



Full wwPDB EM Validation Report ⓘ

Dec 16, 2025 – 10:17 AM EST

PDB ID : 9YF5 / pdb_00009yf5
EMDB ID : EMD-72877
Title : N4 Empty Particle C6 Tail
Authors : Bellis, N.F.; Cingolani, G.
Deposited on : 2025-09-25
Resolution : 3.65 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ 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:

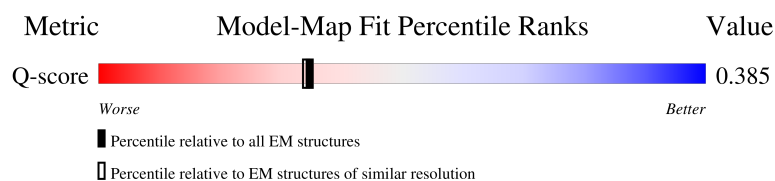
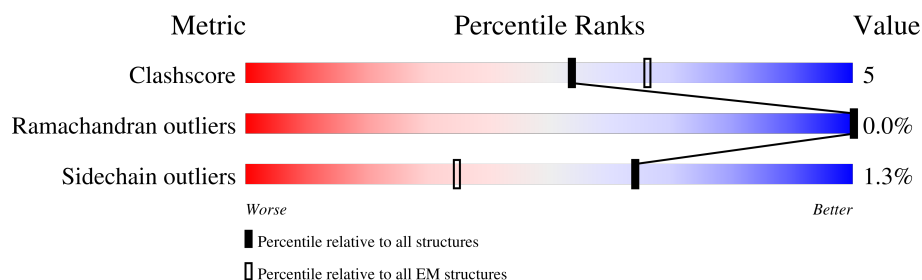
EMDB validation analysis : 0.0.1.dev129
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.47

1 Overall quality at a glance

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

The reported resolution of this entry is 3.65 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	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	11564 (3.15 - 4.15)

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	AA	236	17% 91% 8%
1	AB	236	20% 88% 12%
1	AC	236	16% 90% 9%
1	AD	236	19% 90% 10%

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Mol	Chain	Length	Quality of chain
1	AE	236	16% 92% 8%
1	AF	236	18% 88% 11%
1	AG	236	17% 91% 9%
1	AH	236	20% 88% 11%
1	AI	236	16% 91% 8%
1	AJ	236	19% 89% 11%
1	AK	236	16% 90% 9%
1	AL	236	18% 89% 11%
2	LA	1382	70% 70% 15% 15%
2	LB	1382	70% 69% 16% 15%
2	LC	1382	70% 69% 16% 15%
2	LD	1382	70% 69% 16% 15%
2	LE	1382	70% 70% 15% 15%
2	LF	1382	70% 70% 15% 15%
3	SA	417	78% 83% 15% .
3	SB	417	79% 84% 15% .
3	SC	417	79% 86% 13% .
3	SD	417	78% 84% 15% .
3	SE	417	79% 85% 14% .
3	SF	417	79% 85% 14% .
4	TA	299	25% 87% 13%
4	TB	299	25% 87% 13%
4	TC	299	23% 88% 12%
4	TD	299	26% 87% 13%
4	TE	299	25% 88% 11%

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Mol	Chain	Length	Quality of chain
4	TF	299	24% 87% 13%
4	TG	299	25% 88% 12%
4	TH	299	25% 87% 13%
4	TI	299	23% 87% 12%
4	TJ	299	26% 86% 14%
4	TK	299	25% 87% 12%
4	TL	299	24% 85% 14%
5	XA	556	6% 10% 87%
5	XB	556	5% 11% 87%
5	XC	556	6% 10% 87%
5	XD	556	11% 87%
5	XE	556	6% 9% 87%
5	XF	556	11% 87%
5	XG	556	5% 10% 87%
5	XH	556	5% 11% 87%
5	XI	556	5% 10% 87%
5	XJ	556	11% 87%
5	XK	556	6% 10% 87%
5	XL	556	12% 87%
5	YA	556	5% 10% 88%
5	YB	556	5% 10% 88%
5	YC	556	5% 10% 88%
5	YD	556	5% 10% 88%
5	YE	556	10% 88%
5	YF	556	6% 10% 88%

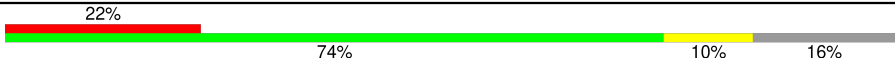
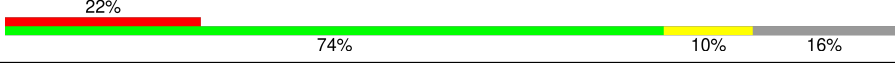
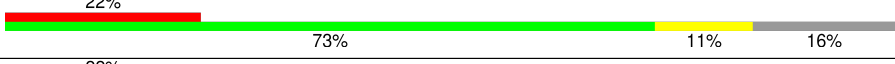
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Mol	Chain	Length	Quality of chain
5	YG	556	
5	YH	556	
5	YI	556	
5	YJ	556	
5	YK	556	
5	YL	556	
5	ZA	556	
5	ZB	556	
5	ZC	556	
5	ZD	556	
5	ZE	556	
5	ZF	556	
5	ZG	556	
5	ZH	556	
5	ZI	556	
5	ZJ	556	
5	ZK	556	
5	ZL	556	
6	PA	763	
6	PB	763	
6	PC	763	
6	PD	763	
6	PE	763	
6	PF	763	
6	PG	763	

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Mol	Chain	Length	Quality of chain
6	PH	763	
6	PI	763	
6	PJ	763	
6	PK	763	
6	PL	763	

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 207084 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 30 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AB	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AC	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AD	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AE	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AF	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AG	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AH	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AI	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AJ	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AK	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		
1	AL	236	Total	C	N	O	S	0	0
			1912	1201	327	375	9		

- Molecule 2 is a protein called Non-contractile tail sheath.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	LA	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		
2	LB	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		
2	LC	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	LD	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		
2	LE	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		
2	LF	1181	Total	C	N	O	S	0	0
			9341	5952	1572	1776	41		

- Molecule 3 is a protein called Gp64.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	SA	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		
3	SB	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		
3	SC	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		
3	SD	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		
3	SE	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		
3	SF	415	Total	C	N	O	S	0	0
			3383	2212	537	616	18		

- Molecule 4 is a protein called Gp54.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	TA	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TB	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TC	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TD	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TE	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TF	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TG	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TH	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	TI	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TJ	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TK	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		
4	TL	298	Total	C	N	O	S	0	0
			2263	1408	381	464	10		

- Molecule 5 is a protein called 60 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	XA	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XB	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YA	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	YB	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZA	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZB	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	XC	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XD	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YC	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	YD	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZC	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZD	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	XE	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XF	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YE	68	Total	C	N	O	S	0	0
			543	355	89	96	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	YF	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZE	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZF	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	XG	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XH	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YG	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	YH	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZG	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZH	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	XI	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XJ	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YI	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	YJ	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZI	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZJ	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	XK	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	XL	72	Total	C	N	O	S	0	0
			575	371	92	107	5		
5	YK	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	YL	68	Total	C	N	O	S	0	0
			543	355	89	96	3		
5	ZK	63	Total	C	N	O	S	0	0
			508	330	82	93	3		
5	ZL	63	Total	C	N	O	S	0	0
			508	330	82	93	3		

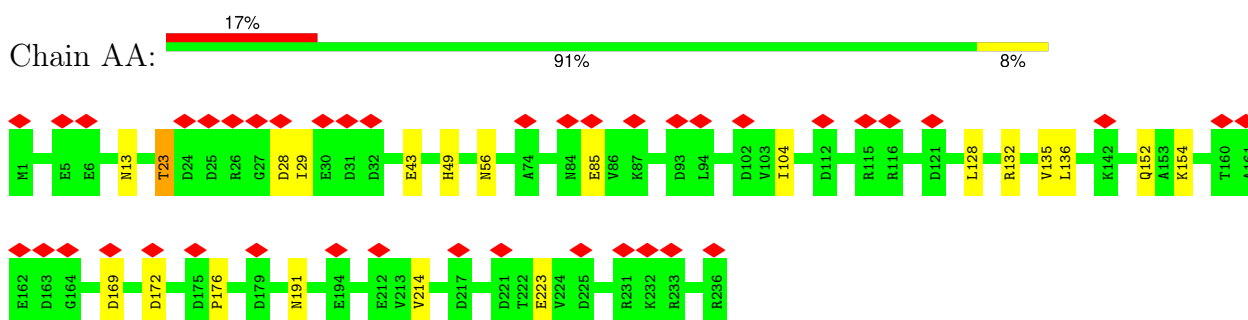
- Molecule 6 is a protein called Probable portal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	PA	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PB	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PC	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PD	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PE	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PF	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PG	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PH	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PI	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PJ	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PK	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		
6	PL	642	Total	C	N	O	S	0	0
			5094	3200	895	977	22		

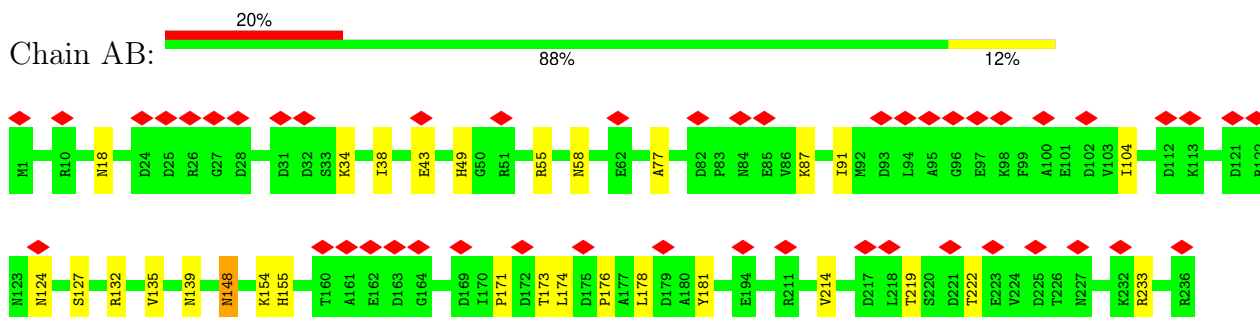
3 Residue-property plots

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.

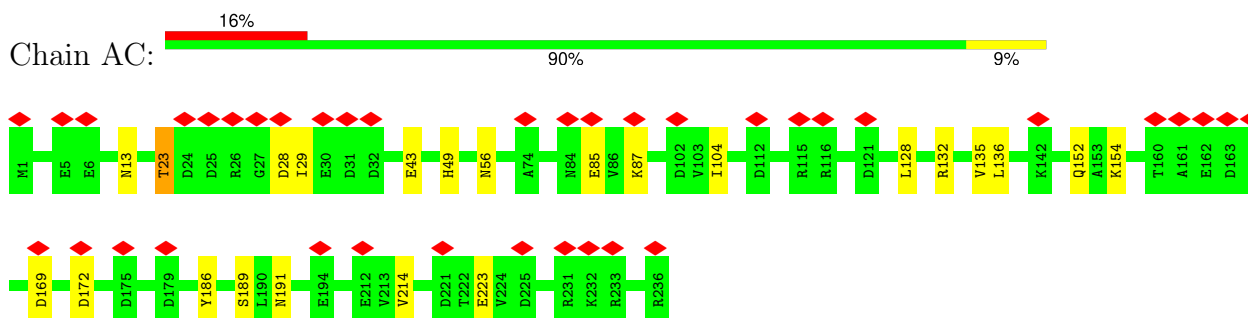
- Molecule 1: 30 kDa protein



- Molecule 1: 30 kDa protein

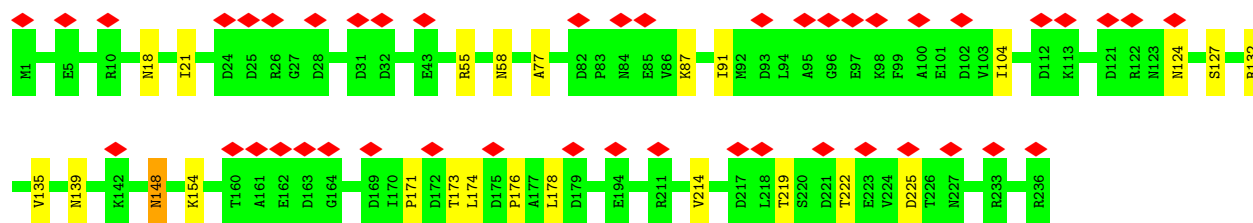


- Molecule 1: 30 kDa protein

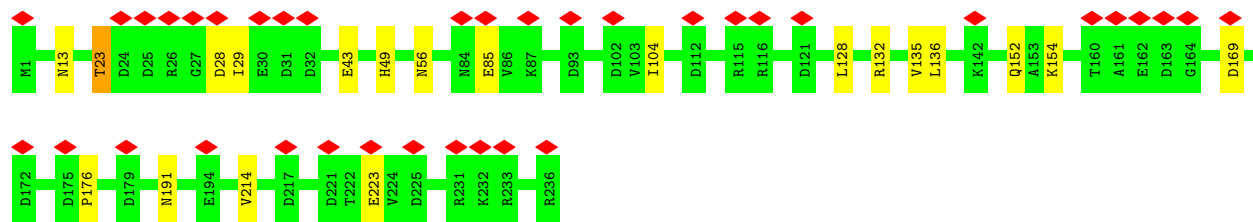


- Molecule 1: 30 kDa protein

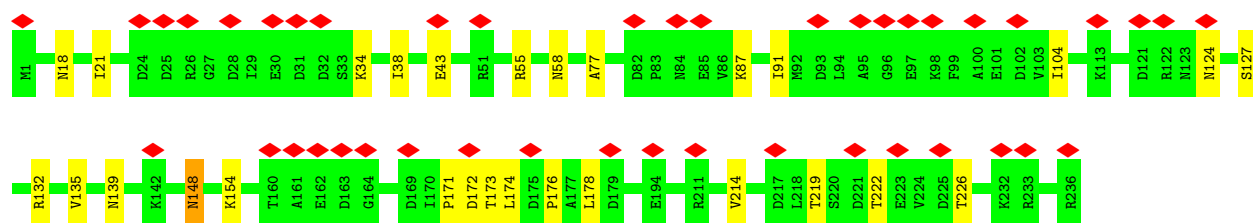
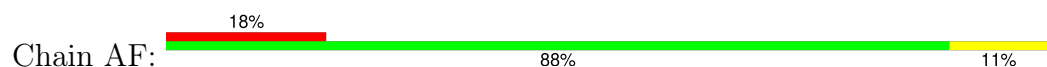




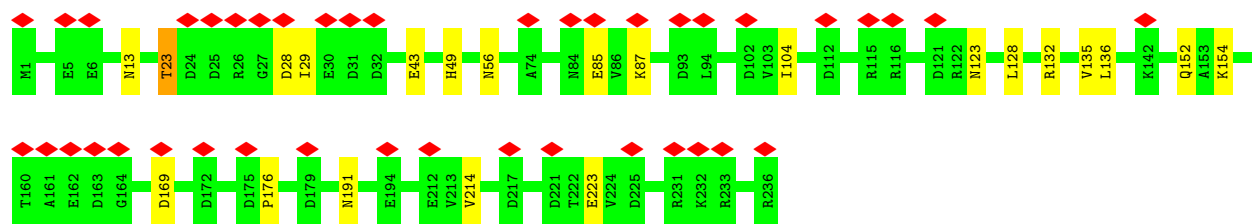
- Molecule 1: 30 kDa protein



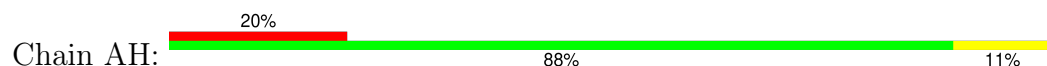
- Molecule 1: 30 kDa protein

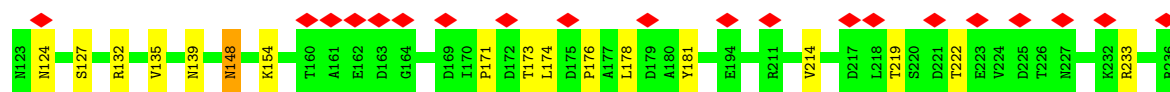


- Molecule 1: 30 kDa protein

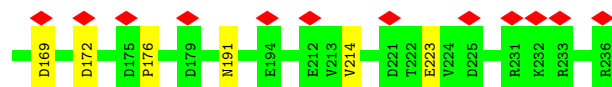
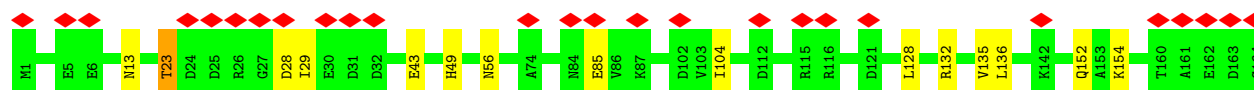


- Molecule 1: 30 kDa protein

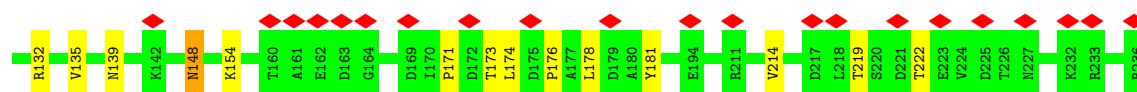
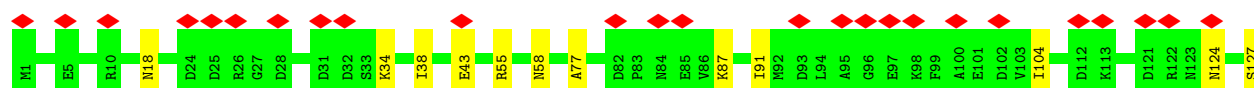
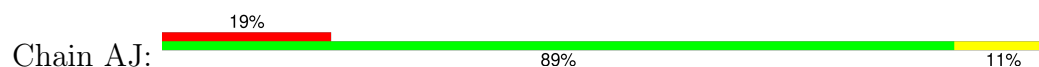




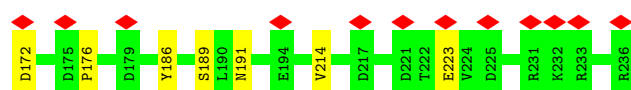
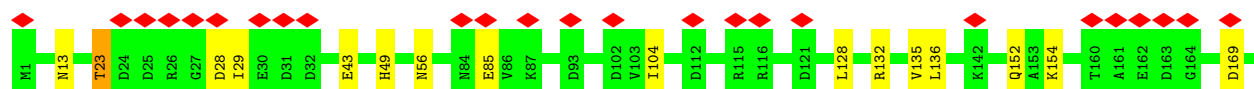
- Molecule 1: 30 kDa protein



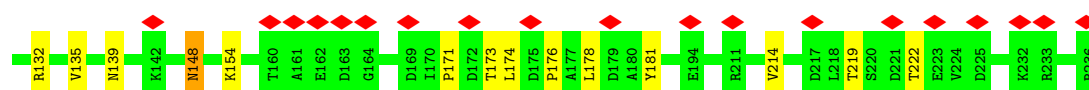
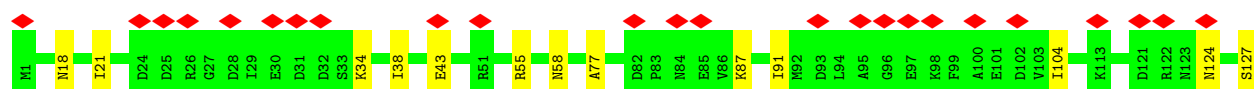
- Molecule 1: 30 kDa protein



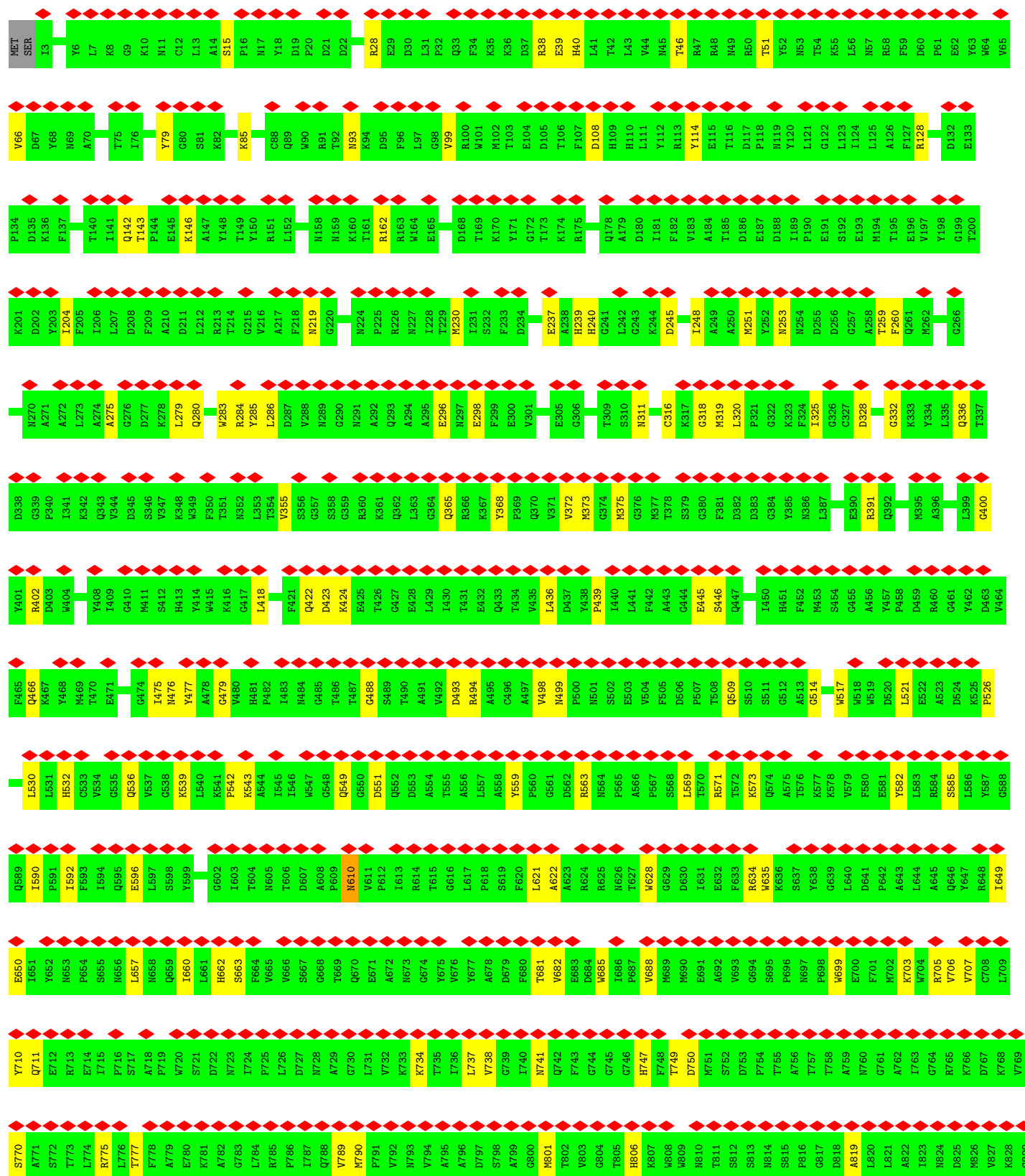
- Molecule 1: 30 kDa protein



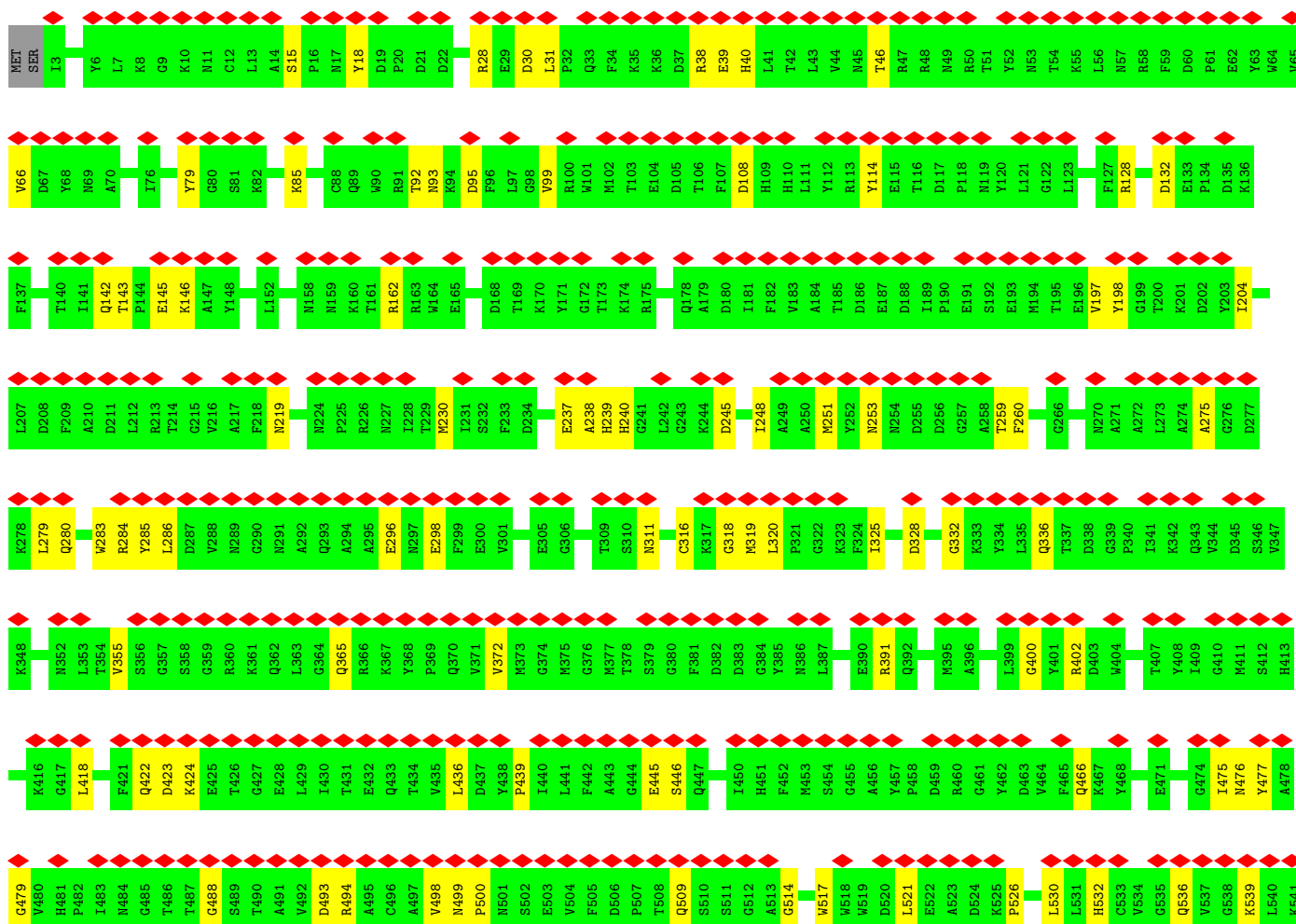
- Molecule 1: 30 kDa protein



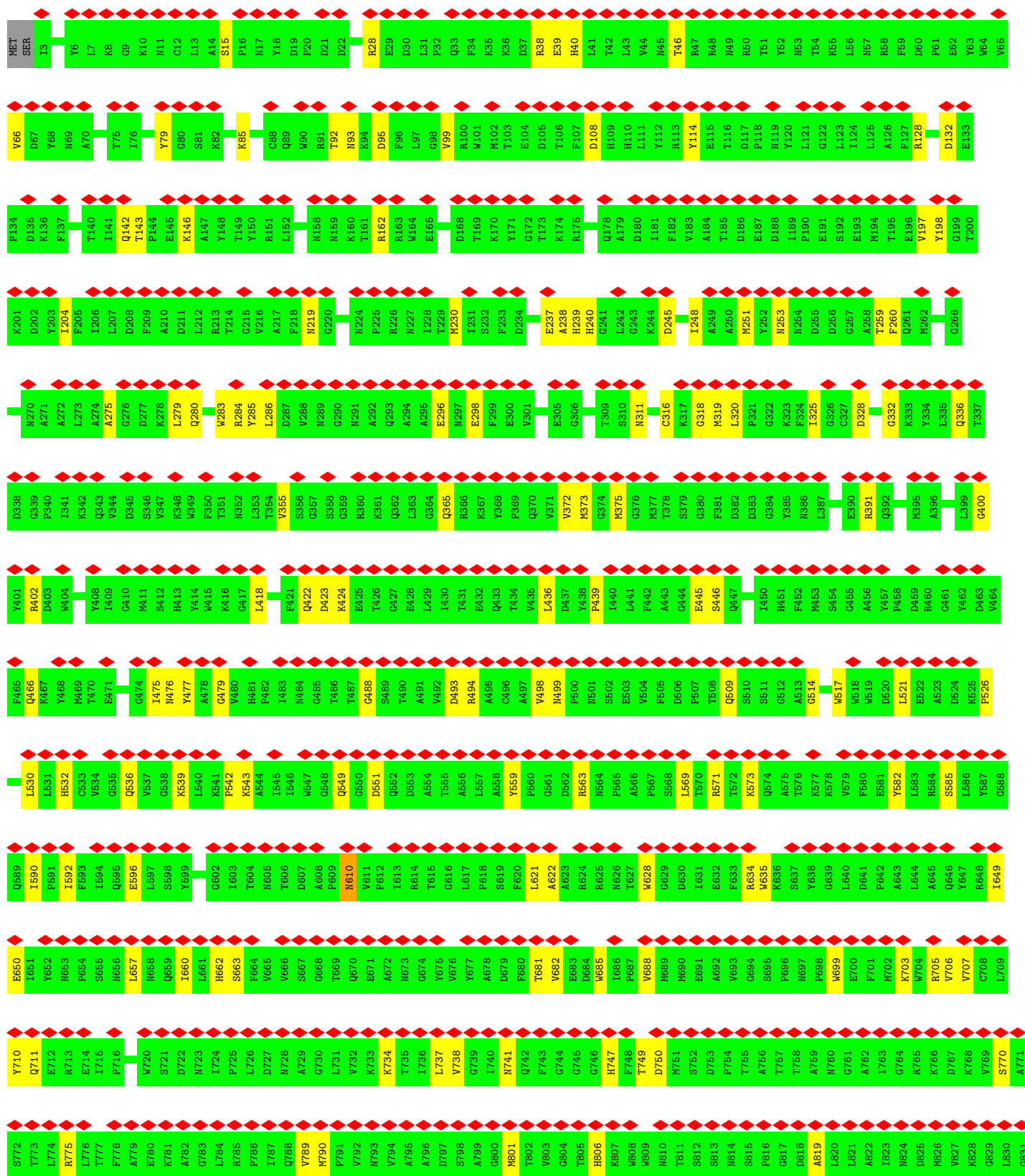
- Molecule 2: Non-contractile tail sheath



T1019	A959	P899	E839	A779	F719	Q659	S598	G538	I475	G410	K342	A271
T1020	I960	P900	A840	E780	W720	L660	Y599	K539	N476	M411	Q343	A272
G1021	E961	N901	N841	K781	S721	L661	G602	L540	Y477	S412	V344	L273
E1023	G963	D902	P842	A782	D722	H662	T603	K541	A478	H413	D345	A274
I1024	E964	L903	W843	G783	W723	H663	T604	P842	G479	K416	S346	G276
S1025	A965	S905	T845	R785	I724	H664	N605	A544	V480	G417	V347	D277
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G1027	A967	A907	W847	I787	L726	V666	T607	I546	P482	G417	K348	L279
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S1031	N971	V911	W851	F791	L731	E671	G510	G550	N484	L418	K348	Q280
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			Q896	Y836	L776	T777	L657	E596	H481	L418	K348	Q280
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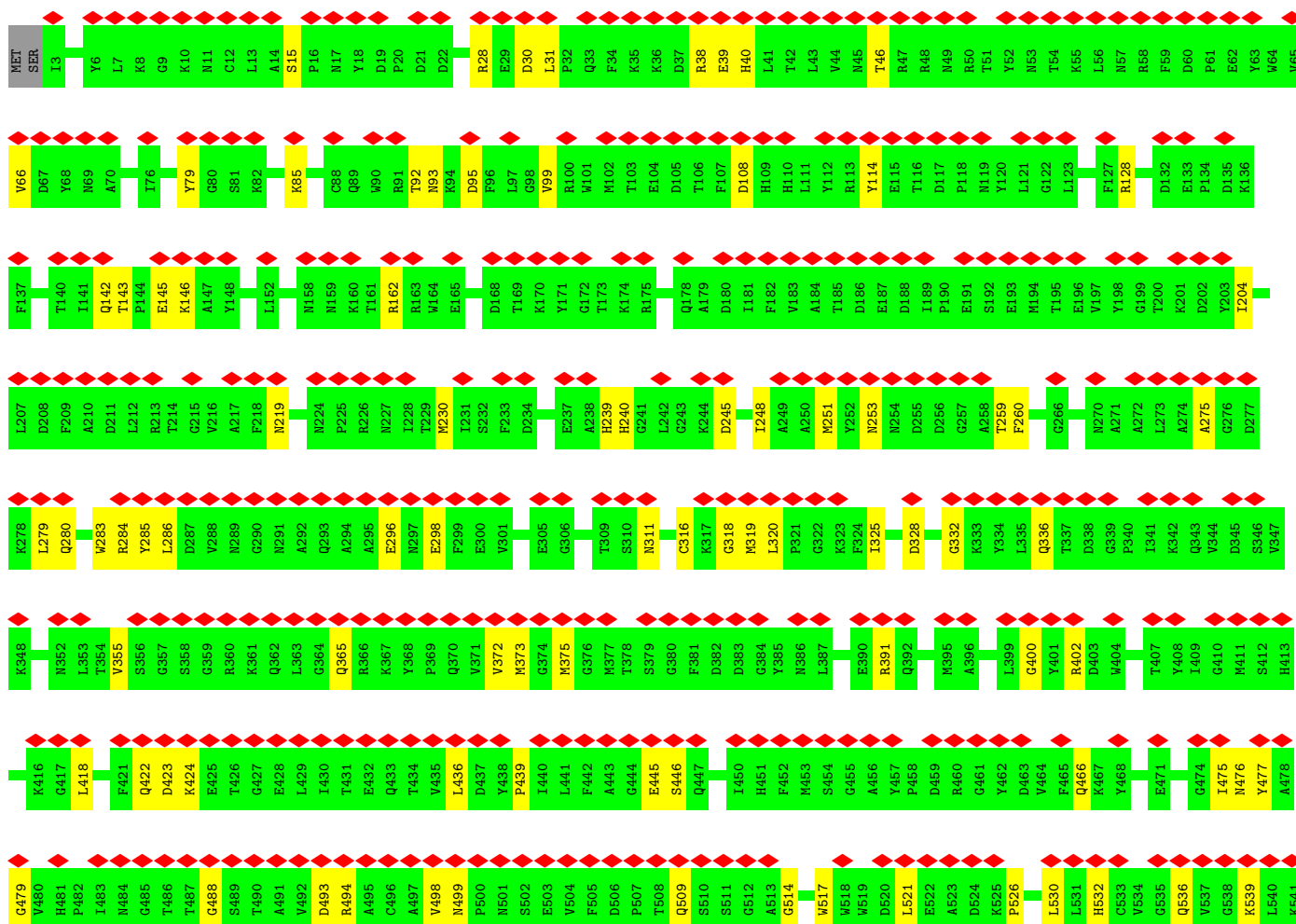
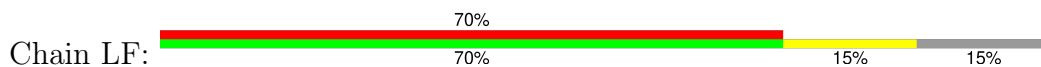


- Molecule 2: Non-contractile tail sheath

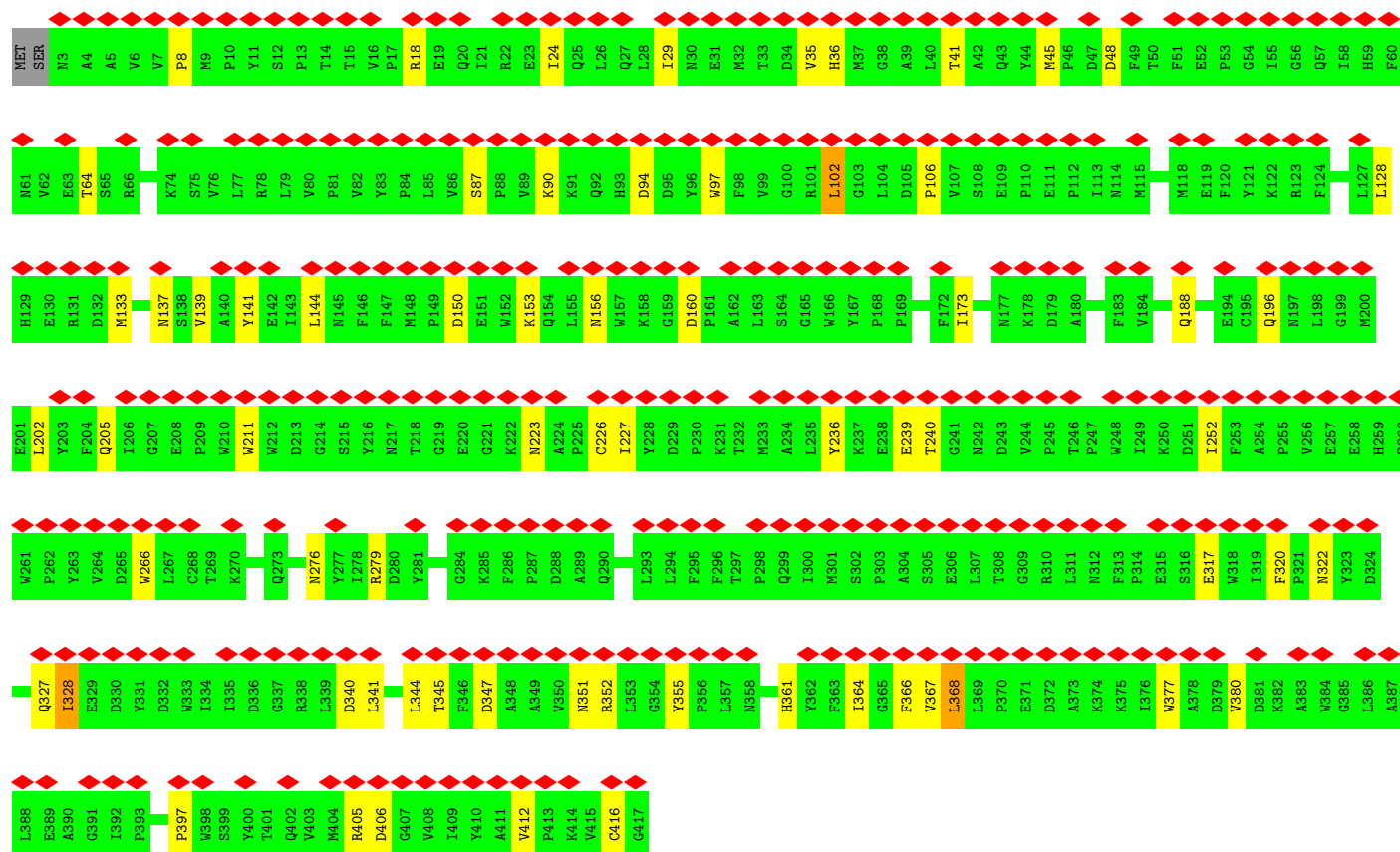
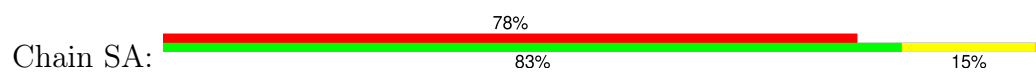


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V1018	T958	A898	I838	A718	N658	L597	V537	I475	I409	K342	A271
T1019	P899	A779	E839	F719	Q659	S598	G538	N476	G410	Q343	A272
T1020	F900	E780	A840	W720	L660	Y599	K539	Y477	M411	Q344	L273
G1021	N901	K781	N841	S721	L661	G602	L540	A478	N413	D345	A274
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E1023	L903	G783	W843	W723	S663	T604	K543	V480	G417	V347	G276
I1024	N904	L784	F785	F725	F664	N605	A544	H481	L418	K348	D277
S1025	S905	R785	V786	L726	V666	T606	I545	I483	N352	N352	K278
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A1027	A907	Q788	Q789	W728	G668	P609	N547	G485	T354	T354	Q280
G1028	T908	W789	K849	A729	T669	N610	G548	T487	V355	V355	N283
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N972	D913	W793	S853	K733	N673	R614	D553	G427	G359	G359	D287
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T974	T855	A795	T735	T735	V675	T615	T555	L429	K361	K361	N289
N975	N916	A796	I736	I736	V676	G616	A556	T430	Q362	Q362	G290
P976	T917	A797	L737	L737	V677	L617	A557	T431	L363	L363	N291
P977	Q917	D797	W738	W738	A678	P618	L557	E432	Q365	Q365	A292
L1038	H918	S798	G739	G739	D679	S619	A558	T434	R366	R366	A294
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D1040	T920	G800	N860	I740	T681	L621	P560	V498	Y368	Y368	E296
G1041	A921	N801	T861	N741	V682	A622	G561	P500	Q370	Q370	N297
N1042	N922	T802	A862	Q742	V682	Q623	D562	L436	V372	V372	E298
A1044	R983	F803	F863	F743	E683	R624	R563	D437	M373	M373	F299
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G1047	K926	G806	S866	G746	L686	T927	A566	L441	G376	G376	N299
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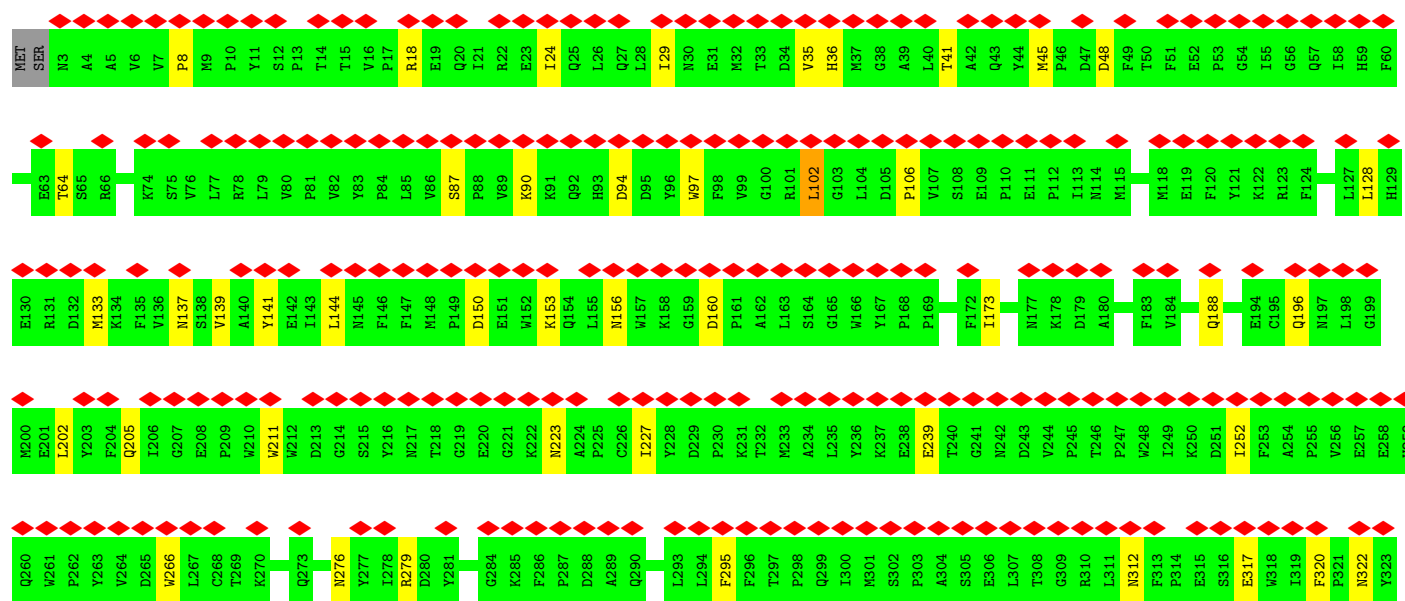
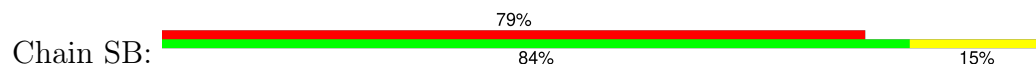
- Molecule 2: Non-contractile tail sheath

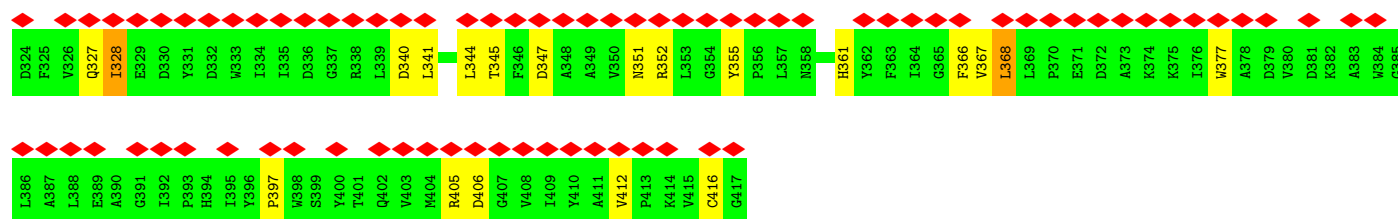


- Molecule 3: Gp64

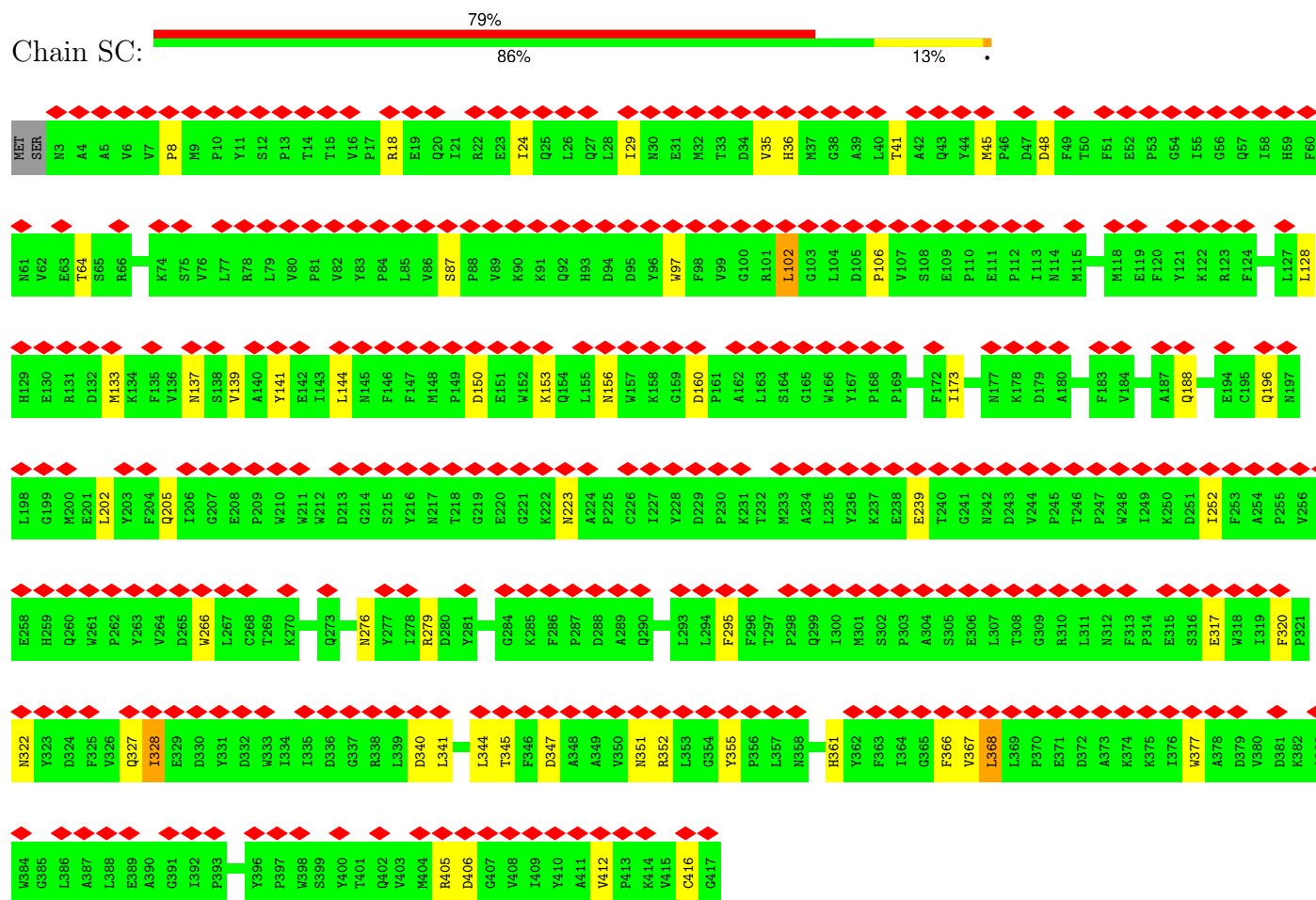


• Molecule 3: Gp64

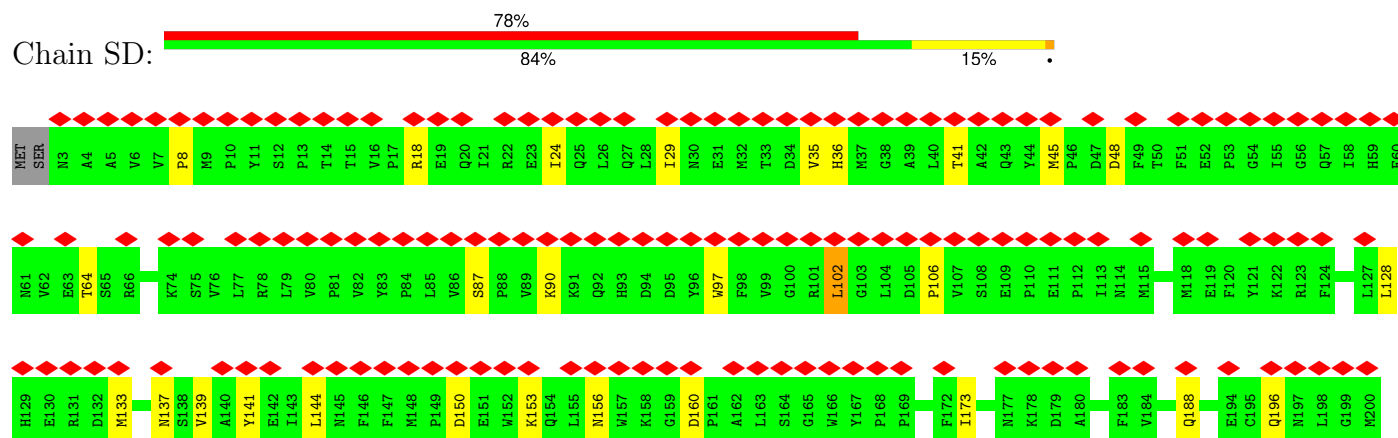


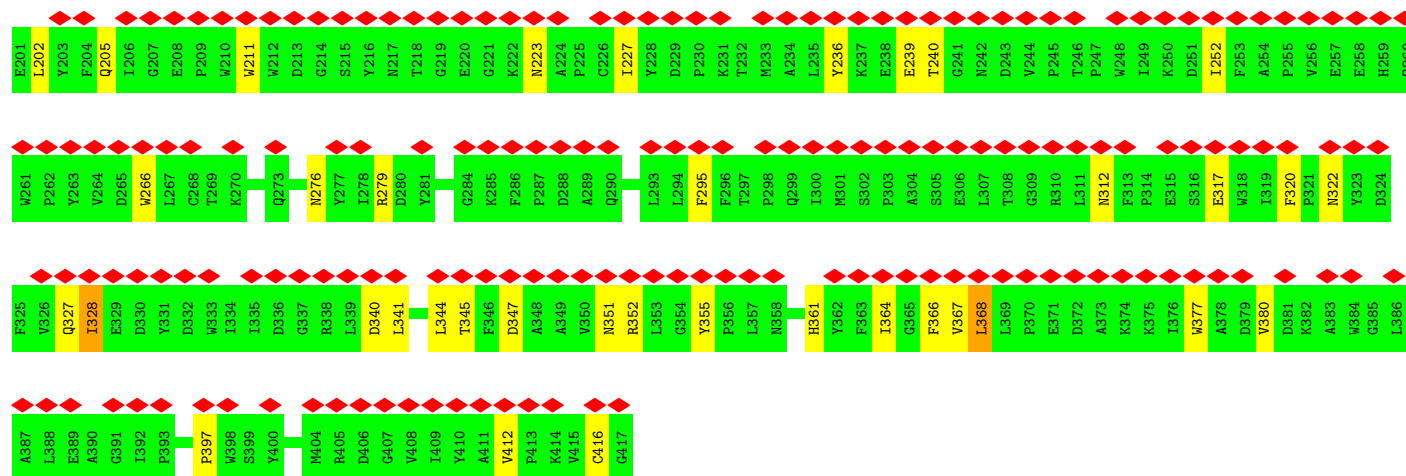


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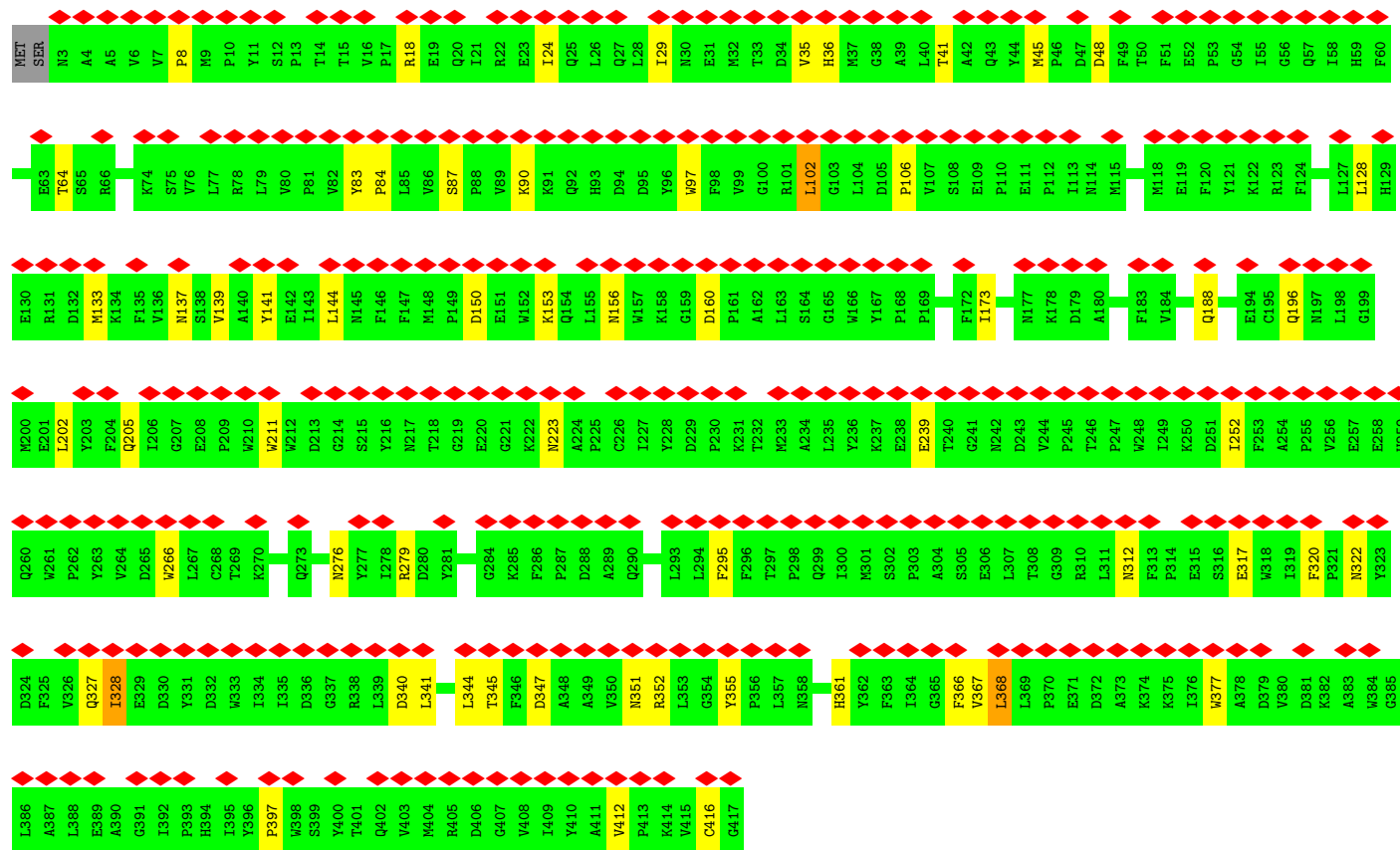
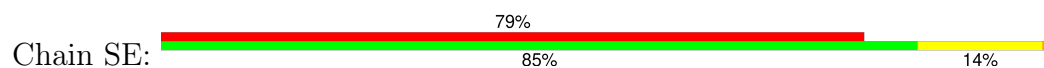


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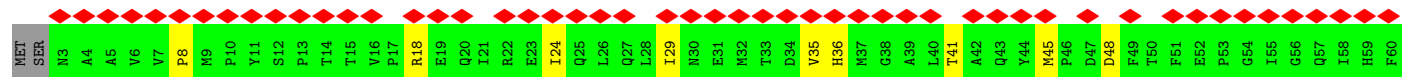
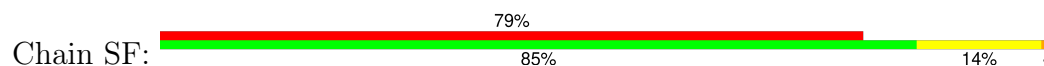


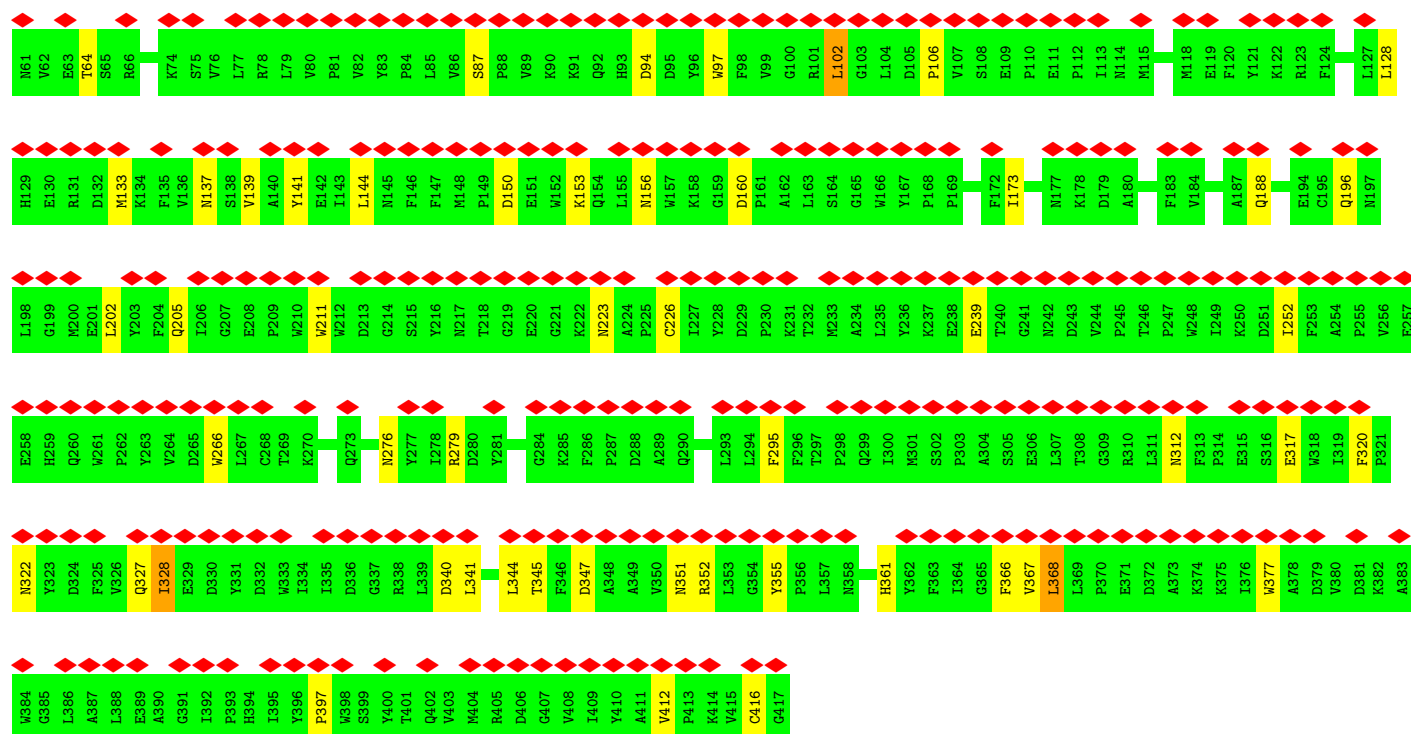


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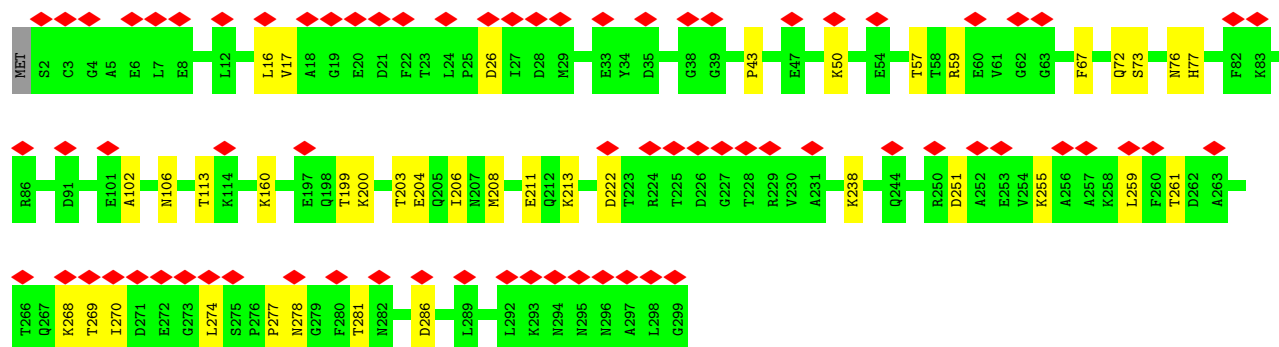
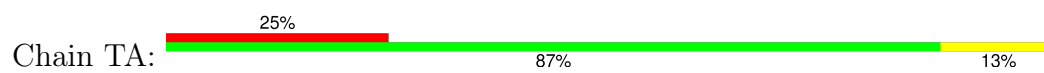


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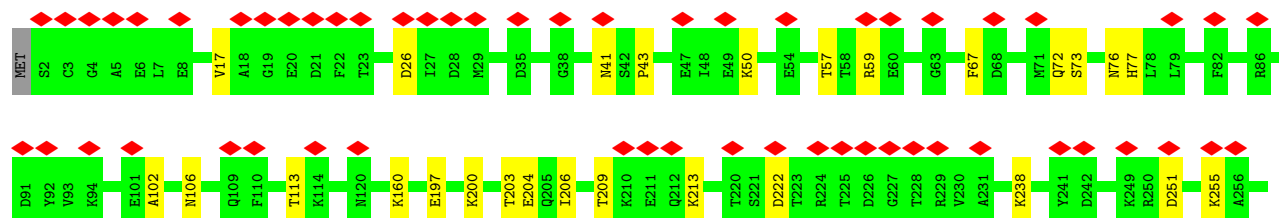
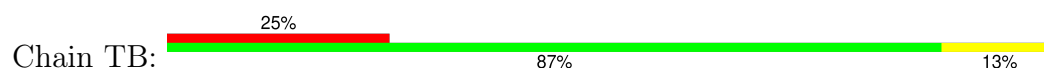


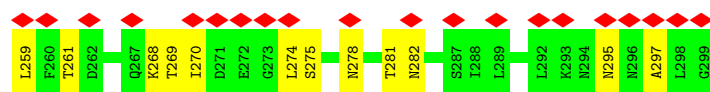


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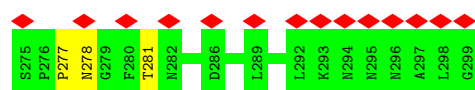
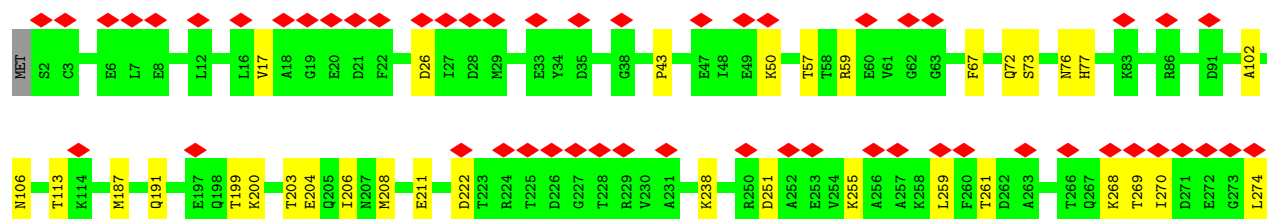
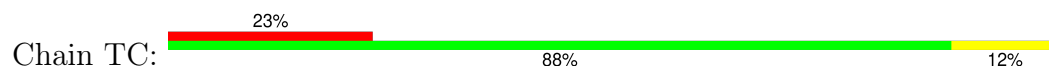


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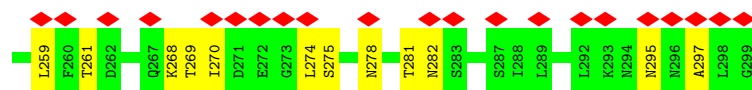
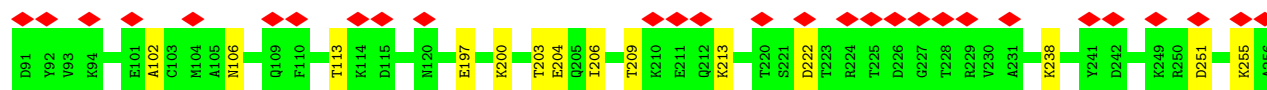
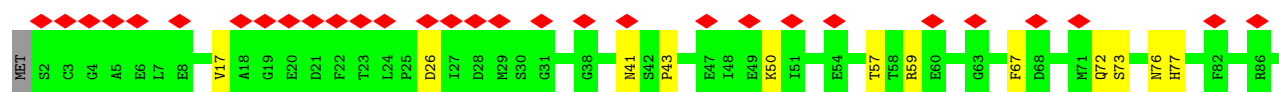
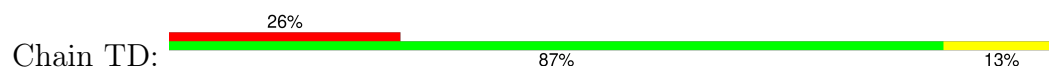




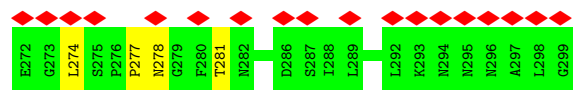
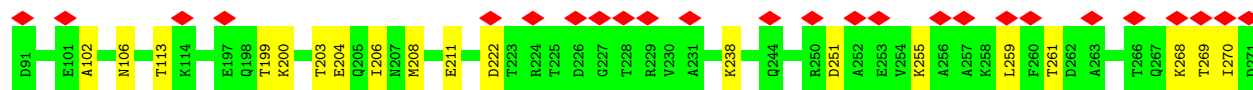
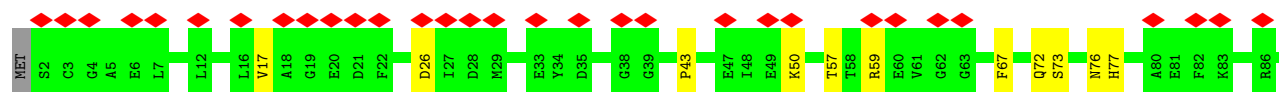
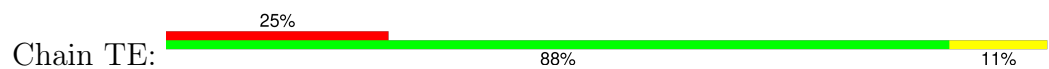
- Molecule 4: Gp54



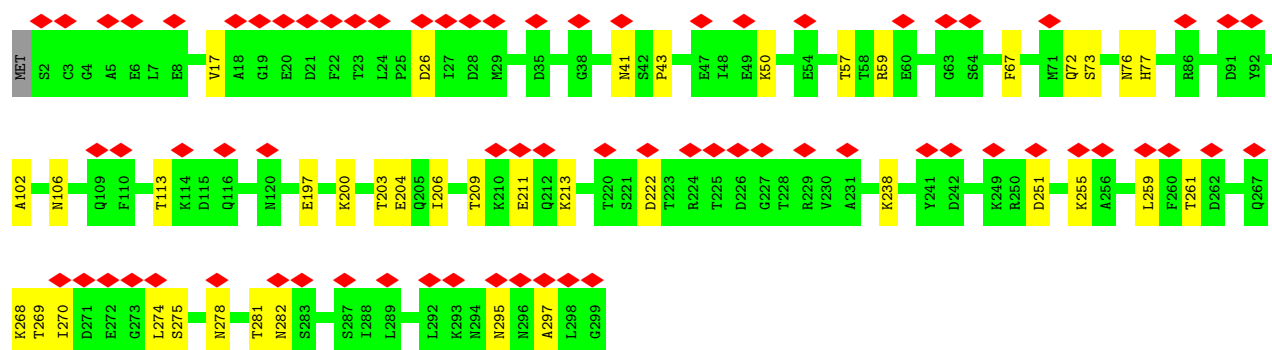
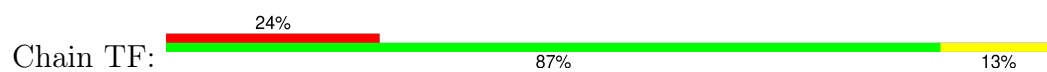
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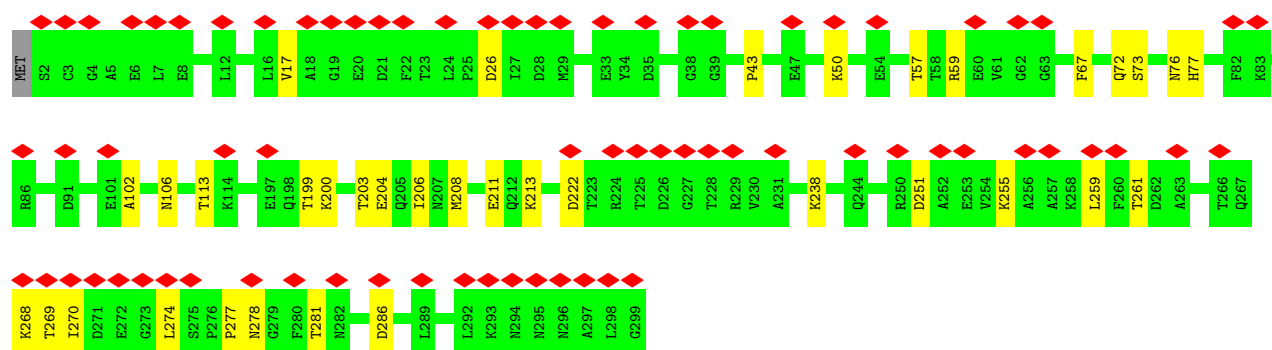
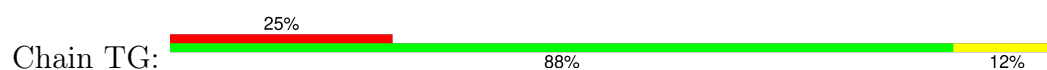
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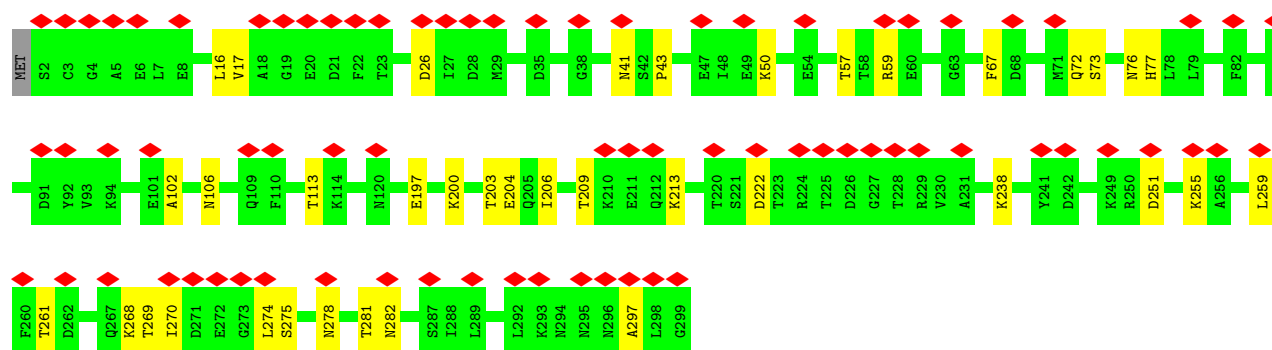
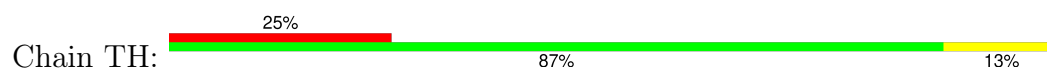
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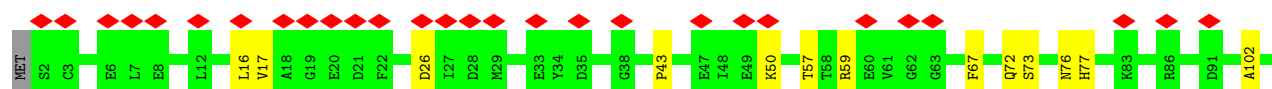
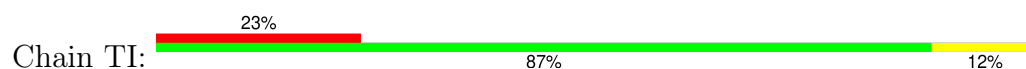
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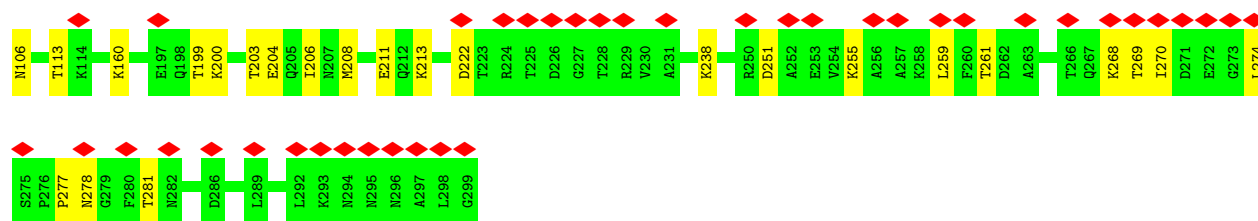


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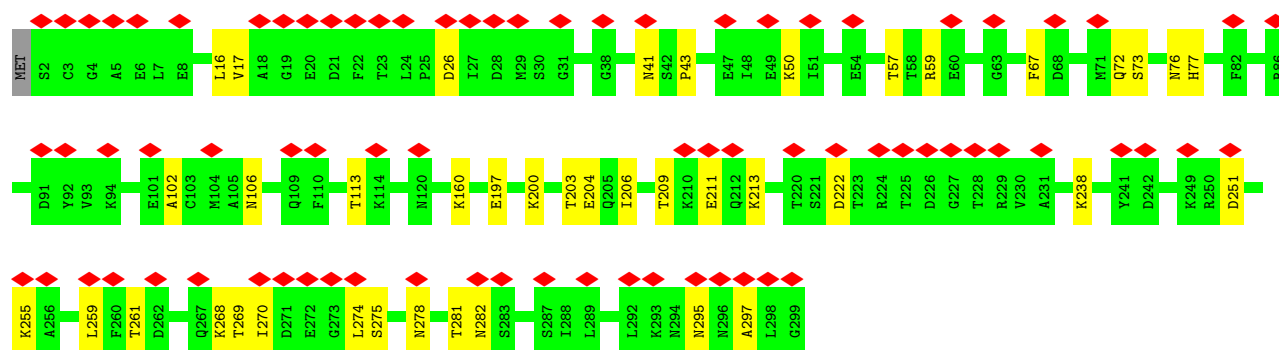
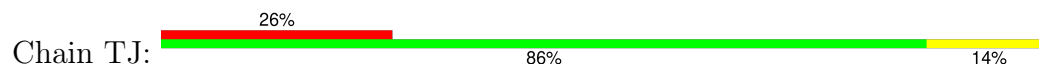


• Molecule 4: Gp54

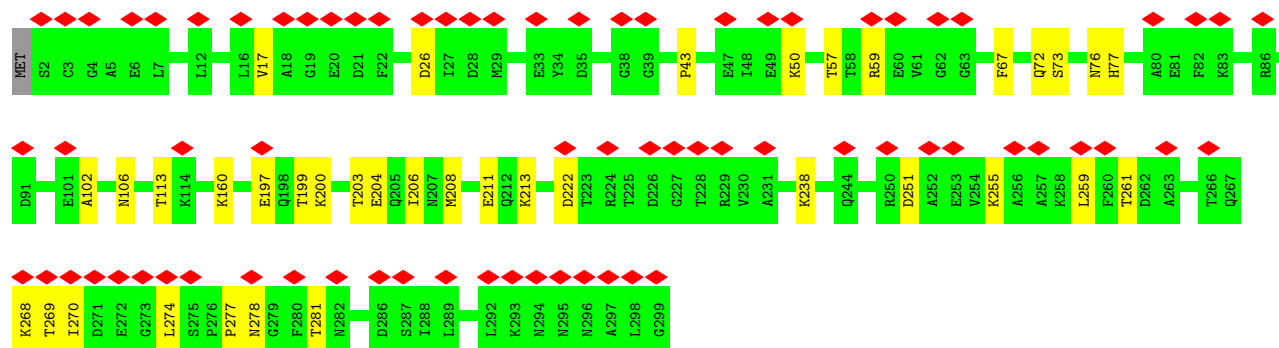




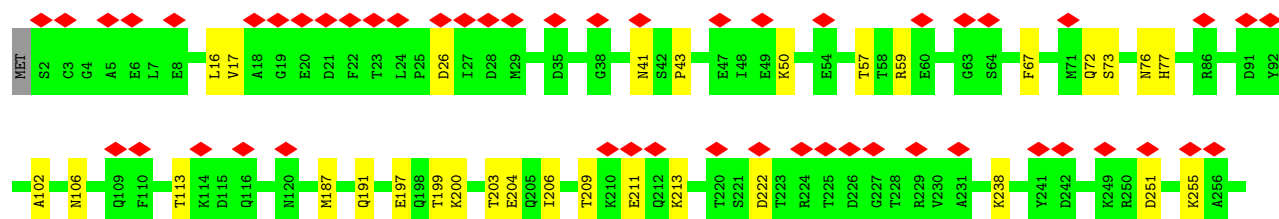
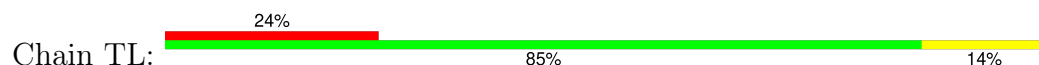
• Molecule 4: Gp54

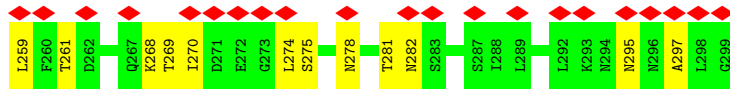


• Molecule 4: Gp54

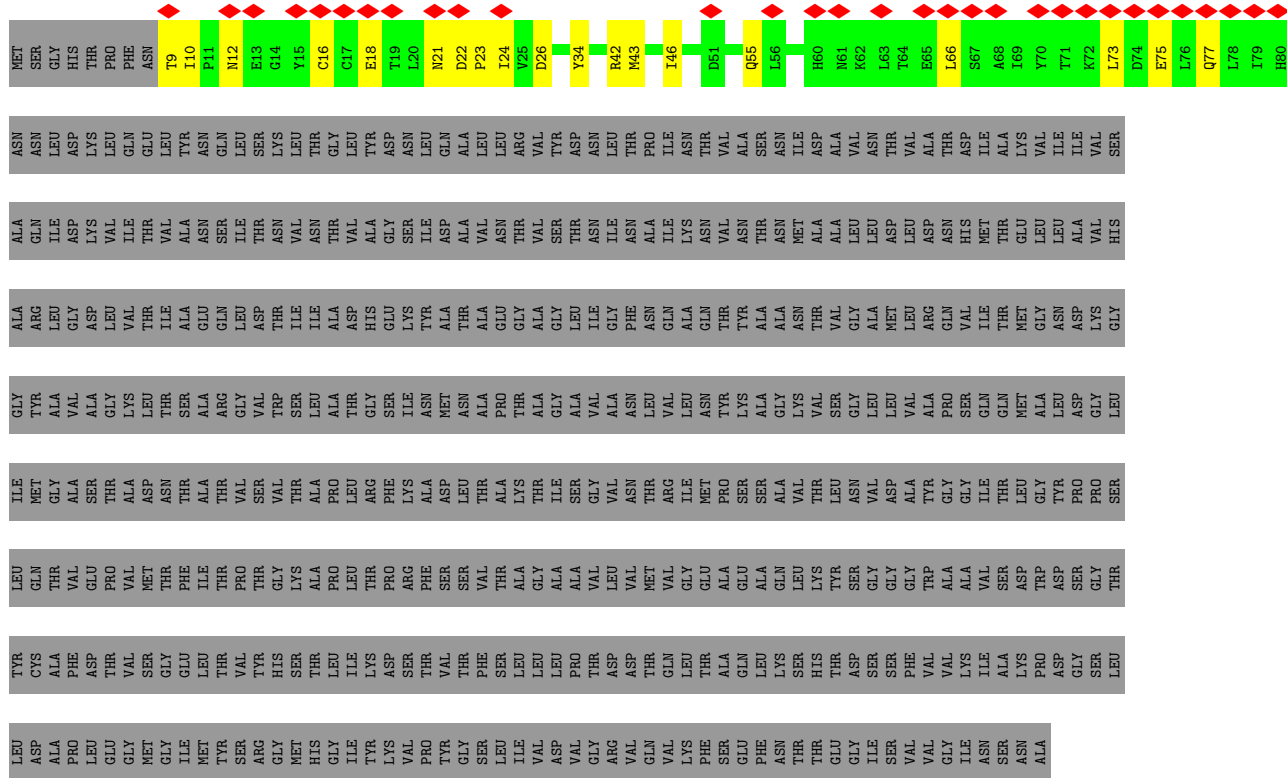


• Molecule 4: Gp54

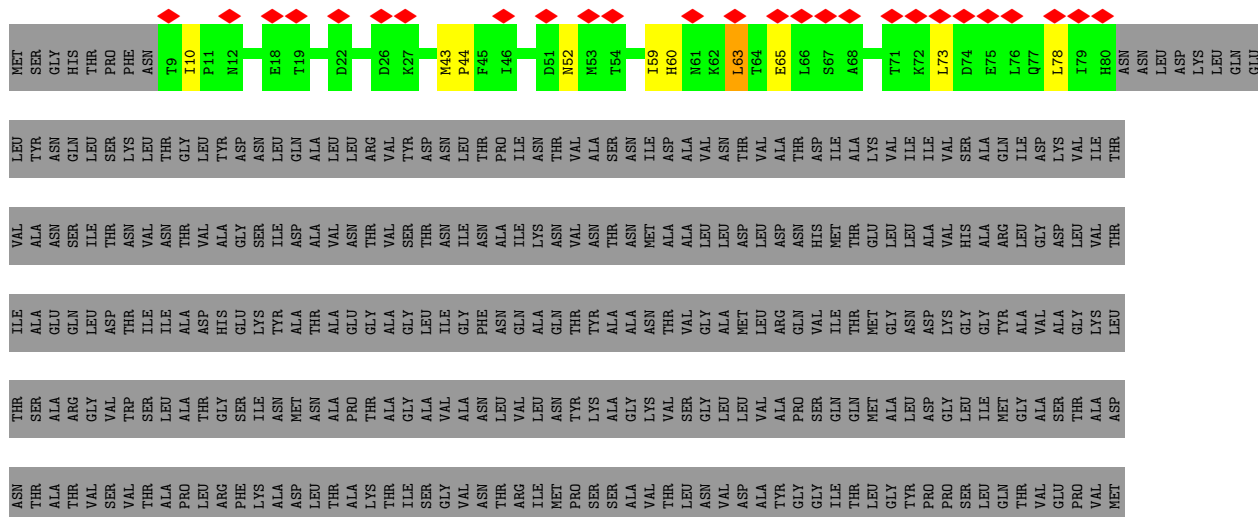




• Molecule 5: 60 kDa protein



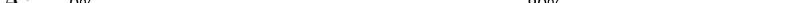
• Molecule 5: 60 kDa protein





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

- Molecule 5: 60 kDa protein

Chain ZA:  9% 89%

[illegible]

- Molecule 5: 60 kDa protein

Chain ZB: 5% 10% 89%

[illegible]

- Molecule 5: 60 kDa protein

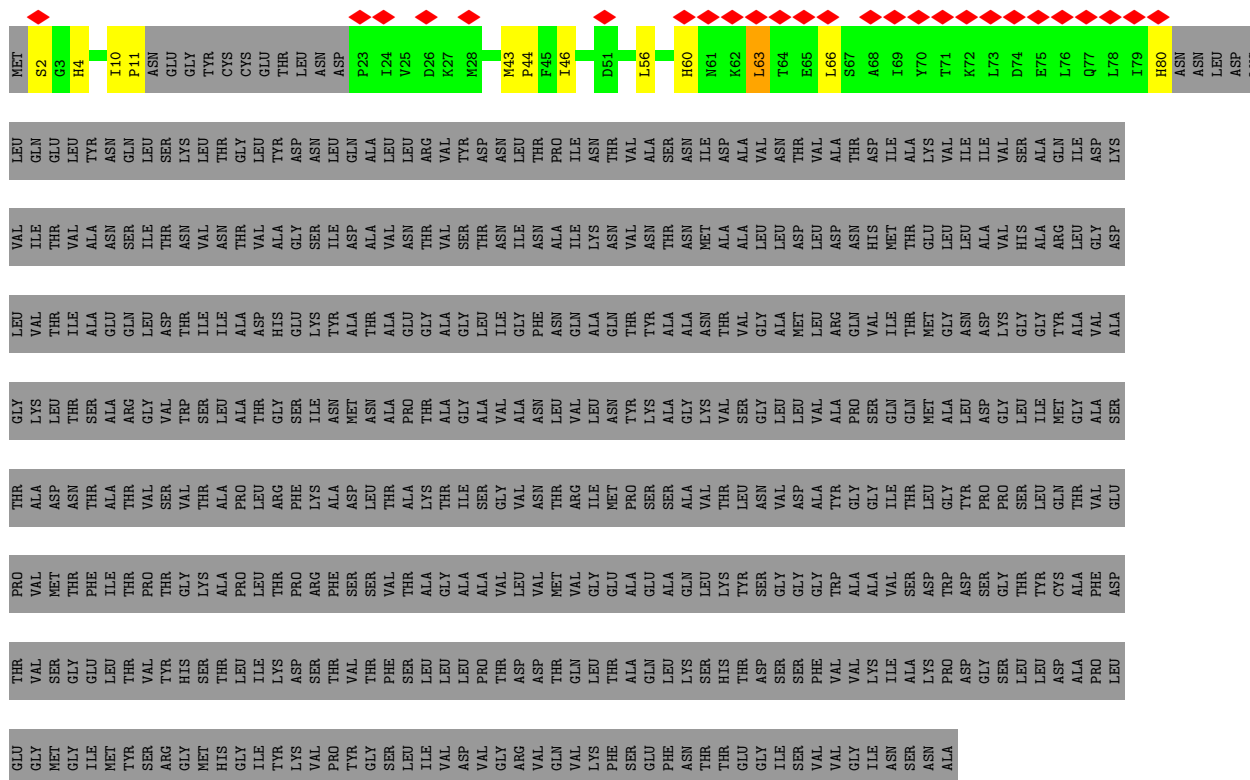


LEU	THR	SER	LEU	GLY	HIS	SER	HBO
LEU	THR	LEU	ILE	GLY	ALA	ALA	ASN
ASP	CYS	GLN	MET	TVR	ARG	GLN	ASN
ALA	ALA	THR	GLY	ALA	LEU	ILE	LEU
PRO	PHE	VAL	ALA	VAL	GLY	ASP	ASP
LEU	ASP	GLU	SER	ALA	ASP	LYS	LYS
GLU	THR	PRO	THR	GLY	LEU	VAL	LEU
GLY	VAL	VAL	ALA	LYS	VAL	ILE	GLN
MET	SER	MET	ASP	LEU	THR	THR	GLU
ILE	GLU	PHE	THR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

- Molecule 5: 60 kDa protein

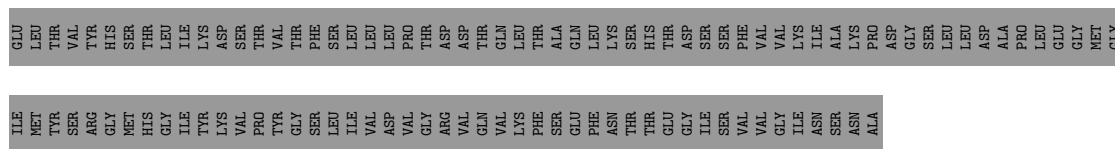


- Molecule 5: 60 kDa protein

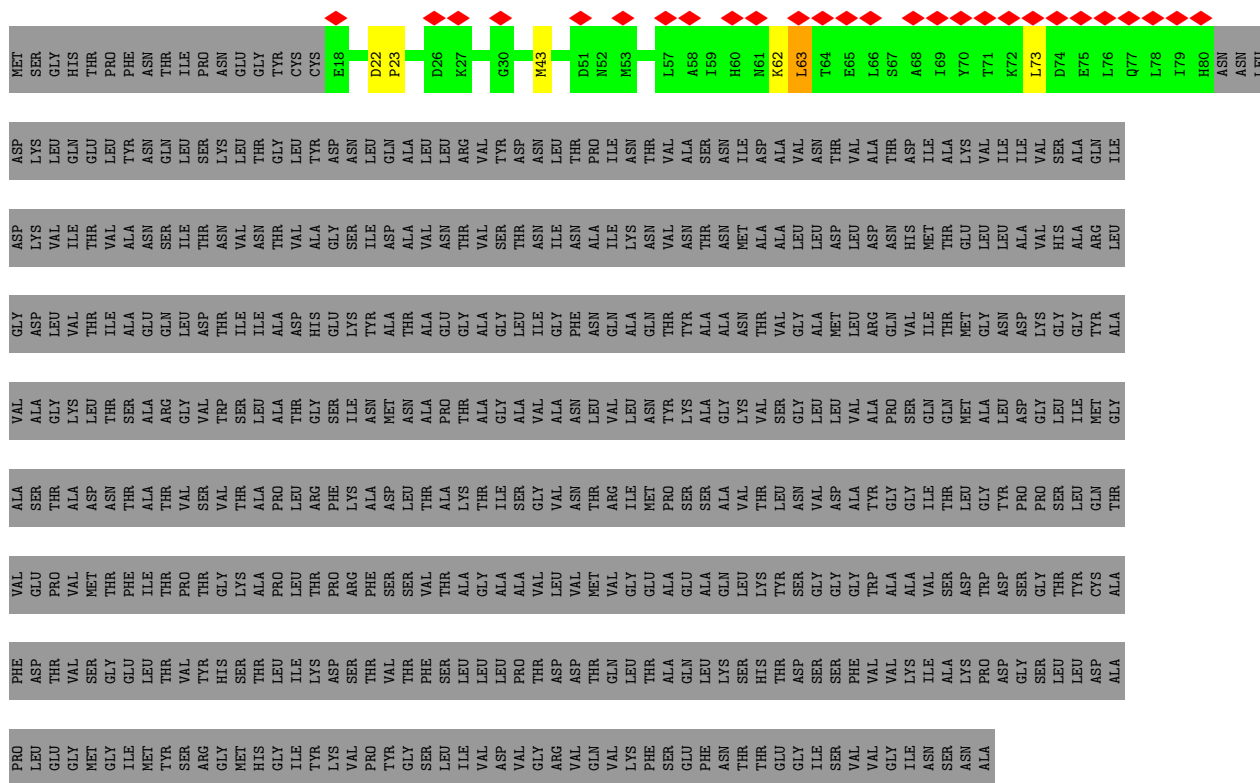


Chain YD:

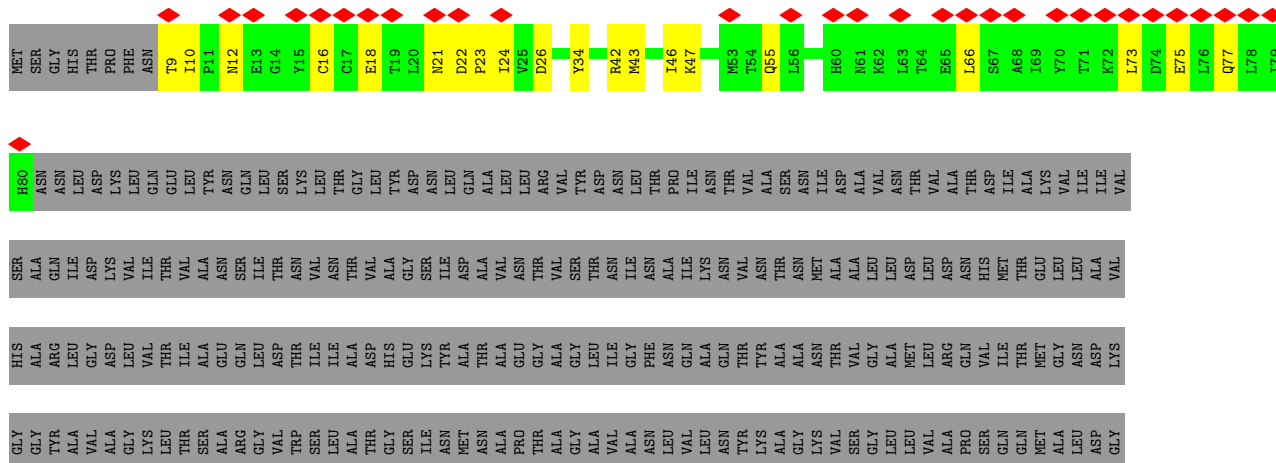




- Molecule 5: 60 kDa protein

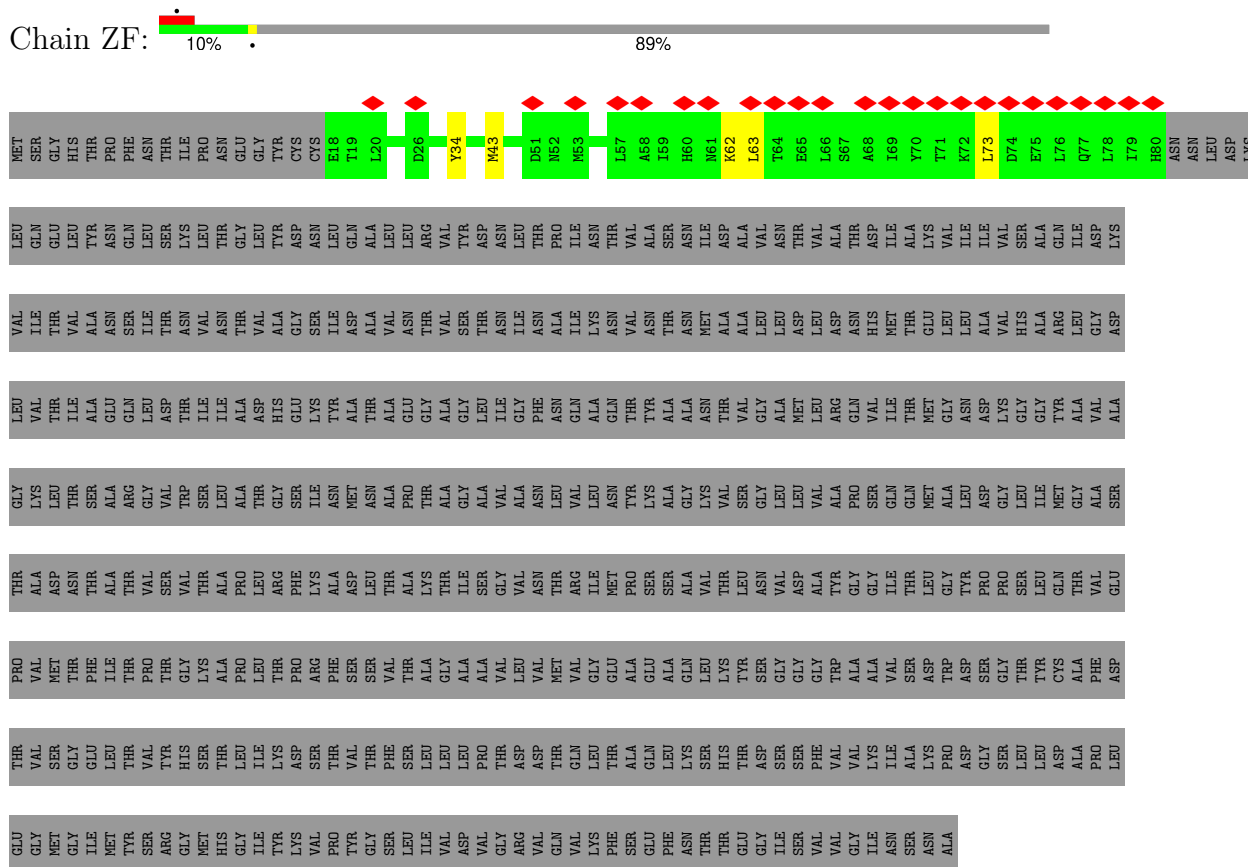


- Molecule 5: 60 kDa protein



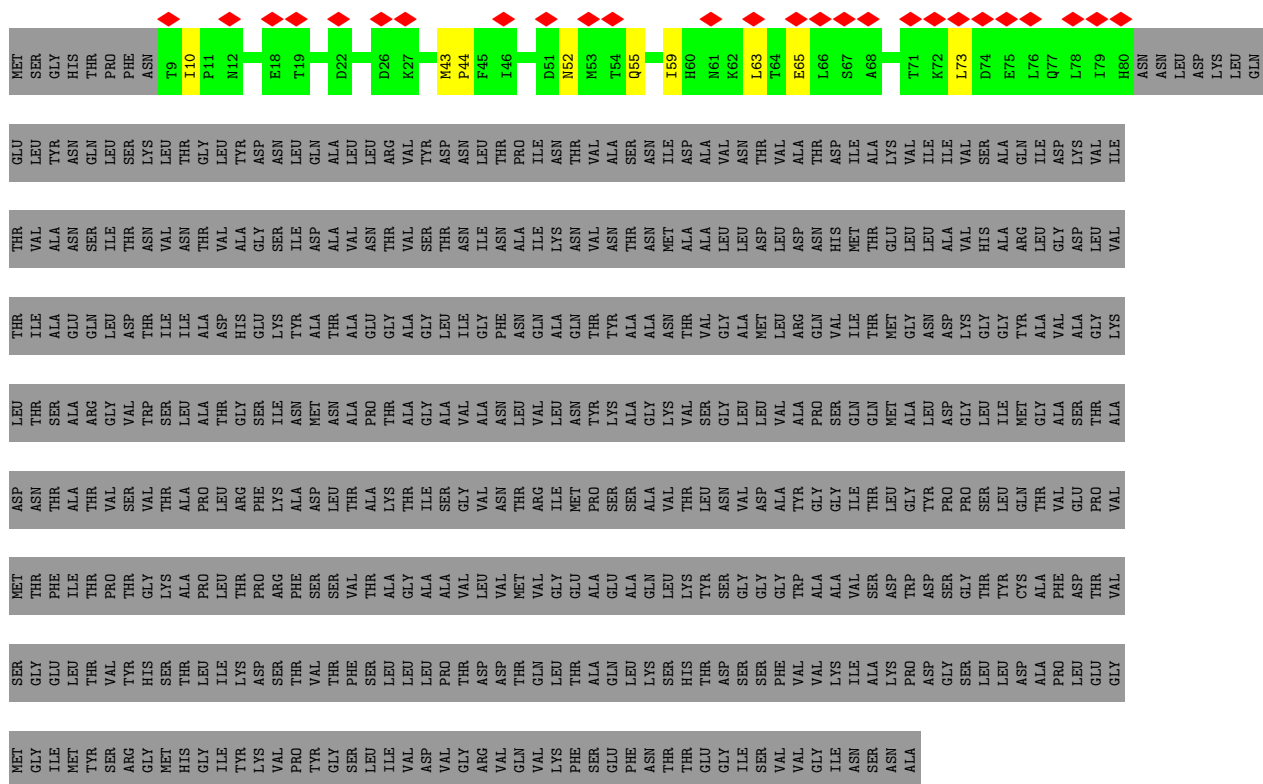
[illegible]

- Molecule 5: 60 kDa protein



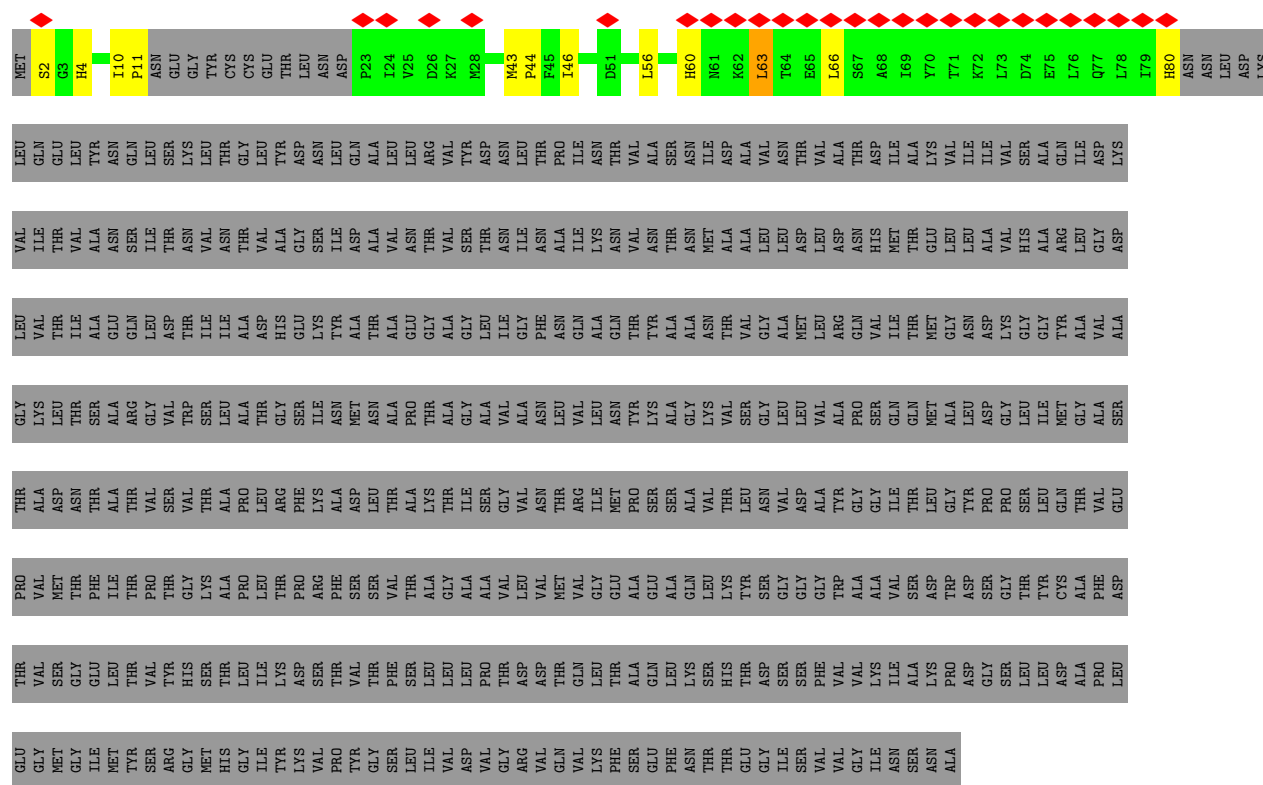
- Molecule 5: 60 kDa protein





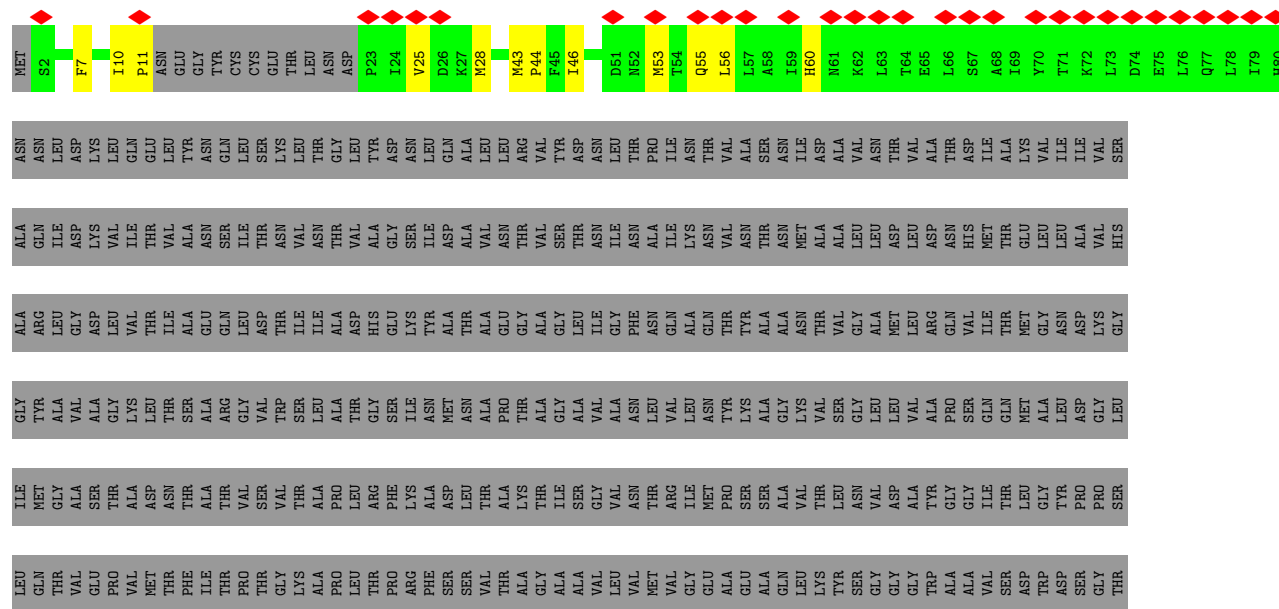
● Molecule 5: 60 kDa protein

Chain YG: 



● Molecule 5: 60 kDa protein

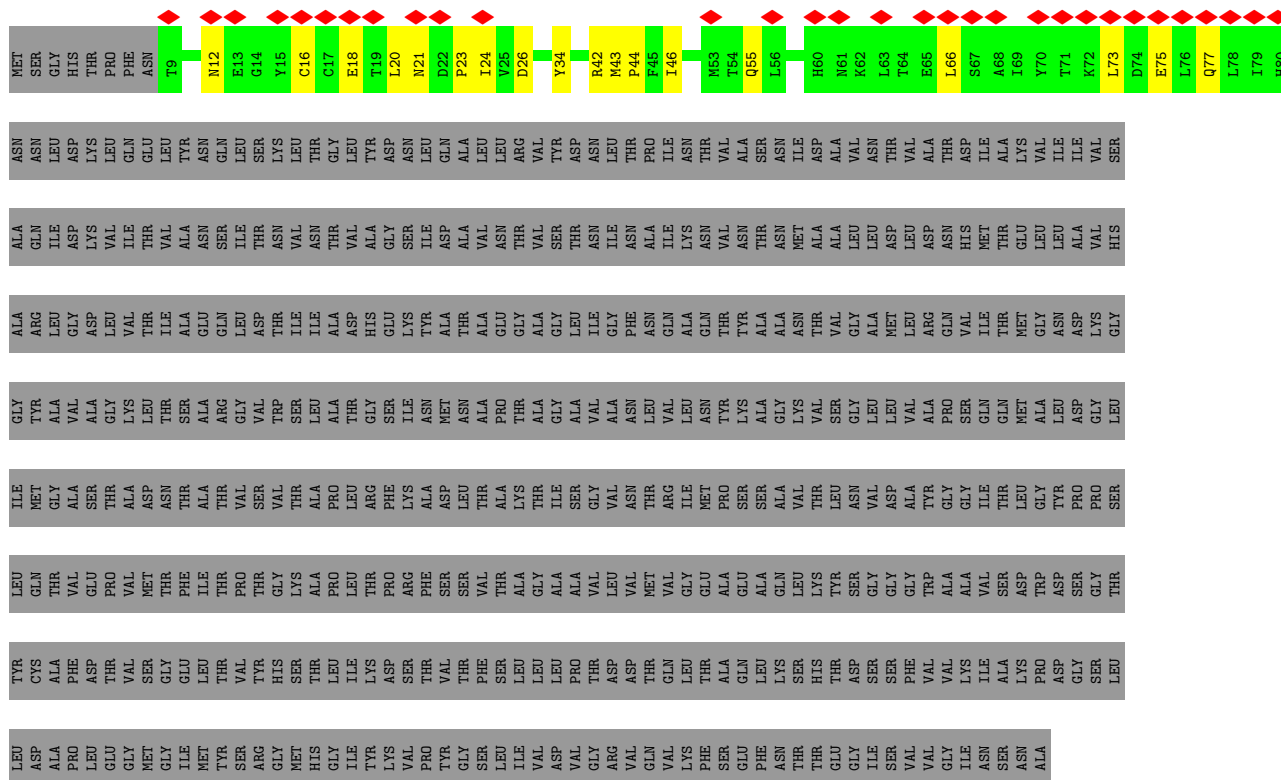
Chain YH: 



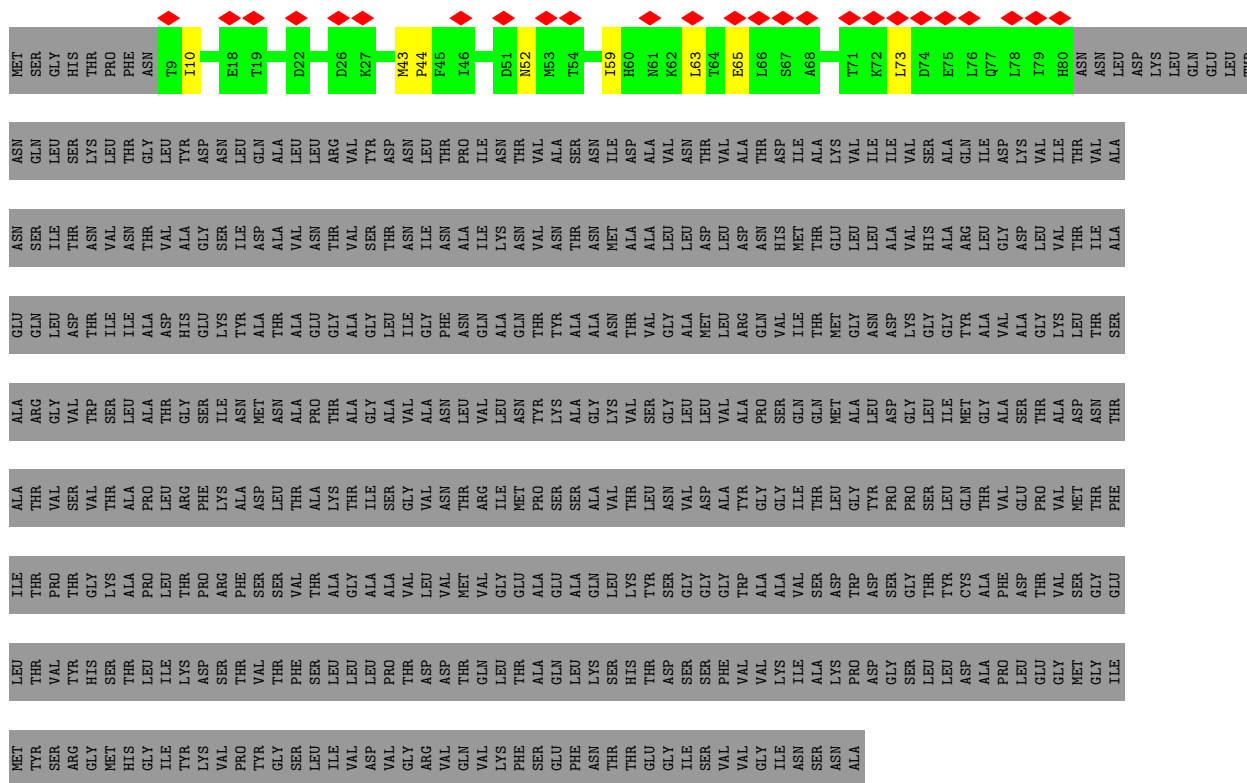
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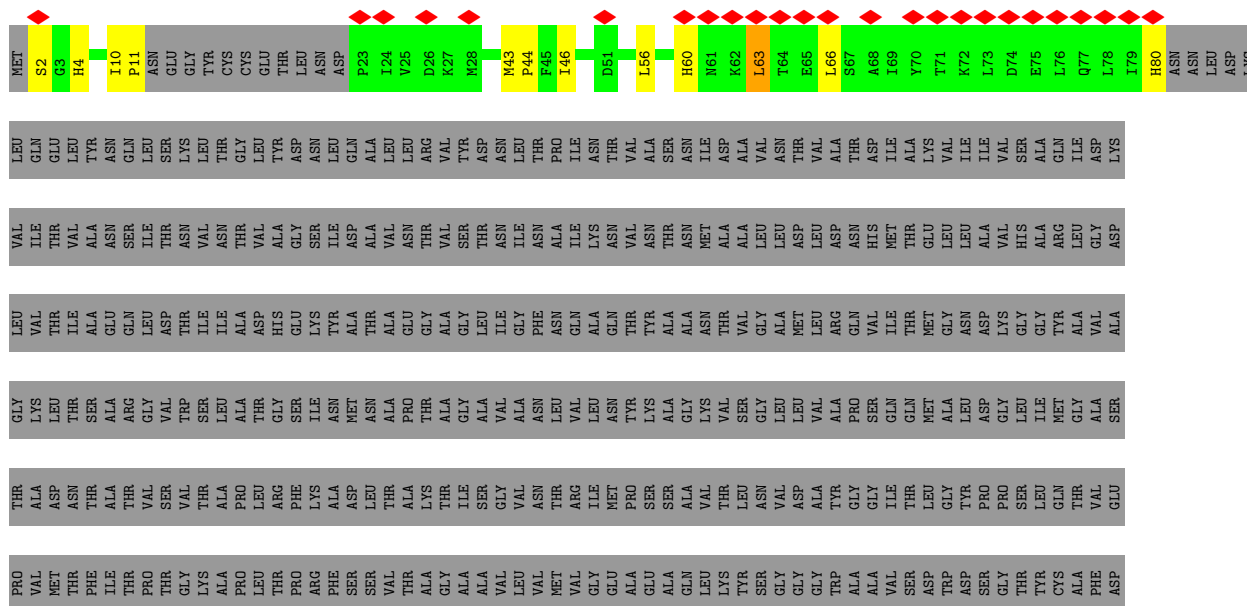
- Molecule 5: 60 kDa protein



- Chain XL:



- Chain YK:



[illegible]

- Molecule 5: 60 kDa protein



MET	S2	F7	I10	P11	ASN	GLU	GLY	TYR	CYS	CYS	GLU	THR	LEU	ASN	ASP	P23	I24	V25	D26	K27	M28	M43	P44	F45	I46	D51	M52	M53	T54	Q55	L56	L57	A58	I59	H60	N61	K62	L63	L64	T65	E66	L66	S67	A68	I69	Y70	T71	K72	L73	D74	E75	L76	Q77	L78	I79	A80
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[illegible]

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

GLY	TYR	ALA	ALA	VAL	ALA	GLY	LYS	LEU	THR	SER	SER	ARG	ALA	GLY	VAL	TRP	SER	LEU	ALA	THR	GLY	SER	ILE	ASN	ASN	ALA	ALA	PRO	THR	ALA	GLY	ALA	VAL	ALA	ASN	ASN	VAL	LEU	LEU	LEU	VAL	ASN	TYR	LYS	GLY	GLY	VAL	LYS	SER	GLY	LEU	LEU	VAL	ALA	ALA	PRO	SER	SER	GLN	GLN	GLN	MET	ALA	ALA	LEU	ASP	GLY	LEU
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I	L	E
M	E	T
G	L	A
S	E	R
A	L	A
S	E	R
T	H	R
A	L	A
A	L	A
A	L	A
A	L	A
V	A	L
S	E	R
S	E	R
T	H	R
A	L	A
A	L	A
P	R	O
L	E	U
A	R	G
P	H	E
L	Y	S
A	L	A
A	S	P
L	E	U
T	H	R
A	L	A
A	L	A
L	Y	S
T	H	R
I	L	E
S	E	R
G	L	A
V	A	L
A	S	N
T	H	R
A	R	G
I	L	E
M	E	T
P	R	O
S	E	R
S	E	R
A	L	A
A	L	A
T	H	R
L	E	U
A	S	N
V	A	L
A	S	P
A	L	A
T	Y	R
G	L	A
G	L	A
I	L	E
T	H	R
L	E	U
G	L	A
P	R	O
P	R	O
P	R	O

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

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

- Molecule 5: 60 kDa protein



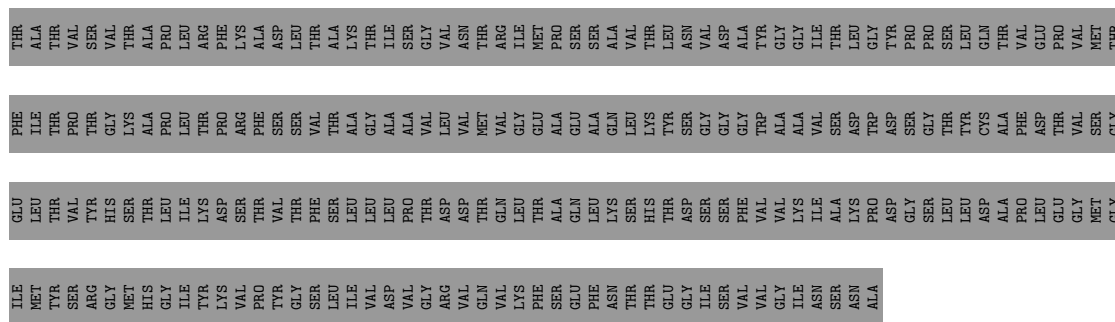
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TYR	ASN	GLN	LEU	SER	LEU	LYS	LEU	THR	GLY	LEU	ASP	ASN	GLN	ALA	LEU	LEU	ARG	VAL	TYR	ASP	ASN	ASN	LEU	THR	PRO	ILE	ILE	THR	THR	VAL	VAL	ALA	SER	ASN	ASN	ILE	ILE	ASP	ALA	VAL	ASN	THR	THR	VAL	ALA	THR	ASP	ILE	ALA	LYS	VAL	VAL	ILE	ILE	ILE	SER	VAL	ALA	GLN	ILE	ASP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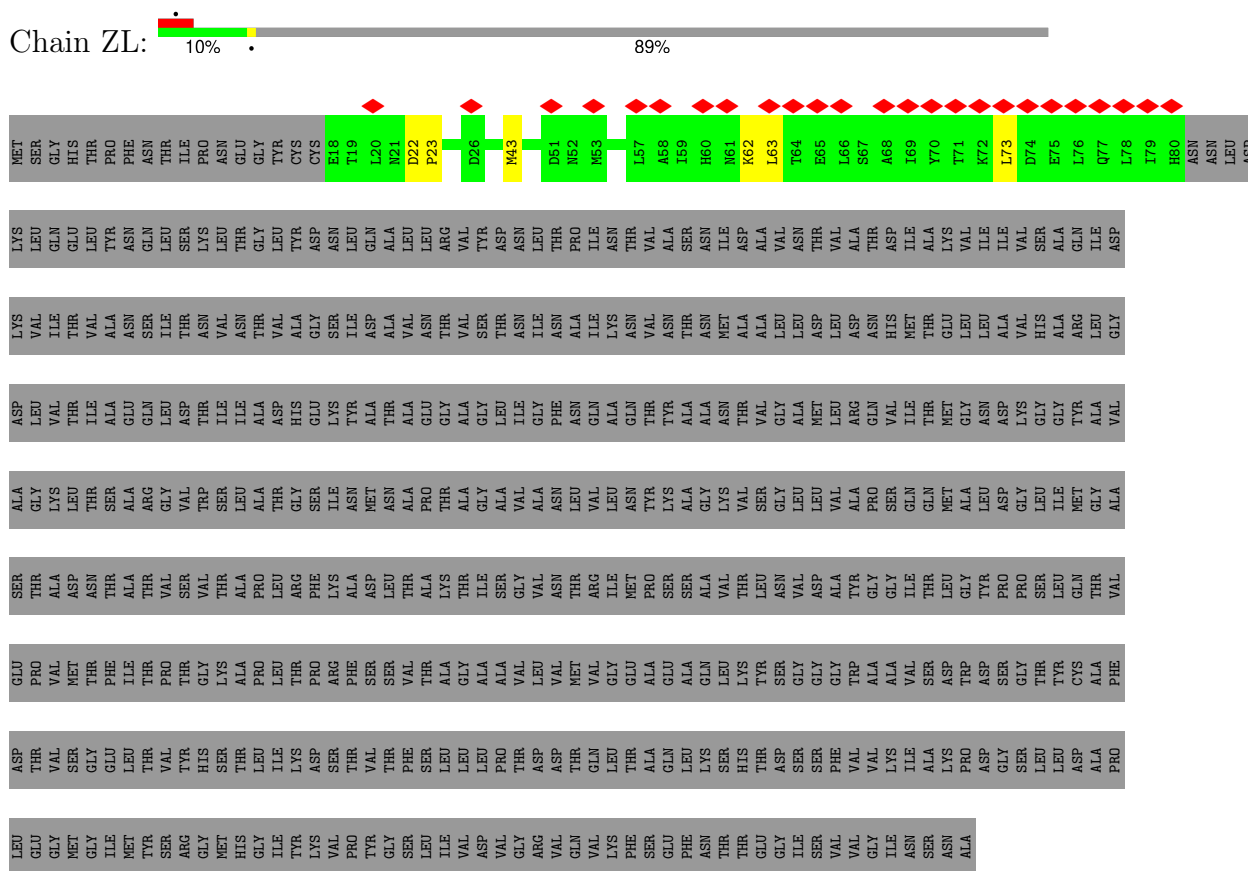
ALA	ASN	SER	SER	THR	THR	ASN	VAL	ALA	ALA	GLY	SER	SER	ILE	ASP	ALA	ASN	ASN	THR	VAL	SER	THR	THR	ASN	ASN	LYS	ALA	ILE	ILE	ASN	VAL	ASN	THR	THR	LEU	LEU	ASP	ASP	ASN	HIS	MET	THR	THR	GLU	LEU	LEU	LEU	ARG	ALA	HIS	VAL	ALA	LEU	GLY	ASP	LEU	VAL	THR	THR	ILE
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ALA GLU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

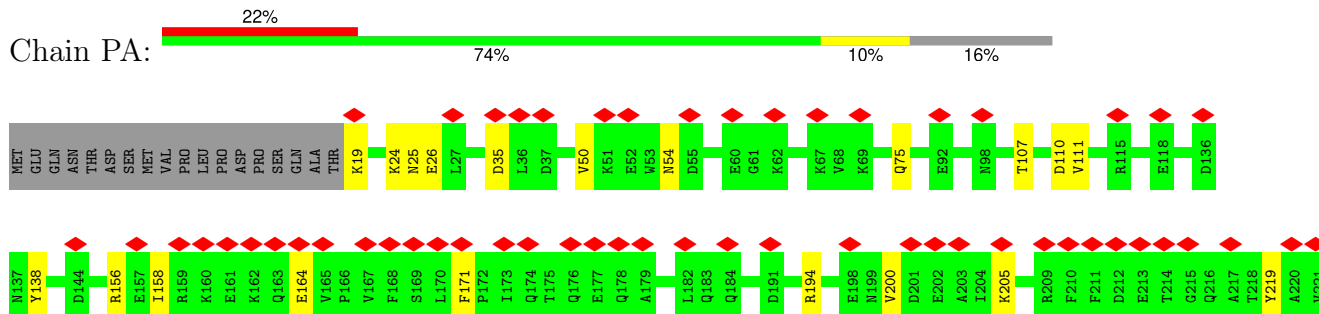
SER	ALA	ARG	GLY	VAL	TRP	SER	LEU	ALA	ALA	THR	GLY	SER	ILE	ASN	MET	ASN	ALA	ALA	PRO	THR	ALA	ALA	ALA	ALA	ALA	ASN	VAL	LEU	LEU	ASN	TYR	LYS	ALA	ALA	GLY	LYS	VAL	SER	GLY	LEU	LEU	VAL	VAL	ALA	ALA	ALA	PRO	SER	GLN	GLN	MET	MET	ALA	LEU	ALA	LEU	ASP	GLY	GLY	ILE	ILE	MET	MET	GLY	ALA	SER	THR	ALA	ALA	ALA	ASP	ASN
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- Molecule 5: 60 kDa protein



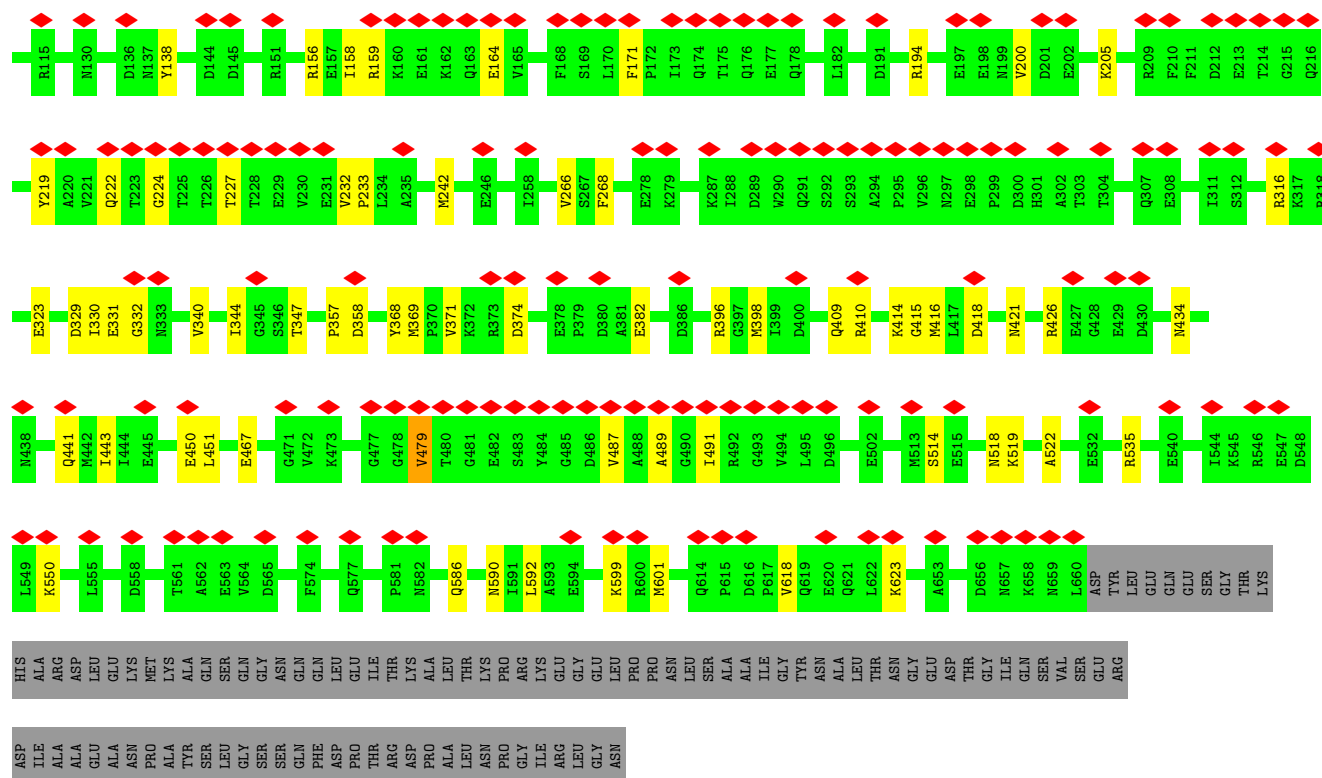
- Molecule 6: Probable portal protein



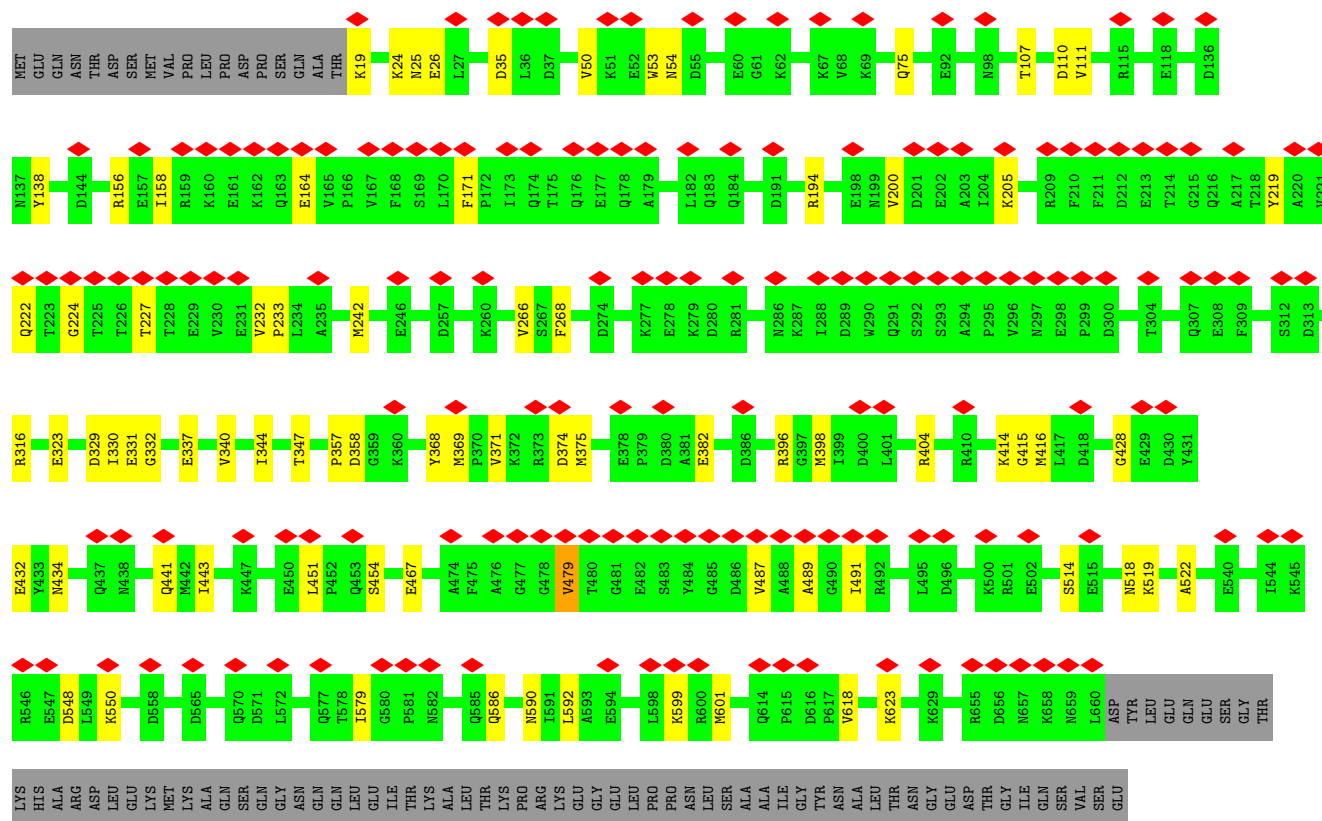
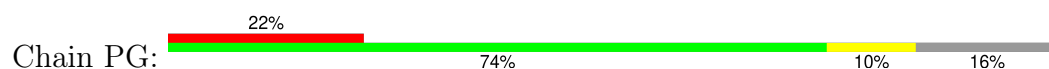


Chain PC:





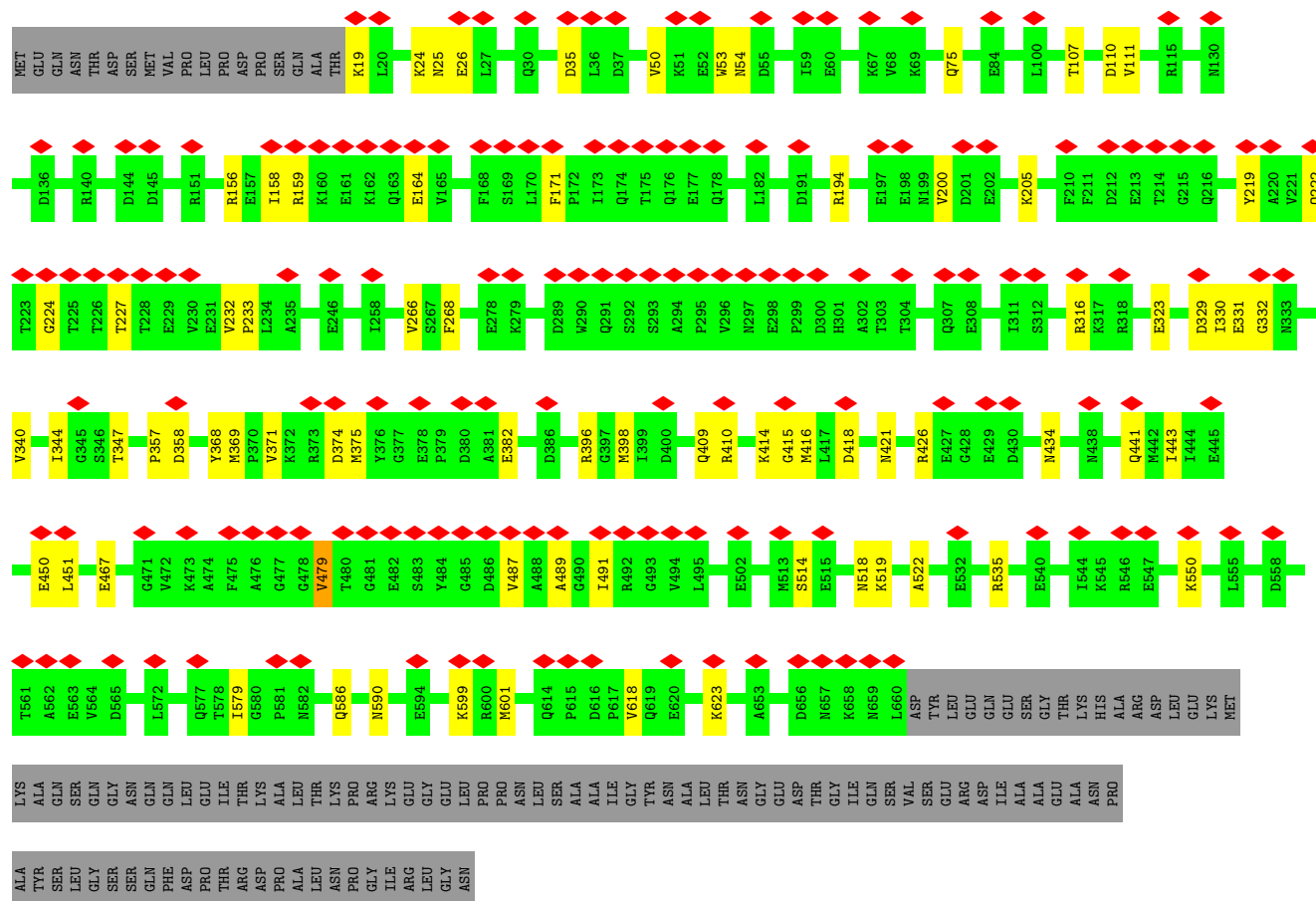
• Molecule 6: Probable portal protein



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

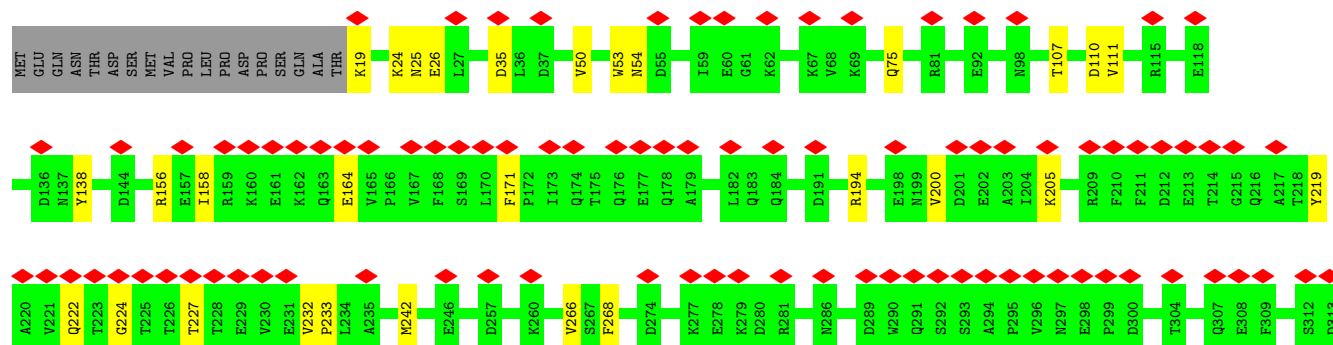
• Molecule 6: Probable portal protein

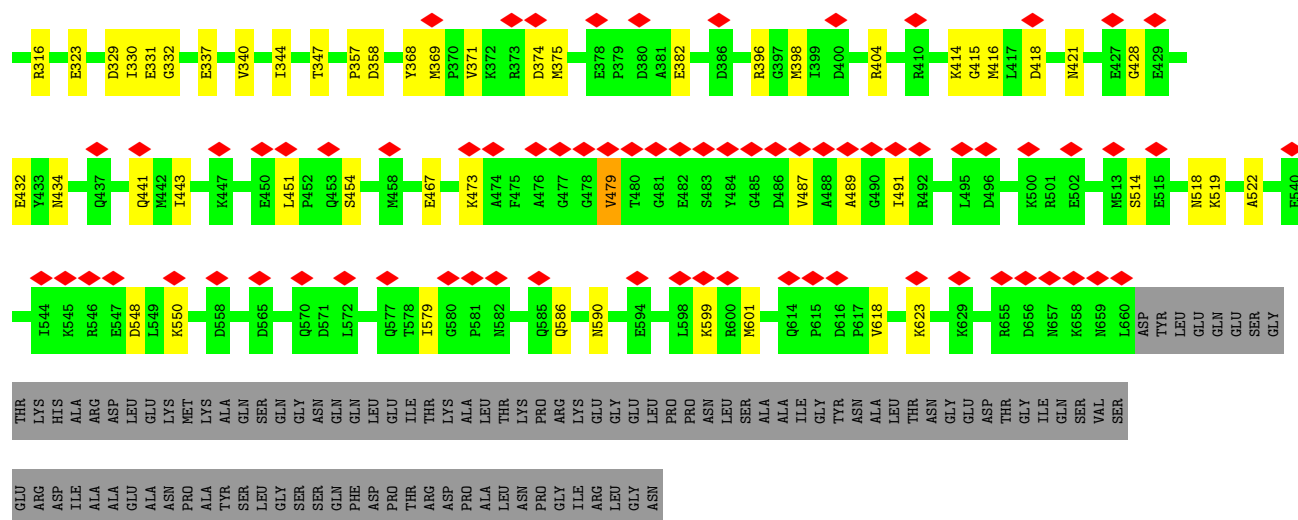
Chain PH: 22% 74% 10% 16%



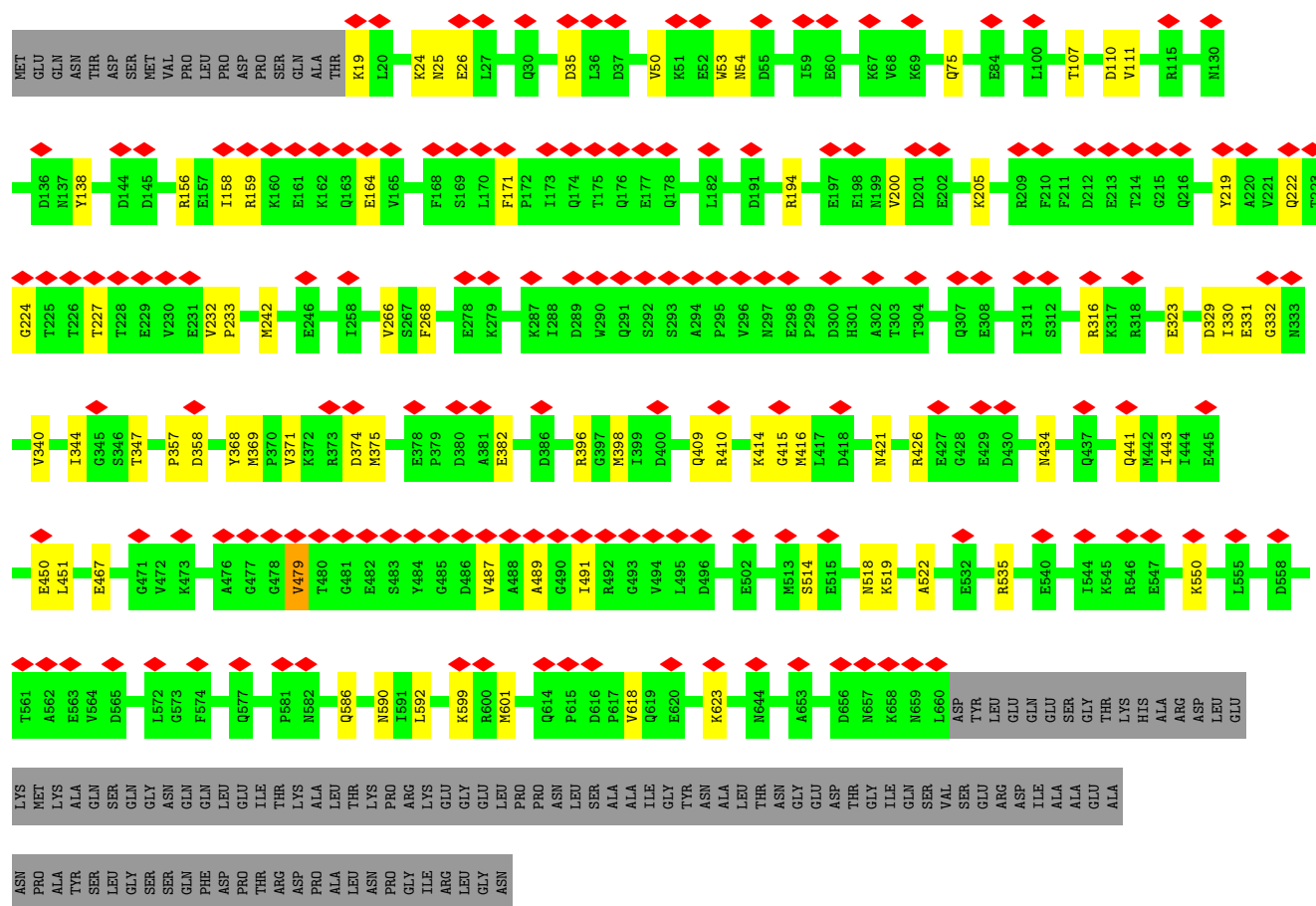
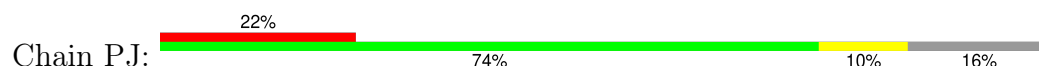
• Molecule 6: Probable portal protein

Chain PI: 22% 74% 10% 16%

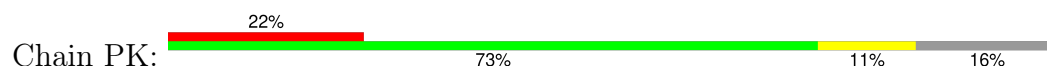


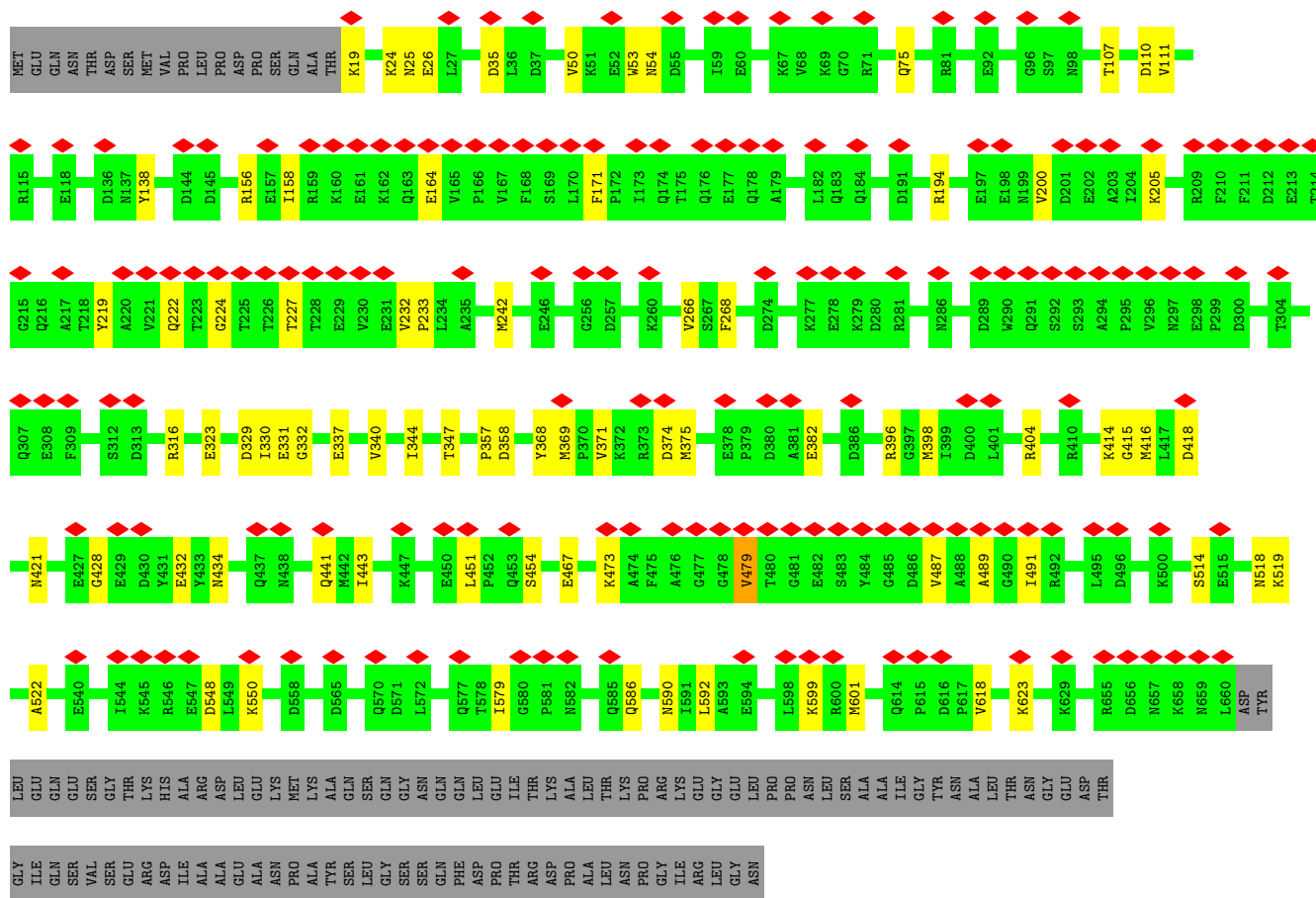


- Molecule 6: Probable portal protein

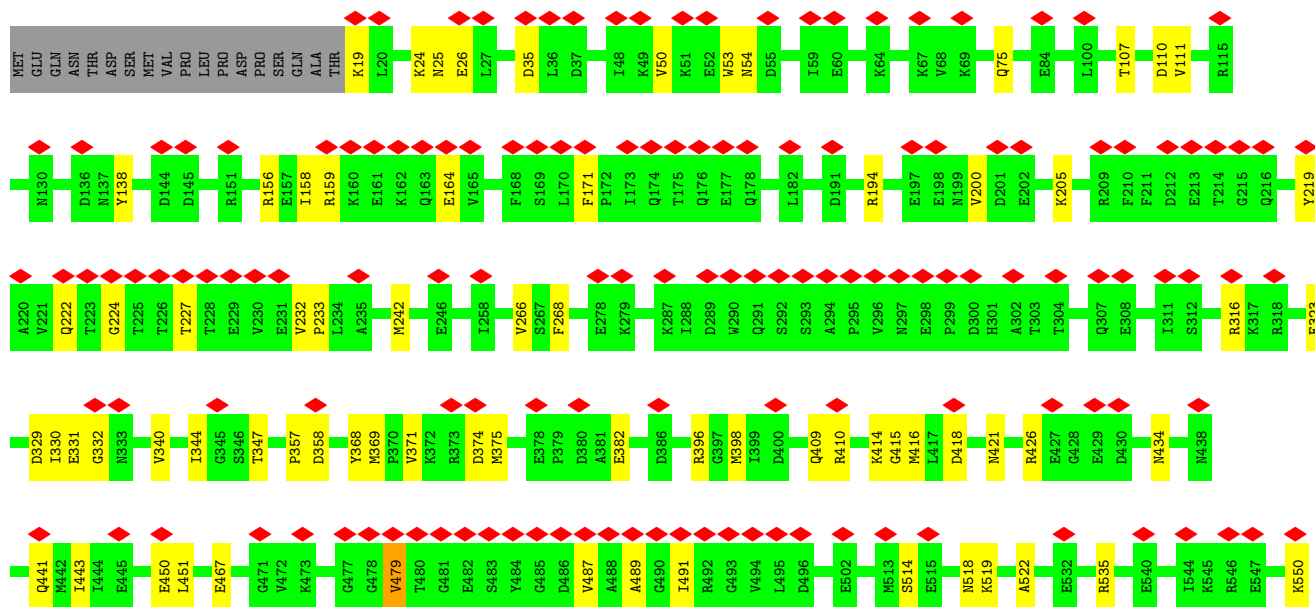
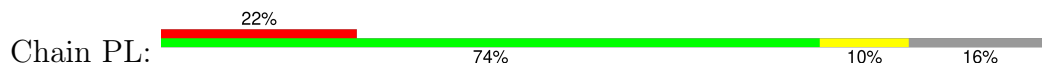


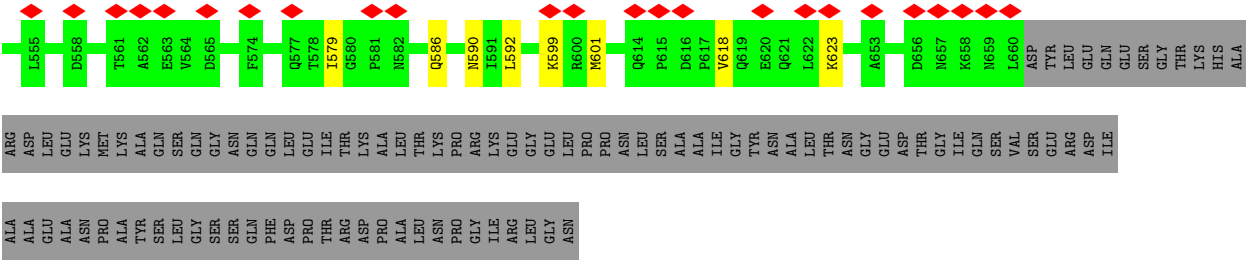
- Molecule 6: Probable portal protein





● Molecule 6: Probable portal protein





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C6	Depositor
Number of particles used	10265	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	TFS FALCON 4i (4k x 4k)	Depositor
Maximum map value	0.443	Depositor
Minimum map value	-0.141	Depositor
Average map value	0.009	Depositor
Map value standard deviation	0.056	Depositor
Recommended contour level	0.17	Depositor
Map size (Å)	266.262, 268.65, 456.108	wwPDB
Map dimensions	382, 225, 223	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.194, 1.194, 1.194	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	AA	0.07	0/1953	0.19	0/2654
1	AB	0.07	0/1953	0.19	0/2654
1	AC	0.07	0/1953	0.18	0/2654
1	AD	0.07	0/1953	0.19	0/2654
1	AE	0.07	0/1953	0.19	0/2654
1	AF	0.07	0/1953	0.19	0/2654
1	AG	0.07	0/1953	0.19	0/2654
1	AH	0.07	0/1953	0.19	0/2654
1	AI	0.07	0/1953	0.19	0/2654
1	AJ	0.07	0/1953	0.19	0/2654
1	AK	0.07	0/1953	0.19	0/2654
1	AL	0.07	0/1953	0.19	0/2654
2	LA	0.07	0/9606	0.22	0/13093
2	LB	0.07	0/9606	0.22	0/13093
2	LC	0.07	0/9606	0.22	0/13093
2	LD	0.07	0/9606	0.22	0/13093
2	LE	0.07	0/9606	0.22	0/13093
2	LF	0.07	0/9606	0.22	0/13093
3	SA	0.07	0/3498	0.22	0/4781
3	SB	0.07	0/3498	0.22	0/4781
3	SC	0.07	0/3498	0.22	0/4781
3	SD	0.07	0/3498	0.22	0/4781
3	SE	0.07	0/3498	0.22	0/4781
3	SF	0.07	0/3498	0.22	0/4781
4	TA	0.06	0/2290	0.17	0/3103
4	TB	0.06	0/2290	0.17	0/3103
4	TC	0.06	0/2290	0.17	0/3103
4	TD	0.06	0/2290	0.17	0/3103
4	TE	0.06	0/2290	0.17	0/3103
4	TF	0.06	0/2290	0.17	0/3103
4	TG	0.06	0/2290	0.17	0/3103
4	TH	0.06	0/2290	0.17	0/3103
4	TI	0.06	0/2290	0.17	0/3103
4	TJ	0.06	0/2290	0.17	0/3103

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
4	TK	0.06	0/2290	0.17	0/3103
4	TL	0.06	0/2290	0.17	0/3103
5	XA	0.08	0/585	0.21	0/794
5	XB	0.07	0/585	0.19	0/794
5	XC	0.08	0/585	0.21	0/794
5	XD	0.07	0/585	0.19	0/794
5	XE	0.08	0/585	0.21	0/794
5	XF	0.07	0/585	0.19	0/794
5	XG	0.08	0/585	0.21	0/794
5	XH	0.07	0/585	0.19	0/794
5	XI	0.08	0/585	0.21	0/794
5	XJ	0.07	0/585	0.19	0/794
5	XK	0.08	0/585	0.21	0/794
5	XL	0.07	0/585	0.19	0/794
5	YA	0.08	0/554	0.24	0/750
5	YB	0.07	0/554	0.21	0/750
5	YC	0.07	0/554	0.24	0/750
5	YD	0.07	0/554	0.21	0/750
5	YE	0.08	0/554	0.24	0/750
5	YF	0.07	0/554	0.21	0/750
5	YG	0.08	0/554	0.24	0/750
5	YH	0.07	0/554	0.21	0/750
5	YI	0.08	0/554	0.24	0/750
5	YJ	0.07	0/554	0.21	0/750
5	YK	0.08	0/554	0.24	0/750
5	YL	0.07	0/554	0.21	0/750
5	ZA	0.07	0/516	0.21	0/699
5	ZB	0.07	0/516	0.21	0/699
5	ZC	0.08	0/516	0.20	0/699
5	ZD	0.07	0/516	0.21	0/699
5	ZE	0.08	0/516	0.20	0/699
5	ZF	0.07	0/516	0.21	0/699
5	ZG	0.07	0/516	0.21	0/699
5	ZH	0.07	0/516	0.21	0/699
5	ZI	0.07	0/516	0.20	0/699
5	ZJ	0.07	0/516	0.21	0/699
5	ZK	0.07	0/516	0.21	0/699
5	ZL	0.07	0/516	0.21	0/699
6	PA	0.07	0/5188	0.18	0/7024
6	PB	0.07	0/5188	0.18	0/7024
6	PC	0.07	0/5188	0.18	0/7024
6	PD	0.07	0/5188	0.18	0/7024
6	PE	0.07	0/5188	0.18	0/7024

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
6	PF	0.07	0/5188	0.18	0/7024
6	PG	0.07	0/5188	0.18	0/7024
6	PH	0.07	0/5188	0.18	0/7024
6	PI	0.07	0/5188	0.18	0/7024
6	PJ	0.07	0/5188	0.18	0/7024
6	PK	0.07	0/5188	0.18	0/7024
6	PL	0.07	0/5188	0.18	0/7024
All	All	0.07	0/211656	0.20	0/287532

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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	AA	1912	0	1842	17	0
1	AB	1912	0	1843	21	0
1	AC	1912	0	1842	18	0
1	AD	1912	0	1843	18	0
1	AE	1912	0	1842	16	0
1	AF	1912	0	1843	21	0
1	AG	1912	0	1842	18	0
1	AH	1912	0	1843	21	0
1	AI	1912	0	1842	17	0
1	AJ	1912	0	1843	19	0
1	AK	1912	0	1842	18	0
1	AL	1912	0	1843	20	0
2	LA	9341	0	8931	124	0
2	LB	9341	0	8931	132	0
2	LC	9341	0	8931	128	0
2	LD	9341	0	8931	128	0
2	LE	9341	0	8931	125	0
2	LF	9341	0	8931	125	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	SA	3383	0	3269	41	0
3	SB	3383	0	3269	43	0
3	SC	3383	0	3269	37	0
3	SD	3383	0	3269	43	0
3	SE	3383	0	3269	39	0
3	SF	3383	0	3269	38	0
4	TA	2263	0	2258	28	0
4	TB	2263	0	2258	29	0
4	TC	2263	0	2258	25	0
4	TD	2263	0	2258	28	0
4	TE	2263	0	2258	24	0
4	TF	2263	0	2258	29	0
4	TG	2263	0	2258	26	0
4	TH	2263	0	2258	29	0
4	TI	2263	0	2258	27	0
4	TJ	2263	0	2258	32	0
4	TK	2263	0	2258	28	0
4	TL	2263	0	2258	32	0
5	XA	575	0	586	13	0
5	XB	575	0	586	10	0
5	XC	575	0	586	12	0
5	XD	575	0	586	10	0
5	XE	575	0	586	14	0
5	XF	575	0	586	10	0
5	XG	575	0	586	11	0
5	XH	575	0	586	9	0
5	XI	575	0	586	13	0
5	XJ	575	0	586	11	0
5	XK	575	0	586	13	0
5	XL	575	0	586	7	0
5	YA	543	0	563	9	0
5	YB	543	0	563	10	0
5	YC	543	0	563	9	0
5	YD	543	0	563	10	0
5	YE	543	0	563	9	0
5	YF	543	0	563	9	0
5	YG	543	0	563	10	0
5	YH	543	0	563	9	0
5	YI	543	0	563	10	0
5	YJ	543	0	563	9	0
5	YK	543	0	563	10	0
5	YL	543	0	563	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	ZA	508	0	528	11	0
5	ZB	508	0	528	5	0
5	ZC	508	0	528	12	0
5	ZD	508	0	528	5	0
5	ZE	508	0	528	10	0
5	ZF	508	0	528	4	0
5	ZG	508	0	528	11	0
5	ZH	508	0	528	3	0
5	ZI	508	0	528	11	0
5	ZJ	508	0	528	4	0
5	ZK	508	0	528	11	0
5	ZL	508	0	528	4	0
6	PA	5094	0	5082	51	0
6	PB	5094	0	5082	54	0
6	PC	5094	0	5082	53	0
6	PD	5094	0	5082	55	0
6	PE	5094	0	5082	50	0
6	PF	5094	0	5082	53	0
6	PG	5094	0	5082	51	0
6	PH	5094	0	5082	53	0
6	PI	5094	0	5082	52	0
6	PJ	5094	0	5082	52	0
6	PK	5094	0	5082	53	0
6	PL	5094	0	5082	55	0
All	All	207084	0	203514	2067	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 5.

All (2067) 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)
2:LA:840:ALA:HA	2:LA:888:GLN:HB3	1.64	0.80
2:LD:840:ALA:HA	2:LD:888:GLN:HB3	1.64	0.80
2:LE:840:ALA:HA	2:LE:888:GLN:HB3	1.64	0.80
6:PA:24:LYS:HE2	6:PA:332:GLY:H	1.48	0.79
2:LB:840:ALA:HA	2:LB:888:GLN:HB3	1.64	0.79
6:PI:24:LYS:HE2	6:PI:332:GLY:H	1.48	0.79
6:PE:24:LYS:HE2	6:PE:332:GLY:H	1.48	0.79
6:PG:24:LYS:HE2	6:PG:332:GLY:H	1.48	0.79
6:PK:24:LYS:HE2	6:PK:332:GLY:H	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PB:24:LYS:HE2	6:PB:332:GLY:H	1.48	0.78
6:PD:24:LYS:HE2	6:PD:332:GLY:H	1.48	0.78
6:PH:24:LYS:HE2	6:PH:332:GLY:H	1.48	0.78
2:LF:840:ALA:HA	2:LF:888:GLN:HB3	1.64	0.78
6:PF:24:LYS:HE2	6:PF:332:GLY:H	1.48	0.78
6:PJ:24:LYS:HE2	6:PJ:332:GLY:H	1.48	0.78
2:LC:840:ALA:HA	2:LC:888:GLN:HB3	1.64	0.77
6:PL:24:LYS:HE2	6:PL:332:GLY:H	1.48	0.77
6:PC:24:LYS:HE2	6:PC:332:GLY:H	1.48	0.76
2:LF:445:GLU:HG2	2:LF:551:ASP:HB2	1.73	0.70
2:LA:445:GLU:HG2	2:LA:551:ASP:HB2	1.73	0.70
2:LC:445:GLU:HG2	2:LC:551:ASP:HB2	1.73	0.70
2:LD:445:GLU:HG2	2:LD:551:ASP:HB2	1.73	0.70
6:PL:158:ILE:HG22	6:PL:233:PRO:HA	1.75	0.69
6:PA:158:ILE:HG22	6:PA:233:PRO:HA	1.75	0.69
2:LE:445:GLU:HG2	2:LE:551:ASP:HB2	1.73	0.69
6:PD:158:ILE:HG22	6:PD:233:PRO:HA	1.75	0.69
6:PI:158:ILE:HG22	6:PI:233:PRO:HA	1.75	0.69
6:PB:158:ILE:HG22	6:PB:233:PRO:HA	1.75	0.69
6:PK:158:ILE:HG22	6:PK:233:PRO:HA	1.75	0.69
2:LB:445:GLU:HG2	2:LB:551:ASP:HB2	1.73	0.69
6:PC:158:ILE:HG22	6:PC:233:PRO:HA	1.75	0.69
6:PJ:158:ILE:HG22	6:PJ:233:PRO:HA	1.75	0.69
6:PF:158:ILE:HG22	6:PF:233:PRO:HA	1.75	0.68
6:PG:158:ILE:HG22	6:PG:233:PRO:HA	1.75	0.68
6:PH:158:ILE:HG22	6:PH:233:PRO:HA	1.75	0.68
6:PG:194:ARG:NH1	6:PH:110:ASP:OD1	2.27	0.68
6:PE:158:ILE:HG22	6:PE:233:PRO:HA	1.75	0.68
6:PI:194:ARG:NH1	6:PJ:110:ASP:OD1	2.27	0.68
6:PA:194:ARG:NH1	6:PB:110:ASP:OD1	2.27	0.67
6:PC:194:ARG:NH1	6:PD:110:ASP:OD1	2.27	0.67
6:PK:194:ARG:NH1	6:PL:110:ASP:OD1	2.27	0.67
2:LA:526:PRO:HB3	2:LA:530:LEU:HD23	1.77	0.67
6:PC:548:ASP:OD2	6:PF:535:ARG:NH1	2.26	0.67
6:PG:548:ASP:OD2	6:PJ:535:ARG:NH1	2.26	0.67
2:LD:559:TYR:O	2:LD:563:ARG:NH2	2.28	0.67
2:LD:526:PRO:HB3	2:LD:530:LEU:HD23	1.77	0.66
6:PE:194:ARG:NH1	6:PF:110:ASP:OD1	2.27	0.66
3:SE:279:ARG:NH1	3:SE:322:ASN:O	2.29	0.66
2:LB:108:ASP:OD1	2:LB:391:ARG:NH1	2.29	0.66
2:LC:559:TYR:O	2:LC:563:ARG:NH2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SD:327:GLN:HG2	3:SD:361:HIS:HB2	1.78	0.66
3:SF:279:ARG:NH1	3:SF:322:ASN:O	2.29	0.66
3:SA:279:ARG:NH1	3:SA:322:ASN:O	2.29	0.66
2:LD:1039:ASN:O	2:LD:1043:ASN:ND2	2.29	0.66
2:LF:526:PRO:HB3	2:LF:530:LEU:HD23	1.77	0.66
3:SB:279:ARG:NH1	3:SB:322:ASN:O	2.29	0.66
2:LA:108:ASP:OD1	2:LA:391:ARG:NH1	2.29	0.65
6:PA:586:GLN:O	6:PA:590:ASN:ND2	2.30	0.65
2:LB:526:PRO:HB3	2:LB:530:LEU:HD23	1.77	0.65
3:SD:279:ARG:NH1	3:SD:322:ASN:O	2.29	0.65
2:LE:526:PRO:HB3	2:LE:530:LEU:HD23	1.77	0.65
2:LC:108:ASP:OD1	2:LC:391:ARG:NH1	2.29	0.65
2:LF:1039:ASN:O	2:LF:1043:ASN:ND2	2.29	0.65
2:LA:1039:ASN:O	2:LA:1043:ASN:ND2	2.29	0.65
3:SC:279:ARG:NH1	3:SC:322:ASN:O	2.29	0.65
3:SA:327:GLN:HG2	3:SA:361:HIS:HB2	1.78	0.65
2:LB:1039:ASN:O	2:LB:1043:ASN:ND2	2.29	0.65
3:SB:327:GLN:HG2	3:SB:361:HIS:HB2	1.78	0.65
2:LE:1039:ASN:O	2:LE:1043:ASN:ND2	2.29	0.65
3:SF:327:GLN:HG2	3:SF:361:HIS:HB2	1.78	0.65
2:LC:526:PRO:HB3	2:LC:530:LEU:HD23	1.78	0.65
2:LD:108:ASP:OD1	2:LD:391:ARG:NH1	2.29	0.65
3:SC:327:GLN:HG2	3:SC:361:HIS:HB2	1.78	0.65
6:PI:548:ASP:OD2	6:PL:535:ARG:NH1	2.26	0.65
2:LC:1039:ASN:O	2:LC:1043:ASN:ND2	2.29	0.65
6:PC:586:GLN:O	6:PC:590:ASN:ND2	2.30	0.65
2:LA:559:TYR:O	2:LA:563:ARG:NH2	2.28	0.64
6:PL:586:GLN:O	6:PL:590:ASN:ND2	2.30	0.64
3:SE:327:GLN:HG2	3:SE:361:HIS:HB2	1.78	0.64
2:LB:559:TYR:O	2:LB:563:ARG:NH2	2.28	0.64
2:LE:108:ASP:OD1	2:LE:391:ARG:NH1	2.29	0.64
2:LF:108:ASP:OD1	2:LF:391:ARG:NH1	2.29	0.64
2:LF:559:TYR:O	2:LF:563:ARG:NH2	2.28	0.64
6:PB:586:GLN:O	6:PB:590:ASN:ND2	2.29	0.64
2:LE:253:ASN:HD21	2:LE:320:LEU:HB2	1.63	0.64
2:LA:253:ASN:HD21	2:LA:320:LEU:HB2	1.63	0.63
2:LE:559:TYR:O	2:LE:563:ARG:NH2	2.28	0.63
6:PE:514:SER:O	6:PE:518:ASN:ND2	2.31	0.63
6:PH:514:SER:O	6:PH:518:ASN:ND2	2.31	0.63
2:LB:1179:GLN:NE2	4:TL:275:SER:OG	2.32	0.63
4:TK:102:ALA:O	4:TK:106:ASN:ND2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PA:548:ASP:OD2	6:PD:535:ARG:NH1	2.26	0.63
6:PE:586:GLN:O	6:PE:590:ASN:ND2	2.30	0.63
6:PF:514:SER:O	6:PF:518:ASN:ND2	2.31	0.63
6:PG:514:SER:O	6:PG:518:ASN:ND2	2.31	0.63
2:LA:1179:GLN:NE2	4:TJ:275:SER:OG	2.32	0.63
4:TA:102:ALA:O	4:TA:106:ASN:ND2	2.31	0.63
4:TD:275:SER:OG	2:LD:1179:GLN:NE2	2.32	0.63
4:TF:275:SER:OG	2:LE:1179:GLN:NE2	2.32	0.63
2:LD:253:ASN:HD21	2:LD:320:LEU:HB2	1.63	0.63
6:PG:586:GLN:O	6:PG:590:ASN:ND2	2.30	0.63
6:PJ:586:GLN:O	6:PJ:590:ASN:ND2	2.30	0.63
4:TB:275:SER:OG	2:LC:1179:GLN:NE2	2.32	0.63
4:TJ:59:ARG:O	4:TK:76:ASN:ND2	2.32	0.63
2:LF:253:ASN:HD21	2:LF:320:LEU:HB2	1.63	0.63
4:TF:102:ALA:O	4:TF:106:ASN:ND2	2.31	0.63
6:PA:514:SER:O	6:PA:518:ASN:ND2	2.31	0.63
4:TC:222:ASP:OD1	4:TC:238:LYS:NZ	2.32	0.63
4:TK:222:ASP:OD1	4:TK:238:LYS:NZ	2.32	0.63
6:PC:514:SER:O	6:PC:518:ASN:ND2	2.31	0.63
4:TI:102:ALA:O	4:TI:106:ASN:ND2	2.31	0.63
6:PI:454:SER:HB2	6:PL:451:LEU:HG	1.81	0.63
6:PJ:514:SER:O	6:PJ:518:ASN:ND2	2.31	0.63
6:PA:454:SER:HB2	6:PD:451:LEU:HG	1.81	0.62
6:PB:451:LEU:HG	6:PK:454:SER:HB2	1.81	0.62
6:PI:514:SER:O	6:PI:518:ASN:ND2	2.31	0.62
4:TD:222:ASP:OD1	4:TD:238:LYS:NZ	2.32	0.62
4:TL:222:ASP:OD1	4:TL:238:LYS:NZ	2.32	0.62
6:PB:514:SER:O	6:PB:518:ASN:ND2	2.31	0.62
6:PB:535:ARG:NH1	6:PK:548:ASP:OD2	2.26	0.62
2:LC:253:ASN:HD21	2:LC:320:LEU:HB2	1.63	0.62
4:TG:222:ASP:OD1	4:TG:238:LYS:NZ	2.32	0.62
4:TH:275:SER:OG	2:LF:1179:GLN:NE2	2.32	0.62
1:AI:214:VAL:O	6:PL:414:LYS:NZ	2.28	0.62
6:PD:514:SER:O	6:PD:518:ASN:ND2	2.31	0.62
6:PH:222:GLN:NE2	6:PH:224:GLY:O	2.33	0.62
6:PI:222:GLN:NE2	6:PI:224:GLY:O	2.33	0.62
6:PJ:24:LYS:NZ	6:PJ:331:GLU:OE1	2.32	0.62
6:PG:24:LYS:NZ	6:PG:331:GLU:OE1	2.32	0.62
6:PG:222:GLN:NE2	6:PG:224:GLY:O	2.33	0.62
4:TA:76:ASN:ND2	4:TL:59:ARG:O	2.32	0.62
4:TD:102:ALA:O	4:TD:106:ASN:ND2	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:TE:59:ARG:NH1	4:TF:72:GLN:OE1	2.32	0.62
6:PD:586:GLN:O	6:PD:590:ASN:ND2	2.30	0.62
6:PE:222:GLN:NE2	6:PE:224:GLY:O	2.33	0.62
6:PJ:222:GLN:NE2	6:PJ:224:GLY:O	2.33	0.62
3:SF:276:ASN:OD1	3:SF:279:ARG:NH2	2.32	0.62
6:PF:222:GLN:NE2	6:PF:224:GLY:O	2.33	0.62
2:LE:738:VAL:HA	2:LE:838:ILE:HB	1.81	0.62
2:LF:738:VAL:HA	2:LF:838:ILE:HB	1.81	0.62
6:PC:222:GLN:NE2	6:PC:224:GLY:O	2.33	0.62
6:PC:454:SER:HB2	6:PF:451:LEU:HG	1.81	0.62
6:PG:454:SER:HB2	6:PJ:451:LEU:HG	1.81	0.62
6:PL:222:GLN:NE2	6:PL:224:GLY:O	2.33	0.62
1:AB:77:ALA:HA	1:AB:91:ILE:HB	1.82	0.62
4:TA:222:ASP:OD1	4:TA:238:LYS:NZ	2.32	0.62
2:LB:253:ASN:HD21	2:LB:320:LEU:HB2	1.63	0.62
3:SC:223:ASN:HB3	3:SC:252:ILE:HG12	1.82	0.62
1:AC:169:ASP:OD2	1:AD:132:ARG:NH2	2.33	0.62
1:AD:77:ALA:HA	1:AD:91:ILE:HB	1.82	0.62
3:SB:223:ASN:HB3	3:SB:252:ILE:HG12	1.82	0.62
4:TC:102:ALA:O	4:TC:106:ASN:ND2	2.31	0.62
1:AE:169:ASP:OD2	1:AF:132:ARG:NH2	2.33	0.62
3:SC:276:ASN:OD1	3:SC:279:ARG:NH2	2.32	0.62
4:TH:222:ASP:OD1	4:TH:238:LYS:NZ	2.32	0.62
6:PH:586:GLN:O	6:PH:590:ASN:ND2	2.29	0.62
1:AG:169:ASP:OD2	1:AH:132:ARG:NH2	2.33	0.62
4:TG:59:ARG:NH1	4:TH:72:GLN:OE1	2.32	0.62
6:PE:548:ASP:OD2	6:PH:535:ARG:NH1	2.26	0.62
6:PK:514:SER:O	6:PK:518:ASN:ND2	2.31	0.62
3:SA:276:ASN:OD1	3:SA:279:ARG:NH2	2.33	0.61
6:PC:24:LYS:NZ	6:PC:331:GLU:OE1	2.32	0.61
6:PI:586:GLN:O	6:PI:590:ASN:ND2	2.30	0.61
3:SA:223:ASN:HB3	3:SA:252:ILE:HG12	1.82	0.61
4:TF:59:ARG:O	4:TG:76:ASN:ND2	2.32	0.61
1:AL:77:ALA:HA	1:AL:91:ILE:HB	1.82	0.61
6:PD:222:GLN:NE2	6:PD:224:GLY:O	2.33	0.61
1:AC:214:VAL:O	6:PF:414:LYS:NZ	2.28	0.61
3:SB:276:ASN:OD1	3:SB:279:ARG:NH2	2.32	0.61
6:PH:24:LYS:NZ	6:PH:331:GLU:OE1	2.32	0.61
1:AE:104:ILE:HD11	1:AE:154:LYS:HB3	1.83	0.61
2:LC:738:VAL:HA	2:LC:838:ILE:HB	1.81	0.61
3:SD:223:ASN:HB3	3:SD:252:ILE:HG12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AI:169:ASP:OD2	1:AJ:132:ARG:NH2	2.33	0.61
1:AA:169:ASP:OD2	1:AB:132:ARG:NH2	2.33	0.61
4:TA:59:ARG:NH1	4:TB:72:GLN:OE1	2.32	0.61
4:TE:222:ASP:OD1	4:TE:238:LYS:NZ	2.32	0.61
3:SE:276:ASN:OD1	3:SE:279:ARG:NH2	2.32	0.61
1:AK:104:ILE:HD11	1:AK:154:LYS:HB3	1.83	0.61
6:PE:337:GLU:OE2	6:PH:159:ARG:NH1	2.34	0.61
4:TC:59:ARG:NH1	4:TD:72:GLN:OE1	2.32	0.61
3:SD:276:ASN:OD1	3:SD:279:ARG:NH2	2.33	0.61
1:AK:169:ASP:OD2	1:AL:132:ARG:NH2	2.33	0.61
6:PE:454:SER:HB2	6:PH:451:LEU:HG	1.81	0.61
6:PK:222:GLN:NE2	6:PK:224:GLY:O	2.33	0.61
6:PK:586:GLN:O	6:PK:590:ASN:ND2	2.30	0.61
6:PA:414:LYS:NZ	1:AL:214:VAL:O	2.31	0.61
6:PA:222:GLN:NE2	6:PA:224:GLY:O	2.33	0.61
2:LB:738:VAL:HA	2:LB:838:ILE:HB	1.81	0.61
1:AF:77:ALA:HA	1:AF:91:ILE:HB	1.82	0.61
5:ZE:48:ASN:O	5:ZE:52:ASN:ND2	2.33	0.61
2:LD:738:VAL:HA	2:LD:838:ILE:HB	1.81	0.61
4:TG:102:ALA:O	4:TG:106:ASN:ND2	2.31	0.61
2:LF:849:LYS:NZ	2:LF:850:ASP:OD1	2.34	0.61
2:LA:849:LYS:NZ	2:LA:850:ASP:OD1	2.33	0.61
6:PA:337:GLU:OE2	6:PD:159:ARG:NH1	2.33	0.61
3:SF:223:ASN:HB3	3:SF:252:ILE:HG12	1.82	0.61
6:PC:337:GLU:OE2	6:PF:159:ARG:NH1	2.34	0.61
6:PG:337:GLU:OE2	6:PJ:159:ARG:NH1	2.34	0.61
6:PL:514:SER:O	6:PL:518:ASN:ND2	2.31	0.61
2:LC:521:LEU:HD12	2:LC:571:ARG:HG3	1.83	0.61
2:LE:849:LYS:NZ	2:LE:850:ASP:OD1	2.34	0.61
2:LA:573:LYS:HE3	3:SA:24:ILE:HG23	1.83	0.60
2:LD:39:GLU:HA	3:SD:412:VAL:HA	1.83	0.60
2:LA:681:THR:OG1	2:LA:775:ARG:NH2	2.34	0.60
2:LA:738:VAL:HA	2:LA:838:ILE:HB	1.81	0.60
4:TB:222:ASP:OD1	4:TB:238:LYS:NZ	2.32	0.60
2:LB:681:THR:OG1	2:LB:775:ARG:NH2	2.34	0.60
2:LD:521:LEU:HD12	2:LD:571:ARG:HG3	1.83	0.60
2:LE:521:LEU:HD12	2:LE:571:ARG:HG3	1.83	0.60
4:TJ:102:ALA:O	4:TJ:106:ASN:ND2	2.31	0.60
1:AC:104:ILE:HD11	1:AC:154:LYS:HB3	1.83	0.60
2:LB:573:LYS:HE3	3:SB:24:ILE:HG23	1.83	0.60
1:AH:77:ALA:HA	1:AH:91:ILE:HB	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:681:THR:OG1	2:LD:775:ARG:NH2	2.34	0.60
2:LD:849:LYS:NZ	2:LD:850:ASP:OD1	2.33	0.60
4:TH:59:ARG:O	4:TI:76:ASN:ND2	2.32	0.60
2:LE:681:THR:OG1	2:LE:775:ARG:NH2	2.34	0.60
3:SE:223:ASN:HB3	3:SE:252:ILE:HG12	1.82	0.60
4:TI:222:ASP:OD1	4:TI:238:LYS:NZ	2.32	0.60
4:TK:59:ARG:NH1	4:TL:72:GLN:OE1	2.32	0.60
6:PB:222:GLN:NE2	6:PB:224:GLY:O	2.33	0.60
2:LA:521:LEU:HD12	2:LA:571:ARG:HG3	1.83	0.60
4:TD:59:ARG:O	4:TE:76:ASN:ND2	2.32	0.60
1:AG:104:ILE:HD11	1:AG:154:LYS:HB3	1.83	0.60
1:AG:214:VAL:O	6:PJ:414:LYS:NZ	2.28	0.60
6:PB:50:VAL:O	6:PB:54:ASN:ND2	2.35	0.60
6:PJ:416:MET:HE1	6:PJ:443:ILE:HD11	1.84	0.60
1:AI:104:ILE:HD11	1:AI:154:LYS:HB3	1.83	0.60
4:TI:59:ARG:NH1	4:TJ:72:GLN:OE1	2.32	0.60
2:LF:521:LEU:HD12	2:LF:571:ARG:HG3	1.83	0.60
5:ZK:48:ASN:O	5:ZK:52:ASN:ND2	2.33	0.60
6:PD:200:VAL:O	6:PD:205:LYS:NZ	2.35	0.60
6:PF:586:GLN:O	6:PF:590:ASN:ND2	2.30	0.60
6:PA:35:ASP:OD2	6:PD:316:ARG:NH2	2.35	0.60
2:LD:573:LYS:HE3	3:SD:24:ILE:HG23	1.83	0.60
4:TH:102:ALA:O	4:TH:106:ASN:ND2	2.31	0.60
1:AJ:77:ALA:HA	1:AJ:91:ILE:HB	1.82	0.60
6:PG:416:MET:HE1	6:PG:443:ILE:HD11	1.84	0.60
6:PI:50:VAL:O	6:PI:54:ASN:ND2	2.35	0.60
2:LB:521:LEU:HD12	2:LB:571:ARG:HG3	1.83	0.60
4:TL:102:ALA:O	4:TL:106:ASN:ND2	2.31	0.60
6:PB:159:ARG:NH1	6:PK:337:GLU:OE2	2.34	0.60
6:PA:50:VAL:O	6:PA:54:ASN:ND2	2.35	0.60
2:LC:39:GLU:HA	3:SC:412:VAL:HA	1.83	0.60
2:LC:1018:VAL:HG13	2:LC:1019:THR:HG23	1.84	0.60
2:LE:573:LYS:HE3	3:SE:24:ILE:HG23	1.83	0.60
6:PB:24:LYS:NZ	6:PB:331:GLU:OE1	2.32	0.60
6:PB:200:VAL:O	6:PB:205:LYS:NZ	2.35	0.60
6:PE:24:LYS:NZ	6:PE:331:GLU:OE1	2.32	0.60
6:PH:416:MET:HE1	6:PH:443:ILE:HD11	1.84	0.60
6:PK:24:LYS:NZ	6:PK:331:GLU:OE1	2.32	0.60
6:PK:200:VAL:O	6:PK:205:LYS:NZ	2.35	0.60
6:PL:50:VAL:O	6:PL:54:ASN:ND2	2.35	0.60
6:PA:24:LYS:NZ	6:PA:331:GLU:OE1	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AE:214:VAL:O	6:PH:414:LYS:NZ	2.28	0.60
2:LC:681:THR:OG1	2:LC:775:ARG:NH2	2.34	0.60
1:AJ:214:VAL:O	6:PK:414:LYS:NZ	2.31	0.60
2:LF:39:GLU:HA	3:SF:412:VAL:HA	1.83	0.60
2:LF:681:THR:OG1	2:LF:775:ARG:NH2	2.34	0.60
6:PD:24:LYS:NZ	6:PD:331:GLU:OE1	2.32	0.60
6:PI:200:VAL:O	6:PI:205:LYS:NZ	2.35	0.60
6:PI:337:GLU:OE2	6:PL:159:ARG:NH1	2.34	0.60
6:PI:416:MET:HE1	6:PI:443:ILE:HD11	1.84	0.60
6:PJ:200:VAL:O	6:PJ:205:LYS:NZ	2.35	0.60
4:TF:222:ASP:OD1	4:TF:238:LYS:NZ	2.32	0.60
6:PF:200:VAL:O	6:PF:205:LYS:NZ	2.35	0.60
2:LC:493:ASP:OD1	2:LC:494:ARG:N	2.35	0.59
2:LD:128:ARG:HG2	2:LD:204:ILE:HG22	1.84	0.59
2:LE:128:ARG:HG2	2:LE:204:ILE:HG22	1.84	0.59
6:PE:35:ASP:OD2	6:PH:316:ARG:NH2	2.35	0.59
6:PE:200:VAL:O	6:PE:205:LYS:NZ	2.35	0.59
6:PH:200:VAL:O	6:PH:205:LYS:NZ	2.35	0.59
1:AA:104:ILE:HD11	1:AA:154:LYS:HB3	1.83	0.59
2:LC:573:LYS:HE3	3:SC:24:ILE:HG23	1.83	0.59
6:PB:316:ARG:NH2	6:PK:35:ASP:OD2	2.35	0.59
6:PL:200:VAL:O	6:PL:205:LYS:NZ	2.35	0.59
2:LA:493:ASP:OD1	2:LA:494:ARG:N	2.36	0.59
6:PA:200:VAL:O	6:PA:205:LYS:NZ	2.35	0.59
2:LE:446:SER:HB3	2:LE:488:GLY:HA2	1.85	0.59
6:PC:35:ASP:OD2	6:PF:316:ARG:NH2	2.35	0.59
6:PG:35:ASP:OD2	6:PJ:316:ARG:NH2	2.35	0.59
6:PL:24:LYS:NZ	6:PL:331:GLU:OE1	2.32	0.59
6:PL:416:MET:HE1	6:PL:443:ILE:HD11	1.84	0.59
2:LA:446:SER:HB3	2:LA:488:GLY:HA2	1.84	0.59
5:YB:28:MET:N	5:YB:28:MET:SD	2.76	0.59
2:LB:446:SER:HB3	2:LB:488:GLY:HA2	1.85	0.59
2:LB:493:ASP:OD1	2:LB:494:ARG:N	2.36	0.59
2:LD:446:SER:HB3	2:LD:488:GLY:HA2	1.84	0.59
2:LE:39:GLU:HA	3:SE:412:VAL:HA	1.83	0.59
2:LF:446:SER:HB3	2:LF:488:GLY:HA2	1.84	0.59
5:YL:28:MET:N	5:YL:28:MET:SD	2.76	0.59
6:PE:416:MET:HE1	6:PE:443:ILE:HD11	1.84	0.59
1:AL:58:ASN:HB2	1:AL:148:ASN:HD21	1.68	0.59
6:PJ:50:VAL:O	6:PJ:54:ASN:ND2	2.34	0.59
4:TB:102:ALA:O	4:TB:106:ASN:ND2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:TE:102:ALA:O	4:TE:106:ASN:ND2	2.31	0.59
1:AH:58:ASN:HB2	1:AH:148:ASN:HD21	1.68	0.59
6:PC:200:VAL:O	6:PC:205:LYS:NZ	2.35	0.59
2:LC:128:ARG:HG2	2:LC:204:ILE:HG22	1.85	0.59
2:LC:446:SER:HB3	2:LC:488:GLY:HA2	1.85	0.59
2:LC:849:LYS:NZ	2:LC:850:ASP:OD1	2.34	0.59
2:LD:1018:VAL:HG13	2:LD:1019:THR:HG23	1.84	0.59
2:LF:573:LYS:HE3	3:SF:24:ILE:HG23	1.83	0.59
6:PG:467:GLU:HB3	6:PJ:479:VAL:HG12	1.84	0.59
5:YD:28:MET:N	5:YD:28:MET:SD	2.76	0.59
2:LE:852:ASN:OD1	2:LE:854:SER:OG	2.20	0.59
2:LF:493:ASP:OD1	2:LF:494:ARG:N	2.36	0.59
6:PG:200:VAL:O	6:PG:205:LYS:NZ	2.35	0.59
6:PI:35:ASP:OD2	6:PL:316:ARG:NH2	2.35	0.59
6:PI:467:GLU:HB3	6:PL:479:VAL:HG12	1.84	0.59
2:LA:39:GLU:HA	3:SA:412:VAL:HA	1.83	0.59
6:PA:467:GLU:HB3	6:PD:479:VAL:HG12	1.85	0.59
2:LD:466:GLN:NE2	2:LD:477:TYR:O	2.31	0.59
2:LF:1018:VAL:HG13	2:LF:1019:THR:HG23	1.84	0.59
6:PK:416:MET:HE1	6:PK:443:ILE:HD11	1.84	0.59
4:TB:59:ARG:O	4:TC:76:ASN:ND2	2.32	0.59
2:LE:493:ASP:OD1	2:LE:494:ARG:N	2.35	0.59
5:YJ:28:MET:N	5:YJ:28:MET:SD	2.76	0.59
4:TK:59:ARG:O	4:TL:76:ASN:ND2	2.36	0.59
6:PF:416:MET:HE1	6:PF:443:ILE:HD11	1.84	0.59
2:LF:128:ARG:HG2	2:LF:204:ILE:HG22	1.85	0.58
1:AB:214:VAL:O	6:PC:414:LYS:NZ	2.31	0.58
5:ZC:48:ASN:O	5:ZC:52:ASN:ND2	2.33	0.58
4:TJ:222:ASP:OD1	4:TJ:238:LYS:NZ	2.32	0.58
6:PB:479:VAL:HG12	6:PK:467:GLU:HB3	1.84	0.58
6:PC:50:VAL:O	6:PC:54:ASN:ND2	2.35	0.58
6:PC:467:GLU:HB3	6:PF:479:VAL:HG12	1.84	0.58
6:PF:50:VAL:O	6:PF:54:ASN:ND2	2.35	0.58
6:PK:50:VAL:O	6:PK:54:ASN:ND2	2.34	0.58
2:LB:39:GLU:HA	3:SB:412:VAL:HA	1.83	0.58
6:PD:50:VAL:O	6:PD:54:ASN:ND2	2.35	0.58
6:PF:358:ASP:O	6:PF:550:LYS:NZ	2.37	0.58
6:PG:358:ASP:O	6:PG:550:LYS:NZ	2.37	0.58
4:TG:59:ARG:O	4:TH:76:ASN:ND2	2.36	0.58
2:LF:852:ASN:OD1	2:LF:854:SER:OG	2.21	0.58
6:PB:416:MET:HE1	6:PB:443:ILE:HD11	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PE:50:VAL:O	6:PE:54:ASN:ND2	2.34	0.58
5:XF:65:GLU:OE1	5:XF:65:GLU:N	2.34	0.58
5:YF:28:MET:SD	5:YF:28:MET:N	2.76	0.58
2:LD:493:ASP:OD1	2:LD:494:ARG:N	2.36	0.58
5:ZI:48:ASN:O	5:ZI:52:ASN:ND2	2.33	0.58
6:PC:416:MET:HE1	6:PC:443:ILE:HD11	1.84	0.58
6:PI:24:LYS:NZ	6:PI:331:GLU:OE1	2.32	0.58
5:XF:59:ILE:HD11	5:YF:60:HIS:HB2	1.86	0.58
5:YH:28:MET:N	5:YH:28:MET:SD	2.76	0.58
1:AJ:58:ASN:HB2	1:AJ:148:ASN:HD21	1.68	0.58
2:LF:466:GLN:NE2	2:LF:477:TYR:O	2.31	0.58
6:PG:618:VAL:HG21	6:PH:623:LYS:HE3	1.86	0.58
2:LA:128:ARG:HG2	2:LA:204:ILE:HG22	1.84	0.58
2:LA:1018:VAL:HG13	2:LA:1019:THR:HG23	1.84	0.58
6:PA:416:MET:HE1	6:PA:443:ILE:HD11	1.84	0.58
1:AD:58:ASN:HB2	1:AD:148:ASN:HD21	1.68	0.58
2:LB:1082:MET:HB2	2:LB:1171:SER:HB3	1.86	0.58
6:PD:416:MET:HE1	6:PD:443:ILE:HD11	1.84	0.58
6:PH:50:VAL:O	6:PH:54:ASN:ND2	2.35	0.58
2:LE:1018:VAL:HG13	2:LE:1019:THR:HG23	1.84	0.58
3:SE:156:ASN:HD21	3:SE:160:ASP:HB3	1.69	0.58
5:XJ:65:GLU:OE1	5:XJ:65:GLU:N	2.34	0.58
6:PE:467:GLU:HB3	6:PH:479:VAL:HG12	1.84	0.58
6:PJ:358:ASP:O	6:PJ:550:LYS:NZ	2.37	0.58
6:PL:415:GLY:O	6:PL:434:ASN:ND2	2.37	0.58
2:LA:1082:MET:HB2	2:LA:1171:SER:HB3	1.86	0.58
2:LB:128:ARG:HG2	2:LB:204:ILE:HG22	1.85	0.58
2:LB:1018:VAL:HG13	2:LB:1019:THR:HG23	1.84	0.58
5:XD:59:ILE:HD11	5:YD:60:HIS:HB2	1.86	0.58
2:LE:318:GLY:O	2:LF:162:ARG:NH1	2.37	0.58
6:PH:415:GLY:O	6:PH:434:ASN:ND2	2.37	0.58
6:PK:415:GLY:O	6:PK:434:ASN:ND2	2.37	0.58
1:AB:58:ASN:HB2	1:AB:148:ASN:HD21	1.68	0.57
1:AH:214:VAL:O	6:PI:414:LYS:NZ	2.31	0.57
2:LE:280:GLN:HG3	2:LE:298:GLU:HG2	1.86	0.57
3:SF:156:ASN:HD21	3:SF:160:ASP:HB3	1.69	0.57
6:PE:415:GLY:O	6:PE:434:ASN:ND2	2.37	0.57
6:PG:50:VAL:O	6:PG:54:ASN:ND2	2.35	0.57
6:PG:415:GLY:O	6:PG:434:ASN:ND2	2.37	0.57
1:AD:222:THR:HG21	6:PH:421:ASN:HD21	1.70	0.57
5:ZG:48:ASN:O	5:ZG:52:ASN:ND2	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PE:358:ASP:O	6:PE:550:LYS:NZ	2.37	0.57
6:PI:415:GLY:O	6:PI:434:ASN:ND2	2.37	0.57
1:AH:222:THR:HG21	6:PL:421:ASN:HD21	1.69	0.57
3:SD:156:ASN:HD21	3:SD:160:ASP:HB3	1.69	0.57
6:PB:415:GLY:O	6:PB:434:ASN:ND2	2.37	0.57
1:AB:222:THR:HG21	6:PF:421:ASN:HD21	1.69	0.57
2:LA:318:GLY:O	2:LB:162:ARG:NH1	2.37	0.57
4:TA:59:ARG:O	4:TB:76:ASN:ND2	2.36	0.57
1:AF:58:ASN:HB2	1:AF:148:ASN:HD21	1.68	0.57
2:LD:318:GLY:O	2:LE:162:ARG:NH1	2.37	0.57
2:LD:1082:MET:HB2	2:LD:1171:SER:HB3	1.86	0.57
5:XL:65:GLU:OE1	5:XL:65:GLU:N	2.34	0.57
6:PI:618:VAL:HG21	6:PJ:623:LYS:HE3	1.86	0.57
6:PJ:415:GLY:O	6:PJ:434:ASN:ND2	2.37	0.57
6:PA:415:GLY:O	6:PA:434:ASN:ND2	2.37	0.57
2:LB:318:GLY:O	2:LC:162:ARG:NH1	2.37	0.57
1:AF:222:THR:HG21	6:PJ:421:ASN:HD21	1.70	0.57
5:XH:59:ILE:HD11	5:YH:60:HIS:HB2	1.86	0.57
2:LF:280:GLN:HG3	2:LF:298:GLU:HG2	1.87	0.57
6:PC:415:GLY:O	6:PC:434:ASN:ND2	2.37	0.57
6:PD:415:GLY:O	6:PD:434:ASN:ND2	2.37	0.57
6:PF:24:LYS:NZ	6:PF:331:GLU:OE1	2.32	0.57
6:PL:330:ILE:HG13	6:PL:331:GLU:HG2	1.87	0.57
2:LD:280:GLN:HG3	2:LD:298:GLU:HG2	1.86	0.57
6:PB:330:ILE:HG13	6:PB:331:GLU:HG2	1.87	0.57
6:PF:415:GLY:O	6:PF:434:ASN:ND2	2.37	0.57
6:PK:330:ILE:HG13	6:PK:331:GLU:HG2	1.87	0.57
3:SA:156:ASN:HD21	3:SA:160:ASP:HB3	1.69	0.57
6:PA:330:ILE:HG13	6:PA:331:GLU:HG2	1.87	0.57
2:LB:466:GLN:NE2	2:LB:477:TYR:O	2.31	0.57
6:PC:618:VAL:HG21	6:PD:623:LYS:HE3	1.86	0.57
6:PE:618:VAL:HG21	6:PF:623:LYS:HE3	1.86	0.57
2:LA:162:ARG:NH1	2:LF:318:GLY:O	2.37	0.57
2:LA:280:GLN:HG3	2:LA:298:GLU:HG2	1.86	0.57
6:PA:358:ASP:O	6:PA:550:LYS:NZ	2.37	0.57
2:LC:1082:MET:HB2	2:LC:1171:SER:HB3	1.86	0.57
2:LE:1082:MET:HB2	2:LE:1171:SER:HB3	1.86	0.57
6:PD:330:ILE:HG13	6:PD:331:GLU:HG2	1.87	0.57
6:PI:330:ILE:HG13	6:PI:331:GLU:HG2	1.87	0.57
6:PA:618:VAL:HG21	6:PB:623:LYS:HE3	1.86	0.57
2:LB:498:VAL:HG11	2:LB:509:GLN:HE22	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AJ:222:THR:HG21	6:PB:421:ASN:HD21	1.70	0.57
6:PC:330:ILE:HG13	6:PC:331:GLU:HG2	1.87	0.56
2:LA:852:ASN:OD1	2:LA:854:SER:OG	2.20	0.56
3:SC:156:ASN:HD21	3:SC:160:ASP:HB3	1.69	0.56
2:LD:93:ASN:ND2	2:LD:239:HIS:O	2.38	0.56
2:LE:466:GLN:NE2	2:LE:477:TYR:O	2.31	0.56
2:LA:498:VAL:HG11	2:LA:509:GLN:HE22	1.70	0.56
5:XB:59:ILE:HD11	5:YB:60:HIS:HB2	1.86	0.56
5:XB:65:GLU:OE1	5:XB:65:GLU:N	2.34	0.56
5:ZA:48:ASN:O	5:ZA:52:ASN:ND2	2.33	0.56
1:AD:214:VAL:O	6:PE:414:LYS:NZ	2.31	0.56
2:LB:849:LYS:NZ	2:LB:850:ASP:OD1	2.34	0.56
2:LE:245:ASP:OD2	2:LE:539:LYS:NZ	2.37	0.56
2:LE:494:ARG:HG2	2:LE:517:TRP:CD2	2.41	0.56
1:AL:222:THR:HG21	6:PD:421:ASN:HD21	1.70	0.56
2:LF:806:HIS:HB3	2:LF:819:ALA:HB2	1.88	0.56
6:PJ:330:ILE:HG13	6:PJ:331:GLU:HG2	1.87	0.56
6:PK:358:ASP:O	6:PK:550:LYS:NZ	2.37	0.56
6:PK:618:VAL:HG21	6:PL:623:LYS:HE3	1.86	0.56
2:LB:806:HIS:HB3	2:LB:819:ALA:HB2	1.88	0.56
2:LC:318:GLY:O	2:LD:162:ARG:NH1	2.37	0.56
2:LD:494:ARG:HG2	2:LD:517:TRP:CD2	2.40	0.56
6:PD:358:ASP:O	6:PD:550:LYS:NZ	2.37	0.56
6:PI:358:ASP:O	6:PI:550:LYS:NZ	2.37	0.56
2:LA:494:ARG:HG2	2:LA:517:TRP:CD2	2.40	0.56
2:LB:280:GLN:HG3	2:LB:298:GLU:HG2	1.86	0.56
3:SB:156:ASN:HD21	3:SB:160:ASP:HB3	1.69	0.56
2:LC:498:VAL:HG11	2:LC:509:GLN:HE22	1.70	0.56
2:LC:806:HIS:HB3	2:LC:819:ALA:HB2	1.88	0.56
6:PB:358:ASP:O	6:PB:550:LYS:NZ	2.37	0.56
6:PF:330:ILE:HG13	6:PF:331:GLU:HG2	1.87	0.56
2:LA:891:THR:HG21	2:LA:950:TYR:HE1	1.71	0.56
1:AF:214:VAL:O	6:PG:414:LYS:NZ	2.31	0.56
2:LC:93:ASN:ND2	2:LC:239:HIS:O	2.38	0.56
2:LB:93:ASN:ND2	2:LB:239:HIS:O	2.38	0.56
2:LB:891:THR:HG21	2:LB:950:TYR:HE1	1.71	0.56
2:LC:494:ARG:HG2	2:LC:517:TRP:CD2	2.41	0.56
5:XJ:59:ILE:HD11	5:YJ:60:HIS:HB2	1.86	0.56
2:LF:93:ASN:ND2	2:LF:239:HIS:O	2.38	0.56
2:LF:494:ARG:HG2	2:LF:517:TRP:CD2	2.40	0.56
2:LC:280:GLN:HG3	2:LC:298:GLU:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:498:VAL:HG11	2:LD:509:GLN:HE22	1.70	0.56
2:LE:93:ASN:ND2	2:LE:239:HIS:O	2.38	0.56
6:PG:330:ILE:HG13	6:PG:331:GLU:HG2	1.87	0.56
2:LA:93:ASN:ND2	2:LA:239:HIS:O	2.38	0.56
2:LB:494:ARG:HG2	2:LB:517:TRP:CD2	2.41	0.56
4:TC:50:LYS:HE3	4:TD:43:PRO:HB2	1.88	0.56
2:LC:245:ASP:OD2	2:LC:539:LYS:NZ	2.37	0.56
2:LC:931:VAL:HG23	2:LC:934:SER:HB2	1.87	0.56
6:PL:358:ASP:O	6:PL:550:LYS:NZ	2.37	0.56
2:LB:245:ASP:OD2	2:LB:539:LYS:NZ	2.37	0.56
2:LC:860:MET:HB3	2:LC:914:LYS:HE3	1.88	0.56
4:TE:59:ARG:O	4:TF:76:ASN:ND2	2.36	0.56
2:LE:931:VAL:HG23	2:LE:934:SER:HB2	1.87	0.56
5:XL:59:ILE:HD11	5:YL:60:HIS:HB2	1.86	0.56
5:YA:60:HIS:HA	5:YA:63:LEU:HD23	1.88	0.55
6:PA:19:LYS:N	6:PA:26:GLU:OE1	2.40	0.55
2:LB:931:VAL:HG23	2:LB:934:SER:HB2	1.87	0.55
2:LC:628:TRP:HB2	2:LC:790:MET:HG2	1.88	0.55
2:LD:628:TRP:HB2	2:LD:790:MET:HG2	1.89	0.55
6:PE:330:ILE:HG13	6:PE:331:GLU:HG2	1.87	0.55
6:PF:19:LYS:N	6:PF:26:GLU:OE1	2.40	0.55
6:PH:330:ILE:HG13	6:PH:331:GLU:HG2	1.87	0.55
6:PH:358:ASP:O	6:PH:550:LYS:NZ	2.37	0.55
6:PK:164:GLU:OE1	6:PK:227:THR:OG1	2.21	0.55
2:LA:1156:VAL:O	2:LA:1178:GLY:N	2.40	0.55
6:PA:473:LYS:NZ	6:PD:479:VAL:O	2.36	0.55
5:YC:60:HIS:HA	5:YC:63:LEU:HD23	1.88	0.55
4:TF:59:ARG:NH1	4:TG:72:GLN:OE1	2.37	0.55
4:TI:59:ARG:O	4:TJ:76:ASN:ND2	2.36	0.55
2:LF:891:THR:HG21	2:LF:950:TYR:HE1	1.71	0.55
2:LF:1082:MET:HB2	2:LF:1171:SER:HB3	1.86	0.55
2:LD:806:HIS:HB3	2:LD:819:ALA:HB2	1.88	0.55
5:YI:60:HIS:HA	5:YI:63:LEU:HD23	1.88	0.55
2:LF:931:VAL:HG23	2:LF:934:SER:HB2	1.87	0.55
6:PB:19:LYS:N	6:PB:26:GLU:OE1	2.40	0.55
6:PE:19:LYS:N	6:PE:26:GLU:OE1	2.40	0.55
4:TE:50:LYS:HE3	4:TF:43:PRO:HB2	1.88	0.55
2:LE:628:TRP:HB2	2:LE:790:MET:HG2	1.89	0.55
2:LA:806:HIS:HB3	2:LA:819:ALA:HB2	1.88	0.55
2:LB:860:MET:HB3	2:LB:914:LYS:HE3	1.88	0.55
2:LC:891:THR:HG21	2:LC:950:TYR:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:860:MET:HB3	2:LD:914:LYS:HE3	1.88	0.55
2:LD:931:VAL:HG23	2:LD:934:SER:HB2	1.87	0.55
6:PB:344:ILE:O	6:PB:347:THR:OG1	2.25	0.55
6:PE:428:GLY:HA2	6:PF:409:GLN:NE2	2.22	0.55
2:LA:1179:GLN:H	2:LA:1179:GLN:CD	2.15	0.55
4:TA:50:LYS:HE3	4:TB:43:PRO:HB2	1.88	0.55
4:TB:59:ARG:NH1	4:TC:72:GLN:OE1	2.37	0.55
5:XG:66:LEU:HD11	5:YG:66:LEU:HD13	1.88	0.55
2:LE:806:HIS:HB3	2:LE:819:ALA:HB2	1.88	0.55
2:LF:498:VAL:HG11	2:LF:509:GLN:HE22	1.70	0.55
6:PC:19:LYS:N	6:PC:26:GLU:OE1	2.40	0.55
6:PC:358:ASP:OD2	6:PC:519:LYS:NZ	2.40	0.55
6:PD:344:ILE:O	6:PD:347:THR:OG1	2.25	0.55
6:PL:358:ASP:OD2	6:PL:519:LYS:NZ	2.40	0.55
4:TD:59:ARG:NH1	4:TE:72:GLN:OE1	2.37	0.55
2:LE:498:VAL:HG11	2:LE:509:GLN:HE22	1.70	0.55
6:PC:428:GLY:HA2	6:PD:409:GLN:NE2	2.22	0.55
6:PD:19:LYS:N	6:PD:26:GLU:OE1	2.39	0.55
6:PI:358:ASP:OD2	6:PI:519:LYS:NZ	2.40	0.55
6:PL:344:ILE:O	6:PL:347:THR:OG1	2.25	0.55
2:LA:860:MET:HB3	2:LA:914:LYS:HE3	1.88	0.55
5:XC:66:LEU:HD11	5:YC:66:LEU:HD13	1.88	0.55
3:SD:351:ASN:OD1	3:SD:352:ARG:N	2.40	0.55
5:YK:60:HIS:HA	5:YK:63:LEU:HD23	1.88	0.55
6:PG:19:LYS:N	6:PG:26:GLU:OE1	2.40	0.55
6:PH:358:ASP:OD2	6:PH:519:LYS:NZ	2.40	0.55
6:PI:19:LYS:N	6:PI:26:GLU:OE1	2.40	0.55
6:PJ:19:LYS:N	6:PJ:26:GLU:OE1	2.40	0.55
6:PK:358:ASP:OD2	6:PK:519:LYS:NZ	2.40	0.55
6:PL:19:LYS:N	6:PL:26:GLU:OE1	2.39	0.55
2:LA:245:ASP:OD2	2:LA:539:LYS:NZ	2.37	0.55
2:LB:628:TRP:HB2	2:LB:790:MET:HG2	1.89	0.55
3:SB:351:ASN:OD1	3:SB:352:ARG:N	2.40	0.55
5:YG:60:HIS:HA	5:YG:63:LEU:HD23	1.88	0.55
6:PD:358:ASP:OD2	6:PD:519:LYS:NZ	2.40	0.55
6:PF:358:ASP:OD2	6:PF:519:LYS:NZ	2.40	0.55
6:PG:428:GLY:HA2	6:PH:409:GLN:NE2	2.22	0.55
6:PH:164:GLU:OE1	6:PH:227:THR:OG1	2.21	0.55
2:LA:466:GLN:NE2	2:LA:477:TYR:O	2.31	0.54
3:SA:351:ASN:OD1	3:SA:352:ARG:N	2.40	0.54
2:LB:1179:GLN:CD	2:LB:1179:GLN:H	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LF:628:TRP:HB2	2:LF:790:MET:HG2	1.89	0.54
3:SF:351:ASN:OD1	3:SF:352:ARG:N	2.40	0.54
6:PC:358:ASP:O	6:PC:550:LYS:NZ	2.37	0.54
6:PF:344:ILE:O	6:PF:347:THR:OG1	2.25	0.54
6:PI:428:GLY:HA2	6:PJ:409:GLN:NE2	2.22	0.54
1:AB:104:ILE:HD11	1:AB:154:LYS:HB3	1.90	0.54
2:LA:917:GLN:HA	2:LA:920:THR:HG22	1.90	0.54
1:AC:13:ASN:ND2	3:SB:416:CYS:SG	2.81	0.54
2:LD:891:THR:HG21	2:LD:950:TYR:HE1	1.71	0.54
4:TG:50:LYS:HE3	4:TH:43:PRO:HB2	1.88	0.54
1:AL:104:ILE:HD11	1:AL:154:LYS:HB3	1.90	0.54
6:PE:75:GLN:OE1	6:PE:396:ARG:NH1	2.40	0.54
6:PJ:358:ASP:OD2	6:PJ:519:LYS:NZ	2.40	0.54
6:PK:428:GLY:HA2	6:PL:409:GLN:NE2	2.22	0.54
6:PA:358:ASP:OD2	6:PA:519:LYS:NZ	2.40	0.54
1:AD:104:ILE:HD11	1:AD:154:LYS:HB3	1.90	0.54
1:AE:13:ASN:ND2	3:SC:416:CYS:SG	2.81	0.54
2:LD:245:ASP:OD2	2:LD:539:LYS:NZ	2.37	0.54
2:LE:860:MET:HB3	2:LE:914:LYS:HE3	1.88	0.54
6:PB:358:ASP:OD2	6:PB:519:LYS:NZ	2.40	0.54
1:AA:191:ASN:ND2	1:AL:18:ASN:OD1	2.41	0.54
2:LA:628:TRP:HB2	2:LA:790:MET:HG2	1.89	0.54
3:SC:351:ASN:OD1	3:SC:352:ARG:N	2.40	0.54
2:LD:845:THR:HG22	2:LD:911:VAL:HG21	1.90	0.54
5:XH:65:GLU:OE1	5:XH:65:GLU:N	2.34	0.54
5:XI:66:LEU:HD11	5:YI:66:LEU:HD13	1.88	0.54
6:PE:358:ASP:OD2	6:PE:519:LYS:NZ	2.40	0.54
6:PK:19:LYS:N	6:PK:26:GLU:OE1	2.40	0.54
1:AB:18:ASN:OD1	1:AC:191:ASN:ND2	2.41	0.54
4:TB:268:LYS:NZ	4:TB:274:LEU:O	2.40	0.54
5:XA:66:LEU:HD11	5:YA:66:LEU:HD13	1.88	0.54
6:PA:428:GLY:HA2	6:PB:409:GLN:NE2	2.22	0.54
2:LC:917:GLN:HA	2:LC:920:THR:HG22	1.90	0.54
2:LD:917:GLN:HA	2:LD:920:THR:HG22	1.90	0.54
1:AJ:104:ILE:HD11	1:AJ:154:LYS:HB3	1.90	0.54
2:LE:917:GLN:HA	2:LE:920:THR:HG22	1.90	0.54
1:AK:13:ASN:ND2	3:SF:416:CYS:SG	2.81	0.54
2:LF:801:MET:SD	2:LF:801:MET:N	2.73	0.54
2:LF:917:GLN:HA	2:LF:920:THR:HG22	1.90	0.54
2:LB:852:ASN:OD1	2:LB:854:SER:OG	2.20	0.54
2:LB:1156:VAL:O	2:LB:1178:GLY:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:66:LEU:HD11	5:YE:66:LEU:HD13	1.88	0.54
2:LD:248:ILE:HG21	2:LD:251:MET:HE3	1.90	0.54
1:AJ:18:ASN:OD1	1:AK:191:ASN:ND2	2.41	0.54
2:LE:248:ILE:HG21	2:LE:251:MET:HE3	1.90	0.54
2:LE:1179:GLN:CD	2:LE:1179:GLN:H	2.15	0.54
3:SE:351:ASN:OD1	3:SE:352:ARG:N	2.40	0.54
4:TI:50:LYS:HE3	4:TJ:43:PRO:HB2	1.88	0.54
4:TJ:50:LYS:HE3	4:TK:43:PRO:HB2	1.89	0.54
2:LF:860:MET:HB3	2:LF:914:LYS:HE3	1.88	0.54
3:SF:341:LEU:HA	3:SF:344:LEU:HD13	1.90	0.54
4:TK:50:LYS:HE3	4:TL:43:PRO:HB2	1.88	0.54
6:PD:25:ASN:ND2	6:PD:329:ASP:O	2.36	0.54
6:PG:344:ILE:O	6:PG:347:THR:OG1	2.25	0.54
6:PG:358:ASP:OD2	6:PG:519:LYS:NZ	2.40	0.54
6:PH:19:LYS:N	6:PH:26:GLU:OE1	2.40	0.54
2:LB:917:GLN:HA	2:LB:920:THR:HG22	1.90	0.54
4:TD:50:LYS:HE3	4:TE:43:PRO:HB2	1.89	0.54
2:LC:253:ASN:HA	2:LC:260:PHE:HB2	1.90	0.54
2:LC:466:GLN:NE2	2:LC:477:TYR:O	2.31	0.54
2:LC:845:THR:HG22	2:LC:911:VAL:HG21	1.90	0.54
3:SC:341:LEU:HA	3:SC:344:LEU:HD13	1.90	0.54
4:TH:59:ARG:NH1	4:TI:72:GLN:OE1	2.37	0.54
2:LE:845:THR:HG22	2:LE:911:VAL:HG21	1.90	0.54
1:AA:13:ASN:ND2	3:SA:416:CYS:SG	2.81	0.54
1:AA:214:VAL:O	6:PD:414:LYS:NZ	2.28	0.54
5:XF:73:LEU:HD11	5:ZF:62:LYS:HD2	1.90	0.54
1:AG:13:ASN:ND2	3:SD:416:CYS:SG	2.81	0.54
2:LE:662:HIS:HB2	2:LE:688:VAL:HG21	1.90	0.54
2:LE:891:THR:HG21	2:LE:950:TYR:HE1	1.71	0.54
2:LF:662:HIS:HB2	2:LF:688:VAL:HG21	1.89	0.54
2:LA:931:VAL:HG23	2:LA:934:SER:HB2	1.87	0.54
1:AD:18:ASN:OD1	1:AE:191:ASN:ND2	2.41	0.54
5:YE:60:HIS:HA	5:YE:63:LEU:HD23	1.88	0.54
2:LD:852:ASN:OD1	2:LD:854:SER:OG	2.20	0.54
1:AI:13:ASN:ND2	3:SE:416:CYS:SG	2.81	0.54
6:PC:25:ASN:ND2	6:PC:329:ASP:O	2.36	0.54
2:LA:439:PRO:HB2	2:LA:542:PRO:HA	1.90	0.54
4:TA:251:ASP:OD2	4:TA:255:LYS:NZ	2.41	0.53
4:TB:251:ASP:OD2	4:TB:255:LYS:NZ	2.41	0.53
6:PA:25:ASN:ND2	6:PA:329:ASP:O	2.37	0.53
3:SB:341:LEU:HA	3:SB:344:LEU:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:TC:251:ASP:OD2	4:TC:255:LYS:NZ	2.41	0.53
4:TD:251:ASP:OD2	4:TD:255:LYS:NZ	2.41	0.53
2:LD:1156:VAL:O	2:LD:1178:GLY:N	2.40	0.53
4:TJ:59:ARG:NH1	4:TK:72:GLN:OE1	2.37	0.53
4:TL:251:ASP:OD2	4:TL:255:LYS:NZ	2.41	0.53
6:PK:25:ASN:ND2	6:PK:329:ASP:O	2.36	0.53
5:XD:73:LEU:HD11	5:ZD:62:LYS:HD2	1.90	0.53
2:LC:439:PRO:HB2	2:LC:542:PRO:HA	1.90	0.53
1:AH:18:ASN:OD1	1:AI:191:ASN:ND2	2.41	0.53
2:LE:275:ALA:O	2:LE:336:GLN:NE2	2.41	0.53
2:LF:1156:VAL:O	2:LF:1178:GLY:N	2.40	0.53
4:TK:251:ASP:OD2	4:TK:255:LYS:NZ	2.41	0.53
6:PF:25:ASN:ND2	6:PF:329:ASP:O	2.36	0.53
4:TC:59:ARG:O	4:TD:76:ASN:ND2	2.36	0.53
5:XH:73:LEU:HD11	5:ZH:62:LYS:HD2	1.90	0.53
2:LE:475:ILE:HD12	2:LE:479:GLY:HA3	1.91	0.53
6:PI:344:ILE:O	6:PI:347:THR:OG1	2.25	0.53
4:TB:50:LYS:HE3	4:TC:43:PRO:HB2	1.90	0.53
2:LB:439:PRO:HB2	2:LB:542:PRO:HA	1.90	0.53
4:TE:251:ASP:OD2	4:TE:255:LYS:NZ	2.41	0.53
2:LD:275:ALA:O	2:LD:336:GLN:NE2	2.41	0.53
4:TH:50:LYS:HE3	4:TI:43:PRO:HB2	1.89	0.53
4:TJ:268:LYS:NZ	4:TJ:274:LEU:O	2.40	0.53
2:LF:248:ILE:HG21	2:LF:251:MET:HE3	1.90	0.53
4:TK:268:LYS:NZ	4:TK:274:LEU:O	2.40	0.53
6:PC:164:GLU:OE1	6:PC:227:THR:OG1	2.21	0.53
3:SA:341:LEU:HA	3:SA:344:LEU:HD13	1.90	0.53
4:TA:72:GLN:OE1	4:TL:59:ARG:NH1	2.37	0.53
6:PA:171:PHE:O	6:PA:219:TYR:N	2.40	0.53
1:AF:104:ILE:HD11	1:AF:154:LYS:HB3	1.90	0.53
1:AH:104:ILE:HD11	1:AH:154:LYS:HB3	1.90	0.53
2:LD:475:ILE:HD12	2:LD:479:GLY:HA3	1.91	0.53
3:SE:341:LEU:HA	3:SE:344:LEU:HD13	1.90	0.53
4:TJ:251:ASP:OD2	4:TJ:255:LYS:NZ	2.41	0.53
2:LF:253:ASN:HA	2:LF:260:PHE:HB2	1.90	0.53
6:PG:25:ASN:ND2	6:PG:329:ASP:O	2.36	0.53
2:LA:253:ASN:HA	2:LA:260:PHE:HB2	1.90	0.53
2:LC:248:ILE:HG21	2:LC:251:MET:HE3	1.90	0.53
2:LE:1156:VAL:O	2:LE:1178:GLY:N	2.40	0.53
6:PC:473:LYS:NZ	6:PF:479:VAL:O	2.35	0.53
2:LB:475:ILE:HD12	2:LB:479:GLY:HA3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:TF:251:ASP:OD2	4:TF:255:LYS:NZ	2.41	0.53
4:TH:251:ASP:OD2	4:TH:255:LYS:NZ	2.41	0.53
2:LE:253:ASN:HA	2:LE:260:PHE:HB2	1.90	0.53
1:AK:214:VAL:O	6:PB:414:LYS:NZ	2.28	0.53
2:LF:1179:GLN:H	2:LF:1179:GLN:CD	2.15	0.53
4:TL:268:LYS:NZ	4:TL:274:LEU:O	2.40	0.53
6:PH:344:ILE:O	6:PH:347:THR:OG1	2.25	0.53
4:TC:204:GLU:HG3	4:TD:206:ILE:HG23	1.91	0.53
2:LD:499:ASN:HB3	2:LD:514:GLY:HA2	1.91	0.53
5:XJ:73:LEU:HD11	5:ZJ:62:LYS:HD2	1.90	0.53
6:PB:25:ASN:ND2	6:PB:329:ASP:O	2.36	0.53
2:LC:499:ASN:HB3	2:LC:514:GLY:HA2	1.91	0.53
2:LD:1179:GLN:H	2:LD:1179:GLN:CD	2.15	0.53
2:LE:801:MET:SD	2:LE:801:MET:N	2.73	0.53
4:TI:204:GLU:HG3	4:TJ:206:ILE:HG23	1.91	0.53
4:TI:268:LYS:NZ	4:TI:274:LEU:O	2.40	0.53
2:LF:439:PRO:HB2	2:LF:542:PRO:HA	1.90	0.53
6:PH:75:GLN:OE1	6:PH:396:ARG:NH1	2.40	0.53
2:LA:662:HIS:HB2	2:LA:688:VAL:HG21	1.90	0.53
4:TA:43:PRO:HB2	4:TL:50:LYS:HE3	1.89	0.53
4:TA:204:GLU:HG3	4:TB:206:ILE:HG23	1.91	0.53
2:LB:845:THR:HG22	2:LB:911:VAL:HG21	1.90	0.53
2:LC:475:ILE:HD12	2:LC:479:GLY:HA3	1.91	0.53
4:TF:50:LYS:HE3	4:TG:43:PRO:HB2	1.89	0.53
2:LD:662:HIS:HB2	2:LD:688:VAL:HG21	1.90	0.53
2:LF:1138:THR:HG23	2:LF:1141:GLU:HG2	1.91	0.53
5:XK:66:LEU:HD11	5:YK:66:LEU:HD13	1.88	0.53
6:PB:164:GLU:OE1	6:PB:227:THR:OG1	2.21	0.53
6:PK:344:ILE:O	6:PK:347:THR:OG1	2.25	0.53
6:PL:25:ASN:ND2	6:PL:329:ASP:O	2.36	0.53
2:LA:423:ASP:OD1	2:LA:424:LYS:N	2.42	0.52
4:TA:268:LYS:NZ	4:TA:274:LEU:O	2.40	0.52
2:LB:275:ALA:O	2:LB:336:GLN:NE2	2.41	0.52
4:TD:268:LYS:NZ	4:TD:274:LEU:O	2.40	0.52
1:AF:18:ASN:OD1	1:AG:191:ASN:ND2	2.41	0.52
2:LC:423:ASP:OD1	2:LC:424:LYS:N	2.42	0.52
2:LC:662:HIS:HB2	2:LC:688:VAL:HG21	1.89	0.52
2:LF:845:THR:HG22	2:LF:911:VAL:HG21	1.90	0.52
4:TK:204:GLU:HG3	4:TL:206:ILE:HG23	1.91	0.52
6:PB:75:GLN:OE1	6:PB:396:ARG:NH1	2.40	0.52
2:LA:248:ILE:HG21	2:LA:251:MET:HE3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XB:73:LEU:HD11	5:ZB:62:LYS:HD2	1.90	0.52
2:LD:439:PRO:HB2	2:LD:542:PRO:HA	1.90	0.52
3:SD:341:LEU:HA	3:SD:344:LEU:HD13	1.90	0.52
2:LE:1138:THR:HG23	2:LE:1141:GLU:HG2	1.91	0.52
6:PE:25:ASN:ND2	6:PE:329:ASP:O	2.36	0.52
6:PG:164:GLU:OE1	6:PG:227:THR:OG1	2.21	0.52
4:TF:204:GLU:HG3	4:TG:206:ILE:HG23	1.92	0.52
4:TG:251:ASP:OD2	4:TG:255:LYS:NZ	2.41	0.52
4:TI:251:ASP:OD2	4:TI:255:LYS:NZ	2.41	0.52
6:PK:75:GLN:OE1	6:PK:396:ARG:NH1	2.40	0.52
2:LA:475:ILE:HD12	2:LA:479:GLY:HA3	1.91	0.52
2:LA:1138:THR:HG23	2:LA:1141:GLU:HG2	1.92	0.52
2:LB:248:ILE:HG21	2:LB:251:MET:HE3	1.90	0.52
2:LB:253:ASN:HA	2:LB:260:PHE:HB2	1.90	0.52
2:LC:1179:GLN:H	2:LC:1179:GLN:CD	2.15	0.52
2:LD:1138:THR:HG23	2:LD:1141:GLU:HG2	1.92	0.52
4:TH:204:GLU:HG3	4:TI:206:ILE:HG23	1.92	0.52
2:LE:499:ASN:HB3	2:LE:514:GLY:HA2	1.91	0.52
2:LE:622:ALA:HB3	2:LE:634:ARG:HB2	1.92	0.52
6:PG:171:PHE:O	6:PG:219:TYR:N	2.40	0.52
6:PJ:171:PHE:O	6:PJ:219:TYR:N	2.40	0.52
6:PJ:344:ILE:O	6:PJ:347:THR:OG1	2.25	0.52
2:LA:622:ALA:HB3	2:LA:634:ARG:HB2	1.92	0.52
2:LA:845:THR:HG22	2:LA:911:VAL:HG21	1.90	0.52
6:PA:344:ILE:O	6:PA:347:THR:OG1	2.25	0.52
2:LC:1138:THR:HG23	2:LC:1141:GLU:HG2	1.91	0.52
2:LC:1156:VAL:O	2:LC:1178:GLY:N	2.40	0.52
4:TE:204:GLU:HG3	4:TF:206:ILE:HG23	1.91	0.52
2:LD:253:ASN:HA	2:LD:260:PHE:HB2	1.90	0.52
2:LD:660:ILE:HD11	2:LD:663:SER:HB3	1.92	0.52
5:XL:73:LEU:HD11	5:ZL:62:LYS:HD2	1.90	0.52
6:PA:75:GLN:OE1	6:PA:396:ARG:NH1	2.40	0.52
2:LB:499:ASN:HB3	2:LB:514:GLY:HA2	1.91	0.52
2:LB:1138:THR:HG23	2:LB:1141:GLU:HG2	1.91	0.52
4:TD:204:GLU:HG3	4:TE:206:ILE:HG23	1.92	0.52
2:LD:622:ALA:HB3	2:LD:634:ARG:HB2	1.92	0.52
4:TG:204:GLU:HG3	4:TH:206:ILE:HG23	1.91	0.52
2:LF:423:ASP:OD1	2:LF:424:LYS:N	2.42	0.52
4:TB:204:GLU:HG3	4:TC:206:ILE:HG23	1.92	0.52
2:LB:423:ASP:OD1	2:LB:424:LYS:N	2.42	0.52
2:LB:622:ALA:HB3	2:LB:634:ARG:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LB:662:HIS:HB2	2:LB:688:VAL:HG21	1.90	0.52
2:LD:423:ASP:OD1	2:LD:424:LYS:N	2.42	0.52
2:LF:622:ALA:HB3	2:LF:634:ARG:HB2	1.92	0.52
2:LF:1004:ASN:OD1	2:LF:1005:ARG:N	2.42	0.52
2:LA:1004:ASN:OD1	2:LA:1005:ARG:N	2.42	0.52
2:LC:1004:ASN:OD1	2:LC:1005:ARG:N	2.42	0.52
4:TJ:204:GLU:HG3	4:TK:206:ILE:HG23	1.92	0.52
1:AK:49:HIS:O	1:AK:152:GLN:NE2	2.43	0.52
6:PH:25:ASN:ND2	6:PH:329:ASP:O	2.36	0.52
6:PI:171:PHE:O	6:PI:219:TYR:N	2.40	0.52
1:AA:49:HIS:O	1:AA:152:GLN:NE2	2.43	0.52
2:LB:660:ILE:HD11	2:LB:663:SER:HB3	1.92	0.52
2:LB:1004:ASN:OD1	2:LB:1005:ARG:N	2.42	0.52
6:PI:25:ASN:ND2	6:PI:329:ASP:O	2.36	0.52
6:PL:75:GLN:OE1	6:PL:396:ARG:NH1	2.40	0.52
2:LA:660:ILE:HD11	2:LA:663:SER:HB3	1.92	0.52
3:SA:236:TYR:O	3:SA:240:THR:OG1	2.25	0.52
4:TA:206:ILE:HG23	4:TL:204:GLU:HG3	1.92	0.52
4:TA:286:ASP:OD2	2:LC:1177:THR:OG1	2.26	0.52
2:LB:650:GLU:OE1	2:LB:705:ARG:NH2	2.40	0.52
2:LC:622:ALA:HB3	2:LC:634:ARG:HB2	1.92	0.52
2:LC:660:ILE:HD11	2:LC:663:SER:HB3	1.92	0.52
2:LC:852:ASN:OD1	2:LC:854:SER:OG	2.20	0.52
2:LD:650:GLU:OE1	2:LD:705:ARG:NH2	2.40	0.52
4:TG:286:ASP:OD2	2:LF:1177:THR:OG1	2.26	0.52
2:LF:219:ASN:O	4:TL:41:ASN:ND2	2.43	0.52
6:PC:344:ILE:O	6:PC:347:THR:OG1	2.25	0.52
6:PD:171:PHE:O	6:PD:219:TYR:N	2.40	0.52
6:PH:171:PHE:O	6:PH:219:TYR:N	2.40	0.52
5:XG:21:ASN:O	5:XG:42:ARG:NH1	2.43	0.51
2:LE:439:PRO:HB2	2:LE:542:PRO:HA	1.90	0.51
2:LA:275:ALA:O	2:LA:336:GLN:NE2	2.41	0.51
4:TH:268:LYS:NZ	4:TH:274:LEU:O	2.40	0.51
2:LF:499:ASN:HB3	2:LF:514:GLY:HA2	1.91	0.51
6:PJ:25:ASN:ND2	6:PJ:329:ASP:O	2.36	0.51
2:LA:499:ASN:HB3	2:LA:514:GLY:HA2	1.91	0.51
5:XE:21:ASN:O	5:XE:42:ARG:NH1	2.43	0.51
5:YE:56:LEU:HD11	5:ZE:53:MET:HE1	1.93	0.51
6:PB:618:VAL:HG21	6:PK:623:LYS:HE3	1.92	0.51
6:PE:623:LYS:HE3	6:PH:618:VAL:HG21	1.92	0.51
2:LA:219:ASN:O	4:TB:41:ASN:ND2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LA:649:ILE:HG12	2:LA:706:VAL:HG22	1.93	0.51
5:XD:65:GLU:OE1	5:XD:65:GLU:N	2.34	0.51
2:LD:219:ASN:O	4:TH:41:ASN:ND2	2.43	0.51
1:AL:43:GLU:OE2	1:AL:181:TYR:OH	2.25	0.51
2:LF:475:ILE:HD12	2:LF:479:GLY:HA3	1.91	0.51
2:LF:660:ILE:HD11	2:LF:663:SER:HB3	1.92	0.51
6:PD:75:GLN:OE1	6:PD:396:ARG:NH1	2.40	0.51
2:LB:649:ILE:HG12	2:LB:706:VAL:HG22	1.93	0.51
3:SC:340:ASP:OD1	3:SC:340:ASP:N	2.44	0.51
2:LE:1004:ASN:OD1	2:LE:1005:ARG:N	2.42	0.51
2:LF:649:ILE:HG12	2:LF:706:VAL:HG22	1.93	0.51
3:SF:150:ASP:HA	3:SF:153:LYS:HE2	1.93	0.51
5:YC:56:LEU:HD11	5:ZC:53:MET:HE1	1.93	0.51
2:LC:219:ASN:O	4:TF:41:ASN:ND2	2.43	0.51
3:SC:150:ASP:HA	3:SC:153:LYS:HE2	1.93	0.51
2:LF:424:LYS:NZ	3:SF:94:ASP:O	2.31	0.51
6:PF:75:GLN:OE1	6:PF:396:ARG:NH1	2.40	0.51
2:LB:887:PHE:O	2:LB:928:GLY:N	2.44	0.51
1:AI:49:HIS:O	1:AI:152:GLN:NE2	2.43	0.51
2:LE:423:ASP:OD1	2:LE:424:LYS:N	2.42	0.51
5:XI:21:ASN:O	5:XI:42:ARG:NH1	2.43	0.51
2:LF:245:ASP:OD2	2:LF:539:LYS:NZ	2.38	0.51
6:PG:623:LYS:HE3	6:PJ:618:VAL:HG21	1.92	0.51
2:LA:734:LYS:HB2	2:LA:789:VAL:HG12	1.93	0.51
1:AC:49:HIS:O	1:AC:152:GLN:NE2	2.43	0.51
5:XC:21:ASN:O	5:XC:42:ARG:NH1	2.43	0.51
2:LE:219:ASN:O	4:TJ:41:ASN:ND2	2.43	0.51
2:LE:649:ILE:HG12	2:LE:706:VAL:HG22	1.93	0.51
6:PL:171:PHE:O	6:PL:219:TYR:N	2.40	0.51
6:PA:623:LYS:HE3	6:PD:618:VAL:HG21	1.92	0.51
2:LB:142:GLN:HB3	2:LB:230:MET:HG2	1.93	0.51
2:LB:219:ASN:O	4:TD:41:ASN:ND2	2.43	0.51
2:LB:734:LYS:HB2	2:LB:789:VAL:HG12	1.93	0.51
2:LC:649:ILE:HG12	2:LC:706:VAL:HG22	1.93	0.51
3:SD:150:ASP:HA	3:SD:153:LYS:HE2	1.93	0.51
3:SD:340:ASP:OD1	3:SD:340:ASP:N	2.44	0.51
2:LE:660:ILE:HD11	2:LE:663:SER:HB3	1.92	0.51
2:LF:610:ASN:O	2:LF:610:ASN:ND2	2.42	0.51
2:LA:995:THR:OG1	2:LA:997:ASP:OD1	2.27	0.51
2:LB:582:TYR:O	2:LB:585:SER:OG	2.24	0.51
1:AE:49:HIS:O	1:AE:152:GLN:NE2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SE:150:ASP:HA	3:SE:153:LYS:HE2	1.93	0.51
5:XI:12:ASN:HD21	5:XI:18:GLU:HG2	1.76	0.51
5:XK:12:ASN:HD21	5:XK:18:GLU:HG2	1.76	0.51
6:PI:75:GLN:OE1	6:PI:396:ARG:NH1	2.40	0.51
6:PI:623:LYS:HE3	6:PL:618:VAL:HG21	1.92	0.51
5:XA:21:ASN:O	5:XA:42:ARG:NH1	2.43	0.50
5:XC:73:LEU:HD13	5:ZC:62:LYS:HZ1	1.76	0.50
2:LC:142:GLN:HB3	2:LC:230:MET:HG2	1.93	0.50
1:AG:49:HIS:O	1:AG:152:GLN:NE2	2.43	0.50
2:LD:649:ILE:HG12	2:LD:706:VAL:HG22	1.93	0.50
5:YG:56:LEU:HD11	5:ZG:53:MET:HE1	1.93	0.50
6:PE:171:PHE:O	6:PE:219:TYR:N	2.40	0.50
2:LA:887:PHE:O	2:LA:928:GLY:N	2.44	0.50
2:LC:801:MET:SD	2:LC:801:MET:N	2.73	0.50
3:SD:141:TYR:HB3	3:SD:173:ILE:HG12	1.93	0.50
5:XG:26:ASP:OD1	5:XG:34:TYR:OH	2.28	0.50
6:PC:75:GLN:OE1	6:PC:396:ARG:NH1	2.40	0.50
6:PJ:164:GLU:OE1	6:PJ:227:THR:OG1	2.21	0.50
2:LB:681:THR:OG1	2:LB:682:VAL:N	2.45	0.50
3:SB:239:GLU:OE2	3:SB:266:TRP:NE1	2.38	0.50
2:LD:582:TYR:O	2:LD:585:SER:OG	2.24	0.50
2:LD:610:ASN:O	2:LD:610:ASN:ND2	2.42	0.50
2:LE:681:THR:OG1	2:LE:682:VAL:N	2.45	0.50
2:LE:922:ASN:OD1	2:LE:923:ILE:N	2.44	0.50
6:PD:164:GLU:OE1	6:PD:227:THR:OG1	2.21	0.50
2:LA:142:GLN:HB3	2:LA:230:MET:HG2	1.93	0.50
2:LA:681:THR:OG1	2:LA:682:VAL:N	2.45	0.50
2:LC:143:THR:HG23	2:LC:146:LYS:H	1.76	0.50
2:LD:681:THR:OG1	2:LD:682:VAL:N	2.45	0.50
2:LE:286:LEU:HB2	2:LE:325:ILE:HD11	1.93	0.50
5:XK:21:ASN:O	5:XK:42:ARG:NH1	2.43	0.50
4:TB:297:ALA:HA	2:LD:1042:GLN:HE21	1.77	0.50
2:LB:286:LEU:HB2	2:LB:325:ILE:HD11	1.93	0.50
5:XC:12:ASN:HD21	5:XC:18:GLU:HG2	1.76	0.50
5:XC:26:ASP:OD1	5:XC:34:TYR:OH	2.28	0.50
2:LC:681:THR:OG1	2:LC:682:VAL:N	2.45	0.50
4:TF:297:ALA:HA	2:LF:1042:GLN:HE21	1.77	0.50
3:SD:317:GLU:O	3:SD:322:ASN:ND2	2.45	0.50
6:PE:344:ILE:O	6:PE:347:THR:OG1	2.25	0.50
2:LA:143:THR:HG23	2:LA:146:LYS:H	1.76	0.50
2:LB:1042:GLN:HE21	4:TJ:297:ALA:HA	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:TD:297:ALA:HA	2:LE:1042:GLN:HE21	1.77	0.50
2:LC:734:LYS:HB2	2:LC:789:VAL:HG12	1.93	0.50
2:LD:1004:ASN:OD1	2:LD:1005:ARG:N	2.42	0.50
5:XG:73:LEU:HD13	5:ZG:62:LYS:HZ1	1.77	0.50
2:LF:143:THR:HG23	2:LF:146:LYS:H	1.76	0.50
6:PC:171:PHE:O	6:PC:219:TYR:N	2.40	0.50
2:LA:848:MET:HA	2:LA:851:VAL:HG22	1.94	0.50
2:LA:1042:GLN:HE21	4:TH:297:ALA:HA	1.77	0.50
3:SA:340:ASP:OD1	3:SA:340:ASP:N	2.44	0.50
5:XA:73:LEU:HD13	5:ZA:62:LYS:HZ1	1.77	0.50
5:YA:56:LEU:HD11	5:ZA:53:MET:HE1	1.93	0.50
2:LB:1105:ARG:NH1	2:LB:1106:PRO:HD2	2.27	0.50
4:TC:268:LYS:NZ	4:TC:274:LEU:O	2.40	0.50
2:LE:610:ASN:O	2:LE:610:ASN:ND2	2.42	0.50
5:XI:26:ASP:OD1	5:XI:34:TYR:OH	2.28	0.50
2:LF:887:PHE:O	2:LF:928:GLY:N	2.44	0.50
5:XK:73:LEU:HD13	5:ZK:62:LYS:HZ1	1.77	0.50
2:LA:922:ASN:OD1	2:LA:923:ILE:N	2.44	0.50
3:SA:150:ASP:HA	3:SA:153:LYS:HE2	1.93	0.50
4:TB:282:ASN:HD21	4:TC:277:PRO:HA	1.77	0.50
2:LB:143:THR:HG23	2:LB:146:LYS:H	1.76	0.50
2:LC:286:LEU:HB2	2:LC:325:ILE:HD11	1.93	0.50
3:SC:317:GLU:O	3:SC:322:ASN:ND2	2.45	0.50
2:LD:38:ARG:HG2	2:LD:40:HIS:CE1	2.47	0.50
2:LD:143:THR:HG23	2:LD:146:LYS:H	1.76	0.50
4:TH:282:ASN:HD21	4:TI:277:PRO:HA	1.77	0.50
2:LE:734:LYS:HB2	2:LE:789:VAL:HG12	1.93	0.50
2:LE:887:PHE:O	2:LE:928:GLY:N	2.44	0.50
5:YI:56:LEU:HD11	5:ZI:53:MET:HE1	1.93	0.50
2:LF:142:GLN:HB3	2:LF:230:MET:HG2	1.93	0.50
2:LF:922:ASN:OD1	2:LF:923:ILE:N	2.44	0.50
6:PC:623:LYS:HE3	6:PF:618:VAL:HG21	1.92	0.50
2:LB:38:ARG:HG2	2:LB:40:HIS:CE1	2.47	0.50
2:LC:275:ALA:O	2:LC:336:GLN:NE2	2.41	0.50
2:LE:848:MET:HA	2:LE:851:VAL:HG22	1.94	0.50
3:SE:317:GLU:O	3:SE:322:ASN:ND2	2.45	0.50
2:LF:734:LYS:HB2	2:LF:789:VAL:HG12	1.93	0.50
6:PK:171:PHE:O	6:PK:219:TYR:N	2.40	0.50
3:SB:150:ASP:HA	3:SB:153:LYS:HE2	1.93	0.49
3:SB:317:GLU:O	3:SB:322:ASN:ND2	2.45	0.49
4:TF:282:ASN:HD21	4:TG:277:PRO:HA	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:142:GLN:HB3	2:LD:230:MET:HG2	1.93	0.49
2:LD:286:LEU:HB2	2:LD:325:ILE:HD11	1.93	0.49
2:LD:922:ASN:OD1	2:LD:923:ILE:N	2.44	0.49
2:LD:1105:ARG:NH1	2:LD:1106:PRO:HD2	2.27	0.49
5:XG:12:ASN:HD21	5:XG:18:GLU:HG2	1.76	0.49
2:LF:38:ARG:HG2	2:LF:40:HIS:CE1	2.47	0.49
2:LA:38:ARG:HG2	2:LA:40:HIS:CE1	2.47	0.49
2:LD:848:MET:HA	2:LD:851:VAL:HG22	1.94	0.49
2:LE:650:GLU:OE1	2:LE:705:ARG:NH2	2.40	0.49
4:TJ:200:LYS:O	4:TJ:203:THR:OG1	2.30	0.49
6:PJ:75:GLN:OE1	6:PJ:396:ARG:NH1	2.40	0.49
2:LA:650:GLU:OE1	2:LA:705:ARG:NH2	2.40	0.49
3:SA:141:TYR:HB3	3:SA:173:ILE:HG12	1.93	0.49
2:LC:1042:GLN:HE21	4:TL:297:ALA:HA	1.77	0.49
6:PC:110:ASP:OD1	6:PF:194:ARG:NH1	2.46	0.49
6:PD:487:VAL:HG22	6:PD:489:ALA:H	1.78	0.49
6:PE:53:TRP:NE1	6:PE:382:GLU:OE1	2.39	0.49
6:PE:110:ASP:OD1	6:PH:194:ARG:NH1	2.45	0.49
2:LA:286:LEU:HB2	2:LA:325:ILE:HD11	1.93	0.49
3:SA:317:GLU:O	3:SA:322:ASN:ND2	2.45	0.49
5:XA:12:ASN:HD21	5:XA:18:GLU:HG2	1.76	0.49
5:XA:26:ASP:OD1	5:XA:34:TYR:OH	2.28	0.49
6:PA:110:ASP:OD1	6:PD:194:ARG:NH1	2.45	0.49
2:LB:891:THR:HG21	2:LB:950:TYR:CE1	2.48	0.49
4:TD:282:ASN:HD21	4:TE:277:PRO:HA	1.77	0.49
3:SD:102:LEU:HB3	3:SD:106:PRO:HB3	1.95	0.49
4:TG:268:LYS:NZ	4:TG:274:LEU:O	2.40	0.49
2:LE:142:GLN:HB3	2:LE:230:MET:HG2	1.93	0.49
3:SF:317:GLU:O	3:SF:322:ASN:ND2	2.45	0.49
6:PB:487:VAL:HG22	6:PB:489:ALA:H	1.78	0.49
6:PF:164:GLU:OE1	6:PF:227:THR:OG1	2.21	0.49
6:PK:487:VAL:HG22	6:PK:489:ALA:H	1.78	0.49
6:PL:487:VAL:HG22	6:PL:489:ALA:H	1.78	0.49
2:LA:891:THR:HG21	2:LA:950:TYR:CE1	2.48	0.49
4:TA:277:PRO:HA	4:TL:282:ASN:HD21	1.77	0.49
6:PA:487:VAL:HG22	6:PA:489:ALA:H	1.78	0.49
2:LB:922:ASN:OD1	2:LB:923:ILE:N	2.44	0.49
2:LC:38:ARG:HG2	2:LC:40:HIS:CE1	2.47	0.49
3:SC:141:TYR:HB3	3:SC:173:ILE:HG12	1.93	0.49
5:XE:73:LEU:HD13	5:ZE:62:LYS:HZ1	1.77	0.49
2:LE:143:THR:HG23	2:LE:146:LYS:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SE:141:TYR:HB3	3:SE:173:ILE:HG12	1.93	0.49
3:SF:102:LEU:HB3	3:SF:106:PRO:HB3	1.95	0.49
4:TK:26:ASP:OD1	4:TK:26:ASP:N	2.46	0.49
5:YK:56:LEU:HD11	5:ZK:53:MET:HE1	1.93	0.49
2:LB:532:HIS:CE1	2:LB:536:GLN:HE21	2.31	0.49
3:SB:141:TYR:HB3	3:SB:173:ILE:HG12	1.93	0.49
5:XE:12:ASN:HD21	5:XE:18:GLU:HG2	1.77	0.49
2:LE:1105:ARG:NH1	2:LE:1106:PRO:HD2	2.27	0.49
4:TJ:282:ASN:HD21	4:TK:277:PRO:HA	1.77	0.49
1:AK:23:THR:OG1	1:AK:28:ASP:O	2.29	0.49
3:SF:141:TYR:HB3	3:SF:173:ILE:HG12	1.93	0.49
4:TL:26:ASP:OD1	4:TL:26:ASP:N	2.46	0.49
6:PB:194:ARG:NH1	6:PK:110:ASP:OD1	2.45	0.49
6:PB:479:VAL:O	6:PK:473:LYS:NZ	2.35	0.49
6:PC:487:VAL:HG22	6:PC:489:ALA:H	1.78	0.49
2:LD:734:LYS:HB2	2:LD:789:VAL:HG12	1.93	0.49
3:SE:102:LEU:HB3	3:SE:106:PRO:HB3	1.95	0.49
3:SE:347:ASP:OD1	3:SE:351:ASN:ND2	2.41	0.49
2:LF:275:ALA:O	2:LF:336:GLN:NE2	2.41	0.49
2:LF:532:HIS:CE1	2:LF:536:GLN:HE21	2.31	0.49
2:LF:848:MET:HA	2:LF:851:VAL:HG22	1.94	0.49
4:TK:200:LYS:O	4:TK:203:THR:OG1	2.30	0.49
6:PF:487:VAL:HG22	6:PF:489:ALA:H	1.78	0.49
6:PI:487:VAL:HG22	6:PI:489:ALA:H	1.78	0.49
6:PJ:487:VAL:HG22	6:PJ:489:ALA:H	1.78	0.49
2:LA:1105:ARG:NH1	2:LA:1106:PRO:HD2	2.27	0.49
2:LB:848:MET:HA	2:LB:851:VAL:HG22	1.94	0.49
2:LC:532:HIS:CE1	2:LC:536:GLN:HE21	2.31	0.49
3:SC:102:LEU:HB3	3:SC:106:PRO:HB3	1.95	0.49
2:LE:532:HIS:CE1	2:LE:536:GLN:HE21	2.31	0.49
4:TI:57:THR:HB	4:TI:67:PHE:HB3	1.95	0.49
6:PC:53:TRP:NE1	6:PC:382:GLU:OE1	2.39	0.49
4:TC:57:THR:HB	4:TC:67:PHE:HB3	1.95	0.49
2:LD:532:HIS:CE1	2:LD:536:GLN:HE21	2.31	0.49
2:LD:887:PHE:O	2:LD:928:GLY:N	2.44	0.49
2:LE:38:ARG:HG2	2:LE:40:HIS:CE1	2.47	0.49
2:LF:286:LEU:HB2	2:LF:325:ILE:HD11	1.93	0.49
2:LF:984:PRO:HD3	2:LF:1068:ALA:HB3	1.95	0.49
6:PF:171:PHE:O	6:PF:219:TYR:N	2.40	0.49
3:SA:347:ASP:OD1	3:SA:351:ASN:ND2	2.41	0.49
4:TB:200:LYS:O	4:TB:203:THR:OG1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LC:922:ASN:OD1	2:LC:923:ILE:N	2.44	0.49
2:LC:1105:ARG:NH1	2:LC:1106:PRO:HD2	2.27	0.49
5:YF:10:ILE:HD12	5:YF:11:PRO:HD2	1.95	0.49
1:AI:23:THR:OG1	1:AI:28:ASP:O	2.29	0.49
2:LF:681:THR:OG1	2:LF:682:VAL:N	2.45	0.49
3:SA:102:LEU:HB3	3:SA:106:PRO:HB3	1.95	0.48
2:LB:424:LYS:NZ	3:SB:94:ASP:O	2.31	0.48
2:LB:984:PRO:HD3	2:LB:1068:ALA:HB3	1.95	0.48
1:AE:23:THR:OG1	1:AE:28:ASP:O	2.29	0.48
4:TG:26:ASP:OD1	4:TG:26:ASP:N	2.46	0.48
4:TH:26:ASP:OD1	4:TH:26:ASP:N	2.46	0.48
3:SE:340:ASP:N	3:SE:340:ASP:OD1	2.44	0.48
4:TL:57:THR:HB	4:TL:67:PHE:HB3	1.95	0.48
2:LD:551:ASP:OD1	3:SD:18:ARG:NH1	2.33	0.48
2:LD:1116:THR:HB	2:LD:1157:ILE:HB	1.95	0.48
5:XI:73:LEU:HD13	5:ZI:62:LYS:HZ1	1.77	0.48
1:AL:139:ASN:OD1	5:YK:4:HIS:ND1	2.46	0.48
6:PE:487:VAL:HG22	6:PE:489:ALA:H	1.78	0.48
6:PG:75:GLN:OE1	6:PG:396:ARG:NH1	2.40	0.48
6:PI:110:ASP:OD1	6:PL:194:ARG:NH1	2.46	0.48
4:TB:57:THR:HB	4:TB:67:PHE:HB3	1.95	0.48
5:YB:46:ILE:HD11	5:ZB:43:MET:HE1	1.95	0.48
2:LC:984:PRO:HD3	2:LC:1068:ALA:HB3	1.95	0.48
5:XE:73:LEU:HB3	5:ZE:62:LYS:HZ1	1.78	0.48
2:LD:801:MET:SD	2:LD:801:MET:N	2.73	0.48
2:LE:891:THR:HG21	2:LE:950:TYR:CE1	2.48	0.48
2:LF:279:LEU:HD22	2:LF:332:GLY:HA2	1.96	0.48
2:LF:582:TYR:O	2:LF:585:SER:OG	2.24	0.48
2:LF:650:GLU:OE1	2:LF:705:ARG:NH2	2.40	0.48
5:XK:73:LEU:HB3	5:ZK:62:LYS:HZ1	1.79	0.48
5:YL:46:ILE:HD11	5:ZL:43:MET:HE1	1.95	0.48
6:PE:473:LYS:NZ	6:PH:479:VAL:O	2.35	0.48
6:PG:110:ASP:OD1	6:PJ:194:ARG:NH1	2.45	0.48
6:PG:487:VAL:HG22	6:PG:489:ALA:H	1.78	0.48
6:PH:487:VAL:HG22	6:PH:489:ALA:H	1.78	0.48
2:LA:532:HIS:CE1	2:LA:536:GLN:HE21	2.31	0.48
4:TC:200:LYS:O	4:TC:203:THR:OG1	2.30	0.48
2:LC:1116:THR:HB	2:LC:1157:ILE:HB	1.95	0.48
2:LE:1116:THR:HB	2:LE:1157:ILE:HB	1.95	0.48
4:TJ:57:THR:HB	4:TJ:67:PHE:HB3	1.95	0.48
5:XJ:73:LEU:HD21	5:ZJ:62:LYS:HZ3	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PB:171:PHE:O	6:PB:219:TYR:N	2.40	0.48
2:LA:259:THR:O	2:LB:162:ARG:NH2	2.43	0.48
2:LA:424:LYS:NZ	3:SA:94:ASP:O	2.31	0.48
2:LA:984:PRO:HD3	2:LA:1068:ALA:HB3	1.95	0.48
4:TA:26:ASP:OD1	4:TA:26:ASP:N	2.46	0.48
5:YB:10:ILE:HD12	5:YB:11:PRO:HD2	1.95	0.48
6:PA:164:GLU:OE1	6:PA:227:THR:OG1	2.21	0.48
2:LC:569:LEU:HD23	3:SC:24:ILE:HD11	1.95	0.48
4:TF:57:THR:HB	4:TF:67:PHE:HB3	1.95	0.48
2:LF:891:THR:HG21	2:LF:950:TYR:CE1	2.48	0.48
1:AD:139:ASN:OD1	5:YC:4:HIS:ND1	2.46	0.48
3:SB:102:LEU:HB3	3:SB:106:PRO:HB3	1.95	0.48
4:TD:73:SER:O	4:TD:77:HIS:ND1	2.43	0.48
2:LC:891:THR:HG21	2:LC:950:TYR:CE1	2.48	0.48
2:LE:984:PRO:HD3	2:LE:1068:ALA:HB3	1.95	0.48
2:LF:1105:ARG:NH1	2:LF:1106:PRO:HD2	2.27	0.48
6:PI:164:GLU:OE1	6:PI:227:THR:OG1	2.21	0.48
5:XA:75:GLU:OE2	5:YA:80:HIS:NE2	2.45	0.48
6:PA:599:LYS:HB3	6:PA:601:MET:HE3	1.96	0.48
2:LC:848:MET:HA	2:LC:851:VAL:HG22	1.94	0.48
2:LD:891:THR:HG21	2:LD:950:TYR:CE1	2.48	0.48
2:LD:1082:MET:HE2	2:LD:1162:GLU:HG2	1.96	0.48
3:SE:239:GLU:OE2	3:SE:266:TRP:NE1	2.38	0.48
4:TK:57:THR:HB	4:TK:67:PHE:HB3	1.95	0.48
6:PL:599:LYS:HB3	6:PL:601:MET:HE3	1.96	0.48
4:TA:57:THR:HB	4:TA:67:PHE:HB3	1.95	0.48
2:LB:801:MET:SD	2:LB:801:MET:N	2.73	0.48
4:TC:26:ASP:OD1	4:TC:26:ASP:N	2.46	0.48
4:TD:200:LYS:O	4:TD:203:THR:OG1	2.30	0.48
5:YD:46:ILE:HD11	5:ZD:43:MET:HE1	1.95	0.48
4:TE:268:LYS:NZ	4:TE:274:LEU:O	2.40	0.48
4:TG:57:THR:HB	4:TG:67:PHE:HB3	1.95	0.48
5:YH:10:ILE:HD12	5:YH:11:PRO:HD2	1.95	0.48
2:LE:279:LEU:HD22	2:LE:332:GLY:HA2	1.96	0.48
6:PD:599:LYS:HB3	6:PD:601:MET:HE3	1.96	0.48
6:PI:599:LYS:HB3	6:PI:601:MET:HE3	1.96	0.48
6:PK:599:LYS:HB3	6:PK:601:MET:HE3	1.96	0.48
1:AA:223:GLU:HG3	6:PD:426:ARG:HH12	1.79	0.48
1:AB:139:ASN:OD1	5:YA:4:HIS:ND1	2.46	0.48
1:AC:223:GLU:HG3	6:PF:426:ARG:HH12	1.79	0.48
3:SC:347:ASP:OD1	3:SC:351:ASN:ND2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YF:46:ILE:HD11	5:ZF:43:MET:HE1	1.95	0.48
1:AH:139:ASN:OD1	5:YG:4:HIS:ND1	2.46	0.48
2:LD:984:PRO:HD3	2:LD:1068:ALA:HB3	1.95	0.48
4:TH:57:THR:HB	4:TH:67:PHE:HB3	1.95	0.48
1:AI:223:GLU:HG3	6:PL:426:ARG:HH12	1.79	0.48
5:XI:73:LEU:HB3	5:ZI:62:LYS:HZ1	1.79	0.48
1:AK:223:GLU:HG3	6:PB:426:ARG:HH12	1.79	0.48
5:XL:73:LEU:HD21	5:ZL:62:LYS:HZ3	1.79	0.48
6:PB:599:LYS:HB3	6:PB:601:MET:HE3	1.96	0.48
2:LC:1082:MET:HE2	2:LC:1162:GLU:HG2	1.96	0.48
5:XB:73:LEU:HD21	5:ZB:62:LYS:HZ3	1.79	0.47
2:LB:1116:THR:HB	2:LB:1157:ILE:HB	1.95	0.47
4:TD:26:ASP:OD1	4:TD:26:ASP:N	2.46	0.47
2:LC:650:GLU:OE1	2:LC:705:ARG:NH2	2.40	0.47
4:TE:57:THR:HB	4:TE:67:PHE:HB3	1.95	0.47
4:TF:26:ASP:OD1	4:TF:26:ASP:N	2.46	0.47
2:LE:569:LEU:HD23	3:SE:24:ILE:HD11	1.95	0.47
5:YJ:46:ILE:HD11	5:ZJ:43:MET:HE1	1.95	0.47
5:XA:73:LEU:HB3	5:ZA:62:LYS:HZ1	1.78	0.47
2:LB:569:LEU:HD23	3:SB:24:ILE:HD11	1.95	0.47
4:TD:57:THR:HB	4:TD:67:PHE:HB3	1.95	0.47
3:SC:239:GLU:OE2	3:SC:266:TRP:NE1	2.38	0.47
4:TE:200:LYS:O	4:TE:203:THR:OG1	2.30	0.47
5:YH:46:ILE:HD11	5:ZH:43:MET:HE1	1.95	0.47
2:LF:1116:THR:HB	2:LF:1157:ILE:HB	1.95	0.47
6:PC:599:LYS:HB3	6:PC:601:MET:HE3	1.96	0.47
6:PJ:599:LYS:HB3	6:PJ:601:MET:HE3	1.96	0.47
2:LA:436:LEU:HD11	3:SA:87:SER:HB3	1.97	0.47
2:LB:436:LEU:HD11	3:SB:87:SER:HB3	1.97	0.47
2:LC:114:TYR:HA	2:LC:365:GLN:HA	1.97	0.47
2:LA:279:LEU:HD22	2:LA:332:GLY:HA2	1.96	0.47
5:XC:73:LEU:HB3	5:ZC:62:LYS:HZ1	1.79	0.47
5:XE:26:ASP:OD1	5:XE:34:TYR:OH	2.28	0.47
2:LD:569:LEU:HD23	3:SD:24:ILE:HD11	1.95	0.47
2:LE:1082:MET:HE2	2:LE:1162:GLU:HG2	1.96	0.47
5:YJ:10:ILE:HD12	5:YJ:11:PRO:HD2	1.95	0.47
5:XC:75:GLU:OE2	5:YC:80:HIS:NE2	2.45	0.47
1:AF:139:ASN:OD1	5:YE:4:HIS:ND1	2.46	0.47
2:LC:436:LEU:HD11	3:SC:87:SER:HB3	1.97	0.47
2:LC:927:LEU:HD21	2:LC:930:PHE:CZ	2.50	0.47
4:TF:268:LYS:NZ	4:TF:274:LEU:O	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:927:LEU:HD21	2:LD:930:PHE:CZ	2.50	0.47
1:AJ:139:ASN:OD1	5:YI:4:HIS:ND1	2.46	0.47
3:SE:328:ILE:HD12	3:SE:345:THR:HG22	1.96	0.47
6:PH:53:TRP:NE1	6:PH:382:GLU:OE1	2.39	0.47
2:LA:569:LEU:HD23	3:SA:24:ILE:HD11	1.95	0.47
5:YD:10:ILE:HD12	5:YD:11:PRO:HD2	1.95	0.47
4:TF:200:LYS:O	4:TF:203:THR:OG1	2.30	0.47
3:SD:128:LEU:HG	3:SD:133:MET:HE3	1.97	0.47
2:LE:927:LEU:HD21	2:LE:930:PHE:CZ	2.49	0.47
3:SE:48:ASP:HB3	3:SE:64:THR:HG21	1.97	0.47
2:LF:436:LEU:HD11	3:SF:87:SER:HB3	1.97	0.47
2:LF:927:LEU:HD21	2:LF:930:PHE:CZ	2.50	0.47
5:YL:10:ILE:HD12	5:YL:11:PRO:HD2	1.95	0.47
2:LB:551:ASP:OD1	3:SB:18:ARG:NH1	2.33	0.47
2:LB:747:HIS:ND1	2:LB:770:SER:OG	2.46	0.47
2:LB:1082:MET:HE2	2:LB:1162:GLU:HG2	1.96	0.47
3:SB:328:ILE:HD12	3:SB:345:THR:HG22	1.96	0.47
1:AG:23:THR:OG1	1:AG:28:ASP:O	2.29	0.47
1:AG:223:GLU:HG3	6:PJ:426:ARG:HH12	1.79	0.47
2:LD:436:LEU:HD11	3:SD:87:SER:HB3	1.97	0.47
2:LE:436:LEU:HD11	3:SE:87:SER:HB3	1.97	0.47
4:TJ:16:LEU:O	4:TK:160:LYS:NZ	2.44	0.47
3:SF:239:GLU:OE2	3:SF:266:TRP:NE1	2.38	0.47
4:TK:261:THR:HG21	4:TL:259:LEU:HD12	1.97	0.47
5:XK:75:GLU:OE2	5:YK:80:HIS:NE2	2.45	0.47
6:PF:599:LYS:HB3	6:PF:601:MET:HE3	1.96	0.47
6:PG:599:LYS:HB3	6:PG:601:MET:HE3	1.96	0.47
4:TA:261:THR:HG21	4:TB:259:LEU:HD12	1.97	0.47
2:LB:927:LEU:HD21	2:LB:930:PHE:CZ	2.50	0.47
2:LC:279:LEU:HD22	2:LC:332:GLY:HA2	1.96	0.47
4:TF:269:THR:HG23	4:TF:270:ILE:HG12	1.97	0.47
3:SF:366:PHE:CZ	3:SF:368:LEU:HB2	2.50	0.47
2:LA:927:LEU:HD21	2:LA:930:PHE:CZ	2.50	0.47
3:SA:366:PHE:CZ	3:SA:368:LEU:HB2	2.50	0.47
4:TA:200:LYS:O	4:TA:203:THR:OG1	2.30	0.47
2:LD:279:LEU:HD22	2:LD:332:GLY:HA2	1.96	0.47
2:LD:935:ASN:OD1	2:LD:935:ASN:N	2.48	0.47
3:SD:328:ILE:HD12	3:SD:345:THR:HG22	1.96	0.47
2:LF:66:VAL:HG12	2:LF:99:VAL:HG22	1.97	0.47
3:SF:328:ILE:HD12	3:SF:345:THR:HG22	1.96	0.47
4:TK:278:ASN:HA	4:TK:281:THR:HG23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PL:164:GLU:OE1	6:PL:227:THR:OG1	2.21	0.47
1:AA:23:THR:OG1	1:AA:28:ASP:O	2.29	0.47
1:AD:124:ASN:HB3	1:AD:127:SER:HB2	1.97	0.47
1:AE:223:GLU:HG3	6:PH:426:ARG:HH12	1.79	0.47
4:TE:26:ASP:OD1	4:TE:26:ASP:N	2.46	0.47
4:TI:269:THR:HG23	4:TI:270:ILE:HG12	1.97	0.47
4:TL:73:SER:O	4:TL:77:HIS:ND1	2.43	0.47
6:PE:599:LYS:HB3	6:PE:601:MET:HE3	1.96	0.47
2:LA:935:ASN:OD1	2:LA:935:ASN:N	2.48	0.46
4:TB:278:ASN:HA	4:TB:281:THR:HG23	1.97	0.46
2:LB:279:LEU:HD22	2:LB:332:GLY:HA2	1.96	0.46
4:TC:261:THR:HG21	4:TD:259:LEU:HD12	1.97	0.46
4:TC:278:ASN:HA	4:TC:281:THR:HG23	1.97	0.46
2:LC:887:PHE:O	2:LC:928:GLY:N	2.44	0.46
3:SC:366:PHE:CZ	3:SC:368:LEU:HB2	2.50	0.46
3:SD:236:TYR:O	3:SD:240:THR:OG1	2.25	0.46
3:SD:347:ASP:OD1	3:SD:351:ASN:ND2	2.41	0.46
2:LF:569:LEU:HD23	3:SF:24:ILE:HD11	1.95	0.46
2:LF:1082:MET:HE2	2:LF:1162:GLU:HG2	1.96	0.46
4:TL:278:ASN:HA	4:TL:281:THR:HG23	1.97	0.46
6:PH:599:LYS:HB3	6:PH:601:MET:HE3	1.96	0.46
1:AB:124:ASN:HB3	1:AB:127:SER:HB2	1.97	0.46
4:TB:26:ASP:OD1	4:TB:26:ASP:N	2.46	0.46
1:AD:171:PRO:HG2	1:AD:174:LEU:HD23	1.98	0.46
3:SB:366:PHE:CZ	3:SB:368:LEU:HB2	2.50	0.46
1:AF:171:PRO:HG2	1:AF:174:LEU:HD23	1.98	0.46
4:TG:200:LYS:O	4:TG:203:THR:OG1	2.30	0.46
1:AL:124:ASN:HB3	1:AL:127:SER:HB2	1.97	0.46
3:SF:48:ASP:HB3	3:SF:64:THR:HG21	1.97	0.46
2:LA:1082:MET:HE2	2:LA:1162:GLU:HG2	1.96	0.46
2:LA:1116:THR:HB	2:LA:1157:ILE:HB	1.95	0.46
4:TC:73:SER:O	4:TC:77:HIS:ND1	2.43	0.46
4:TE:269:THR:HG23	4:TE:270:ILE:HG12	1.97	0.46
3:SD:48:ASP:HB3	3:SD:64:THR:HG21	1.97	0.46
2:LE:114:TYR:HA	2:LE:365:GLN:HA	1.97	0.46
5:XI:75:GLU:OE2	5:YI:80:HIS:NE2	2.45	0.46
4:TB:261:THR:HG21	4:TC:259:LEU:HD12	1.98	0.46
1:AD:176:PRO:HG3	1:AE:43:GLU:HG3	1.98	0.46
2:LB:114:TYR:HA	2:LB:365:GLN:HA	1.97	0.46
1:AH:124:ASN:HB3	1:AH:127:SER:HB2	1.97	0.46
4:TH:269:THR:HG23	4:TH:270:ILE:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AJ:124:ASN:HB3	1:AJ:127:SER:HB2	1.98	0.46
2:LE:66:VAL:HG12	2:LE:99:VAL:HG22	1.97	0.46
1:AL:171:PRO:HG2	1:AL:174:LEU:HD23	1.98	0.46
1:AB:171:PRO:HG2	1:AB:174:LEU:HD23	1.98	0.46
4:TA:269:THR:HG23	4:TA:270:ILE:HG12	1.97	0.46
5:YB:55:GLN:OE1	5:YB:55:GLN:N	2.45	0.46
1:AF:124:ASN:HB3	1:AF:127:SER:HB2	1.98	0.46
2:LC:596:GLU:OE2	3:SC:41:THR:N	2.43	0.46
2:LC:995:THR:OG1	2:LC:997:ASP:OD1	2.27	0.46
3:SC:328:ILE:HD12	3:SC:345:THR:HG22	1.96	0.46
2:LE:935:ASN:OD1	2:LE:935:ASN:N	2.48	0.46
3:SE:211:TRP:N	3:SE:312:ASN:OD1	2.44	0.46
4:TI:261:THR:HG21	4:TJ:259:LEU:HD12	1.97	0.46
4:TL:269:THR:HG23	4:TL:270:ILE:HG12	1.97	0.46
3:SD:239:GLU:OE2	3:SD:266:TRP:NE1	2.38	0.46
3:SD:366:PHE:CZ	3:SD:368:LEU:HB2	2.50	0.46
4:TG:269:THR:HG23	4:TG:270:ILE:HG12	1.97	0.46
3:SE:366:PHE:CZ	3:SE:368:LEU:HB2	2.50	0.46
4:TJ:261:THR:HG21	4:TK:259:LEU:HD12	1.98	0.46
2:LF:873:TRP:O	2:LF:877:ASN:ND2	2.27	0.46
3:SF:128:LEU:HG	3:SF:133:MET:HE3	1.97	0.46
2:LA:66:VAL:HG12	2:LA:99:VAL:HG22	1.97	0.46
2:LA:657:LEU:HB3	2:LA:703:LYS:HE2	1.98	0.46
2:LA:801:MET:SD	2:LA:801:MET:N	2.73	0.46
4:TA:259:LEU:HD12	4:TL:261:THR:HG21	1.98	0.46
2:LB:66:VAL:HG12	2:LB:99:VAL:HG22	1.97	0.46
2:LD:114:TYR:HA	2:LD:365:GLN:HA	1.97	0.46
3:SE:128:LEU:HG	3:SE:133:MET:HE3	1.97	0.46
2:LF:422:GLN:HG3	3:SF:97:TRP:HB2	1.98	0.46
4:TK:73:SER:O	4:TK:77:HIS:ND1	2.43	0.46
6:PE:164:GLU:OE1	6:PE:227:THR:OG1	2.21	0.46
3:SA:48:ASP:HB3	3:SA:64:THR:HG21	1.97	0.46
3:SA:328:ILE:HD12	3:SA:345:THR:HG22	1.96	0.46
1:AC:23:THR:OG1	1:AC:28:ASP:O	2.29	0.46
1:AF:176:PRO:HG3	1:AG:43:GLU:HG3	1.98	0.46
2:LC:445:GLU:HB2	2:LC:549:GLN:HA	1.98	0.46
3:SC:367:VAL:HG21	3:SC:377:TRP:CE2	2.51	0.46
4:TH:261:THR:HG21	4:TI:259:LEU:HD12	1.98	0.46
1:AJ:171:PRO:HG2	1:AJ:174:LEU:HD23	1.98	0.46
4:TK:269:THR:HG23	4:TK:270:ILE:HG12	1.97	0.46
6:PB:451:LEU:H	6:PK:454:SER:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SA:367:VAL:HG21	3:SA:377:TRP:CE2	2.51	0.46
3:SC:128:LEU:HG	3:SC:133:MET:HE3	1.97	0.46
4:TG:261:THR:HG21	4:TH:259:LEU:HD12	1.97	0.46
4:TH:278:ASN:HA	4:TH:281:THR:HG23	1.97	0.46
2:LE:422:GLN:HG3	3:SE:97:TRP:HB2	1.98	0.46
4:TI:278:ASN:HA	4:TI:281:THR:HG23	1.97	0.46
2:LF:114:TYR:HA	2:LF:365:GLN:HA	1.97	0.46
2:LF:657:LEU:HB3	2:LF:703:LYS:HE2	1.98	0.46
6:PB:156:ARG:HE	6:PB:158:ILE:HD13	1.81	0.46
6:PI:156:ARG:HE	6:PI:158:ILE:HD13	1.81	0.46
6:PI:454:SER:HB3	6:PL:451:LEU:H	1.81	0.46
2:LC:422:GLN:HG3	3:SC:97:TRP:HB2	1.98	0.46
2:LC:935:ASN:OD1	2:LC:935:ASN:N	2.48	0.46
1:AH:171:PRO:HG2	1:AH:174:LEU:HD23	1.98	0.46
2:LD:422:GLN:HG3	3:SD:97:TRP:HB2	1.98	0.46
2:LD:445:GLU:HB2	2:LD:549:GLN:HA	1.98	0.46
5:XG:75:GLU:OE2	5:YG:80:HIS:NE2	2.45	0.46
2:LE:445:GLU:HB2	2:LE:549:GLN:HA	1.98	0.46
3:SF:367:VAL:HG21	3:SF:377:TRP:CE2	2.51	0.46
6:PG:454:SER:HB3	6:PJ:451:LEU:H	1.81	0.46
4:TB:269:THR:HG23	4:TB:270:ILE:HG12	1.97	0.45
2:LB:445:GLU:HB2	2:LB:549:GLN:HA	1.98	0.45
2:LB:657:LEU:HB3	2:LB:703:LYS:HE2	1.98	0.45
4:TC:269:THR:HG23	4:TC:270:ILE:HG12	1.97	0.45
4:TD:261:THR:HG21	4:TE:259:LEU:HD12	1.98	0.45
2:LC:66:VAL:HG12	2:LC:99:VAL:HG22	1.97	0.45
2:LC:259:THR:O	2:LD:162:ARG:NH2	2.43	0.45
1:AH:176:PRO:HG3	1:AI:43:GLU:HG3	1.98	0.45
2:LD:873:TRP:O	2:LD:877:ASN:ND2	2.27	0.45
5:XG:77:GLN:NE2	5:ZG:65:GLU:OE2	2.48	0.45
1:AJ:176:PRO:HG3	1:AK:43:GLU:HG3	1.98	0.45
4:TJ:73:SER:O	4:TJ:77:HIS:ND1	2.43	0.45
4:TJ:278:ASN:HA	4:TJ:281:THR:HG23	1.97	0.45
3:SA:128:LEU:HG	3:SA:133:MET:HE3	1.97	0.45
5:XC:43:MET:HE3	5:XC:46:ILE:HB	1.98	0.45
2:LC:747:HIS:ND1	2:LC:770:SER:OG	2.46	0.45
4:TE:278:ASN:HA	4:TE:281:THR:HG23	1.97	0.45
1:AH:43:GLU:OE2	1:AH:181:TYR:OH	2.25	0.45
3:SD:367:VAL:HG21	3:SD:377:TRP:CE2	2.51	0.45
4:TH:200:LYS:O	4:TH:203:THR:OG1	2.30	0.45
5:XJ:55:GLN:OE1	5:XJ:55:GLN:N	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LF:445:GLU:HB2	2:LF:549:GLN:HA	1.98	0.45
6:PG:156:ARG:HE	6:PG:158:ILE:HD13	1.81	0.45
2:LA:114:TYR:HA	2:LA:365:GLN:HA	1.97	0.45
2:LA:162:ARG:NH2	2:LF:259:THR:O	2.43	0.45
2:LA:445:GLU:HB2	2:LA:549:GLN:HA	1.98	0.45
3:SB:367:VAL:HG21	3:SB:377:TRP:CE2	2.51	0.45
4:TE:208:MET:HE3	4:TF:209:THR:HG23	1.99	0.45
4:TE:261:THR:HG21	4:TF:259:LEU:HD12	1.97	0.45
4:TF:261:THR:HG21	4:TG:259:LEU:HD12	1.98	0.45
2:LD:66:VAL:HG12	2:LD:99:VAL:HG22	1.97	0.45
3:SF:340:ASP:OD1	3:SF:340:ASP:N	2.44	0.45
6:PJ:156:ARG:HE	6:PJ:158:ILE:HD13	1.81	0.45
6:PL:156:ARG:HE	6:PL:158:ILE:HD13	1.81	0.45
4:TA:278:ASN:HA	4:TA:281:THR:HG23	1.97	0.45
2:LB:995:THR:OG1	2:LB:997:ASP:OD1	2.27	0.45
3:SB:128:LEU:HG	3:SB:133:MET:HE3	1.97	0.45
2:LC:284:ARG:NH1	2:LC:328:ASP:OD1	2.50	0.45
5:XF:55:GLN:OE1	5:XF:55:GLN:N	2.43	0.45
5:XF:73:LEU:HD21	5:ZF:62:LYS:HZ3	1.82	0.45
5:YG:10:ILE:HD12	5:YG:11:PRO:HD2	1.99	0.45
4:TI:73:SER:O	4:TI:77:HIS:ND1	2.43	0.45
4:TI:208:MET:HE3	4:TJ:209:THR:HG23	1.99	0.45
4:TJ:269:THR:HG23	4:TJ:270:ILE:HG12	1.97	0.45
6:PB:53:TRP:NE1	6:PB:382:GLU:OE1	2.39	0.45
6:PD:53:TRP:NE1	6:PD:382:GLU:OE1	2.39	0.45
6:PH:156:ARG:HE	6:PH:158:ILE:HD13	1.81	0.45
6:PK:156:ARG:HE	6:PK:158:ILE:HD13	1.81	0.45
5:YC:10:ILE:HD12	5:YC:11:PRO:HD2	1.99	0.45
2:LC:494:ARG:NH2	2:LC:500:PRO:O	2.40	0.45
3:SC:48:ASP:HB3	3:SC:64:THR:HG21	1.97	0.45
4:TG:208:MET:HE3	4:TH:209:THR:HG23	1.99	0.45
2:LE:259:THR:O	2:LF:162:ARG:NH2	2.43	0.45
2:LE:657:LEU:HB3	2:LE:703:LYS:HE2	1.98	0.45
2:LF:935:ASN:OD1	2:LF:935:ASN:N	2.48	0.45
5:XK:26:ASP:OD1	5:XK:34:TYR:OH	2.28	0.45
6:PF:53:TRP:NE1	6:PF:382:GLU:OE1	2.39	0.45
5:XE:75:GLU:OE2	5:YE:80:HIS:NE2	2.45	0.45
2:LD:284:ARG:NH1	2:LD:328:ASP:OD1	2.50	0.45
6:PI:473:LYS:NZ	6:PL:479:VAL:O	2.35	0.45
2:LA:741:ASN:HD21	2:LA:843:TRP:HB2	1.82	0.45
6:PA:156:ARG:HE	6:PA:158:ILE:HD13	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LC:93:ASN:O	2:LC:240:HIS:ND1	2.50	0.45
2:LC:582:TYR:O	2:LC:585:SER:OG	2.24	0.45
4:TF:278:ASN:HA	4:TF:281:THR:HG23	1.97	0.45
6:PC:156:ARG:HE	6:PC:158:ILE:HD13	1.81	0.45
5:YA:10:ILE:HD12	5:YA:11:PRO:HD2	1.99	0.45
6:PA:454:SER:HB3	6:PD:451:LEU:H	1.82	0.45
3:SB:48:ASP:HB3	3:SB:64:THR:HG21	1.97	0.45
5:XD:73:LEU:HD21	5:ZD:62:LYS:HZ3	1.82	0.45
1:AG:28:ASP:OD1	1:AG:29:ILE:N	2.50	0.45
1:AI:28:ASP:OD1	1:AI:29:ILE:N	2.50	0.45
5:XI:77:GLN:NE2	5:ZI:65:GLU:OE2	2.48	0.45
5:YI:10:ILE:HD12	5:YI:11:PRO:HD2	1.99	0.45
5:XK:77:GLN:NE2	5:ZK:65:GLU:OE2	2.48	0.45
6:PG:432:GLU:OE1	6:PH:414:LYS:HG2	2.17	0.45
2:LB:284:ARG:NH1	2:LB:328:ASP:OD1	2.50	0.45
4:TD:269:THR:HG23	4:TD:270:ILE:HG12	1.97	0.45
2:LE:741:ASN:HD21	2:LE:843:TRP:HB2	1.82	0.45
1:AK:186:TYR:O	1:AK:189:SER:OG	2.29	0.45
5:XL:10:ILE:HD11	5:ZK:41:LEU:HA	1.99	0.45
6:PH:398:MET:HE3	6:PH:451:LEU:HD13	1.99	0.45
1:AA:43:GLU:HG3	1:AL:176:PRO:HG3	1.98	0.45
2:LB:741:ASN:HD21	2:LB:843:TRP:HB2	1.82	0.45
4:TE:211:GLU:HG3	4:TF:213:LYS:HG3	1.99	0.45
4:TH:73:SER:O	4:TH:77:HIS:ND1	2.43	0.45
5:XI:43:MET:HE3	5:XI:46:ILE:HB	1.98	0.45
5:XJ:10:ILE:HD11	5:ZI:41:LEU:HA	1.99	0.45
1:AL:148:ASN:HB2	5:YL:7:PHE:CD2	2.52	0.45
6:PC:432:GLU:OE1	6:PD:414:LYS:HG2	2.17	0.45
6:PE:398:MET:HE3	6:PE:451:LEU:HD13	1.99	0.45
6:PG:398:MET:HE3	6:PG:451:LEU:HD13	1.99	0.45
1:AD:148:ASN:HB2	5:YD:7:PHE:CD2	2.52	0.44
4:TC:208:MET:HE3	4:TD:209:THR:HG23	1.99	0.44
4:TD:278:ASN:HA	4:TD:281:THR:HG23	1.97	0.44
4:TG:278:ASN:HA	4:TG:281:THR:HG23	1.97	0.44
5:XG:43:MET:HE3	5:XG:46:ILE:HB	1.98	0.44
5:XH:10:ILE:HD11	5:ZG:41:LEU:HA	1.99	0.44
2:LE:284:ARG:NH1	2:LE:328:ASP:OD1	2.50	0.44
2:LE:551:ASP:OD1	3:SE:18:ARG:NH1	2.33	0.44
2:LF:143:THR:OG1	2:LF:145:GLU:OE1	2.31	0.44
4:TK:208:MET:HE3	4:TL:209:THR:HG23	1.99	0.44
6:PE:454:SER:HB3	6:PH:451:LEU:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PI:398:MET:HE3	6:PI:451:LEU:HD13	1.99	0.44
1:AB:43:GLU:OE2	1:AB:181:TYR:OH	2.25	0.44
5:XA:43:MET:HE3	5:XA:46:ILE:HB	1.98	0.44
6:PA:432:GLU:OE1	6:PB:414:LYS:HG2	2.17	0.44
5:XF:10:ILE:HD11	5:ZE:41:LEU:HA	1.99	0.44
4:TG:211:GLU:HG3	4:TH:213:LYS:HG3	1.99	0.44
5:XH:55:GLN:OE1	5:XH:55:GLN:N	2.43	0.44
3:SE:367:VAL:HG21	3:SE:377:TRP:CE2	2.51	0.44
2:LF:596:GLU:OE2	3:SF:41:THR:N	2.43	0.44
2:LF:741:ASN:HD21	2:LF:843:TRP:HB2	1.82	0.44
6:PF:156:ARG:HE	6:PF:158:ILE:HD13	1.81	0.44
1:AA:56:ASN:ND2	5:YA:2:SER:O	2.51	0.44
1:AB:176:PRO:HG3	1:AC:43:GLU:HG3	1.98	0.44
4:TA:73:SER:O	4:TA:77:HIS:ND1	2.43	0.44
1:AJ:148:ASN:HB2	5:YJ:7:PHE:CD2	2.52	0.44
1:AK:28:ASP:OD1	1:AK:29:ILE:N	2.50	0.44
6:PC:454:SER:HB3	6:PF:451:LEU:H	1.81	0.44
2:LA:93:ASN:O	2:LA:240:HIS:ND1	2.50	0.44
2:LB:143:THR:OG1	2:LB:145:GLU:OE1	2.31	0.44
2:LB:888:GLN:HE21	2:LB:931:VAL:HG13	1.83	0.44
2:LE:888:GLN:HE21	2:LE:931:VAL:HG13	1.83	0.44
2:LF:894:TRP:HB2	2:LF:947:TRP:HB2	2.00	0.44
6:PJ:398:MET:HE3	6:PJ:451:LEU:HD13	1.99	0.44
2:LA:422:GLN:HG3	3:SA:97:TRP:HB2	1.98	0.44
2:LA:888:GLN:HE21	2:LA:931:VAL:HG13	1.83	0.44
2:LA:894:TRP:HB2	2:LA:947:TRP:HB2	2.00	0.44
2:LB:422:GLN:HG3	3:SB:97:TRP:HB2	1.98	0.44
1:AE:28:ASP:OD1	1:AE:29:ILE:N	2.50	0.44
1:AF:148:ASN:HB2	5:YF:7:PHE:CD2	2.52	0.44
2:LC:551:ASP:OD1	3:SC:18:ARG:NH1	2.33	0.44
1:AH:148:ASN:HB2	5:YH:7:PHE:CD2	2.53	0.44
2:LD:747:HIS:ND1	2:LD:770:SER:OG	2.46	0.44
2:LF:93:ASN:O	2:LF:240:HIS:ND1	2.50	0.44
6:PD:156:ARG:HE	6:PD:158:ILE:HD13	1.81	0.44
6:PE:156:ARG:HE	6:PE:158:ILE:HD13	1.81	0.44
2:LA:284:ARG:NH1	2:LA:328:ASP:OD1	2.50	0.44
2:LA:968:LEU:O	2:LA:969:ASN:ND2	2.51	0.44
2:LB:610:ASN:O	2:LB:610:ASN:ND2	2.42	0.44
3:SB:340:ASP:OD1	3:SB:340:ASP:N	2.44	0.44
2:LC:657:LEU:HB3	2:LC:703:LYS:HE2	1.98	0.44
2:LC:888:GLN:HE21	2:LC:931:VAL:HG13	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:311:ASN:O	2:LD:476:ASN:ND2	2.50	0.44
2:LD:657:LEU:HB3	2:LD:703:LYS:HE2	1.98	0.44
2:LD:888:GLN:HE21	2:LD:931:VAL:HG13	1.83	0.44
6:PE:107:THR:OG1	6:PE:110:ASP:OD2	2.36	0.44
6:PF:398:MET:HE3	6:PF:451:LEU:HD13	1.99	0.44
6:PL:398:MET:HE3	6:PL:451:LEU:HD13	1.99	0.44
2:LB:968:LEU:O	2:LB:969:ASN:ND2	2.51	0.44
2:LC:311:ASN:O	2:LC:476:ASN:ND2	2.50	0.44
2:LD:995:THR:OG1	2:LD:997:ASP:OD1	2.27	0.44
5:XH:73:LEU:HD21	5:ZH:62:LYS:HZ3	1.83	0.44
2:LE:311:ASN:O	2:LE:476:ASN:ND2	2.50	0.44
2:LF:311:ASN:O	2:LF:476:ASN:ND2	2.50	0.44
5:XK:43:MET:HE3	5:XK:46:ILE:HB	1.98	0.44
6:PC:107:THR:OG1	6:PC:110:ASP:OD2	2.36	0.44
6:PI:432:GLU:OE1	6:PJ:414:LYS:HG2	2.17	0.44
6:PK:432:GLU:OE1	6:PL:414:LYS:HG2	2.17	0.44
3:SA:239:GLU:OE2	3:SA:266:TRP:NE1	2.38	0.44
4:TA:208:MET:HE3	4:TB:209:THR:HG23	1.99	0.44
4:TB:73:SER:O	4:TB:77:HIS:ND1	2.43	0.44
4:TC:211:GLU:HG3	4:TD:213:LYS:HG3	1.99	0.44
5:XE:43:MET:HE3	5:XE:46:ILE:HB	1.98	0.44
1:AG:56:ASN:ND2	5:YG:2:SER:O	2.51	0.44
2:LD:968:LEU:O	2:LD:969:ASN:ND2	2.51	0.44
2:LE:894:TRP:HB2	2:LE:947:TRP:HB2	2.00	0.44
2:LF:284:ARG:NH1	2:LF:328:ASP:OD1	2.50	0.44
2:LF:968:LEU:O	2:LF:969:ASN:ND2	2.51	0.44
4:TK:211:GLU:HG3	4:TL:213:LYS:HG3	1.99	0.44
6:PF:107:THR:OG1	6:PF:110:ASP:OD2	2.36	0.44
2:LB:311:ASN:O	2:LB:476:ASN:ND2	2.50	0.44
2:LC:237:GLU:OE1	2:LC:239:HIS:N	2.34	0.44
2:LC:741:ASN:HD21	2:LC:843:TRP:HB2	1.82	0.44
4:TI:200:LYS:O	4:TI:203:THR:OG1	2.30	0.44
5:YK:10:ILE:HD12	5:YK:11:PRO:HD2	1.99	0.44
1:AB:148:ASN:HB2	5:YB:7:PHE:CD2	2.53	0.43
2:LA:311:ASN:O	2:LA:476:ASN:ND2	2.50	0.43
6:PA:454:SER:HB3	6:PD:450:GLU:HA	2.00	0.43
2:LB:237:GLU:OE1	2:LB:239:HIS:N	2.34	0.43
5:YD:55:GLN:OE1	5:YD:55:GLN:N	2.45	0.43
5:YH:55:GLN:OE1	5:YH:55:GLN:N	2.45	0.43
2:LE:747:HIS:ND1	2:LE:770:SER:OG	2.46	0.43
6:PC:454:SER:HB3	6:PF:450:GLU:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PD:107:THR:OG1	6:PD:110:ASP:OD2	2.36	0.43
6:PH:107:THR:OG1	6:PH:110:ASP:OD2	2.36	0.43
6:PH:371:VAL:HB	6:PH:374:ASP:HB3	2.00	0.43
6:PI:371:VAL:HB	6:PI:374:ASP:HB3	2.00	0.43
6:PK:398:MET:HE3	6:PK:451:LEU:HD13	1.99	0.43
1:AF:173:THR:HG23	1:AF:174:LEU:HD22	2.00	0.43
2:LC:92:THR:OG1	2:LC:95:ASP:OD1	2.36	0.43
2:LC:543:LYS:HA	2:LC:590:ILE:HG21	2.00	0.43
1:AG:85:GLU:N	1:AG:85:GLU:OE1	2.51	0.43
4:TG:73:SER:O	4:TG:77:HIS:ND1	2.43	0.43
6:PC:371:VAL:HB	6:PC:374:ASP:HB3	2.00	0.43
6:PG:53:TRP:NE1	6:PG:382:GLU:OE1	2.39	0.43
6:PG:107:THR:OG1	6:PG:110:ASP:OD2	2.36	0.43
5:ZA:73:LEU:O	5:ZA:77:GLN:HG2	2.19	0.43
2:LB:682:VAL:HA	2:LB:685:TRP:NE1	2.34	0.43
1:AE:85:GLU:OE1	1:AE:85:GLU:N	2.51	0.43
2:LE:543:LYS:HA	2:LE:590:ILE:HG21	2.00	0.43
2:LE:968:LEU:O	2:LE:969:ASN:ND2	2.51	0.43
5:ZI:73:LEU:O	5:ZI:77:GLN:HG2	2.19	0.43
1:AK:85:GLU:OE1	1:AK:85:GLU:N	2.51	0.43
2:LF:92:THR:OG1	2:LF:95:ASP:OD1	2.36	0.43
2:LF:543:LYS:HA	2:LF:590:ILE:HG21	2.00	0.43
3:SF:347:ASP:OD1	3:SF:351:ASN:ND2	2.41	0.43
6:PB:371:VAL:HB	6:PB:374:ASP:HB3	2.00	0.43
6:PC:398:MET:HE3	6:PC:451:LEU:HD13	1.99	0.43
6:PE:432:GLU:OE1	6:PF:414:LYS:HG2	2.17	0.43
6:PA:107:THR:OG1	6:PA:110:ASP:OD2	2.36	0.43
2:LC:968:LEU:O	2:LC:969:ASN:ND2	2.51	0.43
2:LD:1125:ILE:HG12	2:LD:1145:PHE:CZ	2.54	0.43
1:AI:56:ASN:ND2	5:YI:2:SER:O	2.51	0.43
1:AI:85:GLU:OE1	1:AI:85:GLU:N	2.52	0.43
1:AA:28:ASP:OD1	1:AA:29:ILE:N	2.50	0.43
4:TA:211:GLU:HG3	4:TB:213:LYS:HG3	1.99	0.43
1:AC:28:ASP:OD1	1:AC:29:ILE:N	2.50	0.43
2:LB:543:LYS:HA	2:LB:590:ILE:HG21	2.00	0.43
2:LB:894:TRP:HB2	2:LB:947:TRP:HB2	2.00	0.43
2:LB:935:ASN:OD1	2:LB:935:ASN:N	2.48	0.43
3:SB:347:ASP:OD1	3:SB:351:ASN:ND2	2.41	0.43
5:XD:10:ILE:HD11	5:ZC:41:LEU:HA	1.99	0.43
2:LC:610:ASN:O	2:LC:610:ASN:ND2	2.42	0.43
5:YE:10:ILE:HD12	5:YE:11:PRO:HD2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:682:VAL:HA	2:LD:685:TRP:NE1	2.34	0.43
2:LD:741:ASN:HD21	2:LD:843:TRP:HB2	1.82	0.43
5:ZG:73:LEU:O	5:ZG:77:GLN:HG2	2.19	0.43
2:LE:93:ASN:O	2:LE:240:HIS:ND1	2.50	0.43
2:LE:259:THR:HG1	2:LE:316:CYS:C	2.24	0.43
4:TI:211:GLU:HG3	4:TJ:213:LYS:HG3	1.99	0.43
1:AK:56:ASN:ND2	5:YK:2:SER:O	2.51	0.43
2:LF:888:GLN:HE21	2:LF:931:VAL:HG13	1.83	0.43
2:LF:940:TYR:HA	2:LF:950:TYR:HA	2.01	0.43
2:LF:1125:ILE:HG12	2:LF:1145:PHE:CZ	2.54	0.43
1:AA:85:GLU:N	1:AA:85:GLU:OE1	2.51	0.43
2:LA:551:ASP:OD1	3:SA:18:ARG:NH1	2.33	0.43
2:LB:93:ASN:O	2:LB:240:HIS:ND1	2.50	0.43
5:ZC:73:LEU:O	5:ZC:77:GLN:HG2	2.19	0.43
2:LE:1125:ILE:HG12	2:LE:1145:PHE:CZ	2.54	0.43
3:SF:320:PHE:HA	3:SF:355:TYR:CZ	2.54	0.43
6:PB:398:MET:HE3	6:PB:451:LEU:HD13	1.99	0.43
6:PF:371:VAL:HB	6:PF:374:ASP:HB3	2.00	0.43
2:LA:259:THR:HG1	2:LA:316:CYS:C	2.24	0.43
2:LA:747:HIS:ND1	2:LA:770:SER:OG	2.46	0.43
3:SB:87:SER:O	3:SB:90:LYS:NZ	2.47	0.43
1:AE:56:ASN:ND2	5:YE:2:SER:O	2.50	0.43
2:LC:682:VAL:HA	2:LC:685:TRP:NE1	2.34	0.43
3:SD:211:TRP:N	3:SD:312:ASN:OD1	2.44	0.43
3:SE:320:PHE:HA	3:SE:355:TYR:CZ	2.54	0.43
6:PD:357:PRO:HG2	6:PD:522:ALA:HB1	2.01	0.43
6:PD:398:MET:HE3	6:PD:451:LEU:HD13	1.99	0.43
6:PK:371:VAL:HB	6:PK:374:ASP:HB3	2.00	0.43
6:PL:107:THR:OG1	6:PL:110:ASP:OD2	2.36	0.43
1:AB:173:THR:HG23	1:AB:174:LEU:HD22	2.00	0.43
2:LA:237:GLU:OE1	2:LA:239:HIS:N	2.34	0.43
2:LA:873:TRP:O	2:LA:877:ASN:ND2	2.27	0.43
6:PA:398:MET:HE3	6:PA:451:LEU:HD13	1.99	0.43
1:AD:173:THR:HG23	1:AD:174:LEU:HD22	2.00	0.43
2:LC:1125:ILE:HG12	2:LC:1145:PHE:CZ	2.54	0.43
5:ZE:73:LEU:O	5:ZE:77:GLN:HG2	2.19	0.43
3:SE:8:PRO:HB2	3:SE:45:MET:HE2	2.01	0.43
3:SE:196:GLN:HG3	3:SE:202:LEU:HD11	2.01	0.43
4:TJ:26:ASP:OD1	4:TJ:26:ASP:N	2.46	0.43
1:AL:173:THR:HG23	1:AL:174:LEU:HD22	2.00	0.43
6:PE:454:SER:HB3	6:PH:450:GLU:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PJ:371:VAL:HB	6:PJ:374:ASP:HB3	2.00	0.43
1:AA:132:ARG:HB2	1:AA:135:VAL:HB	2.01	0.43
1:AF:87:LYS:HE3	2:LC:15:SER:HB3	2.01	0.43
2:LE:749:THR:OG1	2:LE:750:ASP:N	2.52	0.43
2:LE:940:TYR:HA	2:LE:950:TYR:HA	2.01	0.43
6:PB:450:GLU:HA	6:PK:454:SER:HB3	2.00	0.43
6:PJ:107:THR:OG1	6:PJ:110:ASP:OD2	2.36	0.43
2:LA:682:VAL:HA	2:LA:685:TRP:NE1	2.34	0.43
2:LA:1125:ILE:HG12	2:LA:1145:PHE:CZ	2.54	0.43
5:XB:10:ILE:HD11	5:ZA:41:LEU:HA	1.99	0.43
1:AC:85:GLU:OE1	1:AC:85:GLU:N	2.52	0.43
1:AC:132:ARG:HB2	1:AC:135:VAL:HB	2.01	0.43
2:LB:1125:ILE:HG12	2:LB:1145:PHE:CZ	2.54	0.43
2:LC:894:TRP:HB2	2:LC:947:TRP:HB2	2.00	0.43
3:SD:8:PRO:HB2	3:SD:45:MET:HE2	2.01	0.43
5:XH:43:MET:N	5:XH:44:PRO:HD2	2.34	0.43
2:LE:991:ARG:HD2	2:LE:1077:GLN:HB3	2.01	0.43
2:LF:991:ARG:HD2	2:LF:1077:GLN:HB3	2.01	0.43
5:ZK:73:LEU:O	5:ZK:77:GLN:HG2	2.19	0.43
6:PB:107:THR:OG1	6:PB:110:ASP:OD2	2.36	0.43
6:PG:371:VAL:HB	6:PG:374:ASP:HB3	2.01	0.43
6:PK:107:THR:OG1	6:PK:110:ASP:OD2	2.36	0.43
6:PL:53:TRP:NE1	6:PL:382:GLU:OE1	2.39	0.43
2:LA:582:TYR:O	2:LA:585:SER:OG	2.24	0.42
2:LA:610:ASN:O	2:LA:610:ASN:ND2	2.42	0.42
6:PA:371:VAL:HB	6:PA:374:ASP:HB3	2.00	0.42
3:SB:405:ARG:NE	3:SB:406:ASP:OD1	2.48	0.42
5:XE:77:GLN:NE2	5:ZE:65:GLU:OE2	2.48	0.42
2:LD:543:LYS:HA	2:LD:590:ILE:HG21	2.00	0.42
4:TH:213:LYS:HE2	4:TH:213:LYS:HB3	1.88	0.42
1:AI:128:LEU:HD23	1:AI:136:LEU:HD11	2.01	0.42
2:LE:582:TYR:O	2:LE:585:SER:OG	2.24	0.42
1:AK:128:LEU:HD23	1:AK:136:LEU:HD11	2.02	0.42
2:LF:747:HIS:ND1	2:LF:770:SER:OG	2.46	0.42
3:SF:8:PRO:HB2	3:SF:45:MET:HE2	2.01	0.42
3:SF:137:ASN:O	3:SF:205:GLN:N	2.52	0.42
5:XL:43:MET:N	5:XL:44:PRO:HD2	2.34	0.42
6:PE:371:VAL:HB	6:PE:374:ASP:HB3	2.00	0.42
6:PI:107:THR:OG1	6:PI:110:ASP:OD2	2.36	0.42
6:PL:371:VAL:HB	6:PL:374:ASP:HB3	2.00	0.42
1:AA:128:LEU:HD23	1:AA:136:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LA:940:TYR:HA	2:LA:950:TYR:HA	2.01	0.42
3:SA:320:PHE:HA	3:SA:355:TYR:CZ	2.54	0.42
5:XB:43:MET:N	5:XB:44:PRO:HD2	2.34	0.42
2:LB:51:THR:O	2:LB:368:TYR:OH	2.35	0.42
1:AE:132:ARG:HB2	1:AE:135:VAL:HB	2.01	0.42
2:LC:991:ARG:HD2	2:LC:1077:GLN:HB3	2.01	0.42
5:XE:9:THR:OG1	5:XE:10:ILE:N	2.51	0.42
1:AG:128:LEU:HD23	1:AG:136:LEU:HD11	2.01	0.42
1:AK:132:ARG:HB2	1:AK:135:VAL:HB	2.01	0.42
6:PD:371:VAL:HB	6:PD:374:ASP:HB3	2.00	0.42
6:PK:53:TRP:NE1	6:PK:382:GLU:OE1	2.39	0.42
2:LA:543:LYS:HA	2:LA:590:ILE:HG21	2.00	0.42
3:SA:137:ASN:O	3:SA:205:GLN:N	2.52	0.42
1:AD:87:LYS:HE3	2:LB:15:SER:HB3	2.01	0.42
2:LB:886:TRP:HE3	2:LB:928:GLY:HA2	1.84	0.42
5:XC:77:GLN:NE2	5:ZC:65:GLU:OE2	2.48	0.42
2:LC:737:LEU:O	2:LC:838:ILE:N	2.51	0.42
3:SC:8:PRO:HB2	3:SC:45:MET:HE2	2.01	0.42
1:AH:173:THR:HG23	1:AH:174:LEU:HD22	2.00	0.42
2:LD:894:TRP:HB2	2:LD:947:TRP:HB2	2.00	0.42
2:LE:494:ARG:NH2	2:LE:500:PRO:O	2.40	0.42
2:LE:596:GLU:OE2	3:SE:41:THR:N	2.43	0.42
2:LE:682:VAL:HA	2:LE:685:TRP:NE1	2.34	0.42
2:LF:710:TYR:O	2:LF:711:GLN:HG3	2.19	0.42
2:LA:710:TYR:O	2:LA:711:GLN:HG3	2.19	0.42
2:LA:886:TRP:HE3	2:LA:928:GLY:HA2	1.84	0.42
3:SA:8:PRO:HB2	3:SA:45:MET:HE2	2.01	0.42
5:XA:9:THR:OG1	5:XA:10:ILE:N	2.51	0.42
2:LB:1050:LEU:HG	2:LB:1075:VAL:HG23	2.02	0.42
3:SB:8:PRO:HB2	3:SB:45:MET:HE2	2.01	0.42
3:SB:137:ASN:O	3:SB:205:GLN:N	2.52	0.42
2:LC:873:TRP:O	2:LC:877:ASN:ND2	2.27	0.42
5:XF:43:MET:N	5:XF:44:PRO:HD2	2.34	0.42
2:LD:1089:LYS:HE2	2:LD:1089:LYS:HB2	1.90	0.42
3:SE:137:ASN:O	3:SE:205:GLN:N	2.52	0.42
2:LF:259:THR:HG1	2:LF:316:CYS:C	2.24	0.42
6:PE:357:PRO:HG2	6:PE:522:ALA:HB1	2.01	0.42
6:PF:268:PHE:HE1	6:PF:323:GLU:HG3	1.85	0.42
6:PI:479:VAL:HG12	6:PJ:467:GLU:HB3	2.01	0.42
6:PK:357:PRO:HG2	6:PK:522:ALA:HB1	2.01	0.42
5:XA:77:GLN:NE2	5:ZA:65:GLU:OE2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XB:52:ASN:ND2	5:YB:53:MET:SD	2.93	0.42
2:LB:749:THR:OG1	2:LB:750:ASP:N	2.52	0.42
2:LB:1088:LEU:HD13	2:LB:1102:TRP:HB3	2.02	0.42
5:XC:9:THR:OG1	5:XC:10:ILE:N	2.51	0.42
5:XD:43:MET:N	5:XD:44:PRO:HD2	2.34	0.42
3:SC:139:VAL:HG22	3:SC:188:GLN:NE2	2.35	0.42
3:SC:320:PHE:HA	3:SC:355:TYR:CZ	2.54	0.42
2:LE:995:THR:OG1	2:LE:997:ASP:OD1	2.27	0.42
3:SE:87:SER:O	3:SE:90:LYS:NZ	2.47	0.42
5:XJ:43:MET:N	5:XJ:44:PRO:HD2	2.34	0.42
6:PB:357:PRO:HG2	6:PB:522:ALA:HB1	2.01	0.42
6:PC:268:PHE:HE1	6:PC:323:GLU:HG3	1.85	0.42
6:PC:357:PRO:HG2	6:PC:522:ALA:HB1	2.01	0.42
6:PC:487:VAL:O	6:PC:491:ILE:HG12	2.20	0.42
6:PF:357:PRO:HG2	6:PF:522:ALA:HB1	2.01	0.42
6:PI:454:SER:HB3	6:PL:450:GLU:HA	2.00	0.42
6:PL:374:ASP:OD1	6:PL:375:MET:N	2.52	0.42
2:LA:1050:LEU:HG	2:LA:1075:VAL:HG23	2.02	0.42
6:PA:487:VAL:O	6:PA:491:ILE:HG12	2.20	0.42
3:SB:320:PHE:HA	3:SB:355:TYR:CZ	2.54	0.42
5:XD:52:ASN:ND2	5:YD:53:MET:SD	2.93	0.42
2:LC:143:THR:OG1	2:LC:145:GLU:OE1	2.31	0.42
5:XF:52:ASN:ND2	5:YF:53:MET:SD	2.93	0.42
2:LD:737:LEU:O	2:LD:838:ILE:N	2.51	0.42
2:LE:92:THR:OG1	2:LE:95:ASP:OD1	2.36	0.42
3:SE:139:VAL:HG22	3:SE:188:GLN:NE2	2.35	0.42
1:AL:87:LYS:HE3	2:LF:15:SER:HB3	2.01	0.42
6:PF:487:VAL:O	6:PF:491:ILE:HG12	2.20	0.42
6:PG:454:SER:HB3	6:PJ:450:GLU:HA	2.00	0.42
6:PI:53:TRP:NE1	6:PI:382:GLU:OE1	2.39	0.42
1:AA:172:ASP:OD1	1:AA:172:ASP:N	2.52	0.42
6:PA:357:PRO:HG2	6:PA:522:ALA:HB1	2.01	0.42
6:PA:404:ARG:O	6:PD:410:ARG:NH2	2.53	0.42
1:AE:128:LEU:HD23	1:AE:136:LEU:HD11	2.01	0.42
2:LC:1050:LEU:HG	2:LC:1075:VAL:HG23	2.02	0.42
1:AG:132:ARG:HB2	1:AG:135:VAL:HB	2.01	0.42
2:LD:1117:SER:OG	2:LD:1120:ASP:O	2.38	0.42
3:SD:320:PHE:HA	3:SD:355:TYR:CZ	2.54	0.42
1:AJ:173:THR:HG23	1:AJ:174:LEU:HD22	2.00	0.42
2:LE:1039:ASN:N	2:LE:1039:ASN:OD1	2.52	0.42
2:LF:886:TRP:HE3	2:LF:928:GLY:HA2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PB:410:ARG:NH2	6:PK:404:ARG:O	2.53	0.42
6:PE:268:PHE:HE1	6:PE:323:GLU:HG3	1.85	0.42
6:PI:374:ASP:OD1	6:PI:375:MET:N	2.52	0.42
2:LA:749:THR:OG1	2:LA:750:ASP:N	2.52	0.42
2:LA:1088:LEU:HD13	2:LA:1102:TRP:HB3	2.02	0.42
3:SC:405:ARG:NE	3:SC:406:ASP:OD1	2.48	0.42
2:LD:400:GLY:HA2	2:LD:402:ARG:HE	1.85	0.42
2:LD:749:THR:OG1	2:LD:750:ASP:N	2.52	0.42
1:AI:132:ARG:HB2	1:AI:135:VAL:HB	2.01	0.42
2:LE:710:TYR:O	2:LE:711:GLN:HG3	2.19	0.42
2:LE:932:PRO:HG2	2:LE:957:ALA:HB1	2.02	0.42
4:TI:26:ASP:OD1	4:TI:26:ASP:N	2.46	0.42
2:LF:551:ASP:OD1	3:SF:18:ARG:NH1	2.33	0.42
2:LF:621:LEU:HD13	2:LF:635:TRP:HB3	2.02	0.42
2:LF:913:ASP:OD2	2:LF:983:ARG:NH2	2.53	0.42
3:SF:196:GLN:HG3	3:SF:202:LEU:HD11	2.01	0.42
6:PG:479:VAL:HG12	6:PH:467:GLU:HB3	2.01	0.42
6:PK:374:ASP:OD1	6:PK:375:MET:N	2.52	0.42
6:PK:479:VAL:HG12	6:PL:467:GLU:HB3	2.01	0.42
2:LA:913:ASP:OD2	2:LA:983:ARG:NH2	2.53	0.42
2:LA:991:ARG:HD2	2:LA:1077:GLN:HB3	2.01	0.42
3:SA:196:GLN:HG3	3:SA:202:LEU:HD11	2.01	0.42
1:AD:132:ARG:HB2	1:AD:135:VAL:HB	2.02	0.42
3:SB:196:GLN:HG3	3:SB:202:LEU:HD11	2.01	0.42
1:AF:132:ARG:HB2	1:AF:135:VAL:HB	2.02	0.42
2:LC:886:TRP:HE3	2:LC:928:GLY:HA2	1.84	0.42
3:SC:137:ASN:O	3:SC:205:GLN:N	2.52	0.42
5:YF:55:GLN:OE1	5:YF:55:GLN:N	2.45	0.42
1:AH:233:ARG:HA	1:AH:233:ARG:HD3	1.95	0.42
2:LD:940:TYR:HA	2:LD:950:TYR:HA	2.01	0.42
5:ZG:62:LYS:HB2	5:ZG:65:GLU:CD	2.45	0.42
2:LE:142:GLN:O	2:LE:229:THR:OG1	2.26	0.42
6:PF:368:TYR:CD2	6:PF:369:MET:HG3	2.55	0.42
6:PH:487:VAL:O	6:PH:491:ILE:HG12	2.20	0.42
6:PI:579:ILE:HG12	6:PL:592:LEU:HD13	2.02	0.42
1:AC:128:LEU:HD23	1:AC:136:LEU:HD11	2.01	0.42
1:AC:186:TYR:O	1:AC:189:SER:OG	2.29	0.42
2:LB:596:GLU:OE2	3:SB:41:THR:N	2.43	0.42
2:LB:913:ASP:OD2	2:LB:983:ARG:NH2	2.53	0.42
2:LC:932:PRO:HG2	2:LC:957:ALA:HB1	2.02	0.42
4:TF:73:SER:O	4:TF:77:HIS:ND1	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SD:139:VAL:HG22	3:SD:188:GLN:NE2	2.35	0.42
1:AJ:132:ARG:HB2	1:AJ:135:VAL:HB	2.02	0.42
5:ZI:62:LYS:HB2	5:ZI:65:GLU:CD	2.45	0.42
1:AK:172:ASP:OD1	1:AK:172:ASP:N	2.52	0.42
2:LF:30:ASP:OD1	2:LF:31:LEU:N	2.53	0.42
3:SF:211:TRP:N	3:SF:312:ASN:OD1	2.44	0.42
6:PC:404:ARG:O	6:PF:410:ARG:NH2	2.53	0.42
6:PD:487:VAL:O	6:PD:491:ILE:HG12	2.20	0.42
6:PI:357:PRO:HG2	6:PI:522:ALA:HB1	2.01	0.42
6:PI:404:ARG:O	6:PL:410:ARG:NH2	2.53	0.42
6:PJ:374:ASP:OD1	6:PJ:375:MET:N	2.52	0.42
4:TB:197:GLU:HG3	4:TC:199:THR:HG23	2.02	0.41
6:PA:579:ILE:HG12	6:PD:592:LEU:HD13	2.02	0.41
1:AC:56:ASN:ND2	5:YC:2:SER:O	2.51	0.41
2:LC:901:ASN:CG	2:LC:905:SER:HB3	2.45	0.41
2:LC:1039:ASN:OD1	2:LC:1039:ASN:N	2.52	0.41
3:SC:196:GLN:HG3	3:SC:202:LEU:HD11	2.01	0.41
1:AH:87:LYS:HE3	2:LD:15:SER:HB3	2.01	0.41
2:LD:886:TRP:HE3	2:LD:928:GLY:HA2	1.84	0.41
2:LD:913:ASP:OD2	2:LD:983:ARG:NH2	2.53	0.41
4:TH:197:GLU:HG3	4:TI:199:THR:HG23	2.02	0.41
5:YJ:43:MET:N	5:YJ:44:PRO:HD2	2.35	0.41
6:PD:268:PHE:HE1	6:PD:323:GLU:HG3	1.85	0.41
6:PE:487:VAL:O	6:PE:491:ILE:HG12	2.20	0.41
6:PH:268:PHE:HE1	6:PH:323:GLU:HG3	1.85	0.41
6:PH:368:TYR:CD2	6:PH:369:MET:HG3	2.55	0.41
1:AB:132:ARG:HB2	1:AB:135:VAL:HB	2.02	0.41
1:AB:233:ARG:HA	1:AB:233:ARG:HD3	1.95	0.41
2:LA:400:GLY:HA2	2:LA:402:ARG:HE	1.85	0.41
2:LA:932:PRO:HG2	2:LA:957:ALA:HB1	2.02	0.41
4:TA:199:THR:HG23	4:TL:197:GLU:HG3	2.02	0.41
2:LB:1039:ASN:OD1	2:LB:1039:ASN:N	2.52	0.41
5:YD:43:MET:N	5:YD:44:PRO:HD2	2.35	0.41
4:TF:197:GLU:HG3	4:TG:199:THR:HG23	2.02	0.41
1:AH:55:ARG:NH2	1:AI:132:ARG:HH21	2.18	0.41
1:AH:132:ARG:HB2	1:AH:135:VAL:HB	2.02	0.41
2:LD:710:TYR:O	2:LD:711:GLN:HG3	2.19	0.41
2:LD:932:PRO:HG2	2:LD:957:ALA:HB1	2.02	0.41
2:LD:991:ARG:HD2	2:LD:1077:GLN:HB3	2.01	0.41
1:AJ:87:LYS:HE3	2:LE:15:SER:HB3	2.01	0.41
2:LE:621:LEU:HD13	2:LE:635:TRP:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YL:43:MET:N	5:YL:44:PRO:HD2	2.35	0.41
6:PD:368:TYR:CD2	6:PD:369:MET:HG3	2.55	0.41
6:PG:357:PRO:HG2	6:PG:522:ALA:HB1	2.01	0.41
6:PJ:357:PRO:HG2	6:PJ:522:ALA:HB1	2.01	0.41
6:PK:368:TYR:CD2	6:PK:369:MET:HG3	2.55	0.41
2:LA:621:LEU:HD13	2:LA:635:TRP:HB3	2.02	0.41
3:SA:29:ILE:HG23	3:SA:36:HIS:HB2	2.02	0.41
2:LB:710:TYR:O	2:LB:711:GLN:HG3	2.19	0.41
2:LB:737:LEU:O	2:LB:838:ILE:N	2.52	0.41
2:LB:940:TYR:HA	2:LB:950:TYR:HA	2.01	0.41
3:SB:29:ILE:HG23	3:SB:36:HIS:HB2	2.02	0.41
4:TD:295:ASN:ND2	2:LE:1046:ASN:OD1	2.54	0.41
5:YC:43:MET:N	5:YC:44:PRO:HD2	2.35	0.41
1:AF:55:ARG:NH2	1:AG:132:ARG:HH21	2.18	0.41
2:LC:913:ASP:OD2	2:LC:983:ARG:NH2	2.53	0.41
3:SD:87:SER:O	3:SD:90:LYS:NZ	2.47	0.41
5:XH:52:ASN:ND2	5:YH:53:MET:SD	2.93	0.41
2:LE:901:ASN:CG	2:LE:905:SER:HB3	2.45	0.41
4:TI:213:LYS:HE2	4:TI:213:LYS:HB3	1.88	0.41
1:AL:132:ARG:HB2	1:AL:135:VAL:HB	2.02	0.41
2:LF:400:GLY:HA2	2:LF:402:ARG:HE	1.85	0.41
2:LF:682:VAL:HA	2:LF:685:TRP:NE1	2.34	0.41
3:SF:139:VAL:HG22	3:SF:188:GLN:NE2	2.35	0.41
4:TL:200:LYS:O	4:TL:203:THR:OG1	2.30	0.41
5:ZK:62:LYS:HB2	5:ZK:65:GLU:CD	2.45	0.41
6:PE:368:TYR:CD2	6:PE:369:MET:HG3	2.55	0.41
6:PG:368:TYR:CD2	6:PG:369:MET:HG3	2.55	0.41
6:PL:368:TYR:CD2	6:PL:369:MET:HG3	2.55	0.41
1:AB:87:LYS:HE3	2:LA:15:SER:HB3	2.01	0.41
2:LA:596:GLU:OE2	3:SA:41:THR:N	2.43	0.41
5:YA:43:MET:N	5:YA:44:PRO:HD2	2.36	0.41
2:LB:991:ARG:HD2	2:LB:1077:GLN:HB3	2.01	0.41
4:TD:197:GLU:HG3	4:TE:199:THR:HG23	2.02	0.41
5:ZC:62:LYS:HB2	5:ZC:65:GLU:CD	2.45	0.41
2:LC:1046:ASN:OD1	4:TL:295:ASN:ND2	2.54	0.41
1:AI:172:ASP:OD1	1:AI:172:ASP:N	2.52	0.41
2:LE:400:GLY:HA2	2:LE:402:ARG:HE	1.85	0.41
1:AK:176:PRO:HG3	1:AL:43:GLU:HG3	2.02	0.41
5:XL:52:ASN:ND2	5:YL:53:MET:SD	2.93	0.41
6:PB:374:ASP:OD1	6:PB:375:MET:N	2.52	0.41
6:PE:404:ARG:O	6:PH:410:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PG:404:ARG:O	6:PJ:410:ARG:NH2	2.53	0.41
6:PI:268:PHE:HE1	6:PI:323:GLU:HG3	1.85	0.41
6:PI:487:VAL:O	6:PI:491:ILE:HG12	2.20	0.41
6:PL:268:PHE:HE1	6:PL:323:GLU:HG3	1.85	0.41
5:ZA:62:LYS:HB2	5:ZA:65:GLU:CD	2.45	0.41
6:PA:138:TYR:HA	6:PA:242:MET:SD	2.61	0.41
6:PA:268:PHE:HE1	6:PA:323:GLU:HG3	1.85	0.41
6:PA:368:TYR:CD2	6:PA:369:MET:HG3	2.55	0.41
1:AD:21:ILE:HD12	1:AD:21:ILE:HA	1.96	0.41
2:LB:92:THR:OG1	2:LB:95:ASP:OD1	2.36	0.41
2:LB:621:LEU:HD13	2:LB:635:TRP:HB3	2.02	0.41
2:LB:932:PRO:HG2	2:LB:957:ALA:HB1	2.02	0.41
2:LC:400:GLY:HA2	2:LC:402:ARG:HE	1.85	0.41
5:YG:43:MET:N	5:YG:44:PRO:HD2	2.36	0.41
6:PC:368:TYR:CD2	6:PC:369:MET:HG3	2.55	0.41
6:PC:479:VAL:HG12	6:PD:467:GLU:HB3	2.01	0.41
6:PC:579:ILE:HG12	6:PF:592:LEU:HD13	2.02	0.41
6:PE:479:VAL:HG12	6:PF:467:GLU:HB3	2.01	0.41
6:PH:357:PRO:HG2	6:PH:522:ALA:HB1	2.01	0.41
6:PI:368:TYR:CD2	6:PI:369:MET:HG3	2.55	0.41
6:PJ:487:VAL:O	6:PJ:491:ILE:HG12	2.20	0.41
6:PK:268:PHE:HE1	6:PK:323:GLU:HG3	1.85	0.41
6:PL:357:PRO:HG2	6:PL:522:ALA:HB1	2.01	0.41
2:LA:283:TRP:CZ3	2:LA:285:TYR:HB3	2.56	0.41
2:LA:737:LEU:O	2:LA:838:ILE:N	2.51	0.41
2:LB:777:THR:HG21	2:LB:960:ILE:HA	2.03	0.41
2:LB:873:TRP:O	2:LB:877:ASN:ND2	2.27	0.41
5:XC:12:ASN:ND2	5:XC:18:GLU:HG2	2.35	0.41
2:LC:710:TYR:O	2:LC:711:GLN:HG3	2.19	0.41
2:LC:940:TYR:HA	2:LC:950:TYR:HA	2.01	0.41
3:SC:156:ASN:ND2	3:SC:160:ASP:HB3	2.36	0.41
2:LD:596:GLU:OE2	3:SD:41:THR:N	2.43	0.41
2:LD:979:TRP:CD1	2:LD:979:TRP:H	2.39	0.41
2:LE:913:ASP:OD2	2:LE:983:ARG:NH2	2.53	0.41
2:LE:1088:LEU:HD13	2:LE:1102:TRP:HB3	2.02	0.41
4:TJ:211:GLU:HG3	4:TK:213:LYS:HG3	2.02	0.41
2:LF:901:ASN:CG	2:LF:905:SER:HB3	2.46	0.41
2:LF:1050:LEU:HG	2:LF:1075:VAL:HG23	2.02	0.41
5:XK:55:GLN:HG3	5:YK:60:HIS:CE1	2.56	0.41
6:PB:487:VAL:O	6:PB:491:ILE:HG12	2.20	0.41
6:PC:138:TYR:HA	6:PC:242:MET:SD	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PJ:368:TYR:CD2	6:PJ:369:MET:HG3	2.55	0.41
2:LA:777:THR:HG21	2:LA:960:ILE:HA	2.03	0.41
3:SB:139:VAL:HG22	3:SB:188:GLN:NE2	2.35	0.41
2:LC:979:TRP:CD1	2:LC:979:TRP:H	2.39	0.41
2:LC:1088:LEU:HD13	2:LC:1102:TRP:HB3	2.02	0.41
2:LD:283:TRP:CZ3	2:LD:285:TYR:HB3	2.56	0.41
2:LD:621:LEU:HD13	2:LD:635:TRP:HB3	2.02	0.41
2:LD:901:ASN:CG	2:LD:905:SER:HB3	2.45	0.41
2:LD:1039:ASN:OD1	2:LD:1039:ASN:N	2.52	0.41
2:LE:886:TRP:HE3	2:LE:928:GLY:HA2	1.84	0.41
5:XI:55:GLN:HG3	5:YI:60:HIS:CE1	2.56	0.41
5:YJ:55:GLN:OE1	5:YJ:55:GLN:N	2.45	0.41
2:LF:1039:ASN:OD1	2:LF:1039:ASN:N	2.52	0.41
6:PB:268:PHE:HE1	6:PB:323:GLU:HG3	1.85	0.41
6:PD:138:TYR:HA	6:PD:242:MET:SD	2.61	0.41
6:PG:138:TYR:HA	6:PG:242:MET:SD	2.61	0.41
6:PG:374:ASP:OD1	6:PG:375:MET:N	2.52	0.41
6:PJ:53:TRP:NE1	6:PJ:382:GLU:OE1	2.39	0.41
6:PK:487:VAL:O	6:PK:491:ILE:HG12	2.20	0.41
3:SA:139:VAL:HG22	3:SA:188:GLN:NE2	2.35	0.41
4:TB:295:ASN:ND2	2:LD:1046:ASN:OD1	2.54	0.41
5:XA:12:ASN:ND2	5:XA:18:GLU:HG2	2.35	0.41
5:YB:43:MET:N	5:YB:44:PRO:HD2	2.35	0.41
6:PA:479:VAL:HG12	6:PB:467:GLU:HB3	2.01	0.41
2:LB:1089:LYS:HE2	2:LB:1089:LYS:HB2	1.90	0.41
5:XD:60:HIS:HA	5:XD:63:LEU:HD23	2.03	0.41
2:LC:259:THR:HG1	2:LC:316:CYS:C	2.25	0.41
5:XE:12:ASN:ND2	5:XE:18:GLU:HG2	2.35	0.41
5:XE:55:GLN:HG3	5:YE:60:HIS:CE1	2.56	0.41
1:AH:21:ILE:HD12	1:AH:21:ILE:HA	1.95	0.41
2:LD:894:TRP:CD1	2:LD:899:PRO:HG2	2.56	0.41
3:SD:156:ASN:OD1	3:SD:160:ASP:N	2.54	0.41
3:SD:196:GLN:HG3	3:SD:202:LEU:HD11	2.01	0.41
5:YH:43:MET:N	5:YH:44:PRO:HD2	2.35	0.41
1:AJ:55:ARG:NH2	1:AK:132:ARG:HH21	2.18	0.41
2:LE:283:TRP:CZ3	2:LE:285:TYR:HB3	2.56	0.41
4:TI:16:LEU:O	4:TJ:160:LYS:NZ	2.40	0.41
4:TJ:197:GLU:HG3	4:TK:199:THR:HG23	2.02	0.41
5:XJ:52:ASN:ND2	5:YJ:53:MET:SD	2.93	0.41
1:AL:34:LYS:O	1:AL:38:ILE:HG12	2.21	0.41
2:LF:777:THR:HG21	2:LF:960:ILE:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LF:932:PRO:HG2	2:LF:957:ALA:HB1	2.02	0.41
6:PG:268:PHE:HE1	6:PG:323:GLU:HG3	1.85	0.41
6:PJ:138:TYR:HA	6:PJ:242:MET:SD	2.61	0.41
1:AB:55:ARG:NH2	1:AC:132:ARG:HH21	2.18	0.41
2:LA:51:THR:O	2:LA:368:TYR:OH	2.35	0.41
2:LA:79:TYR:CD1	2:LA:85:LYS:HG3	2.56	0.41
2:LA:901:ASN:CG	2:LA:905:SER:HB3	2.45	0.41
3:SA:87:SER:O	3:SA:90:LYS:NZ	2.47	0.41
3:SA:405:ARG:NE	3:SA:406:ASP:OD1	2.48	0.41
5:ZB:22:ASP:N	5:ZB:23:PRO:HD2	2.36	0.41
1:AD:55:ARG:NH2	1:AE:132:ARG:HH21	2.19	0.41
3:SB:156:ASN:ND2	3:SB:160:ASP:HB3	2.36	0.41
3:SB:211:TRP:N	3:SB:312:ASN:OD1	2.44	0.41
1:AF:226:THR:O	1:AG:123:ASN:ND2	2.46	0.41
2:LC:30:ASP:OD1	2:LC:31:LEU:N	2.53	0.41
2:LC:132:ASP:OD2	2:LC:238:ALA:N	2.54	0.41
2:LC:621:LEU:HD13	2:LC:635:TRP:HB3	2.02	0.41
3:SC:295:PHE:HB2	3:SC:328:ILE:HG22	2.03	0.41
4:TF:295:ASN:ND2	2:LF:1046:ASN:OD1	2.54	0.41
5:ZE:62:LYS:HB2	5:ZE:65:GLU:CD	2.45	0.41
2:LD:93:ASN:O	2:LD:240:HIS:ND1	2.50	0.41
2:LD:197:VAL:HG22	2:LD:198:TYR:CD2	2.56	0.41
2:LD:1088:LEU:HD13	2:LD:1102:TRP:HB3	2.02	0.41
4:TH:16:LEU:O	4:TI:160:LYS:NZ	2.44	0.41
2:LE:979:TRP:CD1	2:LE:979:TRP:H	2.39	0.41
2:LE:1050:LEU:HG	2:LE:1075:VAL:HG23	2.02	0.41
5:XI:12:ASN:ND2	5:XI:18:GLU:HG2	2.35	0.41
5:YI:43:MET:N	5:YI:44:PRO:HD2	2.35	0.41
5:YI:46:ILE:HD11	5:ZI:43:MET:HE1	2.03	0.41
1:AL:21:ILE:HD12	1:AL:21:ILE:HA	1.95	0.41
2:LF:894:TRP:CD1	2:LF:899:PRO:HG2	2.56	0.41
4:TK:213:LYS:HE2	4:TK:213:LYS:HB3	1.88	0.41
5:XK:12:ASN:ND2	5:XK:18:GLU:HG2	2.35	0.41
5:ZL:22:ASP:N	5:ZL:23:PRO:HD2	2.36	0.41
6:PB:138:TYR:HA	6:PB:242:MET:SD	2.61	0.41
6:PB:592:LEU:HD13	6:PK:579:ILE:HG12	2.02	0.41
6:PE:418:ASP:OD2	6:PE:421:ASN:ND2	2.54	0.41
6:PG:579:ILE:HG12	6:PJ:592:LEU:HD13	2.02	0.41
6:PJ:268:PHE:HE1	6:PJ:323:GLU:HG3	1.85	0.41
6:PK:592:LEU:HD13	6:PL:579:ILE:HG12	2.03	0.41
6:PL:138:TYR:HA	6:PL:242:MET:SD	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:PL:487:VAL:O	6:PL:491:ILE:HG12	2.20	0.41
2:LA:894:TRP:CD1	2:LA:899:PRO:HG2	2.56	0.41
4:TA:213:LYS:HG3	4:TL:211:GLU:HG3	2.02	0.41
5:XA:22:ASP:HB2	5:XA:23:PRO:HD3	2.03	0.41
5:XB:60:HIS:HA	5:XB:63:LEU:HD23	2.03	0.41
6:PA:374:ASP:OD1	6:PA:375:MET:N	2.52	0.41
6:PA:418:ASP:OD2	6:PA:421:ASN:ND2	2.54	0.41
2:LB:132:ASP:OD2	2:LB:238:ALA:N	2.54	0.41
2:LB:727:ASP:N	2:LB:727:ASP:OD1	2.54	0.41
5:XC:22:ASP:HB2	5:XC:23:PRO:HD3	2.03	0.41
1:AF:34:LYS:O	1:AF:38:ILE:HG12	2.21	0.41
2:LC:283:TRP:CZ3	2:LC:285:TYR:HB3	2.56	0.41
1:AH:34:LYS:O	1:AH:38:ILE:HG12	2.21	0.41
2:LD:92:THR:OG1	2:LD:95:ASP:OD1	2.36	0.41
2:LD:237:GLU:OE1	2:LD:239:HIS:N	2.34	0.41
2:LD:259:THR:HG1	2:LD:316:CYS:C	2.24	0.41
2:LD:375:MET:HE2	3:SD:397:PRO:HD3	2.03	0.41
2:LD:919:ALA:O	2:LD:971:ASN:ND2	2.54	0.41
3:SD:156:ASN:ND2	3:SD:160:ASP:HB3	2.36	0.41
1:AJ:34:LYS:O	1:AJ:38:ILE:HG12	2.21	0.41
2:LE:197:VAL:HG22	2:LE:198:TYR:CD2	2.56	0.41
2:LE:894:TRP:CD1	2:LE:899:PRO:HG2	2.56	0.41
3:SE:29:ILE:HG23	3:SE:36:HIS:HB2	2.02	0.41
3:SF:29:ILE:HG23	3:SF:36:HIS:HB2	2.02	0.41
5:YK:46:ILE:HD11	5:ZK:43:MET:HE1	2.03	0.41
6:PB:368:TYR:CD2	6:PB:369:MET:HG3	2.55	0.41
6:PD:300:ASP:OD2	6:PD:322:TYR:OH	2.37	0.41
6:PI:316:ARG:NH2	6:PJ:35:ASP:OD2	2.55	0.41
6:PK:418:ASP:OD2	6:PK:421:ASN:ND2	2.54	0.41
1:AA:176:PRO:HG3	1:AB:43:GLU:HG3	2.02	0.40
4:TA:160:LYS:NZ	4:TL:16:LEU:O	2.44	0.40
2:LB:181:ILE:HD12	2:LB:181:ILE:HA	1.97	0.40
2:LB:259:THR:O	2:LC:162:ARG:NH2	2.43	0.40
2:LB:1117:SER:OG	2:LB:1120:ASP:O	2.38	0.40
5:YC:46:ILE:HD11	5:ZC:43:MET:HE1	2.03	0.40
5:ZC:60:HIS:HA	5:ZC:63:LEU:HB2	2.03	0.40
2:LC:79:TYR:CD1	2:LC:85:LYS:HG3	2.56	0.40
3:SC:29:ILE:HG12	3:SC:36:HIS:HB2	2.03	0.40
4:TF:211:GLU:HG3	4:TG:213:LYS:HG3	2.02	0.40
5:XF:62:LYS:NZ	5:YF:63:LEU:HG	2.37	0.40
5:YF:43:MET:N	5:YF:44:PRO:HD2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LD:1050:LEU:HG	2:LD:1075:VAL:HG23	2.02	0.40
3:SD:364:ILE:HG21	3:SD:380:VAL:HG13	2.04	0.40
5:XG:9:THR:OG1	5:XG:10:ILE:N	2.51	0.40
5:XG:12:ASN:ND2	5:XG:18:GLU:HG2	2.35	0.40
5:XG:55:GLN:HG3	5:YG:60:HIS:CE1	2.56	0.40
5:ZG:51:ASP:OD1	5:ZG:52:ASN:ND2	2.54	0.40
1:AJ:43:GLU:OE2	1:AJ:181:TYR:OH	2.25	0.40
2:LE:375:MET:HE2	3:SE:397:PRO:HD3	2.03	0.40
4:TJ:213:LYS:HE2	4:TJ:213:LYS:HB3	1.88	0.40
5:XJ:59:ILE:HD13	5:YJ:56:LEU:HD12	2.03	0.40
2:LF:741:ASN:HA	2:LF:796:ALA:O	2.21	0.40
2:LF:1088:LEU:HD13	2:LF:1102:TRP:HB3	2.02	0.40
5:YL:55:GLN:OE1	5:YL:55:GLN:N	2.45	0.40
5:ZK:51:ASP:OD1	5:ZK:52:ASN:ND2	2.54	0.40
5:ZK:60:HIS:HA	5:ZK:63:LEU:HB2	2.03	0.40
6:PD:418:ASP:OD2	6:PD:421:ASN:ND2	2.54	0.40
6:PE:316:ARG:NH2	6:PF:35:ASP:OD2	2.54	0.40
6:PF:138:TYR:HA	6:PF:242:MET:SD	2.61	0.40
6:PF:418:ASP:OD2	6:PF:421:ASN:ND2	2.54	0.40
1:AB:34:LYS:O	1:AB:38:ILE:HG12	2.21	0.40
3:SA:211:TRP:CE3	3:SA:227:ILE:HG22	2.57	0.40
3:SA:364:ILE:HG21	3:SA:380:VAL:HG13	2.04	0.40
5:ZA:60:HIS:HA	5:ZA:63:LEU:HB2	2.03	0.40
5:ZA:68:ALA:O	5:ZA:72:LYS:HG2	2.21	0.40
1:AD:225:ASP:OD1	1:AD:225:ASP:N	2.54	0.40
2:LB:901:ASN:CG	2:LB:905:SER:HB3	2.45	0.40
3:SB:211:TRP:CE3	3:SB:227:ILE:HG22	2.57	0.40
5:ZD:22:ASP:N	5:ZD:23:PRO:HD2	2.36	0.40
3:SC:156:ASN:OD1	3:SC:160:ASP:N	2.54	0.40
5:XE:22:ASP:HB2	5:XE:23:PRO:HD3	2.03	0.40
5:YE:46:ILE:HD11	5:ZE:43:MET:HE1	2.03	0.40
5:ZE:60:HIS:HA	5:ZE:63:LEU:HB2	2.03	0.40
1:AG:176:PRO:HG3	1:AH:43:GLU:HG3	2.02	0.40
2:LD:79:TYR:CD1	2:LD:85:LYS:HG3	2.56	0.40
5:YG:46:ILE:HD11	5:ZG:43:MET:HE1	2.03	0.40
2:LE:373:MET:HE1	2:LE:400:GLY:HA3	2.04	0.40
5:XI:22:ASP:HB2	5:XI:23:PRO:HD3	2.03	0.40
5:ZI:68:ALA:O	5:ZI:72:LYS:HG2	2.21	0.40
2:LF:283:TRP:CZ3	2:LF:285:TYR:HB3	2.56	0.40
2:LF:375:MET:HE2	3:SF:397:PRO:HD3	2.03	0.40
2:LF:919:ALA:O	2:LF:971:ASN:ND2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XK:20:LEU:O	5:XK:23:PRO:HD2	2.21	0.40
5:YK:43:MET:N	5:YK:44:PRO:HD2	2.36	0.40
6:PB:418:ASP:OD2	6:PB:421:ASN:ND2	2.54	0.40
6:PC:316:ARG:NH2	6:PD:35:ASP:OD2	2.55	0.40
6:PC:418:ASP:OD2	6:PC:421:ASN:ND2	2.54	0.40
6:PC:592:LEU:HD13	6:PD:579:ILE:HG12	2.03	0.40
6:PE:138:TYR:HA	6:PE:242:MET:SD	2.61	0.40
6:PG:592:LEU:HD13	6:PH:579:ILE:HG12	2.03	0.40
6:PL:418:ASP:OD2	6:PL:421:ASN:ND2	2.54	0.40
1:AA:132:ARG:HH21	1:AL:55:ARG:NH2	2.18	0.40
2:LA:375:MET:HE2	3:SA:397:PRO:HD3	2.03	0.40
6:PA:592:LEU:HD13	6:PB:579:ILE:HG12	2.02	0.40
2:LB:375:MET:HE2	3:SB:397:PRO:HD3	2.03	0.40
2:LB:741:ASN:HA	2:LB:796:ALA:O	2.21	0.40
4:TC:187:MET:SD	4:TC:191:GLN:NE2	2.95	0.40
5:ZC:68:ALA:O	5:ZC:72:LYS:HG2	2.21	0.40
5:ZD:63:LEU:HD12	5:ZD:63:LEU:HA	1.96	0.40
1:AE:176:PRO:HG3	1:AF:43:GLU:HG3	2.02	0.40
2:LC:18:TYR:O	5:XE:47:LYS:NZ	2.46	0.40
2:LC:894:TRP:CD1	2:LC:899:PRO:HG2	2.56	0.40
2:LC:1130:TRP:CD2	2:LC:1135:LEU:HD12	2.57	0.40
5:XF:60:HIS:HA	5:XF:63:LEU:HD23	2.03	0.40
2:LD:132:ASP:OD2	2:LD:238:ALA:N	2.54	0.40
3:SD:29:ILE:HG12	3:SD:36:HIS:HB2	2.03	0.40
3:SD:295:PHE:HB2	3:SD:328:ILE:HG22	2.04	0.40
1:AI:176:PRO:HG3	1:AJ:43:GLU:HG3	2.02	0.40
2:LE:130:ASN:OD1	2:LE:130:ASN:N	2.55	0.40
2:LE:727:ASP:OD1	2:LE:727:ASP:N	2.54	0.40
3:SE:156:ASN:OD1	3:SE:160:ASP:N	2.54	0.40
5:XI:20:LEU:O	5:XI:23:PRO:HD2	2.22	0.40
5:XJ:22:ASP:H	5:XJ:42:ARG:HH21	1.69	0.40
5:ZI:51:ASP:OD1	5:ZI:52:ASN:ND2	2.54	0.40
2:LF:373:MET:HE1	2:LF:400:GLY:HA3	2.04	0.40
5:XK:43:MET:N	5:XK:44:PRO:HD2	2.37	0.40
6:PG:316:ARG:NH2	6:PH:35:ASP:OD2	2.55	0.40
6:PH:374:ASP:OD1	6:PH:375:MET:N	2.52	0.40
6:PH:418:ASP:OD2	6:PH:421:ASN:ND2	2.54	0.40
2:LA:979:TRP:CD1	2:LA:979:TRP:H	2.39	0.40
2:LA:1130:TRP:CD2	2:LA:1135:LEU:HD12	2.57	0.40
3:SA:156:ASN:HA	3:SA:226:CYS:HA	2.04	0.40
4:TA:16:LEU:O	4:TB:160:LYS:NZ	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XA:55:GLN:HG3	5:YA:60:HIS:CE1	2.56	0.40
5:XB:59:ILE:HD13	5:YB:56:LEU:HD12	2.04	0.40
5:ZA:51:ASP:OD1	5:ZA:52:ASN:ND2	2.54	0.40
2:LB:30:ASP:OD1	2:LB:31:LEU:N	2.53	0.40
2:LB:283:TRP:CZ3	2:LB:285:TYR:HB3	2.56	0.40
2:LB:376:GLY:O	3:SB:397:PRO:HD2	2.22	0.40
2:LB:1046:ASN:OD1	4:TJ:295:ASN:ND2	2.54	0.40
2:LB:1130:TRP:CD2	2:LB:1135:LEU:HD12	2.57	0.40
3:SB:156:ASN:OD1	3:SB:160:ASP:N	2.54	0.40
1:AF:21:ILE:HD12	1:AF:21:ILE:HA	1.96	0.40
1:AF:172:ASP:OD1	1:AF:172:ASP:N	2.54	0.40
5:ZF:34:TYR:CE1	1:AG:87:LYS:HE3	2.57	0.40
2:LD:373:MET:HE1	2:LD:400:GLY:HA3	2.04	0.40
3:SD:137:ASN:O	3:SD:205:GLN:N	2.52	0.40
5:XH:59:ILE:HD13	5:YH:56:LEU:HD12	2.04	0.40
2:LE:1057:SER:HB2	2:LE:1069:SER:HA	2.04	0.40
3:SE:295:PHE:HB2	3:SE:328:ILE:HG22	2.03	0.40
5:XJ:60:HIS:HA	5:XJ:63:LEU:HD23	2.03	0.40
5:ZJ:22:ASP:N	5:ZJ:23:PRO:HD2	2.36	0.40
6:PG:487:VAL:O	6:PG:491:ILE:HG12	2.20	0.40
6:PI:138:TYR:HA	6:PI:242:MET:SD	2.61	0.40
6:PI:418:ASP:OD2	6:PI:421:ASN:ND2	2.54	0.40
6:PK:138:TYR:HA	6:PK:242:MET:SD	2.61	0.40
1:AB:49:HIS:CE1	1:AB:155:HIS:HB2	2.57	0.40
2:LA:373:MET:HE1	2:LA:400:GLY:HA3	2.04	0.40
5:XB:78:LEU:HD12	5:YB:80:HIS:NE2	2.37	0.40
5:ZB:34:TYR:CE1	1:AC:87:LYS:HE3	2.57	0.40
1:AC:172:ASP:OD1	1:AC:172:ASP:N	2.52	0.40
2:LB:259:THR:HG1	2:LB:316:CYS:C	2.24	0.40
2:LB:373:MET:HE1	2:LB:400:GLY:HA3	2.04	0.40
3:SB:295:PHE:HB2	3:SB:328:ILE:HG22	2.03	0.40
5:XD:59:ILE:HD13	5:YD:56:LEU:HD12	2.04	0.40
5:XD:62:LYS:NZ	5:YD:63:LEU:HG	2.37	0.40
5:ZC:51:ASP:OD1	5:ZC:52:ASN:ND2	2.54	0.40
2:LC:197:VAL:HG22	2:LC:198:TYR:CD2	2.56	0.40
4:TE:73:SER:O	4:TE:77:HIS:ND1	2.43	0.40
2:LD:259:THR:O	2:LE:162:ARG:NH2	2.43	0.40
3:SD:29:ILE:HG23	3:SD:36:HIS:HB2	2.02	0.40
3:SD:211:TRP:CE3	3:SD:227:ILE:HG22	2.57	0.40
5:ZG:60:HIS:HA	5:ZG:63:LEU:HB2	2.03	0.40
5:ZG:68:ALA:O	5:ZG:72:LYS:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:SE:83:TYR:HA	3:SE:84:PRO:HD3	1.92	0.40
2:LF:79:TYR:CD1	2:LF:85:LYS:HG3	2.56	0.40
3:SF:156:ASN:HA	3:SF:226:CYS:HA	2.04	0.40
3:SF:295:PHE:HB2	3:SF:328:ILE:HG22	2.03	0.40
4:TK:197:GLU:HG3	4:TL:199:THR:HG23	2.04	0.40
4:TL:187:MET:SD	4:TL:191:GLN:NE2	2.95	0.40
6:PC:77:LYS:HB3	6:PC:80:ARG:HB3	2.04	0.40
6:PK:316:ARG:NH2	6:PL:35:ASP:OD2	2.55	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	AA	234/236 (99%)	234 (100%)	0	0	100	100
1	AB	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
1	AC	234/236 (99%)	234 (100%)	0	0	100	100
1	AD	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
1	AE	234/236 (99%)	234 (100%)	0	0	100	100
1	AF	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
1	AG	234/236 (99%)	234 (100%)	0	0	100	100
1	AH	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
1	AI	234/236 (99%)	234 (100%)	0	0	100	100
1	AJ	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
1	AK	234/236 (99%)	234 (100%)	0	0	100	100
1	AL	234/236 (99%)	233 (100%)	1 (0%)	0	100	100
2	LA	1179/1382 (85%)	1155 (98%)	24 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	LB	1179/1382 (85%)	1154 (98%)	25 (2%)	0	100	100
2	LC	1179/1382 (85%)	1155 (98%)	24 (2%)	0	100	100
2	LD	1179/1382 (85%)	1155 (98%)	24 (2%)	0	100	100
2	LE	1179/1382 (85%)	1153 (98%)	26 (2%)	0	100	100
2	LF	1179/1382 (85%)	1153 (98%)	26 (2%)	0	100	100
3	SA	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
3	SB	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
3	SC	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
3	SD	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
3	SE	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
3	SF	413/417 (99%)	405 (98%)	7 (2%)	1 (0%)	44	72
4	TA	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TB	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TC	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TD	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TE	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TF	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TG	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TH	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TI	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TJ	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TK	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
4	TL	296/299 (99%)	291 (98%)	5 (2%)	0	100	100
5	XA	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XB	70/556 (13%)	69 (99%)	1 (1%)	0	100	100
5	XC	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XD	70/556 (13%)	69 (99%)	1 (1%)	0	100	100
5	XE	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XF	70/556 (13%)	69 (99%)	1 (1%)	0	100	100
5	XG	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XH	70/556 (13%)	69 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	XI	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XJ	70/556 (13%)	69 (99%)	1 (1%)	0	100	100
5	XK	70/556 (13%)	67 (96%)	3 (4%)	0	100	100
5	XL	70/556 (13%)	69 (99%)	1 (1%)	0	100	100
5	YA	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YB	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YC	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YD	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YE	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YF	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YG	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YH	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YI	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YJ	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YK	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	YL	64/556 (12%)	63 (98%)	1 (2%)	0	100	100
5	ZA	61/556 (11%)	61 (100%)	0	0	100	100
5	ZB	61/556 (11%)	61 (100%)	0	0	100	100
5	ZC	61/556 (11%)	61 (100%)	0	0	100	100
5	ZD	61/556 (11%)	61 (100%)	0	0	100	100
5	ZE	61/556 (11%)	61 (100%)	0	0	100	100
5	ZF	61/556 (11%)	61 (100%)	0	0	100	100
5	ZG	61/556 (11%)	61 (100%)	0	0	100	100
5	ZH	61/556 (11%)	61 (100%)	0	0	100	100
5	ZI	61/556 (11%)	61 (100%)	0	0	100	100
5	ZJ	61/556 (11%)	61 (100%)	0	0	100	100
5	ZK	61/556 (11%)	61 (100%)	0	0	100	100
5	ZL	61/556 (11%)	61 (100%)	0	0	100	100
6	PA	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PB	640/763 (84%)	633 (99%)	7 (1%)	0	100	100
6	PC	640/763 (84%)	631 (99%)	9 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	PD	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PE	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PF	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PG	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PH	640/763 (84%)	633 (99%)	7 (1%)	0	100	100
6	PI	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PJ	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
6	PK	640/763 (84%)	633 (99%)	7 (1%)	0	100	100
6	PL	640/763 (84%)	632 (99%)	8 (1%)	0	100	100
All	All	25932/46386 (56%)	25539 (98%)	387 (2%)	6 (0%)	100	100

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	SA	368	LEU
3	SB	368	LEU
3	SC	368	LEU
3	SD	368	LEU
3	SE	368	LEU
3	SF	368	LEU

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	AA	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AB	209/209 (100%)	206 (99%)	3 (1%)	62	77
1	AC	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AD	209/209 (100%)	206 (99%)	3 (1%)	62	77
1	AE	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AF	209/209 (100%)	206 (99%)	3 (1%)	62	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AG	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AH	209/209 (100%)	206 (99%)	3 (1%)	62	77
1	AI	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AJ	209/209 (100%)	206 (99%)	3 (1%)	62	77
1	AK	209/209 (100%)	208 (100%)	1 (0%)	86	92
1	AL	209/209 (100%)	206 (99%)	3 (1%)	62	77
2	LA	989/1155 (86%)	971 (98%)	18 (2%)	54	71
2	LB	989/1155 (86%)	971 (98%)	18 (2%)	54	71
2	LC	989/1155 (86%)	971 (98%)	18 (2%)	54	71
2	LD	989/1155 (86%)	971 (98%)	18 (2%)	54	71
2	LE	989/1155 (86%)	971 (98%)	18 (2%)	54	71
2	LF	989/1155 (86%)	971 (98%)	18 (2%)	54	71
3	SA	369/371 (100%)	365 (99%)	4 (1%)	70	81
3	SB	369/371 (100%)	365 (99%)	4 (1%)	70	81
3	SC	369/371 (100%)	365 (99%)	4 (1%)	70	81
3	SD	369/371 (100%)	365 (99%)	4 (1%)	70	81
3	SE	369/371 (100%)	365 (99%)	4 (1%)	70	81
3	SF	369/371 (100%)	365 (99%)	4 (1%)	70	81
4	TA	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TB	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TC	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TD	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TE	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TF	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TG	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TH	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TI	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TJ	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TK	243/244 (100%)	241 (99%)	2 (1%)	79	86
4	TL	243/244 (100%)	241 (99%)	2 (1%)	79	86
5	XA	66/455 (14%)	64 (97%)	2 (3%)	36	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	XB	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	XC	66/455 (14%)	64 (97%)	2 (3%)	36	58
5	XD	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	XE	66/455 (14%)	64 (97%)	2 (3%)	36	58
5	XF	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	XG	66/455 (14%)	64 (97%)	2 (3%)	36	58
5	XH	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	XI	66/455 (14%)	64 (97%)	2 (3%)	36	58
5	XJ	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	XK	66/455 (14%)	64 (97%)	2 (3%)	36	58
5	XL	66/455 (14%)	65 (98%)	1 (2%)	60	75
5	YA	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YB	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YC	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YD	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YE	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YF	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YG	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YH	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YI	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YJ	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YK	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	YL	62/455 (14%)	61 (98%)	1 (2%)	58	74
5	ZA	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZB	58/455 (13%)	56 (97%)	2 (3%)	32	55
5	ZC	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZD	58/455 (13%)	56 (97%)	2 (3%)	32	55
5	ZE	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZF	58/455 (13%)	56 (97%)	2 (3%)	32	55
5	ZG	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZH	58/455 (13%)	56 (97%)	2 (3%)	32	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	ZI	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZJ	58/455 (13%)	56 (97%)	2 (3%)	32	55
5	ZK	58/455 (13%)	57 (98%)	1 (2%)	56	73
5	ZL	58/455 (13%)	56 (97%)	2 (3%)	32	55
6	PA	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PB	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PC	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PD	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PE	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PF	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PG	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PH	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PI	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PJ	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PK	551/652 (84%)	545 (99%)	6 (1%)	70	81
6	PL	551/652 (84%)	545 (99%)	6 (1%)	70	81
All	All	22416/38796 (58%)	22116 (99%)	300 (1%)	64	77

All (300) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AA	23	THR
1	AB	148	ASN
1	AB	178	LEU
1	AB	219	THR
2	LA	28	ARG
2	LA	46	THR
2	LA	296	GLU
2	LA	319	MET
2	LA	355	VAL
2	LA	372	VAL
2	LA	418	LEU
2	LA	592	ILE
2	LA	610	ASN
2	LA	699	TRP
2	LA	707	VAL

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Mol	Chain	Res	Type
2	LA	1038	LEU
2	LA	1039	ASN
2	LA	1105	ARG
2	LA	1113	VAL
2	LA	1136	THR
2	LA	1176	VAL
2	LA	1179	GLN
3	SA	35	VAL
3	SA	102	LEU
3	SA	144	LEU
3	SA	328	ILE
4	TA	17	VAL
4	TA	113	THR
4	TB	17	VAL
4	TB	113	THR
5	XA	16	CYS
5	XA	24	ILE
5	XB	63	LEU
5	YA	63	LEU
5	YB	25	VAL
5	ZA	64	THR
5	ZB	63	LEU
5	ZB	73	LEU
6	PA	111	VAL
6	PA	232	VAL
6	PA	266	VAL
6	PA	340	VAL
6	PA	441	GLN
6	PA	479	VAL
1	AC	23	THR
1	AD	148	ASN
1	AD	178	LEU
1	AD	219	THR
2	LB	28	ARG
2	LB	46	THR
2	LB	296	GLU
2	LB	319	MET
2	LB	355	VAL
2	LB	372	VAL
2	LB	418	LEU
2	LB	592	ILE
2	LB	610	ASN

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Mol	Chain	Res	Type
2	LB	699	TRP
2	LB	707	VAL
2	LB	1038	LEU
2	LB	1039	ASN
2	LB	1105	ARG
2	LB	1113	VAL
2	LB	1136	THR
2	LB	1176	VAL
2	LB	1179	GLN
3	SB	35	VAL
3	SB	102	LEU
3	SB	144	LEU
3	SB	328	ILE
4	TC	17	VAL
4	TC	113	THR
4	TD	17	VAL
4	TD	113	THR
5	XC	16	CYS
5	XC	24	ILE
5	XD	63	LEU
5	YC	63	LEU
5	YD	25	VAL
5	ZC	64	THR
5	ZD	63	LEU
5	ZD	73	LEU
1	AE	23	THR
1	AF	148	ASN
1	AF	178	LEU
1	AF	219	THR
2	LC	28	ARG
2	LC	46	THR
2	LC	296	GLU
2	LC	319	MET
2	LC	355	VAL
2	LC	372	VAL
2	LC	418	LEU
2	LC	592	ILE
2	LC	610	ASN
2	LC	699	TRP
2	LC	707	VAL
2	LC	1038	LEU
2	LC	1039	ASN

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Mol	Chain	Res	Type
2	LC	1105	ARG
2	LC	1113	VAL
2	LC	1136	THR
2	LC	1176	VAL
2	LC	1179	GLN
3	SC	35	VAL
3	SC	102	LEU
3	SC	144	LEU
3	SC	328	ILE
4	TE	17	VAL
4	TE	113	THR
4	TF	17	VAL
4	TF	113	THR
5	XE	16	CYS
5	XE	24	ILE
5	XF	63	LEU
5	YE	63	LEU
5	YF	25	VAL
5	ZE	64	THR
5	ZF	63	LEU
5	ZF	73	LEU
1	AG	23	THR
1	AH	148	ASN
1	AH	178	LEU
1	AH	219	THR
2	LD	28	ARG
2	LD	46	THR
2	LD	296	GLU
2	LD	319	MET
2	LD	355	VAL
2	LD	372	VAL
2	LD	418	LEU
2	LD	592	ILE
2	LD	610	ASN
2	LD	699	TRP
2	LD	707	VAL
2	LD	1038	LEU
2	LD	1039	ASN
2	LD	1105	ARG
2	LD	1113	VAL
2	LD	1136	THR
2	LD	1176	VAL

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Mol	Chain	Res	Type
2	LD	1179	GLN
3	SD	35	VAL
3	SD	102	LEU
3	SD	144	LEU
3	SD	328	ILE
4	TG	17	VAL
4	TG	113	THR
4	TH	17	VAL
4	TH	113	THR
5	XG	16	CYS
5	XG	24	ILE
5	XH	63	LEU
5	YG	63	LEU
5	YH	25	VAL
5	ZG	64	THR
5	ZH	63	LEU
5	ZH	73	LEU
1	AI	23	THR
1	AJ	148	ASN
1	AJ	178	LEU
1	AJ	219	THR
2	LE	28	ARG
2	LE	46	THR
2	LE	296	GLU
2	LE	319	MET
2	LE	355	VAL
2	LE	372	VAL
2	LE	418	LEU
2	LE	592	ILE
2	LE	610	ASN
2	LE	699	TRP
2	LE	707	VAL
2	LE	1038	LEU
2	LE	1039	ASN
2	LE	1105	ARG
2	LE	1113	VAL
2	LE	1136	THR
2	LE	1176	VAL
2	LE	1179	GLN
3	SE	35	VAL
3	SE	102	LEU
3	SE	144	LEU

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Continued from previous page...

Mol	Chain	Res	Type
3	SE	328	ILE
4	TI	17	VAL
4	TI	113	THR
4	TJ	17	VAL
4	TJ	113	THR
5	XI	16	CYS
5	XI	24	ILE
5	XJ	63	LEU
5	YI	63	LEU
5	YJ	25	VAL
5	ZI	64	THR
5	ZJ	63	LEU
5	ZJ	73	LEU
1	AK	23	THR
1	AL	148	ASN
1	AL	178	LEU
1	AL	219	THR
2	LF	28	ARG
2	LF	46	THR
2	LF	296	GLU
2	LF	319	MET
2	LF	355	VAL
2	LF	372	VAL
2	LF	418	LEU
2	LF	592	ILE
2	LF	610	ASN
2	LF	699	TRP
2	LF	707	VAL
2	LF	1038	LEU
2	LF	1039	ASN
2	LF	1105	ARG
2	LF	1113	VAL
2	LF	1136	THR
2	LF	1176	VAL
2	LF	1179	GLN
3	SF	35	VAL
3	SF	102	LEU
3	SF	144	LEU
3	SF	328	ILE
4	TK	17	VAL
4	TK	113	THR
4	TL	17	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	TL	113	THR
5	XK	16	CYS
5	XK	24	ILE
5	XL	63	LEU
5	YK	63	LEU
5	YL	25	VAL
5	ZK	64	THR
5	ZL	63	LEU
5	ZL	73	LEU
6	PB	111	VAL
6	PB	232	VAL
6	PB	266	VAL
6	PB	340	VAL
6	PB	441	GLN
6	PB	479	VAL
6	PC	111	VAL
6	PC	232	VAL
6	PC	266	VAL
6	PC	340	VAL
6	PC	441	GLN
6	PC	479	VAL
6	PD	111	VAL
6	PD	232	VAL
6	PD	266	VAL
6	PD	340	VAL
6	PD	441	GLN
6	PD	479	VAL
6	PE	111	VAL
6	PE	232	VAL
6	PE	266	VAL
6	PE	340	VAL
6	PE	441	GLN
6	PE	479	VAL
6	PF	111	VAL
6	PF	232	VAL
6	PF	266	VAL
6	PF	340	VAL
6	PF	441	GLN
6	PF	479	VAL
6	PG	111	VAL
6	PG	232	VAL
6	PG	266	VAL

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Mol	Chain	Res	Type
6	PG	340	VAL
6	PG	441	GLN
6	PG	479	VAL
6	PH	111	VAL
6	PH	232	VAL
6	PH	266	VAL
6	PH	340	VAL
6	PH	441	GLN
6	PH	479	VAL
6	PI	111	VAL
6	PI	232	VAL
6	PI	266	VAL
6	PI	340	VAL
6	PI	441	GLN
6	PI	479	VAL
6	PJ	111	VAL
6	PJ	232	VAL
6	PJ	266	VAL
6	PJ	340	VAL
6	PJ	441	GLN
6	PJ	479	VAL
6	PK	111	VAL
6	PK	232	VAL
6	PK	266	VAL
6	PK	340	VAL
6	PK	441	GLN
6	PK	479	VAL
6	PL	111	VAL
6	PL	232	VAL
6	PL	266	VAL
6	PL	340	VAL
6	PL	441	GLN
6	PL	479	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (340) such sidechains are listed below:

Mol	Chain	Res	Type
1	AA	64	GLN
1	AB	56	ASN
1	AB	134	ASN
1	AB	148	ASN
1	AB	191	ASN

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Mol	Chain	Res	Type
2	LA	11	ASN
2	LA	293	GLN
2	LA	297	ASN
2	LA	447	GLN
2	LA	509	GLN
2	LA	532	HIS
2	LA	882	ASN
2	LA	888	GLN
2	LA	969	ASN
2	LA	1042	GLN
2	LA	1093	GLN
2	LA	1179	GLN
3	SA	57	GLN
3	SA	205	GLN
3	SA	394	HIS
4	TA	116	GLN
4	TA	148	GLN
4	TA	194	GLN
4	TB	41	ASN
4	TB	116	GLN
4	TB	148	GLN
4	TB	194	GLN
4	TB	282	ASN
4	TB	295	ASN
5	XA	12	ASN
5	XA	80	HIS
5	XB	48	ASN
5	XB	77	GLN
5	YB	4	HIS
5	ZA	21	ASN
5	ZB	61	ASN
6	PA	82	GLN
6	PA	124	GLN
6	PA	291	GLN
6	PA	409	GLN
6	PA	441	GLN
6	PA	462	GLN
6	PA	524	ASN
6	PA	570	GLN
6	PA	619	GLN
1	AC	64	GLN
1	AD	56	ASN

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Mol	Chain	Res	Type
1	AD	134	ASN
1	AD	148	ASN
1	AD	191	ASN
2	LB	11	ASN
2	LB	293	GLN
2	LB	297	ASN
2	LB	447	GLN
2	LB	509	GLN
2	LB	532	HIS
2	LB	882	ASN
2	LB	888	GLN
2	LB	969	ASN
2	LB	1042	GLN
2	LB	1093	GLN
3	SB	57	GLN
3	SB	93	HIS
3	SB	205	GLN
3	SB	394	HIS
4	TC	116	GLN
4	TC	148	GLN
4	TC	194	GLN
4	TD	41	ASN
4	TD	116	GLN
4	TD	148	GLN
4	TD	194	GLN
4	TD	282	ASN
4	TD	295	ASN
5	XC	12	ASN
5	XC	80	HIS
5	XD	48	ASN
5	XD	77	GLN
5	YD	4	HIS
5	ZC	21	ASN
5	ZD	60	HIS
5	ZD	61	ASN
1	AE	64	GLN
1	AE	69	ASN
1	AF	56	ASN
1	AF	64	GLN
1	AF	134	ASN
1	AF	148	ASN
1	AF	191	ASN

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Mol	Chain	Res	Type
2	LC	11	ASN
2	LC	293	GLN
2	LC	297	ASN
2	LC	447	GLN
2	LC	509	GLN
2	LC	532	HIS
2	LC	662	HIS
2	LC	882	ASN
2	LC	888	GLN
2	LC	969	ASN
2	LC	1042	GLN
2	LC	1093	GLN
3	SC	57	GLN
3	SC	93	HIS
3	SC	394	HIS
4	TE	116	GLN
4	TE	134	ASN
4	TE	148	GLN
4	TE	194	GLN
4	TF	41	ASN
4	TF	116	GLN
4	TF	148	GLN
4	TF	194	GLN
4	TF	282	ASN
4	TF	295	ASN
5	XE	12	ASN
5	XF	48	ASN
5	XF	77	GLN
5	YF	4	HIS
5	ZE	21	ASN
5	ZF	61	ASN
1	AG	64	GLN
1	AG	69	ASN
1	AH	56	ASN
1	AH	64	GLN
1	AH	134	ASN
1	AH	148	ASN
1	AH	191	ASN
2	LD	11	ASN
2	LD	293	GLN
2	LD	297	ASN
2	LD	447	GLN

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Mol	Chain	Res	Type
2	LD	509	GLN
2	LD	532	HIS
2	LD	882	ASN
2	LD	888	GLN
2	LD	969	ASN
2	LD	1042	GLN
2	LD	1093	GLN
3	SD	57	GLN
3	SD	93	HIS
3	SD	205	GLN
3	SD	394	HIS
4	TG	116	GLN
4	TG	134	ASN
4	TG	148	GLN
4	TG	194	GLN
4	TH	41	ASN
4	TH	116	GLN
4	TH	148	GLN
4	TH	194	GLN
4	TH	282	ASN
4	TH	295	ASN
5	XG	12	ASN
5	XG	80	HIS
5	XH	48	ASN
5	XH	77	GLN
5	YH	4	HIS
5	ZG	21	ASN
5	ZH	60	HIS
5	ZH	61	ASN
1	AI	64	GLN
1	AI	69	ASN
1	AJ	56	ASN
1	AJ	64	GLN
1	AJ	134	ASN
1	AJ	148	ASN
1	AJ	191	ASN
2	LE	11	ASN
2	LE	293	GLN
2	LE	297	ASN
2	LE	447	GLN
2	LE	509	GLN
2	LE	532	HIS

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Mol	Chain	Res	Type
2	LE	882	ASN
2	LE	888	GLN
2	LE	969	ASN
2	LE	1042	GLN
2	LE	1093	GLN
3	SE	57	GLN
3	SE	394	HIS
4	TI	116	GLN
4	TI	148	GLN
4	TI	194	GLN
4	TJ	41	ASN
4	TJ	116	GLN
4	TJ	148	GLN
4	TJ	194	GLN
4	TJ	282	ASN
4	TJ	295	ASN
5	XI	12	ASN
5	XI	80	HIS
5	XJ	48	ASN
5	YJ	4	HIS
5	ZI	21	ASN
5	ZJ	60	HIS
5	ZJ	61	ASN
1	AK	64	GLN
1	AL	56	ASN
1	AL	64	GLN
1	AL	134	ASN
1	AL	148	ASN
1	AL	191	ASN
2	LF	11	ASN
2	LF	293	GLN
2	LF	447	GLN
2	LF	509	GLN
2	LF	532	HIS
2	LF	882	ASN
2	LF	888	GLN
2	LF	969	ASN
2	LF	1042	GLN
2	LF	1093	GLN
3	SF	57	GLN
3	SF	93	HIS
3	SF	394	HIS

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Mol	Chain	Res	Type
4	TK	116	GLN
4	TK	134	ASN
4	TK	148	GLN
4	TK	194	GLN
4	TL	41	ASN
4	TL	116	GLN
4	TL	148	GLN
4	TL	194	GLN
4	TL	282	ASN
4	TL	295	ASN
5	XK	12	ASN
5	XL	48	ASN
5	XL	77	GLN
5	YL	4	HIS
5	ZK	21	ASN
5	ZL	60	HIS
5	ZL	61	ASN
6	PB	82	GLN
6	PB	124	GLN
6	PB	291	GLN
6	PB	409	GLN
6	PB	441	GLN
6	PB	462	GLN
6	PB	524	ASN
6	PB	570	GLN
6	PB	606	HIS
6	PB	619	GLN
6	PC	82	GLN
6	PC	124	GLN
6	PC	291	GLN
6	PC	409	GLN
6	PC	441	GLN
6	PC	462	GLN
6	PC	524	ASN
6	PC	570	GLN
6	PD	82	GLN
6	PD	124	GLN
6	PD	291	GLN
6	PD	409	GLN
6	PD	441	GLN
6	PD	462	GLN
6	PD	524	ASN

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Mol	Chain	Res	Type
6	PD	570	GLN
6	PD	606	HIS
6	PD	619	GLN
6	PE	82	GLN
6	PE	124	GLN
6	PE	291	GLN
6	PE	409	GLN
6	PE	441	GLN
6	PE	462	GLN
6	PE	524	ASN
6	PE	570	GLN
6	PE	619	GLN
6	PF	82	GLN
6	PF	124	GLN
6	PF	291	GLN
6	PF	409	GLN
6	PF	441	GLN
6	PF	524	ASN
6	PF	570	GLN
6	PF	606	HIS
6	PF	619	GLN
6	PG	82	GLN
6	PG	124	GLN
6	PG	291	GLN
6	PG	388	GLN
6	PG	409	GLN
6	PG	441	GLN
6	PG	462	GLN
6	PG	524	ASN
6	PG	570	GLN
6	PG	619	GLN
6	PH	82	GLN
6	PH	124	GLN
6	PH	291	GLN
6	PH	409	GLN
6	PH	441	GLN
6	PH	462	GLN
6	PH	524	ASN
6	PH	570	GLN
6	PH	606	HIS
6	PH	619	GLN
6	PI	82	GLN

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Mol	Chain	Res	Type
6	PI	124	GLN
6	PI	291	GLN
6	PI	388	GLN
6	PI	409	GLN
6	PI	441	GLN
6	PI	462	GLN
6	PI	524	ASN
6	PI	570	GLN
6	PI	619	GLN
6	PJ	82	GLN
6	PJ	117	ASN
6	PJ	124	GLN
6	PJ	291	GLN
6	PJ	388	GLN
6	PJ	409	GLN
6	PJ	441	GLN
6	PJ	462	GLN
6	PJ	524	ASN
6	PJ	570	GLN
6	PJ	606	HIS
6	PJ	619	GLN
6	PJ	649	GLN
6	PK	82	GLN
6	PK	124	GLN
6	PK	291	GLN
6	PK	387	ASN
6	PK	409	GLN
6	PK	441	GLN
6	PK	524	ASN
6	PK	570	GLN
6	PK	619	GLN
6	PL	82	GLN
6	PL	124	GLN
6	PL	291	GLN
6	PL	409	GLN
6	PL	441	GLN
6	PL	462	GLN
6	PL	524	ASN
6	PL	570	GLN
6	PL	606	HIS
6	PL	619	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.

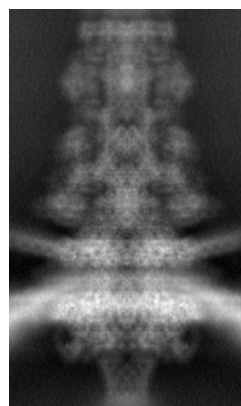
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-72877. These allow visual inspection of the internal detail of the map and identification of artifacts.

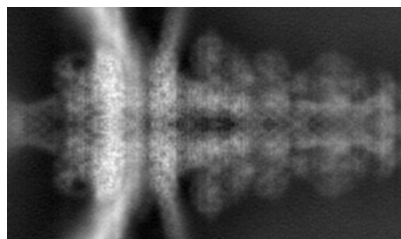
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

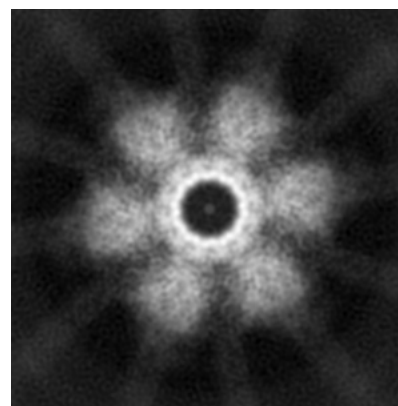
6.1.1 Primary map



X

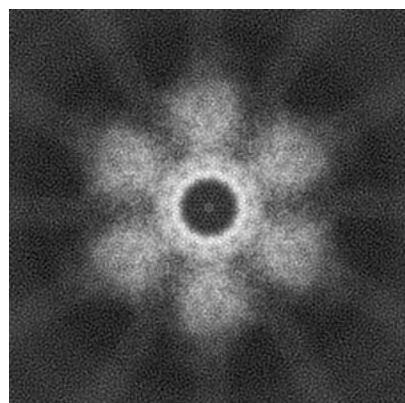


Y

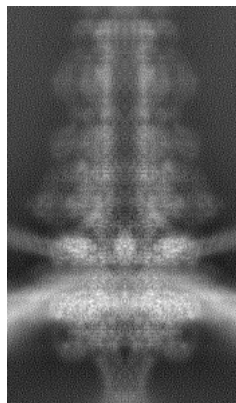


Z

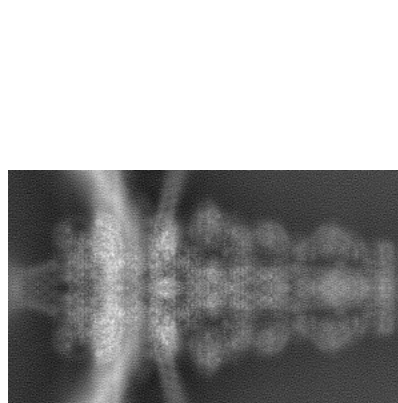
6.1.2 Raw map



X



Y

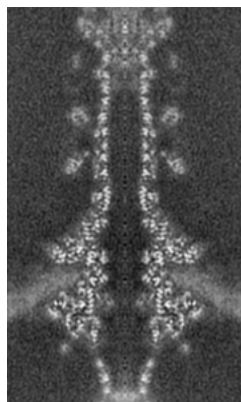


Z

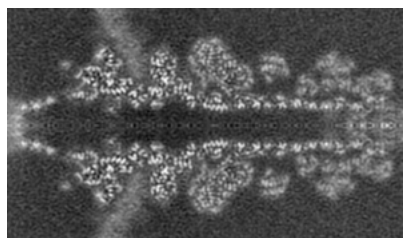
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

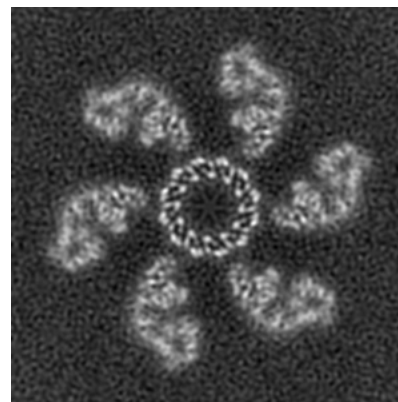
6.2.1 Primary map



X Index: 111

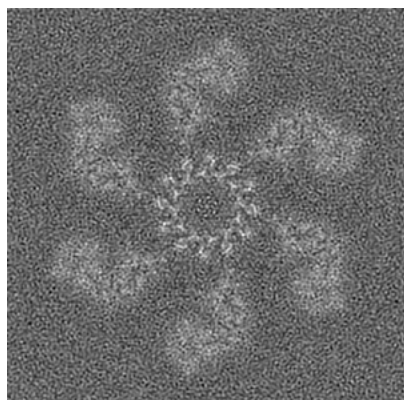


Y Index: 112

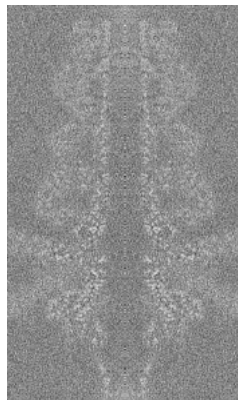


Z Index: 191

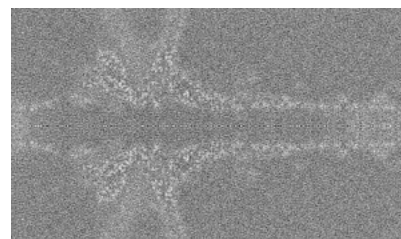
6.2.2 Raw map



X Index: 191



Y Index: 112



Z Index: 111

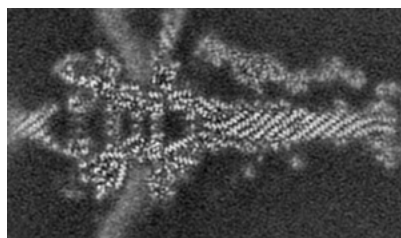
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

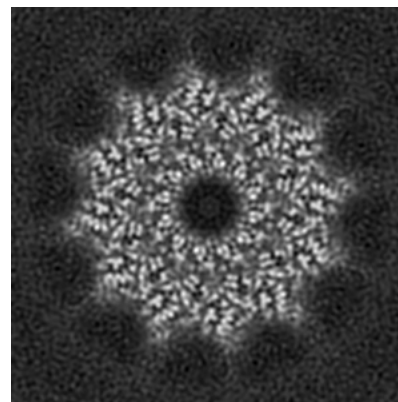
6.3.1 Primary map



X Index: 93

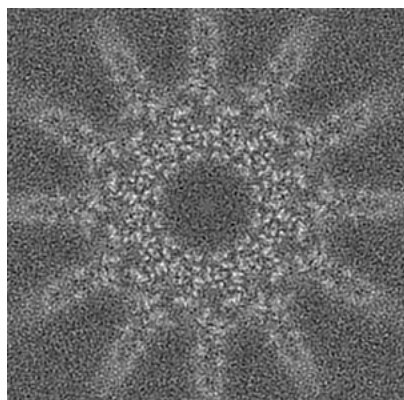


Y Index: 130

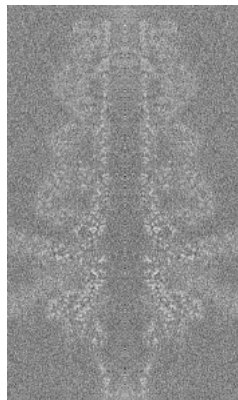


Z Index: 143

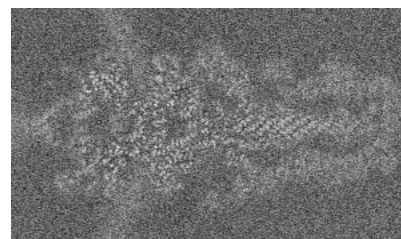
6.3.2 Raw map



X Index: 151



Y Index: 112

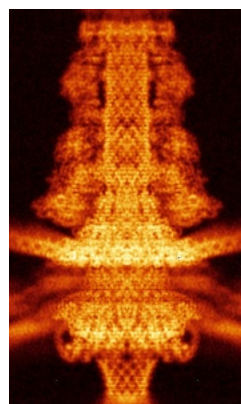


Z Index: 91

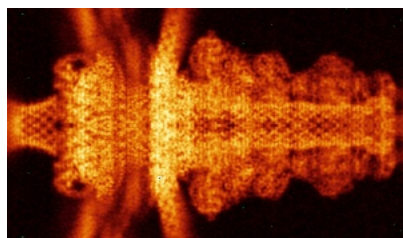
The images above show the largest variance slices of the map in three orthogonal directions.

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

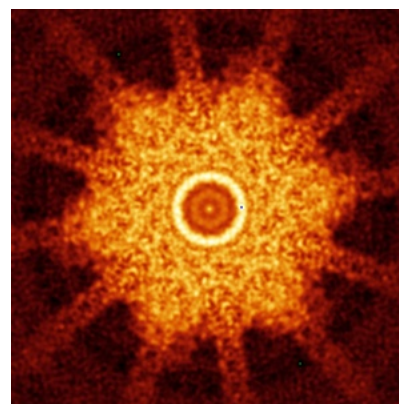
6.4.1 Primary map



X

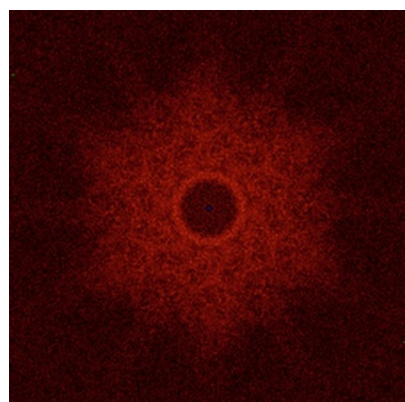


Y

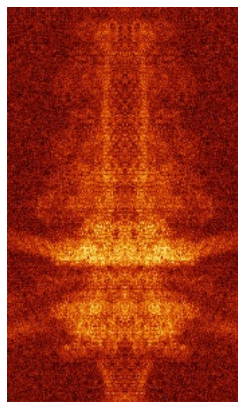


Z

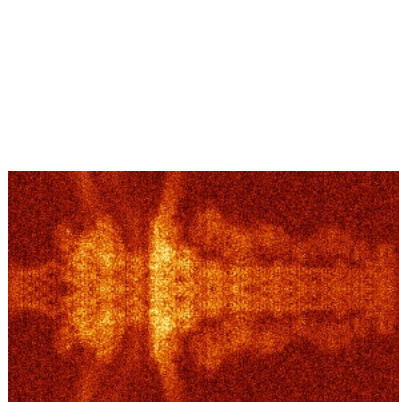
6.4.2 Raw map



X



Y

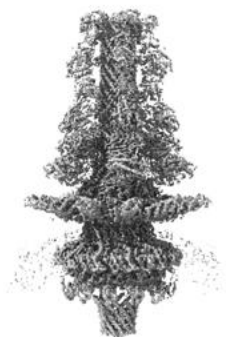


Z

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

6.5 Orthogonal surface views [i](#)

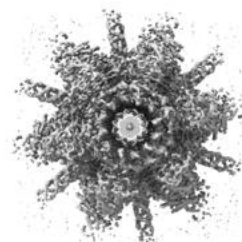
6.5.1 Primary map



X



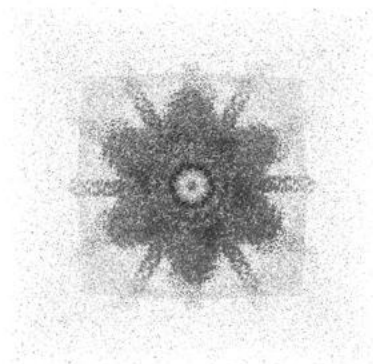
Y



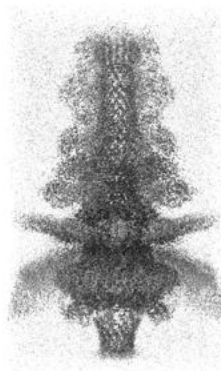
Z

The images above show the 3D surface view of the map at the recommended contour level 0.17. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

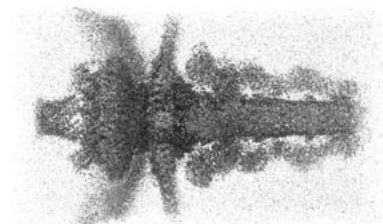
6.5.2 Raw map



X



Y



Z

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

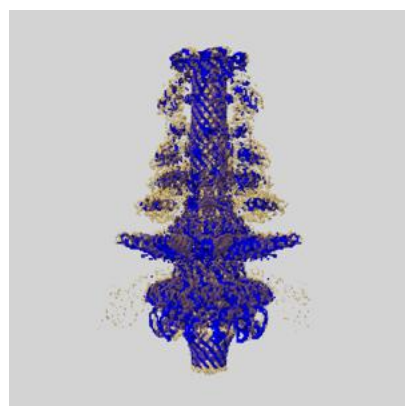
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

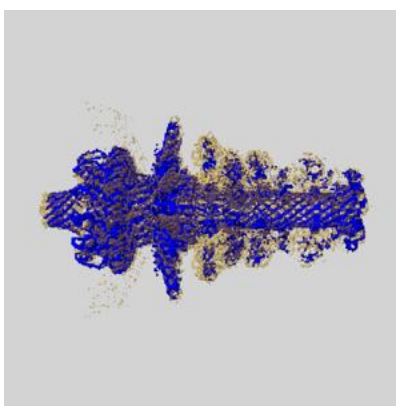
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

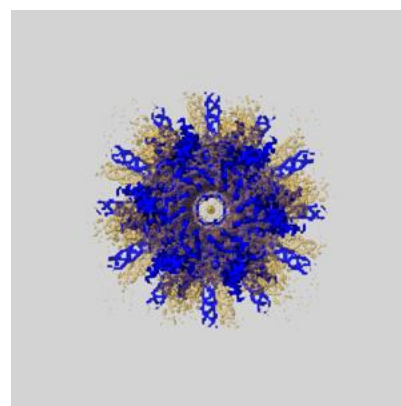
6.6.1 emd_72877_msk_1.map [i](#)



X



Y

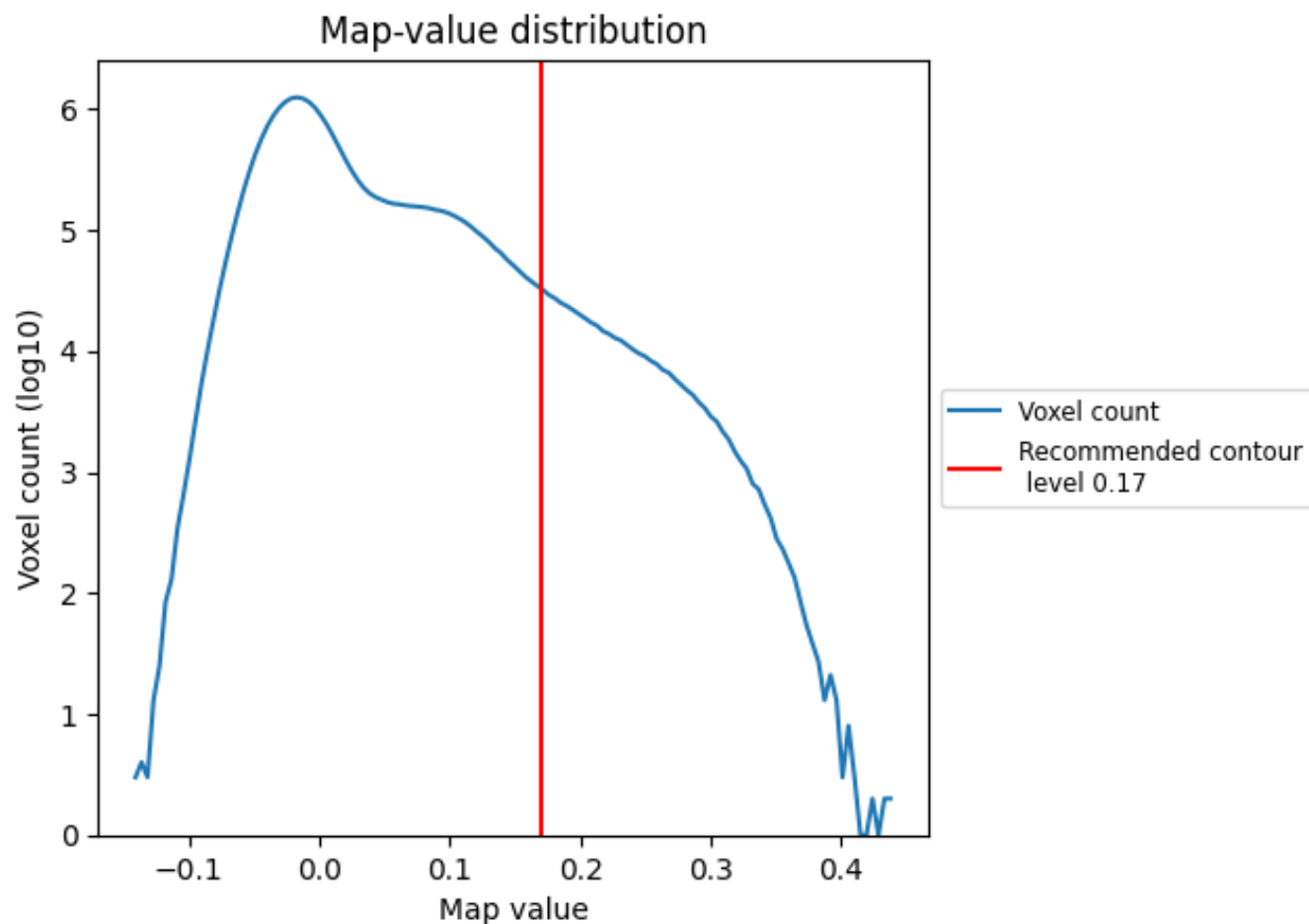


Z

7 Map analysis [i](#)

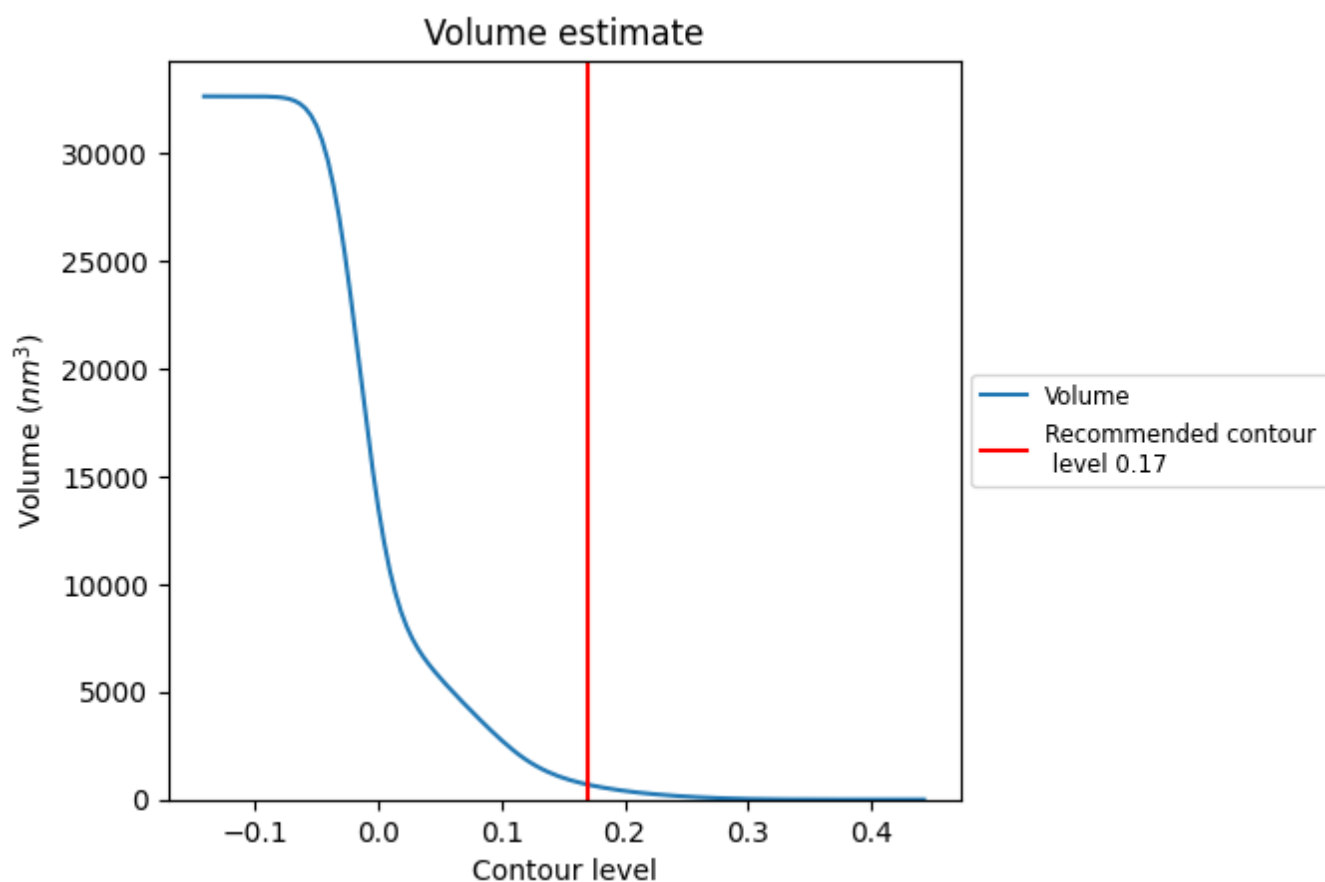
This section contains the results of statistical analysis of the map.

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 698 nm³; this corresponds to an approximate mass of 631 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

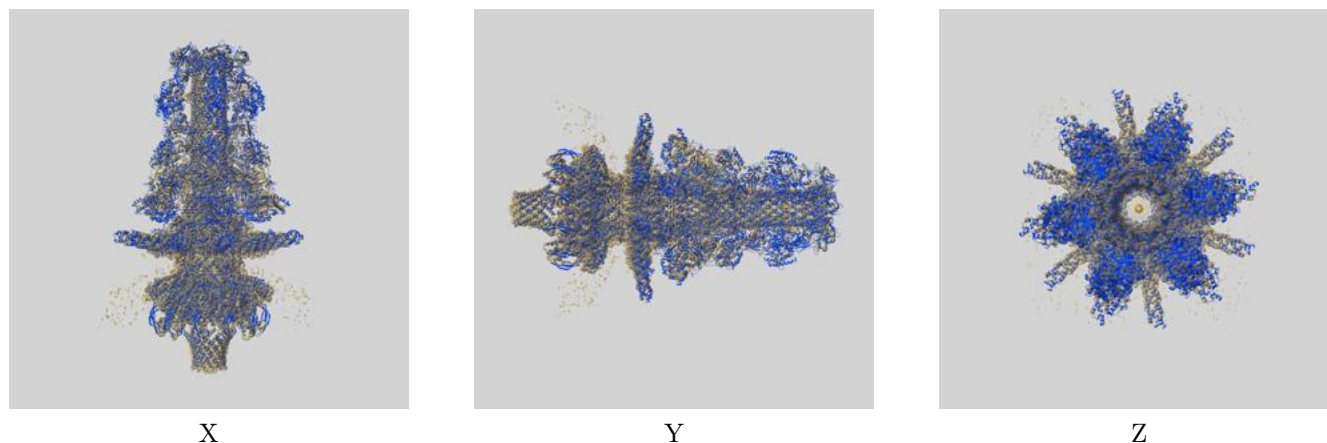
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

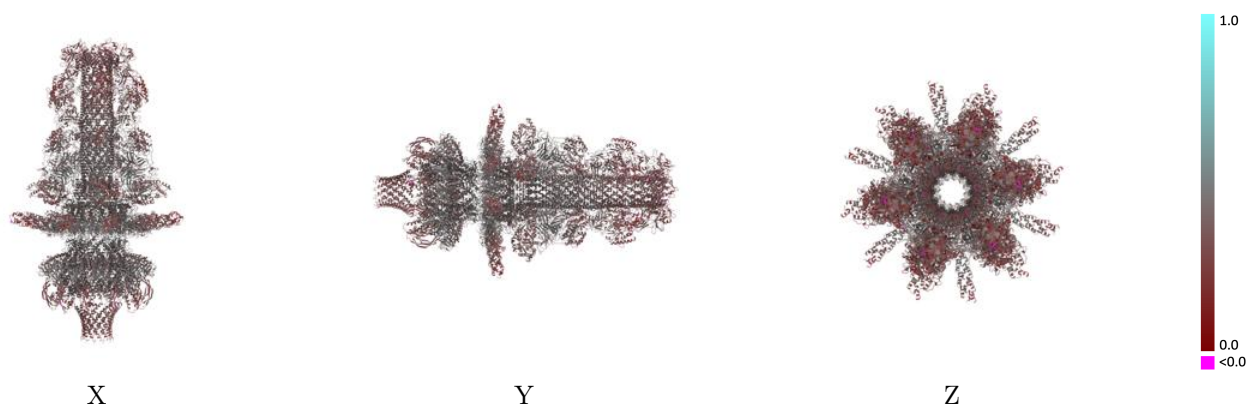
This section contains information regarding the fit between EMDB map EMD-72877 and PDB model 9YF5. Per-residue inclusion information can be found in section [3](#) on page [12](#).

9.1 Map-model overlay [i](#)



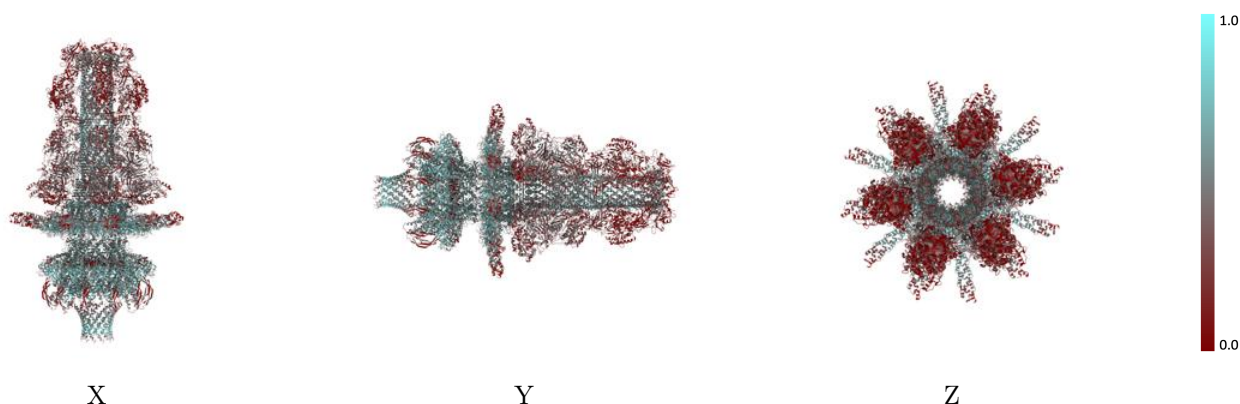
The images above show the 3D surface view of the map at the recommended contour level 0.17 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



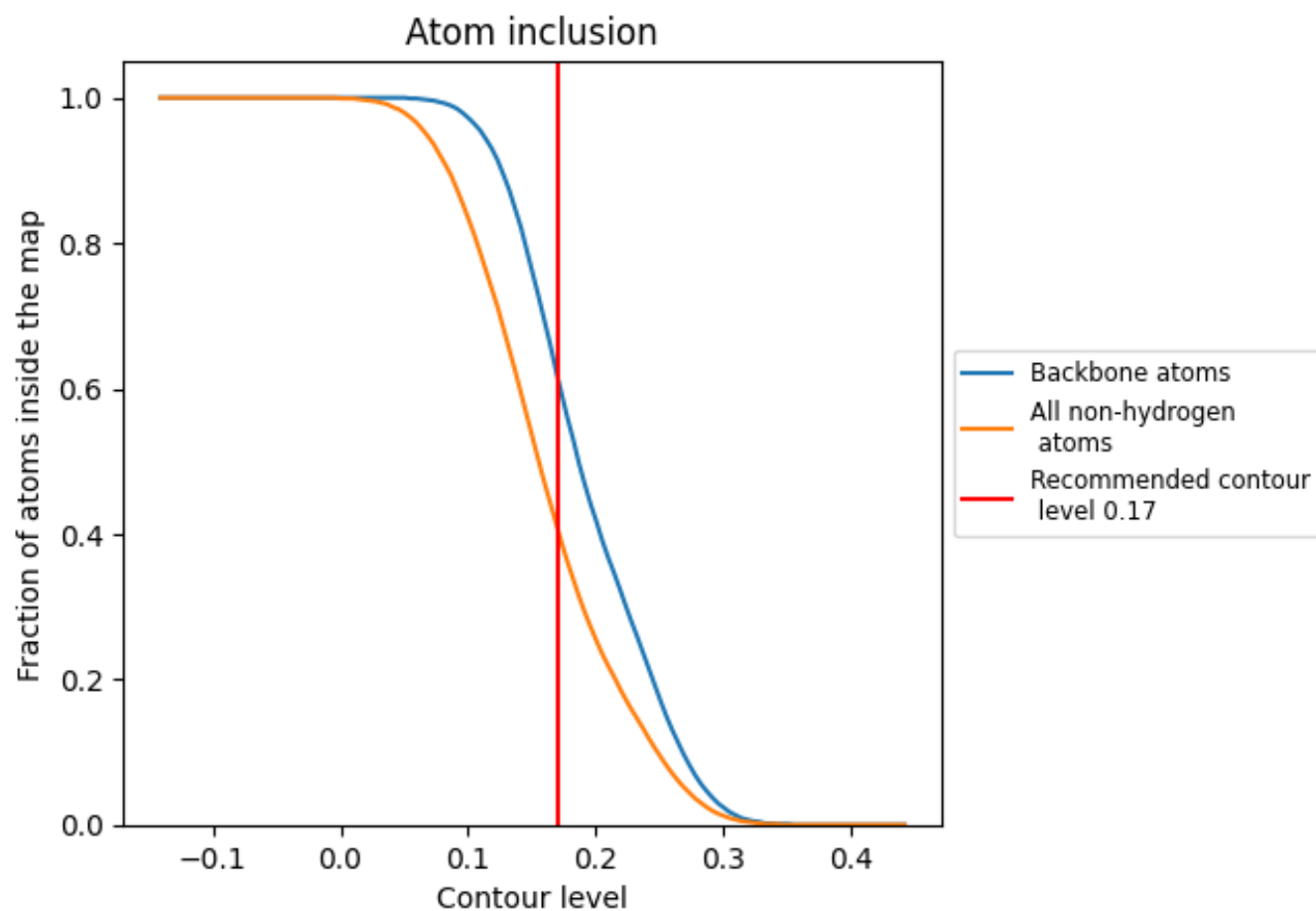
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.17).

9.4 Atom inclusion [i](#)



At the recommended contour level, 62% of all backbone atoms, 41% 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 (0.17) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.4100	 0.3850
AA	 0.5740	 0.4470
AB	 0.5760	 0.4450
AC	 0.5740	 0.4440
AD	 0.5800	 0.4460
AE	 0.5800	 0.4450
AF	 0.5830	 0.4460
AG	 0.5740	 0.4470
AH	 0.5760	 0.4460
AI	 0.5740	 0.4460
AJ	 0.5810	 0.4470
AK	 0.5800	 0.4460
AL	 0.5830	 0.4460
LA	 0.2220	 0.3590
LB	 0.2220	 0.3590
LC	 0.2220	 0.3600
LD	 0.2220	 0.3600
LE	 0.2220	 0.3600
LF	 0.2220	 0.3610
PA	 0.5280	 0.3990
PB	 0.5190	 0.3980
PC	 0.5260	 0.3990
PD	 0.5210	 0.3990
PE	 0.5250	 0.3990
PF	 0.5230	 0.3960
PG	 0.5280	 0.3990
PH	 0.5200	 0.3960
PI	 0.5270	 0.3990
PJ	 0.5200	 0.3970
PK	 0.5250	 0.3990
PL	 0.5230	 0.3980
SA	 0.2420	 0.3550
SB	 0.2390	 0.3540
SC	 0.2350	 0.3560
SD	 0.2420	 0.3560



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Chain	Atom inclusion	Q-score
SE	 0.2390	 0.3560
SF	 0.2350	 0.3550
TA	 0.4960	 0.3910
TB	 0.5020	 0.3920
TC	 0.5020	 0.3900
TD	 0.4970	 0.3910
TE	 0.5000	 0.3880
TF	 0.5030	 0.3890
TG	 0.4960	 0.3900
TH	 0.5020	 0.3900
TI	 0.5020	 0.3900
TJ	 0.4970	 0.3910
TK	 0.5010	 0.3900
TL	 0.5030	 0.3920
XA	 0.4530	 0.3640
XB	 0.4550	 0.3620
XC	 0.4500	 0.3670
XD	 0.4550	 0.3670
XE	 0.4430	 0.3640
XF	 0.4570	 0.3670
XG	 0.4550	 0.3680
XH	 0.4620	 0.3670
XI	 0.4520	 0.3650
XJ	 0.4530	 0.3620
XK	 0.4460	 0.3640
XL	 0.4570	 0.3610
YA	 0.4850	 0.3690
YB	 0.4460	 0.3700
YC	 0.4780	 0.3740
YD	 0.4480	 0.3740
YE	 0.4870	 0.3720
YF	 0.4500	 0.3750
YG	 0.4830	 0.3720
YH	 0.4500	 0.3770
YI	 0.4780	 0.3720
YJ	 0.4460	 0.3710
YK	 0.4870	 0.3710
YL	 0.4500	 0.3710
ZA	 0.4290	 0.3600
ZB	 0.4020	 0.3510
ZC	 0.4190	 0.3570
ZD	 0.4040	 0.3520

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Chain	Atom inclusion	Q-score
ZE	 0.4230	 0.3600
ZF	 0.4080	 0.3520
ZG	 0.4270	 0.3600
ZH	 0.4020	 0.3540
ZI	 0.4190	 0.3590
ZJ	 0.4040	 0.3560
ZK	 0.4230	 0.3590
ZL	 0.4080	 0.3520