



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 07:09 AM GMT

PDB ID : 2ZQY
Title : T-state structure of allosteric L-lactate dehydrogenase from *Lactobacillus casei*
Authors : Arai, K.; Ishimitsu, T.; Fushinobu, S.; Uchikoba, H.; Matsuzawa, H.; Taguchi, H.
Deposited on : 2008-08-22
Resolution : 2.60 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 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
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) : trunk26865

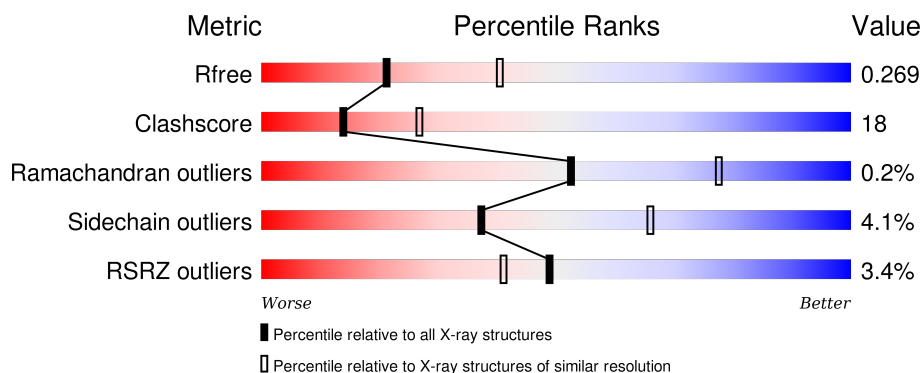
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	2328 (2.60-2.60)
Clashscore	102246	2679 (2.60-2.60)
Ramachandran outliers	100387	2635 (2.60-2.60)
Sidechain outliers	100360	2635 (2.60-2.60)
RSRZ outliers	91569	2334 (2.60-2.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	326	<div> <div>5%</div> <div>62%</div> <div>29%</div> <div>6%</div> </div>
1	B	326	<div> <div>3%</div> <div>63%</div> <div>29%</div> <div>6%</div> </div>
1	C	326	<div> <div>%</div> <div>67%</div> <div>28%</div> <div>• •</div> </div>
1	D	326	<div> <div>4%</div> <div>59%</div> <div>33%</div> <div>• 6%</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 criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	NO3	A	8	-	-	-	X

2 Entry composition [i](#)

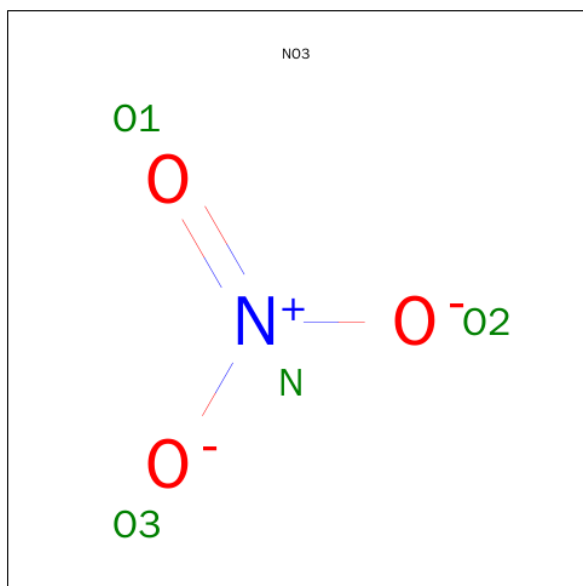
There are 3 unique types of molecules in this entry. The entry contains 9803 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 L-lactate dehydrogenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	305	Total	C	N	O	S	0	0	0
			2334	1492	386	450	6			
1	B	308	Total	C	N	O	S	0	0	0
			2359	1508	391	454	6			
1	C	316	Total	C	N	O	S	0	0	0
			2424	1546	404	468	6			
1	D	305	Total	C	N	O	S	0	0	0
			2334	1492	386	450	6			

- Molecule 2 is NITRATE ION (three-letter code: NO3) (formula: NO₃).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	N	O	0	0
			4	1	3		
2	A	1	Total	N	O	0	0
			4	1	3		

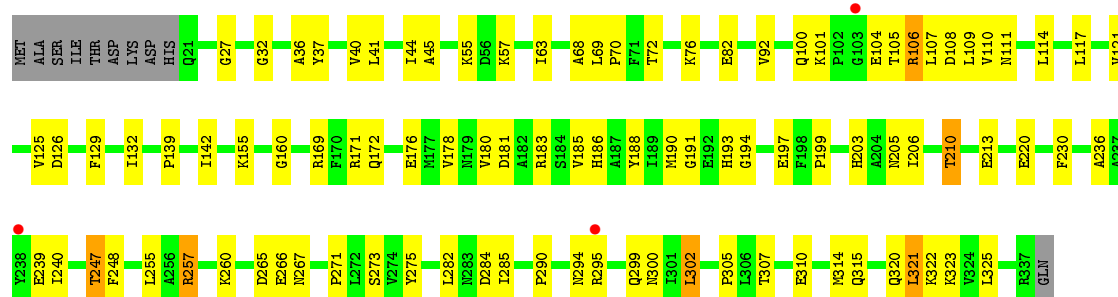
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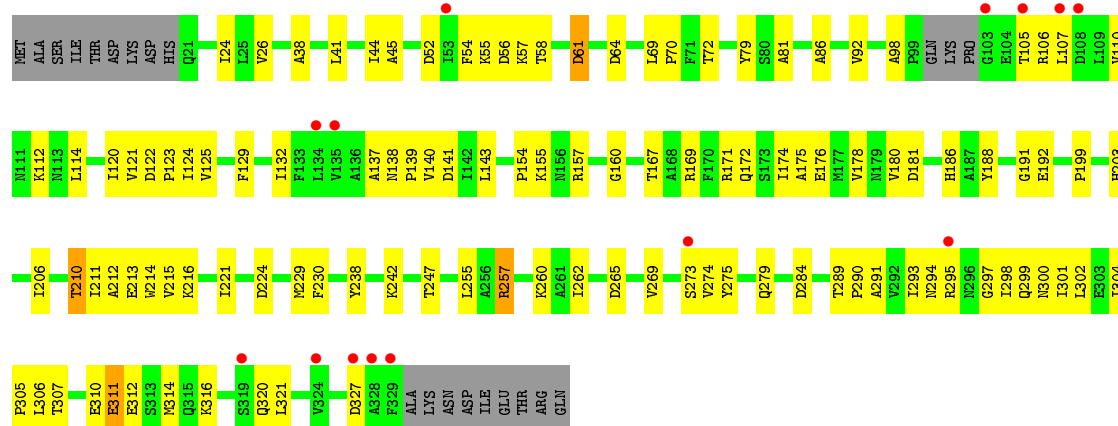
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total 4	N 1	O 3	0	0
2	B	1	Total 4	N 1	O 3	0	0
2	B	1	Total 4	N 1	O 3	0	0
2	B	1	Total 4	N 1	O 3	0	0
2	C	1	Total 4	N 1	O 3	0	0
2	D	1	Total 4	N 1	O 3	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	61	Total 61	O 61	0	0
3	B	83	Total 83	O 83	0	0
3	C	91	Total 91	O 91	0	0
3	D	85	Total 85	O 85	0	0



• Molecule 1: L-lactate dehydrogenase



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	64.34Å 143.98Å 144.79Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.82 – 2.60 32.34 – 2.50	Depositor EDS
% Data completeness (in resolution range)	91.5 (30.82-2.60) 92.6 (32.34-2.50)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.82 (at 2.51Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.196 , 0.265 0.201 , 0.269	Depositor DCC
R_{free} test set	1935 reflections (4.91%)	DCC
Wilson B-factor (Å ²)	36.2	Xtriage
Anisotropy	0.555	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 51.0	EDS
Estimated twinning fraction	0.016 for -h,l,k	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 43858 reflections	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	9803	wwPDB-VP
Average B, all atoms (Å ²)	39.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.41% of the height of the origin peak. No significant pseudotranslation is detected.*

¹ Intensities estimated from amplitudes.

² Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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: NO3

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	0.36	0/2375	0.59	0/3221
1	B	0.37	0/2402	0.61	0/3259
1	C	0.38	0/2467	0.61	0/3346
1	D	0.35	0/2375	0.60	0/3221
All	All	0.36	0/9619	0.60	0/13047

There are no bond length outliers.

There are no bond angle outliers.

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	2334	0	2355	89	0
1	B	2359	0	2384	85	0
1	C	2424	0	2449	80	0
1	D	2334	0	2355	106	0
2	A	12	0	0	0	0
2	B	12	0	0	0	0
2	C	4	0	0	0	0
2	D	4	0	0	0	0
3	A	61	0	0	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	83	0	0	5	0
3	C	91	0	0	6	0
3	D	85	0	0	9	0
All	All	9803	0	9543	350	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 18.

All (350) 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:B:307:THR:HG22	1:B:310:GLU:H	1.15	1.09
1:D:210:THR:HG22	1:D:213:GLU:H	1.34	0.90
1:C:240:ILE:HG21	1:C:247:THR:HG23	1.54	0.86
1:B:100:GLN:HB2	1:B:109:LEU:HD22	1.59	0.84
1:C:105:THR:HG22	1:C:107:LEU:H	1.44	0.81
1:A:222:LYS:HB2	1:A:225:LYS:HG2	1.63	0.80
1:B:55:LYS:HD3	1:B:82:GLU:OE2	1.83	0.78
1:A:274:VAL:HG12	1:A:298:ILE:HD13	1.66	0.76
1:B:21:GLN:HE21	1:B:46:GLN:HE21	1.34	0.76
1:D:307:THR:CG2	1:D:310:GLU:H	2.00	0.75
1:B:41:LEU:HA	1:B:72:THR:HG21	1.67	0.75
1:B:105:THR:HG22	1:B:107:LEU:H	1.53	0.74
1:C:307:THR:HG22	1:C:310:GLU:HB2	1.70	0.73
1:D:122:ASP:HB2	1:D:123:PRO:HD3	1.69	0.73
1:A:178:VAL:HG21	1:A:206:ILE:CD1	2.19	0.73
1:C:100:GLN:HB3	1:C:109:LEU:HD22	1.71	0.73
1:B:311:GLU:O	1:B:315:GLN:HG2	1.89	0.71
1:D:210:THR:HG23	3:D:365:HOH:O	1.89	0.71
1:D:299:GLN:HE21	1:D:300:ASN:HD21	1.38	0.71
1:D:55:LYS:HD3	3:D:389:HOH:O	1.91	0.71
1:B:194:GLY:O	1:B:197:GLU:HG2	1.90	0.71
1:B:299:GLN:HE21	1:B:300:ASN:ND2	1.87	0.71
1:B:28:ASP:OD2	1:B:57:LYS:HD2	1.91	0.70
1:C:307:THR:CG2	1:C:310:GLU:H	2.04	0.70
1:B:154:PRO:HD2	1:B:157:ARG:HG3	1.74	0.70
1:A:274:VAL:HG12	1:A:298:ILE:CD1	2.23	0.69
1:C:307:THR:HG23	1:C:310:GLU:H	1.56	0.69
1:B:178:VAL:HG11	1:B:206:ILE:HD13	1.73	0.69
1:A:194:GLY:O	1:A:197:GLU:HG2	1.92	0.68
1:A:210:THR:HG22	3:A:347:HOH:O	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:299:GLN:HE21	1:C:300:ASN:ND2	1.92	0.68
1:A:98:ALA:HB3	1:A:112:LYS:NZ	2.10	0.67
1:B:141:ASP:HB2	3:B:349:HOH:O	1.95	0.67
1:D:26:VAL:HG21	1:D:124:ILE:HD11	1.76	0.66
1:D:172:GLN:O	1:D:176:GLU:HG3	1.93	0.66
1:D:274:VAL:HG12	1:D:298:ILE:HD13	1.77	0.66
1:B:57:LYS:O	1:B:57:LYS:HD3	1.96	0.66
1:D:192:GLU:OE2	1:D:321:LEU:HD23	1.96	0.66
1:D:57:LYS:O	1:D:61:ASP:HB2	1.96	0.65
1:A:145:TYR:HE2	1:A:284:ASP:O	1.79	0.65
1:D:307:THR:HG22	1:D:310:GLU:H	1.62	0.65
1:A:299:GLN:HG2	1:A:300:ASN:ND2	2.11	0.65
1:D:307:THR:HG22	1:D:310:GLU:HG3	1.78	0.64
1:B:210:THR:HG22	1:B:212:ALA:N	2.12	0.64
1:A:261:ALA:HA	1:A:266:GLU:HG3	1.80	0.64
1:B:21:GLN:HE21	1:B:46:GLN:NE2	1.95	0.64
1:B:299:GLN:HG2	1:B:300:ASN:ND2	2.13	0.64
1:A:159:VAL:HG11	1:A:272:LEU:HD13	1.80	0.63
1:C:108:ASP:HA	1:C:111:ASN:HD22	1.63	0.63
1:C:178:VAL:HG11	1:C:206:ILE:HD13	1.81	0.63
1:D:203:HIS:CD2	1:D:304:ILE:HG23	2.33	0.63
1:C:106:ARG:O	1:C:110:VAL:HG23	1.97	0.63
1:B:299:GLN:HE21	1:B:300:ASN:HD21	1.46	0.63
1:A:240:ILE:CG2	1:A:247:THR:HG23	2.28	0.63
1:D:262:ILE:HD11	1:D:293:ILE:HD11	1.81	0.63
1:B:136:ALA:CB	1:B:255:LEU:HD21	2.29	0.62
1:C:186:HIS:HE1	3:C:345:HOH:O	1.82	0.62
1:C:172:GLN:O	1:C:176:GLU:HG3	2.00	0.62
1:C:210:THR:HG22	1:C:213:GLU:H	1.64	0.62
1:A:186:HIS:HD2	1:A:205:ASN:OD1	1.82	0.62
1:D:191:GLY:HA2	1:D:314:MET:CE	2.29	0.62
1:A:201:TRP:HB2	3:A:383:HOH:O	1.98	0.62
1:A:154:PRO:HD2	1:A:157:ARG:HG3	1.82	0.61
1:D:307:THR:HG22	1:D:310:GLU:CG	2.30	0.61
1:D:121:VAL:O	1:D:125:VAL:HG23	2.00	0.61
1:D:247:THR:HG22	3:D:379:HOH:O	2.00	0.61
1:B:320:GLN:HG3	1:B:321:LEU:N	2.15	0.61
1:B:210:THR:HG22	1:B:212:ALA:H	1.65	0.61
1:A:26:VAL:HG11	1:A:120:ILE:HD13	1.83	0.61
1:A:118:LYS:HB2	1:A:118:LYS:HZ2	1.65	0.61
1:D:299:GLN:HE21	1:D:300:ASN:ND2	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:307:THR:HG22	1:C:310:GLU:CB	2.31	0.60
1:B:91:LEU:HD12	1:B:132:ILE:O	2.01	0.60
1:D:129:PHE:HA	3:D:373:HOH:O	2.00	0.60
1:B:210:THR:HG23	3:B:339:HOH:O	2.02	0.60
1:B:69:LEU:N	1:B:70:PRO:HD2	2.17	0.60
1:D:106:ARG:O	1:D:110:VAL:HG23	2.01	0.60
1:A:240:ILE:HG21	1:A:247:THR:HG23	1.83	0.59
1:D:106:ARG:HG2	1:D:106:ARG:HH21	1.67	0.59
1:D:312:GLU:HG2	1:D:316:LYS:HE3	1.83	0.59
1:A:21:GLN:N	3:A:359:HOH:O	2.35	0.59
1:C:106:ARG:HH21	1:C:320:GLN:HE22	1.49	0.59
1:A:223:GLU:O	1:A:227:VAL:HG23	2.02	0.59
1:B:307:THR:CG2	1:B:310:GLU:H	2.03	0.59
1:D:210:THR:HG22	1:D:213:GLU:N	2.14	0.59
1:C:100:GLN:HG2	1:C:100:GLN:O	2.02	0.58
1:B:220:GLU:HA	1:B:222:LYS:NZ	2.19	0.58
1:D:307:THR:HG22	1:D:310:GLU:CB	2.34	0.58
1:D:26:VAL:HG11	1:D:120:ILE:CG2	2.34	0.58
1:C:108:ASP:HA	1:C:111:ASN:ND2	2.18	0.58
1:D:211:ILE:O	1:D:215:VAL:HG23	2.04	0.58
1:B:237:ALA:O	1:B:241:ILE:HG13	2.04	0.58
1:C:320:GLN:HG2	1:C:323:LYS:NZ	2.19	0.57
1:D:174:ILE:HA	1:D:229:MET:HE1	1.84	0.57
1:A:67:ASN:HD22	1:C:169:ARG:HD3	1.69	0.57
1:C:236:ALA:O	1:C:240:ILE:HG13	2.03	0.57
1:A:190:MET:HE2	1:A:289:THR:HA	1.87	0.57
1:C:210:THR:HG23	3:C:412:HOH:O	2.05	0.57
1:A:193:HIS:HD2	3:A:340:HOH:O	1.88	0.57
1:A:275:TYR:CZ	1:A:284:ASP:HA	2.39	0.57
1:A:265:ASP:OD1	1:A:294:ASN:HB2	2.04	0.57
1:A:41:LEU:HA	1:A:72:THR:HG21	1.87	0.56
1:C:69:LEU:N	1:C:70:PRO:HD2	2.20	0.56
1:A:118:LYS:HD2	1:A:122:ASP:OD2	2.05	0.56
1:B:159:VAL:HG11	1:B:272:LEU:HD13	1.87	0.56
1:B:320:GLN:HG3	1:B:321:LEU:H	1.71	0.56
1:A:178:VAL:HG11	1:A:206:ILE:HD13	1.87	0.56
1:D:191:GLY:HA2	1:D:314:MET:HE3	1.88	0.56
1:B:92:VAL:HG11	1:B:124:ILE:HD13	1.86	0.56
1:C:100:GLN:HB3	1:C:109:LEU:CD2	2.36	0.55
1:D:299:GLN:HG2	1:D:300:ASN:ND2	2.21	0.55
1:C:199:PRO:HD3	1:C:230:PHE:CZ	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:69:LEU:N	1:D:70:PRO:HD2	2.21	0.55
1:C:171:ARG:HD3	1:C:185:VAL:O	2.07	0.55
1:D:320:GLN:NE2	3:D:385:HOH:O	2.39	0.55
1:B:247:THR:HG21	3:D:420:HOH:O	2.06	0.55
1:B:261:ALA:HA	1:B:266:GLU:HB2	1.88	0.55
1:D:307:THR:HG23	1:D:310:GLU:H	1.72	0.55
1:A:57:LYS:O	1:A:61:ASP:HB2	2.06	0.55
1:B:21:GLN:NE2	1:B:46:GLN:HE21	2.05	0.55
1:A:178:VAL:HG21	1:A:206:ILE:HD11	1.88	0.55
1:D:44:ILE:HD13	1:D:260:LYS:HB2	1.90	0.54
1:C:186:HIS:HD2	1:C:205:ASN:OD1	1.90	0.54
1:B:186:HIS:HD2	1:B:205:ASN:OD1	1.91	0.54
1:B:307:THR:HG23	1:B:309:HIS:H	1.71	0.54
1:B:57:LYS:HD3	1:B:57:LYS:C	2.28	0.54
1:A:79:TYR:CE2	1:A:81:ALA:HB2	2.43	0.54
1:B:307:THR:CG2	1:B:309:HIS:HB3	2.38	0.53
1:B:321:LEU:O	1:B:321:LEU:HD12	2.09	0.53
1:B:278:GLY:O	1:B:281:GLY:N	2.37	0.53
1:D:24:ILE:HG13	1:D:86:ALA:HA	1.90	0.53
1:C:181:ASP:OD2	1:C:183:ARG:HB2	2.09	0.53
1:C:155:LYS:HD3	1:C:275:TYR:CD2	2.43	0.53
1:D:178:VAL:HG22	1:D:221:ILE:HD13	1.90	0.53
1:C:37:TYR:CZ	1:C:41:LEU:HD11	2.44	0.53
1:A:203:HIS:CD2	1:A:304:ILE:HG23	2.44	0.53
1:C:40:VAL:HG13	1:C:69:LEU:HD23	1.91	0.53
1:C:76:LYS:HE2	3:C:385:HOH:O	2.09	0.52
1:C:191:GLY:HA2	1:C:314:MET:CE	2.39	0.52
1:A:275:TYR:OH	1:A:284:ASP:HA	2.09	0.52
1:A:118:LYS:HB2	1:A:118:LYS:NZ	2.24	0.52
1:D:138:ASN:HA	1:D:140:VAL:N	2.24	0.52
1:D:155:LYS:HD3	1:D:275:TYR:CD2	2.45	0.52
1:C:41:LEU:HA	1:C:72:THR:HG21	1.92	0.52
1:B:290:PRO:HB2	1:B:302:LEU:HB2	1.92	0.52
1:D:41:LEU:HA	1:D:72:THR:HG21	1.91	0.52
1:B:118:LYS:HA	1:B:150:LEU:HD13	1.92	0.52
1:C:275:TYR:CZ	1:C:284:ASP:HA	2.44	0.52
1:D:44:ILE:O	1:D:45:ALA:HB3	2.09	0.52
1:B:40:VAL:HA	1:B:76:LYS:HE3	1.92	0.52
1:A:244:LYS:O	1:A:244:LYS:HG2	2.09	0.52
1:C:40:VAL:HA	1:C:76:LYS:HE3	1.92	0.51
1:D:265:ASP:OD1	1:D:295:ARG:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:140:VAL:HG13	1:A:141:ASP:N	2.25	0.51
1:B:265:ASP:OD1	1:B:294:ASN:HB2	2.09	0.51
1:A:40:VAL:HA	1:A:76:LYS:HE3	1.92	0.51
1:D:178:VAL:HG11	1:D:206:ILE:HD13	1.91	0.51
1:B:76:LYS:HE2	3:B:372:HOH:O	2.09	0.51
1:D:307:THR:CG2	1:D:310:GLU:HG3	2.41	0.51
1:D:122:ASP:CB	1:D:123:PRO:HD3	2.40	0.51
1:B:220:GLU:HA	1:B:222:LYS:HZ3	1.76	0.51
1:D:210:THR:CG2	1:D:212:ALA:HB3	2.40	0.51
1:A:178:VAL:HG21	1:A:206:ILE:HD13	1.92	0.51
1:D:191:GLY:HA2	1:D:314:MET:HE1	1.93	0.50
1:A:87:LYS:HG3	1:A:127:SER:O	2.12	0.50
1:B:260:LYS:HG2	1:B:264:ASN:HD22	1.77	0.50
1:D:274:VAL:HG12	1:D:298:ILE:CD1	2.42	0.50
1:A:174:ILE:O	1:A:178:VAL:HB	2.12	0.50
1:D:307:THR:HG22	1:D:310:GLU:HB2	1.94	0.49
1:A:159:VAL:CG1	1:A:272:LEU:HD13	2.42	0.49
1:D:306:LEU:HD22	1:D:310:GLU:HB3	1.92	0.49
1:A:21:GLN:N	3:A:371:HOH:O	2.44	0.49
1:B:26:VAL:HG21	1:B:124:ILE:HD11	1.93	0.49
1:B:41:LEU:CD1	1:D:38:ALA:HA	2.41	0.49
1:C:132:ILE:HD11	1:C:295:ARG:O	2.12	0.49
1:A:220:GLU:CD	1:A:220:GLU:H	2.16	0.49
1:A:210:THR:CG2	3:A:347:HOH:O	2.58	0.49
1:C:285:ILE:HG23	1:C:322:LYS:HD3	1.94	0.49
1:C:285:ILE:CG2	1:C:322:LYS:HD3	2.42	0.49
1:A:229:MET:O	1:A:233:VAL:HG23	2.12	0.49
1:B:107:LEU:HG	1:B:111:ASN:ND2	2.27	0.49
1:D:203:HIS:CD2	1:D:305:PRO:HD2	2.48	0.49
1:C:284:ASP:O	1:C:285:ILE:HG23	2.13	0.49
1:D:238:TYR:CE2	1:D:242:LYS:HE3	2.47	0.49
1:D:26:VAL:HG11	1:D:120:ILE:HG21	1.94	0.49
1:A:44:ILE:O	1:A:45:ALA:HB3	2.12	0.49
1:A:69:LEU:N	1:A:70:PRO:HD2	2.28	0.49
1:A:199:PRO:HD3	1:A:230:PHE:CZ	2.48	0.48
1:A:244:LYS:HG3	1:C:57:LYS:HD2	1.95	0.48
1:B:101:LYS:O	1:B:103:GLY:N	2.41	0.48
1:D:178:VAL:HG22	1:D:221:ILE:CD1	2.43	0.48
1:C:68:ALA:C	1:C:70:PRO:HD2	2.34	0.48
1:A:28:ASP:OD2	1:A:57:LYS:HE2	2.13	0.48
1:B:106:ARG:O	1:B:109:LEU:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:322:LYS:HG3	3:C:414:HOH:O	2.14	0.48
1:C:106:ARG:NH1	1:C:139:PRO:HB3	2.29	0.48
1:D:210:THR:HG22	1:D:212:ALA:N	2.28	0.48
1:B:247:THR:HG22	3:B:381:HOH:O	2.13	0.48
1:C:139:PRO:HB2	3:C:365:HOH:O	2.13	0.48
1:B:122:ASP:HB2	1:B:123:PRO:CD	2.44	0.48
1:C:282:LEU:HD11	1:C:314:MET:HG3	1.95	0.48
1:B:67:ASN:HD22	1:D:169:ARG:HD3	1.79	0.47
1:C:55:LYS:HD3	1:C:82:GLU:OE2	2.14	0.47
1:A:155:LYS:HD3	1:A:275:TYR:CD2	2.49	0.47
1:D:181:ASP:HA	3:D:388:HOH:O	2.14	0.47
1:D:138:ASN:ND2	3:D:368:HOH:O	2.47	0.47
1:A:122:ASP:HB2	1:A:123:PRO:CD	2.44	0.47
1:B:44:ILE:O	1:B:45:ALA:HB3	2.13	0.47
1:A:222:LYS:HB2	1:A:225:LYS:CG	2.41	0.47
1:B:118:LYS:NZ	1:B:122:ASP:OD2	2.47	0.47
1:B:199:PRO:HD3	1:B:230:PHE:CZ	2.48	0.47
1:D:199:PRO:HD3	1:D:230:PHE:CZ	2.50	0.47
1:C:117:LEU:O	1:C:121:VAL:HG23	2.15	0.47
1:D:92:VAL:HG11	1:D:124:ILE:HD13	1.98	0.46
1:B:154:PRO:HB2	1:B:157:ARG:HG2	1.98	0.46
1:B:140:VAL:HG13	1:B:141:ASP:N	2.30	0.46
1:A:188:TYR:CD2	1:A:290:PRO:HG3	2.50	0.46
1:B:262:ILE:O	1:B:295:ARG:HA	2.14	0.46
1:A:50:ILE:HG22	1:A:58:THR:HG22	1.97	0.46
1:A:118:LYS:NZ	1:A:150:LEU:HD21	2.29	0.46
1:C:44:ILE:O	1:C:45:ALA:HB3	2.15	0.46
1:C:265:ASP:OD1	1:C:294:ASN:HB2	2.15	0.46
1:A:240:ILE:HG21	1:A:247:THR:CG2	2.45	0.46
1:D:312:GLU:O	1:D:316:LYS:HG3	2.15	0.46
1:C:106:ARG:NH2	1:C:320:GLN:HE22	2.13	0.46
1:A:132:ILE:HD11	1:A:297:GLY:N	2.30	0.46
1:B:312:GLU:O	1:B:315:GLN:HB2	2.15	0.46
1:D:265:ASP:OD1	1:D:294:ASN:HB2	2.16	0.46
1:A:307:THR:HG22	1:A:310:GLU:H	1.81	0.46
1:A:285:ILE:HD12	1:A:321:LEU:HD13	1.97	0.46
1:C:27:GLY:O	1:C:32:GLY:HA3	2.16	0.46
1:A:312:GLU:HB3	1:A:316:LYS:HE3	1.98	0.46
1:C:299:GLN:HE21	1:C:300:ASN:HD21	1.61	0.46
1:A:266:GLU:O	1:D:181:ASP:HB2	2.16	0.45
1:D:110:VAL:O	1:D:114:LEU:HG	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:238:TYR:CZ	1:D:242:LYS:HE3	2.51	0.45
1:B:295:ARG:HB3	1:B:295:ARG:HE	1.35	0.45
1:D:79:TYR:CE2	1:D:81:ALA:HB2	2.51	0.45
1:A:285:ILE:HG21	1:A:322:LYS:HG3	1.99	0.45
1:C:178:VAL:HG12	1:C:180:VAL:HG23	1.99	0.45
1:D:203:HIS:HD2	1:D:305:PRO:HD2	1.82	0.45
1:D:269:VAL:HA	1:D:291:ALA:O	2.16	0.45
1:D:167:THR:O	1:D:171:ARG:HG3	2.17	0.45
1:D:307:THR:O	1:D:311:GLU:HB2	2.16	0.45
1:D:105:THR:HG22	1:D:107:LEU:H	1.82	0.45
1:C:302:LEU:HD23	1:C:302:LEU:N	2.31	0.45
1:B:307:THR:HG23	1:B:309:HIS:N	2.32	0.44
1:A:244:LYS:HD2	1:A:246:ALA:O	2.17	0.44
1:A:261:ALA:HA	1:A:266:GLU:CG	2.47	0.44
1:D:186:HIS:HE1	3:D:400:HOH:O	2.00	0.44
1:B:26:VAL:HG11	1:B:120:ILE:CG2	2.47	0.44
1:C:307:THR:HG22	1:C:310:GLU:CG	2.47	0.44
1:D:26:VAL:HG11	1:D:120:ILE:HG23	1.99	0.44
1:D:24:ILE:HB	1:D:92:VAL:HG22	2.00	0.44
1:A:200:VAL:HG12	1:A:200:VAL:O	2.18	0.44
1:B:292:VAL:HG23	1:B:300:ASN:HB2	1.99	0.44
1:A:109:LEU:HD12	1:A:112:LYS:HE2	1.99	0.44
1:A:98:ALA:HB3	1:A:112:LYS:HZ2	1.81	0.44
1:B:35:TYR:O	1:B:39:MET:HG2	2.18	0.44
1:C:193:HIS:HD2	3:C:346:HOH:O	2.00	0.44
1:C:191:GLY:HA2	1:C:314:MET:HE1	2.00	0.44
1:A:172:GLN:O	1:A:176:GLU:HG3	2.17	0.44
1:D:274:VAL:HG22	1:D:289:THR:HG22	2.00	0.44
1:B:55:LYS:HD2	3:B:373:HOH:O	2.18	0.44
1:D:279:GLN:HE22	1:D:301:ILE:HD12	1.83	0.44
1:A:26:VAL:CG1	1:A:120:ILE:HD13	2.47	0.43
1:A:218:HIS:HB3	1:A:220:GLU:OE1	2.18	0.43
1:D:175:ALA:HB1	1:D:180:VAL:O	2.18	0.43
1:D:275:TYR:CZ	1:D:284:ASP:HA	2.53	0.43
1:A:307:THR:HG22	1:A:309:HIS:N	2.33	0.43
1:B:255:LEU:HD12	1:B:255:LEU:HA	1.71	0.43
1:D:106:ARG:NH2	1:D:106:ARG:HG2	2.32	0.43
1:C:266:GLU:O	1:C:267:ASN:HB2	2.17	0.43
1:D:257:ARG:HD3	1:D:257:ARG:C	2.39	0.43
1:C:203:HIS:CD2	1:C:305:PRO:HD2	2.53	0.43
1:D:137:ALA:O	1:D:143:LEU:HD12	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:188:TYR:CD2	1:D:290:PRO:HG3	2.53	0.43
1:B:307:THR:HG22	1:B:310:GLU:N	2.01	0.43
1:B:289:THR:OG1	1:B:290:PRO:HD2	2.18	0.43
1:C:44:ILE:HD13	1:C:260:LYS:HB2	2.01	0.43
1:D:210:THR:HG21	1:D:212:ALA:HB3	2.01	0.43
1:D:216:LYS:HD2	1:D:216:LYS:HA	1.82	0.43
1:C:194:GLY:O	1:C:197:GLU:HG2	2.19	0.43
1:D:137:ALA:O	1:D:140:VAL:HA	2.19	0.42
1:C:188:TYR:CD2	1:C:271:PRO:HG3	2.54	0.42
1:C:105:THR:C	1:C:107:LEU:N	2.72	0.42
1:A:118:LYS:HZ2	1:A:150:LEU:HD21	1.84	0.42
1:C:257:ARG:C	1:C:257:ARG:HD3	2.40	0.42
1:B:308:ASP:O	1:B:312:GLU:HG3	2.19	0.42
1:B:222:LYS:N	1:B:222:LYS:HD2	2.34	0.42
1:D:215:VAL:HG13	1:D:221:ILE:O	2.20	0.42
1:D:290:PRO:HB2	1:D:302:LEU:HB2	2.00	0.42
1:B:222:LYS:HB3	1:B:224:ASP:OD1	2.20	0.42
1:C:100:GLN:HA	1:C:109:LEU:HD13	2.00	0.42
1:D:178:VAL:HG12	1:D:180:VAL:HG23	2.02	0.42
1:A:140:VAL:HG13	1:A:141:ASP:H	1.84	0.42
1:D:98:ALA:HB3	1:D:112:LYS:HE3	2.02	0.42
1:C:220:GLU:CD	1:C:220:GLU:H	2.23	0.42
1:D:52:ASP:HB3	1:D:58:THR:CG2	2.49	0.42
1:D:160:GLY:HA3	1:D:273:SER:HB2	2.01	0.42
1:D:54:PHE:O	1:D:58:THR:HG23	2.19	0.42
1:B:287:ILE:HG12	1:B:288:GLY:H	1.85	0.42
1:A:186:HIS:CE1	1:D:186:HIS:CE1	3.08	0.42
1:B:190:MET:HE1	1:B:280:TYR:OH	2.20	0.42
1:C:299:GLN:HG2	1:C:300:ASN:ND2	2.35	0.41
1:D:304:ILE:HA	1:D:305:PRO:HD3	1.84	0.41
1:D:178:VAL:CG1	1:D:178:VAL:O	2.67	0.41
1:A:35:TYR:O	1:A:39:MET:HG2	2.21	0.41
1:C:101:LYS:HG2	1:C:104:GLU:OE2	2.20	0.41
1:A:145:TYR:CD1	1:A:325:LEU:HD21	2.55	0.41
1:C:139:PRO:HG2	1:C:142:ILE:HB	2.02	0.41
1:C:188:TYR:CD2	1:C:290:PRO:HG3	2.55	0.41
1:D:154:PRO:HB2	1:D:157:ARG:HG2	2.02	0.41
1:B:243:LEU:HB3	1:D:56:ASP:O	2.20	0.41
1:C:320:GLN:HG2	1:C:323:LYS:HZ1	1.85	0.41
1:C:321:LEU:HD13	1:C:325:LEU:CD2	2.51	0.41
1:A:191:GLY:HA2	1:A:287:ILE:HD11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:160:GLY:HA3	1:C:273:SER:HB2	2.02	0.41
1:C:92:VAL:HG23	1:C:129:PHE:CE1	2.56	0.41
1:A:240:ILE:HB	1:A:247:THR:HG23	2.02	0.41
1:B:105:THR:CG2	1:B:107:LEU:HB3	2.51	0.41
1:C:248:PHE:CD1	1:C:248:PHE:N	2.89	0.41
1:A:21:GLN:HB2	1:A:46:GLN:NE2	2.36	0.41
1:B:229:MET:O	1:B:233:VAL:HG23	2.21	0.41
1:A:307:THR:H	1:A:310:GLU:HB2	1.85	0.41
1:B:190:MET:HE1	1:B:280:TYR:CZ	2.56	0.41
1:B:105:THR:HG22	1:B:107:LEU:N	2.30	0.41
1:A:240:ILE:HD11	1:C:63:ILE:HG22	2.03	0.41
1:B:69:LEU:N	1:B:70:PRO:CD	2.83	0.41
1:A:79:TYR:HE2	1:A:81:ALA:HB2	1.86	0.41
1:D:138:ASN:HA	1:D:139:PRO:C	2.41	0.41
1:B:295:ARG:O	1:B:295:ARG:HG2	2.21	0.41
1:D:178:VAL:O	1:D:178:VAL:HG12	2.20	0.41
1:B:248:PHE:HA	1:B:251:ILE:HG22	2.02	0.41
1:D:327:ASP:OD2	1:D:327:ASP:N	2.53	0.41
1:A:274:VAL:CG1	1:A:298:ILE:HD13	2.43	0.40
1:A:210:THR:HG22	1:A:212:ALA:H	1.87	0.40
1:A:188:TYR:CE2	1:A:290:PRO:HG3	2.56	0.40
1:D:98:ALA:CB	1:D:112:LYS:HE3	2.50	0.40
1:D:132:ILE:HD11	1:D:297:GLY:N	2.35	0.40
1:A:86:ALA:O	1:A:129:PHE:HB2	2.21	0.40
1:D:210:THR:O	1:D:214:TRP:N	2.45	0.40
1:A:67:ASN:ND2	1:C:169:ARG:HD3	2.34	0.40
1:C:121:VAL:O	1:C:125:VAL:HG23	2.21	0.40
1:C:190:MET:HE2	1:C:190:MET:HB3	1.95	0.40
1:B:244:LYS:NZ	1:D:64:ASP:OD2	2.55	0.40
1:D:140:VAL:HG13	1:D:141:ASP:N	2.36	0.40
1:C:36:ALA:O	1:C:40:VAL:HG23	2.21	0.40
1:A:76:LYS:HE2	3:A:366:HOH:O	2.22	0.40
1:B:251:ILE:HG23	1:B:252:ALA:N	2.37	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	301/326 (92%)	283 (94%)	17 (6%)	1 (0%)	46	72
1	B	306/326 (94%)	284 (93%)	20 (6%)	2 (1%)	26	51
1	C	314/326 (96%)	302 (96%)	12 (4%)	0	100	100
1	D	301/326 (92%)	289 (96%)	12 (4%)	0	100	100
All	All	1222/1304 (94%)	1158 (95%)	61 (5%)	3 (0%)	52	77

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	96	ALA
1	B	103	GLY
1	A	153	PHE

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	250/269 (93%)	237 (95%)	13 (5%)	29	54
1	B	253/269 (94%)	241 (95%)	12 (5%)	32	59
1	C	260/269 (97%)	249 (96%)	11 (4%)	36	65
1	D	250/269 (93%)	244 (98%)	6 (2%)	57	82
All	All	1013/1076 (94%)	971 (96%)	42 (4%)	37	66

All (42) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	53	ILE
1	A	61	ASP
1	A	118	LYS
1	A	178	VAL
1	A	239	GLU
1	A	247	THR
1	A	255	LEU
1	A	257	ARG
1	A	307	THR
1	A	308	ASP
1	A	312	GLU
1	A	321	LEU
1	A	325	LEU
1	B	57	LYS
1	B	61	ASP
1	B	130	ASN
1	B	223	GLU
1	B	248	PHE
1	B	255	LEU
1	B	257	ARG
1	B	295	ARG
1	B	307	THR
1	B	308	ASP
1	B	320	GLN
1	B	325	LEU
1	C	106	ARG
1	C	114	LEU
1	C	126	ASP
1	C	210	THR
1	C	239	GLU
1	C	247	THR
1	C	255	LEU
1	C	257	ARG
1	C	302	LEU
1	C	315	GLN
1	C	321	LEU
1	D	61	ASP
1	D	210	THR
1	D	224	ASP
1	D	255	LEU
1	D	257	ARG
1	D	311	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such

sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	GLN
1	A	67	ASN
1	A	111	ASN
1	A	138	ASN
1	A	179	ASN
1	A	186	HIS
1	A	193	HIS
1	A	264	ASN
1	A	299	GLN
1	A	300	ASN
1	A	320	GLN
1	B	42	GLN
1	B	46	GLN
1	B	67	ASN
1	B	111	ASN
1	B	138	ASN
1	B	186	HIS
1	B	193	HIS
1	B	264	ASN
1	B	300	ASN
1	C	46	GLN
1	C	67	ASN
1	C	111	ASN
1	C	186	HIS
1	C	193	HIS
1	C	218	HIS
1	C	300	ASN
1	C	320	GLN
1	D	46	GLN
1	D	67	ASN
1	D	111	ASN
1	D	138	ASN
1	D	179	ASN
1	D	186	HIS
1	D	193	HIS
1	D	218	HIS
1	D	300	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

8 ligands are modelled in this entry.

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	NO3	A	1	-	3,3,3	0.60	0	3,3,3	0.16	0
2	NO3	A	7	-	3,3,3	0.66	0	3,3,3	0.15	0
2	NO3	A	8	-	3,3,3	0.53	0	3,3,3	0.13	0
2	NO3	B	2	-	3,3,3	0.65	0	3,3,3	0.12	0
2	NO3	B	5	-	3,3,3	0.59	0	3,3,3	0.15	0
2	NO3	B	6	-	3,3,3	0.48	0	3,3,3	0.15	0
2	NO3	C	3	-	3,3,3	0.58	0	3,3,3	0.10	0
2	NO3	D	4	-	3,3,3	0.52	0	3,3,3	0.17	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	NO3	A	1	-	-	0/0/0/0	0/0/0/0
2	NO3	A	7	-	-	0/0/0/0	0/0/0/0
2	NO3	A	8	-	-	0/0/0/0	0/0/0/0
2	NO3	B	2	-	-	0/0/0/0	0/0/0/0
2	NO3	B	5	-	-	0/0/0/0	0/0/0/0
2	NO3	B	6	-	-	0/0/0/0	0/0/0/0
2	NO3	C	3	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NO3	D	4	-	-	0/0/0/0	0/0/0/0

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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	305/326 (93%)	0.05	15 (4%) 33 26	22, 38, 69, 89	0
1	B	308/326 (94%)	-0.02	10 (3%) 51 44	19, 34, 65, 94	0
1	C	316/326 (96%)	-0.27	3 (0%) 85 83	20, 33, 53, 84	0
1	D	305/326 (93%)	0.02	14 (4%) 36 29	20, 37, 65, 90	0
All	All	1234/1304 (94%)	-0.06	42 (3%) 49 41	19, 36, 64, 94	0

All (42) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	328	ALA	4.3
1	B	103	GLY	3.7
1	B	105	THR	3.6
1	D	103	GLY	3.6
1	D	328	ALA	3.6
1	D	327	ASP	2.8
1	B	238	TYR	2.7
1	B	102	PRO	2.7
1	B	106	ARG	2.7
1	B	108	ASP	2.7
1	B	308	ASP	2.7
1	D	108	ASP	2.6
1	B	134	LEU	2.6
1	D	107	LEU	2.6
1	A	312	GLU	2.5
1	D	53	ILE	2.5
1	D	324	VAL	2.5
1	A	328	ALA	2.5
1	D	134	LEU	2.4
1	A	56	ASP	2.4
1	A	273	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	161	SER	2.3
1	A	309	HIS	2.3
1	D	329	PHE	2.3
1	C	103	GLY	2.3
1	A	111	ASN	2.2
1	C	238	TYR	2.2
1	C	295	ARG	2.2
1	A	107	LEU	2.2
1	A	329	PHE	2.2
1	D	273	SER	2.1
1	D	295	ARG	2.1
1	A	219	PRO	2.1
1	A	316	LYS	2.1
1	A	271	PRO	2.1
1	A	108	ASP	2.1
1	A	134	LEU	2.0
1	B	251	ILE	2.0
1	D	319	SER	2.0
1	A	225	LYS	2.0
1	D	105	THR	2.0
1	D	135	VAL	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
2	NO3	A	8	4/4	0.97	0.25	3.18	38,38,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
2	NO3	B	2	4/4	0.98	0.18	1.69	38,39,40,42	0
2	NO3	B	6	4/4	0.98	0.19	1.41	44,45,45,45	0
2	NO3	A	1	4/4	0.97	0.18	0.64	43,43,43,46	0
2	NO3	D	4	4/4	0.98	0.16	0.38	43,45,45,45	0
2	NO3	A	7	4/4	0.99	0.17	0.12	33,33,34,36	0
2	NO3	C	3	4/4	0.98	0.16	0.11	34,38,39,40	0
2	NO3	B	5	4/4	0.99	0.16	-0.28	38,39,39,39	0

6.5 Other polymers [i](#)

There are no such residues in this entry.