



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 30, 2016 – 11:01 AM EDT

PDB ID : 5SZL
Title : Protocadherin gamma A1 extracellular cadherin domains 1-4
Authors : Goodman, K.M.; Bahna, F.; Mannepalli, S.; Honig, B.; Shapiro, L.
Deposited on : 2016-08-14
Resolution : 4.20 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

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.1 (RC1), CSD as537be (2016)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20027939
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20027939

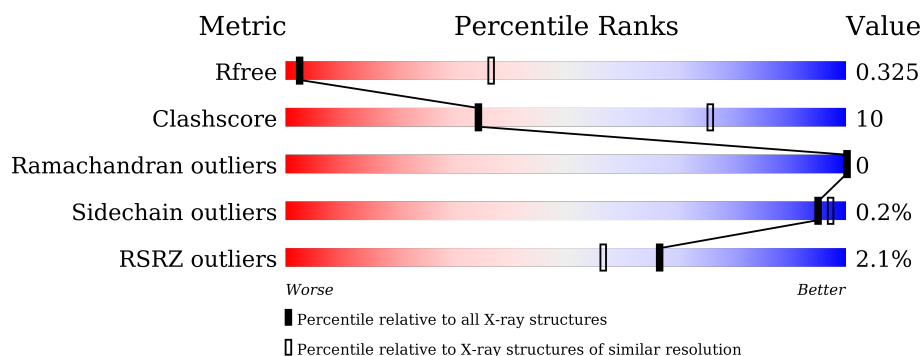
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.20 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}	91344	1039 (4.80-3.60)
Clashscore	102246	1140 (4.80-3.60)
Ramachandran outliers	100387	1083 (4.80-3.60)
Sidechain outliers	100360	1067 (4.80-3.60)
RSRZ outliers	91569	1042 (4.80-3.60)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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 $\leq 5\%$. 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	427	<div> <div>%</div> <div> <div></div> <div>74%</div> <div>22%</div> <div>.</div> </div> </div>
1	B	427	<div> <div>3%</div> <div> <div></div> <div>75%</div> <div>22%</div> <div>.</div> </div> </div>
1	C	427	<div> <div></div> <div> <div></div> <div>78%</div> <div>19%</div> <div>.</div> </div> </div>
1	D	427	<div> <div>4%</div> <div> <div></div> <div>78%</div> <div>19%</div> <div>.</div> </div> </div>

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 crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	MAN	A	501	-	-	-	X
2	MAN	B	502	-	-	-	X
3	CA	B	508	-	-	-	X
3	CA	B	509	-	-	-	X
3	CA	D	510	-	-	-	X

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 12505 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 PROTOCADHERIN GAMMA A1 EXTRACELLULAR CADHERIN DOMAINS 1-4, Protein Pcdhga1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	413	Total	C	N	O	S	0	0	0
			3004	1859	518	618	9			
1	B	412	Total	C	N	O	S	0	0	0
			2974	1840	512	614	8			
1	C	418	Total	C	N	O	S	0	0	0
			3119	1936	535	638	10			
1	D	416	Total	C	N	O	S	0	0	0
			3098	1928	521	640	9			

There are 32 discrepancies between the modelled and reference sequences:

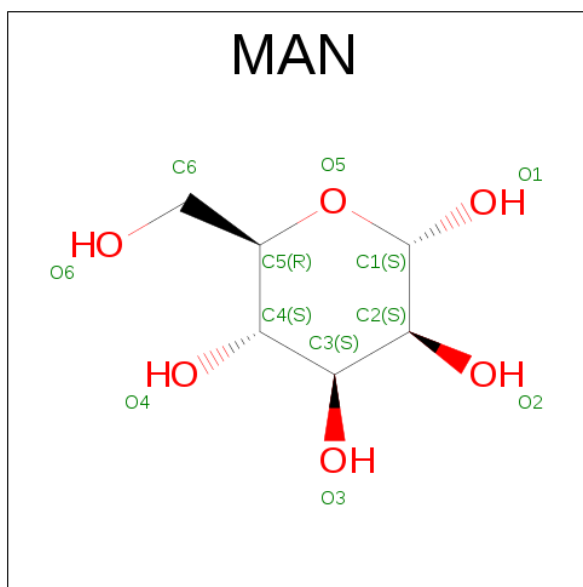
Chain	Residue	Modelled	Actual	Comment	Reference
A	420	HIS	-	expression tag	UNP A0A0A6YW27
A	421	HIS	-	expression tag	UNP A0A0A6YW27
A	422	HIS	-	expression tag	UNP A0A0A6YW27
A	423	HIS	-	expression tag	UNP A0A0A6YW27
A	424	HIS	-	expression tag	UNP A0A0A6YW27
A	425	HIS	-	expression tag	UNP A0A0A6YW27
A	426	HIS	-	expression tag	UNP A0A0A6YW27
A	427	HIS	-	expression tag	UNP A0A0A6YW27
B	420	HIS	-	expression tag	UNP A0A0A6YW27
B	421	HIS	-	expression tag	UNP A0A0A6YW27
B	422	HIS	-	expression tag	UNP A0A0A6YW27
B	423	HIS	-	expression tag	UNP A0A0A6YW27
B	424	HIS	-	expression tag	UNP A0A0A6YW27
B	425	HIS	-	expression tag	UNP A0A0A6YW27
B	426	HIS	-	expression tag	UNP A0A0A6YW27
B	427	HIS	-	expression tag	UNP A0A0A6YW27
C	420	HIS	-	expression tag	UNP A0A0A6YW27
C	421	HIS	-	expression tag	UNP A0A0A6YW27
C	422	HIS	-	expression tag	UNP A0A0A6YW27
C	423	HIS	-	expression tag	UNP A0A0A6YW27

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Chain	Residue	Modelled	Actual	Comment	Reference
C	424	HIS	-	expression tag	UNP A0A0A6YW27
C	425	HIS	-	expression tag	UNP A0A0A6YW27
C	426	HIS	-	expression tag	UNP A0A0A6YW27
C	427	HIS	-	expression tag	UNP A0A0A6YW27
D	420	HIS	-	expression tag	UNP A0A0A6YW27
D	421	HIS	-	expression tag	UNP A0A0A6YW27
D	422	HIS	-	expression tag	UNP A0A0A6YW27
D	423	HIS	-	expression tag	UNP A0A0A6YW27
D	424	HIS	-	expression tag	UNP A0A0A6YW27
D	425	HIS	-	expression tag	UNP A0A0A6YW27
D	426	HIS	-	expression tag	UNP A0A0A6YW27
D	427	HIS	-	expression tag	UNP A0A0A6YW27

- Molecule 2 is ALPHA-D-MANNOSE (three-letter code: MAN) (formula: C₆H₁₂O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			11	6	5		
2	A	1	Total	C	O	0	0
			11	6	5		
2	B	1	Total	C	O	0	0
			11	6	5		
2	B	1	Total	C	O	0	0
			11	6	5		
2	C	1	Total	C	O	0	0
			11	6	5		

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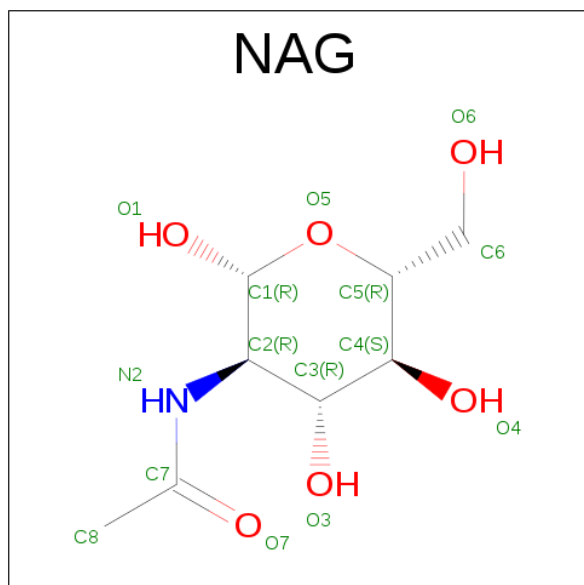
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	C	1	Total	C	O	0	0
			11	6	5		
2	D	1	Total	C	O	0	0
			11	6	5		
2	D	1	Total	C	O	0	0
			11	6	5		

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	B	9	Total	Ca	0	0
			9	9		
3	A	9	Total	Ca	0	0
			9	9		
3	D	9	Total	Ca	0	0
			9	9		
3	C	9	Total	Ca	0	0
			9	9		

- Molecule 4 is N-ACETYL-D-GLUCOSAMINE (three-letter code: NAG) (formula: C₈H₁₅NO₆).



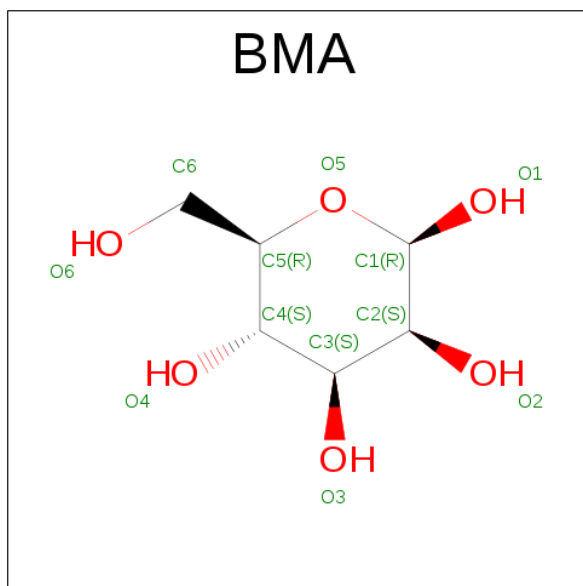
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	A	1	Total	C	N	O	0	0
			14	8	1	5		

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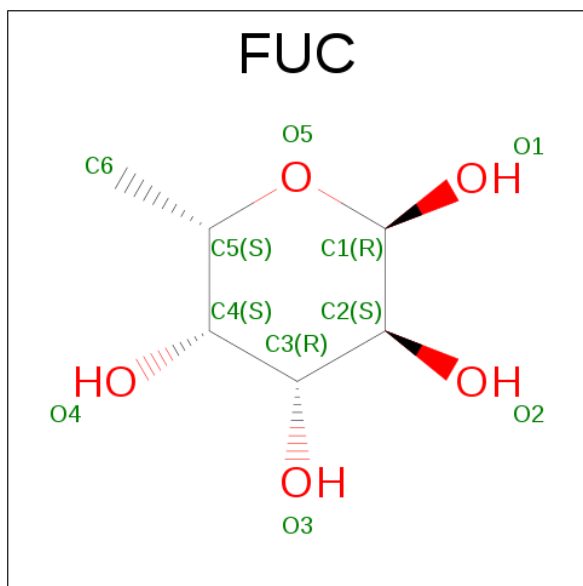
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	B	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	C	1	Total	C	N	O	0	0
			14	8	1	5		
4	D	1	Total	C	N	O	0	0
			14	8	1	5		
4	D	1	Total	C	N	O	0	0
			14	8	1	5		

- Molecule 5 is BETA-D-MANNOSE (three-letter code: BMA) (formula: C₆H₁₂O₆).



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

- Molecule 6 is ALPHA-L-FUCOSE (three-letter code: FUC) (formula: $C_6H_{12}O_5$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	D	1	Total	C	O	0	0
			10	6	4		

4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	107.87Å 107.87Å 463.08Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	39.96 – 4.20 39.96 – 4.20	Depositor EDS
% Data completeness (in resolution range)	99.2 (39.96-4.20) 80.0 (39.96-4.20)	Depositor EDS
R_{merge}	0.38	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.36 (at 4.13Å)	Xtriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.287 , 0.314 0.292 , 0.325	Depositor DCC
R_{free} test set	950 reflections (4.99%)	DCC
Wilson B-factor (Å ²)	103.6	Xtriage
Anisotropy	0.420	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.19 , 84.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.35$, $\langle L^2 \rangle = 0.18$	Xtriage
Estimated twinning fraction	0.138 for -h,-k,l	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	12505	wwPDB-VP
Average B, all atoms (Å ²)	196.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.05% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.30	0/3061	0.53	0/4195
1	B	0.29	0/3028	0.52	0/4147
1	C	0.27	0/3177	0.50	1/4348 (0.0%)
1	D	0.30	0/3156	0.55	2/4321 (0.0%)
All	All	0.29	0/12422	0.53	3/17011 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	46	LEU	CB-CG-CD2	-8.06	97.29	111.00
1	D	356	CYS	CA-CB-SG	-6.47	102.35	114.00
1	C	46	LEU	CB-CG-CD1	-5.03	102.45	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3004	0	2731	64	0
1	B	2974	0	2688	66	0
1	C	3119	0	2934	57	0
1	D	3098	0	2905	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	A	22	0	20	1	0
2	B	22	0	20	1	0
2	C	22	0	20	1	0
2	D	22	0	20	0	0
3	A	9	0	0	0	0
3	B	9	0	0	0	0
3	C	9	0	0	0	0
3	D	9	0	0	0	0
4	A	42	0	37	3	0
4	B	28	0	26	0	0
4	C	42	0	38	1	0
4	D	42	0	36	2	0
5	A	11	0	10	0	0
5	D	11	0	10	0	0
6	D	10	0	10	1	0
All	All	12505	0	11505	241	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 10.

All (241) 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:D:154:VAL:HG12	1:D:164:PRO:HA	1.47	0.96
1:D:41:ARG:N	1:D:44:SER:OG	2.04	0.90
1:B:364:PHE:HA	1:B:378:THR:HA	1.51	0.89
1:C:46:LEU:HD11	1:C:62:ILE:HG12	1.62	0.81
1:A:369:LEU:HD23	1:A:370:VAL:H	1.47	0.79
1:B:34:ARG:HA	1:B:84:ASP:HB2	1.65	0.78
1:D:323:SER:HB3	1:D:340:LEU:HB3	1.65	0.78
1:B:21:ALA:HB2	1:B:31:LEU:HD11	1.67	0.76
1:A:48:SER:HB2	1:A:59:ALA:HB2	1.70	0.74
4:A:512:NAG:H62	4:A:513:NAG:HN2	1.52	0.74
1:B:256:VAL:HG13	1:B:257:ASP:H	1.52	0.73
1:D:334:PRO:HA	1:D:378:THR:HG23	1.69	0.73
1:C:282:GLU:N	1:C:282:GLU:OE1	2.22	0.73
1:C:41:ARG:N	1:C:44:SER:OG	2.20	0.71
1:B:282:GLU:OE1	1:B:282:GLU:N	2.25	0.70
1:D:282:GLU:OE1	1:D:282:GLU:N	2.25	0.70
1:B:144:LEU:H	1:B:152:LEU:HD22	1.57	0.69
1:A:282:GLU:N	1:A:282:GLU:OE1	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:34:ARG:NH2	1:A:84:ASP:OD2	2.26	0.69
1:C:224:PRO:HA	1:C:310:LEU:HB2	1.75	0.67
4:D:512:NAG:H61	4:D:513:NAG:C7	2.26	0.66
1:D:260:VAL:HG13	1:D:287:TYR:HD2	1.61	0.66
1:B:64:ARG:NH2	1:B:69:ALA:O	2.29	0.65
1:C:47:PHE:HB3	1:C:56:LEU:HD11	1.80	0.64
1:A:240:ASP:OD2	1:A:247:GLY:HA2	1.98	0.63
1:A:5:TYR:HB3	1:A:17:VAL:HG12	1.79	0.63
1:D:31:LEU:HD21	1:D:54:GLY:HA3	1.80	0.63
1:A:155:GLN:HE21	1:A:155:GLN:HA	1.64	0.62
1:A:343:VAL:HG23	1:A:354:ILE:HD12	1.81	0.62
1:D:185:THR:HG22	1:D:197:THR:HG22	1.82	0.62
1:C:9:GLU:HG3	1:C:98:ILE:HG12	1.80	0.62
4:D:512:NAG:H83	4:D:512:NAG:H3	1.81	0.62
1:C:126:LEU:HB2	1:C:164:PRO:HG2	1.82	0.61
1:B:148:PRO:HB2	1:B:170:ARG:HD3	1.83	0.61
1:C:154:VAL:HG11	1:C:161:PRO:HB3	1.83	0.61
1:C:43:ARG:HH12	1:C:61:ARG:HG3	1.66	0.60
1:B:28:THR:O	1:B:32:MET:HG2	2.01	0.59
1:B:41:ARG:NH2	1:B:78:PHE:HA	2.17	0.59
1:D:392:ILE:O	1:D:409:HIS:HA	2.02	0.59
1:A:323:SER:HB2	1:A:340:LEU:HB3	1.86	0.58
1:D:215:THR:HG1	1:D:219:TYR:HH	1.47	0.58
1:C:298:GLY:HA3	1:D:205:VAL:HG21	1.85	0.58
1:C:123:ARG:HG2	1:C:167:VAL:HG22	1.86	0.58
1:D:172:LEU:HD13	1:D:204:VAL:HG22	1.86	0.57
1:D:46:LEU:O	1:D:59:ALA:N	2.33	0.57
1:B:126:LEU:HD13	1:B:184:LEU:HD22	1.85	0.57
1:B:193:ILE:O	2:B:502:MAN:O6	2.19	0.57
1:B:16:PHE:HA	1:B:57:VAL:HG12	1.86	0.57
1:A:5:TYR:HB3	1:A:17:VAL:CG1	2.36	0.56
1:B:369:LEU:HB3	1:B:373:TYR:O	2.05	0.56
1:A:151:SER:OG	1:A:169:GLN:NE2	2.31	0.56
1:D:233:LEU:HG	1:D:274:SER:HA	1.87	0.56
1:B:345:ASP:N	1:B:354:ILE:HD11	2.21	0.56
1:A:98:ILE:HG22	1:A:99:ASN:H	1.71	0.56
1:B:287:TYR:HB2	1:B:307:VAL:HB	1.87	0.55
1:C:43:ARG:HD3	1:C:46:LEU:HD12	1.89	0.55
1:D:254:HIS:CD2	1:D:292:GLN:HB2	2.41	0.55
1:D:343:VAL:O	1:D:372:ASN:HB3	2.07	0.55
1:A:392:ILE:O	1:A:409:HIS:HA	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:396:ALA:O	1:A:405:SER:HA	2.07	0.55
1:D:126:LEU:HD13	1:D:184:LEU:HD22	1.90	0.54
1:B:134:VAL:HA	1:B:138:SER:HB3	1.90	0.54
1:B:345:ASP:OD2	1:B:352:GLY:HA2	2.07	0.54
1:C:46:LEU:O	1:C:59:ALA:N	2.33	0.54
1:B:345:ASP:HB2	1:B:354:ILE:HD11	1.90	0.54
1:D:64:ARG:NH2	1:D:69:ALA:O	2.41	0.54
1:D:36:ILE:HG22	1:D:82:MET:HG2	1.90	0.54
1:A:322:THR:HA	1:B:41:ARG:HD3	1.89	0.53
1:D:2:ASN:HA	1:D:90:PRO:O	2.07	0.53
1:A:4:ARG:NH2	1:A:92:GLU:OE1	2.34	0.53
1:C:337:THR:HG22	1:C:375:ARG:HD2	1.89	0.53
1:C:153:ASP:O	1:C:165:GLU:N	2.36	0.53
1:A:111:GLU:HG2	1:A:201:HIS:HB3	1.90	0.53
1:A:41:ARG:N	1:A:44:SER:OG	2.41	0.53
1:B:264:PHE:HB3	1:B:273:LEU:HD11	1.92	0.52
1:D:2:ASN:OD1	1:D:90:PRO:HB2	2.09	0.52
1:A:335:GLY:N	1:A:378:THR:O	2.42	0.52
1:A:286:VAL:HG12	1:A:308:THR:HG23	1.91	0.52
1:C:116:GLU:HA	1:C:172:LEU:HB2	1.91	0.52
1:B:120:PRO:HG2	1:D:120:PRO:HG2	1.91	0.51
1:D:31:LEU:HD21	1:D:54:GLY:CA	2.41	0.51
4:A:515:NAG:O3	4:A:515:NAG:O7	2.22	0.51
1:B:4:ARG:HA	1:B:92:GLU:O	2.10	0.51
1:D:50:ASN:ND2	1:D:53:SER:OG	2.44	0.51
1:A:398:ASP:OD1	1:A:404:LEU:N	2.31	0.51
1:C:207:VAL:HG13	1:D:207:VAL:HG13	1.91	0.51
1:B:323:SER:HB2	1:B:340:LEU:H	1.75	0.51
1:D:368:LYS:HG2	1:D:374:TYR:HE1	1.74	0.51
1:A:240:ASP:OD2	1:A:242:ASP:HB2	2.11	0.51
1:A:316:ALA:HB2	1:A:404:LEU:HB3	1.92	0.51
1:C:115:SER:HB2	1:D:297:ALA:O	2.11	0.51
1:C:17:VAL:HB	1:C:56:LEU:O	2.10	0.50
1:B:343:VAL:HG12	1:B:354:ILE:HD13	1.92	0.50
1:B:68:CYS:HB3	1:B:71:SER:OG	2.11	0.50
1:C:48:SER:HB2	1:C:59:ALA:HB2	1.93	0.50
1:D:111:GLU:HG2	1:D:201:HIS:HB3	1.93	0.50
1:D:368:LYS:HG2	1:D:374:TYR:CE1	2.47	0.50
1:D:313:ASN:ND2	1:D:398:ASP:OD2	2.44	0.50
1:A:185:THR:HG22	1:A:197:THR:HG22	1.94	0.50
4:C:512:NAG:H61	4:C:513:NAG:N2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:361:ASN:OD1	1:D:362:LEU:N	2.44	0.49
1:C:43:ARG:NH1	1:C:61:ARG:HG3	2.27	0.49
1:A:62:ILE:HG21	1:A:95:ILE:HD12	1.94	0.49
1:D:383:ASP:HB2	1:D:386:GLN:HB3	1.94	0.49
1:C:361:ASN:OD1	1:C:362:LEU:N	2.45	0.49
1:A:126:LEU:HD13	1:A:184:LEU:HD22	1.93	0.49
1:B:340:LEU:HD12	1:B:374:TYR:O	2.12	0.49
1:A:319:VAL:HA	1:A:343:VAL:HG12	1.94	0.49
1:A:393:THR:HG22	1:A:409:HIS:ND1	2.28	0.49
1:A:41:ARG:HD3	1:B:322:THR:HB	1.95	0.49
1:C:134:VAL:HG12	1:C:135:GLY:H	1.76	0.49
1:C:293:ALA:O	1:C:300:MET:HA	2.13	0.49
1:C:384:ARG:HH21	1:C:415:THR:HA	1.78	0.48
1:D:357:SER:HB2	1:D:395:THR:OG1	2.12	0.48
1:C:29:ARG:HG3	1:C:30:GLU:H	1.77	0.48
1:C:43:ARG:HG2	1:C:46:LEU:HB2	1.94	0.48
1:C:9:GLU:CG	1:C:98:ILE:HG12	2.43	0.48
1:D:215:THR:HG22	6:D:515:FUC:H61	1.95	0.48
1:B:10:GLU:N	1:B:62:ILE:O	2.36	0.48
1:A:361:ASN:OD1	1:A:362:LEU:N	2.46	0.48
1:C:267:ASP:OD1	1:C:270:THR:N	2.34	0.48
1:A:293:ALA:O	1:A:300:MET:HA	2.14	0.48
1:C:233:LEU:HG	1:C:274:SER:HA	1.93	0.48
1:B:313:ASN:ND2	1:B:402:PRO:O	2.47	0.47
1:D:36:ILE:HD12	1:D:49:LEU:HD21	1.95	0.47
1:B:48:SER:HB2	1:B:59:ALA:HB2	1.95	0.47
1:B:343:VAL:HB	1:B:372:ASN:O	2.13	0.47
1:B:41:ARG:HH22	1:B:78:PHE:HA	1.77	0.47
1:B:19:SER:HB3	1:B:22:LYS:HG2	1.97	0.47
1:B:254:HIS:CD2	1:B:292:GLN:HB2	2.49	0.47
1:C:8:PRO:HA	1:C:96:ILE:HB	1.97	0.47
1:D:328:VAL:HG22	1:D:329:PRO:HD2	1.96	0.47
1:B:260:VAL:HG13	1:B:287:TYR:HD2	1.78	0.47
1:A:134:VAL:HG12	1:A:135:GLY:N	2.30	0.47
1:B:233:LEU:HG	1:B:274:SER:HA	1.97	0.47
4:A:512:NAG:H62	4:A:513:NAG:N2	2.26	0.46
1:C:31:LEU:HG	1:C:36:ILE:HG12	1.97	0.46
1:C:402:PRO:HA	1:C:403:PRO:HD3	1.85	0.46
1:D:343:VAL:CG1	1:D:374:TYR:HE2	2.27	0.46
1:C:195:SER:HB2	2:C:501:MAN:H2	1.48	0.46
1:A:31:LEU:HB2	1:A:36:ILE:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:19:SER:HB3	1:B:22:LYS:HE3	1.97	0.46
1:B:329:PRO:HG2	1:B:332:PHE:CB	2.46	0.46
1:D:120:PRO:HG3	1:D:171:PRO:HG3	1.97	0.46
1:A:4:ARG:HA	1:A:92:GLU:O	2.16	0.46
1:D:134:VAL:HA	1:D:138:SER:HB3	1.97	0.46
1:B:185:THR:HG22	1:B:197:THR:HG22	1.99	0.45
1:B:218:GLU:N	1:B:218:GLU:OE1	2.49	0.45
1:C:29:ARG:HG3	1:C:30:GLU:N	2.32	0.45
1:D:295:ASP:OD2	1:D:299:LEU:HB2	2.17	0.45
1:B:402:PRO:HA	1:B:403:PRO:HD3	1.87	0.45
1:A:36:ILE:HG23	1:A:80:ILE:HG23	1.98	0.45
1:A:224:PRO:HA	1:A:310:LEU:HB2	1.98	0.45
1:A:233:LEU:HG	1:A:274:SER:HA	1.99	0.45
1:C:134:VAL:HA	1:C:138:SER:HB3	1.98	0.45
1:C:254:HIS:CD2	1:C:292:GLN:HB2	2.51	0.45
1:C:218:GLU:HA	1:C:304:LYS:O	2.16	0.45
1:C:369:LEU:HG	1:C:370:VAL:H	1.82	0.45
1:A:155:GLN:NE2	1:A:155:GLN:HA	2.31	0.44
1:B:219:TYR:HB3	1:B:234:LEU:HD21	1.99	0.44
1:D:143:GLN:NE2	1:D:185:THR:O	2.50	0.44
1:A:398:ASP:O	1:A:403:PRO:HB3	2.17	0.44
1:B:219:TYR:HB3	1:B:234:LEU:CD2	2.47	0.44
1:C:179:VAL:HG13	1:C:201:HIS:CE1	2.51	0.44
1:D:343:VAL:HG11	1:D:374:TYR:HE2	1.83	0.44
1:A:343:VAL:CG2	1:A:354:ILE:HD12	2.47	0.44
1:C:184:LEU:HD23	1:C:198:LEU:HD23	1.99	0.44
1:D:123:ARG:NE	1:D:165:GLU:OE1	2.43	0.44
1:B:361:ASN:OD1	1:B:362:LEU:N	2.50	0.44
1:B:175:GLU:OE1	1:B:175:GLU:N	2.45	0.44
1:C:134:VAL:HG12	1:C:135:GLY:N	2.32	0.44
1:A:228:PRO:HG2	1:A:231:THR:OG1	2.17	0.44
1:D:328:VAL:CG2	1:D:329:PRO:HD2	2.48	0.44
1:D:318:GLU:O	1:D:343:VAL:HA	2.18	0.44
1:D:76:VAL:O	1:D:92:GLU:HA	2.18	0.44
1:A:384:ARG:HG3	1:A:414:VAL:HB	2.00	0.44
1:B:219:TYR:HB2	1:B:305:VAL:HG22	2.00	0.44
1:D:345:ASP:OD2	1:D:352:GLY:HA2	2.18	0.44
1:A:139:LEU:HD11	1:A:186:ALA:HB1	2.00	0.43
1:A:3:ILE:HG21	1:A:23:ASP:OD2	2.18	0.43
1:C:186:ALA:O	1:C:195:SER:HA	2.18	0.43
1:D:46:LEU:HA	1:D:46:LEU:HD23	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:225:GLU:OE1	1:B:312:VAL:O	2.35	0.43
1:C:10:GLU:N	1:C:62:ILE:O	2.49	0.43
1:A:112:LEU:HD13	1:A:124:ILE:HD13	2.00	0.43
1:A:369:LEU:CD2	1:A:370:VAL:H	2.23	0.43
1:B:112:LEU:HD13	1:B:124:ILE:HD13	2.00	0.43
1:B:27:GLU:OE2	1:B:27:GLU:N	2.51	0.43
1:A:235:LYS:NZ	1:A:270:THR:O	2.52	0.43
1:A:149:HIS:O	1:A:168:LEU:HD12	2.19	0.43
1:C:126:LEU:HD13	1:C:184:LEU:HD22	2.00	0.43
1:B:111:GLU:HG2	1:B:201:HIS:HB3	2.01	0.43
1:B:17:VAL:HB	1:B:56:LEU:O	2.19	0.43
1:A:354:ILE:O	1:A:354:ILE:HG13	2.19	0.42
1:C:34:ARG:HA	1:C:84:ASP:HB2	2.01	0.42
1:D:185:THR:HA	1:D:196:GLY:O	2.19	0.42
1:A:8:PRO:HA	1:A:96:ILE:HB	2.01	0.42
1:C:5:TYR:OH	1:C:23:ASP:OD2	2.31	0.42
1:B:378:THR:HG22	1:B:380:ARG:H	1.84	0.42
1:A:10:GLU:OE1	1:A:61:ARG:NE	2.48	0.42
1:B:26:LEU:HD13	1:B:34:ARG:NE	2.34	0.42
1:D:283:GLU:HG2	1:D:284:TYR:CD2	2.54	0.42
1:B:56:LEU:HD21	1:B:78:PHE:HZ	1.83	0.42
1:A:282:GLU:O	1:A:283:GLU:HB3	2.20	0.42
1:B:281:PHE:CE1	1:B:285:LYS:HG3	2.55	0.42
1:C:109:GLU:HA	1:C:199:GLN:O	2.19	0.42
1:C:16:PHE:HA	1:C:57:VAL:HG12	2.00	0.42
1:A:133:ASP:HB2	1:A:137:ASN:O	2.19	0.42
1:A:254:HIS:CD2	1:A:292:GLN:HB2	2.55	0.42
1:A:302:ARG:NH1	1:B:125:PRO:HD3	2.35	0.42
1:B:345:ASP:CB	1:B:354:ILE:HD11	2.49	0.42
1:C:219:TYR:HB3	1:C:234:LEU:HD23	2.01	0.42
1:C:357:SER:HB2	1:C:395:THR:OG1	2.20	0.42
1:B:77:SER:OG	1:B:92:GLU:HG2	2.19	0.41
1:D:116:GLU:HA	1:D:172:LEU:HB2	2.01	0.41
1:A:41:ARG:CD	1:B:322:THR:HB	2.50	0.41
1:B:34:ARG:HD3	1:B:82:MET:SD	2.61	0.41
1:A:322:THR:O	1:B:41:ARG:NH1	2.50	0.41
1:C:205:VAL:HG11	1:D:297:ALA:HA	2.02	0.41
1:C:299:LEU:HD23	1:C:299:LEU:HA	1.85	0.41
1:A:3:ILE:HB	1:A:91:ILE:CD1	2.50	0.41
1:D:401:THR:HA	1:D:403:PRO:HD3	2.02	0.41
1:B:70:GLN:HA	1:B:134:VAL:HG11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:302:ARG:HE	1:B:302:ARG:HB3	1.69	0.41
1:B:9:GLU:HG3	1:B:98:ILE:HG12	2.02	0.41
1:C:256:VAL:CG2	1:D:125:PRO:HB2	2.50	0.41
1:C:224:PRO:HG3	1:C:310:LEU:HD12	2.01	0.41
1:A:295:ASP:OD2	1:A:299:LEU:HB2	2.20	0.41
1:D:110:LEU:HD22	1:D:127:PRO:HD3	2.02	0.41
1:A:318:GLU:O	1:A:343:VAL:HA	2.21	0.41
1:D:299:LEU:HD23	1:D:299:LEU:HA	1.95	0.41
1:A:114:MET:O	1:A:204:VAL:HA	2.21	0.41
1:C:318:GLU:O	1:C:343:VAL:HA	2.21	0.41
1:A:225:GLU:OE1	1:A:312:VAL:O	2.38	0.40
1:A:401:THR:HA	1:A:403:PRO:HD3	2.04	0.40
1:A:195:SER:HB2	2:A:501:MAN:H2	1.73	0.40
1:B:399:GLN:O	1:B:399:GLN:HG2	2.21	0.40
1:D:267:ASP:OD2	1:D:270:THR:OG1	2.27	0.40
1:C:24:LEU:HD11	1:C:89:LEU:HD22	2.03	0.40
1:D:48:SER:HB2	1:D:59:ALA:HB2	2.04	0.40
1:D:362:LEU:HD13	1:D:364:PHE:CZ	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	411/427 (96%)	388 (94%)	23 (6%)	0	100	100
1	B	410/427 (96%)	388 (95%)	22 (5%)	0	100	100
1	C	416/427 (97%)	393 (94%)	23 (6%)	0	100	100
1	D	414/427 (97%)	392 (95%)	22 (5%)	0	100	100
All	All	1651/1708 (97%)	1561 (94%)	90 (6%)	0	100	100

There are no Ramachandran outliers to report.

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	312/380 (82%)	311 (100%)	1 (0%)	94	97
1	B	303/380 (80%)	303 (100%)	0	100	100
1	C	340/380 (90%)	339 (100%)	1 (0%)	94	97
1	D	338/380 (89%)	337 (100%)	1 (0%)	94	97
All	All	1293/1520 (85%)	1290 (100%)	3 (0%)	95	97

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	369	LEU
1	C	61	ARG
1	D	143	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	155	GLN
1	B	147	ASN
1	B	292	GLN
1	C	201	HIS
1	D	254	HIS
1	D	292	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 58 ligands modelled in this entry, 36 are monoatomic - leaving 22 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
2	MAN	A	501	1	11,11,12	0.79	0	15,15,17	0.94	1 (6%)
2	MAN	A	502	1	11,11,12	0.97	1 (9%)	15,15,17	0.89	1 (6%)
4	NAG	A	512	1,4	14,14,15	0.34	0	15,19,21	0.37	0
4	NAG	A	513	5,4	14,14,15	0.21	0	15,19,21	0.32	0
5	BMA	A	514	4	11,11,12	0.91	0	15,15,17	0.91	0
4	NAG	A	515	1	14,14,15	0.28	0	15,19,21	0.42	0
2	MAN	B	501	1	11,11,12	0.70	0	15,15,17	0.97	2 (13%)
2	MAN	B	502	1	11,11,12	0.89	0	15,15,17	0.82	1 (6%)
4	NAG	B	512	1	14,14,15	0.25	0	15,19,21	0.34	0
4	NAG	B	513	1	14,14,15	0.55	0	15,19,21	0.33	0
2	MAN	C	501	1	11,11,12	0.83	1 (9%)	15,15,17	0.95	1 (6%)
2	MAN	C	502	1	11,11,12	0.88	1 (9%)	15,15,17	0.89	1 (6%)
4	NAG	C	512	1,4	14,14,15	0.50	0	15,19,21	0.61	0
4	NAG	C	513	4	14,14,15	0.26	0	15,19,21	0.28	0
4	NAG	C	514	1	14,14,15	0.29	0	15,19,21	0.36	0
2	MAN	D	501	1	11,11,12	0.70	0	15,15,17	0.97	1 (6%)
2	MAN	D	502	1	11,11,12	0.83	0	15,15,17	0.90	1 (6%)
4	NAG	D	512	1,4,6	14,14,15	0.86	1 (7%)	15,19,21	1.37	2 (13%)
4	NAG	D	513	5,4	14,14,15	0.17	0	15,19,21	0.65	0
5	BMA	D	514	4	11,11,12	0.97	1 (9%)	15,15,17	1.48	4 (26%)
6	FUC	D	515	4	10,10,11	0.78	0	13,14,16	0.86	0
4	NAG	D	516	1	14,14,15	0.28	0	15,19,21	0.35	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
2	MAN	A	501	1	-	0/2/19/22	0/1/1/1
2	MAN	A	502	1	-	0/2/19/22	0/1/1/1
4	NAG	A	512	1,4	-	0/6/23/26	0/1/1/1
4	NAG	A	513	5,4	-	0/6/23/26	0/1/1/1
5	BMA	A	514	4	-	0/2/19/22	0/1/1/1
4	NAG	A	515	1	-	0/6/23/26	0/1/1/1
2	MAN	B	501	1	-	0/2/19/22	0/1/1/1
2	MAN	B	502	1	-	0/2/19/22	0/1/1/1
4	NAG	B	512	1	-	0/6/23/26	0/1/1/1
4	NAG	B	513	1	-	0/6/23/26	0/1/1/1
2	MAN	C	501	1	-	0/2/19/22	0/1/1/1
2	MAN	C	502	1	-	0/2/19/22	0/1/1/1
4	NAG	C	512	1,4	-	0/6/23/26	0/1/1/1
4	NAG	C	513	4	-	0/6/23/26	0/1/1/1
4	NAG	C	514	1	-	0/6/23/26	0/1/1/1
2	MAN	D	501	1	-	0/2/19/22	0/1/1/1
2	MAN	D	502	1	-	0/2/19/22	0/1/1/1
4	NAG	D	512	1,4,6	-	0/6/23/26	0/1/1/1
4	NAG	D	513	5,4	-	0/6/23/26	0/1/1/1
5	BMA	D	514	4	-	0/2/19/22	0/1/1/1
6	FUC	D	515	4	-	0/0/17/20	0/1/1/1
4	NAG	D	516	1	-	0/6/23/26	0/1/1/1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	512	NAG	O5-C1	-2.75	1.39	1.43
2	A	502	MAN	O5-C1	-2.54	1.39	1.43
2	C	501	MAN	O5-C1	-2.30	1.40	1.43
2	C	502	MAN	O5-C1	-2.24	1.40	1.43
5	D	514	BMA	C1-C2	2.73	1.58	1.52

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	501	MAN	O2-C2-C3	-2.51	105.13	110.19
2	C	502	MAN	O2-C2-C3	-2.35	105.45	110.19
2	C	501	MAN	O2-C2-C3	-2.31	105.53	110.19
2	D	502	MAN	O2-C2-C3	-2.26	105.63	110.19
2	A	501	MAN	O2-C2-C3	-2.23	105.70	110.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	501	MAN	O2-C2-C3	-2.21	105.72	110.19
2	A	502	MAN	O2-C2-C3	-2.16	105.84	110.19
5	D	514	BMA	O5-C5-C4	-2.05	106.74	110.13
2	B	502	MAN	O2-C2-C3	-2.04	106.08	110.19
5	D	514	BMA	O5-C1-C2	2.01	114.12	110.89
2	B	501	MAN	C1-O5-C5	2.02	115.11	112.14
4	D	512	NAG	C1-O5-C5	2.11	115.24	112.14
5	D	514	BMA	C1-O5-C5	2.23	115.42	112.14
5	D	514	BMA	C1-C2-C3	3.55	113.86	109.55
4	D	512	NAG	C2-N2-C7	4.50	128.96	123.11

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

11 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	501	MAN	1	0
4	A	512	NAG	2	0
4	A	513	NAG	2	0
4	A	515	NAG	1	0
2	B	502	MAN	1	0
2	C	501	MAN	1	0
4	C	512	NAG	1	0
4	C	513	NAG	1	0
4	D	512	NAG	2	0
4	D	513	NAG	1	0
6	D	515	FUC	1	0

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, 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	413/427 (96%)	-0.43	3 (0%) 89 84	106, 201, 312, 366	0
1	B	412/427 (96%)	-0.30	14 (3%) 49 38	112, 210, 310, 350	0
1	C	418/427 (97%)	-0.48	1 (0%) 95 94	112, 163, 234, 279	0
1	D	416/427 (97%)	-0.22	17 (4%) 41 31	119, 204, 263, 314	0
All	All	1659/1708 (97%)	-0.36	35 (2%) 67 57	106, 188, 296, 366	0

All (35) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	388	SER	7.2
1	D	48	SER	5.2
1	B	357	SER	5.1
1	D	409	HIS	4.4
1	D	49	LEU	4.2
1	D	393	THR	4.2
1	B	356	CYS	4.2
1	B	413	LEU	3.9
1	A	327	THR	3.8
1	D	407	GLN	3.7
1	D	38	ILE	3.5
1	B	389	ARG	3.3
1	B	329	PRO	3.2
1	D	93	VAL	3.1
1	D	56	LEU	3.0
1	B	89	LEU	3.0
1	B	326	ASN	2.9
1	B	387	SER	2.8
1	D	76	VAL	2.8
1	B	76	VAL	2.8
1	C	158	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
1	B	328	VAL	2.7
1	D	91	ILE	2.7
1	D	55	SER	2.6
1	B	44	SER	2.5
1	A	93	VAL	2.5
1	A	77	SER	2.4
1	D	36	ILE	2.3
1	B	360	GLY	2.2
1	B	39	VAL	2.2
1	D	365	LYS	2.2
1	D	392	ILE	2.2
1	D	77	SER	2.1
1	D	356	CYS	2.1
1	D	47	PHE	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 carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å ²)	Q<0.9
3	CA	D	510	1/1	0.92	0.26	4.54	148,148,148,148	0
2	MAN	A	501	11/12	0.84	0.30	4.49	157,187,239,260	0
3	CA	B	509	1/1	0.88	0.36	3.05	199,199,199,199	0
3	CA	B	508	1/1	0.98	0.22	2.54	104,104,104,104	0
2	MAN	B	502	11/12	0.78	0.28	2.25	207,214,246,252	0
3	CA	D	508	1/1	0.96	0.18	1.50	100,100,100,100	0
3	CA	A	511	1/1	0.80	0.14	1.27	150,150,150,150	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
3	CA	A	505	1/1	0.93	0.25	1.22	95,95,95,95	0
3	CA	D	503	1/1	0.59	0.12	0.61	146,146,146,146	0
3	CA	D	509	1/1	0.68	0.16	0.54	192,192,192,192	0
3	CA	C	509	1/1	0.93	0.14	0.37	158,158,158,158	0
3	CA	B	511	1/1	0.07	0.17	0.35	235,235,235,235	0
3	CA	B	507	1/1	0.95	0.20	0.22	154,154,154,154	0
3	CA	C	510	1/1	0.96	0.15	0.09	124,124,124,124	0
3	CA	A	510	1/1	0.90	0.13	-0.23	187,187,187,187	0
3	CA	C	507	1/1	0.97	0.14	-0.44	95,95,95,95	0
3	CA	B	505	1/1	0.81	0.10	-0.47	193,193,193,193	0
3	CA	B	510	1/1	0.93	0.16	-0.59	145,145,145,145	0
3	CA	C	508	1/1	0.70	0.11	-0.74	171,171,171,171	0
3	CA	C	505	1/1	0.96	0.15	-0.81	97,97,97,97	0
3	CA	D	506	1/1	0.97	0.12	-0.81	129,129,129,129	0
3	CA	D	511	1/1	0.91	0.09	-0.92	190,190,190,190	0
3	CA	A	503	1/1	0.90	0.09	-0.94	119,119,119,119	0
3	CA	D	507	1/1	0.97	0.14	-0.98	103,103,103,103	0
3	CA	A	507	1/1	0.93	0.12	-1.11	185,185,185,185	0
3	CA	A	509	1/1	0.95	0.08	-1.38	110,110,110,110	0
3	CA	A	504	1/1	0.95	0.10	-1.44	130,130,130,130	0
3	CA	C	506	1/1	0.94	0.11	-1.50	151,151,151,151	0
3	CA	D	504	1/1	0.75	0.06	-1.51	175,175,175,175	0
3	CA	C	511	1/1	0.89	0.04	-1.62	132,132,132,132	0
3	CA	B	503	1/1	0.90	0.08	-1.63	184,184,184,184	0
3	CA	B	506	1/1	0.78	0.10	-1.81	96,96,96,96	0
3	CA	D	505	1/1	0.93	0.06	-1.91	169,169,169,169	0
3	CA	C	504	1/1	0.89	0.10	-1.96	127,127,127,127	0
3	CA	A	506	1/1	0.67	0.09	-2.26	198,198,198,198	0
3	CA	B	504	1/1	0.81	0.05	-2.50	209,209,209,209	0
3	CA	A	508	1/1	0.91	0.07	-2.90	239,239,239,239	0
3	CA	C	503	1/1	0.90	0.07	-3.45	120,120,120,120	0
4	NAG	D	513	14/15	0.83	0.31	-	231,248,270,272	0
2	MAN	D	502	11/12	0.93	0.29	-	160,177,206,234	0
5	BMA	D	514	11/12	0.85	0.18	-	222,240,264,275	0
4	NAG	D	512	14/15	0.85	0.26	-	182,201,261,265	0
4	NAG	A	512	14/15	0.82	0.17	-	196,226,239,245	0
4	NAG	A	515	14/15	0.83	0.15	-	102,152,169,174	0
2	MAN	D	501	11/12	0.72	0.26	-	173,195,225,225	0
4	NAG	C	512	14/15	0.86	0.18	-	162,186,198,219	0
2	MAN	B	501	11/12	0.91	0.13	-	155,167,186,195	0
2	MAN	A	502	11/12	0.75	0.29	-	172,194,211,212	0
4	NAG	B	512	14/15	0.74	0.26	-	180,229,240,249	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	NAG	B	513	14/15	0.88	0.14	-	137,151,173,215	0
5	BMA	A	514	11/12	0.94	0.10	-	192,208,216,238	0
4	NAG	C	513	14/15	0.83	0.16	-	174,191,201,212	0
2	MAN	C	502	11/12	0.81	0.18	-	166,170,230,234	0
4	NAG	A	513	14/15	0.90	0.12	-	222,234,245,257	0
4	NAG	C	514	14/15	0.85	0.20	-	127,174,179,183	0
6	FUC	D	515	10/11	0.88	0.32	-	208,233,240,240	0
4	NAG	D	516	14/15	0.81	0.18	-	173,216,229,236	0
2	MAN	C	501	11/12	0.88	0.38	-	144,161,174,234	0

6.5 Other polymers [i](#)

There are no such residues in this entry.