



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 09:37 AM UTC

PDB ID : 4XMT / pdb_00004xmt
Title : Crystal Structure of Met260Ala mutant of E. coli Aminopeptidase N in complex with L-2,3-Diaminopropionic acid
Authors : Addlagatta, A.; Gumpena, R.
Deposited on : 2015-01-15
Resolution : 2.00 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

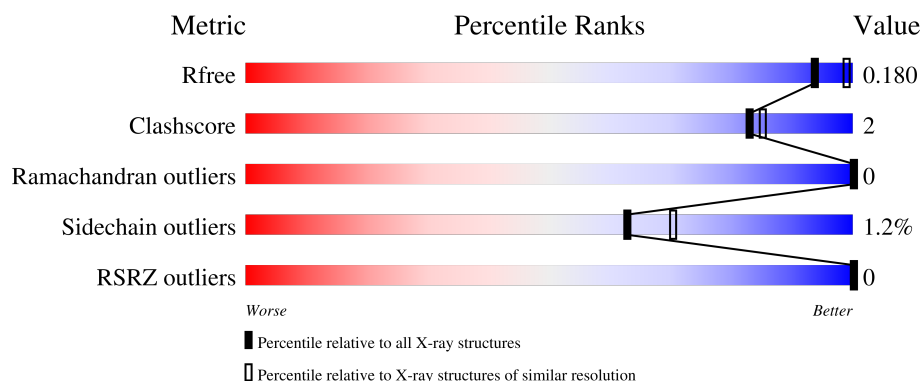
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 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}	180053	10052 (2.00-2.00)
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

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 $\leq 5\%$. 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	867	

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
5	GOL	A	912	-	X	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	GOL	A	917	-	X	-	-
6	MLI	A	919	-	X	-	-

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 8240 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 Aminopeptidase N.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	867	7059	4475	1212	1344	28	0	23	0

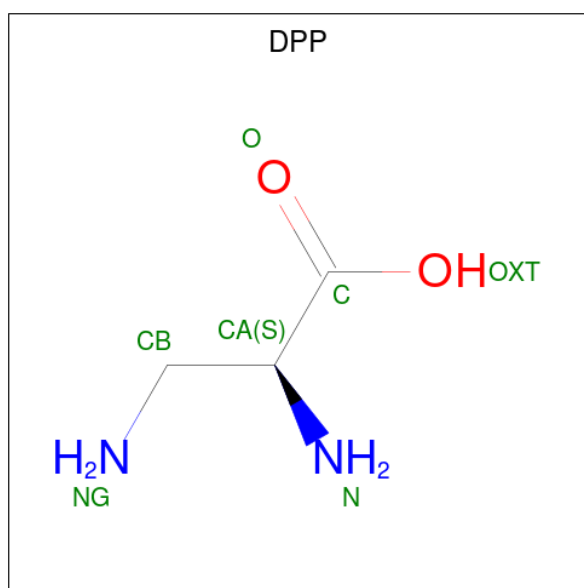
There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	260	ALA	MET	engineered mutation	UNP P04825

- Molecule 2 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	Zn	0	0
			1	1		

- Molecule 3 is DIAMINOPROPANOIC ACID (CCD ID: DPP) (formula: C₃H₈N₂O₂).

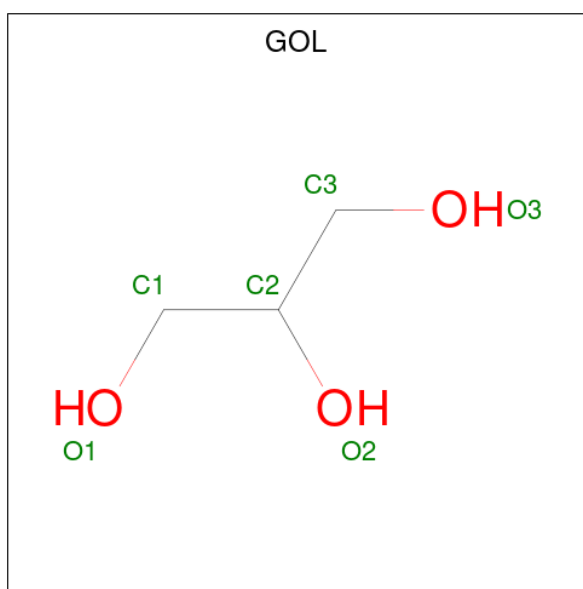


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	N	O	0	0
			7	3	2	2		

- Molecule 4 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	7	Total	Na	0	0
			7	7		

- Molecule 5 is GLYCEROL (CCD ID: GOL) (formula: C₃H₈O₃).



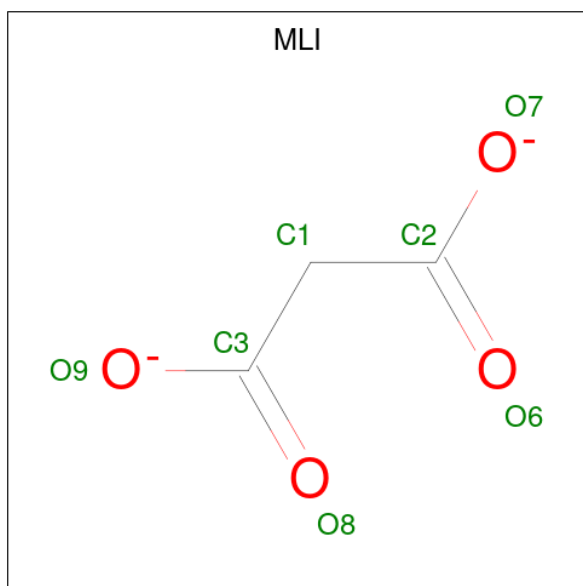
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		
5	A	1	Total	C	O	0	0
			6	3	3		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	C	O	0	0
			6	3	3		

- Molecule 6 is MALONATE ION (CCD ID: MLI) (formula: $C_3H_2O_4$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total	C	O	0	0
			7	3	4		

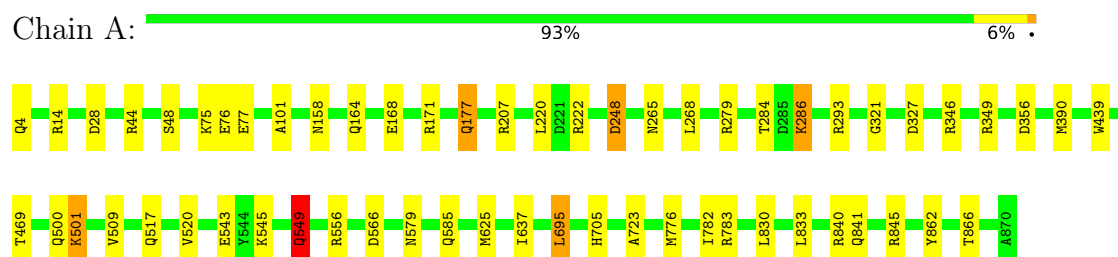
- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	1105	Total	O	0	0
			1105	1105		

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: Aminopeptidase N



4 Data and refinement statistics

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	120.47Å 120.47Å 170.62Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	21.14 – 2.00 21.14 – 2.00	Depositor EDS
% Data completeness (in resolution range)	94.8 (21.14-2.00) 94.8 (21.14-2.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.05	Depositor
$\langle I/\sigma(I) \rangle$ ¹	5.12 (at 2.01Å)	Xtriage
Refinement program	REFMAC 5.8.0073	Depositor
R, R_{free}	0.128 , 0.169 0.141 , 0.180	Depositor DCC
R_{free} test set	4587 reflections (4.73%)	wwPDB-VP
Wilson B-factor (Å ²)	23.0	Xtriage
Anisotropy	0.044	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.40 , 53.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.016 for -h,-k,l	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	8240	wwPDB-VP
Average B, all atoms (Å ²)	25.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.88% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GOL, MLI, DPP, NA, ZN

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	1.34	14/7283 (0.2%)	1.13	9/9889 (0.1%)

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	349	ARG	CD-NE	-8.42	1.34	1.46
1	A	207	ARG	CD-NE	8.25	1.57	1.46
1	A	500	GLN	CA-C	-6.97	1.44	1.52
1	A	585	GLN	CG-CD	6.20	1.67	1.52
1	A	705	HIS	C-O	-5.92	1.16	1.24
1	A	76	GLU	C-O	-5.78	1.17	1.24
1	A	248	ASP	CG-OD2	5.52	1.35	1.25
1	A	723	ALA	C-O	-5.38	1.16	1.23
1	A	501	LYS	N-CA	-5.37	1.39	1.46
1	A	830	LEU	CA-C	-5.32	1.45	1.52
1	A	101	ALA	C-O	-5.16	1.17	1.24
1	A	509	VAL	CA-C	-5.13	1.47	1.53
1	A	44	ARG	C-O	-5.12	1.17	1.24
1	A	48	SER	CA-C	-5.10	1.45	1.52

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4	GLN	CA-C-N	-13.12	107.62	120.21
1	A	4	GLN	C-N-CA	-13.12	107.62	120.21
1	A	321	GLY	N-CA-C	-6.87	104.53	112.50
1	A	349	ARG	NE-CZ-NH2	-6.45	113.39	119.20
1	A	549	GLN	CB-CG-CD	5.91	122.64	112.60
1	A	579	ASN	N-CA-C	5.74	118.48	111.82
1	A	349	ARG	CB-CG-CD	-5.22	99.29	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	158	ASN	CA-C-N	5.14	126.14	121.31
1	A	158	ASN	C-N-CA	5.14	126.14	121.31

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	A	7059	0	6937	32	0
2	A	1	0	0	0	0
3	A	7	0	7	1	0
4	A	7	0	0	0	0
5	A	54	0	72	4	0
6	A	7	0	2	1	0
7	A	1105	0	0	18	0
All	All	8240	0	7018	34	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 2.

All (34) 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:A:346[A]:ARG:NH1	7:A:1001:HOH:O	2.05	0.88
1:A:177:GLN:CD	7:A:1002:HOH:O	2.16	0.87
1:A:783:ARG:HH12	6:A:919:MLI:H12	1.49	0.77
1:A:862:TYR:O	1:A:866:THR:HG23	1.95	0.67
1:A:284:THR:OG1	1:A:286:LYS:HG2	1.96	0.66
3:A:902:DPP:HB3	7:A:1175:HOH:O	1.95	0.64
1:A:177:GLN:OE1	7:A:1002:HOH:O	2.12	0.63
1:A:695:LEU:HD22	7:A:2096:HOH:O	1.98	0.63
1:A:469:THR:H	5:A:910:GOL:H32	1.66	0.61
1:A:293[B]:ARG:NH1	7:A:1008:HOH:O	2.30	0.56
1:A:222:ARG:NE	7:A:1016:HOH:O	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:918:GOL:H2	7:A:1741:HOH:O	2.07	0.54
1:A:556:ARG:NH1	7:A:1022:HOH:O	2.40	0.54
1:A:14:ARG:NH2	7:A:1024:HOH:O	2.41	0.52
1:A:469:THR:H	5:A:910:GOL:C3	2.24	0.50
1:A:279:ARG:HD2	7:A:1862:HOH:O	2.11	0.49
1:A:75:LYS:CE	1:A:77[A]:GLU:OE2	2.61	0.49
1:A:28:ASP:OD1	1:A:171:ARG:NH2	2.44	0.48
1:A:248:ASP:OD1	7:A:1003:HOH:O	2.20	0.48
1:A:549:GLN:HG2	7:A:1362:HOH:O	2.14	0.48
1:A:75:LYS:HE2	1:A:77[A]:GLU:OE2	2.14	0.47
1:A:625[B]:MET:HE2	1:A:637:ILE:HG23	1.95	0.47
1:A:695:LEU:CD2	7:A:2096:HOH:O	2.60	0.47
1:A:543[B]:GLU:CD	7:A:1046:HOH:O	2.58	0.46
1:A:545:LYS:NZ	7:A:1044:HOH:O	2.48	0.45
1:A:566:ASP:HB3	5:A:912:GOL:H2	1.99	0.44
1:A:501:LYS:HE2	1:A:520:VAL:HB	1.98	0.44
1:A:390:MET:HE1	1:A:439:TRP:CE2	2.54	0.43
1:A:168:GLU:OE1	1:A:168:GLU:HA	2.18	0.43
1:A:840:ARG:HG2	7:A:1157:HOH:O	2.19	0.43
1:A:845:ARG:NH1	7:A:1005:HOH:O	2.27	0.42
1:A:776:MET:O	1:A:782:ILE:HD11	2.19	0.42
1:A:265:ASN:HB2	1:A:268:LEU:O	2.19	0.41
1:A:833:LEU:O	1:A:841:GLN:HG2	2.21	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	888/867 (102%)	874 (98%)	14 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	764/741 (103%)	754 (99%)	10 (1%)	61	68

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	164	GLN
1	A	177	GLN
1	A	220	LEU
1	A	286	LYS
1	A	327	ASP
1	A	356	ASP
1	A	517[A]	GLN
1	A	517[B]	GLN
1	A	549	GLN
1	A	695	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	340	ASN
1	A	585	GLN
1	A	663	ASN
1	A	740	HIS
1	A	821	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 19 ligands modelled in this entry, 8 are monoatomic - leaving 11 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
5	GOL	A	910	-	5,5,5	0.92	0	5,5,5	1.92	1 (20%)
5	GOL	A	911	-	5,5,5	0.97	0	5,5,5	1.26	1 (20%)
5	GOL	A	912	-	5,5,5	1.50	1 (20%)	5,5,5	2.53	3 (60%)
3	DPP	A	902	2	5,6,6	1.22	0	2,7,7	4.01	1 (50%)
5	GOL	A	914	-	5,5,5	0.48	0	5,5,5	0.82	0
5	GOL	A	918	-	5,5,5	0.79	0	5,5,5	1.22	1 (20%)
6	MLI	A	919	-	6,6,6	1.27	1 (16%)	7,7,7	2.47	5 (71%)
5	GOL	A	915	-	5,5,5	0.51	0	5,5,5	0.78	0
5	GOL	A	916	-	5,5,5	1.26	0	5,5,5	1.40	0
5	GOL	A	913	-	5,5,5	1.61	2 (40%)	5,5,5	1.57	1 (20%)
5	GOL	A	917	-	5,5,5	1.75	1 (20%)	5,5,5	2.47	3 (60%)

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
5	GOL	A	910	-	-	2/4/4/4	-
5	GOL	A	911	-	-	4/4/4/4	-
5	GOL	A	912	-	-	2/4/4/4	-
3	DPP	A	902	2	-	4/6/6/6	-
5	GOL	A	914	-	-	2/4/4/4	-
5	GOL	A	918	-	-	4/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	MLI	A	919	-	-	2/4/4/4	-
5	GOL	A	915	-	-	0/4/4/4	-
5	GOL	A	916	-	-	2/4/4/4	-
5	GOL	A	913	-	-	1/4/4/4	-
5	GOL	A	917	-	-	2/4/4/4	-

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	917	GOL	O1-C1	3.41	1.56	1.42
5	A	912	GOL	O2-C2	2.78	1.51	1.43
5	A	913	GOL	O2-C2	2.60	1.50	1.43
5	A	913	GOL	O3-C3	2.35	1.52	1.42
6	A	919	MLI	C1-C3	2.13	1.54	1.51

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	902	DPP	OXT-C-O	5.67	136.95	124.08
5	A	912	GOL	C3-C2-C1	-4.37	95.77	111.80
6	A	919	MLI	O6-C2-C1	-3.76	111.39	122.11
5	A	910	GOL	C3-C2-C1	-3.55	98.76	111.80
5	A	917	GOL	O2-C2-C3	-3.40	95.10	109.18
5	A	913	GOL	O2-C2-C3	3.27	122.72	109.18
6	A	919	MLI	O7-C2-C1	3.23	124.53	114.51
5	A	917	GOL	O2-C2-C1	2.93	121.33	109.18
6	A	919	MLI	O9-C3-C1	2.80	123.19	114.51
5	A	912	GOL	O2-C2-C1	2.76	120.60	109.18
5	A	917	GOL	O1-C1-C2	2.58	121.98	110.38
5	A	918	GOL	O2-C2-C1	2.18	118.19	109.18
5	A	911	GOL	O2-C2-C1	-2.15	100.27	109.18
6	A	919	MLI	O8-C3-C1	-2.15	115.98	122.11
5	A	912	GOL	O3-C3-C2	-2.11	100.90	110.38
6	A	919	MLI	C3-C1-C2	2.10	120.37	112.95

There are no chirality outliers.

All (25) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	902	DPP	OXT-C-CA-CB

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Mol	Chain	Res	Type	Atoms
5	A	911	GOL	O1-C1-C2-C3
5	A	917	GOL	O1-C1-C2-C3
5	A	918	GOL	O1-C1-C2-C3
5	A	918	GOL	O2-C2-C3-O3
5	A	910	GOL	O1-C1-C2-C3
5	A	911	GOL	C1-C2-C3-O3
5	A	912	GOL	O1-C1-C2-C3
5	A	913	GOL	C1-C2-C3-O3
5	A	914	GOL	O1-C1-C2-C3
5	A	916	GOL	O1-C1-C2-C3
5	A	918	GOL	C1-C2-C3-O3
5	A	911	GOL	O1-C1-C2-O2
5	A	917	GOL	O1-C1-C2-O2
5	A	918	GOL	O1-C1-C2-O2
5	A	914	GOL	O1-C1-C2-O2
3	A	902	DPP	O-C-CA-CB
5	A	910	GOL	O1-C1-C2-O2
5	A	911	GOL	O2-C2-C3-O3
5	A	916	GOL	O1-C1-C2-O2
6	A	919	MLI	C3-C1-C2-O7
6	A	919	MLI	C3-C1-C2-O6
3	A	902	DPP	OXT-C-CA-N
3	A	902	DPP	O-C-CA-N
5	A	912	GOL	O1-C1-C2-O2

There are no ring outliers.

5 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	910	GOL	2	0
5	A	912	GOL	1	0
3	A	902	DPP	1	0
5	A	918	GOL	1	0
6	A	919	MLI	1	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 [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	867/867 (100%)	-0.73	0 100 100	11, 21, 36, 70	24 (2%)

There are no RSRZ outliers to report.

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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
6	MLI	A	919	7/7	0.82	0.15	42,51,59,65	0
5	GOL	A	917	6/6	0.83	0.15	33,45,50,52	0
5	GOL	A	916	6/6	0.87	0.14	40,47,51,52	0
5	GOL	A	918	6/6	0.90	0.11	41,46,49,51	0
5	GOL	A	912	6/6	0.92	0.11	26,36,41,42	0
5	GOL	A	915	6/6	0.92	0.11	35,40,46,47	0
5	GOL	A	910	6/6	0.92	0.16	35,42,51,54	0
5	GOL	A	913	6/6	0.93	0.12	26,35,37,42	0
5	GOL	A	911	6/6	0.93	0.11	28,39,43,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	DPP	A	902	7/7	0.93	0.09	24,29,37,41	0
5	GOL	A	914	6/6	0.95	0.09	25,39,45,46	0
4	NA	A	907	1/1	0.97	0.12	50,50,50,50	0
4	NA	A	909	1/1	0.97	0.16	48,48,48,48	0
4	NA	A	908	1/1	0.98	0.11	46,46,46,46	0
4	NA	A	905	1/1	0.98	0.07	42,42,42,42	0
4	NA	A	906	1/1	0.98	0.08	33,33,33,33	0
4	NA	A	904	1/1	0.98	0.11	41,41,41,41	0
4	NA	A	903	1/1	0.99	0.10	25,25,25,25	0
2	ZN	A	901	1/1	1.00	0.01	18,18,18,18	0

6.5 Other polymers [i](#)

There are no such residues in this entry.