Worldwide PDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

May 22, 2020 – 12:27 am BST

PDB ID	:	6RJS
Title	:	Inter-dimeric interface controls function and stability of S-methionine adenosyltransferase from U. urealiticum
Authors	:	Shahar, A.; Zarivach, R.; Bershtein, S.; Kleiner, D.; Shmulevich, F.
Deposited on	:	2019-04-29
Resolution	:	2.60 Å(reported)

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

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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.60 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.

■ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution
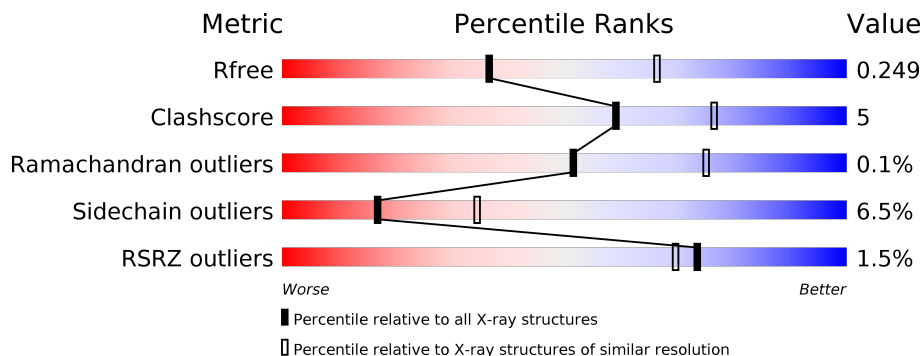
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3163 (2.60-2.60)
Clashscore	141614	3518 (2.60-2.60)
Ramachandran outliers	138981	3455 (2.60-2.60)
Sidechain outliers	138945	3455 (2.60-2.60)
RSRZ outliers	127900	3104 (2.60-2.60)

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 on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	377	% 80% 14% · ·
1	B	377	3% 82% 13% · 5%
1	C	377	% 80% 13% · 5%
1	D	377	% 80% 14% · ·

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 11399 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 Methionine adenosyltransferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	361	Total 2838	C 1805	N 476	O 545	S 12	0	1	0
1	C	358	Total 2815	C 1791	N 471	O 542	S 11	0	0	0
1	B	360	Total 2827	C 1798	N 474	O 544	S 11	0	0	0
1	D	361	Total 2836	C 1803	N 477	O 545	S 11	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

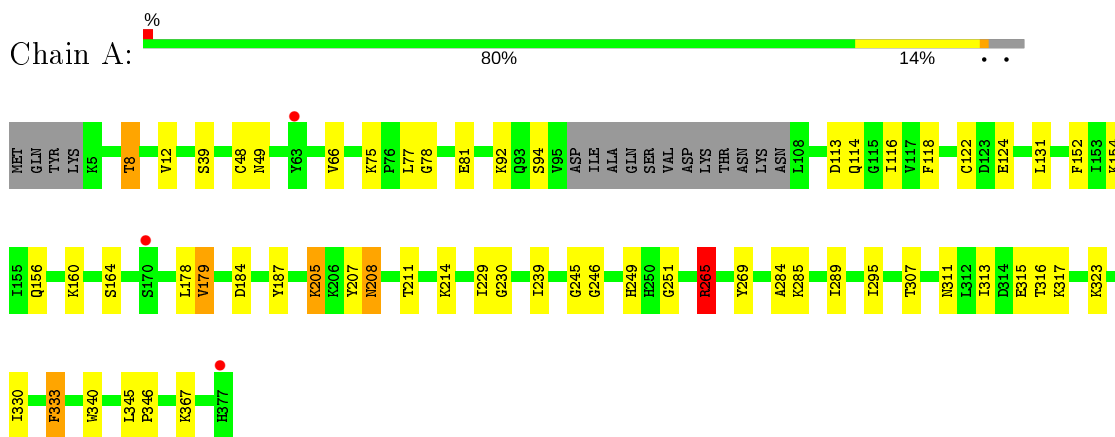| Chain	Residue	Modelled	Actual	Comment	Reference
A	377	HIS	-	expression tag	UNP B2NE58
C	377	HIS	-	expression tag	UNP B2NE58
B	377	HIS	-	expression tag	UNP B2NE58
D	377	HIS	-	expression tag	UNP B2NE58

- Molecule 2 is water.

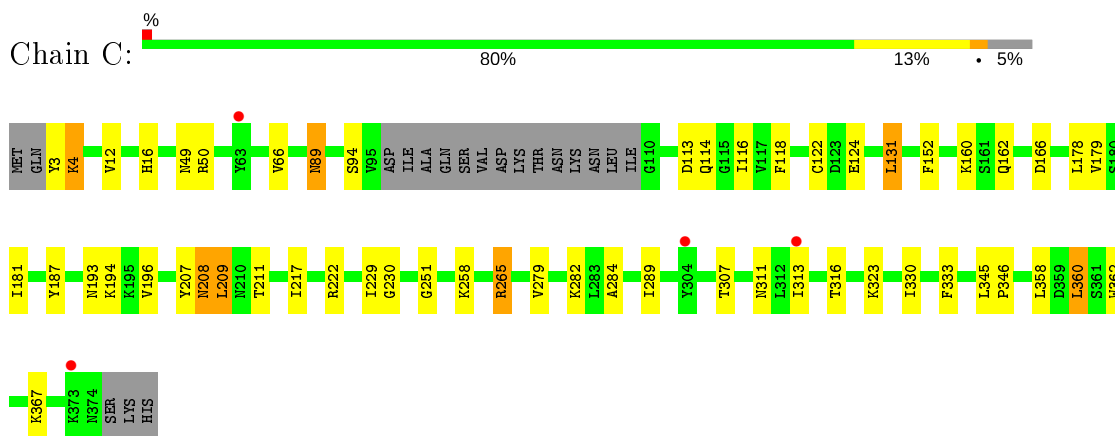| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	24	Total 24	O 24	0	0
2	C	16	Total 16	O 16	0	0
2	B	16	Total 16	O 16	0	0
2	D	27	Total 27	O 27	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.
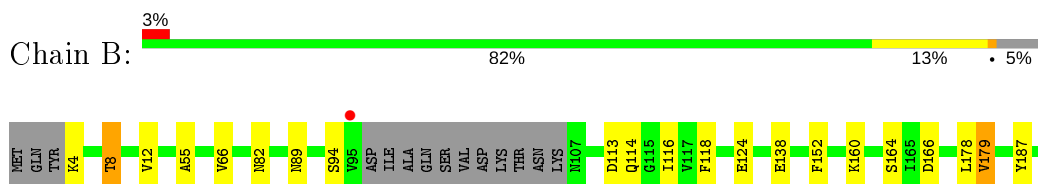
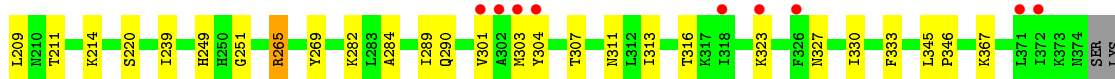- Molecule 1: Methionine adenosyltransferase

- Molecule 1: Methionine adenosyltransferase

- Molecule 1: Methionine adenosyltransferase

L209 N210 T211 K214 S220 I239 H249 H250 G251 R265 Y269 K282 L283 A284 I289 Q290 V301 A302 M303 Y304 T307 N311 L312 I313 T316 K317 I318 K323 F326 N327 I330 F333 L345 P346 K367 L371 I372 K373 N374 SER LYS

HIS

• Molecule 1: Methionine adenosyltransferase

Chain D:

%
80% 14%

MET GLN TYR K4 K5 T8 V12 Y63 V66 K75 P76 L77 G78 N89 S94 V95 ASP ILE ALA GLN SER VAL ASP LYS THR ASN LYS ASN LEU I109 D113 Q114 G115 I116 V117 F118 C122 D123 E124 L131 R148 F152 I153 K160 S164

N169 L173 L178 V179 S180 I181 E185 D186 Y187 N193 K194 K195 V196 K205 K206 Y207 N208 T211 I217 R222 F223 V224 T232 G251 S256 T261 D264 R265 Y269 A284 I289 M303 T307 N311 T316 I322 K323 I330

F333 L345 P346 K376 H377

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	56.20Å 64.06Å 114.50Å 77.93° 83.86° 73.97°	Depositor
Resolution (Å)	47.62 – 2.60 47.62 – 2.60	Depositor EDS
% Data completeness (in resolution range)	92.1 (47.62-2.60) 92.1 (47.62-2.60)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$<I/\sigma(I)>$ [1]	2.49 (at 2.61Å)	Xtriage
Refinement program	REFMAC 5.8.0253	Depositor
R, R_{free}	0.212 , 0.246 0.213 , 0.249	Depositor DCC
R_{free} test set	2049 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å^2)	44.0	Xtriage
Anisotropy	0.527	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 36.3	EDS
L-test for twinning[2]	$<|L|> = 0.51$, $<L^2> = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	11399	wwPDB-VP
Average B, all atoms (Å^2)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.04% 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)

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	0.68	0/2893	0.87	1/3912 (0.0%)
1	B	0.67	0/2878	0.85	0/3892
1	C	0.68	0/2867	0.84	0/3877
1	D	0.67	0/2888	0.86	0/3904
All	All	0.67	0/11526	0.85	1/15585 (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	A	0	4
1	C	0	2
1	D	0	1
All	All	0	7

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	265	ARG	NE-CZ-NH2	5.67	123.14	120.30

There are no chirality outliers.

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	207	TYR	Peptide
1	A	230	GLY	Peptide
1	A	245	GLY	Peptide
1	A	246	GLY	Peptide
1	C	207	TYR	Peptide

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Mol	Chain	Res	Type	Group
1	C	230	GLY	Peptide
1	D	207	TYR	Peptide

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	2838	0	2835	29	0
1	B	2827	0	2824	21	0
1	C	2815	0	2805	35	0
1	D	2836	0	2832	28	0
2	A	24	0	0	4	0
2	B	16	0	0	0	0
2	C	16	0	0	0	0
2	D	27	0	0	1	0
All	All	11399	0	11296	106	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 5.

All (106) 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:C:360:LEU:N	1:C:360:LEU:HD12	1.97	0.79
1:C:358:LEU:HB2	1:C:360:LEU:HD11	1.72	0.72
1:C:360:LEU:HD12	1:C:360:LEU:H	1.55	0.71
1:A:77:LEU:O	2:A:401:HOH:O	2.10	0.69
1:C:131:LEU:HD11	1:C:209:LEU:HD21	1.75	0.68
1:A:48[B]:CYS:SG	1:B:55:ALA:HB1	2.37	0.64
1:D:75:LYS:O	1:D:78:GLY:HA2	1.98	0.64
1:C:360:LEU:CD1	1:C:360:LEU:H	2.10	0.64
1:A:239:ILE:HD11	1:B:239:ILE:HD11	1.82	0.61
1:A:75:LYS:O	1:A:78:GLY:HA2	2.00	0.61
1:C:196:VAL:HG11	1:C:217:ILE:HD12	1.84	0.60
1:B:307:THR:HG21	1:B:311:ASN:HB3	1.84	0.59
1:C:360:LEU:CD1	1:C:360:LEU:N	2.65	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:358:LEU:CB	1:C:360:LEU:HD11	2.33	0.57
1:C:360:LEU:HD23	1:C:362:TRP:CZ2	2.40	0.57
1:D:196:VAL:HG11	1:D:217:ILE:HD12	1.86	0.56
1:C:307:THR:HG21	1:C:311:ASN:HB3	1.87	0.56
1:B:12:VAL:HG12	1:B:160:LYS:HG2	1.88	0.55
1:C:358:LEU:HB2	1:C:360:LEU:CD1	2.35	0.54
1:C:193:ASN:HD22	1:C:217:ILE:CD1	2.20	0.54
1:C:49:ASN:ND2	1:C:229:ILE:O	2.39	0.54
1:D:193:ASN:HD22	1:D:217:ILE:CD1	2.21	0.54
1:C:4:LYS:HE2	1:C:166:ASP:OD2	2.07	0.54
1:D:77:LEU:N	1:D:78:GLY:HA2	2.23	0.54
1:B:116:ILE:O	1:B:251:GLY:HA3	2.09	0.53
1:A:295:ILE:HG21	1:B:220:SER:HB3	1.91	0.53
1:A:49:ASN:ND2	1:A:229:ILE:O	2.41	0.53
1:A:116:ILE:O	1:A:251:GLY:HA3	2.10	0.52
1:D:116:ILE:O	1:D:251:GLY:HA3	2.10	0.51
1:C:116:ILE:O	1:C:251:GLY:HA3	2.10	0.51
1:D:118:PHE:HA	1:D:289:ILE:O	2.11	0.51
1:A:77:LEU:N	1:A:78:GLY:HA2	2.25	0.51
1:C:118:PHE:HA	1:C:289:ILE:O	2.11	0.51
1:A:12:VAL:HG12	1:A:160:LYS:HG2	1.93	0.50
1:A:118:PHE:HA	1:A:289:ILE:O	2.12	0.50
1:A:39:SER:O	2:A:402:HOH:O	2.20	0.50
1:A:8:THR:O	1:B:116:ILE:HD13	2.11	0.50
1:B:118:PHE:HA	1:B:289:ILE:O	2.12	0.49
1:A:313:ILE:HD12	1:A:317:LYS:HB2	1.94	0.49
1:C:330:ILE:HA	1:C:333:PHE:CE2	2.47	0.49
1:D:109:ILE:HD13	1:D:261:THR:HG22	1.93	0.49
1:D:307:THR:HG21	1:D:311:ASN:HB3	1.94	0.49
1:C:178:LEU:HD23	1:C:179:VAL:N	2.27	0.49
1:B:265:ARG:HD3	1:B:269:TYR:CE2	2.48	0.49
1:A:307:THR:HG21	1:A:311:ASN:HB3	1.94	0.49
1:D:265:ARG:HD3	1:D:269:TYR:CE2	2.49	0.48
1:D:178:LEU:HD23	1:D:179:VAL:N	2.29	0.48
1:D:330:ILE:HA	1:D:333:PHE:CE2	2.48	0.48
1:B:330:ILE:HA	1:B:333:PHE:CE2	2.48	0.48
1:D:289:ILE:HG23	1:D:303:MET:HE3	1.96	0.48
1:C:50:ARG:HE	1:B:82:ASN:HD22	1.61	0.48
1:A:330:ILE:HA	1:A:333:PHE:CE2	2.49	0.48
1:A:265:ARG:HD3	1:A:269:TYR:CE2	2.49	0.47
1:D:75:LYS:O	1:D:78:GLY:CA	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:222:ARG:HG2	1:D:224:VAL:HG13	1.97	0.47
1:A:340:TRP:HZ3	2:A:402:HOH:O	1.97	0.47
1:B:178:LEU:HD23	1:B:179:VAL:N	2.29	0.47
1:D:12:VAL:HG12	1:D:160:LYS:HG2	1.97	0.47
1:C:193:ASN:HD22	1:C:217:ILE:HD13	1.78	0.47
1:A:178:LEU:HD23	1:A:179:VAL:N	2.30	0.47
1:C:179:VAL:HG13	1:C:181:ILE:HG13	1.95	0.47
1:D:205:LYS:O	1:D:208:ASN:HB3	2.15	0.46
1:C:12:VAL:HG12	1:C:160:LYS:HG2	1.97	0.46
1:D:256:SER:HB2	2:D:409:HOH:O	2.16	0.46
1:C:122:CYS:SG	1:C:124:GLU:HG3	2.56	0.46
1:A:8:THR:HB	1:A:164:SER:HA	1.97	0.46
1:B:138:GLU:OE2	1:B:206:LYS:NZ	2.40	0.46
1:C:279:VAL:O	1:C:282:LYS:HE2	2.17	0.45
1:A:75:LYS:O	1:A:78:GLY:CA	2.64	0.45
1:B:207:TYR:O	1:B:209:LEU:HG	2.16	0.45
1:D:179:VAL:HG13	1:D:181:ILE:HG13	1.98	0.44
1:B:290:GLN:HB3	1:B:304:TYR:HB3	1.99	0.44
1:B:113:ASP:OD1	1:B:114:GLN:N	2.51	0.44
1:C:196:VAL:CG1	1:C:217:ILE:HD12	2.47	0.44
1:A:113:ASP:OD1	1:A:114:GLN:N	2.51	0.44
1:D:284:ALA:HB1	1:D:307:THR:HG23	1.98	0.44
1:A:284:ALA:HB1	1:A:307:THR:HG23	2.01	0.43
1:C:162:GLN:NE2	1:D:115:GLY:H	2.17	0.43
1:D:196:VAL:CG1	1:D:217:ILE:HD12	2.48	0.43
1:C:258:LYS:O	1:C:265:ARG:NH2	2.49	0.43
1:B:8:THR:HB	1:B:164:SER:HA	2.01	0.43
1:C:16:HIS:CE1	1:C:160:LYS:HE2	2.53	0.43
1:D:8:THR:HB	1:D:164:SER:HA	2.00	0.43
1:D:113:ASP:OD1	1:D:114:GLN:N	2.52	0.42
1:D:122:CYS:SG	1:D:124:GLU:HG3	2.60	0.42
1:D:196:VAL:CB	1:D:217:ILE:HD12	2.49	0.42
1:B:4:LYS:HE3	1:B:166:ASP:OD2	2.19	0.42
1:A:249:HIS:CD2	1:B:249:HIS:CD2	3.07	0.42
1:C:345:LEU:N	1:C:346:PRO:CD	2.83	0.42
1:D:193:ASN:HD22	1:D:217:ILE:HD13	1.83	0.42
1:A:205:LYS:O	1:A:208:ASN:HB3	2.19	0.42
1:B:284:ALA:HB1	1:B:307:THR:HG23	2.02	0.42
1:C:284:ALA:HB1	1:C:307:THR:HG23	2.01	0.42
1:C:113:ASP:OD1	1:C:114:GLN:N	2.52	0.42
1:C:89:ASN:HD22	1:C:89:ASN:HA	1.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:156:GLN:HB3	2:A:401:HOH:O	2.19	0.41
1:B:345:LEU:N	1:B:346:PRO:CD	2.84	0.41
1:C:131:LEU:HD23	1:C:131:LEU:HA	1.94	0.41
1:C:196:VAL:CB	1:C:217:ILE:HD12	2.50	0.41
1:A:345:LEU:N	1:A:346:PRO:CD	2.83	0.41
1:C:193:ASN:HA	1:C:217:ILE:HD13	2.03	0.41
1:D:345:LEU:N	1:D:346:PRO:CD	2.83	0.41
1:A:75:LYS:HE3	1:A:81:GLU:OE1	2.20	0.41
1:A:154:LYS:HA	1:A:184:ASP:OD2	2.21	0.40
1:A:122:CYS:HA	1:A:285:LYS:O	2.21	0.40
1:D:303:MET:HE2	1:D:322:ILE:HG21	2.04	0.40

There are no symmetry-related clashes.

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	358/377 (95%)	338 (94%)	20 (6%)	0	100	100
1	B	356/377 (94%)	337 (95%)	18 (5%)	1 (0%)	41	64
1	C	354/377 (94%)	333 (94%)	20 (6%)	1 (0%)	41	64
1	D	357/377 (95%)	341 (96%)	16 (4%)	0	100	100
All	All	1425/1508 (94%)	1349 (95%)	74 (5%)	2 (0%)	51	75

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	208	ASN
1	B	208	ASN

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	313/327 (96%)	294 (94%)	19 (6%)	18	38
1	B	311/327 (95%)	290 (93%)	21 (7%)	16	32
1	C	309/327 (94%)	290 (94%)	19 (6%)	18	38
1	D	312/327 (95%)	290 (93%)	22 (7%)	14	29
All	All	1245/1308 (95%)	1164 (94%)	81 (6%)	17	34

All (81) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	8	THR
1	A	66	VAL
1	A	92	LYS
1	A	94	SER
1	A	124	GLU
1	A	131	LEU
1	A	152	PHE
1	A	179	VAL
1	A	187	TYR
1	A	205	LYS
1	A	208	ASN
1	A	211	THR
1	A	214	LYS
1	A	265	ARG
1	A	315	GLU
1	A	316	THR
1	A	323	LYS
1	A	333	PHE
1	A	367	LYS
1	C	3	TYR
1	C	4	LYS
1	C	66	VAL
1	C	89	ASN
1	C	94	SER

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Mol	Chain	Res	Type
1	C	131	LEU
1	C	152	PHE
1	C	187	TYR
1	C	194	LYS
1	C	208	ASN
1	C	209	LEU
1	C	211	THR
1	C	222	ARG
1	C	265	ARG
1	C	313	ILE
1	C	316	THR
1	C	323	LYS
1	C	360	LEU
1	C	367	LYS
1	B	8	THR
1	B	66	VAL
1	B	89	ASN
1	B	94	SER
1	B	124	GLU
1	B	152	PHE
1	B	179	VAL
1	B	187	TYR
1	B	205	LYS
1	B	208	ASN
1	B	211	THR
1	B	214	LYS
1	B	265	ARG
1	B	282	LYS
1	B	301	VAL
1	B	303	MET
1	B	313	ILE
1	B	316	THR
1	B	323	LYS
1	B	327	ASN
1	B	367	LYS
1	D	5	LYS
1	D	8	THR
1	D	63	TYR
1	D	66	VAL
1	D	89	ASN
1	D	94	SER
1	D	131	LEU

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Mol	Chain	Res	Type
1	D	148	ARG
1	D	152	PHE
1	D	169	ASN
1	D	187	TYR
1	D	194	LYS
1	D	205	LYS
1	D	208	ASN
1	D	211	THR
1	D	217	ILE
1	D	232	THR
1	D	264	ASP
1	D	265	ARG
1	D	316	THR
1	D	323	LYS
1	D	376	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	49	ASN
1	A	193	ASN
1	A	249	HIS
1	A	374	ASN
1	C	89	ASN
1	C	162	GLN
1	C	182	GLN
1	C	193	ASN
1	C	202	GLN
1	B	82	ASN
1	B	89	ASN
1	B	193	ASN
1	B	202	GLN
1	B	374	ASN
1	D	89	ASN
1	D	193	ASN
1	D	202	GLN
1	D	374	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (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 (i)

6.1 Protein, DNA and RNA chains (i)

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	361/377 (95%)	-0.18	3 (0%)	86	84	32, 47, 71, 92	0
1	B	360/377 (95%)	-0.00	10 (2%)	53	46	33, 52, 91, 102	0
1	C	358/377 (94%)	-0.10	4 (1%)	80	78	35, 56, 82, 92	0
1	D	361/377 (95%)	-0.17	5 (1%)	75	71	34, 51, 77, 100	0
All	All	1440/1508 (95%)	-0.12	22 (1%)	73	70	32, 51, 82, 102	0

All (22) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	377	HIS	5.9
1	A	377	HIS	5.8
1	D	109	ILE	5.3
1	B	304	TYR	4.1
1	B	302	ALA	3.7
1	B	95	VAL	3.5
1	B	371	LEU	3.4
1	D	185	GLU	3.4
1	B	372	ILE	3.2
1	B	301	VAL	3.2
1	A	170	SER	3.0
1	B	323	LYS	2.9
1	B	318	ILE	2.8
1	A	63	TYR	2.8
1	C	63	TYR	2.6
1	C	373	LYS	2.4
1	B	326	PHE	2.4
1	D	153	ILE	2.4
1	C	313	ILE	2.2
1	B	303	MET	2.2
1	C	304	TYR	2.1
1	D	173	LEU	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 carbohydrates 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.