WORLDWIDE

wwPDB

PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Apr 30, 2024 – 08:27 pm BST

PDB ID	:	4ATX
EMDB ID	:	EMD-2098
Title	:	Rigor kinesin motor domain with an ordered neck-linker, docked on tubulin dimer, modelled into the 8A cryo-EM map of doublecortin- microtubules decorated with kinesin
Authors	:	Liu, J.S.; Schubert, C.R.; Fu, X.; Fourniol, F.J.; Jaiswal, J.K.; Houdusse, A.; Stultz, C.M.; Moores, C.A.; Walsh, C.A.
Deposited on	:	2012-05-10
Resolution	:	8.20 Å(reported)
Based on initial models	:	2XRP, 1BG2

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

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

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

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

|		
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

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 8.20 Å.

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

Metric	Percentile Ranks	Value
Clashscore		74
Ramachandran outliers		10.1%
Sidechain outliers		13.5%

Worse   *Better*

▌ Percentile relative to all structures
▯ Percentile relative to all EM structures
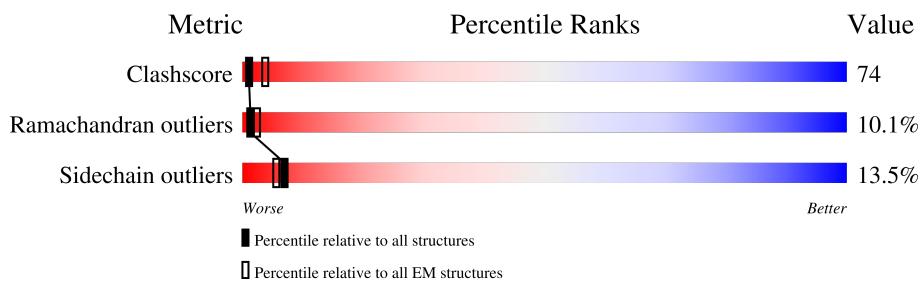
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	445	10% 20% 56% 18% • •
2	B	452	10% 17% 58% 19% • 5%
3	C	340	17% 42% 45% • • 9%
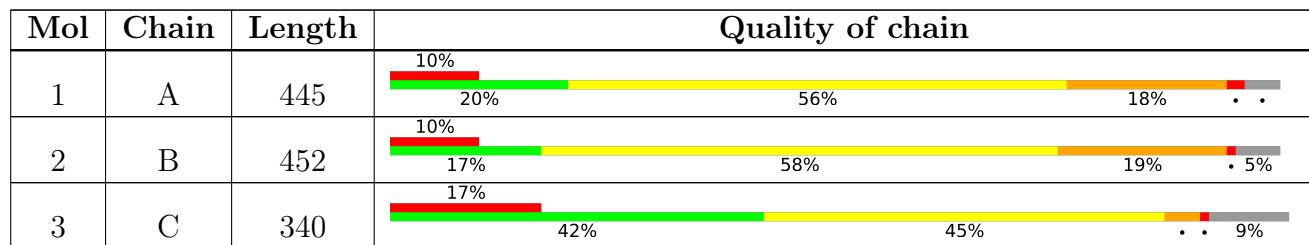
2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 9183 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 TUBULIN BETA-2B CHAIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	426	Total 3351	C 2105	N 575	O 646	S 25	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	57	ALA	THR	conflict	UNP Q6B856
A	172	VAL	MET	conflict	UNP Q6B856
A	298	ALA	SER	conflict	UNP Q6B856
A	318	VAL	ILE	conflict	UNP Q6B856

- Molecule 2 is a protein called TUBULIN ALPHA-1D CHAIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	429	Total 3334	C 2114	N 569	O 630	S 21	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	7	ILE	VAL	conflict	UNP Q2HJ86
B	114	ILE	LEU	conflict	UNP Q2HJ86
B	136	SER	LEU	conflict	UNP Q2HJ86
B	137	VAL	ILE	conflict	UNP Q2HJ86
B	265	GLY	ILE	conflict	UNP Q2HJ86
B	358	GLU	GLN	conflict	UNP Q2HJ86
B	437	VAL	MET	conflict	UNP Q2HJ86
B	450	GLU	ASP	conflict	UNP Q2HJ86

- Molecule 3 is a protein called KINESIN-1 HEAVY CHAIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	310	Total	C	N	O	S	0	1
			2438	1517	420	485	16		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	92	ASN	THR	engineered mutation	UNP Q2PQA9

- Molecule 4 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

Mol	Chain	Residues	Atoms					AltConf
4	A	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 5 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).

GTP
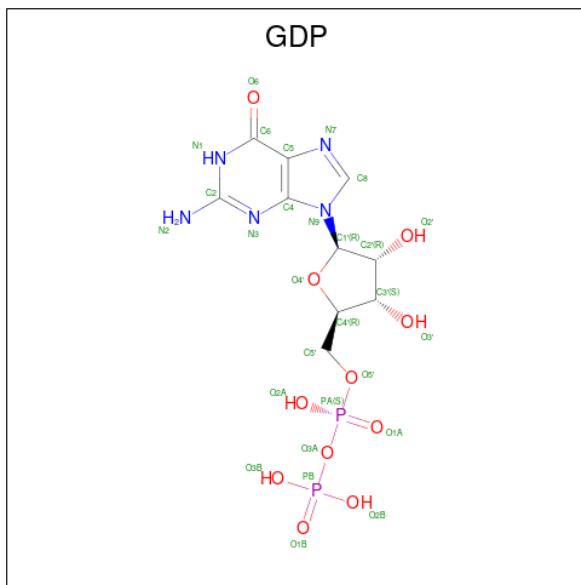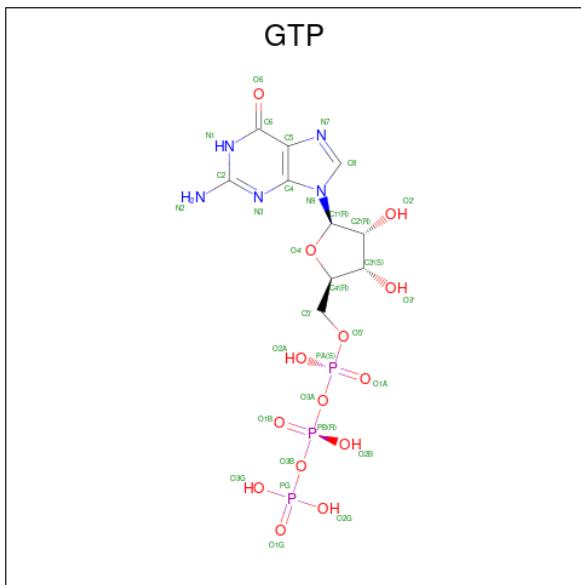
| Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
5	B	1	32	10	5	14	3	0

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: TUBULIN BETA-2B CHAIN

- Molecule 2: TUBULIN ALPHA-1D CHAIN

R64 A65 V66 F67 V68 D69 L70 E71 P72 T73 V74 I75 R79 T80 G81 T82 Y83 R84 Q85 L86 F87 H88 P89 E90 Q91 L92 I93 T94 G95 K96 E97 D98 A99 A100 N101 N102 Y103 A104 R105 G106 H107 Y108 T109 I110 G111 K112 E113 I114 I115 D116 L117 V118 L119 D120 R121 I122 R123 K124 L125

A126 D127 Q128 C129 T130 G131 L132 Q133 G134 F135 S136 V137 F138 H139 S140 F141 G142 G143 G144 T145 G146 S147 G148 F149 T150 S151 L152 L153 M154 E155 R156 L157 S158 K163 K164 S165 K166 L167 E168 F169 S170 I171 Y172 P173 A174 P175 V182 E183 P184 Y185 N186 S187 L188 L189 T190 T191 H192 T193

T194 L195 E196 H197 S198 D199 C200 A201 F202 M203 V204 D205 N206 E207 A208 I209 Y210 D211 I212 C213 R214 R215 N216 L217 D218 I219 E220 R221 P222 T223 Y224 T225 N226 L227 N228 R229 L230 I231 G232 Q233 I234 V235 S236 S237 I238 T239 A240 S241 L242 R243 F244 D245 L248 N249 V250 D251 L252 T253 E254

F255 Q256 T257 N258 L259 V260 P261 Y262 P263 R264 G265 H266 F267 P268 L269 A270 T271 Y272 A273 P274 V275 I276 S277 A278 E279 K280 A281 Y282 S287 V288 A289 E290 I291 T292 N293 A294 C295 F296 E297 P298 A299 N300 Q301 M302 V303 K304 C305 D306 P307 R308 H309 G310 K311 Y312 M313 A314 C315 C316 L317

L318 Y319 R320 G321 D322 V323 V324 P325 K326 D327 V328 N329 A330 A331 I332 A333 T334 I335 K336 T337 K338 R339 T340 I341 Q342 F343 V344 D345 W346 C347 P348 F351 K352 V353 G354 I355 T361 V362 V363 P364 D367 L368 A369 K370 V371 Q372 R373 A374 V375 C376 M377 L378 S379 N380 T381 T382 A383

I384 A385 E386 A387 W388 A389 R390 L391 D392 H393 K394 F395 D396 L397 M398 Y399 A400 K401 R402 A403 F404 V405 H406 W407 Y408 V409 G410 E411 G412 M413 E414 E415 G416 E417 F418 R422 E423 D424 M425 A426 A427 L428 D431 Y432 E433 E434 V435 G436 V437 D438 S439 VAL GLU GLY GLU GLY GLU

GLU GLU GLY GLU GLY TYR

• Molecule 3: KINESIN-1 HEAVY CHAIN

Chain C:

17%

42%　　　45%　　　9%

MET ALA D3 P4 A5 E6 C7 N8 I9 K10 C13 R14 F15 R16 P17 L18 N19 E20 V23 N24 D27 K28 Y29 V30 Q34 G35 E36 D37 T38 V39 M40 I41 Y46 A47 F48 D49 R50 V51 S54 S57 Q60 V61 Y62 C65 A66 I69 V70 K71 D72 D73

L74 E75 G76 Y77 T80 I81 Y84 G85 Q86 T87 S88 S89 G90 K91 T94 M95 K98 L99 H100 D101 P102 M105 G106 I107 I108 P109 R110 I111 I115 F116 N117 Y118 I119 Y120 S121 M122 D123 E124 E127 F128 H129 I130 K131 V132 S133 Y134 F135 E136 I137 Y138 L139 I142

R143 D144 L145 L146 D147 V148 S149 K150 T151 N152 L153 S154 V155 H156 R161 Y164 V165 K166 G167 C168 T169 E170 R171 F172 V173 C174 M180 D181 T182 I183 D184 E185 R190 H191 V192 A193 V194 T195 N196 M197 S202 R203 S204 I207 F208 L209 I210 N211 V212 K213 Q214 E215 N216

T219 E220 Q221 K222 K226 L229 V230 D231 L232 A233 G234 S235 E236 LYS VAL SER LYS THR GLY ALA GLU GLY ALA VAL LEU ASP GLU ALA LYS ASN ILE N255 L258 S259 A260 L261 G262 N263 V264 I265 S266 A267 L268 A269 E270 G271 S272 V275 P276 Y277 R278 D279 S280 K281 M282

I285 D288 S289 N293 C294 R295 T296 T297 I300 C301 C302 S303 P304 S305 S306 Y307 N308 E309 S310 E311 T312 K313 S314 T315 L316 L317 F318 G319 Q320 R321 A322 K323 T324 I325 K326 N327 T328 V329 C330 VAL ASN VAL GLU LEU THR ALA GLU GLN TRP

4   Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	HELICAL, twist=Not provided°, rise=Not provided Å, axial sym=Not provided	Depositor
Number of particles used	168000	Depositor
Resolution determination method	Not provided	
CTF correction method	DONE WITH FREALIGN	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose $(e^-/\text{Å}^2)$	15	Depositor
Minimum defocus (nm)	760	Depositor
Maximum defocus (nm)	2900	Depositor
Magnification	50000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	11.104	Depositor
Minimum map value	-8.071	Depositor
Average map value	0.544	Depositor
Map value standard deviation	1.797	Depositor
Recommended contour level	1.55	Depositor
Map size (Å)	238.0, 140.0, 282.8	wwPDB
Map dimensions	85, 50, 101	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.8, 2.8, 2.8	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: GDP, GTP

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$ >5	RMSZ	#$|Z|$ >5
1	A	0.51	0/3426	0.76	2/4642 (0.0%)
2	B	0.82	3/3410 (0.1%)	0.77	3/4629 (0.1%)
3	C	0.95	1/2477 (0.0%)	1.17	8/3339 (0.2%)
All	All	0.76	4/9313 (0.0%)	0.89	13/12610 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	C	0	5

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	92	LEU	C-N	27.96	1.98	1.34
2	B	298	PRO	C-N	17.31	1.73	1.34
2	B	68	VAL	C-N	14.35	1.67	1.34
3	C	29	TYR	CB-CG	-5.01	1.44	1.51

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	307	TYR	CA-CB-CG	-11.33	91.87	113.40
3	C	307	TYR	CB-CG-CD1	-10.06	114.96	121.00
3	C	29	TYR	CB-CG-CD2	-7.39	116.57	121.00
2	B	68	VAL	O-C-N	-7.10	111.34	122.70
2	B	298	PRO	O-C-N	-6.72	111.94	122.70
3	C	204	SER	CB-CA-C	-6.46	97.83	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	29	TYR	CA-CB-CG	-6.18	101.65	113.40
1	A	235	MET	CG-SD-CE	6.10	109.96	100.20
2	B	69	ASP	CB-CG-OD1	6.09	123.79	118.30
3	C	36	GLU	CB-CA-C	-5.52	99.35	110.40
1	A	217	LEU	N-CA-C	-5.38	96.47	111.00
3	C	18	LEU	CB-CA-C	-5.35	100.03	110.20
3	C	304	PRO	O-C-N	5.05	130.78	122.70

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	C	16	ARG	Sidechain
3	C	27	ASP	Peptide
3	C	28	LYS	Peptide
3	C	30	VAL	Peptide
3	C	305	SER	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3351	0	3229	547	0
2	B	3334	0	3223	633	0
3	C	2438	0	2397	186	0
4	A	28	0	12	1	0
5	B	32	0	12	5	0
All	All	9183	0	8873	1343	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 74.

All (1343) 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:B:296:PHE:CE1	2:B:341:ILE:HD11	1.32	1.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:5:ILE:HG12	2:B:64:ARG:NH1	1.27	1.42
2:B:57:GLY:HA3	2:B:58:ALA:CB	1.45	1.42
2:B:298:PRO:C	2:B:299:ALA:N	1.73	1.40
2:B:3:GLU:CG	2:B:51:THR:HA	1.57	1.34
2:B:296:PHE:CE1	2:B:341:ILE:CD1	2.11	1.32
2:B:63:PRO:HG2	2:B:91:GLN:OE1	1.29	1.31
2:B:3:GLU:HG2	2:B:51:THR:CA	1.60	1.29
2:B:57:GLY:CA	2:B:58:ALA:HB2	1.63	1.28
1:A:264:ARG:HD3	3:C:278:ARG:NH2	1.45	1.27
2:B:62:VAL:CG1	2:B:63:PRO:HD2	1.67	1.23
1:A:264:ARG:NH1	3:C:278:ARG:NE	1.89	1.21
2:B:5:ILE:CG1	2:B:64:ARG:NH1	2.05	1.20
2:B:92:LEU:C	2:B:93:ILE:N	1.98	1.17
2:B:217:LEU:HD12	2:B:277:SER:CB	1.72	1.16
2:B:62:VAL:HG12	2:B:63:PRO:CD	1.76	1.15
2:B:5:ILE:CD1	2:B:64:ARG:HH12	1.57	1.15
2:B:70:LEU:HD13	2:B:145:THR:OG1	1.49	1.13
2:B:296:PHE:CE2	2:B:335:ILE:HG21	1.84	1.13
1:A:234:THR:HG21	1:A:270:PRO:HB2	1.23	1.12
2:B:243:ARG:NH2	2:B:252:LEU:H	1.45	1.12
2:B:30:ILE:HG12	2:B:36:MET:HB3	1.19	1.10
2:B:67:PHE:HE2	2:B:87:PHE:CE2	1.68	1.10
1:A:93:VAL:HG11	1:A:118:VAL:HG22	1.30	1.08
2:B:298:PRO:HB3	2:B:307:PRO:HD2	1.36	1.06
2:B:274:PRO:C	2:B:275:VAL:N	2.09	1.06
2:B:11:GLN:HG3	2:B:74:VAL:HG11	1.34	1.05
1:A:172:VAL:HG11	1:A:387:LEU:HD21	1.37	1.05
2:B:109:THR:HG22	2:B:110:ILE:N	1.71	1.05
2:B:296:PHE:CD1	2:B:341:ILE:CD1	2.40	1.04
2:B:217:LEU:CD1	2:B:277:SER:HB3	1.87	1.04
2:B:67:PHE:CE2	2:B:87:PHE:CE2	2.45	1.04
1:A:299:LYS:H	1:A:299:LYS:HD3	1.24	1.02
1:A:264:ARG:HD3	3:C:278:ARG:CZ	1.88	1.02
3:C:219:THR:HG22	3:C:221:GLN:HG2	1.36	1.02
2:B:56:THR:O	2:B:58:ALA:HB3	1.59	1.02
1:A:236:SER:O	1:A:240:THR:HG23	1.61	1.01
2:B:243:ARG:HH21	2:B:252:LEU:N	1.57	1.01
2:B:5:ILE:HG12	2:B:64:ARG:CZ	1.90	1.00
2:B:5:ILE:CG1	2:B:64:ARG:HH12	1.67	1.00
2:B:88:HIS:HB2	2:B:91:GLN:HE21	1.22	1.00
2:B:52:PHE:HZ	2:B:239:THR:HG21	1.27	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:276:ILE:HG23	2:B:369:ALA:HB2	1.43	0.99
2:B:30:ILE:HD11	2:B:61:HIS:CE1	1.97	0.99
2:B:296:PHE:HE1	2:B:341:ILE:HD11	1.21	0.99
3:C:98:LYS:HD3	3:C:101:ASP:HB2	1.46	0.98
2:B:63:PRO:HG2	2:B:91:GLN:CD	1.85	0.97
3:C:134:TYR:CD1	3:C:145:LEU:HD12	1.98	0.97
3:C:17:PRO:HA	3:C:54:SER:HB3	1.48	0.95
2:B:57:GLY:CA	2:B:58:ALA:CB	2.30	0.95
2:B:62:VAL:HG12	2:B:63:PRO:HD2	0.97	0.95
1:A:273:ALA:HB3	1:A:274:PRO:HD3	1.48	0.95
1:A:281:GLN:O	1:A:283:TYR:N	2.00	0.95
2:B:278:ALA:O	2:B:279:GLU:HB3	1.66	0.95
2:B:316:CYS:HB3	2:B:378:LEU:HD11	1.49	0.95
1:A:264:ARG:NH1	3:C:278:ARG:CZ	2.30	0.94
2:B:251:ASP:N	2:B:254:GLU:HG3	1.82	0.94
2:B:259:LEU:HD11	2:B:378:LEU:HD13	1.47	0.94
2:B:98:ASP:HB2	2:B:105:ARG:HH21	1.31	0.94
2:B:217:LEU:HD12	2:B:277:SER:HB3	0.95	0.93
2:B:251:ASP:H	2:B:254:GLU:HG3	1.33	0.93
2:B:237:SER:HB2	2:B:376:CYS:SG	2.08	0.93
1:A:132:LEU:HD23	1:A:164:ARG:HG3	1.50	0.93
1:A:70:LEU:H	1:A:145:THR:HG21	1.33	0.92
2:B:70:LEU:CD1	2:B:145:THR:OG1	2.18	0.91
2:B:151:SER:HB3	2:B:193:THR:HG21	1.51	0.91
1:A:147:SER:O	1:A:151:THR:HB	1.71	0.91
3:C:219:THR:CG2	3:C:221:GLN:HG2	2.00	0.90
2:B:55:GLU:O	2:B:57:GLY:N	2.04	0.90
2:B:30:ILE:CD1	2:B:61:HIS:ND1	2.34	0.90
1:A:264:ARG:O	1:A:265:LEU:HB3	1.69	0.90
2:B:52:PHE:CE1	2:B:239:THR:HB	2.07	0.90
2:B:30:ILE:CG1	2:B:36:MET:HB3	2.02	0.90
2:B:63:PRO:CG	2:B:91:GLN:OE1	2.20	0.90
2:B:343:PHE:CZ	2:B:351:PHE:CE2	2.61	0.89
1:A:102:ASN:HD21	1:A:408:TYR:HA	1.38	0.89
2:B:110:ILE:HG23	2:B:111:GLY:H	1.38	0.89
3:C:208:PHE:HE2	3:C:210:ILE:HD11	1.38	0.89
2:B:296:PHE:CD1	2:B:341:ILE:HD11	2.03	0.88
2:B:147:SER:HB2	2:B:190:THR:OG1	1.73	0.88
1:A:8:GLN:OE1	1:A:67:LEU:HD22	1.73	0.88
1:A:264:ARG:HB2	1:A:266:HIS:CD2	2.08	0.88
2:B:109:THR:HG22	2:B:110:ILE:H	1.33	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:63:PRO:CD	2:B:87:PHE:HA	2.03	0.88
1:A:93:VAL:HG11	1:A:118:VAL:CG2	2.03	0.88
2:B:119:LEU:HD23	2:B:122:ILE:HD11	1.53	0.87
2:B:122:ILE:HD12	2:B:157:LEU:HD21	1.54	0.87
1:A:311:ARG:HD3	1:A:342:TYR:HA	1.56	0.87
2:B:30:ILE:CD1	2:B:61:HIS:CE1	2.57	0.87
1:A:195:VAL:HG13	1:A:196:GLU:HG2	1.57	0.87
1:A:153:LEU:O	1:A:157:ILE:HG12	1.76	0.86
1:A:276:THR:HB	1:A:281:GLN:HG3	1.56	0.86
1:A:6:HIS:CE1	1:A:8:GLN:HG2	2.10	0.86
1:A:101:ASN:HD21	1:A:143:GLY:HA2	1.38	0.86
2:B:296:PHE:CD1	2:B:341:ILE:HD12	2.08	0.86
1:A:19:LYS:HG3	1:A:228:ASN:HB3	1.57	0.86
2:B:63:PRO:HD3	2:B:87:PHE:HA	1.56	0.86
2:B:52:PHE:CZ	2:B:239:THR:HG21	2.11	0.86
1:A:10:GLY:HA2	1:A:145:THR:HB	1.55	0.85
2:B:264:ARG:O	2:B:266:HIS:N	2.09	0.85
1:A:242:LEU:HD22	1:A:250:ALA:H	1.41	0.85
1:A:360:PRO:HG2	1:A:371:LEU:HB3	1.56	0.85
1:A:4:ILE:HD13	1:A:136:GLN:HE21	1.42	0.84
2:B:234:ILE:HG13	2:B:270:ALA:HB1	1.59	0.84
3:C:48:PHE:CZ	3:C:316:LEU:HD22	2.13	0.84
1:A:234:THR:HG21	1:A:270:PRO:CB	2.06	0.84
1:A:20:PHE:CD1	1:A:235:MET:SD	2.71	0.84
1:A:209:LEU:HB3	1:A:227:LEU:HD22	1.59	0.84
2:B:264:ARG:HB2	2:B:266:HIS:CD2	2.13	0.84
1:A:191:VAL:HG11	1:A:425:MET:HG3	1.60	0.83
2:B:204:VAL:HG11	2:B:231:ILE:HD12	1.59	0.83
1:A:3:GLU:O	1:A:133:GLN:HB3	1.78	0.83
1:A:264:ARG:CD	3:C:278:ARG:CZ	2.55	0.83
1:A:287:THR:O	1:A:288:VAL:HG23	1.79	0.83
1:A:148:GLY:O	1:A:151:THR:HG22	1.79	0.83
1:A:324:SER:HB3	1:A:327:GLU:HG2	1.60	0.83
2:B:23:LEU:HD23	2:B:236:SER:HB2	1.60	0.83
2:B:217:LEU:CD1	2:B:277:SER:CA	2.56	0.83
2:B:316:CYS:HB3	2:B:378:LEU:CD1	2.08	0.83
1:A:150:GLY:HA2	1:A:153:LEU:HD22	1.60	0.83
2:B:106:GLY:O	2:B:111:GLY:HA3	1.78	0.83
2:B:184:PRO:HG2	2:B:398:MET:HE1	1.61	0.82
1:A:156:LYS:HE2	1:A:156:LYS:HA	1.61	0.82
1:A:110:GLU:O	1:A:113:GLU:HG2	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:101:ASN:ND2	1:A:143:GLY:HA2	1.94	0.82
1:A:147:SER:HB2	1:A:190:SER:HB3	1.60	0.82
2:B:52:PHE:CZ	2:B:239:THR:HB	2.14	0.82
2:B:151:SER:CB	2:B:193:THR:HG21	2.09	0.82
3:C:108:ILE:HB	3:C:109:PRO:HD3	1.62	0.82
2:B:276:ILE:HG23	2:B:369:ALA:CB	2.10	0.81
2:B:248:LEU:HD23	2:B:353:VAL:O	1.80	0.81
1:A:20:PHE:CZ	1:A:24:ILE:HD12	2.15	0.81
2:B:67:PHE:CE2	2:B:87:PHE:HE2	1.96	0.81
2:B:220:GLU:C	2:B:222:PRO:HD3	2.02	0.81
2:B:6:SER:HB3	2:B:136:SER:OG	1.81	0.81
2:B:109:THR:CG2	2:B:110:ILE:N	2.44	0.81
3:C:138:TYR:CD2	3:C:139:LEU:HD23	2.15	0.80
2:B:70:LEU:CD1	2:B:145:THR:HG23	2.12	0.80
2:B:217:LEU:CD1	2:B:277:SER:CB	2.55	0.80
1:A:236:SER:O	1:A:240:THR:CG2	2.29	0.80
2:B:234:ILE:HD13	2:B:234:ILE:O	1.81	0.80
2:B:132:LEU:H	2:B:132:LEU:HD23	1.46	0.80
2:B:241:SER:O	2:B:244:PHE:HB3	1.82	0.80
1:A:68:VAL:HG12	1:A:149:MET:SD	2.22	0.80
2:B:7:ILE:HG22	2:B:66:VAL:HG22	1.63	0.79
2:B:52:PHE:HZ	2:B:239:THR:CG2	1.94	0.79
1:A:264:ARG:HB2	1:A:266:HIS:HD2	1.45	0.79
1:A:413:MET:HG3	1:A:414:ASP:H	1.47	0.79
3:C:16:ARG:HG2	3:C:17:PRO:HD2	1.63	0.79
3:C:95:MET:HE3	3:C:95:MET:HA	1.63	0.79
1:A:259:MET:HA	1:A:314:THR:HG21	1.65	0.79
2:B:313:MET:HB3	2:B:344:VAL:HG21	1.63	0.79
1:A:54:ASN:HD21	1:A:64:ARG:HD3	1.46	0.79
3:C:86:GLN:HB2	3:C:311:GLU:HG2	1.64	0.79
1:A:396:THR:HG23	1:A:422:GLU:OE2	1.83	0.78
2:B:172:TYR:HD1	2:B:172:TYR:C	1.87	0.78
1:A:265:LEU:HD12	1:A:265:LEU:O	1.83	0.78
2:B:67:PHE:HE2	2:B:87:PHE:CD2	2.00	0.78
2:B:199:ASP:HB3	2:B:256:GLN:NE2	1.99	0.78
3:C:131:LYS:HG2	3:C:172:PHE:CE1	2.18	0.78
2:B:56:THR:O	2:B:58:ALA:CB	2.30	0.78
2:B:204:VAL:HG13	2:B:209:ILE:HD11	1.66	0.78
1:A:205:ASP:OD2	1:A:304:ALA:HB2	1.84	0.78
2:B:110:ILE:HG23	2:B:111:GLY:N	1.99	0.78
3:C:3:ASP:HB2	3:C:4:PRO:HD3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:71:LYS:O	3:C:71:LYS:HD3	1.84	0.78
1:A:234:THR:CG2	1:A:270:PRO:HB2	2.11	0.78
2:B:52:PHE:CZ	2:B:239:THR:CB	2.67	0.78
1:A:35:SER:HB3	1:A:59:ASN:HA	1.65	0.77
1:A:264:ARG:HH11	3:C:278:ARG:CZ	1.97	0.77
2:B:267:PHE:N	2:B:267:PHE:CD1	2.49	0.77
2:B:11:GLN:HE21	2:B:74:VAL:HG22	1.47	0.77
2:B:217:LEU:CD1	2:B:277:SER:HA	2.13	0.77
2:B:223:THR:HB	2:B:225:THR:HG22	1.67	0.77
2:B:11:GLN:HG3	2:B:74:VAL:CG1	2.15	0.77
2:B:52:PHE:CZ	2:B:239:THR:CG2	2.66	0.77
2:B:155:GLU:HA	2:B:197:HIS:ND1	1.99	0.77
3:C:5:ALA:HB3	3:C:8:ASN:OD1	1.83	0.77
3:C:138:TYR:HE1	3:C:203:ARG:HB3	1.48	0.77
3:C:267:ALA:O	3:C:270:GLU:HG2	1.85	0.77
2:B:30:ILE:HD13	2:B:61:HIS:CG	2.20	0.77
2:B:296:PHE:CZ	2:B:335:ILE:HG21	2.18	0.77
2:B:221:ARG:O	2:B:221:ARG:HD3	1.85	0.77
2:B:231:ILE:HA	2:B:234:ILE:HG22	1.66	0.77
2:B:225:THR:O	2:B:229:ARG:HG3	1.86	0.76
1:A:198:THR:O	1:A:265:LEU:HD22	1.85	0.76
2:B:67:PHE:HD2	2:B:92:LEU:HD23	1.49	0.76
2:B:7:ILE:HD12	2:B:153:LEU:HD21	1.68	0.76
3:C:138:TYR:HE1	3:C:203:ARG:CB	1.99	0.76
2:B:276:ILE:O	2:B:369:ALA:HB2	1.84	0.76
1:A:168:THR:HB	1:A:201:THR:HG23	1.68	0.76
1:A:259:MET:HG2	1:A:314:THR:HG21	1.67	0.75
2:B:331:ALA:O	2:B:335:ILE:HG12	1.86	0.75
2:B:5:ILE:CD1	2:B:64:ARG:NH1	2.38	0.75
2:B:62:VAL:CG1	2:B:63:PRO:CD	2.50	0.75
2:B:70:LEU:CD1	2:B:145:THR:CG2	2.64	0.75
1:A:19:LYS:HG3	1:A:228:ASN:CB	2.17	0.75
2:B:296:PHE:CE1	2:B:341:ILE:HD12	2.20	0.75
2:B:167:LEU:HG	2:B:200:CYS:HB3	1.68	0.75
2:B:344:VAL:HG11	2:B:346:TRP:CE2	2.21	0.75
1:A:192:HIS:ND1	1:A:424:ASN:OD1	2.18	0.74
2:B:3:GLU:HG2	2:B:51:THR:HA	0.80	0.74
2:B:163:LYS:O	2:B:164:LYS:HG2	1.86	0.74
1:A:176:LYS:HE3	1:A:207:GLU:HG3	1.68	0.74
1:A:8:GLN:CD	1:A:67:LEU:HD22	2.08	0.74
2:B:5:ILE:CG1	2:B:64:ARG:CZ	2.56	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:205:ASP:CB	2:B:303:VAL:HA	2.17	0.74
2:B:317:LEU:HB3	2:B:319:TYR:HE1	1.52	0.74
1:A:103:TRP:CZ3	1:A:108:TYR:HE1	2.05	0.74
2:B:425:MET:HE2	2:B:428:LEU:HD23	1.70	0.74
1:A:6:HIS:HE1	1:A:8:GLN:HG2	1.52	0.73
2:B:104:ALA:CB	2:B:413:MET:HG3	2.18	0.73
2:B:362:VAL:HG13	2:B:368:LEU:HD12	1.68	0.73
2:B:4:CYS:SG	2:B:252:LEU:HD11	2.27	0.73
2:B:172:TYR:OH	2:B:387:ALA:HB1	1.87	0.73
2:B:243:ARG:HH21	2:B:252:LEU:H	0.79	0.73
1:A:242:LEU:HD13	1:A:250:ALA:C	2.09	0.73
2:B:103:TYR:CD2	2:B:189:LEU:HD13	2.24	0.73
2:B:104:ALA:HB2	2:B:413:MET:HG3	1.71	0.73
1:A:250:ALA:HA	1:A:254:LYS:HE2	1.68	0.73
1:A:274:PRO:HG2	1:A:371:LEU:HD21	1.70	0.73
2:B:70:LEU:HD11	2:B:145:THR:HG23	1.70	0.73
2:B:112:LYS:O	2:B:115:ILE:HG22	1.89	0.73
2:B:7:ILE:HD11	2:B:137:VAL:HG22	1.71	0.73
2:B:264:ARG:C	2:B:266:HIS:H	1.91	0.73
1:A:76:ASP:HA	1:A:79:ARG:HG2	1.71	0.73
1:A:111:GLY:O	1:A:115:VAL:HG23	1.89	0.73
1:A:209:LEU:HG	1:A:230:LEU:HD22	1.69	0.73
2:B:306:ASP:O	2:B:308:ARG:N	2.20	0.73
1:A:217:LEU:O	1:A:219:LEU:N	2.22	0.72
1:A:264:ARG:HD3	3:C:278:ARG:HH22	1.48	0.72
2:B:242:LEU:HG	2:B:250:VAL:O	1.88	0.72
3:C:98:LYS:CD	3:C:101:ASP:HB2	2.18	0.72
2:B:298:PRO:HB3	2:B:307:PRO:CD	2.15	0.72
2:B:105:ARG:O	2:B:110:ILE:HG22	1.89	0.72
2:B:166:LYS:HE3	2:B:199:ASP:OD1	1.90	0.72
1:A:264:ARG:NH1	3:C:278:ARG:HE	1.88	0.72
3:C:269:ALA:HB2	3:C:322:ALA:HA	1.70	0.72
1:A:264:ARG:CD	3:C:278:ARG:NH2	2.40	0.72
3:C:20:GLU:O	3:C:23:VAL:HG12	1.90	0.72
2:B:7:ILE:CG1	2:B:137:VAL:HG22	2.20	0.72
2:B:312:TYR:O	2:B:344:VAL:HG23	1.90	0.72
1:A:70:LEU:HG	1:A:145:THR:CG2	2.20	0.71
2:B:317:LEU:HD12	2:B:351:PHE:HD1	1.55	0.71
3:C:119:ILE:HD11	3:C:130:ILE:HD11	1.71	0.71
2:B:259:LEU:HD11	2:B:378:LEU:CD1	2.20	0.71
3:C:4:PRO:HD2	3:C:293:ASN:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:356:CYS:SG	1:A:357:ASP:N	2.62	0.71
1:A:431:GLU:OE1	1:A:432:TYR:HA	1.91	0.71
2:B:234:ILE:HG21	2:B:302:MET:HE3	1.71	0.71
1:A:332:MET:HE3	1:A:351:VAL:HG11	1.71	0.71
1:A:191:VAL:CG1	1:A:425:MET:HG3	2.19	0.71
1:A:201:THR:OG1	1:A:265:LEU:HD11	1.90	0.71
2:B:172:TYR:C	2:B:172:TYR:CD1	2.61	0.71
1:A:237:GLY:O	1:A:241:CYS:HB3	1.90	0.71
1:A:243:ARG:NH2	1:A:252:LEU:HG	2.05	0.71
2:B:148:GLY:O	2:B:151:SER:HB2	1.91	0.71
1:A:8:GLN:NE2	1:A:17:GLY:HA3	2.06	0.71
2:B:242:LEU:HD21	2:B:250:VAL:HB	1.71	0.71
2:B:343:PHE:CZ	2:B:351:PHE:HE2	2.08	0.70
2:B:381:THR:C	2:B:383:ALA:H	1.95	0.70
1:A:264:ARG:CZ	3:C:278:ARG:CZ	2.69	0.70
2:B:11:GLN:HE21	2:B:74:VAL:CG2	2.03	0.70
1:A:48:ARG:HG2	1:A:243:ARG:O	1.90	0.70
2:B:12:ALA:HB3	2:B:140:SER:OG	1.91	0.70
3:C:95:MET:HA	3:C:95:MET:CE	2.21	0.70
3:C:156:HIS:HB2	3:C:164:TYR:CZ	2.26	0.70
1:A:217:LEU:C	1:A:219:LEU:H	1.91	0.70
1:A:255:LEU:O	1:A:259:MET:HG3	1.91	0.70
1:A:260:VAL:HG23	2:B:407:TRP:HE1	1.57	0.70
2:B:199:ASP:HB3	2:B:256:GLN:HE21	1.57	0.70
2:B:5:ILE:HG22	2:B:6:SER:N	2.07	0.70
3:C:134:TYR:CE1	3:C:145:LEU:HD12	2.27	0.70
1:A:70:LEU:HG	1:A:145:THR:HG23	1.74	0.70
1:A:10:GLY:O	1:A:14:ASN:HB2	1.90	0.69
1:A:175:PRO:HD2	1:A:207:GLU:OE2	1.91	0.69
1:A:234:THR:O	1:A:238:VAL:HG23	1.92	0.69
2:B:67:PHE:CD2	2:B:92:LEU:HD23	2.26	0.69
2:B:205:ASP:HB3	2:B:303:VAL:HA	1.73	0.69
2:B:237:SER:CB	2:B:376:CYS:SG	2.80	0.69
2:B:244:PHE:HD1	2:B:245:ASP:N	1.90	0.69
1:A:24:ILE:HD11	1:A:52:TYR:CE2	2.28	0.69
2:B:133:GLN:HG2	2:B:243:ARG:HH22	1.57	0.69
2:B:371:VAL:HG12	2:B:372:GLN:H	1.57	0.69
1:A:291:LEU:O	1:A:295:MET:HG3	1.91	0.69
3:C:309:GLU:HB3	3:C:313:LYS:NZ	2.08	0.69
3:C:260:ALA:HB1	3:C:279:ASP:OD1	1.93	0.69
1:A:242:LEU:CD2	1:A:250:ALA:H	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:276:ILE:O	2:B:369:ALA:N	2.25	0.68
2:B:343:PHE:HZ	2:B:351:PHE:CE2	2.10	0.68
2:B:115:ILE:CD1	2:B:119:LEU:HG	2.23	0.68
1:A:209:LEU:HD23	1:A:227:LEU:HB3	1.75	0.68
1:A:251:ASP:O	1:A:253:ARG:N	2.26	0.68
2:B:221:ARG:N	2:B:222:PRO:HD3	2.09	0.68
1:A:180:THR:HG22	1:A:181:VAL:N	2.07	0.68
3:C:62:TYR:HB2	3:C:110:ARG:HD3	1.74	0.68
3:C:207:ILE:CD1	3:C:230:VAL:HG22	2.24	0.68
1:A:256:ALA:O	1:A:260:VAL:HG22	1.94	0.68
2:B:102:ASN:HB2	2:B:408:TYR:CE1	2.29	0.68
3:C:81:ILE:HG12	3:C:297:THR:HG22	1.76	0.68
1:A:204:ILE:HD13	1:A:231:VAL:HG22	1.76	0.68
1:A:243:ARG:HH22	1:A:252:LEU:HG	1.59	0.68
2:B:217:LEU:HD12	2:B:277:SER:CA	2.23	0.68
1:A:103:TRP:HZ3	1:A:108:TYR:HE1	1.42	0.67
1:A:328:VAL:O	1:A:332:MET:HG2	1.95	0.67
1:A:359:PRO:HB2	1:A:360:PRO:HD2	1.74	0.67
2:B:70:LEU:HD12	2:B:145:THR:CG2	2.24	0.67
1:A:325:MET:CE	1:A:355:VAL:HG21	2.24	0.67
2:B:141:PHE:O	2:B:147:SER:HB3	1.94	0.67
1:A:310:GLY:HA3	1:A:436:GLN:HE21	1.59	0.67
1:A:66:ILE:C	1:A:67:LEU:HD23	2.15	0.67
1:A:250:ALA:HB1	1:A:254:LYS:HB2	1.75	0.67
2:B:49:PHE:CE1	2:B:61:HIS:HE1	2.12	0.67
2:B:95:GLY:O	2:B:97:GLU:N	2.27	0.67
1:A:276:THR:HB	1:A:281:GLN:CG	2.25	0.67
2:B:278:ALA:O	2:B:279:GLU:CB	2.43	0.67
1:A:4:ILE:HG21	1:A:136:GLN:HG2	1.76	0.67
2:B:251:ASP:O	2:B:254:GLU:HB2	1.94	0.67
1:A:172:VAL:HG11	1:A:387:LEU:CD2	2.22	0.67
2:B:3:GLU:HG2	2:B:51:THR:C	2.15	0.67
1:A:44:LEU:HD12	1:A:49:ILE:HD13	1.76	0.67
1:A:257:VAL:HG12	1:A:257:VAL:O	1.93	0.67
2:B:172:TYR:HD1	2:B:173:PRO:N	1.93	0.67
2:B:22:GLU:HG3	2:B:83:TYR:OH	1.95	0.66
3:C:131:LYS:HZ2	3:C:172:PHE:HE1	1.41	0.66
1:A:242:LEU:CD1	1:A:255:LEU:HD11	2.25	0.66
2:B:7:ILE:HD12	2:B:153:LEU:CD2	2.24	0.66
2:B:152:LEU:HA	2:B:155:GLU:HB2	1.77	0.66
3:C:191:HIS:HD2	3:C:197:MET:SD	2.18	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:107:HIS:CD2	1:A:151:THR:CG2	2.77	0.66
2:B:63:PRO:CG	2:B:87:PHE:HA	2.26	0.66
1:A:230:LEU:HD23	1:A:231:VAL:N	2.10	0.66
2:B:68:VAL:HG11	2:B:149:PHE:CZ	2.30	0.66
3:C:146:LEU:HD22	3:C:171:ARG:HH12	1.59	0.66
1:A:242:LEU:HD12	1:A:255:LEU:HD11	1.77	0.66
1:A:267:PHE:N	1:A:267:PHE:CD1	2.62	0.66
2:B:341:ILE:HG12	2:B:341:ILE:O	1.95	0.66
3:C:28:LYS:HB2	3:C:306:SER:HB3	1.76	0.66
2:B:67:PHE:CD2	2:B:92:LEU:CD2	2.79	0.66
2:B:175:PRO:HG3	2:B:304:LYS:HG2	1.76	0.66
1:A:281:GLN:O	1:A:283:TYR:HB2	1.96	0.66
3:C:300:ILE:HB	3:C:315:THR:CG2	2.26	0.66
1:A:265:LEU:HD12	1:A:265:LEU:C	2.15	0.66
2:B:100:ALA:CB	2:B:105:ARG:HD3	2.26	0.65
2:B:217:LEU:HD11	2:B:367:ASP:O	1.97	0.65
3:C:48:PHE:HZ	3:C:316:LEU:HD22	1.58	0.65
2:B:313:MET:HB3	2:B:344:VAL:CG2	2.26	0.65
2:B:372:GLN:O	2:B:373:ARG:HB3	1.96	0.65
2:B:49:PHE:CE1	2:B:61:HIS:CE1	2.84	0.65
2:B:344:VAL:HG12	2:B:345:ASP:N	2.12	0.65
1:A:66:ILE:HD13	1:A:122:VAL:HG12	1.79	0.65
1:A:158:ARG:NE	1:A:197:ASN:O	2.30	0.65
1:A:299:LYS:HD3	1:A:299:LYS:N	2.04	0.65
1:A:325:MET:HE2	1:A:355:VAL:HG21	1.78	0.65
2:B:206:ASN:OD1	2:B:227:LEU:HD13	1.96	0.65
1:A:108:TYR:CD1	1:A:413:MET:HE1	2.32	0.65
1:A:431:GLU:O	1:A:434:GLN:HG2	1.97	0.65
2:B:115:ILE:HG23	2:B:116:ASP:N	2.12	0.65
1:A:422:GLU:O	1:A:426:ASN:HB2	1.97	0.65
1:A:325:MET:HE3	1:A:325:MET:HA	1.77	0.65
2:B:293:ASN:OD1	2:B:338:LYS:NZ	2.30	0.65
1:A:66:ILE:CD1	1:A:122:VAL:HG12	2.26	0.64
1:A:241:CYS:O	1:A:244:PHE:HB2	1.98	0.64
2:B:63:PRO:HG3	2:B:87:PHE:HA	1.79	0.64
2:B:3:GLU:HA	2:B:51:THR:CB	2.28	0.64
1:A:35:SER:HB3	1:A:59:ASN:CA	2.26	0.64
2:B:5:ILE:HD11	2:B:64:ARG:HH12	1.59	0.64
1:A:180:THR:CG2	1:A:181:VAL:N	2.61	0.64
2:B:234:ILE:HD13	2:B:234:ILE:C	2.18	0.64
2:B:317:LEU:HD12	2:B:351:PHE:CD1	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:182:VAL:HG23	1:A:186:ASN:HD21	1.60	0.64
1:A:284:ARG:O	1:A:286:LEU:N	2.31	0.64
1:A:264:ARG:CZ	3:C:278:ARG:NE	2.59	0.64
1:A:413:MET:HG2	1:A:418:PHE:HE1	1.61	0.64
2:B:209:ILE:HG23	2:B:230:LEU:HD23	1.79	0.64
2:B:271:THR:HG23	2:B:300:ASN:O	1.97	0.64
2:B:386:GLU:O	2:B:389:ALA:N	2.31	0.64
3:C:28:LYS:CB	3:C:306:SER:HB3	2.27	0.64
2:B:25:CYS:HB2	2:B:30:ILE:O	1.98	0.64
2:B:151:SER:O	2:B:155:GLU:HB2	1.98	0.64
2:B:315:CYS:HB3	2:B:377:MET:HE2	1.78	0.64
1:A:133:GLN:HG3	1:A:165:ILE:HD11	1.80	0.64
2:B:305:CYS:SG	2:B:384:ILE:HD13	2.37	0.64
1:A:105:LYS:O	1:A:110:GLU:HB2	1.97	0.63
2:B:296:PHE:CZ	2:B:341:ILE:HD11	2.22	0.63
3:C:267:ALA:HA	3:C:270:GLU:OE2	1.98	0.63
1:A:114:LEU:O	1:A:118:VAL:HG23	1.97	0.63
1:A:137:LEU:HD22	1:A:154:ILE:CG2	2.28	0.63
1:A:282:GLN:HG2	1:A:282:GLN:O	1.97	0.63
2:B:175:PRO:HG2	2:B:207:GLU:OE1	1.98	0.63
2:B:317:LEU:HD11	2:B:351:PHE:HE1	1.63	0.63
3:C:30:VAL:HG12	3:C:41:ILE:HG12	1.81	0.63
1:A:93:VAL:CG1	1:A:118:VAL:HG22	2.19	0.63
1:A:192:HIS:O	1:A:195:VAL:HG12	1.98	0.63
1:A:315:VAL:HG13	1:A:377:PHE:CE1	2.34	0.63
1:A:318:VAL:HA	1:A:354:ALA:HB3	1.81	0.63
2:B:152:LEU:HD12	2:B:153:LEU:N	2.14	0.63
2:B:23:LEU:HD22	2:B:232:GLY:O	1.99	0.63
1:A:4:ILE:HA	1:A:134:GLY:O	1.99	0.62
1:A:205:ASP:OD2	1:A:304:ALA:N	2.32	0.62
2:B:402:ARG:O	2:B:403:ALA:C	2.36	0.62
1:A:299:LYS:O	1:A:300:ASN:HB2	1.98	0.62
2:B:5:ILE:HD13	2:B:64:ARG:HH12	1.59	0.62
1:A:63:PRO:HD2	1:A:86:ILE:HG12	1.80	0.62
1:A:70:LEU:H	1:A:145:THR:CG2	2.10	0.62
2:B:236:SER:O	2:B:240:ALA:HB3	1.99	0.62
2:B:317:LEU:HB3	2:B:319:TYR:CE1	2.33	0.62
3:C:138:TYR:CE2	3:C:139:LEU:HD23	2.35	0.62
1:A:115:VAL:HG21	1:A:152:LEU:CD2	2.30	0.62
2:B:273:ALA:HB3	2:B:274:PRO:HD3	1.81	0.62
2:B:315:CYS:HB3	2:B:377:MET:CE	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:70:LEU:N	1:A:145:THR:HG21	2.11	0.62
1:A:243:ARG:HH21	1:A:252:LEU:H	1.46	0.62
3:C:313:LYS:O	3:C:317:LEU:HG	1.99	0.62
1:A:253:ARG:O	1:A:256:ALA:N	2.33	0.62
1:A:427:ASP:O	1:A:430:SER:HB3	1.97	0.62
2:B:269:LEU:O	2:B:378:LEU:HA	1.99	0.62
2:B:205:ASP:HB2	2:B:303:VAL:HA	1.82	0.62
2:B:276:ILE:CG2	2:B:369:ALA:HB2	2.26	0.62
3:C:207:ILE:HD13	3:C:230:VAL:HG22	1.82	0.62
2:B:7:ILE:HG22	2:B:66:VAL:CG2	2.28	0.61
2:B:30:ILE:HG12	2:B:36:MET:CB	2.12	0.61
2:B:70:LEU:O	2:B:95:GLY:O	2.17	0.61
2:B:118:VAL:HG11	2:B:149:PHE:HZ	1.65	0.61
2:B:7:ILE:CD1	2:B:137:VAL:HG22	2.29	0.61
2:B:102:ASN:OD1	2:B:105:ARG:HB3	1.99	0.61
2:B:277:SER:HA	2:B:367:ASP:O	2.00	0.61
2:B:345:ASP:C	2:B:347:CYS:H	2.04	0.61
3:C:106:GLY:O	3:C:110:ARG:HG3	2.00	0.61
1:A:204:ILE:CD1	1:A:231:VAL:HG13	2.30	0.61
1:A:324:SER:C	1:A:326:LYS:H	2.03	0.61
1:A:4:ILE:HG23	1:A:134:GLY:O	2.00	0.61
2:B:115:ILE:HG13	2:B:152:LEU:HD13	1.81	0.61
2:B:166:LYS:H	2:B:199:ASP:CG	2.03	0.61
1:A:70:LEU:CG	1:A:145:THR:HG23	2.30	0.61
2:B:62:VAL:HG11	2:B:88:HIS:ND1	2.15	0.61
2:B:267:PHE:HD1	2:B:267:PHE:H	1.47	0.61
3:C:180:MET:HA	3:C:180:MET:HE2	1.82	0.61
1:A:324:SER:CB	1:A:327:GLU:HG2	2.30	0.61
2:B:168:GLU:OE1	2:B:198:SER:HB2	2.01	0.61
2:B:243:ARG:NH2	2:B:252:LEU:N	2.29	0.61
1:A:114:LEU:HD23	1:A:149:MET:CE	2.30	0.61
1:A:211:ASP:OD1	1:A:212:ILE:N	2.33	0.61
2:B:5:ILE:HD11	2:B:64:ARG:HH22	1.65	0.61
1:A:128:SER:OG	1:A:129:CYS:N	2.34	0.60
2:B:169:PHE:CE2	2:B:235:VAL:HG22	2.36	0.60
2:B:362:VAL:HG13	2:B:368:LEU:HB2	1.83	0.60
1:A:204:ILE:HG21	1:A:231:VAL:HG22	1.84	0.60
1:A:230:LEU:O	1:A:233:ALA:HB3	2.00	0.60
1:A:279:GLY:O	1:A:282:GLN:HB3	2.01	0.60
2:B:191:THR:HG21	2:B:425:MET:SD	2.41	0.60
2:B:30:ILE:CD1	2:B:61:HIS:CG	2.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:296:PHE:CZ	2:B:341:ILE:CD1	2.79	0.60
1:A:107:HIS:HD2	1:A:151:THR:CG2	2.12	0.60
3:C:10:LYS:HG2	3:C:49:ASP:OD2	2.02	0.60
3:C:265:ILE:HD12	3:C:318:PHE:CZ	2.37	0.60
1:A:161:TYR:C	1:A:163:ASP:H	2.05	0.60
1:A:324:SER:O	1:A:328:VAL:HG23	2.02	0.60
2:B:87:PHE:CD1	2:B:87:PHE:N	2.69	0.60
2:B:167:LEU:HA	2:B:200:CYS:O	2.01	0.60
2:B:293:ASN:HD21	2:B:338:LYS:HZ1	1.49	0.60
3:C:17:PRO:CA	3:C:54:SER:HB3	2.29	0.60
3:C:302:CYS:HB3	3:C:312:THR:HG22	1.83	0.60
1:A:49:ILE:O	1:A:51:VAL:N	2.35	0.60
2:B:217:LEU:HD11	2:B:277:SER:HA	1.83	0.60
2:B:311:LYS:HE3	2:B:342:GLN:CD	2.22	0.60
2:B:296:PHE:CE2	2:B:335:ILE:CG2	2.73	0.60
3:C:208:PHE:CE2	3:C:210:ILE:HD11	2.29	0.60
1:A:141:LEU:CD1	1:A:141:LEU:N	2.65	0.60
2:B:371:VAL:HG12	2:B:372:GLN:N	2.17	0.60
1:A:54:ASN:ND2	1:A:64:ARG:HD3	2.15	0.60
1:A:285:ALA:HB1	1:A:290:GLU:HG2	1.82	0.60
1:A:408:TYR:CG	1:A:418:PHE:HZ	2.20	0.60
3:C:300:ILE:O	3:C:300:ILE:HG13	2.02	0.60
1:A:115:VAL:HG21	1:A:152:LEU:HD23	1.84	0.60
2:B:229:ARG:NH1	2:B:363:VAL:HG21	2.16	0.60
3:C:72:ASP:O	3:C:75:GLU:HB3	2.02	0.60
1:A:102:ASN:ND2	1:A:407:TRP:O	2.35	0.59
1:A:332:MET:CE	1:A:351:VAL:HG11	2.32	0.59
2:B:413:MET:O	2:B:414:GLU:HG3	2.02	0.59
2:B:435:VAL:HG12	2:B:435:VAL:O	2.02	0.59
1:A:205:ASP:OD2	1:A:304:ALA:CB	2.50	0.59
1:A:30:ILE:HD13	1:A:53:TYR:CE2	2.38	0.59
2:B:276:ILE:HD11	2:B:280:LYS:HD2	1.85	0.59
3:C:3:ASP:HB2	3:C:293:ASN:OD1	2.02	0.59
1:A:264:ARG:HH11	3:C:278:ARG:NH2	1.99	0.59
3:C:134:TYR:CD2	3:C:208:PHE:HD1	2.20	0.59
1:A:89:PRO:HA	1:A:92:PHE:CD2	2.38	0.59
2:B:115:ILE:HD13	2:B:115:ILE:O	2.02	0.59
3:C:208:PHE:HE2	3:C:210:ILE:CD1	2.14	0.59
2:B:344:VAL:HG11	2:B:346:TRP:NE1	2.16	0.59
1:A:151:THR:OG1	1:A:193:GLN:HB3	2.03	0.59
2:B:119:LEU:O	2:B:122:ILE:HG12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:317:LEU:HD11	2:B:351:PHE:CE1	2.38	0.58
1:A:19:LYS:CG	1:A:228:ASN:HB3	2.31	0.58
1:A:183:GLU:HB3	1:A:184:PRO:CD	2.33	0.58
2:B:6:SER:HA	2:B:136:SER:O	2.03	0.58
1:A:270:PRO:HA	1:A:377:PHE:O	2.04	0.58
2:B:51:THR:O	2:B:52:PHE:CD1	2.57	0.58
1:A:217:LEU:C	1:A:219:LEU:N	2.55	0.58
1:A:253:ARG:O	1:A:254:LYS:C	2.42	0.58
2:B:202:PHE:CE1	2:B:378:LEU:HD22	2.38	0.58
2:B:248:LEU:CD2	2:B:353:VAL:O	2.49	0.58
1:A:198:THR:HG22	1:A:265:LEU:HD22	1.85	0.58
1:A:349:ASN:C	1:A:349:ASN:HD22	2.07	0.58
2:B:63:PRO:HG3	2:B:87:PHE:CB	2.34	0.58
2:B:110:ILE:CG2	2:B:111:GLY:H	2.15	0.58
2:B:369:ALA:O	2:B:370:LYS:HB3	2.03	0.58
3:C:62:TYR:CD1	3:C:66:ALA:HB3	2.39	0.58
3:C:316:LEU:O	3:C:320:GLN:HG3	2.04	0.58
1:A:307:PRO:HB3	1:A:312:TYR:OH	2.04	0.58
2:B:119:LEU:CD2	2:B:122:ILE:HD11	2.28	0.58
1:A:180:THR:CG2	1:A:181:VAL:H	2.17	0.58
1:A:299:LYS:O	1:A:300:ASN:CB	2.51	0.58
2:B:268:PRO:HA	2:B:379:SER:O	2.04	0.58
2:B:407:TRP:O	2:B:411:GLU:HG2	2.02	0.58
3:C:132:VAL:HG12	3:C:210:ILE:HD13	1.86	0.58
3:C:260:ALA:HB1	3:C:279:ASP:CG	2.24	0.58
1:A:68:VAL:CG1	1:A:149:MET:SD	2.90	0.58
2:B:165:SER:HA	2:B:199:ASP:OD2	2.04	0.58
2:B:67:PHE:CZ	2:B:87:PHE:CE2	2.92	0.57
2:B:218:ASP:O	2:B:219:ILE:HG23	2.04	0.57
2:B:345:ASP:O	2:B:347:CYS:N	2.37	0.57
3:C:74:LEU:HD13	3:C:118:TYR:CG	2.39	0.57
1:A:70:LEU:C	1:A:99:ALA:HB2	2.24	0.57
2:B:117:LEU:HD11	2:B:121:ARG:HH22	1.69	0.57
2:B:166:LYS:HD2	2:B:197:HIS:O	2.04	0.57
1:A:6:HIS:HB3	1:A:65:ALA:HB2	1.87	0.57
2:B:2:ARG:N	2:B:131:GLY:O	2.36	0.57
2:B:139:HIS:CE1	2:B:170:SER:HB3	2.40	0.57
2:B:313:MET:O	2:B:314:ALA:HB2	2.04	0.57
1:A:5:VAL:CG2	1:A:135:PHE:HD2	2.18	0.57
2:B:216:ASN:O	2:B:217:LEU:HB2	2.05	0.57
2:B:264:ARG:HB2	2:B:266:HIS:HD2	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:362:VAL:HG11	2:B:368:LEU:O	2.04	0.57
3:C:309:GLU:O	3:C:313:LYS:HG2	2.05	0.57
1:A:264:ARG:CD	3:C:278:ARG:NH1	2.68	0.57
2:B:62:VAL:HG13	2:B:63:PRO:HD2	1.78	0.57
1:A:30:ILE:HA	1:A:35:SER:O	2.04	0.57
1:A:149:MET:O	1:A:153:LEU:HD13	2.05	0.57
1:A:273:ALA:CB	1:A:274:PRO:HD3	2.30	0.57
1:A:301:MET:CE	1:A:377:PHE:HE2	2.17	0.57
1:A:14:ASN:OD1	1:A:75:MET:HG2	2.05	0.57
1:A:312:TYR:O	1:A:344:VAL:HB	2.05	0.57
2:B:175:PRO:HG3	2:B:304:LYS:CG	2.35	0.57
2:B:362:VAL:CG1	2:B:368:LEU:HB2	2.35	0.57
1:A:274:PRO:CG	1:A:371:LEU:HD21	2.34	0.56
1:A:320:ARG:O	1:A:359:PRO:HA	2.04	0.56
1:A:422:GLU:O	1:A:426:ASN:N	2.37	0.56
2:B:57:GLY:HA3	2:B:58:ALA:HB2	0.66	0.56
3:C:138:TYR:CE1	3:C:203:ARG:HB3	2.35	0.56
2:B:209:ILE:CG2	2:B:227:LEU:HD22	2.35	0.56
2:B:210:TYR:CE1	2:B:227:LEU:HD11	2.40	0.56
2:B:88:HIS:HB2	2:B:91:GLN:NE2	2.06	0.56
2:B:382:THR:HG22	2:B:382:THR:O	2.05	0.56
1:A:31:ASP:O	1:A:32:PRO:C	2.44	0.56
1:A:50:ASN:O	1:A:64:ARG:NH2	2.38	0.56
1:A:70:LEU:CD1	1:A:145:THR:HG23	2.35	0.56
1:A:182:VAL:HG23	1:A:186:ASN:ND2	2.20	0.56
1:A:259:MET:CA	1:A:314:THR:HG21	2.35	0.56
1:A:272:PHE:HB3	1:A:275:LEU:HD22	1.88	0.56
1:A:283:TYR:C	1:A:284:ARG:HG2	2.24	0.56
1:A:319:PHE:HA	1:A:375:ALA:HA	1.86	0.56
2:B:331:ALA:O	2:B:334:THR:HG22	2.05	0.56
2:B:381:THR:C	2:B:383:ALA:N	2.56	0.56
2:B:436:GLY:C	2:B:438:ASP:H	2.08	0.56
3:C:209:LEU:HD13	3:C:209:LEU:C	2.25	0.56
1:A:191:VAL:HA	1:A:194:LEU:HD12	1.88	0.56
1:A:216:THR:O	1:A:217:LEU:HD12	2.05	0.56
1:A:250:ALA:CA	1:A:254:LYS:HE2	2.35	0.56
2:B:388:TRP:HA	2:B:388:TRP:CE3	2.41	0.56
3:C:62:TYR:CB	3:C:110:ARG:HD3	2.35	0.56
3:C:300:ILE:HB	3:C:315:THR:HG21	1.88	0.56
1:A:165:ILE:HD13	1:A:165:ILE:H	1.71	0.56
1:A:319:PHE:CD2	1:A:375:ALA:HB2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:324:SER:C	1:A:326:LYS:N	2.59	0.56
2:B:152:LEU:HA	2:B:155:GLU:CB	2.35	0.56
2:B:242:LEU:C	2:B:244:PHE:H	2.09	0.56
2:B:231:ILE:HA	2:B:234:ILE:CG2	2.36	0.56
2:B:277:SER:O	2:B:280:LYS:HB2	2.06	0.56
3:C:95:MET:HE3	3:C:107:ILE:HD12	1.88	0.56
2:B:16:ILE:HD12	2:B:171:ILE:HD11	1.87	0.56
2:B:209:ILE:HG22	2:B:227:LEU:HD22	1.88	0.56
3:C:116:PHE:HB3	3:C:120:TYR:CE2	2.40	0.56
3:C:146:LEU:CD2	3:C:171:ARG:HH12	2.19	0.56
3:C:229:LEU:N	3:C:229:LEU:HD22	2.21	0.56
2:B:408:TYR:CD2	2:B:418:PHE:HZ	2.24	0.56
3:C:81:ILE:HG23	3:C:297:THR:CG2	2.36	0.56
1:A:166:MET:HB3	1:A:198:THR:OG1	2.06	0.56
1:A:204:ILE:HG21	1:A:231:VAL:CG2	2.36	0.56
1:A:119:LEU:O	1:A:123:ARG:HG3	2.06	0.55
1:A:311:ARG:HG2	1:A:311:ARG:HH11	1.71	0.55
1:A:19:LYS:O	1:A:23:VAL:HG23	2.06	0.55
1:A:151:THR:OG1	1:A:193:GLN:CB	2.54	0.55
1:A:424:ASN:C	1:A:424:ASN:HD22	2.09	0.55
2:B:338:LYS:O	2:B:340:THR:N	2.34	0.55
3:C:98:LYS:HD3	3:C:101:ASP:CB	2.28	0.55
1:A:311:ARG:HD2	1:A:344:VAL:H	1.71	0.55
2:B:150:THR:O	2:B:153:LEU:N	2.40	0.55
2:B:409:VAL:C	2:B:411:GLU:H	2.09	0.55
1:A:4:ILE:HD13	1:A:136:GLN:NE2	2.18	0.55
1:A:139:HIS:HE1	1:A:168:THR:HG23	1.71	0.55
1:A:147:SER:O	1:A:151:THR:CB	2.51	0.55
1:A:259:MET:CG	1:A:314:THR:HG21	2.36	0.55
1:A:297:ASP:OD1	1:A:298:ALA:N	2.39	0.55
2:B:19:ALA:CB	2:B:228:ASN:HB3	2.35	0.55
3:C:153:LEU:HD12	3:C:166:LYS:O	2.07	0.55
1:A:67:LEU:HD23	1:A:67:LEU:N	2.22	0.55
2:B:64:ARG:O	2:B:64:ARG:HG3	2.07	0.55
3:C:266:SER:OG	3:C:321:ARG:HD3	2.07	0.55
1:A:204:ILE:HD13	1:A:231:VAL:HG13	1.89	0.55
3:C:161:ARG:HD2	3:C:161:ARG:O	2.07	0.55
1:A:5:VAL:HG22	1:A:135:PHE:CD2	2.42	0.55
1:A:223:THR:HG22	1:A:224:TYR:N	2.21	0.55
1:A:310:GLY:CA	1:A:436:GLN:HE21	2.19	0.55
1:A:325:MET:O	1:A:329:ASP:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:30:ILE:HG23	2:B:34:GLY:O	2.07	0.55
2:B:253:THR:O	2:B:256:GLN:HG2	2.06	0.55
2:B:276:ILE:O	2:B:369:ALA:CB	2.53	0.55
3:C:16:ARG:HH12	3:C:303:SER:HB2	1.72	0.55
1:A:239:THR:O	1:A:241:CYS:N	2.41	0.54
3:C:151:THR:HG22	3:C:152:ASN:N	2.23	0.54
2:B:288:VAL:HG22	2:B:373:ARG:NH1	2.23	0.54
1:A:190:SER:O	1:A:194:LEU:HG	2.06	0.54
1:A:210:TYR:HD1	1:A:227:LEU:HD21	1.71	0.54
1:A:239:THR:HG22	1:A:240:THR:N	2.22	0.54
1:A:273:ALA:HB3	1:A:274:PRO:CD	2.29	0.54
2:B:17:GLY:O	2:B:21:TRP:HB2	2.08	0.54
3:C:18:LEU:H	3:C:18:LEU:HD22	1.71	0.54
1:A:133:GLN:HE21	1:A:252:LEU:HB2	1.73	0.54
2:B:6:SER:O	2:B:65:ALA:HB1	2.07	0.54
3:C:171:ARG:NH1	3:C:182:THR:HG23	2.23	0.54
1:A:427:ASP:OD1	1:A:428:LEU:N	2.41	0.54
2:B:115:ILE:HD13	2:B:115:ILE:C	2.28	0.54
2:B:381:THR:OG1	2:B:383:ALA:HB3	2.07	0.54
1:A:68:VAL:HG12	1:A:149:MET:CE	2.38	0.54
1:A:253:ARG:O	1:A:257:VAL:N	2.33	0.54
1:A:343:PHE:O	1:A:344:VAL:O	2.26	0.54
1:A:20:PHE:CE1	1:A:24:ILE:HD12	2.42	0.54
2:B:118:VAL:HG21	2:B:149:PHE:CZ	2.42	0.54
1:A:172:VAL:CG1	1:A:387:LEU:HD21	2.24	0.54
1:A:323:MET:HG3	1:A:328:VAL:HG21	1.90	0.54
2:B:3:GLU:HG3	2:B:51:THR:HA	1.75	0.54
2:B:24:TYR:OH	2:B:239:THR:OG1	2.24	0.54
2:B:61:HIS:C	2:B:62:VAL:HG23	2.28	0.54
2:B:110:ILE:O	2:B:112:LYS:N	2.41	0.54
3:C:303:SER:OG	3:C:305:SER:HB2	2.08	0.54
2:B:163:LYS:O	2:B:163:LYS:HG2	2.08	0.54
2:B:339:ARG:C	2:B:341:ILE:H	2.11	0.54
1:A:264:ARG:NH1	3:C:278:ARG:CD	2.70	0.53
1:A:331:GLN:O	1:A:335:VAL:HG23	2.08	0.53
2:B:121:ARG:O	2:B:125:LEU:HB2	2.08	0.53
3:C:265:ILE:HD12	3:C:318:PHE:CE1	2.43	0.53
1:A:4:ILE:CG2	1:A:136:GLN:HG2	2.38	0.53
2:B:23:LEU:HD23	2:B:236:SER:CB	2.37	0.53
2:B:172:TYR:OH	2:B:387:ALA:O	2.24	0.53
2:B:324:VAL:O	2:B:327:ASP:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:36:TYR:CZ	1:A:38:GLY:HA3	2.43	0.53
1:A:168:THR:CB	1:A:201:THR:HG23	2.38	0.53
2:B:5:ILE:CG2	2:B:6:SER:N	2.70	0.53
1:A:44:LEU:O	1:A:49:ILE:HG12	2.07	0.53
1:A:107:HIS:HD2	1:A:151:THR:HG22	1.72	0.53
1:A:226:ASP:O	1:A:227:LEU:C	2.46	0.53
1:A:325:MET:CE	1:A:355:VAL:HG11	2.38	0.53
1:A:431:GLU:O	1:A:434:GLN:CG	2.56	0.53
2:B:5:ILE:O	2:B:136:SER:N	2.40	0.53
2:B:182:VAL:O	2:B:184:PRO:N	2.41	0.53
2:B:248:LEU:HB3	2:B:355:ILE:H	1.73	0.53
1:A:5:VAL:HG23	1:A:5:VAL:O	2.09	0.53
2:B:98:ASP:O	2:B:110:ILE:HD13	2.08	0.53
1:A:21:TRP:CZ2	1:A:65:ALA:HB2	2.44	0.53
1:A:198:THR:HG22	1:A:265:LEU:CD2	2.39	0.53
2:B:243:ARG:CZ	2:B:252:LEU:HG	2.39	0.53
1:A:141:LEU:HA	1:A:147:SER:HB3	1.91	0.53
2:B:173:PRO:HB2	2:B:391:LEU:CD1	2.39	0.53
1:A:31:ASP:HB3	1:A:32:PRO:HD2	1.89	0.53
2:B:5:ILE:O	2:B:135:PHE:HA	2.09	0.53
2:B:9:VAL:CG1	2:B:139:HIS:HB3	2.38	0.53
2:B:110:ILE:CG2	2:B:111:GLY:N	2.71	0.53
2:B:147:SER:CB	2:B:190:THR:OG1	2.52	0.53
2:B:196:GLU:C	2:B:197:HIS:CD2	2.82	0.53
2:B:231:ILE:CA	2:B:234:ILE:HG22	2.38	0.53
3:C:46:TYR:CG	3:C:316:LEU:HD13	2.44	0.53
1:A:264:ARG:HE	1:A:264:ARG:HA	1.74	0.53
2:B:215:ARG:C	2:B:216:ASN:HD22	2.12	0.53
1:A:226:ASP:O	1:A:229:HIS:N	2.42	0.53
1:A:322:ARG:HG3	1:A:322:ARG:HH11	1.73	0.53
2:B:101:ASN:ND2	5:B:500:GTP:O3G	2.42	0.53
2:B:150:THR:O	2:B:151:SER:C	2.47	0.53
1:A:8:GLN:OE1	1:A:14:ASN:ND2	2.42	0.52
1:A:194:LEU:C	1:A:196:GLU:H	2.11	0.52
2:B:345:ASP:OD2	2:B:439:SER:HB3	2.10	0.52
3:C:4:PRO:CD	3:C:293:ASN:HA	2.36	0.52
1:A:210:TYR:CD1	1:A:227:LEU:HD21	2.44	0.52
2:B:67:PHE:CZ	2:B:87:PHE:HE2	2.27	0.52
2:B:231:ILE:N	2:B:231:ILE:HD13	2.25	0.52
1:A:213:CYS:SG	1:A:219:LEU:HD23	2.48	0.52
1:A:229:HIS:ND1	1:A:229:HIS:C	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:119:LEU:HD11	2:B:156:ARG:CD	2.40	0.52
2:B:408:TYR:O	2:B:411:GLU:N	2.39	0.52
1:A:103:TRP:CE2	1:A:189:LEU:HB3	2.45	0.52
1:A:149:MET:O	1:A:149:MET:HG2	2.10	0.52
2:B:24:TYR:CE1	2:B:240:ALA:HB2	2.45	0.52
1:A:209:LEU:O	1:A:210:TYR:C	2.48	0.52
2:B:201:ALA:O	2:B:267:PHE:HA	2.10	0.52
1:A:179:ASP:HB2	4:A:600:GDP:H3'	1.90	0.52
1:A:212:ILE:O	1:A:216:THR:HB	2.10	0.52
1:A:320:ARG:HA	1:A:356:CYS:HB3	1.92	0.52
3:C:202:SER:O	3:C:233:ALA:HA	2.10	0.52
1:A:188:THR:HA	1:A:425:MET:HE3	1.92	0.52
1:A:425:MET:O	1:A:428:LEU:HB3	2.09	0.52
2:B:8:HIS:HB3	2:B:13:GLY:O	2.10	0.52
2:B:63:PRO:HG3	2:B:87:PHE:CA	2.40	0.52
2:B:239:THR:O	2:B:240:ALA:C	2.48	0.52
1:A:176:LYS:CE	1:A:207:GLU:HG3	2.39	0.52
1:A:295:MET:SD	1:A:375:ALA:O	2.68	0.52
2:B:173:PRO:HB2	2:B:391:LEU:HD11	1.92	0.52
2:B:344:VAL:HG12	2:B:345:ASP:H	1.75	0.52
2:B:417:GLU:OE1	2:B:417:GLU:HA	2.10	0.52
1:A:27:GLU:O	1:A:27:GLU:HG2	2.08	0.52
1:A:107:HIS:CD2	1:A:151:THR:HG22	2.45	0.52
2:B:11:GLN:NE2	2:B:74:VAL:HG22	2.22	0.52
2:B:67:PHE:CE2	2:B:87:PHE:CD2	2.89	0.52
2:B:191:THR:HG23	2:B:192:HIS:N	2.25	0.52
3:C:87:THR:HA	3:C:91:LYS:HZ1	1.75	0.52
2:B:122:ILE:CD1	2:B:157:LEU:HD21	2.35	0.51
2:B:144:GLY:H	5:B:500:GTP:PG	2.33	0.51
1:A:188:THR:HA	1:A:425:MET:CE	2.40	0.51
1:A:314:THR:CG2	1:A:315:VAL:N	2.73	0.51
1:A:70:LEU:HD12	1:A:145:THR:HG23	1.91	0.51
1:A:260:VAL:HG23	1:A:260:VAL:O	2.10	0.51
2:B:206:ASN:OD1	2:B:227:LEU:CD1	2.57	0.51
2:B:243:ARG:NH2	2:B:251:ASP:OD1	2.44	0.51
3:C:134:TYR:CD2	3:C:208:PHE:CD1	2.98	0.51
1:A:5:VAL:CG2	1:A:135:PHE:CD2	2.94	0.51
1:A:149:MET:O	1:A:153:LEU:HD22	2.10	0.51
1:A:200:GLU:N	1:A:265:LEU:HD13	2.25	0.51
1:A:251:ASP:O	1:A:252:LEU:C	2.49	0.51
1:A:277:SER:OG	1:A:281:GLN:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:ILE:O	1:A:50:ASN:C	2.48	0.51
1:A:259:MET:HG2	1:A:314:THR:CG2	2.38	0.51
2:B:4:CYS:HA	2:B:134:GLY:O	2.10	0.51
2:B:251:ASP:OD1	2:B:252:LEU:N	2.43	0.51
2:B:140:SER:O	2:B:142:GLY:N	2.44	0.51
1:A:323:MET:HG3	1:A:328:VAL:CG2	2.41	0.51
1:A:424:ASN:C	1:A:424:ASN:ND2	2.62	0.51
2:B:70:LEU:CD1	2:B:145:THR:CB	2.89	0.51
1:A:103:TRP:HZ3	1:A:108:TYR:CE1	2.27	0.51
3:C:18:LEU:HD13	3:C:18:LEU:N	2.24	0.51
2:B:133:GLN:CB	2:B:243:ARG:HH12	2.24	0.51
1:A:260:VAL:HG23	2:B:407:TRP:NE1	2.24	0.51
2:B:9:VAL:HG21	2:B:149:PHE:CD1	2.46	0.51
2:B:87:PHE:HD1	2:B:87:PHE:H	1.59	0.51
2:B:119:LEU:HA	2:B:122:ILE:HG12	1.93	0.51
3:C:122:MET:O	3:C:124:GLU:HG3	2.10	0.51
1:A:264:ARG:HH12	3:C:278:ARG:NE	2.00	0.50
1:A:345:GLU:C	1:A:347:ILE:H	2.13	0.50
2:B:196:GLU:O	2:B:197:HIS:CD2	2.64	0.50
2:B:244:PHE:CD1	2:B:245:ASP:N	2.76	0.50
3:C:131:LYS:CE	3:C:213:LYS:HD2	2.41	0.50
2:B:14:VAL:HG11	2:B:75:ILE:HD13	1.93	0.50
2:B:133:GLN:HB3	2:B:243:ARG:HH12	1.76	0.50
2:B:171:ILE:HG22	2:B:171:ILE:O	2.10	0.50
2:B:362:VAL:HG13	2:B:368:LEU:CD1	2.38	0.50
1:A:431:GLU:OE1	1:A:432:TYR:CA	2.57	0.50
2:B:261:PRO:HB2	2:B:262:TYR:CD2	2.46	0.50
1:A:296:PHE:CZ	1:A:315:VAL:HG11	2.46	0.50
1:A:298:ALA:O	1:A:299:LYS:C	2.50	0.50
2:B:132:LEU:CD2	2:B:164:LYS:HE3	2.42	0.50
2:B:234:ILE:HB	2:B:302:MET:HE1	1.93	0.50
2:B:264:ARG:C	2:B:266:HIS:N	2.60	0.50
3:C:62:TYR:CE1	3:C:66:ALA:HB3	2.46	0.50
1:A:333:LEU:O	1:A:336:GLN:N	2.45	0.50
2:B:310:GLY:HA3	2:B:383:ALA:N	2.26	0.50
1:A:431:GLU:HA	1:A:434:GLN:CG	2.42	0.50
3:C:191:HIS:O	3:C:194:VAL:HB	2.11	0.50
1:A:113:GLU:HG3	1:A:114:LEU:N	2.26	0.50
1:A:345:GLU:O	1:A:347:ILE:N	2.45	0.50
2:B:62:VAL:HG12	2:B:63:PRO:N	2.25	0.50
3:C:138:TYR:CE2	3:C:139:LEU:CD2	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:TRP:HZ2	1:A:65:ALA:HB2	1.76	0.50
1:A:262:PHE:O	1:A:264:ARG:N	2.45	0.50
1:A:265:LEU:HD12	1:A:266:HIS:O	2.12	0.50
2:B:402:ARG:O	2:B:403:ALA:O	2.29	0.50
1:A:49:ILE:HG13	1:A:50:ASN:H	1.76	0.50
1:A:173:PRO:HB3	1:A:183:GLU:HG2	1.93	0.50
1:A:265:LEU:O	1:A:266:HIS:O	2.29	0.50
2:B:11:GLN:O	2:B:14:VAL:HB	2.12	0.50
2:B:115:ILE:HD11	2:B:119:LEU:HG	1.92	0.50
2:B:227:LEU:O	2:B:231:ILE:HG12	2.12	0.50
2:B:238:ILE:O	2:B:242:LEU:HB2	2.11	0.50
3:C:207:ILE:HD12	3:C:230:VAL:HG22	1.91	0.50
1:A:156:LYS:HA	1:A:156:LYS:CE	2.38	0.49
1:A:269:MET:HB3	1:A:303:ALA:HB2	1.94	0.49
1:A:336:GLN:HE22	1:A:349:ASN:ND2	2.10	0.49
1:A:399:PHE:O	1:A:402:LYS:N	2.29	0.49
2:B:414:GLU:N	2:B:414:GLU:OE1	2.45	0.49
3:C:28:LYS:HB2	3:C:306:SER:CB	2.41	0.49
3:C:270:GLU:HG3	3:C:272:SER:HB3	1.94	0.49
3:C:275:VAL:HB	3:C:277:TYR:CE2	2.47	0.49
1:A:24:ILE:HG22	1:A:25:SER:N	2.27	0.49
1:A:280:SER:O	1:A:282:GLN:N	2.45	0.49
1:A:369:ARG:HD2	1:A:369:ARG:C	2.32	0.49
2:B:244:PHE:CD1	2:B:244:PHE:C	2.84	0.49
1:A:3:GLU:HA	1:A:51:VAL:HA	1.93	0.49
1:A:4:ILE:HG22	1:A:5:VAL:N	2.27	0.49
1:A:264:ARG:CZ	3:C:278:ARG:CD	2.90	0.49
1:A:387:LEU:HD23	1:A:388:PHE:CD1	2.47	0.49
2:B:63:PRO:HD3	2:B:86:LEU:O	2.11	0.49
2:B:231:ILE:O	2:B:235:VAL:HG23	2.12	0.49
2:B:5:ILE:CG1	2:B:64:ARG:NH2	2.75	0.49
2:B:16:ILE:HG23	2:B:17:GLY:N	2.26	0.49
2:B:149:PHE:HE1	2:B:153:LEU:HD22	1.77	0.49
3:C:142:ILE:O	3:C:153:LEU:HD23	2.11	0.49
1:A:154:ILE:HG22	1:A:166:MET:HE1	1.94	0.49
1:A:296:PHE:HZ	1:A:315:VAL:HG11	1.78	0.49
2:B:192:HIS:CD2	2:B:424:ASP:OD2	2.66	0.49
2:B:305:CYS:O	2:B:306:ASP:C	2.49	0.49
3:C:71:LYS:HE3	3:C:75:GLU:OE1	2.12	0.49
1:A:4:ILE:HD12	1:A:239:THR:CG2	2.42	0.49
1:A:240:THR:HG23	1:A:241:CYS:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2:ARG:NH1	2:B:47:ASP:CB	2.76	0.49
2:B:12:ALA:CB	2:B:140:SER:OG	2.59	0.49
2:B:115:ILE:CG2	2:B:116:ASP:N	2.75	0.49
2:B:118:VAL:HG21	2:B:149:PHE:CE2	2.48	0.49
2:B:234:ILE:CG1	2:B:270:ALA:HB1	2.38	0.49
1:A:8:GLN:HB3	1:A:14:ASN:HA	1.94	0.49
1:A:168:THR:O	1:A:201:THR:HA	2.12	0.49
1:A:242:LEU:HD22	1:A:250:ALA:N	2.19	0.49
3:C:265:ILE:CD1	3:C:318:PHE:CE1	2.95	0.49
1:A:431:GLU:OE1	1:A:432:TYR:N	2.46	0.49
2:B:188:ILE:O	2:B:191:THR:HG22	2.13	0.49
2:B:30:ILE:HD12	2:B:61:HIS:ND1	2.22	0.49
2:B:96:LYS:O	2:B:97:GLU:O	2.31	0.49
2:B:105:ARG:HG3	2:B:105:ARG:HH11	1.78	0.49
2:B:155:GLU:OE1	2:B:197:HIS:HE1	1.96	0.49
2:B:191:THR:CG2	2:B:192:HIS:N	2.76	0.49
1:A:49:ILE:HG13	1:A:50:ASN:N	2.28	0.49
1:A:173:PRO:HB3	1:A:183:GLU:CG	2.42	0.49
1:A:199:ASP:O	1:A:200:GLU:HG3	2.13	0.49
2:B:104:ALA:CB	2:B:408:TYR:HD1	2.26	0.49
2:B:115:ILE:O	2:B:116:ASP:C	2.51	0.49
2:B:297:GLU:HG3	2:B:299:ALA:N	2.28	0.49
2:B:392:ASP:O	2:B:395:PHE:HB3	2.13	0.49
3:C:230:VAL:CG1	3:C:232:LEU:HD23	2.42	0.49
1:A:142:GLY:HA3	1:A:183:GLU:OE2	2.13	0.48
1:A:175:PRO:CD	1:A:207:GLU:OE1	2.61	0.48
2:B:98:ASP:CB	2:B:105:ARG:HH21	2.14	0.48
1:A:383:ALA:C	1:A:385:GLN:H	2.15	0.48
2:B:203:MET:SD	2:B:267:PHE:HB3	2.53	0.48
1:A:69:ASP:HA	1:A:145:THR:HG21	1.95	0.48
2:B:70:LEU:HD12	2:B:70:LEU:N	2.28	0.48
3:C:216:ASN:HB3	3:C:219:THR:HB	1.96	0.48
2:B:50:ASN:ND2	2:B:53:PHE:O	2.46	0.48
3:C:261:LEU:O	3:C:265:ILE:HG13	2.13	0.48
1:A:2:ARG:NH1	1:A:251:ASP:OD2	2.46	0.48
1:A:102:ASN:HB3	1:A:105:LYS:HB2	1.95	0.48
1:A:133:GLN:NE2	1:A:252:LEU:HB2	2.27	0.48
1:A:154:ILE:HG22	1:A:166:MET:CE	2.44	0.48
1:A:308:ARG:HG3	1:A:342:TYR:OH	2.13	0.48
2:B:6:SER:OG	2:B:65:ALA:HB2	2.14	0.48
2:B:9:VAL:HG11	2:B:150:THR:OG1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:99:ALA:O	2:B:100:ALA:HB3	2.14	0.48
3:C:138:TYR:HE1	3:C:203:ARG:HB2	1.76	0.48
3:C:180:MET:HE2	3:C:183:ILE:HD12	1.96	0.48
2:B:163:LYS:C	2:B:164:LYS:HG2	2.34	0.48
2:B:242:LEU:C	2:B:244:PHE:N	2.66	0.48
1:A:209:LEU:O	1:A:213:CYS:N	2.47	0.48
1:A:243:ARG:N	1:A:243:ARG:HD3	2.26	0.48
1:A:307:PRO:HB3	1:A:312:TYR:CZ	2.49	0.48
2:B:253:THR:O	2:B:254:GLU:C	2.52	0.48
2:B:274:PRO:CB	2:B:371:VAL:HG21	2.43	0.48
3:C:148:VAL:O	3:C:148:VAL:HG22	2.13	0.48
1:A:20:PHE:CG	1:A:235:MET:SD	3.06	0.48
2:B:63:PRO:CG	2:B:91:GLN:CD	2.72	0.48
2:B:107:HIS:CE1	2:B:152:LEU:HB3	2.49	0.48
2:B:369:ALA:O	2:B:370:LYS:CB	2.62	0.48
3:C:3:ASP:CB	3:C:4:PRO:HD3	2.39	0.48
2:B:230:LEU:O	2:B:233:GLN:N	2.35	0.48
3:C:30:VAL:CG1	3:C:41:ILE:HG12	2.42	0.48
1:A:24:ILE:CD1	1:A:52:TYR:CE2	2.97	0.47
1:A:137:LEU:HD22	1:A:154:ILE:HG21	1.95	0.47
1:A:175:PRO:O	1:A:176:LYS:C	2.52	0.47
1:A:191:VAL:HG13	1:A:192:HIS:N	2.28	0.47
1:A:211:ASP:OD1	1:A:212:ILE:HG13	2.13	0.47
2:B:11:GLN:NE2	2:B:74:VAL:CG2	2.76	0.47
2:B:175:PRO:HD2	2:B:207:GLU:HB3	1.96	0.47
3:C:71:LYS:HD3	3:C:71:LYS:C	2.33	0.47
3:C:119:ILE:CD1	3:C:130:ILE:HD11	2.41	0.47
1:A:70:LEU:O	1:A:99:ALA:HB2	2.14	0.47
1:A:413:MET:HG3	1:A:414:ASP:N	2.22	0.47
2:B:115:ILE:HG23	2:B:116:ASP:H	1.79	0.47
2:B:255:PHE:O	2:B:256:GLN:C	2.53	0.47
1:A:20:PHE:O	1:A:24:ILE:HB	2.14	0.47
1:A:132:LEU:CD2	1:A:164:ARG:HG3	2.32	0.47
1:A:209:LEU:CD2	1:A:227:LEU:HD13	2.44	0.47
1:A:274:PRO:HG2	1:A:371:LEU:CD2	2.43	0.47
2:B:158:SER:OG	2:B:197:HIS:HB3	2.13	0.47
2:B:241:SER:HB3	2:B:320:ARG:NH2	2.29	0.47
2:B:328:VAL:C	2:B:330:ALA:H	2.16	0.47
3:C:146:LEU:HA	3:C:185:GLU:OE2	2.14	0.47
1:A:198:THR:HG23	1:A:200:GLU:H	1.79	0.47
2:B:97:GLU:HB2	2:B:110:ILE:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:117:LEU:HD12	2:B:121:ARG:HH12	1.80	0.47
2:B:335:ILE:O	2:B:337:THR:N	2.47	0.47
2:B:339:ARG:C	2:B:341:ILE:N	2.68	0.47
2:B:384:ILE:HG22	2:B:388:TRP:CD1	2.49	0.47
1:A:176:LYS:HG3	1:A:177:VAL:H	1.78	0.47
1:A:281:GLN:C	1:A:283:TYR:N	2.67	0.47
1:A:399:PHE:O	1:A:400:ARG:C	2.52	0.47
2:B:145:THR:H	5:B:500:GTP:PG	2.37	0.47
2:B:147:SER:O	2:B:190:THR:HG23	2.14	0.47
2:B:154:MET:HA	2:B:157:LEU:HD12	1.96	0.47
2:B:210:TYR:CE1	2:B:227:LEU:HD21	2.49	0.47
1:A:237:GLY:O	1:A:241:CYS:CB	2.61	0.47
2:B:11:GLN:O	2:B:15:GLN:HG3	2.15	0.47
2:B:155:GLU:HA	2:B:197:HIS:CE1	2.49	0.47
2:B:185:TYR:OH	2:B:399:TYR:HA	2.15	0.47
2:B:386:GLU:O	2:B:388:TRP:N	2.47	0.47
3:C:137:ILE:HD12	3:C:282:MET:HE2	1.95	0.47
3:C:261:LEU:HA	3:C:264:VAL:HG22	1.96	0.47
1:A:168:THR:N	1:A:200:GLU:O	2.43	0.47
1:A:226:ASP:O	1:A:229:HIS:HB3	2.14	0.47
1:A:264:ARG:NE	3:C:278:ARG:CZ	2.77	0.47
1:A:384:ILE:O	1:A:384:ILE:HG23	2.14	0.47
2:B:132:LEU:HD21	2:B:164:LYS:HE3	1.96	0.47
2:B:191:THR:O	2:B:195:LEU:HB2	2.15	0.47
2:B:260:VAL:O	2:B:260:VAL:CG2	2.62	0.47
2:B:293:ASN:HD21	2:B:338:LYS:NZ	2.11	0.47
3:C:84:TYR:CD1	3:C:315:THR:HG23	2.50	0.47
3:C:191:HIS:HA	3:C:197:MET:SD	2.54	0.47
1:A:103:TRP:CE3	1:A:189:LEU:HD13	2.50	0.47
1:A:237:GLY:HA3	1:A:376:THR:OG1	2.15	0.47
1:A:260:VAL:HG21	2:B:407:TRP:HZ2	1.80	0.47
2:B:62:VAL:HA	2:B:86:LEU:O	2.15	0.47
2:B:88:HIS:O	2:B:89:PRO:C	2.52	0.47
2:B:155:GLU:HG2	2:B:197:HIS:CE1	2.49	0.47
2:B:434:GLU:C	2:B:436:GLY:H	2.18	0.47
3:C:156:HIS:HB2	3:C:164:TYR:CE1	2.50	0.47
1:A:101:ASN:ND2	1:A:101:ASN:O	2.48	0.47
1:A:242:LEU:CD1	1:A:250:ALA:HB3	2.45	0.47
2:B:55:GLU:O	2:B:56:THR:C	2.50	0.47
2:B:404:PHE:CD1	2:B:404:PHE:N	2.83	0.47
1:A:224:TYR:O	1:A:225:GLY:C	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:104:ALA:HB1	2:B:413:MET:HG3	1.95	0.47
2:B:151:SER:OG	2:B:193:THR:HG21	2.13	0.47
2:B:226:ASN:O	2:B:229:ARG:N	2.48	0.47
1:A:115:VAL:CG2	1:A:152:LEU:HD23	2.44	0.46
2:B:148:GLY:O	2:B:151:SER:CB	2.61	0.46
2:B:388:TRP:HA	2:B:388:TRP:HE3	1.79	0.46
2:B:436:GLY:O	2:B:438:ASP:N	2.48	0.46
1:A:230:LEU:HD21	1:A:302:MET:HE2	1.97	0.46
2:B:3:GLU:CD	2:B:50:ASN:O	2.54	0.46
2:B:22:GLU:O	2:B:23:LEU:C	2.54	0.46
2:B:63:PRO:HG3	2:B:87:PHE:CG	2.50	0.46
2:B:316:CYS:HB3	2:B:378:LEU:HD12	1.95	0.46
2:B:317:LEU:CD1	2:B:351:PHE:CD1	2.97	0.46
3:C:300:ILE:CD1	3:C:316:LEU:HD23	2.45	0.46
1:A:297:ASP:OD2	1:A:299:LYS:HE2	2.14	0.46
1:A:307:PRO:C	1:A:309:HIS:H	2.18	0.46
2:B:10:GLY:O	2:B:11:GLN:C	2.53	0.46
2:B:119:LEU:HD11	2:B:156:ARG:HD2	1.97	0.46
2:B:120:ASP:O	2:B:124:LYS:HB2	2.15	0.46
2:B:256:GLN:HA	2:B:260:VAL:HG13	1.97	0.46
2:B:384:ILE:HG22	2:B:384:ILE:O	2.15	0.46
1:A:242:LEU:HD11	1:A:250:ALA:HB3	1.97	0.46
1:A:263:PRO:O	1:A:264:ARG:C	2.52	0.46
2:B:7:ILE:HD11	2:B:137:VAL:CG2	2.44	0.46
2:B:23:LEU:CD2	2:B:232:GLY:O	2.64	0.46
2:B:243:ARG:NH2	2:B:252:LEU:CB	2.78	0.46
2:B:256:GLN:O	2:B:260:VAL:HG13	2.15	0.46
2:B:407:TRP:O	2:B:411:GLU:CG	2.63	0.46
1:A:262:PHE:HA	1:A:263:PRO:HD2	1.65	0.46
2:B:145:THR:O	2:B:149:PHE:HB3	2.15	0.46
1:A:208:ALA:O	1:A:212:ILE:HG13	2.16	0.46
1:A:324:SER:OG	1:A:326:LYS:HB3	2.15	0.46
1:A:360:PRO:O	1:A:369:ARG:C	2.54	0.46
1:A:431:GLU:HA	1:A:434:GLN:HG3	1.97	0.46
2:B:345:ASP:C	2:B:347:CYS:N	2.68	0.46
3:C:37:ASP:O	3:C:51:VAL:HG23	2.15	0.46
3:C:38:THR:HG22	3:C:39:VAL:N	2.30	0.46
3:C:300:ILE:HD12	3:C:316:LEU:HD23	1.98	0.46
1:A:185:TYR:HD1	1:A:395:PHE:CE1	2.33	0.46
1:A:287:THR:N	1:A:290:GLU:OE1	2.48	0.46
1:A:67:LEU:HD12	1:A:92:PHE:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:94:PHE:CD1	1:A:94:PHE:N	2.84	0.46
1:A:137:LEU:HD22	1:A:154:ILE:HG23	1.97	0.46
2:B:5:ILE:CG2	2:B:6:SER:H	2.29	0.46
2:B:203:MET:SD	2:B:267:PHE:CB	3.04	0.46
2:B:210:TYR:CZ	2:B:227:LEU:HD11	2.51	0.46
2:B:265:GLY:O	2:B:266:HIS:O	2.33	0.46
2:B:396:ASP:O	2:B:397:LEU:C	2.53	0.46
2:B:413:MET:C	2:B:414:GLU:HG3	2.36	0.46
3:C:180:MET:HA	3:C:180:MET:CE	2.46	0.46
3:C:236:GLU:H	3:C:236:GLU:CD	2.19	0.46
1:A:387:LEU:HG	1:A:387:LEU:O	2.15	0.46
2:B:19:ALA:HB2	2:B:228:ASN:HB3	1.96	0.46
2:B:324:VAL:HG12	2:B:326:LYS:H	1.81	0.46
2:B:346:TRP:HZ2	2:B:435:VAL:HG12	1.81	0.46
2:B:392:ASP:OD1	2:B:422:ARG:NE	2.48	0.46
3:C:131:LYS:HG2	3:C:172:PHE:CD1	2.51	0.46
3:C:209:LEU:HD21	3:C:226:LYS:HB3	1.98	0.46
1:A:102:ASN:ND2	1:A:104:ALA:HB3	2.31	0.46
1:A:115:VAL:HG21	1:A:152:LEU:HD21	1.98	0.46
1:A:133:GLN:O	1:A:165:ILE:CD1	2.64	0.46
1:A:134:GLY:HA3	1:A:165:ILE:HG12	1.97	0.46
1:A:242:LEU:C	1:A:244:PHE:H	2.20	0.46
1:A:323:MET:CE	1:A:328:VAL:HG22	2.46	0.46
1:A:360:PRO:HG2	1:A:371:LEU:CB	2.38	0.46
2:B:392:ASP:OD1	2:B:422:ARG:CZ	2.65	0.46
3:C:86:GLN:HA	3:C:236:GLU:OE1	2.15	0.46
3:C:101:ASP:CG	3:C:102:PRO:HD2	2.36	0.46
1:A:243:ARG:HD3	1:A:243:ARG:HA	1.62	0.45
2:B:308:ARG:O	2:B:309:HIS:HB3	2.16	0.45
2:B:317:LEU:CD1	2:B:351:PHE:CE1	2.99	0.45
2:B:381:THR:O	2:B:383:ALA:N	2.49	0.45
3:C:262:GLY:O	3:C:321:ARG:HD3	2.15	0.45
1:A:175:PRO:HD2	1:A:207:GLU:CD	2.36	0.45
1:A:210:TYR:CE1	1:A:227:LEU:HD11	2.52	0.45
1:A:408:TYR:O	1:A:411:GLU:HB2	2.15	0.45
1:A:409:THR:HA	1:A:413:MET:HB3	1.98	0.45
2:B:9:VAL:HG21	2:B:149:PHE:HD1	1.80	0.45
2:B:210:TYR:CD1	2:B:227:LEU:HD21	2.51	0.45
2:B:243:ARG:NH2	2:B:252:LEU:HB2	2.30	0.45
3:C:309:GLU:HB3	3:C:313:LYS:HZ1	1.79	0.45
1:A:72:PRO:O	1:A:74:THR:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:95:GLY:C	2:B:97:GLU:N	2.69	0.45
2:B:132:LEU:H	2:B:132:LEU:CD2	2.23	0.45
2:B:204:VAL:HG21	2:B:231:ILE:HG23	1.97	0.45
3:C:98:LYS:O	3:C:105:MET:HA	2.16	0.45
3:C:264:VAL:O	3:C:268:LEU:HG	2.16	0.45
1:A:6:HIS:HB3	1:A:21:TRP:HZ2	1.81	0.45
1:A:135:PHE:CD1	1:A:135:PHE:N	2.85	0.45
1:A:196:GLU:O	1:A:197:ASN:OD1	2.34	0.45
1:A:264:ARG:HA	1:A:264:ARG:NE	2.29	0.45
2:B:5:ILE:HG22	2:B:6:SER:H	1.78	0.45
2:B:5:ILE:HD11	2:B:64:ARG:NH2	2.31	0.45
2:B:212:ILE:HD11	2:B:302:MET:H	1.82	0.45
2:B:274:PRO:HB2	2:B:371:VAL:HG21	1.98	0.45
2:B:70:LEU:HD12	2:B:145:THR:HG21	1.95	0.45
2:B:114:ILE:O	2:B:118:VAL:HG23	2.15	0.45
2:B:196:GLU:C	2:B:197:HIS:HD2	2.19	0.45
2:B:204:VAL:O	2:B:204:VAL:HG12	2.17	0.45
2:B:271:THR:O	2:B:376:CYS:HA	2.17	0.45
1:A:11:GLN:O	1:A:14:ASN:HB3	2.16	0.45
1:A:209:LEU:HD23	1:A:227:LEU:HD13	1.98	0.45
2:B:54:SER:O	2:B:61:HIS:O	2.35	0.45
3:C:208:PHE:CE2	3:C:210:ILE:CD1	2.95	0.45
1:A:245:PRO:HA	2:B:73:THR:CG2	2.46	0.45
1:A:250:ALA:HB1	1:A:254:LYS:CB	2.43	0.45
1:A:324:SER:O	1:A:326:LYS:N	2.50	0.45
2:B:115:ILE:CG1	2:B:152:LEU:HD13	2.46	0.45
2:B:148:GLY:O	2:B:149:PHE:C	2.55	0.45
3:C:4:PRO:HD3	3:C:293:ASN:OD1	2.17	0.45
1:A:82:PRO:C	1:A:84:GLY:H	2.20	0.45
1:A:154:ILE:HD12	1:A:155:SER:N	2.31	0.45
1:A:175:PRO:HG2	1:A:207:GLU:OE1	2.17	0.45
1:A:194:LEU:C	1:A:196:GLU:N	2.70	0.45
1:A:282:GLN:O	1:A:282:GLN:CG	2.65	0.45
2:B:231:ILE:HD13	2:B:231:ILE:H	1.82	0.45
2:B:295:CYS:SG	2:B:375:VAL:HG11	2.57	0.45
1:A:24:ILE:CG2	1:A:25:SER:N	2.80	0.45
1:A:113:GLU:CG	1:A:114:LEU:N	2.79	0.45
1:A:189:LEU:HD23	1:A:421:ALA:CB	2.47	0.45
1:A:242:LEU:HD22	1:A:250:ALA:O	2.17	0.45
1:A:312:TYR:HA	1:A:381:SER:HA	1.99	0.45
2:B:334:THR:CG2	2:B:335:ILE:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:423:GLU:O	2:B:426:ALA:HB3	2.16	0.45
3:C:211:ASN:OD1	3:C:213:LYS:HE3	2.16	0.45
3:C:221:GLN:OE1	3:C:221:GLN:HA	2.17	0.45
1:A:194:LEU:O	1:A:265:LEU:HD23	2.16	0.45
1:A:313:LEU:O	1:A:347:ILE:HD12	2.16	0.45
1:A:114:LEU:HD23	1:A:149:MET:HE2	1.98	0.44
2:B:152:LEU:HD12	2:B:152:LEU:C	2.38	0.44
2:B:408:TYR:CG	2:B:418:PHE:HZ	2.34	0.44
3:C:69:ILE:HD12	3:C:295:ARG:HB2	1.99	0.44
3:C:153:LEU:N	3:C:153:LEU:HD22	2.32	0.44
1:A:23:VAL:O	1:A:25:SER:N	2.50	0.44
1:A:67:LEU:HD12	1:A:92:PHE:CE1	2.52	0.44
1:A:243:ARG:HH21	1:A:252:LEU:N	2.13	0.44
1:A:280:SER:OG	1:A:281:GLN:N	2.49	0.44
1:A:295:MET:SD	1:A:375:ALA:HB3	2.58	0.44
2:B:103:TYR:CD1	2:B:148:GLY:HA2	2.52	0.44
1:A:4:ILE:HD12	1:A:239:THR:HG21	1.98	0.44
1:A:14:ASN:O	1:A:17:GLY:N	2.50	0.44
1:A:106:GLY:O	1:A:149:MET:HB2	2.16	0.44
1:A:167:ASN:HA	1:A:200:GLU:O	2.17	0.44
1:A:288:VAL:N	1:A:289:PRO:CD	2.79	0.44
2:B:12:ALA:HB2	5:B:500:GTP:C8	2.52	0.44
2:B:121:ARG:HG2	2:B:121:ARG:HH11	1.83	0.44
2:B:182:VAL:O	2:B:184:PRO:CD	2.65	0.44
1:A:167:ASN:HD21	1:A:252:LEU:HD22	1.82	0.44
2:B:84:ARG:HE	2:B:84:ARG:HB3	1.51	0.44
2:B:121:ARG:HG2	2:B:121:ARG:NH1	2.33	0.44
2:B:272:TYR:CE2	2:B:274:PRO:HD2	2.53	0.44
2:B:276:ILE:CG2	2:B:369:ALA:CB	2.91	0.44
2:B:402:ARG:O	2:B:405:VAL:N	2.49	0.44
3:C:134:TYR:HD1	3:C:145:LEU:HD12	1.69	0.44
1:A:8:GLN:CG	1:A:67:LEU:HD22	2.47	0.44
1:A:141:LEU:N	1:A:141:LEU:HD12	2.32	0.44
1:A:288:VAL:C	1:A:290:GLU:N	2.70	0.44
2:B:154:MET:CE	2:B:166:LYS:HB3	2.48	0.44
2:B:229:ARG:NH1	2:B:229:ARG:HG2	2.31	0.44
2:B:296:PHE:HZ	2:B:351:PHE:HZ	1.66	0.44
1:A:147:SER:HB2	1:A:190:SER:CB	2.41	0.44
1:A:239:THR:O	1:A:240:THR:C	2.56	0.44
2:B:117:LEU:HD11	2:B:121:ARG:NH2	2.30	0.44
2:B:175:PRO:CG	2:B:304:LYS:HG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:344:VAL:CG1	2:B:345:ASP:N	2.78	0.44
1:A:82:PRO:HB2	1:A:83:PHE:H	1.56	0.44
2:B:49:PHE:HE1	2:B:61:HIS:CE1	2.34	0.44
2:B:218:ASP:C	2:B:219:ILE:HG12	2.37	0.44
3:C:115:ILE:O	3:C:119:ILE:HG13	2.17	0.44
1:A:161:TYR:C	1:A:163:ASP:N	2.71	0.44
1:A:182:VAL:O	1:A:183:GLU:C	2.56	0.44
1:A:273:ALA:CB	1:A:274:PRO:CD	2.93	0.44
2:B:23:LEU:O	2:B:26:LEU:HB3	2.17	0.44
2:B:64:ARG:HD2	2:B:125:LEU:HD22	1.99	0.44
3:C:16:ARG:HD3	3:C:89:SER:O	2.18	0.44
2:B:217:LEU:HD13	2:B:277:SER:N	2.33	0.44
2:B:241:SER:C	2:B:244:PHE:HB3	2.36	0.44
2:B:262:TYR:HB3	2:B:263:PRO:HD2	2.00	0.44
2:B:304:LYS:HG3	2:B:304:LYS:O	2.18	0.44
2:B:328:VAL:O	2:B:330:ALA:N	2.38	0.44
3:C:28:LYS:HB3	3:C:306:SER:HB3	2.00	0.44
3:C:80:THR:OG1	3:C:296:THR:HG23	2.18	0.44
3:C:107:ILE:O	3:C:111:ILE:HG13	2.18	0.44
2:B:363:VAL:CG1	2:B:364:PRO:HD2	2.48	0.43
2:B:436:GLY:C	2:B:438:ASP:N	2.72	0.43
1:A:70:LEU:HB2	1:A:99:ALA:CB	2.49	0.43
1:A:288:VAL:N	1:A:289:PRO:HD2	2.32	0.43
2:B:151:SER:HB3	2:B:193:THR:CG2	2.34	0.43
2:B:268:PRO:CA	2:B:379:SER:O	2.65	0.43
2:B:303:VAL:O	2:B:303:VAL:CG1	2.64	0.43
1:A:7:ILE:N	1:A:136:GLN:O	2.51	0.43
1:A:103:TRP:HB2	1:A:186:ASN:HA	2.01	0.43
1:A:161:TYR:O	1:A:163:ASP:N	2.51	0.43
1:A:307:PRO:C	1:A:309:HIS:N	2.71	0.43
2:B:166:LYS:CE	2:B:199:ASP:OD1	2.62	0.43
2:B:209:ILE:CD1	2:B:231:ILE:HD11	2.47	0.43
2:B:252:LEU:O	2:B:253:THR:C	2.56	0.43
2:B:276:ILE:O	2:B:369:ALA:CA	2.66	0.43
2:B:409:VAL:C	2:B:411:GLU:N	2.71	0.43
3:C:143:ARG:HH22	3:C:190:ARG:HA	1.84	0.43
1:A:105:LYS:HG2	1:A:110:GLU:CG	2.48	0.43
1:A:299:LYS:H	1:A:299:LYS:CD	2.07	0.43
2:B:103:TYR:O	2:B:104:ALA:C	2.57	0.43
2:B:105:ARG:O	2:B:110:ILE:CG2	2.64	0.43
2:B:263:PRO:O	2:B:264:ARG:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:362:VAL:HG13	2:B:368:LEU:CG	2.48	0.43
2:B:390:ARG:HG3	2:B:390:ARG:HH11	1.83	0.43
1:A:72:PRO:HG2	1:A:73:GLY:H	1.83	0.43
1:A:102:ASN:OD1	1:A:408:TYR:CZ	2.70	0.43
2:B:8:HIS:HA	2:B:138:PHE:HB2	2.00	0.43
2:B:13:GLY:C	2:B:16:ILE:HG22	2.38	0.43
2:B:153:LEU:O	2:B:157:LEU:HG	2.18	0.43
3:C:127:GLU:O	3:C:214:GLN:HA	2.19	0.43
2:B:377:MET:HG3	2:B:377:MET:O	2.18	0.43
3:C:219:THR:HG21	3:C:221:GLN:HG2	1.93	0.43
1:A:325:MET:HE2	1:A:355:VAL:CG2	2.46	0.43
2:B:25:CYS:SG	2:B:26:LEU:N	2.92	0.43
2:B:310:GLY:HA3	2:B:383:ALA:CA	2.49	0.43
2:B:378:LEU:HD12	2:B:378:LEU:O	2.19	0.43
3:C:108:ILE:CB	3:C:109:PRO:HD3	2.38	0.43
1:A:68:VAL:HG11	1:A:153:LEU:HD21	2.00	0.43
1:A:383:ALA:C	1:A:385:GLN:N	2.72	0.43
1:A:409:THR:O	1:A:412:GLY:N	2.48	0.43
2:B:4:CYS:SG	2:B:252:LEU:CD1	3.02	0.43
2:B:8:HIS:CD2	2:B:138:PHE:CD2	3.07	0.43
2:B:110:ILE:O	2:B:111:GLY:C	2.57	0.43
2:B:343:PHE:CE1	2:B:351:PHE:HE2	2.36	0.43
1:A:52:TYR:HE2	1:A:240:THR:HB	1.82	0.43
1:A:168:THR:CG2	1:A:201:THR:HG23	2.48	0.43
3:C:74:LEU:HD13	3:C:118:TYR:CD1	2.53	0.43
3:C:138:TYR:HB2	3:C:204:SER:OG	2.18	0.43
1:A:118:VAL:O	1:A:122:VAL:HG13	2.19	0.43
1:A:192:HIS:NE2	1:A:420:GLU:HG2	2.34	0.42
1:A:240:THR:HG23	1:A:241:CYS:N	2.33	0.42
1:A:249:ASN:OD1	2:B:71:GLU:OE1	2.36	0.42
1:A:250:ALA:CB	1:A:254:LYS:HE2	2.49	0.42
1:A:333:LEU:O	1:A:334:ASN:C	2.58	0.42
1:A:409:THR:C	1:A:411:GLU:H	2.22	0.42
2:B:7:ILE:HG13	2:B:137:VAL:HG22	1.97	0.42
2:B:16:ILE:CG2	2:B:17:GLY:N	2.82	0.42
2:B:115:ILE:CD1	2:B:115:ILE:C	2.87	0.42
2:B:119:LEU:HD11	2:B:156:ARG:HD3	2.01	0.42
2:B:147:SER:HB2	2:B:186:ASN:O	2.19	0.42
1:A:6:HIS:HB3	1:A:65:ALA:CB	2.49	0.42
1:A:153:LEU:HD13	1:A:153:LEU:N	2.34	0.42
1:A:161:TYR:CD1	1:A:161:TYR:N	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:210:TYR:O	1:A:214:PHE:N	2.52	0.42
1:A:282:GLN:HB3	1:A:282:GLN:HE21	1.50	0.42
1:A:301:MET:O	1:A:303:ALA:N	2.51	0.42
2:B:149:PHE:O	2:B:150:THR:C	2.56	0.42
2:B:231:ILE:C	2:B:233:GLN:N	2.73	0.42
3:C:326:LYS:HD3	3:C:326:LYS:HA	1.90	0.42
1:A:138:THR:O	1:A:139:HIS:HB3	2.19	0.42
1:A:187:ALA:O	1:A:188:THR:C	2.57	0.42
1:A:212:ILE:O	1:A:212:ILE:HG22	2.18	0.42
2:B:63:PRO:HG3	2:B:87:PHE:CD2	2.54	0.42
2:B:292:THR:O	2:B:295:CYS:HB2	2.18	0.42
2:B:363:VAL:HG13	2:B:364:PRO:HD2	2.02	0.42
2:B:384:ILE:C	2:B:386:GLU:N	2.72	0.42
3:C:80:THR:HG23	3:C:289:SER:HB3	2.01	0.42
2:B:209:ILE:CD1	2:B:231:ILE:CD1	2.97	0.42
1:A:12:CYS:C	1:A:14:ASN:N	2.71	0.42
1:A:242:LEU:HD23	1:A:242:LEU:HA	1.77	0.42
2:B:104:ALA:HB3	2:B:408:TYR:HD1	1.84	0.42
3:C:38:THR:CG2	3:C:39:VAL:N	2.82	0.42
3:C:46:TYR:CD1	3:C:316:LEU:HD13	2.54	0.42
1:A:106:GLY:O	1:A:149:MET:CA	2.68	0.42
1:A:413:MET:CG	1:A:414:ASP:H	2.26	0.42
1:A:171:VAL:HG12	1:A:171:VAL:O	2.20	0.42
2:B:175:PRO:HG3	2:B:304:LYS:CB	2.50	0.42
2:B:204:VAL:CG1	2:B:231:ILE:HD12	2.42	0.42
1:A:72:PRO:O	1:A:73:GLY:C	2.58	0.42
1:A:175:PRO:O	1:A:177:VAL:N	2.53	0.42
1:A:204:ILE:HD13	1:A:231:VAL:CG2	2.45	0.42
2:B:15:GLN:NE2	5:B:500:GTP:N7	2.67	0.42
2:B:213:CYS:O	2:B:219:ILE:HG13	2.20	0.42
2:B:335:ILE:C	2:B:337:THR:N	2.73	0.42
3:C:73:VAL:HA	3:C:77:TYR:O	2.19	0.42
1:A:199:ASP:C	1:A:265:LEU:HD13	2.40	0.42
1:A:310:GLY:HA3	1:A:436:GLN:NE2	2.29	0.42
2:B:13:GLY:HA2	2:B:16:ILE:CG2	2.50	0.42
2:B:199:ASP:OD2	2:B:256:GLN:NE2	2.46	0.42
2:B:238:ILE:O	2:B:242:LEU:CB	2.67	0.42
2:B:238:ILE:HD11	2:B:378:LEU:HD23	2.01	0.42
2:B:280:LYS:O	2:B:282:TYR:N	2.52	0.42
2:B:328:VAL:C	2:B:330:ALA:N	2.73	0.42
3:C:281:LYS:O	3:C:285:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2:ARG:NH1	1:A:251:ASP:CG	2.73	0.42
1:A:68:VAL:HG12	1:A:149:MET:HE2	2.01	0.41
1:A:261:PRO:HB2	1:A:262:PHE:CD2	2.54	0.41
1:A:288:VAL:HG22	1:A:323:MET:HE3	2.02	0.41
1:A:409:THR:C	1:A:411:GLU:N	2.73	0.41
1:A:421:ALA:O	1:A:422:GLU:C	2.58	0.41
1:A:422:GLU:O	1:A:426:ASN:CB	2.67	0.41
1:A:427:ASP:OD1	1:A:427:ASP:C	2.57	0.41
2:B:243:ARG:NH2	2:B:252:LEU:HG	2.35	0.41
2:B:255:PHE:O	2:B:257:THR:N	2.53	0.41
2:B:292:THR:HG21	2:B:331:ALA:HB1	2.02	0.41
1:A:62:VAL:HA	1:A:63:PRO:HD2	1.92	0.41
1:A:147:SER:CB	1:A:190:SER:HB3	2.42	0.41
1:A:343:PHE:CD1	1:A:350:ASN:ND2	2.88	0.41
1:A:359:PRO:CB	1:A:360:PRO:HD2	2.45	0.41
2:B:234:ILE:C	2:B:234:ILE:CD1	2.86	0.41
3:C:105:MET:HB2	3:C:109:PRO:HB2	2.01	0.41
1:A:26:ASP:C	1:A:28:HIS:H	2.21	0.41
1:A:48:ARG:HG2	1:A:243:ARG:HB3	2.01	0.41
2:B:81:GLY:O	2:B:82:THR:C	2.59	0.41
3:C:62:TYR:OH	3:C:70:VAL:HG21	2.19	0.41
3:C:139:LEU:N	3:C:139:LEU:HD22	2.34	0.41
1:A:269:MET:HE1	1:A:381:SER:OG	2.20	0.41
1:A:399:PHE:O	1:A:401:ARG:N	2.53	0.41
1:A:417:GLU:O	1:A:420:GLU:HB3	2.21	0.41
2:B:296:PHE:CG	2:B:341:ILE:HD12	2.53	0.41
3:C:20:GLU:HA	3:C:23:VAL:HG12	2.03	0.41
3:C:207:ILE:HD13	3:C:230:VAL:HG13	2.02	0.41
1:A:307:PRO:O	1:A:309:HIS:N	2.53	0.41
1:A:395:PHE:HB3	1:A:396:THR:H	1.73	0.41
2:B:199:ASP:CB	2:B:256:GLN:NE2	2.77	0.41
3:C:34:GLN:HE21	3:C:34:GLN:HB3	1.64	0.41
1:A:108:TYR:CE1	1:A:413:MET:HE1	2.56	0.41
1:A:242:LEU:HB3	1:A:250:ALA:O	2.20	0.41
1:A:325:MET:HE2	1:A:355:VAL:HG11	2.03	0.41
1:A:333:LEU:HD11	1:A:337:ASN:HD21	1.85	0.41
2:B:95:GLY:C	2:B:97:GLU:H	2.23	0.41
2:B:242:LEU:HD11	2:B:250:VAL:HG23	2.02	0.41
3:C:23:VAL:HG13	3:C:24:ASN:N	2.34	0.41
3:C:87:THR:O	3:C:88:SER:HB2	2.21	0.41
3:C:150:LYS:HB3	3:C:153:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:255:ASN:HB3	3:C:258:LEU:HG	2.02	0.41
1:A:119:LEU:O	1:A:122:VAL:HG22	2.21	0.41
1:A:135:PHE:CD1	1:A:166:MET:SD	3.14	0.41
2:B:343:PHE:HZ	2:B:351:PHE:CZ	2.36	0.41
2:B:397:LEU:HA	2:B:397:LEU:HD23	1.81	0.41
2:B:398:MET:HE3	2:B:398:MET:HB2	1.81	0.41
3:C:219:THR:O	3:C:220:GLU:HB2	2.21	0.41
1:A:150:GLY:HA2	1:A:153:LEU:CD2	2.42	0.41
1:A:182:VAL:O	1:A:184:PRO:N	2.54	0.41
1:A:435:TYR:C	1:A:437:ASP:N	2.72	0.41
2:B:130:THR:O	2:B:131:GLY:C	2.59	0.41
2:B:152:LEU:C	2:B:152:LEU:CD1	2.89	0.41
2:B:184:PRO:HG2	2:B:398:MET:CE	2.40	0.41
2:B:401:LYS:C	2:B:403:ALA:H	2.24	0.41
2:B:434:GLU:C	2:B:436:GLY:N	2.74	0.41
1:A:11:GLN:O	1:A:15:GLN:N	2.41	0.41
1:A:25:SER:O	1:A:28:HIS:N	2.53	0.41
1:A:133:GLN:CG	1:A:165:ILE:HD11	2.49	0.41
1:A:168:THR:HB	1:A:198:THR:HG21	2.03	0.41
1:A:210:TYR:O	1:A:211:ASP:C	2.57	0.41
1:A:273:ALA:HB1	1:A:291:LEU:HG	2.02	0.41
1:A:311:ARG:HG2	1:A:311:ARG:NH1	2.34	0.41
2:B:11:GLN:CG	2:B:74:VAL:HG21	2.50	0.41
2:B:23:LEU:HD11	2:B:361:THR:O	2.21	0.41
2:B:115:ILE:CG2	2:B:116:ASP:H	2.32	0.41
2:B:248:LEU:HD12	2:B:248:LEU:HA	1.93	0.41
2:B:305:CYS:SG	2:B:383:ALA:HB1	2.60	0.41
2:B:332:ILE:CD1	2:B:353:VAL:HG22	2.51	0.41
3:C:275:VAL:HA	3:C:276:PRO:HD3	1.66	0.41
1:A:114:LEU:HD12	1:A:117:SER:OG	2.21	0.41
1:A:405:LEU:HD23	1:A:405:LEU:O	2.21	0.41
2:B:230:LEU:O	2:B:231:ILE:C	2.57	0.41
2:B:251:ASP:CA	2:B:254:GLU:HG3	2.48	0.41
3:C:173:VAL:HG23	3:C:173:VAL:O	2.20	0.41
3:C:270:GLU:CG	3:C:272:SER:HB3	2.51	0.41
1:A:20:PHE:CD1	1:A:235:MET:CG	3.04	0.40
1:A:202:TYR:CE2	1:A:268:PHE:HD2	2.38	0.40
1:A:287:THR:O	1:A:288:VAL:CG2	2.58	0.40
2:B:34:GLY:O	2:B:61:HIS:HB2	2.20	0.40
2:B:260:VAL:HA	2:B:261:PRO:HD3	1.95	0.40
3:C:57:SER:OG	3:C:60:GLN:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:78:VAL:O	1:A:84:GLY:HA3	2.22	0.40
1:A:105:LYS:HG2	1:A:110:GLU:HG3	2.03	0.40
1:A:187:ALA:O	1:A:190:SER:N	2.54	0.40
1:A:423:SER:O	1:A:424:ASN:C	2.60	0.40
2:B:166:LYS:HB2	2:B:199:ASP:OD1	2.20	0.40
2:B:272:TYR:O	2:B:300:ASN:ND2	2.54	0.40
2:B:362:VAL:HG13	2:B:368:LEU:CB	2.50	0.40
2:B:413:MET:C	2:B:414:GLU:CG	2.90	0.40
2:B:414:GLU:C	2:B:416:GLY:N	2.74	0.40
1:A:11:GLN:HA	1:A:74:THR:HG21	2.04	0.40
1:A:70:LEU:HB2	1:A:99:ALA:HB2	2.03	0.40
1:A:239:THR:CG2	1:A:240:THR:H	2.34	0.40
2:B:11:GLN:HG3	2:B:74:VAL:HG21	2.04	0.40
2:B:100:ALA:C	2:B:102:ASN:H	2.24	0.40
2:B:209:ILE:HD13	2:B:231:ILE:HD11	2.04	0.40
2:B:393:HIS:O	2:B:394:LYS:C	2.59	0.40
3:C:23:VAL:CG1	3:C:24:ASN:N	2.84	0.40
1:A:12:CYS:O	1:A:13:GLY:C	2.59	0.40
1:A:275:LEU:HD12	1:A:275:LEU:HA	1.78	0.40
2:B:71:GLU:HA	2:B:72:PRO:HD3	1.89	0.40
2:B:147:SER:OG	2:B:148:GLY:N	2.54	0.40
2:B:293:ASN:ND2	2:B:338:LYS:NZ	2.69	0.40
2:B:425:MET:O	2:B:426:ALA:C	2.60	0.40
1:A:12:CYS:O	1:A:14:ASN:N	2.55	0.40
1:A:125:GLU:O	1:A:128:SER:HB3	2.22	0.40
1:A:291:LEU:HD21	1:A:373:MET:HG2	2.03	0.40
1:A:326:LYS:HB3	2:B:222:PRO:HD2	2.03	0.40
2:B:149:PHE:CD1	2:B:150:THR:N	2.89	0.40
2:B:287:SER:O	2:B:291:ILE:HG12	2.21	0.40
2:B:425:MET:O	2:B:428:LEU:N	2.45	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	424/445 (95%)	274 (65%)	94 (22%)	56 (13%)	0	5
2	B	423/452 (94%)	279 (66%)	87 (21%)	57 (14%)	0	4
3	C	306/340 (90%)	295 (96%)	8 (3%)	3 (1%)	15	55
All	All	1153/1237 (93%)	848 (74%)	189 (16%)	116 (10%)	1	9

All (116) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	23	VAL
1	A	24	ILE
1	A	32	PRO
1	A	50	ASN
1	A	82	PRO
1	A	97	SER
1	A	128	SER
1	A	176	LYS
1	A	183	GLU
1	A	218	LYS
1	A	238	VAL
1	A	239	THR
1	A	240	THR
1	A	252	LEU
1	A	263	PRO
1	A	266	HIS
1	A	273	ALA
1	A	278	ARG
1	A	280	SER
1	A	281	GLN
1	A	282	GLN
1	A	288	VAL
1	A	294	GLN
1	A	295	MET
1	A	343	PHE
1	A	344	VAL
1	A	346	TRP
1	A	369	ARG
1	A	403	ALA
2	B	56	THR
2	B	58	ALA

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Mol	Chain	Res	Type
2	B	96	LYS
2	B	97	GLU
2	B	108	TYR
2	B	109	THR
2	B	141	PHE
2	B	183	GLU
2	B	217	LEU
2	B	240	ALA
2	B	249	ASN
2	B	255	PHE
2	B	266	HIS
2	B	309	HIS
2	B	346	TRP
2	B	370	LYS
2	B	387	ALA
2	B	403	ALA
2	B	437	VAL
3	C	4	PRO
1	A	38	GLY
1	A	73	GLY
1	A	175	PRO
1	A	265	LEU
1	A	279	GLY
1	A	298	ALA
1	A	300	ASN
1	A	311	ARG
2	B	24	TYR
2	B	73	THR
2	B	83	TYR
2	B	103	TYR
2	B	111	GLY
2	B	131	GLY
2	B	218	ASP
2	B	219	ILE
2	B	238	ILE
2	B	265	GLY
2	B	281	ALA
2	B	314	ALA
2	B	339	ARG
2	B	342	GLN
2	B	373	ARG
2	B	386	GLU

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Mol	Chain	Res	Type
3	C	123	ASP
1	A	34	GLY
1	A	83	PHE
1	A	99	ALA
1	A	100	GLY
1	A	302	MET
1	A	386	GLU
2	B	48	SER
2	B	104	ALA
2	B	148	GLY
2	B	149	PHE
2	B	173	PRO
2	B	239	THR
2	B	245	ASP
2	B	263	PRO
2	B	279	GLU
2	B	330	ALA
2	B	336	LYS
2	B	369	ALA
1	A	96	GLN
1	A	395	PHE
2	B	129	CYS
2	B	300	ASN
2	B	348	PRO
1	A	57	ALA
1	A	74	THR
1	A	285	ALA
1	A	424	ASN
2	B	256	GLN
2	B	303	VAL
2	B	382	THR
3	C	6	GLU
1	A	51	VAL
1	A	58	GLY
1	A	145	THR
1	A	162	PRO
1	A	400	ARG
2	B	62	VAL
2	B	273	ALA
2	B	307	PRO
1	A	195	VAL
2	B	115	ILE

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Mol	Chain	Res	Type
1	A	72	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	367/381 (96%)	307 (84%)	60 (16%)	2	13
2	B	354/378 (94%)	295 (83%)	59 (17%)	2	12
3	C	279/303 (92%)	263 (94%)	16 (6%)	20	45
All	All	1000/1062 (94%)	865 (86%)	135 (14%)	7	17

All (135) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	14	ASN
1	A	24	ILE
1	A	26	ASP
1	A	32	PRO
1	A	41	ASP
1	A	68	VAL
1	A	76	ASP
1	A	90	ASP
1	A	94	PHE
1	A	101	ASN
1	A	122	VAL
1	A	129	CYS
1	A	135	PHE
1	A	141	LEU
1	A	145	THR
1	A	149	MET
1	A	153	LEU
1	A	161	TYR
1	A	163	ASP
1	A	165	ILE
1	A	174	SER

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Mol	Chain	Res	Type
1	A	198	THR
1	A	201	THR
1	A	203	CYS
1	A	207	GLU
1	A	211	ASP
1	A	214	PHE
1	A	215	ARG
1	A	224	TYR
1	A	227	LEU
1	A	230	LEU
1	A	236	SER
1	A	240	THR
1	A	244	PHE
1	A	265	LEU
1	A	267	PHE
1	A	275	LEU
1	A	282	GLN
1	A	283	TYR
1	A	284	ARG
1	A	289	PRO
1	A	299	LYS
1	A	306	ASP
1	A	309	HIS
1	A	322	ARG
1	A	324	SER
1	A	325	MET
1	A	343	PHE
1	A	344	VAL
1	A	349	ASN
1	A	369	ARG
1	A	380	ASN
1	A	387	LEU
1	A	413	MET
1	A	414	ASP
1	A	424	ASN
1	A	427	ASP
1	A	431	GLU
1	A	432	TYR
1	A	437	ASP
2	B	6	SER
2	B	20	CYS
2	B	21	TRP

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Mol	Chain	Res	Type
2	B	31	GLN
2	B	48	SER
2	B	50	ASN
2	B	60	LYS
2	B	61	HIS
2	B	74	VAL
2	B	79	ARG
2	B	82	THR
2	B	84	ARG
2	B	87	PHE
2	B	88	HIS
2	B	90	GLU
2	B	98	ASP
2	B	115	ILE
2	B	120	ASP
2	B	125	LEU
2	B	127	ASP
2	B	130	THR
2	B	135	PHE
2	B	141	PHE
2	B	150	THR
2	B	152	LEU
2	B	155	GLU
2	B	169	PHE
2	B	172	TYR
2	B	173	PRO
2	B	183	GLU
2	B	192	HIS
2	B	204	VAL
2	B	219	ILE
2	B	224	TYR
2	B	231	ILE
2	B	234	ILE
2	B	243	ARG
2	B	244	PHE
2	B	253	THR
2	B	260	VAL
2	B	267	PHE
2	B	269	LEU
2	B	279	GLU
2	B	280	LYS
2	B	290	GLU

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Mol	Chain	Res	Type
2	B	303	VAL
2	B	325	PRO
2	B	334	THR
2	B	345	ASP
2	B	352	LYS
2	B	368	LEU
2	B	376	CYS
2	B	378	LEU
2	B	380	ASN
2	B	404	PHE
2	B	415	GLU
2	B	417	GLU
2	B	431	ASP
2	B	432	TYR
3	C	18	LEU
3	C	27	ASP
3	C	29	TYR
3	C	95	MET
3	C	127	GLU
3	C	134	TYR
3	C	204	SER
3	C	211	ASN
3	C	222	LYS
3	C	236	GLU
3	C	306	SER
3	C	308	ASN
3	C	323	LYS
3	C	324	THR
3	C	326	LYS
3	C	328	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (36) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	14	ASN
1	A	91	ASN
1	A	101	ASN
1	A	102	ASN
1	A	107	HIS
1	A	136	GLN
1	A	139	HIS
1	A	197	ASN

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Mol	Chain	Res	Type
1	A	282	GLN
1	A	331	GLN
1	A	334	ASN
1	A	337	ASN
1	A	349	ASN
1	A	380	ASN
1	A	406	HIS
1	A	434	GLN
1	A	436	GLN
2	B	11	GLN
2	B	15	GLN
2	B	28	HIS
2	B	50	ASN
2	B	61	HIS
2	B	91	GLN
2	B	101	ASN
2	B	133	GLN
2	B	197	HIS
2	B	216	ASN
2	B	226	ASN
2	B	256	GLN
2	B	309	HIS
2	B	380	ASN
3	C	34	GLN
3	C	58	GLN
3	C	156	HIS
3	C	189	ASN
3	C	191	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

2 ligands 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	#$|Z| > 2$
4	GDP	A	600	-	24,30,30	2.59	9 (37%)	30,47,47	2.93	8 (26%)
5	GTP	B	500	-	26,34,34	1.55	5 (19%)	32,54,54	1.59	4 (12%)

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
4	GDP	A	600	-	-	4/12/32/32	0/3/3/3
5	GTP	B	500	-	-	3/18/38/38	0/3/3/3

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	600	GDP	O4'-C1'	6.26	1.49	1.41
4	A	600	GDP	O6-C6	5.66	1.34	1.23
4	A	600	GDP	C2-N1	4.67	1.49	1.37
4	A	600	GDP	PB-O2B	-3.80	1.40	1.54
5	B	500	GTP	C5-C6	-3.76	1.39	1.47
5	B	500	GTP	PG-O1G	3.62	1.62	1.50
4	A	600	GDP	C8-N7	3.53	1.41	1.35
4	A	600	GDP	C5-C6	-2.88	1.41	1.47
5	B	500	GTP	C6-N1	2.63	1.41	1.37
5	B	500	GTP	C8-N7	-2.42	1.30	1.35
4	A	600	GDP	C2-N3	-2.38	1.27	1.33
4	A	600	GDP	PB-O3B	2.34	1.63	1.54
5	B	500	GTP	O4'-C1'	2.24	1.44	1.41
4	A	600	GDP	O3'-C3'	2.08	1.47	1.43

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	600	GDP	C8-N7-C5	9.31	120.72	102.99
4	A	600	GDP	N2-C2-N3	6.27	131.94	119.74
4	A	600	GDP	C5-C6-N1	6.10	124.72	113.95
5	B	500	GTP	O2G-PG-O3B	5.04	121.52	104.64
5	B	500	GTP	O3G-PG-O3B	4.41	119.44	104.64
4	A	600	GDP	O6-C6-C5	-4.23	116.11	124.37
4	A	600	GDP	N2-C2-N1	-4.19	107.80	116.71
4	A	600	GDP	C2-N1-C6	-3.73	118.23	125.10
4	A	600	GDP	C2'-C3'-C4'	3.37	109.19	102.64
5	B	500	GTP	O3G-PG-O2G	-2.58	97.77	107.64
4	A	600	GDP	O2'-C2'-C3'	2.25	119.10	111.82
5	B	500	GTP	O5'-C5'-C4'	2.04	116.02	108.99

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	600	GDP	PA-O3A-PB-O2B
4	A	600	GDP	C5'-O5'-PA-O3A
4	A	600	GDP	C5'-O5'-PA-O1A
5	B	500	GTP	C3'-C4'-C5'-O5'
5	B	500	GTP	O4'-C4'-C5'-O5'
4	A	600	GDP	PA-O3A-PB-O3B
5	B	500	GTP	PG-O3B-PB-O1B

There are no ring outliers.

2 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	600	GDP	1	0
5	B	500	GTP	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and

any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GDP A 600

Bond lengths

Bond angles

Torsions

Rings

Ligand GTP B 500

Bond lengths

Bond angles

Torsions

Rings
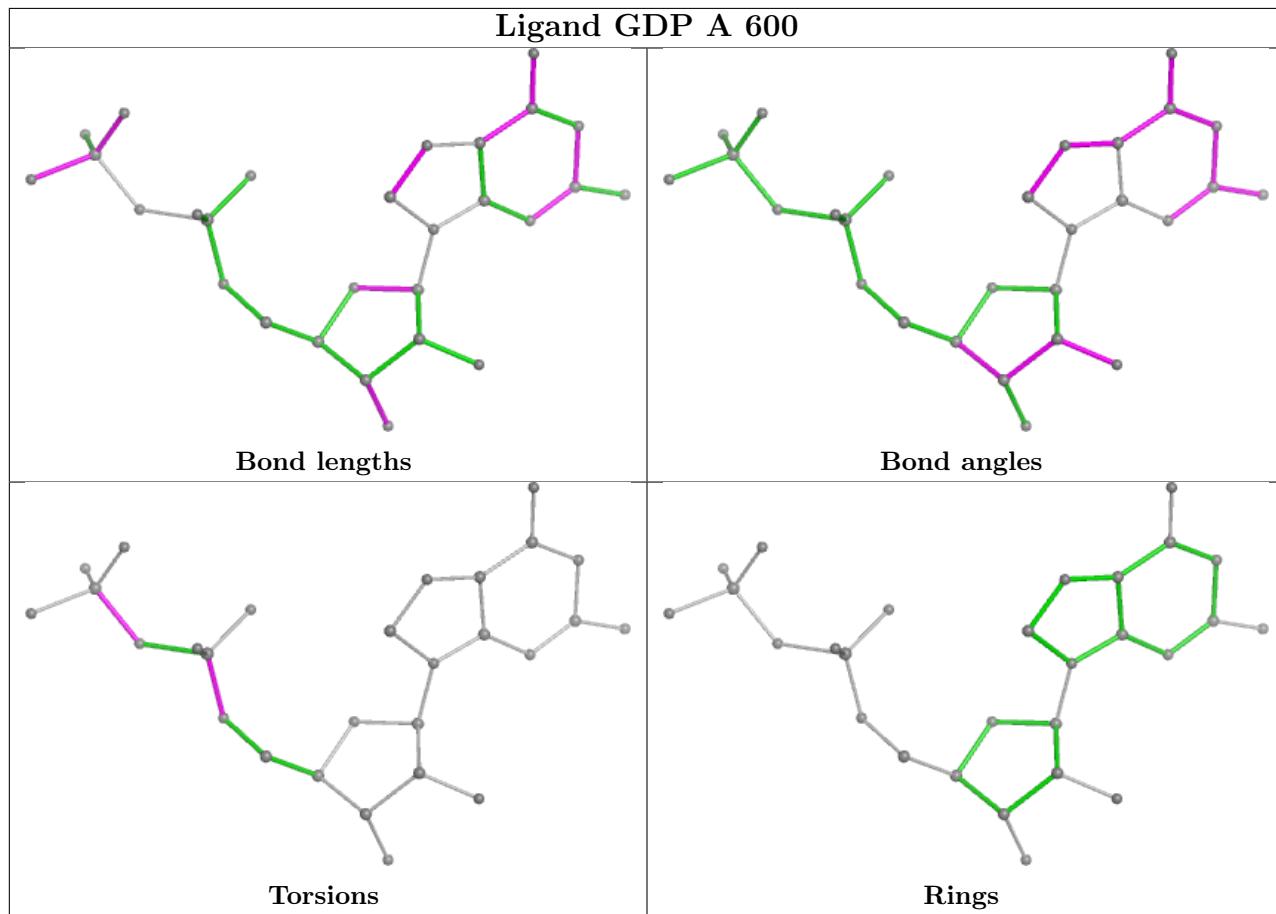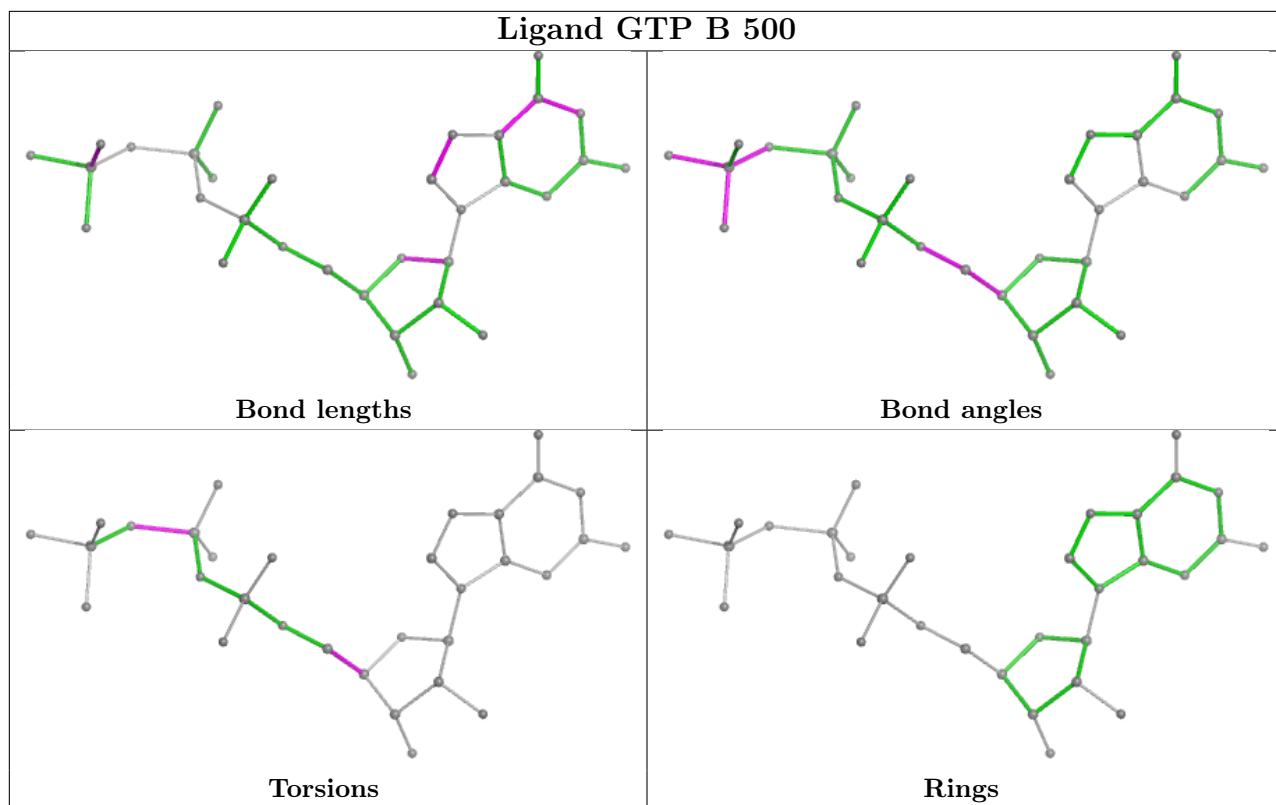
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	B	4

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	274:PRO	C	275:VAL	N	2.09
1	B	92:LEU	C	93:ILE	N	1.98
1	B	298:PRO	C	299:ALA	N	1.73
1	B	68:VAL	C	69:ASP	N	1.67

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-2098. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections ⓘ

6.1.1 Primary map

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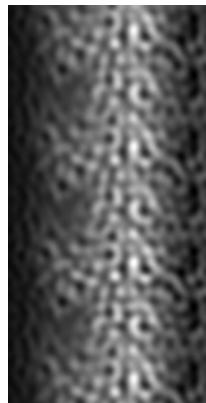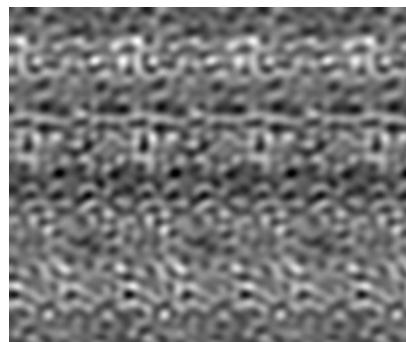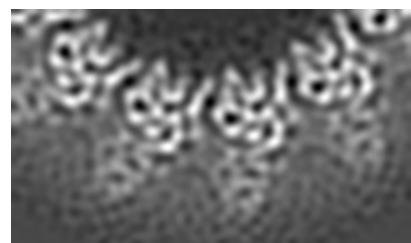
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ

6.2.1 Primary map
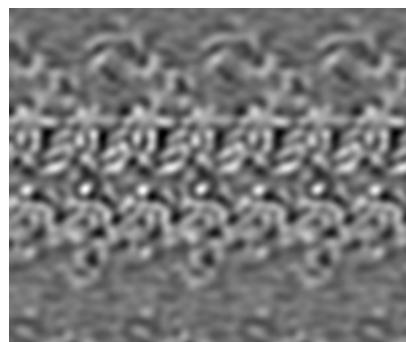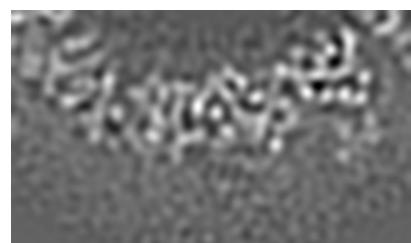
X Index: 42　　　　　Y Index: 25　　　　　Z Index: 50

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

6.3 Largest variance slices ⓘ

6.3.1 Primary map
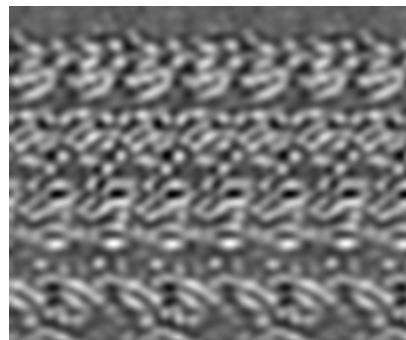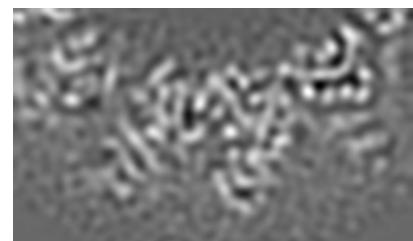
| X Index: 46 | Y Index: 31 | Z Index: 35 |

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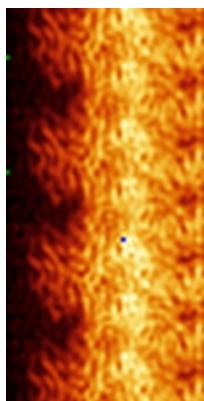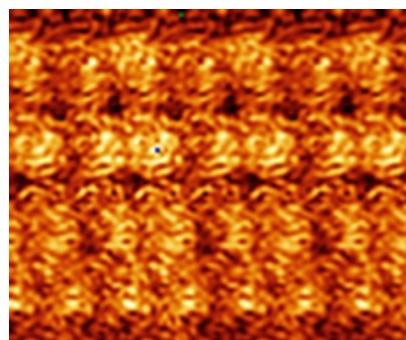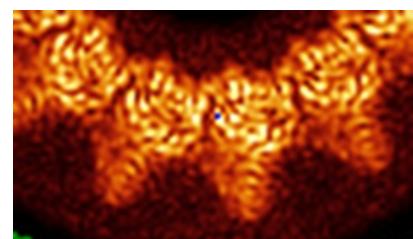
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views ⓘ
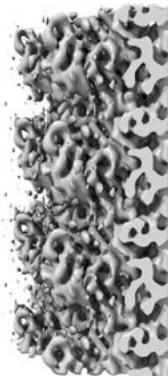
6.5.1 Primary map

X   Y   Z
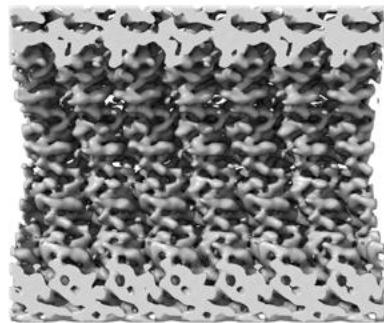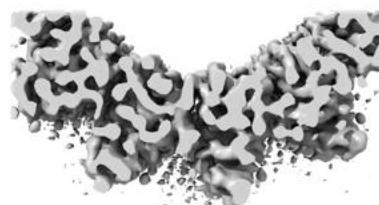
The images above show the 3D surface view of the map at the recommended contour level 1.55. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.6 Mask visualisation ⓘ

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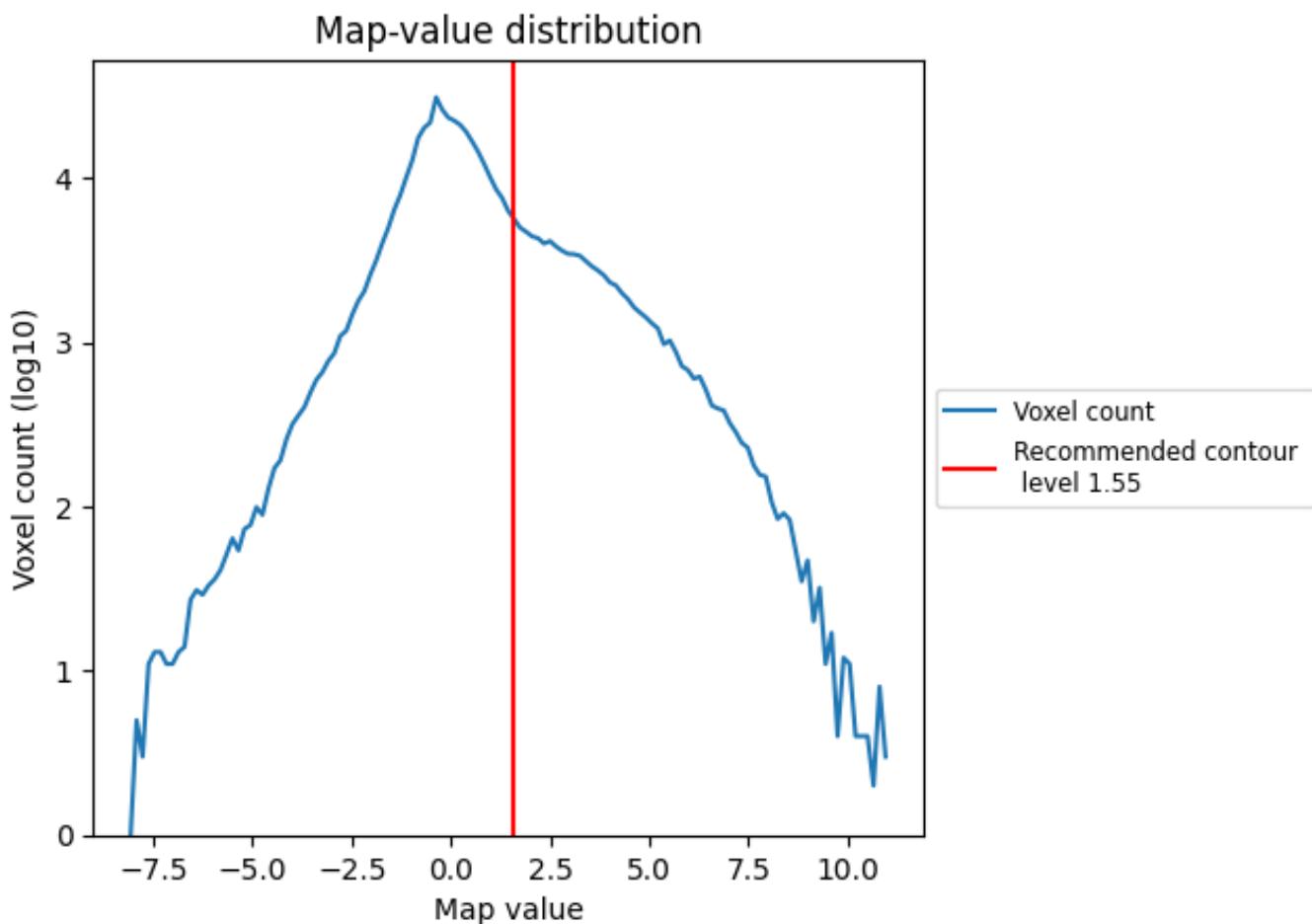
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
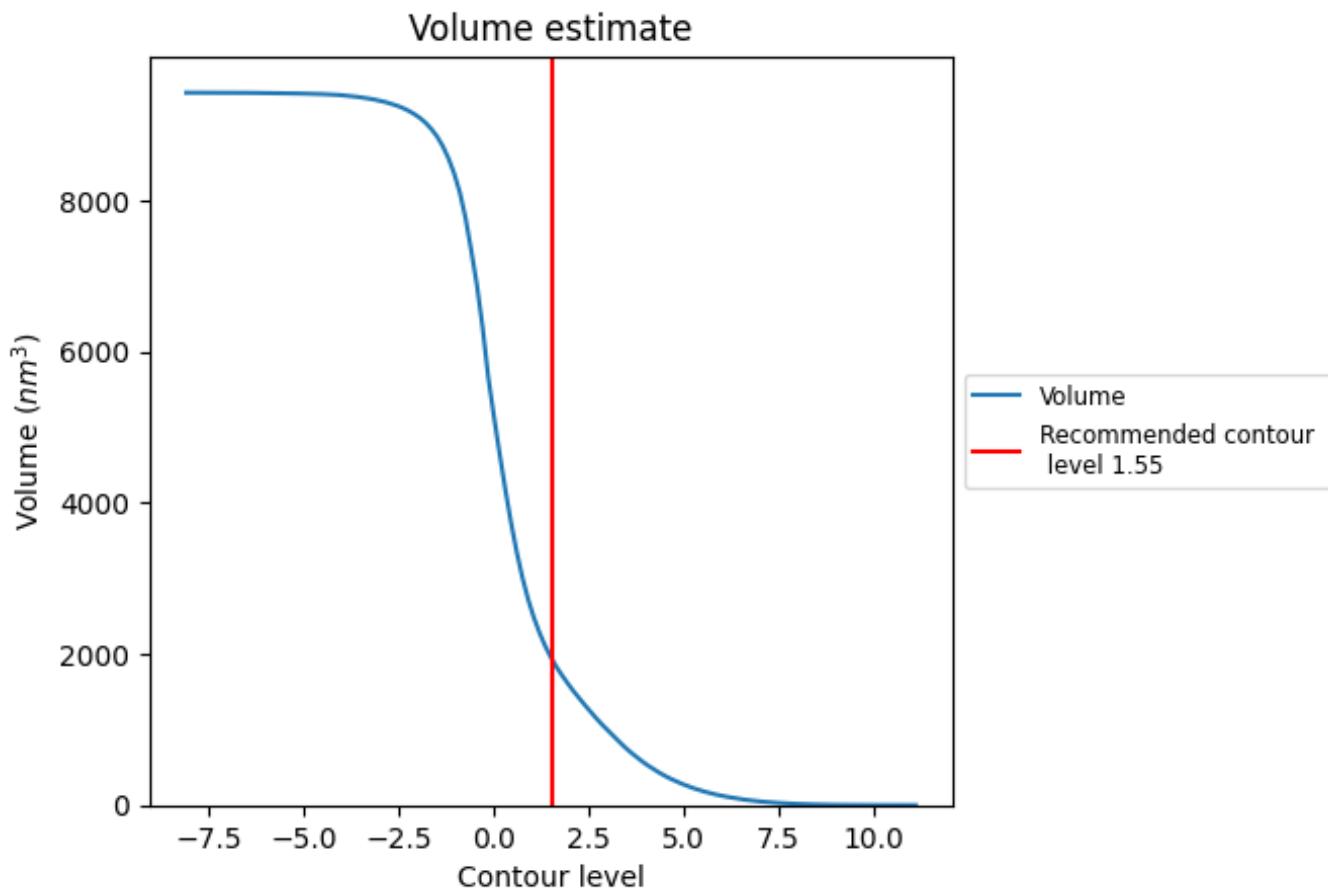
The volume at the recommended contour level is 1924 nm^3; this corresponds to an approximate mass of 1738 kDa.

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-2098 and PDB model 4ATX. Per-residue inclusion information can be found in section 3 on page 6.

9.1　Map-model overlay ⓘ

X　　　　　　　　　　　　　　Y　　　　　　　　　　　　　　Z
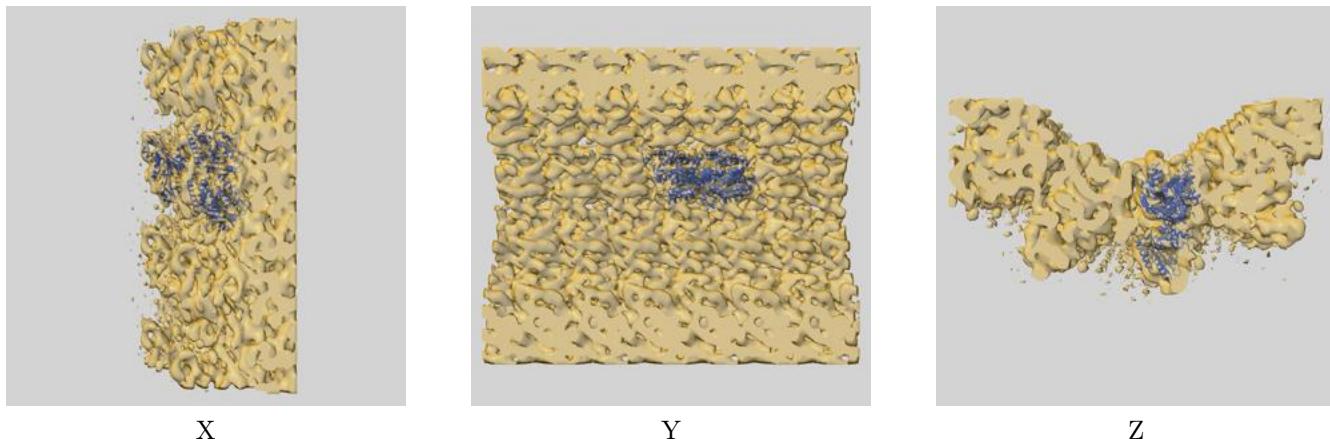
The images above show the 3D surface view of the map at the recommended contour level 1.55 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ

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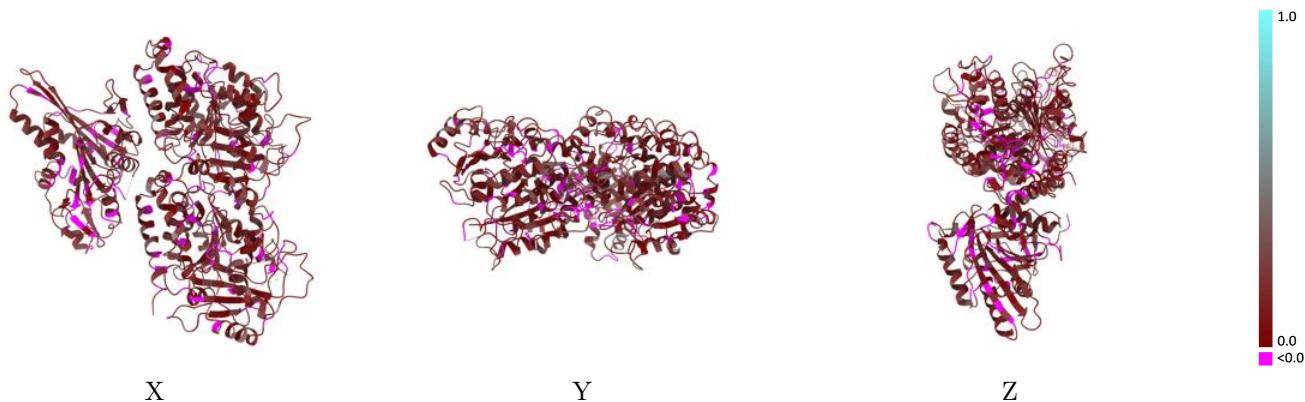
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model ⓘ

X Y Z
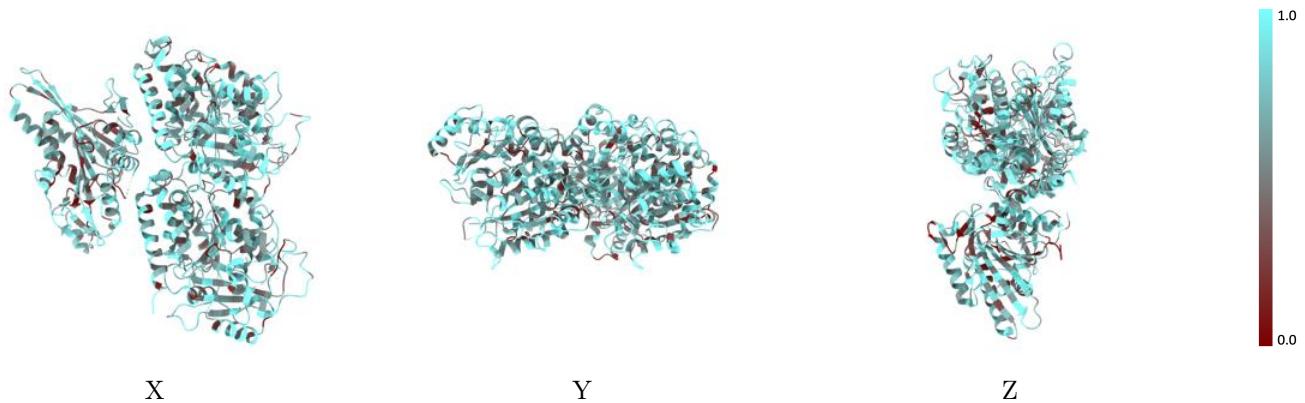
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.55).

9.4　Atom inclusion ⓘ
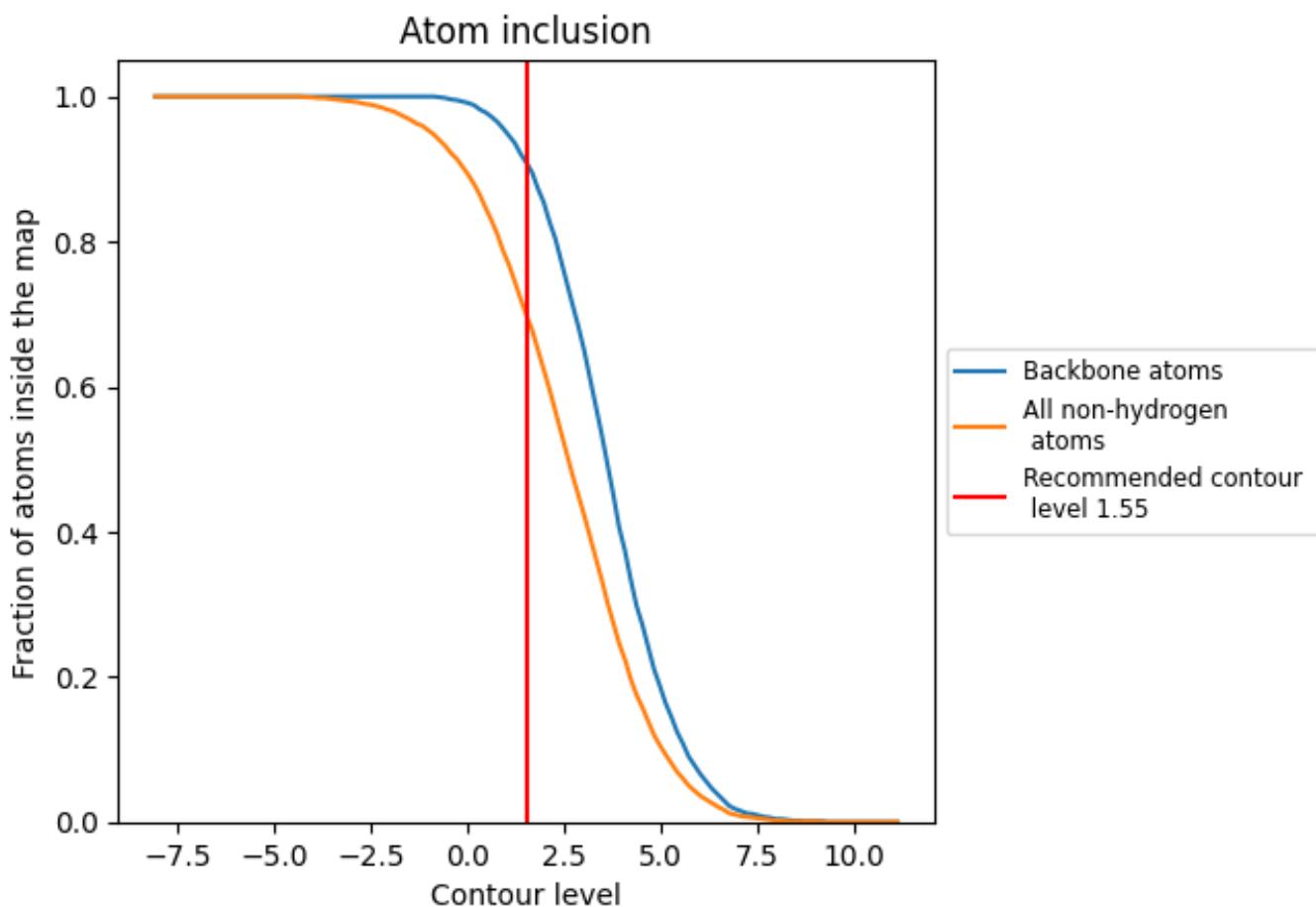
At the recommended contour level, 91% of all backbone atoms, 69% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (1.55) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6940	0.1280
A	0.7160	0.1310
B	0.6960	0.1250
C	0.6610	0.1270

1.0

0.0

<0.0