Full wwPDB X-ray Structure Validation Report ⓘ

Feb 2, 2026 – 06:07 PM JST

PDB ID	:	9LU2 / pdb_00009lu2
Title	:	Crystal structure of Pseudoalteromonas sp. L11-2 tryptophan halogenase putative
Authors	:	Arold, S.T.; Hameed, U.F.S.
Deposited on	:	2025-02-07
Resolution	:	2.98 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:

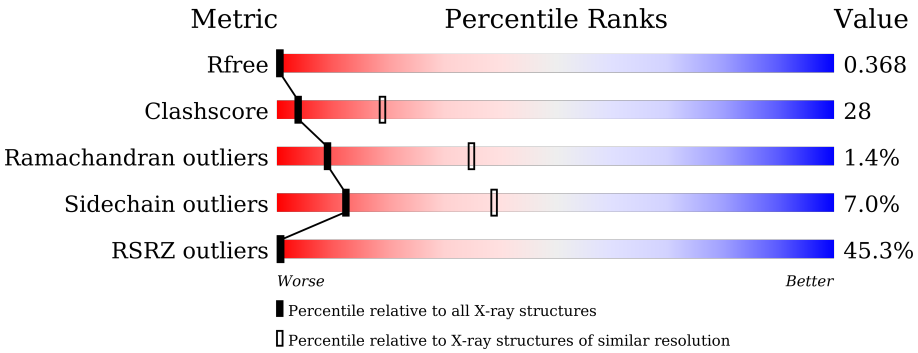
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

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 2.98 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}	164625	3360 (3.00-2.96)
Clashscore	180529	3751 (3.00-2.96)
Ramachandran outliers	177936	3628 (3.00-2.96)
Sidechain outliers	177891	3631 (3.00-2.96)
RSRZ outliers	164620	3372 (3.00-2.96)

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	514	41% 53% 34% 5% • 6%
1	B	514	45% 49% 40% 7% •

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 7679 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 L11-2 tryptophan halogenase putative.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	483	Total	C	N	O	S	0	0	0
			3801	2424	653	707	17			
1	B	493	Total	C	N	O	S	0	0	0
			3878	2473	663	725	17			

3 Residue-property plots (i)

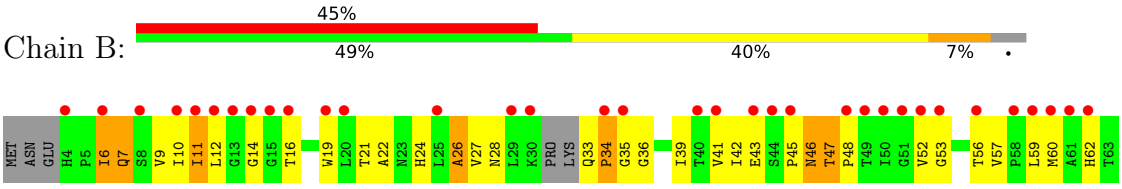
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

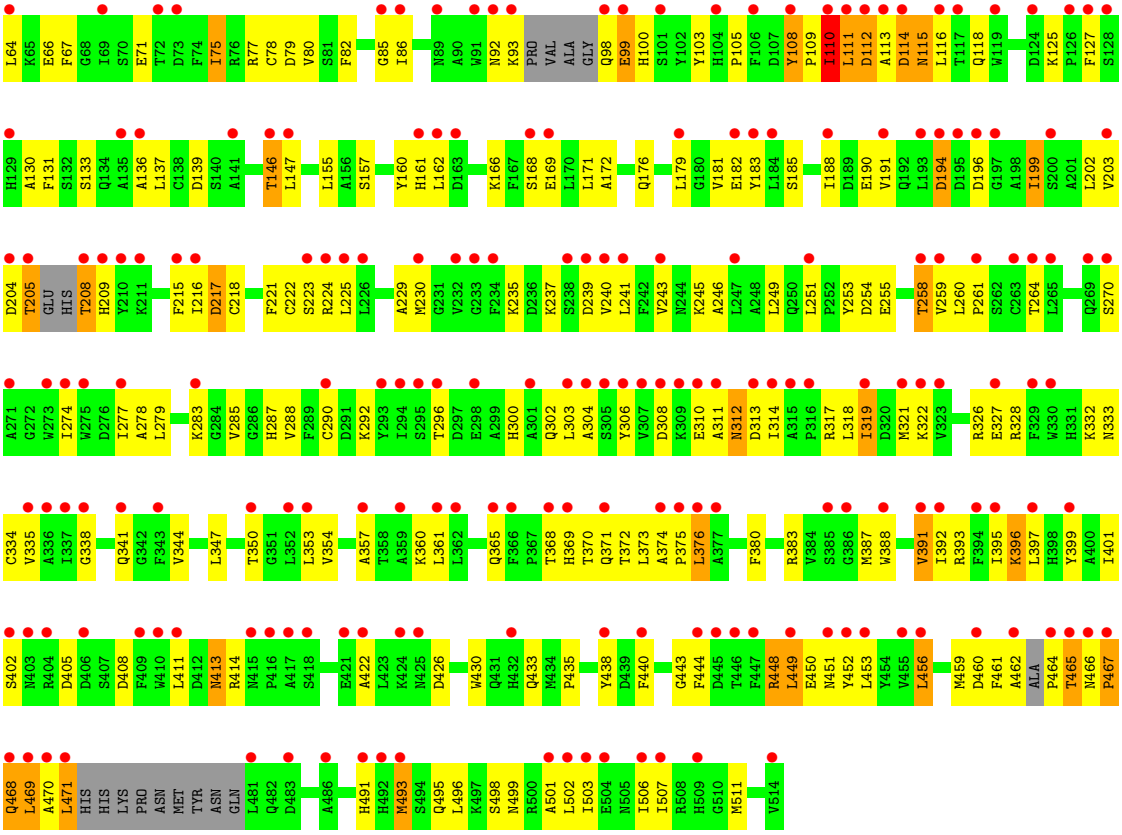
• Molecule 1: L11-2 tryptophan halogenase putative

Chain A:

• Molecule 1: L11-2 tryptophan halogenase putative

Chain B:




L64 K65 E66 F67 G68 I69 S70 E71 T72 D73 F74 I75 R76 R77 C78 D79 V80 S81 F82 G85 I86 N89 A90 W91 N92 K93 PRO VAL ALA GLY Q98 E99 H100 S101 Y102 Y103 H104 P105 F106 D107 Y108 P109 I110 L111 D112 A113 D114 N115 L116 T117 Q118 W119 D124 K125 P126 F127 S128
H129 A130 F131 S132 S133 Q134 A135 A136 L137 C138 D139 S140 A141 T146 L147 L155 A156 S157 Y160 H161 L162 D163 K166 F167 S168 E169 L170 L171 A172 Q176 L179 G180 V181 E182 Y183 L184 S185 I188 D189 E190 V191 Q192 L193 D194 D195 D196 G197 A198 I199 S200 A201 L202 V203
D204 T205 GLU HIS T208 H209 Y210 K211 F215 I216 D217 C218 F221 C222 S223 R224 L225 L226 A229 M230 G231 V232 G233 F234 K235 D236 K237 S238 D239 V240 L241 F242 V243 N244 K245 A246 L247 A248 L249 Q250 L251 P252 Y253 D254 E255 T258 V259 L260 P261 S262 C263 T264 L265 Q269 S270
A271 G272 W273 I274 W275 D276 I277 A278 L279 K283 G284 V285 G286 H287 V288 F289 C290 D291 K292 Y293 I294 S295 T296 D297 E298 A299 H300 A301 Q302 L303 A304 S305 Y306 V307 D308 K309 E310 A311 N312 D313 I314 A315 P316 R317 L318 I319 D320 M321 K322 V323 R326 E327 R328 F329 W330 H331 K332 N333
C334 V335 A336 I337 G338 Q341 G342 F343 V344 L347 T350 G351 L352 L353 V354 A357 T358 A359 K360 L361 L362 Q365 F366 P367 T368 H369 T370 Q371 T372 L373 A374 P375 L376 A377 F380 R383 V384 S385 G386 M387 W388 V391 I392 R393 F394 I395 K396 L397 H398 Y399 A400 I401
S402 N403 R404 D405 D406 S407 D408 F409 W410 L411 D412 N413 R414 N415 P416 A417 S418 E421 A422 L423 K424 N425 D426 W430 Q431 H432 Q433 K434 P435 Y438 D439 F440 G443 F444 D445 T446 F447 R448 L449 E450 N451 Y452 L453 Y454 V455 L456 M459 D460 F461 A462 ALA P464 T465 N466 P467
Q468 L469 A470 L471 HIS HIS LYS PRO ASN MET TYR ASN GLN L481 Q482 D483 A486 H491 K492 M493 S494 Q495 L496 K497 S498 N499 R500 A501 L502 I503 E504 N505 I506 I507 R508 H509 G510 M511 V514

4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	87.90Å 63.16Å 214.08Å 90.00° 99.81° 90.00°	Depositor
Resolution (Å)	47.91 – 2.98 47.91 – 2.98	Depositor EDS
% Data completeness (in resolution range)	97.9 (47.91-2.98) 98.0 (47.91-2.98)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.33 (at 3.01Å)	Xtriage
Refinement program	REFMAC refmac5	Depositor
R, R_{free}	0.322 , 0.365 0.335 , 0.368	Depositor DCC
R_{free} test set	1158 reflections (4.84%)	wwPDB-VP
Wilson B-factor (Å^2)	51.1	Xtriage
Anisotropy	0.311	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 24.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.78	EDS
Total number of atoms	7679	wwPDB-VP
Average B, all atoms (Å^2)	47.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 12.88% 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	0.66	3/3898 (0.1%)	1.32	41/5288 (0.8%)
1	B	0.66	3/3976 (0.1%)	1.27	30/5397 (0.6%)
All	All	0.66	6/7874 (0.1%)	1.29	71/10685 (0.7%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	5
1	B	0	5
All	All	0	10

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	45	PRO	N-CD	9.89	1.61	1.47
1	A	321	MET	SD-CE	-6.32	1.63	1.79
1	A	407	SER	C-N	-6.25	1.24	1.33
1	B	199	ILE	CG1-CD1	-6.18	1.27	1.51
1	B	75	ILE	CG1-CD1	-5.65	1.29	1.51
1	B	493	MET	SD-CE	-5.51	1.65	1.79

All (71) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	468	GLN	N-CA-C	24.32	137.79	111.28
1	B	46	ASN	N-CA-C	-21.75	74.92	109.72
1	B	34	PRO	CB-CA-C	-21.52	76.06	111.56
1	A	321	MET	CB-CA-C	-18.17	74.27	110.42
1	B	469	LEU	N-CA-C	16.99	135.30	111.52
1	A	408	ASP	N-CA-C	-16.64	93.03	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	34	PRO	N-CA-C	14.26	141.85	112.47
1	A	310	GLU	N-CA-C	13.98	140.59	110.80
1	B	470	ALA	N-CA-C	13.82	132.70	111.56
1	A	100	HIS	N-CA-CB	13.67	130.33	110.37
1	A	322	LYS	N-CA-CB	-13.47	88.44	109.19
1	A	310	GLU	CB-CA-C	-12.78	84.98	110.42
1	A	416	PRO	CB-CA-C	11.72	130.90	111.56
1	B	46	ASN	CB-CA-C	10.79	130.58	109.33
1	A	467	PRO	CB-CA-C	-10.58	97.85	111.39
1	B	35	GLY	N-CA-C	-10.16	89.11	113.18
1	A	99	GLU	N-CA-C	-9.83	93.62	108.46
1	A	309	LYS	N-CA-C	-9.28	91.78	108.02
1	A	470	ALA	N-CA-C	-8.22	96.04	108.46
1	A	223	SER	N-CA-C	8.21	121.28	111.02
1	A	467	PRO	N-CA-C	7.86	123.61	111.11
1	B	99	GLU	N-CA-CB	-7.80	98.83	111.24
1	B	449	LEU	N-CA-C	7.75	119.37	111.07
1	A	470	ALA	CB-CA-C	7.65	122.03	109.72
1	A	308	ASP	CB-CA-C	-7.24	99.56	111.36
1	A	321	MET	N-CA-C	7.17	126.07	110.80
1	B	47	THR	N-CA-CB	-7.09	101.17	110.17
1	B	28	ASN	N-CA-C	7.07	121.14	112.23
1	B	7	GLN	N-CA-C	6.89	121.35	113.15
1	B	310	GLU	N-CA-C	6.83	121.33	111.56
1	A	468	GLN	CB-CA-C	-6.79	99.52	110.79
1	A	469	LEU	N-CA-CB	6.74	122.12	111.20
1	A	148	CYS	N-CA-C	-6.63	105.22	113.38
1	A	148	CYS	CB-CA-C	6.43	120.84	109.65
1	B	112	ASP	CB-CA-C	-6.43	109.15	116.54
1	B	449	LEU	CB-CA-C	-6.42	100.79	110.88
1	A	449	LEU	N-CA-C	6.39	124.41	110.80
1	B	470	ALA	CB-CA-C	-6.37	99.13	111.03
1	A	322	LYS	N-CA-C	6.27	119.92	110.64
1	B	100	HIS	N-CA-CB	6.24	120.61	110.32
1	B	194	ASP	CA-CB-CG	6.20	118.80	112.60
1	A	471	LEU	N-CA-CB	-6.12	100.10	110.50
1	A	468	GLN	N-CA-CB	-6.09	101.17	110.12
1	A	469	LEU	N-CA-C	-6.07	100.27	109.85
1	A	43	GLU	CA-C-O	-6.06	114.93	121.36
1	A	407	SER	O-C-N	-6.06	114.53	122.59
1	B	467	PRO	CB-CA-C	5.92	121.33	111.56
1	A	254	ASP	CA-CB-CG	5.83	118.43	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	459	MET	N-CA-C	-5.79	106.45	112.93
1	A	194	ASP	CA-CB-CG	5.78	118.38	112.60
1	A	507	ILE	N-CA-C	-5.74	97.39	109.34
1	A	99	GLU	CB-CA-C	5.71	118.92	109.72
1	A	311	ALA	N-CA-C	5.45	122.41	110.80
1	A	44	SER	C-N-CD	-5.45	102.67	125.00
1	B	108	TYR	N-CA-CB	-5.41	101.87	110.03
1	B	461	PHE	CA-CB-CG	5.35	119.15	113.80
1	B	110	ILE	N-CA-C	5.34	120.45	109.34
1	B	108	TYR	CB-CA-C	5.33	118.20	109.46
1	A	204	ASP	CA-CB-CG	5.33	117.93	112.60
1	A	424	LYS	CB-CA-C	-5.28	101.97	110.74
1	A	356	ASP	CA-CB-CG	5.27	117.87	112.60
1	B	26	ALA	N-CA-C	-5.23	103.13	110.35
1	A	309	LYS	N-CA-CB	5.23	118.91	110.65
1	B	413	ASN	N-CA-C	-5.22	106.87	113.18
1	A	507	ILE	CB-CA-C	5.16	119.75	111.29
1	A	130	ALA	N-CA-C	-5.13	104.10	110.41
1	A	372	THR	CA-CB-OG1	-5.13	101.91	109.60
1	B	45	PRO	N-CA-C	-5.12	98.94	112.92
1	B	218	CYS	CB-CA-C	5.08	117.53	111.22
1	B	217	ASP	N-CA-C	5.06	118.37	111.39
1	B	300	HIS	CA-CB-CG	5.02	118.82	113.80

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	282	ARG	Sidechain
1	A	326	ARG	Sidechain
1	A	393	ARG	Sidechain
1	A	407	SER	Mainchain
1	A	500	ARG	Sidechain
1	B	224	ARG	Sidechain
1	B	326	ARG	Sidechain
1	B	328	ARG	Sidechain
1	B	414	ARG	Sidechain
1	B	448	ARG	Sidechain

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	3801	0	3668	207	2
1	B	3878	0	3748	223	3
All	All	7679	0	7416	424	3

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 28.

All (424) 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:108:TYR:HE1	1:B:448:ARG:NH2	1.27	1.32
1:B:108:TYR:CE1	1:B:448:ARG:NH2	2.15	1.14
1:B:369:HIS:CE1	1:B:371:GLN:HB3	1.90	1.07
1:A:449:LEU:O	1:A:453:LEU:HB2	1.53	1.07
1:B:217:ASP:OD2	1:B:223:SER:OG	1.72	1.06
1:B:240:VAL:HG12	1:B:241:LEU:HD22	1.39	1.01
1:B:127:PHE:CZ	1:B:453:LEU:CD2	2.46	0.99
1:B:208:THR:HG22	1:B:209:HIS:H	1.29	0.96
1:A:390:SER:OG	1:A:446:THR:OG1	1.82	0.94
1:B:108:TYR:HE1	1:B:448:ARG:HH21	1.15	0.93
1:A:243:VAL:HG11	1:A:288:VAL:HG12	1.46	0.93
1:B:449:LEU:O	1:B:453:LEU:HB2	1.67	0.93
1:A:39:ILE:HG22	1:A:181:VAL:HG13	1.48	0.93
1:A:243:VAL:HG11	1:A:288:VAL:CG1	1.99	0.92
1:A:188:ILE:HD11	1:A:224:ARG:HG2	1.46	0.92
1:B:127:PHE:CZ	1:B:453:LEU:HD21	2.06	0.91
1:A:12:LEU:HD11	1:A:188:ILE:HD13	1.51	0.91
1:A:168:SER:HA	1:A:171:LEU:HD12	1.54	0.90
1:A:75:ILE:HG21	1:A:506:ILE:CG2	2.02	0.89
1:A:75:ILE:HG21	1:A:506:ILE:HG22	1.55	0.89
1:A:72:THR:O	1:A:75:ILE:HG22	1.73	0.88
1:B:237:LYS:HZ2	1:B:392:ILE:HD13	1.40	0.85
1:B:57:VAL:HG21	1:B:353:LEU:HD13	1.58	0.84
1:A:16:THR:O	1:A:20:LEU:HG	1.77	0.84
1:B:26:ALA:O	1:B:27:VAL:HG22	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:108:TYR:HE1	1:B:448:ARG:HH22	1.22	0.84
1:B:75:ILE:HD12	1:B:506:ILE:HG21	1.62	0.82
1:A:12:LEU:HD22	1:A:225:LEU:HD11	1.61	0.81
1:B:288:VAL:HG13	1:B:321:MET:HE1	1.64	0.80
1:B:208:THR:HG22	1:B:209:HIS:N	1.97	0.80
1:A:255:GLU:HG2	1:A:258:THR:CG2	2.12	0.79
1:A:255:GLU:HG2	1:A:258:THR:HG22	1.63	0.79
1:A:143:ALA:O	1:A:496:LEU:HD13	1.83	0.78
1:A:25:LEU:HD12	1:A:29:LEU:CD1	2.14	0.78
1:A:133:SER:O	1:A:137:LEU:HD13	1.83	0.77
1:A:329:PHE:CD1	1:A:341:GLN:HG3	2.20	0.75
1:A:466:ASN:HD22	1:B:368:THR:HG22	1.50	0.75
1:A:44:SER:N	1:A:45:PRO:HD2	2.02	0.75
1:A:462:ALA:C	1:A:464:PRO:N	2.45	0.75
1:A:136:ALA:HB1	1:A:493:MET:HE1	1.69	0.75
1:B:93:LYS:HE2	1:B:99:GLU:H	1.52	0.75
1:A:241:LEU:CD1	1:A:323:VAL:HG11	2.17	0.74
1:B:237:LYS:NZ	1:B:392:ILE:HD13	2.02	0.74
1:B:350:THR:HG21	1:B:391:VAL:CG1	2.17	0.74
1:A:39:ILE:CG2	1:A:181:VAL:HG13	2.18	0.73
1:B:498:SER:OG	1:B:501:ALA:CB	2.36	0.73
1:B:217:ASP:CG	1:B:223:SER:OG	2.29	0.73
1:B:176:GLN:HE21	1:B:183:TYR:HB2	1.54	0.73
1:B:215:PHE:HE1	1:B:333:ASN:ND2	1.87	0.73
1:B:246:ALA:HB3	1:B:319:ILE:HG23	1.70	0.72
1:A:367:PRO:CG	1:A:373:LEU:CD2	2.68	0.72
1:A:433:GLN:HE22	1:B:365:GLN:HA	1.53	0.71
1:A:255:GLU:O	1:A:258:THR:HG23	1.91	0.71
1:B:240:VAL:HG12	1:B:241:LEU:CD2	2.17	0.71
1:B:369:HIS:CE1	1:B:371:GLN:CB	2.72	0.71
1:B:6:ILE:O	1:B:6:ILE:HG22	1.90	0.71
1:B:304:ALA:HB1	1:B:311:ALA:H	1.56	0.70
1:B:208:THR:CG2	1:B:209:HIS:N	2.54	0.70
1:A:288:VAL:HG13	1:A:321:MET:HE1	1.73	0.70
1:B:127:PHE:CZ	1:B:453:LEU:HD22	2.26	0.70
1:B:59:LEU:HD12	1:B:62:HIS:HB3	1.71	0.70
1:A:59:LEU:HD21	1:A:356:ASP:OD2	1.90	0.70
1:A:12:LEU:HD22	1:A:225:LEU:HD21	1.73	0.70
1:A:25:LEU:HD12	1:A:29:LEU:HD12	1.74	0.70
1:A:288:VAL:HG22	1:A:321:MET:HE1	1.74	0.69
1:B:199:ILE:HG22	1:B:215:PHE:CZ	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:367:PRO:CB	1:A:373:LEU:HD21	2.23	0.68
1:A:12:LEU:HD22	1:A:225:LEU:CG	2.23	0.68
1:A:12:LEU:HD22	1:A:225:LEU:CD1	2.23	0.68
1:B:39:ILE:HG22	1:B:181:VAL:HG13	1.76	0.68
1:A:161:HIS:CD2	1:A:277:ILE:HG23	2.28	0.68
1:A:241:LEU:HD13	1:A:323:VAL:HG11	1.76	0.68
1:A:70:SER:OG	1:A:151:GLU:OE2	2.12	0.67
1:B:16:THR:HG22	1:B:168:SER:OG	1.94	0.67
1:B:191:VAL:HG22	1:B:202:LEU:HD22	1.77	0.67
1:A:75:ILE:HG21	1:A:506:ILE:HG21	1.77	0.67
1:A:367:PRO:CG	1:A:373:LEU:HD21	2.25	0.67
1:A:52:VAL:HG11	1:A:250:GLN:HG2	1.77	0.66
1:B:237:LYS:NZ	1:B:392:ILE:CD1	2.58	0.66
1:A:367:PRO:HB3	1:A:373:LEU:HD23	1.76	0.66
1:B:239:ASP:OD1	1:B:240:VAL:HG23	1.95	0.66
1:B:60:MET:O	1:B:64:LEU:HD12	1.96	0.66
1:A:45:PRO:HB3	1:A:187:HIS:CD2	2.30	0.66
1:A:442:GLN:OE1	1:A:445:ASP:OD1	2.12	0.66
1:A:367:PRO:CB	1:A:373:LEU:CD2	2.74	0.66
1:B:161:HIS:CD2	1:B:277:ILE:HG23	2.31	0.66
1:B:199:ILE:HB	1:B:215:PHE:CE1	2.32	0.65
1:B:208:THR:CG2	1:B:209:HIS:H	2.07	0.65
1:A:367:PRO:HG2	1:A:373:LEU:HD21	1.79	0.64
1:B:127:PHE:HZ	1:B:453:LEU:HD21	1.58	0.64
1:A:361:LEU:HD23	1:A:380:PHE:CE1	2.32	0.64
1:B:136:ALA:HB1	1:B:493:MET:CE	2.27	0.64
1:B:215:PHE:HE1	1:B:333:ASN:HD21	1.42	0.64
1:B:7:GLN:HG3	1:B:36:GLY:O	1.98	0.64
1:A:338:GLY:HA2	1:A:355:PHE:CE1	2.32	0.64
1:A:56:THR:OG1	1:A:160:TYR:N	2.28	0.64
1:A:82:PHE:CE2	1:A:502:LEU:HD23	2.33	0.63
1:B:387:MET:O	1:B:391:VAL:HG23	1.98	0.63
1:A:255:GLU:CG	1:A:258:THR:HG22	2.28	0.63
1:B:216:ILE:O	1:B:335:VAL:O	2.17	0.62
1:B:75:ILE:CD1	1:B:506:ILE:HG21	2.27	0.62
1:A:59:LEU:HD23	1:A:59:LEU:C	2.25	0.61
1:A:70:SER:HG	1:A:151:GLU:CD	2.08	0.61
1:B:468:GLN:HG2	1:B:469:LEU:H	1.65	0.61
1:A:59:LEU:CD2	1:A:356:ASP:OD2	2.48	0.61
1:A:72:THR:O	1:A:75:ILE:CG2	2.47	0.61
1:A:208:THR:HG22	1:A:209:HIS:ND1	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:127:PHE:CE1	1:B:453:LEU:HD22	2.35	0.61
1:A:44:SER:N	1:A:45:PRO:CD	2.63	0.61
1:A:79:ASP:O	1:A:279:LEU:CD2	2.49	0.61
1:B:56:THR:OG1	1:B:160:TYR:N	2.27	0.61
1:B:448:ARG:HG2	1:B:449:LEU:H	1.65	0.61
1:B:92:ASN:HD21	1:B:402:SER:HA	1.65	0.61
1:A:86:ILE:HG12	1:A:88:PHE:CE1	2.35	0.60
1:B:59:LEU:HD21	1:B:360:LYS:HE3	1.83	0.60
1:B:39:ILE:CG2	1:B:181:VAL:HG13	2.32	0.60
1:A:25:LEU:HD12	1:A:29:LEU:HD11	1.84	0.60
1:A:246:ALA:HB2	1:A:321:MET:CE	2.32	0.60
1:B:498:SER:OG	1:B:501:ALA:HB2	2.00	0.60
1:A:12:LEU:HD22	1:A:225:LEU:CD2	2.32	0.59
1:B:240:VAL:HG13	1:B:396:LYS:HG3	1.83	0.59
1:A:442:GLN:HB3	1:A:445:ASP:CG	2.27	0.59
1:B:204:ASP:O	1:B:205:THR:HG22	2.02	0.59
1:B:240:VAL:CG1	1:B:241:LEU:HD22	2.24	0.59
1:B:6:ILE:HG13	1:B:369:HIS:HA	1.85	0.59
1:B:60:MET:O	1:B:64:LEU:CD1	2.51	0.58
1:A:456:LEU:HD23	1:A:457:TYR:CE1	2.39	0.58
1:B:92:ASN:ND2	1:B:402:SER:HA	2.18	0.58
1:B:393:ARG:NE	1:B:422:ALA:HB3	2.18	0.58
1:A:367:PRO:HG2	1:A:373:LEU:CD2	2.34	0.58
1:A:54:GLU:HG3	1:A:164:ALA:HB2	1.86	0.58
1:A:39:ILE:HG22	1:A:181:VAL:CG1	2.28	0.58
1:B:78:CYS:HA	1:B:166:LYS:HB2	1.86	0.58
1:B:188:ILE:HD13	1:B:202:LEU:HD13	1.85	0.58
1:B:215:PHE:CE1	1:B:333:ASN:ND2	2.69	0.58
1:B:347:LEU:HB3	1:B:395:ILE:HD12	1.84	0.58
1:B:354:VAL:HG11	1:B:388:TRP:CZ2	2.39	0.57
1:B:176:GLN:HE21	1:B:183:TYR:CB	2.18	0.57
1:B:503:ILE:O	1:B:507:ILE:HG12	2.04	0.57
1:A:12:LEU:HD13	1:A:202:LEU:HD13	1.86	0.57
1:A:367:PRO:HB3	1:A:373:LEU:CD2	2.33	0.57
1:B:115:ASN:O	1:B:116:LEU:C	2.46	0.57
1:A:255:GLU:HG2	1:A:258:THR:HG23	1.87	0.57
1:B:462:ALA:C	1:B:464:PRO:N	2.63	0.57
1:B:19:TRP:HB3	1:B:171:LEU:HB3	1.86	0.57
1:A:75:ILE:HA	1:A:80:VAL:HB	1.86	0.56
1:B:237:LYS:HZ1	1:B:392:ILE:CD1	2.18	0.56
1:B:133:SER:O	1:B:137:LEU:HD13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:249:LEU:HD21	1:B:251:LEU:HD21	1.87	0.56
1:A:241:LEU:HD12	1:A:323:VAL:HG11	1.88	0.56
1:A:412:ASP:HA	1:A:415:ASN:HD22	1.71	0.56
1:A:433:GLN:NE2	1:B:365:GLN:HA	2.20	0.56
1:B:75:ILE:HA	1:B:80:VAL:HB	1.88	0.56
1:B:408:ASP:HA	1:B:411:LEU:HB2	1.88	0.56
1:B:304:ALA:CB	1:B:311:ALA:H	2.19	0.56
1:B:350:THR:CG2	1:B:391:VAL:CG1	2.83	0.56
1:A:59:LEU:HD21	1:A:356:ASP:CG	2.31	0.55
1:B:361:LEU:HD23	1:B:380:PHE:CE1	2.40	0.55
1:A:45:PRO:HG2	1:A:46:ASN:H	1.71	0.55
1:A:243:VAL:HG11	1:A:288:VAL:HG13	1.87	0.55
1:A:369:HIS:O	1:A:372:THR:HG22	2.06	0.55
1:A:188:ILE:CD1	1:A:224:ARG:HG2	2.29	0.55
1:A:447:PHE:HD1	1:A:451:ASN:HD22	1.55	0.55
1:B:16:THR:CG2	1:B:168:SER:OG	2.54	0.55
1:B:114:ASP:O	1:B:115:ASN:C	2.50	0.55
1:A:245:LYS:HE2	1:A:318:LEU:HD11	1.89	0.54
1:B:10:ILE:HG21	1:B:42:ILE:HD12	1.88	0.54
1:A:191:VAL:HG13	1:A:202:LEU:CD2	2.38	0.54
1:B:341:GLN:HG3	1:B:388:TRP:CZ2	2.42	0.54
1:B:82:PHE:CE2	1:B:502:LEU:HD23	2.42	0.54
1:B:290:CYS:SG	1:B:292:LYS:HG3	2.48	0.54
1:B:498:SER:OG	1:B:501:ALA:HB3	2.06	0.54
1:B:290:CYS:SG	1:B:292:LYS:CG	2.96	0.54
1:A:75:ILE:HG23	1:A:76:ARG:N	2.23	0.54
1:A:508:ARG:HD3	1:A:509:HIS:CD2	2.43	0.54
1:B:350:THR:HG21	1:B:391:VAL:HG11	1.89	0.53
1:B:43:GLU:O	1:B:185:SER:HA	2.09	0.53
1:B:11:ILE:HD12	1:B:41:VAL:HG22	1.90	0.53
1:B:93:LYS:HZ3	1:B:98:GLN:HB3	1.74	0.53
1:B:397:LEU:HD11	1:B:456:LEU:HD12	1.90	0.53
1:A:79:ASP:O	1:A:279:LEU:HD23	2.09	0.53
1:A:81:SER:HA	1:A:503:ILE:HD11	1.91	0.52
1:A:253:TYR:CE1	1:A:283:LYS:HG3	2.45	0.52
1:B:369:HIS:O	1:B:372:THR:HG22	2.09	0.52
1:B:464:PRO:O	1:B:465:THR:C	2.53	0.52
1:A:77:ARG:HD2	1:A:170:LEU:HD13	1.90	0.52
1:B:114:ASP:O	1:B:116:LEU:N	2.43	0.52
1:A:255:GLU:CD	1:A:258:THR:HG22	2.34	0.52
1:A:288:VAL:HG22	1:A:321:MET:CE	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:27:VAL:HG11	1:B:67:PHE:HA	1.90	0.52
1:B:146:THR:OG1	1:B:147:LEU:N	2.40	0.52
1:A:280:PRO:HA	1:A:500:ARG:HH12	1.75	0.52
1:B:199:ILE:CG2	1:B:215:PHE:CZ	2.92	0.52
1:B:230:MET:SD	1:B:334:CYS:HB3	2.50	0.52
1:B:370:THR:HA	1:B:373:LEU:HG	1.91	0.52
1:B:125:LYS:HG3	1:B:130:ALA:HB2	1.91	0.51
1:A:243:VAL:HG13	1:A:289:PHE:C	2.35	0.51
1:A:501:ALA:O	1:A:505:ASN:ND2	2.44	0.51
1:B:57:VAL:CG2	1:B:353:LEU:HD13	2.37	0.51
1:B:253:TYR:CE1	1:B:283:LYS:HG3	2.46	0.51
1:A:52:VAL:HG13	1:A:282:ARG:CZ	2.41	0.51
1:A:146:THR:HG22	1:A:149:CYS:SG	2.51	0.51
1:A:226:LEU:HD23	1:A:326:ARG:HD2	1.92	0.51
1:B:449:LEU:O	1:B:453:LEU:CB	2.51	0.51
1:A:448:ARG:HB3	1:A:450:GLU:CD	2.35	0.51
1:B:190:GLU:HB3	1:B:203:VAL:HB	1.93	0.51
1:A:216:ILE:HG12	1:A:335:VAL:HG13	1.91	0.51
1:B:338:GLY:O	1:B:341:GLN:HG2	2.11	0.51
1:B:396:LYS:O	1:B:397:LEU:C	2.53	0.51
1:B:93:LYS:NZ	1:B:98:GLN:HB3	2.26	0.51
1:A:448:ARG:HG3	1:A:449:LEU:H	1.76	0.51
1:B:24:HIS:CE1	1:B:360:LYS:HG3	2.46	0.51
1:B:204:ASP:CG	1:B:205:THR:N	2.69	0.51
1:B:368:THR:OG1	1:B:372:THR:HG21	2.11	0.51
1:B:26:ALA:O	1:B:27:VAL:CG2	2.54	0.50
1:A:288:VAL:CG2	1:A:321:MET:HE1	2.40	0.50
1:A:14:GLY:HA3	1:A:43:GLU:HG3	1.94	0.50
1:A:26:ALA:HB1	1:A:179:LEU:HB3	1.93	0.50
1:B:471:LEU:HD13	1:B:471:LEU:C	2.37	0.50
1:B:78:CYS:HA	1:B:166:LYS:CB	2.41	0.50
1:A:43:GLU:O	1:A:44:SER:HB3	2.12	0.50
1:A:288:VAL:CG1	1:A:321:MET:HE1	2.40	0.50
1:A:293:TYR:CE2	1:A:409:PHE:HA	2.46	0.50
1:B:464:PRO:O	1:B:466:ASN:N	2.45	0.50
1:B:235:LYS:HE2	1:B:327:GLU:HA	1.93	0.49
1:B:261:PRO:HD2	1:B:278:ALA:CB	2.42	0.49
1:A:75:ILE:HD13	1:A:506:ILE:HB	1.93	0.49
1:A:188:ILE:HD11	1:A:224:ARG:CG	2.32	0.49
1:B:240:VAL:CG1	1:B:396:LYS:HG3	2.41	0.49
1:B:365:GLN:HB3	1:B:376:LEU:CD2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:LEU:CD2	1:A:225:LEU:HG	2.42	0.49
1:B:39:ILE:HG22	1:B:181:VAL:CG1	2.43	0.49
1:B:11:ILE:HG23	1:B:216:ILE:HB	1.93	0.49
1:B:253:TYR:HB3	1:B:258:THR:CG2	2.42	0.49
1:B:448:ARG:HE	1:B:450:GLU:CD	2.21	0.49
1:A:241:LEU:HD12	1:A:323:VAL:CG1	2.42	0.49
1:A:307:VAL:HG12	1:A:309:LYS:H	1.78	0.49
1:A:329:PHE:HE1	1:A:341:GLN:O	1.96	0.49
1:A:482:GLN:O	1:A:484:ALA:N	2.43	0.49
1:B:24:HIS:CE1	1:B:66:GLU:OE1	2.66	0.49
1:B:450:GLU:HG2	1:B:451:ASN:H	1.77	0.49
1:B:12:LEU:HD13	1:B:188:ILE:HD12	1.95	0.49
1:B:147:LEU:N	1:B:147:LEU:HD12	2.28	0.48
1:A:119:TRP:O	1:A:123:GLN:N	2.46	0.48
1:B:506:ILE:HD13	1:B:511:MET:HE2	1.95	0.48
1:A:21:THR:HG21	1:A:216:ILE:HD13	1.95	0.48
1:A:383:ARG:NH2	1:B:438:TYR:O	2.46	0.48
1:B:204:ASP:OD1	1:B:205:THR:N	2.44	0.48
1:A:75:ILE:HG23	1:A:76:ARG:HG3	1.94	0.48
1:A:142:LEU:CD1	1:A:493:MET:HB2	2.43	0.48
1:B:56:THR:HG21	1:B:60:MET:HG2	1.94	0.48
1:A:484:ALA:O	1:A:485:ILE:C	2.57	0.48
1:B:42:ILE:HG21	1:B:188:ILE:HD11	1.95	0.48
1:B:103:TYR:O	1:B:105:PRO:HD3	2.14	0.48
1:B:253:TYR:HE2	1:B:279:LEU:O	1.97	0.47
1:B:317:ARG:CZ	1:B:317:ARG:HB3	2.44	0.47
1:A:188:ILE:O	1:A:188:ILE:HG13	2.13	0.47
1:B:24:HIS:CE1	1:B:360:LYS:CG	2.97	0.47
1:A:216:ILE:HA	1:A:335:VAL:O	2.14	0.47
1:B:93:LYS:CE	1:B:99:GLU:H	2.25	0.47
1:B:10:ILE:CG2	1:B:42:ILE:HD12	2.44	0.47
1:B:341:GLN:HG3	1:B:388:TRP:HZ2	1.79	0.47
1:A:133:SER:HB3	1:A:488:ARG:HD2	1.95	0.47
1:B:77:ARG:O	1:B:79:ASP:N	2.48	0.47
1:B:468:GLN:HG2	1:B:469:LEU:N	2.28	0.47
1:B:9:VAL:HG13	1:B:39:ILE:HA	1.97	0.47
1:A:21:THR:HG21	1:A:216:ILE:HG21	1.95	0.47
1:A:38:LYS:NZ	1:A:182:GLU:OE2	2.37	0.47
1:A:80:VAL:HG22	1:A:162:LEU:HB3	1.97	0.47
1:A:347:LEU:CD2	1:A:395:ILE:HG23	2.44	0.47
1:B:21:THR:HG21	1:B:216:ILE:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:253:TYR:HB3	1:B:258:THR:HG21	1.96	0.47
1:A:25:LEU:CD1	1:A:29:LEU:HD11	2.45	0.47
1:A:56:THR:HG21	1:A:60:MET:HG2	1.95	0.47
1:A:130:ALA:HB1	1:A:482:GLN:HE22	1.79	0.47
1:A:38:LYS:HE3	1:A:182:GLU:OE1	2.14	0.47
1:A:12:LEU:CD2	1:A:225:LEU:CG	2.92	0.47
1:A:57:VAL:HG21	1:A:353:LEU:HD13	1.96	0.47
1:B:11:ILE:HG12	1:B:216:ILE:HG13	1.97	0.47
1:B:440:PHE:HZ	1:B:452:TYR:CG	2.33	0.47
1:A:338:GLY:HA2	1:A:355:PHE:CD1	2.50	0.46
1:B:221:PHE:CE2	1:B:322:LYS:HB2	2.49	0.46
1:A:22:ALA:HB1	1:A:181:VAL:HG11	1.98	0.46
1:A:450:GLU:HG2	1:A:451:ASN:H	1.80	0.46
1:A:27:VAL:HG11	1:A:67:PHE:HA	1.96	0.46
1:A:223:SER:O	1:A:223:SER:OG	2.30	0.46
1:A:365:GLN:HA	1:B:433:GLN:OE1	2.16	0.46
1:B:86:ILE:HG23	1:B:264:THR:O	2.15	0.46
1:A:12:LEU:CD2	1:A:225:LEU:HD11	2.39	0.46
1:A:19:TRP:CE3	1:A:172:ALA:HA	2.50	0.46
1:B:318:LEU:HD23	1:B:318:LEU:C	2.41	0.46
1:A:374:ALA:HB3	1:A:375:PRO:HD3	1.98	0.46
1:A:397:LEU:O	1:A:401:ILE:HG12	2.16	0.46
1:B:46:ASN:O	1:B:48:PRO:HD3	2.14	0.46
1:B:357:ALA:HB1	1:B:387:MET:HE1	1.97	0.46
1:A:25:LEU:HB3	1:A:39:ILE:HD11	1.97	0.46
1:A:50:ILE:HG13	1:A:52:VAL:HG23	1.97	0.46
1:A:253:TYR:HE2	1:A:279:LEU:O	1.99	0.46
1:A:347:LEU:HB3	1:A:395:ILE:HD12	1.96	0.46
1:A:347:LEU:HD22	1:A:395:ILE:HG23	1.98	0.46
1:B:115:ASN:O	1:B:118:GLN:N	2.49	0.46
1:B:136:ALA:HB1	1:B:493:MET:HE3	1.96	0.46
1:B:26:ALA:HB1	1:B:179:LEU:HB3	1.98	0.46
1:B:71:GLU:OE1	1:B:511:MET:HE1	2.16	0.46
1:A:43:GLU:O	1:A:185:SER:HA	2.15	0.45
1:A:450:GLU:HG2	1:A:451:ASN:N	2.31	0.45
1:B:115:ASN:HB3	1:B:131:PHE:CE2	2.51	0.45
1:B:14:GLY:HA3	1:B:43:GLU:OE1	2.17	0.45
1:B:311:ALA:O	1:B:313:ASP:N	2.50	0.45
1:A:137:LEU:N	1:A:137:LEU:HD12	2.31	0.45
1:A:338:GLY:C	1:A:355:PHE:CE1	2.94	0.45
1:B:112:ASP:O	1:B:113:ALA:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:19:TRP:CE3	1:B:172:ALA:HA	2.52	0.45
1:B:47:THR:O	1:B:47:THR:OG1	2.31	0.45
1:A:257:ASN:OD1	1:A:257:ASN:N	2.50	0.45
1:A:492:HIS:O	1:A:496:LEU:HG	2.16	0.45
1:B:270:SER:HB2	1:B:302:GLN:HE22	1.81	0.45
1:B:435:PRO:HB2	1:B:449:LEU:HD11	1.99	0.45
1:B:344:VAL:HG23	1:B:388:TRP:HZ3	1.81	0.45
1:A:338:GLY:CA	1:A:355:PHE:CE1	2.99	0.45
1:A:50:ILE:HB	1:A:165:GLY:HA3	1.99	0.45
1:B:491:HIS:O	1:B:495:GLN:HG3	2.16	0.44
1:B:155:LEU:HD11	1:B:495:GLN:OE1	2.17	0.44
1:B:24:HIS:NE2	1:B:360:LYS:HG3	2.32	0.44
1:B:194:ASP:O	1:B:196:ASP:O	2.34	0.44
1:B:374:ALA:HB3	1:B:375:PRO:HD3	2.00	0.44
1:A:449:LEU:O	1:A:453:LEU:CB	2.44	0.44
1:B:53:GLY:HA2	1:B:162:LEU:O	2.17	0.44
1:A:12:LEU:HD13	1:A:202:LEU:CD1	2.47	0.44
1:A:44:SER:O	1:A:45:PRO:C	2.61	0.44
1:A:176:GLN:HE21	1:A:183:TYR:HB2	1.83	0.44
1:B:288:VAL:CG1	1:B:321:MET:HE1	2.41	0.44
1:A:75:ILE:HD11	1:A:503:ILE:HG23	2.00	0.44
1:A:146:THR:HG23	1:A:149:CYS:H	1.82	0.44
1:B:127:PHE:O	1:B:131:PHE:HD1	2.00	0.44
1:B:350:THR:CG2	1:B:391:VAL:HG11	2.47	0.44
1:A:338:GLY:HA2	1:A:355:PHE:CZ	2.53	0.44
1:B:75:ILE:HG22	1:B:507:ILE:HD11	2.00	0.44
1:A:116:LEU:HD21	1:A:435:PRO:HD2	2.00	0.44
1:A:25:LEU:HB3	1:A:39:ILE:CD1	2.48	0.43
1:A:44:SER:H	1:A:45:PRO:HD2	1.80	0.43
1:A:328:ARG:HH12	1:A:331:HIS:CE1	2.36	0.43
1:B:240:VAL:CG1	1:B:241:LEU:CD2	2.91	0.43
1:B:260:LEU:HD22	1:B:278:ALA:HB1	2.01	0.43
1:A:92:ASN:O	1:A:93:LYS:HB2	2.19	0.43
1:A:202:LEU:HG	1:A:215:PHE:HE2	1.84	0.43
1:A:245:LYS:HE2	1:A:318:LEU:CD1	2.48	0.43
1:B:56:THR:HG1	1:B:160:TYR:H	1.61	0.43
1:B:11:ILE:HG23	1:B:216:ILE:CB	2.49	0.43
1:B:399:TYR:HB3	1:B:413:ASN:HB3	2.00	0.43
1:B:369:HIS:HE1	1:B:371:GLN:CB	2.27	0.43
1:B:499:ASN:O	1:B:503:ILE:HG13	2.18	0.43
1:A:397:LEU:HD23	1:A:455:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:426:ASP:HB3	1:A:430:TRP:CH2	2.54	0.43
1:B:166:LYS:O	1:B:169:GLU:HB2	2.19	0.43
1:B:444:PHE:O	1:B:444:PHE:CD2	2.72	0.43
1:B:221:PHE:O	1:B:222:CYS:C	2.60	0.43
1:B:108:TYR:HA	1:B:109:PRO:HD3	1.93	0.42
1:B:401:ILE:HD13	1:B:456:LEU:HA	2.00	0.42
1:B:199:ILE:HD12	1:B:230:MET:HE3	2.00	0.42
1:A:415:ASN:O	1:A:416:PRO:C	2.62	0.42
1:B:11:ILE:HA	1:B:216:ILE:HB	2.02	0.42
1:B:246:ALA:HB3	1:B:319:ILE:CG2	2.44	0.42
1:A:441:ASN:HA	1:B:443:GLY:HA3	2.01	0.42
1:B:290:CYS:SG	1:B:292:LYS:HG2	2.59	0.42
1:B:75:ILE:CD1	1:B:506:ILE:HD13	2.50	0.42
1:B:85:GLY:C	1:B:86:ILE:HG13	2.45	0.42
1:B:93:LYS:HE3	1:B:99:GLU:O	2.18	0.42
1:B:285:VAL:HG12	1:B:303:LEU:HD11	2.01	0.42
1:B:397:LEU:O	1:B:401:ILE:HG12	2.20	0.42
1:A:16:THR:HG23	1:A:167:PHE:CD2	2.55	0.42
1:A:145:LYS:HB2	1:A:145:LYS:HE3	1.31	0.42
1:A:267:THR:HG22	1:A:269:GLN:NE2	2.34	0.42
1:A:10:ILE:HG13	1:A:212:ALA:HB2	2.02	0.42
1:B:317:ARG:NH1	1:B:317:ARG:CB	2.83	0.42
1:B:133:SER:O	1:B:137:LEU:CD1	2.67	0.42
1:B:246:ALA:HA	1:B:287:HIS:O	2.20	0.42
1:A:93:LYS:NZ	1:A:99:GLU:O	2.52	0.41
1:A:137:LEU:N	1:A:137:LEU:CD1	2.83	0.41
1:B:426:ASP:HB3	1:B:430:TRP:CH2	2.55	0.41
1:A:19:TRP:HB3	1:A:171:LEU:HB3	2.02	0.41
1:A:54:GLU:CG	1:A:164:ALA:HB2	2.50	0.41
1:A:167:PHE:O	1:A:171:LEU:HG	2.20	0.41
1:B:383:ARG:O	1:B:387:MET:HG3	2.20	0.41
1:A:147:LEU:HD21	1:A:505:ASN:CG	2.45	0.41
1:A:246:ALA:HB2	1:A:321:MET:HE2	2.01	0.41
1:B:93:LYS:CE	1:B:99:GLU:O	2.68	0.41
1:A:70:SER:OG	1:A:151:GLU:CD	2.62	0.41
1:A:82:PHE:CE2	1:A:502:LEU:CD2	3.03	0.41
1:A:271:ALA:HB3	1:A:294:ILE:HD13	2.02	0.41
1:A:373:LEU:HD23	1:A:373:LEU:HA	1.64	0.41
1:A:468:GLN:CD	1:A:468:GLN:H	2.23	0.41
1:A:202:LEU:HG	1:A:215:PHE:CE2	2.56	0.41
1:A:250:GLN:C	1:A:251:LEU:HD12	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:22:ALA:HB1	1:B:181:VAL:HG11	2.02	0.41
1:B:254:ASP:HB2	1:B:255:GLU:OE1	2.21	0.41
1:A:191:VAL:HG13	1:A:202:LEU:HD23	2.02	0.41
1:A:389:GLU:HB3	1:A:393:ARG:NH1	2.36	0.41
1:B:82:PHE:CE2	1:B:502:LEU:CD2	3.03	0.41
1:B:225:LEU:O	1:B:229:ALA:HB3	2.20	0.41
1:B:6:ILE:HD12	1:B:373:LEU:HD21	2.02	0.41
1:B:137:LEU:HD23	1:B:496:LEU:HD13	2.03	0.41
1:A:10:ILE:HD12	1:A:215:PHE:CE2	2.56	0.41
1:A:12:LEU:CD2	1:A:225:LEU:HD21	2.47	0.41
1:A:116:LEU:HD12	1:A:116:LEU:HA	1.93	0.41
1:A:427:LEU:HD23	1:A:430:TRP:HE3	1.85	0.41
1:A:447:PHE:HD1	1:A:451:ASN:ND2	2.18	0.41
1:A:469:LEU:HD13	1:A:469:LEU:HA	1.86	0.41
1:B:136:ALA:HB1	1:B:493:MET:HE1	2.03	0.41
1:B:103:TYR:HE2	1:B:139:ASP:OD1	2.04	0.41
1:B:230:MET:HE1	1:B:332:LYS:HB2	2.03	0.41
1:B:241:LEU:HD21	1:B:392:ILE:HG23	2.03	0.41
1:A:12:LEU:HD11	1:A:188:ILE:HG21	2.02	0.40
1:B:111:LEU:O	1:B:112:ASP:C	2.63	0.40
1:A:246:ALA:HA	1:A:287:HIS:O	2.21	0.40
1:A:307:VAL:HG12	1:A:309:LYS:HB2	2.04	0.40
1:A:427:LEU:HD23	1:A:430:TRP:CE3	2.56	0.40
1:A:482:GLN:HA	1:A:485:ILE:HG13	2.04	0.40
1:B:216:ILE:O	1:B:216:ILE:HG22	2.21	0.40
1:A:426:ASP:HB3	1:A:430:TRP:CZ3	2.57	0.40
1:B:357:ALA:CB	1:B:387:MET:HE1	2.51	0.40
1:A:14:GLY:CA	1:A:43:GLU:HG3	2.51	0.40
1:A:25:LEU:HA	1:A:25:LEU:HD13	1.85	0.40
1:B:306:TYR:CD1	1:B:306:TYR:C	2.99	0.40

All (3) 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:47:THR:CG2	1:B:311:ALA:CB[1_455]	1.69	0.51
1:B:98:GLN:NE2	1:B:182:GLU:OE1[1_565]	1.70	0.50
1:A:47:THR:CG2	1:B:312:ASN:N[1_455]	2.03	0.17

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	469/514 (91%)	423 (90%)	43 (9%)	3 (1%)	22 55
1	B	481/514 (94%)	431 (90%)	40 (8%)	10 (2%)	5 25
All	All	950/1028 (92%)	854 (90%)	83 (9%)	13 (1%)	9 35

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	44	SER
1	B	115	ASN
1	B	114	ASP
1	B	312	ASN
1	B	467	PRO
1	B	468	GLN
1	B	52	VAL
1	B	465	THR
1	B	460	ASP
1	A	52	VAL
1	A	45	PRO
1	B	34	PRO
1	B	110	ILE

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	403/430 (94%)	370 (92%)	33 (8%)	9 32

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	412/430 (96%)	388 (94%)	24 (6%)	17 46
All	All	815/860 (95%)	758 (93%)	57 (7%)	12 39

All (57) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	43	GLU
1	A	49	THR
1	A	50	ILE
1	A	52	VAL
1	A	59	LEU
1	A	69	ILE
1	A	72	THR
1	A	86	ILE
1	A	93	LYS
1	A	98	GLN
1	A	99	GLU
1	A	117	THR
1	A	121	SER
1	A	123	GLN
1	A	125	LYS
1	A	145	LYS
1	A	184	LEU
1	A	194	ASP
1	A	196	ASP
1	A	226	LEU
1	A	257	ASN
1	A	279	LEU
1	A	310	GLU
1	A	326	ARG
1	A	337	ILE
1	A	345	GLU
1	A	360	LYS
1	A	391	VAL
1	A	429	HIS
1	A	467	PRO
1	A	468	GLN
1	A	485	ILE
1	A	508	ARG
1	B	6	ILE
1	B	11	ILE
1	B	33	GLN

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Mol	Chain	Res	Type
1	B	110	ILE
1	B	111	LEU
1	B	146	THR
1	B	157	SER
1	B	205	THR
1	B	208	THR
1	B	243	VAL
1	B	245	LYS
1	B	258	THR
1	B	259	VAL
1	B	274	ILE
1	B	296	THR
1	B	308	ASP
1	B	314	ILE
1	B	319	ILE
1	B	376	LEU
1	B	391	VAL
1	B	396	LYS
1	B	405	ASP
1	B	456	LEU
1	B	471	LEU

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	7	GLN
1	A	100	HIS
1	A	115	ASN
1	A	153	GLN
1	A	176	GLN
1	A	187	HIS
1	A	302	GLN
1	A	365	GLN
1	A	415	ASN
1	A	433	GLN
1	A	451	ASN
1	A	466	ASN
1	A	495	GLN
1	A	509	HIS
1	B	24	HIS
1	B	62	HIS
1	B	176	GLN

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Mol	Chain	Res	Type
1	B	178	ASN
1	B	300	HIS
1	B	302	GLN
1	B	365	GLN
1	B	369	HIS
1	B	403	ASN
1	B	429	HIS
1	B	442	GLN
1	B	491	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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	483/514 (93%)	2.02	209 (43%)	1	1	35, 46, 61, 74	0
1	B	493/514 (95%)	2.09	233 (47%)	0	0	30, 46, 63, 78	0
All	All	976/1028 (94%)	2.05	442 (45%)	1	0	30, 46, 63, 78	0

All (442) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	470	ALA	8.4
1	A	462	ALA	6.7
1	A	147	LEU	6.6
1	A	309	LYS	6.5
1	B	50	ILE	6.1
1	B	402	SER	6.0
1	B	514	VAL	5.5
1	B	375	PRO	5.5
1	B	444	PHE	5.4
1	B	471	LEU	5.3
1	B	6	ILE	5.3
1	A	470	ALA	5.3
1	A	188	ILE	5.3
1	A	308	ASP	5.2
1	B	98	GLN	5.1
1	B	112	ASP	5.1
1	B	10	ILE	5.1
1	B	182	GLU	5.1
1	B	216	ILE	5.0
1	A	90	ALA	4.9
1	A	45	PRO	4.9
1	B	469	LEU	4.9
1	A	319	ILE	4.8
1	B	93	LYS	4.7

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Mol	Chain	Res	Type	RSRZ
1	B	239	ASP	4.7
1	B	418	SER	4.7
1	A	293	TYR	4.6
1	A	228	GLU	4.6
1	B	486	ALA	4.6
1	B	446	THR	4.6
1	B	464	PRO	4.6
1	A	254	ASP	4.5
1	B	113	ALA	4.4
1	B	197	GLY	4.4
1	B	92	ASN	4.4
1	B	466	ASN	4.4
1	A	297	ASP	4.4
1	B	45	PRO	4.4
1	A	42	ILE	4.3
1	A	406	ASP	4.3
1	B	69	ILE	4.3
1	A	52	VAL	4.3
1	B	15	GLY	4.3
1	A	469	LEU	4.3
1	B	44	SER	4.3
1	A	299	ALA	4.3
1	A	256	PRO	4.2
1	B	322	LYS	4.2
1	A	248	ALA	4.2
1	A	486	ALA	4.2
1	B	467	PRO	4.2
1	B	111	LEU	4.2
1	A	75	ILE	4.2
1	A	347	LEU	4.1
1	A	361	LEU	4.1
1	B	62	HIS	4.1
1	A	301	ALA	4.1
1	B	507	ILE	4.1
1	A	12	LEU	4.0
1	A	468	GLN	4.0
1	A	310	GLU	4.0
1	B	30	LYS	4.0
1	A	311	ALA	4.0
1	B	208	THR	4.0
1	A	4	HIS	3.9
1	A	322	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
1	B	73	ASP	3.9
1	A	359	ALA	3.9
1	B	241	LEU	3.9
1	A	129	HIS	3.9
1	A	242	PHE	3.9
1	A	401	ILE	3.8
1	B	34	PRO	3.8
1	B	110	ILE	3.8
1	B	305	SER	3.8
1	A	464	PRO	3.8
1	B	392	ILE	3.8
1	B	259	VAL	3.8
1	B	89	ASN	3.8
1	A	408	ASP	3.8
1	A	443	GLY	3.8
1	B	238	SER	3.8
1	A	49	THR	3.7
1	A	342	GLY	3.7
1	B	416	PRO	3.7
1	B	52	VAL	3.7
1	A	50	ILE	3.7
1	A	115	ASN	3.6
1	B	403	ASN	3.6
1	A	216	ILE	3.6
1	B	313	ASP	3.6
1	B	417	ALA	3.6
1	B	51	GLY	3.6
1	B	455	VAL	3.6
1	A	48	PRO	3.6
1	B	200	SER	3.5
1	A	291	ASP	3.5
1	A	362	LEU	3.5
1	A	44	SER	3.5
1	A	14	GLY	3.5
1	A	377	ALA	3.5
1	A	412	ASP	3.5
1	B	465	THR	3.5
1	B	224	ARG	3.5
1	B	274	ILE	3.4
1	B	205	THR	3.4
1	A	403	ASN	3.4
1	B	210	TYR	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	243	VAL	3.4
1	A	21	THR	3.4
1	A	388	TRP	3.4
1	A	466	ASN	3.4
1	B	371	GLN	3.4
1	A	19	TRP	3.4
1	B	369	HIS	3.4
1	A	244	ASN	3.4
1	B	270	SER	3.4
1	B	425	ASN	3.4
1	B	101	SER	3.3
1	A	222	CYS	3.3
1	B	399	TYR	3.3
1	B	453	LEU	3.3
1	A	320	ASP	3.3
1	A	405	ASP	3.3
1	A	56	THR	3.3
1	B	211	LYS	3.3
1	A	321	MET	3.3
1	A	449	LEU	3.3
1	A	467	PRO	3.3
1	A	507	ILE	3.3
1	B	449	LEU	3.3
1	A	46	ASN	3.3
1	B	263	CYS	3.3
1	B	35	GLY	3.3
1	A	271	ALA	3.2
1	A	134	GLN	3.2
1	A	343	PHE	3.2
1	B	377	ALA	3.2
1	A	337	ILE	3.2
1	B	169	GLU	3.2
1	A	259	VAL	3.2
1	B	468	GLN	3.2
1	B	386	GLY	3.2
1	A	273	TRP	3.2
1	B	293	TYR	3.2
1	B	314	ILE	3.2
1	A	118	GLN	3.2
1	A	365	GLN	3.2
1	B	40	THR	3.2
1	B	406	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
1	A	409	PHE	3.2
1	A	108	TYR	3.1
1	A	249	LEU	3.1
1	B	41	VAL	3.1
1	A	15	GLY	3.1
1	A	375	PRO	3.1
1	A	400	ALA	3.1
1	B	188	ILE	3.1
1	B	493	MET	3.1
1	B	391	VAL	3.1
1	B	85	GLY	3.1
1	A	31	PRO	3.1
1	A	230	MET	3.1
1	B	141	ALA	3.1
1	B	422	ALA	3.1
1	B	179	LEU	3.1
1	A	158	TYR	3.1
1	B	146	THR	3.1
1	B	64	LEU	3.1
1	A	312	ASN	3.1
1	B	117	THR	3.1
1	B	310	GLU	3.1
1	A	57	VAL	3.0
1	B	243	VAL	3.0
1	A	340	ALA	3.0
1	B	135	ALA	3.0
1	A	193	LEU	3.0
1	B	388	TRP	3.0
1	B	129	HIS	3.0
1	B	376	LEU	3.0
1	A	402	SER	3.0
1	B	273	TRP	3.0
1	A	77	ARG	3.0
1	A	102	TYR	3.0
1	A	363	ALA	3.0
1	B	136	ALA	3.0
1	B	424	LYS	3.0
1	A	432	HIS	2.9
1	A	422	ALA	2.9
1	B	501	ALA	2.9
1	B	421	GLU	2.9
1	A	510	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	353	LEU	2.9
1	A	117	THR	2.9
1	B	359	ALA	2.9
1	B	307	VAL	2.9
1	B	275	TRP	2.9
1	A	168	SER	2.9
1	B	162	LEU	2.9
1	B	269	GLN	2.9
1	B	410	TRP	2.9
1	B	295	SER	2.9
1	B	59	LEU	2.9
1	B	203	VAL	2.9
1	A	260	LEU	2.8
1	B	53	GLY	2.8
1	B	327	GLU	2.8
1	A	369	HIS	2.8
1	B	330	TRP	2.8
1	A	302	GLN	2.8
1	B	315	ALA	2.8
1	B	335	VAL	2.8
1	B	16	THR	2.8
1	B	56	THR	2.8
1	A	444	PHE	2.8
1	A	171	LEU	2.8
1	A	416	PRO	2.8
1	B	128	SER	2.8
1	B	196	ASP	2.8
1	B	445	ASP	2.8
1	B	225	LEU	2.8
1	B	491	HIS	2.8
1	A	98	GLN	2.8
1	B	195	ASP	2.8
1	A	264	THR	2.8
1	B	362	LEU	2.8
1	B	277	ILE	2.8
1	B	316	PRO	2.7
1	A	292	LYS	2.7
1	A	169	GLU	2.7
1	A	190	GLU	2.7
1	A	298	GLU	2.7
1	B	447	PHE	2.7
1	A	13	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	275	TRP	2.7
1	A	413	ASN	2.7
1	A	135	ALA	2.7
1	A	269	GLN	2.7
1	B	462	ALA	2.7
1	B	502	LEU	2.7
1	B	337	ILE	2.7
1	B	452	TYR	2.7
1	A	51	GLY	2.7
1	B	271	ALA	2.7
1	B	438	TYR	2.7
1	B	230	MET	2.7
1	B	308	ASP	2.7
1	B	321	MET	2.7
1	B	309	LYS	2.6
1	B	343	PHE	2.6
1	B	395	ILE	2.6
1	B	506	ILE	2.6
1	B	504	GLU	2.6
1	A	187	HIS	2.6
1	B	49	THR	2.6
1	B	296	THR	2.6
1	B	226	LEU	2.6
1	A	300	HIS	2.6
1	B	240	VAL	2.6
1	B	304	ALA	2.6
1	A	318	LEU	2.6
1	A	346	PRO	2.6
1	B	4	HIS	2.6
1	B	194	ASP	2.6
1	A	143	ALA	2.6
1	A	366	PHE	2.6
1	A	433	GLN	2.6
1	A	6	ILE	2.5
1	B	106	PHE	2.5
1	A	324	GLY	2.5
1	B	13	GLY	2.5
1	B	298	GLU	2.5
1	A	372	THR	2.5
1	A	353	LEU	2.5
1	B	12	LEU	2.5
1	A	270	SER	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	294	ILE	2.5
1	A	392	ILE	2.5
1	B	319	ILE	2.5
1	B	147	LEU	2.5
1	A	262	SER	2.5
1	B	209	HIS	2.5
1	A	92	ASN	2.5
1	A	303	LEU	2.5
1	A	208	THR	2.5
1	A	296	THR	2.5
1	A	172	ALA	2.5
1	A	261	PRO	2.5
1	B	126	PRO	2.5
1	A	285	VAL	2.5
1	A	136	ALA	2.5
1	A	465	THR	2.5
1	B	264	THR	2.5
1	A	306	TYR	2.5
1	A	121	SER	2.4
1	B	223	SER	2.4
1	B	483	ASP	2.4
1	A	91	TRP	2.4
1	B	456	LEU	2.4
1	A	240	VAL	2.4
1	A	263	CYS	2.4
1	B	451	ASN	2.4
1	A	245	LYS	2.4
1	B	72	THR	2.4
1	A	330	TRP	2.4
1	A	97	GLY	2.4
1	B	247	LEU	2.4
1	B	352	LEU	2.4
1	B	311	ALA	2.4
1	A	440	PHE	2.4
1	A	101	SER	2.4
1	A	225	LEU	2.4
1	B	251	LEU	2.4
1	A	161	HIS	2.4
1	A	277	ILE	2.4
1	B	61	ALA	2.4
1	B	440	PHE	2.4
1	B	183	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	361	LEU	2.4
1	A	181	VAL	2.4
1	A	145	LYS	2.4
1	A	395	ILE	2.4
1	A	103	TYR	2.3
1	B	108	TYR	2.3
1	A	153	GLN	2.3
1	B	14	GLY	2.3
1	B	233	GLY	2.3
1	A	276	ASP	2.3
1	B	323	VAL	2.3
1	B	86	ILE	2.3
1	B	99	GLU	2.3
1	A	67	PHE	2.3
1	A	357	ALA	2.3
1	B	290	CYS	2.3
1	A	452	TYR	2.3
1	B	20	LEU	2.3
1	B	58	PRO	2.3
1	B	60	MET	2.3
1	A	371	GLN	2.3
1	A	344	VAL	2.3
1	A	139	ASP	2.3
1	A	380	PHE	2.3
1	B	215	PHE	2.3
1	B	394	PHE	2.3
1	B	341	GLN	2.3
1	A	246	ALA	2.3
1	B	114	ASP	2.3
1	B	385	SER	2.3
1	A	393	ARG	2.3
1	B	193	LEU	2.3
1	B	368	THR	2.3
1	A	93	LYS	2.3
1	B	283	LYS	2.3
1	A	35	GLY	2.3
1	B	127	PHE	2.3
1	A	500	ARG	2.3
1	B	336	ALA	2.3
1	B	374	ALA	2.3
1	B	168	SER	2.3
1	A	352	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	48	PRO	2.3
1	A	10	ILE	2.2
1	B	409	PHE	2.2
1	B	357	ALA	2.2
1	A	251	LEU	2.2
1	A	453	LEU	2.2
1	B	184	LEU	2.2
1	A	34	PRO	2.2
1	B	365	GLN	2.2
1	A	488	ARG	2.2
1	B	366	PHE	2.2
1	A	162	LEU	2.2
1	A	339	LEU	2.2
1	B	25	LEU	2.2
1	A	132	SER	2.2
1	A	159	GLY	2.2
1	B	191	VAL	2.2
1	B	232	VAL	2.2
1	A	257	ASN	2.2
1	A	505	ASN	2.2
1	B	303	LEU	2.2
1	B	397	LEU	2.2
1	B	124	ASP	2.2
1	A	128	SER	2.2
1	B	338	GLY	2.2
1	A	429	HIS	2.2
1	B	509	HIS	2.2
1	B	404	ARG	2.2
1	A	26	ALA	2.2
1	A	186	ALA	2.2
1	A	417	ALA	2.2
1	B	301	ALA	2.2
1	A	471	LEU	2.2
1	A	512	SER	2.2
1	B	294	ILE	2.2
1	A	272	GLY	2.1
1	B	306	TYR	2.1
1	A	54	GLU	2.1
1	A	345	GLU	2.1
1	B	91	TRP	2.1
1	B	8	SER	2.1
1	B	329	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	226	LEU	2.1
1	B	411	LEU	2.1
1	B	415	ASN	2.1
1	A	334	CYS	2.1
1	A	9	VAL	2.1
1	A	289	PHE	2.1
1	B	161	HIS	2.1
1	B	492	HIS	2.1
1	A	116	LEU	2.1
1	B	29	LEU	2.1
1	A	22	ALA	2.1
1	B	119	TRP	2.1
1	B	503	ILE	2.1
1	A	351	GLY	2.1
1	A	368	THR	2.1
1	B	350	THR	2.1
1	B	460	ASP	2.1
1	B	265	LEU	2.1
1	A	229	ALA	2.1
1	B	43	GLU	2.1
1	B	261	PRO	2.1
1	B	11	ILE	2.1
1	A	410	TRP	2.1
1	B	19	TRP	2.1
1	A	209	HIS	2.1
1	A	492	HIS	2.1
1	A	509	HIS	2.1
1	B	234	PHE	2.1
1	B	116	LEU	2.0
1	A	250	GLN	2.0
1	B	204	ASP	2.0
1	A	415	ASN	2.0
1	B	432	HIS	2.0
1	B	481	LEU	2.0
1	A	495	GLN	2.0
1	B	258	THR	2.0
1	B	163	ASP	2.0
1	A	253	TYR	2.0
1	A	493	MET	2.0
1	B	104	HIS	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.