WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report ⓘ

Nov 18, 2024 – 12:08 PM EST

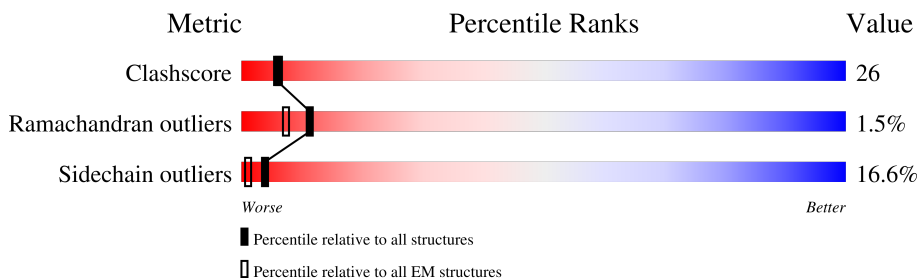|		
PDB ID	:	9CM2
EMDB ID	:	EMD-45737
Title	:	Cryo-EM model derived from localized reconstruction of human adenovirus 6-hexon-FX complex at 4.3A resolution
Authors	:	Reddy, V.S.; Ma, O.X.
Deposited on	:	2024-07-12
Resolution	:	5.01 Å(reported)
Based on initial model	:	6B1T

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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 5.01 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		26
Ramachandran outliers		1.5%
Sidechain outliers		16.6%

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	J	963	45% 37% 13% ••
1	K	963	48% 40% 9% •
1	L	963	52% 35% 9% ••
2	Z	488	74% / 60% 15% • 23%

2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 25229 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 Hexon protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	J	931	Total 7400	C 4691	N 1258	O 1413	S 38	0	0
1	K	935	Total 7426	C 4707	N 1262	O 1419	S 38	0	0
1	L	930	Total 7397	C 4691	N 1256	O 1412	S 38	0	0

- Molecule 2 is a protein called Coagulation factor X.

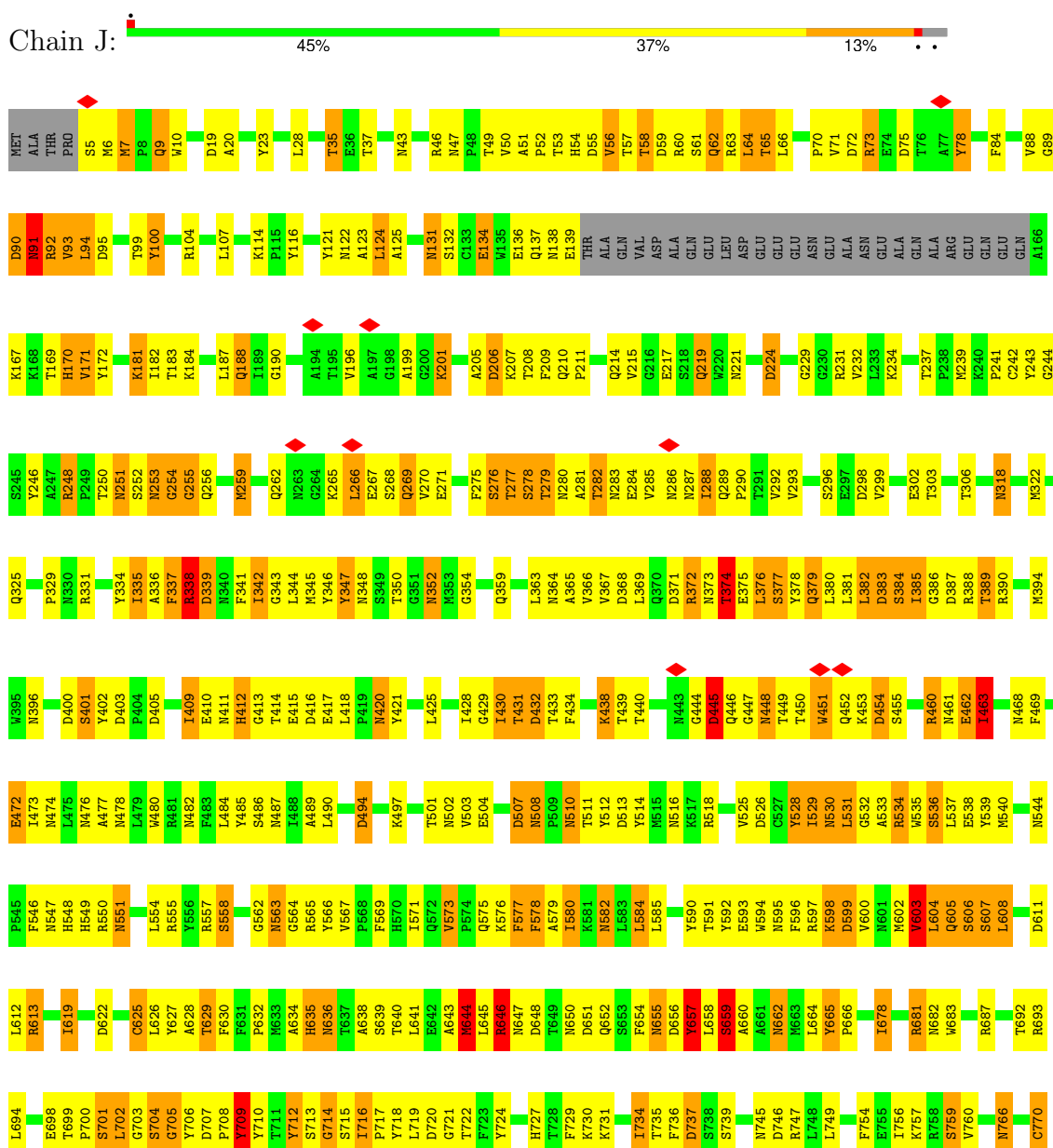| Mol	Chain	Residues	Atoms					AltConf	Trace
2	Z	377	Total 3002	C 1849	N 516	O 606	S 31	0	0

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
3	Z	4	Total 4	Ca 4	0

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: Hexon protein

Chain J:

• Molecule 1: Hexon protein

Chain K:

48%　　　　40%　　　　9%

A961 T962 THR

• Molecule 1: Hexon protein

Chain L:

52%   35%   9%

MET A2 T3 P4 S5 M6 M7 P8 Q9 W10 H14 D19 A20 Y23 L24 S25 F31 Y38 F39 S40 L41 V50 H54 D55 T58 D59 R60 S61 Q62 R63 L64 R67 R73 E74 D75 Y78 S79 Y80 K81 A82 R83 N91 Q92 V93 Y100 R109

T112 F113 K114 P115 Y116 A120 Y121 N122 K127 E134 W135 E136 Q137 N138 E139 THR ALA GLN VAL ASP ALA GLN GLU LEU ASP GLU GLU GLU ASN GLU ALA ASN GLU ALA GLN ALA ARG GLU GLU GLN GLN GLN A166 K167 K168 T169 H170 V171 Y172 A173 Q174 A175 S178 G179 I180 K181

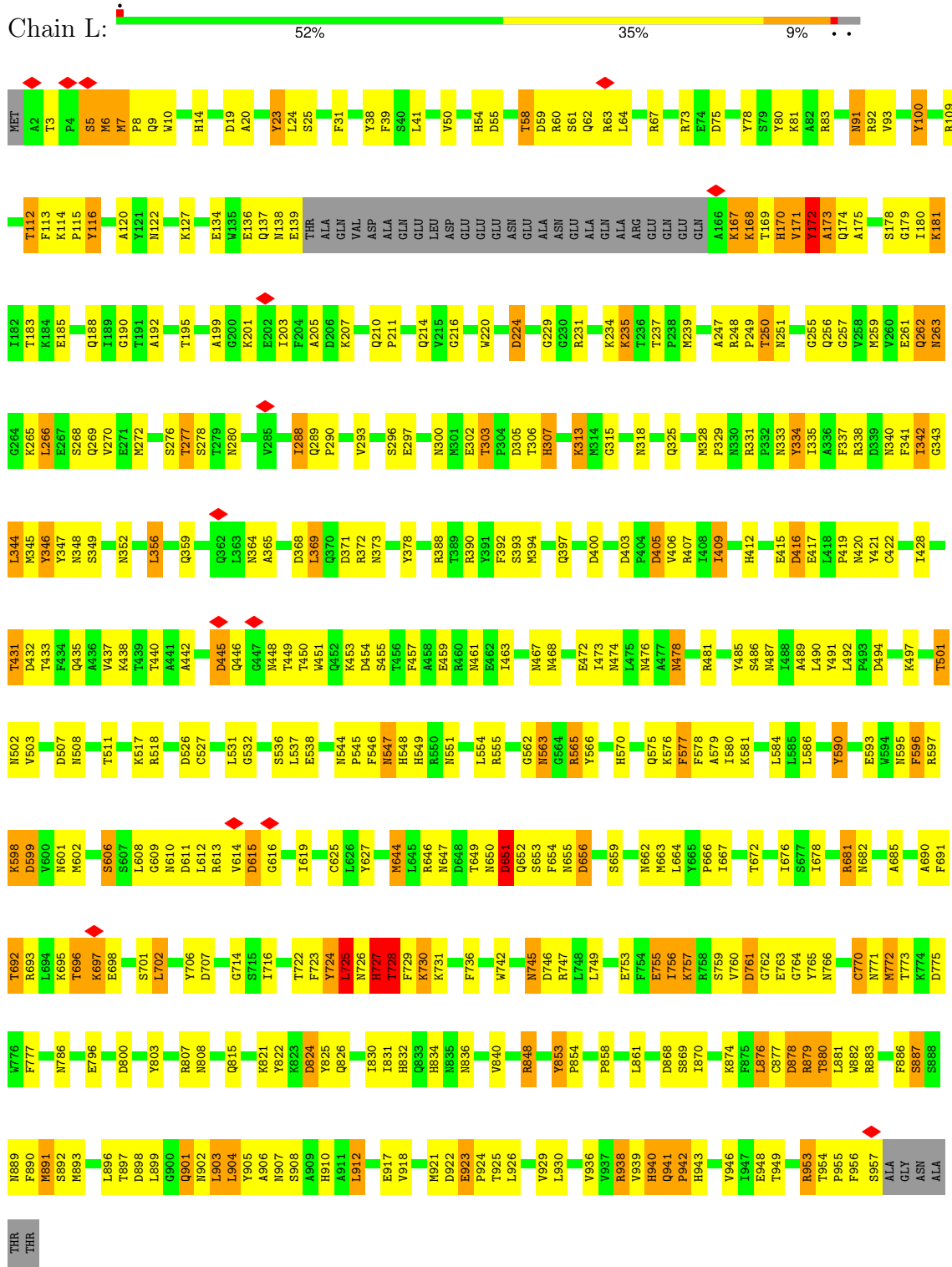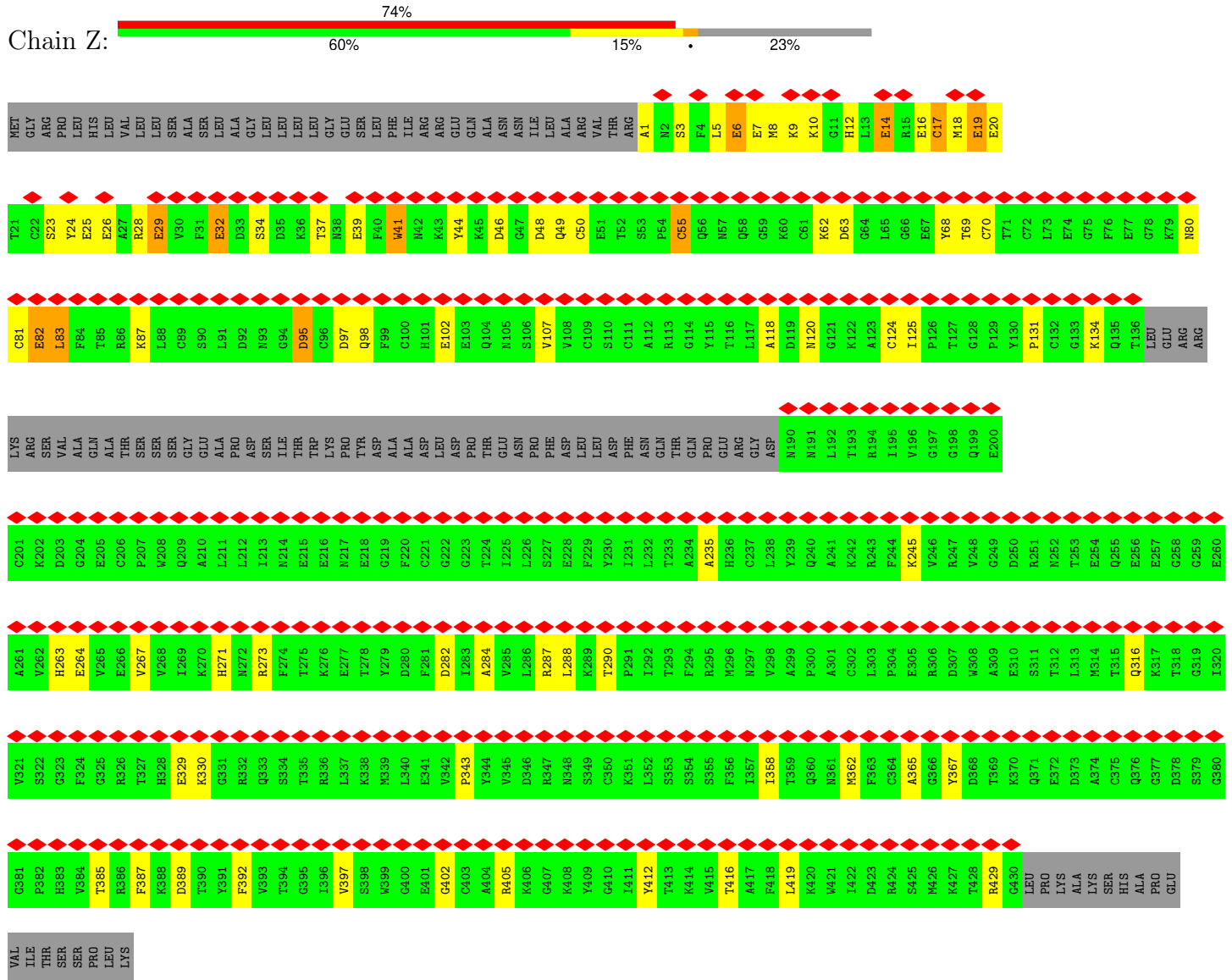I182 T183 K184 E185 Q188 I189 G190 T191 A192 T195 A199 G200 K201 E202 I203 F204 A205 D206 K207 Q210 P211 Q214 V215 G216 W220 D224 G229 G230 R231 K234 K235 T236 T237 P238 M239 A247 R248 P249 T250 N251 G255 Q256 C257 V258 M259 V260 E261 Q262 N263

G264 K265 L266 E267 S268 Q269 V270 E271 M272 S276 T277 S278 T279 N280 V285 I288 Q289 P290 V293 S296 E297 N300 M301 E302 T303 P304 D305 T306 H307 K313 M314 G315 N318 Q325 M328 P329 N330 R331 P332 N333 Y334 I335 A336 F337 R338 D339 N340 F341 I342 G343

L344 M345 Y346 Y347 N348 S349 N352 L356 Q359 Q362 L363 N364 A365 D368 L369 Q370 D371 R372 N373 Y378 R388 T389 R390 Y391 F392 S393 M394 Q397 D400 D403 P404 D405 V406 R407 I408 I409 H412 E415 D416 E417 L418 P419 N420 Y421 C422 I428

T431 D432 T433 F434 Q435 A436 V437 K438 T439 T440 A441 A442 D445 Q446 G447 N448 T449 T450 W451 Q452 K453 D454 S455 T456 F457 A458 E459 R460 N461 E462 I463 N467 N468 E472 I473 N474 L475 N476 A477 M478 R481 Y485 S486 N487 I488 A489 L490 Y491 L492 P493 D494 K497 T501

N502 V503 D507 N508 T511 K517 R518 D526 C527 L531 G532 S536 L537 E538 N544 P545 F546 N547 H548 H549 N551 L554 R555 G562 N563 G564 R565 Y566 H570 Q575 K576 F577 F578 A579 I580 K581 L584 L585 L586 Y590 E593 W594 N595 F596 R597

K598 D599 V600 N601 M602 S606 S607 L608 G609 N610 D611 L612 R613 V614 D615 G616 I619 C625 L626 Y627 M644 L645 R646 N647 D648 T649 N650 D651 Q652 S653 F654 N655 D656 S659 N662 M663 L664 Y665 P666 I667 T672 I676 S677 I678 R681 N682 A685 A690 F691

T692 R693 L694 K695 T696 K697 E698 S701 L702 Y706 D707 G714 S715 I716 T722 F723 Y724 L725 N726 H727 T728 F729 K730 K731 F736 W742 N745 D746 R747 L748 L749 E753 F754 E755 I756 K757 R758 S759 V760 D761 G762 E763 G764 Y765 N766 C770 N771 M772 T773 K774 D775

W776 F777 N786 E796 D800 Y803 R807 N808 Q815 K821 Y822 K823 D824 Y825 Q826 I830 I831 H832 Q833 H834 N835 N836 V840 R848 Y853 P854 P858 L861 D868 S869 I870 K874 F875 L876 C877 D878 R879 T880 L881 W882 R883 F886 S887 S888

N889 F890 M891 S892 M893 L896 T897 D898 L899 G900 Q901 N902 L903 L904 Y905 A906 N907 S908 A909 H910 A911 L912 E917 V918 M921 D922 E923 P924 T925 L926 V929 L930 V936 V937 R938 V939 H940 Q941 P942 H943 V946 I947 E948 T949 R953 T954 P955 F956 S957 ALA GLY ASN ALA

THR THR

• Molecule 2: Coagulation factor X

Chain Z:

74%

60%　　　　　15%　•　23%

MET GLY ARG PRO LEU HIS LEU VAL LEU LEU LEU SER ALA SER LEU ALA GLY LEU LEU LEU LEU GLY GLU SER LEU PHE ILE ARG ARG GLU GLN ALA ASN ASN ILE LEU ALA ARG VAL THR ARG A1 N2 S3 F4 L5 E6 E7 M8 K9 K10 G11 H12 L13 E14 R15 E16 C17 M18 E19 E20

T21 C22 S23 Y24 E25 E26 A27 R28 E29 V30 F31 E32 D33 S34 D35 K36 T37 N38 E39 F40 W41 N42 K43 Y44 K45 D46 G47 D48 Q49 C50 E51 T52 S53 P54 C55 Q56 N57 Q58 G59 K60 C61 K62 D63 G64 L65 G66 E67 Y68 T69 C70 T71 C72 L73 E74 G75 F76 E77 G78 K79 N80

C81 E82 L83 F84 T85 R86 K87 L88 C89 S90 L91 D92 N93 G94 D95 C96 D97 Q98 F99 C100 H101 E102 E103 Q104 N105 S106 V107 V108 C109 S110 C111 A112 R113 G114 Y115 T116 L117 A118 D119 N120 G121 K122 A123 C124 I125 P126 T127 G128 P129 Y130 P131 C132 G133 K134 Q135 T136 LEU GLU ARG ARG

LYS ARG SER VAL ALA GLN ALA THR SER SER SER GLY GLU ALA PRO ASP SER ILE THR TRP LYS PRO TYR ASP ALA ALA ASP LEU ASP PRO THR GLU ASN PRO PHE ASP LEU LEU ASP PHE ASN GLN THR GLN PRO GLU ARG GLY ASP N190 N191 L192 T193 R194 I195 V196 G197 G198 Q199 E200

C201 K202 D203 G204 E205 C206 P207 W208 Q209 A210 L211 L212 I213 N214 E215 E216 N217 E218 G219 F220 C221 G222 G223 T224 I225 L226 S227 E228 F229 Y230 I231 L232 T233 A234 A235 H236 C237 L238 Y239 Q240 A241 K242 R243 F244 K245 V246 R247 V248 G249 D250 R251 N252 T253 E254 Q255 E256 E257 G258 G259 E260

A261 V262 H263 E264 V265 E266 V267 V268 I269 K270 H271 N272 R273 P274 T275 K276 E277 T278 Y279 D280 F281 D282 I283 A284 V285 L286 R287 L288 K289 T290 P291 I292 T293 F294 R295 M296 N297 V298 A299 P300 A301 C302 L303 P304 E305 R306 D307 W308 A309 E310 S311 T312 L313 M314 T315 Q316 K317 T318 G319 I320

V321 S322 G323 F324 G325 R326 T327 H328 E329 K330 G331 R332 Q333 S334 T335 R336 L337 K338 M339 L340 E341 V342 P343 Y344 V345 D346 R347 N348 S349 C350 K351 L352 S353 S354 S355 F356 I357 I358 T359 Q360 N361 M362 F363 C364 A365 G366 Y367 D368 T369 K370 Q371 E372 D373 A374 C375 Q376 G377 D378 S379 G380

G381 P382 H383 V384 T385 R386 F387 K388 D389 T390 Y391 F392 V393 T394 G395 I396 V397 S398 W399 G400 E401 G402 C403 A404 R405 K406 G407 K408 Y409 G410 I411 Y412 T413 K414 V415 T416 A417 F418 L419 K420 W421 I422 D423 R424 S425 M426 K427 T428 R429 G430 LEU PRO LYS ALA LYS SER HIS ALA PRO GLU

VAL ILE THR SER PRO LEU LYS

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1769	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 $(e^-/\text{Å}^2)$	81	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 BIOCONTINUUM (6k x 4k)	Depositor
Maximum map value	0.065	Depositor
Minimum map value	-0.041	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.007	Depositor
Map size (Å)	154.112, 191.74399, 118.271996	wwPDB
Map dimensions	107, 66, 86	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.7919999, 1.7919999, 1.7919999	Depositor

5   Model quality (i)

5.1   Standard geometry (i)

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

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	J	0.45	0/7592	0.57	2/10326 (0.0%)
1	K	0.39	0/7619	0.51	0/10365
1	L	0.37	0/7590	0.50	0/10325
2	Z	0.24	0/2918	0.43	0/3912
All	All	0.39	0/25719	0.52	2/34928 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	448	ASN	N-CA-C	-5.09	97.26	111.00
1	J	657	TYR	N-CA-C	-5.02	97.44	111.00

There are no chirality outliers.

There are no planarity outliers.

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	J	7400	0	7100	524	0
1	K	7426	0	7126	449	0
1	L	7397	0	7100	380	0
2	Z	3002	0	2796	64	0
3	Z	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	25229	0	24122	1294	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 26.

All (1294) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:28:ARG:HD2	2:Z:37:THR:CG2	1.74	1.16
1:J:411:ASN:HB3	1:J:531:LEU:HD23	1.32	1.09
1:K:211:PRO:HB2	1:K:231:ARG:HH12	1.05	1.08
2:Z:23:SER:O	2:Z:24:TYR:CD1	2.06	1.08
2:Z:32:CGU:OE22	2:Z:32:CGU:HA	1.55	1.05
1:J:439:THR:HA	1:J:450:THR:HG22	1.36	1.04
2:Z:50:CYS:SG	2:Z:63:ASP:OD1	2.15	1.04
1:L:134:GLU:HB3	1:L:171:VAL:HG13	1.40	1.03
1:J:94:LEU:HB2	1:J:630:PHE:HE1	1.20	1.03
1:K:211:PRO:HB2	1:K:231:ARG:NH1	1.73	1.03
2:Z:28:ARG:HG2	2:Z:37:THR:OG1	1.59	1.01
1:J:251:ASN:H	1:J:255:GLY:HA3	1.21	0.99
2:Z:28:ARG:HD2	2:Z:37:THR:HG21	1.44	0.98
1:K:74:GLU:HB2	1:K:81:LYS:HE3	1.49	0.94
1:J:712:TYR:CZ	1:J:714:GLY:HA3	2.03	0.94
1:J:430:ILE:HG22	2:Z:9:LYS:HG3	1.48	0.94
2:Z:9:LYS:HG2	2:Z:10:LYS:H	1.32	0.93
2:Z:28:ARG:HH21	2:Z:34:SER:HB3	1.33	0.92
1:J:94:LEU:HB2	1:J:630:PHE:CE1	2.05	0.91
1:J:698:GLU:HG2	1:J:712:TYR:CZ	2.07	0.90
1:K:211:PRO:CB	1:K:231:ARG:HH12	1.85	0.88
2:Z:28:ARG:HD2	2:Z:37:THR:HG23	1.55	0.88
1:J:440:THR:HG23	1:J:450:THR:HA	1.55	0.87
1:J:770:CYS:SG	1:J:771:ASN:N	2.46	0.87
1:J:702:LEU:HD12	1:J:703:GLY:H	1.40	0.86
1:J:78:TYR:CZ	1:J:706:TYR:HB3	2.12	0.85
1:J:251:ASN:N	1:J:255:GLY:HA3	1.91	0.84
1:J:448:ASN:HB3	1:L:289:GLN:HA	1.58	0.84
1:J:461:ASN:HD21	1:L:171:VAL:H	1.22	0.84
2:Z:19:CGU:O	2:Z:19:CGU:OE11	1.97	0.82
1:K:20:ALA:HB2	1:K:23:TYR:CZ	2.15	0.82
1:J:461:ASN:HD21	1:L:171:VAL:N	1.76	0.81
1:J:121:TYR:HB2	1:J:244:GLY:HA2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:786:ASN:ND2	1:L:891:MET:SD	2.52	0.81
1:J:373:ASN:HD22	1:J:376:LEU:HD22	1.45	0.81
1:J:411:ASN:HD22	1:J:531:LEU:HA	1.45	0.81
1:J:698:GLU:HG2	1:J:712:TYR:CE2	2.17	0.80
1:L:80:TYR:HB3	1:L:596:PHE:HD1	1.46	0.80
1:L:655:ASN:HB3	1:L:936:VAL:HG12	1.64	0.79
2:Z:28:ARG:NH2	2:Z:34:SER:HB3	1.96	0.79
1:K:565:ARG:HD2	1:K:566:TYR:CZ	2.18	0.78
1:J:562:GLY:HA3	1:L:815:GLN:HE22	1.48	0.78
1:J:373:ASN:ND2	1:J:376:LEU:HD22	1.99	0.78
1:K:691:PHE:HE1	1:K:882:TRP:HB2	1.47	0.78
2:Z:28:ARG:CG	2:Z:37:THR:OG1	2.30	0.78
1:K:535:TRP:CE3	1:K:814:ARG:HB3	2.19	0.77
1:L:313:LYS:HG2	1:L:315:GLY:H	1.47	0.77
1:K:206:ASP:H	1:K:210:GLN:HB2	1.48	0.76
1:J:643:ALA:O	1:J:646:ARG:HB2	1.86	0.76
1:J:730:LYS:HB3	1:J:917:GLU:HG3	1.67	0.76
1:K:818:ASP:HB2	1:K:869:SER:HA	1.68	0.76
1:J:276:SER:HB3	1:K:435:GLN:HE22	1.51	0.76
1:K:305:ASP:N	1:K:305:ASP:OD1	2.17	0.75
1:L:940:HIS:HB3	1:L:948:GLU:OE1	1.86	0.75
1:J:373:ASN:ND2	1:J:376:LEU:H	1.82	0.75
1:J:280:ASN:O	1:J:284:GLU:HG2	1.86	0.75
1:K:111:PRO:HB3	1:K:565:ARG:HH11	1.51	0.75
1:J:251:ASN:H	1:J:255:GLY:CA	2.00	0.74
1:K:808:ASN:HD22	1:K:879:ARG:HB3	1.52	0.74
1:J:208:THR:O	1:J:231:ARG:NH2	2.21	0.74
1:K:348:ASN:ND2	1:K:372:ARG:O	2.21	0.74
1:J:448:ASN:CB	1:L:290:PRO:HD2	2.18	0.74
1:K:331:ARG:NH2	1:K:490:LEU:O	2.21	0.74
1:L:478:ASN:OD1	1:L:478:ASN:N	2.18	0.74
1:J:369:LEU:H	1:J:372:ARG:HH21	1.36	0.74
1:J:279:THR:HA	1:J:282:THR:HG23	1.70	0.74
1:J:439:THR:CA	1:J:450:THR:HG22	2.16	0.74
1:L:544:ASN:O	1:L:547:ASN:ND2	2.21	0.74
1:J:815:GLN:NE2	1:K:563:ASN:H	1.86	0.73
1:K:211:PRO:HD2	1:K:231:ARG:HH22	1.52	0.73
1:J:214:GLN:HE21	1:L:834:HIS:HB3	1.53	0.73
1:J:114:LYS:NZ	1:J:116:TYR:O	2.22	0.73
1:J:478:ASN:OD1	1:L:420:ASN:ND2	2.21	0.73
1:J:687:ARG:HH11	1:J:932:GLU:HB3	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:461:ASN:ND2	1:L:171:VAL:H	1.88	0.72
1:L:371:ASP:O	1:L:662:ASN:ND2	2.22	0.72
2:Z:9:LYS:HG2	2:Z:10:LYS:N	2.02	0.72
1:K:771:ASN:OD1	1:K:771:ASN:N	2.22	0.72
1:L:953:ARG:HH21	1:L:956:PHE:HB2	1.53	0.72
1:J:318:ASN:OD1	1:J:318:ASN:N	2.23	0.72
1:K:239:MET:HG3	1:K:318:ASN:HD22	1.55	0.72
1:K:542:ASN:ND2	1:K:921:MET:SD	2.63	0.72
1:J:551:ASN:ND2	1:J:554:LEU:H	1.87	0.71
1:L:724:TYR:O	1:L:725:LEU:C	2.28	0.71
1:J:563:ASN:ND2	1:L:532:GLY:O	2.24	0.71
1:J:856:ASN:HB2	1:K:249:PRO:HG3	1.71	0.71
1:K:547:ASN:OD1	1:K:547:ASN:N	2.20	0.71
1:L:303:THR:HG1	1:L:306:THR:HG1	1.38	0.71
1:L:331:ARG:NH2	1:L:490:LEU:O	2.22	0.71
2:Z:23:SER:O	2:Z:24:TYR:CG	2.43	0.71
1:J:60:ARG:HD2	1:J:635:HIS:CE1	2.25	0.71
1:J:828:VAL:O	1:J:833:GLN:NE2	2.24	0.71
2:Z:24:TYR:HE1	2:Z:41:TRP:CZ2	2.07	0.71
1:K:89:GLY:HA3	1:K:92:ARG:HH11	1.55	0.70
1:L:112:THR:O	1:L:333:ASN:ND2	2.23	0.70
1:J:254:GLY:O	1:J:256:GLN:N	2.25	0.70
1:J:91:ASN:CB	1:J:635:HIS:HB3	2.22	0.70
1:K:20:ALA:HB2	1:K:23:TYR:CE1	2.26	0.70
1:K:766:ASN:OD1	1:K:766:ASN:N	2.25	0.70
1:J:346:TYR:CE2	1:J:597:ARG:HG3	2.27	0.70
1:J:468:ASN:O	1:K:848:ARG:NH1	2.24	0.70
1:L:613:ARG:NH1	1:L:706:TYR:OH	2.25	0.70
1:K:206:ASP:N	1:K:210:GLN:HB2	2.06	0.70
1:J:373:ASN:O	1:J:375:GLU:N	2.25	0.70
1:J:91:ASN:HB3	1:J:635:HIS:HB3	1.74	0.69
1:J:381:LEU:O	1:J:385:ILE:HG23	1.91	0.69
2:Z:1:ALA:N	2:Z:20:CGU:OE11	2.25	0.69
1:J:384:SER:O	1:J:801:ARG:NH1	2.25	0.69
1:L:78:TYR:O	1:L:598:LYS:HB2	1.92	0.69
1:K:478:ASN:O	1:K:482:ASN:ND2	2.23	0.69
1:K:851:GLN:NE2	1:L:174:GLN:O	2.25	0.69
1:J:275:PHE:CD1	1:K:436:ALA:HB2	2.28	0.69
1:J:277:THR:HG23	1:J:280:ASN:HB2	1.74	0.69
1:J:771:ASN:N	1:J:771:ASN:OD1	2.25	0.69
1:L:536:SER:O	1:L:874:LYS:NZ	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:766:ASN:OD1	1:J:766:ASN:N	2.22	0.69
1:K:251:ASN:OD1	1:K:255:GLY:N	2.25	0.69
1:K:647:ASN:OD1	1:K:647:ASN:N	2.22	0.69
2:Z:24:TYR:CE1	2:Z:41:TRP:CZ2	2.81	0.69
1:J:211:PRO:O	1:J:231:ARG:NH1	2.26	0.69
1:J:656:ASP:OD2	1:J:658:LEU:HB3	1.93	0.69
1:J:720:ASP:OD1	1:J:721:GLY:N	2.25	0.69
1:K:526:ASP:OD1	1:K:527:CYS:N	2.25	0.69
1:J:376:LEU:O	1:J:379:GLN:HB2	1.94	0.68
1:J:448:ASN:HD22	1:L:289:GLN:HB3	1.58	0.68
1:K:613:ARG:NH2	1:K:710:TYR:O	2.26	0.68
1:J:131:ASN:OD1	1:J:131:ASN:N	2.26	0.68
1:J:196:VAL:HG22	1:J:199:ALA:HB2	1.74	0.68
1:J:507:ASP:OD1	1:J:507:ASP:N	2.24	0.68
1:J:100:TYR:CE1	1:J:627:TYR:HB3	2.29	0.68
1:J:747:ARG:HH12	1:K:62:GLN:H	1.39	0.68
1:J:747:ARG:NH1	1:K:62:GLN:H	1.91	0.68
1:K:662:ASN:OD1	1:K:662:ASN:N	2.26	0.68
1:L:730:LYS:O	1:L:756:ILE:HG13	1.93	0.68
1:K:217:GLU:O	1:L:467:ASN:ND2	2.26	0.68
1:J:707:ASP:O	1:J:708:PRO:C	2.30	0.67
1:K:856:ASN:HB2	1:L:249:PRO:HG3	1.74	0.67
2:Z:131:PRO:HG2	2:Z:134:LYS:HG3	1.74	0.67
1:L:134:GLU:HB3	1:L:171:VAL:CG1	2.21	0.67
1:K:20:ALA:HA	1:K:23:TYR:CG	2.30	0.67
1:K:207:LYS:O	1:K:208:THR:C	2.32	0.67
1:K:565:ARG:HB3	1:K:566:TYR:CE2	2.30	0.67
1:L:770:CYS:SG	1:L:771:ASN:N	2.67	0.67
1:K:824:ASP:N	1:K:824:ASP:OD1	2.28	0.67
1:J:375:GLU:C	1:J:377:SER:N	2.40	0.67
1:J:651:ASP:HB2	1:J:938:ARG:HH11	1.60	0.67
1:J:582:ASN:OD1	1:J:582:ASN:N	2.26	0.67
1:J:775:ASP:N	1:J:775:ASP:OD1	2.27	0.67
1:J:868:ASP:OD1	1:J:868:ASP:N	2.28	0.67
2:Z:28:ARG:CD	2:Z:37:THR:OG1	2.43	0.67
1:K:784:ASN:OD1	1:K:883:ARG:NH1	2.28	0.66
1:L:83:ARG:NE	1:L:593:GLU:OE2	2.28	0.66
1:J:338:ARG:O	1:J:396:ASN:ND2	2.28	0.66
1:J:369:LEU:H	1:J:372:ARG:NH2	1.93	0.66
1:J:438:LYS:NZ	1:J:455:SER:OG	2.29	0.66
1:K:211:PRO:O	1:K:231:ARG:NH1	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:114:LYS:NZ	1:K:116:TYR:O	2.29	0.66
1:K:529:ILE:HG13	1:K:530:ASN:ND2	2.10	0.66
1:K:345:MET:SD	1:K:347:TYR:OH	2.54	0.66
1:J:5:SER:OG	1:J:7:MET:SD	2.50	0.66
1:K:316:ASP:N	1:K:316:ASP:OD1	2.28	0.66
1:L:276:SER:HB2	1:L:290:PRO:HA	1.77	0.66
1:J:801:ARG:N	1:J:804:SER:OG	2.28	0.66
1:K:758:ARG:HH22	1:K:763:GLU:H	1.43	0.66
1:J:420:ASN:ND2	1:K:478:ASN:OD1	2.25	0.66
1:K:338:ARG:HG2	1:K:605:GLN:HB2	1.78	0.66
1:K:499:ASN:OD1	1:K:499:ASN:N	2.27	0.66
1:J:259:MET:HG3	1:J:265:LYS:HB3	1.78	0.66
1:J:376:LEU:O	1:J:380:LEU:HD12	1.96	0.66
1:J:529:ILE:O	1:J:530:ASN:C	2.34	0.66
1:J:411:ASN:ND2	1:J:531:LEU:HA	2.10	0.66
1:L:667:ILE:O	1:L:924:PRO:HA	1.96	0.66
1:J:267:GLU:O	1:J:269:GLN:NE2	2.29	0.65
1:K:80:TYR:HE1	1:K:596:PHE:HB2	1.61	0.65
2:Z:271:HIS:HE1	2:Z:273:ARG:HE	1.42	0.65
1:J:338:ARG:NH2	1:J:602:MET:O	2.28	0.65
1:J:373:ASN:OD1	1:J:375:GLU:HB2	1.96	0.65
1:J:373:ASN:C	1:J:375:GLU:H	1.97	0.65
1:L:364:ASN:OD1	1:L:365:ALA:N	2.29	0.65
1:L:440:THR:HG22	1:L:451:TRP:CE2	2.31	0.65
1:K:537:LEU:HB3	1:K:540:MET:HG2	1.77	0.65
1:J:551:ASN:HD21	1:J:554:LEU:H	1.44	0.65
2:Z:9:LYS:CG	2:Z:10:LYS:H	2.06	0.65
1:J:94:LEU:HG	1:J:95:ASP:N	2.12	0.65
1:J:331:ARG:NH2	1:J:490:LEU:O	2.29	0.65
1:J:645:LEU:O	1:J:646:ARG:C	2.36	0.65
1:K:437:VAL:HB	1:K:450:THR:HB	1.78	0.65
1:K:601:ASN:OD1	1:K:613:ARG:NE	2.27	0.65
2:Z:267:VAL:HB	2:Z:287:ARG:HB3	1.79	0.65
1:L:171:VAL:HG12	1:L:172:TYR:H	1.62	0.65
1:L:261:GLU:HA	1:L:265:LYS:HA	1.78	0.65
1:L:903:LEU:HA	1:L:906:ALA:HB3	1.79	0.65
1:J:287:ASN:ND2	1:J:289:GLN:OE1	2.30	0.65
1:J:636:ASN:O	1:J:640:THR:HG23	1.97	0.65
1:J:835:ASN:OD1	1:J:836:ASN:ND2	2.29	0.65
1:K:889:ASN:ND2	1:K:891:MET:SD	2.70	0.65
1:K:533:ALA:O	1:K:535:TRP:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:615:ASP:N	1:K:615:ASP:OD1	2.30	0.64
1:L:438:LYS:NZ	1:L:455:SER:OG	2.30	0.64
1:K:870:ILE:HG13	1:K:871:THR:H	1.62	0.64
1:J:99:THR:HG22	1:J:628:ALA:HB2	1.79	0.64
1:J:906:ALA:O	1:J:907:ASN:ND2	2.30	0.64
1:L:5:SER:O	1:L:5:SER:OG	2.13	0.64
1:L:437:VAL:HB	1:L:450:THR:HG21	1.79	0.64
1:J:90:ASP:O	1:J:91:ASN:C	2.32	0.64
1:J:250:THR:O	1:L:826:GLN:HG3	1.96	0.64
1:L:586:LEU:HG	1:L:941:GLN:HE21	1.62	0.64
1:J:635:HIS:O	1:J:638:ALA:HB3	1.98	0.64
1:L:7:MET:SD	1:L:7:MET:N	2.71	0.64
1:J:375:GLU:C	1:J:377:SER:H	1.99	0.63
1:J:604:LEU:HD23	1:J:604:LEU:H	1.62	0.63
1:J:708:PRO:O	1:J:710:TYR:N	2.31	0.63
1:J:439:THR:HA	1:J:450:THR:CG2	2.22	0.63
1:L:183:THR:HG23	1:L:185:GLU:H	1.64	0.63
1:J:138:ASN:HA	1:J:167:LYS:HD3	1.80	0.63
1:L:731:LYS:HG2	1:L:917:GLU:HB3	1.80	0.63
1:J:275:PHE:CE1	1:K:436:ALA:HB2	2.33	0.63
1:L:878:ASP:O	1:L:880:THR:HG22	1.99	0.63
1:J:706:TYR:CZ	1:J:708:PRO:HA	2.33	0.63
1:K:108:ASP:OD1	1:K:565:ARG:HD3	1.99	0.63
1:K:530:ASN:O	1:K:531:LEU:C	2.38	0.63
1:L:485:TYR:O	1:L:489:ALA:HB3	1.98	0.63
1:J:373:ASN:HD21	1:J:376:LEU:H	1.46	0.63
1:J:335:ILE:HG12	1:J:606:SER:HA	1.81	0.62
1:K:387:ASP:OD1	1:K:388:ARG:N	2.32	0.62
1:L:417:GLU:OE1	1:L:417:GLU:N	2.31	0.62
1:J:341:PHE:O	1:J:342:ILE:C	2.37	0.62
1:J:461:ASN:ND2	1:L:170:HIS:HA	2.15	0.62
1:J:338:ARG:HG3	1:J:342:ILE:HG23	1.80	0.62
1:L:188:GLN:NE2	1:L:190:GLY:O	2.31	0.62
1:L:491:TYR:OH	1:L:549:HIS:ND1	2.27	0.62
1:L:824:ASP:N	1:L:824:ASP:OD1	2.32	0.62
1:J:270:VAL:HA	1:J:296:SER:O	1.99	0.62
1:K:20:ALA:O	1:K:21:SER:C	2.36	0.62
1:K:259:MET:O	1:K:265:LYS:NZ	2.24	0.62
1:K:335:ILE:HD12	1:K:335:ILE:H	1.64	0.62
1:L:171:VAL:O	1:L:172:TYR:HB2	1.98	0.62
1:K:678:ILE:HB	1:K:912:LEU:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:544:ASN:ND2	1:L:547:ASN:OD1	2.33	0.62
1:L:565:ARG:HD3	1:L:566:TYR:CE1	2.34	0.62
1:J:284:GLU:HG3	1:J:288:ILE:HG22	1.82	0.62
1:J:902:ASN:O	1:J:906:ALA:N	2.32	0.62
1:K:90:ASP:OD1	1:K:92:ARG:NH1	2.33	0.62
1:L:73:ARG:NE	1:L:80:TYR:OH	2.33	0.62
1:J:373:ASN:C	1:J:375:GLU:N	2.50	0.62
1:J:385:ILE:HG13	1:J:386:GLY:N	2.14	0.62
1:J:613:ARG:HH21	1:J:706:TYR:HE1	1.47	0.62
1:K:104:ARG:HG2	1:K:570:HIS:HA	1.82	0.62
1:K:758:ARG:NH1	1:K:761:ASP:O	2.32	0.62
1:L:497:LYS:O	1:L:518:ARG:NH1	2.33	0.62
1:L:880:THR:OG1	1:L:881:LEU:N	2.30	0.62
1:L:346:TYR:CE2	1:L:597:ARG:HG2	2.35	0.61
1:L:388:ARG:NE	1:L:397:GLN:OE1	2.33	0.61
1:J:526:ASP:HB3	1:J:528:TYR:CE1	2.36	0.61
1:J:288:ILE:HD13	1:J:288:ILE:H	1.65	0.61
1:J:478:ASN:O	1:J:482:ASN:ND2	2.31	0.61
1:J:354:GLY:HA3	1:J:594:TRP:CE3	2.35	0.61
1:J:808:ASN:ND2	1:J:878:ASP:O	2.23	0.61
2:Z:28:ARG:HG2	2:Z:37:THR:HG1	1.60	0.61
1:J:78:TYR:OH	1:J:706:TYR:HB3	1.99	0.61
1:J:514:TYR:OH	1:J:518:ARG:NH2	2.32	0.61
1:K:257:GLY:HA2	1:K:299:VAL:HG12	1.82	0.61
1:L:725:LEU:HA	1:L:727:HIS:NE2	2.15	0.61
1:J:529:ILE:O	1:J:531:LEU:N	2.34	0.61
1:K:606:SER:N	1:K:713:SER:O	2.33	0.61
1:J:532:GLY:O	1:K:563:ASN:HB3	2.01	0.61
1:J:598:LYS:O	1:J:599:ASP:C	2.38	0.61
1:J:759:SER:OG	1:J:760:VAL:N	2.33	0.61
1:K:468:ASN:OD1	1:K:468:ASN:N	2.33	0.61
1:K:613:ARG:NH1	1:K:706:TYR:OH	2.33	0.61
1:L:902:ASN:O	1:L:906:ALA:N	2.33	0.61
1:K:501:THR:OG1	1:K:502:ASN:OD1	2.17	0.61
1:J:64:LEU:N	1:L:747:ARG:O	2.34	0.60
1:K:514:TYR:OH	1:K:518:ARG:NH1	2.34	0.60
1:K:109:ARG:NH2	1:K:558:SER:OG	2.34	0.60
1:L:726:ASN:H	1:L:727:HIS:CD2	2.19	0.60
1:L:344:LEU:H	1:L:344:LEU:HD23	1.65	0.60
1:L:58:THR:OG1	1:L:59:ASP:N	2.35	0.60
1:L:727:HIS:CE1	1:L:876:LEU:HD13	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:720:ASP:OD1	1:J:722:THR:N	2.28	0.60
1:J:771:ASN:HD21	1:J:874:LYS:HA	1.65	0.60
1:L:114:LYS:NZ	1:L:116:TYR:O	2.33	0.60
1:J:655:ASN:CB	1:J:936:VAL:HG12	2.32	0.60
1:K:771:ASN:ND2	1:K:873:LYS:O	2.25	0.60
1:L:526:ASP:OD1	1:L:527:CYS:N	2.33	0.60
1:J:248:ARG:O	1:J:248:ARG:HG3	2.02	0.60
1:J:438:LYS:HB3	1:J:453:LYS:HG3	1.84	0.60
1:L:474:ASN:O	1:L:478:ASN:ND2	2.33	0.60
1:J:662:ASN:N	1:J:662:ASN:OD1	2.35	0.60
1:K:826:GLN:NE2	1:L:250:THR:O	2.34	0.60
2:Z:263:HIS:ND1	2:Z:290:THR:OG1	2.34	0.60
1:J:512:TYR:O	1:J:516:ASN:ND2	2.31	0.60
1:J:237:THR:OG1	1:J:298:ASP:OD1	2.20	0.60
1:K:262:GLN:NE2	1:K:263:ASN:OD1	2.35	0.60
1:L:180:ILE:HG22	1:L:181:LYS:HG2	1.84	0.60
1:K:726:ASN:OD1	1:K:726:ASN:N	2.35	0.59
1:J:383:ASP:O	1:J:384:SER:C	2.39	0.59
1:J:747:ARG:HH22	1:K:61:SER:HA	1.66	0.59
1:J:832:HIS:CD2	1:K:253:ASN:HB2	2.37	0.59
1:J:338:ARG:HG3	1:J:342:ILE:CG2	2.31	0.59
1:K:818:ASP:CB	1:K:869:SER:HA	2.31	0.59
1:L:656:ASP:O	1:L:659:SER:OG	2.20	0.59
2:Z:263:HIS:HB2	2:Z:288:LEU:HD13	1.85	0.59
1:J:206:ASP:OD1	1:J:210:GLN:N	2.35	0.59
1:J:425:LEU:HD11	1:K:470:ALA:HB3	1.84	0.59
1:K:131:ASN:OD1	1:K:131:ASN:N	2.35	0.59
1:K:231:ARG:HH11	1:K:231:ARG:HG2	1.68	0.59
1:K:599:ASP:O	1:K:603:VAL:HG13	2.02	0.59
1:L:954:THR:HB	1:L:955:PRO:HD3	1.85	0.59
1:J:411:ASN:HB3	1:J:531:LEU:CD2	2.22	0.59
1:J:815:GLN:HE22	1:K:563:ASN:CG	2.05	0.59
1:K:14:HIS:CE1	1:K:23:TYR:CZ	2.90	0.59
1:L:318:ASN:OD1	1:L:318:ASN:N	2.35	0.59
1:L:726:ASN:O	1:L:727:HIS:C	2.38	0.59
1:J:7:MET:SD	1:J:7:MET:N	2.76	0.59
1:J:35:THR:O	1:J:35:THR:OG1	2.15	0.59
1:J:61:SER:HA	1:L:745:ASN:HB2	1.84	0.59
1:K:497:LYS:O	1:K:518:ARG:NH2	2.35	0.59
1:L:538:GLU:CD	1:L:538:GLU:H	2.06	0.59
1:J:78:TYR:CE1	1:J:706:TYR:HB3	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:88:VAL:HG22	1:J:630:PHE:HZ	1.68	0.59
1:K:646:ARG:NH1	1:K:943:HIS:O	2.36	0.59
1:K:650:ASN:HD21	1:L:25:SER:H	1.50	0.59
1:J:544:ASN:OD1	1:J:547:ASN:N	2.26	0.59
1:K:340:ASN:O	1:K:342:ILE:N	2.36	0.59
1:K:853:TYR:OH	1:L:297:GLU:OE2	2.20	0.59
1:L:575:GLN:OE1	1:L:577:PHE:N	2.24	0.59
2:Z:25:CGU:OE21	2:Z:28:ARG:HD3	2.03	0.59
1:L:938:ARG:O	1:L:949:THR:HA	2.03	0.59
1:J:381:LEU:O	1:J:382:LEU:C	2.42	0.58
1:K:720:ASP:OD1	1:K:722:THR:N	2.26	0.58
1:L:546:PHE:HE1	1:L:879:ARG:HH21	1.51	0.58
1:J:348:ASN:ND2	1:J:368:ASP:OD2	2.29	0.58
1:J:364:ASN:ND2	1:J:366:VAL:O	2.32	0.58
1:K:24:LEU:HB3	1:K:28:LEU:HD11	1.86	0.58
2:Z:46:ASP:OD1	2:Z:46:ASP:N	2.36	0.58
1:K:408:ILE:HG12	1:K:536:SER:HB3	1.85	0.58
1:K:437:VAL:C	1:K:453:LYS:HB2	2.24	0.58
1:J:70:PRO:HA	1:J:84:PHE:HB3	1.86	0.58
1:J:473:ILE:HB	1:L:422:CYS:HB3	1.86	0.58
1:K:341:PHE:HD2	1:K:344:LEU:HD12	1.68	0.58
1:K:780:GLN:O	1:K:784:ASN:ND2	2.30	0.58
1:K:364:ASN:OD1	1:K:366:VAL:N	2.36	0.58
1:L:346:TYR:CZ	1:L:597:ARG:HD3	2.38	0.58
1:J:338:ARG:O	1:J:557:ARG:NE	2.35	0.58
1:J:448:ASN:CG	1:L:290:PRO:HD2	2.24	0.58
1:J:448:ASN:O	1:J:450:THR:HG23	2.04	0.58
1:J:508:ASN:OD1	1:J:511:THR:N	2.37	0.58
1:K:80:TYR:CE1	1:K:596:PHE:HD2	2.21	0.58
1:K:177:LEU:O	1:K:228:ALA:HB1	2.04	0.58
1:J:64:LEU:HB2	1:L:747:ARG:O	2.03	0.58
1:J:611:ASP:OD1	1:J:612:LEU:N	2.36	0.58
1:J:913:ASP:N	1:J:913:ASP:OD1	2.37	0.58
1:K:19:ASP:OD1	1:K:22:GLU:HG3	2.03	0.58
1:K:440:THR:HG22	1:K:451:TRP:CE2	2.38	0.58
1:K:727:HIS:O	1:K:757:LYS:NZ	2.36	0.58
1:K:808:ASN:ND2	1:K:879:ARG:HB3	2.19	0.58
1:K:887:SER:OG	1:K:888:SER:N	2.33	0.58
2:Z:5:LEU:HD12	2:Z:8:MET:HB3	1.84	0.58
1:K:847:MET:SD	1:K:848:ARG:NH2	2.76	0.58
1:J:368:ASP:OD1	1:J:369:LEU:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:375:GLU:O	1:J:377:SER:N	2.37	0.58
1:J:770:CYS:SG	1:J:875:PHE:HB3	2.44	0.58
1:K:289:GLN:OE1	1:L:448:ASN:ND2	2.36	0.58
1:K:491:TYR:OH	1:K:549:HIS:ND1	2.36	0.58
1:L:369:LEU:H	1:L:372:ARG:HH12	1.50	0.58
1:J:655:ASN:HB2	1:J:936:VAL:HG12	1.86	0.58
1:K:207:LYS:O	1:K:209:PHE:N	2.37	0.58
2:Z:287:ARG:NH1	2:Z:429:ARG:O	2.37	0.58
1:J:401:SER:OG	1:J:402:TYR:N	2.37	0.57
1:K:180:ILE:HG22	1:K:181:LYS:HG2	1.84	0.57
1:L:93:VAL:HB	1:L:584:LEU:HD11	1.84	0.57
1:J:444:GLY:O	1:J:445:ASP:HB3	2.04	0.57
1:L:192:ALA:HB2	1:L:201:LYS:HB2	1.85	0.57
1:J:100:TYR:HE1	1:J:627:TYR:HB3	1.68	0.57
1:K:407:ARG:HE	1:K:876:LEU:HD21	1.67	0.57
1:K:847:MET:HE1	1:L:220:TRP:HB3	1.86	0.57
1:J:448:ASN:HA	1:L:290:PRO:HD2	1.85	0.57
1:L:348:ASN:ND2	1:L:372:ARG:O	2.36	0.57
1:L:690:ALA:HA	1:L:882:TRP:O	2.04	0.57
2:Z:48:ASP:OD1	2:Z:49:GLN:N	2.35	0.57
1:J:62:GLN:OE1	1:J:92:ARG:NE	2.38	0.57
1:J:377:SER:O	1:J:378:TYR:C	2.41	0.57
1:J:534:ARG:H	1:K:559:MET:HE2	1.69	0.57
1:K:337:PHE:CZ	1:K:569:PHE:HE2	2.23	0.57
1:L:601:ASN:ND2	1:L:613:ARG:HH21	2.01	0.57
1:L:693:ARG:O	1:L:725:LEU:HD13	2.05	0.57
1:J:84:PHE:HE1	1:J:626:LEU:HD22	1.67	0.57
1:K:335:ILE:O	1:K:558:SER:OG	2.21	0.57
1:K:431:THR:OG1	1:K:463:ILE:N	2.38	0.57
1:L:211:PRO:HD2	1:L:231:ARG:HH12	1.70	0.57
1:L:440:THR:HG21	1:L:449:THR:HG22	1.87	0.57
1:L:770:CYS:SG	1:L:772:MET:N	2.76	0.57
1:K:239:MET:O	1:K:240:LYS:NZ	2.37	0.57
1:K:368:ASP:OD1	1:K:372:ARG:NH1	2.36	0.57
1:K:605:GLN:HE21	1:K:714:GLY:HA2	1.69	0.57
1:K:111:PRO:HA	1:K:565:ARG:HE	1.69	0.57
1:L:405:ASP:OD1	1:L:405:ASP:N	2.26	0.57
1:J:700:PRO:HG3	1:J:716:ILE:HD13	1.86	0.57
1:K:551:ASN:OD1	1:K:554:LEU:N	2.29	0.57
1:J:20:ALA:HA	1:J:23:TYR:CZ	2.39	0.57
1:J:57:THR:HG23	1:J:632:PRO:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:531:LEU:HD13	1:K:116:TYR:CD2	2.40	0.57
1:K:531:LEU:HD13	1:L:116:TYR:CD2	2.39	0.57
1:L:724:TYR:CD2	1:L:725:LEU:HG	2.40	0.57
1:K:459:GLU:HG2	1:K:460:ARG:HG3	1.86	0.56
1:K:676:ILE:HG22	1:K:914:MET:HB2	1.85	0.56
1:K:745:ASN:HD22	1:L:61:SER:HA	1.70	0.56
1:L:80:TYR:HB3	1:L:596:PHE:CD1	2.35	0.56
1:J:336:ALA:HB2	1:J:558:SER:HA	1.85	0.56
1:J:448:ASN:HD22	1:L:289:GLN:CB	2.18	0.56
1:J:461:ASN:HD21	1:L:170:HIS:CA	2.17	0.56
1:K:209:PHE:O	1:K:210:GLN:C	2.43	0.56
1:J:938:ARG:NH2	1:K:12:TYR:O	2.34	0.56
1:K:6:MET:SD	1:K:7:MET:N	2.70	0.56
1:K:726:ASN:ND2	1:K:877:CYS:O	2.38	0.56
1:L:416:ASP:OD1	1:L:416:ASP:N	2.38	0.56
1:L:551:ASN:HD22	1:L:554:LEU:HD12	1.70	0.56
1:J:20:ALA:H	1:J:47:ASN:HB3	1.69	0.56
1:K:868:ASP:OD1	1:K:868:ASP:N	2.38	0.56
1:J:134:GLU:HB3	1:J:171:VAL:HG13	1.87	0.56
1:J:339:ASP:O	1:J:342:ILE:HG22	2.04	0.56
1:J:446:GLN:HA	1:J:449:THR:OG1	2.05	0.56
1:K:188:GLN:HG3	1:K:202:GLU:HB3	1.88	0.56
1:K:720:ASP:OD1	1:K:721:GLY:N	2.39	0.56
1:L:250:THR:HG21	1:L:257:GLY:H	1.71	0.56
1:L:341:PHE:HD2	1:L:344:LEU:HD11	1.71	0.56
1:L:646:ARG:HD3	1:L:942:PRO:O	2.05	0.56
1:J:660:ALA:HB1	1:J:931:PHE:O	2.06	0.56
1:L:766:ASN:HA	1:L:773:THR:HA	1.87	0.56
1:J:440:THR:OG1	1:J:446:GLN:HB3	2.05	0.56
1:K:746:ASP:OD2	1:L:63:ARG:NE	2.39	0.56
1:K:870:ILE:HG23	1:K:871:THR:N	2.21	0.56
2:Z:20:CGU:N	2:Z:44:TYR:OH	2.39	0.56
1:J:411:ASN:HD22	1:J:531:LEU:CA	2.17	0.56
1:K:729:PHE:HA	1:K:918:VAL:HG12	1.88	0.56
1:K:775:ASP:OD1	1:K:775:ASP:N	2.38	0.56
1:L:438:LYS:HZ1	1:L:453:LYS:HG3	1.71	0.56
2:Z:17:CYS:SG	2:Z:26:CGU:HB3	2.46	0.56
1:J:94:LEU:O	1:J:584:LEU:HD13	2.06	0.56
1:J:494:ASP:HA	1:J:497:LYS:HE2	1.87	0.56
1:J:538:GLU:OE1	1:J:538:GLU:N	2.38	0.56
1:L:825:TYR:O	1:L:826:GLN:NE2	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:461:ASN:HD21	1:L:170:HIS:HA	1.70	0.55
1:K:136:GLU:OE1	1:K:137:GLN:N	2.39	0.55
1:K:253:ASN:O	1:K:253:ASN:ND2	2.39	0.55
1:K:346:TYR:CE2	1:K:597:ARG:HG2	2.40	0.55
1:L:586:LEU:HG	1:L:941:GLN:NE2	2.21	0.55
1:J:219:GLN:OE1	1:J:221:ASN:ND2	2.39	0.55
1:J:440:THR:OG1	1:J:446:GLN:O	2.24	0.55
1:K:178:SER:HB2	1:K:225:ALA:HB3	1.89	0.55
1:K:431:THR:HG21	1:K:462:GLU:HB3	1.87	0.55
1:K:437:VAL:O	1:K:453:LYS:HB2	2.06	0.55
1:J:704:SER:O	1:J:705:GLY:C	2.44	0.55
1:K:335:ILE:HA	1:K:606:SER:HA	1.88	0.55
1:L:134:GLU:CB	1:L:171:VAL:HG13	2.26	0.55
1:L:409:ILE:HD13	1:L:409:ILE:H	1.71	0.55
1:L:755:GLU:OE2	1:L:756:ILE:N	2.38	0.55
1:K:750:THR:HG22	1:K:752:ASN:H	1.71	0.55
1:J:9:GLN:OE1	1:J:10:TRP:N	2.39	0.55
1:L:392:PHE:H	1:L:397:GLN:HB3	1.71	0.55
1:J:472:GLU:HG2	1:K:126:PRO:HB3	1.88	0.55
1:J:700:PRO:HA	1:J:710:TYR:CE1	2.42	0.55
1:K:19:ASP:CG	1:K:21:SER:HB3	2.27	0.55
1:K:137:GLN:OE1	1:K:170:HIS:NE2	2.39	0.55
1:K:537:LEU:HD13	1:K:539:TYR:H	1.71	0.55
1:J:88:VAL:HG22	1:J:630:PHE:CZ	2.41	0.55
1:J:849:GLU:OE1	1:K:216:GLY:N	2.40	0.55
1:L:307:HIS:ND1	1:L:328:MET:O	2.37	0.55
1:J:367:VAL:HB	1:J:951:TYR:HE2	1.72	0.55
1:J:626:LEU:HD12	1:J:627:TYR:H	1.72	0.55
1:J:808:ASN:ND2	1:J:879:ARG:HB3	2.22	0.55
1:K:352:ASN:OD1	1:K:352:ASN:N	2.40	0.55
1:L:39:PHE:HD2	1:L:41:LEU:HD21	1.72	0.55
1:L:692:THR:HG22	1:L:693:ARG:H	1.71	0.55
1:J:122:ASN:ND2	1:J:242:CYS:SG	2.80	0.54
1:J:644:MET:SD	1:K:28:LEU:HB3	2.46	0.54
1:L:344:LEU:HD23	1:L:344:LEU:N	2.21	0.54
1:J:657:TYR:O	1:J:658:LEU:C	2.43	0.54
1:K:338:ARG:NE	1:K:602:MET:O	2.32	0.54
1:L:138:ASN:OD1	1:L:167:LYS:NZ	2.40	0.54
1:L:757:LYS:HA	1:L:772:MET:HA	1.89	0.54
1:K:62:GLN:HE22	1:K:92:ARG:HE	1.55	0.54
1:K:528:TYR:HB3	1:L:120:ALA:HB1	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:745:ASN:HD21	1:K:747:ARG:HH22	1.55	0.54
1:L:341:PHE:O	1:L:344:LEU:HG	2.06	0.54
1:L:433:THR:HA	1:L:461:ASN:O	2.07	0.54
1:L:869:SER:OG	1:L:870:ILE:N	2.39	0.54
1:K:717:PRO:HA	1:K:720:ASP:OD1	2.08	0.54
1:L:81:LYS:HG3	1:L:595:ASN:OD1	2.08	0.54
1:K:241:PRO:O	1:K:245:SER:OG	2.26	0.54
1:J:403:ASP:OD1	1:J:405:ASP:N	2.40	0.54
1:J:746:ASP:OD2	1:K:63:ARG:NE	2.40	0.54
1:K:233:LEU:HB2	1:K:297:GLU:O	2.08	0.54
1:K:651:ASP:OD1	1:K:651:ASP:N	2.37	0.54
2:Z:358:ILE:HG23	2:Z:362:MET:HB2	1.89	0.54
1:J:682:ASN:OD1	1:J:683:TRP:N	2.41	0.54
1:J:834:HIS:O	1:J:834:HIS:ND1	2.41	0.54
1:K:432:ASP:O	1:K:433:THR:C	2.45	0.54
1:J:660:ALA:HA	1:J:933:VAL:HG22	1.89	0.54
1:J:692:THR:HG22	1:J:693:ARG:H	1.72	0.54
1:K:20:ALA:HA	1:K:23:TYR:CD2	2.43	0.54
1:L:729:PHE:HA	1:L:918:VAL:HG12	1.90	0.54
1:J:454:ASP:OD1	1:J:454:ASP:N	2.41	0.53
1:J:485:TYR:O	1:J:489:ALA:HB3	2.08	0.53
1:J:815:GLN:NE2	1:K:563:ASN:N	2.56	0.53
1:K:20:ALA:HB1	1:K:24:LEU:HG	1.89	0.53
1:K:94:LEU:HB2	1:K:630:PHE:HE1	1.72	0.53
1:J:217:GLU:OE2	1:J:219:GLN:NE2	2.31	0.53
1:J:278:SER:O	1:J:282:THR:HG23	2.08	0.53
1:K:22:GLU:O	1:K:24:LEU:N	2.41	0.53
1:K:181:LYS:NZ	1:K:182:ILE:O	2.41	0.53
1:K:673:ASN:ND2	1:K:917:GLU:OE1	2.41	0.53
1:L:575:GLN:OE1	1:L:576:LYS:N	2.41	0.53
1:J:431:THR:HG21	1:J:462:GLU:HG3	1.90	0.53
1:L:445:ASP:OD1	1:L:445:ASP:N	2.41	0.53
1:J:281:ALA:O	1:J:282:THR:C	2.46	0.53
1:J:600:VAL:HG13	1:J:604:LEU:HD11	1.91	0.53
1:J:678:ILE:HB	1:J:912:LEU:HD23	1.90	0.53
1:J:708:PRO:C	1:J:710:TYR:H	2.12	0.53
1:J:953:ARG:NE	1:J:956:PHE:O	2.36	0.53
1:J:64:LEU:HG	1:L:747:ARG:HB3	1.90	0.53
1:J:341:PHE:O	1:J:343:GLY:N	2.42	0.53
1:J:544:ASN:HD21	1:J:546:PHE:HB2	1.72	0.53
1:K:371:ASP:OD1	1:K:371:ASP:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:6:MET:HA	1:L:9:GLN:HE22	1.73	0.53
1:J:440:THR:HG21	1:J:449:THR:HG22	1.91	0.53
1:K:737:ASP:OD1	1:K:737:ASP:N	2.41	0.53
1:L:736:PHE:HE2	1:L:742:TRP:HD1	1.56	0.53
1:L:693:ARG:HH22	1:L:921:MET:HG3	1.74	0.53
1:J:656:ASP:OD1	1:J:657:TYR:N	2.37	0.53
1:J:666:PRO:HA	1:J:926:LEU:HD23	1.91	0.53
1:J:446:GLN:CA	1:J:449:THR:HB	2.39	0.53
1:K:508:ASN:OD1	1:K:511:THR:N	2.39	0.53
2:Z:25:CGU:O	2:Z:29:CGU:N	2.41	0.53
1:J:306:THR:HG22	1:J:329:PRO:HA	1.91	0.53
1:J:448:ASN:CA	1:L:290:PRO:HD2	2.38	0.53
1:J:279:THR:HA	1:J:282:THR:CG2	2.38	0.52
1:J:416:ASP:HB3	1:J:476:ASN:HD21	1.74	0.52
1:J:700:PRO:O	1:J:701:SER:C	2.46	0.52
1:K:335:ILE:O	1:K:336:ALA:HB2	2.10	0.52
1:K:430:ILE:HG21	2:Z:3:SER:HB2	1.89	0.52
1:K:835:ASN:OD1	1:K:836:ASN:N	2.42	0.52
1:K:208:THR:HG1	1:K:209:PHE:HD1	1.57	0.52
1:K:869:SER:OG	1:K:870:ILE:N	2.40	0.52
1:L:400:ASP:N	1:L:400:ASP:OD1	2.42	0.52
1:L:695:LYS:O	1:L:697:LYS:N	2.42	0.52
1:J:123:ALA:H	1:L:836:ASN:HD21	1.57	0.52
1:J:468:ASN:HB2	1:L:174:GLN:HE22	1.73	0.52
1:K:340:ASN:O	1:K:341:PHE:C	2.48	0.52
1:K:815:GLN:HB2	1:L:563:ASN:O	2.09	0.52
1:K:948:GLU:OE1	1:K:949:THR:N	2.43	0.52
1:L:615:ASP:OD1	1:L:615:ASP:N	2.41	0.52
1:J:411:ASN:ND2	1:J:530:ASN:O	2.42	0.52
1:J:440:THR:HG23	1:J:450:THR:CA	2.32	0.52
1:K:20:ALA:C	1:K:22:GLU:N	2.55	0.52
1:L:685:ALA:HB3	1:L:954:THR:HG21	1.91	0.52
1:L:726:ASN:O	1:L:728:THR:N	2.42	0.52
1:L:727:HIS:HE1	1:L:876:LEU:HD13	1.72	0.52
1:J:206:ASP:OD1	1:J:209:PHE:N	2.40	0.52
1:J:369:LEU:N	1:J:372:ARG:HH21	2.05	0.52
1:K:175:ALA:HB1	1:K:229:GLY:O	2.09	0.52
1:J:279:THR:CA	1:J:282:THR:HG23	2.38	0.52
1:J:837:SER:HB2	1:K:213:PRO:O	2.10	0.52
1:L:100:TYR:CE1	1:L:627:TYR:HB2	2.45	0.52
1:L:276:SER:OG	1:L:280:ASN:ND2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:494:ASP:HA	1:L:497:LYS:HE2	1.91	0.52
2:Z:28:ARG:CD	2:Z:37:THR:CG2	2.67	0.52
1:J:378:TYR:CD2	1:J:576:LYS:HG2	2.44	0.52
1:J:431:THR:HB	1:J:462:GLU:OE1	2.10	0.52
1:J:280:ASN:O	1:J:284:GLU:CG	2.58	0.52
1:K:369:LEU:HD12	1:K:372:ARG:HH22	1.74	0.52
1:L:606:SER:OG	1:L:609:GLY:N	2.41	0.52
1:L:646:ARG:NH1	1:L:941:GLN:O	2.43	0.52
1:J:334:TYR:O	1:J:607:SER:HB3	2.10	0.52
1:J:535:TRP:CG	1:J:536:SER:N	2.78	0.52
1:K:188:GLN:HA	1:K:204:PHE:HA	1.92	0.52
1:J:730:LYS:HD2	1:J:757:LYS:HE2	1.92	0.52
2:Z:97:ASP:OD2	2:Z:124:CYS:N	2.42	0.52
1:J:5:SER:HB3	1:L:905:TYR:HE1	1.75	0.51
1:J:364:ASN:OD1	1:J:365:ALA:N	2.44	0.51
1:J:486:SER:OG	1:J:487:ASN:N	2.43	0.51
1:J:99:THR:HG22	1:J:628:ALA:CB	2.40	0.51
1:J:434:PHE:HA	1:L:278:SER:H	1.75	0.51
1:K:656:ASP:OD2	1:K:659:SER:N	2.30	0.51
1:L:195:THR:OG1	1:L:199:ALA:N	2.44	0.51
1:L:342:ILE:HG22	1:L:343:GLY:N	2.25	0.51
1:L:695:LYS:O	1:L:696:THR:C	2.47	0.51
2:Z:134:LYS:NZ	2:Z:389:ASP:O	2.41	0.51
2:Z:316:GLN:HG3	2:Z:385:THR:HG21	1.92	0.51
1:J:181:LYS:NZ	1:J:182:ILE:H	2.08	0.51
1:J:336:ALA:HB2	1:J:558:SER:CA	2.40	0.51
1:J:440:THR:HA	1:J:451:TRP:CE2	2.45	0.51
1:J:528:TYR:HD2	1:J:835:ASN:HD22	1.58	0.51
1:J:731:LYS:HG2	1:J:917:GLU:HG2	1.93	0.51
1:K:24:LEU:HD22	1:K:28:LEU:HD11	1.93	0.51
1:K:313:LYS:HG3	1:K:315:GLY:H	1.75	0.51
1:K:745:ASN:OD1	1:K:745:ASN:N	2.44	0.51
1:L:78:TYR:C	1:L:598:LYS:HB2	2.30	0.51
1:L:601:ASN:OD1	1:L:613:ARG:NE	2.40	0.51
1:J:214:GLN:OE1	1:J:214:GLN:N	2.44	0.51
1:J:345:MET:HG2	1:J:596:PHE:HD1	1.75	0.51
1:J:411:ASN:ND2	1:J:529:ILE:O	2.44	0.51
1:J:820:THR:O	1:J:823:LYS:NZ	2.44	0.51
1:K:559:MET:O	1:K:560:LEU:C	2.47	0.51
1:J:472:GLU:OE1	1:J:473:ILE:N	2.43	0.51
1:L:459:GLU:OE1	1:L:459:GLU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:652:GLN:O	1:L:938:ARG:HA	2.10	0.51
1:L:693:ARG:NH1	1:L:728:THR:OG1	2.44	0.51
1:L:942:PRO:HD2	1:L:946:VAL:HG12	1.93	0.51
2:Z:24:TYR:HE1	2:Z:41:TRP:CE2	2.28	0.51
1:J:342:ILE:HD11	1:J:719:LEU:HB3	1.92	0.51
1:J:375:GLU:O	1:J:376:LEU:C	2.43	0.51
1:K:212:GLU:HB3	1:K:213:PRO:CD	2.40	0.51
1:K:335:ILE:H	1:K:335:ILE:CD1	2.21	0.51
1:L:606:SER:HG	1:L:608:LEU:H	1.59	0.51
1:L:848:ARG:O	1:L:848:ARG:NE	2.44	0.51
1:J:832:HIS:HD2	1:K:253:ASN:HB2	1.76	0.51
1:K:89:GLY:HA3	1:K:92:ARG:HD2	1.92	0.51
1:K:258:VAL:HG23	1:K:299:VAL:HA	1.93	0.51
1:K:535:TRP:CE2	1:K:814:ARG:HD3	2.46	0.51
1:L:168:LYS:HZ2	1:L:168:LYS:HB3	1.76	0.51
1:L:898:ASP:OD1	1:L:898:ASP:N	2.41	0.51
1:L:957:SER:O	1:L:957:SER:OG	2.26	0.51
1:J:635:HIS:HA	1:J:638:ALA:HB2	1.93	0.51
1:K:206:ASP:O	1:K:207:LYS:C	2.47	0.51
1:K:338:ARG:CZ	1:K:716:ILE:HD11	2.41	0.51
1:J:605:GLN:HG3	1:J:606:SER:N	2.25	0.51
1:J:736:PHE:O	1:J:739:SER:OG	2.21	0.51
1:L:262:GLN:NE2	1:L:263:ASN:OD1	2.43	0.51
1:J:121:TYR:CE1	1:L:858:PRO:HG2	2.46	0.51
1:J:377:SER:OG	1:J:378:TYR:N	2.40	0.51
1:J:448:ASN:HA	1:L:290:PRO:CD	2.41	0.51
1:J:643:ALA:O	1:J:644:MET:C	2.49	0.51
1:K:337:PHE:HZ	1:K:569:PHE:HE2	1.57	0.51
1:K:960:ASN:CG	1:K:962:THR:H	2.14	0.51
1:J:448:ASN:HB3	1:L:290:PRO:CD	2.41	0.50
1:K:346:TYR:CZ	1:K:597:ARG:HG2	2.45	0.50
1:L:696:THR:H	1:L:925:THR:HA	1.76	0.50
1:J:347:TYR:OH	1:J:575:GLN:OE1	2.20	0.50
1:J:383:ASP:OD2	1:J:802:MET:HB3	2.11	0.50
1:J:575:GLN:OE1	1:J:576:LYS:N	2.44	0.50
1:K:8:PRO:O	1:K:11:SER:OG	2.21	0.50
1:K:133:CYS:HA	1:K:232:VAL:CG2	2.41	0.50
1:K:887:SER:OG	1:K:889:ASN:OD1	2.27	0.50
1:L:91:ASN:N	1:L:91:ASN:OD1	2.43	0.50
1:L:695:LYS:O	1:L:698:GLU:N	2.37	0.50
1:L:853:TYR:CG	1:L:854:PRO:HD2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:72:ASP:OD1	1:J:73:ARG:N	2.44	0.50
1:K:232:VAL:O	1:K:296:SER:HA	2.10	0.50
1:L:546:PHE:CE2	1:L:722:THR:HB	2.47	0.50
1:L:612:LEU:O	1:L:616:GLY:N	2.44	0.50
2:Z:98:GLN:HG2	2:Z:392:PHE:HZ	1.76	0.50
1:J:278:SER:O	1:J:281:ALA:HB3	2.10	0.50
1:K:537:LEU:HD22	1:K:538:GLU:H	1.77	0.50
1:J:251:ASN:OD1	1:J:254:GLY:N	2.44	0.50
1:J:440:THR:HG22	1:J:451:TRP:CD1	2.47	0.50
1:J:549:HIS:CE1	1:J:550:ARG:HG2	2.47	0.50
1:J:641:LEU:O	1:J:644:MET:HB2	2.11	0.50
1:K:922:ASP:OD1	1:K:922:ASP:N	2.45	0.50
1:J:510:ASN:OD1	1:J:510:ASN:N	2.44	0.50
1:J:635:HIS:HA	1:J:638:ALA:CB	2.41	0.50
1:J:878:ASP:N	1:J:878:ASP:OD1	2.44	0.50
1:K:531:LEU:HD22	1:L:116:TYR:HB3	1.93	0.50
1:L:334:TYR:OH	1:L:555:ARG:NH2	2.44	0.50
1:L:942:PRO:HG2	1:L:943:HIS:H	1.75	0.50
1:J:747:ARG:NH1	1:K:62:GLN:O	2.45	0.50
1:K:419:PRO:HG3	1:L:127:LYS:HG3	1.93	0.50
1:K:835:ASN:OD1	1:K:836:ASN:ND2	2.44	0.50
1:L:224:ASP:OD1	1:L:224:ASP:N	2.45	0.50
1:L:922:ASP:OD1	1:L:923:GLU:N	2.44	0.50
2:Z:329:GLU:HG2	2:Z:330:LYS:HG3	1.94	0.50
1:J:411:ASN:HA	1:J:480:TRP:HH2	1.76	0.50
1:J:646:ARG:HH12	1:J:943:HIS:C	2.15	0.50
1:K:287:ASN:OD1	1:K:289:GLN:NE2	2.43	0.50
1:K:601:ASN:HB2	1:K:602:MET:HE1	1.93	0.50
1:J:63:ARG:HG3	1:J:63:ARG:HH11	1.76	0.50
1:J:448:ASN:CB	1:L:290:PRO:CD	2.90	0.50
1:J:702:LEU:HD12	1:J:703:GLY:N	2.17	0.50
1:K:100:TYR:CE1	1:K:627:TYR:HB2	2.47	0.50
1:J:377:SER:C	1:J:379:GLN:N	2.63	0.49
1:J:224:ASP:N	1:J:224:ASP:OD1	2.45	0.49
1:K:9:GLN:OE1	1:K:9:GLN:N	2.45	0.49
1:K:345:MET:HB2	1:K:347:TYR:CE2	2.47	0.49
1:L:442:ALA:HA	1:L:446:GLN:HB2	1.93	0.49
1:L:501:THR:OG1	1:L:502:ASN:OD1	2.29	0.49
1:K:731:LYS:HG2	1:K:917:GLU:HB3	1.93	0.49
1:L:114:LYS:H	1:L:333:ASN:HB3	1.78	0.49
1:L:415:GLU:OE1	1:L:415:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:652:GLN:HB2	1:J:939:VAL:HB	1.94	0.49
1:K:80:TYR:CE1	1:K:596:PHE:HB2	2.45	0.49
1:L:67:ARG:NH2	1:L:625:CYS:SG	2.85	0.49
1:L:80:TYR:O	1:L:595:ASN:HA	2.12	0.49
1:L:419:PRO:HB2	1:L:421:TYR:CE1	2.48	0.49
1:J:280:ASN:O	1:J:281:ALA:C	2.51	0.49
1:J:712:TYR:OH	1:J:714:GLY:HA3	2.12	0.49
1:K:481:ARG:NE	1:K:526:ASP:OD2	2.33	0.49
1:L:647:ASN:CG	1:L:649:THR:HG22	2.32	0.49
1:J:94:LEU:CG	1:J:95:ASP:N	2.75	0.49
1:J:414:THR:OG1	1:J:415:GLU:N	2.45	0.49
1:L:599:ASP:OD2	1:L:602:MET:N	2.44	0.49
1:J:50:VAL:HG22	1:L:896:LEU:HB3	1.95	0.49
1:J:410:GLU:HG2	1:J:534:ARG:HG3	1.94	0.49
1:J:421:TYR:CE1	1:J:472:GLU:HB2	2.47	0.49
1:J:438:LYS:O	1:J:450:THR:HB	2.13	0.49
1:L:137:GLN:HB3	1:L:170:HIS:CE1	2.47	0.49
1:J:46:ARG:HG2	1:L:653:SER:HB2	1.95	0.49
1:K:183:THR:HG21	1:K:204:PHE:CE1	2.48	0.49
1:K:693:ARG:HG2	1:K:725:LEU:HD13	1.95	0.49
1:L:170:HIS:ND1	1:L:170:HIS:N	2.59	0.49
1:L:853:TYR:CD1	1:L:854:PRO:HD2	2.48	0.49
1:J:383:ASP:O	1:J:386:GLY:O	2.31	0.49
1:J:645:LEU:O	1:J:647:ASN:N	2.46	0.49
1:J:737:ASP:OD1	1:J:737:ASP:N	2.45	0.49
1:K:279:THR:O	1:K:282:THR:OG1	2.27	0.49
1:L:415:GLU:O	1:L:476:ASN:ND2	2.35	0.49
1:L:431:THR:OG1	1:L:463:ILE:N	2.45	0.49
1:J:276:SER:OG	1:J:277:THR:N	2.44	0.48
1:J:887:SER:OG	1:J:890:PHE:N	2.46	0.48
1:J:46:ARG:HD2	1:J:46:ARG:HA	1.72	0.48
1:J:250:THR:N	1:J:255:GLY:O	2.46	0.48
1:J:604:LEU:HD23	1:J:604:LEU:N	2.27	0.48
1:K:211:PRO:C	1:K:231:ARG:HH12	2.16	0.48
1:K:240:LYS:HD3	1:K:241:PRO:HD2	1.94	0.48
1:K:731:LYS:HB2	1:K:753:GLU:OE2	2.13	0.48
1:L:346:TYR:O	1:L:347:TYR:CG	2.67	0.48
1:J:438:LYS:HZ1	1:J:453:LYS:HA	1.78	0.48
1:K:611:ASP:OD2	1:K:614:VAL:N	2.45	0.48
1:K:766:ASN:HD22	1:K:771:ASN:HA	1.76	0.48
1:L:392:PHE:CZ	1:L:394:MET:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:724:TYR:CD1	1:L:724:TYR:N	2.81	0.48
1:J:277:THR:HA	1:K:434:PHE:HD1	1.79	0.48
1:K:111:PRO:CA	1:K:565:ARG:HE	2.26	0.48
1:K:610:ASN:OD1	1:K:610:ASN:N	2.46	0.48
1:L:548:HIS:CG	1:L:549:HIS:H	2.32	0.48
1:L:644:MET:O	1:L:650:ASN:ND2	2.47	0.48
1:J:181:LYS:HZ2	1:J:182:ILE:H	1.60	0.48
1:K:815:GLN:N	1:K:815:GLN:OE1	2.47	0.48
1:L:691:PHE:N	1:L:691:PHE:CD1	2.80	0.48
1:J:418:LEU:HD12	1:K:482:ASN:HA	1.95	0.48
1:K:590:TYR:HE1	1:K:945:GLY:HA2	1.78	0.48
1:L:307:HIS:HD1	1:L:307:HIS:H	1.61	0.48
1:J:611:ASP:OD1	1:J:613:ARG:N	2.46	0.48
1:K:724:TYR:O	1:K:727:HIS:NE2	2.47	0.48
2:Z:55:CYS:HB3	2:Z:81:CYS:SG	2.53	0.48
1:J:531:LEU:HD13	1:K:116:TYR:CG	2.48	0.48
1:K:343:GLY:O	1:K:597:ARG:NH1	2.46	0.48
1:K:586:LEU:HB2	1:K:941:GLN:OE1	2.13	0.48
1:L:691:PHE:CZ	1:L:882:TRP:HB3	2.49	0.48
1:J:290:PRO:HD2	1:K:448:ASN:CG	2.34	0.48
1:J:345:MET:HG2	1:J:596:PHE:CD1	2.48	0.48
1:J:409:ILE:HD13	1:J:409:ILE:H	1.79	0.48
1:K:227:ALA:O	1:K:228:ALA:HB2	2.14	0.48
1:K:685:ALA:HB2	1:L:10:TRP:HZ2	1.77	0.48
1:L:771:ASN:N	1:L:771:ASN:OD1	2.38	0.48
1:J:815:GLN:HB3	1:J:871:THR:OG1	2.14	0.48
1:K:58:THR:OG1	1:K:59:ASP:N	2.47	0.48
1:K:334:TYR:HB2	1:K:607:SER:HB3	1.96	0.48
1:K:530:ASN:O	1:L:563:ASN:ND2	2.47	0.48
1:K:575:GLN:OE1	1:K:576:LYS:N	2.47	0.48
1:J:84:PHE:CE1	1:J:626:LEU:HD22	2.48	0.47
1:J:446:GLN:HA	1:J:449:THR:CB	2.43	0.47
1:J:734:ILE:O	1:J:735:THR:OG1	2.29	0.47
1:K:19:ASP:C	1:K:21:SER:N	2.64	0.47
1:L:207:LYS:NZ	1:L:270:VAL:O	2.37	0.47
1:L:435:GLN:NE2	1:L:454:ASP:OD1	2.46	0.47
1:J:411:ASN:HD22	1:J:530:ASN:C	2.17	0.47
1:J:476:ASN:OD1	1:J:477:ALA:N	2.46	0.47
1:J:497:LYS:O	1:J:518:ARG:NH1	2.46	0.47
1:K:723:PHE:O	1:K:878:ASP:HB2	2.14	0.47
1:K:870:ILE:HG13	1:K:871:THR:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:729:PHE:O	1:J:757:LYS:NZ	2.46	0.47
1:K:113:PHE:HA	1:K:335:ILE:HD11	1.96	0.47
1:L:438:LYS:C	1:L:450:THR:HG23	2.34	0.47
1:L:887:SER:OG	1:L:890:PHE:N	2.48	0.47
1:J:656:ASP:CG	1:J:659:SER:H	2.15	0.47
1:K:134:GLU:OE2	1:K:235:LYS:N	2.47	0.47
1:K:224:ASP:OD1	1:K:224:ASP:N	2.47	0.47
1:K:480:TRP:CZ2	1:K:484:LEU:HD21	2.49	0.47
1:K:569:PHE:CD1	1:K:569:PHE:N	2.82	0.47
1:K:690:ALA:HB3	1:K:930:LEU:HB2	1.96	0.47
1:J:535:TRP:CE3	1:J:814:ARG:HB3	2.50	0.47
1:J:699:THR:O	1:J:700:PRO:C	2.45	0.47
1:J:715:SER:O	1:J:717:PRO:HD3	2.13	0.47
1:J:897:THR:HG23	1:J:900:GLY:H	1.78	0.47
1:J:65:THR:OG1	1:J:629:THR:HG23	2.15	0.47
1:J:282:THR:OG1	1:J:283:ASN:N	2.48	0.47
1:J:338:ARG:NH1	1:J:716:ILE:HG13	2.30	0.47
1:J:531:LEU:O	1:J:532:GLY:C	2.53	0.47
1:J:639:SER:OG	1:J:640:THR:N	2.48	0.47
1:J:664:LEU:HD23	1:J:928:TYR:HA	1.95	0.47
1:K:14:HIS:CE1	1:K:23:TYR:CE1	3.02	0.47
1:K:384:SER:O	1:K:801:ARG:NH2	2.47	0.47
1:K:565:ARG:HB3	1:K:566:TYR:CD2	2.50	0.47
1:K:578:PHE:CG	1:K:579:ALA:N	2.82	0.47
1:K:822:TYR:CZ	1:K:824:ASP:HB2	2.49	0.47
1:J:378:TYR:CE1	1:J:382:LEU:HD12	2.50	0.47
1:J:508:ASN:ND2	1:J:510:ASN:OD1	2.47	0.47
1:J:577:PHE:HB3	1:J:580:ILE:HG12	1.96	0.47
1:J:600:VAL:HG13	1:J:604:LEU:CD1	2.44	0.47
1:J:639:SER:O	1:J:640:THR:C	2.52	0.47
1:K:19:ASP:HB2	1:K:21:SER:HB3	1.97	0.47
1:K:169:THR:HB	1:L:457:PHE:CD1	2.50	0.47
1:J:59:ASP:O	1:J:60:ARG:C	2.52	0.47
1:J:211:PRO:HD2	1:J:231:ARG:NH2	2.30	0.47
1:J:271:GLU:N	1:J:271:GLU:OE1	2.48	0.47
1:J:338:ARG:HH11	1:J:716:ILE:HG13	1.80	0.47
1:J:412:HIS:O	1:K:117:SER:N	2.45	0.47
1:K:90:ASP:O	1:K:92:ARG:HG3	2.15	0.47
1:K:727:HIS:HE1	1:K:876:LEU:HD13	1.78	0.47
1:L:78:TYR:O	1:L:598:LYS:N	2.48	0.47
1:L:489:ALA:HA	1:L:492:LEU:HD23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:56:VAL:O	1:J:634:ALA:N	2.43	0.47
1:J:338:ARG:CG	1:J:342:ILE:HG23	2.43	0.47
1:K:271:GLU:OE1	1:K:271:GLU:N	2.48	0.47
1:L:369:LEU:H	1:L:372:ARG:NH1	2.12	0.47
1:L:538:GLU:OE1	1:L:538:GLU:N	2.35	0.47
1:L:908:SER:OG	1:L:910:HIS:NE2	2.30	0.47
2:Z:25:CGU:OE21	2:Z:28:ARG:NH1	2.48	0.47
1:J:196:VAL:H	1:J:199:ALA:HB2	1.81	0.46
1:J:374:THR:O	1:J:377:SER:HB3	2.15	0.46
1:K:134:GLU:HB3	1:K:171:VAL:HG22	1.97	0.46
1:K:808:ASN:O	1:K:877:CYS:HA	2.15	0.46
1:L:761:ASP:OD2	1:L:764:GLY:N	2.45	0.46
1:J:61:SER:OG	1:L:746:ASP:N	2.49	0.46
1:J:345:MET:SD	1:J:573:VAL:HG11	2.55	0.46
1:J:413:GLY:HA3	1:K:117:SER:O	2.15	0.46
1:J:657:TYR:CD1	1:J:657:TYR:C	2.89	0.46
1:K:287:ASN:O	1:K:289:GLN:NE2	2.38	0.46
1:K:544:ASN:CG	1:K:724:TYR:HE2	2.18	0.46
1:L:692:THR:HG21	1:L:723:PHE:CD2	2.50	0.46
1:J:636:ASN:OD1	1:J:636:ASN:N	2.47	0.46
1:J:699:THR:O	1:J:701:SER:N	2.49	0.46
1:K:100:TYR:HE1	1:K:627:TYR:HB2	1.80	0.46
1:K:431:THR:OG1	1:K:432:ASP:N	2.46	0.46
1:L:20:ALA:HA	1:L:23:TYR:CE2	2.50	0.46
1:J:58:THR:OG1	1:J:59:ASP:N	2.49	0.46
1:J:92:ARG:O	1:J:93:VAL:HG13	2.15	0.46
1:J:201:LYS:H	1:J:201:LYS:HD3	1.80	0.46
1:K:403:ASP:OD1	1:K:406:VAL:N	2.38	0.46
1:K:554:LEU:HD23	1:K:554:LEU:HA	1.67	0.46
1:L:578:PHE:CG	1:L:579:ALA:N	2.83	0.46
1:L:766:ASN:OD1	1:L:766:ASN:N	2.49	0.46
1:L:904:LEU:O	1:L:907:ASN:HB2	2.16	0.46
1:J:531:LEU:HD22	1:K:116:TYR:HB3	1.97	0.46
1:K:572:GLN:N	1:K:572:GLN:OE1	2.49	0.46
1:L:24:LEU:HD12	1:L:24:LEU:H	1.80	0.46
1:L:239:MET:O	1:L:325:GLN:NE2	2.48	0.46
2:Z:245:LYS:HE2	2:Z:264:GLU:HG2	1.98	0.46
1:J:250:THR:OG1	1:J:255:GLY:O	2.32	0.46
1:K:217:GLU:HG2	1:K:222:GLU:HB3	1.98	0.46
1:K:339:ASP:O	1:K:340:ASN:C	2.50	0.46
1:K:565:ARG:HD2	1:K:566:TYR:CE1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:817:VAL:HG12	1:K:818:ASP:O	2.16	0.46
1:J:438:LYS:NZ	1:J:453:LYS:HA	2.31	0.46
1:K:899:LEU:HA	1:K:899:LEU:HD23	1.68	0.46
1:L:307:HIS:HB2	1:L:517:LYS:NZ	2.30	0.46
1:L:834:HIS:O	1:L:834:HIS:ND1	2.48	0.46
1:J:61:SER:CB	1:L:745:ASN:HB2	2.45	0.46
1:J:644:MET:O	1:J:645:LEU:C	2.52	0.46
1:J:706:TYR:CE2	1:J:708:PRO:HA	2.51	0.46
1:K:829:GLY:O	1:K:833:GLN:HG3	2.16	0.46
1:K:928:TYR:CZ	1:K:930:LEU:HD21	2.50	0.46
1:L:188:GLN:NE2	1:L:203:ILE:O	2.49	0.46
1:L:878:ASP:O	1:L:879:ARG:C	2.53	0.46
1:J:717:PRO:HA	1:J:720:ASP:OD1	2.16	0.46
1:K:23:TYR:HD1	1:K:23:TYR:O	1.98	0.46
1:K:724:TYR:CD1	1:K:725:LEU:HG	2.51	0.46
1:K:849:GLU:OE1	1:L:216:GLY:N	2.48	0.46
1:L:341:PHE:HB3	1:L:344:LEU:CD1	2.46	0.46
1:L:759:SER:OG	1:L:760:VAL:N	2.49	0.46
1:J:269:GLN:NE2	1:J:269:GLN:H	2.14	0.46
1:J:603:VAL:O	1:J:604:LEU:C	2.55	0.46
1:J:655:ASN:HB3	1:J:936:VAL:HG12	1.98	0.46
1:J:786:ASN:HD21	1:J:892:SER:HB3	1.81	0.46
1:K:338:ARG:HA	1:K:557:ARG:HH21	1.80	0.46
1:K:954:THR:HB	1:K:955:PRO:HD3	1.98	0.46
2:Z:23:SER:O	2:Z:24:TYR:CE1	2.66	0.46
1:J:205:ALA:HB1	1:J:210:GLN:HB3	1.98	0.45
1:J:656:ASP:CG	1:J:657:TYR:N	2.70	0.45
1:J:665:TYR:HD1	1:J:665:TYR:HA	1.67	0.45
1:K:78:TYR:C	1:K:598:LYS:HD3	2.37	0.45
1:K:220:TRP:NE1	1:K:221:ASN:OD1	2.50	0.45
1:L:306:THR:HG22	1:L:329:PRO:HA	1.97	0.45
1:L:753:GLU:N	1:L:753:GLU:OE1	2.49	0.45
1:J:400:ASP:N	1:J:400:ASP:OD1	2.48	0.45
1:J:681:ARG:NH1	1:J:955:PRO:O	2.49	0.45
1:K:53:THR:OG1	1:K:54:HIS:N	2.50	0.45
1:K:55:ASP:OD1	1:K:55:ASP:N	2.50	0.45
1:K:600:VAL:HA	1:K:603:VAL:HG22	1.97	0.45
1:L:876:LEU:HD12	1:L:877:CYS:N	2.31	0.45
1:J:447:GLY:O	1:J:450:THR:HG23	2.16	0.45
1:J:535:TRP:CE2	1:J:814:ARG:HD3	2.52	0.45
1:K:78:TYR:O	1:K:598:LYS:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:288:ILE:HD12	1:L:437:VAL:HG12	1.99	0.45
1:K:776:TRP:O	1:K:780:GLN:HG2	2.17	0.45
1:L:341:PHE:HB3	1:L:344:LEU:HD11	1.97	0.45
1:J:63:ARG:HG3	1:J:63:ARG:NH1	2.32	0.45
1:J:92:ARG:HB2	1:J:92:ARG:HH11	1.82	0.45
1:J:132:SER:HB3	1:J:232:VAL:HG23	1.98	0.45
1:J:452:GLN:HB3	1:J:454:ASP:OD1	2.16	0.45
1:J:643:ALA:HA	1:J:646:ARG:HB2	1.98	0.45
1:K:41:LEU:HD13	1:K:41:LEU:HA	1.74	0.45
1:K:94:LEU:HB2	1:K:630:PHE:CE1	2.50	0.45
1:K:732:VAL:HA	1:K:915:THR:O	2.16	0.45
1:L:62:GLN:OE1	1:L:92:ARG:NE	2.47	0.45
1:L:651:ASP:CG	1:L:938:ARG:HD3	2.37	0.45
2:Z:402:GLY:HA3	2:Z:405:ARG:HD2	1.97	0.45
1:J:341:PHE:CZ	1:J:396:ASN:HB2	2.51	0.45
1:J:342:ILE:HG23	1:J:342:ILE:O	2.17	0.45
1:J:354:GLY:HA3	1:J:594:TRP:CZ3	2.52	0.45
1:J:474:ASN:ND2	1:J:476:ASN:OD1	2.43	0.45
1:K:490:LEU:HA	1:K:490:LEU:HD23	1.70	0.45
1:K:731:LYS:HB2	1:K:753:GLU:CD	2.37	0.45
1:K:745:ASN:ND2	1:L:60:ARG:O	2.50	0.45
1:K:955:PRO:HD2	1:K:956:PHE:HD1	1.81	0.45
1:L:109:ARG:HD3	1:L:113:PHE:CG	2.52	0.45
1:L:341:PHE:CD2	1:L:344:LEU:HD11	2.52	0.45
2:Z:3:SER:OG	2:Z:6:CGU:N	2.50	0.45
2:Z:62:LYS:HB3	2:Z:69:THR:HB	1.99	0.45
1:J:239:MET:O	1:J:325:GLN:NE2	2.41	0.45
1:J:440:THR:HG22	1:J:451:TRP:NE1	2.31	0.45
1:J:712:TYR:CZ	1:J:714:GLY:CA	2.89	0.45
1:K:691:PHE:CE1	1:K:882:TRP:HB2	2.38	0.45
1:K:960:ASN:ND2	1:K:962:THR:H	2.14	0.45
1:L:205:ALA:HA	1:L:210:GLN:HG2	1.98	0.45
1:L:606:SER:HG	1:L:609:GLY:H	1.65	0.45
1:K:198:GLY:O	1:K:200:GLY:N	2.48	0.45
1:K:437:VAL:HA	1:K:453:LYS:H	1.81	0.45
1:L:178:SER:OG	1:L:179:GLY:N	2.50	0.45
1:L:647:ASN:OD1	1:L:649:THR:HG22	2.16	0.45
1:L:771:ASN:ND2	1:L:874:LYS:HA	2.32	0.45
1:J:269:GLN:H	1:J:269:GLN:HE21	1.65	0.45
1:J:331:ARG:HG2	1:J:490:LEU:HD13	1.99	0.45
1:J:745:ASN:O	1:J:747:ARG:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:691:PHE:CD1	1:K:691:PHE:N	2.83	0.45
1:L:270:VAL:HG22	1:L:297:GLU:HB3	1.98	0.45
1:L:356:LEU:O	1:L:365:ALA:HB3	2.16	0.45
1:L:373:ASN:H	1:L:662:ASN:ND2	2.15	0.45
1:L:403:ASP:OD2	1:L:406:VAL:N	2.42	0.45
1:L:649:THR:HG23	1:L:650:ASN:OD1	2.17	0.45
1:L:726:ASN:C	1:L:728:THR:N	2.69	0.45
1:L:830:ILE:HD12	1:L:830:ILE:H	1.82	0.45
1:J:104:ARG:NH1	1:L:762:GLY:O	2.38	0.45
1:J:207:LYS:HG2	1:J:270:VAL:HB	1.99	0.45
1:J:382:LEU:O	1:J:383:ASP:C	2.53	0.45
1:K:111:PRO:CB	1:K:565:ARG:HH11	2.25	0.45
1:K:232:VAL:CG2	1:K:233:LEU:N	2.80	0.45
1:K:276:SER:HB2	1:K:290:PRO:HA	1.99	0.45
1:L:808:ASN:ND2	1:L:879:ARG:HB3	2.32	0.45
1:L:939:VAL:HG13	1:L:949:THR:HG22	1.98	0.45
1:J:434:PHE:CE1	1:L:277:THR:HG23	2.52	0.45
1:K:23:TYR:O	1:K:23:TYR:CD1	2.70	0.45
1:L:454:ASP:OD1	1:L:454:ASP:N	2.50	0.45
1:L:473:ILE:HG12	1:L:474:ASN:O	2.17	0.45
1:L:654:PHE:O	1:L:936:VAL:HA	2.17	0.45
1:L:695:LYS:HA	1:L:925:THR:HG22	1.99	0.45
1:L:882:TRP:HA	1:L:882:TRP:CE3	2.53	0.45
1:J:20:ALA:HA	1:J:23:TYR:CE2	2.51	0.44
1:J:205:ALA:HA	1:J:210:GLN:HG2	1.99	0.44
1:K:121:TYR:CD1	1:K:246:TYR:HB2	2.52	0.44
1:K:176:PRO:HD2	1:K:229:GLY:O	2.16	0.44
1:K:239:MET:SD	1:K:318:ASN:HB2	2.57	0.44
1:L:486:SER:OG	1:L:487:ASN:N	2.49	0.44
1:J:250:THR:HG23	1:J:255:GLY:O	2.16	0.44
1:K:485:TYR:O	1:K:489:ALA:HB3	2.17	0.44
1:L:259:MET:SD	1:L:268:SER:HB3	2.57	0.44
1:L:723:PHE:O	1:L:879:ARG:N	2.44	0.44
1:J:124:LEU:N	1:L:836:ASN:OD1	2.40	0.44
1:J:444:GLY:O	1:J:445:ASP:CB	2.64	0.44
1:J:535:TRP:CH2	1:J:814:ARG:HG2	2.52	0.44
1:J:824:ASP:OD1	1:J:824:ASP:N	2.51	0.44
1:K:72:ASP:HB3	1:K:83:ARG:HB3	2.00	0.44
1:K:613:ARG:HH22	1:K:710:TYR:HB3	1.82	0.44
1:L:270:VAL:HA	1:L:296:SER:O	2.17	0.44
1:L:346:TYR:CD2	1:L:597:ARG:HG2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:407:ARG:NH1	1:L:545:PRO:HG3	2.32	0.44
1:L:730:LYS:CB	1:L:917:GLU:O	2.66	0.44
1:L:878:ASP:OD1	1:L:878:ASP:N	2.50	0.44
1:J:396:ASN:OD1	1:J:557:ARG:HD2	2.18	0.44
1:J:421:TYR:HE1	1:J:472:GLU:HB2	1.81	0.44
1:K:294:LEU:HD23	1:K:294:LEU:HA	1.83	0.44
1:L:259:MET:HB3	1:L:265:LYS:HG2	1.99	0.44
1:L:581:LYS:HE2	1:L:581:LYS:HB3	1.81	0.44
1:L:940:HIS:CE1	1:L:942:PRO:HD3	2.51	0.44
1:J:122:ASN:HB3	1:J:125:ALA:HB2	1.99	0.44
1:L:763:GLU:HB3	1:L:765:TYR:CE1	2.52	0.44
1:J:89:GLY:HA3	1:J:92:ARG:NH1	2.33	0.44
1:J:352:ASN:N	1:J:352:ASN:OD1	2.50	0.44
1:J:786:ASN:OD1	1:J:891:MET:HB3	2.18	0.44
1:J:898:ASP:OD1	1:J:899:LEU:N	2.44	0.44
1:L:7:MET:HB2	1:L:8:PRO:HD3	2.00	0.44
1:L:288:ILE:HD13	1:L:288:ILE:H	1.83	0.44
1:L:822:TYR:CZ	1:L:824:ASP:HB2	2.53	0.44
1:J:534:ARG:O	1:J:535:TRP:HB2	2.18	0.44
1:K:110:GLY:O	1:K:565:ARG:HG2	2.18	0.44
1:K:586:LEU:HD23	1:K:586:LEU:HA	1.82	0.44
2:Z:87:LYS:HB3	2:Z:107:VAL:HG23	2.00	0.44
1:J:170:HIS:CE1	1:K:458:ALA:HB2	2.52	0.44
1:J:432:ASP:O	1:J:433:THR:C	2.56	0.44
1:J:600:VAL:HG22	1:J:619:ILE:HG22	2.00	0.44
1:J:646:ARG:HH22	1:J:944:ARG:HA	1.82	0.44
1:K:836:ASN:N	1:L:122:ASN:OD1	2.39	0.44
1:L:338:ARG:NH1	1:L:716:ILE:HD11	2.33	0.44
1:L:666:PRO:HA	1:L:926:LEU:HD23	1.99	0.44
1:L:786:ASN:HD21	1:L:892:SER:H	1.66	0.44
2:Z:118:ALA:HB2	2:Z:125:ILE:HG13	1.99	0.44
2:Z:365:ALA:HB3	2:Z:412:TYR:CE1	2.53	0.44
1:J:136:GLU:OE1	1:J:137:GLN:N	2.49	0.44
1:J:253:ASN:O	1:L:832:HIS:CD2	2.71	0.44
1:J:268:SER:O	1:J:270:VAL:HG23	2.17	0.44
1:J:338:ARG:HD2	1:J:338:ARG:HA	1.87	0.44
1:J:378:TYR:HE1	1:J:382:LEU:HD12	1.83	0.44
1:J:463:ILE:HD12	1:L:173:ALA:O	2.18	0.44
1:L:697:LYS:HB3	1:L:697:LYS:HE3	1.61	0.44
1:L:727:HIS:O	1:L:729:PHE:N	2.51	0.44
2:Z:235:ALA:N	2:Z:282:ASP:OD1	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:201:LYS:O	1:J:201:LYS:NZ	2.42	0.43
1:J:298:ASP:OD1	1:J:299:VAL:N	2.51	0.43
1:J:501:THR:OG1	1:J:502:ASN:OD1	2.29	0.43
1:J:957:SER:OG	1:J:958:ALA:N	2.51	0.43
1:K:137:GLN:HB3	1:K:170:HIS:CE1	2.53	0.43
1:K:344:LEU:HD23	1:K:344:LEU:HA	1.85	0.43
1:L:136:GLU:OE1	1:L:137:GLN:N	2.51	0.43
1:J:771:ASN:ND2	1:J:874:LYS:HA	2.33	0.43
1:K:105:GLY:HA2	1:K:622:ASP:CG	2.39	0.43
1:K:571:ILE:H	1:K:571:ILE:HG13	1.69	0.43
1:J:438:LYS:HE3	1:J:453:LYS:HG3	1.99	0.43
1:J:462:GLU:O	1:J:463:ILE:HD13	2.19	0.43
1:J:643:ALA:C	1:J:646:ARG:HB2	2.39	0.43
1:J:952:LEU:HD12	1:J:952:LEU:HA	1.68	0.43
1:K:281:ALA:HA	1:K:288:ILE:HG22	2.00	0.43
1:K:666:PRO:HA	1:K:926:LEU:HD23	2.00	0.43
1:K:870:ILE:CG1	1:K:871:THR:H	2.25	0.43
1:L:14:HIS:CD2	1:L:23:TYR:HH	2.27	0.43
1:L:667:ILE:HD12	1:L:693:ARG:HE	1.83	0.43
1:J:7:MET:HB2	1:J:10:TRP:CZ3	2.53	0.43
1:J:234:LYS:HD3	1:J:234:LYS:HA	1.89	0.43
1:J:939:VAL:HG22	1:J:949:THR:HG22	2.00	0.43
1:K:263:ASN:OD1	1:K:263:ASN:N	2.51	0.43
1:K:526:ASP:HB3	1:K:528:TYR:CE2	2.53	0.43
1:K:569:PHE:N	1:K:569:PHE:HD1	2.17	0.43
1:J:61:SER:CA	1:L:745:ASN:HB2	2.48	0.43
1:J:368:ASP:OD1	1:J:372:ARG:NH2	2.51	0.43
1:J:636:ASN:C	1:J:638:ALA:N	2.71	0.43
1:J:694:LEU:HD11	1:J:718:TYR:HB2	2.01	0.43
1:K:234:LYS:NZ	1:K:271:GLU:OE1	2.34	0.43
1:K:338:ARG:NH1	1:K:601:ASN:O	2.51	0.43
1:K:354:GLY:HA3	1:K:594:TRP:CE3	2.52	0.43
1:L:359:GLN:H	1:L:590:TYR:HA	1.84	0.43
1:L:507:ASP:OD1	1:L:507:ASP:N	2.49	0.43
1:L:586:LEU:HD12	1:L:941:GLN:HB2	1.99	0.43
1:L:681:ARG:HD3	1:L:682:ASN:H	1.82	0.43
1:L:701:SER:OG	1:L:707:ASP:OD2	2.24	0.43
2:Z:23:SER:C	2:Z:24:TYR:CG	2.91	0.43
1:K:251:ASN:ND2	1:K:253:ASN:OD1	2.44	0.43
1:K:603:VAL:HG23	1:K:604:LEU:HD23	2.00	0.43
1:K:861:LEU:HD23	1:K:861:LEU:HA	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:112:THR:O	1:L:112:THR:OG1	2.27	0.43
1:J:337:PHE:HE1	1:J:603:VAL:HB	1.83	0.43
1:J:730:LYS:HB3	1:J:917:GLU:O	2.19	0.43
1:K:20:ALA:CB	1:K:23:TYR:CE1	3.00	0.43
1:L:338:ARG:NH2	1:L:714:GLY:O	2.44	0.43
1:L:682:ASN:HD21	1:L:904:LEU:HD21	1.83	0.43
1:L:690:ALA:HB3	1:L:930:LEU:HB2	2.00	0.43
1:L:775:ASP:N	1:L:775:ASP:OD1	2.52	0.43
1:L:831:ILE:HD13	1:L:831:ILE:HA	1.85	0.43
2:Z:12:HIS:NE2	2:Z:14:CGU:OE12	2.51	0.43
1:J:90:ASP:OD1	1:J:90:ASP:N	2.50	0.43
1:J:275:PHE:HA	1:K:435:GLN:O	2.19	0.43
1:K:687:ARG:HD3	1:K:932:GLU:HG2	2.01	0.43
1:K:702:LEU:HD22	1:K:702:LEU:H	1.84	0.43
1:K:800:ASP:OD1	1:K:801:ARG:N	2.51	0.43
1:L:113:PHE:CD2	1:L:115:PRO:HD3	2.54	0.43
1:L:508:ASN:OD1	1:L:511:THR:N	2.52	0.43
1:J:137:GLN:OE1	1:J:170:HIS:NE2	2.52	0.43
1:J:289:GLN:CD	1:K:448:ASN:HD22	2.22	0.43
1:J:535:TRP:CD1	1:J:536:SER:N	2.83	0.43
1:K:78:TYR:O	1:K:598:LYS:N	2.52	0.43
1:K:388:ARG:HH21	1:K:397:GLN:HG2	1.84	0.43
1:K:453:LYS:HD3	1:K:453:LYS:O	2.19	0.43
1:K:724:TYR:HD1	1:K:725:LEU:HG	1.82	0.43
1:K:942:PRO:HB2	1:K:943:HIS:ND1	2.34	0.43
1:L:188:GLN:HE21	1:L:203:ILE:N	2.17	0.43
1:L:305:ASP:OD1	1:L:305:ASP:N	2.50	0.43
1:L:531:LEU:HA	1:L:531:LEU:HD23	1.80	0.43
1:L:596:PHE:CD1	1:L:596:PHE:N	2.77	0.43
1:K:352:ASN:HB3	1:K:595:ASN:ND2	2.34	0.43
1:K:563:ASN:N	1:K:563:ASN:OD1	2.52	0.43
1:K:702:LEU:O	1:K:704:SER:N	2.50	0.43
1:L:652:GLN:HB2	1:L:939:VAL:HB	2.00	0.43
1:L:724:TYR:CG	1:L:725:LEU:HG	2.53	0.43
1:J:43:ASN:O	1:J:43:ASN:ND2	2.52	0.42
1:J:206:ASP:OD2	1:J:208:THR:OG1	2.30	0.42
1:J:346:TYR:HA	1:J:597:ARG:HH12	1.84	0.42
1:J:384:SER:OG	1:J:385:ILE:N	2.52	0.42
1:J:534:ARG:N	1:K:559:MET:CE	2.81	0.42
1:J:641:LEU:HA	1:J:644:MET:HB2	2.00	0.42
1:K:266:LEU:H	1:K:266:LEU:HG	1.70	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:20:ALA:HA	1:L:23:TYR:CZ	2.53	0.42
1:L:606:SER:OG	1:L:608:LEU:N	2.41	0.42
1:J:91:ASN:HB2	1:J:635:HIS:HB3	2.00	0.42
1:J:241:PRO:HD3	1:J:325:GLN:HG3	2.01	0.42
1:J:418:LEU:HD11	1:K:485:TYR:HB3	2.00	0.42
1:J:659:SER:O	1:J:660:ALA:HB2	2.19	0.42
1:J:700:PRO:HB3	1:J:710:TYR:CE2	2.55	0.42
1:K:405:ASP:OD1	1:K:405:ASP:N	2.51	0.42
1:K:732:VAL:N	1:K:753:GLU:OE1	2.50	0.42
1:L:586:LEU:O	1:L:590:TYR:OH	2.38	0.42
2:Z:70:CYS:SG	2:Z:80:ASN:HA	2.59	0.42
1:J:448:ASN:CA	1:L:290:PRO:CD	2.97	0.42
1:J:463:ILE:HD12	1:J:463:ILE:HA	1.73	0.42
1:J:544:ASN:HB2	1:J:724:TYR:CZ	2.54	0.42
1:J:590:TYR:CD2	1:J:947:ILE:HD11	2.55	0.42
1:K:231:ARG:NH1	1:K:231:ARG:HG2	2.34	0.42
1:K:467:ASN:OD1	1:K:467:ASN:N	2.51	0.42
1:L:472:GLU:HG2	1:L:473:ILE:N	2.33	0.42
1:J:534:ARG:HB3	1:J:534:ARG:HH11	1.83	0.42
1:J:555:ARG:HD3	1:L:412:HIS:CE1	2.54	0.42
1:K:113:PHE:CE2	1:K:564:GLY:O	2.73	0.42
1:K:133:CYS:HA	1:K:232:VAL:HG21	2.02	0.42
1:K:442:ALA:HA	1:K:446:GLN:HB2	2.01	0.42
1:K:467:ASN:HD22	1:L:848:ARG:HH21	1.67	0.42
1:K:782:LEU:HD23	1:K:787:ILE:O	2.20	0.42
1:L:652:GLN:O	1:L:938:ARG:HG2	2.20	0.42
1:L:868:ASP:OD1	1:L:868:ASP:N	2.42	0.42
1:J:71:VAL:H	1:J:84:PHE:HB3	1.84	0.42
1:K:81:LYS:NZ	1:K:82:ALA:HA	2.34	0.42
1:K:340:ASN:C	1:K:342:ILE:N	2.72	0.42
1:K:507:ASP:OD1	1:K:507:ASP:N	2.45	0.42
1:L:942:PRO:HB2	1:L:943:HIS:ND1	2.34	0.42
1:J:347:TYR:HH	1:J:576:LYS:H	1.65	0.42
1:J:461:ASN:HD21	1:L:170:HIS:C	2.22	0.42
1:J:678:ILE:HD13	1:J:678:ILE:HA	1.94	0.42
1:K:487:ASN:HD21	1:K:550:ARG:HH21	1.65	0.42
1:L:551:ASN:ND2	1:L:554:LEU:H	2.18	0.42
1:J:70:PRO:HD3	1:J:625:CYS:HA	2.00	0.42
1:J:344:LEU:HD11	1:J:571:ILE:HD11	2.00	0.42
1:J:373:ASN:O	1:J:374:THR:C	2.58	0.42
1:J:530:ASN:HD21	1:J:814:ARG:NH2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:608:LEU:HD13	1:J:608:LEU:HA	1.71	0.42
1:J:808:ASN:HD21	1:J:879:ARG:HB3	1.84	0.42
1:K:22:GLU:C	1:K:24:LEU:H	2.21	0.42
1:K:338:ARG:NH1	1:K:716:ILE:HD11	2.34	0.42
1:K:759:SER:OG	1:K:760:VAL:N	2.51	0.42
1:K:787:ILE:HD13	1:K:793:TYR:CE1	2.54	0.42
1:K:848:ARG:H	1:K:848:ARG:HG3	1.59	0.42
1:L:231:ARG:NE	1:L:297:GLU:OE2	2.50	0.42
1:L:693:ARG:NH2	1:L:925:THR:OG1	2.50	0.42
1:L:757:LYS:HE2	1:L:757:LYS:HB2	1.77	0.42
1:J:51:ALA:HB1	1:L:893:MET:HG3	2.01	0.42
1:J:266:LEU:H	1:J:266:LEU:HG	1.62	0.42
1:J:375:GLU:OE1	1:J:375:GLU:HA	2.19	0.42
1:J:855:ALA:O	1:K:256:GLN:NE2	2.53	0.42
1:K:481:ARG:HE	1:K:526:ASP:CG	2.19	0.42
1:L:349:SER:OG	1:L:352:ASN:O	2.38	0.42
1:L:368:ASP:OD1	1:L:372:ARG:NH1	2.53	0.42
1:L:393:SER:OG	1:L:394:MET:N	2.53	0.42
1:L:678:ILE:HB	1:L:912:LEU:HD23	2.01	0.42
1:L:730:LYS:HD3	1:L:730:LYS:HA	1.27	0.42
1:J:657:TYR:O	1:J:657:TYR:HD1	2.03	0.42
1:K:209:PHE:HD2	1:K:212:GLU:OE2	2.03	0.42
1:K:367:VAL:HB	1:K:951:TYR:HE2	1.85	0.42
1:L:440:THR:HG23	1:L:450:THR:CA	2.50	0.42
1:J:480:TRP:HE1	1:J:484:LEU:HD21	1.85	0.42
1:J:713:SER:O	1:J:714:GLY:O	2.38	0.42
1:K:76:THR:OG1	1:K:77:ALA:N	2.53	0.42
1:K:187:LEU:HB2	1:K:293:VAL:HG11	2.01	0.42
1:K:220:TRP:CZ3	1:K:426:GLY:HA3	2.55	0.42
1:K:395:TRP:CD1	1:K:395:TRP:N	2.86	0.42
1:L:251:ASN:OD1	1:L:255:GLY:N	2.37	0.42
2:Z:343:PRO:HD3	2:Z:367:TYR:CZ	2.54	0.42
1:J:599:ASP:OD2	1:J:602:MET:N	2.53	0.41
1:J:657:TYR:C	1:J:657:TYR:HD1	2.23	0.41
1:K:20:ALA:O	1:K:24:LEU:HB2	2.20	0.41
1:K:127:LYS:HE2	1:K:243:TYR:CE1	2.55	0.41
1:K:192:ALA:HB3	1:K:200:GLY:HA2	2.01	0.41
1:K:548:HIS:CG	1:K:549:HIS:H	2.38	0.41
1:K:667:ILE:HG13	1:K:925:THR:C	2.40	0.41
1:K:685:ALA:HB2	1:L:10:TRP:CZ2	2.54	0.41
1:K:727:HIS:CE1	1:K:876:LEU:HD13	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:807:ARG:HH21	1:L:390:ARG:CZ	2.33	0.41
1:K:830:ILE:H	1:K:830:ILE:HD12	1.86	0.41
1:L:328:MET:HG3	1:L:329:PRO:HD2	2.02	0.41
1:L:438:LYS:O	1:L:450:THR:HG23	2.20	0.41
1:J:116:TYR:CG	1:L:531:LEU:HD13	2.55	0.41
1:J:468:ASN:OD1	1:J:469:PHE:N	2.53	0.41
1:J:818:ASP:OD2	1:J:820:THR:N	2.54	0.41
1:K:113:PHE:HB2	1:K:335:ILE:HD13	2.02	0.41
1:K:438:LYS:O	1:K:450:THR:HG22	2.20	0.41
1:K:508:ASN:HA	1:K:509:PRO:HD3	1.90	0.41
1:K:812:MET:HE3	1:K:874:LYS:HG3	2.02	0.41
1:L:175:ALA:HB1	1:L:229:GLY:C	2.40	0.41
1:J:432:ASP:O	1:J:434:PHE:HD1	2.03	0.41
1:J:812:MET:HE1	1:J:876:LEU:HB2	2.02	0.41
1:K:290:PRO:HD2	1:L:448:ASN:CG	2.41	0.41
1:K:551:ASN:HB3	1:K:554:LEU:HB2	2.02	0.41
1:K:668:PRO:HG2	1:K:671:ALA:HB2	2.02	0.41
1:L:428:ILE:HA	1:L:468:ASN:OD1	2.20	0.41
1:L:563:ASN:OD1	1:L:563:ASN:N	2.50	0.41
1:J:207:LYS:NZ	1:J:268:SER:O	2.33	0.41
1:J:289:GLN:NE2	1:K:448:ASN:HD22	2.19	0.41
1:J:390:ARG:CZ	1:L:807:ARG:HH21	2.34	0.41
1:K:747:ARG:HA	1:L:64:LEU:HG	2.02	0.41
1:K:898:ASP:OD1	1:K:899:LEU:N	2.53	0.41
1:L:889:ASN:OD1	1:L:891:MET:HB2	2.21	0.41
1:J:388:ARG:HA	1:J:388:ARG:HD2	1.69	0.41
1:K:479:LEU:HD12	1:K:479:LEU:HA	1.88	0.41
1:K:569:PHE:HD1	1:K:569:PHE:H	1.68	0.41
1:K:758:ARG:NH2	1:K:763:GLU:H	2.13	0.41
1:L:651:ASP:OD2	1:L:938:ARG:NH1	2.54	0.41
1:L:899:LEU:HA	1:L:899:LEU:HD23	1.80	0.41
1:J:58:THR:HB	1:J:635:HIS:CE1	2.56	0.41
1:J:533:ALA:HB2	1:K:563:ASN:CG	2.41	0.41
1:J:749:LEU:HD22	1:J:749:LEU:H	1.85	0.41
1:J:807:ARG:HH21	1:K:390:ARG:NH1	2.18	0.41
1:J:856:ASN:OD1	1:J:856:ASN:N	2.52	0.41
1:K:443:ASN:OD1	1:K:443:ASN:N	2.53	0.41
1:K:742:TRP:HB3	1:K:743:PRO:HD3	2.02	0.41
1:K:755:GLU:O	1:K:773:THR:OG1	2.23	0.41
1:K:830:ILE:HA	1:K:833:GLN:CD	2.41	0.41
1:J:51:ALA:HB1	1:J:52:PRO:HD2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:716:ILE:O	1:J:720:ASP:CG	2.58	0.41
1:K:251:ASN:ND2	1:K:253:ASN:H	2.18	0.41
1:K:339:ASP:O	1:K:342:ILE:HG13	2.20	0.41
1:K:717:PRO:HB3	1:K:722:THR:O	2.21	0.41
1:K:834:HIS:HB3	1:L:214:GLN:NE2	2.35	0.41
1:L:342:ILE:O	1:L:344:LEU:HD23	2.20	0.41
2:Z:397:VAL:HG22	2:Z:412:TYR:CE2	2.56	0.41
2:Z:416:THR:HA	2:Z:419:LEU:HG	2.03	0.41
1:J:440:THR:OG1	1:J:449:THR:O	2.39	0.41
1:L:577:PHE:O	1:L:581:LYS:HB2	2.21	0.41
1:L:901:GLN:H	1:L:901:GLN:HG3	1.48	0.41
1:J:169:THR:HB	1:K:457:PHE:CE1	2.56	0.41
1:J:252:SER:O	1:J:253:ASN:HB3	2.20	0.41
1:J:605:GLN:OE1	1:J:714:GLY:O	2.39	0.41
1:K:24:LEU:O	1:K:25:SER:C	2.58	0.41
1:K:79:SER:N	1:K:598:LYS:HD3	2.36	0.41
1:K:195:THR:HG22	1:K:196:VAL:H	1.85	0.41
1:K:290:PRO:HD2	1:L:448:ASN:OD1	2.21	0.41
1:K:345:MET:HE2	1:K:596:PHE:HE1	1.86	0.41
1:K:354:GLY:HA3	1:K:594:TRP:CZ3	2.56	0.41
1:L:234:LYS:HD3	1:L:296:SER:HB2	2.02	0.41
1:L:481:ARG:HH12	1:L:840:VAL:HG21	1.85	0.41
1:L:678:ILE:HD13	1:L:678:ILE:HA	1.84	0.41
1:L:702:LEU:H	1:L:702:LEU:HG	1.65	0.41
1:J:188:GLN:OE1	1:J:190:GLY:N	2.54	0.41
1:J:529:ILE:HD12	1:J:529:ILE:HA	1.74	0.41
1:J:579:ALA:HB3	1:J:580:ILE:HD13	2.03	0.41
1:K:206:ASP:H	1:K:210:GLN:CB	2.25	0.41
1:K:318:ASN:OD1	1:K:318:ASN:N	2.52	0.41
1:K:454:ASP:HA	1:K:457:PHE:HB2	2.03	0.41
1:L:340:ASN:HD21	1:L:397:GLN:HA	1.86	0.41
2:Z:28:ARG:NH2	2:Z:34:SER:CB	2.79	0.41
2:Z:82:GLU:OE1	2:Z:83:LEU:N	2.54	0.41
1:J:433:THR:HB	1:J:460:ARG:HH12	1.87	0.40
1:J:709:TYR:N	1:J:709:TYR:CD1	2.89	0.40
1:K:31:PHE:CZ	1:K:35:THR:HG21	2.56	0.40
1:K:211:PRO:C	1:K:231:ARG:NH1	2.74	0.40
1:K:529:ILE:O	1:K:529:ILE:HG23	2.20	0.40
1:L:693:ARG:HH22	1:L:921:MET:CG	2.34	0.40
2:Z:235:ALA:HA	2:Z:284:ALA:HB2	2.03	0.40
1:J:853:TYR:OH	1:K:231:ARG:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:19:ASP:CB	1:K:21:SER:HB3	2.51	0.40
1:K:756:ILE:H	1:K:756:ILE:HG13	1.68	0.40
1:K:818:ASP:CG	1:K:819:ASP:N	2.74	0.40
1:K:853:TYR:HE2	1:L:231:ARG:HB3	1.86	0.40
1:L:247:ALA:HB3	1:L:256:GLN:OE1	2.21	0.40
1:L:266:LEU:H	1:L:266:LEU:HG	1.58	0.40
1:L:692:THR:HG21	1:L:723:PHE:HD2	1.86	0.40
1:J:229:GLY:HA2	1:J:293:VAL:O	2.22	0.40
1:J:578:PHE:CE2	1:J:655:ASN:HA	2.56	0.40
1:J:818:ASP:OD1	1:J:821:LYS:N	2.54	0.40
1:K:133:CYS:HA	1:K:232:VAL:HG23	2.03	0.40
1:K:175:ALA:HB1	1:K:229:GLY:C	2.42	0.40
1:K:378:TYR:CZ	1:K:382:LEU:HD12	2.57	0.40
1:K:603:VAL:O	1:K:604:LEU:HD23	2.22	0.40
1:J:502:ASN:OD1	1:J:502:ASN:N	2.54	0.40
1:J:605:GLN:NE2	1:J:714:GLY:O	2.54	0.40
1:K:529:ILE:C	1:K:531:LEU:N	2.75	0.40
1:K:656:ASP:O	1:K:659:SER:OG	2.37	0.40
1:L:235:LYS:HB2	1:L:235:LYS:HE2	1.78	0.40
1:J:94:LEU:HD23	1:J:585:LEU:HB3	2.03	0.40
1:J:387:ASP:OD2	1:J:389:THR:HG22	2.21	0.40
1:J:537:LEU:HA	1:J:537:LEU:HD13	1.75	0.40
1:J:564:GLY:N	1:L:815:GLN:OE1	2.48	0.40
1:J:565:ARG:HD3	1:J:566:TYR:CZ	2.57	0.40
1:K:24:LEU:HA	1:K:24:LEU:HD23	1.86	0.40
1:K:278:SER:O	1:K:282:THR:HG23	2.21	0.40
1:K:433:THR:HG22	1:K:460:ARG:O	2.21	0.40
1:K:837:SER:OG	1:K:838:GLY:N	2.53	0.40
1:L:611:ASP:OD2	1:L:614:VAL:HG23	2.20	0.40
1:L:940:HIS:HD1	1:L:948:GLU:HB3	1.86	0.40
2:Z:95:ASP:OD1	2:Z:95:ASP:N	2.55	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	J	927/963 (96%)	763 (82%)	135 (15%)	29 (3%)	3	22
1	K	931/963 (97%)	784 (84%)	139 (15%)	8 (1%)	14	51
1	L	926/963 (96%)	814 (88%)	102 (11%)	10 (1%)	12	46
2	Z	362/488 (74%)	343 (95%)	18 (5%)	1 (0%)	37	72
All	All	3146/3377 (93%)	2704 (86%)	394 (12%)	48 (2%)	11	39

All (48) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	J	255	GLY
1	J	286	ASN
1	J	530	ASN
1	J	603	VAL
1	J	646	ARG
1	J	91	ASN
1	J	253	ASN
1	J	383	ASP
1	J	429	GLY
1	J	599	ASP
1	J	607	SER
1	J	659	SER
1	J	705	GLY
1	J	709	TYR
1	K	23	TYR
1	L	725	LEU
1	J	338	ARG
1	J	374	THR
1	J	714	GLY
1	K	208	THR
1	K	209	PHE
1	L	172	TYR
1	L	696	THR
1	L	727	HIS
1	L	728	THR
1	J	384	SER
1	J	712	TYR
1	K	205	ALA
1	K	213	PRO
1	L	562	GLY

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Mol	Chain	Res	Type
1	L	879	ARG
2	Z	18	MET
1	J	282	THR
1	J	379	GLN
1	J	445	ASP
1	J	606	SER
1	J	644	MET
1	K	336	ALA
1	K	341	PHE
1	L	173	ALA
1	L	651	ASP
1	J	285	VAL
1	J	463	ILE
1	J	254	GLY
1	J	342	ILE
1	L	942	PRO
1	J	716	ILE
1	K	437	VAL

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	J	800/826 (97%)	621 (78%)	179 (22%)	1	5
1	K	803/826 (97%)	669 (83%)	134 (17%)	2	10
1	L	801/826 (97%)	673 (84%)	128 (16%)	2	11
2	Z	313/408 (77%)	303 (97%)	10 (3%)	34	54
All	All	2717/2886 (94%)	2266 (83%)	451 (17%)	4	10

All (451) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	J	6	MET
1	J	7	MET
1	J	9	GLN

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Mol	Chain	Res	Type
1	J	19	ASP
1	J	28	LEU
1	J	35	THR
1	J	37	THR
1	J	49	THR
1	J	53	THR
1	J	54	HIS
1	J	55	ASP
1	J	56	VAL
1	J	58	THR
1	J	62	GLN
1	J	64	LEU
1	J	65	THR
1	J	66	LEU
1	J	73	ARG
1	J	75	ASP
1	J	78	TYR
1	J	90	ASP
1	J	91	ASN
1	J	92	ARG
1	J	93	VAL
1	J	94	LEU
1	J	100	TYR
1	J	107	LEU
1	J	124	LEU
1	J	131	ASN
1	J	134	GLU
1	J	139	GLU
1	J	170	HIS
1	J	171	VAL
1	J	172	TYR
1	J	181	LYS
1	J	183	THR
1	J	184	LYS
1	J	187	LEU
1	J	188	GLN
1	J	201	LYS
1	J	206	ASP
1	J	215	VAL
1	J	219	GLN
1	J	224	ASP
1	J	243	TYR

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Mol	Chain	Res	Type
1	J	246	TYR
1	J	248	ARG
1	J	251	ASN
1	J	259	MET
1	J	262	GLN
1	J	266	LEU
1	J	269	GLN
1	J	276	SER
1	J	277	THR
1	J	278	SER
1	J	279	THR
1	J	288	ILE
1	J	292	VAL
1	J	302	GLU
1	J	303	THR
1	J	318	ASN
1	J	322	MET
1	J	335	ILE
1	J	337	PHE
1	J	338	ARG
1	J	339	ASP
1	J	347	TYR
1	J	350	THR
1	J	352	ASN
1	J	359	GLN
1	J	363	LEU
1	J	371	ASP
1	J	372	ARG
1	J	374	THR
1	J	376	LEU
1	J	377	SER
1	J	382	LEU
1	J	385	ILE
1	J	389	THR
1	J	394	MET
1	J	401	SER
1	J	409	ILE
1	J	412	HIS
1	J	417	GLU
1	J	420	ASN
1	J	428	ILE
1	J	430	ILE

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Mol	Chain	Res	Type
1	J	431	THR
1	J	432	ASP
1	J	438	LYS
1	J	445	ASP
1	J	451	TRP
1	J	454	ASP
1	J	460	ARG
1	J	462	GLU
1	J	463	ILE
1	J	472	GLU
1	J	494	ASP
1	J	503	VAL
1	J	504	GLU
1	J	507	ASP
1	J	508	ASN
1	J	510	ASN
1	J	513	ASP
1	J	525	VAL
1	J	528	TYR
1	J	529	ILE
1	J	531	LEU
1	J	534	ARG
1	J	536	SER
1	J	539	TYR
1	J	540	MET
1	J	548	HIS
1	J	551	ASN
1	J	558	SER
1	J	563	ASN
1	J	567	VAL
1	J	569	PHE
1	J	573	VAL
1	J	577	PHE
1	J	578	PHE
1	J	580	ILE
1	J	582	ASN
1	J	584	LEU
1	J	591	THR
1	J	592	TYR
1	J	593	GLU
1	J	595	ASN
1	J	598	LYS

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Mol	Chain	Res	Type
1	J	603	VAL
1	J	604	LEU
1	J	605	GLN
1	J	608	LEU
1	J	613	ARG
1	J	619	ILE
1	J	622	ASP
1	J	625	CYS
1	J	629	THR
1	J	635	HIS
1	J	636	ASN
1	J	644	MET
1	J	646	ARG
1	J	648	ASP
1	J	650	ASN
1	J	654	PHE
1	J	655	ASN
1	J	657	TYR
1	J	659	SER
1	J	662	ASN
1	J	665	TYR
1	J	678	ILE
1	J	681	ARG
1	J	701	SER
1	J	702	LEU
1	J	704	SER
1	J	709	TYR
1	J	727	HIS
1	J	734	ILE
1	J	737	ASP
1	J	754	PHE
1	J	756	ILE
1	J	759	SER
1	J	766	ASN
1	J	770	CYS
1	J	771	ASN
1	J	775	ASP
1	J	787	ILE
1	J	812	MET
1	J	815	GLN
1	J	818	ASP
1	J	848	ARG

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Mol	Chain	Res	Type
1	J	853	TYR
1	J	867	VAL
1	J	868	ASP
1	J	870	ILE
1	J	883	ARG
1	J	887	SER
1	J	910	HIS
1	J	913	ASP
1	K	6	MET
1	K	9	GLN
1	K	10	TRP
1	K	16	SER
1	K	18	GLN
1	K	19	ASP
1	K	21	SER
1	K	30	GLN
1	K	37	THR
1	K	39	PHE
1	K	41	LEU
1	K	54	HIS
1	K	56	VAL
1	K	62	GLN
1	K	67	ARG
1	K	69	ILE
1	K	74	GLU
1	K	80	TYR
1	K	81	LYS
1	K	83	ARG
1	K	90	ASP
1	K	93	VAL
1	K	95	ASP
1	K	100	TYR
1	K	102	ASP
1	K	107	LEU
1	K	108	ASP
1	K	112	THR
1	K	131	ASN
1	K	134	GLU
1	K	181	LYS
1	K	188	GLN
1	K	195	THR
1	K	207	LYS

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Mol	Chain	Res	Type
1	K	210	GLN
1	K	214	GLN
1	K	215	VAL
1	K	224	ASP
1	K	231	ARG
1	K	232	VAL
1	K	251	ASN
1	K	263	ASN
1	K	277	THR
1	K	283	ASN
1	K	287	ASN
1	K	305	ASP
1	K	308	LEU
1	K	310	TYR
1	K	316	ASP
1	K	333	ASN
1	K	335	ILE
1	K	338	ARG
1	K	344	LEU
1	K	348	ASN
1	K	352	ASN
1	K	362	GLN
1	K	367	VAL
1	K	371	ASP
1	K	383	ASP
1	K	391	TYR
1	K	395	TRP
1	K	397	GLN
1	K	403	ASP
1	K	409	ILE
1	K	414	THR
1	K	430	ILE
1	K	431	THR
1	K	435	GLN
1	K	440	THR
1	K	443	ASN
1	K	467	ASN
1	K	468	ASN
1	K	473	ILE
1	K	499	ASN
1	K	503	VAL
1	K	505	ILE

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Mol	Chain	Res	Type
1	K	516	ASN
1	K	524	LEU
1	K	525	VAL
1	K	531	LEU
1	K	547	ASN
1	K	558	SER
1	K	560	LEU
1	K	561	LEU
1	K	563	ASN
1	K	565	ARG
1	K	569	PHE
1	K	570	HIS
1	K	583	LEU
1	K	584	LEU
1	K	591	THR
1	K	592	TYR
1	K	595	ASN
1	K	599	ASP
1	K	602	MET
1	K	604	LEU
1	K	606	SER
1	K	615	ASP
1	K	624	ILE
1	K	645	LEU
1	K	647	ASN
1	K	649	THR
1	K	651	ASP
1	K	662	ASN
1	K	667	ILE
1	K	681	ARG
1	K	691	PHE
1	K	692	THR
1	K	702	LEU
1	K	711	THR
1	K	724	TYR
1	K	726	ASN
1	K	727	HIS
1	K	737	ASP
1	K	757	LYS
1	K	766	ASN
1	K	767	VAL
1	K	771	ASN

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Mol	Chain	Res	Type
1	K	775	ASP
1	K	819	ASP
1	K	824	ASP
1	K	848	ARG
1	K	868	ASP
1	K	869	SER
1	K	871	THR
1	K	881	LEU
1	K	886	PHE
1	K	887	SER
1	K	897	THR
1	K	933	VAL
1	K	935	ASP
1	K	936	VAL
1	K	938	ARG
1	K	940	HIS
1	L	3	THR
1	L	5	SER
1	L	6	MET
1	L	7	MET
1	L	19	ASP
1	L	23	TYR
1	L	31	PHE
1	L	38	TYR
1	L	50	VAL
1	L	54	HIS
1	L	55	ASP
1	L	58	THR
1	L	75	ASP
1	L	91	ASN
1	L	100	TYR
1	L	112	THR
1	L	116	TYR
1	L	139	GLU
1	L	167	LYS
1	L	168	LYS
1	L	169	THR
1	L	170	HIS
1	L	171	VAL
1	L	172	TYR
1	L	181	LYS
1	L	224	ASP

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Mol	Chain	Res	Type
1	L	235	LYS
1	L	237	THR
1	L	248	ARG
1	L	250	THR
1	L	262	GLN
1	L	263	ASN
1	L	266	LEU
1	L	269	GLN
1	L	272	MET
1	L	277	THR
1	L	288	ILE
1	L	293	VAL
1	L	300	ASN
1	L	302	GLU
1	L	303	THR
1	L	307	HIS
1	L	313	LYS
1	L	334	TYR
1	L	335	ILE
1	L	337	PHE
1	L	342	ILE
1	L	344	LEU
1	L	345	MET
1	L	346	TYR
1	L	356	LEU
1	L	369	LEU
1	L	378	TYR
1	L	405	ASP
1	L	409	ILE
1	L	416	ASP
1	L	431	THR
1	L	432	ASP
1	L	445	ASP
1	L	478	ASN
1	L	501	THR
1	L	503	VAL
1	L	537	LEU
1	L	547	ASN
1	L	563	ASN
1	L	565	ARG
1	L	570	HIS
1	L	577	PHE

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Mol	Chain	Res	Type
1	L	580	ILE
1	L	590	TYR
1	L	596	PHE
1	L	598	LYS
1	L	599	ASP
1	L	606	SER
1	L	610	ASN
1	L	615	ASP
1	L	619	ILE
1	L	644	MET
1	L	651	ASP
1	L	656	ASP
1	L	663	MET
1	L	664	LEU
1	L	672	THR
1	L	676	ILE
1	L	681	ARG
1	L	692	THR
1	L	697	LYS
1	L	702	LEU
1	L	724	TYR
1	L	725	LEU
1	L	727	HIS
1	L	728	THR
1	L	730	LYS
1	L	745	ASN
1	L	749	LEU
1	L	755	GLU
1	L	756	ILE
1	L	757	LYS
1	L	761	ASP
1	L	770	CYS
1	L	772	MET
1	L	777	PHE
1	L	796	GLU
1	L	800	ASP
1	L	803	TYR
1	L	821	LYS
1	L	824	ASP
1	L	848	ARG
1	L	853	TYR
1	L	861	LEU

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Mol	Chain	Res	Type
1	L	876	LEU
1	L	878	ASP
1	L	880	THR
1	L	883	ARG
1	L	886	PHE
1	L	887	SER
1	L	891	MET
1	L	897	THR
1	L	901	GLN
1	L	903	LEU
1	L	904	LEU
1	L	912	LEU
1	L	923	GLU
1	L	929	VAL
1	L	938	ARG
1	L	940	HIS
1	L	941	GLN
1	L	953	ARG
2	Z	17	CYS
2	Z	41	TRP
2	Z	55	CYS
2	Z	68	TYR
2	Z	82	GLU
2	Z	83	LEU
2	Z	95	ASP
2	Z	102	GLU
2	Z	120	ASN
2	Z	387	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	J	269	GLN
1	J	287	ASN
1	J	373	ASN
1	J	411	ASN
1	J	448	ASN
1	J	461	ASN
1	J	605	GLN
1	J	815	GLN
1	K	62	GLN
1	K	262	GLN

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Mol	Chain	Res	Type
1	K	348	ASN
1	K	448	ASN
1	K	530	ASN
1	K	605	GLN
1	K	650	ASN
1	L	174	GLN
1	L	262	GLN
1	L	263	ASN
1	L	420	ASN
2	Z	271	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

11 non-standard protein/DNA/RNA residues are 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	$\#|Z| > 2$
2	CGU	Z	16	3,2	9,11,12	1.44	1 (11%)	10,14,16	0.82	0
2	CGU	Z	19	2	9,11,12	1.45	1 (11%)	10,14,16	0.97	0
2	CGU	Z	6	3,2	9,11,12	1.81	2 (22%)	10,14,16	0.84	0
2	CGU	Z	14	2	9,11,12	1.57	2 (22%)	10,14,16	0.86	0
2	CGU	Z	25	2	9,11,12	1.40	0	10,14,16	0.90	0
2	CGU	Z	26	3,2	9,11,12	1.36	0	10,14,16	0.78	0
2	CGU	Z	39	2	9,11,12	1.46	1 (11%)	10,14,16	0.93	0
2	CGU	Z	7	3,2	9,11,12	1.53	1 (11%)	10,14,16	0.83	0
2	CGU	Z	20	2	9,11,12	1.41	0	10,14,16	0.84	0
2	CGU	Z	29	3,2	9,11,12	1.53	1 (11%)	10,14,16	0.98	0
2	CGU	Z	32	2	9,11,12	1.55	1 (11%)	10,14,16	0.86	0

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
2	CGU	Z	16	3,2	-	4/13/14/16	-
2	CGU	Z	19	2	-	7/13/14/16	-
2	CGU	Z	6	3,2	-	5/13/14/16	-
2	CGU	Z	14	2	-	6/13/14/16	-
2	CGU	Z	25	2	-	5/13/14/16	-
2	CGU	Z	26	3,2	-	7/13/14/16	-
2	CGU	Z	39	2	-	8/13/14/16	-
2	CGU	Z	7	3,2	-	8/13/14/16	-
2	CGU	Z	20	2	-	3/13/14/16	-
2	CGU	Z	29	3,2	-	6/13/14/16	-
2	CGU	Z	32	2	-	7/13/14/16	-

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	Z	6	CGU	CG-CD2	3.03	1.56	1.52
2	Z	6	CGU	CG-CD1	2.77	1.55	1.52
2	Z	32	CGU	CG-CD2	2.69	1.55	1.52
2	Z	7	CGU	CG-CD2	2.43	1.55	1.52
2	Z	14	CGU	CG-CD2	2.31	1.55	1.52
2	Z	14	CGU	CG-CD1	2.23	1.55	1.52
2	Z	29	CGU	CG-CD2	2.19	1.54	1.52
2	Z	16	CGU	CG-CD2	2.17	1.54	1.52
2	Z	39	CGU	CG-CD1	2.17	1.54	1.52
2	Z	19	CGU	CG-CD2	2.01	1.54	1.52

There are no bond angle outliers.

There are no chirality outliers.

All (66) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	Z	6	CGU	N-CA-CB-CG
2	Z	6	CGU	C-CA-CB-CG
2	Z	7	CGU	C-CA-CB-CG
2	Z	19	CGU	O-C-CA-CB

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Mol	Chain	Res	Type	Atoms
2	Z	20	CGU	O-C-CA-CB
2	Z	20	CGU	OE12-CD1-CG-CD2
2	Z	25	CGU	N-CA-CB-CG
2	Z	25	CGU	C-CA-CB-CG
2	Z	25	CGU	CA-CB-CG-CD2
2	Z	25	CGU	OE12-CD1-CG-CB
2	Z	26	CGU	N-CA-CB-CG
2	Z	26	CGU	CA-CB-CG-CD1
2	Z	26	CGU	CA-CB-CG-CD2
2	Z	32	CGU	CA-CB-CG-CD2
2	Z	39	CGU	O-C-CA-CB
2	Z	39	CGU	CA-CB-CG-CD1
2	Z	39	CGU	CA-CB-CG-CD2
2	Z	7	CGU	N-CA-CB-CG
2	Z	32	CGU	N-CA-CB-CG
2	Z	6	CGU	OE21-CD2-CG-CB
2	Z	6	CGU	OE22-CD2-CG-CB
2	Z	7	CGU	OE11-CD1-CG-CB
2	Z	7	CGU	OE12-CD1-CG-CB
2	Z	7	CGU	OE21-CD2-CG-CB
2	Z	14	CGU	OE21-CD2-CG-CB
2	Z	16	CGU	OE11-CD1-CG-CB
2	Z	16	CGU	OE12-CD1-CG-CB
2	Z	19	CGU	OE21-CD2-CG-CB
2	Z	19	CGU	OE22-CD2-CG-CB
2	Z	25	CGU	OE11-CD1-CG-CB
2	Z	26	CGU	OE11-CD1-CG-CB
2	Z	26	CGU	OE12-CD1-CG-CB
2	Z	14	CGU	OE21-CD2-CG-CD1
2	Z	14	CGU	OE22-CD2-CG-CD1
2	Z	20	CGU	OE11-CD1-CG-CD2
2	Z	26	CGU	OE11-CD1-CG-CD2
2	Z	26	CGU	OE12-CD1-CG-CD2
2	Z	32	CGU	OE21-CD2-CG-CD1
2	Z	32	CGU	OE22-CD2-CG-CD1
2	Z	39	CGU	OE21-CD2-CG-CD1
2	Z	39	CGU	OE22-CD2-CG-CD1
2	Z	14	CGU	CA-CB-CG-CD1
2	Z	14	CGU	CA-CB-CG-CD2
2	Z	16	CGU	CA-CB-CG-CD1
2	Z	16	CGU	CA-CB-CG-CD2
2	Z	19	CGU	CA-CB-CG-CD1

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Mol	Chain	Res	Type	Atoms
2	Z	19	CGU	N-CA-CB-CG
2	Z	7	CGU	OE22-CD2-CG-CB
2	Z	14	CGU	OE22-CD2-CG-CB
2	Z	19	CGU	OE11-CD1-CG-CB
2	Z	19	CGU	OE12-CD1-CG-CB
2	Z	29	CGU	OE11-CD1-CG-CB
2	Z	29	CGU	OE12-CD1-CG-CB
2	Z	29	CGU	OE21-CD2-CG-CB
2	Z	29	CGU	OE22-CD2-CG-CB
2	Z	32	CGU	OE11-CD1-CG-CB
2	Z	32	CGU	OE12-CD1-CG-CB
2	Z	39	CGU	OE11-CD1-CG-CB
2	Z	39	CGU	OE12-CD1-CG-CB
2	Z	6	CGU	OE22-CD2-CG-CD1
2	Z	7	CGU	OE21-CD2-CG-CD1
2	Z	7	CGU	OE22-CD2-CG-CD1
2	Z	29	CGU	OE21-CD2-CG-CD1
2	Z	29	CGU	OE22-CD2-CG-CD1
2	Z	32	CGU	OE11-CD1-CG-CD2
2	Z	39	CGU	OE11-CD1-CG-CD2

There are no ring outliers.

8 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	Z	19	CGU	1	0
2	Z	6	CGU	1	0
2	Z	14	CGU	1	0
2	Z	25	CGU	3	0
2	Z	26	CGU	1	0
2	Z	20	CGU	2	0
2	Z	29	CGU	1	0
2	Z	32	CGU	1	0

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6   Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-45737. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1   Orthogonal projections (i)

6.1.1   Primary map
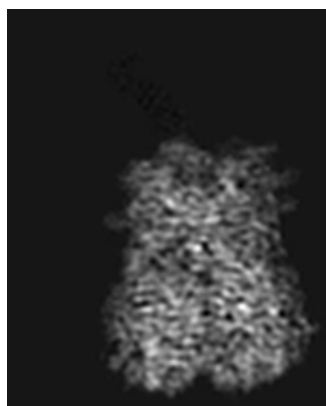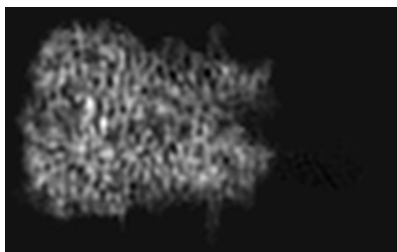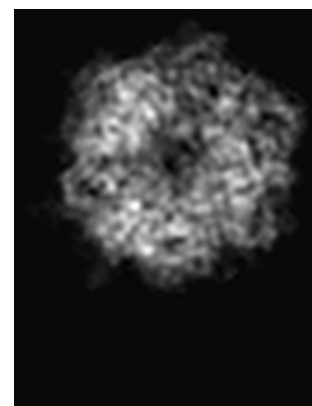
X   Y   Z

6.1.2   Raw map

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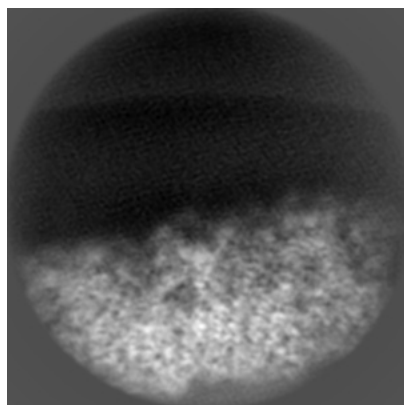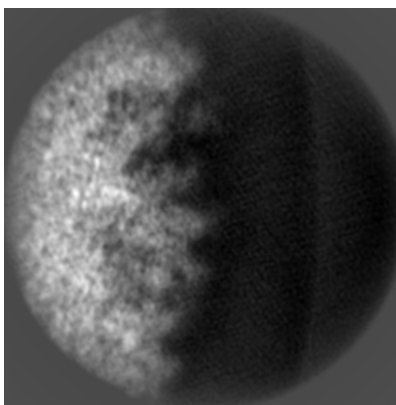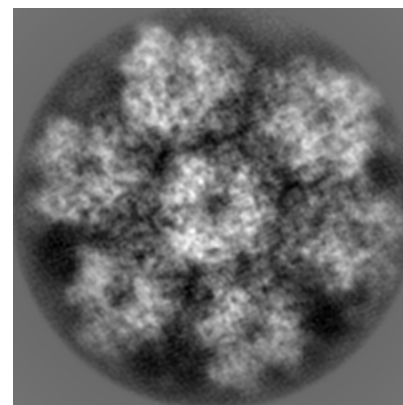
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map
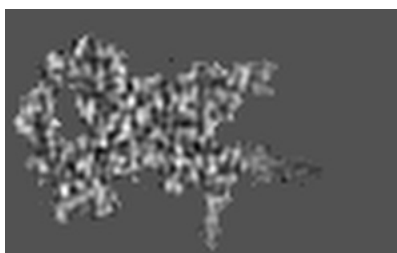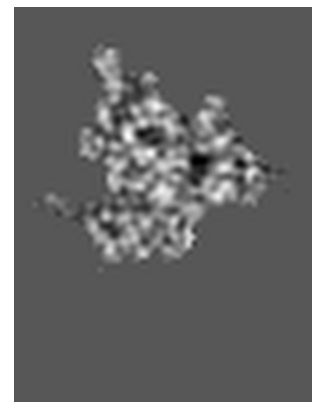
| X Index: 33 | Y Index: 43 | Z Index: 53 |

6.2.2 Raw map
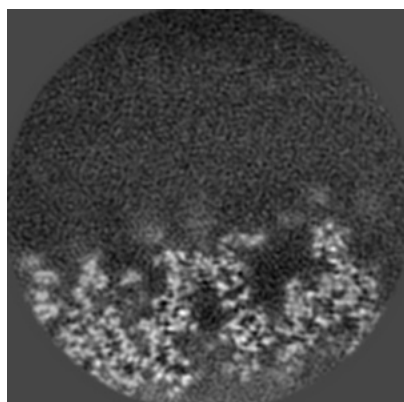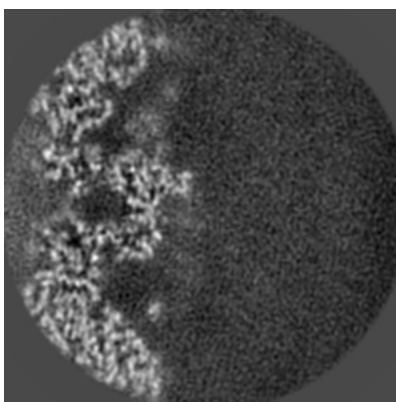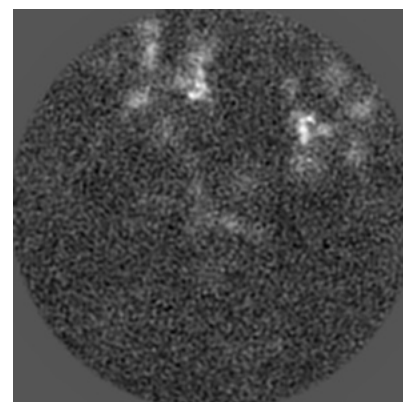
| X Index: 80 | Y Index: 80 | Z Index: 80 |

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

6.3 Largest variance slices ⓘ
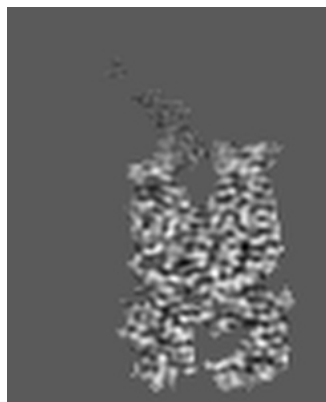
6.3.1 Primary map
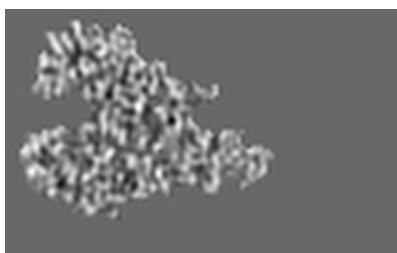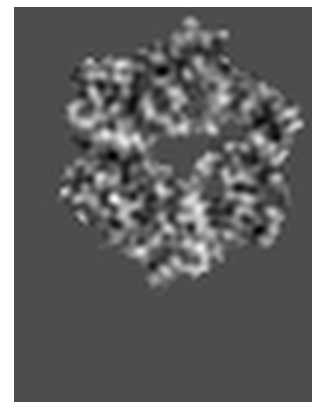
X Index: 25	Y Index: 64	Z Index: 22

6.3.2 Raw map
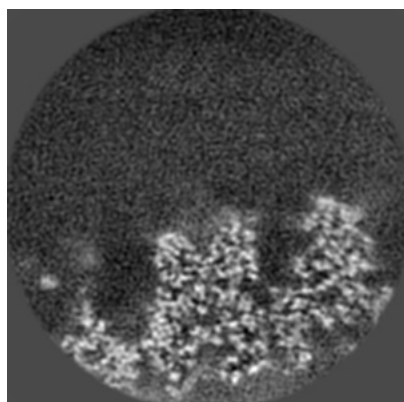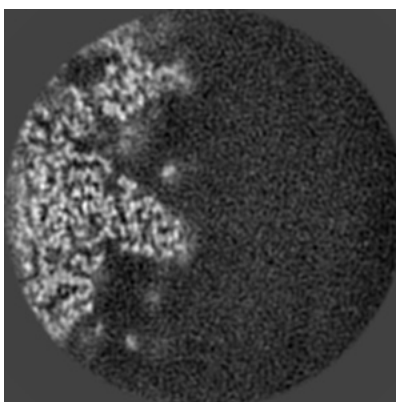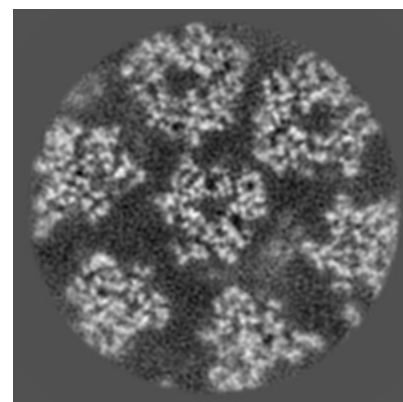
X Index: 74	Y Index: 65	Z Index: 46

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
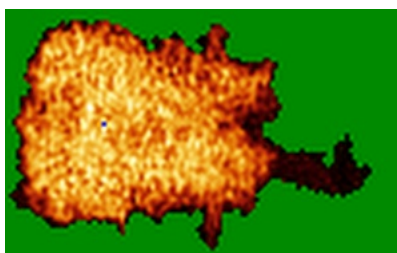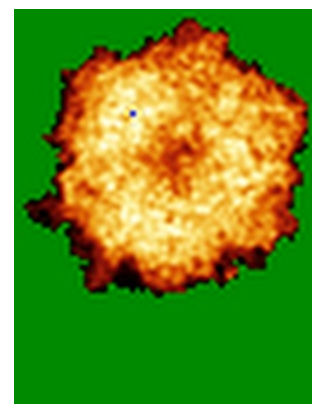
X   Y   Z

6.4.2 Raw map

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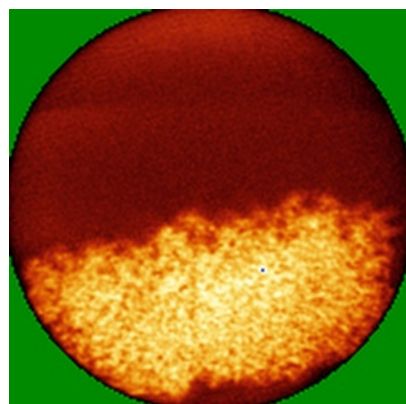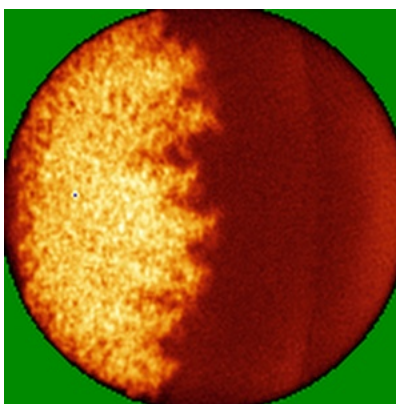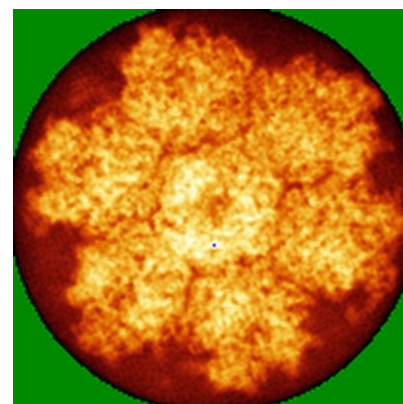
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X   Y   Z
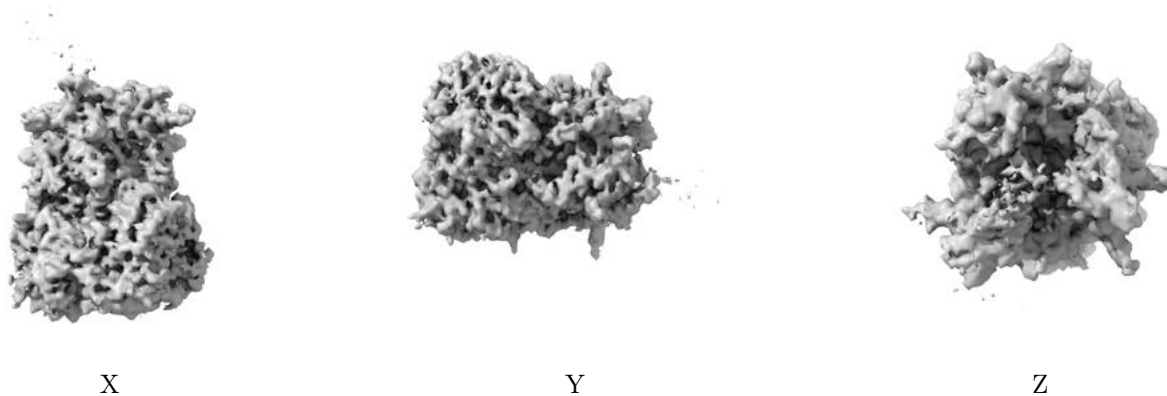
The images above show the 3D surface view of the map at the recommended contour level 0.007. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

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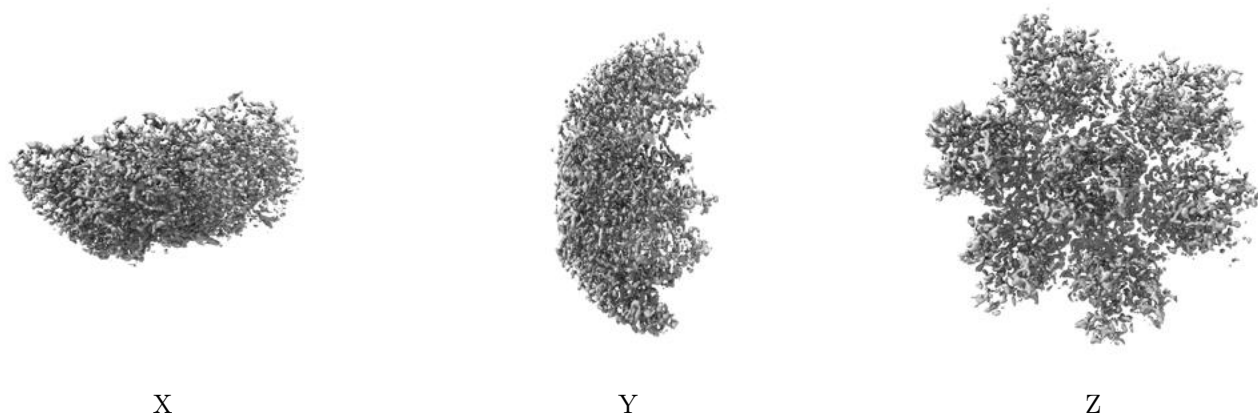
These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

6.6 Mask visualisation (i)

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

7 Map analysis (i)

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

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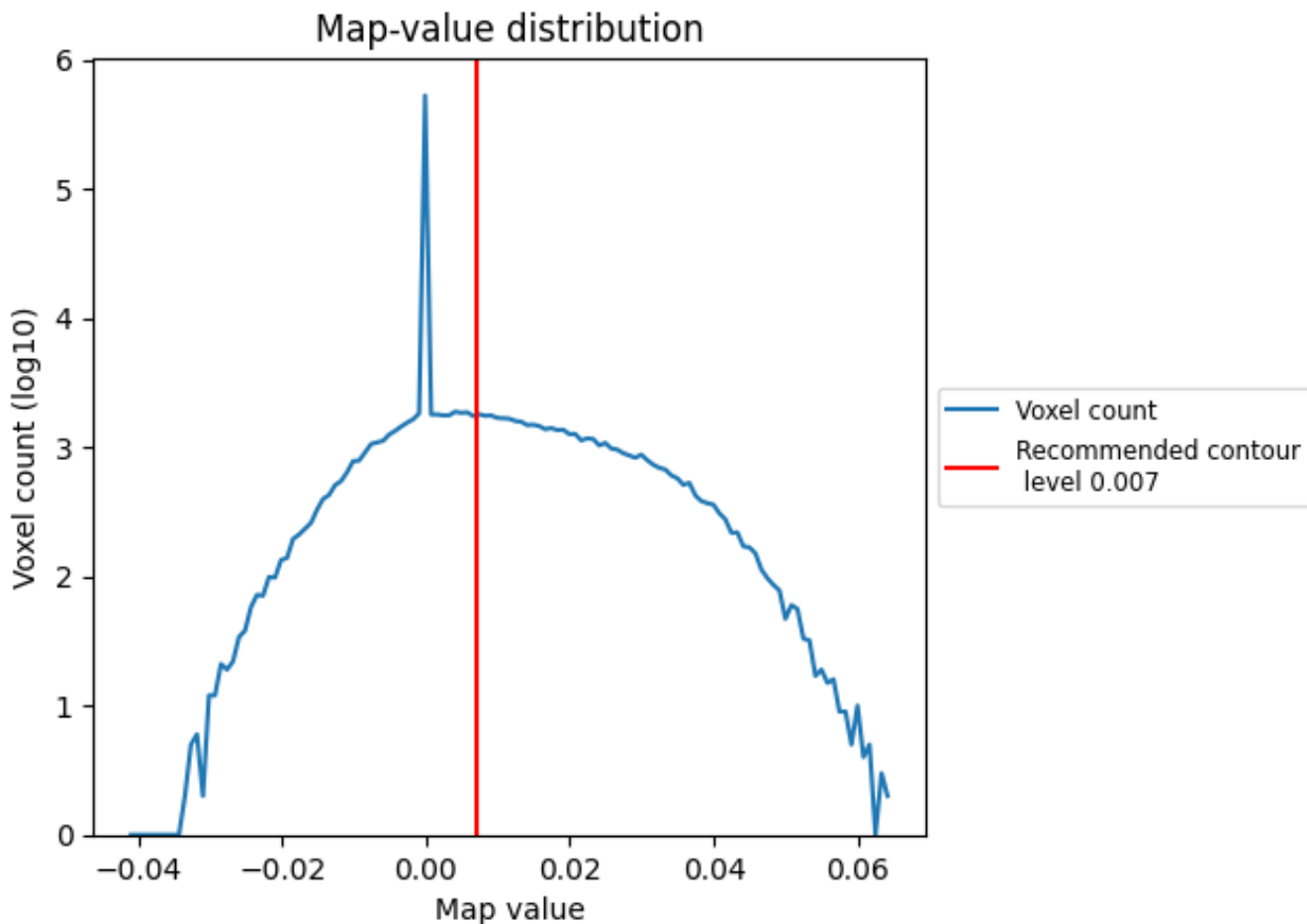
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
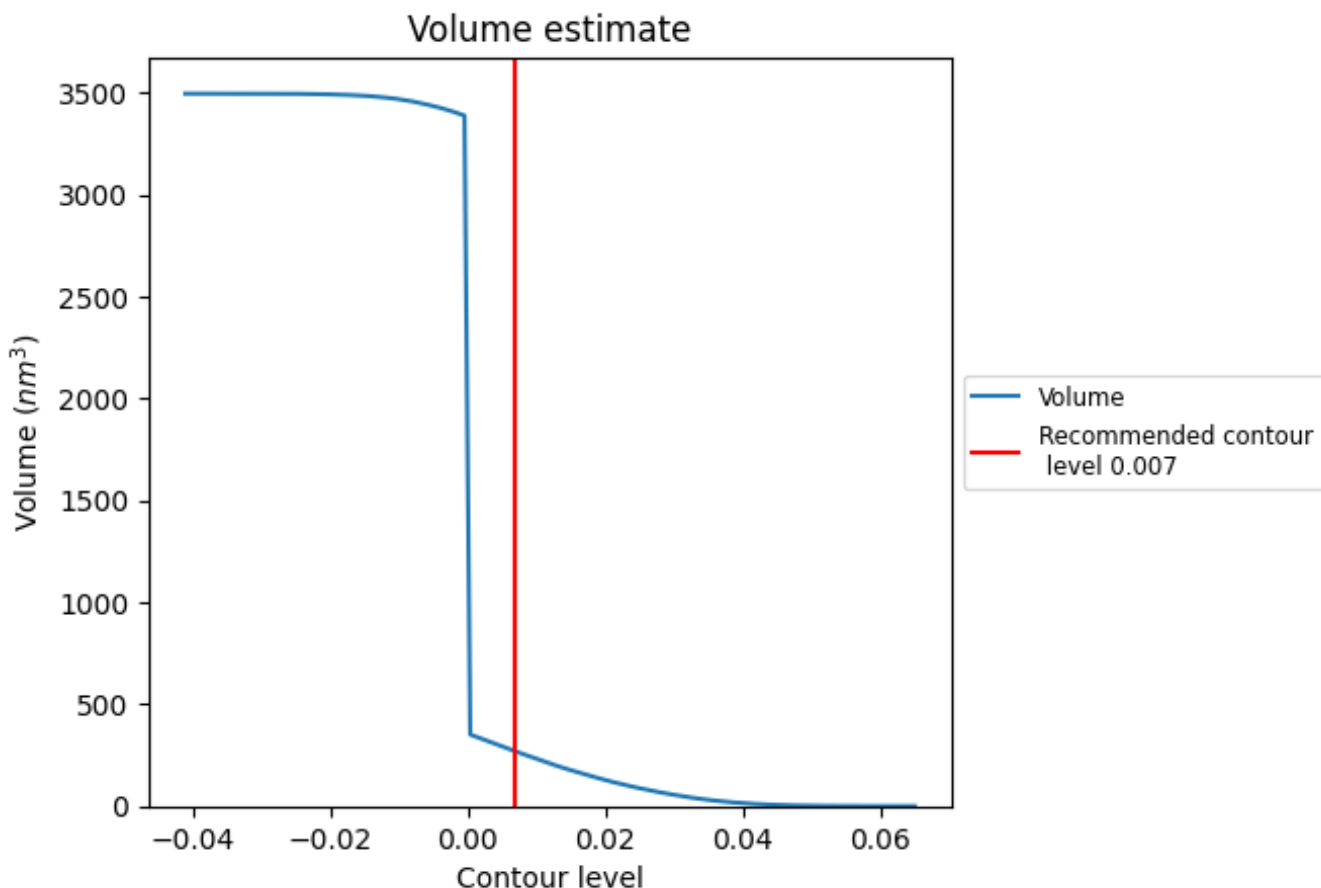
The volume at the recommended contour level is 269 nm^3; this corresponds to an approximate mass of 243 kDa.

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 ⓘ

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

8   Fourier-Shell correlation ⓘ

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

9　Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-45737 and PDB model 9CM2. Per-residue inclusion information can be found in section 3 on page 4.

9.1　Map-model overlay ⓘ

X　　　　　　　　　　　　　Y　　　　　　　　　　　　　Z
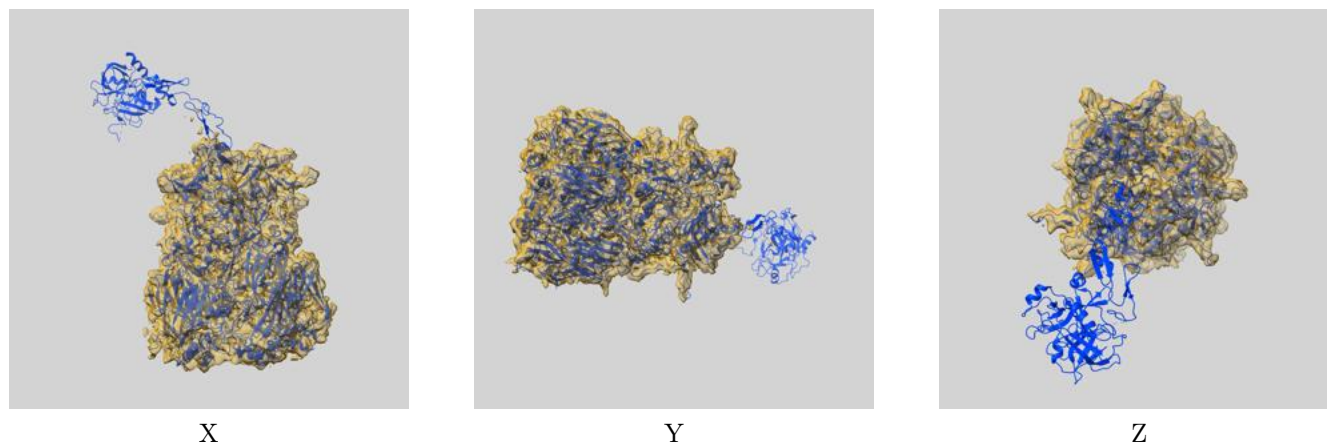
The images above show the 3D surface view of the map at the recommended contour level 0.007 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ
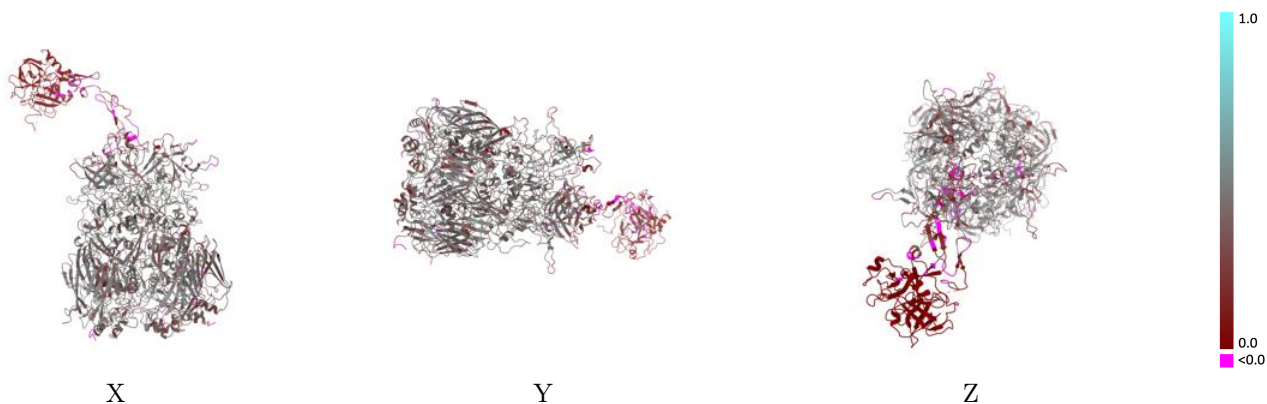
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 ⓘ
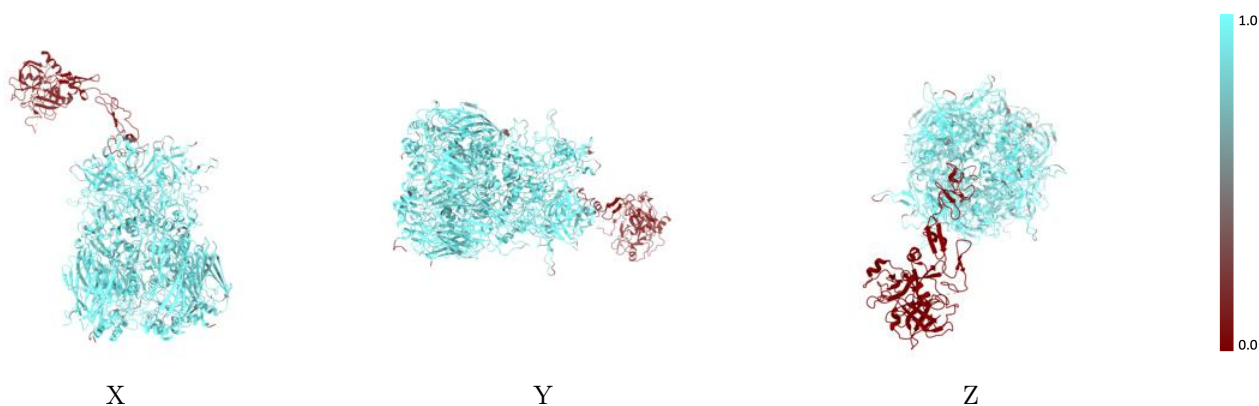
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.007).

9.4　Atom inclusion ⓘ
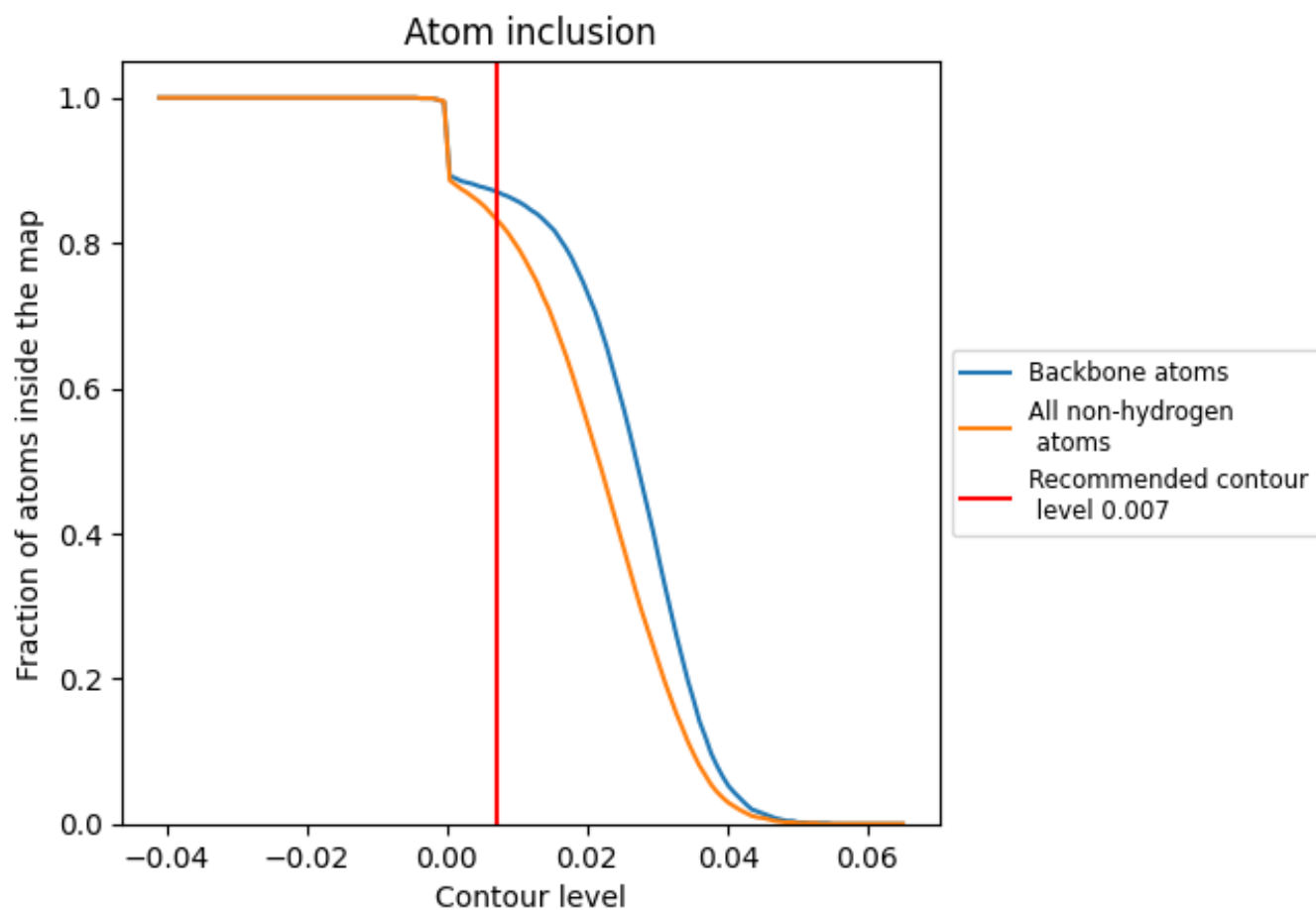
At the recommended contour level, 87% of all backbone atoms, 83% of all non-hydrogen atoms, are inside the map.

9.5   Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.007) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8330	0.3680
J	0.9430	0.4140
K	0.9500	0.4170
L	0.9280	0.4030
Z	0.0430	0.0460

1.0

0.0

<0.0