



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 06:38 AM GMT

PDB ID : 2XRC
Title : HUMAN COMPLEMENT FACTOR I
Authors : Roversi, P.; Johnson, S.; Lea, S.M.
Deposited on : 2010-09-13
Resolution : 2.69 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

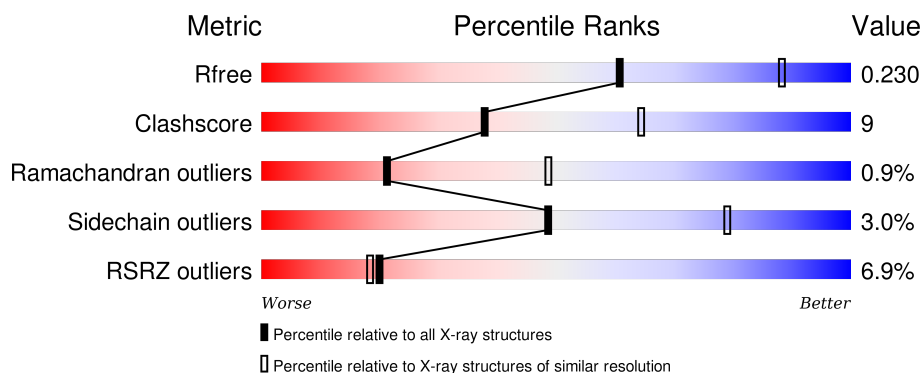
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.69 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	2103 (2.70-2.70)
Clashscore	102246	2422 (2.70-2.70)
Ramachandran outliers	100387	2382 (2.70-2.70)
Sidechain outliers	100360	2382 (2.70-2.70)
RSRZ outliers	91569	2107 (2.70-2.70)

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	565	<div> <div>5%</div> <div>65% 16% 18%</div> </div>
1	B	565	<div> <div>8%</div> <div>65% 18% 14%</div> </div>
1	C	565	<div> <div>6%</div> <div>68% 11% 20%</div> </div>
1	D	565	<div> <div>4%</div> <div>71% 11% 18%</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
3	NAG	A	646	X	-	-	-
3	NAG	A	659	X	-	-	-
3	NAG	A	676	X	-	-	-
3	NAG	B	646	X	-	-	-
3	NAG	D	646	X	-	-	-

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 14897 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 HUMAN COMPLEMENT FACTOR I.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	461	Total	C	N	O	S	0	0	0
			3606	2262	617	681	46			
1	B	485	Total	C	N	O	S	0	0	0
			3798	2388	652	711	47			
1	C	454	Total	C	N	O	S	0	0	0
			3568	2245	609	668	46			
1	D	464	Total	C	N	O	S	0	0	0
			3609	2264	619	679	47			

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	B	2	Total	Ca	0	0
			2	2		
2	A	2	Total	Ca	0	0
			2	2		
2	D	2	Total	Ca	0	0
			2	2		
2	C	2	Total	Ca	0	0
			2	2		

- Molecule 3 is SUGAR (N-ACETYL-D-GLUCOSAMINE) (three-letter code: NAG) (formula: C₈H₁₅NO₆).



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

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

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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 ($\text{RSRZ} > 2$). 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.

[illegible]

Chain B:

8% 65% 18% 14%

LYS VAL THR TVR THR SER GLN GLU D9 L10 K13 K14 A17 C25 D26 K27 V28 R35 C36 I37 C43 K44 L45 P46 Y47 V56 C57 N60 N84 T89 G92 L98 K99 H100 V111 K112 L113 V114 D117 I122 S128 M129 R130 E131 L137 Q142 T147 Q148 R149 R150 L153 S154 S157 I158 N159 E162 C163 L164 H165 V166 L175 K182 R183 R184 L185 M186 G187 Y188 I189 A291 D292 F191 V194 V195 T198 G199 LYS ALA ASP SER PRQ MET ASP ASP F208 V212 D228 D231 Q232 S233 L236 T237 A240 K249 K250 G251 V252 I267 T268 G269 E270 V273 G274 C275 ALA GLY PHE ALA SER VAL ALA GLN GLU GLU THR ILE L289 L290 A291 D292 A295 E296 E297 R298 R299 I300 L303 L307 S308 C309 GLY VAL LYS ASN ARG MET HIS ILE ARG ARG LYS ARG I322 I323

4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	71.32Å 234.72Å 40.30Å 89.98° 90.18° 90.03°	Depositor
Resolution (Å)	79.00 – 2.69 78.24 – 2.65	Depositor EDS
% Data completeness (in resolution range)	90.0 (79.00-2.69) 65.1 (78.24-2.65)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.15 (at 2.65Å)	Xtriage
Refinement program	REFMAC 5.6.0079	Depositor
R, R_{free}	0.200 , 0.238 0.202 , 0.230	Depositor DCC
R_{free} test set	2370 reflections (5.22%)	DCC
Wilson B-factor (Å ²)	43.3	Xtriage
Anisotropy	0.479	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 4.8	EDS
Estimated twinning fraction	0.334 for H, K, L 0.359 for -H, K, -L 0.187 for -H, -K, L 0.119 for H, -K, -L 0.339 for -h,-k,l 0.317 for h,-k,-l 0.409 for -h,k,-l	Xtriage
Reported twinning fraction	0.334 for H, K, L 0.359 for -H, K, -L 0.187 for -H, -K, L 0.119 for H, -K, -L	Depositor
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtriage
Outliers	0 of 49895 reflections	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	14897	wwPDB-VP
Average B, all atoms (Å ²)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.17% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

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	0.32	0/3681	0.47	0/4966
1	B	0.32	0/3879	0.51	1/5235 (0.0%)
1	C	0.33	0/3641	0.47	0/4908
1	D	0.32	0/3682	0.47	0/4960
All	All	0.32	0/14883	0.48	1/20069 (0.0%)

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	B	0	2

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	B	184	ARG	NE-CZ-NH1	6.65	123.62	120.30

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	184	ARG	Peptide
1	B	185	THR	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3606	0	3439	79	0
1	B	3798	0	3631	90	0
1	C	3568	0	3401	57	0
1	D	3609	0	3442	44	0
2	A	2	0	0	0	0
2	B	2	0	0	0	0
2	C	2	0	0	0	0
2	D	2	0	0	0	0
3	A	84	0	78	0	0
3	B	84	0	78	1	0
3	C	70	0	65	0	0
3	D	70	0	65	0	0
All	All	14897	0	14199	267	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 9.

All (267) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:357:ILE:HD12	1:A:374:ILE:HD13	1.40	1.03
1:D:377:THR:HG22	1:D:389:ILE:HG22	1.52	0.92
1:B:357:ILE:HD12	1:B:374:ILE:HD13	1.53	0.91
1:B:10:LEU:HD22	1:B:240:ALA:HB3	1.53	0.90
1:C:98:LEU:HD11	1:C:139:LEU:HD13	1.55	0.88
1:B:37:ILE:HG21	1:B:562:GLN:HA	1.57	0.86
1:B:337:VAL:HG11	1:B:357:ILE:HD13	1.57	0.84
1:A:525:VAL:HG23	1:A:542:THR:HG23	1.61	0.82
1:B:186:MET:HB3	1:B:187:GLY:HA3	1.64	0.80
1:A:98:LEU:HD11	1:A:139:LEU:HD13	1.62	0.79
1:D:350:ILE:HD13	1:D:522:VAL:HG22	1.63	0.79
1:C:311:VAL:HG12	1:C:432:ILE:HG21	1.65	0.79
1:A:108:ILE:HD11	1:A:153:LEU:HD11	1.63	0.78
1:A:390:VAL:HG11	1:A:428:LEU:HD21	1.64	0.78
1:D:357:ILE:HD12	1:D:374:ILE:HD13	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:337:VAL:HG11	1:A:357:ILE:HD13	1.66	0.75
1:C:122:ILE:HD12	1:C:166:VAL:CG2	2.16	0.75
1:A:525:VAL:CG2	1:A:542:THR:HG23	2.16	0.74
1:B:350:ILE:HD13	1:B:522:VAL:HG13	1.70	0.73
1:A:357:ILE:HD12	1:A:374:ILE:CD1	2.17	0.73
1:B:350:ILE:HD11	1:B:522:VAL:HG22	1.71	0.71
1:B:358:LEU:HD23	1:B:522:VAL:HG11	1.73	0.71
1:D:147:THR:HG21	1:D:217:ILE:HA	1.71	0.71
1:A:15:CYS:SG	1:A:16:LEU:N	2.63	0.71
1:A:512:VAL:CG1	1:A:520:THR:HG23	2.21	0.70
1:B:561:SER:HA	1:B:562:GLN:CB	2.21	0.70
1:C:430:ARG:HB3	1:C:431:SER:HA	1.73	0.70
1:C:92:GLY:HA3	1:C:114:VAL:HG13	1.76	0.68
1:B:524:GLY:HA2	1:B:544:VAL:HG23	1.74	0.68
1:D:512:VAL:CG1	1:D:520:THR:HG22	2.23	0.67
1:C:451:VAL:HG23	1:C:471:VAL:HG11	1.77	0.67
1:B:512:VAL:HG13	1:B:520:THR:HG23	1.77	0.66
1:A:337:VAL:CG1	1:A:374:ILE:HG23	2.26	0.66
1:B:158:ILE:HG22	1:B:159:ASN:H	1.61	0.66
1:A:273:VAL:HG11	1:A:516:ALA:HB3	1.79	0.65
1:C:151:PHE:CZ	1:C:153:LEU:HD11	2.33	0.64
1:B:565:VAL:O	1:B:565:VAL:HG12	1.98	0.64
1:A:273:VAL:HG11	1:A:516:ALA:CB	2.28	0.63
1:A:45:LEU:HD13	1:A:76:LEU:HD11	1.80	0.63
1:B:561:SER:HA	1:B:562:GLN:HB2	1.79	0.63
1:A:108:ILE:HD11	1:A:153:LEU:HD21	1.80	0.63
1:A:350:ILE:CD1	1:A:522:VAL:HG22	2.28	0.63
1:A:111:VAL:HG21	1:A:122:ILE:HD11	1.80	0.62
1:D:122:ILE:HD12	1:D:166:VAL:HG21	1.82	0.60
1:A:405:ALA:HB3	1:B:408:TYR:CD1	2.37	0.60
1:C:350:ILE:HD13	1:C:522:VAL:HG22	1.82	0.60
1:B:322:ILE:HG22	1:B:323:VAL:HG23	1.82	0.60
1:C:374:ILE:HD11	1:C:394:VAL:HG22	1.84	0.60
1:D:167:HIS:HB3	1:D:179:THR:HG22	1.83	0.59
1:C:411:ASP:O	1:C:542:THR:HG21	2.03	0.58
1:B:350:ILE:CD1	1:B:522:VAL:HG22	2.33	0.58
1:C:151:PHE:CE1	1:C:153:LEU:HD21	2.38	0.58
1:B:327:ARG:O	1:B:328:ALA:HB3	2.02	0.58
1:B:350:ILE:HG23	1:B:358:LEU:HB3	1.85	0.58
1:B:428:LEU:HD13	1:B:429:PRO:HD2	1.85	0.58
1:B:322:ILE:HD12	1:B:322:ILE:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:512:VAL:CG1	1:B:520:THR:HG23	2.34	0.57
1:D:512:VAL:HG12	1:D:520:THR:HG22	1.86	0.57
1:C:357:ILE:HD11	1:C:374:ILE:HG21	1.86	0.57
1:A:493:ALA:HB3	1:A:541:TYR:CE2	2.39	0.57
1:B:451:VAL:HG22	1:B:511:LEU:CD1	2.34	0.57
1:B:323:VAL:HG12	1:B:324:GLY:H	1.68	0.57
1:A:394:VAL:HG13	1:A:415:ILE:HG23	1.87	0.57
1:B:45:LEU:HD21	1:B:565:VAL:N	2.19	0.57
1:A:411:ASP:O	1:A:542:THR:HG21	2.05	0.56
1:A:122:ILE:HB	1:A:192:ALA:HB3	1.87	0.56
1:A:337:VAL:HG13	1:A:374:ILE:HG23	1.86	0.56
1:A:45:LEU:CD1	1:A:76:LEU:HD11	2.34	0.56
1:A:297:ARG:HA	1:A:300:ILE:HD12	1.87	0.56
1:C:45:LEU:HD12	1:C:76:LEU:HD11	1.87	0.56
1:B:474:ILE:HD11	1:B:477:CYS:HB2	1.88	0.56
1:A:436:VAL:HG11	1:A:551:ILE:HD13	1.87	0.56
1:B:184:ARG:CG	1:B:184:ARG:HH11	2.19	0.56
1:C:349:GLY:HA2	1:C:359:THR:HG22	1.87	0.56
1:B:357:ILE:CD1	1:B:374:ILE:HD13	2.32	0.56
1:B:474:ILE:C	1:B:474:ILE:HD12	2.26	0.56
1:A:129:MET:SD	1:A:147:THR:HG22	2.46	0.56
1:C:149:ARG:HB3	1:C:195:VAL:HG11	1.88	0.56
1:C:120:MET:HE3	1:C:164:LEU:HD11	1.88	0.55
1:D:525:VAL:HG22	1:D:542:THR:CG2	2.37	0.55
1:C:103:THR:HG22	1:C:105:SER:H	1.71	0.55
1:D:122:ILE:HD12	1:D:166:VAL:CG2	2.35	0.55
1:B:471:VAL:HG23	1:B:495:THR:HA	1.88	0.55
1:A:512:VAL:HG13	1:A:520:THR:HG23	1.89	0.55
1:A:374:ILE:HD11	1:A:415:ILE:HG21	1.89	0.55
1:A:335:TRP:NE1	1:A:512:VAL:HG21	2.22	0.55
1:C:376:THR:HG23	1:C:378:VAL:HG23	1.88	0.55
1:D:294:ASP:OD1	1:D:297:ARG:NH1	2.40	0.55
1:B:137:LEU:HD13	1:B:142:GLN:HA	1.89	0.54
1:A:98:LEU:HD11	1:A:139:LEU:CD1	2.35	0.54
1:A:350:ILE:HD11	1:A:522:VAL:HG22	1.88	0.54
1:D:122:ILE:HG21	1:D:127:TRP:CZ3	2.41	0.54
1:D:471:VAL:HG23	1:D:494:GLY:O	2.08	0.54
1:A:122:ILE:HD12	1:A:166:VAL:CG2	2.38	0.54
1:D:167:HIS:HB3	1:D:179:THR:CG2	2.37	0.54
1:B:27:LYS:HB3	1:B:236:LEU:HD22	1.89	0.54
1:C:526:VAL:HG22	1:C:541:TYR:CE1	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:98:LEU:CD1	1:D:139:LEU:HD11	2.38	0.54
1:D:64:PHE:CZ	1:D:73:LEU:HD13	2.42	0.54
1:A:185:THR:HG22	1:A:186:MET:O	2.08	0.54
1:B:553:TYR:HA	1:B:560:ILE:HD11	1.90	0.54
1:B:147:THR:HG21	1:B:228:ASP:HB3	1.89	0.54
1:A:24:SER:O	1:A:28:VAL:HG12	2.07	0.54
1:B:327:ARG:O	1:B:328:ALA:CB	2.57	0.53
1:A:512:VAL:HG11	1:A:520:THR:HG23	1.89	0.53
1:B:297:ARG:HA	1:B:300:ILE:HD12	1.90	0.53
1:C:74:GLU:OE2	1:C:173:THR:OG1	2.20	0.53
1:D:375:TRP:CH2	1:D:391:ILE:HD11	2.44	0.53
1:B:356:TRP:NE1	1:B:555:VAL:HG13	2.23	0.53
1:D:98:LEU:HD11	1:D:139:LEU:HD11	1.91	0.53
1:C:10:LEU:HD11	1:C:242:GLN:HB3	1.91	0.52
1:A:22:HIS:CD2	1:A:23:LEU:HD23	2.45	0.52
1:D:111:VAL:HG21	1:D:122:ILE:HD11	1.90	0.52
1:A:349:GLY:HA2	1:A:359:THR:HG22	1.92	0.52
1:B:563:TYR:CD1	1:B:565:VAL:HG13	2.44	0.52
1:B:299:ARG:NH1	1:B:303:LEU:HD11	2.25	0.52
1:D:524:GLY:HA2	1:D:544:VAL:HG23	1.91	0.52
1:C:525:VAL:O	1:C:542:THR:HG22	2.08	0.52
1:B:343:SER:O	1:B:345:ILE:N	2.38	0.52
1:A:525:VAL:HG23	1:A:542:THR:CG2	2.35	0.51
1:A:428:LEU:HD22	1:A:429:PRO:HD2	1.92	0.51
1:B:270:GLU:O	1:B:273:VAL:HG12	2.10	0.51
1:C:273:VAL:HG11	1:C:516:ALA:HB1	1.92	0.51
1:A:20:TYR:O	1:A:236:LEU:HD12	2.11	0.51
1:C:311:VAL:CG1	1:C:432:ILE:HD13	2.40	0.51
1:C:122:ILE:HG21	1:C:127:TRP:CZ3	2.45	0.51
1:A:236:LEU:HD23	1:A:252:VAL:HG13	1.93	0.51
1:B:563:TYR:HD1	1:B:565:VAL:HG13	1.75	0.51
1:B:212:VAL:HG23	1:B:233:SER:HB3	1.93	0.51
1:D:357:ILE:CD1	1:D:374:ILE:HD13	2.38	0.50
1:A:108:ILE:CD1	1:A:153:LEU:HD21	2.41	0.50
1:C:357:ILE:HG22	1:C:359:THR:HG23	1.93	0.50
1:B:338:ALA:HB3	1:B:375:TRP:HB2	1.93	0.50
1:B:249:LYS:HB2	1:B:268:THR:HG21	1.94	0.50
1:B:292:ASP:OD1	1:B:295:ALA:N	2.40	0.50
1:B:532:CYS:HB3	1:B:533:GLY:HA2	1.93	0.49
1:B:186:MET:CB	1:B:187:GLY:HA3	2.38	0.49
1:B:451:VAL:HG22	1:B:511:LEU:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:339:ILE:HD13	1:A:359:THR:HG21	1.94	0.49
1:B:84:ASN:HB3	1:B:114:VAL:HG11	1.93	0.49
1:A:255:PRO:O	1:A:258:TYR:HB2	2.12	0.49
1:D:397:ILE:HG23	1:D:415:ILE:HD13	1.94	0.49
1:A:394:VAL:CG1	1:A:415:ILE:HG23	2.42	0.49
1:A:111:VAL:CG2	1:A:122:ILE:HD11	2.43	0.49
1:C:339:ILE:N	1:C:339:ILE:HD12	2.28	0.49
1:C:335:TRP:CD1	1:C:350:ILE:HD11	2.48	0.49
1:B:291:ALA:HA	3:B:685:NAG:H83	1.94	0.49
1:C:357:ILE:CD1	1:C:374:ILE:HD13	2.43	0.48
1:D:96:VAL:HG21	1:D:138:ASP:OD1	2.13	0.48
1:C:116:GLN:HG2	1:C:120:MET:HE2	1.95	0.48
1:C:166:VAL:HG11	1:C:175:LEU:HD21	1.96	0.48
1:B:184:ARG:HH11	1:B:184:ARG:HG2	1.76	0.48
1:A:397:ILE:N	1:A:397:ILE:HD12	2.29	0.48
1:A:509:GLY:O	1:A:526:VAL:HG23	2.14	0.48
1:A:212:VAL:HG23	1:A:233:SER:OG	2.14	0.48
1:D:397:ILE:HG23	1:D:415:ILE:CD1	2.44	0.47
1:C:60:ASN:ND2	1:C:80:THR:HG21	2.28	0.47
1:B:111:VAL:HG12	1:B:113:LEU:HD12	1.97	0.47
1:A:357:ILE:CD1	1:A:374:ILE:HD13	2.28	0.47
1:B:27:LYS:O	1:B:267:ILE:HD13	2.14	0.47
1:B:122:ILE:HD12	1:B:166:VAL:HG23	1.95	0.47
1:A:428:LEU:HD13	1:A:429:PRO:HD2	1.96	0.47
1:A:526:VAL:HG22	1:A:541:TYR:CE1	2.50	0.47
1:D:510:PRO:HA	1:D:525:VAL:HA	1.97	0.46
1:C:473:LEU:HD21	1:C:511:LEU:HD21	1.97	0.46
1:C:129:MET:HE1	1:C:132:ALA:HB3	1.97	0.46
1:D:374:ILE:HD12	1:D:417:MET:HG2	1.97	0.46
1:D:375:TRP:CZ2	1:D:391:ILE:HD11	2.50	0.46
1:B:185:THR:HG22	1:B:186:MET:N	2.31	0.46
1:C:357:ILE:HD11	1:C:374:ILE:HD13	1.97	0.46
1:B:392:GLU:HB3	1:B:417:MET:HE2	1.98	0.46
1:D:23:LEU:HD22	1:D:41:CYS:O	2.16	0.46
1:C:122:ILE:HD13	1:C:164:LEU:HB2	1.98	0.46
1:B:561:SER:CA	1:B:562:GLN:CB	2.93	0.45
1:C:335:TRP:CZ2	1:C:520:THR:HG21	2.52	0.45
1:B:355:CYS:SG	1:B:426:CYS:N	2.89	0.45
1:B:341:ASP:HB3	1:B:343:SER:O	2.16	0.45
1:C:122:ILE:HG21	1:C:127:TRP:CE3	2.52	0.45
1:D:414:LEU:O	1:D:415:ILE:HD13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:LYS:HB2	1:A:426:CYS:SG	2.57	0.45
1:D:512:VAL:HG12	1:D:520:THR:CG2	2.47	0.45
1:B:231:ASP:OD1	1:B:233:SER:OG	2.28	0.45
1:A:83:LEU:HD11	1:A:94:PHE:H	1.81	0.45
1:A:362:HIS:HB2	1:B:484:ARG:NH2	2.32	0.45
1:B:35:ARG:NH1	1:B:43:CYS:O	2.50	0.45
1:D:84:ASN:OD1	1:D:114:VAL:HG11	2.17	0.45
1:C:122:ILE:HB	1:C:192:ALA:HB3	1.99	0.44
1:D:106:GLU:HG2	1:D:195:VAL:HG22	1.99	0.44
1:B:411:ASP:O	1:B:542:THR:HG21	2.17	0.44
1:C:45:LEU:CD1	1:C:45:LEU:N	2.79	0.44
1:B:356:TRP:CD2	1:B:555:VAL:HG22	2.52	0.44
1:D:349:GLY:HA2	1:D:359:THR:HG22	1.99	0.44
1:B:335:TRP:CH2	1:B:520:THR:HG21	2.52	0.44
1:C:122:ILE:HG23	1:C:166:VAL:HG23	2.00	0.44
1:B:356:TRP:CE3	1:B:555:VAL:HG22	2.53	0.44
1:B:122:ILE:HD13	1:B:164:LEU:HB2	1.99	0.44
1:A:10:LEU:HD22	1:A:240:ALA:O	2.18	0.44
1:A:525:VAL:HG22	1:A:542:THR:HG23	2.00	0.44
1:B:471:VAL:HG23	1:B:494:GLY:C	2.38	0.44
1:B:350:ILE:HD13	1:B:522:VAL:CG1	2.44	0.43
1:C:349:GLY:CA	1:C:359:THR:HG22	2.48	0.43
1:A:335:TRP:CZ3	1:A:520:THR:HG21	2.53	0.43
1:D:64:PHE:CE1	1:D:73:LEU:HD13	2.53	0.43
1:B:122:ILE:HD12	1:B:166:VAL:CG2	2.47	0.43
1:A:169:ARG:CZ	1:A:171:LEU:HD12	2.47	0.43
1:D:512:VAL:HG13	1:D:521:TYR:O	2.18	0.43
1:B:565:VAL:O	1:B:565:VAL:CG1	2.65	0.43
1:A:418:LYS:O	1:A:419:LYS:HB3	2.18	0.43
1:A:339:ILE:CD1	1:A:359:THR:HG21	2.47	0.43
1:A:451:VAL:HG22	1:A:511:LEU:HD13	2.01	0.43
1:A:166:VAL:HG22	1:A:180:PHE:CD1	2.54	0.43
1:C:429:PRO:HA	1:C:430:ARG:HA	1.82	0.43
1:C:149:ARG:HB3	1:C:195:VAL:HG21	2.00	0.43
1:A:244:LYS:O	1:A:256:SER:OG	2.37	0.43
1:D:509:GLY:O	1:D:526:VAL:HG23	2.19	0.43
1:B:525:VAL:HG22	1:B:542:THR:HG23	2.01	0.43
1:A:444:GLN:HB3	1:A:445:PRO:HD2	2.00	0.43
1:D:270:GLU:HA	1:D:273:VAL:HG22	2.01	0.42
1:A:451:VAL:HG23	1:A:471:VAL:CG1	2.49	0.42
1:A:337:VAL:HG12	1:A:338:ALA:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:151:PHE:CE1	1:C:153:LEU:HD11	2.55	0.42
1:B:356:TRP:CE2	1:B:555:VAL:HG13	2.55	0.42
1:C:473:LEU:CD2	1:C:511:LEU:HD21	2.49	0.42
1:D:349:GLY:CA	1:D:359:THR:HG22	2.49	0.42
1:C:138:ASP:C	1:C:138:ASP:OD2	2.58	0.42
1:C:167:HIS:HB3	1:C:179:THR:HG23	2.01	0.42
1:B:557:ARG:N	1:B:558:PRO:HD3	2.34	0.42
1:B:56:VAL:CG1	1:B:57:CYS:N	2.82	0.42
1:C:175:LEU:HD22	1:C:180:PHE:HZ	1.84	0.42
1:C:152:LYS:O	1:C:153:LEU:HD13	2.20	0.42
1:C:451:VAL:HG23	1:C:471:VAL:CG1	2.47	0.42
1:B:89:THR:HG21	1:B:92:GLY:HA3	2.02	0.42
1:A:32:PRO:HB2	1:A:300:ILE:HG22	2.01	0.42
1:A:57:CYS:SG	1:A:83:LEU:HD23	2.60	0.42
1:D:103:THR:HG22	1:D:106:GLU:HB2	2.02	0.42
1:A:350:ILE:HD13	1:A:522:VAL:HG13	2.02	0.42
1:C:358:LEU:HD11	1:C:412:ILE:HD11	2.01	0.42
1:B:350:ILE:HD11	1:B:434:ALA:HB3	2.02	0.41
1:C:338:ALA:HB2	1:C:454:TRP:CZ3	2.55	0.41
1:A:108:ILE:HD11	1:A:153:LEU:CD1	2.41	0.41
1:A:405:ALA:HB2	1:B:406:GLY:O	2.20	0.41
1:C:103:THR:HG22	1:C:104:ASP:N	2.35	0.41
1:D:236:LEU:HD23	1:D:252:VAL:HG13	2.02	0.41
1:A:493:ALA:HB3	1:A:541:TYR:HE2	1.86	0.41
1:D:64:PHE:HZ	1:D:73:LEU:HD13	1.84	0.41
1:B:392:GLU:CB	1:B:417:MET:HE2	2.50	0.41
1:B:56:VAL:HG13	1:B:57:CYS:N	2.35	0.41
1:B:236:LEU:HD23	1:B:252:VAL:HG13	2.03	0.41
1:A:98:LEU:N	1:A:98:LEU:HD12	2.36	0.41
1:D:350:ILE:HD13	1:D:522:VAL:CG2	2.44	0.41
1:C:60:ASN:HD21	1:C:80:THR:HG21	1.86	0.41
1:B:175:LEU:HD23	1:B:175:LEU:HA	1.97	0.41
1:C:120:MET:CE	1:C:164:LEU:HD21	2.51	0.41
1:B:471:VAL:HG22	1:B:493:ALA:HB1	2.02	0.41
1:B:212:VAL:HG23	1:B:233:SER:CB	2.50	0.41
1:D:149:ARG:HD2	1:D:195:VAL:HG11	2.03	0.41
1:A:374:ILE:HD12	1:A:417:MET:HG2	2.03	0.40
1:B:335:TRP:CZ2	1:B:512:VAL:HG21	2.56	0.40
1:C:175:LEU:HD23	1:C:178:CYS:SG	2.61	0.40
1:D:525:VAL:CG2	1:D:542:THR:CG2	2.99	0.40
1:A:132:ALA:HB1	1:A:145:ALA:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:335:TRP:O	1:B:337:VAL:HG23	2.21	0.40
1:A:390:VAL:HG11	1:A:428:LEU:CD2	2.43	0.40
1:B:350:ILE:HD11	1:B:434:ALA:CB	2.51	0.40
1:B:250:SER:HB2	1:B:267:ILE:HD11	2.04	0.40
1:A:132:ALA:HB1	1:A:145:ALA:CB	2.51	0.40
1:B:195:VAL:HG13	1:B:195:VAL:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	445/565 (79%)	404 (91%)	39 (9%)	2 (0%)	39	69
1	B	469/565 (83%)	404 (86%)	52 (11%)	13 (3%)	6	15
1	C	432/565 (76%)	398 (92%)	34 (8%)	0	100	100
1	D	444/565 (79%)	412 (93%)	31 (7%)	1 (0%)	52	80
All	All	1790/2260 (79%)	1618 (90%)	156 (9%)	16 (1%)	21	49

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	158	ILE
1	B	185	THR
1	B	186	MET
1	B	323	VAL
1	B	560	ILE
1	B	562	GLN
1	A	114	VAL
1	B	154	SER
1	D	499	SER

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Mol	Chain	Res	Type
1	B	162	GLU
1	B	328	ALA
1	A	156	LEU
1	B	329	GLN
1	B	532	CYS
1	B	189	GLN
1	B	344	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	401/489 (82%)	392 (98%)	9 (2%)	60	86
1	B	420/489 (86%)	400 (95%)	20 (5%)	31	62
1	C	396/489 (81%)	385 (97%)	11 (3%)	51	81
1	D	399/489 (82%)	391 (98%)	8 (2%)	63	87
All	All	1616/1956 (83%)	1568 (97%)	48 (3%)	48	79

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	31	GLN
1	A	63	SER
1	A	162	GLU
1	A	184	ARG
1	A	407	THR
1	A	419	LYS
1	A	423	LYS
1	A	435	CYS
1	A	542	THR
1	B	25	CYS
1	B	28	VAL
1	B	56	VAL
1	B	89	THR
1	B	98	LEU

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Mol	Chain	Res	Type
1	B	117	ASP
1	B	131	GLU
1	B	150	ARG
1	B	153	LEU
1	B	184	ARG
1	B	359	THR
1	B	428	LEU
1	B	467	GLN
1	B	496	TYR
1	B	532	CYS
1	B	542	THR
1	B	557	ARG
1	B	560	ILE
1	B	563	TYR
1	B	564	ASN
1	C	45	LEU
1	C	116	GLN
1	C	138	ASP
1	C	149	ARG
1	C	175	LEU
1	C	179	THR
1	C	184	ARG
1	C	186	MET
1	C	309	CYS
1	C	428	LEU
1	C	430	ARG
1	D	18	LYS
1	D	43	CYS
1	D	131	GLU
1	D	147	THR
1	D	309	CYS
1	D	355	CYS
1	D	496	TYR
1	D	537	PHE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	564	ASN
1	C	148	GLN
1	D	410	ASN

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 carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 30 ligands modelled in this entry, 8 are monoatomic - leaving 22 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
3	NAG	A	618	1	14,14,15	0.38	0	15,19,21	0.79	1 (6%)
3	NAG	A	646	1	14,14,15	0.37	0	15,19,21	0.75	1 (6%)
3	NAG	A	652	1	14,14,15	0.30	0	15,19,21	0.63	0
3	NAG	A	659	1	14,14,15	0.33	0	15,19,21	0.60	0
3	NAG	A	676	1	14,14,15	0.41	0	15,19,21	0.81	0
3	NAG	A	685	1	14,14,15	0.40	0	15,19,21	1.48	1 (6%)
3	NAG	B	618	1	14,14,15	0.31	0	15,19,21	1.04	1 (6%)
3	NAG	B	646	1	14,14,15	0.45	0	15,19,21	0.98	2 (13%)
3	NAG	B	652	1	14,14,15	0.26	0	15,19,21	0.59	0
3	NAG	B	659	1	14,14,15	0.28	0	15,19,21	1.02	1 (6%)
3	NAG	B	676	1	14,14,15	0.28	0	15,19,21	0.61	0
3	NAG	B	685	1	14,14,15	0.31	0	15,19,21	1.15	1 (6%)
3	NAG	C	618	1	14,14,15	0.44	0	15,19,21	0.78	1 (6%)
3	NAG	C	646	1	14,14,15	0.26	0	15,19,21	0.47	0
3	NAG	C	652	1	14,14,15	0.40	0	15,19,21	1.13	1 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	NAG	C	676	1	14,14,15	0.29	0	15,19,21	0.49	0
3	NAG	C	685	1	14,14,15	0.34	0	15,19,21	1.52	2 (13%)
3	NAG	D	618	1	14,14,15	0.29	0	15,19,21	0.94	0
3	NAG	D	646	1	14,14,15	0.58	0	15,19,21	1.25	2 (13%)
3	NAG	D	652	1	14,14,15	0.29	0	15,19,21	0.72	0
3	NAG	D	676	1	14,14,15	0.32	0	15,19,21	0.62	0
3	NAG	D	685	1	14,14,15	0.46	0	15,19,21	0.75	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
3	NAG	A	618	1	-	0/6/23/26	0/1/1/1
3	NAG	A	646	1	1/1/5/7	0/6/23/26	0/1/1/1
3	NAG	A	652	1	-	0/6/23/26	0/1/1/1
3	NAG	A	659	1	1/1/5/7	0/6/23/26	0/1/1/1
3	NAG	A	676	1	1/1/5/7	0/6/23/26	0/1/1/1
3	NAG	A	685	1	-	0/6/23/26	0/1/1/1
3	NAG	B	618	1	-	0/6/23/26	0/1/1/1
3	NAG	B	646	1	1/1/5/7	0/6/23/26	0/1/1/1
3	NAG	B	652	1	-	0/6/23/26	0/1/1/1
3	NAG	B	659	1	-	0/6/23/26	0/1/1/1
3	NAG	B	676	1	-	0/6/23/26	0/1/1/1
3	NAG	B	685	1	-	0/6/23/26	0/1/1/1
3	NAG	C	618	1	-	0/6/23/26	0/1/1/1
3	NAG	C	646	1	-	0/6/23/26	0/1/1/1
3	NAG	C	652	1	-	0/6/23/26	0/1/1/1
3	NAG	C	676	1	-	0/6/23/26	0/1/1/1
3	NAG	C	685	1	-	0/6/23/26	0/1/1/1
3	NAG	D	618	1	-	0/6/23/26	0/1/1/1
3	NAG	D	646	1	1/1/5/7	0/6/23/26	0/1/1/1
3	NAG	D	652	1	-	0/6/23/26	0/1/1/1
3	NAG	D	676	1	-	0/6/23/26	0/1/1/1
3	NAG	D	685	1	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	685	NAG	C4-C3-C2	-2.25	107.74	111.23
3	C	618	NAG	C1-O5-C5	2.05	114.85	112.25
3	A	618	NAG	C1-O5-C5	2.10	114.91	112.25
3	D	646	NAG	C3-C4-C5	2.11	113.87	110.20
3	B	646	NAG	C3-C4-C5	2.14	113.93	110.20
3	A	646	NAG	C1-O5-C5	2.29	115.16	112.25
3	B	646	NAG	C4-C3-C2	2.62	115.31	111.23
3	B	685	NAG	C1-O5-C5	3.30	116.43	112.25
3	B	618	NAG	C1-O5-C5	3.45	116.63	112.25
3	B	659	NAG	C1-O5-C5	3.57	116.78	112.25
3	D	646	NAG	C4-C3-C2	3.70	116.98	111.23
3	C	652	NAG	C1-O5-C5	4.07	117.41	112.25
3	A	685	NAG	C1-O5-C5	4.71	118.22	112.25
3	C	685	NAG	C1-O5-C5	4.89	118.46	112.25

All (5) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	A	659	NAG	C1
3	A	646	NAG	C1
3	B	646	NAG	C1
3	D	646	NAG	C1
3	A	676	NAG	C1

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	685	NAG	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
1	A	461/565 (81%)	0.62	29 (6%)	23	22	18, 46, 74, 100	0
1	B	485/565 (85%)	0.71	43 (8%)	12	9	26, 50, 82, 108	0
1	C	454/565 (80%)	0.72	36 (7%)	15	13	24, 46, 75, 95	0
1	D	464/565 (82%)	0.59	21 (4%)	37	36	25, 46, 67, 95	0
All	All	1864/2260 (82%)	0.66	129 (6%)	20	18	18, 47, 77, 108	0

All (129) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	156	LEU	7.6
1	B	188	TYR	5.6
1	C	425	ASP	5.2
1	C	157	SER	5.0
1	A	191	PHE	4.5
1	B	329	GLN	4.4
1	C	389	ILE	4.4
1	B	191	PHE	4.4
1	C	466	LEU	4.3
1	C	424	LYS	4.3
1	B	454	TRP	4.3
1	C	208	PHE	4.0
1	B	330	LEU	4.0
1	D	162	GLU	3.9
1	D	16	LEU	3.9
1	B	368	LYS	3.7
1	B	153	LEU	3.7
1	D	535	PRO	3.7
1	B	189	GLN	3.6
1	D	389	ILE	3.6
1	C	89	THR	3.5

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Mol	Chain	Res	Type	RSRZ
1	C	378	VAL	3.5
1	C	369	THR	3.5
1	A	494	GLY	3.4
1	B	369	THR	3.4
1	B	190	ASP	3.3
1	B	506	ASP	3.3
1	D	13	LYS	3.3
1	B	158	ILE	3.2
1	A	121	PHE	3.2
1	A	309	CYS	3.2
1	C	432	ILE	3.2
1	A	345	ILE	3.1
1	C	448	THR	3.1
1	A	507	SER	3.0
1	B	148	GLN	3.0
1	D	453	GLY	3.0
1	B	157	SER	3.0
1	D	312	LYS	3.0
1	C	393	TYR	3.0
1	B	194	VAL	3.0
1	C	537	PHE	2.9
1	B	100	HIS	2.9
1	B	507	SER	2.9
1	D	140	GLY	2.8
1	B	323	VAL	2.8
1	B	322	ILE	2.8
1	C	209	PHE	2.8
1	B	514	MET	2.8
1	B	47	TYR	2.7
1	D	424	LYS	2.7
1	D	375	TRP	2.7
1	C	149	ARG	2.7
1	C	495	THR	2.7
1	D	54	THR	2.7
1	C	364	LEU	2.7
1	C	188	TYR	2.7
1	B	307	LEU	2.6
1	C	246	PHE	2.6
1	B	536	GLU	2.6
1	C	423	LYS	2.6
1	C	377	THR	2.6
1	D	191	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	311	VAL	2.6
1	B	565	VAL	2.6
1	C	264	VAL	2.6
1	C	529	GLY	2.5
1	C	183	ARG	2.5
1	C	394	VAL	2.5
1	C	428	LEU	2.5
1	B	237	CYS	2.5
1	B	13	LYS	2.5
1	A	340	LYS	2.4
1	B	14	LYS	2.4
1	A	369	THR	2.4
1	A	423	LYS	2.4
1	A	64	PHE	2.4
1	A	187	GLY	2.4
1	C	431	SER	2.4
1	D	212	VAL	2.4
1	D	14	LYS	2.4
1	B	342	ALA	2.4
1	A	188	TYR	2.4
1	D	183	ARG	2.4
1	B	429	PRO	2.3
1	D	365	ARG	2.3
1	B	117	ASP	2.3
1	B	128	SER	2.3
1	A	153	LEU	2.3
1	C	342	ALA	2.3
1	B	563	TYR	2.3
1	B	92	GLY	2.3
1	D	96	VAL	2.3
1	A	368	LYS	2.3
1	D	240	ALA	2.2
1	A	47	TYR	2.2
1	B	327	ARG	2.2
1	C	305	PRO	2.2
1	A	481	TYR	2.2
1	B	182	LYS	2.2
1	B	159	ASN	2.2
1	A	335	TRP	2.2
1	C	479	LYS	2.2
1	A	154	SER	2.2
1	A	226	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	466	LEU	2.1
1	B	252	VAL	2.1
1	B	467	GLN	2.1
1	D	11	VAL	2.1
1	A	254	ILE	2.1
1	D	28	VAL	2.1
1	C	186	MET	2.1
1	A	390	VAL	2.1
1	D	542	THR	2.1
1	A	399	PHE	2.1
1	B	480	PHE	2.1
1	C	262	GLY	2.1
1	A	359	THR	2.1
1	A	520	THR	2.1
1	B	17	ALA	2.1
1	C	240	ALA	2.1
1	A	120	MET	2.0
1	B	129	MET	2.0
1	C	454	TRP	2.0
1	A	496	TYR	2.0
1	B	60	ASN	2.0
1	C	274	GLY	2.0
1	A	152	LYS	2.0
1	A	252	VAL	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates 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. 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(\AA^2)	Q<0.9
3	NAG	B	685	14/15	0.89	0.17	-0.22	50,52,56,57	0
2	CA	A	601	1/1	0.97	0.18	-0.46	43,43,43,43	0
2	CA	B	601	1/1	0.91	0.16	-1.01	60,60,60,60	0
2	CA	C	601	1/1	0.97	0.17	-1.09	37,37,37,37	0
2	CA	D	601	1/1	0.88	0.15	-1.21	61,61,61,61	0
2	CA	B	600	1/1	0.92	0.14	-1.82	58,58,58,58	0
2	CA	C	600	1/1	0.97	0.13	-1.90	41,41,41,41	0
2	CA	A	600	1/1	0.95	0.14	-2.38	33,33,33,33	0
2	CA	D	600	1/1	0.98	0.09	-2.64	45,45,45,45	0
3	NAG	D	618	14/15	0.87	0.19	-	53,55,56,57	0
3	NAG	C	618	14/15	0.89	0.20	-	64,66,70,73	0
3	NAG	B	676	14/15	0.86	0.25	-	64,67,74,75	0
3	NAG	B	646	14/15	0.90	0.27	-	59,63,70,71	0
3	NAG	D	646	14/15	0.87	0.22	-	63,65,68,69	0
3	NAG	D	685	14/15	0.89	0.19	-	50,53,56,57	0
3	NAG	A	676	14/15	0.88	0.19	-	65,69,74,75	0
3	NAG	A	685	14/15	0.91	0.18	-	49,52,56,56	0
3	NAG	C	652	14/15	0.87	0.20	-	65,67,67,67	0
3	NAG	B	618	14/15	0.91	0.20	-	49,51,51,51	0
3	NAG	B	652	14/15	0.80	0.24	-	73,77,81,83	0
3	NAG	D	676	14/15	0.84	0.24	-	65,67,67,68	0
3	NAG	C	685	14/15	0.86	0.20	-	55,57,62,64	0
3	NAG	C	646	14/15	0.84	0.22	-	62,64,67,68	0
3	NAG	B	659	14/15	0.85	0.33	-	90,93,95,96	0
3	NAG	A	618	14/15	0.86	0.21	-	64,67,68,69	0
3	NAG	D	652	14/15	0.82	0.20	-	79,85,87,88	0
3	NAG	C	676	14/15	0.86	0.22	-	61,63,65,65	0
3	NAG	A	659	14/15	0.89	0.21	-	73,75,77,77	0
3	NAG	A	646	14/15	0.71	0.35	-	66,73,79,79	0
3	NAG	A	652	14/15	0.85	0.20	-	60,62,63,64	0

6.5 Other polymers

There are no such residues in this entry.