Full wwPDB X-ray Structure Validation Report ⓘ

Aug 15, 2023 – 01:00 AM EDT

PDB ID	:	1QZX
Title	:	Crystal structure of the complete core of archaeal SRP and implications for inter-domain communication
Authors	:	Rosendal, K.R.; Wild, K.; Montoya, G.; Sinning, I.
Deposited on	:	2003-09-18
Resolution	:	4.00 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 types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

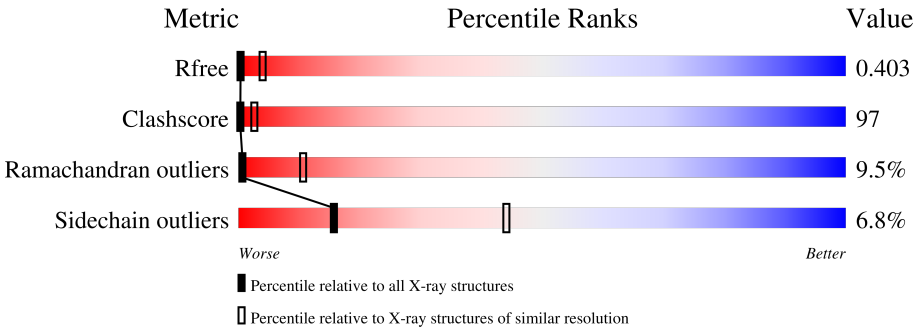
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 4.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1087 (4.30-3.70)
Clashscore	141614	1148 (4.30-3.70)
Ramachandran outliers	138981	1108 (4.30-3.70)
Sidechain outliers	138945	1099 (4.30-3.70)

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 of 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%

Mol	Chain	Length	Quality of chain
1	A	440	21% 63% 11%
1	B	440	22% 62% 11%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 6698 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 Signal recognition 54 kDa protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	425	Total	C	N	O	S	0	0	0
			3349	2142	565	628	14			
1	B	425	Total	C	N	O	S	0	0	0
			3349	2142	565	628	14			

There are 16 discrepancies between the modelled and reference sequences:

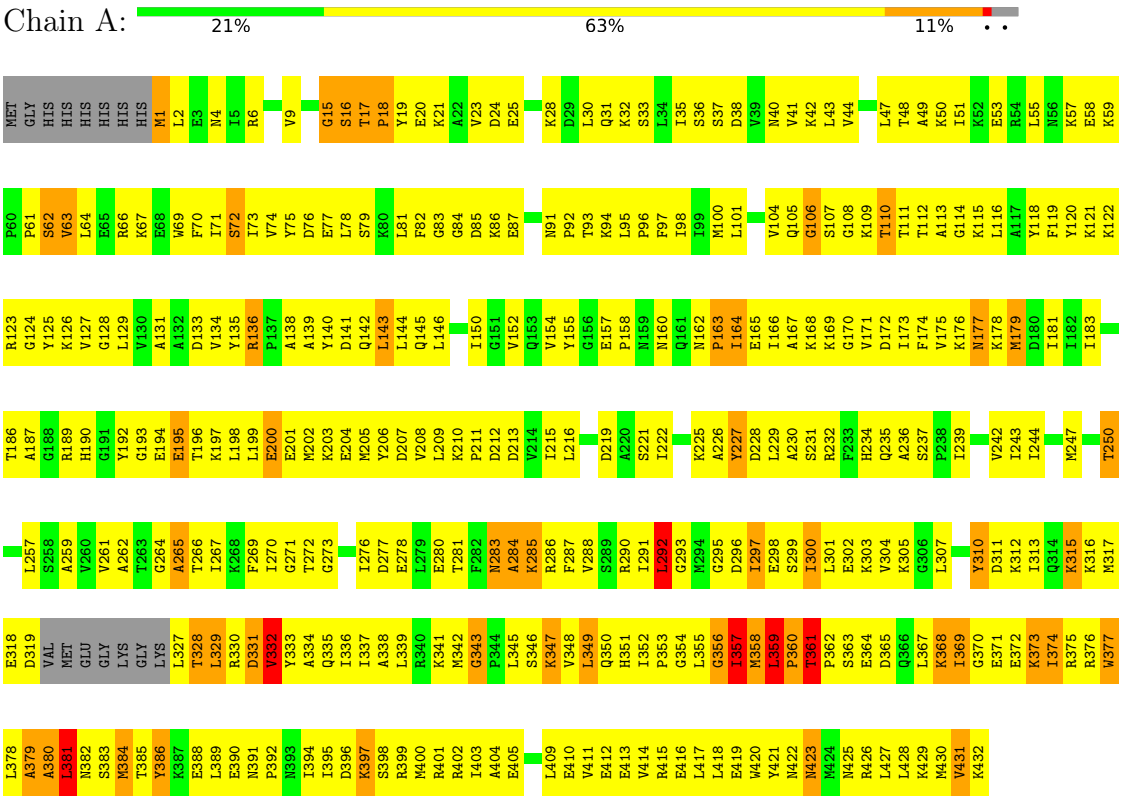
Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	MET	-	expression tag	UNP Q97ZE7
A	-6	GLY	-	expression tag	UNP Q97ZE7
A	-5	HIS	-	expression tag	UNP Q97ZE7
A	-4	HIS	-	expression tag	UNP Q97ZE7
A	-3	HIS	-	expression tag	UNP Q97ZE7
A	-2	HIS	-	expression tag	UNP Q97ZE7
A	-1	HIS	-	expression tag	UNP Q97ZE7
A	0	HIS	-	expression tag	UNP Q97ZE7
B	-7	MET	-	expression tag	UNP Q97ZE7
B	-6	GLY	-	expression tag	UNP Q97ZE7
B	-5	HIS	-	expression tag	UNP Q97ZE7
B	-4	HIS	-	expression tag	UNP Q97ZE7
B	-3	HIS	-	expression tag	UNP Q97ZE7
B	-2	HIS	-	expression tag	UNP Q97ZE7
B	-1	HIS	-	expression tag	UNP Q97ZE7
B	0	HIS	-	expression tag	UNP Q97ZE7

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

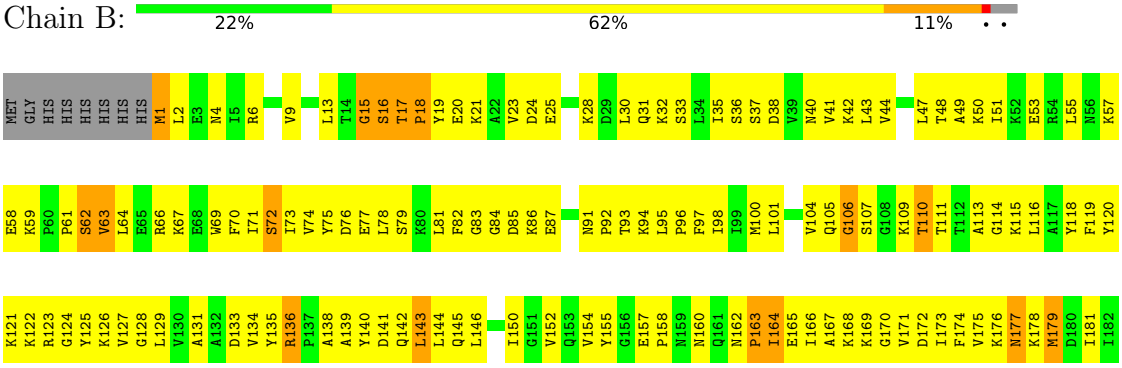
• Molecule 1: Signal recognition 54 kDa protein

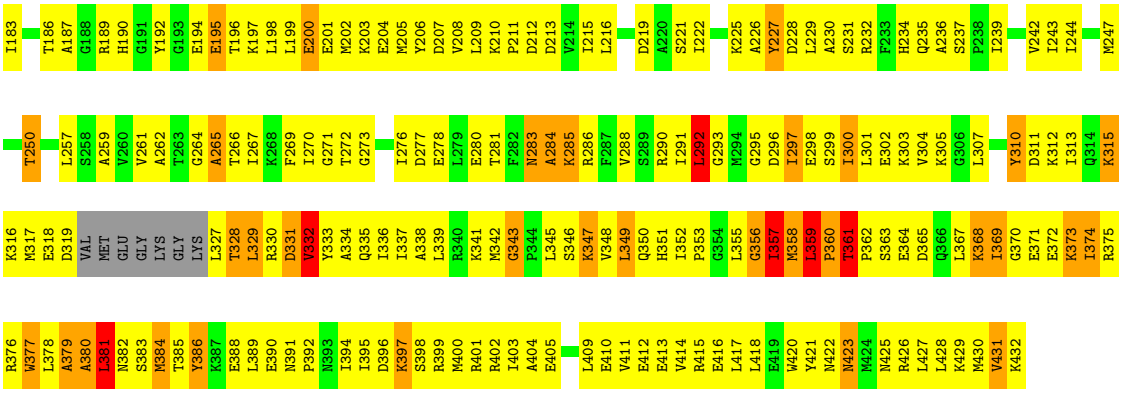
Chain A:



• Molecule 1: Signal recognition 54 kDa protein

Chain B:




I183 T186 A187 G188 R189 H190 G191 Y192 G193 E194 E195 T196 K197 L198 L199 E200 E201 M202 K203 E204 M205 Y206 D207 V208 L209 K210 P211 D212 D213 V214 I215 L216 D219 A220 S221 I222 K225 A226 Y227 D228 L229 A230 S231 R232 F233 H234 Q235 A236 S237 P238 I239 V242 I243 I244 M247
T250 L257 S258 A259 V260 V261 A262 T263 G264 A265 T266 I267 K268 F269 I270 G271 T272 G273 I276 D277 E278 L279 E280 T281 F282 N283 A284 K285 R286 F287 V288 S289 R290 I291 L292 G293 M294 G295 D296 I297 E298 S299 I300 L301 E302 K303 V304 K305 G306 L307 Y310 D311 K312 I313 Q314 K315
K316 M317 E318 D319 VAL MET GLU GLY LYS GLY LYS L327 T328 L329 R330 D331 V332 Y333 A334 Q335 I336 I337 A338 L339 R340 K341 M342 G343 P344 L345 S346 K347 V348 L349 Q350 H351 I352 P353 G354 L355 G356 I357 M358 L359 P360 T361 P362 S363 E364 D365 Q366 L367 K368 I369 G370 E371 E372 K373 I374 R375
R376 W377 L378 A379 A380 L381 N382 S383 M384 T385 Y386 K387 E388 L389 E390 N391 P392 H393 I394 I395 D396 K397 S398 R399 M400 R401 R402 I403 A404 E405 L409 E410 V411 E412 E413 V414 R415 E416 L417 L418 E419 W420 Y421 N422 N423 M424 N425 R426 L427 L428 K429 M430 V431 K432

4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 4	Depositor
Cell constants a, b, c, α, β, γ	197.91Å 197.91Å 64.31Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.00 38.81 – 4.00	Depositor EDS
% Data completeness (in resolution range)	89.0 (40.00-4.00) 97.9 (38.81-4.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$< I/\sigma(I) >$ [1]	2.70 (at 3.99Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.313 , 0.383 0.404 , 0.403	Depositor DCC
R_{free} test set	725 reflections (6.88%)	wwPDB-VP
Wilson B-factor (Å^2)	171.1	Xtriage
Anisotropy	0.085	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 26.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	0.428 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.82	EDS
Total number of atoms	6698	wwPDB-VP
Average B, all atoms (Å^2)	84.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.28% 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	0.71	5/3399 (0.1%)	0.88	4/4569 (0.1%)
1	B	0.71	5/3399 (0.1%)	0.88	4/4569 (0.1%)
All	All	0.71	10/6798 (0.1%)	0.88	8/9138 (0.1%)

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	361	THR	CB-CG2	-6.78	1.29	1.52
1	B	361	THR	CB-CG2	-6.78	1.29	1.52
1	B	227	TYR	CD2-CE2	-5.99	1.30	1.39
1	A	227	TYR	CD2-CE2	-5.96	1.30	1.39
1	A	361	THR	CA-CB	5.92	1.68	1.53
1	B	361	THR	CA-CB	5.91	1.68	1.53
1	B	360	PRO	N-CD	5.33	1.55	1.47
1	A	360	PRO	N-CD	5.33	1.55	1.47
1	A	360	PRO	C-N	-5.15	1.22	1.34
1	B	360	PRO	C-N	-5.13	1.22	1.34

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	292	LEU	CA-CB-CG	-5.79	101.99	115.30
1	B	292	LEU	CA-CB-CG	-5.77	102.03	115.30
1	B	361	THR	N-CA-CB	5.21	120.20	110.30
1	A	361	THR	N-CA-CB	5.20	120.19	110.30
1	B	332	VAL	N-CA-C	-5.16	97.06	111.00
1	A	332	VAL	N-CA-C	-5.16	97.07	111.00
1	B	359	LEU	CB-CA-C	5.02	119.74	110.20
1	A	359	LEU	CB-CA-C	5.02	119.74	110.20

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3349	0	3486	713	43
1	B	3349	0	3486	708	43
All	All	6698	0	6972	1324	43

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 97.

All (1324) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:362:PRO:HD3	1:B:367:LEU:CD2	1.43	1.47
1:B:190:HIS:CD2	1:B:197:LYS:HD2	1.49	1.45
1:A:190:HIS:CD2	1:A:197:LYS:HD2	1.49	1.44
1:A:362:PRO:HD3	1:A:367:LEU:CD2	1.43	1.43
1:B:359:LEU:CG	1:B:360:PRO:HD3	1.49	1.42
1:A:359:LEU:CG	1:A:360:PRO:HD3	1.49	1.39
1:A:362:PRO:CD	1:A:367:LEU:HD21	1.54	1.38
1:B:362:PRO:CD	1:B:367:LEU:HD21	1.54	1.38
1:A:361:THR:HA	1:A:367:LEU:CD1	1.54	1.36
1:A:385:THR:HG21	1:B:382:ASN:O	1.25	1.35
1:A:382:ASN:O	1:B:385:THR:HG21	1.27	1.34
1:B:361:THR:HA	1:B:367:LEU:CD1	1.54	1.34
1:A:361:THR:CA	1:A:367:LEU:HD11	1.62	1.28
1:B:361:THR:CA	1:B:367:LEU:HD11	1.62	1.27
1:A:164:ILE:CD1	1:A:208:VAL:HG21	1.66	1.24
1:B:164:ILE:CD1	1:B:208:VAL:HG21	1.66	1.24
1:B:92:PRO:HB2	1:B:97:PHE:CE2	1.75	1.21
1:B:359:LEU:CD1	1:B:360:PRO:HD3	1.70	1.20
1:A:92:PRO:HB2	1:A:97:PHE:CE2	1.75	1.20
1:A:359:LEU:CD1	1:A:360:PRO:HD3	1.70	1.20
1:A:2:LEU:HD22	1:A:291:ILE:HG21	1.23	1.17
1:B:356:GLY:O	1:B:357:ILE:HG13	1.47	1.14
1:B:164:ILE:HD11	1:B:208:VAL:HG21	1.20	1.13
1:A:190:HIS:CD2	1:A:197:LYS:CD	2.31	1.13
1:B:359:LEU:HG	1:B:360:PRO:HD3	1.15	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:359:LEU:HG	1:A:360:PRO:HD3	1.15	1.13
1:B:190:HIS:CD2	1:B:197:LYS:CD	2.31	1.13
1:B:194:GLU:HB3	1:B:197:LYS:CE	1.80	1.11
1:A:129:LEU:HD13	1:A:143:LEU:HD21	1.29	1.11
1:A:194:GLU:HB3	1:A:197:LYS:CE	1.80	1.11
1:B:2:LEU:HD22	1:B:291:ILE:HG21	1.23	1.11
1:B:17:THR:HG22	1:B:18:PRO:CD	1.81	1.10
1:A:17:THR:HG22	1:A:18:PRO:CD	1.82	1.10
1:A:356:GLY:O	1:A:357:ILE:HG13	1.47	1.10
1:A:194:GLU:HB3	1:A:197:LYS:HE3	1.16	1.10
1:A:164:ILE:HD11	1:A:208:VAL:CG2	1.82	1.09
1:B:164:ILE:HD11	1:B:208:VAL:CG2	1.82	1.08
1:B:129:LEU:HD13	1:B:143:LEU:HD21	1.29	1.08
1:A:164:ILE:HD11	1:A:208:VAL:HG21	1.20	1.07
1:B:359:LEU:HG	1:B:360:PRO:CD	1.84	1.07
1:A:17:THR:CG2	1:A:18:PRO:HD2	1.83	1.07
1:A:359:LEU:HG	1:A:360:PRO:CD	1.84	1.07
1:A:126:LYS:HE3	1:B:364:GLU:OE2	1.54	1.07
1:B:17:THR:CG2	1:B:18:PRO:HD2	1.83	1.07
1:B:190:HIS:CG	1:B:197:LYS:HD2	1.88	1.07
1:B:194:GLU:HB3	1:B:197:LYS:HE3	1.16	1.07
1:A:122:LYS:O	1:B:359:LEU:HD13	1.55	1.06
1:A:190:HIS:CG	1:A:197:LYS:HD2	1.88	1.06
1:B:409:LEU:HD13	1:B:413:GLU:OE1	1.56	1.06
1:B:157:GLU:HB3	1:B:160:ASN:ND2	1.70	1.06
1:A:364:GLU:OE2	1:B:126:LYS:HE3	1.56	1.05
1:A:157:GLU:HB3	1:A:160:ASN:ND2	1.69	1.05
1:A:409:LEU:HD13	1:A:413:GLU:OE1	1.56	1.05
1:B:378:LEU:HA	1:B:381:LEU:HD12	1.39	1.05
1:A:348:VAL:O	1:A:352:ILE:HG13	1.56	1.05
1:A:378:LEU:HA	1:A:381:LEU:HD12	1.39	1.04
1:A:359:LEU:HD13	1:B:122:LYS:O	1.57	1.04
1:B:194:GLU:CB	1:B:197:LYS:HE3	1.87	1.04
1:B:348:VAL:O	1:B:352:ILE:HG13	1.56	1.04
1:A:329:LEU:HD22	1:A:392:PRO:HB3	1.40	1.03
1:A:385:THR:HG21	1:B:382:ASN:C	1.79	1.03
1:A:194:GLU:CB	1:A:197:LYS:HE3	1.87	1.03
1:A:359:LEU:CG	1:A:360:PRO:CD	2.36	1.03
1:B:157:GLU:HB3	1:B:160:ASN:HD22	1.18	1.03
1:A:382:ASN:C	1:B:385:THR:HG21	1.79	1.02
1:B:303:LYS:O	1:B:307:LEU:HG	1.59	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:61:PRO:HD2	1:B:64:LEU:HD12	1.40	1.02
1:B:359:LEU:CG	1:B:360:PRO:CD	2.36	1.02
1:A:303:LYS:O	1:A:307:LEU:HG	1.59	1.02
1:A:157:GLU:HB3	1:A:160:ASN:HD22	1.18	1.01
1:B:361:THR:HG23	1:B:362:PRO:HD2	1.40	1.01
1:B:383:SER:HB3	1:B:403:ILE:HG23	1.41	1.01
1:A:383:SER:HB3	1:A:403:ILE:HG23	1.41	1.00
1:A:402:ARG:HD3	1:B:402:ARG:HD3	1.37	1.00
1:B:378:LEU:HA	1:B:381:LEU:CD1	1.91	1.00
1:A:378:LEU:HA	1:A:381:LEU:CD1	1.91	0.99
1:A:359:LEU:HD12	1:A:360:PRO:HD3	1.42	0.99
1:A:361:THR:HG23	1:A:362:PRO:HD2	1.40	0.99
1:A:61:PRO:HD2	1:A:64:LEU:HD12	1.40	0.99
1:B:329:LEU:HD22	1:B:392:PRO:HB3	1.40	0.99
1:B:359:LEU:HD12	1:B:360:PRO:HD3	1.42	0.98
1:A:384:MET:O	1:B:385:THR:HA	1.64	0.97
1:A:385:THR:HA	1:B:384:MET:O	1.64	0.97
1:A:385:THR:CG2	1:B:382:ASN:O	2.11	0.97
1:A:382:ASN:O	1:B:385:THR:CG2	2.12	0.97
1:A:1:MET:SD	1:A:37:SER:CB	2.55	0.95
1:B:164:ILE:CG1	1:B:208:VAL:HG21	1.97	0.95
1:B:1:MET:SD	1:B:37:SER:CB	2.55	0.95
1:A:164:ILE:CG1	1:A:208:VAL:HG21	1.97	0.95
1:A:301:LEU:HG	1:A:305:LYS:HD2	1.49	0.95
1:A:397:LYS:HA	1:A:400:MET:HE3	1.49	0.94
1:A:335:GLN:O	1:A:339:LEU:HD22	1.66	0.94
1:B:75:TYR:CD2	1:B:297:ILE:HG23	2.02	0.94
1:B:94:LYS:N	1:B:97:PHE:CZ	2.36	0.94
1:A:75:TYR:CD2	1:A:297:ILE:HG23	2.02	0.94
1:A:72:SER:HB2	1:A:300:ILE:HD11	1.48	0.94
1:B:301:LEU:HG	1:B:305:LYS:HD2	1.49	0.94
1:A:94:LYS:N	1:A:97:PHE:CZ	2.36	0.93
1:A:15:GLY:HA2	1:A:67:LYS:NZ	1.83	0.93
1:B:72:SER:HB2	1:B:300:ILE:HD11	1.48	0.93
1:B:335:GLN:O	1:B:339:LEU:HD22	1.66	0.93
1:B:15:GLY:HA2	1:B:67:LYS:NZ	1.83	0.93
1:B:200:GLU:CD	1:B:201:GLU:N	2.23	0.93
1:B:397:LYS:HA	1:B:400:MET:HE3	1.49	0.92
1:B:197:LYS:O	1:B:200:GLU:OE1	1.87	0.92
1:A:200:GLU:CD	1:A:201:GLU:N	2.23	0.92
1:B:157:GLU:CB	1:B:160:ASN:HD22	1.82	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:197:LYS:O	1:A:200:GLU:OE1	1.87	0.92
1:B:15:GLY:HA2	1:B:67:LYS:HZ3	1.34	0.92
1:B:297:ILE:O	1:B:300:ILE:HB	1.69	0.92
1:A:327:LEU:HD12	1:A:391:ASN:OD1	1.70	0.91
1:A:297:ILE:O	1:A:300:ILE:HB	1.69	0.91
1:B:221:SER:HA	1:B:250:THR:HG21	1.53	0.91
1:A:221:SER:HA	1:A:250:THR:HG21	1.53	0.91
1:A:349:LEU:HA	1:A:352:ILE:HB	1.53	0.91
1:B:327:LEU:HD12	1:B:391:ASN:OD1	1.70	0.91
1:B:295:GLY:HA2	1:B:298:GLU:HB2	1.52	0.91
1:A:157:GLU:CB	1:A:160:ASN:HD22	1.82	0.91
1:B:317:MET:SD	1:B:328:THR:OG1	2.29	0.91
1:B:362:PRO:CD	1:B:367:LEU:CD2	2.27	0.91
1:A:331:ASP:O	1:A:332:VAL:HG23	1.71	0.90
1:A:301:LEU:HD11	1:A:305:LYS:HE3	1.51	0.90
1:A:317:MET:SD	1:A:328:THR:OG1	2.29	0.90
1:B:301:LEU:HD11	1:B:305:LYS:HE3	1.51	0.90
1:A:281:THR:HG21	1:B:315:LYS:NZ	1.86	0.90
1:A:295:GLY:HA2	1:A:298:GLU:HB2	1.52	0.90
1:B:361:THR:OG1	1:B:367:LEU:HG	1.70	0.90
1:B:331:ASP:O	1:B:332:VAL:HG23	1.71	0.90
1:B:349:LEU:HA	1:B:352:ILE:HB	1.53	0.90
1:A:85:ASP:CG	1:A:285:LYS:HD3	1.92	0.90
1:A:2:LEU:HD22	1:A:291:ILE:HD13	1.51	0.89
1:B:2:LEU:HD22	1:B:291:ILE:HD13	1.51	0.89
1:B:85:ASP:CG	1:B:285:LYS:HD3	1.92	0.89
1:A:361:THR:OG1	1:A:367:LEU:HG	1.70	0.89
1:A:315:LYS:NZ	1:B:281:THR:HG21	1.87	0.89
1:A:362:PRO:CD	1:A:367:LEU:CD2	2.27	0.89
1:A:329:LEU:CD2	1:A:392:PRO:HB3	2.03	0.89
1:B:329:LEU:CD2	1:B:392:PRO:HB3	2.03	0.89
1:B:17:THR:HG22	1:B:18:PRO:HD2	0.92	0.88
1:B:1:MET:SD	1:B:37:SER:HB3	2.15	0.87
1:B:118:TYR:HE2	1:B:277:ASP:HB3	1.40	0.87
1:A:167:ALA:HB1	1:A:209:LEU:HD11	1.57	0.87
1:A:118:TYR:HE2	1:A:277:ASP:HB3	1.40	0.87
1:A:150:ILE:HG13	1:A:152:VAL:HG23	1.56	0.87
1:A:359:LEU:CB	1:A:360:PRO:CD	2.53	0.87
1:B:167:ALA:HB1	1:B:209:LEU:HD11	1.57	0.87
1:A:86:LYS:HE2	1:A:266:THR:HG23	1.56	0.86
1:B:359:LEU:CB	1:B:360:PRO:CD	2.53	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:216:LEU:HB3	1:B:242:VAL:HG22	1.56	0.86
1:A:2:LEU:CD2	1:A:291:ILE:HG21	2.06	0.86
1:A:383:SER:CB	1:A:403:ILE:HG23	2.06	0.86
1:B:150:ILE:HG13	1:B:152:VAL:HG23	1.56	0.86
1:A:216:LEU:HB3	1:A:242:VAL:HG22	1.56	0.86
1:A:359:LEU:HD12	1:A:360:PRO:CD	2.06	0.86
1:B:2:LEU:HD22	1:B:291:ILE:CG2	2.05	0.85
1:B:86:LYS:HE2	1:B:266:THR:HG23	1.56	0.85
1:B:383:SER:CB	1:B:403:ILE:HG23	2.06	0.85
1:B:359:LEU:HD12	1:B:360:PRO:CD	2.06	0.85
1:A:1:MET:SD	1:A:37:SER:HB3	2.15	0.85
1:A:402:ARG:CZ	1:B:402:ARG:HG2	2.07	0.85
1:B:381:LEU:N	1:B:381:LEU:HD23	1.92	0.85
1:B:422:ASN:O	1:B:426:ARG:HG3	1.77	0.84
1:A:2:LEU:HD22	1:A:291:ILE:CG2	2.05	0.84
1:A:95:LEU:HD23	1:A:97:PHE:CE1	2.12	0.84
1:A:402:ARG:HG2	1:B:402:ARG:CZ	2.07	0.84
1:B:372:GLU:O	1:B:374:ILE:N	2.10	0.84
1:A:123:ARG:CZ	1:B:318:GLU:OE1	2.26	0.84
1:A:381:LEU:N	1:A:381:LEU:HD23	1.92	0.84
1:A:422:ASN:O	1:A:426:ARG:HG3	1.77	0.84
1:B:95:LEU:HD23	1:B:97:PHE:CE1	2.12	0.84
1:B:417:LEU:HB3	1:B:421:TYR:HE1	1.41	0.84
1:A:310:TYR:OH	1:A:355:LEU:HD23	1.78	0.84
1:A:69:TRP:O	1:A:73:ILE:HG13	1.78	0.84
1:A:417:LEU:HB3	1:A:421:TYR:HE1	1.41	0.84
1:A:17:THR:HG22	1:A:18:PRO:HD2	0.92	0.83
1:A:200:GLU:OE2	1:A:201:GLU:HA	1.78	0.83
1:A:164:ILE:HG23	1:A:165:GLU:N	1.94	0.83
1:A:372:GLU:O	1:A:374:ILE:N	2.10	0.83
1:B:69:TRP:O	1:B:73:ILE:HG13	1.78	0.83
1:B:164:ILE:HG23	1:B:165:GLU:N	1.94	0.83
1:B:2:LEU:CD2	1:B:291:ILE:HG21	2.06	0.83
1:A:372:GLU:C	1:A:374:ILE:H	1.78	0.83
1:B:310:TYR:OH	1:B:355:LEU:HD23	1.78	0.83
1:A:92:PRO:HB2	1:A:97:PHE:CZ	2.14	0.82
1:A:318:GLU:OE1	1:B:123:ARG:CZ	2.26	0.82
1:B:92:PRO:HB2	1:B:97:PHE:CZ	2.14	0.82
1:B:418:LEU:HA	1:B:421:TYR:HD1	1.44	0.82
1:A:418:LEU:HA	1:A:421:TYR:HD1	1.43	0.82
1:A:313:ILE:HD11	1:A:331:ASP:OD1	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:200:GLU:OE2	1:B:201:GLU:HA	1.78	0.81
1:B:380:ALA:HA	1:B:383:SER:HB2	1.61	0.81
1:A:55:LEU:HD13	1:A:55:LEU:O	1.80	0.81
1:B:164:ILE:CD1	1:B:208:VAL:CG2	2.51	0.81
1:A:15:GLY:HA2	1:A:67:LYS:HZ3	1.40	0.81
1:A:2:LEU:CD2	1:A:291:ILE:HD13	2.11	0.81
1:B:55:LEU:HD13	1:B:55:LEU:O	1.80	0.81
1:B:100:MET:HE3	1:B:205:MET:O	1.80	0.81
1:A:380:ALA:HA	1:A:383:SER:HB2	1.61	0.81
1:B:2:LEU:CD2	1:B:291:ILE:HD13	2.11	0.81
1:B:75:TYR:HD2	1:B:297:ILE:HG23	1.45	0.81
1:A:378:LEU:O	1:A:381:LEU:HG	1.81	0.80
1:A:176:LYS:O	1:A:178:LYS:N	2.14	0.80
1:B:176:LYS:O	1:B:178:LYS:N	2.15	0.80
1:A:6:ARG:HG3	1:A:292:LEU:HD23	1.62	0.80
1:B:372:GLU:C	1:B:374:ILE:H	1.78	0.80
1:B:313:ILE:HD11	1:B:331:ASP:OD1	1.80	0.80
1:B:359:LEU:CB	1:B:360:PRO:HD3	2.11	0.80
1:A:75:TYR:HD2	1:A:297:ILE:HG23	1.45	0.80
1:B:378:LEU:O	1:B:381:LEU:HG	1.81	0.80
1:B:394:ILE:HG22	1:B:399:ARG:NH1	1.96	0.80
1:B:6:ARG:HG3	1:B:292:LEU:HD23	1.62	0.80
1:B:346:SER:O	1:B:348:VAL:N	2.15	0.80
1:A:359:LEU:CB	1:A:360:PRO:HD3	2.11	0.80
1:A:346:SER:O	1:A:348:VAL:N	2.15	0.80
1:A:129:LEU:CD1	1:A:143:LEU:HD21	2.11	0.80
1:A:163:PRO:HG2	1:A:164:ILE:H	1.47	0.79
1:B:199:LEU:HD23	1:B:202:MET:SD	2.23	0.79
1:B:94:LYS:N	1:B:97:PHE:HZ	1.81	0.79
1:A:417:LEU:HB3	1:A:421:TYR:CE1	2.18	0.79
1:A:199:LEU:HD23	1:A:202:MET:SD	2.23	0.78
1:B:272:THR:HG21	1:B:280:GLU:OE2	1.82	0.78
1:B:417:LEU:HB3	1:B:421:TYR:CE1	2.18	0.78
1:A:172:ASP:O	1:A:176:LYS:HG3	1.83	0.78
1:A:272:THR:HG21	1:A:280:GLU:OE2	1.82	0.78
1:B:172:ASP:O	1:B:176:LYS:HG3	1.83	0.78
1:A:94:LYS:N	1:A:97:PHE:HZ	1.81	0.78
1:A:100:MET:HE3	1:A:205:MET:O	1.83	0.78
1:A:394:ILE:HG22	1:A:399:ARG:NH1	1.96	0.78
1:B:129:LEU:CD1	1:B:143:LEU:HD21	2.11	0.78
1:A:124:GLY:HA3	1:B:359:LEU:CA	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:234:HIS:CE1	1:A:265:ALA:CB	2.67	0.78
1:B:82:PHE:C	1:B:261:VAL:HG21	2.04	0.78
1:B:163:PRO:HG2	1:B:164:ILE:H	1.47	0.78
1:A:402:ARG:HD3	1:B:402:ARG:CD	2.14	0.78
1:A:384:MET:HE2	1:A:389:LEU:HD23	1.66	0.77
1:B:234:HIS:CE1	1:B:265:ALA:CB	2.67	0.77
1:A:82:PHE:C	1:A:261:VAL:HG21	2.04	0.77
1:A:299:SER:O	1:A:303:LYS:HG2	1.85	0.77
1:A:222:ILE:HG21	1:A:226:ALA:HB2	1.68	0.76
1:A:396:ASP:O	1:A:400:MET:HG3	1.86	0.76
1:B:299:SER:O	1:B:303:LYS:HG2	1.85	0.76
1:B:222:ILE:HG21	1:B:226:ALA:HB2	1.67	0.76
1:A:402:ARG:CD	1:B:402:ARG:HD3	2.14	0.76
1:B:194:GLU:HB3	1:B:197:LYS:CD	2.16	0.76
1:A:87:GLU:HG3	1:B:315:LYS:HZ1	1.50	0.76
1:B:396:ASP:O	1:B:400:MET:HG3	1.86	0.76
1:A:124:GLY:HA3	1:B:359:LEU:HA	1.68	0.76
1:A:361:THR:OG1	1:A:367:LEU:CG	2.34	0.76
1:A:383:SER:O	1:A:403:ILE:HG12	1.85	0.76
1:B:383:SER:O	1:B:403:ILE:HG12	1.85	0.76
1:A:194:GLU:HB3	1:A:197:LYS:CD	2.16	0.76
1:A:359:LEU:CA	1:B:124:GLY:HA3	2.16	0.76
1:B:200:GLU:OE2	1:B:201:GLU:CA	2.33	0.75
1:A:200:GLU:OE2	1:A:201:GLU:CA	2.34	0.75
1:B:234:HIS:CE1	1:B:265:ALA:HB1	2.22	0.75
1:A:356:GLY:O	1:A:357:ILE:CG1	2.32	0.75
1:A:234:HIS:CE1	1:A:265:ALA:HB1	2.22	0.75
1:A:329:LEU:CD1	1:A:421:TYR:HB3	2.17	0.75
1:A:402:ARG:HG2	1:B:402:ARG:NH2	2.02	0.75
1:B:361:THR:OG1	1:B:367:LEU:CG	2.34	0.75
1:A:122:LYS:O	1:B:359:LEU:CD1	2.33	0.74
1:B:92:PRO:HB2	1:B:97:PHE:CD2	2.22	0.74
1:B:222:ILE:CG2	1:B:226:ALA:HB2	2.17	0.74
1:B:335:GLN:HB3	1:B:355:LEU:HD22	1.70	0.74
1:A:335:GLN:HB3	1:A:355:LEU:HD22	1.70	0.74
1:A:359:LEU:HA	1:B:124:GLY:HA3	1.68	0.74
1:A:382:ASN:CA	1:B:385:THR:HG21	2.18	0.74
1:B:118:TYR:CE2	1:B:277:ASP:HB3	2.22	0.74
1:A:349:LEU:HD22	1:A:371:GLU:HG2	1.70	0.74
1:A:402:ARG:NH2	1:B:402:ARG:HG2	2.03	0.74
1:B:329:LEU:HD22	1:B:392:PRO:CB	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:329:LEU:CD1	1:B:421:TYR:HB3	2.17	0.74
1:B:378:LEU:O	1:B:380:ALA:O	2.06	0.74
1:A:164:ILE:HG23	1:A:165:GLU:H	1.50	0.74
1:A:118:TYR:CE2	1:A:277:ASP:HB3	2.22	0.74
1:A:222:ILE:CG2	1:A:226:ALA:HB2	2.17	0.74
1:A:92:PRO:HB2	1:A:97:PHE:CD2	2.22	0.74
1:A:384:MET:CE	1:A:389:LEU:HD23	2.18	0.73
1:A:206:TYR:OH	1:A:239:ILE:HD11	1.88	0.73
1:A:362:PRO:HD3	1:A:367:LEU:HD23	1.66	0.73
1:A:378:LEU:O	1:A:380:ALA:O	2.06	0.73
1:B:200:GLU:OE2	1:B:201:GLU:N	2.22	0.73
1:A:382:ASN:HA	1:B:385:THR:CG2	2.18	0.73
1:B:164:ILE:HG23	1:B:165:GLU:H	1.50	0.73
1:A:385:THR:CG2	1:B:382:ASN:HA	2.19	0.73
1:B:346:SER:C	1:B:348:VAL:H	1.92	0.73
1:A:346:SER:C	1:A:348:VAL:H	1.92	0.73
1:A:402:ARG:HB3	1:B:402:ARG:NH1	2.04	0.73
1:B:206:TYR:OH	1:B:239:ILE:HD11	1.88	0.73
1:B:356:GLY:O	1:B:357:ILE:CG1	2.31	0.73
1:A:373:LYS:HE3	1:A:377:TRP:CH2	2.24	0.73
1:A:385:THR:HG21	1:B:382:ASN:CA	2.19	0.73
1:B:349:LEU:HD22	1:B:371:GLU:HG2	1.70	0.72
1:A:95:LEU:HD23	1:A:97:PHE:CD1	2.24	0.72
1:A:123:ARG:NH1	1:B:318:GLU:CD	2.42	0.72
1:A:318:GLU:CD	1:B:123:ARG:NH1	2.43	0.72
1:B:174:PHE:O	1:B:179:MET:HB2	1.90	0.72
1:A:155:TYR:CD2	1:A:170:GLY:HA2	2.24	0.72
1:A:342:MET:O	1:A:348:VAL:HG21	1.90	0.72
1:B:155:TYR:CD2	1:B:170:GLY:HA2	2.24	0.72
1:B:373:LYS:HE3	1:B:377:TRP:CH2	2.24	0.72
1:B:384:MET:HE2	1:B:389:LEU:HD23	1.69	0.72
1:B:383:SER:HB3	1:B:403:ILE:CG2	2.19	0.72
1:A:372:GLU:O	1:A:374:ILE:HG22	1.88	0.72
1:B:95:LEU:HD23	1:B:97:PHE:CD1	2.24	0.72
1:A:281:THR:HG21	1:B:315:LYS:CE	2.19	0.72
1:A:357:ILE:O	1:A:358:MET:HB2	1.88	0.72
1:B:164:ILE:HG13	1:B:208:VAL:HG21	1.70	0.72
1:B:342:MET:O	1:B:348:VAL:HG21	1.90	0.72
1:A:83:GLY:N	1:A:261:VAL:HG11	2.05	0.72
1:B:234:HIS:NE2	1:B:265:ALA:HB2	2.04	0.72
1:B:372:GLU:O	1:B:374:ILE:HG22	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:ARG:NH1	1:B:318:GLU:OE2	2.23	0.72
1:B:334:ALA:O	1:B:337:ILE:HG22	1.90	0.72
1:A:200:GLU:OE2	1:A:201:GLU:N	2.22	0.72
1:A:234:HIS:NE2	1:A:265:ALA:HB2	2.04	0.72
1:B:329:LEU:HD11	1:B:421:TYR:HB3	1.72	0.72
1:B:384:MET:CE	1:B:389:LEU:HD23	2.18	0.72
1:B:362:PRO:HD3	1:B:367:LEU:HD23	1.66	0.71
1:A:329:LEU:HD11	1:A:421:TYR:HB3	1.72	0.71
1:A:42:LYS:O	1:A:42:LYS:HD3	1.91	0.71
1:A:334:ALA:O	1:A:337:ILE:HG22	1.90	0.71
1:A:164:ILE:HG13	1:A:208:VAL:HG21	1.70	0.71
1:B:357:ILE:O	1:B:358:MET:HB2	1.88	0.71
1:A:301:LEU:HD21	1:A:305:LYS:NZ	2.06	0.71
1:A:329:LEU:HD22	1:A:392:PRO:CB	2.17	0.71
1:A:359:LEU:CD1	1:B:122:LYS:O	2.35	0.71
1:A:169:LYS:O	1:A:173:ILE:HG13	1.91	0.71
1:A:174:PHE:O	1:A:179:MET:HB2	1.90	0.71
1:B:385:THR:HG22	1:B:386:TYR:N	2.05	0.71
1:B:403:ILE:HG22	1:B:414:VAL:HG21	1.73	0.71
1:A:134:VAL:HA	1:A:140:TYR:HE1	1.55	0.71
1:A:432:LYS:HE2	1:B:277:ASP:HB2	1.72	0.71
1:B:83:GLY:N	1:B:261:VAL:HG11	2.05	0.71
1:B:134:VAL:HA	1:B:140:TYR:HE1	1.55	0.71
1:A:318:GLU:OE2	1:B:123:ARG:NH1	2.24	0.70
1:B:355:LEU:O	1:B:356:GLY:C	2.29	0.70
1:A:403:ILE:HG22	1:A:414:VAL:HG21	1.73	0.70
1:A:355:LEU:O	1:A:356:GLY:C	2.30	0.70
1:A:402:ARG:NH1	1:B:402:ARG:HB3	2.05	0.70
1:A:402:ARG:CG	1:B:402:ARG:CZ	2.70	0.70
1:A:402:ARG:CZ	1:B:402:ARG:CG	2.70	0.70
1:A:63:VAL:O	1:A:63:VAL:HG12	1.92	0.70
1:A:179:MET:CE	1:A:179:MET:HA	2.21	0.70
1:B:169:LYS:O	1:B:173:ILE:HG13	1.91	0.70
1:B:301:LEU:O	1:B:305:LYS:HD2	1.92	0.70
1:A:176:LYS:C	1:A:178:LYS:H	1.96	0.70
1:B:42:LYS:HD3	1:B:42:LYS:O	1.91	0.70
1:A:200:GLU:CD	1:A:200:GLU:C	2.51	0.69
1:A:277:ASP:HB2	1:B:432:LYS:HE2	1.73	0.69
1:A:303:LYS:HG3	1:A:304:VAL:H	1.57	0.69
1:A:315:LYS:HZ3	1:B:281:THR:HG21	1.55	0.69
1:B:303:LYS:HG3	1:B:304:VAL:H	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:385:THR:HG22	1:A:386:TYR:N	2.05	0.69
1:B:136:ARG:HD3	1:B:139:ALA:HB2	1.74	0.69
1:B:200:GLU:CD	1:B:200:GLU:C	2.51	0.69
1:A:247:MET:CE	1:A:270:ILE:HD11	2.23	0.69
1:A:301:LEU:O	1:A:305:LYS:HD2	1.92	0.69
1:B:301:LEU:HD21	1:B:305:LYS:NZ	2.06	0.69
1:B:397:LYS:CA	1:B:400:MET:HE3	2.23	0.69
1:B:176:LYS:C	1:B:178:LYS:H	1.96	0.69
1:B:401:ARG:O	1:B:405:GLU:HG2	1.92	0.69
1:A:315:LYS:CE	1:B:281:THR:HG21	2.21	0.69
1:B:78:LEU:O	1:B:81:LEU:HB3	1.93	0.69
1:B:179:MET:HA	1:B:179:MET:CE	2.21	0.69
1:B:310:TYR:HA	1:B:335:GLN:HE22	1.57	0.69
1:B:384:MET:HA	1:B:388:GLU:OE1	1.92	0.69
1:A:401:ARG:O	1:A:405:GLU:HG2	1.92	0.69
1:B:361:THR:HG23	1:B:362:PRO:CD	2.20	0.69
1:B:369:ILE:HG22	1:B:370:GLY:H	1.58	0.69
1:A:78:LEU:O	1:A:81:LEU:HB3	1.93	0.68
1:A:369:ILE:HG22	1:A:370:GLY:H	1.58	0.68
1:A:300:ILE:O	1:A:303:LYS:HG2	1.93	0.68
1:A:315:LYS:HZ1	1:B:87:GLU:HG3	1.57	0.68
1:A:384:MET:HA	1:A:388:GLU:OE1	1.92	0.68
1:A:310:TYR:HA	1:A:335:GLN:HE22	1.58	0.68
1:B:100:MET:CE	1:B:205:MET:O	2.42	0.68
1:B:235:GLN:O	1:B:237:SER:N	2.27	0.68
1:B:300:ILE:O	1:B:303:LYS:HG2	1.93	0.68
1:B:247:MET:CE	1:B:270:ILE:HD11	2.23	0.68
1:A:412:GLU:OE1	1:A:415:ARG:HD2	1.93	0.68
1:B:302:GLU:OE1	1:B:341:LYS:HE3	1.94	0.68
1:A:136:ARG:HD3	1:A:139:ALA:HB2	1.74	0.68
1:A:190:HIS:CD2	1:A:194:GLU:OE1	2.47	0.68
1:A:383:SER:HB3	1:A:403:ILE:CG2	2.19	0.68
1:A:394:ILE:O	1:A:399:ARG:NH1	2.27	0.68
1:B:63:VAL:HG12	1:B:63:VAL:O	1.92	0.68
1:A:234:HIS:CE1	1:A:265:ALA:HB2	2.30	0.67
1:A:409:LEU:HB3	1:A:413:GLU:CD	2.14	0.67
1:A:378:LEU:HA	1:A:381:LEU:HD11	1.76	0.67
1:A:397:LYS:HA	1:A:400:MET:CE	2.24	0.67
1:B:361:THR:OG1	1:B:367:LEU:CD1	2.42	0.67
1:B:394:ILE:O	1:B:399:ARG:NH1	2.27	0.67
1:B:412:GLU:OE1	1:B:415:ARG:HD2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:MET:CE	1:A:205:MET:O	2.42	0.67
1:B:378:LEU:HA	1:B:381:LEU:HD11	1.76	0.67
1:B:397:LYS:HA	1:B:400:MET:CE	2.24	0.67
1:A:235:GLN:O	1:A:237:SER:N	2.27	0.67
1:A:302:GLU:OE1	1:A:341:LYS:HE3	1.94	0.67
1:B:374:ILE:C	1:B:376:ARG:H	1.96	0.67
1:B:190:HIS:CD2	1:B:194:GLU:OE1	2.47	0.67
1:B:373:LYS:HE3	1:B:377:TRP:CZ3	2.30	0.67
1:B:374:ILE:HG23	1:B:375:ARG:H	1.60	0.67
1:A:373:LYS:HE3	1:A:377:TRP:CZ3	2.30	0.67
1:B:369:ILE:HG22	1:B:370:GLY:N	2.10	0.67
1:B:409:LEU:HB3	1:B:413:GLU:CD	2.14	0.67
1:A:397:LYS:CA	1:A:400:MET:HE3	2.23	0.67
1:A:361:THR:OG1	1:A:367:LEU:CD1	2.42	0.67
1:B:234:HIS:CE1	1:B:265:ALA:HB2	2.30	0.67
1:B:247:MET:HE2	1:B:257:LEU:HD21	1.77	0.67
1:A:95:LEU:CD2	1:A:97:PHE:HE1	2.08	0.66
1:B:75:TYR:OH	1:B:292:LEU:HD12	1.95	0.66
1:B:301:LEU:HG	1:B:305:LYS:CD	2.24	0.66
1:A:94:LYS:C	1:A:97:PHE:CZ	2.69	0.66
1:A:369:ILE:HG22	1:A:370:GLY:N	2.10	0.66
1:A:374:ILE:C	1:A:376:ARG:H	1.96	0.66
1:A:374:ILE:HG23	1:A:375:ARG:H	1.60	0.66
1:B:378:LEU:O	1:B:379:ALA:C	2.34	0.66
1:A:1:MET:O	1:A:4:ASN:N	2.28	0.66
1:A:280:GLU:OE1	1:A:290:ARG:NH2	2.28	0.66
1:B:190:HIS:HD2	1:B:194:GLU:OE1	1.79	0.66
1:A:31:GLN:HG3	1:A:48:THR:HG21	1.78	0.66
1:A:348:VAL:HG12	1:A:352:ILE:HD11	1.77	0.66
1:B:95:LEU:CD2	1:B:97:PHE:HE1	2.08	0.66
1:B:118:TYR:HE2	1:B:277:ASP:CB	2.09	0.66
1:B:119:PHE:CZ	1:B:123:ARG:NH2	2.64	0.66
1:B:276:ILE:HG23	1:B:277:ASP:N	2.10	0.66
1:A:348:VAL:O	1:A:352:ILE:CG1	2.39	0.66
1:B:1:MET:O	1:B:4:ASN:N	2.28	0.66
1:B:31:GLN:HG3	1:B:48:THR:HG21	1.78	0.66
1:B:361:THR:CA	1:B:367:LEU:CD1	2.44	0.66
1:B:379:ALA:O	1:B:380:ALA:O	2.14	0.66
1:A:164:ILE:CG2	1:A:165:GLU:H	2.09	0.65
1:B:280:GLU:OE1	1:B:290:ARG:NH2	2.28	0.65
1:A:119:PHE:CZ	1:A:123:ARG:NH2	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:276:ILE:HG23	1:A:277:ASP:N	2.10	0.65
1:A:361:THR:HG23	1:A:362:PRO:CD	2.20	0.65
1:A:373:LYS:HA	1:A:376:ARG:HG3	1.78	0.65
1:B:373:LYS:HA	1:B:376:ARG:HG3	1.78	0.65
1:B:409:LEU:CD1	1:B:413:GLU:OE1	2.41	0.65
1:A:301:LEU:HG	1:A:305:LYS:CD	2.24	0.65
1:B:301:LEU:HD21	1:B:305:LYS:HZ1	1.62	0.65
1:B:94:LYS:C	1:B:97:PHE:CZ	2.69	0.65
1:B:348:VAL:HG12	1:B:352:ILE:HD11	1.77	0.65
1:A:190:HIS:HD2	1:A:194:GLU:OE1	1.79	0.65
1:A:339:LEU:HD22	1:A:339:LEU:H	1.62	0.65
1:B:423:ASN:O	1:B:427:LEU:HG	1.97	0.65
1:A:53:GLU:HG3	1:A:57:LYS:HE3	1.79	0.64
1:A:75:TYR:OH	1:A:292:LEU:HD12	1.95	0.64
1:A:310:TYR:O	1:A:313:ILE:HG22	1.97	0.64
1:B:53:GLU:HG3	1:B:57:LYS:HE3	1.79	0.64
1:A:297:ILE:O	1:A:300:ILE:CB	2.45	0.64
1:A:423:ASN:O	1:A:427:LEU:HG	1.97	0.64
1:B:164:ILE:CG2	1:B:165:GLU:N	2.59	0.64
1:A:378:LEU:O	1:A:379:ALA:C	2.34	0.64
1:A:379:ALA:O	1:A:380:ALA:O	2.15	0.64
1:A:2:LEU:HD13	1:A:291:ILE:HG23	1.79	0.64
1:A:21:LYS:HD3	1:A:25:GLU:OE2	1.97	0.64
1:A:359:LEU:HA	1:B:124:GLY:CA	2.28	0.64
1:B:167:ALA:HB1	1:B:209:LEU:HD21	1.79	0.64
1:A:86:LYS:CE	1:A:266:THR:HG23	2.28	0.64
1:A:124:GLY:CA	1:B:359:LEU:HA	2.27	0.64
1:A:361:THR:CA	1:A:367:LEU:CD1	2.44	0.64
1:B:21:LYS:HD3	1:B:25:GLU:OE2	1.97	0.64
1:A:87:GLU:OE2	1:B:315:LYS:HD2	1.98	0.64
1:A:385:THR:CA	1:B:384:MET:O	2.44	0.64
1:B:288:VAL:O	1:B:291:ILE:HG12	1.97	0.64
1:B:310:TYR:O	1:B:313:ILE:HG22	1.98	0.64
1:B:335:GLN:O	1:B:339:LEU:CD2	2.45	0.64
1:B:164:ILE:CG2	1:B:165:GLU:H	2.09	0.64
1:A:167:ALA:HB1	1:A:209:LEU:HD21	1.79	0.64
1:B:176:LYS:C	1:B:178:LYS:N	2.51	0.64
1:A:119:PHE:CZ	1:A:123:ARG:NE	2.66	0.63
1:A:95:LEU:CD2	1:A:97:PHE:CE1	2.82	0.63
1:A:129:LEU:HD13	1:A:143:LEU:CD2	2.18	0.63
1:A:281:THR:HG21	1:B:315:LYS:HZ3	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:288:VAL:O	1:A:291:ILE:HG12	1.97	0.63
1:A:384:MET:O	1:B:385:THR:CA	2.44	0.63
1:A:385:THR:CG2	1:B:382:ASN:C	2.63	0.63
1:A:87:GLU:HG3	1:B:315:LYS:NZ	2.14	0.63
1:A:335:GLN:O	1:A:339:LEU:CD2	2.45	0.63
1:B:196:THR:OG1	1:B:232:ARG:NH1	2.32	0.63
1:B:244:ILE:O	1:B:271:GLY:N	2.24	0.63
1:B:339:LEU:HD22	1:B:339:LEU:H	1.62	0.63
1:A:247:MET:HE1	1:A:257:LEU:HD21	1.81	0.63
1:B:372:GLU:C	1:B:374:ILE:N	2.52	0.63
1:A:118:TYR:HE2	1:A:277:ASP:CB	2.09	0.63
1:B:362:PRO:HD3	1:B:367:LEU:HD21	0.68	0.63
1:A:69:TRP:NE1	1:A:73:ILE:HD11	2.14	0.63
1:B:2:LEU:HD13	1:B:291:ILE:HG23	1.79	0.63
1:B:119:PHE:HZ	1:B:123:ARG:NH2	1.95	0.63
1:B:362:PRO:O	1:B:363:SER:C	2.36	0.63
1:A:33:SER:O	1:A:36:SER:HB2	1.99	0.63
1:B:9:VAL:HG13	1:B:71:ILE:CD1	2.28	0.63
1:B:85:ASP:OD1	1:B:285:LYS:HD3	1.99	0.63
1:B:348:VAL:O	1:B:352:ILE:CG1	2.39	0.63
1:A:9:VAL:HG13	1:A:71:ILE:CD1	2.28	0.62
1:A:167:ALA:CB	1:A:209:LEU:HD21	2.29	0.62
1:B:357:ILE:HD12	1:B:358:MET:H	1.64	0.62
1:A:379:ALA:HB2	1:A:409:LEU:HD11	1.80	0.62
1:B:379:ALA:HB2	1:B:409:LEU:HD11	1.80	0.62
1:A:164:ILE:CD1	1:A:208:VAL:CG2	2.51	0.62
1:B:33:SER:O	1:B:36:SER:HB2	1.99	0.62
1:B:69:TRP:NE1	1:B:73:ILE:HD11	2.14	0.62
1:B:359:LEU:HB3	1:B:360:PRO:HD2	1.81	0.62
1:A:196:THR:OG1	1:A:232:ARG:NH1	2.32	0.62
1:A:119:PHE:HZ	1:A:123:ARG:NH2	1.95	0.62
1:A:376:ARG:O	1:A:377:TRP:C	2.38	0.62
1:B:283:ASN:C	1:B:283:ASN:HD22	2.03	0.62
1:B:379:ALA:CB	1:B:409:LEU:HD11	2.30	0.62
1:A:362:PRO:HD3	1:A:367:LEU:HD21	0.68	0.62
1:A:283:ASN:C	1:A:283:ASN:HD22	2.03	0.62
1:A:357:ILE:HD12	1:A:358:MET:H	1.64	0.62
1:B:1:MET:SD	1:B:37:SER:HB2	2.40	0.62
1:A:75:TYR:O	1:A:76:ASP:C	2.38	0.62
1:A:291:ILE:O	1:A:292:LEU:HB2	2.00	0.62
1:A:315:LYS:NZ	1:B:87:GLU:HG3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:351:HIS:O	1:B:353:PRO:HD3	2.00	0.62
1:A:82:PHE:O	1:A:261:VAL:HG21	1.99	0.62
1:A:244:ILE:O	1:A:271:GLY:N	2.24	0.62
1:A:315:LYS:HD2	1:B:87:GLU:OE2	2.00	0.62
1:A:379:ALA:CB	1:A:409:LEU:HD11	2.30	0.61
1:B:167:ALA:CB	1:B:209:LEU:HD21	2.29	0.61
1:A:359:LEU:HB3	1:A:360:PRO:HD2	1.81	0.61
1:B:75:TYR:O	1:B:76:ASP:C	2.38	0.61
1:B:119:PHE:CZ	1:B:123:ARG:NE	2.66	0.61
1:A:351:HIS:O	1:A:353:PRO:HD3	2.00	0.61
1:B:129:LEU:HD13	1:B:143:LEU:CD2	2.18	0.61
1:A:85:ASP:OD1	1:A:285:LYS:HD3	1.99	0.61
1:A:382:ASN:C	1:B:385:THR:CG2	2.64	0.61
1:B:297:ILE:O	1:B:300:ILE:CB	2.45	0.61
1:B:394:ILE:CG2	1:B:399:ARG:NH1	2.63	0.61
1:A:194:GLU:CA	1:A:197:LYS:HE3	2.30	0.61
1:A:329:LEU:HD11	1:A:421:TYR:CB	2.31	0.61
1:A:394:ILE:CG2	1:A:399:ARG:HH12	2.14	0.61
1:A:394:ILE:CG2	1:A:399:ARG:NH1	2.64	0.61
1:B:242:VAL:CG1	1:B:243:ILE:N	2.64	0.61
1:A:394:ILE:HG22	1:A:394:ILE:O	2.00	0.61
1:B:116:LEU:HD11	1:B:120:TYR:CE2	2.36	0.61
1:B:380:ALA:C	1:B:381:LEU:HG	2.21	0.61
1:A:380:ALA:C	1:A:381:LEU:HG	2.21	0.61
1:B:82:PHE:O	1:B:261:VAL:HG21	2.00	0.61
1:B:273:GLY:HA3	1:B:278:GLU:OE1	2.00	0.61
1:B:291:ILE:O	1:B:292:LEU:HB2	2.00	0.61
1:A:87:GLU:HB3	1:B:312:LYS:HE2	1.82	0.61
1:B:300:ILE:HD13	1:B:303:LYS:CE	2.31	0.61
1:B:394:ILE:HG22	1:B:394:ILE:O	2.00	0.61
1:A:247:MET:HE1	1:A:270:ILE:HD11	1.82	0.60
1:A:273:GLY:HA3	1:A:278:GLU:OE1	2.00	0.60
1:B:6:ARG:HA	1:B:292:LEU:HD21	1.83	0.60
1:B:377:TRP:CE3	1:B:377:TRP:HA	2.35	0.60
1:A:6:ARG:HA	1:A:292:LEU:HD21	1.83	0.60
1:A:91:ASN:ND2	1:B:357:ILE:HG21	2.16	0.60
1:A:176:LYS:C	1:A:178:LYS:N	2.51	0.60
1:A:328:THR:HG23	1:A:331:ASP:OD2	2.01	0.60
1:A:377:TRP:HA	1:A:377:TRP:CE3	2.35	0.60
1:A:234:HIS:CD2	1:A:265:ALA:HB2	2.36	0.60
1:A:402:ARG:CD	1:B:402:ARG:CD	2.78	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:247:MET:HE2	1:B:257:LEU:CD2	2.31	0.60
1:B:378:LEU:HD23	1:B:378:LEU:C	2.22	0.60
1:B:378:LEU:CA	1:B:381:LEU:CD1	2.76	0.60
1:B:376:ARG:O	1:B:377:TRP:C	2.38	0.60
1:B:301:LEU:CD1	1:B:305:LYS:HE3	2.28	0.60
1:A:30:LEU:HD23	1:A:48:THR:HG22	1.84	0.60
1:A:116:LEU:HD11	1:A:120:TYR:CE2	2.36	0.60
1:A:300:ILE:HD13	1:A:303:LYS:CE	2.31	0.60
1:A:327:LEU:HB2	1:A:390:GLU:O	2.01	0.60
1:A:378:LEU:C	1:A:378:LEU:HD23	2.22	0.60
1:B:122:LYS:C	1:B:124:GLY:H	2.05	0.60
1:B:234:HIS:CD2	1:B:265:ALA:HB2	2.36	0.60
1:B:329:LEU:HD11	1:B:421:TYR:CB	2.31	0.60
1:A:119:PHE:HZ	1:A:123:ARG:HH21	1.48	0.60
1:B:327:LEU:HB2	1:B:390:GLU:O	2.01	0.60
1:A:378:LEU:CA	1:A:381:LEU:CD1	2.76	0.60
1:B:328:THR:HG23	1:B:331:ASP:OD2	2.01	0.60
1:B:394:ILE:CG2	1:B:399:ARG:HH12	2.14	0.60
1:B:194:GLU:CA	1:B:197:LYS:HE3	2.30	0.60
1:A:123:ARG:NH2	1:B:318:GLU:OE1	2.35	0.59
1:A:276:ILE:CG2	1:A:277:ASP:N	2.65	0.59
1:B:85:ASP:OD1	1:B:285:LYS:CD	2.50	0.59
1:A:302:GLU:OE1	1:A:341:LYS:HG3	2.02	0.59
1:A:382:ASN:CA	1:B:385:THR:CG2	2.79	0.59
1:A:41:VAL:HG12	1:A:41:VAL:O	2.02	0.59
1:A:85:ASP:OD1	1:A:285:LYS:CD	2.50	0.59
1:A:122:LYS:C	1:A:124:GLY:H	2.05	0.59
1:A:312:LYS:HE2	1:B:87:GLU:HB3	1.83	0.59
1:A:242:VAL:CG1	1:A:243:ILE:N	2.64	0.59
1:A:372:GLU:C	1:A:374:ILE:N	2.52	0.59
1:A:385:THR:CG2	1:B:382:ASN:CA	2.79	0.59
1:B:276:ILE:CG2	1:B:277:ASP:N	2.65	0.59
1:A:377:TRP:CE3	1:A:377:TRP:CA	2.85	0.59
1:B:30:LEU:HD23	1:B:48:THR:HG22	1.84	0.59
1:B:302:GLU:OE1	1:B:341:LYS:HG3	2.02	0.59
1:A:331:ASP:O	1:A:332:VAL:CG2	2.49	0.59
1:A:357:ILE:HG21	1:B:91:ASN:ND2	2.18	0.59
1:B:86:LYS:CE	1:B:266:THR:HG23	2.28	0.59
1:B:346:SER:C	1:B:348:VAL:N	2.55	0.59
1:B:348:VAL:CG1	1:B:352:ILE:HD11	2.33	0.59
1:A:362:PRO:O	1:A:363:SER:C	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:331:ASP:O	1:B:332:VAL:CG2	2.49	0.59
1:A:318:GLU:OE1	1:B:123:ARG:NH2	2.36	0.58
1:B:109:LYS:O	1:B:110:THR:CB	2.51	0.58
1:B:377:TRP:CE3	1:B:377:TRP:CA	2.85	0.58
1:B:318:GLU:O	1:B:319:ASP:OD1	2.22	0.58
1:B:418:LEU:HA	1:B:421:TYR:CD1	2.34	0.58
1:B:41:VAL:HG12	1:B:41:VAL:O	2.02	0.58
1:A:109:LYS:O	1:A:110:THR:CB	2.51	0.58
1:B:377:TRP:N	1:B:377:TRP:HE3	2.02	0.58
1:B:100:MET:CE	1:B:209:LEU:HD12	2.34	0.58
1:A:2:LEU:HB3	1:A:291:ILE:CG2	2.34	0.58
1:A:335:GLN:HB3	1:A:355:LEU:CD2	2.33	0.58
1:A:409:LEU:CD1	1:A:413:GLU:OE1	2.41	0.58
1:A:346:SER:C	1:A:348:VAL:N	2.55	0.57
1:B:335:GLN:HB3	1:B:355:LEU:CD2	2.33	0.57
1:A:123:ARG:O	1:B:358:MET:O	2.22	0.57
1:A:301:LEU:O	1:A:305:LYS:HB2	2.04	0.57
1:B:131:ALA:O	1:B:140:TYR:HE2	1.87	0.57
1:B:359:LEU:HB3	1:B:360:PRO:CD	2.33	0.57
1:A:1:MET:SD	1:A:37:SER:HB2	2.40	0.57
1:B:199:LEU:CD2	1:B:202:MET:SD	2.92	0.57
1:A:402:ARG:CD	1:B:402:ARG:NE	2.68	0.57
1:A:402:ARG:NE	1:B:402:ARG:NE	2.51	0.57
1:A:359:LEU:HB3	1:A:360:PRO:CD	2.33	0.57
1:A:367:LEU:O	1:A:368:LYS:HB2	2.04	0.57
1:B:359:LEU:CD1	1:B:360:PRO:CD	2.60	0.57
1:A:87:GLU:HG2	1:B:312:LYS:HG2	1.86	0.57
1:B:2:LEU:HB3	1:B:291:ILE:CG2	2.34	0.57
1:B:118:TYR:OH	1:B:122:LYS:HE3	2.04	0.57
1:A:299:SER:O	1:A:303:LYS:N	2.37	0.57
1:A:300:ILE:HG22	1:A:301:LEU:N	2.20	0.57
1:A:348:VAL:CG1	1:A:352:ILE:HD11	2.33	0.57
1:B:367:LEU:O	1:B:368:LYS:HB2	2.04	0.57
1:A:199:LEU:CD2	1:A:202:MET:SD	2.92	0.57
1:A:377:TRP:HE3	1:A:377:TRP:N	2.02	0.57
1:B:301:LEU:O	1:B:305:LYS:HB2	2.04	0.57
1:B:283:ASN:O	1:B:284:ALA:C	2.42	0.57
1:A:361:THR:OG1	1:A:367:LEU:HD12	2.04	0.56
1:B:369:ILE:CG2	1:B:370:GLY:H	2.18	0.56
1:A:100:MET:CE	1:A:209:LEU:HD12	2.34	0.56
1:A:402:ARG:NE	1:B:402:ARG:CD	2.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:283:ASN:O	1:A:284:ALA:C	2.42	0.56
1:A:318:GLU:OE1	1:B:123:ARG:NH1	2.39	0.56
1:A:318:GLU:O	1:A:319:ASP:OD1	2.21	0.56
1:B:77:GLU:O	1:B:78:LEU:C	2.41	0.56
1:B:299:SER:O	1:B:303:LYS:N	2.37	0.56
1:B:300:ILE:HG22	1:B:301:LEU:N	2.20	0.56
1:B:361:THR:OG1	1:B:367:LEU:HD12	2.04	0.56
1:A:116:LEU:HD11	1:A:120:TYR:HE2	1.69	0.56
1:A:118:TYR:OH	1:A:122:LYS:HE3	2.04	0.56
1:A:300:ILE:HD13	1:A:303:LYS:HE3	1.88	0.56
1:A:342:MET:O	1:A:343:GLY:O	2.23	0.56
1:A:131:ALA:O	1:A:140:TYR:HE2	1.87	0.56
1:A:358:MET:O	1:B:123:ARG:O	2.23	0.56
1:B:116:LEU:HD11	1:B:120:TYR:HE2	1.69	0.56
1:A:143:LEU:HD13	1:A:154:VAL:HG13	1.88	0.56
1:A:301:LEU:CD1	1:A:305:LYS:HE3	2.28	0.56
1:B:95:LEU:CD2	1:B:97:PHE:CE1	2.82	0.56
1:B:427:LEU:O	1:B:431:VAL:HG23	2.06	0.56
1:A:135:TYR:CD1	1:A:189:ARG:CZ	2.88	0.56
1:A:293:GLY:HA3	1:A:296:ASP:OD2	2.06	0.56
1:B:293:GLY:HA3	1:B:296:ASP:OD2	2.06	0.56
1:B:347:LYS:O	1:B:347:LYS:HG3	2.06	0.56
1:A:312:LYS:HG2	1:B:87:GLU:HG2	1.87	0.56
1:A:427:LEU:O	1:A:431:VAL:HG23	2.05	0.56
1:B:1:MET:CG	1:B:37:SER:HB3	2.36	0.56
1:B:135:TYR:CD1	1:B:189:ARG:CZ	2.88	0.56
1:B:300:ILE:HD13	1:B:303:LYS:HE3	1.88	0.56
1:B:380:ALA:C	1:B:381:LEU:CG	2.74	0.56
1:A:347:LYS:HG3	1:A:347:LYS:O	2.06	0.56
1:A:385:THR:CG2	1:A:386:TYR:N	2.69	0.56
1:A:293:GLY:O	1:A:296:ASP:N	2.32	0.55
1:A:369:ILE:CG2	1:A:370:GLY:H	2.18	0.55
1:B:95:LEU:HD23	1:B:97:PHE:HE1	1.63	0.55
1:B:219:ASP:OD1	1:B:221:SER:OG	2.23	0.55
1:B:247:MET:HE2	1:B:270:ILE:HD11	1.89	0.55
1:A:123:ARG:NH1	1:B:318:GLU:OE1	2.39	0.55
1:A:219:ASP:OD1	1:A:221:SER:OG	2.23	0.55
1:B:342:MET:O	1:B:343:GLY:O	2.24	0.55
1:B:376:ARG:O	1:B:379:ALA:N	2.40	0.55
1:B:425:ASN:O	1:B:429:LYS:HG3	2.06	0.55
1:B:75:TYR:CD2	1:B:297:ILE:CG2	2.85	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:427:LEU:O	1:B:428:LEU:C	2.45	0.55
1:A:376:ARG:O	1:A:379:ALA:N	2.40	0.55
1:A:379:ALA:HB3	1:A:417:LEU:HD11	1.88	0.55
1:B:293:GLY:O	1:B:296:ASP:N	2.32	0.55
1:A:51:ILE:HD13	1:A:74:VAL:HG22	1.88	0.55
1:B:85:ASP:OD1	1:B:285:LYS:CE	2.54	0.55
1:A:416:GLU:O	1:A:417:LEU:C	2.45	0.55
1:B:267:ILE:O	1:B:267:ILE:HG22	2.07	0.55
1:A:85:ASP:OD1	1:A:285:LYS:CE	2.54	0.55
1:A:409:LEU:HB3	1:A:413:GLU:OE1	2.07	0.55
1:B:379:ALA:HB3	1:B:417:LEU:HD11	1.88	0.54
1:B:143:LEU:HD13	1:B:154:VAL:HG13	1.88	0.54
1:B:329:LEU:HG	1:B:329:LEU:O	2.07	0.54
1:B:385:THR:CG2	1:B:386:TYR:N	2.69	0.54
1:A:40:ASN:HD22	1:A:42:LYS:CB	2.20	0.54
1:A:300:ILE:HD13	1:A:303:LYS:HZ2	1.72	0.54
1:B:129:LEU:HD23	1:B:183:ILE:HB	1.89	0.54
1:B:416:GLU:O	1:B:417:LEU:C	2.45	0.54
1:A:1:MET:CG	1:A:37:SER:HB3	2.36	0.54
1:A:77:GLU:O	1:A:78:LEU:C	2.41	0.54
1:A:247:MET:HE1	1:A:257:LEU:CD2	2.37	0.54
1:A:270:ILE:HG23	1:A:270:ILE:O	2.08	0.54
1:B:75:TYR:CE2	1:B:297:ILE:HG23	2.42	0.54
1:A:129:LEU:HD23	1:A:183:ILE:HB	1.89	0.54
1:A:163:PRO:O	1:A:164:ILE:C	2.46	0.54
1:A:221:SER:CA	1:A:250:THR:HG21	2.33	0.54
1:B:361:THR:CB	1:B:367:LEU:HG	2.38	0.54
1:A:329:LEU:O	1:A:329:LEU:HG	2.07	0.54
1:B:28:LYS:O	1:B:32:LYS:HD3	2.07	0.54
1:B:361:THR:HA	1:B:367:LEU:HD11	0.66	0.54
1:B:369:ILE:HA	1:B:373:LYS:HG2	1.89	0.54
1:A:101:LEU:HD12	1:A:113:ALA:HB2	1.90	0.54
1:A:267:ILE:HG22	1:A:267:ILE:O	2.07	0.54
1:A:336:ILE:HD11	1:A:377:TRP:HD1	1.73	0.54
1:A:425:ASN:O	1:A:429:LYS:HG3	2.06	0.54
1:B:409:LEU:HB3	1:B:413:GLU:OE1	2.07	0.54
1:A:369:ILE:HA	1:A:373:LYS:HG2	1.89	0.54
1:B:190:HIS:HB3	1:B:194:GLU:HB2	1.89	0.54
1:B:101:LEU:HD12	1:B:113:ALA:HB2	1.90	0.54
1:A:28:LYS:O	1:A:32:LYS:HD3	2.07	0.54
1:A:75:TYR:CE2	1:A:297:ILE:HG23	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:247:MET:HG3	1:A:270:ILE:HD11	1.90	0.54
1:A:293:GLY:CA	1:A:296:ASP:OD2	2.56	0.54
1:A:385:THR:HG23	1:B:384:MET:O	2.08	0.54
1:B:94:LYS:N	1:B:97:PHE:CE2	2.68	0.54
1:B:155:TYR:CE1	1:B:173:ILE:HD12	2.43	0.54
1:A:359:LEU:CD1	1:A:360:PRO:CD	2.60	0.53
1:A:403:ILE:CG2	1:A:414:VAL:HG21	2.38	0.53
1:B:51:ILE:HD13	1:B:74:VAL:HG22	1.88	0.53
1:B:105:GLN:O	1:B:106:GLY:O	2.26	0.53
1:B:162:ASN:O	1:B:166:ILE:HG13	2.08	0.53
1:B:209:LEU:O	1:B:210:LYS:C	2.46	0.53
1:B:381:LEU:N	1:B:381:LEU:CD2	2.62	0.53
1:B:403:ILE:CG2	1:B:414:VAL:HG21	2.37	0.53
1:A:19:TYR:CD2	1:A:66:ARG:NH2	2.76	0.53
1:A:105:GLN:O	1:A:106:GLY:O	2.26	0.53
1:A:361:THR:CB	1:A:367:LEU:HG	2.38	0.53
1:B:40:ASN:HD22	1:B:42:LYS:CB	2.20	0.53
1:B:380:ALA:O	1:B:381:LEU:CB	2.56	0.53
1:B:380:ALA:O	1:B:381:LEU:HG	2.08	0.53
1:A:380:ALA:O	1:A:382:ASN:OD1	2.26	0.53
1:A:380:ALA:C	1:A:381:LEU:CG	2.74	0.53
1:A:427:LEU:O	1:A:428:LEU:C	2.45	0.53
1:B:270:ILE:O	1:B:270:ILE:HG23	2.08	0.53
1:B:336:ILE:HD11	1:B:377:TRP:HD1	1.73	0.53
1:A:162:ASN:O	1:A:166:ILE:HG13	2.08	0.53
1:B:19:TYR:CD2	1:B:66:ARG:NH2	2.76	0.53
1:B:118:TYR:CZ	1:B:122:LYS:HE3	2.44	0.53
1:B:247:MET:HG3	1:B:270:ILE:HD11	1.91	0.53
1:B:343:GLY:O	1:B:348:VAL:HG21	2.09	0.53
1:A:9:VAL:HG13	1:A:71:ILE:HD12	1.90	0.53
1:B:1:MET:HG2	1:B:37:SER:HB3	1.91	0.53
1:B:75:TYR:OH	1:B:292:LEU:CD1	2.55	0.53
1:B:310:TYR:CZ	1:B:355:LEU:HD23	2.44	0.53
1:A:380:ALA:O	1:A:381:LEU:HG	2.08	0.53
1:B:9:VAL:HG13	1:B:71:ILE:HD12	1.90	0.53
1:B:380:ALA:O	1:B:382:ASN:OD1	2.26	0.53
1:A:23:VAL:O	1:A:24:ASP:C	2.46	0.53
1:B:155:TYR:CD2	1:B:170:GLY:CA	2.91	0.53
1:A:190:HIS:HB3	1:A:194:GLU:HB2	1.89	0.53
1:A:394:ILE:HG22	1:A:399:ARG:CZ	2.39	0.53
1:A:75:TYR:OH	1:A:292:LEU:CD1	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:155:TYR:CE1	1:A:173:ILE:HD12	2.43	0.53
1:A:167:ALA:HB1	1:A:209:LEU:CD1	2.36	0.53
1:A:300:ILE:O	1:A:303:LYS:CG	2.57	0.53
1:B:163:PRO:O	1:B:164:ILE:C	2.46	0.53
1:B:167:ALA:HB1	1:B:209:LEU:CD1	2.36	0.53
1:B:293:GLY:CA	1:B:296:ASP:OD2	2.56	0.53
1:A:70:PHE:O	1:A:71:ILE:C	2.46	0.53
1:A:380:ALA:O	1:A:381:LEU:CB	2.56	0.53
1:B:300:ILE:O	1:B:303:LYS:CG	2.57	0.53
1:A:15:GLY:HA2	1:A:67:LYS:HZ2	1.71	0.52
1:B:70:PHE:O	1:B:71:ILE:C	2.46	0.52
1:A:155:TYR:CD2	1:A:170:GLY:CA	2.91	0.52
1:A:299:SER:O	1:A:303:LYS:CG	2.56	0.52
1:B:23:VAL:O	1:B:24:ASP:C	2.45	0.52
1:B:431:VAL:O	1:B:432:LYS:HB2	2.09	0.52
1:A:313:ILE:CD1	1:A:331:ASP:OD1	2.56	0.52
1:B:143:LEU:O	1:B:143:LEU:HD22	2.10	0.52
1:B:394:ILE:HG22	1:B:399:ARG:CZ	2.39	0.52
1:A:372:GLU:C	1:A:374:ILE:HG22	2.30	0.52
1:B:64:LEU:HD11	1:B:303:LYS:HZ3	1.73	0.52
1:B:345:LEU:HG	1:B:346:SER:H	1.74	0.52
1:B:362:PRO:CD	1:B:367:LEU:HD23	2.33	0.52
1:A:1:MET:HG2	1:A:37:SER:HB3	1.91	0.52
1:A:75:TYR:CE1	1:A:292:LEU:HD12	2.44	0.52
1:A:343:GLY:O	1:A:348:VAL:HG21	2.09	0.52
1:A:357:ILE:O	1:A:358:MET:CB	2.57	0.52
1:A:377:TRP:CZ3	1:A:417:LEU:CD2	2.93	0.52
1:B:428:LEU:O	1:B:431:VAL:HG23	2.10	0.52
1:A:310:TYR:CZ	1:A:355:LEU:HD23	2.44	0.52
1:B:75:TYR:HD2	1:B:297:ILE:CG2	2.19	0.52
1:B:225:LYS:C	1:B:227:TYR:H	2.12	0.52
1:A:100:MET:HE3	1:A:209:LEU:HD12	1.90	0.52
1:A:384:MET:O	1:B:385:THR:HG23	2.09	0.52
1:A:428:LEU:O	1:A:431:VAL:HG23	2.10	0.52
1:B:372:GLU:C	1:B:374:ILE:HG22	2.30	0.52
1:A:118:TYR:CZ	1:A:122:LYS:HE3	2.44	0.52
1:A:209:LEU:O	1:A:210:LYS:C	2.46	0.52
1:B:295:GLY:HA2	1:B:298:GLU:CB	2.33	0.52
1:B:361:THR:CG2	1:B:365:ASP:O	2.58	0.52
1:B:374:ILE:HG23	1:B:375:ARG:N	2.24	0.52
1:A:58:GLU:O	1:A:69:TRP:NE1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:225:LYS:C	1:A:227:TYR:H	2.13	0.51
1:A:330:ARG:HB3	1:A:389:LEU:O	2.10	0.51
1:B:377:TRP:CZ3	1:B:417:LEU:CD2	2.93	0.51
1:A:133:ASP:OD1	1:A:187:ALA:HB2	2.09	0.51
1:A:164:ILE:CG2	1:A:165:GLU:N	2.59	0.51
1:A:190:HIS:CG	1:A:197:LYS:CD	2.79	0.51
1:A:283:ASN:C	1:A:283:ASN:ND2	2.62	0.51
1:B:133:ASP:OD1	1:B:187:ALA:HB2	2.09	0.51
1:A:75:TYR:HD2	1:A:297:ILE:CG2	2.19	0.51
1:A:329:LEU:HD11	1:A:421:TYR:CG	2.45	0.51
1:B:83:GLY:HA2	1:B:261:VAL:HG13	1.92	0.51
1:B:329:LEU:HD11	1:B:421:TYR:CG	2.45	0.51
1:A:361:THR:CG2	1:A:365:ASP:O	2.58	0.51
1:A:417:LEU:O	1:A:421:TYR:CD1	2.64	0.51
1:A:431:VAL:O	1:A:432:LYS:HB2	2.09	0.51
1:B:75:TYR:CE1	1:B:292:LEU:HD12	2.44	0.51
1:A:40:ASN:ND2	1:A:42:LYS:CB	2.73	0.51
1:A:225:LYS:C	1:A:227:TYR:N	2.64	0.51
1:A:380:ALA:HB1	1:A:384:MET:SD	2.51	0.51
1:B:417:LEU:O	1:B:421:TYR:CD1	2.64	0.51
1:A:143:LEU:HD22	1:A:143:LEU:O	2.10	0.51
1:B:144:LEU:HD23	1:B:154:VAL:HB	1.91	0.51
1:B:168:LYS:HE3	1:B:208:VAL:HG13	1.93	0.51
1:A:40:ASN:HB3	1:A:43:LEU:HG	1.92	0.51
1:A:53:GLU:CG	1:A:57:LYS:HE3	2.40	0.51
1:A:259:ALA:O	1:A:262:ALA:HB3	2.11	0.51
1:A:310:TYR:OH	1:A:355:LEU:HA	2.11	0.51
1:A:346:SER:O	1:A:349:LEU:N	2.43	0.51
1:A:361:THR:HA	1:A:367:LEU:HD11	0.66	0.51
1:A:374:ILE:HG23	1:A:375:ARG:N	2.24	0.51
1:B:53:GLU:CG	1:B:57:LYS:HE3	2.40	0.51
1:B:225:LYS:C	1:B:227:TYR:N	2.64	0.51
1:B:283:ASN:C	1:B:283:ASN:ND2	2.62	0.51
1:B:310:TYR:OH	1:B:355:LEU:HA	2.11	0.51
1:B:374:ILE:C	1:B:376:ARG:N	2.64	0.51
1:A:163:PRO:HG2	1:A:164:ILE:N	2.22	0.51
1:A:295:GLY:HA2	1:A:298:GLU:CB	2.33	0.51
1:B:40:ASN:HB3	1:B:43:LEU:HG	1.92	0.51
1:B:330:ARG:HB3	1:B:389:LEU:O	2.10	0.51
1:B:380:ALA:HB1	1:B:384:MET:SD	2.51	0.51
1:A:168:LYS:HE3	1:A:208:VAL:HG13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:299:SER:O	1:B:303:LYS:CG	2.56	0.51
1:A:63:VAL:O	1:A:63:VAL:CG1	2.59	0.50
1:A:75:TYR:CD2	1:A:297:ILE:CG2	2.85	0.50
1:A:384:MET:O	1:B:385:THR:CB	2.59	0.50
1:B:40:ASN:ND2	1:B:42:LYS:CB	2.73	0.50
1:B:61:PRO:O	1:B:62:SER:C	2.48	0.50
1:B:301:LEU:HG	1:B:301:LEU:O	2.11	0.50
1:A:61:PRO:O	1:A:62:SER:C	2.48	0.50
1:A:114:GLY:O	1:A:115:LYS:C	2.49	0.50
1:A:301:LEU:HG	1:A:301:LEU:O	2.11	0.50
1:B:131:ALA:HB2	1:B:143:LEU:HD12	1.92	0.50
1:A:6:ARG:HG3	1:A:292:LEU:CD2	2.37	0.50
1:A:83:GLY:HA2	1:A:261:VAL:HG13	1.92	0.50
1:A:195:GLU:O	1:A:196:THR:C	2.49	0.50
1:A:345:LEU:HG	1:A:346:SER:H	1.74	0.50
1:B:369:ILE:CG2	1:B:370:GLY:N	2.75	0.50
1:A:420:TRP:O	1:A:423:ASN:N	2.45	0.50
1:B:6:ARG:HG3	1:B:292:LEU:CD2	2.37	0.50
1:A:119:PHE:CE1	1:A:123:ARG:NE	2.73	0.50
1:B:101:LEU:HD23	1:B:215:ILE:HB	1.94	0.50
1:B:374:ILE:C	1:B:374:ILE:HD13	2.31	0.50
1:A:101:LEU:HD23	1:A:215:ILE:HB	1.94	0.50
1:A:144:LEU:HD23	1:A:154:VAL:HB	1.91	0.50
1:A:359:LEU:CB	1:A:360:PRO:HD2	2.36	0.50
1:A:369:ILE:CG2	1:A:370:GLY:N	2.75	0.50
1:B:346:SER:O	1:B:349:LEU:N	2.43	0.50
1:B:420:TRP:O	1:B:423:ASN:N	2.45	0.50
1:A:243:ILE:HG12	1:A:269:PHE:HB2	1.94	0.50
1:A:374:ILE:C	1:A:374:ILE:HD13	2.31	0.50
1:B:374:ILE:HD13	1:B:375:ARG:N	2.27	0.50
1:A:123:ARG:C	1:B:358:MET:O	2.50	0.50
1:B:115:LYS:O	1:B:118:TYR:HB3	2.12	0.50
1:B:349:LEU:HA	1:B:352:ILE:CB	2.36	0.50
1:A:374:ILE:HD13	1:A:375:ARG:N	2.27	0.50
1:B:87:GLU:OE1	1:B:283:ASN:OD1	2.30	0.49
1:B:259:ALA:O	1:B:262:ALA:HB3	2.11	0.49
1:A:244:ILE:HB	1:A:270:ILE:HG13	1.94	0.49
1:A:385:THR:CB	1:B:384:MET:O	2.60	0.49
1:A:418:LEU:HA	1:A:421:TYR:CD1	2.34	0.49
1:A:131:ALA:HB2	1:A:143:LEU:HD12	1.92	0.49
1:A:374:ILE:C	1:A:376:ARG:N	2.64	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:58:GLU:O	1:B:69:TRP:NE1	2.44	0.49
1:B:114:GLY:O	1:B:115:LYS:C	2.49	0.49
1:B:195:GLU:O	1:B:196:THR:C	2.49	0.49
1:B:243:ILE:HG12	1:B:269:PHE:HB2	1.94	0.49
1:A:300:ILE:HA	1:A:303:LYS:HE3	1.94	0.49
1:B:200:GLU:OE2	1:B:200:GLU:C	2.49	0.49
1:B:300:ILE:HD13	1:B:303:LYS:HZ2	1.77	0.49
1:A:281:THR:CB	1:B:315:LYS:HD3	2.42	0.49
1:A:115:LYS:O	1:A:118:TYR:HB3	2.12	0.49
1:A:40:ASN:HD22	1:A:42:LYS:H	1.61	0.49
1:A:200:GLU:OE1	1:A:201:GLU:N	2.46	0.49
1:B:63:VAL:O	1:B:63:VAL:CG1	2.59	0.49
1:A:242:VAL:HG12	1:A:243:ILE:N	2.27	0.49
1:B:357:ILE:O	1:B:358:MET:CB	2.57	0.49
1:B:377:TRP:CE3	1:B:377:TRP:N	2.81	0.49
1:A:349:LEU:O	1:A:352:ILE:N	2.43	0.48
1:B:163:PRO:CG	1:B:164:ILE:H	2.23	0.48
1:A:127:VAL:HA	1:A:181:ILE:O	2.14	0.48
1:B:100:MET:HE2	1:B:209:LEU:HD12	1.95	0.48
1:B:244:ILE:HB	1:B:270:ILE:HG13	1.94	0.48
1:A:207:ASP:C	1:A:207:ASP:OD1	2.52	0.48
1:B:100:MET:HE3	1:B:209:LEU:HD12	1.95	0.48
1:B:207:ASP:OD1	1:B:207:ASP:C	2.52	0.48
1:B:242:VAL:HG12	1:B:243:ILE:N	2.27	0.48
1:A:215:ILE:HG21	1:A:243:ILE:CD1	2.43	0.48
1:A:358:MET:O	1:B:123:ARG:C	2.52	0.48
1:B:300:ILE:HA	1:B:303:LYS:HE3	1.94	0.48
1:B:330:ARG:HB3	1:B:389:LEU:HB3	1.95	0.48
1:A:87:GLU:OE1	1:A:283:ASN:OD1	2.30	0.48
1:A:200:GLU:OE2	1:A:200:GLU:C	2.49	0.48
1:A:432:LYS:HE2	1:B:277:ASP:CB	2.40	0.48
1:B:107:SER:OG	1:B:109:LYS:HB2	2.13	0.48
1:B:168:LYS:CE	1:B:208:VAL:HG13	2.44	0.48
1:A:108:GLY:O	1:A:112:THR:OG1	2.25	0.48
1:A:234:HIS:NE2	1:A:265:ALA:CB	2.75	0.48
1:A:362:PRO:HD2	1:A:367:LEU:CD2	2.38	0.48
1:A:432:LYS:HE2	1:B:277:ASP:OD2	2.14	0.48
1:B:396:ASP:OD1	1:B:396:ASP:C	2.52	0.48
1:A:20:GLU:O	1:A:24:ASP:OD2	2.32	0.48
1:B:164:ILE:HD11	1:B:208:VAL:HG22	1.88	0.48
1:A:107:SER:OG	1:A:109:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:277:ASP:OD2	1:B:432:LYS:HE2	2.14	0.48
1:B:40:ASN:HD22	1:B:42:LYS:H	1.61	0.48
1:B:430:MET:HE3	1:B:430:MET:HA	1.95	0.48
1:A:168:LYS:CE	1:A:208:VAL:HG13	2.44	0.48
1:A:373:LYS:HE3	1:A:377:TRP:HH2	1.78	0.48
1:B:194:GLU:O	1:B:197:LYS:HG2	2.14	0.48
1:B:215:ILE:HG21	1:B:243:ILE:CD1	2.43	0.48
1:B:303:LYS:C	1:B:307:LEU:HG	2.31	0.48
1:B:370:GLY:O	1:B:373:LYS:HB3	2.14	0.48
1:A:315:LYS:HD3	1:B:281:THR:CB	2.44	0.47
1:A:377:TRP:CE3	1:A:377:TRP:N	2.81	0.47
1:B:127:VAL:HA	1:B:181:ILE:O	2.14	0.47
1:A:194:GLU:HA	1:A:197:LYS:HE3	1.96	0.47
1:A:194:GLU:O	1:A:197:LYS:HG2	2.14	0.47
1:A:376:ARG:O	1:A:379:ALA:CB	2.62	0.47
1:A:417:LEU:C	1:A:421:TYR:CD1	2.88	0.47
1:A:430:MET:HE3	1:A:430:MET:HA	1.96	0.47
1:A:74:VAL:O	1:A:75:TYR:C	2.53	0.47
1:A:291:ILE:O	1:A:292:LEU:CB	2.62	0.47
1:B:177:ASN:O	1:B:178:LYS:HB2	2.14	0.47
1:A:70:PHE:O	1:A:73:ILE:N	2.47	0.47
1:A:277:ASP:CB	1:B:432:LYS:HE2	2.41	0.47
1:A:383:SER:HB3	1:A:403:ILE:CA	2.44	0.47
1:B:163:PRO:HG2	1:B:164:ILE:N	2.22	0.47
1:B:247:MET:SD	1:B:270:ILE:HD11	2.55	0.47
1:B:221:SER:CA	1:B:250:THR:HG21	2.33	0.47
1:B:300:ILE:HD13	1:B:303:LYS:NZ	2.29	0.47
1:B:302:GLU:CD	1:B:341:LYS:HE3	2.35	0.47
1:B:417:LEU:C	1:B:421:TYR:CD1	2.88	0.47
1:A:141:ASP:O	1:A:145:GLN:HG3	2.15	0.47
1:B:376:ARG:O	1:B:379:ALA:CB	2.62	0.47
1:B:383:SER:HB3	1:B:403:ILE:CA	2.44	0.47
1:A:98:ILE:HD13	1:A:171:VAL:HG11	1.97	0.47
1:A:177:ASN:O	1:A:178:LYS:HB2	2.14	0.47
1:A:247:MET:SD	1:A:270:ILE:HD11	2.55	0.47
1:A:302:GLU:HB3	1:A:341:LYS:HB3	1.97	0.47
1:A:334:ALA:HA	1:A:337:ILE:HG22	1.97	0.47
1:A:370:GLY:O	1:A:373:LYS:HB3	2.14	0.47
1:A:418:LEU:CA	1:A:421:TYR:HD1	2.21	0.47
1:B:20:GLU:O	1:B:24:ASP:OD2	2.32	0.47
1:B:61:PRO:O	1:B:62:SER:O	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:194:GLU:HA	1:B:197:LYS:HE3	1.96	0.47
1:B:200:GLU:OE1	1:B:201:GLU:N	2.46	0.47
1:A:61:PRO:O	1:A:62:SER:O	2.33	0.47
1:A:317:MET:CE	1:A:328:THR:HB	2.45	0.47
1:B:98:ILE:HD13	1:B:171:VAL:HG11	1.97	0.47
1:A:362:PRO:CD	1:A:367:LEU:HD23	2.33	0.47
1:B:302:GLU:HB3	1:B:341:LYS:HB3	1.97	0.47
1:A:85:ASP:OD1	1:A:285:LYS:HE2	2.15	0.47
1:A:300:ILE:HD13	1:A:303:LYS:NZ	2.29	0.47
1:A:302:GLU:CD	1:A:341:LYS:HE3	2.34	0.47
1:B:235:GLN:C	1:B:237:SER:H	2.18	0.47
1:B:367:LEU:O	1:B:368:LYS:CB	2.63	0.47
1:A:115:LYS:HG2	1:A:276:ILE:O	2.14	0.46
1:A:235:GLN:C	1:A:237:SER:H	2.18	0.46
1:A:330:ARG:HB3	1:A:389:LEU:HB3	1.95	0.46
1:B:40:ASN:ND2	1:B:42:LYS:H	2.13	0.46
1:B:115:LYS:HG2	1:B:276:ILE:O	2.14	0.46
1:B:190:HIS:CG	1:B:197:LYS:CD	2.79	0.46
1:B:378:LEU:O	1:B:381:LEU:CG	2.60	0.46
1:A:40:ASN:ND2	1:A:42:LYS:HB2	2.31	0.46
1:A:119:PHE:CZ	1:A:123:ARG:CZ	2.98	0.46
1:A:135:TYR:CE1	1:A:189:ARG:NE	2.83	0.46
1:A:301:LEU:HD21	1:A:305:LYS:HZ1	1.77	0.46
1:A:367:LEU:O	1:A:368:LYS:CB	2.63	0.46
1:A:417:LEU:C	1:A:421:TYR:CE1	2.89	0.46
1:B:300:ILE:HA	1:B:303:LYS:HG2	1.97	0.46
1:B:317:MET:CE	1:B:328:THR:HB	2.45	0.46
1:B:334:ALA:CA	1:B:337:ILE:HG22	2.46	0.46
1:A:94:LYS:N	1:A:97:PHE:CE2	2.68	0.46
1:B:74:VAL:O	1:B:75:TYR:C	2.53	0.46
1:B:85:ASP:OD1	1:B:285:LYS:HE2	2.15	0.46
1:B:119:PHE:CE1	1:B:123:ARG:NE	2.74	0.46
1:B:230:ALA:O	1:B:231:SER:C	2.54	0.46
1:A:40:ASN:ND2	1:A:42:LYS:H	2.13	0.46
1:A:317:MET:SD	1:A:328:THR:CB	3.04	0.46
1:B:207:ASP:O	1:B:210:LYS:HG3	2.16	0.46
1:B:313:ILE:CD1	1:B:331:ASP:OD1	2.56	0.46
1:B:336:ILE:HG13	1:B:377:TRP:HB3	1.98	0.46
1:B:379:ALA:C	1:B:380:ALA:O	2.52	0.46
1:A:109:LYS:O	1:A:110:THR:HB	2.16	0.46
1:A:163:PRO:CG	1:A:164:ILE:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:215:ILE:CG2	1:A:243:ILE:HG13	2.46	0.46
1:A:230:ALA:O	1:A:231:SER:C	2.54	0.46
1:A:300:ILE:HA	1:A:303:LYS:HG2	1.97	0.46
1:B:270:ILE:O	1:B:270:ILE:CG2	2.64	0.46
1:B:298:GLU:O	1:B:302:GLU:HG2	2.16	0.46
1:A:193:GLY:N	1:A:195:GLU:OE2	2.42	0.46
1:A:334:ALA:CA	1:A:337:ILE:HG22	2.46	0.46
1:A:361:THR:HG23	1:A:367:LEU:HG	1.98	0.46
1:A:361:THR:CB	1:A:367:LEU:CD1	2.93	0.46
1:B:141:ASP:O	1:B:145:GLN:HG3	2.15	0.46
1:B:362:PRO:HD2	1:B:367:LEU:CD2	2.38	0.46
1:B:417:LEU:C	1:B:421:TYR:CE1	2.89	0.46
1:A:270:ILE:O	1:A:270:ILE:CG2	2.63	0.46
1:A:300:ILE:C	1:A:302:GLU:N	2.69	0.46
1:A:301:LEU:O	1:A:305:LYS:CD	2.61	0.46
1:A:303:LYS:C	1:A:307:LEU:HG	2.31	0.46
1:B:9:VAL:HG11	1:B:292:LEU:HD13	1.98	0.46
1:B:135:TYR:CE1	1:B:189:ARG:NE	2.83	0.46
1:B:397:LYS:O	1:B:398:SER:C	2.53	0.46
1:A:125:TYR:CD2	1:B:358:MET:SD	3.09	0.46
1:A:336:ILE:HG13	1:A:377:TRP:HB3	1.98	0.46
1:B:303:LYS:O	1:B:307:LEU:CG	2.49	0.46
1:A:330:ARG:CB	1:A:389:LEU:HB3	2.46	0.46
1:A:300:ILE:CD1	1:A:303:LYS:HZ2	2.28	0.46
1:B:298:GLU:C	1:B:300:ILE:N	2.67	0.46
1:B:310:TYR:HA	1:B:335:GLN:NE2	2.29	0.46
1:B:334:ALA:HA	1:B:337:ILE:HG22	1.97	0.46
1:B:361:THR:CB	1:B:367:LEU:CD1	2.93	0.46
1:B:378:LEU:CA	1:B:381:LEU:HD11	2.45	0.46
1:A:75:TYR:CZ	1:A:292:LEU:HD12	2.50	0.45
1:A:122:LYS:C	1:A:124:GLY:N	2.70	0.45
1:B:307:LEU:HD23	1:B:307:LEU:N	2.31	0.45
1:A:292:LEU:HD23	1:A:292:LEU:HA	1.61	0.45
1:A:396:ASP:OD1	1:A:396:ASP:C	2.52	0.45
1:B:392:PRO:O	1:B:395:ILE:HG13	2.16	0.45
1:A:378:LEU:O	1:A:381:LEU:CG	2.60	0.45
1:B:2:LEU:HD13	1:B:291:ILE:CG2	2.46	0.45
1:B:94:LYS:O	1:B:96:PRO:O	2.34	0.45
1:B:40:ASN:ND2	1:B:42:LYS:HB2	2.31	0.45
1:B:70:PHE:O	1:B:73:ILE:N	2.47	0.45
1:B:119:PHE:CZ	1:B:123:ARG:CZ	2.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:215:ILE:CG2	1:B:243:ILE:HG13	2.46	0.45
1:B:301:LEU:O	1:B:305:LYS:CD	2.61	0.45
1:A:235:GLN:C	1:A:237:SER:N	2.70	0.45
1:A:307:LEU:N	1:A:307:LEU:HD23	2.31	0.45
1:A:335:GLN:O	1:A:338:ALA:HB3	2.17	0.45
1:B:2:LEU:HD11	1:B:288:VAL:HA	1.98	0.45
1:B:75:TYR:CZ	1:B:292:LEU:HD12	2.50	0.45
1:A:9:VAL:HG11	1:A:292:LEU:HD13	1.98	0.45
1:A:93:THR:HG22	1:A:93:THR:O	2.16	0.45
1:A:207:ASP:O	1:A:210:LYS:HG3	2.16	0.45
1:A:298:GLU:O	1:A:302:GLU:HG2	2.16	0.45
1:A:349:LEU:HA	1:A:352:ILE:CB	2.36	0.45
1:A:392:PRO:O	1:A:395:ILE:HG13	2.17	0.45
1:B:93:THR:O	1:B:93:THR:HG22	2.16	0.45
1:B:109:LYS:O	1:B:110:THR:HB	2.16	0.45
1:B:111:THR:HG22	1:B:115:LYS:HE3	1.98	0.45
1:B:116:LEU:HD12	1:B:116:LEU:HA	1.70	0.45
1:B:212:ASP:O	1:B:213:ASP:OD1	2.35	0.45
1:B:335:GLN:O	1:B:338:ALA:HB3	2.17	0.45
1:A:2:LEU:HD11	1:A:288:VAL:HA	1.98	0.45
1:A:125:TYR:CG	1:B:358:MET:SD	3.10	0.45
1:A:417:LEU:CB	1:A:421:TYR:HE1	2.21	0.45
1:B:300:ILE:CA	1:B:303:LYS:HG2	2.47	0.45
1:B:317:MET:SD	1:B:328:THR:CB	3.04	0.45
1:B:391:ASN:O	1:B:392:PRO:C	2.55	0.45
1:A:94:LYS:O	1:A:96:PRO:O	2.34	0.45
1:A:164:ILE:HD11	1:A:208:VAL:HG22	1.88	0.45
1:A:168:LYS:HG3	1:A:172:ASP:OD2	2.17	0.45
1:B:300:ILE:C	1:B:302:GLU:H	2.19	0.45
1:B:40:ASN:HD22	1:B:42:LYS:HB3	1.82	0.45
1:B:300:ILE:HA	1:B:303:LYS:CD	2.47	0.45
1:A:50:LYS:HD3	1:A:77:GLU:OE1	2.17	0.45
1:A:94:LYS:CA	1:A:97:PHE:CZ	3.00	0.45
1:A:336:ILE:HD11	1:A:377:TRP:CD1	2.52	0.45
1:A:397:LYS:O	1:A:398:SER:C	2.53	0.45
1:B:301:LEU:O	1:B:305:LYS:CG	2.65	0.45
1:B:330:ARG:CB	1:B:389:LEU:HB3	2.46	0.45
1:B:372:GLU:O	1:B:374:ILE:CG2	2.62	0.45
1:A:100:MET:HE2	1:A:209:LEU:HD12	2.00	0.44
1:A:300:ILE:C	1:A:302:GLU:H	2.19	0.44
1:A:300:ILE:CA	1:A:303:LYS:HG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:373:LYS:O	1:A:373:LYS:HG3	2.17	0.44
1:B:373:LYS:HG3	1:B:373:LYS:O	2.17	0.44
1:A:212:ASP:O	1:A:213:ASP:OD1	2.35	0.44
1:A:300:ILE:HA	1:A:303:LYS:CD	2.47	0.44
1:A:301:LEU:O	1:A:305:LYS:CG	2.65	0.44
1:A:335:GLN:HA	1:A:335:GLN:OE1	2.17	0.44
1:B:207:ASP:OD1	1:B:210:LYS:NZ	2.50	0.44
1:B:234:HIS:NE2	1:B:265:ALA:CB	2.75	0.44
1:B:418:LEU:CA	1:B:421:TYR:HD1	2.22	0.44
1:A:157:GLU:OE2	1:A:169:LYS:HD2	2.17	0.44
1:A:336:ILE:HA	1:A:339:LEU:HD23	1.99	0.44
1:B:30:LEU:HD23	1:B:48:THR:CG2	2.47	0.44
1:B:47:LEU:CD1	1:B:77:GLU:HB3	2.48	0.44
1:B:150:ILE:HG13	1:B:152:VAL:CG2	2.39	0.44
1:B:168:LYS:HG3	1:B:172:ASP:OD2	2.17	0.44
1:B:349:LEU:O	1:B:352:ILE:N	2.43	0.44
1:B:361:THR:HG23	1:B:367:LEU:HG	1.98	0.44
1:A:298:GLU:C	1:A:300:ILE:N	2.67	0.44
1:B:23:VAL:HG13	1:B:70:PHE:CZ	2.53	0.44
1:B:192:TYR:HE1	1:B:229:LEU:HD23	1.83	0.44
1:B:336:ILE:HA	1:B:339:LEU:HD23	1.99	0.44
1:A:47:LEU:CD1	1:A:77:GLU:HB3	2.48	0.44
1:A:53:GLU:O	1:A:57:LYS:HG3	2.18	0.44
1:A:111:THR:HG22	1:A:115:LYS:HE3	1.98	0.44
1:A:198:LEU:O	1:A:201:GLU:HB3	2.18	0.44
1:B:53:GLU:O	1:B:57:LYS:HG3	2.18	0.44
1:B:157:GLU:OE2	1:B:169:LYS:HD2	2.17	0.44
1:B:333:TYR:O	1:B:334:ALA:C	2.55	0.44
1:A:71:ILE:O	1:A:74:VAL:HB	2.18	0.44
1:A:378:LEU:CA	1:A:381:LEU:HD11	2.45	0.44
1:B:94:LYS:CA	1:B:97:PHE:CZ	3.00	0.44
1:A:40:ASN:HD22	1:A:42:LYS:HB3	1.82	0.44
1:A:302:GLU:CD	1:A:341:LYS:CD	2.86	0.44
1:A:402:ARG:CB	1:B:402:ARG:NH1	2.79	0.44
1:B:410:GLU:HG2	1:B:411:VAL:N	2.33	0.44
1:A:23:VAL:HG13	1:A:70:PHE:CZ	2.53	0.44
1:B:50:LYS:HD3	1:B:77:GLU:OE1	2.17	0.44
1:B:164:ILE:O	1:B:165:GLU:C	2.56	0.44
1:B:291:ILE:O	1:B:292:LEU:CB	2.62	0.44
1:B:300:ILE:C	1:B:302:GLU:N	2.69	0.44
1:B:335:GLN:HA	1:B:335:GLN:OE1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:361:THR:HA	1:B:367:LEU:CG	2.40	0.44
1:A:164:ILE:O	1:A:165:GLU:C	2.56	0.44
1:A:303:LYS:HG3	1:A:304:VAL:N	2.30	0.44
1:A:348:VAL:HG12	1:A:352:ILE:CD1	2.45	0.44
1:B:69:TRP:CD1	1:B:73:ILE:HD11	2.53	0.44
1:B:298:GLU:O	1:B:299:SER:C	2.56	0.44
1:A:207:ASP:OD1	1:A:210:LYS:NZ	2.50	0.43
1:A:244:ILE:HG13	1:A:267:ILE:HD13	1.99	0.43
1:B:122:LYS:C	1:B:124:GLY:N	2.70	0.43
1:B:198:LEU:O	1:B:201:GLU:HB3	2.18	0.43
1:A:41:VAL:O	1:A:41:VAL:CG1	2.65	0.43
1:A:64:LEU:HD11	1:A:303:LYS:HZ3	1.83	0.43
1:A:69:TRP:CD1	1:A:73:ILE:HD11	2.53	0.43
1:B:71:ILE:O	1:B:74:VAL:HB	2.18	0.43
1:B:78:LEU:O	1:B:79:SER:C	2.56	0.43
1:B:302:GLU:CD	1:B:341:LYS:CD	2.86	0.43
1:A:2:LEU:HD23	1:A:2:LEU:HA	1.79	0.43
1:A:104:VAL:HG21	1:A:192:TYR:CE2	2.53	0.43
1:A:109:LYS:HE2	1:A:186:THR:O	2.18	0.43
1:A:176:LYS:O	1:A:177:ASN:C	2.56	0.43
1:A:176:LYS:O	1:A:178:LYS:HG2	2.18	0.43
1:A:298:GLU:O	1:A:299:SER:C	2.56	0.43
1:A:349:LEU:HA	1:A:352:ILE:HD12	2.00	0.43
1:A:372:GLU:O	1:A:374:ILE:CG2	2.62	0.43
1:B:41:VAL:O	1:B:41:VAL:CG1	2.65	0.43
1:A:2:LEU:HD13	1:A:291:ILE:CG2	2.46	0.43
1:B:235:GLN:C	1:B:237:SER:N	2.70	0.43
1:B:349:LEU:HA	1:B:352:ILE:HD12	2.00	0.43
1:A:83:GLY:HA2	1:A:261:VAL:CG1	2.48	0.43
1:A:163:PRO:O	1:A:166:ILE:N	2.52	0.43
1:A:199:LEU:HA	1:A:202:MET:SD	2.59	0.43
1:A:410:GLU:HG2	1:A:411:VAL:N	2.33	0.43
1:B:131:ALA:O	1:B:140:TYR:CE2	2.69	0.43
1:A:192:TYR:HE1	1:A:229:LEU:HD23	1.83	0.43
1:B:2:LEU:HD23	1:B:2:LEU:HA	1.79	0.43
1:B:119:PHE:HZ	1:B:123:ARG:HH21	1.48	0.43
1:B:244:ILE:HG13	1:B:267:ILE:HD13	1.99	0.43
1:B:293:GLY:O	1:B:296:ASP:HB2	2.18	0.43
1:B:403:ILE:HG22	1:B:414:VAL:CG2	2.45	0.43
1:B:417:LEU:CB	1:B:421:TYR:HE1	2.21	0.43
1:A:293:GLY:O	1:A:296:ASP:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:105:GLN:O	1:B:106:GLY:C	2.56	0.43
1:B:163:PRO:O	1:B:166:ILE:N	2.52	0.43
1:B:302:GLU:CD	1:B:341:LYS:HD2	2.39	0.43
1:A:247:MET:HG3	1:A:270:ILE:CD1	2.48	0.43
1:A:291:ILE:O	1:A:291:ILE:HG13	2.19	0.43
1:A:301:LEU:HD21	1:A:305:LYS:HZ2	1.83	0.43
1:A:358:MET:SD	1:B:125:TYR:CD2	3.12	0.43
1:B:2:LEU:HB3	1:B:291:ILE:HG22	2.01	0.43
1:B:199:LEU:HA	1:B:202:MET:SD	2.59	0.43
1:B:336:ILE:HD11	1:B:377:TRP:CD1	2.52	0.43
1:B:348:VAL:HG12	1:B:352:ILE:CD1	2.45	0.43
1:B:109:LYS:HE2	1:B:186:THR:O	2.18	0.43
1:B:247:MET:HG3	1:B:270:ILE:CD1	2.48	0.43
1:B:291:ILE:O	1:B:291:ILE:HG13	2.19	0.43
1:B:303:LYS:HG3	1:B:304:VAL:N	2.30	0.43
1:A:131:ALA:O	1:A:140:TYR:CE2	2.69	0.43
1:A:175:VAL:HG12	1:A:175:VAL:O	2.19	0.43
1:B:127:VAL:HG12	1:B:128:GLY:N	2.34	0.43
1:B:146:LEU:HD22	1:B:276:ILE:HD13	2.00	0.43
1:B:210:LYS:N	1:B:211:PRO:CD	2.82	0.43
1:A:124:GLY:HA3	1:B:359:LEU:N	2.34	0.42
1:A:219:ASP:CG	1:A:221:SER:HG	2.19	0.42
1:A:333:TYR:O	1:A:334:ALA:C	2.55	0.42
1:A:391:ASN:O	1:A:392:PRO:C	2.55	0.42
1:B:104:VAL:HG21	1:B:192:TYR:CE2	2.53	0.42
1:B:163:PRO:CG	1:B:164:ILE:N	2.82	0.42
1:A:403:ILE:HG22	1:A:414:VAL:CG2	2.45	0.42
1:B:40:ASN:O	1:B:44:VAL:HG23	2.19	0.42
1:B:176:LYS:O	1:B:178:LYS:HG2	2.18	0.42
1:A:302:GLU:CD	1:A:341:LYS:HD2	2.39	0.42
1:B:107:SER:C	1:B:109:LYS:N	2.71	0.42
1:B:335:GLN:CB	1:B:355:LEU:HD22	2.46	0.42
1:A:37:SER:O	1:A:38:ASP:HB3	2.19	0.42
1:B:83:GLY:HA2	1:B:261:VAL:CG1	2.48	0.42
1:B:157:GLU:HB2	1:B:160:ASN:HD22	1.77	0.42
1:A:210:LYS:N	1:A:211:PRO:CD	2.82	0.42
1:B:383:SER:O	1:B:384:MET:HG3	2.20	0.42
1:A:2:LEU:HB3	1:A:291:ILE:HG22	2.01	0.42
1:A:30:LEU:HD23	1:A:48:THR:CG2	2.47	0.42
1:A:72:SER:OG	1:A:73:ILE:N	2.53	0.42
1:A:76:ASP:O	1:A:79:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:ILE:HD12	1:A:222:ILE:HA	1.93	0.42
1:A:299:SER:C	1:A:303:LYS:HE3	2.40	0.42
1:A:383:SER:O	1:A:384:MET:HG3	2.20	0.42
1:B:302:GLU:CD	1:B:341:LYS:CE	2.88	0.42
1:B:368:LYS:O	1:B:369:ILE:HB	2.20	0.42
1:A:310:TYR:OH	1:A:354:GLY:O	2.37	0.42
1:A:358:MET:SD	1:B:125:TYR:CG	3.13	0.42
1:A:376:ARG:O	1:A:379:ALA:HB3	2.19	0.42
1:B:283:ASN:HD21	1:B:285:LYS:HG2	1.85	0.42
1:A:40:ASN:O	1:A:44:VAL:HG23	2.19	0.42
1:A:146:LEU:HD22	1:A:276:ILE:HD13	2.00	0.42
1:A:334:ALA:C	1:A:337:ILE:HG22	2.40	0.42
1:A:383:SER:HB2	1:A:403:ILE:HG23	1.97	0.42
1:B:35:ILE:O	1:B:36:SER:C	2.57	0.42
1:B:37:SER:O	1:B:38:ASP:HB3	2.20	0.42
1:A:167:ALA:C	1:A:209:LEU:HD21	2.40	0.42
1:A:227:TYR:O	1:A:228:ASP:C	2.57	0.42
1:A:303:LYS:O	1:A:307:LEU:CG	2.49	0.42
1:B:13:LEU:HA	1:B:13:LEU:HD23	1.84	0.42
1:A:283:ASN:HD21	1:A:285:LYS:HG2	1.85	0.42
1:B:76:ASP:O	1:B:79:SER:HB3	2.19	0.42
1:B:227:TYR:O	1:B:228:ASP:C	2.57	0.42
1:A:105:GLN:O	1:A:106:GLY:C	2.56	0.41
1:A:302:GLU:CD	1:A:341:LYS:CE	2.88	0.41
1:B:121:LYS:O	1:B:124:GLY:N	2.52	0.41
1:B:202:MET:O	1:B:203:LYS:C	2.59	0.41
1:B:347:LYS:HD2	1:B:350:GLN:HE21	1.84	0.41
1:A:127:VAL:HG12	1:A:128:GLY:N	2.34	0.41
1:B:20:GLU:HA	1:B:20:GLU:OE1	2.20	0.41
1:B:298:GLU:O	1:B:300:ILE:N	2.54	0.41
1:B:377:TRP:CA	1:B:377:TRP:HE3	2.33	0.41
1:A:284:ALA:O	1:A:286:ARG:N	2.52	0.41
1:B:64:LEU:CD1	1:B:303:LYS:HZ3	2.33	0.41
1:B:113:ALA:O	1:B:129:LEU:HD21	2.21	0.41
1:B:116:LEU:HD23	1:B:183:ILE:HD13	2.03	0.41
1:A:1:MET:SD	1:A:37:SER:OG	2.79	0.41
1:A:116:LEU:HD23	1:A:183:ILE:HD13	2.03	0.41
1:A:138:ALA:O	1:A:142:GLN:HB2	2.20	0.41
1:A:379:ALA:C	1:A:380:ALA:O	2.52	0.41
1:A:381:LEU:HB2	1:A:382:ASN:H	1.54	0.41
1:B:299:SER:C	1:B:303:LYS:HE3	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:334:ALA:C	1:B:337:ILE:HG22	2.39	0.41
1:B:373:LYS:HE3	1:B:377:TRP:HH2	1.78	0.41
1:B:383:SER:HB3	1:B:403:ILE:HA	2.03	0.41
1:A:350:GLN:HG3	1:A:351:HIS:CD2	2.56	0.41
1:B:15:GLY:HA2	1:B:67:LYS:HZ2	1.78	0.41
1:B:138:ALA:O	1:B:142:GLN:HB2	2.20	0.41
1:B:284:ALA:O	1:B:286:ARG:N	2.52	0.41
1:B:350:GLN:HG3	1:B:351:HIS:CD2	2.56	0.41
1:B:376:ARG:O	1:B:379:ALA:HB3	2.19	0.41
1:A:368:LYS:O	1:A:369:ILE:HB	2.20	0.41
1:A:381:LEU:N	1:A:381:LEU:CD2	2.62	0.41
1:B:219:ASP:CG	1:B:221:SER:HG	2.21	0.41
1:B:244:ILE:HG21	1:B:257:LEU:CD1	2.51	0.41
1:A:107:SER:C	1:A:109:LYS:N	2.71	0.41
1:A:202:MET:O	1:A:203:LYS:C	2.58	0.41
1:A:333:TYR:O	1:A:337:ILE:HG22	2.21	0.41
1:A:402:ARG:NH1	1:B:402:ARG:CB	2.79	0.41
1:B:383:SER:HB2	1:B:403:ILE:HG23	1.97	0.41
1:A:143:LEU:HA	1:A:143:LEU:HD23	1.81	0.41
1:A:335:GLN:CB	1:A:355:LEU:HD22	2.46	0.41
1:A:379:ALA:HB1	1:A:409:LEU:HD11	2.03	0.41
1:A:430:MET:HA	1:A:430:MET:CE	2.50	0.41
1:B:168:LYS:HE3	1:B:208:VAL:CG1	2.51	0.41
1:A:20:GLU:HA	1:A:20:GLU:OE1	2.20	0.41
1:A:78:LEU:O	1:A:79:SER:C	2.56	0.41
1:A:113:ALA:O	1:A:129:LEU:HD21	2.20	0.41
1:A:116:LEU:HA	1:A:116:LEU:HD12	1.70	0.41
1:A:131:ALA:HB1	1:A:140:TYR:CD2	2.56	0.41
1:A:157:GLU:HB2	1:A:160:ASN:HD22	1.77	0.41
1:A:284:ALA:O	1:A:287:PHE:N	2.54	0.41
1:A:347:LYS:HD2	1:A:350:GLN:HE21	1.84	0.41
1:B:167:ALA:C	1:B:209:LEU:HD21	2.40	0.41
1:B:175:VAL:O	1:B:175:VAL:HG12	2.19	0.41
1:B:300:ILE:CD1	1:B:303:LYS:HZ2	2.33	0.41
1:A:47:LEU:C	1:A:49:ALA:H	2.24	0.41
1:A:168:LYS:HE3	1:A:208:VAL:CG1	2.51	0.41
1:A:179:MET:HA	1:A:179:MET:HE1	1.99	0.41
1:A:310:TYR:HA	1:A:335:GLN:NE2	2.29	0.41
1:B:264:GLY:O	1:B:265:ALA:O	2.39	0.41
1:B:381:LEU:HB2	1:B:382:ASN:H	1.53	0.41
1:A:347:LYS:O	1:A:347:LYS:CG	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:430:MET:O	1:A:432:LYS:N	2.55	0.40
1:B:6:ARG:CA	1:B:292:LEU:HD21	2.51	0.40
1:B:131:ALA:HB1	1:B:140:TYR:CD2	2.56	0.40
1:B:377:TRP:O	1:B:381:LEU:HD11	2.22	0.40
1:B:423:ASN:O	1:B:423:ASN:ND2	2.55	0.40
1:A:35:ILE:O	1:A:36:SER:C	2.57	0.40
1:A:119:PHE:CE1	1:A:123:ARG:NH2	2.88	0.40
1:A:121:LYS:O	1:A:124:GLY:N	2.52	0.40
1:A:264:GLY:O	1:A:265:ALA:O	2.39	0.40
1:A:281:THR:HG21	1:B:315:LYS:HZ2	1.77	0.40
1:A:383:SER:HB3	1:A:403:ILE:HA	2.03	0.40
1:A:420:TRP:O	1:A:421:TYR:C	2.60	0.40
1:B:127:VAL:HG13	1:B:181:ILE:O	2.22	0.40
1:B:312:LYS:O	1:B:315:LYS:N	2.54	0.40
1:B:331:ASP:O	1:B:332:VAL:CB	2.70	0.40
1:A:298:GLU:O	1:A:300:ILE:N	2.54	0.40
1:A:377:TRP:O	1:A:381:LEU:HD11	2.21	0.40
1:A:397:LYS:N	1:A:400:MET:CE	2.85	0.40
1:A:419:GLU:O	1:A:419:GLU:HG3	2.21	0.40
1:B:47:LEU:C	1:B:49:ALA:H	2.24	0.40
1:B:329:LEU:HD22	1:B:392:PRO:CG	2.51	0.40
1:B:349:LEU:N	1:B:352:ILE:HD12	2.37	0.40
1:B:380:ALA:O	1:B:381:LEU:CG	2.70	0.40
1:A:127:VAL:HG13	1:A:181:ILE:O	2.22	0.40
1:A:313:ILE:HG21	1:A:335:GLN:NE2	2.37	0.40
1:B:333:TYR:O	1:B:337:ILE:HG22	2.21	0.40
1:B:83:GLY:CA	1:B:261:VAL:CG1	3.00	0.40
1:B:430:MET:HA	1:B:430:MET:CE	2.51	0.40

All (43) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:360:PRO:CB	1:B:362:PRO:CA[8_454]	1.18	1.02
1:A:362:PRO:CA	1:B:360:PRO:CB[8_454]	1.24	0.96
1:A:200:GLU:CB	1:B:203:LYS:CB[6_555]	1.41	0.79
1:A:203:LYS:CB	1:B:200:GLU:CB[6_555]	1.45	0.75
1:A:360:PRO:CB	1:B:362:PRO:CB[8_454]	1.57	0.63
1:A:362:PRO:CB	1:B:360:PRO:CB[8_454]	1.69	0.51
1:A:362:PRO:C	1:B:360:PRO:CB[8_454]	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:360:PRO:CB	1:B:362:PRO:C[8_454]	1.79	0.41
1:A:367:LEU:CD1	1:B:367:LEU:CD2[8_454]	1.83	0.37
1:A:196:THR:CB	1:B:207:ASP:CB[6_555]	1.85	0.35
1:A:207:ASP:CB	1:B:196:THR:CB[6_555]	1.85	0.35
1:A:200:GLU:O	1:B:200:GLU:O[6_555]	1.89	0.31
1:A:204:GLU:CB	1:B:197:LYS:CA[6_555]	1.90	0.30
1:A:367:LEU:CD2	1:B:367:LEU:CD1[8_454]	1.90	0.30
1:A:197:LYS:CA	1:B:204:GLU:CB[6_555]	1.92	0.28
1:A:207:ASP:CB	1:B:196:THR:CG2[6_555]	1.92	0.28
1:A:196:THR:CG2	1:B:207:ASP:CB[6_555]	1.93	0.27
1:A:200:GLU:CG	1:B:204:GLU:N[6_555]	2.03	0.17
1:A:204:GLU:N	1:B:200:GLU:CG[6_555]	2.03	0.17
1:A:41:VAL:CG1	1:B:41:VAL:CG1[6_554]	2.04	0.16
1:A:207:ASP:OD2	1:B:196:THR:OG1[6_555]	2.04	0.16
1:A:360:PRO:CA	1:B:362:PRO:CA[8_454]	2.04	0.16
1:A:196:THR:OG1	1:B:207:ASP:OD2[6_555]	2.07	0.13
1:A:207:ASP:CG	1:B:196:THR:OG1[6_555]	2.10	0.10
1:A:362:PRO:CA	1:B:360:PRO:CA[8_454]	2.10	0.10
1:A:207:ASP:OD2	1:B:196:THR:CB[6_555]	2.12	0.08
1:A:363:SER:N	1:B:360:PRO:CB[8_454]	2.12	0.08
1:A:196:THR:OG1	1:B:207:ASP:CG[6_555]	2.13	0.07
1:A:196:THR:CB	1:B:207:ASP:OD2[6_555]	2.13	0.07
1:A:197:LYS:CA	1:B:204:GLU:CA[6_555]	2.14	0.06
1:A:204:GLU:CA	1:B:197:LYS:CA[6_555]	2.14	0.06
1:A:200:GLU:C	1:B:200:GLU:O[6_555]	2.15	0.05
1:A:200:GLU:O	1:B:200:GLU:C[6_555]	2.15	0.05
1:A:197:LYS:CB	1:B:204:GLU:CB[6_555]	2.16	0.04
1:A:200:GLU:CG	1:B:200:GLU:O[6_555]	2.16	0.04
1:A:204:GLU:CB	1:B:197:LYS:CB[6_555]	2.16	0.04
1:A:200:GLU:O	1:B:200:GLU:CG[6_555]	2.17	0.03
1:A:200:GLU:CA	1:B:203:LYS:CB[6_555]	2.17	0.03
1:A:200:GLU:OE2	1:B:200:GLU:OE2[6_555]	2.19	0.01
1:A:200:GLU:OE1	1:B:204:GLU:CB[6_555]	2.19	0.01
1:A:200:GLU:CB	1:B:203:LYS:CA[6_555]	2.19	0.01
1:A:203:LYS:CB	1:B:200:GLU:CA[6_555]	2.19	0.01
1:A:204:GLU:CB	1:B:200:GLU:OE1[6_555]	2.19	0.01

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	421/440 (96%)	294 (70%)	87 (21%)	40 (10%)	0 10
1	B	421/440 (96%)	293 (70%)	88 (21%)	40 (10%)	0 10
All	All	842/880 (96%)	587 (70%)	175 (21%)	80 (10%)	0 10

All (80) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	63	VAL
1	A	236	ALA
1	A	265	ALA
1	A	332	VAL
1	A	343	GLY
1	A	347	LYS
1	A	357	ILE
1	A	358	MET
1	A	359	LEU
1	A	369	ILE
1	A	373	LYS
1	A	379	ALA
1	A	380	ALA
1	B	63	VAL
1	B	236	ALA
1	B	265	ALA
1	B	332	VAL
1	B	343	GLY
1	B	347	LYS
1	B	357	ILE
1	B	358	MET
1	B	359	LEU
1	B	369	ILE
1	B	373	LYS
1	B	379	ALA

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Mol	Chain	Res	Type
1	B	380	ALA
1	A	15	GLY
1	A	16	SER
1	A	62	SER
1	A	106	GLY
1	A	110	THR
1	A	177	ASN
1	A	179	MET
1	A	284	ALA
1	A	292	LEU
1	A	300	ILE
1	A	329	LEU
1	A	356	GLY
1	A	368	LYS
1	A	404	ALA
1	B	15	GLY
1	B	16	SER
1	B	62	SER
1	B	106	GLY
1	B	110	THR
1	B	177	ASN
1	B	179	MET
1	B	284	ALA
1	B	292	LEU
1	B	300	ILE
1	B	329	LEU
1	B	356	GLY
1	B	368	LYS
1	B	404	ALA
1	A	195	GLU
1	A	316	LYS
1	B	195	GLU
1	B	316	LYS
1	A	84	GLY
1	A	285	LYS
1	A	315	LYS
1	A	397	LYS
1	B	84	GLY
1	B	285	LYS
1	B	315	LYS
1	B	397	LYS
1	A	18	PRO

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Mol	Chain	Res	Type
1	A	361	THR
1	A	381	LEU
1	A	431	VAL
1	B	18	PRO
1	B	361	THR
1	B	381	LEU
1	B	431	VAL
1	A	158	PRO
1	A	164	ILE
1	B	158	PRO
1	B	164	ILE
1	A	163	PRO
1	B	163	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	365/377 (97%)	340 (93%)	25 (7%)	16	44
1	B	365/377 (97%)	340 (93%)	25 (7%)	16	44
All	All	730/754 (97%)	680 (93%)	50 (7%)	16	44

All (50) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	16	SER
1	A	17	THR
1	A	59	LYS
1	A	72	SER
1	A	136	ARG
1	A	143	LEU
1	A	200	GLU
1	A	250	THR
1	A	283	ASN

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Mol	Chain	Res	Type
1	A	297	ILE
1	A	310	TYR
1	A	311	ASP
1	A	328	THR
1	A	331	ASP
1	A	349	LEU
1	A	357	ILE
1	A	359	LEU
1	A	361	THR
1	A	374	ILE
1	A	377	TRP
1	A	381	LEU
1	A	384	MET
1	A	386	TYR
1	A	423	ASN
1	B	1	MET
1	B	16	SER
1	B	17	THR
1	B	59	LYS
1	B	72	SER
1	B	136	ARG
1	B	143	LEU
1	B	200	GLU
1	B	250	THR
1	B	283	ASN
1	B	297	ILE
1	B	310	TYR
1	B	311	ASP
1	B	328	THR
1	B	331	ASP
1	B	349	LEU
1	B	357	ILE
1	B	359	LEU
1	B	361	THR
1	B	374	ILE
1	B	377	TRP
1	B	381	LEU
1	B	384	MET
1	B	386	TYR
1	B	423	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (26) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	4	ASN
1	A	31	GLN
1	A	40	ASN
1	A	91	ASN
1	A	148	ASN
1	A	160	ASN
1	A	190	HIS
1	A	224	GLN
1	A	234	HIS
1	A	235	GLN
1	A	283	ASN
1	A	350	GLN
1	A	351	HIS
1	B	4	ASN
1	B	31	GLN
1	B	40	ASN
1	B	91	ASN
1	B	148	ASN
1	B	160	ASN
1	B	190	HIS
1	B	224	GLN
1	B	234	HIS
1	B	235	GLN
1	B	283	ASN
1	B	350	GLN
1	B	351	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 monosaccharides 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

Unable to reproduce the depositors R factor - this section is therefore empty.

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

Unable to reproduce the depositors R factor - this section is therefore empty.

6.3 Carbohydrates

Unable to reproduce the depositors R factor - this section is therefore empty.

6.4 Ligands

Unable to reproduce the depositors R factor - this section is therefore empty.

6.5 Other polymers

Unable to reproduce the depositors R factor - this section is therefore empty.