Full wwPDB EM Validation Report

Oct 13, 2024 – 06:10 pm BST

PDB ID	:	6RZW
EMDB ID	:	EMD-10065
Title	:	Structure of s-Mgm1 decorating the inner surface of tubulated lipid membranes in the GTPgammaS bound state
Authors	:	Faelber, K.; Dietrich, L.; Noel, J.K.; Sanchez, R.; Kudryashev, M.; Kuelbrandt, W.; Daumke, O.
Deposited on	:	2019-06-13
Resolution	:	18.80 Å(reported)

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

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

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

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

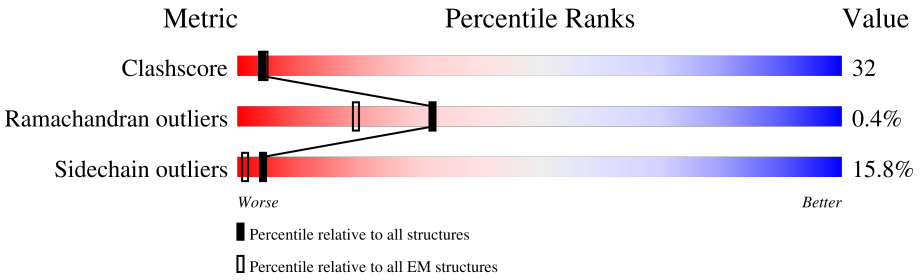
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 18.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	695	9% 47% 34% 13% • 5%
1	B	695	7% 56% 31% 6% • 5%
1	C	695	7% 57% 30% 7% • 5%
1	D	695	10% 49% 32% 13% • 5%
1	E	695	11% 47% 34% 12% • 5%
1	F	695	12% 56% 30% 7% • 5%
1	G	695	9% 55% 33% 6% • 5%
1	H	695	19% 46% 35% 13% • 5%

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Mol	Chain	Length	Quality of chain
1	I	695	12% 56% 29% 9% • 5%
1	J	695	11% 46% 35% 13% • 5%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 51520 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.

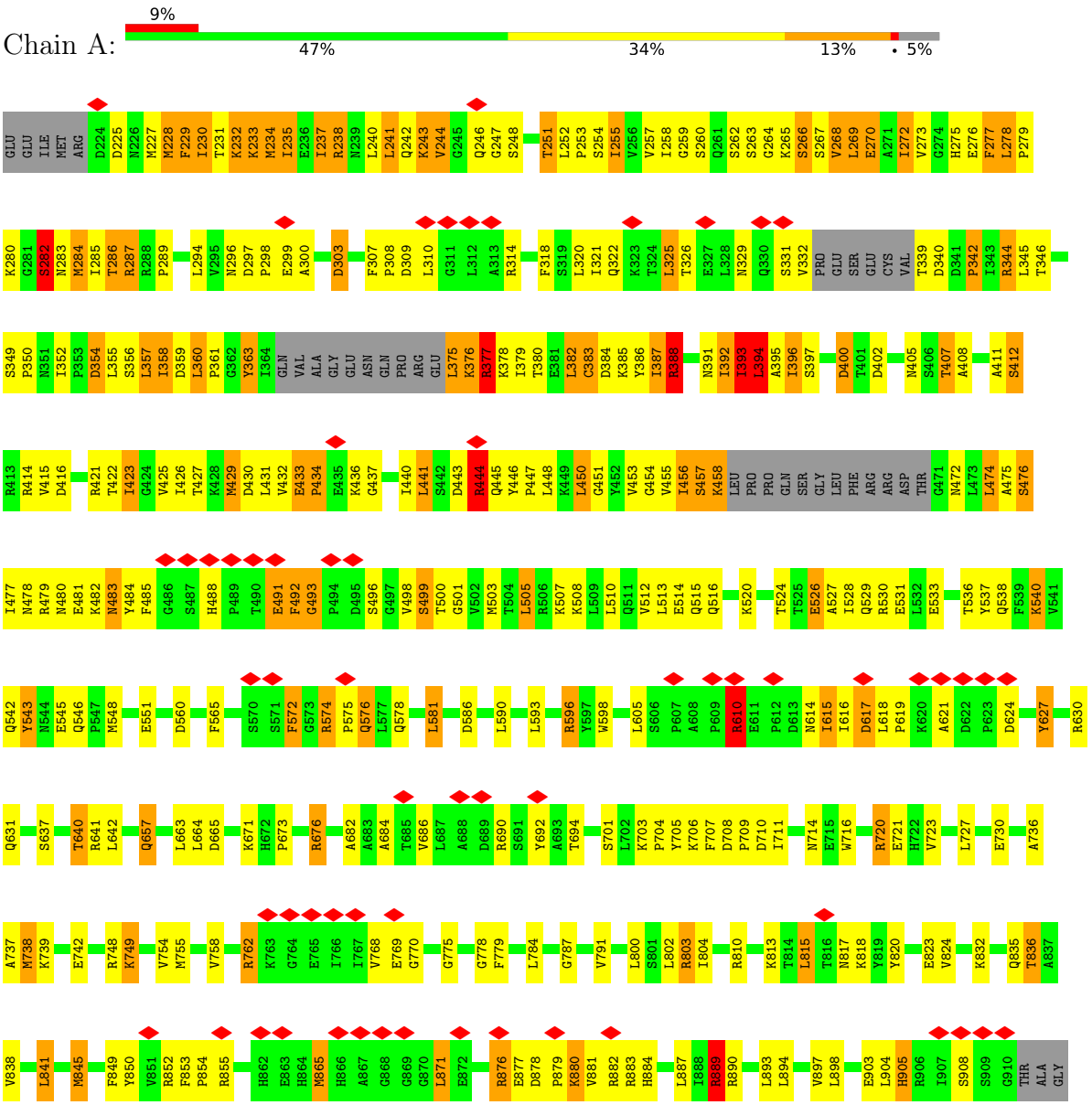
- Molecule 1 is a protein called Putative mitochondrial dynamin protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	B	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	C	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	D	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	E	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	F	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	G	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	H	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	I	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		
1	J	659	Total	C	N	O	S	0	0
			5152	3243	910	982	17		

3 Residue-property plots (i)

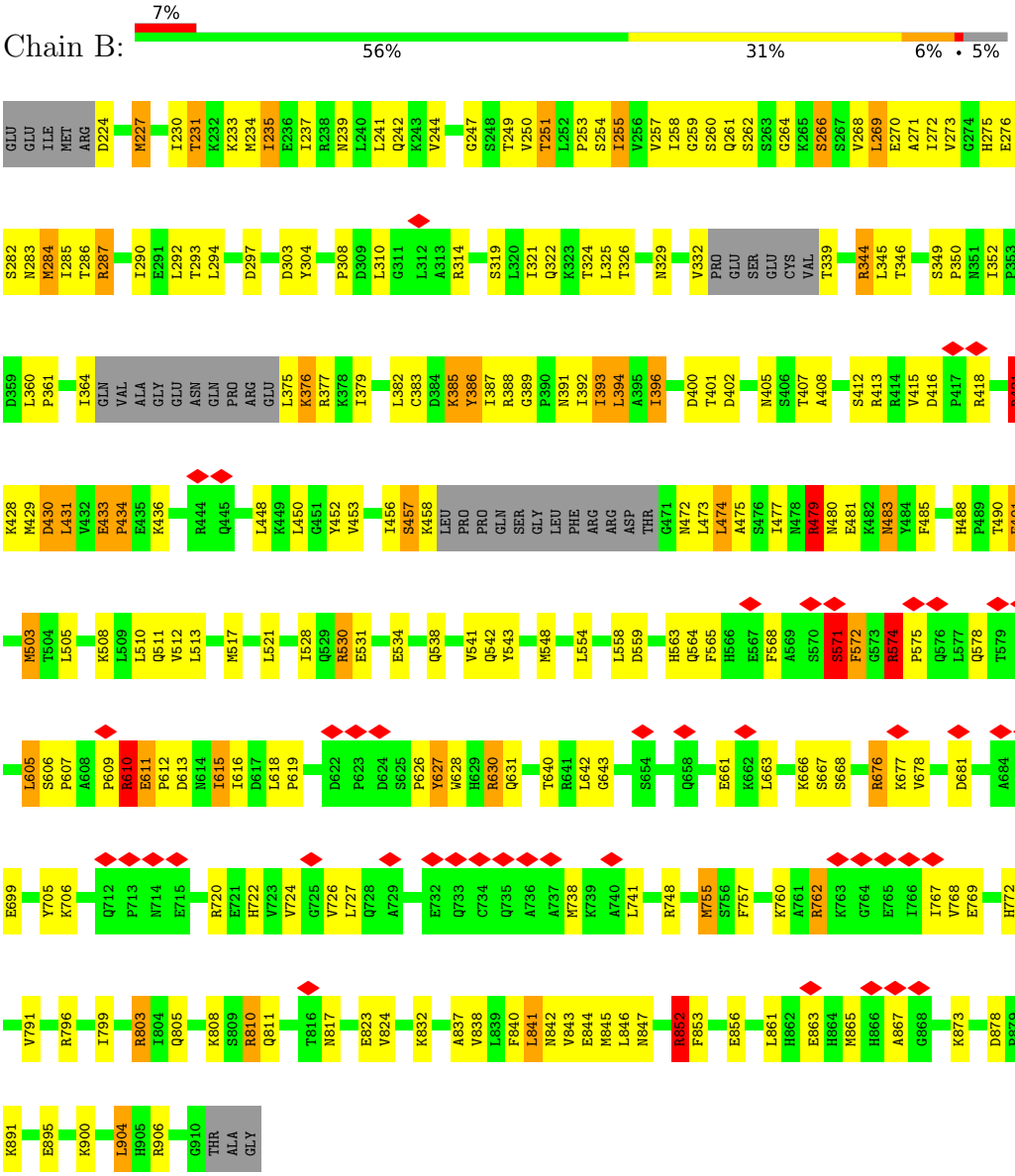
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: Putative mitochondrial dynamin protein



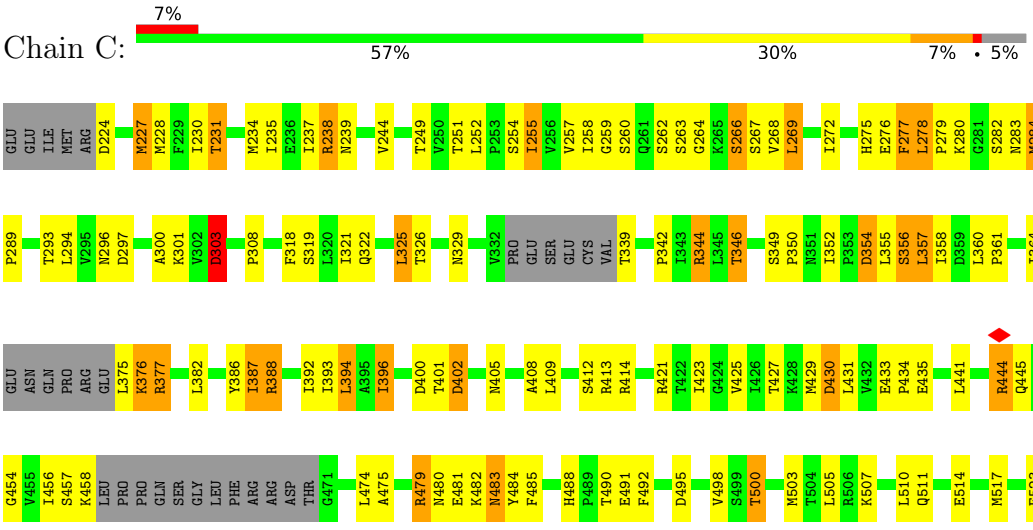
- Molecule 1: Putative mitochondrial dynamin protein

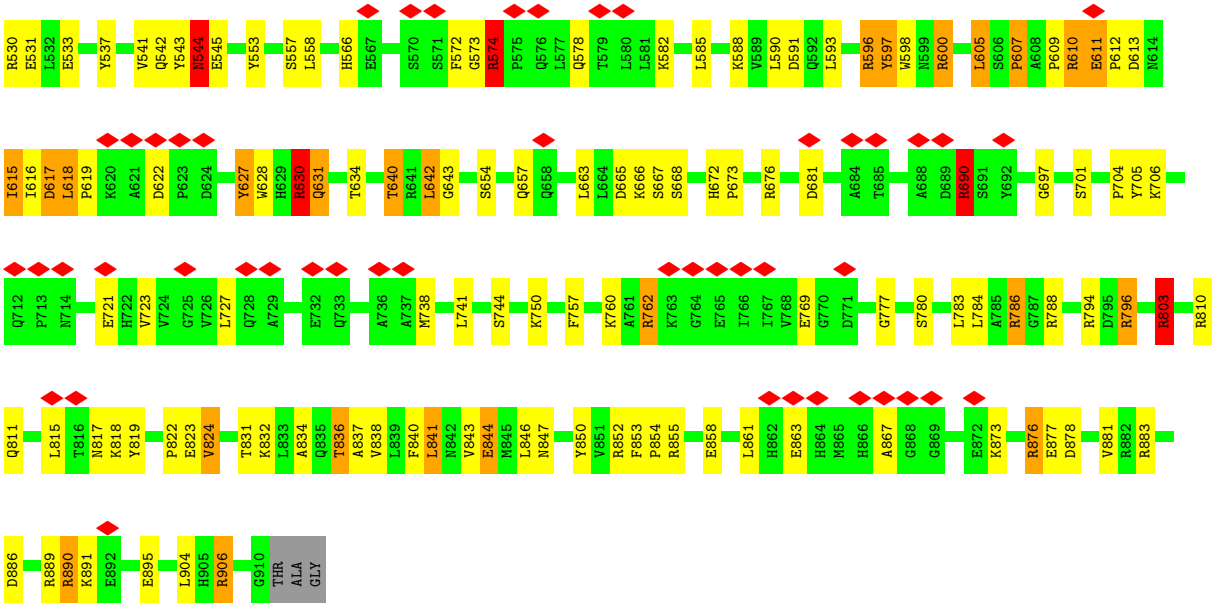
Chain B:



• Molecule 1: Putative mitochondrial dynamin protein

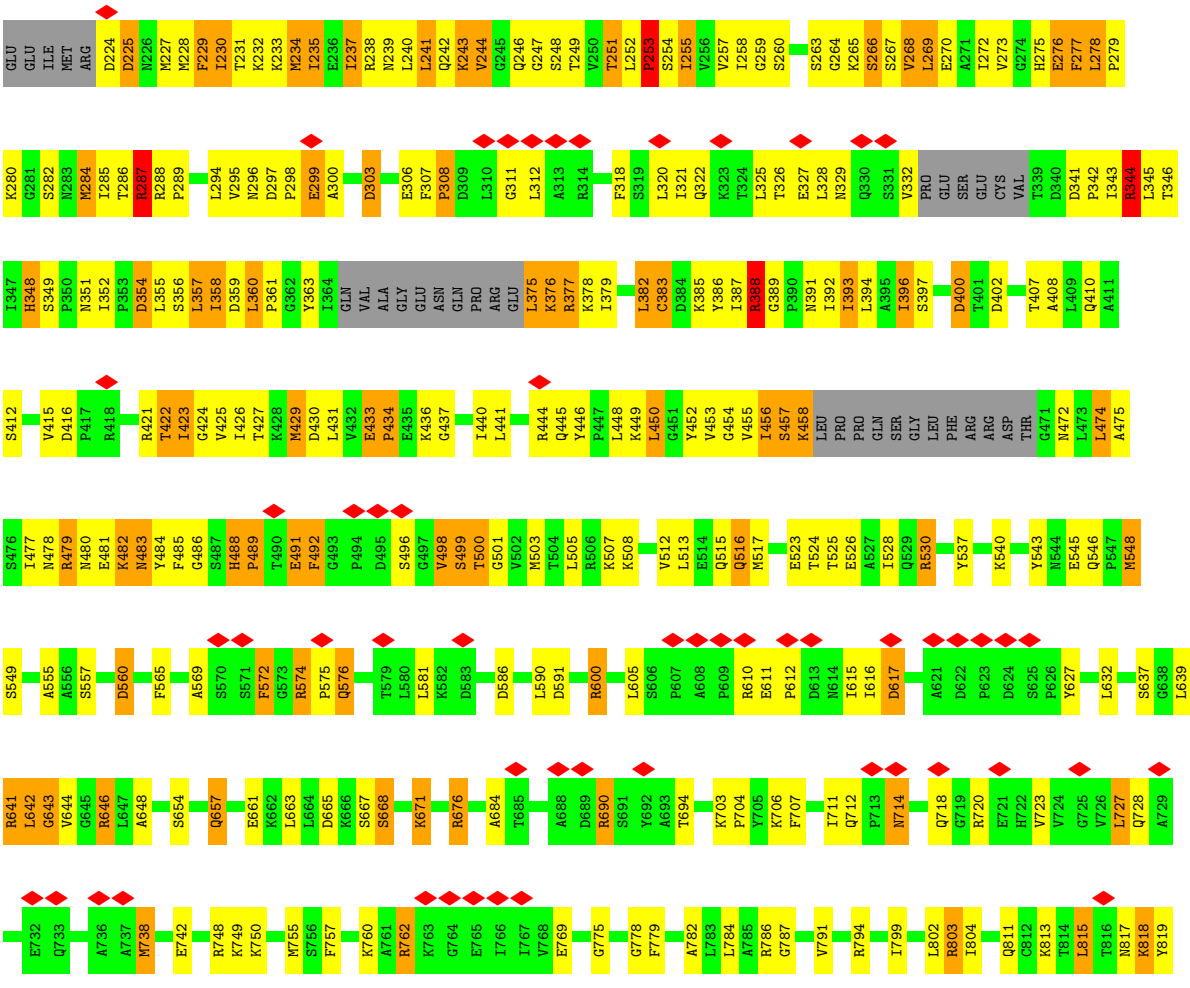
Chain C:

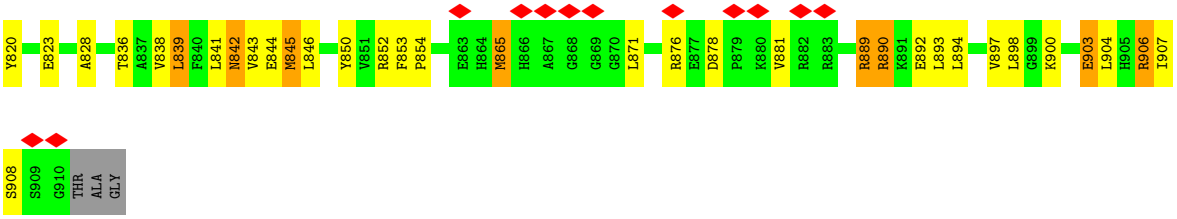




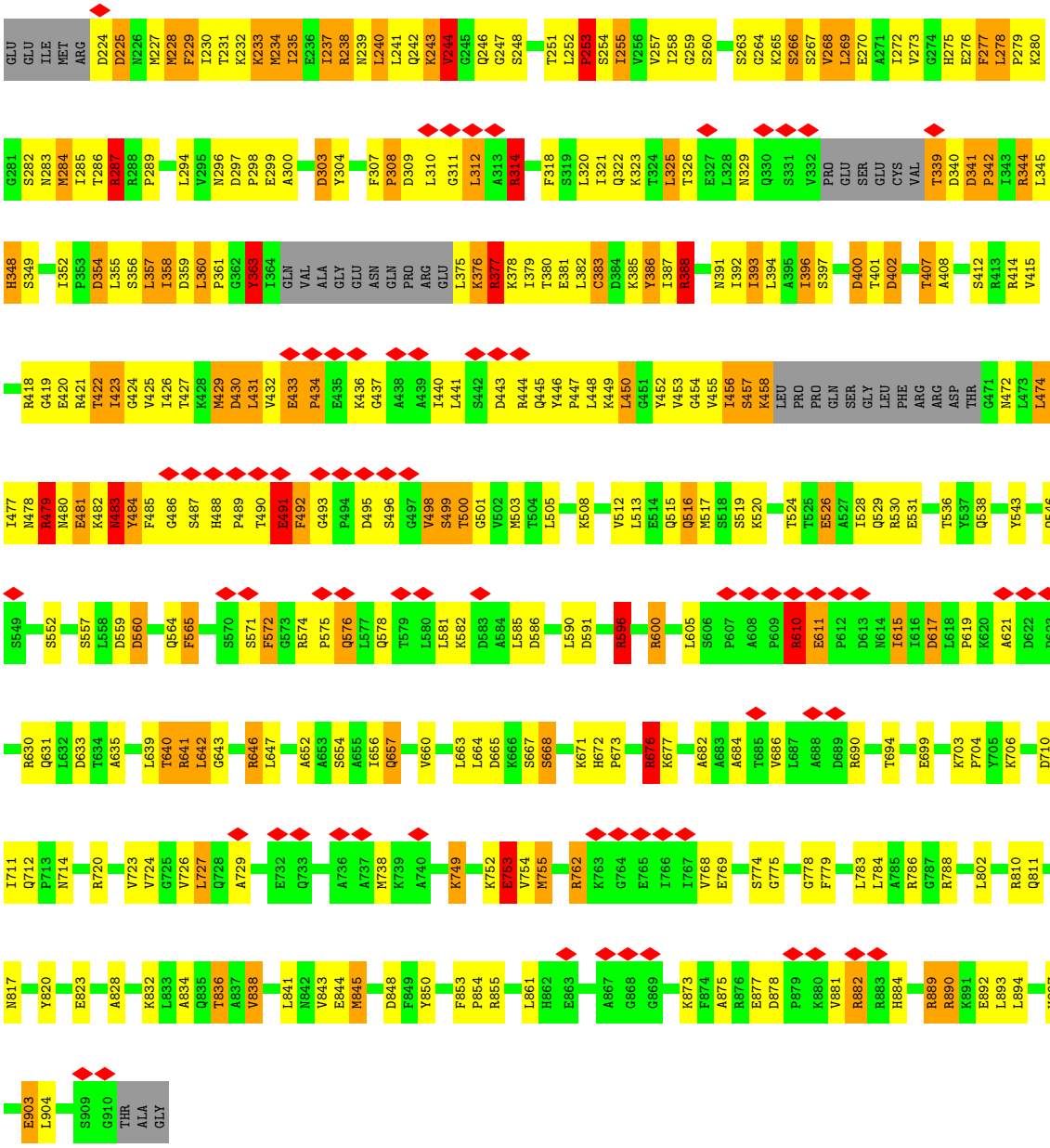
• Molecule 1: Putative mitochondrial dynamin protein

Chain D:

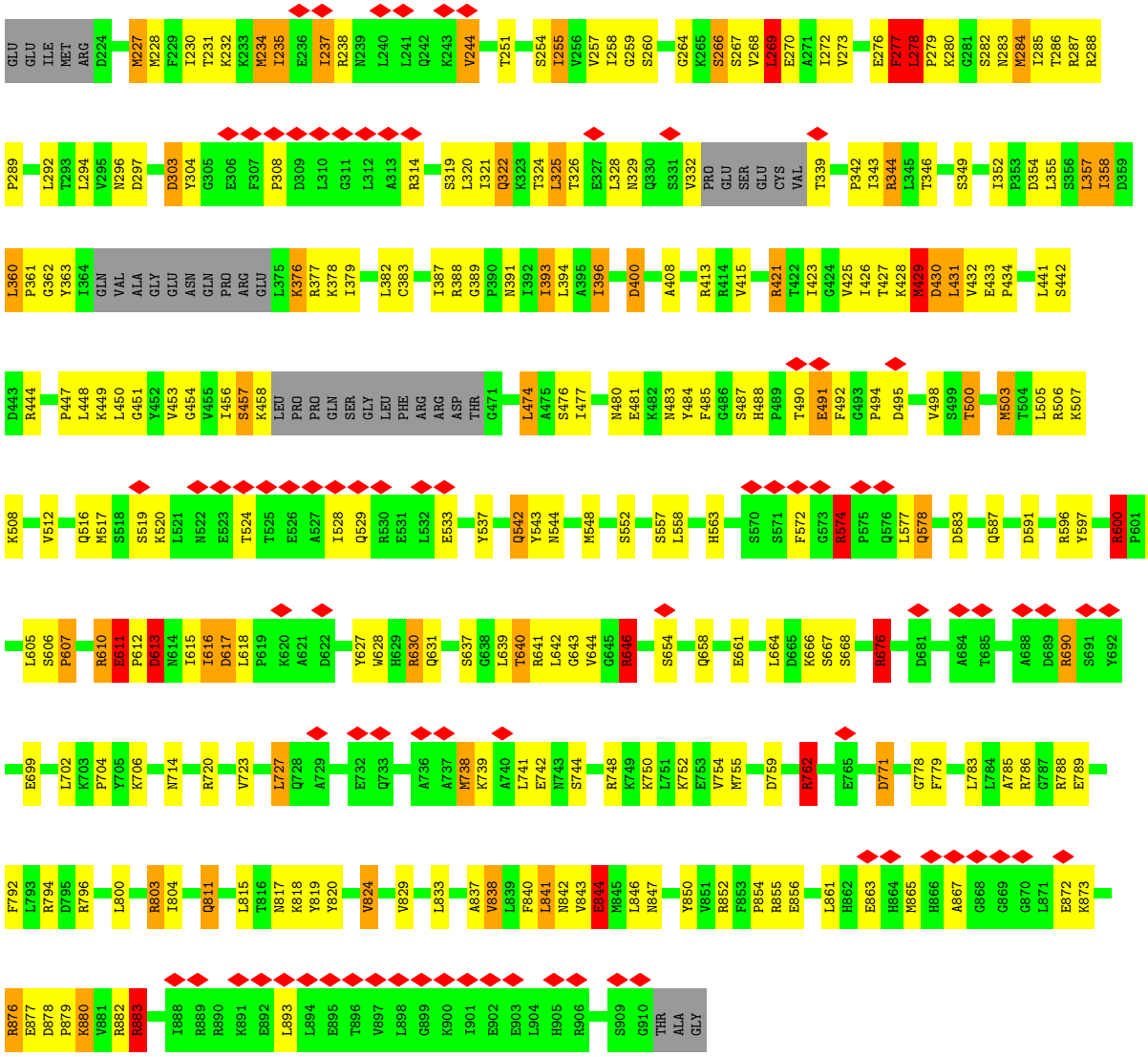




• Molecule 1: Putative mitochondrial dynamin protein

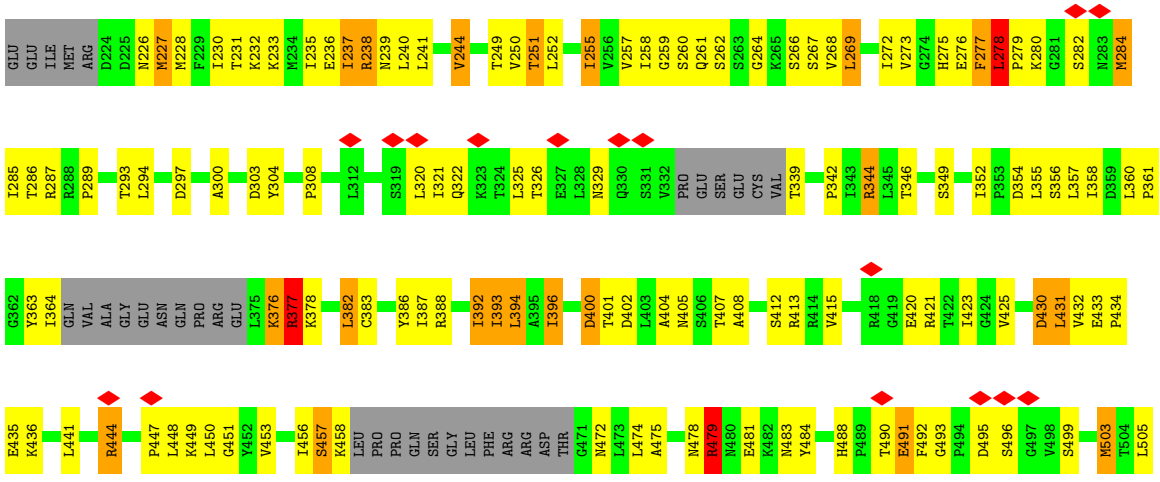


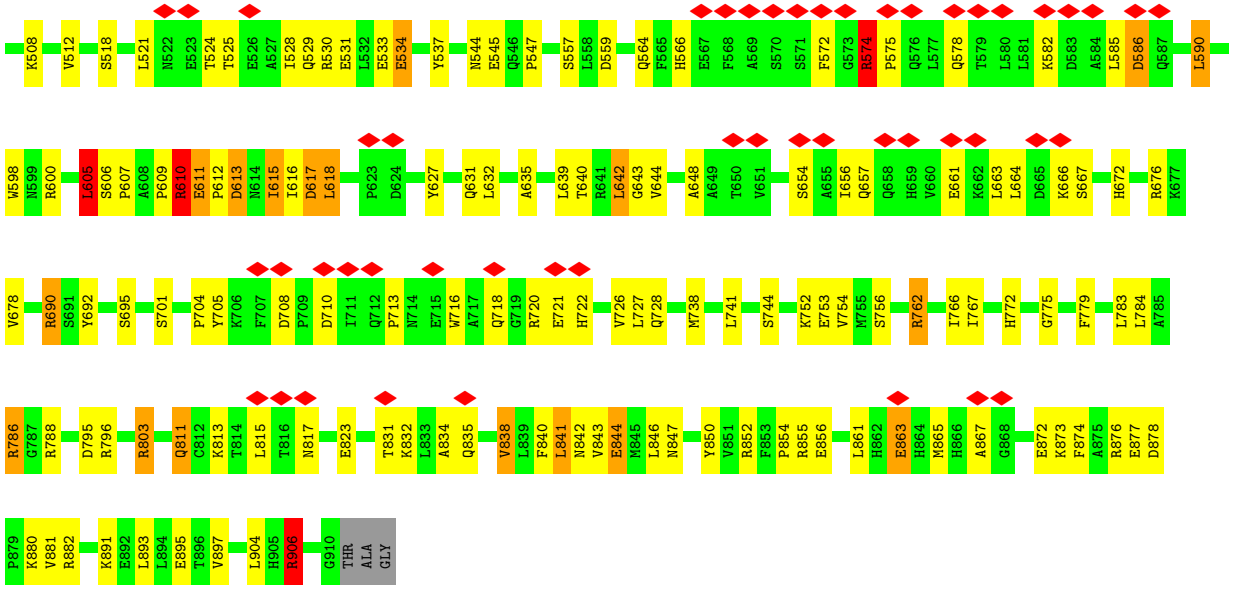
• Molecule 1: Putative mitochondrial dynamin protein



• Molecule 1: Putative mitochondrial dynamin protein

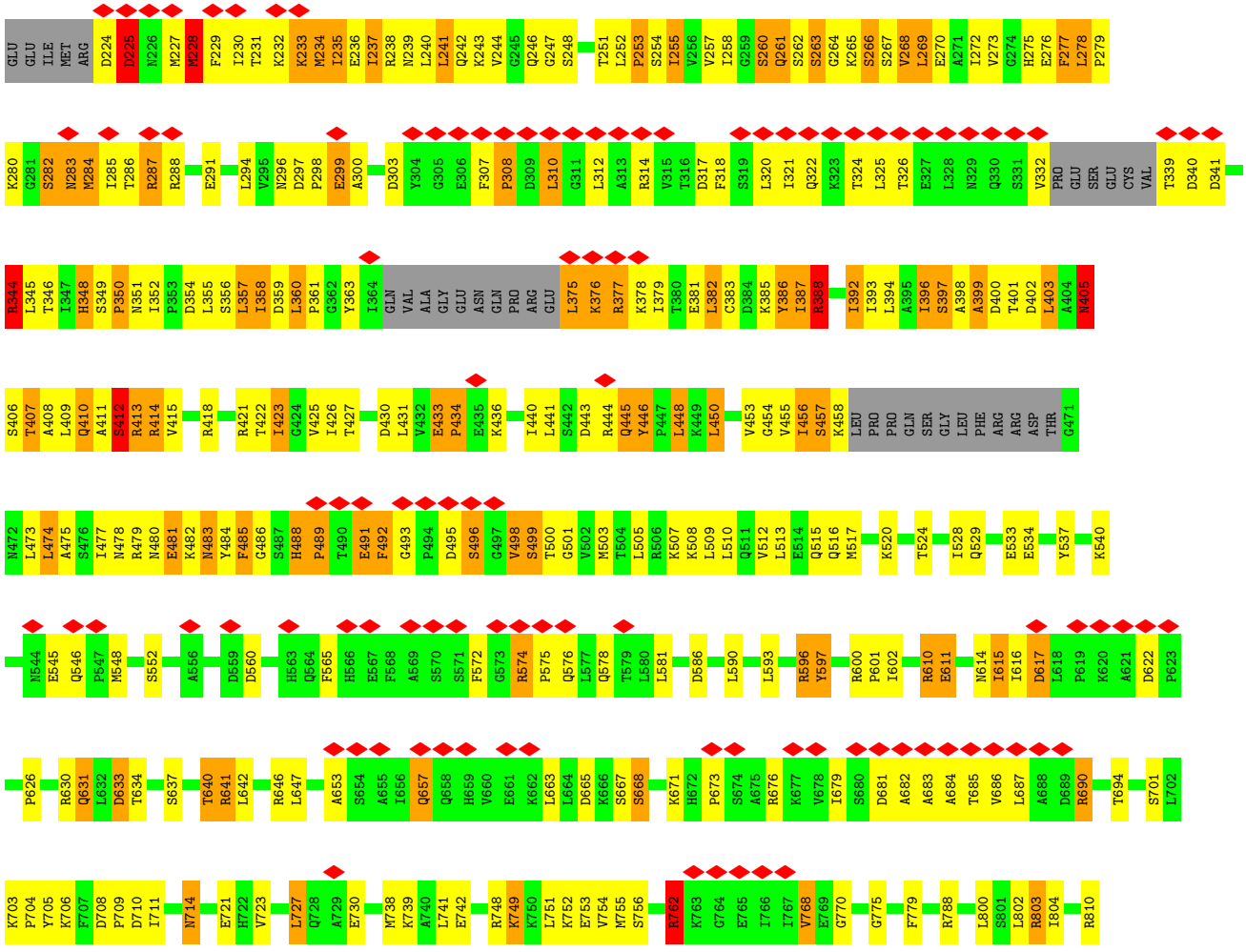
Chain G:

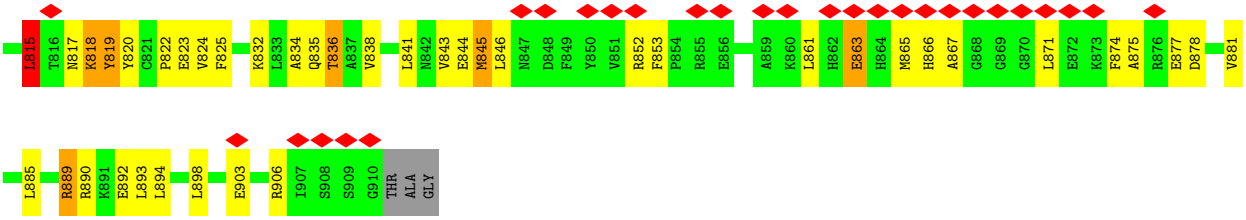




• Molecule 1: Putative mitochondrial dynamin protein

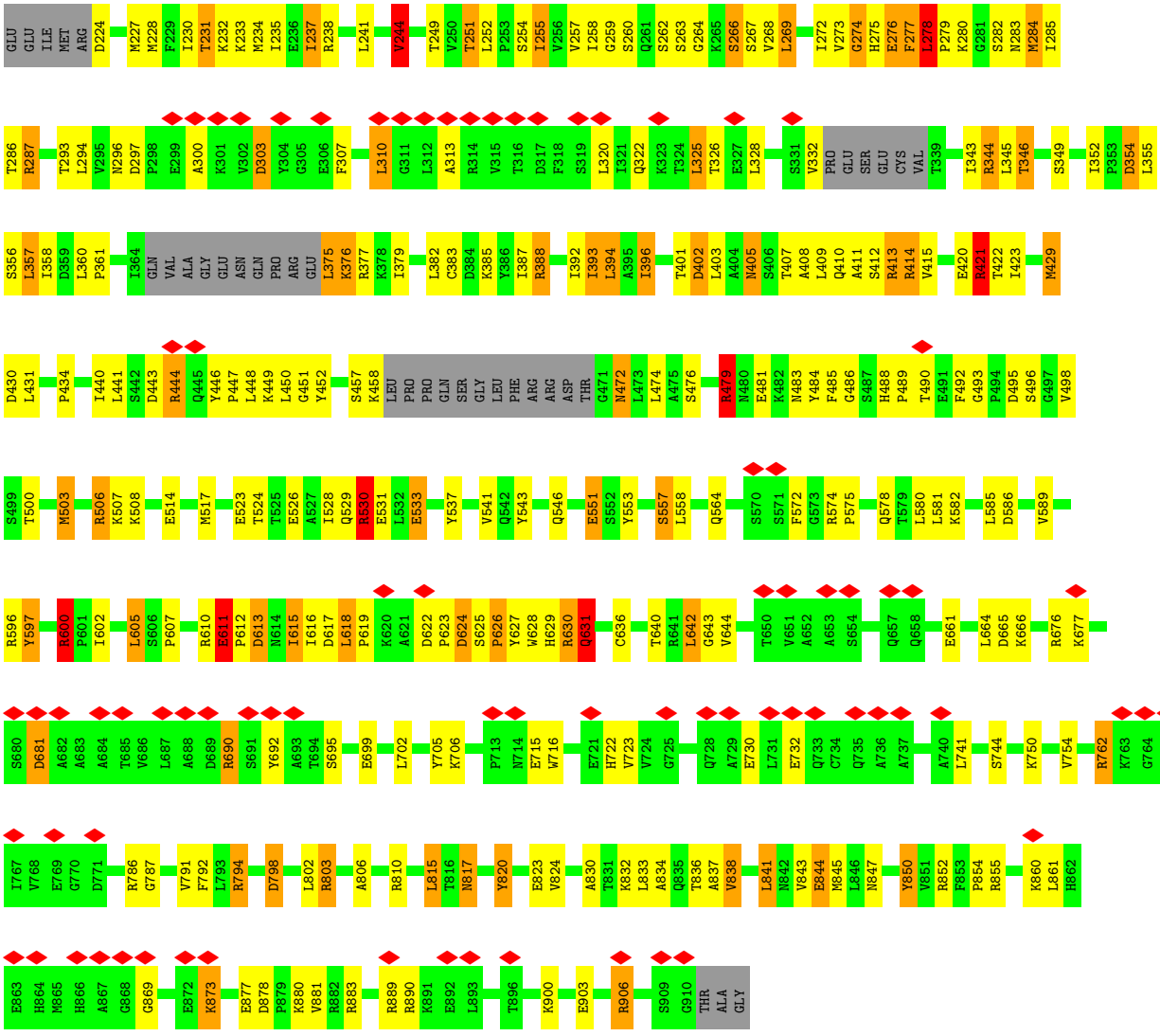
Chain H:





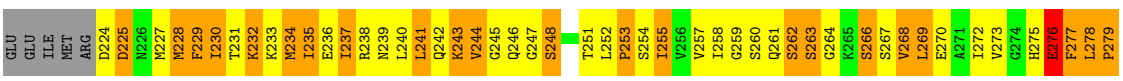
• Molecule 1: Putative mitochondrial dynamin protein

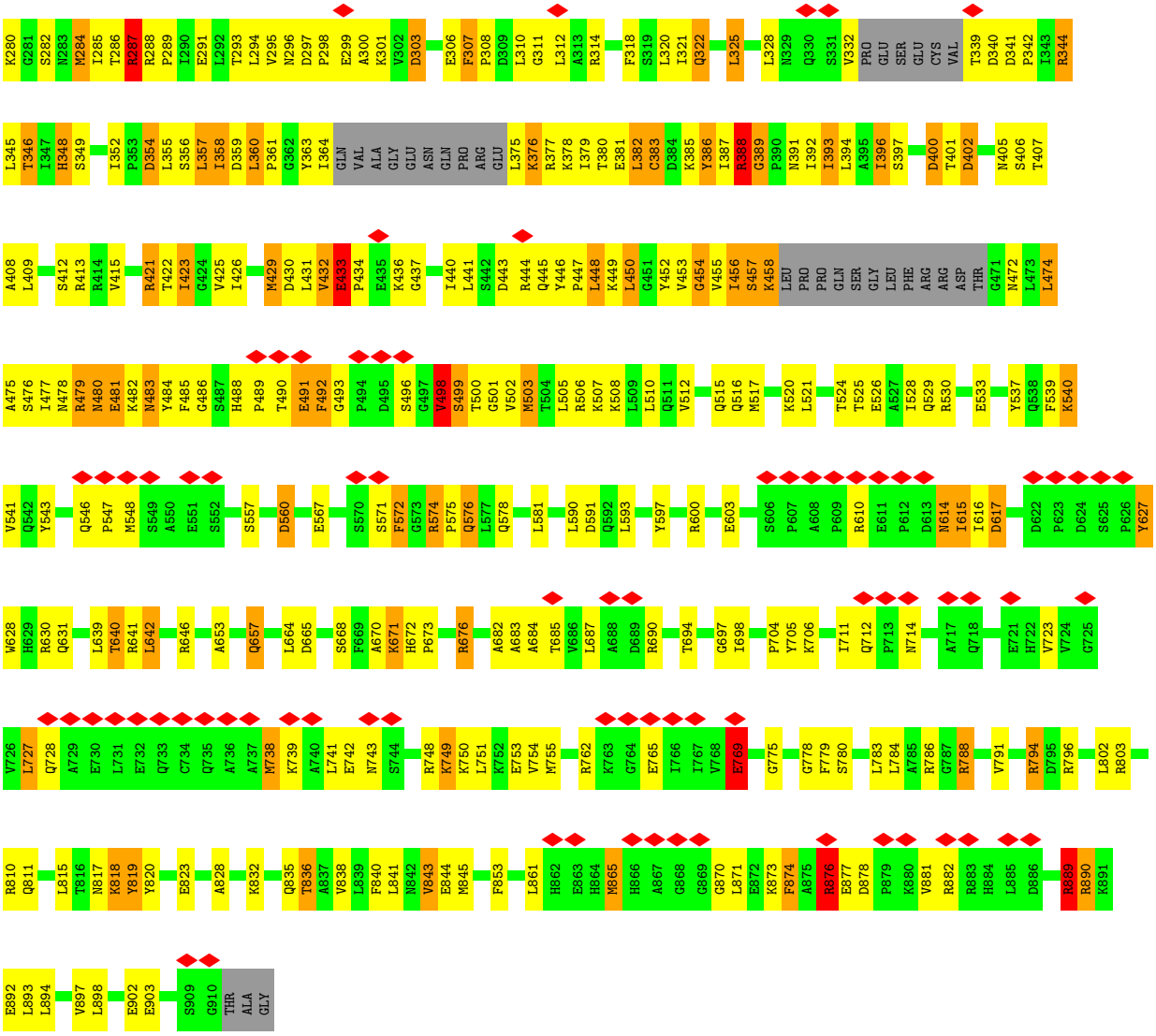
Chain I:



• Molecule 1: Putative mitochondrial dynamin protein

Chain J:




K280 G281 S282 N283 M284 I285 T286 R287 R288 P289 I290 E291 L292 T293 L294 V295 N296 D297 P298 E299 A300 K301 V302 D303 E306 F307 P308 D309 L310 G311 L312 A313 R314 F318 S319 L320 I321 Q322 L325 L328 N329 Q330 S331 V332 PRO GLU SER GLU CYS VAL T339 D340 D341 P342 I343 R344
L345 T346 I347 H348 S349 I352 P353 D354 L355 S356 L357 I358 D359 L360 P361 G362 Y363 I364 GLN VAL ALA GLY GLU ASN GLN PRO ARG GLU L375 K376 R377 K378 I379 T380 E381 L382 C383 D384 K385 Y386 I387 R388 G389 P390 N391 I392 I393 L394 A395 I396 S397 D400 T401 D402 N405 S406 T407
A408 L409 S412 R413 R414 V415 R421 T422 I423 G424 V425 I426 M429 D430 L431 V432 E433 P434 E435 K436 G437 I440 L441 S442 D443 R444 Q445 Y446 P447 L448 K449 L450 G451 Y452 V453 G454 V455 I456 S457 K458 LEU PRO PRO GLN SER GLY LEU PHE ARG ARG ASP THR G471 N472 L473 L474
A475 S476 I477 N478 R479 N480 E481 K482 N483 Y484 F485 G486 S487 H488 P489 T490 E491 F492 G493 P494 D495 S496 G497 V498 S499 T500 G501 V502 M503 T504 L505 R506 K507 K508 L509 L510 Q511 V512 Q515 Q516 M517 K520 L521 T524 T525 E526 A527 I528 Q529 R530 E533 Y537 Q538 F539 K540
V541 Q542 Y543 Q546 P547 M548 S549 A550 E551 S552 S557 D560 E567 S570 S571 F572 G573 R574 P575 Q576 L577 Q578 L581 L590 D591 Q592 L593 Y597 R600 E603 S606 P607 A608 P609 R610 E611 P612 D613 N614 I615 I616 D617 D622 P623 D624 S625 P626 Y627
W628 H629 R630 Q631 L639 T640 R641 L642 R646 A653 Q657 L664 D665 S668 F669 A670 K671 H672 P673 R676 A682 A683 A684 T685 V686 L687 A688 D689 R690 T694 G697 I698 P704 Y705 K706 I711 Q712 P713 N714 A717 Q718 E721 H722 V723 V724 G725
V726 L727 Q728 A729 E730 L731 E732 Q733 C734 Q735 A736 A737 M738 K739 A740 L741 E742 N743 S744 R748 K749 K750 L751 K752 E753 V754 M755 R762 K763 G764 E765 I766 I767 V768 E769 G775 G778 F779 S780 L783 L784 A785 R786 G787 R788 V791 R794 D795 R796 L802 R803
R810 Q811 L815 T816 N817 K818 Y819 Y820 E823 A828 K832 Q835 T836 A837 V838 L839 F840 L841 N842 V843 E844 M845 F853 L861 H862 E863 H864 M865 H866 A867 G868 G869 G870 L871 E872 K873 F874 A875 R876 E877 D878 P879 K880 V881 R882 R883 H884 L885 D886 R889 R890 K891
E892 L893 L894 V897 L898 E902 E903 S909 Q910 THR ALA GLY

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	1820	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY; CTF determination was done by Gctf and correction was performed by ctfphaseflip from IMOD	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	2	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	53000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	4.290	Depositor
Minimum map value	-1.812	Depositor
Average map value	0.127	Depositor
Map value standard deviation	0.496	Depositor
Recommended contour level	0.67	Depositor
Map size (Å)	432.0, 432.0, 432.0	wwPDB
Map dimensions	160, 160, 160	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.7, 2.7, 2.7	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	1.59	35/5238 (0.7%)	1.11	17/7075 (0.2%)
1	B	1.47	23/5238 (0.4%)	1.07	13/7075 (0.2%)
1	C	1.49	26/5238 (0.5%)	1.07	14/7075 (0.2%)
1	D	1.52	33/5238 (0.6%)	1.11	22/7075 (0.3%)
1	E	1.52	31/5238 (0.6%)	1.12	27/7075 (0.4%)
1	F	1.51	26/5238 (0.5%)	1.07	20/7075 (0.3%)
1	G	1.48	19/5238 (0.4%)	1.06	18/7075 (0.3%)
1	H	1.53	26/5238 (0.5%)	1.14	25/7075 (0.4%)
1	I	1.58	33/5238 (0.6%)	1.06	15/7075 (0.2%)
1	J	1.54	35/5238 (0.7%)	1.12	19/7075 (0.3%)
All	All	1.52	287/52380 (0.5%)	1.09	190/70750 (0.3%)

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	A	0	15
1	B	0	10
1	C	0	17
1	D	0	7
1	E	0	17
1	F	0	21
1	G	0	12
1	H	0	14
1	I	0	20
1	J	0	18
All	All	0	151

All (287) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	540	LYS	CD-CE	26.99	2.18	1.51
1	I	626	PRO	N-CD	20.12	1.76	1.47
1	I	626	PRO	N-CA	19.62	1.80	1.47
1	I	626	PRO	CA-CB	16.50	1.86	1.53
1	E	253	PRO	C-N	-11.31	1.08	1.34
1	J	769	GLU	CD-OE2	9.88	1.36	1.25
1	D	253	PRO	C-N	-9.68	1.11	1.34
1	H	253	PRO	C-N	-9.62	1.11	1.34
1	J	253	PRO	C-N	-9.51	1.12	1.34
1	I	626	PRO	CG-CD	8.91	1.80	1.50
1	I	526	GLU	CG-CD	-8.81	1.38	1.51
1	I	514	GLU	CD-OE1	8.33	1.34	1.25
1	C	523	GLU	CD-OE2	-8.25	1.16	1.25
1	A	451	GLY	N-CA	-8.18	1.33	1.46
1	J	738	MET	CG-SD	8.18	2.02	1.81
1	A	253	PRO	C-N	-8.12	1.15	1.34
1	A	738	MET	CG-SD	8.11	2.02	1.81
1	A	479	ARG	NE-CZ	8.07	1.43	1.33
1	D	306	GLU	CD-OE2	-8.07	1.16	1.25
1	J	386	TYR	CG-CD1	-8.04	1.28	1.39
1	F	882	ARG	NE-CZ	-8.04	1.22	1.33
1	I	429	MET	CG-SD	7.95	2.01	1.81
1	G	863	GLU	CD-OE2	7.81	1.34	1.25
1	I	845	MET	CG-SD	7.79	2.01	1.81
1	H	489	PRO	N-CD	7.66	1.58	1.47
1	C	227	MET	CG-SD	7.45	2.00	1.81
1	C	228	MET	CG-SD	7.44	2.00	1.81
1	J	503	MET	CG-SD	7.39	2.00	1.81
1	A	721	GLU	CD-OE1	7.26	1.33	1.25
1	E	342	PRO	N-CD	7.25	1.57	1.47
1	H	503	MET	CG-SD	7.21	1.99	1.81
1	I	852	ARG	CZ-NH1	-7.20	1.23	1.33
1	A	526	GLU	CD-OE2	7.13	1.33	1.25
1	H	299	GLU	CD-OE2	7.11	1.33	1.25
1	C	600	ARG	CZ-NH2	7.10	1.42	1.33
1	H	865	MET	N-CA	-7.06	1.32	1.46
1	E	314	ARG	NE-CZ	6.93	1.42	1.33
1	E	491	GLU	CD-OE1	6.93	1.33	1.25
1	D	299	GLU	CD-OE1	-6.91	1.18	1.25
1	A	551	GLU	CD-OE2	-6.85	1.18	1.25
1	E	253	PRO	N-CD	6.84	1.57	1.47
1	C	738	MET	CG-SD	6.81	1.98	1.81
1	D	503	MET	CG-SD	6.81	1.98	1.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	H	418	ARG	NE-CZ	6.76	1.41	1.33
1	A	429	MET	CG-SD	6.75	1.98	1.81
1	I	533	GLU	CD-OE1	6.75	1.33	1.25
1	C	876	ARG	CZ-NH1	6.73	1.41	1.33
1	H	863	GLU	CD-OE1	6.71	1.33	1.25
1	J	902	GLU	CD-OE1	6.71	1.33	1.25
1	E	753	GLU	CD-OE2	6.66	1.32	1.25
1	D	661	GLU	CD-OE1	-6.63	1.18	1.25
1	G	876	ARG	CZ-NH2	6.63	1.41	1.33
1	C	574	ARG	NE-CZ	6.63	1.41	1.33
1	B	452	TYR	CG-CD1	6.58	1.47	1.39
1	C	769	GLU	CD-OE1	6.57	1.32	1.25
1	F	362	GLY	N-CA	-6.57	1.36	1.46
1	I	228	MET	CG-SD	6.53	1.98	1.81
1	G	435	GLU	CD-OE1	6.51	1.32	1.25
1	D	612	PRO	N-CD	6.51	1.56	1.47
1	F	548	MET	CG-SD	6.51	1.98	1.81
1	B	429	MET	CG-SD	6.51	1.98	1.81
1	A	531	GLU	CD-OE2	-6.50	1.18	1.25
1	J	755	MET	CG-SD	6.46	1.98	1.81
1	E	227	MET	CG-SD	6.46	1.98	1.81
1	H	552	SER	CB-OG	-6.44	1.33	1.42
1	J	227	MET	CG-SD	6.42	1.97	1.81
1	D	227	MET	CG-SD	6.39	1.97	1.81
1	A	503	MET	CG-SD	6.38	1.97	1.81
1	A	548	MET	CG-SD	6.36	1.97	1.81
1	G	738	MET	CG-SD	6.35	1.97	1.81
1	D	890	ARG	CZ-NH1	-6.32	1.24	1.33
1	D	479	ARG	NE-CZ	-6.32	1.24	1.33
1	D	543	TYR	CE1-CZ	6.30	1.46	1.38
1	D	517	MET	CG-SD	6.29	1.97	1.81
1	H	517	MET	CG-SD	6.26	1.97	1.81
1	E	517	MET	CG-SD	6.23	1.97	1.81
1	B	699	GLU	CD-OE2	-6.21	1.18	1.25
1	H	738	MET	CG-SD	6.20	1.97	1.81
1	H	308	PRO	N-CD	6.18	1.56	1.47
1	D	865	MET	CG-SD	6.16	1.97	1.81
1	A	377	ARG	CZ-NH1	-6.15	1.25	1.33
1	A	253	PRO	N-CD	6.15	1.56	1.47
1	D	489	PRO	N-CD	6.14	1.56	1.47
1	F	234	MET	CG-SD	6.14	1.97	1.81
1	F	537	TYR	CD2-CE2	-6.13	1.30	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	227	MET	CG-SD	6.12	1.97	1.81
1	B	350	PRO	C-O	6.12	1.35	1.23
1	J	517	MET	CG-SD	6.11	1.97	1.81
1	F	227	MET	CG-SD	6.07	1.97	1.81
1	A	850	TYR	CG-CD2	-6.06	1.31	1.39
1	H	721	GLU	CG-CD	6.05	1.61	1.51
1	E	363	TYR	CE1-CZ	-6.05	1.30	1.38
1	G	534	GLU	CD-OE1	-6.05	1.19	1.25
1	D	908	SER	CB-OG	-6.04	1.34	1.42
1	J	548	MET	CG-SD	6.04	1.96	1.81
1	D	794	ARG	CZ-NH1	6.03	1.40	1.33
1	J	498	VAL	C-O	-6.03	1.11	1.23
1	B	883	ARG	C-O	6.03	1.34	1.23
1	D	429	MET	CG-SD	6.02	1.96	1.81
1	G	574	ARG	CZ-NH2	6.02	1.40	1.33
1	F	778	GLY	C-O	5.97	1.33	1.23
1	D	383	CYS	C-O	-5.97	1.12	1.23
1	E	503	MET	CG-SD	5.95	1.96	1.81
1	F	503	MET	CG-SD	5.95	1.96	1.81
1	E	531	GLU	CD-OE2	-5.93	1.19	1.25
1	B	386	TYR	CE2-CZ	-5.93	1.30	1.38
1	J	245	GLY	N-CA	-5.92	1.37	1.46
1	J	306	GLU	CG-CD	-5.91	1.43	1.51
1	F	738	MET	CG-SD	5.89	1.96	1.81
1	I	600	ARG	CZ-NH1	5.89	1.40	1.33
1	B	755	MET	CG-SD	5.89	1.96	1.81
1	D	308	PRO	N-CD	5.89	1.56	1.47
1	B	738	MET	CG-SD	5.89	1.96	1.81
1	I	730	GLU	CD-OE2	5.88	1.32	1.25
1	I	276	GLU	CD-OE1	5.88	1.32	1.25
1	E	755	MET	CG-SD	5.87	1.96	1.81
1	C	573	GLY	CA-C	5.87	1.61	1.51
1	H	386	TYR	CD2-CE2	-5.87	1.30	1.39
1	F	506	ARG	NE-CZ	5.86	1.40	1.33
1	A	543	TYR	CG-CD2	-5.85	1.31	1.39
1	C	545	GLU	CD-OE1	5.84	1.32	1.25
1	G	865	MET	CG-SD	5.84	1.96	1.81
1	J	603	GLU	CB-CG	5.83	1.63	1.52
1	I	850	TYR	CB-CG	-5.83	1.43	1.51
1	D	738	MET	CG-SD	5.83	1.96	1.81
1	H	548	MET	CG-SD	5.82	1.96	1.81
1	F	699	GLU	CD-OE2	5.81	1.32	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	574	ARG	CZ-NH1	5.79	1.40	1.33
1	A	755	MET	CG-SD	5.78	1.96	1.81
1	B	543	TYR	CE1-CZ	-5.78	1.31	1.38
1	I	820	TYR	CB-CG	5.78	1.60	1.51
1	J	307	PHE	C-N	5.77	1.45	1.34
1	C	596	ARG	NE-CZ	5.75	1.40	1.33
1	I	526	GLU	CD-OE2	5.75	1.31	1.25
1	A	627	TYR	CE2-CZ	-5.74	1.31	1.38
1	C	597	TYR	CG-CD1	5.74	1.46	1.39
1	E	484	TYR	CZ-OH	5.74	1.47	1.37
1	E	228	MET	CG-SD	5.74	1.96	1.81
1	E	724	VAL	C-N	5.72	1.43	1.33
1	J	526	GLU	CD-OE2	-5.72	1.19	1.25
1	C	429	MET	CG-SD	5.71	1.96	1.81
1	J	865	MET	CG-SD	5.71	1.96	1.81
1	B	386	TYR	CD1-CE1	-5.69	1.30	1.39
1	A	865	MET	CG-SD	5.68	1.96	1.81
1	E	386	TYR	CG-CD2	-5.68	1.31	1.39
1	J	386	TYR	CB-CG	-5.67	1.43	1.51
1	I	692	TYR	CE2-CZ	5.67	1.46	1.38
1	I	503	MET	CG-SD	5.67	1.95	1.81
1	A	803	ARG	NE-CZ	-5.66	1.25	1.33
1	I	452	TYR	CG-CD2	-5.66	1.31	1.39
1	C	607	PRO	N-CD	-5.65	1.40	1.47
1	I	300	ALA	CA-CB	5.64	1.64	1.52
1	D	342	PRO	N-CD	5.63	1.55	1.47
1	I	244	VAL	C-N	5.63	1.43	1.33
1	I	732	GLU	CD-OE1	-5.63	1.19	1.25
1	D	530	ARG	CZ-NH1	-5.62	1.25	1.33
1	E	890	ARG	CZ-NH2	5.62	1.40	1.33
1	J	892	GLU	CD-OE1	5.62	1.31	1.25
1	C	350	PRO	N-CD	5.62	1.55	1.47
1	H	865	MET	CG-SD	5.61	1.95	1.81
1	B	571	SER	N-CA	5.61	1.57	1.46
1	H	810	ARG	CZ-NH1	5.60	1.40	1.33
1	C	598	TRP	CD2-CE2	5.59	1.48	1.41
1	E	429	MET	CG-SD	5.59	1.95	1.81
1	A	433	GLU	CD-OE1	5.58	1.31	1.25
1	A	762	ARG	NE-CZ	5.58	1.40	1.33
1	D	637	SER	CB-OG	-5.58	1.34	1.42
1	G	228	MET	CG-SD	5.57	1.95	1.81
1	F	856	GLU	CD-OE2	-5.57	1.19	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	548	MET	CG-SD	5.56	1.95	1.81
1	F	611	GLU	CG-CD	5.56	1.60	1.51
1	A	692	TYR	CB-CG	5.55	1.59	1.51
1	A	476	SER	CA-CB	-5.55	1.44	1.52
1	H	392	ILE	C-O	5.55	1.33	1.23
1	B	503	MET	CG-SD	5.54	1.95	1.81
1	J	796	ARG	NE-CZ	5.53	1.40	1.33
1	B	413	ARG	CZ-NH2	-5.51	1.25	1.33
1	C	844	GLU	CD-OE2	-5.51	1.19	1.25
1	E	388	ARG	C-O	-5.51	1.12	1.23
1	D	760	LYS	C-O	5.50	1.33	1.23
1	I	523	GLU	CD-OE1	-5.50	1.19	1.25
1	J	567	GLU	CD-OE2	5.50	1.31	1.25
1	A	692	TYR	CG-CD2	5.49	1.46	1.39
1	D	646	ARG	CZ-NH2	5.49	1.40	1.33
1	F	476	SER	CA-CB	5.48	1.61	1.52
1	J	429	MET	CG-SD	5.46	1.95	1.81
1	A	228	MET	CG-SD	5.46	1.95	1.81
1	F	865	MET	CG-SD	5.45	1.95	1.81
1	D	803	ARG	CD-NE	5.45	1.55	1.46
1	H	350	PRO	N-CD	5.45	1.55	1.47
1	G	872	GLU	CD-OE2	-5.43	1.19	1.25
1	H	228	MET	CG-SD	5.43	1.95	1.81
1	F	789	GLU	CD-OE1	5.43	1.31	1.25
1	B	434	PRO	N-CD	-5.43	1.40	1.47
1	D	276	GLU	CD-OE1	-5.43	1.19	1.25
1	J	248	SER	CB-OG	-5.42	1.35	1.42
1	J	543	TYR	CE1-CZ	5.42	1.45	1.38
1	E	903	GLU	CD-OE2	5.42	1.31	1.25
1	D	845	MET	CG-SD	5.42	1.95	1.81
1	A	238	ARG	NE-CZ	5.41	1.40	1.33
1	C	627	TYR	CG-CD2	-5.41	1.32	1.39
1	H	665	ASP	CG-OD1	-5.41	1.12	1.25
1	F	676	ARG	NE-CZ	5.39	1.40	1.33
1	A	845	MET	CG-SD	5.39	1.95	1.81
1	J	600	ARG	CZ-NH2	-5.39	1.26	1.33
1	C	517	MET	CG-SD	5.39	1.95	1.81
1	F	606	SER	CB-OG	-5.38	1.35	1.42
1	I	383	CYS	CB-SG	-5.38	1.73	1.81
1	A	610	ARG	NE-CZ	5.37	1.40	1.33
1	G	304	TYR	CZ-OH	5.36	1.47	1.37
1	A	270	GLU	CD-OE2	5.36	1.31	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	G	856	GLU	CD-OE1	5.36	1.31	1.25
1	E	388	ARG	NE-CZ	-5.36	1.26	1.33
1	F	433	GLU	CD-OE1	-5.36	1.19	1.25
1	E	419	GLY	N-CA	-5.35	1.38	1.46
1	D	386	TYR	CD1-CE1	-5.35	1.31	1.39
1	A	531	GLU	CD-OE1	5.33	1.31	1.25
1	I	715	GLU	CD-OE2	-5.33	1.19	1.25
1	H	234	MET	CG-SD	5.32	1.95	1.81
1	D	755	MET	CG-SD	5.32	1.95	1.81
1	E	699	GLU	CD-OE1	5.32	1.31	1.25
1	E	845	MET	CG-SD	5.31	1.95	1.81
1	H	681	ASP	C-O	-5.31	1.13	1.23
1	E	552	SER	CB-OG	5.31	1.49	1.42
1	G	420	GLU	CD-OE1	5.31	1.31	1.25
1	C	387	ILE	C-O	5.30	1.33	1.23
1	F	429	MET	CG-SD	5.29	1.94	1.81
1	J	454	GLY	N-CA	-5.28	1.38	1.46
1	B	457	SER	CB-OG	-5.28	1.35	1.42
1	I	517	MET	CG-SD	5.28	1.94	1.81
1	E	619	PRO	N-CD	5.26	1.55	1.47
1	J	406	SER	CB-OG	-5.26	1.35	1.42
1	I	631	GLN	N-CA	-5.26	1.35	1.46
1	B	407	THR	C-N	5.26	1.46	1.34
1	B	247	GLY	CA-C	-5.25	1.43	1.51
1	G	484	TYR	CG-CD1	5.25	1.46	1.39
1	D	718	GLN	C-O	5.25	1.33	1.23
1	D	600	ARG	NE-CZ	5.24	1.39	1.33
1	D	253	PRO	N-CD	5.23	1.55	1.47
1	J	421	ARG	CZ-NH1	-5.23	1.26	1.33
1	A	282	SER	CA-CB	5.23	1.60	1.52
1	E	630	ARG	CD-NE	5.23	1.55	1.46
1	B	845	MET	CG-SD	5.22	1.94	1.81
1	F	876	ARG	CZ-NH2	5.21	1.39	1.33
1	E	738	MET	CG-SD	5.21	1.94	1.81
1	C	537	TYR	CD1-CE1	5.20	1.47	1.39
1	H	845	MET	CG-SD	5.20	1.94	1.81
1	F	611	GLU	CD-OE2	-5.19	1.20	1.25
1	H	756	SER	CB-OG	5.19	1.49	1.42
1	E	308	PRO	N-CD	5.19	1.55	1.47
1	C	414	ARG	NE-CZ	5.18	1.39	1.33
1	J	391	ASN	N-CA	-5.18	1.35	1.46
1	G	533	GLU	CG-CD	5.18	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	514	GLU	CD-OE1	-5.16	1.20	1.25
1	G	227	MET	CG-SD	5.16	1.94	1.81
1	G	499	SER	CB-OG	5.16	1.49	1.42
1	H	260	SER	CB-OG	-5.12	1.35	1.42
1	J	627	TYR	CG-CD1	5.12	1.45	1.39
1	I	626	PRO	CB-CG	5.11	1.75	1.50
1	J	276	GLU	CD-OE2	-5.11	1.20	1.25
1	B	304	TYR	CB-CG	5.10	1.59	1.51
1	C	750	LYS	N-CA	-5.09	1.36	1.46
1	E	339	THR	CB-OG1	-5.08	1.33	1.43
1	H	633	ASP	CB-CG	5.08	1.62	1.51
1	J	539	PHE	CG-CD2	5.08	1.46	1.38
1	E	536	THR	C-O	5.08	1.33	1.23
1	G	728	GLN	C-O	5.07	1.32	1.23
1	C	435	GLU	CD-OE2	-5.07	1.20	1.25
1	D	523	GLU	CG-CD	-5.07	1.44	1.51
1	B	627	TYR	CE2-CZ	5.06	1.45	1.38
1	B	699	GLU	CB-CG	5.06	1.61	1.52
1	I	869	GLY	C-N	5.06	1.42	1.33
1	F	494	PRO	N-CD	-5.06	1.40	1.47
1	I	551	GLU	CG-CD	5.05	1.59	1.51
1	J	547	PRO	CA-C	5.04	1.62	1.52
1	F	228	MET	CG-SD	5.04	1.94	1.81
1	C	610	ARG	CZ-NH2	-5.03	1.26	1.33
1	A	880	LYS	CD-CE	5.03	1.63	1.51
1	G	721	GLU	CD-OE1	-5.03	1.20	1.25
1	I	274	GLY	N-CA	-5.03	1.38	1.46
1	A	730	GLU	CD-OE2	5.02	1.31	1.25
1	G	413	ARG	CZ-NH2	5.02	1.39	1.33
1	J	819	TYR	CE2-CZ	-5.02	1.32	1.38
1	F	844	GLU	CD-OE2	-5.01	1.20	1.25
1	C	234	MET	CG-SD	5.01	1.94	1.81
1	I	597	TYR	CG-CD1	-5.01	1.32	1.39
1	J	279	PRO	N-CD	-5.01	1.40	1.47

All (190) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	794	ARG	NE-CZ-NH2	-11.06	114.77	120.30
1	G	906	ARG	NE-CZ-NH2	-9.87	115.36	120.30
1	C	630	ARG	NE-CZ-NH1	-9.74	115.43	120.30
1	B	479	ARG	NE-CZ-NH2	-9.32	115.64	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	238	ARG	NE-CZ-NH1	-9.23	115.69	120.30
1	E	418	ARG	NE-CZ-NH2	-8.80	115.90	120.30
1	B	421	ARG	NE-CZ-NH1	-8.19	116.21	120.30
1	G	788	ARG	NE-CZ-NH2	8.19	124.39	120.30
1	J	676	ARG	NE-CZ-NH1	-8.07	116.27	120.30
1	A	882	ARG	NE-CZ-NH1	-8.05	116.28	120.30
1	E	238	ARG	NE-CZ-NH1	-8.00	116.30	120.30
1	G	479	ARG	NE-CZ-NH1	7.97	124.28	120.30
1	G	852	ARG	NE-CZ-NH1	-7.84	116.38	120.30
1	C	794	ARG	NE-CZ-NH2	-7.72	116.44	120.30
1	D	852	ARG	NE-CZ-NH1	-7.60	116.50	120.30
1	E	786	ARG	NE-CZ-NH1	-7.58	116.51	120.30
1	E	377	ARG	NE-CZ-NH2	-7.54	116.53	120.30
1	C	906	ARG	NE-CZ-NH2	-7.54	116.53	120.30
1	H	852	ARG	NE-CZ-NH1	-7.38	116.61	120.30
1	B	418	ARG	NE-CZ-NH1	-7.34	116.63	120.30
1	J	876	ARG	NE-CZ-NH2	-7.32	116.64	120.30
1	A	444	ARG	NE-CZ-NH2	-7.30	116.65	120.30
1	J	788	ARG	NE-CZ-NH1	-7.27	116.67	120.30
1	F	600	ARG	NE-CZ-NH2	-7.25	116.67	120.30
1	H	225	ASP	CB-CG-OD1	-7.13	111.88	118.30
1	C	803	ARG	NE-CZ-NH2	7.09	123.85	120.30
1	C	796	ARG	NE-CZ-NH1	-7.08	116.76	120.30
1	B	530	ARG	NE-CZ-NH2	-7.08	116.76	120.30
1	G	882	ARG	NE-CZ-NH2	-7.04	116.78	120.30
1	C	890	ARG	NE-CZ-NH2	-7.04	116.78	120.30
1	B	852	ARG	NE-CZ-NH2	-7.00	116.80	120.30
1	H	819	TYR	CB-CG-CD2	6.98	125.19	121.00
1	F	630	ARG	NE-CZ-NH2	-6.97	116.81	120.30
1	B	610	ARG	NE-CZ-NH1	-6.97	116.81	120.30
1	H	889	ARG	NE-CZ-NH2	-6.96	116.82	120.30
1	D	641	ARG	NE-CZ-NH1	6.93	123.77	120.30
1	E	238	ARG	NE-CZ-NH2	6.91	123.75	120.30
1	B	890	ARG	NE-CZ-NH1	-6.90	116.85	120.30
1	I	798	ASP	CB-CG-OD1	-6.90	112.09	118.30
1	C	627	TYR	CB-CG-CD1	-6.88	116.87	121.00
1	H	890	ARG	NE-CZ-NH2	-6.88	116.86	120.30
1	H	819	TYR	CB-CG-CD1	-6.84	116.89	121.00
1	D	889	ARG	NE-CZ-NH2	-6.83	116.89	120.30
1	J	530	ARG	NE-CZ-NH1	-6.81	116.90	120.30
1	I	889	ARG	NE-CZ-NH1	-6.80	116.90	120.30
1	G	874	PHE	CB-CG-CD2	-6.75	116.07	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	444	ARG	NE-CZ-NH2	-6.74	116.93	120.30
1	G	586	ASP	CB-CG-OD2	-6.73	112.25	118.30
1	H	344	ARG	NE-CZ-NH1	-6.68	116.96	120.30
1	G	377	ARG	NE-CZ-NH1	-6.68	116.96	120.30
1	F	676	ARG	NE-CZ-NH2	-6.65	116.97	120.30
1	G	788	ARG	NE-CZ-NH1	-6.63	116.98	120.30
1	D	234	MET	CB-CG-SD	-6.63	92.52	112.40
1	H	803	ARG	NE-CZ-NH1	-6.62	116.99	120.30
1	J	803	ARG	NE-CZ-NH1	-6.62	116.99	120.30
1	J	314	ARG	NE-CZ-NH2	-6.60	117.00	120.30
1	A	889	ARG	NE-CZ-NH1	-6.59	117.01	120.30
1	I	530	ARG	NE-CZ-NH2	-6.55	117.03	120.30
1	I	600	ARG	NE-CZ-NH2	-6.55	117.03	120.30
1	F	277	PHE	CB-CG-CD1	6.49	125.34	120.80
1	E	244	VAL	CB-CA-C	-6.47	99.11	111.40
1	D	244	VAL	CB-CA-C	-6.45	99.15	111.40
1	D	224	ASP	CB-CG-OD2	6.42	124.08	118.30
1	F	646	ARG	NE-CZ-NH1	-6.42	117.09	120.30
1	H	485	PHE	CB-CG-CD2	6.39	125.27	120.80
1	C	278	LEU	CA-CB-CG	6.36	129.93	115.30
1	H	762	ARG	NE-CZ-NH1	-6.34	117.13	120.30
1	D	627	TYR	CB-CG-CD1	6.33	124.80	121.00
1	J	574	ARG	NE-CZ-NH2	-6.32	117.14	120.30
1	D	344	ARG	NE-CZ-NH2	-6.31	117.14	120.30
1	F	720	ARG	NE-CZ-NH2	6.30	123.45	120.30
1	H	597	TYR	CB-CG-CD1	-6.30	117.22	121.00
1	D	641	ARG	NE-CZ-NH2	-6.27	117.16	120.30
1	F	820	TYR	CB-CG-CD2	-6.25	117.25	121.00
1	I	605	LEU	CA-CB-CG	6.24	129.65	115.30
1	I	413	ARG	NE-CZ-NH1	-6.20	117.20	120.30
1	H	788	ARG	NE-CZ-NH1	-6.19	117.20	120.30
1	H	597	TYR	CB-CG-CD2	6.17	124.70	121.00
1	B	630	ARG	NE-CZ-NH1	-6.15	117.22	120.30
1	J	874	PHE	CB-CG-CD1	-6.15	116.50	120.80
1	H	815	LEU	CA-CB-CG	6.12	129.37	115.30
1	E	633	ASP	CB-CG-OD2	6.11	123.80	118.30
1	E	414	ARG	NE-CZ-NH1	-6.06	117.27	120.30
1	B	574	ARG	NE-CZ-NH1	-6.06	117.27	120.30
1	F	883	ARG	NE-CZ-NH2	-6.03	117.29	120.30
1	B	596	ARG	NE-CZ-NH1	6.01	123.31	120.30
1	I	810	ARG	NE-CZ-NH1	-6.00	117.30	120.30
1	A	876	ARG	NE-CZ-NH2	-6.00	117.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	906	ARG	NE-CZ-NH1	-5.96	117.32	120.30
1	C	543	TYR	CB-CG-CD2	-5.96	117.42	121.00
1	E	314	ARG	NE-CZ-NH1	-5.93	117.33	120.30
1	H	234	MET	CB-CG-SD	-5.92	94.64	112.40
1	E	882	ARG	NE-CZ-NH2	-5.91	117.34	120.30
1	A	491	GLU	O-C-N	-5.91	113.25	122.70
1	A	433	GLU	C-N-CD	-5.90	107.61	120.60
1	E	720	ARG	NE-CZ-NH2	5.89	123.24	120.30
1	A	855	ARG	NE-CZ-NH1	-5.86	117.37	120.30
1	A	610	ARG	NE-CZ-NH1	-5.86	117.37	120.30
1	I	421	ARG	NE-CZ-NH1	-5.85	117.38	120.30
1	A	849	PHE	CB-CG-CD2	-5.84	116.71	120.80
1	H	288	ARG	NE-CZ-NH2	-5.80	117.40	120.30
1	G	413	ARG	NE-CZ-NH1	-5.78	117.41	120.30
1	C	238	ARG	NE-CZ-NH1	-5.77	117.42	120.30
1	J	794	ARG	NE-CZ-NH1	5.75	123.17	120.30
1	E	788	ARG	NE-CZ-NH2	-5.75	117.43	120.30
1	G	444	ARG	NE-CZ-NH1	-5.74	117.43	120.30
1	D	479	ARG	NE-CZ-NH2	-5.74	117.43	120.30
1	A	244	VAL	CB-CA-C	-5.73	100.52	111.40
1	G	238	ARG	NE-CZ-NH1	-5.71	117.44	120.30
1	G	610	ARG	NE-CZ-NH1	-5.71	117.45	120.30
1	C	642	LEU	CA-CB-CG	5.70	128.42	115.30
1	D	794	ARG	NE-CZ-NH1	-5.70	117.45	120.30
1	F	720	ARG	NE-CZ-NH1	-5.70	117.45	120.30
1	J	234	MET	CB-CG-SD	-5.68	95.36	112.40
1	B	325	LEU	CA-CB-CG	5.67	128.35	115.30
1	D	762	ARG	NE-CZ-NH2	-5.67	117.47	120.30
1	E	610	ARG	NE-CZ-NH2	-5.67	117.47	120.30
1	G	278	LEU	CA-CB-CG	5.66	128.31	115.30
1	A	493	GLY	C-N-CD	5.64	140.25	128.40
1	G	537	TYR	CB-CG-CD2	5.64	124.39	121.00
1	I	479	ARG	NE-CZ-NH1	-5.63	117.48	120.30
1	I	278	LEU	CA-CB-CG	5.62	128.22	115.30
1	E	377	ARG	NE-CZ-NH1	-5.61	117.49	120.30
1	F	597	TYR	CB-CG-CD2	-5.60	117.64	121.00
1	D	646	ARG	NE-CZ-NH2	-5.57	117.52	120.30
1	E	600	ARG	NE-CZ-NH2	-5.57	117.52	120.30
1	H	874	PHE	CB-CG-CD1	-5.56	116.91	120.80
1	E	443	ASP	CB-CG-OD1	5.55	123.30	118.30
1	D	748	ARG	NE-CZ-NH1	-5.54	117.53	120.30
1	E	641	ARG	NE-CZ-NH2	-5.54	117.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	488	HIS	C-N-CD	5.53	140.01	128.40
1	J	890	ARG	NE-CZ-NH2	-5.49	117.55	120.30
1	B	610	ARG	NE-CZ-NH2	-5.48	117.56	120.30
1	D	488	HIS	C-N-CD	5.47	139.88	128.40
1	D	287	ARG	NE-CZ-NH2	-5.46	117.57	120.30
1	F	278	LEU	CA-CB-CG	5.46	127.85	115.30
1	I	238	ARG	NE-CZ-NH1	5.45	123.03	120.30
1	E	341	ASP	C-N-CD	5.44	139.83	128.40
1	J	815	LEU	CA-CB-CG	5.42	127.78	115.30
1	J	433	GLU	C-N-CD	-5.42	108.69	120.60
1	F	852	ARG	NE-CZ-NH2	-5.41	117.60	120.30
1	H	496	SER	N-CA-C	-5.36	96.53	111.00
1	F	413	ARG	NE-CZ-NH2	-5.34	117.63	120.30
1	J	479	ARG	NE-CZ-NH1	-5.34	117.63	120.30
1	E	363	TYR	CB-CG-CD2	5.33	124.20	121.00
1	H	433	GLU	C-N-CD	-5.32	108.90	120.60
1	H	596	ARG	NE-CZ-NH2	-5.31	117.64	120.30
1	J	325	LEU	CA-CB-CG	5.29	127.47	115.30
1	H	341	ASP	C-N-CD	5.29	139.50	128.40
1	E	234	MET	CB-CG-SD	-5.28	96.57	112.40
1	J	889	ARG	NE-CZ-NH2	-5.28	117.66	120.30
1	A	441	LEU	CB-CG-CD2	5.27	119.96	111.00
1	I	325	LEU	CA-CB-CG	5.27	127.42	115.30
1	F	796	ARG	NE-CZ-NH2	-5.26	117.67	120.30
1	J	597	TYR	CB-CG-CD2	-5.25	117.85	121.00
1	G	605	LEU	CA-CB-CG	5.25	127.38	115.30
1	E	388	ARG	NE-CZ-NH1	-5.25	117.68	120.30
1	J	341	ASP	C-N-CD	5.24	139.39	128.40
1	C	605	LEU	CA-CB-CG	5.23	127.34	115.30
1	B	278	LEU	CA-CB-CG	5.23	127.34	115.30
1	D	496	SER	N-CA-C	-5.22	96.91	111.00
1	F	820	TYR	CB-CG-CD1	5.20	124.12	121.00
1	I	890	ARG	NE-CZ-NH2	-5.20	117.70	120.30
1	A	234	MET	CB-CG-SD	-5.19	96.82	112.40
1	G	786	ARG	NE-CZ-NH1	-5.19	117.71	120.30
1	D	341	ASP	C-N-CD	5.19	139.29	128.40
1	E	565	PHE	CB-CG-CD1	-5.16	117.19	120.80
1	D	555	ALA	N-CA-CB	-5.15	102.89	110.10
1	F	794	ARG	NE-CZ-NH2	-5.13	117.73	120.30
1	J	277	PHE	CB-CG-CD1	-5.12	117.21	120.80
1	H	344	ARG	NE-CZ-NH2	-5.11	117.75	120.30
1	A	388	ARG	NE-CZ-NH1	5.09	122.84	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	325	LEU	CA-CB-CG	5.08	126.98	115.30
1	F	269	LEU	CA-CB-CG	5.08	126.97	115.30
1	F	288	ARG	NE-CZ-NH2	-5.08	117.76	120.30
1	E	810	ARG	NE-CZ-NH1	-5.07	117.77	120.30
1	H	317	ASP	CB-CG-OD2	-5.07	113.74	118.30
1	D	543	TYR	CB-CG-CD2	-5.05	117.97	121.00
1	F	676	ARG	NE-CZ-NH1	5.05	122.83	120.30
1	E	850	TYR	CG-CD2-CE2	-5.04	117.27	121.30
1	A	815	LEU	CA-CB-CG	5.04	126.90	115.30
1	E	500	THR	N-CA-CB	5.04	119.88	110.30
1	D	500	THR	N-CA-C	5.04	124.60	111.00
1	H	906	ARG	NE-CZ-NH2	-5.03	117.78	120.30
1	C	690	ARG	NE-CZ-NH1	5.03	122.81	120.30
1	G	325	LEU	CA-CB-CG	5.03	126.87	115.30
1	A	286	THR	CA-CB-CG2	-5.01	105.38	112.40
1	E	483	ASN	N-CA-C	5.01	124.54	111.00
1	I	414	ARG	NE-CZ-NH1	5.00	122.80	120.30
1	E	479	ARG	NE-CZ-NH2	-5.00	117.80	120.30

There are no chirality outliers.

All (151) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	314	ARG	Sidechain
1	A	388	ARG	Sidechain
1	A	393	ILE	Peptide
1	A	394	LEU	Peptide
1	A	444	ARG	Sidechain
1	A	538	GLN	Sidechain
1	A	596	ARG	Sidechain
1	A	624	ASP	Sidechain
1	A	630	ARG	Sidechain
1	A	676	ARG	Sidechain
1	A	720	ARG	Sidechain
1	A	803	ARG	Sidechain
1	A	852	ARG	Sidechain
1	A	876	ARG	Sidechain
1	A	889	ARG	Sidechain
1	B	314	ARG	Sidechain
1	B	421	ARG	Sidechain
1	B	542	GLN	Sidechain
1	B	574	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	B	596	ARG	Sidechain
1	B	610	ARG	Sidechain
1	B	796	ARG	Sidechain
1	B	805	GLN	Sidechain
1	B	852	ARG	Sidechain
1	B	856	GLU	Sidechain
1	C	238	ARG	Sidechain
1	C	303	ASP	Sidechain
1	C	388	ARG	Sidechain
1	C	445	GLN	Sidechain
1	C	514	GLU	Sidechain
1	C	544	ASN	Sidechain
1	C	574	ARG	Sidechain
1	C	630	ARG	Sidechain
1	C	657	GLN	Sidechain
1	C	786	ARG	Sidechain
1	C	788	ARG	Sidechain
1	C	796	ARG	Sidechain
1	C	810	ARG	Sidechain
1	C	852	ARG	Sidechain
1	C	883	ARG	Sidechain
1	C	889	ARG	Sidechain
1	C	890	ARG	Sidechain
1	D	253	PRO	Mainchain
1	D	388	ARG	Sidechain
1	D	410	GLN	Sidechain
1	D	444	ARG	Sidechain
1	D	600	ARG	Sidechain
1	D	676	ARG	Sidechain
1	D	876	ARG	Sidechain
1	E	253	PRO	Mainchain
1	E	287	ARG	Sidechain
1	E	314	ARG	Sidechain
1	E	377	ARG	Sidechain
1	E	479	ARG	Sidechain
1	E	526	GLU	Sidechain
1	E	538	GLN	Sidechain
1	E	559	ASP	Sidechain
1	E	596	ARG	Sidechain
1	E	600	ARG	Sidechain
1	E	610	ARG	Sidechain
1	E	611	GLU	Sidechain

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Mol	Chain	Res	Type	Group
1	E	676	ARG	Sidechain
1	E	712	GLN	Sidechain
1	E	753	GLU	Sidechain
1	E	855	ARG	Sidechain
1	E	882	ARG	Sidechain
1	F	421	ARG	Sidechain
1	F	516	GLN	Sidechain
1	F	542	GLN	Sidechain
1	F	574	ARG	Sidechain
1	F	578	GLN	Sidechain
1	F	583	ASP	Sidechain
1	F	596	ARG	Sidechain
1	F	607	PRO	Peptide
1	F	610	ARG	Sidechain
1	F	613	ASP	Sidechain
1	F	630	ARG	Sidechain
1	F	646	ARG	Sidechain
1	F	658	GLN	Sidechain
1	F	748	ARG	Sidechain
1	F	759	ASP	Sidechain
1	F	762	ARG	Sidechain
1	F	771	ASP	Sidechain
1	F	803	ARG	Sidechain
1	F	811	GLN	Sidechain
1	F	872	GLU	Sidechain
1	F	883	ARG	Sidechain
1	G	226	ASN	Sidechain
1	G	238	ARG	Sidechain
1	G	478	ASN	Sidechain
1	G	574	ARG	Sidechain
1	G	586	ASP	Sidechain
1	G	610	ARG	Sidechain
1	G	657	GLN	Sidechain
1	G	718	GLN	Sidechain
1	G	795	ASP	Sidechain
1	G	811	GLN	Sidechain
1	G	823	GLU	Sidechain
1	G	906	ARG	Sidechain
1	H	225	ASP	Sidechain
1	H	253	PRO	Mainchain
1	H	283	ASN	Sidechain
1	H	291	GLU	Sidechain

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Mol	Chain	Res	Type	Group
1	H	314	ARG	Sidechain
1	H	344	ARG	Sidechain
1	H	388	ARG	Sidechain
1	H	397	SER	Peptide
1	H	611	GLU	Sidechain
1	H	646	ARG	Sidechain
1	H	714	ASN	Sidechain
1	H	730	GLU	Sidechain
1	H	753	GLU	Sidechain
1	H	803	ARG	Sidechain
1	I	283	ASN	Sidechain
1	I	344	ARG	Sidechain
1	I	388	ARG	Sidechain
1	I	421	ARG	Sidechain
1	I	443	ASP	Sidechain
1	I	444	ARG	Sidechain
1	I	479	ARG	Sidechain
1	I	506	ARG	Sidechain
1	I	530	ARG	Sidechain
1	I	551	GLU	Sidechain
1	I	564	GLN	Sidechain
1	I	574	ARG	Sidechain
1	I	611	GLU	Sidechain
1	I	630	ARG	Sidechain
1	I	681	ASP	Sidechain
1	I	690	ARG	Sidechain
1	I	794	ARG	Sidechain
1	I	798	ASP	Sidechain
1	I	883	ARG	Sidechain
1	I	906	ARG	Sidechain
1	J	253	PRO	Mainchain
1	J	276	GLU	Sidechain
1	J	287	ARG	Sidechain
1	J	322	GLN	Sidechain
1	J	388	ARG	Sidechain
1	J	433	GLU	Sidechain
1	J	480	ASN	Sidechain
1	J	614	ASN	Sidechain
1	J	630	ARG	Sidechain
1	J	646	ARG	Sidechain
1	J	712	GLN	Sidechain
1	J	728	GLN	Sidechain

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Mol	Chain	Res	Type	Group
1	J	743	ASN	Sidechain
1	J	765	GLU	Sidechain
1	J	769	GLU	Sidechain
1	J	810	ARG	Sidechain
1	J	876	ARG	Sidechain
1	J	889	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5152	0	5222	581	0
1	B	5152	0	5223	231	0
1	C	5152	0	5223	170	0
1	D	5152	0	5222	413	0
1	E	5152	0	5221	484	0
1	F	5152	0	5223	183	0
1	G	5152	0	5223	228	0
1	H	5152	0	5222	468	0
1	I	5152	0	5223	306	0
1	J	5152	0	5222	499	0
All	All	51520	0	52224	3357	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 32.

All (3357) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:441:LEU:HD23	1:J:498:VAL:CB	1.14	1.60
1:A:426:ILE:CD1	1:A:440:ILE:HG22	1.21	1.60
1:H:441:LEU:HD23	1:H:498:VAL:CB	1.12	1.59
1:E:441:LEU:HD23	1:E:498:VAL:CB	1.19	1.59
1:I:626:PRO:CB	1:I:626:PRO:CG	1.75	1.59
1:A:441:LEU:CD2	1:A:498:VAL:HB	1.17	1.59
1:A:540:LYS:CD	1:I:626:PRO:CB	1.79	1.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:540:LYS:CE	1:I:626:PRO:CG	1.79	1.58
1:A:540:LYS:CE	1:I:626:PRO:CA	1.82	1.58
1:A:426:ILE:HD13	1:A:440:ILE:CG2	1.35	1.57
1:I:626:PRO:CG	1:I:626:PRO:CD	1.80	1.57
1:D:441:LEU:HD23	1:D:498:VAL:CB	1.24	1.56
1:J:426:ILE:CD1	1:J:440:ILE:HG22	1.26	1.56
1:E:426:ILE:CD1	1:E:440:ILE:HG22	1.19	1.56
1:A:441:LEU:HD23	1:A:498:VAL:CB	1.12	1.55
1:A:540:LYS:CD	1:I:626:PRO:CD	1.81	1.55
1:D:426:ILE:CD1	1:D:440:ILE:HG22	1.31	1.55
1:J:441:LEU:CD2	1:J:498:VAL:HB	1.31	1.54
1:I:626:PRO:CB	1:I:626:PRO:CA	1.86	1.52
1:H:441:LEU:CD2	1:H:498:VAL:HB	1.35	1.50
1:A:540:LYS:HE2	1:I:626:PRO:C	1.31	1.49
1:E:441:LEU:CD2	1:E:498:VAL:HB	1.40	1.49
1:A:540:LYS:CD	1:I:626:PRO:CA	1.87	1.49
1:D:441:LEU:CD2	1:D:498:VAL:HB	1.40	1.48
1:H:426:ILE:CD1	1:H:440:ILE:HG22	1.43	1.48
1:G:503:MET:CE	1:G:503:MET:SD	2.01	1.47
1:H:228:MET:CE	1:H:228:MET:SD	2.02	1.47
1:A:272:ILE:HG23	1:A:278:LEU:CD1	1.44	1.47
1:I:429:MET:SD	1:I:429:MET:CG	2.01	1.47
1:E:426:ILE:HD13	1:E:440:ILE:CG2	1.40	1.47
1:A:738:MET:CG	1:A:738:MET:SD	2.02	1.46
1:J:738:MET:SD	1:J:738:MET:CG	2.02	1.45
1:A:540:LYS:HE2	1:I:627:TYR:N	1.28	1.44
1:E:285:ILE:HD12	1:E:287:ARG:N	1.31	1.44
1:I:626:PRO:CD	1:I:626:PRO:N	1.76	1.44
1:J:426:ILE:CD1	1:J:440:ILE:CG2	1.92	1.44
1:I:626:PRO:CA	1:I:626:PRO:N	1.80	1.44
1:A:540:LYS:CD	1:I:626:PRO:N	1.81	1.43
1:H:401:THR:CG2	1:H:410:GLN:HG2	1.49	1.42
1:A:540:LYS:CE	1:I:626:PRO:CB	1.97	1.41
1:A:540:LYS:CE	1:I:626:PRO:CD	1.96	1.40
1:A:540:LYS:CE	1:I:626:PRO:N	1.85	1.39
1:A:285:ILE:CD1	1:A:287:ARG:HB2	1.50	1.38
1:A:540:LYS:CD	1:I:626:PRO:CG	2.02	1.38
1:E:260:SER:O	1:E:264:GLY:N	1.57	1.38
1:J:478:ASN:ND2	1:J:482:LYS:HZ1	1.14	1.38
1:J:426:ILE:HD13	1:J:440:ILE:CG2	1.50	1.38
1:A:269:LEU:HD21	1:A:457:SER:CB	1.53	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:285:ILE:CD1	1:E:287:ARG:HB2	1.53	1.37
1:H:426:ILE:CD1	1:H:440:ILE:CG2	2.02	1.36
1:J:285:ILE:CD1	1:J:287:ARG:HB2	1.54	1.36
1:H:426:ILE:HD13	1:H:440:ILE:CG2	1.56	1.35
1:A:536:THR:CG2	1:I:630:ARG:HD2	1.54	1.34
1:J:285:ILE:HD12	1:J:287:ARG:N	1.41	1.34
1:D:426:ILE:CD1	1:D:440:ILE:CG2	2.05	1.33
1:E:478:ASN:ND2	1:E:482:LYS:HZ1	1.24	1.33
1:E:426:ILE:CD1	1:E:440:ILE:CG2	1.98	1.32
1:D:426:ILE:HD13	1:D:440:ILE:CG2	1.60	1.31
1:D:260:SER:O	1:D:264:GLY:N	1.61	1.31
1:A:536:THR:HG22	1:I:630:ARG:CD	1.59	1.31
1:A:540:LYS:CG	1:I:626:PRO:CG	2.08	1.31
1:A:540:LYS:HE3	1:I:626:PRO:CG	1.42	1.31
1:A:260:SER:O	1:A:264:GLY:N	1.63	1.31
1:J:285:ILE:CD1	1:J:287:ARG:H	1.43	1.31
1:H:478:ASN:ND2	1:H:482:LYS:HZ1	1.28	1.30
1:J:229:PHE:CD1	1:J:232:LYS:HD2	1.67	1.29
1:H:441:LEU:HD23	1:H:498:VAL:CG1	1.62	1.28
1:A:540:LYS:CB	1:I:626:PRO:HG3	1.63	1.28
1:D:285:ILE:CD1	1:D:287:ARG:HB2	1.64	1.27
1:J:276:GLU:OE2	1:J:318:PHE:CE2	1.87	1.26
1:B:630:ARG:CB	1:J:540:LYS:HG3	1.66	1.26
1:A:540:LYS:HB3	1:I:626:PRO:CG	1.65	1.25
1:J:441:LEU:HD23	1:J:498:VAL:CG1	1.66	1.25
1:J:272:ILE:HG23	1:J:278:LEU:CD1	1.67	1.25
1:E:269:LEU:HD11	1:E:457:SER:O	1.09	1.24
1:A:540:LYS:HE2	1:I:626:PRO:CA	1.47	1.24
1:A:272:ILE:CG2	1:A:278:LEU:HD12	1.66	1.24
1:E:441:LEU:HD23	1:E:498:VAL:CG1	1.66	1.23
1:J:478:ASN:ND2	1:J:482:LYS:NZ	1.87	1.22
1:A:269:LEU:HD11	1:A:457:SER:O	1.05	1.22
1:H:269:LEU:HD21	1:H:457:SER:OG	1.33	1.22
1:D:478:ASN:ND2	1:D:482:LYS:HZ1	1.37	1.22
1:A:540:LYS:CD	1:A:540:LYS:CE	2.18	1.21
1:H:269:LEU:HD21	1:H:457:SER:CB	1.68	1.21
1:H:269:LEU:CD1	1:H:457:SER:O	1.88	1.21
1:D:478:ASN:ND2	1:D:482:LYS:NZ	1.90	1.20
1:H:272:ILE:HG23	1:H:278:LEU:CD1	1.72	1.20
1:H:260:SER:O	1:H:264:GLY:N	1.74	1.20
1:J:260:SER:O	1:J:264:GLY:N	1.71	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:540:LYS:CB	1:I:626:PRO:CG	2.19	1.20
1:H:478:ASN:ND2	1:H:482:LYS:NZ	1.89	1.20
1:A:394:LEU:HD22	1:A:395:ALA:HB2	1.21	1.19
1:D:285:ILE:CD1	1:D:287:ARG:H	1.54	1.19
1:A:276:GLU:OE2	1:A:318:PHE:HE2	1.25	1.19
1:H:401:THR:HB	1:H:410:GLN:CA	1.73	1.19
1:E:269:LEU:HD21	1:E:457:SER:CB	1.72	1.19
1:G:642:LEU:HD22	1:G:643:GLY:N	1.57	1.18
1:A:540:LYS:HZ2	1:I:626:PRO:HD2	1.07	1.18
1:A:276:GLU:OE2	1:A:318:PHE:CE2	1.97	1.18
1:E:272:ILE:HG23	1:E:278:LEU:CD1	1.74	1.17
1:J:540:LYS:C	1:J:540:LYS:HE2	1.64	1.17
1:A:540:LYS:NZ	1:I:626:PRO:CD	2.05	1.17
1:E:285:ILE:HD13	1:E:287:ARG:CB	1.73	1.17
1:A:441:LEU:HD23	1:A:498:VAL:CG1	1.73	1.17
1:H:401:THR:CB	1:H:410:GLN:HA	1.75	1.16
1:D:269:LEU:HD11	1:D:457:SER:O	1.04	1.16
1:E:441:LEU:CD2	1:E:498:VAL:CB	2.09	1.16
1:H:407:THR:HB	1:H:414:ARG:HD3	1.24	1.16
1:J:269:LEU:HD11	1:J:457:SER:O	1.00	1.16
1:A:540:LYS:CG	1:I:626:PRO:CD	2.23	1.16
1:A:540:LYS:HD2	1:I:626:PRO:N	1.46	1.16
1:J:269:LEU:CD1	1:J:457:SER:O	1.93	1.16
1:A:285:ILE:CD1	1:A:287:ARG:H	1.58	1.16
1:A:394:LEU:HG	1:A:422:THR:OG1	1.42	1.16
1:D:269:LEU:HD21	1:D:457:SER:OG	1.44	1.15
1:B:630:ARG:HD3	1:J:540:LYS:HB2	1.23	1.15
1:D:272:ILE:HG23	1:D:278:LEU:CD1	1.76	1.15
1:J:276:GLU:OE2	1:J:318:PHE:HE2	1.19	1.15
1:D:269:LEU:HD21	1:D:457:SER:CB	1.75	1.15
1:E:285:ILE:CD1	1:E:287:ARG:H	1.59	1.15
1:A:394:LEU:CD2	1:A:395:ALA:HB2	1.76	1.14
1:I:625:SER:HB3	1:I:628:TRP:CD1	1.82	1.14
1:A:540:LYS:CB	1:I:626:PRO:HB3	1.77	1.14
1:A:269:LEU:CD2	1:A:457:SER:CB	2.25	1.14
1:A:269:LEU:CD1	1:A:457:SER:O	1.95	1.14
1:A:285:ILE:HD12	1:A:287:ARG:N	1.62	1.14
1:A:478:ASN:ND2	1:A:482:LYS:HZ1	1.45	1.14
1:H:269:LEU:CD2	1:H:457:SER:OG	1.95	1.14
1:A:537:TYR:HE2	1:I:612:PRO:CG	1.60	1.13
1:D:273:VAL:HG21	1:D:457:SER:HB3	1.29	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:537:TYR:CE2	1:I:612:PRO:HG2	1.81	1.13
1:H:285:ILE:HD13	1:H:287:ARG:HB2	1.21	1.13
1:A:540:LYS:HZ2	1:I:626:PRO:CD	1.57	1.13
1:D:272:ILE:HG23	1:D:278:LEU:HD12	1.13	1.12
1:H:441:LEU:CD2	1:H:498:VAL:CB	2.04	1.12
1:A:540:LYS:CE	1:I:627:TYR:N	2.11	1.12
1:D:426:ILE:HD11	1:D:440:ILE:HG22	1.30	1.12
1:E:478:ASN:ND2	1:E:482:LYS:NZ	1.97	1.12
1:A:269:LEU:CD2	1:A:457:SER:OG	1.97	1.12
1:E:269:LEU:CD1	1:E:457:SER:O	1.98	1.12
1:J:426:ILE:HD13	1:J:440:ILE:HG21	1.16	1.12
1:A:540:LYS:CB	1:I:626:PRO:CB	2.27	1.12
1:D:269:LEU:CD1	1:D:457:SER:O	1.97	1.12
1:A:286:THR:HB	1:A:361:PRO:HB3	1.32	1.11
1:E:441:LEU:HG	1:E:498:VAL:HG12	1.28	1.11
1:H:269:LEU:HD11	1:H:457:SER:O	0.94	1.11
1:D:285:ILE:HD13	1:D:287:ARG:HB2	1.31	1.11
1:H:412:SER:O	1:H:413:ARG:HG3	1.50	1.11
1:A:478:ASN:ND2	1:A:482:LYS:NZ	1.98	1.11
1:E:472:ASN:HD21	1:E:475:ALA:HB3	1.04	1.11
1:H:278:LEU:HD21	1:H:280:LYS:HD3	1.31	1.11
1:H:285:ILE:HD12	1:H:287:ARG:H	0.95	1.10
1:J:426:ILE:HD11	1:J:440:ILE:CG2	1.69	1.10
1:A:394:LEU:HD22	1:A:395:ALA:CB	1.80	1.10
1:C:630:ARG:HD3	1:C:630:ARG:C	1.67	1.10
1:E:472:ASN:ND2	1:E:475:ALA:HB3	1.65	1.10
1:H:273:VAL:HG21	1:H:457:SER:HB3	1.30	1.10
1:J:307:PHE:CE1	1:J:345:LEU:HD21	1.85	1.10
1:A:426:ILE:HD13	1:A:440:ILE:HG21	1.30	1.10
1:A:478:ASN:HD21	1:A:482:LYS:NZ	1.48	1.10
1:A:537:TYR:HD1	1:I:630:ARG:NH2	1.50	1.10
1:J:278:LEU:HD21	1:J:280:LYS:HD3	1.10	1.10
1:A:426:ILE:HD11	1:A:440:ILE:HG22	1.34	1.09
1:A:441:LEU:HG	1:A:498:VAL:HG12	1.29	1.09
1:A:540:LYS:HD3	1:I:626:PRO:CA	1.65	1.09
1:A:540:LYS:HB2	1:I:626:PRO:HB3	1.32	1.09
1:D:285:ILE:HD12	1:D:287:ARG:N	1.65	1.09
1:H:285:ILE:HD12	1:H:287:ARG:N	1.66	1.09
1:G:261:GLN:NE2	1:J:401:THR:HG23	1.68	1.09
1:A:278:LEU:HD21	1:A:280:LYS:HD3	1.35	1.09
1:A:540:LYS:HD3	1:I:626:PRO:CB	1.64	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:781:ALA:HB2	1:E:778:GLY:N	1.68	1.09
1:B:781:ALA:HB2	1:E:778:GLY:CA	1.82	1.08
1:G:642:LEU:HD22	1:G:643:GLY:H	0.94	1.08
1:E:426:ILE:HD13	1:E:440:ILE:HG21	1.32	1.08
1:J:269:LEU:HA	1:J:272:ILE:HD12	1.28	1.08
1:A:540:LYS:HB3	1:I:626:PRO:HG3	1.11	1.08
1:H:377:ARG:HG2	1:H:377:ARG:HH21	1.11	1.08
1:H:407:THR:HG21	1:H:414:ARG:NH1	1.68	1.08
1:A:279:PRO:HG2	1:A:325:LEU:HD21	1.31	1.07
1:A:537:TYR:HE2	1:I:612:PRO:HG2	1.00	1.07
1:H:434:PRO:HB3	1:H:491:GLU:HG3	1.34	1.07
1:D:488:HIS:HB3	1:D:491:GLU:HG2	1.34	1.07
1:D:279:PRO:HG2	1:D:325:LEU:HD21	1.18	1.07
1:E:273:VAL:HG21	1:E:457:SER:HB3	1.31	1.07
1:A:540:LYS:CE	1:I:627:TYR:H	1.68	1.06
1:D:426:ILE:HD12	1:D:440:ILE:HG22	1.37	1.06
1:D:441:LEU:HD23	1:D:498:VAL:CG1	1.84	1.06
1:H:401:THR:CG2	1:H:410:GLN:CG	2.32	1.06
1:D:269:LEU:CD2	1:D:457:SER:OG	2.03	1.06
1:E:279:PRO:HG2	1:E:325:LEU:HD21	1.38	1.06
1:B:630:ARG:HB2	1:J:540:LYS:CG	1.85	1.06
1:B:630:ARG:HE	1:J:540:LYS:HB3	1.14	1.06
1:H:403:LEU:HD23	1:H:403:LEU:H	1.14	1.06
1:A:540:LYS:HE3	1:I:626:PRO:HG2	1.06	1.06
1:H:426:ILE:HD13	1:H:440:ILE:HG21	1.34	1.06
1:H:441:LEU:HD21	1:H:499:SER:H	1.21	1.06
1:J:308:PRO:HG3	1:J:344:ARG:HB2	1.38	1.05
1:D:278:LEU:HD21	1:D:280:LYS:HD3	1.31	1.05
1:D:426:ILE:HD13	1:D:440:ILE:HG21	1.27	1.05
1:H:441:LEU:CG	1:H:498:VAL:HG12	1.86	1.05
1:J:285:ILE:HD13	1:J:287:ARG:CB	1.86	1.05
1:A:269:LEU:CD2	1:A:457:SER:HB2	1.86	1.05
1:A:426:ILE:CD1	1:A:440:ILE:CG2	2.07	1.05
1:A:540:LYS:NZ	1:I:626:PRO:N	2.04	1.05
1:H:272:ILE:HG23	1:H:278:LEU:HD12	1.35	1.05
1:J:285:ILE:CD1	1:J:287:ARG:CB	2.35	1.05
1:D:234:MET:O	1:D:237:ILE:HG22	1.56	1.05
1:I:613:ASP:HB3	1:I:627:TYR:CE1	1.92	1.04
1:A:269:LEU:HD21	1:A:457:SER:HB2	1.35	1.04
1:A:285:ILE:CD1	1:A:287:ARG:CB	2.35	1.04
1:A:540:LYS:HD2	1:I:626:PRO:CD	1.86	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:307:PHE:CE1	1:A:345:LEU:HD21	1.93	1.04
1:E:285:ILE:CD1	1:E:287:ARG:CB	2.30	1.04
1:H:441:LEU:HD21	1:H:499:SER:N	1.73	1.04
1:D:272:ILE:HG22	1:D:277:PHE:HA	1.40	1.03
1:E:233:LYS:N	1:E:233:LYS:HE3	1.72	1.03
1:J:272:ILE:HG23	1:J:278:LEU:HD12	1.34	1.03
1:E:269:LEU:HA	1:E:272:ILE:HD12	1.35	1.03
1:E:441:LEU:CG	1:E:498:VAL:HG12	1.88	1.03
1:H:401:THR:HG22	1:H:410:GLN:CG	1.88	1.03
1:H:478:ASN:HD21	1:H:482:LYS:NZ	1.52	1.03
1:A:537:TYR:CE1	1:I:627:TYR:HB2	1.93	1.03
1:B:878:ASP:HB3	1:B:881:VAL:HG12	1.39	1.03
1:D:276:GLU:CD	1:D:318:PHE:HE2	1.62	1.03
1:A:540:LYS:HG2	1:I:626:PRO:HD3	1.35	1.02
1:H:426:ILE:HD12	1:H:440:ILE:HG22	1.04	1.02
1:H:441:LEU:HG	1:H:498:VAL:HG12	1.39	1.02
1:A:285:ILE:HD13	1:A:287:ARG:HB2	1.07	1.02
1:B:630:ARG:HE	1:J:540:LYS:CB	1.73	1.02
1:D:276:GLU:OE2	1:D:318:PHE:CE2	2.11	1.02
1:E:272:ILE:HG23	1:E:278:LEU:HD12	1.05	1.02
1:E:486:GLY:O	1:E:489:PRO:HD3	1.59	1.02
1:F:357:LEU:HD23	1:F:357:LEU:C	1.79	1.02
1:J:269:LEU:HD21	1:J:457:SER:OG	1.58	1.02
1:A:540:LYS:CD	1:I:626:PRO:HB3	1.89	1.01
1:G:261:GLN:CG	1:J:402:ASP:HB2	1.89	1.01
1:J:284:MET:HG2	1:J:286:THR:CG2	1.89	1.01
1:H:241:LEU:O	1:H:244:VAL:HG23	1.59	1.01
1:A:453:VAL:HG11	1:A:505:LEU:HB2	1.39	1.00
1:A:540:LYS:CG	1:I:626:PRO:HD3	1.87	1.00
1:H:434:PRO:CB	1:H:491:GLU:HG3	1.89	1.00
1:E:278:LEU:HD21	1:E:280:LYS:HD3	1.41	1.00
1:J:251:THR:HG22	1:J:252:LEU:H	1.24	1.00
1:B:488:HIS:HB3	1:B:491:GLU:HG3	1.44	1.00
1:E:472:ASN:HD21	1:E:475:ALA:CB	1.73	1.00
1:D:486:GLY:O	1:D:489:PRO:HD3	1.61	1.00
1:D:285:ILE:HD12	1:D:287:ARG:H	0.85	0.99
1:J:273:VAL:HG11	1:J:457:SER:HB2	1.43	0.99
1:A:393:ILE:HG12	1:A:394:LEU:CA	1.91	0.99
1:A:278:LEU:O	1:A:278:LEU:HD13	1.63	0.98
1:J:278:LEU:HD21	1:J:280:LYS:CD	1.93	0.98
1:E:233:LYS:HE2	1:E:233:LYS:HA	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:272:ILE:HG23	1:J:278:LEU:HD13	1.43	0.98
1:A:455:VAL:HG12	1:A:501:GLY:H	1.24	0.98
1:H:279:PRO:HG2	1:H:325:LEU:HD21	1.45	0.98
1:H:486:GLY:O	1:H:489:PRO:HD3	1.63	0.98
1:D:488:HIS:HB3	1:D:491:GLU:CG	1.93	0.98
1:G:261:GLN:HG3	1:J:402:ASP:HB2	1.00	0.98
1:A:235:ILE:O	1:A:235:ILE:HD12	1.63	0.98
1:A:285:ILE:HD12	1:A:287:ARG:H	0.83	0.97
1:A:540:LYS:HE3	1:I:626:PRO:CB	1.92	0.97
1:D:286:THR:CB	1:D:361:PRO:HB3	1.94	0.97
1:D:284:MET:HG2	1:D:286:THR:CG2	1.94	0.97
1:E:269:LEU:HD21	1:E:457:SER:OG	1.64	0.97
1:E:426:ILE:HD11	1:E:440:ILE:HG22	0.98	0.97
1:J:284:MET:HG2	1:J:286:THR:HG22	1.44	0.97
1:A:472:ASN:HD21	1:A:475:ALA:HB3	1.29	0.97
1:A:540:LYS:CD	1:I:626:PRO:HD3	1.95	0.97
1:A:540:LYS:HG2	1:I:626:PRO:CD	1.87	0.97
1:E:284:MET:HG2	1:E:286:THR:HG22	1.47	0.97
1:H:285:ILE:CD1	1:H:287:ARG:H	1.78	0.97
1:D:383:CYS:O	1:D:387:ILE:HG13	1.62	0.97
1:I:854:PRO:HB2	1:I:855:ARG:NH2	1.79	0.96
1:J:278:LEU:CD2	1:J:280:LYS:HD3	1.94	0.96
1:A:537:TYR:HD1	1:I:630:ARG:HH21	1.05	0.96
1:H:375:LEU:HD23	1:H:375:LEU:N	1.78	0.96
1:J:363:TYR:HE1	1:J:383:CYS:SG	1.87	0.96
1:D:235:ILE:HD12	1:D:235:ILE:O	1.65	0.96
1:J:229:PHE:CE1	1:J:232:LYS:HD2	1.99	0.96
1:A:433:GLU:O	1:A:436:LYS:HB2	1.62	0.96
1:E:278:LEU:CD2	1:E:280:LYS:HD3	1.95	0.96
1:E:284:MET:HG2	1:E:286:THR:CG2	1.94	0.96
1:A:246:GLN:HG2	1:A:247:GLY:N	1.78	0.96
1:D:441:LEU:HG	1:D:498:VAL:HG12	1.48	0.96
1:J:279:PRO:HB3	1:J:322:GLN:CB	1.95	0.96
1:D:363:TYR:HE1	1:D:383:CYS:SG	1.88	0.96
1:E:307:PHE:CE1	1:E:345:LEU:HD21	2.00	0.96
1:I:625:SER:HB3	1:I:628:TRP:HD1	1.25	0.95
1:E:441:LEU:CD2	1:E:498:VAL:CG1	2.40	0.95
1:A:273:VAL:HG21	1:A:457:SER:HB3	1.46	0.95
1:E:285:ILE:CD1	1:E:287:ARG:N	2.21	0.95
1:A:278:LEU:CD2	1:A:280:LYS:HD3	1.97	0.95
1:B:626:PRO:O	1:J:540:LYS:HD2	1.67	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:240:LEU:N	1:E:240:LEU:HD23	1.82	0.95
1:E:376:LYS:NZ	1:E:379:ILE:HD12	1.80	0.95
1:J:488:HIS:HB3	1:J:491:GLU:HG2	1.48	0.95
1:A:540:LYS:CG	1:I:626:PRO:HG3	1.86	0.95
1:E:269:LEU:CD2	1:E:457:SER:OG	2.15	0.94
1:J:441:LEU:CD2	1:J:498:VAL:CB	2.08	0.94
1:A:540:LYS:HE2	1:I:627:TYR:H	1.23	0.94
1:B:630:ARG:NE	1:J:540:LYS:HB3	1.83	0.94
1:D:251:THR:HG22	1:D:252:LEU:H	1.32	0.94
1:A:540:LYS:CG	1:I:626:PRO:CB	2.45	0.94
1:E:383:CYS:O	1:E:387:ILE:HG13	1.65	0.94
1:A:441:LEU:CG	1:A:498:VAL:HG12	1.97	0.94
1:H:488:HIS:HB3	1:H:491:GLU:HG2	1.50	0.94
1:A:540:LYS:HD3	1:I:626:PRO:HB3	1.45	0.94
1:B:781:ALA:HB2	1:E:778:GLY:HA2	1.47	0.94
1:E:453:VAL:HG11	1:E:505:LEU:HB2	1.50	0.94
1:H:376:LYS:HA	1:H:376:LYS:HZ3	1.32	0.94
1:J:244:VAL:HB	1:J:248:SER:OG	1.67	0.94
1:B:630:ARG:HB2	1:J:540:LYS:HG3	0.95	0.93
1:D:269:LEU:CD2	1:D:457:SER:CB	2.46	0.93
1:G:364:ILE:HA	1:J:405:ASN:OD1	1.66	0.93
1:A:393:ILE:HG12	1:A:394:LEU:HA	1.51	0.93
1:G:611:GLU:H	1:G:612:PRO:HD2	1.32	0.93
1:H:273:VAL:HG11	1:H:457:SER:HB2	1.50	0.93
1:H:403:LEU:H	1:H:403:LEU:CD2	1.80	0.93
1:A:441:LEU:CD2	1:A:498:VAL:CB	1.99	0.93
1:D:478:ASN:HD21	1:D:482:LYS:NZ	1.60	0.93
1:H:441:LEU:CD2	1:H:498:VAL:CG1	2.38	0.93
1:J:273:VAL:HG21	1:J:457:SER:HB3	1.51	0.93
1:E:272:ILE:CG2	1:E:278:LEU:HD12	1.98	0.93
1:G:878:ASP:HB3	1:G:881:VAL:HG12	1.51	0.93
1:H:235:ILE:HD12	1:H:235:ILE:O	1.69	0.93
1:D:297:ASP:OD2	1:D:300:ALA:HB3	1.69	0.93
1:J:269:LEU:HD21	1:J:457:SER:CB	1.99	0.93
1:D:244:VAL:HB	1:D:248:SER:OG	1.70	0.92
1:D:441:LEU:CD2	1:D:498:VAL:CB	2.16	0.92
1:H:285:ILE:HD13	1:H:287:ARG:CB	1.99	0.92
1:H:272:ILE:HG22	1:H:277:PHE:HA	1.49	0.92
1:I:903:GLU:HG3	1:I:906:ARG:NH2	1.84	0.92
1:A:537:TYR:CD1	1:I:630:ARG:NH2	2.38	0.92
1:J:285:ILE:HD13	1:J:287:ARG:HB2	0.95	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:363:TYR:HD2	1:J:407:THR:HB	1.31	0.92
1:H:401:THR:HG22	1:H:410:GLN:HG2	0.93	0.92
1:A:472:ASN:ND2	1:A:475:ALA:HB3	1.84	0.91
1:H:272:ILE:HG23	1:H:278:LEU:HD13	1.51	0.91
1:A:485:PHE:CD2	1:A:492:PHE:CD1	2.57	0.91
1:A:276:GLU:CD	1:A:318:PHE:HE2	1.73	0.91
1:J:878:ASP:HB3	1:J:881:VAL:HG22	1.50	0.91
1:D:269:LEU:O	1:D:273:VAL:HG13	1.69	0.91
1:D:286:THR:HB	1:D:361:PRO:HB3	1.50	0.91
1:H:407:THR:CB	1:H:414:ARG:HD3	1.99	0.91
1:A:375:LEU:N	1:A:375:LEU:HD23	1.81	0.91
1:G:405:ASN:HD21	1:J:260:SER:HB3	1.34	0.91
1:A:540:LYS:HB3	1:I:626:PRO:CB	1.99	0.91
1:J:493:GLY:O	1:J:496:SER:HB3	1.71	0.91
1:B:630:ARG:NE	1:J:540:LYS:CB	2.33	0.91
1:E:269:LEU:CD2	1:E:457:SER:CB	2.49	0.91
1:B:630:ARG:CD	1:J:540:LYS:HB2	1.99	0.90
1:C:260:SER:O	1:C:264:GLY:N	2.04	0.90
1:B:261:GLN:H	1:B:261:GLN:CD	1.75	0.90
1:D:265:LYS:O	1:D:268:VAL:HG23	1.71	0.90
1:A:272:ILE:HG12	1:A:278:LEU:HD11	1.53	0.90
1:G:405:ASN:HB2	1:J:261:GLN:HB3	1.52	0.90
1:C:285:ILE:HD12	1:C:287:ARG:H	1.36	0.90
1:D:276:GLU:OE2	1:D:318:PHE:HE2	1.46	0.90
1:E:229:PHE:CE1	1:E:232:LYS:HD2	2.06	0.90
1:E:485:PHE:CD2	1:E:492:PHE:CD1	2.59	0.90
1:J:434:PRO:CB	1:J:491:GLU:HG3	2.01	0.90
1:A:269:LEU:HD21	1:A:457:SER:OG	1.61	0.90
1:A:394:LEU:HD22	1:A:395:ALA:N	1.87	0.90
1:A:530:ARG:HD2	1:I:600:ARG:HH12	1.34	0.90
1:A:279:PRO:HB3	1:A:322:GLN:HA	1.52	0.90
1:A:441:LEU:HD21	1:A:499:SER:N	1.87	0.90
1:A:273:VAL:HG11	1:A:457:SER:HB2	1.52	0.90
1:E:297:ASP:CG	1:E:300:ALA:HB3	1.92	0.90
1:J:376:LYS:HA	1:J:376:LYS:NZ	1.87	0.90
1:E:257:VAL:CG2	1:E:359:ASP:HA	2.01	0.90
1:G:405:ASN:CB	1:J:261:GLN:HB3	2.02	0.90
1:G:405:ASN:CG	1:J:261:GLN:HB3	1.91	0.90
1:G:642:LEU:CD2	1:G:643:GLY:H	1.81	0.90
1:J:273:VAL:HG11	1:J:457:SER:CB	2.00	0.90
1:E:229:PHE:CD1	1:E:232:LYS:HD2	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:279:PRO:CB	1:A:322:GLN:HA	2.03	0.89
1:A:394:LEU:CG	1:A:422:THR:OG1	2.21	0.89
1:H:377:ARG:HH21	1:H:377:ARG:CG	1.84	0.89
1:H:407:THR:HB	1:H:414:ARG:CD	2.03	0.89
1:A:272:ILE:CG2	1:A:278:LEU:CD1	2.36	0.89
1:B:284:MET:HG2	1:B:286:THR:CG2	2.02	0.89
1:H:474:LEU:HG	1:H:475:ALA:H	1.36	0.88
1:J:286:THR:HB	1:J:361:PRO:HB3	1.55	0.88
1:G:878:ASP:HB3	1:G:881:VAL:CG1	2.03	0.88
1:H:269:LEU:HD11	1:H:457:SER:C	1.93	0.88
1:H:407:THR:HG21	1:H:414:ARG:HH11	1.36	0.88
1:D:434:PRO:CB	1:D:491:GLU:HG3	2.04	0.88
1:E:286:THR:HB	1:E:361:PRO:HB3	1.51	0.88
1:J:279:PRO:CB	1:J:322:GLN:HA	2.04	0.88
1:E:312:LEU:N	1:E:312:LEU:HD23	1.88	0.88
1:A:393:ILE:O	1:A:394:LEU:HB2	1.71	0.88
1:H:285:ILE:CD1	1:H:287:ARG:HB2	2.04	0.88
1:H:434:PRO:HB3	1:H:491:GLU:CG	2.03	0.88
1:H:412:SER:OG	1:H:413:ARG:HD3	1.72	0.88
1:J:229:PHE:HA	1:J:232:LYS:CG	2.04	0.88
1:A:540:LYS:HG2	1:I:626:PRO:CG	2.03	0.88
1:J:229:PHE:CE2	1:J:233:LYS:HD2	2.09	0.87
1:D:277:PHE:HD1	1:D:278:LEU:N	1.73	0.87
1:D:441:LEU:CG	1:D:498:VAL:HG12	2.04	0.87
1:J:279:PRO:HB3	1:J:322:GLN:CA	2.04	0.87
1:A:485:PHE:HD2	1:A:492:PHE:O	1.55	0.87
1:A:610:ARG:HA	1:A:610:ARG:HE	1.38	0.87
1:H:269:LEU:HD23	1:H:270:GLU:N	1.89	0.87
1:J:269:LEU:HD23	1:J:270:GLU:N	1.90	0.87
1:B:261:GLN:H	1:B:261:GLN:NE2	1.73	0.87
1:E:229:PHE:HA	1:E:232:LYS:HG2	1.57	0.87
1:E:376:LYS:HZ1	1:E:379:ILE:HD12	1.36	0.87
1:E:441:LEU:HD21	1:E:499:SER:N	1.90	0.87
1:F:260:SER:O	1:F:264:GLY:N	2.08	0.86
1:H:307:PHE:CE1	1:H:345:LEU:HD21	2.10	0.86
1:J:441:LEU:HD21	1:J:499:SER:H	1.40	0.86
1:H:269:LEU:CD2	1:H:457:SER:CB	2.47	0.86
1:H:401:THR:HG21	1:H:410:GLN:CG	2.02	0.86
1:A:267:SER:HB3	1:A:396:ILE:HG13	1.56	0.86
1:J:286:THR:CB	1:J:361:PRO:HB3	2.04	0.86
1:A:394:LEU:HD22	1:A:395:ALA:CA	2.05	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:261:GLN:HG3	1:J:402:ASP:CB	1.97	0.86
1:J:269:LEU:CD2	1:J:457:SER:OG	2.23	0.86
1:E:272:ILE:HG21	1:E:277:PHE:HD1	1.40	0.86
1:E:441:LEU:HD21	1:E:499:SER:H	1.36	0.86
1:J:383:CYS:O	1:J:387:ILE:HG13	1.75	0.86
1:E:241:LEU:O	1:E:244:VAL:HG23	1.75	0.85
1:E:455:VAL:HG12	1:E:501:GLY:H	1.41	0.85
1:H:287:ARG:HH11	1:H:287:ARG:HG3	1.40	0.85
1:A:269:LEU:O	1:A:273:VAL:HG13	1.76	0.85
1:E:426:ILE:HD11	1:E:440:ILE:CG2	1.86	0.85
1:H:363:TYR:HE1	1:H:383:CYS:SG	1.98	0.85
1:E:269:LEU:HD21	1:E:457:SER:HB2	1.57	0.85
1:H:377:ARG:HG2	1:H:377:ARG:NH2	1.92	0.85
1:D:251:THR:HG22	1:D:252:LEU:N	1.91	0.85
1:E:363:TYR:HE1	1:E:383:CYS:SG	2.00	0.85
1:I:903:GLU:HG3	1:I:906:ARG:HH22	1.41	0.85
1:A:326:THR:HA	1:A:329:ASN:ND2	1.90	0.85
1:A:441:LEU:HD21	1:A:498:VAL:HB	1.55	0.85
1:A:540:LYS:NZ	1:I:626:PRO:HD2	1.77	0.85
1:B:286:THR:HB	1:B:361:PRO:HB3	1.58	0.85
1:F:376:LYS:NZ	1:F:379:ILE:HD12	1.91	0.85
1:G:402:ASP:HB2	1:J:261:GLN:CG	2.07	0.85
1:J:453:VAL:HG11	1:J:505:LEU:HB2	1.56	0.85
1:A:286:THR:HB	1:A:361:PRO:CB	2.07	0.85
1:D:441:LEU:HD21	1:D:499:SER:N	1.91	0.85
1:A:455:VAL:HG12	1:A:501:GLY:N	1.92	0.85
1:J:434:PRO:HG2	1:J:488:HIS:CG	2.11	0.85
1:G:615:ILE:HD11	1:G:803:ARG:HE	1.41	0.84
1:J:251:THR:HG22	1:J:252:LEU:N	1.92	0.84
1:A:251:THR:HG22	1:A:252:LEU:H	1.40	0.84
1:H:401:THR:HG21	1:H:410:GLN:HG2	1.52	0.84
1:J:441:LEU:HD21	1:J:499:SER:N	1.92	0.84
1:A:278:LEU:HD21	1:A:280:LYS:CD	2.07	0.84
1:J:279:PRO:HB3	1:J:322:GLN:HA	1.58	0.84
1:A:279:PRO:HB3	1:A:322:GLN:CA	2.07	0.84
1:A:286:THR:CB	1:A:361:PRO:HB3	2.07	0.84
1:B:284:MET:O	1:B:286:THR:HG23	1.75	0.84
1:D:273:VAL:HG11	1:D:457:SER:HB2	1.59	0.84
1:F:879:PRO:HG3	1:H:630:ARG:HD2	1.60	0.84
1:J:276:GLU:CD	1:J:318:PHE:HE2	1.78	0.84
1:B:630:ARG:HD3	1:J:540:LYS:CB	2.05	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:375:LEU:N	1:D:375:LEU:HD23	1.92	0.84
1:B:488:HIS:HB3	1:B:491:GLU:CG	2.08	0.84
1:D:278:LEU:HD21	1:D:280:LYS:CD	2.06	0.84
1:H:308:PRO:HG3	1:H:344:ARG:HB2	1.59	0.84
1:B:630:ARG:CD	1:J:540:LYS:CB	2.56	0.84
1:J:279:PRO:HB3	1:J:322:GLN:HB2	1.60	0.84
1:H:610:ARG:HA	1:H:610:ARG:HE	1.43	0.84
1:A:537:TYR:CE2	1:I:612:PRO:CG	2.52	0.84
1:E:269:LEU:O	1:E:273:VAL:HG13	1.77	0.84
1:D:279:PRO:HB3	1:D:322:GLN:CB	2.07	0.83
1:D:382:LEU:C	1:D:382:LEU:HD12	1.97	0.83
1:E:235:ILE:HD12	1:E:235:ILE:O	1.77	0.83
1:A:394:LEU:HB3	1:A:423:ILE:O	1.77	0.83
1:D:284:MET:HG2	1:D:286:THR:HG22	1.59	0.83
1:H:286:THR:O	1:H:361:PRO:HB3	1.77	0.83
1:H:441:LEU:HB3	1:H:498:VAL:HG11	1.59	0.83
1:J:434:PRO:HB2	1:J:491:GLU:HG3	1.60	0.83
1:H:363:TYR:HE1	1:H:383:CYS:HG	0.86	0.83
1:E:251:THR:HG22	1:E:252:LEU:H	1.40	0.83
1:A:363:TYR:HE1	1:A:383:CYS:SG	2.02	0.83
1:A:537:TYR:HA	1:I:630:ARG:CZ	2.08	0.83
1:D:269:LEU:CD2	1:D:457:SER:HB2	2.08	0.83
1:A:426:ILE:HD12	1:A:440:ILE:HG22	1.55	0.82
1:J:272:ILE:HG22	1:J:277:PHE:HA	1.60	0.82
1:D:278:LEU:CD2	1:D:280:LYS:HD3	2.09	0.82
1:E:233:LYS:HE2	1:E:233:LYS:CA	2.09	0.82
1:H:284:MET:N	1:H:284:MET:SD	2.48	0.82
1:B:843:VAL:O	1:B:847:ASN:HB2	1.80	0.82
1:G:402:ASP:HB2	1:J:261:GLN:HG3	1.59	0.82
1:E:339:THR:HG23	1:E:340:ASP:N	1.94	0.82
1:H:434:PRO:HG2	1:H:488:HIS:ND1	1.93	0.82
1:F:357:LEU:C	1:F:357:LEU:CD2	2.47	0.82
1:E:233:LYS:CA	1:E:233:LYS:CE	2.57	0.82
1:G:611:GLU:N	1:G:612:PRO:HD2	1.93	0.82
1:B:878:ASP:HB3	1:B:881:VAL:CG1	2.10	0.82
1:D:285:ILE:CD1	1:D:287:ARG:CB	2.54	0.82
1:E:272:ILE:HG22	1:E:277:PHE:HA	1.61	0.81
1:F:480:ASN:HA	1:F:483:ASN:OD1	1.80	0.81
1:H:403:LEU:HD23	1:H:403:LEU:N	1.94	0.81
1:J:229:PHE:HA	1:J:232:LYS:HG2	1.62	0.81
1:A:240:LEU:N	1:A:240:LEU:HD23	1.93	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:394:LEU:HG	1:A:422:THR:HG1	1.46	0.81
1:B:574:ARG:NH2	1:B:842:ASN:ND2	2.28	0.81
1:C:578:GLN:HA	1:C:838:VAL:HG21	1.60	0.81
1:D:267:SER:HB3	1:D:396:ILE:HG13	1.61	0.81
1:E:233:LYS:N	1:E:233:LYS:CE	2.42	0.81
1:H:434:PRO:HG2	1:H:488:HIS:CG	2.15	0.81
1:E:285:ILE:HD12	1:E:287:ARG:CA	2.09	0.81
1:H:455:VAL:HG12	1:H:501:GLY:H	1.44	0.81
1:A:269:LEU:HD21	1:A:457:SER:CA	2.11	0.81
1:D:229:PHE:HA	1:D:232:LYS:HG2	1.60	0.81
1:D:287:ARG:HH11	1:D:287:ARG:HG3	1.44	0.81
1:H:257:VAL:CG2	1:H:359:ASP:HA	2.10	0.81
1:H:572:PHE:O	1:H:576:GLN:NE2	2.13	0.81
1:J:272:ILE:CG2	1:J:278:LEU:CD1	2.56	0.81
1:J:363:TYR:CD2	1:J:407:THR:HB	2.15	0.81
1:J:426:ILE:HD11	1:J:440:ILE:HG22	0.82	0.81
1:E:749:LYS:H	1:E:749:LYS:HD2	1.45	0.81
1:A:232:LYS:HG3	1:A:233:LYS:HE3	1.61	0.81
1:G:605:LEU:HD22	1:G:606:SER:O	1.79	0.81
1:E:441:LEU:CG	1:E:498:VAL:CG1	2.58	0.81
1:J:441:LEU:CD2	1:J:498:VAL:CG1	2.48	0.81
1:H:278:LEU:HD22	1:H:279:PRO:O	1.81	0.81
1:H:388:ARG:O	1:H:421:ARG:NH2	2.13	0.81
1:H:441:LEU:CG	1:H:498:VAL:CG1	2.59	0.81
1:I:235:ILE:HD13	1:I:356:SER:HB2	1.61	0.81
1:E:269:LEU:CD2	1:E:457:SER:HB2	2.11	0.80
1:J:485:PHE:CD2	1:J:492:PHE:CD1	2.69	0.80
1:C:611:GLU:N	1:C:612:PRO:HD2	1.95	0.80
1:D:278:LEU:HD22	1:D:279:PRO:O	1.81	0.80
1:D:376:LYS:HZ3	1:D:376:LYS:HA	1.44	0.80
1:J:441:LEU:CG	1:J:498:VAL:HG12	2.11	0.80
1:J:540:LYS:C	1:J:540:LYS:CE	2.47	0.80
1:C:616:ILE:HG23	1:C:617:ASP:OD1	1.81	0.80
1:G:322:GLN:O	1:G:326:THR:OG1	1.99	0.80
1:J:279:PRO:HG2	1:J:325:LEU:HD21	1.62	0.80
1:J:279:PRO:O	1:J:280:LYS:HD2	1.82	0.80
1:B:863:GLU:O	1:B:867:ALA:HB3	1.81	0.80
1:D:376:LYS:HA	1:D:376:LYS:NZ	1.96	0.80
1:D:269:LEU:HA	1:D:272:ILE:HD12	1.60	0.80
1:J:441:LEU:HD22	1:J:498:VAL:HB	1.60	0.80
1:J:478:ASN:HD21	1:J:482:LYS:HZ1	0.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:244:VAL:HB	1:E:248:SER:OG	1.82	0.80
1:A:383:CYS:O	1:A:387:ILE:HG13	1.80	0.80
1:A:537:TYR:HE1	1:I:627:TYR:N	1.79	0.80
1:J:269:LEU:HA	1:J:272:ILE:CD1	2.11	0.80
1:A:279:PRO:HG2	1:A:325:LEU:CD2	2.12	0.80
1:A:297:ASP:CG	1:A:300:ALA:HB3	2.03	0.80
1:J:232:LYS:HA	1:J:235:ILE:CG2	2.11	0.80
1:D:480:ASN:HA	1:D:483:ASN:OD1	1.82	0.80
1:H:233:LYS:HE2	1:H:233:LYS:HA	1.62	0.80
1:H:363:TYR:HD2	1:H:408:ALA:HB2	1.47	0.80
1:A:454:GLY:O	1:A:500:THR:HB	1.81	0.79
1:A:537:TYR:CE1	1:A:540:LYS:HE3	2.17	0.79
1:A:540:LYS:HD3	1:I:626:PRO:HA	1.64	0.79
1:A:441:LEU:HD21	1:A:499:SER:H	1.46	0.79
1:D:272:ILE:CG2	1:D:277:PHE:HA	2.12	0.79
1:A:231:THR:O	1:A:235:ILE:HG22	1.82	0.79
1:D:478:ASN:HD21	1:D:482:LYS:HZ1	0.82	0.79
1:E:229:PHE:CG	1:E:232:LYS:HD2	2.16	0.79
1:E:434:PRO:HG2	1:E:488:HIS:ND1	1.97	0.79
1:D:277:PHE:HD1	1:D:278:LEU:H	1.27	0.79
1:D:279:PRO:CG	1:D:325:LEU:HD21	2.07	0.79
1:E:441:LEU:HB3	1:E:498:VAL:HG11	1.63	0.79
1:H:272:ILE:HG21	1:H:277:PHE:HD1	1.47	0.79
1:E:278:LEU:HB2	1:E:279:PRO:HD2	1.65	0.79
1:H:273:VAL:HG11	1:H:457:SER:CB	2.12	0.79
1:D:478:ASN:CG	1:D:482:LYS:NZ	2.36	0.79
1:J:441:LEU:HD23	1:J:498:VAL:CA	2.10	0.79
1:A:286:THR:O	1:A:361:PRO:HB3	1.82	0.79
1:C:322:GLN:O	1:C:326:THR:OG1	1.99	0.79
1:D:286:THR:OG1	1:D:361:PRO:HB3	1.83	0.79
1:A:485:PHE:CD2	1:A:492:PHE:HD1	1.99	0.79
1:E:434:PRO:CB	1:E:491:GLU:HG3	2.13	0.78
1:H:276:GLU:OE2	1:H:318:PHE:HE2	1.65	0.78
1:A:572:PHE:O	1:A:576:GLN:NE2	2.16	0.78
1:D:286:THR:O	1:D:361:PRO:CG	2.32	0.78
1:E:279:PRO:HB3	1:E:322:GLN:CB	2.14	0.78
1:H:485:PHE:HD2	1:H:492:PHE:O	1.65	0.78
1:J:434:PRO:HG2	1:J:488:HIS:ND1	1.98	0.78
1:A:445:GLN:O	1:A:446:TYR:CD1	2.37	0.78
1:A:694:THR:HG21	1:A:845:MET:HB2	1.64	0.78
1:E:272:ILE:HG21	1:E:277:PHE:CD1	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:244:VAL:HB	1:H:248:SER:OG	1.83	0.78
1:H:279:PRO:HB3	1:H:322:GLN:CB	2.14	0.78
1:I:284:MET:HG2	1:I:286:THR:CG2	2.13	0.78
1:E:376:LYS:HA	1:E:376:LYS:HZ3	1.48	0.78
1:A:279:PRO:HB3	1:A:322:GLN:CB	2.13	0.78
1:E:285:ILE:HD13	1:E:287:ARG:HB2	0.82	0.78
1:A:434:PRO:HB3	1:A:491:GLU:HG3	1.66	0.78
1:E:286:THR:CB	1:E:361:PRO:HB3	2.13	0.78
1:G:578:GLN:HA	1:G:838:VAL:HG21	1.65	0.78
1:J:241:LEU:O	1:J:244:VAL:HG23	1.84	0.78
1:A:537:TYR:HE1	1:I:627:TYR:H	1.32	0.78
1:D:434:PRO:HB3	1:D:491:GLU:CB	2.13	0.78
1:E:279:PRO:CB	1:E:322:GLN:HA	2.13	0.78
1:H:278:LEU:CD2	1:H:280:LYS:HD3	2.10	0.78
1:J:285:ILE:CD1	1:J:287:ARG:N	2.19	0.78
1:B:258:ILE:HG22	1:B:360:LEU:HD11	1.64	0.77
1:D:272:ILE:CG2	1:D:278:LEU:HD12	2.05	0.77
1:E:234:MET:O	1:E:237:ILE:HG22	1.83	0.77
1:H:276:GLU:OE2	1:H:318:PHE:CE2	2.37	0.77
1:A:268:VAL:O	1:A:272:ILE:HG13	1.85	0.77
1:E:279:PRO:HB3	1:E:322:GLN:HA	1.64	0.77
1:I:618:LEU:HD22	1:I:628:TRP:CE3	2.19	0.77
1:C:611:GLU:H	1:C:612:PRO:HD2	1.50	0.77
1:H:269:LEU:HA	1:H:272:ILE:HD12	1.65	0.77
1:A:574:ARG:H	1:A:575:PRO:HD2	1.49	0.77
1:D:269:LEU:HD21	1:D:457:SER:HB2	1.65	0.77
1:G:402:ASP:CB	1:J:261:GLN:CG	2.63	0.77
1:I:285:ILE:HD13	1:I:332:VAL:HG22	1.66	0.77
1:B:284:MET:N	1:B:284:MET:SD	2.57	0.77
1:I:618:LEU:CD2	1:I:628:TRP:CE3	2.68	0.77
1:A:657:GLN:HE22	1:A:684:ALA:HA	1.48	0.76
1:B:260:SER:O	1:B:264:GLY:N	2.17	0.76
1:D:285:ILE:CD1	1:D:287:ARG:N	2.37	0.76
1:E:272:ILE:HG12	1:E:278:LEU:CD1	2.15	0.76
1:F:843:VAL:O	1:F:847:ASN:HB2	1.85	0.76
1:G:402:ASP:CB	1:J:261:GLN:HG2	2.15	0.76
1:G:405:ASN:CG	1:J:261:GLN:CB	2.53	0.76
1:H:682:ALA:O	1:H:685:THR:HG22	1.84	0.76
1:J:286:THR:O	1:J:361:PRO:HB3	1.84	0.76
1:D:286:THR:O	1:D:361:PRO:HG3	1.86	0.76
1:D:441:LEU:HB3	1:D:498:VAL:HG11	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:246:GLN:HG2	1:H:247:GLY:N	2.00	0.76
1:H:258:ILE:HG22	1:H:360:LEU:HD11	1.67	0.76
1:D:453:VAL:HG11	1:D:505:LEU:HB2	1.65	0.76
1:E:269:LEU:CA	1:E:272:ILE:HD12	2.14	0.76
1:E:376:LYS:HE2	1:E:376:LYS:N	2.01	0.76
1:H:441:LEU:HB3	1:H:498:VAL:CG1	2.15	0.76
1:A:441:LEU:CD2	1:A:498:VAL:CG1	2.48	0.76
1:A:537:TYR:HE1	1:I:627:TYR:HB2	1.50	0.76
1:E:251:THR:HG22	1:E:252:LEU:N	2.01	0.76
1:F:434:PRO:HG2	1:F:488:HIS:CG	2.20	0.76
1:I:285:ILE:HD12	1:I:287:ARG:H	1.49	0.76
1:D:264:GLY:O	1:D:268:VAL:HG22	1.85	0.76
1:E:275:HIS:CG	1:E:276:GLU:H	2.03	0.76
1:D:285:ILE:HG13	1:D:286:THR:H	1.51	0.76
1:H:240:LEU:HD23	1:H:240:LEU:N	2.00	0.76
1:D:277:PHE:CD1	1:D:278:LEU:N	2.53	0.76
1:H:278:LEU:HD21	1:H:280:LYS:CD	2.15	0.76
1:I:642:LEU:HD22	1:I:643:GLY:H	1.50	0.76
1:D:436:LYS:O	1:D:440:ILE:HG13	1.85	0.76
1:E:455:VAL:HG12	1:E:501:GLY:N	2.01	0.76
1:F:357:LEU:HD23	1:F:358:ILE:N	2.00	0.76
1:I:260:SER:O	1:I:264:GLY:N	2.19	0.76
1:I:627:TYR:HD2	1:I:628:TRP:CZ3	2.04	0.76
1:H:237:ILE:O	1:H:237:ILE:HD13	1.86	0.75
1:J:235:ILE:HD12	1:J:235:ILE:O	1.86	0.75
1:E:284:MET:O	1:E:284:MET:SD	2.43	0.75
1:G:261:GLN:NE2	1:J:405:ASN:CB	2.50	0.75
1:J:376:LYS:HA	1:J:376:LYS:HZ3	1.51	0.75
1:E:485:PHE:CE2	1:E:500:THR:OG1	2.39	0.75
1:J:269:LEU:HD23	1:J:269:LEU:C	2.07	0.75
1:D:441:LEU:HB3	1:D:498:VAL:CG1	2.16	0.75
1:E:273:VAL:HG11	1:E:457:SER:HB2	1.67	0.75
1:E:285:ILE:CD1	1:E:287:ARG:CA	2.64	0.75
1:G:261:GLN:HB3	1:J:405:ASN:ND2	2.01	0.75
1:G:364:ILE:CA	1:J:405:ASN:OD1	2.33	0.75
1:G:585:LEU:HD12	1:G:834:ALA:HB2	1.67	0.75
1:I:664:LEU:HD23	1:I:676:ARG:HG3	1.69	0.75
1:J:478:ASN:HD21	1:J:482:LYS:NZ	1.67	0.75
1:C:235:ILE:HD13	1:C:356:SER:HB2	1.69	0.75
1:D:434:PRO:HB3	1:D:491:GLU:HG3	1.68	0.75
1:E:229:PHE:CZ	1:E:232:LYS:HD2	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:394:LEU:HD21	1:A:395:ALA:HB2	1.67	0.75
1:B:781:ALA:N	1:E:778:GLY:HA3	2.02	0.75
1:D:279:PRO:HG2	1:D:325:LEU:CD2	2.10	0.75
1:D:445:GLN:O	1:D:446:TYR:CD1	2.40	0.75
1:D:441:LEU:CD2	1:D:498:VAL:CG1	2.60	0.75
1:D:572:PHE:O	1:D:576:GLN:NE2	2.19	0.75
1:H:453:VAL:HG11	1:H:505:LEU:HB2	1.69	0.75
1:A:363:TYR:CE1	1:A:383:CYS:SG	2.79	0.74
1:A:441:LEU:CG	1:A:498:VAL:CG1	2.64	0.74
1:B:781:ALA:CB	1:E:778:GLY:CA	2.64	0.74
1:E:308:PRO:HG3	1:E:344:ARG:HB2	1.69	0.74
1:H:272:ILE:CG2	1:H:278:LEU:CD1	2.62	0.74
1:A:485:PHE:CE2	1:A:500:THR:OG1	2.38	0.74
1:C:611:GLU:H	1:C:612:PRO:CD	2.00	0.74
1:I:284:MET:SD	1:I:284:MET:N	2.59	0.74
1:J:441:LEU:HG	1:J:498:VAL:HG12	1.66	0.74
1:J:540:LYS:CE	1:J:540:LYS:O	2.35	0.74
1:E:478:ASN:CG	1:E:482:LYS:NZ	2.40	0.74
1:I:843:VAL:O	1:I:847:ASN:HB2	1.87	0.74
1:E:267:SER:HB3	1:E:396:ILE:HG13	1.68	0.74
1:J:231:THR:O	1:J:235:ILE:HG22	1.87	0.74
1:J:237:ILE:HD13	1:J:237:ILE:O	1.87	0.74
1:C:854:PRO:HB2	1:C:855:ARG:NH2	2.03	0.74
1:D:285:ILE:HG13	1:D:286:THR:N	2.02	0.74
1:F:739:LYS:HD2	1:F:742:GLU:OE1	1.86	0.74
1:H:269:LEU:HD21	1:H:457:SER:HB2	1.65	0.74
1:H:377:ARG:CG	1:H:377:ARG:NH2	2.47	0.74
1:J:485:PHE:HD2	1:J:492:PHE:O	1.71	0.74
1:G:260:SER:O	1:G:264:GLY:N	2.21	0.74
1:G:261:GLN:NE2	1:J:401:THR:CG2	2.49	0.74
1:J:434:PRO:HB3	1:J:491:GLU:HG3	1.70	0.74
1:A:272:ILE:HG23	1:A:278:LEU:HD12	0.76	0.74
1:D:278:LEU:HB2	1:D:279:PRO:HD2	1.70	0.74
1:J:273:VAL:CG1	1:J:457:SER:HB2	2.17	0.74
1:J:284:MET:N	1:J:284:MET:SD	2.54	0.74
1:E:339:THR:HG23	1:E:340:ASP:H	1.52	0.74
1:J:270:GLU:O	1:J:273:VAL:HG22	1.87	0.74
1:A:394:LEU:CD2	1:A:395:ALA:CB	2.53	0.74
1:B:781:ALA:HB2	1:E:778:GLY:H	1.51	0.74
1:G:453:VAL:HG11	1:G:505:LEU:HB2	1.70	0.74
1:J:485:PHE:CE2	1:J:500:THR:OG1	2.39	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:ILE:HG12	1:A:394:LEU:N	1.95	0.74
1:G:605:LEU:CD2	1:G:606:SER:O	2.36	0.74
1:J:246:GLN:HG2	1:J:247:GLY:N	2.02	0.74
1:J:486:GLY:O	1:J:489:PRO:HD3	1.88	0.74
1:D:230:ILE:O	1:D:234:MET:HG3	1.87	0.73
1:D:279:PRO:HB3	1:D:322:GLN:HB2	1.70	0.73
1:E:434:PRO:HG2	1:E:488:HIS:CG	2.22	0.73
1:E:269:LEU:HD11	1:E:457:SER:C	2.05	0.73
1:G:611:GLU:H	1:G:612:PRO:CD	2.00	0.73
1:E:434:PRO:HB3	1:E:491:GLU:CB	2.19	0.73
1:A:238:ARG:NH2	1:A:356:SER:OG	2.21	0.73
1:A:244:VAL:HB	1:A:248:SER:OG	1.88	0.73
1:H:269:LEU:CD2	1:H:457:SER:HB2	2.17	0.73
1:H:285:ILE:CD1	1:H:287:ARG:N	2.45	0.73
1:H:269:LEU:O	1:H:273:VAL:HG13	1.87	0.73
1:H:610:ARG:HA	1:H:610:ARG:NE	2.02	0.73
1:J:480:ASN:HA	1:J:483:ASN:OD1	1.89	0.73
1:A:255:ILE:HD11	1:A:355:LEU:HG	1.70	0.73
1:A:488:HIS:HB3	1:A:491:GLU:HG2	1.69	0.73
1:B:630:ARG:NH1	1:J:537:TYR:HD1	1.86	0.73
1:A:285:ILE:CD1	1:A:287:ARG:N	2.35	0.73
1:A:393:ILE:CG1	1:A:394:LEU:HA	2.19	0.73
1:C:258:ILE:HG22	1:C:360:LEU:HD11	1.69	0.73
1:G:642:LEU:CD2	1:G:643:GLY:N	2.47	0.73
1:J:339:THR:HG23	1:J:340:ASP:N	2.02	0.73
1:F:610:ARG:HD2	1:F:613:ASP:OD1	1.89	0.73
1:G:285:ILE:HD12	1:G:287:ARG:H	1.54	0.73
1:J:285:ILE:HD11	1:J:287:ARG:HB2	1.68	0.73
1:J:363:TYR:HE1	1:J:383:CYS:HG	0.79	0.73
1:A:269:LEU:HA	1:A:272:ILE:HD12	1.69	0.73
1:J:352:ILE:HD12	1:J:352:ILE:O	1.89	0.73
1:A:307:PHE:CE1	1:A:345:LEU:CD2	2.72	0.72
1:A:540:LYS:NZ	1:I:627:TYR:H	1.85	0.72
1:C:609:PRO:HB2	1:C:610:ARG:C	2.09	0.72
1:A:251:THR:HG22	1:A:252:LEU:N	2.02	0.72
1:A:376:LYS:N	1:A:376:LYS:HE2	2.04	0.72
1:A:610:ARG:HA	1:A:610:ARG:NE	2.05	0.72
1:H:238:ARG:HA	1:H:241:LEU:HD12	1.72	0.72
1:H:488:HIS:HB3	1:H:491:GLU:CG	2.18	0.72
1:A:284:MET:SD	1:A:284:MET:N	2.60	0.72
1:A:707:PHE:CZ	1:B:847:ASN:ND2	2.58	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:630:ARG:HD3	1:C:631:GLN:N	2.04	0.72
1:D:485:PHE:HD2	1:D:492:PHE:O	1.73	0.72
1:C:627:TYR:HE2	1:C:628:TRP:CZ3	2.08	0.72
1:E:279:PRO:HB3	1:E:322:GLN:CA	2.19	0.72
1:J:285:ILE:CD1	1:J:287:ARG:CA	2.67	0.72
1:E:229:PHE:CE1	1:E:232:LYS:CE	2.73	0.72
1:H:238:ARG:NH2	1:H:356:SER:OG	2.23	0.72
1:I:626:PRO:HB2	1:I:630:ARG:HE	1.53	0.72
1:J:286:THR:O	1:J:361:PRO:CG	2.37	0.72
1:A:272:ILE:HG22	1:A:277:PHE:HA	1.70	0.72
1:E:230:ILE:O	1:E:234:MET:HG3	1.89	0.72
1:G:405:ASN:ND2	1:J:261:GLN:H	1.87	0.72
1:I:615:ILE:HD11	1:I:803:ARG:HE	1.54	0.72
1:A:540:LYS:HE2	1:I:626:PRO:CB	2.14	0.72
1:G:364:ILE:HG23	1:J:405:ASN:OD1	1.90	0.72
1:H:233:LYS:N	1:H:233:LYS:HE3	2.04	0.72
1:A:257:VAL:CG2	1:A:359:ASP:HA	2.19	0.72
1:A:297:ASP:OD2	1:A:300:ALA:HB3	1.90	0.72
1:A:396:ILE:HG22	1:A:425:VAL:HB	1.72	0.72
1:G:261:GLN:NE2	1:J:405:ASN:HB3	2.04	0.72
1:A:540:LYS:CG	1:I:626:PRO:HB3	2.17	0.71
1:B:863:GLU:O	1:B:867:ALA:CB	2.38	0.71
1:E:229:PHE:CD1	1:E:232:LYS:HE3	2.25	0.71
1:G:609:PRO:HB2	1:G:610:ARG:C	2.11	0.71
1:A:273:VAL:HG21	1:A:457:SER:CB	2.19	0.71
1:A:278:LEU:HB2	1:A:279:PRO:HD2	1.70	0.71
1:B:781:ALA:CB	1:E:778:GLY:N	2.48	0.71
1:F:610:ARG:HB2	1:F:611:GLU:HA	1.72	0.71
1:I:627:TYR:C	1:I:628:TRP:CE3	2.64	0.71
1:A:273:VAL:HG11	1:A:457:SER:CB	2.20	0.71
1:H:485:PHE:CD2	1:H:492:PHE:CD1	2.78	0.71
1:D:287:ARG:HH11	1:D:287:ARG:CG	2.03	0.71
1:E:297:ASP:OD2	1:E:300:ALA:HB3	1.90	0.71
1:G:530:ARG:HG2	1:G:530:ARG:HH11	1.55	0.71
1:B:239:ASN:HD21	1:B:293:THR:HG21	1.56	0.71
1:E:376:LYS:NZ	1:E:376:LYS:HA	2.05	0.71
1:H:376:LYS:HA	1:H:376:LYS:NZ	2.06	0.71
1:J:308:PRO:CG	1:J:344:ARG:HB2	2.17	0.71
1:D:272:ILE:CG2	1:D:278:LEU:CD1	2.65	0.71
1:D:853:PHE:HB3	1:D:854:PRO:HD3	1.71	0.71
1:H:294:LEU:HB3	1:H:352:ILE:HD13	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:413:ARG:NH1	1:H:446:TYR:CE1	2.58	0.71
1:A:434:PRO:CB	1:A:491:GLU:HG3	2.21	0.71
1:E:229:PHE:CE1	1:E:232:LYS:CD	2.74	0.71
1:H:275:HIS:CG	1:H:276:GLU:H	2.08	0.71
1:H:397:SER:HB3	1:H:411:ALA:HB1	1.71	0.71
1:A:434:PRO:HG2	1:A:488:HIS:CG	2.26	0.71
1:A:454:GLY:H	1:A:500:THR:HG22	1.56	0.71
1:D:272:ILE:HG23	1:D:278:LEU:H	1.55	0.71
1:D:363:TYR:CE1	1:D:383:CYS:SG	2.73	0.71
1:E:889:ARG:HG3	1:E:890:ARG:N	2.04	0.71
1:A:376:LYS:NZ	1:A:379:ILE:HD12	2.05	0.71
1:C:672:HIS:HD2	1:C:877:GLU:HB2	1.56	0.71
1:H:236:GLU:O	1:H:239:ASN:HB2	1.91	0.71
1:I:259:GLY:HA2	1:I:408:ALA:HB2	1.73	0.71
1:I:628:TRP:CD2	1:I:628:TRP:N	2.53	0.71
1:F:453:VAL:HG11	1:F:505:LEU:HB2	1.73	0.70
1:H:268:VAL:O	1:H:272:ILE:HG13	1.89	0.70
1:J:441:LEU:HB3	1:J:498:VAL:CG1	2.20	0.70
1:B:285:ILE:HD12	1:B:287:ARG:H	1.56	0.70
1:D:279:PRO:CB	1:D:322:GLN:HA	2.20	0.70
1:E:485:PHE:HD2	1:E:492:PHE:O	1.73	0.70
1:H:441:LEU:HD23	1:H:498:VAL:HB	0.71	0.70
1:J:441:LEU:HB3	1:J:498:VAL:HG11	1.70	0.70
1:G:605:LEU:HD22	1:G:606:SER:N	2.05	0.70
1:H:474:LEU:HG	1:H:475:ALA:N	2.07	0.70
1:C:665:ASP:OD1	1:C:676:ARG:NH1	2.24	0.70
1:D:775:GLY:HA2	1:D:779:PHE:O	1.91	0.70
1:E:363:TYR:CE1	1:E:383:CYS:SG	2.80	0.70
1:H:284:MET:HG2	1:H:286:THR:HG22	1.74	0.70
1:D:377:ARG:HG2	1:D:377:ARG:HH21	1.56	0.70
1:D:492:PHE:O	1:D:492:PHE:HD1	1.74	0.70
1:A:286:THR:O	1:A:361:PRO:CG	2.40	0.70
1:H:485:PHE:CE2	1:H:500:THR:OG1	2.44	0.70
1:C:224:ASP:HB3	1:C:227:MET:HB2	1.72	0.70
1:A:234:MET:O	1:A:237:ILE:HG22	1.91	0.70
1:A:284:MET:HG2	1:A:286:THR:CG2	2.22	0.70
1:E:272:ILE:CG2	1:E:278:LEU:CD1	2.61	0.70
1:G:261:GLN:HB3	1:J:405:ASN:CG	2.12	0.70
1:I:434:PRO:HG2	1:I:488:HIS:CG	2.27	0.70
1:D:273:VAL:HG11	1:D:457:SER:CB	2.21	0.70
1:D:878:ASP:HB3	1:D:881:VAL:HG22	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:257:VAL:HG22	1:E:359:ASP:HA	1.73	0.70
1:G:284:MET:N	1:G:284:MET:SD	2.65	0.70
1:A:537:TYR:CE1	1:I:627:TYR:CB	2.73	0.70
1:E:339:THR:CG2	1:E:340:ASP:H	2.04	0.70
1:A:272:ILE:HG12	1:A:278:LEU:CD1	2.22	0.69
1:A:349:SER:O	1:A:352:ILE:HG13	1.92	0.69
1:D:434:PRO:HG2	1:D:488:HIS:ND1	2.06	0.69
1:E:272:ILE:CG2	1:E:277:PHE:HA	2.22	0.69
1:H:272:ILE:HG21	1:H:277:PHE:CD1	2.25	0.69
1:J:540:LYS:HE2	1:J:541:VAL:N	2.07	0.69
1:A:276:GLU:OE2	1:A:318:PHE:CD2	2.45	0.69
1:B:574:ARG:NH2	1:B:842:ASN:HD21	1.88	0.69
1:E:434:PRO:HB3	1:E:491:GLU:HG3	1.73	0.69
1:E:441:LEU:HD23	1:E:498:VAL:HB	0.71	0.69
1:E:445:GLN:O	1:E:446:TYR:CD1	2.45	0.69
1:F:255:ILE:HD11	1:F:355:LEU:HG	1.71	0.69
1:J:478:ASN:CG	1:J:482:LYS:NZ	2.45	0.69
1:D:485:PHE:CE2	1:D:500:THR:OG1	2.46	0.69
1:E:388:ARG:O	1:E:421:ARG:NH2	2.25	0.69
1:G:261:GLN:HE21	1:J:405:ASN:HB2	1.57	0.69
1:H:279:PRO:CB	1:H:322:GLN:HA	2.22	0.69
1:J:275:HIS:CG	1:J:276:GLU:H	2.11	0.69
1:E:454:GLY:O	1:E:500:THR:HG22	1.92	0.69
1:H:441:LEU:CD2	1:H:498:VAL:HG12	2.11	0.69
1:D:269:LEU:HD23	1:D:270:GLU:N	2.07	0.69
1:H:339:THR:HG23	1:H:340:ASP:N	2.08	0.69
1:J:308:PRO:HG3	1:J:344:ARG:CB	2.18	0.69
1:E:396:ILE:HG22	1:E:425:VAL:HB	1.74	0.69
1:F:258:ILE:HG22	1:F:360:LEU:HD11	1.74	0.69
1:G:402:ASP:HB3	1:J:261:GLN:HG2	1.74	0.69
1:E:225:ASP:N	1:E:225:ASP:OD1	2.20	0.69
1:E:278:LEU:HD21	1:E:280:LYS:CD	2.20	0.69
1:E:278:LEU:HD22	1:E:279:PRO:O	1.93	0.69
1:G:284:MET:O	1:G:286:THR:HG23	1.92	0.69
1:J:236:GLU:O	1:J:239:ASN:HB2	1.91	0.69
1:J:493:GLY:O	1:J:496:SER:CB	2.41	0.69
1:A:285:ILE:HD11	1:A:287:ARG:HB2	1.67	0.69
1:A:393:ILE:CG1	1:A:394:LEU:N	2.55	0.69
1:C:387:ILE:O	1:C:421:ARG:NH2	2.25	0.69
1:H:265:LYS:O	1:H:268:VAL:HG23	1.92	0.69
1:I:613:ASP:HB3	1:I:627:TYR:CD1	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:261:GLN:NE2	1:B:261:GLN:N	2.41	0.69
1:B:285:ILE:HG12	1:B:329:ASN:O	1.92	0.69
1:D:441:LEU:HD21	1:D:499:SER:H	1.56	0.69
1:E:232:LYS:C	1:E:233:LYS:HE3	2.13	0.69
1:E:279:PRO:HG2	1:E:325:LEU:CD2	2.20	0.69
1:E:694:THR:HG21	1:E:845:MET:HB2	1.75	0.69
1:I:284:MET:HG2	1:I:286:THR:HG22	1.74	0.69
1:C:285:ILE:HG12	1:C:329:ASN:O	1.93	0.68
1:E:478:ASN:O	1:E:482:LYS:HG2	1.93	0.68
1:G:364:ILE:O	1:J:405:ASN:HA	1.93	0.68
1:A:533:GLU:HB2	1:I:596:ARG:NH1	2.09	0.68
1:D:257:VAL:HG22	1:D:359:ASP:HA	1.75	0.68
1:F:376:LYS:HZ1	1:F:379:ILE:HD12	1.57	0.68
1:I:624:ASP:HA	1:I:629:HIS:HD2	1.58	0.68
1:A:485:PHE:CD2	1:A:492:PHE:O	2.42	0.68
1:J:310:LEU:N	1:J:310:LEU:HD23	2.09	0.68
1:J:434:PRO:HB3	1:J:491:GLU:CG	2.23	0.68
1:B:596:ARG:HH22	1:J:533:GLU:HG2	1.59	0.68
1:G:261:GLN:HE21	1:J:405:ASN:CB	2.06	0.68
1:I:854:PRO:CB	1:I:855:ARG:NH2	2.57	0.68
1:C:630:ARG:HD3	1:C:630:ARG:O	1.94	0.68
1:D:455:VAL:HG12	1:D:501:GLY:H	1.58	0.68
1:E:441:LEU:CD2	1:E:498:VAL:HG12	2.15	0.68
1:H:456:ILE:HD12	1:H:457:SER:N	2.08	0.68
1:J:257:VAL:CG2	1:J:359:ASP:HA	2.23	0.68
1:J:276:GLU:OE2	1:J:318:PHE:CD2	2.44	0.68
1:J:664:LEU:HB3	1:J:676:ARG:NH2	2.08	0.68
1:J:818:LYS:HE3	1:J:819:TYR:CZ	2.29	0.68
1:J:572:PHE:O	1:J:576:GLN:NE2	2.26	0.68
1:D:242:GLN:HE22	1:D:344:ARG:HD2	1.59	0.68
1:E:246:GLN:HG2	1:E:247:GLY:N	2.08	0.68
1:G:349:SER:HB3	1:G:352:ILE:HG23	1.74	0.68
1:H:375:LEU:N	1:H:375:LEU:CD2	2.53	0.68
1:A:326:THR:HA	1:A:329:ASN:HD22	1.57	0.68
1:A:540:LYS:HG2	1:I:626:PRO:HG3	1.70	0.68
1:B:630:ARG:HE	1:J:540:LYS:CG	2.07	0.68
1:D:273:VAL:HG21	1:D:457:SER:CB	2.18	0.68
1:J:237:ILE:HD11	1:J:897:VAL:HG13	1.75	0.68
1:A:537:TYR:CE1	1:A:540:LYS:CE	2.77	0.67
1:A:540:LYS:HZ2	1:I:626:PRO:N	1.92	0.67
1:A:545:GLU:OE1	1:I:630:ARG:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:640:THR:HG21	1:A:706:LYS:HA	1.74	0.67
1:E:229:PHE:CE2	1:E:232:LYS:HD2	2.29	0.67
1:F:279:PRO:HB3	1:F:322:GLN:HA	1.75	0.67
1:B:615:ILE:HD11	1:B:803:ARG:HE	1.59	0.67
1:B:627:TYR:CD1	1:B:630:ARG:NH2	2.62	0.67
1:D:423:ILE:HG22	1:D:450:LEU:HD13	1.76	0.67
1:D:485:PHE:CD2	1:D:492:PHE:CD1	2.82	0.67
1:H:441:LEU:HD23	1:H:498:VAL:CA	2.17	0.67
1:J:286:THR:O	1:J:361:PRO:HG3	1.94	0.67
1:B:284:MET:HG2	1:B:286:THR:HG22	1.75	0.67
1:E:526:GLU:OE1	1:E:530:ARG:NH1	2.28	0.67
1:H:272:ILE:CG2	1:H:277:PHE:HA	2.24	0.67
1:H:339:THR:HG23	1:H:340:ASP:H	1.60	0.67
1:E:242:GLN:HE22	1:E:344:ARG:CD	2.07	0.67
1:G:434:PRO:HG2	1:G:488:HIS:CG	2.29	0.67
1:H:705:TYR:CE1	1:H:832:LYS:HD3	2.30	0.67
1:J:441:LEU:HD23	1:J:498:VAL:HB	0.68	0.67
1:B:781:ALA:CB	1:E:778:GLY:HA2	2.23	0.67
1:E:339:THR:CG2	1:E:340:ASP:N	2.58	0.67
1:F:259:GLY:HA2	1:F:408:ALA:HB2	1.76	0.67
1:F:611:GLU:N	1:F:612:PRO:HD2	2.10	0.67
1:J:472:ASN:HD21	1:J:475:ALA:HB3	1.58	0.67
1:D:278:LEU:O	1:D:278:LEU:HD13	1.95	0.67
1:E:363:TYR:HE1	1:E:383:CYS:HG	0.81	0.67
1:J:639:LEU:O	1:J:642:LEU:HD23	1.94	0.67
1:D:239:ASN:O	1:D:242:GLN:HB3	1.95	0.67
1:J:540:LYS:HE2	1:J:540:LYS:O	1.95	0.67
1:A:778:GLY:C	1:A:779:PHE:HD2	1.98	0.67
1:B:607:PRO:HG3	1:B:762:ARG:HG3	1.76	0.67
1:B:609:PRO:HB2	1:B:610:ARG:C	2.15	0.67
1:D:272:ILE:CG2	1:D:278:LEU:H	2.07	0.67
1:E:229:PHE:CD2	1:E:232:LYS:HD2	2.30	0.67
1:E:237:ILE:HD11	1:E:897:VAL:HG13	1.76	0.67
1:E:576:GLN:NE2	1:E:576:GLN:H	1.92	0.67
1:G:258:ILE:HG22	1:G:360:LEU:HD11	1.77	0.67
1:G:524:THR:O	1:G:528:ILE:HG13	1.94	0.67
1:G:598:TRP:HE3	1:G:796:ARG:NH1	1.92	0.67
1:H:225:ASP:O	1:H:229:PHE:HD1	1.77	0.67
1:H:286:THR:O	1:H:361:PRO:CB	2.42	0.67
1:I:878:ASP:HB3	1:I:881:VAL:HG12	1.77	0.67
1:E:231:THR:O	1:E:235:ILE:HG22	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:627:TYR:HE2	1:F:628:TRP:CZ3	2.13	0.67
1:H:426:ILE:HD12	1:H:440:ILE:CG2	1.92	0.67
1:J:267:SER:HB2	1:J:396:ILE:CD1	2.25	0.67
1:C:627:TYR:OH	1:C:631:GLN:NE2	2.28	0.66
1:D:270:GLU:O	1:D:273:VAL:HG22	1.95	0.66
1:H:263:SER:OG	1:H:397:SER:HA	1.94	0.66
1:A:478:ASN:HD21	1:A:482:LYS:HZ1	0.72	0.66
1:C:611:GLU:N	1:C:612:PRO:CD	2.57	0.66
1:D:434:PRO:HB3	1:D:491:GLU:CG	2.25	0.66
1:F:578:GLN:HA	1:F:838:VAL:HG21	1.77	0.66
1:H:454:GLY:O	1:H:500:THR:HB	1.96	0.66
1:D:434:PRO:HG2	1:D:488:HIS:CG	2.30	0.66
1:E:434:PRO:HB3	1:E:491:GLU:HB2	1.76	0.66
1:B:626:PRO:C	1:J:540:LYS:HD2	2.16	0.66
1:B:642:LEU:HD22	1:B:643:GLY:H	1.59	0.66
1:E:229:PHE:CE1	1:E:232:LYS:HE3	2.30	0.66
1:H:233:LYS:HE2	1:H:233:LYS:CA	2.26	0.66
1:H:574:ARG:H	1:H:575:PRO:HD2	1.60	0.66
1:A:307:PHE:CD1	1:A:345:LEU:HD21	2.30	0.66
1:J:229:PHE:CD1	1:J:232:LYS:CD	2.62	0.66
1:C:269:LEU:HA	1:C:272:ILE:HD12	1.76	0.66
1:E:307:PHE:CD1	1:E:345:LEU:HD21	2.29	0.66
1:E:574:ARG:H	1:E:575:PRO:HD2	1.61	0.66
1:H:273:VAL:HG21	1:H:457:SER:CB	2.17	0.66
1:J:307:PHE:CD1	1:J:345:LEU:HD21	2.31	0.66
1:J:485:PHE:CD2	1:J:492:PHE:HD1	2.11	0.66
1:A:472:ASN:HD21	1:A:475:ALA:CB	2.06	0.66
1:A:488:HIS:HB3	1:A:491:GLU:CG	2.26	0.66
1:D:276:GLU:OE2	1:D:318:PHE:CD2	2.48	0.66
1:D:388:ARG:O	1:D:421:ARG:NH2	2.27	0.66
1:E:269:LEU:HD21	1:E:457:SER:CA	2.26	0.66
1:H:434:PRO:HB3	1:H:491:GLU:CB	2.25	0.66
1:J:286:THR:O	1:J:361:PRO:CB	2.44	0.66
1:J:396:ILE:HG22	1:J:425:VAL:HB	1.78	0.66
1:A:286:THR:O	1:A:361:PRO:CB	2.43	0.66
1:B:630:ARG:CB	1:J:540:LYS:CG	2.59	0.66
1:D:246:GLN:HG2	1:D:247:GLY:N	2.09	0.66
1:D:441:LEU:CG	1:D:498:VAL:CG1	2.73	0.66
1:I:622:ASP:OD1	1:I:623:PRO:HD2	1.96	0.66
1:J:278:LEU:HD22	1:J:280:LYS:HG2	1.78	0.66
1:E:339:THR:O	1:E:340:ASP:HB3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:ILE:O	1:A:237:ILE:HD13	1.96	0.65
1:A:246:GLN:CG	1:A:247:GLY:N	2.55	0.65
1:D:272:ILE:HG21	1:D:277:PHE:CD1	2.31	0.65
1:G:249:THR:OG1	1:G:531:GLU:OE1	2.11	0.65
1:H:485:PHE:CD2	1:H:492:PHE:O	2.48	0.65
1:J:278:LEU:CD2	1:J:280:LYS:CD	2.64	0.65
1:J:285:ILE:HD12	1:J:287:ARG:H	0.59	0.65
1:E:312:LEU:N	1:E:312:LEU:CD2	2.58	0.65
1:J:232:LYS:HA	1:J:235:ILE:HG22	1.77	0.65
1:J:352:ILE:HD12	1:J:352:ILE:C	2.17	0.65
1:J:540:LYS:O	1:J:540:LYS:HE3	1.94	0.65
1:A:275:HIS:CG	1:A:276:GLU:H	2.15	0.65
1:A:394:LEU:HD21	1:A:412:SER:CB	2.27	0.65
1:A:707:PHE:CE2	1:B:847:ASN:ND2	2.65	0.65
1:B:257:VAL:HG12	1:B:394:LEU:HB3	1.78	0.65
1:E:229:PHE:CD1	1:E:232:LYS:CD	2.79	0.65
1:E:376:LYS:HE2	1:E:376:LYS:CA	2.26	0.65
1:F:360:LEU:HB2	1:F:361:PRO:HD2	1.78	0.65
1:H:232:LYS:HA	1:H:235:ILE:HG22	1.76	0.65
1:J:234:MET:O	1:J:237:ILE:HG22	1.95	0.65
1:J:817:ASN:HB3	1:J:820:TYR:HB2	1.78	0.65
1:A:441:LEU:CD2	1:A:498:VAL:CA	2.74	0.65
1:F:430:ASP:HB3	1:F:456:ILE:HG12	1.78	0.65
1:G:402:ASP:CB	1:J:261:GLN:HG3	2.27	0.65
1:H:441:LEU:CD2	1:H:498:VAL:CA	2.74	0.65
1:A:269:LEU:HD23	1:A:457:SER:HB2	1.74	0.65
1:A:326:THR:O	1:A:329:ASN:HB2	1.97	0.65
1:A:485:PHE:HA	1:A:492:PHE:HE1	1.62	0.65
1:H:478:ASN:O	1:H:482:LYS:HG2	1.96	0.65
1:J:475:ALA:O	1:J:479:ARG:HG2	1.97	0.65
1:B:376:LYS:NZ	1:B:379:ILE:HD12	2.11	0.65
1:D:279:PRO:HB3	1:D:322:GLN:HA	1.78	0.65
1:D:284:MET:HG2	1:D:286:THR:HG23	1.77	0.65
1:H:405:ASN:C	1:H:410:GLN:NE2	2.50	0.65
1:I:444:ARG:O	1:I:447:PRO:HD3	1.96	0.65
1:J:269:LEU:CD2	1:J:457:SER:CB	2.74	0.65
1:A:376:LYS:HZ3	1:A:376:LYS:HA	1.61	0.65
1:J:488:HIS:HB3	1:J:491:GLU:CG	2.27	0.65
1:H:229:PHE:O	1:H:233:LYS:HG2	1.97	0.65
1:C:524:THR:O	1:C:528:ILE:HG13	1.97	0.65
1:C:690:ARG:NH1	1:C:844:GLU:OE2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:768:VAL:HG23	1:A:770:GLY:H	1.63	0.64
1:E:441:LEU:HB3	1:E:498:VAL:CG1	2.26	0.64
1:E:477:ILE:O	1:E:477:ILE:HG22	1.97	0.64
1:F:627:TYR:HE2	1:F:628:TRP:CH2	2.15	0.64
1:H:241:LEU:HD21	1:H:528:ILE:HD11	1.79	0.64
1:A:307:PHE:CD1	1:A:345:LEU:CD2	2.81	0.64
1:B:255:ILE:HD11	1:B:355:LEU:HG	1.78	0.64
1:B:596:ARG:HH22	1:J:533:GLU:CG	2.10	0.64
1:B:757:PHE:HA	1:B:760:LYS:HD2	1.79	0.64
1:F:387:ILE:O	1:F:421:ARG:NH2	2.30	0.64
1:F:863:GLU:O	1:F:867:ALA:CB	2.46	0.64
1:H:441:LEU:CB	1:H:498:VAL:CG1	2.75	0.64
1:J:272:ILE:CG2	1:J:278:LEU:HD13	2.23	0.64
1:J:574:ARG:H	1:J:575:PRO:HD2	1.62	0.64
1:A:272:ILE:CG2	1:A:278:LEU:H	2.10	0.64
1:A:339:THR:HG23	1:A:340:ASP:H	1.63	0.64
1:D:297:ASP:N	1:D:298:PRO:HD3	2.12	0.64
1:E:252:LEU:HD23	1:E:524:THR:HG21	1.79	0.64
1:H:286:THR:O	1:H:361:PRO:CG	2.45	0.64
1:H:454:GLY:O	1:H:500:THR:CG2	2.45	0.64
1:A:308:PRO:HG3	1:A:344:ARG:HB2	1.78	0.64
1:F:879:PRO:HG3	1:H:630:ARG:CD	2.27	0.64
1:G:261:GLN:CD	1:J:405:ASN:HD22	2.00	0.64
1:J:258:ILE:HG22	1:J:360:LEU:HD11	1.79	0.64
1:D:297:ASP:CG	1:D:300:ALA:HB3	2.18	0.64
1:D:525:THR:HA	1:D:528:ILE:HD12	1.79	0.64
1:E:269:LEU:HD23	1:E:270:GLU:N	2.13	0.64
1:J:665:ASP:OD1	1:J:676:ARG:NH2	2.31	0.64
1:A:270:GLU:HA	1:A:273:VAL:HG22	1.79	0.64
1:A:376:LYS:HE2	1:A:376:LYS:CA	2.28	0.64
1:D:238:ARG:HA	1:D:241:LEU:HD12	1.79	0.64
1:D:311:GLY:O	1:D:312:LEU:HB2	1.96	0.64
1:G:598:TRP:CE3	1:G:796:ARG:NH1	2.65	0.64
1:H:232:LYS:O	1:H:235:ILE:HG23	1.96	0.64
1:A:285:ILE:HD12	1:A:285:ILE:C	2.18	0.64
1:C:863:GLU:O	1:C:867:ALA:CB	2.46	0.64
1:D:279:PRO:HB3	1:D:322:GLN:CA	2.28	0.64
1:D:433:GLU:O	1:D:436:LYS:HB2	1.96	0.64
1:E:310:LEU:N	1:E:310:LEU:HD23	2.12	0.64
1:H:441:LEU:CB	1:H:498:VAL:HG12	2.26	0.64
1:A:278:LEU:CD2	1:A:280:LYS:CD	2.73	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:396:ILE:HG22	1:D:425:VAL:HB	1.78	0.64
1:E:485:PHE:CZ	1:E:500:THR:OG1	2.50	0.64
1:H:279:PRO:HG2	1:H:325:LEU:CD2	2.25	0.64
1:H:382:LEU:C	1:H:382:LEU:HD12	2.19	0.64
1:C:818:LYS:HE3	1:C:819:TYR:CE2	2.33	0.64
1:E:276:GLU:CD	1:E:318:PHE:HE2	2.01	0.64
1:E:307:PHE:CE1	1:E:345:LEU:CD2	2.80	0.64
1:J:272:ILE:CG2	1:J:277:PHE:HA	2.27	0.64
1:F:328:LEU:HD13	1:F:343:ILE:HD13	1.79	0.63
1:J:871:LEU:O	1:J:874:PHE:HB3	1.98	0.63
1:A:363:TYR:HE1	1:A:383:CYS:HG	0.82	0.63
1:E:286:THR:O	1:E:361:PRO:HB3	1.97	0.63
1:E:376:LYS:HZ1	1:E:379:ILE:CD1	2.07	0.63
1:H:310:LEU:N	1:H:310:LEU:HD23	2.13	0.63
1:I:903:GLU:HA	1:I:906:ARG:HH21	1.63	0.63
1:C:705:TYR:CE1	1:C:832:LYS:HD3	2.33	0.63
1:D:276:GLU:CD	1:D:318:PHE:CE2	2.53	0.63
1:D:328:LEU:HD13	1:D:343:ILE:HD13	1.81	0.63
1:D:456:ILE:O	1:D:481:GLU:OE2	2.16	0.63
1:E:238:ARG:NH2	1:E:356:SER:OG	2.31	0.63
1:E:596:ARG:HG3	1:E:635:ALA:HB2	1.79	0.63
1:E:690:ARG:NH1	1:E:844:GLU:OE2	2.31	0.63
1:F:273:VAL:HG11	1:F:457:SER:HB3	1.80	0.63
1:A:318:PHE:HD1	1:A:321:ILE:HD12	1.62	0.63
1:A:537:TYR:OH	1:I:612:PRO:HB2	1.99	0.63
1:E:572:PHE:O	1:E:576:GLN:NE2	2.32	0.63
1:G:261:GLN:HG2	1:G:262:SER:N	2.13	0.63
1:H:286:THR:HB	1:H:361:PRO:HB3	1.80	0.63
1:J:286:THR:HB	1:J:361:PRO:CB	2.28	0.63
1:A:454:GLY:O	1:A:500:THR:CB	2.47	0.63
1:D:229:PHE:HA	1:D:232:LYS:CG	2.28	0.63
1:D:485:PHE:CD2	1:D:492:PHE:O	2.51	0.63
1:E:376:LYS:HA	1:E:376:LYS:CE	2.28	0.63
1:E:528:ILE:HG23	1:E:894:LEU:HD22	1.81	0.63
1:F:357:LEU:HD23	1:F:357:LEU:O	1.97	0.63
1:I:623:PRO:O	1:I:629:HIS:CD2	2.51	0.63
1:J:268:VAL:O	1:J:272:ILE:HG13	1.98	0.63
1:J:382:LEU:C	1:J:382:LEU:HD12	2.19	0.63
1:A:267:SER:HB3	1:A:396:ILE:CG1	2.28	0.63
1:A:339:THR:HG23	1:A:340:ASP:N	2.13	0.63
1:H:233:LYS:CA	1:H:233:LYS:CE	2.76	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:402:ASP:HB3	1:I:405:ASN:HB2	1.81	0.63
1:C:607:PRO:HG3	1:C:762:ARG:HG3	1.80	0.63
1:D:252:LEU:HD23	1:D:524:THR:HG21	1.81	0.63
1:E:434:PRO:HB3	1:E:491:GLU:CG	2.29	0.63
1:E:478:ASN:CG	1:E:482:LYS:HZ2	1.99	0.63
1:E:493:GLY:O	1:E:496:SER:HB3	1.98	0.63
1:G:285:ILE:HG12	1:G:329:ASN:O	1.98	0.63
1:A:376:LYS:HA	1:A:376:LYS:CE	2.28	0.63
1:D:286:THR:HB	1:D:361:PRO:CB	2.25	0.63
1:E:272:ILE:HG12	1:E:278:LEU:HD13	1.81	0.63
1:F:627:TYR:CE2	1:F:628:TRP:CZ3	2.86	0.63
1:H:529:GLN:HG2	1:H:898:LEU:HD21	1.81	0.63
1:A:276:GLU:CD	1:A:318:PHE:CE2	2.61	0.63
1:C:318:PHE:CD1	1:C:321:ILE:HD12	2.34	0.62
1:H:441:LEU:HD22	1:H:498:VAL:HB	1.68	0.62
1:I:278:LEU:HD21	1:I:280:LYS:HD3	1.81	0.62
1:J:259:GLY:HA2	1:J:408:ALA:HB2	1.81	0.62
1:J:878:ASP:HB3	1:J:881:VAL:CG2	2.27	0.62
1:A:285:ILE:HD11	1:A:287:ARG:CB	2.24	0.62
1:B:574:ARG:CZ	1:B:842:ASN:ND2	2.62	0.62
1:F:524:THR:O	1:F:528:ILE:HG13	2.00	0.62
1:G:843:VAL:HG21	1:H:704:PRO:HA	1.80	0.62
1:J:388:ARG:O	1:J:421:ARG:NH2	2.30	0.62
1:J:423:ILE:HG22	1:J:450:LEU:HD13	1.80	0.62
1:C:285:ILE:HD12	1:C:287:ARG:N	2.11	0.62
1:E:284:MET:HG2	1:E:286:THR:HG23	1.79	0.62
1:E:287:ARG:HH11	1:E:287:ARG:HG3	1.64	0.62
1:E:475:ALA:O	1:E:479:ARG:HG2	2.00	0.62
1:G:754:VAL:HG22	1:G:779:PHE:CD2	2.34	0.62
1:H:279:PRO:HB3	1:H:322:GLN:HB2	1.81	0.62
1:H:363:TYR:HD2	1:H:408:ALA:CB	2.13	0.62
1:I:275:HIS:CG	1:I:276:GLU:H	2.17	0.62
1:I:401:THR:HG22	1:I:405:ASN:HB3	1.80	0.62
1:J:267:SER:HB3	1:J:396:ILE:HG13	1.81	0.62
1:A:263:SER:OG	1:A:397:SER:HA	1.99	0.62
1:D:257:VAL:CG2	1:D:359:ASP:HA	2.30	0.62
1:D:694:THR:HG21	1:D:845:MET:HB2	1.82	0.62
1:F:292:LEU:HD12	1:F:357:LEU:HD22	1.82	0.62
1:H:279:PRO:HG3	1:H:322:GLN:HA	1.80	0.62
1:A:238:ARG:HA	1:A:241:LEU:HD12	1.82	0.62
1:D:278:LEU:CD2	1:D:280:LYS:CD	2.75	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:257:VAL:HG22	1:H:358:ILE:O	1.99	0.62
1:H:276:GLU:CD	1:H:318:PHE:HE2	2.02	0.62
1:H:407:THR:CG2	1:H:414:ARG:HD3	2.29	0.62
1:A:478:ASN:ND2	1:A:482:LYS:HZ2	1.94	0.62
1:A:537:TYR:CA	1:I:630:ARG:CZ	2.77	0.62
1:C:854:PRO:O	1:C:858:GLU:HG3	2.00	0.62
1:H:401:THR:HB	1:H:410:GLN:HA	0.80	0.62
1:H:455:VAL:HG12	1:H:501:GLY:N	2.14	0.62
1:H:456:ILE:O	1:H:481:GLU:OE2	2.17	0.62
1:H:754:VAL:HA	1:H:779:PHE:HE1	1.63	0.62
1:E:307:PHE:CD1	1:E:345:LEU:CD2	2.82	0.62
1:F:322:GLN:O	1:F:326:THR:OG1	2.06	0.62
1:H:453:VAL:HG21	1:H:505:LEU:HD23	1.80	0.62
1:J:375:LEU:N	1:J:375:LEU:HD23	2.15	0.62
1:A:229:PHE:O	1:A:233:LYS:HG2	2.00	0.62
1:A:387:ILE:CG2	1:A:393:ILE:HD12	2.29	0.62
1:C:434:PRO:HG2	1:C:488:HIS:CG	2.34	0.62
1:D:238:ARG:NH2	1:D:356:SER:OG	2.33	0.62
1:D:279:PRO:O	1:D:280:LYS:HD2	2.00	0.62
1:D:308:PRO:HG3	1:D:344:ARG:HG3	1.82	0.62
1:D:454:GLY:O	1:D:455:VAL:CG1	2.48	0.62
1:E:878:ASP:HB3	1:E:881:VAL:HG22	1.82	0.62
1:H:412:SER:C	1:H:413:ARG:HG3	2.19	0.62
1:H:478:ASN:CG	1:H:482:LYS:NZ	2.53	0.62
1:I:578:GLN:HA	1:I:838:VAL:HG21	1.81	0.62
1:A:241:LEU:O	1:A:244:VAL:HG23	1.99	0.62
1:A:294:LEU:HB3	1:A:352:ILE:HD13	1.81	0.62
1:A:537:TYR:HA	1:I:630:ARG:NE	2.14	0.62
1:H:878:ASP:HB3	1:H:881:VAL:HG22	1.82	0.62
1:J:272:ILE:CG2	1:J:278:LEU:HD12	2.20	0.62
1:J:279:PRO:O	1:J:280:LYS:CD	2.47	0.62
1:A:394:LEU:CD2	1:A:412:SER:HB2	2.30	0.62
1:B:376:LYS:CA	1:B:376:LYS:HE2	2.30	0.62
1:B:434:PRO:HG2	1:B:488:HIS:CG	2.35	0.62
1:E:273:VAL:HG11	1:E:457:SER:CB	2.29	0.62
1:E:454:GLY:O	1:E:500:THR:CG2	2.48	0.62
1:F:664:LEU:HD23	1:F:676:ARG:HG3	1.80	0.62
1:G:405:ASN:ND2	1:J:260:SER:HB3	2.12	0.62
1:B:227:MET:HA	1:B:230:ILE:HG22	1.81	0.61
1:E:240:LEU:N	1:E:240:LEU:CD2	2.51	0.61
1:E:259:GLY:HA2	1:E:408:ALA:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:267:SER:HB2	1:E:396:ILE:CD1	2.30	0.61
1:E:360:LEU:HB2	1:E:361:PRO:HD2	1.82	0.61
1:E:690:ARG:CZ	1:E:848:ASP:OD2	2.48	0.61
1:F:616:ILE:HD12	1:F:616:ILE:O	2.00	0.61
1:J:260:SER:N	1:J:263:SER:HB3	2.15	0.61
1:F:484:TYR:O	1:F:487:SER:HB3	2.00	0.61
1:I:854:PRO:HB2	1:I:855:ARG:CZ	2.29	0.61
1:J:441:LEU:CD2	1:J:498:VAL:HG12	2.25	0.61
1:A:286:THR:O	1:A:361:PRO:HG3	2.01	0.61
1:A:394:LEU:CD1	1:A:423:ILE:O	2.48	0.61
1:E:492:PHE:O	1:E:492:PHE:HD1	1.82	0.61
1:J:472:ASN:ND2	1:J:475:ALA:HB3	2.15	0.61
1:A:229:PHE:HA	1:A:232:LYS:HG2	1.82	0.61
1:D:488:HIS:HB3	1:D:491:GLU:HG3	1.80	0.61
1:H:434:PRO:CG	1:H:488:HIS:CG	2.83	0.61
1:J:657:GLN:HE22	1:J:684:ALA:HA	1.65	0.61
1:D:229:PHE:O	1:D:232:LYS:HG3	2.01	0.61
1:E:474:LEU:HG	1:E:475:ALA:H	1.66	0.61
1:E:574:ARG:N	1:E:575:PRO:HD2	2.15	0.61
1:F:257:VAL:HG12	1:F:394:LEU:HB3	1.82	0.61
1:J:444:ARG:O	1:J:447:PRO:HD3	2.00	0.61
1:C:284:MET:O	1:C:286:THR:HG23	2.01	0.61
1:F:357:LEU:CD2	1:F:357:LEU:O	2.48	0.61
1:C:258:ILE:HG21	1:C:387:ILE:HD11	1.81	0.61
1:D:246:GLN:CG	1:D:247:GLY:N	2.63	0.61
1:E:278:LEU:CD2	1:E:280:LYS:CD	2.73	0.61
1:H:272:ILE:CG2	1:H:278:LEU:HD12	2.23	0.61
1:A:267:SER:HB2	1:A:396:ILE:CD1	2.30	0.61
1:C:585:LEU:HD12	1:C:834:ALA:HB2	1.83	0.61
1:E:478:ASN:HD21	1:E:482:LYS:HZ1	1.38	0.61
1:I:224:ASP:HB3	1:I:227:MET:HB2	1.81	0.61
1:I:762:ARG:HG2	1:I:762:ARG:NH1	2.15	0.61
1:J:229:PHE:O	1:J:232:LYS:HG3	2.01	0.61
1:J:525:THR:HA	1:J:528:ILE:HD12	1.82	0.61
1:A:388:ARG:O	1:A:421:ARG:NH2	2.32	0.61
1:E:488:HIS:HB3	1:E:491:GLU:HG2	1.83	0.61
1:H:307:PHE:CE1	1:H:345:LEU:CD2	2.84	0.61
1:J:238:ARG:HA	1:J:241:LEU:HD12	1.81	0.61
1:A:278:LEU:HD13	1:A:278:LEU:C	2.19	0.61
1:G:610:ARG:HB3	1:G:613:ASP:OD1	2.00	0.61
1:I:628:TRP:CE3	1:I:628:TRP:N	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:307:PHE:CE1	1:J:345:LEU:CD2	2.74	0.61
1:A:434:PRO:HG2	1:A:488:HIS:ND1	2.16	0.60
1:A:441:LEU:HB3	1:A:498:VAL:HG11	1.82	0.60
1:C:627:TYR:CE2	1:C:628:TRP:CZ3	2.89	0.60
1:G:387:ILE:O	1:G:421:ARG:NH2	2.33	0.60
1:H:287:ARG:HH11	1:H:287:ARG:CG	2.12	0.60
1:H:307:PHE:CZ	1:H:345:LEU:HD21	2.36	0.60
1:H:614:ASN:OD1	1:H:616:ILE:HG22	2.01	0.60
1:A:257:VAL:HG22	1:A:358:ILE:O	2.01	0.60
1:B:627:TYR:OH	1:B:631:GLN:NE2	2.34	0.60
1:C:272:ILE:HG23	1:C:277:PHE:HA	1.83	0.60
1:E:488:HIS:HB3	1:E:491:GLU:CG	2.31	0.60
1:E:853:PHE:HB3	1:E:854:PRO:HD3	1.83	0.60
1:F:285:ILE:HD13	1:F:332:VAL:HG22	1.82	0.60
1:H:252:LEU:HD23	1:H:524:THR:HG21	1.82	0.60
1:A:705:TYR:CE1	1:A:832:LYS:HD3	2.36	0.60
1:B:387:ILE:O	1:B:421:ARG:NH2	2.35	0.60
1:F:883:ARG:HH22	1:H:634:THR:HG21	1.65	0.60
1:J:339:THR:CG2	1:J:340:ASP:N	2.64	0.60
1:A:423:ILE:HG22	1:A:450:LEU:HD13	1.82	0.60
1:A:429:MET:CE	1:A:437:GLY:HA2	2.31	0.60
1:D:441:LEU:CB	1:D:498:VAL:HG12	2.32	0.60
1:D:778:GLY:O	1:D:779:PHE:HD2	1.84	0.60
1:H:454:GLY:O	1:H:500:THR:HG22	2.00	0.60
1:J:252:LEU:HD23	1:J:524:THR:HG21	1.82	0.60
1:J:690:ARG:NH1	1:J:844:GLU:OE2	2.34	0.60
1:A:270:GLU:O	1:A:273:VAL:HG22	2.01	0.60
1:A:485:PHE:CE2	1:A:492:PHE:CD1	2.90	0.60
1:B:840:PHE:CZ	1:B:844:GLU:HG3	2.36	0.60
1:D:508:LYS:O	1:D:512:VAL:HG23	2.01	0.60
1:E:429:MET:CE	1:E:437:GLY:HA2	2.31	0.60
1:E:665:ASP:OD1	1:E:676:ARG:NH2	2.34	0.60
1:G:400:ASP:HB3	1:J:400:ASP:OD2	2.01	0.60
1:J:278:LEU:HD22	1:J:279:PRO:O	2.02	0.60
1:J:434:PRO:CG	1:J:488:HIS:CG	2.83	0.60
1:D:322:GLN:O	1:D:326:THR:OG1	2.12	0.60
1:H:270:GLU:O	1:H:273:VAL:HG22	2.00	0.60
1:A:279:PRO:HG3	1:A:321:ILE:HG22	1.84	0.60
1:E:615:ILE:H	1:E:615:ILE:HD12	1.65	0.60
1:I:625:SER:CB	1:I:628:TRP:CD1	2.73	0.60
1:J:441:LEU:CG	1:J:498:VAL:CG1	2.78	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:267:SER:CB	1:A:396:ILE:CD1	2.80	0.60
1:A:483:ASN:C	1:A:483:ASN:ND2	2.55	0.60
1:A:817:ASN:HB3	1:A:820:TYR:HB2	1.84	0.60
1:B:630:ARG:CG	1:J:540:LYS:HG3	2.28	0.60
1:C:434:PRO:HG2	1:C:488:HIS:ND1	2.17	0.60
1:D:297:ASP:HB3	1:D:349:SER:C	2.22	0.60
1:D:787:GLY:O	1:D:791:VAL:HG23	2.02	0.60
1:E:376:LYS:CA	1:E:376:LYS:CE	2.79	0.60
1:H:229:PHE:HA	1:H:232:LYS:HG2	1.82	0.60
1:H:278:LEU:HD22	1:H:280:LYS:HG2	1.83	0.60
1:A:537:TYR:CE1	1:I:627:TYR:N	2.66	0.60
1:C:640:THR:HG21	1:C:706:LYS:HA	1.83	0.60
1:D:429:MET:CE	1:D:437:GLY:HA2	2.31	0.60
1:G:257:VAL:HG12	1:G:394:LEU:HB3	1.84	0.60
1:J:257:VAL:HG22	1:J:359:ASP:HA	1.82	0.60
1:C:484:TYR:HD1	1:C:485:PHE:CD1	2.20	0.60
1:D:273:VAL:CG2	1:D:457:SER:HB3	2.20	0.60
1:D:225:ASP:OD1	1:D:225:ASP:N	2.33	0.59
1:D:308:PRO:HG3	1:D:344:ARG:HB2	1.85	0.59
1:E:339:THR:HG23	1:E:341:ASP:H	1.66	0.59
1:E:363:TYR:N	1:E:363:TYR:CD1	2.69	0.59
1:E:499:SER:O	1:E:500:THR:HG23	2.01	0.59
1:G:661:GLU:OE2	1:G:676:ARG:NH2	2.35	0.59
1:H:397:SER:CB	1:H:411:ALA:HB1	2.32	0.59
1:A:441:LEU:HB3	1:A:498:VAL:CG1	2.32	0.59
1:D:387:ILE:CG2	1:D:415:VAL:HG21	2.32	0.59
1:F:255:ILE:HG13	1:F:357:LEU:HA	1.84	0.59
1:H:286:THR:CB	1:H:361:PRO:HB3	2.32	0.59
1:H:363:TYR:CD2	1:H:408:ALA:HB2	2.33	0.59
1:I:284:MET:O	1:I:286:THR:HG23	2.02	0.59
1:J:260:SER:HB2	1:J:263:SER:HB2	1.83	0.59
1:J:263:SER:OG	1:J:397:SER:HA	2.02	0.59
1:J:284:MET:HG2	1:J:286:THR:HG23	1.79	0.59
1:A:275:HIS:CD2	1:A:275:HIS:H	2.20	0.59
1:C:863:GLU:O	1:C:867:ALA:HB3	2.02	0.59
1:D:268:VAL:O	1:D:272:ILE:HG13	2.01	0.59
1:D:574:ARG:H	1:D:575:PRO:HD2	1.67	0.59
1:E:286:THR:HB	1:E:361:PRO:CB	2.27	0.59
1:H:232:LYS:HA	1:H:235:ILE:CG2	2.31	0.59
1:H:741:LEU:HG	1:H:751:LEU:HD11	1.84	0.59
1:H:800:LEU:O	1:H:804:ILE:HG13	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:242:GLN:OE1	1:J:291:GLU:OE1	2.21	0.59
1:A:878:ASP:HB3	1:A:881:VAL:HG22	1.84	0.59
1:D:326:THR:HA	1:D:329:ASN:ND2	2.18	0.59
1:E:230:ILE:HG13	1:E:904:LEU:HD11	1.84	0.59
1:H:477:ILE:O	1:H:477:ILE:HG22	2.01	0.59
1:A:278:LEU:HD11	1:A:280:LYS:HG3	1.85	0.59
1:A:394:LEU:CD2	1:A:395:ALA:N	2.63	0.59
1:A:434:PRO:HB3	1:A:491:GLU:CG	2.32	0.59
1:B:383:CYS:O	1:B:387:ILE:HG13	2.03	0.59
1:H:273:VAL:CG1	1:H:457:SER:HB2	2.29	0.59
1:H:279:PRO:HB3	1:H:322:GLN:HA	1.84	0.59
1:H:456:ILE:O	1:H:456:ILE:HG23	2.03	0.59
1:D:441:LEU:HD23	1:D:498:VAL:HB	0.62	0.59
1:F:269:LEU:O	1:F:272:ILE:HB	2.02	0.59
1:F:863:GLU:O	1:F:867:ALA:HB3	2.02	0.59
1:G:261:GLN:HE22	1:J:401:THR:HG23	1.62	0.59
1:H:363:TYR:N	1:H:363:TYR:CD1	2.68	0.59
1:H:508:LYS:O	1:H:512:VAL:HG23	2.02	0.59
1:H:540:LYS:HE2	1:H:545:GLU:OE1	2.02	0.59
1:C:630:ARG:C	1:C:630:ARG:CD	2.48	0.59
1:D:298:PRO:O	1:D:299:GLU:HB3	2.02	0.59
1:D:488:HIS:CB	1:D:491:GLU:HG2	2.22	0.59
1:D:657:GLN:HE22	1:D:684:ALA:HA	1.67	0.59
1:D:665:ASP:OD1	1:D:676:ARG:NH2	2.36	0.59
1:G:308:PRO:HG3	1:G:344:ARG:HB2	1.85	0.59
1:I:255:ILE:HA	1:I:392:ILE:O	2.03	0.59
1:J:273:VAL:HG21	1:J:457:SER:CB	2.29	0.59
1:J:441:LEU:CD2	1:J:498:VAL:CA	2.78	0.59
1:A:537:TYR:HE1	1:I:627:TYR:CB	2.15	0.59
1:B:376:LYS:HZ3	1:B:379:ILE:HD12	1.68	0.59
1:B:627:TYR:HE2	1:B:628:TRP:CZ3	2.21	0.59
1:C:254:SER:HB2	1:C:356:SER:O	2.03	0.59
1:D:272:ILE:HG12	1:D:278:LEU:CD1	2.33	0.59
1:H:270:GLU:HA	1:H:273:VAL:HG22	1.83	0.59
1:J:485:PHE:CD2	1:J:492:PHE:O	2.55	0.59
1:C:704:PRO:HA	1:D:843:VAL:HG21	1.85	0.59
1:D:376:LYS:HZ1	1:D:379:ILE:HD12	1.68	0.59
1:E:430:ASP:C	1:E:430:ASP:OD1	2.41	0.59
1:G:261:GLN:HE21	1:J:401:THR:HG23	1.62	0.59
1:G:405:ASN:ND2	1:J:261:GLN:N	2.51	0.59
1:H:275:HIS:CG	1:H:276:GLU:N	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:401:THR:HG21	1:H:410:GLN:HG3	1.81	0.59
1:H:478:ASN:HD21	1:H:482:LYS:HZ1	0.67	0.59
1:A:297:ASP:HB3	1:A:349:SER:C	2.24	0.59
1:A:454:GLY:O	1:A:500:THR:CG2	2.51	0.59
1:D:276:GLU:HG2	1:D:277:PHE:N	2.16	0.59
1:D:576:GLN:NE2	1:D:576:GLN:H	2.01	0.59
1:D:671:LYS:HD2	1:D:671:LYS:N	2.18	0.59
1:E:387:ILE:CG2	1:E:415:VAL:HG21	2.33	0.59
1:E:400:ASP:N	1:E:400:ASP:OD1	2.35	0.59
1:F:883:ARG:HH22	1:H:634:THR:CG2	2.15	0.59
1:H:297:ASP:HB3	1:H:349:SER:C	2.24	0.59
1:A:272:ILE:HG23	1:A:278:LEU:HD13	1.68	0.58
1:A:278:LEU:CD2	1:A:280:LYS:HG2	2.32	0.58
1:D:296:ASN:C	1:D:298:PRO:HD3	2.23	0.58
1:E:269:LEU:HA	1:E:272:ILE:CD1	2.23	0.58
1:E:272:ILE:CG2	1:E:277:PHE:HD1	2.14	0.58
1:E:308:PRO:HG3	1:E:344:ARG:HG3	1.85	0.58
1:H:273:VAL:CG2	1:H:457:SER:HB3	2.19	0.58
1:B:630:ARG:NE	1:J:540:LYS:CG	2.65	0.58
1:D:278:LEU:CD2	1:D:280:LYS:HG2	2.33	0.58
1:D:478:ASN:CG	1:D:482:LYS:HZ2	2.06	0.58
1:E:229:PHE:HA	1:E:232:LYS:CG	2.32	0.58
1:E:581:LEU:HD12	1:E:838:VAL:HG23	1.84	0.58
1:F:785:ALA:HA	1:F:788:ARG:NH1	2.18	0.58
1:G:878:ASP:CB	1:G:881:VAL:HG12	2.29	0.58
1:H:817:ASN:HB3	1:H:820:TYR:HB2	1.83	0.58
1:J:294:LEU:HB2	1:J:355:LEU:H	1.69	0.58
1:A:394:LEU:HD13	1:A:395:ALA:H	1.67	0.58
1:A:508:LYS:O	1:A:512:VAL:HG23	2.03	0.58
1:B:456:ILE:HG23	1:B:456:ILE:O	2.02	0.58
1:C:615:ILE:HD11	1:C:803:ARG:HE	1.68	0.58
1:E:246:GLN:N	1:E:246:GLN:OE1	2.34	0.58
1:E:363:TYR:N	1:E:363:TYR:HD1	2.01	0.58
1:J:499:SER:O	1:J:500:THR:CG2	2.51	0.58
1:A:269:LEU:HD23	1:A:457:SER:CB	2.26	0.58
1:A:276:GLU:OE1	1:A:303:ASP:OD1	2.20	0.58
1:A:376:LYS:NZ	1:A:376:LYS:HA	2.18	0.58
1:A:394:LEU:HD21	1:A:412:SER:HB2	1.86	0.58
1:F:396:ILE:HG22	1:F:425:VAL:HB	1.84	0.58
1:F:667:SER:OG	1:F:668:SER:N	2.37	0.58
1:H:272:ILE:CG2	1:H:277:PHE:HD1	2.14	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:613:ASP:HB3	1:I:627:TYR:CZ	2.38	0.58
1:I:615:ILE:O	1:I:618:LEU:HB2	2.04	0.58
1:J:510:LEU:O	1:J:510:LEU:HD22	2.03	0.58
1:A:278:LEU:HD21	1:A:280:LYS:CG	2.33	0.58
1:A:355:LEU:HD23	1:A:357:LEU:CD2	2.32	0.58
1:D:243:LYS:O	1:D:243:LYS:HG2	2.03	0.58
1:G:405:ASN:CG	1:J:261:GLN:H	2.06	0.58
1:H:251:THR:HG22	1:H:252:LEU:H	1.68	0.58
1:H:478:ASN:ND2	1:H:482:LYS:HZ2	1.92	0.58
1:A:434:PRO:CG	1:A:488:HIS:CG	2.87	0.58
1:H:617:ASP:OD1	1:H:617:ASP:N	2.37	0.58
1:A:279:PRO:CG	1:A:325:LEU:HD21	2.22	0.58
1:A:526:GLU:OE1	1:A:530:ARG:NH1	2.37	0.58
1:A:865:MET:HB3	1:A:871:LEU:HB2	1.86	0.58
1:B:534:GLU:OE2	1:D:646:ARG:NH2	2.26	0.58
1:D:260:SER:N	1:D:263:SER:HB3	2.19	0.58
1:F:855:ARG:NH2	1:G:559:ASP:OD2	2.36	0.58
1:G:402:ASP:HB2	1:J:261:GLN:HG2	1.78	0.58
1:C:249:THR:OG1	1:C:531:GLU:OE1	2.17	0.58
1:D:296:ASN:HB2	1:D:354:ASP:OD2	2.04	0.58
1:A:232:LYS:HA	1:A:235:ILE:CG2	2.34	0.58
1:A:285:ILE:CD1	1:A:287:ARG:CA	2.82	0.58
1:D:286:THR:O	1:D:361:PRO:HD3	2.04	0.58
1:E:298:PRO:O	1:E:299:GLU:HB3	2.03	0.58
1:I:484:TYR:HD1	1:I:485:PHE:CD1	2.21	0.58
1:B:528:ILE:O	1:B:531:GLU:HG2	2.04	0.58
1:C:318:PHE:HD1	1:C:321:ILE:HD12	1.68	0.58
1:D:376:LYS:HA	1:D:376:LYS:CE	2.33	0.58
1:E:484:TYR:HE1	1:E:492:PHE:CZ	2.21	0.58
1:G:400:ASP:N	1:G:400:ASP:OD1	2.37	0.58
1:H:278:LEU:HB2	1:H:279:PRO:HD2	1.85	0.58
1:H:363:TYR:HE2	1:H:407:THR:HG1	1.49	0.58
1:I:258:ILE:HG22	1:I:360:LEU:HD11	1.85	0.58
1:I:597:TYR:HA	1:I:627:TYR:OH	2.04	0.58
1:J:578:GLN:HA	1:J:838:VAL:HG21	1.85	0.58
1:A:458:LYS:C	1:A:458:LYS:HZ3	2.06	0.57
1:A:492:PHE:O	1:A:492:PHE:HD1	1.87	0.57
1:D:297:ASP:N	1:D:298:PRO:CD	2.67	0.57
1:E:576:GLN:H	1:E:576:GLN:HE21	1.52	0.57
1:E:640:THR:HG21	1:E:706:LYS:HA	1.86	0.57
1:G:405:ASN:HB2	1:J:261:GLN:CB	2.27	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:661:GLU:OE2	1:I:676:ARG:NH2	2.36	0.57
1:E:485:PHE:HA	1:E:492:PHE:HE1	1.68	0.57
1:J:499:SER:O	1:J:500:THR:HG23	2.03	0.57
1:A:593:LEU:HD21	1:A:823:GLU:HG3	1.86	0.57
1:B:376:LYS:HE2	1:B:376:LYS:N	2.18	0.57
1:G:249:THR:HG23	1:G:250:VAL:O	2.04	0.57
1:H:308:PRO:HG3	1:H:344:ARG:CB	2.33	0.57
1:I:625:SER:O	1:I:628:TRP:CD1	2.56	0.57
1:I:627:TYR:CD2	1:I:628:TRP:CZ3	2.91	0.57
1:A:536:THR:HB	1:I:630:ARG:HH11	1.69	0.57
1:B:640:THR:HG22	1:B:706:LYS:HG2	1.86	0.57
1:D:377:ARG:HH21	1:D:377:ARG:CG	2.17	0.57
1:E:246:GLN:CG	1:E:247:GLY:N	2.67	0.57
1:A:716:TRP:CE3	1:A:815:LEU:HD23	2.40	0.57
1:D:284:MET:N	1:D:284:MET:SD	2.76	0.57
1:E:237:ILE:O	1:E:237:ILE:HD13	2.05	0.57
1:E:441:LEU:CB	1:E:498:VAL:CG1	2.82	0.57
1:J:433:GLU:O	1:J:436:LYS:HB2	2.03	0.57
1:A:240:LEU:N	1:A:240:LEU:CD2	2.64	0.57
1:D:727:LEU:HD21	1:D:823:GLU:HG2	1.86	0.57
1:E:257:VAL:HG22	1:E:358:ILE:O	2.04	0.57
1:F:264:GLY:HA2	1:F:267:SER:HB3	1.85	0.57
1:H:768:VAL:HG23	1:H:770:GLY:H	1.70	0.57
1:I:431:LEU:H	1:I:431:LEU:HD23	1.70	0.57
1:J:478:ASN:CG	1:J:482:LYS:HZ2	2.07	0.57
1:J:479:ARG:HH21	1:J:482:LYS:HZ3	1.50	0.57
1:A:480:ASN:HA	1:A:483:ASN:OD1	2.05	0.57
1:D:387:ILE:O	1:D:421:ARG:NH2	2.37	0.57
1:F:855:ARG:HA	1:F:855:ARG:HE	1.70	0.57
1:A:230:ILE:O	1:A:234:MET:HG3	2.04	0.57
1:A:749:LYS:H	1:A:749:LYS:HD2	1.70	0.57
1:D:265:LYS:HA	1:D:268:VAL:CG2	2.35	0.57
1:H:272:ILE:HG12	1:H:280:LYS:HG3	1.85	0.57
1:J:233:LYS:HA	1:J:233:LYS:HE2	1.85	0.57
1:J:705:TYR:CE1	1:J:832:LYS:HD3	2.40	0.57
1:A:376:LYS:CA	1:A:376:LYS:CE	2.82	0.57
1:A:441:LEU:HD21	1:A:498:VAL:CB	2.23	0.57
1:D:285:ILE:CG1	1:D:286:THR:N	2.67	0.57
1:D:889:ARG:HG3	1:D:890:ARG:N	2.19	0.57
1:E:272:ILE:CG2	1:E:278:LEU:H	2.17	0.57
1:E:433:GLU:O	1:E:436:LYS:HB2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:610:ARG:HE	1:F:613:ASP:HB2	1.70	0.57
1:F:661:GLU:OE2	1:F:676:ARG:NH2	2.38	0.57
1:G:843:VAL:O	1:G:847:ASN:HB2	2.05	0.57
1:A:269:LEU:HD23	1:A:269:LEU:C	2.25	0.57
1:A:269:LEU:HD22	1:A:457:SER:OG	1.98	0.57
1:A:278:LEU:CD1	1:A:280:LYS:HG2	2.34	0.57
1:C:259:GLY:HA2	1:C:408:ALA:HB2	1.87	0.57
1:D:260:SER:H	1:D:263:SER:HB3	1.70	0.57
1:H:284:MET:HG2	1:H:286:THR:CG2	2.34	0.57
1:J:749:LYS:O	1:J:753:GLU:HG3	2.05	0.57
1:J:791:VAL:HG13	1:J:794:ARG:NH2	2.20	0.57
1:A:278:LEU:CD2	1:A:280:LYS:CG	2.83	0.56
1:D:255:ILE:HA	1:D:392:ILE:O	2.05	0.56
1:G:377:ARG:HG3	1:G:377:ARG:O	2.05	0.56
1:H:279:PRO:HB3	1:H:322:GLN:CA	2.34	0.56
1:I:257:VAL:HG12	1:I:394:LEU:HB3	1.86	0.56
1:I:275:HIS:CE1	1:I:278:LEU:HD12	2.40	0.56
1:I:803:ARG:NH1	1:I:806:ALA:HB1	2.19	0.56
1:B:433:GLU:O	1:B:436:LYS:HB2	2.04	0.56
1:D:275:HIS:CG	1:D:276:GLU:H	2.23	0.56
1:E:349:SER:O	1:E:352:ILE:HG13	2.05	0.56
1:E:436:LYS:O	1:E:440:ILE:HG13	2.04	0.56
1:E:455:VAL:HG12	1:E:501:GLY:CA	2.35	0.56
1:G:605:LEU:HD22	1:G:605:LEU:C	2.26	0.56
1:H:361:PRO:CG	1:H:382:LEU:HD21	2.35	0.56
1:H:405:ASN:C	1:H:410:GLN:HE21	2.08	0.56
1:A:272:ILE:HG23	1:A:278:LEU:H	1.69	0.56
1:A:272:ILE:CG1	1:A:278:LEU:HD11	2.31	0.56
1:A:454:GLY:O	1:A:455:VAL:HG13	2.05	0.56
1:B:772:HIS:HB3	1:E:774:SER:OG	2.04	0.56
1:B:774:SER:O	1:B:781:ALA:HA	2.06	0.56
1:D:285:ILE:HD11	1:D:287:ARG:HB2	1.77	0.56
1:D:477:ILE:HG22	1:D:477:ILE:O	2.05	0.56
1:D:526:GLU:OE1	1:D:530:ARG:NH1	2.38	0.56
1:E:279:PRO:HB3	1:E:322:GLN:CG	2.35	0.56
1:E:387:ILE:HG22	1:E:415:VAL:HG21	1.86	0.56
1:F:855:ARG:HA	1:F:855:ARG:NE	2.20	0.56
1:G:508:LYS:O	1:G:512:VAL:HG23	2.04	0.56
1:H:279:PRO:CG	1:H:322:GLN:HA	2.35	0.56
1:H:441:LEU:CD2	1:H:499:SER:N	2.60	0.56
1:H:454:GLY:O	1:H:455:VAL:CG1	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:749:LYS:H	1:H:749:LYS:HD2	1.70	0.56
1:J:229:PHE:CE1	1:J:232:LYS:CD	2.81	0.56
1:J:230:ILE:O	1:J:234:MET:HG3	2.05	0.56
1:J:376:LYS:NZ	1:J:379:ILE:HD12	2.20	0.56
1:J:524:THR:O	1:J:528:ILE:HG13	2.05	0.56
1:A:277:PHE:HD1	1:A:278:LEU:H	1.52	0.56
1:A:326:THR:HG22	1:A:329:ASN:HD22	1.69	0.56
1:D:441:LEU:CB	1:D:498:VAL:CG1	2.83	0.56
1:E:229:PHE:O	1:E:232:LYS:HG3	2.06	0.56
1:F:294:LEU:HB3	1:F:352:ILE:HD13	1.85	0.56
1:F:664:LEU:HB3	1:F:676:ARG:NH1	2.20	0.56
1:G:261:GLN:H	1:J:405:ASN:ND2	2.02	0.56
1:G:701:SER:O	1:G:704:PRO:HD2	2.06	0.56
1:A:285:ILE:O	1:A:286:THR:OG1	2.23	0.56
1:B:227:MET:O	1:B:230:ILE:HG22	2.05	0.56
1:B:254:SER:HB2	1:B:356:SER:O	2.06	0.56
1:F:268:VAL:O	1:F:272:ILE:HG13	2.05	0.56
1:H:238:ARG:NH2	1:H:356:SER:HG	2.02	0.56
1:H:485:PHE:CD2	1:H:492:PHE:HD1	2.23	0.56
1:A:355:LEU:HD23	1:A:357:LEU:HD22	1.87	0.56
1:H:387:ILE:CG2	1:H:415:VAL:HG21	2.36	0.56
1:J:478:ASN:ND2	1:J:482:LYS:HZ2	1.98	0.56
1:J:682:ALA:O	1:J:685:THR:HG22	2.05	0.56
1:A:225:ASP:OD1	1:A:225:ASP:N	2.37	0.56
1:A:272:ILE:HG21	1:A:277:PHE:CD1	2.40	0.56
1:A:296:ASN:C	1:A:298:PRO:HD3	2.26	0.56
1:B:308:PRO:HG3	1:B:344:ARG:HB2	1.87	0.56
1:E:265:LYS:O	1:E:268:VAL:HG23	2.06	0.56
1:G:297:ASP:HB3	1:G:349:SER:C	2.26	0.56
1:H:279:PRO:CG	1:H:325:LEU:HD21	2.28	0.56
1:H:493:GLY:O	1:H:496:SER:HB3	2.05	0.56
1:H:673:PRO:HD2	1:H:877:GLU:OE1	2.05	0.56
1:J:272:ILE:HG12	1:J:278:LEU:CD1	2.35	0.56
1:J:272:ILE:HG21	1:J:277:PHE:HD1	1.71	0.56
1:J:456:ILE:HG23	1:J:456:ILE:O	2.06	0.56
1:J:749:LYS:HD2	1:J:749:LYS:H	1.70	0.56
1:A:454:GLY:N	1:A:500:THR:HG22	2.19	0.56
1:D:363:TYR:N	1:D:363:TYR:CD1	2.74	0.56
1:D:648:ALA:HB1	1:D:841:LEU:HD12	1.86	0.56
1:E:279:PRO:O	1:E:280:LYS:CD	2.54	0.56
1:E:642:LEU:HD12	1:E:643:GLY:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:257:VAL:HG22	1:H:359:ASP:HA	1.86	0.56
1:H:266:SER:HB2	1:H:427:THR:OG1	2.06	0.56
1:H:272:ILE:CG2	1:H:278:LEU:HD13	2.32	0.56
1:I:249:THR:OG1	1:I:531:GLU:OE1	2.19	0.56
1:A:540:LYS:HD2	1:I:626:PRO:CA	2.19	0.56
1:B:475:ALA:O	1:B:479:ARG:HG2	2.05	0.56
1:C:239:ASN:HD21	1:C:293:THR:HG21	1.71	0.56
1:C:284:MET:N	1:C:284:MET:SD	2.75	0.56
1:C:510:LEU:HD23	1:C:510:LEU:C	2.26	0.56
1:F:627:TYR:OH	1:F:631:GLN:NE2	2.38	0.56
1:H:485:PHE:HA	1:H:492:PHE:HE1	1.71	0.56
1:I:268:VAL:O	1:I:272:ILE:HG13	2.05	0.56
1:I:803:ARG:NH1	1:I:806:ALA:CB	2.69	0.56
1:J:296:ASN:HB2	1:J:354:ASP:OD2	2.06	0.56
1:A:255:ILE:HA	1:A:392:ILE:O	2.06	0.56
1:A:434:PRO:HB3	1:A:491:GLU:CB	2.36	0.56
1:E:275:HIS:CG	1:E:276:GLU:N	2.73	0.56
1:G:627:TYR:OH	1:G:631:GLN:NE2	2.39	0.56
1:H:426:ILE:CD1	1:H:440:ILE:HG23	2.28	0.56
1:H:426:ILE:HD13	1:H:440:ILE:HG23	1.78	0.56
1:H:450:LEU:HD22	1:H:512:VAL:HG22	1.88	0.56
1:J:445:GLN:O	1:J:446:TYR:CD1	2.58	0.56
1:J:575:PRO:O	1:J:578:GLN:HB3	2.06	0.56
1:B:563:HIS:CD2	1:C:566:HIS:CE1	2.94	0.55
1:C:672:HIS:CD2	1:C:877:GLU:HB2	2.38	0.55
1:C:843:VAL:HG21	1:D:704:PRO:HA	1.89	0.55
1:D:232:LYS:HG3	1:D:233:LYS:HE3	1.88	0.55
1:E:444:ARG:O	1:E:447:PRO:HD3	2.06	0.55
1:E:456:ILE:O	1:E:481:GLU:OE2	2.23	0.55
1:E:752:LYS:HA	1:E:755:MET:HE2	1.87	0.55
1:G:720:ARG:NH1	1:G:813:LYS:HA	2.21	0.55
1:G:878:ASP:HB3	1:G:881:VAL:HG11	1.83	0.55
1:I:411:ALA:O	1:I:414:ARG:HB3	2.06	0.55
1:I:855:ARG:NE	1:I:855:ARG:HA	2.21	0.55
1:J:279:PRO:HG2	1:J:325:LEU:CD2	2.34	0.55
1:J:640:THR:HG21	1:J:706:LYS:HA	1.87	0.55
1:A:297:ASP:OD1	1:A:300:ALA:HB3	2.04	0.55
1:D:278:LEU:HD21	1:D:280:LYS:CG	2.35	0.55
1:D:279:PRO:HG3	1:D:321:ILE:HG22	1.88	0.55
1:E:266:SER:HB2	1:E:427:THR:OG1	2.07	0.55
1:H:285:ILE:CD1	1:H:287:ARG:CB	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:642:LEU:HD22	1:I:643:GLY:N	2.21	0.55
1:J:485:PHE:O	1:J:489:PRO:HA	2.06	0.55
1:A:269:LEU:HD21	1:A:457:SER:C	2.26	0.55
1:A:484:TYR:CD1	1:A:484:TYR:C	2.79	0.55
1:B:249:THR:OG1	1:B:531:GLU:OE1	2.19	0.55
1:B:326:THR:O	1:B:329:ASN:HB2	2.06	0.55
1:B:357:LEU:HD23	1:B:357:LEU:H	1.71	0.55
1:B:611:GLU:N	1:B:612:PRO:HD2	2.22	0.55
1:C:235:ILE:HD13	1:C:356:SER:CB	2.35	0.55
1:D:275:HIS:HB2	1:D:352:ILE:HG21	1.87	0.55
1:E:564:GLN:HG2	1:E:663:LEU:HD11	1.89	0.55
1:E:817:ASN:HB3	1:E:820:TYR:HB2	1.89	0.55
1:G:611:GLU:N	1:G:612:PRO:CD	2.61	0.55
1:H:239:ASN:HB3	1:H:240:LEU:HD23	1.88	0.55
1:H:285:ILE:HD12	1:H:286:THR:N	2.20	0.55
1:J:339:THR:HG23	1:J:340:ASP:H	1.69	0.55
1:J:401:THR:HG22	1:J:402:ASP:O	2.06	0.55
1:A:441:LEU:HG	1:A:498:VAL:CG1	2.16	0.55
1:G:252:LEU:HD23	1:G:524:THR:HG21	1.89	0.55
1:H:363:TYR:CE1	1:H:383:CYS:SG	2.84	0.55
1:H:399:ALA:HA	1:H:411:ALA:HB3	1.88	0.55
1:H:710:ASP:O	1:H:832:LYS:NZ	2.39	0.55
1:J:278:LEU:CD2	1:J:280:LYS:HG2	2.36	0.55
1:C:837:ALA:O	1:C:841:LEU:HB2	2.05	0.55
1:D:272:ILE:HG23	1:D:278:LEU:N	2.22	0.55
1:D:278:LEU:CD2	1:D:280:LYS:CG	2.84	0.55
1:D:278:LEU:HD22	1:D:280:LYS:HG2	1.88	0.55
1:E:278:LEU:HD22	1:E:280:LYS:HG2	1.89	0.55
1:G:364:ILE:CG2	1:J:405:ASN:OD1	2.53	0.55
1:A:308:PRO:HG3	1:A:344:ARG:HG3	1.87	0.55
1:A:387:ILE:CG2	1:A:415:VAL:HG21	2.36	0.55
1:D:269:LEU:HD23	1:D:269:LEU:C	2.26	0.55
1:E:485:PHE:CD2	1:E:492:PHE:HD1	2.18	0.55
1:F:272:ILE:HD11	1:F:280:LYS:HB2	1.89	0.55
1:F:442:SER:HB2	1:F:498:VAL:HG12	1.88	0.55
1:H:275:HIS:H	1:H:275:HIS:CD2	2.24	0.55
1:I:627:TYR:HD2	1:I:628:TRP:HZ3	1.54	0.55
1:I:832:LYS:O	1:I:836:THR:HG22	2.06	0.55
1:J:255:ILE:HA	1:J:392:ILE:O	2.06	0.55
1:J:672:HIS:HA	1:J:877:GLU:OE2	2.06	0.55
1:A:269:LEU:CG	1:A:457:SER:O	2.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:297:ASP:OD1	1:A:300:ALA:CB	2.55	0.55
1:A:339:THR:CG2	1:A:340:ASP:H	2.20	0.55
1:D:429:MET:HE2	1:D:437:GLY:HA2	1.88	0.55
1:E:524:THR:O	1:E:528:ILE:HG13	2.06	0.55
1:I:705:TYR:CE1	1:I:832:LYS:HD3	2.42	0.55
1:J:278:LEU:CD2	1:J:280:LYS:CG	2.85	0.55
1:J:455:VAL:HG12	1:J:501:GLY:H	1.72	0.55
1:D:349:SER:O	1:D:352:ILE:HG13	2.07	0.55
1:E:255:ILE:HD11	1:E:355:LEU:HG	1.89	0.55
1:E:255:ILE:HA	1:E:392:ILE:O	2.07	0.55
1:E:298:PRO:O	1:E:299:GLU:CB	2.55	0.55
1:E:657:GLN:HE22	1:E:684:ALA:HA	1.70	0.55
1:F:234:MET:HE2	1:F:517:MET:HB3	1.89	0.55
1:F:269:LEU:HD11	1:F:457:SER:O	2.07	0.55
1:G:267:SER:CB	1:G:396:ILE:HG13	2.36	0.55
1:G:607:PRO:HD3	1:G:762:ARG:HG3	1.89	0.55
1:H:251:THR:HG22	1:H:252:LEU:N	2.22	0.55
1:J:286:THR:OG1	1:J:361:PRO:HB3	2.07	0.55
1:J:311:GLY:O	1:J:312:LEU:HB2	2.06	0.55
1:A:235:ILE:HD12	1:A:235:ILE:C	2.24	0.55
1:D:275:HIS:HB2	1:D:352:ILE:CG2	2.37	0.55
1:D:279:PRO:O	1:D:280:LYS:CD	2.55	0.55
1:D:750:LYS:HE2	1:G:772:HIS:ND1	2.22	0.55
1:G:518:SER:O	1:G:521:LEU:HB3	2.07	0.55
1:J:285:ILE:HD12	1:J:287:ARG:CA	2.27	0.55
1:A:242:GLN:HE22	1:A:344:ARG:CD	2.20	0.55
1:B:376:LYS:HE2	1:B:376:LYS:HA	1.88	0.55
1:D:263:SER:HA	1:D:266:SER:OG	2.07	0.55
1:D:272:ILE:HG12	1:D:278:LEU:HD11	1.89	0.55
1:D:286:THR:O	1:D:361:PRO:CD	2.55	0.55
1:D:454:GLY:O	1:D:455:VAL:HG13	2.07	0.55
1:D:817:ASN:HB3	1:D:820:TYR:HB2	1.89	0.55
1:E:272:ILE:CG1	1:E:278:LEU:CD1	2.83	0.55
1:J:240:LEU:N	1:J:240:LEU:HD23	2.22	0.55
1:J:307:PHE:CD1	1:J:345:LEU:CD2	2.90	0.55
1:B:578:GLN:HA	1:B:838:VAL:HG21	1.89	0.54
1:C:284:MET:HG2	1:C:286:THR:HG22	1.88	0.54
1:G:401:THR:HA	1:J:262:SER:OG	2.07	0.54
1:G:472:ASN:OD1	1:G:475:ALA:HB3	2.07	0.54
1:G:708:ASP:OD1	1:G:710:ASP:HB3	2.07	0.54
1:H:694:THR:HG21	1:H:845:MET:HB2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:832:LYS:O	1:H:835:GLN:HG2	2.07	0.54
1:J:278:LEU:HD22	1:J:278:LEU:C	2.26	0.54
1:A:275:HIS:CG	1:A:276:GLU:N	2.75	0.54
1:E:276:GLU:OE1	1:E:318:PHE:HE2	1.89	0.54
1:E:456:ILE:HD12	1:E:457:SER:N	2.22	0.54
1:J:229:PHE:HA	1:J:232:LYS:HG3	1.83	0.54
1:J:242:GLN:HE22	1:J:344:ARG:CD	2.20	0.54
1:J:255:ILE:HG13	1:J:357:LEU:HA	1.89	0.54
1:A:273:VAL:CG1	1:A:457:SER:HB2	2.31	0.54
1:G:405:ASN:CB	1:J:261:GLN:CB	2.83	0.54
1:H:387:ILE:HG22	1:H:415:VAL:HG21	1.90	0.54
1:I:275:HIS:CG	1:I:276:GLU:N	2.75	0.54
1:I:375:LEU:HB2	1:I:376:LYS:HE2	1.90	0.54
1:I:626:PRO:C	1:I:628:TRP:N	2.57	0.54
1:J:279:PRO:HG3	1:J:321:ILE:HG22	1.88	0.54
1:A:287:ARG:HH11	1:A:287:ARG:HG3	1.72	0.54
1:A:393:ILE:O	1:A:394:LEU:CB	2.47	0.54
1:B:268:VAL:HB	1:B:280:LYS:HB3	1.90	0.54
1:C:780:SER:OG	1:C:783:LEU:HB2	2.08	0.54
1:D:235:ILE:HD12	1:D:235:ILE:C	2.27	0.54
1:D:240:LEU:N	1:D:240:LEU:HD23	2.22	0.54
1:D:492:PHE:O	1:D:492:PHE:CD1	2.56	0.54
1:D:499:SER:O	1:D:500:THR:CG2	2.56	0.54
1:E:454:GLY:O	1:E:455:VAL:HG13	2.07	0.54
1:F:269:LEU:CD2	1:F:457:SER:HB2	2.37	0.54
1:F:854:PRO:HB2	1:F:855:ARG:CZ	2.38	0.54
1:G:261:GLN:CD	1:J:405:ASN:ND2	2.60	0.54
1:G:618:LEU:HG	1:G:803:ARG:NH2	2.23	0.54
1:H:425:VAL:HA	1:H:453:VAL:O	2.08	0.54
1:I:328:LEU:HD13	1:I:343:ILE:HD13	1.90	0.54
1:I:585:LEU:HD12	1:I:834:ALA:HB2	1.88	0.54
1:J:778:GLY:C	1:J:779:PHE:HD2	2.11	0.54
1:A:484:TYR:HE1	1:A:492:PHE:CZ	2.26	0.54
1:D:382:LEU:HD12	1:D:382:LEU:O	2.07	0.54
1:E:229:PHE:CD1	1:E:232:LYS:CE	2.90	0.54
1:E:429:MET:HE1	1:E:437:GLY:HA2	1.88	0.54
1:F:273:VAL:HG12	1:F:477:ILE:HD13	1.88	0.54
1:I:402:ASP:CB	1:I:405:ASN:HB2	2.37	0.54
1:I:616:ILE:HD12	1:I:616:ILE:O	2.07	0.54
1:A:318:PHE:CD1	1:A:321:ILE:HD12	2.43	0.54
1:A:832:LYS:O	1:A:836:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:640:THR:HG21	1:D:706:LYS:HA	1.90	0.54
1:E:441:LEU:CB	1:E:498:VAL:HG12	2.38	0.54
1:E:492:PHE:CD1	1:E:492:PHE:O	2.61	0.54
1:H:269:LEU:HD23	1:H:270:GLU:CA	2.38	0.54
1:J:339:THR:CG2	1:J:340:ASP:H	2.19	0.54
1:A:529:GLN:HG2	1:A:898:LEU:HD21	1.89	0.54
1:D:387:ILE:HG22	1:D:415:VAL:HG21	1.90	0.54
1:D:723:VAL:O	1:D:727:LEU:HB2	2.07	0.54
1:E:238:ARG:NH2	1:E:356:SER:HG	2.05	0.54
1:E:392:ILE:HD12	1:E:421:ARG:O	2.06	0.54
1:F:642:LEU:HD22	1:F:643:GLY:H	1.70	0.54
1:G:832:LYS:O	1:G:835:GLN:HG2	2.07	0.54
1:H:232:LYS:O	1:H:235:ILE:CG2	2.55	0.54
1:J:272:ILE:CG2	1:J:278:LEU:H	2.20	0.54
1:J:441:LEU:HD23	1:J:498:VAL:HG12	1.72	0.54
1:A:393:ILE:HG12	1:A:394:LEU:CB	2.36	0.54
1:E:376:LYS:NZ	1:E:379:ILE:CD1	2.64	0.54
1:F:637:SER:O	1:F:641:ARG:HB2	2.08	0.54
1:H:349:SER:HB3	1:H:352:ILE:HG23	1.88	0.54
1:H:578:GLN:HA	1:H:838:VAL:HG21	1.90	0.54
1:I:699:GLU:OE1	1:I:699:GLU:HA	2.06	0.54
1:A:259:GLY:HA2	1:A:408:ALA:HB2	1.89	0.54
1:A:310:LEU:HD23	1:A:310:LEU:N	2.23	0.54
1:A:363:TYR:N	1:A:363:TYR:CD1	2.74	0.54
1:A:363:TYR:N	1:A:363:TYR:HD1	2.06	0.54
1:B:235:ILE:HD11	1:B:293:THR:HG22	1.90	0.54
1:B:510:LEU:C	1:B:510:LEU:HD23	2.28	0.54
1:B:627:TYR:HD1	1:B:630:ARG:NH2	2.05	0.54
1:F:376:LYS:HZ3	1:F:379:ILE:HD12	1.70	0.54
1:I:449:LYS:C	1:I:451:GLY:H	2.11	0.54
1:J:264:GLY:O	1:J:268:VAL:HG22	2.07	0.54
1:J:269:LEU:O	1:J:273:VAL:HG13	2.08	0.54
1:A:246:GLN:HG2	1:A:247:GLY:H	1.70	0.54
1:A:436:LYS:O	1:A:440:ILE:HG13	2.08	0.54
1:E:672:HIS:HA	1:E:877:GLU:OE2	2.08	0.54
1:G:269:LEU:HA	1:G:272:ILE:HD12	1.89	0.54
1:H:387:ILE:O	1:H:421:ARG:NH2	2.41	0.54
1:I:843:VAL:HG21	1:J:704:PRO:HA	1.90	0.54
1:J:272:ILE:HG23	1:J:278:LEU:H	1.72	0.54
1:J:474:LEU:HG	1:J:475:ALA:H	1.73	0.54
1:J:508:LYS:O	1:J:512:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:375:LEU:N	1:A:375:LEU:CD2	2.56	0.53
1:A:454:GLY:O	1:A:455:VAL:CG1	2.56	0.53
1:E:238:ARG:HA	1:E:241:LEU:HD12	1.89	0.53
1:E:749:LYS:H	1:E:749:LYS:CD	2.16	0.53
1:G:261:GLN:HE21	1:J:401:THR:CG2	2.19	0.53
1:J:225:ASP:N	1:J:225:ASP:OD1	2.39	0.53
1:J:441:LEU:CB	1:J:498:VAL:HG12	2.38	0.53
1:A:275:HIS:HB2	1:A:352:ILE:CG2	2.38	0.53
1:D:254:SER:HB2	1:D:356:SER:O	2.08	0.53
1:E:269:LEU:HD23	1:E:457:SER:OG	2.06	0.53
1:E:287:ARG:HH11	1:E:287:ARG:CG	2.20	0.53
1:E:308:PRO:CG	1:E:344:ARG:HG3	2.38	0.53
1:E:610:ARG:HE	1:E:611:GLU:N	2.07	0.53
1:G:387:ILE:HG22	1:G:415:VAL:HG21	1.90	0.53
1:J:263:SER:HA	1:J:266:SER:OG	2.08	0.53
1:J:673:PRO:HD2	1:J:877:GLU:OE1	2.07	0.53
1:F:244:VAL:HA	1:F:893:LEU:HD13	1.89	0.53
1:G:360:LEU:HB2	1:G:361:PRO:HD2	1.89	0.53
1:H:241:LEU:CD2	1:H:528:ILE:HD11	2.38	0.53
1:H:296:ASN:O	1:H:298:PRO:HD3	2.08	0.53
1:H:754:VAL:HA	1:H:779:PHE:CE1	2.43	0.53
1:I:269:LEU:O	1:I:272:ILE:HB	2.09	0.53
1:A:528:ILE:HG23	1:A:894:LEU:HD22	1.90	0.53
1:B:627:TYR:HA	1:J:540:LYS:HD3	1.89	0.53
1:D:263:SER:OG	1:D:397:SER:HA	2.09	0.53
1:E:296:ASN:C	1:E:298:PRO:HD3	2.29	0.53
1:G:255:ILE:HD11	1:G:355:LEU:HG	1.89	0.53
1:H:434:PRO:HG2	1:H:488:HIS:CE1	2.44	0.53
1:H:454:GLY:O	1:H:455:VAL:HG13	2.08	0.53
1:I:873:LYS:O	1:I:877:GLU:HG3	2.09	0.53
1:A:456:ILE:O	1:A:481:GLU:OE2	2.25	0.53
1:B:630:ARG:CZ	1:J:537:TYR:HD1	2.21	0.53
1:C:572:PHE:HB3	1:C:850:TYR:OH	2.07	0.53
1:C:609:PRO:HB2	1:C:610:ARG:CA	2.38	0.53
1:D:229:PHE:O	1:D:233:LYS:HG2	2.09	0.53
1:D:231:THR:O	1:D:235:ILE:HG22	2.08	0.53
1:D:237:ILE:O	1:D:237:ILE:HD13	2.09	0.53
1:E:272:ILE:HG12	1:E:278:LEU:HD11	1.91	0.53
1:E:529:GLN:HG2	1:E:898:LEU:HD21	1.91	0.53
1:F:235:ILE:HD12	1:F:235:ILE:O	2.09	0.53
1:F:434:PRO:HG2	1:F:488:HIS:ND1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:690:ARG:NH1	1:F:844:GLU:OE2	2.41	0.53
1:G:259:GLY:HA2	1:G:408:ALA:HB2	1.89	0.53
1:H:454:GLY:O	1:H:500:THR:CB	2.57	0.53
1:H:528:ILE:HG23	1:H:894:LEU:HD22	1.90	0.53
1:H:640:THR:HG21	1:H:706:LYS:HA	1.91	0.53
1:J:238:ARG:NH2	1:J:356:SER:OG	2.40	0.53
1:J:454:GLY:O	1:J:455:VAL:HG13	2.08	0.53
1:A:278:LEU:HD22	1:A:279:PRO:O	2.08	0.53
1:E:762:ARG:NH1	1:E:762:ARG:HG2	2.22	0.53
1:I:762:ARG:HG2	1:I:762:ARG:HH11	1.73	0.53
1:J:275:HIS:CG	1:J:276:GLU:N	2.75	0.53
1:B:285:ILE:HD13	1:B:332:VAL:HG22	1.91	0.53
1:E:272:ILE:HG23	1:E:278:LEU:H	1.73	0.53
1:H:363:TYR:HE2	1:H:407:THR:OG1	1.91	0.53
1:H:565:PHE:HA	1:H:663:LEU:HD21	1.91	0.53
1:I:269:LEU:HA	1:I:272:ILE:HD12	1.89	0.53
1:J:300:ALA:C	1:J:301:LYS:HD3	2.29	0.53
1:J:387:ILE:CG2	1:J:415:VAL:HG21	2.38	0.53
1:J:775:GLY:HA2	1:J:779:PHE:O	2.09	0.53
1:A:233:LYS:HE2	1:A:233:LYS:HA	1.91	0.53
1:B:575:PRO:O	1:B:578:GLN:HB3	2.09	0.53
1:C:272:ILE:HD11	1:C:280:LYS:HB2	1.90	0.53
1:D:267:SER:CB	1:D:396:ILE:HG13	2.37	0.53
1:E:704:PRO:HA	1:F:843:VAL:HG21	1.89	0.53
1:F:297:ASP:HB3	1:F:349:SER:C	2.29	0.53
1:F:308:PRO:HG3	1:F:344:ARG:HB2	1.89	0.53
1:G:678:VAL:HG11	1:G:861:LEU:HD23	1.91	0.53
1:H:456:ILE:HD12	1:H:456:ILE:C	2.29	0.53
1:J:657:GLN:HE22	1:J:684:ALA:CA	2.21	0.53
1:A:384:ASP:C	1:A:384:ASP:OD1	2.45	0.53
1:A:665:ASP:OD1	1:A:676:ARG:NH2	2.42	0.53
1:A:738:MET:SD	1:A:738:MET:CB	2.94	0.53
1:B:233:LYS:HE3	1:B:900:LYS:HD2	1.91	0.53
1:B:564:GLN:HG2	1:B:663:LEU:HG	1.90	0.53
1:C:308:PRO:HG3	1:C:344:ARG:HB2	1.91	0.53
1:D:232:LYS:O	1:D:235:ILE:HG23	2.09	0.53
1:D:269:LEU:HD23	1:D:457:SER:OG	2.03	0.53
1:D:499:SER:O	1:D:500:THR:HG23	2.09	0.53
1:E:257:VAL:HG23	1:E:359:ASP:HA	1.88	0.53
1:E:673:PRO:HD2	1:E:877:GLU:OE1	2.08	0.53
1:H:269:LEU:HD23	1:H:457:SER:OG	1.99	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:433:GLU:O	1:H:436:LYS:HB2	2.08	0.53
1:B:611:GLU:H	1:B:612:PRO:HD2	1.74	0.53
1:D:484:TYR:HD1	1:D:485:PHE:CD1	2.27	0.53
1:G:363:TYR:CD2	1:G:407:THR:HB	2.44	0.53
1:H:272:ILE:CG2	1:H:278:LEU:H	2.22	0.53
1:J:284:MET:O	1:J:286:THR:HG23	2.09	0.53
1:J:387:ILE:HG22	1:J:415:VAL:HG21	1.91	0.53
1:A:254:SER:O	1:A:391:ASN:HB3	2.09	0.52
1:A:269:LEU:HD21	1:A:457:SER:O	2.10	0.52
1:A:576:GLN:NE2	1:A:576:GLN:H	2.07	0.52
1:A:705:TYR:CD1	1:A:832:LYS:HD3	2.43	0.52
1:B:425:VAL:HA	1:B:453:VAL:O	2.09	0.52
1:B:705:TYR:CE1	1:B:832:LYS:HD3	2.45	0.52
1:E:434:PRO:CG	1:E:488:HIS:CG	2.92	0.52
1:E:834:ALA:O	1:E:838:VAL:HB	2.08	0.52
1:H:233:LYS:N	1:H:233:LYS:CE	2.72	0.52
1:H:708:ASP:OD1	1:H:710:ASP:HB3	2.09	0.52
1:J:269:LEU:CA	1:J:272:ILE:HD12	2.20	0.52
1:J:574:ARG:N	1:J:575:PRO:HD2	2.24	0.52
1:A:232:LYS:HA	1:A:235:ILE:HG22	1.91	0.52
1:A:542:GLN:O	1:A:543:TYR:CD2	2.63	0.52
1:A:704:PRO:HA	1:B:843:VAL:HG21	1.90	0.52
1:B:255:ILE:HA	1:B:392:ILE:O	2.09	0.52
1:C:227:MET:HA	1:C:230:ILE:HG22	1.91	0.52
1:E:258:ILE:HG22	1:E:360:LEU:HD11	1.91	0.52
1:E:286:THR:O	1:E:361:PRO:CG	2.58	0.52
1:E:610:ARG:NE	1:E:610:ARG:HA	2.23	0.52
1:E:639:LEU:O	1:E:642:LEU:HD23	2.10	0.52
1:G:405:ASN:HA	1:J:364:ILE:O	2.10	0.52
1:J:529:GLN:HG2	1:J:898:LEU:HD21	1.90	0.52
1:J:865:MET:HB3	1:J:871:LEU:HB2	1.91	0.52
1:H:657:GLN:HE22	1:H:684:ALA:HA	1.74	0.52
1:I:251:THR:HG22	1:I:252:LEU:H	1.73	0.52
1:A:326:THR:HA	1:A:329:ASN:CG	2.30	0.52
1:A:331:SER:O	1:A:332:VAL:HB	2.08	0.52
1:D:275:HIS:H	1:D:275:HIS:CD2	2.26	0.52
1:D:286:THR:O	1:D:361:PRO:HB3	2.09	0.52
1:D:287:ARG:CG	1:D:287:ARG:NH1	2.66	0.52
1:H:231:THR:O	1:H:235:ILE:HG22	2.08	0.52
1:H:405:ASN:O	1:H:410:GLN:NE2	2.43	0.52
1:B:277:PHE:HB2	1:B:473:LEU:HD23	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:631:GLN:OE1	1:C:631:GLN:HA	2.09	0.52
1:F:444:ARG:O	1:F:447:PRO:HD3	2.09	0.52
1:F:754:VAL:HG21	1:F:783:LEU:HD22	1.92	0.52
1:H:818:LYS:HD2	1:H:825:PHE:CE1	2.45	0.52
1:J:560:ASP:OD2	1:J:668:SER:OG	2.26	0.52
1:A:537:TYR:N	1:I:630:ARG:NH1	2.56	0.52
1:C:617:ASP:OD1	1:C:617:ASP:N	2.42	0.52
1:C:744:SER:OG	1:C:786:ARG:NH2	2.42	0.52
1:D:259:GLY:HA2	1:D:408:ALA:HB2	1.92	0.52
1:D:266:SER:HB2	1:D:427:THR:OG1	2.10	0.52
1:F:279:PRO:HG2	1:F:325:LEU:HD21	1.91	0.52
1:F:285:ILE:HG12	1:F:329:ASN:O	2.10	0.52
1:G:648:ALA:HB1	1:G:841:LEU:HD12	1.91	0.52
1:A:376:LYS:HE2	1:A:376:LYS:HA	1.91	0.52
1:A:441:LEU:CB	1:A:498:VAL:HG12	2.39	0.52
1:A:542:GLN:C	1:A:543:TYR:CD2	2.83	0.52
1:H:775:GLY:HA2	1:H:779:PHE:O	2.10	0.52
1:I:241:LEU:HD21	1:I:528:ILE:HD13	1.91	0.52
1:J:278:LEU:HB2	1:J:279:PRO:HD2	1.92	0.52
1:A:363:TYR:CD2	1:A:407:THR:HB	2.45	0.52
1:A:499:SER:O	1:A:500:THR:CG2	2.58	0.52
1:A:537:TYR:HE1	1:I:627:TYR:CA	2.22	0.52
1:B:272:ILE:HD11	1:B:280:LYS:HB2	1.92	0.52
1:B:393:ILE:HD11	1:B:412:SER:HB2	1.91	0.52
1:B:780:SER:OG	1:B:783:LEU:HB2	2.10	0.52
1:B:803:ARG:HD2	1:B:823:GLU:OE2	2.10	0.52
1:E:308:PRO:HD2	1:E:344:ARG:O	2.09	0.52
1:F:640:THR:HG21	1:F:706:LYS:HA	1.92	0.52
1:I:279:PRO:HG3	1:I:322:GLN:HA	1.91	0.52
1:I:855:ARG:HA	1:I:855:ARG:HE	1.75	0.52
1:B:286:THR:CB	1:B:361:PRO:HB3	2.37	0.52
1:D:278:LEU:CD1	1:D:278:LEU:N	2.73	0.52
1:D:355:LEU:HD23	1:D:357:LEU:HD22	1.92	0.52
1:E:484:TYR:HE1	1:E:492:PHE:HZ	1.57	0.52
1:E:499:SER:O	1:E:500:THR:CG2	2.57	0.52
1:F:279:PRO:CB	1:F:322:GLN:HA	2.38	0.52
1:G:530:ARG:HG2	1:G:530:ARG:NH1	2.24	0.52
1:G:617:ASP:OD1	1:G:617:ASP:N	2.43	0.52
1:G:663:LEU:O	1:G:667:SER:HB2	2.10	0.52
1:H:297:ASP:HB3	1:H:350:PRO:N	2.25	0.52
1:B:642:LEU:HD22	1:B:643:GLY:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:476:SER:OG	1:E:477:ILE:N	2.40	0.51
1:E:485:PHE:HD2	1:E:492:PHE:HD1	1.57	0.51
1:H:363:TYR:N	1:H:363:TYR:HD1	2.08	0.51
1:H:653:ALA:HA	1:H:687:LEU:HD13	1.93	0.51
1:I:268:VAL:HB	1:I:280:LYS:HB3	1.92	0.51
1:A:284:MET:HG2	1:A:286:THR:HG23	1.92	0.51
1:B:276:GLU:HG2	1:B:277:PHE:N	2.25	0.51
1:B:616:ILE:O	1:B:619:PRO:HD2	2.10	0.51
1:D:298:PRO:O	1:D:299:GLU:CB	2.59	0.51
1:D:393:ILE:HG23	1:D:422:THR:HB	1.93	0.51
1:E:276:GLU:OE1	1:E:303:ASP:OD1	2.28	0.51
1:E:723:VAL:O	1:E:727:LEU:HB2	2.10	0.51
1:G:261:GLN:CG	1:G:262:SER:N	2.73	0.51
1:H:286:THR:O	1:H:361:PRO:HG3	2.09	0.51
1:H:474:LEU:CG	1:H:475:ALA:N	2.71	0.51
1:I:817:ASN:HB2	1:I:820:TYR:HB2	1.92	0.51
1:J:278:LEU:HD21	1:J:280:LYS:CG	2.40	0.51
1:C:480:ASN:HA	1:C:483:ASN:OD1	2.11	0.51
1:D:230:ILE:HG13	1:D:904:LEU:HD11	1.91	0.51
1:D:232:LYS:HA	1:D:235:ILE:CG2	2.40	0.51
1:E:297:ASP:HB3	1:E:349:SER:C	2.31	0.51
1:J:441:LEU:CB	1:J:498:VAL:CG1	2.87	0.51
1:A:387:ILE:HG22	1:A:415:VAL:HG21	1.91	0.51
1:A:720:ARG:HG2	1:A:720:ARG:HH11	1.76	0.51
1:D:375:LEU:N	1:D:375:LEU:CD2	2.67	0.51
1:E:273:VAL:CG2	1:E:457:SER:HB3	2.21	0.51
1:H:277:PHE:HD1	1:H:278:LEU:H	1.56	0.51
1:H:480:ASN:HA	1:H:483:ASN:OD1	2.11	0.51
1:I:616:ILE:O	1:I:619:PRO:HD2	2.10	0.51
1:J:376:LYS:HA	1:J:376:LYS:CE	2.39	0.51
1:A:278:LEU:HD22	1:A:280:LYS:HG2	1.92	0.51
1:A:455:VAL:HG12	1:A:501:GLY:CA	2.40	0.51
1:C:267:SER:HB3	1:C:396:ILE:HG13	1.93	0.51
1:D:778:GLY:C	1:D:779:PHE:HD2	2.14	0.51
1:E:454:GLY:O	1:E:455:VAL:CG1	2.59	0.51
1:G:264:GLY:HA2	1:G:267:SER:HB3	1.93	0.51
1:I:616:ILE:HD13	1:I:802:LEU:HD13	1.92	0.51
1:J:269:LEU:HD23	1:J:270:GLU:CA	2.40	0.51
1:A:263:SER:HA	1:A:266:SER:OG	2.11	0.51
1:A:778:GLY:C	1:A:779:PHE:CD2	2.80	0.51
1:E:267:SER:CB	1:E:396:ILE:HG13	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:682:ALA:HA	1:H:685:THR:HG22	1.92	0.51
1:C:596:ARG:HH21	1:C:634:THR:HB	1.76	0.51
1:D:307:PHE:N	1:D:307:PHE:HD1	2.09	0.51
1:E:272:ILE:CG1	1:E:278:LEU:HD11	2.41	0.51
1:F:600:ARG:CZ	1:F:600:ARG:HB3	2.40	0.51
1:H:667:SER:OG	1:H:668:SER:N	2.44	0.51
1:I:360:LEU:HB2	1:I:361:PRO:HD2	1.93	0.51
1:I:611:GLU:N	1:I:612:PRO:HD2	2.26	0.51
1:A:841:LEU:HD23	1:A:845:MET:HB3	1.92	0.51
1:F:269:LEU:HD21	1:F:457:SER:HB2	1.93	0.51
1:F:279:PRO:O	1:F:280:LYS:HD2	2.11	0.51
1:H:276:GLU:HG2	1:H:277:PHE:N	2.26	0.51
1:H:308:PRO:HG3	1:H:344:ARG:HG3	1.92	0.51
1:J:244:VAL:HG11	1:J:894:LEU:HD21	1.92	0.51
1:J:456:ILE:O	1:J:481:GLU:OE2	2.29	0.51
1:B:528:ILE:HA	1:B:531:GLU:CD	2.32	0.51
1:E:309:ASP:C	1:E:310:LEU:HD23	2.31	0.51
1:E:642:LEU:HD12	1:E:643:GLY:C	2.31	0.51
1:G:272:ILE:HD11	1:G:280:LYS:HB2	1.90	0.51
1:G:430:ASP:HB3	1:G:456:ILE:HG12	1.93	0.51
1:H:278:LEU:CD2	1:H:280:LYS:HG2	2.41	0.51
1:H:412:SER:O	1:H:413:ARG:CG	2.42	0.51
1:H:682:ALA:O	1:H:685:THR:CG2	2.58	0.51
1:I:234:MET:HA	1:I:237:ILE:HG22	1.91	0.51
1:I:322:GLN:O	1:I:326:THR:OG1	2.13	0.51
1:A:499:SER:O	1:A:500:THR:HG23	2.11	0.51
1:B:294:LEU:HB2	1:B:355:LEU:H	1.76	0.51
1:B:840:PHE:CE1	1:B:844:GLU:HG3	2.45	0.51
1:C:453:VAL:HG11	1:C:505:LEU:HB2	1.93	0.51
1:E:278:LEU:HD22	1:E:280:LYS:HD3	1.86	0.51
1:E:279:PRO:O	1:E:280:LYS:HD2	2.10	0.51
1:F:321:ILE:HA	1:F:324:THR:OG1	2.11	0.51
1:H:296:ASN:C	1:H:298:PRO:HD3	2.31	0.51
1:I:274:GLY:O	1:I:506:ARG:HD2	2.11	0.51
1:J:275:HIS:H	1:J:275:HIS:CD2	2.28	0.51
1:J:503:MET:HG2	1:J:506:ARG:NH2	2.26	0.51
1:B:661:GLU:OE2	1:B:676:ARG:NH2	2.44	0.50
1:C:255:ILE:HA	1:C:392:ILE:O	2.10	0.50
1:C:279:PRO:HG3	1:C:322:GLN:HA	1.93	0.50
1:C:667:SER:OG	1:C:668:SER:N	2.44	0.50
1:D:376:LYS:NZ	1:D:379:ILE:HD12	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:903:GLU:HG3	1:D:906:ARG:HH21	1.76	0.50
1:E:284:MET:SD	1:E:284:MET:N	2.77	0.50
1:J:478:ASN:O	1:J:482:LYS:HG2	2.11	0.50
1:J:521:LEU:HD13	1:J:521:LEU:C	2.31	0.50
1:A:478:ASN:CG	1:A:482:LYS:NZ	2.62	0.50
1:B:842:ASN:O	1:B:846:LEU:HB3	2.11	0.50
1:C:279:PRO:O	1:C:280:LYS:HD2	2.11	0.50
1:I:231:THR:O	1:I:235:ILE:HG22	2.11	0.50
1:I:837:ALA:O	1:I:841:LEU:HB2	2.11	0.50
1:J:272:ILE:HG21	1:J:277:PHE:CD1	2.46	0.50
1:A:277:PHE:HD1	1:A:278:LEU:N	2.08	0.50
1:B:224:ASP:HB3	1:B:227:MET:HB2	1.92	0.50
1:C:588:LYS:O	1:C:591:ASP:HB2	2.11	0.50
1:D:270:GLU:HA	1:D:273:VAL:HG22	1.93	0.50
1:E:682:ALA:O	1:E:686:VAL:HG23	2.11	0.50
1:E:775:GLY:HA2	1:E:779:PHE:O	2.12	0.50
1:J:269:LEU:CD2	1:J:457:SER:HB2	2.41	0.50
1:J:297:ASP:HB3	1:J:349:SER:C	2.31	0.50
1:A:264:GLY:O	1:A:268:VAL:HG22	2.11	0.50
1:A:458:LYS:HG3	1:A:458:LYS:O	2.11	0.50
1:D:286:THR:O	1:D:361:PRO:CB	2.59	0.50
1:E:308:PRO:HG3	1:E:344:ARG:CB	2.40	0.50
1:H:423:ILE:HG22	1:H:450:LEU:HD13	1.92	0.50
1:H:434:PRO:HB2	1:H:491:GLU:HG3	1.87	0.50
1:H:863:GLU:O	1:H:867:ALA:HB3	2.11	0.50
1:I:269:LEU:O	1:I:273:VAL:HG13	2.12	0.50
1:I:524:THR:O	1:I:528:ILE:HG13	2.11	0.50
1:I:787:GLY:O	1:I:791:VAL:HG23	2.11	0.50
1:J:485:PHE:HA	1:J:492:PHE:HE1	1.76	0.50
1:A:326:THR:HG22	1:A:329:ASN:ND2	2.26	0.50
1:A:455:VAL:CG1	1:A:501:GLY:H	2.11	0.50
1:D:355:LEU:HG	1:D:356:SER:H	1.76	0.50
1:E:273:VAL:HG21	1:E:457:SER:CB	2.21	0.50
1:E:297:ASP:OD1	1:E:300:ALA:HB3	2.11	0.50
1:E:485:PHE:HD2	1:E:492:PHE:CD1	2.24	0.50
1:E:710:ASP:O	1:E:832:LYS:NZ	2.38	0.50
1:F:227:MET:O	1:F:230:ILE:HG22	2.12	0.50
1:F:426:ILE:HG22	1:F:429:MET:HG3	1.94	0.50
1:H:499:SER:O	1:H:500:THR:HG23	2.12	0.50
1:I:602:ILE:CG1	1:I:792:PHE:HB2	2.41	0.50
1:J:593:LEU:HD21	1:J:823:GLU:HG3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:670:ALA:HB1	1:J:671:LYS:NZ	2.27	0.50
1:D:363:TYR:HD2	1:D:407:THR:HB	1.77	0.50
1:E:296:ASN:HB2	1:E:354:ASP:OD2	2.12	0.50
1:E:627:TYR:CZ	1:E:631:GLN:NE2	2.79	0.50
1:F:400:ASP:OD1	1:F:400:ASP:N	2.43	0.50
1:I:357:LEU:HD23	1:I:357:LEU:H	1.76	0.50
1:I:543:TYR:O	1:I:546:GLN:HB3	2.10	0.50
1:J:377:ARG:HH21	1:J:377:ARG:HG3	1.77	0.50
1:J:436:LYS:O	1:J:440:ILE:HG13	2.11	0.50
1:A:537:TYR:CE2	1:I:613:ASP:OD2	2.65	0.50
1:A:543:TYR:HB3	1:A:884:HIS:CE1	2.47	0.50
1:C:321:ILE:O	1:C:325:LEU:HG	2.12	0.50
1:D:246:GLN:CD	1:D:247:GLY:H	2.15	0.50
1:D:307:PHE:N	1:D:307:PHE:CD1	2.80	0.50
1:E:646:ARG:NH2	1:G:534:GLU:OE2	2.37	0.50
1:I:607:PRO:HG3	1:I:762:ARG:HG3	1.93	0.50
1:A:429:MET:HE1	1:A:437:GLY:HA2	1.92	0.50
1:D:284:MET:SD	1:D:284:MET:O	2.69	0.50
1:D:441:LEU:HB3	1:D:498:VAL:HG12	1.92	0.50
1:E:454:GLY:O	1:E:500:THR:HB	2.12	0.50
1:E:481:GLU:OE1	1:E:481:GLU:N	2.45	0.50
1:F:611:GLU:N	1:F:612:PRO:CD	2.75	0.50
1:G:704:PRO:HA	1:H:843:VAL:HG21	1.94	0.50
1:H:818:LYS:HG2	1:H:819:TYR:N	2.26	0.50
1:I:387:ILE:O	1:I:421:ARG:NH2	2.45	0.50
1:E:224:ASP:N	1:E:225:ASP:OD1	2.44	0.50
1:F:269:LEU:HA	1:F:272:ILE:HD12	1.94	0.50
1:F:285:ILE:HD12	1:F:287:ARG:H	1.75	0.50
1:H:361:PRO:HG2	1:H:382:LEU:HD21	1.93	0.50
1:A:493:GLY:O	1:A:496:SER:HB3	2.12	0.49
1:A:723:VAL:HG21	1:A:824:VAL:HA	1.93	0.49
1:D:376:LYS:CE	1:D:376:LYS:CA	2.90	0.49
1:D:472:ASN:O	1:D:472:ASN:ND2	2.45	0.49
1:E:667:SER:OG	1:E:668:SER:N	2.45	0.49
1:F:234:MET:HA	1:F:237:ILE:HG22	1.94	0.49
1:F:488:HIS:HB3	1:F:491:GLU:HG3	1.94	0.49
1:G:275:HIS:CG	1:G:276:GLU:H	2.29	0.49
1:G:744:SER:OG	1:G:786:ARG:NH2	2.40	0.49
1:I:485:PHE:HE2	1:I:500:THR:HG1	1.58	0.49
1:I:618:LEU:CD2	1:I:628:TRP:CZ3	2.95	0.49
1:I:627:TYR:CE1	1:I:631:GLN:NE2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:665:ASP:OD1	1:I:676:ARG:NH1	2.46	0.49
1:J:670:ALA:HB1	1:J:671:LYS:HZ1	1.76	0.49
1:A:297:ASP:N	1:A:298:PRO:HD3	2.27	0.49
1:A:394:LEU:HD13	1:A:423:ILE:O	2.12	0.49
1:A:441:LEU:CB	1:A:498:VAL:CG1	2.91	0.49
1:A:540:LYS:NZ	1:I:625:SER:C	2.64	0.49
1:D:311:GLY:O	1:D:312:LEU:CB	2.59	0.49
1:D:441:LEU:CD2	1:D:498:VAL:CA	2.89	0.49
1:D:485:PHE:HE2	1:D:500:THR:OG1	1.92	0.49
1:E:229:PHE:O	1:E:233:LYS:HG2	2.13	0.49
1:E:307:PHE:CD1	1:E:307:PHE:N	2.79	0.49
1:F:428:LYS:HB3	1:F:431:LEU:HD21	1.93	0.49
1:F:873:LYS:O	1:F:877:GLU:HG3	2.11	0.49
1:H:297:ASP:OD2	1:H:300:ALA:HB3	2.11	0.49
1:H:426:ILE:HG21	1:H:440:ILE:HG21	1.93	0.49
1:I:269:LEU:HD21	1:I:457:SER:HB2	1.93	0.49
1:I:276:GLU:HG2	1:I:277:PHE:N	2.27	0.49
1:J:381:GLU:OE1	1:J:381:GLU:HA	2.12	0.49
1:A:376:LYS:HZ1	1:A:379:ILE:HD12	1.75	0.49
1:A:565:PHE:CZ	1:A:853:PHE:HD2	2.30	0.49
1:C:400:ASP:OD1	1:C:400:ASP:N	2.46	0.49
1:E:238:ARG:NE	1:E:356:SER:OG	2.44	0.49
1:E:269:LEU:HD21	1:E:457:SER:C	2.33	0.49
1:E:664:LEU:HB3	1:E:676:ARG:NH2	2.27	0.49
1:H:239:ASN:O	1:H:242:GLN:HB3	2.12	0.49
1:H:246:GLN:CG	1:H:247:GLY:N	2.72	0.49
1:A:411:ALA:HA	1:A:414:ARG:HB3	1.93	0.49
1:D:229:PHE:CG	1:D:232:LYS:HD2	2.47	0.49
1:D:232:LYS:HA	1:D:235:ILE:HG22	1.94	0.49
1:E:232:LYS:HA	1:E:235:ILE:CG2	2.42	0.49
1:E:238:ARG:CZ	1:E:356:SER:OG	2.60	0.49
1:H:355:LEU:HD23	1:H:357:LEU:HD22	1.94	0.49
1:I:626:PRO:HA	1:I:630:ARG:H	1.77	0.49
1:B:559:ASP:OD2	1:C:855:ARG:NH2	2.45	0.49
1:D:605:LEU:HD21	1:D:784:LEU:HD12	1.92	0.49
1:E:296:ASN:O	1:E:298:PRO:HD3	2.13	0.49
1:E:297:ASP:OD1	1:E:300:ALA:CB	2.60	0.49
1:E:401:THR:HG22	1:E:402:ASP:O	2.12	0.49
1:F:837:ALA:O	1:F:841:LEU:HB2	2.13	0.49
1:H:279:PRO:HB3	1:H:322:GLN:CG	2.43	0.49
1:H:499:SER:O	1:H:500:THR:CG2	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:325:LEU:HA	1:I:328:LEU:HD12	1.94	0.49
1:A:285:ILE:HD12	1:A:287:ARG:HB2	1.74	0.49
1:A:394:LEU:HD21	1:A:412:SER:HB3	1.93	0.49
1:A:536:THR:CB	1:I:630:ARG:HH11	2.25	0.49
1:B:904:LEU:HD12	1:B:904:LEU:O	2.13	0.49
1:C:642:LEU:HD22	1:C:643:GLY:H	1.77	0.49
1:D:457:SER:O	1:D:458:LYS:HB2	2.11	0.49
1:E:267:SER:HB2	1:E:396:ILE:HD12	1.95	0.49
1:E:276:GLU:HG2	1:E:277:PHE:N	2.28	0.49
1:F:376:LYS:HZ1	1:F:379:ILE:CD1	2.26	0.49
1:F:587:GLN:OE1	1:F:587:GLN:HA	2.12	0.49
1:H:255:ILE:HA	1:H:392:ILE:O	2.13	0.49
1:H:279:PRO:O	1:H:280:LYS:CD	2.61	0.49
1:H:694:THR:HG22	1:H:844:GLU:CG	2.43	0.49
1:I:349:SER:O	1:I:352:ILE:HG13	2.12	0.49
1:J:475:ALA:O	1:J:478:ASN:HB3	2.12	0.49
1:J:779:PHE:CD2	1:J:779:PHE:N	2.80	0.49
1:A:429:MET:HE2	1:A:437:GLY:HA2	1.93	0.49
1:C:640:THR:HG22	1:C:706:LYS:HG2	1.94	0.49
1:D:229:PHE:CD1	1:D:232:LYS:HE3	2.47	0.49
1:F:325:LEU:C	1:F:325:LEU:HD12	2.33	0.49
1:F:800:LEU:O	1:F:804:ILE:HG13	2.12	0.49
1:H:232:LYS:CA	1:H:235:ILE:HG22	2.41	0.49
1:I:303:ASP:OD1	1:I:349:SER:HB2	2.13	0.49
1:I:627:TYR:HB3	1:I:628:TRP:CZ3	2.48	0.49
1:J:409:LEU:O	1:J:413:ARG:HG3	2.13	0.49
1:J:455:VAL:CG1	1:J:501:GLY:H	2.26	0.49
1:E:483:ASN:C	1:E:483:ASN:HD22	2.15	0.49
1:F:558:LEU:HD12	1:F:861:LEU:HD12	1.94	0.49
1:G:632:LEU:O	1:G:635:ALA:HB3	2.13	0.49
1:J:441:LEU:HB3	1:J:498:VAL:HG12	1.94	0.49
1:A:450:LEU:HD22	1:A:512:VAL:HG22	1.94	0.49
1:D:478:ASN:ND2	1:D:482:LYS:HZ3	1.99	0.49
1:E:294:LEU:HB3	1:E:352:ILE:HD13	1.93	0.49
1:E:832:LYS:O	1:E:836:THR:HG22	2.13	0.49
1:I:227:MET:HA	1:I:230:ILE:HG22	1.94	0.49
1:I:626:PRO:CB	1:I:626:PRO:C	2.76	0.49
1:J:376:LYS:HZ2	1:J:379:ILE:HD12	1.77	0.49
1:J:477:ILE:O	1:J:477:ILE:HG22	2.13	0.49
1:A:307:PHE:CD1	1:A:307:PHE:N	2.81	0.49
1:A:339:THR:CG2	1:A:340:ASP:N	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:483:ASN:C	1:A:483:ASN:HD22	2.16	0.49
1:A:701:SER:O	1:A:704:PRO:HD2	2.13	0.49
1:A:800:LEU:O	1:A:804:ILE:HG13	2.13	0.49
1:B:284:MET:HG2	1:B:286:THR:HG23	1.89	0.49
1:C:257:VAL:HG12	1:C:394:LEU:HB3	1.95	0.49
1:C:377:ARG:HH21	1:C:377:ARG:CG	2.26	0.49
1:D:307:PHE:CE1	1:D:345:LEU:HD21	2.47	0.49
1:E:454:GLY:H	1:E:500:THR:HG22	1.78	0.49
1:E:478:ASN:HD22	1:E:482:LYS:HZ1	1.40	0.49
1:H:254:SER:HB2	1:H:356:SER:O	2.13	0.49
1:H:406:SER:O	1:H:410:GLN:HG3	2.12	0.49
1:I:272:ILE:HG23	1:I:277:PHE:HA	1.95	0.49
1:I:624:ASP:HA	1:I:629:HIS:CD2	2.44	0.49
1:J:484:TYR:C	1:J:486:GLY:H	2.16	0.49
1:J:614:ASN:OD1	1:J:615:ILE:HD12	2.13	0.49
1:A:533:GLU:HB2	1:I:596:ARG:HH12	1.75	0.48
1:B:722:HIS:O	1:B:726:VAL:HG23	2.13	0.48
1:H:278:LEU:CD2	1:H:280:LYS:CD	2.84	0.48
1:I:275:HIS:CD2	1:I:276:GLU:H	2.31	0.48
1:I:413:ARG:NH2	1:I:446:TYR:CD1	2.81	0.48
1:J:254:SER:HB2	1:J:356:SER:O	2.13	0.48
1:J:272:ILE:HG12	1:J:280:LYS:HG3	1.95	0.48
1:A:441:LEU:HD21	1:A:498:VAL:CA	2.42	0.48
1:A:474:LEU:HG	1:A:475:ALA:H	1.77	0.48
1:A:657:GLN:HE22	1:A:684:ALA:CA	2.23	0.48
1:A:664:LEU:HB3	1:A:676:ARG:NH2	2.27	0.48
1:B:294:LEU:HB3	1:B:352:ILE:HD13	1.94	0.48
1:B:389:GLY:O	1:B:391:ASN:N	2.43	0.48
1:B:640:THR:HG21	1:B:706:LYS:HA	1.95	0.48
1:C:262:SER:O	1:C:266:SER:OG	2.27	0.48
1:C:530:ARG:HD3	1:C:530:ARG:HA	1.61	0.48
1:D:229:PHE:CD2	1:D:232:LYS:HD2	2.48	0.48
1:G:227:MET:O	1:G:230:ILE:HG22	2.13	0.48
1:G:772:HIS:HD2	1:G:775:GLY:O	1.96	0.48
1:H:690:ARG:NH1	1:H:844:GLU:OE2	2.46	0.48
1:I:586:ASP:O	1:I:589:VAL:HB	2.13	0.48
1:I:602:ILE:HG12	1:I:792:PHE:HB2	1.93	0.48
1:J:694:THR:HG21	1:J:845:MET:HB2	1.93	0.48
1:A:257:VAL:HG22	1:A:359:ASP:HA	1.93	0.48
1:A:276:GLU:HG2	1:A:277:PHE:N	2.28	0.48
1:A:278:LEU:HD11	1:A:280:LYS:CG	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:456:ILE:HD12	1:A:457:SER:N	2.28	0.48
1:E:429:MET:HE1	1:E:437:GLY:CA	2.43	0.48
1:H:360:LEU:HD13	1:H:383:CYS:SG	2.53	0.48
1:H:723:VAL:HG21	1:H:824:VAL:HA	1.95	0.48
1:I:255:ILE:HD11	1:I:355:LEU:HG	1.95	0.48
1:I:873:LYS:HB2	1:I:873:LYS:HE3	1.53	0.48
1:A:387:ILE:HG21	1:A:393:ILE:HD12	1.95	0.48
1:A:457:SER:O	1:A:458:LYS:HB2	2.13	0.48
1:A:614:ASN:OD1	1:A:615:ILE:HD12	2.12	0.48
1:C:723:VAL:O	1:C:727:LEU:HB2	2.14	0.48
1:D:434:PRO:HB3	1:D:491:GLU:HB2	1.92	0.48
1:E:297:ASP:CG	1:E:300:ALA:CB	2.76	0.48
1:E:484:TYR:CE1	1:E:492:PHE:HZ	2.31	0.48
1:G:235:ILE:HD13	1:G:356:SER:HB2	1.95	0.48
1:G:294:LEU:HB2	1:G:355:LEU:H	1.78	0.48
1:H:239:ASN:C	1:H:240:LEU:HD23	2.34	0.48
1:J:444:ARG:CZ	1:J:447:PRO:HB3	2.44	0.48
1:J:485:PHE:HE2	1:J:500:THR:OG1	1.89	0.48
1:A:303:ASP:OD1	1:A:349:SER:HB2	2.13	0.48
1:B:262:SER:O	1:B:266:SER:OG	2.32	0.48
1:B:270:GLU:O	1:B:273:VAL:HG22	2.14	0.48
1:B:690:ARG:NH1	1:B:844:GLU:OE2	2.47	0.48
1:B:697:GLY:HA3	1:B:840:PHE:CE1	2.49	0.48
1:D:229:PHE:CD1	1:D:232:LYS:HD2	2.48	0.48
1:F:752:LYS:HA	1:F:755:MET:HB2	1.96	0.48
1:G:276:GLU:HG2	1:G:277:PHE:N	2.29	0.48
1:G:891:LYS:O	1:G:895:GLU:HG3	2.12	0.48
1:H:485:PHE:CZ	1:H:500:THR:OG1	2.57	0.48
1:I:420:GLU:HG3	1:I:449:LYS:HE3	1.96	0.48
1:J:694:THR:O	1:J:698:ILE:HG13	2.13	0.48
1:J:780:SER:OG	1:J:783:LEU:HB2	2.14	0.48
1:A:278:LEU:CD1	1:A:280:LYS:CG	2.91	0.48
1:A:279:PRO:HB3	1:A:322:GLN:CG	2.43	0.48
1:A:441:LEU:CD2	1:A:498:VAL:HG12	2.31	0.48
1:B:273:VAL:HG11	1:B:457:SER:HB3	1.95	0.48
1:B:276:GLU:HG2	1:B:277:PHE:H	1.78	0.48
1:B:677:LYS:NZ	1:B:681:ASP:OD2	2.47	0.48
1:C:673:PRO:HD2	1:C:877:GLU:OE1	2.14	0.48
1:D:456:ILE:HD12	1:D:457:SER:N	2.29	0.48
1:E:610:ARG:HE	1:E:611:GLU:H	1.60	0.48
1:H:752:LYS:HA	1:H:755:MET:HE2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:625:SER:HB3	1:I:628:TRP:NE1	2.25	0.48
1:J:889:ARG:HG3	1:J:890:ARG:N	2.28	0.48
1:A:540:LYS:CE	1:I:626:PRO:HG2	1.84	0.48
1:B:326:THR:HA	1:B:329:ASN:ND2	2.28	0.48
1:C:296:ASN:HB2	1:C:354:ASP:OD2	2.13	0.48
1:E:278:LEU:CD2	1:E:280:LYS:CG	2.91	0.48
1:E:286:THR:O	1:E:361:PRO:CB	2.61	0.48
1:F:574:ARG:O	1:F:577:LEU:HB2	2.13	0.48
1:G:664:LEU:HD23	1:G:676:ARG:HG3	1.95	0.48
1:I:269:LEU:CD2	1:I:457:SER:HB2	2.44	0.48
1:I:640:THR:HG22	1:I:706:LYS:HG2	1.95	0.48
1:J:388:ARG:O	1:J:389:GLY:C	2.52	0.48
1:A:393:ILE:HD11	1:A:394:LEU:HD23	1.94	0.48
1:A:621:ALA:O	1:A:820:TYR:OH	2.23	0.48
1:B:558:LEU:HD12	1:B:861:LEU:HD12	1.96	0.48
1:C:289:PRO:HB2	1:C:342:PRO:HB3	1.96	0.48
1:D:434:PRO:CG	1:D:488:HIS:CG	2.97	0.48
1:E:275:HIS:H	1:E:275:HIS:CD2	2.31	0.48
1:E:393:ILE:HG23	1:E:422:THR:HB	1.95	0.48
1:E:615:ILE:H	1:E:615:ILE:CD1	2.24	0.48
1:H:875:ALA:HB1	1:H:885:LEU:CD1	2.44	0.48
1:J:224:ASP:N	1:J:225:ASP:OD1	2.47	0.48
1:A:703:LYS:HE3	1:C:544:ASN:HB3	1.96	0.48
1:B:241:LEU:HD13	1:B:250:VAL:O	2.13	0.48
1:B:810:ARG:HG3	1:B:810:ARG:O	2.13	0.48
1:E:345:LEU:HA	1:E:345:LEU:HD23	1.64	0.48
1:E:363:TYR:CD2	1:E:407:THR:HB	2.49	0.48
1:H:272:ILE:HG12	1:H:278:LEU:CD1	2.43	0.48
1:J:272:ILE:HG12	1:J:278:LEU:HD11	1.95	0.48
1:J:429:MET:CE	1:J:437:GLY:HA2	2.44	0.48
1:A:272:ILE:HG12	1:A:280:LYS:HG3	1.95	0.48
1:A:810:ARG:O	1:A:813:LYS:HB2	2.14	0.48
1:B:387:ILE:HG22	1:B:415:VAL:HG21	1.95	0.48
1:B:605:LEU:HD13	1:B:606:SER:O	2.14	0.48
1:E:285:ILE:O	1:E:286:THR:OG1	2.24	0.48
1:E:560:ASP:OD2	1:E:668:SER:OG	2.30	0.48
1:E:762:ARG:HG2	1:E:762:ARG:HH11	1.78	0.48
1:F:855:ARG:NE	1:F:855:ARG:CA	2.77	0.48
1:G:261:GLN:OE1	1:G:261:GLN:N	2.46	0.48
1:G:382:LEU:C	1:G:382:LEU:HD12	2.34	0.48
1:H:339:THR:CG2	1:H:340:ASP:H	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:625:SER:O	1:I:628:TRP:CG	2.67	0.48
1:I:626:PRO:O	1:I:628:TRP:N	2.46	0.48
1:J:267:SER:CB	1:J:396:ILE:HG13	2.43	0.48
1:J:738:MET:O	1:J:741:LEU:HB3	2.14	0.48
1:A:267:SER:HB3	1:A:396:ILE:CD1	2.44	0.47
1:B:385:LYS:HE2	1:B:385:LYS:HB3	1.66	0.47
1:B:906:ARG:HG2	1:B:906:ARG:HH11	1.78	0.47
1:C:325:LEU:HD12	1:C:326:THR:N	2.29	0.47
1:D:243:LYS:O	1:D:243:LYS:CG	2.61	0.47
1:D:303:ASP:OD1	1:D:349:SER:HB2	2.14	0.47
1:E:286:THR:O	1:E:361:PRO:HG3	2.14	0.47
1:E:472:ASN:ND2	1:E:472:ASN:O	2.46	0.47
1:G:241:LEU:HA	1:G:244:VAL:HG13	1.96	0.47
1:G:279:PRO:HG3	1:G:321:ILE:HG22	1.96	0.47
1:G:572:PHE:HB3	1:G:850:TYR:OH	2.14	0.47
1:H:448:LEU:H	1:H:448:LEU:HD12	1.80	0.47
1:J:257:VAL:HG23	1:J:257:VAL:O	2.14	0.47
1:J:450:LEU:HD22	1:J:512:VAL:HG22	1.94	0.47
1:A:275:HIS:HB2	1:A:352:ILE:HG21	1.96	0.47
1:B:401:THR:HG22	1:B:402:ASP:N	2.30	0.47
1:B:615:ILE:HG21	1:B:799:ILE:HG23	1.96	0.47
1:D:244:VAL:HB	1:D:248:SER:HG	1.77	0.47
1:E:255:ILE:HD12	1:E:357:LEU:HB3	1.96	0.47
1:E:726:VAL:O	1:E:729:ALA:HB3	2.14	0.47
1:H:238:ARG:HH21	1:H:356:SER:HG	1.54	0.47
1:H:260:SER:O	1:H:264:GLY:CA	2.58	0.47
1:H:637:SER:O	1:H:641:ARG:HB2	2.14	0.47
1:H:815:LEU:O	1:H:815:LEU:HD22	2.14	0.47
1:I:387:ILE:HG22	1:I:415:VAL:HG21	1.96	0.47
1:I:744:SER:OG	1:I:786:ARG:NH2	2.47	0.47
1:J:296:ASN:O	1:J:298:PRO:HD3	2.14	0.47
1:A:455:VAL:CG1	1:A:501:GLY:N	2.73	0.47
1:C:553:TYR:O	1:C:553:TYR:CD1	2.67	0.47
1:F:617:ASP:OD1	1:F:617:ASP:N	2.37	0.47
1:H:257:VAL:HG23	1:H:257:VAL:O	2.14	0.47
1:I:403:LEU:HD21	1:I:440:ILE:HG23	1.96	0.47
1:J:284:MET:SD	1:J:284:MET:O	2.73	0.47
1:J:614:ASN:HB3	1:J:616:ILE:HG22	1.95	0.47
1:C:906:ARG:HG2	1:C:906:ARG:HH11	1.78	0.47
1:D:441:LEU:CD2	1:D:498:VAL:HG12	2.35	0.47
1:E:752:LYS:HA	1:E:755:MET:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:244:VAL:HA	1:G:893:LEU:HD13	1.97	0.47
1:G:784:LEU:HD23	1:G:784:LEU:HA	1.79	0.47
1:H:232:LYS:HG3	1:H:233:LYS:HE3	1.97	0.47
1:H:751:LEU:HA	1:H:754:VAL:HG12	1.97	0.47
1:J:257:VAL:HG22	1:J:358:ILE:O	2.15	0.47
1:J:297:ASP:OD2	1:J:300:ALA:HB3	2.14	0.47
1:A:255:ILE:HG13	1:A:357:LEU:HA	1.95	0.47
1:A:298:PRO:O	1:A:299:GLU:HB3	2.15	0.47
1:A:754:VAL:HA	1:A:779:PHE:HE1	1.80	0.47
1:B:627:TYR:CE2	1:B:628:TRP:CZ3	3.01	0.47
1:B:630:ARG:CZ	1:J:537:TYR:CD1	2.97	0.47
1:F:284:MET:SD	1:F:284:MET:N	2.87	0.47
1:G:268:VAL:HG23	1:G:269:LEU:N	2.30	0.47
1:H:685:THR:HG23	1:H:686:VAL:N	2.30	0.47
1:I:393:ILE:HG23	1:I:422:THR:HB	1.96	0.47
1:J:454:GLY:O	1:J:500:THR:HB	2.15	0.47
1:J:617:ASP:OD1	1:J:617:ASP:N	2.47	0.47
1:A:269:LEU:HD23	1:A:270:GLU:N	2.29	0.47
1:D:363:TYR:N	1:D:363:TYR:HD1	2.11	0.47
1:E:432:VAL:HB	1:E:436:LYS:HB3	1.96	0.47
1:F:829:VAL:O	1:F:833:LEU:HG	2.14	0.47
1:A:265:LYS:O	1:A:268:VAL:HG23	2.15	0.47
1:A:392:ILE:HD12	1:A:421:ARG:O	2.15	0.47
1:B:538:GLN:HA	1:B:541:VAL:HG12	1.97	0.47
1:B:891:LYS:HG2	1:B:895:GLU:OE2	2.14	0.47
1:C:891:LYS:O	1:C:895:GLU:HG3	2.15	0.47
1:D:267:SER:HB2	1:D:396:ILE:CD1	2.45	0.47
1:D:455:VAL:HG12	1:D:501:GLY:N	2.26	0.47
1:D:865:MET:HB3	1:D:871:LEU:HB2	1.97	0.47
1:E:263:SER:OG	1:E:397:SER:HA	2.13	0.47
1:E:441:LEU:CD2	1:E:498:VAL:CA	2.88	0.47
1:E:621:ALA:O	1:E:820:TYR:OH	2.27	0.47
1:F:863:GLU:O	1:F:867:ALA:HB2	2.15	0.47
1:F:880:LYS:NZ	1:H:633:ASP:HB3	2.29	0.47
1:G:364:ILE:HD12	1:G:376:LYS:NZ	2.30	0.47
1:G:713:PRO:O	1:G:716:TRP:HB3	2.14	0.47
1:H:239:ASN:CB	1:H:240:LEU:HD23	2.44	0.47
1:H:276:GLU:OE1	1:H:303:ASP:CG	2.52	0.47
1:H:454:GLY:H	1:H:500:THR:HG22	1.79	0.47
1:I:626:PRO:O	1:I:627:TYR:C	2.51	0.47
1:I:664:LEU:CD2	1:I:676:ARG:HG3	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:690:ARG:NH1	1:I:844:GLU:OE2	2.48	0.47
1:I:855:ARG:NE	1:I:855:ARG:CA	2.77	0.47
1:J:269:LEU:CG	1:J:457:SER:O	2.61	0.47
1:J:303:ASP:OD1	1:J:349:SER:HB2	2.15	0.47
1:J:615:ILE:HD12	1:J:615:ILE:H	1.79	0.47
1:A:454:GLY:O	1:A:500:THR:HG22	2.13	0.47
1:D:481:GLU:OE1	1:D:481:GLU:N	2.48	0.47
1:D:738:MET:O	1:D:742:GLU:HG3	2.14	0.47
1:F:441:LEU:HD23	1:F:498:VAL:HB	1.97	0.47
1:G:239:ASN:HD21	1:G:293:THR:HG21	1.80	0.47
1:I:307:PHE:CE1	1:I:345:LEU:HD21	2.50	0.47
1:A:484:TYR:HE1	1:A:492:PHE:HZ	1.62	0.47
1:B:568:PHE:O	1:B:571:SER:N	2.48	0.47
1:C:269:LEU:O	1:C:272:ILE:HB	2.15	0.47
1:C:843:VAL:O	1:C:847:ASN:HB2	2.14	0.47
1:C:861:LEU:HD23	1:C:861:LEU:HA	1.71	0.47
1:D:279:PRO:HB3	1:D:322:GLN:CG	2.43	0.47
1:D:694:THR:HG22	1:D:844:GLU:HG3	1.97	0.47
1:F:456:ILE:O	1:F:456:ILE:HG23	2.14	0.47
1:J:272:ILE:HA	1:J:278:LEU:HD12	1.96	0.47
1:J:444:ARG:NE	1:J:444:ARG:HA	2.29	0.47
1:A:360:LEU:HB2	1:A:361:PRO:HD2	1.97	0.47
1:A:709:PRO:O	1:A:711:ILE:HG12	2.15	0.47
1:A:878:ASP:OD1	1:A:880:LYS:HB2	2.15	0.47
1:B:416:ASP:OD2	1:B:422:THR:HG22	2.15	0.47
1:B:781:ALA:N	1:E:778:GLY:CA	2.76	0.47
1:D:345:LEU:HD23	1:D:345:LEU:HA	1.66	0.47
1:E:453:VAL:HG21	1:E:505:LEU:HD23	1.97	0.47
1:E:711:ILE:HD12	1:E:828:ALA:HB1	1.95	0.47
1:F:319:SER:O	1:F:322:GLN:HB3	2.15	0.47
1:G:261:GLN:CB	1:J:405:ASN:ND2	2.76	0.47
1:I:625:SER:O	1:I:628:TRP:HB2	2.14	0.47
1:A:453:VAL:HG11	1:A:505:LEU:CB	2.28	0.46
1:D:272:ILE:HG23	1:D:278:LEU:HD13	1.81	0.46
1:D:581:LEU:HD12	1:D:838:VAL:HG23	1.97	0.46
1:D:842:ASN:O	1:D:846:LEU:HB3	2.15	0.46
1:E:237:ILE:HD12	1:E:241:LEU:HD11	1.96	0.46
1:E:273:VAL:CG1	1:E:457:SER:HB2	2.41	0.46
1:E:480:ASN:HA	1:E:483:ASN:OD1	2.15	0.46
1:F:268:VAL:HB	1:F:280:LYS:HB3	1.97	0.46
1:G:722:HIS:O	1:G:726:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:753:GLU:O	1:G:756:SER:HB2	2.15	0.46
1:H:401:THR:CB	1:H:410:GLN:CA	2.59	0.46
1:A:255:ILE:HD12	1:A:357:LEU:HB3	1.98	0.46
1:B:630:ARG:HE	1:J:540:LYS:CD	2.27	0.46
1:D:424:GLY:O	1:D:452:TYR:HA	2.16	0.46
1:D:528:ILE:HG23	1:D:894:LEU:HD22	1.97	0.46
1:E:242:GLN:NE2	1:E:344:ARG:CD	2.78	0.46
1:E:278:LEU:HD22	1:E:280:LYS:CD	2.44	0.46
1:F:488:HIS:HB3	1:F:491:GLU:CG	2.45	0.46
1:I:349:SER:HB3	1:I:352:ILE:HG12	1.96	0.46
1:J:276:GLU:OE1	1:J:303:ASP:OD1	2.33	0.46
1:A:230:ILE:HG13	1:A:904:LEU:HD11	1.97	0.46
1:A:307:PHE:N	1:A:307:PHE:HD1	2.14	0.46
1:B:227:MET:HA	1:B:230:ILE:CG2	2.45	0.46
1:B:253:PRO:HG2	1:B:517:MET:HG2	1.96	0.46
1:C:255:ILE:HG13	1:C:357:LEU:HA	1.97	0.46
1:E:232:LYS:O	1:E:235:ILE:HG23	2.14	0.46
1:E:485:PHE:CD2	1:E:492:PHE:CE1	3.03	0.46
1:G:387:ILE:CG2	1:G:393:ILE:HD12	2.46	0.46
1:H:264:GLY:O	1:H:268:VAL:HG22	2.16	0.46
1:H:269:LEU:HD23	1:H:269:LEU:C	2.35	0.46
1:J:242:GLN:HE22	1:J:344:ARG:HD3	1.80	0.46
1:J:243:LYS:O	1:J:243:LYS:HG2	2.14	0.46
1:J:363:TYR:CE1	1:J:383:CYS:SG	2.79	0.46
1:A:456:ILE:O	1:A:456:ILE:HG23	2.16	0.46
1:B:510:LEU:HD23	1:B:511:GLN:N	2.29	0.46
1:C:360:LEU:HB2	1:C:361:PRO:HD2	1.97	0.46
1:C:430:ASP:HB3	1:C:456:ILE:HG12	1.97	0.46
1:D:285:ILE:HD12	1:D:287:ARG:HB2	1.73	0.46
1:D:308:PRO:HG3	1:D:344:ARG:CG	2.45	0.46
1:E:279:PRO:CG	1:E:322:GLN:HA	2.45	0.46
1:F:572:PHE:HB3	1:F:850:TYR:OH	2.16	0.46
1:H:600:ARG:HB3	1:H:601:PRO:HD2	1.97	0.46
1:I:407:THR:HG22	1:I:410:GLN:OE1	2.15	0.46
1:J:520:LYS:HA	1:J:520:LYS:HD3	1.75	0.46
1:A:542:GLN:HB3	1:A:543:TYR:CE2	2.51	0.46
1:B:400:ASP:N	1:B:400:ASP:OD1	2.48	0.46
1:D:276:GLU:HG2	1:D:277:PHE:H	1.79	0.46
1:F:264:GLY:O	1:F:268:VAL:HG22	2.15	0.46
1:F:607:PRO:HD2	1:F:762:ARG:O	2.16	0.46
1:F:854:PRO:HB2	1:F:855:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:268:VAL:HG12	1:H:280:LYS:HE3	1.96	0.46
1:H:376:LYS:NZ	1:H:379:ILE:HD12	2.30	0.46
1:J:297:ASP:CG	1:J:300:ALA:HB3	2.36	0.46
1:J:363:TYR:HD2	1:J:407:THR:CB	2.15	0.46
1:J:434:PRO:HG2	1:J:488:HIS:CE1	2.50	0.46
1:J:457:SER:O	1:J:458:LYS:HB2	2.15	0.46
1:J:751:LEU:HA	1:J:754:VAL:HG12	1.97	0.46
1:B:294:LEU:HB3	1:B:352:ILE:CD1	2.46	0.46
1:B:554:LEU:HD21	1:B:865:MET:HG3	1.97	0.46
1:C:863:GLU:O	1:C:867:ALA:HB2	2.15	0.46
1:E:444:ARG:HD2	1:E:444:ARG:HA	1.52	0.46
1:F:611:GLU:H	1:F:612:PRO:HD2	1.76	0.46
1:G:237:ILE:HD11	1:G:897:VAL:HG13	1.96	0.46
1:J:267:SER:HB2	1:J:396:ILE:HD12	1.97	0.46
1:J:484:TYR:C	1:J:486:GLY:N	2.68	0.46
1:A:444:ARG:CZ	1:A:447:PRO:HB3	2.45	0.46
1:D:565:PHE:HA	1:D:663:LEU:HD21	1.97	0.46
1:D:642:LEU:HD12	1:D:643:GLY:N	2.30	0.46
1:E:251:THR:CG2	1:E:252:LEU:H	2.22	0.46
1:E:276:GLU:OE1	1:E:318:PHE:CE2	2.68	0.46
1:F:270:GLU:O	1:F:273:VAL:HG22	2.16	0.46
1:H:263:SER:HA	1:H:266:SER:OG	2.16	0.46
1:H:412:SER:C	1:H:413:ARG:CG	2.82	0.46
1:H:454:GLY:C	1:H:455:VAL:HG13	2.36	0.46
1:H:484:TYR:HD1	1:H:485:PHE:CD1	2.33	0.46
1:H:520:LYS:HD3	1:H:520:LYS:HA	1.59	0.46
1:H:683:ALA:HB2	1:H:853:PHE:CE1	2.51	0.46
1:J:258:ILE:HG21	1:J:387:ILE:HD11	1.98	0.46
1:J:275:HIS:CD2	1:J:275:HIS:N	2.84	0.46
1:J:426:ILE:CD1	1:J:440:ILE:HG21	1.93	0.46
1:J:818:LYS:HE3	1:J:819:TYR:CE2	2.50	0.46
1:A:450:LEU:HD22	1:A:512:VAL:CG2	2.45	0.46
1:B:396:ILE:HG22	1:B:425:VAL:HB	1.98	0.46
1:C:627:TYR:CZ	1:C:631:GLN:NE2	2.83	0.46
1:D:485:PHE:CD2	1:D:492:PHE:HD1	2.29	0.46
1:D:576:GLN:H	1:D:576:GLN:HE21	1.63	0.46
1:E:272:ILE:HG23	1:E:278:LEU:HD13	1.85	0.46
1:E:377:ARG:HH21	1:E:377:ARG:CG	2.29	0.46
1:G:564:GLN:HG2	1:G:663:LEU:HD11	1.98	0.46
1:H:277:PHE:CD1	1:H:278:LEU:N	2.84	0.46
1:I:296:ASN:H	1:I:354:ASP:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:235:ILE:HD12	1:J:235:ILE:C	2.36	0.46
1:B:450:LEU:HD22	1:B:512:VAL:CG2	2.46	0.46
1:B:762:ARG:NH1	1:B:762:ARG:HG2	2.31	0.46
1:C:596:ARG:NH2	1:C:630:ARG:HH21	2.13	0.46
1:D:232:LYS:O	1:D:235:ILE:CG2	2.63	0.46
1:D:485:PHE:CE2	1:D:492:PHE:CD1	3.04	0.46
1:E:307:PHE:N	1:E:307:PHE:HD1	2.13	0.46
1:H:478:ASN:O	1:H:482:LYS:CG	2.62	0.46
1:H:484:TYR:C	1:H:484:TYR:CD1	2.89	0.46
1:H:593:LEU:HD21	1:H:823:GLU:HG3	1.97	0.46
1:I:376:LYS:HZ3	1:I:379:ILE:HD12	1.81	0.46
1:J:288:ARG:HA	1:J:289:PRO:HD3	1.77	0.46
1:J:657:GLN:HE21	1:J:657:GLN:HB2	1.59	0.46
1:C:873:LYS:HB2	1:C:873:LYS:HE3	1.65	0.46
1:D:241:LEU:O	1:D:244:VAL:HG23	2.16	0.46
1:D:454:GLY:C	1:D:455:VAL:HG13	2.36	0.46
1:E:242:GLN:HE22	1:E:344:ARG:HD2	1.81	0.46
1:E:377:ARG:HH21	1:E:377:ARG:HG2	1.80	0.46
1:E:520:LYS:HA	1:E:520:LYS:HD3	1.82	0.46
1:F:818:LYS:HE3	1:F:819:TYR:CE2	2.51	0.46
1:G:404:ALA:HB1	1:J:364:ILE:CG2	2.46	0.46
1:G:404:ALA:O	1:J:364:ILE:HG22	2.16	0.46
1:I:264:GLY:HA2	1:I:267:SER:HB3	1.98	0.46
1:I:615:ILE:O	1:I:615:ILE:HD13	2.16	0.46
1:I:625:SER:O	1:I:628:TRP:CB	2.64	0.46
1:J:360:LEU:HD13	1:J:383:CYS:SG	2.56	0.46
1:J:376:LYS:HA	1:J:376:LYS:HZ1	1.77	0.46
1:J:832:LYS:O	1:J:836:THR:HG22	2.16	0.46
1:B:488:HIS:O	1:B:491:GLU:HG2	2.16	0.45
1:C:697:GLY:HA3	1:C:840:PHE:CZ	2.51	0.45
1:D:269:LEU:HD11	1:D:458:LYS:HB2	1.97	0.45
1:D:703:LYS:N	1:D:704:PRO:HD2	2.31	0.45
1:F:640:THR:HG22	1:F:706:LYS:HG2	1.98	0.45
1:G:396:ILE:HG22	1:G:425:VAL:HB	1.98	0.45
1:H:279:PRO:O	1:H:280:LYS:CG	2.65	0.45
1:H:339:THR:CG2	1:H:340:ASP:N	2.77	0.45
1:H:657:GLN:HE22	1:H:684:ALA:CA	2.29	0.45
1:H:701:SER:O	1:H:704:PRO:HD2	2.15	0.45
1:I:254:SER:HB2	1:I:356:SER:O	2.16	0.45
1:J:325:LEU:HA	1:J:328:LEU:HD12	1.97	0.45
1:J:360:LEU:HB2	1:J:361:PRO:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:476:SER:C	1:J:478:ASN:N	2.69	0.45
1:B:272:ILE:HA	1:B:278:LEU:HD12	1.99	0.45
1:B:554:LEU:CD2	1:B:865:MET:HG3	2.46	0.45
1:F:279:PRO:HG3	1:F:321:ILE:HG22	1.98	0.45
1:H:279:PRO:O	1:H:280:LYS:HG2	2.16	0.45
1:I:434:PRO:HG2	1:I:488:HIS:ND1	2.30	0.45
1:I:507:LYS:HB2	1:I:507:LYS:HE3	1.77	0.45
1:I:664:LEU:HB3	1:I:676:ARG:NH1	2.31	0.45
1:J:843:VAL:HG12	1:J:844:GLU:N	2.31	0.45
1:A:267:SER:HB2	1:A:396:ILE:HD12	1.96	0.45
1:C:279:PRO:HG2	1:C:325:LEU:HD21	1.98	0.45
1:C:510:LEU:HD23	1:C:511:GLN:N	2.32	0.45
1:D:269:LEU:HD23	1:D:457:SER:CB	2.44	0.45
1:D:275:HIS:CG	1:D:276:GLU:N	2.85	0.45
1:D:297:ASP:OD1	1:D:348:HIS:HB3	2.16	0.45
1:D:389:GLY:O	1:D:391:ASN:N	2.44	0.45
1:D:900:LYS:HD3	1:D:900:LYS:HA	1.73	0.45
1:E:565:PHE:HA	1:E:663:LEU:HD21	1.99	0.45
1:H:383:CYS:O	1:H:387:ILE:HG13	2.16	0.45
1:A:233:LYS:HE3	1:A:233:LYS:N	2.32	0.45
1:A:270:GLU:CA	1:A:273:VAL:HG22	2.46	0.45
1:A:537:TYR:CD2	1:I:613:ASP:OD2	2.69	0.45
1:A:593:LEU:CD2	1:A:823:GLU:HG3	2.47	0.45
1:A:853:PHE:HB3	1:A:854:PRO:HD3	1.98	0.45
1:B:231:THR:O	1:B:235:ILE:HG22	2.17	0.45
1:B:453:VAL:HG11	1:B:505:LEU:HB2	1.98	0.45
1:D:363:TYR:CD2	1:D:407:THR:HB	2.51	0.45
1:D:524:THR:O	1:D:528:ILE:HG13	2.16	0.45
1:E:242:GLN:HE22	1:E:344:ARG:HD3	1.82	0.45
1:E:429:MET:HE2	1:E:437:GLY:HA2	1.98	0.45
1:F:254:SER:O	1:F:391:ASN:HB2	2.17	0.45
1:F:842:ASN:O	1:F:846:LEU:HB3	2.15	0.45
1:G:545:GLU:O	1:G:547:PRO:HD3	2.16	0.45
1:H:272:ILE:HG13	1:H:272:ILE:H	1.62	0.45
1:H:533:GLU:OE1	1:H:534:GLU:N	2.49	0.45
1:J:267:SER:HB2	1:J:396:ILE:HD11	1.97	0.45
1:J:276:GLU:HG2	1:J:277:PHE:N	2.31	0.45
1:B:261:GLN:CD	1:B:261:GLN:N	2.50	0.45
1:B:882:ARG:HG2	1:B:882:ARG:HH11	1.80	0.45
1:C:377:ARG:CG	1:C:377:ARG:NH2	2.78	0.45
1:D:617:ASP:OD1	1:D:617:ASP:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:690:ARG:NH1	1:D:844:GLU:OE2	2.49	0.45
1:E:425:VAL:HA	1:E:453:VAL:O	2.16	0.45
1:E:843:VAL:HG21	1:F:704:PRO:HA	1.97	0.45
1:H:358:ILE:O	1:H:358:ILE:HG12	2.16	0.45
1:H:597:TYR:CE2	1:H:822:PRO:HG3	2.50	0.45
1:I:233:LYS:HE3	1:I:900:LYS:HD2	1.98	0.45
1:A:267:SER:HB2	1:A:396:ILE:HD11	1.97	0.45
1:A:443:ASP:O	1:A:444:ARG:HD2	2.15	0.45
1:A:485:PHE:HE2	1:A:500:THR:OG1	1.94	0.45
1:B:227:MET:CA	1:B:230:ILE:HG22	2.44	0.45
1:C:596:ARG:CZ	1:C:630:ARG:HH21	2.29	0.45
1:C:597:TYR:CE2	1:C:822:PRO:HG3	2.51	0.45
1:C:823:GLU:OE1	1:C:823:GLU:N	2.45	0.45
1:D:255:ILE:HG12	1:D:513:LEU:HD21	1.99	0.45
1:D:288:ARG:HA	1:D:289:PRO:HD3	1.78	0.45
1:F:387:ILE:HG22	1:F:415:VAL:HG21	1.97	0.45
1:G:387:ILE:HG21	1:G:393:ILE:HD12	1.97	0.45
1:G:590:LEU:HA	1:G:590:LEU:HD22	1.73	0.45
1:H:299:GLU:O	1:H:299:GLU:HG2	2.17	0.45
1:I:279:PRO:HG2	1:I:325:LEU:HD21	1.99	0.45
1:J:485:PHE:CE2	1:J:492:PHE:CD1	3.04	0.45
1:D:327:GLU:HA	1:D:327:GLU:OE1	2.17	0.45
1:D:815:LEU:O	1:D:815:LEU:HD22	2.17	0.45
1:E:229:PHE:CZ	1:E:232:LYS:CD	2.95	0.45
1:E:278:LEU:CD2	1:E:280:LYS:HG2	2.46	0.45
1:E:454:GLY:O	1:E:500:THR:CB	2.64	0.45
1:F:389:GLY:O	1:F:391:ASN:N	2.44	0.45
1:G:525:THR:O	1:G:529:GLN:HG3	2.16	0.45
1:H:285:ILE:HG12	1:H:332:VAL:HG22	1.99	0.45
1:H:413:ARG:NE	1:H:422:THR:HG21	2.32	0.45
1:I:486:GLY:O	1:I:489:PRO:HD3	2.16	0.45
1:A:394:LEU:HD13	1:A:395:ALA:HB3	1.98	0.45
1:B:242:GLN:OE1	1:B:251:THR:HG21	2.16	0.45
1:C:266:SER:HB2	1:C:427:THR:OG1	2.17	0.45
1:C:441:LEU:HD23	1:C:498:VAL:HB	1.99	0.45
1:E:326:THR:HA	1:E:329:ASN:ND2	2.32	0.45
1:F:727:LEU:HD12	1:F:727:LEU:HA	1.82	0.45
1:F:738:MET:O	1:F:742:GLU:HG3	2.17	0.45
1:H:275:HIS:CD2	1:H:275:HIS:N	2.84	0.45
1:H:705:TYR:CD1	1:H:832:LYS:HD3	2.52	0.45
1:A:257:VAL:O	1:A:257:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:278:LEU:HD13	1:B:280:LYS:HG2	1.99	0.45
1:B:480:ASN:HA	1:B:483:ASN:OD1	2.17	0.45
1:C:224:ASP:CB	1:C:227:MET:HB2	2.45	0.45
1:C:224:ASP:O	1:C:227:MET:N	2.49	0.45
1:C:572:PHE:CD2	1:C:846:LEU:HD11	2.51	0.45
1:E:238:ARG:CZ	1:E:356:SER:HG	2.29	0.45
1:E:426:ILE:HD13	1:E:440:ILE:CB	2.35	0.45
1:F:627:TYR:CE2	1:F:628:TRP:CH2	3.02	0.45
1:H:287:ARG:CG	1:H:287:ARG:NH1	2.76	0.45
1:H:413:ARG:NH1	1:H:446:TYR:CD1	2.70	0.45
1:I:627:TYR:O	1:I:628:TRP:CE3	2.70	0.45
1:J:293:THR:OG1	1:J:346:THR:HG23	2.16	0.45
1:A:275:HIS:CD2	1:A:275:HIS:N	2.84	0.45
1:E:703:LYS:HE3	1:G:544:ASN:HB3	1.98	0.45
1:F:278:LEU:HD13	1:F:280:LYS:HG2	1.99	0.45
1:F:563:HIS:CD2	1:G:566:HIS:NE2	2.85	0.45
1:F:878:ASP:OD2	1:F:879:PRO:HD2	2.17	0.45
1:G:690:ARG:HA	1:G:690:ARG:HD3	1.66	0.45
1:H:257:VAL:HG21	1:H:359:ASP:HB2	1.99	0.45
1:H:307:PHE:CD1	1:H:345:LEU:CD2	3.00	0.45
1:H:407:THR:CG2	1:H:414:ARG:HH11	2.15	0.45
1:A:267:SER:CB	1:A:396:ILE:HG13	2.36	0.44
1:A:754:VAL:HA	1:A:779:PHE:CE1	2.51	0.44
1:A:832:LYS:O	1:A:835:GLN:HG2	2.17	0.44
1:B:227:MET:C	1:B:230:ILE:HG22	2.38	0.44
1:B:279:PRO:CB	1:B:322:GLN:HA	2.47	0.44
1:B:290:ILE:HG22	1:B:292:LEU:CD2	2.46	0.44
1:E:377:ARG:O	1:E:380:THR:OG1	2.30	0.44
1:F:529:GLN:O	1:F:533:GLU:HG3	2.17	0.44
1:G:605:LEU:CD2	1:G:606:SER:N	2.77	0.44
1:G:656:ILE:HD11	1:G:846:LEU:HD12	1.99	0.44
1:G:873:LYS:HB2	1:G:873:LYS:HE3	1.71	0.44
1:H:272:ILE:HG23	1:H:278:LEU:H	1.82	0.44
1:H:682:ALA:C	1:H:685:THR:HG22	2.38	0.44
1:I:375:LEU:N	1:I:375:LEU:HD23	2.32	0.44
1:I:472:ASN:O	1:I:476:SER:HB3	2.18	0.44
1:I:613:ASP:CB	1:I:627:TYR:CE1	2.83	0.44
1:J:262:SER:O	1:J:266:SER:OG	2.34	0.44
1:A:478:ASN:CG	1:A:482:LYS:HZ2	2.20	0.44
1:B:873:LYS:HB2	1:B:873:LYS:HE3	1.79	0.44
1:C:663:LEU:HD12	1:C:663:LEU:HA	1.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:255:ILE:HG13	1:D:357:LEU:HA	1.99	0.44
1:D:258:ILE:HG22	1:D:360:LEU:HD11	2.00	0.44
1:D:269:LEU:CG	1:D:457:SER:O	2.63	0.44
1:E:279:PRO:HG3	1:E:322:GLN:HA	1.99	0.44
1:E:303:ASP:OD1	1:E:349:SER:HB2	2.16	0.44
1:E:381:GLU:OE1	1:E:381:GLU:HA	2.17	0.44
1:E:585:LEU:HD23	1:E:585:LEU:HA	1.77	0.44
1:F:664:LEU:CD2	1:F:676:ARG:HG3	2.45	0.44
1:G:289:PRO:HB2	1:G:342:PRO:HB3	1.99	0.44
1:G:444:ARG:O	1:G:447:PRO:HD3	2.17	0.44
1:G:642:LEU:O	1:G:644:VAL:N	2.50	0.44
1:H:272:ILE:HG12	1:H:278:LEU:HD11	2.00	0.44
1:H:615:ILE:H	1:H:615:ILE:HD12	1.81	0.44
1:I:294:LEU:HB2	1:I:355:LEU:H	1.81	0.44
1:I:296:ASN:HB2	1:I:354:ASP:OD2	2.17	0.44
1:I:530:ARG:HA	1:I:530:ARG:HD3	1.70	0.44
1:J:690:ARG:O	1:J:694:THR:HG23	2.17	0.44
1:B:572:PHE:CD2	1:B:846:LEU:HD11	2.53	0.44
1:C:258:ILE:HD13	1:C:387:ILE:HD13	1.98	0.44
1:C:618:LEU:N	1:C:619:PRO:HD2	2.32	0.44
1:C:784:LEU:HA	1:C:784:LEU:HD23	1.79	0.44
1:D:257:VAL:O	1:D:257:VAL:HG23	2.16	0.44
1:E:285:ILE:HG13	1:E:286:THR:N	2.31	0.44
1:E:392:ILE:HG21	1:E:513:LEU:HD22	1.98	0.44
1:E:652:ALA:O	1:E:656:ILE:HG13	2.17	0.44
1:F:276:GLU:HG2	1:F:277:PHE:N	2.31	0.44
1:H:344:ARG:H	1:H:344:ARG:HG2	1.54	0.44
1:H:534:GLU:O	1:H:537:TYR:HB3	2.17	0.44
1:I:407:THR:HA	1:I:410:GLN:OE1	2.18	0.44
1:J:285:ILE:HD12	1:J:286:THR:N	2.33	0.44
1:J:426:ILE:HD13	1:J:440:ILE:CB	2.37	0.44
1:A:243:LYS:O	1:A:243:LYS:HG2	2.17	0.44
1:A:394:LEU:CG	1:A:395:ALA:N	2.79	0.44
1:A:394:LEU:HD12	1:A:423:ILE:O	2.17	0.44
1:A:536:THR:CG2	1:I:630:ARG:CD	2.49	0.44
1:A:610:ARG:NE	1:A:610:ARG:CA	2.77	0.44
1:D:279:PRO:O	1:D:280:LYS:CG	2.65	0.44
1:D:279:PRO:O	1:D:280:LYS:HG2	2.17	0.44
1:D:667:SER:OG	1:D:668:SER:N	2.49	0.44
1:D:711:ILE:HD12	1:D:828:ALA:HB1	2.00	0.44
1:E:454:GLY:N	1:E:500:THR:HG22	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:483:ASN:C	1:E:483:ASN:ND2	2.71	0.44
1:F:303:ASP:OD1	1:F:349:SER:HB2	2.18	0.44
1:G:297:ASP:OD2	1:G:300:ALA:HB3	2.18	0.44
1:H:450:LEU:HD22	1:H:512:VAL:CG2	2.48	0.44
1:H:491:GLU:CD	1:H:491:GLU:N	2.70	0.44
1:I:450:LEU:O	1:I:508:LYS:NZ	2.50	0.44
1:A:307:PHE:HB2	1:A:310:LEU:HB2	2.00	0.44
1:A:441:LEU:HD21	1:A:498:VAL:C	2.38	0.44
1:C:227:MET:O	1:C:231:THR:OG1	2.35	0.44
1:C:357:LEU:HD23	1:C:357:LEU:H	1.82	0.44
1:E:243:LYS:HG2	1:E:243:LYS:O	2.17	0.44
1:E:246:GLN:HE22	1:E:890:ARG:NH1	2.16	0.44
1:E:269:LEU:HD21	1:E:457:SER:O	2.17	0.44
1:F:425:VAL:HG12	1:F:427:THR:HG23	1.98	0.44
1:G:269:LEU:HD11	1:G:457:SER:O	2.18	0.44
1:G:383:CYS:O	1:G:387:ILE:HG13	2.18	0.44
1:G:615:ILE:HD13	1:G:615:ILE:O	2.17	0.44
1:G:648:ALA:HB1	1:G:841:LEU:CD1	2.46	0.44
1:G:873:LYS:O	1:G:877:GLU:HG3	2.17	0.44
1:H:255:ILE:HD11	1:H:355:LEU:HG	2.00	0.44
1:H:610:ARG:HE	1:H:611:GLU:H	1.64	0.44
1:J:285:ILE:HG12	1:J:332:VAL:HG22	1.99	0.44
1:J:361:PRO:HD2	1:J:382:LEU:HD21	1.99	0.44
1:A:285:ILE:HD12	1:A:287:ARG:CA	2.41	0.44
1:A:537:TYR:CE1	1:I:627:TYR:CA	3.00	0.44
1:A:894:LEU:HD23	1:A:894:LEU:HA	1.80	0.44
1:B:450:LEU:O	1:B:508:LYS:NZ	2.44	0.44
1:C:701:SER:O	1:C:704:PRO:HD2	2.18	0.44
1:E:308:PRO:HG3	1:E:344:ARG:CG	2.47	0.44
1:E:574:ARG:N	1:E:575:PRO:CD	2.80	0.44
1:E:617:ASP:OD1	1:E:617:ASP:N	2.50	0.44
1:E:723:VAL:HG11	1:E:823:GLU:HB3	2.00	0.44
1:G:754:VAL:HG22	1:G:779:PHE:CE2	2.52	0.44
1:G:754:VAL:HG21	1:G:783:LEU:HD22	1.99	0.44
1:H:279:PRO:O	1:H:280:LYS:HD2	2.17	0.44
1:J:434:PRO:HB3	1:J:491:GLU:CB	2.47	0.44
1:A:278:LEU:HD13	1:A:280:LYS:HG2	1.98	0.44
1:A:524:THR:O	1:A:527:ALA:HB3	2.17	0.44
1:B:450:LEU:HD22	1:B:512:VAL:HG22	2.00	0.44
1:C:444:ARG:NH1	1:C:447:PRO:HB3	2.32	0.44
1:F:289:PRO:HB2	1:F:342:PRO:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:449:LYS:C	1:F:451:GLY:H	2.20	0.44
1:G:275:HIS:CG	1:G:276:GLU:N	2.86	0.44
1:G:605:LEU:HD22	1:G:606:SER:C	2.37	0.44
1:H:255:ILE:HG13	1:H:357:LEU:HA	2.00	0.44
1:I:553:TYR:O	1:I:557:SER:OG	2.35	0.44
1:I:627:TYR:HB3	1:I:628:TRP:CH2	2.53	0.44
1:J:237:ILE:HD11	1:J:897:VAL:CG1	2.44	0.44
1:J:742:GLU:CD	1:J:748:ARG:HE	2.20	0.44
1:A:279:PRO:HB3	1:A:322:GLN:HB2	1.94	0.44
1:A:416:ASP:OD2	1:A:421:ARG:HG2	2.18	0.44
1:A:441:LEU:HD23	1:A:498:VAL:HB	0.48	0.44
1:B:784:LEU:HD23	1:B:784:LEU:HA	1.87	0.44
1:C:252:LEU:HD23	1:C:524:THR:HG21	2.00	0.44
1:D:294:LEU:HB3	1:D:352:ILE:HD13	2.00	0.44
1:D:400:ASP:N	1:D:400:ASP:OD1	2.51	0.44
1:D:560:ASP:OD2	1:D:668:SER:OG	2.30	0.44
1:E:485:PHE:HE2	1:E:500:THR:OG1	1.94	0.44
1:E:749:LYS:O	1:E:753:GLU:HG3	2.17	0.44
1:F:296:ASN:N	1:F:354:ASP:HB3	2.33	0.44
1:F:611:GLU:H	1:F:612:PRO:CD	2.31	0.44
1:F:754:VAL:HG22	1:F:779:PHE:CD2	2.52	0.44
1:H:282:SER:HB2	1:H:283:ASN:H	1.60	0.44
1:A:238:ARG:NH2	1:A:356:SER:HG	2.15	0.44
1:A:775:GLY:HA2	1:A:779:PHE:O	2.17	0.44
1:B:259:GLY:HA2	1:B:408:ALA:HB2	1.99	0.44
1:D:275:HIS:CD2	1:D:275:HIS:N	2.86	0.44
1:D:396:ILE:HA	1:D:425:VAL:O	2.18	0.44
1:E:233:LYS:HA	1:E:233:LYS:CE	2.22	0.44
1:E:270:GLU:HA	1:E:273:VAL:HG22	1.98	0.44
1:E:543:TYR:CE1	1:E:884:HIS:HB2	2.53	0.44
1:E:762:ARG:HH11	1:E:762:ARG:CG	2.31	0.44
1:F:266:SER:HA	1:F:269:LEU:HD22	1.99	0.44
1:G:450:LEU:O	1:G:508:LYS:NZ	2.50	0.44
1:H:477:ILE:O	1:H:477:ILE:CG2	2.64	0.44
1:H:694:THR:HG22	1:H:844:GLU:HG3	1.99	0.44
1:I:260:SER:N	1:I:263:SER:HB3	2.33	0.44
1:I:485:PHE:CD1	1:I:485:PHE:N	2.86	0.44
1:A:272:ILE:CB	1:A:278:LEU:CD1	2.96	0.43
1:A:382:LEU:C	1:A:382:LEU:HD12	2.38	0.43
1:A:384:ASP:OD1	1:A:384:ASP:O	2.36	0.43
1:A:520:LYS:HD3	1:A:520:LYS:HA	1.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:782:ALA:O	1:D:786:ARG:HD3	2.18	0.43
1:E:285:ILE:HG13	1:E:286:THR:H	1.83	0.43
1:E:640:THR:HG22	1:E:706:LYS:HG2	2.00	0.43
1:F:611:GLU:HG3	1:F:611:GLU:O	2.17	0.43
1:G:272:ILE:HA	1:G:278:LEU:HD12	1.99	0.43
1:G:363:TYR:HD2	1:G:407:THR:HB	1.82	0.43
1:G:575:PRO:O	1:G:578:GLN:HB3	2.17	0.43
1:I:716:TRP:CE2	1:I:815:LEU:HA	2.53	0.43
1:J:237:ILE:HD13	1:J:241:LEU:HG	1.99	0.43
1:J:252:LEU:HD23	1:J:252:LEU:HA	1.77	0.43
1:J:285:ILE:HD12	1:J:285:ILE:C	2.38	0.43
1:J:499:SER:C	1:J:500:THR:HG23	2.38	0.43
1:J:683:ALA:HB2	1:J:853:PHE:CE1	2.53	0.43
1:A:308:PRO:HD2	1:A:344:ARG:O	2.18	0.43
1:A:778:GLY:O	1:A:779:PHE:HD2	2.00	0.43
1:B:321:ILE:HA	1:B:324:THR:OG1	2.17	0.43
1:B:344:ARG:H	1:B:344:ARG:HG2	1.56	0.43
1:B:565:PHE:CZ	1:B:853:PHE:HD2	2.36	0.43
1:B:627:TYR:HA	1:J:540:LYS:CD	2.48	0.43
1:B:781:ALA:CA	1:E:778:GLY:CA	2.96	0.43
1:C:475:ALA:O	1:C:479:ARG:HG2	2.17	0.43
1:D:454:GLY:O	1:D:500:THR:HG22	2.17	0.43
1:E:260:SER:N	1:E:263:SER:HB3	2.34	0.43
1:E:488:HIS:HB3	1:E:491:GLU:HG3	1.98	0.43
1:G:251:THR:HG22	1:G:252:LEU:H	1.83	0.43
1:H:261:GLN:OE1	1:H:261:GLN:N	2.51	0.43
1:H:286:THR:HB	1:H:361:PRO:CB	2.48	0.43
1:H:381:GLU:OE1	1:H:381:GLU:HA	2.18	0.43
1:H:832:LYS:O	1:H:836:THR:HG22	2.18	0.43
1:A:307:PHE:CZ	1:A:345:LEU:HD21	2.48	0.43
1:B:667:SER:OG	1:B:668:SER:N	2.51	0.43
1:C:529:GLN:O	1:C:533:GLU:HG3	2.18	0.43
1:C:673:PRO:HA	1:C:676:ARG:HB3	2.00	0.43
1:E:375:LEU:N	1:E:375:LEU:HD23	2.33	0.43
1:G:618:LEU:HG	1:G:803:ARG:HH21	1.83	0.43
1:I:677:LYS:NZ	1:I:681:ASP:OD2	2.45	0.43
1:A:282:SER:HB2	1:A:283:ASN:H	1.64	0.43
1:A:618:LEU:HB3	1:A:619:PRO:HD3	1.98	0.43
1:A:690:ARG:O	1:A:694:THR:HG23	2.19	0.43
1:B:492:PHE:HB3	1:B:498:VAL:HG21	1.99	0.43
1:C:876:ARG:NH1	1:C:886:ASP:OD1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:253:PRO:HG3	1:D:516:GLN:OE1	2.17	0.43
1:E:279:PRO:CG	1:E:325:LEU:HD21	2.27	0.43
1:E:519:SER:OG	1:E:520:LYS:N	2.51	0.43
1:G:268:VAL:HB	1:G:280:LYS:HB3	2.00	0.43
1:G:705:TYR:CE1	1:G:832:LYS:HD3	2.53	0.43
1:H:312:LEU:N	1:H:312:LEU:HD23	2.34	0.43
1:H:540:LYS:HA	1:H:545:GLU:HG3	2.00	0.43
1:H:540:LYS:HB2	1:H:540:LYS:HE3	1.71	0.43
1:I:297:ASP:HB3	1:I:349:SER:C	2.39	0.43
1:J:294:LEU:HB3	1:J:352:ILE:HD13	1.99	0.43
1:J:723:VAL:HG11	1:J:823:GLU:HB3	1.99	0.43
1:A:258:ILE:HG22	1:A:360:LEU:HD11	1.99	0.43
1:A:425:VAL:HA	1:A:453:VAL:O	2.18	0.43
1:B:521:LEU:HD13	1:B:521:LEU:C	2.39	0.43
1:D:255:ILE:HA	1:D:392:ILE:HG23	2.01	0.43
1:E:875:ALA:O	1:E:881:VAL:HG23	2.18	0.43
1:F:646:ARG:HA	1:F:646:ARG:HD2	1.86	0.43
1:G:257:VAL:HA	1:G:394:LEU:O	2.18	0.43
1:G:294:LEU:HB3	1:G:352:ILE:CD1	2.48	0.43
1:G:840:PHE:CZ	1:G:844:GLU:HG3	2.54	0.43
1:H:298:PRO:O	1:H:299:GLU:HB3	2.18	0.43
1:J:232:LYS:O	1:J:235:ILE:HG23	2.19	0.43
1:J:263:SER:CA	1:J:266:SER:OG	2.67	0.43
1:A:297:ASP:N	1:A:298:PRO:CD	2.80	0.43
1:A:377:ARG:O	1:A:380:THR:OG1	2.33	0.43
1:A:537:TYR:CZ	1:I:627:TYR:HB2	2.46	0.43
1:B:430:ASP:HB3	1:B:456:ILE:HG12	2.01	0.43
1:B:678:VAL:HG11	1:B:861:LEU:HD23	2.00	0.43
1:B:769:GLU:H	1:B:769:GLU:CD	2.21	0.43
1:C:303:ASP:OD1	1:C:349:SER:HB2	2.18	0.43
1:E:279:PRO:HG3	1:E:321:ILE:HG22	2.01	0.43
1:E:381:GLU:OE1	1:E:381:GLU:CA	2.66	0.43
1:F:360:LEU:HD13	1:F:383:CYS:SG	2.59	0.43
1:F:544:ASN:ND2	1:H:703:LYS:HE3	2.34	0.43
1:G:240:LEU:HD23	1:G:240:LEU:HA	1.81	0.43
1:G:430:ASP:C	1:G:430:ASP:OD1	2.57	0.43
1:G:854:PRO:HB2	1:G:855:ARG:NH2	2.33	0.43
1:H:297:ASP:CG	1:H:300:ALA:HB3	2.39	0.43
1:H:436:LYS:O	1:H:440:ILE:HG13	2.19	0.43
1:H:478:ASN:CG	1:H:482:LYS:HZ2	2.20	0.43
1:I:585:LEU:HB3	1:I:830:ALA:HB1	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:640:THR:HG21	1:I:706:LYS:HA	2.00	0.43
1:A:394:LEU:HA	1:A:394:LEU:HD23	1.84	0.43
1:A:682:ALA:O	1:A:686:VAL:HG23	2.18	0.43
1:A:883:ARG:O	1:A:887:LEU:HB2	2.18	0.43
1:B:474:LEU:HG	1:B:475:ALA:H	1.84	0.43
1:D:308:PRO:HD2	1:D:344:ARG:O	2.19	0.43
1:D:376:LYS:CA	1:D:376:LYS:HE2	2.49	0.43
1:D:480:ASN:O	1:D:480:ASN:OD1	2.37	0.43
1:D:712:GLN:HB2	1:D:714:ASN:ND2	2.34	0.43
1:D:784:LEU:HD13	1:D:784:LEU:HA	1.95	0.43
1:D:907:ILE:HD12	1:D:907:ILE:HA	1.85	0.43
1:G:294:LEU:HB3	1:G:352:ILE:HD13	2.00	0.43
1:H:307:PHE:CD1	1:H:345:LEU:HD21	2.53	0.43
1:H:443:ASP:OD1	1:H:445:GLN:HB2	2.19	0.43
1:I:263:SER:OG	1:I:396:ILE:O	2.36	0.43
1:I:558:LEU:HD12	1:I:861:LEU:HD12	1.99	0.43
1:J:255:ILE:HG23	1:J:392:ILE:HG23	2.00	0.43
1:J:297:ASP:OD1	1:J:348:HIS:HB3	2.18	0.43
1:J:876:ARG:HB3	1:J:882:ARG:HH21	1.84	0.43
1:A:454:GLY:C	1:A:455:VAL:HG13	2.39	0.43
1:A:605:LEU:HD21	1:A:784:LEU:HD12	2.01	0.43
1:A:615:ILE:HD12	1:A:615:ILE:H	1.83	0.43
1:A:779:PHE:CD2	1:A:779:PHE:N	2.86	0.43
1:B:241:LEU:O	1:B:244:VAL:HG13	2.18	0.43
1:B:423:ILE:HG22	1:B:450:LEU:HD13	2.01	0.43
1:C:269:LEU:HD11	1:C:457:SER:O	2.19	0.43
1:D:237:ILE:HD11	1:D:897:VAL:HG13	2.00	0.43
1:D:540:LYS:HA	1:D:545:GLU:HG3	1.99	0.43
1:E:297:ASP:OD1	1:E:348:HIS:HB3	2.18	0.43
1:G:230:ILE:HG13	1:G:904:LEU:HD11	2.00	0.43
1:G:279:PRO:CB	1:G:322:GLN:HA	2.49	0.43
1:G:456:ILE:HG23	1:G:456:ILE:O	2.19	0.43
1:G:475:ALA:O	1:G:479:ARG:HG2	2.19	0.43
1:H:224:ASP:OD2	1:H:227:MET:HB2	2.19	0.43
1:H:230:ILE:O	1:H:234:MET:HG3	2.18	0.43
1:I:279:PRO:HB3	1:I:322:GLN:CD	2.38	0.43
1:I:702:LEU:HD23	1:I:702:LEU:HA	1.80	0.43
1:A:267:SER:CB	1:A:396:ILE:HD11	2.49	0.43
1:A:673:PRO:HD2	1:A:877:GLU:OE1	2.19	0.43
1:B:283:ASN:ND2	1:B:283:ASN:C	2.72	0.43
1:B:630:ARG:CD	1:J:540:LYS:CG	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:861:LEU:HD23	1:B:861:LEU:HA	1.85	0.43
1:B:904:LEU:HD12	1:B:904:LEU:C	2.39	0.43
1:C:263:SER:HA	1:C:266:SER:OG	2.18	0.43
1:E:396:ILE:HA	1:E:425:VAL:O	2.18	0.43
1:E:783:LEU:HD23	1:E:783:LEU:HA	1.90	0.43
1:F:627:TYR:CZ	1:F:631:GLN:NE2	2.87	0.43
1:G:268:VAL:HG12	1:G:280:LYS:HE3	2.01	0.43
1:G:273:VAL:HG21	1:G:457:SER:HB3	2.01	0.43
1:G:508:LYS:HE2	1:G:508:LYS:HB3	1.82	0.43
1:H:261:GLN:N	1:H:261:GLN:CD	2.72	0.43
1:H:276:GLU:HG2	1:H:277:PHE:H	1.83	0.43
1:H:657:GLN:HE21	1:H:657:GLN:HB2	1.44	0.43
1:H:679:ILE:O	1:H:682:ALA:HB3	2.18	0.43
1:I:409:LEU:O	1:I:413:ARG:HG3	2.19	0.43
1:J:345:LEU:HD23	1:J:345:LEU:HA	1.82	0.43
1:J:349:SER:O	1:J:352:ILE:HG13	2.19	0.43
1:J:832:LYS:O	1:J:835:GLN:HG2	2.19	0.43
1:A:543:TYR:CE1	1:A:884:HIS:HB2	2.54	0.43
1:A:878:ASP:HA	1:A:879:PRO:HD3	1.91	0.43
1:B:227:MET:O	1:B:231:THR:OG1	2.37	0.43
1:D:694:THR:HG22	1:D:844:GLU:CG	2.49	0.43
1:D:720:ARG:CZ	1:D:813:LYS:HG3	2.49	0.43
1:F:723:VAL:HG21	1:F:824:VAL:HA	2.00	0.43
1:G:232:LYS:HB3	1:G:232:LYS:HE2	1.76	0.43
1:G:400:ASP:CB	1:J:400:ASP:OD2	2.65	0.43
1:I:257:VAL:HA	1:I:394:LEU:O	2.19	0.43
1:A:237:ILE:HD12	1:A:241:LEU:HD11	2.01	0.42
1:A:260:SER:O	1:A:264:GLY:CA	2.60	0.42
1:C:297:ASP:HB3	1:C:349:SER:C	2.39	0.42
1:D:308:PRO:CG	1:D:344:ARG:HG3	2.48	0.42
1:D:388:ARG:HE	1:D:388:ARG:HB2	1.54	0.42
1:D:799:ILE:O	1:D:803:ARG:HG2	2.19	0.42
1:E:268:VAL:O	1:E:272:ILE:HG13	2.19	0.42
1:E:420:GLU:HG3	1:E:449:LYS:CE	2.48	0.42
1:G:449:LYS:C	1:G:451:GLY:H	2.22	0.42
1:H:474:LEU:O	1:H:475:ALA:C	2.57	0.42
1:I:585:LEU:HD23	1:I:585:LEU:HA	1.81	0.42
1:J:627:TYR:HE2	1:J:628:TRP:CZ3	2.37	0.42
1:A:430:ASP:O	1:A:430:ASP:OD1	2.37	0.42
1:A:485:PHE:CZ	1:A:500:THR:OG1	2.54	0.42
1:B:261:GLN:HG3	1:B:364:ILE:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:630:ARG:CD	1:J:540:LYS:HG3	2.48	0.42
1:D:278:LEU:HD13	1:D:278:LEU:C	2.39	0.42
1:D:416:ASP:OD2	1:D:422:THR:HG22	2.20	0.42
1:E:252:LEU:HD23	1:E:252:LEU:HA	1.85	0.42
1:F:232:LYS:HG3	1:F:354:ASP:CG	2.40	0.42
1:F:542:GLN:C	1:F:543:TYR:CG	2.92	0.42
1:F:542:GLN:O	1:F:543:TYR:CD1	2.72	0.42
1:H:398:ALA:O	1:H:399:ALA:HB2	2.18	0.42
1:H:491:GLU:CD	1:H:491:GLU:H	2.19	0.42
1:H:723:VAL:O	1:H:727:LEU:HB2	2.18	0.42
1:A:272:ILE:HG13	1:A:272:ILE:H	1.69	0.42
1:A:708:ASP:OD1	1:A:710:ASP:HB3	2.19	0.42
1:C:588:LYS:HD3	1:C:588:LYS:HA	1.77	0.42
1:C:723:VAL:HG21	1:C:824:VAL:HA	1.99	0.42
1:C:757:PHE:O	1:C:760:LYS:HB2	2.20	0.42
1:C:847:ASN:ND2	1:D:707:PHE:CZ	2.87	0.42
1:D:277:PHE:CD1	1:D:277:PHE:C	2.89	0.42
1:E:349:SER:HB3	1:E:352:ILE:CG2	2.50	0.42
1:E:430:ASP:OD1	1:E:431:LEU:N	2.52	0.42
1:G:357:LEU:H	1:G:357:LEU:HD23	1.84	0.42
1:H:267:SER:HB3	1:H:396:ILE:HG13	2.01	0.42
1:H:278:LEU:HD13	1:H:278:LEU:O	2.19	0.42
1:I:750:LYS:O	1:I:754:VAL:HG23	2.19	0.42
1:J:870:GLY:O	1:J:874:PHE:HB2	2.19	0.42
1:A:289:PRO:HB2	1:A:342:PRO:HB3	2.02	0.42
1:B:230:ILE:O	1:B:234:MET:HG3	2.19	0.42
1:B:781:ALA:CA	1:E:778:GLY:HA2	2.50	0.42
1:C:558:LEU:HD12	1:C:861:LEU:HD12	2.01	0.42
1:C:803:ARG:HD3	1:C:803:ARG:HA	1.51	0.42
1:D:242:GLN:HE22	1:D:344:ARG:CD	2.28	0.42
1:D:574:ARG:N	1:D:575:PRO:HD2	2.32	0.42
1:D:642:LEU:O	1:D:644:VAL:N	2.50	0.42
1:E:278:LEU:HD22	1:E:280:LYS:CG	2.49	0.42
1:G:404:ALA:O	1:J:364:ILE:CG2	2.67	0.42
1:H:308:PRO:HG3	1:H:344:ARG:CG	2.48	0.42
1:I:262:SER:O	1:I:266:SER:OG	2.37	0.42
1:I:723:VAL:HG11	1:I:823:GLU:HB3	2.01	0.42
1:I:861:LEU:HA	1:I:861:LEU:HD23	1.75	0.42
1:J:363:TYR:CD1	1:J:363:TYR:N	2.88	0.42
1:B:297:ASP:HB3	1:B:349:SER:C	2.39	0.42
1:B:375:LEU:C	1:B:376:LYS:HE2	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:285:ILE:HD11	1:D:287:ARG:H	1.66	0.42
1:D:296:ASN:C	1:D:298:PRO:CD	2.87	0.42
1:D:484:TYR:HE1	1:D:492:PHE:CZ	2.38	0.42
1:E:272:ILE:HG23	1:E:278:LEU:N	2.35	0.42
1:E:278:LEU:HD13	1:E:280:LYS:HG2	2.01	0.42
1:F:304:TYR:CD2	1:F:314:ARG:HD3	2.55	0.42
1:F:639:LEU:O	1:F:642:LEU:HB3	2.20	0.42
1:F:744:SER:OG	1:F:786:ARG:NH2	2.53	0.42
1:G:663:LEU:HD12	1:G:663:LEU:HA	1.90	0.42
1:H:276:GLU:OE2	1:H:318:PHE:CD2	2.73	0.42
1:H:321:ILE:HA	1:H:324:THR:OG1	2.19	0.42
1:H:322:GLN:O	1:H:326:THR:OG1	2.24	0.42
1:J:496:SER:OG	1:J:498:VAL:HG22	2.19	0.42
1:A:272:ILE:CG1	1:A:278:LEU:CD1	2.95	0.42
1:A:322:GLN:O	1:A:326:THR:OG1	2.18	0.42
1:A:657:GLN:HE21	1:A:657:GLN:HB2	1.60	0.42
1:B:241:LEU:HA	1:B:244:VAL:HG13	2.01	0.42
1:B:269:LEU:HD11	1:B:457:SER:O	2.19	0.42
1:D:233:LYS:HE2	1:D:233:LYS:HA	2.00	0.42
1:E:239:ASN:C	1:E:240:LEU:HD23	2.38	0.42
1:E:458:LYS:C	1:E:458:LYS:HD2	2.39	0.42
1:F:258:ILE:HG21	1:F:387:ILE:HD11	2.02	0.42
1:G:863:GLU:O	1:G:867:ALA:CB	2.67	0.42
1:H:409:LEU:HD23	1:H:409:LEU:HA	1.90	0.42
1:H:574:ARG:N	1:H:575:PRO:HD2	2.30	0.42
1:H:834:ALA:O	1:H:838:VAL:HB	2.19	0.42
1:I:607:PRO:HD3	1:I:762:ARG:HG3	2.02	0.42
1:J:272:ILE:HG12	1:J:278:LEU:HD13	2.02	0.42
1:J:298:PRO:O	1:J:299:GLU:HB3	2.19	0.42
1:J:687:LEU:HA	1:J:687:LEU:HD23	1.81	0.42
1:A:723:VAL:O	1:A:727:LEU:HB2	2.20	0.42
1:B:757:PHE:HA	1:B:760:LYS:CD	2.47	0.42
1:C:296:ASN:H	1:C:354:ASP:HB3	1.84	0.42
1:D:574:ARG:CZ	1:D:839:LEU:HD12	2.49	0.42
1:E:263:SER:HA	1:E:266:SER:OG	2.20	0.42
1:E:298:PRO:O	1:E:298:PRO:CD	2.67	0.42
1:E:423:ILE:HG22	1:E:450:LEU:HD13	2.01	0.42
1:E:578:GLN:HA	1:E:838:VAL:HG21	2.02	0.42
1:F:276:GLU:HG3	1:F:474:LEU:HD23	2.01	0.42
1:F:363:TYR:N	1:F:363:TYR:CD1	2.88	0.42
1:F:454:GLY:O	1:F:500:THR:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:610:ARG:NE	1:F:613:ASP:HB2	2.35	0.42
1:G:286:THR:HB	1:G:361:PRO:HB3	2.01	0.42
1:H:473:LEU:HD12	1:H:473:LEU:HA	1.81	0.42
1:H:709:PRO:O	1:H:711:ILE:HG12	2.19	0.42
1:A:296:ASN:CG	1:A:298:PRO:HD3	2.40	0.42
1:A:536:THR:HG22	1:I:630:ARG:HD2	0.62	0.42
1:B:345:LEU:HD23	1:B:345:LEU:HA	1.94	0.42
1:B:837:ALA:O	1:B:841:LEU:HB2	2.20	0.42
1:C:279:PRO:CB	1:C:322:GLN:HA	2.49	0.42
1:D:269:LEU:HD23	1:D:270:GLU:CA	2.50	0.42
1:D:639:LEU:O	1:D:642:LEU:HD23	2.20	0.42
1:G:364:ILE:C	1:J:405:ASN:OD1	2.57	0.42
1:H:270:GLU:CA	1:H:273:VAL:HG22	2.50	0.42
1:J:228:MET:O	1:J:231:THR:HB	2.20	0.42
1:J:425:VAL:HA	1:J:453:VAL:O	2.20	0.42
1:J:453:VAL:HG21	1:J:505:LEU:HD23	2.01	0.42
1:J:454:GLY:H	1:J:500:THR:HG22	1.83	0.42
1:J:727:LEU:HA	1:J:727:LEU:HD12	1.83	0.42
1:A:308:PRO:HG2	1:A:309:ASP:H	1.85	0.42
1:B:781:ALA:H	1:E:778:GLY:HA3	1.82	0.42
1:C:267:SER:CB	1:C:396:ILE:HG13	2.49	0.42
1:C:268:VAL:HB	1:C:280:LYS:HB3	2.02	0.42
1:C:409:LEU:O	1:C:413:ARG:HG3	2.19	0.42
1:C:757:PHE:CE1	1:C:777:GLY:HA3	2.55	0.42
1:D:272:ILE:CG2	1:D:277:PHE:CD1	3.02	0.42
1:D:430:ASP:O	1:D:430:ASP:OD1	2.38	0.42
1:D:434:PRO:HB3	1:D:491:GLU:HB3	1.97	0.42
1:F:873:LYS:O	1:F:876:ARG:HB2	2.20	0.42
1:G:842:ASN:O	1:G:846:LEU:HB3	2.19	0.42
1:H:235:ILE:HD12	1:H:235:ILE:C	2.34	0.42
1:H:742:GLU:CD	1:H:748:ARG:HE	2.23	0.42
1:J:233:LYS:HA	1:J:233:LYS:CE	2.47	0.42
1:J:233:LYS:CA	1:J:233:LYS:CE	2.98	0.42
1:J:697:GLY:HA3	1:J:840:PHE:CZ	2.55	0.42
1:A:492:PHE:CD1	1:A:492:PHE:O	2.69	0.42
1:A:578:GLN:HA	1:A:838:VAL:HG21	2.00	0.42
1:B:273:VAL:HG12	1:B:477:ILE:HD13	2.02	0.42
1:C:541:VAL:HG13	1:C:542:GLN:CG	2.50	0.42
1:C:582:LYS:HE2	1:C:831:THR:HG23	2.01	0.42
1:D:279:PRO:CG	1:D:322:GLN:HA	2.49	0.42
1:D:485:PHE:CD1	1:D:485:PHE:N	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:818:LYS:HG2	1:D:819:TYR:N	2.34	0.42
1:E:377:ARG:CG	1:E:377:ARG:NH2	2.82	0.42
1:E:432:VAL:HB	1:E:436:LYS:CB	2.50	0.42
1:E:477:ILE:O	1:E:477:ILE:CG2	2.67	0.42
1:E:508:LYS:O	1:E:512:VAL:HG23	2.19	0.42
1:E:582:LYS:O	1:E:586:ASP:HB2	2.20	0.42
1:F:450:LEU:O	1:F:508:LYS:NZ	2.52	0.42
1:G:639:LEU:HD12	1:G:639:LEU:HA	1.90	0.42
1:H:285:ILE:CD1	1:H:287:ARG:CA	2.98	0.42
1:H:524:THR:O	1:H:528:ILE:HG13	2.20	0.42
1:I:610:ARG:HE	1:I:613:ASP:HB2	1.85	0.42
1:A:574:ARG:N	1:A:575:PRO:HD2	2.27	0.41
1:C:392:ILE:HD12	1:C:421:ARG:O	2.19	0.41
1:D:474:LEU:HG	1:D:475:ALA:H	1.85	0.41
1:D:569:ALA:HB1	1:D:850:TYR:CE1	2.54	0.41
1:E:229:PHE:CD2	1:E:233:LYS:HD2	2.55	0.41
1:E:610:ARG:HE	1:E:610:ARG:HA	1.82	0.41
1:F:771:ASP:OD1	1:F:771:ASP:N	2.51	0.41
1:G:387:ILE:CG2	1:G:415:VAL:HG21	2.49	0.41
1:H:407:THR:CG2	1:H:414:ARG:NH1	2.60	0.41
1:H:413:ARG:HG2	1:H:422:THR:HG21	2.02	0.41
1:H:444:ARG:HA	1:H:444:ARG:HD2	1.81	0.41
1:H:576:GLN:NE2	1:H:576:GLN:H	2.18	0.41
1:H:610:ARG:NE	1:H:610:ARG:CA	2.80	0.41
1:I:310:LEU:O	1:I:313:ALA:HB3	2.20	0.41
1:J:269:LEU:HD11	1:J:458:LYS:HB2	2.02	0.41
1:J:278:LEU:HD13	1:J:278:LEU:H	1.85	0.41
1:J:672:HIS:HA	1:J:877:GLU:CD	2.40	0.41
1:A:736:ALA:O	1:A:737:ALA:C	2.58	0.41
1:B:428:LYS:HB3	1:B:431:LEU:HD21	2.01	0.41
1:B:808:LYS:HB3	1:B:808:LYS:HE2	1.83	0.41
1:C:528:ILE:HA	1:C:531:GLU:HG2	2.01	0.41
1:C:681:ASP:N	1:C:681:ASP:OD1	2.53	0.41
1:D:257:VAL:HG22	1:D:358:ILE:O	2.21	0.41
1:D:285:ILE:O	1:D:286:THR:OG1	2.34	0.41
1:D:426:ILE:HD12	1:D:440:ILE:CG2	2.16	0.41
1:E:254:SER:O	1:E:391:ASN:HB3	2.20	0.41
1:E:349:SER:HB3	1:E:352:ILE:HG23	2.01	0.41
1:E:424:GLY:HA3	1:E:452:TYR:CD2	2.54	0.41
1:E:431:LEU:O	1:E:432:VAL:HG13	2.20	0.41
1:F:284:MET:HG2	1:F:286:THR:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:441:LEU:HD12	1:G:441:LEU:HA	1.81	0.41
1:G:582:LYS:HE2	1:G:831:THR:HG23	2.01	0.41
1:H:349:SER:HB3	1:H:352:ILE:CG2	2.50	0.41
1:H:403:LEU:CD2	1:H:403:LEU:N	2.59	0.41
1:A:308:PRO:HG3	1:A:344:ARG:CB	2.48	0.41
1:A:458:LYS:O	1:A:458:LYS:CG	2.68	0.41
1:A:488:HIS:HB3	1:A:491:GLU:HG3	2.02	0.41
1:A:610:ARG:HE	1:A:610:ARG:CA	2.20	0.41
1:A:905:HIS:O	1:A:908:SER:O	2.38	0.41
1:B:271:ALA:O	1:B:275:HIS:CE1	2.73	0.41
1:B:757:PHE:O	1:B:760:LYS:HB2	2.20	0.41
1:D:229:PHE:CE1	1:D:232:LYS:HE3	2.55	0.41
1:D:285:ILE:HD12	1:D:287:ARG:CB	2.38	0.41
1:D:485:PHE:HA	1:D:492:PHE:HE1	1.85	0.41
1:D:778:GLY:C	1:D:779:PHE:CD2	2.92	0.41
1:E:376:LYS:HZ3	1:E:379:ILE:HD12	1.77	0.41
1:G:233:LYS:HD2	1:G:236:GLU:OE1	2.20	0.41
1:G:433:GLU:O	1:G:436:LYS:HB2	2.20	0.41
1:H:242:GLN:HE22	1:H:344:ARG:CD	2.33	0.41
1:H:396:ILE:HA	1:H:425:VAL:O	2.20	0.41
1:H:399:ALA:HA	1:H:411:ALA:CB	2.50	0.41
1:I:582:LYS:HB2	1:I:582:LYS:HE3	1.86	0.41
1:J:255:ILE:HD11	1:J:355:LEU:HG	2.01	0.41
1:J:671:LYS:HD2	1:J:671:LYS:N	2.36	0.41
1:J:711:ILE:HD12	1:J:828:ALA:HB1	2.02	0.41
1:A:400:ASP:OD1	1:A:400:ASP:N	2.54	0.41
1:A:433:GLU:HA	1:A:434:PRO:HD2	1.75	0.41
1:B:530:ARG:HD3	1:B:530:ARG:HA	1.86	0.41
1:C:235:ILE:HD11	1:C:293:THR:HG22	2.01	0.41
1:E:279:PRO:HB3	1:E:322:GLN:HB2	1.97	0.41
1:E:575:PRO:O	1:E:578:GLN:HB3	2.20	0.41
1:F:294:LEU:HB3	1:F:352:ILE:CD1	2.49	0.41
1:G:255:ILE:HA	1:G:392:ILE:O	2.21	0.41
1:H:307:PHE:CD1	1:H:307:PHE:N	2.88	0.41
1:H:441:LEU:HD21	1:H:498:VAL:CA	2.49	0.41
1:H:499:SER:C	1:H:500:THR:HG23	2.41	0.41
1:I:572:PHE:HB3	1:I:850:TYR:OH	2.20	0.41
1:J:432:VAL:HB	1:J:436:LYS:HB2	2.03	0.41
1:J:694:THR:HG22	1:J:844:GLU:CG	2.50	0.41
1:A:505:LEU:O	1:A:505:LEU:HD22	2.20	0.41
1:A:537:TYR:HE1	1:A:540:LYS:CE	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:540:LYS:HD2	1:I:626:PRO:HD3	1.80	0.41
1:B:491:GLU:HG2	1:B:491:GLU:H	1.57	0.41
1:D:285:ILE:HD13	1:D:332:VAL:HG22	2.01	0.41
1:D:728:GLN:HA	1:D:804:ILE:HD11	2.02	0.41
1:E:235:ILE:HD12	1:E:235:ILE:C	2.37	0.41
1:E:240:LEU:HD23	1:E:240:LEU:H	1.79	0.41
1:E:311:GLY:C	1:E:312:LEU:HD23	2.40	0.41
1:E:478:ASN:O	1:E:482:LYS:CG	2.65	0.41
1:G:493:GLY:O	1:G:496:SER:HB3	2.21	0.41
1:I:267:SER:HB2	1:I:396:ILE:CD1	2.50	0.41
1:J:285:ILE:HD11	1:J:287:ARG:CB	2.37	0.41
1:J:289:PRO:HB2	1:J:342:PRO:HB3	2.01	0.41
1:A:233:LYS:CA	1:A:233:LYS:CE	2.98	0.41
1:A:237:ILE:HD11	1:A:897:VAL:HG13	2.01	0.41
1:A:339:THR:O	1:A:340:ASP:HB3	2.21	0.41
1:A:581:LEU:HD12	1:A:838:VAL:HG23	2.01	0.41
1:A:598:TRP:CD1	1:A:598:TRP:N	2.88	0.41
1:C:878:ASP:HB3	1:C:881:VAL:HG12	2.01	0.41
1:D:278:LEU:CB	1:D:279:PRO:HD2	2.45	0.41
1:D:348:HIS:ND1	1:D:348:HIS:N	2.69	0.41
1:D:434:PRO:CG	1:D:491:GLU:HG3	2.49	0.41
1:D:548:MET:HG3	1:D:549:SER:N	2.36	0.41
1:E:287:ARG:CG	1:E:287:ARG:NH1	2.82	0.41
1:G:258:ILE:HG21	1:G:387:ILE:HD11	2.02	0.41
1:G:297:ASP:CG	1:G:300:ALA:HB3	2.40	0.41
1:H:284:MET:SD	1:H:284:MET:O	2.79	0.41
1:I:642:LEU:O	1:I:644:VAL:N	2.51	0.41
1:J:861:LEU:HD23	1:J:861:LEU:HA	1.89	0.41
1:A:475:ALA:O	1:A:478:ASN:HB3	2.21	0.41
1:B:349:SER:HB3	1:B:352:ILE:HG12	2.02	0.41
1:B:776:ALA:HB3	1:B:784:LEU:HD11	2.03	0.41
1:C:294:LEU:HB3	1:C:352:ILE:HD13	2.02	0.41
1:C:454:GLY:O	1:C:500:THR:HG22	2.21	0.41
1:D:295:VAL:HG12	1:D:296:ASN:O	2.20	0.41
1:D:499:SER:C	1:D:500:THR:HG23	2.41	0.41
1:E:304:TYR:CZ	1:E:314:ARG:NH1	2.88	0.41
1:F:450:LEU:HD22	1:F:512:VAL:HG22	2.03	0.41
1:G:276:GLU:HG2	1:G:277:PHE:H	1.84	0.41
1:I:285:ILE:HD12	1:I:287:ARG:HB2	2.03	0.41
1:J:229:PHE:CG	1:J:232:LYS:HD2	2.39	0.41
1:J:295:VAL:O	1:J:352:ILE:HD11	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:269:LEU:CD2	1:A:457:SER:O	2.68	0.41
1:A:297:ASP:HB3	1:A:350:PRO:N	2.35	0.41
1:B:572:PHE:HD2	1:B:846:LEU:HD11	1.84	0.41
1:B:755:MET:HG2	1:B:791:VAL:HG22	2.03	0.41
1:C:401:THR:HG22	1:C:402:ASP:N	2.35	0.41
1:D:276:GLU:OE1	1:D:303:ASP:OD1	2.38	0.41
1:D:285:ILE:CD1	1:D:287:ARG:CA	2.99	0.41
1:D:377:ARG:CG	1:D:377:ARG:NH2	2.78	0.41
1:D:757:PHE:CD2	1:D:757:PHE:C	2.94	0.41
1:D:903:GLU:CG	1:D:906:ARG:NH2	2.83	0.41
1:E:285:ILE:CG1	1:E:286:THR:N	2.84	0.41
1:E:656:ILE:O	1:E:660:VAL:HG23	2.21	0.41
1:E:727:LEU:HD21	1:E:823:GLU:HG2	2.02	0.41
1:F:602:ILE:CG1	1:F:792:PHE:HB2	2.51	0.41
1:F:602:ILE:HG12	1:F:792:PHE:HB2	2.03	0.41
1:F:750:LYS:HE3	1:F:750:LYS:HB3	1.92	0.41
1:G:431:LEU:O	1:G:432:VAL:HG13	2.21	0.41
1:H:355:LEU:HD23	1:H:357:LEU:CD2	2.51	0.41
1:H:861:LEU:HD23	1:H:861:LEU:HA	1.94	0.41
1:I:307:PHE:CD1	1:I:307:PHE:N	2.89	0.41
1:I:529:GLN:O	1:I:533:GLU:HG3	2.20	0.41
1:I:611:GLU:H	1:I:612:PRO:HD2	1.84	0.41
1:J:344:ARG:H	1:J:344:ARG:HG2	1.74	0.41
1:J:387:ILE:HG21	1:J:393:ILE:HD12	2.03	0.41
1:J:429:MET:HE2	1:J:437:GLY:HA2	2.02	0.41
1:J:521:LEU:HD13	1:J:521:LEU:O	2.21	0.41
1:J:784:LEU:O	1:J:788:ARG:HG3	2.21	0.41
1:A:262:SER:O	1:A:266:SER:OG	2.38	0.41
1:A:565:PHE:HA	1:A:663:LEU:HD21	2.02	0.41
1:A:617:ASP:OD1	1:A:617:ASP:N	2.54	0.41
1:A:637:SER:O	1:A:641:ARG:HB2	2.21	0.41
1:B:258:ILE:HG21	1:B:387:ILE:HD11	2.01	0.41
1:D:903:GLU:CG	1:D:906:ARG:HH21	2.34	0.41
1:E:238:ARG:HD2	1:E:252:LEU:O	2.21	0.41
1:E:253:PRO:HG3	1:E:516:GLN:OE1	2.21	0.41
1:E:325:LEU:HD12	1:E:326:THR:N	2.36	0.41
1:E:420:GLU:HG3	1:E:449:LYS:HE3	2.01	0.41
1:E:575:PRO:HG2	1:E:576:GLN:NE2	2.36	0.41
1:F:387:ILE:HG21	1:F:393:ILE:HD12	2.03	0.41
1:F:485:PHE:CD1	1:F:485:PHE:N	2.88	0.41
1:F:507:LYS:HB2	1:F:507:LYS:HE3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:616:ILE:HD12	1:F:616:ILE:C	2.38	0.41
1:G:261:GLN:CD	1:G:262:SER:H	2.22	0.41
1:G:285:ILE:HD12	1:G:287:ARG:N	2.28	0.41
1:G:488:HIS:HB3	1:G:491:GLU:HG3	2.03	0.41
1:G:766:ILE:HG13	1:G:767:ILE:N	2.35	0.41
1:H:241:LEU:C	1:H:244:VAL:HG23	2.34	0.41
1:H:846:LEU:HD12	1:H:846:LEU:HA	1.84	0.41
1:I:241:LEU:HA	1:I:244:VAL:HG13	2.03	0.41
1:I:278:LEU:HD22	1:I:279:PRO:N	2.35	0.41
1:I:293:THR:OG1	1:I:346:THR:HG23	2.20	0.41
1:I:441:LEU:HD23	1:I:498:VAL:HB	2.02	0.41
1:I:493:GLY:H	1:I:496:SER:HB3	1.85	0.41
1:I:537:TYR:O	1:I:541:VAL:HG12	2.21	0.41
1:I:575:PRO:O	1:I:578:GLN:HB3	2.21	0.41
1:I:580:LEU:HD23	1:I:580:LEU:HA	1.94	0.41
1:J:279:PRO:CG	1:J:322:GLN:HA	2.51	0.41
1:J:421:ARG:HH11	1:J:421:ARG:HD3	1.70	0.41
1:J:443:ASP:O	1:J:444:ARG:HD2	2.21	0.41
1:J:478:ASN:O	1:J:482:LYS:CG	2.68	0.41
1:J:835:GLN:CG	1:J:836:THR:N	2.84	0.41
1:A:294:LEU:HB2	1:A:354:ASP:HA	2.03	0.41
1:C:293:THR:O	1:C:346:THR:HA	2.20	0.41
1:C:364:ILE:HD12	1:C:376:LYS:NZ	2.36	0.41
1:C:832:LYS:O	1:C:836:THR:HG22	2.20	0.41
1:D:454:GLY:O	1:D:455:VAL:HG12	2.20	0.41
1:D:569:ALA:CB	1:D:850:TYR:CE1	3.03	0.41
1:E:483:ASN:ND2	1:E:484:TYR:N	2.68	0.41
1:E:605:LEU:HD21	1:E:784:LEU:HD12	2.02	0.41
1:F:519:SER:OG	1:F:520:LYS:HE2	2.21	0.41
1:H:491:GLU:N	1:H:491:GLU:OE2	2.53	0.41
1:H:610:ARG:HE	1:H:611:GLU:N	2.19	0.41
1:H:626:PRO:O	1:H:630:ARG:HB3	2.20	0.41
1:I:618:LEU:HG	1:I:803:ARG:NH2	2.36	0.41
1:I:903:GLU:CG	1:I:906:ARG:NH2	2.71	0.41
1:J:727:LEU:HD21	1:J:823:GLU:HG2	2.02	0.41
1:A:387:ILE:O	1:A:421:ARG:NH2	2.55	0.40
1:A:627:TYR:O	1:A:631:GLN:HB2	2.21	0.40
1:B:485:PHE:CD2	1:B:492:PHE:CD1	3.09	0.40
1:C:425:VAL:HA	1:C:453:VAL:O	2.21	0.40
1:C:593:LEU:HD13	1:C:823:GLU:HG3	2.02	0.40
1:D:279:PRO:CG	1:D:321:ILE:HG22	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:457:SER:O	1:D:458:LYS:CB	2.68	0.40
1:D:640:THR:HG22	1:D:706:LYS:HG2	2.02	0.40
1:E:268:VAL:O	1:E:272:ILE:CD1	2.70	0.40
1:F:430:ASP:HB3	1:F:456:ILE:CG1	2.48	0.40
1:F:610:ARG:HB3	1:F:613:ASP:OD1	2.22	0.40
1:G:278:LEU:HD13	1:G:278:LEU:O	2.20	0.40
1:G:692:TYR:CD2	1:G:692:TYR:C	2.94	0.40
1:H:278:LEU:CD2	1:H:280:LYS:CG	2.98	0.40
1:H:454:GLY:N	1:H:500:THR:HG22	2.36	0.40
1:H:602:ILE:HG12	1:H:762:ARG:CZ	2.51	0.40
1:H:631:GLN:OE1	1:H:631:GLN:HA	2.20	0.40
1:J:270:GLU:HA	1:J:273:VAL:HG22	2.03	0.40
1:J:308:PRO:CG	1:J:344:ARG:HG3	2.51	0.40
1:J:750:LYS:O	1:J:753:GLU:HB2	2.21	0.40
1:A:787:GLY:O	1:A:791:VAL:HG23	2.21	0.40
1:B:376:LYS:CA	1:B:376:LYS:CE	2.97	0.40
1:B:521:LEU:HD13	1:B:521:LEU:O	2.21	0.40
1:C:300:ALA:C	1:C:301:LYS:HD3	2.42	0.40
1:C:355:LEU:HD23	1:C:357:LEU:HD22	2.03	0.40
1:E:289:PRO:HB2	1:E:342:PRO:HB3	2.03	0.40
1:E:754:VAL:HA	1:E:779:PHE:CE1	2.56	0.40
1:F:344:ARG:H	1:F:344:ARG:HG2	1.68	0.40
1:F:441:LEU:CD2	1:F:498:VAL:HB	2.52	0.40
1:F:702:LEU:O	1:F:706:LYS:HG3	2.21	0.40
1:H:263:SER:OG	1:H:397:SER:CA	2.66	0.40
1:H:348:HIS:N	1:H:348:HIS:ND1	2.69	0.40
1:I:352:ILE:C	1:I:352:ILE:HD12	2.42	0.40
1:J:270:GLU:O	1:J:273:VAL:CG2	2.65	0.40
1:J:581:LEU:HD23	1:J:581:LEU:HA	1.88	0.40
1:A:242:GLN:HE22	1:A:344:ARG:HD2	1.85	0.40
1:A:279:PRO:HG3	1:A:321:ILE:C	2.40	0.40
1:A:576:GLN:H	1:A:576:GLN:HE21	1.68	0.40
1:B:472:ASN:OD1	1:B:475:ALA:HB3	2.21	0.40
1:B:852:ARG:HH21	1:B:852:ARG:HD2	1.65	0.40
1:C:275:HIS:CG	1:C:276:GLU:N	2.89	0.40
1:D:308:PRO:HG3	1:D:344:ARG:CB	2.49	0.40
1:E:285:ILE:HG12	1:E:329:ASN:O	2.21	0.40
1:E:676:ARG:HG2	1:E:677:LYS:N	2.37	0.40
1:E:861:LEU:HD23	1:E:861:LEU:HA	1.69	0.40
1:H:241:LEU:O	1:H:244:VAL:CG2	2.49	0.40
1:H:509:LEU:HD23	1:H:509:LEU:HA	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:246:GLN:NE2	1:A:890:ARG:HH12	2.20	0.40
1:A:476:SER:OG	1:A:477:ILE:N	2.54	0.40
1:A:528:ILE:HD13	1:A:528:ILE:HG21	1.89	0.40
1:A:754:VAL:O	1:A:758:VAL:HG23	2.22	0.40
1:B:720:ARG:O	1:B:724:VAL:HG23	2.21	0.40
1:C:853:PHE:HB3	1:C:854:PRO:HD3	2.04	0.40
1:E:376:LYS:HA	1:E:376:LYS:HE2	1.95	0.40
1:G:632:LEU:O	1:G:632:LEU:HD22	2.21	0.40
1:G:861:LEU:HD23	1:G:861:LEU:HA	1.93	0.40
1:H:396:ILE:HG22	1:H:425:VAL:HB	2.03	0.40
1:I:232:LYS:HB3	1:I:232:LYS:HE2	1.85	0.40
1:I:626:PRO:CB	1:I:630:ARG:HE	2.30	0.40
1:J:448:LEU:HD11	1:J:452:TYR:CE1	2.57	0.40
1:A:727:LEU:HD12	1:A:727:LEU:HA	1.98	0.40
1:A:742:GLU:CD	1:A:748:ARG:HE	2.25	0.40
1:B:319:SER:O	1:B:322:GLN:HB3	2.20	0.40
1:C:255:ILE:HG13	1:C:357:LEU:CA	2.52	0.40
1:C:275:HIS:CG	1:C:276:GLU:H	2.40	0.40
1:C:319:SER:O	1:C:322:GLN:HB3	2.22	0.40
1:C:507:LYS:HB2	1:C:507:LYS:HE3	1.84	0.40
1:C:628:TRP:CE3	1:C:628:TRP:HA	2.56	0.40
1:D:611:GLU:H	1:D:611:GLU:HG2	1.69	0.40
1:E:285:ILE:C	1:E:287:ARG:H	2.25	0.40
1:F:840:PHE:CE1	1:F:844:GLU:HG3	2.57	0.40
1:F:873:LYS:HA	1:F:876:ARG:HB2	2.04	0.40
1:H:433:GLU:HA	1:H:434:PRO:HD2	1.80	0.40
1:I:615:ILE:HD11	1:I:803:ARG:HG2	2.02	0.40
1:I:702:LEU:HD13	1:I:833:LEU:HD22	2.04	0.40
1:J:653:ALA:HA	1:J:687:LEU:HD13	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	651/695 (94%)	614 (94%)	34 (5%)	3 (0%)	25	64
1	B	651/695 (94%)	616 (95%)	34 (5%)	1 (0%)	44	78
1	C	651/695 (94%)	616 (95%)	32 (5%)	3 (0%)	25	64
1	D	651/695 (94%)	622 (96%)	27 (4%)	2 (0%)	37	73
1	E	651/695 (94%)	620 (95%)	31 (5%)	0	100	100
1	F	651/695 (94%)	617 (95%)	32 (5%)	2 (0%)	37	73
1	G	651/695 (94%)	618 (95%)	30 (5%)	3 (0%)	25	64
1	H	651/695 (94%)	618 (95%)	27 (4%)	6 (1%)	14	52
1	I	651/695 (94%)	614 (94%)	36 (6%)	1 (0%)	44	78
1	J	651/695 (94%)	624 (96%)	25 (4%)	2 (0%)	37	73
All	All	6510/6950 (94%)	6179 (95%)	308 (5%)	23 (0%)	32	68

All (23) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	394	LEU
1	H	405	ASN
1	H	410	GLN
1	D	643	GLY
1	H	399	ALA
1	H	414	ARG
1	C	356	SER
1	H	412	SER
1	A	574	ARG
1	G	611	GLU
1	C	574	ARG
1	C	611	GLU
1	F	574	ARG
1	F	611	GLU
1	I	611	GLU
1	J	389	GLY
1	J	843	VAL
1	B	611	GLU
1	G	844	GLU
1	G	574	ARG
1	H	574	ARG
1	D	574	ARG
1	A	342	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	A	563/594 (95%)	464 (82%)	99 (18%)	1 8
1	B	563/594 (95%)	492 (87%)	71 (13%)	3 14
1	C	563/594 (95%)	487 (86%)	76 (14%)	3 13
1	D	563/594 (95%)	460 (82%)	103 (18%)	1 8
1	E	563/594 (95%)	453 (80%)	110 (20%)	1 7
1	F	563/594 (95%)	486 (86%)	77 (14%)	3 13
1	G	563/594 (95%)	490 (87%)	73 (13%)	3 14
1	H	563/594 (95%)	453 (80%)	110 (20%)	1 7
1	I	563/594 (95%)	491 (87%)	72 (13%)	3 14
1	J	563/594 (95%)	462 (82%)	101 (18%)	1 8
All	All	5630/5940 (95%)	4738 (84%)	892 (16%)	4 10

All (892) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	227	MET
1	A	228	MET
1	A	229	PHE
1	A	230	ILE
1	A	232	LYS
1	A	233	LYS
1	A	235	ILE
1	A	237	ILE
1	A	241	LEU
1	A	243	LYS
1	A	251	THR
1	A	255	ILE
1	A	266	SER
1	A	268	VAL
1	A	269	LEU
1	A	272	ILE

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Mol	Chain	Res	Type
1	A	277	PHE
1	A	278	LEU
1	A	282	SER
1	A	284	MET
1	A	287	ARG
1	A	303	ASP
1	A	320	LEU
1	A	344	ARG
1	A	346	THR
1	A	354	ASP
1	A	357	LEU
1	A	358	ILE
1	A	360	LEU
1	A	363	TYR
1	A	375	LEU
1	A	376	LYS
1	A	377	ARG
1	A	378	LYS
1	A	382	LEU
1	A	383	CYS
1	A	385	LYS
1	A	386	TYR
1	A	387	ILE
1	A	388	ARG
1	A	392	ILE
1	A	393	ILE
1	A	394	LEU
1	A	396	ILE
1	A	400	ASP
1	A	402	ASP
1	A	405	ASN
1	A	407	THR
1	A	412	SER
1	A	423	ILE
1	A	427	THR
1	A	431	LEU
1	A	432	VAL
1	A	434	PRO
1	A	448	LEU
1	A	450	LEU
1	A	456	ILE
1	A	457	SER

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Mol	Chain	Res	Type
1	A	458	LYS
1	A	474	LEU
1	A	483	ASN
1	A	492	PHE
1	A	499	SER
1	A	505	LEU
1	A	507	LYS
1	A	510	LEU
1	A	513	LEU
1	A	515	GLN
1	A	516	GLN
1	A	546	GLN
1	A	560	ASP
1	A	572	PHE
1	A	576	GLN
1	A	581	LEU
1	A	586	ASP
1	A	590	LEU
1	A	596	ARG
1	A	610	ARG
1	A	615	ILE
1	A	616	ILE
1	A	617	ASP
1	A	640	THR
1	A	642	LEU
1	A	657	GLN
1	A	671	LYS
1	A	714	ASN
1	A	739	LYS
1	A	749	LYS
1	A	762	ARG
1	A	769	GLU
1	A	802	LEU
1	A	818	LYS
1	A	836	THR
1	A	841	LEU
1	A	871	LEU
1	A	889	ARG
1	A	893	LEU
1	A	903	GLU
1	A	905	HIS
1	B	231	THR

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Mol	Chain	Res	Type
1	B	235	ILE
1	B	237	ILE
1	B	251	THR
1	B	255	ILE
1	B	266	SER
1	B	269	LEU
1	B	277	PHE
1	B	278	LEU
1	B	282	SER
1	B	284	MET
1	B	287	ARG
1	B	303	ASP
1	B	310	LEU
1	B	339	THR
1	B	344	ARG
1	B	346	THR
1	B	354	ASP
1	B	358	ILE
1	B	376	LYS
1	B	377	ARG
1	B	382	LEU
1	B	385	LYS
1	B	386	TYR
1	B	388	ARG
1	B	393	ILE
1	B	394	LEU
1	B	396	ILE
1	B	405	ASN
1	B	422	THR
1	B	423	ILE
1	B	430	ASP
1	B	431	LEU
1	B	433	GLU
1	B	448	LEU
1	B	458	LYS
1	B	474	LEU
1	B	479	ARG
1	B	481	GLU
1	B	483	ASN
1	B	490	THR
1	B	491	GLU
1	B	492	PHE

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Mol	Chain	Res	Type
1	B	500	THR
1	B	503	MET
1	B	513	LEU
1	B	571	SER
1	B	572	PHE
1	B	574	ARG
1	B	600	ARG
1	B	605	LEU
1	B	613	ASP
1	B	615	ILE
1	B	618	LEU
1	B	666	LYS
1	B	676	ARG
1	B	690	ARG
1	B	727	LEU
1	B	741	LEU
1	B	748	ARG
1	B	762	ARG
1	B	767	ILE
1	B	768	VAL
1	B	803	ARG
1	B	810	ARG
1	B	811	GLN
1	B	817	ASN
1	B	824	VAL
1	B	841	LEU
1	B	880	LYS
1	B	904	LEU
1	C	231	THR
1	C	237	ILE
1	C	244	VAL
1	C	251	THR
1	C	255	ILE
1	C	266	SER
1	C	269	LEU
1	C	277	PHE
1	C	278	LEU
1	C	282	SER
1	C	283	ASN
1	C	284	MET
1	C	303	ASP
1	C	325	LEU

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Mol	Chain	Res	Type
1	C	339	THR
1	C	344	ARG
1	C	346	THR
1	C	354	ASP
1	C	357	LEU
1	C	358	ILE
1	C	375	LEU
1	C	376	LYS
1	C	377	ARG
1	C	382	LEU
1	C	386	TYR
1	C	388	ARG
1	C	393	ILE
1	C	394	LEU
1	C	396	ILE
1	C	402	ASP
1	C	405	ASN
1	C	412	SER
1	C	423	ILE
1	C	430	ASP
1	C	431	LEU
1	C	433	GLU
1	C	448	LEU
1	C	458	LYS
1	C	474	LEU
1	C	479	ARG
1	C	481	GLU
1	C	482	LYS
1	C	483	ASN
1	C	490	THR
1	C	491	GLU
1	C	492	PHE
1	C	495	ASP
1	C	500	THR
1	C	503	MET
1	C	544	ASN
1	C	557	SER
1	C	590	LEU
1	C	600	ARG
1	C	605	LEU
1	C	613	ASP
1	C	615	ILE

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Mol	Chain	Res	Type
1	C	617	ASP
1	C	618	LEU
1	C	622	ASP
1	C	630	ARG
1	C	631	GLN
1	C	640	THR
1	C	654	SER
1	C	666	LYS
1	C	690	ARG
1	C	721	GLU
1	C	741	LEU
1	C	762	ARG
1	C	803	ARG
1	C	811	GLN
1	C	815	LEU
1	C	817	ASN
1	C	824	VAL
1	C	836	THR
1	C	841	LEU
1	C	904	LEU
1	D	225	ASP
1	D	228	MET
1	D	229	PHE
1	D	230	ILE
1	D	235	ILE
1	D	237	ILE
1	D	241	LEU
1	D	243	LYS
1	D	249	THR
1	D	251	THR
1	D	255	ILE
1	D	266	SER
1	D	268	VAL
1	D	269	LEU
1	D	277	PHE
1	D	278	LEU
1	D	282	SER
1	D	284	MET
1	D	287	ARG
1	D	303	ASP
1	D	320	LEU
1	D	344	ARG

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Mol	Chain	Res	Type
1	D	346	THR
1	D	348	HIS
1	D	351	ASN
1	D	354	ASP
1	D	357	LEU
1	D	358	ILE
1	D	360	LEU
1	D	375	LEU
1	D	376	LYS
1	D	377	ARG
1	D	378	LYS
1	D	382	LEU
1	D	385	LYS
1	D	388	ARG
1	D	393	ILE
1	D	394	LEU
1	D	396	ILE
1	D	400	ASP
1	D	402	ASP
1	D	412	SER
1	D	422	THR
1	D	423	ILE
1	D	431	LEU
1	D	433	GLU
1	D	434	PRO
1	D	448	LEU
1	D	449	LYS
1	D	450	LEU
1	D	456	ILE
1	D	457	SER
1	D	458	LYS
1	D	474	LEU
1	D	479	ARG
1	D	482	LYS
1	D	483	ASN
1	D	491	GLU
1	D	492	PHE
1	D	498	VAL
1	D	499	SER
1	D	507	LYS
1	D	515	GLN
1	D	516	GLN

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Mol	Chain	Res	Type
1	D	537	TYR
1	D	546	GLN
1	D	548	MET
1	D	557	SER
1	D	560	ASP
1	D	572	PHE
1	D	576	GLN
1	D	586	ASP
1	D	590	LEU
1	D	591	ASP
1	D	610	ARG
1	D	615	ILE
1	D	616	ILE
1	D	617	ASP
1	D	632	LEU
1	D	640	THR
1	D	641	ARG
1	D	642	LEU
1	D	654	SER
1	D	657	GLN
1	D	668	SER
1	D	671	LYS
1	D	690	ARG
1	D	714	ASN
1	D	727	LEU
1	D	749	LYS
1	D	762	ARG
1	D	769	GLU
1	D	802	LEU
1	D	811	GLN
1	D	815	LEU
1	D	818	LYS
1	D	836	THR
1	D	839	LEU
1	D	842	ASN
1	D	892	GLU
1	D	893	LEU
1	D	898	LEU
1	D	903	GLU
1	E	225	ASP
1	E	228	MET
1	E	229	PHE

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Mol	Chain	Res	Type
1	E	233	LYS
1	E	235	ILE
1	E	237	ILE
1	E	240	LEU
1	E	243	LYS
1	E	244	VAL
1	E	255	ILE
1	E	266	SER
1	E	268	VAL
1	E	269	LEU
1	E	277	PHE
1	E	278	LEU
1	E	282	SER
1	E	283	ASN
1	E	284	MET
1	E	287	ARG
1	E	303	ASP
1	E	312	LEU
1	E	320	LEU
1	E	323	LYS
1	E	325	LEU
1	E	344	ARG
1	E	346	THR
1	E	348	HIS
1	E	354	ASP
1	E	357	LEU
1	E	358	ILE
1	E	360	LEU
1	E	363	TYR
1	E	376	LYS
1	E	377	ARG
1	E	378	LYS
1	E	382	LEU
1	E	383	CYS
1	E	385	LYS
1	E	386	TYR
1	E	388	ARG
1	E	393	ILE
1	E	394	LEU
1	E	396	ILE
1	E	400	ASP
1	E	402	ASP

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Mol	Chain	Res	Type
1	E	407	THR
1	E	412	SER
1	E	422	THR
1	E	423	ILE
1	E	430	ASP
1	E	431	LEU
1	E	433	GLU
1	E	434	PRO
1	E	448	LEU
1	E	450	LEU
1	E	456	ILE
1	E	457	SER
1	E	458	LYS
1	E	474	LEU
1	E	476	SER
1	E	481	GLU
1	E	483	ASN
1	E	487	SER
1	E	490	THR
1	E	491	GLU
1	E	492	PHE
1	E	495	ASP
1	E	498	VAL
1	E	499	SER
1	E	515	GLN
1	E	516	GLN
1	E	546	GLN
1	E	557	SER
1	E	560	ASP
1	E	571	SER
1	E	572	PHE
1	E	576	GLN
1	E	590	LEU
1	E	591	ASP
1	E	596	ARG
1	E	610	ARG
1	E	615	ILE
1	E	617	ASP
1	E	640	THR
1	E	641	ARG
1	E	642	LEU
1	E	646	ARG

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Mol	Chain	Res	Type
1	E	647	LEU
1	E	654	SER
1	E	657	GLN
1	E	668	SER
1	E	671	LYS
1	E	676	ARG
1	E	714	ASN
1	E	727	LEU
1	E	749	LYS
1	E	762	ARG
1	E	768	VAL
1	E	769	GLU
1	E	802	LEU
1	E	811	GLN
1	E	815	LEU
1	E	836	THR
1	E	838	VAL
1	E	841	LEU
1	E	873	LYS
1	E	889	ARG
1	E	892	GLU
1	E	893	LEU
1	E	903	GLU
1	F	231	THR
1	F	235	ILE
1	F	237	ILE
1	F	244	VAL
1	F	251	THR
1	F	255	ILE
1	F	266	SER
1	F	269	LEU
1	F	277	PHE
1	F	278	LEU
1	F	282	SER
1	F	283	ASN
1	F	284	MET
1	F	303	ASP
1	F	320	LEU
1	F	322	GLN
1	F	325	LEU
1	F	339	THR
1	F	344	ARG

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Mol	Chain	Res	Type
1	F	346	THR
1	F	357	LEU
1	F	358	ILE
1	F	360	LEU
1	F	376	LYS
1	F	377	ARG
1	F	378	LYS
1	F	382	LEU
1	F	388	ARG
1	F	393	ILE
1	F	396	ILE
1	F	400	ASP
1	F	423	ILE
1	F	429	MET
1	F	430	ASP
1	F	431	LEU
1	F	432	VAL
1	F	448	LEU
1	F	457	SER
1	F	458	LYS
1	F	474	LEU
1	F	481	GLU
1	F	490	THR
1	F	491	GLU
1	F	492	PHE
1	F	495	ASP
1	F	500	THR
1	F	503	MET
1	F	552	SER
1	F	557	SER
1	F	591	ASP
1	F	600	ARG
1	F	605	LEU
1	F	611	GLU
1	F	613	ASP
1	F	615	ILE
1	F	616	ILE
1	F	617	ASP
1	F	618	LEU
1	F	640	THR
1	F	644	VAL
1	F	654	SER

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Mol	Chain	Res	Type
1	F	666	LYS
1	F	676	ARG
1	F	690	ARG
1	F	714	ASN
1	F	727	LEU
1	F	741	LEU
1	F	762	ARG
1	F	803	ARG
1	F	811	GLN
1	F	815	LEU
1	F	817	ASN
1	F	824	VAL
1	F	838	VAL
1	F	841	LEU
1	F	844	GLU
1	F	880	LYS
1	G	231	THR
1	G	237	ILE
1	G	244	VAL
1	G	251	THR
1	G	255	ILE
1	G	266	SER
1	G	269	LEU
1	G	277	PHE
1	G	278	LEU
1	G	282	SER
1	G	284	MET
1	G	303	ASP
1	G	320	LEU
1	G	339	THR
1	G	344	ARG
1	G	346	THR
1	G	354	ASP
1	G	358	ILE
1	G	376	LYS
1	G	377	ARG
1	G	378	LYS
1	G	382	LEU
1	G	386	TYR
1	G	388	ARG
1	G	392	ILE
1	G	393	ILE

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Mol	Chain	Res	Type
1	G	394	LEU
1	G	396	ILE
1	G	400	ASP
1	G	412	SER
1	G	423	ILE
1	G	430	ASP
1	G	431	LEU
1	G	448	LEU
1	G	457	SER
1	G	458	LYS
1	G	474	LEU
1	G	479	ARG
1	G	481	GLU
1	G	483	ASN
1	G	490	THR
1	G	491	GLU
1	G	492	PHE
1	G	495	ASP
1	G	503	MET
1	G	557	SER
1	G	590	LEU
1	G	600	ARG
1	G	605	LEU
1	G	613	ASP
1	G	615	ILE
1	G	616	ILE
1	G	617	ASP
1	G	618	LEU
1	G	640	THR
1	G	642	LEU
1	G	654	SER
1	G	666	LYS
1	G	672	HIS
1	G	690	ARG
1	G	695	SER
1	G	727	LEU
1	G	741	LEU
1	G	752	LYS
1	G	762	ARG
1	G	803	ARG
1	G	811	GLN
1	G	815	LEU

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Mol	Chain	Res	Type
1	G	817	ASN
1	G	838	VAL
1	G	841	LEU
1	G	880	LYS
1	G	906	ARG
1	H	225	ASP
1	H	228	MET
1	H	233	LYS
1	H	235	ILE
1	H	237	ILE
1	H	241	LEU
1	H	243	LYS
1	H	255	ILE
1	H	261	GLN
1	H	262	SER
1	H	263	SER
1	H	266	SER
1	H	268	VAL
1	H	269	LEU
1	H	277	PHE
1	H	278	LEU
1	H	282	SER
1	H	284	MET
1	H	287	ARG
1	H	310	LEU
1	H	320	LEU
1	H	344	ARG
1	H	346	THR
1	H	348	HIS
1	H	351	ASN
1	H	354	ASP
1	H	357	LEU
1	H	358	ILE
1	H	360	LEU
1	H	375	LEU
1	H	376	LYS
1	H	377	ARG
1	H	378	LYS
1	H	382	LEU
1	H	385	LYS
1	H	386	TYR
1	H	387	ILE

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Mol	Chain	Res	Type
1	H	388	ARG
1	H	393	ILE
1	H	394	LEU
1	H	396	ILE
1	H	400	ASP
1	H	402	ASP
1	H	403	LEU
1	H	405	ASN
1	H	407	THR
1	H	412	SER
1	H	413	ARG
1	H	423	ILE
1	H	430	ASP
1	H	431	LEU
1	H	434	PRO
1	H	445	GLN
1	H	446	TYR
1	H	448	LEU
1	H	450	LEU
1	H	456	ILE
1	H	457	SER
1	H	458	LYS
1	H	474	LEU
1	H	479	ARG
1	H	481	GLU
1	H	483	ASN
1	H	491	GLU
1	H	492	PHE
1	H	495	ASP
1	H	498	VAL
1	H	499	SER
1	H	507	LYS
1	H	510	LEU
1	H	513	LEU
1	H	515	GLN
1	H	516	GLN
1	H	546	GLN
1	H	560	ASP
1	H	581	LEU
1	H	586	ASP
1	H	590	LEU
1	H	596	ARG

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Mol	Chain	Res	Type
1	H	610	ARG
1	H	615	ILE
1	H	617	ASP
1	H	622	ASP
1	H	631	GLN
1	H	640	THR
1	H	641	ARG
1	H	642	LEU
1	H	647	LEU
1	H	657	GLN
1	H	668	SER
1	H	671	LYS
1	H	676	ARG
1	H	690	ARG
1	H	714	ASN
1	H	727	LEU
1	H	739	LYS
1	H	749	LYS
1	H	762	ARG
1	H	768	VAL
1	H	802	LEU
1	H	815	LEU
1	H	818	LYS
1	H	836	THR
1	H	841	LEU
1	H	866	HIS
1	H	871	LEU
1	H	889	ARG
1	H	892	GLU
1	H	893	LEU
1	H	903	GLU
1	I	231	THR
1	I	237	ILE
1	I	244	VAL
1	I	251	THR
1	I	255	ILE
1	I	266	SER
1	I	269	LEU
1	I	277	PHE
1	I	278	LEU
1	I	282	SER
1	I	284	MET

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Mol	Chain	Res	Type
1	I	287	ARG
1	I	303	ASP
1	I	310	LEU
1	I	320	LEU
1	I	344	ARG
1	I	346	THR
1	I	354	ASP
1	I	357	LEU
1	I	358	ILE
1	I	375	LEU
1	I	376	LYS
1	I	377	ARG
1	I	382	LEU
1	I	385	LYS
1	I	388	ARG
1	I	393	ILE
1	I	394	LEU
1	I	396	ILE
1	I	402	ASP
1	I	405	ASN
1	I	412	SER
1	I	423	ILE
1	I	430	ASP
1	I	448	LEU
1	I	458	LYS
1	I	472	ASN
1	I	474	LEU
1	I	479	ARG
1	I	481	GLU
1	I	483	ASN
1	I	490	THR
1	I	492	PHE
1	I	495	ASP
1	I	503	MET
1	I	557	SER
1	I	581	LEU
1	I	600	ARG
1	I	605	LEU
1	I	613	ASP
1	I	615	ILE
1	I	617	ASP
1	I	618	LEU

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Mol	Chain	Res	Type
1	I	624	ASP
1	I	631	GLN
1	I	636	CYS
1	I	642	LEU
1	I	666	LYS
1	I	695	SER
1	I	722	HIS
1	I	741	LEU
1	I	762	ARG
1	I	803	ARG
1	I	815	LEU
1	I	817	ASN
1	I	824	VAL
1	I	838	VAL
1	I	841	LEU
1	I	844	GLU
1	I	860	LYS
1	I	873	LYS
1	I	880	LYS
1	J	225	ASP
1	J	228	MET
1	J	229	PHE
1	J	230	ILE
1	J	232	LYS
1	J	235	ILE
1	J	237	ILE
1	J	241	LEU
1	J	243	LYS
1	J	244	VAL
1	J	255	ILE
1	J	262	SER
1	J	263	SER
1	J	266	SER
1	J	268	VAL
1	J	269	LEU
1	J	278	LEU
1	J	282	SER
1	J	284	MET
1	J	287	ARG
1	J	303	ASP
1	J	320	LEU
1	J	344	ARG

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Mol	Chain	Res	Type
1	J	346	THR
1	J	348	HIS
1	J	354	ASP
1	J	357	LEU
1	J	358	ILE
1	J	360	LEU
1	J	376	LYS
1	J	378	LYS
1	J	380	THR
1	J	382	LEU
1	J	383	CYS
1	J	385	LYS
1	J	386	TYR
1	J	388	ARG
1	J	393	ILE
1	J	394	LEU
1	J	396	ILE
1	J	400	ASP
1	J	402	ASP
1	J	412	SER
1	J	422	THR
1	J	423	ILE
1	J	430	ASP
1	J	431	LEU
1	J	432	VAL
1	J	433	GLU
1	J	448	LEU
1	J	449	LYS
1	J	450	LEU
1	J	456	ILE
1	J	457	SER
1	J	458	LYS
1	J	474	LEU
1	J	481	GLU
1	J	483	ASN
1	J	490	THR
1	J	491	GLU
1	J	492	PHE
1	J	498	VAL
1	J	499	SER
1	J	502	VAL
1	J	507	LYS

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Mol	Chain	Res	Type
1	J	515	GLN
1	J	516	GLN
1	J	540	LYS
1	J	546	GLN
1	J	557	SER
1	J	560	ASP
1	J	571	SER
1	J	572	PHE
1	J	576	GLN
1	J	590	LEU
1	J	591	ASP
1	J	610	ARG
1	J	615	ILE
1	J	617	ASP
1	J	631	GLN
1	J	640	THR
1	J	641	ARG
1	J	642	LEU
1	J	657	GLN
1	J	671	LYS
1	J	714	ASN
1	J	727	LEU
1	J	739	LYS
1	J	749	LYS
1	J	762	ARG
1	J	769	GLU
1	J	786	ARG
1	J	802	LEU
1	J	811	GLN
1	J	818	LYS
1	J	836	THR
1	J	841	LEU
1	J	873	LYS
1	J	889	ARG
1	J	893	LEU
1	J	903	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	242	GLN
1	A	275	HIS

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Mol	Chain	Res	Type
1	A	329	ASN
1	A	351	ASN
1	A	472	ASN
1	A	478	ASN
1	A	483	ASN
1	A	488	HIS
1	A	576	GLN
1	A	631	GLN
1	A	657	GLN
1	A	659	HIS
1	A	714	ASN
1	A	722	HIS
1	A	847	ASN
1	A	866	HIS
1	A	884	HIS
1	B	239	ASN
1	B	283	ASN
1	B	329	ASN
1	B	488	HIS
1	B	563	HIS
1	B	631	GLN
1	B	842	ASN
1	C	511	GLN
1	C	566	HIS
1	C	631	GLN
1	C	672	HIS
1	C	772	HIS
1	C	884	HIS
1	D	242	GLN
1	D	275	HIS
1	D	329	ASN
1	D	478	ASN
1	D	529	GLN
1	D	576	GLN
1	D	657	GLN
1	D	659	HIS
1	D	714	ASN
1	D	811	GLN
1	E	242	GLN
1	E	275	HIS
1	E	472	ASN
1	E	478	ASN

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Mol	Chain	Res	Type
1	E	483	ASN
1	E	576	GLN
1	E	657	GLN
1	E	714	ASN
1	E	866	HIS
1	F	391	ASN
1	F	488	HIS
1	F	511	GLN
1	F	563	HIS
1	F	631	GLN
1	F	672	HIS
1	G	283	ASN
1	G	405	ASN
1	G	631	GLN
1	G	772	HIS
1	H	242	GLN
1	H	275	HIS
1	H	410	GLN
1	H	472	ASN
1	H	478	ASN
1	H	576	GLN
1	H	657	GLN
1	I	488	HIS
1	I	629	HIS
1	J	242	GLN
1	J	275	HIS
1	J	472	ASN
1	J	478	ASN
1	J	576	GLN
1	J	657	GLN
1	J	884	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1
1	J	1
1	D	1
1	H	1
1	E	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	253:PRO	C	254:SER	N	1.15
1	J	253:PRO	C	254:SER	N	1.12
1	D	253:PRO	C	254:SER	N	1.11
1	H	253:PRO	C	254:SER	N	1.11
1	E	253:PRO	C	254:SER	N	1.08

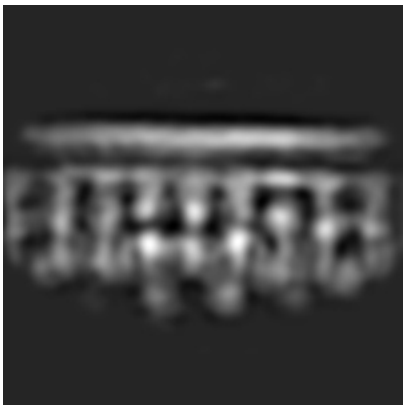
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-10065. These allow visual inspection of the internal detail of the map and identification of artifacts.

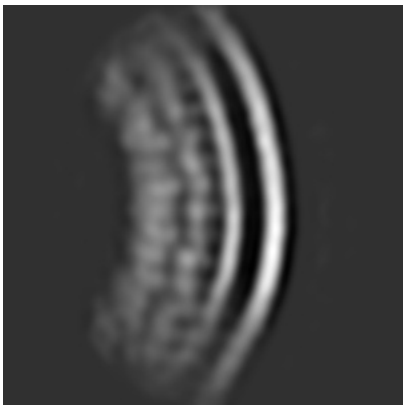
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

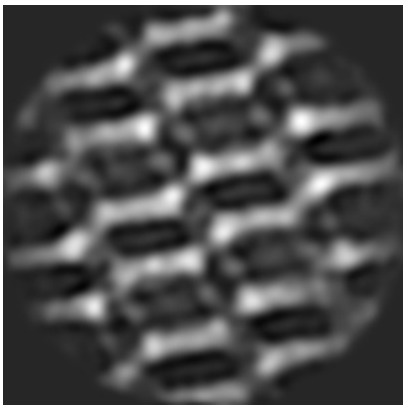
6.1.1 Primary map



X

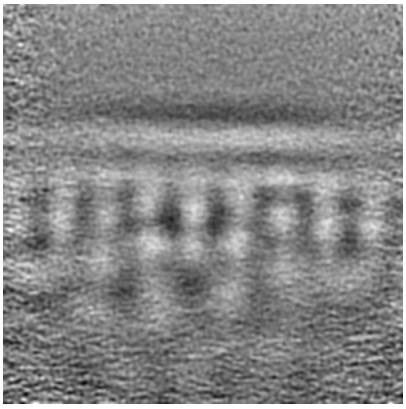


Y

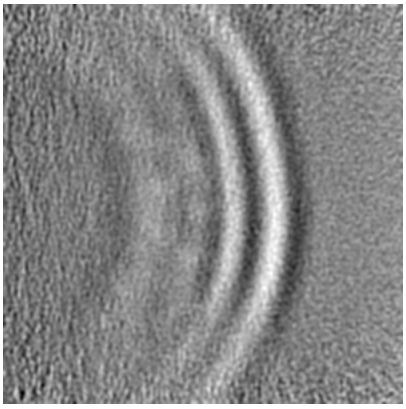


Z

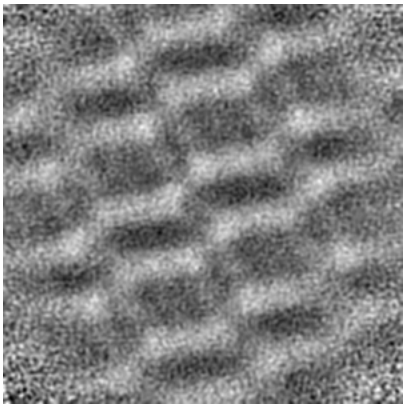
6.1.2 Raw map



X



Y



Z

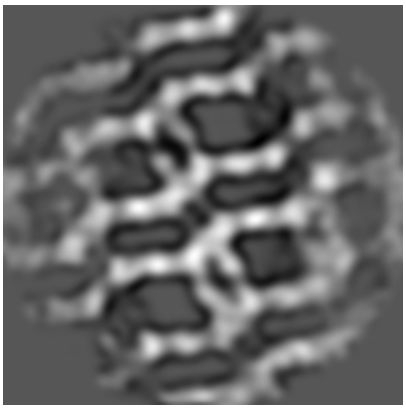
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map

X Index: 80

Y Index: 80

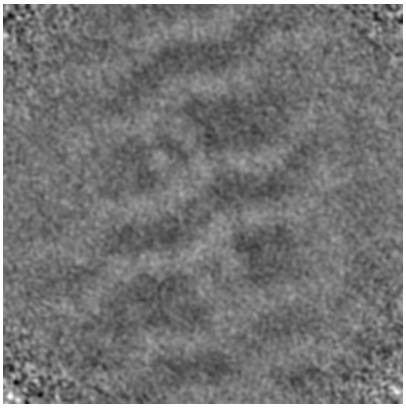


Z Index: 80

6.2.2 Raw map

X Index: 80

Y Index: 80



Z Index: 80

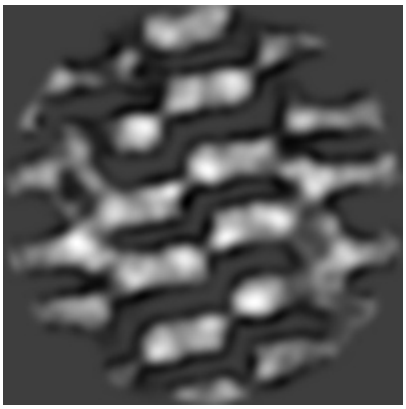
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map

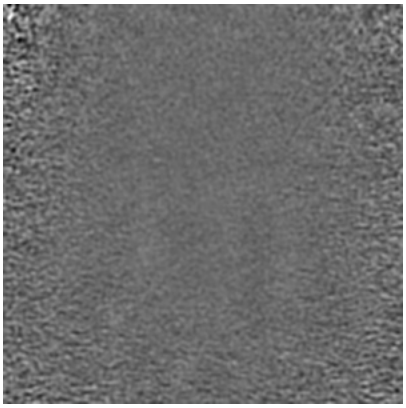
X Index: 59

Y Index: 93

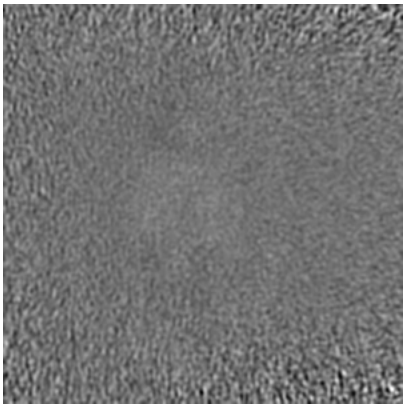


Z Index: 63

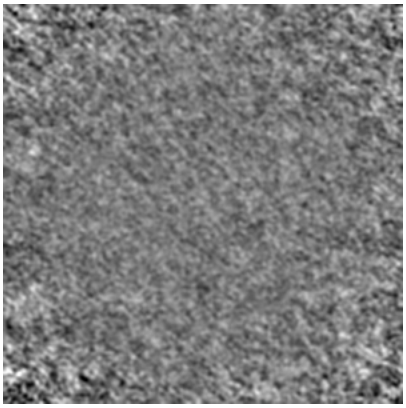
6.3.2 Raw map



X Index: 1



Y Index: 1

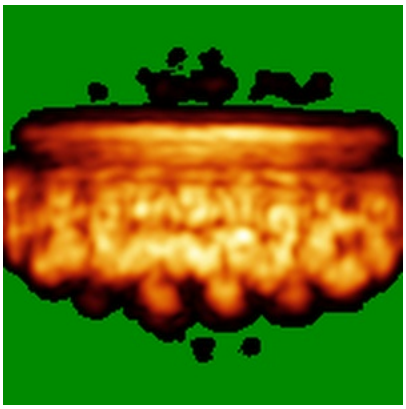


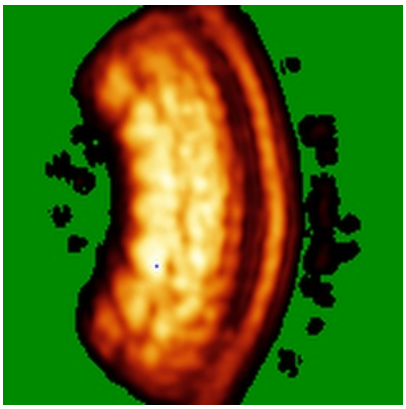
Z Index: 0

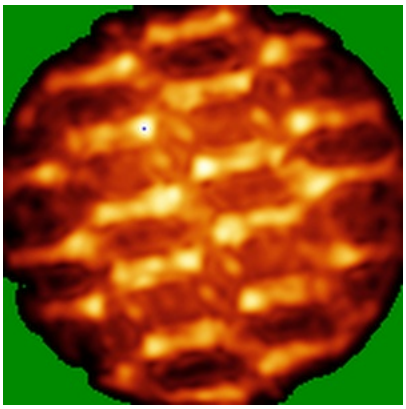
The images above show the largest variance slices of the map in three orthogonal directions.

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

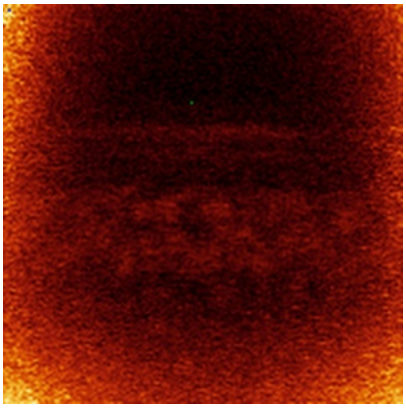
6.4.1 Primary map

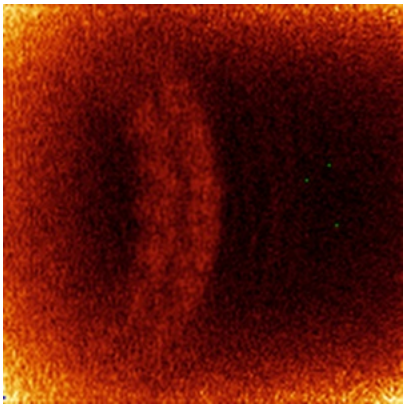

X

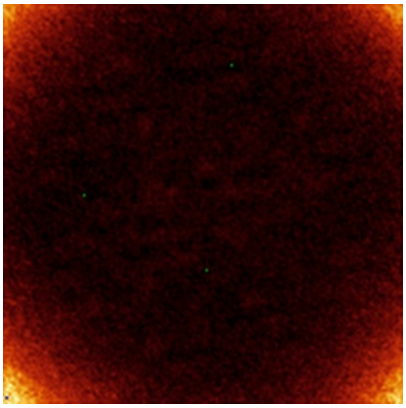

Y


Z

6.4.2 Raw map


X


Y


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.67. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

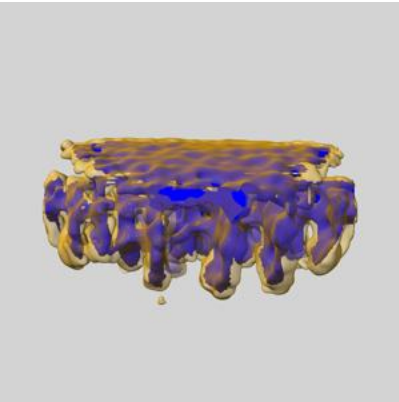
6.6 Mask visualisation (i)

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

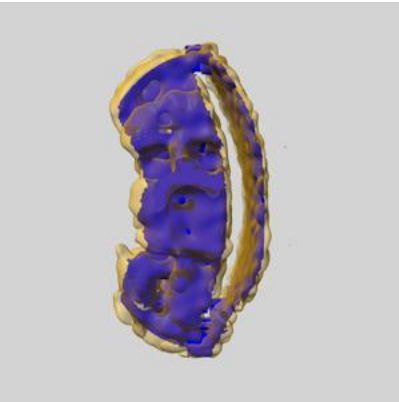
A mask typically either:

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

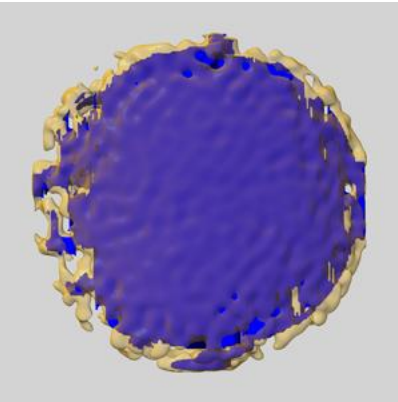
6.6.1 emd_10065_msk_1.map (i)



X



Y

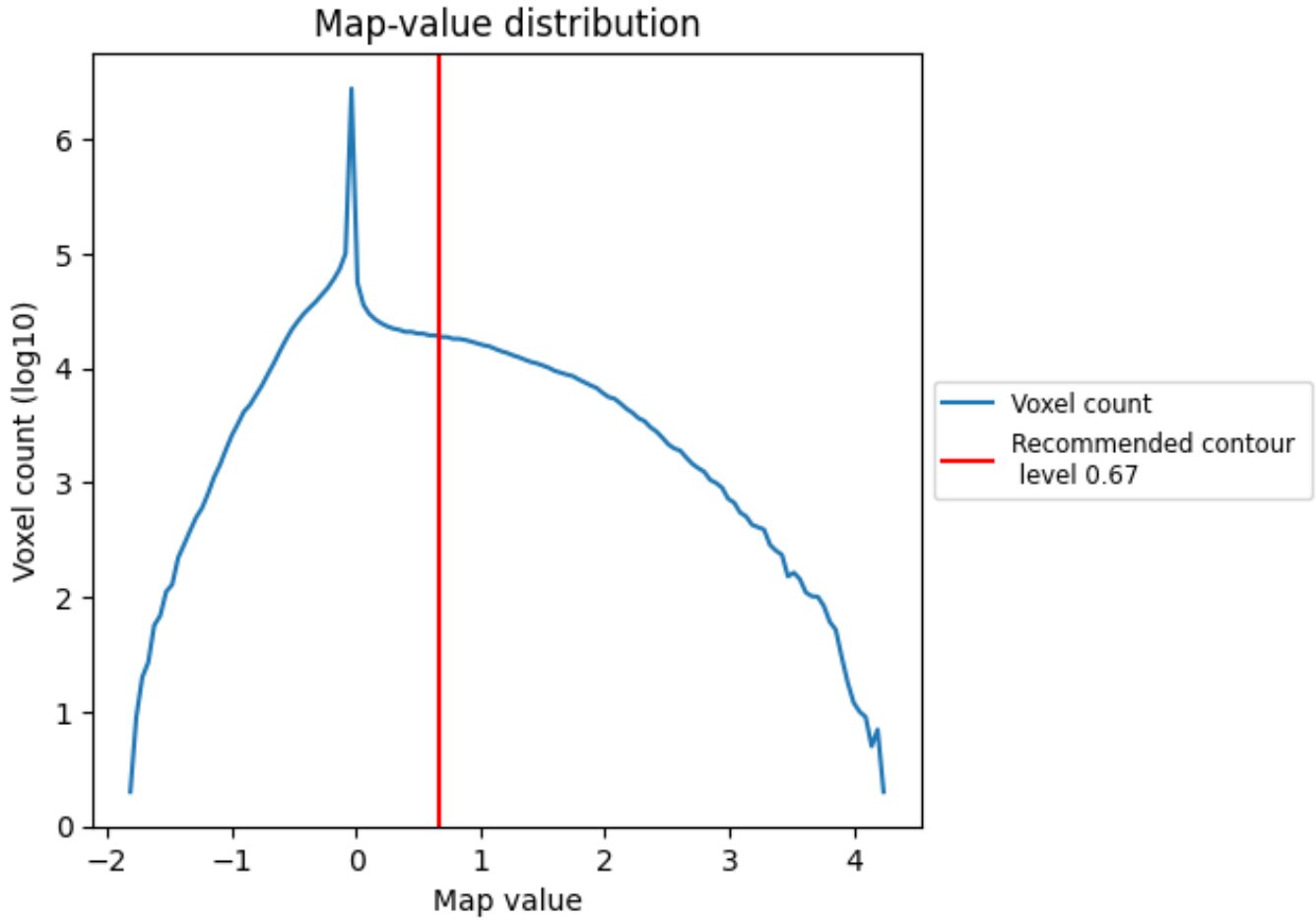


Z

7 Map analysis

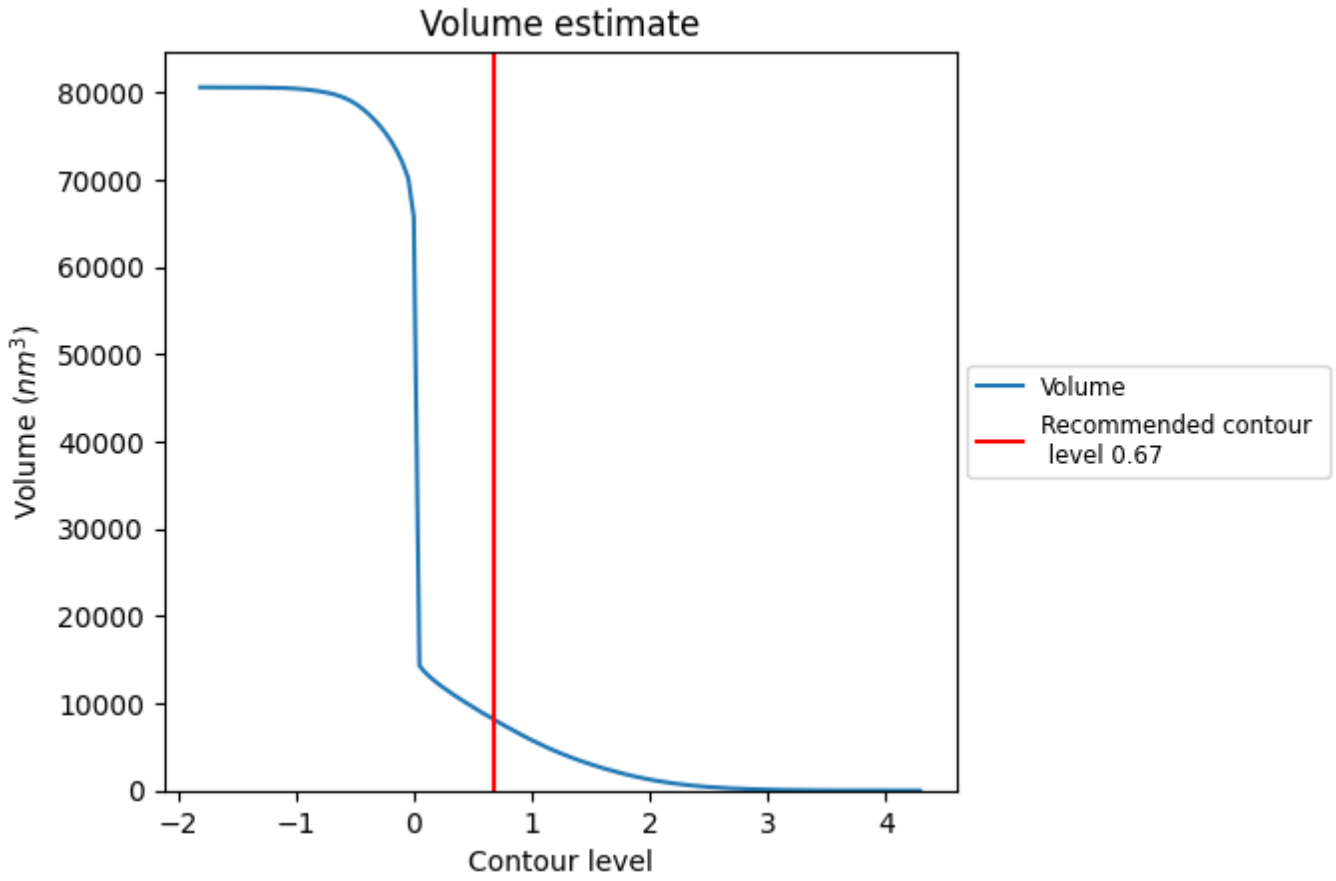
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

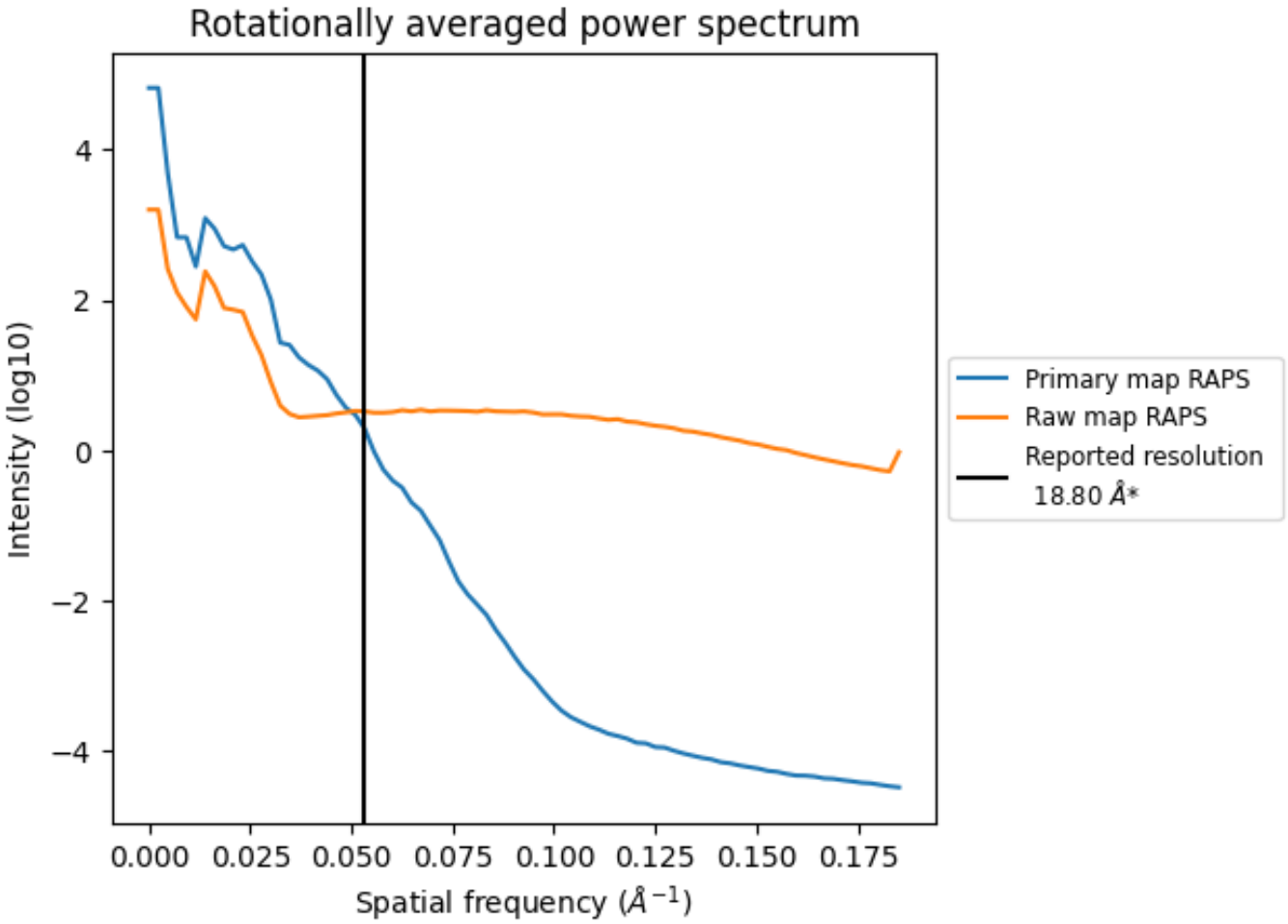
7.2 Volume estimate



The volume at the recommended contour level is 8207 nm^3; this corresponds to an approximate mass of 7413 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)

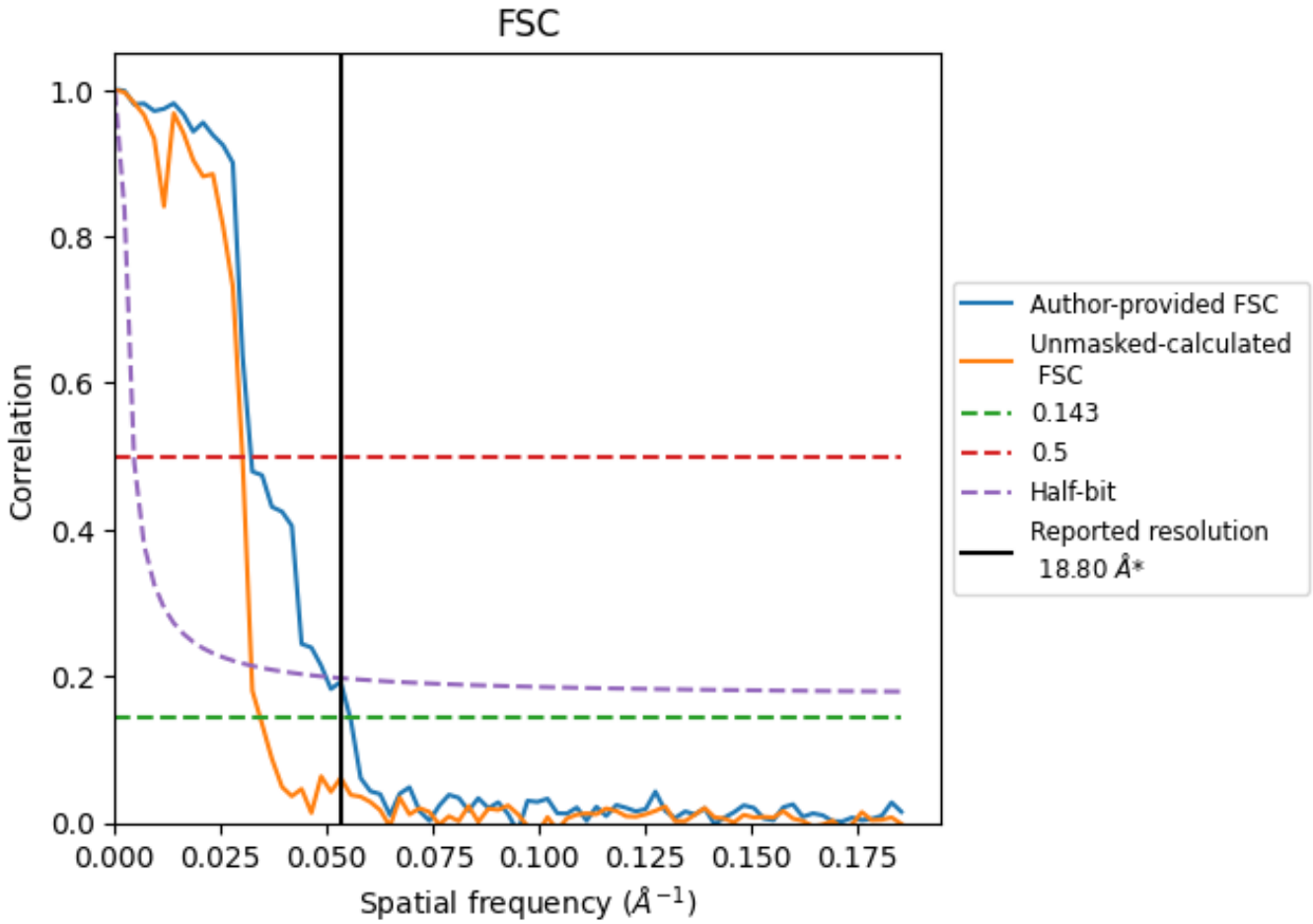


*Reported resolution corresponds to spatial frequency of 0.053 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.053 Å^{-1}

8.2 Resolution estimates (i)

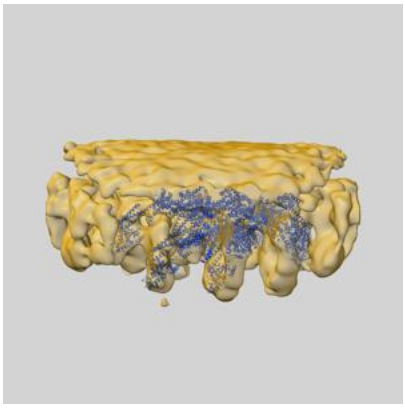
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	18.80	-	-
Author-provided FSC curve	18.05	31.15	20.08
Unmasked-calculated*	29.15	33.22	31.06

*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 29.15 differs from the reported value 18.8 by more than 10 %

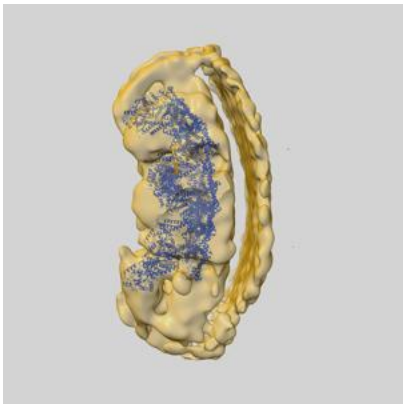
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-10065 and PDB model 6RZW. Per-residue inclusion information can be found in section 3 on page 5.

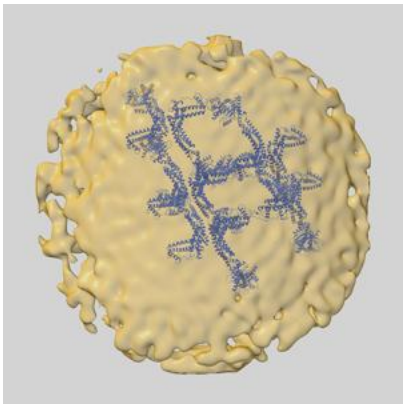
9.1 Map-model overlay



X



Y



Z

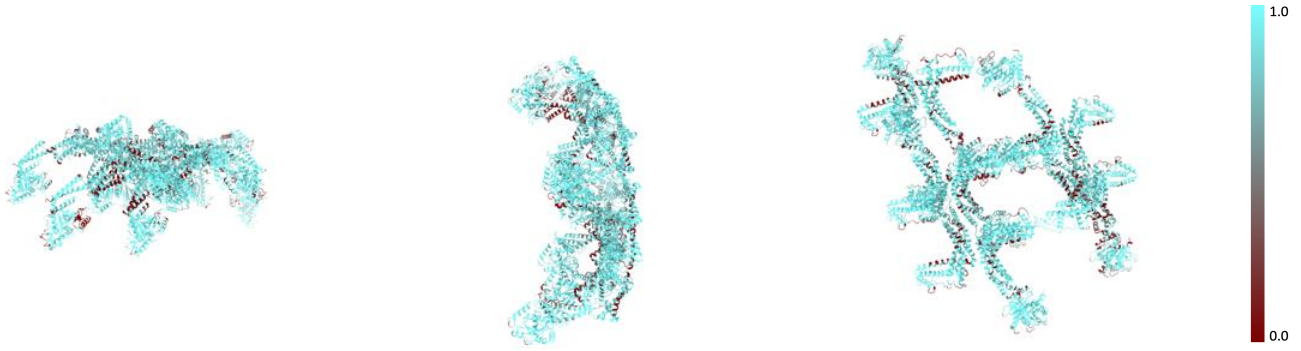
The images above show the 3D surface view of the map at the recommended contour level 0.67 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model

X Y Z

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

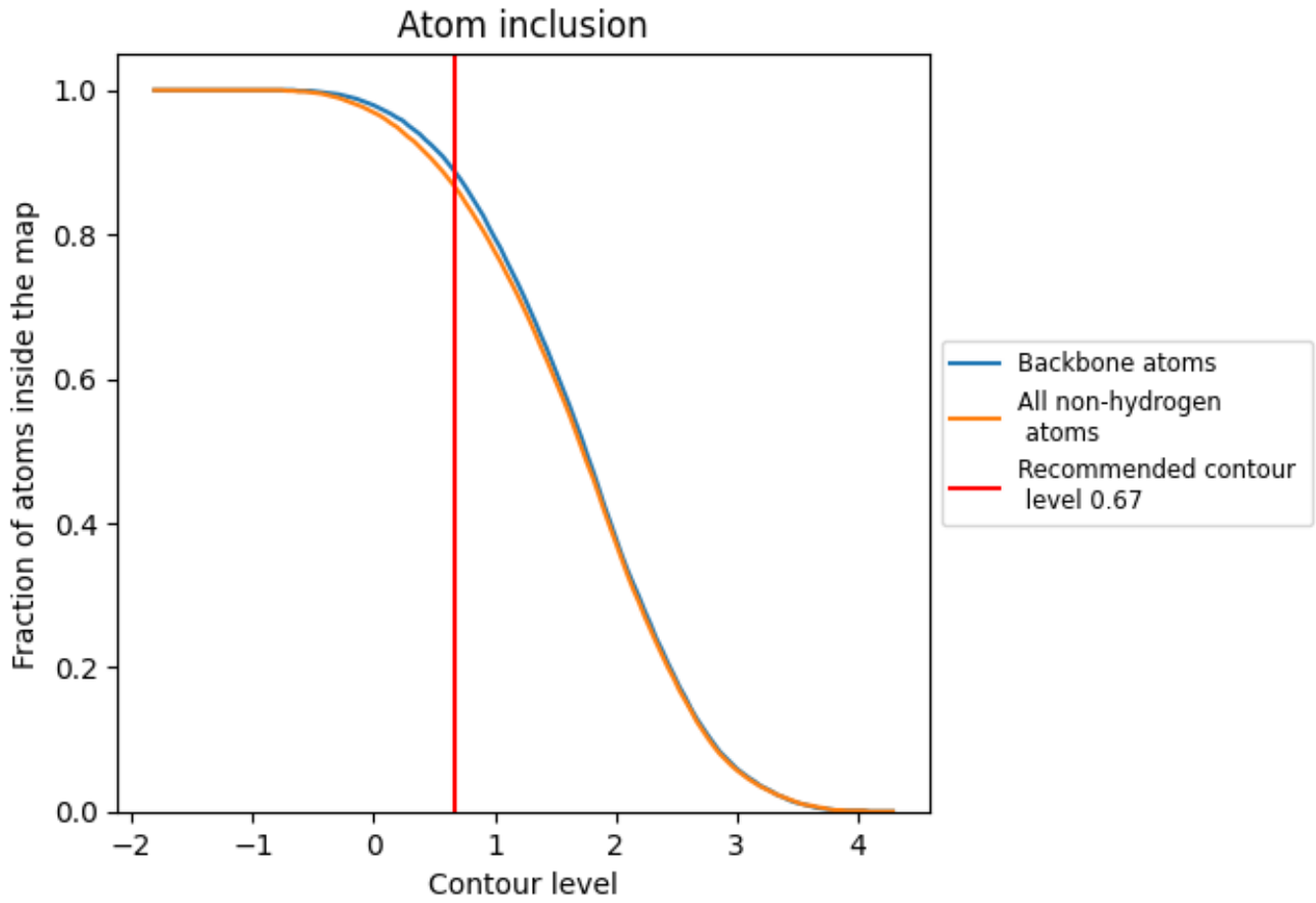
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.67).

9.4 Atom inclusion (i)



At the recommended contour level, 89% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.67) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8660	0.0580
A	0.8920	0.0610
B	0.9060	0.0590
C	0.8980	0.0590
D	0.8890	0.0620
E	0.8660	0.0620
F	0.8500	0.0550
G	0.8850	0.0580
H	0.7690	0.0490
I	0.8560	0.0570
J	0.8510	0.0560