Full wwPDB X-ray Structure Validation Report ⓘ

Dec 18, 2024 – 06:23 pm GMT

PDB ID	:	9F01
Title	:	Complex between D-SH2 domain of ABL with monobody 'DAM21
Authors	:	Essen, L.-O.; Hantschel, O.; Schmidt, N.; Korf, L.
Deposited on	:	2024-04-14
Resolution	:	2.73 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:

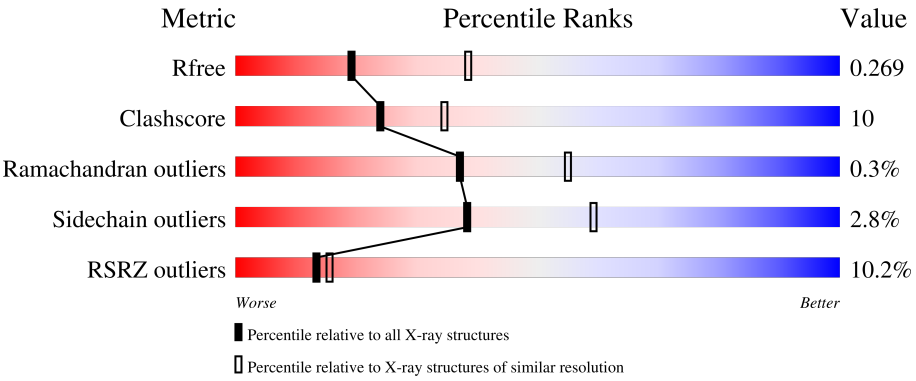
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation 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 2.73 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}	164625	1649 (2.76-2.72)
Clashscore	180529	1744 (2.76-2.72)
Ramachandran outliers	177936	1710 (2.76-2.72)
Sidechain outliers	177891	1711 (2.76-2.72)
RSRZ outliers	164620	1649 (2.76-2.72)

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	99	79% 21%
1	B	99	79% 21%
1	C	99	82% 18%
1	D	99	% 82% 18%
2	E	98	12% 79% 16% 5%

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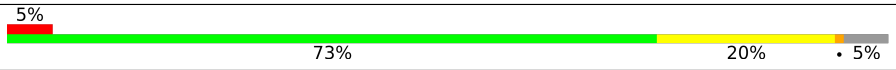
Mol	Chain	Length	Quality of chain
2	F	98	
2	G	98	
2	H	98	

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 6102 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 synthetic D-SH2 domain NS1-10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	99	Total	C	N	O	S	0	0	0
			787	490	146	150	1			
1	B	99	Total	C	N	O	S	0	0	0
			787	490	146	150	1			
1	C	99	Total	C	N	O	S	0	0	0
			787	490	146	150	1			
1	D	99	Total	C	N	O	S	0	0	0
			787	490	146	150	1			

- Molecule 2 is a protein called nanobody DAM21.3.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	E	93	Total	C	N	O	0	0	0
			706	453	106	147			
2	F	93	Total	C	N	O	0	0	0
			706	453	106	147			
2	G	93	Total	C	N	O	0	0	0
			706	453	106	147			
2	H	93	Total	C	N	O	0	0	0
			706	453	106	147			

- Molecule 3 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Cl	0	0
			1	1		
3	B	1	Total	Cl	0	0
			1	1		
3	C	1	Total	Cl	0	0
			1	1		
3	D	1	Total	Cl	0	0
			1	1		

- Molecule 4 is water.

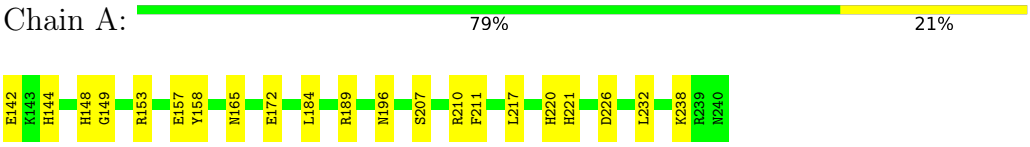
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	31	Total O 31 31	0	0
4	B	15	Total O 15 15	0	0
4	C	15	Total O 15 15	0	0
4	D	12	Total O 12 12	0	0
4	E	14	Total O 14 14	0	0
4	F	17	Total O 17 17	0	0
4	G	9	Total O 9 9	0	0
4	H	13	Total O 13 13	0	0

3 Residue-property plots (i)

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.

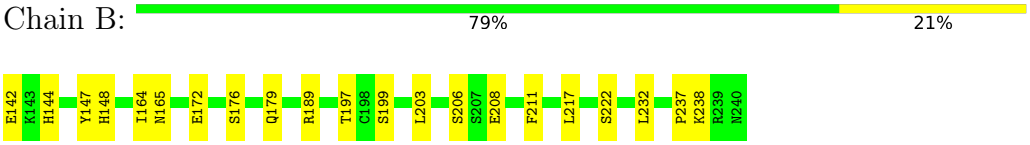
• Molecule 1: synthetic D-SH2 domain NS1-10

Chain A:



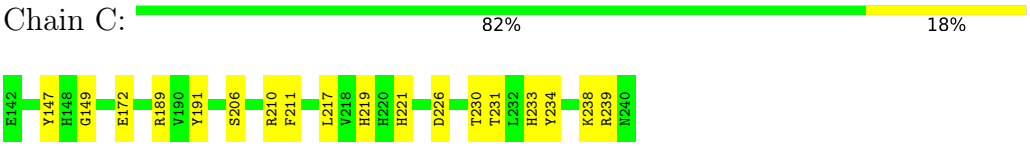
• Molecule 1: synthetic D-SH2 domain NS1-10

Chain B:



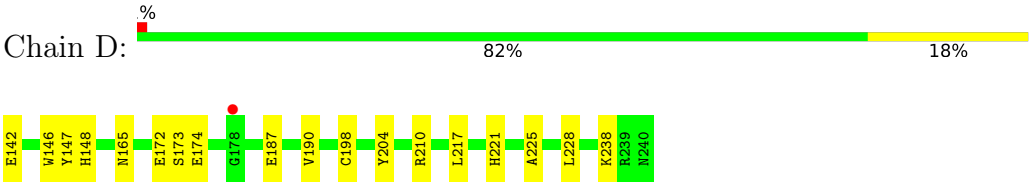
• Molecule 1: synthetic D-SH2 domain NS1-10

Chain C:



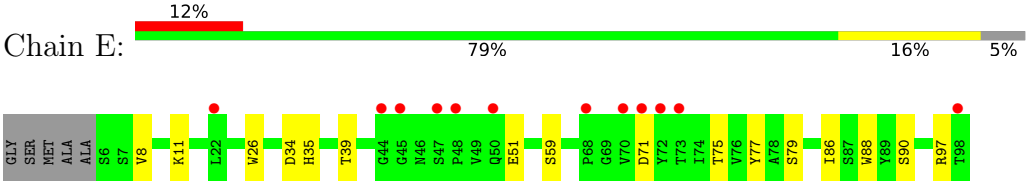
• Molecule 1: synthetic D-SH2 domain NS1-10

Chain D:



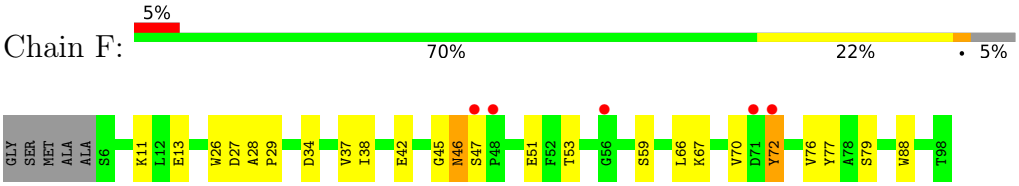
• Molecule 2: nanobody DAM21.3

Chain E:



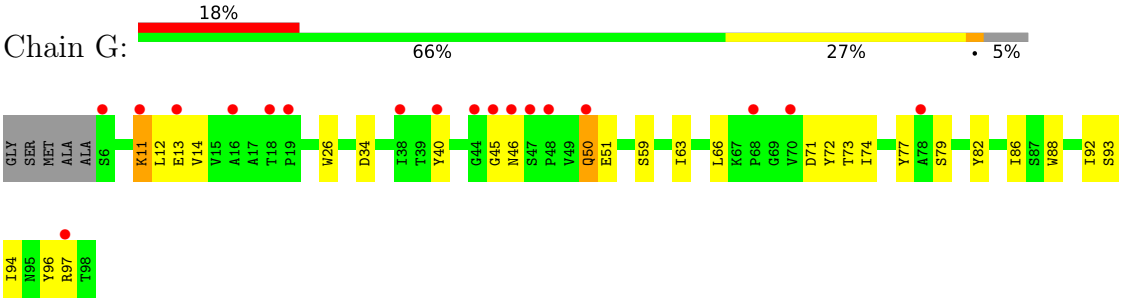
• Molecule 2: nanobody DAM21.3

Chain F:



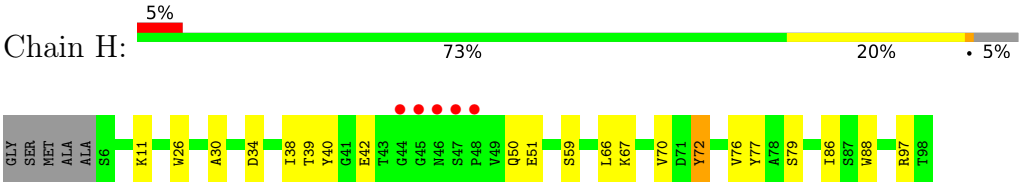
• Molecule 2: nanobody DAM21.3

Chain G:



• Molecule 2: nanobody DAM21.3

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	76.64Å 62.29Å 116.66Å 90.00° 98.06° 90.00°	Depositor
Resolution (Å)	48.15 – 2.73 48.15 – 2.73	Depositor EDS
% Data completeness (in resolution range)	87.7 (48.15-2.73) 84.1 (48.15-2.73)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.23 (at 2.73Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.222 , 0.270 0.222 , 0.269	Depositor DCC
R_{free} test set	28667 reflections (2.46%)	wwPDB-VP
Wilson B-factor (Å^2)	31.6	Xtriage
Anisotropy	0.351	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.38 , 52.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	6102	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 11.49% of the height of the origin peak. No significant pseudotranslation is detected.*

[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: DTH, DPN, DPR, DSG, DSN, DIL, DLY, DGN, DVA, CL, DHI, DGL, DAL, DTR, DAR, DLE, DAS, DTY, DCY

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	0.31	0/21	0.77	0/14
1	B	0.38	0/21	0.61	0/14
1	C	0.34	0/21	0.65	0/14
1	D	0.34	0/21	0.63	0/14
2	E	0.43	1/726 (0.1%)	0.60	0/1000
2	F	0.37	0/726	0.65	0/1000
2	G	0.43	0/726	0.90	4/1000 (0.4%)
2	H	0.36	0/726	0.69	1/1000 (0.1%)
All	All	0.40	1/2988 (0.0%)	0.72	5/4056 (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
2	G	0	1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	11	LYS	CD-CE	6.59	1.67	1.51

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	G	11	LYS	CA-CB-CG	10.05	135.52	113.40
2	G	11	LYS	CB-CG-CD	-8.29	90.03	111.60
2	G	11	LYS	CB-CA-C	-7.99	94.43	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	G	11	LYS	N-CA-CB	5.83	121.09	110.60
2	H	97	ARG	CA-CB-CG	5.05	124.51	113.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	G	45	GLY	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	787	0	682	15	0
1	B	787	0	683	15	0
1	C	787	0	680	16	0
1	D	787	0	682	13	0
2	E	706	0	678	10	0
2	F	706	0	678	19	0
2	G	706	0	678	22	0
2	H	706	0	678	12	0
3	A	1	0	0	0	0
3	B	1	0	0	1	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	31	0	0	2	0
4	B	15	0	0	0	0
4	C	15	0	0	0	0
4	D	12	0	0	1	0
4	E	14	0	0	2	0
4	F	17	0	0	0	0
4	G	9	0	0	0	0
4	H	13	0	0	0	0
All	All	6102	0	5439	113	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 (113) 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:G:71:ASP:HB2	2:G:97:ARG:HH21	1.28	0.95
2:G:40:TYR:CZ	2:G:50:GLN:HG2	2.16	0.79
1:A:189:DAR:NH1	2:E:51:GLU:OE1	2.18	0.77
2:G:11:LYS:HE2	2:G:13:GLU:OE1	1.92	0.69
1:C:147:DTY:OH	1:C:172:DGL:OE2	2.08	0.69
1:B:147:DTY:OH	1:B:172:DGL:OE2	2.11	0.68
1:B:189:DAR:NH2	2:F:51:GLU:OE1	2.27	0.68
1:D:147:DTY:OH	1:D:172:DGL:OE2	2.07	0.66
1:C:234:DTY:HE1	2:F:13:GLU:OE2	1.96	0.65
1:A:165:DSG:ND2	4:A:402:HOH:O	2.27	0.65
1:D:190:DVA:N	4:D:401:HOH:O	2.29	0.64
2:G:50:GLN:HG3	2:G:51:GLU:N	2.12	0.64
2:G:40:TYR:CE1	2:G:50:GLN:HG2	2.33	0.63
2:F:66:LEU:HD22	2:F:72:TYR:CE2	2.34	0.63
2:G:71:ASP:HB2	2:G:97:ARG:NH2	2.08	0.63
1:A:211:DPN:HD1	1:A:217:DLE:HD22	1.81	0.63
1:B:211:DPN:HD1	1:B:217:DLE:HD22	1.79	0.62
1:B:172:DGL:O	2:G:82:TYR:OH	2.17	0.62
2:G:66:LEU:HD22	2:G:72:TYR:CE2	2.35	0.61
2:F:37:VAL:HG22	2:F:53:THR:HG22	1.83	0.60
1:B:197:DTH:HG23	1:B:203:DLE:HD13	1.85	0.59
2:G:26:TRP:CE2	2:G:59:SER:HA	2.37	0.59
1:D:148:DHI:CE1	1:D:238:DLY:HA	2.34	0.58
2:G:79:SER:HB3	2:G:88:TRP:CZ3	2.39	0.58
2:F:70:VAL:HB	2:F:72:TYR:HE1	1.69	0.57
2:E:90:SER:OG	4:E:101:HOH:O	2.14	0.56
1:C:219:DHI:O	1:C:219:DHI:HD2	2.08	0.55
1:A:142:DGL:HB2	1:A:144:DHI:HD2	1.89	0.54
2:H:66:LEU:HD22	2:H:72:TYR:CE2	2.42	0.54
2:H:39:THR:HG22	2:H:51:GLU:HB2	1.90	0.54
1:B:206:DSN:O	1:B:208:DGL:N	2.40	0.54
2:G:40:TYR:CZ	2:G:63:ILE:HG23	2.43	0.54
2:E:26:TRP:O	2:E:59:SER:HB3	2.07	0.54
1:B:144:DHI:ND1	3:B:301:CL:CL	2.64	0.53
2:F:34:ASP:HB3	2:F:79:SER:OG	2.08	0.53
2:H:79:SER:HB2	2:H:86:ILE:HD11	1.90	0.52
1:C:189:DAR:NH2	1:C:191:DTY:OH	2.42	0.52
1:A:207:DSN:O	1:A:210:DAR:NH1	2.43	0.52
1:D:142:DGL:N	1:D:142:DGL:OE1	2.42	0.52
2:G:34:ASP:HB3	2:G:79:SER:OG	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:DAR:NH1	4:A:403:HOH:O	2.34	0.51
1:C:239:DAR:HA	1:C:239:DAR:HE	1.75	0.51
1:D:165:DSG:OD1	1:D:187:DGL:N	2.43	0.51
1:B:189:DAR:HB3	2:F:88:TRP:CD1	2.46	0.51
2:F:11:LYS:HD3	2:F:13:GLU:OE1	2.11	0.51
1:C:206:DSN:OG	1:C:226:DAS:O	2.28	0.51
2:F:26:TRP:CE2	2:F:59:SER:HA	2.46	0.51
1:C:211:DPN:HD2	1:C:217:DLE:HD22	1.93	0.51
2:E:79:SER:HB3	2:E:88:TRP:CZ3	2.45	0.51
1:C:233:DHI:HD2	1:C:234:DTY:CE1	2.41	0.50
1:A:221:DHI:HE1	1:A:226:DAS:O	2.12	0.50
1:B:142:DGL:O	1:B:144:DHI:N	2.45	0.49
2:H:70:VAL:HB	2:H:72:TYR:HE1	1.77	0.49
1:D:217:DLE:HG	1:D:221:DHI:HD2	1.95	0.49
2:F:38:ILE:HG13	2:F:76:VAL:HG22	1.95	0.49
1:A:148:DHI:CE1	1:A:238:DLY:HA	2.43	0.49
2:H:26:TRP:CE2	2:H:59:SER:HA	2.48	0.49
1:D:225:DAL:HB1	1:D:228:DLE:O	2.14	0.48
1:B:148:DHI:CE1	1:B:238:DLY:HA	2.44	0.48
1:C:221:DHI:CE1	1:C:226:DAS:HB3	2.44	0.48
2:F:79:SER:HB3	2:F:88:TRP:CZ3	2.49	0.47
2:G:79:SER:HB2	2:G:86:ILE:HD11	1.96	0.47
2:G:79:SER:HB3	2:G:88:TRP:CH2	2.49	0.47
2:E:39:THR:OG1	2:E:75:THR:HB	2.14	0.47
2:E:34:ASP:HB3	2:E:79:SER:OG	2.14	0.47
2:G:40:TYR:HA	2:G:73:THR:O	2.15	0.47
2:F:42:GLU:OE2	2:F:67:LYS:HD3	2.14	0.46
2:H:34:ASP:HB3	2:H:79:SER:OG	2.15	0.46
2:H:79:SER:HB3	2:H:88:TRP:CZ3	2.51	0.46
1:C:210:DAR:CZ	1:D:210:DAR:HH12	2.30	0.45
2:E:8:VAL:O	4:E:102:HOH:O	2.21	0.45
2:E:79:SER:HB2	2:E:86:ILE:HD11	1.98	0.45
1:B:222:DSN:HA	1:B:232:DLE:O	2.16	0.44
1:D:146:DTR:HZ3	1:D:147:DTY:HD1	1.99	0.44
2:G:66:LEU:HD22	2:G:72:TYR:CD2	2.52	0.44
2:G:12:LEU:HD12	2:G:12:LEU:HA	1.77	0.44
1:A:149:GLY:C	1:A:172:DGL:HG2	2.38	0.44
2:G:26:TRP:CZ2	2:G:59:SER:HA	2.53	0.44
1:D:148:DHI:HE1	1:D:238:DLY:HA	2.00	0.44
2:G:12:LEU:HB3	2:G:94:ILE:HG23	1.99	0.43
2:H:40:TYR:CZ	2:H:50:GLN:HB2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:196:DSG:HB3	1:B:199:DSN:OG	2.18	0.43
1:C:210:DAR:HD2	1:D:210:DAR:HH12	1.84	0.43
2:H:42:GLU:OE2	2:H:67:LYS:HD3	2.19	0.43
1:A:153:DAR:O	1:A:157:DGL:HG3	2.19	0.43
2:F:11:LYS:HE3	2:F:27:ASP:CG	2.38	0.43
1:B:148:DHI:HE1	1:B:237:DPR:O	2.19	0.43
1:A:211:DPN:HZ	1:A:220:DHI:CG	2.49	0.42
1:B:164:DIL:HG12	1:B:165:DSG:N	2.34	0.42
1:C:147:DTY:O	1:C:238:DLY:NZ	2.52	0.42
1:C:149:GLY:C	1:C:172:DGL:HG2	2.40	0.42
2:F:46:ASN:O	2:F:47:SER:C	2.58	0.42
2:F:11:LYS:HE3	2:F:11:LYS:HB3	1.91	0.42
1:D:198:DCY:SG	1:D:204:DTY:HE2	2.60	0.42
2:F:26:TRP:O	2:F:59:SER:HB2	2.20	0.42
2:E:71:ASP:HA	2:E:97:ARG:HA	2.02	0.41
1:A:211:DPN:HD1	1:A:217:DLE:CD2	2.49	0.41
1:C:233:DHI:HD2	1:C:234:DTY:CZ	2.51	0.41
1:C:230:DTH:HG22	1:C:231:DTH:N	2.36	0.41
2:G:14:VAL:HG21	2:G:96:TYR:CD1	2.55	0.41
2:H:38:ILE:HG13	2:H:76:VAL:HG22	2.02	0.41
1:A:158:DTY:HE2	2:H:30:ALA:HB3	2.01	0.41
2:F:28:ALA:HA	2:F:29:PRO:HD3	1.91	0.41
1:B:176:DSN:O	1:B:179:DGN:HG2	2.21	0.41
1:C:230:DTH:HG22	1:C:231:DTH:H	1.86	0.41
1:D:173:DSN:OG	1:D:174:DGL:O	2.38	0.41
2:G:11:LYS:C	2:G:92:ILE:HD13	2.41	0.41
2:H:39:THR:HG22	2:H:51:GLU:CB	2.50	0.41
2:E:34:ASP:OD2	2:E:35:HIS:ND1	2.45	0.40
2:F:11:LYS:HD2	2:F:11:LYS:C	2.42	0.40
2:F:45:GLY:O	2:F:47:SER:N	2.53	0.40
2:G:74:ILE:O	2:G:93:SER:HA	2.21	0.40
1:A:184:DLE:HD23	1:A:232:DLE:HD13	2.03	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	7/99 (7%)	7 (100%)	0	0	100	100
1	B	7/99 (7%)	7 (100%)	0	0	100	100
1	C	7/99 (7%)	7 (100%)	0	0	100	100
1	D	7/99 (7%)	7 (100%)	0	0	100	100
2	E	91/98 (93%)	90 (99%)	1 (1%)	0	100	100
2	F	91/98 (93%)	87 (96%)	3 (3%)	1 (1%)	12	21
2	G	91/98 (93%)	88 (97%)	3 (3%)	0	100	100
2	H	91/98 (93%)	88 (97%)	3 (3%)	0	100	100
All	All	392/788 (50%)	381 (97%)	10 (3%)	1 (0%)	37	55

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	F	46	ASN

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	
2	E	80/82 (98%)	79 (99%)	1 (1%)	65	80
2	F	80/82 (98%)	78 (98%)	2 (2%)	42	63
2	G	80/82 (98%)	77 (96%)	3 (4%)	28	48
2	H	80/82 (98%)	77 (96%)	3 (4%)	28	48
All	All	320/328 (98%)	311 (97%)	9 (3%)	38	59

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	E	77	TYR
2	F	72	TYR
2	F	77	TYR
2	G	46	ASN
2	G	50	GLN
2	G	77	TYR
2	H	11	LYS
2	H	72	TYR
2	H	77	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
2	G	50	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)

368 non-standard protein/DNA/RNA residues are modelled in this entry.

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.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

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

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, 95^{th} 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	7/99 (7%)	0.47	0 100 100	20, 25, 38, 57	0
1	B	7/99 (7%)	0.26	0 100 100	29, 40, 50, 56	0
1	C	7/99 (7%)	0.24	0 100 100	26, 31, 40, 49	0
1	D	7/99 (7%)	0.69	1 (14%) 7 9	28, 41, 51, 61	0
2	E	93/98 (94%)	0.84	12 (12%) 9 11	21, 39, 76, 99	0
2	F	93/98 (94%)	0.51	5 (5%) 32 34	22, 32, 67, 111	0
2	G	93/98 (94%)	1.35	18 (19%) 4 5	26, 53, 86, 111	0
2	H	93/98 (94%)	0.46	5 (5%) 32 34	19, 29, 64, 112	0
All	All	400/788 (50%)	0.76	41 (10%) 13 15	19, 37, 82, 112	0

All (41) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	11	LYS	6.0
2	G	50	GLN	4.6
2	G	48	PRO	4.3
2	H	46	ASN	4.1
2	G	16	ALA	4.0
2	E	47	SER	3.7
2	F	48	PRO	3.6
2	H	45	GLY	3.5
2	G	44	GLY	3.5
2	G	47	SER	3.5
2	H	47	SER	3.4
2	E	45	GLY	3.4
2	E	48	PRO	3.4
2	G	13	GLU	3.0
2	G	40	TYR	3.0
2	G	70	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
2	E	70	VAL	2.7
2	H	48	PRO	2.7
2	G	68	PRO	2.7
2	E	44	GLY	2.6
2	E	72	TYR	2.5
2	F	47	SER	2.5
2	G	78	ALA	2.5
2	F	71	ASP	2.4
2	G	38	ILE	2.4
2	G	18	THR	2.4
2	E	50	GLN	2.4
2	G	45	GLY	2.4
2	F	72	TYR	2.3
2	H	44	GLY	2.3
2	E	71	ASP	2.3
2	G	6	SER	2.3
2	E	98	THR	2.2
2	G	97	ARG	2.1
2	E	68	PRO	2.1
1	D	178	GLY	2.1
2	G	19	PRO	2.1
2	E	73	THR	2.1
2	E	22	LEU	2.1
2	F	56	GLY	2.1
2	G	46	ASN	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (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, 95^{th} 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
1	DAR	B	239	11/12	0.20	0.29	87,96,113,121	0
1	DAR	D	239	11/12	0.32	0.29	75,85,95,105	0
1	DGL	D	208	9/10	0.57	0.24	81,88,96,98	0
1	DGL	C	142	9/10	0.58	0.26	45,54,63,64	0
1	DSN	D	175	6/7	0.60	0.18	51,53,56,60	0
1	DGL	A	142	9/10	0.63	0.25	39,44,56,66	0
1	DGL	D	142	9/10	0.66	0.23	54,61,75,79	0
1	DSG	B	240	8/9	0.68	0.33	109,117,126,130	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DSN	D	222	6/7	0.69	0.19	52,57,67,73	0
1	DSN	B	176	6/7	0.71	0.17	43,49,59,67	0
1	DGL	C	208	9/10	0.72	0.18	55,64,84,88	0
1	DGL	B	208	9/10	0.72	0.20	61,69,84,89	0
1	DSN	B	207	6/7	0.73	0.30	88,93,101,103	0
1	DLY	B	143	5/10	0.73	0.22	55,56,67,70	0
1	DLY	D	238	9/10	0.74	0.23	44,61,92,94	0
1	DGL	B	142	9/10	0.75	0.22	46,50,59,62	0
1	DAR	C	239	11/12	0.75	0.27	76,85,91,96	0
1	DAR	D	210	11/12	0.75	0.19	45,57,72,76	0
1	DAR	A	239	11/12	0.75	0.25	51,68,81,82	0
1	DSN	B	162	6/7	0.76	0.16	45,49,56,56	0
1	DSN	D	206	6/7	0.76	0.16	46,50,63,66	0
1	DLY	B	202	9/10	0.77	0.21	36,42,50,58	0
1	DSG	A	240	8/9	0.77	0.23	61,70,74,80	0
1	DSN	C	175	6/7	0.77	0.23	53,62,67,69	0
1	DSN	D	207	6/7	0.78	0.25	93,99,101,105	0
1	DCY	B	198	6/7	0.79	0.18	31,34,39,66	0
1	DLY	D	143	5/10	0.80	0.20	55,58,71,83	0
1	DHI	D	233	10/11	0.80	0.17	41,56,73,88	0
1	DHI	D	144	10/11	0.80	0.18	67,73,78,82	0
1	DSN	B	145	6/7	0.80	0.13	49,55,60,61	0
1	DSN	D	145	6/7	0.80	0.16	45,55,60,69	0
1	DCY	D	198	6/7	0.80	0.14	38,40,47,62	0
1	DLY	A	143	5/10	0.80	0.20	41,49,60,61	0
1	DSN	B	209	6/7	0.80	0.15	47,52,60,62	0
1	DLY	D	202	9/10	0.80	0.18	41,46,53,56	0
1	DSG	C	240	8/9	0.80	0.17	40,69,74,77	0
1	DGL	A	208	9/10	0.81	0.18	50,61,85,90	0
1	DLY	C	238	9/10	0.81	0.16	31,36,65,72	0
1	DSG	D	240	8/9	0.81	0.21	45,74,77,79	0
1	DCY	C	198	6/7	0.82	0.14	35,36,40,55	0
1	DHI	D	219	10/11	0.82	0.21	56,81,99,101	0
1	DSN	B	175	6/7	0.82	0.17	47,50,62,68	0
1	DTH	C	230	7/8	0.82	0.19	27,29,40,47	0
1	DAR	C	210	11/12	0.82	0.16	35,47,73,76	0
1	DSN	D	162	6/7	0.83	0.14	39,41,53,62	0
1	DSN	D	199	6/7	0.83	0.15	40,43,44,45	0
1	DVA	B	224	7/8	0.83	0.21	57,62,67,67	0
1	DSG	B	212	8/9	0.83	0.16	44,48,55,63	0
1	DSG	D	212	8/9	0.83	0.12	47,52,54,59	0
1	DTH	D	197	7/8	0.84	0.13	31,33,37,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DSG	A	212	8/9	0.84	0.11	37,43,52,62	0
1	DLE	B	203	8/9	0.84	0.18	26,36,37,42	0
1	DHI	B	233	10/11	0.84	0.17	40,56,71,71	0
1	DSG	C	212	8/9	0.84	0.13	40,42,46,54	0
1	DLY	B	238	9/10	0.84	0.16	45,54,85,91	0
1	DSN	C	206	6/7	0.84	0.16	34,40,48,57	0
1	DSG	D	165	8/9	0.84	0.13	40,46,56,57	0
1	DSN	B	199	6/7	0.85	0.12	37,38,40,41	0
1	DSN	D	176	6/7	0.85	0.12	46,51,52,52	0
1	DPR	D	235	7/8	0.85	0.16	42,46,50,54	0
1	DPR	C	150	7/8	0.85	0.15	29,32,39,39	0
1	DHI	B	144	10/11	0.85	0.15	47,60,69,70	0
1	DSN	D	173	6/7	0.85	0.13	37,38,40,43	0
1	DGL	C	174	9/10	0.85	0.14	31,36,49,56	0
1	DAR	A	180	11/12	0.86	0.17	20,26,41,44	0
1	DIL	C	182	8/9	0.86	0.16	19,20,23,25	0
1	DAL	A	236	5/6	0.86	0.12	17,26,30,31	0
1	DTH	C	197	7/8	0.86	0.12	29,36,43,49	0
1	DAS	B	200	8/9	0.86	0.14	38,41,48,50	0
1	DAS	D	200	8/9	0.86	0.15	45,50,61,62	0
1	DHI	A	219	10/11	0.86	0.16	27,32,59,64	0
1	DAR	B	153	11/12	0.86	0.16	24,34,43,44	0
1	DLY	C	202	9/10	0.86	0.16	32,40,46,56	0
1	DGL	A	174	9/10	0.86	0.14	34,36,43,47	0
1	DVA	D	224	7/8	0.86	0.17	55,60,63,64	0
1	DGL	B	174	9/10	0.86	0.14	41,49,57,60	0
1	DTH	D	231	7/8	0.86	0.14	38,43,46,46	0
1	DSN	B	206	6/7	0.86	0.16	38,41,59,59	0
1	DVA	D	205	7/8	0.87	0.14	33,35,39,46	0
1	DHI	B	219	10/11	0.87	0.15	37,44,50,50	0
1	DTY	D	186	12/13	0.87	0.13	25,32,37,40	0
1	DSN	B	173	6/7	0.87	0.13	39,44,48,51	0
1	DSN	D	209	6/7	0.87	0.13	53,62,66,68	0
1	DIL	B	164	8/9	0.87	0.17	41,48,62,67	0
1	DSN	A	207	6/7	0.87	0.12	37,48,55,58	0
1	DTH	D	230	7/8	0.87	0.18	34,38,46,50	0
1	DGN	A	179	9/10	0.87	0.17	23,42,51,56	0
1	DGN	B	179	9/10	0.87	0.16	31,45,68,69	0
1	DSN	C	145	6/7	0.87	0.12	29,33,34,43	0
1	DAR	D	171	11/12	0.87	0.17	19,28,40,41	0
1	DIL	D	229	8/9	0.88	0.11	26,30,37,38	0
1	DTH	A	230	7/8	0.88	0.14	22,24,31,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DLE	D	160	8/9	0.88	0.12	22,29,36,38	0
1	DSN	C	207	6/7	0.88	0.12	43,47,58,60	0
1	DGN	C	179	9/10	0.88	0.14	32,44,59,60	0
1	DLE	A	203	8/9	0.88	0.15	25,30,37,40	0
1	DGN	D	179	9/10	0.88	0.12	30,36,50,65	0
1	DAL	C	215	5/6	0.88	0.14	33,33,38,38	0
1	DLE	C	217	8/9	0.88	0.14	27,32,34,38	0
1	DAL	D	236	5/6	0.88	0.12	34,37,47,58	0
1	DGL	B	172	9/10	0.88	0.17	41,43,59,65	0
1	DSN	A	162	6/7	0.88	0.13	17,24,35,43	0
1	DHI	C	219	10/11	0.88	0.13	40,47,71,72	0
1	DSN	C	176	6/7	0.88	0.12	36,42,46,47	0
1	DHI	D	220	10/11	0.88	0.15	45,50,54,62	0
1	DSN	B	222	6/7	0.88	0.11	36,44,48,50	0
1	DSN	A	175	6/7	0.88	0.11	36,38,40,42	0
1	DTH	B	223	7/8	0.88	0.18	44,51,53,66	0
1	DAR	A	210	11/12	0.88	0.11	33,40,48,52	0
1	DLY	C	143	5/10	0.88	0.14	41,42,45,48	0
1	DIL	C	229	8/9	0.88	0.18	28,33,36,37	0
1	DTH	D	213	7/8	0.89	0.12	41,46,50,50	0
1	DSN	D	161	6/7	0.89	0.09	28,34,41,43	0
1	DGL	A	216	9/10	0.89	0.15	28,34,48,51	0
1	DIL	D	195	8/9	0.89	0.15	20,25,28,29	0
1	DPR	B	177	7/8	0.89	0.14	36,51,57,60	0
1	DPR	D	177	7/8	0.89	0.15	56,59,68,75	0
1	DTY	B	234	12/13	0.89	0.15	42,52,62,75	0
1	DTY	D	147	12/13	0.89	0.15	38,40,46,49	0
1	DSN	C	209	6/7	0.89	0.13	42,55,63,68	0
1	DSN	A	206	6/7	0.89	0.10	32,37,42,42	0
1	DPR	B	237	7/8	0.89	0.15	54,57,74,78	0
1	DSN	A	222	6/7	0.89	0.11	24,27,37,44	0
1	DAR	D	153	11/12	0.89	0.17	27,31,57,60	0
1	DSN	C	222	6/7	0.89	0.09	31,38,45,56	0
1	DGL	C	157	9/10	0.89	0.13	20,22,32,34	0
1	DHI	C	144	10/11	0.89	0.12	33,45,47,52	0
1	DSG	B	165	8/9	0.89	0.12	40,42,43,47	0
1	DAR	C	180	11/12	0.89	0.13	20,29,45,47	0
1	DAS	A	226	8/9	0.89	0.13	32,40,56,60	0
1	DAS	D	226	8/9	0.89	0.11	48,53,57,62	0
1	DSG	C	165	8/9	0.89	0.10	27,31,39,58	0
1	DTY	A	186	12/13	0.89	0.13	19,27,31,34	0
1	DAR	D	180	11/12	0.90	0.13	24,36,51,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DLE	A	232	8/9	0.90	0.15	18,21,33,39	0
1	DHI	A	233	10/11	0.90	0.13	24,31,40,40	0
1	DLY	A	202	9/10	0.90	0.13	33,37,50,59	0
1	DPN	D	211	11/12	0.90	0.14	43,47,54,58	0
1	DSG	A	196	8/9	0.90	0.10	21,27,29,38	0
1	DTY	C	234	12/13	0.90	0.12	27,35,42,52	0
1	DTY	D	234	12/13	0.90	0.12	42,52,60,63	0
1	DTH	A	197	7/8	0.90	0.12	30,34,41,46	0
1	DSN	B	181	6/7	0.90	0.13	18,20,22,38	0
1	DTY	D	158	12/13	0.90	0.16	27,31,37,41	0
1	DTH	D	223	7/8	0.90	0.16	53,58,68,70	0
1	DLY	A	238	9/10	0.90	0.11	21,27,50,53	0
1	DAR	B	180	11/12	0.90	0.12	22,32,52,55	0
1	DLE	C	214	8/9	0.90	0.15	27,31,34,35	0
1	DTY	B	186	12/13	0.90	0.12	24,30,39,56	0
1	DSN	A	209	6/7	0.90	0.12	34,44,51,55	0
1	DGL	B	216	9/10	0.90	0.12	34,36,50,53	0
1	DTY	C	186	12/13	0.90	0.12	24,30,40,41	0
1	DGL	C	172	9/10	0.90	0.12	26,32,42,49	0
1	DGL	A	187	9/10	0.90	0.13	19,24,31,47	0
1	DIL	C	195	8/9	0.90	0.14	20,26,28,39	0
1	DTH	A	231	7/8	0.90	0.12	22,27,35,42	0
1	DTH	C	231	7/8	0.90	0.13	27,33,35,41	0
1	DTY	B	147	12/13	0.91	0.11	33,37,44,52	0
1	DAS	B	226	8/9	0.91	0.10	34,41,45,50	0
1	DAS	C	226	8/9	0.91	0.09	32,41,48,55	0
1	DAR	C	153	11/12	0.91	0.13	20,22,42,46	0
1	DTY	C	147	12/13	0.91	0.12	32,35,47,48	0
1	DSN	C	162	6/7	0.91	0.09	27,31,37,47	0
1	DTH	B	197	7/8	0.91	0.12	25,28,34,34	0
1	DGL	A	157	9/10	0.91	0.12	13,17,25,27	0
1	DAL	B	215	5/6	0.91	0.11	32,35,37,39	0
1	DGL	B	157	9/10	0.91	0.12	23,28,34,36	0
1	DCY	A	198	6/7	0.91	0.10	34,35,36,44	0
1	DGL	D	174	9/10	0.91	0.10	30,41,48,55	0
1	DGL	C	216	9/10	0.91	0.12	34,35,54,70	0
1	DGL	D	216	9/10	0.91	0.12	45,56,58,61	0
1	DLE	A	217	8/9	0.91	0.16	23,28,32,33	0
1	DLE	B	217	8/9	0.91	0.12	25,29,32,34	0
1	DSG	A	165	8/9	0.91	0.09	20,22,33,38	0
1	DVA	A	218	7/8	0.91	0.12	20,24,28,28	0
1	DSN	A	145	6/7	0.91	0.15	22,23,32,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DGL	D	157	9/10	0.91	0.11	21,27,33,42	0
1	DTY	A	147	12/13	0.91	0.11	21,27,34,36	0
1	DAS	A	200	8/9	0.91	0.15	38,41,48,60	0
1	DSN	A	176	6/7	0.91	0.10	32,38,44,44	0
1	DHI	C	221	10/11	0.91	0.11	26,31,40,42	0
1	DHI	D	221	10/11	0.91	0.12	35,44,54,55	0
1	DAS	C	200	8/9	0.91	0.11	37,39,41,48	0
1	DPN	C	168	11/12	0.91	0.12	21,23,27,29	0
1	DLE	A	169	8/9	0.91	0.14	15,18,21,22	0
1	DAR	A	153	11/12	0.91	0.13	15,21,57,63	0
1	DSN	C	161	6/7	0.91	0.09	22,29,32,36	0
1	DTY	A	193	12/13	0.91	0.12	18,22,25,27	0
1	DVA	A	224	7/8	0.91	0.15	31,32,40,48	0
1	DPN	B	211	11/12	0.91	0.11	37,41,44,48	0
1	DAR	B	194	11/12	0.91	0.10	16,20,22,25	0
1	DAL	C	225	5/6	0.91	0.11	31,31,36,41	0
1	DAR	A	194	11/12	0.92	0.12	20,27,40,42	0
1	DTR	C	146	14/15	0.92	0.13	24,29,36,39	0
1	DAR	B	210	11/12	0.92	0.10	37,44,50,56	0
1	DTH	B	231	7/8	0.92	0.11	31,37,43,48	0
1	DAR	C	194	11/12	0.92	0.12	24,27,43,52	0
1	DSN	A	152	6/7	0.92	0.10	16,20,23,24	0
1	DGL	A	172	9/10	0.92	0.11	20,25,36,39	0
1	DLE	C	232	8/9	0.92	0.14	24,28,36,42	0
1	DHI	A	221	10/11	0.92	0.10	21,28,35,38	0
1	DTY	C	158	12/13	0.92	0.10	23,26,30,31	0
1	DHI	C	233	10/11	0.92	0.11	30,40,53,69	0
1	DSG	B	154	8/9	0.92	0.11	30,34,37,39	0
1	DSN	A	181	6/7	0.92	0.09	16,19,23,24	0
1	DGL	D	172	9/10	0.92	0.12	29,35,49,49	0
1	DSN	C	181	6/7	0.92	0.09	20,22,25,31	0
1	DSG	D	154	8/9	0.92	0.13	22,25,36,40	0
1	DLE	A	214	8/9	0.92	0.16	20,29,30,31	0
1	DAL	B	236	5/6	0.92	0.11	42,45,48,52	0
1	DAR	A	185	11/12	0.92	0.09	15,20,26,30	0
1	DAL	A	215	5/6	0.92	0.12	26,26,28,30	0
1	DSN	C	173	6/7	0.92	0.13	24,35,43,46	0
1	DSN	B	161	6/7	0.92	0.09	35,41,48,50	0
1	DAL	B	225	5/6	0.92	0.13	32,36,43,60	0
1	DAL	D	215	5/6	0.92	0.12	41,43,47,48	0
1	DAL	A	156	5/6	0.92	0.14	14,15,18,23	0
1	DTR	D	146	14/15	0.92	0.13	39,45,49,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DHI	A	144	10/11	0.92	0.10	31,36,40,48	0
1	DGL	B	187	9/10	0.92	0.10	28,30,45,52	0
1	DGL	C	187	9/10	0.92	0.12	26,28,37,41	0
1	DGL	D	187	9/10	0.92	0.09	26,29,40,57	0
1	DPN	D	168	11/12	0.92	0.14	29,36,43,45	0
1	DTH	B	230	7/8	0.92	0.13	28,29,31,52	0
1	DSN	D	181	6/7	0.93	0.12	18,22,29,37	0
1	DIL	B	182	8/9	0.93	0.13	17,19,24,25	0
1	DLE	D	217	8/9	0.93	0.13	35,44,47,48	0
1	DPN	B	168	11/12	0.93	0.12	27,33,38,38	0
1	DVA	C	218	7/8	0.93	0.11	25,31,36,39	0
1	DVA	D	218	7/8	0.93	0.12	38,41,46,47	0
1	DLE	A	184	8/9	0.93	0.14	18,22,26,28	0
1	DIL	D	164	8/9	0.93	0.13	37,46,48,50	0
1	DTY	A	204	12/13	0.93	0.12	24,31,36,39	0
1	DPN	C	211	11/12	0.93	0.13	35,39,43,45	0
1	DTY	D	204	12/13	0.93	0.11	32,37,49,52	0
1	DAR	B	185	11/12	0.93	0.09	25,29,45,55	0
1	DHI	B	221	10/11	0.93	0.10	27,31,39,42	0
1	DAR	C	185	11/12	0.93	0.09	22,25,30,40	0
1	DAR	D	185	11/12	0.93	0.10	26,32,37,37	0
1	DTY	A	234	12/13	0.93	0.10	24,28,37,49	0
1	DSN	A	173	6/7	0.93	0.09	22,28,34,34	0
1	DTH	C	213	7/8	0.93	0.11	34,36,44,49	0
1	DTY	B	158	12/13	0.93	0.13	34,46,55,60	0
1	DLE	C	159	8/9	0.93	0.12	22,26,27,29	0
1	DLE	B	214	8/9	0.93	0.12	26,31,34,36	0
1	DVA	A	170	7/8	0.93	0.09	16,18,24,24	0
1	DLE	D	214	8/9	0.93	0.14	33,37,41,43	0
1	DAR	B	171	11/12	0.93	0.10	22,26,35,36	0
1	DPR	D	237	7/8	0.93	0.13	45,48,57,64	0
1	DLE	D	159	8/9	0.93	0.16	28,30,46,50	0
1	DSG	C	154	8/9	0.93	0.11	22,23,28,29	0
1	DPR	C	177	7/8	0.93	0.13	34,37,46,49	0
1	DAL	D	225	5/6	0.93	0.11	39,40,53,59	0
1	DAR	C	189	11/12	0.93	0.10	21,24,37,39	0
1	DTY	C	191	12/13	0.93	0.11	18,22,31,34	0
1	DSN	A	167	6/7	0.93	0.09	17,19,23,34	0
1	DTY	B	193	12/13	0.93	0.09	16,19,21,21	0
1	DLE	C	228	8/9	0.93	0.12	23,26,28,39	0
1	DIL	A	229	8/9	0.93	0.11	23,26,28,29	0
1	DIL	B	229	8/9	0.93	0.10	23,27,30,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DTY	D	193	12/13	0.93	0.12	17,24,34,35	0
1	DLE	D	203	8/9	0.94	0.13	32,36,44,45	0
1	DSG	C	196	8/9	0.94	0.08	23,32,34,36	0
1	DTY	B	204	12/13	0.94	0.10	29,34,39,44	0
1	DHI	C	220	10/11	0.94	0.09	34,39,42,45	0
1	DSG	D	196	8/9	0.94	0.09	26,31,33,40	0
1	DVA	A	205	7/8	0.94	0.10	22,27,33,34	0
1	DVA	B	205	7/8	0.94	0.10	26,31,36,39	0
1	DVA	C	205	7/8	0.94	0.11	23,29,32,40	0
1	DTH	B	213	7/8	0.94	0.10	35,37,44,44	0
1	DAL	A	155	5/6	0.94	0.13	17,18,19,27	0
1	DLE	B	159	8/9	0.94	0.14	36,40,50,56	0
1	DSN	A	183	6/7	0.94	0.09	12,14,18,18	0
1	DAR	B	189	11/12	0.94	0.11	22,24,34,39	0
1	DVA	A	151	7/8	0.94	0.10	19,21,22,27	0
1	DTH	C	223	7/8	0.94	0.08	38,40,43,53	0
1	DVA	A	190	7/8	0.94	0.08	13,14,19,20	0
1	DVA	C	190	7/8	0.94	0.11	19,19,21,23	0
1	DPR	B	235	7/8	0.94	0.11	55,56,60,63	0
1	DLE	C	184	8/9	0.94	0.12	19,20,26,27	0
1	DHI	D	148	10/11	0.94	0.11	32,37,48,50	0
1	DAL	A	225	5/6	0.94	0.11	26,29,32,41	0
1	DAL	C	236	5/6	0.94	0.10	24,26,28,34	0
1	DLE	B	169	8/9	0.94	0.10	21,27,29,31	0
1	DTY	C	193	12/13	0.94	0.11	22,25,29,32	0
1	DPR	C	237	7/8	0.94	0.10	28,31,37,41	0
1	DLE	C	169	8/9	0.94	0.12	20,21,25,31	0
1	DLE	C	160	8/9	0.94	0.13	19,23,26,28	0
1	DTR	B	146	14/15	0.94	0.11	30,38,42,54	0
1	DSN	A	161	6/7	0.94	0.08	18,18,18,25	0
1	DIL	A	195	8/9	0.94	0.12	17,19,24,26	0
1	DLE	A	228	8/9	0.94	0.11	18,26,30,33	0
1	DLE	B	228	8/9	0.94	0.10	21,27,33,43	0
1	DSN	C	167	6/7	0.94	0.08	23,25,26,32	0
1	DPN	A	168	11/12	0.94	0.12	17,20,24,29	0
1	DIL	A	182	8/9	0.94	0.13	13,18,20,29	0
1	DSG	B	196	8/9	0.94	0.08	20,28,29,31	0
1	DLE	C	203	8/9	0.94	0.15	26,30,41,42	0
1	DPN	A	211	11/12	0.94	0.11	28,35,40,40	0
1	DVA	B	190	7/8	0.95	0.08	21,22,24,26	0
1	DIL	A	164	8/9	0.95	0.10	19,20,22,24	0
1	DAR	A	171	11/12	0.95	0.08	14,16,25,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DHI	A	192	10/11	0.95	0.09	14,19,22,23	0
1	DHI	D	192	10/11	0.95	0.09	19,22,26,27	0
1	DLE	A	159	8/9	0.95	0.10	17,20,26,29	0
1	DHI	A	220	10/11	0.95	0.09	28,30,37,39	0
1	DHI	B	220	10/11	0.95	0.10	36,38,47,53	0
1	DIL	D	182	8/9	0.95	0.13	20,23,30,33	0
1	DAR	C	171	11/12	0.95	0.09	19,20,27,31	0
1	DLE	B	232	8/9	0.95	0.10	27,32,38,50	0
1	DSN	B	183	6/7	0.95	0.09	18,20,24,24	0
1	DLE	D	232	8/9	0.95	0.12	35,38,42,55	0
1	DSN	C	183	6/7	0.95	0.09	18,19,20,20	0
1	DSN	D	183	6/7	0.95	0.07	18,21,24,29	0
1	DIL	C	164	8/9	0.95	0.09	28,30,34,39	0
1	DAR	D	194	11/12	0.95	0.09	19,21,29,30	0
1	DPR	A	177	7/8	0.95	0.11	33,38,41,45	0
1	DTH	A	213	7/8	0.95	0.09	29,31,33,34	0
1	DTY	C	204	12/13	0.95	0.08	25,31,36,36	0
1	DIL	B	195	8/9	0.95	0.11	18,20,23,25	0
1	DLE	D	184	8/9	0.95	0.11	21,25,34,34	0
1	DPR	C	235	7/8	0.95	0.08	27,28,33,34	0
1	DVA	D	151	7/8	0.95	0.11	24,29,31,34	0
1	DTR	A	146	14/15	0.95	0.09	18,23,30,32	0
1	DAL	B	155	5/6	0.95	0.10	35,36,37,39	0
1	DVA	C	224	7/8	0.95	0.11	35,36,40,57	0
1	DLE	B	160	8/9	0.95	0.09	24,28,38,38	0
1	DAL	D	155	5/6	0.95	0.09	23,25,27,27	0
1	DSN	D	152	6/7	0.95	0.09	22,25,32,32	0
1	DAL	B	156	5/6	0.95	0.12	28,29,31,33	0
1	DPR	A	150	7/8	0.95	0.07	24,26,28,29	0
1	DPR	B	150	7/8	0.95	0.10	36,38,41,45	0
1	DHI	A	148	10/11	0.95	0.08	18,22,28,28	0
1	DHI	B	148	10/11	0.95	0.10	33,38,45,48	0
1	DSG	A	154	8/9	0.95	0.10	16,19,28,32	0
1	DVA	B	151	7/8	0.95	0.10	32,33,34,36	0
1	DSN	A	199	6/7	0.95	0.11	38,40,43,43	0
1	DVA	C	151	7/8	0.95	0.12	23,25,26,26	0
1	DLE	D	228	8/9	0.95	0.10	29,36,42,51	0
1	DSN	C	199	6/7	0.95	0.10	35,37,37,38	0
1	DLE	D	169	8/9	0.95	0.10	25,27,28,33	0
1	DVA	B	218	7/8	0.95	0.10	28,29,35,37	0
1	DTH	A	223	7/8	0.96	0.08	32,36,38,44	0
1	DLE	A	160	8/9	0.96	0.08	13,16,21,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	DVA	D	190	7/8	0.96	0.08	16,18,19,24	0
1	DTY	A	191	12/13	0.96	0.09	14,20,25,25	0
1	DTY	B	191	12/13	0.96	0.07	17,21,23,25	0
1	DTY	A	158	12/13	0.96	0.08	17,21,27,29	0
1	DTY	D	191	12/13	0.96	0.08	17,21,27,27	0
1	DPR	A	237	7/8	0.96	0.09	29,33,39,39	0
1	DHI	C	148	10/11	0.96	0.09	24,27,30,33	0
1	DHI	B	192	10/11	0.96	0.07	16,20,23,25	0
1	DHI	C	192	10/11	0.96	0.07	18,20,22,25	0
1	DAL	C	156	5/6	0.96	0.09	19,20,21,22	0
1	DVA	C	170	7/8	0.96	0.07	22,22,26,28	0
1	DVA	D	170	7/8	0.96	0.12	25,31,37,45	0
1	DSN	D	167	6/7	0.96	0.09	30,37,39,50	0
1	DLE	B	184	8/9	0.96	0.09	20,21,24,26	0
1	DAL	D	156	5/6	0.96	0.09	19,21,27,29	0
1	DAR	A	189	11/12	0.96	0.07	15,18,23,24	0
1	DSN	B	152	6/7	0.96	0.06	30,34,36,36	0
1	DAL	C	155	5/6	0.96	0.09	22,23,26,29	0
1	DAR	D	189	11/12	0.96	0.07	19,22,25,32	0
1	DSN	C	152	6/7	0.96	0.09	22,24,25,25	0
1	DPR	D	150	7/8	0.96	0.07	32,33,37,41	0
1	DPR	A	235	7/8	0.97	0.07	21,21,25,35	0
1	DVA	B	170	7/8	0.97	0.07	22,23,28,31	0
1	DSN	B	167	6/7	0.98	0.05	27,36,37,39	0

6.3 Carbohydrates (i)

There are no monosaccharides 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
3	CL	D	301	1/1	0.83	0.19	63,63,63,63	0
3	CL	C	301	1/1	0.95	0.10	51,51,51,51	0
3	CL	A	301	1/1	0.95	0.08	45,45,45,45	0
3	CL	B	301	1/1	0.98	0.10	41,41,41,41	0

6.5 Other polymers (i)

There are no such residues in this entry.