.26	0/681	0.55	0/930
2	E	0.45	3/1994 (0.2%)	0.61	3/2724 (0.1%)
3	F	0.33	0/1643	0.61	4/2237 (0.2%)
3	G	0.26	0/1665	0.46	2/2267 (0.1%)
3	H	0.22	0/1652	0.42	0/2249
3	I	0.22	0/1652	0.40	0/2249
3	J	0.30	0/1662	0.53	1/2263 (0.0%)
4	K	0.17	0/300	0.43	0/400
4	L	0.11	0/547	0.24	0/733
4	M	0.17	0/561	0.29	0/753
4	N	0.13	0/561	0.27	0/753
4	O	0.13	0/561	0.31	0/753
4	P	0.16	0/554	0.32	0/743
5	Q	0.21	0/930	0.46	0/1251
5	R	0.16	0/855	0.34	0/1150
5	S	0.18	0/855	0.39	0/1150
5	T	0.16	0/870	0.33	0/1169
5	U	0.18	0/839	0.35	0/1129
6	V	0.15	0/981	0.31	0/1334
6	W	0.13	0/976	0.32	0/1327
6	X	0.52	2/981 (0.2%)	0.98	3/1334 (0.2%)
6	Y	0.16	0/981	0.36	0/1334
6	Z	0.15	0/981	0.35	0/1334
6	a	0.19	0/981	0.36	0/1334
7	b	0.70	0/83	0.97	0/114
7	c	0.16	0/107	0.37	0/148
7	d	0.27	0/137	0.52	0/191
7	e	0.20	0/107	0.44	0/148
7	f	1.32	1/145 (0.7%)	1.50	3/203 (1.5%)
7	g	0.22	0/107	0.57	0/148
7	h	0.13	0/145	0.29	0/203

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
7	i	0.14	0/107	0.41	0/148
7	j	0.25	0/137	0.66	0/191
7	k	0.16	0/107	0.30	0/148
7	l	0.26	0/145	0.44	0/203
8	m	0.36	0/1828	0.56	1/2492 (0.0%)
8	n	0.26	0/1836	0.47	0/2502
8	o	0.22	0/1844	0.44	0/2512
8	p	0.17	0/1844	0.37	0/2512
8	q	0.29	0/1836	0.49	1/2502 (0.0%)
9	0	0.28	0/1888	0.51	1/2564 (0.0%)
9	1	0.27	0/1917	0.52	0/2605
9	2	0.21	0/1973	0.46	0/2682
9	3	0.23	0/1973	0.47	0/2682
9	4	0.20	0/1973	0.46	0/2682
9	5	0.32	0/1973	0.58	0/2682
9	6	0.30	0/1973	0.57	0/2682
9	7	0.22	0/1973	0.45	0/2682
9	8	0.26	0/1973	0.52	0/2682
9	9	0.23	0/1973	0.54	2/2682 (0.1%)
9	ZA	0.27	0/1973	0.51	0/2682
9	ZB	0.26	0/1973	0.50	0/2682
9	ZC	0.23	0/1973	0.51	0/2682
9	ZD	0.25	0/1973	0.53	0/2682
9	ZE	0.23	0/1973	0.46	0/2682
9	r	0.35	0/1926	0.60	0/2618
9	s	0.40	0/1934	0.69	0/2629
9	t	0.35	0/1942	0.64	3/2639 (0.1%)
9	u	0.33	0/1926	0.60	2/2618 (0.1%)
9	v	0.31	0/1934	0.55	0/2629
9	w	0.32	0/1844	0.58	1/2505 (0.0%)
9	x	0.30	0/1888	0.53	0/2564
9	y	0.30	0/1888	0.57	0/2564
9	z	0.28	0/1888	0.50	0/2564
10	ZF	0.23	0/2991	0.48	2/4076 (0.0%)
10	ZG	0.29	1/2991 (0.0%)	0.53	4/4076 (0.1%)
10	ZH	0.24	0/2991	0.48	1/4076 (0.0%)
10	ZI	0.27	0/2991	0.50	1/4076 (0.0%)
10	ZJ	0.28	0/2991	0.51	0/4076
10	ZK	0.17	0/2991	0.39	0/4076
10	ZL	0.23	0/2991	0.44	0/4076
10	ZM	0.22	0/2991	0.49	1/4076 (0.0%)
10	ZN	0.21	0/2991	0.46	1/4076 (0.0%)
10	ZO	0.26	0/2991	0.49	1/4076 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
10	ZP	0.20	0/2991	0.43	1/4076 (0.0%)
10	ZQ	0.22	0/2991	0.48	0/4076
10	ZR	0.24	1/2991 (0.0%)	0.50	2/4076 (0.0%)
10	ZS	0.21	0/2991	0.44	0/4076
10	ZT	0.13	0/2991	0.35	0/4076
10	ZU	0.21	0/2991	0.43	0/4076
10	ZV	0.48	4/2991 (0.1%)	0.65	7/4076 (0.2%)
10	ZW	0.14	0/2991	0.37	0/4076
10	ZX	0.18	0/2991	0.41	0/4076
10	ZY	0.22	1/2991 (0.0%)	0.45	2/4076 (0.0%)
10	ZZ	0.13	0/2991	0.35	0/4076
10	Za	0.18	0/2991	0.41	1/4076 (0.0%)
10	Zb	0.25	0/2991	0.48	1/4076 (0.0%)
10	Zc	0.23	0/2991	0.49	3/4076 (0.1%)
10	Zd	0.25	0/2991	0.50	1/4076 (0.0%)
10	Ze	0.21	0/2991	0.48	0/4076
10	Zf	0.21	0/2991	0.45	0/4076
10	Zg	0.18	0/2991	0.42	0/4076
10	Zh	0.16	0/2991	0.38	0/4076
All	All	0.26	13/170184 (0.0%)	0.49	56/231624 (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
3	H	0	1
5	Q	0	1
5	U	0	1
6	Y	0	1
6	a	0	1
8	m	0	2
8	n	0	1
8	o	0	1
8	q	0	1
9	0	0	2
9	1	0	1
9	5	0	1
9	6	0	1
9	8	0	1
9	ZA	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
9	r	0	1
9	u	0	1
9	y	0	2
9	z	0	1
10	ZG	0	1
10	ZI	0	1
10	ZK	0	1
10	ZO	0	1
10	ZW	0	1
10	Zb	0	1
10	Zd	0	1
10	Ze	0	1
All	All	0	30

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	ZV	140	PRO	CG-CD	-15.65	0.97	1.50
7	f	331	PRO	CG-CD	-13.86	1.03	1.50
10	ZV	125	PRO	CG-CD	-12.77	1.17	1.51
6	X	73	PRO	CG-CD	-12.38	1.08	1.50
2	E	185	MET	C-O	9.78	1.35	1.24
10	ZV	140	PRO	N-CD	8.38	1.59	1.47
6	X	73	PRO	CB-CG	-7.58	1.11	1.49
10	ZY	125	PRO	CG-CD	-7.01	1.32	1.51
2	E	182	ASN	C-O	6.64	1.32	1.24
10	ZV	125	PRO	N-CD	6.64	1.57	1.47
10	ZR	125	PRO	CG-CD	-6.60	1.33	1.51
10	ZG	4	SER	CA-CB	-5.78	1.46	1.54
2	E	184	LEU	C-O	-5.47	1.17	1.24

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	X	73	PRO	CB-CG-CD	23.05	179.87	106.10
6	X	73	PRO	N-CD-CG	-18.79	75.01	103.20
10	ZV	140	PRO	N-CD-CG	-17.34	77.19	103.20
7	f	331	PRO	N-CD-CG	-16.10	79.05	103.20
10	ZV	125	PRO	N-CD-CG	-14.54	86.35	103.80
6	X	73	PRO	CA-CB-CG	-14.25	77.42	104.50
10	ZR	125	PRO	CA-N-CD	-13.96	91.96	111.50
10	ZY	125	PRO	CA-N-CD	-13.35	92.81	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	ZV	125	PRO	CA-N-CD	-13.26	92.94	111.50
3	F	162	PRO	CA-N-CD	-12.38	94.66	112.00
10	Zc	125	PRO	CA-N-CD	-11.21	95.80	111.50
10	ZV	140	PRO	CA-N-CD	-10.60	97.16	112.00
10	ZR	125	PRO	N-CD-CG	-9.98	91.83	103.80
10	ZY	125	PRO	N-CD-CG	-9.84	92.00	103.80
10	ZV	140	PRO	CA-CB-CG	-9.55	86.35	104.50
7	f	331	PRO	CA-CB-CG	-9.27	86.89	104.50
9	t	2	ILE	N-CA-C	-8.97	103.65	112.17
10	ZM	223	PRO	CA-N-CD	-8.79	99.70	112.00
10	Zc	125	PRO	N-CD-CG	-7.82	94.42	103.80
3	J	84	PRO	N-CA-C	-7.75	101.25	110.70
7	f	331	PRO	N-CA-CB	-7.42	94.84	103.00
10	ZG	235	ASN	N-CA-C	-7.33	104.86	114.31
3	F	162	PRO	N-CD-CG	-6.55	93.37	103.20
10	Zb	397	ASN	N-CA-C	-6.25	104.39	111.14
3	G	162	PRO	N-CA-CB	-6.19	96.75	103.25
2	E	185	MET	CA-C-N	-6.16	112.23	120.54
2	E	185	MET	C-N-CA	-6.16	112.23	120.54
9	0	52	PRO	N-CA-CB	-6.08	96.31	103.00
2	E	189	PRO	CA-N-CD	-5.85	103.81	112.00
9	t	5	LEU	N-CA-C	-5.78	106.07	113.23
9	9	135	GLN	CA-C-N	5.77	128.86	122.22
9	9	135	GLN	C-N-CA	5.77	128.86	122.22
10	ZI	322	ASN	CB-CA-C	-5.75	103.03	111.77
9	t	4	SER	N-CA-C	-5.66	107.37	114.56
10	ZV	125	PRO	CA-CB-CG	-5.66	93.25	104.00
10	ZG	4	SER	N-CA-C	-5.63	107.05	114.31
10	ZF	134	PRO	N-CA-CB	-5.61	98.31	103.25
3	G	120	LYS	N-CA-C	-5.59	104.28	113.50
10	Zc	125	PRO	CB-CG-CD	-5.58	92.58	105.40
10	ZP	125	PRO	CA-N-CD	-5.57	103.70	111.50
10	ZH	397	ASN	N-CA-C	-5.56	105.12	111.07
10	ZV	140	PRO	N-CA-CB	-5.50	98.41	103.31
9	w	4	SER	N-CA-C	-5.48	106.37	113.16
10	ZG	47	LYS	N-CA-C	-5.38	106.64	114.12
3	F	126	ALA	CA-C-N	-5.37	113.03	120.38
3	F	126	ALA	C-N-CA	-5.37	113.03	120.38
10	ZF	394	GLN	N-CA-C	-5.36	105.84	112.38
10	ZO	141	ASN	N-CA-C	-5.36	106.74	113.28
9	u	257	LEU	CA-C-N	-5.26	112.31	120.31
9	u	257	LEU	C-N-CA	-5.26	112.31	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	m	153	ASN	N-CA-C	-5.21	106.70	113.16
10	ZN	218	PRO	CA-N-CD	-5.15	104.79	112.00
10	ZG	3	PHE	N-CA-C	-5.14	106.41	113.30
8	q	246	GLN	N-CA-C	-5.13	107.69	114.31
10	Za	126	PRO	CA-N-CD	-5.11	104.85	112.00
10	Zd	323	ASN	N-CA-C	-5.07	105.94	111.82

There are no chirality outliers.

All (30) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	0	36	ARG	Sidechain
9	0	50	ARG	Sidechain
9	1	36	ARG	Sidechain
9	5	50	ARG	Sidechain
9	6	153	ARG	Sidechain
9	8	238	ARG	Sidechain
3	H	143	ARG	Sidechain
5	Q	106	ARG	Sidechain
5	U	104	ARG	Sidechain
6	Y	110	ARG	Sidechain
9	ZA	79	ARG	Sidechain
10	ZG	71	ARG	Sidechain
10	ZI	380	ARG	Sidechain
10	ZK	71	ARG	Sidechain
10	ZO	71	ARG	Sidechain
10	ZW	71	ARG	Sidechain
10	Zb	106	ARG	Sidechain
10	Zd	380	ARG	Sidechain
10	Ze	380	ARG	Sidechain
6	a	110	ARG	Sidechain
8	m	200	ARG	Sidechain
8	m	243	ARG	Sidechain
8	n	225	ARG	Sidechain
8	o	243	ARG	Sidechain
8	q	160	ARG	Sidechain
9	r	36	ARG	Sidechain
9	u	116	ARG	Sidechain
9	y	36	ARG	Sidechain
9	y	50	ARG	Sidechain
9	z	238	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	A	670	0	739	15	0
1	B	670	0	739	28	0
1	C	670	0	739	28	0
1	D	670	0	739	40	0
2	E	1945	0	2063	81	0
3	F	1605	0	1701	63	0
3	G	1626	0	1718	48	0
3	H	1614	0	1709	40	0
3	I	1614	0	1709	43	0
3	J	1623	0	1715	65	0
4	K	300	0	311	15	0
4	L	543	0	550	10	0
4	M	557	0	566	10	0
4	N	557	0	566	13	0
4	O	557	0	566	18	0
4	P	550	0	559	18	0
5	Q	922	0	914	26	0
5	R	848	0	847	16	0
5	S	848	0	847	25	0
5	T	863	0	863	17	0
5	U	832	0	829	24	0
6	V	969	0	981	51	0
6	W	964	0	976	60	0
6	X	969	0	981	35	0
6	Y	969	0	981	37	0
6	Z	969	0	981	45	0
6	a	969	0	981	56	0
7	b	81	0	78	6	0
7	c	103	0	99	1	0
7	d	133	0	129	5	0
7	e	103	0	99	5	0
7	f	140	0	136	0	0
7	g	103	0	99	5	0
7	h	140	0	136	2	0
7	i	103	0	99	3	0
7	j	133	0	129	3	0
7	k	103	0	99	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	l	140	0	136	1	0
8	m	1804	0	1791	107	0
8	n	1812	0	1800	151	0
8	o	1820	0	1812	127	0
8	p	1820	0	1812	109	0
8	q	1812	0	1800	118	0
9	0	1866	0	1848	67	0
9	1	1894	0	1878	63	0
9	2	1949	0	1926	59	0
9	3	1949	0	1926	53	0
9	4	1949	0	1926	71	0
9	5	1949	0	1926	72	0
9	6	1949	0	1926	74	0
9	7	1949	0	1926	57	0
9	8	1949	0	1926	65	0
9	9	1949	0	1926	60	0
9	ZA	1949	0	1926	78	0
9	ZB	1949	0	1926	85	0
9	ZC	1949	0	1926	90	0
9	ZD	1949	0	1926	102	0
9	ZE	1949	0	1926	88	0
9	r	1903	0	1878	115	0
9	s	1911	0	1889	110	0
9	t	1919	0	1901	117	0
9	u	1903	0	1878	83	0
9	v	1911	0	1889	99	0
9	w	1823	0	1797	74	0
9	x	1866	0	1848	94	0
9	y	1866	0	1848	92	0
9	z	1866	0	1848	72	0
10	ZF	2947	0	2839	75	0
10	ZG	2947	0	2839	86	0
10	ZH	2947	0	2839	94	0
10	ZI	2947	0	2839	103	0
10	ZJ	2947	0	2839	87	0
10	ZK	2947	0	2839	68	0
10	ZL	2947	0	2839	64	0
10	ZM	2947	0	2839	70	0
10	ZN	2947	0	2839	71	0
10	ZO	2947	0	2839	72	0
10	ZP	2947	0	2839	79	0
10	ZQ	2947	0	2839	66	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	ZR	2947	0	2839	70	0
10	ZS	2947	0	2839	92	0
10	ZT	2947	0	2839	70	0
10	ZU	2947	0	2839	69	0
10	ZV	2947	0	2839	71	0
10	ZW	2947	0	2839	64	0
10	ZX	2947	0	2839	60	0
10	ZY	2947	0	2839	74	0
10	ZZ	2947	0	2839	61	0
10	Za	2947	0	2839	44	0
10	Zb	2947	0	2839	63	0
10	Zc	2947	0	2839	51	0
10	Zd	2947	0	2839	53	0
10	Ze	2947	0	2839	52	0
10	Zf	2947	0	2839	47	0
10	Zg	2947	0	2839	44	0
10	Zh	2947	0	2839	39	0
All	All	167771	0	164995	4002	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 12.

All (4002) 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)
9:ZD:233:MET:CE	10:ZI:388:THR:HA	1.40	1.48
8:q:228:GLU:CB	9:w:258:THR:HG21	1.48	1.40
9:ZD:233:MET:HE1	10:ZI:388:THR:CA	1.55	1.36
6:V:77:VAL:HG13	9:r:6:TRP:NE1	1.41	1.32
9:ZE:122:VAL:O	10:ZJ:322:ASN:HB2	1.33	1.25
9:ZB:240:TYR:CD2	10:ZG:395:ILE:CG2	2.18	1.25
8:o:138:ALA:HB1	9:4:56:SER:O	1.32	1.24
8:p:221:ILE:HD13	9:v:251:ASP:OD2	1.38	1.22
9:ZB:235:GLN:NE2	10:ZH:3:PHE:CD2	2.06	1.22
9:ZA:20:ASP:OD1	10:ZF:2:SER:HB2	1.38	1.21
8:m:202:MET:CG	9:x:45:LEU:HD11	1.69	1.21
8:q:140:ASP:OD2	9:6:57:SER:HA	1.38	1.20
8:m:140:ASP:OD2	9:2:58:GLU:HG3	1.39	1.20
6:W:77:VAL:CG1	9:s:6:TRP:CE2	2.23	1.19
8:m:138:ALA:HB1	9:2:56:SER:O	1.03	1.19
9:ZD:233:MET:HE2	10:ZI:388:THR:HA	1.21	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:V:77:VAL:HG13	9:r:6:TRP:CD1	1.77	1.19
8:n:221:ILE:HG21	9:t:251:ASP:OD2	1.43	1.17
9:ZD:233:MET:HE1	10:ZI:388:THR:CB	1.73	1.16
6:W:77:VAL:HG11	9:s:6:TRP:CE2	1.79	1.16
8:m:70:GLN:HG3	9:x:3:SER:CA	1.77	1.15
9:9:85:ASN:HD22	10:ZK:4:SER:CB	1.58	1.14
9:ZA:37:GLN:NE2	10:ZF:43:PHE:CZ	2.16	1.14
9:ZD:185:GLU:OE2	10:ZI:46:SER:HB2	1.48	1.14
6:a:77:VAL:HG11	9:w:6:TRP:CD1	1.82	1.14
8:q:231:MET:HE3	9:v:257:LEU:HA	1.23	1.14
8:q:116:GLN:HE22	9:v:42:GLU:HG3	1.06	1.13
8:q:231:MET:CE	9:v:257:LEU:HA	1.79	1.13
9:9:85:ASN:ND2	10:ZK:4:SER:HB2	1.61	1.13
6:a:83:PRO:HD2	9:v:62:LEU:CD2	1.78	1.12
6:V:77:VAL:CG1	9:r:6:TRP:NE1	2.13	1.11
6:X:90:TYR:OH	9:t:44:LEU:HB3	1.47	1.10
8:n:71:LEU:HD13	9:y:70:THR:HG21	1.12	1.10
9:ZC:234:ILE:HG21	10:ZI:393:ASP:OD2	1.50	1.10
9:ZD:185:GLU:CD	10:ZI:46:SER:HB2	1.74	1.10
9:ZE:240:TYR:CE2	10:ZJ:395:ILE:HG23	1.86	1.09
8:n:172:GLN:HE22	9:s:52:PRO:HG3	0.97	1.09
8:q:228:GLU:HB3	9:w:258:THR:HG21	1.30	1.09
8:q:228:GLU:CB	9:w:258:THR:CG2	2.30	1.09
8:m:138:ALA:CB	9:2:56:SER:O	1.99	1.09
8:m:70:GLN:CG	9:x:3:SER:HA	1.82	1.08
8:n:221:ILE:CG2	9:t:251:ASP:OD2	2.00	1.08
8:q:228:GLU:HB3	9:w:258:THR:CG2	1.82	1.07
6:V:78:TYR:CG	9:r:44:LEU:HD21	1.89	1.07
8:o:231:MET:HE1	9:t:260:LEU:HD22	1.10	1.06
8:p:16:LEU:HD23	9:u:253:MET:CE	1.86	1.06
9:ZC:240:TYR:CE2	10:ZH:399:LEU:HD11	1.90	1.06
6:W:77:VAL:HG11	9:s:6:TRP:CZ2	1.90	1.06
8:q:138:ALA:CB	9:6:56:SER:HA	1.85	1.05
6:W:78:TYR:CE2	9:s:73:ARG:HD3	1.90	1.05
8:m:140:ASP:OD2	9:2:58:GLU:CG	2.03	1.05
9:ZA:37:GLN:NE2	10:ZF:43:PHE:HZ	1.50	1.05
8:m:202:MET:HG3	9:x:45:LEU:CD1	1.86	1.04
8:n:109:PRO:HG3	9:s:197:SER:O	1.55	1.04
8:n:116:GLN:NE2	9:s:42:GLU:OE2	1.90	1.04
8:q:228:GLU:HB2	9:w:258:THR:HG21	1.09	1.04
8:p:221:ILE:CG2	9:v:251:ASP:OD1	2.05	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:V:78:TYR:CG	9:r:44:LEU:CD2	2.41	1.04
8:n:172:GLN:NE2	9:s:52:PRO:HG3	1.71	1.04
6:W:78:TYR:CZ	9:s:73:ARG:HD3	1.93	1.04
6:W:80:PRO:HB3	9:x:52:PRO:HG3	1.08	1.04
8:n:138:ALA:HB1	9:3:56:SER:O	1.56	1.03
8:q:232:LYS:HE2	9:w:260:LEU:C	1.84	1.03
8:o:21:VAL:CG2	9:t:68:ILE:HG22	1.89	1.03
8:m:73:TYR:CE1	9:x:73:ARG:HG3	1.94	1.02
6:V:79:GLU:CG	9:r:6:TRP:HZ2	1.70	1.02
9:ZB:240:TYR:CD2	10:ZG:395:ILE:HG21	1.90	1.02
9:ZD:238:ARG:NE	10:ZJ:393:ASP:OD1	1.93	1.02
9:ZD:233:MET:CE	10:ZI:388:THR:CA	2.21	1.01
8:n:221:ILE:HG21	9:t:251:ASP:CG	1.84	1.01
8:p:221:ILE:HG21	9:v:251:ASP:CG	1.83	1.01
9:ZC:240:TYR:HE2	10:ZH:399:LEU:CD1	1.74	1.01
9:ZE:240:TYR:CD2	10:ZJ:395:ILE:HG23	1.94	1.01
6:W:83:PRO:HG2	9:r:62:LEU:CD2	1.89	1.00
6:a:83:PRO:HD2	9:v:62:LEU:HD21	1.41	1.00
6:a:77:VAL:CG1	9:w:6:TRP:HD1	1.74	1.00
8:q:138:ALA:HB1	9:6:56:SER:HA	1.42	1.00
8:p:228:GLU:HG2	9:u:256:LYS:HD3	1.42	0.99
9:ZB:240:TYR:HD2	10:ZG:395:ILE:HG23	1.27	0.99
9:ZE:238:ARG:NH2	10:ZK:393:ASP:OD1	1.96	0.99
2:E:185:MET:O	2:E:189:PRO:HD2	1.64	0.98
6:W:77:VAL:CG1	9:s:6:TRP:NE1	2.27	0.98
9:ZD:233:MET:HE1	10:ZI:388:THR:OG1	1.63	0.97
9:ZE:19:MET:HE3	10:ZJ:395:ILE:HD11	1.45	0.97
9:ZD:218:TYR:OH	10:ZO:53:LYS:HD2	1.65	0.97
9:ZC:240:TYR:CD2	10:ZH:395:ILE:CG2	2.48	0.97
6:W:83:PRO:HG2	9:r:62:LEU:HD23	1.45	0.97
9:ZD:76:ALA:HB1	10:ZI:47:LYS:HE3	1.45	0.97
6:V:78:TYR:HB2	9:r:44:LEU:HD22	1.46	0.96
6:W:83:PRO:HD2	9:r:62:LEU:HD21	1.44	0.96
8:p:221:ILE:CG2	9:v:251:ASP:CG	2.38	0.96
6:W:77:VAL:HG13	9:s:6:TRP:NE1	1.80	0.96
8:n:225:ARG:NH2	9:t:255:GLN:OE1	1.99	0.96
8:o:231:MET:CE	9:t:260:LEU:HD22	1.95	0.96
8:p:221:ILE:CG2	9:v:251:ASP:OD2	2.14	0.96
6:X:78:TYR:HB2	9:t:44:LEU:HD22	1.45	0.96
6:X:78:TYR:HB2	9:t:44:LEU:CD2	1.95	0.96
9:9:45:LEU:HD22	9:y:98:LYS:HG3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZC:234:ILE:CG2	10:ZI:393:ASP:OD2	2.13	0.95
9:ZB:240:TYR:CE2	10:ZG:395:ILE:CG2	2.49	0.95
9:ZB:240:TYR:CD2	10:ZG:395:ILE:HG23	2.00	0.95
8:p:16:LEU:HD23	9:u:253:MET:HE1	1.48	0.95
8:m:202:MET:HG3	9:x:45:LEU:HD11	0.97	0.94
8:n:71:LEU:HD13	9:y:70:THR:CG2	1.97	0.94
8:o:131:GLU:HB3	9:t:179:MET:HE2	1.48	0.94
8:m:138:ALA:HB1	9:2:56:SER:C	1.93	0.94
9:ZC:240:TYR:HE2	10:ZH:399:LEU:HD11	1.25	0.94
9:ZD:27:ALA:O	10:ZI:52:VAL:HG21	1.67	0.94
9:9:85:ASN:HD22	10:ZK:4:SER:HB2	0.78	0.94
8:p:205:VAL:HG11	9:0:44:LEU:HD21	1.47	0.93
8:n:221:ILE:CG2	9:t:251:ASP:CG	2.41	0.93
9:ZD:233:MET:HE1	10:ZI:388:THR:HA	1.11	0.93
8:p:221:ILE:HG21	9:v:251:ASP:OD2	1.65	0.93
9:ZE:240:TYR:CE2	10:ZJ:395:ILE:CG2	2.51	0.93
9:ZC:185:GLU:OE1	10:ZH:46:SER:HB2	1.69	0.93
8:m:202:MET:CE	9:x:73:ARG:NH2	2.31	0.92
8:m:228:GLU:OE1	9:r:256:LYS:HG2	1.69	0.92
8:n:71:LEU:CD1	9:y:70:THR:HG21	1.99	0.92
9:ZA:207:GLY:O	10:ZG:89:ASN:ND2	2.01	0.92
9:ZE:218:TYR:OH	10:ZP:53:LYS:HD2	1.70	0.92
6:W:80:PRO:HB3	9:x:52:PRO:CG	1.98	0.92
8:q:116:GLN:NE2	9:v:42:GLU:HG3	1.85	0.92
9:ZA:240:TYR:CE2	10:ZF:395:ILE:HG23	2.04	0.92
8:q:228:GLU:HB2	9:w:258:THR:CG2	1.98	0.91
8:o:215:GLU:HG2	9:u:9:LYS:HE3	1.51	0.91
6:W:84:LEU:HD11	9:r:62:LEU:HG	1.53	0.91
8:m:140:ASP:OD2	9:2:58:GLU:CD	2.14	0.91
6:V:79:GLU:CD	9:r:6:TRP:HZ2	1.78	0.91
6:a:77:VAL:CG1	9:w:6:TRP:CD1	2.51	0.91
8:o:84:GLN:OE1	9:z:48:THR:HG22	1.71	0.91
8:p:152:PRO:HB2	9:0:195:THR:HG23	1.52	0.91
8:q:152:PRO:HG3	9:1:193:ILE:HG21	1.53	0.91
9:ZC:240:TYR:CD2	10:ZH:395:ILE:HG23	2.05	0.90
2:E:158:PRO:HG2	2:E:162:ASN:HD21	1.35	0.89
9:5:257:LEU:HG	9:u:230:LEU:HD12	1.53	0.89
9:ZD:85:ASN:OD1	10:ZO:50:LEU:HD13	1.72	0.89
9:ZE:122:VAL:O	10:ZJ:322:ASN:CB	2.20	0.89
8:o:62:PRO:HA	9:t:63:PRO:HG2	1.55	0.89
8:q:71:LEU:HG	9:1:70:THR:HG21	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:7:235:GLN:NE2	9:ZD:9:LYS:HD2	1.88	0.88
9:7:235:GLN:HE22	9:ZD:9:LYS:HD2	1.39	0.88
6:W:80:PRO:CB	9:x:52:PRO:HG3	1.99	0.88
8:q:152:PRO:HG3	9:1:193:ILE:CG2	2.04	0.88
6:W:120:ASN:HD21	8:m:247:LEU:HB3	1.37	0.88
8:o:21:VAL:HG23	9:t:68:ILE:HG22	1.56	0.88
8:n:203:SER:O	9:y:73:ARG:NH2	2.07	0.88
8:p:27:ALA:HB1	9:u:72:VAL:HG12	1.55	0.88
8:p:27:ALA:O	9:u:72:VAL:HG11	1.73	0.87
9:5:85:ASN:ND2	10:ZG:4:SER:OG	2.06	0.87
8:o:28:ASN:ND2	9:t:43:ASP:HB3	1.89	0.87
8:q:231:MET:HE2	9:v:257:LEU:HB2	1.56	0.87
6:a:83:PRO:HG2	9:v:62:LEU:HD23	1.55	0.87
8:p:16:LEU:CD2	9:u:253:MET:CE	2.52	0.87
9:ZB:240:TYR:CE2	10:ZG:395:ILE:HG22	2.08	0.87
8:n:221:ILE:CG2	9:t:251:ASP:OD1	2.23	0.87
8:n:228:GLU:OE1	9:t:258:THR:OG1	1.92	0.87
6:X:83:PRO:HG2	9:s:62:LEU:HD23	1.56	0.86
8:n:106:GLN:NE2	9:s:78:GLU:OE1	2.09	0.86
8:m:220:MET:HE2	9:r:246:ALA:HA	1.58	0.86
6:V:79:GLU:CD	9:r:6:TRP:CZ2	2.54	0.86
8:o:217:MET:SD	9:t:245:LYS:HD2	2.16	0.86
6:W:83:PRO:CG	9:r:62:LEU:CD2	2.55	0.85
8:m:202:MET:HE1	9:x:73:ARG:HH21	1.41	0.85
9:2:244:SER:OG	9:7:256:LYS:NZ	2.10	0.85
8:o:21:VAL:HG22	9:t:68:ILE:HG22	1.59	0.84
8:q:16:LEU:HD23	9:v:253:MET:CE	2.07	0.84
9:0:238:ARG:HH21	9:6:255:GLN:HB2	1.42	0.84
8:n:70:GLN:CG	9:y:6:TRP:CD1	2.60	0.84
8:p:221:ILE:HG21	9:v:251:ASP:OD1	1.73	0.84
9:7:85:ASN:ND2	10:ZI:4:SER:OG	2.11	0.84
8:q:16:LEU:HD23	9:v:253:MET:HE1	1.58	0.84
5:Q:88:ARG:NH1	5:Q:105:GLU:OE1	2.10	0.84
9:5:231:VAL:HG11	9:ZB:9:LYS:HG2	1.60	0.84
9:ZD:233:MET:CE	10:ZI:388:THR:CB	2.55	0.84
8:o:71:LEU:HB2	9:z:70:THR:CG2	2.06	0.84
8:o:217:MET:CE	9:z:258:THR:HA	2.08	0.84
8:p:217:MET:HE1	9:u:242:ILE:HD13	1.58	0.84
2:E:182:ASN:HB3	2:E:239:PHE:HZ	1.43	0.83
6:V:79:GLU:CG	9:r:6:TRP:CZ2	2.59	0.83
8:m:58:THR:HG22	9:r:50:ARG:HH22	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZC:28:ASN:OD1	10:ZH:52:VAL:HG23	1.77	0.83
9:ZD:24:ASN:ND2	10:ZI:49:GLY:HA3	1.93	0.83
8:o:217:MET:HE3	9:z:258:THR:HA	1.59	0.83
8:n:202:MET:HE3	9:y:73:ARG:NH1	1.93	0.83
8:n:224:ALA:HA	9:s:253:MET:CE	2.07	0.83
8:n:225:ARG:HH21	9:t:255:GLN:CD	1.84	0.83
8:n:221:ILE:HD13	9:t:251:ASP:OD2	1.78	0.83
8:p:138:ALA:HB1	9:5:56:SER:O	1.78	0.83
8:n:172:GLN:HE22	9:s:52:PRO:CG	1.88	0.83
8:q:231:MET:CE	9:v:257:LEU:CA	2.55	0.83
6:W:77:VAL:CG1	9:s:6:TRP:CZ2	2.56	0.82
8:o:70:GLN:HB2	9:z:6:TRP:CE3	2.14	0.82
9:y:3:SER:O	9:y:7:ILE:HG13	1.79	0.82
8:o:70:GLN:HB2	9:z:6:TRP:HE3	1.42	0.82
8:m:220:MET:CE	9:r:246:ALA:HB2	2.10	0.82
9:9:42:GLU:HG2	9:9:75:VAL:HG23	1.62	0.82
9:ZA:77:THR:H	10:ZF:47:LYS:HD2	1.45	0.82
9:t:2:ILE:HG13	9:t:254:LEU:HD11	1.62	0.82
6:Z:6:ILE:HG21	6:Z:122:VAL:HG11	1.59	0.82
8:o:28:ASN:HD21	9:t:43:ASP:HB3	1.44	0.82
6:V:78:TYR:CD1	9:r:44:LEU:CD2	2.62	0.81
9:ZB:240:TYR:OH	10:ZG:399:LEU:HD11	1.79	0.81
1:C:28:ALA:HB1	1:C:54:LYS:HE3	1.60	0.81
6:W:120:ASN:ND2	8:m:247:LEU:HB3	1.94	0.81
8:n:138:ALA:HB2	9:3:55:GLN:O	1.80	0.81
5:U:33:ALA:O	5:U:98:ASN:ND2	2.13	0.81
6:W:79:GLU:OE2	9:s:6:TRP:CH2	2.32	0.81
8:o:228:GLU:HG2	9:t:256:LYS:HG3	1.60	0.81
8:p:26:LEU:CD1	9:u:242:ILE:HG21	2.09	0.81
9:ZB:122:VAL:O	10:ZG:322:ASN:CG	2.23	0.81
8:m:202:MET:SD	9:x:45:LEU:CD1	2.69	0.81
6:W:83:PRO:HD2	9:r:62:LEU:CD2	2.10	0.81
9:u:185:GLU:HG3	9:z:67:GLN:HE22	1.46	0.81
8:m:202:MET:CG	9:x:45:LEU:CD1	2.53	0.80
9:0:51:GLN:HB3	9:0:52:PRO:HD2	1.62	0.80
10:ZO:236:GLY:HA2	10:ZO:268:GLN:H	1.46	0.80
9:0:153:ARG:HD2	9:0:213:LEU:HD13	1.63	0.80
9:6:231:VAL:HG11	9:ZC:9:LYS:HG2	1.63	0.80
8:q:231:MET:HE1	9:v:257:LEU:CD1	2.11	0.80
9:s:28:ASN:HD21	9:x:43:ASP:HB3	1.45	0.80
8:p:26:LEU:HD12	9:u:242:ILE:CG2	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:a:100:GLY:HA2	9:r:9:LYS:HE3	1.65	0.79
8:m:225:ARG:NH2	9:s:251:ASP:OD1	2.11	0.79
6:Y:6:ILE:HG21	6:Y:122:VAL:HG21	1.63	0.79
8:o:138:ALA:HB1	9:4:56:SER:C	2.06	0.79
6:a:83:PRO:HD2	9:v:62:LEU:HD23	1.65	0.79
9:ZD:76:ALA:CB	10:ZI:47:LYS:HE3	2.12	0.79
3:J:83:ALA:HB3	3:J:84:PRO:HD3	1.62	0.79
8:n:202:MET:HE1	9:y:73:ARG:CD	2.12	0.79
8:o:71:LEU:HD23	9:z:70:THR:HG21	1.62	0.79
1:B:39:GLN:NE2	1:B:46:GLU:O	2.13	0.79
6:a:83:PRO:CD	9:v:62:LEU:CD2	2.61	0.78
8:q:152:PRO:CG	9:1:193:ILE:HG21	2.13	0.78
9:2:179:MET:HE2	9:x:126:GLY:HA2	1.65	0.78
9:9:241:GLU:HG2	9:ZE:256:LYS:HG3	1.64	0.78
5:S:35:THR:HG22	6:X:49:PHE:HB3	1.65	0.78
6:X:78:TYR:CB	9:t:44:LEU:CD2	2.61	0.78
10:ZQ:160:SER:HA	10:ZQ:268:GLN:HE21	1.48	0.78
3:F:141:GLN:HE22	3:F:243:PHE:HB3	1.47	0.78
8:n:224:ALA:HA	9:s:253:MET:HE2	1.66	0.78
6:a:80:PRO:HB3	9:1:52:PRO:HG3	1.65	0.78
8:m:26:LEU:HD13	9:r:242:ILE:CG2	2.13	0.78
8:q:138:ALA:HB2	9:6:56:SER:HA	1.64	0.78
9:5:52:PRO:HB3	9:5:65:GLY:H	1.48	0.78
6:a:77:VAL:HG13	9:w:6:TRP:HD1	1.49	0.78
6:W:83:PRO:CD	9:r:62:LEU:HD21	2.13	0.78
6:V:78:TYR:CD1	9:r:44:LEU:HD23	2.18	0.78
8:n:223:ASN:C	9:s:253:MET:HE2	2.09	0.78
9:ZA:145:ASN:OD1	10:ZF:352:ASN:ND2	2.15	0.78
9:ZE:240:TYR:CE2	10:ZJ:399:LEU:HD11	2.18	0.78
9:6:226:VAL:HG11	9:ZB:242:ILE:HD13	1.65	0.78
10:ZQ:2:SER:OG	10:ZQ:3:PHE:N	2.17	0.78
8:q:152:PRO:CG	9:1:193:ILE:CG2	2.61	0.77
9:t:157:VAL:HB	9:t:171:GLY:HA3	1.66	0.77
9:5:226:VAL:HG11	9:ZA:242:ILE:HD13	1.65	0.77
10:ZI:126:PRO:HG2	10:ZI:310:GLN:HG2	1.64	0.77
9:ZB:233:MET:HE1	10:ZG:388:THR:OG1	1.84	0.77
9:ZE:19:MET:HE3	10:ZJ:395:ILE:CD1	2.14	0.77
6:a:83:PRO:CG	9:v:62:LEU:HD23	2.15	0.77
3:J:62:THR:HG23	3:J:101:MET:HE2	1.66	0.77
8:n:70:GLN:OE1	9:y:1:MET:N	2.17	0.77
9:ZD:185:GLU:OE2	10:ZI:46:SER:CB	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZM:319:ASN:ND2	10:ZM:352:ASN:OD1	2.18	0.76
6:W:78:TYR:CE2	9:s:73:ARG:CD	2.69	0.76
8:n:138:ALA:HB1	9:3:56:SER:C	2.11	0.76
8:q:138:ALA:HB1	9:6:56:SER:CA	2.15	0.76
9:ZA:37:GLN:NE2	10:ZF:43:PHE:CE1	2.52	0.76
8:m:70:GLN:HG3	9:x:3:SER:HA	0.86	0.76
10:ZU:380:ARG:NH1	10:Za:393:ASP:OD1	2.18	0.76
8:n:70:GLN:CB	9:y:6:TRP:CD1	2.68	0.76
8:o:27:ALA:O	9:t:72:VAL:HG11	1.84	0.76
10:ZF:118:GLY:HA2	10:ZF:316:VAL:HG12	1.68	0.76
8:n:109:PRO:HG3	9:s:197:SER:C	2.09	0.76
8:n:109:PRO:CG	9:s:197:SER:O	2.34	0.76
8:m:202:MET:SD	9:x:45:LEU:HD12	2.26	0.76
8:o:215:GLU:CG	9:u:9:LYS:HE3	2.16	0.76
1:D:55:ILE:HD11	3:I:205:MET:HE1	1.67	0.75
10:Zh:196:MET:HE3	10:Zh:259:PHE:HZ	1.51	0.75
8:n:70:GLN:HG3	9:y:6:TRP:CD1	2.21	0.75
8:p:221:ILE:CD1	9:v:251:ASP:OD2	2.29	0.75
9:ZC:190:ASN:OD1	10:ZH:41:ASP:OD2	2.05	0.75
8:n:70:GLN:HB2	9:y:6:TRP:CD1	2.20	0.75
9:ZC:10:THR:CG2	9:ZC:71:GLY:HA3	2.17	0.75
10:ZI:2:SER:HB3	10:ZI:392:GLN:HE21	1.51	0.75
8:q:231:MET:HE3	9:v:260:LEU:HD23	1.69	0.75
9:s:147:LEU:HD11	9:s:162:GLN:HG2	1.68	0.75
8:p:229:MET:HG3	9:v:258:THR:HG22	1.67	0.75
9:ZC:19:MET:HE1	10:ZH:391:THR:HG21	1.68	0.75
9:ZC:240:TYR:HD2	10:ZH:395:ILE:HG23	1.52	0.75
6:W:83:PRO:CG	9:r:62:LEU:HD23	2.17	0.74
8:o:231:MET:HE1	9:t:260:LEU:CD2	2.05	0.74
9:6:57:SER:HB3	9:w:108:PRO:HB3	1.68	0.74
9:ZD:185:GLU:OE1	10:ZI:46:SER:HB2	1.85	0.74
7:e:312:VAL:O	7:e:317:SER:OG	2.05	0.74
9:ZC:122:VAL:O	10:ZH:322:ASN:HB2	1.88	0.74
10:Zh:112:GLN:HE21	10:Zh:331:ASP:HB2	1.51	0.74
3:G:135:ARG:NH2	3:G:165:VAL:O	2.21	0.74
6:X:6:ILE:HG21	6:X:122:VAL:HG21	1.69	0.74
8:p:202:MET:SD	9:0:44:LEU:HD23	2.27	0.74
10:ZN:401:ASN:O	10:ZN:402:LEU:C	2.31	0.74
2:E:23:VAL:HA	2:E:150:LEU:HD21	1.69	0.74
8:m:248:LEU:O	8:m:249:SER:C	2.28	0.74
8:p:71:LEU:HB2	9:0:70:THR:HG21	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Za:18:ASP:OD2	10:Zf:2:SER:N	2.21	0.74
4:K:75:MET:HE1	4:P:88:VAL:HG22	1.69	0.74
6:V:78:TYR:HB2	9:r:44:LEU:CD2	2.16	0.74
8:p:138:ALA:HB2	9:5:55:GLN:O	1.86	0.74
9:9:37:GLN:HE21	9:9:79:ARG:HH12	1.34	0.74
5:Q:93:PRO:O	8:m:54:ARG:NH1	2.21	0.74
9:ZE:248:SER:HB2	10:ZJ:402:LEU:CD2	2.18	0.74
10:ZP:270:ASN:HD22	10:ZV:192:ASN:HA	1.51	0.73
10:ZW:130:GLN:OE1	10:ZW:130:GLN:N	2.21	0.73
10:ZY:71:ARG:NH1	10:ZY:74:ASP:OD1	2.20	0.73
8:m:72:ASP:HB3	9:x:9:LYS:NZ	2.02	0.73
9:ZD:233:MET:HE3	10:ZI:388:THR:HG23	1.70	0.73
10:ZO:235:ASN:HD22	10:ZU:189:SER:HB2	1.53	0.73
9:v:100:GLN:NE2	9:v:181:ASP:OD2	2.21	0.73
4:N:94:ALA:O	4:N:98:GLU:HG3	1.89	0.73
6:V:78:TYR:CZ	9:r:73:ARG:HD2	2.24	0.73
6:Z:6:ILE:HD13	6:Z:122:VAL:HG21	1.70	0.73
8:n:224:ALA:CA	9:s:253:MET:CE	2.66	0.73
8:o:84:GLN:OE1	9:z:48:THR:CG2	2.35	0.73
9:7:226:VAL:HG11	9:ZC:242:ILE:HD13	1.70	0.73
9:ZC:98:LYS:HE3	10:ZN:44:ALA:HB2	1.70	0.73
4:K:89:ARG:NH1	4:P:102:MET:SD	2.62	0.73
8:o:138:ALA:HB2	9:4:55:GLN:O	1.87	0.73
8:q:228:GLU:HB3	9:w:258:THR:HG22	1.68	0.73
1:C:29:LEU:HB2	1:D:52:ILE:HG13	1.71	0.73
6:X:79:GLU:HG2	6:X:82:ASN:HB2	1.69	0.73
10:ZS:77:ILE:HG22	10:ZS:356:LEU:HD22	1.71	0.73
6:V:77:VAL:CG1	9:r:6:TRP:HE1	2.02	0.73
6:a:78:TYR:CE2	9:w:73:ARG:HD3	2.23	0.73
9:5:122:VAL:O	9:ZA:180:ASN:ND2	2.20	0.73
9:t:98:LYS:HD2	9:t:215:TYR:CE2	2.23	0.73
5:S:42:ASP:OD2	5:S:43:ILE:N	2.22	0.73
6:X:3:LEU:HB2	6:X:126:MET:HE3	1.70	0.73
9:0:180:ASN:HD22	9:v:122:VAL:HG23	1.54	0.73
9:ZB:98:LYS:HE3	10:ZM:44:ALA:HB2	1.69	0.73
9:ZC:218:TYR:OH	10:ZN:53:LYS:HD2	1.87	0.73
6:V:78:TYR:CB	9:r:44:LEU:CD2	2.67	0.72
9:ZC:122:VAL:O	10:ZH:322:ASN:ND2	2.22	0.72
10:ZS:77:ILE:HD11	10:ZS:96:ARG:HD3	1.70	0.72
8:o:16:LEU:HD23	9:t:253:MET:HE1	1.71	0.72
9:ZC:218:TYR:OH	10:ZN:53:LYS:CD	2.36	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZY:285:LYS:O	10:ZY:306:ASN:ND2	2.20	0.72
9:ZD:27:ALA:O	10:ZI:52:VAL:CG2	2.37	0.72
9:x:98:LYS:HD2	9:x:213:LEU:HD12	1.69	0.72
10:Zd:118:GLY:HA2	10:Zd:316:VAL:HG12	1.71	0.72
8:p:26:LEU:CD1	9:u:242:ILE:CG2	2.67	0.72
9:ZC:186:SER:O	10:ZH:45:GLY:O	2.07	0.72
6:W:6:ILE:HG21	6:W:122:VAL:HG21	1.72	0.72
6:W:79:GLU:OE2	9:s:6:TRP:CZ2	2.43	0.72
8:p:26:LEU:HD12	9:u:242:ILE:HG21	1.70	0.72
9:ZC:28:ASN:OD1	10:ZH:52:VAL:CG2	2.36	0.72
5:R:46:ALA:O	5:R:50:LYS:HG3	1.90	0.72
6:a:78:TYR:CZ	9:w:73:ARG:HD3	2.25	0.72
8:m:26:LEU:HD13	9:r:242:ILE:HG22	1.71	0.72
8:m:220:MET:HE1	9:r:246:ALA:HB2	1.71	0.72
6:a:83:PRO:CD	9:v:62:LEU:HD23	2.20	0.71
9:6:218:TYR:OH	10:ZH:53:LYS:HG3	1.90	0.71
9:6:235:GLN:HG2	9:ZC:5:LEU:HD21	1.71	0.71
9:8:42:GLU:HB2	9:8:75:VAL:HG23	1.72	0.71
4:P:76:GLN:HE21	6:V:123:LYS:HB2	1.54	0.71
6:a:100:GLY:CA	9:r:9:LYS:HE3	2.20	0.71
8:o:104:ASN:ND2	9:t:38:ARG:HH21	1.88	0.71
8:m:202:MET:HE1	9:x:73:ARG:NH2	2.01	0.71
9:9:226:VAL:HG11	9:ZE:242:ILE:HD13	1.72	0.71
10:ZP:324:GLU:OE1	10:ZP:324:GLU:N	2.23	0.71
9:ZE:248:SER:HB2	10:ZJ:402:LEU:HD22	1.73	0.71
10:Zc:2:SER:OG	10:Zc:3:PHE:N	2.21	0.71
3:J:139:LEU:O	3:J:142:THR:HG22	1.89	0.71
9:8:208:LEU:O	9:8:210:GLY:N	2.23	0.71
9:ZC:240:TYR:CE2	10:ZH:399:LEU:CD1	2.61	0.71
1:D:48:THR:OG1	3:I:206:ALA:O	2.08	0.71
6:V:78:TYR:CD2	9:r:44:LEU:HD21	2.26	0.71
6:W:83:PRO:CD	9:r:62:LEU:CD2	2.68	0.71
1:B:39:GLN:HE21	1:B:49:LEU:HD12	1.56	0.71
2:E:187:ALA:O	2:E:188:LEU:C	2.34	0.71
6:a:90:TYR:CZ	9:w:45:LEU:HD23	2.25	0.71
9:7:79:ARG:NH2	9:7:184:LEU:O	2.23	0.71
9:ZC:19:MET:HE1	10:ZH:391:THR:CG2	2.21	0.71
10:ZH:165:PRO:HG2	10:ZH:201:VAL:HG13	1.71	0.71
10:ZZ:157:ASN:HB3	10:ZZ:271:THR:HG21	1.72	0.70
1:D:84:LEU:HD21	3:J:185:ILE:HG23	1.72	0.70
8:n:26:LEU:HD22	9:s:242:ILE:HG21	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZB:122:VAL:O	10:ZG:322:ASN:ND2	2.23	0.70
10:Zg:110:ASN:HB2	10:Zg:114:MET:HB2	1.73	0.70
10:ZG:45:GLY:O	10:ZG:46:SER:HB3	1.90	0.70
8:q:58:THR:OG1	9:v:50:ARG:NH2	2.24	0.70
9:9:238:ARG:NH2	10:ZF:397:ASN:HB2	2.05	0.70
9:v:128:LEU:HD12	9:v:140:ILE:HD13	1.72	0.70
8:n:224:ALA:N	9:s:253:MET:CE	2.54	0.70
10:ZY:42:MET:HG2	10:ZY:53:LYS:HG2	1.73	0.70
6:W:77:VAL:HG13	9:s:6:TRP:CD1	2.25	0.70
6:W:78:TYR:CZ	9:s:73:ARG:CD	2.73	0.70
10:ZR:160:SER:HA	10:ZR:268:GLN:HE21	1.55	0.70
10:Zc:159:ASN:ND2	10:Zc:161:THR:OG1	2.24	0.70
1:D:13:ALA:HB1	3:J:195:ILE:HD11	1.73	0.70
9:9:70:THR:HG22	9:9:71:GLY:H	1.57	0.70
9:u:77:THR:HG23	9:z:66:LEU:HB2	1.74	0.70
9:0:51:GLN:O	9:0:52:PRO:C	2.35	0.70
9:ZE:233:MET:HE3	10:ZJ:391:THR:OG1	1.91	0.70
10:ZG:45:GLY:O	10:ZG:46:SER:CB	2.38	0.70
6:a:77:VAL:HG11	9:w:6:TRP:NE1	2.06	0.70
9:ZA:42:GLU:HG2	9:ZA:75:VAL:HG23	1.73	0.70
9:ZE:42:GLU:OE2	9:ZE:73:ARG:NH1	2.24	0.70
2:E:182:ASN:HB3	2:E:239:PHE:CZ	2.26	0.70
9:ZE:238:ARG:NH2	10:ZK:397:ASN:HB2	2.07	0.70
10:ZS:390:LYS:HE2	10:ZS:394:GLN:HE22	1.57	0.70
8:q:180:ARG:HH11	8:q:180:ARG:HG3	1.56	0.69
8:o:71:LEU:HD23	9:z:70:THR:CG2	2.22	0.69
8:p:221:ILE:HG23	9:v:251:ASP:OD2	1.90	0.69
9:4:86:LEU:HD12	10:ZF:42:MET:HE2	1.75	0.69
5:T:91:ASP:OD2	5:T:104:ARG:NH1	2.25	0.69
8:n:116:GLN:HE21	9:s:42:GLU:CD	1.98	0.69
9:ZB:235:GLN:NE2	10:ZH:3:PHE:HD2	1.82	0.69
8:n:153:ASN:HA	9:y:196:GLN:HG2	1.75	0.69
9:2:208:LEU:O	9:x:162:GLN:NE2	2.26	0.69
9:ZC:185:GLU:OE1	10:ZH:46:SER:CB	2.40	0.69
10:ZO:111:MET:HA	10:ZO:111:MET:HE3	1.75	0.69
2:E:188:LEU:HB3	2:E:189:PRO:CD	2.23	0.69
3:J:143:ARG:HB3	3:J:146:ASP:OD2	1.92	0.69
4:M:77:LYS:NZ	5:S:13:GLN:OE1	2.26	0.69
9:8:227:ALA:HB1	10:ZJ:399:LEU:CD2	2.22	0.69
10:ZM:156:ILE:HD12	10:ZM:276:ILE:HG12	1.75	0.69
1:C:13:ALA:HB1	3:I:195:ILE:HD11	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:153:LEU:HD22	3:I:99:PHE:HB3	1.74	0.69
5:R:36:PRO:HG2	7:e:311:GLY:H	1.56	0.69
6:W:77:VAL:HG13	9:s:6:TRP:CE2	2.17	0.69
8:m:173:ARG:NH1	9:r:46:TYR:OH	2.26	0.69
8:o:16:LEU:HD23	9:t:253:MET:CE	2.22	0.69
10:Zb:387:GLN:NE2	10:Zh:400:VAL:O	2.26	0.69
8:p:170:GLU:OE2	8:p:189:ARG:NH1	2.25	0.69
8:q:231:MET:CE	9:v:257:LEU:HB2	2.23	0.69
6:W:84:LEU:HD11	9:r:62:LEU:CG	2.23	0.69
6:Y:117:GLU:OE1	8:p:249:SER:OG	2.11	0.69
8:q:173:ARG:NH1	9:v:46:TYR:HE1	1.91	0.69
9:ZA:145:ASN:HA	10:ZF:352:ASN:HD22	1.58	0.69
10:ZJ:180:LYS:HD3	10:ZJ:274:ASN:HD22	1.57	0.69
10:ZK:107:ASN:ND2	10:ZK:138:THR:OG1	2.26	0.69
10:ZQ:380:ARG:NH2	10:ZW:393:ASP:OD1	2.26	0.69
10:Zc:238:LEU:HD21	10:Zc:242:GLY:HA3	1.73	0.69
8:o:71:LEU:HB2	9:z:70:THR:HG23	1.75	0.68
9:9:42:GLU:OE2	9:9:73:ARG:NE	2.27	0.68
9:ZE:240:TYR:HE2	10:ZJ:399:LEU:CD1	2.06	0.68
10:ZF:5:GLN:NE2	10:ZF:49:GLY:O	2.26	0.68
10:ZR:165:PRO:HG2	10:ZR:201:VAL:HG13	1.73	0.68
10:ZY:27:SER:OG	10:Zd:381:ASN:ND2	2.26	0.68
10:Zb:238:LEU:HD21	10:Zb:242:GLY:HA3	1.75	0.68
10:Ze:60:ASP:O	10:Ze:365:ASN:ND2	2.26	0.68
6:V:77:VAL:HG13	9:r:6:TRP:HE1	1.54	0.68
6:Z:32:ASP:OD1	9:v:2:ILE:CD1	2.41	0.68
8:n:221:ILE:HG23	9:t:251:ASP:OD2	1.89	0.68
9:ZD:28:ASN:OD1	10:ZI:52:VAL:HG22	1.93	0.68
8:p:1:MET:HG2	8:p:241:GLU:CD	2.18	0.68
9:ZD:233:MET:CE	10:ZI:388:THR:OG1	2.41	0.68
3:F:109:TYR:HA	3:F:113:TYR:HB2	1.74	0.68
6:W:19:LYS:HE2	8:m:51:LEU:HD12	1.75	0.68
8:n:224:ALA:CA	9:s:253:MET:HE2	2.24	0.68
10:ZH:208:TRP:NE1	10:ZH:268:GLN:OE1	2.25	0.68
6:V:77:VAL:CG1	9:r:6:TRP:CE2	2.76	0.68
6:V:78:TYR:CB	9:r:44:LEU:HD22	2.23	0.68
6:Y:83:PRO:HG2	9:t:62:LEU:HD23	1.75	0.68
6:a:123:LYS:HD2	8:q:250:MET:O	1.93	0.68
8:p:26:LEU:HD11	9:u:242:ILE:HG21	1.76	0.68
9:ZB:205:THR:HB	9:ZB:208:LEU:HG	1.76	0.68
10:Zd:2:SER:OG	10:Zd:3:PHE:N	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:x:195:THR:HG22	9:x:197:SER:H	1.59	0.68
8:n:102:ASN:ND2	8:n:116:GLN:OE1	2.26	0.68
9:0:42:GLU:HG3	9:v:190:ASN:HB2	1.76	0.68
9:ZC:240:TYR:CE2	10:ZH:395:ILE:CG2	2.76	0.68
8:q:173:ARG:NH1	9:v:46:TYR:CE1	2.61	0.68
10:ZM:204:LYS:HD2	10:ZM:205:ASP:H	1.59	0.68
10:ZU:159:ASN:ND2	10:ZU:161:THR:OG1	2.26	0.68
10:ZV:102:LEU:HD21	10:ZV:106:ARG:HD3	1.74	0.68
10:ZY:18:ASP:HB3	10:Zd:5:GLN:HE22	1.56	0.68
6:Z:75:LYS:NZ	9:v:3:SER:HB2	2.09	0.68
8:p:71:LEU:HD13	9:0:70:THR:HG21	1.75	0.68
10:ZF:65:THR:HB	10:ZF:363:ALA:HB3	1.75	0.68
10:ZI:111:MET:HE1	10:ZN:58:THR:HB	1.76	0.68
8:m:58:THR:HG22	9:r:50:ARG:NH2	2.09	0.68
9:4:121:GLN:NE2	9:9:78:GLU:OE1	2.27	0.68
10:ZT:210:VAL:O	10:ZT:227:SER:N	2.28	0.68
1:B:58:VAL:HG21	3:H:207:LEU:HD11	1.75	0.67
9:1:22:ILE:HG21	9:1:233:MET:HG3	1.77	0.67
9:ZA:22:ILE:HG21	9:ZA:233:MET:HG3	1.76	0.67
10:ZT:208:TRP:NE1	10:ZT:268:GLN:OE1	2.26	0.67
9:2:45:LEU:HD22	9:r:98:LYS:HD2	1.75	0.67
9:3:241:GLU:HG2	9:8:256:LYS:HG2	1.75	0.67
9:5:238:ARG:NE	9:ZB:251:ASP:OD1	2.27	0.67
9:ZA:137:GLN:HA	9:ZA:139:ALA:H	1.58	0.67
3:F:59:LEU:HD21	4:K:102:MET:HE1	1.75	0.67
6:X:73:PRO:HB2	9:t:47:GLN:HE21	1.59	0.67
8:q:217:MET:HE3	9:1:257:LEU:O	1.94	0.67
8:q:231:MET:HE2	9:v:257:LEU:CB	2.23	0.67
9:ZC:238:ARG:NH2	10:ZI:397:ASN:HB2	2.10	0.67
10:ZL:373:VAL:O	10:ZL:376:ILE:N	2.27	0.67
10:ZN:349:GLY:O	10:ZT:89:ASN:ND2	2.28	0.67
10:Zc:210:VAL:O	10:Zc:227:SER:N	2.26	0.67
8:o:62:PRO:CA	9:t:63:PRO:HG2	2.24	0.67
10:ZN:17:LEU:HD13	10:ZS:395:ILE:HD11	1.77	0.67
10:ZP:349:GLY:O	10:ZV:89:ASN:ND2	2.27	0.67
6:Y:99:VAL:HG22	9:u:257:LEU:HD13	1.76	0.67
8:m:235:THR:OG1	9:r:260:LEU:HD12	1.95	0.67
8:o:131:GLU:CB	9:t:179:MET:HE2	2.24	0.67
9:ZA:28:ASN:OD1	10:ZF:52:VAL:HB	1.93	0.67
10:ZX:285:LYS:O	10:ZX:306:ASN:ND2	2.23	0.67
1:B:14:MET:HG3	1:C:59:PHE:HE1	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:W:84:LEU:CD1	9:r:62:LEU:HG	2.25	0.67
8:m:35:ARG:O	8:m:173:ARG:NH2	2.28	0.67
9:0:99:GLY:O	9:0:116:ARG:NH2	2.28	0.67
9:ZA:207:GLY:C	10:ZG:89:ASN:HD21	2.01	0.67
10:ZH:285:LYS:HG2	10:ZH:286:PRO:HD2	1.76	0.67
10:ZQ:178:TYR:HA	10:ZQ:201:VAL:HG12	1.74	0.67
10:Za:309:GLU:OE1	10:Za:309:GLU:N	2.27	0.67
2:E:166:SER:O	2:E:168:ALA:N	2.26	0.67
8:n:35:ARG:HA	8:n:210:ASN:HD21	1.60	0.67
8:n:70:GLN:CB	9:y:6:TRP:HD1	2.07	0.67
10:ZZ:380:ARG:NH1	10:Zf:393:ASP:OD1	2.27	0.67
9:r:229:GLU:O	9:r:233:MET:HG3	1.95	0.67
5:U:36:PRO:HB3	5:U:96:ASP:HB2	1.77	0.67
8:n:202:MET:HE1	9:y:73:ARG:HD2	1.76	0.67
8:q:231:MET:CE	9:v:257:LEU:CB	2.73	0.66
3:H:68:ILE:HD11	4:M:104:VAL:HG22	1.76	0.66
8:q:60:SER:HA	9:v:65:GLY:O	1.94	0.66
6:X:93:MET:HE3	9:t:1:MET:HG3	1.77	0.66
9:0:112:SER:HB3	9:0:137:GLN:HE22	1.61	0.66
9:5:259:GLN:O	9:5:260:LEU:C	2.37	0.66
9:7:238:ARG:HB3	9:ZD:1:MET:HE1	1.77	0.66
9:ZD:85:ASN:OD1	10:ZO:50:LEU:CD1	2.42	0.66
10:Zd:154:MET:HE2	10:Zd:263:PHE:HE1	1.60	0.66
9:y:22:ILE:HD11	9:y:232:ASN:HB3	1.76	0.66
3:F:43:GLN:OE1	5:Q:4:ARG:NH1	2.28	0.66
9:5:85:ASN:HA	10:ZG:50:LEU:HD22	1.76	0.66
10:ZF:65:THR:HG23	10:ZQ:50:LEU:HD21	1.78	0.66
10:ZL:294:ILE:O	10:ZL:358:ASN:ND2	2.27	0.66
10:ZO:317:LEU:HD11	10:ZO:356:LEU:HD21	1.76	0.66
10:ZT:349:GLY:O	10:ZZ:89:ASN:ND2	2.28	0.66
9:9:175:LEU:HD11	9:9:214:LEU:HD21	1.77	0.66
10:ZR:375:MET:HE1	10:ZW:388:THR:HG23	1.76	0.66
10:ZW:42:MET:HE3	10:ZW:53:LYS:HB3	1.76	0.66
10:ZZ:210:VAL:O	10:ZZ:227:SER:N	2.28	0.66
6:Z:110:ARG:NH1	8:q:238:ASP:OD1	2.28	0.66
9:4:86:LEU:HD12	10:ZF:42:MET:CE	2.25	0.66
9:ZD:205:THR:HB	9:ZD:208:LEU:HD23	1.77	0.66
10:ZH:379:GLN:HE21	10:ZM:391:THR:HG23	1.59	0.66
2:E:193:LEU:HD22	2:E:228:LEU:HD11	1.77	0.66
3:I:194:LEU:HD11	3:J:220:PRO:HG2	1.77	0.66
6:Z:75:LYS:HZ2	9:v:3:SER:HB2	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:312:VAL:O	7:k:317:SER:OG	2.11	0.66
9:ZC:115:THR:HB	9:ZC:191:LEU:HD23	1.77	0.66
6:V:6:ILE:HG21	6:V:122:VAL:HG21	1.76	0.66
6:a:100:GLY:HA2	9:r:9:LYS:CE	2.25	0.66
8:n:223:ASN:C	9:s:253:MET:CE	2.69	0.66
8:p:72:ASP:OD2	9:0:9:LYS:CE	2.43	0.66
10:Zb:18:ASP:CG	10:Zg:5:GLN:HE22	2.02	0.66
9:t:98:LYS:HD2	9:t:215:TYR:HE2	1.58	0.66
6:Z:37:PRO:HB2	7:j:330:THR:HG23	1.78	0.66
8:n:151:PRO:HB2	8:n:154:THR:HG23	1.77	0.66
9:1:51:GLN:NE2	9:w:75:VAL:O	2.29	0.66
9:4:70:THR:HG22	9:4:71:GLY:H	1.60	0.66
9:ZE:167:PRO:HG2	10:ZP:338:GLN:NE2	2.10	0.66
10:ZG:118:GLY:HA2	10:ZG:316:VAL:HG12	1.77	0.66
10:ZI:65:THR:HG21	10:ZT:4:SER:HB3	1.77	0.66
10:ZI:156:ILE:HG13	10:ZI:276:ILE:HA	1.76	0.66
9:t:229:GLU:O	9:t:233:MET:HG3	1.96	0.66
5:U:123:LEU:HD23	6:Z:132:LEU:HD11	1.77	0.66
10:ZR:337:THR:HG22	10:ZR:339:ALA:H	1.61	0.66
10:ZW:57:ILE:HD12	10:Zb:47:LYS:HB2	1.78	0.66
10:Za:331:ASP:HA	10:Zf:40:ALA:HB1	1.78	0.66
9:1:43:ASP:HA	9:1:72:VAL:HA	1.78	0.65
9:w:130:THR:HG23	9:w:132:GLY:H	1.60	0.65
8:m:229:MET:HG2	9:s:258:THR:HG22	1.77	0.65
9:ZA:208:LEU:O	9:ZA:210:GLY:N	2.30	0.65
10:ZK:112:GLN:HE21	10:ZK:331:ASP:HB3	1.61	0.65
10:ZL:165:PRO:HG3	10:ZL:179:ASN:HD21	1.60	0.65
10:ZM:33:LYS:HD2	10:ZM:61:PHE:HA	1.77	0.65
9:u:124:GLN:NE2	9:u:125:ASN:OD1	2.30	0.65
8:n:224:ALA:CA	9:s:253:MET:HE3	2.25	0.65
8:o:221:ILE:HG23	9:u:251:ASP:OD2	1.96	0.65
9:ZE:26:LEU:HD22	10:ZJ:384:SER:OG	1.96	0.65
9:ZE:54:ALA:HB1	9:y:150:THR:HG21	1.77	0.65
9:2:122:VAL:O	9:7:180:ASN:ND2	2.29	0.65
9:8:46:TYR:HA	9:8:69:GLY:HA2	1.79	0.65
10:ZQ:288:ASP:H	10:ZQ:305:SER:HB3	1.61	0.65
10:ZS:196:MET:HA	10:ZS:196:MET:HE3	1.78	0.65
10:ZV:77:ILE:HD12	10:ZV:96:ARG:HD3	1.78	0.65
3:H:66:ARG:NH2	3:H:242:SER:OG	2.30	0.65
8:p:74:THR:HG21	9:u:38:ARG:NH1	2.11	0.65
10:ZL:269:GLN:HG3	10:ZL:270:ASN:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:V:79:GLU:HG2	9:r:6:TRP:HZ2	1.59	0.65
8:o:165:LYS:HG3	8:o:199:ILE:HD11	1.78	0.65
9:ZD:185:GLU:OE1	10:ZI:46:SER:CB	2.44	0.65
9:ZE:85:ASN:CG	10:ZP:50:LEU:HD21	2.21	0.65
10:ZL:144:MET:HE3	10:ZL:306:ASN:HD21	1.61	0.65
10:ZY:2:SER:OG	10:ZY:3:PHE:N	2.24	0.65
8:p:217:MET:SD	9:u:245:LYS:HG2	2.37	0.65
9:6:241:GLU:HG2	9:ZB:256:LYS:HG3	1.78	0.65
9:7:254:LEU:O	9:7:258:THR:HG23	1.97	0.65
9:ZB:28:ASN:HD22	9:ZB:31:THR:HG21	1.62	0.65
10:ZV:267:MET:HE3	10:ZV:269:GLN:HE21	1.61	0.65
3:H:135:ARG:NH1	3:H:165:VAL:O	2.30	0.65
6:W:79:GLU:OE2	9:s:6:TRP:HH2	1.76	0.65
8:p:217:MET:CE	9:u:242:ILE:HD13	2.27	0.65
9:1:79:ARG:HH12	9:1:184:LEU:HB2	1.62	0.65
9:4:79:ARG:NH2	9:4:184:LEU:O	2.30	0.65
10:ZI:379:GLN:HG3	10:ZN:391:THR:HG23	1.77	0.65
3:J:138:MET:HE1	3:J:171:LEU:HD23	1.78	0.65
8:m:220:MET:CE	9:r:246:ALA:CB	2.75	0.65
9:2:140:ILE:HD13	9:2:157:VAL:HG21	1.78	0.65
10:ZJ:2:SER:HB3	10:ZJ:392:GLN:HG3	1.78	0.65
10:ZX:2:SER:OG	10:ZX:3:PHE:N	2.27	0.65
9:u:241:GLU:HG2	9:z:256:LYS:HG2	1.78	0.65
9:w:153:ARG:HG2	9:w:213:LEU:HD12	1.78	0.65
3:F:58:LEU:O	3:F:62:THR:OG1	2.14	0.64
6:Z:82:ASN:OD1	9:u:62:LEU:HD21	1.96	0.64
8:m:235:THR:OG1	9:r:260:LEU:CD1	2.45	0.64
9:6:28:ASN:ND2	9:ZB:43:ASP:OD1	2.29	0.64
9:9:218:TYR:OH	10:ZK:53:LYS:HB2	1.97	0.64
9:ZE:205:THR:HB	9:ZE:208:LEU:HD22	1.77	0.64
10:ZK:380:ARG:NH2	10:ZQ:393:ASP:OD1	2.30	0.64
8:o:220:MET:HE3	9:t:245:LYS:HD3	1.78	0.64
10:ZX:27:SER:HB3	10:ZX:368:LEU:HD21	1.78	0.64
10:ZY:128:ILE:HD13	10:ZY:314:GLN:HB2	1.78	0.64
5:R:36:PRO:HB3	5:R:96:ASP:HB2	1.79	0.64
9:ZE:167:PRO:CG	10:ZP:338:GLN:NE2	2.61	0.64
9:ZE:259:GLN:O	9:ZE:260:LEU:C	2.40	0.64
10:ZI:294:ILE:O	10:ZI:358:ASN:ND2	2.29	0.64
9:ZC:70:THR:HG22	9:ZC:71:GLY:H	1.63	0.64
9:ZE:28:ASN:OD1	10:ZJ:52:VAL:HB	1.96	0.64
10:Za:349:GLY:O	10:Zg:89:ASN:ND2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:r:259:GLN:O	9:r:260:LEU:C	2.39	0.64
9:7:70:THR:HG22	9:7:71:GLY:H	1.62	0.64
9:7:231:VAL:HG11	9:ZD:9:LYS:HG2	1.78	0.64
9:ZA:42:GLU:OE2	9:ZA:73:ARG:NH1	2.28	0.64
9:ZA:91:ASN:ND2	9:ZA:94:ASP:OD2	2.30	0.64
9:ZC:122:VAL:O	10:ZH:322:ASN:CG	2.41	0.64
9:ZD:20:ASP:OD1	10:ZI:2:SER:HB2	1.97	0.64
10:ZR:269:GLN:HB3	10:ZX:286:PRO:HG3	1.79	0.64
10:Zc:379:GLN:HE22	10:Zh:394:GLN:HE21	1.46	0.64
8:o:215:GLU:HG2	9:u:9:LYS:CE	2.27	0.64
10:ZV:379:GLN:NE2	10:Za:394:GLN:OE1	2.31	0.64
9:y:187:ILE:HD12	9:y:193:ILE:HD11	1.79	0.64
4:P:55:GLN:NE2	4:P:74:ASP:OD2	2.31	0.64
8:p:26:LEU:HD12	9:u:242:ILE:HG22	1.79	0.64
8:q:231:MET:HE1	9:v:257:LEU:HD12	1.79	0.64
9:0:115:THR:HB	9:0:191:LEU:HD23	1.79	0.64
3:I:204:LEU:HD22	3:I:212:VAL:HG11	1.78	0.64
9:ZD:52:PRO:HA	9:ZD:65:GLY:H	1.63	0.64
8:p:76:ARG:NH2	8:p:79:ASP:OD1	2.31	0.64
9:0:130:THR:HG23	9:0:132:GLY:H	1.63	0.64
9:ZA:76:ALA:HA	10:ZF:47:LYS:NZ	2.13	0.64
9:ZC:98:LYS:CE	10:ZN:44:ALA:HB2	2.28	0.64
10:ZH:331:ASP:HA	10:ZM:40:ALA:HB1	1.78	0.64
2:E:24:LEU:HB3	4:K:89:ARG:NH2	2.12	0.64
7:g:322:PRO:HD3	9:t:50:ARG:HD3	1.79	0.64
10:ZQ:22:ASN:ND2	10:ZV:49:GLY:O	2.32	0.64
10:ZX:71:ARG:HD3	10:ZX:74:ASP:OD1	1.98	0.64
10:Zc:154:MET:HE1	10:Zc:198:VAL:HG21	1.79	0.64
2:E:158:PRO:CG	2:E:162:ASN:HD21	2.09	0.63
9:8:151:ILE:HG23	9:8:157:VAL:HG22	1.79	0.63
10:ZI:159:ASN:ND2	10:ZI:271:THR:O	2.31	0.63
10:ZU:65:THR:HG21	10:Zf:4:SER:HB3	1.80	0.63
1:C:75:ASP:O	1:C:79:THR:HG23	1.98	0.63
6:Z:109:SER:O	8:p:243:ARG:NH2	2.31	0.63
10:ZK:248:THR:OG1	10:ZK:257:ALA:N	2.31	0.63
10:ZY:159:ASN:ND2	10:ZY:161:THR:OG1	2.30	0.63
8:n:157:PRO:HG3	9:3:55:GLN:OE1	1.97	0.63
9:ZD:238:ARG:O	9:ZD:242:ILE:HG13	1.98	0.63
10:ZU:155:GLN:HG3	10:ZU:277:VAL:HB	1.79	0.63
10:ZY:281:GLN:NE2	10:ZY:283:GLY:O	2.32	0.63
10:Za:146:ALA:HB2	10:Za:286:PRO:HD3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:58:VAL:HG11	3:J:207:LEU:HD11	1.79	0.63
5:S:22:ARG:NH2	5:S:108:GLN:OE1	2.31	0.63
6:Z:32:ASP:OD1	9:v:2:ILE:HD13	1.99	0.63
9:3:179:MET:HE1	9:y:144:ALA:HB2	1.80	0.63
10:ZP:373:VAL:O	10:ZP:376:ILE:N	2.30	0.63
8:m:220:MET:HE2	9:r:246:ALA:CA	2.27	0.63
8:q:213:PRO:HB3	9:v:242:ILE:HD13	1.80	0.63
9:4:98:LYS:NZ	9:ZA:187:ILE:O	2.31	0.63
10:ZI:374:ASN:O	10:ZI:377:VAL:N	2.31	0.63
10:ZW:281:GLN:NE2	10:ZW:283:GLY:O	2.29	0.63
9:y:37:GLN:NE2	9:y:77:THR:OG1	2.32	0.63
9:3:256:LYS:HG2	9:y:241:GLU:HG2	1.81	0.63
9:9:16:GLN:NE2	9:9:20:ASP:OD1	2.32	0.63
10:ZH:162:ASP:OD1	10:ZH:274:ASN:ND2	2.30	0.63
8:q:165:LYS:HB2	8:q:199:ILE:HD11	1.81	0.63
10:ZW:17:LEU:HD13	10:Zb:395:ILE:HD11	1.81	0.63
3:H:116:PHE:O	5:S:4:ARG:NH2	2.30	0.63
6:X:20:ARG:NH1	7:g:313:PRO:O	2.32	0.63
8:q:152:PRO:CG	9:1:193:ILE:HG22	2.29	0.63
9:ZA:240:TYR:CD2	10:ZF:395:ILE:HG23	2.34	0.63
10:ZI:373:VAL:HG21	10:ZO:10:LEU:CD2	2.28	0.63
10:ZP:217:ASP:HB3	10:ZP:220:ALA:HB2	1.80	0.63
10:ZT:87:ASP:HB3	10:ZT:114:MET:HE2	1.80	0.63
10:Zb:199:TYR:HB2	10:Zb:211:TYR:HB2	1.80	0.63
10:Zh:112:GLN:OE1	10:Zh:112:GLN:N	2.32	0.63
8:q:91:GLN:HB2	8:q:121:ILE:HD11	1.80	0.63
10:ZQ:112:GLN:OE1	10:ZQ:112:GLN:N	2.31	0.63
8:q:231:MET:HE1	9:v:257:LEU:HD13	1.79	0.62
10:ZH:78:SER:O	10:ZH:354:GLY:HA3	1.99	0.62
10:ZK:167:LYS:NZ	10:ZK:168:THR:O	2.31	0.62
10:ZW:285:LYS:O	10:ZW:306:ASN:ND2	2.29	0.62
9:s:82:SER:OG	9:s:223:ASN:ND2	2.32	0.62
9:z:22:ILE:HD11	9:z:232:ASN:HB3	1.81	0.62
1:C:23:PRO:O	1:C:27:VAL:HG12	1.99	0.62
3:J:229:VAL:O	3:J:230:ASP:C	2.41	0.62
8:n:37:GLN:OE1	8:n:173:ARG:NH1	2.30	0.62
9:8:36:ARG:HB3	9:8:224:VAL:HG22	1.81	0.62
9:x:88:GLN:HB2	9:x:218:TYR:CE1	2.34	0.62
3:F:60:MET:HE1	3:G:91:GLY:HA3	1.81	0.62
6:V:77:VAL:HG13	9:r:6:TRP:CE2	2.30	0.62
8:p:71:LEU:HB2	9:0:70:THR:CG2	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZA:70:THR:HG22	9:ZA:71:GLY:H	1.64	0.62
9:ZD:237:GLN:O	9:ZD:241:GLU:HG2	2.00	0.62
10:ZI:111:MET:CE	10:ZN:58:THR:HB	2.29	0.62
10:ZM:223:PRO:HD2	10:ZM:223:PRO:O	1.97	0.62
10:ZX:242:GLY:O	10:ZX:263:PHE:N	2.30	0.62
6:X:113:GLN:NE2	8:n:239:GLU:OE1	2.31	0.62
1:B:24:LEU:HD22	1:B:58:VAL:HG13	1.81	0.62
3:F:162:PRO:HD2	3:F:163:GLU:N	2.14	0.62
9:ZA:259:GLN:O	9:ZA:260:LEU:C	2.42	0.62
3:G:67:ILE:HD12	3:G:239:LEU:HD13	1.81	0.62
8:q:232:LYS:HE2	9:w:260:LEU:O	1.98	0.62
9:7:22:ILE:HG21	9:7:233:MET:HG3	1.81	0.62
10:ZL:367:ASP:HB3	10:ZL:370:LYS:HG2	1.82	0.62
10:ZR:180:LYS:HB3	10:ZR:200:PHE:CD1	2.34	0.62
2:E:105:GLN:NE2	3:F:216:THR:O	2.33	0.62
8:o:165:LYS:O	8:o:189:ARG:NH2	2.33	0.62
9:2:42:GLU:HB3	9:2:75:VAL:HG23	1.81	0.62
9:5:70:THR:HG22	9:5:71:GLY:H	1.65	0.62
10:ZN:34:SER:HB3	10:ZN:366:VAL:HG22	1.82	0.62
3:J:45:LEU:HG	4:P:89:ARG:HD3	1.81	0.62
8:q:109:PRO:HG3	9:v:197:SER:HA	1.82	0.62
10:ZH:238:LEU:HD21	10:ZH:242:GLY:HA3	1.81	0.62
10:ZX:17:LEU:HD13	10:Zc:395:ILE:HD11	1.81	0.62
6:Z:76:LEU:HD12	9:v:47:GLN:NE2	2.14	0.62
8:o:184:GLU:OE2	9:t:55:GLN:C	2.42	0.62
10:ZL:331:ASP:HA	10:ZQ:40:ALA:HB1	1.80	0.62
10:ZP:146:ALA:HB2	10:ZP:286:PRO:HD3	1.81	0.62
10:Zb:97:ASN:OD1	10:Zb:99:GLN:NE2	2.32	0.62
3:H:52:THR:OG1	4:M:91:LYS:NZ	2.28	0.62
9:ZA:37:GLN:HE22	10:ZF:43:PHE:HE1	1.48	0.62
9:ZB:24:ASN:OD1	9:ZB:37:GLN:NE2	2.33	0.62
9:ZB:163:GLY:O	9:ZB:164:GLN:C	2.43	0.62
10:ZS:319:ASN:ND2	10:ZS:352:ASN:OD1	2.33	0.62
9:v:142:ILE:HD13	9:v:149:ILE:HG12	1.82	0.62
1:D:70:LEU:O	1:D:74:LEU:HG	2.00	0.61
2:E:185:MET:O	2:E:186:LEU:C	2.42	0.61
4:M:75:MET:HE1	5:R:122:VAL:HG13	1.82	0.61
9:8:70:THR:HG22	9:8:71:GLY:H	1.65	0.61
9:ZB:175:LEU:HG	9:ZB:206:PRO:HG3	1.82	0.61
9:ZC:88:GLN:HE21	10:ZN:53:LYS:HB2	1.63	0.61
10:ZY:104:GLU:OE2	10:ZY:104:GLU:N	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:x:49:ILE:HD12	9:x:66:LEU:HD11	1.81	0.61
1:D:46:GLU:HB2	1:D:49:LEU:HD23	1.82	0.61
2:E:114:VAL:HG12	3:G:213:PRO:HB3	1.81	0.61
9:1:100:GLN:OE1	9:1:100:GLN:N	2.30	0.61
10:ZT:27:SER:OG	10:ZY:381:ASN:OD1	2.13	0.61
3:J:83:ALA:O	3:J:84:PRO:C	2.39	0.61
9:2:49:ILE:HG21	9:2:66:LEU:HD23	1.82	0.61
9:4:254:LEU:O	9:4:258:THR:HG23	2.01	0.61
10:ZO:18:ASP:HA	10:ZT:5:GLN:HE22	1.64	0.61
9:x:3:SER:O	9:x:5:LEU:N	2.32	0.61
1:D:9:MET:HE2	3:J:191:ILE:HG13	1.81	0.61
8:p:27:ALA:HB1	9:u:72:VAL:CG1	2.30	0.61
9:4:50:ARG:HD3	9:4:62:LEU:HD11	1.82	0.61
9:5:94:ASP:OD2	9:ZA:38:ARG:NH1	2.32	0.61
10:ZH:281:GLN:OE1	10:ZH:283:GLY:N	2.31	0.61
10:ZW:322:ASN:HB3	10:ZW:340:SER:HA	1.82	0.61
10:Zc:396:LEU:O	10:Zc:400:VAL:HG23	2.00	0.61
8:n:133:SER:HA	8:n:148:PRO:HD3	1.82	0.61
9:ZC:10:THR:HG21	9:ZC:71:GLY:HA3	1.83	0.61
9:ZE:231:VAL:HG11	10:ZK:7:VAL:HG22	1.82	0.61
10:ZK:112:GLN:N	10:ZK:112:GLN:OE1	2.33	0.61
10:ZQ:355:LYS:NZ	10:ZW:87:ASP:OD1	2.31	0.61
9:s:256:LYS:HD2	9:s:259:GLN:HE21	1.63	0.61
9:y:109:ASP:OD2	9:y:111:THR:OG1	2.15	0.61
5:Q:23:GLN:NE2	6:V:125:MET:HE1	2.15	0.61
6:Z:76:LEU:HD12	9:v:47:GLN:HE21	1.64	0.61
8:p:146:LEU:HD13	8:p:155:VAL:HG22	1.83	0.61
10:Za:2:SER:OG	10:Za:3:PHE:N	2.34	0.61
10:Zg:385:ASN:O	10:Zg:388:THR:N	2.33	0.61
9:r:79:ARG:NH2	9:r:186:SER:OG	2.33	0.61
9:t:52:PRO:HA	9:t:64:SER:O	2.00	0.61
1:A:66:GLY:HA2	1:A:69:MET:HE2	1.82	0.61
3:G:82:SER:HA	4:K:103:GLN:NE2	2.15	0.61
8:q:152:PRO:CD	9:1:193:ILE:HG21	2.30	0.61
8:q:231:MET:HE2	9:v:257:LEU:CA	2.31	0.61
8:q:232:LYS:CE	9:w:260:LEU:C	2.68	0.61
3:F:52:THR:OG1	4:K:91:LYS:NZ	2.34	0.61
9:9:20:ASP:OD1	9:ZE:4:SER:OG	2.18	0.61
9:ZA:34:PHE:HB3	9:ZA:222:SER:HB3	1.82	0.61
10:ZU:294:ILE:O	10:ZU:358:ASN:ND2	2.30	0.61
10:ZV:178:TYR:HA	10:ZV:201:VAL:HG22	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:R:51:LYS:NZ	5:R:84:ASP:OD1	2.34	0.61
6:W:27:ASN:OD1	6:W:42:TYR:OH	2.19	0.61
6:W:78:TYR:HB2	9:s:44:LEU:HD13	1.83	0.61
8:n:223:ASN:HB3	9:s:253:MET:HE1	1.83	0.61
10:ZJ:370:LYS:HE3	10:ZP:11:ASN:ND2	2.14	0.61
10:ZL:83:PHE:HB2	10:ZL:95:SER:O	2.01	0.61
10:ZN:165:PRO:HG2	10:ZN:201:VAL:HG23	1.82	0.61
10:ZN:379:GLN:HG3	10:ZS:391:THR:HG23	1.82	0.61
10:ZR:146:ALA:HB2	10:ZR:286:PRO:HD3	1.83	0.61
10:ZW:178:TYR:HA	10:ZW:201:VAL:HG22	1.83	0.61
1:A:56:VAL:O	1:A:60:ILE:HG12	2.01	0.61
3:G:66:ARG:NE	3:G:178:GLU:OE1	2.33	0.61
8:n:202:MET:HE3	9:y:73:ARG:HH11	1.64	0.61
8:o:26:LEU:HD13	9:t:242:ILE:HG22	1.82	0.61
9:1:99:GLY:O	9:1:116:ARG:NH2	2.29	0.61
10:ZF:107:ASN:ND2	10:ZF:138:THR:OG1	2.33	0.61
10:ZO:170:PHE:HE2	10:ZO:178:TYR:HB3	1.65	0.61
10:ZW:349:GLY:O	10:Zc:89:ASN:ND2	2.34	0.61
10:ZY:383:GLN:HG2	10:Zd:398:THR:HG21	1.82	0.61
10:Zc:42:MET:HG2	10:Zc:53:LYS:HE3	1.83	0.61
9:3:88:GLN:HB2	9:3:218:TYR:CE2	2.37	0.60
9:4:50:ARG:NH1	9:z:75:VAL:HG13	2.16	0.60
9:9:259:GLN:O	9:9:260:LEU:C	2.44	0.60
10:ZS:295:ASN:ND2	10:ZS:299:THR:OG1	2.34	0.60
10:ZT:187:TYR:HE2	10:ZT:285:LYS:HB2	1.65	0.60
9:s:178:PHE:CE2	9:s:184:LEU:HD21	2.36	0.60
2:E:106:MET:SD	2:E:225:GLY:HA3	2.40	0.60
3:F:123:MET:HE3	3:F:124:GLN:HG2	1.81	0.60
5:R:94:SER:OG	8:n:3:HIS:ND1	2.33	0.60
8:m:181:LEU:HD21	8:m:193:LEU:HD11	1.81	0.60
8:o:26:LEU:HD13	9:t:242:ILE:CG2	2.31	0.60
9:5:75:VAL:O	9:ZA:50:ARG:NH1	2.33	0.60
10:ZV:281:GLN:NE2	10:ZV:283:GLY:O	2.34	0.60
6:Z:12:SER:OG	6:Z:62:VAL:O	2.20	0.60
9:ZE:167:PRO:HG2	10:ZP:338:GLN:HE22	1.65	0.60
10:ZO:248:THR:OG1	10:ZO:257:ALA:N	2.34	0.60
10:ZU:17:LEU:HD13	10:ZZ:395:ILE:HD11	1.82	0.60
9:s:140:ILE:HG23	9:s:170:VAL:HG12	1.82	0.60
3:I:83:ALA:HB3	3:I:84:PRO:HD3	1.84	0.60
8:n:153:ASN:HD21	9:y:194:GLU:CD	2.09	0.60
9:3:22:ILE:HG21	9:3:233:MET:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4:242:ILE:HD13	9:ZA:258:THR:HG23	1.83	0.60
10:ZW:17:LEU:CD1	10:Zb:395:ILE:HD11	2.31	0.60
10:ZY:194:HIS:HB3	10:ZY:196:MET:HE3	1.82	0.60
9:r:143:PRO:HG2	9:r:161:GLN:HE22	1.65	0.60
9:t:22:ILE:HG21	9:t:233:MET:HG2	1.84	0.60
6:Y:80:PRO:HB3	9:z:52:PRO:HG3	1.83	0.60
8:q:62:PRO:HA	9:v:63:PRO:HG2	1.83	0.60
1:D:74:LEU:HD11	3:J:228:LEU:HD13	1.83	0.60
9:ZC:24:ASN:HB2	10:ZH:5:GLN:HE21	1.67	0.60
9:ZD:208:LEU:O	9:ZD:210:GLY:N	2.35	0.60
10:ZJ:65:THR:HG22	10:ZU:50:LEU:HD12	1.82	0.60
10:ZL:144:MET:SD	10:ZL:310:GLN:NE2	2.75	0.60
10:ZV:196:MET:HA	10:ZV:196:MET:HE3	1.83	0.60
9:u:50:ARG:HG2	9:u:65:GLY:HA2	1.84	0.60
8:p:221:ILE:HG23	9:v:251:ASP:CG	2.23	0.60
9:8:215:TYR:OH	9:ZE:189:GLU:OE2	2.19	0.60
10:ZU:331:ASP:HA	10:ZZ:40:ALA:HB1	1.82	0.60
10:ZX:80:ASN:OD1	10:ZX:81:GLY:N	2.34	0.60
10:ZZ:394:GLN:O	10:ZZ:398:THR:HG23	2.01	0.60
1:B:14:MET:HG3	1:C:59:PHE:CE1	2.37	0.60
8:n:217:MET:HE2	9:s:245:LYS:HG2	1.83	0.60
8:o:104:ASN:ND2	9:t:38:ARG:NH2	2.50	0.60
9:4:40:VAL:O	9:4:75:VAL:N	2.30	0.60
9:9:64:SER:O	9:9:64:SER:OG	2.19	0.60
10:ZZ:184:VAL:HG13	10:ZZ:196:MET:HB2	1.83	0.60
6:Y:109:SER:O	6:Y:113:GLN:HG3	2.02	0.60
9:6:180:ASN:OD1	9:6:183:GLY:N	2.35	0.60
10:ZH:11:ASN:O	10:ZH:15:THR:HG23	2.00	0.60
10:Zc:71:ARG:NH1	10:Zc:74:ASP:OD1	2.35	0.60
9:y:86:LEU:HD12	9:y:218:TYR:HB3	1.84	0.60
3:J:83:ALA:CB	3:J:84:PRO:HD3	2.30	0.60
8:n:202:MET:HE1	9:y:73:ARG:HD3	1.84	0.60
9:3:34:PHE:HB3	9:3:222:SER:HB3	1.83	0.60
9:3:248:SER:O	9:3:252:GLN:HG2	2.02	0.60
9:ZB:240:TYR:CZ	10:ZG:399:LEU:HD11	2.37	0.60
9:ZE:85:ASN:CG	10:ZP:50:LEU:CD2	2.75	0.60
10:ZF:346:GLY:HA3	10:ZF:353:PHE:CE2	2.37	0.60
10:ZO:71:ARG:HB2	10:ZO:74:ASP:OD1	2.02	0.60
10:ZU:150:THR:H	10:ZU:282:ASN:HD21	1.48	0.60
1:C:52:ILE:O	1:C:56:VAL:HG22	2.02	0.59
3:I:232:TRP:O	3:I:236:MET:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:184:GLN:O	3:J:188:THR:HG23	2.02	0.59
8:q:140:ASP:OD2	9:6:57:SER:CA	2.32	0.59
9:5:35:LYS:NZ	9:5:220:GLU:OE2	2.35	0.59
9:ZC:122:VAL:O	10:ZH:322:ASN:CB	2.50	0.59
10:ZO:146:ALA:HB2	10:ZO:286:PRO:HD3	1.83	0.59
10:ZX:114:MET:HE1	10:ZX:333:VAL:HG21	1.82	0.59
10:Ze:233:ASN:HD21	10:Ze:237:ILE:HB	1.67	0.59
10:Zg:114:MET:HA	10:Zg:114:MET:HE3	1.82	0.59
9:t:90:ASN:O	9:t:91:ASN:C	2.45	0.59
5:Q:94:SER:O	7:d:324:ASN:ND2	2.35	0.59
5:U:32:ASN:ND2	6:Z:60:GLY:O	2.35	0.59
6:X:67:VAL:HG23	8:n:51:LEU:HD22	1.83	0.59
9:ZB:31:THR:HG22	10:ZG:39:PHE:HB2	1.83	0.59
9:ZB:40:VAL:HG23	9:ZB:75:VAL:HB	1.84	0.59
9:ZC:54:ALA:HB1	9:w:150:THR:HG21	1.83	0.59
10:ZJ:17:LEU:HD13	10:ZO:395:ILE:HD11	1.84	0.59
10:ZZ:309:GLU:N	10:ZZ:309:GLU:OE2	2.34	0.59
6:V:20:ARG:HD3	6:V:108:ALA:HB2	1.84	0.59
9:7:167:PRO:CG	10:ZI:338:GLN:OE1	2.50	0.59
10:ZQ:188:ASP:HA	10:ZQ:257:ALA:HB2	1.82	0.59
10:ZS:289:LEU:HA	10:ZS:304:TYR:HA	1.84	0.59
9:r:93:LYS:HE3	9:r:149:ILE:HG21	1.84	0.59
8:o:104:ASN:HD21	9:t:38:ARG:HH21	1.49	0.59
9:9:137:GLN:HE21	9:9:138:PRO:HA	1.67	0.59
10:Za:24:ILE:O	10:Za:27:SER:OG	2.20	0.59
9:z:115:THR:HB	9:z:191:LEU:HD23	1.85	0.59
5:S:115:LYS:HE3	6:Y:4:LEU:HD11	1.84	0.59
8:n:91:GLN:HB2	8:n:121:ILE:HD11	1.83	0.59
9:ZE:240:TYR:CE2	10:ZJ:399:LEU:CD1	2.83	0.59
10:ZK:165:PRO:HG2	10:ZK:201:VAL:HG13	1.84	0.59
10:ZT:42:MET:HE3	10:ZT:53:LYS:HB3	1.84	0.59
10:Zh:217:ASP:HB3	10:Zh:220:ALA:HB2	1.85	0.59
9:x:22:ILE:HG21	9:x:233:MET:HG3	1.84	0.59
1:A:84:LEU:HD13	3:G:188:THR:HG21	1.84	0.59
1:B:51:PHE:CZ	1:B:55:ILE:HD11	2.38	0.59
3:F:66:ARG:NH2	3:F:243:PHE:O	2.36	0.59
5:Q:46:ALA:O	5:Q:50:LYS:HG3	2.02	0.59
8:n:224:ALA:HA	9:s:253:MET:HE3	1.81	0.59
9:ZD:238:ARG:CZ	10:ZJ:393:ASP:OD1	2.50	0.59
10:ZM:156:ILE:HB	10:ZM:276:ILE:HG23	1.84	0.59
10:ZQ:6:ALA:HB1	10:ZQ:389:ILE:HG12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZV:101:LYS:HZ1	10:ZV:111:MET:HA	1.66	0.59
9:t:241:GLU:HG3	9:y:256:LYS:HE3	1.84	0.59
9:x:3:SER:O	9:x:6:TRP:N	2.35	0.59
8:o:170:GLU:OE1	8:o:189:ARG:NH1	2.36	0.59
8:p:104:ASN:ND2	9:u:38:ARG:NH2	2.50	0.59
9:5:208:LEU:O	9:5:210:GLY:N	2.34	0.59
10:ZM:18:ASP:O	10:ZR:5:GLN:NE2	2.36	0.59
10:ZT:180:LYS:HD3	10:ZT:274:ASN:HB3	1.85	0.59
10:ZW:208:TRP:NE1	10:ZW:268:GLN:OE1	2.35	0.59
8:m:122:GLY:O	8:m:124:GLY:N	2.35	0.59
8:m:215:GLU:HG3	9:s:9:LYS:NZ	2.17	0.59
8:p:174:SER:OG	8:p:176:ASP:OD2	2.16	0.59
9:5:115:THR:HB	9:5:191:LEU:HD23	1.85	0.59
10:ZT:314:GLN:NE2	10:ZT:347:THR:OG1	2.35	0.59
10:Zc:101:LYS:HE2	10:Zh:322:ASN:HD21	1.67	0.59
10:Zc:150:THR:OG1	10:Zc:282:ASN:ND2	2.35	0.59
8:q:215:GLU:HG2	9:w:9:LYS:HE3	1.85	0.59
9:0:180:ASN:ND2	9:v:122:VAL:O	2.35	0.59
9:8:45:LEU:HD21	9:x:98:LYS:HG3	1.85	0.59
9:ZA:49:ILE:HG21	9:ZA:66:LEU:HD23	1.85	0.59
10:ZH:160:SER:O	10:ZN:252:ASN:ND2	2.35	0.59
10:ZO:211:TYR:CE2	10:ZO:226:ALA:HA	2.38	0.59
8:n:84:GLN:OE1	9:y:48:THR:HG22	2.03	0.58
9:ZE:238:ARG:CZ	10:ZK:393:ASP:OD1	2.51	0.58
10:Zb:57:ILE:HD12	10:Zg:47:LYS:HB2	1.85	0.58
9:t:75:VAL:HA	9:y:51:GLN:HE22	1.68	0.58
8:m:96:ALA:HB3	8:m:180:ARG:HH21	1.68	0.58
8:p:72:ASP:OD2	9:0:9:LYS:HE2	2.03	0.58
9:2:40:VAL:O	9:2:75:VAL:N	2.33	0.58
9:ZD:46:TYR:HA	9:ZD:69:GLY:HA2	1.84	0.58
10:ZZ:71:ARG:HG2	10:ZZ:73:LEU:H	1.68	0.58
10:Zc:281:GLN:NE2	10:Zc:283:GLY:O	2.36	0.58
8:m:122:GLY:O	8:m:123:GLU:C	2.47	0.58
10:ZJ:217:ASP:HB3	10:ZJ:220:ALA:HB2	1.84	0.58
10:ZL:22:ASN:ND2	10:ZQ:49:GLY:HA3	2.18	0.58
10:ZS:33:LYS:O	10:ZS:59:GLN:NE2	2.36	0.58
10:Zd:144:MET:HE3	10:Zd:145:ALA:N	2.19	0.58
10:Zf:159:ASN:ND2	10:Zf:161:THR:OG1	2.34	0.58
9:1:49:ILE:HB	9:1:66:LEU:HD23	1.85	0.58
9:2:1:MET:HB2	9:w:235:GLN:HE21	1.68	0.58
9:7:137:GLN:HA	9:7:139:ALA:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:127:GLN:NE2	9:9:135:GLN:OE1	2.37	0.58
10:ZQ:22:ASN:OD1	10:ZQ:26:ASN:ND2	2.35	0.58
10:ZT:248:THR:OG1	10:ZT:257:ALA:N	2.37	0.58
6:Y:20:ARG:HD2	7:i:313:PRO:HG2	1.85	0.58
8:q:226:ARG:O	8:q:230:GLN:HG2	2.03	0.58
9:ZD:189:GLU:OE1	10:ZI:53:LYS:CE	2.51	0.58
10:ZS:105:ASN:HB2	10:ZS:107:ASN:HD21	1.68	0.58
10:ZX:146:ALA:HB2	10:ZX:286:PRO:HD3	1.85	0.58
10:Zd:208:TRP:NE1	10:Zd:268:GLN:OE1	2.37	0.58
9:r:76:ALA:HA	9:w:66:LEU:HB3	1.84	0.58
5:Q:127:LEU:O	5:Q:131:MET:HG2	2.03	0.58
8:m:72:ASP:HB3	9:x:9:LYS:HZ3	1.68	0.58
9:8:230:LEU:HD21	9:ZD:242:ILE:HG23	1.86	0.58
10:ZK:75:VAL:HG21	10:ZK:356:LEU:HD23	1.85	0.58
10:ZS:228:THR:HB	10:ZS:244:VAL:HG11	1.86	0.58
10:ZU:154:MET:HE1	10:ZU:198:VAL:HG21	1.86	0.58
10:ZZ:69:THR:OG1	10:ZZ:74:ASP:OD2	2.21	0.58
10:Zb:107:ASN:ND2	10:Zb:138:THR:OG1	2.37	0.58
9:y:66:LEU:H	9:y:66:LEU:HD23	1.69	0.58
3:J:82:SER:OG	4:N:104:VAL:O	2.20	0.58
5:S:42:ASP:OD1	5:S:88:ARG:NH2	2.36	0.58
6:V:36:GLY:HA2	6:a:51:VAL:HG12	1.85	0.58
8:m:150:ASP:O	8:m:151:PRO:C	2.47	0.58
8:n:142:THR:OG1	9:3:58:GLU:OE1	2.16	0.58
8:q:16:LEU:CD2	9:v:253:MET:CE	2.80	0.58
8:q:37:GLN:HE22	9:v:67:GLN:HB3	1.68	0.58
8:q:217:MET:CE	9:1:258:THR:HA	2.34	0.58
9:4:64:SER:O	9:4:64:SER:OG	2.19	0.58
9:6:35:LYS:HB2	9:6:79:ARG:HD2	1.85	0.58
9:8:47:GLN:N	9:8:68:ILE:O	2.37	0.58
10:ZI:99:GLN:HG3	10:ZI:361:LEU:HD21	1.84	0.58
10:ZU:373:VAL:O	10:ZU:376:ILE:N	2.36	0.58
10:Zf:101:LYS:HD3	10:Zf:102:LEU:H	1.67	0.58
1:A:35:ILE:HD11	1:A:53:PRO:HB2	1.85	0.58
1:C:29:LEU:HD22	1:D:52:ILE:HG21	1.84	0.58
3:I:146:ASP:OD1	3:J:233:GLN:NE2	2.37	0.58
8:o:71:LEU:HB2	9:z:70:THR:HG21	1.86	0.58
8:o:91:GLN:HB3	8:o:119:PRO:HG2	1.86	0.58
8:q:173:ARG:HH11	9:v:46:TYR:HE1	1.42	0.58
9:ZD:207:GLY:O	10:ZJ:89:ASN:ND2	2.36	0.58
10:ZI:195:ASP:OD2	10:ZI:216:SER:OG	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZK:27:SER:OG	10:ZP:381:ASN:ND2	2.37	0.58
10:ZK:150:THR:OG1	10:ZK:282:ASN:ND2	2.36	0.58
10:ZO:140:PRO:HD2	10:ZO:312:LEU:CD2	2.34	0.58
10:ZX:178:TYR:HA	10:ZX:201:VAL:HG22	1.85	0.58
10:Zb:380:ARG:NH2	10:Zh:393:ASP:OD1	2.36	0.58
3:H:83:ALA:HB3	3:H:84:PRO:HD3	1.85	0.58
8:o:131:GLU:HB3	9:t:179:MET:CE	2.28	0.58
8:o:202:MET:HE1	9:z:44:LEU:HA	1.86	0.58
9:8:1:MET:HE3	9:x:226:VAL:HG21	1.84	0.58
9:ZD:24:ASN:HD21	10:ZI:49:GLY:HA3	1.69	0.58
9:ZD:115:THR:HB	9:ZD:191:LEU:HD23	1.84	0.58
9:ZD:238:ARG:HH21	10:ZJ:393:ASP:CG	2.12	0.58
10:ZO:367:ASP:O	10:ZO:371:GLU:HG2	2.04	0.58
10:ZS:17:LEU:HD13	10:ZX:395:ILE:HD11	1.85	0.58
9:u:6:TRP:O	9:u:10:THR:HG23	2.04	0.58
2:E:187:ALA:O	2:E:190:VAL:HG12	2.04	0.58
6:V:50:GLN:HG3	6:V:65:ALA:HB2	1.85	0.58
9:ZE:154:ASP:OD2	9:ZE:154:ASP:N	2.37	0.58
10:ZU:112:GLN:OE1	10:ZU:112:GLN:N	2.36	0.58
10:ZX:50:LEU:H	10:ZX:50:LEU:HD22	1.69	0.58
2:E:167:ASN:HD21	2:E:174:ARG:HH12	1.52	0.57
6:a:80:PRO:HB3	9:l:52:PRO:CG	2.34	0.57
8:n:223:ASN:O	9:s:253:MET:HE2	2.04	0.57
8:p:26:LEU:HD21	8:p:216:ALA:HB1	1.86	0.57
8:p:221:ILE:HG22	9:v:251:ASP:OD1	1.98	0.57
9:2:98:LYS:HB3	9:2:213:LEU:H	1.68	0.57
9:2:232:ASN:O	9:2:236:VAL:HG13	2.04	0.57
10:ZH:319:ASN:HB2	10:ZH:353:PHE:HE1	1.69	0.57
10:ZI:373:VAL:HG21	10:ZO:10:LEU:HD22	1.86	0.57
10:ZP:178:TYR:HA	10:ZP:201:VAL:HG12	1.86	0.57
10:Ze:129:GLN:OE1	10:Ze:132:ALA:N	2.34	0.57
2:E:176:GLY:HA2	2:E:179:ILE:HD12	1.86	0.57
8:m:72:ASP:HB3	9:x:9:LYS:HZ2	1.67	0.57
8:p:215:GLU:HG3	9:v:9:LYS:NZ	2.20	0.57
9:8:24:ASN:ND2	9:ZD:70:THR:O	2.36	0.57
9:9:83:GLN:NE2	9:9:97:ILE:O	2.37	0.57
9:ZA:122:VAL:O	10:ZF:322:ASN:CG	2.46	0.57
9:ZE:24:ASN:ND2	10:ZJ:49:GLY:HA3	2.19	0.57
10:Zb:80:ASN:OD1	10:Zb:81:GLY:N	2.37	0.57
9:v:129:VAL:HG12	9:v:135:GLN:HA	1.84	0.57
3:G:58:LEU:O	3:G:62:THR:OG1	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:n:165:LYS:HG3	8:n:199:ILE:HD11	1.85	0.57
8:o:226:ARG:O	8:o:230:GLN:HG2	2.04	0.57
10:ZG:263:PHE:O	10:ZG:266:SER:OG	2.18	0.57
10:ZQ:155:GLN:HG3	10:ZQ:278:ALA:HB3	1.86	0.57
10:ZQ:155:GLN:NE2	10:ZQ:277:VAL:HB	2.19	0.57
10:ZQ:196:MET:HA	10:ZQ:196:MET:HE3	1.86	0.57
5:T:103:ASP:OD1	6:Z:112:TYR:OH	2.14	0.57
6:Y:45:LYS:NZ	8:o:55:THR:OG1	2.36	0.57
9:0:151:ILE:HG12	9:0:157:VAL:HG22	1.86	0.57
9:1:178:PHE:HE1	9:1:201:PRO:HB3	1.67	0.57
9:3:122:VAL:O	9:8:180:ASN:ND2	2.37	0.57
9:ZB:7:ILE:HG23	9:ZB:71:GLY:HA2	1.86	0.57
9:ZC:208:LEU:O	9:ZC:210:GLY:N	2.37	0.57
10:ZJ:373:VAL:O	10:ZJ:377:VAL:HG23	2.04	0.57
10:ZO:65:THR:HG22	10:ZZ:50:LEU:HD22	1.86	0.57
10:ZX:367:ASP:O	10:ZX:371:GLU:HG2	2.05	0.57
10:ZZ:104:GLU:OE1	10:Ze:338:GLN:NE2	2.38	0.57
3:H:59:LEU:HD11	4:M:102:MET:HE1	1.87	0.57
4:P:76:GLN:HG3	6:V:123:LYS:HD2	1.87	0.57
5:U:42:ASP:OD1	5:U:43:ILE:N	2.38	0.57
9:2:85:ASN:O	9:2:221:THR:OG1	2.21	0.57
9:3:52:PRO:HB3	9:3:65:GLY:H	1.70	0.57
9:8:22:ILE:HG21	9:8:233:MET:HG3	1.87	0.57
9:ZC:189:GLU:HA	10:ZH:40:ALA:HB1	1.86	0.57
10:ZG:180:LYS:HD2	10:ZG:181:LYS:H	1.70	0.57
10:ZL:167:LYS:HA	10:ZL:167:LYS:HE3	1.86	0.57
10:Zc:217:ASP:HB3	10:Zc:220:ALA:HB2	1.86	0.57
2:E:170:MET:O	2:E:174:ARG:N	2.26	0.57
8:o:21:VAL:HG23	9:t:68:ILE:CG2	2.33	0.57
10:ZI:212:THR:HG21	10:ZI:246:ILE:HD13	1.86	0.57
10:ZJ:159:ASN:ND2	10:ZJ:161:THR:OG1	2.38	0.57
10:ZQ:281:GLN:NE2	10:ZQ:283:GLY:O	2.38	0.57
10:Zd:71:ARG:NH1	10:Zd:74:ASP:OD1	2.38	0.57
9:t:142:ILE:HD13	9:t:149:ILE:HG12	1.86	0.57
9:z:49:ILE:HD12	9:z:66:LEU:HD11	1.86	0.57
6:X:113:GLN:HG2	8:n:243:ARG:HD2	1.86	0.57
9:ZA:257:LEU:HG	9:z:230:LEU:HD12	1.87	0.57
9:ZE:85:ASN:HA	10:ZP:50:LEU:CD1	2.35	0.57
10:ZM:196:MET:HA	10:ZM:196:MET:HE3	1.86	0.57
10:ZM:270:ASN:HD22	10:ZS:192:ASN:HA	1.69	0.57
10:ZY:17:LEU:HD13	10:Zd:395:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZZ:196:MET:HE3	10:ZZ:196:MET:HA	1.87	0.57
9:t:140:ILE:HD12	9:t:171:GLY:HA2	1.86	0.57
8:q:221:ILE:HG23	9:w:251:ASP:OD2	2.04	0.57
9:1:67:GLN:HE22	9:w:186:SER:H	1.53	0.57
10:ZV:349:GLY:O	10:Zb:89:ASN:ND2	2.38	0.57
10:ZZ:83:PHE:HB2	10:ZZ:95:SER:O	2.05	0.57
10:Ze:34:SER:HB3	10:Ze:366:VAL:HG12	1.85	0.57
8:n:153:ASN:ND2	9:y:194:GLU:HG2	2.20	0.57
8:o:152:PRO:HB2	9:z:195:THR:HG22	1.85	0.57
9:6:77:THR:HG23	9:ZB:66:LEU:HD12	1.87	0.57
9:ZB:208:LEU:O	9:ZB:210:GLY:N	2.38	0.57
10:ZI:183:THR:OG1	10:ZT:131:GLY:O	2.16	0.57
10:Zb:349:GLY:O	10:Zh:89:ASN:ND2	2.35	0.57
10:Ze:106:ARG:HH22	10:Ze:141:ASN:HB3	1.68	0.57
9:x:1:MET:HG3	9:x:2:ILE:H	1.69	0.57
6:W:94:PRO:HB2	6:W:96:VAL:HG23	1.86	0.57
9:3:7:ILE:HG23	9:3:71:GLY:HA2	1.86	0.57
9:7:98:LYS:NZ	9:ZD:187:ILE:O	2.37	0.57
9:7:241:GLU:HG2	9:ZC:256:LYS:HG3	1.87	0.57
9:ZC:240:TYR:CD2	10:ZH:395:ILE:HG21	2.37	0.57
10:ZG:165:PRO:HG2	10:ZG:201:VAL:HG13	1.86	0.57
10:ZN:319:ASN:ND2	10:ZN:352:ASN:O	2.38	0.57
10:ZS:322:ASN:HB3	10:ZS:340:SER:HA	1.87	0.57
10:Zd:102:LEU:HD11	10:Zd:139:ILE:HD12	1.87	0.57
10:Ze:156:ILE:HG13	10:Ze:276:ILE:HA	1.87	0.57
9:r:241:GLU:OE1	9:x:258:THR:OG1	2.22	0.57
2:E:149:LEU:O	2:E:153:THR:HG23	2.05	0.56
6:Y:103:VAL:HG21	8:p:9:MET:HB2	1.85	0.56
9:6:1:MET:HE2	9:v:226:VAL:HG11	1.87	0.56
9:ZC:123:ASP:OD1	9:ZC:123:ASP:N	2.38	0.56
10:ZS:235:ASN:OD1	10:ZY:189:SER:OG	2.23	0.56
10:ZW:6:ALA:HB1	10:ZW:389:ILE:HG12	1.87	0.56
10:Ze:95:SER:HB2	10:Ze:333:VAL:HG23	1.87	0.56
8:m:215:GLU:HG3	9:s:9:LYS:HZ2	1.69	0.56
8:o:71:LEU:CD2	9:z:70:THR:HG21	2.35	0.56
8:o:181:LEU:HD11	8:o:193:LEU:HG	1.86	0.56
9:ZC:22:ILE:HG21	9:ZC:233:MET:HG3	1.87	0.56
10:ZJ:165:PRO:HG2	10:ZJ:201:VAL:HG13	1.85	0.56
10:Zc:395:ILE:O	10:Zc:398:THR:HG22	2.06	0.56
1:B:9:MET:HA	1:B:12:GLU:OE1	2.05	0.56
1:C:4:GLU:C	1:C:6:VAL:H	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:R:114:LEU:HD21	6:X:126:MET:SD	2.45	0.56
6:Y:83:PRO:HD2	9:t:62:LEU:HD21	1.86	0.56
8:m:226:ARG:O	8:m:230:GLN:HG2	2.05	0.56
9:2:128:LEU:HD12	9:2:140:ILE:HB	1.88	0.56
9:3:19:MET:HB2	9:3:236:VAL:HG11	1.87	0.56
9:8:227:ALA:CB	10:ZJ:399:LEU:HD22	2.35	0.56
9:9:115:THR:HB	9:9:191:LEU:HD23	1.87	0.56
9:ZD:52:PRO:HG3	9:ZD:67:GLN:HE21	1.70	0.56
9:ZD:70:THR:HG22	9:ZD:71:GLY:H	1.70	0.56
9:ZD:88:GLN:HE21	10:ZO:53:LYS:HB2	1.69	0.56
10:ZM:24:ILE:O	10:ZM:27:SER:OG	2.22	0.56
10:ZR:107:ASN:ND2	10:ZR:138:THR:OG1	2.38	0.56
10:ZR:267:MET:HE2	10:ZR:269:GLN:NE2	2.19	0.56
10:ZU:159:ASN:N	10:ZU:274:ASN:OD1	2.32	0.56
10:ZW:228:THR:HB	10:ZW:244:VAL:HG21	1.87	0.56
10:Zd:159:ASN:ND2	10:Zd:162:ASP:OD2	2.38	0.56
10:Zf:69:THR:OG1	10:Zf:74:ASP:OD2	2.20	0.56
6:Z:118:VAL:HG23	8:q:248:LEU:HD13	1.88	0.56
8:q:231:MET:CE	9:v:260:LEU:HD23	2.35	0.56
9:3:49:ILE:HG21	9:3:66:LEU:HD23	1.86	0.56
10:ZV:144:MET:HG2	10:ZV:287:GLY:H	1.71	0.56
9:r:255:GLN:O	9:r:259:GLN:HG2	2.05	0.56
5:Q:23:GLN:HE22	6:V:125:MET:HE1	1.69	0.56
6:X:103:VAL:HG21	8:o:9:MET:HB2	1.86	0.56
8:n:153:ASN:HD21	9:y:194:GLU:CG	2.19	0.56
9:6:185:GLU:OE1	9:ZB:51:GLN:NE2	2.38	0.56
9:8:122:VAL:O	9:ZD:180:ASN:ND2	2.39	0.56
10:ZF:331:ASP:HA	10:ZK:40:ALA:HB1	1.88	0.56
10:ZJ:41:ASP:HB2	10:ZJ:43:PHE:CE2	2.40	0.56
10:ZK:310:GLN:O	10:ZK:312:LEU:HD12	2.05	0.56
10:ZN:65:THR:HA	10:ZY:50:LEU:HD23	1.88	0.56
10:ZS:180:LYS:HD2	10:ZS:181:LYS:H	1.71	0.56
2:E:93:ALA:HB2	3:F:88:VAL:HG21	1.87	0.56
8:n:71:LEU:HB2	9:y:70:THR:CG2	2.34	0.56
9:0:77:THR:HG23	9:5:66:LEU:HD12	1.87	0.56
9:9:45:LEU:HD22	9:y:98:LYS:CG	2.30	0.56
9:ZB:19:MET:HE1	9:ZB:233:MET:HG3	1.86	0.56
9:ZD:122:VAL:O	10:ZI:322:ASN:CG	2.48	0.56
10:ZH:75:VAL:CG1	10:ZH:356:LEU:HB3	2.35	0.56
10:ZJ:195:ASP:OD2	10:ZJ:216:SER:OG	2.17	0.56
10:ZK:102:LEU:HD21	10:ZK:106:ARG:HD3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZK:379:GLN:HG3	10:ZP:391:THR:HG23	1.87	0.56
10:ZO:156:ILE:HG21	10:ZO:200:PHE:HE2	1.71	0.56
10:ZT:294:ILE:O	10:ZT:358:ASN:ND2	2.39	0.56
9:w:22:ILE:HG21	9:w:233:MET:HG3	1.88	0.56
1:D:25:LEU:HD23	3:J:206:ALA:HB2	1.86	0.56
8:m:231:MET:HE3	9:r:260:LEU:HD13	1.88	0.56
8:q:152:PRO:HG3	9:l:193:ILE:HG22	1.85	0.56
10:ZK:99:GLN:HG3	10:ZK:361:LEU:HD11	1.88	0.56
10:ZM:171:SER:O	10:ZM:177:SER:OG	2.23	0.56
10:ZO:304:TYR:HE1	10:ZO:310:GLN:HB3	1.71	0.56
10:ZS:159:ASN:ND2	10:ZS:162:ASP:OD1	2.38	0.56
2:E:205:ASN:HD21	3:F:211:MET:HB2	1.71	0.56
3:H:66:ARG:HG3	3:H:182:ALA:HB2	1.87	0.56
9:2:9:LYS:HE3	9:w:228:GLU:HG3	1.87	0.56
9:ZA:99:GLY:O	9:ZA:116:ARG:NH2	2.39	0.56
9:ZA:218:TYR:HH	10:ZL:53:LYS:HB2	1.71	0.56
9:ZA:233:MET:SD	10:ZF:388:THR:HB	2.46	0.56
9:ZA:248:SER:HB2	10:ZF:402:LEU:HD22	1.87	0.56
9:ZE:85:ASN:HA	10:ZP:50:LEU:HD11	1.88	0.56
10:ZL:165:PRO:HG3	10:ZL:179:ASN:ND2	2.20	0.56
10:ZQ:390:LYS:HB2	10:ZV:402:LEU:HD22	1.86	0.56
10:ZX:159:ASN:ND2	10:ZX:161:THR:OG1	2.35	0.56
6:W:72:ALA:O	6:W:95:ASN:ND2	2.38	0.56
8:p:2:ASP:OD2	8:p:4:ALA:N	2.31	0.56
8:q:148:PRO:HB2	9:v:210:GLY:HA3	1.88	0.56
9:ZD:189:GLU:OE1	10:ZI:53:LYS:HE2	2.06	0.56
9:ZE:128:LEU:HD13	9:ZE:140:ILE:HB	1.87	0.56
10:ZI:71:ARG:NH1	10:ZI:74:ASP:OD1	2.39	0.56
10:ZK:118:GLY:HA2	10:ZK:316:VAL:HG12	1.87	0.56
10:ZP:107:ASN:HD22	10:ZP:138:THR:HG22	1.69	0.56
10:ZP:164:VAL:HG22	10:ZP:202:LYS:HG2	1.87	0.56
10:Zc:331:ASP:HA	10:Zh:40:ALA:HB1	1.87	0.56
8:p:16:LEU:CD2	9:u:253:MET:HE3	2.33	0.56
9:l:91:ASN:ND2	9:l:94:ASP:OD1	2.39	0.56
10:ZG:112:GLN:HG2	10:ZG:331:ASP:HB3	1.87	0.56
10:ZI:382:TYR:CE1	10:ZN:395:ILE:HG23	2.41	0.56
10:ZM:105:ASN:HB2	10:ZM:107:ASN:HD21	1.70	0.56
10:ZS:247:THR:HG23	10:ZS:258:THR:HG22	1.88	0.56
10:Zb:217:ASP:HB3	10:Zb:220:ALA:HB2	1.88	0.56
9:t:241:GLU:OE1	9:z:258:THR:OG1	2.20	0.56
4:L:87:GLN:O	4:L:91:LYS:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Q:42:ASP:HB3	7:d:316:LEU:HD21	1.88	0.55
8:q:72:ASP:OD1	9:1:9:LYS:HE2	2.06	0.55
9:8:241:GLU:HB3	9:ZE:258:THR:HG21	1.87	0.55
9:ZB:238:ARG:NH1	10:ZH:393:ASP:OD1	2.39	0.55
10:ZH:380:ARG:NH1	10:ZN:393:ASP:OD1	2.40	0.55
10:ZI:269:GLN:HE22	10:ZO:146:ALA:H	1.53	0.55
10:ZO:186:VAL:HG23	10:ZO:194:HIS:HB2	1.87	0.55
9:v:38:ARG:NH2	9:v:78:GLU:OE1	2.36	0.55
2:E:166:SER:C	2:E:168:ALA:N	2.64	0.55
3:H:58:LEU:O	3:H:62:THR:OG1	2.23	0.55
8:p:152:PRO:HB3	9:5:51:GLN:HE21	1.71	0.55
9:4:22:ILE:HG21	9:4:233:MET:HG2	1.88	0.55
10:ZL:8:SER:OG	10:ZL:52:VAL:O	2.23	0.55
10:ZY:217:ASP:HB3	10:ZY:220:ALA:HB2	1.89	0.55
10:Ze:130:GLN:H	10:Ze:130:GLN:CD	2.14	0.55
3:J:75:ARG:NH1	3:J:86:ASN:OD1	2.36	0.55
4:P:89:ARG:NH2	4:P:90:ASN:OD1	2.39	0.55
8:n:202:MET:CE	9:y:73:ARG:NH1	2.65	0.55
8:q:71:LEU:CG	9:1:70:THR:HG21	2.33	0.55
8:q:155:VAL:HG21	9:6:54:ALA:HA	1.88	0.55
8:q:196:ASP:HB3	8:q:199:ILE:HD12	1.88	0.55
9:2:34:PHE:HB3	9:2:222:SER:HB3	1.88	0.55
9:4:55:GLN:NE2	9:4:57:SER:O	2.40	0.55
9:5:9:LYS:HE3	9:z:228:GLU:HG3	1.89	0.55
10:ZG:397:ASN:OD1	10:ZG:401:ASN:ND2	2.39	0.55
10:ZV:330:GLY:O	10:ZV:333:VAL:HG12	2.06	0.55
10:ZX:80:ASN:ND2	10:ZX:352:ASN:OD1	2.39	0.55
10:ZZ:33:LYS:O	10:ZZ:59:GLN:NE2	2.38	0.55
10:Zd:381:ASN:OD1	10:Zd:385:ASN:ND2	2.39	0.55
3:F:38:TRP:HB2	4:L:46:SER:OG	2.06	0.55
8:n:109:PRO:HG3	9:s:197:SER:CA	2.36	0.55
9:3:107:LEU:HD12	9:3:111:THR:HG23	1.88	0.55
9:ZD:76:ALA:HB1	10:ZI:47:LYS:CE	2.29	0.55
10:ZJ:41:ASP:HB2	10:ZJ:43:PHE:HE2	1.71	0.55
10:ZO:236:GLY:O	10:ZO:237:ILE:C	2.49	0.55
10:ZS:117:THR:HG22	10:ZS:136:PRO:HA	1.88	0.55
10:ZV:111:MET:N	10:ZV:111:MET:SD	2.79	0.55
10:Zh:97:ASN:OD1	10:Zh:99:GLN:NE2	2.40	0.55
8:o:75:SER:O	8:o:75:SER:OG	2.23	0.55
9:0:22:ILE:HG21	9:0:233:MET:HG3	1.87	0.55
9:3:9:LYS:HE3	9:x:228:GLU:HG3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:45:LEU:HD21	9:y:215:TYR:CE2	2.42	0.55
10:ZN:112:GLN:HG2	10:ZN:331:ASP:HB3	1.88	0.55
10:ZU:16:ASN:O	10:ZU:20:ILE:HG13	2.06	0.55
10:ZZ:160:SER:O	10:ZZ:202:LYS:NZ	2.39	0.55
2:E:233:MET:O	2:E:236:ILE:HG12	2.06	0.55
3:J:230:ASP:OD2	3:J:230:ASP:N	2.40	0.55
8:p:72:ASP:OD2	9:0:9:LYS:HE3	2.05	0.55
9:0:6:TRP:O	9:0:10:THR:HG23	2.07	0.55
9:ZD:233:MET:CE	10:ZI:388:THR:HG23	2.36	0.55
10:ZM:129:GLN:HE21	10:ZM:132:ALA:HB2	1.71	0.55
10:ZT:319:ASN:OD1	10:ZT:320:PHE:N	2.39	0.55
10:ZW:210:VAL:O	10:ZW:227:SER:OG	2.23	0.55
9:r:95:VAL:HG12	9:r:216:GLN:HA	1.89	0.55
9:z:229:GLU:O	9:z:233:MET:HG3	2.06	0.55
6:Z:17:GLN:NE2	6:Z:111:SER:OG	2.39	0.55
6:Z:76:LEU:CD1	9:v:47:GLN:NE2	2.69	0.55
8:n:28:ASN:ND2	9:s:43:ASP:HB3	2.21	0.55
9:ZD:238:ARG:NH1	10:ZJ:397:ASN:HD22	2.03	0.55
10:ZK:233:ASN:ND2	10:ZK:237:ILE:O	2.38	0.55
10:Zb:105:ASN:O	10:Zb:106:ARG:HB2	2.05	0.55
10:Zc:379:GLN:NE2	10:Zh:394:GLN:HE21	2.05	0.55
3:J:80:THR:HB	3:J:83:ALA:HB2	1.88	0.55
6:W:84:LEU:HD11	9:r:62:LEU:CD1	2.37	0.55
9:2:35:LYS:NZ	9:2:220:GLU:OE2	2.40	0.55
9:3:240:TYR:HE1	9:8:257:LEU:HD13	1.72	0.55
10:ZF:18:ASP:OD1	10:ZK:2:SER:HB2	2.07	0.55
10:ZF:352:ASN:OD1	10:ZF:352:ASN:N	2.39	0.55
10:ZG:212:THR:HG21	10:ZG:246:ILE:HD13	1.87	0.55
10:ZN:107:ASN:ND2	10:ZN:138:THR:OG1	2.39	0.55
9:s:185:GLU:HG3	9:x:67:GLN:NE2	2.21	0.55
4:O:59:PHE:CD2	5:T:118:MET:HE2	2.42	0.55
6:X:22:ASN:HD21	8:n:54:ARG:HH21	1.55	0.55
6:Z:3:LEU:HB3	6:Z:126:MET:HE3	1.88	0.55
8:n:224:ALA:N	9:s:253:MET:HE2	2.18	0.55
9:ZE:208:LEU:O	9:ZE:210:GLY:N	2.40	0.55
6:Z:113:GLN:HB2	8:p:243:ARG:NE	2.21	0.55
6:Z:117:GLU:HB3	8:q:248:LEU:HB2	1.89	0.55
8:o:14:GLN:HG3	8:o:58:THR:HA	1.89	0.55
9:8:79:ARG:NH2	9:8:184:LEU:O	2.40	0.55
9:ZD:35:LYS:HB2	9:ZD:79:ARG:HD3	1.88	0.55
10:ZM:184:VAL:HG13	10:ZM:196:MET:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZN:248:THR:OG1	10:ZN:257:ALA:N	2.40	0.55
10:ZU:146:ALA:HB2	10:ZU:286:PRO:HD3	1.88	0.55
10:ZY:251:ILE:HG22	10:ZY:252:ASN:OD1	2.07	0.55
9:v:126:GLY:O	9:v:127:GLN:HB2	2.05	0.55
9:z:22:ILE:HG21	9:z:233:MET:HG2	1.89	0.55
4:K:72:MET:O	4:K:76:GLN:HG2	2.06	0.54
6:V:79:GLU:HG3	9:r:6:TRP:CZ2	2.39	0.54
6:X:80:PRO:HB3	9:y:52:PRO:HD3	1.89	0.54
8:n:153:ASN:HD21	9:y:194:GLU:HG2	1.71	0.54
8:o:146:LEU:CD1	9:4:51:GLN:NE2	2.70	0.54
8:p:152:PRO:CB	9:0:195:THR:HG23	2.31	0.54
8:q:76:ARG:NH2	8:q:105:ILE:O	2.35	0.54
9:1:163:GLY:HA2	9:ZC:111:THR:HG21	1.88	0.54
9:3:45:LEU:HD21	9:s:215:TYR:CE2	2.42	0.54
9:ZB:240:TYR:HE2	10:ZG:395:ILE:HG22	1.68	0.54
10:ZN:71:ARG:NH1	10:ZN:74:ASP:OD1	2.40	0.54
10:ZN:93:PHE:HB3	10:ZN:333:VAL:HG13	1.89	0.54
10:ZW:196:MET:HE1	10:ZW:214:ASP:HB2	1.88	0.54
10:ZY:299:THR:HG22	10:ZY:314:GLN:HG3	1.89	0.54
2:E:166:SER:O	2:E:167:ASN:C	2.49	0.54
3:F:83:ALA:HB3	3:F:84:PRO:HD3	1.89	0.54
6:V:113:GLN:O	6:V:117:GLU:HG2	2.07	0.54
8:q:232:LYS:NZ	9:w:260:LEU:O	2.40	0.54
9:8:205:THR:OG1	9:8:208:LEU:HD23	2.08	0.54
10:ZK:331:ASP:HA	10:ZP:40:ALA:HB1	1.88	0.54
10:ZU:180:LYS:HZ1	10:ZU:274:ASN:C	2.15	0.54
5:R:90:PRO:HB3	5:R:99:THR:HB	1.88	0.54
6:a:117:GLU:HG3	9:r:258:THR:O	2.07	0.54
10:ZH:285:LYS:O	10:ZH:306:ASN:ND2	2.40	0.54
10:ZM:367:ASP:O	10:ZM:371:GLU:HG2	2.07	0.54
10:ZR:210:VAL:HB	10:ZR:228:THR:HG22	1.88	0.54
10:ZY:16:ASN:HB2	10:ZY:39:PHE:HZ	1.72	0.54
9:r:147:LEU:HD11	9:r:162:GLN:HA	1.88	0.54
9:u:3:SER:O	9:u:7:ILE:HD12	2.06	0.54
4:O:77:LYS:HE3	5:U:13:GLN:HE22	1.73	0.54
5:S:36:PRO:HB3	5:S:96:ASP:HB2	1.89	0.54
6:X:121:THR:OG1	8:o:248:LEU:O	2.19	0.54
10:ZI:190:GLN:OE1	10:ZI:192:ASN:ND2	2.36	0.54
10:ZT:187:TYR:CE2	10:ZT:285:LYS:HB2	2.41	0.54
10:ZX:128:ILE:H	10:ZX:128:ILE:HD12	1.71	0.54
10:Zf:79:GLN:O	10:Zf:96:ARG:NH2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:z:180:ASN:ND2	9:z:197:SER:O	2.38	0.54
3:F:37:SER:HA	3:F:123:MET:HE2	1.90	0.54
8:n:70:GLN:CD	9:y:6:TRP:CD1	2.85	0.54
8:n:228:GLU:OE1	9:t:258:THR:CB	2.55	0.54
8:o:26:LEU:HD22	9:t:242:ILE:HG21	1.89	0.54
9:4:50:ARG:HH12	9:z:75:VAL:HG13	1.71	0.54
9:ZC:254:LEU:O	9:ZC:258:THR:HG23	2.07	0.54
9:ZE:22:ILE:HG21	9:ZE:233:MET:HG3	1.89	0.54
10:ZH:42:MET:O	10:ZH:50:LEU:HB2	2.08	0.54
10:ZP:201:VAL:HG23	10:ZP:209:ALA:HB3	1.90	0.54
10:ZR:71:ARG:O	10:ZR:359:GLY:HA2	2.08	0.54
10:ZT:83:PHE:HB2	10:ZT:95:SER:O	2.08	0.54
10:ZV:383:GLN:O	10:ZV:387:GLN:HG2	2.07	0.54
10:Zf:109:VAL:HG12	10:Zf:115:GLN:HA	1.88	0.54
1:C:54:LYS:HZ3	1:D:48:THR:HG21	1.72	0.54
2:E:38:ILE:HB	2:E:43:LYS:HE2	1.90	0.54
8:m:173:ARG:HD3	9:r:46:TYR:CE2	2.43	0.54
8:o:220:MET:HE3	9:t:245:LYS:CD	2.37	0.54
9:3:184:LEU:HB3	9:3:192:TYR:HB3	1.90	0.54
9:4:52:PRO:HB3	9:4:65:GLY:H	1.73	0.54
9:ZC:218:TYR:OH	10:ZN:53:LYS:HD3	2.08	0.54
10:ZM:150:THR:OG1	10:ZM:282:ASN:ND2	2.39	0.54
10:ZT:281:GLN:NE2	10:ZT:283:GLY:O	2.35	0.54
10:ZX:349:GLY:O	10:Zd:89:ASN:ND2	2.32	0.54
10:ZZ:337:THR:HG22	10:ZZ:339:ALA:H	1.72	0.54
10:Ze:322:ASN:HB3	10:Ze:340:SER:HA	1.89	0.54
9:y:44:LEU:HD23	9:y:73:ARG:HD2	1.88	0.54
1:B:36:SER:HB3	1:C:44:ILE:HG23	1.89	0.54
2:E:236:ILE:O	2:E:240:CYS:N	2.36	0.54
4:O:77:LYS:HE3	5:U:13:GLN:NE2	2.23	0.54
9:1:78:GLU:HG2	9:w:121:GLN:HE22	1.70	0.54
9:9:248:SER:HB2	9:ZE:260:LEU:HD22	1.90	0.54
9:ZC:151:ILE:HG12	9:ZC:157:VAL:HG22	1.90	0.54
10:ZF:102:LEU:O	10:ZK:322:ASN:ND2	2.40	0.54
10:ZS:65:THR:HG22	10:Zd:50:LEU:HD12	1.90	0.54
10:ZT:158:LEU:HB2	10:ZT:268:GLN:HG3	1.90	0.54
10:Zc:93:PHE:HD1	10:Zc:114:MET:HE1	1.71	0.54
10:Zf:111:MET:HA	10:Zf:111:MET:HE3	1.90	0.54
9:s:187:ILE:HD11	9:s:193:ILE:HD13	1.90	0.54
8:m:160:ARG:HH11	9:2:58:GLU:HG2	1.73	0.54
8:o:136:THR:HG21	9:4:54:ALA:HB1	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4:78:GLU:OE1	9:z:121:GLN:NE2	2.41	0.54
9:8:227:ALA:HB1	10:ZJ:399:LEU:HD21	1.89	0.54
10:ZX:331:ASP:O	10:ZX:333:VAL:HG23	2.08	0.54
10:Ze:397:ASN:O	10:Ze:398:THR:C	2.48	0.54
10:Zh:294:ILE:O	10:Zh:358:ASN:ND2	2.40	0.54
9:s:19:MET:HE1	9:s:233:MET:HG2	1.90	0.54
1:D:51:PHE:HB3	3:I:205:MET:HE3	1.90	0.54
6:Z:113:GLN:HB2	8:p:243:ARG:HE	1.72	0.54
6:a:85:ALA:HB1	6:a:89:GLY:HA2	1.89	0.54
7:j:328:ILE:HG21	9:u:64:SER:OG	2.08	0.54
8:m:151:PRO:HB2	8:m:154:THR:HG23	1.90	0.54
8:n:243:ARG:O	8:n:246:GLN:HG2	2.08	0.54
8:o:216:ALA:O	8:o:220:MET:HG3	2.08	0.54
9:8:35:LYS:NZ	9:8:220:GLU:OE2	2.38	0.54
10:ZF:288:ASP:OD2	10:ZF:288:ASP:N	2.40	0.54
10:ZO:288:ASP:OD1	10:ZO:289:LEU:N	2.41	0.54
10:ZZ:14:ALA:HB2	10:ZZ:382:TYR:HE2	1.73	0.54
10:Zb:83:PHE:HB2	10:Zb:95:SER:O	2.08	0.54
9:v:187:ILE:HG13	9:v:191:LEU:HB2	1.90	0.54
3:F:126:ALA:O	3:F:127:LEU:C	2.48	0.54
8:n:60:SER:HB2	9:s:65:GLY:O	2.08	0.54
8:n:175:ASP:O	9:s:45:LEU:HD12	2.08	0.54
8:o:115:ILE:HG22	8:o:116:GLN:HG3	1.90	0.54
8:p:87:TRP:HB3	8:p:99:TYR:HB3	1.90	0.54
8:p:200:ARG:HH12	9:v:187:ILE:HB	1.73	0.54
9:4:19:MET:HB2	9:4:236:VAL:HG11	1.90	0.54
9:ZA:240:TYR:OH	10:ZF:399:LEU:HD22	2.07	0.54
9:ZB:40:VAL:O	9:ZB:75:VAL:N	2.41	0.54
10:ZM:81:GLY:HA3	10:ZM:317:LEU:HD23	1.89	0.54
10:ZP:93:PHE:HB3	10:ZP:333:VAL:HG13	1.90	0.54
10:ZY:150:THR:OG1	10:ZY:282:ASN:ND2	2.35	0.54
9:s:77:THR:HG23	9:x:66:LEU:HB2	1.89	0.54
9:s:178:PHE:CE1	9:s:201:PRO:HB3	2.42	0.54
9:x:2:ILE:CG2	9:x:254:LEU:HD11	2.37	0.54
4:N:76:GLN:NE2	6:Y:132:LEU:O	2.41	0.53
8:m:58:THR:CG2	9:r:50:ARG:NH2	2.71	0.53
8:q:87:TRP:HB3	8:q:99:TYR:HB3	1.90	0.53
9:ZC:240:TYR:CE2	10:ZH:395:ILE:HG22	2.42	0.53
9:ZD:218:TYR:OH	10:ZO:53:LYS:CD	2.47	0.53
10:ZG:97:ASN:OD1	10:ZG:98:GLY:N	2.40	0.53
10:ZL:18:ASP:OD1	10:ZQ:2:SER:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZV:128:ILE:HD12	10:ZV:314:GLN:HB2	1.90	0.53
10:ZW:382:TYR:CE1	10:Zb:395:ILE:HG23	2.43	0.53
10:Za:14:ALA:HB2	10:Za:382:TYR:HE2	1.72	0.53
10:Ze:137:ILE:HG21	10:Ze:300:VAL:HG21	1.90	0.53
9:u:76:ALA:HA	9:z:66:LEU:HB3	1.90	0.53
2:E:188:LEU:O	2:E:190:VAL:N	2.39	0.53
5:U:103:ASP:OD1	6:a:112:TYR:OH	2.26	0.53
9:ZB:98:LYS:HE3	10:ZM:44:ALA:CB	2.38	0.53
9:ZE:37:GLN:NE2	10:ZJ:43:PHE:HE1	2.06	0.53
10:ZG:109:VAL:HG12	10:ZG:115:GLN:HA	1.91	0.53
10:ZP:87:ASP:OD1	10:ZP:87:ASP:N	2.35	0.53
10:ZS:349:GLY:O	10:ZY:89:ASN:ND2	2.42	0.53
10:ZU:165:PRO:HG2	10:ZU:201:VAL:HG13	1.89	0.53
10:ZY:188:ASP:OD1	10:ZY:194:HIS:NE2	2.39	0.53
10:Zd:33:LYS:NZ	10:Zd:362:GLU:OE1	2.39	0.53
9:t:91:ASN:HB3	9:t:94:ASP:OD2	2.09	0.53
9:z:43:ASP:OD1	9:z:43:ASP:N	2.41	0.53
2:E:186:LEU:HD21	2:E:236:ILE:HG22	1.90	0.53
3:F:211:MET:SD	3:G:211:MET:HE3	2.49	0.53
3:I:59:LEU:HD11	4:N:102:MET:HE1	1.90	0.53
3:I:139:LEU:HG	3:I:170:LEU:HD21	1.90	0.53
3:I:163:GLU:N	3:I:163:GLU:OE2	2.39	0.53
8:o:18:GLN:NE2	8:o:41:LEU:HG	2.22	0.53
9:1:19:MET:HB2	9:1:236:VAL:HG11	1.91	0.53
9:6:52:PRO:HB3	9:6:65:GLY:H	1.74	0.53
9:7:256:LYS:HD2	9:7:256:LYS:O	2.08	0.53
9:ZA:97:ILE:HD12	9:ZA:116:ARG:HG3	1.91	0.53
10:ZJ:231:LYS:NZ	10:ZJ:239:GLU:OE1	2.38	0.53
10:Zc:29:THR:HG23	10:Zh:39:PHE:HB2	1.89	0.53
10:Zd:281:GLN:NE2	10:Zd:283:GLY:O	2.39	0.53
1:D:42:THR:HG22	1:D:44:ILE:HG12	1.91	0.53
8:n:132:GLY:HA3	9:s:179:MET:SD	2.48	0.53
8:q:16:LEU:CD2	9:v:253:MET:HE3	2.37	0.53
8:q:140:ASP:CG	9:6:57:SER:HA	2.25	0.53
9:7:49:ILE:HG21	9:7:66:LEU:HD23	1.91	0.53
9:ZD:42:GLU:OE2	9:ZD:73:ARG:NE	2.35	0.53
10:ZO:156:ILE:HG13	10:ZO:276:ILE:HA	1.91	0.53
10:ZU:170:PHE:HE2	10:ZU:223:PRO:HG2	1.73	0.53
10:ZX:71:ARG:NH1	10:ZX:100:PHE:O	2.36	0.53
8:p:76:ARG:HB3	8:p:79:ASP:OD2	2.09	0.53
9:7:57:SER:OG	9:r:154:ASP:OD1	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:22:ILE:HG21	9:9:233:MET:HG3	1.91	0.53
9:ZB:120:PHE:HB3	9:ZB:128:LEU:HD22	1.90	0.53
10:ZJ:151:THR:OG1	10:ZJ:282:ASN:ND2	2.42	0.53
10:ZP:74:ASP:O	10:ZP:359:GLY:N	2.40	0.53
10:ZP:112:GLN:HG2	10:ZP:331:ASP:HB3	1.89	0.53
10:ZX:319:ASN:OD1	10:ZX:320:PHE:N	2.42	0.53
10:Zf:397:ASN:O	10:Zf:398:THR:C	2.51	0.53
1:D:9:MET:HE1	3:J:188:THR:HA	1.90	0.53
3:F:75:ARG:HD2	3:F:84:PRO:HD2	1.89	0.53
3:F:207:LEU:HD23	3:F:209:MET:HE1	1.91	0.53
5:U:106:ARG:HG2	8:q:248:LEU:HD21	1.91	0.53
6:Z:121:THR:HA	8:q:250:MET:HE2	1.90	0.53
8:m:202:MET:HE2	9:x:73:ARG:NH2	2.21	0.53
8:o:89:VAL:HG12	8:o:121:ILE:HB	1.91	0.53
9:0:116:ARG:NH1	9:0:220:GLU:OE2	2.41	0.53
9:3:33:GLY:N	9:3:220:GLU:O	2.40	0.53
9:4:256:LYS:HG2	9:z:241:GLU:HG2	1.90	0.53
9:5:257:LEU:HG	9:u:230:LEU:CD1	2.34	0.53
10:ZO:148:SER:HA	10:ZO:187:TYR:O	2.08	0.53
10:ZU:293:GLN:NE2	10:ZU:303:ASN:HD21	2.07	0.53
10:ZY:106:ARG:HH12	10:ZY:141:ASN:HB3	1.74	0.53
1:B:77:VAL:HG21	3:H:225:LEU:HD11	1.91	0.53
2:E:54:ILE:HD11	3:J:153:LEU:HB3	1.91	0.53
9:6:197:SER:HB3	9:ZB:53:GLY:HA2	1.88	0.53
9:9:231:VAL:HG11	10:ZF:7:VAL:HG22	1.90	0.53
9:ZA:227:ALA:HB1	10:ZL:399:LEU:CD2	2.39	0.53
10:ZK:146:ALA:HB2	10:ZK:286:PRO:HD3	1.91	0.53
10:ZO:201:VAL:HG23	10:ZO:209:ALA:HB3	1.91	0.53
10:ZQ:112:GLN:NE2	10:ZQ:331:ASP:HB3	2.24	0.53
10:ZQ:184:VAL:HG13	10:ZQ:196:MET:HB2	1.89	0.53
10:Zc:84:ARG:HD2	10:Zc:345:LEU:HD21	1.90	0.53
9:s:76:ALA:HA	9:x:66:LEU:HB3	1.89	0.53
2:E:101:PHE:CE2	3:F:223:LEU:HD11	2.43	0.53
5:Q:50:LYS:O	5:Q:54:VAL:HG22	2.09	0.53
6:W:23:VAL:HG21	6:W:47:VAL:HG13	1.91	0.53
6:Z:98:VAL:HG12	9:v:257:LEU:HD21	1.91	0.53
8:m:76:ARG:HB3	8:m:79:ASP:OD1	2.09	0.53
8:m:107:VAL:HG12	8:m:113:LEU:HD23	1.91	0.53
8:m:138:ALA:HB2	9:2:55:GLN:O	2.08	0.53
8:m:151:PRO:C	8:m:153:ASN:H	2.17	0.53
8:p:220:MET:SD	9:u:246:ALA:HA	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:q:180:ARG:HG3	8:q:180:ARG:NH1	2.21	0.53
9:6:153:ARG:HH12	9:6:213:LEU:HD22	1.74	0.53
9:6:175:LEU:HD21	9:6:214:LEU:HD21	1.89	0.53
10:ZK:270:ASN:HD22	10:ZQ:192:ASN:HA	1.73	0.53
10:ZO:374:ASN:O	10:ZO:377:VAL:N	2.42	0.53
10:ZT:196:MET:HA	10:ZT:196:MET:HE3	1.89	0.53
10:ZU:156:ILE:HG13	10:ZU:276:ILE:HA	1.91	0.53
10:ZV:112:GLN:HG2	10:ZV:331:ASP:HB3	1.89	0.53
9:u:188:GLY:O	9:u:190:ASN:N	2.40	0.53
1:B:62:ILE:O	1:B:66:GLY:N	2.39	0.53
5:T:90:PRO:HG2	8:p:49:LEU:HB2	1.91	0.53
6:Z:57:GLN:O	6:Z:59:THR:N	2.40	0.53
9:0:83:GLN:NE2	9:0:97:ILE:O	2.20	0.53
9:3:145:ASN:O	9:3:161:GLN:NE2	2.42	0.53
9:5:174:ASN:ND2	9:5:203:GLU:OE2	2.36	0.53
9:ZC:137:GLN:HA	9:ZC:138:PRO:C	2.34	0.53
9:ZE:122:VAL:HG13	9:ZE:126:GLY:HA2	1.91	0.53
10:ZG:382:TYR:HE1	10:ZL:399:LEU:HD11	1.73	0.53
10:ZP:396:LEU:O	10:ZP:400:VAL:HG23	2.09	0.53
10:ZS:367:ASP:O	10:ZS:371:GLU:HG2	2.09	0.53
10:ZV:3:PHE:O	10:ZV:7:VAL:HG23	2.09	0.53
10:ZW:112:GLN:OE1	10:ZW:112:GLN:N	2.42	0.53
2:E:127:ARG:O	2:E:131:MET:HE3	2.08	0.53
8:n:137:ILE:HG12	8:n:143:ILE:HG12	1.91	0.53
8:q:76:ARG:NH1	8:q:79:ASP:OD1	2.40	0.53
8:q:232:LYS:CE	9:w:260:LEU:O	2.57	0.53
9:ZC:19:MET:CE	10:ZH:391:THR:CG2	2.87	0.53
10:ZG:217:ASP:HB3	10:ZG:220:ALA:HB2	1.90	0.53
10:ZR:44:ALA:HB3	10:ZR:50:LEU:HD12	1.91	0.53
10:ZX:42:MET:HG2	10:ZX:53:LYS:HE3	1.91	0.53
10:Za:287:GLY:N	10:Za:306:ASN:HD22	2.07	0.53
10:Ze:99:GLN:HE22	10:Ze:111:MET:HG2	1.73	0.53
10:Zf:139:ILE:HA	10:Zf:312:LEU:HD13	1.91	0.53
9:r:19:MET:HE1	9:r:233:MET:HE2	1.90	0.53
3:H:194:LEU:HD11	3:I:217:ILE:HA	1.91	0.52
3:I:180:LYS:O	3:I:184:GLN:HG3	2.09	0.52
8:m:70:GLN:HG3	9:x:3:SER:CB	2.39	0.52
9:1:115:THR:HB	9:1:191:LEU:HD23	1.91	0.52
9:5:245:LYS:HE3	9:ZB:258:THR:O	2.09	0.52
9:6:42:GLU:OE1	9:6:73:ARG:NH2	2.32	0.52
9:9:238:ARG:CZ	10:ZF:397:ASN:HB2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZH:399:LEU:O	10:ZH:400:VAL:C	2.51	0.52
10:ZP:208:TRP:NE1	10:ZP:268:GLN:OE1	2.36	0.52
10:ZU:178:TYR:HA	10:ZU:201:VAL:HG22	1.89	0.52
10:Zb:233:ASN:HD21	10:Zb:237:ILE:HB	1.74	0.52
10:Zc:10:LEU:HD22	10:Zc:389:ILE:HD12	1.91	0.52
10:Ze:165:PRO:HG2	10:Ze:201:VAL:HG13	1.91	0.52
10:Zg:85:LEU:HD13	10:Zg:114:MET:HB3	1.91	0.52
2:E:188:LEU:HB3	2:E:189:PRO:HD2	1.91	0.52
3:H:232:TRP:O	3:H:236:MET:HG3	2.10	0.52
3:I:116:PHE:O	5:T:4:ARG:NH2	2.42	0.52
4:P:76:GLN:NE2	6:V:123:LYS:HB2	2.24	0.52
6:V:80:PRO:HB3	6:V:89:GLY:HA3	1.90	0.52
6:Y:10:ALA:HB3	6:Y:119:LEU:HD13	1.89	0.52
6:a:113:GLN:NE2	8:q:239:GLU:OE2	2.39	0.52
9:2:208:LEU:O	9:2:210:GLY:N	2.42	0.52
9:ZA:111:THR:HG21	9:z:163:GLY:HA2	1.90	0.52
9:ZD:47:GLN:N	9:ZD:68:ILE:O	2.41	0.52
10:ZG:380:ARG:NE	10:ZM:393:ASP:OD2	2.33	0.52
10:ZW:33:LYS:NZ	10:ZW:362:GLU:OE1	2.42	0.52
10:ZZ:33:LYS:NZ	10:ZZ:362:GLU:OE1	2.42	0.52
3:J:41:SER:HB3	5:U:133:VAL:HG21	1.91	0.52
3:J:52:THR:OG1	4:O:91:LYS:NZ	2.32	0.52
8:p:35:ARG:HH11	8:p:101:ARG:HG3	1.74	0.52
8:p:76:ARG:HH21	9:u:38:ARG:HH22	1.57	0.52
9:1:78:GLU:HG2	9:w:121:GLN:NE2	2.23	0.52
9:6:57:SER:O	9:6:59:GLN:N	2.35	0.52
10:ZR:288:ASP:H	10:ZR:305:SER:HG	1.57	0.52
10:ZS:379:GLN:NE2	10:ZX:394:GLN:OE1	2.37	0.52
10:ZU:71:ARG:NH1	10:ZZ:324:GLU:OE2	2.42	0.52
9:u:185:GLU:HB3	9:u:193:ILE:HG13	1.92	0.52
9:y:254:LEU:O	9:y:258:THR:HG23	2.08	0.52
4:O:73:ALA:HB1	5:U:13:GLN:HE21	1.74	0.52
8:m:72:ASP:OD1	9:x:6:TRP:CD2	2.63	0.52
9:ZD:238:ARG:NH2	10:ZJ:393:ASP:OD1	2.43	0.52
10:ZF:84:ARG:NH1	10:ZF:134:PRO:HB2	2.23	0.52
10:ZL:93:PHE:CD2	10:ZL:114:MET:HE1	2.45	0.52
10:ZR:83:PHE:HB2	10:ZR:95:SER:O	2.10	0.52
10:ZY:125:PRO:HD2	10:ZY:125:PRO:O	2.08	0.52
9:x:254:LEU:O	9:x:258:THR:HG23	2.09	0.52
3:G:205:MET:HE3	3:H:209:MET:HA	1.91	0.52
6:V:131:THR:O	6:V:131:THR:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:X:34:VAL:HG21	8:n:40:ALA:HB1	1.92	0.52
6:a:90:TYR:OH	9:w:45:LEU:HD23	2.09	0.52
7:h:324:ASN:HD21	8:o:48:GLY:HA3	1.75	0.52
9:0:251:ASP:OD1	9:u:238:ARG:NH2	2.33	0.52
9:1:16:GLN:OE1	9:1:16:GLN:HA	2.10	0.52
9:4:130:THR:OG1	9:4:131:ALA:N	2.42	0.52
10:ZM:160:SER:O	10:ZM:202:LYS:NZ	2.41	0.52
10:ZQ:102:LEU:HD21	10:ZQ:106:ARG:HA	1.90	0.52
10:Zd:180:LYS:HB3	10:Zd:200:PHE:HB2	1.91	0.52
10:Zd:397:ASN:O	10:Zd:399:LEU:N	2.43	0.52
3:F:149:LEU:HD22	3:G:233:GLN:HG3	1.92	0.52
8:m:79:ASP:HB3	8:m:206:LEU:HD13	1.92	0.52
8:o:70:GLN:NE2	9:z:1:MET:H2	2.08	0.52
9:2:178:PHE:CE1	9:2:184:LEU:HD21	2.45	0.52
9:7:257:LEU:HG	9:w:230:LEU:HD12	1.92	0.52
10:ZL:27:SER:O	10:ZL:364:SER:OG	2.27	0.52
10:ZR:200:PHE:CE2	10:ZR:263:PHE:HE1	2.26	0.52
10:ZR:331:ASP:HA	10:ZW:40:ALA:HB1	1.92	0.52
10:ZU:160:SER:HA	10:ZU:268:GLN:HE21	1.74	0.52
10:Zd:397:ASN:C	10:Zd:399:LEU:N	2.63	0.52
1:D:35:ILE:HG21	1:D:50:SER:HA	1.92	0.52
3:F:199:VAL:O	3:F:203:VAL:HG23	2.10	0.52
4:O:48:ARG:NH1	5:U:3:ASP:OD2	2.43	0.52
8:n:89:VAL:HG12	8:n:121:ILE:HB	1.91	0.52
8:q:115:ILE:HD12	8:q:120:VAL:HG22	1.91	0.52
9:3:219:VAL:HG11	9:8:38:ARG:HH12	1.75	0.52
9:4:42:GLU:OE2	9:4:73:ARG:NE	2.28	0.52
9:7:235:GLN:HG2	9:ZD:5:LEU:HD21	1.91	0.52
10:ZF:139:ILE:HG12	10:ZF:312:LEU:HD22	1.92	0.52
10:ZK:322:ASN:OD1	10:ZK:325:GLY:N	2.43	0.52
10:ZO:2:SER:OG	10:ZO:3:PHE:N	2.37	0.52
10:ZQ:200:PHE:HE2	10:ZQ:263:PHE:HE2	1.57	0.52
10:ZU:144:MET:HE3	10:ZU:306:ASN:HD21	1.73	0.52
10:ZZ:210:VAL:HB	10:ZZ:228:THR:HG22	1.90	0.52
10:Za:188:ASP:OD1	10:Za:192:ASN:N	2.42	0.52
9:y:116:ARG:NH2	9:y:220:GLU:OE1	2.42	0.52
1:B:3:PRO:O	1:B:7:MET:HG2	2.09	0.52
1:D:77:VAL:HG11	3:J:229:VAL:HG21	1.90	0.52
5:S:46:ALA:O	5:S:50:LYS:HG3	2.09	0.52
6:Y:20:ARG:NH2	6:Y:107:SER:HB2	2.24	0.52
8:m:102:ASN:HD22	8:m:116:GLN:HE21	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:q:228:GLU:OE2	9:v:256:LYS:HE3	2.10	0.52
9:2:151:ILE:HG12	9:2:157:VAL:HG22	1.92	0.52
9:5:77:THR:HG23	9:ZA:66:LEU:HD12	1.90	0.52
9:5:257:LEU:HD21	9:u:227:ALA:HA	1.91	0.52
9:7:218:TYR:OH	10:ZI:53:LYS:HG3	2.10	0.52
9:8:226:VAL:HG11	9:ZD:242:ILE:HD12	1.90	0.52
9:ZC:5:LEU:O	9:ZC:9:LYS:HG3	2.09	0.52
10:ZR:267:MET:HE2	10:ZR:269:GLN:HE22	1.74	0.52
10:ZS:151:THR:OG1	10:ZS:282:ASN:ND2	2.43	0.52
10:ZW:331:ASP:HA	10:Zb:40:ALA:HB1	1.92	0.52
10:ZX:331:ASP:HA	10:Zc:40:ALA:HB1	1.91	0.52
10:Zf:397:ASN:O	10:Zf:400:VAL:N	2.43	0.52
10:Zg:157:ASN:HB3	10:Zg:271:THR:HG21	1.90	0.52
3:H:80:THR:O	3:H:80:THR:OG1	2.26	0.52
8:n:221:ILE:HG23	9:t:251:ASP:CG	2.28	0.52
9:7:75:VAL:O	9:ZC:50:ARG:NH1	2.37	0.52
9:9:85:ASN:ND2	10:ZK:4:SER:CB	2.43	0.52
9:ZA:40:VAL:HG23	9:ZA:75:VAL:HB	1.92	0.52
10:ZI:367:ASP:O	10:ZI:371:GLU:HG2	2.10	0.52
10:ZN:41:ASP:N	10:ZN:41:ASP:OD2	2.42	0.52
10:ZP:380:ARG:NE	10:ZV:393:ASP:OD2	2.43	0.52
10:ZW:93:PHE:HB3	10:ZW:333:VAL:HG13	1.92	0.52
10:ZY:230:LEU:HD21	10:ZY:263:PHE:HD2	1.74	0.52
10:Za:116:LEU:HD21	10:Za:315:ILE:HD13	1.92	0.52
10:Zb:109:VAL:HG12	10:Zb:115:GLN:HA	1.92	0.52
10:Zf:317:LEU:HD21	10:Zf:356:LEU:HD11	1.91	0.52
9:z:3:SER:O	9:z:7:ILE:HG13	2.09	0.52
6:a:67:VAL:HG11	8:q:53:THR:HG22	1.91	0.52
7:j:325:GLU:OE1	7:j:325:GLU:N	2.43	0.52
8:q:42:ARG:HG3	8:q:58:THR:HG23	1.91	0.52
9:ZA:241:GLU:HG2	10:ZF:398:THR:HG21	1.91	0.52
10:ZH:380:ARG:HB3	10:ZN:396:LEU:HD13	1.91	0.52
10:ZK:170:PHE:HE2	10:ZK:223:PRO:HG2	1.74	0.52
10:ZN:212:THR:HG21	10:ZN:246:ILE:HD11	1.91	0.52
10:ZP:331:ASP:HA	10:ZU:40:ALA:HB1	1.91	0.52
10:ZV:34:SER:HB3	10:ZV:366:VAL:HG12	1.91	0.52
10:ZV:180:LYS:HD3	10:ZV:274:ASN:HB3	1.91	0.52
10:ZZ:381:ASN:O	10:ZZ:385:ASN:ND2	2.43	0.52
10:Za:150:THR:OG1	10:Za:282:ASN:ND2	2.34	0.52
1:A:65:ALA:O	1:A:69:MET:HG3	2.09	0.51
3:G:83:ALA:HB1	3:G:84:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:73:LEU:HD13	3:I:186:GLY:HA3	1.92	0.51
8:n:221:ILE:HG21	9:t:251:ASP:OD1	1.97	0.51
8:o:221:ILE:CG2	9:u:251:ASP:OD2	2.58	0.51
8:p:135:ILE:HG23	8:p:143:ILE:HG23	1.92	0.51
9:4:7:ILE:HG23	9:4:71:GLY:HA2	1.92	0.51
9:7:18:ASN:O	9:7:22:ILE:HG13	2.10	0.51
10:ZG:30:TYR:HD1	10:ZG:363:ALA:HA	1.75	0.51
10:ZM:80:ASN:OD1	10:ZM:81:GLY:N	2.43	0.51
10:ZS:118:GLY:HA2	10:ZS:316:VAL:HG12	1.92	0.51
10:ZS:180:LYS:HB2	10:ZS:274:ASN:HD22	1.76	0.51
10:Zg:111:MET:HE2	10:Zg:111:MET:N	2.25	0.51
9:w:107:LEU:HD12	9:w:111:THR:HG23	1.92	0.51
2:E:227:MET:SD	2:E:228:LEU:N	2.83	0.51
3:G:74:LEU:HD22	3:G:235:LEU:HD22	1.91	0.51
6:Z:23:VAL:HG21	6:Z:47:VAL:HG13	1.91	0.51
9:8:127:GLN:HE22	9:8:139:ALA:HB1	1.75	0.51
9:ZE:37:GLN:HG2	9:ZE:79:ARG:HD2	1.92	0.51
10:ZI:154:MET:HG3	10:ZI:279:THR:HG22	1.91	0.51
10:ZM:374:ASN:O	10:ZM:377:VAL:N	2.43	0.51
10:ZR:162:ASP:OD2	10:ZR:274:ASN:ND2	2.42	0.51
10:ZR:288:ASP:N	10:ZR:305:SER:OG	2.43	0.51
10:ZV:211:TYR:CE2	10:ZV:226:ALA:HA	2.45	0.51
10:Zc:146:ALA:HB2	10:Zc:286:PRO:HD3	1.91	0.51
1:C:4:GLU:C	1:C:6:VAL:N	2.67	0.51
3:F:67:ILE:H	3:F:67:ILE:HD12	1.75	0.51
9:7:167:PRO:HG2	10:ZI:338:GLN:OE1	2.10	0.51
9:ZC:34:PHE:HB3	9:ZC:222:SER:HB3	1.91	0.51
10:ZJ:34:SER:HB3	10:ZJ:366:VAL:HG22	1.92	0.51
10:ZV:184:VAL:HG13	10:ZV:196:MET:HB2	1.93	0.51
10:ZZ:332:ASN:N	10:Ze:41:ASP:OD2	2.34	0.51
9:y:129:VAL:HG12	9:y:135:GLN:HA	1.91	0.51
1:D:78:ARG:HG3	3:J:234:LEU:HD11	1.91	0.51
3:H:42:VAL:HG13	4:N:42:LEU:HD22	1.93	0.51
6:Z:28:LEU:HD21	6:Z:101:GLU:HB2	1.91	0.51
6:Z:121:THR:OG1	8:q:248:LEU:O	2.19	0.51
6:a:72:ALA:HB3	6:a:95:ASN:HD22	1.74	0.51
8:n:70:GLN:CD	9:y:6:TRP:NE1	2.68	0.51
9:9:155:GLY:HA2	9:9:214:LEU:HD12	1.92	0.51
9:ZB:25:ASN:HD21	9:ZB:37:GLN:H	1.56	0.51
9:ZC:26:LEU:HD22	10:ZH:384:SER:OG	2.09	0.51
9:ZD:151:ILE:HG23	9:ZD:157:VAL:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZP:234:GLU:OE1	10:ZV:255:THR:N	2.42	0.51
3:I:75:ARG:NH1	3:I:86:ASN:OD1	2.36	0.51
6:W:7:PHE:HZ	6:W:123:LYS:HB2	1.76	0.51
8:o:131:GLU:CB	9:t:179:MET:CE	2.86	0.51
8:q:60:SER:CB	9:v:65:GLY:O	2.58	0.51
8:q:225:ARG:HD2	9:w:254:LEU:HB3	1.91	0.51
9:ZB:130:THR:HG22	9:ZB:131:ALA:H	1.75	0.51
9:ZC:174:ASN:ND2	9:ZC:203:GLU:OE2	2.42	0.51
10:ZG:150:THR:OG1	10:ZG:282:ASN:ND2	2.38	0.51
10:ZJ:331:ASP:HA	10:ZO:40:ALA:HB1	1.91	0.51
10:ZS:307:GLU:N	10:ZS:307:GLU:OE2	2.43	0.51
10:ZU:150:THR:HG23	10:ZU:151:THR:HG23	1.93	0.51
10:ZV:2:SER:OG	10:ZV:392:GLN:OE1	2.21	0.51
10:Zf:314:GLN:NE2	10:Zf:347:THR:OG1	2.44	0.51
9:x:79:ARG:HH22	9:x:184:LEU:HB2	1.74	0.51
1:B:59:PHE:HZ	3:G:198:LEU:HD21	1.75	0.51
1:D:17:ALA:HB2	3:J:195:ILE:HG23	1.92	0.51
2:E:130:ASP:O	2:E:134:MET:HG2	2.10	0.51
4:O:53:ARG:O	4:O:57:GLU:HG2	2.11	0.51
5:Q:29:ASN:ND2	5:Q:41:ARG:O	2.36	0.51
6:Z:109:SER:OG	8:p:240:ASN:ND2	2.42	0.51
9:0:120:PHE:HB3	9:0:128:LEU:HD22	1.92	0.51
9:5:85:ASN:ND2	10:ZG:4:SER:CB	2.73	0.51
9:ZB:227:ALA:HA	10:ZM:399:LEU:HD23	1.91	0.51
9:ZD:31:THR:HG22	10:ZI:39:PHE:HB2	1.91	0.51
10:ZI:75:VAL:O	10:ZI:98:GLY:HA3	2.10	0.51
10:ZJ:57:ILE:HG13	10:ZO:47:LYS:HB2	1.93	0.51
10:ZL:269:GLN:NE2	10:ZR:190:GLN:HA	2.25	0.51
10:ZQ:379:GLN:HE21	10:ZV:394:GLN:HE22	1.58	0.51
10:ZR:114:MET:HE1	10:ZR:333:VAL:HG11	1.93	0.51
10:ZR:200:PHE:HE2	10:ZR:263:PHE:HE1	1.58	0.51
10:ZU:33:LYS:NZ	10:ZU:362:GLU:OE1	2.41	0.51
10:ZV:211:TYR:HE2	10:ZV:226:ALA:HA	1.75	0.51
10:ZW:210:VAL:HB	10:ZW:228:THR:HG22	1.93	0.51
10:Zg:144:MET:HE2	10:Zg:310:GLN:HE21	1.76	0.51
9:x:2:ILE:HG23	9:x:254:LEU:HD11	1.92	0.51
9:x:89:THR:OG1	9:x:94:ASP:OD2	2.28	0.51
6:a:78:TYR:CZ	9:w:73:ARG:CD	2.93	0.51
8:n:153:ASN:ND2	9:y:194:GLU:CD	2.69	0.51
8:p:138:ALA:HB1	9:5:56:SER:C	2.35	0.51
9:0:150:THR:OG1	9:0:158:SER:OG	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZC:19:MET:CE	10:ZH:391:THR:HG22	2.41	0.51
10:ZI:374:ASN:O	10:ZI:375:MET:C	2.54	0.51
10:ZJ:306:ASN:O	10:ZJ:307:GLU:HG2	2.10	0.51
10:ZM:144:MET:HE3	10:ZM:306:ASN:HD21	1.76	0.51
10:ZP:139:ILE:HA	10:ZP:312:LEU:HD13	1.91	0.51
10:ZS:5:GLN:HG3	10:ZS:50:LEU:O	2.11	0.51
10:ZS:93:PHE:HB3	10:ZS:333:VAL:HG13	1.93	0.51
10:ZS:102:LEU:HD21	10:ZS:106:ARG:HD3	1.93	0.51
9:v:98:LYS:HG3	9:v:215:TYR:HE2	1.76	0.51
2:E:88:MET:HG2	2:E:146:LEU:HD11	1.93	0.51
8:n:224:ALA:HB2	9:s:249:THR:HG23	1.93	0.51
8:q:228:GLU:OE2	9:v:256:LYS:HG3	2.10	0.51
10:ZH:112:GLN:HG2	10:ZH:331:ASP:HB3	1.93	0.51
10:ZK:27:SER:HA	10:ZK:366:VAL:HG21	1.93	0.51
10:ZM:165:PRO:HG2	10:ZM:201:VAL:HG13	1.92	0.51
10:ZO:199:TYR:O	10:ZO:210:VAL:HA	2.11	0.51
10:ZT:196:MET:SD	10:ZT:248:THR:HG22	2.51	0.51
10:ZV:95:SER:OG	10:ZV:333:VAL:HG23	2.10	0.51
10:Za:112:GLN:NE2	10:Za:331:ASP:O	2.44	0.51
10:Zg:317:LEU:HD11	10:Zg:356:LEU:HD21	1.92	0.51
10:Zh:284:TYR:HB2	10:Zh:306:ASN:HD22	1.76	0.51
9:r:233:MET:HE1	9:w:246:ALA:HA	1.93	0.51
9:z:21:VAL:HG21	9:z:39:ALA:HB2	1.91	0.51
1:D:2:THR:HG23	1:D:5:SER:H	1.76	0.51
2:E:86:PHE:CZ	3:F:91:GLY:HA3	2.45	0.51
3:G:193:PHE:HB3	3:G:222:LYS:HD3	1.92	0.51
9:5:49:ILE:HG22	9:5:50:ARG:HG3	1.93	0.51
9:5:248:SER:HB3	9:ZA:260:LEU:HD22	1.93	0.51
9:6:115:THR:HB	9:6:191:LEU:HD23	1.93	0.51
10:ZG:150:THR:HG1	10:ZG:282:ASN:HD21	1.59	0.51
10:ZG:208:TRP:NE1	10:ZG:268:GLN:OE1	2.41	0.51
10:ZQ:74:ASP:HB3	10:ZQ:361:LEU:HG	1.93	0.51
10:Zb:95:SER:HB2	10:Zb:333:VAL:HG22	1.92	0.51
10:Zh:77:ILE:HD13	10:Zh:96:ARG:HD2	1.92	0.51
9:s:31:THR:HG23	9:x:42:GLU:HA	1.92	0.51
9:u:178:PHE:CE1	9:u:201:PRO:HB3	2.46	0.51
1:B:10:GLY:O	1:B:14:MET:HE2	2.11	0.51
3:F:135:ARG:NH2	3:F:165:VAL:O	2.44	0.51
5:U:92:GLN:HE21	6:a:19:LYS:HG2	1.76	0.51
6:V:78:TYR:OH	9:r:73:ARG:HD2	2.10	0.51
6:W:45:LYS:NZ	8:m:55:THR:OG1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:n:16:LEU:HD22	9:s:2:ILE:HD11	1.93	0.51
8:o:175:ASP:OD1	9:t:48:THR:OG1	2.29	0.51
8:o:202:MET:SD	9:z:44:LEU:CD2	2.99	0.51
8:q:60:SER:HB2	9:v:65:GLY:O	2.10	0.51
9:4:151:ILE:HG12	9:4:157:VAL:HG22	1.93	0.51
9:4:255:GLN:HE21	9:4:259:GLN:NE2	2.09	0.51
9:ZE:115:THR:HB	9:ZE:191:LEU:HD23	1.93	0.51
10:ZT:71:ARG:HB3	10:ZT:74:ASP:OD1	2.11	0.51
10:ZZ:204:LYS:HG3	10:ZZ:205:ASP:H	1.76	0.51
9:v:19:MET:HG2	9:v:236:VAL:HG11	1.93	0.51
1:D:58:VAL:O	1:D:62:ILE:HD12	2.11	0.50
2:E:205:ASN:ND2	3:F:211:MET:HB2	2.25	0.50
4:O:84:MET:O	4:O:88:VAL:HG23	2.11	0.50
8:p:214:VAL:HG11	9:v:12:LEU:HB2	1.93	0.50
9:7:164:GLN:HE22	9:7:166:ALA:HB3	1.76	0.50
9:ZC:98:LYS:CE	10:ZN:44:ALA:CB	2.89	0.50
9:ZE:59:GLN:HG2	9:ZE:60:THR:HG23	1.92	0.50
10:ZH:390:LYS:HB2	10:ZM:402:LEU:HD22	1.92	0.50
10:ZK:348:ALA:HB2	10:ZK:356:LEU:HD13	1.94	0.50
10:ZL:42:MET:HG2	10:ZL:53:LYS:HD3	1.93	0.50
10:ZP:17:LEU:HD13	10:ZU:395:ILE:HD11	1.92	0.50
10:ZQ:71:ARG:HG2	10:ZQ:73:LEU:H	1.76	0.50
10:ZQ:156:ILE:HG22	10:ZQ:276:ILE:HG23	1.93	0.50
10:ZT:165:PRO:HG2	10:ZT:201:VAL:HG13	1.92	0.50
10:Za:41:ASP:N	10:Za:41:ASP:OD1	2.44	0.50
10:Zh:392:GLN:HA	10:Zh:395:ILE:HG22	1.93	0.50
3:H:65:THR:O	3:H:68:ILE:HG22	2.12	0.50
3:I:119:GLN:HG3	5:T:4:ARG:HE	1.75	0.50
3:I:161:GLY:C	3:I:163:GLU:N	2.69	0.50
6:a:19:LYS:HD3	8:q:51:LEU:HD12	1.93	0.50
8:o:16:LEU:CD2	9:t:253:MET:HE3	2.40	0.50
9:ZB:175:LEU:HD21	9:ZB:214:LEU:HD21	1.94	0.50
10:ZG:264:LEU:HD12	10:ZG:265:ASN:H	1.75	0.50
10:ZJ:109:VAL:HG12	10:ZJ:115:GLN:HG3	1.93	0.50
10:ZM:206:ASN:ND2	10:ZM:233:ASN:O	2.44	0.50
10:ZS:139:ILE:HA	10:ZS:312:LEU:HD23	1.94	0.50
10:Zb:154:MET:HE3	10:Zb:156:ILE:HB	1.93	0.50
10:Zg:83:PHE:HB2	10:Zg:95:SER:O	2.11	0.50
9:u:189:GLU:O	9:u:191:LEU:HG	2.12	0.50
1:D:2:THR:O	1:D:5:SER:OG	2.24	0.50
6:V:78:TYR:CB	9:r:44:LEU:HD21	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:W:118:VAL:HG23	8:n:248:LEU:HD13	1.93	0.50
6:Y:77:VAL:HB	9:u:6:TRP:CE2	2.46	0.50
6:Z:83:PRO:HD2	9:u:62:LEU:CD2	2.41	0.50
8:p:129:VAL:HG11	8:p:135:ILE:HD11	1.92	0.50
8:q:138:ALA:HB2	9:6:55:GLN:O	2.10	0.50
9:0:108:PRO:HG2	9:u:153:ARG:HH21	1.76	0.50
9:1:248:SER:O	9:1:252:GLN:HG3	2.11	0.50
9:ZA:128:LEU:HD12	9:ZA:140:ILE:HB	1.92	0.50
9:ZC:10:THR:HG23	9:ZC:71:GLY:HA3	1.94	0.50
9:ZC:28:ASN:OD1	10:ZH:52:VAL:HB	2.11	0.50
10:ZF:379:GLN:HG3	10:ZK:391:THR:HG23	1.92	0.50
10:ZG:65:THR:HG22	10:ZR:50:LEU:HD22	1.92	0.50
10:ZG:104:GLU:HA	10:ZG:104:GLU:OE2	2.10	0.50
10:ZK:103:ASP:OD1	10:ZK:107:ASN:N	2.40	0.50
10:ZO:236:GLY:CA	10:ZO:268:GLN:H	2.21	0.50
10:ZO:373:VAL:O	10:ZO:374:ASN:C	2.54	0.50
10:ZV:159:ASN:ND2	10:ZV:162:ASP:OD2	2.38	0.50
10:Za:109:VAL:HG12	10:Za:115:GLN:HA	1.92	0.50
10:Za:171:SER:O	10:Za:177:SER:OG	2.28	0.50
9:y:205:THR:OG1	9:y:208:LEU:HB2	2.11	0.50
3:I:204:LEU:HD11	3:I:217:ILE:HD12	1.93	0.50
6:W:54:ALA:HB3	6:W:55:PRO:HD3	1.93	0.50
6:Y:107:SER:HA	8:p:1:MET:HE2	1.94	0.50
8:n:202:MET:CE	9:y:73:ARG:CD	2.85	0.50
8:q:60:SER:CA	9:v:65:GLY:O	2.59	0.50
9:0:19:MET:HB2	9:0:236:VAL:HG11	1.94	0.50
9:5:56:SER:H	9:5:61:THR:HA	1.77	0.50
9:ZA:121:GLN:OE1	10:ZF:324:GLU:HG3	2.10	0.50
9:ZC:77:THR:O	9:ZC:77:THR:OG1	2.28	0.50
9:ZE:37:GLN:NE2	10:ZJ:43:PHE:CE1	2.80	0.50
10:ZP:96:ARG:NH2	10:ZP:362:GLU:OE2	2.39	0.50
10:Zd:349:GLY:HA3	10:Zd:355:LYS:HD3	1.92	0.50
2:E:106:MET:HE1	2:E:226:ILE:HG13	1.93	0.50
8:q:35:ARG:O	8:q:173:ARG:NH2	2.44	0.50
9:4:240:TYR:HE2	9:9:257:LEU:HG	1.76	0.50
9:6:35:LYS:NZ	9:6:220:GLU:OE2	2.39	0.50
9:ZB:227:ALA:HA	10:ZM:399:LEU:CD2	2.41	0.50
9:ZC:145:ASN:HA	10:ZH:352:ASN:HD22	1.75	0.50
10:ZG:146:ALA:HB2	10:ZG:286:PRO:HD3	1.92	0.50
10:ZH:84:ARG:HD2	10:ZH:345:LEU:HD21	1.93	0.50
10:ZM:271:THR:OG1	10:ZM:273:ALA:O	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZQ:30:TYR:HD1	10:ZQ:363:ALA:HA	1.75	0.50
10:ZQ:367:ASP:O	10:ZQ:371:GLU:HG2	2.10	0.50
10:ZR:180:LYS:NZ	10:ZR:181:LYS:O	2.45	0.50
10:ZS:271:THR:OG1	10:ZS:273:ALA:O	2.29	0.50
10:Ze:362:GLU:OE1	10:Ze:362:GLU:N	2.38	0.50
10:Zf:381:ASN:O	10:Zf:385:ASN:ND2	2.44	0.50
9:r:82:SER:OG	9:r:223:ASN:ND2	2.36	0.50
9:s:79:ARG:NH2	9:s:186:SER:OG	2.44	0.50
9:u:164:GLN:C	9:u:166:ALA:H	2.19	0.50
3:F:143:ARG:HH21	3:F:180:LYS:HB3	1.77	0.50
5:T:123:LEU:HD23	6:Y:132:LEU:HD11	1.92	0.50
8:m:231:MET:HE2	9:r:257:LEU:HA	1.93	0.50
8:n:172:GLN:HB2	8:n:182:THR:HG22	1.93	0.50
9:4:226:VAL:HG11	9:9:242:ILE:HD13	1.93	0.50
9:5:173:LEU:HD23	9:5:214:LEU:HD13	1.93	0.50
9:ZD:231:VAL:HG11	10:ZJ:7:VAL:HG22	1.93	0.50
10:ZH:144:MET:HE3	10:ZH:306:ASN:HD21	1.77	0.50
10:ZK:109:VAL:HG12	10:ZK:115:GLN:HA	1.93	0.50
10:ZN:65:THR:HG21	10:ZY:4:SER:HB2	1.93	0.50
10:ZO:102:LEU:HD21	10:ZO:106:ARG:HD2	1.93	0.50
2:E:229:MET:O	2:E:233:MET:HG2	2.12	0.50
3:G:75:ARG:NH2	3:G:84:PRO:O	2.44	0.50
3:G:86:ASN:HD21	4:L:103:GLN:HA	1.77	0.50
3:G:180:LYS:NZ	3:H:230:ASP:OD1	2.27	0.50
4:K:86:ILE:HG12	4:P:102:MET:HE2	1.93	0.50
6:Y:10:ALA:O	6:Y:14:LEU:HG	2.12	0.50
8:n:231:MET:SD	9:s:260:LEU:CD1	3.00	0.50
9:2:227:ALA:HA	9:ZD:257:LEU:HD21	1.93	0.50
9:5:76:ALA:HB1	9:ZA:64:SER:O	2.12	0.50
9:ZA:37:GLN:HG2	9:ZA:79:ARG:HD3	1.93	0.50
9:ZA:122:VAL:O	10:ZF:322:ASN:OD1	2.30	0.50
9:ZC:28:ASN:OD1	10:ZH:52:VAL:CB	2.58	0.50
9:ZD:40:VAL:HG23	9:ZD:75:VAL:HB	1.94	0.50
9:ZD:233:MET:CE	10:ZI:388:THR:CG2	2.89	0.50
10:ZF:22:ASN:ND2	10:ZK:48:VAL:O	2.40	0.50
10:ZJ:237:ILE:H	10:ZJ:237:ILE:HD12	1.77	0.50
10:ZP:6:ALA:HB1	10:ZP:389:ILE:HG13	1.94	0.50
10:ZP:391:THR:O	10:ZP:395:ILE:HG23	2.12	0.50
10:ZU:270:ASN:ND2	10:Za:286:PRO:HD2	2.27	0.50
10:Zb:86:VAL:HG13	10:Zb:115:GLN:HB2	1.92	0.50
10:Zb:114:MET:HE1	10:Zb:333:VAL:HG11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Zb:373:VAL:O	10:Zb:377:VAL:HG23	2.12	0.50
10:Zc:188:ASP:OD1	10:Zc:192:ASN:N	2.44	0.50
10:Zd:317:LEU:HD11	10:Zd:356:LEU:HD21	1.93	0.50
3:F:224:MET:O	3:F:228:LEU:HB2	2.11	0.50
3:J:167:MET:HG3	3:J:171:LEU:HG	1.93	0.50
4:N:57:GLU:HG2	5:S:11:PHE:CE2	2.47	0.50
7:k:322:PRO:HD3	9:v:50:ARG:HD3	1.94	0.50
8:n:109:PRO:HG3	9:s:197:SER:HA	1.92	0.50
8:n:147:ASN:O	8:n:148:PRO:C	2.54	0.50
9:1:72:VAL:HB	9:w:28:ASN:ND2	2.26	0.50
9:4:184:LEU:HB3	9:4:192:TYR:HB3	1.93	0.50
9:8:227:ALA:CB	10:ZJ:399:LEU:CD2	2.90	0.50
9:ZB:5:LEU:O	9:ZB:9:LYS:HG3	2.11	0.50
10:ZO:178:TYR:HA	10:ZO:201:VAL:HG12	1.92	0.50
10:ZY:27:SER:O	10:ZY:364:SER:OG	2.30	0.50
10:Zd:397:ASN:O	10:Zd:398:THR:C	2.53	0.50
9:t:129:VAL:HG12	9:t:135:GLN:HA	1.93	0.50
9:x:184:LEU:HB3	9:x:192:TYR:HB3	1.94	0.50
9:y:19:MET:HB2	9:y:236:VAL:HG11	1.93	0.50
2:E:185:MET:HE3	2:E:188:LEU:HD22	1.94	0.50
8:o:174:SER:OG	8:o:176:ASP:OD1	2.29	0.50
8:q:101:ARG:NH1	8:q:207:GLU:OE1	2.45	0.50
9:4:123:ASP:OD1	9:4:127:GLN:N	2.45	0.50
9:7:56:SER:O	9:r:153:ARG:N	2.39	0.50
10:ZG:300:VAL:HG13	10:ZG:312:LEU:HB2	1.93	0.50
10:ZK:34:SER:HB3	10:ZK:366:VAL:HG12	1.94	0.50
10:ZN:102:LEU:O	10:ZS:322:ASN:ND2	2.44	0.50
10:ZV:314:GLN:NE2	10:ZV:347:THR:OG1	2.44	0.50
10:ZX:208:TRP:NE1	10:ZX:268:GLN:OE1	2.36	0.50
10:Zf:319:ASN:OD1	10:Zf:320:PHE:N	2.44	0.50
6:Y:106:MET:O	6:Y:110:ARG:HG2	2.12	0.49
9:5:7:ILE:HG23	9:5:71:GLY:HA2	1.92	0.49
9:7:52:PRO:HB3	9:7:65:GLY:H	1.77	0.49
9:7:151:ILE:HG12	9:7:157:VAL:HG22	1.94	0.49
10:ZF:99:GLN:HG2	10:ZF:111:MET:HE2	1.93	0.49
10:ZH:397:ASN:OD1	10:ZH:401:ASN:ND2	2.45	0.49
10:ZO:80:ASN:OD1	10:ZO:81:GLY:N	2.45	0.49
10:ZO:129:GLN:O	10:ZO:129:GLN:HG3	2.11	0.49
10:Zh:391:THR:O	10:Zh:395:ILE:HG22	2.12	0.49
3:I:161:GLY:C	3:I:163:GLU:H	2.20	0.49
4:P:55:GLN:HG2	4:P:71:VAL:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:U:46:ALA:O	5:U:50:LYS:HG2	2.11	0.49
8:q:154:THR:O	8:q:155:VAL:C	2.55	0.49
9:3:185:GLU:OE1	9:8:51:GLN:NE2	2.45	0.49
9:6:46:TYR:HA	9:6:69:GLY:HA2	1.93	0.49
9:ZE:85:ASN:ND2	10:ZP:50:LEU:CD2	2.75	0.49
10:ZO:141:ASN:O	10:ZO:142:THR:C	2.56	0.49
10:ZS:116:LEU:HD21	10:ZS:315:ILE:HD13	1.94	0.49
10:ZT:337:THR:OG1	10:ZT:338:GLN:N	2.44	0.49
9:y:2:ILE:HG13	9:y:254:LEU:HD21	1.93	0.49
6:X:78:TYR:CG	9:t:44:LEU:CD2	2.95	0.49
6:Y:102:MET:HE3	8:o:229:MET:HG2	1.94	0.49
6:Y:113:GLN:CD	8:o:243:ARG:HD2	2.38	0.49
8:m:26:LEU:HD22	9:r:242:ILE:HG21	1.94	0.49
8:m:160:ARG:NH1	9:2:58:GLU:HG2	2.27	0.49
9:1:122:VAL:O	9:6:180:ASN:ND2	2.35	0.49
9:2:70:THR:HG22	9:2:71:GLY:H	1.77	0.49
10:ZJ:171:SER:O	10:ZJ:177:SER:OG	2.28	0.49
10:ZL:84:ARG:HH12	10:ZL:92:VAL:HG22	1.77	0.49
10:ZN:139:ILE:HA	10:ZN:312:LEU:HD22	1.93	0.49
10:ZP:181:LYS:HD3	10:Za:129:GLN:HE22	1.77	0.49
10:ZQ:65:THR:HA	10:Zb:50:LEU:HD13	1.94	0.49
10:Zb:179:ASN:OD1	10:Zb:202:LYS:N	2.35	0.49
10:Zf:126:PRO:HB2	10:Zf:311:VAL:HG12	1.94	0.49
9:s:241:GLU:OE1	9:y:258:THR:OG1	2.26	0.49
3:F:232:TRP:NE1	3:F:236:MET:HE3	2.27	0.49
3:I:59:LEU:O	3:I:65:THR:OG1	2.28	0.49
3:J:40:LEU:HD23	5:U:130:MET:HE1	1.94	0.49
8:m:144:SER:OG	9:2:55:GLN:HB3	2.11	0.49
8:m:202:MET:HE2	9:x:73:ARG:CZ	2.42	0.49
8:n:188:GLU:HG3	8:n:189:ARG:HG2	1.94	0.49
8:p:215:GLU:HG3	9:v:9:LYS:HZ2	1.77	0.49
9:2:66:LEU:HD12	9:x:77:THR:HG23	1.94	0.49
9:6:230:LEU:HA	9:6:233:MET:HG3	1.95	0.49
9:ZB:151:ILE:HG23	9:ZB:157:VAL:HG22	1.93	0.49
9:ZC:20:ASP:OD1	10:ZH:2:SER:HB2	2.12	0.49
9:ZE:207:GLY:O	10:ZK:89:ASN:ND2	2.46	0.49
9:ZE:240:TYR:CD2	10:ZJ:395:ILE:CG2	2.80	0.49
10:ZK:175:ALA:HA	10:ZK:178:TYR:CZ	2.47	0.49
10:ZL:30:TYR:HD1	10:ZL:363:ALA:HA	1.77	0.49
10:ZS:322:ASN:OD1	10:ZS:325:GLY:N	2.45	0.49
10:ZT:396:LEU:O	10:ZT:400:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZV:387:GLN:CD	10:Zb:400:VAL:HG13	2.38	0.49
10:Zg:159:ASN:ND2	10:Zg:161:THR:OG1	2.44	0.49
3:F:101:MET:HE1	3:F:137:PHE:CZ	2.47	0.49
3:G:66:ARG:NH2	3:G:178:GLU:OE1	2.45	0.49
5:Q:106:ARG:NH1	8:m:241:GLU:OE2	2.45	0.49
6:W:22:ASN:ND2	8:m:54:ARG:HE	2.10	0.49
7:h:324:ASN:ND2	8:o:48:GLY:HA3	2.28	0.49
8:p:91:GLN:HB2	8:p:121:ILE:HD11	1.94	0.49
8:p:104:ASN:HD21	9:u:38:ARG:HH21	1.59	0.49
9:0:51:GLN:NE2	9:0:65:GLY:HA3	2.27	0.49
10:ZG:160:SER:HA	10:ZG:268:GLN:HE21	1.76	0.49
10:ZM:390:LYS:HB2	10:ZR:402:LEU:HD22	1.94	0.49
10:ZU:141:ASN:HA	10:ZU:289:LEU:HD13	1.94	0.49
10:ZV:147:LYS:NZ	10:ZV:148:SER:O	2.43	0.49
10:Zb:96:ARG:HG3	10:Zb:334:TRP:HZ3	1.76	0.49
10:Zb:322:ASN:OD1	10:Zb:325:GLY:N	2.45	0.49
10:Zc:139:ILE:HA	10:Zc:312:LEU:HD22	1.93	0.49
10:Zc:317:LEU:HD21	10:Zc:356:LEU:HD21	1.95	0.49
10:Zh:2:SER:C	10:Zh:392:GLN:HE22	2.21	0.49
9:u:129:VAL:HG12	9:u:135:GLN:HA	1.94	0.49
1:D:77:VAL:CG1	3:J:229:VAL:HG21	2.42	0.49
2:E:12:TRP:CZ3	4:P:34:PHE:HB2	2.48	0.49
9:9:252:GLN:O	9:9:256:LYS:HG2	2.12	0.49
9:ZA:77:THR:H	10:ZF:47:LYS:CD	2.22	0.49
9:ZE:49:ILE:HB	9:ZE:66:LEU:HB3	1.93	0.49
10:ZH:175:ALA:HA	10:ZH:178:TYR:CZ	2.47	0.49
10:ZM:269:GLN:OE1	10:ZS:146:ALA:N	2.45	0.49
10:ZT:17:LEU:HD13	10:ZY:395:ILE:HD11	1.95	0.49
10:ZT:210:VAL:HB	10:ZT:228:THR:HG22	1.93	0.49
10:ZU:65:THR:HA	10:Zf:50:LEU:HD13	1.94	0.49
10:ZU:182:GLY:HA2	10:Zf:131:GLY:HA3	1.93	0.49
10:ZW:102:LEU:O	10:Zb:322:ASN:ND2	2.46	0.49
10:Za:348:ALA:HB1	10:Za:355:LYS:HA	1.94	0.49
10:Zh:386:ALA:O	10:Zh:389:ILE:HG22	2.13	0.49
9:r:185:GLU:HB3	9:r:193:ILE:HG23	1.95	0.49
8:n:225:ARG:NH2	9:t:255:GLN:CD	2.61	0.49
9:0:80:LEU:HD13	9:v:91:ASN:HB2	1.94	0.49
9:4:76:ALA:HB1	9:9:64:SER:O	2.13	0.49
9:ZB:163:GLY:O	9:ZB:165:ALA:N	2.46	0.49
9:ZB:172:GLN:HE22	9:ZB:205:THR:HG23	1.78	0.49
9:ZB:235:GLN:HE22	10:ZH:3:PHE:HB3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZD:185:GLU:CD	10:ZI:46:SER:CB	2.66	0.49
10:ZN:156:ILE:HD12	10:ZN:276:ILE:HG13	1.93	0.49
10:ZY:21:GLY:HA2	10:ZY:24:ILE:HG22	1.94	0.49
10:Za:68:ASN:OD1	10:Za:68:ASN:N	2.44	0.49
10:Zd:389:ILE:O	10:Zd:390:LYS:C	2.55	0.49
9:u:36:ARG:NH2	9:u:229:GLU:OE2	2.45	0.49
4:L:82:MET:HE3	5:Q:133:VAL:CG2	2.43	0.49
5:Q:17:ASN:HD22	5:Q:57:ARG:NH1	2.10	0.49
5:T:102:MET:HB3	5:T:106:ARG:HH21	1.77	0.49
8:p:188:GLU:HG3	8:p:189:ARG:HG2	1.95	0.49
9:0:231:VAL:O	9:0:235:GLN:HG3	2.12	0.49
9:9:175:LEU:HD13	9:9:206:PRO:HG3	1.93	0.49
9:ZB:50:ARG:HB2	9:ZB:66:LEU:H	1.76	0.49
9:ZB:227:ALA:HB1	10:ZM:399:LEU:HD21	1.95	0.49
9:ZC:162:GLN:OE1	10:ZH:351:GLY:O	2.30	0.49
9:ZD:238:ARG:HH12	10:ZJ:397:ASN:ND2	2.11	0.49
10:ZK:228:THR:HB	10:ZK:244:VAL:HG11	1.95	0.49
10:ZT:188:ASP:HA	10:ZT:257:ALA:HB2	1.93	0.49
10:ZX:195:ASP:OD2	10:ZX:216:SER:OG	2.31	0.49
10:ZZ:373:VAL:HG11	10:Zf:7:VAL:HG22	1.95	0.49
10:Zg:196:MET:HE3	10:Zg:248:THR:HG22	1.95	0.49
9:r:238:ARG:NH2	9:x:251:ASP:OD1	2.40	0.49
9:t:126:GLY:HA2	9:y:179:MET:HE3	1.95	0.49
9:y:82:SER:HB2	9:y:223:ASN:HD21	1.78	0.49
1:C:36:SER:OG	1:D:44:ILE:HG23	2.12	0.49
8:m:217:MET:CE	9:x:257:LEU:O	2.60	0.49
9:3:151:ILE:HG12	9:3:157:VAL:HG22	1.93	0.49
9:ZB:29:VAL:O	9:ZB:222:SER:OG	2.31	0.49
9:ZB:240:TYR:CE2	10:ZG:395:ILE:HG21	2.31	0.49
9:ZC:31:THR:HG22	10:ZH:39:PHE:HB2	1.93	0.49
10:ZR:199:TYR:HB2	10:ZR:211:TYR:HB2	1.95	0.49
10:ZT:69:THR:HG21	10:ZT:361:LEU:HD12	1.93	0.49
10:ZT:243:THR:HG22	10:ZT:262:SER:HB2	1.94	0.49
10:ZT:380:ARG:HD2	10:ZZ:396:LEU:HB3	1.94	0.49
10:Zb:144:MET:SD	10:Zb:306:ASN:ND2	2.85	0.49
9:r:238:ARG:HG3	9:x:254:LEU:HD13	1.95	0.49
9:x:198:SER:O	9:x:198:SER:OG	2.27	0.49
3:F:179:LEU:HD22	3:G:84:PRO:HG3	1.95	0.49
6:X:78:TYR:CB	9:t:44:LEU:HD21	2.42	0.49
6:a:78:TYR:CE2	9:w:73:ARG:CD	2.93	0.49
8:o:21:VAL:CG2	9:t:68:ILE:CG2	2.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:q:228:GLU:OE2	9:v:256:LYS:CE	2.61	0.49
9:1:142:ILE:HD11	9:1:149:ILE:HD12	1.93	0.49
9:4:35:LYS:HE3	9:4:81:HIS:HA	1.95	0.49
9:6:10:THR:OG1	9:6:71:GLY:HA3	2.12	0.49
10:ZH:24:ILE:O	10:ZH:27:SER:OG	2.25	0.49
10:ZN:233:ASN:HD21	10:ZN:237:ILE:HB	1.77	0.49
10:ZP:159:ASN:OD1	10:ZP:161:THR:N	2.46	0.49
10:ZT:95:SER:OG	10:ZT:332:ASN:O	2.23	0.49
10:ZU:293:GLN:HE21	10:ZU:303:ASN:HD21	1.61	0.49
10:ZW:104:GLU:HG2	10:ZW:105:ASN:OD1	2.13	0.49
10:ZX:41:ASP:OD1	10:ZX:41:ASP:N	2.42	0.49
10:Zc:107:ASN:ND2	10:Zc:138:THR:OG1	2.46	0.49
3:F:92:LEU:HD13	3:F:232:TRP:HZ2	1.77	0.48
5:T:49:LEU:O	5:T:53:MET:HG2	2.13	0.48
8:o:24:SER:N	9:t:7:ILE:HG21	2.27	0.48
8:o:70:GLN:OE1	9:z:2:ILE:O	2.31	0.48
9:6:122:VAL:O	9:ZB:180:ASN:ND2	2.46	0.48
9:8:34:PHE:HB3	9:8:222:SER:HB3	1.94	0.48
9:ZB:235:GLN:HE22	10:ZH:3:PHE:CB	2.25	0.48
9:ZD:184:LEU:HB3	9:ZD:192:TYR:HB3	1.95	0.48
10:ZG:27:SER:O	10:ZG:364:SER:OG	2.30	0.48
10:ZH:210:VAL:O	10:ZH:227:SER:N	2.45	0.48
10:ZP:83:PHE:HB2	10:ZP:95:SER:O	2.13	0.48
10:ZS:103:ASP:OD2	10:ZS:105:ASN:N	2.44	0.48
10:ZU:285:LYS:O	10:ZU:306:ASN:ND2	2.42	0.48
10:ZV:5:GLN:HB2	10:ZV:50:LEU:O	2.13	0.48
10:Ze:178:TYR:HA	10:Ze:201:VAL:HG22	1.94	0.48
9:v:123:ASP:OD2	9:v:127:GLN:HB2	2.13	0.48
3:F:130:GLY:O	3:F:133:PRO:HD2	2.13	0.48
6:V:37:PRO:HD3	6:a:51:VAL:HG13	1.95	0.48
6:X:97:ASP:O	6:X:101:GLU:HG2	2.13	0.48
6:a:80:PRO:CB	9:1:52:PRO:HG3	2.40	0.48
9:0:185:GLU:HB3	9:0:193:ILE:HG13	1.94	0.48
9:3:155:GLY:HA2	9:3:214:LEU:HD12	1.94	0.48
9:5:5:LEU:HD23	9:z:235:GLN:HG3	1.95	0.48
9:8:185:GLU:HG3	9:ZD:67:GLN:NE2	2.28	0.48
9:9:184:LEU:HB3	9:9:192:TYR:HB3	1.95	0.48
9:ZD:105:VAL:HA	9:ZD:136:VAL:HA	1.95	0.48
10:ZI:198:VAL:HG22	10:ZI:212:THR:HG22	1.95	0.48
10:ZK:204:LYS:HZ2	10:ZK:207:GLU:HG3	1.78	0.48
10:ZM:203:THR:OG1	10:ZM:207:GLU:OE1	2.23	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZS:188:ASP:HA	10:ZS:257:ALA:HB2	1.96	0.48
10:ZX:83:PHE:HB2	10:ZX:95:SER:O	2.13	0.48
10:Zc:188:ASP:HA	10:Zc:257:ALA:HB2	1.95	0.48
10:Zd:154:MET:HB2	10:Zd:279:THR:HG22	1.95	0.48
9:r:190:ASN:ND2	9:w:42:GLU:HG3	2.29	0.48
1:A:48:THR:HG21	3:F:208:GLY:HA2	1.95	0.48
3:I:42:VAL:HG13	4:O:42:LEU:HD22	1.95	0.48
3:J:73:LEU:HD13	3:J:186:GLY:HA3	1.94	0.48
5:S:32:ASN:ND2	6:X:51:VAL:HG12	2.28	0.48
6:X:94:PRO:HB2	6:X:96:VAL:HG23	1.94	0.48
9:4:44:LEU:HB3	9:4:70:THR:HB	1.95	0.48
9:7:34:PHE:HB3	9:7:222:SER:HB3	1.95	0.48
10:ZH:319:ASN:HB2	10:ZH:353:PHE:CE1	2.47	0.48
10:ZW:18:ASP:HB3	10:Zb:5:GLN:HE22	1.77	0.48
10:ZW:144:MET:SD	10:ZW:310:GLN:NE2	2.86	0.48
10:ZY:102:LEU:HD11	10:ZY:139:ILE:HD12	1.95	0.48
10:Zb:24:ILE:O	10:Zb:27:SER:OG	2.31	0.48
10:Zb:85:LEU:HD13	10:Zb:114:MET:HB3	1.94	0.48
10:Zb:293:GLN:NE2	10:Zb:303:ASN:OD1	2.45	0.48
10:Zb:331:ASP:HA	10:Zg:40:ALA:HB1	1.95	0.48
1:D:36:SER:OG	2:E:211:LEU:O	2.24	0.48
4:N:99:VAL:O	4:N:102:MET:HG2	2.13	0.48
6:W:21:LEU:HD21	8:m:237:VAL:HG22	1.94	0.48
6:W:102:MET:CE	8:m:232:LYS:HG2	2.43	0.48
8:p:11:ALA:HB3	8:p:230:GLN:HG2	1.95	0.48
9:6:20:ASP:OD1	9:ZB:3:SER:HB3	2.14	0.48
10:ZI:93:PHE:HB3	10:ZI:333:VAL:HG13	1.95	0.48
10:ZM:17:LEU:HD13	10:ZR:395:ILE:HD11	1.94	0.48
10:ZR:180:LYS:HB3	10:ZR:200:PHE:HD1	1.79	0.48
10:ZY:319:ASN:ND2	10:ZY:352:ASN:O	2.46	0.48
10:ZZ:180:LYS:HB3	10:ZZ:200:PHE:HB2	1.96	0.48
9:y:35:LYS:NZ	9:y:220:GLU:OE2	2.44	0.48
2:E:114:VAL:HG21	3:I:211:MET:HE1	1.96	0.48
2:E:178:LEU:HD13	2:E:181:LEU:HD23	1.95	0.48
9:5:129:VAL:HG12	9:5:135:GLN:HA	1.96	0.48
9:5:238:ARG:NH1	9:5:241:GLU:OE2	2.45	0.48
9:8:42:GLU:CB	9:8:75:VAL:HG23	2.41	0.48
9:ZA:95:VAL:HG11	9:ZA:214:LEU:HD23	1.95	0.48
9:ZB:240:TYR:CE2	10:ZG:399:LEU:HD11	2.49	0.48
9:ZB:248:SER:HB3	10:ZG:402:LEU:HD22	1.94	0.48
10:ZG:99:GLN:HG3	10:ZG:361:LEU:HD11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZL:316:VAL:HG22	10:ZL:345:LEU:HD12	1.96	0.48
10:ZP:122:THR:OG1	10:ZP:129:GLN:NE2	2.46	0.48
10:ZR:186:VAL:HG22	10:ZR:194:HIS:HB2	1.95	0.48
10:ZV:367:ASP:HB3	10:ZV:370:LYS:HD2	1.95	0.48
10:ZY:373:VAL:HG11	10:Ze:7:VAL:HG22	1.94	0.48
10:ZZ:331:ASP:HA	10:Ze:40:ALA:HB1	1.96	0.48
10:Zb:68:ASN:OD1	10:Zb:68:ASN:N	2.47	0.48
8:n:34:PHE:HB3	8:n:209:SER:HB3	1.96	0.48
8:q:181:LEU:HD21	8:q:193:LEU:HD11	1.96	0.48
9:9:123:ASP:OD2	9:9:125:ASN:ND2	2.47	0.48
9:ZE:36:ARG:HB3	9:ZE:224:VAL:HG22	1.95	0.48
9:ZE:140:ILE:HG23	9:ZE:171:GLY:HA3	1.96	0.48
10:ZG:390:LYS:HB2	10:ZL:402:LEU:HD22	1.94	0.48
10:ZH:18:ASP:HB3	10:ZM:5:GLN:HE22	1.78	0.48
10:ZH:355:LYS:N	10:ZH:355:LYS:HD3	2.29	0.48
10:ZK:248:THR:HG1	10:ZK:257:ALA:N	2.10	0.48
10:ZL:165:PRO:HG2	10:ZL:201:VAL:HG13	1.94	0.48
10:ZS:201:VAL:HG22	10:ZS:209:ALA:HB3	1.96	0.48
10:ZT:228:THR:HB	10:ZT:244:VAL:HG11	1.94	0.48
10:ZZ:93:PHE:HB3	10:ZZ:333:VAL:HG13	1.94	0.48
10:Zb:170:PHE:HE2	10:Zb:223:PRO:HG2	1.79	0.48
10:Zb:299:THR:HG22	10:Zb:314:GLN:HG3	1.95	0.48
10:Zf:297:ASP:OD1	10:Zf:297:ASP:N	2.36	0.48
10:Zg:95:SER:OG	10:Zg:332:ASN:O	2.19	0.48
9:z:2:ILE:HG21	9:z:254:LEU:HD11	1.96	0.48
2:E:101:PHE:CE2	3:F:80:THR:HG21	2.48	0.48
3:I:159:LEU:O	3:I:160:GLN:HB2	2.14	0.48
3:J:71:PHE:CZ	3:J:236:MET:HE1	2.49	0.48
3:J:150:PHE:CE1	3:J:172:PRO:HB2	2.48	0.48
4:L:55:GLN:HG2	4:L:71:VAL:HG22	1.95	0.48
5:T:11:PHE:CD1	5:T:53:MET:HE2	2.48	0.48
6:X:27:ASN:OD1	6:X:42:TYR:OH	2.27	0.48
8:q:123:GLU:OE2	8:q:160:ARG:HD3	2.14	0.48
9:3:50:ARG:HH21	9:y:73:ARG:NH2	2.12	0.48
9:4:22:ILE:HD11	9:4:232:ASN:HB3	1.95	0.48
9:5:205:THR:HB	9:5:208:LEU:HD23	1.94	0.48
9:5:215:TYR:HB3	9:5:218:TYR:HD2	1.78	0.48
9:ZB:28:ASN:ND2	10:ZG:52:VAL:HG23	2.28	0.48
10:ZG:159:ASN:ND2	10:ZG:272:GLY:O	2.45	0.48
10:ZP:156:ILE:HD12	10:ZP:276:ILE:HG12	1.96	0.48
10:ZT:233:ASN:HD21	10:ZT:237:ILE:HB	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZT:269:GLN:HB3	10:ZZ:286:PRO:HG2	1.95	0.48
10:Ze:196:MET:SD	10:Ze:212:THR:HB	2.54	0.48
10:Zf:294:ILE:HG12	10:Zf:300:VAL:HG22	1.96	0.48
10:Zg:3:PHE:O	10:Zg:7:VAL:HG22	2.13	0.48
1:C:14:MET:HE3	1:D:63:ILE:HD11	1.96	0.48
2:E:158:PRO:HG2	2:E:162:ASN:ND2	2.16	0.48
6:V:27:ASN:ND2	6:V:45:LYS:O	2.33	0.48
8:m:220:MET:CE	9:r:246:ALA:CA	2.92	0.48
8:q:227:PHE:CE2	9:v:253:MET:O	2.67	0.48
9:0:33:GLY:N	9:0:220:GLU:O	2.47	0.48
9:0:195:THR:HG22	9:0:196:GLN:H	1.79	0.48
9:2:121:GLN:NE2	9:7:78:GLU:OE1	2.38	0.48
9:5:44:LEU:HB3	9:5:70:THR:HB	1.95	0.48
9:8:19:MET:HB2	9:8:236:VAL:HG11	1.96	0.48
9:ZA:95:VAL:O	9:ZA:118:GLY:HA3	2.13	0.48
10:ZM:331:ASP:HA	10:ZR:40:ALA:HB1	1.95	0.48
10:ZQ:22:ASN:N	10:ZV:5:GLN:HE21	2.11	0.48
10:ZU:195:ASP:OD2	10:ZU:195:ASP:N	2.40	0.48
10:Zb:288:ASP:O	10:Zb:305:SER:N	2.45	0.48
10:Zg:146:ALA:HB2	10:Zg:286:PRO:HD3	1.95	0.48
9:x:19:MET:HB2	9:x:236:VAL:HG11	1.96	0.48
1:D:60:ILE:HA	1:D:63:ILE:HG12	1.96	0.48
2:E:86:PHE:CZ	3:F:88:VAL:HA	2.48	0.48
3:F:99:PHE:C	3:F:99:PHE:CD2	2.91	0.48
8:n:26:LEU:HD22	9:s:242:ILE:CG2	2.41	0.48
8:n:71:LEU:HB2	9:y:70:THR:HG22	1.94	0.48
8:q:138:ALA:CB	9:6:56:SER:CA	2.75	0.48
9:4:97:ILE:HD11	9:4:103:PHE:CE2	2.49	0.48
9:6:47:GLN:N	9:6:68:ILE:O	2.45	0.48
9:6:64:SER:O	9:6:64:SER:OG	2.23	0.48
9:ZE:34:PHE:HB3	9:ZE:222:SER:HB3	1.95	0.48
10:ZF:47:LYS:HE3	10:ZF:47:LYS:HB3	1.67	0.48
10:ZH:298:GLY:HA2	10:ZH:356:LEU:HD12	1.96	0.48
10:ZI:17:LEU:HD13	10:ZN:395:ILE:HD11	1.95	0.48
10:ZI:147:LYS:HE2	10:ZI:282:ASN:HD22	1.79	0.48
10:ZO:5:GLN:HG2	10:ZO:50:LEU:O	2.14	0.48
10:ZQ:317:LEU:HD11	10:ZQ:356:LEU:HD21	1.96	0.48
10:ZR:390:LYS:O	10:ZR:394:GLN:HG2	2.14	0.48
10:ZU:69:THR:HG22	10:ZU:71:ARG:H	1.79	0.48
10:ZU:181:LYS:HZ3	10:ZU:197:ASN:HB3	1.79	0.48
10:ZW:186:VAL:HG23	10:ZW:194:HIS:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZW:294:ILE:HG12	10:ZW:300:VAL:HG22	1.96	0.48
10:Zd:20:ILE:O	10:Zd:24:ILE:HG13	2.14	0.48
10:Ze:33:LYS:HG3	10:Ze:61:PHE:CD2	2.49	0.48
10:Zf:2:SER:OG	10:Zf:3:PHE:N	2.46	0.48
9:2:76:ALA:HB1	9:7:64:SER:O	2.14	0.48
9:6:210:GLY:O	9:6:211:ALA:C	2.53	0.48
9:9:130:THR:HG22	9:9:132:GLY:H	1.79	0.48
9:ZD:248:SER:HB2	10:ZI:402:LEU:HD22	1.95	0.48
10:ZH:78:SER:OG	10:ZH:355:LYS:N	2.35	0.48
10:ZW:159:ASN:ND2	10:ZW:162:ASP:OD1	2.45	0.48
10:ZZ:367:ASP:HB2	10:ZZ:370:LYS:HG3	1.94	0.48
9:s:115:THR:HB	9:s:191:LEU:HD23	1.96	0.48
9:t:190:ASN:ND2	9:y:42:GLU:HG3	2.29	0.48
1:B:11:THR:HA	1:B:14:MET:HE3	1.96	0.47
1:C:54:LYS:NZ	1:D:48:THR:HG21	2.29	0.47
2:E:94:ALA:HB2	2:E:179:ILE:HA	1.96	0.47
6:W:44:ALA:HB2	6:W:96:VAL:HG22	1.96	0.47
6:Z:42:TYR:O	6:Z:94:PRO:HB3	2.14	0.47
8:n:18:GLN:NE2	8:n:223:ASN:OD1	2.46	0.47
8:p:16:LEU:HD21	9:u:253:MET:CE	2.40	0.47
8:p:35:ARG:HA	8:p:210:ASN:HD21	1.78	0.47
9:3:230:LEU:HA	9:3:233:MET:HE2	1.95	0.47
9:3:240:TYR:CE1	9:8:257:LEU:HD13	2.49	0.47
9:6:153:ARG:HH22	9:6:213:LEU:HD13	1.78	0.47
9:ZB:95:VAL:O	9:ZB:118:GLY:HA3	2.14	0.47
9:ZC:230:LEU:O	9:ZC:234:ILE:HG12	2.14	0.47
10:ZO:14:ALA:HB2	10:ZO:382:TYR:HE2	1.78	0.47
10:ZO:33:LYS:HD2	10:ZO:61:PHE:HA	1.95	0.47
10:ZR:126:PRO:HG2	10:ZR:310:GLN:HE21	1.78	0.47
10:ZR:261:LEU:HD21	10:ZR:263:PHE:HE2	1.78	0.47
10:ZS:170:PHE:HE2	10:ZS:223:PRO:HG2	1.79	0.47
10:ZW:211:TYR:CD1	10:ZW:226:ALA:HA	2.49	0.47
10:ZW:317:LEU:HD11	10:ZW:356:LEU:HD21	1.96	0.47
10:Zb:154:MET:HE1	10:Zb:276:ILE:HG12	1.96	0.47
9:u:185:GLU:HG3	9:z:67:GLN:NE2	2.22	0.47
3:H:190:PHE:CD1	3:I:220:PRO:HG3	2.49	0.47
5:R:29:ASN:HD21	5:R:41:ARG:H	1.61	0.47
6:Y:28:LEU:HD21	6:Y:102:MET:HE2	1.96	0.47
8:p:234:ILE:HG21	9:u:260:LEU:HD21	1.95	0.47
8:q:65:ASP:O	8:q:210:ASN:ND2	2.45	0.47
9:0:42:GLU:HB3	9:0:75:VAL:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:0:73:ARG:HH11	9:0:73:ARG:HB2	1.78	0.47
9:1:66:LEU:HD12	9:w:77:THR:HG23	1.95	0.47
9:ZD:50:ARG:HB2	9:ZD:66:LEU:H	1.78	0.47
10:ZG:318:ALA:HB2	10:ZG:345:LEU:HD23	1.96	0.47
10:ZH:33:LYS:HA	10:ZH:365:ASN:HD21	1.78	0.47
10:ZJ:110:ASN:ND2	10:ZJ:112:GLN:OE1	2.47	0.47
10:ZJ:380:ARG:HD3	10:ZJ:380:ARG:HA	1.71	0.47
10:ZM:235:ASN:ND2	10:ZS:189:SER:OG	2.47	0.47
10:ZS:380:ARG:HH21	10:ZY:397:ASN:HD21	1.61	0.47
10:ZT:184:VAL:HG13	10:ZT:196:MET:HB2	1.96	0.47
10:Zf:59:GLN:HB3	10:Zf:61:PHE:CE1	2.49	0.47
1:B:44:ILE:HD13	1:B:44:ILE:HA	1.74	0.47
5:R:24:GLU:OE1	6:W:5:ASN:HB2	2.14	0.47
6:W:106:MET:HE3	8:n:238:ASP:HB2	1.95	0.47
8:m:225:ARG:O	8:m:229:MET:HG3	2.14	0.47
9:4:241:GLU:OE1	9:ZA:258:THR:HB	2.15	0.47
9:5:22:ILE:HG21	9:5:233:MET:HG3	1.96	0.47
10:ZH:114:MET:HE1	10:ZH:333:VAL:HG11	1.97	0.47
10:ZX:17:LEU:HD13	10:Zc:395:ILE:CD1	2.44	0.47
10:Zd:116:LEU:HD12	10:Zd:117:THR:N	2.29	0.47
9:x:142:ILE:HD13	9:x:149:ILE:HD13	1.96	0.47
1:B:70:LEU:O	1:B:74:LEU:HG	2.14	0.47
1:D:2:THR:OG1	1:D:4:GLU:OE1	2.29	0.47
5:S:10:ARG:HE	5:S:53:MET:HE1	1.79	0.47
6:Y:52:ASP:OD1	6:Y:63:LYS:HD3	2.13	0.47
8:n:70:GLN:CD	9:y:6:TRP:HE1	2.22	0.47
8:n:231:MET:SD	9:s:260:LEU:HD13	2.55	0.47
9:1:18:ASN:O	9:1:22:ILE:HG13	2.15	0.47
9:3:22:ILE:HD11	9:3:232:ASN:HB3	1.95	0.47
9:5:34:PHE:HB3	9:5:222:SER:HB3	1.95	0.47
9:5:100:GLN:HG3	9:5:100:GLN:O	2.14	0.47
9:8:95:VAL:O	9:8:118:GLY:HA3	2.14	0.47
9:8:238:ARG:NH1	9:8:241:GLU:OE1	2.47	0.47
9:ZB:28:ASN:ND2	10:ZG:52:VAL:HB	2.29	0.47
9:ZC:98:LYS:HE2	10:ZN:44:ALA:HB1	1.95	0.47
9:ZD:97:ILE:HD11	9:ZD:103:PHE:CE2	2.49	0.47
10:ZI:83:PHE:HB2	10:ZI:95:SER:O	2.14	0.47
10:ZL:373:VAL:O	10:ZL:375:MET:N	2.47	0.47
10:ZN:331:ASP:HA	10:ZS:40:ALA:HB1	1.96	0.47
10:ZP:14:ALA:HB2	10:ZP:382:TYR:HE2	1.79	0.47
10:ZP:314:GLN:NE2	10:ZP:347:THR:OG1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZU:99:GLN:NE2	10:ZZ:38:SER:OG	2.46	0.47
10:Za:16:ASN:O	10:Za:20:ILE:HG12	2.14	0.47
10:Zc:83:PHE:HB2	10:Zc:95:SER:O	2.13	0.47
10:Zg:87:ASP:OD1	10:Zg:91:SER:N	2.46	0.47
9:t:98:LYS:HD3	9:t:213:LEU:HD12	1.95	0.47
9:u:18:ASN:HB2	9:u:41:PHE:HZ	1.79	0.47
9:x:3:SER:C	9:x:5:LEU:N	2.72	0.47
1:B:7:MET:SD	1:C:70:LEU:HD22	2.54	0.47
3:G:82:SER:HA	4:K:103:GLN:HE21	1.79	0.47
4:L:99:VAL:HA	4:L:102:MET:HE3	1.96	0.47
5:R:96:ASP:OD1	5:R:96:ASP:N	2.39	0.47
5:T:11:PHE:HD1	5:T:53:MET:HE2	1.80	0.47
5:U:106:ARG:NH1	8:q:245:ASN:OD1	2.47	0.47
6:Y:113:GLN:HG2	8:o:243:ARG:HD2	1.96	0.47
8:m:224:ALA:O	8:m:228:GLU:HG2	2.14	0.47
9:3:215:TYR:HE2	9:ZE:45:LEU:HD21	1.80	0.47
9:5:1:MET:HE2	9:u:226:VAL:HG21	1.96	0.47
9:6:56:SER:O	9:6:57:SER:C	2.57	0.47
9:ZD:76:ALA:CA	10:ZI:47:LYS:HE3	2.43	0.47
10:ZF:162:ASP:OD2	10:ZF:274:ASN:ND2	2.30	0.47
10:ZM:93:PHE:HB3	10:ZM:333:VAL:HG13	1.95	0.47
10:ZQ:228:THR:HG21	10:ZQ:244:VAL:HG11	1.96	0.47
10:ZS:6:ALA:O	10:ZS:9:GLY:N	2.48	0.47
10:ZT:144:MET:HG3	10:ZT:310:GLN:NE2	2.29	0.47
10:Zb:309:GLU:OE1	10:Zb:309:GLU:N	2.41	0.47
9:r:43:ASP:OD1	9:r:43:ASP:N	2.45	0.47
6:W:83:PRO:HG2	9:r:62:LEU:HD22	1.86	0.47
8:p:35:ARG:O	8:p:173:ARG:NH2	2.37	0.47
9:6:158:SER:HB3	9:6:167:PRO:HB2	1.96	0.47
9:9:50:ARG:HD3	9:9:66:LEU:HD12	1.96	0.47
10:ZF:210:VAL:O	10:ZF:227:SER:N	2.48	0.47
10:ZO:140:PRO:HD2	10:ZO:312:LEU:HD23	1.95	0.47
10:ZP:27:SER:O	10:ZP:364:SER:OG	2.32	0.47
10:ZW:171:SER:HB3	10:ZW:174:ASP:HB2	1.96	0.47
10:ZX:6:ALA:HB1	10:ZX:389:ILE:HG12	1.95	0.47
10:Zc:6:ALA:HB1	10:Zc:389:ILE:HG13	1.96	0.47
10:Zc:80:ASN:OD1	10:Zc:81:GLY:N	2.46	0.47
10:Ze:58:THR:OG1	10:Ze:59:GLN:N	2.47	0.47
9:v:208:LEU:O	9:v:209:ASN:HB3	2.15	0.47
9:y:115:THR:HB	9:y:191:LEU:HD23	1.97	0.47
2:E:9:TRP:CD1	2:E:9:TRP:H	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:189:ILE:O	3:F:192:PRO:HD2	2.15	0.47
4:K:80:VAL:HG22	5:Q:131:MET:SD	2.54	0.47
5:T:102:MET:HE3	5:T:106:ARG:HE	1.78	0.47
6:Y:121:THR:OG1	8:p:248:LEU:O	2.19	0.47
6:a:78:TYR:HB2	9:w:44:LEU:HD22	1.97	0.47
8:m:200:ARG:NH1	9:s:189:GLU:CB	2.77	0.47
8:n:70:GLN:NE2	9:y:6:TRP:HE1	2.12	0.47
8:n:109:PRO:HB3	9:s:197:SER:O	2.15	0.47
8:o:28:ASN:HD21	9:t:43:ASP:CB	2.20	0.47
8:q:152:PRO:C	8:q:154:THR:H	2.22	0.47
9:ZA:28:ASN:OD1	10:ZF:52:VAL:CB	2.61	0.47
9:ZB:227:ALA:CB	10:ZM:399:LEU:CD2	2.92	0.47
9:ZE:48:THR:HG22	9:ZE:67:GLN:HE22	1.80	0.47
10:ZG:358:ASN:OD1	10:ZG:359:GLY:N	2.47	0.47
10:ZH:233:ASN:OD1	10:ZH:234:GLU:N	2.47	0.47
10:ZJ:87:ASP:OD2	10:ZJ:88:SER:N	2.45	0.47
10:ZK:373:VAL:HG11	10:ZQ:7:VAL:HG22	1.96	0.47
10:ZL:84:ARG:HG2	10:ZL:117:THR:OG1	2.14	0.47
10:ZL:234:GLU:OE2	10:ZR:255:THR:OG1	2.31	0.47
10:ZO:18:ASP:HA	10:ZT:5:GLN:NE2	2.28	0.47
10:ZO:74:ASP:OD1	10:ZO:74:ASP:N	2.48	0.47
10:ZQ:97:ASN:HD22	10:ZQ:332:ASN:ND2	2.13	0.47
10:ZR:295:ASN:ND2	10:ZR:299:THR:OG1	2.38	0.47
10:ZR:390:LYS:HB2	10:ZW:402:LEU:HD22	1.97	0.47
10:ZV:107:ASN:HD22	10:ZV:138:THR:HG22	1.79	0.47
10:ZW:233:ASN:HD21	10:ZW:237:ILE:HB	1.79	0.47
10:ZW:396:LEU:HD23	10:ZW:396:LEU:HA	1.73	0.47
10:ZX:245:ASN:C	10:ZX:246:ILE:HD13	2.40	0.47
10:ZX:317:LEU:HD11	10:ZX:356:LEU:HD21	1.97	0.47
10:Za:149:THR:HG21	10:Za:186:VAL:HB	1.97	0.47
10:Zg:194:HIS:CE1	10:Zg:251:ILE:HD12	2.50	0.47
10:Zg:294:ILE:HG12	10:Zg:300:VAL:HG22	1.97	0.47
9:r:98:LYS:HE2	9:x:187:ILE:O	2.14	0.47
9:r:155:GLY:HA2	9:r:214:LEU:HD12	1.97	0.47
9:w:85:ASN:O	9:w:221:THR:OG1	2.32	0.47
9:w:142:ILE:HD13	9:w:149:ILE:HD13	1.96	0.47
9:x:188:GLY:O	9:x:190:ASN:N	2.48	0.47
6:a:86:ASP:OD1	6:a:86:ASP:N	2.38	0.47
7:b:318:ASN:O	7:b:319:GLN:C	2.58	0.47
8:m:151:PRO:C	8:m:153:ASN:N	2.73	0.47
8:n:82:LEU:HD11	8:n:88:LEU:HG	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:n:109:PRO:CB	9:s:197:SER:O	2.63	0.47
8:n:213:PRO:HD2	9:y:2:ILE:HD11	1.95	0.47
8:o:18:GLN:HE21	8:o:41:LEU:HG	1.79	0.47
9:6:57:SER:HB3	9:w:108:PRO:CB	2.39	0.47
10:ZG:160:SER:O	10:ZM:252:ASN:ND2	2.48	0.47
10:ZG:195:ASP:O	10:ZG:215:SER:OG	2.33	0.47
10:ZJ:183:THR:HG22	10:ZU:131:GLY:O	2.15	0.47
10:ZJ:195:ASP:OD2	10:ZJ:195:ASP:N	2.36	0.47
10:ZL:383:GLN:O	10:ZL:387:GLN:HG2	2.15	0.47
10:ZN:382:TYR:CE1	10:ZS:395:ILE:HG23	2.50	0.47
10:ZQ:233:ASN:HD21	10:ZQ:239:GLU:HB3	1.79	0.47
10:ZU:195:ASP:OD2	10:ZU:216:SER:OG	2.22	0.47
10:Zd:60:ASP:O	10:Zd:365:ASN:ND2	2.48	0.47
10:Ze:269:GLN:HG2	10:Ze:270:ASN:H	1.80	0.47
10:Zg:328:SER:HG	10:Zg:334:TRP:CD1	2.32	0.47
9:t:153:ARG:HH21	9:z:108:PRO:HG2	1.79	0.47
9:x:7:ILE:HG12	9:x:70:THR:O	2.13	0.47
9:y:7:ILE:HG23	9:y:71:GLY:HA2	1.96	0.47
2:E:72:TRP:HE1	2:E:161:SER:HB2	1.80	0.47
4:L:48:ARG:HH22	5:R:6:ASP:CG	2.22	0.47
9:4:238:ARG:O	9:4:242:ILE:HG12	2.15	0.47
9:9:128:LEU:HD12	9:9:140:ILE:HB	1.95	0.47
9:ZC:40:VAL:HG23	9:ZC:75:VAL:HB	1.97	0.47
10:ZM:86:VAL:HG13	10:ZM:117:THR:HG21	1.97	0.47
10:ZN:87:ASP:OD2	10:ZN:88:SER:N	2.39	0.47
10:ZP:195:ASP:OD2	10:ZP:216:SER:OG	2.25	0.47
10:ZZ:10:LEU:HG	10:ZZ:382:TYR:CZ	2.49	0.47
10:Zb:171:SER:HB3	10:Zb:174:ASP:HB2	1.97	0.47
9:u:113:ALA:HB1	9:u:191:LEU:HB3	1.96	0.47
9:x:2:ILE:HG12	9:x:254:LEU:HD11	1.97	0.47
1:C:31:THR:O	1:C:35:ILE:HG12	2.14	0.47
4:M:48:ARG:NH2	5:S:6:ASP:OD2	2.48	0.47
4:N:59:PHE:CD2	5:S:118:MET:HE1	2.50	0.47
9:6:95:VAL:O	9:6:118:GLY:HA3	2.15	0.47
9:ZA:26:LEU:HD22	10:ZF:384:SER:OG	2.14	0.47
9:ZA:70:THR:HG22	9:ZA:71:GLY:N	2.29	0.47
10:ZQ:33:LYS:O	10:ZQ:59:GLN:NE2	2.48	0.47
10:ZS:392:GLN:HA	10:ZS:395:ILE:HD12	1.97	0.47
10:ZT:143:LEU:HD21	10:ZT:286:PRO:HB3	1.97	0.47
10:ZX:71:ARG:HB3	10:ZX:74:ASP:CG	2.39	0.47
10:ZX:307:GLU:OE1	10:ZX:307:GLU:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZY:184:VAL:HG13	10:ZY:196:MET:HB2	1.97	0.47
10:ZZ:99:GLN:HB3	10:ZZ:111:MET:HE3	1.96	0.47
10:Zd:171:SER:O	10:Zd:177:SER:OG	2.30	0.47
10:Ze:352:ASN:OD1	10:Ze:352:ASN:N	2.43	0.47
9:v:98:LYS:N	9:v:213:LEU:O	2.40	0.47
9:w:188:GLY:O	9:w:190:ASN:N	2.47	0.47
1:A:17:ALA:HB2	3:G:195:ILE:HD12	1.96	0.46
3:F:230:ASP:O	3:F:234:LEU:HG	2.15	0.46
3:H:138:MET:HE2	3:H:170:LEU:HG	1.98	0.46
5:Q:22:ARG:NH2	5:Q:108:GLN:OE1	2.47	0.46
6:W:14:LEU:HD21	6:W:116:ILE:HG13	1.97	0.46
6:a:88:ASN:HB2	6:a:90:TYR:CD2	2.50	0.46
9:4:173:LEU:HD23	9:4:214:LEU:HD13	1.97	0.46
9:ZE:238:ARG:HH22	10:ZK:397:ASN:HB2	1.80	0.46
10:ZG:185:THR:OG1	10:ZR:133:ASN:OD1	2.33	0.46
10:Zh:269:GLN:HG2	10:Zh:270:ASN:H	1.80	0.46
9:r:122:VAL:HG23	9:w:180:ASN:HD22	1.80	0.46
9:t:122:VAL:HG11	9:t:142:ILE:HD12	1.97	0.46
1:B:29:LEU:HD23	1:B:30:ILE:HD13	1.96	0.46
2:E:103:GLY:O	2:E:106:MET:HB2	2.16	0.46
3:J:83:ALA:HB3	3:J:84:PRO:CD	2.38	0.46
3:J:105:ILE:HD13	4:O:34:PHE:HZ	1.80	0.46
5:S:114:LEU:HD21	6:Y:126:MET:CE	2.45	0.46
6:V:22:ASN:HD21	6:a:5:ASN:ND2	2.12	0.46
6:Y:83:PRO:CG	9:t:62:LEU:HD23	2.43	0.46
7:d:319:GLN:HG2	7:d:320:PRO:HD2	1.95	0.46
8:m:109:PRO:HG3	9:r:197:SER:C	2.41	0.46
8:n:28:ASN:HD21	9:s:43:ASP:HB3	1.80	0.46
8:n:217:MET:HE3	9:s:242:ILE:HD13	1.97	0.46
8:o:214:VAL:CG2	9:u:12:LEU:HD13	2.45	0.46
9:8:111:THR:HG21	9:x:163:GLY:HA2	1.96	0.46
9:ZD:28:ASN:OD1	10:ZI:52:VAL:HG13	2.15	0.46
10:ZG:264:LEU:HD12	10:ZG:265:ASN:N	2.30	0.46
10:ZI:183:THR:HG22	10:ZI:197:ASN:ND2	2.30	0.46
10:ZM:267:MET:HE2	10:ZM:269:GLN:NE2	2.29	0.46
10:ZX:96:ARG:NH2	10:ZX:362:GLU:OE2	2.40	0.46
10:ZY:194:HIS:CE1	10:ZY:251:ILE:HD12	2.51	0.46
10:Zg:79:GLN:HB2	10:Zg:354:GLY:HA3	1.96	0.46
9:x:153:ARG:HE	9:x:213:LEU:HD13	1.80	0.46
3:G:59:LEU:O	3:G:65:THR:OG1	2.21	0.46
8:o:16:LEU:CD2	9:t:253:MET:CE	2.92	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:0:227:ALA:HA	9:ZB:257:LEU:HD21	1.97	0.46
9:3:194:GLU:OE2	9:3:201:PRO:HD3	2.16	0.46
9:4:85:ASN:OD1	10:ZF:50:LEU:CD2	2.64	0.46
9:6:45:LEU:HD21	9:v:215:TYR:CE2	2.50	0.46
10:ZI:374:ASN:O	10:ZI:376:ILE:N	2.48	0.46
10:ZP:367:ASP:O	10:ZP:371:GLU:HG2	2.15	0.46
10:ZS:149:THR:HG21	10:ZS:186:VAL:HG12	1.97	0.46
10:ZS:182:GLY:HA2	10:Zd:131:GLY:HA3	1.97	0.46
10:ZY:210:VAL:HB	10:ZY:228:THR:HG22	1.97	0.46
9:4:85:ASN:HA	10:ZF:50:LEU:HD22	1.97	0.46
9:5:219:VAL:HG11	9:ZA:38:ARG:HH22	1.80	0.46
9:8:41:PHE:HA	9:8:74:PRO:HA	1.96	0.46
10:ZI:204:LYS:O	10:ZI:205:ASP:C	2.58	0.46
10:ZL:318:ALA:HB1	10:ZL:343:ALA:HB1	1.98	0.46
10:ZM:374:ASN:O	10:ZM:375:MET:C	2.59	0.46
10:ZQ:155:GLN:HE21	10:ZQ:277:VAL:HB	1.79	0.46
10:ZT:185:THR:OG1	10:Ze:133:ASN:OD1	2.34	0.46
10:ZV:93:PHE:HB3	10:ZV:333:VAL:CG2	2.46	0.46
10:ZW:16:ASN:HB2	10:ZW:39:PHE:HZ	1.80	0.46
9:r:61:THR:OG1	9:r:62:LEU:N	2.46	0.46
9:r:122:VAL:HG11	9:r:142:ILE:HD12	1.97	0.46
9:s:22:ILE:HG21	9:s:233:MET:HG3	1.98	0.46
9:t:11:GLY:O	9:t:15:GLN:HG2	2.15	0.46
9:x:95:VAL:O	9:x:118:GLY:HA3	2.15	0.46
3:F:75:ARG:HD3	3:F:89:LEU:HD11	1.97	0.46
3:J:159:LEU:HD13	3:J:165:VAL:HG22	1.98	0.46
4:O:48:ARG:NH2	5:U:6:ASP:OD1	2.49	0.46
6:X:114:ALA:O	6:X:118:VAL:HG23	2.16	0.46
6:Z:47:VAL:HG12	6:Z:67:VAL:HG22	1.96	0.46
9:2:184:LEU:HB3	9:2:192:TYR:HB3	1.96	0.46
9:5:44:LEU:HD23	9:5:44:LEU:HA	1.77	0.46
9:7:115:THR:HB	9:7:191:LEU:HD23	1.96	0.46
9:ZC:7:ILE:HG23	9:ZC:71:GLY:HA2	1.97	0.46
10:ZF:233:ASN:HD21	10:ZF:237:ILE:HB	1.80	0.46
10:ZG:319:ASN:OD1	10:ZG:344:LEU:HB3	2.16	0.46
10:ZH:159:ASN:ND2	10:ZH:162:ASP:OD2	2.46	0.46
10:ZJ:24:ILE:O	10:ZJ:27:SER:OG	2.32	0.46
10:ZJ:159:ASN:HB3	10:ZJ:162:ASP:OD2	2.15	0.46
10:ZJ:367:ASP:OD2	10:ZJ:370:LYS:HB2	2.15	0.46
10:ZU:107:ASN:ND2	10:ZU:138:THR:HG22	2.31	0.46
9:x:42:GLU:OE1	9:x:75:VAL:HG21	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:100:ILE:HG23	3:F:101:MET:HE2	1.98	0.46
7:c:315:ALA:HA	8:m:9:MET:HE1	1.98	0.46
9:1:258:THR:OG1	9:v:241:GLU:OE2	2.26	0.46
9:6:57:SER:CB	9:w:108:PRO:HG3	2.46	0.46
10:ZL:208:TRP:HE1	10:ZL:268:GLN:CD	2.23	0.46
10:ZO:331:ASP:HA	10:ZT:40:ALA:HB1	1.97	0.46
10:ZP:16:ASN:HB2	10:ZP:39:PHE:HZ	1.80	0.46
10:ZP:144:MET:SD	10:ZP:306:ASN:ND2	2.77	0.46
10:ZQ:160:SER:O	10:ZW:252:ASN:ND2	2.48	0.46
10:ZQ:194:HIS:CE1	10:ZQ:251:ILE:HD12	2.50	0.46
10:ZR:212:THR:HG21	10:ZR:246:ILE:HG13	1.97	0.46
10:ZR:373:VAL:HG11	10:ZX:7:VAL:HG22	1.97	0.46
10:ZS:143:LEU:HD23	10:ZS:143:LEU:H	1.80	0.46
10:ZS:317:LEU:HD11	10:ZS:356:LEU:HD21	1.98	0.46
10:Ze:110:ASN:OD1	10:Ze:114:MET:N	2.49	0.46
9:u:32:ASN:HD22	9:u:219:VAL:HB	1.80	0.46
1:C:15:LYS:HB2	1:C:15:LYS:HE2	1.70	0.46
3:F:150:PHE:CZ	3:F:172:PRO:HB2	2.51	0.46
6:X:43:ARG:HD2	6:X:69:GLU:OE2	2.14	0.46
8:n:59:ALA:O	9:s:66:LEU:HD13	2.15	0.46
8:o:144:SER:OG	9:4:55:GLN:HB3	2.14	0.46
9:0:89:THR:HG23	9:0:91:ASN:H	1.80	0.46
9:2:3:SER:OG	9:r:85:ASN:ND2	2.39	0.46
9:5:19:MET:HB2	9:5:236:VAL:HG11	1.97	0.46
9:7:7:ILE:HG23	9:7:71:GLY:HA2	1.95	0.46
9:8:255:GLN:O	9:8:259:GLN:HG2	2.16	0.46
9:ZB:233:MET:HE1	10:ZG:388:THR:HG1	1.79	0.46
10:ZR:281:GLN:NE2	10:ZR:283:GLY:O	2.47	0.46
10:ZS:180:LYS:HD2	10:ZS:181:LYS:N	2.30	0.46
10:ZS:394:GLN:O	10:ZS:398:THR:HG22	2.16	0.46
10:ZT:16:ASN:HB2	10:ZT:39:PHE:HZ	1.81	0.46
10:ZW:199:TYR:HB2	10:ZW:211:TYR:HB2	1.98	0.46
10:Za:93:PHE:HB3	10:Za:333:VAL:HG13	1.97	0.46
10:Ze:95:SER:OG	10:Ze:332:ASN:O	2.24	0.46
10:Zh:374:ASN:HA	10:Zh:377:VAL:HG12	1.98	0.46
9:w:184:LEU:HB3	9:w:192:TYR:HB3	1.97	0.46
2:E:86:PHE:HZ	3:F:87:GLN:O	1.97	0.46
3:I:138:MET:O	3:I:142:THR:OG1	2.28	0.46
5:Q:113:SER:O	5:Q:117:GLN:HG3	2.15	0.46
5:R:51:LYS:O	5:R:55:ARG:HG2	2.16	0.46
7:i:315:ALA:HA	8:p:9:MET:HE1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:1:135:GLN:NE2	9:1:137:GLN:HG2	2.30	0.46
10:ZI:109:VAL:HG12	10:ZI:115:GLN:HA	1.97	0.46
10:ZL:140:PRO:HD2	10:ZL:312:LEU:HD22	1.98	0.46
10:ZM:109:VAL:HG12	10:ZM:115:GLN:HA	1.98	0.46
10:ZO:196:MET:HE3	10:ZO:248:THR:HG22	1.98	0.46
10:ZS:34:SER:HB3	10:ZS:366:VAL:HG22	1.98	0.46
10:ZV:391:THR:O	10:ZV:395:ILE:HG12	2.16	0.46
10:ZW:373:VAL:HG11	10:Zc:7:VAL:HG22	1.98	0.46
10:ZY:109:VAL:HG12	10:ZY:115:GLN:HA	1.98	0.46
10:ZZ:5:GLN:HG2	10:ZZ:50:LEU:O	2.16	0.46
10:ZZ:109:VAL:HG12	10:ZZ:115:GLN:HA	1.98	0.46
10:Za:139:ILE:HA	10:Za:312:LEU:HD22	1.98	0.46
1:C:24:LEU:HD11	1:C:62:ILE:HD11	1.96	0.46
6:V:78:TYR:CE2	9:r:73:ARG:HB2	2.51	0.46
6:a:123:LYS:HD2	8:q:250:MET:C	2.40	0.46
8:n:70:GLN:HG3	9:y:6:TRP:NE1	2.30	0.46
9:4:45:LEU:CD2	9:t:98:LYS:HG2	2.45	0.46
9:ZE:5:LEU:HB2	9:ZE:250:THR:HG21	1.98	0.46
10:ZH:43:PHE:HD2	10:ZH:49:GLY:HA2	1.81	0.46
10:ZP:245:ASN:C	10:ZP:246:ILE:HD13	2.40	0.46
10:ZQ:93:PHE:HB3	10:ZQ:333:VAL:HG13	1.97	0.46
10:ZS:105:ASN:HB2	10:ZS:107:ASN:ND2	2.30	0.46
10:Ze:44:ALA:HB3	10:Ze:50:LEU:HD11	1.98	0.46
10:Zh:69:THR:OG1	10:Zh:74:ASP:OD1	2.29	0.46
9:z:151:ILE:HG12	9:z:157:VAL:HG22	1.97	0.46
2:E:108:LEU:HA	2:E:108:LEU:HD23	1.76	0.46
3:G:97:THR:O	3:G:101:MET:HG2	2.16	0.46
3:G:171:LEU:HB3	3:G:172:PRO:HD3	1.97	0.46
6:a:106:MET:HE1	9:w:260:LEU:HB3	1.97	0.46
8:n:184:GLU:OE1	9:s:55:GLN:OE1	2.34	0.46
9:4:95:VAL:O	9:4:118:GLY:HA3	2.16	0.46
10:ZG:230:LEU:HB3	10:ZG:238:LEU:HD11	1.98	0.46
10:ZH:83:PHE:HB2	10:ZH:95:SER:O	2.15	0.46
10:ZK:262:SER:OG	10:ZK:264:LEU:HG	2.15	0.46
10:ZL:106:ARG:HD3	10:ZL:140:PRO:HA	1.97	0.46
10:ZO:156:ILE:HA	10:ZO:277:VAL:HG23	1.98	0.46
10:ZR:184:VAL:HG13	10:ZR:196:MET:HB2	1.98	0.46
10:ZS:156:ILE:HG13	10:ZS:276:ILE:HA	1.98	0.46
10:ZT:18:ASP:HB3	10:ZY:5:GLN:HE22	1.80	0.46
10:ZU:10:LEU:HD23	10:ZU:10:LEU:HA	1.84	0.46
10:ZY:17:LEU:HD13	10:Zd:395:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZY:57:ILE:HD12	10:Zd:47:LYS:HB2	1.98	0.46
10:ZY:83:PHE:HB2	10:ZY:95:SER:O	2.16	0.46
9:s:188:GLY:O	9:s:190:ASN:N	2.49	0.46
9:t:135:GLN:NE2	9:t:137:GLN:OE1	2.49	0.46
9:u:115:THR:HB	9:u:191:LEU:HD23	1.97	0.46
1:A:84:LEU:HD21	3:G:185:ILE:HG23	1.97	0.45
1:C:85:PRO:HG3	3:I:238:SER:HA	1.98	0.45
1:D:7:MET:HA	1:D:7:MET:HE3	1.97	0.45
3:H:109:TYR:HA	3:H:113:TYR:HB3	1.98	0.45
3:I:48:ILE:HD11	4:O:89:ARG:HH12	1.81	0.45
6:a:3:LEU:HB2	7:b:319:GLN:HE21	1.80	0.45
6:a:103:VAL:HG21	9:r:9:LYS:HB2	1.98	0.45
8:m:235:THR:OG1	9:r:260:LEU:HD11	2.15	0.45
8:n:151:PRO:HB2	8:n:154:THR:CG2	2.44	0.45
8:o:225:ARG:HA	8:o:225:ARG:HD3	1.66	0.45
8:o:235:THR:OG1	9:t:260:LEU:HD12	2.16	0.45
9:1:252:GLN:NE2	9:w:237:GLN:HE22	2.14	0.45
9:2:79:ARG:HH11	9:2:79:ARG:HG3	1.81	0.45
9:3:215:TYR:CE2	9:ZE:45:LEU:HD21	2.52	0.45
9:5:29:VAL:O	9:5:222:SER:OG	2.33	0.45
9:8:40:VAL:O	9:8:75:VAL:N	2.45	0.45
9:8:56:SER:O	9:s:152:GLY:HA3	2.17	0.45
10:ZH:75:VAL:HG13	10:ZH:356:LEU:HB3	1.98	0.45
10:ZI:197:ASN:HD22	10:ZI:197:ASN:N	2.14	0.45
10:ZW:74:ASP:O	10:ZW:359:GLY:N	2.49	0.45
10:ZW:314:GLN:NE2	10:ZW:347:THR:OG1	2.49	0.45
10:ZY:268:GLN:NE2	10:Ze:190:GLN:HE22	2.12	0.45
10:ZZ:99:GLN:HE21	10:ZZ:111:MET:HE3	1.82	0.45
10:ZZ:208:TRP:NE1	10:ZZ:268:GLN:OE1	2.38	0.45
10:Zf:5:GLN:HG2	10:Zf:50:LEU:O	2.15	0.45
9:r:205:THR:HB	9:r:208:LEU:HD12	1.99	0.45
9:s:36:ARG:HD3	9:s:80:LEU:HD22	1.97	0.45
8:p:109:PRO:HG3	9:u:197:SER:C	2.41	0.45
8:q:213:PRO:HB3	9:v:242:ILE:CD1	2.46	0.45
9:2:244:SER:HG	9:7:256:LYS:NZ	2.10	0.45
9:5:184:LEU:HB3	9:5:192:TYR:HB3	1.99	0.45
9:6:1:MET:HE3	9:6:1:MET:HB2	1.86	0.45
9:6:57:SER:OG	9:w:108:PRO:HG3	2.17	0.45
9:7:19:MET:HB2	9:7:236:VAL:HG11	1.98	0.45
10:ZG:181:LYS:HE2	10:ZR:129:GLN:HE21	1.80	0.45
10:ZJ:233:ASN:ND2	10:ZJ:235:ASN:H	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZK:93:PHE:HB3	10:ZK:333:VAL:HG13	1.98	0.45
10:ZL:104:GLU:H	10:ZL:104:GLU:CD	2.23	0.45
10:ZM:213:HIS:HB2	10:ZM:223:PRO:HG3	1.99	0.45
10:ZU:109:VAL:HG12	10:ZU:115:GLN:HA	1.98	0.45
10:Za:81:GLY:HA3	10:Za:317:LEU:HD23	1.97	0.45
10:Za:104:GLU:OE2	10:Zf:341:GLY:HA2	2.15	0.45
10:Zc:93:PHE:CD1	10:Zc:114:MET:HE1	2.50	0.45
10:Zd:5:GLN:HG2	10:Zd:50:LEU:O	2.17	0.45
10:Zd:93:PHE:HB3	10:Zd:333:VAL:HG13	1.98	0.45
9:u:229:GLU:O	9:u:233:MET:HG3	2.15	0.45
9:v:130:THR:OG1	9:v:131:ALA:N	2.50	0.45
9:x:249:THR:O	9:x:253:MET:HG3	2.16	0.45
1:D:14:MET:HE2	2:E:229:MET:SD	2.56	0.45
3:G:205:MET:CE	3:H:209:MET:HA	2.45	0.45
3:I:190:PHE:CD1	3:J:220:PRO:HG3	2.52	0.45
4:K:86:ILE:HG12	4:P:102:MET:CE	2.46	0.45
5:U:130:MET:HE2	5:U:130:MET:HB2	1.87	0.45
6:W:77:VAL:HG12	9:s:6:TRP:CE2	2.41	0.45
6:Z:103:VAL:HG21	8:q:9:MET:HB2	1.97	0.45
8:n:28:ASN:OD1	9:s:72:VAL:HB	2.16	0.45
9:5:245:LYS:HE2	9:5:245:LYS:HB2	1.52	0.45
9:7:128:LEU:HD23	9:7:128:LEU:HA	1.82	0.45
10:ZN:159:ASN:ND2	10:ZN:162:ASP:OD2	2.49	0.45
10:ZP:83:PHE:O	10:ZP:94:TYR:HA	2.16	0.45
10:ZZ:63:ASP:OD2	10:ZZ:79:GLN:N	2.50	0.45
10:Zd:93:PHE:HB2	10:Zd:114:MET:HE1	1.98	0.45
10:Ze:383:GLN:O	10:Ze:387:GLN:HG2	2.16	0.45
2:E:158:PRO:HD2	2:E:162:ASN:ND2	2.32	0.45
3:H:66:ARG:HB2	3:H:178:GLU:OE1	2.17	0.45
4:N:69:ASN:HB2	5:T:16:LEU:HD23	1.99	0.45
5:S:33:ALA:O	5:S:98:ASN:ND2	2.50	0.45
5:T:115:LYS:HE2	6:Z:4:LEU:HD21	1.97	0.45
6:Y:67:VAL:HG21	8:o:53:THR:HG22	1.98	0.45
8:o:217:MET:HE2	9:z:258:THR:HA	1.94	0.45
9:2:180:ASN:ND2	9:x:122:VAL:O	2.49	0.45
9:6:242:ILE:HD12	9:ZC:1:MET:HE1	1.96	0.45
9:ZD:59:GLN:N	9:ZD:59:GLN:OE1	2.49	0.45
9:ZE:238:ARG:NE	10:ZK:393:ASP:OD1	2.49	0.45
10:ZF:117:THR:HA	10:ZF:136:PRO:HA	1.97	0.45
10:ZG:71:ARG:O	10:ZG:359:GLY:HA2	2.16	0.45
10:ZG:154:MET:HB3	10:ZG:154:MET:HE2	1.73	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZM:139:ILE:HA	10:ZM:312:LEU:HD13	1.97	0.45
10:ZX:144:MET:HE3	10:ZX:284:TYR:CE1	2.51	0.45
10:ZX:230:LEU:HD22	10:ZX:238:LEU:HD11	1.98	0.45
10:ZY:17:LEU:CD1	10:Zd:395:ILE:HD11	2.46	0.45
10:ZY:210:VAL:O	10:ZY:227:SER:N	2.49	0.45
10:ZZ:112:GLN:OE1	10:ZZ:112:GLN:N	2.50	0.45
9:w:44:LEU:HB2	9:w:70:THR:HB	1.97	0.45
9:w:176:THR:OG1	9:w:203:GLU:OE2	2.35	0.45
9:z:238:ARG:O	9:z:242:ILE:HG12	2.17	0.45
1:A:58:VAL:HG21	3:G:207:LEU:HD21	1.97	0.45
1:D:9:MET:HE1	3:J:188:THR:HB	1.99	0.45
5:Q:104:ARG:O	5:Q:108:GLN:HG2	2.17	0.45
8:m:213:PRO:HG3	9:x:1:MET:CE	2.46	0.45
9:4:1:MET:HE3	9:t:226:VAL:HG21	1.98	0.45
9:6:57:SER:HB3	9:w:108:PRO:HG3	1.97	0.45
9:ZC:95:VAL:HG11	9:ZC:214:LEU:HD23	1.98	0.45
9:ZD:54:ALA:HB1	9:x:150:THR:HG21	1.98	0.45
9:ZD:122:VAL:O	10:ZI:322:ASN:ND2	2.48	0.45
10:ZJ:265:ASN:OD1	10:ZJ:265:ASN:O	2.35	0.45
10:ZO:180:LYS:HB3	10:ZO:200:PHE:HB2	1.98	0.45
10:ZP:396:LEU:HD23	10:ZP:396:LEU:HA	1.76	0.45
10:ZQ:233:ASN:ND2	10:ZQ:239:GLU:HB3	2.31	0.45
10:ZR:204:LYS:HG2	10:ZR:205:ASP:N	2.32	0.45
10:ZS:10:LEU:HD11	10:ZS:382:TYR:CE1	2.52	0.45
10:ZS:27:SER:O	10:ZS:364:SER:OG	2.34	0.45
10:Zh:2:SER:OG	10:Zh:392:GLN:NE2	2.49	0.45
9:s:185:GLU:HG3	9:x:67:GLN:HE22	1.82	0.45
9:x:147:LEU:HD11	9:x:162:GLN:HB2	1.98	0.45
9:y:120:PHE:CD1	9:y:136:VAL:HG21	2.52	0.45
9:z:47:GLN:HG2	9:z:68:ILE:HB	1.99	0.45
3:G:59:LEU:HD11	4:L:102:MET:HE1	1.99	0.45
4:P:61:LEU:HD21	5:U:50:LYS:NZ	2.31	0.45
5:Q:11:PHE:HD1	5:Q:53:MET:HE2	1.82	0.45
5:S:128:LYS:HE2	6:X:134:GLN:HG2	1.99	0.45
6:X:113:GLN:HE21	8:n:240:ASN:ND2	2.14	0.45
8:m:110:THR:HG23	8:m:112:GLN:HG2	1.97	0.45
8:n:29:ALA:HB1	9:y:1:MET:HE3	1.98	0.45
8:n:71:LEU:HB2	9:y:70:THR:HG21	1.99	0.45
8:o:82:LEU:HD13	8:o:201:ILE:HG22	1.97	0.45
8:p:16:LEU:CD2	9:u:253:MET:HE2	2.43	0.45
9:0:129:VAL:HG12	9:0:135:GLN:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4:45:LEU:HD22	9:t:98:LYS:HG2	1.98	0.45
9:7:94:ASP:OD2	9:ZC:38:ARG:NH1	2.43	0.45
9:ZB:233:MET:SD	10:ZG:388:THR:HA	2.56	0.45
10:ZI:75:VAL:HG11	10:ZI:356:LEU:HD13	1.98	0.45
10:ZM:217:ASP:HB3	10:ZM:220:ALA:HB2	1.98	0.45
10:Zc:10:LEU:HD12	10:Zc:10:LEU:HA	1.71	0.45
10:Zc:210:VAL:HB	10:Zc:228:THR:HG22	1.99	0.45
10:Zd:3:PHE:O	10:Zd:7:VAL:HG13	2.16	0.45
9:r:7:ILE:HG12	9:r:70:THR:O	2.16	0.45
9:t:157:VAL:HB	9:t:171:GLY:CA	2.42	0.45
9:x:3:SER:O	9:x:4:SER:C	2.59	0.45
2:E:254:ILE:HD13	2:E:254:ILE:HA	1.86	0.45
3:G:204:LEU:HD12	3:G:214:PRO:HB3	1.99	0.45
9:1:239:ALA:HB2	9:7:1:MET:HE1	1.98	0.45
9:3:10:THR:OG1	9:3:71:GLY:HA3	2.17	0.45
9:4:50:ARG:HH21	9:z:73:ARG:HH22	1.63	0.45
9:7:106:MET:HE3	9:7:110:GLY:HA2	1.98	0.45
9:9:35:LYS:NZ	9:9:220:GLU:OE2	2.48	0.45
9:ZC:88:GLN:NE2	10:ZN:53:LYS:HB2	2.30	0.45
10:ZH:162:ASP:O	10:ZH:202:LYS:NZ	2.33	0.45
10:ZN:380:ARG:HA	10:ZN:380:ARG:HD3	1.68	0.45
10:ZR:179:ASN:N	10:ZR:200:PHE:O	2.45	0.45
10:ZR:316:VAL:HG21	10:ZR:345:LEU:HD23	1.98	0.45
10:ZT:380:ARG:HD3	10:ZT:380:ARG:HA	1.76	0.45
10:ZV:102:LEU:HD21	10:ZV:106:ARG:HA	1.98	0.45
10:ZV:119:TYR:HB2	10:ZV:314:GLN:HB3	1.99	0.45
10:ZX:188:ASP:HA	10:ZX:257:ALA:HB2	1.99	0.45
10:ZY:33:LYS:NZ	10:ZY:362:GLU:OE2	2.49	0.45
10:Za:157:ASN:ND2	10:Zg:143:LEU:HD13	2.31	0.45
10:Zd:116:LEU:HD12	10:Zd:117:THR:H	1.80	0.45
10:Ze:380:ARG:HA	10:Ze:380:ARG:HD3	1.64	0.45
9:w:237:GLN:O	9:w:241:GLU:HG3	2.17	0.45
1:A:10:GLY:O	1:A:14:MET:HG2	2.16	0.45
1:D:60:ILE:O	1:D:64:VAL:HG22	2.17	0.45
4:P:64:PRO:CG	7:b:322:PRO:HB3	2.47	0.45
6:V:79:GLU:CD	9:r:6:TRP:CH2	2.94	0.45
6:W:86:ASP:OD1	6:W:86:ASP:N	2.41	0.45
7:i:322:PRO:HG3	9:u:50:ARG:HD3	1.98	0.45
8:q:64:ALA:HB2	8:q:173:ARG:HH21	1.80	0.45
9:0:21:VAL:HG21	9:0:39:ALA:HB2	1.99	0.45
9:0:112:SER:HB3	9:0:137:GLN:NE2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:196:GLN:HE22	9:7:55:GLN:HE21	1.63	0.45
9:3:98:LYS:HB3	9:3:213:LEU:HB2	1.98	0.45
9:3:189:GLU:HA	9:8:42:GLU:CD	2.42	0.45
9:4:9:LYS:HE3	9:y:228:GLU:HG3	1.99	0.45
9:8:70:THR:HG22	9:8:71:GLY:N	2.30	0.45
9:ZB:8:ALA:HB1	9:ZB:247:VAL:HG23	1.99	0.45
9:ZC:88:GLN:NE2	9:ZC:218:TYR:OH	2.50	0.45
10:ZK:210:VAL:HB	10:ZK:228:THR:HG22	1.98	0.45
10:ZL:269:GLN:HG2	10:ZR:286:PRO:HG2	1.98	0.45
10:ZN:202:LYS:HB2	10:ZN:208:TRP:CZ3	2.52	0.45
10:ZO:139:ILE:HA	10:ZO:312:LEU:HD22	1.98	0.45
10:ZQ:288:ASP:O	10:ZQ:305:SER:N	2.50	0.45
10:ZV:373:VAL:HG11	10:Zb:7:VAL:HG22	1.98	0.45
10:Za:352:ASN:O	10:Za:352:ASN:OD1	2.35	0.45
10:Zf:378:ALA:O	10:Zf:379:GLN:C	2.59	0.45
9:r:122:VAL:O	9:w:180:ASN:ND2	2.50	0.45
9:s:16:GLN:HE21	9:s:16:GLN:HB2	1.48	0.45
9:t:147:LEU:HB2	9:t:160:THR:HG23	1.98	0.45
9:x:187:ILE:HD11	9:x:193:ILE:HG13	1.99	0.45
9:z:198:SER:O	9:z:198:SER:OG	2.31	0.45
3:H:90:LEU:HG	4:M:104:VAL:CG2	2.47	0.45
3:J:239:LEU:HD12	3:J:239:LEU:HA	1.84	0.45
6:V:112:TYR:CD1	6:a:125:MET:HG3	2.51	0.45
6:a:128:LYS:O	6:a:131:THR:HG22	2.17	0.45
8:n:80:VAL:O	8:n:103:GLY:HA3	2.17	0.45
9:0:184:LEU:HB3	9:0:192:TYR:HB3	1.98	0.45
9:1:238:ARG:O	9:1:242:ILE:HG12	2.17	0.45
9:2:28:ASN:ND2	9:7:43:ASP:OD1	2.49	0.45
9:2:36:ARG:HE	9:2:80:LEU:HD22	1.82	0.45
9:3:123:ASP:OD1	9:3:127:GLN:N	2.49	0.45
9:6:1:MET:HE3	9:v:29:VAL:HG11	1.99	0.45
9:6:26:LEU:HD11	9:6:233:MET:HE2	1.98	0.45
9:ZC:95:VAL:O	9:ZC:118:GLY:HA3	2.17	0.45
10:ZI:352:ASN:OD1	10:ZI:352:ASN:N	2.49	0.45
10:ZL:160:SER:HA	10:ZL:268:GLN:HE21	1.82	0.45
10:ZM:246:ILE:HD13	10:ZM:246:ILE:HA	1.88	0.45
10:ZP:73:LEU:HD21	10:ZP:292:TYR:CE1	2.52	0.45
10:ZT:146:ALA:HB2	10:ZT:286:PRO:HD3	1.99	0.45
10:ZY:146:ALA:HB2	10:ZY:286:PRO:HD3	1.98	0.45
10:Zf:101:LYS:HD3	10:Zf:102:LEU:N	2.31	0.45
9:r:106:MET:HE2	9:r:106:MET:HB2	1.86	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:y:25:ASN:HD21	9:y:37:GLN:H	1.64	0.45
2:E:144:LEU:HB3	3:J:149:LEU:HD22	1.98	0.45
3:J:221:PHE:O	3:J:224:MET:HE2	2.17	0.45
6:W:20:ARG:HD3	7:e:313:PRO:HG2	1.99	0.45
6:X:49:PHE:CG	7:g:313:PRO:HG3	2.52	0.45
8:q:144:SER:HB3	8:q:155:VAL:HG22	1.99	0.45
9:2:10:THR:OG1	9:2:71:GLY:HA3	2.17	0.45
9:3:35:LYS:NZ	9:3:220:GLU:OE2	2.48	0.45
9:4:17:THR:HG23	9:9:68:ILE:HD11	1.99	0.45
9:4:238:ARG:NH2	9:ZA:251:ASP:OD2	2.47	0.45
9:ZB:184:LEU:HB3	9:ZB:192:TYR:HB3	1.99	0.45
10:ZL:270:ASN:HB2	10:ZR:190:GLN:O	2.17	0.45
10:ZQ:265:ASN:C	10:ZQ:267:MET:HE2	2.42	0.45
10:ZS:86:VAL:HG23	10:ZS:117:THR:HG21	1.98	0.45
10:ZS:128:ILE:HD13	10:ZS:128:ILE:HA	1.87	0.45
10:ZT:128:ILE:HD13	10:ZT:128:ILE:HA	1.83	0.45
10:ZW:122:THR:OG1	10:ZW:129:GLN:NE2	2.50	0.45
10:ZY:212:THR:HG21	10:ZY:246:ILE:HD12	1.99	0.45
10:ZY:337:THR:HG23	10:ZY:339:ALA:H	1.82	0.45
10:ZY:392:GLN:HA	10:ZY:395:ILE:HD12	1.99	0.45
9:s:147:LEU:HB2	9:s:160:THR:HG23	1.98	0.45
9:u:97:ILE:HD12	9:u:116:ARG:HG2	1.98	0.45
9:v:234:ILE:O	9:v:238:ARG:HG2	2.17	0.45
1:C:27:VAL:HG22	1:C:57:ALA:HB1	1.98	0.44
2:E:8:GLN:O	2:E:12:TRP:HD1	2.01	0.44
3:G:57:ILE:O	3:G:61:MET:HB2	2.17	0.44
3:J:114:GLN:HB3	3:J:115:PRO:HD3	2.00	0.44
5:S:31:ALA:HB1	6:X:13:ALA:HB2	1.98	0.44
5:S:109:PHE:CZ	6:X:118:VAL:HG13	2.53	0.44
8:m:171:VAL:HG13	8:m:179:PHE:HB3	1.98	0.44
8:p:10:GLY:O	8:p:14:GLN:HG2	2.16	0.44
9:1:100:GLN:HE22	9:w:147:LEU:HD23	1.82	0.44
9:5:100:GLN:HE21	9:5:177:THR:HG21	1.82	0.44
9:9:36:ARG:HH21	9:9:80:LEU:HD22	1.82	0.44
9:ZA:167:PRO:HD3	10:ZL:338:GLN:HB3	1.99	0.44
9:ZB:31:THR:HG22	10:ZG:39:PHE:CB	2.46	0.44
10:ZF:71:ARG:HB2	10:ZF:74:ASP:OD2	2.17	0.44
10:ZQ:42:MET:HE2	10:ZQ:50:LEU:HD22	1.98	0.44
10:ZQ:373:VAL:O	10:ZQ:377:VAL:HG23	2.17	0.44
10:ZT:71:ARG:NH2	10:ZT:100:PHE:O	2.45	0.44
10:ZZ:281:GLN:OE1	10:ZZ:281:GLN:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Za:269:GLN:OE1	10:Zg:286:PRO:HG3	2.17	0.44
10:Zc:69:THR:HG21	10:Zc:361:LEU:HD12	1.99	0.44
10:Zc:125:PRO:HA	10:Zc:126:PRO:HD3	1.88	0.44
10:Zf:196:MET:HE1	10:Zf:259:PHE:CZ	2.52	0.44
10:Zh:154:MET:HG2	10:Zh:279:THR:HG22	1.98	0.44
9:u:178:PHE:HE1	9:u:201:PRO:HB3	1.82	0.44
9:w:102:PHE:HB3	9:w:114:TYR:HB3	1.99	0.44
1:B:2:THR:HG23	1:B:5:SER:H	1.82	0.44
1:B:20:LEU:HD11	1:B:73:LEU:HD13	2.00	0.44
4:L:75:MET:HE3	4:L:75:MET:HB3	1.83	0.44
4:M:70:ASP:OD1	5:S:13:GLN:NE2	2.49	0.44
6:X:83:PRO:HG2	9:s:62:LEU:CD2	2.37	0.44
6:Y:22:ASN:OD1	8:o:4:ALA:HB2	2.18	0.44
8:o:10:GLY:O	8:o:14:GLN:HG2	2.17	0.44
8:o:71:LEU:CB	9:z:70:THR:HG21	2.48	0.44
8:p:14:GLN:HG3	8:p:58:THR:HA	1.98	0.44
8:p:26:LEU:HD21	8:p:216:ALA:CB	2.48	0.44
9:5:55:GLN:HA	9:5:55:GLN:HE21	1.82	0.44
9:6:189:GLU:HA	9:ZB:42:GLU:HB2	1.98	0.44
9:7:227:ALA:CB	10:ZI:399:LEU:HD13	2.46	0.44
9:ZB:26:LEU:HD22	10:ZG:384:SER:OG	2.17	0.44
9:ZE:70:THR:HG22	9:ZE:71:GLY:H	1.82	0.44
9:ZE:186:SER:O	10:ZJ:45:GLY:O	2.34	0.44
9:ZE:255:GLN:O	9:ZE:259:GLN:HG2	2.17	0.44
10:ZH:93:PHE:HB3	10:ZH:333:VAL:HG13	1.99	0.44
10:ZJ:93:PHE:HB3	10:ZJ:333:VAL:HG13	1.99	0.44
10:ZJ:350:SER:OG	10:ZJ:351:GLY:N	2.48	0.44
10:ZL:47:LYS:HE3	10:ZL:47:LYS:HB2	1.81	0.44
10:ZL:322:ASN:OD1	10:ZL:325:GLY:N	2.50	0.44
10:ZN:99:GLN:HG2	10:ZN:361:LEU:HD11	1.98	0.44
10:ZZ:74:ASP:O	10:ZZ:359:GLY:N	2.50	0.44
3:H:101:MET:HE3	3:H:101:MET:HB3	1.77	0.44
3:H:127:LEU:HD23	3:H:127:LEU:HA	1.88	0.44
8:o:208:GLY:HA3	9:z:6:TRP:HZ3	1.82	0.44
8:q:152:PRO:CD	9:1:193:ILE:CG2	2.95	0.44
9:1:178:PHE:CE1	9:1:201:PRO:HB3	2.50	0.44
9:4:33:GLY:N	9:4:220:GLU:O	2.49	0.44
9:5:257:LEU:O	9:5:260:LEU:HB2	2.16	0.44
9:9:37:GLN:HE21	9:9:79:ARG:NH1	2.08	0.44
9:ZC:98:LYS:HE2	10:ZN:44:ALA:CB	2.48	0.44
9:ZD:175:LEU:HD12	9:ZD:206:PRO:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZH:233:ASN:HD21	10:ZH:237:ILE:HB	1.82	0.44
10:ZI:95:SER:OG	10:ZI:332:ASN:O	2.23	0.44
10:ZJ:396:LEU:HD23	10:ZJ:396:LEU:HA	1.84	0.44
10:ZP:103:ASP:OD1	10:ZP:107:ASN:N	2.50	0.44
10:Ze:80:ASN:OD1	10:Ze:81:GLY:N	2.50	0.44
9:s:47:GLN:O	9:s:67:GLN:HA	2.17	0.44
1:D:7:MET:HE2	2:E:233:MET:O	2.17	0.44
2:E:75:MET:O	2:E:79:LEU:HG	2.17	0.44
2:E:123:PRO:HB2	2:E:126:ALA:HB3	1.99	0.44
3:J:204:LEU:HD11	3:J:217:ILE:HD12	1.99	0.44
5:Q:49:LEU:O	5:Q:53:MET:HG2	2.17	0.44
8:q:130:PRO:O	8:q:131:GLU:C	2.60	0.44
8:q:227:PHE:O	8:q:231:MET:HG2	2.17	0.44
9:1:35:LYS:HD2	9:1:81:HIS:HA	1.99	0.44
9:4:185:GLU:OE1	9:9:51:GLN:NE2	2.50	0.44
9:8:7:ILE:O	9:8:10:THR:OG1	2.34	0.44
9:ZB:164:GLN:C	9:ZB:166:ALA:H	2.26	0.44
9:ZD:49:ILE:HB	9:ZD:66:LEU:HB3	1.99	0.44
9:ZD:91:ASN:HB2	9:ZD:94:ASP:OD2	2.17	0.44
9:ZE:31:THR:HG22	10:ZJ:39:PHE:CB	2.48	0.44
10:ZI:87:ASP:OD1	10:ZI:87:ASP:N	2.37	0.44
10:ZJ:146:ALA:HB2	10:ZJ:286:PRO:HD3	1.98	0.44
10:ZM:102:LEU:HD12	10:ZM:102:LEU:HA	1.88	0.44
10:ZS:53:LYS:HE3	10:ZS:53:LYS:HB2	1.79	0.44
10:ZX:382:TYR:CE1	10:Zc:395:ILE:HG23	2.53	0.44
10:ZY:74:ASP:OD2	10:ZY:361:LEU:HD11	2.18	0.44
10:Zd:184:VAL:HG13	10:Zd:196:MET:HB2	1.98	0.44
9:y:43:ASP:HA	9:y:72:VAL:HA	1.99	0.44
3:F:100:ILE:HG23	3:F:101:MET:CE	2.47	0.44
3:F:213:PRO:HA	3:F:214:PRO:HD3	1.91	0.44
3:I:147:LEU:HD21	3:I:165:VAL:HG11	2.00	0.44
6:V:103:VAL:HG21	8:m:9:MET:HB2	1.98	0.44
8:m:120:VAL:O	8:m:126:PRO:HA	2.16	0.44
8:o:202:MET:SD	9:z:44:LEU:HD23	2.58	0.44
9:0:49:ILE:HB	9:0:66:LEU:HG	1.98	0.44
9:1:197:SER:HA	9:w:124:GLN:HB3	1.99	0.44
9:2:141:THR:C	9:2:142:ILE:HD13	2.41	0.44
9:6:123:ASP:OD1	9:6:127:GLN:N	2.50	0.44
9:9:70:THR:HG22	9:9:71:GLY:N	2.30	0.44
10:ZF:65:THR:HA	10:ZQ:50:LEU:HD11	1.99	0.44
10:ZI:8:SER:HB3	10:ZI:52:VAL:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZI:324:GLU:O	10:ZI:326:LEU:N	2.50	0.44
10:ZK:126:PRO:HG2	10:ZK:310:GLN:HG3	2.00	0.44
10:ZR:182:GLY:O	10:ZR:197:ASN:HA	2.17	0.44
10:ZS:331:ASP:HA	10:ZX:40:ALA:HB1	1.99	0.44
10:ZT:14:ALA:HB2	10:ZT:382:TYR:HE2	1.82	0.44
10:ZV:368:LEU:HD23	10:ZV:368:LEU:HA	1.84	0.44
10:ZZ:233:ASN:HD21	10:ZZ:237:ILE:HB	1.83	0.44
10:Zf:103:ASP:OD2	10:Zf:104:GLU:N	2.48	0.44
9:r:24:ASN:ND2	9:w:69:GLY:HA3	2.32	0.44
9:y:123:ASP:OD2	9:y:127:GLN:NE2	2.51	0.44
8:m:70:GLN:CG	9:x:3:SER:CB	2.96	0.44
8:n:34:PHE:O	8:n:210:ASN:ND2	2.51	0.44
8:n:87:TRP:HB2	8:n:164:VAL:HG23	1.99	0.44
8:p:49:LEU:HA	8:p:50:SER:HA	1.72	0.44
8:p:105:ILE:HG12	8:p:115:ILE:HD11	2.00	0.44
9:1:38:ARG:NH1	9:w:94:ASP:OD2	2.46	0.44
9:1:254:LEU:O	9:1:258:THR:HG23	2.17	0.44
9:3:76:ALA:HB1	9:8:64:SER:O	2.18	0.44
9:4:74:PRO:HB2	9:9:66:LEU:HD11	1.99	0.44
9:7:58:GLU:OE2	9:7:58:GLU:N	2.42	0.44
9:8:137:GLN:HA	9:8:138:PRO:C	2.43	0.44
9:ZE:255:GLN:O	9:ZE:256:LYS:C	2.59	0.44
10:ZF:65:THR:HG21	10:ZQ:4:SER:HB2	1.99	0.44
10:ZI:233:ASN:OD1	10:ZI:237:ILE:N	2.47	0.44
10:ZJ:178:TYR:HA	10:ZJ:201:VAL:HG22	2.00	0.44
10:ZN:269:GLN:HE22	10:ZT:146:ALA:H	1.65	0.44
10:ZP:71:ARG:NH1	10:ZP:74:ASP:OD1	2.51	0.44
10:ZP:346:GLY:HA3	10:ZP:353:PHE:CE2	2.53	0.44
10:ZR:178:TYR:HA	10:ZR:201:VAL:HG22	1.98	0.44
10:ZS:170:PHE:CE2	10:ZS:223:PRO:HG2	2.52	0.44
10:ZT:99:GLN:NE2	10:ZY:38:SER:OG	2.47	0.44
10:ZV:16:ASN:HB2	10:ZV:39:PHE:HZ	1.83	0.44
10:ZV:156:ILE:HG22	10:ZV:276:ILE:HG12	2.00	0.44
10:ZW:390:LYS:O	10:ZW:394:GLN:HG3	2.18	0.44
10:Ze:117:THR:HA	10:Ze:136:PRO:HA	2.00	0.44
10:Zg:71:ARG:NH1	10:Zg:74:ASP:OD1	2.51	0.44
10:Zh:5:GLN:H	10:Zh:5:GLN:HG2	1.62	0.44
3:I:212:VAL:HG21	3:I:217:ILE:HD11	2.00	0.44
6:a:3:LEU:H	7:b:319:GLN:HE21	1.66	0.44
8:m:138:ALA:CB	9:2:56:SER:C	2.73	0.44
8:n:29:ALA:O	8:n:209:SER:OG	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:o:167:GLU:OE1	8:o:167:GLU:N	2.50	0.44
8:q:77:PRO:O	8:q:203:SER:OG	2.34	0.44
9:2:86:LEU:HG	9:ZD:45:LEU:HD12	1.98	0.44
9:6:184:LEU:HB3	9:6:192:TYR:HB3	1.99	0.44
9:8:180:ASN:OD1	9:8:183:GLY:N	2.44	0.44
9:ZB:215:TYR:HB3	9:ZB:218:TYR:CD2	2.53	0.44
10:ZL:368:LEU:HD12	10:ZL:368:LEU:HA	1.68	0.44
10:ZS:233:ASN:OD1	10:ZS:237:ILE:N	2.49	0.44
10:ZU:3:PHE:HE2	10:ZU:396:LEU:HD12	1.81	0.44
10:ZV:41:ASP:OD2	10:ZV:41:ASP:N	2.46	0.44
10:ZV:309:GLU:OE1	10:Zg:338:GLN:NE2	2.50	0.44
10:ZY:24:ILE:HD11	10:Zd:384:SER:OG	2.18	0.44
10:ZZ:10:LEU:HD21	10:Ze:399:LEU:HD21	1.99	0.44
10:ZZ:307:GLU:O	10:ZZ:307:GLU:HG2	2.17	0.44
10:Zb:80:ASN:OD1	10:Zb:80:ASN:C	2.61	0.44
10:Zf:210:VAL:HB	10:Zf:228:THR:HG22	2.00	0.44
9:s:20:ASP:OD1	9:x:4:SER:OG	2.35	0.44
9:s:189:GLU:O	9:s:191:LEU:HG	2.18	0.44
2:E:193:LEU:O	2:E:196:THR:OG1	2.25	0.44
9:0:20:ASP:OD1	9:5:3:SER:OG	2.36	0.44
9:0:143:PRO:HG2	9:0:159:VAL:HG11	1.99	0.44
9:5:49:ILE:HG21	9:5:66:LEU:HD23	2.00	0.44
9:ZA:208:LEU:C	9:ZA:210:GLY:H	2.26	0.44
10:ZJ:139:ILE:HG12	10:ZJ:312:LEU:HD13	1.99	0.44
10:ZL:373:VAL:O	10:ZL:374:ASN:C	2.60	0.44
10:ZM:307:GLU:OE1	10:ZM:307:GLU:O	2.35	0.44
10:ZP:373:VAL:O	10:ZP:375:MET:N	2.50	0.44
10:ZR:111:MET:N	10:ZR:111:MET:SD	2.90	0.44
10:ZR:295:ASN:HB2	10:ZR:297:ASP:OD2	2.18	0.44
10:ZZ:144:MET:HE2	10:ZZ:144:MET:HB3	1.83	0.44
10:Zg:73:LEU:HB3	10:Zg:100:PHE:HB2	2.00	0.44
9:x:6:TRP:O	9:x:10:THR:HG23	2.18	0.44
1:D:52:ILE:HD13	1:D:52:ILE:HA	1.83	0.44
6:Z:32:ASP:OD1	9:v:2:ILE:HD11	2.16	0.44
9:1:114:TYR:CD2	9:1:178:PHE:HZ	2.36	0.44
9:5:244:SER:HB2	9:ZA:260:LEU:HD11	1.99	0.44
9:6:45:LEU:HD21	9:v:215:TYR:HE2	1.83	0.44
9:ZA:76:ALA:HA	10:ZF:47:LYS:HD3	2.00	0.44
9:ZE:44:LEU:HD23	9:ZE:44:LEU:HA	1.82	0.44
10:ZL:380:ARG:HD3	10:ZL:380:ARG:HA	1.66	0.44
10:ZS:382:TYR:CE1	10:ZX:395:ILE:HG23	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZV:14:ALA:HB2	10:ZV:382:TYR:HE2	1.83	0.44
10:ZX:388:THR:O	10:ZX:392:GLN:HG2	2.18	0.44
10:ZY:396:LEU:HD23	10:ZY:396:LEU:HA	1.77	0.44
10:ZZ:2:SER:OG	10:ZZ:3:PHE:N	2.48	0.44
10:Za:112:GLN:N	10:Za:112:GLN:OE1	2.51	0.44
10:Zg:42:MET:SD	10:Zg:53:LYS:HB3	2.58	0.44
9:w:137:GLN:HA	9:w:138:PRO:C	2.42	0.44
9:y:22:ILE:HG21	9:y:233:MET:HG3	2.00	0.44
9:y:95:VAL:O	9:y:118:GLY:HA3	2.18	0.44
9:z:85:ASN:O	9:z:221:THR:OG1	2.33	0.44
3:G:211:MET:HE1	3:H:210:MET:CE	2.48	0.43
3:J:80:THR:CB	3:J:83:ALA:HB2	2.48	0.43
5:S:88:ARG:HH12	5:S:108:GLN:HG3	1.83	0.43
6:Z:97:ASP:O	6:Z:101:GLU:HG2	2.18	0.43
6:a:3:LEU:O	7:b:319:GLN:HG3	2.18	0.43
8:m:202:MET:CE	9:x:73:ARG:CZ	2.94	0.43
8:n:18:GLN:HG2	8:n:223:ASN:HD21	1.82	0.43
8:p:16:LEU:HD23	9:u:253:MET:HE3	1.87	0.43
9:6:128:LEU:HD23	9:6:128:LEU:HA	1.86	0.43
9:7:225:ASN:O	9:7:229:GLU:HG2	2.18	0.43
9:ZA:76:ALA:HA	10:ZF:47:LYS:CD	2.48	0.43
9:ZC:46:TYR:HA	9:ZC:69:GLY:HA2	2.00	0.43
9:ZC:145:ASN:HA	10:ZH:352:ASN:ND2	2.33	0.43
9:ZD:42:GLU:HG2	9:ZD:75:VAL:HG23	2.00	0.43
10:ZL:84:ARG:HG3	10:ZL:84:ARG:HH11	1.83	0.43
10:ZL:93:PHE:HE1	10:ZL:329:GLN:HG3	1.83	0.43
10:ZM:6:ALA:HB1	10:ZM:389:ILE:HG13	2.00	0.43
10:ZN:9:GLY:C	10:ZN:385:ASN:HD22	2.25	0.43
10:ZO:95:SER:HB2	10:ZO:333:VAL:HG22	2.00	0.43
10:ZO:288:ASP:H	10:ZO:305:SER:HG	1.62	0.43
10:ZU:368:LEU:HD23	10:ZU:368:LEU:HA	1.80	0.43
10:ZV:331:ASP:HA	10:Za:40:ALA:HB1	2.01	0.43
10:Zf:38:SER:O	10:Zf:55:ALA:N	2.47	0.43
9:r:22:ILE:HG21	9:r:233:MET:HG2	1.99	0.43
9:x:107:LEU:HB2	9:x:111:THR:O	2.17	0.43
9:y:154:ASP:OD1	9:y:154:ASP:O	2.35	0.43
3:J:124:GLN:H	3:J:124:GLN:HG2	1.67	0.43
3:J:195:ILE:O	3:J:199:VAL:HG13	2.18	0.43
6:a:6:ILE:HG22	7:b:315:ALA:O	2.18	0.43
8:o:27:ALA:O	9:t:72:VAL:CG1	2.61	0.43
8:o:27:ALA:HB1	9:t:72:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:o:143:ILE:HB	8:o:159:GLY:O	2.18	0.43
9:0:257:LEU:HD22	9:v:240:TYR:OH	2.18	0.43
9:3:238:ARG:NH2	9:9:255:GLN:HB2	2.33	0.43
9:4:253:MET:HE2	9:z:240:TYR:CD1	2.53	0.43
9:5:208:LEU:C	9:5:210:GLY:H	2.25	0.43
9:6:7:ILE:HG23	9:6:71:GLY:HA2	1.99	0.43
10:ZI:154:MET:HE2	10:ZI:276:ILE:HD13	1.99	0.43
10:ZI:324:GLU:C	10:ZI:326:LEU:H	2.25	0.43
10:ZN:267:MET:HE2	10:ZN:267:MET:HB3	1.78	0.43
10:ZR:86:VAL:HG13	10:ZR:117:THR:HG21	2.00	0.43
10:ZV:44:ALA:HB3	10:ZV:50:LEU:HD22	2.01	0.43
10:ZV:208:TRP:NE1	10:ZV:268:GLN:OE1	2.50	0.43
10:ZX:210:VAL:O	10:ZX:227:SER:HB2	2.18	0.43
10:ZY:156:ILE:HD11	10:ZY:180:LYS:HG2	2.00	0.43
10:ZY:382:TYR:CE1	10:Zd:395:ILE:HG23	2.52	0.43
9:t:5:LEU:HD23	9:t:5:LEU:HA	1.90	0.43
9:t:147:LEU:HD11	9:y:210:GLY:HA2	1.99	0.43
9:t:153:ARG:NH2	9:z:108:PRO:HG2	2.33	0.43
9:t:188:GLY:O	9:t:190:ASN:N	2.51	0.43
9:x:2:ILE:O	9:x:3:SER:HB3	2.18	0.43
2:E:251:LEU:HD23	2:E:251:LEU:HA	1.84	0.43
3:F:123:MET:HE3	3:F:123:MET:HB3	1.84	0.43
6:V:77:VAL:HG12	9:r:6:TRP:HE1	1.80	0.43
6:Z:113:GLN:HB2	8:p:243:ARG:CZ	2.48	0.43
6:a:99:VAL:HG11	9:r:12:LEU:CD1	2.48	0.43
8:m:125:GLY:O	8:m:126:PRO:C	2.60	0.43
8:o:231:MET:CE	9:t:260:LEU:HB2	2.48	0.43
8:p:104:ASN:ND2	9:u:38:ARG:HH21	2.15	0.43
8:q:138:ALA:HB1	9:6:57:SER:N	2.32	0.43
9:0:85:ASN:O	9:0:221:THR:OG1	2.34	0.43
9:0:89:THR:HG21	9:0:94:ASP:HB2	2.01	0.43
9:2:95:VAL:O	9:2:118:GLY:HA3	2.18	0.43
9:2:231:VAL:HG11	9:8:9:LYS:HG3	2.00	0.43
9:2:255:GLN:HE21	9:2:259:GLN:NE2	2.16	0.43
9:3:107:LEU:HD21	9:3:191:LEU:HD13	2.00	0.43
10:ZJ:78:SER:O	10:ZJ:354:GLY:HA3	2.18	0.43
10:ZL:267:MET:HE3	10:ZL:267:MET:HB3	1.85	0.43
10:ZM:14:ALA:HB2	10:ZM:382:TYR:HE2	1.82	0.43
10:ZM:129:GLN:NE2	10:ZM:132:ALA:HB2	2.32	0.43
10:ZR:382:TYR:CE1	10:ZW:395:ILE:HG23	2.53	0.43
10:ZU:367:ASP:O	10:ZU:371:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZV:144:MET:HB3	10:ZV:304:TYR:CE2	2.54	0.43
10:ZX:37:ALA:HA	10:ZX:57:ILE:HD13	2.00	0.43
10:ZX:74:ASP:OD1	10:ZX:74:ASP:N	2.51	0.43
10:Ze:10:LEU:HD11	10:Ze:382:TYR:CE1	2.53	0.43
10:Ze:381:ASN:O	10:Ze:382:TYR:C	2.61	0.43
10:Zg:322:ASN:HB3	10:Zg:340:SER:HA	2.01	0.43
9:s:95:VAL:O	9:s:118:GLY:HA3	2.18	0.43
1:A:37:ILE:HD13	1:B:44:ILE:HD11	2.00	0.43
2:E:205:ASN:HB3	3:F:209:MET:HG3	2.00	0.43
7:e:315:ALA:HA	8:n:9:MET:HE1	2.00	0.43
8:n:72:ASP:OD1	8:n:72:ASP:C	2.61	0.43
8:o:16:LEU:HD23	9:t:253:MET:HE3	2.00	0.43
8:p:34:PHE:HB3	8:p:209:SER:HB2	2.00	0.43
9:1:188:GLY:O	9:1:190:ASN:N	2.47	0.43
9:4:257:LEU:HD23	9:4:257:LEU:HA	1.81	0.43
9:8:154:ASP:O	9:8:172:GLN:NE2	2.52	0.43
9:8:249:THR:O	9:8:253:MET:HG3	2.18	0.43
9:ZC:128:LEU:HD12	9:ZC:140:ILE:HB	1.99	0.43
9:ZE:70:THR:HG22	9:ZE:71:GLY:N	2.33	0.43
10:ZF:380:ARG:HH21	10:ZL:397:ASN:HB2	1.83	0.43
10:ZJ:74:ASP:O	10:ZJ:359:GLY:N	2.36	0.43
10:ZK:380:ARG:HD3	10:ZK:380:ARG:HA	1.53	0.43
10:ZM:228:THR:HB	10:ZM:244:VAL:HG11	2.00	0.43
10:ZO:159:ASN:ND2	10:ZO:162:ASP:OD2	2.43	0.43
10:ZP:73:LEU:HD21	10:ZP:292:TYR:HE1	1.83	0.43
10:ZP:107:ASN:ND2	10:ZP:138:THR:HG22	2.33	0.43
10:ZU:180:LYS:HB3	10:ZU:200:PHE:HD1	1.84	0.43
10:Zc:379:GLN:HE22	10:Zh:394:GLN:NE2	2.13	0.43
10:Zd:269:GLN:HG2	10:Zd:270:ASN:H	1.82	0.43
9:r:79:ARG:NH1	9:r:184:LEU:O	2.47	0.43
9:y:102:PHE:HB3	9:y:114:TYR:HB3	2.00	0.43
9:z:254:LEU:O	9:z:258:THR:HG23	2.19	0.43
1:C:77:VAL:HG12	3:I:229:VAL:HG11	2.00	0.43
2:E:179:ILE:H	2:E:179:ILE:HG13	1.69	0.43
3:H:143:ARG:HH22	3:H:177:SER:HA	1.83	0.43
4:K:84:MET:HE2	5:Q:134:LEU:HD21	2.00	0.43
5:T:19:ARG:NH2	5:T:115:LYS:HD3	2.33	0.43
5:T:117:GLN:HE22	6:Y:125:MET:CG	2.32	0.43
6:Z:22:ASN:OD1	8:p:4:ALA:HB2	2.19	0.43
6:a:22:ASN:OD1	8:q:54:ARG:NH1	2.51	0.43
8:n:28:ASN:OD1	9:s:72:VAL:CG2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:2:42:GLU:HG3	9:2:43:ASP:O	2.18	0.43
9:2:79:ARG:HG3	9:2:79:ARG:NH1	2.34	0.43
9:4:47:GLN:N	9:4:68:ILE:O	2.50	0.43
9:6:44:LEU:HA	9:6:44:LEU:HD23	1.83	0.43
9:ZD:44:LEU:HD23	9:ZD:44:LEU:HA	1.88	0.43
9:ZE:121:GLN:NE2	9:ZE:131:ALA:HA	2.33	0.43
10:ZK:133:ASN:N	10:ZK:133:ASN:OD1	2.50	0.43
10:ZK:394:GLN:O	10:ZK:398:THR:HG22	2.19	0.43
10:ZN:202:LYS:HZ3	10:ZN:203:THR:C	2.26	0.43
10:ZN:373:VAL:O	10:ZN:377:VAL:HG23	2.19	0.43
10:ZP:188:ASP:OD2	10:ZP:192:ASN:N	2.51	0.43
10:ZQ:34:SER:HB3	10:ZQ:366:VAL:HG12	2.01	0.43
10:ZQ:128:ILE:HD13	10:ZQ:314:GLN:HB2	2.01	0.43
10:ZQ:373:VAL:HG11	10:ZW:7:VAL:HG22	2.00	0.43
10:ZV:42:MET:SD	10:ZV:53:LYS:HB3	2.58	0.43
10:ZV:330:GLY:N	10:Za:43:PHE:HB2	2.33	0.43
10:ZZ:56:GLY:C	10:ZZ:57:ILE:HD12	2.43	0.43
10:Za:149:THR:HG23	10:Za:259:PHE:HB3	2.01	0.43
10:Zb:17:LEU:CD1	10:Zg:395:ILE:HD11	2.47	0.43
10:Ze:156:ILE:HD11	10:Ze:180:LYS:HE2	1.99	0.43
10:Zf:114:MET:HE3	10:Zf:333:VAL:HG21	2.00	0.43
9:x:2:ILE:CG1	9:x:254:LEU:HD11	2.48	0.43
3:F:63:SER:HB2	3:F:66:ARG:HH21	1.84	0.43
3:I:59:LEU:HD21	4:N:102:MET:HE1	2.01	0.43
4:N:59:PHE:CD2	4:N:59:PHE:C	2.97	0.43
6:W:103:VAL:HG21	8:n:9:MET:HB2	1.99	0.43
8:m:245:ASN:OD1	8:m:246:GLN:N	2.51	0.43
8:n:73:TYR:HD1	8:n:205:VAL:HG12	1.83	0.43
8:n:193:LEU:HD23	8:n:193:LEU:HA	1.87	0.43
8:p:65:ASP:OD2	8:p:212:LYS:NZ	2.52	0.43
9:5:95:VAL:O	9:5:118:GLY:HA3	2.18	0.43
9:5:249:THR:O	9:5:253:MET:HG3	2.19	0.43
9:6:238:ARG:HD3	9:6:238:ARG:HA	1.79	0.43
9:ZE:19:MET:HE2	9:ZE:19:MET:HB2	1.92	0.43
10:ZG:210:VAL:O	10:ZG:227:SER:N	2.52	0.43
10:ZG:288:ASP:N	10:ZG:288:ASP:OD1	2.51	0.43
10:ZR:122:THR:OG1	10:ZR:129:GLN:OE1	2.26	0.43
10:ZS:6:ALA:C	10:ZS:8:SER:N	2.77	0.43
10:Zc:381:ASN:O	10:Zc:385:ASN:ND2	2.51	0.43
10:Ze:107:ASN:HD22	10:Ze:138:THR:HG22	1.82	0.43
9:u:187:ILE:HG23	9:u:193:ILE:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:29:LEU:HD12	2:E:216:ILE:HG13	2.01	0.43
2:E:224:VAL:O	2:E:228:LEU:HB2	2.18	0.43
3:G:217:ILE:O	3:G:220:PRO:HD2	2.18	0.43
3:H:114:GLN:O	3:H:118:GLU:HG2	2.19	0.43
3:H:121:ILE:HD12	3:H:121:ILE:HA	1.90	0.43
6:W:82:ASN:HD22	6:W:91:VAL:HG21	1.83	0.43
6:a:99:VAL:CG1	9:r:12:LEU:CD1	2.97	0.43
8:o:231:MET:CE	9:t:260:LEU:CD2	2.82	0.43
8:p:76:ARG:HH21	9:u:38:ARG:NH2	2.17	0.43
9:0:37:GLN:NE2	9:5:67:GLN:O	2.49	0.43
9:7:44:LEU:HD23	9:7:44:LEU:HA	1.84	0.43
9:8:185:GLU:HG3	9:ZD:67:GLN:HE22	1.83	0.43
9:ZA:76:ALA:CB	10:ZF:47:LYS:HD3	2.49	0.43
9:ZE:85:ASN:ND2	10:ZP:50:LEU:HD22	2.33	0.43
9:ZE:89:THR:HG23	9:ZE:91:ASN:HB2	1.99	0.43
10:ZJ:248:THR:HG23	10:ZJ:257:ALA:O	2.19	0.43
10:ZK:58:THR:OG1	10:ZK:324:GLU:OE2	2.30	0.43
10:ZK:102:LEU:HD21	10:ZK:106:ARG:HA	1.99	0.43
10:ZM:30:TYR:HD1	10:ZM:363:ALA:HA	1.83	0.43
10:ZV:188:ASP:OD2	10:ZV:194:HIS:NE2	2.51	0.43
10:ZV:380:ARG:NE	10:Zb:393:ASP:OD2	2.46	0.43
10:Za:108:LEU:HD23	10:Za:108:LEU:HA	1.83	0.43
10:Zg:269:GLN:HG2	10:Zg:270:ASN:H	1.83	0.43
9:y:87:SER:OG	9:y:219:VAL:HG23	2.19	0.43
2:E:166:SER:C	2:E:168:ALA:H	2.27	0.43
3:F:97:THR:HA	3:F:100:ILE:HG22	2.00	0.43
3:G:119:GLN:HE22	5:R:4:ARG:HG2	1.84	0.43
3:H:141:GLN:NE2	3:H:243:PHE:HA	2.33	0.43
3:I:106:ASP:OD2	4:N:32:VAL:HG23	2.19	0.43
6:W:7:PHE:CD2	6:W:119:LEU:HD11	2.54	0.43
8:n:74:THR:OG1	8:n:79:ASP:OD2	2.34	0.43
9:6:175:LEU:HG	9:6:206:PRO:HG3	2.00	0.43
9:8:42:GLU:N	9:8:73:ARG:O	2.52	0.43
9:ZB:244:SER:HB2	10:ZG:399:LEU:CD2	2.49	0.43
10:ZF:158:LEU:HD22	10:ZF:208:TRP:CZ3	2.54	0.43
10:ZI:396:LEU:HD23	10:ZI:396:LEU:HA	1.91	0.43
10:ZJ:121:ALA:HB1	10:ZJ:126:PRO:HB2	2.00	0.43
10:ZP:77:ILE:HD13	10:ZP:356:LEU:HG	2.00	0.43
10:ZP:352:ASN:O	10:ZP:352:ASN:OD1	2.37	0.43
10:ZQ:75:VAL:O	10:ZQ:98:GLY:HA3	2.18	0.43
10:ZQ:352:ASN:OD1	10:ZQ:352:ASN:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZS:202:LYS:HG3	10:ZS:208:TRP:CE2	2.53	0.43
10:ZT:185:THR:HG22	10:ZT:187:TYR:HE1	1.84	0.43
10:ZT:186:VAL:C	10:ZT:187:TYR:HD1	2.26	0.43
10:ZU:159:ASN:HA	10:ZU:269:GLN:O	2.19	0.43
10:ZX:307:GLU:O	10:ZX:308:GLN:HG2	2.18	0.43
10:ZX:396:LEU:HD23	10:ZX:396:LEU:HA	1.78	0.43
10:Zb:194:HIS:CE1	10:Zb:251:ILE:HD12	2.53	0.43
10:Zd:83:PHE:HB2	10:Zd:95:SER:O	2.19	0.43
10:Zh:185:THR:OG1	10:Zh:195:ASP:OD1	2.22	0.43
9:s:225:ASN:OD1	9:s:226:VAL:N	2.51	0.43
9:u:195:THR:HG22	9:u:197:SER:H	1.84	0.43
9:v:35:LYS:HA	9:v:35:LYS:HD3	1.92	0.43
9:z:7:ILE:HG12	9:z:70:THR:O	2.19	0.43
1:B:2:THR:O	1:B:5:SER:OG	2.35	0.43
3:F:147:LEU:HD23	3:F:147:LEU:HA	1.87	0.43
3:G:190:PHE:CD1	3:H:220:PRO:HG3	2.54	0.43
6:V:122:VAL:O	6:V:126:MET:HG2	2.18	0.43
6:Y:29:ALA:HB1	8:o:11:ALA:HB2	2.01	0.43
8:m:217:MET:HE2	9:x:257:LEU:O	2.18	0.43
8:o:72:ASP:CG	9:z:9:LYS:HZ1	2.27	0.43
8:p:82:LEU:HD11	8:p:88:LEU:HG	2.01	0.43
9:ZD:77:THR:O	9:ZD:77:THR:OG1	2.32	0.43
9:ZE:137:GLN:HA	9:ZE:138:PRO:C	2.43	0.43
10:ZG:296:ASN:O	10:ZG:296:ASN:ND2	2.52	0.43
10:ZJ:367:ASP:CG	10:ZJ:370:LYS:HB2	2.44	0.43
10:ZL:65:THR:HA	10:ZW:50:LEU:HD13	2.00	0.43
10:ZP:159:ASN:N	10:ZP:274:ASN:OD1	2.47	0.43
10:ZQ:27:SER:OG	10:ZV:381:ASN:ND2	2.52	0.43
10:ZR:229:THR:O	10:ZR:241:GLY:HA3	2.19	0.43
10:ZS:103:ASP:OD2	10:ZS:103:ASP:C	2.62	0.43
10:ZY:5:GLN:HG2	10:ZY:50:LEU:O	2.19	0.43
10:Zc:60:ASP:O	10:Zc:365:ASN:ND2	2.52	0.43
10:Zf:71:ARG:HB2	10:Zf:74:ASP:OD2	2.19	0.43
9:w:95:VAL:O	9:w:118:GLY:HA3	2.18	0.43
9:y:195:THR:HG22	9:y:197:SER:H	1.83	0.43
2:E:49:MET:HE1	3:J:175:VAL:HG21	2.01	0.43
8:o:16:LEU:HD21	9:t:253:MET:HE3	2.01	0.43
9:0:95:VAL:O	9:0:118:GLY:HA3	2.18	0.43
9:2:237:GLN:O	9:2:241:GLU:HG3	2.19	0.43
9:3:36:ARG:HE	9:3:80:LEU:HD22	1.84	0.43
9:5:153:ARG:HH22	9:ZB:108:PRO:HG2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8:179:MET:HE2	9:8:179:MET:HA	2.01	0.43
9:9:95:VAL:O	9:9:118:GLY:HA3	2.19	0.43
9:ZA:35:LYS:O	9:ZA:79:ARG:NH1	2.46	0.43
10:ZJ:199:TYR:O	10:ZJ:210:VAL:HA	2.19	0.43
10:ZL:78:SER:O	10:ZL:354:GLY:HA3	2.19	0.43
10:ZO:212:THR:O	10:ZO:223:PRO:HG3	2.19	0.43
10:ZR:211:TYR:CE1	10:ZR:226:ALA:HA	2.53	0.43
10:ZW:111:MET:HE2	10:ZW:111:MET:HA	2.00	0.43
10:ZX:99:GLN:HB3	10:ZX:111:MET:HE3	2.01	0.43
10:ZZ:119:TYR:HB2	10:ZZ:128:ILE:HD11	2.01	0.43
10:Ze:397:ASN:O	10:Ze:400:VAL:N	2.52	0.43
9:t:77:THR:HG23	9:y:66:LEU:HB2	2.01	0.43
2:E:88:MET:HA	2:E:247:ILE:HG21	1.99	0.42
3:F:63:SER:O	3:F:67:ILE:HD12	2.19	0.42
4:K:74:ASP:OD2	4:K:74:ASP:N	2.52	0.42
7:e:322:PRO:HA	7:e:323:PRO:HD3	1.94	0.42
8:n:72:ASP:OD1	8:n:74:THR:HG23	2.18	0.42
8:n:80:VAL:HB	8:n:201:ILE:HD11	2.01	0.42
8:n:181:LEU:HD23	8:n:181:LEU:HA	1.90	0.42
8:p:169:ASN:OD1	8:p:169:ASN:N	2.51	0.42
8:p:181:LEU:HD11	8:p:193:LEU:HG	2.00	0.42
9:4:34:PHE:HB3	9:4:222:SER:HB3	2.01	0.42
9:5:3:SER:HB2	9:u:85:ASN:ND2	2.34	0.42
9:7:49:ILE:HB	9:7:66:LEU:HB3	2.01	0.42
9:7:142:ILE:HD13	9:7:170:VAL:HG21	2.00	0.42
9:9:257:LEU:O	9:9:258:THR:C	2.61	0.42
9:ZA:103:PHE:HE1	9:ZA:214:LEU:HD21	1.83	0.42
9:ZB:44:LEU:HD23	9:ZB:44:LEU:HA	1.87	0.42
9:ZD:138:PRO:O	9:ZD:140:ILE:HG13	2.18	0.42
9:ZE:19:MET:HE2	9:ZE:236:VAL:HG12	2.01	0.42
10:ZG:107:ASN:ND2	10:ZG:138:THR:HG22	2.33	0.42
10:ZM:71:ARG:NH1	10:ZM:74:ASP:OD1	2.52	0.42
10:ZN:165:PRO:HB3	10:ZN:176:ASP:O	2.19	0.42
10:ZN:230:LEU:HD12	10:ZN:230:LEU:HA	1.85	0.42
10:ZQ:382:TYR:CE1	10:ZV:395:ILE:HG23	2.53	0.42
10:ZR:204:LYS:HG2	10:ZR:205:ASP:H	1.84	0.42
10:ZU:396:LEU:HD23	10:ZU:396:LEU:HA	1.80	0.42
10:ZY:137:ILE:HG21	10:ZY:300:VAL:HG21	2.00	0.42
10:ZZ:319:ASN:HB2	10:ZZ:353:PHE:CE1	2.54	0.42
10:Ze:100:PHE:CE2	10:Ze:116:LEU:HD13	2.53	0.42
10:Zf:99:GLN:HE21	10:Zf:361:LEU:HD11	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Zf:107:ASN:ND2	10:Zf:138:THR:HG22	2.34	0.42
10:Zg:117:THR:HA	10:Zg:136:PRO:HA	2.01	0.42
10:Zh:392:GLN:HA	10:Zh:395:ILE:CG2	2.49	0.42
9:t:80:LEU:HD22	9:t:82:SER:HB3	2.00	0.42
9:y:189:GLU:O	9:y:191:LEU:HG	2.19	0.42
1:D:45:ASN:OD1	1:D:45:ASN:N	2.50	0.42
3:G:161:GLY:O	3:G:162:PRO:C	2.61	0.42
5:Q:114:LEU:HD21	6:W:123:LYS:HG3	2.00	0.42
5:U:31:ALA:HB1	6:Z:13:ALA:HB2	2.00	0.42
6:Z:3:LEU:HD12	6:Z:3:LEU:HA	1.92	0.42
7:g:315:ALA:HA	8:o:9:MET:HE1	1.99	0.42
8:n:68:PRO:CG	9:y:47:GLN:HB2	2.49	0.42
8:n:240:ASN:HD22	8:n:240:ASN:HA	1.61	0.42
9:1:7:ILE:HG12	9:1:70:THR:O	2.18	0.42
9:3:173:LEU:HD23	9:3:214:LEU:HD13	1.99	0.42
9:3:218:TYR:CE1	9:ZE:73:ARG:HD2	2.53	0.42
9:ZA:86:LEU:HD22	9:ZA:96:ALA:HB1	2.01	0.42
9:ZC:241:GLU:HG2	10:ZH:398:THR:HG21	2.00	0.42
9:ZD:123:ASP:OD1	9:ZD:123:ASP:N	2.46	0.42
10:ZG:396:LEU:HD23	10:ZG:396:LEU:HA	1.80	0.42
10:ZK:112:GLN:HG2	10:ZK:331:ASP:HB3	1.99	0.42
10:ZL:280:ASN:OD1	10:ZL:281:GLN:N	2.52	0.42
10:ZS:41:ASP:OD2	10:ZS:41:ASP:N	2.45	0.42
10:ZS:288:ASP:O	10:ZS:305:SER:N	2.52	0.42
10:ZT:262:SER:OG	10:ZT:264:LEU:HG	2.18	0.42
10:ZX:361:LEU:HD12	10:ZX:361:LEU:HA	1.89	0.42
10:Zc:5:GLN:HG2	10:Zc:50:LEU:O	2.19	0.42
10:Zh:320:PHE:CD2	10:Zh:340:SER:HB2	2.54	0.42
2:E:243:LEU:HD23	2:E:243:LEU:HA	1.81	0.42
3:G:114:GLN:HB3	3:G:115:PRO:HD3	2.01	0.42
3:J:82:SER:OG	3:J:82:SER:O	2.37	0.42
6:V:13:ALA:HA	6:V:62:VAL:HG12	2.02	0.42
8:o:24:SER:HA	9:t:7:ILE:CG2	2.49	0.42
8:o:59:ALA:O	9:t:66:LEU:HG	2.20	0.42
8:p:217:MET:CE	9:u:242:ILE:CD1	2.94	0.42
9:1:100:GLN:NE2	9:1:210:GLY:O	2.51	0.42
9:4:67:GLN:NE2	9:z:185:GLU:OE2	2.52	0.42
9:4:122:VAL:HG13	9:4:126:GLY:HA2	2.02	0.42
9:ZA:59:GLN:HG2	9:ZA:60:THR:HG23	2.01	0.42
9:ZA:238:ARG:NE	10:ZG:393:ASP:OD1	2.40	0.42
9:ZD:24:ASN:ND2	10:ZI:49:GLY:CA	2.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZE:70:THR:CG2	9:ZE:71:GLY:H	2.32	0.42
10:ZH:281:GLN:OE1	10:ZH:281:GLN:C	2.63	0.42
10:ZI:105:ASN:OD1	10:ZI:105:ASN:N	2.53	0.42
10:ZL:3:PHE:HE1	10:ZL:396:LEU:HD12	1.85	0.42
10:ZL:159:ASN:HD21	10:ZL:161:THR:HG23	1.84	0.42
10:ZQ:319:ASN:OD1	10:ZQ:344:LEU:HB2	2.20	0.42
10:ZS:180:LYS:NZ	10:ZS:274:ASN:O	2.52	0.42
10:ZS:245:ASN:OD1	10:ZS:245:ASN:N	2.53	0.42
10:ZS:319:ASN:C	10:ZS:319:ASN:OD1	2.62	0.42
10:ZV:346:GLY:HA3	10:ZV:353:PHE:CE2	2.54	0.42
10:Za:125:PRO:HA	10:Za:126:PRO:HD2	1.85	0.42
10:Za:375:MET:HE2	10:Za:375:MET:HB2	1.82	0.42
10:Zf:27:SER:O	10:Zf:364:SER:OG	2.36	0.42
10:Zf:187:TYR:HB3	10:Zf:191:GLY:HA2	2.00	0.42
10:Zg:96:ARG:H	10:Zg:334:TRP:HZ3	1.67	0.42
9:t:151:ILE:HG12	9:t:157:VAL:HG22	2.01	0.42
1:C:84:LEU:HD21	3:I:185:ILE:HG23	2.01	0.42
2:E:125:LEU:O	2:E:129:MET:HG3	2.20	0.42
3:F:214:PRO:HG2	3:G:212:VAL:HG22	2.01	0.42
3:I:171:LEU:HB3	3:I:172:PRO:HD3	2.01	0.42
4:O:73:ALA:HB1	5:U:13:GLN:NE2	2.33	0.42
5:Q:62:GLY:HA2	5:Q:79:SER:HB3	2.02	0.42
5:S:103:ASP:OD1	6:Y:112:TYR:OH	2.36	0.42
6:Y:77:VAL:HB	9:u:6:TRP:NE1	2.34	0.42
8:o:71:LEU:CG	9:z:70:THR:HG21	2.49	0.42
8:o:72:ASP:CG	9:z:9:LYS:NZ	2.78	0.42
9:1:1:MET:HE3	9:1:1:MET:HB3	1.80	0.42
9:4:196:GLN:NE2	9:9:53:GLY:O	2.52	0.42
9:9:124:GLN:HB2	9:ZE:199:GLY:HA2	2.01	0.42
9:ZA:55:GLN:HG3	9:ZA:57:SER:O	2.19	0.42
9:ZB:225:ASN:O	9:ZB:229:GLU:HG2	2.19	0.42
10:ZF:93:PHE:HB3	10:ZF:333:VAL:HG13	2.00	0.42
10:ZF:104:GLU:CD	10:ZK:341:GLY:HA2	2.45	0.42
10:ZK:153:SER:HB2	10:ZK:280:ASN:OD1	2.19	0.42
10:ZK:317:LEU:HD11	10:ZK:356:LEU:HD11	2.00	0.42
10:ZP:175:ALA:HA	10:ZP:178:TYR:CZ	2.55	0.42
10:ZR:10:LEU:HG	10:ZR:382:TYR:CE2	2.55	0.42
10:ZS:109:VAL:HG12	10:ZS:115:GLN:HA	2.01	0.42
10:ZS:373:VAL:O	10:ZS:377:VAL:HG23	2.20	0.42
10:ZU:322:ASN:HB3	10:ZU:340:SER:HA	2.01	0.42
10:ZU:386:ALA:O	10:ZU:389:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZZ:95:SER:OG	10:ZZ:332:ASN:O	2.34	0.42
10:ZZ:97:ASN:HD22	10:ZZ:332:ASN:ND2	2.17	0.42
10:Za:368:LEU:O	10:Za:372:LEU:N	2.47	0.42
10:Zb:379:GLN:OE1	10:Zg:391:THR:HG23	2.19	0.42
10:Zd:296:ASN:OD1	10:Zd:355:LYS:HD2	2.20	0.42
9:u:175:LEU:HD12	9:u:206:PRO:HB3	2.00	0.42
9:x:98:LYS:O	9:x:98:LYS:HG2	2.19	0.42
9:y:120:PHE:CE1	9:y:136:VAL:HG21	2.54	0.42
1:C:52:ILE:O	1:C:55:ILE:HG22	2.18	0.42
1:C:54:LYS:HB3	1:C:54:LYS:HE2	1.83	0.42
2:E:167:ASN:ND2	2:E:174:ARG:HH12	2.18	0.42
3:H:41:SER:HB2	4:N:82:MET:HE3	2.00	0.42
3:H:86:ASN:HD22	4:M:103:GLN:HA	1.83	0.42
5:Q:85:LEU:HA	5:Q:85:LEU:HD23	1.81	0.42
5:U:36:PRO:HG2	7:k:311:GLY:H	1.84	0.42
6:Y:112:TYR:CE2	6:Y:116:ILE:HD11	2.55	0.42
8:n:181:LEU:HD11	8:n:193:LEU:HD21	2.01	0.42
8:o:83:GLN:HG2	8:o:84:GLN:N	2.34	0.42
8:o:115:ILE:HG13	8:o:120:VAL:HG22	2.01	0.42
8:o:202:MET:SD	9:z:44:LEU:HD22	2.59	0.42
9:0:9:LYS:HG3	9:u:231:VAL:HG21	2.01	0.42
9:1:28:ASN:ND2	9:6:43:ASP:OD1	2.53	0.42
9:2:256:LYS:HG2	9:x:241:GLU:HG2	2.01	0.42
9:6:42:GLU:HB3	9:6:75:VAL:HG22	2.01	0.42
9:7:76:ALA:HB1	9:ZC:64:SER:O	2.19	0.42
9:ZD:58:GLU:HB3	9:ZD:59:GLN:OE1	2.20	0.42
10:ZK:27:SER:HA	10:ZK:366:VAL:CG2	2.48	0.42
10:ZN:390:LYS:O	10:ZN:394:GLN:HG3	2.19	0.42
10:ZR:18:ASP:HB3	10:ZW:5:GLN:HE22	1.85	0.42
10:Zb:111:MET:N	10:Zb:111:MET:SD	2.92	0.42
10:Zb:326:LEU:HD12	10:Zb:340:SER:HB2	2.01	0.42
10:Zb:373:VAL:HG11	10:Zh:7:VAL:HG22	2.02	0.42
10:Zc:213:HIS:HB2	10:Zc:223:PRO:HG3	2.01	0.42
9:r:107:LEU:HD11	9:r:191:LEU:HD13	2.01	0.42
9:t:189:GLU:HG2	9:y:42:GLU:CD	2.45	0.42
9:z:185:GLU:HB3	9:z:193:ILE:HG13	2.02	0.42
3:F:171:LEU:HB3	3:F:172:PRO:HD3	2.01	0.42
3:G:121:ILE:HG12	3:G:125:GLU:HB3	2.02	0.42
3:J:121:ILE:HG23	3:J:125:GLU:HB3	2.02	0.42
6:a:16:ALA:HB1	6:a:49:PHE:CE1	2.55	0.42
8:m:15:THR:OG1	8:m:226:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:n:72:ASP:HB2	9:y:9:LYS:HZ3	1.85	0.42
8:p:15:THR:OG1	8:p:226:ARG:NH1	2.53	0.42
9:0:35:LYS:HD2	9:0:81:HIS:HA	2.01	0.42
9:8:98:LYS:NZ	9:ZE:187:ILE:O	2.51	0.42
10:ZF:374:ASN:HA	10:ZF:377:VAL:HG22	2.00	0.42
10:ZG:214:ASP:OD2	10:ZG:249:GLY:N	2.46	0.42
10:ZL:22:ASN:OD1	10:ZL:26:ASN:ND2	2.53	0.42
10:ZM:381:ASN:O	10:ZM:385:ASN:ND2	2.53	0.42
10:ZN:6:ALA:HB1	10:ZN:389:ILE:HG12	2.02	0.42
10:ZN:269:GLN:HG2	10:ZT:190:GLN:O	2.20	0.42
10:ZR:38:SER:O	10:ZR:55:ALA:N	2.51	0.42
10:ZS:373:VAL:HG11	10:ZY:7:VAL:HG22	2.02	0.42
10:ZS:396:LEU:HD23	10:ZS:396:LEU:HA	1.88	0.42
10:ZT:93:PHE:HB3	10:ZT:333:VAL:HG13	2.01	0.42
9:t:95:VAL:O	9:t:118:GLY:HA3	2.20	0.42
9:x:180:ASN:O	9:x:198:SER:HB2	2.19	0.42
3:F:162:PRO:CD	3:F:163:GLU:N	2.82	0.42
6:Z:84:LEU:HD23	9:u:62:LEU:HG	2.01	0.42
8:p:152:PRO:CD	9:0:193:ILE:HD12	2.50	0.42
9:4:1:MET:HE2	9:4:254:LEU:HD22	2.02	0.42
9:7:145:ASN:HB2	9:ZC:209:ASN:O	2.19	0.42
9:8:44:LEU:HD23	9:8:44:LEU:HA	1.82	0.42
9:8:55:GLN:HG3	9:s:169:GLN:HE22	1.85	0.42
9:9:43:ASP:OD1	9:9:44:LEU:N	2.53	0.42
9:ZC:184:LEU:HB3	9:ZC:192:TYR:HB3	2.00	0.42
10:ZN:95:SER:OG	10:ZN:332:ASN:O	2.30	0.42
10:ZR:380:ARG:HD3	10:ZR:380:ARG:HA	1.75	0.42
10:ZR:387:GLN:O	10:ZR:391:THR:HG23	2.19	0.42
10:ZT:331:ASP:HA	10:ZY:40:ALA:HB1	2.01	0.42
10:ZU:78:SER:O	10:ZU:354:GLY:HA3	2.20	0.42
10:ZV:24:ILE:O	10:ZV:27:SER:OG	2.28	0.42
10:ZV:212:THR:HG21	10:ZV:246:ILE:HD11	2.01	0.42
10:ZV:401:ASN:O	10:ZV:402:LEU:C	2.62	0.42
10:ZW:331:ASP:O	10:ZW:333:VAL:HG23	2.20	0.42
10:ZY:60:ASP:OD2	10:ZY:365:ASN:ND2	2.53	0.42
10:ZY:298:GLY:HA3	10:ZY:315:ILE:HG22	2.01	0.42
10:Za:83:PHE:HB2	10:Za:95:SER:O	2.19	0.42
10:Zb:380:ARG:HA	10:Zb:380:ARG:HD3	1.68	0.42
10:Zg:103:ASP:HB3	10:Zg:109:VAL:HG21	2.01	0.42
9:s:238:ARG:NH2	9:y:251:ASP:OD1	2.27	0.42
9:x:127:GLN:HA	9:x:140:ILE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1:MET:HE2	1:C:1:MET:HB3	1.90	0.42
2:E:122:MET:HG3	3:J:214:PRO:HG2	2.01	0.42
3:J:92:LEU:HD12	3:J:92:LEU:HA	1.78	0.42
6:V:117:GLU:HB3	8:m:249:SER:CB	2.50	0.42
6:a:123:LYS:HE2	6:a:123:LYS:HA	2.02	0.42
7:g:316:LEU:HD12	7:g:316:LEU:HA	1.77	0.42
8:m:29:ALA:O	8:m:209:SER:OG	2.37	0.42
8:n:146:LEU:HB2	8:n:155:VAL:HG22	2.01	0.42
8:o:70:GLN:NE2	9:z:1:MET:N	2.67	0.42
8:p:1:MET:HG2	8:p:241:GLU:CG	2.49	0.42
8:p:80:VAL:O	8:p:103:GLY:HA3	2.19	0.42
8:p:152:PRO:HD3	9:0:193:ILE:HD12	2.01	0.42
9:6:142:ILE:HD13	9:6:149:ILE:HD13	2.01	0.42
9:9:116:ARG:HG3	9:9:116:ARG:O	2.20	0.42
9:ZA:231:VAL:HG11	10:ZG:7:VAL:HG22	2.02	0.42
10:ZG:93:PHE:HB3	10:ZG:333:VAL:HG13	2.01	0.42
10:ZI:63:ASP:OD2	10:ZI:96:ARG:NH2	2.52	0.42
10:ZK:138:THR:HG22	10:ZK:140:PRO:HD3	2.00	0.42
10:ZN:269:GLN:HB3	10:ZT:286:PRO:HG2	2.02	0.42
10:ZP:71:ARG:O	10:ZP:359:GLY:HA2	2.19	0.42
10:ZR:246:ILE:HD13	10:ZR:246:ILE:HA	1.88	0.42
10:ZU:380:ARG:HH21	10:ZU:383:GLN:NE2	2.18	0.42
10:ZX:16:ASN:HB2	10:ZX:39:PHE:HZ	1.85	0.42
10:Zd:210:VAL:HG11	10:Zd:263:PHE:CZ	2.55	0.42
10:Zf:94:TYR:CG	10:Zf:320:PHE:HZ	2.37	0.42
10:Zg:396:LEU:HD23	10:Zg:396:LEU:HA	1.78	0.42
9:x:19:MET:HE1	9:x:233:MET:HG2	2.02	0.42
2:E:175:ALA:HA	2:E:178:LEU:HD23	2.02	0.42
3:J:66:ARG:HA	3:J:182:ALA:HB2	2.02	0.42
3:J:189:ILE:O	3:J:192:PRO:HD2	2.19	0.42
4:O:69:ASN:OD1	4:O:69:ASN:N	2.52	0.42
6:W:10:ALA:HB3	6:W:119:LEU:HD13	2.02	0.42
6:a:34:VAL:HG13	6:a:35:THR:HG22	2.02	0.42
7:d:324:ASN:HB2	8:m:47:ASP:O	2.19	0.42
8:n:49:LEU:HA	8:n:50:SER:HA	1.64	0.42
8:n:59:ALA:O	9:s:66:LEU:HD22	2.20	0.42
8:n:223:ASN:CB	9:s:253:MET:HE1	2.49	0.42
8:o:82:LEU:HD11	8:o:163:LEU:HD22	2.02	0.42
9:5:10:THR:OG1	9:5:71:GLY:HA3	2.20	0.42
9:5:175:LEU:HG	9:5:206:PRO:HG3	2.02	0.42
9:6:76:ALA:HB1	9:ZB:64:SER:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:9:227:ALA:HB1	10:ZK:399:LEU:CD1	2.50	0.42
9:9:245:LYS:HB2	9:9:245:LYS:HE2	1.78	0.42
10:ZF:380:ARG:HD3	10:ZF:380:ARG:HA	1.69	0.42
10:ZI:24:ILE:HG22	10:ZN:385:ASN:OD1	2.18	0.42
10:ZN:397:ASN:O	10:ZN:398:THR:C	2.60	0.42
10:ZO:380:ARG:HD3	10:ZO:380:ARG:HA	1.81	0.42
10:ZQ:10:LEU:HD23	10:ZQ:10:LEU:HA	1.78	0.42
10:ZS:232:PHE:HB3	10:ZS:236:GLY:HA2	2.01	0.42
10:ZT:34:SER:HB3	10:ZT:366:VAL:HG22	2.01	0.42
10:ZT:71:ARG:O	10:ZT:359:GLY:HA2	2.20	0.42
10:ZW:69:THR:HG21	10:ZW:361:LEU:HD12	2.02	0.42
10:ZY:269:GLN:OE1	10:Ze:286:PRO:HB3	2.20	0.42
10:Ze:150:THR:OG1	10:Ze:282:ASN:ND2	2.51	0.42
10:Zg:367:ASP:O	10:Zg:371:GLU:HG2	2.20	0.42
9:s:43:ASP:N	9:s:43:ASP:OD1	2.53	0.42
9:t:185:GLU:HB3	9:t:193:ILE:HG22	2.02	0.42
9:x:5:LEU:HD23	9:x:5:LEU:HA	1.87	0.42
3:F:60:MET:CE	3:G:91:GLY:HA3	2.47	0.42
4:O:84:MET:SD	5:U:134:LEU:HD21	2.59	0.42
4:P:75:MET:HE2	4:P:75:MET:HB2	1.81	0.42
5:R:29:ASN:ND2	5:R:40:ALA:HA	2.34	0.42
8:m:37:GLN:OE1	9:r:67:GLN:O	2.37	0.42
8:q:135:ILE:HG23	8:q:143:ILE:HG23	2.01	0.42
9:2:241:GLU:HG2	9:7:256:LYS:HG2	2.01	0.42
9:3:230:LEU:HD13	9:ZE:257:LEU:HB3	2.01	0.42
9:ZA:76:ALA:HA	10:ZF:47:LYS:HZ2	1.85	0.42
9:ZB:240:TYR:HH	10:ZG:399:LEU:HD11	1.78	0.42
9:ZC:80:LEU:HD23	9:ZC:80:LEU:HA	1.75	0.42
10:ZG:144:MET:HE2	10:ZG:310:GLN:HE21	1.85	0.42
10:ZH:373:VAL:HG11	10:ZN:7:VAL:HG22	2.02	0.42
10:ZK:14:ALA:HB2	10:ZK:382:TYR:HE2	1.85	0.42
10:ZO:148:SER:HB3	10:ZO:188:ASP:C	2.45	0.42
10:ZQ:337:THR:HG22	10:ZQ:339:ALA:H	1.84	0.42
10:ZS:17:LEU:CD1	10:ZX:395:ILE:HD11	2.50	0.42
10:ZS:380:ARG:NH2	10:ZY:397:ASN:OD1	2.53	0.42
10:ZU:78:SER:HB3	10:ZU:79:GLN:OE1	2.19	0.42
10:ZY:126:PRO:HG2	10:ZY:310:GLN:NE2	2.35	0.42
10:Za:284:TYR:HB3	10:Za:308:GLN:HE22	1.85	0.42
10:Zb:233:ASN:OD1	10:Zb:237:ILE:N	2.51	0.42
10:Zd:397:ASN:C	10:Zd:399:LEU:H	2.28	0.42
9:t:228:GLU:HG3	9:z:9:LYS:HE3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:v:188:GLY:O	9:v:190:ASN:N	2.45	0.42
9:x:193:ILE:HG22	9:x:194:GLU:O	2.20	0.42
9:y:88:GLN:HB2	9:y:218:TYR:CE1	2.55	0.42
4:L:82:MET:HE3	5:Q:133:VAL:HG22	2.02	0.41
8:m:70:GLN:CD	9:x:3:SER:CB	2.93	0.41
9:1:241:GLU:HG3	9:6:256:LYS:HE3	2.01	0.41
9:7:45:LEU:HG	9:w:86:LEU:HD11	2.02	0.41
9:ZD:89:THR:OG1	9:ZD:94:ASP:OD2	2.37	0.41
10:ZF:106:ARG:HB3	10:ZF:139:ILE:O	2.19	0.41
10:ZH:352:ASN:O	10:ZH:352:ASN:CG	2.63	0.41
10:ZI:42:MET:O	10:ZI:50:LEU:HB2	2.20	0.41
10:ZM:281:GLN:NE2	10:ZM:283:GLY:O	2.47	0.41
10:ZO:248:THR:HG1	10:ZO:257:ALA:N	2.18	0.41
10:ZO:396:LEU:HD23	10:ZO:396:LEU:HA	1.82	0.41
10:ZW:326:LEU:HD22	10:ZW:334:TRP:HB3	2.01	0.41
10:ZY:375:MET:SD	10:Zd:388:THR:HA	2.60	0.41
10:ZZ:112:GLN:HG2	10:ZZ:331:ASP:HB3	2.02	0.41
10:Za:83:PHE:O	10:Za:94:TYR:HA	2.19	0.41
10:Zd:399:LEU:HD23	10:Zd:399:LEU:HA	1.85	0.41
10:Zg:33:LYS:NZ	10:Zg:362:GLU:OE2	2.52	0.41
10:Zh:380:ARG:HD3	10:Zh:380:ARG:HA	1.76	0.41
9:t:238:ARG:NH2	9:z:255:GLN:HB2	2.35	0.41
9:w:223:ASN:O	9:w:223:ASN:OD1	2.38	0.41
5:T:39:GLN:HA	5:T:99:THR:HB	2.01	0.41
7:l:312:VAL:HG12	7:l:315:ALA:HB2	2.01	0.41
8:m:202:MET:CE	9:x:73:ARG:HH21	2.01	0.41
8:o:68:PRO:CD	8:o:84:GLN:HE21	2.32	0.41
9:5:185:GLU:HB3	9:5:193:ILE:HG12	2.02	0.41
9:7:194:GLU:OE2	9:7:201:PRO:HD3	2.20	0.41
9:8:28:ASN:ND2	9:ZD:43:ASP:OD1	2.54	0.41
9:ZC:42:GLU:OE2	9:ZC:73:ARG:NH2	2.47	0.41
9:ZC:56:SER:O	9:w:153:ARG:N	2.52	0.41
9:ZD:95:VAL:O	9:ZD:118:GLY:HA3	2.20	0.41
10:ZF:85:LEU:HD13	10:ZF:114:MET:HB2	2.02	0.41
10:ZF:197:ASN:HD22	10:ZF:197:ASN:N	2.17	0.41
10:ZH:280:ASN:OD1	10:ZH:281:GLN:N	2.53	0.41
10:ZI:143:LEU:HD12	10:ZI:287:GLY:O	2.20	0.41
10:ZI:196:MET:HE3	10:ZI:196:MET:HB3	1.98	0.41
10:ZO:160:SER:HA	10:ZO:268:GLN:HE21	1.85	0.41
10:ZQ:112:GLN:HE21	10:ZQ:331:ASP:HB3	1.82	0.41
10:ZS:233:ASN:HD21	10:ZS:237:ILE:HB	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZS:314:GLN:NE2	10:ZS:347:THR:OG1	2.47	0.41
10:ZU:3:PHE:O	10:ZU:7:VAL:HG23	2.20	0.41
10:ZU:102:LEU:HD21	10:ZU:106:ARG:HA	2.02	0.41
10:Zc:71:ARG:O	10:Zc:359:GLY:HA2	2.20	0.41
10:Zd:16:ASN:HB2	10:Zd:39:PHE:HZ	1.85	0.41
10:Ze:30:TYR:HD1	10:Ze:363:ALA:HA	1.85	0.41
10:Zg:5:GLN:H	10:Zg:5:GLN:HG3	1.59	0.41
10:Zg:75:VAL:HG21	10:Zg:294:ILE:HG21	2.02	0.41
10:Zg:385:ASN:O	10:Zg:386:ALA:C	2.63	0.41
10:Zh:396:LEU:HA	10:Zh:396:LEU:HD23	1.83	0.41
9:r:17:THR:HG23	9:w:68:ILE:HD11	2.02	0.41
9:t:193:ILE:HD12	9:t:193:ILE:HA	1.92	0.41
9:v:178:PHE:CE1	9:v:201:PRO:HB3	2.55	0.41
2:E:176:GLY:HA2	2:E:179:ILE:CD1	2.49	0.41
3:I:190:PHE:CG	3:J:220:PRO:HG3	2.55	0.41
3:J:85:PRO:O	3:J:86:ASN:C	2.62	0.41
3:J:129:LYS:HB3	3:J:129:LYS:HE3	1.87	0.41
4:M:80:VAL:HG22	5:S:131:MET:HG2	2.01	0.41
4:P:82:MET:HE2	4:P:82:MET:HA	2.02	0.41
8:p:2:ASP:OD2	8:p:3:HIS:N	2.54	0.41
9:0:76:ALA:HB1	9:5:64:SER:O	2.21	0.41
9:1:3:SER:C	9:1:5:LEU:H	2.28	0.41
9:6:225:ASN:O	9:6:229:GLU:HG2	2.20	0.41
9:8:45:LEU:HD21	9:x:98:LYS:CG	2.48	0.41
9:9:41:PHE:HA	9:9:74:PRO:HA	2.01	0.41
9:ZA:3:SER:HA	9:z:85:ASN:ND2	2.36	0.41
9:ZA:137:GLN:HA	9:ZA:139:ALA:N	2.31	0.41
9:ZB:28:ASN:ND2	10:ZG:52:VAL:CG2	2.83	0.41
9:ZD:189:GLU:OE1	10:ZI:53:LYS:NZ	2.52	0.41
9:ZD:238:ARG:NH1	10:ZJ:397:ASN:ND2	2.67	0.41
9:ZE:85:ASN:CG	10:ZP:50:LEU:HD22	2.46	0.41
9:ZE:208:LEU:HB3	9:ZE:209:ASN:H	1.61	0.41
10:ZF:198:VAL:HG22	10:ZF:212:THR:HG22	2.02	0.41
10:ZG:267:MET:HE3	10:ZG:267:MET:HB3	1.89	0.41
10:ZK:18:ASP:HB3	10:ZP:5:GLN:HE22	1.85	0.41
10:ZN:161:THR:O	10:ZN:161:THR:OG1	2.29	0.41
10:ZN:373:VAL:HG11	10:ZT:7:VAL:HG22	2.02	0.41
10:ZQ:125:PRO:HA	10:ZQ:126:PRO:HD3	1.92	0.41
10:ZR:396:LEU:HD23	10:ZR:396:LEU:HA	1.76	0.41
10:ZS:158:LEU:HD13	10:ZS:208:TRP:CD2	2.56	0.41
10:ZV:181:LYS:HD3	10:Zg:129:GLN:HE21	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZW:83:PHE:HB2	10:ZW:95:SER:O	2.19	0.41
10:ZX:188:ASP:OD1	10:ZX:188:ASP:N	2.40	0.41
10:Zd:144:MET:HE3	10:Zd:145:ALA:H	1.85	0.41
10:Zf:78:SER:OG	10:Zf:355:LYS:O	2.29	0.41
9:t:98:LYS:HD3	9:t:213:LEU:HB2	2.01	0.41
9:u:95:VAL:O	9:u:118:GLY:HA3	2.20	0.41
9:u:98:LYS:HD3	9:u:213:LEU:HD12	2.03	0.41
9:u:154:ASP:O	9:u:154:ASP:OD2	2.39	0.41
9:w:113:ALA:HB1	9:w:191:LEU:HB3	2.03	0.41
9:z:173:LEU:HD23	9:z:173:LEU:HA	1.84	0.41
3:I:101:MET:HE3	3:I:101:MET:HB3	1.76	0.41
3:J:217:ILE:O	3:J:220:PRO:HD2	2.20	0.41
3:J:225:LEU:HD12	3:J:229:VAL:HG22	2.01	0.41
8:n:28:ASN:OD1	9:s:72:VAL:HG23	2.19	0.41
8:n:60:SER:HA	9:s:65:GLY:O	2.20	0.41
8:n:227:PHE:O	8:n:228:GLU:C	2.62	0.41
8:o:136:THR:HG21	9:4:54:ALA:CB	2.51	0.41
9:0:138:PRO:O	9:0:140:ILE:HG13	2.19	0.41
9:2:241:GLU:OE1	9:8:258:THR:HG21	2.20	0.41
9:3:3:SER:HB3	9:y:20:ASP:OD1	2.19	0.41
10:ZF:154:MET:HE3	10:ZF:184:VAL:HB	2.03	0.41
10:ZH:306:ASN:C	10:ZH:307:GLU:HG2	2.45	0.41
10:ZI:204:LYS:O	10:ZI:207:GLU:N	2.53	0.41
10:ZL:367:ASP:HB3	10:ZL:370:LYS:CG	2.47	0.41
10:ZO:235:ASN:O	10:ZO:237:ILE:N	2.51	0.41
10:ZS:146:ALA:HB2	10:ZS:286:PRO:HD3	2.02	0.41
10:ZW:104:GLU:OE2	10:ZW:104:GLU:N	2.35	0.41
10:ZW:285:LYS:HB2	10:ZW:285:LYS:HE3	1.91	0.41
10:ZX:290:VAL:HG12	10:ZX:303:ASN:O	2.20	0.41
10:Zd:183:THR:HG23	10:Zd:195:ASP:OD2	2.21	0.41
9:s:233:MET:HE1	9:x:245:LYS:HG3	2.02	0.41
3:F:44:THR:HG23	4:K:84:MET:HE1	2.01	0.41
3:G:171:LEU:HD23	3:H:95:PHE:CZ	2.55	0.41
3:J:83:ALA:O	3:J:85:PRO:N	2.54	0.41
6:Z:119:LEU:HA	6:Z:119:LEU:HD23	1.67	0.41
8:o:24:SER:CA	9:t:7:ILE:HG21	2.50	0.41
8:q:35:ARG:NH1	8:q:101:ARG:HG3	2.35	0.41
9:1:95:VAL:O	9:1:118:GLY:HA3	2.20	0.41
9:4:28:ASN:ND2	9:9:43:ASP:HB2	2.36	0.41
9:4:258:THR:HG21	9:y:241:GLU:OE1	2.21	0.41
9:5:102:PHE:HE2	9:5:181:ASP:OD1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:ZA:218:TYR:OH	10:ZL:53:LYS:HB2	2.20	0.41
9:ZE:140:ILE:HD13	9:ZE:157:VAL:HG21	2.03	0.41
10:ZH:78:SER:HG	10:ZH:355:LYS:H	1.62	0.41
10:ZH:128:ILE:HD13	10:ZH:314:GLN:OE1	2.21	0.41
10:ZI:323:ASN:H	10:ZI:323:ASN:HD22	1.69	0.41
10:ZM:59:GLN:NE2	10:ZM:334:TRP:HE1	2.18	0.41
10:ZO:71:ARG:HH11	10:ZO:71:ARG:HB3	1.84	0.41
10:ZP:170:PHE:HE2	10:ZP:223:PRO:HG2	1.85	0.41
10:ZT:121:ALA:HB2	10:ZT:128:ILE:HD13	2.03	0.41
10:ZT:200:PHE:HZ	10:ZT:263:PHE:HE2	1.69	0.41
10:ZT:297:ASP:OD2	10:ZT:297:ASP:N	2.53	0.41
10:ZT:367:ASP:HB3	10:ZT:370:LYS:HG3	2.03	0.41
10:ZU:151:THR:OG1	10:ZU:282:ASN:OD1	2.23	0.41
10:ZV:103:ASP:OD1	10:ZV:107:ASN:N	2.41	0.41
10:ZW:184:VAL:HG13	10:ZW:196:MET:HB2	2.02	0.41
10:ZW:330:GLY:N	10:Zb:43:PHE:HB2	2.36	0.41
10:Za:34:SER:HB3	10:Za:366:VAL:HG22	2.01	0.41
9:r:161:GLN:HA	9:r:161:GLN:OE1	2.21	0.41
9:y:6:TRP:O	9:y:10:THR:HG23	2.21	0.41
9:z:178:PHE:CE1	9:z:201:PRO:HB3	2.56	0.41
3:F:194:LEU:HD12	3:G:220:PRO:HG2	2.03	0.41
3:G:194:LEU:HD23	3:G:194:LEU:HA	1.83	0.41
3:I:52:THR:HG23	4:O:97:GLN:HE21	1.85	0.41
5:S:16:LEU:HD11	5:S:120:LEU:HG	2.02	0.41
5:U:90:PRO:HG2	8:q:49:LEU:HB2	2.02	0.41
6:V:30:ASN:ND2	6:a:62:VAL:HB	2.36	0.41
8:n:202:MET:CE	9:y:73:ARG:CZ	2.98	0.41
9:2:208:LEU:HB3	9:2:209:ASN:H	1.71	0.41
9:3:47:GLN:N	9:3:68:ILE:O	2.53	0.41
9:3:109:ASP:OD2	9:3:111:THR:HG22	2.20	0.41
9:8:100:GLN:HG3	9:8:210:GLY:O	2.20	0.41
9:ZB:164:GLN:C	9:ZB:166:ALA:N	2.78	0.41
9:ZB:256:LYS:HA	9:ZB:256:LYS:HD3	1.90	0.41
10:ZF:319:ASN:OD1	10:ZF:320:PHE:N	2.54	0.41
10:ZG:60:ASP:OD1	10:ZG:62:THR:HG23	2.21	0.41
10:ZJ:66:THR:OG1	10:ZU:42:MET:SD	2.77	0.41
10:ZL:16:ASN:HB2	10:ZL:39:PHE:HZ	1.85	0.41
10:ZO:167:LYS:HE2	10:ZO:174:ASP:OD2	2.21	0.41
10:ZO:288:ASP:N	10:ZO:305:SER:OG	2.43	0.41
10:ZP:269:GLN:NE2	10:ZV:146:ALA:HB3	2.35	0.41
10:ZQ:99:GLN:HG2	10:ZQ:111:MET:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZU:230:LEU:HD22	10:ZU:238:LEU:HD11	2.03	0.41
10:ZU:232:PHE:HE2	10:ZU:267:MET:HA	1.86	0.41
10:ZW:2:SER:O	10:ZW:2:SER:OG	2.36	0.41
10:ZW:212:THR:HG21	10:ZW:246:ILE:HG21	2.03	0.41
10:ZY:349:GLY:O	10:Ze:89:ASN:ND2	2.53	0.41
10:ZY:380:ARG:HB3	10:Ze:396:LEU:HD23	2.02	0.41
10:Zb:361:LEU:HD23	10:Zb:361:LEU:HA	1.86	0.41
10:Zd:33:LYS:O	10:Zd:59:GLN:NE2	2.54	0.41
10:Ze:78:SER:O	10:Ze:354:GLY:HA3	2.20	0.41
10:Zf:58:THR:HG23	10:Zf:324:GLU:HG2	2.02	0.41
1:A:18:LEU:HD12	1:A:18:LEU:HA	1.91	0.41
1:A:52:ILE:N	1:A:52:ILE:HD12	2.35	0.41
1:B:51:PHE:CE2	1:B:55:ILE:HD11	2.56	0.41
3:G:234:LEU:HD12	3:G:234:LEU:HA	1.92	0.41
5:S:106:ARG:HG2	8:o:248:LEU:HD21	2.02	0.41
6:a:98:VAL:O	6:a:102:MET:HG2	2.21	0.41
7:d:326:ALA:HB2	8:m:46:VAL:HA	2.03	0.41
7:k:322:PRO:HA	7:k:323:PRO:HD3	1.98	0.41
8:m:26:LEU:HD23	8:m:26:LEU:HA	1.87	0.41
8:n:116:GLN:NE2	9:s:42:GLU:HG3	2.35	0.41
8:n:153:ASN:OD1	8:n:153:ASN:N	2.52	0.41
8:p:89:VAL:HG22	8:p:99:TYR:CD1	2.56	0.41
8:q:82:LEU:HD11	8:q:88:LEU:HD12	2.03	0.41
9:3:143:PRO:HG2	9:3:159:VAL:HG21	2.02	0.41
9:6:245:LYS:HD3	9:6:245:LYS:HA	1.85	0.41
9:7:175:LEU:HG	9:7:206:PRO:HG3	2.02	0.41
9:9:92:SER:O	9:9:216:GLN:NE2	2.45	0.41
9:ZE:85:ASN:OD1	10:ZP:50:LEU:HD21	2.20	0.41
10:ZI:324:GLU:C	10:ZI:326:LEU:N	2.78	0.41
10:ZL:128:ILE:HD12	10:ZL:314:GLN:HB2	2.03	0.41
10:ZO:49:GLY:O	10:ZO:50:LEU:C	2.63	0.41
10:ZS:381:ASN:O	10:ZS:385:ASN:ND2	2.54	0.41
10:ZU:108:LEU:HD12	10:ZU:137:ILE:HG21	2.02	0.41
10:ZU:139:ILE:HA	10:ZU:312:LEU:HD22	2.02	0.41
10:ZU:187:TYR:CE1	10:ZU:285:LYS:HE2	2.56	0.41
10:ZV:93:PHE:HB3	10:ZV:333:VAL:HG22	2.03	0.41
10:ZV:213:HIS:HB2	10:ZV:223:PRO:HG3	2.02	0.41
10:ZY:116:LEU:HD11	10:ZY:315:ILE:HD11	2.02	0.41
10:ZY:171:SER:O	10:ZY:177:SER:OG	2.39	0.41
10:ZY:399:LEU:HA	10:ZY:399:LEU:HD23	1.84	0.41
10:ZZ:77:ILE:HD11	10:ZZ:83:PHE:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Zf:73:LEU:HD22	10:Zf:108:LEU:HD11	2.03	0.41
10:Zf:228:THR:HB	10:Zf:244:VAL:HG21	2.01	0.41
10:Zf:298:GLY:O	10:Zf:315:ILE:HG13	2.20	0.41
9:s:2:ILE:HG23	9:s:5:LEU:HB2	2.03	0.41
9:s:35:LYS:HD2	9:s:81:HIS:HA	2.02	0.41
1:B:39:GLN:NE2	1:B:49:LEU:HD12	2.31	0.41
3:F:175:VAL:O	3:F:179:LEU:HG	2.20	0.41
3:F:217:ILE:HD13	3:F:217:ILE:HA	1.89	0.41
3:I:187:PHE:CD2	3:J:224:MET:HB2	2.56	0.41
6:Y:8:ASP:C	6:Y:8:ASP:OD2	2.64	0.41
6:Z:126:MET:O	6:Z:129:THR:HG22	2.21	0.41
8:o:49:LEU:HA	8:o:50:SER:HA	1.69	0.41
8:o:146:LEU:HD11	9:4:51:GLN:NE2	2.35	0.41
9:1:73:ARG:HG3	9:1:75:VAL:HG13	2.03	0.41
9:3:46:TYR:HA	9:3:69:GLY:HA2	2.02	0.41
9:5:208:LEU:HA	9:5:208:LEU:HD13	1.83	0.41
9:8:227:ALA:HB1	10:ZJ:399:LEU:HD22	1.97	0.41
9:ZE:35:LYS:NZ	9:ZE:220:GLU:OE1	2.54	0.41
10:ZF:355:LYS:H	10:ZF:355:LYS:HG2	1.66	0.41
10:ZI:374:ASN:C	10:ZI:376:ILE:N	2.79	0.41
10:ZM:27:SER:HB2	10:ZR:381:ASN:ND2	2.36	0.41
10:ZM:380:ARG:HB3	10:ZS:396:LEU:HD13	2.02	0.41
10:ZR:380:ARG:HD2	10:ZX:396:LEU:HB3	2.03	0.41
10:ZU:197:ASN:HD21	10:ZU:215:SER:HB2	1.85	0.41
10:ZV:198:VAL:HG12	10:ZV:212:THR:HG22	2.03	0.41
10:ZY:148:SER:HB3	10:ZY:189:SER:HA	2.03	0.41
10:Zb:159:ASN:ND2	10:Zb:161:THR:OG1	2.49	0.41
10:Zc:388:THR:O	10:Zc:392:GLN:HG2	2.20	0.41
10:Zh:20:ILE:HG23	10:Zh:371:GLU:OE2	2.20	0.41
9:r:151:ILE:HB	9:r:216:GLN:HG3	2.02	0.41
9:t:233:MET:HE1	9:y:246:ALA:HA	2.01	0.41
1:A:15:LYS:HE2	1:A:15:LYS:HB3	1.88	0.41
2:E:231:ALA:O	2:E:234:PRO:HD2	2.21	0.41
3:G:171:LEU:O	3:G:175:VAL:HG23	2.21	0.41
3:J:213:PRO:HA	3:J:214:PRO:HD3	1.91	0.41
4:P:69:ASN:OD1	6:V:112:TYR:OH	2.11	0.41
5:R:29:ASN:HD22	5:R:38:TYR:HE2	1.68	0.41
8:o:138:ALA:CB	9:4:56:SER:C	2.88	0.41
9:1:83:GLN:HE21	9:ZC:45:LEU:HD12	1.86	0.41
9:2:100:GLN:NE2	9:2:210:GLY:O	2.43	0.41
9:3:95:VAL:O	9:3:118:GLY:HA3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:7:70:THR:HG23	9:w:85:ASN:OD1	2.21	0.41
9:7:109:ASP:OD2	9:7:109:ASP:C	2.63	0.41
9:ZB:116:ARG:HH21	9:ZB:220:GLU:CD	2.28	0.41
9:ZC:10:THR:OG1	9:ZC:72:VAL:O	2.39	0.41
10:ZF:401:ASN:HD22	10:ZF:401:ASN:HA	1.74	0.41
10:ZH:157:ASN:ND2	10:ZN:143:LEU:HD13	2.36	0.41
10:ZL:77:ILE:HD11	10:ZL:96:ARG:CZ	2.51	0.41
10:ZL:233:ASN:OD1	10:ZL:237:ILE:N	2.48	0.41
10:ZM:111:MET:HE3	10:ZM:111:MET:HB3	1.92	0.41
10:ZM:320:PHE:CE1	10:ZM:343:ALA:HB2	2.55	0.41
10:ZN:73:LEU:HD21	10:ZN:292:TYR:HE2	1.85	0.41
10:ZN:167:LYS:NZ	10:ZN:168:THR:O	2.54	0.41
10:ZO:112:GLN:HG2	10:ZO:331:ASP:HB3	2.02	0.41
10:ZR:18:ASP:CB	10:ZW:5:GLN:HE22	2.33	0.41
10:ZS:118:GLY:HA3	10:ZS:314:GLN:O	2.21	0.41
10:ZS:186:VAL:HG23	10:ZS:194:HIS:HB2	2.02	0.41
10:ZT:380:ARG:NH2	10:ZZ:397:ASN:OD1	2.53	0.41
10:ZU:172:VAL:HG11	10:ZU:223:PRO:HD2	2.03	0.41
10:ZV:217:ASP:HA	10:ZV:251:ILE:HD11	2.01	0.41
10:ZW:75:VAL:O	10:ZW:98:GLY:HA3	2.21	0.41
10:ZX:242:GLY:HA2	10:ZX:263:PHE:HB2	2.03	0.41
10:ZX:285:LYS:HE2	10:ZX:285:LYS:HB3	1.76	0.41
10:ZZ:107:ASN:ND2	10:ZZ:138:THR:HG22	2.35	0.41
10:Zb:110:ASN:OD1	10:Zb:114:MET:N	2.50	0.41
10:Zc:304:TYR:HE1	10:Zc:310:GLN:HB3	1.86	0.41
10:Zc:348:ALA:HB2	10:Zc:356:LEU:HG	2.02	0.41
10:Ze:85:LEU:HD23	10:Ze:114:MET:HB3	2.02	0.41
10:Ze:86:VAL:HG23	10:Ze:117:THR:HG21	2.03	0.41
10:Zf:380:ARG:HA	10:Zf:380:ARG:HD3	1.77	0.41
10:Zg:370:LYS:HB2	10:Zg:370:LYS:HE2	1.90	0.41
10:Zh:33:LYS:O	10:Zh:59:GLN:NE2	2.54	0.41
10:Zh:71:ARG:HD3	10:Zh:73:LEU:HB2	2.03	0.41
10:Zh:285:LYS:HG2	10:Zh:286:PRO:HD2	2.02	0.41
9:r:44:LEU:HD13	9:r:70:THR:HG22	2.02	0.41
9:r:138:PRO:HG3	9:r:174:ASN:ND2	2.36	0.41
9:r:140:ILE:HG21	9:r:157:VAL:HG11	2.02	0.41
9:r:189:GLU:HB2	9:w:42:GLU:CD	2.46	0.41
9:t:3:SER:O	9:t:7:ILE:HD12	2.21	0.41
9:u:42:GLU:OE1	9:u:73:ARG:NH2	2.54	0.41
9:u:114:TYR:CE2	9:u:178:PHE:HZ	2.39	0.41
9:x:248:SER:O	9:x:252:GLN:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:z:129:VAL:HG12	9:z:135:GLN:HA	2.02	0.41
1:B:59:PHE:CZ	3:G:198:LEU:HD21	2.55	0.41
3:G:204:LEU:HD11	3:G:217:ILE:HD12	2.01	0.41
3:H:189:ILE:HD13	3:H:235:LEU:HD11	2.03	0.41
6:Z:45:LYS:C	6:Z:46:GLN:HG2	2.46	0.41
9:1:22:ILE:HD11	9:1:232:ASN:HB3	2.02	0.41
9:4:10:THR:OG1	9:4:71:GLY:HA3	2.21	0.41
9:5:79:ARG:NH2	9:5:184:LEU:O	2.50	0.41
9:5:144:ALA:HA	9:ZA:179:MET:SD	2.61	0.41
9:7:119:SER:OG	9:ZC:38:ARG:NH2	2.54	0.41
9:ZA:7:ILE:HG23	9:ZA:71:GLY:HA2	2.03	0.41
9:ZE:31:THR:HG22	10:ZJ:39:PHE:HB2	2.03	0.41
10:ZF:174:ASP:HB3	10:ZF:176:ASP:OD1	2.21	0.41
10:ZJ:156:ILE:HG13	10:ZJ:276:ILE:HA	2.03	0.41
10:ZJ:174:ASP:HB3	10:ZJ:176:ASP:OD1	2.21	0.41
10:ZJ:208:TRP:HE1	10:ZJ:268:GLN:CD	2.29	0.41
10:ZM:237:ILE:H	10:ZM:237:ILE:HD12	1.85	0.41
10:ZN:184:VAL:HG13	10:ZN:196:MET:HB2	2.02	0.41
10:ZN:233:ASN:ND2	10:ZN:237:ILE:HB	2.35	0.41
10:ZO:195:ASP:OD2	10:ZO:216:SER:OG	2.37	0.41
10:ZP:42:MET:SD	10:ZP:53:LYS:HB3	2.61	0.41
10:ZP:75:VAL:O	10:ZP:98:GLY:HA3	2.21	0.41
10:ZT:33:LYS:NZ	10:ZT:362:GLU:OE1	2.36	0.41
10:ZT:373:VAL:HG11	10:ZZ:7:VAL:HG22	2.02	0.41
10:Za:190:GLN:HG3	10:Za:254:ALA:HB2	2.03	0.41
10:Zf:267:MET:HG3	10:Zf:268:GLN:N	2.35	0.41
9:s:155:GLY:HA2	9:s:214:LEU:HD12	2.03	0.41
9:t:2:ILE:O	9:t:3:SER:HB3	2.21	0.41
9:z:225:ASN:O	9:z:229:GLU:HG2	2.20	0.41
1:D:35:ILE:HD13	1:D:35:ILE:HA	1.98	0.40
1:D:77:VAL:HG11	3:J:225:LEU:HD11	2.03	0.40
2:E:4:VAL:HB	4:P:44:ARG:HH12	1.86	0.40
3:F:138:MET:O	3:F:142:THR:OG1	2.16	0.40
3:F:153:LEU:HD23	3:F:153:LEU:HA	1.91	0.40
3:F:187:PHE:CZ	3:F:191:ILE:HD11	2.56	0.40
3:H:189:ILE:O	3:H:192:PRO:HD2	2.21	0.40
6:W:120:ASN:HD21	8:m:247:LEU:CB	2.21	0.40
6:Y:113:GLN:CG	8:o:243:ARG:HD2	2.51	0.40
8:n:172:GLN:NE2	9:s:52:PRO:CG	2.62	0.40
8:o:144:SER:OG	9:4:55:GLN:CB	2.69	0.40
8:q:138:ALA:HB1	9:6:57:SER:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8:45:LEU:HD23	9:8:45:LEU:HA	1.81	0.40
9:ZA:76:ALA:HB1	10:ZF:47:LYS:HD3	2.04	0.40
9:ZC:44:LEU:HD23	9:ZC:44:LEU:HA	1.82	0.40
9:ZD:208:LEU:C	9:ZD:210:GLY:H	2.29	0.40
10:ZI:147:LYS:HE2	10:ZI:282:ASN:ND2	2.36	0.40
10:ZJ:351:GLY:C	10:ZJ:353:PHE:H	2.29	0.40
10:ZK:71:ARG:O	10:ZK:359:GLY:HA2	2.20	0.40
10:ZM:149:THR:O	10:ZM:259:PHE:HB3	2.21	0.40
10:ZN:174:ASP:OD2	10:ZN:174:ASP:N	2.52	0.40
10:ZO:374:ASN:O	10:ZO:375:MET:C	2.65	0.40
10:ZR:79:GLN:HB3	10:ZR:80:ASN:H	1.75	0.40
10:ZS:42:MET:HE2	10:ZS:42:MET:HB2	1.96	0.40
10:ZU:299:THR:HG22	10:ZU:314:GLN:OE1	2.21	0.40
10:ZV:46:SER:HB3	10:ZV:48:VAL:HG22	2.03	0.40
10:Zb:399:LEU:HD23	10:Zb:399:LEU:HA	1.78	0.40
9:x:130:THR:OG1	9:x:131:ALA:N	2.54	0.40
9:z:83:GLN:NE2	9:z:97:ILE:O	2.36	0.40
1:B:84:LEU:HD22	3:H:185:ILE:HG23	2.03	0.40
1:C:49:LEU:HD23	1:C:49:LEU:HA	1.94	0.40
3:G:75:ARG:HB2	3:G:83:ALA:CB	2.52	0.40
3:J:64:PHE:HE2	4:O:102:MET:HE1	1.85	0.40
4:O:103:GLN:CD	4:O:103:GLN:H	2.30	0.40
6:V:77:VAL:HG12	9:r:6:TRP:NE1	2.24	0.40
8:o:26:LEU:HD23	8:o:26:LEU:HA	1.91	0.40
8:p:83:GLN:HG2	8:p:84:GLN:N	2.36	0.40
9:0:11:GLY:O	9:0:15:GLN:HG2	2.21	0.40
9:1:107:LEU:HD11	9:1:113:ALA:HB2	2.03	0.40
9:4:117:ASP:OD1	9:4:117:ASP:C	2.64	0.40
9:5:1:MET:HE3	9:5:1:MET:HB2	1.88	0.40
9:6:22:ILE:HD11	9:6:232:ASN:HB3	2.03	0.40
9:8:127:GLN:NE2	9:8:139:ALA:HB1	2.35	0.40
10:ZF:393:ASP:C	10:ZF:395:ILE:N	2.76	0.40
10:ZH:111:MET:N	10:ZH:111:MET:SD	2.94	0.40
10:ZM:396:LEU:HD23	10:ZM:396:LEU:HA	1.85	0.40
10:ZR:183:THR:HG22	10:ZR:197:ASN:HD22	1.86	0.40
10:ZS:71:ARG:NH1	10:ZS:74:ASP:OD1	2.54	0.40
10:ZS:399:LEU:HD23	10:ZS:399:LEU:HA	1.92	0.40
10:ZT:139:ILE:HA	10:ZT:312:LEU:HD13	2.03	0.40
10:ZZ:74:ASP:HB3	10:ZZ:361:LEU:HG	2.03	0.40
10:Zb:308:GLN:NE2	10:Zb:309:GLU:OE1	2.55	0.40
10:Ze:71:ARG:NH2	10:Ze:74:ASP:OD1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Zh:78:SER:OG	10:Zh:355:LYS:O	2.36	0.40
9:v:175:LEU:HD23	9:v:175:LEU:HA	1.97	0.40
1:A:50:SER:OG	1:B:46:GLU:OE2	2.25	0.40
3:H:71:PHE:HD1	3:H:71:PHE:HA	1.80	0.40
5:Q:128:LYS:HD2	5:Q:128:LYS:HA	1.62	0.40
8:n:70:GLN:CG	9:y:6:TRP:NE1	2.84	0.40
9:0:35:LYS:HA	9:0:35:LYS:HD3	1.96	0.40
9:0:67:GLN:HE22	9:v:185:GLU:HA	1.87	0.40
9:2:50:ARG:HD3	9:2:66:LEU:HB2	2.03	0.40
9:9:76:ALA:HB1	9:ZE:64:SER:O	2.22	0.40
9:ZB:147:LEU:CD2	10:ZG:352:ASN:OD1	2.70	0.40
9:ZD:104:GLN:O	9:ZD:137:GLN:N	2.54	0.40
9:ZD:160:THR:HG22	9:ZD:167:PRO:HB3	2.04	0.40
9:ZD:186:SER:O	10:ZI:45:GLY:O	2.39	0.40
9:ZE:40:VAL:O	9:ZE:75:VAL:N	2.51	0.40
9:ZE:225:ASN:O	9:ZE:229:GLU:HG2	2.21	0.40
10:ZG:14:ALA:HB2	10:ZG:382:TYR:HE2	1.86	0.40
10:ZG:147:LYS:HB2	10:ZG:147:LYS:HE2	1.66	0.40
10:ZG:380:ARG:NH1	10:ZG:383:GLN:OE1	2.54	0.40
10:ZH:144:MET:SD	10:ZH:310:GLN:NE2	2.95	0.40
10:ZJ:75:VAL:O	10:ZJ:98:GLY:HA3	2.21	0.40
10:ZL:122:THR:OG1	10:ZL:129:GLN:OE1	2.38	0.40
10:ZO:262:SER:OG	10:ZO:264:LEU:HD23	2.22	0.40
10:ZP:185:THR:HG22	10:ZP:187:TYR:HE1	1.87	0.40
10:ZQ:97:ASN:HD22	10:ZQ:332:ASN:HD21	1.70	0.40
10:ZU:188:ASP:OD1	10:ZU:192:ASN:N	2.54	0.40
10:ZX:171:SER:O	10:ZX:177:SER:OG	2.39	0.40
10:ZZ:106:ARG:HA	10:ZZ:106:ARG:HD2	1.79	0.40
10:Zh:38:SER:O	10:Zh:55:ALA:N	2.52	0.40
9:x:179:MET:HE2	9:x:200:ALA:HB3	2.03	0.40
9:y:49:ILE:O	9:y:65:GLY:HA3	2.21	0.40
2:E:146:LEU:HA	2:E:146:LEU:HD23	1.80	0.40
3:I:132:GLN:HB2	3:I:133:PRO:HD3	2.04	0.40
8:m:82:LEU:HD21	8:m:88:LEU:HD12	2.03	0.40
8:p:70:GLN:HG2	9:0:3:SER:O	2.20	0.40
9:0:137:GLN:HA	9:0:138:PRO:C	2.45	0.40
9:0:189:GLU:HB2	9:5:42:GLU:OE1	2.21	0.40
9:6:153:ARG:NH1	9:6:213:LEU:HD22	2.37	0.40
9:ZB:235:GLN:NE2	10:ZH:3:PHE:CG	2.67	0.40
10:ZF:157:ASN:ND2	10:ZL:143:LEU:HD13	2.36	0.40
10:ZJ:2:SER:HB3	10:ZJ:392:GLN:CG	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZJ:180:LYS:HE3	10:ZJ:276:ILE:HG13	2.03	0.40
10:ZL:93:PHE:HB3	10:ZL:333:VAL:HG13	2.03	0.40
10:ZL:125:PRO:HA	10:ZL:126:PRO:HD3	1.98	0.40
10:ZN:170:PHE:CD2	10:ZN:170:PHE:C	2.99	0.40
10:ZO:104:GLU:OE2	10:ZO:104:GLU:N	2.35	0.40
10:ZP:16:ASN:O	10:ZP:20:ILE:HG13	2.22	0.40
10:ZP:104:GLU:CD	10:ZP:104:GLU:H	2.29	0.40
10:ZP:248:THR:HG1	10:ZP:257:ALA:H	1.65	0.40
10:ZQ:199:TYR:O	10:ZQ:210:VAL:HA	2.21	0.40
10:ZU:281:GLN:NE2	10:ZU:283:GLY:O	2.53	0.40
10:ZW:78:SER:O	10:ZW:354:GLY:HA3	2.22	0.40
10:ZX:56:GLY:HA2	10:Zc:47:LYS:NZ	2.36	0.40
10:ZX:230:LEU:HD11	10:ZX:263:PHE:HD2	1.87	0.40
10:ZY:75:VAL:HG21	10:ZY:356:LEU:HD23	2.04	0.40
10:Zb:42:MET:HG2	10:Zb:53:LYS:HE3	2.04	0.40
10:Zc:110:ASN:OD1	10:Zc:114:MET:N	2.40	0.40
10:Ze:84:ARG:C	10:Ze:85:LEU:HD12	2.46	0.40
10:Ze:367:ASP:O	10:Ze:371:GLU:HG2	2.21	0.40
9:r:44:LEU:H	9:r:44:LEU:HD12	1.86	0.40
9:t:123:ASP:OD1	9:t:127:GLN:HB3	2.22	0.40
2:E:172:LEU:O	2:E:175:ALA:HB3	2.21	0.40
4:K:68:LEU:H	4:K:68:LEU:HD12	1.85	0.40
6:Y:119:LEU:HD12	6:Y:119:LEU:HA	1.84	0.40
8:m:79:ASP:HB3	8:m:206:LEU:CD1	2.51	0.40
8:o:112:GLN:H	8:o:112:GLN:HG2	1.58	0.40
8:p:211:VAL:O	9:0:1:MET:HA	2.22	0.40
9:1:42:GLU:OE2	9:1:75:VAL:HG11	2.22	0.40
9:5:42:GLU:HG2	9:5:73:ARG:HG2	2.04	0.40
9:6:17:THR:HG23	9:ZB:68:ILE:HD11	2.04	0.40
9:8:205:THR:HA	9:8:206:PRO:HD3	1.91	0.40
9:8:255:GLN:HA	9:8:258:THR:HG22	2.03	0.40
9:ZB:34:PHE:HB3	9:ZB:222:SER:HB3	2.04	0.40
9:ZD:24:ASN:HD21	10:ZI:49:GLY:CA	2.33	0.40
10:ZG:111:MET:N	10:ZG:111:MET:SD	2.95	0.40
10:ZH:399:LEU:O	10:ZH:402:LEU:HG	2.21	0.40
10:ZI:2:SER:O	10:ZI:2:SER:OG	2.31	0.40
10:ZK:104:GLU:HG2	10:ZP:338:GLN:O	2.21	0.40
10:ZM:180:LYS:HG3	10:ZM:181:LYS:N	2.37	0.40
10:ZN:74:ASP:O	10:ZN:359:GLY:N	2.52	0.40
10:ZN:109:VAL:HG12	10:ZN:115:GLN:HA	2.02	0.40
10:ZP:85:LEU:HD23	10:ZP:116:LEU:HA	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:ZS:81:GLY:O	10:ZS:82:PHE:HD1	2.05	0.40
10:ZT:103:ASP:OD1	10:ZT:105:ASN:N	2.54	0.40
10:ZY:53:LYS:HE3	10:ZY:53:LYS:HB2	1.86	0.40
10:ZZ:17:LEU:CD1	10:Ze:395:ILE:HD11	2.51	0.40
10:Zd:4:SER:HA	10:Zd:7:VAL:HG22	2.03	0.40
9:r:75:VAL:HG23	9:r:76:ALA:H	1.87	0.40
9:s:51:GLN:H	9:s:51:GLN:HG2	1.71	0.40
9:s:153:ARG:NE	9:s:213:LEU:HD13	2.36	0.40
9:t:155:GLY:HA2	9:t:214:LEU:HD12	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
1	B	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
1	C	87/89 (98%)	86 (99%)	1 (1%)	0	100	100
1	D	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
2	E	251/264 (95%)	231 (92%)	14 (6%)	6 (2%)	4	24
3	F	205/245 (84%)	195 (95%)	10 (5%)	0	100	100
3	G	207/245 (84%)	199 (96%)	6 (3%)	2 (1%)	12	40
3	H	206/245 (84%)	201 (98%)	5 (2%)	0	100	100
3	I	206/245 (84%)	199 (97%)	6 (3%)	1 (0%)	24	55
3	J	207/245 (84%)	200 (97%)	5 (2%)	2 (1%)	12	40
4	K	38/104 (36%)	36 (95%)	2 (5%)	0	100	100
4	L	70/104 (67%)	70 (100%)	0	0	100	100
4	M	72/104 (69%)	70 (97%)	2 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	N	72/104 (69%)	72 (100%)	0	0	100	100
4	O	72/104 (69%)	72 (100%)	0	0	100	100
4	P	71/104 (68%)	71 (100%)	0	0	100	100
5	Q	115/138 (83%)	115 (100%)	0	0	100	100
5	R	104/138 (75%)	103 (99%)	1 (1%)	0	100	100
5	S	104/138 (75%)	103 (99%)	1 (1%)	0	100	100
5	T	106/138 (77%)	104 (98%)	2 (2%)	0	100	100
5	U	102/138 (74%)	101 (99%)	1 (1%)	0	100	100
6	V	131/134 (98%)	123 (94%)	8 (6%)	0	100	100
6	W	130/134 (97%)	124 (95%)	6 (5%)	0	100	100
6	X	131/134 (98%)	126 (96%)	5 (4%)	0	100	100
6	Y	131/134 (98%)	127 (97%)	4 (3%)	0	100	100
6	Z	131/134 (98%)	125 (95%)	5 (4%)	1 (1%)	16	45
6	a	131/134 (98%)	125 (95%)	6 (5%)	0	100	100
7	b	11/560 (2%)	10 (91%)	1 (9%)	0	100	100
7	c	14/560 (2%)	12 (86%)	2 (14%)	0	100	100
7	d	18/560 (3%)	18 (100%)	0	0	100	100
7	e	14/560 (2%)	14 (100%)	0	0	100	100
7	f	19/560 (3%)	19 (100%)	0	0	100	100
7	g	14/560 (2%)	13 (93%)	1 (7%)	0	100	100
7	h	19/560 (3%)	19 (100%)	0	0	100	100
7	i	14/560 (2%)	14 (100%)	0	0	100	100
7	j	18/560 (3%)	17 (94%)	1 (6%)	0	100	100
7	k	14/560 (2%)	14 (100%)	0	0	100	100
7	l	19/560 (3%)	19 (100%)	0	0	100	100
8	m	246/251 (98%)	232 (94%)	11 (4%)	3 (1%)	10	37
8	n	247/251 (98%)	241 (98%)	6 (2%)	0	100	100
8	o	248/251 (99%)	239 (96%)	9 (4%)	0	100	100
8	p	248/251 (99%)	240 (97%)	8 (3%)	0	100	100
8	q	247/251 (98%)	233 (94%)	13 (5%)	1 (0%)	30	60
9	0	244/260 (94%)	236 (97%)	7 (3%)	1 (0%)	30	60

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	1	248/260 (95%)	238 (96%)	9 (4%)	1 (0%)	30	60
9	2	258/260 (99%)	247 (96%)	9 (4%)	2 (1%)	16	45
9	3	258/260 (99%)	248 (96%)	8 (3%)	2 (1%)	16	45
9	4	258/260 (99%)	248 (96%)	7 (3%)	3 (1%)	10	37
9	5	258/260 (99%)	242 (94%)	14 (5%)	2 (1%)	16	45
9	6	258/260 (99%)	244 (95%)	12 (5%)	2 (1%)	16	45
9	7	258/260 (99%)	245 (95%)	10 (4%)	3 (1%)	10	37
9	8	258/260 (99%)	247 (96%)	9 (4%)	2 (1%)	16	45
9	9	258/260 (99%)	245 (95%)	11 (4%)	2 (1%)	16	45
9	ZA	258/260 (99%)	242 (94%)	13 (5%)	3 (1%)	10	37
9	ZB	258/260 (99%)	244 (95%)	11 (4%)	3 (1%)	10	37
9	ZC	258/260 (99%)	243 (94%)	12 (5%)	3 (1%)	10	37
9	ZD	258/260 (99%)	244 (95%)	12 (5%)	2 (1%)	16	45
9	ZE	258/260 (99%)	245 (95%)	12 (5%)	1 (0%)	30	60
9	r	250/260 (96%)	237 (95%)	12 (5%)	1 (0%)	30	60
9	s	251/260 (96%)	237 (94%)	13 (5%)	1 (0%)	30	60
9	t	252/260 (97%)	241 (96%)	10 (4%)	1 (0%)	30	60
9	u	250/260 (96%)	242 (97%)	6 (2%)	2 (1%)	16	45
9	v	251/260 (96%)	241 (96%)	9 (4%)	1 (0%)	30	60
9	w	239/260 (92%)	232 (97%)	6 (2%)	1 (0%)	30	60
9	x	244/260 (94%)	237 (97%)	4 (2%)	3 (1%)	10	37
9	y	244/260 (94%)	237 (97%)	6 (2%)	1 (0%)	30	60
9	z	244/260 (94%)	240 (98%)	3 (1%)	1 (0%)	30	60
10	ZF	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
10	ZG	399/403 (99%)	392 (98%)	6 (2%)	1 (0%)	36	65
10	ZH	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
10	ZI	399/403 (99%)	387 (97%)	10 (2%)	2 (0%)	24	55
10	ZJ	399/403 (99%)	387 (97%)	12 (3%)	0	100	100
10	ZK	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
10	ZL	399/403 (99%)	389 (98%)	9 (2%)	1 (0%)	36	65
10	ZM	399/403 (99%)	388 (97%)	11 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	ZN	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
10	ZO	399/403 (99%)	381 (96%)	15 (4%)	3 (1%)	16	45
10	ZP	399/403 (99%)	385 (96%)	13 (3%)	1 (0%)	36	65
10	ZQ	399/403 (99%)	389 (98%)	10 (2%)	0	100	100
10	ZR	399/403 (99%)	390 (98%)	8 (2%)	1 (0%)	36	65
10	ZS	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
10	ZT	399/403 (99%)	389 (98%)	10 (2%)	0	100	100
10	ZU	399/403 (99%)	387 (97%)	12 (3%)	0	100	100
10	ZV	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
10	ZW	399/403 (99%)	385 (96%)	14 (4%)	0	100	100
10	ZX	399/403 (99%)	389 (98%)	10 (2%)	0	100	100
10	ZY	399/403 (99%)	386 (97%)	13 (3%)	0	100	100
10	ZZ	399/403 (99%)	389 (98%)	10 (2%)	0	100	100
10	Za	399/403 (99%)	388 (97%)	11 (3%)	0	100	100
10	Zb	399/403 (99%)	392 (98%)	7 (2%)	0	100	100
10	Zc	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
10	Zd	399/403 (99%)	387 (97%)	12 (3%)	0	100	100
10	Ze	399/403 (99%)	385 (96%)	14 (4%)	0	100	100
10	Zf	399/403 (99%)	386 (97%)	13 (3%)	0	100	100
10	Zg	399/403 (99%)	387 (97%)	12 (3%)	0	100	100
10	Zh	399/403 (99%)	392 (98%)	7 (2%)	0	100	100
All	All	22393/29305 (76%)	21644 (97%)	680 (3%)	69 (0%)	37	65

All (69) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	E	188	LEU
2	E	190	VAL
3	J	83	ALA
8	m	123	GLU
9	2	209	ASN
9	5	209	ASN
9	8	209	ASN
9	ZA	209	ASN
9	ZB	164	GLN

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Mol	Chain	Res	Type
9	ZC	139	ALA
10	ZG	46	SER
2	E	167	ASN
2	E	213	ILE
3	G	83	ALA
3	I	160	GLN
9	9	139	ALA
9	ZB	165	ALA
9	ZB	209	ASN
9	ZC	209	ASN
9	ZD	209	ASN
9	ZE	209	ASN
10	ZI	375	MET
10	ZO	237	ILE
10	ZR	87	ASP
9	u	165	ALA
9	x	4	SER
9	z	127	GLN
2	E	189	PRO
8	m	151	PRO
9	0	127	GLN
9	2	49	ILE
9	3	49	ILE
9	4	49	ILE
9	4	139	ALA
9	4	140	ILE
9	5	49	ILE
10	ZL	374	ASN
9	r	127	GLN
9	x	3	SER
9	y	127	GLN
9	6	49	ILE
9	6	58	GLU
9	7	49	ILE
9	7	138	PRO
9	8	49	ILE
9	9	49	ILE
9	ZA	49	ILE
9	ZA	139	ALA
9	ZD	139	ALA
10	ZO	142	THR
10	ZP	374	ASN

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Mol	Chain	Res	Type
9	s	127	GLN
9	u	127	GLN
9	w	127	GLN
9	x	127	GLN
3	G	162	PRO
9	1	127	GLN
9	7	210	GLY
9	t	127	GLN
9	v	127	GLN
2	E	187	ALA
6	Z	58	ALA
9	3	139	ALA
10	ZO	375	MET
8	m	149	GLY
8	q	132	GLY
10	ZI	325	GLY
3	J	229	VAL
9	ZC	138	PRO

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	A	74/74 (100%)	72 (97%)	2 (3%)	39	63
1	B	74/74 (100%)	74 (100%)	0	100	100
1	C	74/74 (100%)	74 (100%)	0	100	100
1	D	74/74 (100%)	72 (97%)	2 (3%)	39	63
2	E	210/221 (95%)	208 (99%)	2 (1%)	68	76
3	F	177/204 (87%)	174 (98%)	3 (2%)	53	71
3	G	179/204 (88%)	174 (97%)	5 (3%)	38	62
3	H	178/204 (87%)	176 (99%)	2 (1%)	65	76
3	I	178/204 (87%)	175 (98%)	3 (2%)	53	71
3	J	179/204 (88%)	178 (99%)	1 (1%)	78	81

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	K	33/79 (42%)	33 (100%)	0	100	100
4	L	56/79 (71%)	56 (100%)	0	100	100
4	M	58/79 (73%)	58 (100%)	0	100	100
4	N	58/79 (73%)	57 (98%)	1 (2%)	53	71
4	O	58/79 (73%)	58 (100%)	0	100	100
4	P	57/79 (72%)	56 (98%)	1 (2%)	51	70
5	Q	98/113 (87%)	96 (98%)	2 (2%)	48	68
5	R	90/113 (80%)	89 (99%)	1 (1%)	65	76
5	S	90/113 (80%)	90 (100%)	0	100	100
5	T	91/113 (80%)	91 (100%)	0	100	100
5	U	89/113 (79%)	88 (99%)	1 (1%)	65	76
6	V	104/105 (99%)	104 (100%)	0	100	100
6	W	104/105 (99%)	104 (100%)	0	100	100
6	X	104/105 (99%)	104 (100%)	0	100	100
6	Y	104/105 (99%)	103 (99%)	1 (1%)	68	76
6	Z	104/105 (99%)	102 (98%)	2 (2%)	50	68
6	a	104/105 (99%)	104 (100%)	0	100	100
7	b	8/467 (2%)	8 (100%)	0	100	100
7	c	11/467 (2%)	11 (100%)	0	100	100
7	d	14/467 (3%)	12 (86%)	2 (14%)	3	14
7	e	11/467 (2%)	11 (100%)	0	100	100
7	f	15/467 (3%)	15 (100%)	0	100	100
7	g	11/467 (2%)	11 (100%)	0	100	100
7	h	15/467 (3%)	15 (100%)	0	100	100
7	i	11/467 (2%)	11 (100%)	0	100	100
7	j	14/467 (3%)	13 (93%)	1 (7%)	13	40
7	k	11/467 (2%)	11 (100%)	0	100	100
7	l	15/467 (3%)	14 (93%)	1 (7%)	15	42
8	m	190/193 (98%)	185 (97%)	5 (3%)	40	64
8	n	191/193 (99%)	189 (99%)	2 (1%)	68	76
8	o	192/193 (100%)	189 (98%)	3 (2%)	55	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	p	192/193 (100%)	192 (100%)	0	100	100
8	q	191/193 (99%)	190 (100%)	1 (0%)	81	83
9	0	205/215 (95%)	200 (98%)	5 (2%)	43	65
9	1	209/215 (97%)	206 (99%)	3 (1%)	59	73
9	2	215/215 (100%)	214 (100%)	1 (0%)	81	83
9	3	215/215 (100%)	213 (99%)	2 (1%)	70	78
9	4	215/215 (100%)	214 (100%)	1 (0%)	81	83
9	5	215/215 (100%)	213 (99%)	2 (1%)	70	78
9	6	215/215 (100%)	212 (99%)	3 (1%)	59	73
9	7	215/215 (100%)	215 (100%)	0	100	100
9	8	215/215 (100%)	213 (99%)	2 (1%)	70	78
9	9	215/215 (100%)	212 (99%)	3 (1%)	59	73
9	ZA	215/215 (100%)	214 (100%)	1 (0%)	81	83
9	ZB	215/215 (100%)	211 (98%)	4 (2%)	50	68
9	ZC	215/215 (100%)	212 (99%)	3 (1%)	59	73
9	ZD	215/215 (100%)	213 (99%)	2 (1%)	70	78
9	ZE	215/215 (100%)	214 (100%)	1 (0%)	81	83
9	r	209/215 (97%)	206 (99%)	3 (1%)	59	73
9	s	210/215 (98%)	203 (97%)	7 (3%)	33	59
9	t	211/215 (98%)	206 (98%)	5 (2%)	43	65
9	u	209/215 (97%)	204 (98%)	5 (2%)	43	65
9	v	210/215 (98%)	207 (99%)	3 (1%)	59	73
9	w	200/215 (93%)	199 (100%)	1 (0%)	81	83
9	x	205/215 (95%)	203 (99%)	2 (1%)	68	76
9	y	205/215 (95%)	200 (98%)	5 (2%)	43	65
9	z	205/215 (95%)	201 (98%)	4 (2%)	48	68
10	ZF	321/323 (99%)	315 (98%)	6 (2%)	50	68
10	ZG	321/323 (99%)	316 (98%)	5 (2%)	55	72
10	ZH	321/323 (99%)	316 (98%)	5 (2%)	55	72
10	ZI	321/323 (99%)	316 (98%)	5 (2%)	55	72
10	ZJ	321/323 (99%)	320 (100%)	1 (0%)	86	86

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	ZK	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZL	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZM	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZN	321/323 (99%)	319 (99%)	2 (1%)	78	81
10	ZO	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZP	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZQ	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZR	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	ZS	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZT	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZU	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZV	321/323 (99%)	319 (99%)	2 (1%)	78	81
10	ZW	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZX	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	ZY	321/323 (99%)	321 (100%)	0	100	100
10	ZZ	321/323 (99%)	321 (100%)	0	100	100
10	Za	321/323 (99%)	321 (100%)	0	100	100
10	Zb	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	Zc	321/323 (99%)	318 (99%)	3 (1%)	70	78
10	Zd	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	Ze	321/323 (99%)	319 (99%)	2 (1%)	78	81
10	Zf	321/323 (99%)	319 (99%)	2 (1%)	78	81
10	Zg	321/323 (99%)	320 (100%)	1 (0%)	86	86
10	Zh	321/323 (99%)	320 (100%)	1 (0%)	86	86
All	All	18273/23835 (77%)	18098 (99%)	175 (1%)	65	76

All (175) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	7	MET
1	A	15	LYS
1	D	9	MET
1	D	14	MET
2	E	185	MET

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Mol	Chain	Res	Type
2	E	214	PHE
3	F	123	MET
3	F	160	GLN
3	F	190	PHE
3	G	48	ILE
3	G	140	ARG
3	G	160	GLN
3	G	162	PRO
3	G	209	MET
3	H	143	ARG
3	H	152	ARG
3	I	125	GLU
3	I	187	PHE
3	I	241	GLN
3	J	230	ASP
4	N	97	GLN
4	P	91	LYS
5	Q	101	ASP
5	Q	125	SER
5	R	55	ARG
5	U	104	ARG
6	Y	101	GLU
6	Z	6	ILE
6	Z	127	LEU
7	d	318	ASN
7	d	319	GLN
7	j	319	GLN
7	l	318	ASN
8	m	37	GLN
8	m	39	ASN
8	m	126	PRO
8	m	150	ASP
8	m	247	LEU
8	n	70	GLN
8	n	201	ILE
8	o	70	GLN
8	o	71	LEU
8	o	184	GLU
8	q	163	LEU
9	0	1	MET
9	0	36	ARG
9	0	50	ARG

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Mol	Chain	Res	Type
9	0	52	PRO
9	0	73	ARG
9	1	1	MET
9	1	42	GLU
9	1	241	GLU
9	2	238	ARG
9	3	43	ASP
9	3	153	ARG
9	4	209	ASN
9	5	137	GLN
9	5	245	LYS
9	6	59	GLN
9	6	78	GLU
9	6	203	GLU
9	8	58	GLU
9	8	100	GLN
9	9	66	LEU
9	9	137	GLN
9	9	226	VAL
9	ZA	136	VAL
9	ZB	58	GLU
9	ZB	95	VAL
9	ZB	100	GLN
9	ZB	137	GLN
9	ZC	1	MET
9	ZC	43	ASP
9	ZC	136	VAL
9	ZD	136	VAL
9	ZD	196	GLN
9	ZE	141	THR
10	ZF	60	ASP
10	ZF	134	PRO
10	ZF	154	MET
10	ZF	229	THR
10	ZF	352	ASN
10	ZF	355	LYS
10	ZG	3	PHE
10	ZG	234	GLU
10	ZG	296	ASN
10	ZG	332	ASN
10	ZG	397	ASN
10	ZH	42	MET

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Mol	Chain	Res	Type
10	ZH	128	ILE
10	ZH	288	ASP
10	ZH	355	LYS
10	ZH	399	LEU
10	ZI	52	VAL
10	ZI	99	GLN
10	ZI	105	ASN
10	ZI	246	ILE
10	ZI	352	ASN
10	ZJ	42	MET
10	ZK	338	GLN
10	ZL	338	GLN
10	ZL	368	LEU
10	ZL	370	LYS
10	ZM	89	ASN
10	ZM	156	ILE
10	ZM	369	SER
10	ZN	396	LEU
10	ZN	402	LEU
10	ZO	141	ASN
10	ZO	235	ASN
10	ZO	237	ILE
10	ZP	333	VAL
10	ZP	369	SER
10	ZP	370	LYS
10	ZQ	158	LEU
10	ZQ	367	ASP
10	ZQ	370	LYS
10	ZR	255	THR
10	ZR	269	GLN
10	ZR	331	ASP
10	ZS	367	ASP
10	ZT	42	MET
10	ZU	237	ILE
10	ZV	397	ASN
10	ZV	399	LEU
10	ZW	114	MET
10	ZX	63	ASP
10	Zb	36	THR
10	Zb	331	ASP
10	Zb	367	ASP
10	Zc	369	SER

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Mol	Chain	Res	Type
10	Zc	370	LYS
10	Zc	399	LEU
10	Zd	397	ASN
10	Ze	58	THR
10	Ze	395	ILE
10	Zf	395	ILE
10	Zf	396	LEU
10	Zg	375	MET
10	Zh	54	VAL
9	r	36	ARG
9	r	106	MET
9	r	256	LYS
9	s	16	GLN
9	s	17	THR
9	s	137	GLN
9	s	169	GLN
9	s	170	VAL
9	s	251	ASP
9	s	257	LEU
9	t	1	MET
9	t	66	LEU
9	t	75	VAL
9	t	100	GLN
9	t	135	GLN
9	u	4	SER
9	u	179	MET
9	u	181	ASP
9	u	194	GLU
9	u	208	LEU
9	v	73	ARG
9	v	127	GLN
9	v	150	THR
9	w	4	SER
9	x	1	MET
9	x	137	GLN
9	y	1	MET
9	y	36	ARG
9	y	50	ARG
9	y	208	LEU
9	y	209	ASN
9	z	1	MET
9	z	3	SER

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Mol	Chain	Res	Type
9	z	179	MET
9	z	252	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (622) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	39	GLN
2	E	162	ASN
2	E	182	ASN
2	E	205	ASN
3	F	119	GLN
3	F	141	GLN
3	F	160	GLN
3	G	86	ASN
3	G	241	GLN
3	H	184	GLN
3	I	160	GLN
3	I	184	GLN
3	I	241	GLN
3	J	87	GLN
3	J	114	GLN
3	J	155	ASN
4	K	103	GLN
4	M	83	GLN
4	M	103	GLN
4	O	39	HIS
4	O	55	GLN
4	O	83	GLN
4	O	87	GLN
4	O	97	GLN
4	P	55	GLN
4	P	76	GLN
4	P	87	GLN
5	Q	17	ASN
5	R	21	GLN
5	R	29	ASN
5	R	92	GLN
5	R	98	ASN
5	R	117	GLN
5	S	32	ASN
5	S	92	GLN
5	S	135	GLN

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Mol	Chain	Res	Type
5	T	21	GLN
5	T	32	ASN
5	T	98	ASN
5	T	117	GLN
5	U	13	GLN
5	U	112	ASN
6	V	30	ASN
6	V	115	ASN
6	W	22	ASN
6	W	30	ASN
6	W	120	ASN
6	X	40	GLN
6	X	50	GLN
6	X	57	GLN
6	X	134	GLN
6	Y	82	ASN
6	Z	17	GLN
6	Z	115	ASN
6	a	5	ASN
6	a	57	GLN
6	a	115	ASN
7	b	319	GLN
7	e	324	ASN
7	f	324	ASN
7	h	324	ASN
7	i	318	ASN
7	l	318	ASN
8	m	18	GLN
8	m	19	GLN
8	m	37	GLN
8	m	91	GLN
8	m	102	ASN
8	m	112	GLN
8	n	18	GLN
8	n	172	GLN
8	n	210	ASN
8	n	223	ASN
8	n	230	GLN
8	n	240	ASN
8	o	18	GLN
8	o	28	ASN
8	o	70	GLN

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Mol	Chain	Res	Type
8	o	83	GLN
8	o	104	ASN
8	o	106	GLN
8	o	186	GLN
8	p	14	GLN
8	p	17	ASN
8	p	104	ASN
8	p	106	GLN
8	p	210	ASN
8	p	240	ASN
8	q	18	GLN
8	q	37	GLN
8	q	112	GLN
8	q	116	GLN
9	0	32	ASN
9	0	88	GLN
9	0	100	GLN
9	0	135	GLN
9	0	137	GLN
9	0	180	ASN
9	0	237	GLN
9	0	255	GLN
9	1	67	GLN
9	1	83	GLN
9	1	85	ASN
9	1	135	GLN
9	1	237	GLN
9	1	252	GLN
9	2	164	GLN
9	2	180	ASN
9	2	255	GLN
9	3	32	ASN
9	3	37	GLN
9	3	67	GLN
9	3	104	GLN
9	3	137	GLN
9	3	255	GLN
9	4	37	GLN
9	4	51	GLN
9	4	81	HIS
9	4	88	GLN
9	4	104	GLN

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Mol	Chain	Res	Type
9	4	125	ASN
9	4	127	GLN
9	4	174	ASN
9	4	216	GLN
9	4	235	GLN
9	4	252	GLN
9	4	255	GLN
9	5	32	ASN
9	5	55	GLN
9	5	85	ASN
9	5	100	GLN
9	5	237	GLN
9	5	252	GLN
9	6	16	GLN
9	6	59	GLN
9	6	91	ASN
9	6	121	GLN
9	6	127	GLN
9	6	135	GLN
9	6	161	GLN
9	6	209	ASN
9	6	237	GLN
9	7	55	GLN
9	7	81	HIS
9	7	125	ASN
9	7	164	GLN
9	7	190	ASN
9	7	235	GLN
9	8	83	GLN
9	8	85	ASN
9	8	196	GLN
9	8	209	ASN
9	9	37	GLN
9	9	47	GLN
9	9	85	ASN
9	9	88	GLN
9	9	91	ASN
9	9	137	GLN
9	9	259	GLN
9	ZA	32	ASN
9	ZA	37	GLN
9	ZA	83	GLN

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Mol	Chain	Res	Type
9	ZA	137	GLN
9	ZA	235	GLN
9	ZB	24	ASN
9	ZB	25	ASN
9	ZB	28	ASN
9	ZB	37	GLN
9	ZB	100	GLN
9	ZB	137	GLN
9	ZB	235	GLN
9	ZB	243	ASN
9	ZC	16	GLN
9	ZC	24	ASN
9	ZC	55	GLN
9	ZC	67	GLN
9	ZC	83	GLN
9	ZC	88	GLN
9	ZC	100	GLN
9	ZC	125	ASN
9	ZC	127	GLN
9	ZC	137	GLN
9	ZC	190	ASN
9	ZC	202	ASN
9	ZC	259	GLN
9	ZD	24	ASN
9	ZD	67	GLN
9	ZD	88	GLN
9	ZD	91	ASN
9	ZD	124	GLN
9	ZD	135	GLN
9	ZD	161	GLN
9	ZE	37	GLN
9	ZE	67	GLN
9	ZE	91	ASN
9	ZE	121	GLN
9	ZE	252	GLN
10	ZF	5	GLN
10	ZF	107	ASN
10	ZF	155	GLN
10	ZF	194	HIS
10	ZF	197	ASN
10	ZF	265	ASN
10	ZF	270	ASN

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Mol	Chain	Res	Type
10	ZF	280	ASN
10	ZF	282	ASN
10	ZF	310	GLN
10	ZF	358	ASN
10	ZF	385	ASN
10	ZF	387	GLN
10	ZG	22	ASN
10	ZG	89	ASN
10	ZG	107	ASN
10	ZG	115	GLN
10	ZG	130	GLN
10	ZG	133	ASN
10	ZG	233	ASN
10	ZG	265	ASN
10	ZG	270	ASN
10	ZG	293	GLN
10	ZG	303	ASN
10	ZG	332	ASN
10	ZG	385	ASN
10	ZG	387	GLN
10	ZG	397	ASN
10	ZG	401	ASN
10	ZH	5	GLN
10	ZH	206	ASN
10	ZH	252	ASN
10	ZH	270	ASN
10	ZH	296	ASN
10	ZH	303	ASN
10	ZH	329	GLN
10	ZH	352	ASN
10	ZH	365	ASN
10	ZH	379	GLN
10	ZH	385	ASN
10	ZH	392	GLN
10	ZI	5	GLN
10	ZI	22	ASN
10	ZI	130	GLN
10	ZI	197	ASN
10	ZI	245	ASN
10	ZI	252	ASN
10	ZI	265	ASN
10	ZI	269	GLN

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Mol	Chain	Res	Type
10	ZI	322	ASN
10	ZI	323	ASN
10	ZI	385	ASN
10	ZI	387	GLN
10	ZI	392	GLN
10	ZI	394	GLN
10	ZI	401	ASN
10	ZJ	22	ASN
10	ZJ	133	ASN
10	ZJ	159	ASN
10	ZJ	197	ASN
10	ZJ	265	ASN
10	ZJ	270	ASN
10	ZJ	274	ASN
10	ZJ	282	ASN
10	ZJ	293	GLN
10	ZJ	310	GLN
10	ZJ	379	GLN
10	ZJ	392	GLN
10	ZJ	397	ASN
10	ZJ	401	ASN
10	ZK	89	ASN
10	ZK	107	ASN
10	ZK	197	ASN
10	ZK	252	ASN
10	ZK	274	ASN
10	ZK	303	ASN
10	ZK	319	ASN
10	ZK	332	ASN
10	ZK	392	GLN
10	ZK	401	ASN
10	ZL	5	GLN
10	ZL	89	ASN
10	ZL	99	GLN
10	ZL	179	ASN
10	ZL	190	GLN
10	ZL	197	ASN
10	ZL	252	ASN
10	ZL	282	ASN
10	ZL	293	GLN
10	ZL	303	ASN
10	ZL	306	ASN

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Mol	Chain	Res	Type
10	ZL	310	GLN
10	ZL	338	GLN
10	ZL	385	ASN
10	ZL	401	ASN
10	ZM	5	GLN
10	ZM	22	ASN
10	ZM	59	GLN
10	ZM	89	ASN
10	ZM	197	ASN
10	ZM	213	HIS
10	ZM	235	ASN
10	ZM	252	ASN
10	ZM	381	ASN
10	ZM	397	ASN
10	ZN	22	ASN
10	ZN	79	GLN
10	ZN	107	ASN
10	ZN	129	GLN
10	ZN	133	ASN
10	ZN	157	ASN
10	ZN	190	GLN
10	ZN	192	ASN
10	ZN	197	ASN
10	ZN	213	HIS
10	ZN	270	ASN
10	ZN	319	ASN
10	ZN	332	ASN
10	ZN	338	GLN
10	ZN	379	GLN
10	ZN	385	ASN
10	ZN	387	GLN
10	ZN	401	ASN
10	ZO	5	GLN
10	ZO	22	ASN
10	ZO	141	ASN
10	ZO	192	ASN
10	ZO	235	ASN
10	ZO	270	ASN
10	ZO	296	ASN
10	ZO	322	ASN
10	ZO	332	ASN
10	ZP	11	ASN

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Mol	Chain	Res	Type
10	ZP	89	ASN
10	ZP	107	ASN
10	ZP	129	GLN
10	ZP	192	ASN
10	ZP	194	HIS
10	ZP	213	HIS
10	ZP	245	ASN
10	ZP	270	ASN
10	ZP	314	GLN
10	ZP	322	ASN
10	ZP	338	GLN
10	ZP	381	ASN
10	ZP	385	ASN
10	ZP	392	GLN
10	ZQ	89	ASN
10	ZQ	97	ASN
10	ZQ	105	ASN
10	ZQ	133	ASN
10	ZQ	141	ASN
10	ZQ	155	GLN
10	ZQ	197	ASN
10	ZQ	213	HIS
10	ZQ	233	ASN
10	ZQ	265	ASN
10	ZQ	308	GLN
10	ZQ	383	GLN
10	ZQ	387	GLN
10	ZR	107	ASN
10	ZR	133	ASN
10	ZR	157	ASN
10	ZR	197	ASN
10	ZR	206	ASN
10	ZR	252	ASN
10	ZR	268	GLN
10	ZR	269	GLN
10	ZR	293	GLN
10	ZR	295	ASN
10	ZR	310	GLN
10	ZR	401	ASN
10	ZS	22	ASN
10	ZS	133	ASN
10	ZS	197	ASN

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Mol	Chain	Res	Type
10	ZS	206	ASN
10	ZS	303	ASN
10	ZS	394	GLN
10	ZT	5	GLN
10	ZT	22	ASN
10	ZT	99	GLN
10	ZT	129	GLN
10	ZT	133	ASN
10	ZT	197	ASN
10	ZT	213	HIS
10	ZT	235	ASN
10	ZT	252	ASN
10	ZT	270	ASN
10	ZT	275	ASN
10	ZT	293	GLN
10	ZT	303	ASN
10	ZT	310	GLN
10	ZT	314	GLN
10	ZT	352	ASN
10	ZU	22	ASN
10	ZU	59	GLN
10	ZU	99	GLN
10	ZU	107	ASN
10	ZU	133	ASN
10	ZU	159	ASN
10	ZU	197	ASN
10	ZU	293	GLN
10	ZU	310	GLN
10	ZU	314	GLN
10	ZU	332	ASN
10	ZU	379	GLN
10	ZU	387	GLN
10	ZU	401	ASN
10	ZV	89	ASN
10	ZV	107	ASN
10	ZV	130	GLN
10	ZV	133	ASN
10	ZV	159	ASN
10	ZV	197	ASN
10	ZV	213	HIS
10	ZV	252	ASN
10	ZV	269	GLN

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Mol	Chain	Res	Type
10	ZV	280	ASN
10	ZV	293	GLN
10	ZV	295	ASN
10	ZV	303	ASN
10	ZV	314	GLN
10	ZV	381	ASN
10	ZV	394	GLN
10	ZW	5	GLN
10	ZW	107	ASN
10	ZW	129	GLN
10	ZW	133	ASN
10	ZW	213	HIS
10	ZW	252	ASN
10	ZW	270	ASN
10	ZW	310	GLN
10	ZW	314	GLN
10	ZW	332	ASN
10	ZX	89	ASN
10	ZX	159	ASN
10	ZX	270	ASN
10	ZX	314	GLN
10	ZX	401	ASN
10	ZY	5	GLN
10	ZY	59	GLN
10	ZY	80	ASN
10	ZY	115	GLN
10	ZY	159	ASN
10	ZY	190	GLN
10	ZY	197	ASN
10	ZY	265	ASN
10	ZY	268	GLN
10	ZY	270	ASN
10	ZY	314	GLN
10	ZY	332	ASN
10	ZY	385	ASN
10	ZY	392	GLN
10	ZZ	99	GLN
10	ZZ	107	ASN
10	ZZ	133	ASN
10	ZZ	194	HIS
10	ZZ	197	ASN
10	ZZ	213	HIS

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Mol	Chain	Res	Type
10	ZZ	293	GLN
10	ZZ	303	ASN
10	ZZ	308	GLN
10	ZZ	314	GLN
10	ZZ	332	ASN
10	ZZ	387	GLN
10	ZZ	394	GLN
10	ZZ	401	ASN
10	Za	22	ASN
10	Za	129	GLN
10	Za	133	ASN
10	Za	157	ASN
10	Za	197	ASN
10	Za	293	GLN
10	Za	332	ASN
10	Za	385	ASN
10	Za	387	GLN
10	Zb	5	GLN
10	Zb	79	GLN
10	Zb	107	ASN
10	Zb	133	ASN
10	Zb	159	ASN
10	Zb	197	ASN
10	Zb	293	GLN
10	Zb	308	GLN
10	Zb	314	GLN
10	Zb	358	ASN
10	Zb	385	ASN
10	Zb	401	ASN
10	Zc	107	ASN
10	Zc	115	GLN
10	Zc	129	GLN
10	Zc	159	ASN
10	Zc	190	GLN
10	Zc	197	ASN
10	Zc	270	ASN
10	Zc	293	GLN
10	Zc	352	ASN
10	Zc	379	GLN
10	Zc	387	GLN
10	Zd	5	GLN
10	Zd	22	ASN

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Mol	Chain	Res	Type
10	Zd	105	ASN
10	Zd	129	GLN
10	Zd	130	GLN
10	Zd	133	ASN
10	Zd	293	GLN
10	Zd	295	ASN
10	Zd	303	ASN
10	Zd	322	ASN
10	Zd	387	GLN
10	Ze	5	GLN
10	Ze	22	ASN
10	Ze	99	GLN
10	Ze	107	ASN
10	Ze	133	ASN
10	Ze	197	ASN
10	Ze	252	ASN
10	Ze	303	ASN
10	Ze	322	ASN
10	Ze	358	ASN
10	Ze	394	GLN
10	Zf	22	ASN
10	Zf	105	ASN
10	Zf	107	ASN
10	Zf	115	GLN
10	Zf	159	ASN
10	Zf	197	ASN
10	Zf	252	ASN
10	Zf	293	GLN
10	Zf	303	ASN
10	Zf	308	GLN
10	Zf	314	GLN
10	Zf	332	ASN
10	Zf	385	ASN
10	Zg	5	GLN
10	Zg	107	ASN
10	Zg	129	GLN
10	Zg	133	ASN
10	Zg	159	ASN
10	Zg	179	ASN
10	Zg	197	ASN
10	Zg	213	HIS
10	Zg	310	GLN

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Mol	Chain	Res	Type
10	Zg	381	ASN
10	Zh	97	ASN
10	Zh	99	GLN
10	Zh	115	GLN
10	Zh	197	ASN
10	Zh	303	ASN
10	Zh	383	GLN
10	Zh	385	ASN
10	Zh	392	GLN
9	r	47	GLN
9	r	83	GLN
9	r	85	ASN
9	r	121	GLN
9	r	135	GLN
9	r	161	GLN
9	r	172	GLN
9	r	174	ASN
9	r	223	ASN
9	s	16	GLN
9	s	28	ASN
9	s	37	GLN
9	s	47	GLN
9	s	137	GLN
9	s	169	GLN
9	s	180	ASN
9	s	223	ASN
9	s	259	GLN
9	t	37	GLN
9	t	90	ASN
9	t	104	GLN
9	t	127	GLN
9	t	162	GLN
9	t	223	ASN
9	t	259	GLN
9	u	16	GLN
9	u	32	ASN
9	u	37	GLN
9	u	196	GLN
9	u	202	ASN
9	u	252	GLN
9	v	47	GLN
9	v	85	ASN

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Mol	Chain	Res	Type
9	v	90	ASN
9	v	161	GLN
9	v	164	GLN
9	v	169	GLN
9	v	172	GLN
9	v	223	ASN
9	v	232	ASN
9	w	28	ASN
9	w	32	ASN
9	w	104	GLN
9	w	121	GLN
9	w	135	GLN
9	w	172	GLN
9	w	180	ASN
9	w	196	GLN
9	w	223	ASN
9	w	235	GLN
9	x	32	ASN
9	x	37	GLN
9	x	81	HIS
9	x	104	GLN
9	x	121	GLN
9	x	127	GLN
9	x	145	ASN
9	y	25	ASN
9	y	37	GLN
9	y	51	GLN
9	y	67	GLN
9	y	91	ASN
9	y	125	ASN
9	y	127	GLN
9	y	209	ASN
9	y	223	ASN
9	y	252	GLN
9	z	37	GLN
9	z	67	GLN
9	z	125	ASN
9	z	137	GLN
9	z	161	GLN
9	z	235	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

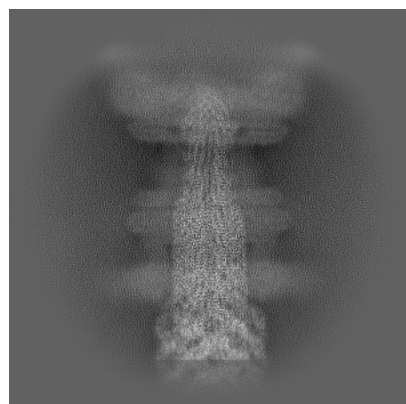
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-37601. These allow visual inspection of the internal detail of the map and identification of artifacts.

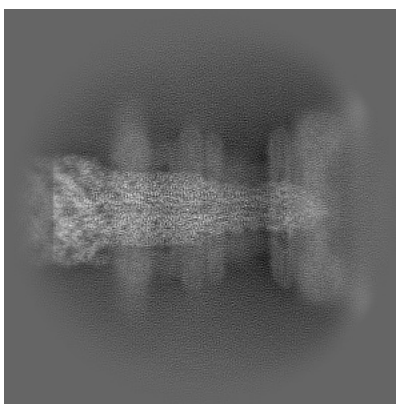
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

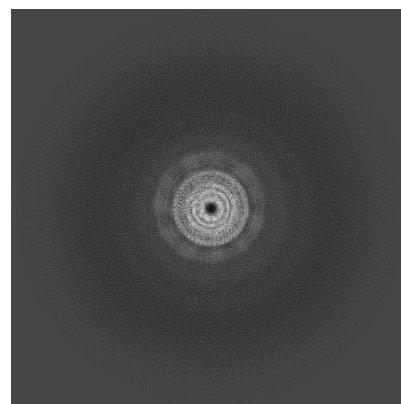
6.1.1 Primary map



X

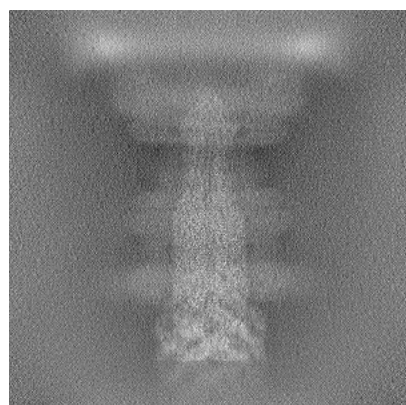


Y

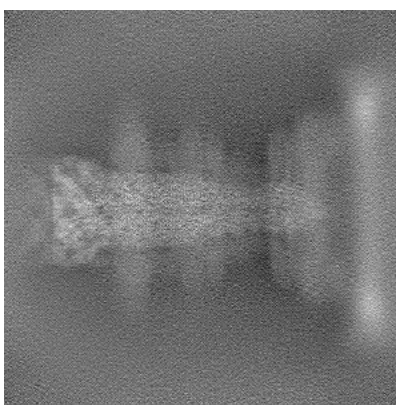


Z

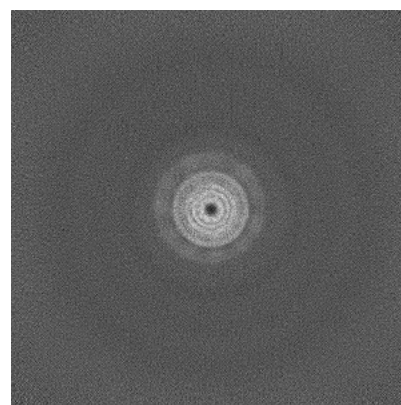
6.1.2 Raw map



X



Y

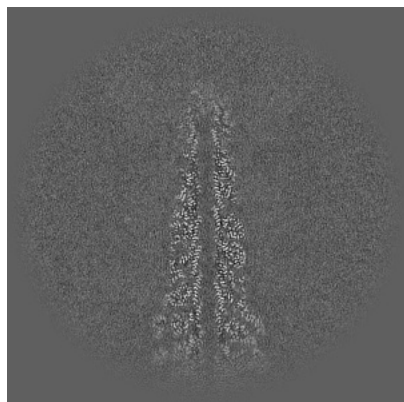


Z

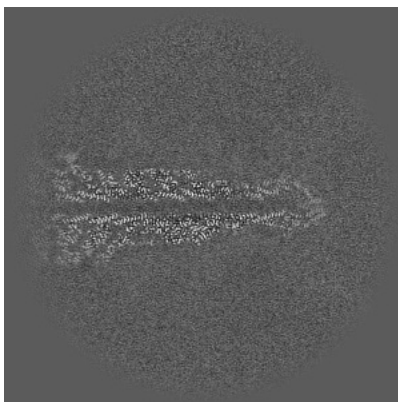
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

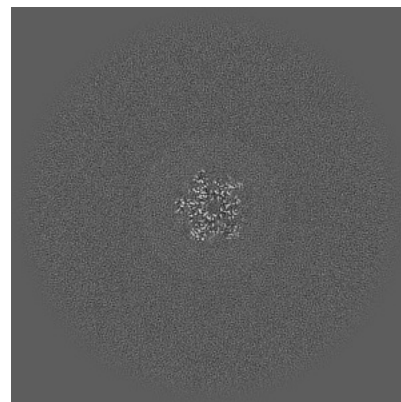
6.2.1 Primary map



X Index: 256

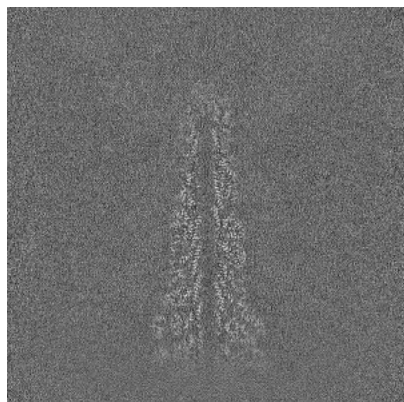


Y Index: 256

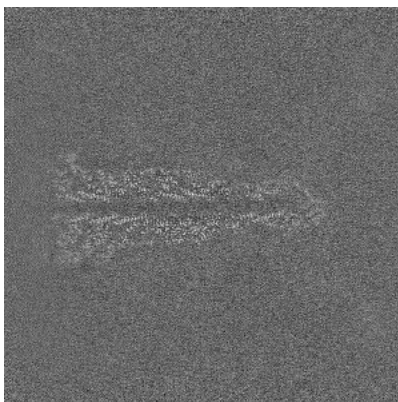


Z Index: 256

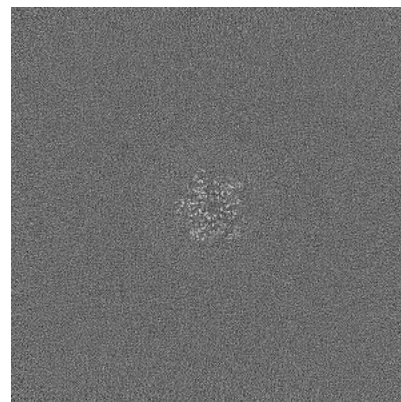
6.2.2 Raw map



X Index: 256



Y Index: 256

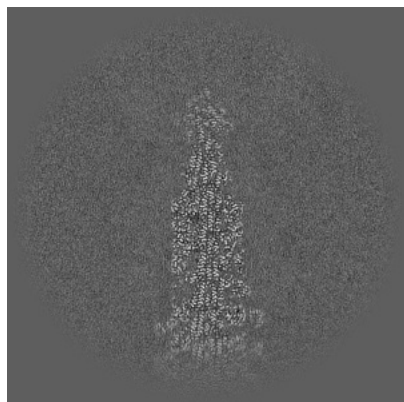


Z Index: 256

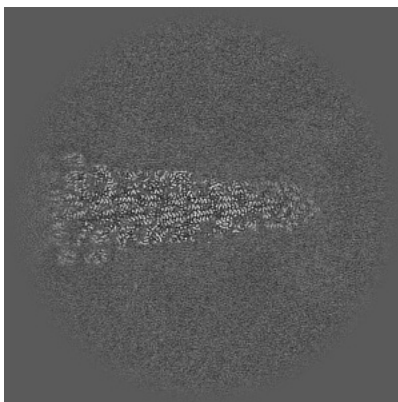
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

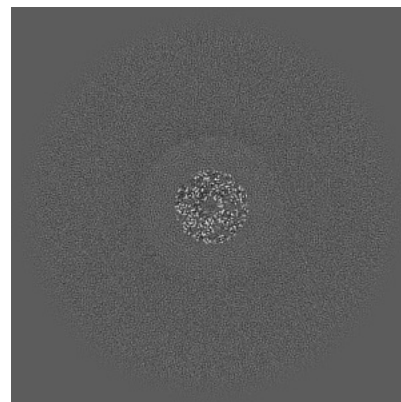
6.3.1 Primary map



X Index: 242

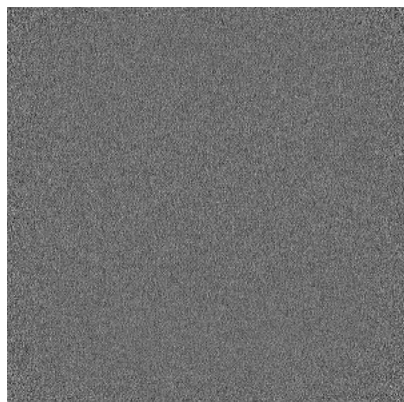


Y Index: 268

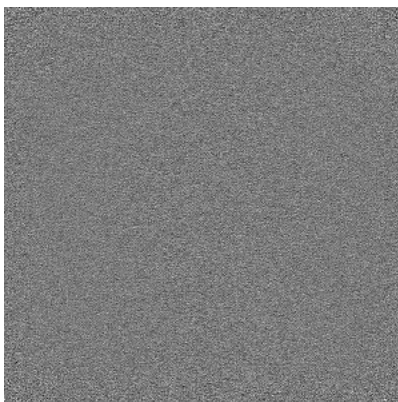


Z Index: 224

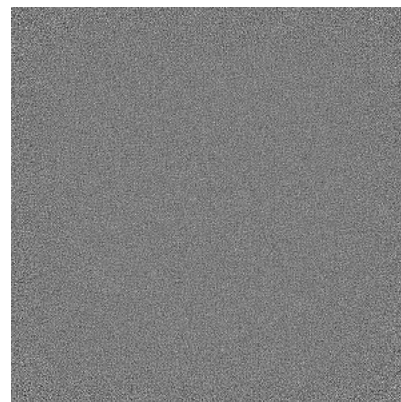
6.3.2 Raw map



X Index: 0



Y Index: 0

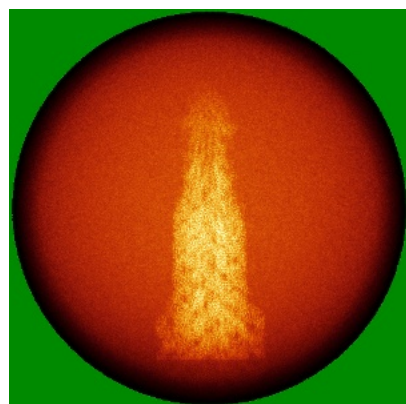


Z Index: 0

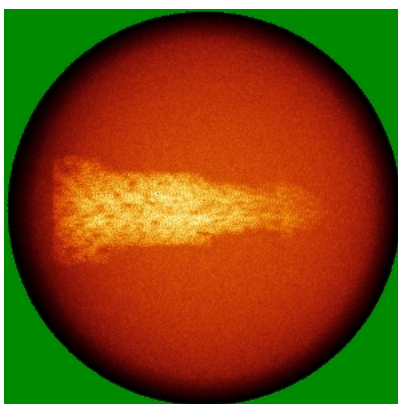
The images above show the largest variance slices of the map in three orthogonal directions.

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

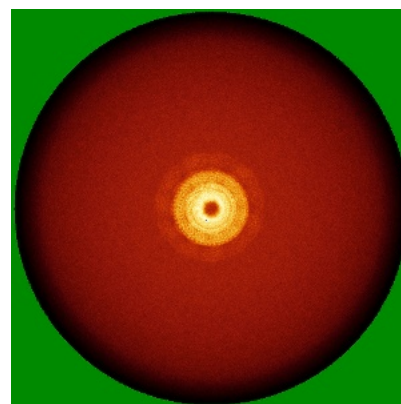
6.4.1 Primary map



X

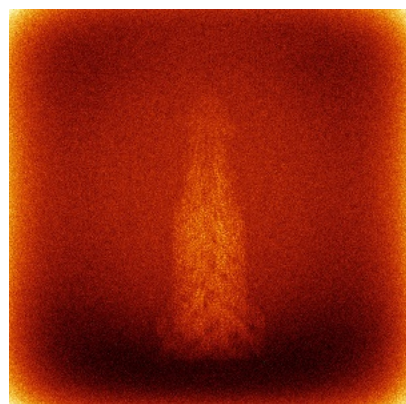


Y

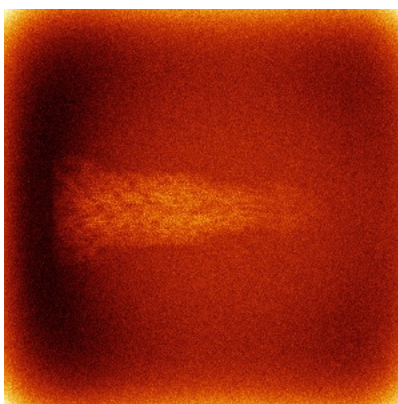


Z

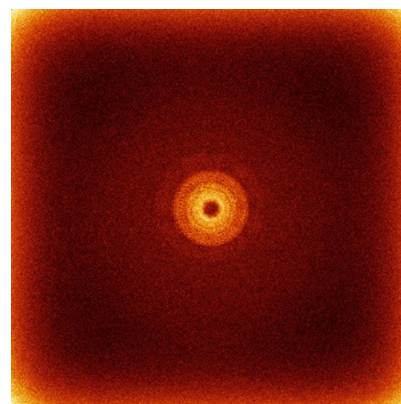
6.4.2 Raw map



X



Y

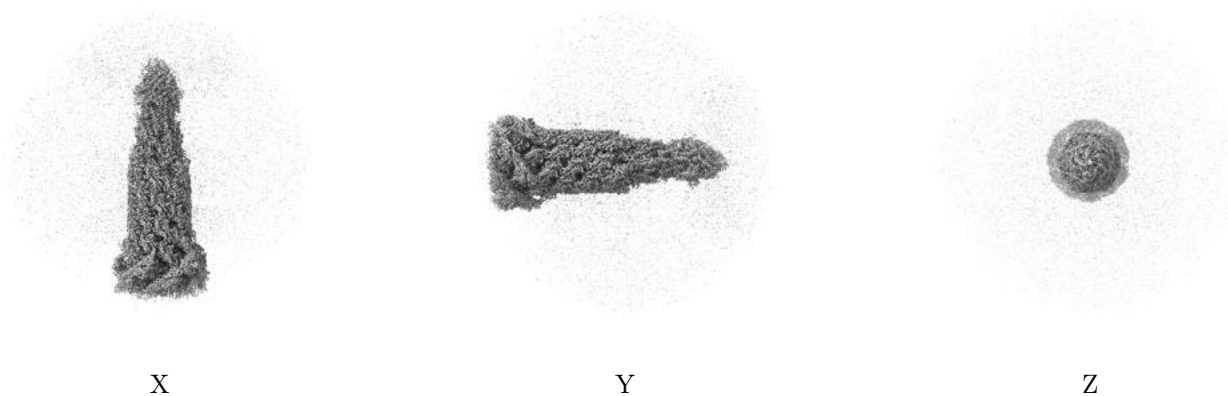


Z

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

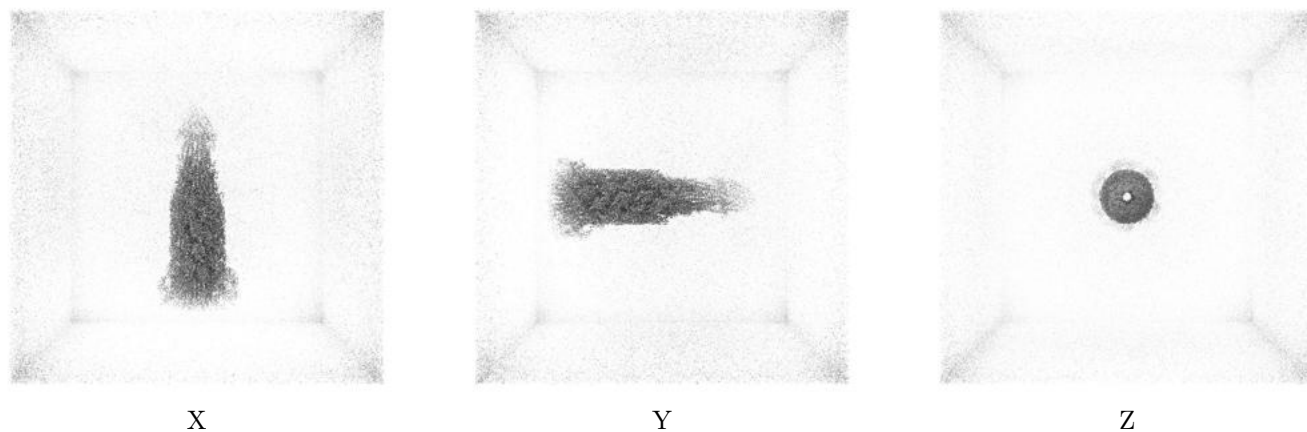
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.35. 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



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

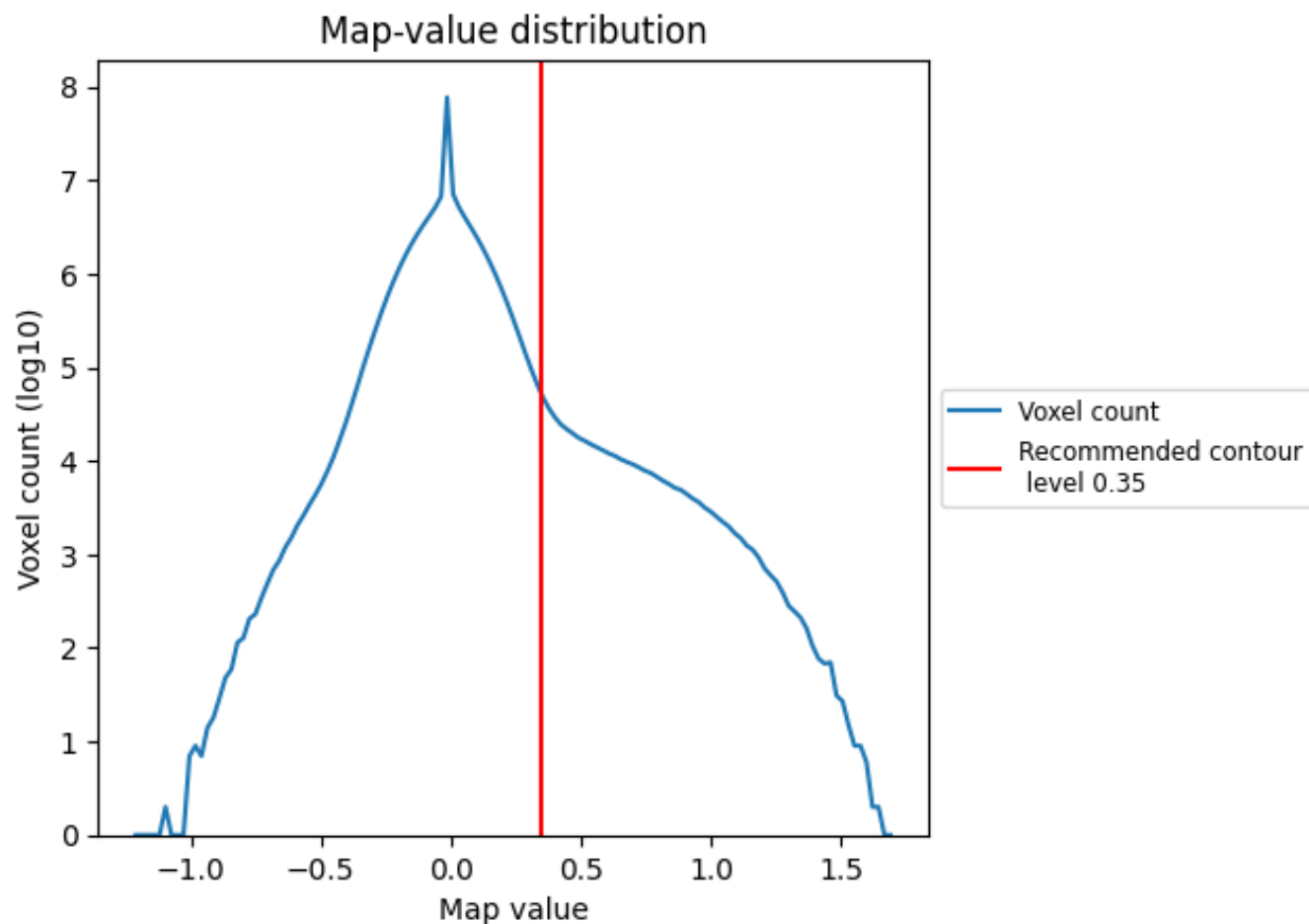
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

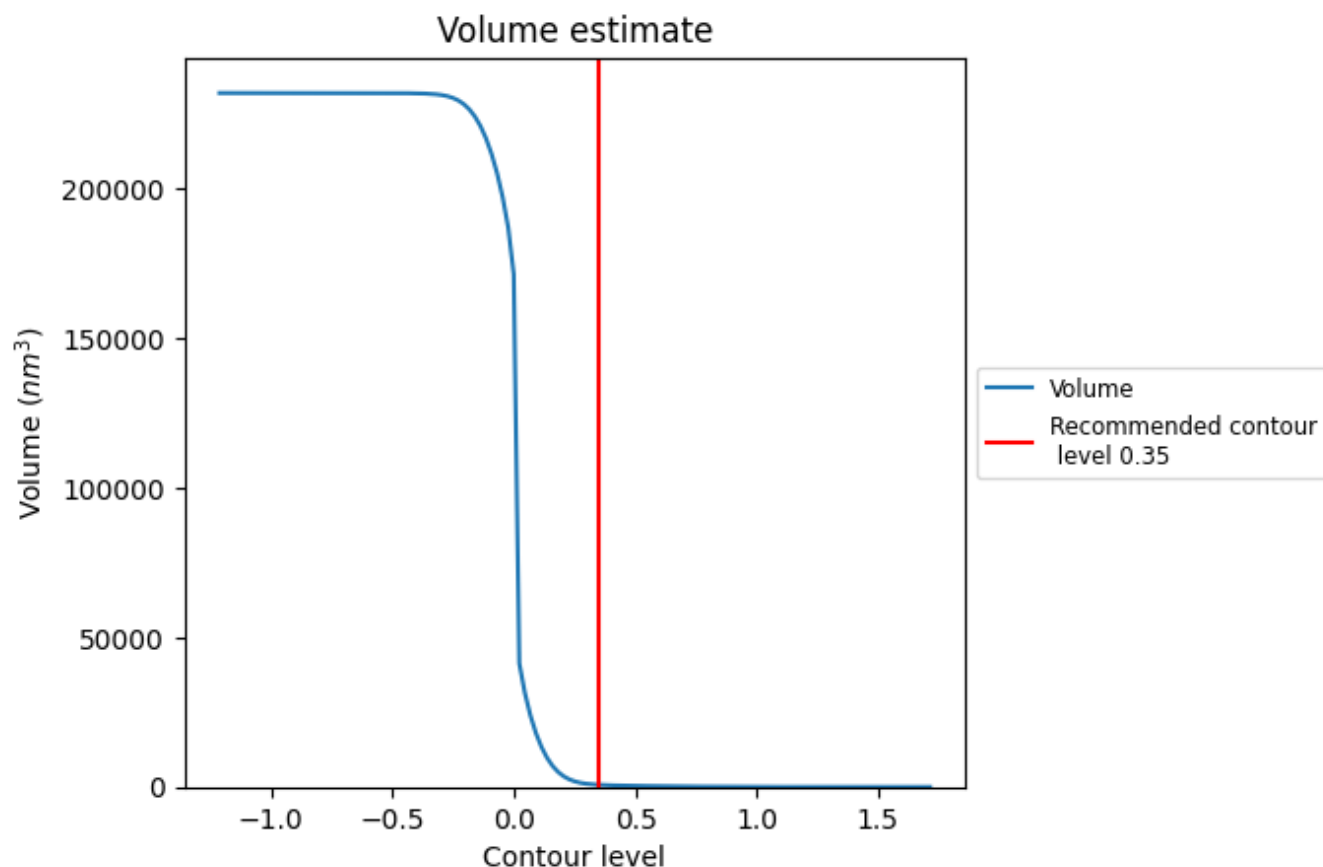
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

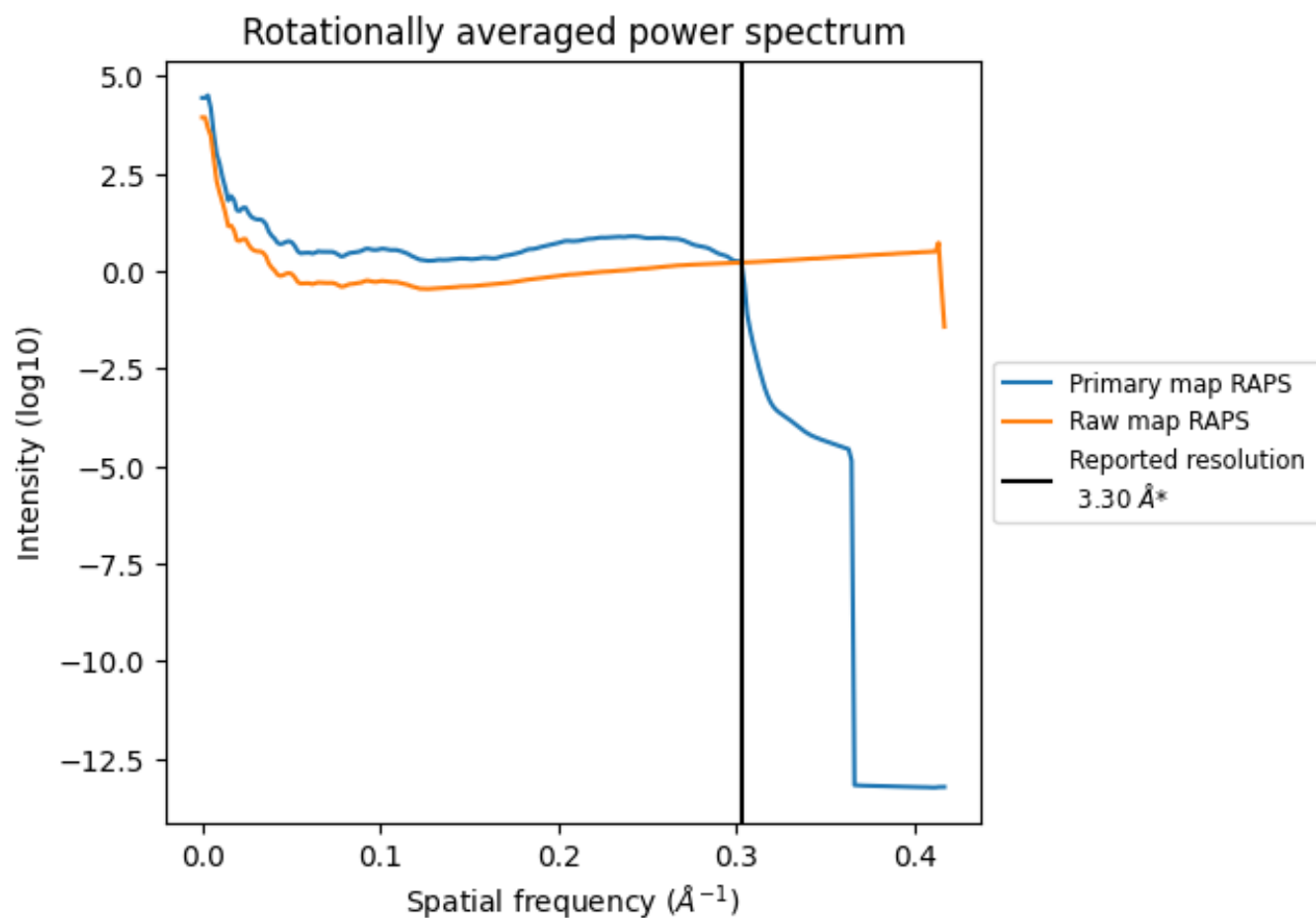
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 705 nm^3 ; this corresponds to an approximate mass of 637 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 ⓘ

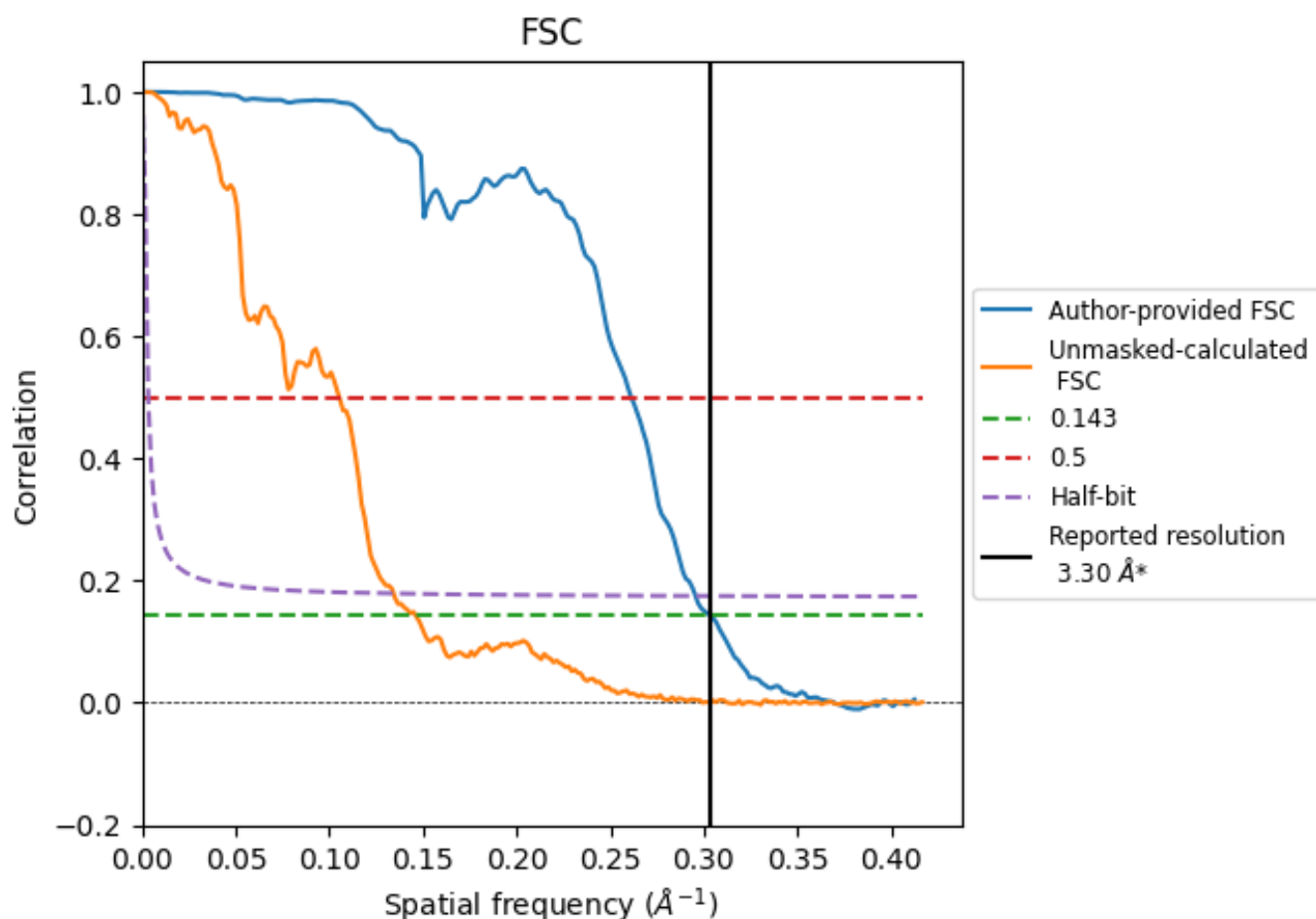


*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

8.2 Resolution estimates [i](#)

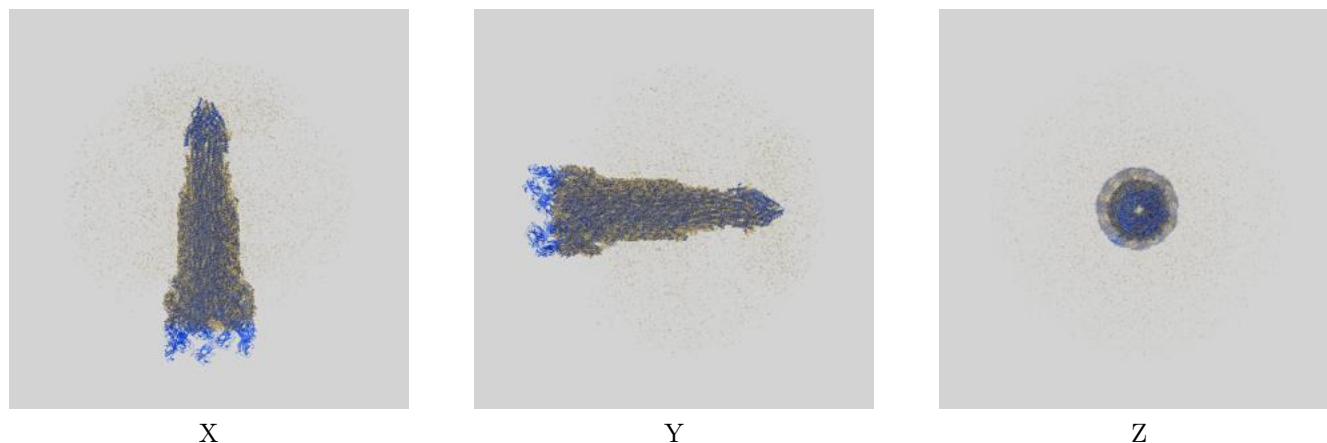
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	3.30	3.83	3.38
Unmasked-calculated*	6.85	9.51	7.45

*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 6.85 differs from the reported value 3.3 by more than 10 %

9 Map-model fit [i](#)

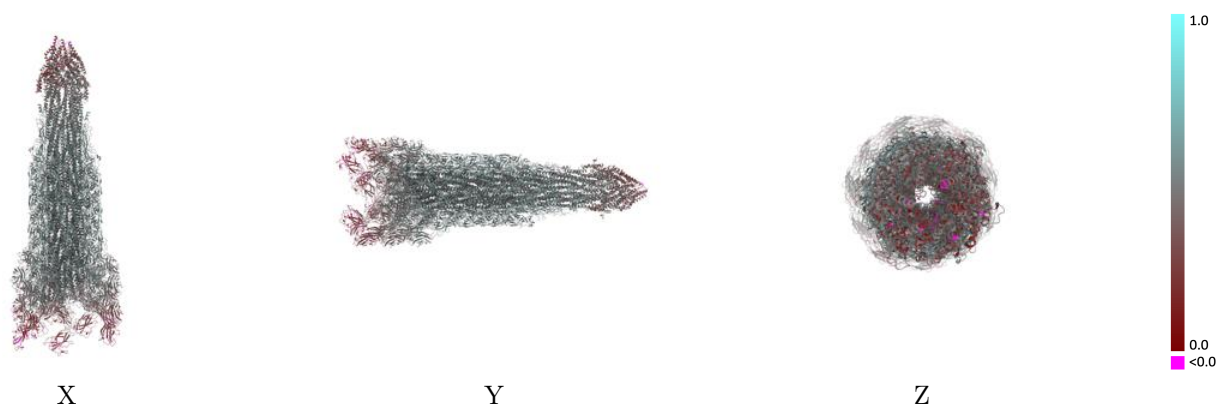
This section contains information regarding the fit between EMDB map EMD-37601 and PDB model 8WKK. Per-residue inclusion information can be found in section 3 on page 13.

9.1 Map-model overlay [i](#)



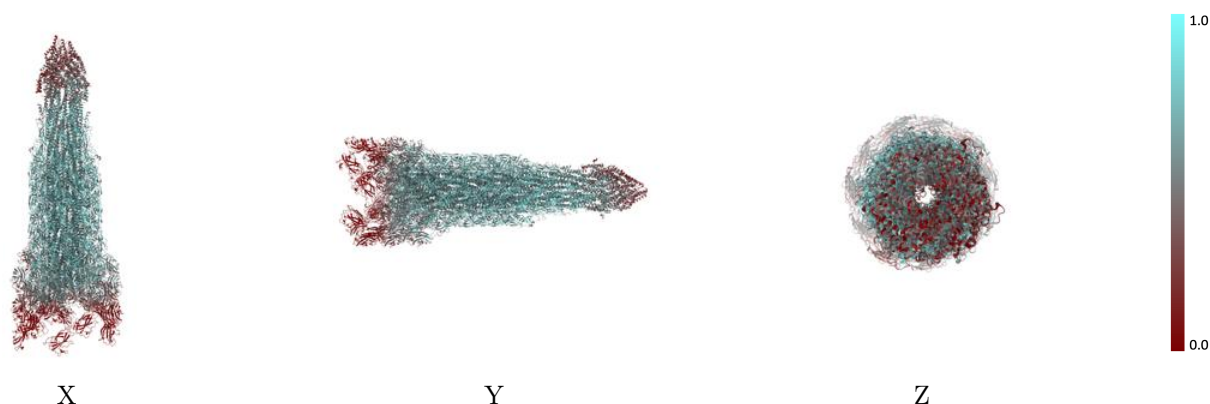
The images above show the 3D surface view of the map at the recommended contour level 0.35 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



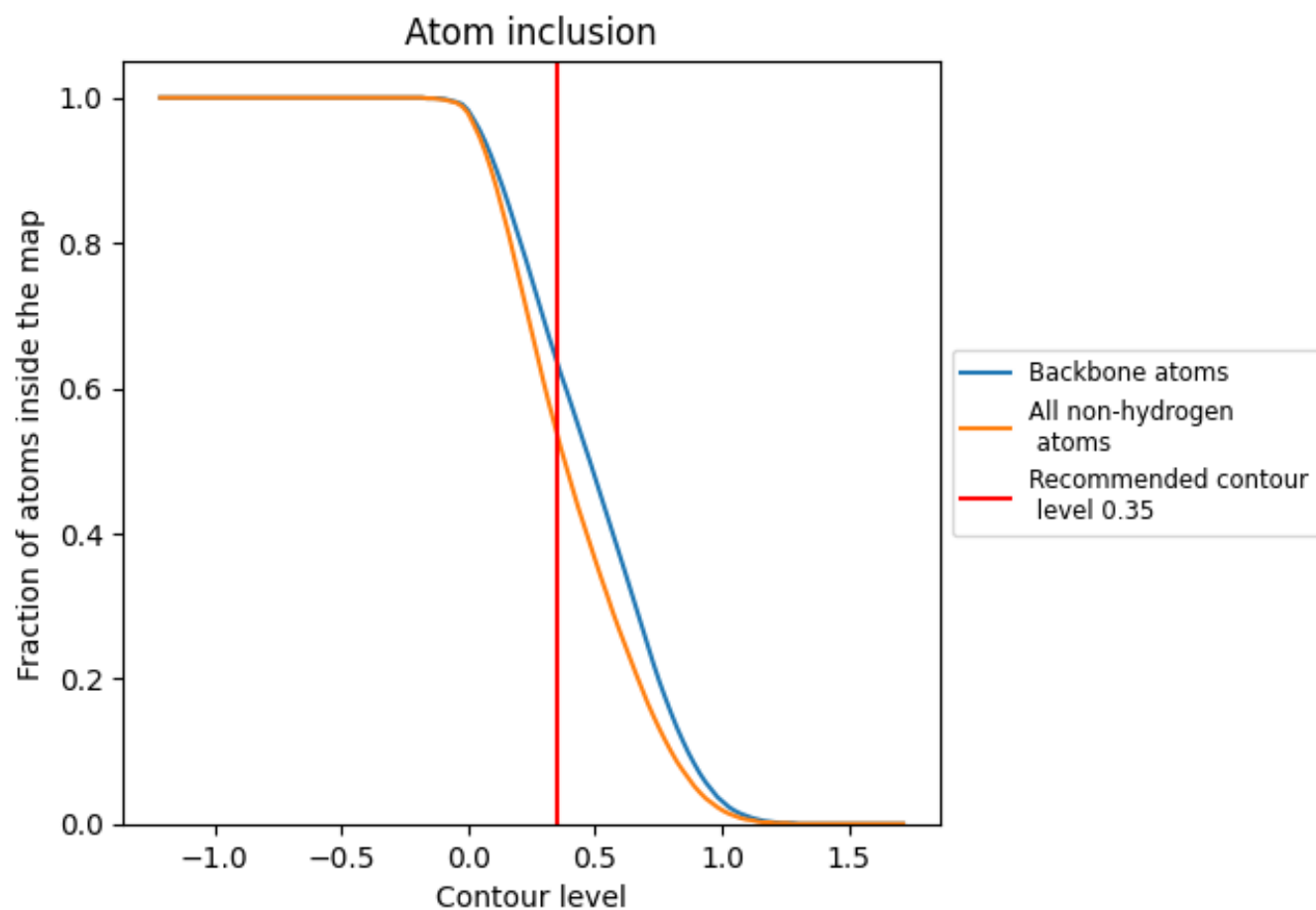
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.35).

9.4 Atom inclusion [i](#)



At the recommended contour level, 64% of all backbone atoms, 54% 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 (0.35) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5380	 0.4710
0	 0.7050	 0.5320
1	 0.6880	 0.5310
2	 0.6930	 0.5370
3	 0.6950	 0.5280
4	 0.6870	 0.5220
5	 0.6760	 0.5240
6	 0.6860	 0.5270
7	 0.6860	 0.5250
8	 0.6940	 0.5250
9	 0.6890	 0.5290
A	 0.1740	 0.2680
B	 0.3050	 0.3490
C	 0.3290	 0.3590
D	 0.2360	 0.3150
E	 0.2560	 0.3370
F	 0.3470	 0.3860
G	 0.4690	 0.4330
H	 0.5000	 0.4440
I	 0.4820	 0.4440
J	 0.3890	 0.4180
K	 0.4950	 0.4730
L	 0.5990	 0.4760
M	 0.6260	 0.4960
N	 0.6280	 0.5020
O	 0.5950	 0.4790
P	 0.5560	 0.4610
Q	 0.5750	 0.4810
R	 0.6770	 0.5040
S	 0.6950	 0.5210
T	 0.6770	 0.5130
U	 0.6510	 0.4950
V	 0.5880	 0.4940
W	 0.6810	 0.5180
X	 0.6760	 0.5290



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Chain	Atom inclusion	Q-score
Y	 0.6770	 0.5160
Z	 0.6570	 0.5150
ZA	 0.6710	 0.5200
ZB	 0.6810	 0.5250
ZC	 0.6810	 0.5230
ZD	 0.6720	 0.5170
ZE	 0.6580	 0.5170
ZF	 0.4120	 0.4580
ZG	 0.5850	 0.5040
ZH	 0.6120	 0.5040
ZI	 0.6150	 0.5040
ZJ	 0.6050	 0.4980
ZK	 0.5810	 0.4940
ZL	 0.5860	 0.4880
ZM	 0.5930	 0.4940
ZN	 0.5990	 0.4910
ZO	 0.5750	 0.4910
ZP	 0.5670	 0.4840
ZQ	 0.5360	 0.4750
ZR	 0.5370	 0.4690
ZS	 0.5260	 0.4690
ZT	 0.4920	 0.4610
ZU	 0.4740	 0.4570
ZV	 0.4360	 0.4420
ZW	 0.4360	 0.4430
ZX	 0.4120	 0.4300
ZY	 0.3940	 0.4240
ZZ	 0.3630	 0.4160
Za	 0.3520	 0.4020
Zb	 0.3390	 0.4000
Zc	 0.3060	 0.3940
Zd	 0.2840	 0.3690
Ze	 0.2500	 0.3670
Zf	 0.2250	 0.3470
Zg	 0.2030	 0.3190
Zh	 0.1840	 0.3290
a	 0.6240	 0.5050
b	 0.3700	 0.4480
c	 0.5630	 0.4860
d	 0.5040	 0.4980
e	 0.5730	 0.5260
f	 0.6430	 0.5100

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Chain	Atom inclusion	Q-score
g	 0.5920	 0.4950
h	 0.6570	 0.5050
i	 0.5340	 0.4690
j	 0.6470	 0.4990
k	 0.5630	 0.4830
l	 0.5430	 0.5030
m	 0.6420	 0.5150
n	 0.7010	 0.5350
o	 0.7130	 0.5350
p	 0.7130	 0.5320
q	 0.6710	 0.5170
r	 0.6570	 0.5270
s	 0.6960	 0.5350
t	 0.6940	 0.5340
u	 0.6980	 0.5390
v	 0.6900	 0.5310
w	 0.7100	 0.5340
x	 0.6920	 0.5290
y	 0.6920	 0.5300
z	 0.7000	 0.5370