Full wwPDB X-ray Structure Validation Report ⓘ

May 24, 2020 – 10:35 am BST

PDB ID	:	4DJK
Title	:	Structure of glutamate-GABA antiporter GadC
Authors	:	Ma, D.; Lu, P.L.; Yan, C.Y.; Fan, C.; Yin, P.; Wang, J.W.; Shi, Y.G.
Deposited on	:	2012-02-02
Resolution	:	3.10 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see references ①) were used in the production of this report:

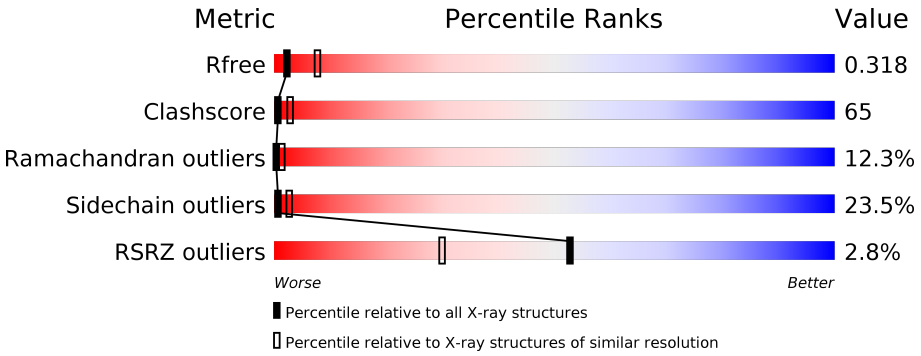
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.11
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	511	2% 22% 47% 17% • 12%
1	B	511	3% 20% 47% 19% • 11%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 6891 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Probable glutamate/gamma-aminobutyrate antiporter.

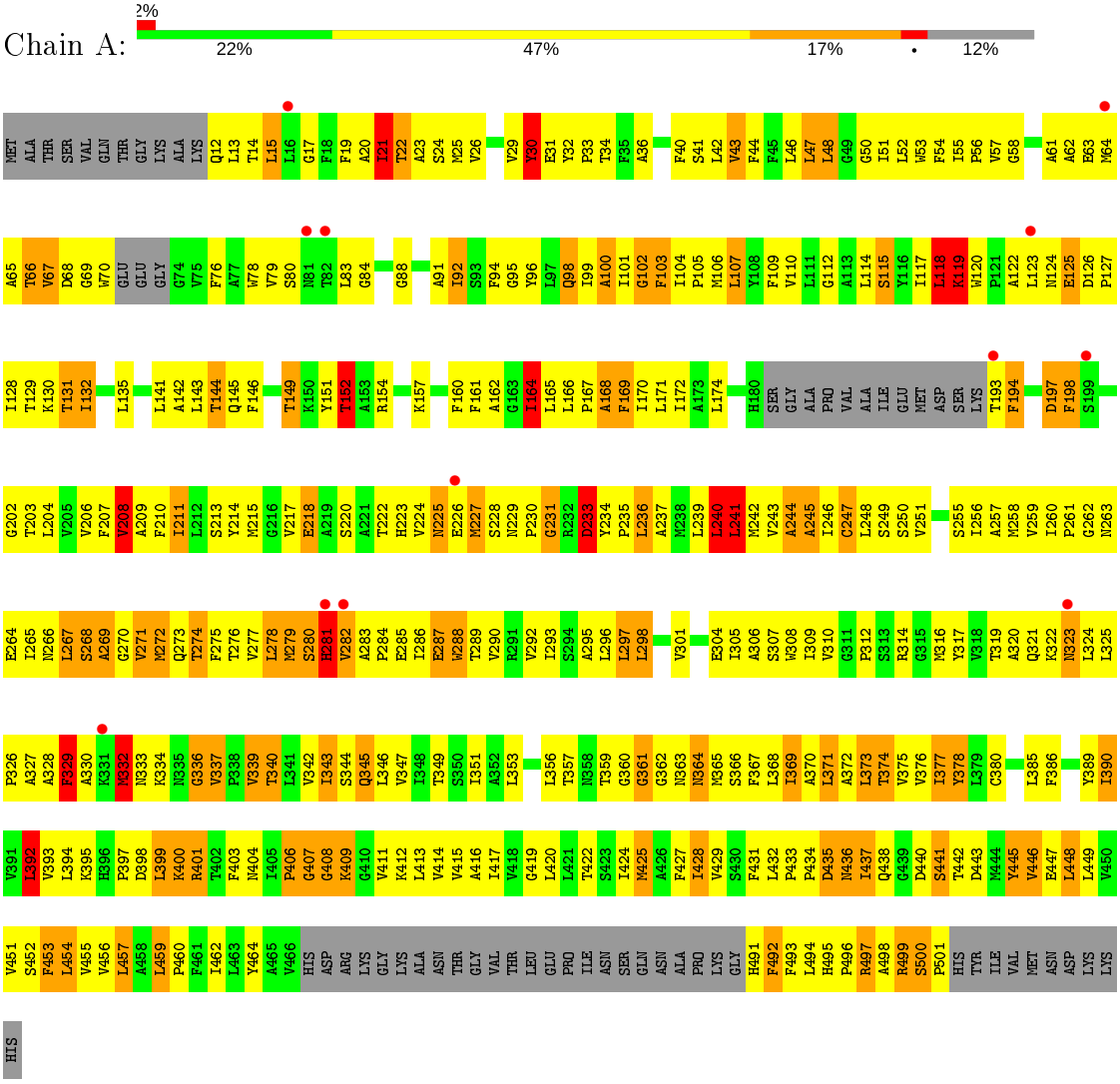
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	451	Total	C	N	O	S	0	0	0
			3436	2314	528	574	20			
1	B	453	Total	C	N	O	S	0	0	0
			3455	2324	532	579	20			

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA 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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

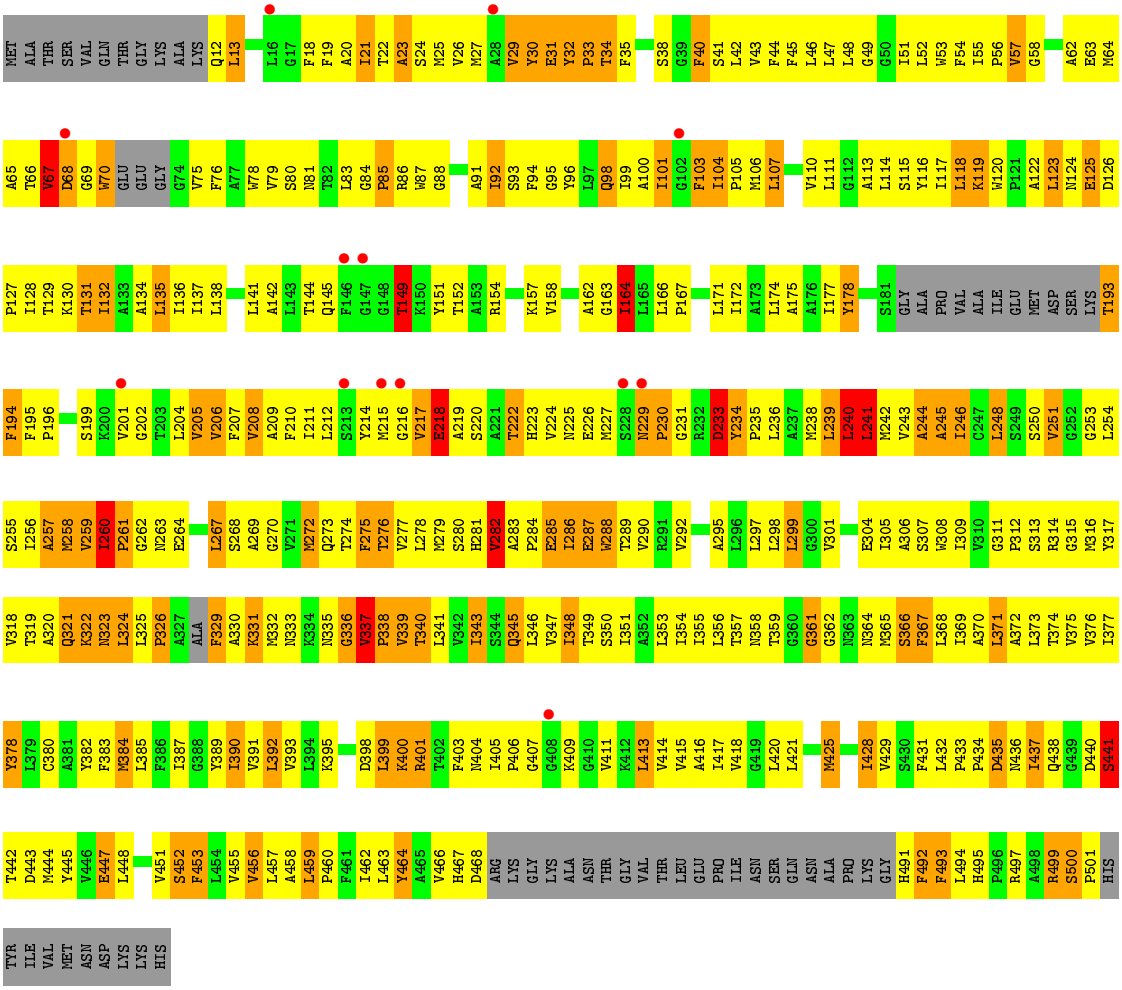
- Molecule 1: Probable glutamate/gamma-aminobutyrate antiporter

Chain A:



- Molecule 1: Probable glutamate/gamma-aminobutyrate antiporter

Chain B:


MET ALA THR SER VAL GLN THR GLY LYS ALA LYS Q12 L13 L16 G17 F18 F19 A20 I21 T22 A23 S24 M25 V26 M27 A28 V29 Y30 E31 Y32 P33 T34 F35 S38 G39 F40 S41 L42 V43 F44 F45 L46 L47 L48 G49 G50 I51 L52 W53 F54 I55 P56 V57 G58 A62 E63 M64
A65 T66 V67 D68 G69 W70 GLU GLU GLY G74 V75 F76 A77 W78 V79 S80 N81 T82 L83 G84 P85 R86 W87 G88 A91 I92 S93 F94 G95 Y96 L97 Q98 I99 A100 I101 G102 F103 I104 P105 M106 L107 V110 L111 G112 A113 L114 S115 Y116 I117 L118 K119 W120 P121 A122 L123 N124 E125 D126
P127 I128 T129 K130 T131 I132 A133 A134 L135 I136 I137 L138 L141 A142 L143 T144 Q145 F146 G147 G148 T149 K150 Y151 T152 A153 R154 K157 V158 A162 G163 I164 L165 L166 P167 L171 I172 A173 L174 A175 A176 I177 Y178 S181 GLY ALA PRO VAL ALA ILE GLU MET ASP SER LYS T193
F194 F195 P196 S199 K200 V201 G202 T203 L204 V205 V206 F207 V208 A209 F210 I211 L212 S213 Y214 M215 G216 V217 E218 A219 S220 A221 T222 H223 V224 N225 E226 M227 S228 N229 P230 G231 R232 D233 Y234 P235 L236 A237 M238 L239 I240 L241 M242 V243 A244 A245 I246 C247 L248 S249 S250 V251 G252 G253 L254
S255 I256 A257 M258 V259 I260 P261 G262 N263 E264 I267 S268 A269 G270 V271 M272 Q273 T274 F275 T276 V277 L278 M279 S280 H281 V282 A283 P284 E285 I286 E287 W288 T289 V290 R291 V292 A295 I296 I297 I298 I299 G300 V301 E304 I305 A306 S307 W308 I309 V310 G311 P312 S313 R314 G315 M316 Y317
V318 T319 A320 Q321 K322 N323 I324 I325 P326 A327 ALA F329 A330 K331 M332 N333 K334 N335 G336 V337 P338 V339 T340 I341 V342 I343 S344 Q345 I346 V347 I348 T349 S350 I351 A352 I353 I354 I355 L356 T357 N358 T359 G360 G361 G362 N363 N364 N365 S366 F367 L368 I369 A370 L371 A372 I373 T374 V375 V376 I377
Y378 L379 C380 A381 Y382 F383 M384 L385 F386 I387 G388 Y389 I390 Y391 L392 V393 L394 K395 D398 I399 K400 R401 T402 F403 N404 I405 P406 G407 G408 K409 G410 V411 K412 L413 V414 V415 A416 I417 V418 G419 I420 L421 M425 T428 V429 S430 F431 L432 P433 P434 D435 N436 I437 Q438 G439 D440 S441
T442 D443 M444 Y445 V446 E447 L448 V451 S452 F453 L454 V455 V456 L457 A458 L459 P460 F461 I462 L463 Y464 A465 V466 H467 D468 ARG LYS GLY LYS ALA ASN THR GLY VAL THR LEU GLU PRO ILE ASN SER GLN ASN ALA PRO LYS GLY H491 F492 F493 L494 H495 P496 R497 A498 R499 S500 P501 HIS
TYR ILE VAL MET ASN ASP LYS LYS HIS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	71.96Å 106.41Å 185.98Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	33.14 – 3.10 33.14 – 3.10	Depositor EDS
% Data completeness (in resolution range)	79.7 (33.14-3.10) 79.8 (33.14-3.10)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.62 (at 3.12Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.7.1_743)	Depositor
R, R_{free}	0.282 , 0.325 0.270 , 0.318	Depositor DCC
R_{free} test set	1146 reflections (5.38%)	wwPDB-VP
Wilson B-factor (Å^2)	102.0	Xtriage
Anisotropy	0.794	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 87.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	6891	wwPDB-VP
Average B, all atoms (Å^2)	142.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.46% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.49	0/3524	0.72	2/4812 (0.0%)
1	B	0.49	0/3543	0.72	0/4836
All	All	0.49	0/7067	0.72	2/9648 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1

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	A	392	LEU	CA-CB-CG	5.75	128.52	115.30
1	A	118	LEU	CB-CG-CD2	5.35	120.10	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	337	VAL	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	3436	0	3595	439	0
1	B	3455	0	3605	486	0
All	All	6891	0	7200	918	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 65.

All (918) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:394:LEU:HD11	1:B:204:LEU:HD12	1.40	1.04
1:A:491:HIS:C	1:A:493:PHE:H	1.58	1.01
1:A:101:ILE:HD13	1:A:373:LEU:HD21	1.43	1.00
1:B:400:LYS:H	1:B:400:LYS:HD2	1.24	1.00
1:B:279:MET:O	1:B:281:HIS:N	1.94	1.00
1:A:128:ILE:HG22	1:A:132:ILE:HG22	1.44	0.99
1:B:377:ILE:HD11	1:B:456:VAL:HG11	1.44	0.99
1:A:12:GLN:HG2	1:A:228:SER:HB3	1.45	0.98
1:A:21:ILE:HG13	1:A:492:PHE:CD1	1.99	0.97
1:B:283:ALA:HB1	1:B:284:PRO:HA	1.44	0.97
1:A:17:GLY:O	1:A:21:ILE:HG22	1.64	0.96
1:A:336:GLY:HA3	1:A:337:VAL:HB	1.46	0.96
1:B:178:TYR:O	1:B:178:TYR:HD2	1.48	0.96
1:B:219:ALA:HB3	1:B:220:SER:HB2	1.48	0.95
1:B:22:THR:O	1:B:24:SER:N	1.98	0.95
1:B:398:ASP:HA	1:B:399:LEU:HG	1.48	0.95
1:B:377:ILE:CD1	1:B:456:VAL:HG11	1.96	0.95
1:A:491:HIS:HD1	1:A:492:PHE:HD2	1.01	0.95
1:B:254:LEU:HA	1:B:257:ALA:HB3	1.49	0.94
1:A:260:ILE:HD11	1:A:277:VAL:HG21	1.51	0.93
1:A:94:PHE:CE1	1:A:460:PRO:HG2	2.03	0.93
1:B:92:ILE:HD12	1:B:316:MET:HG3	1.52	0.91
1:B:219:ALA:HB3	1:B:220:SER:CB	2.01	0.91
1:B:495:HIS:CD2	1:B:497:ARG:HG3	2.05	0.91
1:A:40:PHE:HD2	1:A:194:PHE:HB2	1.35	0.90
1:A:406:PRO:O	1:A:408:GLY:N	2.03	0.90
1:A:441:SER:O	1:A:443:ASP:N	2.05	0.89
1:B:67:VAL:CG2	1:B:400:LYS:HB2	2.02	0.89
1:A:233:ASP:H	1:A:235:PRO:HD2	1.34	0.88
1:B:284:PRO:HA	1:B:287:GLU:HB2	1.56	0.88
1:A:168:ALA:O	1:A:171:LEU:N	2.06	0.88
1:B:253:GLY:O	1:B:257:ALA:HB2	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:19:PHE:O	1:B:23:ALA:HB2	1.72	0.87
1:A:157:LYS:HE3	1:A:491:HIS:N	1.88	0.87
1:A:436:ASN:ND2	1:A:436:ASN:O	2.08	0.87
1:A:491:HIS:O	1:A:494:LEU:HD23	1.75	0.87
1:B:399:LEU:H	1:B:400:LYS:HD2	1.40	0.87
1:A:117:ILE:O	1:A:119:LYS:N	2.08	0.86
1:B:276:THR:HG22	1:B:290:VAL:HG11	1.56	0.85
1:B:80:SER:HA	1:B:84:GLY:O	1.75	0.85
1:B:364:ASN:HD22	1:B:438:GLN:HB2	1.42	0.84
1:B:68:ASP:CB	1:B:69:GLY:HA2	2.08	0.84
1:B:29:VAL:HA	1:B:32:TYR:CD1	2.12	0.84
1:A:314:ARG:HH21	1:A:337:VAL:HA	1.44	0.83
1:B:222:THR:O	1:B:224:VAL:N	2.11	0.83
1:B:67:VAL:HG23	1:B:400:LYS:HB2	1.60	0.83
1:B:451:VAL:O	1:B:455:VAL:HG23	1.79	0.83
1:B:79:VAL:HG13	1:B:83:LEU:HD12	1.60	0.83
1:B:162:ALA:O	1:B:167:PRO:HD3	1.80	0.82
1:B:68:ASP:HB2	1:B:69:GLY:HA2	1.62	0.81
1:A:174:LEU:HG	1:A:278:LEU:HD23	1.60	0.81
1:B:257:ALA:O	1:B:261:PRO:HG2	1.80	0.80
1:B:110:VAL:HG11	1:B:137:ILE:HD13	1.62	0.80
1:A:364:ASN:HD22	1:A:438:GLN:HB2	1.47	0.80
1:B:240:LEU:O	1:B:243:VAL:N	2.15	0.80
1:A:451:VAL:O	1:A:455:VAL:HG23	1.81	0.80
1:B:436:ASN:HA	1:B:441:SER:CB	2.11	0.80
1:B:281:HIS:C	1:B:283:ALA:H	1.81	0.79
1:A:225:ASN:C	1:A:227:MET:H	1.86	0.79
1:A:279:MET:O	1:A:281:HIS:N	2.15	0.79
1:A:198:PHE:O	1:B:395:LYS:HG3	1.82	0.79
1:A:126:ASP:O	1:A:129:THR:OG1	1.99	0.79
1:B:258:MET:O	1:B:259:VAL:HG13	1.83	0.79
1:B:250:SER:O	1:B:254:LEU:HB2	1.82	0.79
1:A:29:VAL:O	1:A:32:TYR:N	2.15	0.78
1:B:464:TYR:HD2	1:B:464:TYR:O	1.65	0.78
1:B:491:HIS:C	1:B:493:PHE:H	1.87	0.78
1:A:283:ALA:HA	1:A:286:ILE:HB	1.64	0.78
1:B:208:VAL:HG13	1:B:375:VAL:HG21	1.66	0.78
1:B:339:VAL:O	1:B:343:ILE:HB	1.83	0.77
1:A:495:HIS:HD2	1:A:497:ARG:HB2	1.47	0.77
1:A:19:PHE:O	1:A:23:ALA:HB2	1.83	0.77
1:A:47:LEU:O	1:A:51:ILE:HG12	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:491:HIS:C	1:A:493:PHE:N	2.32	0.77
1:A:459:LEU:HD13	1:A:462:ILE:HD11	1.66	0.77
1:B:331:LYS:O	1:B:332:MET:HG2	1.84	0.77
1:A:19:PHE:HE1	1:A:241:LEU:HA	1.50	0.76
1:B:120:TRP:NE1	1:B:122:ALA:HB3	2.00	0.76
1:B:425:MET:O	1:B:429:VAL:HG23	1.85	0.76
1:A:322:LYS:O	1:A:325:LEU:HD13	1.85	0.76
1:A:222:THR:O	1:A:224:VAL:N	2.16	0.76
1:A:276:THR:HG22	1:A:290:VAL:HG11	1.67	0.76
1:A:491:HIS:O	1:A:493:PHE:N	2.18	0.76
1:B:279:MET:C	1:B:281:HIS:H	1.90	0.75
1:A:411:VAL:HA	1:A:414:VAL:HG12	1.68	0.75
1:B:398:ASP:HA	1:B:399:LEU:CG	2.16	0.75
1:B:83:LEU:HB3	1:B:87:TRP:HE3	1.52	0.75
1:B:94:PHE:CE1	1:B:460:PRO:HG2	2.21	0.75
1:A:52:LEU:HB3	1:A:422:THR:HG21	1.67	0.74
1:B:491:HIS:O	1:B:494:LEU:HD23	1.86	0.74
1:B:500:SER:H	1:B:501:PRO:HD3	1.53	0.74
1:A:106:MET:HB3	1:A:305:ILE:HD11	1.69	0.74
1:B:306:ALA:HA	1:B:309:ILE:HG12	1.70	0.74
1:B:414:VAL:O	1:B:418:VAL:HG23	1.88	0.73
1:A:325:LEU:HB2	1:A:326:PRO:HD3	1.71	0.73
1:A:491:HIS:ND1	1:A:492:PHE:CD2	2.55	0.73
1:B:361:GLY:N	1:B:442:THR:OG1	2.19	0.73
1:B:68:ASP:OD1	1:B:81:ASN:ND2	2.20	0.73
1:B:229:ASN:O	1:B:229:ASN:ND2	2.22	0.73
1:B:41:SER:CB	1:B:196:PRO:HB3	2.19	0.73
1:A:44:PHE:HB2	1:A:193:THR:HG22	1.71	0.72
1:B:157:LYS:HE3	1:B:491:HIS:N	2.03	0.72
1:A:286:ILE:C	1:A:288:TRP:H	1.93	0.72
1:B:392:LEU:O	1:B:392:LEU:HD12	1.88	0.72
1:B:491:HIS:O	1:B:493:PHE:N	2.22	0.72
1:B:202:GLY:HA3	1:B:434:PRO:CA	2.19	0.72
1:A:327:ALA:O	1:A:329:PHE:N	2.23	0.72
1:A:64:MET:CE	1:A:78:TRP:HB3	2.19	0.72
1:B:436:ASN:HA	1:B:441:SER:OG	1.88	0.72
1:B:202:GLY:HA3	1:B:434:PRO:N	2.05	0.72
1:A:293:ILE:HA	1:A:296:LEU:HD13	1.71	0.72
1:B:464:TYR:HE2	1:B:468:ASP:O	1.72	0.71
1:A:292:VAL:O	1:A:296:LEU:HD12	1.89	0.71
1:A:395:LYS:HG3	1:B:201:VAL:HG21	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:MET:HG2	1:A:316:MET:O	1.91	0.71
1:A:66:THR:HG21	1:A:403:PHE:HB3	1.73	0.71
1:A:66:THR:O	1:A:67:VAL:HB	1.91	0.71
1:B:66:THR:HG22	1:B:224:VAL:HG11	1.73	0.71
1:A:339:VAL:HG13	1:A:340:THR:N	2.05	0.70
1:B:29:VAL:O	1:B:31:GLU:N	2.24	0.70
1:B:262:GLY:O	1:B:264:GLU:N	2.23	0.70
1:B:62:ALA:O	1:B:66:THR:HG23	1.90	0.70
1:A:117:ILE:C	1:A:119:LYS:H	1.93	0.70
1:A:101:ILE:HG22	1:A:374:THR:OG1	1.91	0.70
1:B:67:VAL:HG21	1:B:400:LYS:HB2	1.72	0.70
1:B:103:PHE:HZ	1:B:309:ILE:HD13	1.57	0.70
1:B:398:ASP:HA	1:B:399:LEU:CB	2.21	0.70
1:A:222:THR:C	1:A:224:VAL:H	1.95	0.70
1:B:283:ALA:HB1	1:B:284:PRO:CA	2.21	0.70
1:A:149:THR:OG1	1:A:149:THR:O	2.10	0.69
1:B:227:MET:CE	1:B:234:TYR:HB2	2.22	0.69
1:A:30:TYR:N	1:A:30:TYR:CD2	2.59	0.69
1:A:284:PRO:C	1:A:286:ILE:H	1.94	0.69
1:B:178:TYR:O	1:B:178:TYR:CD2	2.38	0.69
1:A:46:LEU:HD23	1:A:246:ILE:HA	1.72	0.69
1:B:68:ASP:HB2	1:B:69:GLY:CA	2.22	0.69
1:A:118:LEU:O	1:A:118:LEU:HD23	1.93	0.69
1:B:304:GLU:O	1:B:307:SER:OG	2.09	0.69
1:B:495:HIS:NE2	1:B:497:ARG:HG3	2.08	0.69
1:B:174:LEU:HG	1:B:278:LEU:HD22	1.74	0.69
1:B:314:ARG:HB2	1:B:337:VAL:HG21	1.75	0.69
1:B:350:SER:O	1:B:354:ILE:HG13	1.92	0.69
1:B:276:THR:CG2	1:B:290:VAL:HG11	2.22	0.69
1:A:46:LEU:HD12	1:A:210:PHE:CD1	2.27	0.69
1:A:101:ILE:HD13	1:A:373:LEU:CD2	2.21	0.68
1:B:43:VAL:O	1:B:47:LEU:HG	1.94	0.68
1:B:21:ILE:HB	1:B:492:PHE:CD1	2.29	0.68
1:B:68:ASP:CB	1:B:69:GLY:CA	2.71	0.68
1:A:307:SER:HB2	1:A:494:LEU:HD12	1.74	0.68
1:A:67:VAL:HG11	1:A:400:LYS:HB2	1.76	0.68
1:A:365:MET:HA	1:A:437:ILE:HD11	1.74	0.68
1:B:38:SER:O	1:B:41:SER:OG	2.10	0.68
1:B:99:ILE:O	1:B:101:ILE:N	2.27	0.68
1:A:274:THR:O	1:A:278:LEU:HB2	1.94	0.68
1:A:98:GLN:HG3	1:A:378:TYR:CD2	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:329:PHE:O	1:B:340:THR:HG21	1.93	0.68
1:A:46:LEU:HD12	1:A:210:PHE:HD1	1.59	0.68
1:A:128:ILE:N	1:A:128:ILE:HD12	2.08	0.67
1:A:66:THR:OG1	1:A:66:THR:O	2.10	0.67
1:A:433:PRO:HG3	1:A:445:TYR:CD2	2.30	0.67
1:A:237:ALA:O	1:A:241:LEU:HB2	1.95	0.67
1:A:215:MET:HE3	1:A:375:VAL:HG13	1.76	0.67
1:B:491:HIS:C	1:B:493:PHE:N	2.46	0.67
1:B:314:ARG:HG2	1:B:500:SER:OG	1.95	0.67
1:B:64:MET:CE	1:B:78:TRP:HB3	2.25	0.67
1:A:166:LEU:HB3	1:A:167:PRO:HD3	1.76	0.67
1:B:86:ARG:HA	1:B:464:TYR:CE1	2.30	0.67
1:A:240:LEU:O	1:A:243:VAL:N	2.28	0.67
1:A:101:ILE:O	1:A:103:PHE:N	2.28	0.67
1:A:124:ASN:HD21	1:A:268:SER:HB2	1.59	0.67
1:A:333:ASN:O	1:A:334:LYS:HG3	1.95	0.67
1:A:361:GLY:O	1:A:440:ASP:HB3	1.95	0.66
1:B:282:VAL:HG13	1:B:286:ILE:HG21	1.76	0.66
1:A:369:ILE:HG13	1:A:445:TYR:CE1	2.30	0.66
1:B:243:VAL:HA	1:B:246:ILE:HD12	1.77	0.66
1:B:364:ASN:HD22	1:B:438:GLN:CB	2.08	0.66
1:A:408:GLY:O	1:A:412:LYS:HE3	1.95	0.66
1:B:42:LEU:HD12	1:B:43:VAL:N	2.10	0.66
1:A:25:MET:HB2	1:A:495:HIS:HE1	1.61	0.66
1:A:67:VAL:HG11	1:A:401:ARG:H	1.60	0.66
1:B:157:LYS:HZ1	1:B:491:HIS:N	1.94	0.66
1:A:269:ALA:O	1:A:271:VAL:N	2.29	0.66
1:A:29:VAL:O	1:A:31:GLU:N	2.28	0.65
1:A:336:GLY:CA	1:A:337:VAL:HB	2.22	0.65
1:B:233:ASP:H	1:B:235:PRO:HD2	1.60	0.65
1:B:365:MET:HA	1:B:437:ILE:CD1	2.25	0.65
1:B:83:LEU:HB3	1:B:87:TRP:CE3	2.31	0.65
1:B:284:PRO:C	1:B:286:ILE:H	1.98	0.65
1:A:171:LEU:HB2	1:A:275:PHE:CZ	2.31	0.65
1:A:377:ILE:HG12	1:A:456:VAL:HG11	1.78	0.65
1:B:274:THR:O	1:B:278:LEU:HB2	1.97	0.65
1:B:283:ALA:HB1	1:B:287:GLU:HB2	1.77	0.65
1:B:222:THR:C	1:B:224:VAL:H	1.99	0.65
1:B:46:LEU:HD23	1:B:246:ILE:HA	1.79	0.65
1:B:94:PHE:HE1	1:B:460:PRO:HG2	1.62	0.65
1:B:175:ALA:HB2	1:B:278:LEU:HD11	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:53:TRP:C	1:A:56:PRO:HD2	2.17	0.65
1:B:120:TRP:CD1	1:B:122:ALA:HB3	2.31	0.65
1:B:286:ILE:O	1:B:289:THR:HG22	1.97	0.65
1:B:233:ASP:OD2	1:B:234:TYR:N	2.29	0.65
1:B:356:LEU:HD11	1:B:369:ILE:HD13	1.79	0.65
1:B:365:MET:HA	1:B:437:ILE:HD11	1.78	0.65
1:A:431:PHE:C	1:A:432:LEU:HD23	2.18	0.65
1:B:209:ALA:HB2	1:B:371:LEU:HD12	1.79	0.65
1:B:448:LEU:O	1:B:452:SER:HB2	1.96	0.65
1:B:433:PRO:HG3	1:B:445:TYR:HD2	1.62	0.64
1:A:323:ASN:HB3	1:A:325:LEU:CD1	2.26	0.64
1:B:34:THR:HG22	1:B:267:LEU:HD12	1.79	0.64
1:A:99:ILE:O	1:A:101:ILE:N	2.30	0.64
1:B:411:VAL:HA	1:B:414:VAL:HG12	1.80	0.64
1:A:197:ASP:O	1:A:203:THR:HG21	1.96	0.64
1:A:295:ALA:O	1:A:298:LEU:HD23	1.97	0.64
1:B:98:GLN:HB2	1:B:378:TYR:HB2	1.80	0.64
1:B:117:ILE:HD11	1:B:295:ALA:HA	1.78	0.64
1:B:103:PHE:CZ	1:B:309:ILE:HD13	2.32	0.64
1:B:317:TYR:CE1	1:B:330:ALA:HB1	2.32	0.64
1:A:356:LEU:HD11	1:A:369:ILE:HD13	1.80	0.64
1:B:127:PRO:O	1:B:131:THR:HG22	1.97	0.64
1:A:409:LYS:HA	1:A:412:LYS:HB2	1.79	0.64
1:A:101:ILE:C	1:A:103:PHE:H	1.99	0.64
1:A:440:ASP:N	1:A:441:SER:OG	2.26	0.64
1:B:219:ALA:HB3	1:B:220:SER:HB3	1.80	0.64
1:A:347:VAL:O	1:A:351:ILE:CG1	2.46	0.64
1:B:12:GLN:N	1:B:12:GLN:OE1	2.31	0.64
1:B:22:THR:OG1	1:B:241:LEU:HD11	1.98	0.63
1:A:356:LEU:HD11	1:A:369:ILE:HG21	1.79	0.63
1:A:373:LEU:HB2	1:A:449:LEU:HD12	1.81	0.63
1:A:104:ILE:N	1:A:105:PRO:HD2	2.14	0.63
1:B:124:ASN:ND2	1:B:269:ALA:HB2	2.14	0.63
1:B:30:TYR:N	1:B:30:TYR:CD2	2.65	0.63
1:B:400:LYS:CD	1:B:400:LYS:H	1.97	0.63
1:A:333:ASN:CG	1:A:334:LYS:H	2.02	0.63
1:A:80:SER:HA	1:A:84:GLY:O	1.99	0.63
1:B:117:ILE:HG22	1:B:118:LEU:HD12	1.79	0.63
1:B:92:ILE:HD12	1:B:316:MET:CG	2.27	0.63
1:A:339:VAL:CG1	1:A:340:THR:N	2.62	0.62
1:B:317:TYR:O	1:B:320:ALA:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:492:PHE:CD2	1:A:492:PHE:N	2.68	0.62
1:B:194:PHE:O	1:B:196:PRO:N	2.32	0.62
1:B:208:VAL:CG1	1:B:371:LEU:HB3	2.29	0.62
1:B:281:HIS:C	1:B:283:ALA:N	2.50	0.62
1:B:240:LEU:O	1:B:242:MET:N	2.32	0.62
1:A:19:PHE:CE1	1:A:241:LEU:HA	2.33	0.62
1:B:41:SER:HB2	1:B:196:PRO:HB3	1.82	0.62
1:A:119:LYS:HE3	1:A:119:LYS:HA	1.81	0.62
1:A:347:VAL:O	1:A:351:ILE:HG13	1.99	0.62
1:A:368:LEU:HD23	1:A:437:ILE:HG21	1.80	0.62
1:A:492:PHE:HD2	1:A:492:PHE:N	1.96	0.62
1:A:67:VAL:HG21	1:A:400:LYS:HB3	1.80	0.62
1:B:22:THR:C	1:B:24:SER:H	2.01	0.62
1:B:18:PHE:CD1	1:B:21:ILE:HD11	2.34	0.62
1:B:376:VAL:HG23	1:B:453:PHE:HD1	1.65	0.62
1:A:356:LEU:HD11	1:A:369:ILE:CG2	2.30	0.62
1:B:244:ALA:O	1:B:246:ILE:N	2.33	0.62
1:B:377:ILE:HG22	1:B:378:TYR:N	2.15	0.62
1:B:365:MET:HG3	1:B:437:ILE:HD11	1.82	0.62
1:A:317:TYR:OH	1:A:330:ALA:HB1	2.00	0.61
1:A:40:PHE:HD2	1:A:194:PHE:CB	2.11	0.61
1:A:377:ILE:HD11	1:A:456:VAL:HG21	1.81	0.61
1:B:260:ILE:H	1:B:261:PRO:HD2	1.65	0.61
1:B:431:PHE:O	1:B:432:LEU:HD23	1.99	0.61
1:A:215:MET:CE	1:A:375:VAL:HG13	2.31	0.61
1:B:362:GLY:HA3	1:B:440:ASP:HB3	1.82	0.61
1:B:255:SER:O	1:B:259:VAL:HG22	2.00	0.61
1:B:417:ILE:O	1:B:421:LEU:HD13	2.00	0.61
1:A:259:VAL:HG21	1:A:278:LEU:HD12	1.83	0.61
1:A:117:ILE:HD11	1:A:295:ALA:N	2.15	0.61
1:A:40:PHE:O	1:A:43:VAL:HG23	1.99	0.61
1:A:229:ASN:O	1:A:230:PRO:C	2.37	0.61
1:A:64:MET:HE2	1:A:78:TRP:HB3	1.81	0.61
1:B:104:ILE:HG12	1:B:353:LEU:HD23	1.83	0.61
1:A:386:PHE:O	1:A:390:ILE:HG12	2.00	0.61
1:B:104:ILE:HG22	1:B:105:PRO:N	2.16	0.61
1:B:128:ILE:O	1:B:132:ILE:HG23	2.01	0.61
1:B:453:PHE:C	1:B:453:PHE:CD2	2.73	0.61
1:A:32:TYR:N	1:A:33:PRO:HD2	2.16	0.61
1:A:64:MET:HE1	1:A:78:TRP:HB3	1.81	0.61
1:B:234:TYR:CD2	1:B:234:TYR:C	2.74	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:456:VAL:HG12	1:B:457:LEU:N	2.15	0.61
1:A:142:ALA:O	1:A:146:PHE:HD2	1.84	0.61
1:A:152:THR:HG21	1:A:307:SER:HA	1.83	0.61
1:B:227:MET:HE3	1:B:234:TYR:HB2	1.83	0.61
1:B:76:PHE:O	1:B:80:SER:OG	2.10	0.61
1:B:433:PRO:HG3	1:B:445:TYR:CD2	2.36	0.60
1:B:307:SER:HB2	1:B:494:LEU:HD12	1.83	0.60
1:A:112:GLY:O	1:A:115:SER:HB3	2.01	0.60
1:B:256:ILE:HG23	1:B:274:THR:OG1	2.01	0.60
1:B:64:MET:HE1	1:B:78:TRP:HB3	1.81	0.60
1:B:113:ALA:HA	1:B:272:MET:SD	2.42	0.60
1:B:371:LEU:O	1:B:375:VAL:HG23	2.01	0.60
1:B:53:TRP:C	1:B:56:PRO:HD2	2.21	0.60
1:A:120:TRP:CD1	1:A:122:ALA:HB3	2.36	0.60
1:A:368:LEU:O	1:A:371:LEU:HB2	2.01	0.60
1:A:12:GLN:HG2	1:A:228:SER:CB	2.28	0.60
1:B:253:GLY:O	1:B:257:ALA:CB	2.48	0.60
1:B:47:LEU:O	1:B:51:ILE:HG12	2.02	0.60
1:B:174:LEU:HG	1:B:278:LEU:CD2	2.31	0.60
1:A:225:ASN:C	1:A:227:MET:N	2.54	0.60
1:A:244:ALA:O	1:A:246:ILE:N	2.35	0.59
1:A:306:ALA:O	1:A:309:ILE:HG12	2.02	0.59
1:A:21:ILE:HG13	1:A:492:PHE:CE1	2.37	0.59
1:A:124:ASN:O	1:A:363:ASN:ND2	2.35	0.59
1:B:55:ILE:HA	1:B:238:MET:CE	2.33	0.59
1:A:361:GLY:HA3	1:A:441:SER:HA	1.84	0.59
1:A:496:PRO:C	1:A:498:ALA:H	2.05	0.59
1:A:30:TYR:CE2	1:A:301:VAL:HG23	2.37	0.59
1:B:365:MET:O	1:B:366:SER:C	2.41	0.59
1:B:367:PHE:O	1:B:370:ALA:N	2.35	0.59
1:B:98:GLN:HG3	1:B:378:TYR:CD2	2.38	0.59
1:A:128:ILE:O	1:A:131:THR:HG23	2.01	0.59
1:A:256:ILE:HA	1:A:274:THR:OG1	2.03	0.59
1:B:499:ARG:O	1:B:500:SER:HB2	2.02	0.59
1:A:54:PHE:CD1	1:A:214:TYR:HD1	2.21	0.59
1:B:29:VAL:HA	1:B:32:TYR:CE1	2.37	0.59
1:B:361:GLY:H	1:B:442:THR:HG1	1.46	0.59
1:B:233:ASP:O	1:B:236:LEU:HB2	2.03	0.59
1:A:399:LEU:C	1:A:400:LYS:HD2	2.22	0.59
1:A:491:HIS:HA	1:A:494:LEU:HD22	1.85	0.58
1:A:79:VAL:CG1	1:A:88:GLY:HA2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:498:ALA:O	1:A:499:ARG:O	2.21	0.58
1:B:44:PHE:HA	1:B:193:THR:HG22	1.85	0.58
1:A:227:MET:CE	1:A:234:TYR:HB2	2.33	0.58
1:A:314:ARG:NH2	1:A:336:GLY:HA3	2.18	0.58
1:A:61:ALA:HB2	1:A:385:LEU:HD11	1.84	0.58
1:B:236:LEU:HA	1:B:239:LEU:HB2	1.85	0.58
1:A:98:GLN:HG3	1:A:378:TYR:CG	2.38	0.58
1:B:314:ARG:NH2	1:B:335:ASN:HB3	2.19	0.58
1:B:94:PHE:C	1:B:96:TYR:H	2.07	0.58
1:B:234:TYR:HD2	1:B:234:TYR:C	2.06	0.58
1:B:31:GLU:O	1:B:32:TYR:C	2.42	0.58
1:B:163:GLY:O	1:B:164:ILE:HG13	2.03	0.58
1:B:208:VAL:HG12	1:B:209:ALA:N	2.18	0.58
1:B:225:ASN:C	1:B:227:MET:N	2.57	0.58
1:B:145:GLN:NE2	1:B:152:THR:HG21	2.19	0.58
1:B:283:ALA:HA	1:B:285:GLU:N	2.18	0.58
1:B:101:ILE:HG22	1:B:374:THR:OG1	2.04	0.58
1:A:52:LEU:CB	1:A:422:THR:HG21	2.34	0.58
1:B:407:GLY:HA3	1:B:411:VAL:HB	1.85	0.58
1:A:332:MET:HA	1:A:337:VAL:O	2.04	0.58
1:B:45:PHE:HD2	1:B:210:PHE:CE2	2.22	0.58
1:B:225:ASN:C	1:B:227:MET:H	2.07	0.58
1:A:245:ALA:O	1:A:249:SER:OG	2.16	0.57
1:A:286:ILE:C	1:A:288:TRP:N	2.57	0.57
1:B:99:ILE:HG21	1:B:312:PRO:HG2	1.85	0.57
1:A:101:ILE:C	1:A:103:PHE:N	2.56	0.57
1:A:40:PHE:CD2	1:A:194:PHE:HB2	2.27	0.57
1:A:21:ILE:O	1:A:499:ARG:NH2	2.36	0.57
1:A:79:VAL:HG12	1:A:88:GLY:HA2	1.86	0.57
1:B:365:MET:CG	1:B:437:ILE:HD11	2.34	0.57
1:B:307:SER:HB2	1:B:494:LEU:CD1	2.35	0.57
1:B:145:GLN:HG3	1:B:309:ILE:HB	1.85	0.57
1:B:204:LEU:O	1:B:206:VAL:N	2.37	0.57
1:B:215:MET:CE	1:B:378:TYR:HB3	2.35	0.57
1:B:227:MET:HE1	1:B:234:TYR:HB2	1.86	0.57
1:B:377:ILE:HD11	1:B:456:VAL:CG1	2.27	0.57
1:A:92:ILE:HG23	1:A:316:MET:SD	2.45	0.57
1:B:63:GLU:OE2	1:B:404:ASN:HA	2.03	0.57
1:B:405:ILE:HG23	1:B:406:PRO:HD2	1.87	0.57
1:B:431:PHE:O	1:B:433:PRO:HD3	2.04	0.57
1:A:20:ALA:O	1:A:23:ALA:N	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:428:ILE:O	1:A:431:PHE:N	2.36	0.57
1:B:463:LEU:O	1:B:466:VAL:HG22	2.04	0.57
1:A:247:CYS:O	1:A:251:VAL:HG23	2.05	0.57
1:A:327:ALA:C	1:A:329:PHE:H	2.07	0.57
1:B:240:LEU:O	1:B:241:LEU:C	2.43	0.57
1:A:225:ASN:O	1:A:227:MET:N	2.38	0.57
1:B:431:PHE:C	1:B:432:LEU:HD23	2.25	0.57
1:B:21:ILE:HB	1:B:492:PHE:HD1	1.69	0.57
1:B:349:THR:O	1:B:353:LEU:HB2	2.05	0.56
1:A:209:ALA:HB2	1:A:371:LEU:CD1	2.35	0.56
1:B:40:PHE:HD1	1:B:40:PHE:O	1.88	0.56
1:A:145:GLN:NE2	1:A:145:GLN:HA	2.20	0.56
1:A:161:PHE:CE2	1:A:493:PHE:HE1	2.24	0.56
1:A:68:ASP:HB2	1:A:69:GLY:HA2	1.88	0.56
1:A:411:VAL:HA	1:A:414:VAL:CG1	2.35	0.56
1:B:46:LEU:HD12	1:B:210:PHE:CD1	2.41	0.56
1:A:228:SER:HA	1:A:230:PRO:HD3	1.87	0.56
1:A:392:LEU:HD12	1:A:401:ARG:HH21	1.70	0.56
1:B:92:ILE:HG23	1:B:316:MET:HG3	1.86	0.56
1:B:458:ALA:O	1:B:462:ILE:HG23	2.05	0.56
1:B:207:PHE:O	1:B:208:VAL:C	2.44	0.56
1:B:284:PRO:HA	1:B:287:GLU:CB	2.34	0.56
1:A:456:VAL:HG12	1:A:457:LEU:N	2.19	0.56
1:B:27:MET:HG2	1:B:164:ILE:CG2	2.35	0.56
1:B:369:ILE:HG13	1:B:445:TYR:CE1	2.41	0.56
1:B:229:ASN:O	1:B:230:PRO:O	2.24	0.56
1:B:94:PHE:CD2	1:B:380:CYS:HB2	2.40	0.56
1:B:145:GLN:HA	1:B:145:GLN:OE1	2.05	0.55
1:B:365:MET:CB	1:B:437:ILE:HD11	2.36	0.55
1:B:411:VAL:HA	1:B:414:VAL:CG1	2.35	0.55
1:A:25:MET:HB2	1:A:495:HIS:CE1	2.40	0.55
1:B:149:THR:HG21	1:B:314:ARG:HH22	1.71	0.55
1:A:227:MET:HE3	1:A:234:TYR:HB2	1.89	0.55
1:B:400:LYS:N	1:B:400:LYS:HD2	2.08	0.55
1:A:339:VAL:CG1	1:A:340:THR:H	2.19	0.55
1:B:157:LYS:CE	1:B:491:HIS:N	2.70	0.55
1:B:337:VAL:N	1:B:338:PRO:HD3	2.22	0.55
1:B:351:ILE:O	1:B:355:ILE:HD12	2.07	0.55
1:B:436:ASN:HA	1:B:441:SER:HB2	1.88	0.55
1:A:209:ALA:HB2	1:A:371:LEU:HD12	1.89	0.55
1:A:500:SER:H	1:A:501:PRO:HD2	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:116:TYR:CD1	1:B:272:MET:HB2	2.42	0.55
1:B:31:GLU:O	1:B:33:PRO:N	2.40	0.55
1:A:398:ASP:HA	1:A:399:LEU:HB2	1.89	0.55
1:A:365:MET:HA	1:A:437:ILE:CD1	2.37	0.55
1:A:22:THR:HA	1:A:499:ARG:HH22	1.72	0.55
1:A:168:ALA:O	1:A:170:ILE:N	2.40	0.54
1:A:261:PRO:O	1:A:263:ASN:N	2.39	0.54
1:A:41:SER:HB3	1:A:194:PHE:O	2.07	0.54
1:B:31:GLU:HB2	1:B:35:PHE:CE2	2.41	0.54
1:B:362:GLY:CA	1:B:440:ASP:HB3	2.37	0.54
1:B:131:THR:O	1:B:135:LEU:HB2	2.07	0.54
1:B:279:MET:C	1:B:281:HIS:N	2.51	0.54
1:B:330:ALA:O	1:B:331:LYS:HD3	2.07	0.54
1:A:124:ASN:HD21	1:A:269:ALA:H	1.55	0.54
1:B:218:GLU:OE2	1:B:378:TYR:OH	2.12	0.54
1:B:301:VAL:O	1:B:305:ILE:HG13	2.07	0.54
1:A:124:ASN:ND2	1:A:268:SER:HB2	2.22	0.54
1:A:44:PHE:HB2	1:A:193:THR:CG2	2.38	0.54
1:A:377:ILE:CD1	1:A:456:VAL:HG11	2.37	0.54
1:B:70:TRP:CD1	1:B:222:THR:HB	2.43	0.54
1:A:36:ALA:HB1	1:A:257:ALA:HA	1.90	0.54
1:B:358:ASN:O	1:B:359:THR:HG23	2.07	0.54
1:A:46:LEU:HD22	1:A:250:SER:HB3	1.90	0.54
1:A:284:PRO:C	1:A:286:ILE:N	2.61	0.54
1:A:79:VAL:HG12	1:A:88:GLY:CA	2.37	0.54
1:A:120:TRP:NE1	1:A:122:ALA:HB3	2.23	0.53
1:A:206:VAL:HG13	1:A:210:PHE:HE2	1.73	0.53
1:B:142:ALA:HB2	1:B:346:LEU:HD11	1.89	0.53
1:A:12:GLN:CG	1:A:228:SER:HB3	2.30	0.53
1:A:296:LEU:HD12	1:A:296:LEU:H	1.73	0.53
1:A:312:PRO:HG3	1:A:498:ALA:HA	1.90	0.53
1:A:323:ASN:HB3	1:A:325:LEU:HD12	1.89	0.53
1:A:389:TYR:O	1:A:393:VAL:HG23	2.07	0.53
1:B:166:LEU:HB3	1:B:167:PRO:HD3	1.88	0.53
1:A:168:ALA:O	1:A:169:PHE:C	2.47	0.53
1:B:44:PHE:HB2	1:B:193:THR:HG22	1.91	0.53
1:B:304:GLU:O	1:B:307:SER:N	2.42	0.53
1:B:86:ARG:HA	1:B:464:TYR:CD1	2.43	0.53
1:A:376:VAL:HG23	1:A:453:PHE:HD1	1.74	0.53
1:A:204:LEU:HB3	1:A:429:VAL:CG1	2.39	0.53
1:A:441:SER:O	1:A:443:ASP:OD1	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:31:GLU:HB2	1:B:35:PHE:CD2	2.43	0.53
1:A:119:LYS:CE	1:A:119:LYS:HA	2.38	0.53
1:A:131:THR:HG22	1:A:357:THR:HG21	1.89	0.53
1:A:267:LEU:HB3	1:A:367:PHE:CD2	2.44	0.53
1:A:41:SER:O	1:A:44:PHE:HB3	2.08	0.53
1:B:329:PHE:C	1:B:329:PHE:CD2	2.82	0.53
1:A:106:MET:O	1:A:110:VAL:HG23	2.08	0.53
1:B:317:TYR:OH	1:B:330:ALA:HB1	2.08	0.53
1:B:373:LEU:HD23	1:B:373:LEU:O	2.09	0.53
1:B:351:ILE:HG22	1:B:355:ILE:HD12	1.91	0.53
1:B:219:ALA:CB	1:B:220:SER:CB	2.82	0.52
1:B:66:THR:HG22	1:B:224:VAL:CG1	2.39	0.52
1:B:366:SER:O	1:B:369:ILE:HG22	2.08	0.52
1:A:271:VAL:O	1:A:274:THR:HB	2.09	0.52
1:A:130:LYS:NZ	1:A:363:ASN:HB2	2.25	0.52
1:B:175:ALA:CB	1:B:278:LEU:HD11	2.40	0.52
1:B:70:TRP:N	1:B:70:TRP:CE3	2.78	0.52
1:A:110:VAL:HG22	1:A:301:VAL:HG11	1.90	0.52
1:A:361:GLY:H	1:A:365:MET:HE3	1.74	0.52
1:A:377:ILE:CG1	1:A:456:VAL:HG11	2.39	0.52
1:A:491:HIS:ND1	1:A:492:PHE:CE2	2.78	0.52
1:B:442:THR:HG21	1:B:444:MET:CE	2.40	0.52
1:A:29:VAL:C	1:A:31:GLU:N	2.63	0.52
1:B:120:TRP:HE1	1:B:122:ALA:HB3	1.71	0.52
1:B:18:PHE:HD1	1:B:21:ILE:HD11	1.74	0.52
1:B:260:ILE:HD11	1:B:274:THR:HA	1.91	0.52
1:A:42:LEU:HD12	1:A:42:LEU:C	2.30	0.52
1:B:68:ASP:HB3	1:B:69:GLY:HA2	1.89	0.52
1:A:500:SER:H	1:A:501:PRO:CD	2.23	0.52
1:B:124:ASN:HD22	1:B:269:ALA:HB2	1.75	0.52
1:B:132:ILE:HD12	1:B:132:ILE:O	2.09	0.52
1:B:308:TRP:CD1	1:B:308:TRP:N	2.78	0.52
1:B:393:VAL:HG11	1:B:413:LEU:HD13	1.91	0.52
1:A:141:LEU:HA	1:A:144:THR:CG2	2.39	0.52
1:A:222:THR:C	1:A:224:VAL:N	2.63	0.52
1:A:401:ARG:HH12	1:A:412:LYS:NZ	2.07	0.52
1:B:104:ILE:O	1:B:107:LEU:N	2.42	0.52
1:B:289:THR:O	1:B:292:VAL:HB	2.10	0.52
1:A:307:SER:HB2	1:A:494:LEU:CD1	2.40	0.52
1:A:152:THR:CG2	1:A:307:SER:HA	2.40	0.51
1:A:360:GLY:O	1:A:362:GLY:N	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:256:ILE:O	1:B:258:MET:N	2.43	0.51
1:A:117:ILE:C	1:A:119:LYS:N	2.60	0.51
1:A:395:LYS:HG3	1:B:201:VAL:CG2	2.39	0.51
1:A:495:HIS:ND1	1:A:496:PRO:HD2	2.25	0.51
1:B:149:THR:O	1:B:149:THR:OG1	2.28	0.51
1:B:336:GLY:HA3	1:B:338:PRO:HG3	1.92	0.51
1:A:160:PHE:CE1	1:A:165:LEU:HD21	2.46	0.51
1:B:20:ALA:O	1:B:22:THR:N	2.44	0.51
1:B:46:LEU:CD1	1:B:210:PHE:CD1	2.94	0.51
1:B:435:ASP:N	1:B:435:ASP:OD2	2.43	0.51
1:A:65:ALA:HB2	1:A:78:TRP:CZ2	2.46	0.51
1:B:22:THR:HA	1:B:499:ARG:HH22	1.76	0.51
1:B:317:TYR:HE1	1:B:330:ALA:HB1	1.76	0.51
1:A:398:ASP:OD2	1:A:398:ASP:N	2.42	0.51
1:A:99:ILE:C	1:A:101:ILE:N	2.64	0.51
1:B:272:MET:O	1:B:273:GLN:C	2.47	0.51
1:B:338:PRO:O	1:B:339:VAL:C	2.48	0.51
1:A:243:VAL:HG12	1:A:244:ALA:N	2.23	0.51
1:B:209:ALA:HB2	1:B:371:LEU:CD1	2.41	0.51
1:B:270:GLY:O	1:B:273:GLN:HB3	2.11	0.51
1:B:464:TYR:CD2	1:B:464:TYR:C	2.84	0.51
1:B:495:HIS:HD2	1:B:497:ARG:HG3	1.70	0.51
1:A:233:ASP:OD2	1:A:234:TYR:N	2.44	0.51
1:A:373:LEU:HB2	1:A:449:LEU:CD1	2.41	0.51
1:A:54:PHE:CD1	1:A:214:TYR:CD1	2.99	0.51
1:A:110:VAL:HG22	1:A:301:VAL:CG1	2.40	0.51
1:A:229:ASN:O	1:A:229:ASN:CG	2.49	0.51
1:A:26:VAL:HG13	1:A:245:ALA:HA	1.93	0.50
1:A:325:LEU:CB	1:A:326:PRO:HD3	2.40	0.50
1:A:67:VAL:HG11	1:A:401:ARG:N	2.25	0.50
1:B:240:LEU:HA	1:B:243:VAL:HG12	1.93	0.50
1:A:286:ILE:O	1:A:288:TRP:N	2.36	0.50
1:A:66:THR:O	1:A:67:VAL:CB	2.59	0.50
1:B:94:PHE:CD2	1:B:380:CYS:CB	2.93	0.50
1:B:42:LEU:O	1:B:46:LEU:HD13	2.11	0.50
1:A:304:GLU:O	1:A:307:SER:N	2.44	0.50
1:A:67:VAL:HG21	1:A:400:LYS:CB	2.41	0.50
1:A:25:MET:CB	1:A:495:HIS:CE1	2.94	0.50
1:A:361:GLY:H	1:A:365:MET:CE	2.23	0.50
1:A:453:PHE:CD2	1:A:453:PHE:C	2.84	0.50
1:A:66:THR:O	1:A:401:ARG:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:380:CYS:O	1:B:383:PHE:HB2	2.11	0.50
1:B:377:ILE:HD11	1:B:456:VAL:HG21	1.93	0.50
1:B:96:TYR:O	1:B:99:ILE:HB	2.11	0.50
1:B:99:ILE:C	1:B:101:ILE:N	2.65	0.50
1:B:40:PHE:CD1	1:B:40:PHE:O	2.64	0.50
1:B:48:LEU:HD12	1:B:207:PHE:CE2	2.47	0.50
1:B:281:HIS:O	1:B:283:ALA:N	2.44	0.50
1:B:292:VAL:O	1:B:295:ALA:HB3	2.11	0.50
1:B:365:MET:CA	1:B:437:ILE:HD11	2.41	0.49
1:A:114:LEU:CD2	1:A:298:LEU:HD13	2.42	0.49
1:A:128:ILE:HD12	1:A:128:ILE:H	1.75	0.49
1:A:208:VAL:HG12	1:A:209:ALA:N	2.27	0.49
1:B:464:TYR:HD2	1:B:464:TYR:C	2.16	0.49
1:A:128:ILE:N	1:A:128:ILE:CD1	2.75	0.49
1:A:19:PHE:HE1	1:A:241:LEU:CA	2.23	0.49
1:A:361:GLY:HA3	1:A:441:SER:CA	2.42	0.49
1:A:417:ILE:HG21	1:B:425:MET:HE3	1.94	0.49
1:B:464:TYR:CD2	1:B:464:TYR:O	2.55	0.49
1:B:51:ILE:O	1:B:56:PRO:HD3	2.12	0.49
1:A:103:PHE:HE2	1:A:308:TRP:HB2	1.76	0.49
1:A:30:TYR:CE2	1:A:301:VAL:CG2	2.95	0.49
1:A:393:VAL:HG11	1:A:413:LEU:HD13	1.94	0.49
1:A:202:GLY:HA3	1:A:434:PRO:HG3	1.94	0.49
1:B:20:ALA:O	1:B:21:ILE:C	2.51	0.49
1:B:240:LEU:HD23	1:B:243:VAL:HG12	1.94	0.49
1:A:29:VAL:O	1:A:30:TYR:C	2.51	0.49
1:B:163:GLY:O	1:B:164:ILE:CG1	2.60	0.49
1:B:321:GLN:OE1	1:B:321:GLN:HA	2.13	0.49
1:B:324:LEU:HD13	1:B:467:HIS:HE1	1.78	0.49
1:A:496:PRO:C	1:A:498:ALA:N	2.66	0.49
1:A:286:ILE:HA	1:A:288:TRP:HD1	1.78	0.49
1:B:306:ALA:HA	1:B:309:ILE:CG1	2.40	0.49
1:A:218:GLU:HG3	1:A:218:GLU:H	1.31	0.49
1:A:411:VAL:O	1:A:412:LYS:C	2.51	0.49
1:B:244:ALA:O	1:B:245:ALA:C	2.51	0.49
1:A:317:TYR:O	1:A:319:THR:N	2.45	0.49
1:A:343:ILE:HG22	1:A:344:SER:N	2.28	0.49
1:A:124:ASN:HD21	1:A:269:ALA:N	2.10	0.48
1:A:322:LYS:O	1:A:324:LEU:N	2.45	0.48
1:A:76:PHE:O	1:A:80:SER:HB2	2.13	0.48
1:B:92:ILE:CG2	1:B:316:MET:HG3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:286:ILE:C	1:B:288:TRP:H	2.17	0.48
1:B:275:PHE:O	1:B:276:THR:C	2.51	0.48
1:B:48:LEU:HD12	1:B:207:PHE:CZ	2.48	0.48
1:A:48:LEU:HD12	1:A:207:PHE:CE2	2.48	0.48
1:A:364:ASN:HB2	1:A:440:ASP:OD2	2.13	0.48
1:B:104:ILE:N	1:B:105:PRO:HD2	2.28	0.48
1:B:44:PHE:CA	1:B:193:THR:HG22	2.42	0.48
1:B:66:THR:CG2	1:B:224:VAL:HG11	2.43	0.48
1:B:275:PHE:HB3	1:B:290:VAL:HG22	1.94	0.48
1:A:500:SER:O	1:A:501:PRO:C	2.51	0.48
1:B:316:MET:O	1:B:316:MET:HG2	2.13	0.48
1:A:385:LEU:HD23	1:A:385:LEU:C	2.33	0.48
1:A:432:LEU:HD23	1:A:432:LEU:N	2.28	0.48
1:A:53:TRP:O	1:A:56:PRO:HD2	2.14	0.48
1:B:13:LEU:HB2	1:B:226:GLU:O	2.13	0.48
1:B:42:LEU:CD1	1:B:250:SER:HB2	2.43	0.48
1:A:141:LEU:HA	1:A:144:THR:HG22	1.94	0.48
1:A:204:LEU:HB3	1:A:429:VAL:HG11	1.96	0.48
1:B:31:GLU:O	1:B:34:THR:N	2.47	0.48
1:B:46:LEU:CD1	1:B:210:PHE:CE1	2.97	0.48
1:B:99:ILE:C	1:B:101:ILE:H	2.16	0.48
1:A:101:ILE:HG22	1:A:374:THR:HG1	1.78	0.48
1:B:258:MET:O	1:B:259:VAL:CG1	2.58	0.48
1:B:171:LEU:HB2	1:B:275:PHE:CZ	2.49	0.48
1:A:415:VAL:HG12	1:A:416:ALA:N	2.28	0.48
1:B:167:PRO:CB	1:B:297:LEU:HD21	2.44	0.48
1:B:53:TRP:O	1:B:56:PRO:HD2	2.14	0.48
1:A:162:ALA:O	1:A:167:PRO:HD3	2.14	0.47
1:B:262:GLY:C	1:B:264:GLU:H	2.16	0.47
1:B:149:THR:CG2	1:B:314:ARG:HH22	2.26	0.47
1:B:326:PRO:HB2	1:B:329:PHE:CE2	2.48	0.47
1:A:33:PRO:HB2	1:A:267:LEU:HA	1.96	0.47
1:A:385:LEU:HD23	1:A:386:PHE:N	2.29	0.47
1:A:53:TRP:CZ2	1:A:57:VAL:HG21	2.50	0.47
1:B:208:VAL:HG11	1:B:371:LEU:HB3	1.96	0.47
1:B:389:TYR:CD2	1:B:389:TYR:C	2.88	0.47
1:A:193:THR:HG22	1:A:193:THR:O	2.15	0.47
1:B:204:LEU:O	1:B:205:VAL:C	2.52	0.47
1:B:29:VAL:C	1:B:31:GLU:N	2.67	0.47
1:B:368:LEU:HD23	1:B:437:ILE:HG21	1.96	0.47
1:B:113:ALA:HB2	1:B:272:MET:HE1	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:30:TYR:CD1	1:A:106:MET:HG2	2.50	0.47
1:A:297:LEU:HD22	1:A:297:LEU:HA	1.80	0.47
1:A:42:LEU:HD12	1:A:43:VAL:N	2.30	0.47
1:B:27:MET:HG2	1:B:164:ILE:HG23	1.95	0.47
1:B:315:GLY:O	1:B:318:VAL:HG23	2.14	0.47
1:A:117:ILE:HG22	1:A:118:LEU:N	2.30	0.47
1:A:14:THR:O	1:A:17:GLY:N	2.48	0.47
1:A:314:ARG:HH22	1:A:336:GLY:HA3	1.79	0.47
1:A:101:ILE:HG21	1:A:373:LEU:HD23	1.96	0.47
1:B:142:ALA:CB	1:B:346:LEU:HD11	2.45	0.47
1:B:212:LEU:HA	1:B:215:MET:SD	2.54	0.47
1:A:293:ILE:HA	1:A:296:LEU:CD1	2.43	0.47
1:B:284:PRO:C	1:B:286:ILE:N	2.62	0.47
1:B:67:VAL:HB	1:B:401:ARG:HA	1.96	0.47
1:A:123:LEU:O	1:A:130:LYS:HG3	2.14	0.47
1:A:397:PRO:HD2	1:A:398:ASP:OD2	2.14	0.47
1:B:157:LYS:NZ	1:B:491:HIS:N	2.62	0.47
1:B:47:LEU:HD12	1:B:193:THR:CG2	2.44	0.47
1:B:208:VAL:HG13	1:B:375:VAL:CG2	2.40	0.47
1:B:219:ALA:CB	1:B:220:SER:HB2	2.34	0.47
1:B:274:THR:O	1:B:278:LEU:CB	2.62	0.47
1:B:114:LEU:HD23	1:B:298:LEU:HD22	1.95	0.47
1:B:317:TYR:CZ	1:B:330:ALA:HB1	2.50	0.47
1:B:48:LEU:HD22	1:B:52:LEU:HD12	1.96	0.47
1:B:500:SER:H	1:B:501:PRO:CD	2.24	0.47
1:A:389:TYR:CD2	1:A:416:ALA:HB2	2.49	0.47
1:A:431:PHE:HD1	1:A:446:VAL:HG12	1.79	0.47
1:A:496:PRO:O	1:A:498:ALA:N	2.48	0.47
1:B:129:THR:O	1:B:130:LYS:C	2.52	0.47
1:B:101:ILE:HD13	1:B:373:LEU:HD13	1.97	0.47
1:A:99:ILE:C	1:A:101:ILE:H	2.17	0.47
1:B:111:LEU:HD12	1:B:130:LYS:HG3	1.97	0.46
1:B:357:THR:HG22	1:B:358:ASN:ND2	2.31	0.46
1:B:398:ASP:CA	1:B:399:LEU:CB	2.92	0.46
1:B:47:LEU:HD12	1:B:193:THR:HG23	1.97	0.46
1:A:127:PRO:HA	1:A:128:ILE:C	2.36	0.46
1:A:433:PRO:HG3	1:A:445:TYR:HD2	1.79	0.46
1:A:373:LEU:CD1	1:A:452:SER:HB3	2.44	0.46
1:A:94:PHE:HE1	1:A:460:PRO:HG2	1.69	0.46
1:A:88:GLY:O	1:A:91:ALA:HB3	2.15	0.46
1:B:275:PHE:O	1:B:278:LEU:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:491:HIS:O	1:A:494:LEU:CD2	2.57	0.46
1:A:491:HIS:CE1	1:A:492:PHE:CE2	3.04	0.46
1:A:259:VAL:HG21	1:A:278:LEU:CD1	2.45	0.46
1:A:92:ILE:HD12	1:A:316:MET:HG3	1.97	0.46
1:B:175:ALA:O	1:B:178:TYR:N	2.48	0.46
1:B:337:VAL:N	1:B:338:PRO:CD	2.78	0.46
1:B:67:VAL:HG21	1:B:401:ARG:H	1.80	0.46
1:A:283:ALA:HB1	1:A:287:GLU:HG2	1.97	0.46
1:A:94:PHE:CD2	1:A:380:CYS:HB3	2.49	0.46
1:B:118:LEU:O	1:B:119:LYS:C	2.53	0.46
1:B:138:LEU:HD11	1:B:346:LEU:HD22	1.97	0.46
1:B:378:TYR:CE1	1:B:382:TYR:HE2	2.34	0.46
1:B:462:ILE:O	1:B:466:VAL:HG13	2.16	0.46
1:A:207:PHE:CE1	1:A:211:ILE:HG13	2.51	0.46
1:A:210:PHE:O	1:A:213:SER:HB3	2.16	0.46
1:A:46:LEU:CD1	1:A:210:PHE:CD1	2.97	0.46
1:B:224:VAL:HG23	1:B:227:MET:SD	2.55	0.46
1:A:109:PHE:HZ	1:A:297:LEU:CD1	2.28	0.46
1:A:233:ASP:O	1:A:236:LEU:HB2	2.16	0.46
1:B:261:PRO:C	1:B:264:GLU:OE1	2.54	0.46
1:A:172:ILE:HG12	1:A:251:VAL:CG1	2.46	0.46
1:B:120:TRP:CE3	1:B:123:LEU:HG	2.51	0.46
1:B:162:ALA:O	1:B:166:LEU:HB3	2.16	0.46
1:B:22:THR:HG22	1:B:220:SER:OG	2.15	0.46
1:B:325:LEU:HB2	1:B:326:PRO:HD3	1.97	0.46
1:B:442:THR:HG21	1:B:444:MET:HE3	1.98	0.46
1:B:103:PHE:HA	1:B:106:MET:HE2	1.97	0.46
1:B:224:VAL:HG13	1:B:225:ASN:OD1	2.16	0.46
1:A:114:LEU:HD23	1:A:114:LEU:HA	1.73	0.45
1:A:48:LEU:HD22	1:A:52:LEU:HD12	1.96	0.45
1:B:365:MET:HA	1:B:437:ILE:HD12	1.98	0.45
1:B:64:MET:HE2	1:B:78:TRP:HB3	1.98	0.45
1:A:204:LEU:HD23	1:A:204:LEU:HA	1.67	0.45
1:A:46:LEU:CD1	1:A:210:PHE:HD1	2.27	0.45
1:A:240:LEU:O	1:A:241:LEU:C	2.55	0.45
1:A:94:PHE:C	1:A:96:TYR:H	2.20	0.45
1:B:46:LEU:HD12	1:B:210:PHE:HD1	1.80	0.45
1:A:342:VAL:HG12	1:A:343:ILE:N	2.32	0.45
1:A:459:LEU:O	1:A:462:ILE:HG12	2.16	0.45
1:B:123:LEU:HA	1:B:123:LEU:HD23	1.56	0.45
1:B:204:LEU:C	1:B:206:VAL:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:26:VAL:HG12	1:B:248:LEU:HG	1.99	0.45
1:B:283:ALA:HA	1:B:285:GLU:H	1.81	0.45
1:A:491:HIS:O	1:A:494:LEU:N	2.44	0.45
1:B:172:ILE:HG12	1:B:251:VAL:CG1	2.46	0.45
1:B:428:ILE:HG13	1:B:428:ILE:H	1.62	0.45
1:B:63:GLU:HA	1:B:403:PHE:HD2	1.81	0.45
1:B:27:MET:SD	1:B:248:LEU:HD11	2.57	0.45
1:B:29:VAL:C	1:B:31:GLU:H	2.20	0.45
1:A:118:LEU:O	1:A:118:LEU:CD2	2.64	0.45
1:A:128:ILE:H	1:A:128:ILE:CD1	2.29	0.45
1:A:164:ILE:HG22	1:A:165:LEU:N	2.32	0.45
1:B:142:ALA:HA	1:B:309:ILE:HG21	1.98	0.45
1:B:178:TYR:C	1:B:178:TYR:CD2	2.91	0.45
1:B:337:VAL:HG12	1:B:341:LEU:HD12	1.97	0.45
1:A:124:ASN:ND2	1:A:266:ASN:ND2	2.65	0.45
1:A:20:ALA:O	1:A:22:THR:N	2.50	0.45
1:A:345:GLN:O	1:A:345:GLN:HG3	2.15	0.45
1:B:279:MET:CE	1:B:289:THR:HG21	2.47	0.45
1:B:371:LEU:O	1:B:372:ALA:C	2.55	0.45
1:B:85:PRO:CD	1:B:86:ARG:H	2.30	0.45
1:A:275:PHE:O	1:A:276:THR:C	2.55	0.45
1:A:44:PHE:HA	1:A:193:THR:HG21	1.98	0.45
1:B:267:LEU:HB3	1:B:367:PHE:CD2	2.52	0.45
1:A:119:LYS:CA	1:A:119:LYS:HE3	2.44	0.44
1:B:101:ILE:C	1:B:103:PHE:N	2.69	0.44
1:B:442:THR:CG2	1:B:444:MET:HG3	2.47	0.44
1:B:46:LEU:HD22	1:B:250:SER:HB3	1.99	0.44
1:A:26:VAL:HG13	1:A:245:ALA:CA	2.47	0.44
1:A:157:LYS:CE	1:A:491:HIS:N	2.72	0.44
1:B:202:GLY:HA3	1:B:434:PRO:CB	2.47	0.44
1:B:216:GLY:HA3	1:B:497:ARG:HG2	1.99	0.44
1:B:67:VAL:CG2	1:B:401:ARG:H	2.31	0.44
1:A:229:ASN:N	1:A:230:PRO:CD	2.81	0.44
1:A:63:GLU:HA	1:A:403:PHE:HD2	1.82	0.44
1:B:114:LEU:CD2	1:B:298:LEU:HD22	2.46	0.44
1:B:346:LEU:O	1:B:349:THR:HG22	2.18	0.44
1:B:98:GLN:HG3	1:B:378:TYR:CG	2.52	0.44
1:B:377:ILE:CG1	1:B:456:VAL:HG11	2.47	0.44
1:B:66:THR:OG1	1:B:66:THR:O	2.33	0.44
1:A:377:ILE:HD11	1:A:456:VAL:HG11	2.00	0.44
1:A:431:PHE:CD1	1:A:449:LEU:HD23	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:141:LEU:O	1:B:144:THR:HG22	2.17	0.44
1:B:30:TYR:CD1	1:B:106:MET:HG2	2.51	0.44
1:A:15:LEU:HD12	1:A:15:LEU:O	2.17	0.44
1:A:193:THR:O	1:A:194:PHE:C	2.56	0.44
1:A:365:MET:CB	1:A:437:ILE:HD11	2.48	0.44
1:A:369:ILE:CG2	1:A:370:ALA:N	2.80	0.44
1:A:454:LEU:HA	1:A:454:LEU:HD12	1.69	0.44
1:B:311:GLY:O	1:B:312:PRO:C	2.55	0.44
1:B:314:ARG:N	1:B:337:VAL:HG11	2.33	0.44
1:B:57:VAL:HG12	1:B:58:GLY:N	2.33	0.44
1:A:101:ILE:HG21	1:A:373:LEU:CD2	2.48	0.44
1:A:333:ASN:CG	1:A:334:LYS:N	2.70	0.44
1:A:364:ASN:HD22	1:A:438:GLN:CB	2.25	0.44
1:B:433:PRO:HB3	1:B:445:TYR:CE2	2.52	0.44
1:A:407:GLY:HA3	1:A:411:VAL:HB	1.99	0.44
1:A:42:LEU:O	1:A:46:LEU:HD13	2.18	0.44
1:B:47:LEU:CD1	1:B:193:THR:HG23	2.48	0.44
1:A:141:LEU:HA	1:A:141:LEU:HD23	1.74	0.44
1:A:40:PHE:CD2	1:A:194:PHE:CB	2.97	0.44
1:A:342:VAL:O	1:A:346:LEU:HG	2.18	0.44
1:A:364:ASN:ND2	1:A:438:GLN:HB2	2.24	0.44
1:B:254:LEU:HA	1:B:257:ALA:CB	2.33	0.44
1:B:346:LEU:HA	1:B:346:LEU:HD23	1.79	0.44
1:A:285:GLU:O	1:A:288:TRP:HB3	2.18	0.44
1:A:101:ILE:CD1	1:A:373:LEU:HD21	2.29	0.44
1:A:198:PHE:O	1:B:395:LYS:HE2	2.18	0.43
1:A:314:ARG:NH2	1:A:337:VAL:HA	2.23	0.43
1:A:64:MET:HE1	1:A:78:TRP:CB	2.46	0.43
1:B:149:THR:HG21	1:B:314:ARG:NH2	2.33	0.43
1:B:92:ILE:HG21	1:B:319:THR:CG2	2.48	0.43
1:A:198:PHE:CD2	1:A:198:PHE:N	2.83	0.43
1:B:141:LEU:HA	1:B:144:THR:HG22	1.99	0.43
1:A:327:ALA:C	1:A:329:PHE:N	2.68	0.43
1:B:111:LEU:HD12	1:B:130:LYS:CG	2.49	0.43
1:B:222:THR:O	1:B:224:VAL:HG12	2.18	0.43
1:A:166:LEU:O	1:A:170:ILE:HD13	2.17	0.43
1:A:227:MET:HE1	1:A:234:TYR:HB2	2.00	0.43
1:A:347:VAL:O	1:A:351:ILE:HG12	2.18	0.43
1:A:495:HIS:CG	1:A:496:PRO:HD2	2.54	0.43
1:B:62:ALA:HB2	1:B:234:TYR:OH	2.18	0.43
1:B:420:LEU:HA	1:B:420:LEU:HD12	1.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:LEU:C	1:A:15:LEU:HD12	2.39	0.43
1:A:230:PRO:O	1:A:231:GLY:O	2.37	0.43
1:B:94:PHE:CE2	1:B:380:CYS:HB3	2.53	0.43
1:B:392:LEU:C	1:B:392:LEU:HD12	2.39	0.43
1:B:65:ALA:HB2	1:B:78:TRP:CZ2	2.54	0.43
1:A:13:LEU:HB3	1:A:227:MET:HA	2.00	0.43
1:A:246:ILE:O	1:A:250:SER:OG	2.24	0.43
1:A:376:VAL:HB	1:A:427:PHE:CE1	2.54	0.43
1:A:464:TYR:C	1:A:464:TYR:CD2	2.92	0.43
1:A:394:LEU:CD1	1:B:204:LEU:HD12	2.28	0.43
1:B:222:THR:C	1:B:224:VAL:N	2.61	0.43
1:B:365:MET:O	1:B:367:PHE:N	2.52	0.43
1:B:46:LEU:CD2	1:B:250:SER:HB3	2.48	0.43
1:A:124:ASN:OD1	1:A:268:SER:HB2	2.18	0.43
1:A:260:ILE:HG22	1:A:265:ILE:HG12	1.99	0.43
1:A:339:VAL:O	1:A:340:THR:C	2.56	0.43
1:B:64:MET:SD	1:B:389:TYR:HB2	2.59	0.43
1:A:50:GLY:HA2	1:A:54:PHE:HB3	2.00	0.43
1:B:29:VAL:O	1:B:32:TYR:N	2.51	0.43
1:B:413:LEU:HD12	1:B:413:LEU:HA	1.89	0.43
1:B:442:THR:O	1:B:443:ASP:C	2.56	0.43
1:B:44:PHE:CB	1:B:193:THR:HG22	2.48	0.43
1:A:125:GLU:O	1:A:127:PRO:CD	2.67	0.43
1:B:333:ASN:O	1:B:333:ASN:ND2	2.52	0.43
1:A:107:LEU:HD12	1:A:107:LEU:HA	1.66	0.42
1:A:109:PHE:HZ	1:A:297:LEU:HD13	1.84	0.42
1:A:356:LEU:CD2	1:A:370:ALA:HB2	2.49	0.42
1:A:435:ASP:N	1:A:435:ASP:OD1	2.50	0.42
1:A:445:TYR:O	1:A:448:LEU:N	2.52	0.42
1:A:94:PHE:O	1:A:98:GLN:HB3	2.18	0.42
1:B:217:VAL:C	1:B:219:ALA:H	2.22	0.42
1:B:336:GLY:O	1:B:337:VAL:HB	2.19	0.42
1:B:369:ILE:CD1	1:B:448:LEU:HD22	2.49	0.42
1:B:500:SER:N	1:B:501:PRO:CD	2.82	0.42
1:A:224:VAL:HG22	1:A:227:MET:SD	2.59	0.42
1:A:376:VAL:HG23	1:A:453:PHE:CD1	2.54	0.42
1:A:386:PHE:CZ	1:A:419:GLY:HA3	2.54	0.42
1:B:101:ILE:C	1:B:103:PHE:H	2.21	0.42
1:B:436:ASN:OD1	1:B:436:ASN:O	2.37	0.42
1:A:389:TYR:CE2	1:A:416:ALA:HB2	2.54	0.42
1:A:500:SER:N	1:A:501:PRO:HD2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:125:GLU:O	1:B:126:ASP:C	2.58	0.42
1:B:326:PRO:HB2	1:B:329:PHE:CZ	2.53	0.42
1:B:329:PHE:O	1:B:329:PHE:CG	2.71	0.42
1:B:24:SER:OG	1:B:495:HIS:HA	2.19	0.42
1:A:240:LEU:O	1:A:242:MET:N	2.53	0.42
1:A:309:ILE:O	1:A:342:VAL:HG22	2.19	0.42
1:B:164:ILE:N	1:B:167:PRO:HD2	2.35	0.42
1:B:362:GLY:C	1:B:364:ASN:H	2.22	0.42
1:A:128:ILE:O	1:A:132:ILE:HG22	2.20	0.42
1:A:164:ILE:C	1:A:167:PRO:HD2	2.40	0.42
1:A:229:ASN:N	1:A:230:PRO:HD3	2.35	0.42
1:A:280:SER:O	1:A:281:HIS:HB2	2.20	0.42
1:A:32:TYR:OH	1:A:249:SER:HA	2.20	0.42
1:A:365:MET:CA	1:A:437:ILE:HD11	2.45	0.42
1:A:68:ASP:CB	1:A:69:GLY:HA2	2.48	0.42
1:A:98:GLN:O	1:A:98:GLN:HG2	2.20	0.42
1:B:283:ALA:CB	1:B:284:PRO:HA	2.32	0.42
1:B:311:GLY:O	1:B:313:SER:N	2.53	0.42
1:B:464:TYR:CE2	1:B:468:ASP:C	2.93	0.42
1:A:207:PHE:O	1:A:208:VAL:C	2.58	0.42
1:A:372:ALA:O	1:A:375:VAL:HB	2.19	0.42
1:A:54:PHE:CG	1:A:214:TYR:CD1	3.08	0.42
1:B:75:VAL:HA	1:B:78:TRP:CE3	2.54	0.42
1:A:161:PHE:CE2	1:A:493:PHE:CE1	3.06	0.42
1:B:229:ASN:O	1:B:230:PRO:C	2.59	0.42
1:A:413:LEU:O	1:A:414:VAL:C	2.58	0.42
1:B:92:ILE:HG23	1:B:316:MET:SD	2.60	0.42
1:B:110:VAL:CG1	1:B:137:ILE:HD13	2.42	0.41
1:B:242:MET:O	1:B:246:ILE:HG13	2.20	0.41
1:B:51:ILE:HD13	1:B:242:MET:SD	2.60	0.41
1:B:244:ALA:C	1:B:246:ILE:N	2.73	0.41
1:B:323:ASN:O	1:B:324:LEU:C	2.58	0.41
1:B:54:PHE:CE2	1:B:242:MET:HB2	2.55	0.41
1:A:64:MET:HB3	1:A:64:MET:HE2	1.88	0.41
1:B:240:LEU:HD23	1:B:243:VAL:CG1	2.50	0.41
1:B:22:THR:C	1:B:24:SER:N	2.66	0.41
1:B:260:ILE:HB	1:B:261:PRO:HD3	2.02	0.41
1:B:29:VAL:O	1:B:30:TYR:C	2.58	0.41
1:B:447:GLU:O	1:B:451:VAL:HG23	2.20	0.41
1:A:230:PRO:O	1:A:231:GLY:C	2.58	0.41
1:A:436:ASN:HD22	1:A:436:ASN:C	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:261:PRO:HB3	1:B:262:GLY:HA2	2.02	0.41
1:B:48:LEU:CD2	1:B:52:LEU:HD12	2.51	0.41
1:A:244:ALA:C	1:A:246:ILE:N	2.74	0.41
1:A:279:MET:HG3	1:A:283:ALA:HB2	2.02	0.41
1:A:456:VAL:O	1:A:459:LEU:N	2.46	0.41
1:A:68:ASP:HB2	1:A:69:GLY:CA	2.50	0.41
1:B:330:ALA:O	1:B:331:LYS:HB2	2.19	0.41
1:B:434:PRO:O	1:B:443:ASP:OD2	2.37	0.41
1:A:419:GLY:O	1:A:420:LEU:C	2.59	0.41
1:A:52:LEU:O	1:A:56:PRO:HG2	2.21	0.41
1:B:295:ALA:O	1:B:298:LEU:HB3	2.21	0.41
1:B:376:VAL:CG2	1:B:453:PHE:HD1	2.32	0.41
1:A:317:TYR:C	1:A:319:THR:N	2.72	0.41
1:B:318:VAL:O	1:B:322:LYS:HB2	2.20	0.41
1:A:272:MET:O	1:A:276:THR:HG23	2.20	0.41
1:A:67:VAL:CG1	1:A:401:ARG:H	2.30	0.41
1:A:52:LEU:HB3	1:A:422:THR:CG2	2.44	0.41
1:A:68:ASP:CB	1:A:69:GLY:CA	2.98	0.41
1:B:54:PHE:CD1	1:B:214:TYR:HD1	2.38	0.41
1:B:25:MET:HB3	1:B:495:HIS:CE1	2.56	0.41
1:B:106:MET:HE3	1:B:305:ILE:HG12	2.01	0.41
1:A:154:ARG:HA	1:A:157:LYS:HB2	2.03	0.41
1:A:255:SER:O	1:A:256:ILE:C	2.58	0.41
1:B:299:LEU:HD23	1:B:299:LEU:HA	1.78	0.41
1:B:348:ILE:HG22	1:B:349:THR:N	2.36	0.41
1:B:387:ILE:O	1:B:390:ILE:HG12	2.21	0.41
1:A:102:GLY:HA2	1:A:374:THR:OG1	2.20	0.41
1:A:44:PHE:HA	1:A:47:LEU:HD12	2.02	0.41
1:A:495:HIS:CD2	1:A:497:ARG:H	2.39	0.41
1:A:62:ALA:O	1:A:64:MET:N	2.54	0.41
1:B:345:GLN:HG3	1:B:345:GLN:O	2.20	0.41
1:B:351:ILE:HG22	1:B:355:ILE:CD1	2.51	0.41
1:B:459:LEU:CB	1:B:460:PRO:HD3	2.51	0.41
1:A:273:GLN:O	1:A:277:VAL:HG22	2.21	0.41
1:B:166:LEU:O	1:B:167:PRO:C	2.56	0.41
1:B:384:MET:O	1:B:385:LEU:C	2.60	0.41
1:B:94:PHE:C	1:B:96:TYR:N	2.74	0.41
1:A:131:THR:HG22	1:A:357:THR:CG2	2.50	0.40
1:A:171:LEU:HD13	1:A:275:PHE:CE1	2.56	0.40
1:A:282:VAL:O	1:A:282:VAL:HG12	2.21	0.40
1:A:317:TYR:O	1:A:320:ALA:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:336:GLY:HA3	1:A:337:VAL:CB	2.23	0.40
1:B:230:PRO:HB2	1:B:231:GLY:H	1.72	0.40
1:B:254:LEU:CA	1:B:257:ALA:HB3	2.36	0.40
1:B:347:VAL:O	1:B:351:ILE:HG12	2.21	0.40
1:B:459:LEU:HA	1:B:459:LEU:HD13	1.61	0.40
1:B:88:GLY:O	1:B:91:ALA:HB3	2.20	0.40
1:A:96:TYR:O	1:A:99:ILE:HB	2.20	0.40
1:B:167:PRO:HB2	1:B:297:LEU:HD21	2.02	0.40
1:B:93:SER:HB3	1:B:460:PRO:HG3	2.02	0.40
1:B:49:GLY:O	1:B:53:TRP:HB3	2.22	0.40
1:A:99:ILE:HG22	1:A:100:ALA:N	2.36	0.40
1:A:288:TRP:C	1:A:290:VAL:N	2.74	0.40
1:A:30:TYR:CZ	1:A:301:VAL:CG2	3.05	0.40
1:A:491:HIS:CE1	1:A:492:PHE:HE2	2.39	0.40
1:B:19:PHE:CG	1:B:19:PHE:O	2.75	0.40
1:B:339:VAL:O	1:B:340:THR:O	2.40	0.40
1:B:361:GLY:O	1:B:440:ASP:HB3	2.21	0.40
1:A:167:PRO:CB	1:A:297:LEU:HD21	2.52	0.40
1:A:33:PRO:HG3	1:A:267:LEU:O	2.22	0.40
1:A:55:ILE:HB	1:A:56:PRO:HD3	2.03	0.40
1:B:107:LEU:HB3	1:B:134:ALA:HB1	2.03	0.40
1:B:259:VAL:O	1:B:260:ILE:HG12	2.22	0.40
1:B:70:TRP:N	1:B:70:TRP:CD2	2.75	0.40
1:A:401:ARG:HB3	1:A:403:PHE:O	2.22	0.40
1:B:415:VAL:HG12	1:B:416:ALA:N	2.35	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	443/511 (87%)	307 (69%)	82 (18%)	54 (12%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	B	443/511 (87%)	304 (69%)	84 (19%)	55 (12%)	0 1
All	All	886/1022 (87%)	611 (69%)	166 (19%)	109 (12%)	0 1

All (109) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	67	VAL
1	A	100	ALA
1	A	118	LEU
1	A	152	THR
1	A	223	HIS
1	A	241	LEU
1	A	269	ALA
1	A	280	SER
1	A	281	HIS
1	A	287	GLU
1	A	323	ASN
1	A	328	ALA
1	A	339	VAL
1	A	406	PRO
1	A	407	GLY
1	A	442	THR
1	A	492	PHE
1	A	499	ARG
1	A	500	SER
1	B	23	ALA
1	B	67	VAL
1	B	223	HIS
1	B	230	PRO
1	B	233	ASP
1	B	241	LEU
1	B	259	VAL
1	B	261	PRO
1	B	263	ASN
1	B	275	PHE
1	B	280	SER
1	B	286	ILE
1	B	336	GLY
1	B	337	VAL
1	B	339	VAL
1	B	340	THR
1	B	399	LEU

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Mol	Chain	Res	Type
1	B	401	ARG
1	B	441	SER
1	B	492	PHE
1	B	499	ARG
1	B	500	SER
1	A	21	ILE
1	A	102	GLY
1	A	164	ILE
1	A	226	GLU
1	A	231	GLY
1	A	233	ASP
1	A	244	ALA
1	A	245	ALA
1	A	270	GLY
1	A	282	VAL
1	A	332	MET
1	A	336	GLY
1	A	409	LYS
1	A	441	SER
1	A	445	TYR
1	B	30	TYR
1	B	68	ASP
1	B	100	ALA
1	B	119	LYS
1	B	149	THR
1	B	164	ILE
1	B	205	VAL
1	B	208	VAL
1	B	240	LEU
1	B	245	ALA
1	B	257	ALA
1	B	338	PRO
1	B	367	PHE
1	A	30	TYR
1	A	119	LYS
1	A	194	PHE
1	B	218	GLU
1	B	260	ILE
1	B	326	PRO
1	A	24	SER
1	A	169	PHE
1	A	262	GLY

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Mol	Chain	Res	Type
1	A	329	PHE
1	A	399	LEU
1	A	425	MET
1	A	497	ARG
1	B	21	ILE
1	B	195	PHE
1	B	199	SER
1	B	244	ALA
1	B	276	THR
1	B	285	GLU
1	B	409	LYS
1	A	168	ALA
1	A	240	LEU
1	A	337	VAL
1	A	401	ARG
1	B	32	TYR
1	B	85	PRO
1	B	118	LEU
1	B	287	GLU
1	B	322	LYS
1	B	361	GLY
1	A	208	VAL
1	A	58	GLY
1	A	408	GLY
1	B	282	VAL
1	A	271	VAL
1	B	33	PRO
1	A	95	GLY
1	A	361	GLY
1	B	95	GLY
1	B	246	ILE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	365/414 (88%)	274 (75%)	91 (25%)	0 2
1	B	368/414 (89%)	287 (78%)	81 (22%)	1 4
All	All	733/828 (88%)	561 (76%)	172 (24%)	1 3

All (172) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	15	LEU
1	A	21	ILE
1	A	22	THR
1	A	30	TYR
1	A	34	THR
1	A	43	VAL
1	A	47	LEU
1	A	48	LEU
1	A	66	THR
1	A	70	TRP
1	A	83	LEU
1	A	92	ILE
1	A	98	GLN
1	A	103	PHE
1	A	107	LEU
1	A	115	SER
1	A	119	LYS
1	A	125	GLU
1	A	131	THR
1	A	132	ILE
1	A	135	LEU
1	A	143	LEU
1	A	144	THR
1	A	149	THR
1	A	151	TYR
1	A	152	THR
1	A	164	ILE
1	A	197	ASP
1	A	198	PHE
1	A	208	VAL
1	A	211	ILE
1	A	217	VAL

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Mol	Chain	Res	Type
1	A	218	GLU
1	A	220	SER
1	A	225	ASN
1	A	227	MET
1	A	233	ASP
1	A	236	LEU
1	A	239	LEU
1	A	240	LEU
1	A	241	LEU
1	A	247	CYS
1	A	248	LEU
1	A	258	MET
1	A	264	GLU
1	A	267	LEU
1	A	268	SER
1	A	272	MET
1	A	274	THR
1	A	278	LEU
1	A	279	MET
1	A	281	HIS
1	A	288	TRP
1	A	289	THR
1	A	297	LEU
1	A	298	LEU
1	A	310	VAL
1	A	321	GLN
1	A	329	PHE
1	A	332	MET
1	A	340	THR
1	A	343	ILE
1	A	345	GLN
1	A	349	THR
1	A	353	LEU
1	A	359	THR
1	A	364	ASN
1	A	366	SER
1	A	369	ILE
1	A	371	LEU
1	A	373	LEU
1	A	374	THR
1	A	377	ILE
1	A	378	TYR

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Mol	Chain	Res	Type
1	A	390	ILE
1	A	392	LEU
1	A	400	LYS
1	A	404	ASN
1	A	424	ILE
1	A	425	MET
1	A	428	ILE
1	A	435	ASP
1	A	436	ASN
1	A	437	ILE
1	A	446	VAL
1	A	447	GLU
1	A	448	LEU
1	A	453	PHE
1	A	454	LEU
1	A	457	LEU
1	A	459	LEU
1	B	13	LEU
1	B	29	VAL
1	B	31	GLU
1	B	34	THR
1	B	40	PHE
1	B	57	VAL
1	B	67	VAL
1	B	70	TRP
1	B	92	ILE
1	B	98	GLN
1	B	101	ILE
1	B	103	PHE
1	B	104	ILE
1	B	107	LEU
1	B	115	SER
1	B	123	LEU
1	B	125	GLU
1	B	131	THR
1	B	132	ILE
1	B	135	LEU
1	B	136	ILE
1	B	149	THR
1	B	151	TYR
1	B	154	ARG
1	B	158	VAL

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Mol	Chain	Res	Type
1	B	164	ILE
1	B	177	ILE
1	B	178	TYR
1	B	193	THR
1	B	194	PHE
1	B	206	VAL
1	B	211	ILE
1	B	217	VAL
1	B	218	GLU
1	B	222	THR
1	B	229	ASN
1	B	233	ASP
1	B	234	TYR
1	B	239	LEU
1	B	240	LEU
1	B	241	LEU
1	B	248	LEU
1	B	251	VAL
1	B	258	MET
1	B	260	ILE
1	B	267	LEU
1	B	268	SER
1	B	272	MET
1	B	277	VAL
1	B	282	VAL
1	B	288	TRP
1	B	299	LEU
1	B	321	GLN
1	B	323	ASN
1	B	324	LEU
1	B	329	PHE
1	B	331	LYS
1	B	343	ILE
1	B	345	GLN
1	B	348	ILE
1	B	366	SER
1	B	371	LEU
1	B	378	TYR
1	B	384	MET
1	B	390	ILE
1	B	391	VAL
1	B	392	LEU

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Mol	Chain	Res	Type
1	B	400	LYS
1	B	413	LEU
1	B	425	MET
1	B	428	ILE
1	B	435	ASP
1	B	437	ILE
1	B	441	SER
1	B	447	GLU
1	B	452	SER
1	B	453	PHE
1	B	456	VAL
1	B	459	LEU
1	B	464	TYR
1	B	493	PHE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	495	HIS
1	B	12	GLN
1	B	145	GLN
1	B	358	ASN
1	B	364	ASN
1	B	467	HIS
1	B	495	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	451/511 (88%)	-0.15	12 (2%)	54	31	89, 136, 198, 249	0
1	B	453/511 (88%)	-0.14	13 (2%)	51	28	86, 137, 212, 265	0
All	All	904/1022 (88%)	-0.15	25 (2%)	53	30	86, 137, 205, 265	0

All (25) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	226	GLU	4.8
1	B	147	GLY	4.6
1	B	68	ASP	4.1
1	B	213	SER	3.7
1	B	408	GLY	3.7
1	B	146	PHE	3.4
1	A	323	ASN	3.2
1	B	16	LEU	3.0
1	A	193	THR	2.9
1	A	16	LEU	2.8
1	B	28	ALA	2.8
1	B	215	MET	2.7
1	A	282	VAL	2.6
1	B	228	SER	2.5
1	A	82	THR	2.4
1	B	229	ASN	2.4
1	A	281	HIS	2.4
1	B	216	GLY	2.3
1	B	102	GLY	2.3
1	A	123	LEU	2.3
1	A	199	SER	2.2
1	A	331	LYS	2.2
1	A	64	MET	2.1
1	A	81	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
1	B	201	VAL	2.0

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

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

6.3 Carbohydrates

There are no carbohydrates in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.