Full wwPDB EM Validation Report

Jun 18, 2025 – 04:40 PM JST

PDB ID	:	7YFP / pdb_00007yfp
EMDB ID	:	EMD-33796
Title	:	The NuA4 histone acetyltransferase complex from S. cerevisiae
Authors	:	Ji, L.T.; Zhao, L.X.; Xu, K.; Gao, H.H.; Zhou, Y.; Kornberg, R.D.; Zhang, H.Q.
Deposited on	:	2022-07-08
Resolution	:	4.00 Å(reported)
Based on initial model	:	5OJS

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 (1)) were used in the production of this report:

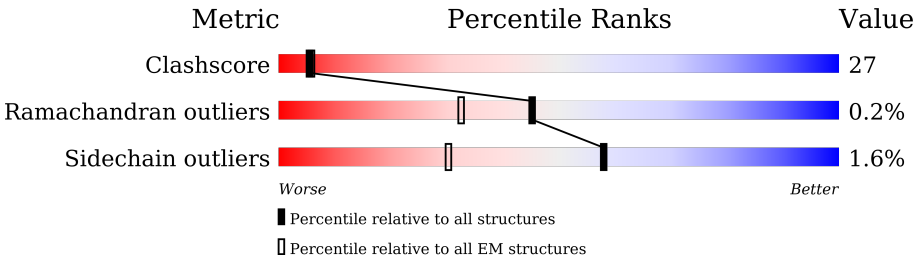
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 4.00 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	372	6% 52% 48%
2	B	481	47% 36% 16%
3	D	982	27% 19% 54%
4	E	476	26% 16% 58%
5	F	832	9% 6% 85%
6	T	3744	21% 47% 44% 7%

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 40949 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 Actin.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	372	Total	C	N	O	S	0	0
			2904	1841	491	553	19		

- Molecule 2 is a protein called ARP4 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	402	Total	C	N	O	S	0	0
			3172	2024	518	619	11		

- Molecule 3 is a protein called Chromatin modification-related protein EAF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	454	Total	C	N	O	S	0	0
			3777	2392	683	691	11		

- Molecule 4 is a protein called SWR1-complex protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	201	Total	C	N	O	S	0	0
			1668	1069	276	319	4		

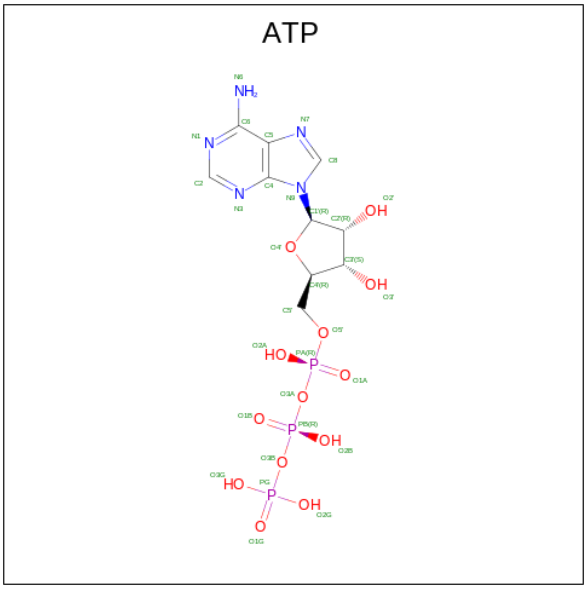
- Molecule 5 is a protein called Enhancer of polycomb-like protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	F	124	Total	C	N	O	S	0	0
			1023	653	177	190	3		

- Molecule 6 is a protein called Transcription-associated protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	T	3475	Total	C	N	O	S	0	0
			28374	18368	4717	5169	120		

- Molecule 7 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



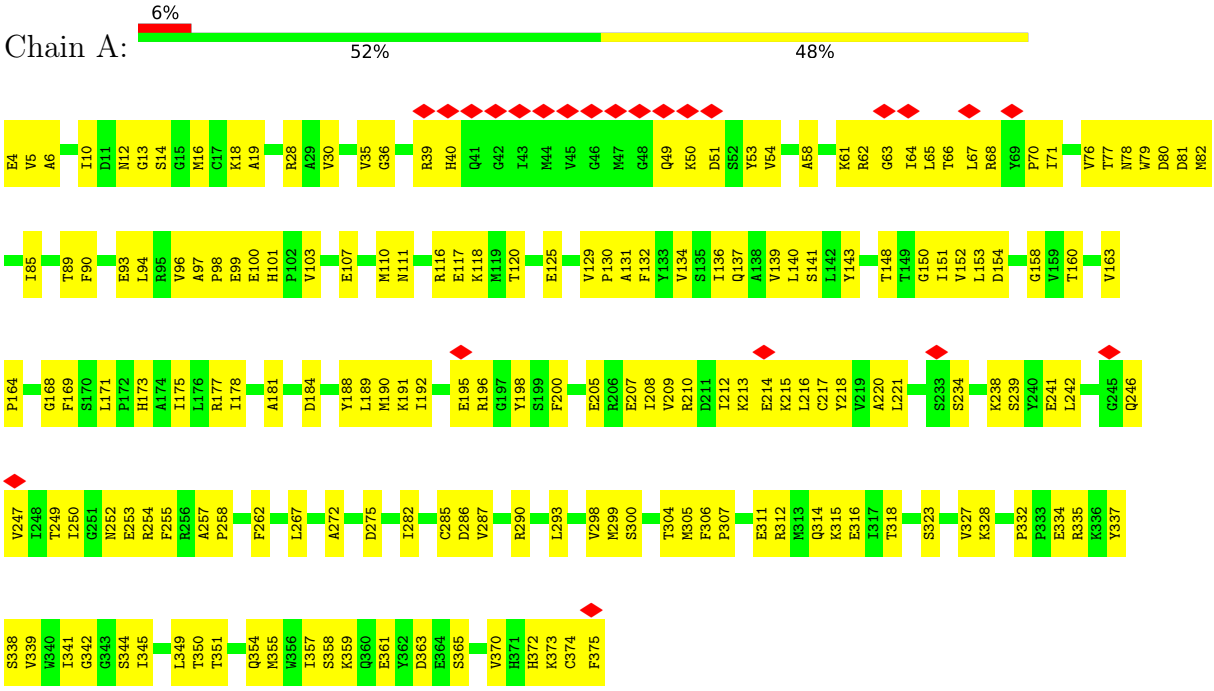
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
7	B	1	31	10	5	13	3	0

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.

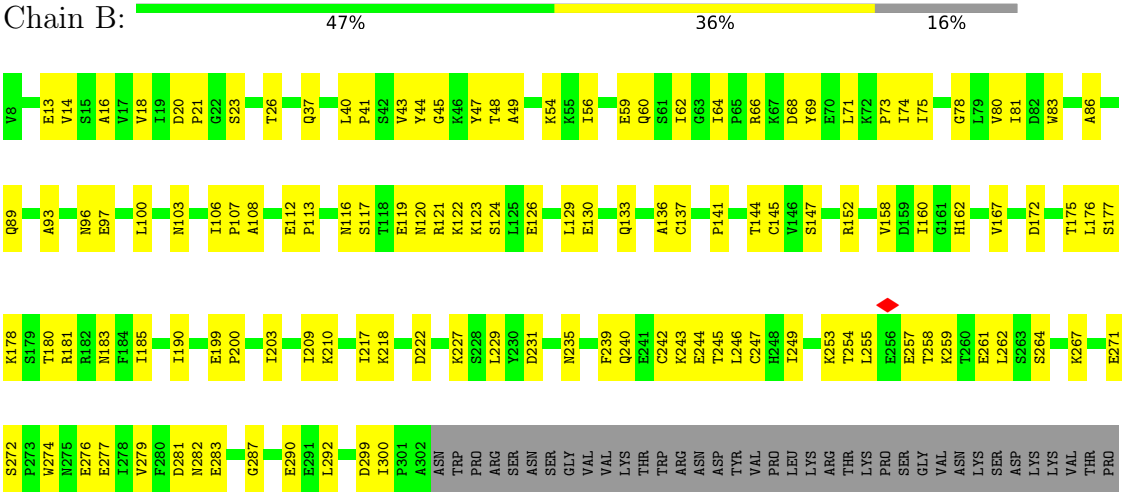
• Molecule 1: Actin

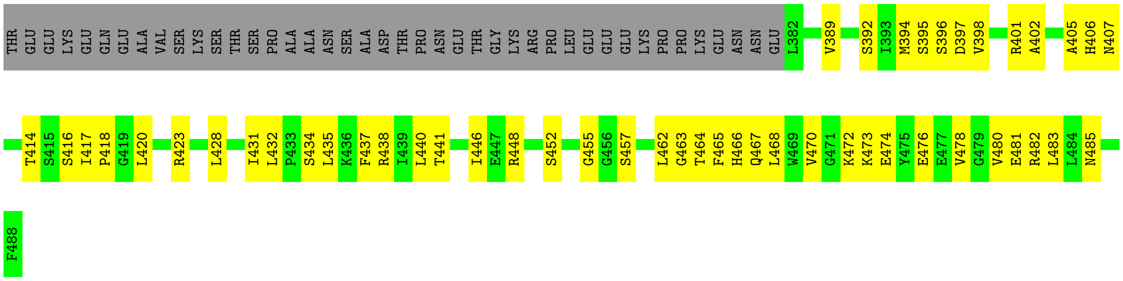
Chain A:



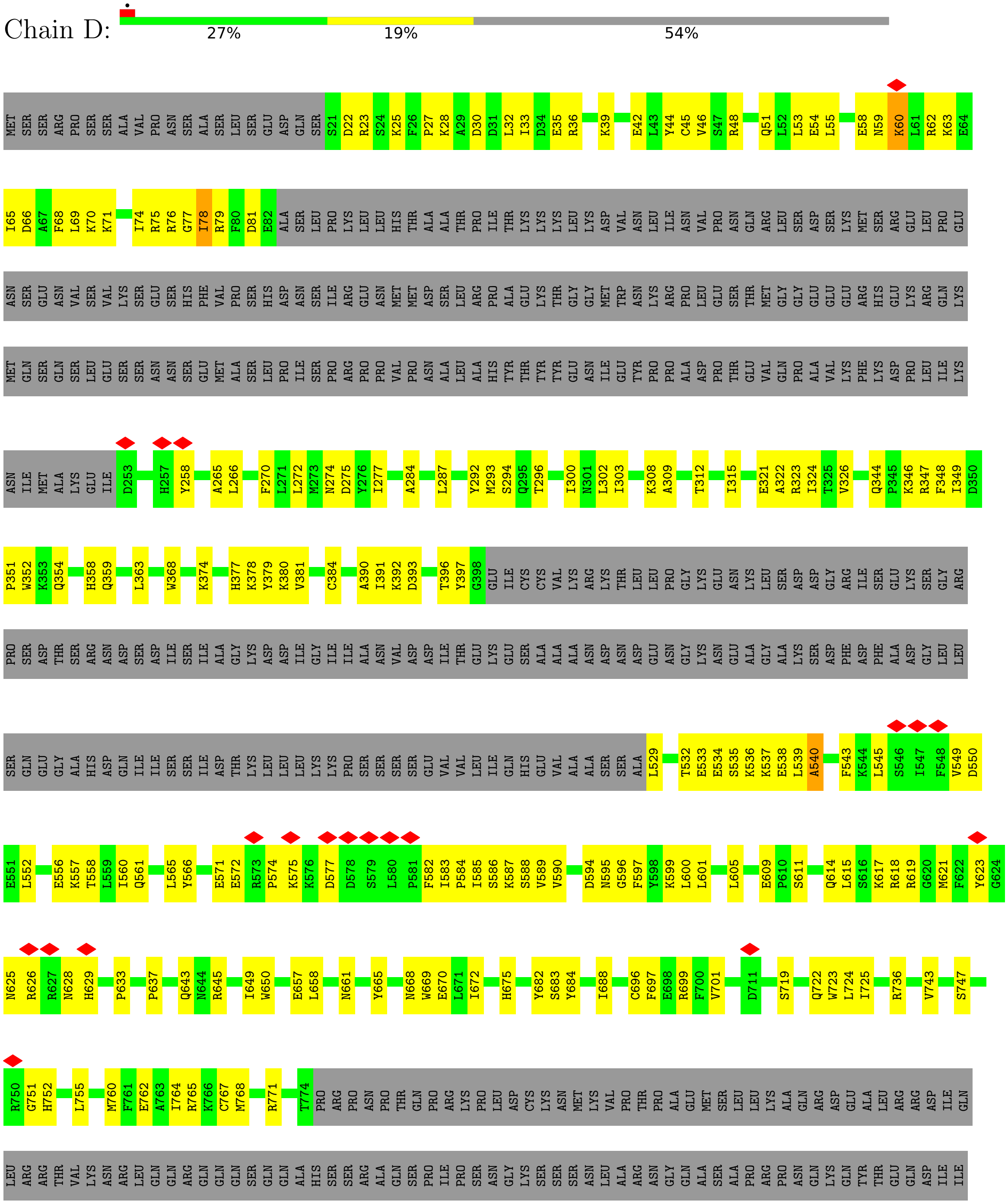
• Molecule 2: ARP4 isoform 1

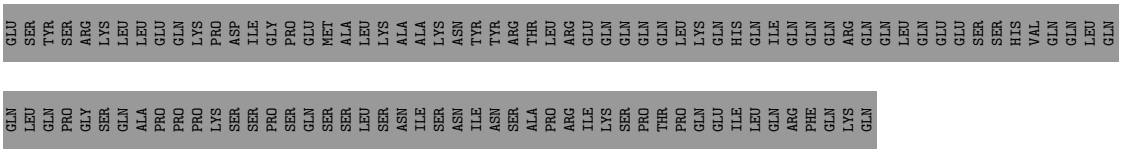
Chain B:





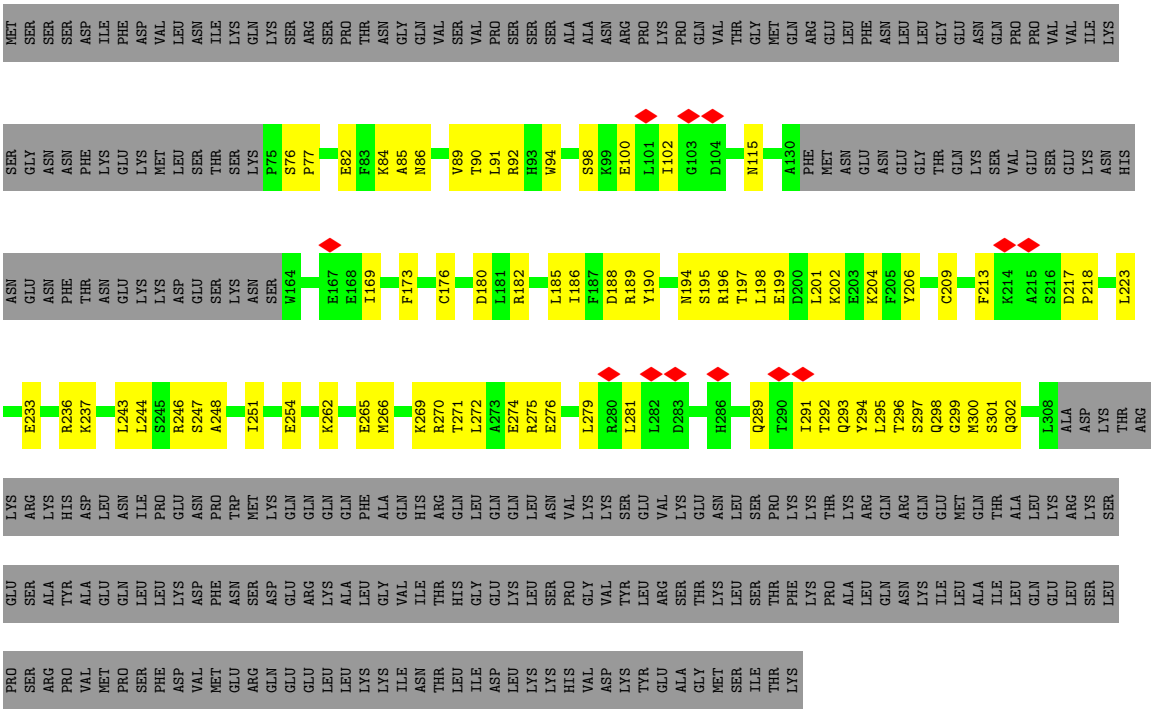
- Molecule 3: Chromatin modification-related protein EAF1





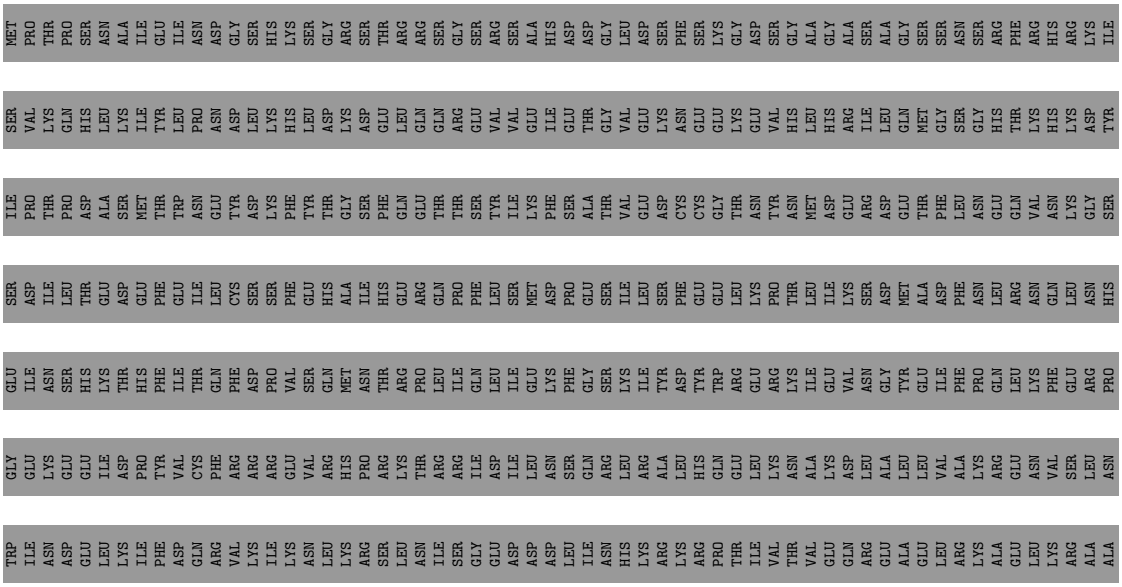
• Molecule 4: SWR1-complex protein 4

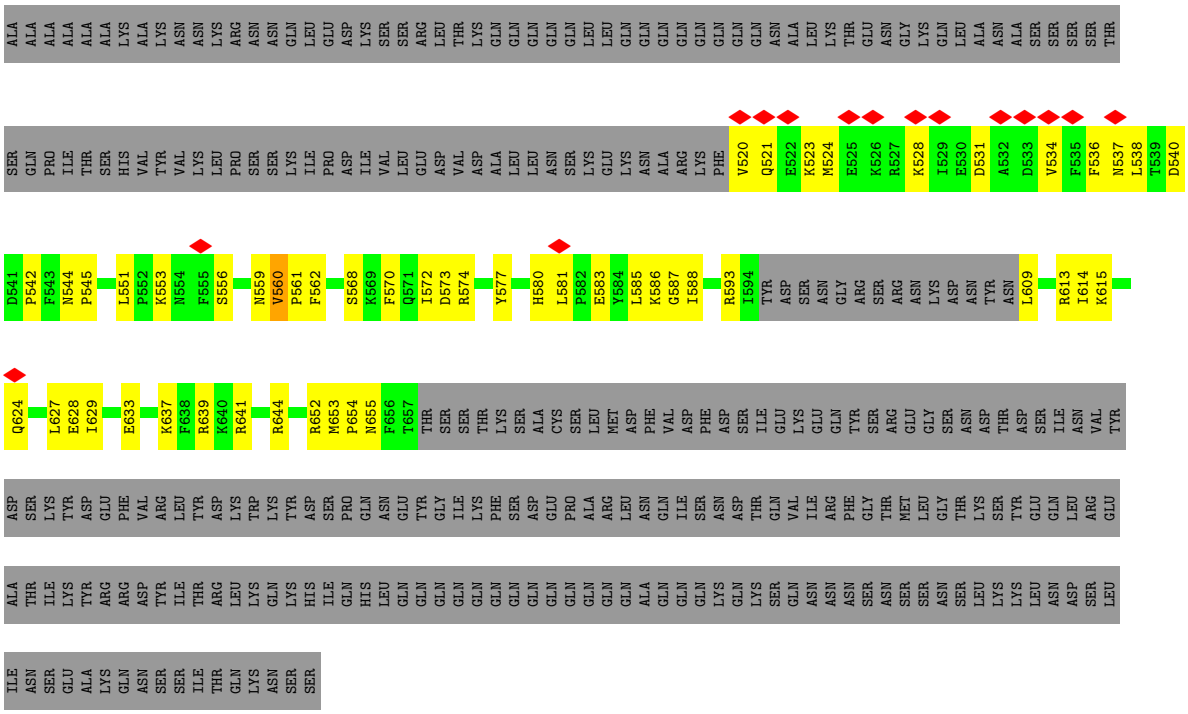
Chain E: 26% 16% 58%



• Molecule 5: Enhancer of polycomb-like protein 1

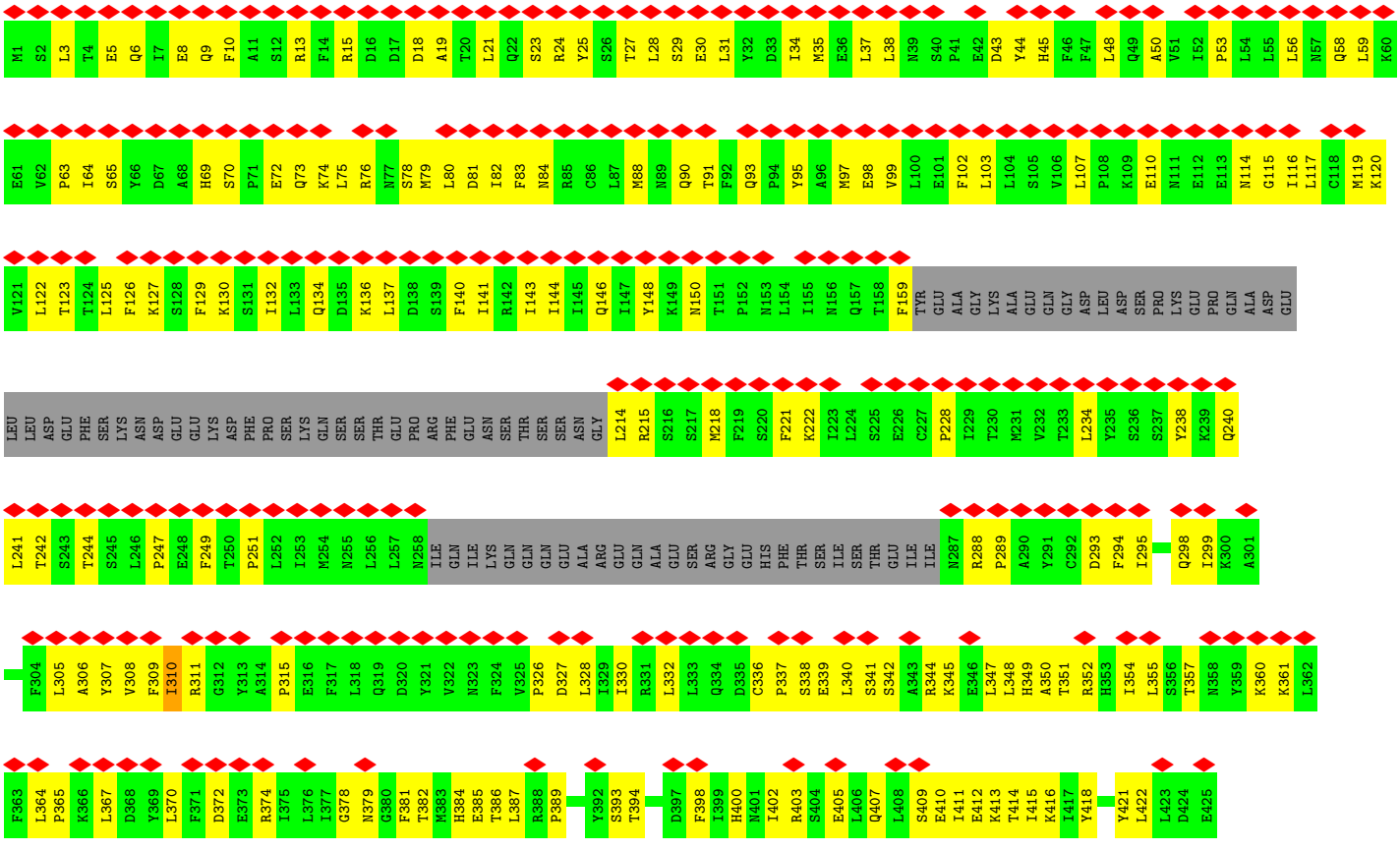
Chain F: 9% 6% 85%

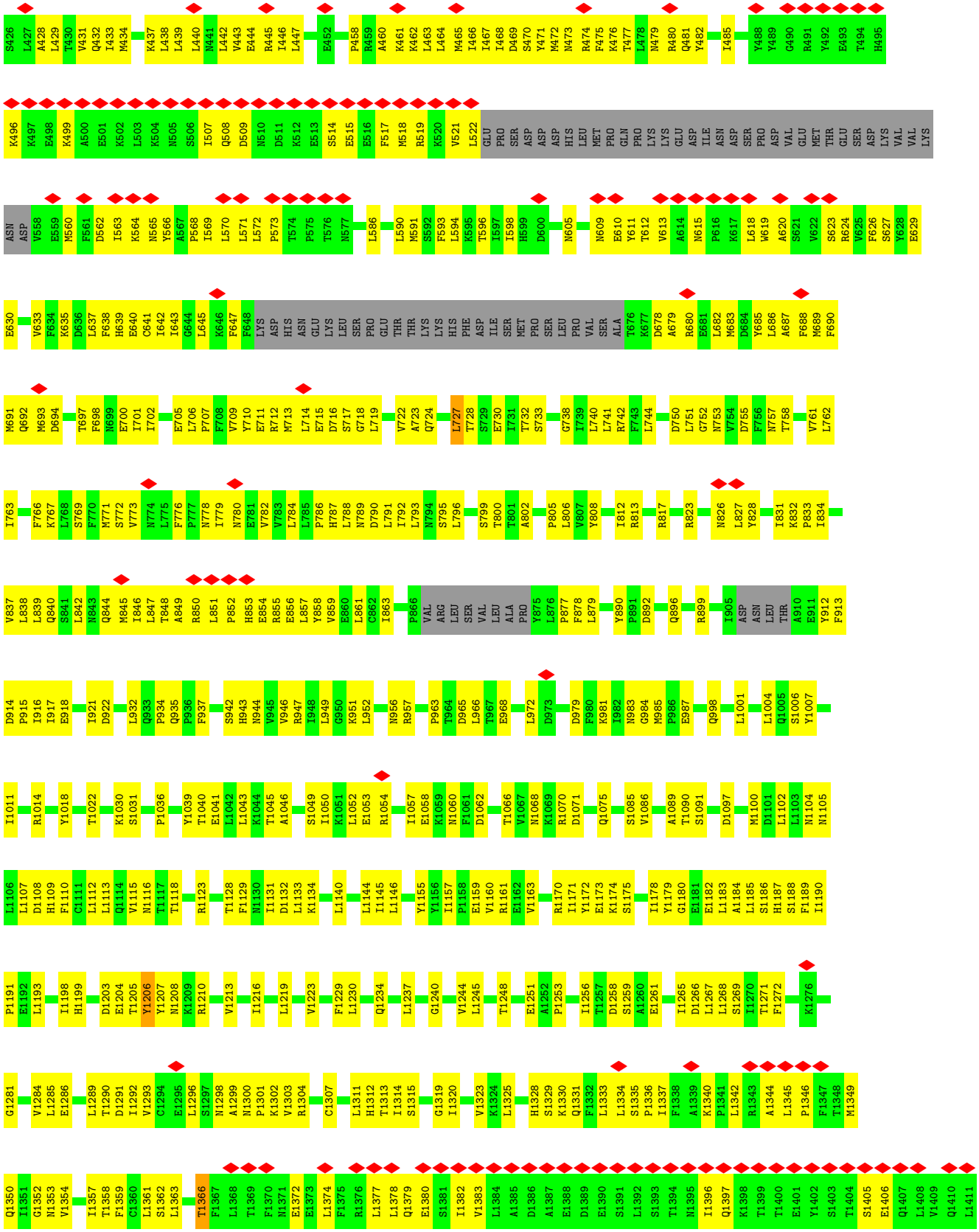




• Molecule 6: Transcription-associated protein 1

Chain T:

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K496 K497 E498 K499 A500 E501 K502 L503 K504 N505 S506 I507 Q508 D509 N510 D511 K512 E513 S514 E515 E516 F517 M518 R519 K520 V521 L522 GLU PRO SER ASP ASP HIS LEU MET PRO GLN PRO LYS LYS GLU ASP ILE ASN ASP SER PRO ASP VAL GLU MET THR GLU SER ASP LYS VAL VAL LYS
ASN ASP V558 E559 M560 F561 D562 I563 K564 N565 Y566 A567 P568 I569 L570 L571 L572 P573 T574 P575 T576 N577 L586 L590 M591 S592 F593 L594 K595 T596 I597 I598 H599 D600 N605 N609 E610 Y611 T612 V613 A614 N615 P616 K617 L618 W619 A620 S621 V622 S623 R624 V625 F626 S627 Y628 E629
E630 V633 F634 K635 D636 L637 F638 H639 E640 C641 I642 I643 G644 L645 K646 F647 F648 LYS ASP HIS ASN GLU LYS LEU SER PRO GLU THR LYS LYS HIS PHE ASP ILE SER MET PRO SER LEU PRO VAL SER ALA T676 K677 D678 A679 R680 E681 L682 M683 D684 Y685 L686 A687 F688 M689 F690
M691 Q692 M693 D694 T697 F698 N699 E700 I701 I702 E705 L706 P707 F708 V709 Y710 E711 R712 M713 L714 E715 D716 S717 G718 L719 V722 A723 Q724 L727 T728 S729 E730 I731 T732 S733 G738 I739 L740 L741 R742 F743 L744 D750 L751 G752 N753 V754 D755 F756 N757 T758 V761 L762
I763 F766 K767 L768 S769 F770 M771 S772 V773 N774 L775 F776 P777 N778 I779 N780 E781 V782 V783 L784 L785 P786 H787 L788 N789 D790 L791 I792 L793 N794 S795 L796 S799 T800 T801 A802 P805 L806 V807 Y808 I812 R813 R817 R823 N826 L827 Y828 I831 K832 P833 I834
V837 L838 L839 Q840 S841 L842 N843 Q844 M845 I846 L847 T848 A849 R850 L851 P852 H853 E854 R855 E856 L857 Y858 V859 E860 L861 C862 I863 P866 VAL ARG LEU SER VAL LEU ALA PRO Y875 L876 P877 F878 L879 Y890 P891 D892 Q896 R899 I905 ASP ASN LEU THR A910 E911 Y912 F913
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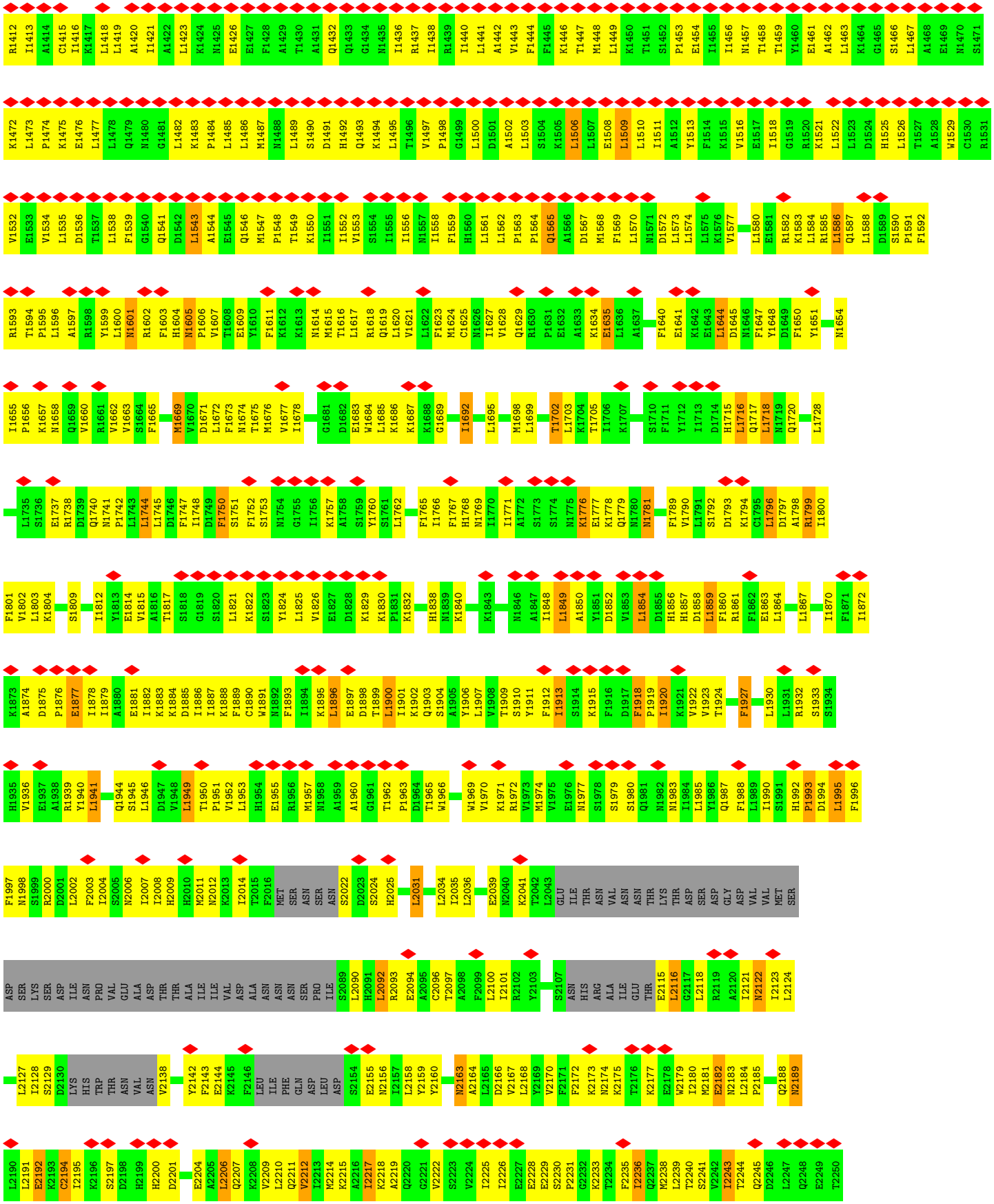
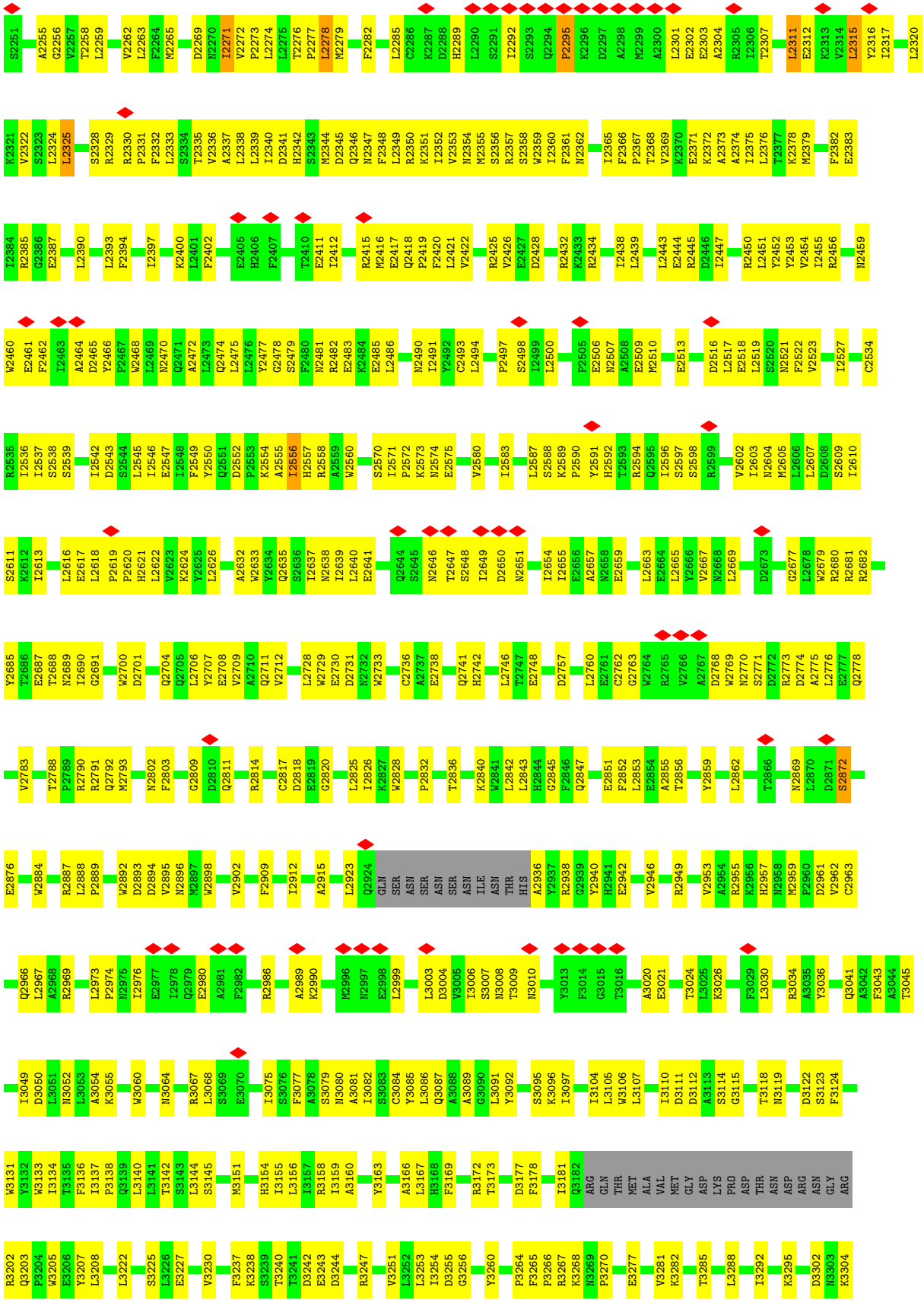
G1281 V1284 L1285 E1286 L1289 T1290 D1291 I1292 V1293 C1294 E1295 L1296 S1297 N1298 A1299 N1300 P1301 K1302 V1303 R1304 C1307 L1311 H1312 T1313 I1314 S1315 G1319 I1320 V1323 K1324 L1325 H1328 S1329 K1330 Q1331 F1332 L1333 L1334 S1335 P1336 I1337 F1338 A1339 K1340 P1341 L1342 R1343 A1344 L1345 P1346 F1347 T1348 M1349
Q1350 I1351 G1352 N1353 V1354 I1357 T1358 F1359 C1360 L1361 S1362 L1363 T1366 F1367 L1368 T1369 F1370 N1371 E1372 E1373 L1374 F1375 R1376 L1377 L1378 Q1379 E1380 S1381 I1382 V1383 L1384 A1385 D1386 A1387 E1388 D1389 E1390 S1391 L1392 S1393 T1394 N1395 I1396 Q1397 K1398 T1399 T1400 E1401 Y1402 S1403 T1404 S1405 E1406 Q1407 L1408 V1409 Q1410 L1411

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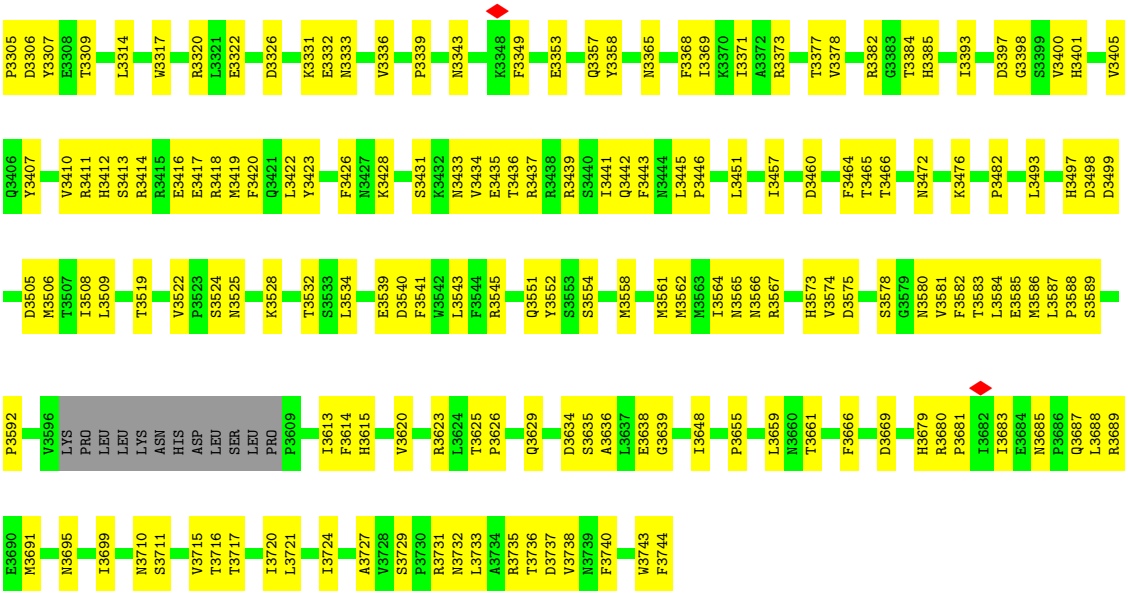
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E3690 M3691 N3695 I3699 N3710 S3711 V3715 T3716 T3717 I3720 L3721 I3724 A3727 V3728 S3729 P3730 R3731 N3732 L3733 A3734 R3735 T3736 D3737 V3738 N3739 F3740 W3743 F3744

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	197044	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	1300	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.170	Depositor
Minimum map value	-0.099	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.0396	Depositor
Map size (Å)	330.0, 330.0, 330.0	wwPDB
Map dimensions	500, 500, 500	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.66, 0.66, 0.66	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.18	0/2968	0.36	0/4017
2	B	0.23	0/3241	0.38	0/4398
3	D	0.25	0/3859	0.48	0/5212
4	E	0.20	0/1707	0.38	0/2300
5	F	0.24	0/1046	0.55	0/1405
6	T	0.50	0/28991	0.72	4/39278 (0.0%)
All	All	0.44	0/41812	0.64	4/56610 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	D	0	3
5	F	0	1
6	T	0	1
All	All	0	5

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	T	3592	PRO	N-CA-CB	6.65	110.23	103.25
6	T	1960	ALA	N-CA-C	-6.22	106.33	114.04
6	T	1436	ILE	N-CA-C	-5.66	107.36	112.12
6	T	2872	SER	N-CA-C	-5.47	107.25	114.04

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	D	535	SER	Peptide
3	D	540	ALA	Peptide
3	D	60	LYS	Peptide
5	F	560	VAL	Peptide
6	T	1366	THR	Peptide

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	2904	0	2874	138	0
2	B	3172	0	3125	136	0
3	D	3777	0	3763	190	0
4	E	1668	0	1630	73	0
5	F	1023	0	999	58	0
6	T	28374	0	28736	1730	0
7	B	31	0	12	5	0
All	All	40949	0	41139	2238	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 27.

All (2238) 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)
6:T:480:ARG:HD3	6:T:1760:TYR:CD1	1.17	1.60
6:T:2320:LEU:CD1	6:T:2355:MET:HB3	1.26	1.58
6:T:480:ARG:CB	6:T:1760:TYR:CZ	1.86	1.55
6:T:480:ARG:HD3	6:T:1760:TYR:CE1	1.40	1.53
6:T:2320:LEU:HD11	6:T:2355:MET:C	1.30	1.50
6:T:2320:LEU:CD1	6:T:2355:MET:CB	1.85	1.50
6:T:694:ASP:CG	6:T:1585:ARG:HH11	1.15	1.45
6:T:2320:LEU:HD13	6:T:2355:MET:CB	1.42	1.44
6:T:1441:LEU:CD1	6:T:1473:LEU:HD13	1.51	1.41
6:T:1441:LEU:HD12	6:T:1473:LEU:CD1	1.49	1.40
6:T:560:MET:HA	6:T:1767:PHE:CZ	1.59	1.37
6:T:2325:LEU:CD2	6:T:2329:ARG:HA	1.53	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:480:ARG:HB3	6:T:1760:TYR:CZ	1.49	1.32
6:T:560:MET:HG2	6:T:1767:PHE:CE1	1.64	1.31
6:T:480:ARG:CD	6:T:1760:TYR:CE1	2.12	1.30
6:T:480:ARG:CD	6:T:1760:TYR:CD1	2.13	1.29
6:T:480:ARG:HB2	6:T:1760:TYR:CZ	1.52	1.28
6:T:2320:LEU:HD21	6:T:2358:SER:OG	1.33	1.27
6:T:2325:LEU:HD21	6:T:2329:ARG:CA	1.69	1.23
6:T:480:ARG:HB2	6:T:1760:TYR:CE1	1.74	1.21
6:T:480:ARG:HB3	6:T:1760:TYR:CE2	1.77	1.20
6:T:694:ASP:OD2	6:T:1585:ARG:NH1	1.73	1.19
6:T:560:MET:HG2	6:T:1767:PHE:CZ	1.76	1.19
6:T:2276:THR:CG2	6:T:2277:PRO:HD3	1.72	1.19
6:T:1594:THR:OG1	6:T:1595:PRO:HD3	1.40	1.18
6:T:694:ASP:CG	6:T:1585:ARG:NH1	2.00	1.16
6:T:629:GLU:CD	6:T:1717:GLN:HB3	1.69	1.16
6:T:2320:LEU:CD1	6:T:2355:MET:C	2.20	1.14
6:T:1441:LEU:CD1	6:T:1473:LEU:CD1	2.13	1.12
6:T:1441:LEU:HD12	6:T:1473:LEU:HD12	1.28	1.12
6:T:1441:LEU:HD13	6:T:1473:LEU:HD13	1.19	1.11
6:T:381:PHE:HB2	6:T:1858:ASP:OD1	1.50	1.10
6:T:480:ARG:CB	6:T:1760:TYR:CE1	2.32	1.09
6:T:480:ARG:CB	6:T:1760:TYR:OH	1.96	1.09
6:T:480:ARG:HB2	6:T:1760:TYR:OH	1.51	1.08
6:T:613:VAL:HG13	6:T:1536:ASP:OD1	1.53	1.07
6:T:1900:LEU:HD23	6:T:1900:LEU:H	1.17	1.06
6:T:1716:LEU:H	6:T:1716:LEU:HD12	1.16	1.05
6:T:1920:ILE:H	6:T:1920:ILE:HD12	1.21	1.05
6:T:1543:LEU:HD22	6:T:1543:LEU:H	1.20	1.05
6:T:1449:LEU:HD22	6:T:1484:PRO:HG2	1.35	1.04
6:T:611:TYR:CZ	6:T:1583:LYS:O	2.10	1.04
6:T:1441:LEU:HB2	6:T:1473:LEU:HD11	1.39	1.04
6:T:560:MET:CA	6:T:1767:PHE:CZ	2.39	1.04
6:T:560:MET:O	6:T:1767:PHE:HE1	1.42	1.03
6:T:480:ARG:NH1	6:T:1760:TYR:HD1	1.55	1.02
6:T:2116:LEU:HD23	6:T:2116:LEU:H	1.22	1.02
6:T:611:TYR:CE1	6:T:1583:LYS:O	2.12	1.02
6:T:694:ASP:OD1	6:T:1585:ARG:NH1	1.91	1.02
6:T:2320:LEU:HD12	6:T:2355:MET:CB	1.84	1.01
6:T:560:MET:CG	6:T:1767:PHE:CE1	2.43	1.01
6:T:2320:LEU:HD11	6:T:2356:SER:N	1.74	1.00
6:T:2276:THR:HG23	6:T:2277:PRO:CD	1.90	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:480:ARG:NH1	6:T:1760:TYR:CD1	2.28	0.99
6:T:480:ARG:NH1	6:T:1760:TYR:HB2	1.77	0.99
6:T:629:GLU:OE1	6:T:1717:GLN:HB3	1.60	0.99
6:T:1487:MET:HE2	6:T:1487:MET:HA	1.43	0.98
6:T:339:GLU:CD	6:T:1897:GLU:HG2	1.88	0.97
6:T:480:ARG:C	6:T:1760:TYR:OH	2.08	0.96
6:T:2320:LEU:CD1	6:T:2355:MET:CA	2.43	0.96
6:T:378:GLY:O	6:T:1856:HIS:NE2	1.99	0.96
6:T:2320:LEU:HD21	6:T:2358:SER:HG	1.27	0.95
6:T:1832:LYS:HE2	6:T:1832:LYS:HA	1.49	0.94
6:T:2320:LEU:CD1	6:T:2355:MET:HB2	1.96	0.94
6:T:694:ASP:OD2	6:T:1585:ARG:CZ	2.16	0.94
6:T:1751:SER:HB2	6:T:1796:LEU:HG	1.48	0.94
6:T:1950:THR:OG1	6:T:1951:PRO:HD3	1.69	0.92
6:T:2325:LEU:HD21	6:T:2329:ARG:HA	0.93	0.92
6:T:629:GLU:HG2	6:T:1720:GLN:OE1	1.69	0.92
6:T:2320:LEU:CD2	6:T:2358:SER:OG	2.17	0.92
6:T:560:MET:HA	6:T:1767:PHE:HZ	0.97	0.92
6:T:1547:MET:HA	6:T:1550:LYS:HE2	1.50	0.92
6:T:2325:LEU:CD2	6:T:2329:ARG:CA	2.35	0.91
6:T:694:ASP:OD2	6:T:1585:ARG:NE	2.04	0.91
6:T:2276:THR:HG23	6:T:2277:PRO:HD3	0.96	0.91
6:T:2320:LEU:HD12	6:T:2355:MET:HB2	1.47	0.91
6:T:1915:LYS:HA	6:T:1915:LYS:HE2	1.52	0.91
6:T:560:MET:HA	6:T:1767:PHE:CE1	2.05	0.91
6:T:2320:LEU:HD11	6:T:2355:MET:CA	2.01	0.91
6:T:560:MET:CG	6:T:1767:PHE:CZ	2.55	0.90
6:T:2155:GLU:HA	6:T:2158:LEU:HD13	1.54	0.89
6:T:2004:ILE:HG21	6:T:2035:ILE:HD13	1.55	0.89
6:T:1416:ILE:HD13	6:T:1459:THR:OG1	1.72	0.89
6:T:1594:THR:HG1	6:T:1595:PRO:HD3	1.31	0.88
6:T:1628:VAL:HG13	6:T:1675:THR:HG21	1.55	0.88
6:T:2155:GLU:HG3	6:T:2158:LEU:HD22	1.56	0.88
6:T:2207:GLN:HA	6:T:2210:LEU:HD12	1.54	0.88
6:T:560:MET:CA	6:T:1767:PHE:CE1	2.57	0.88
6:T:560:MET:C	6:T:1767:PHE:HE1	1.81	0.88
6:T:2115:GLU:OE1	6:T:2115:GLU:N	2.08	0.86
6:T:572:LEU:HA	6:T:1940:TYR:CD2	2.11	0.86
6:T:1553:VAL:HG12	6:T:1592:PHE:HB3	1.56	0.86
6:T:2315:LEU:HD12	6:T:2315:LEU:O	1.76	0.86
6:T:1692:ILE:HA	6:T:1695:LEU:HD12	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:284:ALA:HB1	4:E:265:GLU:HG2	1.56	0.85
6:T:381:PHE:HD2	6:T:1859:LEU:HD21	1.39	0.85
6:T:381:PHE:CD2	6:T:1859:LEU:HD21	2.11	0.85
3:D:621:MET:HB3	6:T:2417:GLU:HG3	1.59	0.85
6:T:1799:ARG:N	6:T:1799:ARG:HD2	1.90	0.85
6:T:1493:GLN:HA	6:T:1493:GLN:HE21	1.41	0.85
6:T:572:LEU:CA	6:T:1940:TYR:CD2	2.60	0.84
6:T:1655:ILE:HG12	6:T:1662:VAL:HG12	1.59	0.84
6:T:1995:LEU:HD23	6:T:1995:LEU:H	1.43	0.84
6:T:2325:LEU:HD23	6:T:2329:ARG:HA	1.57	0.83
6:T:560:MET:HG2	6:T:1767:PHE:CD1	2.13	0.83
6:T:2206:LEU:HD12	6:T:2206:LEU:O	1.78	0.83
6:T:2226:ILE:HD12	6:T:2228:GLU:HB2	1.60	0.83
6:T:2239:LEU:HD11	6:T:2259:LEU:HD13	1.60	0.82
6:T:2243:ILE:HG21	6:T:2256:GLY:HA3	1.59	0.82
6:T:1296:LEU:HD13	6:T:1307:CYS:HB2	1.61	0.82
6:T:1449:LEU:HD22	6:T:1484:PRO:CG	2.09	0.82
6:T:1562:LEU:HD12	6:T:1563:PRO:HD2	1.60	0.82
6:T:1801:PHE:HA	6:T:1804:LYS:HD2	1.62	0.82
6:T:2517:LEU:HD12	6:T:2519:LEU:HB2	1.63	0.81
3:D:62:ARG:HD2	3:D:65:ILE:HB	1.61	0.81
6:T:382:THR:HG23	6:T:1900:LEU:HD11	1.63	0.81
6:T:1594:THR:OG1	6:T:1595:PRO:CD	2.28	0.81
6:T:611:TYR:OH	6:T:1583:LYS:O	1.99	0.81
6:T:560:MET:O	6:T:1767:PHE:CE1	2.33	0.80
6:T:1654:ASN:HA	6:T:1657:LYS:HE2	1.63	0.80
2:B:244:GLU:O	3:D:75:ARG:NH2	2.14	0.80
6:T:838:LEU:HD11	6:T:1251:GLU:HB3	1.64	0.80
6:T:1586:LEU:O	6:T:1586:LEU:HD23	1.83	0.79
6:T:750:ASP:HB2	6:T:753:ASN:HB2	1.64	0.79
6:T:1535:LEU:HD13	6:T:1583:LYS:HE3	1.64	0.79
6:T:1441:LEU:HB2	6:T:1473:LEU:CD1	2.13	0.79
6:T:1979:SER:HA	6:T:1983:ASN:HB2	1.64	0.79
2:B:398:VAL:HA	2:B:401:ARG:HE	1.47	0.79
4:E:246:ARG:NH1	4:E:254:GLU:OE1	2.16	0.79
6:T:799:SER:HB2	6:T:805:PRO:HB3	1.65	0.79
6:T:1487:MET:HE2	6:T:1487:MET:CA	2.12	0.78
6:T:518:MET:SD	6:T:2317:ILE:HD13	2.23	0.78
3:D:529:LEU:N	3:D:556:GLU:OE2	2.16	0.78
6:T:2168:LEU:HD12	6:T:2212:VAL:HG12	1.63	0.78
6:T:560:MET:C	6:T:1767:PHE:CE1	2.61	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1493:GLN:HA	6:T:1493:GLN:NE2	1.97	0.78
6:T:1885:ASP:HA	6:T:1888:LYS:HE3	1.65	0.78
6:T:2116:LEU:H	6:T:2116:LEU:CD2	1.97	0.77
6:T:680:ARG:HA	6:T:683:MET:HE2	1.66	0.77
6:T:2493:CYS:SG	6:T:2494:LEU:N	2.57	0.77
6:T:573:PRO:HG3	6:T:1940:TYR:CE1	2.20	0.77
6:T:1832:LYS:HE2	6:T:1832:LYS:CA	2.15	0.77
6:T:1562:LEU:CD1	6:T:1563:PRO:HD2	2.13	0.77
6:T:2271:ILE:HG21	6:T:2274:LEU:HD12	1.66	0.77
1:A:188:TYR:HB2	1:A:267:LEU:HD21	1.66	0.77
6:T:773:VAL:HG21	6:T:784:LEU:HD12	1.67	0.77
6:T:2688:THR:OG1	6:T:2729:TRP:NE1	2.17	0.77
6:T:730:GLU:HG2	6:T:732:THR:H	1.50	0.76
6:T:340:LEU:O	6:T:344:ARG:NH1	2.18	0.76
6:T:2007:ILE:HG13	6:T:2031:LEU:HD22	1.66	0.76
6:T:3688:LEU:HA	6:T:3691:MET:HE2	1.67	0.76
6:T:351:THR:HA	6:T:354:ILE:HD12	1.67	0.76
6:T:572:LEU:C	6:T:1940:TYR:CE2	2.64	0.76
6:T:1635:GLU:H	6:T:1635:GLU:CD	1.93	0.75
6:T:480:ARG:CG	6:T:1760:TYR:CE1	2.69	0.75
6:T:956:ASN:HD21	6:T:2843:LEU:HB3	1.52	0.75
6:T:2241:SER:HA	6:T:2274:LEU:HD21	1.68	0.75
6:T:3412:HIS:NE2	6:T:3585:GLU:OE1	2.20	0.75
6:T:1543:LEU:H	6:T:1543:LEU:CD2	1.96	0.74
6:T:1789:PHE:HB3	6:T:1803:LEU:HD13	1.69	0.74
6:T:570:LEU:HG	6:T:1940:TYR:HE2	1.50	0.74
6:T:1971:LYS:HE2	6:T:2000:ARG:HG3	1.68	0.74
3:D:62:ARG:NH1	3:D:65:ILE:O	2.21	0.74
6:T:2278:LEU:C	6:T:2278:LEU:HD12	2.12	0.74
6:T:1766:ILE:HD13	6:T:1769:ASN:HD21	1.52	0.74
6:T:1506:LEU:C	6:T:1506:LEU:HD12	2.13	0.74
6:T:2986:ARG:HH12	6:T:3055:LYS:HE2	1.53	0.74
6:T:3043:PHE:HB3	6:T:3060:TRP:HE3	1.52	0.74
6:T:1449:LEU:CD2	6:T:1484:PRO:HG2	2.15	0.73
6:T:1463:LEU:O	6:T:1463:LEU:HD23	1.89	0.73
6:T:1473:LEU:HD23	6:T:1473:LEU:C	2.14	0.73
5:F:633:GLU:OE2	5:F:655:ASN:ND2	2.21	0.73
6:T:2090:LEU:HD12	6:T:2093:ARG:HB2	1.70	0.73
6:T:2245:GLN:HA	6:T:2245:GLN:NE2	2.04	0.73
6:T:1543:LEU:HD22	6:T:1543:LEU:N	2.01	0.73
6:T:1762:LEU:HD23	6:T:1762:LEU:C	2.14	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2100:LEU:HD23	6:T:2100:LEU:C	2.14	0.73
6:T:2116:LEU:HD23	6:T:2116:LEU:N	2.02	0.73
6:T:2329:ARG:HH22	6:T:2367:PRO:HD2	1.53	0.73
3:D:45:CYS:SG	6:T:3497:HIS:NE2	2.62	0.73
6:T:560:MET:CA	6:T:1767:PHE:HZ	1.86	0.73
6:T:1006:SER:O	6:T:1014:ARG:NH1	2.22	0.73
6:T:1854:LEU:HD23	6:T:1854:LEU:C	2.14	0.73
6:T:2034:LEU:HD23	6:T:2034:LEU:C	2.14	0.72
6:T:2124:LEU:HD23	6:T:2124:LEU:C	2.14	0.72
6:T:3054:ALA:H	6:T:3091:LEU:HD22	1.53	0.72
6:T:1907:LEU:HD23	6:T:1907:LEU:C	2.14	0.72
2:B:467:GLN:HA	4:E:85:ALA:HB1	1.71	0.72
6:T:917:ILE:HG12	6:T:921:ILE:HG12	1.70	0.72
6:T:65:SER:HA	6:T:76:ARG:HH22	1.54	0.72
6:T:2282:PHE:HB2	6:T:2315:LEU:HD21	1.70	0.72
6:T:2957:HIS:HA	6:T:3434:VAL:HG11	1.72	0.72
1:A:332:PRO:O	1:A:335:ARG:NE	2.23	0.72
6:T:339:GLU:OE2	6:T:1897:GLU:HG2	1.90	0.72
6:T:1482:LEU:HD12	6:T:1485:LEU:HB2	1.70	0.72
6:T:2354:ASN:OD1	6:T:2357:ARG:NH1	2.21	0.72
1:A:107:GLU:OE1	1:A:116:ARG:NH1	2.23	0.71
1:A:285:CYS:SG	1:A:286:ASP:N	2.63	0.71
6:T:381:PHE:CB	6:T:1858:ASP:OD1	2.36	0.71
6:T:1535:LEU:HD23	6:T:1535:LEU:C	2.14	0.71
6:T:2976:ILE:HB	6:T:2980:GLU:HB2	1.71	0.71
6:T:1703:LEU:HD23	6:T:1703:LEU:C	2.15	0.71
6:T:3054:ALA:HB2	6:T:3091:LEU:HB3	1.70	0.71
6:T:2649:ILE:HD12	6:T:2655:ILE:HD13	1.72	0.71
6:T:339:GLU:OE1	6:T:1897:GLU:HG2	1.88	0.71
6:T:1586:LEU:HD23	6:T:1586:LEU:C	2.15	0.71
6:T:1850:ALA:HB1	6:T:1860:PHE:HE2	1.54	0.71
6:T:2138:VAL:HA	6:T:2142:TYR:HB2	1.73	0.71
6:T:560:MET:CB	6:T:1767:PHE:CZ	2.74	0.71
6:T:1919:PRO:HG2	6:T:1922:VAL:HB	1.71	0.71
6:T:1949:LEU:HD23	6:T:1949:LEU:C	2.15	0.71
6:T:2811:GLN:HG3	6:T:2814:ARG:HD3	1.73	0.71
6:T:1699:LEU:O	6:T:1699:LEU:HD23	1.90	0.71
6:T:1995:LEU:H	6:T:1995:LEU:CD2	2.02	0.71
6:T:1600:LEU:HD13	6:T:1607:VAL:HG11	1.73	0.70
6:T:339:GLU:CD	6:T:1897:GLU:CG	2.64	0.70
6:T:1593:ARG:HG2	6:T:1627:ILE:HD11	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1829:LYS:O	6:T:1829:LYS:HD3	1.91	0.70
3:D:768:MET:HA	3:D:771:ARG:HG2	1.73	0.70
6:T:2613:ILE:HG21	6:T:2616:LEU:HB2	1.72	0.70
2:B:394:MET:SD	2:B:401:ARG:NH1	2.65	0.70
6:T:1570:LEU:HD23	6:T:1570:LEU:C	2.17	0.70
6:T:1619:GLN:OE1	6:T:1619:GLN:N	2.18	0.70
6:T:1872:ILE:HD11	6:T:1886:ILE:HG21	1.73	0.70
3:D:623:TYR:HB2	3:D:626:ARG:HE	1.54	0.70
6:T:570:LEU:HD11	6:T:1940:TYR:OH	1.92	0.70
6:T:629:GLU:OE2	6:T:1717:GLN:HB3	1.91	0.70
6:T:2118:LEU:C	6:T:2118:LEU:HD23	2.16	0.70
3:D:35:GLU:OE1	6:T:3731:ARG:NH2	2.25	0.70
6:T:480:ARG:NH1	6:T:1760:TYR:CB	2.55	0.70
6:T:1794:LYS:H	6:T:1794:LYS:HD3	1.56	0.70
6:T:1941:LEU:HD12	6:T:1941:LEU:O	1.92	0.70
4:E:86:ASN:HB2	4:E:89:VAL:HG22	1.74	0.69
6:T:572:LEU:N	6:T:1940:TYR:CD2	2.60	0.69
6:T:3715:VAL:HG23	6:T:3716:THR:H	1.56	0.69
6:T:1718:LEU:C	6:T:1718:LEU:HD12	2.18	0.69
6:T:1716:LEU:H	6:T:1716:LEU:CD1	1.94	0.69
6:T:1995:LEU:HD23	6:T:1995:LEU:N	2.07	0.69
6:T:2031:LEU:HD12	6:T:2031:LEU:O	1.93	0.69
3:D:614:GLN:HB2	6:T:2456:ARG:HH12	1.56	0.69
6:T:222:LYS:NZ	6:T:238:TYR:OH	2.24	0.69
6:T:1879:ILE:HB	6:T:1882:ILE:HG12	1.75	0.69
6:T:1915:LYS:HE2	6:T:1915:LYS:CA	2.22	0.69
6:T:2093:ARG:HG2	6:T:2127:LEU:HD11	1.72	0.69
6:T:2325:LEU:HD21	6:T:2329:ARG:N	2.07	0.69
6:T:2320:LEU:O	6:T:2320:LEU:HD23	1.92	0.69
1:A:16:MET:O	1:A:18:LYS:NZ	2.26	0.69
3:D:33:ILE:HD12	3:D:300:ILE:HD11	1.74	0.69
3:D:45:CYS:HG	6:T:3497:HIS:CE1	2.11	0.69
3:D:617:LYS:O	3:D:619:ARG:NH1	2.26	0.69
6:T:966:LEU:HD12	6:T:3540:ASP:HB2	1.72	0.69
6:T:2303:GLU:OE1	6:T:2303:GLU:N	2.19	0.69
6:T:474:ARG:O	6:T:474:ARG:NH2	2.26	0.69
6:T:2320:LEU:HD11	6:T:2355:MET:O	1.90	0.69
2:B:441:THR:OG1	2:B:448:ARG:NH2	2.27	0.68
6:T:1100:MET:O	6:T:1104:ASN:ND2	2.25	0.68
6:T:2168:LEU:HD23	6:T:2168:LEU:C	2.19	0.68
6:T:1900:LEU:H	6:T:1900:LEU:CD2	1.96	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:339:GLU:OE1	6:T:1897:GLU:CG	2.41	0.68
6:T:481:GLN:N	6:T:1760:TYR:OH	2.27	0.68
6:T:1204:GLU:OE1	6:T:3373:ARG:NH1	2.26	0.68
6:T:1300:ASN:HB3	6:T:1303:VAL:HG12	1.76	0.68
6:T:2128:ILE:HG21	6:T:2173:LYS:HB3	1.75	0.68
6:T:3446:PRO:HD3	6:T:3582:PHE:HB2	1.75	0.68
3:D:312:THR:OG1	6:T:3629:GLN:NE2	2.27	0.68
6:T:613:VAL:CG1	6:T:1536:ASP:OD1	2.38	0.68
6:T:1472:LYS:HG3	6:T:1475:LYS:HE2	1.74	0.68
1:A:93:GLU:HG3	1:A:94:LEU:HD12	1.75	0.68
3:D:657:GLU:O	3:D:661:ASN:ND2	2.23	0.68
6:T:613:VAL:HA	6:T:1536:ASP:OD2	1.94	0.68
6:T:1577:VAL:HG13	6:T:1592:PHE:HE2	1.59	0.68
6:T:2342:HIS:HB3	6:T:2344:MET:HE3	1.75	0.68
3:D:670:GLU:OE1	3:D:670:GLU:N	2.26	0.68
6:T:1920:ILE:HD12	6:T:1920:ILE:N	2.04	0.68
6:T:727:LEU:HG	6:T:772:SER:HB3	1.76	0.68
6:T:2955:ARG:HH12	6:T:2990:LYS:HB3	1.59	0.68
1:A:196:ARG:HH12	1:A:250:ILE:HA	1.57	0.67
6:T:2039:GLU:HA	6:T:2039:GLU:OE1	1.94	0.67
1:A:35:VAL:HG21	1:A:81:ASP:HB3	1.76	0.67
4:E:289:GLN:NE2	4:E:291:ILE:O	2.27	0.67
6:T:1361:LEU:HD23	6:T:1421:ILE:HG23	1.76	0.67
6:T:1509:LEU:HD22	6:T:1509:LEU:N	2.09	0.67
2:B:47:TYR:OH	2:B:66:ARG:NH2	2.28	0.67
6:T:515:GLU:HA	6:T:518:MET:HE2	1.75	0.67
6:T:2244:THR:HG21	6:T:2274:LEU:HD22	1.77	0.67
6:T:1476:GLU:N	6:T:1476:GLU:OE1	2.28	0.67
6:T:1482:LEU:HG	6:T:1486:LEU:HG	1.77	0.67
2:B:243:LYS:NZ	7:B:501:ATP:O2'	2.28	0.67
1:A:35:VAL:HA	1:A:54:VAL:HG12	1.77	0.67
3:D:48:ARG:HG2	3:D:55:LEU:HD13	1.77	0.67
5:F:537:ASN:O	5:F:538:LEU:HG	1.95	0.67
6:T:2303:GLU:H	6:T:2303:GLU:CD	2.02	0.67
2:B:112:GLU:OE1	2:B:116:ASN:ND2	2.25	0.67
6:T:1378:LEU:HD12	6:T:1415:CYS:HB2	1.77	0.67
6:T:2387:GLU:OE1	6:T:2390:LEU:N	2.22	0.67
4:E:293:GLN:OE1	4:E:302:GLN:NE2	2.28	0.67
6:T:110:GLU:HG2	6:T:214:LEU:HD13	1.76	0.67
6:T:1941:LEU:HA	6:T:1944:GLN:HE21	1.60	0.66
6:T:2008:ILE:HG12	6:T:2031:LEU:HD21	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2320:LEU:HD13	6:T:2355:MET:CA	2.19	0.66
6:T:469:ASP:O	6:T:473:ASN:ND2	2.28	0.66
6:T:2179:TRP:HA	6:T:2181:MET:HE1	1.78	0.66
6:T:1777:GLU:OE1	6:T:1777:GLU:HA	1.94	0.66
6:T:1936:VAL:HA	6:T:1939:ARG:HG3	1.77	0.66
6:T:141:ILE:HA	6:T:144:ILE:HD12	1.76	0.66
6:T:968:GLU:OE1	6:T:968:GLU:N	2.29	0.66
6:T:1577:VAL:HG21	6:T:1596:LEU:HD11	1.76	0.66
6:T:1936:VAL:HG23	6:T:1939:ARG:HD3	1.77	0.66
6:T:1485:LEU:HD22	6:T:1503:LEU:HD21	1.77	0.66
6:T:2485:GLU:HG2	6:T:2486:LEU:H	1.61	0.66
5:F:637:LYS:NZ	5:F:654:PRO:O	2.28	0.66
6:T:2014:ILE:HG13	6:T:2024:SER:HB2	1.77	0.66
6:T:1737:GLU:H	6:T:1737:GLU:CD	2.04	0.66
6:T:1881:GLU:H	6:T:1881:GLU:CD	2.04	0.66
6:T:2773:ARG:HA	6:T:2776:LEU:HB2	1.78	0.66
6:T:1178:ILE:HD12	6:T:2519:LEU:HD23	1.78	0.65
6:T:1179:TYR:HD2	6:T:1184:ALA:HA	1.61	0.65
6:T:1900:LEU:HD23	6:T:1900:LEU:N	2.01	0.65
6:T:943:HIS:NE2	6:T:2818:ASP:OD1	2.24	0.65
6:T:2184:LEU:HD23	6:T:2184:LEU:C	2.21	0.65
6:T:1315:SER:O	6:T:1319:GLY:HA2	1.94	0.65
6:T:2325:LEU:HD11	6:T:2328:SER:HB3	1.78	0.65
3:D:274:ASN:OD1	3:D:275:ASP:N	2.29	0.65
1:A:153:LEU:HD23	1:A:299:MET:HE1	1.78	0.65
6:T:1538:LEU:HD22	6:T:1546:GLN:HE22	1.61	0.65
6:T:1546:GLN:HG3	6:T:1548:PRO:HD2	1.79	0.65
6:T:1815:VAL:HG21	6:T:1870:ILE:HD11	1.79	0.65
6:T:2450:ARG:NH1	6:T:2475:LEU:O	2.30	0.65
6:T:2315:LEU:HD12	6:T:2315:LEU:C	2.22	0.65
6:T:2604:ASN:HD22	6:T:2632:ALA:HB2	1.62	0.65
6:T:1689:GLY:HA2	6:T:1692:ILE:HG23	1.77	0.65
3:D:45:CYS:O	6:T:3497:HIS:NE2	2.30	0.65
6:T:572:LEU:N	6:T:1940:TYR:HD2	1.95	0.65
6:T:1036:PRO:HD3	6:T:2498:SER:HA	1.79	0.65
6:T:1662:VAL:HG11	6:T:1705:THR:HG21	1.78	0.65
6:T:1840:LYS:HD2	6:T:1840:LYS:C	2.22	0.65
6:T:382:THR:HG22	6:T:1858:ASP:OD2	1.96	0.65
6:T:2184:LEU:HD23	6:T:2184:LEU:O	1.97	0.65
2:B:71:LEU:HD11	2:B:229:LEU:HD23	1.79	0.65
6:T:944:ASN:OD1	6:T:947:ARG:NH2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:533:GLU:OE1	3:D:533:GLU:N	2.29	0.64
6:T:813:ARG:HD3	6:T:817:ARG:HD3	1.79	0.64
6:T:1797:ASP:HA	6:T:1800:ILE:HD12	1.79	0.64
6:T:2464:ALA:HA	6:T:2596:ILE:HA	1.78	0.64
2:B:20:ASP:OD2	2:B:452:SER:OG	2.14	0.64
6:T:780:ASN:HB2	6:T:782:VAL:HG12	1.77	0.64
6:T:1848:ILE:HG21	6:T:1852:ASP:H	1.63	0.64
6:T:2803:PHE:HA	6:T:2809:GLY:HA3	1.78	0.64
6:T:2177:LYS:HZ3	6:T:2179:TRP:HB3	1.62	0.64
6:T:2369:VAL:O	6:T:2415:ARG:NH1	2.29	0.64
6:T:466:ILE:HA	6:T:1716:LEU:HD21	1.80	0.64
6:T:1939:ARG:HB3	6:T:1939:ARG:CZ	2.26	0.64
6:T:2271:ILE:HG12	6:T:2274:LEU:HG	1.80	0.64
6:T:2421:LEU:HD13	6:T:2460:TRP:HB2	1.78	0.64
3:D:615:LEU:HD21	6:T:2452:TYR:HB3	1.79	0.64
5:F:588:ILE:HD11	5:F:593:ARG:HH21	1.63	0.64
6:T:2560:TRP:CD1	6:T:2609:SER:HG	2.16	0.64
6:T:2768:ASP:OD1	6:T:2769:TRP:N	2.31	0.64
1:A:66:THR:OG1	1:A:68:ARG:NH2	2.27	0.64
1:A:154:ASP:HA	1:A:300:SER:O	1.96	0.64
1:A:334:GLU:OE1	1:A:334:GLU:N	2.30	0.64
5:F:581:LEU:HD23	5:F:615:LYS:HE3	1.79	0.64
6:T:1265:ILE:HG23	6:T:1313:THR:HG21	1.79	0.64
6:T:1567:ASP:HB3	6:T:1569:PHE:HD2	1.61	0.64
6:T:1634:LYS:HD2	6:T:1634:LYS:C	2.22	0.64
6:T:2792:GLN:HG2	6:T:2820:GLY:HA2	1.78	0.64
6:T:1881:GLU:OE1	6:T:1881:GLU:N	2.19	0.64
6:T:1821:LEU:HB3	6:T:1874:ALA:HB1	1.78	0.64
6:T:2869:ASN:O	6:T:2872:SER:OG	2.15	0.64
2:B:93:ALA:O	2:B:97:GLU:HB2	1.97	0.64
6:T:1757:LYS:HZ1	6:T:1802:VAL:HG13	1.63	0.64
6:T:2680:ARG:HE	6:T:2689:ASN:HD22	1.44	0.64
6:T:3004:ASP:O	6:T:3008:ASN:N	2.30	0.64
3:D:561:GLN:OE1	3:D:561:GLN:N	2.31	0.63
4:E:269:LYS:O	4:E:270:ARG:NE	2.31	0.63
6:T:1877:GLU:CD	6:T:1877:GLU:H	2.05	0.63
6:T:2276:THR:CG2	6:T:2277:PRO:CD	2.63	0.63
6:T:2632:ALA:HB1	6:T:2635:GLN:HB2	1.79	0.63
6:T:934:PRO:HB3	6:T:2825:LEU:HB3	1.81	0.63
3:D:303:ILE:HD13	3:D:315:ILE:HD13	1.79	0.63
6:T:570:LEU:HG	6:T:1940:TYR:CE2	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:626:PHE:O	6:T:1587:GLN:NE2	2.31	0.63
6:T:1854:LEU:HD23	6:T:1854:LEU:O	1.97	0.63
3:D:347:ARG:NH1	3:D:582:PHE:O	2.32	0.63
6:T:2373:ALA:HA	6:T:2376:LEU:HD12	1.80	0.63
2:B:152:ARG:NH1	2:B:407:ASN:OD1	2.32	0.63
6:T:336:CYS:HB2	6:T:344:ARG:HH21	1.62	0.63
1:A:14:SER:HB2	1:A:158:GLY:H	1.63	0.63
4:E:84:LYS:HG2	4:E:90:THR:HG22	1.79	0.63
6:T:1529:TRP:HB3	6:T:1552:ILE:HD11	1.80	0.63
6:T:1203:ASP:OD1	6:T:1204:GLU:N	2.32	0.63
6:T:1476:GLU:HG2	6:T:1477:LEU:HD22	1.81	0.63
6:T:2590:PRO:HG2	6:T:2592:HIS:CE1	2.33	0.63
6:T:3060:TRP:O	6:T:3064:ASN:ND2	2.32	0.63
6:T:148:TYR:OH	6:T:218:MET:SD	2.54	0.63
6:T:956:ASN:ND2	6:T:2843:LEU:O	2.31	0.63
6:T:1879:ILE:HG13	6:T:1879:ILE:O	1.99	0.63
6:T:2680:ARG:NH1	6:T:3638:GLU:OE2	2.31	0.63
6:T:480:ARG:CA	6:T:1760:TYR:OH	2.46	0.62
6:T:615:ASN:HB3	6:T:618:LEU:HD13	1.80	0.62
6:T:856:GLU:HA	6:T:859:VAL:HG12	1.80	0.62
6:T:1304:ARG:HH11	6:T:1352:GLY:HA2	1.63	0.62
6:T:1487:MET:HA	6:T:1487:MET:CE	2.26	0.62
6:T:3357:GLN:HE22	6:T:3369:ILE:H	1.47	0.62
6:T:3505:ASP:OD2	6:T:3508:ILE:N	2.30	0.62
1:A:97:ALA:O	1:A:101:HIS:NE2	2.32	0.62
6:T:612:THR:OG1	6:T:1583:LYS:NZ	2.32	0.62
6:T:2704:GLN:HG3	6:T:2733:TRP:HE1	1.62	0.62
6:T:2773:ARG:NH1	6:T:2802:ASN:OD1	2.33	0.62
1:A:205:GLU:HA	1:A:208:ILE:HG22	1.81	0.62
2:B:44:TYR:HB3	2:B:74:ILE:HD11	1.82	0.62
3:D:33:ILE:O	3:D:36:ARG:HD3	2.00	0.62
4:E:98:SER:OG	4:E:100:GLU:OE1	2.18	0.62
6:T:568:PRO:HG2	6:T:569:ILE:HD12	1.80	0.62
6:T:767:LYS:O	6:T:771:MET:HG2	1.99	0.62
6:T:3244:ASP:OD1	6:T:3247:ARG:NH2	2.32	0.62
6:T:3410:VAL:HB	6:T:3412:HIS:CE1	2.34	0.62
1:A:196:ARG:HD3	1:A:198:TYR:HE2	1.64	0.62
6:T:2329:ARG:HH11	6:T:2368:THR:HG22	1.63	0.62
6:T:3122:ASP:OD1	6:T:3123:SER:N	2.31	0.62
6:T:3589:SER:OG	6:T:3615:HIS:O	2.17	0.62
2:B:119:GLU:HA	2:B:122:LYS:HE2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:339:GLU:HA	6:T:1898:ASP:OD1	1.99	0.62
6:T:2320:LEU:HD23	6:T:2320:LEU:C	2.25	0.62
1:A:141:SER:HB3	1:A:339:VAL:HG12	1.82	0.62
3:D:550:ASP:OD2	5:F:652:ARG:NH1	2.32	0.62
6:T:1053:GLU:HG2	6:T:1054:ARG:HG2	1.81	0.62
6:T:3096:LYS:HD2	6:T:3428:LYS:HG2	1.81	0.62
6:T:3737:ASP:OD1	6:T:3738:VAL:N	2.33	0.62
6:T:1771:ILE:HD12	6:T:1814:GLU:HB2	1.82	0.62
6:T:1884:LYS:HA	6:T:1887:ILE:HD12	1.82	0.62
6:T:2690:ILE:HA	6:T:3715:VAL:HA	1.82	0.62
6:T:114:ASN:O	6:T:215:ARG:NH1	2.33	0.62
6:T:2302:GLU:OE2	6:T:2302:GLU:N	2.20	0.62
6:T:2004:ILE:HD13	6:T:2035:ILE:HD13	1.82	0.62
6:T:3578:SER:OG	6:T:3580:ASN:ND2	2.33	0.62
6:T:21:LEU:HD12	6:T:24:ARG:HH12	1.65	0.61
6:T:2762:CYS:SG	6:T:2763:GLY:N	2.72	0.61
6:T:560:MET:HG2	6:T:1767:PHE:CE2	2.31	0.61
6:T:2537:ILE:HG22	6:T:2539:SER:H	1.65	0.61
6:T:2688:THR:HG1	6:T:2729:TRP:HE1	1.46	0.61
6:T:3306:ASP:OD1	6:T:3309:THR:N	2.32	0.61
1:A:304:THR:O	1:A:335:ARG:NH1	2.32	0.61
6:T:1030:LYS:NZ	6:T:2485:GLU:O	2.33	0.61
6:T:1776:LYS:HG2	6:T:1776:LYS:O	1.99	0.61
3:D:70:LYS:HD3	3:D:540:ALA:HB2	1.82	0.61
3:D:378:LYS:NZ	3:D:536:LYS:O	2.30	0.61
6:T:1562:LEU:CG	6:T:1563:PRO:HD2	2.29	0.61
6:T:1585:ARG:O	6:T:1585:ARG:HG3	2.00	0.61
6:T:3540:ASP:OD1	6:T:3541:PHE:N	2.33	0.61
6:T:355:LEU:HD13	6:T:364:LEU:HD13	1.83	0.61
6:T:413:LYS:HG3	6:T:416:LYS:HE3	1.81	0.61
6:T:1737:GLU:OE1	6:T:1737:GLU:N	2.19	0.61
5:F:551:LEU:HD13	5:F:627:LEU:HD22	1.81	0.61
6:T:249:PHE:O	6:T:288:ARG:NH1	2.34	0.61
6:T:1903:GLN:HE21	6:T:1941:LEU:HG	1.66	0.61
6:T:2184:LEU:N	6:T:2185:PRO:HD2	2.14	0.61
6:T:2552:ASP:OD2	6:T:2555:ALA:N	2.30	0.61
6:T:1438:ILE:HA	6:T:1473:LEU:CD1	2.31	0.61
6:T:1543:LEU:HG	6:T:1591:PRO:HG3	1.83	0.61
6:T:3400:VAL:O	6:T:3401:HIS:ND1	2.34	0.61
3:D:293:MET:HE1	4:E:272:LEU:HD13	1.83	0.61
4:E:243:LEU:HD23	4:E:246:ARG:HD3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1340:LYS:NZ	6:T:1344:ALA:O	2.33	0.61
6:T:1800:ILE:HG22	6:T:1804:LYS:HE3	1.83	0.61
6:T:2546:ILE:HA	6:T:2549:PHE:HD2	1.64	0.61
2:B:481:GLU:O	2:B:485:ASN:ND2	2.33	0.61
6:T:1619:GLN:H	6:T:1619:GLN:CD	2.07	0.61
3:D:649:ILE:HG13	3:D:688:ILE:HD12	1.82	0.60
6:T:1449:LEU:HD13	6:T:1484:PRO:HB2	1.83	0.60
6:T:1574:LEU:HD22	6:T:1623:PHE:HE2	1.65	0.60
6:T:2007:ILE:HD11	6:T:2031:LEU:HD13	1.83	0.60
6:T:3008:ASN:O	6:T:3010:ASN:ND2	2.34	0.60
6:T:10:PHE:HB2	6:T:13:ARG:NE	2.16	0.60
6:T:1337:ILE:HG23	6:T:1353:ASN:HB3	1.83	0.60
2:B:463:GLY:HA2	2:B:466:HIS:HE1	1.67	0.60
6:T:2324:LEU:O	6:T:2324:LEU:HD12	2.01	0.60
6:T:306:ALA:HA	6:T:309:PHE:CE2	2.35	0.60
6:T:422:LEU:HD13	6:T:432:GLN:HB3	1.83	0.60
6:T:466:ILE:HG12	6:T:1716:LEU:HD11	1.83	0.60
6:T:1463:LEU:HD23	6:T:1463:LEU:C	2.26	0.60
6:T:2175:LYS:HD3	6:T:2175:LYS:N	2.16	0.60
6:T:2465:ASP:OD1	6:T:2466:TYR:N	2.34	0.60
1:A:200:PHE:HD1	1:A:205:GLU:HB2	1.65	0.60
3:D:323:ARG:HH12	5:F:561:PRO:HD3	1.67	0.60
3:D:649:ILE:H	3:D:688:ILE:HG23	1.67	0.60
3:D:719:SER:O	3:D:722:GLN:NE2	2.33	0.60
6:T:693:MET:HG3	6:T:694:ASP:H	1.66	0.60
6:T:957:ARG:NH2	6:T:2893:ASP:OD2	2.33	0.60
6:T:1179:TYR:HB3	6:T:1183:LEU:HG	1.84	0.60
6:T:1300:ASN:HD22	6:T:1303:VAL:H	1.50	0.60
6:T:1913:ILE:HD12	6:T:1923:VAL:HG22	1.83	0.60
6:T:2289:HIS:HA	6:T:2292:ILE:HG12	1.83	0.60
6:T:2474:GLN:OE1	6:T:2546:ILE:HD12	2.02	0.60
1:A:78:ASN:ND2	1:A:81:ASP:OD2	2.35	0.60
6:T:1897:GLU:OE1	6:T:1897:GLU:N	2.33	0.60
4:E:292:THR:HG22	4:E:295:LEU:HD12	1.84	0.60
6:T:1420:ALA:HB2	6:T:1462:ALA:HB1	1.83	0.60
6:T:1814:GLU:HG2	6:T:1821:LEU:HD12	1.84	0.60
6:T:1936:VAL:HG23	6:T:1939:ARG:HH11	1.66	0.60
6:T:1936:VAL:HG22	6:T:1936:VAL:O	2.02	0.60
6:T:2460:TRP:HD1	6:T:2462:PHE:HD1	1.49	0.60
6:T:3067:ARG:NH2	6:T:3077:PHE:O	2.35	0.60
6:T:3151:MET:SD	6:T:3151:MET:N	2.68	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:565:LEU:HB3	5:F:585:LEU:HD13	1.84	0.60
6:T:3260:TYR:HA	6:T:3307:TYR:OH	2.02	0.60
6:T:706:LEU:HG	6:T:707:PRO:HD3	1.83	0.60
6:T:1199:HIS:ND1	6:T:3333:ASN:OD1	2.35	0.60
6:T:1716:LEU:HD12	6:T:1716:LEU:N	2.01	0.60
6:T:1962:THR:OG1	6:T:1963:PRO:HD3	2.01	0.60
6:T:21:LEU:O	6:T:24:ARG:NH1	2.35	0.60
6:T:679:ALA:O	6:T:683:MET:HG3	2.00	0.60
6:T:1112:LEU:O	6:T:1115:VAL:HG12	2.01	0.60
6:T:1244:VAL:O	6:T:1248:THR:HG23	2.02	0.60
6:T:2516:ASP:OD1	6:T:2517:LEU:N	2.34	0.60
6:T:3333:ASN:HB2	6:T:3336:VAL:HG22	1.82	0.60
1:A:163:VAL:HG22	1:A:175:ILE:HG23	1.84	0.59
6:T:1672:LEU:HG	6:T:1676:MET:HE3	1.84	0.59
3:D:358:HIS:HB2	4:E:115:ASN:HA	1.84	0.59
6:T:344:ARG:HA	6:T:347:LEU:HB3	1.84	0.59
6:T:411:ILE:O	6:T:415:ILE:HG12	2.01	0.59
6:T:573:PRO:HD3	6:T:1940:TYR:CG	2.38	0.59
6:T:1957:MET:HE2	6:T:1965:THR:HB	1.84	0.59
6:T:2894:ASP:OD1	6:T:2895:VAL:N	2.36	0.59
1:A:220:ALA:O	1:A:312:ARG:NH1	2.35	0.59
2:B:467:GLN:NE2	2:B:468:LEU:HB2	2.18	0.59
6:T:110:GLU:O	6:T:215:ARG:NH1	2.31	0.59
6:T:2587:LEU:O	6:T:2594:ARG:NH2	2.36	0.59
6:T:355:LEU:HD12	6:T:398:PHE:CE1	2.37	0.59
6:T:793:LEU:HD21	6:T:831:ILE:HD11	1.83	0.59
6:T:877:PRO:HA	6:T:916:ILE:HD11	1.83	0.59
6:T:922:ASP:N	6:T:922:ASP:OD1	2.35	0.59
6:T:1825:LEU:HG	6:T:1878:ILE:HG21	1.83	0.59
6:T:1838:HIS:HE1	6:T:1882:ILE:HG23	1.67	0.59
6:T:2301:LEU:HG	6:T:2304:ALA:HB3	1.83	0.59
6:T:3155:ILE:O	6:T:3159:ILE:HG13	2.02	0.59
1:A:100:GLU:OE1	1:A:100:GLU:N	2.35	0.59
6:T:1182:GLU:OE2	6:T:1182:GLU:N	2.26	0.59
6:T:2549:PHE:HD1	6:T:2556:ILE:HG22	1.67	0.59
6:T:3397:ASP:OD1	6:T:3398:GLY:N	2.35	0.59
4:E:169:ILE:O	4:E:173:PHE:HB2	2.03	0.59
6:T:381:PHE:CB	6:T:1859:LEU:HD21	2.33	0.59
6:T:2285:LEU:HD21	6:T:2311:LEU:HD11	1.85	0.59
6:T:2477:TYR:HD2	6:T:2542:ILE:HB	1.67	0.59
1:A:282:ILE:HG23	1:A:293:LEU:HD23	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:480:ARG:HD2	6:T:1760:TYR:CE1	2.29	0.59
6:T:917:ILE:HG23	6:T:921:ILE:HD11	1.83	0.59
6:T:1441:LEU:CB	6:T:1473:LEU:CD1	2.81	0.59
6:T:2461:GLU:HA	6:T:2592:HIS:CG	2.37	0.59
2:B:78:GLY:O	2:B:113:PRO:HG3	2.02	0.59
6:T:619:TRP:CG	6:T:623:SER:HG	2.21	0.59
6:T:2128:ILE:HD12	6:T:2173:LYS:HG3	1.85	0.59
6:T:3472:ASN:HD22	6:T:3482:PRO:HG2	1.68	0.59
1:A:213:LYS:NZ	1:A:214:GLU:OE2	2.35	0.59
6:T:626:PHE:HB3	6:T:630:GLU:HB2	1.84	0.59
6:T:2347:ASN:OD1	6:T:2348:PHE:N	2.34	0.59
6:T:2647:THR:HG22	6:T:2648:SER:H	1.68	0.59
6:T:1438:ILE:HG23	6:T:1473:LEU:HG	1.84	0.58
6:T:1949:LEU:HG	6:T:1953:LEU:HD23	1.84	0.58
6:T:3277:GLU:O	6:T:3281:VAL:HG23	2.02	0.58
1:A:89:THR:HA	1:A:93:GLU:HB3	1.84	0.58
6:T:2090:LEU:HD12	6:T:2090:LEU:O	2.03	0.58
6:T:2229:GLU:HG3	6:T:2233:LYS:HG3	1.84	0.58
6:T:2611:SER:HA	6:T:2639:ILE:HD11	1.84	0.58
6:T:2894:ASP:OD1	6:T:2896:ASN:N	2.35	0.58
2:B:190:ILE:HD11	2:B:292:LEU:HD22	1.86	0.58
3:D:346:LYS:H	3:D:346:LYS:HD2	1.66	0.58
6:T:18:ASP:O	6:T:23:SER:OG	2.19	0.58
6:T:1350:GLN:O	6:T:1354:VAL:HG23	2.04	0.58
6:T:1793:ASP:HA	6:T:1800:ILE:HD13	1.84	0.58
2:B:416:SER:HA	2:B:448:ARG:HH11	1.68	0.58
6:T:629:GLU:CD	6:T:1717:GLN:CB	2.61	0.58
6:T:716:ASP:OD1	6:T:717:SER:N	2.36	0.58
6:T:776:PHE:HB3	6:T:779:ILE:HG22	1.85	0.58
6:T:2341:ASP:O	6:T:2385:ARG:NH1	2.36	0.58
2:B:178:LYS:N	4:E:188:ASP:OD2	2.34	0.58
6:T:837:VAL:HA	6:T:840:GLN:HE21	1.68	0.58
6:T:2851:GLU:OE1	6:T:2884:TRP:NE1	2.35	0.58
6:T:3465:THR:OG1	6:T:3466:THR:N	2.37	0.58
3:D:377:HIS:O	3:D:381:VAL:HG23	2.04	0.58
6:T:365:PRO:HG3	6:T:398:PHE:HZ	1.67	0.58
6:T:2325:LEU:HG	6:T:2329:ARG:HB3	1.85	0.58
6:T:2335:THR:O	6:T:2339:LEU:HG	2.03	0.58
6:T:2646:ASN:ND2	6:T:2647:THR:OG1	2.36	0.58
3:D:760:MET:O	3:D:764:ILE:HG12	2.04	0.58
6:T:854:GLU:OE1	6:T:854:GLU:N	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2158:LEU:H	6:T:2158:LEU:HD12	1.67	0.58
6:T:2704:GLN:O	6:T:2708:GLU:HG2	2.02	0.58
6:T:480:ARG:HB2	6:T:1760:TYR:HH	1.63	0.58
6:T:1323:VAL:HG12	6:T:1366:THR:HG22	1.84	0.58
6:T:2158:LEU:HD12	6:T:2158:LEU:N	2.19	0.58
6:T:2228:GLU:N	6:T:2228:GLU:OE1	2.36	0.58
2:B:14:VAL:HG11	4:E:91:LEU:HD13	1.84	0.58
2:B:262:LEU:O	2:B:282:ASN:ND2	2.37	0.58
2:B:397:ASP:OD1	2:B:398:VAL:N	2.30	0.58
5:F:556:SER:OG	6:T:3519:THR:OG1	2.22	0.58
6:T:1216:ILE:HD11	6:T:1237:LEU:HD23	1.84	0.58
6:T:1372:GLU:OE2	6:T:1432:GLN:NE2	2.37	0.58
6:T:1750:PHE:O	6:T:1750:PHE:HD1	1.87	0.58
3:D:78:ILE:HG13	3:D:79:ARG:H	1.68	0.57
6:T:1562:LEU:HG	6:T:1563:PRO:HD2	1.86	0.57
6:T:2460:TRP:HD1	6:T:2462:PHE:CD1	2.21	0.57
6:T:2811:GLN:HE21	6:T:2814:ARG:HD3	1.69	0.57
6:T:3131:TRP:HD1	6:T:3163:TYR:CZ	2.22	0.57
6:T:126:PHE:CZ	6:T:130:LYS:HD3	2.38	0.57
6:T:1281:GLY:HA2	6:T:1285:LEU:HB2	1.86	0.57
6:T:1617:LEU:HB2	6:T:1620:LEU:HB3	1.86	0.57
6:T:2218:LYS:HG3	6:T:2218:LYS:O	2.03	0.57
6:T:851:LEU:HA	6:T:854:GLU:HB3	1.86	0.57
6:T:1173:GLU:OE1	6:T:1174:LYS:NZ	2.37	0.57
6:T:1234:GLN:NE2	6:T:1271:THR:OG1	2.37	0.57
6:T:1821:LEU:HG	6:T:1821:LEU:O	2.02	0.57
1:A:103:VAL:HG12	1:A:129:VAL:HG11	1.86	0.57
4:E:82:GLU:HG3	4:E:92:ARG:HG2	1.85	0.57
6:T:10:PHE:HA	6:T:30:GLU:HG3	1.86	0.57
6:T:19:ALA:O	6:T:23:SER:N	2.37	0.57
6:T:1486:LEU:HD23	6:T:1489:LEU:HD12	1.86	0.57
6:T:2240:THR:HG23	6:T:2259:LEU:HD22	1.85	0.57
6:T:2357:ARG:O	6:T:2360:ILE:HG22	2.05	0.57
6:T:2459:ASN:HD21	6:T:2468:TRP:NE1	2.02	0.57
6:T:3060:TRP:HD1	6:T:3084:CYS:SG	2.27	0.57
2:B:231:ASP:OD1	2:B:235:ASN:ND2	2.37	0.57
6:T:832:LYS:HG3	6:T:833:PRO:HD3	1.87	0.57
6:T:1490:SER:HA	6:T:1521:LYS:HD2	1.86	0.57
6:T:1930:LEU:HB3	6:T:1946:LEU:HD21	1.85	0.57
6:T:25:TYR:O	6:T:29:SER:OG	2.21	0.57
6:T:480:ARG:HD3	6:T:1760:TYR:CG	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:698:PHE:O	6:T:702:ILE:HG22	2.04	0.57
6:T:2432:ARG:HD3	6:T:2550:TYR:CZ	2.38	0.57
6:T:80:LEU:HD22	6:T:120:LYS:HB3	1.87	0.57
6:T:612:THR:HB	6:T:1532:VAL:HG11	1.86	0.57
6:T:751:LEU:HB2	6:T:808:TYR:CZ	2.40	0.57
6:T:1454:GLU:H	6:T:1454:GLU:CD	2.12	0.57
6:T:1510:LEU:HD23	6:T:1513:TYR:HE1	1.70	0.57
6:T:1949:LEU:HD23	6:T:1949:LEU:O	2.03	0.57
2:B:126:GLU:O	2:B:130:GLU:HB3	2.05	0.57
2:B:130:GLU:O	2:B:133:GLN:NE2	2.38	0.57
6:T:690:PHE:HA	6:T:693:MET:HE3	1.86	0.57
6:T:2322:VAL:HG23	6:T:2322:VAL:O	2.05	0.57
6:T:2621:HIS:ND1	6:T:2622:LEU:HG	2.20	0.57
6:T:3202:ARG:O	6:T:3205:TRP:NE1	2.36	0.57
3:D:597:PHE:CD1	5:F:639:ARG:HB2	2.40	0.57
3:D:645:ARG:O	3:D:736:ARG:NH2	2.33	0.57
6:T:1543:LEU:HD12	6:T:1549:THR:HG21	1.86	0.57
6:T:1699:LEU:HD23	6:T:1699:LEU:C	2.29	0.57
6:T:2209:VAL:HA	6:T:2212:VAL:HG13	1.87	0.57
6:T:2481:ASN:OD1	6:T:2482:ARG:N	2.38	0.57
6:T:507:ILE:HG13	6:T:508:GLN:HG2	1.86	0.57
6:T:1036:PRO:HG2	6:T:1039:TYR:HB2	1.87	0.57
6:T:1962:THR:N	6:T:1963:PRO:HD2	2.20	0.57
6:T:3255:ASP:OD1	6:T:3256:GLY:N	2.38	0.57
6:T:146:GLN:OE1	6:T:150:ASN:ND2	2.38	0.56
6:T:892:ASP:OD1	6:T:892:ASP:N	2.38	0.56
6:T:2426:VAL:HG13	6:T:2428:ASP:H	1.70	0.56
3:D:354:GLN:OE1	4:E:182:ARG:NH1	2.38	0.56
6:T:985:MET:HG2	6:T:2570:SER:HB2	1.88	0.56
1:A:363:ASP:OD1	4:E:76:SER:N	2.24	0.56
3:D:675:HIS:NE2	6:T:2622:LEU:HB2	2.20	0.56
4:E:199:GLU:OE1	4:E:199:GLU:N	2.30	0.56
6:T:240:GLN:O	6:T:244:THR:HG23	2.05	0.56
6:T:352:ARG:HD3	6:T:394:THR:HG22	1.88	0.56
6:T:942:SER:O	6:T:946:VAL:HG23	2.05	0.56
6:T:1379:GLN:O	6:T:1383:VAL:HG23	2.05	0.56
6:T:2036:LEU:HD23	6:T:2123:ILE:HD12	1.87	0.56
6:T:2847:GLN:NE2	6:T:2851:GLU:OE2	2.39	0.56
6:T:2680:ARG:HE	6:T:2689:ASN:ND2	2.03	0.56
2:B:222:ASP:N	2:B:222:ASP:OD1	2.38	0.56
3:D:585:ILE:HG22	3:D:587:LYS:HZ1	1.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:586:SER:C	3:D:587:LYS:HZ2	2.12	0.56
5:F:627:LEU:HD13	5:F:629:ILE:HG12	1.87	0.56
6:T:80:LEU:O	6:T:84:ASN:ND2	2.39	0.56
6:T:2332:PHE:O	6:T:2336:VAL:HG23	2.06	0.56
6:T:422:LEU:HD12	6:T:474:ARG:HG2	1.87	0.56
6:T:1426:GLU:OE1	6:T:1426:GLU:N	2.38	0.56
6:T:2775:ALA:O	6:T:2778:GLN:NE2	2.38	0.56
3:D:643:GLN:CD	3:D:643:GLN:H	2.14	0.56
6:T:99:VAL:HG21	6:T:125:LEU:HD12	1.87	0.56
6:T:755:ASP:OD1	6:T:758:THR:HG22	2.05	0.56
6:T:808:TYR:O	6:T:812:ILE:HG12	2.05	0.56
6:T:1205:THR:O	6:T:1208:ASN:N	2.39	0.56
6:T:2329:ARG:O	6:T:2333:LEU:HG	2.06	0.56
3:D:272:LEU:HD11	3:D:566:TYR:HE1	1.71	0.56
3:D:292:TYR:O	3:D:296:THR:HG23	2.05	0.56
3:D:549:VAL:HG23	3:D:550:ASP:H	1.71	0.56
6:T:31:LEU:HD22	6:T:82:ILE:HG12	1.87	0.56
6:T:1271:THR:HG23	6:T:1272:PHE:HD1	1.70	0.56
6:T:2188:GLN:HE21	6:T:2192:GLU:HB3	1.70	0.56
6:T:3155:ILE:HG22	6:T:3159:ILE:HD11	1.87	0.56
6:T:3729:SER:OG	6:T:3732:ASN:OD1	2.23	0.56
6:T:434:MET:O	6:T:438:LEU:HG	2.05	0.56
6:T:1354:VAL:O	6:T:1358:THR:HG23	2.06	0.56
6:T:2206:LEU:HD12	6:T:2206:LEU:C	2.31	0.56
6:T:2279:MET:HA	6:T:2279:MET:HE3	1.87	0.56
6:T:3384:THR:HG23	6:T:3385:HIS:HD2	1.71	0.56
2:B:287:GLY:HA2	2:B:290:GLU:HB3	1.87	0.56
6:T:834:ILE:H	6:T:834:ILE:HD12	1.71	0.56
6:T:1110:PHE:HB3	6:T:1145:ILE:HD13	1.88	0.56
6:T:2182:GLU:H	6:T:2182:GLU:CD	2.13	0.56
6:T:2236:ILE:HB	6:T:2259:LEU:HD21	1.87	0.56
1:A:168:GLY:HA3	3:D:384:CYS:HB3	1.87	0.55
2:B:21:PRO:HB2	2:B:75:ILE:HG13	1.88	0.55
6:T:327:ASP:HA	6:T:330:ILE:HG22	1.88	0.55
6:T:3436:THR:HG23	6:T:3441:ILE:HD13	1.86	0.55
6:T:2350:ARG:HA	6:T:2353:VAL:HG22	1.87	0.55
1:A:39:ARG:NH2	1:A:62:ARG:O	2.40	0.55
1:A:117:GLU:OE1	4:E:94:TRP:NE1	2.40	0.55
2:B:210:LYS:N	2:B:217:ILE:O	2.39	0.55
3:D:595:ASN:OD1	3:D:596:GLY:N	2.31	0.55
5:F:577:TYR:O	5:F:580:HIS:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:580:HIS:CG	5:F:581:LEU:N	2.74	0.55
6:T:3041:GLN:O	6:T:3045:THR:HG23	2.06	0.55
6:T:826:ASN:OD1	6:T:827:LEU:N	2.38	0.55
6:T:1673:PHE:HZ	6:T:1692:ILE:HG22	1.71	0.55
6:T:1740:GLN:HE22	6:T:1781:ASN:HB2	1.71	0.55
6:T:1895:LYS:H	6:T:1895:LYS:HD2	1.72	0.55
6:T:2482:ARG:HH21	6:T:2539:SER:HA	1.72	0.55
6:T:2892:TRP:CD2	6:T:3437:ARG:HG2	2.42	0.55
3:D:575:LYS:HE2	3:D:577:ASP:HB3	1.88	0.55
6:T:410:GLU:O	6:T:414:THR:HG23	2.07	0.55
6:T:796:LEU:HD13	6:T:838:LEU:HD23	1.88	0.55
6:T:972:LEU:HD23	6:T:998:GLN:HG3	1.89	0.55
6:T:1702:THR:HA	6:T:1705:THR:HG22	1.87	0.55
1:A:358:SER:OG	1:A:361:GLU:N	2.33	0.55
4:E:274:GLU:HB3	4:E:275:ARG:NH2	2.22	0.55
5:F:581:LEU:HG	5:F:615:LYS:HB2	1.88	0.55
6:T:1641:GLU:HG2	6:T:1676:MET:HE2	1.89	0.55
6:T:1864:LEU:HD11	6:T:1893:PHE:HZ	1.71	0.55
6:T:2100:LEU:HD21	6:T:2121:ILE:HD13	1.88	0.55
6:T:3154:HIS:O	6:T:3158:ARG:NH1	2.39	0.55
6:T:3416:GLU:HG3	6:T:3420:PHE:CE2	2.42	0.55
6:T:3717:THR:O	6:T:3720:ILE:N	2.40	0.55
2:B:272:SER:OG	2:B:276:GLU:N	2.39	0.55
6:T:572:LEU:CA	6:T:1940:TYR:CE2	2.90	0.55
6:T:1331:GLN:HA	6:T:1334:LEU:HG	1.88	0.55
1:A:51:ASP:OD1	1:A:51:ASP:N	2.39	0.55
1:A:188:TYR:HE2	1:A:257:ALA:HA	1.71	0.55
3:D:762:GLU:HA	3:D:765:ARG:HH11	1.71	0.55
6:T:339:GLU:HB3	6:T:1897:GLU:HB3	1.88	0.55
6:T:1030:LYS:HA	6:T:2534:CYS:SG	2.47	0.55
6:T:3564:ILE:HG13	6:T:3565:ASN:H	1.71	0.55
2:B:103:ASN:HA	2:B:106:ILE:HD12	1.89	0.55
3:D:637:PRO:HG2	3:D:723:TRP:NE1	2.21	0.55
6:T:1198:ILE:HD11	6:T:1237:LEU:HG	1.89	0.55
6:T:1532:VAL:HG22	6:T:1583:LYS:HE2	1.89	0.55
6:T:2741:GLN:HG3	6:T:2742:HIS:H	1.72	0.55
6:T:3082:ILE:HD12	6:T:3107:LEU:HB3	1.89	0.55
1:A:58:ALA:HB1	1:A:67:LEU:HD21	1.88	0.54
1:A:152:VAL:HG13	1:A:298:VAL:HG12	1.88	0.54
6:T:337:PRO:O	6:T:344:ARG:NH2	2.40	0.54
6:T:382:THR:HG23	6:T:1900:LEU:CD1	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:590:LEU:O	6:T:594:LEU:HG	2.07	0.54
6:T:1132:ASP:HA	6:T:3320:ARG:HH22	1.71	0.54
6:T:1146:LEU:HD13	6:T:1193:LEU:HD22	1.88	0.54
6:T:2118:LEU:HD23	6:T:2118:LEU:O	2.08	0.54
6:T:2320:LEU:CD1	6:T:2356:SER:N	2.60	0.54
1:A:110:MET:SD	2:B:37:GLN:NE2	2.81	0.54
2:B:396:SER:OG	2:B:397:ASP:N	2.40	0.54
2:B:480:VAL:HA	2:B:483:LEU:HD12	1.88	0.54
6:T:1159:GLU:O	6:T:1163:VAL:HG23	2.07	0.54
6:T:1485:LEU:HB3	6:T:1503:LEU:HD21	1.89	0.54
6:T:1912:PHE:CD1	6:T:1912:PHE:C	2.85	0.54
6:T:2311:LEU:C	6:T:2311:LEU:HD12	2.33	0.54
6:T:3034:ARG:NH2	6:T:3036:TYR:OH	2.35	0.54
1:A:4:GLU:OE1	1:A:5:VAL:HG22	2.07	0.54
1:A:136:ILE:HG23	1:A:139:VAL:HG12	1.90	0.54
3:D:66:ASP:HB3	3:D:537:LYS:HE3	1.89	0.54
6:T:709:VAL:O	6:T:713:MET:HG3	2.07	0.54
6:T:1284:VAL:HG13	6:T:1285:LEU:HD22	1.89	0.54
6:T:1487:MET:CA	6:T:1487:MET:CE	2.85	0.54
6:T:1506:LEU:HD12	6:T:1506:LEU:O	2.07	0.54
6:T:1750:PHE:C	6:T:1750:PHE:CD1	2.85	0.54
6:T:3435:GLU:OE2	6:T:3439:ARG:NH1	2.37	0.54
6:T:769:SER:O	6:T:773:VAL:HG23	2.07	0.54
6:T:2748:GLU:OE1	6:T:2748:GLU:N	2.31	0.54
6:T:2847:GLN:O	6:T:2851:GLU:HG2	2.08	0.54
6:T:639:HIS:CE1	6:T:643:ILE:HD11	2.43	0.54
6:T:769:SER:O	6:T:772:SER:OG	2.17	0.54
6:T:934:PRO:HG3	6:T:2826:ILE:HA	1.90	0.54
6:T:1449:LEU:CD2	6:T:1484:PRO:CG	2.82	0.54
6:T:1859:LEU:N	6:T:1859:LEU:HD23	2.22	0.54
6:T:1915:LYS:CA	6:T:1915:LYS:CE	2.86	0.54
6:T:2174:ASN:HB3	6:T:2175:LYS:HE2	1.90	0.54
6:T:3237:PHE:CD2	6:T:3405:VAL:HG21	2.43	0.54
3:D:33:ILE:HG13	3:D:36:ARG:CZ	2.38	0.54
3:D:586:SER:O	3:D:587:LYS:NZ	2.37	0.54
4:E:169:ILE:HA	4:E:196:ARG:HH22	1.73	0.54
6:T:3566:ASN:O	6:T:3567:ARG:NE	2.36	0.54
1:A:221:LEU:O	1:A:315:LYS:NZ	2.36	0.54
6:T:10:PHE:HB2	6:T:13:ARG:HE	1.72	0.54
6:T:339:GLU:CD	6:T:1897:GLU:CB	2.80	0.54
6:T:1004:LEU:HD21	6:T:1089:ALA:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2411:GLU:OE1	6:T:2411:GLU:N	2.41	0.54
6:T:2590:PRO:HD2	6:T:2592:HIS:O	2.07	0.54
6:T:3680:ARG:HD2	6:T:3683:ILE:HG21	1.90	0.54
4:E:298:GLN:NE2	4:E:301:SER:H	2.04	0.54
6:T:480:ARG:CZ	6:T:1760:TYR:CD1	2.91	0.54
6:T:2278:LEU:HD12	6:T:2278:LEU:O	2.07	0.54
6:T:2691:GLY:HA3	6:T:2707:TYR:CE1	2.43	0.54
6:T:15:ARG:HH22	6:T:27:THR:HB	1.71	0.54
6:T:1420:ALA:CB	6:T:1462:ALA:HB1	2.38	0.54
6:T:2189:ASN:HD22	6:T:2189:ASN:N	2.04	0.54
6:T:2191:LEU:HD12	6:T:2194:CYS:HB2	1.90	0.54
6:T:2210:LEU:HD11	6:T:2258:THR:HB	1.88	0.54
3:D:308:LYS:NZ	6:T:2689:ASN:OD1	2.41	0.54
6:T:792:ILE:O	6:T:795:SER:OG	2.19	0.54
6:T:1107:LEU:HD22	6:T:1171:ILE:HD11	1.88	0.54
6:T:1568:MET:HE1	6:T:1572:ASP:HB2	1.89	0.54
6:T:1985:LEU:HA	6:T:1988:PHE:CE2	2.43	0.54
6:T:2206:LEU:HD23	6:T:2255:ALA:HA	1.90	0.54
6:T:3405:VAL:HG12	6:T:3457:ILE:HG22	1.90	0.54
6:T:786:PRO:O	6:T:787:HIS:ND1	2.40	0.53
6:T:846:ILE:HG12	6:T:848:THR:O	2.08	0.53
6:T:1776:LYS:HE2	6:T:1778:LYS:HE3	1.89	0.53
6:T:2031:LEU:HD12	6:T:2031:LEU:C	2.32	0.53
6:T:2862:LEU:HD11	6:T:2915:ALA:HB3	1.90	0.53
6:T:480:ARG:NH1	6:T:1760:TYR:CG	2.73	0.53
6:T:849:ALA:C	6:T:851:LEU:H	2.14	0.53
6:T:3551:GLN:NE2	6:T:3580:ASN:OD1	2.41	0.53
1:A:160:THR:HG23	1:A:178:ILE:HB	1.89	0.53
2:B:141:PRO:O	2:B:144:THR:OG1	2.23	0.53
6:T:678:ASP:O	6:T:682:LEU:HG	2.08	0.53
6:T:823:ARG:O	6:T:826:ASN:N	2.24	0.53
6:T:1444:PHE:O	6:T:1448:MET:HG2	2.08	0.53
6:T:1752:PHE:CE1	6:T:1796:LEU:HD21	2.44	0.53
6:T:1776:LYS:HZ3	6:T:1778:LYS:HG3	1.73	0.53
6:T:1801:PHE:CE1	6:T:1859:LEU:HB2	2.43	0.53
6:T:2365:ILE:HG13	6:T:2366:PHE:N	2.23	0.53
6:T:3240:THR:HG23	6:T:3242:ASP:H	1.73	0.53
6:T:3466:THR:HG22	6:T:3573:HIS:CD2	2.43	0.53
1:A:99:GLU:H	1:A:99:GLU:CD	2.14	0.53
6:T:402:ILE:HG13	6:T:403:ARG:H	1.73	0.53
6:T:1300:ASN:ND2	6:T:1303:VAL:H	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1522:LEU:C	6:T:1522:LEU:HD23	2.34	0.53
6:T:2452:TYR:OH	6:T:2575:GLU:OE2	2.25	0.53
6:T:2470:ASN:O	6:T:2474:GLN:HG2	2.09	0.53
6:T:2701:ASP:N	6:T:2701:ASP:OD1	2.39	0.53
1:A:207:GLU:HG2	1:A:210:ARG:HH21	1.72	0.53
2:B:183:ASN:HD21	2:B:185:ILE:HB	1.73	0.53
3:D:743:VAL:HG11	3:D:747:SER:H	1.72	0.53
6:T:440:LEU:O	6:T:443:VAL:HG22	2.07	0.53
6:T:1097:ASP:OD1	6:T:1097:ASP:N	2.41	0.53
6:T:1340:LYS:HE2	6:T:1345:LEU:HD13	1.90	0.53
6:T:1825:LEU:HD23	6:T:1875:ASP:HB2	1.90	0.53
6:T:2708:GLU:OE2	6:T:2733:TRP:NE1	2.41	0.53
6:T:3551:GLN:O	6:T:3554:SER:OG	2.21	0.53
1:A:200:PHE:HA	1:A:205:GLU:HG3	1.90	0.53
1:A:239:SER:HA	1:A:249:THR:HA	1.91	0.53
2:B:144:THR:O	2:B:147:SER:OG	2.22	0.53
3:D:51:GLN:HE21	3:D:54:GLU:CD	2.16	0.53
4:E:281:LEU:HD13	6:T:2685:TYR:C	2.34	0.53
5:F:540:ASP:OD1	5:F:545:PRO:HD3	2.09	0.53
6:T:2862:LEU:HD12	6:T:2912:ILE:HG13	1.90	0.53
4:E:169:ILE:HD13	4:E:204:LYS:HE2	1.90	0.53
6:T:1899:THR:HA	6:T:1902:LYS:HE2	1.90	0.53
6:T:2486:LEU:HD23	6:T:2536:ILE:HG22	1.91	0.53
1:A:39:ARG:NH2	1:A:65:LEU:O	2.42	0.53
6:T:8:GLU:OE2	6:T:9:GLN:NE2	2.41	0.53
6:T:37:LEU:HD12	6:T:2009:HIS:CD2	2.44	0.53
6:T:741:LEU:HD23	6:T:787:HIS:CE1	2.43	0.53
6:T:1312:HIS:O	6:T:1315:SER:OG	2.23	0.53
6:T:1438:ILE:HD12	6:T:1473:LEU:HG	1.91	0.53
6:T:2225:ILE:HG22	6:T:2226:ILE:HG23	1.90	0.53
6:T:2245:GLN:HA	6:T:2245:GLN:HE21	1.71	0.53
6:T:2549:PHE:CD1	6:T:2556:ILE:HG22	2.44	0.53
6:T:2898:TRP:CE3	6:T:2953:VAL:HG11	2.43	0.53
6:T:15:ARG:NH2	6:T:18:ASP:OD1	2.43	0.53
6:T:76:ARG:HB3	6:T:117:LEU:HD11	1.90	0.53
6:T:479:ASN:ND2	6:T:640:GLU:O	2.42	0.53
6:T:2394:PHE:O	6:T:2397:ILE:HG12	2.08	0.53
6:T:3715:VAL:O	6:T:3716:THR:OG1	2.23	0.53
1:A:49:GLN:NE2	1:A:50:LYS:O	2.42	0.52
1:A:100:GLU:HG2	1:A:101:HIS:CE1	2.45	0.52
6:T:613:VAL:HA	6:T:1536:ASP:CG	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1205:THR:HG22	6:T:1207:TYR:HB2	1.92	0.52
6:T:3302:ASP:C	6:T:3304:LYS:H	2.17	0.52
2:B:83:TRP:CD1	2:B:123:LYS:HZ3	2.28	0.52
3:D:30:ASP:O	3:D:33:ILE:HG22	2.09	0.52
3:D:349:ILE:HG13	3:D:351:PRO:HD3	1.91	0.52
3:D:583:ILE:HB	3:D:584:PRO:HD3	1.91	0.52
6:T:365:PRO:HG3	6:T:398:PHE:CZ	2.45	0.52
6:T:1382:ILE:O	6:T:1412:ARG:NH2	2.34	0.52
6:T:1996:PHE:C	6:T:1996:PHE:CD2	2.87	0.52
6:T:3054:ALA:HB3	6:T:3092:TYR:HB2	1.91	0.52
2:B:48:THR:OG1	2:B:68:ASP:OD1	2.27	0.52
3:D:683:SER:OG	3:D:684:TYR:N	2.40	0.52
6:T:1359:PHE:O	6:T:1363:LEU:HG	2.10	0.52
6:T:1883:LYS:HB3	6:T:1912:PHE:CZ	2.43	0.52
6:T:3112:ASP:OD1	6:T:3112:ASP:N	2.43	0.52
6:T:59:LEU:HD11	6:T:83:PHE:CE2	2.45	0.52
6:T:75:LEU:O	6:T:79:MET:HG3	2.10	0.52
6:T:467:ILE:O	6:T:470:SER:OG	2.18	0.52
6:T:640:GLU:HA	6:T:643:ILE:HD12	1.92	0.52
6:T:1281:GLY:O	6:T:1286:GLU:HB2	2.08	0.52
6:T:1742:PRO:HA	6:T:1745:LEU:HD12	1.90	0.52
6:T:2783:VAL:HG12	6:T:2791:ARG:HE	1.73	0.52
6:T:3106:TRP:HE3	6:T:3107:LEU:HD22	1.75	0.52
1:A:181:ALA:N	1:A:184:ASP:OD2	2.43	0.52
6:T:473:ASN:O	6:T:477:THR:HG23	2.10	0.52
6:T:572:LEU:CA	6:T:1940:TYR:HD2	2.21	0.52
6:T:1040:THR:OG1	6:T:1041:GLU:OE1	2.24	0.52
6:T:1513:TYR:O	6:T:1513:TYR:HD1	1.92	0.52
6:T:1830:LYS:HA	6:T:1832:LYS:HE3	1.91	0.52
3:D:533:GLU:OE2	3:D:552:LEU:N	2.43	0.52
6:T:496:LYS:O	6:T:499:LYS:HG3	2.09	0.52
6:T:507:ILE:HG13	6:T:508:GLN:N	2.24	0.52
6:T:1906:TYR:HA	6:T:1909:THR:HG22	1.91	0.52
6:T:326:PRO:HG2	6:T:367:LEU:HD13	1.92	0.52
6:T:697:THR:O	6:T:701:ILE:HG12	2.10	0.52
6:T:1950:THR:HG1	6:T:1951:PRO:HD3	1.74	0.52
6:T:3240:THR:HG23	6:T:3242:ASP:N	2.25	0.52
3:D:265:ALA:O	3:D:266:LEU:HG	2.10	0.52
3:D:682:TYR:HD1	6:T:2667:VAL:HG13	1.74	0.52
6:T:1298:ASN:OD1	6:T:1299:ALA:N	2.39	0.52
6:T:1301:PRO:HA	6:T:1304:ARG:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1441:LEU:HD23	6:T:1444:PHE:HD2	1.74	0.52
6:T:2271:ILE:HG13	6:T:2273:PRO:HD2	1.92	0.52
6:T:2519:LEU:H	6:T:2519:LEU:HD12	1.75	0.52
6:T:2959:MET:O	6:T:2962:VAL:HG12	2.10	0.52
6:T:2966:GLN:HA	6:T:2969:ARG:HH22	1.75	0.52
1:A:218:TYR:HA	1:A:307:PRO:HD2	1.90	0.52
2:B:261:GLU:O	2:B:264:SER:OG	2.25	0.52
6:T:349:HIS:HD2	6:T:352:ARG:HH12	1.58	0.52
6:T:1178:ILE:HG23	6:T:1179:TYR:CD1	2.45	0.52
6:T:1509:LEU:N	6:T:1509:LEU:CD2	2.73	0.52
6:T:1611:PHE:HB2	6:T:1624:MET:HE1	1.91	0.52
6:T:1651:TYR:CE2	6:T:1669:MET:HB3	2.45	0.52
6:T:2359:TRP:O	6:T:2372:LYS:NZ	2.39	0.52
3:D:628:ASN:H	6:T:2591:TYR:HE2	1.57	0.52
6:T:473:ASN:HA	6:T:476:LYS:HE2	1.92	0.52
6:T:1673:PHE:CE2	6:T:1695:LEU:HD11	2.45	0.52
6:T:2195:ILE:HG23	6:T:2239:LEU:HD22	1.91	0.52
6:T:2325:LEU:HD11	6:T:2328:SER:C	2.35	0.52
6:T:2420:PHE:HE2	6:T:2439:LEU:HD13	1.75	0.52
2:B:181:ARG:NH2	2:B:395:SER:OG	2.43	0.51
3:D:42:GLU:O	3:D:46:VAL:HG12	2.10	0.51
3:D:59:ASN:OD1	3:D:60:LYS:N	2.43	0.51
6:T:72:GLU:HB2	6:T:76:ARG:HH21	1.75	0.51
6:T:979:ASP:OD1	6:T:979:ASP:N	2.43	0.51
6:T:1510:LEU:HD11	6:T:1563:PRO:HD3	1.92	0.51
6:T:1559:PHE:HB3	6:T:1599:TYR:CD1	2.45	0.51
6:T:1673:PHE:CZ	6:T:1692:ILE:HG22	2.45	0.51
6:T:2687:GLU:OE1	6:T:2687:GLU:N	2.23	0.51
1:A:13:GLY:HA2	1:A:137:GLN:HE22	1.75	0.51
6:T:58:GLN:HG2	6:T:79:MET:HE2	1.91	0.51
6:T:222:LYS:HZ1	6:T:234:LEU:HD22	1.75	0.51
6:T:381:PHE:CE1	6:T:1856:HIS:CE1	2.98	0.51
6:T:752:GLY:HA3	6:T:802:ALA:HB1	1.92	0.51
6:T:856:GLU:HB3	6:T:890:TYR:CE1	2.45	0.51
6:T:984:GLY:HA3	6:T:2447:ILE:HG22	1.91	0.51
1:A:286:ASP:OD1	1:A:287:VAL:N	2.40	0.51
2:B:253:LYS:HE3	2:B:257:GLU:HG3	1.93	0.51
6:T:2180:ILE:O	6:T:2180:ILE:HG13	2.10	0.51
6:T:3087:GLN:HG2	6:T:3124:PHE:HE1	1.75	0.51
2:B:23:SER:N	7:B:501:ATP:O3G	2.43	0.51
3:D:751:GLY:HA2	3:D:755:LEU:HD22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:560:VAL:O	5:F:562:PHE:N	2.44	0.51
6:T:1939:ARG:NH1	6:T:1939:ARG:CB	2.73	0.51
6:T:2621:HIS:CE1	6:T:2657:ALA:HB1	2.45	0.51
6:T:2650:ASP:OD1	6:T:2650:ASP:N	2.44	0.51
6:T:3172:ARG:NH2	6:T:3227:GLU:OE1	2.43	0.51
2:B:21:PRO:HA	2:B:26:THR:HG23	1.92	0.51
6:T:1353:ASN:O	6:T:1357:ILE:HG13	2.11	0.51
6:T:1601:ASN:HD22	6:T:1601:ASN:N	2.07	0.51
6:T:1941:LEU:HD12	6:T:1941:LEU:C	2.35	0.51
6:T:2143:PHE:CZ	6:T:2170:VAL:HG11	2.45	0.51
6:T:2164:ALA:HA	6:T:2167:VAL:HG22	1.92	0.51
6:T:2214:MET:C	6:T:2214:MET:SD	2.94	0.51
6:T:2669:LEU:HD22	6:T:2836:THR:HG21	1.91	0.51
6:T:3156:LEU:HA	6:T:3159:ILE:HD12	1.93	0.51
6:T:3493:LEU:HG	6:T:3509:LEU:HD21	1.92	0.51
1:A:70:PRO:O	1:A:77:THR:N	2.43	0.51
1:A:372:HIS:HE1	5:F:644:ARG:CZ	2.24	0.51
6:T:443:VAL:HA	6:T:446:ILE:HD12	1.92	0.51
6:T:1045:THR:HG21	6:T:2510:MET:HA	1.93	0.51
6:T:1625:CYS:HA	6:T:1628:VAL:HG12	1.93	0.51
6:T:1867:LEU:C	6:T:1867:LEU:HD12	2.36	0.51
6:T:3736:THR:HG21	6:T:3740:PHE:HD2	1.75	0.51
1:A:275:ASP:N	1:A:275:ASP:OD1	2.40	0.51
1:A:311:GLU:OE1	1:A:311:GLU:N	2.43	0.51
3:D:272:LEU:HD11	3:D:566:TYR:CE1	2.46	0.51
6:T:381:PHE:O	6:T:385:GLU:N	2.41	0.51
6:T:1511:ILE:HG23	6:T:1511:ILE:O	2.09	0.51
6:T:3203:GLN:HG3	6:T:3207:TYR:HE2	1.75	0.51
1:A:151:ILE:HA	1:A:164:PRO:HA	1.91	0.51
3:D:633:PRO:HB3	3:D:697:PHE:CZ	2.46	0.51
4:E:98:SER:O	4:E:102:ILE:HG12	2.10	0.51
6:T:80:LEU:HD13	6:T:120:LYS:HG2	1.93	0.51
6:T:519:ARG:HA	6:T:522:LEU:HD12	1.92	0.51
6:T:1131:ILE:HG23	6:T:3320:ARG:HG2	1.93	0.51
6:T:1132:ASP:HA	6:T:3320:ARG:NH2	2.26	0.51
6:T:1159:GLU:OE1	6:T:1159:GLU:N	2.39	0.51
4:E:294:TYR:HB3	6:T:2712:VAL:HG11	1.93	0.51
6:T:1848:ILE:HB	6:T:1852:ASP:HB2	1.93	0.51
6:T:2271:ILE:HG23	6:T:2274:LEU:HB2	1.93	0.51
1:A:82:MET:HA	1:A:85:ILE:HD12	1.93	0.51
2:B:116:ASN:OD1	2:B:117:SER:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:277:ILE:HG23	5:F:577:TYR:OH	2.11	0.51
3:D:347:ARG:HD2	3:D:585:ILE:HD11	1.92	0.51
6:T:381:PHE:N	6:T:1858:ASP:OD1	2.43	0.51
6:T:477:THR:O	6:T:481:GLN:HG2	2.10	0.51
6:T:481:GLN:N	6:T:1760:TYR:HH	2.08	0.51
6:T:1062:ASP:OD1	6:T:1062:ASP:N	2.38	0.51
6:T:1157:ILE:O	6:T:1160:VAL:HG22	2.10	0.51
6:T:1423:LEU:HD12	6:T:1466:SER:OG	2.11	0.51
6:T:3304:LYS:N	6:T:3305:PRO:HD2	2.26	0.51
1:A:242:LEU:HD13	1:A:246:GLN:HB3	1.93	0.50
2:B:41:PRO:HD3	2:B:59:GLU:HB2	1.94	0.50
3:D:621:MET:HE3	3:D:625:ASN:HB3	1.93	0.50
3:D:762:GLU:HA	3:D:765:ARG:HD3	1.93	0.50
6:T:379:ASN:OD1	6:T:1856:HIS:HA	2.12	0.50
6:T:570:LEU:HD23	6:T:570:LEU:H	1.77	0.50
6:T:3412:HIS:CD2	6:T:3587:LEU:HD21	2.46	0.50
3:D:293:MET:O	3:D:296:THR:OG1	2.23	0.50
5:F:520:VAL:O	5:F:524:MET:HG3	2.11	0.50
6:T:611:TYR:OH	6:T:1584:LEU:C	2.54	0.50
6:T:858:TYR:HA	6:T:861:LEU:HD12	1.92	0.50
6:T:1405:SER:OG	6:T:1406:GLU:OE1	2.27	0.50
6:T:1516:VAL:HG11	6:T:1562:LEU:HD21	1.93	0.50
6:T:2197:SER:HA	6:T:2200:HIS:CE1	2.47	0.50
4:E:218:PRO:HA	4:E:223:LEU:HD12	1.93	0.50
6:T:24:ARG:NH2	6:T:70:SER:O	2.45	0.50
6:T:711:GLU:O	6:T:714:LEU:HB2	2.11	0.50
6:T:757:ASN:O	6:T:761:VAL:HG23	2.11	0.50
6:T:942:SER:OG	6:T:943:HIS:ND1	2.44	0.50
6:T:1655:ILE:N	6:T:1656:PRO:HD2	2.26	0.50
1:A:164:PRO:HG2	1:A:171:LEU:HD12	1.94	0.50
2:B:247:CYS:HB2	2:B:417:ILE:HD12	1.93	0.50
6:T:713:MET:HE3	6:T:719:LEU:HB2	1.93	0.50
6:T:918:GLU:HA	6:T:921:ILE:HG13	1.94	0.50
6:T:1641:GLU:HB3	6:T:1684:TRP:CZ2	2.45	0.50
6:T:3613:ILE:HG22	6:T:3614:PHE:H	1.77	0.50
3:D:609:GLU:O	3:D:611:SER:N	2.44	0.50
3:D:619:ARG:HD2	3:D:619:ARG:N	2.27	0.50
6:T:598:ILE:HD11	6:T:689:MET:HB3	1.93	0.50
6:T:912:TYR:O	6:T:915:PRO:HD2	2.12	0.50
6:T:1449:LEU:HD22	6:T:1484:PRO:CB	2.40	0.50
6:T:1482:LEU:HG	6:T:1482:LEU:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2156:ASN:HA	6:T:2159:TYR:CD2	2.46	0.50
6:T:2342:HIS:O	6:T:2385:ARG:NH2	2.29	0.50
6:T:3266:PRO:HA	6:T:3498:ASP:HB3	1.93	0.50
6:T:3413:SER:OG	6:T:3417:GLU:OE2	2.30	0.50
1:A:169:PHE:HZ	3:D:381:VAL:HG22	1.77	0.50
1:A:196:ARG:NH1	1:A:253:GLU:OE2	2.43	0.50
2:B:209:ILE:HA	2:B:218:LYS:HA	1.94	0.50
3:D:684:TYR:CD2	6:T:2757:ASP:HB2	2.46	0.50
4:E:298:GLN:HE22	4:E:301:SER:H	1.59	0.50
6:T:307:TYR:OH	6:T:347:LEU:HB2	2.11	0.50
6:T:434:MET:HA	6:T:437:LYS:HD2	1.94	0.50
6:T:1437:ARG:HA	6:T:1440:ILE:HG22	1.93	0.50
6:T:1570:LEU:HD23	6:T:1570:LEU:O	2.12	0.50
6:T:1977:ASN:HD21	6:T:1983:ASN:HA	1.76	0.50
6:T:2337:ALA:HA	6:T:2340:ILE:HD12	1.93	0.50
6:T:2338:LEU:HG	6:T:2342:HIS:NE2	2.26	0.50
6:T:3426:PHE:HE2	6:T:3561:MET:HE1	1.77	0.50
2:B:43:VAL:HG12	2:B:73:PRO:HA	1.93	0.50
2:B:478:VAL:HG22	2:B:482:ARG:HG2	1.94	0.50
3:D:71:LYS:HA	3:D:74:ILE:HG22	1.93	0.50
6:T:477:THR:HA	6:T:480:ARG:HD2	1.94	0.50
6:T:1115:VAL:HA	6:T:1118:THR:HG22	1.94	0.50
6:T:1210:ARG:HB2	6:T:1256:ILE:HD12	1.93	0.50
6:T:2616:LEU:O	6:T:2617:GLU:HG2	2.11	0.50
6:T:2619:PRO:N	6:T:2620:PRO:HD2	2.26	0.50
6:T:3306:ASP:OD1	6:T:3309:THR:HG22	2.11	0.50
1:A:98:PRO:HA	1:A:101:HIS:HD2	1.76	0.50
5:F:574:ARG:HG2	5:F:574:ARG:O	2.12	0.50
6:T:103:LEU:HD22	6:T:122:LEU:HG	1.93	0.50
1:A:80:ASP:OD1	1:A:81:ASP:N	2.44	0.50
3:D:543:PHE:O	3:D:545:LEU:HG	2.12	0.50
6:T:99:VAL:O	6:T:103:LEU:HG	2.11	0.50
6:T:381:PHE:HE1	6:T:1856:HIS:CE1	2.30	0.50
6:T:2189:ASN:N	6:T:2189:ASN:ND2	2.60	0.50
6:T:2320:LEU:HD13	6:T:2355:MET:HB3	0.54	0.50
6:T:2588:SER:OG	6:T:2589:LYS:N	2.45	0.50
5:F:524:MET:O	5:F:528:LYS:HG2	2.12	0.49
6:T:562:ASP:OD1	6:T:565:ASN:ND2	2.31	0.49
6:T:847:LEU:H	6:T:1207:TYR:HE2	1.59	0.49
6:T:1001:LEU:HD21	6:T:1085:SER:HB2	1.94	0.49
6:T:1102:LEU:HA	6:T:1105:ASN:HD22	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1335:SER:OG	6:T:1336:PRO:HD3	2.12	0.49
6:T:1832:LYS:HE2	6:T:1832:LYS:N	2.27	0.49
6:T:1858:ASP:OD1	6:T:1858:ASP:N	2.45	0.49
6:T:2006:ASN:HA	6:T:2009:HIS:CD2	2.47	0.49
6:T:2282:PHE:HE1	6:T:2335:THR:HB	1.77	0.49
6:T:2588:SER:O	6:T:2594:ARG:NH2	2.35	0.49
6:T:2633:TRP:CD1	6:T:2832:PRO:HD3	2.46	0.49
1:A:341:ILE:O	1:A:344:SER:OG	2.29	0.49
2:B:16:ALA:HB2	2:B:107:PRO:HG2	1.94	0.49
4:E:272:LEU:O	4:E:276:GLU:HG2	2.12	0.49
6:T:1650:PHE:C	6:T:1650:PHE:CD2	2.90	0.49
6:T:2138:VAL:HG22	6:T:2142:TYR:CD1	2.48	0.49
6:T:2184:LEU:C	6:T:2184:LEU:CD2	2.86	0.49
6:T:3020:ALA:O	6:T:3024:THR:HG23	2.11	0.49
6:T:624:ARG:O	6:T:1585:ARG:HD2	2.12	0.49
6:T:1378:LEU:HB3	6:T:1415:CYS:SG	2.52	0.49
6:T:1491:ASP:HA	6:T:1525:HIS:CE1	2.48	0.49
6:T:1605:ASN:H	6:T:1606:PRO:CD	2.25	0.49
6:T:1699:LEU:C	6:T:1699:LEU:CD2	2.86	0.49
6:T:1765:PHE:HA	6:T:1768:HIS:CE1	2.46	0.49
3:D:752:HIS:H	3:D:755:LEU:HB3	1.77	0.49
4:E:274:GLU:HB3	4:E:275:ARG:HH22	1.77	0.49
6:T:612:THR:O	6:T:1532:VAL:CG1	2.60	0.49
6:T:789:ASN:HB3	6:T:828:TYR:CE1	2.47	0.49
6:T:1857:HIS:HB3	6:T:1859:LEU:HG	1.94	0.49
6:T:1875:ASP:HB3	6:T:1878:ILE:HG22	1.95	0.49
6:T:2124:LEU:HD23	6:T:2124:LEU:O	2.12	0.49
6:T:2999:LEU:HD23	6:T:3003:LEU:HD23	1.94	0.49
6:T:3441:ILE:HG21	6:T:3648:ILE:HD11	1.94	0.49
5:F:581:LEU:HD21	5:F:613:ARG:HA	1.94	0.49
6:T:137:LEU:HD21	6:T:228:PRO:HG2	1.95	0.49
6:T:796:LEU:O	6:T:800:THR:HG23	2.12	0.49
6:T:1483:LYS:HB3	6:T:1484:PRO:HD3	1.94	0.49
6:T:2361:PHE:HZ	6:T:2400:LYS:HG2	1.78	0.49
6:T:2973:LEU:HD12	6:T:2974:PRO:HD2	1.95	0.49
6:T:34:ILE:HB	6:T:38:LEU:HD11	1.95	0.49
6:T:1419:LEU:O	6:T:1423:LEU:HG	2.12	0.49
6:T:1564:PRO:HA	6:T:1603:PHE:CE1	2.47	0.49
6:T:1748:ILE:HD11	6:T:1789:PHE:HZ	1.78	0.49
6:T:2160:TYR:HA	6:T:2163:ASN:ND2	2.28	0.49
6:T:2602:VAL:HA	6:T:2605:MET:HE2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2708:GLU:O	6:T:2712:VAL:HG23	2.13	0.49
6:T:3460:ASP:HA	6:T:3464:PHE:HZ	1.76	0.49
3:D:39:LYS:HA	6:T:3508:ILE:HG21	1.95	0.49
6:T:72:GLU:O	6:T:76:ARG:HG3	2.12	0.49
6:T:789:ASN:OD1	6:T:790:ASP:N	2.42	0.49
6:T:1546:GLN:HG2	6:T:1549:THR:HG23	1.93	0.49
6:T:1821:LEU:HD11	6:T:1824:TYR:HB2	1.94	0.49
6:T:2143:PHE:HZ	6:T:2170:VAL:HG11	1.76	0.49
6:T:2329:ARG:HG3	6:T:2330:ARG:N	2.28	0.49
6:T:2461:GLU:HA	6:T:2592:HIS:CD2	2.47	0.49
6:T:2626:LEU:HD23	6:T:2626:LEU:O	2.12	0.49
6:T:3422:LEU:HB2	6:T:3666:PHE:HD2	1.78	0.49
6:T:3423:TYR:CD2	6:T:3558:MET:HG2	2.48	0.49
1:A:125:GLU:OE2	4:E:77:PRO:HA	2.13	0.49
2:B:261:GLU:OE1	2:B:261:GLU:N	2.45	0.49
2:B:277:GLU:OE1	2:B:279:VAL:HG23	2.13	0.49
3:D:22:ASP:OD1	3:D:23:ARG:N	2.45	0.49
3:D:379:TYR:CZ	3:D:532:THR:HG21	2.48	0.49
3:D:722:GLN:HA	3:D:725:ILE:HG22	1.95	0.49
6:T:31:LEU:HD23	6:T:35:MET:HE2	1.95	0.49
6:T:129:PHE:HA	6:T:132:ILE:HG12	1.95	0.49
6:T:686:LEU:HA	6:T:689:MET:SD	2.53	0.49
6:T:715:GLU:OE1	6:T:715:GLU:N	2.45	0.49
6:T:1179:TYR:HB2	6:T:1184:ALA:HB2	1.95	0.49
6:T:1463:LEU:C	6:T:1463:LEU:CD2	2.86	0.49
6:T:1776:LYS:HE2	6:T:1778:LYS:CE	2.43	0.49
6:T:1778:LYS:HA	6:T:1781:ASN:ND2	2.28	0.49
6:T:2320:LEU:CD2	6:T:2320:LEU:C	2.86	0.49
6:T:2790:ARG:NH1	6:T:2793:MET:SD	2.86	0.49
1:A:19:ALA:O	1:A:28:ARG:N	2.43	0.49
2:B:242:CYS:HB3	2:B:246:LEU:HD12	1.95	0.49
6:T:129:PHE:HZ	6:T:136:LYS:H	1.59	0.49
6:T:311:ARG:HH21	6:T:315:PRO:HD3	1.78	0.49
6:T:458:PRO:O	6:T:462:LYS:HG3	2.13	0.49
6:T:461:LYS:O	6:T:465:MET:HG2	2.12	0.49
6:T:1039:TYR:CZ	6:T:1043:LEU:HD21	2.48	0.49
6:T:1832:LYS:CA	6:T:1832:LYS:CE	2.85	0.49
6:T:1864:LEU:HD11	6:T:1893:PHE:CZ	2.48	0.49
6:T:1903:GLN:HB3	6:T:1941:LEU:HD21	1.94	0.49
6:T:1992:HIS:HB2	6:T:1993:PRO:HD3	1.95	0.49
6:T:2573:LYS:O	6:T:2574:ASN:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2855:ALA:HB1	6:T:2859:TYR:HE2	1.78	0.49
6:T:3080:ASN:OD1	6:T:3081:ALA:N	2.41	0.49
1:A:152:VAL:HG22	1:A:298:VAL:HB	1.94	0.49
2:B:49:ALA:H	2:B:68:ASP:CG	2.20	0.49
3:D:32:LEU:HD23	3:D:300:ILE:HB	1.94	0.49
6:T:95:TYR:HA	6:T:98:GLU:HG3	1.94	0.49
6:T:560:MET:CB	6:T:1767:PHE:CE1	2.96	0.49
6:T:571:LEU:C	6:T:1940:TYR:HD2	2.19	0.49
6:T:730:GLU:HB3	6:T:733:SER:OG	2.13	0.49
6:T:1535:LEU:C	6:T:1535:LEU:CD2	2.86	0.49
6:T:1809:SER:HA	6:T:1812:ILE:HG12	1.95	0.49
6:T:1918:PHE:CE2	6:T:1920:ILE:HG13	2.48	0.49
6:T:1927:PHE:HA	6:T:1930:LEU:CD1	2.43	0.49
6:T:2659:GLU:HB3	6:T:2682:ARG:HD2	1.93	0.49
1:A:18:LYS:HG2	1:A:30:VAL:HG12	1.94	0.48
3:D:292:TYR:HE2	5:F:524:MET:HG2	1.78	0.48
3:D:585:ILE:HG22	3:D:587:LYS:NZ	2.28	0.48
6:T:789:ASN:HB3	6:T:828:TYR:HE1	1.77	0.48
6:T:1109:HIS:O	6:T:1113:LEU:HG	2.13	0.48
6:T:1570:LEU:C	6:T:1570:LEU:CD2	2.86	0.48
6:T:1747:PHE:HA	6:T:1750:PHE:CE2	2.48	0.48
6:T:1798:ALA:HA	6:T:1801:PHE:HD2	1.77	0.48
6:T:2100:LEU:C	6:T:2100:LEU:CD2	2.86	0.48
6:T:2172:PHE:HB2	6:T:2215:LYS:HD3	1.94	0.48
6:T:2272:VAL:N	6:T:2273:PRO:CD	2.75	0.48
6:T:2419:PRO:O	6:T:2422:VAL:HG12	2.12	0.48
6:T:2817:CYS:SG	6:T:2853:LEU:HD21	2.53	0.48
4:E:197:THR:OG1	4:E:199:GLU:OE1	2.19	0.48
6:T:24:ARG:NE	6:T:74:LYS:HB2	2.28	0.48
6:T:326:PRO:HB2	6:T:367:LEU:HD22	1.93	0.48
6:T:3169:PHE:O	6:T:3173:THR:HG23	2.12	0.48
6:T:3225:SER:HB3	6:T:3349:PHE:HE1	1.78	0.48
6:T:3270:PRO:HG2	6:T:3307:TYR:CD2	2.48	0.48
3:D:585:ILE:HD12	3:D:585:ILE:H	1.76	0.48
3:D:628:ASN:OD1	3:D:629:HIS:N	2.40	0.48
6:T:594:LEU:HD13	6:T:637:LEU:HD11	1.95	0.48
6:T:742:ARG:CZ	6:T:1544:ALA:CB	2.90	0.48
6:T:965:ASP:N	6:T:965:ASP:OD1	2.46	0.48
6:T:1762:LEU:C	6:T:1762:LEU:CD2	2.85	0.48
6:T:2711:GLN:NE2	6:T:2730:GLU:HA	2.28	0.48
6:T:3238:LYS:HG2	6:T:3407:TYR:CZ	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:312:THR:H	6:T:3629:GLN:NE2	2.12	0.48
4:E:173:PHE:HA	4:E:176:CYS:HB2	1.94	0.48
6:T:370:LEU:O	6:T:374:ARG:NH1	2.47	0.48
6:T:573:PRO:HD3	6:T:1940:TYR:CD2	2.48	0.48
6:T:851:LEU:N	6:T:852:PRO:HD3	2.28	0.48
6:T:1128:THR:OG1	6:T:1129:PHE:N	2.46	0.48
6:T:1590:SER:HB3	6:T:1593:ARG:CD	2.43	0.48
6:T:3679:HIS:O	6:T:3681:PRO:HD3	2.14	0.48
6:T:63:PRO:O	6:T:64:ILE:HD13	2.14	0.48
6:T:629:GLU:OE2	6:T:1717:GLN:CB	2.59	0.48
6:T:1039:TYR:CE1	6:T:2497:PRO:HB2	2.49	0.48
6:T:1123:ARG:HH11	6:T:1133:LEU:HD22	1.78	0.48
6:T:1703:LEU:C	6:T:1703:LEU:CD2	2.85	0.48
6:T:1800:ILE:HA	6:T:1803:LEU:CD1	2.43	0.48
6:T:1895:LYS:HD2	6:T:1895:LYS:N	2.28	0.48
6:T:2285:LEU:CD2	6:T:2311:LEU:HD11	2.44	0.48
5:F:627:LEU:HD12	5:F:628:GLU:N	2.28	0.48
6:T:247:PRO:HG2	6:T:251:PRO:HD3	1.95	0.48
6:T:462:LYS:O	6:T:466:ILE:HG13	2.13	0.48
6:T:842:LEU:HA	6:T:845:MET:HB3	1.95	0.48
6:T:2788:THR:HG22	6:T:2791:ARG:HH11	1.78	0.48
6:T:2852:PHE:O	6:T:2856:THR:HG23	2.13	0.48
6:T:3114:SER:OG	6:T:3115:GLY:N	2.46	0.48
6:T:3365:ASN:HB2	6:T:3368:PHE:CE2	2.49	0.48
1:A:169:PHE:CZ	3:D:381:VAL:HG22	2.49	0.48
2:B:175:THR:O	4:E:189:ARG:NH1	2.46	0.48
2:B:267:LYS:HD3	2:B:281:ASP:HA	1.96	0.48
3:D:594:ASP:OD1	3:D:594:ASP:N	2.45	0.48
6:T:572:LEU:N	6:T:1940:TYR:CE2	2.82	0.48
6:T:1031:SER:HB2	6:T:2493:CYS:SG	2.53	0.48
6:T:1359:PHE:HA	6:T:1362:SER:OG	2.13	0.48
6:T:2460:TRP:CG	6:T:2461:GLU:N	2.81	0.48
3:D:558:THR:HB	3:D:561:GLN:HB2	1.95	0.48
3:D:661:ASN:O	3:D:665:TYR:HB2	2.13	0.48
6:T:338:SER:O	6:T:338:SER:OG	2.31	0.48
6:T:378:GLY:O	6:T:1856:HIS:CD2	2.67	0.48
6:T:466:ILE:CA	6:T:1716:LEU:HD21	2.42	0.48
6:T:509:ASP:OD1	6:T:509:ASP:N	2.42	0.48
6:T:629:GLU:OE2	6:T:1717:GLN:N	2.46	0.48
6:T:2700:TRP:HD1	6:T:2736:CYS:SG	2.36	0.48
6:T:3177:ASP:O	6:T:3181:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:3371:ILE:HG22	6:T:3393:ILE:HG21	1.96	0.48
1:A:120:THR:HG21	1:A:370:VAL:HB	1.96	0.48
2:B:299:ASP:H	2:B:300:ILE:HD12	1.78	0.48
3:D:684:TYR:OH	6:T:2738:GLU:OE1	2.21	0.48
6:T:249:PHE:CG	6:T:289:PRO:HG3	2.49	0.48
6:T:480:ARG:CZ	6:T:1760:TYR:HB2	2.41	0.48
6:T:1300:ASN:ND2	6:T:1302:LYS:HB2	2.29	0.48
6:T:1582:ARG:HD3	6:T:1582:ARG:C	2.39	0.48
6:T:1591:PRO:HG2	6:T:1592:PHE:HD1	1.78	0.48
6:T:1974:MET:HA	6:T:1977:ASN:HB2	1.95	0.48
6:T:2118:LEU:C	6:T:2118:LEU:CD2	2.86	0.48
6:T:2244:THR:HB	6:T:2277:PRO:HB3	1.96	0.48
6:T:3151:MET:HA	6:T:3154:HIS:HD2	1.78	0.48
6:T:44:TYR:HB3	6:T:48:LEU:HD22	1.96	0.48
6:T:472:MET:HA	6:T:475:PHE:CE2	2.49	0.48
6:T:740:LEU:O	6:T:744:LEU:HD23	2.14	0.48
6:T:951:LYS:HA	6:T:2887:ARG:HE	1.79	0.48
6:T:1330:LYS:HG3	6:T:1331:GLN:N	2.29	0.48
6:T:1738:ARG:NE	6:T:1738:ARG:HA	2.29	0.48
6:T:1990:ILE:HG13	6:T:1997:PHE:CZ	2.49	0.48
6:T:2325:LEU:HD21	6:T:2328:SER:C	2.39	0.48
6:T:2898:TRP:HZ3	6:T:2949:ARG:HG3	1.79	0.48
6:T:2989:ALA:HA	6:T:3006:ILE:HD12	1.96	0.48
1:A:14:SER:HB2	1:A:158:GLY:N	2.28	0.47
1:A:349:LEU:HD12	1:A:350:THR:H	1.78	0.47
3:D:697:PHE:O	3:D:701:VAL:HG23	2.14	0.47
5:F:573:ASP:OD1	5:F:574:ARG:HD3	2.14	0.47
6:T:627:SER:H	6:T:630:GLU:CD	2.22	0.47
6:T:1190:ILE:HG23	6:T:1191:PRO:HD3	1.95	0.47
6:T:1516:VAL:CG2	6:T:1562:LEU:HD11	2.44	0.47
6:T:1879:ILE:HD12	6:T:1882:ILE:HG21	1.96	0.47
6:T:1924:THR:HA	6:T:1927:PHE:CD2	2.49	0.47
3:D:628:ASN:N	6:T:2591:TYR:HE2	2.12	0.47
5:F:520:VAL:N	5:F:523:LYS:HB3	2.29	0.47
6:T:1086:VAL:O	6:T:1090:THR:HG23	2.14	0.47
6:T:1516:VAL:HG21	6:T:1562:LEU:HD11	1.95	0.47
1:A:39:ARG:O	1:A:40:HIS:ND1	2.47	0.47
1:A:139:VAL:HG13	1:A:140:LEU:HD22	1.94	0.47
3:D:765:ARG:NE	4:E:300:MET:SD	2.74	0.47
4:E:296:THR:OG1	4:E:297:SER:N	2.48	0.47
6:T:1108:ASP:HB2	6:T:2522:PHE:HZ	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1651:TYR:HE2	6:T:1669:MET:HB3	1.78	0.47
6:T:1741:ASN:HB3	6:T:1742:PRO:HD3	1.96	0.47
6:T:1872:ILE:HD12	6:T:1912:PHE:CD2	2.49	0.47
6:T:1919:PRO:HD2	6:T:1923:VAL:HG23	1.96	0.47
6:T:3464:PHE:HB3	6:T:3575:ASP:HA	1.95	0.47
6:T:3731:ARG:H	6:T:3731:ARG:HD2	1.80	0.47
4:E:298:GLN:OE1	4:E:299:GLY:N	2.47	0.47
6:T:428:ALA:HB3	6:T:431:VAL:HG12	1.96	0.47
6:T:1040:THR:OG1	6:T:1041:GLU:N	2.47	0.47
6:T:1290:THR:HG22	6:T:1329:SER:OG	2.15	0.47
6:T:1547:MET:N	6:T:1548:PRO:CD	2.78	0.47
6:T:1644:LEU:HA	6:T:1647:PHE:CD2	2.50	0.47
6:T:1747:PHE:HA	6:T:1750:PHE:CZ	2.50	0.47
6:T:2122:ASN:N	6:T:2122:ASN:ND2	2.60	0.47
6:T:2177:LYS:NZ	6:T:2179:TRP:HB3	2.30	0.47
6:T:3371:ILE:HG13	6:T:3371:ILE:O	2.15	0.47
6:T:3493:LEU:HD11	6:T:3506:MET:HE1	1.95	0.47
1:A:36:GLY:HA3	1:A:53:TYR:HB2	1.96	0.47
5:F:580:HIS:CG	5:F:581:LEU:H	2.32	0.47
6:T:242:THR:HB	6:T:328:LEU:HD21	1.97	0.47
6:T:605:ASN:HD22	6:T:620:ALA:C	2.22	0.47
6:T:678:ASP:OD1	6:T:679:ALA:N	2.48	0.47
6:T:1046:ALA:O	6:T:1049:SER:OG	2.22	0.47
6:T:1240:GLY:O	6:T:1244:VAL:HG23	2.14	0.47
6:T:1556:ILE:HD12	6:T:1573:LEU:HD21	1.95	0.47
6:T:1744:LEU:HA	6:T:1747:PHE:CD2	2.50	0.47
6:T:1744:LEU:HD13	6:T:1747:PHE:CE2	2.50	0.47
6:T:1985:LEU:HA	6:T:1988:PHE:CZ	2.49	0.47
6:T:2003:PHE:HA	6:T:2006:ASN:ND2	2.29	0.47
6:T:2158:LEU:H	6:T:2158:LEU:CD1	2.28	0.47
6:T:2557:HIS:ND1	6:T:2605:MET:HG2	2.29	0.47
6:T:3464:PHE:HB2	6:T:3574:VAL:O	2.14	0.47
1:A:30:VAL:HG11	1:A:337:TYR:CE1	2.50	0.47
1:A:39:ARG:NE	1:A:63:GLY:O	2.48	0.47
1:A:252:ASN:HA	1:A:255:PHE:CE2	2.49	0.47
1:A:253:GLU:H	1:A:253:GLU:CD	2.21	0.47
3:D:623:TYR:HD1	3:D:626:ARG:HH21	1.63	0.47
6:T:638:PHE:O	6:T:642:ILE:HG12	2.14	0.47
6:T:1068:ASN:ND2	6:T:1071:ASP:OD2	2.46	0.47
6:T:1219:LEU:O	6:T:1223:VAL:HG12	2.14	0.47
6:T:1289:LEU:O	6:T:1293:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1658:ASN:HD21	6:T:1665:PHE:HZ	1.61	0.47
6:T:2679:TRP:CZ3	6:T:2728:LEU:HD22	2.50	0.47
6:T:2959:MET:O	6:T:2959:MET:HG2	2.15	0.47
6:T:3119:ASN:O	6:T:3123:SER:OG	2.17	0.47
2:B:152:ARG:NH2	2:B:440:LEU:HD11	2.30	0.47
3:D:346:LYS:HE2	5:F:536:PHE:HD2	1.79	0.47
4:E:271:THR:O	4:E:275:ARG:HG2	2.13	0.47
6:T:28:LEU:HG	6:T:78:SER:HB3	1.97	0.47
6:T:159:PHE:HE1	6:T:298:GLN:HE22	1.62	0.47
6:T:638:PHE:HB2	6:T:690:PHE:CZ	2.49	0.47
6:T:687:ALA:O	6:T:691:MET:HG2	2.15	0.47
6:T:1907:LEU:C	6:T:1907:LEU:CD2	2.85	0.47
6:T:1998:ASN:ND2	6:T:2041:LYS:HG2	2.29	0.47
6:T:2034:LEU:C	6:T:2034:LEU:CD2	2.86	0.47
6:T:2168:LEU:HD11	6:T:2211:GLN:CG	2.45	0.47
6:T:2182:GLU:CD	6:T:2182:GLU:N	2.73	0.47
6:T:2238:MET:SD	6:T:2239:LEU:N	2.88	0.47
6:T:2359:TRP:HA	6:T:2362:ASN:CG	2.40	0.47
6:T:2374:ALA:O	6:T:2378:LYS:HG2	2.14	0.47
6:T:2379:MET:HE3	6:T:2382:PHE:CE2	2.49	0.47
6:T:2961:ASP:OD1	6:T:2961:ASP:N	2.47	0.47
6:T:3110:ILE:HG22	6:T:3112:ASP:H	1.78	0.47
6:T:3418:ARG:NH1	6:T:3669:ASP:HB3	2.30	0.47
6:T:3564:ILE:HA	6:T:3588:PRO:HA	1.95	0.47
6:T:3731:ARG:O	6:T:3735:ARG:HG3	2.14	0.47
3:D:590:VAL:HA	5:F:570:PHE:CE2	2.50	0.47
4:E:169:ILE:O	4:E:173:PHE:CB	2.63	0.47
4:E:194:ASN:OD1	4:E:195:SER:N	2.48	0.47
6:T:1794:LYS:HD3	6:T:1794:LYS:N	2.27	0.47
6:T:2008:ILE:CG1	6:T:2031:LEU:HD21	2.44	0.47
6:T:2129:SER:HB3	6:T:2173:LYS:NZ	2.30	0.47
6:T:2304:ALA:HA	6:T:2307:THR:HG22	1.96	0.47
1:A:242:LEU:HB2	1:A:246:GLN:HB3	1.96	0.47
3:D:533:GLU:HG2	3:D:533:GLU:O	2.15	0.47
6:T:328:LEU:O	6:T:332:LEU:HG	2.15	0.47
6:T:2235:PHE:HA	6:T:2238:MET:HG3	1.97	0.47
1:A:190:MET:HG3	1:A:200:PHE:HB2	1.96	0.47
2:B:183:ASN:ND2	2:B:185:ILE:HB	2.31	0.47
6:T:418:TYR:HA	6:T:421:TYR:CD2	2.50	0.47
6:T:744:LEU:HD12	6:T:766:PHE:CE2	2.50	0.47
6:T:935:GLN:C	6:T:937:PHE:N	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1751:SER:HA	6:T:1799:ARG:NE	2.30	0.47
6:T:1864:LEU:HD13	6:T:1889:PHE:CZ	2.50	0.47
6:T:2594:ARG:HH12	6:T:2603:ILE:HD12	1.80	0.47
6:T:3420:PHE:HE1	6:T:3446:PRO:HD2	1.80	0.47
1:A:349:LEU:HD21	3:D:390:ALA:HB1	1.97	0.46
3:D:51:GLN:NE2	3:D:54:GLU:OE2	2.42	0.46
3:D:323:ARG:NH1	5:F:561:PRO:HD3	2.30	0.46
6:T:76:ARG:O	6:T:80:LEU:HG	2.16	0.46
6:T:857:LEU:O	6:T:861:LEU:HG	2.15	0.46
6:T:1053:GLU:OE1	6:T:1053:GLU:N	2.48	0.46
6:T:1876:PRO:HA	6:T:1883:LYS:HE2	1.96	0.46
6:T:2236:ILE:HD12	6:T:2263:LEU:HD22	1.97	0.46
6:T:2316:TYR:CE2	6:T:2348:PHE:CD2	3.03	0.46
6:T:2348:PHE:O	6:T:2352:ILE:HG23	2.15	0.46
6:T:2545:LEU:HG	6:T:2549:PHE:CE2	2.49	0.46
6:T:2610:ILE:HG21	6:T:2618:LEU:HD23	1.96	0.46
6:T:3136:PHE:O	6:T:3140:LEU:HG	2.15	0.46
6:T:3322:GLU:OE2	6:T:3382:ARG:NH2	2.48	0.46
6:T:382:THR:HG21	6:T:1901:ILE:HD11	1.98	0.46
6:T:1796:LEU:HD12	6:T:1799:ARG:HD3	1.98	0.46
6:T:2422:VAL:HA	6:T:2425:ARG:HG2	1.98	0.46
6:T:3332:GLU:HB2	6:T:3378:VAL:HG13	1.97	0.46
1:A:94:LEU:HB3	1:A:96:VAL:HG12	1.98	0.46
3:D:53:LEU:HA	3:D:53:LEU:HD23	1.62	0.46
3:D:588:SER:OG	3:D:589:VAL:N	2.48	0.46
3:D:618:ARG:C	3:D:619:ARG:HD2	2.39	0.46
4:E:186:ILE:O	4:E:190:TYR:HB3	2.15	0.46
4:E:206:TYR:HA	4:E:209:CYS:SG	2.56	0.46
6:T:381:PHE:HD2	6:T:1859:LEU:CD2	2.21	0.46
6:T:382:THR:H	6:T:1858:ASP:CG	2.23	0.46
6:T:1860:PHE:HD2	6:T:1861:ARG:HD2	1.80	0.46
6:T:2101:ILE:HD12	6:T:2166:ASP:HB3	1.96	0.46
6:T:3081:ALA:HB1	6:T:3085:TYR:HE1	1.81	0.46
1:A:216:LEU:HB3	1:A:254:ARG:HE	1.78	0.46
1:A:342:GLY:HA2	1:A:345:ILE:HD12	1.96	0.46
2:B:108:ALA:O	2:B:137:CYS:HA	2.15	0.46
2:B:389:VAL:O	2:B:392:SER:OG	2.29	0.46
6:T:471:TYR:HE2	6:T:593:PHE:HD2	1.63	0.46
6:T:481:GLN:O	6:T:485:ILE:HG13	2.16	0.46
6:T:1442:ALA:O	6:T:1446:LYS:HG3	2.15	0.46
6:T:1799:ARG:N	6:T:1799:ARG:CD	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2007:ILE:CD1	6:T:2031:LEU:HD13	2.45	0.46
6:T:2182:GLU:HG2	6:T:2183:ASN:ND2	2.30	0.46
6:T:3423:TYR:HB2	6:T:3445:LEU:HD13	1.97	0.46
6:T:3499:ASP:OD1	6:T:3499:ASP:N	2.48	0.46
1:A:338:SER:HA	1:A:341:ILE:HD12	1.96	0.46
2:B:13:GLU:OE2	5:F:644:ARG:NH1	2.38	0.46
3:D:587:LYS:HD2	4:E:244:LEU:HD21	1.97	0.46
3:D:650:TRP:CE3	3:D:699:ARG:HG2	2.50	0.46
6:T:384:HIS:CD2	6:T:387:LEU:HD12	2.51	0.46
6:T:438:LEU:O	6:T:442:LEU:HG	2.16	0.46
6:T:517:PHE:O	6:T:521:VAL:HG22	2.15	0.46
6:T:719:LEU:HA	6:T:722:VAL:HG23	1.98	0.46
6:T:723:ALA:O	6:T:727:LEU:HD22	2.16	0.46
6:T:742:ARG:NH2	6:T:1544:ALA:HB3	2.30	0.46
6:T:963:PRO:HD2	6:T:3543:LEU:HD21	1.97	0.46
6:T:1518:ILE:HA	6:T:1521:LYS:CE	2.46	0.46
6:T:2282:PHE:HD2	6:T:2315:LEU:HG	1.81	0.46
1:A:312:ARG:O	1:A:316:GLU:HG2	2.16	0.46
2:B:45:GLY:HA3	2:B:69:TYR:OH	2.16	0.46
3:D:767:CYS:SG	6:T:2704:GLN:NE2	2.89	0.46
6:T:37:LEU:HD23	6:T:37:LEU:H	1.80	0.46
6:T:345:LYS:O	6:T:349:HIS:ND1	2.30	0.46
6:T:1268:LEU:O	6:T:1272:PHE:HB2	2.15	0.46
6:T:3021:GLU:OE1	6:T:3021:GLU:N	2.48	0.46
6:T:3733:LEU:O	6:T:3736:THR:HG22	2.15	0.46
1:A:61:LYS:HG2	1:A:64:ILE:HD11	1.98	0.46
1:A:213:LYS:HD3	1:A:306:PHE:CZ	2.51	0.46
6:T:685:TYR:O	6:T:689:MET:HG3	2.15	0.46
6:T:1188:SER:OG	6:T:1189:PHE:N	2.48	0.46
6:T:1510:LEU:HA	6:T:1513:TYR:CE1	2.50	0.46
6:T:1597:ALA:HB2	6:T:1627:ILE:HG23	1.97	0.46
6:T:1966:TRP:CD1	6:T:1966:TRP:H	2.31	0.46
6:T:2229:GLU:HA	6:T:2229:GLU:OE2	2.15	0.46
6:T:2332:PHE:O	6:T:2335:THR:OG1	2.23	0.46
6:T:3339:PRO:O	6:T:3343:ASN:ND2	2.48	0.46
6:T:3416:GLU:OE1	6:T:3586:MET:N	2.49	0.46
2:B:83:TRP:CH2	2:B:124:SER:HB3	2.51	0.46
5:F:585:LEU:C	5:F:586:LYS:HD3	2.41	0.46
6:T:69:HIS:HA	6:T:73:GLN:HG3	1.97	0.46
6:T:293:ASP:OD1	6:T:294:PHE:N	2.49	0.46
6:T:683:MET:HB3	6:T:722:VAL:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:700:GLU:OE1	6:T:1587:GLN:N	2.42	0.46
6:T:1110:PHE:CZ	6:T:1144:LEU:HD11	2.50	0.46
6:T:1320:ILE:HG13	6:T:1325:LEU:HD21	1.97	0.46
6:T:1640:PHE:HB3	6:T:1672:LEU:HD21	1.96	0.46
6:T:2485:GLU:HG2	6:T:2486:LEU:N	2.28	0.46
6:T:3416:GLU:HG3	6:T:3420:PHE:HE2	1.80	0.46
6:T:3721:LEU:HA	6:T:3724:ILE:HG22	1.97	0.46
1:A:120:THR:HG22	1:A:132:PHE:HE2	1.81	0.46
3:D:534:GLU:OE2	5:F:641:ARG:NH2	2.30	0.46
5:F:586:LYS:HE2	5:F:586:LYS:HB2	1.78	0.46
6:T:148:TYR:CG	6:T:241:LEU:HD11	2.51	0.46
6:T:480:ARG:HH11	6:T:1760:TYR:HD1	0.71	0.46
6:T:685:TYR:C	6:T:689:MET:HE3	2.41	0.46
6:T:1185:LEU:HD21	6:T:1229:PHE:HB3	1.98	0.46
6:T:1453:PRO:HA	6:T:1456:ILE:HG12	1.98	0.46
6:T:1473:LEU:C	6:T:1473:LEU:CD2	2.85	0.46
6:T:1629:GLN:HA	6:T:1675:THR:HG23	1.98	0.46
6:T:1877:GLU:CD	6:T:1877:GLU:N	2.73	0.46
6:T:1910:SER:HA	6:T:1913:ILE:CD1	2.45	0.46
6:T:2096:CYS:SG	6:T:2097:THR:N	2.88	0.46
6:T:2704:GLN:HG3	6:T:2733:TRP:NE1	2.29	0.46
6:T:3419:MET:HE3	6:T:3588:PRO:HG2	1.97	0.46
2:B:462:LEU:HD11	2:B:465:PHE:HB2	1.98	0.46
3:D:683:SER:HB2	6:T:2731:ASP:HB3	1.99	0.46
6:T:382:THR:N	6:T:1858:ASP:OD2	2.44	0.46
6:T:848:THR:OG1	6:T:849:ALA:N	2.49	0.46
6:T:1311:LEU:HD13	6:T:1314:ILE:HD11	1.98	0.46
6:T:1358:THR:HA	6:T:1418:LEU:HD13	1.98	0.46
6:T:1526:LEU:CD2	6:T:1552:ILE:HG23	2.46	0.46
6:T:1645:ASP:HA	6:T:1648:TYR:HD2	1.79	0.46
6:T:1750:PHE:HD1	6:T:1750:PHE:C	2.24	0.46
6:T:2538:SER:O	6:T:2542:ILE:HG12	2.16	0.46
6:T:2665:LEU:HD12	6:T:2665:LEU:HA	1.80	0.46
6:T:3331:LYS:HE2	6:T:3377:THR:HB	1.97	0.46
2:B:240:GLN:OE1	7:B:501:ATP:O2'	2.29	0.45
2:B:462:LEU:HD12	2:B:464:THR:H	1.80	0.45
3:D:258:TYR:HB2	5:F:627:LEU:HD21	1.98	0.45
6:T:93:GLN:O	6:T:97:MET:HG2	2.16	0.45
6:T:444:GLU:O	6:T:447:LEU:HG	2.16	0.45
6:T:1438:ILE:HA	6:T:1473:LEU:HD11	1.98	0.45
6:T:1939:ARG:CZ	6:T:1939:ARG:CB	2.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:2011:MET:HA	6:T:2014:ILE:HG12	1.97	0.45
6:T:2174:ASN:HB3	6:T:2175:LYS:NZ	2.31	0.45
6:T:2393:LEU:O	6:T:2397:ILE:HG23	2.16	0.45
6:T:2651:ASN:O	6:T:2654:ILE:HG22	2.15	0.45
6:T:3411:ARG:NH1	6:T:3412:HIS:HB3	2.32	0.45
1:A:173:HIS:CD2	2:B:446:ILE:HG21	2.51	0.45
4:E:269:LYS:C	4:E:270:ARG:HE	2.22	0.45
6:T:73:GLN:HE22	6:T:116:ILE:HD11	1.80	0.45
6:T:952:LEU:O	6:T:956:ASN:N	2.49	0.45
6:T:1223:VAL:HG13	6:T:1230:LEU:HD21	1.98	0.45
6:T:1441:LEU:CB	6:T:1473:LEU:HD11	2.26	0.45
6:T:2180:ILE:CD1	6:T:2183:ASN:HB2	2.46	0.45
6:T:2454:VAL:HG21	6:T:2472:ALA:HA	1.98	0.45
2:B:178:LYS:H	4:E:188:ASP:CG	2.22	0.45
4:E:289:GLN:HE22	4:E:292:THR:HA	1.82	0.45
6:T:1267:LEU:O	6:T:1271:THR:HG22	2.17	0.45
6:T:1412:ARG:O	6:T:1416:ILE:HG13	2.16	0.45
6:T:1564:PRO:HA	6:T:1603:PHE:HE1	1.81	0.45
6:T:1848:ILE:CB	6:T:1852:ASP:HB2	2.46	0.45
6:T:3687:GLN:O	6:T:3691:MET:HG3	2.15	0.45
2:B:60:GLN:NE2	2:B:60:GLN:O	2.50	0.45
3:D:59:ASN:ND2	3:D:63:LYS:HG3	2.32	0.45
6:T:123:THR:O	6:T:127:LYS:HG3	2.16	0.45
6:T:393:SER:HA	6:T:434:MET:HE1	1.98	0.45
6:T:462:LYS:HZ3	6:T:1715:HIS:HE2	1.62	0.45
6:T:515:GLU:OE2	6:T:519:ARG:NH2	2.50	0.45
6:T:570:LEU:HD21	6:T:1940:TYR:OH	2.17	0.45
6:T:853:HIS:HB3	6:T:856:GLU:CG	2.45	0.45
6:T:1060:ASN:HD22	6:T:1134:LYS:NZ	2.15	0.45
6:T:1172:TYR:HD2	6:T:1190:ILE:HD12	1.81	0.45
6:T:1299:ALA:HA	6:T:1304:ARG:NH1	2.31	0.45
6:T:1449:LEU:CD2	6:T:1484:PRO:CB	2.94	0.45
6:T:1546:GLN:CG	6:T:1548:PRO:HD2	2.46	0.45
6:T:1677:VAL:HG21	6:T:1728:LEU:HD11	1.98	0.45
6:T:2285:LEU:HD13	6:T:2312:GLU:HG3	1.99	0.45
6:T:2366:PHE:O	6:T:2368:THR:N	2.50	0.45
2:B:160:ILE:HG22	2:B:414:THR:OG1	2.16	0.45
2:B:431:ILE:HG23	2:B:432:LEU:H	1.81	0.45
2:B:473:LYS:H	2:B:473:LYS:HD2	1.81	0.45
3:D:302:LEU:HD21	4:E:279:LEU:HB3	1.98	0.45
6:T:593:PHE:O	6:T:596:THR:OG1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1330:LYS:HG3	6:T:1331:GLN:H	1.82	0.45
6:T:1618:ARG:HA	6:T:1621:VAL:HG22	1.99	0.45
6:T:2461:GLU:HG3	6:T:2592:HIS:CB	2.47	0.45
6:T:2542:ILE:O	6:T:2546:ILE:HG12	2.16	0.45
6:T:2620:PRO:C	6:T:2622:LEU:H	2.24	0.45
6:T:2663:LEU:HD13	6:T:2679:TRP:NE1	2.31	0.45
6:T:3620:VAL:HG23	6:T:3727:ALA:HA	1.98	0.45
6:T:3635:SER:OG	6:T:3636:ALA:N	2.49	0.45
1:A:96:VAL:HG22	1:A:101:HIS:HE2	1.81	0.45
1:A:215:LYS:HB3	1:A:216:LEU:HD12	1.99	0.45
3:D:321:GLU:O	3:D:324:ILE:HG22	2.16	0.45
6:T:45:HIS:HB2	6:T:88:MET:HE1	1.99	0.45
6:T:766:PHE:O	6:T:769:SER:OG	2.27	0.45
6:T:849:ALA:HB3	6:T:854:GLU:CB	2.47	0.45
6:T:1864:LEU:HD13	6:T:1889:PHE:HZ	1.82	0.45
6:T:1939:ARG:HE	6:T:1985:LEU:HD22	1.81	0.45
6:T:2369:VAL:HG12	6:T:2372:LYS:HD3	1.99	0.45
6:T:2597:SER:OG	6:T:2598:SER:N	2.49	0.45
6:T:2986:ARG:HH12	6:T:2990:LYS:HZ1	1.64	0.45
6:T:3160:ALA:HA	6:T:3167:LEU:HD21	1.97	0.45
1:A:357:ILE:HD11	1:A:373:LYS:HB2	1.98	0.45
2:B:472:LYS:O	2:B:476:GLU:HG2	2.16	0.45
6:T:76:ARG:HA	6:T:79:MET:SD	2.57	0.45
6:T:460:ALA:O	6:T:464:LEU:HG	2.17	0.45
6:T:466:ILE:CG1	6:T:1716:LEU:HD11	2.46	0.45
6:T:850:ARG:NH2	6:T:1007:TYR:HB2	2.31	0.45
6:T:1715:HIS:ND1	6:T:1717:GLN:HG2	2.31	0.45
6:T:2292:ILE:C	6:T:2295:PRO:HD2	2.42	0.45
6:T:2325:LEU:CD2	6:T:2329:ARG:CB	2.95	0.45
6:T:2353:VAL:HA	6:T:2356:SER:OG	2.16	0.45
6:T:2506:GLU:OE1	6:T:2507:ASN:ND2	2.50	0.45
6:T:2681:ARG:HH11	6:T:3634:ASP:HB2	1.81	0.45
6:T:3087:GLN:HG2	6:T:3124:PHE:CE1	2.50	0.45
6:T:3288:LEU:O	6:T:3292:ILE:HG22	2.16	0.45
2:B:23:SER:OG	7:B:501:ATP:O3B	2.30	0.45
2:B:172:ASP:OD2	4:E:182:ARG:NH1	2.50	0.45
4:E:213:PHE:O	4:E:217:ASP:N	2.50	0.45
6:T:472:MET:HE3	6:T:472:MET:HB3	1.85	0.45
6:T:949:LEU:HD23	6:T:949:LEU:HA	1.78	0.45
6:T:1251:GLU:H	6:T:1251:GLU:CD	2.17	0.45
6:T:1491:ASP:HA	6:T:1525:HIS:NE2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1800:ILE:HA	6:T:1803:LEU:HD12	1.98	0.45
6:T:2179:TRP:HA	6:T:2181:MET:CE	2.46	0.45
6:T:2418:GLN:HB3	6:T:2419:PRO:HD3	1.99	0.45
6:T:2554:LYS:HE3	6:T:2558:ARG:HH21	1.82	0.45
1:A:66:THR:HG1	1:A:68:ARG:HH22	1.61	0.45
1:A:287:VAL:HA	1:A:290:ARG:NE	2.32	0.45
1:A:354:GLN:HG3	1:A:355:MET:SD	2.56	0.45
3:D:23:ARG:HH21	3:D:27:PRO:HG3	1.82	0.45
6:T:90:GLN:HG2	6:T:91:THR:HG23	1.97	0.45
6:T:409:SER:O	6:T:412:GLU:HG3	2.16	0.45
6:T:629:GLU:O	6:T:633:VAL:HG13	2.16	0.45
6:T:641:CYS:O	6:T:645:LEU:HG	2.17	0.45
6:T:1266:ASP:O	6:T:1269:SER:OG	2.30	0.45
6:T:1564:PRO:HD3	6:T:1602:ARG:CZ	2.47	0.45
6:T:1676:MET:HE2	6:T:1676:MET:HB3	1.84	0.45
6:T:1952:VAL:HA	6:T:1955:GLU:HG2	1.99	0.45
6:T:2677:GLY:HA3	6:T:3639:GLY:HA3	1.98	0.45
6:T:3295:LYS:HG3	6:T:3317:TRP:HZ2	1.82	0.45
1:A:177:ARG:NH2	2:B:96:ASN:O	2.40	0.45
2:B:402:ALA:HA	2:B:435:LEU:HD22	1.99	0.45
3:D:628:ASN:O	6:T:2591:TYR:OH	2.35	0.45
3:D:669:TRP:CZ2	3:D:697:PHE:HD1	2.34	0.45
6:T:422:LEU:O	6:T:432:GLN:NE2	2.51	0.45
6:T:705:GLU:O	6:T:709:VAL:HG23	2.17	0.45
6:T:738:GLY:O	6:T:742:ARG:HG3	2.16	0.45
6:T:854:GLU:HG2	6:T:855:ARG:N	2.32	0.45
6:T:1133:LEU:HD23	6:T:1133:LEU:HA	1.80	0.45
6:T:1258:ASP:OD1	6:T:1259:SER:N	2.51	0.45
6:T:1605:ASN:N	6:T:1606:PRO:CD	2.80	0.45
6:T:1768:HIS:C	6:T:1768:HIS:CD2	2.94	0.45
6:T:1918:PHE:CD1	6:T:1923:VAL:HG21	2.51	0.45
6:T:1939:ARG:HB3	6:T:1939:ARG:NH1	2.31	0.45
6:T:2094:GLU:C	6:T:2094:GLU:CD	2.85	0.45
6:T:2412:ILE:O	6:T:2415:ARG:HG2	2.17	0.45
6:T:2518:GLU:OE1	6:T:2521:ASN:ND2	2.48	0.45
2:B:249:ILE:HD12	2:B:420:LEU:HA	1.98	0.44
2:B:434:SER:HA	4:E:251:ILE:HD12	1.99	0.44
4:E:82:GLU:OE1	4:E:82:GLU:N	2.50	0.44
6:T:249:PHE:HB3	6:T:288:ARG:NE	2.32	0.44
6:T:778:ASN:OD1	6:T:778:ASN:N	2.50	0.44
6:T:1180:GLY:HA3	6:T:1183:LEU:HD21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1508:GLU:HB2	6:T:1561:LEU:HD12	1.99	0.44
6:T:1535:LEU:HD23	6:T:1535:LEU:O	2.16	0.44
6:T:1580:LEU:HD11	6:T:1592:PHE:CZ	2.52	0.44
6:T:2122:ASN:N	6:T:2122:ASN:HD22	2.14	0.44
6:T:2179:TRP:O	6:T:2179:TRP:CE3	2.70	0.44
6:T:2345:ASP:H	6:T:2348:PHE:HE1	1.65	0.44
6:T:3222:LEU:HD12	6:T:3222:LEU:HA	1.81	0.44
1:A:312:ARG:NE	1:A:316:GLU:OE2	2.50	0.44
4:E:194:ASN:ND2	4:E:196:ARG:HD3	2.32	0.44
6:T:339:GLU:CB	6:T:1897:GLU:HB3	2.47	0.44
6:T:345:LYS:C	6:T:349:HIS:HD1	2.18	0.44
6:T:386:THR:O	6:T:389:PRO:HD2	2.18	0.44
6:T:1018:TYR:O	6:T:1022:THR:HG23	2.17	0.44
6:T:1186:SER:OG	6:T:1187:HIS:N	2.51	0.44
6:T:1440:ILE:HA	6:T:1443:VAL:HG12	1.98	0.44
6:T:1804:LYS:HD3	6:T:1863:GLU:HG2	1.99	0.44
6:T:2412:ILE:HG23	6:T:2415:ARG:H	1.83	0.44
6:T:2542:ILE:HG13	6:T:2543:ASP:N	2.32	0.44
6:T:2596:ILE:HG13	6:T:2602:VAL:HG11	1.98	0.44
6:T:2909:PHE:O	6:T:2912:ILE:HG22	2.18	0.44
1:A:217:CYS:HA	1:A:254:ARG:HB3	1.99	0.44
3:D:605:LEU:HD21	5:F:614:ILE:HG23	2.00	0.44
3:D:665:TYR:HE2	3:D:675:HIS:CE1	2.35	0.44
6:T:932:LEU:HG	6:T:2825:LEU:HD11	1.98	0.44
6:T:1532:VAL:HG22	6:T:1583:LYS:NZ	2.32	0.44
6:T:1532:VAL:HG22	6:T:1583:LYS:CE	2.47	0.44
6:T:1748:ILE:HD11	6:T:1789:PHE:CZ	2.53	0.44
6:T:1856:HIS:CG	6:T:1856:HIS:O	2.70	0.44
6:T:1924:THR:HA	6:T:1927:PHE:CE2	2.52	0.44
6:T:2092:LEU:H	6:T:2092:LEU:HG	1.61	0.44
6:T:2230:SER:N	6:T:2231:PRO:CD	2.81	0.44
6:T:2303:GLU:N	6:T:2303:GLU:CD	2.73	0.44
6:T:2620:PRO:O	6:T:2622:LEU:N	2.50	0.44
6:T:2663:LEU:HD23	6:T:2663:LEU:HA	1.71	0.44
6:T:3251:VAL:HA	6:T:3254:ILE:HG22	1.99	0.44
6:T:3353:GLU:OE2	6:T:3358:TYR:HE2	2.00	0.44
6:T:3565:ASN:OD1	6:T:3566:ASN:N	2.45	0.44
6:T:3710:ASN:OD1	6:T:3711:SER:N	2.48	0.44
3:D:58:GLU:HG3	3:D:59:ASN:N	2.32	0.44
6:T:357:THR:O	6:T:361:LYS:HG3	2.18	0.44
6:T:474:ARG:NH2	6:T:477:THR:OG1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:518:MET:SD	6:T:2317:ILE:HG21	2.57	0.44
6:T:563:ILE:HG23	6:T:564:LYS:H	1.83	0.44
6:T:611:TYR:CE1	6:T:1585:ARG:HB3	2.52	0.44
6:T:1041:GLU:O	6:T:1045:THR:HG23	2.17	0.44
6:T:1286:GLU:OE2	6:T:1328:HIS:NE2	2.51	0.44
6:T:1641:GLU:CG	6:T:1676:MET:HE2	2.48	0.44
6:T:2124:LEU:C	6:T:2124:LEU:CD2	2.86	0.44
6:T:2573:LYS:C	6:T:2575:GLU:H	2.24	0.44
6:T:3253:LEU:HD12	6:T:3314:LEU:HB3	1.98	0.44
1:A:305:MET:HA	1:A:335:ARG:NH1	2.32	0.44
2:B:18:VAL:HG21	2:B:457:SER:HA	1.99	0.44
2:B:245:THR:HA	3:D:75:ARG:NH2	2.33	0.44
2:B:406:HIS:O	2:B:438:ARG:HG2	2.17	0.44
3:D:352:TRP:N	3:D:352:TRP:CD1	2.85	0.44
3:D:599:LYS:C	3:D:600:LEU:HD22	2.43	0.44
6:T:730:GLU:HG2	6:T:732:THR:N	2.24	0.44
6:T:806:LEU:HD12	6:T:806:LEU:H	1.82	0.44
6:T:1066:THR:N	6:T:3476:LYS:HZ2	2.15	0.44
6:T:1493:GLN:HE21	6:T:1493:GLN:CA	2.12	0.44
6:T:1539:PHE:CD2	6:T:1539:PHE:O	2.70	0.44
6:T:1685:LEU:HD12	6:T:1689:GLY:H	1.83	0.44
6:T:2175:LYS:HD3	6:T:2175:LYS:H	1.82	0.44
6:T:3075:ILE:HG23	6:T:3077:PHE:H	1.83	0.44
6:T:3134:ILE:HG12	6:T:3166:ALA:HB1	2.00	0.44
2:B:40:LEU:HD23	2:B:40:LEU:HA	1.83	0.44
2:B:74:ILE:O	2:B:81:ILE:HG12	2.17	0.44
3:D:762:GLU:N	3:D:762:GLU:OE1	2.50	0.44
5:F:540:ASP:CG	5:F:545:PRO:HD3	2.42	0.44
6:T:724:GLN:O	6:T:728:THR:HG23	2.18	0.44
6:T:1041:GLU:HB3	6:T:2513:GLU:HB2	1.99	0.44
6:T:1798:ALA:HA	6:T:1801:PHE:CD2	2.52	0.44
6:T:1815:VAL:HG21	6:T:1870:ILE:CD1	2.47	0.44
6:T:1849:LEU:HD13	6:T:1896:LEU:HD23	2.00	0.44
6:T:1876:PRO:HA	6:T:1883:LYS:NZ	2.33	0.44
6:T:1903:GLN:HB3	6:T:1941:LEU:CD2	2.48	0.44
6:T:2328:SER:C	6:T:2331:PRO:HD2	2.43	0.44
6:T:3583:THR:HG22	6:T:3584:LEU:H	1.83	0.44
1:A:191:LYS:O	1:A:195:GLU:HG2	2.17	0.44
3:D:537:LYS:HE3	3:D:537:LYS:HB2	1.67	0.44
3:D:558:THR:O	3:D:560:ILE:HD12	2.18	0.44
3:D:615:LEU:H	6:T:2456:ARG:NH1	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:247:SER:OG	4:E:248:ALA:N	2.51	0.44
4:E:269:LYS:HB3	5:F:624:GLN:HE22	1.83	0.44
5:F:573:ASP:CG	5:F:574:ARG:N	2.76	0.44
6:T:562:ASP:HB3	6:T:566:TYR:HD2	1.81	0.44
6:T:1838:HIS:CE1	6:T:1882:ILE:HD12	2.52	0.44
6:T:2036:LEU:CD2	6:T:2123:ILE:HG23	2.48	0.44
6:T:2282:PHE:HA	6:T:2285:LEU:HD12	1.99	0.44
6:T:2285:LEU:HD13	6:T:2312:GLU:CG	2.48	0.44
6:T:2432:ARG:NH1	6:T:2547:GLU:OE2	2.51	0.44
6:T:2434:ARG:O	6:T:2438:ILE:HG12	2.18	0.44
6:T:2509:GLU:N	6:T:2509:GLU:OE1	2.50	0.44
6:T:2876:GLU:OE1	6:T:2876:GLU:N	2.33	0.44
6:T:3026:LYS:O	6:T:3030:LEU:HG	2.17	0.44
1:A:6:ALA:O	1:A:101:HIS:HB3	2.17	0.44
1:A:110:MET:HB3	2:B:37:GLN:HE21	1.83	0.44
1:A:272:ALA:H	2:B:60:GLN:HE21	1.66	0.44
2:B:80:VAL:HB	2:B:120:ASN:HD21	1.83	0.44
3:D:36:ARG:HE	3:D:322:ALA:HB1	1.83	0.44
3:D:60:LYS:HD2	3:D:60:LYS:HA	1.68	0.44
3:D:81:ASP:N	3:D:81:ASP:OD1	2.51	0.44
3:D:312:THR:OG1	6:T:3626:PRO:HG3	2.18	0.44
3:D:359:GLN:O	3:D:363:LEU:HG	2.18	0.44
4:E:294:TYR:HB2	4:E:302:GLN:HG2	1.99	0.44
6:T:125:LEU:HD11	6:T:140:PHE:CZ	2.53	0.44
6:T:344:ARG:O	6:T:348:LEU:HG	2.18	0.44
6:T:1568:MET:HE3	6:T:1568:MET:O	2.17	0.44
6:T:2090:LEU:HA	6:T:2093:ARG:CD	2.47	0.44
6:T:2330:ARG:NH2	6:T:2371:GLU:OE2	2.50	0.44
6:T:2372:LYS:O	6:T:2375:ILE:HG12	2.18	0.44
6:T:2402:PHE:CZ	6:T:2416:MET:HB3	2.53	0.44
6:T:3230:VAL:HG23	6:T:3451:LEU:HD22	2.00	0.44
6:T:3426:PHE:HD1	6:T:3426:PHE:HA	1.71	0.44
1:A:10:ILE:HD11	1:A:90:PHE:CE1	2.52	0.44
6:T:712:ARG:HD3	6:T:712:ARG:HA	1.72	0.44
6:T:1345:LEU:O	6:T:1350:GLN:HG3	2.18	0.44
6:T:1879:ILE:HB	6:T:1882:ILE:CG1	2.47	0.44
6:T:1904:SER:N	6:T:1941:LEU:HD21	2.33	0.44
6:T:1918:PHE:CD2	6:T:1918:PHE:O	2.71	0.44
6:T:2490:ASN:OD1	6:T:2490:ASN:N	2.48	0.44
6:T:2889:PRO:HB2	6:T:2898:TRP:NE1	2.33	0.44
6:T:2923:LEU:HD11	6:T:2938:ARG:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:3433:ASN:OD1	6:T:3434:VAL:N	2.51	0.44
1:A:213:LYS:HA	1:A:217:CYS:SG	2.57	0.43
2:B:158:VAL:HG22	2:B:167:VAL:HG22	2.00	0.43
2:B:434:SER:HA	4:E:251:ILE:CD1	2.48	0.43
3:D:277:ILE:HD12	5:F:577:TYR:CZ	2.52	0.43
3:D:597:PHE:HE1	5:F:639:ARG:NE	2.16	0.43
3:D:615:LEU:HD12	3:D:619:ARG:HH12	1.83	0.43
5:F:540:ASP:OD1	5:F:544:ASN:HB3	2.18	0.43
5:F:559:ASN:N	5:F:559:ASN:OD1	2.47	0.43
6:T:349:HIS:CD2	6:T:352:ARG:HH12	2.35	0.43
6:T:629:GLU:OE2	6:T:1717:GLN:CA	2.66	0.43
6:T:1889:PHE:C	6:T:1889:PHE:CD2	2.96	0.43
6:T:2607:LEU:HD21	6:T:2624:LYS:HE3	1.99	0.43
6:T:2783:VAL:HG12	6:T:2791:ARG:NE	2.33	0.43
6:T:2840:LYS:HE3	6:T:2840:LYS:HB2	1.80	0.43
6:T:3086:LEU:HD23	6:T:3104:ILE:HD13	1.99	0.43
1:A:241:GLU:HA	1:A:247:VAL:HA	2.00	0.43
1:A:255:PHE:C	1:A:258:PRO:HD2	2.43	0.43
2:B:416:SER:HA	2:B:448:ARG:NH1	2.32	0.43
4:E:169:ILE:HG21	4:E:204:LYS:HE2	2.00	0.43
6:T:116:ILE:O	6:T:120:LYS:HD3	2.18	0.43
6:T:981:LYS:N	6:T:2483:GLU:OE1	2.50	0.43
6:T:1890:CYS:SG	6:T:1891:TRP:N	2.90	0.43
6:T:1936:VAL:CG2	6:T:1939:ARG:HD3	2.44	0.43
6:T:2174:ASN:HB3	6:T:2175:LYS:CE	2.47	0.43
6:T:2191:LEU:HA	6:T:2194:CYS:SG	2.58	0.43
6:T:3464:PHE:HB3	6:T:3575:ASP:OD1	2.18	0.43
1:A:189:LEU:O	1:A:192:ILE:HG12	2.18	0.43
2:B:253:LYS:HE2	2:B:258:THR:HG22	2.00	0.43
3:D:76:ARG:HD2	3:D:77:GLY:N	2.33	0.43
3:D:294:SER:HB2	3:D:321:GLU:OE2	2.19	0.43
4:E:198:LEU:HA	4:E:201:LEU:HB3	2.01	0.43
5:F:609:LEU:N	5:F:613:ARG:HH21	2.16	0.43
6:T:942:SER:OG	6:T:943:HIS:N	2.52	0.43
6:T:1210:ARG:HA	6:T:1213:VAL:HG12	1.99	0.43
6:T:1300:ASN:HD21	6:T:1302:LYS:HB2	1.82	0.43
6:T:1473:LEU:N	6:T:1474:PRO:HD2	2.33	0.43
6:T:1738:ARG:HA	6:T:1738:ARG:HE	1.81	0.43
6:T:1913:ILE:HD12	6:T:1923:VAL:CG2	2.48	0.43
6:T:2022:SER:HB3	6:T:2025:HIS:HE1	1.82	0.43
6:T:3089:ALA:HB1	6:T:3097:ILE:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:3225:SER:HB3	6:T:3349:PHE:CE1	2.53	0.43
6:T:3685:ASN:CG	6:T:3687:GLN:HB3	2.43	0.43
1:A:98:PRO:HA	1:A:101:HIS:CD2	2.53	0.43
2:B:69:TYR:HE2	2:B:229:LEU:HD21	1.84	0.43
6:T:24:ARG:HE	6:T:74:LYS:HB2	1.82	0.43
6:T:591:MET:HB3	6:T:689:MET:HE1	1.99	0.43
6:T:688:PHE:O	6:T:692:GLN:NE2	2.51	0.43
6:T:1333:LEU:O	6:T:1336:PRO:HD2	2.18	0.43
6:T:1492:HIS:ND1	6:T:1494:LYS:HB2	2.34	0.43
6:T:1592:PHE:C	6:T:1595:PRO:HD2	2.44	0.43
6:T:3282:LYS:O	6:T:3285:THR:HG22	2.19	0.43
6:T:952:LEU:O	6:T:952:LEU:HD12	2.19	0.43
6:T:1043:LEU:HD11	6:T:1115:VAL:HG11	2.00	0.43
6:T:1175:SER:HA	6:T:1178:ILE:HG22	2.00	0.43
6:T:1378:LEU:O	6:T:1382:ILE:HG12	2.18	0.43
6:T:1413:ILE:HD11	6:T:1458:THR:HG21	1.99	0.43
6:T:1757:LYS:HD3	6:T:1802:VAL:HG22	2.00	0.43
6:T:1872:ILE:HD12	6:T:1912:PHE:HD2	1.84	0.43
6:T:2245:GLN:NE2	6:T:2245:GLN:CA	2.73	0.43
6:T:2621:HIS:CE1	6:T:2622:LEU:HG	2.54	0.43
6:T:2746:LEU:H	6:T:2746:LEU:HD23	1.83	0.43
6:T:2774:ASP:OD1	6:T:2775:ALA:N	2.49	0.43
6:T:3626:PRO:HA	6:T:3629:GLN:HG2	2.00	0.43
2:B:255:LEU:O	2:B:259:LYS:NZ	2.48	0.43
3:D:393:ASP:HA	3:D:396:THR:HG22	2.00	0.43
3:D:537:LYS:HG3	3:D:538:GLU:H	1.83	0.43
6:T:381:PHE:CG	6:T:1859:LEU:HD21	2.53	0.43
6:T:570:LEU:C	6:T:572:LEU:H	2.26	0.43
6:T:1091:SER:O	6:T:1091:SER:OG	2.33	0.43
6:T:1107:LEU:HD23	6:T:1107:LEU:HA	1.83	0.43
6:T:1962:THR:N	6:T:1963:PRO:CD	2.81	0.43
6:T:2244:THR:CG2	6:T:2274:LEU:HD22	2.48	0.43
6:T:2451:LEU:HD12	6:T:2451:LEU:HA	1.79	0.43
6:T:2842:LEU:O	6:T:2845:GLY:N	2.52	0.43
1:A:314:GLN:HE22	1:A:328:LYS:HA	1.84	0.43
2:B:47:TYR:HH	2:B:66:ARG:HH21	1.63	0.43
2:B:199:GLU:N	2:B:200:PRO:HD2	2.34	0.43
2:B:441:THR:HG22	3:D:68:PHE:HA	2.01	0.43
2:B:474:GLU:O	2:B:478:VAL:HG12	2.19	0.43
3:D:379:TYR:OH	3:D:532:THR:HG21	2.19	0.43
6:T:1448:MET:CE	6:T:1456:ILE:HB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1483:LYS:N	6:T:1484:PRO:CD	2.82	0.43
6:T:1546:GLN:OE1	6:T:1546:GLN:HA	2.19	0.43
6:T:2204:GLU:H	6:T:2204:GLU:HG3	1.63	0.43
6:T:2282:PHE:HE1	6:T:2335:THR:CB	2.31	0.43
6:T:3111:ASP:OD1	6:T:3111:ASP:N	2.48	0.43
2:B:162:HIS:HB2	7:B:501:ATP:O3'	2.19	0.43
5:F:581:LEU:HD11	5:F:613:ARG:HA	2.01	0.43
6:T:23:SER:HA	6:T:27:THR:HG23	2.01	0.43
6:T:80:LEU:HA	6:T:83:PHE:HB2	2.00	0.43
6:T:341:SER:OG	6:T:344:ARG:HB2	2.18	0.43
6:T:913:PHE:HZ	6:T:917:ILE:HD12	1.83	0.43
6:T:1075:GLN:NE2	6:T:2491:ILE:O	2.46	0.43
6:T:1300:ASN:O	6:T:1303:VAL:HG12	2.18	0.43
6:T:1377:LEU:O	6:T:1380:GLU:HG3	2.19	0.43
6:T:1497:VAL:N	6:T:1498:PRO:CD	2.81	0.43
6:T:1703:LEU:HD23	6:T:1703:LEU:O	2.18	0.43
6:T:1932:ARG:HE	6:T:1933:SER:H	1.67	0.43
6:T:2238:MET:SD	6:T:2238:MET:C	3.02	0.43
6:T:2387:GLU:HB3	6:T:2390:LEU:HB3	2.01	0.43
6:T:2482:ARG:HD2	6:T:2539:SER:HB2	2.01	0.43
6:T:2580:VAL:HA	6:T:2583:ILE:HG22	2.00	0.43
6:T:2828:TRP:CD1	6:T:2828:TRP:C	2.96	0.43
6:T:3095:SER:O	6:T:3096:LYS:HE2	2.18	0.43
6:T:3178:PHE:HA	6:T:3181:ILE:HD12	2.00	0.43
6:T:3267:ARG:NH1	6:T:3498:ASP:OD2	2.49	0.43
2:B:86:ALA:O	2:B:89:GLN:HB3	2.19	0.43
3:D:44:TYR:HD1	3:D:44:TYR:HA	1.71	0.43
3:D:600:LEU:HD13	3:D:600:LEU:HA	1.82	0.43
6:T:6:GLN:NE2	6:T:43:ASP:OD2	2.52	0.43
6:T:635:LYS:HB2	6:T:701:ILE:HD12	2.01	0.43
6:T:1541:GLN:OE1	6:T:1541:GLN:HA	2.18	0.43
6:T:2383:GLU:OE1	6:T:2383:GLU:N	2.52	0.43
6:T:2888:LEU:HD12	6:T:2888:LEU:HA	1.92	0.43
6:T:3414:ARG:NH2	6:T:3417:GLU:OE1	2.51	0.43
3:D:537:LYS:HG3	3:D:538:GLU:N	2.34	0.43
5:F:637:LYS:NZ	5:F:655:ASN:HB3	2.34	0.43
6:T:429:LEU:O	6:T:433:ILE:HG13	2.19	0.43
6:T:776:PHE:HB3	6:T:779:ILE:CG2	2.48	0.43
6:T:844:GLN:N	6:T:844:GLN:OE1	2.52	0.43
6:T:896:GLN:HA	6:T:899:ARG:HD2	2.01	0.43
6:T:1104:ASN:HB3	6:T:1170:ARG:NE	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1346:PRO:O	6:T:1349:MET:N	2.52	0.43
6:T:1588:LEU:O	6:T:1588:LEU:HG	2.19	0.43
6:T:1969:TRP:HA	6:T:1972:ARG:HB2	2.01	0.43
6:T:2274:LEU:C	6:T:2277:PRO:HD2	2.44	0.43
6:T:2637:ILE:O	6:T:2638:ASN:C	2.61	0.43
6:T:2770:ASN:OD1	6:T:2771:SER:N	2.52	0.43
1:A:150:GLY:HA2	1:A:293:LEU:HD12	2.01	0.42
2:B:418:PRO:HG3	3:D:75:ARG:HH12	1.83	0.42
3:D:287:LEU:HB2	4:E:265:GLU:OE1	2.18	0.42
3:D:533:GLU:H	3:D:533:GLU:CD	2.27	0.42
6:T:222:LYS:NZ	6:T:234:LEU:HD22	2.34	0.42
6:T:330:ILE:HD13	6:T:372:ASP:HB3	2.01	0.42
6:T:518:MET:CE	6:T:2317:ILE:HD13	2.48	0.42
6:T:570:LEU:O	6:T:571:LEU:HG	2.19	0.42
6:T:788:LEU:O	6:T:791:LEU:HB3	2.19	0.42
6:T:1518:ILE:HA	6:T:1521:LYS:HE2	2.01	0.42
6:T:1936:VAL:HG23	6:T:1939:ARG:NH1	2.34	0.42
6:T:3551:GLN:HB3	6:T:3581:VAL:HG12	2.01	0.42
2:B:129:LEU:HD23	2:B:129:LEU:HA	1.73	0.42
3:D:536:LYS:HD2	3:D:536:LYS:HA	1.76	0.42
3:D:601:LEU:HD23	3:D:601:LEU:HA	1.78	0.42
3:D:723:TRP:HE3	3:D:724:LEU:HD22	1.84	0.42
5:F:521:GLN:H	5:F:521:GLN:CD	2.27	0.42
6:T:3:LEU:HG	6:T:5:GLU:H	1.84	0.42
6:T:349:HIS:O	6:T:352:ARG:HG2	2.19	0.42
6:T:400:HIS:HB2	6:T:438:LEU:HD22	2.01	0.42
6:T:439:LEU:O	6:T:443:VAL:HG13	2.18	0.42
6:T:1011:ILE:HA	6:T:1014:ARG:HD3	2.01	0.42
6:T:1776:LYS:NZ	6:T:1778:LYS:HG3	2.33	0.42
6:T:1815:VAL:HG21	6:T:1870:ILE:CG1	2.49	0.42
6:T:1970:VAL:HG12	6:T:2003:PHE:CE2	2.54	0.42
6:T:3105:LEU:HD21	6:T:3133:TRP:HZ3	1.83	0.42
2:B:203:ILE:HA	2:B:274:TRP:CH2	2.55	0.42
2:B:472:LYS:HE2	2:B:476:GLU:HG3	2.01	0.42
3:D:308:LYS:NZ	4:E:281:LEU:HD21	2.34	0.42
3:D:374:LYS:O	3:D:378:LYS:HG3	2.19	0.42
4:E:198:LEU:O	4:E:202:LYS:HG2	2.19	0.42
6:T:1157:ILE:O	6:T:1161:ARG:HG3	2.19	0.42
6:T:1206:TYR:CE2	6:T:1253:PRO:HD2	2.54	0.42
6:T:1474:PRO:HG3	6:T:1511:ILE:HD13	2.00	0.42
6:T:1559:PHE:HB3	6:T:1599:TYR:CE1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1564:PRO:HD3	6:T:1602:ARG:NH2	2.35	0.42
6:T:1600:LEU:N	6:T:1600:LEU:HD23	2.34	0.42
6:T:1673:PHE:HA	6:T:1676:MET:HG2	2.01	0.42
6:T:1930:LEU:CB	6:T:1946:LEU:HD21	2.48	0.42
6:T:2115:GLU:HB2	6:T:2116:LEU:HD23	2.00	0.42
6:T:2219:ALA:HB3	6:T:2222:VAL:CG1	2.50	0.42
6:T:2640:LEU:HD23	6:T:2640:LEU:HA	1.78	0.42
6:T:3240:THR:CG2	6:T:3243:GLU:H	2.31	0.42
6:T:3416:GLU:CD	6:T:3586:MET:H	2.26	0.42
1:A:361:GLU:O	1:A:365:SER:OG	2.26	0.42
3:D:25:LYS:O	3:D:28:LYS:N	2.50	0.42
5:F:627:LEU:O	5:F:628:GLU:HG3	2.18	0.42
6:T:3:LEU:HD23	6:T:3:LEU:H	1.84	0.42
6:T:72:GLU:OE1	6:T:76:ARG:NH2	2.53	0.42
6:T:471:TYR:CE2	6:T:590:LEU:HD22	2.54	0.42
6:T:719:LEU:HA	6:T:722:VAL:CG2	2.49	0.42
6:T:934:PRO:HD3	6:T:2825:LEU:HG	2.01	0.42
6:T:1039:TYR:HE1	6:T:2497:PRO:HB2	1.84	0.42
6:T:1671:ASP:HA	6:T:1674:ASN:HD22	1.84	0.42
6:T:1750:PHE:O	6:T:1750:PHE:CD1	2.70	0.42
6:T:1822:LYS:HB2	6:T:1822:LYS:HE3	1.82	0.42
6:T:2191:LEU:HD12	6:T:2194:CYS:SG	2.60	0.42
6:T:2707:TYR:O	6:T:2711:GLN:HG3	2.17	0.42
6:T:2825:LEU:HD12	6:T:2825:LEU:HA	1.85	0.42
6:T:3050:ASP:CG	6:T:3052:ASN:H	2.26	0.42
6:T:3142:THR:O	6:T:3145:SER:OG	2.18	0.42
6:T:3528:LYS:O	6:T:3532:THR:HG22	2.20	0.42
6:T:3583:THR:HG22	6:T:3584:LEU:N	2.33	0.42
2:B:47:TYR:HD2	2:B:54:LYS:HG3	1.84	0.42
2:B:254:THR:HG22	2:B:423:ARG:NH2	2.34	0.42
3:D:609:GLU:C	3:D:611:SER:H	2.27	0.42
3:D:619:ARG:HD3	6:T:2443:LEU:HD23	2.00	0.42
4:E:82:GLU:OE2	4:E:92:ARG:NH1	2.52	0.42
6:T:310:ILE:HD13	6:T:350:ALA:HB1	2.00	0.42
6:T:332:LEU:O	6:T:336:CYS:HB3	2.19	0.42
6:T:357:THR:OG1	6:T:360:LYS:HB2	2.19	0.42
6:T:466:ILE:HA	6:T:1716:LEU:CD2	2.49	0.42
6:T:913:PHE:CZ	6:T:917:ILE:HD12	2.54	0.42
6:T:1066:THR:H	6:T:3476:LYS:HZ2	1.67	0.42
6:T:1849:LEU:HD21	6:T:1893:PHE:HA	2.01	0.42
6:T:1860:PHE:HA	6:T:1863:GLU:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1902:LYS:HB3	6:T:1906:TYR:CE2	2.55	0.42
6:T:1919:PRO:CG	6:T:1922:VAL:HB	2.47	0.42
6:T:1987:GLN:HE21	6:T:2007:ILE:HG22	1.83	0.42
6:T:2022:SER:HB3	6:T:2025:HIS:CE1	2.55	0.42
6:T:2365:ILE:HG13	6:T:2366:PHE:H	1.84	0.42
6:T:2620:PRO:O	6:T:2621:HIS:CG	2.72	0.42
6:T:2892:TRP:HA	6:T:3434:VAL:HG23	2.02	0.42
6:T:2936:ALA:HB3	6:T:2938:ARG:NH2	2.34	0.42
6:T:3079:SER:HA	6:T:3082:ILE:HG22	2.01	0.42
6:T:3422:LEU:HD12	6:T:3666:PHE:HB2	2.01	0.42
1:A:130:PRO:O	1:A:359:LYS:N	2.52	0.42
3:D:74:ILE:C	3:D:76:ARG:H	2.27	0.42
3:D:270:PHE:O	5:F:587:GLY:N	2.32	0.42
3:D:368:TRP:CD2	3:D:571:GLU:CD	2.98	0.42
6:T:56:LEU:HB2	6:T:102:PHE:HZ	1.84	0.42
6:T:58:GLN:HG2	6:T:79:MET:HG2	2.01	0.42
6:T:81:ASP:HA	6:T:84:ASN:HD21	1.83	0.42
6:T:1140:LEU:HB2	6:T:2493:CYS:O	2.20	0.42
6:T:1654:ASN:HB3	6:T:1665:PHE:CZ	2.55	0.42
6:T:2214:MET:HA	6:T:2217:ILE:HG22	2.01	0.42
6:T:2444:GLU:HG3	6:T:2445:ARG:H	1.85	0.42
6:T:3137:ILE:HG23	6:T:3138:PRO:HD3	2.02	0.42
6:T:3137:ILE:HA	6:T:3140:LEU:HD12	2.01	0.42
2:B:227:LYS:HD3	2:B:227:LYS:HA	1.78	0.42
6:T:407:GLN:O	6:T:411:ILE:HG12	2.20	0.42
6:T:956:ASN:HD21	6:T:2843:LEU:CB	2.25	0.42
6:T:987:GLU:OE1	6:T:987:GLU:N	2.53	0.42
6:T:1456:ILE:HD12	6:T:1502:ALA:HB2	2.01	0.42
6:T:1830:LYS:C	6:T:1832:LYS:HE3	2.45	0.42
6:T:2369:VAL:HA	6:T:2372:LYS:HD3	2.02	0.42
6:T:2959:MET:HG2	6:T:2962:VAL:HG12	2.02	0.42
6:T:3081:ALA:HB1	6:T:3085:TYR:CE1	2.54	0.42
6:T:3326:ASP:OD2	6:T:3382:ARG:NH1	2.47	0.42
1:A:107:GLU:OE2	1:A:111:ASN:ND2	2.52	0.42
3:D:59:ASN:HA	5:F:568:SER:O	2.19	0.42
3:D:74:ILE:HD12	3:D:74:ILE:HA	1.95	0.42
3:D:309:ALA:HB3	6:T:2681:ARG:NH2	2.34	0.42
3:D:623:TYR:HB2	3:D:626:ARG:NE	2.27	0.42
4:E:262:LYS:O	4:E:266:MET:HG3	2.20	0.42
6:T:618:LEU:H	6:T:618:LEU:HD12	1.85	0.42
6:T:1416:ILE:HG21	6:T:1459:THR:OG1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1449:LEU:CD1	6:T:1484:PRO:HB2	2.48	0.42
6:T:1487:MET:HE2	6:T:1487:MET:N	2.34	0.42
6:T:1683:GLU:HG3	6:T:1686:LYS:H	1.84	0.42
6:T:2243:ILE:HD13	6:T:2243:ILE:HA	1.85	0.42
6:T:2262:VAL:HA	6:T:2265:MET:SD	2.59	0.42
6:T:2468:TRP:CD1	6:T:2468:TRP:C	2.97	0.42
6:T:2474:GLN:OE1	6:T:2546:ILE:HG23	2.19	0.42
6:T:2641:GLU:CD	6:T:3545:ARG:HH12	2.28	0.42
6:T:3464:PHE:CB	6:T:3575:ASP:HA	2.49	0.42
6:T:3623:ARG:NH2	6:T:3744:PHE:O	2.42	0.42
2:B:243:LYS:HA	2:B:247:CYS:SG	2.60	0.42
6:T:88:MET:HE3	6:T:88:MET:HB3	1.82	0.42
6:T:218:MET:HA	6:T:221:PHE:CD2	2.55	0.42
6:T:683:MET:O	6:T:686:LEU:HG	2.20	0.42
6:T:758:THR:O	6:T:762:LEU:HD23	2.20	0.42
6:T:849:ALA:C	6:T:851:LEU:N	2.78	0.42
6:T:879:LEU:HD13	6:T:879:LEU:HA	1.90	0.42
6:T:1342:LEU:HA	6:T:1342:LEU:HD12	1.78	0.42
6:T:1617:LEU:HD12	6:T:1620:LEU:HD23	2.02	0.42
6:T:1814:GLU:HA	6:T:1817:THR:HG22	2.02	0.42
6:T:1854:LEU:C	6:T:1854:LEU:CD2	2.85	0.42
6:T:2259:LEU:HD23	6:T:2259:LEU:C	2.44	0.42
6:T:2316:TYR:CE2	6:T:2348:PHE:HD2	2.38	0.42
6:T:2760:LEU:HD11	6:T:2790:ARG:HH21	1.84	0.42
1:A:375:PHE:CD1	3:D:380:LYS:HB2	2.54	0.42
2:B:431:ILE:HG23	2:B:432:LEU:N	2.35	0.42
5:F:583:GLU:OE1	5:F:583:GLU:N	2.52	0.42
6:T:72:GLU:CB	6:T:76:ARG:HE	2.33	0.42
6:T:295:ILE:O	6:T:299:ILE:HG12	2.20	0.42
6:T:1821:LEU:CD1	6:T:1824:TYR:HB2	2.50	0.42
6:T:2195:ILE:CG2	6:T:2239:LEU:HD22	2.50	0.42
6:T:2443:LEU:HD11	6:T:2453:TYR:CD2	2.55	0.42
6:T:2523:VAL:O	6:T:2527:ILE:HG12	2.20	0.42
6:T:2546:ILE:HA	6:T:2546:ILE:HD13	1.86	0.42
1:A:12:ASN:HD21	1:A:71:ILE:HG21	1.85	0.41
1:A:238:LYS:HE3	1:A:238:LYS:HB3	1.93	0.41
2:B:16:ALA:CB	2:B:107:PRO:HG2	2.50	0.41
3:D:537:LYS:HG3	3:D:538:GLU:OE1	2.20	0.41
5:F:653:MET:HE2	5:F:653:MET:HB3	1.85	0.41
6:T:474:ARG:HA	6:T:474:ARG:HD2	1.89	0.41
6:T:700:GLU:OE1	6:T:1587:GLN:O	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1155:TYR:CD2	6:T:1160:VAL:HG21	2.55	0.41
6:T:1396:ILE:HG13	6:T:1397:GLN:H	1.84	0.41
6:T:1448:MET:HA	6:T:1456:ILE:HG22	2.02	0.41
6:T:1454:GLU:HA	6:T:1457:ASN:HD21	1.85	0.41
6:T:1543:LEU:CB	6:T:1591:PRO:HG3	2.50	0.41
6:T:1568:MET:O	6:T:1568:MET:SD	2.78	0.41
6:T:1792:SER:HA	6:T:1794:LYS:NZ	2.34	0.41
2:B:49:ALA:N	2:B:68:ASP:OD2	2.53	0.41
2:B:281:ASP:OD2	2:B:283:GLU:HB3	2.20	0.41
2:B:405:ALA:O	2:B:437:PHE:HA	2.20	0.41
3:D:70:LYS:NZ	3:D:539:LEU:H	2.18	0.41
3:D:258:TYR:CZ	5:F:553:LYS:HB2	2.54	0.41
3:D:650:TRP:CZ3	3:D:699:ARG:HG2	2.55	0.41
4:E:180:ASP:HB3	4:E:182:ARG:NE	2.35	0.41
6:T:470:SER:HA	6:T:473:ASN:HD21	1.85	0.41
6:T:482:TYR:HD1	6:T:647:PHE:CE1	2.38	0.41
6:T:965:ASP:C	6:T:966:LEU:HD22	2.45	0.41
6:T:1574:LEU:HD22	6:T:1623:PHE:CE2	2.49	0.41
6:T:3009:THR:HG23	6:T:3010:ASN:H	1.86	0.41
3:D:348:PHE:H	4:E:236:ARG:NH1	2.19	0.41
6:T:611:TYR:OH	6:T:1584:LEU:O	2.37	0.41
6:T:1615:MET:HE3	6:T:1651:TYR:CE1	2.55	0.41
6:T:1881:GLU:CD	6:T:1881:GLU:N	2.73	0.41
6:T:2279:MET:HE2	6:T:2332:PHE:HB2	2.01	0.41
6:T:2571:ILE:HD12	6:T:2571:ILE:HA	1.95	0.41
6:T:3295:LYS:HG3	6:T:3317:TRP:CZ2	2.56	0.41
1:A:318:THR:HA	1:A:327:VAL:HG21	2.02	0.41
1:A:351:THR:O	1:A:354:GLN:HG2	2.21	0.41
6:T:50:ALA:O	6:T:53:PRO:HD2	2.20	0.41
6:T:914:ASP:HB2	6:T:915:PRO:HD3	2.02	0.41
6:T:1046:ALA:O	6:T:1050:ILE:HG12	2.20	0.41
6:T:1601:ASN:HA	6:T:1604:HIS:CE1	2.54	0.41
6:T:1684:TRP:CE3	6:T:1684:TRP:O	2.72	0.41
6:T:1912:PHE:C	6:T:1912:PHE:HD1	2.27	0.41
6:T:1932:ARG:HE	6:T:1932:ARG:HA	1.85	0.41
6:T:2325:LEU:CD1	6:T:2328:SER:HB3	2.46	0.41
6:T:2999:LEU:HD23	6:T:2999:LEU:O	2.21	0.41
6:T:3020:ALA:HB2	6:T:3049:ILE:HG21	2.02	0.41
6:T:3322:GLU:HG3	6:T:3382:ARG:HD3	2.01	0.41
2:B:56:ILE:H	2:B:56:ILE:HD12	1.85	0.41
4:E:292:THR:HB	4:E:295:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:560:VAL:HB	5:F:561:PRO:CD	2.51	0.41
6:T:464:LEU:HA	6:T:467:ILE:HG22	2.02	0.41
6:T:854:GLU:HG2	6:T:855:ARG:H	1.85	0.41
6:T:1529:TRP:HA	6:T:1529:TRP:CE3	2.56	0.41
6:T:1565:GLN:HE21	6:T:1565:GLN:HB2	1.55	0.41
6:T:1591:PRO:HG2	6:T:1592:PHE:CD1	2.55	0.41
6:T:1651:TYR:CD1	6:T:1665:PHE:HB3	2.55	0.41
6:T:2573:LYS:C	6:T:2575:GLU:N	2.78	0.41
6:T:2852:PHE:O	6:T:2855:ALA:HB3	2.20	0.41
6:T:3365:ASN:OD1	6:T:3365:ASN:C	2.62	0.41
1:A:209:VAL:HA	1:A:212:ILE:HD12	2.03	0.41
1:A:272:ALA:H	2:B:60:GLN:NE2	2.19	0.41
1:A:299:MET:HE2	1:A:299:MET:HB2	1.83	0.41
2:B:64:ILE:O	2:B:66:ARG:NH1	2.51	0.41
4:E:185:LEU:HD23	4:E:185:LEU:H	1.84	0.41
4:E:246:ARG:HE	4:E:246:ARG:HB2	1.54	0.41
6:T:132:ILE:HD12	6:T:134:GLN:HG2	2.01	0.41
6:T:840:GLN:OE1	6:T:878:PHE:HB3	2.20	0.41
6:T:859:VAL:O	6:T:863:ILE:HG12	2.21	0.41
6:T:913:PHE:CE1	6:T:917:ILE:HB	2.56	0.41
6:T:934:PRO:HG3	6:T:2825:LEU:O	2.21	0.41
6:T:1057:ILE:HG22	6:T:1058:GLU:N	2.36	0.41
6:T:1461:GLU:C	6:T:1461:GLU:CD	2.88	0.41
6:T:1848:ILE:HG21	6:T:1852:ASP:N	2.31	0.41
6:T:2204:GLU:HA	6:T:2207:GLN:NE2	2.35	0.41
6:T:2320:LEU:HD21	6:T:2355:MET:O	2.21	0.41
6:T:3140:LEU:O	6:T:3144:LEU:HG	2.20	0.41
1:A:323:SER:H	2:B:271:GLU:CD	2.29	0.41
2:B:100:LEU:HD21	2:B:106:ILE:HD13	2.03	0.41
2:B:145:CYS:O	2:B:455:GLY:HA3	2.21	0.41
2:B:290:GLU:OE1	2:B:423:ARG:NH1	2.39	0.41
2:B:432:LEU:HD23	2:B:432:LEU:HA	1.95	0.41
3:D:617:LYS:HD2	3:D:617:LYS:HA	1.76	0.41
5:F:531:ASP:HA	5:F:534:VAL:HG12	2.02	0.41
6:T:129:PHE:CD1	6:T:132:ILE:HD11	2.55	0.41
6:T:464:LEU:O	6:T:468:ILE:HG12	2.19	0.41
6:T:1328:HIS:O	6:T:1328:HIS:ND1	2.54	0.41
6:T:1342:LEU:HB2	6:T:1377:LEU:HD11	2.02	0.41
6:T:1617:LEU:HD12	6:T:1620:LEU:CD2	2.49	0.41
6:T:1703:LEU:CD1	6:T:1753:SER:HB2	2.51	0.41
6:T:1798:ALA:HB3	6:T:1799:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1876:PRO:HA	6:T:1883:LYS:CE	2.50	0.41
6:T:2315:LEU:C	6:T:2315:LEU:CD1	2.93	0.41
6:T:2349:LEU:O	6:T:2353:VAL:HG13	2.20	0.41
1:A:143:TYR:CE1	3:D:391:ILE:HG13	2.56	0.41
3:D:396:THR:HG23	3:D:397:TYR:CD1	2.56	0.41
4:E:198:LEU:HD23	4:E:198:LEU:H	1.85	0.41
6:T:586:LEU:O	6:T:590:LEU:HG	2.21	0.41
6:T:611:TYR:CZ	6:T:1585:ARG:HB3	2.55	0.41
6:T:623:SER:C	6:T:624:ARG:HD2	2.46	0.41
6:T:1049:SER:HA	6:T:1052:LEU:HG	2.03	0.41
6:T:1832:LYS:N	6:T:1832:LYS:CE	2.84	0.41
6:T:2768:ASP:HB2	6:T:2770:ASN:OD1	2.20	0.41
6:T:3172:ARG:O	6:T:3173:THR:C	2.64	0.41
6:T:3623:ARG:NH1	6:T:3625:THR:HB	2.35	0.41
1:A:70:PRO:HB3	1:A:78:ASN:HB3	2.02	0.41
1:A:118:LYS:HE3	1:A:118:LYS:HB2	1.90	0.41
2:B:64:ILE:HB	2:B:66:ARG:NH1	2.36	0.41
2:B:75:ILE:HD13	2:B:75:ILE:HA	1.87	0.41
2:B:116:ASN:OD1	2:B:120:ASN:HB3	2.21	0.41
2:B:121:ARG:O	2:B:124:SER:OG	2.29	0.41
3:D:68:PHE:CE2	3:D:69:LEU:HG	2.56	0.41
3:D:344:GLN:O	5:F:538:LEU:HD13	2.20	0.41
3:D:539:LEU:HD23	3:D:539:LEU:HA	1.78	0.41
3:D:558:THR:HB	3:D:561:GLN:CD	2.46	0.41
3:D:658:LEU:HD13	3:D:696:CYS:SG	2.61	0.41
4:E:173:PHE:HA	4:E:176:CYS:CB	2.51	0.41
4:E:233:GLU:O	4:E:237:LYS:HG2	2.21	0.41
6:T:5:GLU:O	6:T:8:GLU:HG3	2.20	0.41
6:T:5:GLU:O	6:T:9:GLN:HG2	2.20	0.41
6:T:342:SER:HA	6:T:345:LYS:HG3	2.03	0.41
6:T:706:LEU:HA	6:T:709:VAL:HB	2.03	0.41
6:T:744:LEU:HD12	6:T:766:PHE:CZ	2.56	0.41
6:T:1001:LEU:HD23	6:T:1001:LEU:HA	1.82	0.41
6:T:1070:ARG:NH1	6:T:3534:LEU:HD13	2.35	0.41
6:T:1116:ASN:OD1	6:T:2500:LEU:HB3	2.21	0.41
6:T:1291:ASP:OD1	6:T:1292:ILE:N	2.54	0.41
6:T:1495:LEU:HB3	6:T:1500:LEU:HD11	2.03	0.41
6:T:1513:TYR:O	6:T:1513:TYR:CD1	2.70	0.41
6:T:1635:GLU:OE1	6:T:1635:GLU:N	2.53	0.41
6:T:1662:VAL:HG21	6:T:1705:THR:HG23	2.02	0.41
6:T:1737:GLU:CD	6:T:1737:GLU:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:1911:TYR:C	6:T:1911:TYR:CD2	2.98	0.41
6:T:1927:PHE:C	6:T:1927:PHE:CD1	2.99	0.41
6:T:2278:LEU:C	6:T:2278:LEU:CD1	2.85	0.41
6:T:3106:TRP:CH2	6:T:3689:ARG:HD2	2.55	0.41
6:T:3420:PHE:HA	6:T:3445:LEU:HD11	2.03	0.41
6:T:3431:SER:HB2	6:T:3442:GLN:OE1	2.21	0.41
6:T:3472:ASN:ND2	6:T:3482:PRO:HG2	2.33	0.41
6:T:3524:SER:OG	6:T:3525:ASN:N	2.53	0.41
6:T:3695:ASN:O	6:T:3699:ILE:HG12	2.20	0.41
6:T:1357:ILE:HD13	6:T:1374:LEU:HD13	2.02	0.41
6:T:1467:LEU:O	6:T:1467:LEU:HG	2.21	0.41
6:T:1473:LEU:N	6:T:1474:PRO:CD	2.83	0.41
6:T:1907:LEU:HD12	6:T:1945:SER:HB3	2.03	0.41
6:T:2450:ARG:HH12	6:T:2478:GLY:C	2.29	0.41
6:T:3004:ASP:OD1	6:T:3007:SER:OG	2.38	0.41
6:T:3045:THR:O	6:T:3049:ILE:HG12	2.21	0.41
6:T:3118:THR:OG1	6:T:3119:ASN:N	2.54	0.41
6:T:3265:PHE:O	6:T:3267:ARG:HG3	2.21	0.41
6:T:3562:MET:HE2	6:T:3562:MET:HB3	1.82	0.41
1:A:134:VAL:HG12	1:A:374:CYS:SG	2.61	0.40
2:B:235:ASN:HA	2:B:239:PHE:CD2	2.56	0.40
3:D:323:ARG:O	3:D:326:VAL:HG12	2.20	0.40
3:D:572:GLU:C	3:D:574:PRO:HD3	2.46	0.40
5:F:574:ARG:HD3	5:F:574:ARG:H	1.87	0.40
6:T:305:LEU:O	6:T:308:VAL:HG12	2.21	0.40
6:T:463:LEU:HA	6:T:466:ILE:HD12	2.03	0.40
6:T:473:ASN:HA	6:T:476:LYS:HB3	2.03	0.40
6:T:514:SER:O	6:T:518:MET:HG3	2.22	0.40
6:T:609:ASN:OD1	6:T:610:GLU:N	2.54	0.40
6:T:839:LEU:HD23	6:T:839:LEU:HA	1.86	0.40
6:T:983:ASN:ND2	6:T:2479:SER:OG	2.51	0.40
6:T:1129:PHE:CD2	6:T:1131:ILE:HG12	2.56	0.40
6:T:1698:MET:O	6:T:1698:MET:SD	2.79	0.40
6:T:2461:GLU:HG3	6:T:2592:HIS:HB3	2.03	0.40
6:T:2940:TYR:O	6:T:2942:GLU:N	2.54	0.40
1:A:131:ALA:HA	1:A:357:ILE:O	2.20	0.40
2:B:136:ALA:HB1	2:B:470:VAL:O	2.21	0.40
2:B:176:LEU:O	2:B:180:THR:HG23	2.21	0.40
2:B:255:LEU:HB2	2:B:290:GLU:HG2	2.03	0.40
3:D:556:GLU:N	3:D:557:LYS:HZ3	2.18	0.40
6:T:710:TYR:HA	6:T:713:MET:HG3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:763:ILE:HD13	6:T:763:ILE:HA	1.93	0.40
6:T:1669:MET:HE3	6:T:1698:MET:HG2	2.04	0.40
6:T:1703:LEU:HD11	6:T:1753:SER:HB2	2.03	0.40
6:T:2271:ILE:HG12	6:T:2274:LEU:CG	2.47	0.40
6:T:2571:ILE:HG13	6:T:2572:PRO:HD2	2.03	0.40
1:A:234:SER:O	1:A:234:SER:OG	2.33	0.40
1:A:262:PHE:CE2	1:A:312:ARG:HG2	2.56	0.40
2:B:177:SER:O	2:B:180:THR:OG1	2.21	0.40
6:T:218:MET:HA	6:T:221:PHE:CE2	2.57	0.40
6:T:405:GLU:H	6:T:445:ARG:NH2	2.19	0.40
6:T:1245:LEU:HD11	6:T:1261:GLU:HB3	2.03	0.40
6:T:1486:LEU:HD23	6:T:1486:LEU:HA	1.95	0.40
6:T:1744:LEU:HA	6:T:1744:LEU:HD13	1.84	0.40
6:T:2214:MET:HE3	6:T:2214:MET:HB3	1.98	0.40
6:T:2346:GLN:O	6:T:2350:ARG:HG2	2.21	0.40
6:T:2455:ILE:HD13	6:T:2455:ILE:HA	1.89	0.40
6:T:2963:CYS:O	6:T:2967:LEU:HD23	2.21	0.40
6:T:3266:PRO:HB2	6:T:3268:LYS:NZ	2.37	0.40
6:T:3434:VAL:HG22	6:T:3435:GLU:H	1.87	0.40
1:A:99:GLU:O	1:A:130:PRO:HD3	2.22	0.40
1:A:148:THR:HG21	3:D:392:LYS:HD2	2.03	0.40
2:B:59:GLU:O	2:B:62:ILE:HG22	2.21	0.40
2:B:152:ARG:CZ	2:B:440:LEU:HD11	2.51	0.40
2:B:428:LEU:HD12	2:B:437:PHE:CZ	2.57	0.40
3:D:668:ASN:O	3:D:672:ILE:HG13	2.21	0.40
6:T:718:GLY:O	6:T:722:VAL:HG23	2.22	0.40
6:T:1213:VAL:HA	6:T:1216:ILE:HG22	2.04	0.40
6:T:1615:MET:HB2	6:T:1650:PHE:CZ	2.57	0.40
6:T:1907:LEU:HD23	6:T:1907:LEU:O	2.20	0.40
6:T:1950:THR:N	6:T:1951:PRO:CD	2.84	0.40
6:T:1962:THR:OG1	6:T:1963:PRO:CD	2.69	0.40
6:T:1994:ASP:HA	6:T:1997:PHE:HD2	1.85	0.40
6:T:2138:VAL:O	6:T:2138:VAL:HG12	2.21	0.40
6:T:2348:PHE:HA	6:T:2351:LYS:HB2	2.03	0.40
6:T:2706:LEU:O	6:T:2709:VAL:HG12	2.21	0.40
6:T:2902:VAL:HG13	6:T:2946:VAL:HG12	2.03	0.40
6:T:3208:LEU:HA	6:T:3208:LEU:HD12	1.83	0.40
6:T:3522:VAL:HG21	6:T:3743:TRP:CD1	2.57	0.40
1:A:76:VAL:HG21	1:A:79:TRP:CE3	2.56	0.40
1:A:160:THR:CG2	1:A:178:ILE:HB	2.52	0.40
6:T:107:LEU:HD22	6:T:143:ILE:HD12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:T:115:GLY:O	6:T:119:MET:HG2	2.21	0.40
6:T:1447:THR:O	6:T:1456:ILE:HG22	2.22	0.40
6:T:1883:LYS:HB3	6:T:1912:PHE:HZ	1.83	0.40
6:T:1895:LYS:H	6:T:1895:LYS:CD	2.34	0.40
6:T:1910:SER:HA	6:T:1913:ILE:HD11	2.02	0.40
6:T:2004:ILE:H	6:T:2004:ILE:HG13	1.67	0.40
6:T:2236:ILE:HD12	6:T:2263:LEU:CD2	2.52	0.40
6:T:2477:TYR:CD2	6:T:2542:ILE:HB	2.52	0.40
6:T:2681:ARG:HD2	6:T:2681:ARG:HA	1.83	0.40
6:T:3067:ARG:HH12	6:T:3075:ILE:HG21	1.85	0.40
6:T:3552:TYR:OH	6:T:3623:ARG:O	2.35	0.40
6:T:3659:LEU:C	6:T:3661:THR:H	2.29	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	370/372 (100%)	346 (94%)	24 (6%)	0	100	100
2	B	398/481 (83%)	365 (92%)	33 (8%)	0	100	100
3	D	448/982 (46%)	357 (80%)	91 (20%)	0	100	100
4	E	197/476 (41%)	174 (88%)	23 (12%)	0	100	100
5	F	120/832 (14%)	93 (78%)	26 (22%)	1 (1%)	16	53
6	T	3445/3744 (92%)	3069 (89%)	366 (11%)	10 (0%)	37	71
All	All	4978/6887 (72%)	4404 (88%)	563 (11%)	11 (0%)	45	76

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	T	1796	LEU

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Mol	Chain	Res	Type
6	T	1980	SER
5	F	542	PRO
6	T	1993	PRO
6	T	1206	TYR
6	T	3443	PHE
6	T	3539	GLU
6	T	2295	PRO
6	T	3655	PRO
6	T	1605	ASN
6	T	3264	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	317/317 (100%)	317 (100%)	0	100	100
2	B	354/428 (83%)	354 (100%)	0	100	100
3	D	414/892 (46%)	413 (100%)	1 (0%)	92	93
4	E	184/441 (42%)	184 (100%)	0	100	100
5	F	114/769 (15%)	113 (99%)	1 (1%)	75	83
6	T	3188/3452 (92%)	3117 (98%)	71 (2%)	47	65
All	All	4571/6299 (73%)	4498 (98%)	73 (2%)	58	74

All (73) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	D	78	ILE
5	F	572	ILE
6	T	310	ILE
6	T	727	LEU
6	T	1506	LEU
6	T	1509	LEU
6	T	1534	VAL
6	T	1543	LEU

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Mol	Chain	Res	Type
6	T	1558	ILE
6	T	1565	GLN
6	T	1586	LEU
6	T	1601	ASN
6	T	1609	GLU
6	T	1614	ASN
6	T	1616	THR
6	T	1635	GLU
6	T	1644	LEU
6	T	1660	VAL
6	T	1663	VAL
6	T	1669	MET
6	T	1678	ILE
6	T	1687	LYS
6	T	1692	ILE
6	T	1702	THR
6	T	1716	LEU
6	T	1718	LEU
6	T	1744	LEU
6	T	1750	PHE
6	T	1776	LYS
6	T	1779	GLN
6	T	1781	ASN
6	T	1790	VAL
6	T	1799	ARG
6	T	1826	VAL
6	T	1849	LEU
6	T	1854	LEU
6	T	1859	LEU
6	T	1877	GLU
6	T	1896	LEU
6	T	1900	LEU
6	T	1913	ILE
6	T	1918	PHE
6	T	1920	ILE
6	T	1927	PHE
6	T	1941	LEU
6	T	1949	LEU
6	T	1995	LEU
6	T	2002	LEU
6	T	2012	ASN
6	T	2031	LEU

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Mol	Chain	Res	Type
6	T	2092	LEU
6	T	2116	LEU
6	T	2122	ASN
6	T	2144	GLU
6	T	2163	ASN
6	T	2182	GLU
6	T	2189	ASN
6	T	2192	GLU
6	T	2194	CYS
6	T	2201	ASP
6	T	2206	LEU
6	T	2212	VAL
6	T	2217	ILE
6	T	2236	ILE
6	T	2243	ILE
6	T	2269	ASP
6	T	2271	ILE
6	T	2278	LEU
6	T	2311	LEU
6	T	2315	LEU
6	T	2325	LEU
6	T	2556	ILE
6	T	3068	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (115) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	49	GLN
1	A	73	HIS
1	A	87	HIS
1	A	128	ASN
1	A	137	GLN
1	A	161	HIS
1	A	353	GLN
1	A	372	HIS
2	B	37	GLN
2	B	60	GLN
2	B	95	GLN
2	B	103	ASN
2	B	120	ASN
2	B	191	ASN
2	B	234	ASN

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Mol	Chain	Res	Type
2	B	248	HIS
2	B	406	HIS
2	B	444	HIS
3	D	72	ASN
3	D	262	ASN
3	D	359	GLN
3	D	389	GLN
3	D	570	ASN
3	D	644	ASN
5	F	580	HIS
5	F	624	GLN
6	T	6	GLN
6	T	39	ASN
6	T	84	ASN
6	T	146	GLN
6	T	150	ASN
6	T	353	HIS
6	T	384	HIS
6	T	401	ASN
6	T	473	ASN
6	T	605	ASN
6	T	615	ASN
6	T	639	HIS
6	T	983	ASN
6	T	1060	ASN
6	T	1104	ASN
6	T	1105	ASN
6	T	1116	ASN
6	T	1234	GLN
6	T	1287	ASN
6	T	1300	ASN
6	T	1312	HIS
6	T	1316	ASN
6	T	1379	GLN
6	T	1457	ASN
6	T	1470	ASN
6	T	1493	GLN
6	T	1525	HIS
6	T	1546	GLN
6	T	1565	GLN
6	T	1571	ASN
6	T	1601	ASN

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Mol	Chain	Res	Type
6	T	1604	HIS
6	T	1659	GLN
6	T	1709	ASN
6	T	1768	HIS
6	T	1769	ASN
6	T	1780	ASN
6	T	1805	ASN
6	T	1838	HIS
6	T	1866	GLN
6	T	1903	GLN
6	T	1944	GLN
6	T	1977	ASN
6	T	1981	GLN
6	T	1987	GLN
6	T	1998	ASN
6	T	2009	HIS
6	T	2122	ASN
6	T	2174	ASN
6	T	2183	ASN
6	T	2188	GLN
6	T	2189	ASN
6	T	2200	HIS
6	T	2207	GLN
6	T	2245	GLN
6	T	2266	ASN
6	T	2418	GLN
6	T	2458	GLN
6	T	2592	HIS
6	T	2644	GLN
6	T	2646	ASN
6	T	2651	ASN
6	T	2704	GLN
6	T	2741	GLN
6	T	2811	GLN
6	T	2861	ASN
6	T	2869	ASN
6	T	2896	ASN
6	T	2957	HIS
6	T	2992	HIS
6	T	3041	GLN
6	T	3059	GLN
6	T	3064	ASN

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Mol	Chain	Res	Type
6	T	3073	ASN
6	T	3119	ASN
6	T	3139	GLN
6	T	3154	HIS
6	T	3232	GLN
6	T	3357	GLN
6	T	3367	HIS
6	T	3385	HIS
6	T	3421	GLN
6	T	3444	ASN
6	T	3515	ASN
6	T	3537	GLN
6	T	3629	GLN
6	T	3657	ASN
6	T	3679	HIS
6	T	3695	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
7	ATP	B	501	-	26,33,33	0.90	1 (3%)	31,52,52	1.68	5 (16%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	ATP	B	501	-	-	2/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	B	501	ATP	C5-C4	2.23	1.46	1.40

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	B	501	ATP	PA-O3A-PB	-4.60	117.03	132.83
7	B	501	ATP	PB-O3B-PG	-3.81	119.74	132.83
7	B	501	ATP	C3'-C2'-C1'	3.31	105.97	100.98
7	B	501	ATP	N3-C2-N1	-3.01	123.97	128.68
7	B	501	ATP	C4-C5-N7	-2.47	106.83	109.40

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	B	501	ATP	O4'-C4'-C5'-O5'
7	B	501	ATP	C5'-O5'-PA-O1A

There are no ring outliers.

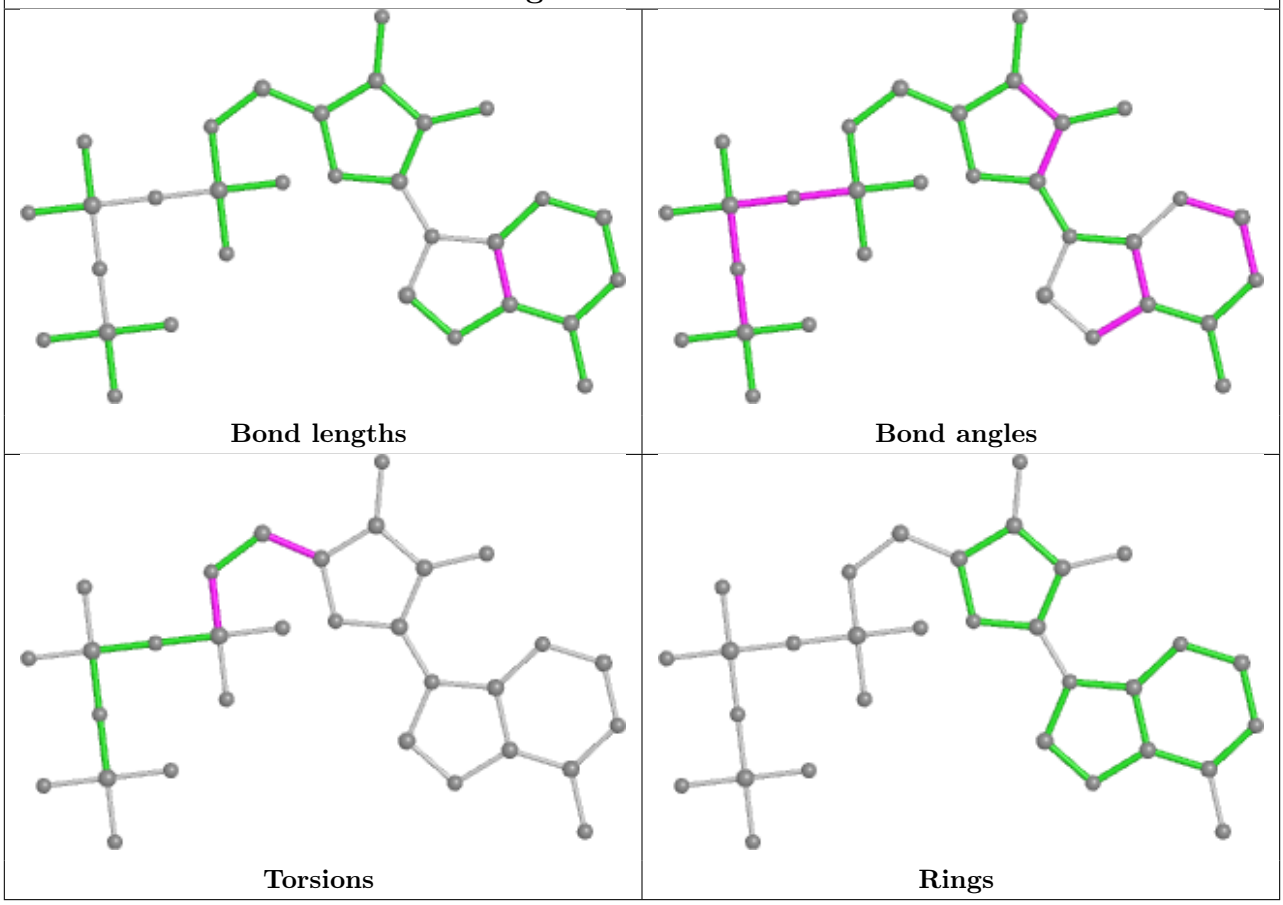
1 monomer is involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	B	501	ATP	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will

also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand ATP B 501



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

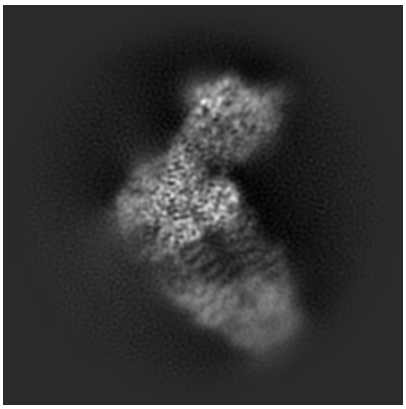
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-33796. These allow visual inspection of the internal detail of the map and identification of artifacts.

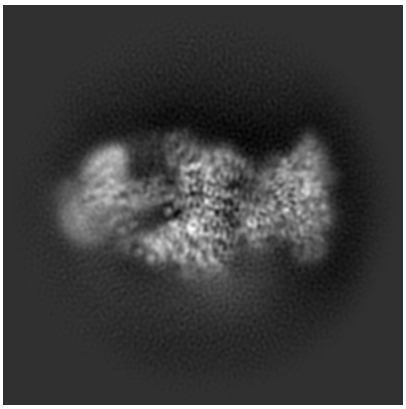
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

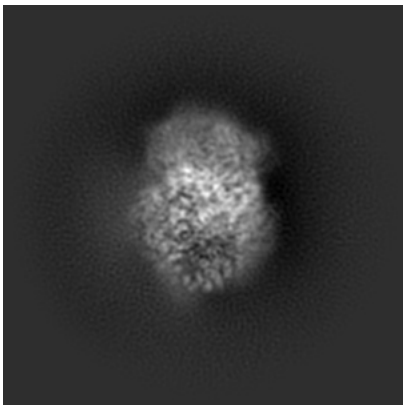
6.1.1 Primary map



X

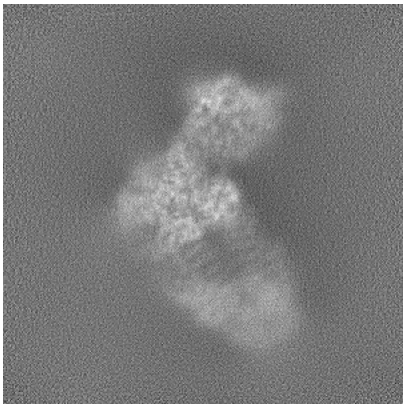


Y

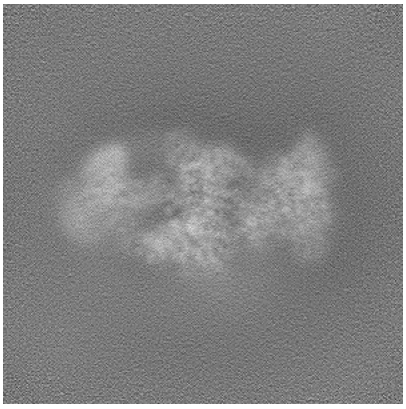


Z

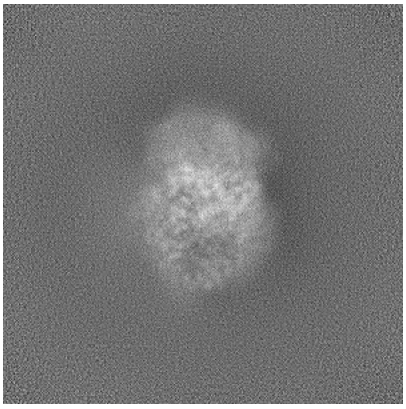
6.1.2 Raw map



X



Y

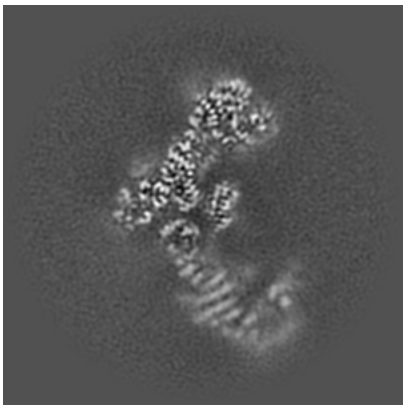


Z

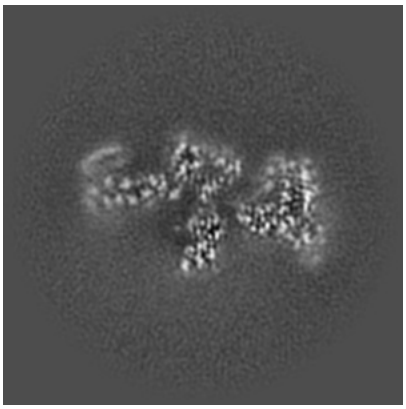
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

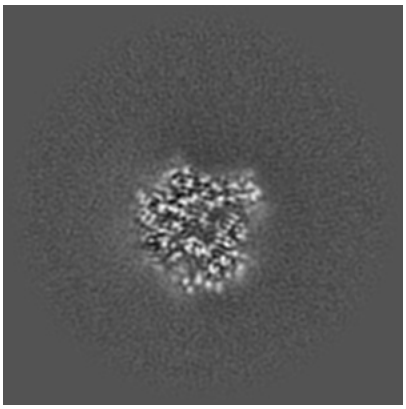
6.2.1 Primary map



X Index: 250

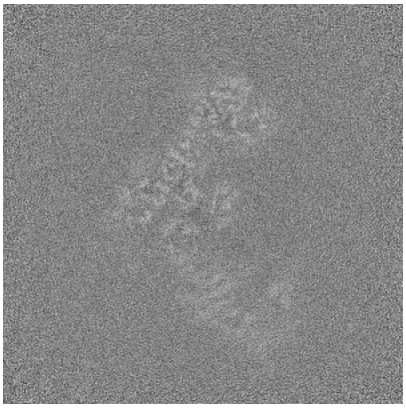


Y Index: 250

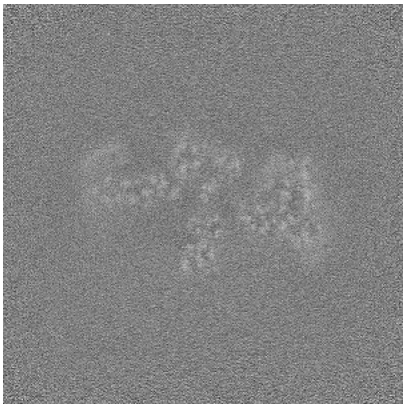


Z Index: 250

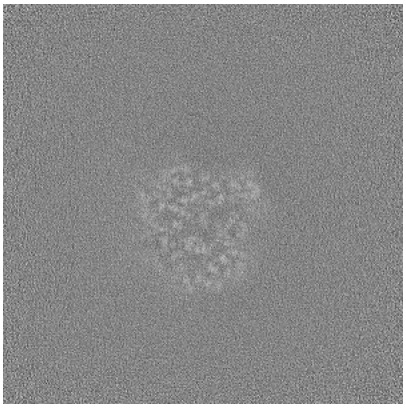
6.2.2 Raw map



X Index: 250



Y Index: 250

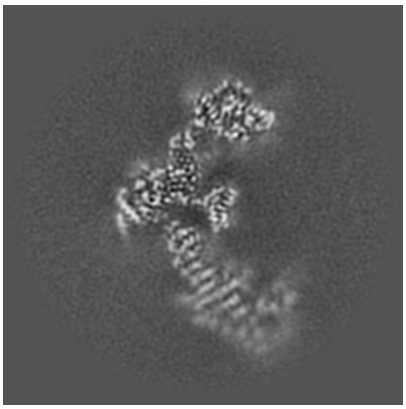


Z Index: 250

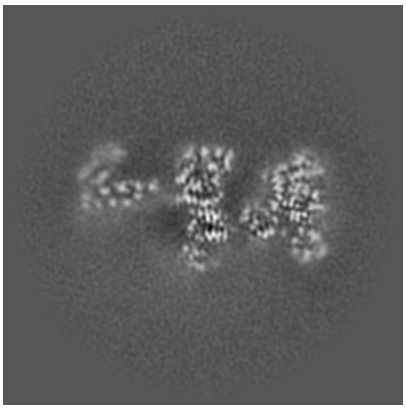
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

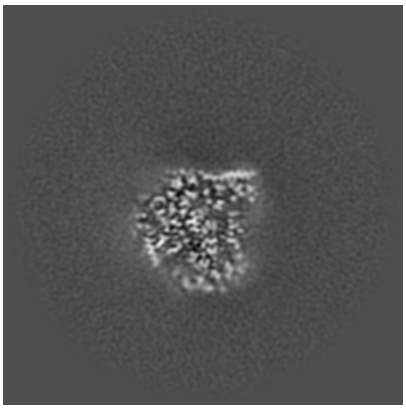
6.3.1 Primary map



X Index: 256

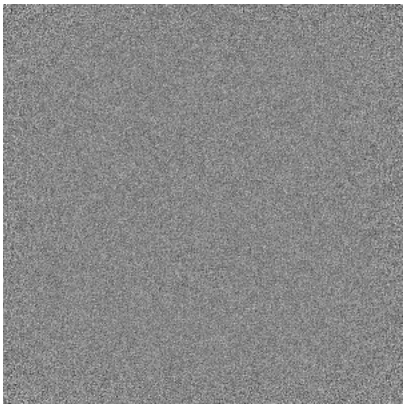


Y Index: 264

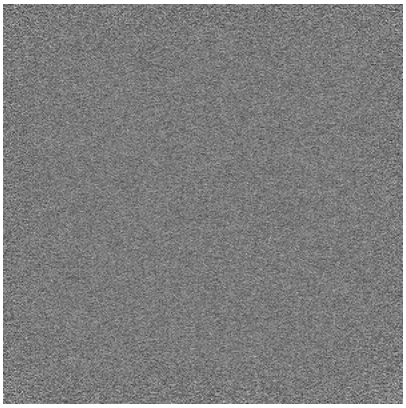


Z Index: 257

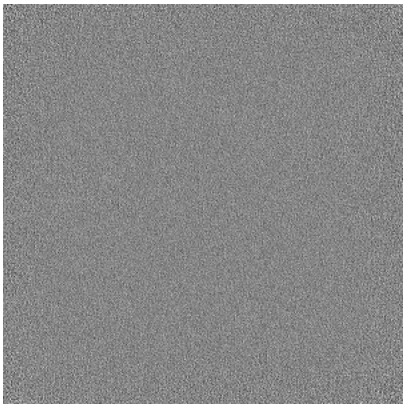
6.3.2 Raw map



X Index: 0



Y Index: 0

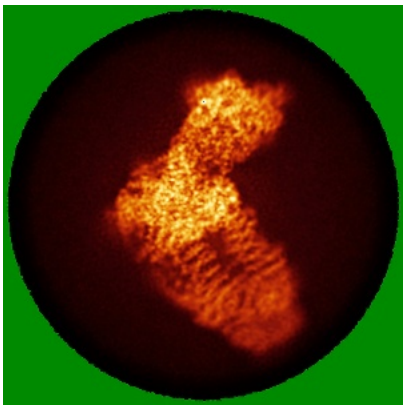


Z Index: 0

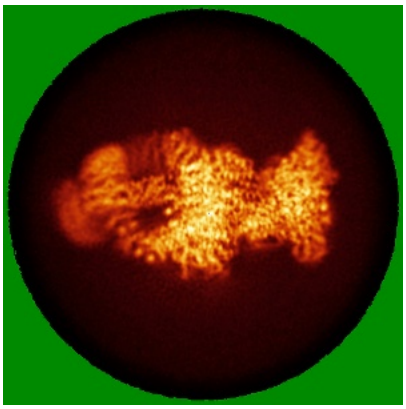
The images above show the largest variance slices of the map in three orthogonal directions.

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

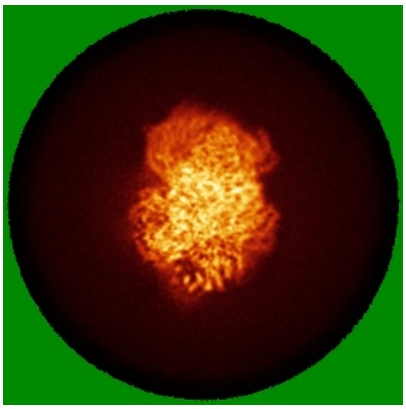
6.4.1 Primary map



X

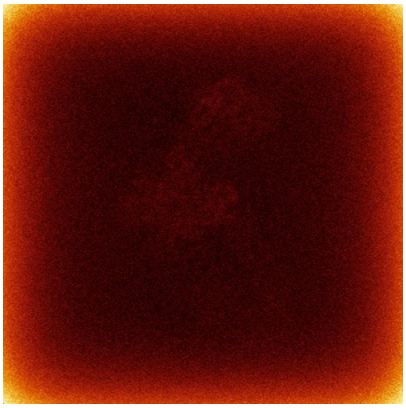


Y

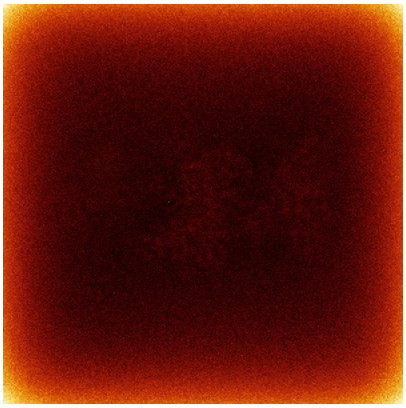


Z

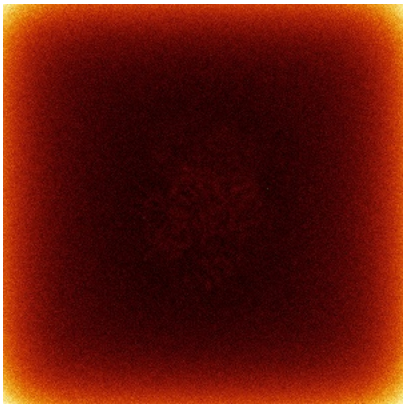
6.4.2 Raw map



X



Y



Z

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

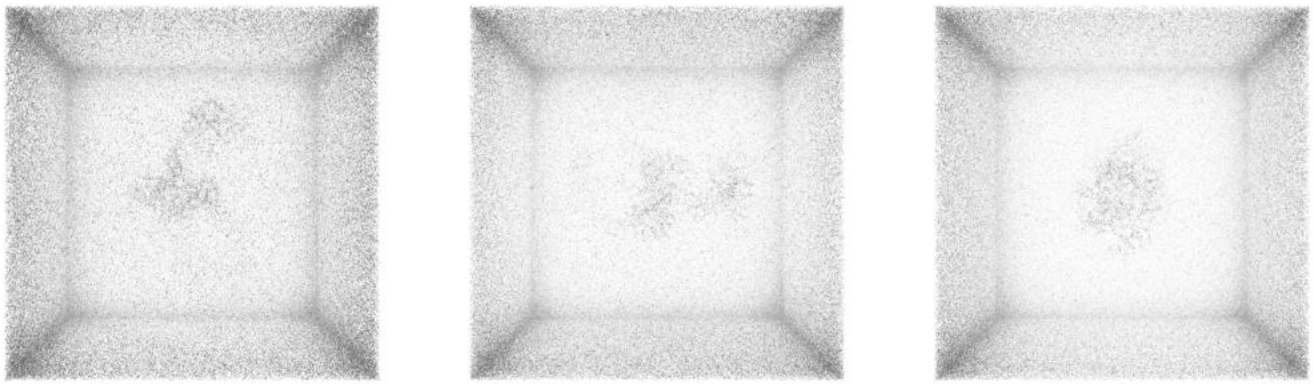
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0396. 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.

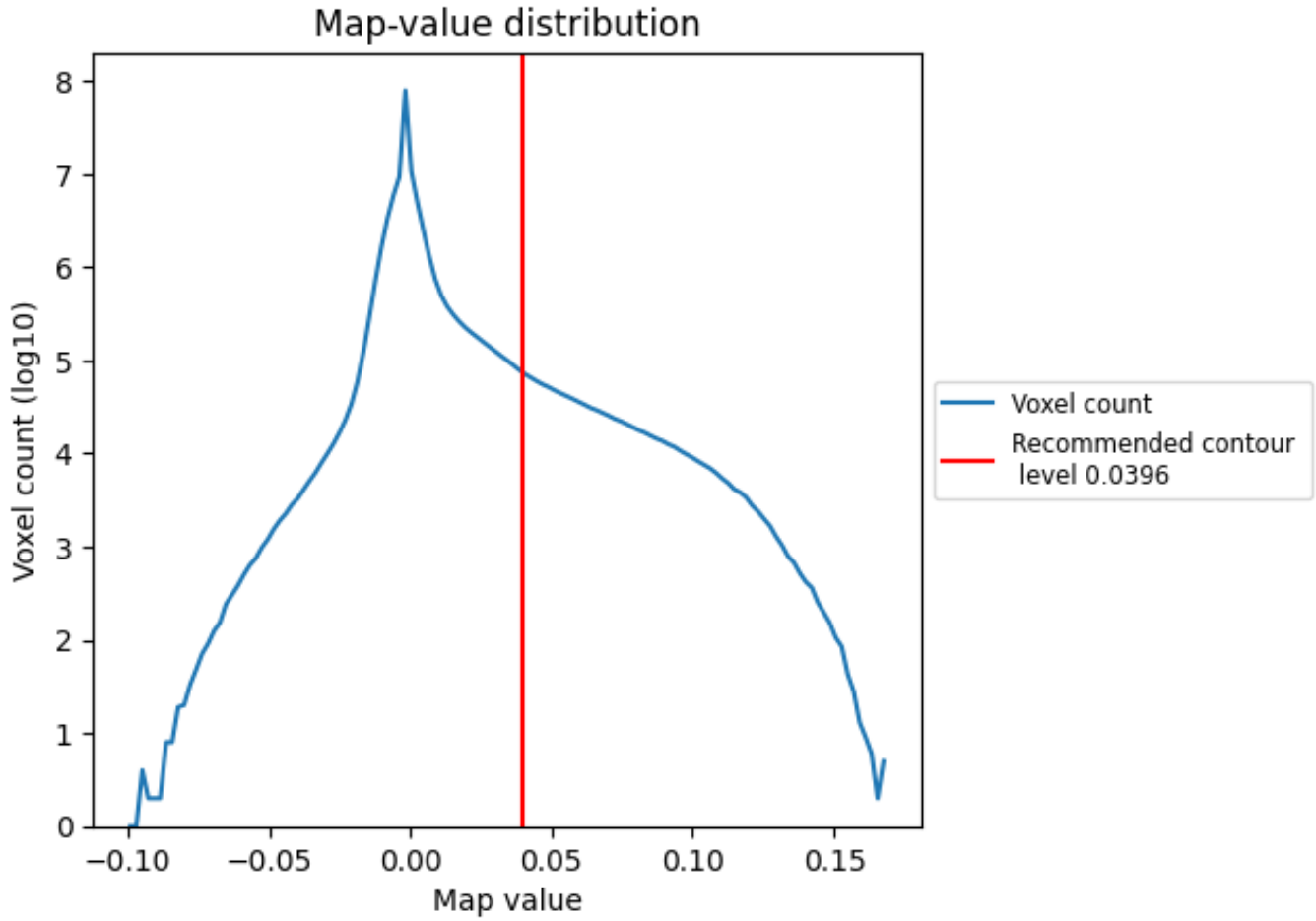
6.6 Mask visualisation (i)

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

7 Map analysis

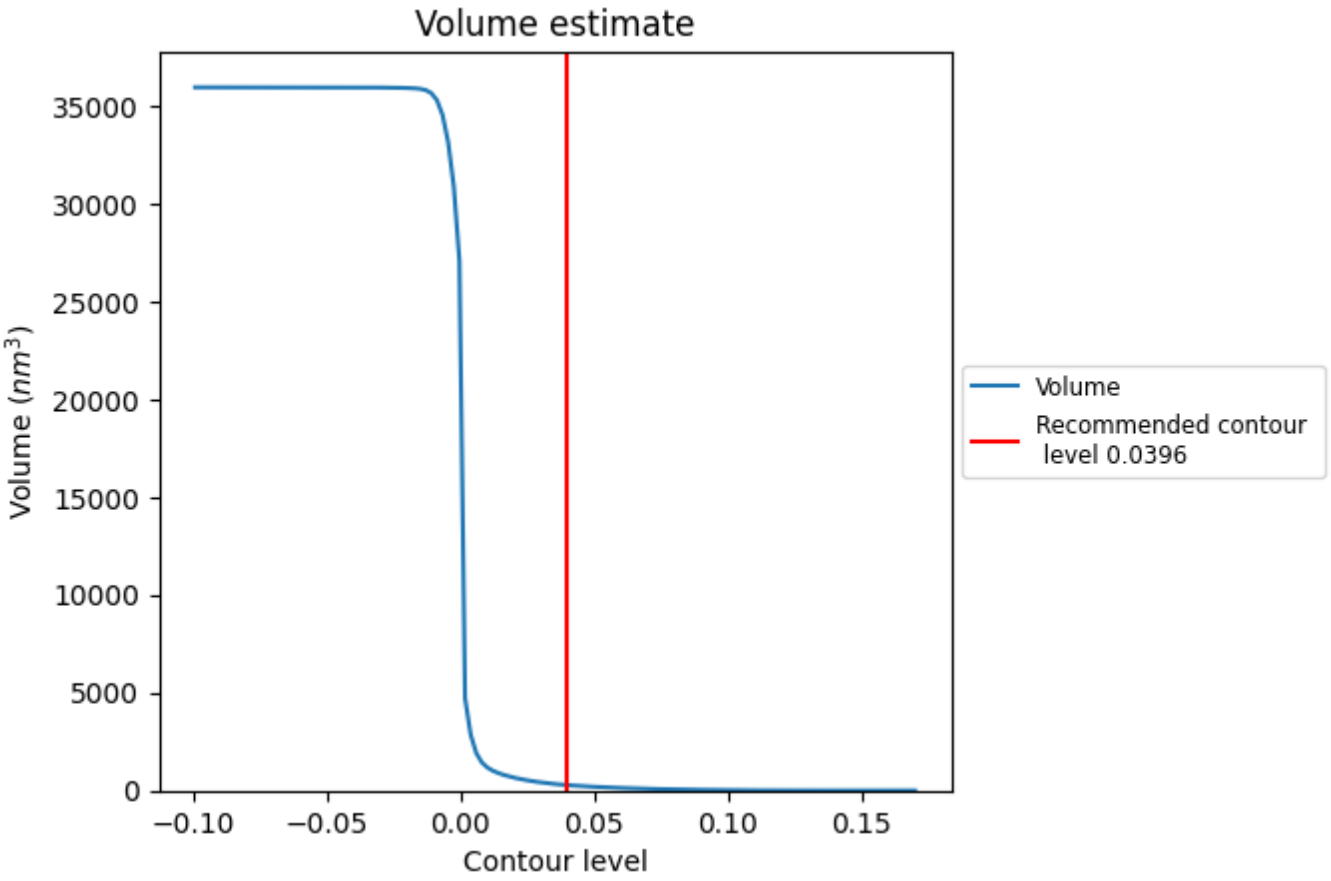
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

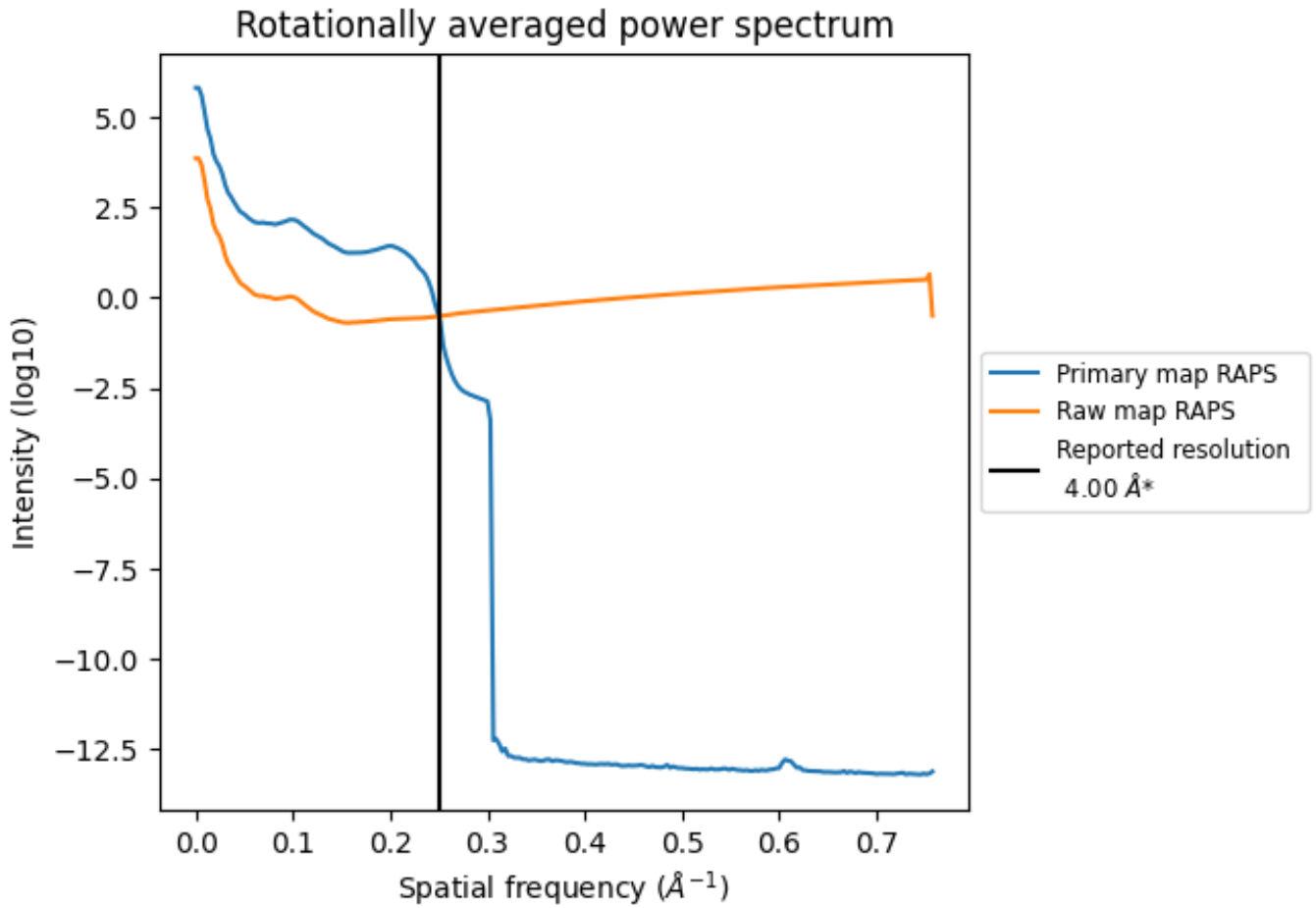
7.2 Volume estimate



The volume at the recommended contour level is 282 nm^3; this corresponds to an approximate mass of 255 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)

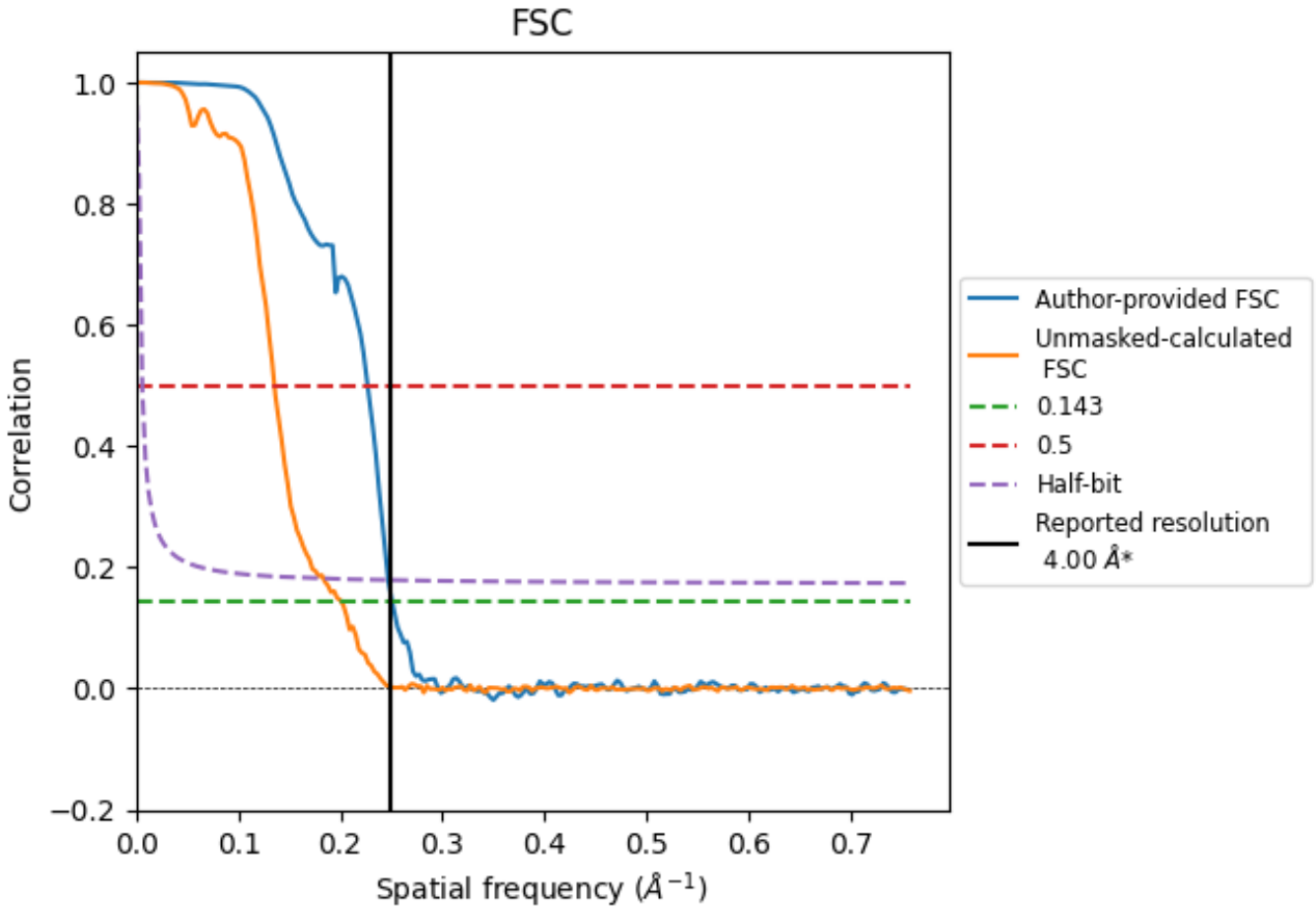


*Reported resolution corresponds to spatial frequency of 0.250 Å^{-1}

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 0.250 Å^{-1}

8.2 Resolution estimates (i)

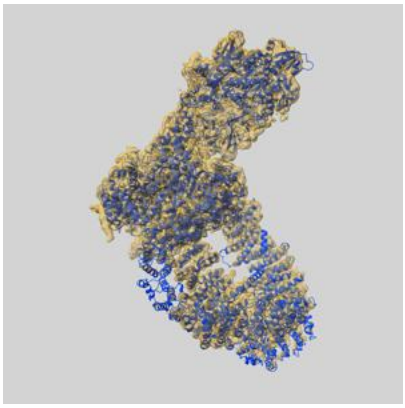
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.00	-	-
Author-provided FSC curve	3.99	4.41	4.05
Unmasked-calculated*	4.98	7.39	5.45

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.98 differs from the reported value 4.0 by more than 10 %

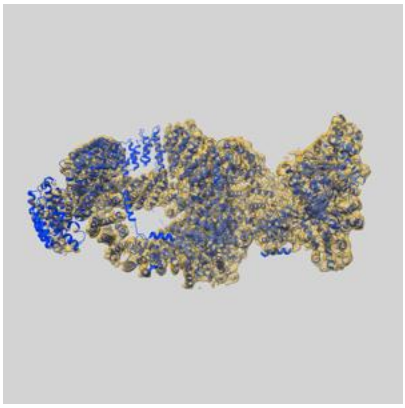
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-33796 and PDB model 7YFP. Per-residue inclusion information can be found in section 3 on page 5.

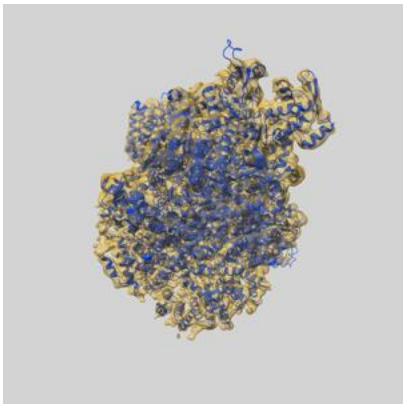
9.1 Map-model overlay



X



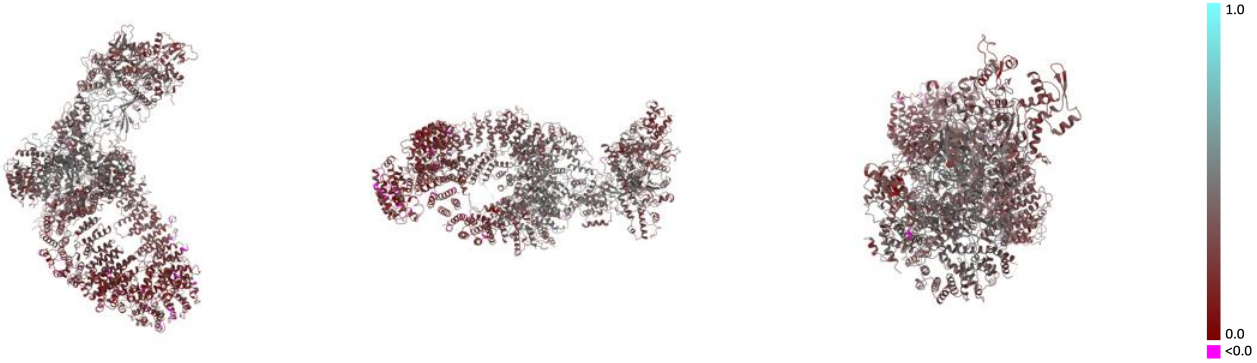
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0396 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

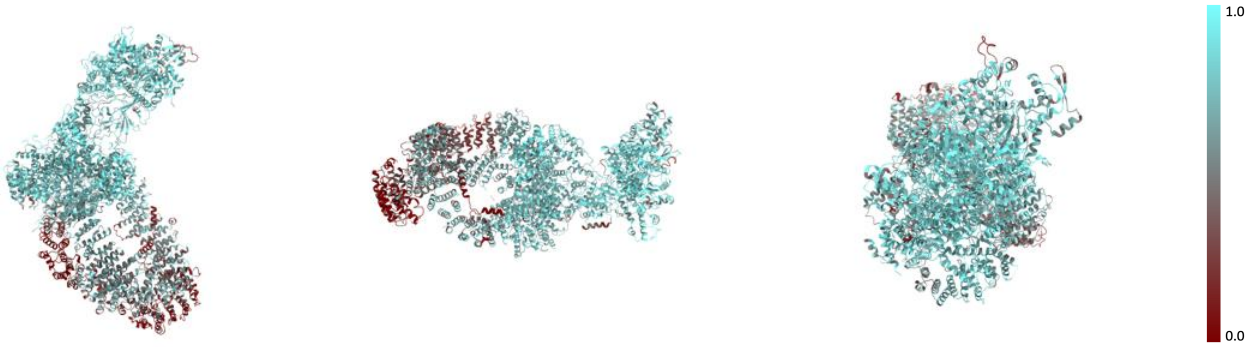
9.2 Q-score mapped to coordinate model (i)



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.

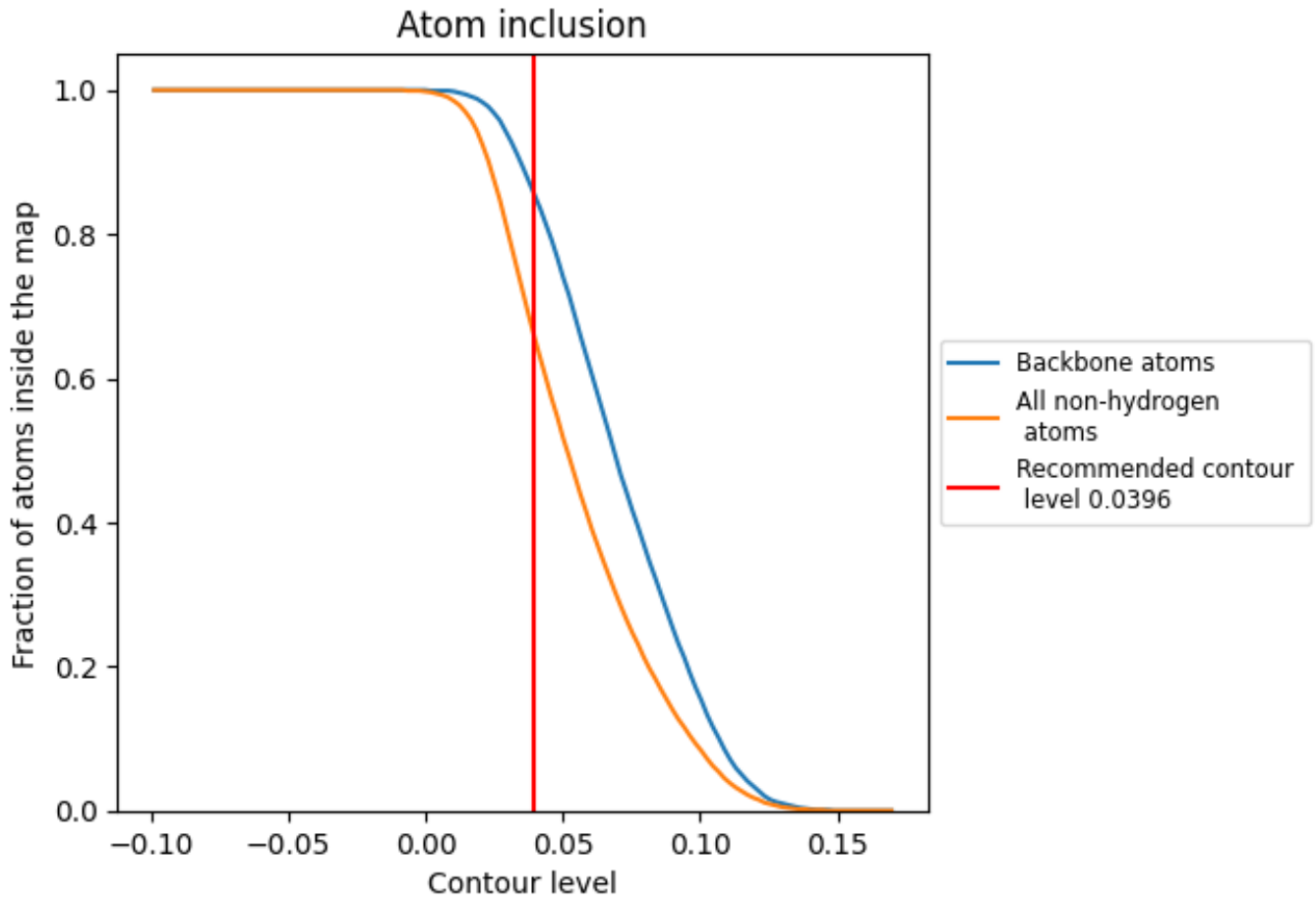
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.0396).

9.4 Atom inclusion (i)



At the recommended contour level, 86% of all backbone atoms, 66% 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 (0.0396) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6570	0.3340
A	0.7470	0.3330
B	0.8340	0.3930
D	0.7720	0.3870
E	0.7870	0.3540
F	0.7500	0.4060
T	0.6020	0.3170