



Full wwPDB EM Validation Report ⓘ

Aug 22, 2022 – 04:17 pm BST

PDB ID : 8A3T
EMDB ID : EMD-15123
Title : *S. cerevisiae* APC/C-Cdh1 complex
Authors : Barford, D.; Vazquez-Fernandez, E.; Zhang, Z.; Yang, J.
Deposited on : 2022-06-09
Resolution : 3.50 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:

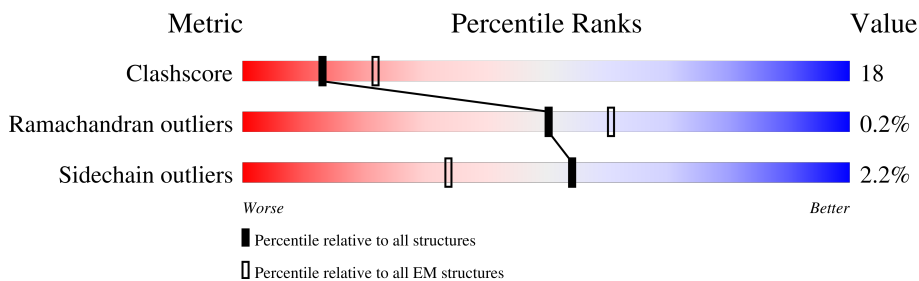
EMDB validation analysis : 0.0.1.dev8
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.29

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	F	758	6% (red), 44% (green), 22% (yellow), 34% (grey)
1	H	758	29% (red), 41% (green), 24% (yellow), 33% (grey)
2	J	850	40% (green), 19% (yellow), 40% (grey)
2	K	850	7% (red), 35% (green), 23% (yellow), 41% (grey)
3	G	124	9% (red), 15% (green), 13% (yellow), 72% (grey)
3	W	124	20% (red), 21% (green), 9% (yellow), 70% (grey)
4	E	265	24% (red), 31% (green), 18% (yellow), 51% (grey)
5	A	250	33% (red), 50% (green), 37% (yellow), 12% (grey)

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Mol	Chain	Length	Quality of chain
6	B	566	<p>49% 46% 31% 22%</p>
7	S	1518	<p>100%</p>
8	C	1748	<p>10% 56% 24% 19%</p>
9	O	685	<p>5% 66% 29%</p>
10	D	626	<p>67% 22% 11%</p>
10	P	626	<p>12% 63% 24% 11%</p>
11	I	170	<p>6% 42% 21% 35%</p>
12	N	368	<p>21% 5% 74%</p>
13	Q	652	<p>17% 66% 28%</p>
14	T	853	<p>41% 53% 21% 24%</p>
15	U	165	<p>68% 53% 16% 31%</p>

2 Entry composition [i](#)

There are 16 unique types of molecules in this entry. The entry contains 61351 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 Anaphase-promoting complex subunit CDC27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	F	502	Total	C	N	O	S	0	0
			3991	2569	656	739	27		
1	H	505	Total	C	N	O	S	0	0
			4031	2593	664	747	27		

- Molecule 2 is a protein called Anaphase-promoting complex subunit CDC16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	J	509	Total	C	N	O	S	0	0
			4128	2661	675	769	23		
2	K	505	Total	C	N	O	S	0	0
			4102	2642	673	764	23		

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	841	LYS	-	expression tag	UNP P09798
J	842	SER	-	expression tag	UNP P09798
J	843	SER	-	expression tag	UNP P09798
J	844	ILE	-	expression tag	UNP P09798
J	845	PRO	-	expression tag	UNP P09798
J	846	GLU	-	expression tag	UNP P09798
J	847	ASN	-	expression tag	UNP P09798
J	848	LEU	-	expression tag	UNP P09798
J	849	TYR	-	expression tag	UNP P09798
J	850	PHE	-	expression tag	UNP P09798
K	841	LYS	-	expression tag	UNP P09798
K	842	SER	-	expression tag	UNP P09798
K	843	SER	-	expression tag	UNP P09798
K	844	ILE	-	expression tag	UNP P09798
K	845	PRO	-	expression tag	UNP P09798
K	846	GLU	-	expression tag	UNP P09798
K	847	ASN	-	expression tag	UNP P09798

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Chain	Residue	Modelled	Actual	Comment	Reference
K	848	LEU	-	expression tag	UNP P09798
K	849	TYR	-	expression tag	UNP P09798
K	850	PHE	-	expression tag	UNP P09798

- Molecule 3 is a protein called Anaphase-promoting complex subunit CDC26.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	G	35	Total	C	N	O	S	0	0
			284	174	51	58	1		
3	W	37	Total	C	N	O	S	0	0
			300	184	54	61	1		

- Molecule 4 is a protein called Anaphase-promoting complex subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	130	Total	C	N	O	S	0	0
			1091	678	201	205	7		

- Molecule 5 is a protein called Anaphase-promoting complex subunit DOC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A	219	Total	C	N	O	S	0	0
			1743	1118	304	311	10		

- Molecule 6 is a protein called CDH1 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	B	440	Total	C	N	O	S	0	0
			3418	2143	602	660	13		

- Molecule 7 is a protein called HSL1 isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	S	6	Total	C	N	O	0	0
			45	27	7	11		

- Molecule 8 is a protein called Anaphase-promoting complex subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	C	1410	Total	C	N	O	S	0	0
			10863	7023	1756	2038	46		

- Molecule 9 is a protein called Anaphase-promoting complex subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	O	658	Total	C	N	O	S	0	0
			5288	3402	869	990	27		

- Molecule 10 is a protein called Anaphase-promoting complex subunit CDC23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	D	560	Total	C	N	O	S	0	0
			4524	2925	729	844	26		
10	P	556	Total	C	N	O	S	0	0
			4518	2922	738	831	27		

- Molecule 11 is a protein called Anaphase-promoting complex subunit SWM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	I	111	Total	C	N	O	S	0	0
			906	568	158	176	4		

- Molecule 12 is a protein called Anaphase-promoting complex subunit MND2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	N	96	Total	C	N	O	S	0	0
			784	504	138	139	3		

- Molecule 13 is a protein called Anaphase-promoting complex subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	Q	623	Total	C	N	O	S	0	0
			5083	3278	842	950	13		

- Molecule 14 is a protein called Anaphase-promoting complex subunit 2.

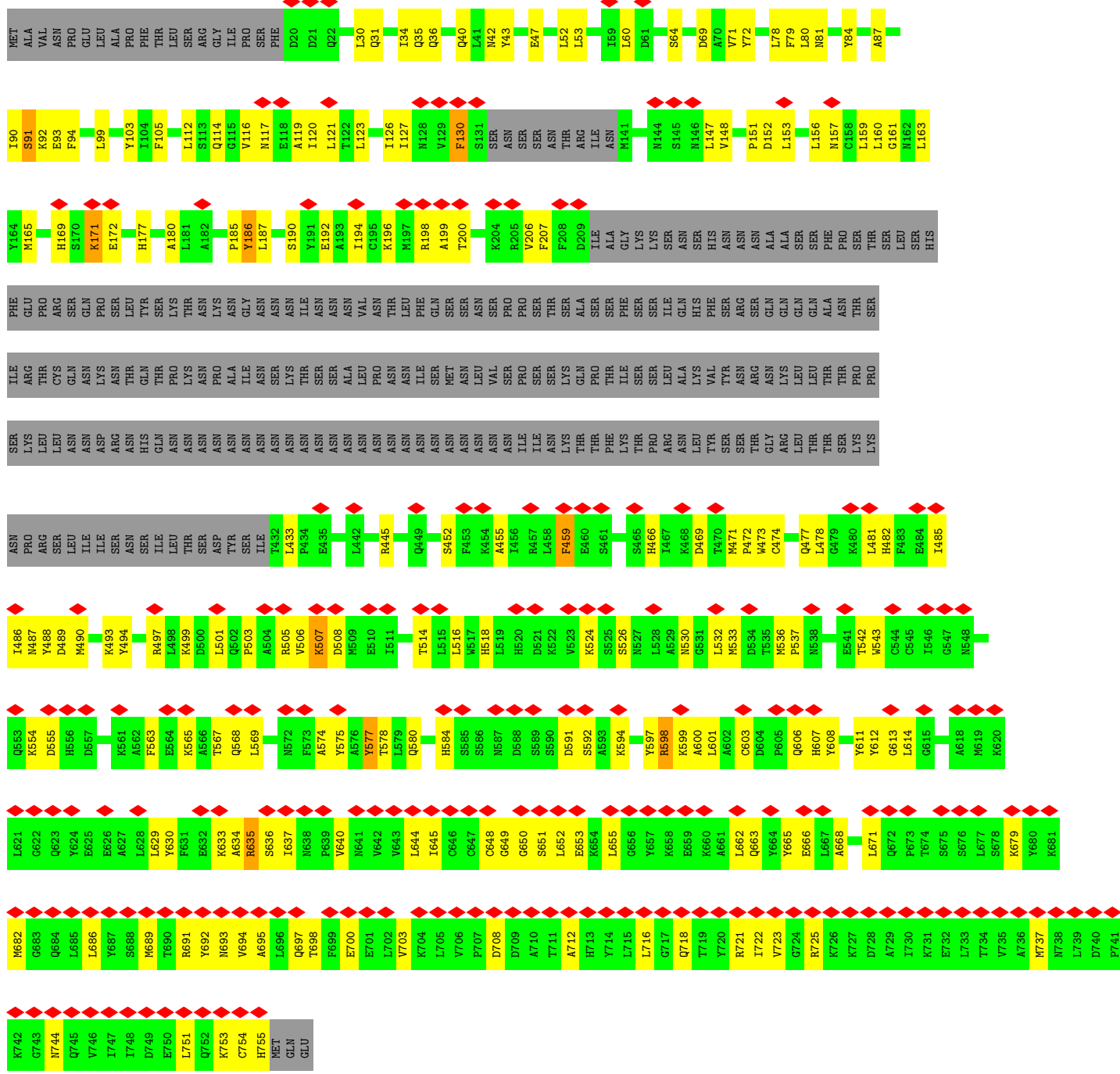
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	T	645	Total	C	N	O	S	0	0
			5337	3466	871	976	24		

- Molecule 15 is a protein called Anaphase-promoting complex subunit 11.

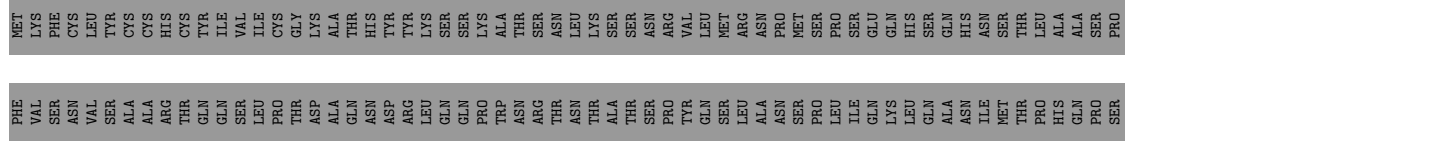
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	U	114	Total	C	N	O	S	0	0
			912	574	164	162	12		

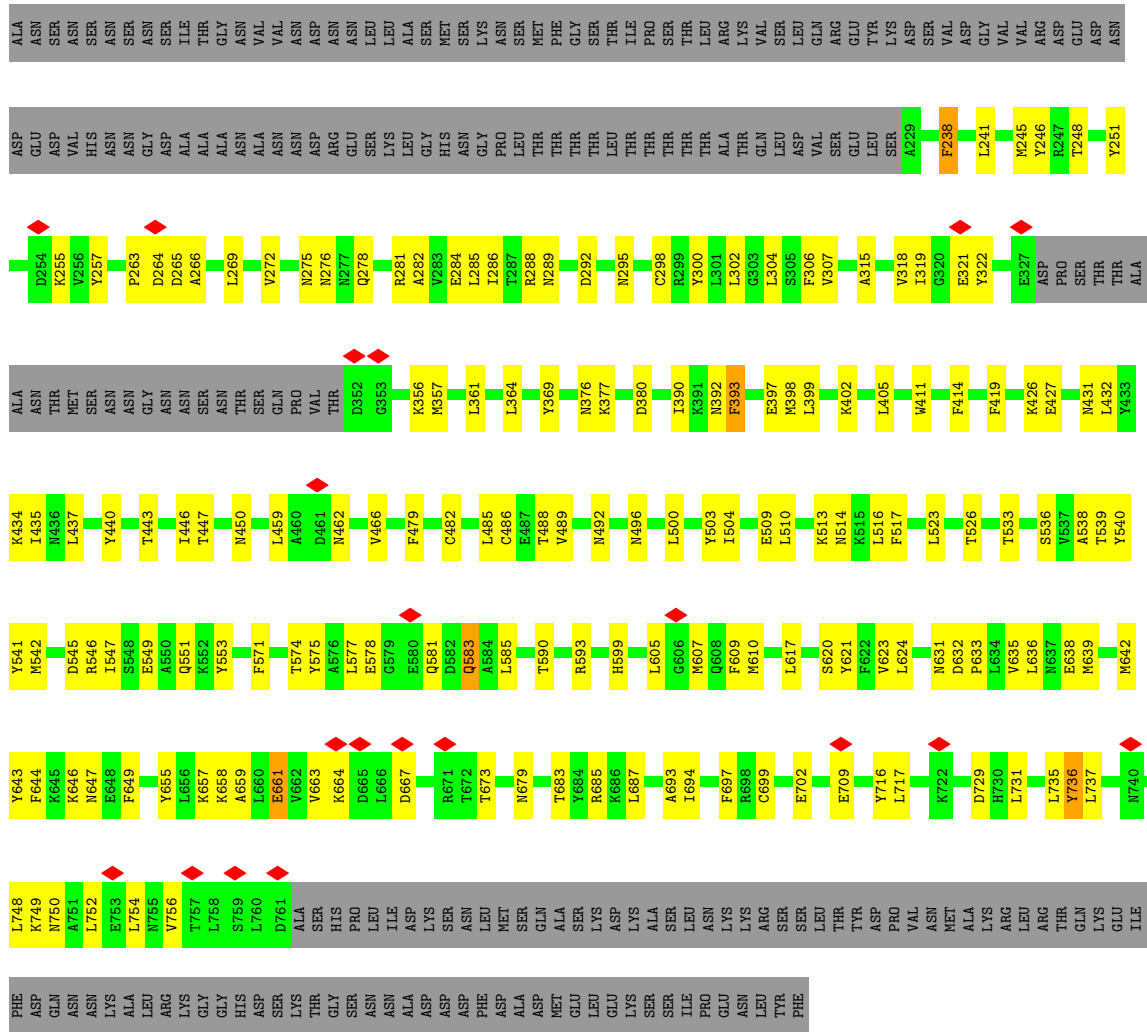
- Molecule 16 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
16	U	3	Total 3	Zn 3	0

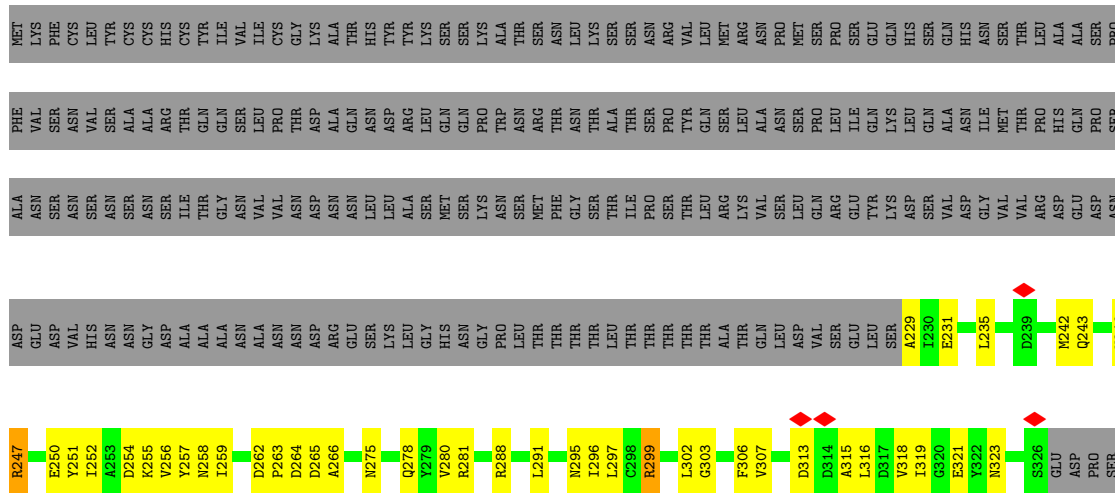
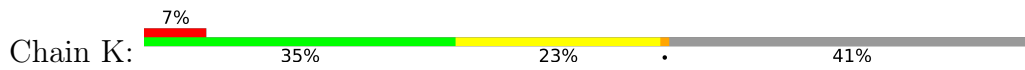


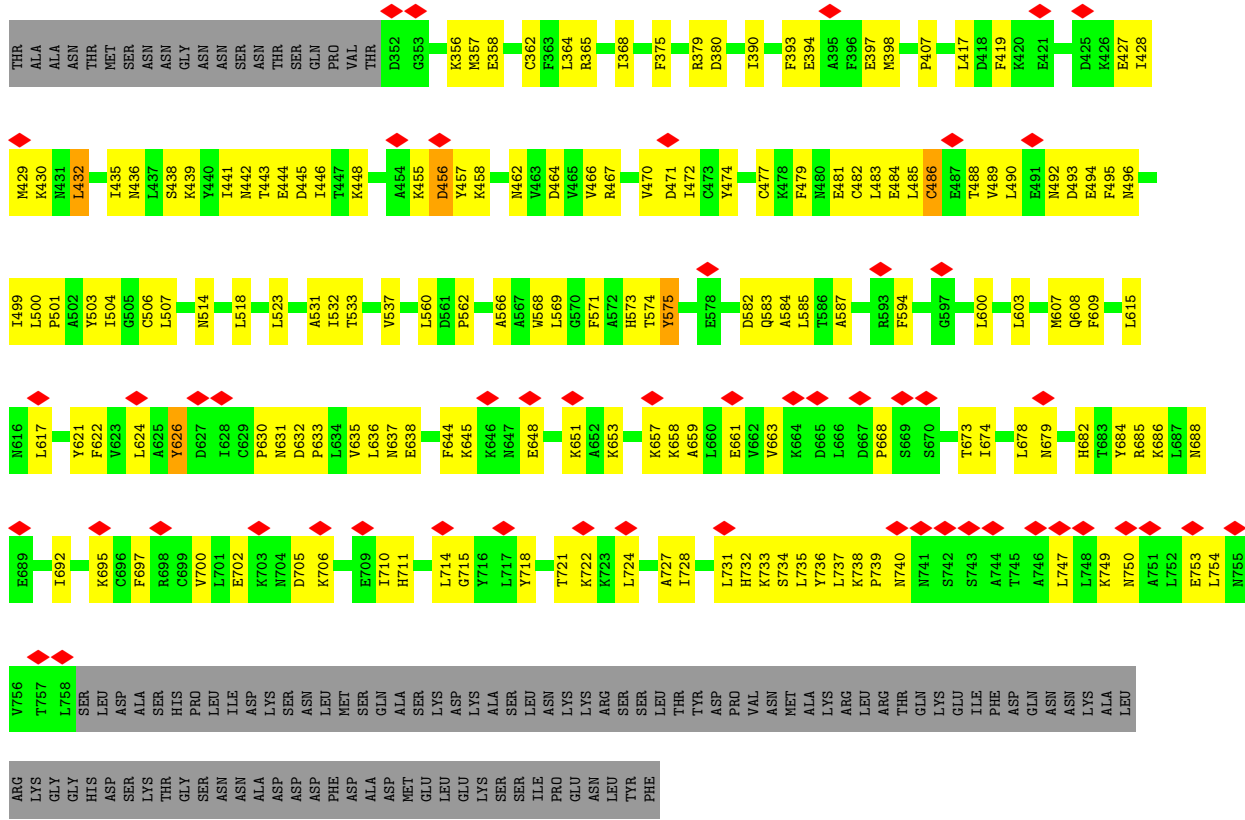
• Molecule 2: Anaphase-promoting complex subunit CDC16



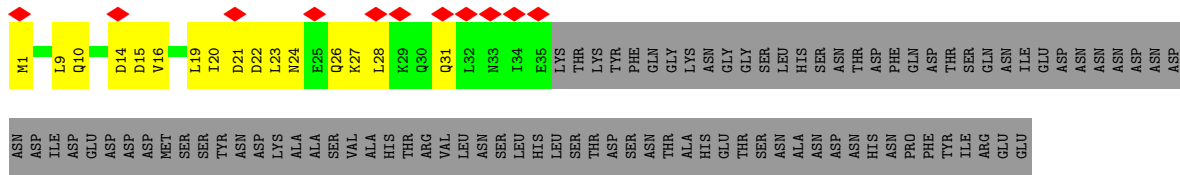


● Molecule 2: Anaphase-promoting complex subunit CDC16

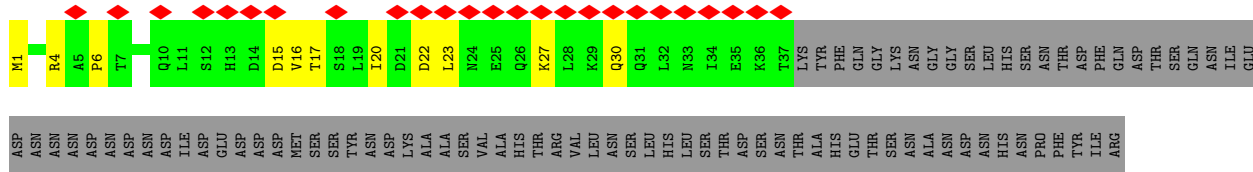




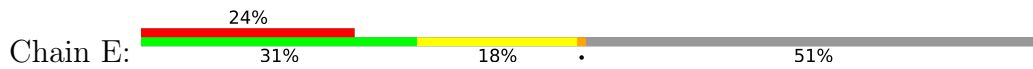
● Molecule 3: Anaphase-promoting complex subunit CDC26

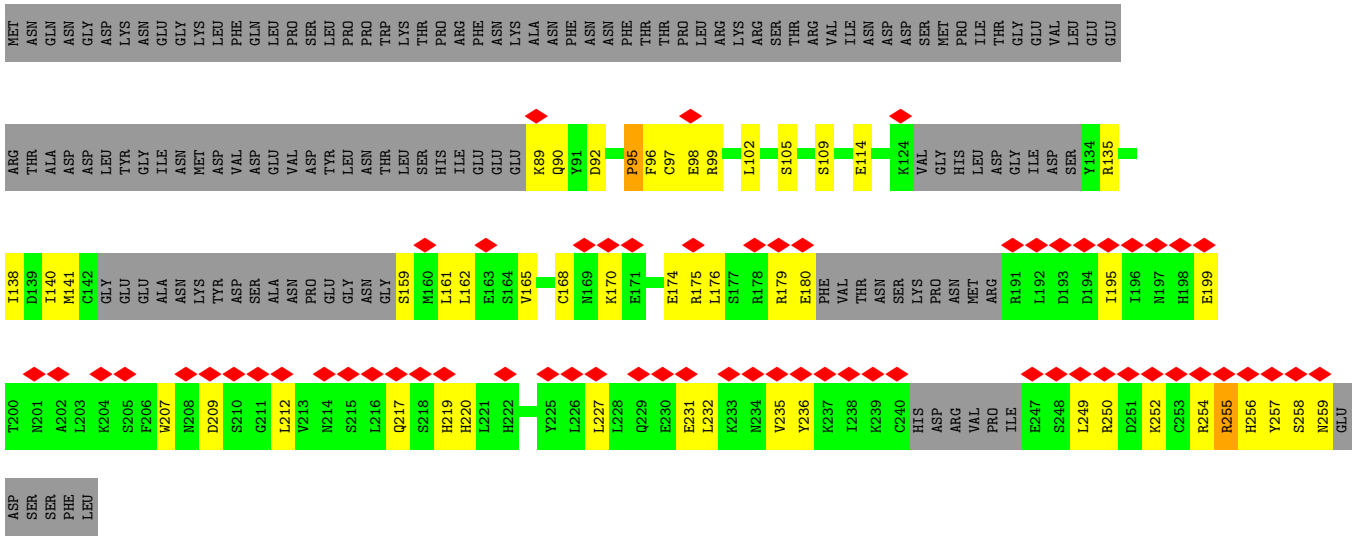


● Molecule 3: Anaphase-promoting complex subunit CDC26

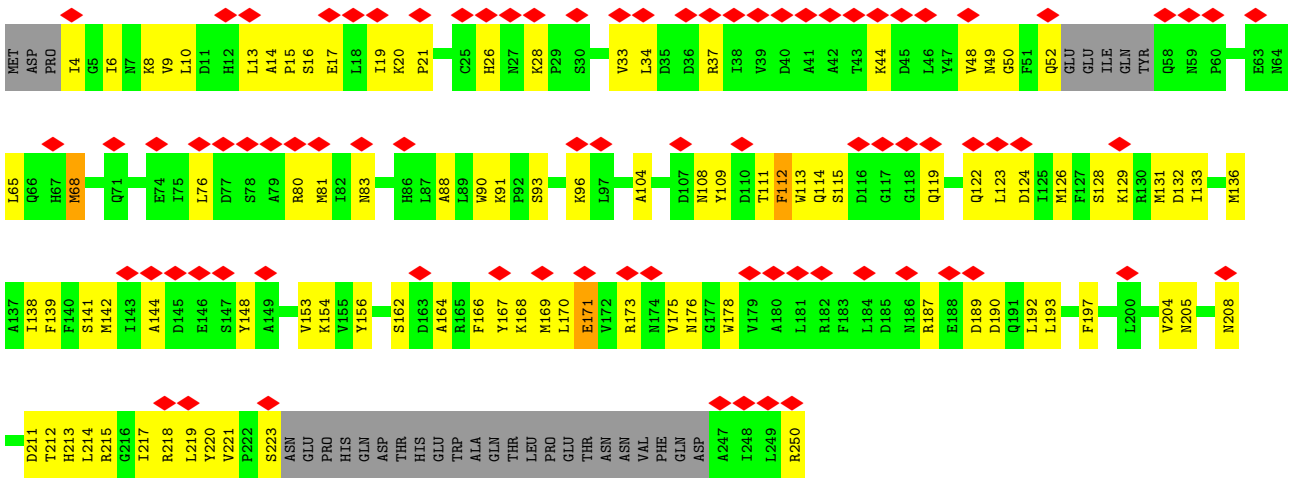


● Molecule 4: Anaphase-promoting complex subunit 9





• Molecule 5: Anaphase-promoting complex subunit DOC1



• Molecule 6: CDH1 isoform 1

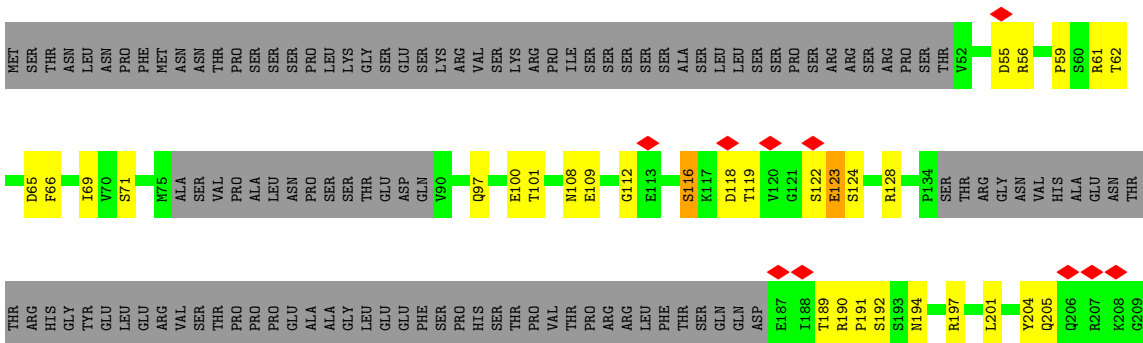
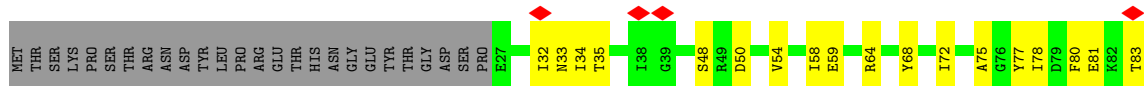
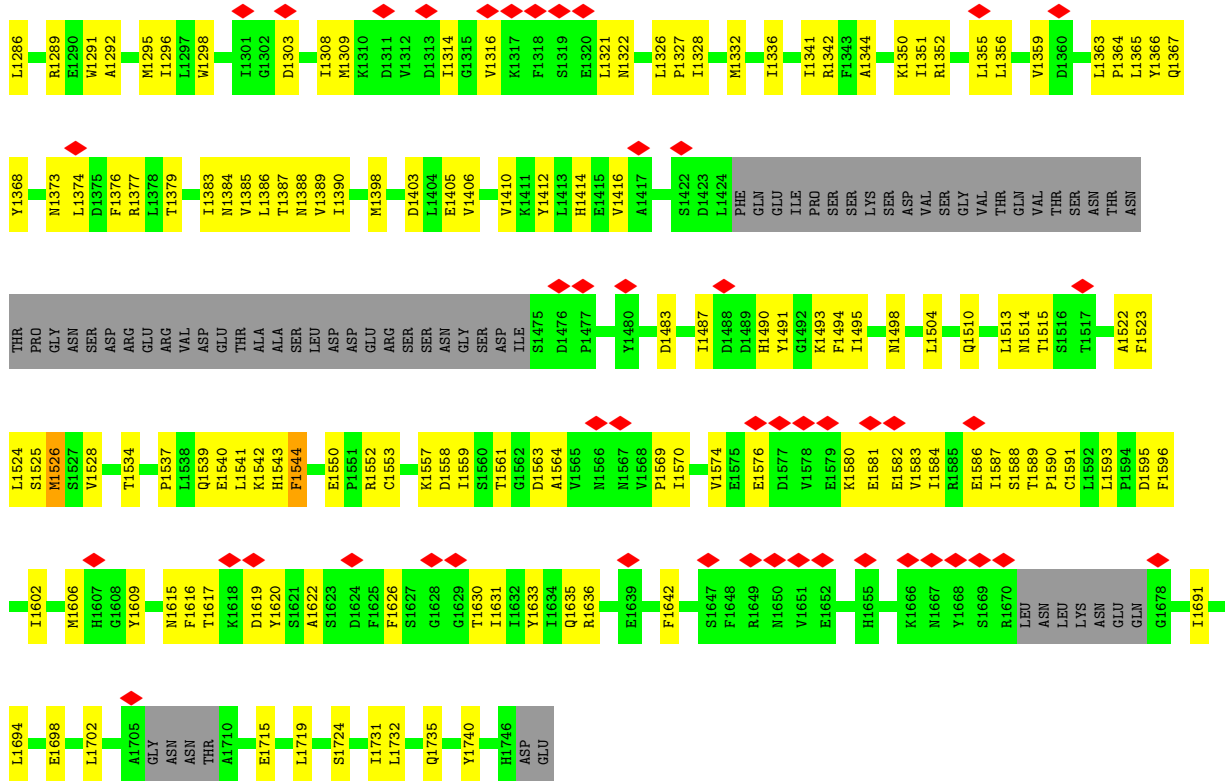


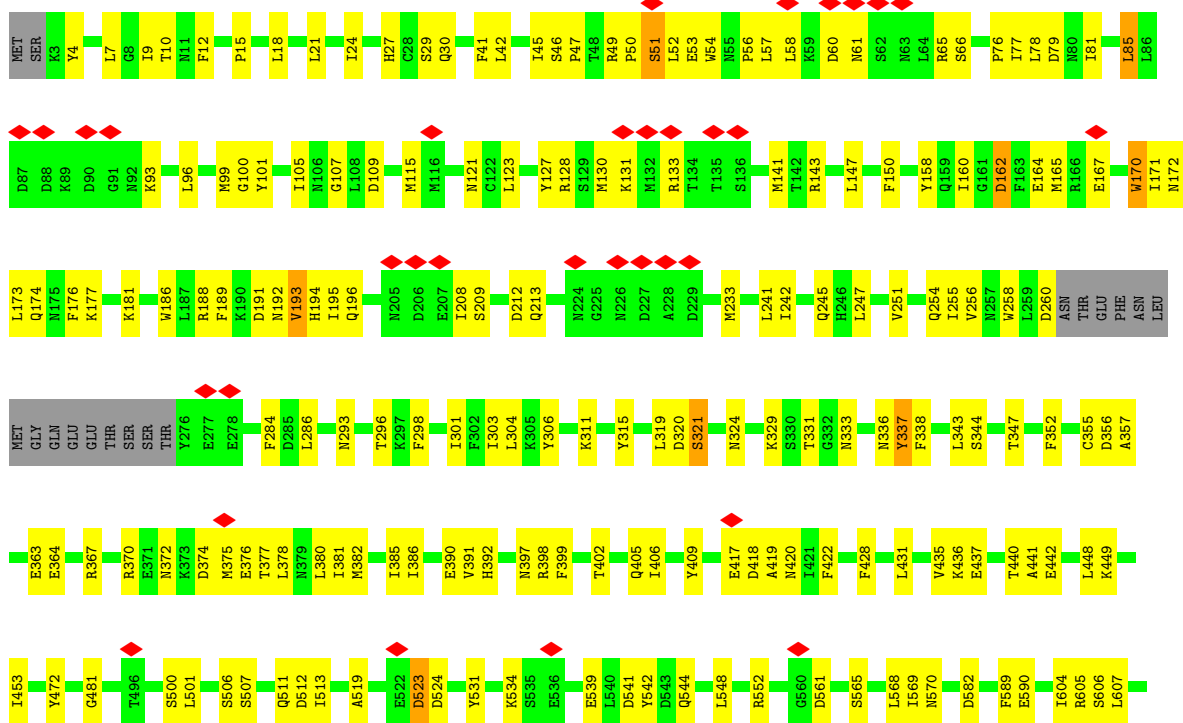
Table of amino acid residues for Chain C, showing sequences from MET to SER. The table is organized into 12 horizontal rows. The final row contains specific residue labels: MET, THR, L32, N33, I34, T35, I36, G39, S48, R49, D50, V54, I58, E59, R64, Y68, I72, A75, G76, Y77, I78, D79, F80, E81, K82, and T83.

• Molecule 8: Anaphase-promoting complex subunit 1



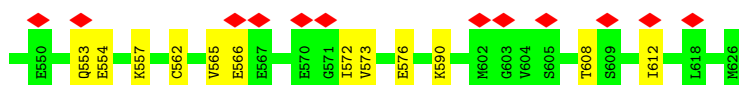
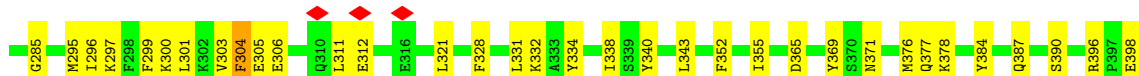


• Molecule 9: Anaphase-promoting complex subunit 5

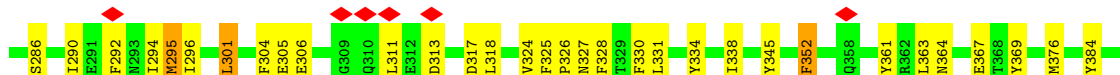
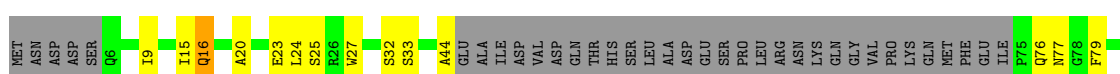


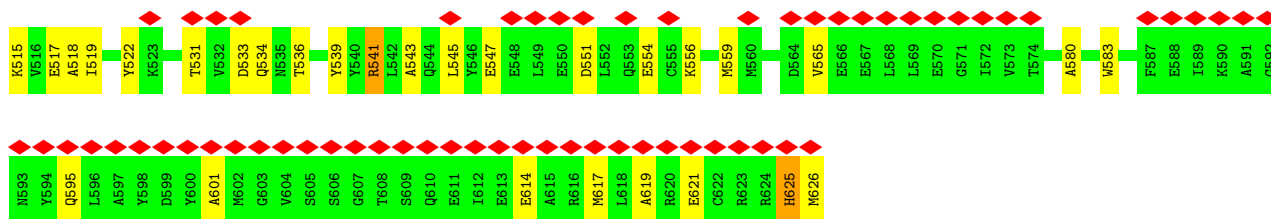


• Molecule 10: Anaphase-promoting complex subunit CDC23

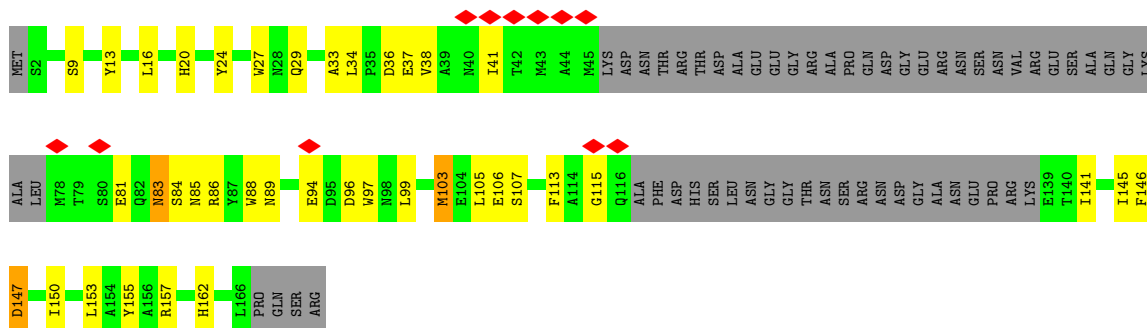


• Molecule 10: Anaphase-promoting complex subunit CDC23

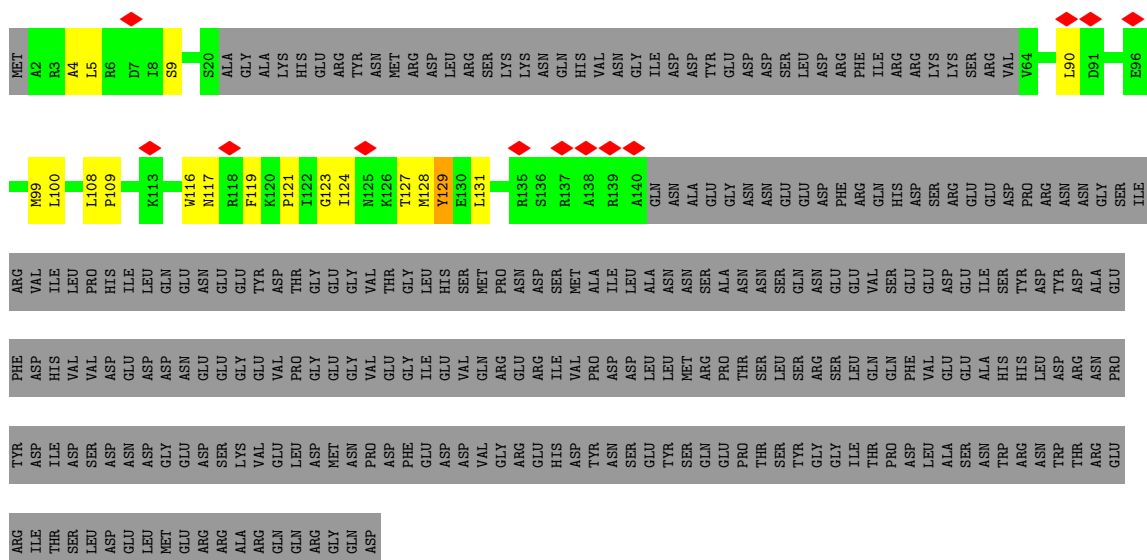




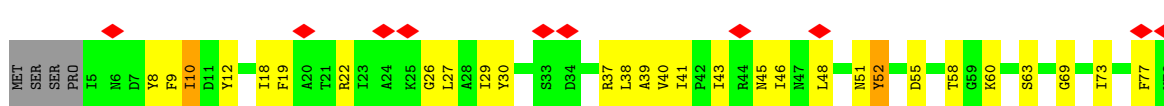
• Molecule 11: Anaphase-promoting complex subunit SWM1

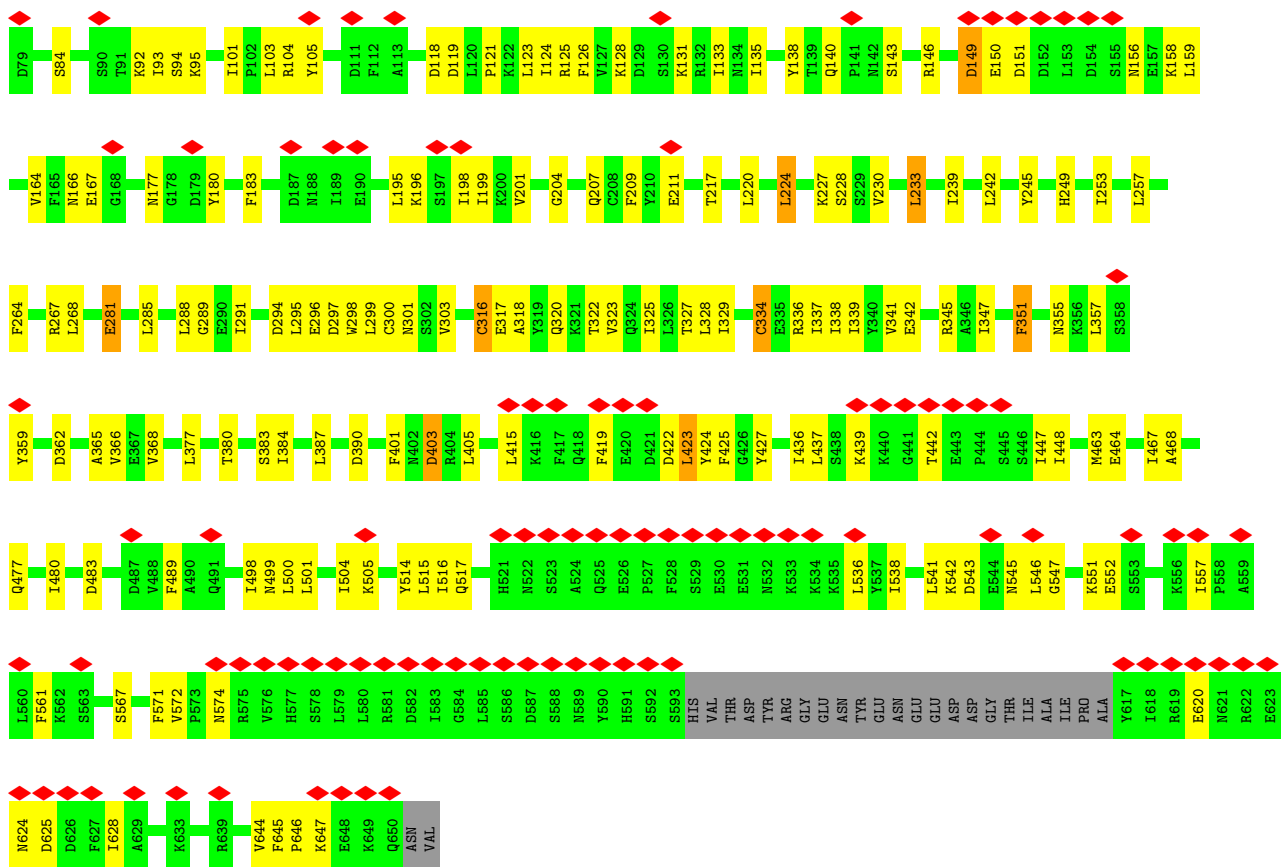


• Molecule 12: Anaphase-promoting complex subunit MND2

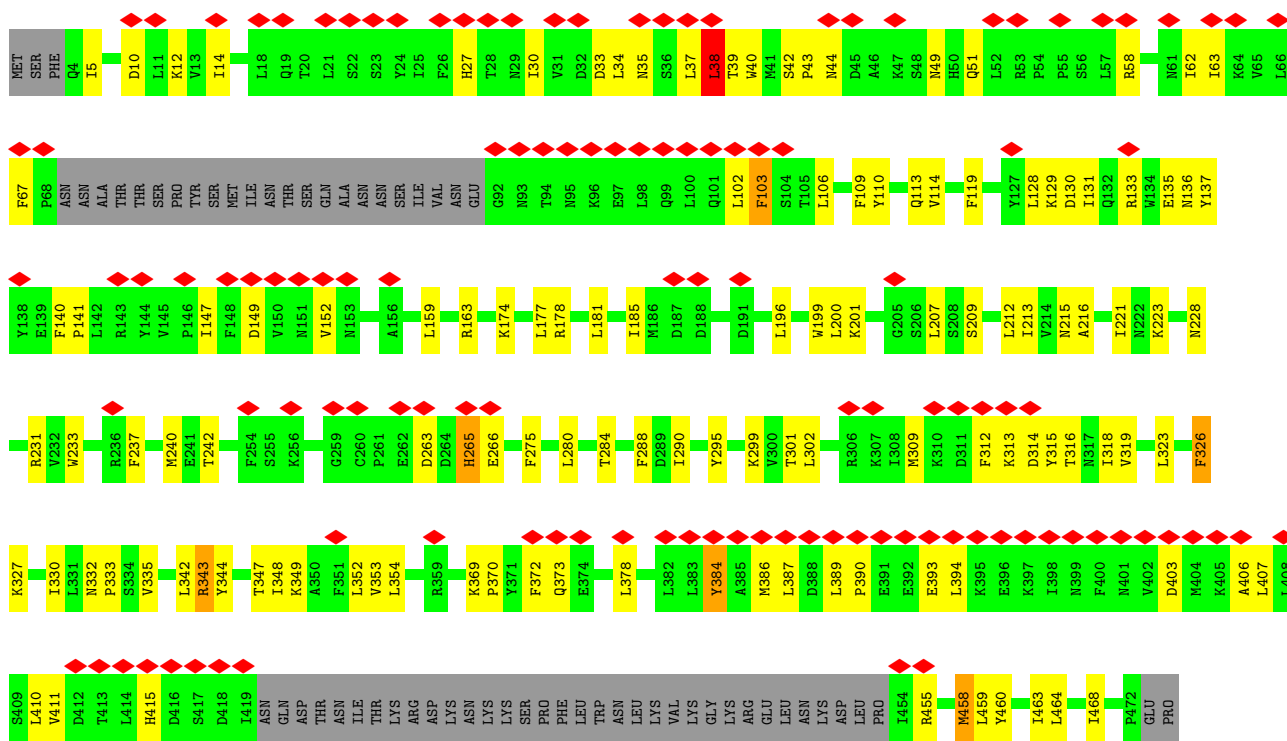
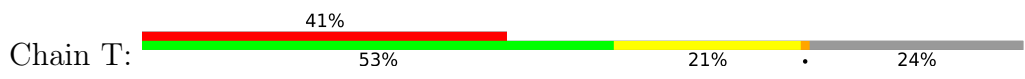


• Molecule 13: Anaphase-promoting complex subunit 4





Molecule 14: Anaphase-promoting complex subunit 2



ASN	ASP	MET	ILE	PRO	GLY	ASN	ILE	K483	S484	S485	Y486	I487	K488	T489	M490	L491	F492	E493	V494	V495	L496	D497	L498	F499	E500	S501	R502	E503	F504	F505	I506	S507	E508	F509	R510	N611	L512	L513	T514	D515	R516	L517	F518	T519	L520	LYS	PHE	TYR	THR	L525	D526	E527	K528	W529	T530	R531	C532	L533	K534													
L535	I536	R537	E538	K539	I540	V541	K542	F543	T544	GLU	THR	SER	HIS	SER	SER	TYR	ILE	THR	ASN	ASN	GLY	ILE	LEU	GLY	LEU	LEU	LEU	THR	THR	ALA	ALA	A567	D568	A569	D570	Q571	S572	N573	L574	N575	S576	I577	D578	V579	M580	L581	W582	D583	I584	K585	C586	S587	E588	F589	L590	C591	R592	K593	M594													
H595	E596	V597	A598	G599	L600	D601	P602	I603	I604	F605	P606	K607	F608	I609	S610	L611	L612	Y613	W614	K615	Y616	N617	C618	D619	THR	GLN	GLY	ALA	SER	ASN	D625	L626	A627	F628	H629	L630	P631	I632	D633	L634	E635	R636	E637	L638	Q639	K640	Y641	S642	D643	I644	Y645	S646	Q647	L648	K649	P650	G651	R652	K653	L654												
Q655	L656	C657	K658	D659	K660	G661	K662	V663	E664	I665	Q666	L667	A668	F669	K670	D671	G672	R673	K674	L675	V676	L677	D678	V679	S680	L681	E682	Q683	C684	S685	V686	I687	N688	Q689	F690	D691	S692	P693	N694	D695	E696	P697	I698	C699	L700	S701	L702	E703	Q704	L705	S706	E707	S708	L709	N710	I711	A712	F713	P714													
R715	L716	T717	H718	L719	L720	D721	F722	W723	I724	Q725	K726	G727	V728	L729	L730	E731	E732	M733	G734	T735	Y736	S737	V738	I739	E740	H741	S742	E743	M744	D745	F746	ASP	GLN	ALA	GLN	LYS	THR	ALA	PRO	THR	ALA	ASN	ASN	SER	THR	GLY	LEU	LEU	GLN	GLN	LEU	LEU	PRO	MET	TYR	ILE	GLU	ILE	GLU	ASN	ASN	THR	LEU	LEU	ILE	ILE	ARG	GLY	ASP	GLU	GLY	ARG
GLU	LEU	THR	LEU	GLN	ARG	ASN	GLY	LEU	PRO	PHE	ILE	GLU	GLY	GLY	MET	LEU	THR	THR	ASN	ASN	GLY	ALA	ALA	LYS	LYS	HIS	LYS	ILE	THR	SER	PHE	LEU	LYS	ILE	VAL	PRO	ASP	LYS	TRP	GLY	ASN	ASN	ARG	ILE	THR	LEU	GLN	GLN	LEU	LEU	GLY	TYR	LEU	LEU	ASN	THR	LEU	ALA	ASP	GLU	GLY	ARG										
LEU	LYS	TYR	ILE	ALA	ASN	GLY	SER	TYR	TYR	GLU	ILE	VAL	LYS	ASN	ASN	GLY	HIS	LYS	ASN	ASN	GLY	SER	THR	ALA	ILE	THR	VAL	PRO	ASP	LYS	TRP	GLY	ASN	ASN	GLU	D37	E38	D39	V40	C41	G42	I43	C44	R45	A46	S47	Y48	N49	G50	T51	C52	P53	S54	C55	K56	F57	P58	G59	D60													
Q61	C62	P63	L64	V65	G67	L68	C69	H70	H71	N72	F73	H74	D75	H76	C77	Y79	R80	W81	L82	D83	T84	P85	T86	S87	K88	G89	L90	C91	P92	M93	C94	R95	D96	T97	F98	Q99	L100	Q101	K102	G103	L104	A105	I106	N107	D108	A109	H110	V111	Q112	K113	F114	V115	E116	I117	S118	S119	R120															
R121	R122	E123	E124	M125	I126	E127	E128	G129	V130	ALA	GLU	GLU	PHE	VAL	ASP	PHE	ASP	PRO	GLU	ARG	ILE	GLN	ASN	THR	THR	ASP	ASN	PRO	ILE	ILE	GLY	ARG	GLN	GLN	VAL	VAL	THR	ILE	LEU	LEU	ASP	GLU	ASP	ASP	PHE	LEU	LEU	LEU	ARG																							

● Molecule 15: Anaphase-promoting complex subunit 11



M1	K2	V3	K4	I5	N6	E7	V8	H9	S10	V11	F12	A13	W14	S15	W16	H17	P19	S20	THR	SER	ASP	GLU	ASP	ALA	ALA	ASN	ASP	PRO	PHO	ILE	GLY	ASN	ASP	GLU	D37	E38	D39	V40	C41	G42	I43	C44	R45	A46	S47	Y48	N49	G50	T51	C52	P53	S54	C55	K56	F57	P58	G59	D60
Q61	C62	P63	L64	V65	G67	L68	C69	H70	H71	N72	F73	H74	D75	H76	C77	Y79	R80	W81	L82	D83	T84	P85	T86	S87	K88	G89	L90	C91	P92	M93	C94	R95	D96	T97	F98	Q99	L100	Q101	K102	G103	L104	A105	I106	N107	D108	A109	H110	V111	Q112	K113	F114	V115	E116	I117	S118	S119	R120	
R121	R122	E123	E124	M125	I126	E127	E128	G129	V130	ALA	GLU	GLU	PHE	VAL	ASP	PHE	ASP	PRO	GLU	ARG	ILE	GLN	ASN	THR	THR	ASP	ASN	PRO	ILE	ILE	GLY	ARG	GLN	GLN	VAL	VAL	THR	ILE	LEU	LEU	ASP	GLU	ASP	ASP	PHE	LEU	LEU	LEU	ARG									

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	249193	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	59	Depositor
Minimum defocus (nm)	1600	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.287	Depositor
Minimum map value	-0.161	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.05	Depositor
Map size (\AA)	353.28, 353.28, 353.28	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.38, 1.38, 1.38	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	F	0.27	0/4079	0.53	1/5525 (0.0%)
1	H	0.27	0/4118	0.50	0/5574
2	J	0.28	0/4214	0.51	0/5692
2	K	0.30	0/4188	0.52	0/5657
3	G	0.28	0/285	0.68	0/384
3	W	0.25	0/301	0.59	0/405
4	E	0.75	1/1108 (0.1%)	0.73	2/1481 (0.1%)
5	A	0.25	0/1785	0.55	1/2418 (0.0%)
6	B	0.27	0/3487	0.53	0/4730
7	S	0.21	0/44	0.39	0/59
8	C	0.26	0/11088	0.50	3/15080 (0.0%)
9	O	0.27	0/5387	0.47	0/7291
10	D	0.26	0/4621	0.44	0/6243
10	P	0.28	0/4616	0.50	2/6228 (0.0%)
11	I	0.29	0/930	0.64	1/1263 (0.1%)
12	N	0.28	0/800	0.55	0/1076
13	Q	0.25	0/5190	0.49	0/7020
14	T	0.32	2/5455 (0.0%)	0.61	5/7387 (0.1%)
15	U	0.25	0/936	0.49	0/1265
All	All	0.29	3/62632 (0.0%)	0.52	15/84778 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	H	0	1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	E	95	PRO	N-CD	23.35	1.80	1.47
14	T	650	PRO	CB-CG	-11.48	0.92	1.50
14	T	650	PRO	CG-CD	-6.54	1.29	1.50

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	T	650	PRO	CB-CG-CD	18.83	179.94	106.50
14	T	650	PRO	N-CD-CG	-18.79	75.01	103.20
4	E	95	PRO	CA-N-CD	-16.35	88.61	111.50
14	T	650	PRO	CA-CB-CG	-15.95	73.70	104.00
14	T	650	PRO	CA-N-CD	-9.06	98.81	111.50
10	P	295	MET	CG-SD-CE	-8.05	87.32	100.20
4	E	95	PRO	N-CD-CG	-7.50	91.95	103.20
14	T	38	LEU	CA-CB-CG	7.44	132.42	115.30
8	C	1155	LEU	CA-CB-CG	6.76	130.85	115.30
8	C	1155	LEU	CB-CG-CD2	-6.36	100.19	111.00
5	A	136	MET	CB-CG-SD	5.83	129.88	112.40
8	C	845	PRO	N-CA-CB	5.75	110.20	103.30
10	P	110	ASP	CB-CG-OD1	5.68	123.41	118.30
1	F	197	MET	CA-CB-CG	5.14	122.03	113.30
11	I	147	ASP	CB-CG-OD1	5.12	122.91	118.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	H	635	ARG	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	3991	0	3947	171	0
1	H	4031	0	4003	204	0
2	J	4128	0	4096	176	0
2	K	4102	0	4065	230	0
3	G	284	0	293	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	W	300	0	313	17	0
4	E	1091	0	1058	67	0
5	A	1743	0	1714	82	0
6	B	3418	0	3307	184	0
7	S	45	0	43	1	0
8	C	10863	0	10672	373	0
9	O	5288	0	5299	176	0
10	D	4524	0	4391	132	0
10	P	4518	0	4410	189	0
11	I	906	0	813	61	0
12	N	784	0	784	20	0
13	Q	5083	0	5093	155	0
14	T	5337	0	5314	226	0
15	U	912	0	873	28	0
16	U	3	0	0	0	0
All	All	61351	0	60488	2228	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 18.

All (2228) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:431:LEU:HD13	9:O:472:TYR:CZ	1.16	1.65
6:B:190:ARG:HB2	11:I:97:TRP:CZ3	1.32	1.62
10:P:27:TRP:CH2	10:P:115:TYR:CE1	1.85	1.61
9:O:170:TRP:CZ3	9:O:174:GLN:HG3	1.32	1.61
10:P:301:LEU:HD22	10:P:334:TYR:CE2	1.33	1.57
10:P:301:LEU:HD22	10:P:334:TYR:CZ	1.35	1.57
2:K:242:MET:CE	2:K:243:GLN:HE22	1.23	1.50
10:P:27:TRP:CZ2	10:P:115:TYR:CE1	2.07	1.41
4:E:95:PRO:CD	4:E:95:PRO:N	1.80	1.39
14:T:309:MET:SD	14:T:314:ASP:HB3	1.62	1.39
14:T:103:PHE:HE2	14:T:147:ILE:O	1.04	1.37
14:T:309:MET:SD	14:T:314:ASP:CB	2.11	1.38
14:T:237:PHE:HB2	14:T:240:MET:CE	1.52	1.37
14:T:309:MET:HE2	14:T:315:TYR:CD1	1.59	1.37
2:K:575:TYR:CE2	6:B:222:PHE:CZ	2.12	1.37
14:T:237:PHE:CB	14:T:240:MET:HE2	1.55	1.37
10:P:27:TRP:CZ2	10:P:115:TYR:HE1	1.43	1.36
6:B:190:ARG:N	11:I:97:TRP:CH2	1.94	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:190:ARG:HB2	11:I:97:TRP:CE3	1.61	1.35
10:P:301:LEU:CD2	10:P:334:TYR:CE2	2.11	1.33
9:O:431:LEU:CD1	9:O:472:TYR:CZ	2.11	1.33
2:K:242:MET:CE	2:K:243:GLN:NE2	1.85	1.33
10:P:9:ILE:HD12	10:P:292:PHE:CE1	1.64	1.31
14:T:309:MET:CE	14:T:315:TYR:CE1	2.16	1.29
14:T:309:MET:CE	14:T:315:TYR:CD1	2.15	1.28
2:K:242:MET:HE3	2:K:243:GLN:NE2	0.97	1.28
6:B:190:ARG:CB	11:I:97:TRP:CZ3	2.19	1.25
10:P:301:LEU:CD2	10:P:334:TYR:OH	1.85	1.24
10:D:536:THR:C	10:D:576:GLU:OE2	1.78	1.22
4:E:95:PRO:HD2	4:E:96:PHE:N	1.54	1.22
9:O:170:TRP:CZ3	9:O:174:GLN:CG	2.22	1.21
9:O:431:LEU:HD13	9:O:472:TYR:OH	1.39	1.20
10:D:536:THR:O	10:D:576:GLU:OE2	1.54	1.20
14:T:309:MET:HE2	14:T:315:TYR:CE1	1.74	1.20
14:T:384:TYR:CE2	14:T:394:LEU:HD22	1.77	1.20
8:C:463:GLN:NE2	8:C:480:GLU:HA	1.53	1.20
14:T:103:PHE:CE2	14:T:147:ILE:O	1.95	1.19
2:K:575:TYR:CE2	6:B:222:PHE:CE1	2.30	1.18
4:E:255:ARG:NH2	4:E:256:HIS:HB2	1.57	1.18
9:O:170:TRP:CH2	9:O:174:GLN:HG3	1.79	1.17
2:K:736:TYR:CD1	1:H:599:LYS:HG2	1.79	1.17
2:J:748:LEU:O	2:J:752:LEU:HD22	1.45	1.16
14:T:181:LEU:HD13	14:T:196:LEU:HD23	1.20	1.16
8:C:463:GLN:OE1	8:C:479:SER:C	1.83	1.16
2:K:575:TYR:CZ	6:B:222:PHE:CE1	2.35	1.15
13:Q:403:ASP:OD1	13:Q:415:LEU:HD13	1.47	1.14
10:P:139:ILE:HD13	12:N:119:PHE:HE1	1.08	1.14
10:P:27:TRP:CZ3	10:P:115:TYR:CE1	2.37	1.13
10:D:201:TYR:CE1	10:D:203:ILE:HB	1.83	1.13
10:P:286:SER:OG	10:P:292:PHE:CD1	2.03	1.11
2:K:736:TYR:O	1:H:599:LYS:HE2	1.47	1.11
10:P:27:TRP:CZ2	10:P:115:TYR:OH	2.04	1.11
14:T:309:MET:SD	14:T:314:ASP:HB2	1.82	1.11
14:T:309:MET:CE	14:T:314:ASP:HB2	1.79	1.11
8:C:463:GLN:HE22	8:C:480:GLU:CA	1.63	1.11
10:P:301:LEU:HD22	10:P:334:TYR:OH	1.40	1.11
10:D:247:PHE:HA	10:D:295:MET:HE2	1.16	1.10
10:P:27:TRP:CZ2	10:P:115:TYR:CZ	2.39	1.10
10:P:301:LEU:CD2	10:P:334:TYR:HE2	1.55	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:463:GLN:NE2	8:C:481:GLY:N	2.00	1.08
2:K:739:PRO:HG3	1:H:599:LYS:NZ	1.69	1.07
10:D:201:TYR:HE1	10:D:203:ILE:HB	0.94	1.07
8:C:463:GLN:OE1	8:C:479:SER:O	1.71	1.07
10:P:139:ILE:HD13	12:N:119:PHE:CE1	1.89	1.07
14:T:384:TYR:CE2	14:T:389:LEU:HB3	1.90	1.06
8:C:463:GLN:HE22	8:C:480:GLU:HA	1.02	1.06
4:E:95:PRO:HD2	4:E:96:PHE:H	1.10	1.06
10:P:27:TRP:CH2	10:P:115:TYR:CZ	2.43	1.06
10:P:301:LEU:CD2	10:P:334:TYR:CZ	2.28	1.06
2:J:748:LEU:HD23	2:J:752:LEU:HD21	1.38	1.05
10:P:9:ILE:HD12	10:P:292:PHE:HE1	0.90	1.04
10:D:201:TYR:HE1	10:D:203:ILE:CB	1.70	1.04
9:O:431:LEU:HD13	9:O:472:TYR:CE1	1.93	1.03
8:C:463:GLN:NE2	8:C:481:GLY:H	1.57	1.03
2:J:749:LYS:HA	2:J:752:LEU:HD23	1.38	1.03
10:P:139:ILE:CD1	12:N:119:PHE:HE1	1.70	1.03
2:K:736:TYR:HD1	1:H:599:LYS:HG2	1.16	1.02
1:F:51:GLU:HG3	1:H:471:MET:CE	1.89	1.02
13:Q:334:CYS:SG	13:Q:377:LEU:HB2	2.00	1.02
10:P:27:TRP:HZ2	10:P:115:TYR:OH	1.41	1.02
1:H:459:PHE:CD1	1:H:478:LEU:HD12	1.95	1.01
8:C:454:LEU:HD21	8:C:459:PRO:HB3	1.43	1.01
2:J:756:VAL:HG22	10:P:512:THR:HG22	1.00	0.99
14:T:384:TYR:CE2	14:T:389:LEU:CB	2.45	0.99
14:T:455:ARG:HA	14:T:458:MET:SD	2.01	0.99
2:J:756:VAL:HG22	10:P:512:THR:CG2	1.91	0.99
6:B:190:ARG:HB2	11:I:97:TRP:CH2	1.96	0.99
6:B:504:SER:CA	6:B:505:MET:HE1	1.91	0.99
10:P:9:ILE:CD1	10:P:292:PHE:CE1	2.46	0.98
9:O:170:TRP:CZ2	9:O:174:GLN:NE2	2.30	0.98
10:P:27:TRP:CE2	10:P:115:TYR:HE1	1.81	0.98
10:D:537:SER:HA	10:D:576:GLU:OE1	1.64	0.98
13:Q:150:GLU:CB	14:T:327:LYS:HE3	1.94	0.98
14:T:577:ILE:HA	14:T:580:MET:HE1	1.47	0.97
14:T:181:LEU:HD13	14:T:196:LEU:CD2	1.95	0.96
2:J:756:VAL:CG2	10:P:512:THR:HG22	1.95	0.96
10:P:136:MET:O	10:P:139:ILE:HG22	1.66	0.96
13:Q:351:PHE:HD1	13:Q:355:ASN:OD1	1.46	0.96
14:T:384:TYR:CZ	14:T:389:LEU:HG	2.01	0.95
1:H:60:LEU:HD21	1:H:64:SER:HB3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:504:SER:C	6:B:505:MET:HE1	1.87	0.95
13:Q:403:ASP:OD1	13:Q:415:LEU:CD1	2.15	0.95
14:T:181:LEU:HB2	14:T:196:LEU:HD21	1.45	0.95
10:P:301:LEU:HD23	10:P:334:TYR:OH	1.67	0.95
2:J:284:GLU:OE2	2:K:493:ASP:HA	1.67	0.94
8:C:463:GLN:CD	8:C:480:GLU:HA	1.87	0.94
10:P:559:MET:CE	10:P:580:ALA:HA	1.97	0.94
4:E:95:PRO:CD	4:E:96:PHE:N	2.32	0.93
9:O:431:LEU:HD13	9:O:472:TYR:CE2	2.01	0.93
4:E:95:PRO:CD	4:E:96:PHE:H	1.81	0.93
14:T:309:MET:HE3	14:T:315:TYR:CE1	2.02	0.93
13:Q:365:ALA:HA	13:Q:463:MET:HE1	1.51	0.93
10:P:27:TRP:CH2	10:P:115:TYR:HE1	1.46	0.92
14:T:309:MET:HE1	14:T:314:ASP:HB2	1.51	0.92
14:T:384:TYR:CE2	14:T:394:LEU:CD2	2.53	0.92
1:H:117:ASN:O	1:H:121:LEU:HD22	1.68	0.92
8:C:463:GLN:OE1	8:C:480:GLU:N	2.02	0.92
14:T:103:PHE:CZ	14:T:147:ILE:HA	2.05	0.91
6:B:190:ARG:N	11:I:97:TRP:HH2	1.53	0.91
8:C:463:GLN:NE2	8:C:480:GLU:CA	2.24	0.91
14:T:309:MET:HE2	14:T:315:TYR:HD1	1.34	0.91
9:O:431:LEU:CD1	9:O:472:TYR:OH	2.10	0.91
1:F:165:MET:HE3	1:F:173:GLY:HA3	1.51	0.91
11:I:37:GLU:HB3	11:I:84:SER:HB3	1.52	0.91
2:J:750:ASN:HD22	3:G:20:ILE:HD12	1.36	0.91
4:E:255:ARG:CZ	4:E:256:HIS:HB2	2.01	0.91
14:T:309:MET:HE1	14:T:315:TYR:CD1	2.06	0.90
14:T:577:ILE:HA	14:T:580:MET:CE	2.02	0.90
2:K:739:PRO:HG3	1:H:599:LYS:HZ2	1.37	0.89
10:P:559:MET:HE2	10:P:580:ALA:HA	1.54	0.89
1:H:459:PHE:CE1	1:H:478:LEU:HD12	2.08	0.89
2:K:736:TYR:O	1:H:599:LYS:CE	2.20	0.89
10:P:301:LEU:CD1	10:P:334:TYR:HE2	1.85	0.89
5:A:81:MET:SD	5:A:220:TYR:HB3	2.12	0.89
9:O:170:TRP:CH2	9:O:174:GLN:NE2	2.40	0.89
14:T:384:TYR:HE2	14:T:394:LEU:HD22	1.31	0.88
10:P:509:TYR:O	10:P:512:THR:OG1	1.92	0.88
1:F:51:GLU:HG3	1:H:471:MET:HE3	1.54	0.88
8:C:463:GLN:OE1	8:C:480:GLU:CA	2.21	0.88
6:B:504:SER:C	6:B:505:MET:CE	2.41	0.87
13:Q:351:PHE:CD1	13:Q:355:ASN:OD1	2.27	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:475:LEU:HD11	8:C:491:LEU:HB3	1.56	0.87
2:K:736:TYR:HD1	1:H:599:LYS:CG	1.86	0.87
6:B:190:ARG:CB	11:I:97:TRP:CE3	2.50	0.87
13:Q:151:ASP:CG	14:T:327:LYS:HZ2	1.77	0.87
6:B:190:ARG:CA	11:I:97:TRP:CH2	2.57	0.86
8:C:1165:GLU:HG3	8:C:1242:ASN:ND2	1.90	0.86
10:P:301:LEU:HD13	10:P:334:TYR:CE2	2.10	0.86
2:J:748:LEU:O	2:J:752:LEU:CD2	2.23	0.86
14:T:384:TYR:CD2	14:T:394:LEU:CD2	2.58	0.86
2:K:467:ARG:NH1	2:K:471:ASP:OD1	2.07	0.86
2:K:739:PRO:HG3	1:H:599:LYS:HZ1	1.40	0.86
10:P:519:ILE:HD11	10:P:545:LEU:HD22	1.58	0.86
2:K:575:TYR:CD2	6:B:222:PHE:CZ	2.63	0.85
1:H:47:GLU:HA	1:H:47:GLU:OE2	1.75	0.85
6:B:504:SER:HA	6:B:505:MET:HE1	1.56	0.85
14:T:738:VAL:HG11	15:U:1:MET:CG	2.05	0.85
14:T:237:PHE:CB	14:T:240:MET:CE	2.30	0.85
1:F:535:THR:HG23	1:F:536:MET:SD	2.16	0.85
2:K:496:ASN:HB3	2:K:499:ILE:HG22	1.59	0.85
2:K:736:TYR:CD1	1:H:599:LYS:CG	2.59	0.85
13:Q:150:GLU:HB2	14:T:327:LYS:HE3	1.59	0.85
14:T:181:LEU:CD1	14:T:196:LEU:HD23	2.05	0.85
2:K:736:TYR:HA	1:H:599:LYS:CE	2.07	0.84
2:K:736:TYR:HA	1:H:599:LYS:HG3	1.58	0.84
1:F:51:GLU:OE2	1:H:471:MET:HA	1.77	0.84
2:J:246:TYR:OH	2:J:275:ASN:HB3	1.76	0.84
4:E:255:ARG:HH22	4:E:256:HIS:HB2	1.43	0.84
6:B:532:SER:HB3	6:B:542:TRP:HH2	1.43	0.84
10:D:247:PHE:HA	10:D:295:MET:CE	2.07	0.83
8:C:454:LEU:HD21	8:C:459:PRO:CB	2.09	0.83
2:K:736:TYR:HA	1:H:599:LYS:HE3	1.60	0.82
8:C:491:LEU:HB2	8:C:500:SER:HB3	1.61	0.82
14:T:384:TYR:CE1	14:T:389:LEU:HG	2.14	0.82
1:F:103:TYR:CD1	1:F:151:PRO:HG3	2.14	0.82
2:K:242:MET:HE3	2:K:243:GLN:HE21	1.44	0.82
4:E:249:LEU:HA	4:E:252:LYS:HE2	1.62	0.82
14:T:384:TYR:HD2	14:T:394:LEU:HD21	1.45	0.82
9:O:170:TRP:CH2	9:O:174:GLN:CG	2.53	0.81
10:P:139:ILE:CD1	12:N:119:PHE:CE1	2.58	0.81
6:B:205:GLN:HE22	10:D:377:GLN:HE21	1.28	0.81
2:K:575:TYR:HE2	6:B:222:PHE:CZ	1.97	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:384:TYR:CD2	14:T:394:LEU:HD21	2.15	0.81
1:F:595:THR:O	1:F:599:LYS:HG3	1.81	0.81
1:F:51:GLU:CD	1:H:472:PRO:HD2	2.01	0.81
14:T:43:PRO:HD2	14:T:113:GLN:HG3	1.61	0.81
8:C:1308:ILE:HG22	8:C:1309:MET:HE2	1.62	0.81
2:J:255:LYS:HD3	2:K:432:LEU:HD11	1.62	0.80
2:K:566:ALA:HB2	3:W:1:MET:CE	2.12	0.80
10:P:301:LEU:CG	10:P:334:TYR:HE2	1.95	0.80
2:J:466:VAL:HG21	2:J:489:VAL:HG21	1.61	0.80
1:F:51:GLU:HG3	1:H:471:MET:HE2	1.61	0.80
2:J:731:LEU:HB3	2:J:748:LEU:HD12	1.61	0.80
2:K:575:TYR:OH	6:B:222:PHE:CE1	2.33	0.80
1:F:479:GLY:HA3	1:F:495:PHE:HD2	1.46	0.79
2:K:435:ILE:O	2:K:439:LYS:NZ	2.15	0.79
8:C:929:PHE:HE2	8:C:989:PRO:HD2	1.46	0.79
6:B:112:GLY:HA3	6:B:230:ARG:HH12	1.47	0.79
1:F:165:MET:CE	1:F:173:GLY:HA3	2.13	0.79
6:B:386:GLN:HB2	6:B:406:ASP:HB3	1.63	0.79
13:Q:383:SER:O	13:Q:387:LEU:HD22	1.83	0.79
10:P:301:LEU:CD1	10:P:334:TYR:CE2	2.66	0.79
10:P:534:GLN:OE1	10:P:534:GLN:N	2.17	0.78
14:T:387:LEU:HD21	14:T:529:TRP:CH2	2.19	0.78
8:C:463:GLN:NE2	8:C:480:GLU:C	2.37	0.78
9:O:431:LEU:CG	9:O:472:TYR:OH	2.32	0.78
14:T:196:LEU:HD12	14:T:200:LEU:HD23	1.63	0.78
14:T:237:PHE:O	14:T:240:MET:CG	2.31	0.78
1:H:159:LEU:HD11	1:H:163:LEU:HD21	1.64	0.78
2:J:393:PHE:CE1	2:J:397:GLU:HB2	2.18	0.77
9:O:419:ALA:HB2	12:N:4:ALA:H	1.50	0.77
8:C:1541:LEU:HD12	8:C:1544:PHE:CD2	2.19	0.77
14:T:237:PHE:O	14:T:240:MET:HG2	1.84	0.77
8:C:463:GLN:OE1	8:C:480:GLU:HA	1.84	0.77
10:P:27:TRP:CZ3	10:P:115:TYR:HE1	1.90	0.77
2:J:748:LEU:CD2	2:J:752:LEU:HD21	2.15	0.77
1:H:471:MET:HG2	1:H:474:CYS:H	1.50	0.77
5:A:44:LYS:NZ	5:A:50:GLY:HA2	2.00	0.77
2:J:610:MET:HE1	2:J:642:MET:HB2	1.67	0.77
10:P:119:LEU:HD23	10:P:119:LEU:O	1.85	0.76
14:T:387:LEU:HD21	14:T:529:TRP:CZ2	2.21	0.76
8:C:1523:PHE:HA	8:C:1526:MET:HE3	1.66	0.76
1:H:697:GLN:HA	1:H:700:GLU:HG2	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:170:TRP:HZ3	9:O:174:GLN:HG3	1.41	0.76
10:D:247:PHE:CA	10:D:295:MET:HE2	2.07	0.76
13:Q:150:GLU:HB3	14:T:327:LYS:HE3	1.66	0.76
14:T:384:TYR:OH	14:T:393:GLU:HB2	1.85	0.76
6:B:190:ARG:HD3	11:I:97:TRP:CE3	2.21	0.75
8:C:1355:LEU:HD12	8:C:1390:ILE:HG13	1.66	0.75
14:T:384:TYR:CD2	14:T:394:LEU:HD22	2.21	0.75
2:K:585:LEU:HD11	2:K:609:PHE:HE1	1.51	0.75
1:H:169:HIS:ND1	1:H:172:GLU:OE2	2.19	0.75
6:B:65:ASP:OD1	6:B:66:PHE:N	2.19	0.75
2:J:393:PHE:O	2:J:393:PHE:CD1	2.40	0.75
1:H:635:ARG:HH22	1:H:648:CYS:HB2	1.51	0.75
2:K:467:ARG:CZ	2:K:471:ASP:OD1	2.35	0.75
2:K:575:TYR:CZ	6:B:222:PHE:HE1	1.99	0.75
8:C:662:MET:HE2	8:C:664:TRP:CE2	2.21	0.75
15:U:104:LEU:O	15:U:107:ASN:ND2	2.20	0.75
10:P:27:TRP:CZ3	10:P:115:TYR:CD1	2.74	0.74
11:I:115:GLY:HA3	11:I:157:ARG:HH12	1.50	0.74
14:T:576:SER:O	14:T:580:MET:SD	2.44	0.74
2:J:748:LEU:HD23	2:J:752:LEU:CD2	2.17	0.74
10:P:235:MET:SD	10:P:258:CYS:HB3	2.27	0.74
8:C:950:MET:SD	8:C:953:ARG:NH1	2.60	0.74
13:Q:151:ASP:CG	14:T:327:LYS:NZ	2.39	0.74
10:D:537:SER:HA	10:D:576:GLU:CD	2.06	0.74
4:E:255:ARG:HH12	4:E:256:HIS:CG	2.05	0.74
1:H:469:ASP:O	1:H:497:ARG:NH2	2.21	0.73
1:H:526:SER:O	1:H:530:ASN:ND2	2.21	0.73
8:C:463:GLN:CD	8:C:480:GLU:CA	2.52	0.73
10:P:621:GLU:HG2	10:P:625:HIS:CE1	2.23	0.73
14:T:237:PHE:HB2	14:T:240:MET:HE2	0.76	0.73
2:J:251:TYR:OH	2:K:436:ASN:OD1	2.06	0.73
4:E:135:ARG:HD3	4:E:138:ILE:HD11	1.70	0.73
1:F:54:TYR:HE1	1:F:71:VAL:HG22	1.53	0.73
2:K:288:ARG:O	2:K:288:ARG:HD3	1.89	0.73
9:O:431:LEU:CD1	9:O:472:TYR:CE2	2.67	0.73
2:J:509:GLU:OE1	2:J:509:GLU:C	2.27	0.73
3:G:14:ASP:OD1	3:G:15:ASP:N	2.21	0.73
9:O:50:PRO:HA	9:O:245:GLN:HG2	1.71	0.73
9:O:96:LEU:HD23	9:O:194:HIS:HB3	1.70	0.73
2:K:496:ASN:HB3	2:K:499:ILE:CG2	2.19	0.73
10:P:559:MET:HE3	10:P:580:ALA:HA	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:723:VAL:HG12	1:H:725:ARG:HH12	1.53	0.73
1:F:51:GLU:OE1	1:H:472:PRO:HD2	1.89	0.73
10:D:77:ASN:HD21	10:P:77:ASN:HD22	1.37	0.73
10:P:9:ILE:CD1	10:P:292:PHE:CZ	2.71	0.73
2:K:455:LYS:HG3	2:K:456:ASP:OD1	1.89	0.72
8:C:1155:LEU:HD11	8:C:1167:TYR:HE1	1.53	0.72
1:F:543:TRP:CZ3	1:F:562:ALA:HA	2.25	0.72
6:B:190:ARG:CB	11:I:97:TRP:CH2	2.62	0.72
2:J:541:TYR:HH	11:I:88:TRP:HD1	1.37	0.72
1:F:35:GLN:HE22	1:F:148:VAL:H	1.35	0.72
13:Q:125:ARG:HG3	13:Q:138:TYR:HA	1.70	0.72
15:U:83:ASP:O	15:U:121:ARG:NH2	2.21	0.72
8:C:662:MET:CE	8:C:664:TRP:NE1	2.53	0.72
10:D:398:GLU:N	10:D:398:GLU:OE2	2.22	0.72
13:Q:26:GLY:HA2	13:Q:43:ILE:HG22	1.71	0.72
1:H:194:ILE:HG23	1:H:199:ALA:HB3	1.71	0.72
1:H:497:ARG:HH12	1:H:501:LEU:HG	1.55	0.71
13:Q:365:ALA:HA	13:Q:463:MET:CE	2.20	0.71
10:P:136:MET:O	10:P:139:ILE:CG2	2.38	0.71
1:H:505:ARG:HE	1:H:507:LYS:HB2	1.56	0.71
14:T:384:TYR:CE2	14:T:389:LEU:HB2	2.24	0.71
14:T:666:GLN:NE2	14:T:674:LYS:HB3	2.06	0.71
8:C:1356:LEU:HD11	8:C:1405:GLU:HG3	1.73	0.71
13:Q:542:LYS:HE2	13:Q:545:ASN:HB3	1.73	0.71
2:K:390:ILE:HD12	2:K:417:LEU:HD13	1.73	0.71
4:E:255:ARG:NH1	4:E:256:HIS:HA	2.05	0.71
9:O:170:TRP:CE3	9:O:170:TRP:O	2.43	0.71
10:P:556:LYS:HA	10:P:583:TRP:HH2	1.56	0.71
6:B:254:VAL:O	7:S:831:LEU:N	2.24	0.71
8:C:404:ARG:NH2	8:C:409:GLU:OE1	2.24	0.71
8:C:1051:LEU:HD12	8:C:1081:GLY:HA2	1.73	0.71
4:E:255:ARG:CZ	4:E:256:HIS:CB	2.68	0.71
1:F:457:ARG:HH21	4:E:96:PHE:HE2	1.38	0.70
1:F:490:MET:HE1	4:E:98:GLU:HB2	1.73	0.70
9:O:386:ILE:HD11	9:O:406:ILE:HG21	1.73	0.70
14:T:384:TYR:CD2	14:T:389:LEU:HB2	2.26	0.70
1:H:159:LEU:HD12	1:H:159:LEU:O	1.91	0.70
1:H:665:TYR:HB3	1:H:682:MET:SD	2.31	0.70
2:K:566:ALA:HB2	3:W:1:MET:HE3	1.70	0.70
14:T:666:GLN:HE22	14:T:674:LYS:HB3	1.56	0.70
8:C:929:PHE:CE2	8:C:989:PRO:HD2	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:268:LEU:HD21	13:Q:303:VAL:HG22	1.74	0.70
1:F:206:VAL:HG22	4:E:161:LEU:HD22	1.74	0.70
2:J:546:ARG:HH22	11:I:37:GLU:HG3	1.57	0.70
2:K:242:MET:CE	2:K:243:GLN:HE21	1.99	0.70
2:K:307:VAL:HG22	2:K:368:ILE:HD11	1.73	0.70
14:T:129:LYS:HB2	14:T:133:ARG:HH21	1.54	0.70
1:F:187:LEU:HD13	1:H:42:ASN:HD21	1.56	0.70
1:F:479:GLY:HA3	1:F:495:PHE:CD2	2.27	0.70
1:H:530:ASN:OD1	4:E:252:LYS:NZ	2.19	0.70
2:J:633:PRO:HB3	2:J:663:VAL:HG21	1.74	0.69
2:K:288:ARG:HD3	2:K:288:ARG:C	2.11	0.69
8:C:811:ALA:N	8:C:1635:GLN:OE1	2.25	0.69
10:P:9:ILE:HG13	10:P:292:PHE:HZ	1.58	0.69
14:T:384:TYR:CZ	14:T:389:LEU:CB	2.76	0.69
8:C:722:ILE:HG13	8:C:722:ILE:O	1.92	0.69
14:T:384:TYR:CZ	14:T:389:LEU:CG	2.75	0.69
2:K:397:GLU:OE2	2:K:397:GLU:C	2.31	0.69
3:G:23:LEU:HD12	3:G:26:GLN:HE21	1.58	0.69
8:C:454:LEU:HD12	8:C:456:LEU:HD23	1.74	0.69
13:Q:220:LEU:HD23	13:Q:480:ILE:HD11	1.75	0.69
14:T:178:ARG:HE	14:T:207:LEU:HD21	1.57	0.69
15:U:48:TYR:HB3	15:U:64:LEU:HD11	1.75	0.69
9:O:431:LEU:HD22	9:O:472:TYR:OH	1.92	0.69
13:Q:104:ARG:HA	13:Q:104:ARG:NH1	2.07	0.69
2:J:661:GLU:HA	2:J:664:LYS:HG2	1.75	0.69
1:H:652:LEU:HA	1:H:655:LEU:HD12	1.75	0.69
10:D:537:SER:N	10:D:576:GLU:OE2	2.26	0.69
8:C:1224:LEU:HA	8:C:1227:ILE:HD12	1.75	0.69
2:K:739:PRO:CG	1:H:599:LYS:HZ1	2.05	0.68
8:C:1490:HIS:HA	8:C:1493:LYS:HE3	1.75	0.68
2:K:585:LEU:HD11	2:K:609:PHE:CE1	2.29	0.68
8:C:213:LEU:HD13	8:C:380:LEU:HD21	1.75	0.68
8:C:475:LEU:HD21	8:C:491:LEU:HD13	1.75	0.68
14:T:613:TYR:HE2	15:U:58:PRO:HG3	1.57	0.68
1:F:498:LEU:HD21	1:F:505:ARG:HD3	1.74	0.68
10:D:79:PHE:HB3	10:D:81:LEU:HD23	1.76	0.68
14:T:43:PRO:HD2	14:T:113:GLN:HE21	1.58	0.68
10:P:345:TYR:HB2	10:P:376:MET:HE1	1.74	0.68
14:T:181:LEU:HB2	14:T:196:LEU:CD2	2.23	0.68
8:C:465:MET:HB2	8:C:477:LEU:O	1.93	0.68
8:C:1291:TRP:O	8:C:1295:MET:HG2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:128:ASN:HD22	4:E:179:ARG:HH21	1.41	0.68
1:H:30:LEU:O	1:H:34:ILE:HG13	1.94	0.68
8:C:798:LEU:O	8:C:810:ARG:NH1	2.27	0.68
14:T:652:ARG:NH2	15:U:60:ASP:OD1	2.27	0.68
1:F:706:VAL:HG21	6:B:557:LEU:HD11	1.75	0.67
6:B:324:GLY:HA3	6:B:343:HIS:HB2	1.76	0.67
2:J:245:MET:HG3	2:K:394:GLU:OE1	1.94	0.67
2:K:296:ILE:HD12	2:K:299:ARG:HD3	1.77	0.67
2:K:496:ASN:O	2:K:499:ILE:HG22	1.93	0.67
8:C:662:MET:CE	8:C:664:TRP:CE2	2.76	0.67
9:O:659:GLU:HA	13:Q:342:GLU:OE2	1.95	0.67
2:K:356:LYS:HD2	2:K:358:GLU:H	1.60	0.67
14:T:387:LEU:HD12	14:T:387:LEU:O	1.95	0.67
2:J:246:TYR:HH	2:J:275:ASN:HB3	1.60	0.67
1:H:130:PHE:CE2	1:H:153:LEU:HD21	2.29	0.67
1:H:161:GLY:O	1:H:165:MET:HG2	1.95	0.67
4:E:97:CYS:HB3	4:E:102:LEU:HD21	1.77	0.67
6:B:189:THR:C	11:I:97:TRP:CH2	2.68	0.67
9:O:376:GLU:OE1	9:O:376:GLU:N	2.26	0.67
2:K:733:LYS:O	2:K:737:LEU:HD12	1.94	0.67
3:G:10:GLN:OE1	3:G:10:GLN:N	2.28	0.67
1:H:159:LEU:CD1	1:H:163:LEU:HD21	2.24	0.67
9:O:61:ASN:HB2	9:O:65:ARG:HG2	1.77	0.66
2:J:269:LEU:HD22	2:J:285:LEU:HD22	1.76	0.66
2:K:621:TYR:HA	2:K:624:LEU:HG	1.77	0.66
14:T:369:LYS:HG2	14:T:370:PRO:HD3	1.75	0.66
1:F:713:HIS:ND1	1:F:732:GLU:OE2	2.28	0.66
2:K:390:ILE:CD1	2:K:417:LEU:HD13	2.24	0.66
9:O:100:GLY:HA2	9:O:195:ILE:HG23	1.76	0.66
14:T:332:ASN:HB3	14:T:335:VAL:HG23	1.78	0.66
1:F:165:MET:HE2	1:F:170:SER:HA	1.77	0.66
1:F:738:ASN:OD1	2:J:593:ARG:NH2	2.29	0.66
2:J:393:PHE:O	2:J:393:PHE:HD1	1.77	0.66
9:O:440:THR:OG1	13:Q:119:ASP:OD2	2.05	0.66
1:F:730:ILE:HD11	2:J:621:TYR:CE1	2.31	0.66
10:P:306:GLU:OE2	10:P:463:ARG:NH1	2.28	0.66
1:H:200:THR:HA	1:H:445:ARG:HH22	1.61	0.66
1:H:703:VAL:HG12	1:H:712:ALA:HB1	1.78	0.66
1:F:495:PHE:CE1	1:F:512:PHE:HD1	2.14	0.65
8:C:588:LEU:O	8:C:614:LYS:NZ	2.25	0.65
15:U:97:THR:HG21	15:U:122:ARG:HH21	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:607:HIS:O	1:H:611:TYR:HE2	1.78	0.65
9:O:441:ALA:HA	13:Q:119:ASP:OD1	1.96	0.65
10:P:621:GLU:O	10:P:625:HIS:ND1	2.29	0.65
8:C:54:VAL:HG23	8:C:72:ILE:HD13	1.77	0.65
10:P:301:LEU:CG	10:P:334:TYR:CE2	2.75	0.65
11:I:29:GLN:OE1	11:I:29:GLN:N	2.30	0.65
8:C:1167:TYR:O	8:C:1167:TYR:HD2	1.80	0.65
14:T:34:LEU:HD12	14:T:37:LEU:HD12	1.79	0.65
8:C:1164:ASP:OD1	8:C:1166:GLU:N	2.29	0.65
10:D:247:PHE:HD1	10:D:295:MET:CE	2.10	0.65
1:H:117:ASN:O	1:H:121:LEU:CD2	2.42	0.65
8:C:586:LEU:HD23	8:C:624:LEU:HD21	1.78	0.65
1:H:537:PRO:O	1:H:543:TRP:NE1	2.28	0.65
10:P:515:LYS:HB3	10:P:545:LEU:HD21	1.78	0.65
1:F:735:VAL:HG22	2:J:593:ARG:HG3	1.79	0.64
6:B:340:LEU:HD21	6:B:376:PRO:HD2	1.79	0.64
8:C:1150:GLN:NE2	8:C:1167:TYR:OH	2.29	0.64
13:Q:8:TYR:CD2	13:Q:646:PRO:HB3	2.32	0.64
13:Q:253:ILE:HG22	13:Q:257:LEU:HD12	1.78	0.64
2:K:617:LEU:HB3	2:K:621:TYR:CE2	2.32	0.64
6:B:381:ILE:HG12	6:B:417:LYS:HG3	1.78	0.64
8:C:205:PHE:HB2	8:C:216:TYR:HE1	1.62	0.64
3:G:23:LEU:O	3:G:27:LYS:HG2	1.98	0.64
8:C:703:ILE:HG23	8:C:707:LEU:HD23	1.78	0.64
13:Q:357:LEU:HD23	13:Q:359:TYR:H	1.63	0.64
14:T:387:LEU:CG	14:T:529:TRP:CZ2	2.79	0.64
10:P:556:LYS:HA	10:P:583:TRP:CH2	2.33	0.64
2:K:739:PRO:CG	1:H:599:LYS:NZ	2.54	0.64
2:J:393:PHE:HE2	2:K:251:TYR:CG	2.15	0.64
14:T:384:TYR:CZ	14:T:389:LEU:HB3	2.33	0.64
2:J:393:PHE:HE1	2:J:397:GLU:HB2	1.61	0.64
10:D:422:ARG:HD3	11:I:27:TRP:CZ2	2.33	0.64
9:O:431:LEU:CD2	9:O:472:TYR:OH	2.46	0.64
5:A:112:PHE:HE2	5:A:213:HIS:CE1	2.16	0.64
13:Q:150:GLU:HB2	14:T:327:LYS:CE	2.27	0.64
8:C:463:GLN:HE22	8:C:480:GLU:C	2.01	0.64
8:C:1384:ASN:O	8:C:1388:ASN:ND2	2.30	0.64
13:Q:403:ASP:CG	13:Q:415:LEU:CD1	2.66	0.64
14:T:49:ASN:OD1	14:T:51:GLN:NE2	2.31	0.64
2:J:434:LYS:HA	2:J:437:LEU:HD13	1.79	0.63
2:J:731:LEU:O	2:J:735:LEU:HD12	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:187:ILE:HG23	10:D:224:ILE:HD11	1.80	0.63
14:T:407:LEU:O	14:T:411:VAL:HG23	1.98	0.63
8:C:1102:ILE:H	8:C:1102:ILE:HD12	1.63	0.63
8:C:1164:ASP:OD1	8:C:1167:TYR:N	2.28	0.63
8:C:81:GLU:HB2	8:C:122:ASN:HB2	1.80	0.63
8:C:127:GLU:HG3	8:C:152:TYR:CE1	2.34	0.63
8:C:480:GLU:O	8:C:488:LYS:N	2.32	0.63
10:P:483:TYR:HE2	12:N:123:GLY:HA3	1.63	0.63
6:B:245:ARG:NH1	6:B:247:ILE:HD11	2.14	0.63
8:C:1271:LEU:HD13	8:C:1274:ILE:HD11	1.81	0.63
8:C:1576:GLU:HG2	8:C:1583:VAL:HG12	1.81	0.63
14:T:103:PHE:HZ	14:T:147:ILE:HA	1.64	0.63
6:B:432:ALA:C	6:B:477:MET:HE1	2.18	0.63
8:C:1609:TYR:HD1	8:C:1636:ARG:HA	1.62	0.63
2:K:569:LEU:O	2:K:573:HIS:ND1	2.16	0.63
8:C:1166:GLU:HG2	8:C:1537:PRO:HB3	1.80	0.63
2:J:263:PRO:HB2	2:J:295:ASN:HD21	1.64	0.63
2:J:679:ASN:O	2:J:683:THR:HG23	1.98	0.63
2:K:566:ALA:HB2	3:W:1:MET:HE1	1.80	0.63
2:K:583:GLN:HE22	6:B:226:MET:HB3	1.64	0.63
8:C:213:LEU:CD1	8:C:380:LEU:HD21	2.29	0.63
8:C:636:GLU:OE2	8:C:703:ILE:HB	1.99	0.63
14:T:30:ILE:O	14:T:34:LEU:N	2.22	0.63
1:F:714:TYR:HE1	1:F:747:ILE:HG12	1.64	0.63
6:B:287:LEU:N	6:B:296:VAL:O	2.30	0.63
9:O:336:ASN:HB3	9:O:372:ASN:HD21	1.63	0.63
1:F:51:GLU:CG	1:H:471:MET:HE2	2.28	0.62
2:K:721:THR:HG22	2:K:722:LYS:H	1.63	0.62
9:O:56:PRO:HB2	9:O:57:LEU:HD12	1.81	0.62
10:P:424:LEU:HD21	10:P:434:TRP:CE2	2.33	0.62
4:E:255:ARG:NH1	4:E:256:HIS:CB	2.62	0.62
8:C:1082:LEU:HD11	8:C:1086:MET:HE3	1.81	0.62
8:C:1155:LEU:HD11	8:C:1167:TYR:CE1	2.33	0.62
10:P:128:TRP:CH2	10:P:187:ILE:HD13	2.34	0.62
10:P:286:SER:OG	10:P:292:PHE:HD1	1.80	0.62
2:J:278:GLN:OE1	2:J:281:ARG:NH1	2.31	0.62
2:J:255:LYS:HG2	2:K:462:ASN:HD21	1.65	0.62
5:A:133:ILE:HA	5:A:221:VAL:HG12	1.81	0.62
8:C:1495:ILE:HD11	8:C:1542:LYS:HG3	1.82	0.62
10:P:27:TRP:CE2	10:P:115:TYR:CE1	2.68	0.62
10:P:248:ASN:ND2	10:P:251:CYS:SG	2.72	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:595:HIS:HD2	14:T:600:LEU:HB2	1.64	0.62
1:F:443:ILE:HD11	1:F:458:LEU:HB2	1.81	0.62
1:H:751:LEU:HD22	1:H:755:HIS:HE1	1.65	0.62
10:D:452:GLU:OE1	10:D:456:ARG:NH2	2.32	0.62
1:F:457:ARG:HB3	4:E:140:ILE:HD13	1.80	0.62
2:K:736:TYR:CA	1:H:599:LYS:HE3	2.29	0.62
1:H:692:TYR:HA	1:H:695:ALA:HB3	1.81	0.62
9:O:85:LEU:H	9:O:85:LEU:HD12	1.65	0.62
10:P:509:TYR:HE2	10:P:514:ASN:O	1.83	0.62
13:Q:29:ILE:HG22	13:Q:38:LEU:HB3	1.82	0.62
8:C:553:TRP:HZ2	8:C:575:GLU:HG2	1.64	0.62
8:C:626:ARG:HH21	8:C:727:LEU:HB2	1.65	0.62
13:Q:140:GLN:HB2	13:Q:143:SER:HB3	1.81	0.62
14:T:384:TYR:OH	14:T:393:GLU:CB	2.47	0.62
6:B:429:ALA:O	6:B:473:GLN:NE2	2.31	0.62
14:T:149:ASP:HB3	14:T:152:VAL:HG22	1.82	0.62
14:T:387:LEU:CD2	14:T:529:TRP:CZ2	2.83	0.62
2:J:466:VAL:CG2	2:J:489:VAL:HG21	2.30	0.62
8:C:795:GLU:O	8:C:810:ARG:NH2	2.31	0.62
14:T:579:VAL:O	14:T:583:ASP:N	2.30	0.62
4:E:255:ARG:NH1	4:E:256:HIS:CA	2.63	0.62
6:B:191:PRO:HG3	11:I:86:ARG:HG3	1.81	0.62
1:H:187:LEU:HD22	1:H:190:SER:H	1.64	0.61
8:C:1082:LEU:HD11	8:C:1086:MET:CE	2.29	0.61
9:O:170:TRP:CE3	9:O:174:GLN:CG	2.82	0.61
10:D:280:PHE:HE1	10:D:285:GLY:HA2	1.65	0.61
13:Q:489:PHE:HE2	13:Q:516:ILE:HG21	1.65	0.61
2:J:466:VAL:HG21	2:J:489:VAL:CG2	2.29	0.61
2:K:736:TYR:C	1:H:599:LYS:HE2	2.20	0.61
1:H:459:PHE:HD1	1:H:478:LEU:HD12	1.58	0.61
10:P:187:ILE:HA	10:P:190:ILE:HB	1.81	0.61
13:Q:515:LEU:HD11	13:Q:536:LEU:HB2	1.81	0.61
1:F:471:MET:CE	1:H:52:LEU:HA	2.29	0.61
2:J:411:TRP:HZ2	2:J:446:ILE:HD11	1.65	0.61
5:A:119:GLN:NE2	5:A:204:VAL:HA	2.16	0.61
13:Q:45:ASN:HB2	13:Q:48:LEU:HG	1.81	0.61
15:U:1:MET:HA	15:U:1:MET:HE3	1.82	0.61
9:O:52:LEU:HD13	13:Q:423:LEU:HD22	1.81	0.61
1:F:51:GLU:OE2	1:H:472:PRO:HD2	2.00	0.61
2:K:753:GLU:HA	1:H:629:LEU:HD11	1.81	0.61
10:P:621:GLU:HG2	10:P:625:HIS:HE1	1.61	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:33:ALA:HB1	11:I:38:VAL:HG11	1.82	0.61
14:T:221:ILE:HB	14:T:275:PHE:HE1	1.66	0.61
6:B:190:ARG:HB2	11:I:97:TRP:CD2	2.32	0.61
14:T:738:VAL:HG11	15:U:1:MET:HG3	1.80	0.61
1:F:88:PHE:CE1	1:F:105:PHE:HE1	2.19	0.61
2:K:323:ASN:HA	2:K:365:ARG:HH12	1.66	0.61
4:E:89:LYS:HD3	4:E:90:GLN:N	2.15	0.61
4:E:105:SER:O	4:E:109:SER:OG	2.17	0.61
2:J:516:LEU:HD21	2:J:539:THR:HG23	1.83	0.61
10:P:223:VAL:HG21	11:I:9:SER:HB2	1.82	0.61
1:H:607:HIS:O	1:H:611:TYR:CE2	2.53	0.61
5:A:114:GLN:NE2	5:A:211:ASP:HB3	2.16	0.61
6:B:356:VAL:HG22	6:B:370:ASP:HA	1.83	0.61
10:P:301:LEU:HD21	10:P:318:LEU:HD12	1.83	0.60
5:A:104:ALA:HB2	5:A:113:TRP:HB3	1.83	0.60
9:O:251:VAL:HG21	9:O:298:PHE:CZ	2.37	0.60
11:I:38:VAL:O	11:I:41:ILE:HG22	2.00	0.60
13:Q:121:PRO:O	13:Q:336:ARG:NH2	2.34	0.60
14:T:33:ASP:OD2	14:T:62:ILE:HD11	2.01	0.60
2:J:636:LEU:HB2	2:J:659:ALA:HB2	1.82	0.60
14:T:518:PHE:HE1	14:T:661:GLY:H	1.49	0.60
1:F:30:LEU:HD12	1:H:433:LEU:HD13	1.81	0.60
10:D:278:PHE:HZ	10:D:296:ILE:HD11	1.65	0.60
13:Q:104:ARG:HA	13:Q:104:ARG:HH11	1.66	0.60
6:B:432:ALA:HB1	6:B:477:MET:CE	2.31	0.60
6:B:520:HIS:O	6:B:533:GLY:N	2.35	0.60
1:F:51:GLU:CG	1:H:471:MET:CE	2.73	0.60
2:K:575:TYR:CD2	6:B:222:PHE:HZ	2.17	0.60
6:B:448:GLY:H	6:B:452:ARG:H	1.50	0.60
10:D:300:LYS:O	10:D:304:PHE:HB2	2.02	0.60
1:H:31:GLN:O	1:H:35:GLN:NE2	2.34	0.60
5:A:15:PRO:HB2	5:A:19:ILE:HG12	1.84	0.60
6:B:544:LEU:HD23	6:B:545:PHE:N	2.17	0.60
1:F:120:ILE:HG12	1:F:163:LEU:HD13	1.82	0.60
6:B:189:THR:C	11:I:97:TRP:HH2	2.04	0.60
8:C:610:PHE:HE1	8:C:614:LYS:HD2	1.65	0.60
9:O:193:VAL:HA	9:O:196:GLN:HG2	1.84	0.60
13:Q:22:ARG:HH11	13:Q:46:ILE:HG23	1.67	0.60
14:T:237:PHE:HB3	14:T:240:MET:SD	2.41	0.60
9:O:46:SER:HA	9:O:49:ARG:HG3	1.84	0.60
9:O:164:GLU:OE2	10:P:394:ARG:NE	2.28	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:105:TYR:OH	13:Q:227:LYS:HA	2.02	0.60
1:F:34:ILE:O	1:F:38:ILE:HG22	2.02	0.59
5:A:6:ILE:HG23	8:C:1309:MET:HG3	1.84	0.59
5:A:205:ASN:OD1	5:A:212:THR:OG1	2.19	0.59
8:C:1082:LEU:CD1	8:C:1086:MET:HE3	2.30	0.59
2:J:446:ILE:O	2:J:450:ASN:ND2	2.34	0.59
6:B:118:ASP:OD2	6:B:128:ARG:NH2	2.35	0.59
6:B:190:ARG:H	11:I:97:TRP:HH2	1.24	0.59
8:C:211:LYS:O	8:C:380:LEU:HG	2.02	0.59
10:P:480:MET:SD	10:P:480:MET:N	2.65	0.59
1:F:492:LEU:O	1:F:496:ASN:HB2	2.01	0.59
1:F:495:PHE:HE1	1:F:512:PHE:HD1	1.49	0.59
2:J:302:LEU:HD22	2:J:318:VAL:HG21	1.83	0.59
1:H:634:ALA:HA	1:H:637:ILE:HD12	1.84	0.59
10:D:74:ILE:N	10:P:83:GLU:OE2	2.35	0.59
10:P:205:ILE:HG21	10:P:240:LYS:HD2	1.83	0.59
2:K:736:TYR:CA	1:H:599:LYS:CE	2.80	0.59
1:H:580:GLN:O	1:H:584:HIS:ND1	2.32	0.59
6:B:269:ILE:HG22	6:B:279:VAL:HG12	1.83	0.59
8:C:1510:GLN:HG3	8:C:1553:CYS:HB3	1.84	0.59
9:O:170:TRP:CH2	9:O:174:GLN:CD	2.75	0.59
14:T:510:ARG:HH21	14:T:577:ILE:HG23	1.68	0.59
2:K:566:ALA:CB	3:W:1:MET:HE3	2.31	0.59
1:F:59:ILE:HG13	1:H:466:HIS:HB2	1.85	0.59
1:H:635:ARG:CZ	1:H:635:ARG:HB2	2.32	0.59
14:T:237:PHE:O	14:T:240:MET:HG3	2.01	0.59
2:J:729:ASP:OD1	2:J:729:ASP:N	2.34	0.59
9:O:331:THR:HG21	10:D:452:GLU:OE2	2.02	0.59
6:B:261:ALA:HB3	6:B:268:LEU:HD11	1.85	0.59
6:B:370:ASP:N	6:B:376:PRO:O	2.34	0.59
10:D:134:GLU:HG3	11:I:20:HIS:HB3	1.85	0.59
10:D:187:ILE:HD12	10:D:224:ILE:HD11	1.84	0.59
10:P:121:LEU:CD1	10:P:190:ILE:HG23	2.33	0.59
13:Q:40:VAL:C	13:Q:41:ILE:HD13	2.24	0.59
13:Q:93:ILE:HG23	13:Q:164:VAL:HG13	1.83	0.59
14:T:387:LEU:HG	14:T:529:TRP:CZ2	2.38	0.59
1:F:646:CYS:SG	1:F:681:LYS:HG3	2.43	0.59
2:J:709:GLU:HG2	3:G:10:GLN:HG2	1.84	0.59
6:B:303:ASN:ND2	6:B:321:GLN:OE1	2.34	0.59
10:D:537:SER:HA	10:D:576:GLU:OE2	2.03	0.59
2:K:702:GLU:OE2	1:H:169:HIS:NE2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:551:LYS:NZ	13:Q:552:GLU:O	2.36	0.58
1:F:78:LEU:HB2	1:F:87:ALA:HB2	1.85	0.58
1:F:625:GLU:N	1:F:625:GLU:OE1	2.35	0.58
1:F:730:ILE:HD11	2:J:621:TYR:CZ	2.37	0.58
8:C:1326:LEU:HD21	8:C:1379:THR:HA	1.84	0.58
9:O:382:MET:HA	9:O:385:ILE:HD12	1.85	0.58
10:P:27:TRP:CD2	10:P:115:TYR:HE1	2.21	0.58
10:P:138:ASN:OD1	11:I:29:GLN:NE2	2.36	0.58
8:C:598:TYR:HA	8:C:605:TYR:HE2	1.67	0.58
10:D:247:PHE:HD1	10:D:295:MET:HE2	1.68	0.58
2:J:255:LYS:HG2	2:K:462:ASN:ND2	2.18	0.58
4:E:254:ARG:NH2	4:E:258:SER:OG	2.36	0.58
9:O:251:VAL:HG21	9:O:298:PHE:HZ	1.68	0.58
13:Q:498:ILE:HD11	13:Q:516:ILE:HB	1.85	0.58
6:B:411:VAL:HB	6:B:421:LEU:HB2	1.85	0.58
8:C:741:ARG:NH2	8:C:778:THR:OG1	2.32	0.58
8:C:1735:GLN:HE22	14:T:5:ILE:HG13	1.67	0.58
10:D:205:ILE:HG13	10:D:206:ASP:H	1.68	0.58
13:Q:322:THR:HG21	13:Q:448:ILE:HD11	1.86	0.58
2:K:674:ILE:HD12	2:K:700:VAL:HG23	1.84	0.58
8:C:1274:ILE:HB	8:C:1279:ILE:HD13	1.84	0.58
10:P:483:TYR:CE2	12:N:123:GLY:HA3	2.38	0.58
11:I:94:GLU:OE2	11:I:94:GLU:N	2.31	0.58
14:T:237:PHE:HB2	14:T:240:MET:HE1	1.75	0.58
14:T:527:GLU:OE2	14:T:531:ARG:NH1	2.37	0.58
8:C:58:ILE:HG23	8:C:59:GLU:H	1.67	0.58
8:C:918:LEU:O	8:C:953:ARG:NH2	2.36	0.58
8:C:1314:ILE:HG12	8:C:1316:VAL:HG12	1.85	0.58
8:C:1617:THR:HG23	8:C:1619:ASP:H	1.68	0.58
1:F:533:MET:O	1:F:537:PRO:HD3	2.04	0.58
8:C:749:TYR:HA	8:C:752:VAL:HG12	1.85	0.58
8:C:1588:SER:OG	8:C:1591:CYS:SG	2.60	0.58
10:P:448:HIS:O	10:P:452:GLU:HG3	2.04	0.58
11:I:36:ASP:OD2	11:I:37:GLU:N	2.35	0.58
2:J:541:TYR:OH	11:I:84:SER:HB2	2.04	0.58
2:J:756:VAL:HG23	10:P:482:LEU:HD13	1.86	0.58
1:H:662:LEU:HD11	1:H:689:MET:CE	2.33	0.58
13:Q:294:ASP:OD1	13:Q:295:LEU:N	2.37	0.58
2:K:302:LEU:HD22	2:K:318:VAL:HG11	1.85	0.58
6:B:505:MET:N	6:B:505:MET:SD	2.76	0.58
8:C:1366:TYR:CD1	8:C:1387:THR:HG21	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:332:LYS:HB2	10:D:355:ILE:HD11	1.86	0.58
1:H:171:LYS:H	1:H:171:LYS:HD3	1.68	0.57
5:A:166:PHE:HZ	5:A:169:MET:HG2	1.67	0.57
9:O:60:ASP:OD1	9:O:60:ASP:N	2.37	0.57
9:O:417:GLU:H	12:N:4:ALA:HB1	1.68	0.57
14:T:103:PHE:CE2	14:T:147:ILE:C	2.77	0.57
1:F:50:ALA:HB1	1:F:74:TYR:HA	1.85	0.57
2:J:547:ILE:HG13	2:J:577:LEU:HD22	1.85	0.57
8:C:1514:ASN:HD22	8:C:1550:GLU:HG2	1.70	0.57
2:K:653:LYS:HE2	2:K:657:LYS:HD2	1.85	0.57
5:A:37:ARG:NH2	5:A:52:GLN:O	2.35	0.57
5:A:44:LYS:HZ1	5:A:50:GLY:HA2	1.68	0.57
14:T:237:PHE:HB3	14:T:240:MET:CE	2.32	0.57
2:J:479:PHE:HB3	2:J:510:LEU:HD11	1.86	0.57
2:K:316:LEU:HD11	2:K:321:GLU:HA	1.86	0.57
6:B:378:PHE:CD2	6:B:379:GLU:HG3	2.40	0.57
6:B:399:LYS:HD3	6:B:413:GLU:HA	1.87	0.57
8:C:500:SER:HB2	8:C:551:PHE:CG	2.38	0.57
2:K:250:GLU:OE2	2:K:250:GLU:C	2.43	0.57
9:O:81:ILE:O	9:O:85:LEU:HD12	2.04	0.57
10:P:252:TRP:HZ3	10:P:295:MET:HE2	1.69	0.57
5:A:128:SER:HB3	8:C:1235:GLU:HG3	1.86	0.57
14:T:280:LEU:O	14:T:284:THR:HG23	2.05	0.57
6:B:252:TYR:HE1	6:B:542:TRP:C	2.08	0.57
1:H:206:VAL:HG13	1:H:207:PHE:HD1	1.70	0.57
1:H:455:ALA:HB3	1:H:481:LEU:HD21	1.86	0.57
1:H:694:VAL:O	1:H:697:GLN:HG3	2.05	0.57
6:B:432:ALA:O	6:B:446:GLY:N	2.35	0.57
13:Q:27:LEU:HB2	13:Q:41:ILE:HB	1.87	0.57
14:T:43:PRO:CD	14:T:113:GLN:HE21	2.18	0.57
6:B:529:THR:HA	6:B:542:TRP:O	2.04	0.56
13:Q:217:THR:HB	13:Q:483:ASP:HB3	1.86	0.56
4:E:141:MET:N	4:E:141:MET:SD	2.78	0.56
4:E:175:ARG:HG3	4:E:180:GLU:HB2	1.87	0.56
8:C:1244:GLN:HB3	8:C:1285:LEU:HD22	1.87	0.56
8:C:1308:ILE:HG22	8:C:1309:MET:CE	2.35	0.56
1:F:532:LEU:HD12	1:F:542:THR:HG22	1.86	0.56
2:J:246:TYR:CD2	2:J:276:ASN:HB3	2.40	0.56
2:J:575:TYR:CE1	2:J:583:GLN:NE2	2.63	0.56
2:K:653:LYS:HG3	2:K:684:TYR:HE1	1.70	0.56
4:E:95:PRO:HD2	4:E:95:PRO:C	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:255:ARG:NH1	4:E:256:HIS:CG	2.72	0.56
8:C:501:PRO:HG2	8:C:607:ARG:HD3	1.87	0.56
8:C:568:VAL:HG12	8:C:569:VAL:HG23	1.88	0.56
8:C:907:SER:OG	8:C:908:GLU:N	2.36	0.56
8:C:1406:VAL:O	8:C:1410:VAL:HG23	2.04	0.56
9:O:390:GLU:HB2	9:O:428:PHE:HE1	1.70	0.56
10:P:119:LEU:HD23	10:P:119:LEU:C	2.26	0.56
10:P:301:LEU:HD13	10:P:334:TYR:CD2	2.40	0.56
13:Q:625:ASP:OD1	13:Q:647:LYS:NZ	2.28	0.56
14:T:196:LEU:CD1	14:T:200:LEU:HD23	2.32	0.56
2:J:750:ASN:ND2	3:G:23:LEU:HD23	2.20	0.56
2:K:636:LEU:HB2	2:K:659:ALA:HB2	1.87	0.56
2:K:731:LEU:HD21	2:K:747:LEU:HB3	1.87	0.56
6:B:55:ASP:OD1	6:B:56:ARG:N	2.38	0.56
8:C:1586:GLU:HA	8:C:1586:GLU:OE2	2.06	0.56
10:P:9:ILE:HG13	10:P:292:PHE:CZ	2.37	0.56
10:P:509:TYR:O	10:P:509:TYR:CD2	2.58	0.56
1:F:461:SER:OG	1:F:462:GLN:OE1	2.23	0.56
2:K:250:GLU:OE2	2:K:251:TYR:N	2.39	0.56
1:H:177:HIS:O	1:H:190:SER:OG	2.20	0.56
6:B:482:ASN:HB2	6:B:545:PHE:HE2	1.71	0.56
11:I:141:ILE:HD12	11:I:153:LEU:CD2	2.35	0.56
1:H:123:LEU:HA	1:H:126:ILE:HG22	1.88	0.56
8:C:428:LEU:HB3	8:C:433:LEU:HD11	1.86	0.56
10:P:286:SER:OG	10:P:292:PHE:CE1	2.43	0.56
2:K:622:PHE:CE2	2:K:638:GLU:HB3	2.40	0.56
6:B:488:THR:HG1	6:B:498:THR:HG1	1.53	0.56
14:T:228:ASN:ND2	14:T:242:THR:HG22	2.21	0.56
1:H:691:ARG:HD2	1:H:694:VAL:HB	1.88	0.56
5:A:112:PHE:CE2	5:A:213:HIS:CE1	2.94	0.56
5:A:126:MET:SD	5:A:197:PHE:HD1	2.29	0.56
8:C:927:THR:HG21	8:C:986:SER:HB2	1.87	0.56
13:Q:366:VAL:HG23	13:Q:467:ILE:HD12	1.88	0.56
1:F:116:VAL:HG11	1:F:167:LEU:HD13	1.88	0.56
2:K:644:PHE:HE2	2:K:686:LYS:HG3	1.71	0.56
8:C:766:LEU:HD12	8:C:771:VAL:HG11	1.87	0.56
10:D:269:ASN:ND2	10:D:312:GLU:OE2	2.39	0.56
10:D:531:THR:OG1	10:D:534:GLN:NE2	2.40	0.56
2:K:617:LEU:HB3	2:K:621:TYR:HE2	1.70	0.55
2:K:736:TYR:HA	1:H:599:LYS:CG	2.34	0.55
8:C:115:GLY:N	8:C:127:GLU:O	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:860:ILE:HG23	9:O:448:LEU:HD21	1.89	0.55
9:O:76:PRO:HG3	9:O:242:ILE:HG12	1.88	0.55
10:P:363:LEU:HD11	10:P:389:VAL:HG13	1.87	0.55
11:I:94:GLU:H	11:I:94:GLU:CD	2.08	0.55
13:Q:151:ASP:OD1	14:T:327:LYS:HG2	2.07	0.55
1:F:41:LEU:HD21	1:H:79:PHE:HE2	1.71	0.55
2:K:393:PHE:CE1	2:K:397:GLU:HB2	2.41	0.55
2:K:753:GLU:OE2	3:W:27:LYS:NZ	2.37	0.55
3:W:27:LYS:HA	3:W:30:GLN:HE22	1.71	0.55
5:A:34:LEU:H	5:A:173:ARG:HH12	1.55	0.55
8:C:1609:TYR:CD1	8:C:1636:ARG:HA	2.40	0.55
10:D:498:ASP:HB3	10:D:501:ILE:HG22	1.89	0.55
1:F:560:ILE:HG22	1:F:564:GLU:OE2	2.07	0.55
2:J:443:THR:O	2:J:447:THR:HG23	2.07	0.55
8:C:426:ILE:HD11	8:C:448:MET:SD	2.46	0.55
9:O:431:LEU:HB2	9:O:472:TYR:OH	2.07	0.55
1:F:74:TYR:O	1:F:78:LEU:HD12	2.06	0.55
1:H:506:VAL:HG13	1:H:507:LYS:N	2.22	0.55
4:E:255:ARG:CZ	4:E:256:HIS:CA	2.84	0.55
1:H:635:ARG:NH2	1:H:648:CYS:HB2	2.21	0.55
6:B:122:SER:OG	6:B:192:SER:OG	2.24	0.55
8:C:1642:PHE:HD2	8:C:1694:LEU:HD21	1.72	0.55
9:O:436:LYS:O	9:O:437:GLU:HG3	2.06	0.55
11:I:103:MET:SD	11:I:103:MET:C	2.84	0.55
14:T:613:TYR:CE2	15:U:58:PRO:HG3	2.41	0.55
2:K:427:GLU:HA	2:K:430:LYS:HE3	1.89	0.55
2:K:587:ALA:HB2	6:B:222:PHE:HE2	1.70	0.55
1:H:608:TYR:HA	1:H:611:TYR:HD2	1.70	0.55
8:C:1139:ARG:NH2	8:C:1181:GLY:O	2.40	0.55
10:D:201:TYR:CE1	10:D:203:ILE:N	2.74	0.55
4:E:195:ILE:O	4:E:199:GLU:N	2.38	0.55
8:C:463:GLN:HE21	8:C:481:GLY:H	1.49	0.55
8:C:475:LEU:HD12	8:C:476:ILE:H	1.72	0.55
8:C:1292:ALA:O	8:C:1296:ILE:HG12	2.07	0.55
9:O:45:ILE:HD12	9:O:45:ILE:H	1.70	0.55
14:T:295:TYR:HE2	14:T:349:LYS:HE2	1.72	0.55
14:T:517:LEU:HD22	14:T:584:ILE:HG13	1.88	0.55
2:J:599:HIS:NE2	2:J:632:ASP:OD2	2.38	0.55
5:A:114:GLN:HE22	5:A:212:THR:H	1.53	0.55
8:C:48:SER:OG	8:C:50:ASP:O	2.24	0.55
10:D:396:ARG:HB2	10:D:399:THR:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:N:9:SER:OG	13:Q:320:GLN:OE1	2.25	0.55
1:F:98:HIS:HB3	1:F:101:ILE:HG13	1.89	0.55
2:J:241:LEU:HD13	2:J:272:VAL:HG22	1.88	0.55
2:K:686:LYS:NZ	3:W:15:ASP:OD2	2.40	0.55
8:C:662:MET:HE3	8:C:664:TRP:NE1	2.22	0.55
14:T:537:ARG:NH1	14:T:578:ASP:OD2	2.40	0.55
15:U:100:LEU:HD13	15:U:107:ASN:OD1	2.07	0.55
8:C:64:ARG:NH2	9:O:539:GLU:OE2	2.40	0.54
13:Q:299:LEU:HD12	13:Q:405:LEU:HD13	1.88	0.54
2:J:376:ASN:OD1	2:J:377:LYS:N	2.41	0.54
2:K:594:PHE:CE2	6:B:218:LEU:HD23	2.42	0.54
8:C:403:LEU:HD13	8:C:494:PRO:HG3	1.89	0.54
10:P:226:LYS:NZ	10:P:254:GLU:OE1	2.32	0.54
10:P:595:GLN:HA	10:P:626:MET:HE1	1.87	0.54
13:Q:9:PHE:O	13:Q:10:ILE:HB	2.07	0.54
1:H:47:GLU:OE1	1:H:78:LEU:HD22	2.08	0.54
6:B:325:LEU:HD11	6:B:339:THR:HG23	1.89	0.54
14:T:233:TRP:HB3	14:T:301:THR:HG21	1.89	0.54
11:I:113:PHE:HB2	11:I:141:ILE:HB	1.89	0.54
1:F:721:ARG:HH12	1:F:753:LYS:HB3	1.73	0.54
5:A:187:ARG:HH12	8:C:1322:ASN:HB3	1.73	0.54
6:B:276:VAL:HG13	6:B:287:LEU:CD1	2.38	0.54
8:C:745:ILE:HD12	8:C:783:ILE:HG21	1.88	0.54
10:P:364:ASN:OD1	10:P:396:ARG:NH2	2.40	0.54
13:Q:18:ILE:HD11	13:Q:29:ILE:HG23	1.90	0.54
2:K:319:ILE:HD11	2:K:364:LEU:HD13	1.90	0.54
8:C:972:ILE:HB	8:C:975:GLN:HB3	1.90	0.54
10:P:531:THR:OG1	10:P:534:GLN:NE2	2.40	0.54
13:Q:499:ASN:HB3	13:Q:517:GLN:HB3	1.89	0.54
1:F:513:SER:OG	1:F:548:ASN:ND2	2.33	0.54
2:J:610:MET:CE	2:J:642:MET:HB2	2.36	0.54
1:H:516:LEU:HD21	1:H:524:LYS:HB3	1.90	0.54
6:B:514:HIS:ND1	6:B:536:ASP:OD2	2.38	0.54
10:D:201:TYR:CE1	10:D:203:ILE:CB	2.62	0.54
13:Q:209:PHE:HB3	13:Q:500:LEU:HD21	1.89	0.54
13:Q:561:PHE:HD2	13:Q:628:ILE:HD13	1.73	0.54
2:K:446:ILE:HG21	2:K:472:ILE:HD11	1.89	0.54
1:H:577:TYR:CE2	1:H:599:LYS:HB3	2.43	0.54
6:B:365:ARG:HB3	6:B:367:LEU:HD13	1.90	0.54
8:C:608:ASP:OD1	8:C:609:LEU:N	2.41	0.54
1:F:748:ILE:O	1:F:752:GLN:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:648:GLU:HB3	2:K:651:LYS:HZ1	1.73	0.54
8:C:59:GLU:HB2	9:O:534:LYS:HE2	1.90	0.54
10:P:507:GLU:OE2	10:P:541:ARG:NH1	2.40	0.54
13:Q:366:VAL:CG2	13:Q:467:ILE:HD12	2.38	0.54
13:Q:423:LEU:HD23	13:Q:424:TYR:H	1.72	0.54
1:F:506:VAL:HB	1:F:536:MET:CE	2.38	0.54
2:J:246:TYR:CE2	2:J:276:ASN:HB3	2.42	0.54
4:E:217:GLN:HB2	4:E:220:HIS:ND1	2.23	0.54
8:C:605:TYR:HA	8:C:610:PHE:CD2	2.43	0.54
10:P:27:TRP:N	10:P:27:TRP:CD1	2.75	0.54
10:P:614:GLU:HA	10:P:617:MET:HE2	1.88	0.54
11:I:103:MET:O	11:I:103:MET:HE3	2.08	0.54
2:K:573:HIS:NE2	3:W:4:ARG:HB2	2.23	0.53
9:O:123:LEU:HD11	9:O:143:ARG:HD2	1.90	0.53
10:P:324:VAL:HG22	10:P:325:PHE:CD1	2.43	0.53
10:P:345:TYR:HB3	10:P:376:MET:HE2	1.90	0.53
1:F:123:LEU:HA	1:F:126:ILE:HG22	1.89	0.53
2:J:427:GLU:O	2:J:431:ASN:ND2	2.41	0.53
2:K:575:TYR:HB3	2:K:584:ALA:HB2	1.90	0.53
2:K:739:PRO:CD	1:H:599:LYS:HZ1	2.21	0.53
3:G:23:LEU:CD1	3:G:26:GLN:HE21	2.20	0.53
6:B:213:SER:HA	6:B:217:LEU:HD22	1.89	0.53
6:B:520:HIS:HB2	6:B:533:GLY:HA3	1.90	0.53
8:C:979:ILE:HD11	8:C:1049:PHE:HB2	1.90	0.53
9:O:512:ASP:HB3	9:O:531:TYR:HE2	1.73	0.53
13:Q:41:ILE:HD13	13:Q:41:ILE:N	2.22	0.53
14:T:128:LEU:HD13	14:T:177:LEU:HD21	1.90	0.53
1:F:187:LEU:CD1	1:H:42:ASN:HD21	2.22	0.53
1:F:471:MET:HE1	1:H:52:LEU:HA	1.89	0.53
2:K:583:GLN:HE21	8:C:1142:ARG:HH22	1.56	0.53
1:H:127:ILE:HD11	1:H:153:LEU:CD1	2.39	0.53
9:O:15:PRO:HD2	9:O:241:LEU:HB2	1.90	0.53
14:T:14:ILE:HD12	14:T:109:PHE:HA	1.90	0.53
14:T:536:ILE:O	14:T:540:ILE:HG12	2.07	0.53
2:K:486:CYS:HA	2:K:489:VAL:HG12	1.89	0.53
1:H:614:LEU:HD13	1:H:630:TYR:CZ	2.43	0.53
6:B:350:LEU:HD22	6:B:357:LEU:HD21	1.91	0.53
6:B:391:LEU:HD11	6:B:400:LEU:HD21	1.89	0.53
11:I:145:ILE:HG23	11:I:146:PHE:CD2	2.43	0.53
13:Q:10:ILE:HG23	13:Q:19:PHE:HB2	1.90	0.53
13:Q:253:ILE:HG21	13:Q:325:ILE:HG21	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:343:ARG:O	14:T:347:THR:HG23	2.09	0.53
2:K:429:MET:HA	2:K:429:MET:HE2	1.89	0.53
2:K:668:PRO:O	2:K:673:THR:OG1	2.22	0.53
1:H:565:LYS:HZ3	1:H:569:LEU:HD21	1.74	0.53
10:D:537:SER:CA	10:D:576:GLU:OE2	2.56	0.53
10:P:27:TRP:CE3	10:P:115:TYR:HE1	2.25	0.53
2:K:306:PHE:HB3	2:K:315:ALA:HB2	1.90	0.53
4:E:135:ARG:HB2	4:E:138:ILE:HG13	1.90	0.53
6:B:108:ASN:O	6:B:230:ARG:NH2	2.42	0.53
8:C:1285:LEU:HD12	8:C:1285:LEU:O	2.09	0.53
9:O:77:ILE:HG22	9:O:79:ASP:H	1.72	0.53
10:D:247:PHE:CD1	10:D:295:MET:HE2	2.43	0.53
2:J:321:GLU:OE1	2:J:369:TYR:OH	2.25	0.53
2:J:694:ILE:HD13	2:J:717:LEU:HD13	1.91	0.53
5:A:93:SER:HB3	5:A:122:GLN:H	1.73	0.53
8:C:1154:LEU:HD11	8:C:1163:ALA:HB2	1.91	0.53
13:Q:22:ARG:HD3	13:Q:46:ILE:HD12	1.90	0.53
14:T:37:LEU:HD11	14:T:62:ILE:HG21	1.91	0.53
14:T:528:LYS:HG3	14:T:529:TRP:CD1	2.44	0.53
2:J:432:LEU:HD11	2:K:255:LYS:HE2	1.90	0.53
2:K:474:TYR:OH	3:W:1:MET:O	2.27	0.53
1:H:651:SER:O	1:H:655:LEU:HD12	2.09	0.53
5:A:148:TYR:HD2	5:A:213:HIS:NE2	2.07	0.53
8:C:381:PRO:HD2	8:C:384:ILE:HD12	1.90	0.53
8:C:756:ASN:OD1	8:C:756:ASN:N	2.39	0.53
8:C:956:THR:HG21	8:C:1494:PHE:HB3	1.90	0.53
10:P:363:LEU:HD23	10:P:396:ARG:HE	1.73	0.53
2:J:607:MET:HG3	2:J:638:GLU:OE2	2.09	0.53
1:H:69:ASP:HB3	1:H:147:LEU:HD11	1.91	0.53
8:C:120:TYR:HA	8:C:196:SER:HA	1.91	0.53
8:C:662:MET:CE	8:C:664:TRP:CZ2	2.92	0.53
9:O:623:PRO:HB2	9:O:660:PHE:HZ	1.73	0.53
10:P:396:ARG:NH1	11:I:13:TYR:OH	2.40	0.53
13:Q:201:VAL:HG13	13:Q:543:ASP:HB2	1.89	0.53
13:Q:628:ILE:HB	13:Q:645:PHE:HB2	1.91	0.53
1:H:506:VAL:HG13	1:H:507:LYS:H	1.73	0.52
6:B:437:PRO:HD2	6:B:479:TRP:CD1	2.44	0.52
9:O:208:ILE:HG12	9:O:212:ASP:OD1	2.09	0.52
9:O:329:LYS:HE2	9:O:337:TYR:CE2	2.44	0.52
13:Q:366:VAL:HG22	13:Q:467:ILE:CD1	2.39	0.52
14:T:387:LEU:HD21	14:T:529:TRP:CE2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:387:LEU:HD21	14:T:529:TRP:CZ3	2.44	0.52
1:H:645:ILE:HG21	1:H:668:ALA:HB2	1.90	0.52
8:C:1321:LEU:HD13	8:C:1376:PHE:HE1	1.74	0.52
9:O:10:THR:HG22	9:O:12:PHE:H	1.74	0.52
11:I:85:ASN:O	11:I:89:ASN:HB2	2.09	0.52
14:T:384:TYR:HE2	14:T:394:LEU:CD2	2.05	0.52
1:F:453:PHE:CE2	4:E:114:GLU:HA	2.43	0.52
2:J:459:LEU:HD21	2:K:259:ILE:HG13	1.91	0.52
1:H:157:ASN:HB2	1:H:180:ALA:HB2	1.90	0.52
13:Q:22:ARG:NH2	13:Q:52:TYR:OH	2.40	0.52
2:J:514:ASN:ND2	10:D:384:TYR:CE1	2.73	0.52
8:C:401:LEU:HD12	8:C:412:LEU:HD23	1.92	0.52
10:D:562:CYS:O	10:D:565:VAL:HG12	2.09	0.52
13:Q:149:ASP:OD1	13:Q:158:LYS:NZ	2.37	0.52
2:K:256:VAL:HG12	2:K:265:ASP:OD2	2.10	0.52
2:K:263:PRO:HB2	2:K:295:ASN:ND2	2.24	0.52
8:C:1213:GLN:HA	8:C:1216:MET:HG2	1.92	0.52
8:C:1483:ASP:O	8:C:1487:ILE:HG13	2.10	0.52
10:P:247:PHE:HA	10:P:295:MET:SD	2.49	0.52
13:Q:323:VAL:HG23	13:Q:384:ILE:HG23	1.91	0.52
1:F:30:LEU:HD13	1:F:52:LEU:HD22	1.91	0.52
6:B:328:ILE:O	6:B:337:ILE:N	2.41	0.52
8:C:1133:MET:HA	8:C:1177:LEU:HD22	1.90	0.52
8:C:1626:PHE:HD2	8:C:1630:THR:HA	1.73	0.52
9:O:541:ASP:OD1	9:O:542:TYR:N	2.43	0.52
2:K:479:PHE:CD1	2:K:506:CYS:SG	3.03	0.52
1:H:192:GLU:O	1:H:196:LYS:HG2	2.09	0.52
8:C:1732:LEU:H	8:C:1732:LEU:HD23	1.74	0.52
9:O:247:LEU:O	9:O:251:VAL:HG23	2.10	0.52
10:P:27:TRP:CE3	10:P:115:TYR:CE1	2.96	0.52
13:Q:128:LYS:HG3	13:Q:133:ILE:HG12	1.91	0.52
14:T:35:ASN:O	14:T:38:LEU:HD12	2.10	0.52
14:T:319:VAL:O	14:T:323:LEU:HG	2.09	0.52
1:F:626:GLU:HB3	4:E:227:LEU:HD13	1.92	0.52
2:K:288:ARG:C	2:K:288:ARG:CD	2.77	0.52
6:B:189:THR:CA	11:I:97:TRP:HH2	2.22	0.52
8:C:959:VAL:HA	8:C:1543:HIS:NE2	2.25	0.52
9:O:251:VAL:HG13	9:O:304:LEU:HD12	1.90	0.52
8:C:166:SER:HB2	8:C:371:VAL:HG12	1.92	0.52
8:C:1341:ILE:HD11	8:C:1528:VAL:HG21	1.91	0.52
9:O:435:VAL:HG13	9:O:582:ASP:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:24:TYR:HB3	11:I:27:TRP:HE1	1.74	0.52
1:F:725:ARG:NH1	1:F:728:ASP:OD2	2.43	0.52
6:B:109:GLU:OE1	8:C:1100:LYS:HB3	2.10	0.52
8:C:630:GLY:O	8:C:634:ILE:HG23	2.10	0.52
8:C:863:ILE:O	8:C:867:ILE:HG23	2.10	0.52
8:C:1561:THR:OG1	8:C:1563:ASP:OD1	2.20	0.52
8:C:1587:ILE:HD12	8:C:1591:CYS:HB2	1.92	0.52
9:O:29:SER:O	9:O:30:GLN:HG3	2.10	0.52
9:O:331:THR:HG21	10:D:452:GLU:HB2	1.91	0.52
14:T:113:GLN:OE1	14:T:113:GLN:HA	2.08	0.52
1:F:453:PHE:HE1	4:E:96:PHE:CE1	2.27	0.51
2:J:514:ASN:HD21	10:D:384:TYR:HE1	1.53	0.51
2:J:643:TYR:HE2	2:J:655:TYR:CE2	2.28	0.51
2:J:754:LEU:HD23	3:G:27:LYS:HD3	1.92	0.51
8:C:605:TYR:HA	8:C:610:PHE:CE2	2.45	0.51
9:O:382:MET:SD	9:O:406:ILE:HD12	2.50	0.51
13:Q:63:SER:HA	13:Q:73:ILE:HG22	1.92	0.51
2:J:281:ARG:HG2	2:K:495:PHE:HB2	1.92	0.51
2:J:509:GLU:OE1	2:J:509:GLU:O	2.28	0.51
4:E:232:LEU:O	4:E:236:TYR:CE1	2.64	0.51
5:A:17:GLU:CD	5:A:17:GLU:H	2.13	0.51
5:A:44:LYS:HZ2	5:A:50:GLY:HA2	1.75	0.51
8:C:585:LEU:O	8:C:614:LYS:NZ	2.41	0.51
8:C:1558:ASP:OD1	8:C:1559:ILE:N	2.43	0.51
9:O:107:GLY:HA3	10:P:384:TYR:HE1	1.74	0.51
14:T:683:GLN:OE1	14:T:723:TRP:NE1	2.44	0.51
2:J:245:MET:HG3	2:K:394:GLU:CD	2.30	0.51
2:K:407:PRO:HB3	2:K:438:SER:HB3	1.93	0.51
5:A:138:ILE:HD13	5:A:217:ILE:HD13	1.92	0.51
6:B:271:TRP:HZ2	6:B:525:ASN:HB3	1.75	0.51
6:B:544:LEU:HD23	6:B:545:PHE:H	1.73	0.51
13:Q:195:LEU:HD21	13:Q:198:ILE:HD11	1.91	0.51
14:T:616:TYR:OH	14:T:659:ASP:OD1	2.27	0.51
15:U:104:LEU:HB2	15:U:107:ASN:HD22	1.75	0.51
2:K:278:GLN:OE1	2:K:281:ARG:NH1	2.43	0.51
2:K:428:ILE:HD13	2:K:457:TYR:CE1	2.46	0.51
5:A:9:VAL:O	5:A:13:LEU:HG	2.09	0.51
10:P:352:PHE:HD2	10:P:369:TYR:CD1	2.28	0.51
1:F:730:ILE:HG21	2:J:624:LEU:HD11	1.91	0.51
2:J:393:PHE:CD1	2:J:393:PHE:C	2.83	0.51
2:K:242:MET:HE2	2:K:243:GLN:NE2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:566:ALA:CA	3:W:1:MET:HE3	2.40	0.51
8:C:810:ARG:O	8:C:814:GLN:NE2	2.42	0.51
8:C:961:TRP:HD1	8:C:1017:SER:HG	1.57	0.51
8:C:1580:LYS:HD3	8:C:1580:LYS:N	2.25	0.51
9:O:306:TYR:HB2	9:O:321:SER:OG	2.10	0.51
10:D:376:MET:HB3	10:D:378:LYS:HG3	1.91	0.51
14:T:33:ASP:OD1	14:T:58:ARG:HD3	2.10	0.51
14:T:312:PHE:HA	14:T:315:TYR:CD2	2.45	0.51
1:H:737:MET:HG2	1:H:744:ASN:OD1	2.10	0.51
5:A:133:ILE:HG23	5:A:193:LEU:HB3	1.93	0.51
6:B:252:TYR:CE1	6:B:543:LYS:HB2	2.45	0.51
8:C:422:LYS:HB3	8:C:451:LEU:HD11	1.92	0.51
10:P:90:LEU:O	10:P:94:THR:HG22	2.11	0.51
10:P:121:LEU:HD12	10:P:190:ILE:HG23	1.92	0.51
10:P:426:LEU:HD22	11:I:13:TYR:HB2	1.93	0.51
11:I:141:ILE:HG22	11:I:141:ILE:O	2.11	0.51
13:Q:199:ILE:HD11	13:Q:505:LYS:HB2	1.93	0.51
14:T:299:LYS:HE2	14:T:353:VAL:HG11	1.92	0.51
14:T:313:LYS:HA	14:T:316:THR:HG22	1.91	0.51
1:F:196:LYS:HD2	1:F:196:LYS:O	2.10	0.51
2:K:501:PRO:HG3	2:K:532:ILE:HD11	1.93	0.51
9:O:258:TRP:HZ2	9:O:311:LYS:HB2	1.74	0.51
9:O:431:LEU:CB	9:O:472:TYR:OH	2.58	0.51
2:J:447:THR:HA	2:J:450:ASN:HD21	1.76	0.51
5:A:49:ASN:OD1	5:A:178:TRP:N	2.43	0.51
5:A:91:LYS:O	5:A:124:ASP:HB3	2.11	0.51
8:C:1032:SER:OG	9:O:370:ARG:NH1	2.44	0.51
10:D:297:LYS:O	10:D:301:LEU:HD12	2.11	0.51
14:T:103:PHE:CE2	14:T:147:ILE:HA	2.46	0.51
14:T:185:ILE:HG21	14:T:216:ALA:HB1	1.93	0.51
14:T:455:ARG:CA	14:T:458:MET:SD	2.90	0.51
8:C:463:GLN:HE22	8:C:481:GLY:H	1.47	0.51
10:P:481:HIS:O	10:P:484:SER:OG	2.27	0.51
14:T:738:VAL:HG11	15:U:1:MET:HG2	1.88	0.51
1:F:28:ILE:O	1:F:31:GLN:HG3	2.11	0.50
2:J:754:LEU:HD11	3:G:23:LEU:HD21	1.93	0.50
5:A:48:VAL:HG21	5:A:76:LEU:HD21	1.92	0.50
5:A:167:TYR:CD2	5:A:168:LYS:HB2	2.46	0.50
6:B:118:ASP:OD1	6:B:119:THR:N	2.38	0.50
9:O:160:ILE:HD11	12:N:100:LEU:HD23	1.92	0.50
9:O:356:ASP:OD1	9:O:357:ALA:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:372:PHE:HD1	14:T:378:LEU:HD13	1.75	0.50
2:J:647:ASN:HA	2:J:649:PHE:CE2	2.47	0.50
1:H:78:LEU:HB3	1:H:87:ALA:HB2	1.92	0.50
1:H:703:VAL:HG21	1:H:716:LEU:HD22	1.92	0.50
8:C:1350:LYS:HG3	8:C:1351:ILE:HD12	1.93	0.50
9:O:431:LEU:CD1	9:O:472:TYR:CE1	2.73	0.50
10:P:427:ASP:HB2	10:P:430:THR:HG22	1.93	0.50
13:Q:126:PHE:H	13:Q:249:HIS:HE2	1.58	0.50
13:Q:342:GLU:OE1	13:Q:342:GLU:HA	2.12	0.50
2:J:431:ASN:O	2:J:435:ILE:HG12	2.11	0.50
2:K:736:TYR:C	1:H:599:LYS:CE	2.78	0.50
1:H:159:LEU:O	1:H:163:LEU:HG	2.11	0.50
1:H:601:LEU:HD11	1:H:611:TYR:CZ	2.46	0.50
1:H:635:ARG:HH22	1:H:648:CYS:CB	2.21	0.50
5:A:6:ILE:H	5:A:6:ILE:HD12	1.76	0.50
8:C:95:ALA:HB2	8:C:110:PHE:HZ	1.75	0.50
10:D:469:PHE:HE1	10:D:473:GLN:HE21	1.57	0.50
15:U:68:LEU:HD12	15:U:99:GLN:HB2	1.93	0.50
1:F:117:ASN:O	1:F:121:LEU:HG	2.12	0.50
2:J:419:PHE:HB2	2:J:426:LYS:HE3	1.94	0.50
8:C:524:TYR:CG	8:C:525:PRO:HD2	2.46	0.50
8:C:734:VAL:HA	8:C:737:ARG:HH11	1.76	0.50
8:C:1615:ASN:O	8:C:1620:TYR:OH	2.20	0.50
13:Q:228:SER:HB3	13:Q:347:ILE:HD12	1.93	0.50
1:F:706:VAL:HG21	6:B:557:LEU:CD1	2.41	0.50
2:K:633:PRO:HB3	2:K:663:VAL:HG21	1.92	0.50
3:W:23:LEU:O	3:W:27:LYS:HG2	2.10	0.50
5:A:132:ASP:HB3	5:A:192:LEU:HD13	1.92	0.50
6:B:349:CYS:SG	6:B:391:LEU:N	2.85	0.50
8:C:1385:VAL:O	8:C:1389:VAL:HG23	2.11	0.50
11:I:141:ILE:HD12	11:I:153:LEU:HD21	1.93	0.50
14:T:199:TRP:HE3	14:T:200:LEU:HD22	1.75	0.50
14:T:702:LEU:H	14:T:702:LEU:HD12	1.76	0.50
1:H:485:ILE:C	1:H:486:ILE:HD12	2.31	0.50
1:H:574:ALA:HB2	1:H:603:CYS:HB3	1.92	0.50
6:B:505:MET:CE	6:B:505:MET:N	2.74	0.50
10:D:321:LEU:HB3	10:D:331:LEU:HD21	1.92	0.50
14:T:43:PRO:HB3	14:T:137:TYR:HE1	1.77	0.50
2:J:440:TYR:O	2:J:631:ASN:ND2	2.44	0.50
2:J:644:PHE:CE1	3:G:9:LEU:HD11	2.47	0.50
2:K:715:GLY:HA3	2:K:731:LEU:CD1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:99:ARG:NH1	4:E:99:ARG:HA	2.27	0.50
6:B:526:ASP:OD1	6:B:526:ASP:N	2.45	0.50
8:C:779:TYR:O	9:O:605:ARG:NH2	2.44	0.50
8:C:1136:LEU:HD12	8:C:1177:LEU:HD21	1.93	0.50
8:C:1724:SER:OG	8:C:1724:SER:O	2.29	0.50
9:O:192:ASN:O	9:O:193:VAL:HG12	2.11	0.50
14:T:411:VAL:HG12	14:T:415:HIS:HD2	1.77	0.50
5:A:80:ARG:NH2	5:A:223:SER:OG	2.45	0.50
5:A:156:TYR:HD1	5:A:166:PHE:HA	1.77	0.50
5:A:164:ALA:HB2	5:A:197:PHE:HE2	1.77	0.50
6:B:506:ASP:OD1	6:B:506:ASP:N	2.44	0.50
8:C:463:GLN:HE22	8:C:481:GLY:N	1.87	0.50
8:C:467:ILE:HD12	8:C:476:ILE:HG22	1.94	0.50
1:F:205:ARG:NH1	4:E:159:SER:OG	2.45	0.50
1:F:442:LEU:HG	1:F:458:LEU:HD11	1.92	0.50
1:F:695:ALA:HA	1:F:698:THR:HG22	1.94	0.50
2:J:432:LEU:HD21	2:K:255:LYS:HG3	1.94	0.50
6:B:268:LEU:HD22	6:B:280:ALA:HB3	1.92	0.50
8:C:1490:HIS:O	8:C:1493:LYS:HG2	2.12	0.50
13:Q:123:LEU:HD12	13:Q:123:LEU:H	1.76	0.50
14:T:579:VAL:HG11	14:T:613:TYR:CD2	2.47	0.50
1:F:646:CYS:SG	1:F:677:LEU:HG	2.52	0.49
5:A:80:ARG:HH12	5:A:223:SER:H	1.60	0.49
5:A:83:ASN:HD21	5:A:218:ARG:HD2	1.75	0.49
5:A:205:ASN:ND2	5:A:211:ASP:O	2.44	0.49
6:B:474:ILE:HG12	6:B:490:HIS:CE1	2.47	0.49
8:C:1359:VAL:O	8:C:1363:LEU:HB2	2.12	0.49
8:C:1557:LYS:HA	8:C:1564:ALA:HA	1.92	0.49
8:C:1715:GLU:O	8:C:1719:LEU:HG	2.12	0.49
9:O:233:MET:SD	10:D:128:TRP:HB2	2.51	0.49
9:O:329:LYS:HE2	9:O:337:TYR:HE2	1.77	0.49
10:D:28:LYS:NZ	10:D:97:ASP:OD2	2.40	0.49
10:P:141:THR:O	10:P:421:ARG:HG3	2.11	0.49
13:Q:325:ILE:O	13:Q:329:ILE:HB	2.12	0.49
13:Q:366:VAL:CG2	13:Q:467:ILE:CD1	2.89	0.49
14:T:309:MET:CE	14:T:315:TYR:HE1	2.10	0.49
2:J:610:MET:HE1	2:J:642:MET:CB	2.40	0.49
6:B:432:ALA:HB2	6:B:475:CYS:C	2.33	0.49
8:C:1020:LEU:O	8:C:1020:LEU:HD12	2.11	0.49
10:P:352:PHE:HD2	10:P:369:TYR:HD1	1.59	0.49
10:P:595:GLN:HA	10:P:626:MET:CE	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:51:GLU:CG	1:H:471:MET:HE3	2.35	0.49
1:H:662:LEU:HD11	1:H:689:MET:HE2	1.94	0.49
6:B:222:PHE:CD1	6:B:222:PHE:C	2.85	0.49
11:I:36:ASP:OD2	11:I:37:GLU:OE1	2.29	0.49
12:N:108:LEU:HB3	12:N:109:PRO:HD3	1.93	0.49
2:J:245:MET:CG	2:K:394:GLU:OE1	2.60	0.49
8:C:454:LEU:CD2	8:C:459:PRO:HB3	2.29	0.49
8:C:1367:GLN:H	8:C:1384:ASN:HD21	1.59	0.49
9:O:507:SER:O	9:O:511:GLN:HG2	2.12	0.49
10:D:38:GLU:HB3	10:D:328:PHE:HE1	1.77	0.49
10:D:255:LEU:HD21	10:D:268:LEU:HD21	1.94	0.49
13:Q:501:LEU:HD22	13:Q:567:SER:HA	1.94	0.49
2:J:546:ARG:NH2	11:I:37:GLU:OE2	2.45	0.49
2:K:362:CYS:HA	2:K:365:ARG:HE	1.77	0.49
1:H:611:TYR:CD2	1:H:637:ILE:CD1	2.96	0.49
8:C:1228:VAL:HG13	8:C:1229:THR:HG23	1.94	0.49
8:C:1740:TYR:HD1	14:T:119:PHE:CD2	2.30	0.49
13:Q:285:LEU:HD12	13:Q:289:GLY:HA2	1.95	0.49
15:U:71:HIS:HE1	15:U:94:CYS:HB3	1.77	0.49
1:F:127:ILE:HG13	1:F:160:LEU:HD11	1.94	0.49
1:F:629:LEU:HD12	4:E:207:TRP:HE1	1.78	0.49
2:J:479:PHE:HA	2:J:482:CYS:HB3	1.95	0.49
2:K:585:LEU:N	2:K:608:GLN:HE22	2.11	0.49
2:K:728:ILE:O	2:K:732:HIS:ND1	2.45	0.49
1:H:490:MET:HA	1:H:493:LYS:NZ	2.28	0.49
4:E:250:ARG:O	4:E:250:ARG:NH1	2.42	0.49
8:C:919:LEU:HD11	8:C:960:GLY:HA3	1.95	0.49
8:C:1540:GLU:OE2	8:C:1540:GLU:N	2.23	0.49
9:O:54:TRP:HZ3	9:O:303:ILE:HD13	1.77	0.49
10:D:422:ARG:NH1	11:I:27:TRP:NE1	2.61	0.49
10:P:484:SER:OG	10:P:508:CYS:SG	2.69	0.49
13:Q:239:ILE:HG22	13:Q:464:GLU:HG3	1.95	0.49
2:J:517:PHE:HB2	2:J:540:TYR:CE2	2.48	0.49
2:J:667:ASP:O	2:J:673:THR:OG1	2.19	0.49
8:C:127:GLU:HG3	8:C:152:TYR:HE1	1.75	0.49
8:C:202:ILE:HG21	8:C:411:LEU:HD11	1.94	0.49
8:C:861:TYR:HE2	13:Q:135:ILE:HD12	1.78	0.49
9:O:315:TYR:HA	9:O:352:PHE:HE2	1.77	0.49
14:T:610:SER:OG	15:U:14:TRP:NE1	2.45	0.49
14:T:702:LEU:HG	14:T:736:TYR:HE1	1.78	0.49
2:J:286:ILE:HB	2:J:302:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:513:GLY:O	6:B:540:ARG:NH2	2.43	0.49
8:C:78:ILE:HD13	8:C:119:TRP:CE3	2.48	0.49
8:C:461:ARG:HG2	8:C:461:ARG:O	2.13	0.49
8:C:752:VAL:HG23	8:C:757:PHE:CE2	2.47	0.49
2:K:706:LYS:HD3	2:K:737:LEU:HD23	1.95	0.49
1:H:159:LEU:HD12	1:H:159:LEU:C	2.28	0.49
5:A:113:TRP:CZ2	5:A:115:SER:HB3	2.48	0.49
6:B:269:ILE:HG12	6:B:520:HIS:HB3	1.95	0.49
8:C:1602:ILE:HG22	8:C:1616:PHE:HE1	1.78	0.49
9:O:51:SER:HB2	12:N:90:LEU:HD21	1.94	0.49
9:O:606:SER:O	9:O:610:ILE:HG22	2.13	0.49
13:Q:327:THR:HG22	13:Q:384:ILE:HD13	1.94	0.49
1:H:649:GLY:HA3	1:H:665:TYR:CE1	2.48	0.49
9:O:162:ASP:OD1	9:O:164:GLU:N	2.42	0.49
10:D:134:GLU:HG2	10:P:395:PHE:HD2	1.77	0.49
10:D:352:PHE:HB3	10:D:369:TYR:CD2	2.47	0.49
14:T:63:ILE:O	14:T:67:PHE:HD1	1.96	0.49
14:T:181:LEU:CB	14:T:196:LEU:HD21	2.31	0.49
1:F:103:TYR:CE2	1:F:107:ARG:HG3	2.47	0.48
1:F:506:VAL:HB	1:F:536:MET:HE2	1.94	0.48
2:J:504:ILE:HG23	2:J:539:THR:HG21	1.94	0.48
4:E:97:CYS:SG	4:E:99:ARG:HB2	2.53	0.48
6:B:280:ALA:HB2	6:B:308:LEU:HD21	1.95	0.48
6:B:368:HIS:HE1	6:B:400:LEU:HD22	1.77	0.48
8:C:211:LYS:CB	8:C:380:LEU:HD12	2.43	0.48
8:C:429:LEU:O	8:C:433:LEU:HG	2.11	0.48
8:C:699:GLU:OE1	8:C:699:GLU:N	2.46	0.48
8:C:722:ILE:HD12	8:C:726:ARG:HD2	1.95	0.48
8:C:1061:ASN:OD1	8:C:1061:ASN:N	2.46	0.48
9:O:12:PHE:HB3	9:O:165:MET:SD	2.53	0.48
10:D:553:GLN:HG3	10:D:557:LYS:HZ1	1.78	0.48
10:P:91:LEU:O	10:P:95:LEU:HD12	2.13	0.48
13:Q:572:VAL:HG21	13:Q:644:VAL:HG23	1.93	0.48
2:J:644:PHE:CD2	2:J:683:THR:HG22	2.47	0.48
2:K:479:PHE:HD1	2:K:506:CYS:SG	2.35	0.48
2:K:644:PHE:CE2	2:K:686:LYS:HG3	2.48	0.48
8:C:194:PHE:CG	8:C:195:PRO:HD2	2.48	0.48
14:T:665:ILE:HD12	14:T:667:LEU:HD21	1.95	0.48
1:F:453:PHE:HE1	4:E:96:PHE:HE1	1.61	0.48
2:K:432:LEU:HD23	2:K:435:ILE:HD12	1.95	0.48
2:K:441:ILE:HD12	2:K:442:ASN:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:99:ARG:HA	4:E:99:ARG:CZ	2.42	0.48
6:B:407:ASN:HA	6:B:426:HIS:HB2	1.95	0.48
8:C:1691:ILE:HD12	9:O:607:LEU:HD13	1.95	0.48
10:P:256:MET:CE	10:P:256:MET:HA	2.44	0.48
13:Q:199:ILE:HG23	13:Q:207:GLN:HB2	1.95	0.48
14:T:387:LEU:HG	14:T:389:LEU:CD2	2.43	0.48
14:T:595:HIS:CD2	14:T:600:LEU:HB2	2.45	0.48
1:F:716:LEU:HB3	1:F:732:GLU:HG2	1.95	0.48
2:J:736:TYR:O	2:J:736:TYR:HD2	1.97	0.48
2:K:594:PHE:CZ	6:B:218:LEU:HD23	2.48	0.48
6:B:276:VAL:HG13	6:B:287:LEU:HD11	1.95	0.48
6:B:366:ILE:HB	6:B:381:ILE:HB	1.95	0.48
9:O:338:PHE:HB3	10:D:480:MET:SD	2.53	0.48
10:P:313:ASP:O	10:P:317:ASP:OD2	2.31	0.48
13:Q:298:TRP:HE3	13:Q:299:LEU:HD22	1.77	0.48
14:T:315:TYR:O	14:T:318:ILE:HG22	2.13	0.48
14:T:628:PHE:CE1	14:T:658:LYS:HB3	2.49	0.48
1:F:617:SER:O	1:F:620:LYS:HG2	2.14	0.48
2:J:319:ILE:HD12	2:J:361:LEU:HD22	1.93	0.48
2:J:607:MET:CE	2:J:638:GLU:OE2	2.61	0.48
2:J:644:PHE:HD2	2:J:683:THR:HG22	1.79	0.48
1:H:119:ALA:O	1:H:123:LEU:HD12	2.13	0.48
1:H:555:ASP:OD1	1:H:555:ASP:N	2.45	0.48
1:H:607:HIS:O	1:H:637:ILE:HD13	2.13	0.48
1:H:635:ARG:HE	1:H:645:ILE:HD13	1.77	0.48
10:D:557:LYS:H	10:D:557:LYS:HD2	1.78	0.48
13:Q:95:LYS:NZ	13:Q:195:LEU:O	2.42	0.48
2:K:390:ILE:HD11	2:K:417:LEU:HB2	1.96	0.48
2:K:735:LEU:O	1:H:599:LYS:HE3	2.12	0.48
5:A:142:MET:N	5:A:176:ASN:OD1	2.47	0.48
6:B:61:ARG:NH1	10:D:473:GLN:OE1	2.46	0.48
6:B:527:GLY:O	6:B:544:LEU:HD21	2.14	0.48
8:C:1278:ASN:O	8:C:1279:ILE:HG22	2.13	0.48
9:O:374:ASP:HB2	9:O:376:GLU:OE1	2.12	0.48
10:D:14:ARG:HE	10:D:43:LEU:HD22	1.79	0.48
10:D:417:ILE:HD11	10:D:437:MET:HG3	1.96	0.48
14:T:40:TRP:HA	14:T:49:ASN:HA	1.96	0.48
1:F:495:PHE:HE1	1:F:512:PHE:CD1	2.31	0.48
2:K:485:LEU:O	2:K:488:THR:OG1	2.22	0.48
5:A:219:LEU:HD23	5:A:219:LEU:HA	1.69	0.48
6:B:222:PHE:HD1	6:B:222:PHE:O	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:480:SER:OG	6:B:481:LYS:N	2.47	0.48
8:C:776:LEU:HD11	8:C:787:LEU:HD22	1.96	0.48
9:O:127:TYR:CZ	13:Q:291:ILE:HB	2.49	0.48
9:O:565:SER:O	9:O:569:ILE:HG22	2.13	0.48
10:P:9:ILE:CG1	10:P:292:PHE:CZ	2.96	0.48
14:T:135:GLU:HG2	14:T:159:LEU:HD11	1.95	0.48
2:K:728:ILE:O	2:K:732:HIS:CE1	2.67	0.48
6:B:122:SER:O	6:B:123:GLU:HG2	2.14	0.48
6:B:281:LEU:HD12	6:B:286:PHE:HD2	1.79	0.48
8:C:662:MET:HE1	8:C:664:TRP:CZ2	2.48	0.48
8:C:930:PHE:CE2	14:T:459:LEU:HD21	2.49	0.48
10:D:17:LEU:HB3	10:D:40:LEU:HD12	1.95	0.48
10:D:128:TRP:CE3	10:D:187:ILE:HD11	2.49	0.48
1:F:202:ASP:O	1:F:206:VAL:HG23	2.14	0.48
2:J:246:TYR:CZ	2:J:275:ASN:HB3	2.48	0.48
2:J:541:TYR:CE2	2:J:549:GLU:OE1	2.67	0.48
2:K:648:GLU:HB3	2:K:651:LYS:NZ	2.28	0.48
8:C:946:PHE:N	8:C:946:PHE:CD1	2.81	0.48
9:O:65:ARG:NH2	9:O:260:ASP:OD2	2.39	0.48
10:D:201:TYR:HD1	10:D:203:ILE:H	1.57	0.48
2:K:397:GLU:OE2	2:K:398:MET:N	2.47	0.48
2:K:736:TYR:CA	1:H:599:LYS:HG3	2.39	0.48
1:H:663:GLN:HA	1:H:666:GLU:OE2	2.14	0.48
5:A:126:MET:SD	5:A:197:PHE:CD1	3.07	0.48
6:B:210:ARG:HG2	10:D:573:VAL:O	2.14	0.48
6:B:428:ALA:HB3	6:B:448:GLY:HA3	1.96	0.48
14:T:315:TYR:O	14:T:319:VAL:HG13	2.13	0.48
2:J:578:GLU:OE1	2:J:578:GLU:N	2.47	0.47
5:A:33:VAL:HA	5:A:173:ARG:HH22	1.78	0.47
5:A:142:MET:HG3	5:A:175:VAL:H	1.79	0.47
8:C:1321:LEU:HD13	8:C:1376:PHE:CE1	2.48	0.47
10:D:277:GLN:OE1	10:D:277:GLN:N	2.47	0.47
12:N:127:THR:HG23	12:N:129:TYR:H	1.77	0.47
1:F:608:TYR:HB3	1:F:637:ILE:HD11	1.94	0.47
2:K:637:ASN:OD1	2:K:679:ASN:ND2	2.44	0.47
1:H:93:GLU:CG	1:H:94:PHE:CD2	2.97	0.47
8:C:1491:TYR:OH	8:C:1539:GLN:NE2	2.37	0.47
8:C:1702:LEU:HD23	8:C:1702:LEU:C	2.35	0.47
9:O:296:THR:HG21	10:D:456:ARG:NH2	2.29	0.47
10:D:390:SER:HB2	10:D:403:ILE:HD11	1.95	0.47
11:I:147:ASP:OD1	11:I:150:ILE:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:94:SER:HB3	13:Q:167:GLU:HB3	1.96	0.47
1:F:51:GLU:OE2	1:H:472:PRO:CD	2.62	0.47
1:F:699:PHE:HB3	1:F:716:LEU:HD22	1.97	0.47
2:K:617:LEU:O	2:K:621:TYR:CD2	2.68	0.47
3:G:21:ASP:HA	3:G:24:ASN:HD22	1.80	0.47
8:C:1167:TYR:C	8:C:1167:TYR:CD2	2.84	0.47
9:O:107:GLY:CA	9:O:170:TRP:HE1	2.28	0.47
9:O:364:GLU:HG2	9:O:367:ARG:HH21	1.80	0.47
9:O:390:GLU:HB2	9:O:428:PHE:CE1	2.49	0.47
14:T:12:LYS:O	14:T:12:LYS:HD3	2.14	0.47
14:T:464:LEU:O	14:T:468:ILE:HG12	2.13	0.47
2:J:257:TYR:CE1	2:J:266:ALA:HB2	2.49	0.47
2:K:455:LYS:HD3	2:K:456:ASP:H	1.79	0.47
2:K:523:LEU:HD23	2:K:533:THR:HA	1.96	0.47
6:B:62:THR:OG1	6:B:201:LEU:O	2.32	0.47
6:B:366:ILE:HD11	6:B:384:HIS:CD2	2.49	0.47
8:C:475:LEU:HD12	8:C:476:ILE:N	2.28	0.47
10:D:201:TYR:CD1	10:D:203:ILE:N	2.78	0.47
10:P:334:TYR:CE1	10:P:338:ILE:HD11	2.50	0.47
13:Q:436:ILE:HG23	13:Q:437:LEU:HG	1.95	0.47
1:F:49:LEU:HD21	1:H:186:TYR:HB3	1.97	0.47
1:F:555:ASP:OD1	1:F:556:HIS:N	2.47	0.47
2:K:617:LEU:O	2:K:621:TYR:CE2	2.68	0.47
1:H:682:MET:O	1:H:686:LEU:HG	2.15	0.47
6:B:97:GLN:O	6:B:100:GLU:HG3	2.14	0.47
6:B:521:LEU:HD23	6:B:532:SER:HA	1.96	0.47
8:C:1379:THR:O	8:C:1383:ILE:HG13	2.14	0.47
10:D:304:PHE:CD2	10:D:311:LEU:HA	2.50	0.47
10:P:367:GLU:N	10:P:367:GLU:OE2	2.47	0.47
13:Q:345:ARG:HB2	13:Q:366:VAL:HG11	1.95	0.47
1:F:168:ASP:HB3	1:F:169:HIS:CD2	2.49	0.47
1:F:598:ARG:NH1	1:F:630:TYR:OH	2.47	0.47
2:J:571:PHE:CE2	11:I:105:LEU:HD23	2.49	0.47
2:K:603:LEU:HD11	2:K:635:VAL:HG22	1.96	0.47
1:H:152:ASP:O	1:H:156:LEU:HG	2.15	0.47
1:H:171:LYS:H	1:H:171:LYS:CD	2.27	0.47
4:E:232:LEU:O	4:E:236:TYR:CD1	2.67	0.47
4:E:236:TYR:CD1	4:E:236:TYR:N	2.82	0.47
6:B:478:VAL:O	6:B:486:LEU:HD12	2.15	0.47
8:C:483:ASN:HB2	8:C:486:GLU:HG2	1.96	0.47
9:O:170:TRP:O	9:O:170:TRP:HE3	1.91	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:P:328:PHE:CE2	10:P:330:PHE:HB3	2.50	0.47
10:P:625:HIS:HD1	10:P:625:HIS:H	1.63	0.47
2:J:255:LYS:NZ	2:K:464:ASP:OD2	2.40	0.47
2:J:288:ARG:HG3	2:J:289:ASN:N	2.30	0.47
2:J:685:ARG:HH11	2:J:685:ARG:HG2	1.79	0.47
2:K:615:LEU:HD21	2:K:645:LYS:HB2	1.95	0.47
2:K:749:LYS:O	2:K:753:GLU:HG2	2.14	0.47
5:A:189:ASP:N	5:A:189:ASP:OD1	2.47	0.47
6:B:124:SER:HB2	6:B:232:ASP:OD1	2.13	0.47
8:C:77:TYR:HA	8:C:87:PHE:HA	1.97	0.47
8:C:197:ASP:N	8:C:197:ASP:OD1	2.48	0.47
8:C:454:LEU:HD23	8:C:454:LEU:H	1.80	0.47
8:C:760:ASP:OD1	8:C:761:TYR:N	2.48	0.47
8:C:783:ILE:HD12	8:C:783:ILE:H	1.80	0.47
8:C:1698:GLU:OE2	9:O:605:ARG:NH1	2.48	0.47
10:D:23:GLU:HA	10:D:26:ARG:HB3	1.97	0.47
10:D:134:GLU:HG2	10:P:395:PHE:CD2	2.50	0.47
10:D:235:MET:O	10:D:239:LEU:HG	2.15	0.47
10:P:119:LEU:C	10:P:119:LEU:CD2	2.83	0.47
10:P:389:VAL:HG12	10:P:399:THR:HG23	1.96	0.47
11:I:83:ASN:C	11:I:83:ASN:HD22	2.13	0.47
14:T:352:LEU:HD21	14:T:489:THR:O	2.14	0.47
2:J:392:ASN:OD1	2:J:393:PHE:N	2.47	0.47
2:J:523:LEU:HB3	2:J:533:THR:OG1	2.15	0.47
2:J:551:GLN:HG3	2:J:571:PHE:HE1	1.80	0.47
2:K:484:GLU:O	2:K:488:THR:HG23	2.15	0.47
1:H:53:LEU:HD12	1:H:53:LEU:O	2.15	0.47
4:E:209:ASP:O	4:E:209:ASP:OD2	2.33	0.47
6:B:477:MET:HE2	6:B:477:MET:HB3	1.78	0.47
8:C:1328:ILE:HD12	8:C:1328:ILE:H	1.80	0.47
9:O:442:GLU:C	9:O:442:GLU:OE1	2.53	0.47
14:T:44:ASN:HB2	14:T:113:GLN:HE22	1.79	0.47
14:T:128:LEU:O	14:T:131:ILE:HG22	2.15	0.47
1:H:473:TRP:CE2	1:H:477:GLN:HG3	2.50	0.47
9:O:324:ASN:OD1	10:D:455:ARG:NH2	2.48	0.47
10:P:556:LYS:CA	10:P:583:TRP:HH2	2.27	0.47
14:T:309:MET:HE2	14:T:315:TYR:HE1	1.62	0.47
14:T:613:TYR:O	14:T:615:LYS:HE2	2.13	0.47
1:F:123:LEU:O	1:F:127:ILE:HG12	2.15	0.47
1:F:495:PHE:HB2	1:F:498:LEU:HD13	1.96	0.47
2:J:541:TYR:OH	11:I:88:TRP:HD1	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:99:LEU:CD2	1:H:151:PRO:HD2	2.44	0.47
1:H:198:ARG:NE	1:H:606:GLN:OE1	2.46	0.47
1:H:482:HIS:HA	1:H:485:ILE:HG22	1.97	0.47
5:A:108:ASN:ND2	5:A:111:THR:HG23	2.30	0.47
6:B:308:LEU:HD13	6:B:319:VAL:HG22	1.97	0.47
6:B:343:HIS:CE1	6:B:367:LEU:HD22	2.50	0.47
8:C:118:PHE:CD2	8:C:191:LEU:HD23	2.50	0.47
9:O:57:LEU:O	9:O:58:LEU:HB2	2.13	0.47
9:O:181:LYS:HA	9:O:186:TRP:CD1	2.49	0.47
10:D:306:GLU:HA	10:D:306:GLU:OE2	2.15	0.47
2:J:620:SER:O	2:J:623:VAL:HG12	2.16	0.46
2:K:263:PRO:HB2	2:K:295:ASN:HD21	1.77	0.46
5:A:6:ILE:HD12	5:A:6:ILE:N	2.30	0.46
6:B:274:THR:HG23	6:B:276:VAL:HB	1.96	0.46
6:B:400:LEU:HD23	6:B:412:TYR:HD2	1.80	0.46
10:D:23:GLU:O	10:D:27:TRP:N	2.48	0.46
13:Q:60:LYS:HA	13:Q:77:PHE:CE1	2.50	0.46
13:Q:180:TYR:HE1	13:Q:468:ALA:HB1	1.80	0.46
1:F:196:LYS:HD2	1:F:196:LYS:C	2.35	0.46
1:H:116:VAL:O	1:H:120:ILE:HG12	2.15	0.46
6:B:300:ASP:N	6:B:300:ASP:OD1	2.46	0.46
8:C:114:ILE:HD12	8:C:114:ILE:N	2.30	0.46
9:O:512:ASP:HB3	9:O:531:TYR:CE2	2.51	0.46
14:T:42:SER:O	14:T:49:ASN:HB3	2.15	0.46
1:F:41:LEU:O	1:F:41:LEU:HD23	2.15	0.46
1:F:196:LYS:NZ	1:F:197:MET:CE	2.79	0.46
2:J:248:THR:OG1	2:K:393:PHE:HB3	2.15	0.46
2:J:397:GLU:OE2	2:J:398:MET:N	2.49	0.46
3:G:19:LEU:HD23	3:G:20:ILE:HD13	1.97	0.46
4:E:95:PRO:CD	4:E:95:PRO:C	2.63	0.46
4:E:209:ASP:OD2	4:E:209:ASP:C	2.53	0.46
6:B:69:ILE:HD12	6:B:201:LEU:HD22	1.97	0.46
6:B:492:TYR:H	6:B:495:TYR:HE1	1.63	0.46
6:B:532:SER:HB3	6:B:542:TRP:CH2	2.35	0.46
8:C:83:THR:N	8:C:84:PRO:HD3	2.30	0.46
8:C:149:LYS:HD2	8:C:150:HIS:HB2	1.97	0.46
9:O:191:ASP:OD1	9:O:191:ASP:N	2.48	0.46
10:D:458:VAL:HG21	10:D:468:TRP:CE2	2.51	0.46
10:P:398:GLU:OE1	10:P:398:GLU:N	2.49	0.46
11:I:106:GLU:CD	11:I:107:SER:H	2.18	0.46
13:Q:37:ARG:HD2	13:Q:40:VAL:HG23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:118:ASP:N	13:Q:118:ASP:OD1	2.47	0.46
13:Q:489:PHE:CE2	13:Q:516:ILE:HG21	2.48	0.46
14:T:33:ASP:O	14:T:37:LEU:HG	2.15	0.46
1:F:165:MET:HE1	1:F:170:SER:O	2.16	0.46
1:F:516:LEU:HD11	1:F:524:LYS:HB2	1.98	0.46
2:J:390:ILE:HD12	2:J:419:PHE:HA	1.98	0.46
2:J:605:LEU:HD22	2:J:621:TYR:CE2	2.49	0.46
2:K:531:ALA:HB2	2:K:560:LEU:HB3	1.97	0.46
4:E:255:ARG:NH2	4:E:256:HIS:CB	2.51	0.46
5:A:114:GLN:HB2	5:A:213:HIS:CE1	2.50	0.46
6:B:255:LEU:HD23	6:B:541:TYR:CZ	2.50	0.46
6:B:367:LEU:HD23	6:B:369:ARG:HE	1.78	0.46
8:C:157:ASP:OD1	8:C:157:ASP:N	2.47	0.46
8:C:1167:TYR:O	8:C:1167:TYR:CD2	2.66	0.46
10:D:340:TYR:OH	10:D:371:ASN:ND2	2.48	0.46
10:D:468:TRP:HB3	10:D:491:ALA:HB2	1.97	0.46
10:P:290:ILE:O	10:P:296:ILE:HG21	2.15	0.46
13:Q:337:ILE:O	13:Q:341:VAL:HG12	2.15	0.46
13:Q:365:ALA:O	13:Q:463:MET:HE3	2.15	0.46
14:T:201:LYS:HZ2	14:T:201:LYS:HB3	1.80	0.46
1:F:163:LEU:HD12	1:F:164:TYR:N	2.31	0.46
1:F:489:ASP:OD1	1:F:490:MET:N	2.49	0.46
2:K:490:LEU:HD22	2:K:494:GLU:HA	1.98	0.46
2:K:500:LEU:O	2:K:504:ILE:HG12	2.16	0.46
3:W:15:ASP:OD1	3:W:16:VAL:N	2.48	0.46
1:H:459:PHE:CD1	1:H:478:LEU:CD1	2.84	0.46
6:B:189:THR:HA	11:I:97:TRP:HH2	1.81	0.46
8:C:711:THR:HG23	8:C:753:HIS:HE1	1.80	0.46
8:C:1154:LEU:HB3	8:C:1161:MET:SD	2.55	0.46
8:C:1291:TRP:HZ2	8:C:1525:SER:HG	1.62	0.46
9:O:58:LEU:HD23	9:O:380:LEU:HD21	1.97	0.46
10:P:231:ILE:HG21	10:P:260:GLN:HE22	1.80	0.46
10:P:621:GLU:O	10:P:625:HIS:CE1	2.68	0.46
13:Q:439:LYS:O	13:Q:442:THR:OG1	2.32	0.46
14:T:263:ASP:O	14:T:263:ASP:OD2	2.34	0.46
14:T:290:ILE:CG2	14:T:302:LEU:HD21	2.46	0.46
14:T:669:PHE:CD2	15:U:1:MET:SD	3.08	0.46
1:F:453:PHE:CE1	4:E:96:PHE:HE1	2.33	0.46
2:J:539:THR:HA	2:J:542:MET:HB2	1.97	0.46
2:K:483:LEU:HD11	2:K:507:LEU:HD23	1.97	0.46
2:K:566:ALA:CA	3:W:1:MET:CE	2.93	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:727:ALA:O	2:K:731:LEU:HD13	2.16	0.46
3:G:1:MET:SD	3:G:1:MET:N	2.89	0.46
6:B:504:SER:C	6:B:505:MET:HE2	2.30	0.46
8:C:860:ILE:HD13	13:Q:121:PRO:HB2	1.97	0.46
8:C:1106:LEU:HD23	8:C:1109:PHE:CD2	2.51	0.46
9:O:397:ASN:OD1	9:O:398:ARG:N	2.48	0.46
9:O:561:ASP:OD1	9:O:561:ASP:N	2.47	0.46
10:D:9:ILE:O	10:D:13:ILE:HG12	2.16	0.46
13:Q:204:GLY:CA	13:Q:220:LEU:HB2	2.45	0.46
14:T:701:SER:OG	14:T:704:GLN:HG2	2.16	0.46
2:J:504:ILE:CG2	2:J:539:THR:HG21	2.46	0.46
2:J:605:LEU:HD22	2:J:621:TYR:CZ	2.50	0.46
1:H:478:LEU:HD22	1:H:494:TYR:CD2	2.51	0.46
8:C:454:LEU:HD12	8:C:456:LEU:CD2	2.46	0.46
8:C:927:THR:HG22	8:C:950:MET:HG3	1.97	0.46
8:C:1139:ARG:HH21	8:C:1182:ALA:HA	1.80	0.46
8:C:1642:PHE:HZ	9:O:611:ILE:HD12	1.81	0.46
10:D:608:THR:O	10:D:612:ILE:HG12	2.16	0.46
14:T:44:ASN:HB2	14:T:113:GLN:NE2	2.31	0.46
14:T:665:ILE:HD11	14:T:723:TRP:HH2	1.80	0.46
1:H:577:TYR:HB3	1:H:600:ALA:HB2	1.98	0.46
6:B:477:MET:HB2	6:B:486:LEU:HD11	1.97	0.46
8:C:1117:LEU:HD23	8:C:1117:LEU:H	1.81	0.46
8:C:1253:PHE:HE1	8:C:1522:ALA:HA	1.81	0.46
8:C:1257:LYS:HG3	8:C:1298:TRP:CD1	2.50	0.46
9:O:386:ILE:O	9:O:390:GLU:N	2.40	0.46
9:O:590:GLU:HG2	9:O:613:LEU:HD11	1.98	0.46
10:D:16:GLN:HG2	10:D:247:PHE:CE2	2.51	0.46
10:D:304:PHE:HE2	10:D:312:GLU:H	1.63	0.46
14:T:738:VAL:HG11	15:U:1:MET:SD	2.56	0.46
1:F:30:LEU:HB3	1:F:53:LEU:HD21	1.98	0.46
1:F:733:LEU:HD12	1:F:747:ILE:HG23	1.98	0.46
2:K:242:MET:HG2	2:K:243:GLN:NE2	2.31	0.46
2:K:481:GLU:HA	2:K:481:GLU:OE2	2.16	0.46
2:K:658:LYS:O	2:K:661:GLU:HG3	2.16	0.46
1:H:563:PHE:O	1:H:567:THR:HG23	2.16	0.46
9:O:170:TRP:CE3	9:O:174:GLN:HG2	2.51	0.46
10:P:345:TYR:CB	10:P:376:MET:CE	2.94	0.46
14:T:10:ASP:O	14:T:14:ILE:HG12	2.16	0.46
15:U:73:PHE:HZ	15:U:93:MET:HG2	1.81	0.46
1:F:568:GLN:OE1	4:E:259:ASN:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:749:LYS:HA	2:J:752:LEU:CD2	2.26	0.46
3:G:28:LEU:HD12	3:G:31:GLN:HE22	1.81	0.46
5:A:109:TYR:O	5:A:215:ARG:NH2	2.47	0.46
5:A:114:GLN:NE2	5:A:115:SER:O	2.31	0.46
5:A:167:TYR:HA	8:C:1374:LEU:HD21	1.98	0.46
8:C:791:LEU:O	8:C:795:GLU:HG2	2.16	0.46
8:C:1303:ASP:HB2	8:C:1351:ILE:HD11	1.98	0.46
10:P:235:MET:SD	10:P:258:CYS:CB	3.02	0.46
10:P:345:TYR:HB2	10:P:376:MET:CE	2.44	0.46
14:T:612:LEU:HD23	14:T:613:TYR:HE1	1.80	0.46
2:J:750:ASN:HD21	3:G:23:LEU:HD23	1.80	0.45
2:K:255:LYS:HD3	2:K:255:LYS:HA	1.64	0.45
5:A:90:TRP:CZ3	5:A:123:LEU:HD21	2.51	0.45
6:B:355:HIS:CD2	6:B:356:VAL:HG23	2.51	0.45
8:C:805:LEU:HB3	8:C:814:GLN:HG3	1.97	0.45
8:C:1016:VAL:HG22	8:C:1051:LEU:HB3	1.97	0.45
10:P:448:HIS:CD2	12:N:128:MET:HB3	2.51	0.45
10:P:509:TYR:CD2	10:P:509:TYR:C	2.89	0.45
2:J:414:PHE:CZ	2:J:434:LYS:HG3	2.50	0.45
2:J:581:GLN:HE22	2:J:585:LEU:HD21	1.80	0.45
2:K:428:ILE:HD13	2:K:457:TYR:CZ	2.51	0.45
2:K:566:ALA:CB	3:W:1:MET:CE	2.87	0.45
3:G:15:ASP:OD1	3:G:16:VAL:N	2.50	0.45
1:H:591:ASP:OD1	1:H:592:SER:N	2.49	0.45
6:B:472:SER:HG	6:B:490:HIS:CE1	2.31	0.45
8:C:524:TYR:CD1	8:C:525:PRO:HD2	2.51	0.45
8:C:530:THR:HG21	8:C:575:GLU:HB3	1.98	0.45
9:O:385:ILE:HG23	9:O:399:PHE:CE2	2.52	0.45
10:P:108:LEU:O	10:P:120:LYS:HD3	2.16	0.45
12:N:99:MET:HG3	12:N:100:LEU:N	2.32	0.45
13:Q:124:ILE:HD12	13:Q:135:ILE:HG21	1.98	0.45
14:T:103:PHE:CE2	14:T:147:ILE:CA	2.99	0.45
14:T:196:LEU:HD12	14:T:200:LEU:CD2	2.39	0.45
14:T:207:LEU:HD12	14:T:207:LEU:HA	1.78	0.45
2:J:657:LYS:O	2:J:661:GLU:HG2	2.15	0.45
2:K:466:VAL:O	2:K:470:VAL:HG23	2.15	0.45
2:K:632:ASP:OD1	2:K:632:ASP:N	2.49	0.45
5:A:139:PHE:HD2	5:A:215:ARG:HB2	1.81	0.45
6:B:112:GLY:O	6:B:116:SER:N	2.41	0.45
6:B:498:THR:HG22	6:B:510:ILE:HD12	1.97	0.45
10:P:79:PHE:CD1	10:P:115:TYR:OH	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:514:TYR:O	13:Q:538:ILE:HG13	2.16	0.45
1:F:74:TYR:CE2	1:F:78:LEU:HD11	2.52	0.45
2:J:263:PRO:HB2	2:J:295:ASN:ND2	2.31	0.45
2:J:288:ARG:NH2	2:K:493:ASP:HB2	2.32	0.45
2:J:300:TYR:CE1	2:J:364:LEU:HD22	2.52	0.45
2:K:739:PRO:HD3	1:H:599:LYS:HZ1	1.80	0.45
1:H:71:VAL:HG11	1:H:94:PHE:HD2	1.82	0.45
5:A:190:ASP:HB3	5:A:192:LEU:HG	1.99	0.45
8:C:391:LEU:O	8:C:395:LEU:HG	2.16	0.45
8:C:498:ILE:H	8:C:498:ILE:HD12	1.82	0.45
9:O:7:LEU:HD11	9:O:242:ILE:HD12	1.98	0.45
9:O:66:SER:HG	13:Q:424:TYR:HD2	1.63	0.45
10:D:18:ARG:O	10:D:22:THR:OG1	2.31	0.45
10:D:32:SER:OG	10:D:250:SER:N	2.29	0.45
10:D:201:TYR:CD1	10:D:201:TYR:C	2.89	0.45
10:D:458:VAL:HG21	10:D:468:TRP:CZ2	2.51	0.45
10:P:601:ALA:HB1	10:P:619:ALA:HB2	1.97	0.45
14:T:43:PRO:CB	14:T:137:TYR:HE1	2.30	0.45
14:T:666:GLN:OE1	14:T:667:LEU:N	2.49	0.45
1:F:89:GLN:O	1:F:93:GLU:HG2	2.17	0.45
1:F:527:ASN:OD1	2:K:514:ASN:ND2	2.29	0.45
2:K:443:THR:O	2:K:446:ILE:HG22	2.16	0.45
1:H:127:ILE:HD11	1:H:153:LEU:HD11	1.97	0.45
1:H:650:GLY:O	1:H:653:GLU:HG3	2.16	0.45
8:C:956:THR:HG23	8:C:1498:ASN:ND2	2.32	0.45
8:C:968:THR:OG1	8:C:969:GLU:N	2.49	0.45
9:O:141:MET:HE1	9:O:147:LEU:HB3	1.99	0.45
9:O:188:ARG:HD3	9:O:189:PHE:CE1	2.51	0.45
9:O:569:ILE:HD11	9:O:589:PHE:O	2.17	0.45
10:P:252:TRP:CZ3	10:P:295:MET:HG3	2.50	0.45
14:T:35:ASN:HA	14:T:38:LEU:HG	1.98	0.45
14:T:102:LEU:O	14:T:106:LEU:HG	2.16	0.45
14:T:510:ARG:NH1	14:T:573:ASN:HA	2.32	0.45
1:F:625:GLU:HG2	4:E:227:LEU:CD1	2.46	0.45
1:F:689:MET:SD	1:F:691:ARG:HG3	2.57	0.45
2:J:752:LEU:HB3	10:P:482:LEU:CG	2.47	0.45
2:K:533:THR:O	2:K:537:VAL:HG23	2.17	0.45
2:K:697:PHE:HA	2:K:700:VAL:HG12	1.99	0.45
5:A:34:LEU:H	5:A:173:ARG:NH1	2.14	0.45
6:B:109:GLU:C	6:B:109:GLU:OE2	2.55	0.45
8:C:1254:LEU:HD23	8:C:1254:LEU:HA	1.86	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:1513:LEU:HD23	8:C:1524:LEU:HD21	1.98	0.45
10:D:76:GLN:OE1	10:D:76:GLN:N	2.50	0.45
10:P:252:TRP:HZ3	10:P:295:MET:HG3	1.81	0.45
10:P:313:ASP:O	10:P:317:ASP:CG	2.55	0.45
10:P:427:ASP:C	10:P:429:LYS:H	2.20	0.45
11:I:36:ASP:OD1	11:I:88:TRP:NE1	2.49	0.45
13:Q:101:ILE:HG21	13:Q:224:LEU:HD11	1.97	0.45
13:Q:196:LYS:HE2	13:Q:211:GLU:HB3	1.98	0.45
14:T:309:MET:HE1	14:T:315:TYR:N	2.31	0.45
1:F:477:GLN:O	1:F:481:LEU:HG	2.17	0.45
1:F:751:LEU:HB3	2:J:617:LEU:HD22	1.98	0.45
1:H:36:GLN:NE2	1:H:40:GLN:OE1	2.48	0.45
1:H:112:LEU:HB3	1:H:114:GLN:HG2	1.99	0.45
5:A:4:ILE:O	5:A:8:LYS:HG2	2.15	0.45
8:C:616:ASP:N	8:C:616:ASP:OD1	2.50	0.45
8:C:972:ILE:O	8:C:972:ILE:CG2	2.65	0.45
9:O:49:ARG:NH1	13:Q:419:PHE:O	2.49	0.45
10:P:32:SER:HB3	10:P:250:SER:HB2	1.99	0.45
12:N:121:PRO:HG2	12:N:124:ILE:HB	1.99	0.45
15:U:100:LEU:CD2	15:U:111:VAL:HA	2.47	0.45
2:K:375:PHE:O	2:K:379:ARG:HG3	2.17	0.45
2:K:444:GLU:O	2:K:448:LYS:HG3	2.17	0.45
2:K:692:ILE:HA	2:K:695:LYS:HG2	1.99	0.45
1:H:103:TYR:CD2	1:H:151:PRO:HG3	2.51	0.45
1:H:575:TYR:HA	1:H:578:THR:HG22	1.98	0.45
9:O:96:LEU:HA	9:O:99:MET:HB2	1.99	0.45
9:O:254:GLN:HE21	9:O:284:PHE:HE1	1.65	0.45
9:O:298:PHE:O	9:O:301:ILE:HG22	2.17	0.45
10:D:301:LEU:HB3	10:D:334:TYR:CE2	2.52	0.45
10:P:142:THR:HG22	10:P:144:LYS:H	1.81	0.45
11:I:157:ARG:O	11:I:157:ARG:HG2	2.16	0.45
13:Q:77:PHE:CD2	14:T:333:PRO:HD2	2.52	0.45
2:J:486:CYS:HB3	2:J:503:TYR:CD1	2.52	0.45
2:K:479:PHE:HA	2:K:482:CYS:SG	2.57	0.45
2:K:562:PRO:HB3	6:B:215:ALA:HB3	1.99	0.45
1:H:591:ASP:O	1:H:594:LYS:HG2	2.17	0.45
5:A:156:TYR:CD1	5:A:166:PHE:HA	2.52	0.45
8:C:760:ASP:OD1	8:C:761:TYR:CD2	2.70	0.45
8:C:1086:MET:HG2	8:C:1098:LEU:HD11	1.99	0.45
9:O:513:ILE:HG12	9:O:548:LEU:HD11	1.97	0.45
14:T:102:LEU:HG	14:T:106:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:517:LEU:O	14:T:607:LYS:NZ	2.47	0.45
1:F:197:MET:HE1	1:F:605:PRO:HG2	1.99	0.45
4:E:89:LYS:O	4:E:135:ARG:NH2	2.50	0.45
8:C:1043:ASP:N	8:C:1043:ASP:OD1	2.48	0.45
8:C:1595:ASP:OD1	8:C:1595:ASP:N	2.49	0.45
9:O:115:MET:HG2	9:O:158:TYR:CD2	2.52	0.45
9:O:320:ASP:OD1	10:D:486:TYR:OH	2.20	0.45
10:P:488:PHE:HB3	10:P:505:LEU:HD12	1.98	0.45
10:P:519:ILE:N	10:P:519:ILE:HD13	2.32	0.45
14:T:44:ASN:H	14:T:113:GLN:NE2	2.15	0.45
1:F:99:LEU:HD23	1:F:143:LEU:HA	1.98	0.44
1:F:171:LYS:HD3	4:E:176:LEU:HD11	1.99	0.44
2:K:523:LEU:HD21	2:K:532:ILE:HG22	1.98	0.44
1:H:489:ASP:OD1	1:H:490:MET:N	2.51	0.44
6:B:190:ARG:CD	11:I:97:TRP:CE3	2.98	0.44
6:B:486:LEU:HB3	6:B:500:TRP:HB3	1.99	0.44
8:C:1373:ASN:O	8:C:1377:ARG:N	2.42	0.44
9:O:519:ALA:HB1	9:O:524:ASP:HB3	1.99	0.44
10:D:81:LEU:HD12	10:D:85:GLU:HG3	1.98	0.44
10:D:228:GLU:OE1	10:D:230:ASN:HB2	2.17	0.44
10:D:231:ILE:H	10:D:231:ILE:HD12	1.82	0.44
13:Q:105:TYR:OH	13:Q:227:LYS:CA	2.65	0.44
1:F:617:SER:HA	1:F:620:LYS:HD3	1.99	0.44
2:K:231:GLU:O	2:K:235:LEU:HG	2.17	0.44
2:K:626:TYR:CE1	2:K:630:PRO:HA	2.52	0.44
1:H:686:LEU:HD22	1:H:691:ARG:HG2	1.99	0.44
5:A:141:SER:HB2	5:A:144:ALA:HB3	1.99	0.44
8:C:1072:SER:HB3	8:C:1073:PRO:HD3	1.99	0.44
9:O:381:ILE:O	9:O:385:ILE:HG13	2.17	0.44
10:D:29:LEU:HD21	10:D:216:LEU:HD11	1.99	0.44
10:D:301:LEU:HD11	10:D:321:LEU:HD12	1.99	0.44
11:I:145:ILE:HD12	11:I:145:ILE:HA	1.89	0.44
14:T:38:LEU:HD12	14:T:39:THR:HG23	1.98	0.44
14:T:490:ASN:HD22	14:T:539:LYS:HE3	1.83	0.44
1:F:645:ILE:HG21	1:F:668:ALA:HB2	2.00	0.44
2:J:485:LEU:O	2:J:489:VAL:HG23	2.18	0.44
8:C:463:GLN:CD	8:C:463:GLN:H	2.21	0.44
8:C:1364:PRO:HB3	14:T:460:TYR:CE1	2.53	0.44
14:T:492:PHE:CZ	14:T:496:LEU:HD11	2.52	0.44
2:J:642:MET:CE	2:J:646:LYS:HE2	2.47	0.44
1:H:611:TYR:CE2	1:H:637:ILE:CD1	3.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:257:ALA:HB2	6:B:539:LEU:HD11	1.99	0.44
6:B:370:ASP:O	6:B:376:PRO:HA	2.17	0.44
6:B:490:HIS:NE2	6:B:498:THR:OG1	2.45	0.44
8:C:655:LEU:HD23	8:C:655:LEU:HA	1.84	0.44
8:C:707:LEU:HD12	8:C:749:TYR:HD1	1.82	0.44
8:C:925:THR:HB	8:C:953:ARG:HH12	1.82	0.44
8:C:1225:LEU:HA	8:C:1228:VAL:HG12	2.00	0.44
9:O:363:GLU:C	9:O:363:GLU:OE2	2.55	0.44
10:D:553:GLN:HG3	10:D:557:LYS:NZ	2.33	0.44
10:P:486:TYR:CZ	10:P:490:LYS:HD2	2.52	0.44
2:K:263:PRO:HB3	2:K:291:LEU:HD23	2.00	0.44
2:K:390:ILE:O	2:K:390:ILE:CG2	2.66	0.44
4:E:170:LYS:O	4:E:174:GLU:HG2	2.17	0.44
5:A:20:LYS:HA	8:C:1368:TYR:OH	2.17	0.44
5:A:154:LYS:HD3	5:A:166:PHE:HE2	1.83	0.44
8:C:424:TRP:HE1	8:C:449:ILE:HG23	1.81	0.44
8:C:1167:TYR:HD2	8:C:1167:TYR:C	2.21	0.44
10:D:331:LEU:HD12	10:D:331:LEU:HA	1.79	0.44
10:P:198:LEU:HD13	10:P:198:LEU:HA	1.86	0.44
10:P:304:PHE:CZ	10:P:311:LEU:HA	2.52	0.44
11:I:34:LEU:HD11	11:I:37:GLU:OE2	2.16	0.44
14:T:140:PHE:HB3	14:T:141:PRO:HD3	2.00	0.44
1:F:453:PHE:CE1	4:E:96:PHE:CE1	3.06	0.44
2:J:541:TYR:CD2	2:J:549:GLU:OE1	2.71	0.44
2:K:262:ASP:OD1	2:K:262:ASP:N	2.49	0.44
6:B:482:ASN:HB2	6:B:545:PHE:CE2	2.51	0.44
10:P:509:TYR:CE1	10:P:517:GLU:OE1	2.71	0.44
13:Q:447:ILE:HG23	13:Q:448:ILE:H	1.82	0.44
14:T:163:ARG:HG2	14:T:199:TRP:CZ2	2.53	0.44
1:F:532:LEU:HB3	1:F:542:THR:HG22	1.99	0.44
2:J:356:LYS:HE3	2:J:357:MET:H	1.82	0.44
2:J:399:LEU:HD21	2:J:405:LEU:HD12	2.00	0.44
5:A:26:HIS:CE1	5:A:28:LYS:HB2	2.53	0.44
6:B:222:PHE:C	6:B:222:PHE:HD1	2.20	0.44
6:B:237:LEU:HD13	8:C:1110:LEU:HD21	1.99	0.44
6:B:257:ALA:HB1	6:B:281:LEU:HD21	2.00	0.44
8:C:1414:HIS:HE1	8:C:1498:ASN:OD1	2.01	0.44
9:O:27:HIS:HE2	13:Q:288:LEU:HD11	1.83	0.44
10:P:16:GLN:NE2	10:P:247:PHE:CE2	2.86	0.44
10:P:187:ILE:HA	10:P:190:ILE:HD12	1.99	0.44
13:Q:19:PHE:CZ	13:Q:30:TYR:HB2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:103:LEU:HD11	13:Q:230:VAL:HG11	1.99	0.44
1:F:43:TYR:HE2	1:F:80:LEU:HD13	1.82	0.44
2:K:711:HIS:HB3	2:K:734:SER:HB2	1.99	0.44
1:H:93:GLU:CD	1:H:94:PHE:CE2	2.91	0.44
1:H:532:LEU:HB3	1:H:542:THR:HG22	2.00	0.44
6:B:365:ARG:HE	6:B:382:GLU:CD	2.21	0.44
8:C:1344:ALA:HB3	8:C:1515:THR:HG21	2.00	0.44
9:O:377:THR:O	9:O:381:ILE:HG12	2.18	0.44
10:D:26:ARG:O	10:D:89:TYR:OH	2.31	0.44
14:T:44:ASN:N	14:T:113:GLN:NE2	2.66	0.44
14:T:265:HIS:ND1	14:T:266:GLU:N	2.66	0.44
14:T:389:LEU:HD12	14:T:393:GLU:OE1	2.17	0.44
6:B:363:ASP:OD1	6:B:363:ASP:N	2.50	0.44
8:C:415:HIS:CE1	8:C:417:PRO:HD2	2.53	0.44
8:C:1065:TRP:CD1	8:C:1065:TRP:C	2.91	0.44
8:C:1514:ASN:HA	8:C:1552:ARG:NH2	2.33	0.44
9:O:131:LYS:NZ	13:Q:296:GLU:OE1	2.46	0.44
10:P:481:HIS:HB3	10:P:508:CYS:SG	2.58	0.44
14:T:342:LEU:HD23	14:T:343:ARG:HD3	1.99	0.44
1:F:495:PHE:CE1	1:F:512:PHE:CD1	3.01	0.43
2:J:571:PHE:O	2:J:574:THR:OG1	2.29	0.43
2:K:457:TYR:C	2:K:458:LYS:HG2	2.38	0.43
1:H:84:TYR:HB3	1:H:112:LEU:HD21	1.99	0.43
1:H:694:VAL:O	1:H:698:THR:HG23	2.18	0.43
6:B:287:LEU:HD12	6:B:288:THR:N	2.33	0.43
8:C:34:ILE:HG13	8:C:35:THR:OG1	2.18	0.43
8:C:1125:THR:O	8:C:1129:ILE:HG22	2.17	0.43
8:C:1589:THR:HB	8:C:1590:PRO:HD3	1.98	0.43
10:P:23:GLU:O	10:P:27:TRP:HD1	2.01	0.43
10:P:439:HIS:CE1	10:P:454:TYR:HH	2.35	0.43
1:F:40:GLN:OE1	1:H:151:PRO:HA	2.17	0.43
2:J:255:LYS:HD3	2:K:432:LEU:CD1	2.42	0.43
2:J:295:ASN:N	2:J:295:ASN:OD1	2.50	0.43
2:J:513:LYS:HB2	2:J:513:LYS:HE3	1.87	0.43
1:H:72:TYR:OH	1:H:148:VAL:O	2.30	0.43
6:B:245:ARG:HH11	6:B:247:ILE:HD11	1.81	0.43
6:B:297:HIS:O	6:B:334:ARG:NH2	2.51	0.43
8:C:799:SER:O	8:C:799:SER:OG	2.34	0.43
8:C:1582:GLU:OE1	8:C:1584:ILE:N	2.51	0.43
10:P:139:ILE:HD11	12:N:119:PHE:CE1	2.48	0.43
14:T:682:GLU:OE2	14:T:715:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:740:ASP:OD2	1:F:740:ASP:C	2.57	0.43
2:J:658:LYS:O	2:J:661:GLU:HG3	2.18	0.43
2:K:303:GLY:O	2:K:307:VAL:HG23	2.18	0.43
2:K:486:CYS:SG	2:K:503:TYR:HB2	2.58	0.43
1:H:721:ARG:HG2	1:H:753:LYS:NZ	2.33	0.43
6:B:222:PHE:CD1	6:B:222:PHE:O	2.71	0.43
6:B:271:TRP:CZ2	6:B:525:ASN:HB3	2.53	0.43
6:B:403:GLY:HA3	6:B:433:MET:CE	2.47	0.43
8:C:64:ARG:NH2	9:O:352:PHE:O	2.51	0.43
8:C:644:CYS:HB2	8:C:647:GLU:OE2	2.17	0.43
8:C:760:ASP:O	8:C:802:ARG:NH1	2.48	0.43
8:C:1596:PHE:HB3	8:C:1622:ALA:HB3	2.00	0.43
2:J:306:PHE:HB3	2:J:315:ALA:HB2	2.01	0.43
2:K:566:ALA:HA	3:W:1:MET:HE3	2.00	0.43
6:B:441:GLY:O	6:B:459:VAL:N	2.43	0.43
8:C:468:HIS:CE1	8:C:470:LEU:HB3	2.53	0.43
8:C:606:GLU:OE1	8:C:606:GLU:N	2.48	0.43
8:C:1260:ASN:OD1	8:C:1263:ILE:HG12	2.19	0.43
8:C:1581:GLU:HG2	8:C:1582:GLU:H	1.84	0.43
10:D:108:LEU:HD23	10:D:108:LEU:HA	1.85	0.43
10:D:417:ILE:CD1	10:D:437:MET:HG3	2.49	0.43
14:T:103:PHE:CZ	14:T:147:ILE:CA	2.91	0.43
14:T:591:CYS:SG	14:T:606:PRO:HD2	2.58	0.43
1:F:721:ARG:NH2	1:F:750:GLU:OE1	2.51	0.43
2:J:538:ALA:HB2	2:J:553:TYR:HB3	2.01	0.43
2:K:435:ILE:HA	2:K:446:ILE:HD11	2.00	0.43
2:K:653:LYS:HG3	2:K:684:TYR:CE1	2.50	0.43
5:A:128:SER:CB	8:C:1235:GLU:HG3	2.49	0.43
8:C:722:ILE:CD1	8:C:726:ARG:HD2	2.48	0.43
8:C:741:ARG:NH2	8:C:775:GLU:OE1	2.51	0.43
8:C:774:ASP:HB2	9:O:570:ASN:ND2	2.33	0.43
8:C:861:TYR:CE2	13:Q:135:ILE:HB	2.54	0.43
8:C:1086:MET:HE3	8:C:1086:MET:HB2	1.79	0.43
10:P:137:GLU:O	10:P:141:THR:HG22	2.19	0.43
11:I:99:LEU:HD22	11:I:155:TYR:CE1	2.53	0.43
12:N:128:MET:HA	12:N:131:LEU:HD12	2.00	0.43
1:F:686:LEU:HG	1:F:691:ARG:HB2	2.00	0.43
2:K:734:SER:HA	2:K:737:LEU:HD13	2.00	0.43
1:H:459:PHE:HD1	1:H:478:LEU:CD1	2.29	0.43
1:H:533:MET:CE	4:E:252:LYS:HD2	2.48	0.43
6:B:271:TRP:HB2	6:B:522:THR:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:271:TRP:N	6:B:522:THR:HG21	2.33	0.43
8:C:974:THR:HG23	9:O:378:LEU:HD12	1.99	0.43
9:O:42:LEU:O	9:O:46:SER:OG	2.28	0.43
9:O:127:TYR:O	9:O:130:MET:HB2	2.18	0.43
9:O:173:LEU:O	9:O:177:LYS:N	2.43	0.43
9:O:418:ASP:O	9:O:420:ASN:N	2.50	0.43
10:D:304:PHE:HE2	10:D:312:GLU:N	2.17	0.43
13:Q:95:LYS:HB3	13:Q:95:LYS:HE2	1.78	0.43
14:T:38:LEU:HB2	14:T:109:PHE:CZ	2.54	0.43
14:T:309:MET:HB3	14:T:315:TYR:HE1	1.84	0.43
15:U:82:LEU:HD11	15:U:98:PHE:CD2	2.53	0.43
1:F:123:LEU:HA	1:F:126:ILE:CG2	2.49	0.43
2:J:526:THR:HG23	2:K:280:VAL:HG21	2.01	0.43
2:K:229:ALA:N	2:K:231:GLU:OE1	2.52	0.43
2:K:658:LYS:HB2	2:K:658:LYS:HE3	1.81	0.43
2:K:736:TYR:HA	1:H:599:LYS:HE2	1.96	0.43
1:H:90:ILE:HD13	1:H:90:ILE:HA	1.91	0.43
1:H:485:ILE:HG23	1:H:487:ASN:HB2	2.01	0.43
6:B:445:THR:OG1	6:B:455:LYS:HB2	2.19	0.43
8:C:80:PHE:CD2	8:C:158:PRO:HD3	2.54	0.43
8:C:1593:LEU:HD21	8:C:1596:PHE:HE1	1.82	0.43
9:O:101:TYR:O	9:O:105:ILE:HG12	2.19	0.43
9:O:391:VAL:HG12	9:O:392:HIS:CD2	2.54	0.43
9:O:500:SER:O	9:O:501:LEU:HG	2.18	0.43
10:P:193:GLU:C	10:P:193:GLU:OE1	2.56	0.43
13:Q:146:ARG:NH1	13:Q:177:ASN:HB3	2.33	0.43
13:Q:423:LEU:HG	13:Q:424:TYR:CD1	2.54	0.43
13:Q:489:PHE:HE1	13:Q:541:LEU:HD11	1.83	0.43
13:Q:504:ILE:HG12	13:Q:571:PHE:CG	2.54	0.43
1:F:169:HIS:ND1	1:F:172:GLU:OE1	2.51	0.43
2:K:364:LEU:HD23	2:K:364:LEU:O	2.18	0.43
1:H:751:LEU:O	1:H:755:HIS:ND1	2.37	0.43
6:B:59:PRO:HB3	6:B:204:TYR:CE1	2.53	0.43
6:B:214:ALA:H	6:B:217:LEU:HD13	1.84	0.43
8:C:1352:ARG:NH1	8:C:1403:ASP:OD2	2.51	0.43
8:C:1398:MET:HA	8:C:1398:MET:HE2	2.00	0.43
8:C:1642:PHE:CD2	8:C:1694:LEU:HD21	2.53	0.43
9:O:347:THR:HG23	9:O:501:LEU:HB3	2.00	0.43
9:O:636:VAL:O	9:O:640:VAL:HG23	2.18	0.43
10:D:121:LEU:HD21	10:D:193:GLU:HG2	2.00	0.43
10:D:130:LYS:O	10:D:134:GLU:OE1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:P:519:ILE:HD11	10:P:545:LEU:CD2	2.40	0.43
13:Q:55:ASP:OD2	13:Q:58:THR:OG1	2.37	0.43
13:Q:281:GLU:OE1	13:Q:295:LEU:HD13	2.17	0.43
14:T:209:SER:O	14:T:213:ILE:HG12	2.19	0.43
1:F:563:PHE:CE2	1:F:579:LEU:HB3	2.53	0.43
2:J:238:PHE:C	2:J:238:PHE:CD1	2.92	0.43
2:J:545:ASP:O	2:J:545:ASP:OD1	2.37	0.43
1:H:611:TYR:CD2	1:H:637:ILE:HD13	2.54	0.43
1:H:718:GLN:O	1:H:722:ILE:HG12	2.19	0.43
5:A:20:LYS:HG2	8:C:1368:TYR:CE2	2.54	0.43
6:B:71:SER:O	8:C:1068:TYR:HE2	2.02	0.43
6:B:190:ARG:HD3	11:I:97:TRP:HE3	1.81	0.43
8:C:54:VAL:HG11	8:C:87:PHE:HZ	1.84	0.43
8:C:806:GLU:H	8:C:806:GLU:CD	2.18	0.43
10:D:106:PHE:HB2	10:P:361:TYR:HD2	1.82	0.43
10:D:554:GLU:HA	10:D:557:LYS:HZ2	1.84	0.43
14:T:177:LEU:HD13	14:T:200:LEU:HD21	2.01	0.43
14:T:612:LEU:HD23	14:T:613:TYR:CE1	2.54	0.43
1:F:435:GLU:OE1	1:F:435:GLU:N	2.44	0.43
2:J:292:ASP:HA	2:J:298:CYS:SG	2.59	0.43
2:J:699:CYS:O	2:J:702:GLU:HG3	2.19	0.43
1:H:47:GLU:OE1	1:H:78:LEU:CD2	2.66	0.43
4:E:250:ARG:HH11	4:E:250:ARG:C	2.21	0.43
8:C:404:ARG:HA	8:C:409:GLU:HA	2.01	0.43
8:C:662:MET:HE2	8:C:664:TRP:NE1	2.29	0.43
8:C:903:GLY:O	8:C:907:SER:HB3	2.19	0.43
9:O:46:SER:OG	9:O:47:PRO:HD3	2.18	0.43
11:I:81:GLU:O	11:I:84:SER:OG	2.32	0.43
14:T:110:TYR:O	14:T:114:VAL:HG12	2.18	0.43
14:T:403:ASP:OD2	14:T:406:ALA:N	2.46	0.43
2:K:486:CYS:HA	2:K:489:VAL:CG1	2.48	0.42
2:K:718:TYR:HB3	2:K:727:ALA:HB2	2.00	0.42
1:H:640:VAL:HG13	1:H:671:LEU:HD21	2.01	0.42
5:A:65:LEU:HA	5:A:68:MET:HG3	2.01	0.42
5:A:164:ALA:HB2	5:A:197:PHE:CE2	2.54	0.42
8:C:636:GLU:OE1	8:C:636:GLU:HA	2.19	0.42
8:C:763:LEU:HB3	8:C:804:ASN:OD1	2.19	0.42
8:C:987:VAL:HG22	8:C:993:LYS:HG3	2.01	0.42
10:D:11:HIS:NE2	10:D:15:ILE:HD11	2.34	0.42
10:D:530:GLN:NE2	10:D:534:GLN:HE22	2.17	0.42
10:P:294:ILE:HD11	10:P:325:PHE:CZ	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:318:ALA:O	13:Q:322:THR:OG1	2.27	0.42
1:F:594:LYS:O	1:F:598:ARG:HG2	2.19	0.42
1:F:731:LYS:O	1:F:735:VAL:HG23	2.19	0.42
2:J:304:LEU:HA	2:J:307:VAL:HG12	2.00	0.42
2:J:536:SER:O	2:J:539:THR:HG22	2.19	0.42
2:J:581:GLN:NE2	2:J:585:LEU:HD21	2.34	0.42
2:K:242:MET:HG2	2:K:243:GLN:CD	2.39	0.42
2:K:390:ILE:O	2:K:390:ILE:HG22	2.17	0.42
1:H:43:TYR:HB3	1:H:81:ASN:OD1	2.18	0.42
1:H:92:LYS:HD3	1:H:105:PHE:CE1	2.53	0.42
4:E:165:VAL:HB	4:E:168:CYS:SG	2.60	0.42
4:E:255:ARG:CZ	4:E:256:HIS:N	2.82	0.42
5:A:10:LEU:HD21	8:C:1309:MET:SD	2.59	0.42
5:A:153:VAL:HB	5:A:170:LEU:HD22	2.01	0.42
6:B:433:MET:N	6:B:477:MET:HE1	2.34	0.42
8:C:867:ILE:CD1	9:O:453:ILE:HD11	2.49	0.42
8:C:1007:VAL:O	8:C:1011:GLN:HG3	2.19	0.42
8:C:1122:LYS:HD2	8:C:1540:GLU:OE1	2.19	0.42
8:C:1321:LEU:H	8:C:1321:LEU:HD12	1.85	0.42
9:O:209:SER:HA	9:O:213:GLN:HG3	2.01	0.42
10:P:128:TRP:CZ3	10:P:187:ILE:HD13	2.54	0.42
10:P:198:LEU:HD11	10:P:214:LEU:HD11	2.01	0.42
13:Q:338:ILE:HD13	13:Q:338:ILE:HA	1.89	0.42
13:Q:368:VAL:HB	13:Q:463:MET:CE	2.50	0.42
13:Q:542:LYS:NZ	13:Q:547:GLY:HA3	2.34	0.42
13:Q:620:GLU:O	13:Q:624:ASN:HB2	2.19	0.42
14:T:411:VAL:HG12	14:T:415:HIS:CD2	2.53	0.42
1:F:442:LEU:HD13	1:F:445:ARG:NH2	2.33	0.42
2:J:649:PHE:HB3	2:J:687:LEU:HD13	2.02	0.42
2:K:257:TYR:CE1	2:K:266:ALA:HB2	2.54	0.42
2:K:297:LEU:HA	2:K:357:MET:HE2	1.99	0.42
5:A:90:TRP:HH2	5:A:217:ILE:HG12	1.84	0.42
8:C:213:LEU:HD13	8:C:380:LEU:CD2	2.46	0.42
8:C:1016:VAL:HG11	8:C:1543:HIS:CG	2.54	0.42
8:C:1096:SER:O	8:C:1100:LYS:HG3	2.18	0.42
10:D:187:ILE:HD13	10:D:187:ILE:HA	1.89	0.42
10:P:9:ILE:CG1	10:P:292:PHE:HZ	2.27	0.42
13:Q:300:CYS:SG	13:Q:301:ASN:N	2.92	0.42
1:F:28:ILE:HD13	1:F:28:ILE:HA	1.93	0.42
1:F:522:LYS:HZ2	1:F:553:GLN:HA	1.85	0.42
1:F:748:ILE:HD13	1:F:748:ILE:HA	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:754:LEU:CD2	3:G:27:LYS:HD3	2.50	0.42
1:H:691:ARG:HD3	1:H:693:ASN:OD1	2.20	0.42
6:B:270:ASP:OD1	6:B:310:TRP:CD1	2.73	0.42
8:C:662:MET:HE2	8:C:664:TRP:CZ2	2.54	0.42
9:O:133:ARG:HA	9:O:133:ARG:HD2	1.75	0.42
9:O:523:ASP:N	9:O:523:ASP:OD1	2.52	0.42
10:P:15:ILE:HD11	10:P:76:GLN:HG3	2.02	0.42
10:P:110:ASP:OD1	10:P:110:ASP:O	2.38	0.42
13:Q:249:HIS:HB3	13:Q:325:ILE:HD11	2.02	0.42
14:T:181:LEU:CD1	14:T:196:LEU:CD2	2.80	0.42
14:T:196:LEU:CD1	14:T:200:LEU:CD2	2.96	0.42
1:F:738:ASN:ND2	2:J:590:THR:OG1	2.44	0.42
2:J:398:MET:SD	2:J:402:LYS:HE2	2.60	0.42
2:K:724:LEU:HD21	2:K:754:LEU:HG	2.01	0.42
1:H:91:SER:OG	1:H:105:PHE:HB2	2.18	0.42
1:H:92:LYS:HD3	1:H:105:PHE:HE1	1.84	0.42
4:E:231:GLU:O	4:E:235:VAL:HG23	2.19	0.42
5:A:138:ILE:HD11	5:A:214:LEU:HD11	2.02	0.42
8:C:32:ILE:HG23	8:C:33:ASN:H	1.84	0.42
8:C:707:LEU:HD13	8:C:707:LEU:HA	1.83	0.42
8:C:752:VAL:HG13	8:C:753:HIS:HD2	1.84	0.42
9:O:127:TYR:CE1	13:Q:291:ILE:HB	2.54	0.42
13:Q:383:SER:O	13:Q:387:LEU:CD2	2.61	0.42
14:T:389:LEU:CD1	14:T:390:PRO:HD2	2.50	0.42
1:F:492:LEU:O	1:F:496:ASN:CB	2.66	0.42
2:K:264:ASP:OD1	2:K:265:ASP:N	2.53	0.42
2:K:607:MET:HE1	3:W:6:PRO:HA	2.01	0.42
2:K:721:THR:HG22	2:K:722:LYS:N	2.33	0.42
1:H:514:THR:O	1:H:518:HIS:ND1	2.52	0.42
1:H:665:TYR:HB3	1:H:682:MET:CE	2.49	0.42
5:A:148:TYR:HD2	5:A:213:HIS:CD2	2.38	0.42
5:A:162:SER:O	8:C:1534:THR:OG1	2.38	0.42
6:B:55:ASP:HB2	10:D:343:LEU:HD21	2.02	0.42
8:C:956:THR:HG23	8:C:1498:ASN:HD22	1.84	0.42
9:O:167:GLU:O	9:O:171:ILE:HD12	2.19	0.42
10:D:198:LEU:HD21	10:D:218:TYR:CZ	2.55	0.42
10:D:469:PHE:HZ	10:D:504:VAL:HG21	1.85	0.42
10:P:111:VAL:HG11	10:P:116:LEU:HB3	2.01	0.42
13:Q:12:TYR:HB2	13:Q:574:ASN:HB2	2.02	0.42
14:T:407:LEU:O	14:T:410:LEU:HG	2.20	0.42
15:U:101:GLN:HB3	15:U:104:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:191:TYR:HA	1:F:194:ILE:HG22	2.01	0.42
1:F:202:ASP:OD1	1:F:202:ASP:N	2.41	0.42
2:J:462:ASN:O	2:J:466:VAL:HG13	2.20	0.42
2:J:693:ALA:O	2:J:697:PHE:HD1	2.02	0.42
2:J:716:TYR:CZ	3:G:19:LEU:HD13	2.54	0.42
2:K:246:TYR:CZ	2:K:275:ASN:HB3	2.55	0.42
2:K:653:LYS:O	2:K:657:LYS:HG3	2.20	0.42
6:B:268:LEU:O	6:B:308:LEU:HB2	2.20	0.42
8:C:561:LEU:HD23	8:C:561:LEU:HA	1.87	0.42
8:C:1326:LEU:N	8:C:1327:PRO:HD2	2.35	0.42
10:D:96:PHE:C	10:D:96:PHE:CD1	2.93	0.42
14:T:580:MET:HA	14:T:583:ASP:HB2	2.02	0.42
1:F:457:ARG:HD3	1:F:457:ARG:HA	1.73	0.42
2:J:397:GLU:HG3	2:K:247:ARG:NE	2.35	0.42
2:K:254:ASP:OD2	2:K:255:LYS:NZ	2.52	0.42
2:K:736:TYR:CA	1:H:599:LYS:HE2	2.48	0.42
1:H:532:LEU:HD12	1:H:542:THR:HG22	2.02	0.42
8:C:1174:SER:O	8:C:1178:ILE:HG13	2.19	0.42
8:C:1557:LYS:HD3	8:C:1631:ILE:HD12	2.02	0.42
9:O:9:ILE:HD11	9:O:247:LEU:HD23	2.00	0.42
10:P:205:ILE:HD11	10:P:244:CYS:HB2	2.02	0.42
10:P:404:ALA:HB1	10:P:420:PHE:CD2	2.55	0.42
13:Q:104:ARG:CD	13:Q:156:ASN:HD22	2.32	0.42
13:Q:131:LYS:HD3	13:Q:131:LYS:N	2.35	0.42
2:K:705:ASP:OD1	2:K:706:LYS:N	2.52	0.42
1:H:165:MET:HG2	1:H:165:MET:H	1.66	0.42
6:B:197:ARG:HD3	10:D:377:GLN:HE22	1.85	0.42
6:B:412:TYR:HD1	6:B:419:PRO:HA	1.85	0.42
8:C:997:LYS:HG2	8:C:1000:GLU:OE1	2.20	0.42
8:C:1082:LEU:HD11	8:C:1086:MET:HE1	2.01	0.42
8:C:1135:TYR:HB3	8:C:1178:ILE:HG23	2.01	0.42
8:C:1574:VAL:HG23	8:C:1576:GLU:H	1.85	0.42
9:O:10:THR:OG1	9:O:241:LEU:HD13	2.20	0.42
10:D:566:GLU:HA	10:D:572:ILE:HG22	2.00	0.42
10:P:91:LEU:HD21	10:P:107:PHE:HD2	1.84	0.42
13:Q:124:ILE:O	13:Q:245:TYR:OH	2.38	0.42
15:U:41:CYS:HB3	15:U:44:CYS:SG	2.60	0.42
1:F:187:LEU:HD13	1:H:42:ASN:ND2	2.29	0.42
5:A:91:LYS:HD3	5:A:91:LYS:HA	1.80	0.42
8:C:741:ARG:CZ	8:C:775:GLU:OE2	2.68	0.42
8:C:1541:LEU:CD1	8:C:1544:PHE:CD2	2.98	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:343:LEU:HD21	9:O:381:ILE:HD13	2.01	0.42
10:D:299:PHE:O	10:D:303:VAL:HG12	2.20	0.42
10:P:186:ASN:O	10:P:190:ILE:HG13	2.20	0.42
10:P:218:TYR:HE1	10:P:221:ARG:HH11	1.67	0.42
10:P:252:TRP:CZ3	10:P:295:MET:HE2	2.53	0.42
10:P:483:TYR:HD1	10:P:483:TYR:HA	1.76	0.42
14:T:37:LEU:HD21	14:T:62:ILE:CD1	2.50	0.42
1:F:187:LEU:HG	1:F:190:SER:OG	2.20	0.41
2:K:617:LEU:HD23	2:K:621:TYR:OH	2.19	0.41
3:W:17:THR:HA	3:W:20:ILE:HG22	2.01	0.41
1:H:473:TRP:CZ2	1:H:477:GLN:HG3	2.54	0.41
1:H:490:MET:HA	1:H:493:LYS:HZ1	1.84	0.41
1:H:591:ASP:HA	1:H:594:LYS:HG2	2.01	0.41
6:B:289:ASP:HB2	6:B:292:THR:OG1	2.20	0.41
6:B:298:LEU:HD23	6:B:334:ARG:HG2	2.01	0.41
6:B:406:ASP:OD1	6:B:406:ASP:N	2.52	0.41
8:C:819:ILE:O	8:C:823:ILE:HG12	2.20	0.41
8:C:952:LEU:O	8:C:956:THR:HG22	2.19	0.41
9:O:107:GLY:HA3	10:P:384:TYR:CE1	2.54	0.41
10:D:321:LEU:HD23	10:D:321:LEU:HA	1.91	0.41
13:Q:51:ASN:ND2	13:Q:95:LYS:HG3	2.35	0.41
1:F:664:TYR:OH	4:E:212:LEU:HD23	2.20	0.41
1:F:675:SER:OG	1:F:678:SER:OG	2.20	0.41
1:F:699:PHE:HB3	1:F:716:LEU:CD2	2.51	0.41
2:J:264:ASP:OD1	2:J:265:ASP:N	2.53	0.41
2:K:380:ASP:OD2	2:K:380:ASP:C	2.58	0.41
2:K:600:LEU:HD12	2:K:600:LEU:HA	1.83	0.41
2:K:682:HIS:O	2:K:685:ARG:HG2	2.20	0.41
2:K:710:ILE:HD13	2:K:710:ILE:HA	1.94	0.41
1:H:43:TYR:CZ	1:H:80:LEU:HD13	2.55	0.41
1:H:478:LEU:HD22	1:H:494:TYR:HD2	1.84	0.41
5:A:129:LYS:HB3	5:A:131:MET:CE	2.51	0.41
6:B:478:VAL:HB	6:B:487:VAL:HG22	2.02	0.41
8:C:869:LYS:HE2	8:C:869:LYS:HB3	1.86	0.41
8:C:1269:VAL:HG11	8:C:1286:LEU:HD22	2.01	0.41
8:C:1735:GLN:NE2	14:T:5:ILE:HG13	2.35	0.41
9:O:481:GLY:CA	9:O:624:LEU:HD22	2.50	0.41
9:O:624:LEU:HD21	9:O:662:PHE:HE1	1.84	0.41
10:D:499:ARG:NH1	10:D:534:GLN:OE1	2.53	0.41
13:Q:92:LYS:O	13:Q:166:ASN:ND2	2.48	0.41
14:T:302:LEU:HD12	14:T:354:LEU:HB2	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:344:TYR:O	14:T:348:ILE:HG12	2.19	0.41
15:U:100:LEU:HD22	15:U:111:VAL:HA	2.02	0.41
1:F:539:LYS:HA	1:F:539:LYS:HD2	1.84	0.41
1:F:714:TYR:CE1	1:F:747:ILE:HG12	2.50	0.41
2:J:397:GLU:HG3	2:K:247:ARG:HE	1.85	0.41
2:J:516:LEU:HD23	2:J:540:TYR:HA	2.02	0.41
2:J:736:TYR:C	2:J:736:TYR:CD2	2.93	0.41
2:K:738:LYS:NZ	2:K:740:ASN:O	2.50	0.41
1:H:452:SER:HA	1:H:481:LEU:HD11	2.02	0.41
1:H:508:ASP:OD1	1:H:508:ASP:N	2.51	0.41
1:H:611:TYR:CE2	1:H:637:ILE:HD13	2.55	0.41
1:H:635:ARG:HB2	1:H:644:LEU:HD21	2.02	0.41
6:B:97:GLN:O	6:B:101:THR:HG22	2.20	0.41
6:B:252:TYR:CZ	6:B:543:LYS:HB2	2.55	0.41
6:B:473:GLN:O	6:B:490:HIS:ND1	2.53	0.41
8:C:722:ILE:O	8:C:722:ILE:CG1	2.64	0.41
8:C:806:GLU:OE1	8:C:806:GLU:N	2.29	0.41
9:O:78:LEU:HB2	9:O:176:PHE:CZ	2.55	0.41
10:D:88:LEU:HD23	10:D:88:LEU:HA	1.88	0.41
10:D:352:PHE:HB3	10:D:369:TYR:HD2	1.86	0.41
10:D:435:THR:HG22	10:D:439:HIS:CE1	2.55	0.41
10:P:16:GLN:HE21	10:P:16:GLN:HB3	1.52	0.41
10:P:431:THR:O	10:P:433:ALA:N	2.46	0.41
10:P:509:TYR:OH	10:P:517:GLU:HB3	2.20	0.41
10:P:551:ASP:HB3	10:P:554:GLU:HB2	2.01	0.41
13:Q:536:LEU:HD22	13:Q:557:ILE:HD11	2.02	0.41
14:T:130:ASP:O	14:T:133:ARG:HG2	2.20	0.41
2:K:252:ILE:O	2:K:256:VAL:HG23	2.21	0.41
2:K:297:LEU:HA	2:K:357:MET:CE	2.51	0.41
2:K:571:PHE:O	2:K:574:THR:OG1	2.29	0.41
5:A:14:ALA:HB1	8:C:1365:LEU:CD1	2.50	0.41
6:B:478:VAL:CG1	6:B:523:LEU:HB3	2.51	0.41
8:C:153:ILE:HG23	8:C:162:PHE:HB3	2.02	0.41
8:C:386:PHE:HB2	8:C:394:ILE:HG23	2.02	0.41
8:C:1164:ASP:OD1	8:C:1164:ASP:C	2.58	0.41
8:C:1233:ASP:N	8:C:1233:ASP:OD1	2.52	0.41
10:D:533:ASP:C	10:D:533:ASP:OD2	2.58	0.41
10:P:20:ALA:O	10:P:24:LEU:HB2	2.20	0.41
10:P:509:TYR:CZ	10:P:517:GLU:HB3	2.56	0.41
13:Q:73:ILE:HD11	13:Q:84:SER:HB3	2.01	0.41
13:Q:536:LEU:HD23	13:Q:536:LEU:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:T:174:LYS:HE3	14:T:207:LEU:HD22	2.01	0.41
14:T:231:ARG:HD3	14:T:233:TRP:CZ2	2.54	0.41
14:T:582:TRP:NE1	14:T:586:CYS:SG	2.93	0.41
1:F:178:SER:O	4:E:161:LEU:HD12	2.21	0.41
1:F:471:MET:HG3	1:F:474:CYS:H	1.86	0.41
2:K:445:ASP:HA	2:K:448:LYS:HZ3	1.85	0.41
2:K:477:CYS:HB3	2:K:479:PHE:CE2	2.55	0.41
1:H:499:LYS:HE2	1:H:503:PRO:HA	2.02	0.41
1:H:565:LYS:HD2	4:E:257:TYR:HE1	1.86	0.41
6:B:281:LEU:HD12	6:B:286:PHE:CD2	2.55	0.41
8:C:662:MET:HE3	8:C:664:TRP:HE1	1.84	0.41
8:C:745:ILE:HD11	8:C:779:TYR:CZ	2.56	0.41
8:C:748:LEU:HD23	8:C:748:LEU:HA	1.88	0.41
1:F:95:LYS:HD3	1:F:105:PHE:CE2	2.55	0.41
1:F:439:ASN:O	1:F:443:ILE:HG12	2.20	0.41
1:F:446:SER:OG	1:F:455:ALA:HB2	2.20	0.41
2:J:485:LEU:HA	2:J:488:THR:HG22	2.03	0.41
2:J:635:VAL:O	2:J:639:MET:HG3	2.20	0.41
2:K:432:LEU:HD23	2:K:432:LEU:HA	1.82	0.41
1:H:486:ILE:HG23	1:H:488:TYR:HE1	1.86	0.41
6:B:265:TYR:HE1	6:B:405:ASN:HD21	1.69	0.41
8:C:454:LEU:HD11	8:C:462:ILE:HD11	2.02	0.41
8:C:605:TYR:HD1	8:C:610:PHE:CE2	2.38	0.41
8:C:807:LEU:H	8:C:807:LEU:HD12	1.85	0.41
8:C:972:ILE:O	8:C:972:ILE:HG22	2.20	0.41
8:C:1169:LEU:O	8:C:1173:ILE:HG22	2.21	0.41
9:O:604:ILE:HD12	9:O:607:LEU:HD11	2.02	0.41
9:O:647:GLU:HA	9:O:650:ILE:HG22	2.02	0.41
13:Q:29:ILE:HD13	13:Q:39:ALA:HB3	2.02	0.41
13:Q:156:ASN:N	13:Q:156:ASN:OD1	2.53	0.41
13:Q:242:LEU:HA	13:Q:245:TYR:HB3	2.02	0.41
14:T:326:PHE:CD1	14:T:330:ILE:HB	2.56	0.41
1:F:748:ILE:HD13	1:F:751:LEU:HD12	2.03	0.41
2:K:407:PRO:HB3	2:K:438:SER:CB	2.50	0.41
2:K:583:GLN:HE21	8:C:1142:ARG:NH2	2.17	0.41
1:H:679:LYS:HB3	1:H:679:LYS:HE3	1.62	0.41
6:B:504:SER:O	6:B:505:MET:HE2	2.21	0.41
8:C:1332:MET:O	8:C:1336:ILE:HG12	2.20	0.41
8:C:1386:LEU:O	8:C:1390:ILE:HG22	2.20	0.41
8:C:1731:ILE:O	8:C:1735:GLN:HG3	2.20	0.41
13:Q:264:PHE:HD1	13:Q:267:ARG:HH22	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:469:ASP:OD1	1:F:470:THR:N	2.53	0.41
1:F:543:TRP:HB3	1:F:566:ALA:HB2	2.03	0.41
1:F:543:TRP:CE2	1:F:565:LYS:HG2	2.56	0.41
2:K:678:LEU:HD12	2:K:697:PHE:HE1	1.86	0.41
1:H:185:PRO:HG2	1:H:186:TYR:CE1	2.55	0.41
1:H:601:LEU:HD13	1:H:601:LEU:HA	1.92	0.41
1:H:721:ARG:HG2	1:H:753:LYS:HZ3	1.86	0.41
1:H:753:LYS:HG3	1:H:754:CYS:N	2.35	0.41
5:A:14:ALA:HB1	8:C:1365:LEU:HD11	2.02	0.41
5:A:88:ALA:HB1	5:A:126:MET:O	2.21	0.41
5:A:124:ASP:C	5:A:124:ASP:OD1	2.59	0.41
6:B:194:ASN:OD1	6:B:194:ASN:N	2.53	0.41
6:B:252:TYR:HE1	6:B:543:LYS:N	2.18	0.41
6:B:431:LYS:HB3	6:B:475:CYS:HA	2.03	0.41
8:C:1097:LYS:HD3	8:C:1097:LYS:HA	1.74	0.41
8:C:1504:LEU:HA	8:C:1504:LEU:HD23	1.79	0.41
9:O:172:ASN:O	9:O:176:PHE:N	2.41	0.41
10:D:259:LEU:HD11	10:D:268:LEU:HD23	2.03	0.41
10:D:311:LEU:HD23	10:D:311:LEU:H	1.84	0.41
10:P:518:ALA:O	10:P:522:TYR:N	2.37	0.41
10:P:543:ALA:O	10:P:547:GLU:HG2	2.21	0.41
15:U:78:ILE:HG12	15:U:98:PHE:CZ	2.56	0.41
1:F:35:GLN:HE22	1:F:148:VAL:N	2.10	0.41
1:F:205:ARG:NH1	4:E:159:SER:O	2.54	0.41
1:F:591:ASP:OD1	1:F:592:SER:N	2.54	0.41
2:K:419:PHE:CE2	2:K:430:LYS:HA	2.55	0.41
3:G:16:VAL:O	3:G:20:ILE:HG12	2.21	0.41
1:H:60:LEU:CD2	1:H:64:SER:HB3	2.33	0.41
1:H:597:TYR:CZ	1:H:613:GLY:HA3	2.56	0.41
1:H:723:VAL:HG12	1:H:725:ARG:NH1	2.27	0.41
6:B:190:ARG:N	11:I:97:TRP:CZ2	2.75	0.41
8:C:1063:GLU:HG2	8:C:1066:HIS:CE1	2.56	0.41
8:C:1248:VAL:HA	8:C:1251:ILE:HG22	2.02	0.41
8:C:1569:PRO:O	8:C:1570:ILE:HD13	2.21	0.41
9:O:255:ILE:HG13	9:O:256:VAL:N	2.35	0.41
9:O:364:GLU:HG2	9:O:367:ARG:NH2	2.35	0.41
10:D:201:TYR:CD1	10:D:202:GLU:N	2.89	0.41
10:P:25:SER:HB3	10:P:33:SER:OG	2.21	0.41
10:P:301:LEU:HD21	10:P:334:TYR:CE2	2.36	0.41
13:Q:69:GLY:HA2	13:Q:93:ILE:HD11	2.03	0.41
13:Q:101:ILE:O	13:Q:159:LEU:N	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:377:LEU:HA	13:Q:380:THR:HG22	2.03	0.41
14:T:103:PHE:CE2	14:T:147:ILE:HG23	2.56	0.41
14:T:609:ILE:HB	14:T:614:TRP:NE1	2.36	0.41
14:T:610:SER:HG	15:U:14:TRP:HE1	1.61	0.41
1:F:116:VAL:O	1:F:120:ILE:HG13	2.21	0.41
1:F:527:ASN:ND2	2:K:518:LEU:HD21	2.36	0.41
1:H:514:THR:HG23	5:A:250:ARG:HB3	2.02	0.41
1:H:594:LYS:HG3	1:H:598:ARG:HH21	1.86	0.41
1:H:633:LYS:HD2	1:H:636:SER:OG	2.20	0.41
9:O:4:TYR:HA	9:O:286:LEU:HD21	2.03	0.41
9:O:21:LEU:HA	9:O:24:ILE:HG22	2.02	0.41
9:O:93:LYS:CD	9:O:93:LYS:H	2.34	0.41
9:O:552:ARG:HD2	9:O:568:LEU:HD21	2.03	0.41
10:D:515:LYS:HD2	10:D:545:LEU:HD22	2.03	0.41
13:Q:336:ARG:O	13:Q:339:ILE:HG22	2.21	0.41
14:T:129:LYS:O	14:T:133:ARG:NE	2.54	0.41
14:T:288:PHE:CE1	14:T:326:PHE:HA	2.56	0.41
14:T:459:LEU:O	14:T:463:ILE:HB	2.21	0.41
14:T:634:LEU:HD21	15:U:5:ILE:HD13	2.02	0.41
2:J:282:ALA:O	2:J:286:ILE:HG12	2.21	0.40
2:J:432:LEU:HD12	2:J:432:LEU:HA	1.90	0.40
2:J:514:ASN:HB2	10:D:387:GLN:HG2	2.02	0.40
2:J:607:MET:SD	2:J:638:GLU:OE2	2.79	0.40
2:J:609:PHE:HD1	2:J:609:PHE:HA	1.80	0.40
2:K:697:PHE:HB3	2:K:714:LEU:HD21	2.03	0.40
5:A:16:SER:HB2	8:C:1365:LEU:HG	2.03	0.40
8:C:68:TYR:CD1	8:C:91:LEU:HD11	2.56	0.40
8:C:1285:LEU:CD1	8:C:1289:ARG:HG3	2.51	0.40
8:C:1715:GLU:N	8:C:1715:GLU:OE1	2.54	0.40
9:O:18:LEU:HA	9:O:21:LEU:HB2	2.03	0.40
9:O:41:PHE:O	9:O:45:ILE:HD12	2.21	0.40
10:D:10:ILE:HG23	10:D:43:LEU:HD21	2.03	0.40
10:D:16:GLN:O	10:D:20:ALA:N	2.44	0.40
10:P:434:TRP:HB3	10:P:457:ALA:HB2	2.03	0.40
13:Q:183:PHE:O	13:Q:477:GLN:NE2	2.54	0.40
13:Q:233:LEU:HD23	13:Q:233:LEU:HA	1.87	0.40
2:J:255:LYS:HE2	2:K:432:LEU:HD21	2.04	0.40
2:J:393:PHE:CE2	2:K:251:TYR:CD2	3.08	0.40
2:J:496:ASN:O	2:J:500:LEU:HG	2.21	0.40
1:H:123:LEU:HB3	1:H:160:LEU:HD12	2.03	0.40
1:H:652:LEU:HA	1:H:655:LEU:CD1	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:187:ARG:NH1	8:C:1322:ASN:HB3	2.35	0.40
6:B:417:LYS:HD2	6:B:417:LYS:H	1.87	0.40
8:C:749:TYR:OH	8:C:783:ILE:HG23	2.21	0.40
8:C:1298:TRP:CH2	8:C:1342:ARG:HA	2.56	0.40
8:C:1363:LEU:HD21	8:C:1412:TYR:HD2	1.86	0.40
9:O:45:ILE:HG23	9:O:150:PHE:CD1	2.55	0.40
9:O:402:THR:N	9:O:405:GLN:OE1	2.50	0.40
9:O:422:PHE:CE2	12:N:5:LEU:HD22	2.56	0.40
9:O:481:GLY:HA2	9:O:624:LEU:HD22	2.03	0.40
10:D:463:ARG:HA	10:D:494:LEU:HD11	2.03	0.40
10:D:533:ASP:O	10:D:536:THR:HG22	2.22	0.40
10:P:44:ALA:HB2	10:P:326:PRO:HG2	2.03	0.40
10:P:499:ARG:HH11	10:P:499:ARG:HG2	1.85	0.40
10:P:539:TYR:HE2	10:P:565:VAL:HG21	1.85	0.40
11:I:16:LEU:HD23	11:I:16:LEU:H	1.86	0.40
13:Q:316:CYS:SG	13:Q:317:GLU:N	2.93	0.40
13:Q:328:LEU:O	13:Q:329:ILE:HD13	2.21	0.40
14:T:490:ASN:HD21	14:T:492:PHE:HD2	1.69	0.40
15:U:121:ARG:HD3	15:U:121:ARG:HA	1.96	0.40
1:F:197:MET:HA	1:F:197:MET:HE3	2.02	0.40
1:F:201:VAL:HG12	4:E:162:LEU:HA	2.03	0.40
1:F:436:ILE:HD13	1:F:436:ILE:HA	1.94	0.40
2:J:737:LEU:HD23	2:J:737:LEU:HA	1.89	0.40
2:K:631:ASN:OD1	2:K:631:ASN:N	2.54	0.40
1:H:80:LEU:HD23	1:H:80:LEU:HA	1.92	0.40
1:H:601:LEU:CD1	1:H:611:TYR:CZ	3.04	0.40
6:B:436:SER:OG	6:B:442:VAL:HB	2.22	0.40
6:B:439:LYS:HA	6:B:439:LYS:HD2	1.88	0.40
8:C:546:ASN:O	8:C:550:ILE:HD12	2.21	0.40
8:C:634:ILE:HG13	8:C:635:ARG:N	2.36	0.40
8:C:815:ARG:NH2	8:C:1633:TYR:H	2.20	0.40
8:C:867:ILE:HG21	9:O:449:LYS:HG2	2.03	0.40
8:C:1038:LYS:HA	8:C:1039:PRO:HD3	1.91	0.40
9:O:506:SER:HB2	9:O:544:GLN:HE22	1.85	0.40
10:D:215:ALA:HB2	10:D:244:CYS:SG	2.61	0.40
10:D:305:GLU:HG3	10:D:338:ILE:HD11	2.03	0.40
12:N:116:TRP:HB3	12:N:117:ASN:OD1	2.21	0.40
13:Q:60:LYS:HG3	13:Q:77:PHE:CD1	2.57	0.40
14:T:389:LEU:HD13	14:T:390:PRO:HD2	2.03	0.40
1:F:31:GLN:O	1:F:35:GLN:HG2	2.21	0.40
1:F:88:PHE:CD1	1:F:105:PHE:HE1	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:519:LEU:HD23	1:F:519:LEU:HA	1.87	0.40
1:F:633:LYS:HA	1:F:633:LYS:HD2	1.87	0.40
2:J:643:TYR:HE2	2:J:655:TYR:HE2	1.68	0.40
2:K:621:TYR:HA	2:K:624:LEU:CG	2.48	0.40
6:B:468:ILE:HG21	6:B:500:TRP:CH2	2.57	0.40
8:C:75:ALA:HB1	8:C:87:PHE:HE1	1.86	0.40
8:C:527:THR:O	8:C:531:LYS:NZ	2.51	0.40
8:C:559:ILE:HG12	8:C:603:GLU:HG3	2.03	0.40
8:C:613:LEU:HD23	8:C:613:LEU:HA	1.87	0.40
8:C:749:TYR:CZ	8:C:783:ILE:HG23	2.56	0.40
8:C:942:GLN:HB3	8:C:946:PHE:CZ	2.57	0.40
8:C:1128:ILE:HD11	8:C:1147:ILE:CD1	2.52	0.40
9:O:128:ARG:HD3	9:O:128:ARG:HA	1.88	0.40
9:O:319:LEU:HD12	9:O:319:LEU:HA	1.94	0.40
9:O:343:LEU:O	9:O:347:THR:N	2.40	0.40
10:D:523:LYS:NZ	10:D:546:TYR:OH	2.53	0.40
10:P:533:ASP:O	10:P:536:THR:HG22	2.22	0.40
13:Q:422:ASP:HB3	13:Q:425:PHE:HB2	2.03	0.40
14:T:27:HIS:O	14:T:27:HIS:ND1	2.50	0.40
14:T:181:LEU:HD23	14:T:212:LEU:HB3	2.03	0.40
14:T:576:SER:HB2	14:T:613:TYR:HB3	2.03	0.40
14:T:626:LEU:HD22	14:T:659:ASP:HB3	2.03	0.40
1:F:745:GLN:HG2	1:F:746:VAL:N	2.37	0.40
2:J:364:LEU:HD12	2:J:364:LEU:HA	1.79	0.40
2:J:610:MET:HE2	2:J:642:MET:HA	2.02	0.40
2:K:728:ILE:HB	2:K:732:HIS:CE1	2.56	0.40
5:A:142:MET:CG	5:A:175:VAL:H	2.34	0.40
5:A:171:GLU:HG2	5:A:173:ARG:CZ	2.51	0.40
6:B:353:ASN:ND2	6:B:395:VAL:O	2.54	0.40
8:C:1524:LEU:O	8:C:1528:VAL:HG13	2.22	0.40
8:C:1541:LEU:HD12	8:C:1544:PHE:HD2	1.80	0.40
10:D:590:LYS:HA	10:D:590:LYS:HD3	1.90	0.40
10:P:16:GLN:NE2	10:P:247:PHE:CD2	2.85	0.40
10:P:331:LEU:HD23	10:P:331:LEU:HA	1.82	0.40
13:Q:368:VAL:HB	13:Q:463:MET:HE3	2.03	0.40
13:Q:423:LEU:HD23	13:Q:424:TYR:N	2.36	0.40
14:T:606:PRO:HG3	14:T:641:TYR:CD2	2.57	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	F	496/758 (65%)	475 (96%)	21 (4%)	0	100	100
1	H	499/758 (66%)	481 (96%)	16 (3%)	2 (0%)	34	72
2	J	505/850 (59%)	487 (96%)	18 (4%)	0	100	100
2	K	501/850 (59%)	488 (97%)	13 (3%)	0	100	100
3	G	33/124 (27%)	32 (97%)	1 (3%)	0	100	100
3	W	35/124 (28%)	35 (100%)	0	0	100	100
4	E	120/265 (45%)	119 (99%)	1 (1%)	0	100	100
5	A	213/250 (85%)	201 (94%)	11 (5%)	1 (0%)	29	68
6	B	432/566 (76%)	404 (94%)	27 (6%)	1 (0%)	47	81
7	S	4/1518 (0%)	3 (75%)	1 (25%)	0	100	100
8	C	1384/1748 (79%)	1299 (94%)	81 (6%)	4 (0%)	41	75
9	O	654/685 (96%)	625 (96%)	25 (4%)	4 (1%)	25	64
10	D	554/626 (88%)	540 (98%)	13 (2%)	1 (0%)	47	81
10	P	550/626 (88%)	530 (96%)	20 (4%)	0	100	100
11	I	105/170 (62%)	98 (93%)	7 (7%)	0	100	100
12	N	92/368 (25%)	89 (97%)	3 (3%)	0	100	100
13	Q	619/652 (95%)	596 (96%)	22 (4%)	1 (0%)	47	81
14	T	631/853 (74%)	620 (98%)	11 (2%)	0	100	100
15	U	110/165 (67%)	107 (97%)	3 (3%)	0	100	100
All	All	7537/11956 (63%)	7229 (96%)	294 (4%)	14 (0%)	50	81

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	C	844	VAL
8	C	1279	ILE

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Mol	Chain	Res	Type
9	O	193	VAL
10	D	205	ILE
1	H	507	LYS
1	H	554	LYS
13	Q	10	ILE
8	C	1416	VAL
9	O	51	SER
9	O	53	GLU
6	B	123	GLU
8	C	801	VAL
9	O	355	CYS
5	A	21	PRO

5.3.2 Protein sidechains [i](#)

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	F	433/684 (63%)	429 (99%)	4 (1%)	78	90
1	H	439/684 (64%)	428 (98%)	11 (2%)	47	75
2	J	451/760 (59%)	443 (98%)	8 (2%)	59	81
2	K	448/760 (59%)	434 (97%)	14 (3%)	40	70
3	G	34/115 (30%)	33 (97%)	1 (3%)	42	71
3	W	36/115 (31%)	35 (97%)	1 (3%)	43	72
4	E	123/246 (50%)	120 (98%)	3 (2%)	49	76
5	A	190/226 (84%)	185 (97%)	5 (3%)	46	74
6	B	375/503 (75%)	362 (96%)	13 (4%)	36	67
7	S	6/1389 (0%)	6 (100%)	0	100	100
8	C	1180/1568 (75%)	1161 (98%)	19 (2%)	62	83
9	O	598/643 (93%)	583 (98%)	15 (2%)	47	75
10	D	477/560 (85%)	473 (99%)	4 (1%)	81	91
10	P	476/560 (85%)	464 (98%)	12 (2%)	47	75

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	I	95/144 (66%)	91 (96%)	4 (4%)	30	63
12	N	83/332 (25%)	82 (99%)	1 (1%)	71	87
13	Q	571/598 (96%)	555 (97%)	16 (3%)	43	72
14	T	605/804 (75%)	589 (97%)	16 (3%)	46	74
15	U	103/149 (69%)	103 (100%)	0	100	100
All	All	6723/10840 (62%)	6576 (98%)	147 (2%)	54	78

All (147) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	F	453	PHE
1	F	490	MET
1	F	543	TRP
1	F	575	TYR
2	J	238	PHE
2	J	322	TYR
2	J	380	ASP
2	J	393	PHE
2	J	492	ASN
2	J	583	GLN
2	J	661	GLU
2	J	736	TYR
2	K	247	ARG
2	K	258	ASN
2	K	299	ARG
2	K	313	ASP
2	K	432	LEU
2	K	456	ASP
2	K	486	CYS
2	K	492	ASN
2	K	568	TRP
2	K	575	TYR
2	K	582	ASP
2	K	626	TYR
2	K	688	ASN
2	K	750	ASN
3	G	22	ASP
3	W	22	ASP
1	H	91	SER
1	H	130	PHE

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Mol	Chain	Res	Type
1	H	171	LYS
1	H	186	TYR
1	H	459	PHE
1	H	536	MET
1	H	568	GLN
1	H	577	TYR
1	H	598	ARG
1	H	612	TYR
1	H	708	ASP
4	E	92	ASP
4	E	219	HIS
4	E	255	ARG
5	A	68	MET
5	A	96	LYS
5	A	112	PHE
5	A	171	GLU
5	A	208	ASN
6	B	116	SER
6	B	222	PHE
6	B	226	MET
6	B	242	LYS
6	B	373	MET
6	B	377	PHE
6	B	393	TRP
6	B	458	ASN
6	B	477	MET
6	B	505	MET
6	B	516	PHE
6	B	544	LEU
6	B	545	PHE
8	C	127	GLU
8	C	149	LYS
8	C	205	PHE
8	C	465	MET
8	C	610	PHE
8	C	706	SER
8	C	748	LEU
8	C	807	LEU
8	C	991	ASP
8	C	1065	TRP
8	C	1070	TYR
8	C	1105	HIS

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Mol	Chain	Res	Type
8	C	1133	MET
8	C	1161	MET
8	C	1167	TYR
8	C	1266	MET
8	C	1526	MET
8	C	1544	PHE
8	C	1606	MET
9	O	85	LEU
9	O	109	ASP
9	O	121	ASN
9	O	162	ASP
9	O	170	TRP
9	O	293	ASN
9	O	321	SER
9	O	333	ASN
9	O	337	TYR
9	O	344	SER
9	O	375	MET
9	O	409	TYR
9	O	523	ASP
9	O	634	CYS
9	O	644	MET
10	D	280	PHE
10	D	304	PHE
10	D	365	ASP
10	D	510	SER
10	P	16	GLN
10	P	110	ASP
10	P	138	ASN
10	P	145	PHE
10	P	301	LEU
10	P	305	GLU
10	P	327	ASN
10	P	352	PHE
10	P	405	ASN
10	P	480	MET
10	P	541	ARG
10	P	625	HIS
11	I	83	ASN
11	I	96	ASP
11	I	103	MET
11	I	162	HIS

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Mol	Chain	Res	Type
12	N	129	TYR
13	Q	52	TYR
13	Q	149	ASP
13	Q	224	LEU
13	Q	233	LEU
13	Q	281	GLU
13	Q	297	ASP
13	Q	316	CYS
13	Q	334	CYS
13	Q	351	PHE
13	Q	362	ASP
13	Q	390	ASP
13	Q	401	PHE
13	Q	403	ASP
13	Q	423	LEU
13	Q	427	TYR
13	Q	546	LEU
14	T	38	LEU
14	T	103	PHE
14	T	136	ASN
14	T	215	ASN
14	T	223	LYS
14	T	265	HIS
14	T	326	PHE
14	T	343	ARG
14	T	373	GLN
14	T	384	TYR
14	T	386	MET
14	T	458	MET
14	T	492	PHE
14	T	518	PHE
14	T	580	MET
14	T	613	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (27) such sidechains are listed below:

Mol	Chain	Res	Type
1	F	35	GLN
1	F	128	ASN
2	J	450	ASN
2	J	581	GLN
2	J	750	ASN

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Mol	Chain	Res	Type
2	K	243	GLN
2	K	583	GLN
2	K	750	ASN
3	G	26	GLN
1	H	42	ASN
4	E	219	HIS
5	A	208	ASN
8	C	753	HIS
8	C	1414	HIS
8	C	1543	HIS
9	O	323	HIS
9	O	372	ASN
10	D	77	ASN
10	D	371	ASN
10	D	377	GLN
10	D	534	GLN
10	P	16	GLN
10	P	248	ASN
11	I	40	ASN
13	Q	355	ASN
14	T	113	GLN
15	U	107	ASN

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

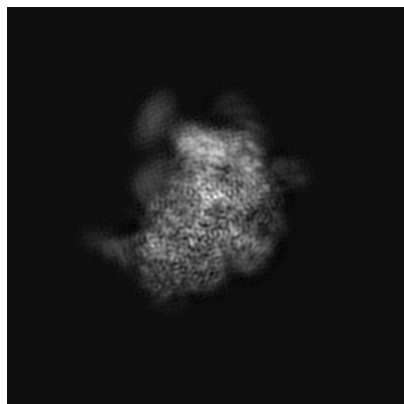
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-15123. These allow visual inspection of the internal detail of the map and identification of artifacts.

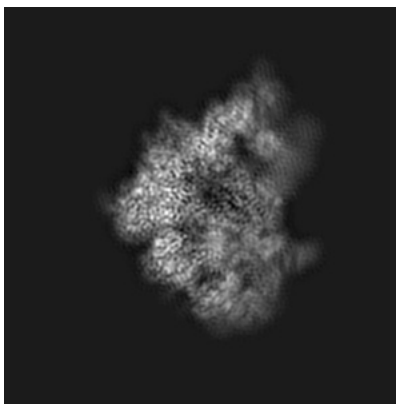
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

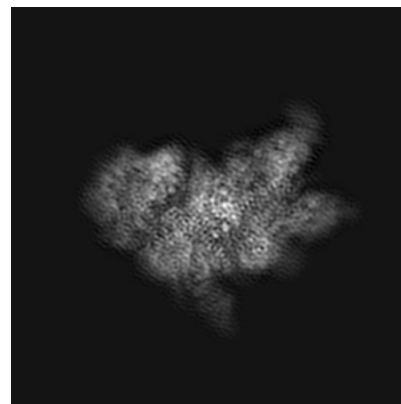
6.1.1 Primary map



X

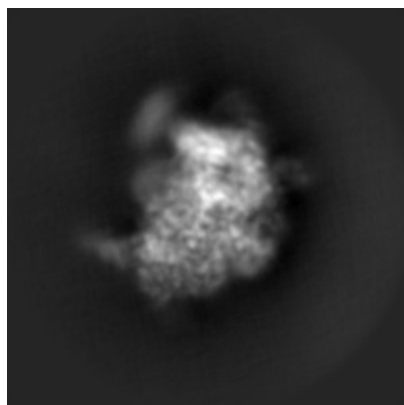


Y

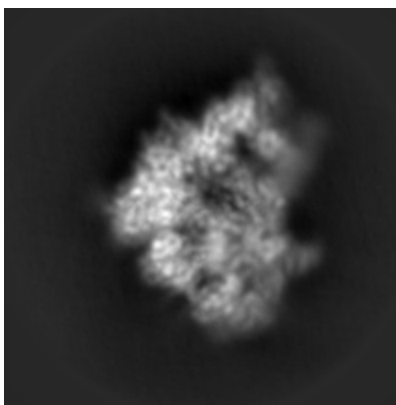


Z

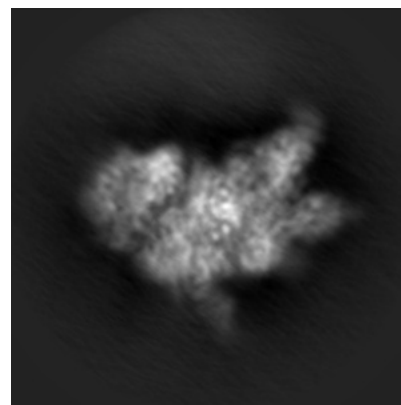
6.1.2 Raw map



X



Y

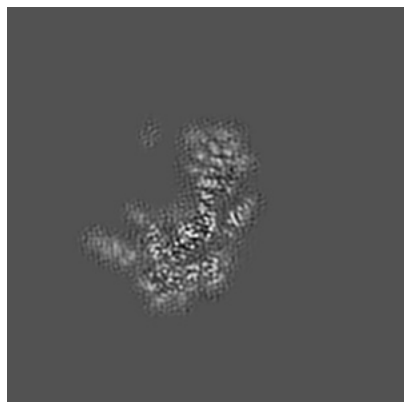


Z

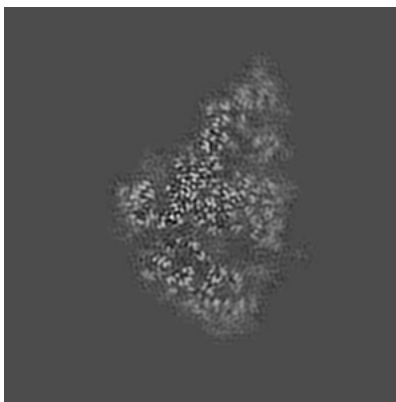
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

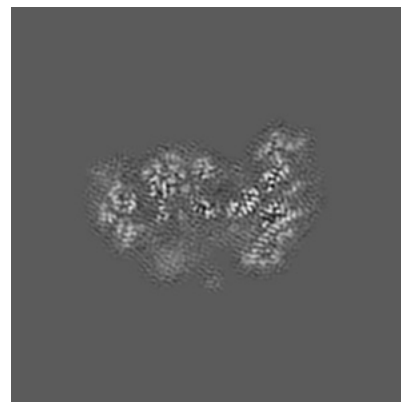
6.2.1 Primary map



X Index: 128

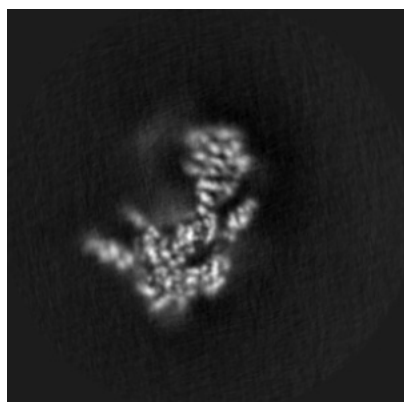


Y Index: 128

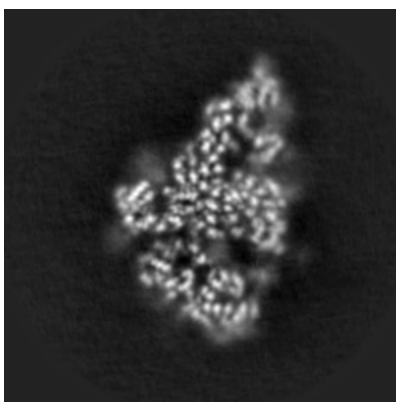


Z Index: 128

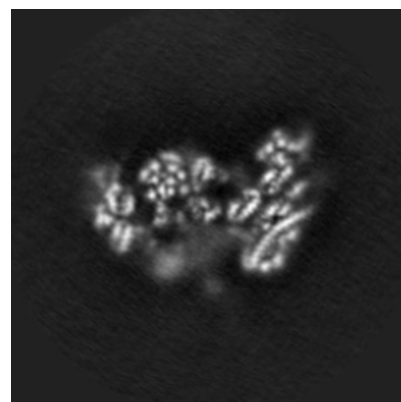
6.2.2 Raw map



X Index: 128



Y Index: 128

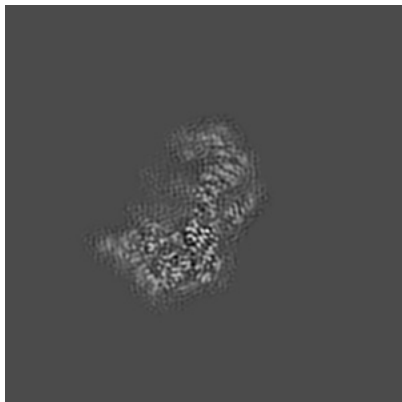


Z Index: 128

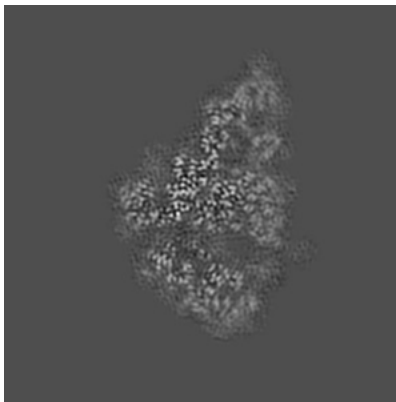
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

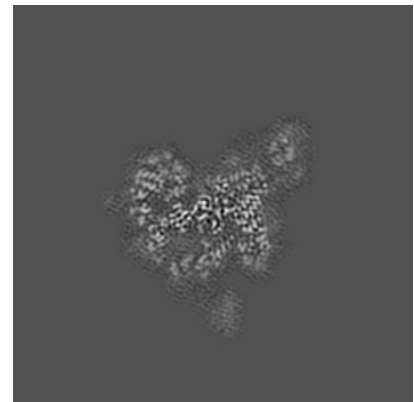
6.3.1 Primary map



X Index: 122

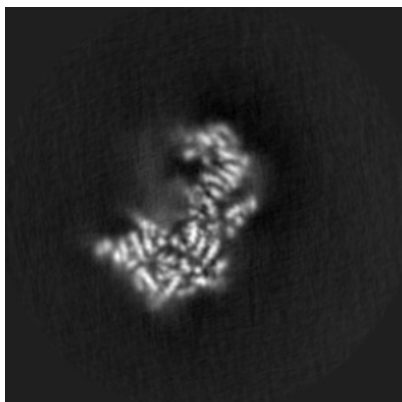


Y Index: 129

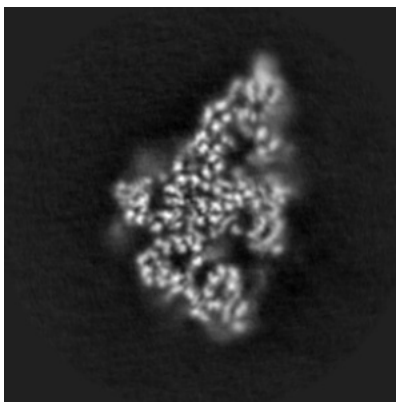


Z Index: 111

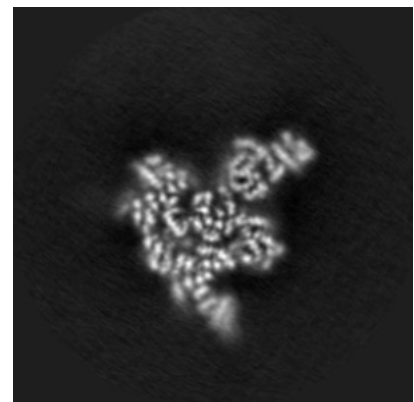
6.3.2 Raw map



X Index: 123



Y Index: 125



Z Index: 104

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

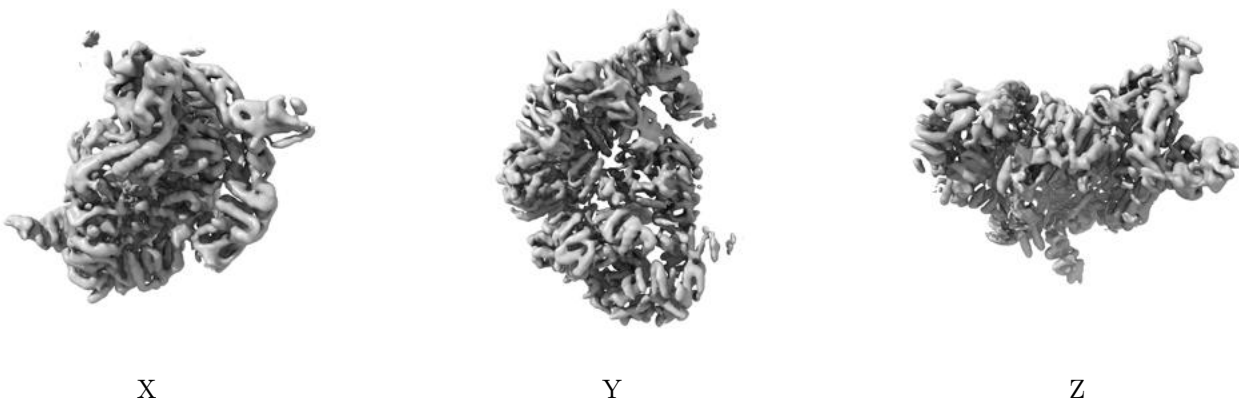
6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 Raw map



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

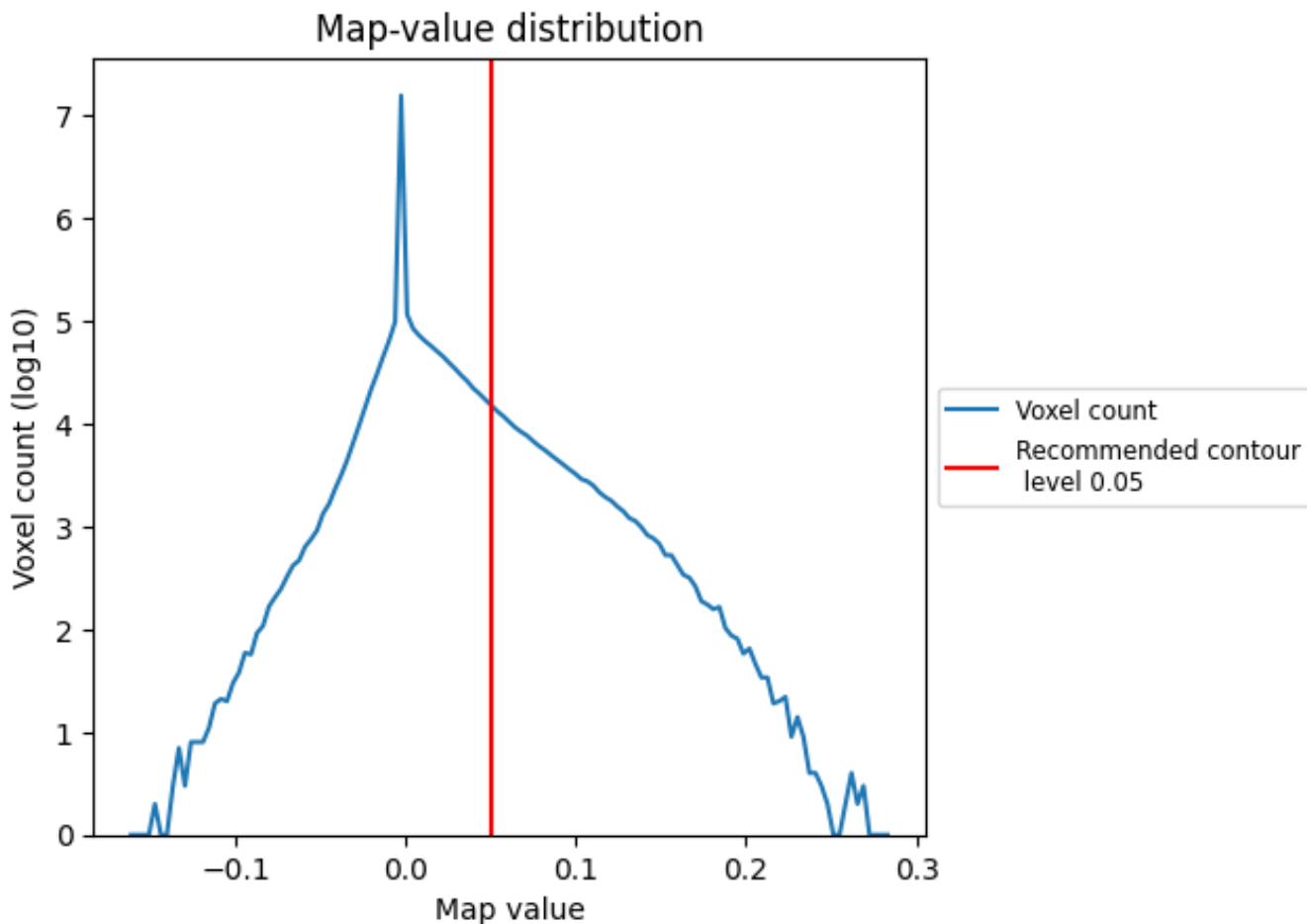
6.5 Mask visualisation [i](#)

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

7 Map analysis [i](#)

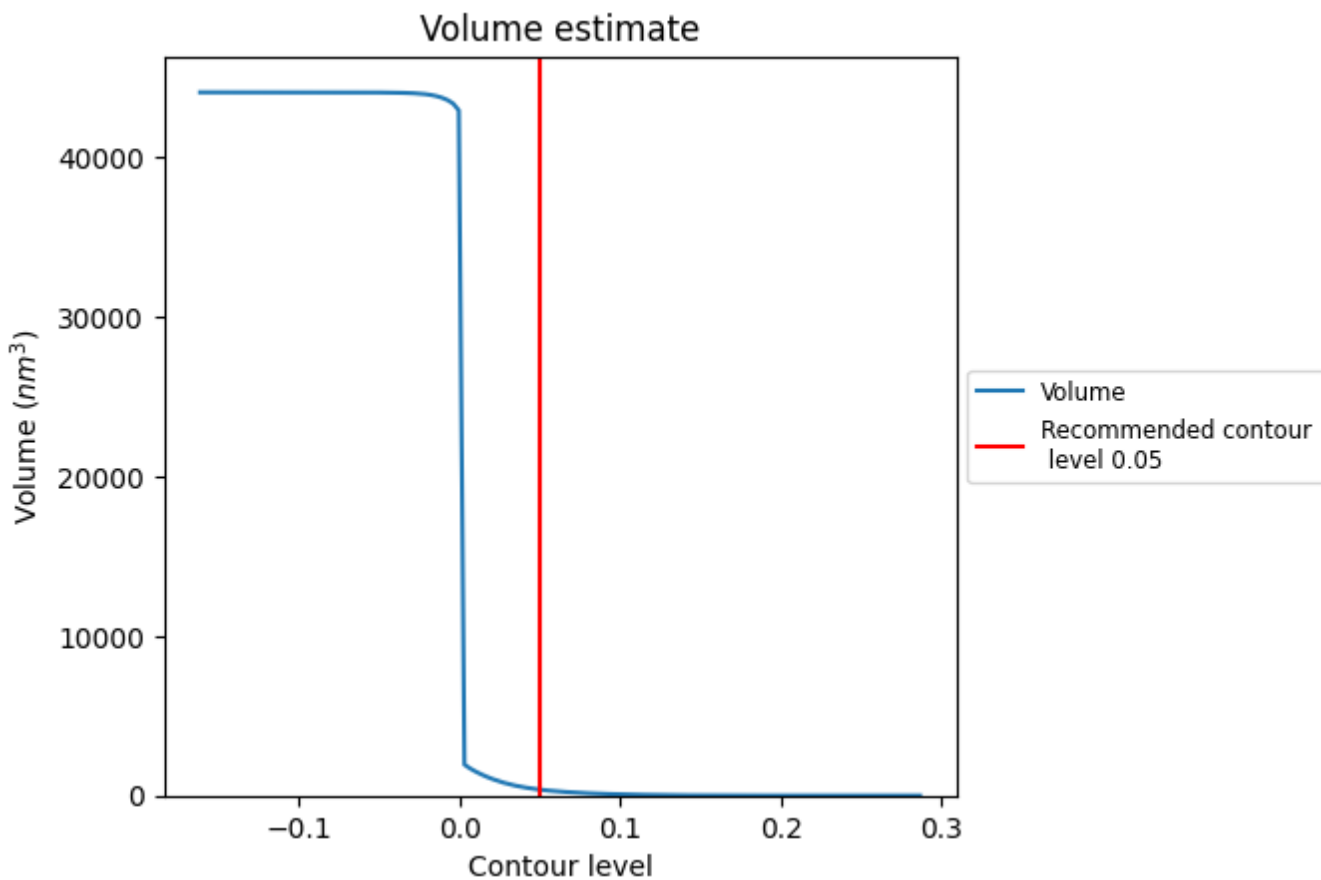
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

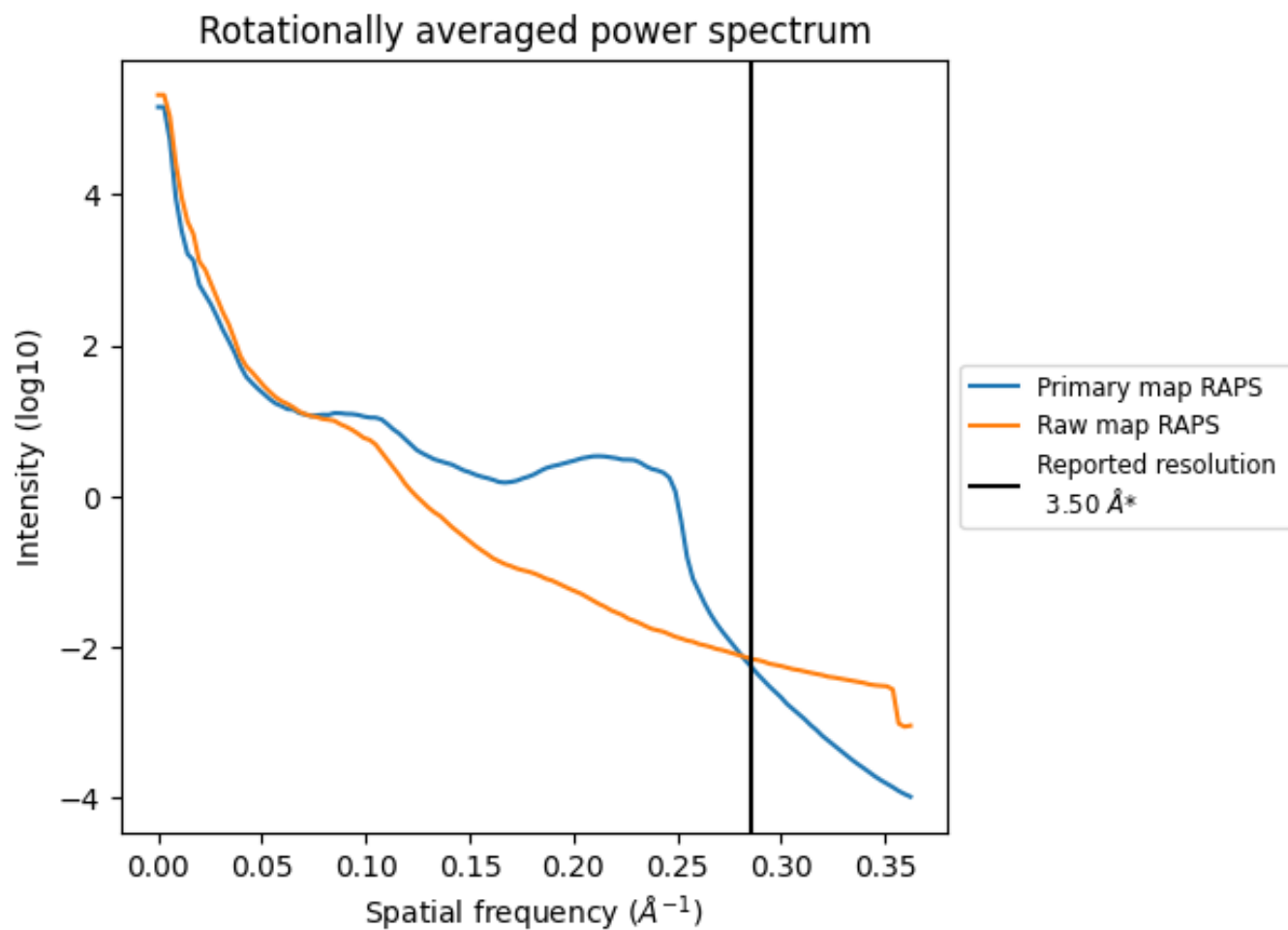
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 376 nm³; this corresponds to an approximate mass of 339 kDa.

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

7.3 Rotationally averaged power spectrum i

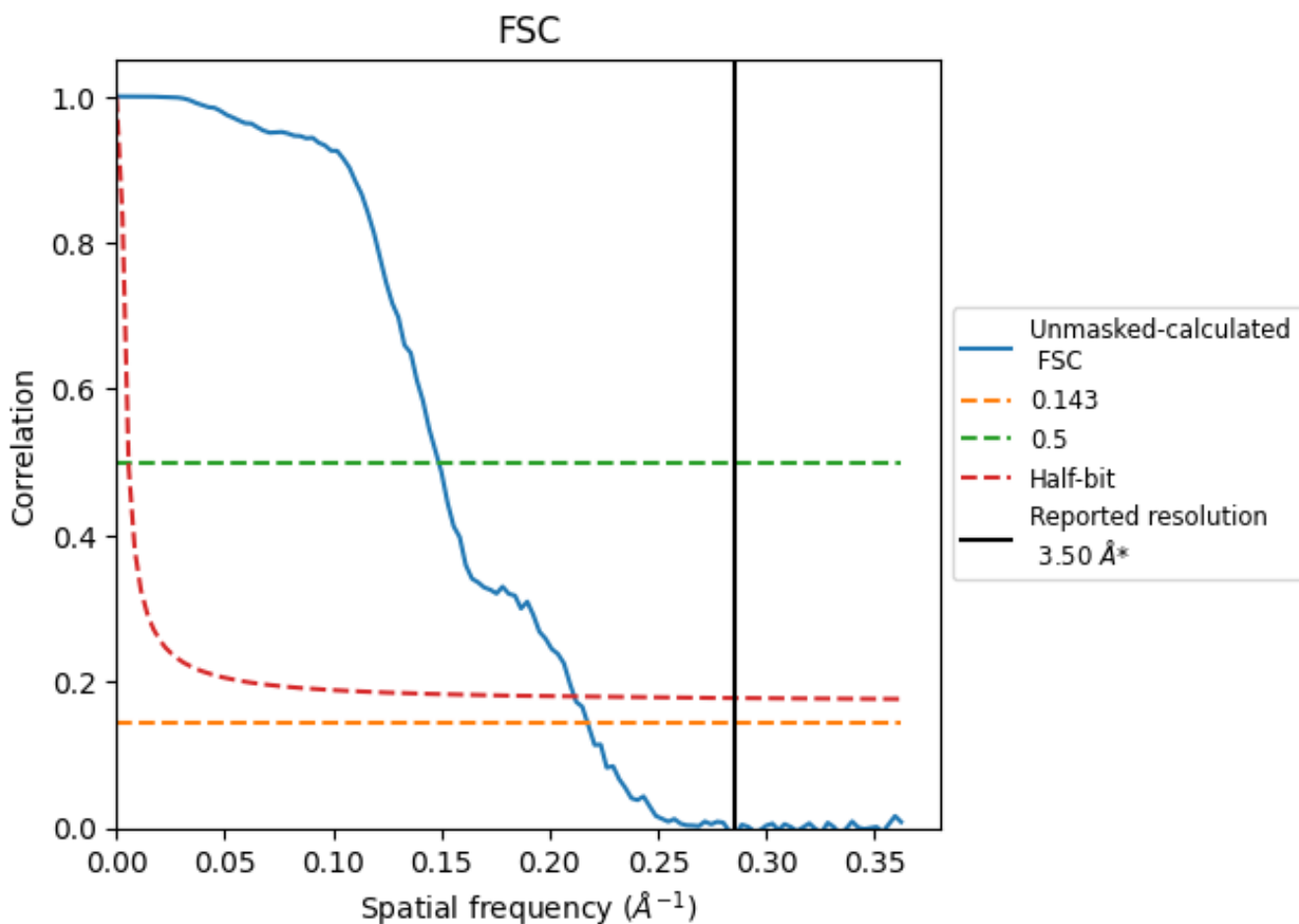


*Reported resolution corresponds to spatial frequency of 0.286 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.286 Å⁻¹

8.2 Resolution estimates [i](#)

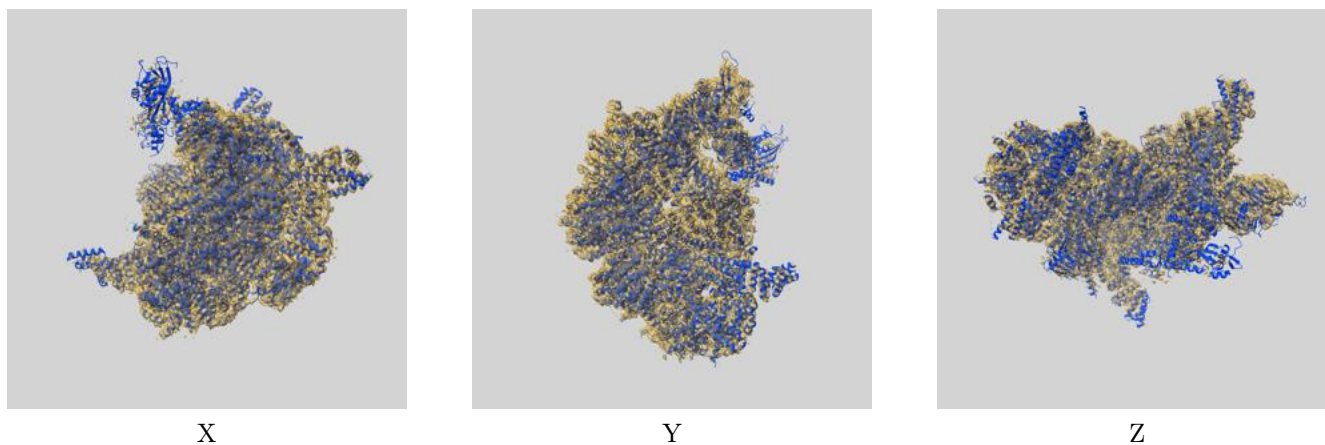
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.50	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.60	6.72	4.73

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.60 differs from the reported value 3.5 by more than 10 %

9 Map-model fit [i](#)

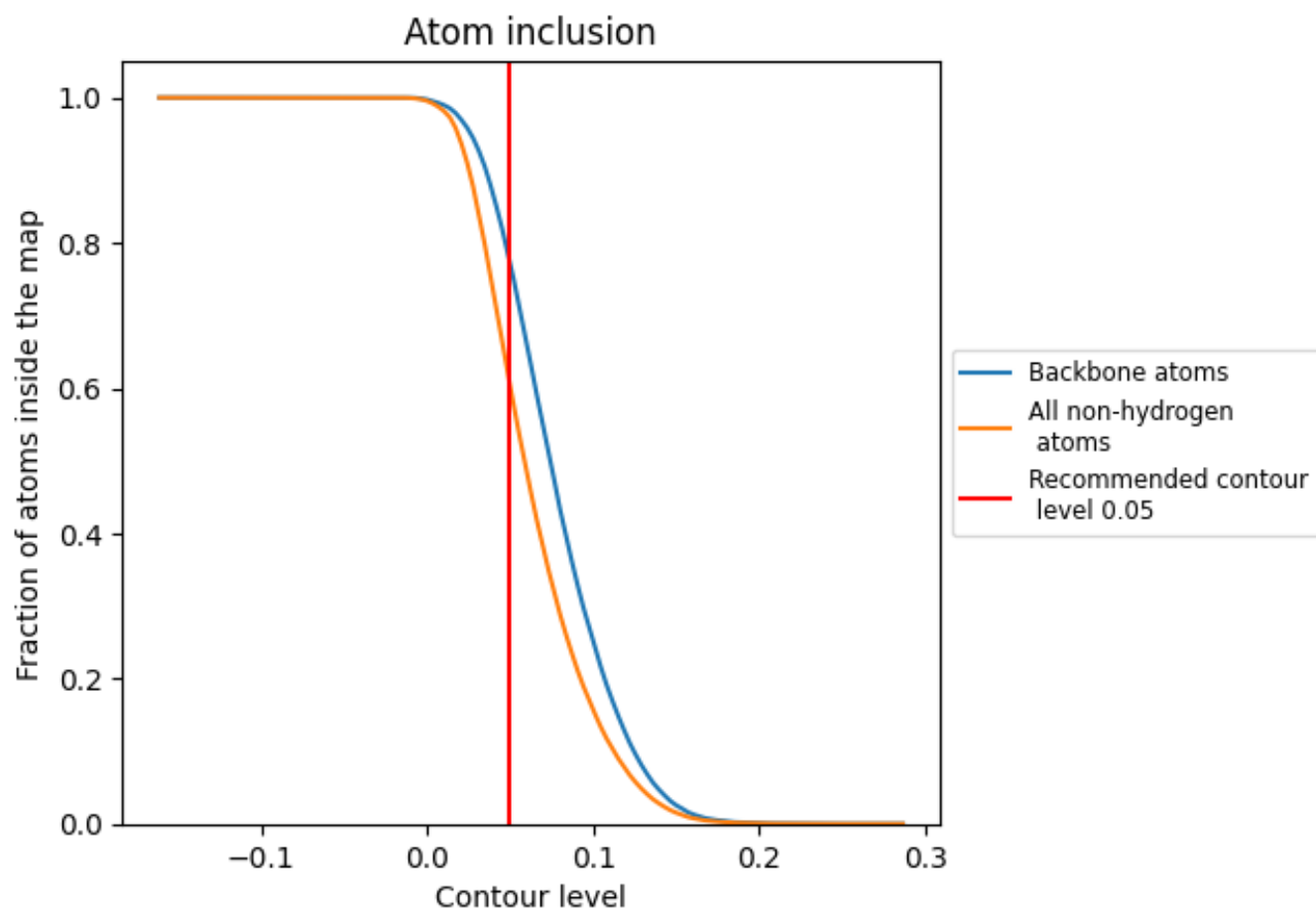
This section contains information regarding the fit between EMDB map EMD-15123 and PDB model 8A3T. Per-residue inclusion information can be found in section 3 on page 8.

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.05 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 Atom inclusion [i](#)



At the recommended contour level, 77% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.