WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Oct 15, 2023 – 07:12 AM EDT

PDB ID	:	7STZ
Title	:	Crystal Structure of Human E-cadherin EC1-5 bound by mouse monoclonal antibody Fab mAb-1_19A11
Authors	:	Seattle Structural Genomics Center for Infectious Disease; Seattle Structural Genomics Center for Infectious Disease (SSGCID)
Deposited on	:	2021-11-15
Resolution	:	2.95 Å(reported)

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

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

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.95 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.
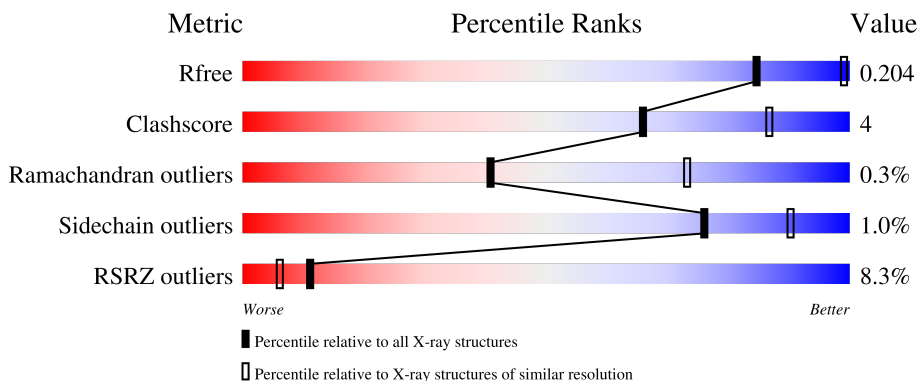
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3104 (3.00-2.92)
Clashscore	141614	3462 (3.00-2.92)
Ramachandran outliers	138981	3340 (3.00-2.92)
Sidechain outliers	138945	3343 (3.00-2.92)
RSRZ outliers	127900	2986 (3.00-2.92)

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	C	590	
1	D	590	
2	H	246	
2	I	246	
3	L	240	

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Mol	Chain	Length	Quality of chain
3	M	240	85% 7% 8%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	EDO	H	302	-	-	-	X
6	PG4	C	604	-	-	-	X
7	MAN	C	607	-	-	-	X

2 Entry composition ⓘ

There are 10 unique types of molecules in this entry. The entry contains 14687 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 Cadherin-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	C	540	4093	2572	660	851	10	0	1	0
1	D	422	Total	C	N	O	S	0	0	0
			3068	1910	498	656	4			

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-15	MET	-	expression tag	UNP P12830
C	-14	PRO	-	expression tag	UNP P12830
C	-13	LEU	-	expression tag	UNP P12830
C	-12	LEU	-	expression tag	UNP P12830
C	-11	LEU	-	expression tag	UNP P12830
C	-10	LEU	-	expression tag	UNP P12830
C	-9	LEU	-	expression tag	UNP P12830
C	-8	PRO	-	expression tag	UNP P12830
C	-7	LEU	-	expression tag	UNP P12830
C	-6	LEU	-	expression tag	UNP P12830
C	-5	TRP	-	expression tag	UNP P12830
C	-4	ALA	-	expression tag	UNP P12830
C	-3	GLY	-	expression tag	UNP P12830
C	-2	ALA	-	expression tag	UNP P12830
C	-1	LEU	-	expression tag	UNP P12830
C	0	ALA	-	expression tag	UNP P12830
D	-15	MET	-	expression tag	UNP P12830
D	-14	PRO	-	expression tag	UNP P12830
D	-13	LEU	-	expression tag	UNP P12830
D	-12	LEU	-	expression tag	UNP P12830
D	-11	LEU	-	expression tag	UNP P12830
D	-10	LEU	-	expression tag	UNP P12830
D	-9	LEU	-	expression tag	UNP P12830
D	-8	PRO	-	expression tag	UNP P12830
D	-7	LEU	-	expression tag	UNP P12830

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-6	LEU	-	expression tag	UNP P12830
D	-5	TRP	-	expression tag	UNP P12830
D	-4	ALA	-	expression tag	UNP P12830
D	-3	GLY	-	expression tag	UNP P12830
D	-2	ALA	-	expression tag	UNP P12830
D	-1	LEU	-	expression tag	UNP P12830
D	0	ALA	-	expression tag	UNP P12830

- Molecule 2 is a protein called mAb-1_19A11 Heavy Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	219	Total 1643	C 1042	N 268	O 322	S 11	0	5	0
2	I	216	Total 1646	C 1041	N 273	O 322	S 10	0	6	0

- Molecule 3 is a protein called mAb-1_19A11 Light Chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	L	220	Total 1703	C 1060	N 289	O 345	S 9	0	2	0
3	M	220	Total 1712	C 1066	N 293	O 345	S 8	0	2	0

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).
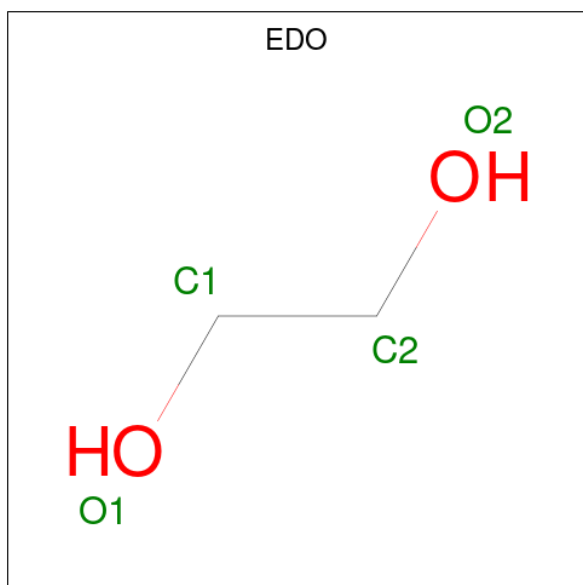
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	C	1	Total 4	C 2	O 2	0	0
4	H	1	Total 4	C 2	O 2	0	0
4	H	1	Total 4	C 2	O 2	0	0
4	I	1	Total 4	C 2	O 2	0	0
4	I	1	Total 4	C 2	O 2	0	0

- Molecule 5 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).
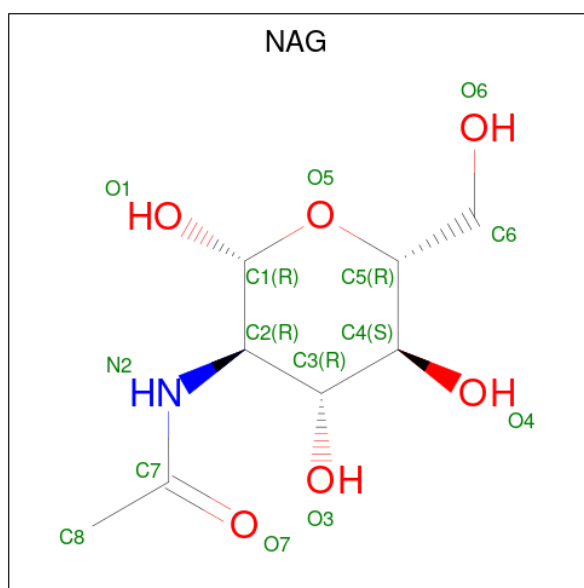
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	C	1	Total 14	C 8	N 1	O 5	0	0

- Molecule 6 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: $C_8H_{18}O_5$).

PG4

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	C	1	Total 13	C 8	O 5	0	0
6	C	1	Total 13	C 8	O 5	0	0
6	H	1	Total 13	C 8	O 5	0	0
6	D	1	Total 13	C 8	O 5	0	0
6	I	1	Total 13	C 8	O 5	0	0

- Molecule 7 is alpha-D-mannopyranose (three-letter code: MAN) (formula: $C_6H_{12}O_6$).

MAN
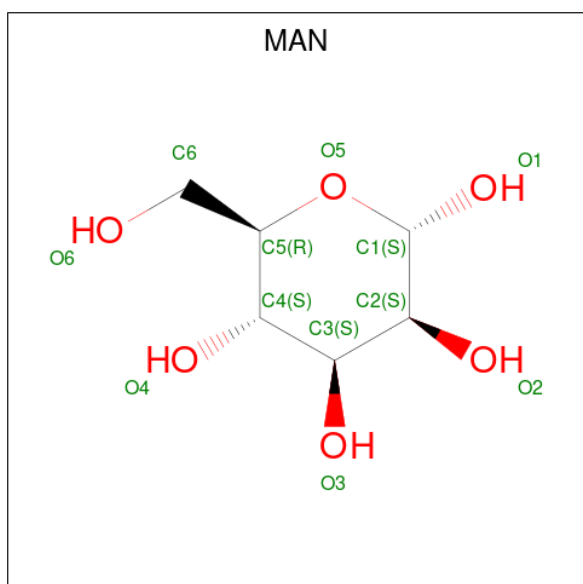
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
7	C	1	Total 11	C 6	O 5	0	0
7	C	1	Total 11	C 6	O 5	0	0
7	C	1	Total 11	C 6	O 5	0	0

- Molecule 8 is beta-D-mannopyranose (three-letter code: BMA) (formula: $C_6H_{12}O_6$).
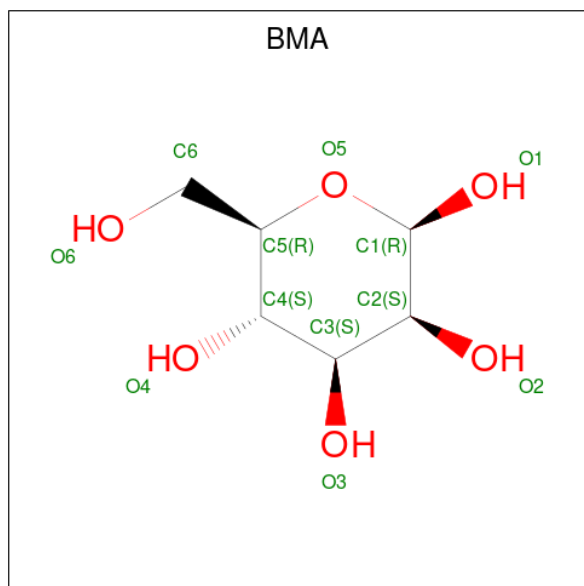
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	C	1	Total 11	C 6	O 5	0	0
8	C	1	Total 11	C 6	O 5	0	0
8	C	1	Total 11	C 6	O 5	0	0
8	C	1	Total 11	C 6	O 5	0	0
8	C	1	Total 11	C 6	O 5	0	0
8	C	1	Total 11	C 6	O 5	0	0
8	D	1	Total 11	C 6	O 5	0	0
8	D	1	Total 11	C 6	O 5	0	0
8	D	1	Total 11	C 6	O 5	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	D	1	Total 11	C 6	O 5	0	0
8	D	1	Total 11	C 6	O 5	0	0
8	D	1	Total 11	C 6	O 5	0	0

- Molecule 9 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	C	12	Total 12	Ca 12	0	0
9	D	11	Total 11	Ca 11	0	0
9	M	1	Total 1	Ca 1	0	0

- Molecule 10 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
10	C	81	Total 81	O 81	0	0
10	H	76	Total 76	O 76	0	0
10	L	107	Total 107	O 107	0	0
10	D	62	Total 62	O 62	0	0
10	I	103	Total 103	O 103	0	0
10	M	105	Total 105	O 105	0	0

3 Residue-property plots ⓘ

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

• Molecule 1: Cadherin-1

Chain C:

• Molecule 1: Cadherin-1

Chain D:

PRO ARG THR ILE PHE PHE CYS GLU ARG ASN PRO LYS PRO GLN VAL ILE ASN ILE ILE ASP ALA ASP LEU PRO PRO ASN THR SER PRO PHE THR ALA LEU THR HIS GLY ALA SER ALA ASN TRP THR ILE GLN TYR ASN ASP PRO THR GLN GLU SER ILE LEU LYS PRO MET

ALA LEU GLU VAL GLY ASP TYR LYS ILE ASN LEU LYS LEU MET ASP SER ASN GLN ASN LYS ASP GLN VAL THR THR LEU GLU VAL SER VAL CYS ASP CYS GLU GLY ALA ALA GLY VAL CYS ARG LYS ALA SER ALA TRP SER HIS PRO GLN PHE GLU LYS GLY GLY GLY SER GLY GLY SER

GLY GLY SER ALA TRP SER HIS PRO GLN PHE GLU LYS

• Molecule 2: mAb-1_19A11 Heavy Chain

Chain H:

81% 8% 11%

MET ALA VAL LEU GLY LEU LEU LEU CYS LEU VAL THR PHE PRO SER CYS VAL LEU SER Q1 L18 S19 I20 W36 V37 R38 L48 D58 L67 L80 K81 M82 L85 P125 P132 GLY SER ALA A136 Q137 V142 Y151 W160 L165 V187

P195 C201 C221 H222 HIS HIS HIS HIS

• Molecule 2: mAb-1_19A11 Heavy Chain

Chain I:

79% 8% • 12%

MET ALA VAL LEU GLY LEU LEU LEU CYS LEU VAL THR PHE PRO SER CYS VAL LEU SER Q1 L11 L18 V24 L29 R38 W47 L48 D58 R66 L67 L80 L85 D89 T90 L102 T116 P132 GLY SER ALA ALA Q137 P153 W160

L165 V187 C201 D220 CYS HIS HIS HIS HIS HIS

• Molecule 3: mAb-1_19A11 Light Chain

Chain L:

83% 8% 8%

MET GLU SER GLN THR GLN VAL LEU MET PHE LEU LEU LEU TRP VAL SER GLY ALA CYS ALA D1 M13 V19 T20 M21 W41 L53 I54 F68 L79 T108 I112 K155 I156 Q172 L185 T186 L187 H195 T199 C200 E201 V212 R217

C220

• Molecule 3: mAb-1_19A11 Light Chain

Chain M:

85% 7% 8%

MET GLU SER GLN THR GLN VAL LEU MET PHE LEU LEU LEU TRP VAL SER GLY ALA CYS ALA D1 M13 V19 T20 M21 W41 L53 I54 Y55 F68 L79 R99 F104 T108 V152 W169 M181 E201 V212 C220

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	85.34Å 131.62Å 201.76Å 90.00° 100.86° 90.00°	Depositor
Resolution (Å)	49.54 – 2.95 49.54 – 2.95	Depositor EDS
% Data completeness (in resolution range)	99.9 (49.54-2.95) 95.6 (49.54-2.95)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.99 (at 2.96Å)	Xtriage
Refinement program	PHENIX 1.20rc3-4406	Depositor
R, R_{free}	0.182 , 0.208 0.183 , 0.204	Depositor DCC
R_{free} test set	2000 reflections (2.17%)	wwPDB-VP
Wilson B-factor (Å^2)	50.2	Xtriage
Anisotropy	0.524	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 72.5	EDS
L-test for twinning[2]	$< |L| > = 0.50, < L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.016 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	14687	wwPDB-VP
Average B, all atoms (Å^2)	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.49% 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 ⓘ

5.1   Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: PG4, BMA, NAG, MAN, CA, EDO

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	C	0.25	0/4181	0.48	0/5745
1	D	0.24	0/3121	0.45	0/4293
2	H	0.25	0/1701	0.48	0/2328
2	I	0.26	0/1707	0.51	0/2334
3	L	0.26	0/1752	0.52	1/2376 (0.0%)
3	M	0.26	0/1755	0.51	0/2379
All	All	0.25	0/14217	0.49	1/19455 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L	187	LEU	CA-CB-CG	6.13	129.41	115.30

There are no chirality outliers.

There are no planarity outliers.

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	C	4093	0	3897	45	0
1	D	3068	0	2794	24	0
2	H	1643	0	1596	10	0
2	I	1646	0	1602	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	L	1703	0	1633	10	0
3	M	1712	0	1650	12	0
4	C	4	0	6	0	0
4	H	8	0	10	0	0
4	I	8	0	12	0	0
5	C	14	0	13	0	0
6	C	26	0	36	3	0
6	D	13	0	18	0	0
6	H	13	0	18	0	0
6	I	13	0	18	3	0
7	C	33	0	30	0	0
8	C	66	0	60	0	0
8	D	66	0	60	1	0
9	C	12	0	0	0	0
9	D	11	0	0	0	0
9	M	1	0	0	0	0
10	C	81	0	0	0	0
10	D	62	0	0	0	0
10	H	76	0	0	0	0
10	I	103	0	0	0	0
10	L	107	0	0	0	0
10	M	105	0	0	0	0
All	All	14687	0	13453	111	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 4.

All (111) 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:470:SER:HB3	1:C:471:PRO:HD2	1.51	0.91
3:M:13:MET:HG3	3:M:19:VAL:HG22	1.71	0.72
1:C:441:PRO:HD3	1:C:524:VAL:HG21	1.76	0.67
1:C:501:LYS:HG3	6:C:604:PG4:H52	1.79	0.64
3:L:13:MET:HG3	3:L:19:VAL:HG22	1.80	0.64
2:I:66:ARG:NH2	2:I:89:ASP:OD2	2.25	0.63
2:I:18:LEU:HB2	2:I:85:LEU:HD11	1.80	0.63
1:C:181:ARG:NH1	1:C:182:GLU:OE2	2.32	0.63
1:C:310:VAL:HG12	1:C:311:SER:H	1.63	0.62
1:C:231:PRO:HA	1:C:324:LEU:HB2	1.82	0.61
1:D:7:ILE:HB	1:D:96:ILE:HD13	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:201:GLU:HG2	3:M:212:VAL:HG22	1.83	0.60
1:C:7:ILE:HB	1:C:96:ILE:HD13	1.83	0.60
1:C:74:TYR:HB2	1:C:96:ILE:HB	1.83	0.60
1:C:296:TYR:HB2	1:C:321:VAL:HB	1.84	0.59
1:C:499:LYS:HE3	6:C:604:PG4:H21	1.84	0.59
1:D:74:TYR:HB2	1:D:96:ILE:HB	1.84	0.59
1:D:293:LYS:NZ	1:D:295:GLN:O	2.36	0.58
1:C:443:PRO:HD2	1:C:458:ILE:HG23	1.85	0.56
6:I:303:PG4:H22	3:M:104:PHE:H	1.70	0.56
1:D:246:ASP:HB3	1:D:255:TRP:CD1	2.41	0.55
6:I:303:PG4:H22	3:M:104:PHE:HB2	1.88	0.55
1:C:246:ASP:HB3	1:C:255:TRP:CD1	2.42	0.55
1:C:485:THR:HG21	6:C:604:PG4:H31	1.87	0.55
1:C:181:ARG:NH1	1:C:213:ASP:OD1	2.40	0.55
2:I:1:GLN:N	2:I:1:GLN:OE1	2.36	0.55
2:I:11:LEU:HB2	2:I:153:PRO:HG3	1.89	0.54
1:C:372:TRP:HB2	1:C:412:ILE:HG23	1.90	0.54
1:C:293:LYS:NZ	1:C:295:GLN:O	2.39	0.54
1:D:231:PRO:HA	1:D:324:LEU:HB2	1.89	0.53
3:L:201:GLU:HG2	3:L:212:VAL:HG22	1.90	0.53
1:C:441:PRO:HG3	1:C:513:LEU:HD23	1.90	0.52
1:C:517:ASP:OD1	1:C:518:ASN:N	2.35	0.52
1:D:181:ARG:HD3	1:D:213:ASP:HB2	1.91	0.52
1:D:350:GLU:HA	1:D:389:SER:HA	1.93	0.51
2:I:102:LEU:HD22	3:M:55:TYR:CE2	2.46	0.50
1:C:263:ASN:HD21	1:C:298:LEU:HA	1.76	0.50
2:H:165:LEU:HD13	2:H:187:VAL:HG21	1.93	0.50
1:C:10:PRO:HA	1:C:99:THR:HB	1.94	0.49
1:C:442:GLU:HB3	1:C:443:PRO:HD3	1.94	0.49
1:D:118:MET:HA	1:D:212:THR:HB	1.93	0.49
1:D:222:ASN:HB3	1:D:223:PRO:HD3	1.95	0.49
3:M:21:MET:HG2	3:M:108:THR:HG21	1.95	0.49
3:L:21:MET:HG2	3:L:108:THR:HG21	1.93	0.49
1:D:159:ASP:HB3	1:D:162:MET:HG2	1.95	0.49
1:C:511:ILE:HD12	1:C:529:VAL:HG21	1.96	0.48
2:I:24:VAL:HG21	2:I:29:LEU:HD13	1.95	0.48
1:C:462:ASP:HB3	1:C:469:THR:HG22	1.96	0.48
3:M:169:TRP:CE2	3:M:181:MET:HG3	2.49	0.48
1:D:105:LYS:HG2	1:D:201:LEU:HB3	1.96	0.47
1:C:342:SER:HA	1:C:432:SER:HB2	1.97	0.47
2:I:90:THR:HG23	2:I:116:THR:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:160:TRP:CZ3	2:H:201:CYS:HB3	2.49	0.47
1:C:105:LYS:HG2	1:C:201:LEU:HB3	1.96	0.46
2:H:82:MET:HB3	2:H:85:LEU:HD11	1.98	0.46
2:H:137:GLN:HG3	2:H:142:VAL:HB	1.97	0.46
3:M:53:LEU:HD21	3:M:68:PHE:CD1	2.49	0.46
2:H:125:PRO:HB3	2:H:151:TYR:HB3	1.98	0.46
3:L:41:TRP:CE2	3:L:79:LEU:HB2	2.50	0.46
1:C:222:ASN:HB3	1:C:223:PRO:HD3	1.98	0.46
2:I:165:LEU:HD13	2:I:187:VAL:HG21	1.97	0.46
2:I:38:ARG:HB3	2:I:48:LEU:HD11	1.98	0.45
1:C:470:SER:HB3	1:C:471:PRO:CD	2.36	0.45
3:M:152:VAL:HG21	3:M:181:MET:HE1	1.98	0.45
1:C:232:GLU:HG3	1:C:290:PHE:H	1.81	0.45
1:C:404:ASN:OD1	1:C:405:SER:N	2.44	0.45
1:C:418:SER:HB3	1:C:419:PRO:HD3	1.98	0.44
3:L:156:ILE:HD11	3:L:185:LEU:HD21	1.99	0.44
1:D:223:PRO:HD3	1:D:243:LYS:HB2	1.99	0.44
2:H:18:LEU:HD21	2:H:20:ILE:HD11	2.00	0.44
1:D:352:THR:OG1	1:D:353:SER:N	2.51	0.44
1:D:249:ALA:O	1:D:252:THR:OG1	2.24	0.44
1:C:396:ARG:NH1	1:C:397:GLU:OE2	2.51	0.44
3:M:41:TRP:CE2	3:M:79:LEU:HB2	2.53	0.44
3:L:155:LYS:HB2	3:L:199:THR:HB	2.00	0.43
3:L:112:ILE:O	3:L:172:GLN:NE2	2.40	0.43
1:D:14:LYS:HB2	3:M:99[B]:ARG:HG2	2.00	0.43
1:D:156:GLU:HB2	1:D:160:LYS:HA	2.00	0.43
1:D:229:GLN:HG2	1:D:322:ASP:HB2	2.01	0.43
1:C:479:GLY:C	1:C:481:SER:H	2.22	0.43
2:I:160:TRP:CZ3	2:I:201:CYS:HB3	2.54	0.43
1:C:223:PRO:HD2	1:C:226:TYR:OH	2.19	0.43
1:C:298:LEU:HB2	1:C:319:VAL:HG13	2.00	0.43
1:C:446:ILE:HG23	1:C:456:GLN:HG2	2.01	0.43
1:D:68:ARG:HD3	1:D:100:ASP:HB2	2.01	0.42
1:C:484:TRP:CE2	1:C:511:ILE:HD11	2.54	0.42
3:L:53:LEU:HD21	3:L:68:PHE:CD1	2.54	0.42
1:D:255:TRP:CH2	1:D:278:ASN:HB2	2.54	0.42
1:C:388:ILE:HD13	1:C:427:LEU:HD22	2.00	0.42
3:L:195:HIS:O	3:L:217:ARG:HD3	2.19	0.42
1:D:113:PHE:CG	1:D:130:VAL:HG12	2.55	0.42
2:I:67:LEU:HD22	2:I:80:LEU:HD11	2.02	0.42
2:H:38:ARG:HB3	2:H:48:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:221:CYS:HB3	2:H:222:HIS:H	1.68	0.41
1:C:29:ASP:HA	1:C:32:GLY:O	2.20	0.41
1:D:154:ASP:HA	1:D:155:PRO:HA	1.89	0.41
2:I:47:TRP:H	6:I:303:PG4:H21	1.85	0.41
2:I:102:LEU:HD22	3:M:55:TYR:CZ	2.56	0.41
2:H:36:TRP:CE2	2:H:80:LEU:HB2	2.56	0.41
1:D:234:GLU:HB3	1:D:237:VAL:HG21	2.03	0.41
1:D:171:VAL:HG11	8:D:606:BMA:H62	2.03	0.41
1:C:218:PRO:HA	1:C:219:PRO:HD3	1.99	0.40
1:C:26:SER:OG	1:C:89:GLU:OE2	2.30	0.40
1:C:402:VAL:HG12	1:C:404:ASN:O	2.21	0.40
2:H:67:LEU:HD22	2:H:80:LEU:HD11	2.02	0.40
1:C:159:ASP:OD1	1:C:160:LYS:N	2.54	0.40
1:C:371:ILE:HG12	1:C:381:ILE:HG22	2.02	0.40
3:L:41:TRP:HB2	3:L:54:ILE:HB	2.03	0.40
1:C:154:ASP:HA	1:C:155:PRO:HA	1.82	0.40
1:C:223:PRO:HD3	1:C:243:LYS:HB2	2.04	0.40
1:D:298:LEU:HB2	1:D:319:VAL:HG13	2.03	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	C	539/590 (91%)	504 (94%)	30 (6%)	5 (1%)	17	51
1	D	410/590 (70%)	387 (94%)	23 (6%)	0	100	100
2	H	220/246 (89%)	213 (97%)	7 (3%)	0	100	100
2	I	218/246 (89%)	213 (98%)	5 (2%)	0	100	100
3	L	220/240 (92%)	217 (99%)	3 (1%)	0	100	100
3	M	220/240 (92%)	217 (99%)	3 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	1827/2152 (85%)	1751 (96%)	71 (4%)	5 (0%)	41 73

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	310	VAL
1	C	471	PRO
1	C	472	PHE
1	C	232	GLU
1	C	419	PRO

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	C	455/507 (90%)	449 (99%)	6 (1%)	69	87
1	D	323/507 (64%)	318 (98%)	5 (2%)	65	85
2	H	188/214 (88%)	186 (99%)	2 (1%)	73	89
2	I	189/214 (88%)	185 (98%)	4 (2%)	53	80
3	L	196/214 (92%)	195 (100%)	1 (0%)	88	95
3	M	196/214 (92%)	196 (100%)	0	100	100
All	All	1547/1870 (83%)	1529 (99%)	18 (1%)	76	88

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	111	GLU
1	C	341	VAL
1	C	354	TYR
1	C	396	ARG
1	C	478	HIS
1	C	485	THR
2	H	58[A]	ASP

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Mol	Chain	Res	Type
2	H	58[B]	ASP
3	L	187	LEU
1	D	81	VAL
1	D	119	GLU
1	D	181	ARG
1	D	206	THR
1	D	258	VAL
2	I	58[A]	ASP
2	I	58[B]	ASP
2	I	165	LEU
2	I	201	CYS

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

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 50 ligands modelled in this entry, 24 are monoatomic - leaving 26 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
8	BMA	C	608	-	11,11,12	0.75	0	15,15,17	1.41	3 (20%)
4	EDO	H	302	-	3,3,3	0.50	0	2,2,2	0.28	0
8	BMA	C	606	-	11,11,12	0.93	1 (9%)	15,15,17	1.04	2 (13%)
7	MAN	C	611	1	11,11,12	0.76	0	15,15,17	1.26	3 (20%)
4	EDO	I	302	-	3,3,3	0.47	0	2,2,2	0.29	0
8	BMA	C	610	-	11,11,12	0.75	0	15,15,17	1.06	2 (13%)
7	MAN	C	607	1	11,11,12	0.69	0	15,15,17	1.08	2 (13%)
4	EDO	I	301	-	3,3,3	0.49	0	2,2,2	0.31	0
8	BMA	D	603	-	11,11,12	0.81	0	15,15,17	1.33	2 (13%)
7	MAN	C	605	1	11,11,12	0.83	1 (9%)	15,15,17	1.05	2 (13%)
8	BMA	C	612	-	11,11,12	0.86	0	15,15,17	1.61	3 (20%)
5	NAG	C	602	1	14,14,15	0.27	0	17,19,21	0.43	0
8	BMA	D	606	-	11,11,12	0.85	0	15,15,17	1.22	3 (20%)
8	BMA	C	609	-	11,11,12	0.92	0	15,15,17	1.22	2 (13%)
4	EDO	C	601	-	3,3,3	0.50	0	2,2,2	0.26	0
6	PG4	C	604	-	12,12,12	0.15	0	11,11,11	0.61	0
8	BMA	D	604	-	11,11,12	0.67	0	15,15,17	1.11	2 (13%)
8	BMA	C	613	-	11,11,12	0.84	0	15,15,17	1.37	3 (20%)
8	BMA	D	602	-	11,11,12	0.79	0	15,15,17	1.05	1 (6%)
6	PG4	I	303	-	12,12,12	0.13	0	11,11,11	0.66	0
4	EDO	H	301	-	3,3,3	0.48	0	2,2,2	0.28	0
6	PG4	H	303	-	12,12,12	0.14	0	11,11,11	0.63	0
6	PG4	C	603	-	12,12,12	0.13	0	11,11,11	0.61	0
8	BMA	D	607	-	11,11,12	0.83	0	15,15,17	1.45	3 (20%)
8	BMA	D	605	-	11,11,12	0.67	0	15,15,17	1.07	2 (13%)
6	PG4	D	601	-	12,12,12	0.13	0	11,11,11	0.62	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	BMA	C	608	-	-	2/2/19/22	0/1/1/1
4	EDO	H	302	-	-	0/1/1/1	-
8	BMA	C	606	-	-	2/2/19/22	0/1/1/1
7	MAN	C	611	1	-	0/2/19/22	0/1/1/1
4	EDO	I	302	-	-	0/1/1/1	-
8	BMA	C	610	-	-	2/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	MAN	C	607	1	-	2/2/19/22	0/1/1/1
4	EDO	I	301	-	-	0/1/1/1	-
8	BMA	D	603	-	-	0/2/19/22	1/1/1/1
7	MAN	C	605	1	-	0/2/19/22	0/1/1/1
8	BMA	C	612	-	-	2/2/19/22	0/1/1/1
5	NAG	C	602	1	-	2/6/23/26	0/1/1/1
8	BMA	D	606	-	-	2/2/19/22	0/1/1/1
8	BMA	C	609	-	-	2/2/19/22	1/1/1/1
4	EDO	C	601	-	-	0/1/1/1	-
6	PG4	C	604	-	-	3/10/10/10	-
8	BMA	D	604	-	-	2/2/19/22	0/1/1/1
8	BMA	C	613	-	-	1/2/19/22	0/1/1/1
8	BMA	D	602	-	-	0/2/19/22	0/1/1/1
6	PG4	I	303	-	-	8/10/10/10	-
4	EDO	H	301	-	-	0/1/1/1	-
6	PG4	H	303	-	-	6/10/10/10	-
6	PG4	C	603	-	-	2/10/10/10	-
8	BMA	D	607	-	-	1/2/19/22	0/1/1/1
8	BMA	D	605	-	-	0/2/19/22	0/1/1/1
6	PG4	D	601	-	-	5/10/10/10	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	C	606	BMA	O5-C1	-2.23	1.40	1.43
7	C	605	MAN	O5-C1	-2.11	1.40	1.43

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	C	612	BMA	C1-O5-C5	4.25	117.94	112.19
8	D	607	BMA	C1-O5-C5	3.81	117.35	112.19
8	C	608	BMA	C1-O5-C5	3.75	117.27	112.19
8	D	603	BMA	C1-O5-C5	3.72	117.23	112.19
8	C	613	BMA	C1-O5-C5	3.61	117.09	112.19
8	C	609	BMA	C1-O5-C5	3.20	116.53	112.19
7	C	611	MAN	C1-O5-C5	3.08	116.37	112.19
8	C	612	BMA	O5-C1-C2	2.80	115.09	110.77
8	D	607	BMA	O5-C1-C2	2.46	114.57	110.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	D	604	BMA	C1-O5-C5	2.46	115.52	112.19
8	D	606	BMA	C1-O5-C5	2.43	115.48	112.19
7	C	607	MAN	C1-O5-C5	2.42	115.47	112.19
8	D	605	BMA	C1-O5-C5	2.40	115.44	112.19
8	C	608	BMA	O5-C1-C2	2.36	114.42	110.77
8	D	606	BMA	O2-C2-C3	-2.31	105.51	110.14
8	C	609	BMA	O2-C2-C3	-2.30	105.53	110.14
8	D	605	BMA	O2-C2-C3	-2.28	105.56	110.14
8	C	610	BMA	C1-O5-C5	2.28	115.28	112.19
8	C	608	BMA	O2-C2-C3	-2.26	105.60	110.14
8	C	613	BMA	O5-C1-C2	2.26	114.25	110.77
7	C	605	MAN	C1-O5-C5	2.22	115.20	112.19
8	D	603	BMA	O2-C2-C3	-2.21	105.71	110.14
8	C	612	BMA	O2-C2-C3	-2.21	105.72	110.14
8	C	606	BMA	O2-C2-C3	-2.19	105.75	110.14
8	C	610	BMA	O2-C2-C3	-2.18	105.77	110.14
8	D	602	BMA	C1-O5-C5	2.17	115.13	112.19
8	D	604	BMA	O2-C2-C3	-2.17	105.80	110.14
7	C	611	MAN	O2-C2-C3	-2.16	105.81	110.14
7	C	607	MAN	O2-C2-C3	-2.16	105.81	110.14
8	D	607	BMA	O2-C2-C3	-2.16	105.82	110.14
8	C	613	BMA	O2-C2-C3	-2.14	105.85	110.14
8	D	606	BMA	O5-C1-C2	2.06	113.95	110.77
7	C	605	MAN	O2-C2-C3	-2.04	106.06	110.14
7	C	611	MAN	O5-C1-C2	2.02	113.89	110.77
8	C	606	BMA	C1-O5-C5	2.01	114.92	112.19

There are no chirality outliers.

All (44) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	C	612	BMA	O5-C5-C6-O6
8	C	608	BMA	O5-C5-C6-O6
7	C	607	MAN	O5-C5-C6-O6
8	C	609	BMA	C4-C5-C6-O6
8	D	604	BMA	C4-C5-C6-O6
5	C	602	NAG	C8-C7-N2-C2
5	C	602	NAG	O7-C7-N2-C2
7	C	607	MAN	C4-C5-C6-O6
8	C	606	BMA	O5-C5-C6-O6
8	C	609	BMA	O5-C5-C6-O6
8	D	604	BMA	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
8	C	608	BMA	C4-C5-C6-O6
8	C	612	BMA	C4-C5-C6-O6
8	D	606	BMA	O5-C5-C6-O6
8	C	613	BMA	O5-C5-C6-O6
6	C	604	PG4	O2-C3-C4-O3
6	H	303	PG4	O4-C7-C8-O5
6	I	303	PG4	O4-C7-C8-O5
6	D	601	PG4	O3-C5-C6-O4
6	H	303	PG4	O2-C3-C4-O3
8	D	607	BMA	O5-C5-C6-O6
6	C	603	PG4	O2-C3-C4-O3
8	C	610	BMA	C4-C5-C6-O6
8	C	606	BMA	C4-C5-C6-O6
6	C	604	PG4	C5-C6-O4-C7
6	H	303	PG4	C3-C4-O3-C5
6	D	601	PG4	C3-C4-O3-C5
6	C	604	PG4	C6-C5-O3-C4
6	I	303	PG4	C4-C3-O2-C2
6	H	303	PG4	C4-C3-O2-C2
6	D	601	PG4	C6-C5-O3-C4
6	D	601	PG4	O2-C3-C4-O3
6	I	303	PG4	C8-C7-O4-C6
6	I	303	PG4	C3-C4-O3-C5
6	I	303	PG4	C6-C5-O3-C4
8	D	606	BMA	C4-C5-C6-O6
6	I	303	PG4	O2-C3-C4-O3
6	C	603	PG4	C4-C3-O2-C2
8	C	610	BMA	O5-C5-C6-O6
6	H	303	PG4	O1-C1-C2-O2
6	I	303	PG4	C1-C2-O2-C3
6	H	303	PG4	C6-C5-O3-C4
6	I	303	PG4	O1-C1-C2-O2
6	D	601	PG4	C4-C3-O2-C2

All (2) ring outliers are listed below:

Mol	Chain	Res	Type	Atoms
8	D	603	BMA	C1-C2-C3-C4-C5-O5
8	C	609	BMA	C1-C2-C3-C4-C5-O5

3 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	D	606	BMA	1	0
6	C	604	PG4	3	0
6	I	303	PG4	3	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6   Fit of model and data ⓘ

6.1   Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	C	540/590 (91%)	0.45	52 (9%)	8	4	35, 99, 146, 213	0
1	D	422/590 (71%)	1.00	97 (22%)	0	0	36, 134, 179, 224	0
2	H	219/246 (89%)	-0.14	2 (0%)	84	71	34, 60, 131, 179	0
2	I	216/246 (87%)	-0.13	0	100	100	29, 46, 82, 182	0
3	L	220/240 (91%)	-0.14	0	100	100	32, 52, 96, 154	0
3	M	220/240 (91%)	-0.11	1 (0%)	91	81	29, 46, 85, 140	0
All	All	1837/2152 (85%)	0.30	152 (8%)	11	6	29, 65, 161, 224	0

All (152) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	300	VAL	7.8
1	D	321	VAL	7.0
1	D	269	PHE	6.9
1	C	301	ALA	6.0
1	D	298	LEU	5.8
1	D	280	GLY	5.6
1	D	296	TYR	5.3
1	D	341	VAL	5.3
1	D	270	VAL	5.2
1	C	372	TRP	5.2
1	D	240	THR	5.2
1	C	526	THR	5.1
1	C	413	ALA	5.1
1	D	308	PHE	5.1
1	D	301	ALA	5.0
1	D	302	VAL	4.9
1	D	271	VAL	4.9
1	D	352	THR	4.7
1	D	281	ILE	4.6

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Mol	Chain	Res	Type	RSRZ
1	D	297	ILE	4.4
1	D	282	LEU	4.4
1	D	345	PHE	4.4
1	D	299	HIS	4.3
1	C	281	ILE	4.2
1	D	263	ASN	4.1
1	C	411	ILE	4.1
1	D	288	LEU	4.0
1	D	416	ASN	4.0
1	C	341	VAL	4.0
1	C	470	SER	3.9
1	D	415	ASP	3.9
1	D	242	LEU	3.9
3	M	220	CYS	3.9
1	C	261	ILE	3.9
1	D	342	SER	3.9
1	C	300	VAL	3.8
1	D	122	LEU	3.8
1	C	421	ALA	3.7
1	D	283	LYS	3.7
1	D	244	VAL	3.6
1	C	313	THR	3.6
1	D	229	GLN	3.6
1	D	209	ILE	3.5
1	D	351	ILE	3.5
1	D	262	LEU	3.4
1	D	329	ALA	3.4
1	D	218	PRO	3.3
1	C	282	LEU	3.3
1	D	340	GLU	3.3
1	D	189	LEU	3.3
1	C	219	PRO	3.3
1	C	412	ILE	3.3
1	D	344	ASP	3.3
1	D	319	VAL	3.2
1	C	262	LEU	3.2
1	D	320	THR	3.2
1	D	187	TYR	3.2
1	C	399	PHE	3.2
1	D	221	PHE	3.1
1	D	261	ILE	3.1
1	D	359	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
1	D	211	VAL	3.0
1	D	315	SER	3.0
1	C	388	ILE	3.0
1	D	295	GLN	3.0
1	D	259	TYR	3.0
1	C	431	LEU	3.0
1	D	220	ILE	3.0
1	D	293	LYS	2.9
1	D	176	THR	2.9
1	D	365	GLN	2.9
1	D	117	VAL	2.9
1	D	402	VAL	2.9
1	D	217	ASN	2.9
1	C	310	VAL	2.9
1	D	323	VAL	2.8
1	C	302	VAL	2.8
1	C	270	VAL	2.8
1	D	322	ASP	2.8
2	H	137	GLN	2.8
1	C	280	GLY	2.8
1	D	414	THR	2.8
1	C	221	PHE	2.7
1	C	525	THR	2.7
1	D	303	THR	2.7
1	D	309	GLU	2.7
1	D	237	VAL	2.7
1	D	324	LEU	2.7
1	D	172	ILE	2.7
1	C	220	ILE	2.6
1	C	308	PHE	2.6
1	D	131	THR	2.6
1	D	165	ILE	2.6
1	C	371	ILE	2.6
1	D	173	SER	2.6
1	C	244	VAL	2.6
1	D	222	ASN	2.5
1	D	231	PRO	2.5
1	D	362	PHE	2.5
1	D	157	LEU	2.5
1	C	260	THR	2.5
1	D	314	THR	2.5
1	D	406	THR	2.5

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Mol	Chain	Res	Type	RSRZ
1	D	408	THR	2.5
1	D	247	ALA	2.5
1	D	272	THR	2.5
1	C	149	THR	2.4
1	D	411	ILE	2.4
1	D	290	PHE	2.4
1	D	339	VAL	2.4
1	C	414	THR	2.4
1	D	316	THR	2.4
1	C	259	TYR	2.4
1	D	401	HIS	2.3
1	D	245	THR	2.3
1	C	386	GLY	2.3
1	D	256	GLU	2.3
1	C	178	GLY	2.3
1	C	298	LEU	2.3
1	D	208	VAL	2.3
1	D	127	VAL	2.3
1	C	218	PRO	2.3
1	D	356	ALA	2.3
1	C	375	THR	2.2
1	D	186	THR	2.2
1	D	257	ALA	2.2
1	D	228	GLY	2.2
1	C	401	HIS	2.2
1	D	286	LYS	2.2
1	C	408	THR	2.2
1	C	430	ILE	2.2
1	C	187	TYR	2.2
1	C	354	TYR	2.2
1	C	174	VAL	2.2
1	C	356	ALA	2.2
2	H	195	PRO	2.2
1	C	303	THR	2.1
1	C	288	LEU	2.1
1	D	306	VAL	2.1
1	C	247	ALA	2.1
1	D	375	THR	2.1
1	D	294	GLN	2.1
1	C	186	THR	2.1
1	D	429	LEU	2.1
1	D	113	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	150	ILE	2.1
1	D	205	ALA	2.1
1	D	287	GLY	2.0
1	C	205	ALA	2.0
1	C	403	LYS	2.0
1	D	304	ASN	2.0
1	D	403	LYS	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	EDO	H	302	4/4	0.39	0.42	105,108,110,142	0
9	CA	D	618	1/1	0.69	0.05	207,207,207,207	0
6	PG4	C	604	13/13	0.75	0.55	66,84,102,105	0
7	MAN	C	607	11/12	0.78	0.45	135,156,174,174	0
8	BMA	D	606	11/12	0.81	0.42	127,135,144,147	0
8	BMA	D	602	11/12	0.81	0.31	85,124,137,143	0
8	BMA	D	603	11/12	0.83	0.29	99,120,129,136	0
8	BMA	D	605	11/12	0.83	0.42	123,156,166,171	0
4	EDO	C	601	4/4	0.84	0.39	60,70,73,87	0
8	BMA	D	604	11/12	0.85	0.72	153,158,171,176	0
6	PG4	C	603	13/13	0.85	0.29	80,94,116,137	0
5	NAG	C	602	14/15	0.86	0.20	78,111,123,125	0
8	BMA	C	609	11/12	0.86	0.29	109,122,141,152	0
8	BMA	D	607	11/12	0.86	0.38	130,149,159,160	0
8	BMA	C	612	11/12	0.86	0.52	122,132,143,145	0
9	CA	D	615	1/1	0.88	0.20	159,159,159,159	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
9	CA	D	616	1/1	0.88	0.04	124,124,124,124	0
6	PG4	D	601	13/13	0.88	0.24	76,88,101,117	0
8	BMA	C	610	11/12	0.89	0.34	133,147,151,152	0
7	MAN	C	611	11/12	0.89	0.31	96,122,130,141	0
8	BMA	C	613	11/12	0.89	0.22	112,128,153,160	0
4	EDO	I	302	4/4	0.89	0.35	70,75,75,79	0
4	EDO	H	301	4/4	0.90	0.37	66,67,75,76	0
7	MAN	C	605	11/12	0.90	0.28	93,109,117,123	0
9	CA	C	621	1/1	0.90	0.06	87,87,87,87	0
9	CA	D	609	1/1	0.91	0.06	135,135,135,135	0
9	CA	C	618	1/1	0.91	0.11	118,118,118,118	0
9	CA	C	624	1/1	0.91	0.08	116,116,116,116	0
9	CA	D	608	1/1	0.91	0.10	173,173,173,173	0
9	CA	M	301	1/1	0.91	0.15	99,99,99,99	0
6	PG4	H	303	13/13	0.92	0.19	24,85,105,107	0
8	BMA	C	606	11/12	0.92	0.28	93,109,133,136	0
8	BMA	C	608	11/12	0.92	0.27	130,134,146,148	0
9	CA	D	614	1/1	0.92	0.05	135,135,135,135	0
9	CA	D	610	1/1	0.93	0.14	152,152,152,152	0
4	EDO	I	301	4/4	0.93	0.17	48,48,55,62	0
6	PG4	I	303	13/13	0.93	0.26	5,76,106,121	0
9	CA	C	622	1/1	0.94	0.11	106,106,106,106	0
9	CA	C	620	1/1	0.94	0.09	73,73,73,73	0
9	CA	C	623	1/1	0.95	0.06	113,113,113,113	0
9	CA	C	625	1/1	0.95	0.10	133,133,133,133	0
9	CA	C	619	1/1	0.96	0.10	135,135,135,135	0
9	CA	D	617	1/1	0.97	0.17	169,169,169,169	0
9	CA	D	611	1/1	0.97	0.23	49,49,49,49	0
9	CA	C	617	1/1	0.97	0.06	109,109,109,109	0
9	CA	C	615	1/1	0.98	0.24	53,53,53,53	0
9	CA	C	614	1/1	0.99	0.17	43,43,43,43	0
9	CA	D	612	1/1	0.99	0.13	44,44,44,44	0
9	CA	D	613	1/1	0.99	0.13	53,53,53,53	0
9	CA	C	616	1/1	1.00	0.14	42,42,42,42	0

6.5 Other polymers ⓘ

There are no such residues in this entry.