W O R L D W I D E
wwPDB
P R O T E I N   D A T A   B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Dec 15, 2024 – 10:09 AM EST

PDB ID	:	4LNM
Title	:	Structure of Escherichia coli Threonine Aldolase in Complex with Serine
Authors	:	Safo, M.K.; Contestabile, R.; Remesh, S.G.
Deposited on	:	2013-07-11
Resolution	:	2.10 Å(reported)

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

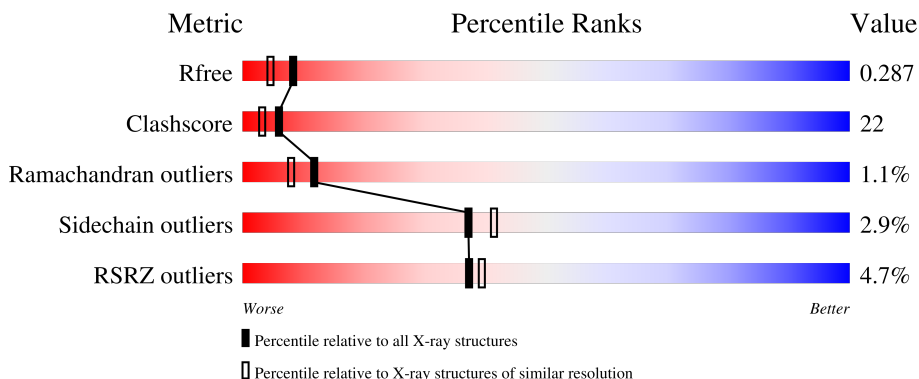|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

1 Overall quality at a glance (i)

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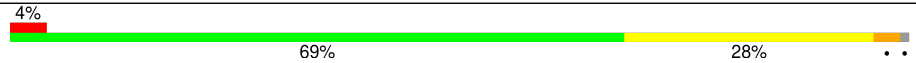*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.10 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	Percentile Ranks	Value
Rfree		0.287
Clashscore		22
Ramachandran outliers		1.1%
Sidechain outliers		2.9%
RSRZ outliers		4.7%

Worse   *Better*

▌ 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}	164625	6234 (2.10-2.10)
Clashscore	180529	6893 (2.10-2.10)
Ramachandran outliers	177936	6839 (2.10-2.10)
Sidechain outliers	177891	6840 (2.10-2.10)
RSRZ outliers	164620	6234 (2.10-2.10)

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

Mol	Chain	Length	Quality of chain
1	A	333	5% / 61% / 36% / •••
1	B	333	4% / 69% / 28% / ••

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:

WORLD WIDE
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PROTEIN DATA BANK

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	PLG	A	401[A]	-	X	-	-
2	PLG	A	401[B]	-	-	X	-
4	PLR	A	403[A]	-	X	-	-
4	PLR	A	403[B]	-	X	-	-

2   Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 5452 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 Low-specificity L-threonine aldolase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	331	Total	C	N	O	S	0	1	0
			2549	1599	459	475	16			
1	B	331	Total	C	N	O	S	0	1	0
			2549	1599	459	475	16			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	256	THR	ALA	conflict	UNP E7U392
A	257	ALA	THR	conflict	UNP E7U392
B	256	THR	ALA	conflict	UNP E7U392
B	257	ALA	THR	conflict	UNP E7U392

- Molecule 2 is N-GLYCINE-[3-HYDROXY-2-METHYL-5-PHOSPHONOOXYMETHYL-PYRIDIN-4-YL-METHANE] (three-letter code: PLG) (formula: $C_{10}H_{15}N_2O_7P$).
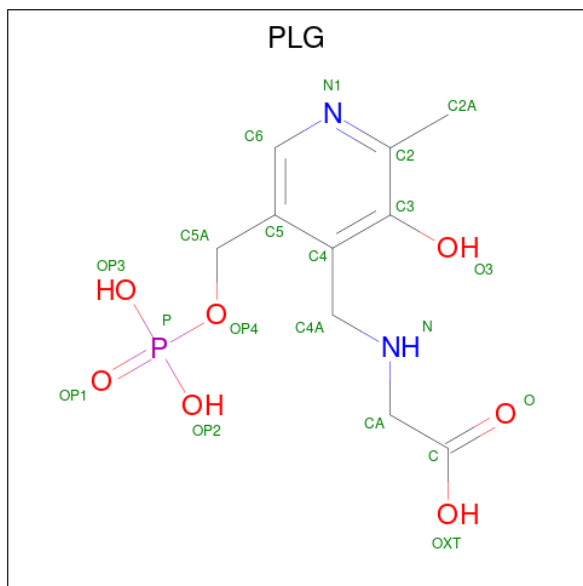
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	1
			40	20	4	14	2		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	2	Total	Ca	0	0
			2	2		
3	B	1	Total	Ca	0	0
			1	1		

- Molecule 4 is (5-HYDROXY-4,6-DIMETHYLPYRIDIN-3-YL)METHYL DIHYDROGEN PHOSPHATE (three-letter code: PLR) (formula: $C_8H_{12}NO_5P$).
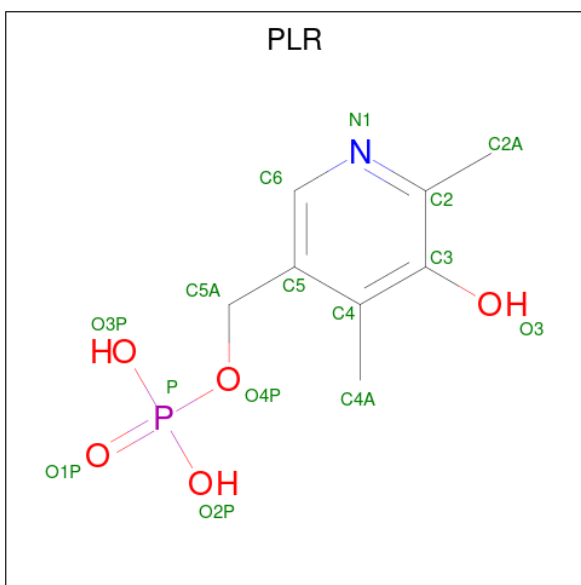
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	P	0	1
			30	16	2	10	2		

- Molecule 5 is 4-(2-HYDROXYETHYL)-1-PIPERAZINE ETHANESULFONIC ACID (three-letter code: EPE) (formula: $C_8H_{18}N_2O_4S$).

EPE

O3S
OH

O1S O ═ S ═ O O2S
S

C9   C10

N1
C2   C6

C3   C5
N4

C8   C7

OH
O8

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	A	1	Total	C	N	O	S	0	0
			15	8	2	4	1		
5	B	1	Total	C	N	O	S	0	0
			15	8	2	4	1		

• Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	113	Total	O	0	0
			113	113		
6	B	138	Total	O	0	0
			138	138		

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: Low-specificity L-threonine aldolase

Chain A:

• Molecule 1: Low-specificity L-threonine aldolase

Chain B:
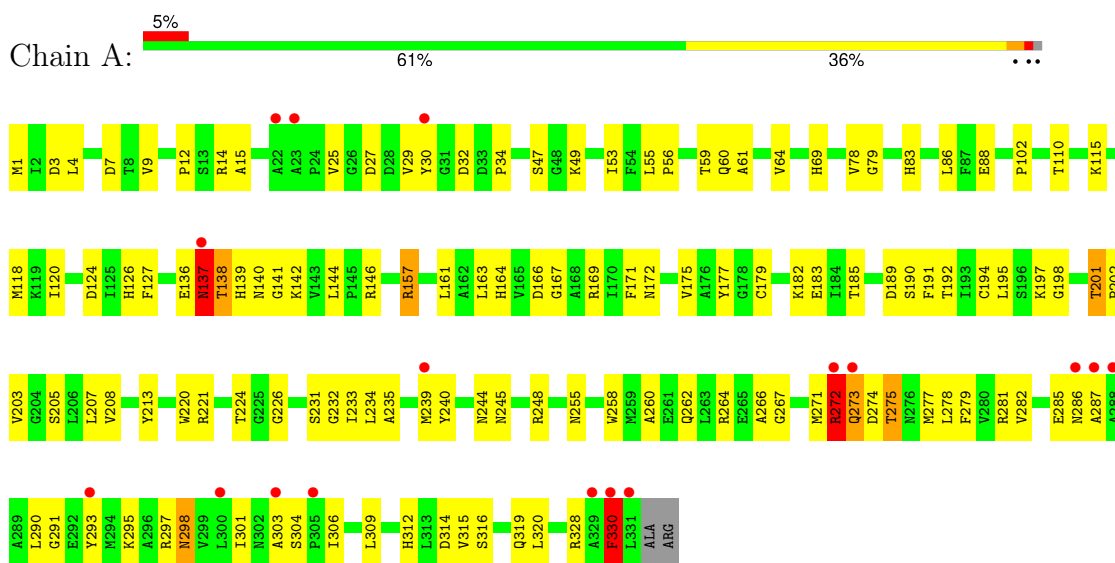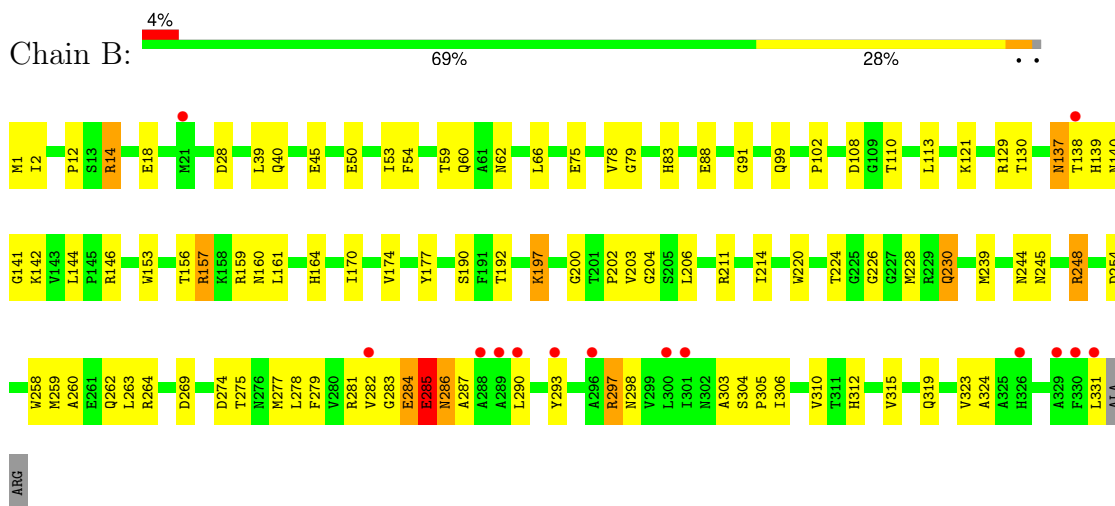
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	77.20Å 101.05Å 176.40Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.14 – 2.10 29.14 – 2.10	Depositor EDS
% Data completeness (in resolution range)	86.4 (29.14-2.10) 86.9 (29.14-2.10)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.30 (at 2.10Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.227 , 0.289 0.232 , 0.287	Depositor DCC
R_{free} test set	1768 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	22.1	Xtriage
Anisotropy	0.125	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 59.5	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	0.92	EDS
Total number of atoms	5452	wwPDB-VP
Average B, all atoms (Å^2)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.14% 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: EPE, PLG, PLR, CA

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	0.43	2/2598 (0.1%)	0.71	5/3518 (0.1%)
1	B	0.44	1/2598 (0.0%)	0.65	1/3518 (0.0%)
All	All	0.43	3/5196 (0.1%)	0.68	6/7036 (0.1%)

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	2
1	B	0	1
All	All	0	3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	285	GLU	CB-CG	-7.24	1.38	1.52
1	A	126[A]	HIS	CB-CG	-5.29	1.40	1.50
1	A	126[B]	HIS	CB-CG	-5.29	1.40	1.50

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	126[A]	HIS	CA-CB-CG	12.73	135.24	113.60
1	A	126[B]	HIS	CA-CB-CG	12.73	135.24	113.60
1	A	137	ASN	CB-CA-C	6.31	123.02	110.40
1	B	200	GLY	N-CA-C	5.57	127.01	113.10
1	A	286	ASN	N-CA-C	-5.41	96.40	111.00
1	A	272	ARG	CB-CA-C	5.03	120.46	110.40

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	137	ASN	Peptide
1	A	272	ARG	Peptide
1	B	137	ASN	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	2549	0	2546	125	0
1	B	2549	0	2545	105	0
2	A	40	0	22	11	0
3	A	2	0	0	0	0
3	B	1	0	0	0	0
4	A	30	0	16	3	0
5	A	15	0	18	1	0
5	B	15	0	18	1	0
6	A	113	0	0	6	0
6	B	138	0	0	11	0
All	All	5452	0	5165	231	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 22.

All (231) 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)
2:A:401[A]:PLG:H	1:B:197:LYS:NZ	1.52	1.08
2:A:401[A]:PLG:H4A2	1:B:197:LYS:NZ	1.68	1.08
2:A:401[A]:PLG:N	1:B:197:LYS:NZ	2.03	1.06
1:A:197:LYS:NZ	2:A:401[B]:PLG:C4A	2.23	1.02
1:B:12:PRO:HG3	1:B:202:PRO:HG3	1.46	0.98
1:A:272:ARG:NH1	1:A:274:ASP:OD2	1.98	0.96
1:A:197:LYS:NZ	2:A:401[B]:PLG:H4A2	1.86	0.91
1:A:60:GLN:HE22	1:A:226:GLY:HA3	1.34	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:59:THR:HG23	1:B:88:GLU:HG2	1.59	0.85
1:A:69:HIS:HD2	6:A:543:HOH:O	1.59	0.84
1:A:272:ARG:HH11	1:A:272:ARG:HB2	1.43	0.84
1:A:197:LYS:HZ3	2:A:401[B]:PLG:C4A	1.49	0.84
1:A:316:SER:H	1:A:319:GLN:HE21	1.24	0.82
1:A:157:ARG:HH22	1:A:189:ASP:CG	1.82	0.82
1:A:271:MET:SD	1:A:281:ARG:HB2	2.18	0.82
1:A:136:GLU:OE2	1:A:139:HIS:HD2	1.65	0.80
1:B:75:GLU:HG2	1:B:130:THR:HA	1.65	0.79
1:B:278:LEU:HD23	1:B:279:PHE:N	1.98	0.79
1:A:138:THR:HG22	6:A:564:HOH:O	1.82	0.78
1:B:248:ARG:HH11	1:B:248:ARG:HB2	1.49	0.77
1:B:12:PRO:CG	1:B:202:PRO:HG3	2.15	0.77
1:A:25:VAL:HG12	1:A:232:GLY:HA3	1.64	0.77
1:A:138:THR:HG21	6:A:549:HOH:O	1.83	0.76
1:B:78:VAL:HG22	1:B:79:GLY:N	2.00	0.76
1:A:12:PRO:HG3	1:A:202:PRO:HG3	1.66	0.76
1:A:195:LEU:O	1:A:201:THR:HB	1.87	0.75
1:B:153:TRP:O	1:B:157:ARG:HD2	1.87	0.74
1:B:78:VAL:HG22	1:B:79:GLY:H	1.51	0.73
1:A:157:ARG:NH2	1:A:189:ASP:OD1	2.21	0.73
1:B:137:ASN:HD21	1:B:144:LEU:H	1.38	0.72
1:A:110:THR:HG22	1:A:144:LEU:HG	1.72	0.70
1:A:83:HIS:HD2	1:A:88:GLU:OE2	1.74	0.70
1:A:197:LYS:NZ	2:A:401[B]:PLG:N	2.35	0.70
1:A:169:ARG:HB3	1:A:172:ASN:HD22	1.57	0.69
1:A:157:ARG:HD2	1:A:157:ARG:N	2.07	0.69
1:B:83:HIS:HD2	1:B:88:GLU:OE2	1.76	0.69
1:B:297:ARG:N	1:B:297:ARG:HD2	2.08	0.69
1:B:138:THR:HA	1:B:142:LYS:O	1.92	0.68
1:A:141:GLY:N	1:A:277:MET:HE3	2.09	0.68
1:A:220:TRP:O	1:A:224:THR:HG22	1.95	0.67
1:A:47:SER:HB2	1:A:185:THR:HG21	1.75	0.66
1:B:113:LEU:HG	6:B:604:HOH:O	1.95	0.66
1:B:50:GLU:HB3	1:B:211:ARG:HG3	1.76	0.65
1:B:230:GLN:H	1:B:230:GLN:NE2	1.94	0.65
1:B:282:VAL:HG11	1:B:290:LEU:HD22	1.77	0.65
1:A:197:LYS:NZ	2:A:401[B]:PLG:C4	2.58	0.65
1:B:297:ARG:HD2	1:B:297:ARG:H	1.62	0.65
1:A:60:GLN:NE2	1:A:226:GLY:HA3	2.10	0.64
1:B:254:ASP:HB2	6:B:636:HOH:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:290:LEU:HD13	1:A:330:PHE:CZ	2.33	0.63
1:B:54:PHE:HA	1:B:206:LEU:HD23	1.80	0.63
1:A:272:ARG:HA	1:A:273:GLN:HG3	1.80	0.62
1:A:169:ARG:HH11	1:A:197:LYS:HE2	1.64	0.62
1:A:272:ARG:CG	1:A:279:PHE:HB2	2.29	0.62
1:B:40:GLN:HE21	1:B:54:PHE:H	1.48	0.62
1:A:83:HIS:CD2	4:A:403[A]:PLR:C6	2.83	0.62
1:A:7:ASP:OD1	1:A:197:LYS:HG2	1.99	0.62
1:A:167:GLY:H	1:A:192:THR:HG22	1.65	0.61
1:A:140:ASN:O	1:A:272:ARG:NH2	2.33	0.61
1:A:213:TYR:HB2	5:A:405:EPE:O3S	2.00	0.61
1:B:137:ASN:ND2	1:B:144:LEU:H	1.98	0.61
1:B:137:ASN:ND2	1:B:138:THR:H	1.98	0.60
1:A:191:PHE:CE1	1:A:208:VAL:HB	2.37	0.60
1:B:78:VAL:CG2	1:B:79:GLY:H	2.14	0.60
1:B:45:GLU:HB2	6:B:580:HOH:O	2.01	0.60
1:B:60:GLN:OE1	1:B:226:GLY:HA3	2.01	0.60
1:A:166:ASP:HA	1:A:192:THR:HG22	1.84	0.60
1:B:159:ARG:HD2	6:B:605:HOH:O	2.01	0.60
1:A:274:ASP:O	1:A:275:THR:C	2.40	0.60
1:A:272:ARG:NH1	1:A:272:ARG:HB2	2.16	0.59
1:A:164:HIS:HD2	1:A:190:SER:OG	1.85	0.59
1:B:1:MET:CB	1:B:298:ASN:HB3	2.33	0.59
1:A:78:VAL:HG22	1:A:79:GLY:N	2.18	0.59
1:A:55:LEU:HD22	1:A:61:ALA:HA	1.84	0.59
1:A:260:ALA:O	1:A:264:ARG:HG3	2.01	0.59
1:B:129:ARG:HG2	6:B:620:HOH:O	2.03	0.58
1:B:277:MET:HE1	6:B:621:HOH:O	2.04	0.58
1:B:1:MET:HB3	1:B:298:ASN:O	2.03	0.58
1:B:78:VAL:CG2	1:B:79:GLY:N	2.67	0.58
1:B:259:MET:HE2	1:B:263:LEU:HG	1.85	0.58
1:A:258:TRP:CZ3	1:A:262:GLN:HG3	2.39	0.57
1:B:53:ILE:HG12	1:B:214:ILE:HG23	1.85	0.57
1:A:301:ILE:HD12	1:A:301:ILE:C	2.26	0.56
1:B:153:TRP:CZ3	1:B:157:ARG:NH1	2.73	0.56
1:A:272:ARG:HG2	1:A:279:PHE:HB2	1.86	0.56
1:B:203:VAL:HG12	1:B:204:GLY:N	2.20	0.56
1:B:260:ALA:HA	1:B:278:LEU:HD11	1.87	0.55
1:B:248:ARG:HB2	1:B:248:ARG:NH1	2.19	0.55
2:A:401[A]:PLG:H2A3	1:B:83:HIS:HB2	1.89	0.55
1:A:60:GLN:HE22	1:A:226:GLY:CA	2.13	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:272:ARG:C	1:A:273:GLN:HG3	2.28	0.54
1:A:169:ARG:HB3	1:A:172:ASN:ND2	2.22	0.54
1:B:170:ILE:O	1:B:174:VAL:HG23	2.07	0.54
1:B:108:ASP:OD1	1:B:110:THR:HG23	2.07	0.53
1:B:264:ARG:NH2	6:B:603:HOH:O	2.41	0.53
1:A:1:MET:H1	1:A:298:ASN:HD22	1.56	0.53
1:A:157:ARG:HD2	1:A:157:ARG:H	1.74	0.53
1:A:59:THR:HG23	1:A:88:GLU:HG2	1.90	0.52
1:A:32:ASP:O	1:A:34:PRO:HD3	2.10	0.52
1:B:146:ARG:HG3	1:B:177:TYR:CE1	2.44	0.52
1:B:319:GLN:O	1:B:323:VAL:HG23	2.09	0.52
1:B:287:ALA:O	1:B:290:LEU:HB3	2.10	0.52
1:A:328:ARG:HG3	1:A:328:ARG:HH11	1.75	0.52
1:A:235:ALA:O	1:A:239:MET:HG2	2.10	0.51
1:B:14:ARG:O	1:B:18:GLU:HG3	2.11	0.51
1:B:156:THR:HB	1:B:161:LEU:O	2.10	0.51
1:B:164:HIS:HD2	1:B:190:SER:OG	1.93	0.51
1:A:258:TRP:CH2	1:A:262:GLN:HG3	2.45	0.51
1:A:255:ASN:HB3	1:A:320:LEU:HD11	1.94	0.50
1:A:201:THR:HG23	1:A:203:VAL:H	1.77	0.50
1:A:163:LEU:HD12	1:A:164:HIS:N	2.27	0.50
1:A:179:CYS:HB2	1:A:183:GLU:OE1	2.10	0.50
1:A:244:ASN:C	1:A:245:ASN:HD22	2.15	0.50
1:B:75:GLU:CG	1:B:130:THR:HA	2.36	0.50
1:B:1:MET:HG3	1:B:2:ILE:HG13	1.92	0.50
1:A:272:ARG:HG3	1:A:279:PHE:HB2	1.92	0.50
1:B:137:ASN:HD22	1:B:138:THR:H	1.58	0.50
1:B:259:MET:CE	1:B:263:LEU:HG	2.42	0.50
1:A:312:HIS:CE1	1:A:314:ASP:HB2	2.47	0.49
1:B:53:ILE:HG12	1:B:214:ILE:CG2	2.42	0.49
1:B:283:GLY:O	1:B:287:ALA:HB2	2.12	0.49
1:B:192:THR:HA	1:B:206:LEU:O	2.13	0.48
1:B:137:ASN:O	1:B:138:THR:HB	2.13	0.48
1:A:293:TYR:O	1:A:297:ARG:HD3	2.14	0.48
1:A:7:ASP:CG	1:A:197:LYS:HG2	2.34	0.48
1:B:1:MET:HB2	1:B:298:ASN:HB3	1.93	0.48
1:B:277:MET:HG2	1:B:310:VAL:HG22	1.95	0.48
1:A:49:LYS:HE2	1:A:185:THR:HG22	1.96	0.48
1:A:312:HIS:O	1:A:315:VAL:HG12	2.14	0.48
1:B:220:TRP:O	1:B:224:THR:HG23	2.13	0.48
1:A:140:ASN:C	1:A:277:MET:HE3	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:169:ARG:NH2	1:A:277:MET:HE1	2.28	0.48
1:B:91:GLY:HA3	6:B:520:HOH:O	2.13	0.48
1:A:137:ASN:OD1	1:A:138:THR:N	2.47	0.48
1:A:120:ILE:HD11	1:A:161:LEU:HD11	1.95	0.47
1:A:291:GLY:O	1:A:295:LYS:HB2	2.14	0.47
1:A:293:TYR:CE2	1:A:330:PHE:HB3	2.48	0.47
2:A:401[B]:PLG:H4A1	6:B:638:HOH:O	2.14	0.47
1:A:272:ARG:HG3	1:A:279:PHE:CD1	2.49	0.47
1:A:124:ASP:HB3	1:A:127:PHE:CE2	2.49	0.47
1:B:312:HIS:H	1:B:315:VAL:CG1	2.26	0.47
1:A:115:LYS:HA	1:A:118:MET:HE3	1.94	0.47
1:A:274:ASP:O	1:A:275:THR:O	2.32	0.47
1:B:312:HIS:H	1:B:315:VAL:HG12	1.80	0.47
1:A:124:ASP:HB3	1:A:127:PHE:CD2	2.49	0.47
1:B:40:GLN:HE21	1:B:54:PHE:N	2.11	0.47
1:A:328:ARG:HG3	1:A:328:ARG:NH1	2.29	0.47
1:A:255:ASN:HB3	1:A:320:LEU:CD1	2.45	0.47
1:A:60:GLN:O	1:A:64:VAL:HG23	2.15	0.47
1:A:136:GLU:OE2	1:A:139:HIS:CD2	2.56	0.46
1:B:139:HIS:O	1:B:140:ASN:HB2	2.15	0.46
1:A:27:ASP:HB3	1:A:30:TYR:CD2	2.51	0.46
1:B:137:ASN:ND2	1:B:144:LEU:HB2	2.30	0.46
1:B:230:GLN:NE2	1:B:230:GLN:N	2.62	0.46
1:A:53:ILE:HD11	1:A:221:ARG:HD3	1.98	0.46
1:A:316:SER:N	1:A:319:GLN:HE21	2.01	0.46
1:B:53:ILE:CG1	1:B:214:ILE:HG23	2.46	0.46
1:B:297:ARG:O	1:B:298:ASN:HB2	2.15	0.46
1:B:279:PHE:N	1:B:279:PHE:CD1	2.85	0.45
1:B:269:ASP:OD2	1:B:281:ARG:NH1	2.49	0.45
1:A:167:GLY:N	1:A:192:THR:HG22	2.31	0.45
1:B:278:LEU:HD23	1:B:279:PHE:H	1.77	0.45
1:A:53:ILE:CG2	1:A:207:LEU:HB3	2.47	0.45
1:A:140:ASN:HA	1:A:277:MET:HE3	1.98	0.45
1:B:285:GLU:HB3	1:B:286:ASN:H	1.22	0.45
1:B:315:VAL:HG13	1:B:315:VAL:O	2.16	0.45
1:A:53:ILE:HG23	1:A:55:LEU:HD11	1.99	0.45
1:A:266:ALA:HB1	1:A:328:ARG:HB2	1.99	0.45
1:B:303:ALA:O	1:B:304:SER:HB2	2.17	0.45
4:A:403[B]:PLR:O4P	4:A:403[B]:PLR:H4A1	2.17	0.44
1:B:258:TRP:CH2	1:B:262:GLN:HG3	2.53	0.44
1:A:182:LYS:HB2	6:A:561:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:157:ARG:HH21	1:B:157:ARG:N	2.15	0.44
1:A:78:VAL:HG22	1:A:79:GLY:H	1.81	0.44
1:A:78:VAL:O	1:A:102:PRO:HA	2.18	0.44
1:B:78:VAL:O	1:B:102:PRO:HA	2.17	0.44
1:B:62:ASN:O	1:B:66:LEU:HG	2.18	0.44
1:A:221:ARG:HA	1:A:224:THR:HG22	2.00	0.43
1:A:169:ARG:NH2	1:A:277:MET:CE	2.81	0.43
1:A:221:ARG:HA	1:A:224:THR:CG2	2.48	0.43
1:B:230:GLN:H	1:B:230:GLN:HE21	1.65	0.43
1:B:293:TYR:O	1:B:297:ARG:CD	2.66	0.43
1:B:137:ASN:ND2	1:B:138:THR:N	2.65	0.43
1:A:303:ALA:O	1:A:304:SER:HB2	2.18	0.43
1:B:141:GLY:N	6:B:621:HOH:O	2.52	0.43
1:A:291:GLY:HA2	1:A:301:ILE:HD11	1.99	0.43
1:B:75:GLU:HB2	1:B:99:GLN:O	2.18	0.43
1:B:331:LEU:HD12	6:B:597:HOH:O	2.18	0.43
1:B:297:ARG:HG2	1:B:297:ARG:HH11	1.84	0.43
1:A:277:MET:HE3	6:A:564:HOH:O	2.19	0.42
1:A:140:ASN:CA	1:A:277:MET:HE3	2.48	0.42
1:A:171:PHE:O	1:A:175:VAL:HG23	2.20	0.42
1:B:160:ASN:OD1	5:B:402:EPE:H71	2.19	0.42
1:A:138:THR:HA	1:A:142:LYS:O	2.19	0.42
1:A:277:MET:CE	6:A:564:HOH:O	2.67	0.42
1:A:282:VAL:CG1	1:A:287:ALA:HB2	2.50	0.42
1:B:305:PRO:C	1:B:306:ILE:HD12	2.40	0.42
1:A:3:ASP:HB3	1:A:9:VAL:HG21	2.00	0.42
1:A:1:MET:H1	1:A:298:ASN:ND2	2.16	0.42
1:B:39:LEU:HD13	1:B:239:MET:HG2	2.01	0.42
1:B:306:ILE:HD12	1:B:306:ILE:N	2.34	0.42
1:B:28:ASP:HB3	1:B:228:MET:O	2.20	0.42
1:A:194:CYS:SG	1:A:205:SER:OG	2.78	0.42
1:B:137:ASN:HD22	1:B:138:THR:N	2.18	0.42
1:A:4:LEU:HD21	1:A:315:VAL:HG21	2.01	0.41
1:A:86:LEU:CD1	1:B:121:LYS:HE3	2.49	0.41
1:B:284:GLU:HG2	1:B:305:PRO:HG3	2.01	0.41
1:A:27:ASP:OD1	1:A:29:VAL:HB	2.20	0.41
1:A:78:VAL:CG2	1:A:79:GLY:N	2.81	0.41
1:B:153:TRP:CZ3	1:B:157:ARG:NE	2.89	0.41
1:A:15:ALA:HB1	1:A:240:TYR:CE2	2.56	0.41
1:A:248:ARG:HG3	1:A:248:ARG:HH11	1.86	0.41
1:B:203:VAL:CG1	1:B:204:GLY:N	2.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:164:HIS:CD2	1:A:190:SER:OG	2.71	0.41
1:B:40:GLN:NE2	1:B:53:ILE:HA	2.36	0.41
1:B:274:ASP:O	1:B:275:THR:C	2.58	0.41
1:B:304:SER:OG	1:B:305:PRO:HD2	2.21	0.41
1:B:50:GLU:CB	1:B:211:ARG:HG3	2.48	0.41
1:A:146:ARG:HG3	1:A:177:TYR:CE1	2.55	0.41
1:A:233:ILE:HG23	1:A:234:LEU:N	2.36	0.41
1:A:197:LYS:HB3	1:A:198:GLY:H	1.52	0.41
1:A:271:MET:CG	1:A:281:ARG:HB2	2.51	0.41
1:A:115:LYS:HA	1:A:118:MET:CE	2.51	0.40
1:A:271:MET:CE	1:A:306:ILE:HG23	2.51	0.40
1:B:259:MET:HE3	1:B:324:ALA:HB2	2.03	0.40
1:A:56:PRO:HD2	1:A:60:GLN:NE2	2.36	0.40
1:A:83:HIS:CE1	2:A:401[B]:PLG:C4	3.05	0.40
1:B:244:ASN:C	1:B:245:ASN:HD22	2.25	0.40
1:A:221:ARG:CA	1:A:224:THR:HG22	2.51	0.40
1:A:278:LEU:HB3	1:A:309:LEU:HB2	2.04	0.40
4:A:403[B]:PLR:H2A3	1:B:83:HIS:HB2	2.02	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	330/333 (99%)	305 (92%)	20 (6%)	5 (2%)	8	5
1	B	330/333 (99%)	305 (92%)	23 (7%)	2 (1%)	22	19
All	All	660/666 (99%)	610 (92%)	43 (6%)	7 (1%)	12	8

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	275	THR
1	A	285	GLU
1	A	138	THR
1	B	286	ASN
1	B	285	GLU
1	A	330	PHE
1	A	267	GLY

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	261/261 (100%)	253 (97%)	8 (3%)	35	39
1	B	261/261 (100%)	254 (97%)	7 (3%)	40	44
All	All	522/522 (100%)	507 (97%)	15 (3%)	37	41

All (15) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	14	ARG
1	A	157	ARG
1	A	201	THR
1	A	231	SER
1	A	272	ARG
1	A	273	GLN
1	A	298	ASN
1	A	330	PHE
1	B	14	ARG
1	B	157	ARG
1	B	197	LYS
1	B	230	GLN
1	B	248	ARG
1	B	284	GLU
1	B	297	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	37	ASN
1	A	60	GLN
1	A	69	HIS
1	A	83	HIS
1	A	139	HIS
1	A	164	HIS
1	A	172	ASN
1	A	245	ASN
1	A	298	ASN
1	A	302	ASN
1	A	319	GLN
1	B	37	ASN
1	B	40	GLN
1	B	83	HIS
1	B	137	ASN
1	B	139	HIS
1	B	140	ASN
1	B	164	HIS
1	B	172	ASN
1	B	210	ASN
1	B	230	GLN
1	B	245	ASN
1	B	250	GLN
1	B	326	HIS

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 oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 9 ligands modelled in this entry, 3 are monoatomic - leaving 6 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	#$|Z| > 2$
4	PLR	A	403[B]	1	15,15,15	5.37	7 (46%)	21,22,22	2.53	8 (38%)
5	EPE	A	405	-	15,15,15	1.44	2 (13%)	19,20,20	1.41	2 (10%)
4	PLR	A	403[A]	1	15,15,15	5.79	7 (46%)	21,22,22	2.66	8 (38%)
5	EPE	B	402	-	15,15,15	1.83	2 (13%)	19,20,20	1.57	4 (21%)
2	PLG	A	401[B]	-	20,20,20	4.46	7 (35%)	26,28,28	3.53	9 (34%)
2	PLG	A	401[A]	1	20,20,20	4.42	7 (35%)	26,28,28	3.45	10 (38%)

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
4	PLR	A	403[B]	1	-	5/6/6/6	0/1/1/1
5	EPE	A	405	-	-	2/9/19/19	0/1/1/1
4	PLR	A	403[A]	1	-	3/6/6/6	0/1/1/1
5	EPE	B	402	-	-	2/9/19/19	0/1/1/1
2	PLG	A	401[B]	-	-	6/12/12/12	0/1/1/1
2	PLG	A	401[A]	1	-	9/12/12/12	0/1/1/1

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	403[A]	PLR	C5-C4	17.57	1.60	1.40
4	A	403[B]	PLR	C5-C4	16.47	1.59	1.40
2	A	401[B]	PLG	C5-C4	13.69	1.59	1.40
2	A	401[A]	PLG	C5-C4	13.36	1.59	1.40
4	A	403[A]	PLR	C3-C2	11.23	1.52	1.41
2	A	401[A]	PLG	C3-C2	11.18	1.52	1.41
2	A	401[B]	PLG	C3-C2	10.88	1.52	1.41
4	A	403[B]	PLR	C3-C2	9.79	1.51	1.41
2	A	401[B]	PLG	C3-C4	5.17	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	401[A]	PLG	C2-N1	5.01	1.42	1.33
4	A	403[A]	PLR	C2-N1	4.82	1.42	1.33
2	A	401[A]	PLG	C3-C4	4.56	1.46	1.40
4	A	403[B]	PLR	C2-N1	4.51	1.41	1.33
2	A	401[B]	PLG	C2-N1	4.51	1.41	1.33
5	B	402	EPE	C6-N1	4.33	1.58	1.46
4	A	403[A]	PLR	C6-N1	3.94	1.42	1.34
2	A	401[B]	PLG	C6-N1	3.81	1.42	1.34
2	A	401[A]	PLG	C6-N1	3.79	1.42	1.34
5	A	405	EPE	C6-N1	3.71	1.56	1.46
4	A	403[B]	PLR	C6-N1	3.55	1.41	1.34
4	A	403[B]	PLR	C3-C4	3.42	1.46	1.40
5	B	402	EPE	C10-S	3.39	1.82	1.77
4	A	403[A]	PLR	C3-C4	3.13	1.46	1.40
2	A	401[B]	PLG	P-OP3	-2.71	1.44	1.54
2	A	401[A]	PLG	C5A-C5	2.50	1.57	1.50
4	A	403[B]	PLR	P-O2P	-2.41	1.45	1.54
4	A	403[B]	PLR	C5A-C5	2.41	1.57	1.50
2	A	401[B]	PLG	C5A-C5	2.36	1.57	1.50
2	A	401[A]	PLG	P-OP3	-2.22	1.46	1.54
4	A	403[A]	PLR	P-O2P	-2.10	1.47	1.54
5	A	405	EPE	C10-S	2.08	1.80	1.77
4	A	403[A]	PLR	C5A-C5	2.03	1.56	1.50

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	401[B]	PLG	C4A-N-CA	12.87	127.70	112.72
2	A	401[A]	PLG	C4A-N-CA	11.36	125.95	112.72
2	A	401[A]	PLG	C2A-C2-C3	7.99	130.15	120.80
2	A	401[B]	PLG	C2A-C2-C3	7.36	129.42	120.80
4	A	403[A]	PLR	C2A-C2-C3	7.26	129.30	120.80
4	A	403[B]	PLR	C2A-C2-C3	7.07	129.08	120.80
2	A	401[A]	PLG	C4-C4A-N	5.51	121.68	111.50
2	A	401[B]	PLG	C6-N1-C2	4.62	127.58	119.20
4	A	403[A]	PLR	C4A-C4-C5	4.54	125.62	120.94
4	A	403[A]	PLR	C6-N1-C2	4.49	127.34	119.20
4	A	403[B]	PLR	C6-N1-C2	4.46	127.28	119.20
2	A	401[B]	PLG	C4-C4A-N	4.34	119.50	111.50
2	A	401[A]	PLG	C6-N1-C2	4.33	127.06	119.20
2	A	401[A]	PLG	C3-C2-N1	-4.19	115.68	120.96
4	A	403[A]	PLR	C3-C2-N1	-4.00	115.92	120.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	401[B]	PLG	C3-C2-N1	-3.81	116.15	120.96
5	A	405	EPE	C9-N1-C6	3.81	121.39	111.24
4	A	403[B]	PLR	C3-C2-N1	-3.79	116.17	120.96
5	B	402	EPE	C9-N1-C6	3.77	121.28	111.24
4	A	403[B]	PLR	C4A-C4-C5	3.52	124.57	120.94
2	A	401[B]	PLG	C4A-C4-C5	3.15	123.18	119.75
4	A	403[B]	PLR	O3-C3-C4	3.09	126.17	118.10
2	A	401[A]	PLG	OP4-C5A-C5	2.89	114.77	109.36
4	A	403[A]	PLR	O3-C3-C4	2.81	125.44	118.10
2	A	401[B]	PLG	C5-C6-N1	-2.79	119.29	123.83
2	A	401[B]	PLG	O3-C3-C4	2.75	126.17	118.18
2	A	401[A]	PLG	O3-C3-C4	2.73	126.11	118.18
2	A	401[A]	PLG	C4A-C4-C5	2.73	122.72	119.75
4	A	403[A]	PLR	C5-C6-N1	-2.73	119.39	123.83
4	A	403[B]	PLR	C5-C6-N1	-2.72	119.41	123.83
2	A	401[B]	PLG	OP4-C5A-C5	2.64	114.30	109.36
5	A	405	EPE	O3S-S-C10	-2.55	101.01	106.00
5	B	402	EPE	C5-C6-N1	2.54	115.78	110.65
2	A	401[A]	PLG	C5-C6-N1	-2.48	119.79	123.83
5	B	402	EPE	O3S-S-C10	-2.29	101.52	106.00
5	B	402	EPE	C3-C2-N1	2.21	115.11	110.65
4	A	403[A]	PLR	O4P-C5A-C5	2.19	113.46	109.36
2	A	401[A]	PLG	O3-C3-C2	-2.14	113.14	117.58
4	A	403[A]	PLR	C4A-C4-C3	-2.14	116.95	120.52
4	A	403[B]	PLR	O3-C3-C2	-2.05	113.33	117.58
4	A	403[B]	PLR	O4P-C5A-C5	2.04	113.18	109.36

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401[A]	PLG	C5-C4-C4A-N
2	A	401[A]	PLG	C4-C5-C5A-OP4
2	A	401[A]	PLG	C6-C5-C5A-OP4
2	A	401[A]	PLG	C5A-OP4-P-OP2
2	A	401[A]	PLG	C5A-OP4-P-OP3
2	A	401[B]	PLG	C5-C4-C4A-N
2	A	401[B]	PLG	C5A-OP4-P-OP1
2	A	401[B]	PLG	C5A-OP4-P-OP2
2	A	401[B]	PLG	C5A-OP4-P-OP3
4	A	403[A]	PLR	C5A-O4P-P-O2P
4	A	403[A]	PLR	C5A-O4P-P-O3P

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Mol	Chain	Res	Type	Atoms
4	A	403[B]	PLR	C4-C5-C5A-O4P
4	A	403[B]	PLR	C6-C5-C5A-O4P
4	A	403[B]	PLR	C5A-O4P-P-O2P
4	A	403[B]	PLR	C5A-O4P-P-O3P
5	A	405	EPE	S-C10-C9-N1
2	A	401[A]	PLG	O-C-CA-N
2	A	401[A]	PLG	OXT-C-CA-N
5	B	402	EPE	S-C10-C9-N1
2	A	401[A]	PLG	C4-C4A-N-CA
2	A	401[B]	PLG	C4-C4A-N-CA
4	A	403[A]	PLR	C5A-O4P-P-O1P
4	A	403[B]	PLR	C5A-O4P-P-O1P
5	A	405	EPE	N4-C7-C8-O8
2	A	401[A]	PLG	C3-C4-C4A-N
2	A	401[B]	PLG	C3-C4-C4A-N
5	B	402	EPE	C8-C7-N4-C5

There are no ring outliers.

6 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	403[B]	PLR	2	0
5	A	405	EPE	1	0
4	A	403[A]	PLR	1	0
5	B	402	EPE	1	0
2	A	401[B]	PLG	7	0
2	A	401[A]	PLG	4	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand PLG A 401 (B)

Bond lengths

Bond angles

Torsions

Rings

Ligand PLG A 401 (A)

Bond lengths

Bond angles

Torsions

Rings
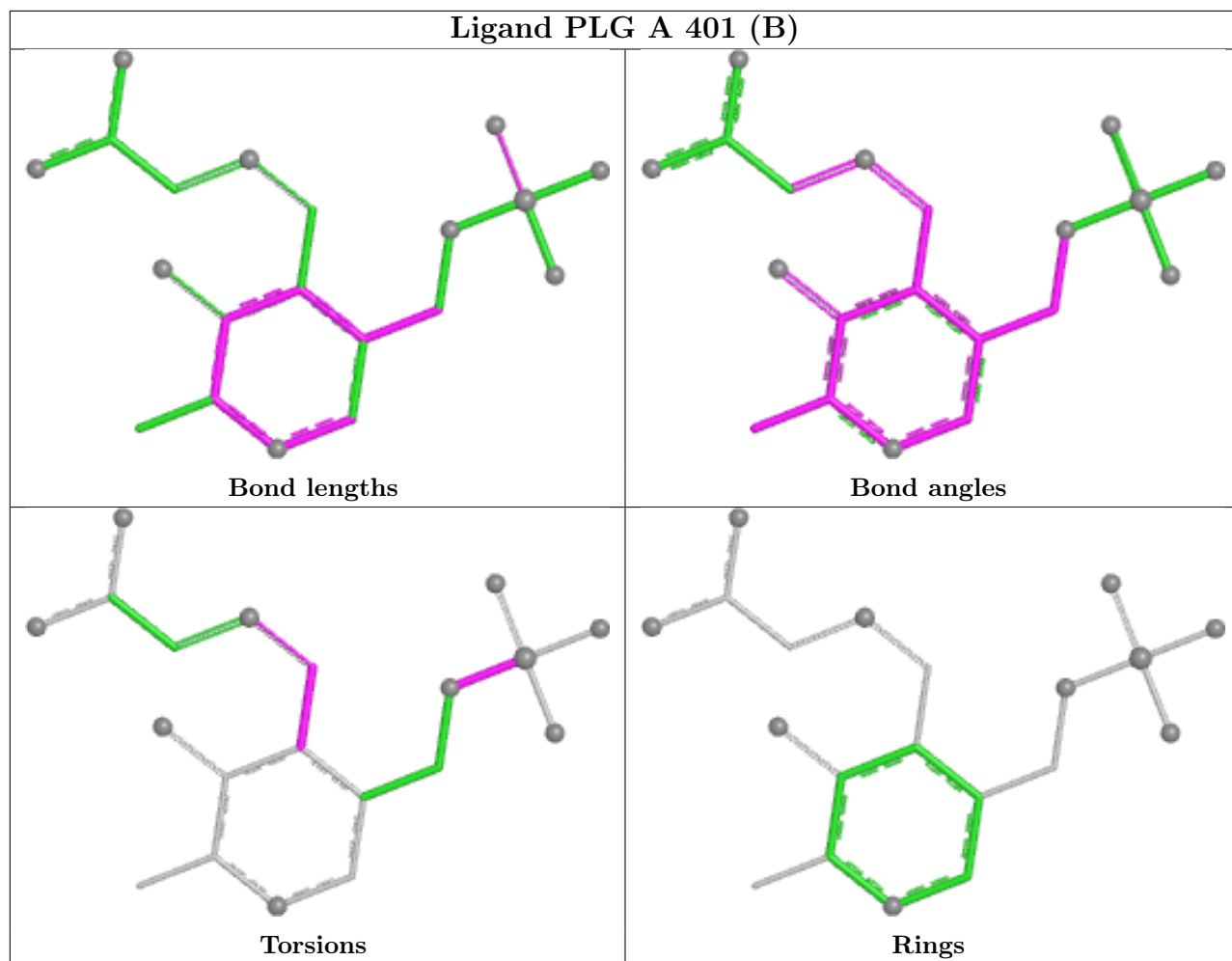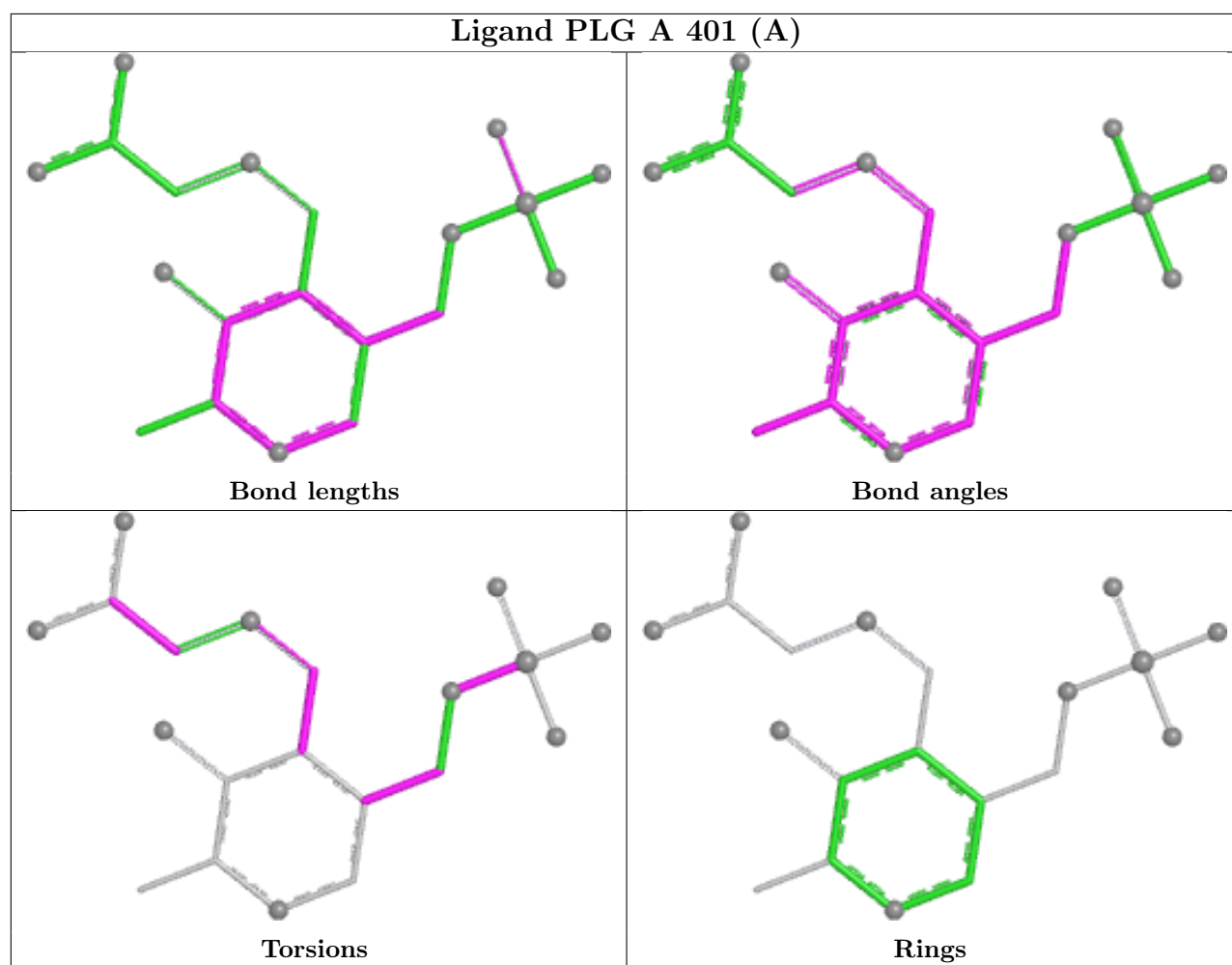
5.7　Other polymers ⓘ

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	A	331/333 (99%)	0.18	17 (5%)	34	36	13, 29, 54, 89	1 (0%)
1	B	331/333 (99%)	0.16	14 (4%)	41	43	15, 28, 61, 78	1 (0%)
All	All	662/666 (99%)	0.17	31 (4%)	37	39	13, 28, 60, 89	2 (0%)

All (31) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	273	GLN	5.5
1	A	330	PHE	3.9
1	B	138	THR	3.4
1	B	330	PHE	3.3
1	A	287	ALA	3.3
1	B	331	LEU	3.1
1	A	272	ARG	3.1
1	B	296	ALA	3.0
1	A	331	LEU	3.0
1	A	30	TYR	2.9
1	B	326	HIS	2.8
1	A	288	ALA	2.6
1	A	239	MET	2.6
1	B	290	LEU	2.5
1	A	23	ALA	2.4
1	A	22	ALA	2.4
1	A	286	ASN	2.4
1	B	289	ALA	2.3
1	B	293	TYR	2.3
1	A	300	LEU	2.3
1	B	301	ILE	2.2
1	A	303	ALA	2.2
1	B	329	ALA	2.2
1	B	21	MET	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	300	LEU	2.1
1	A	293	TYR	2.1
1	A	305	PRO	2.1
1	A	137	ASN	2.1
1	B	282	VAL	2.1
1	A	329	ALA	2.0
1	B	288	ALA	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
5	EPE	B	402	15/15	0.72	0.25	44,89,98,100	0
5	EPE	A	405	15/15	0.82	0.18	50,62,81,82	0
4	PLR	A	403[A]	15/15	0.84	0.17	38,50,59,61	15
4	PLR	A	403[B]	15/15	0.84	0.17	22,29,36,36	15
2	PLG	A	401[A]	20/20	0.86	0.17	37,44,50,51	20
2	PLG	A	401[B]	20/20	0.86	0.17	29,33,42,42	20
3	CA	A	404	1/1	0.97	0.08	44,44,44,44	0
3	CA	A	402	1/1	0.98	0.05	39,39,39,39	0
3	CA	B	401	1/1	0.98	0.04	37,37,37,37	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.
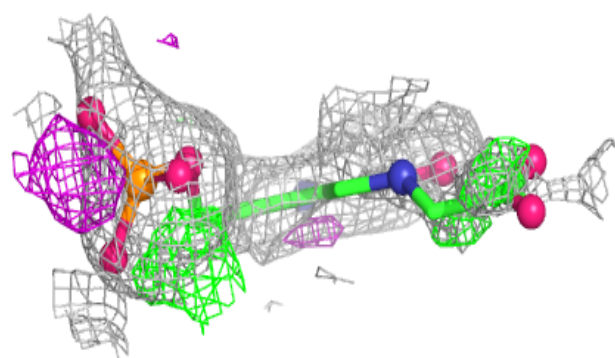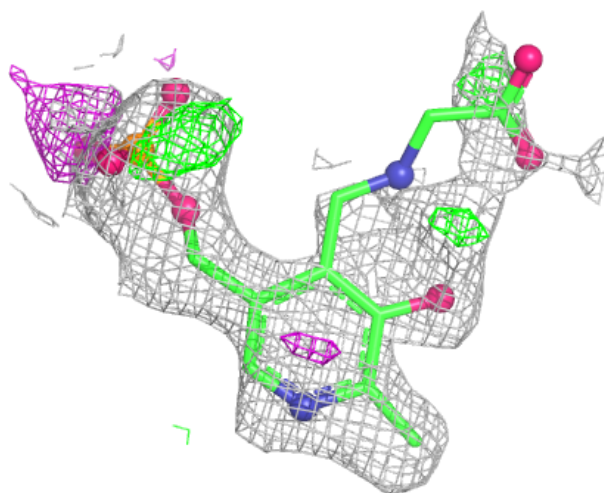
Electron density around PLG A 401 (A):

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
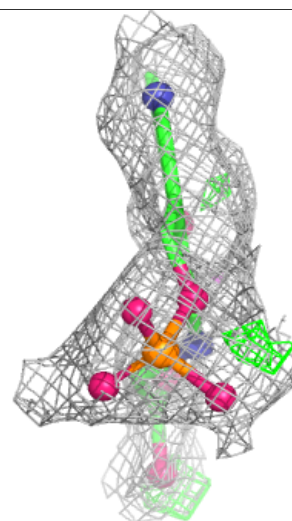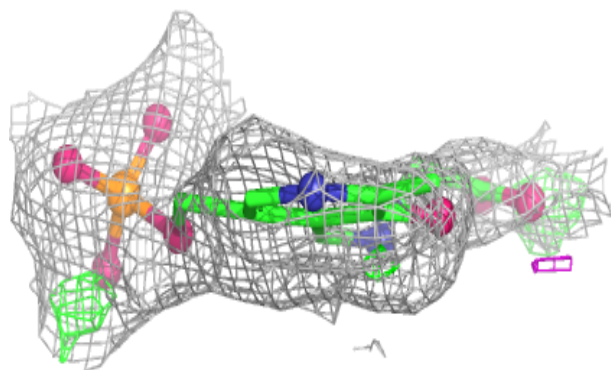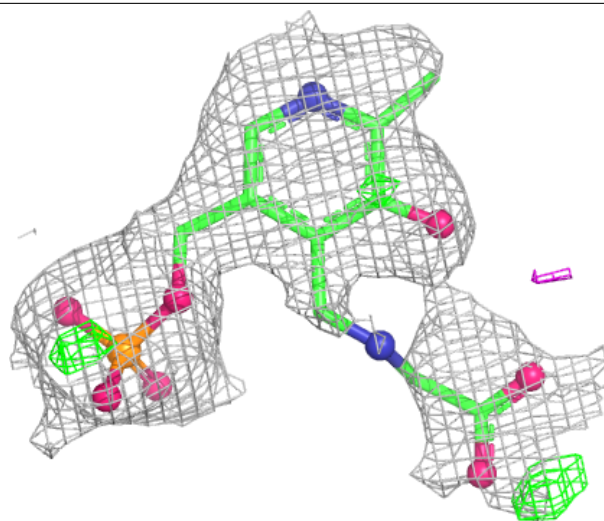
Electron density around PLG A 401 (B):

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

6.5 Other polymers ⓘ

There are no such residues in this entry.