Full wwPDB X-ray Structure Validation Report (i)

Oct 16, 2023 – 07:42 AM EDT

PDB ID	:	1LTX
Title	:	Structure of Rab Escort Protein-1 in complex with Rab geranylgeranyl transferase and isoprenoid
Authors	:	Pylypenko, O.; Rak, A.; Reents, R.; Niculae, A.; Thoma, N.H.; Waldmann, H.; Schlichting, I.; Goody, R.S.; Alexandrov, K.
Deposited on	:	2002-05-21
Resolution	:	2.70 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 (i) symbol.

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

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

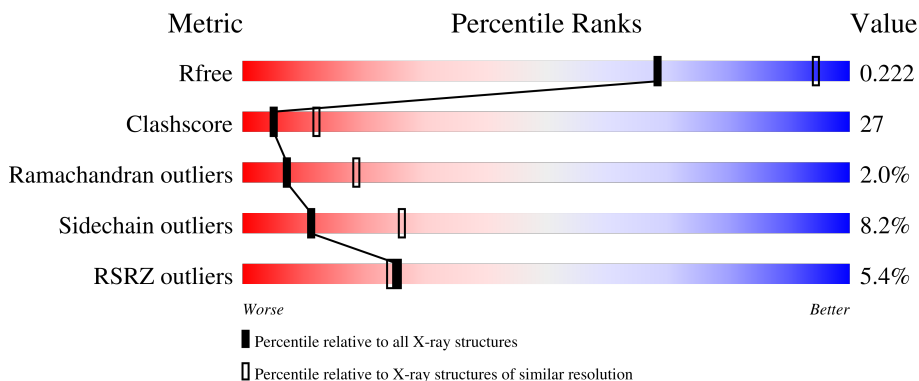|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1   Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.70 Å.

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

Metric	Percentile Ranks	Value
Rfree		0.222
Clashscore		27
Ramachandran outliers		2.0%
Sidechain outliers		8.2%
RSRZ outliers		5.4%

Worse .... *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)

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% 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	567	6% / 47% / 42% / 6% / 5%
2	B	331	3% / 48% / 42% / 5% / •
3	R	650	4% / 44% / 29% / • / 24%
4	P	4	75% / 50% / 50%

2 Entry composition ⓘ

There are 8 unique types of molecules in this entry. The entry contains 10874 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 RAB GERANYLGERANYLTRANSFERASE ALPHA SUBUNIT.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	536	Total 4291	C 2709	N 755	O 799	S 28	0	0	0

- Molecule 2 is a protein called RAB GERANYLGERANYLTRANSFERASE BETA SUBUNIT.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	318	Total 2477	C 1582	N 411	O 464	S 20	0	0	0

- Molecule 3 is a protein called Rab Escort Protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	R	494	Total 3944	C 2494	N 663	O 758	S 29	0	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	231	LYS	GLN	engineered mutation	UNP P37727
R	473	THR	ALA	engineered mutation	UNP P37727
R	483	ALA	GLY	engineered mutation	UNP P37727

- Molecule 4 is a protein called AAAA.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	P	4	Total 42	C 24	N 8	O 10	0	4	0

- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	B	1	Total 1	Zn 1	0	0

- Molecule 6 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	R	1	Total 1	Cl 1	0	0

- Molecule 7 is FARNESYL (three-letter code: FAR) (formula: $C_{15}H_{26}$).

FAR
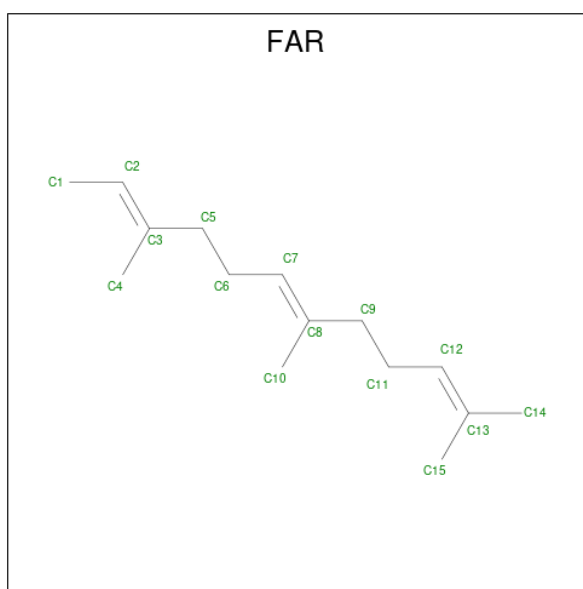
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	P	1	Total 15	C 15	0	0

- Molecule 8 is water.

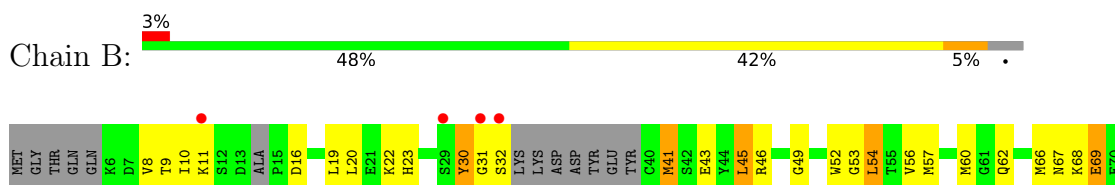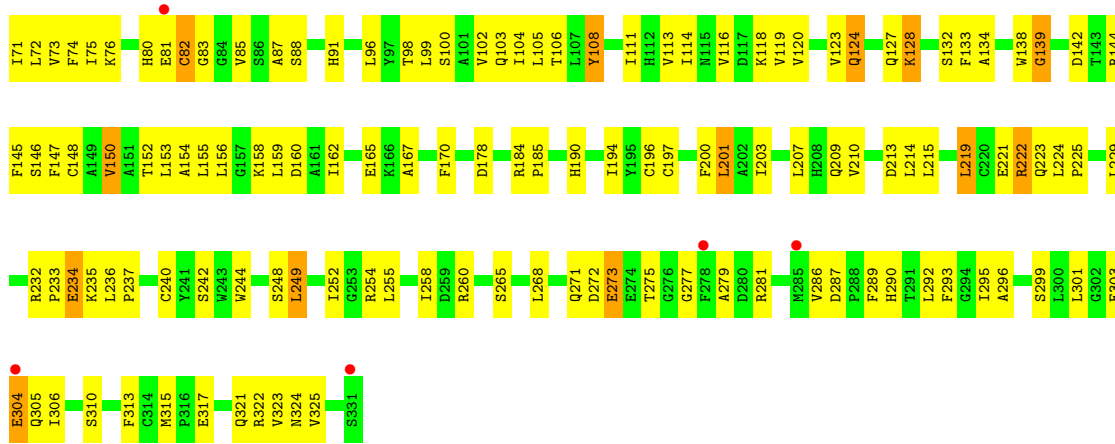| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	A	41	Total 41	O 41	0	0
8	B	20	Total 20	O 20	0	0
8	R	41	Total 41	O 41	0	0
8	P	1	Total 1	O 1	0	0

3 Residue-property plots ⓘ

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

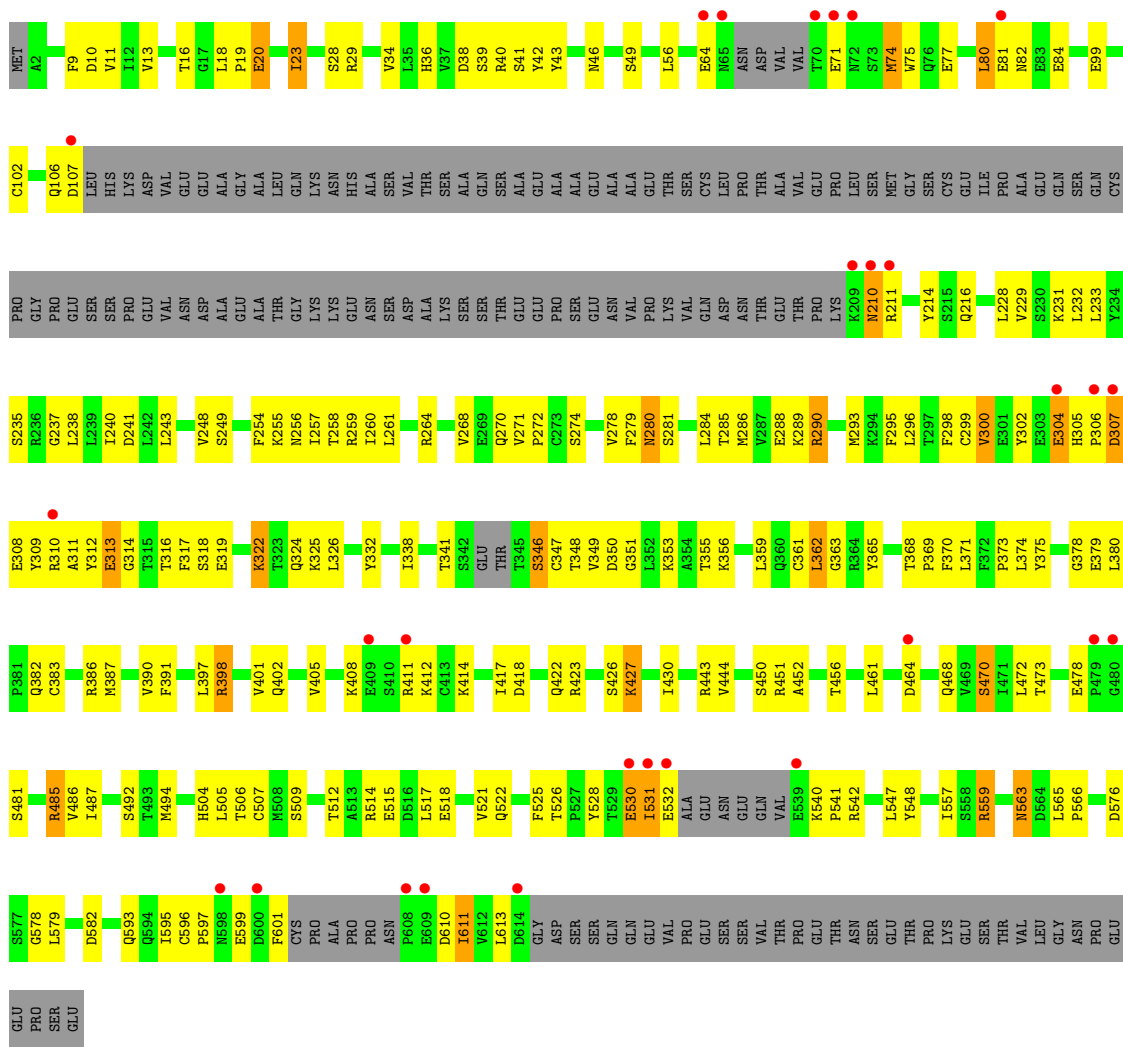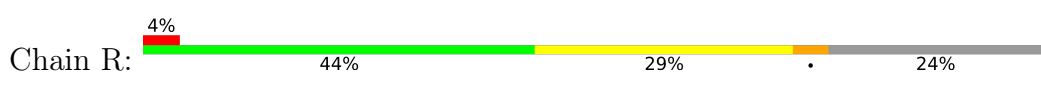• Molecule 1: RAB GERANYLGERANYLTRANSFERASE ALPHA SUBUNIT

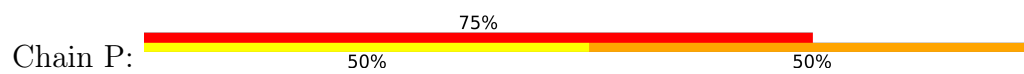• Molecule 2: RAB GERANYLGERANYLTRANSFERASE BETA SUBUNIT

I71 L72 V73 F74 I75 K76 H80 E81 C82 G83 G84 V85 S86 A87 S88 H91 L96 Y97 T98 L99 S100 A101 V102 Q103 I104 L105 T106 L107 Y108 I111 H112 V113 I114 N115 V116 D117 K118 V119 V120 V123 Q124 Q127 K128 S132 F133 A134 W138 G139 D142 T143 R144

F145 S146 F147 C148 A149 V150 A151 T152 L153 A154 L155 L156 G157 K158 L159 D160 A161 I162 E165 K166 A167 F170 D178 R184 P185 H190 I194 Y195 C196 C197 F200 L201 A202 I203 L207 H208 Q209 V210 D213 L214 L215 L219 C220 E221 R222 Q223 L224 P225 L229

R232 P233 E234 K235 L236 P237 C240 Y241 S242 W243 W244 S248 L249 I252 G253 R254 L255 I258 D259 R260 S265 L268 Q271 D272 E273 T275 G276 G277 F278 A279 D280 R281 M285 V286 D287 P288 F289 H290 T291 L292 F293 G294 I295 A296 S299 L300 L301 G302 E303

E304 Q305 I306 S310 F313 C314 M315 P316 E317 Q321 R322 V323 N324 V325 S331

● Molecule 3: Rab Escort Protein 1

Chain R:

MET A2 F9 D10 V11 I12 V13 T16 G17 L18 P19 E20 I23 S28 R29 V34 L35 H36 V37 D38 S39 R40 S41 Y42 Y43 N46 S49 L56 E64 N65 ASN ASP VAL VAL I70 E71 N72 S73 M74 W75 Q76 E77 L80 E81 N82 E83 E84 E99

C102 Q106 D107 LEU HIS LYS ASP VAL GLU VAL ASN ASP ALA GLU GLY ALA LEU GLN LYS ASN HIS ALA SER VAL THR SER ALA GLN SER ALA GLU GLU ALA GLU GLU ALA GLU THR SER LEU PRO THR ALA VAL GLU PRO LEU SER MET GLY SER CYS GLU ILE PRO ALA GLU GLN SER GLN CYS

PRO GLY PRO GLU SER SER PRO GLU GLU VAL ASN ASP ALA GLU ALA GLY THR GLY LYS LYS GLU ASN HIS ALA SER VAL THR SER ALA GLN SER ALA ASP ALA LYS SER SER THR GLU GLU PRO SER GLU ASN VAL PRO LYS VAL GLN ASP ASN THR GLU THR PRO LYS K209 N210 R211 Y214 S215 Q216 L228 V229 S230 K231 L232 L233 Y234

S235 R236 G237 L238 L239 I240 D241 L242 L243 V248 S249 F254 K255 N256 I257 T258 R259 I260 L261 R264 V268 E269 Q270 V271 P272 C273 S274 V278 F279 N280 S281 L284 T285 M286 V287 E288 K289 R290 M293 K294 F295 L296 T297 F298 C299 V300 E301 Y302 E303 E304 H305 P306 D307

E308 Y309 R310 A311 Y312 E313 G314 T315 T316 F317 S318 E319 K322 T323 Q324 K325 L326 Y332 I338 T341 S342 GLU THR T345 S346 C347 T348 V349 D350 G351 L352 K353 A354 T355 K356 L359 Q360 C361 L362 G363 R364 Y365 T368 P369 F370 L371 F372 P373 L374 Y375 G378 E379 L380

P381 Q382 C383 R386 M387 V390 F391 L397 R398 V401 Q402 V405 K408 E409 S410 R411 K412 C413 K414 I417 D418 Q422 R423 S426 K427 I430 R443 V444 S450 R451 A452 T456 L461 D464 Q468 V469 S470 I471 L472 T473 E478 P479 G480

S481 R485 V486 I487 S492 T493 M494 H504 L505 T506 C507 N508 S509 T512 A513 R514 E515 D516 L517 E518 V521 Q522 F525 T526 P527 Y528 T529 E530 I531 E532 ALA GLU ASN GLU GLN VAL E539 K540 P541 R542 L547 Y548 I557 S558 R559 N563 D564 L565 P566 D576

S577 G578 L579 D582 Q593 E594 I595 C596 P597 N598 E599 D600 F601 CYS PRO ALA PRO PRO ASN P608 E609 D610 I611 V612 L613 D614 GLY ASP SER SER GLN GLU VAL PRO GLU SER SER VAL THR PRO GLU THR ASN SER GLU GLU THR PRO LYS SER GLU SER THR VAL LEU GLY ASN PRO GLU

GLU PRO SER GLU

● Molecule 4: AAAA

Chain P:

75%

50%   50%

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants	68.70Å 197.30Å 85.30Å	
a, b, c, α, β, γ	90.00° 112.80° 90.00°	Depositor
Resolution (Å)	19.74 – 2.70	Depositor
	19.72 – 2.70	EDS
% Data completeness	94.9 (19.74-2.70)	Depositor
(in resolution range)	94.9 (19.72-2.70)	EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	3.13 (at 2.71Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.224 , 0.272	Depositor
	0.219 , 0.222	DCC
R_{free} test set	2739 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å^2)	51.7	Xtriage
Anisotropy	0.389	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 55.6	EDS
L-test for twinning[2]	$< |L| > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.028 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	10874	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.04% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, CL, FAR

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	0.40	0/4380	0.61	1/5953 (0.0%)
2	B	0.38	0/2532	0.59	0/3428
3	R	0.44	0/4016	0.66	0/5422
4	P	0.56	0/40	0.47	0/50
All	All	0.41	0/10968	0.62	1/14853 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	193	PRO	N-CA-CB	5.65	110.08	103.30

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	4291	0	4252	247	0
2	B	2477	0	2434	142	0
3	R	3944	0	3891	194	0
4	P	42	0	38	9	0
5	B	1	0	0	0	0
6	R	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	P	15	0	26	3	0
8	A	41	0	0	2	0
8	B	20	0	0	0	0
8	P	1	0	0	0	0
8	R	41	0	0	2	0
All	All	10874	0	10641	575	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 27.

All (575) 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)
4:P:12[B]:ALA:OXT	4:P:12[B]:ALA:O	1.73	1.05
1:A:71:GLU:HA	1:A:74:GLN:HE21	1.25	1.00
3:R:259:ARG:HG3	3:R:470:SER:HB3	1.44	0.99
3:R:106:GLN:HB2	3:R:214:TYR:HB3	1.46	0.97
3:R:316:THR:HG22	3:R:318:SER:H	1.27	0.96
2:B:224:LEU:HD12	2:B:237:PRO:HG3	1.47	0.95
3:R:472:LEU:HD23	3:R:473:THR:N	1.83	0.94
1:A:356:LEU:H	1:A:356:LEU:HD22	1.30	0.93
2:B:20:LEU:HD11	2:B:305:GLN:HB3	1.48	0.93
3:R:450:SER:OG	3:R:509:SER:HB3	1.70	0.92
1:A:492:GLN:HG2	1:A:514:LEU:HD12	1.52	0.92
3:R:305:HIS:HB3	3:R:308:GLU:HG3	1.51	0.92
3:R:478:GLU:HB2	3:R:481:SER:HB2	1.55	0.87
1:A:160:PRO:HB2	1:A:191:LEU:HD21	1.53	0.87
3:R:559:ARG:HH21	3:R:565:LEU:HB2	1.41	0.85
3:R:368:THR:HG23	3:R:369:PRO:HD2	1.57	0.85
4:P:12[A]:ALA:HA	7:P:1428:FAR:H42	1.58	0.85
1:A:163:GLU:HG2	1:A:183:TYR:OH	1.76	0.84
3:R:368:THR:HG22	3:R:370:PHE:H	1.39	0.84
1:A:452:ASP:OD1	1:A:474:ARG:HD3	1.80	0.82
2:B:43:GLU:HA	2:B:46:ARG:HG2	1.60	0.81
3:R:373:PRO:HG2	3:R:380:LEU:HD21	1.64	0.79
1:A:293:ARG:HH11	1:A:293:ARG:HB3	1.46	0.79
1:A:321:ILE:HG12	1:A:328:GLN:HG2	1.63	0.79
2:B:224:LEU:HD12	2:B:237:PRO:CG	2.13	0.78
2:B:100:SER:O	2:B:104:ILE:HG13	1.82	0.78
3:R:349:VAL:O	3:R:353:LYS:HG3	1.83	0.78
2:B:232:ARG:NH2	2:B:235:LYS:HZ1	1.82	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:120:VAL:HG21	2:B:158:LYS:HG2	1.65	0.78
1:A:299:VAL:HG21	1:A:484:ALA:HA	1.66	0.78
2:B:150:VAL:HG22	2:B:159:LEU:HD11	1.65	0.77
3:R:210:ASN:N	3:R:210:ASN:HD22	1.82	0.77
3:R:596:CYS:HB3	3:R:599:GLU:HG3	1.67	0.77
1:A:293:ARG:HB3	1:A:293:ARG:NH1	2.01	0.75
3:R:305:HIS:HB3	3:R:308:GLU:CG	2.17	0.75
2:B:194:ILE:HD13	2:B:215:LEU:HD11	1.68	0.75
2:B:71:ILE:O	2:B:75:ILE:HG12	1.85	0.75
1:A:44:LEU:HD22	1:A:75:HIS:CD2	2.22	0.74
3:R:559:ARG:NH2	3:R:565:LEU:HB2	2.02	0.74
1:A:212:LEU:O	1:A:215:VAL:HG12	1.87	0.73
1:A:101:ARG:HH12	1:A:134:ARG:HH21	1.36	0.73
1:A:418:ARG:O	1:A:422:LEU:HG	1.88	0.73
2:B:52:TRP:CZ3	4:P:12[B]:ALA:OXT	2.41	0.73
1:A:343:ARG:HH21	1:A:461:GLN:HG3	1.54	0.72
1:A:240:GLU:OE2	1:A:241:PRO:HD2	1.90	0.72
3:R:281:SER:OG	3:R:284:LEU:HD13	1.88	0.72
1:A:88:LEU:HD13	1:A:91:ALA:HB3	1.71	0.72
1:A:168:ASP:O	1:A:172:THR:HG23	1.90	0.71
3:R:368:THR:HG23	3:R:369:PRO:CD	2.19	0.71
3:R:84:GLU:OE1	3:R:408:LYS:HD2	1.91	0.71
3:R:258:THR:OG1	3:R:468:GLN:HB2	1.90	0.70
1:A:382:LYS:HE2	1:A:383:TRP:CE2	2.26	0.70
3:R:231:LYS:HE2	3:R:578:GLY:O	1.90	0.70
1:A:96:LEU:HD13	1:A:113:ARG:HB2	1.71	0.70
1:A:217:ASN:HD22	1:A:218:ALA:N	1.90	0.70
1:A:171:ILE:HA	1:A:177:ASN:ND2	2.06	0.69
1:A:131:LEU:O	1:A:131:LEU:HD23	1.93	0.69
2:B:150:VAL:HG13	2:B:203:ILE:HG21	1.75	0.68
1:A:93:LEU:H	1:A:93:LEU:HD12	1.59	0.68
3:R:412:LYS:HA	3:R:566:PRO:HB3	1.76	0.68
1:A:44:LEU:HD13	1:A:75:HIS:CE1	2.28	0.68
3:R:443:ARG:HD3	3:R:563:ASN:OD1	1.94	0.67
1:A:261:PHE:CD1	1:A:265:LEU:HD11	2.29	0.67
2:B:232:ARG:NE	2:B:235:LYS:HZ2	1.93	0.67
1:A:44:LEU:HD12	1:A:44:LEU:H	1.60	0.67
1:A:527:GLN:HB3	1:A:528:PRO:HD3	1.77	0.67
2:B:248:SER:O	2:B:252:ILE:HG12	1.95	0.66
3:R:559:ARG:NH2	3:R:565:LEU:CB	2.58	0.66
2:B:222:ARG:HA	2:B:222:ARG:NH1	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:44:LEU:HA	1:A:72:VAL:HG12	1.78	0.66
3:R:373:PRO:CG	3:R:380:LEU:HD21	2.25	0.66
3:R:313:GLU:HG3	3:R:349:VAL:CG1	2.25	0.66
3:R:347:CYS:SG	3:R:349:VAL:HG22	2.36	0.66
1:A:71:GLU:O	1:A:74:GLN:HG2	1.96	0.66
3:R:304:GLU:HB3	3:R:305:HIS:HD2	1.61	0.66
3:R:49:SER:HB2	3:R:378:GLY:HA3	1.79	0.65
3:R:82:ASN:O	3:R:408:LYS:HB2	1.96	0.65
2:B:219:LEU:HD23	2:B:249:LEU:HD13	1.78	0.65
3:R:512:THR:OG1	3:R:515:GLU:HG3	1.97	0.65
2:B:8:VAL:HG22	2:B:9:THR:N	2.12	0.64
1:A:151:PHE:O	1:A:155:GLN:HG2	1.97	0.64
1:A:183:TYR:CE1	1:A:187:LEU:HD21	2.32	0.64
1:A:66:TRP:HE3	1:A:112:HIS:ND1	1.95	0.64
1:A:166:PHE:O	1:A:170:LEU:HD23	1.96	0.64
2:B:52:TRP:HZ3	4:P:12[B]:ALA:OXT	1.80	0.64
1:A:128:GLU:HB3	1:A:152:VAL:HG11	1.79	0.64
2:B:83:GLY:HA2	2:B:118:LYS:HB3	1.78	0.64
3:R:559:ARG:HH21	3:R:565:LEU:CB	2.11	0.64
1:A:530:VAL:HG22	1:A:530:VAL:O	1.97	0.64
3:R:9:PHE:O	3:R:426:SER:HA	1.97	0.64
3:R:285:THR:OG1	3:R:288:GLU:HG3	1.98	0.64
3:R:259:ARG:NH1	3:R:461:LEU:HD23	2.12	0.63
1:A:402:LYS:O	1:A:406:GLN:HG3	1.98	0.63
1:A:60:PRO:HG3	1:A:103:ASN:ND2	2.13	0.63
3:R:280:ASN:N	3:R:280:ASN:HD22	1.97	0.63
1:A:224:ASN:N	1:A:224:ASN:HD22	1.96	0.63
1:A:270:ARG:HE	2:B:165:GLU:CD	2.01	0.63
1:A:40:GLN:HE22	1:A:41:ALA:HB2	1.64	0.62
3:R:280:ASN:HD22	3:R:280:ASN:H	1.46	0.62
1:A:220:PHE:O	3:R:290:ARG:HG2	1.99	0.62
3:R:324:GLN:HB2	3:R:326:LEU:HD23	1.82	0.62
2:B:268:LEU:O	2:B:271:GLN:HG2	1.98	0.62
3:R:238:LEU:HD13	3:R:582:ASP:OD2	1.99	0.62
2:B:20:LEU:HD11	2:B:305:GLN:CB	2.27	0.61
2:B:279:ALA:HB2	2:B:286:VAL:HG12	1.83	0.61
1:A:233:ARG:HD2	8:A:584:HOH:O	1.99	0.61
1:A:97:GLU:HB3	1:A:101:ARG:NH1	2.15	0.60
1:A:274:LEU:HD22	1:A:320:VAL:CG1	2.30	0.60
1:A:557:GLU:O	1:A:560:PRO:HD3	2.02	0.60
1:A:172:THR:HG22	3:R:279:PHE:CE2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:384:CYS:O	1:A:388:ILE:HG13	2.01	0.60
1:A:97:GLU:O	1:A:101:ARG:HD3	2.00	0.60
1:A:55:ILE:HD12	1:A:55:ILE:H	1.67	0.60
1:A:174:ASN:HB2	1:A:177:ASN:HD22	1.67	0.60
3:R:526:THR:HG23	3:R:540:LYS:HE3	1.83	0.60
1:A:102:VAL:HG13	1:A:103:ASN:ND2	2.17	0.60
3:R:506:THR:HG22	3:R:507:CYS:N	2.17	0.60
1:A:29:GLN:O	1:A:32:THR:HB	2.02	0.60
3:R:313:GLU:HG3	3:R:349:VAL:HG11	1.84	0.60
1:A:418:ARG:NH2	2:B:223:GLN:O	2.35	0.59
2:B:54:LEU:HD12	2:B:66:MET:HG3	1.84	0.59
1:A:270:ARG:NH1	1:A:270:ARG:HB2	2.17	0.59
1:A:289:THR:HG23	1:A:294:ASN:HA	1.83	0.59
3:R:304:GLU:HB3	3:R:305:HIS:CD2	2.37	0.59
1:A:451:LYS:HB2	1:A:453:LEU:HG	1.84	0.59
1:A:71:GLU:HA	1:A:74:GLN:NE2	2.08	0.59
1:A:75:HIS:C	1:A:76:LEU:HD12	2.22	0.59
2:B:119:VAL:O	2:B:123:VAL:HG23	2.03	0.59
1:A:66:TRP:HE3	1:A:112:HIS:HD1	1.44	0.59
3:R:237:GLY:H	3:R:240:ILE:CG2	2.15	0.59
3:R:316:THR:HG22	3:R:318:SER:N	2.10	0.59
1:A:289:THR:CG2	1:A:294:ASN:HA	2.33	0.59
3:R:40:ARG:HG2	3:R:42:TYR:CZ	2.38	0.58
3:R:237:GLY:H	3:R:240:ILE:HG22	1.67	0.58
2:B:102:VAL:HG21	2:B:152:THR:HG23	1.85	0.58
3:R:351:GLY:O	3:R:355:THR:HG23	2.03	0.58
2:B:83:GLY:CA	2:B:118:LYS:HB3	2.33	0.58
3:R:210:ASN:N	3:R:210:ASN:ND2	2.51	0.58
2:B:229:LEU:HD12	2:B:242:SER:HA	1.86	0.58
3:R:228:LEU:O	3:R:451:ARG:HD3	2.03	0.58
1:A:412:LYS:HE2	1:A:422:LEU:HB2	1.85	0.58
2:B:317:GLU:O	2:B:321:GLN:HG3	2.03	0.58
1:A:559:LEU:HB3	1:A:562:VAL:HG23	1.85	0.58
1:A:264:PRO:HG3	1:A:298:HIS:CE1	2.39	0.58
2:B:222:ARG:HA	2:B:222:ARG:HH11	1.69	0.58
1:A:82:PRO:HA	1:A:85:SER:OG	2.04	0.57
1:A:444:ARG:HD2	1:A:464:LEU:O	2.03	0.57
3:R:368:THR:CG2	3:R:369:PRO:CD	2.81	0.57
1:A:55:ILE:HD12	1:A:55:ILE:N	2.20	0.57
3:R:452:ALA:HB3	3:R:505:LEU:HB2	1.87	0.57
3:R:243:LEU:HB3	3:R:249:SER:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:66:TRP:CE3	1:A:112:HIS:ND1	2.69	0.57
3:R:579:LEU:O	3:R:579:LEU:HD23	2.04	0.57
1:A:260:CYS:HA	1:A:298:HIS:O	2.05	0.57
3:R:28:SER:HB3	3:R:391:PHE:HB2	1.87	0.56
3:R:248:VAL:CG1	3:R:383:CYS:HB3	2.35	0.56
3:R:472:LEU:HD23	3:R:473:THR:H	1.63	0.56
2:B:67:ASN:O	2:B:71:ILE:HG13	2.04	0.56
2:B:8:VAL:HG22	2:B:9:THR:H	1.70	0.56
3:R:506:THR:O	3:R:507:CYS:HB3	2.05	0.56
2:B:232:ARG:CZ	2:B:235:LYS:NZ	2.69	0.56
3:R:248:VAL:HG13	3:R:383:CYS:HB3	1.86	0.56
1:A:72:VAL:O	1:A:75:HIS:HB3	2.04	0.56
1:A:64:THR:HA	1:A:67:ASN:HD22	1.70	0.56
1:A:289:THR:H	1:A:294:ASN:ND2	2.04	0.56
3:R:579:LEU:HD23	3:R:579:LEU:C	2.26	0.56
1:A:241:PRO:HB2	1:A:244:VAL:HG21	1.88	0.56
3:R:374:LEU:O	3:R:375:TYR:HB2	2.05	0.56
1:A:72:VAL:HG23	1:A:73:LEU:N	2.21	0.55
1:A:226:GLN:HG2	1:A:383:TRP:CZ2	2.42	0.55
2:B:106:THR:HA	2:B:111:ILE:HD11	1.88	0.55
1:A:88:LEU:HD13	1:A:91:ALA:CB	2.37	0.55
3:R:295:PHE:O	3:R:298:PHE:HB3	2.06	0.55
3:R:304:GLU:C	3:R:305:HIS:HD2	2.10	0.55
2:B:128:LYS:HD2	2:B:128:LYS:N	2.21	0.55
2:B:116:VAL:O	2:B:120:VAL:HG23	2.07	0.55
2:B:240:CYS:HB3	2:B:290:HIS:CD2	2.41	0.55
1:A:44:LEU:HD22	1:A:75:HIS:CG	2.42	0.55
1:A:356:LEU:HD21	1:A:394:ALA:O	2.07	0.55
2:B:232:ARG:CZ	2:B:235:LYS:HZ1	2.19	0.55
3:R:80:LEU:HD13	3:R:81:GLU:H	1.72	0.55
3:R:304:GLU:C	3:R:306:PRO:HD3	2.26	0.55
1:A:160:PRO:HB2	1:A:191:LEU:CD2	2.33	0.55
2:B:303:GLU:HG2	2:B:306:ILE:CD1	2.37	0.55
1:A:310:ASN:OD1	1:A:312:GLN:HG2	2.06	0.55
1:A:88:LEU:O	1:A:91:ALA:HB3	2.07	0.55
3:R:102:CYS:SG	3:R:107:ASP:HB3	2.47	0.55
2:B:295:ILE:HG23	2:B:306:ILE:HG12	1.89	0.55
1:A:137:GLU:OE1	1:A:170:LEU:HD11	2.06	0.54
3:R:312:TYR:C	3:R:314:GLY:H	2.10	0.54
1:A:369:GLU:HG3	1:A:370:SER:N	2.23	0.54
2:B:134:ALA:HB1	2:B:139:GLY:HA2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:153:LEU:HD11	2:B:162:ILE:HG23	1.89	0.54
1:A:270:ARG:HB2	1:A:270:ARG:HH11	1.72	0.54
1:A:127:ARG:HA	1:A:130:GLU:OE2	2.07	0.54
1:A:345:SER:O	1:A:349:GLU:HG2	2.07	0.54
2:B:88:SER:HB3	2:B:91:HIS:CD2	2.42	0.54
1:A:225:ASP:OD2	1:A:227:SER:HB2	2.07	0.54
2:B:68:LYS:HG2	2:B:72:LEU:HD13	1.88	0.54
1:A:315:GLN:HB3	1:A:334:LEU:HD23	1.90	0.54
1:A:220:PHE:CD2	3:R:286:MET:HG3	2.43	0.54
1:A:37:GLN:HA	1:A:37:GLN:NE2	2.23	0.54
2:B:213:ASP:OD2	2:B:254:ARG:NH1	2.40	0.54
3:R:317:PHE:CD2	3:R:351:GLY:HA3	2.43	0.54
1:A:357:SER:O	1:A:359:GLU:N	2.41	0.53
1:A:366:SER:O	1:A:369:GLU:HG2	2.08	0.53
3:R:338:ILE:N	3:R:338:ILE:HD12	2.23	0.53
3:R:368:THR:CG2	3:R:369:PRO:N	2.70	0.53
1:A:389:ILE:HG23	1:A:404:THR:HG23	1.90	0.53
1:A:89:VAL:HG12	1:A:90:LYS:N	2.22	0.53
2:B:111:ILE:HG22	2:B:111:ILE:O	2.08	0.53
3:R:368:THR:HG22	3:R:369:PRO:N	2.23	0.53
1:A:38:LYS:NZ	1:A:38:LYS:HB3	2.24	0.53
1:A:356:LEU:H	1:A:356:LEU:CD2	2.09	0.53
2:B:303:GLU:HG2	2:B:306:ILE:HD13	1.91	0.53
2:B:96:LEU:HD23	2:B:148:CYS:SG	2.49	0.53
2:B:159:LEU:O	2:B:159:LEU:HG	2.09	0.53
3:R:478:GLU:H	3:R:478:GLU:CD	2.11	0.53
1:A:80:LYS:CD	1:A:80:LYS:H	2.22	0.53
1:A:140:GLU:CD	1:A:140:GLU:H	2.12	0.53
1:A:506:ASN:H	1:A:531:SER:HB2	1.74	0.53
1:A:248:VAL:HG21	1:A:329:LYS:HB3	1.91	0.52
2:B:304:GLU:CD	2:B:304:GLU:H	2.12	0.52
1:A:131:LEU:HA	1:A:134:ARG:NH1	2.25	0.52
1:A:545:LEU:O	1:A:548:GLU:HG3	2.10	0.52
2:B:43:GLU:HA	2:B:46:ARG:CG	2.35	0.52
1:A:142:ASN:OD1	1:A:144:HIS:HB2	2.10	0.52
1:A:148:TYR:O	1:A:151:PHE:HB3	2.10	0.52
3:R:379:GLU:HG2	8:R:906:HOH:O	2.09	0.52
3:R:518:GLU:O	3:R:522:GLN:HG3	2.10	0.52
1:A:392:MET:SD	1:A:400:TYR:HB3	2.49	0.52
1:A:45:ASP:OD1	1:A:47:SER:N	2.42	0.52
1:A:545:LEU:C	1:A:545:LEU:HD12	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:456:THR:HG21	3:R:525:PHE:CE2	2.45	0.52
1:A:67:ASN:OD1	2:B:138:TRP:CD1	2.63	0.52
3:R:411:ARG:HH11	3:R:411:ARG:HG2	1.75	0.52
1:A:80:LYS:H	1:A:80:LYS:HD3	1.74	0.51
3:R:260:ILE:N	3:R:260:ILE:HD12	2.25	0.51
3:R:274:SER:O	3:R:278:VAL:HG23	2.10	0.51
1:A:77:GLU:HB2	1:A:119:ARG:HH12	1.75	0.51
2:B:43:GLU:OE2	2:B:46:ARG:HG3	2.11	0.51
3:R:405:VAL:O	3:R:414:LYS:HG2	2.11	0.51
3:R:485:ARG:O	3:R:485:ARG:HG3	2.10	0.51
1:A:87:ALA:O	1:A:90:LYS:HG2	2.10	0.51
1:A:174:ASN:HB2	1:A:177:ASN:ND2	2.25	0.51
1:A:176:SER:HA	1:A:225:ASP:OD1	2.10	0.51
1:A:70:ARG:HG3	1:A:115:TRP:CZ3	2.46	0.51
1:A:444:ARG:O	1:A:465:VAL:HG13	2.10	0.51
3:R:295:PHE:CE1	3:R:299:CYS:SG	3.04	0.51
3:R:237:GLY:O	3:R:240:ILE:HG22	2.10	0.51
3:R:39:SER:O	3:R:398:ARG:HA	2.11	0.51
3:R:84:GLU:HG3	3:R:408:LYS:CD	2.41	0.51
3:R:307:ASP:HA	3:R:310:ARG:HG2	1.92	0.51
2:B:114:ILE:HD12	2:B:114:ILE:O	2.11	0.51
3:R:485:ARG:HG2	3:R:485:ARG:HH11	1.76	0.51
1:A:52:THR:OG1	1:A:69:ARG:NH1	2.43	0.51
1:A:241:PRO:O	1:A:244:VAL:HG23	2.11	0.51
3:R:386:ARG:O	3:R:390:VAL:HG23	2.11	0.51
1:A:52:THR:O	1:A:56:LEU:HB2	2.11	0.50
1:A:233:ARG:HD3	1:A:390:LEU:HD13	1.92	0.50
2:B:80:HIS:O	2:B:82:CYS:N	2.43	0.50
3:R:341:THR:HB	3:R:346:SER:HB3	1.93	0.50
2:B:197:CYS:O	2:B:201:LEU:HD22	2.11	0.50
1:A:77:GLU:OE2	1:A:85:SER:HB2	2.11	0.50
1:A:40:GLN:HE22	1:A:41:ALA:CB	2.25	0.50
3:R:46:ASN:O	3:R:229:VAL:HG23	2.10	0.50
3:R:74:MET:SD	3:R:75:TRP:N	2.84	0.50
3:R:13:VAL:HB	3:R:36:HIS:CD2	2.46	0.50
1:A:232:HIS:CE1	1:A:236:LEU:HD21	2.47	0.50
1:A:447:HIS:O	1:A:448:LEU:HD23	2.11	0.50
1:A:322:TRP:O	1:A:326:ASP:HA	2.12	0.50
1:A:92:GLU:O	1:A:95:PHE:N	2.45	0.50
3:R:272:PRO:HG2	3:R:284:LEU:HD11	1.94	0.50
2:B:234:GLU:O	2:B:235:LYS:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:261:LEU:HD21	3:R:461:LEU:HD22	1.94	0.49
3:R:506:THR:HG22	3:R:507:CYS:H	1.76	0.49
1:A:559:LEU:HB3	1:A:562:VAL:CG2	2.41	0.49
1:A:93:LEU:H	1:A:93:LEU:CD1	2.24	0.49
2:B:197:CYS:O	2:B:201:LEU:HB2	2.12	0.49
1:A:131:LEU:O	1:A:134:ARG:HB3	2.12	0.49
1:A:232:HIS:O	1:A:236:LEU:CD2	2.61	0.49
3:R:525:PHE:HD2	3:R:541:PRO:HB2	1.77	0.49
3:R:305:HIS:CD2	3:R:305:HIS:N	2.78	0.49
3:R:305:HIS:N	3:R:306:PRO:HD3	2.27	0.49
2:B:178:ASP:O	2:B:214:LEU:HD22	2.12	0.49
1:A:171:ILE:HG13	1:A:180:SER:OG	2.13	0.49
1:A:73:LEU:HD12	1:A:73:LEU:C	2.33	0.48
2:B:232:ARG:NE	2:B:235:LYS:NZ	2.60	0.48
1:A:117:LEU:HG	1:A:128:GLU:OE1	2.13	0.48
3:R:255:LYS:HZ2	3:R:492:SER:HB2	1.78	0.48
1:A:247:CYS:SG	1:A:463:LEU:HD22	2.53	0.48
1:A:531:SER:O	1:A:533:PRO:HD3	2.13	0.48
2:B:144:ARG:HD2	7:P:1428:FAR:H62	1.94	0.48
3:R:526:THR:CG2	3:R:540:LYS:HE3	2.44	0.48
2:B:201:LEU:HB3	2:B:207:LEU:HD23	1.96	0.48
2:B:272:ASP:HB2	2:B:286:VAL:HG11	1.94	0.48
3:R:261:LEU:CD2	3:R:461:LEU:HD22	2.43	0.48
1:A:31:ALA:O	1:A:34:ALA:HB3	2.13	0.48
1:A:310:ASN:HD21	1:A:312:GLN:NE2	2.12	0.48
1:A:476:ARG:O	1:A:477:ALA:HB2	2.13	0.48
2:B:72:LEU:HG	2:B:113:VAL:HG21	1.96	0.48
2:B:223:GLN:HB2	2:B:229:LEU:CD2	2.43	0.48
3:R:289:LYS:O	3:R:293:MET:HB2	2.14	0.48
1:A:261:PHE:CE1	1:A:265:LEU:HD11	2.48	0.48
2:B:43:GLU:CD	2:B:46:ARG:HG3	2.34	0.48
2:B:45:LEU:HA	2:B:87:ALA:HB1	1.96	0.48
3:R:530:GLU:C	3:R:532:GLU:H	2.15	0.48
1:A:93:LEU:HD12	1:A:93:LEU:N	2.26	0.48
2:B:190:HIS:NE2	4:P:12[A]:ALA:OXT	2.46	0.48
3:R:595:ILE:O	3:R:597:PRO:HD3	2.13	0.48
1:A:400:TYR:HA	1:A:403:GLU:OE1	2.13	0.48
2:B:236:LEU:N	2:B:236:LEU:HD12	2.28	0.48
1:A:345:SER:HB3	1:A:348:ASP:HB2	1.95	0.48
3:R:485:ARG:HG2	3:R:485:ARG:NH1	2.29	0.48
1:A:37:GLN:O	1:A:40:GLN:HG3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:244:TRP:CH2	2:B:289:PHE:HZ	2.32	0.47
3:R:82:ASN:C	3:R:408:LYS:HB2	2.34	0.47
3:R:107:ASP:HB2	3:R:214:TYR:CD2	2.48	0.47
1:A:368:LEU:HA	1:A:391:LEU:HD13	1.95	0.47
1:A:382:LYS:HE2	1:A:383:TRP:CZ2	2.48	0.47
3:R:451:ARG:NH2	3:R:504:HIS:HB3	2.28	0.47
1:A:48:VAL:O	1:A:52:THR:HG23	2.15	0.47
1:A:291:ASP:CG	1:A:293:ARG:HG3	2.33	0.47
1:A:322:TRP:CD1	1:A:325:SER:HB3	2.49	0.47
1:A:382:LYS:HE2	1:A:383:TRP:CD2	2.50	0.47
2:B:120:VAL:O	2:B:124:GLN:HG2	2.15	0.47
2:B:229:LEU:O	2:B:237:PRO:HA	2.15	0.47
2:B:232:ARG:NH2	2:B:235:LYS:NZ	2.58	0.47
2:B:53:GLY:O	2:B:56:VAL:HG12	2.14	0.47
2:B:69:GLU:O	2:B:73:VAL:HG23	2.14	0.47
2:B:132:SER:HB3	2:B:170:PHE:CE1	2.49	0.47
3:R:240:ILE:HG23	3:R:241:ASP:N	2.28	0.47
3:R:316:THR:HB	3:R:319:GLU:HB2	1.96	0.47
1:A:192:HIS:CG	1:A:207:VAL:HG21	2.50	0.47
1:A:380:GLU:HB3	8:A:601:HOH:O	2.14	0.47
1:A:435:VAL:O	1:A:439:GLU:HG3	2.15	0.47
3:R:310:ARG:HD2	3:R:311:ALA:N	2.30	0.47
3:R:322:LYS:HB2	3:R:322:LYS:NZ	2.30	0.47
3:R:512:THR:HG23	3:R:515:GLU:OE2	2.15	0.47
1:A:92:GLU:O	1:A:94:GLY:N	2.48	0.47
1:A:163:GLU:HG2	1:A:183:TYR:CZ	2.50	0.47
2:B:85:VAL:HB	2:B:98:THR:HA	1.96	0.47
2:B:132:SER:HB3	2:B:170:PHE:CZ	2.50	0.47
1:A:538:LEU:HD22	1:A:540:LEU:HG	1.95	0.47
1:A:31:ALA:CB	1:A:55:ILE:HD11	2.45	0.47
2:B:106:THR:HG21	2:B:155:LEU:HD22	1.95	0.47
3:R:405:VAL:HG11	3:R:423:ARG:HH22	1.79	0.47
1:A:291:ASP:O	1:A:293:ARG:HG2	2.15	0.46
2:B:156:LEU:O	2:B:158:LYS:HD3	2.14	0.46
3:R:84:GLU:HG3	3:R:408:LYS:HD3	1.97	0.46
1:A:40:GLN:NE2	1:A:41:ALA:N	2.63	0.46
2:B:11:LYS:NZ	2:B:265:SER:HB3	2.30	0.46
3:R:302:TYR:CE2	3:R:356:LYS:HD3	2.51	0.46
3:R:452:ALA:HA	3:R:547:LEU:O	2.15	0.46
3:R:559:ARG:NH2	3:R:565:LEU:HB3	2.29	0.46
3:R:559:ARG:NH1	8:R:909:HOH:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:80:LYS:CD	1:A:80:LYS:N	2.78	0.46
1:A:431:LEU:O	1:A:435:VAL:HG23	2.14	0.46
1:A:529:LEU:N	1:A:529:LEU:HD12	2.30	0.46
2:B:52:TRP:HA	2:B:292:LEU:HD22	1.98	0.46
3:R:259:ARG:HB3	3:R:270:GLN:NE2	2.30	0.46
3:R:261:LEU:HD22	3:R:268:VAL:CG1	2.46	0.46
1:A:124:ASN:CG	1:A:124:ASN:O	2.54	0.46
1:A:546:CYS:SG	1:A:567:THR:OXT	2.72	0.46
3:R:382:GLN:O	3:R:386:ARG:HG3	2.15	0.46
1:A:172:THR:HG22	3:R:279:PHE:CD2	2.50	0.46
1:A:396:ASP:CG	1:A:399:LEU:HB2	2.36	0.46
2:B:153:LEU:HB3	2:B:159:LEU:HA	1.97	0.46
1:A:288:ARG:HA	1:A:294:ASN:ND2	2.30	0.46
2:B:23:HIS:ND1	2:B:277:GLY:N	2.64	0.46
3:R:444:VAL:CG1	3:R:557:ILE:HD13	2.44	0.46
1:A:75:HIS:O	1:A:79:GLU:HG3	2.15	0.46
1:A:357:SER:O	1:A:360:LYS:N	2.49	0.46
3:R:20:GLU:O	3:R:23:ILE:HG22	2.16	0.46
1:A:115:TRP:CZ2	1:A:119:ARG:HD2	2.51	0.46
1:A:493:ALA:HB3	1:A:515:LEU:HD23	1.98	0.46
2:B:142:ASP:HB3	2:B:145:PHE:CD1	2.50	0.46
3:R:233:LEU:HD22	3:R:254:PHE:CE1	2.50	0.46
3:R:595:ILE:C	3:R:597:PRO:HD3	2.36	0.46
1:A:49:LEU:HD12	1:A:72:VAL:HG23	1.98	0.45
2:B:127:GLN:NE2	2:B:167:ALA:HB2	2.31	0.45
3:R:232:LEU:HD22	3:R:257:ILE:HD11	1.98	0.45
3:R:309:TYR:O	3:R:312:TYR:N	2.42	0.45
3:R:324:GLN:HE21	3:R:324:GLN:N	2.14	0.45
1:A:37:GLN:NE2	1:A:40:GLN:HG2	2.31	0.45
1:A:44:LEU:HD12	1:A:44:LEU:N	2.29	0.45
1:A:64:THR:O	1:A:67:ASN:HB2	2.16	0.45
1:A:92:GLU:C	1:A:94:GLY:N	2.69	0.45
3:R:18:LEU:HB3	3:R:19:PRO:CD	2.45	0.45
3:R:74:MET:HE1	3:R:402:GLN:HG3	1.96	0.45
1:A:295:ARG:HB3	1:A:296:PRO:CD	2.46	0.45
3:R:302:TYR:CD2	3:R:356:LYS:HD3	2.52	0.45
3:R:405:VAL:HG11	3:R:423:ARG:NH2	2.32	0.45
1:A:417:MET:CE	2:B:225:PRO:HA	2.47	0.45
1:A:527:GLN:O	1:A:530:VAL:HG12	2.15	0.45
3:R:300:VAL:HG13	3:R:359:LEU:HB2	1.98	0.45
1:A:31:ALA:HB3	1:A:55:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:291:ASP:OD1	1:A:293:ARG:HG3	2.17	0.45
1:A:64:THR:HG21	2:B:91:HIS:HA	1.98	0.45
1:A:66:TRP:O	1:A:70:ARG:HB2	2.15	0.45
1:A:269:SER:O	1:A:270:ARG:C	2.55	0.45
1:A:531:SER:O	1:A:533:PRO:CD	2.65	0.45
2:B:23:HIS:HE1	2:B:271:GLN:HB2	1.81	0.45
3:R:248:VAL:HG22	3:R:387:MET:HG3	1.98	0.45
3:R:325:LYS:C	3:R:326:LEU:HD22	2.37	0.45
3:R:365:TYR:HE1	3:R:610:ASP:OD2	2.00	0.45
1:A:468:LEU:HD21	1:A:470:LEU:HD11	1.99	0.45
1:A:519:ARG:HG2	1:A:519:ARG:HH11	1.82	0.45
2:B:105:LEU:CD2	2:B:114:ILE:HG13	2.46	0.45
2:B:127:GLN:HB2	2:B:133:PHE:CZ	2.52	0.45
3:R:451:ARG:HH22	3:R:504:HIS:HB3	1.82	0.45
1:A:217:ASN:HA	1:A:220:PHE:HB2	1.99	0.45
1:A:343:ARG:NH2	1:A:461:GLN:HG3	2.26	0.45
2:B:232:ARG:HB2	2:B:233:PRO:CD	2.47	0.45
3:R:547:LEU:HD12	3:R:548:TYR:N	2.32	0.45
1:A:82:PRO:O	1:A:86:ALA:HB3	2.17	0.45
2:B:150:VAL:HG13	2:B:203:ILE:CG2	2.45	0.45
2:B:260:ARG:HG3	2:B:301:LEU:HD22	1.99	0.45
1:A:105:LYS:O	1:A:106:SER:HB2	2.16	0.44
3:R:304:GLU:C	3:R:305:HIS:CD2	2.89	0.44
3:R:611:ILE:CD1	3:R:613:LEU:HD21	2.47	0.44
1:A:226:GLN:O	1:A:229:TRP:HB2	2.17	0.44
1:A:270:ARG:O	1:A:272:GLY:N	2.51	0.44
2:B:293:PHE:HA	2:B:296:ALA:HB3	2.00	0.44
2:B:74:PHE:HZ	2:B:88:SER:HA	1.82	0.44
1:A:164:LEU:HD22	1:A:191:LEU:CD1	2.48	0.44
2:B:8:VAL:CG2	2:B:9:THR:N	2.78	0.44
2:B:10:ILE:N	2:B:10:ILE:HD12	2.33	0.44
3:R:298:PHE:HE1	3:R:305:HIS:HB2	1.83	0.44
1:A:344:ASP:HB3	1:A:349:GLU:HG3	2.00	0.44
3:R:41:SER:HB3	3:R:398:ARG:HD3	2.00	0.44
3:R:373:PRO:HG2	3:R:380:LEU:CD2	2.39	0.44
3:R:478:GLU:CD	3:R:478:GLU:N	2.71	0.44
3:R:576:ASP:OD1	3:R:578:GLY:N	2.50	0.44
1:A:211:GLU:HA	1:A:211:GLU:OE1	2.18	0.44
1:A:526:ILE:HG22	1:A:526:ILE:O	2.18	0.44
2:B:232:ARG:HB2	2:B:233:PRO:HD2	1.99	0.44
1:A:76:LEU:HD23	1:A:80:LYS:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:216:GLN:O	1:A:220:PHE:HD2	2.00	0.44
2:B:221:GLU:OE2	2:B:221:GLU:HA	2.16	0.44
2:B:323:VAL:HG12	2:B:323:VAL:O	2.18	0.44
1:A:448:LEU:HD12	1:A:470:LEU:CD2	2.48	0.44
3:R:99:GLU:OE1	3:R:514:ARG:HD3	2.17	0.44
3:R:368:THR:CG2	3:R:369:PRO:HD2	2.35	0.44
1:A:185:SER:O	1:A:189:PRO:HG2	2.18	0.43
1:A:530:VAL:O	1:A:530:VAL:CG2	2.65	0.43
2:B:190:HIS:O	2:B:194:ILE:HG13	2.18	0.43
3:R:255:LYS:HG3	3:R:256:ASN:N	2.33	0.43
1:A:566:LEU:HD13	1:A:566:LEU:N	2.33	0.43
2:B:49:GLY:HA2	2:B:52:TRP:CE3	2.53	0.43
1:A:41:ALA:HB3	1:A:43:GLU:OE1	2.18	0.43
1:A:48:VAL:CG2	1:A:72:VAL:HG11	2.47	0.43
1:A:68:CYS:HA	1:A:71:GLU:OE2	2.18	0.43
2:B:249:LEU:HD12	2:B:254:ARG:HB2	1.99	0.43
2:B:255:LEU:HD23	2:B:255:LEU:O	2.19	0.43
3:R:528:TYR:HA	3:R:542:ARG:HH21	1.82	0.43
1:A:131:LEU:HD23	1:A:131:LEU:C	2.38	0.43
1:A:128:GLU:HG3	1:A:148:TYR:HE1	1.83	0.43
2:B:30:TYR:O	2:B:32:SER:N	2.51	0.43
3:R:387:MET:O	3:R:390:VAL:HB	2.19	0.43
1:A:74:GLN:HA	1:A:119:ARG:HH22	1.84	0.43
1:A:393:ARG:O	1:A:397:PRO:HG3	2.19	0.43
1:A:512:GLU:HG2	1:A:537:LEU:HB3	2.00	0.43
2:B:19:LEU:CD1	2:B:273:GLU:HA	2.48	0.43
2:B:184:ARG:O	2:B:185:PRO:C	2.57	0.43
3:R:305:HIS:CB	3:R:308:GLU:HG3	2.37	0.43
1:A:314:PRO:C	1:A:315:GLN:HG3	2.36	0.43
2:B:56:VAL:HG13	2:B:57:MET:N	2.34	0.43
2:B:76:LYS:HA	2:B:76:LYS:HD2	1.89	0.43
2:B:215:LEU:O	2:B:219:LEU:HB2	2.18	0.43
3:R:43:TYR:CZ	3:R:397:LEU:HD11	2.53	0.43
3:R:317:PHE:HA	3:R:348:THR:HA	1.99	0.43
1:A:155:GLN:C	1:A:157:ALA:H	2.22	0.43
1:A:417:MET:HE3	2:B:225:PRO:HA	2.01	0.43
1:A:132:CYS:C	1:A:134:ARG:N	2.71	0.43
1:A:566:LEU:HD22	1:A:566:LEU:H	1.83	0.43
2:B:8:VAL:CG2	2:B:9:THR:H	2.32	0.43
2:B:108:TYR:HD2	2:B:108:TYR:HA	1.74	0.43
1:A:377:LEU:HD23	3:R:325:LYS:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:287:ASP:OD2	4:P:9[A]:ALA:HB3	2.19	0.43
2:B:310:SER:HA	2:B:317:GLU:OE1	2.19	0.43
2:B:313:PHE:O	2:B:315:MET:HG3	2.18	0.43
3:R:10:ASP:HA	3:R:427:LYS:HD3	2.00	0.43
3:R:264:ARG:HD3	3:R:332:TYR:CD2	2.54	0.43
3:R:401:VAL:HA	3:R:418:ASP:HA	2.01	0.43
3:R:531:ILE:O	3:R:531:ILE:HG22	2.19	0.43
3:R:611:ILE:HD11	3:R:613:LEU:HD21	2.01	0.43
1:A:40:GLN:CD	1:A:41:ALA:N	2.72	0.42
2:B:224:LEU:HD12	2:B:237:PRO:CD	2.49	0.42
1:A:288:ARG:HA	1:A:294:ASN:HD21	1.84	0.42
1:A:428:LYS:O	1:A:432:GLU:HG3	2.18	0.42
3:R:347:CYS:O	3:R:350:ASP:HB2	2.18	0.42
2:B:299:SER:HB2	2:B:306:ILE:HG21	2.00	0.42
2:B:323:VAL:O	2:B:325:VAL:HG23	2.18	0.42
3:R:280:ASN:N	3:R:280:ASN:ND2	2.65	0.42
2:B:200:PHE:CD1	2:B:200:PHE:C	2.92	0.42
1:A:48:VAL:HG21	1:A:72:VAL:HG11	2.01	0.42
2:B:147:PHE:HB2	2:B:196:CYS:HB3	2.01	0.42
2:B:154:ALA:C	2:B:156:LEU:H	2.23	0.42
3:R:232:LEU:HG	3:R:487:ILE:HD13	2.02	0.42
3:R:264:ARG:HD3	3:R:332:TYR:CE2	2.54	0.42
7:P:1428:FAR:H111	7:P:1428:FAR:H101	1.84	0.42
3:R:256:ASN:ND2	3:R:371:LEU:HD23	2.35	0.42
3:R:302:TYR:O	3:R:309:TYR:HE2	2.03	0.42
3:R:380:LEU:N	3:R:380:LEU:HD22	2.34	0.42
3:R:211:ARG:HD2	3:R:528:TYR:OH	2.19	0.42
3:R:284:LEU:HD12	3:R:284:LEU:N	2.34	0.42
3:R:417:ILE:HA	3:R:422:GLN:O	2.20	0.42
1:A:132:CYS:SG	1:A:149:ARG:HB2	2.60	0.42
2:B:184:ARG:HB2	2:B:185:PRO:CD	2.50	0.42
3:R:235:SER:HB2	3:R:361:CYS:HB3	2.02	0.42
3:R:248:VAL:HG22	3:R:387:MET:CG	2.50	0.42
3:R:295:PHE:CD2	3:R:326:LEU:HD21	2.55	0.42
1:A:245:LEU:HD23	1:A:329:LYS:HB2	2.02	0.42
1:A:551:ILE:HG23	1:A:552:GLN:N	2.35	0.42
2:B:249:LEU:HD12	2:B:249:LEU:HA	1.90	0.42
3:R:261:LEU:HD12	3:R:470:SER:HB2	2.02	0.42
1:A:40:GLN:NE2	1:A:41:ALA:HB2	2.32	0.41
1:A:25:LEU:HD12	1:A:25:LEU:C	2.40	0.41
1:A:77:GLU:HB2	1:A:119:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:284:LEU:HA	3:R:288:GLU:OE1	2.19	0.41
1:A:479:PRO:O	1:A:503:GLY:HA3	2.19	0.41
1:A:220:PHE:CG	3:R:286:MET:HG3	2.56	0.41
2:B:99:LEU:HD22	2:B:148:CYS:HA	2.01	0.41
2:B:100:SER:HA	2:B:103:GLN:NE2	2.36	0.41
3:R:362:LEU:HD23	3:R:363:GLY:H	1.84	0.41
1:A:149:ARG:CZ	1:A:163:GLU:OE1	2.68	0.41
2:B:289:PHE:CE2	4:P:10[A]:ALA:HB2	2.56	0.41
3:R:16:THR:HG23	3:R:38:ASP:HB2	2.01	0.41
3:R:259:ARG:C	3:R:260:ILE:HD12	2.41	0.41
1:A:29:GLN:NE2	1:A:29:GLN:C	2.74	0.41
1:A:37:GLN:C	1:A:39:ARG:H	2.23	0.41
1:A:132:CYS:O	1:A:134:ARG:N	2.53	0.41
2:B:272:ASP:CG	2:B:275:THR:HG1	2.22	0.41
3:R:313:GLU:HG3	3:R:349:VAL:HG12	2.01	0.41
1:A:65:LEU:C	1:A:67:ASN:N	2.71	0.41
1:A:183:TYR:HE1	1:A:187:LEU:HD21	1.82	0.41
2:B:322:ARG:C	2:B:324:ASN:H	2.23	0.41
3:R:307:ASP:CG	3:R:310:ARG:HG2	2.40	0.41
3:R:517:LEU:O	3:R:521:VAL:HG23	2.20	0.41
1:A:49:LEU:HD23	1:A:49:LEU:O	2.21	0.41
1:A:488:LEU:HD11	1:A:490:VAL:O	2.21	0.41
2:B:155:LEU:O	2:B:156:LEU:HD12	2.20	0.41
4:P:10[B]:ALA:HB1	4:P:11[B]:ALA:H	1.75	0.41
1:A:79:GLU:HB2	1:A:80:LYS:H	1.60	0.41
1:A:116:LEU:C	1:A:118:SER:H	2.23	0.41
1:A:128:GLU:HA	1:A:128:GLU:OE2	2.20	0.41
1:A:236:LEU:N	1:A:236:LEU:HD22	2.36	0.41
2:B:41:MET:H	2:B:41:MET:HG2	1.68	0.41
2:B:56:VAL:O	2:B:60:MET:HG3	2.21	0.41
2:B:142:ASP:OD1	2:B:144:ARG:HB2	2.21	0.41
3:R:229:VAL:HG12	3:R:231:LYS:HG3	2.02	0.41
3:R:296:LEU:O	3:R:300:VAL:HG22	2.21	0.41
3:R:361:CYS:HB2	3:R:369:PRO:HB3	2.03	0.41
3:R:362:LEU:HD23	3:R:363:GLY:N	2.36	0.41
1:A:66:TRP:HB3	1:A:70:ARG:NH2	2.36	0.41
2:B:184:ARG:HB2	2:B:185:PRO:HD2	2.03	0.41
3:R:478:GLU:HB2	3:R:481:SER:CB	2.40	0.41
1:A:177:ASN:O	1:A:181:TRP:HD1	2.04	0.40
1:A:274:LEU:HD22	1:A:320:VAL:HG13	2.03	0.40
2:B:9:THR:HG21	2:B:281:ARG:HD2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:SER:HA	2:B:103:GLN:HE21	1.86	0.40
2:B:201:LEU:HD23	2:B:210:VAL:CG2	2.50	0.40
3:R:23:ILE:HG21	3:R:430:ILE:HD13	2.02	0.40
3:R:312:TYR:C	3:R:314:GLY:N	2.75	0.40
1:A:88:LEU:HA	1:A:91:ALA:CB	2.52	0.40
1:A:482:LEU:HD12	1:A:485:LEU:HD13	2.02	0.40
2:B:52:TRP:CH2	4:P:12[B]:ALA:OXT	2.73	0.40
1:A:164:LEU:HD21	1:A:188:LEU:HD21	2.03	0.40
1:A:265:LEU:HD12	1:A:265:LEU:C	2.42	0.40
2:B:158:LYS:C	2:B:160:ASP:H	2.25	0.40
1:A:79:GLU:HB2	1:A:80:LYS:HD3	2.03	0.40
3:R:316:THR:HG21	3:R:318:SER:OG	2.22	0.40
2:B:215:LEU:HG	2:B:219:LEU:HD22	2.03	0.40
3:R:271:VAL:HA	3:R:272:PRO:HD3	1.88	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	530/567 (94%)	448 (84%)	69 (13%)	13 (2%)	5	14
2	B	312/331 (94%)	267 (86%)	38 (12%)	7 (2%)	6	17
3	R	482/650 (74%)	432 (90%)	46 (10%)	4 (1%)	19	43
4	P	4/4 (100%)	0	0	4 (100%)	0	0
All	All	1328/1552 (86%)	1147 (86%)	153 (12%)	28 (2%)	7	18

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	358	VAL

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Mol	Chain	Res	Type
2	B	16	ASP
2	B	30	TYR
3	R	611	ILE
4	P	10[A]	ALA
4	P	10[B]	ALA
1	A	80	LYS
1	A	106	SER
1	A	270	ARG
2	B	31	GLY
2	B	81	GLU
2	B	139	GLY
3	R	563	ASN
4	P	11[A]	ALA
4	P	11[B]	ALA
1	A	271	MET
1	A	325	SER
1	A	354	CYS
2	B	82	CYS
1	A	93	LEU
1	A	517	ASN
2	B	41	MET
1	A	117	LEU
1	A	227	SER
3	R	313	GLU
3	R	531	ILE
1	A	38	LYS
1	A	42	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	477/508 (94%)	430 (90%)	47 (10%)	8	18
2	B	273/284 (96%)	254 (93%)	19 (7%)	15	35
3	R	447/581 (77%)	415 (93%)	32 (7%)	14	34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	1197/1373 (87%)	1099 (92%)	98 (8%)	11 26

All (98) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	29	GLN
1	A	44	LEU
1	A	50	GLU
1	A	62	PHE
1	A	83	GLU
1	A	88	LEU
1	A	97	GLU
1	A	122	GLU
1	A	128	GLU
1	A	137	GLU
1	A	175	PHE
1	A	177	ASN
1	A	179	SER
1	A	183	TYR
1	A	206	ASN
1	A	208	LEU
1	A	217	ASN
1	A	220	PHE
1	A	224	ASN
1	A	233	ARG
1	A	238	ARG
1	A	246	CYS
1	A	265	LEU
1	A	284	SER
1	A	293	ARG
1	A	297	SER
1	A	301	LEU
1	A	315	GLN
1	A	326	ASP
1	A	329	LYS
1	A	353	ARG
1	A	356	LEU
1	A	374	LEU
1	A	378	GLU
1	A	382	LYS
1	A	386	LEU
1	A	411	LEU

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Mol	Chain	Res	Type
1	A	418	ARG
1	A	431	LEU
1	A	462	LEU
1	A	491	LEU
1	A	492	GLN
1	A	501	VAL
1	A	522	GLN
1	A	538	LEU
1	A	561	SER
1	A	566	LEU
2	B	22	LYS
2	B	45	LEU
2	B	54	LEU
2	B	62	GLN
2	B	69	GLU
2	B	108	TYR
2	B	124	GLN
2	B	128	LYS
2	B	146	SER
2	B	150	VAL
2	B	201	LEU
2	B	209	GLN
2	B	219	LEU
2	B	222	ARG
2	B	234	GLU
2	B	249	LEU
2	B	258	ILE
2	B	273	GLU
2	B	304	GLU
3	R	11	VAL
3	R	20	GLU
3	R	23	ILE
3	R	29	ARG
3	R	34	VAL
3	R	56	LEU
3	R	64	GLU
3	R	71	GLU
3	R	74	MET
3	R	77	GLU
3	R	80	LEU
3	R	210	ASN
3	R	216	GLN

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Mol	Chain	Res	Type
3	R	280	ASN
3	R	290	ARG
3	R	300	VAL
3	R	304	GLU
3	R	307	ASP
3	R	322	LYS
3	R	346	SER
3	R	362	LEU
3	R	398	ARG
3	R	427	LYS
3	R	464	ASP
3	R	470	SER
3	R	485	ARG
3	R	486	VAL
3	R	494	MET
3	R	530	GLU
3	R	559	ARG
3	R	593	GLN
3	R	601	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (43) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	29	GLN
1	A	33	GLN
1	A	37	GLN
1	A	40	GLN
1	A	74	GLN
1	A	75	HIS
1	A	103	ASN
1	A	111	HIS
1	A	174	ASN
1	A	177	ASN
1	A	216	GLN
1	A	217	ASN
1	A	224	ASN
1	A	294	ASN
1	A	312	GLN
1	A	315	GLN
1	A	375	GLN
1	A	521	GLN
1	A	522	GLN

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Mol	Chain	Res	Type
1	A	547	GLN
2	B	62	GLN
2	B	91	HIS
2	B	94	HIS
2	B	193	GLN
2	B	209	GLN
2	B	326	GLN
3	R	63	GLN
3	R	72	ASN
3	R	76	GLN
3	R	78	GLN
3	R	96	GLN
3	R	97	HIS
3	R	210	ASN
3	R	225	ASN
3	R	247	ASN
3	R	256	ASN
3	R	280	ASN
3	R	305	HIS
3	R	324	GLN
3	R	336	HIS
3	R	439	ASN
3	R	448	GLN
3	R	468	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 3 ligands modelled in this entry, 2 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
7	FAR	P	1428	-	14,14,14	1.15	2 (14%)	16,16,16	1.07	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	FAR	P	1428	-	-	6/14/14/14	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	P	1428	FAR	C9-C8	2.46	1.56	1.51
7	P	1428	FAR	C7-C8	2.00	1.37	1.33

There are no bond angle outliers.

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	P	1428	FAR	C3-C5-C6-C7
7	P	1428	FAR	C11-C12-C13-C14
7	P	1428	FAR	C11-C12-C13-C15
7	P	1428	FAR	C10-C8-C9-C11
7	P	1428	FAR	C7-C8-C9-C11
7	P	1428	FAR	C12-C11-C9-C8

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	P	1428	FAR	3	0

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, 95th 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	536/567 (94%)	0.16	33 (6%)	20	19	27, 54, 74, 81	0
2	B	318/331 (96%)	0.10	9 (2%)	53	54	26, 55, 68, 79	0
3	R	494/650 (76%)	0.12	28 (5%)	23	22	22, 48, 72, 79	0
4	P	4/4 (100%)	2.36	3 (75%)	0	0	67, 70, 71, 72	0
All	All	1352/1552 (87%)	0.14	73 (5%)	25	24	22, 52, 73, 81	0

All (73) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	175	PHE	6.3
3	R	531	ILE	5.7
1	A	78	THR	5.2
1	A	123	PRO	4.8
3	R	210	ASN	4.7
1	A	44	LEU	4.4
2	B	32	SER	4.3
3	R	72	ASN	4.1
3	R	532	GLU	4.1
2	B	331	SER	4.0
1	A	121	PRO	3.9
3	R	304	GLU	3.7
3	R	70	THR	3.7
1	A	83	GLU	3.6
2	B	31	GLY	3.6
2	B	29	SER	3.5
1	A	241	PRO	3.5
3	R	479	PRO	3.4
3	R	409	GLU	3.3
3	R	107	ASP	3.3
1	A	41	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
3	R	71	GLU	3.2
1	A	84	GLU	3.2
1	A	24	LYS	3.1
1	A	200	GLN	3.1
3	R	480	GLY	3.0
3	R	209	LYS	3.0
4	P	11[A]	ALA	3.0
2	B	11	LYS	3.0
4	P	10[A]	ALA	2.9
1	A	358	VAL	2.9
1	A	45	ASP	2.9
3	R	609	GLU	2.9
1	A	102	VAL	2.9
3	R	600	ASP	2.9
3	R	608	PRO	2.8
1	A	157	ALA	2.8
1	A	77	GLU	2.7
1	A	29	GLN	2.7
1	A	79	GLU	2.7
3	R	411	ARG	2.6
3	R	539	GLU	2.6
3	R	464	ASP	2.6
1	A	42	GLY	2.6
3	R	307	ASP	2.6
1	A	239	ALA	2.6
1	A	30	SER	2.5
1	A	240	GLU	2.5
3	R	598	ASN	2.5
1	A	43	GLU	2.5
3	R	530	GLU	2.5
3	R	64	GLU	2.5
3	R	65	ASN	2.5
1	A	101	ARG	2.5
1	A	440	TYR	2.4
2	B	81	GLU	2.4
1	A	59	ASN	2.4
1	A	176	SER	2.4
1	A	122	GLU	2.3
2	B	278	PHE	2.3
3	R	614	ASP	2.2
4	P	12[A]	ALA	2.2
2	B	304	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
3	R	310	ARG	2.2
1	A	40	GLN	2.2
1	A	85	SER	2.1
3	R	81	GLU	2.1
3	R	211	ARG	2.1
1	A	68	CYS	2.1
2	B	285	MET	2.1
1	A	38	LYS	2.0
3	R	306	PRO	2.0
1	A	50	GLU	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 monosaccharides in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
7	FAR	P	1428	15/15	0.68	0.40	63,65,67,67	1
6	CL	R	901	1/1	0.97	0.13	45,45,45,45	0
5	ZN	B	900	1/1	0.98	0.04	71,71,71,71	0

6.5 Other polymers ⓘ

There are no such residues in this entry.