WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

Sep 11, 2023 – 08:26 PM EDT

PDB ID	:	4LML
Title	:	GLIC double mutant I9'A T25'A
Authors	:	Grosman, C.; Gonzalez-Gutierrez, G.
Deposited on	:	2013-07-10
Resolution	:	3.80 Å(reported)

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

|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

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 3.80 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.
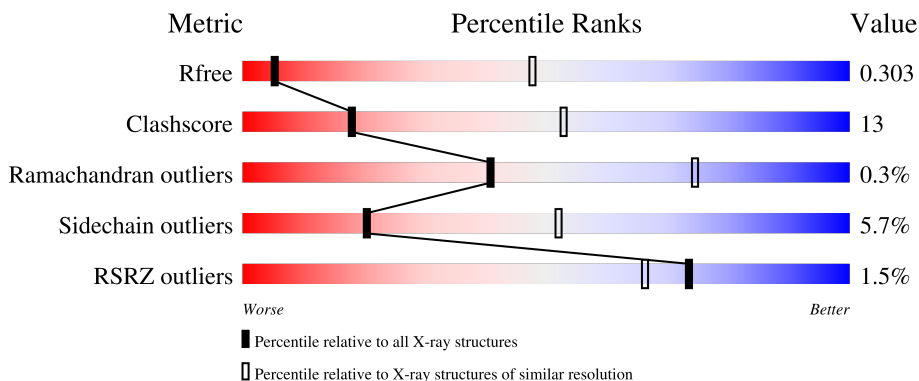
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1212 (4.00-3.60)
Clashscore	141614	1288 (4.00-3.60)
Ramachandran outliers	138981	1243 (4.00-3.60)
Sidechain outliers	138945	1237 (4.00-3.60)
RSRZ outliers	127900	1121 (4.00-3.60)

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	318	% 63% 32% · ·
1	B	318	% 68% 27% · ·
1	C	318	% 66% 30% · ·
1	D	318	2% 63% 32% · ·
1	E	318	3% 65% 30% · ·

2　Entry composition　ⓘ

There is only 1 type of molecule in this entry. The entry contains 12580 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 Proton-gated ion channel.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	310	Total	C	N	O	S	0	0	0
			2516	1658	403	451	4			
1	B	310	Total	C	N	O	S	0	0	0
			2516	1658	403	451	4			
1	C	310	Total	C	N	O	S	0	0	0
			2516	1658	403	451	4			
1	D	310	Total	C	N	O	S	0	0	0
			2516	1658	403	451	4			
1	E	310	Total	C	N	O	S	0	0	0
			2516	1658	403	451	4			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP Q7NDN8
A	0	SER	-	expression tag	UNP Q7NDN8
A	232	ALA	ILE	engineered mutation	UNP Q7NDN8
A	248	ALA	THR	engineered mutation	UNP Q7NDN8
B	-1	GLY	-	expression tag	UNP Q7NDN8
B	0	SER	-	expression tag	UNP Q7NDN8
B	232	ALA	ILE	engineered mutation	UNP Q7NDN8
B	248	ALA	THR	engineered mutation	UNP Q7NDN8
C	-1	GLY	-	expression tag	UNP Q7NDN8
C	0	SER	-	expression tag	UNP Q7NDN8
C	232	ALA	ILE	engineered mutation	UNP Q7NDN8
C	248	ALA	THR	engineered mutation	UNP Q7NDN8
D	-1	GLY	-	expression tag	UNP Q7NDN8
D	0	SER	-	expression tag	UNP Q7NDN8
D	232	ALA	ILE	engineered mutation	UNP Q7NDN8
D	248	ALA	THR	engineered mutation	UNP Q7NDN8
E	-1	GLY	-	expression tag	UNP Q7NDN8
E	0	SER	-	expression tag	UNP Q7NDN8
E	232	ALA	ILE	engineered mutation	UNP Q7NDN8

WORLDWIDE
PDB
PROTEIN DATA BANK

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
E	248	ALA	THR	engineered mutation	UNP Q7NDN8

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: Proton-gated ion channel

Chain A:

• Molecule 1: Proton-gated ion channel

Chain B:

• Molecule 1: Proton-gated ion channel

Chain C:

V109 L110 L113 D114 F115 Y118 P119 T124 L125 Y128 V134 R137 V140 D144 K147 V148 G149 K150 N151 V154 F155 L156 T165 A166 K169 P170 L179 E180 S181 R191 I197 P198 I201 L202 L208 F209 I210 S211 W212 Y213 Y220 E221

V224 T225 L226 V227 V228 L245 P246 T252 Y253 T254 I257 I258 F259 M260 I261 Y265 V269 V274 Q275 H276 Y277 L278 E281 S282 Q283 P284 A285 R286 A287 I290 T291 R292 L304 A305 I308 L309 A310 F311 F316

• Molecule 1: Proton-gated ion channel

Chain D:

2%

63%   32%   • •

GLY SER GLN ASP MET VAL SER PRO P7 P8 P9 I10 E13 P14 L15 T16 Y22 L23 L29 D30 A33 E34 T35 V38 F41 D48 R49 R50 L51 A52 F53 D54 R57 Y65 E66 P67 E68 A69 I70 E81 R84 V93 S94 P95 D96 G97 T98 V99

Q100 Y101 L102 E103 R108 V109 L110 S111 P112 Y118 D121 S122 Q123 T124 I127 Y128 L129 I130 V131 R132 S133 V134 D135 T136 R137 D144 K147 V148 G149 F155 L156 W159 T165 A166 L175 R178 L179 E180 S181 K182 L183 I189 Y196 I197 P198 I201

L202 P203 M204 L205 F206 F209 I210 S211 W212 T213 Y220 E221 A222 N223 V224 T225 L226 V227 I239 Y253 I257 I258 F259 V269 I270 E271 V272 T273 V274 Q275 H276 Y277 L278 S282 Q283 P284 A285 R286 A287 A288 S289 I290 T291 R292 I296 A297 F298 V301 L304

I308 L309 F313 F314 G315 F316

• Molecule 1: Proton-gated ion channel

Chain E:

3%

65%   30%   • •

GLY SER GLN ASP MET VAL SER PRO P7 P8 P9 E13 P14 T19 G20 I21 Y22 E25 D30 A33 E34 T35 F36 N39 A40 F41 L42 S43 R49 F53 D54 P55 V56 R57 R61 V62 K63 E66 P67 E68 W71 V78 N79 V80 R84 P95

L102 E103 R108 V109 L110 D114 F115 Q123 T124 L125 Y128 L129 I130 V131 R132 S133 V134 D135 T136 R137 N138 I139 V140 D144 K147 V148 G149 K150 F155 T165 A166 L179 E180 S181 L183 S195 Y196 I197 P198 N199 I200 I201 L202 L205 L208

W212 F215 Y220 N223 L226 V227 V228 L240 L245 P249 T252 I257 I258 F259 M260 I261 F264 I270 H276 Y277 L278 S282 Q283 P284 A285 R286 A287 A288 S289 I290 T291 R292 A293 S294 R295 I296 A297 V301 L304 I308 L309 F316

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	122.80Å 128.00Å 190.34Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	38.93 – 3.80 39.43 – 3.79	Depositor EDS
% Data completeness (in resolution range)	72.2 (38.93-3.80) 70.7 (39.43-3.79)	Depositor EDS
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$<I/\sigma(I)>$ [1]	2.81 (at 3.76Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.246 , 0.302 0.246 , 0.303	Depositor DCC
R_{free} test set	2003 reflections (8.26%)	wwPDB-VP
Wilson B-factor (Å^2)	24.3	Xtriage
Anisotropy	1.738	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 23.3	EDS
L-test for twinning [2]	$<|L|> = 0.47, <L^2> = 0.30$	Xtriage
Estimated twinning fraction	0.032 for k,h,-l	Xtriage
F_o,F_c correlation	0.79	EDS
Total number of atoms	12580	wwPDB-VP
Average B, all atoms (Å^2)	53.0	wwPDB-VP

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

---

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$ >5	RMSZ	#$|Z|$ >5
1	A	0.38	0/2584	0.60	0/3528
1	B	0.38	0/2584	0.59	0/3528
1	C	0.37	0/2584	0.58	0/3528
1	D	0.39	0/2584	0.59	0/3528
1	E	0.38	0/2584	0.59	1/3528 (0.0%)
All	All	0.38	0/12920	0.59	1/17640 (0.0%)

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

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

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	149	GLY	N-CA-C	6.03	128.18	113.10

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	53	PHE	Peptide

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2516	0	2529	71	0
1	B	2516	0	2529	72	1
1	C	2516	0	2529	76	0
1	D	2516	0	2529	78	1
1	E	2516	0	2529	72	0
All	All	12580	0	12645	340	1

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 13.

All (340) 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:121:ASP:OD1	1:B:123:GLN:NE2	2.04	0.90
1:B:117:ARG:HB2	1:B:121:ASP:HB3	1.60	0.83
1:C:22:TYR:HA	1:C:149:GLY:HA3	1.59	0.83
1:C:35:THR:OG1	1:C:108:ARG:NH2	2.12	0.82
1:D:51:LEU:HD12	1:D:93:VAL:HG11	1.63	0.81
1:C:84:ARG:NH1	1:C:103:GLU:OE1	2.15	0.78
1:B:29:LEU:HB2	1:B:156:LEU:HD11	1.68	0.73
1:A:29:LEU:HB2	1:A:156:LEU:HD11	1.69	0.72
1:A:51:LEU:HD12	1:A:93:VAL:HG11	1.72	0.72
1:D:54:ASP:HB2	1:D:57:ARG:HB2	1.71	0.71
1:D:84:ARG:NH1	1:D:103:GLU:OE1	2.15	0.71
1:D:22:TYR:HB3	1:D:41:PHE:HB2	1.73	0.70
1:B:22:TYR:HA	1:B:149:GLY:HA3	1.74	0.69
1:B:208:LEU:HD13	1:B:261:ILE:HG23	1.72	0.69
1:D:121:ASP:OD1	1:D:123:GLN:NE2	2.27	0.68
1:D:257:ILE:HG22	1:D:309:LEU:HD23	1.75	0.67
1:B:144:ASP:HA	1:B:147:LYS:HD2	1.76	0.66
1:E:278:LEU:HD21	1:E:286:ARG:HB3	1.77	0.66
1:A:22:TYR:HB3	1:A:41:PHE:HB2	1.77	0.66
1:D:175:LEU:HD11	1:E:22:TYR:CE1	2.32	0.65
1:C:22:TYR:HB3	1:C:41:PHE:HB2	1.79	0.65
1:E:208:LEU:HD13	1:E:261:ILE:HG23	1.77	0.65
1:B:53:PHE:H	1:B:53:PHE:HD2	1.45	0.65
1:D:94:SER:HB2	1:D:98:THR:HB	1.78	0.64
1:B:257:ILE:HG22	1:B:309:LEU:HD23	1.80	0.64
1:A:78:VAL:HB	1:A:128:TYR:HB2	1.80	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:269:VAL:HG11	1:D:210:ILE:HG23	1.80	0.63
1:E:257:ILE:HG22	1:E:309:LEU:HD23	1.81	0.63
1:C:35:THR:HG22	1:C:110:LEU:HG	1.80	0.63
1:B:94:SER:HB2	1:B:98:THR:HB	1.80	0.62
1:D:112:PRO:HB3	1:E:155:PHE:CZ	2.35	0.62
1:D:165:THR:OG1	1:D:166:ALA:N	2.33	0.62
1:D:278:LEU:HD21	1:D:286:ARG:HB3	1.82	0.61
1:A:210:ILE:HD13	1:C:269:VAL:HG21	1.83	0.61
1:E:165:THR:OG1	1:E:166:ALA:N	2.34	0.61
1:B:208:LEU:O	1:B:211:SER:HB3	2.01	0.60
1:E:22:TYR:HB3	1:E:41:PHE:HB2	1.83	0.60
1:C:208:LEU:HD13	1:C:261:ILE:HG23	1.83	0.60
1:B:54:ASP:HB2	1:B:57:ARG:HB2	1.84	0.59
1:A:30:ASP:HB3	1:A:33:ALA:HB3	1.84	0.59
1:A:66:GLU:HG3	1:A:67:PRO:HD2	1.85	0.59
1:B:197:ILE:HB	1:B:198:PRO:HD3	1.84	0.59
1:C:25:GLU:HB2	1:C:39:ASN:HB3	1.84	0.59
1:A:165:THR:OG1	1:A:166:ALA:N	2.34	0.59
1:A:257:ILE:HG22	1:A:309:LEU:HD23	1.85	0.59
1:B:112:PRO:HB3	1:C:155:PHE:HZ	1.67	0.59
1:E:53:PHE:CE2	1:E:63:LYS:HB3	2.37	0.59
1:E:25:GLU:HB2	1:E:39:ASN:HB3	1.84	0.58
1:B:165:THR:OG1	1:B:166:ALA:N	2.35	0.58
1:D:30:ASP:HB3	1:D:33:ALA:HB3	1.85	0.58
1:E:42:LEU:HB3	1:E:103:GLU:HG2	1.86	0.58
1:B:112:PRO:HB3	1:C:155:PHE:CZ	2.39	0.58
1:C:140:VAL:HG22	1:C:181:SER:HB3	1.86	0.58
1:D:29:LEU:HB2	1:D:156:LEU:HD11	1.85	0.57
1:A:278:LEU:HD21	1:A:286:ARG:HB3	1.86	0.57
1:B:53:PHE:HE1	1:B:55:PRO:HG3	1.68	0.57
1:A:144:ASP:O	1:A:148:VAL:HB	2.05	0.57
1:B:22:TYR:HB3	1:B:41:PHE:HB2	1.86	0.57
1:D:134:VAL:O	1:D:178:ARG:NH2	2.38	0.57
1:D:175:LEU:HD11	1:E:22:TYR:HE1	1.68	0.57
1:B:51:LEU:H	1:B:51:LEU:HD23	1.69	0.57
1:C:29:LEU:HB2	1:C:156:LEU:HD11	1.87	0.57
1:C:197:ILE:O	1:C:202:LEU:HB2	2.04	0.57
1:D:227:VAL:HG11	1:D:269:VAL:HG23	1.86	0.57
1:D:147:LYS:O	1:D:147:LYS:HG2	2.03	0.57
1:E:66:GLU:HG3	1:E:67:PRO:HD2	1.87	0.56
1:B:53:PHE:CE1	1:B:55:PRO:HG3	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:ASP:HB2	1:A:57:ARG:HB2	1.88	0.56
1:E:132:ARG:HA	1:E:180:GLU:HG2	1.86	0.56
1:E:140:VAL:HG23	1:E:183:LEU:HG	1.87	0.56
1:B:11:ALA:HB3	1:B:136:THR:HG21	1.88	0.56
1:A:202:LEU:HD12	1:C:259:PHE:CZ	2.41	0.56
1:D:22:TYR:HA	1:D:149:GLY:HA3	1.88	0.55
1:D:197:ILE:HA	1:D:201:ILE:HB	1.88	0.55
1:A:114:ASP:O	1:A:123:GLN:NE2	2.39	0.55
1:A:132:ARG:HA	1:A:180:GLU:HG2	1.89	0.55
1:A:32:LYS:HA	1:A:246:PRO:HD3	1.89	0.55
1:E:78:VAL:HB	1:E:128:TYR:HB2	1.88	0.55
1:E:84:ARG:NH2	1:E:103:GLU:OE1	2.19	0.55
1:E:61:ARG:O	1:E:95:PRO:HG3	2.07	0.55
1:A:112:PRO:HB3	1:D:155:PHE:CZ	2.43	0.54
1:B:144:ASP:O	1:B:148:VAL:HG13	2.07	0.54
1:C:278:LEU:HD21	1:C:286:ARG:HB3	1.90	0.54
1:B:66:GLU:HG3	1:B:67:PRO:HD2	1.90	0.54
1:C:66:GLU:HG3	1:C:67:PRO:HD2	1.88	0.54
1:D:9:PRO:HB3	1:D:48:ASP:CG	2.29	0.53
1:D:304:LEU:O	1:D:308:ILE:HG12	2.08	0.53
1:E:202:LEU:HD22	1:E:205:LEU:HD12	1.90	0.53
1:E:30:ASP:HB3	1:E:33:ALA:HB3	1.89	0.53
1:E:133:SER:HB3	1:E:136:THR:O	2.08	0.53
1:D:137:ARG:HB3	1:D:179:LEU:HD23	1.89	0.53
1:A:262:TYR:CE1	1:D:203:PRO:HB3	2.44	0.53
1:C:55:PRO:HD3	1:C:95:PRO:HB3	1.91	0.53
1:A:133:SER:HB3	1:A:137:ARG:HA	1.90	0.53
1:A:96:ASP:OD1	1:A:96:ASP:N	2.42	0.53
1:E:197:ILE:HB	1:E:198:PRO:HD3	1.91	0.53
1:E:304:LEU:O	1:E:308:ILE:HG12	2.09	0.52
1:A:161:ILE:HA	1:A:189:ILE:HG22	1.89	0.52
1:E:57:ARG:HE	1:E:57:ARG:HA	1.75	0.52
1:E:144:ASP:O	1:E:148:VAL:HG13	2.09	0.52
1:B:109:VAL:HG11	1:B:127:ILE:HG12	1.92	0.52
1:D:130:ILE:HA	1:D:181:SER:O	2.09	0.52
1:D:197:ILE:HB	1:D:198:PRO:HD3	1.91	0.52
1:D:156:LEU:HD23	1:D:189:ILE:HG21	1.90	0.52
1:E:286:ARG:O	1:E:290:ILE:HG13	2.10	0.52
1:C:30:ASP:HB3	1:C:33:ALA:HB3	1.92	0.52
1:C:197:ILE:HA	1:C:201:ILE:HB	1.92	0.51
1:D:286:ARG:O	1:D:290:ILE:HG13	2.09	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:ASN:HB3	1:A:272:VAL:HG11	1.92	0.51
1:C:93:VAL:HG22	1:C:99:VAL:HG22	1.91	0.51
1:C:197:ILE:HB	1:C:198:PRO:HD3	1.91	0.51
1:B:147:LYS:O	1:B:147:LYS:HG2	2.11	0.51
1:A:264:PHE:HA	1:A:267:VAL:HG22	1.93	0.51
1:C:137:ARG:HB3	1:C:179:LEU:HD21	1.93	0.51
1:C:147:LYS:C	1:C:149:GLY:H	2.14	0.51
1:E:292:ARG:HD2	1:E:295:ARG:HD2	1.91	0.51
1:D:10:ILE:HD12	1:D:50:ARG:HD3	1.92	0.51
1:A:65:TYR:CG	1:A:70:ILE:HD11	2.45	0.51
1:B:284:PRO:HA	1:B:287:ALA:HB3	1.93	0.51
1:B:20:GLY:HA3	1:B:146:GLU:HB3	1.92	0.51
1:E:197:ILE:HA	1:E:201:ILE:HB	1.93	0.50
1:B:269:VAL:HG11	1:C:210:ILE:HG23	1.94	0.50
1:C:118:TYR:O	1:C:254:THR:OG1	2.28	0.50
1:D:144:ASP:O	1:D:148:VAL:HG13	2.12	0.50
1:E:215:PHE:HB3	1:E:295:ARG:HG2	1.94	0.50
1:D:41:PHE:CD1	1:D:102:LEU:HD11	2.46	0.50
1:D:133:SER:HB3	1:D:136:THR:O	2.12	0.50
1:D:147:LYS:C	1:D:149:GLY:H	2.15	0.49
1:C:286:ARG:O	1:C:290:ILE:HG13	2.11	0.49
1:C:144:ASP:O	1:C:148:VAL:HG13	2.13	0.49
1:E:41:PHE:CD1	1:E:102:LEU:HD11	2.47	0.49
1:A:65:TYR:O	1:A:91:ILE:HB	2.13	0.49
1:B:35:THR:OG1	1:B:108:ARG:NH2	2.46	0.49
1:C:278:LEU:HD23	1:C:287:ALA:HA	1.95	0.49
1:E:215:PHE:CZ	1:E:294:SER:HB3	2.48	0.49
1:A:291:THR:O	1:A:295:ARG:HG3	2.12	0.49
1:D:66:GLU:HG3	1:D:67:PRO:HD2	1.95	0.49
1:D:93:VAL:HG22	1:D:99:VAL:HG13	1.94	0.48
1:B:13:GLU:HB3	1:B:14:PRO:HD2	1.94	0.48
1:D:94:SER:N	1:D:98:THR:O	2.39	0.48
1:D:275:GLN:HG3	1:D:287:ALA:HB1	1.94	0.48
1:C:80:VAL:HG13	1:C:108:ARG:O	2.14	0.48
1:D:35:THR:OG1	1:D:108:ARG:NH2	2.45	0.48
1:B:266:PHE:HA	1:C:210:ILE:HD11	1.96	0.48
1:B:175:LEU:HD11	1:C:22:TYR:CE1	2.48	0.48
1:D:13:GLU:HB3	1:D:14:PRO:HD2	1.96	0.48
1:E:36:PHE:CD1	1:E:125:LEU:HD13	2.49	0.48
1:A:304:LEU:O	1:A:308:ILE:HG12	2.14	0.48
1:B:304:LEU:O	1:B:308:ILE:HG12	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:9:PRO:HD3	1:E:71:TRP:CE3	2.49	0.48
1:E:264:PHE:HZ	1:E:301:VAL:HG12	1.78	0.48
1:C:13:GLU:HB3	1:C:14:PRO:HD2	1.96	0.48
1:D:259:PHE:CZ	1:E:202:LEU:HD12	2.48	0.48
1:D:65:TYR:CG	1:D:70:ILE:HD11	2.48	0.47
1:D:239:ILE:HG12	1:E:240:LEU:HD22	1.96	0.47
1:D:253:TYR:HD1	1:D:313:PHE:CD1	2.33	0.47
1:B:35:THR:HG22	1:B:110:LEU:HG	1.96	0.47
1:B:147:LYS:C	1:B:149:GLY:H	2.16	0.47
1:C:257:ILE:HG22	1:C:309:LEU:HD23	1.96	0.47
1:E:80:VAL:HG13	1:E:108:ARG:O	2.14	0.47
1:B:270:ILE:HD13	1:B:270:ILE:HA	1.79	0.47
1:E:130:ILE:HA	1:E:181:SER:O	2.14	0.47
1:A:263:LEU:HD12	1:D:206:PHE:CE1	2.50	0.47
1:C:284:PRO:HA	1:C:287:ALA:HB3	1.96	0.47
1:A:53:PHE:CD2	1:A:96:ASP:HA	2.50	0.47
1:A:197:ILE:HB	1:A:198:PRO:HD3	1.97	0.47
1:B:197:ILE:HG23	1:B:202:LEU:HG	1.96	0.47
1:E:131:VAL:HG11	1:E:140:VAL:HG13	1.96	0.47
1:E:195:SER:O	1:E:199:ASN:ND2	2.48	0.47
1:E:137:ARG:HB3	1:E:179:LEU:HD23	1.97	0.47
1:B:65:TYR:CG	1:B:70:ILE:HD11	2.50	0.47
1:B:76:ARG:HH11	1:C:104:ARG:HH11	1.63	0.47
1:C:311:PHE:CZ	1:C:316:PHE:HB2	2.49	0.47
1:D:101:TYR:OH	1:D:103:GLU:OE2	2.25	0.47
1:B:150:LYS:HB3	1:B:150:LYS:HE2	1.68	0.46
1:B:278:LEU:HD21	1:B:286:ARG:HB3	1.97	0.46
1:D:283:GLN:N	1:D:284:PRO:HD3	2.31	0.46
1:E:19:THR:HA	1:E:43:SER:O	2.14	0.46
1:E:35:THR:HG22	1:E:110:LEU:HG	1.97	0.46
1:A:13:GLU:HB3	1:A:14:PRO:HD2	1.98	0.46
1:B:192:GLN:OE1	1:E:249:PRO:HG3	2.16	0.46
1:D:81:GLU:HG3	1:D:108:ARG:HG3	1.98	0.46
1:E:21:ILE:HD11	1:E:129:LEU:HD11	1.97	0.46
1:E:147:LYS:O	1:E:147:LYS:HG2	2.16	0.46
1:C:304:LEU:O	1:C:308:ILE:HG12	2.15	0.46
1:C:118:TYR:HD1	1:C:191:ARG:NH2	2.13	0.46
1:C:147:LYS:O	1:C:147:LYS:HG2	2.16	0.46
1:A:21:ILE:HA	1:A:41:PHE:O	2.16	0.46
1:A:212:TRP:HB2	1:A:215:PHE:CE1	2.51	0.46
1:B:30:ASP:HB3	1:B:33:ALA:HB3	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:202:LEU:HD12	1:E:259:PHE:HZ	1.81	0.46
1:E:78:VAL:HG22	1:E:130:ILE:HG12	1.98	0.46
1:E:114:ASP:O	1:E:123:GLN:NE2	2.47	0.46
1:A:93:VAL:HG22	1:A:99:VAL:HG13	1.97	0.45
1:C:147:LYS:HE3	1:C:166:ALA:H	1.80	0.45
1:B:133:SER:HB3	1:B:136:THR:O	2.16	0.45
1:B:274:VAL:O	1:B:278:LEU:HB2	2.16	0.45
1:E:131:VAL:CG1	1:E:140:VAL:HG13	2.47	0.45
1:C:309:LEU:HD12	1:C:309:LEU:HA	1.71	0.45
1:E:55:PRO:HD3	1:E:95:PRO:HB3	1.97	0.45
1:E:284:PRO:HA	1:E:287:ALA:HB3	1.98	0.45
1:A:208:LEU:HD13	1:A:261:ILE:HG23	1.98	0.45
1:B:9:PRO:HB3	1:B:48:ASP:OD1	2.16	0.45
1:A:151:ASN:O	1:A:154:VAL:HG22	2.16	0.45
1:B:78:VAL:HG22	1:B:130:ILE:HG12	1.99	0.45
1:D:53:PHE:HB3	1:D:95:PRO:C	2.36	0.45
1:A:9:PRO:HB3	1:A:48:ASP:OD1	2.16	0.45
1:B:254:THR:O	1:B:258:ILE:HB	2.17	0.45
1:C:118:TYR:CD1	1:C:119:PRO:HA	2.51	0.45
1:C:221:GLU:O	1:C:224:VAL:HG22	2.17	0.45
1:D:212:TRP:HE3	1:D:298:PHE:HD1	1.64	0.45
1:C:36:PHE:CD1	1:C:125:LEU:HD13	2.51	0.45
1:B:202:LEU:HD12	1:E:259:PHE:CZ	2.52	0.45
1:B:13:GLU:HB3	1:B:14:PRO:CD	2.47	0.45
1:C:197:ILE:HG23	1:C:202:LEU:HD23	1.99	0.45
1:D:159:TRP:CE3	1:D:189:ILE:HD12	2.52	0.44
1:B:41:PHE:CD1	1:B:102:LEU:HD11	2.52	0.44
1:C:80:VAL:HG12	1:C:82:ASN:O	2.18	0.44
1:B:131:VAL:HG11	1:B:140:VAL:HG13	1.99	0.44
1:E:291:THR:O	1:E:295:ARG:HG3	2.17	0.44
1:A:68:GLU:CD	1:A:68:GLU:H	2.20	0.44
1:C:165:THR:OG1	1:C:166:ALA:N	2.50	0.44
1:C:277:TYR:O	1:C:281:GLU:HG2	2.18	0.44
1:D:35:THR:HG22	1:D:110:LEU:HG	1.98	0.44
1:E:297:ALA:O	1:E:301:VAL:HG23	2.17	0.44
1:A:260:MET:O	1:A:263:LEU:HB2	2.16	0.44
1:D:175:LEU:HD12	1:D:175:LEU:HA	1.68	0.44
1:A:67:PRO:HG2	1:A:88:VAL:HG21	2.00	0.44
1:B:81:GLU:HG3	1:B:108:ARG:HG3	2.00	0.44
1:E:264:PHE:CZ	1:E:301:VAL:HG12	2.52	0.44
1:B:207:ILE:HG13	1:B:208:LEU:N	2.33	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:286:ARG:O	1:B:290:ILE:HG13	2.18	0.44
1:C:29:LEU:HD12	1:C:125:LEU:HD11	2.00	0.44
1:D:212:TRP:CE3	1:D:298:PHE:HD1	2.36	0.44
1:E:13:GLU:HB3	1:E:14:PRO:HD2	1.99	0.44
1:E:223:ASN:O	1:E:227:VAL:HG23	2.18	0.44
1:A:9:PRO:HB3	1:A:48:ASP:CG	2.37	0.44
1:A:221:GLU:OE1	1:D:222:ALA:HA	2.18	0.44
1:D:51:LEU:N	1:D:51:LEU:HD23	2.33	0.44
1:C:274:VAL:O	1:C:278:LEU:HB2	2.18	0.43
1:A:121:ASP:OD1	1:A:123:GLN:NE2	2.49	0.43
1:B:130:ILE:HA	1:B:181:SER:O	2.18	0.43
1:D:96:ASP:OD1	1:D:96:ASP:N	2.51	0.43
1:A:215:PHE:CE1	1:A:294:SER:HB3	2.54	0.43
1:B:197:ILE:O	1:B:202:LEU:HB2	2.18	0.43
1:A:130:ILE:HA	1:A:181:SER:O	2.18	0.43
1:A:261:ILE:O	1:A:265:TYR:HD1	2.01	0.43
1:B:229:SER:HB3	1:E:228:VAL:HG11	2.00	0.43
1:C:169:LYS:HA	1:C:170:PRO:HD2	1.86	0.43
1:E:220:TYR:CD1	1:E:276:HIS:HB2	2.53	0.43
1:A:10:ILE:HD12	1:A:50:ARG:HD3	2.00	0.43
1:A:286:ARG:O	1:A:290:ILE:HG13	2.18	0.43
1:B:76:ARG:NH2	1:B:130:ILE:HD12	2.34	0.43
1:C:78:VAL:HB	1:C:128:TYR:HB2	2.00	0.43
1:C:94:SER:HB2	1:C:98:THR:HB	2.01	0.43
1:B:51:LEU:HD12	1:B:93:VAL:HG11	2.00	0.43
1:C:34:GLU:OE2	1:C:113:LEU:N	2.39	0.43
1:A:53:PHE:HB3	1:A:95:PRO:CA	2.48	0.43
1:A:159:TRP:CE3	1:A:189:ILE:HD12	2.53	0.43
1:A:224:VAL:O	1:A:228:VAL:HB	2.19	0.43
1:D:223:ASN:HB3	1:D:272:VAL:HG11	2.01	0.43
1:E:215:PHE:CE1	1:E:294:SER:HB3	2.54	0.43
1:B:269:VAL:HG21	1:C:210:ILE:HD13	2.01	0.43
1:A:36:PHE:CD1	1:A:125:LEU:HD13	2.54	0.43
1:A:94:SER:N	1:A:98:THR:O	2.44	0.43
1:A:137:ARG:HA	1:A:137:ARG:HD3	1.73	0.43
1:A:202:LEU:HD12	1:C:259:PHE:HZ	1.82	0.43
1:B:309:LEU:HD12	1:B:309:LEU:HA	1.81	0.43
1:B:156:LEU:HD12	1:B:156:LEU:HA	1.78	0.42
1:C:22:TYR:CD1	1:C:149:GLY:HA2	2.53	0.42
1:B:161:ILE:HA	1:B:189:ILE:HG22	2.00	0.42
1:C:137:ARG:HA	1:C:137:ARG:HD3	1.89	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:202:LEU:HD22	1:D:205:LEU:HD12	1.99	0.42
1:D:259:PHE:HZ	1:E:202:LEU:HD12	1.83	0.42
1:A:208:LEU:O	1:A:211:SER:HB3	2.18	0.42
1:E:139:ILE:HA	1:E:181:SER:OG	2.19	0.42
1:B:53:PHE:N	1:B:53:PHE:CD2	2.82	0.42
1:C:151:ASN:O	1:C:154:VAL:HG22	2.20	0.42
1:C:282:SER:C	1:C:284:PRO:HD3	2.40	0.42
1:E:282:SER:C	1:E:284:PRO:HD3	2.40	0.42
1:A:42:LEU:HB3	1:A:103:GLU:HG2	2.01	0.42
1:A:221:GLU:O	1:A:224:VAL:HG22	2.20	0.42
1:B:229:SER:CB	1:E:228:VAL:HG11	2.50	0.42
1:A:229:SER:HB3	1:C:228:VAL:HG11	2.02	0.42
1:B:221:GLU:O	1:B:224:VAL:HG22	2.20	0.42
1:C:144:ASP:HA	1:C:147:LYS:HD2	2.01	0.42
1:D:13:GLU:HB3	1:D:14:PRO:CD	2.49	0.42
1:C:245:LEU:HD12	1:C:245:LEU:HA	1.74	0.42
1:C:261:ILE:O	1:C:265:TYR:HD1	2.02	0.42
1:D:109:VAL:HG11	1:D:127:ILE:HG12	2.02	0.42
1:D:282:SER:C	1:D:284:PRO:HD3	2.40	0.42
1:A:61:ARG:O	1:A:95:PRO:HG3	2.20	0.42
1:C:13:GLU:HB3	1:C:14:PRO:CD	2.49	0.42
1:D:297:ALA:O	1:D:301:VAL:HG23	2.20	0.42
1:D:220:TYR:CD1	1:D:276:HIS:HB2	2.55	0.42
1:A:27:TYR:OH	1:C:81:GLU:O	2.36	0.41
1:A:35:THR:HG22	1:A:110:LEU:HG	2.02	0.41
1:B:197:ILE:HA	1:B:201:ILE:HB	2.01	0.41
1:C:220:TYR:CD1	1:C:276:HIS:HB2	2.55	0.41
1:D:84:ARG:HH11	1:D:84:ARG:HD2	1.75	0.41
1:D:155:PHE:HD2	1:D:155:PHE:HA	1.65	0.41
1:B:84:ARG:NH2	1:B:103:GLU:OE1	2.44	0.41
1:B:264:PHE:HE2	1:B:302:PHE:HB2	1.85	0.41
1:C:275:GLN:OE1	1:C:291:THR:OG1	2.28	0.41
1:D:128:TYR:HA	1:D:183:LEU:O	2.20	0.41
1:E:49:ARG:H	1:E:49:ARG:HG2	1.64	0.41
1:E:270:ILE:HD13	1:E:270:ILE:HA	1.86	0.41
1:C:115:PHE:O	1:C:252:THR:HG22	2.20	0.41
1:A:35:THR:OG1	1:A:108:ARG:NH2	2.46	0.41
1:E:133:SER:HB3	1:E:137:ARG:HA	2.03	0.41
1:B:245:LEU:HD12	1:B:245:LEU:HA	1.82	0.41
1:E:245:LEU:HD12	1:E:245:LEU:HA	1.87	0.41
1:A:264:PHE:CE2	1:A:302:PHE:HD1	2.39	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:27:TYR:HB3	1:C:110:LEU:HD11	2.03	0.41
1:A:169:LYS:HA	1:A:170:PRO:HD2	1.98	0.41
1:C:9:PRO:HG2	1:C:15:LEU:HD22	2.03	0.41
1:C:147:LYS:HE2	1:C:165:THR:HA	2.02	0.41
1:D:296:ILE:HD13	1:D:296:ILE:HA	1.91	0.41
1:E:13:GLU:HB3	1:E:14:PRO:CD	2.51	0.41
1:D:23:LEU:HD22	1:D:38:VAL:HG21	2.03	0.41
1:A:53:PHE:HD2	1:A:96:ASP:HA	1.84	0.40
1:C:257:ILE:O	1:C:261:ILE:HG13	2.21	0.40
1:D:132:ARG:NH2	1:D:178:ARG:HB2	2.36	0.40
1:D:209:PHE:HA	1:D:212:TRP:NE1	2.37	0.40
1:D:118:TYR:HH	1:D:196:TYR:HE2	1.68	0.40
1:D:221:GLU:O	1:D:224:VAL:HG22	2.21	0.40
1:E:130:ILE:HD12	1:E:180:GLU:OE1	2.22	0.40
1:B:235:ILE:HG12	1:B:262:TYR:OH	2.20	0.40
1:C:245:LEU:HG	1:C:246:PRO:HD2	2.02	0.40
1:C:305:ALA:O	1:C:309:LEU:HB2	2.21	0.40
1:D:9:PRO:HB3	1:D:48:ASP:OD1	2.21	0.40
1:D:270:ILE:HA	1:D:270:ILE:HD13	1.82	0.40
1:A:23:LEU:HB2	1:A:150:LYS:HB2	2.02	0.40
1:C:283:GLN:N	1:C:284:PRO:HD3	2.36	0.40
1:D:53:PHE:HB3	1:D:95:PRO:O	2.21	0.40
1:E:22:TYR:CD2	1:E:22:TYR:C	2.94	0.40
1:E:115:PHE:O	1:E:252:THR:HG22	2.20	0.40
1:A:202:LEU:HD22	1:A:202:LEU:HA	1.94	0.40
1:A:215:PHE:HB3	1:A:295:ARG:HG2	2.02	0.40
1:D:68:GLU:H	1:D:68:GLU:HG2	1.53	0.40

All (1) 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:B:147:LYS:NZ	1:D:98:THR:OG1[3_554]	2.11	0.09

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	308/318 (97%)	291 (94%)	16 (5%)	1 (0%)	41	74
1	B	308/318 (97%)	290 (94%)	18 (6%)	0	100	100
1	C	308/318 (97%)	286 (93%)	21 (7%)	1 (0%)	41	74
1	D	308/318 (97%)	289 (94%)	18 (6%)	1 (0%)	41	74
1	E	308/318 (97%)	289 (94%)	18 (6%)	1 (0%)	41	74
All	All	1540/1590 (97%)	1445 (94%)	91 (6%)	4 (0%)	41	74

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	134	VAL
1	C	201	ILE
1	D	134	VAL
1	E	134	VAL

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	276/283 (98%)	259 (94%)	17 (6%)	18	49
1	B	276/283 (98%)	259 (94%)	17 (6%)	18	49
1	C	276/283 (98%)	262 (95%)	14 (5%)	24	54
1	D	276/283 (98%)	260 (94%)	16 (6%)	20	51
1	E	276/283 (98%)	262 (95%)	14 (5%)	24	54
All	All	1380/1415 (98%)	1302 (94%)	78 (6%)	20	52

All (78) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	51	LEU
1	A	54	ASP
1	A	68	GLU
1	A	84	ARG
1	A	124	THR
1	A	134	VAL
1	A	145	LEU
1	A	155	PHE
1	A	162	GLU
1	A	165	THR
1	A	179	LEU
1	A	202	LEU
1	A	212	TRP
1	A	213	THR
1	A	226	LEU
1	A	258	ILE
1	A	292	ARG
1	B	51	LEU
1	B	53	PHE
1	B	54	ASP
1	B	68	GLU
1	B	84	ARG
1	B	124	THR
1	B	134	VAL
1	B	147	LYS
1	B	155	PHE
1	B	179	LEU
1	B	202	LEU
1	B	212	TRP
1	B	254	THR
1	B	257	ILE
1	B	258	ILE
1	B	274	VAL
1	B	292	ARG
1	C	54	ASP
1	C	68	GLU
1	C	124	THR
1	C	134	VAL
1	C	155	PHE
1	C	165	THR
1	C	179	LEU
1	C	202	LEU
1	C	212	TRP

Continued from previous page...

Mol	Chain	Res	Type
1	C	213	THR
1	C	226	LEU
1	C	257	ILE
1	C	258	ILE
1	C	292	ARG
1	D	16	THR
1	D	51	LEU
1	D	54	ASP
1	D	68	GLU
1	D	124	THR
1	D	134	VAL
1	D	147	LYS
1	D	155	PHE
1	D	165	THR
1	D	179	LEU
1	D	202	LEU
1	D	212	TRP
1	D	213	THR
1	D	226	LEU
1	D	274	VAL
1	D	292	ARG
1	E	22	TYR
1	E	54	ASP
1	E	68	GLU
1	E	84	ARG
1	E	124	THR
1	E	134	VAL
1	E	150	LYS
1	E	165	THR
1	E	179	LEU
1	E	202	LEU
1	E	212	TRP
1	E	226	LEU
1	E	258	ILE
1	E	292	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA (i)

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 ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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(Å²)	Q<0.9
1	A	310/318 (97%)	-0.30	3 (0%)	82	76	13, 48, 116, 160	0
1	B	310/318 (97%)	-0.32	3 (0%)	82	76	12, 45, 103, 128	0
1	C	310/318 (97%)	-0.27	4 (1%)	77	70	18, 50, 98, 154	0
1	D	310/318 (97%)	-0.42	5 (1%)	72	64	14, 45, 107, 130	0
1	E	310/318 (97%)	-0.24	9 (2%)	51	42	13, 45, 117, 139	0
All	All	1550/1590 (97%)	-0.31	24 (1%)	73	66	12, 46, 108, 160	0

All (24) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	148	VAL	5.4
1	E	316	PHE	5.0
1	C	57	ARG	3.8
1	E	284	PRO	3.6
1	D	292	ARG	3.3
1	E	286	ARG	3.3
1	D	316	PHE	3.2
1	C	281	GLU	3.2
1	E	287	ALA	3.2
1	A	57	ARG	3.1
1	B	249	PRO	3.1
1	E	285	ALA	3.0
1	C	282	SER	2.9
1	E	288	ALA	2.8
1	E	276	HIS	2.7
1	D	315	GLY	2.6
1	B	292	ARG	2.6
1	C	55	PRO	2.6
1	A	61	ARG	2.6
1	D	288	ALA	2.2

Continued on next page...

W O R L D W I D E
wwPDB
PROTEIN DATA BANK

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	144	ASP	2.2
1	D	296	ILE	2.1
1	E	149	GLY	2.1
1	B	315	GLY	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 ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.

WORLDWIDE
wwPDB
PROTEIN DATA BANK