WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Jul 9, 2025 – 08:23 PM JST

PDB ID	:	9LA2 / pdb_00009la2
EMDB ID	:	EMD-62917
Title	:	Arabidopsis GORK WT2
Authors	:	Yamanashi, T.; Kume, T.; Sekido, N.; Muraoka, Y.; Yokoyama, T.; Tanaka, Y.; Uozumi, N.
Deposited on	:	2025-01-01
Resolution	:	3.20 Å(reported)

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

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

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

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

|		
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
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 ⓘ

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

The reported resolution of this entry is 3.20 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	Percentile Ranks	Value
Clashscore		24
Ramachandran outliers		0
Sidechain outliers		3.0%

Worse   *Better*

▮ Percentile relative to all structures
▯ Percentile relative to all EM structures
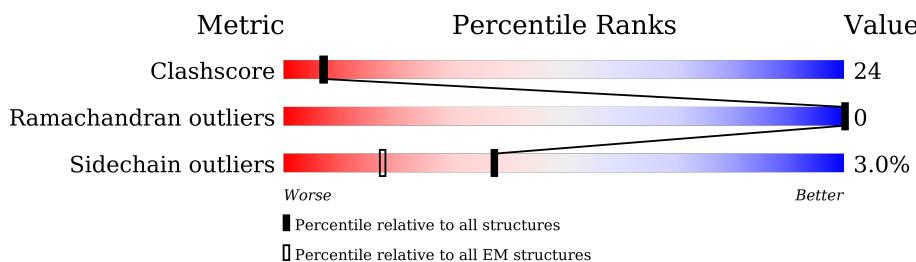
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	834	21% / 45% / 35% / • / 19%
1	B	834	13% / 43% / 36% / • / 19%
1	C	834	14% / 40% / 39% / • / 19%
1	D	834	18% / 43% / 37% / • / 19%

2 Entry composition ⓘ

There is only 1 type of molecule in this entry. The entry contains 21917 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 Potassium channel GORK.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	676	Total	C	N	O	S	0	0
			5486	3559	914	988	25		
1	B	673	Total	C	N	O	S	0	0
			5459	3539	911	984	25		
1	C	676	Total	C	N	O	S	0	0
			5486	3559	914	988	25		
1	D	676	Total	C	N	O	S	0	0
			5486	3559	914	988	25		

There are 60 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	MET	-	initiating methionine	UNP Q94A76
A	-6	ASP	-	expression tag	UNP Q94A76
A	-5	TYR	-	expression tag	UNP Q94A76
A	-4	LYS	-	expression tag	UNP Q94A76
A	-3	ASP	-	expression tag	UNP Q94A76
A	-2	ASP	-	expression tag	UNP Q94A76
A	-1	ASP	-	expression tag	UNP Q94A76
A	0	ASP	-	expression tag	UNP Q94A76
A	1	LYS	-	expression tag	UNP Q94A76
A	821	HIS	-	expression tag	UNP Q94A76
A	822	HIS	-	expression tag	UNP Q94A76
A	823	HIS	-	expression tag	UNP Q94A76
A	824	HIS	-	expression tag	UNP Q94A76
A	825	HIS	-	expression tag	UNP Q94A76
A	826	HIS	-	expression tag	UNP Q94A76
B	-7	MET	-	initiating methionine	UNP Q94A76
B	-6	ASP	-	expression tag	UNP Q94A76
B	-5	TYR	-	expression tag	UNP Q94A76
B	-4	LYS	-	expression tag	UNP Q94A76
B	-3	ASP	-	expression tag	UNP Q94A76
B	-2	ASP	-	expression tag	UNP Q94A76
B	-1	ASP	-	expression tag	UNP Q94A76

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| Chain	Residue	Modelled	Actual	Comment	Reference
B	0	ASP	-	expression tag	UNP Q94A76
B	1	LYS	-	expression tag	UNP Q94A76
B	821	HIS	-	expression tag	UNP Q94A76
B	822	HIS	-	expression tag	UNP Q94A76
B	823	HIS	-	expression tag	UNP Q94A76
B	824	HIS	-	expression tag	UNP Q94A76
B	825	HIS	-	expression tag	UNP Q94A76
B	826	HIS	-	expression tag	UNP Q94A76
C	-7	MET	-	initiating methionine	UNP Q94A76
C	-6	ASP	-	expression tag	UNP Q94A76
C	-5	TYR	-	expression tag	UNP Q94A76
C	-4	LYS	-	expression tag	UNP Q94A76
C	-3	ASP	-	expression tag	UNP Q94A76
C	-2	ASP	-	expression tag	UNP Q94A76
C	-1	ASP	-	expression tag	UNP Q94A76
C	0	ASP	-	expression tag	UNP Q94A76
C	1	LYS	-	expression tag	UNP Q94A76
C	821	HIS	-	expression tag	UNP Q94A76
C	822	HIS	-	expression tag	UNP Q94A76
C	823	HIS	-	expression tag	UNP Q94A76
C	824	HIS	-	expression tag	UNP Q94A76
C	825	HIS	-	expression tag	UNP Q94A76
C	826	HIS	-	expression tag	UNP Q94A76
D	-7	MET	-	initiating methionine	UNP Q94A76
D	-6	ASP	-	expression tag	UNP Q94A76
D	-5	TYR	-	expression tag	UNP Q94A76
D	-4	LYS	-	expression tag	UNP Q94A76
D	-3	ASP	-	expression tag	UNP Q94A76
D	-2	ASP	-	expression tag	UNP Q94A76
D	-1	ASP	-	expression tag	UNP Q94A76
D	0	ASP	-	expression tag	UNP Q94A76
D	1	LYS	-	expression tag	UNP Q94A76
D	821	HIS	-	expression tag	UNP Q94A76
D	822	HIS	-	expression tag	UNP Q94A76
D	823	HIS	-	expression tag	UNP Q94A76
D	824	HIS	-	expression tag	UNP Q94A76
D	825	HIS	-	expression tag	UNP Q94A76
D	826	HIS	-	expression tag	UNP Q94A76

3 Residue-property plots ⓘ

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

• Molecule 1: Potassium channel GORK

R692 W693 G694 N695 S696 P697 L698 D699 E700 A701 R702 L703 C704 G705 N706 K707 K708 L709 I710 K711 L712 L713 E714 D715 V716 K717 N718 A719 Q720 S721 S722 I723 Y724 P725 SER SER LEU ARG GLU LEU GLN GLU GLU ARG ILE GLU ARG ARG LYS CYS THR VAL PHE PRO PHE HIS PRO GLN GLU ALA

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

MET ILE SER ASP THR THR ASP GLN THR HIS HIS HIS HIS HIS HIS

• Molecule 1: Potassium channel GORK

13%

Chain B: 43% 36% • 19%

MET ASP TYR LYS ASP ASP ASP LYS GLY ARG LEU ARG ARG GLN GLU ILE ILE ASP HIS GLU GLU GLU SER ASN ASP ASP VAL SER ARG ARG GLY LYS LEU SER LEU ALA GLU THR PHE ARG TRP LEU ASP SER SER GLU HIS ARG ARG ILE GLU THR ASP G50 H51 N52

D53 Y54 I58 H59 P60 K61 N62 Y65 I72 L81 M85 E86 F87 L109 V110 D111 I112 F116 F117 V118 A119 Y120 R121 D122 R127 T128 V129 Y130 K131 P132 T133 R134 I135 L140 H143 F144 L145 M146 G150 K163 H164 E165 L166 V167 R168 W172 I173

R174 L175 F176 R177 V178 R179 V182 E183 Q186 E189 K190 D191 T192 Y196 L197 F198 T199 R200 I201 L202 F206 Y210 H213 Y220 Y221 L222 A223 T224 T225 W235 L241 G242 D243 R250 D253 L254 T259 Y263 F264 V267 T268 M269 V272 G273

Y274 G275 D276 I277 V280 M285 M289 N305 I306 T307 A308 L309 I310 G313 E317 R318 K322 M323 N324 D325 L326 F329 R332 K333 K334 L335 G336 R337 D338 L339 R340 S341 Q342 I343 T344 V347 R348 L349 D352 S353 H354 Y355 T356 D357 V359 M360 L361 Q362

D363 I364 P365 A366 S367 I368 R369 A370 K371 I372 A373 Q374 L375 L378 P379 Y380 I381 K382 K383 V384 P385 L386 F387 K388 G389 T392 E393 F394 I395 N396 Q397 I398 V399 I400 R401 L402 H403 E404 E405 P407 Y406 F407 L408 P409 G410 E411 V412 I413 T414 E415 Q416 V420 D421 H422 L423 Y424 F425 V426

C427 L430 L431 E432 A433 L434 V435 T436 K437 T438 D439 G440 S441 E442 E443 S444 V445 T446 L447 L448 T452 S453 F454 G455 D456 I457 I460 C461 N462 I463 S464 Q465 P466 F467 T468 V469 R470 V471 C472 E473 L474 C475 H476 L477 L478 R479 V480 D481 K482 Q483 S484 F485 S486 L489 E490 I491

Y492 F493 H494 D495 G496 R497 T498 I499 L500 N501 N502 I503 M504 E505 E506 K507 E508 S509 N510 D511 R512 I513 K514 K515 L516 E517 I520 V521 I522 H523 I524 Q527 E528 A532 L533 N536 S537 Q541 G542 D543 F544 Y545 Q546 L547 K548 R552 S553 G554 A555 D556 K559 G564

R565 S566 P567 L568 H569 L570 A571 A572 C573 E577 D578 I579 T580 L581 F582 L583 I584 D589 V590 N591 L592 K593 D594 K595 T599 P600 L601 A604 V605 K606 A607 G608 Q609 E610 G611 V612 I613 G614 L615 L616 V617 K618 E619 G620 A621 S622 F623 N624 L625 E626 D627 S628 G629 N630 F631 L632

C633 T634 T635 V636 A637 K638 G639 D640 S641 D642 F643 L644 K645 R646 L647 S650 G651 M652 N653 P654 N655 S656 E657 D658 Y659 D660 H661 R662 T663 P664 L665 H666 V667 A668 A669 S670 E671 G672 L673 F674 L675 M676 A677 K678 M679 L680 V681 E682 A683 G684 A685 S686 V687 I688 S689 K690 D691 R692 W693

G694 N695 S696 P697 L698 D699 E700 A701 R702 L703 C704 G705 N706 K707 K708 L709 I710 K711 L712 L713 E714 D715 V716 K717 N718 A719 Q720 S721 S722 ILE TYR PRO SER SER LEU ARG GLU LEU GLN GLU GLU ARG ILE GLU ARG ARG LYS CYS THR VAL PHE PRO PHE HIS PRO GLN GLU ALA LYS GLU

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

SER ASP THR ASP GLN THR HIS HIS HIS HIS HIS

• Molecule 1: Potassium channel GORK

Chain C:

14%

40% 39% 19%

• Molecule 1: Potassium channel GORK

Chain D:

18%

43% 37% 19%

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	22850	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	60	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.559	Depositor
Minimum map value	-0.306	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.016	Depositor
Recommended contour level	0.08	Depositor
Map size (Å)	315.19998, 315.19998, 315.19998	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.7879999, 0.7879999, 0.7879999	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#|Z| > 5$	RMSZ	$\#|Z| > 5$
1	A	0.37	0/5615	0.58	0/7596
1	B	0.43	0/5586	0.64	0/7555
1	C	0.24	0/5615	0.46	0/7596
1	D	0.26	0/5615	0.47	0/7596
All	All	0.33	0/22431	0.54	0/30343

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5486	0	5502	266	0
1	B	5459	0	5475	282	0
1	C	5486	0	5502	301	0
1	D	5486	0	5502	263	0
All	All	21917	0	21981	1036	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 24.

All (1036) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:457:ILE:HD11	1:B:503:ILE:HG21	1.39	1.03
1:D:708:LYS:HA	1:D:711:LYS:HE3	1.50	0.93
1:A:500:LEU:HD22	1:A:524:ILE:HG12	1.55	0.87
1:B:368:ILE:HD12	1:C:343:ILE:HG12	1.58	0.85
1:A:605:VAL:HG13	1:A:646:ARG:HG3	1.57	0.85
1:C:395:ILE:HA	1:C:398:ILE:HD12	1.57	0.83
1:D:59:HIS:HD2	1:D:60:PRO:HD2	1.43	0.83
1:B:397:GLN:HE22	1:C:418:ASN:HA	1.43	0.83
1:A:601:LEU:HB2	1:A:621:ALA:HB1	1.63	0.80
1:B:364:ILE:HD12	1:C:346:HIS:HB3	1.63	0.80
1:B:364:ILE:HG13	1:B:365:PRO:HD2	1.64	0.79
1:B:272:VAL:O	1:D:273:GLY:HA3	1.83	0.79
1:A:548:LYS:HB3	1:A:552:ARG:HH21	1.47	0.78
1:A:273:GLY:HA3	1:D:272:VAL:O	1.84	0.78
1:C:605:VAL:HG13	1:C:646:ARG:HB3	1.66	0.78
1:B:433:ALA:HA	1:B:469:VAL:HA	1.66	0.77
1:A:563:ASP:HB2	1:A:565:ARG:HG3	1.66	0.77
1:B:415:GLU:HA	1:B:468:THR:HA	1.66	0.77
1:D:60:PRO:HD3	1:D:119:ALA:HB3	1.66	0.76
1:D:497:ARG:HA	1:D:520:ILE:HD12	1.68	0.76
1:C:397:GLN:HB3	1:C:488:ILE:HD13	1.67	0.76
1:D:648:LEU:HD11	1:D:680:LEU:HD23	1.67	0.75
1:D:153:PRO:HB2	1:D:156:LEU:HB2	1.67	0.75
1:B:381:ILE:HG21	1:B:399:VAL:HG22	1.68	0.75
1:A:275:GLY:HA3	1:D:274:TYR:O	1.86	0.74
1:A:425:PHE:HB2	1:A:478:LEU:HB2	1.69	0.74
1:B:629:GLY:HA3	1:B:658:ASP:HB2	1.69	0.73
1:C:410:GLY:N	1:C:471:VAL:O	2.21	0.73
1:B:109:LEU:HA	1:B:112:ILE:HD12	1.70	0.73
1:D:386:LEU:HD23	1:D:503:ILE:HG23	1.70	0.72
1:B:544:PHE:HE1	1:B:582:PHE:HB2	1.54	0.72
1:D:460:ILE:HG21	1:D:500:LEU:HD11	1.71	0.72
1:A:542:GLY:HA2	1:A:579:ILE:HD11	1.71	0.72
1:C:285:MET:O	1:C:289:MET:HG2	1.89	0.72
1:A:665:LEU:HD21	1:A:687:VAL:HG22	1.72	0.71
1:A:688:ILE:HG22	1:A:717:LYS:HG3	1.73	0.71
1:C:90:PHE:O	1:C:168:ARG:NH2	2.22	0.71
1:D:645:LYS:HA	1:D:679:MET:HE2	1.73	0.71
1:A:348:ARG:HA	1:A:351:TYR:HE1	1.54	0.71
1:D:556:ASP:HB3	1:D:559:LYS:HG2	1.71	0.71
1:C:495:ASP:O	1:C:499:ILE:HG13	1.90	0.70
1:D:547:LEU:HD22	1:D:579:ILE:HD12	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:87:PHE:O	1:C:168:ARG:NH2	2.24	0.70
1:B:590:VAL:HG11	1:B:616:LEU:HB3	1.72	0.70
1:C:430:LEU:HA	1:C:449:GLY:HA3	1.72	0.69
1:C:431:LEU:HD12	1:C:471:VAL:HA	1.72	0.69
1:B:690:LYS:NZ	1:B:691:ASP:O	2.23	0.69
1:D:690:LYS:HD3	1:D:694:GLY:HA2	1.73	0.69
1:B:565:ARG:HH21	1:B:570:LEU:HD23	1.56	0.69
1:D:146:MET:HE3	1:D:146:MET:HA	1.75	0.69
1:A:335:LEU:HD12	1:A:336:GLY:H	1.57	0.69
1:B:536:ASN:HB3	1:C:562:TYR:CZ	2.28	0.69
1:A:565:ARG:HH12	1:A:569:HIS:HB2	1.56	0.69
1:B:349:LEU:HD23	1:B:408:LEU:HD23	1.75	0.69
1:C:409:PRO:HD3	1:C:474:LEU:HA	1.75	0.69
1:D:87:PHE:O	1:D:168:ARG:NH2	2.27	0.68
1:C:466:PRO:HB3	1:C:514:LYS:HG2	1.75	0.68
1:B:657:GLU:HB3	1:B:661:HIS:HA	1.76	0.68
1:B:140:LEU:HA	1:B:144:PHE:HB3	1.74	0.68
1:D:340:ARG:O	1:D:344:THR:HG23	1.93	0.68
1:B:437:LYS:H	1:B:442:GLU:HA	1.59	0.68
1:A:346:HIS:HD2	1:A:408:LEU:HG	1.58	0.68
1:B:401:ARG:NH1	1:B:484:SER:HB3	2.08	0.68
1:A:386:LEU:O	1:A:502:ASN:ND2	2.20	0.67
1:C:131:LYS:HG3	1:C:134:ARG:H	1.58	0.67
1:C:470:ARG:NH1	1:C:472:CYS:SG	2.65	0.67
1:D:531:LEU:HD12	1:D:550:LEU:HD23	1.75	0.67
1:B:548:LYS:HA	1:B:582:PHE:CZ	2.30	0.67
1:B:196:TYR:HB2	1:C:320:ARG:HG2	1.77	0.67
1:B:365:PRO:HD3	1:C:407:PHE:CD1	2.30	0.67
1:C:417:GLY:HA2	1:C:464:SER:HB2	1.76	0.67
1:A:677:ALA:O	1:A:681:VAL:HG23	1.95	0.67
1:B:494:HIS:CD2	1:B:553:SER:HB2	2.30	0.67
1:A:599:THR:HG21	1:A:623:PHE:HA	1.77	0.66
1:C:515:LYS:HA	1:C:520:ILE:HG13	1.76	0.66
1:C:431:LEU:HB2	1:C:447:LEU:HB3	1.77	0.66
1:A:430:LEU:HD23	1:A:449:GLY:HA2	1.77	0.66
1:C:638:LYS:HE3	1:C:638:LYS:HA	1.75	0.66
1:A:431:LEU:HD22	1:A:471:VAL:HG22	1.78	0.66
1:B:318:ARG:HG3	1:B:318:ARG:HH11	1.59	0.66
1:A:348:ARG:HA	1:A:351:TYR:CE1	2.30	0.66
1:A:654:PRO:HB2	1:A:685:ALA:HB2	1.76	0.66
1:D:457:ILE:H	1:D:457:ILE:HD12	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:447:LEU:HD13	1:B:512:ARG:HD2	1.78	0.66
1:A:500:LEU:HD13	1:A:524:ILE:HG23	1.78	0.65
1:A:315:ASN:HD21	1:A:351:TYR:HB2	1.60	0.65
1:B:59:HIS:HB3	1:B:62:ASN:HB2	1.78	0.65
1:B:275:GLY:HA3	1:C:274:TYR:O	1.96	0.65
1:B:432:GLU:O	1:B:446:THR:HA	1.97	0.65
1:D:645:LYS:HZ1	1:D:646:ARG:HG2	1.62	0.65
1:A:414:THR:HG21	1:A:420:VAL:HG22	1.78	0.65
1:B:506:GLU:O	1:B:510:ASN:N	2.29	0.65
1:B:662:ARG:HE	1:B:666:HIS:HB3	1.61	0.64
1:C:577:GLU:H	1:C:577:GLU:CD	2.06	0.64
1:A:418:ASN:H	1:A:465:GLN:HB3	1.62	0.64
1:A:486:SER:O	1:A:490:GLU:HG3	1.98	0.64
1:D:108:PHE:O	1:D:112:ILE:HG13	1.96	0.64
1:A:281:ASN:O	1:A:285:MET:HG3	1.97	0.64
1:C:407:PHE:HB2	1:C:475:CYS:SG	2.37	0.64
1:B:475:CYS:HB2	1:B:477:LEU:HD21	1.79	0.63
1:B:374:GLN:HA	1:B:378:LEU:HB2	1.80	0.63
1:D:114:LEU:HA	1:D:117:PHE:HE1	1.63	0.63
1:C:457:ILE:HG21	1:C:514:LYS:HD3	1.81	0.63
1:A:272:VAL:HG13	1:C:271:THR:HA	1.81	0.63
1:B:397:GLN:NE2	1:C:417:GLY:O	2.32	0.63
1:C:361:LEU:O	1:C:369:ARG:NH2	2.31	0.63
1:B:326:LEU:HD11	1:B:347:VAL:HG21	1.81	0.63
1:C:529:ALA:O	1:C:533:LEU:HG	1.99	0.63
1:B:698:LEU:HG	1:B:702:ARG:HH22	1.64	0.62
1:B:564:GLY:HA3	1:B:595:LYS:HG3	1.80	0.62
1:B:338:ASP:O	1:B:342:GLN:NE2	2.28	0.62
1:B:368:ILE:HA	1:B:371:LYS:HG3	1.80	0.62
1:C:504:MET:SD	1:C:504:MET:N	2.72	0.62
1:C:570:LEU:HD12	1:C:570:LEU:H	1.65	0.62
1:A:599:THR:HB	1:A:602:PHE:HB3	1.81	0.62
1:B:259:THR:HG22	1:D:285:MET:HE2	1.82	0.62
1:C:319:PHE:HE2	1:C:323:MET:HE2	1.63	0.62
1:A:90:PHE:O	1:A:168:ARG:NH1	2.32	0.62
1:A:643:PHE:O	1:A:647:LEU:HG	1.99	0.62
1:C:338:ASP:OD2	1:C:338:ASP:N	2.30	0.62
1:C:707:LYS:HD2	1:C:710:ILE:HD12	1.81	0.62
1:D:306:ILE:O	1:D:310:ILE:HG12	2.00	0.62
1:B:368:ILE:O	1:B:372:ILE:HG12	2.00	0.62
1:B:467:PHE:HZ	1:B:512:ARG:HE	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:344:THR:O	1:C:348:ARG:HG3	1.99	0.62
1:D:233:TYR:O	1:D:281:ASN:ND2	2.33	0.62
1:B:395:ILE:O	1:B:399:VAL:HG23	2.00	0.62
1:C:394:PHE:CD1	1:C:398:ILE:HD11	2.35	0.62
1:B:692:ARG:HG2	1:B:693:TRP:CZ3	2.34	0.61
1:A:263:TYR:HA	1:C:289:MET:SD	2.40	0.61
1:C:605:VAL:HA	1:C:613:ILE:HD11	1.81	0.61
1:D:423:LEU:HD23	1:D:480:LEU:HD23	1.81	0.61
1:A:393:GLU:CD	1:A:393:GLU:H	2.08	0.61
1:B:274:TYR:O	1:D:275:GLY:HA3	2.01	0.61
1:C:688:ILE:HD13	1:C:721:SER:HA	1.82	0.61
1:D:319:PHE:HA	1:D:322:LYS:HE2	1.82	0.61
1:D:377:TYR:HB2	1:D:399:VAL:HG13	1.82	0.61
1:C:642:ASP:HA	1:C:645:LYS:HE3	1.83	0.61
1:B:512:ARG:HD3	1:B:513:ILE:HG12	1.83	0.61
1:C:394:PHE:HD1	1:C:398:ILE:HD11	1.66	0.61
1:C:492:TYR:HB3	1:C:495:ASP:HB2	1.81	0.61
1:C:514:LYS:HA	1:C:517:GLU:HB3	1.82	0.61
1:C:572:ALA:HA	1:C:612:VAL:HG11	1.82	0.61
1:D:59:HIS:CD2	1:D:60:PRO:HD2	2.32	0.61
1:C:504:MET:HE1	1:C:520:ILE:HG22	1.83	0.61
1:C:208:GLU:O	1:C:212:THR:HG23	2.01	0.61
1:B:197:LEU:HA	1:B:200:ARG:HB2	1.82	0.60
1:A:241:LEU:HD21	1:A:276:ASP:HB2	1.82	0.60
1:B:357:ASP:HA	1:B:360:MET:HG2	1.83	0.60
1:C:619:GLU:HG3	1:C:621:ALA:H	1.66	0.60
1:A:424:TYR:HB3	1:A:477:LEU:HD12	1.83	0.60
1:C:580:THR:O	1:C:584:ILE:HG13	2.01	0.60
1:D:459:ILE:HG23	1:D:482:LYS:HG3	1.82	0.60
1:A:266:ILE:HG21	1:C:289:MET:HA	1.82	0.60
1:B:584:ILE:HG12	1:B:619:GLU:HG3	1.83	0.60
1:C:531:LEU:O	1:C:535:VAL:HG23	2.01	0.60
1:A:346:HIS:CD2	1:A:408:LEU:HG	2.37	0.59
1:D:102:ILE:O	1:D:106:ILE:HG23	2.02	0.59
1:A:317:GLU:HG2	1:C:196:TYR:CE2	2.37	0.59
1:B:544:PHE:O	1:B:548:LYS:HG2	2.01	0.59
1:C:155:ASP:O	1:C:159:LYS:HG3	2.01	0.59
1:C:373:ALA:HB3	1:C:399:VAL:HG13	1.84	0.59
1:B:182:VAL:HG12	1:B:186:GLN:HE21	1.66	0.59
1:B:460:ILE:HG21	1:B:500:LEU:HD11	1.84	0.59
1:C:281:ASN:O	1:C:285:MET:HG3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:708:LYS:O	1:C:711:LYS:HG2	2.02	0.59
1:B:373:ALA:HB1	1:B:399:VAL:HG12	1.84	0.59
1:D:416:GLN:OE1	1:D:436:THR:N	2.35	0.59
1:D:540:PHE:HA	1:D:574:ARG:HG3	1.84	0.59
1:A:274:TYR:O	1:C:275:GLY:HA3	2.03	0.59
1:A:560:THR:HB	1:A:564:GLY:HA2	1.85	0.59
1:C:387:PHE:CE2	1:C:398:ILE:HD13	2.38	0.59
1:C:486:SER:HA	1:C:489:LEU:HD12	1.83	0.59
1:A:394:PHE:CE1	1:A:398:ILE:HD11	2.38	0.59
1:C:569:HIS:CD2	1:C:600:PRO:HG3	2.38	0.59
1:D:93:LEU:HD12	1:D:94:PRO:HD2	1.85	0.59
1:A:548:LYS:HG2	1:A:582:PHE:CE2	2.38	0.58
1:A:555:ALA:HA	1:A:559:LYS:HE2	1.84	0.58
1:C:394:PHE:CE2	1:C:488:ILE:HG22	2.38	0.58
1:C:366:ALA:HA	1:C:369:ARG:HE	1.67	0.58
1:C:426:VAL:HA	1:C:477:LEU:HD22	1.84	0.58
1:A:282:LEU:HD11	1:D:256:LYS:HA	1.84	0.58
1:B:565:ARG:HD2	1:C:596:PHE:HZ	1.67	0.58
1:B:673:LEU:HB3	1:B:676:MET:HG2	1.84	0.58
1:A:427:CYS:SG	1:A:476:HIS:HB3	2.43	0.58
1:B:492:TYR:HB3	1:B:495:ASP:HB2	1.84	0.58
1:D:330:MET:HE2	1:D:340:ARG:HD2	1.84	0.58
1:D:380:TYR:CE2	1:D:425:PHE:HB3	2.38	0.58
1:D:500:LEU:O	1:D:505:GLU:N	2.36	0.58
1:A:398:ILE:HG23	1:A:480:LEU:HD22	1.84	0.58
1:C:319:PHE:CE2	1:C:323:MET:HE2	2.38	0.58
1:C:361:LEU:HA	1:C:364:ILE:HG12	1.86	0.58
1:C:512:ARG:CZ	1:C:512:ARG:HA	2.34	0.58
1:A:671:GLU:HA	1:D:692:ARG:HH22	1.69	0.58
1:B:456:ASP:OD1	1:B:456:ASP:N	2.33	0.58
1:A:329:PHE:HD2	1:A:332:ARG:HH21	1.51	0.58
1:B:409:PRO:HB3	1:B:473:GLU:HA	1.86	0.58
1:D:531:LEU:O	1:D:535:VAL:HG23	2.02	0.58
1:D:337:ARG:HB3	1:D:340:ARG:HH11	1.69	0.57
1:A:433:ALA:O	1:A:445:VAL:N	2.37	0.57
1:C:460:ILE:HD13	1:C:503:ILE:HG21	1.87	0.57
1:D:356:THR:HA	1:D:359:VAL:HG22	1.85	0.57
1:A:644:LEU:HD22	1:A:676:MET:HE3	1.87	0.57
1:A:102:ILE:O	1:A:106:ILE:HG13	2.03	0.57
1:A:548:LYS:HB3	1:A:552:ARG:NH2	2.16	0.57
1:A:637:ALA:HB2	1:D:659:TYR:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:393:GLU:O	1:B:397:GLN:HG2	2.03	0.57
1:C:416:GLN:OE1	1:C:436:THR:N	2.34	0.57
1:C:557:PRO:HB2	1:C:588:VAL:HG22	1.86	0.57
1:C:665:LEU:HD22	1:C:685:ALA:HB1	1.85	0.57
1:A:357:ASP:O	1:A:361:LEU:N	2.38	0.57
1:B:352:ASP:HA	1:B:354:HIS:CE1	2.39	0.57
1:B:422:HIS:CE1	1:B:479:ARG:HD3	2.39	0.57
1:A:315:ASN:HA	1:A:318:ARG:HE	1.68	0.57
1:A:630:ASN:O	1:A:634:THR:HG23	2.05	0.57
1:B:463:ILE:HB	1:D:545:TYR:CE1	2.40	0.57
1:C:93:LEU:HD12	1:C:93:LEU:H	1.69	0.57
1:A:204:LEU:HG	1:A:305:ASN:ND2	2.20	0.57
1:A:289:MET:HE1	1:D:262:LEU:HD23	1.87	0.57
1:B:424:TYR:HB2	1:B:454:PHE:CE1	2.39	0.57
1:B:643:PHE:HA	1:B:646:ARG:HH21	1.69	0.57
1:C:435:VAL:HG22	1:C:467:PHE:HB3	1.86	0.57
1:D:378:LEU:HG	1:D:382:LYS:NZ	2.18	0.57
1:D:434:LEU:HD11	1:D:470:ARG:HB2	1.87	0.57
1:C:391:SER:HA	1:C:394:PHE:HB3	1.87	0.57
1:D:90:PHE:O	1:D:168:ARG:NH2	2.38	0.57
1:A:412:VAL:HA	1:A:470:ARG:HA	1.86	0.56
1:B:532:ALA:O	1:B:536:ASN:HB2	2.06	0.56
1:B:500:LEU:HA	1:B:503:ILE:HD12	1.87	0.56
1:C:365:PRO:HD2	1:C:368:ILE:HD12	1.87	0.56
1:D:432:GLU:HB3	1:D:472:CYS:SG	2.45	0.56
1:D:572:ALA:HA	1:D:612:VAL:HG11	1.86	0.56
1:B:491:ILE:HD11	1:C:462:ASN:O	2.06	0.56
1:C:519:ASP:O	1:C:522:ILE:N	2.38	0.56
1:C:673:LEU:HB3	1:C:676:MET:HB2	1.87	0.56
1:C:702:ARG:HE	1:C:703:LEU:HG	1.70	0.56
1:D:640:ASP:OD1	1:D:640:ASP:N	2.39	0.56
1:C:331:ASN:OD1	1:C:340:ARG:NH1	2.35	0.56
1:C:413:ILE:HD11	1:C:424:TYR:CZ	2.40	0.56
1:A:503:ILE:O	1:A:507:LYS:N	2.39	0.56
1:C:563:ASP:HA	1:C:595:LYS:HG2	1.88	0.56
1:D:364:ILE:HG22	1:D:365:PRO:HD2	1.87	0.56
1:C:339:LEU:O	1:C:343:ILE:HG13	2.05	0.56
1:D:551:ILE:HG21	1:D:586:GLU:OE2	2.05	0.56
1:A:497:ARG:HD2	1:A:498:THR:N	2.20	0.56
1:B:424:TYR:HB3	1:B:477:LEU:HD13	1.88	0.56
1:D:224:THR:O	1:D:250:ARG:NH2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:409:PRO:HA	1:D:471:VAL:HG12	1.88	0.56
1:D:643:PHE:HA	1:D:646:ARG:HG3	1.88	0.56
1:A:281:ASN:ND2	1:A:284:GLU:OE2	2.37	0.56
1:B:691:ASP:OD1	1:B:695:ASN:N	2.37	0.56
1:D:600:PRO:HA	1:D:603:GLU:HG2	1.88	0.56
1:B:360:MET:SD	1:B:360:MET:N	2.79	0.55
1:B:431:LEU:HD12	1:B:447:LEU:HB3	1.88	0.55
1:A:281:ASN:HD22	1:A:284:GLU:CD	2.13	0.55
1:A:497:ARG:HA	1:A:500:LEU:HD12	1.88	0.55
1:A:566:SER:H	1:A:569:HIS:HE1	1.54	0.55
1:A:707:LYS:HA	1:A:710:ILE:HD12	1.88	0.55
1:B:431:LEU:CD1	1:B:447:LEU:HB3	2.37	0.55
1:C:572:ALA:HB1	1:C:604:ALA:HB2	1.88	0.55
1:C:386:LEU:HD11	1:C:460:ILE:HD11	1.89	0.55
1:C:631:PHE:O	1:C:635:THR:OG1	2.23	0.55
1:C:677:ALA:O	1:C:681:VAL:HG23	2.06	0.55
1:A:605:VAL:HG12	1:A:643:PHE:CE1	2.42	0.55
1:A:678:LYS:HB3	1:A:712:LEU:HD21	1.87	0.55
1:C:599:THR:HG21	1:C:624:ASN:HB2	1.89	0.55
1:B:410:GLY:HA2	1:B:470:ARG:HE	1.71	0.55
1:B:533:LEU:O	1:B:537:SER:OG	2.25	0.55
1:C:666:HIS:NE2	1:C:697:PRO:HD3	2.21	0.55
1:C:226:LEU:O	1:C:250:ARG:NH2	2.40	0.55
1:D:349:LEU:HD22	1:D:408:LEU:HG	1.88	0.55
1:D:524:ILE:O	1:D:528:GLU:HG3	2.07	0.55
1:A:630:ASN:ND2	1:D:634:THR:OG1	2.40	0.55
1:D:577:GLU:HG3	1:D:612:VAL:HG22	1.89	0.55
1:B:430:LEU:HB3	1:B:472:CYS:HB3	1.89	0.55
1:B:632:LEU:HD11	1:B:652:MET:HE2	1.89	0.55
1:D:605:VAL:HA	1:D:613:ILE:HD11	1.88	0.55
1:B:145:LEU:H	1:B:145:LEU:HD23	1.72	0.55
1:D:328:SER:HA	1:D:331:ASN:HD22	1.72	0.55
1:D:610:GLU:HA	1:D:613:ILE:HD12	1.88	0.55
1:A:431:LEU:HD11	1:A:477:LEU:HD11	1.89	0.54
1:A:666:HIS:NE2	1:A:697:PRO:HD3	2.22	0.54
1:B:412:VAL:HA	1:B:470:ARG:HA	1.89	0.54
1:B:544:PHE:CE1	1:B:582:PHE:HB2	2.39	0.54
1:B:698:LEU:HD23	1:B:717:LYS:HD3	1.89	0.54
1:C:355:TYR:O	1:C:358:THR:HG22	2.07	0.54
1:D:315:ASN:HA	1:D:318:ARG:HG3	1.89	0.54
1:B:548:LYS:HB3	1:B:582:PHE:CE1	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:610:GLU:HA	1:B:613:ILE:HD12	1.88	0.54
1:D:145:LEU:HD23	1:D:145:LEU:H	1.72	0.54
1:A:335:LEU:HD12	1:A:336:GLY:N	2.20	0.54
1:A:343:ILE:HG12	1:C:368:ILE:HD13	1.90	0.54
1:C:415:GLU:N	1:C:415:GLU:OE1	2.39	0.54
1:C:460:ILE:HG21	1:C:503:ILE:HG21	1.89	0.54
1:D:121:ARG:HA	1:D:128:THR:HA	1.89	0.54
1:A:659:TYR:HB3	1:D:637:ALA:HB2	1.89	0.54
1:B:274:TYR:O	1:D:275:GLY:CA	2.56	0.54
1:B:435:VAL:HG13	1:B:443:GLU:HB2	1.90	0.54
1:B:572:ALA:HB1	1:B:604:ALA:HB2	1.89	0.54
1:C:331:ASN:HA	1:C:340:ARG:HH22	1.72	0.54
1:C:681:VAL:HA	1:C:685:ALA:HB3	1.90	0.54
1:B:146:MET:HE1	1:B:173:ILE:HD12	1.89	0.54
1:B:636:VAL:HG11	1:B:668:ALA:HB2	1.89	0.54
1:D:365:PRO:HG2	1:D:368:ILE:HG12	1.90	0.54
1:C:410:GLY:CA	1:C:471:VAL:O	2.55	0.54
1:B:364:ILE:CD1	1:C:343:ILE:HA	2.37	0.54
1:D:149:ILE:O	1:D:154:TRP:NE1	2.41	0.54
1:D:362:GLN:N	1:D:362:GLN:OE1	2.41	0.54
1:D:212:THR:HG21	1:D:269:MET:HE3	1.88	0.54
1:B:486:SER:HA	1:B:489:LEU:HG	1.90	0.54
1:A:127:ARG:HB3	1:D:473:GLU:OE1	2.08	0.53
1:B:592:LEU:O	1:B:600:PRO:HD3	2.08	0.53
1:C:153:PRO:HB2	1:C:156:LEU:HG	1.90	0.53
1:D:431:LEU:HD23	1:D:471:VAL:HA	1.90	0.53
1:D:701:ALA:HB2	1:D:713:LEU:HD12	1.90	0.53
1:B:547:LEU:HD12	1:B:582:PHE:CD2	2.44	0.53
1:C:281:ASN:HD22	1:C:284:GLU:HG3	1.73	0.53
1:C:396:ASN:O	1:C:400:ILE:HG13	2.07	0.53
1:A:720:GLN:O	1:A:724:TYR:N	2.41	0.53
1:B:499:ILE:O	1:B:503:ILE:HG13	2.08	0.53
1:D:605:VAL:HG13	1:D:646:ARG:HB2	1.90	0.53
1:A:628:SER:HB2	1:A:652:MET:HG3	1.89	0.53
1:B:367:SER:O	1:B:371:LYS:HG3	2.09	0.53
1:C:335:LEU:HG	1:C:339:LEU:HD23	1.89	0.53
1:A:563:ASP:HB3	1:A:596:PHE:HE2	1.73	0.53
1:C:575:GLY:HA2	1:C:612:VAL:HG21	1.89	0.53
1:D:434:LEU:HD12	1:D:434:LEU:H	1.74	0.53
1:A:122:ASP:O	1:A:126:TYR:N	2.31	0.53
1:B:397:GLN:HG3	1:B:492:TYR:HE2	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:119:ALA:HA	1:D:135:ILE:HD11	1.91	0.53
1:A:624:ASN:OD1	1:A:624:ASN:O	2.26	0.53
1:B:410:GLY:HA2	1:B:470:ARG:NE	2.24	0.53
1:B:714:GLU:O	1:B:718:ASN:ND2	2.40	0.53
1:C:368:ILE:O	1:C:372:ILE:HG12	2.09	0.53
1:C:688:ILE:HG22	1:C:717:LYS:HE3	1.90	0.53
1:D:430:LEU:HD11	1:D:447:LEU:HB3	1.91	0.53
1:A:429:GLY:HA3	1:A:475:CYS:SG	2.48	0.53
1:C:165:GLU:OE2	1:C:168:ARG:NH1	2.33	0.53
1:D:378:LEU:HB3	1:D:379:PRO:HD3	1.91	0.53
1:B:58:ILE:HB	1:B:118:VAL:HG12	1.90	0.53
1:C:665:LEU:HD21	1:C:687:VAL:HG23	1.91	0.53
1:A:428:GLU:O	1:A:428:GLU:HG2	2.09	0.53
1:D:122:ASP:HB2	1:D:129:VAL:HG23	1.91	0.53
1:D:409:PRO:HG3	1:D:473:GLU:HA	1.90	0.53
1:A:85:MET:HE2	1:A:213:HIS:HE1	1.73	0.52
1:B:372:ILE:HG23	1:C:339:LEU:HD21	1.90	0.52
1:D:374:GLN:HA	1:D:378:LEU:HB2	1.91	0.52
1:A:568:LEU:HD11	1:A:616:LEU:HD21	1.91	0.52
1:A:569:HIS:HB3	1:A:603:GLU:HG2	1.91	0.52
1:B:192:THR:HA	1:C:320:ARG:HH12	1.74	0.52
1:C:514:LYS:HD2	1:C:520:ILE:HD11	1.91	0.52
1:B:378:LEU:HA	1:B:381:ILE:HG22	1.90	0.52
1:B:698:LEU:HG	1:B:702:ARG:NH2	2.23	0.52
1:B:698:LEU:HG	1:B:702:ARG:HH12	1.74	0.52
1:D:396:ASN:O	1:D:400:ILE:HG12	2.08	0.52
1:D:648:LEU:HB2	1:D:679:MET:HE3	1.92	0.52
1:D:687:VAL:HG23	1:D:697:PRO:HB2	1.92	0.52
1:A:275:GLY:CA	1:D:274:TYR:O	2.56	0.52
1:A:426:VAL:HG22	1:A:431:LEU:HD12	1.92	0.52
1:B:253:ASP:OD1	1:B:254:LEU:N	2.43	0.52
1:B:368:ILE:HB	1:C:339:LEU:HD11	1.92	0.52
1:A:662:ARG:HG2	1:A:691:ASP:HB2	1.92	0.52
1:C:369:ARG:HA	1:C:372:ILE:HG12	1.91	0.52
1:C:579:ILE:O	1:C:583:LEU:HD23	2.09	0.52
1:A:195:ASN:HD22	1:A:195:ASN:H	1.58	0.52
1:A:320:ARG:NH2	1:C:194:ILE:O	2.36	0.52
1:B:384:VAL:HG12	1:B:386:LEU:H	1.75	0.52
1:C:86:GLU:HG2	1:C:171:LEU:HD21	1.91	0.52
1:C:434:LEU:HD23	1:C:444:SER:HA	1.92	0.52
1:B:416:GLN:N	1:B:416:GLN:OE1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:644:LEU:O	1:C:648:LEU:HG	2.09	0.52
1:D:387:PHE:HE2	1:D:398:ILE:HD13	1.74	0.52
1:D:455:GLY:HA2	1:D:465:GLN:NE2	2.25	0.52
1:A:105:GLN:HE21	1:A:106:ILE:HG12	1.75	0.52
1:A:504:MET:HA	1:A:507:LYS:HB2	1.92	0.52
1:B:87:PHE:O	1:B:168:ARG:NH2	2.42	0.52
1:B:636:VAL:HG21	1:B:680:LEU:HD11	1.92	0.52
1:C:185:PHE:O	1:C:189:GLU:N	2.43	0.52
1:D:436:THR:HG23	1:D:442:GLU:HG2	1.92	0.52
1:A:414:THR:HG23	1:A:418:ASN:HD22	1.74	0.52
1:A:496:GLY:O	1:A:500:LEU:HG	2.10	0.52
1:D:561:ASP:OD1	1:D:565:ARG:N	2.37	0.52
1:B:674:PHE:CE2	1:B:712:LEU:HD22	2.45	0.51
1:C:507:LYS:HD2	1:C:512:ARG:HG3	1.92	0.51
1:D:114:LEU:HA	1:D:117:PHE:CE1	2.44	0.51
1:A:494:HIS:HA	1:A:497:ARG:HG3	1.92	0.51
1:B:456:ASP:O	1:B:460:ILE:HG13	2.10	0.51
1:B:517:GLU:O	1:B:520:ILE:HG22	2.10	0.51
1:C:699:ASP:HB3	1:C:702:ARG:NH2	2.25	0.51
1:A:457:ILE:HD13	1:A:457:ILE:H	1.76	0.51
1:B:392:THR:O	1:B:395:ILE:HG22	2.11	0.51
1:C:425:PHE:HB2	1:C:478:LEU:HB2	1.91	0.51
1:A:272:VAL:O	1:C:273:GLY:HA3	2.10	0.51
1:B:289:MET:HG2	1:C:266:ILE:HG13	1.93	0.51
1:B:559:LYS:O	1:B:566:SER:HA	2.10	0.51
1:B:633:CYS:HB3	1:B:667:VAL:HG21	1.92	0.51
1:B:665:LEU:HD21	1:B:687:VAL:HG22	1.92	0.51
1:B:666:HIS:CE1	1:B:697:PRO:HD3	2.45	0.51
1:C:59:HIS:CD2	1:C:60:PRO:HD2	2.46	0.51
1:C:405:GLU:OE2	1:C:406:TYR:N	2.29	0.51
1:A:358:THR:O	1:A:362:GLN:NE2	2.43	0.51
1:B:636:VAL:HA	1:B:644:LEU:HD11	1.92	0.51
1:A:331:ASN:HA	1:A:340:ARG:HH22	1.76	0.51
1:A:359:VAL:HA	1:A:362:GLN:HE21	1.76	0.51
1:B:514:LYS:HA	1:B:517:GLU:HB3	1.91	0.51
1:D:500:LEU:HB3	1:D:505:GLU:HG2	1.92	0.51
1:A:698:LEU:HD23	1:A:717:LYS:HD3	1.92	0.51
1:A:274:TYR:O	1:C:275:GLY:CA	2.59	0.51
1:A:513:ILE:HB	1:A:516:LEU:HD23	1.93	0.51
1:A:567:PRO:HG2	1:A:583:LEU:HD21	1.93	0.51
1:B:122:ASP:HB2	1:B:127:ARG:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:165:GLU:OE2	1:B:168:ARG:NE	2.32	0.51
1:C:145:LEU:HD23	1:C:145:LEU:H	1.76	0.51
1:C:223:ALA:HB2	1:C:235:TRP:NE1	2.26	0.51
1:C:640:ASP:HB3	1:C:643:PHE:HB3	1.93	0.51
1:B:310:ILE:HD12	1:D:304:GLY:HA3	1.93	0.51
1:B:426:VAL:HB	1:B:452:THR:HB	1.93	0.51
1:B:497:ARG:HE	1:B:527:GLN:HB3	1.76	0.51
1:B:577:GLU:OE1	1:B:581:LEU:HD23	2.10	0.51
1:C:387:PHE:HB3	1:C:391:SER:OG	2.11	0.51
1:D:494:HIS:ND1	1:D:495:ASP:OD1	2.43	0.51
1:D:538:ALA:O	1:D:542:GLY:N	2.30	0.51
1:D:706:ASN:O	1:D:710:ILE:HG13	2.11	0.51
1:B:223:ALA:HB2	1:B:235:TRP:NE1	2.26	0.50
1:B:388:LYS:O	1:B:502:ASN:ND2	2.44	0.50
1:D:171:LEU:HD23	1:D:174:ARG:HH11	1.75	0.50
1:C:583:LEU:HD12	1:C:588:VAL:HG21	1.93	0.50
1:D:220:TYR:O	1:D:224:THR:HG23	2.11	0.50
1:D:666:HIS:NE2	1:D:697:PRO:HD3	2.26	0.50
1:A:565:ARG:HH21	1:A:598:HIS:HB2	1.76	0.50
1:C:381:ILE:HA	1:C:384:VAL:HG23	1.93	0.50
1:D:512:ARG:HD3	1:D:515:LYS:HG3	1.92	0.50
1:D:596:PHE:HB2	1:D:598:HIS:CE1	2.46	0.50
1:A:402:LEU:HD13	1:A:478:LEU:HD13	1.92	0.50
1:A:463:ILE:HD12	1:A:464:SER:H	1.76	0.50
1:A:514:LYS:O	1:A:518:SER:N	2.44	0.50
1:B:608:GLY:HA2	1:B:646:ARG:HD2	1.93	0.50
1:D:62:ASN:OD1	1:D:63:ARG:N	2.43	0.50
1:A:673:LEU:HD13	1:A:676:MET:HG3	1.93	0.50
1:A:681:VAL:CG1	1:A:716:VAL:HG11	2.42	0.50
1:B:318:ARG:HG3	1:B:318:ARG:NH1	2.26	0.50
1:B:379:PRO:O	1:B:383:LYS:HD3	2.12	0.50
1:D:350:GLN:HG3	1:D:356:THR:HG21	1.94	0.50
1:A:105:GLN:NE2	1:A:106:ILE:HG12	2.27	0.50
1:A:394:PHE:O	1:A:398:ILE:HG12	2.12	0.50
1:A:364:ILE:HD11	1:D:347:VAL:HG23	1.92	0.50
1:A:377:TYR:O	1:A:381:ILE:HG12	2.12	0.50
1:C:357:ASP:O	1:C:361:LEU:HD22	2.11	0.50
1:D:376:LEU:HD21	1:D:476:HIS:HE1	1.74	0.50
1:D:631:PHE:O	1:D:635:THR:OG1	2.23	0.50
1:A:310:ILE:HG21	1:C:305:ASN:HA	1.93	0.50
1:A:330:MET:SD	1:A:340:ARG:HG2	2.52	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:671:GLU:HB3	1:A:673:LEU:HG	1.94	0.50
1:B:191:ASP:C	1:C:320:ARG:HH22	2.20	0.50
1:D:460:ILE:HD13	1:D:500:LEU:HD11	1.92	0.50
1:A:240:LYS:O	1:A:240:LYS:HG2	2.11	0.50
1:B:580:THR:HG21	1:B:612:VAL:HG13	1.93	0.50
1:D:715:ASP:HA	1:D:718:ASN:HD22	1.77	0.50
1:A:514:LYS:HD3	1:A:515:LYS:H	1.77	0.49
1:B:511:ASP:HA	1:B:514:LYS:CB	2.42	0.49
1:C:176:PHE:O	1:C:179:ARG:HG2	2.12	0.49
1:C:657:GLU:HB3	1:C:661:HIS:HA	1.93	0.49
1:D:109:LEU:HD23	1:D:112:ILE:HD12	1.94	0.49
1:D:81:LEU:O	1:D:213:HIS:NE2	2.45	0.49
1:C:700:GLU:HA	1:C:703:LEU:HD12	1.95	0.49
1:D:598:HIS:HB3	1:D:603:GLU:OE1	2.12	0.49
1:A:226:LEU:O	1:A:250:ARG:NH2	2.42	0.49
1:A:431:LEU:HD11	1:A:477:LEU:HD21	1.94	0.49
1:B:259:THR:HG21	1:D:282:LEU:HG	1.95	0.49
1:B:397:GLN:HG3	1:B:492:TYR:CE2	2.47	0.49
1:C:131:LYS:HD3	1:C:132:PRO:HD2	1.95	0.49
1:C:533:LEU:HD13	1:C:562:TYR:OH	2.12	0.49
1:A:601:LEU:HD21	1:A:650:SER:HB3	1.95	0.49
1:B:507:LYS:HZ3	1:B:513:ILE:HB	1.78	0.49
1:B:611:GLY:O	1:B:615:LEU:HG	2.12	0.49
1:B:666:HIS:NE2	1:B:697:PRO:HD3	2.27	0.49
1:B:687:VAL:HG13	1:B:697:PRO:HB2	1.95	0.49
1:C:264:PHE:O	1:C:268:THR:HG23	2.12	0.49
1:A:318:ARG:O	1:A:322:LYS:HG3	2.12	0.49
1:A:520:ILE:O	1:A:524:ILE:HG13	2.11	0.49
1:B:416:GLN:HB3	1:B:467:PHE:HA	1.95	0.49
1:C:84:PRO:HG2	1:C:214:THR:HG22	1.94	0.49
1:A:54:TYR:CD1	1:A:131:LYS:HA	2.47	0.49
1:A:359:VAL:O	1:A:362:GLN:HG2	2.12	0.49
1:D:112:ILE:HG23	1:D:139:TYR:OH	2.13	0.49
1:D:717:LYS:HD2	1:D:717:LYS:O	2.13	0.49
1:B:387:PHE:CG	1:B:394:PHE:HE1	2.31	0.49
1:C:642:ASP:OD2	1:D:642:ASP:HB2	2.12	0.49
1:D:253:ASP:OD1	1:D:254:LEU:N	2.46	0.49
1:D:499:ILE:O	1:D:503:ILE:HG13	2.13	0.49
1:B:371:LYS:HD3	1:C:339:LEU:HD13	1.95	0.49
1:B:454:PHE:CD2	1:B:469:VAL:HG21	2.48	0.49
1:D:551:ILE:HA	1:D:555:ALA:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:445:VAL:HG21	1:B:515:LYS:HE2	1.94	0.48
1:C:520:ILE:O	1:C:524:ILE:HG12	2.13	0.48
1:C:668:ALA:HA	1:C:672:GLY:HA3	1.95	0.48
1:D:150:GLY:O	1:D:174:ARG:NE	2.46	0.48
1:A:93:LEU:HD22	1:A:97:LEU:HB2	1.95	0.48
1:C:652:MET:HE2	1:C:652:MET:HA	1.95	0.48
1:D:402:LEU:HD22	1:D:478:LEU:HB3	1.94	0.48
1:A:109:LEU:HD22	1:A:151:CYS:HB3	1.96	0.48
1:A:220:TYR:O	1:A:224:THR:HG23	2.13	0.48
1:A:410:GLY:H	1:A:471:VAL:HB	1.78	0.48
1:C:377:TYR:O	1:C:381:ILE:HG22	2.13	0.48
1:C:522:ILE:O	1:C:526:LYS:HG3	2.13	0.48
1:D:376:LEU:HD22	1:D:377:TYR:CD1	2.48	0.48
1:D:628:SER:O	1:D:632:LEU:HG	2.14	0.48
1:D:704:CYS:SG	1:D:709:LEU:HD23	2.53	0.48
1:A:319:PHE:HE2	1:A:323:MET:HE3	1.77	0.48
1:A:502:ASN:O	1:A:505:GLU:HG2	2.13	0.48
1:B:306:ILE:O	1:B:310:ILE:HG13	2.13	0.48
1:B:380:TYR:CD1	1:B:427:CYS:HB3	2.48	0.48
1:B:504:MET:SD	1:B:520:ILE:HD13	2.54	0.48
1:A:108:PHE:O	1:A:112:ILE:HG12	2.14	0.48
1:C:532:ALA:HB2	1:C:559:LYS:HB3	1.96	0.48
1:D:655:ASN:OD1	1:D:686:SER:N	2.46	0.48
1:D:657:GLU:HB3	1:D:661:HIS:HA	1.95	0.48
1:A:663:THR:O	1:A:666:HIS:HB2	2.13	0.48
1:B:452:THR:HG22	1:B:453:SER:H	1.77	0.48
1:A:583:LEU:HG	1:A:588:VAL:HG21	1.96	0.48
1:B:340:ARG:O	1:B:344:THR:HG23	2.14	0.48
1:C:57:ILE:HD11	1:C:132:PRO:HB3	1.95	0.48
1:D:486:SER:HA	1:D:489:LEU:HD12	1.95	0.48
1:A:365:PRO:HB3	1:D:405:GLU:OE1	2.13	0.48
1:C:558:ASN:HA	1:C:588:VAL:HG13	1.96	0.48
1:A:409:PRO:HB3	1:A:473:GLU:HA	1.96	0.48
1:B:659:TYR:HD2	1:C:637:ALA:HB1	1.79	0.48
1:B:676:MET:SD	1:B:676:MET:N	2.86	0.48
1:C:388:LYS:O	1:C:502:ASN:ND2	2.46	0.48
1:A:540:PHE:HD1	1:A:570:LEU:HB2	1.80	0.47
1:A:599:THR:HG22	1:A:601:LEU:H	1.78	0.47
1:C:426:VAL:HG22	1:C:477:LEU:HD22	1.96	0.47
1:D:412:VAL:HG23	1:D:468:THR:HG23	1.95	0.47
1:D:456:ASP:N	1:D:456:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:629:GLY:HA2	1:A:632:LEU:HD12	1.97	0.47
1:B:393:GLU:HB3	1:B:492:TYR:OH	2.14	0.47
1:B:532:ALA:HB2	1:B:559:LYS:HG3	1.96	0.47
1:C:90:PHE:HZ	1:C:254:LEU:HD22	1.79	0.47
1:C:674:PHE:CZ	1:C:712:LEU:HB2	2.50	0.47
1:D:115:GLN:HA	1:D:118:VAL:HG12	1.96	0.47
1:D:121:ARG:HH22	1:D:126:TYR:HD1	1.62	0.47
1:D:154:TRP:CZ3	1:D:170:LEU:HD13	2.49	0.47
1:A:197:LEU:O	1:A:201:ILE:HG23	2.15	0.47
1:B:413:ILE:HD12	1:B:413:ILE:H	1.79	0.47
1:B:435:VAL:HA	1:B:467:PHE:HB2	1.96	0.47
1:C:673:LEU:HD23	1:C:674:PHE:N	2.29	0.47
1:A:70:MET:HE2	1:A:70:MET:HA	1.96	0.47
1:B:310:ILE:HD13	1:D:305:ASN:ND2	2.29	0.47
1:C:557:PRO:HG3	1:C:586:GLU:HB3	1.96	0.47
1:C:644:LEU:HA	1:C:647:LEU:HD12	1.97	0.47
1:C:681:VAL:HG12	1:C:720:GLN:HE21	1.78	0.47
1:B:65:TYR:CE1	1:B:118:VAL:HG11	2.50	0.47
1:B:425:PHE:O	1:B:477:LEU:HA	2.14	0.47
1:D:425:PHE:O	1:D:477:LEU:HA	2.15	0.47
1:D:492:TYR:O	1:D:496:GLY:N	2.38	0.47
1:A:454:PHE:CE2	1:A:469:VAL:HG11	2.49	0.47
1:C:64:TRP:CE3	1:C:64:TRP:HA	2.50	0.47
1:D:457:ILE:HG23	1:D:504:MET:HE1	1.96	0.47
1:A:524:ILE:O	1:A:528:GLU:HG3	2.15	0.47
1:A:659:TYR:O	1:A:692:ARG:NH2	2.48	0.47
1:A:698:LEU:CD2	1:A:717:LYS:HD3	2.44	0.47
1:B:285:MET:HG2	1:C:263:TYR:CG	2.49	0.47
1:B:403:HIS:HD2	1:B:405:GLU:OE2	1.98	0.47
1:B:565:ARG:CZ	1:B:569:HIS:HB3	2.43	0.47
1:C:394:PHE:HD2	1:C:492:TYR:HB2	1.78	0.47
1:C:536:ASN:HD22	1:C:561:ASP:HB3	1.80	0.47
1:C:687:VAL:HA	1:C:697:PRO:HG2	1.96	0.47
1:A:530:GLU:O	1:A:534:LYS:HG3	2.15	0.47
1:B:437:LYS:N	1:B:442:GLU:HA	2.28	0.47
1:C:407:PHE:CE2	1:C:477:LEU:HD12	2.50	0.47
1:D:380:TYR:HE2	1:D:425:PHE:HB3	1.79	0.47
1:D:574:ARG:HB3	1:D:576:TYR:CE2	2.50	0.47
1:B:365:PRO:HD3	1:C:407:PHE:HD1	1.79	0.47
1:C:80:SER:O	1:C:210:TYR:OH	2.31	0.47
1:D:62:ASN:HD21	1:D:64:TRP:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:358:THR:HA	1:D:361:LEU:HG	1.97	0.47
1:D:551:ILE:HD13	1:D:555:ALA:HB3	1.97	0.47
1:A:93:LEU:HD23	1:A:94:PRO:HD2	1.95	0.47
1:A:223:ALA:HB2	1:A:235:TRP:NE1	2.30	0.47
1:A:378:LEU:HG	1:A:382:LYS:HE3	1.97	0.47
1:A:497:ARG:HD2	1:A:497:ARG:C	2.39	0.47
1:C:448:LEU:HB2	1:C:452:THR:HG21	1.97	0.47
1:D:86:GLU:HA	1:D:90:PHE:HD2	1.80	0.47
1:D:327:ILE:O	1:D:331:ASN:ND2	2.49	0.47
1:A:182:VAL:O	1:A:186:GLN:HG2	2.16	0.46
1:A:262:LEU:HG	1:C:289:MET:HE1	1.98	0.46
1:B:511:ASP:O	1:B:515:LYS:HG3	2.15	0.46
1:D:498:THR:HA	1:D:501:ASN:HB2	1.97	0.46
1:D:514:LYS:HG3	1:D:516:LEU:O	2.15	0.46
1:A:362:GLN:HA	1:A:369:ARG:HD3	1.97	0.46
1:A:691:ASP:OD1	1:A:695:ASN:N	2.41	0.46
1:B:85:MET:HG3	1:B:213:HIS:CE1	2.50	0.46
1:B:547:LEU:HG	1:B:579:ILE:HG23	1.96	0.46
1:B:601:LEU:HB2	1:B:621:ALA:HB1	1.97	0.46
1:C:255:TRP:O	1:C:259:THR:OG1	2.27	0.46
1:C:662:ARG:HG2	1:C:691:ASP:OD1	2.16	0.46
1:D:514:LYS:HD2	1:D:514:LYS:HA	1.80	0.46
1:A:358:THR:HA	1:A:361:LEU:CB	2.45	0.46
1:B:72:ILE:HG12	1:B:111:ASP:CG	2.40	0.46
1:C:406:TYR:CE2	1:C:476:HIS:HB2	2.51	0.46
1:C:407:PHE:HE2	1:C:477:LEU:HD12	1.80	0.46
1:C:447:LEU:HD11	1:C:454:PHE:HB3	1.97	0.46
1:C:582:PHE:O	1:C:586:GLU:HG2	2.15	0.46
1:C:648:LEU:HD11	1:C:680:LEU:HD23	1.96	0.46
1:D:375:LEU:O	1:D:375:LEU:HD12	2.14	0.46
1:B:405:GLU:OE2	1:B:479:ARG:NE	2.48	0.46
1:C:390:CYS:HB3	1:C:498:THR:HG22	1.96	0.46
1:A:395:ILE:O	1:A:399:VAL:HG23	2.16	0.46
1:A:602:PHE:HA	1:A:623:PHE:HE1	1.80	0.46
1:D:337:ARG:HG2	1:D:340:ARG:HD3	1.97	0.46
1:D:712:LEU:O	1:D:716:VAL:HG23	2.16	0.46
1:A:536:ASN:ND2	1:A:561:ASP:HB3	2.31	0.46
1:A:687:VAL:O	1:A:697:PRO:HD2	2.16	0.46
1:B:322:LYS:O	1:B:326:LEU:HG	2.15	0.46
1:C:493:PHE:HE2	1:C:554:GLY:O	1.99	0.46
1:C:687:VAL:HG12	1:C:717:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:648:LEU:HD13	1:A:683:ALA:HB2	1.98	0.46
1:B:407:PHE:HB2	1:B:475:CYS:SG	2.56	0.46
1:B:485:PHE:CE1	1:B:489:LEU:HD23	2.51	0.46
1:D:379:PRO:O	1:D:383:LYS:HG3	2.15	0.46
1:D:395:ILE:O	1:D:399:VAL:HG23	2.16	0.46
1:D:404:GLU:HG3	1:D:476:HIS:CD2	2.51	0.46
1:C:504:MET:O	1:C:508:GLU:HG3	2.16	0.46
1:D:318:ARG:H	1:D:318:ARG:HG2	1.58	0.46
1:D:386:LEU:HD12	1:D:386:LEU:H	1.81	0.46
1:D:401:ARG:HD2	1:D:484:SER:CB	2.46	0.46
1:A:106:ILE:O	1:A:110:VAL:HG23	2.16	0.46
1:A:674:PHE:O	1:A:678:LYS:HG2	2.16	0.46
1:A:706:ASN:O	1:A:710:ILE:HG13	2.16	0.46
1:B:189:GLU:HB3	1:B:199:THR:HG21	1.98	0.46
1:B:202:LEU:HD13	1:B:202:LEU:HA	1.74	0.46
1:B:354:HIS:HB2	1:C:332:ARG:NH2	2.30	0.46
1:C:182:VAL:O	1:C:186:GLN:HG2	2.15	0.46
1:A:512:ARG:HH22	1:A:513:ILE:HD13	1.81	0.46
1:A:517:GLU:O	1:A:521:VAL:HG13	2.16	0.46
1:B:317:GLU:HG3	1:D:196:TYR:HE1	1.80	0.46
1:B:500:LEU:HB3	1:B:524:ILE:HD11	1.98	0.46
1:C:454:PHE:CD1	1:C:454:PHE:C	2.94	0.46
1:C:601:LEU:HD11	1:C:650:SER:HB3	1.97	0.46
1:D:569:HIS:CD2	1:D:600:PRO:HG3	2.51	0.46
1:A:384:VAL:HG12	1:A:386:LEU:H	1.81	0.45
1:A:454:PHE:CD2	1:A:469:VAL:HG21	2.51	0.45
1:A:557:PRO:HB2	1:A:559:LYS:HZ3	1.80	0.45
1:C:578:ASP:N	1:C:578:ASP:OD1	2.47	0.45
1:C:616:LEU:HA	1:C:619:GLU:HB3	1.98	0.45
1:D:547:LEU:HD21	1:D:583:LEU:CD2	2.46	0.45
1:A:90:PHE:HZ	1:A:254:LEU:HD22	1.81	0.45
1:A:121:ARG:HD2	1:A:126:TYR:HD1	1.82	0.45
1:A:285:MET:HE2	1:D:263:TYR:CD2	2.51	0.45
1:A:660:ASP:OD1	1:D:662:ARG:NH1	2.42	0.45
1:C:186:GLN:O	1:C:190:LYS:HG3	2.16	0.45
1:A:455:GLY:O	1:A:459:ILE:HG12	2.15	0.45
1:B:332:ARG:HB2	1:B:332:ARG:NH1	2.32	0.45
1:D:101:ASP:O	1:D:105:GLN:HG2	2.16	0.45
1:D:569:HIS:HE1	1:D:594:ASP:N	2.15	0.45
1:D:674:PHE:HB2	1:D:709:LEU:HB2	1.98	0.45
1:A:358:THR:HA	1:A:361:LEU:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:365:PRO:HD3	1:C:407:PHE:CE1	2.51	0.45
1:B:687:VAL:O	1:B:697:PRO:HD2	2.16	0.45
1:B:698:LEU:HD21	1:B:714:GLU:OE1	2.17	0.45
1:C:329:PHE:HA	1:C:332:ARG:HE	1.81	0.45
1:C:367:SER:O	1:C:371:LYS:HG3	2.15	0.45
1:C:413:ILE:HD12	1:C:454:PHE:CE1	2.52	0.45
1:C:493:PHE:C	1:C:493:PHE:CD1	2.94	0.45
1:D:575:GLY:HA2	1:D:612:VAL:HG21	1.99	0.45
1:B:421:ASP:HA	1:B:482:LYS:HB3	1.99	0.45
1:B:471:VAL:HG22	1:B:475:CYS:SG	2.56	0.45
1:B:507:LYS:HG2	1:B:513:ILE:HB	1.98	0.45
1:B:698:LEU:HG	1:B:702:ARG:NH1	2.31	0.45
1:C:432:GLU:HA	1:C:446:THR:HA	1.99	0.45
1:D:362:GLN:HA	1:D:369:ARG:HD3	1.97	0.45
1:D:421:ASP:O	1:D:422:HIS:ND1	2.49	0.45
1:C:235:TRP:HD1	1:C:284:GLU:OE2	1.98	0.45
1:D:337:ARG:HB3	1:D:340:ARG:NH1	2.30	0.45
1:A:153:PRO:HB2	1:A:156:LEU:HB2	1.99	0.45
1:B:533:LEU:O	1:C:562:TYR:OH	2.35	0.45
1:B:642:ASP:OD1	1:B:643:PHE:N	2.50	0.45
1:C:374:GLN:OE1	1:C:378:LEU:HD13	2.16	0.45
1:C:448:LEU:HD22	1:C:448:LEU:H	1.81	0.45
1:B:380:TYR:O	1:B:384:VAL:HG23	2.16	0.45
1:D:188:LEU:HD11	1:D:194:ILE:HG13	1.97	0.45
1:A:422:HIS:ND1	1:A:481:ASP:HA	2.32	0.45
1:C:501:ASN:HA	1:C:504:MET:HG2	1.98	0.45
1:C:530:GLU:HG3	1:C:534:LYS:HE3	1.98	0.45
1:A:396:ASN:O	1:A:400:ILE:HG12	2.16	0.45
1:A:529:ALA:O	1:A:533:LEU:HG	2.17	0.45
1:A:566:SER:H	1:A:569:HIS:CE1	2.34	0.45
1:B:466:PRO:HB2	1:B:467:PHE:CD1	2.52	0.45
1:B:482:LYS:HB2	1:B:482:LYS:HE2	1.68	0.45
1:B:524:ILE:O	1:B:528:GLU:N	2.48	0.45
1:C:605:VAL:HG12	1:C:643:PHE:CE1	2.52	0.45
1:A:245:SER:O	1:A:246:TYR:C	2.60	0.44
1:A:500:LEU:HD11	1:A:527:GLN:CD	2.42	0.44
1:B:61:LYS:HB2	1:B:61:LYS:HE3	1.61	0.44
1:B:578:ASP:O	1:B:581:LEU:HG	2.17	0.44
1:C:686:SER:HB3	1:C:689:SER:HB3	1.99	0.44
1:D:665:LEU:HD12	1:D:665:LEU:HA	1.85	0.44
1:A:448:LEU:O	1:A:452:THR:HG21	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:605:VAL:HG12	1:A:643:PHE:HE1	1.82	0.44
1:A:637:ALA:CB	1:D:659:TYR:HB3	2.47	0.44
1:B:635:THR:HG23	1:B:640:ASP:HB3	2.00	0.44
1:C:72:ILE:HG12	1:C:180:LYS:HZ1	1.81	0.44
1:C:374:GLN:HE22	1:C:396:ASN:HB2	1.81	0.44
1:C:536:ASN:ND2	1:C:561:ASP:HB3	2.32	0.44
1:D:346:HIS:HE1	1:D:407:PHE:CD2	2.35	0.44
1:D:636:VAL:HA	1:D:676:MET:HE1	2.00	0.44
1:A:102:ILE:O	1:A:105:GLN:HG3	2.17	0.44
1:A:241:LEU:HB2	1:A:246:TYR:HE2	1.82	0.44
1:A:329:PHE:CE1	1:C:361:LEU:HD21	2.53	0.44
1:B:150:GLY:O	1:B:177:ARG:NH2	2.51	0.44
1:B:366:ALA:HA	1:B:369:ARG:CD	2.47	0.44
1:B:679:MET:HE2	1:B:679:MET:HA	1.99	0.44
1:C:681:VAL:HG11	1:C:716:VAL:HG13	1.99	0.44
1:D:431:LEU:HB2	1:D:448:LEU:HB2	1.99	0.44
1:A:82:PHE:HZ	1:A:93:LEU:HD21	1.82	0.44
1:A:364:ILE:HD12	1:D:346:HIS:HB2	1.99	0.44
1:B:322:LYS:HE2	1:B:322:LYS:HB3	1.76	0.44
1:B:404:GLU:CD	1:B:476:HIS:HE2	2.26	0.44
1:B:661:HIS:CD2	1:B:692:ARG:HB2	2.52	0.44
1:B:699:ASP:HA	1:B:702:ARG:NE	2.32	0.44
1:C:231:GLU:O	1:C:237:GLY:HA3	2.18	0.44
1:C:493:PHE:HD1	1:C:493:PHE:O	2.00	0.44
1:C:507:LYS:HB2	1:C:515:LYS:HG3	1.99	0.44
1:C:512:ARG:HB2	1:C:515:LYS:HB2	2.00	0.44
1:C:687:VAL:O	1:C:697:PRO:HD2	2.17	0.44
1:C:688:ILE:HD11	1:C:724:TYR:HB2	1.98	0.44
1:D:96:ARG:HG2	1:D:97:LEU:HD22	1.99	0.44
1:D:642:ASP:O	1:D:645:LYS:HE3	2.16	0.44
1:D:720:GLN:HB3	1:D:724:TYR:HB2	1.98	0.44
1:A:402:LEU:CD2	1:A:478:LEU:HB3	2.47	0.44
1:A:470:ARG:HG2	1:A:471:VAL:H	1.82	0.44
1:C:80:SER:HB2	1:C:210:TYR:OH	2.18	0.44
1:D:120:TYR:HB2	1:D:138:ARG:CZ	2.47	0.44
1:D:223:ALA:HB2	1:D:235:TRP:NE1	2.33	0.44
1:A:399:VAL:HA	1:A:402:LEU:HD12	1.99	0.44
1:B:386:LEU:HD22	1:B:453:SER:OG	2.18	0.44
1:B:511:ASP:HA	1:B:514:LYS:HB2	2.00	0.44
1:D:701:ALA:HB1	1:D:709:LEU:HG	1.98	0.44
1:A:422:HIS:HA	1:A:480:LEU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:201:ILE:HG22	1:B:305:ASN:HB3	1.99	0.44
1:B:420:VAL:HG22	1:B:465:GLN:CD	2.43	0.44
1:C:197:LEU:HD12	1:C:312:LYS:HZ1	1.83	0.44
1:C:360:MET:O	1:C:364:ILE:HG12	2.18	0.44
1:C:484:SER:O	1:C:488:ILE:HG13	2.18	0.44
1:D:349:LEU:HD12	1:D:349:LEU:HA	1.83	0.44
1:D:514:LYS:NZ	1:D:516:LEU:HB3	2.32	0.44
1:D:542:GLY:HA3	1:D:576:TYR:CE1	2.53	0.44
1:D:547:LEU:HD21	1:D:583:LEU:HD21	1.98	0.44
1:A:69:GLU:OE1	1:A:69:GLU:HA	2.18	0.44
1:A:424:TYR:HB2	1:A:454:PHE:CE1	2.52	0.44
1:A:698:LEU:HD21	1:A:702:ARG:NH2	2.33	0.44
1:B:499:ILE:HG22	1:B:503:ILE:HD11	2.00	0.44
1:C:178:VAL:O	1:C:181:VAL:HG22	2.17	0.44
1:C:373:ALA:HB1	1:C:399:VAL:HG22	2.00	0.44
1:D:485:PHE:O	1:D:489:LEU:HG	2.18	0.44
1:A:196:TYR:HB2	1:D:320:ARG:HG3	1.99	0.44
1:B:241:LEU:HB3	1:D:280:VAL:HG13	1.99	0.44
1:B:457:ILE:HG13	1:B:513:ILE:HG21	2.00	0.44
1:B:681:VAL:HG21	1:B:716:VAL:HG11	2.00	0.44
1:C:59:HIS:CG	1:C:60:PRO:HD2	2.52	0.44
1:C:235:TRP:HZ3	1:C:260:THR:HG22	1.82	0.44
1:A:708:LYS:H	1:A:708:LYS:HG3	1.55	0.43
1:B:567:PRO:HB2	1:B:583:LEU:HD11	2.00	0.43
1:B:671:GLU:HG2	1:C:692:ARG:HH22	1.83	0.43
1:A:120:TYR:CE2	1:A:138:ARG:HD2	2.53	0.43
1:B:643:PHE:CA	1:B:646:ARG:HH21	2.31	0.43
1:B:662:ARG:HH11	1:C:693:TRP:HZ2	1.64	0.43
1:B:675:LEU:O	1:B:679:MET:HG2	2.18	0.43
1:B:701:ALA:HB2	1:B:713:LEU:HD12	1.99	0.43
1:C:81:LEU:O	1:C:213:HIS:NE2	2.50	0.43
1:C:423:LEU:HD23	1:C:459:ILE:HD12	1.99	0.43
1:D:337:ARG:HA	1:D:340:ARG:HG2	2.00	0.43
1:D:569:HIS:HD2	1:D:600:PRO:HG3	1.83	0.43
1:A:643:PHE:HA	1:A:646:ARG:HD2	1.99	0.43
1:B:277:ILE:H	1:B:277:ILE:HG12	1.72	0.43
1:D:85:MET:HE1	1:D:255:TRP:CZ3	2.53	0.43
1:D:434:LEU:HA	1:D:444:SER:HA	2.00	0.43
1:A:407:PHE:CD1	1:A:413:ILE:HD12	2.53	0.43
1:B:501:ASN:HA	1:B:504:MET:HE2	1.99	0.43
1:C:493:PHE:C	1:C:493:PHE:HD1	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:523:HIS:HA	1:C:526:LYS:HE3	1.99	0.43
1:C:574:ARG:HB3	1:C:576:TYR:CE2	2.54	0.43
1:D:525:GLY:HA2	1:D:528:GLU:CD	2.43	0.43
1:A:198:PHE:O	1:A:201:ILE:HG12	2.18	0.43
1:A:221:TYR:O	1:A:225:THR:HG23	2.18	0.43
1:A:538:ALA:HA	1:A:541:GLN:HB2	2.00	0.43
1:B:375:LEU:HD12	1:B:375:LEU:O	2.18	0.43
1:B:556:ASP:O	1:B:559:LYS:HB2	2.18	0.43
1:B:662:ARG:HH21	1:B:666:HIS:C	2.27	0.43
1:C:139:TYR:CE2	1:C:144:PHE:HD2	2.37	0.43
1:C:181:VAL:O	1:C:184:PHE:HB3	2.18	0.43
1:C:428:GLU:O	1:C:475:CYS:HA	2.19	0.43
1:C:447:LEU:HD13	1:C:448:LEU:O	2.18	0.43
1:C:488:ILE:HA	1:C:491:ILE:HD12	2.00	0.43
1:C:676:MET:O	1:C:680:LEU:HG	2.17	0.43
1:D:212:THR:HG22	1:D:291:TYR:OH	2.18	0.43
1:D:342:GLN:O	1:D:346:HIS:HD2	2.00	0.43
1:D:459:ILE:HD13	1:D:482:LYS:HA	1.99	0.43
1:A:267:VAL:HG13	1:A:272:VAL:HB	2.00	0.43
1:A:467:PHE:HD1	1:A:467:PHE:O	2.01	0.43
1:A:499:ILE:O	1:A:503:ILE:HG13	2.19	0.43
1:A:609:GLN:O	1:A:613:ILE:HG13	2.18	0.43
1:A:643:PHE:O	1:A:646:ARG:HG2	2.19	0.43
1:B:121:ARG:HD2	1:B:128:THR:HG22	2.01	0.43
1:B:415:GLU:HG3	1:B:468:THR:HG23	2.00	0.43
1:B:623:PHE:CE2	1:B:650:SER:HB2	2.54	0.43
1:C:220:TYR:O	1:C:224:THR:HG23	2.18	0.43
1:C:398:ILE:O	1:C:402:LEU:HG	2.19	0.43
1:C:434:LEU:HD22	1:C:442:GLU:OE2	2.18	0.43
1:D:161:SER:O	1:D:161:SER:OG	2.28	0.43
1:D:208:GLU:O	1:D:212:THR:HG23	2.18	0.43
1:D:353:SER:HB2	1:D:355:TYR:HD1	1.83	0.43
1:D:534:LYS:HB2	1:D:550:LEU:HD21	2.01	0.43
1:B:706:ASN:ND2	1:B:709:LEU:HD13	2.34	0.43
1:C:136:ALA:O	1:C:140:LEU:HB2	2.18	0.43
1:C:394:PHE:CD2	1:C:492:TYR:HB2	2.53	0.43
1:C:706:ASN:O	1:C:710:ILE:HG13	2.18	0.43
1:D:601:LEU:HB2	1:D:621:ALA:CB	2.49	0.43
1:A:264:PHE:O	1:A:268:THR:HG23	2.18	0.43
1:A:423:LEU:HB2	1:A:459:ILE:HG13	2.01	0.43
1:A:692:ARG:NH1	1:D:670:SER:OG	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:378:LEU:HA	1:B:381:ILE:CG2	2.49	0.43
1:B:394:PHE:O	1:B:398:ILE:HG12	2.19	0.43
1:B:403:HIS:O	1:B:479:ARG:N	2.50	0.43
1:C:120:TYR:HB3	1:C:138:ARG:HH22	1.83	0.43
1:D:393:GLU:O	1:D:394:PHE:C	2.61	0.43
1:D:583:LEU:HD12	1:D:588:VAL:HG21	2.01	0.43
1:D:644:LEU:HA	1:D:647:LEU:HD12	1.99	0.43
1:B:308:ALA:HA	1:C:311:VAL:HG22	2.00	0.43
1:B:313:GLY:HA3	1:B:317:GLU:OE1	2.19	0.43
1:C:86:GLU:OE2	1:C:93:LEU:HD11	2.18	0.43
1:C:380:TYR:CE1	1:C:427:CYS:HB3	2.53	0.43
1:D:689:SER:O	1:D:697:PRO:HD3	2.19	0.43
1:A:211:CYS:HG	1:A:294:PHE:HZ	1.65	0.43
1:A:416:GLN:NE2	1:A:466:PRO:O	2.51	0.43
1:A:599:THR:OG1	1:A:623:PHE:O	2.27	0.43
1:B:163:LYS:HB3	1:B:163:LYS:HE3	1.83	0.43
1:B:326:LEU:CD1	1:B:347:VAL:HG21	2.47	0.43
1:B:662:ARG:NH2	1:B:666:HIS:O	2.51	0.43
1:C:485:PHE:CD1	1:C:485:PHE:C	2.97	0.43
1:C:687:VAL:HG11	1:C:717:LYS:HB2	2.00	0.43
1:D:95:GLU:H	1:D:95:GLU:CD	2.26	0.43
1:D:327:ILE:HG22	1:D:331:ASN:HD21	1.84	0.43
1:D:481:ASP:OD1	1:D:483:GLN:N	2.51	0.43
1:A:375:LEU:HD23	1:A:376:LEU:HD22	2.00	0.42
1:A:666:HIS:CE1	1:A:697:PRO:HD3	2.54	0.42
1:C:530:GLU:HA	1:C:533:LEU:HD12	2.01	0.42
1:D:110:VAL:O	1:D:114:LEU:HD13	2.19	0.42
1:D:605:VAL:HG21	1:D:623:PHE:CZ	2.54	0.42
1:B:172:TRP:CE3	1:B:175:LEU:HD22	2.54	0.42
1:C:410:GLY:HA2	1:C:471:VAL:O	2.19	0.42
1:C:702:ARG:HA	1:C:710:ILE:HD11	2.01	0.42
1:A:114:LEU:O	1:A:118:VAL:HG13	2.19	0.42
1:A:311:VAL:HG22	1:C:308:ALA:HA	2.01	0.42
1:B:221:TYR:O	1:B:225:THR:HG23	2.18	0.42
1:B:457:ILE:CD1	1:B:503:ILE:HD13	2.50	0.42
1:B:475:CYS:HB2	1:B:477:LEU:CD2	2.46	0.42
1:B:491:ILE:HA	1:B:491:ILE:HD12	1.74	0.42
1:B:511:ASP:HA	1:B:514:LYS:HB3	2.01	0.42
1:C:228:PRO:HA	1:C:231:GLU:HG3	2.01	0.42
1:B:60:PRO:HD3	1:B:119:ALA:HB3	2.01	0.42
1:B:206:PHE:HE1	1:B:210:TYR:HE2	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:374:GLN:NE2	1:C:396:ASN:HD22	2.17	0.42
1:D:175:LEU:HG	1:D:210:TYR:OH	2.20	0.42
1:D:416:GLN:HB2	1:D:468:THR:N	2.35	0.42
1:C:208:GLU:HG2	1:C:298:LEU:HD23	2.02	0.42
1:C:623:PHE:CE1	1:C:652:MET:HB2	2.55	0.42
1:D:340:ARG:O	1:D:343:ILE:HG12	2.20	0.42
1:D:433:ALA:HB1	1:D:467:PHE:CD2	2.55	0.42
1:A:129:VAL:HB	1:A:131:LYS:HZ2	1.85	0.42
1:A:646:ARG:HE	1:A:646:ARG:HB3	1.72	0.42
1:B:663:THR:O	1:B:666:HIS:HB2	2.19	0.42
1:A:330:MET:O	1:A:340:ARG:NH2	2.52	0.42
1:A:360:MET:SD	1:D:322:LYS:HA	2.60	0.42
1:B:81:LEU:HD23	1:B:81:LEU:HA	1.94	0.42
1:B:460:ILE:HG22	1:B:523:HIS:NE2	2.35	0.42
1:C:601:LEU:O	1:C:605:VAL:HG23	2.19	0.42
1:C:667:VAL:HA	1:C:670:SER:OG	2.20	0.42
1:D:524:ILE:HD13	1:D:524:ILE:HA	1.83	0.42
1:D:544:PHE:O	1:D:548:LYS:HG3	2.20	0.42
1:D:636:VAL:HG12	1:D:644:LEU:HD22	2.00	0.42
1:D:637:ALA:HA	1:D:671:GLU:OE2	2.20	0.42
1:D:718:ASN:O	1:D:721:SER:OG	2.27	0.42
1:B:524:ILE:O	1:B:528:GLU:HG2	2.20	0.42
1:C:569:HIS:NE2	1:C:592:LEU:HD23	2.35	0.42
1:D:131:LYS:HD2	1:D:134:ARG:HG2	2.00	0.42
1:D:376:LEU:HD22	1:D:377:TYR:HD1	1.85	0.42
1:D:435:VAL:O	1:D:442:GLU:HA	2.20	0.42
1:A:583:LEU:HA	1:A:586:GLU:HB2	2.02	0.42
1:B:605:VAL:HG21	1:B:623:PHE:CZ	2.55	0.42
1:C:356:THR:C	1:C:360:MET:HE3	2.45	0.42
1:D:66:LYS:HA	1:D:66:LYS:HD3	1.81	0.42
1:A:395:ILE:HA	1:A:398:ILE:HG12	2.02	0.42
1:A:477:LEU:HD13	1:A:477:LEU:HA	1.72	0.42
1:B:374:GLN:O	1:B:378:LEU:HB3	2.19	0.42
1:B:378:LEU:HD13	1:B:399:VAL:HG21	2.01	0.42
1:C:170:LEU:O	1:C:173:ILE:HB	2.20	0.42
1:C:693:TRP:HB2	1:C:695:ASN:HD21	1.85	0.42
1:D:675:LEU:HA	1:D:678:LYS:HE3	2.02	0.42
1:A:368:ILE:HD13	1:D:342:GLN:HG2	2.02	0.41
1:A:421:ASP:OD1	1:A:482:LYS:HB3	2.20	0.41
1:A:596:PHE:HB2	1:A:598:HIS:CE1	2.55	0.41
1:B:241:LEU:HD22	1:D:278:HIS:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:358:THR:O	1:B:361:LEU:HG	2.20	0.41
1:B:460:ILE:HG22	1:B:523:HIS:CD2	2.55	0.41
1:C:560:THR:HA	1:C:566:SER:HA	2.02	0.41
1:A:374:GLN:HA	1:A:399:VAL:HG11	2.02	0.41
1:A:430:LEU:N	1:A:475:CYS:SG	2.93	0.41
1:B:263:TYR:O	1:B:267:VAL:HG13	2.19	0.41
1:B:305:ASN:OD1	1:C:310:ILE:HD13	2.20	0.41
1:B:690:LYS:HD2	1:B:694:GLY:HA2	2.02	0.41
1:C:590:VAL:O	1:C:600:PRO:HD2	2.20	0.41
1:D:401:ARG:HD2	1:D:484:SER:HB3	2.03	0.41
1:A:89:PHE:HA	1:A:220:TYR:CE2	2.55	0.41
1:A:387:PHE:HE2	1:A:394:PHE:HE1	1.68	0.41
1:A:431:LEU:O	1:A:447:LEU:HA	2.20	0.41
1:B:59:HIS:CD2	1:B:61:LYS:H	2.38	0.41
1:C:72:ILE:HG12	1:C:180:LYS:NZ	2.34	0.41
1:C:77:ILE:HD13	1:C:181:VAL:HG11	2.03	0.41
1:C:282:LEU:HD12	1:C:282:LEU:HA	1.93	0.41
1:C:294:PHE:CZ	1:C:298:LEU:HD22	2.55	0.41
1:C:437:LYS:HD2	1:C:439:ASP:HB2	2.02	0.41
1:C:640:ASP:CB	1:C:643:PHE:HB3	2.50	0.41
1:D:431:LEU:HD21	1:D:471:VAL:HG22	2.03	0.41
1:D:458:SER:HA	1:D:463:ILE:O	2.19	0.41
1:A:391:SER:O	1:A:395:ILE:HG13	2.20	0.41
1:A:676:MET:HE3	1:A:676:MET:HB3	1.87	0.41
1:B:220:TYR:O	1:B:224:THR:HG23	2.20	0.41
1:B:485:PHE:CD1	1:B:485:PHE:C	2.98	0.41
1:B:628:SER:O	1:B:632:LEU:HD13	2.20	0.41
1:C:526:LYS:HG3	1:C:526:LYS:H	1.62	0.41
1:D:662:ARG:HG2	1:D:691:ASP:HB2	2.01	0.41
1:D:720:GLN:O	1:D:724:TYR:N	2.53	0.41
1:A:66:LYS:HD2	1:A:66:LYS:HA	1.71	0.41
1:B:85:MET:HG3	1:B:213:HIS:HE1	1.86	0.41
1:B:143:HIS:CD2	1:B:179:ARG:NH1	2.88	0.41
1:C:172:TRP:O	1:C:175:LEU:HB2	2.21	0.41
1:D:107:ALA:O	1:D:110:VAL:HG22	2.21	0.41
1:D:698:LEU:HD11	1:D:714:GLU:HG3	2.02	0.41
1:A:195:ASN:H	1:A:195:ASN:ND2	2.18	0.41
1:A:285:MET:O	1:A:289:MET:HG3	2.20	0.41
1:A:662:ARG:HD2	1:A:693:TRP:CZ3	2.56	0.41
1:A:672:GLY:O	1:A:706:ASN:ND2	2.53	0.41
1:A:699:ASP:HA	1:A:702:ARG:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:702:ARG:NH2	1:A:714:GLU:OE2	2.52	0.41
1:B:280:VAL:HG11	1:C:242:GLY:HA3	2.03	0.41
1:B:422:HIS:CD2	1:B:479:ARG:HD3	2.55	0.41
1:C:315:ASN:HA	1:C:318:ARG:HD2	2.02	0.41
1:C:605:VAL:HG12	1:C:643:PHE:HE1	1.85	0.41
1:D:357:ASP:O	1:D:361:LEU:HG	2.20	0.41
1:B:605:VAL:HG13	1:B:646:ARG:HB2	2.01	0.41
1:C:175:LEU:HD12	1:C:175:LEU:HA	1.91	0.41
1:C:428:GLU:HG3	1:C:474:LEU:O	2.21	0.41
1:C:433:ALA:HB2	1:C:447:LEU:HB2	2.02	0.41
1:A:448:LEU:HD23	1:A:448:LEU:HA	1.83	0.41
1:A:513:ILE:O	1:A:514:LYS:C	2.64	0.41
1:A:602:PHE:HB2	1:A:623:PHE:HD1	1.85	0.41
1:B:372:ILE:HG22	1:C:335:LEU:HD11	2.03	0.41
1:B:423:LEU:HG	1:B:425:PHE:HE1	1.85	0.41
1:C:551:ILE:HG21	1:C:582:PHE:CE1	2.56	0.41
1:C:556:ASP:HB3	1:C:559:LYS:HG2	2.02	0.41
1:D:369:ARG:HA	1:D:372:ILE:HG12	2.03	0.41
1:D:376:LEU:HD21	1:D:476:HIS:CE1	2.55	0.41
1:D:641:SER:HA	1:D:676:MET:HE3	2.03	0.41
1:D:717:LYS:HD2	1:D:717:LYS:C	2.45	0.41
1:A:52:ASN:O	1:A:55:LYS:NZ	2.28	0.41
1:A:326:LEU:O	1:A:330:MET:HG3	2.21	0.41
1:A:381:ILE:HG12	1:A:381:ILE:H	1.69	0.41
1:A:399:VAL:O	1:A:402:LEU:HB2	2.20	0.41
1:A:654:PRO:O	1:A:664:PRO:HD2	2.21	0.41
1:B:129:VAL:O	1:B:135:ILE:HD11	2.21	0.41
1:B:661:HIS:HD2	1:B:692:ARG:HB2	1.85	0.41
1:C:72:ILE:O	1:C:72:ILE:HG13	2.21	0.41
1:C:551:ILE:HD13	1:C:582:PHE:CD1	2.56	0.41
1:D:367:SER:O	1:D:371:LYS:HG3	2.20	0.41
1:D:398:ILE:HD11	1:D:480:LEU:HD21	2.03	0.41
1:D:398:ILE:O	1:D:402:LEU:HG	2.20	0.41
1:D:416:GLN:HB2	1:D:468:THR:H	1.86	0.41
1:D:605:VAL:HG21	1:D:623:PHE:HZ	1.85	0.41
1:D:653:ASN:OD1	1:D:656:SER:N	2.54	0.41
1:A:231:GLU:HB2	1:A:249:PHE:HE2	1.86	0.41
1:A:565:ARG:HH12	1:A:569:HIS:CB	2.28	0.41
1:B:364:ILE:O	1:B:369:ARG:NE	2.48	0.41
1:B:605:VAL:HG12	1:B:643:PHE:CE1	2.56	0.41
1:B:625:LEU:HD23	1:B:625:LEU:HA	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:172:TRP:CE3	1:C:175:LEU:HD22	2.56	0.41
1:C:362:GLN:HA	1:C:369:ARG:HH22	1.86	0.41
1:D:605:VAL:HG12	1:D:643:PHE:HE1	1.86	0.41
1:D:714:GLU:O	1:D:718:ASN:ND2	2.54	0.41
1:A:395:ILE:HG13	1:A:395:ILE:H	1.60	0.40
1:B:434:LEU:H	1:B:434:LEU:HD23	1.86	0.40
1:B:593:LYS:HG3	1:B:599:THR:HG23	2.02	0.40
1:C:113:VAL:O	1:C:116:PHE:HB2	2.20	0.40
1:C:380:TYR:CD1	1:C:427:CYS:HB3	2.56	0.40
1:C:515:LYS:HA	1:C:520:ILE:CG1	2.49	0.40
1:C:693:TRP:HB2	1:C:695:ASN:ND2	2.37	0.40
1:D:51:HIS:ND1	1:D:54:TYR:O	2.51	0.40
1:D:109:LEU:HA	1:D:112:ILE:HD12	2.03	0.40
1:D:522:ILE:HD13	1:D:522:ILE:HA	1.96	0.40
1:A:524:ILE:HG22	1:A:528:GLU:OE2	2.21	0.40
1:B:333:LYS:HB2	1:B:335:LEU:CD2	2.51	0.40
1:C:364:ILE:HD13	1:C:364:ILE:N	2.36	0.40
1:C:581:LEU:O	1:C:585:GLN:HG3	2.21	0.40
1:C:697:PRO:HA	1:C:700:GLU:HB2	2.02	0.40
1:D:422:HIS:HA	1:D:480:LEU:O	2.21	0.40
1:A:282:LEU:HD23	1:A:282:LEU:HA	1.86	0.40
1:A:333:LYS:HA	1:A:333:LYS:HD3	1.86	0.40
1:A:393:GLU:O	1:A:397:GLN:HG2	2.21	0.40
1:B:196:TYR:O	1:B:197:LEU:HB2	2.22	0.40
1:B:250:ARG:HB2	1:B:250:ARG:NH1	2.36	0.40
1:B:264:PHE:O	1:B:268:THR:HG23	2.21	0.40
1:B:414:THR:HB	1:B:465:GLN:HG3	2.03	0.40
1:B:457:ILE:HD11	1:B:503:ILE:HD13	2.04	0.40
1:C:307:THR:O	1:C:311:VAL:HG23	2.21	0.40
1:D:361:LEU:HB3	1:D:364:ILE:HD11	2.03	0.40
1:D:378:LEU:HG	1:D:382:LYS:HZ2	1.84	0.40
1:D:531:LEU:HG	1:D:555:ALA:HB2	2.03	0.40
1:A:111:ASP:O	1:A:115:GLN:HG2	2.22	0.40
1:A:329:PHE:CE1	1:C:361:LEU:HD11	2.56	0.40
1:A:424:TYR:HB2	1:A:454:PHE:CZ	2.56	0.40
1:A:583:LEU:HG	1:A:588:VAL:CG2	2.52	0.40
1:B:131:LYS:HG2	1:B:133:THR:HG22	2.03	0.40
1:C:398:ILE:O	1:C:401:ARG:N	2.54	0.40
1:C:566:SER:HB2	1:C:567:PRO:HD2	2.04	0.40
1:C:611:GLY:O	1:C:615:LEU:HG	2.22	0.40
1:D:707:LYS:O	1:D:707:LYS:HD3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:121:ARG:HH11	1:A:126:TYR:HE1	1.70	0.40
1:A:497:ARG:HH21	1:A:553:SER:HB3	1.87	0.40
1:B:333:LYS:HB2	1:B:335:LEU:HD21	2.04	0.40
1:B:335:LEU:HA	1:D:375:LEU:HD21	2.02	0.40
1:B:690:LYS:HG3	1:B:691:ASP:O	2.22	0.40
1:C:187:ARG:HA	1:C:190:LYS:HE3	2.03	0.40
1:C:548:LYS:O	1:C:552:ARG:HD3	2.21	0.40
1:D:106:ILE:O	1:D:110:VAL:HG13	2.22	0.40
1:D:540:PHE:HB2	1:D:570:LEU:HD21	2.03	0.40
1:D:707:LYS:O	1:D:711:LYS:HG3	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	674/834 (81%)	650 (96%)	24 (4%)	0	100	100
1	B	671/834 (80%)	638 (95%)	33 (5%)	0	100	100
1	C	674/834 (81%)	643 (95%)	31 (5%)	0	100	100
1	D	674/834 (81%)	651 (97%)	23 (3%)	0	100	100
All	All	2693/3336 (81%)	2582 (96%)	111 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	597/743 (80%)	579 (97%)	18 (3%)	36	66
1	B	594/743 (80%)	574 (97%)	20 (3%)	32	63
1	C	597/743 (80%)	576 (96%)	21 (4%)	31	63
1	D	597/743 (80%)	585 (98%)	12 (2%)	50	75
All	All	2385/2972 (80%)	2314 (97%)	71 (3%)	37	66

All (71) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	100	LEU
1	A	109	LEU
1	A	175	LEU
1	A	195	ASN
1	A	204	LEU
1	A	205	LEU
1	A	266	ILE
1	A	277	ILE
1	A	415	GLU
1	A	420	VAL
1	A	434	LEU
1	A	457	ILE
1	A	477	LEU
1	A	514	LYS
1	A	570	LEU
1	A	640	ASP
1	A	647	LEU
1	A	724	TYR
1	B	54	TYR
1	B	109	LEU
1	B	116	PHE
1	B	145	LEU
1	B	166	LEU
1	B	183	GLU
1	B	243	ASP
1	B	269	MET
1	B	272	VAL
1	B	277	ILE
1	B	329	PHE
1	B	368	ILE

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Mol	Chain	Res	Type
1	B	491	ILE
1	B	513	ILE
1	B	520	ILE
1	B	522	ILE
1	B	537	SER
1	B	547	LEU
1	B	552	ARG
1	B	589	ASP
1	C	55	LYS
1	C	98	PHE
1	C	114	LEU
1	C	116	PHE
1	C	188	LEU
1	C	189	GLU
1	C	269	MET
1	C	277	ILE
1	C	338	ASP
1	C	381	ILE
1	C	399	VAL
1	C	413	ILE
1	C	414	THR
1	C	416	GLN
1	C	419	VAL
1	C	452	THR
1	C	475	CYS
1	C	476	HIS
1	C	513	ILE
1	C	514	LYS
1	C	627	ASP
1	D	109	LEU
1	D	116	PHE
1	D	117	PHE
1	D	137	PHE
1	D	269	MET
1	D	292	VAL
1	D	309	LEU
1	D	434	LEU
1	D	488	ILE
1	D	493	PHE
1	D	499	ILE
1	D	544	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (46)

such sidechains are listed below:

Mol	Chain	Res	Type
1	A	105	GLN
1	A	195	ASN
1	A	281	ASN
1	A	315	ASN
1	A	362	GLN
1	A	418	ASN
1	A	476	HIS
1	A	569	HIS
1	A	624	ASN
1	A	630	ASN
1	B	186	GLN
1	B	278	HIS
1	B	324	ASN
1	B	354	HIS
1	B	403	HIS
1	B	510	ASN
1	B	609	GLN
1	B	661	HIS
1	B	718	ASN
1	B	720	GLN
1	C	115	GLN
1	C	186	GLN
1	C	281	ASN
1	C	396	ASN
1	C	403	HIS
1	C	418	ASN
1	C	483	GLN
1	C	502	ASN
1	C	527	GLN
1	C	569	HIS
1	C	695	ASN
1	C	706	ASN
1	C	718	ASN
1	C	720	GLN
1	D	59	HIS
1	D	331	ASN
1	D	342	GLN
1	D	346	HIS
1	D	350	GLN
1	D	354	HIS
1	D	397	GLN
1	D	462	ASN

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Mol	Chain	Res	Type
1	D	465	GLN
1	D	483	GLN
1	D	569	HIS
1	D	718	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 ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-62917. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections (i)

6.1.1 Primary map
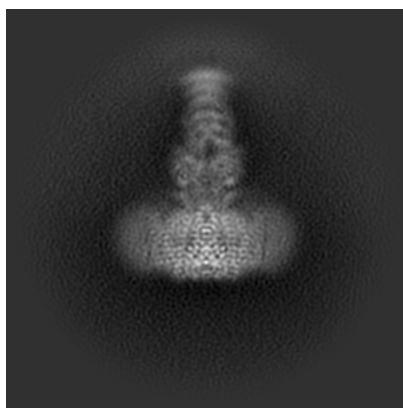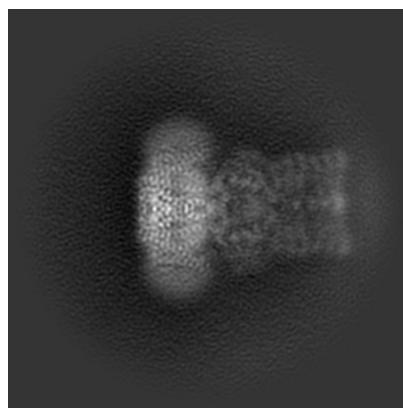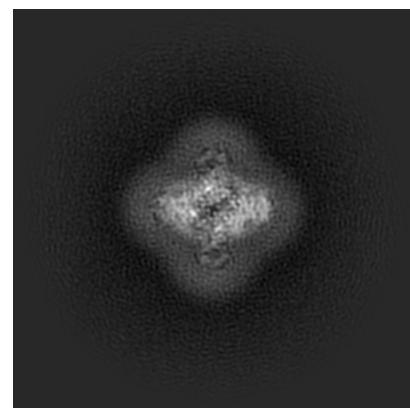
| X | Y | Z |

6.1.2 Raw map

| X | Y | Z |
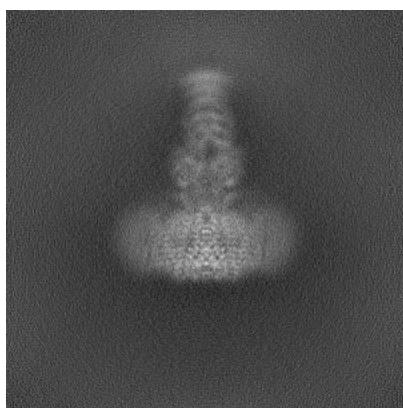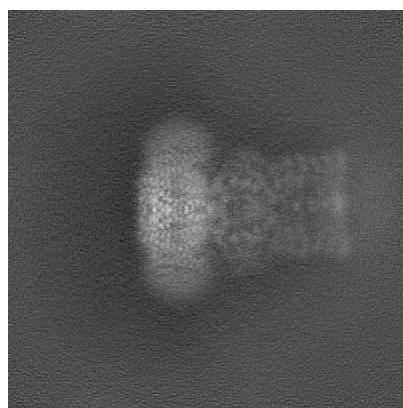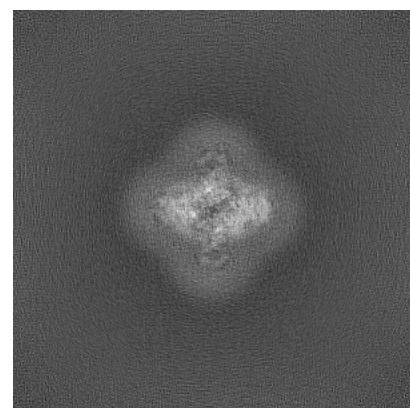
The images above show the map projected in three orthogonal directions.

6.2   Central slices ⓘ
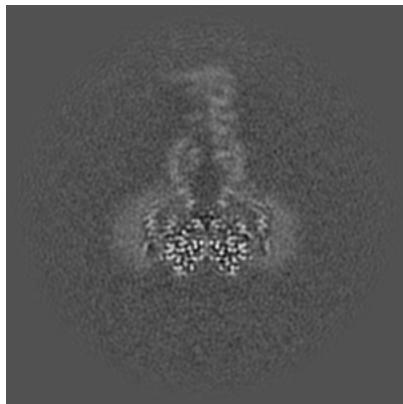
6.2.1   Primary map
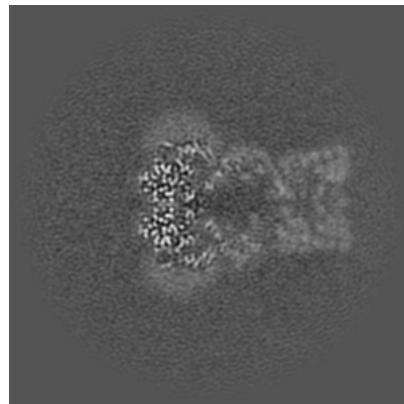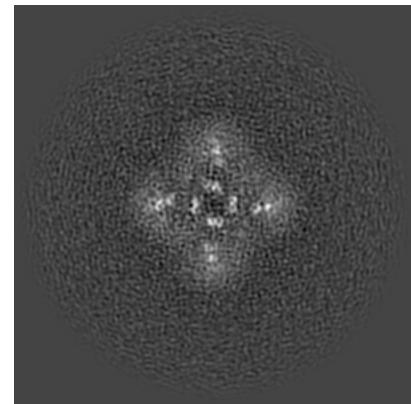
| X Index: 200 | Y Index: 200 | Z Index: 200 |

6.2.2   Raw map
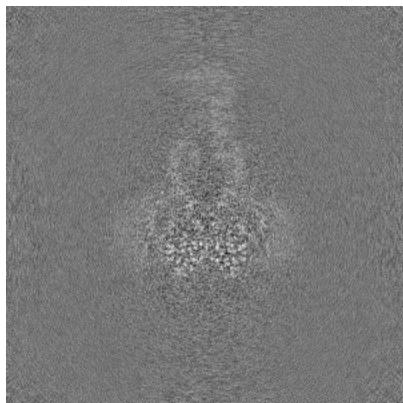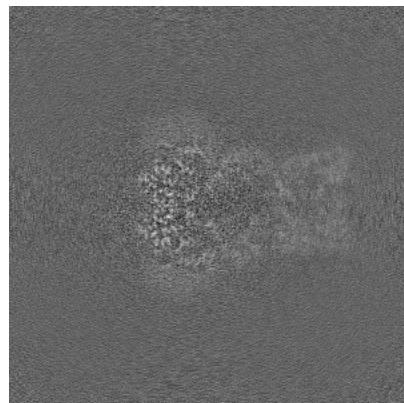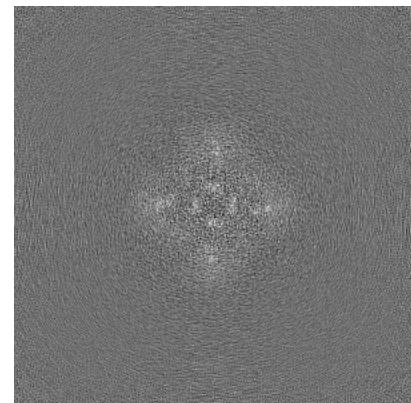
| X Index: 200 | Y Index: 200 | Z Index: 200 |

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

6.3　Largest variance slices ⓘ
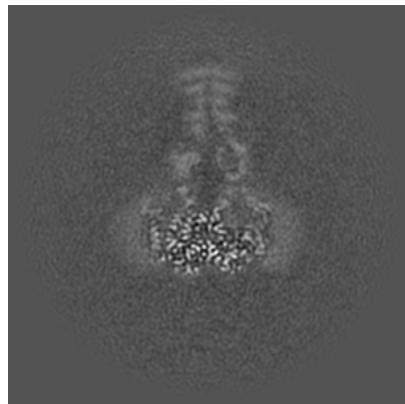
6.3.1　Primary map
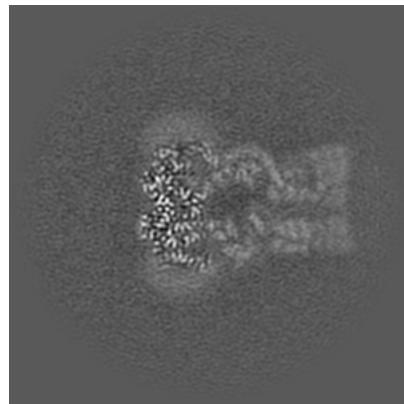
| X Index: 204 | Y Index: 196 | Z Index: 154 |
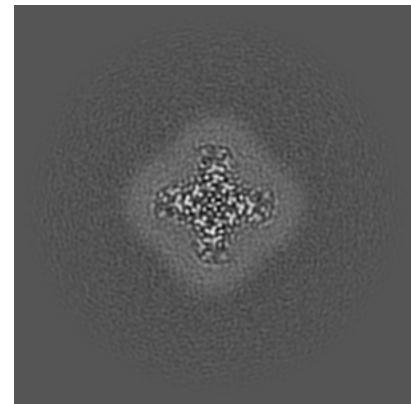
6.3.2　Raw map
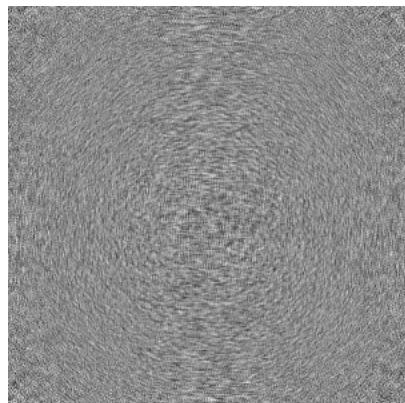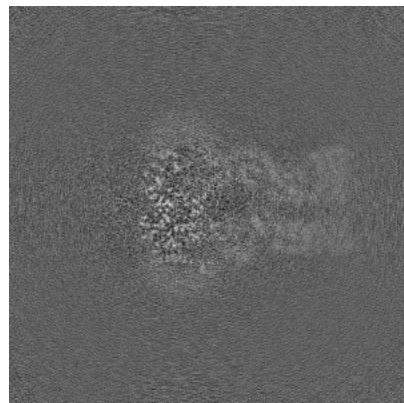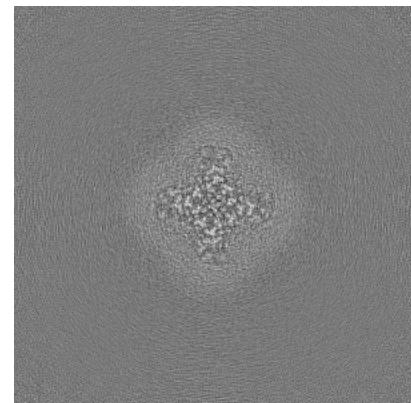
| X Index: 0 | Y Index: 195 | Z Index: 154 |

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

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

6.4.1 Primary map
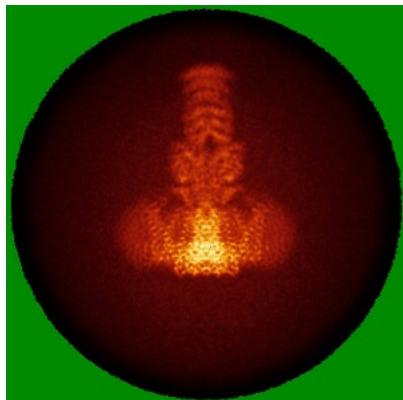
X
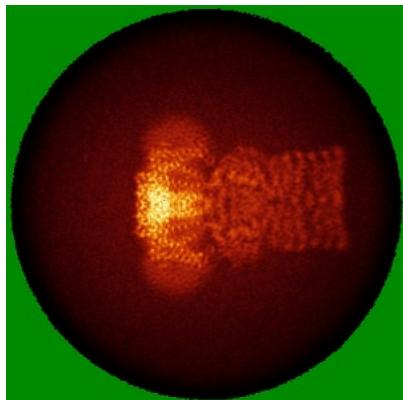
Y
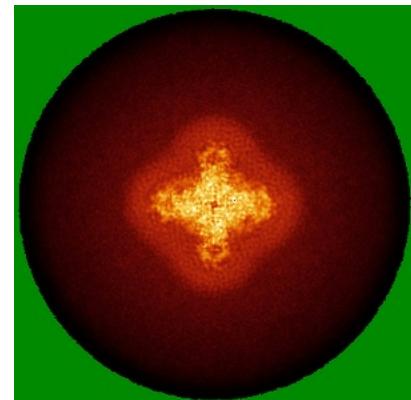
Z

6.4.2 Raw map

X

Y

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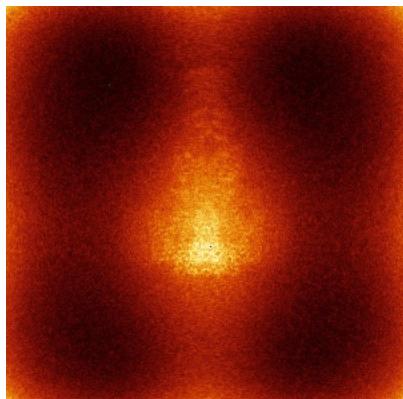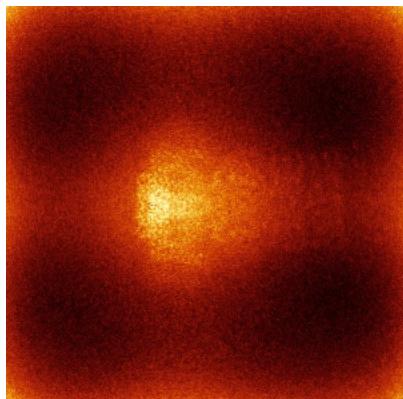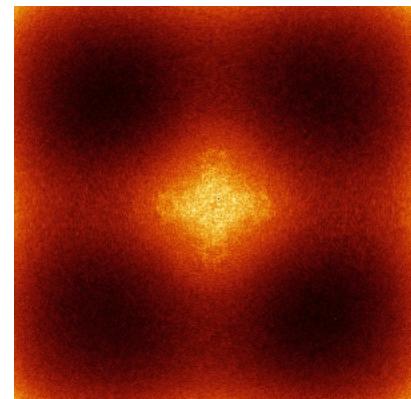
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X   Y   Z
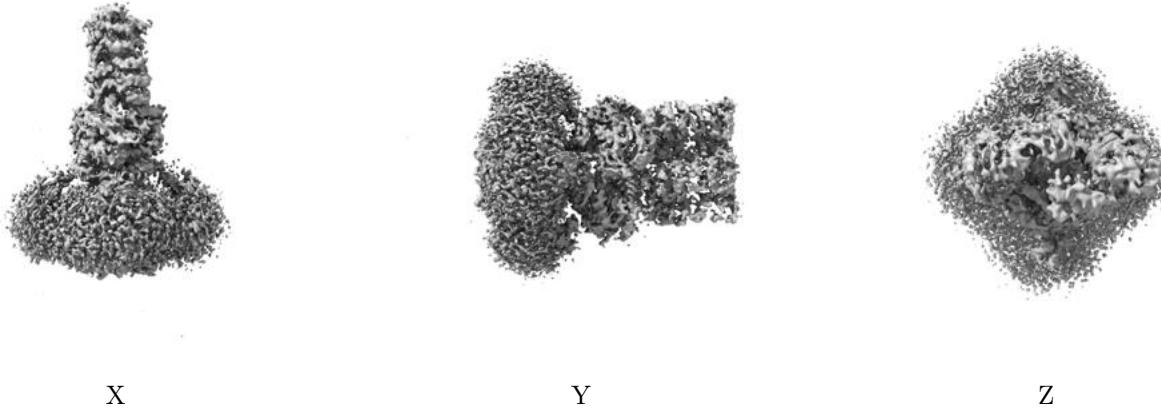
The images above show the 3D surface view of the map at the recommended contour level 0.08. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

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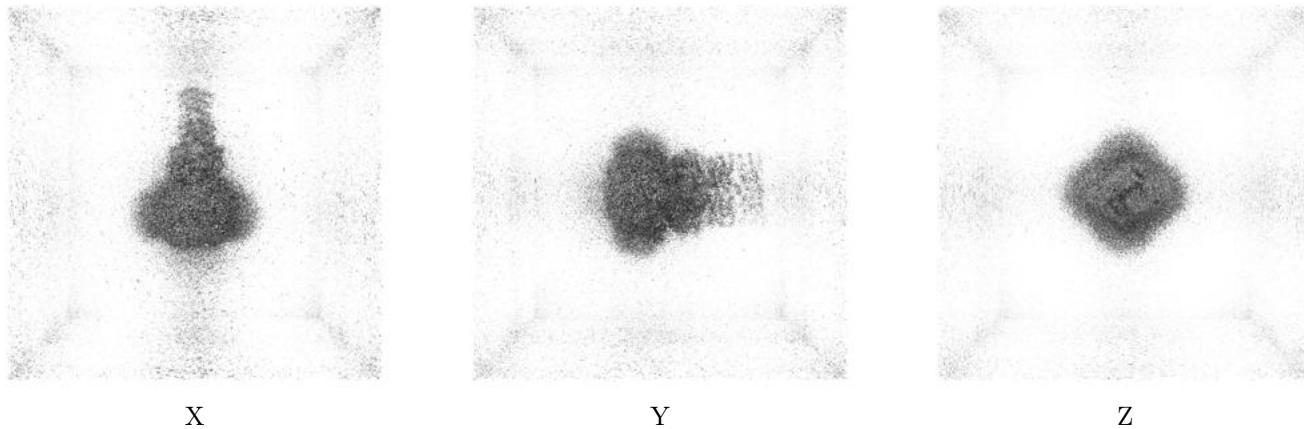
These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

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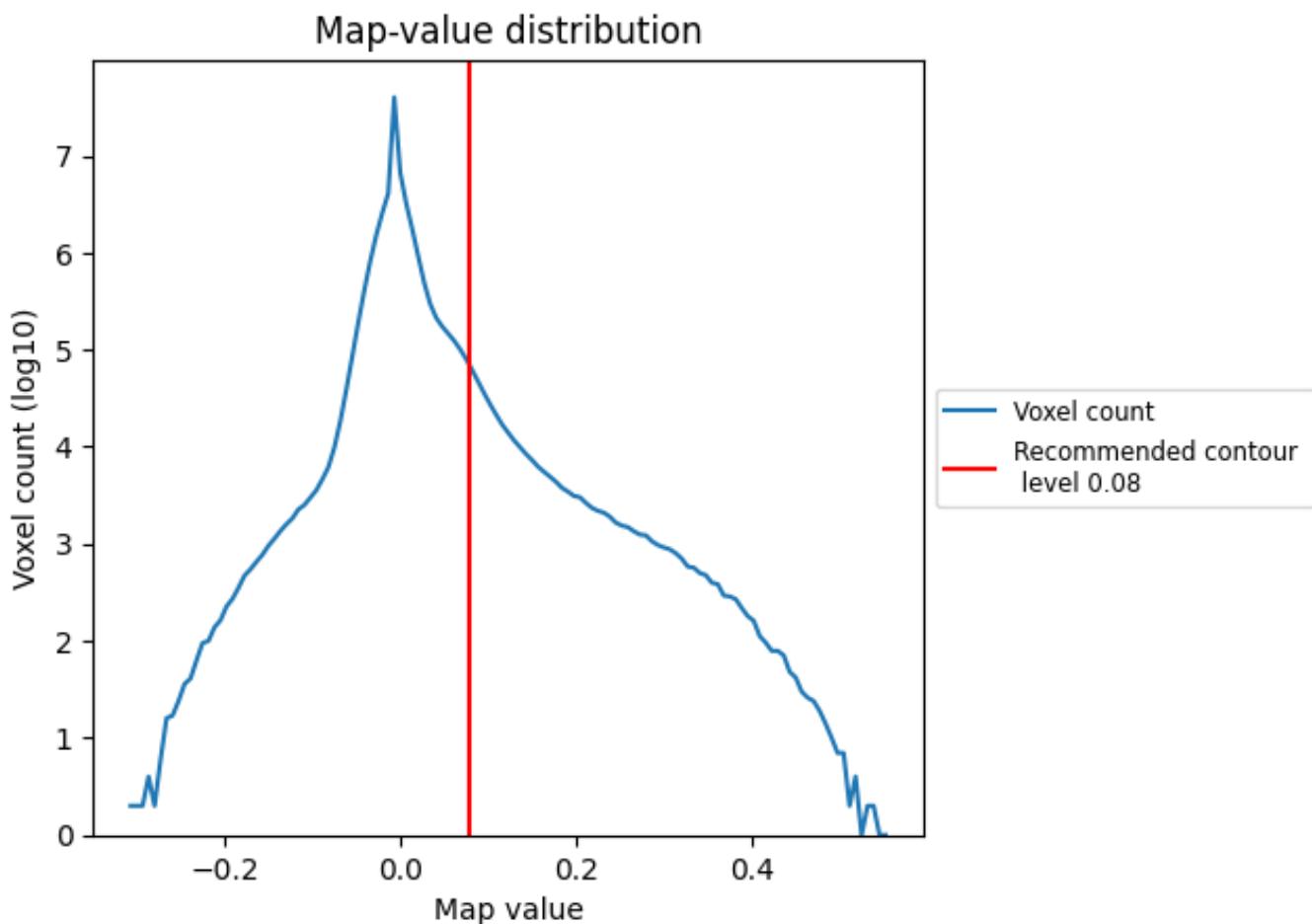
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2　Volume estimate ⓘ
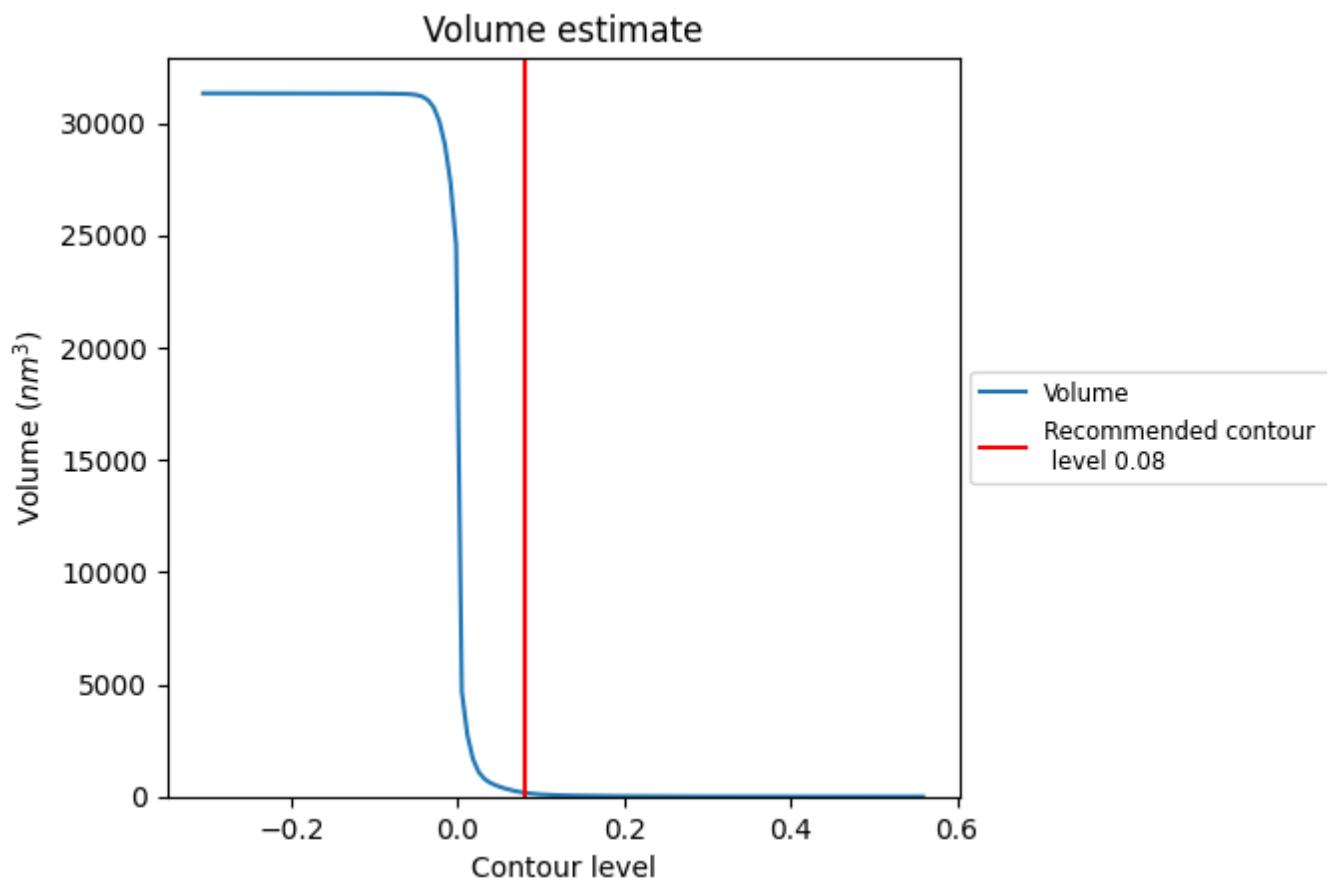
The volume at the recommended contour level is 171 nm^3; this corresponds to an approximate mass of 155 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ
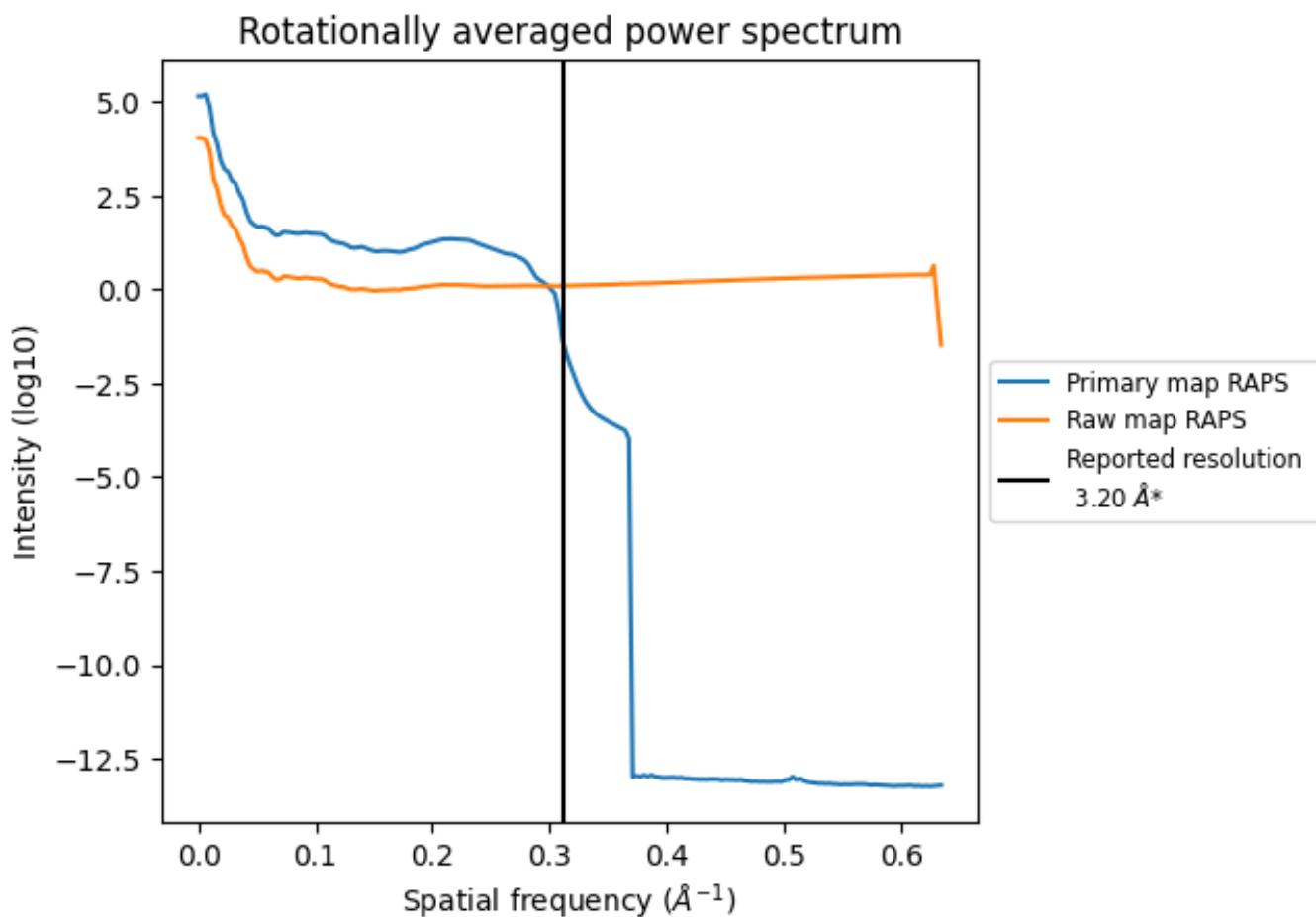
*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

8 Fourier-Shell correlation (i)

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

8.1 FSC (i)
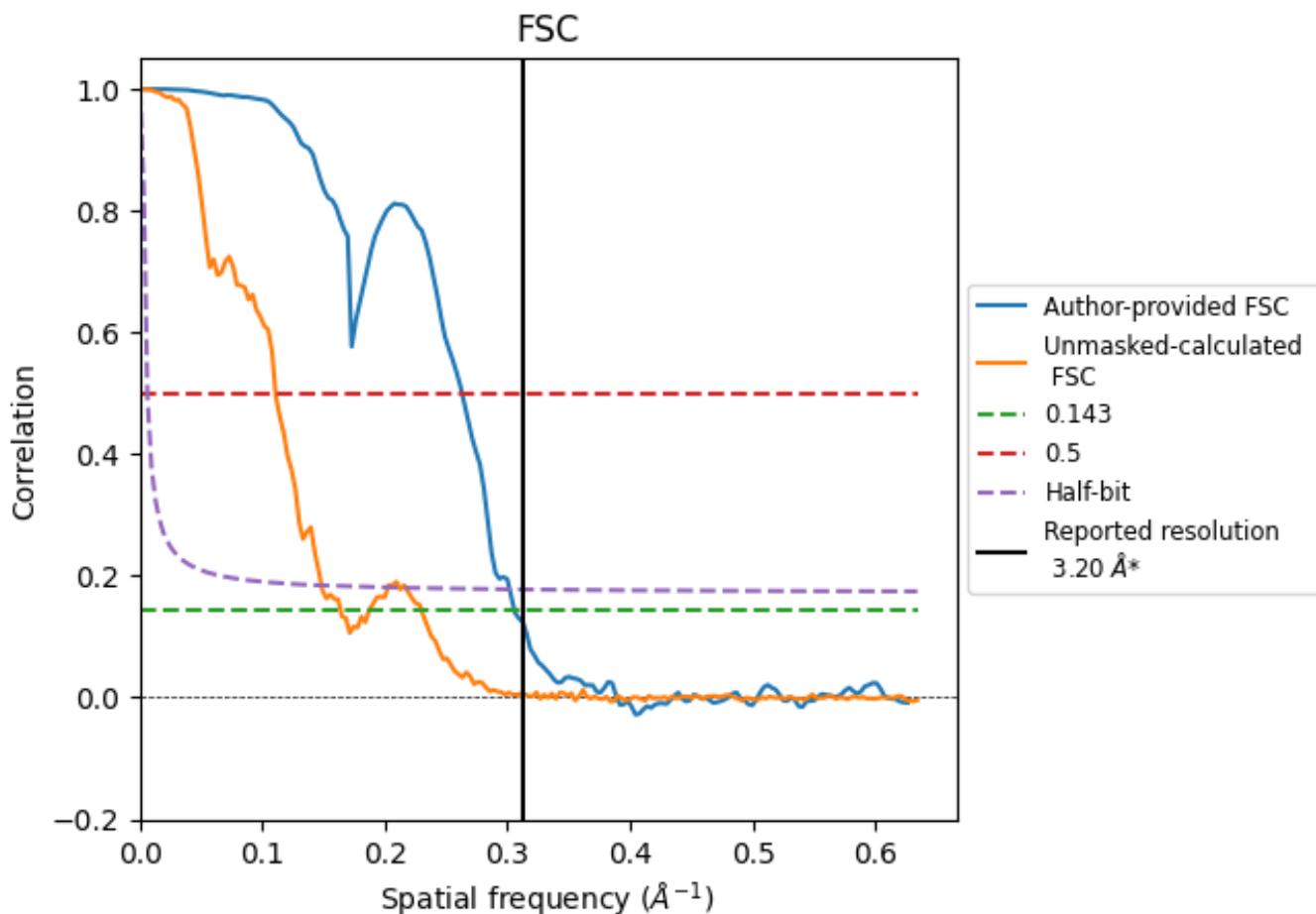
*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.20	-	-
Author-provided FSC curve	3.27	3.80	3.31
Unmasked-calculated*	6.11	9.03	6.74

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.11 differs from the reported value 3.2 by more than 10 %

9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-62917 and PDB model 9LA2. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay ⓘ

| X | Y | Z |
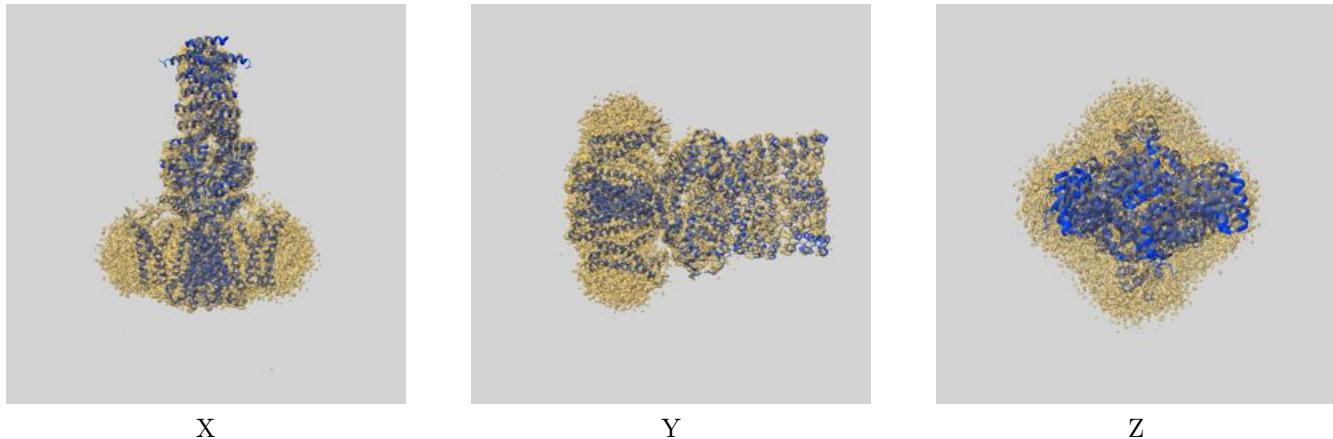
The images above show the 3D surface view of the map at the recommended contour level 0.08 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ

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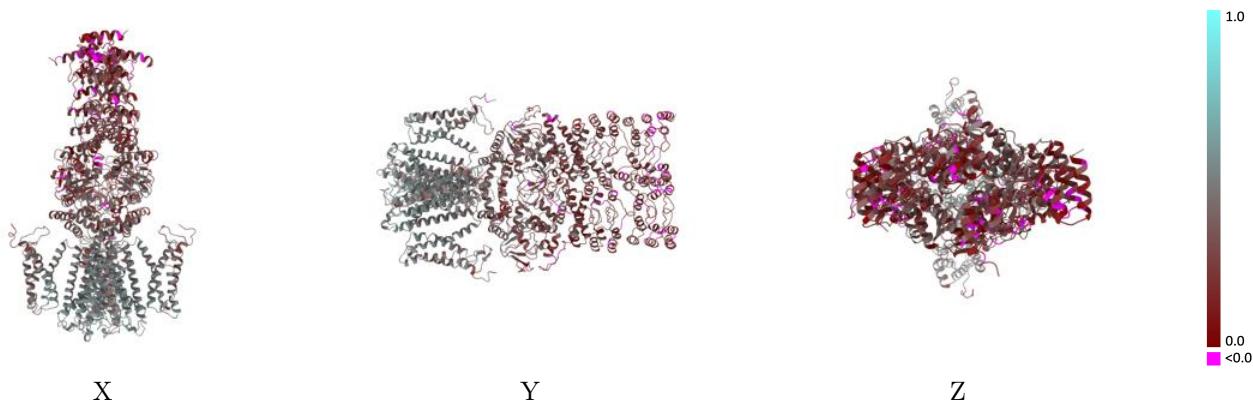
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model ⓘ

| X | Y | Z |
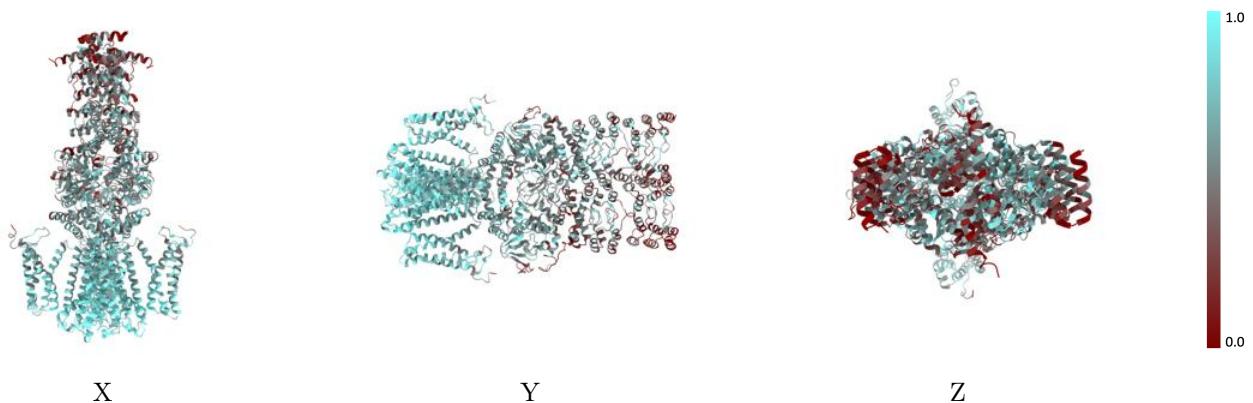
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.08).

9.4   Atom inclusion ⓘ
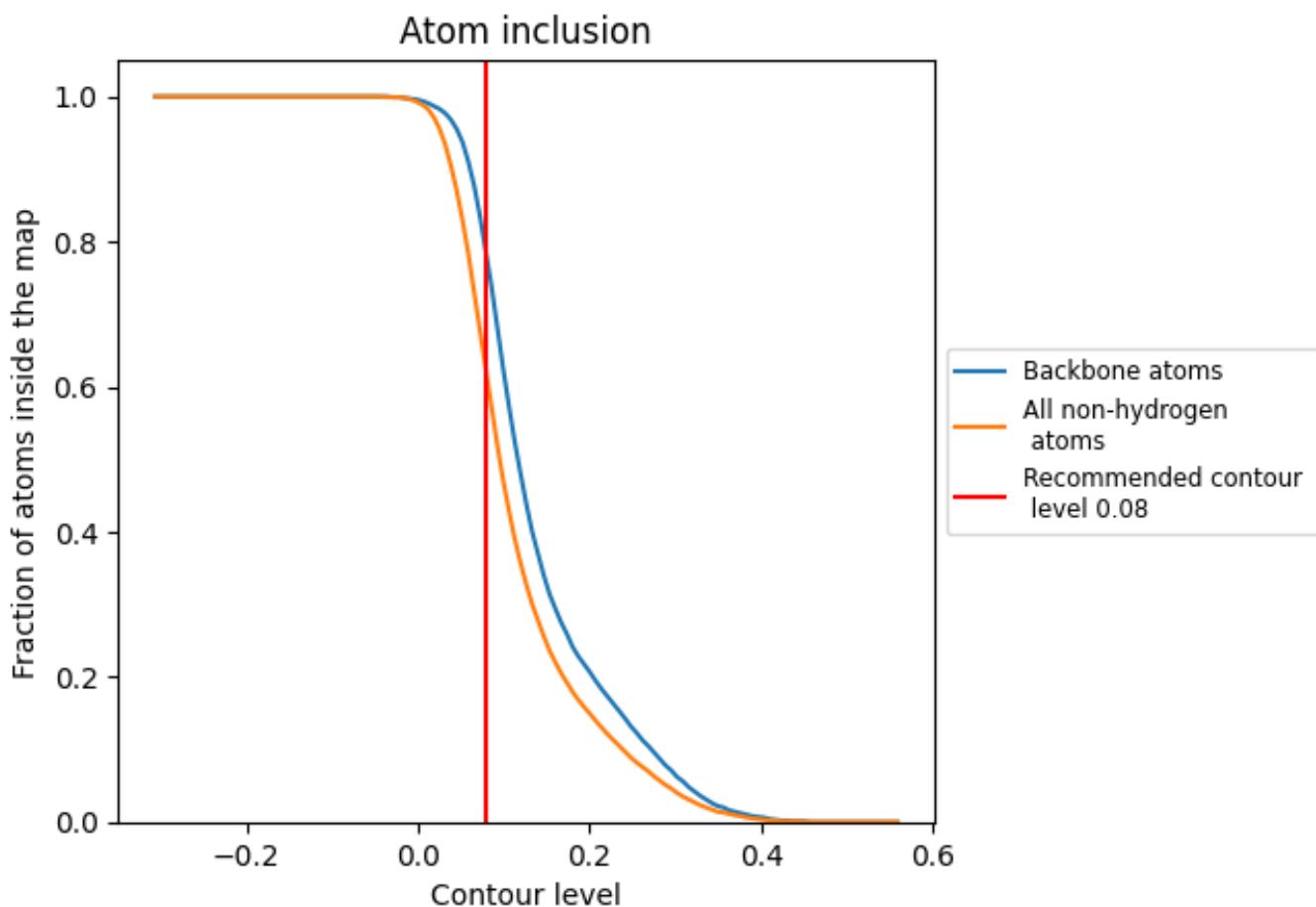
At the recommended contour level, 78% of all backbone atoms, 62% of all non-hydrogen atoms, are inside the map.

9.5   Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.08) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6160	0.3460
A	0.5850	0.3380
B	0.6400	0.3500
C	0.6320	0.3500
D	0.6070	0.3440

1.0

0.0

<0.0