Full wwPDB X-ray Structure Validation Report (i)

Apr 29, 2025 – 02:15 PM EDT

PDB ID	:	3NVN / pdb_00003nvn
Title	:	Molecular mechanism of guidance cue recognition
Authors	:	Liu, H.; Juo, Z.; Shim, A.; Focia, P.; Chen, X.; Garcia, C.; He, X.
Deposited on	:	2010-07-08
Resolution	:	2.26 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 (i) 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 (i)) were used in the production of this report:

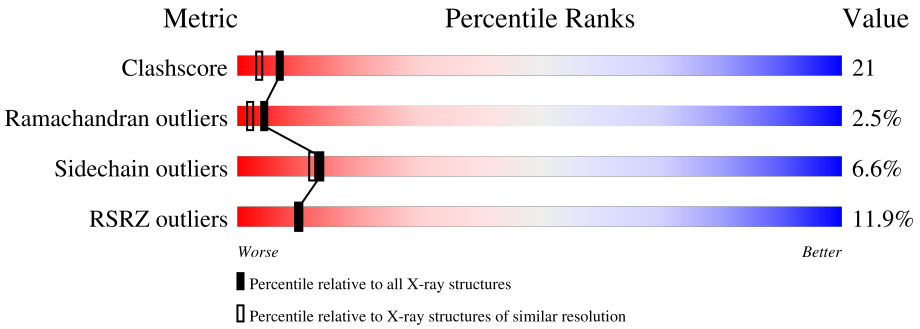
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

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 2.26 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))
Clashscore	180529	1919 (2.26-2.26)
Ramachandran outliers	177936	1884 (2.26-2.26)
Sidechain outliers	177891	1885 (2.26-2.26)
RSRZ outliers	164620	1763 (2.26-2.26)

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	389	10% 62% 29% 7%
2	B	476	13% 62% 33% 5%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 7296 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 EVM139.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	383	3052	1943	508	589	12	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	12	PRO	-	expression tag	UNP Q8JL80
A	13	GLY	-	expression tag	UNP Q8JL80
A	14	THR	-	expression tag	UNP Q8JL80
A	15	SER	-	expression tag	UNP Q8JL80

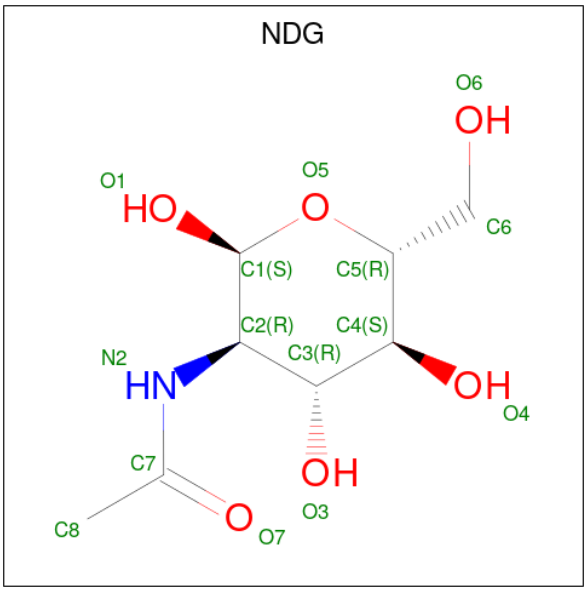
- Molecule 2 is a protein called Plexin-C1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	474	3622	2262	645	694	21	0	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	508	GLY	-	expression tag	UNP O60486
B	509	ALA	-	expression tag	UNP O60486
B	510	PRO	-	expression tag	UNP O60486

- Molecule 3 is 2-acetamido-2-deoxy-alpha-D-glucopyranose (CCD ID: NDG) (formula: $C_8H_{15}NO_6$).

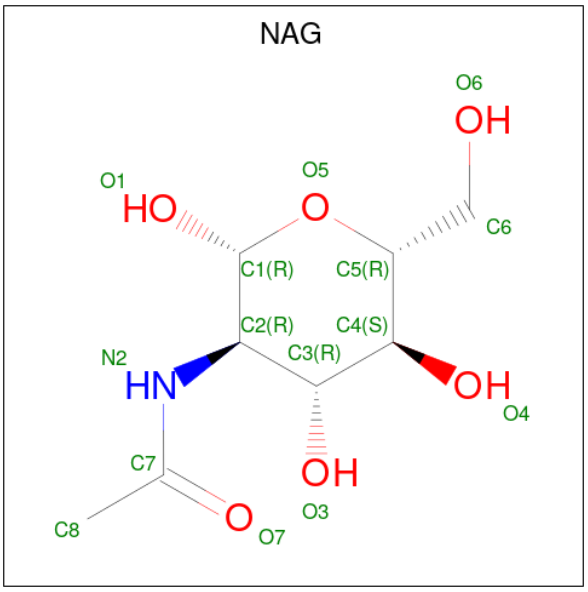


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O 14 8 1 5	0	0
3	B	1	Total C N O 14 8 1 5	0	0
3	B	1	Total C N O 14 8 1 5	0	0

- Molecule 4 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	1	Total Ca 1 1	0	0

- Molecule 5 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



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

- Molecule 6 is water.

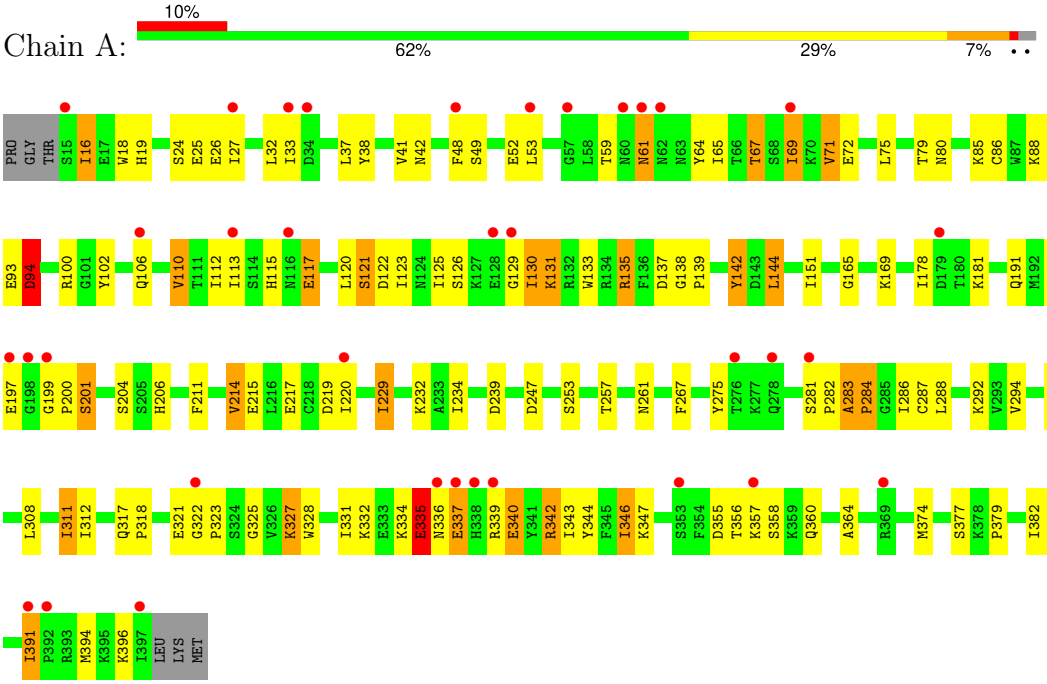
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	267	Total O 267 267	0	0
6	B	242	Total O 242 242	0	0

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.

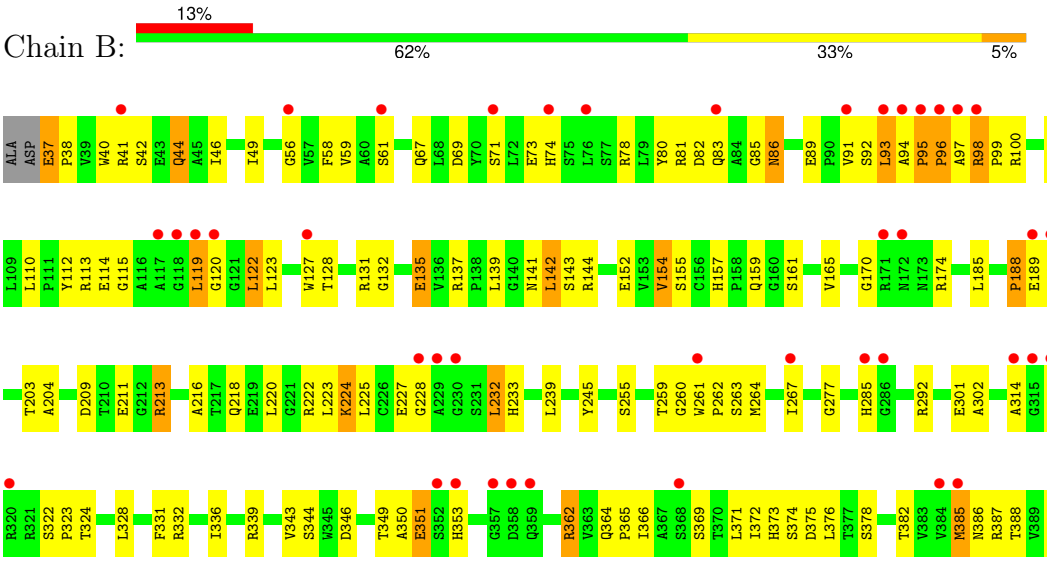
- Molecule 1: EVM139

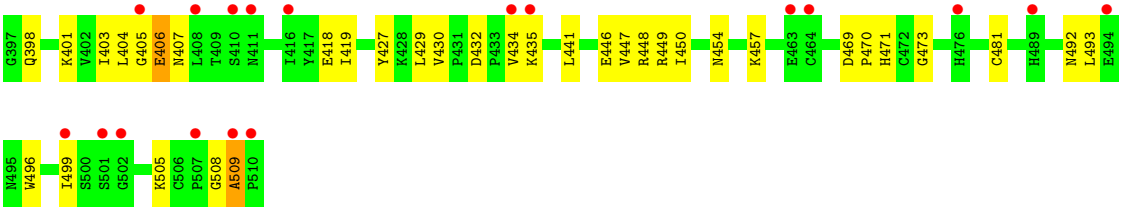
Chain A:



- Molecule 2: Plexin-C1

Chain B:




G397
Q398
K401
V402
I403
L404
G405
E406
N407
L408
T409
S410
N411
I416
Y417
E418
I419
Y427
K428
L429
V430
P431
D432
P433
V434
K435
L441
E446
V447
R448
R449
I450
N454
K457
E463
C464
D469
P470
H471
C472
G473
H476
C481
H489
N492
L493
E494
N496
W496
I499
S500
S501
G502
K505
C506
P507
G508
A509
P510

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	95.75Å 133.49Å 172.23Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	43.53 – 2.26 43.53 – 2.26	Depositor EDS
% Data completeness (in resolution range)	99.5 (43.53-2.26) 99.5 (43.53-2.26)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.26 (at 2.00Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.239 , 0.276 0.234 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	21.5	Xtriage
Anisotropy	0.146	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 56.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	7296	wwPDB-VP
Average B, all atoms (Å^2)	47.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.61% 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: NDG, NAG, CA

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.55	3/3123 (0.1%)	0.98	22/4231 (0.5%)
2	B	0.47	2/3706 (0.1%)	0.93	10/5040 (0.2%)
All	All	0.51	5/6829 (0.1%)	0.95	32/9271 (0.3%)

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	201	SER	CB-OG	-14.41	1.13	1.42
1	A	201	SER	C-O	-6.42	1.15	1.23
2	B	86	ASN	CB-CG	-6.37	1.36	1.52
2	B	86	ASN	CG-ND2	-5.96	1.20	1.33
1	A	201	SER	C-N	-5.70	1.26	1.33

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	229	ILE	CB-CA-C	-7.90	104.99	111.71
1	A	377	SER	N-CA-C	-7.84	103.84	113.41
1	A	94	ASP	CA-C-N	7.07	127.06	119.28
1	A	94	ASP	C-N-CA	7.07	127.06	119.28
1	A	138	GLY	CA-C-N	6.86	126.83	119.28
1	A	138	GLY	C-N-CA	6.86	126.83	119.28
1	A	339	ARG	N-CA-C	-6.66	105.47	112.93
1	A	151	ILE	CA-C-N	6.50	126.88	119.92
1	A	151	ILE	C-N-CA	6.50	126.88	119.92
2	B	364	GLN	CA-C-N	6.43	127.88	119.84
2	B	364	GLN	C-N-CA	6.43	127.88	119.84
2	B	216	ALA	N-CA-C	6.34	119.23	110.35
2	B	430	VAL	N-CA-C	6.18	114.78	107.73
2	B	301	GLU	N-CA-C	6.07	118.68	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	253	SER	N-CA-C	-5.86	100.87	109.18
1	A	117	GLU	N-CA-C	-5.68	105.75	114.16
1	A	72	GLU	N-CA-C	-5.65	106.34	113.18
1	A	321	GLU	N-CA-C	5.64	117.98	109.41
1	A	181	LYS	N-CA-C	-5.62	106.97	113.88
2	B	346	ASP	N-CA-C	-5.52	106.90	113.97
2	B	128	THR	N-CA-C	-5.43	106.50	113.23
1	A	294	VAL	CA-C-N	5.29	125.58	119.92
1	A	294	VAL	C-N-CA	5.29	125.58	119.92
2	B	277	GLY	N-CA-C	5.27	117.23	110.96
2	B	369	SER	N-CA-C	-5.25	106.92	113.38
1	A	165	GLY	N-CA-C	-5.17	106.91	111.67
2	B	385	MET	N-CA-C	-5.15	103.68	111.56
1	A	346	ILE	N-CA-C	5.14	117.43	108.95
1	A	121	SER	N-CA-C	5.07	116.78	109.07
1	A	283	ALA	CA-C-N	5.07	126.18	119.84
1	A	283	ALA	C-N-CA	5.07	126.18	119.84
1	A	312	ILE	N-CA-C	5.04	116.01	108.54

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	3052	0	2995	140	0
2	B	3622	0	3499	142	0
3	A	14	0	12	0	0
3	B	28	0	24	1	0
4	B	1	0	0	0	0
5	B	70	0	65	3	0
6	A	267	0	0	18	0
6	B	242	0	0	15	0
All	All	7296	0	6595	277	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 21.

All (277) 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:232:LYS:HE3	1:A:234:ILE:HD11	1.33	1.09
1:A:229:ILE:HD11	1:A:247:ASP:HB2	1.25	1.07
1:A:334:LYS:HE3	1:A:355:ASP:OD2	1.57	1.04
1:A:391:ILE:HD13	1:A:391:ILE:H	1.23	1.03
1:A:281:SER:HB2	1:A:282:PRO:HD3	1.44	0.99
2:B:91:VAL:HG12	2:B:92:SER:H	1.29	0.98
1:A:110:VAL:HG13	1:A:123:ILE:HD11	1.46	0.98
1:A:199:GLY:HA3	1:A:204:SER:O	1.67	0.95
1:A:75:LEU:HD11	1:A:86:CYS:HB3	1.52	0.92
2:B:264:MET:HE2	2:B:336:ILE:HG21	1.53	0.91
1:A:100:ARG:HH21	2:B:220:LEU:HD12	1.38	0.88
1:A:100:ARG:NH2	2:B:220:LEU:HD12	1.91	0.85
2:B:49:ILE:HD13	2:B:59:VAL:HG22	1.58	0.85
2:B:261:TRP:HD1	2:B:262:PRO:HD2	1.41	0.85
1:A:340:GLU:HG3	1:A:356:THR:OG1	1.76	0.84
1:A:229:ILE:HD11	1:A:247:ASP:CB	2.08	0.84
2:B:174:ARG:NH2	2:B:211:GLU:HB2	1.93	0.82
2:B:204:ALA:HB2	2:B:225:LEU:HG	1.61	0.81
1:A:88:LYS:HB2	1:A:92:SER:HB2	1.62	0.81
2:B:174:ARG:HH22	2:B:211:GLU:HB2	1.45	0.79
2:B:41:ARG:HG2	2:B:446:GLU:HG2	1.65	0.78
2:B:98:ARG:HH11	2:B:98:ARG:HG3	1.48	0.77
1:A:27:ILE:HD11	1:A:383:ALA:C	2.10	0.77
1:A:41:VAL:HG22	1:A:42:ASN:H	1.52	0.74
1:A:335:GLU:O	1:A:335:GLU:HG3	1.87	0.74
1:A:340:GLU:HG2	1:A:357:LYS:HB2	1.70	0.73
1:A:391:ILE:H	1:A:391:ILE:CD1	2.01	0.72
1:A:323:PRO:HG2	1:A:347:LYS:HD2	1.71	0.72
2:B:499:ILE:HG12	6:B:642:HOH:O	1.90	0.72
1:A:239:ASP:HB3	1:A:261:ASN:ND2	2.06	0.71
2:B:385:MET:HE2	2:B:385:MET:HA	1.72	0.71
1:A:217:GLU:HB2	1:A:311:ILE:CD1	2.21	0.70
1:A:27:ILE:HD11	1:A:383:ALA:O	1.91	0.70
2:B:259:THR:HG21	5:B:5:NAG:O7	1.93	0.69
2:B:328:LEU:HD21	2:B:390:LEU:HD13	1.75	0.69
2:B:91:VAL:HG12	2:B:92:SER:N	2.07	0.68
1:A:135:ARG:NH1	1:A:144:LEU:HD22	2.09	0.68
2:B:86:ASN:OD1	6:B:563:HOH:O	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:157:HIS:HB3	2:B:159:GLN:HE21	1.59	0.68
1:A:41:VAL:HG22	1:A:42:ASN:N	2.09	0.67
1:A:331:ILE:HD12	1:A:343:ILE:HG12	1.76	0.67
2:B:98:ARG:HG3	2:B:98:ARG:NH1	2.10	0.67
1:A:360:GLN:HB3	6:A:533:HOH:O	1.93	0.66
2:B:255:SER:HB3	5:B:5:NAG:O6	1.94	0.66
2:B:89:GLU:HB3	2:B:105:PHE:CE2	2.31	0.66
2:B:302:ALA:HB2	6:B:697:HOH:O	1.96	0.66
1:A:16:ILE:HD11	1:A:388:GLY:HA3	1.78	0.66
2:B:448:ARG:HB2	2:B:450:ILE:HD11	1.76	0.65
1:A:142:TYR:HB2	6:A:415:HOH:O	1.95	0.65
1:A:364:ALA:HB2	1:A:394:MET:HG2	1.78	0.65
2:B:157:HIS:HB3	2:B:159:GLN:NE2	2.11	0.65
2:B:188:PRO:HG2	2:B:189:GLU:H	1.61	0.65
2:B:107:LYS:HB2	2:B:154:VAL:HG11	1.78	0.65
1:A:67:THR:HG21	1:A:102:TYR:O	1.97	0.64
2:B:82:ASP:OD1	2:B:83:GLN:HG3	1.98	0.64
2:B:398:GLN:HG2	2:B:418:GLU:HG2	1.79	0.64
1:A:217:GLU:HB2	1:A:311:ILE:HD11	1.80	0.64
2:B:99:PRO:HG2	2:B:314:ALA:HB2	1.80	0.64
2:B:450:ILE:HD12	2:B:450:ILE:N	2.12	0.64
1:A:85:LYS:HE2	6:A:661:HOH:O	1.97	0.64
2:B:89:GLU:HB3	2:B:105:PHE:HE2	1.64	0.63
2:B:406:GLU:HG3	2:B:407:ASN:H	1.63	0.63
1:A:100:ARG:HH21	2:B:220:LEU:CD1	2.12	0.63
1:A:232:LYS:HE3	1:A:234:ILE:CD1	2.22	0.62
1:A:33:ILE:HD13	1:A:38:TYR:CD2	2.34	0.62
2:B:97:ALA:HB1	2:B:99:PRO:HD2	1.82	0.61
1:A:281:SER:CB	1:A:282:PRO:HD3	2.27	0.61
2:B:508:GLY:O	2:B:509:ALA:C	2.44	0.61
1:A:328:TRP:HZ2	1:A:374:MET:HE3	1.63	0.61
2:B:388:THR:HB	2:B:404:LEU:HD12	1.81	0.61
1:A:32:LEU:C	1:A:33:ILE:HD12	2.26	0.61
1:A:130:ILE:HG23	1:A:130:ILE:O	1.99	0.60
2:B:93:LEU:HD21	2:B:105:PHE:CE2	2.36	0.60
1:A:110:VAL:CG1	1:A:123:ILE:HD11	2.28	0.60
2:B:93:LEU:O	2:B:95:PRO:HD3	2.02	0.60
1:A:89:ILE:HG22	6:A:575:HOH:O	2.01	0.60
1:A:199:GLY:CA	1:A:204:SER:O	2.48	0.59
1:A:396:LYS:HG2	6:A:533:HOH:O	2.01	0.59
1:A:80:ASN:HD21	1:A:85:LYS:HB3	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:93:GLU:HB2	6:A:589:HOH:O	2.02	0.59
2:B:375:ASP:OD1	2:B:395:GLY:HA3	2.03	0.59
2:B:141:ASN:HB3	2:B:144:ARG:HD2	1.84	0.58
1:A:229:ILE:HD11	1:A:247:ASP:N	2.19	0.58
1:A:284:PRO:HB3	1:A:302:ILE:HG12	1.85	0.58
2:B:115:GLY:HA2	6:B:544:HOH:O	2.04	0.58
2:B:373:HIS:HB3	2:B:376:LEU:HG	1.85	0.58
1:A:25:GLU:HB3	1:A:41:VAL:HG21	1.86	0.57
1:A:215:GLU:HB3	1:A:311:ILE:HG12	1.84	0.57
2:B:223:LEU:HD22	2:B:267:ILE:HD11	1.86	0.57
2:B:261:TRP:CZ3	2:B:362:ARG:NE	2.73	0.57
1:A:33:ILE:HD12	1:A:33:ILE:N	2.19	0.57
1:A:16:ILE:HD13	1:A:16:ILE:C	2.30	0.57
1:A:229:ILE:CD1	1:A:247:ASP:HB2	2.17	0.57
2:B:222:ARG:HG3	2:B:224:LYS:HE2	1.87	0.57
1:A:93:GLU:HG3	6:A:514:HOH:O	2.05	0.57
2:B:113:ARG:HD3	2:B:122:LEU:HD22	1.86	0.56
1:A:217:GLU:HB2	1:A:311:ILE:HD12	1.87	0.56
2:B:387:ARG:HH21	2:B:405:GLY:HA2	1.71	0.56
1:A:328:TRP:CZ2	1:A:374:MET:HE3	2.41	0.56
1:A:93:GLU:O	1:A:94:ASP:HB3	2.06	0.56
1:A:301:ILE:HD11	6:A:594:HOH:O	2.06	0.56
2:B:285:HIS:HD2	2:B:372:ILE:HD11	1.71	0.55
2:B:78:ARG:HD3	2:B:80:TYR:CE1	2.41	0.55
2:B:99:PRO:HG2	2:B:314:ALA:CB	2.37	0.55
2:B:190:THR:HA	2:B:193:ARG:HB2	1.86	0.55
1:A:193:CYS:HB3	6:A:447:HOH:O	2.07	0.55
2:B:218:GLN:HG2	6:B:712:HOH:O	2.06	0.54
1:A:121:SER:OG	1:A:123:ILE:HD13	2.08	0.54
1:A:33:ILE:HD13	1:A:38:TYR:CE2	2.43	0.54
1:A:219:ASP:C	1:A:220:ILE:HD12	2.33	0.54
1:A:358:SER:HB2	1:A:360:GLN:HE21	1.72	0.54
1:A:387:ILE:HD13	1:A:387:ILE:H	1.73	0.54
2:B:93:LEU:N	2:B:93:LEU:HD22	2.23	0.53
2:B:261:TRP:CD1	2:B:262:PRO:HD2	2.33	0.53
1:A:75:LEU:HD11	1:A:86:CYS:CB	2.34	0.53
2:B:351:GLU:N	2:B:351:GLU:OE1	2.38	0.53
1:A:144:LEU:HA	1:A:206:HIS:O	2.09	0.53
1:A:283:ALA:HB3	1:A:286:ILE:HD12	1.90	0.53
2:B:119:LEU:HD22	2:B:120:GLY:H	1.73	0.53
2:B:331:PHE:CZ	2:B:365:PRO:HB3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:401:LYS:HZ1	2:B:471:HIS:HD2	1.56	0.53
2:B:81:ARG:HD3	6:B:606:HOH:O	2.08	0.53
2:B:154:VAL:CG1	2:B:155:SER:N	2.71	0.53
1:A:69:ILE:HD13	1:A:69:ILE:H	1.74	0.53
1:A:297:THR:HG23	6:A:557:HOH:O	2.09	0.53
2:B:225:LEU:CD2	2:B:232:LEU:HD22	2.39	0.53
1:A:283:ALA:HB3	1:A:286:ILE:CD1	2.39	0.53
2:B:225:LEU:HD23	2:B:232:LEU:HD22	1.91	0.52
1:A:360:GLN:OE1	1:A:396:LYS:HE3	2.09	0.52
2:B:213:ARG:HG3	2:B:213:ARG:O	2.09	0.52
1:A:49:SER:O	1:A:52:GLU:HG2	2.09	0.52
1:A:110:VAL:HG22	1:A:123:ILE:HG13	1.91	0.52
2:B:98:ARG:N	2:B:99:PRO:CD	2.73	0.52
2:B:135:GLU:HG3	2:B:137:ARG:NH2	2.24	0.52
2:B:91:VAL:CG1	2:B:92:SER:H	2.12	0.51
2:B:378:SER:OG	2:B:429:LEU:HG	2.10	0.51
1:A:26:GLU:O	1:A:41:VAL:HG23	2.11	0.51
2:B:261:TRP:HD1	2:B:262:PRO:CD	2.19	0.51
1:A:211:PHE:O	1:A:302:ILE:CD1	2.59	0.51
1:A:275:TYR:CE1	1:A:301:ILE:HD12	2.46	0.51
1:A:211:PHE:O	1:A:302:ILE:HD11	2.11	0.51
2:B:161:SER:HB3	2:B:233:HIS:ND1	2.25	0.51
1:A:80:ASN:ND2	1:A:85:LYS:HB3	2.26	0.51
2:B:454:ASN:O	2:B:457:LYS:HG2	2.11	0.51
2:B:174:ARG:NH2	2:B:209:ASP:OD1	2.44	0.51
1:A:16:ILE:O	1:A:16:ILE:HG23	2.10	0.50
2:B:78:ARG:HD3	2:B:80:TYR:CZ	2.46	0.50
2:B:192:SER:O	2:B:193:ARG:C	2.54	0.50
1:A:229:ILE:N	1:A:229:ILE:HD12	2.27	0.50
1:A:229:ILE:CD1	1:A:247:ASP:N	2.74	0.50
1:A:65:ILE:N	1:A:65:ILE:HD12	2.26	0.50
2:B:74:HIS:HA	6:B:520:HOH:O	2.12	0.50
1:A:25:GLU:OE1	1:A:41:VAL:HG21	2.11	0.49
2:B:260:GLY:O	2:B:292:ARG:HG2	2.12	0.49
1:A:123:ILE:HD12	1:A:123:ILE:N	2.26	0.49
1:A:297:THR:O	1:A:301:ILE:HG12	2.12	0.49
2:B:193:ARG:HG3	6:B:614:HOH:O	2.12	0.49
2:B:108:LEU:CD2	2:B:110:LEU:HG	2.42	0.49
2:B:189:GLU:HA	6:B:693:HOH:O	2.12	0.49
1:A:334:LYS:HE3	1:A:355:ASP:CG	2.35	0.49
1:A:64:TYR:O	1:A:79:THR:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:201:SER:HB2	2:B:152:GLU:HB2	1.95	0.49
1:A:113:ILE:HG13	6:A:652:HOH:O	2.13	0.49
1:A:331:ILE:CD1	1:A:343:ILE:HG23	2.43	0.48
2:B:170:GLY:HA3	6:B:579:HOH:O	2.13	0.48
2:B:323:PRO:HA	2:B:374:SER:HB3	1.95	0.48
2:B:505:LYS:NZ	2:B:505:LYS:HB3	2.27	0.48
1:A:302:ILE:HD13	1:A:302:ILE:O	2.13	0.48
1:A:169:LYS:HE3	1:A:287:CYS:SG	2.53	0.48
2:B:165:VAL:HG21	2:B:239:LEU:HD13	1.94	0.48
1:A:117:GLU:HB3	1:A:139:PRO:HG2	1.95	0.48
2:B:112:TYR:CD1	2:B:113:ARG:HG3	2.49	0.48
2:B:245:TYR:CD1	2:B:264:MET:HE3	2.49	0.48
2:B:427:TYR:HB3	6:B:522:HOH:O	2.13	0.48
1:A:214:VAL:HG23	1:A:267:PHE:CZ	2.49	0.48
2:B:432:ASP:HB3	2:B:435:LYS:O	2.13	0.48
1:A:387:ILE:HG12	1:A:387:ILE:O	2.14	0.47
2:B:401:LYS:NZ	2:B:471:HIS:HD2	2.13	0.47
2:B:434:VAL:HG12	2:B:435:LYS:HD2	1.97	0.47
1:A:257:THR:HG21	1:A:318:PRO:HD2	1.96	0.47
2:B:73:GLU:HG3	2:B:74:HIS:CD2	2.49	0.47
2:B:127:TRP:O	2:B:132:GLY:HA2	2.13	0.47
1:A:178:ILE:N	1:A:178:ILE:HD12	2.30	0.47
2:B:85:GLY:O	2:B:86:ASN:C	2.57	0.47
2:B:131:ARG:HD3	6:B:668:HOH:O	2.15	0.47
1:A:41:VAL:CG2	1:A:42:ASN:H	2.24	0.47
2:B:49:ILE:CD1	2:B:59:VAL:HG22	2.37	0.46
1:A:69:ILE:HD13	1:A:69:ILE:N	2.29	0.46
1:A:325:GLY:HA3	1:A:347:LYS:HE3	1.97	0.46
2:B:473:GLY:HA3	2:B:496:TRP:CE2	2.51	0.46
1:A:100:ARG:HD2	6:A:416:HOH:O	2.16	0.46
1:A:75:LEU:CD1	1:A:86:CYS:HB3	2.35	0.46
2:B:93:LEU:HD22	2:B:93:LEU:H	1.81	0.46
1:A:382:ILE:HD12	1:A:382:ILE:N	2.31	0.45
1:A:335:GLU:O	1:A:337:GLU:N	2.49	0.45
2:B:94:ALA:O	2:B:96:PRO:HD3	2.16	0.45
1:A:311:ILE:O	1:A:311:ILE:HG23	2.16	0.45
1:A:214:VAL:HG22	1:A:308:LEU:HD12	1.99	0.45
1:A:344:TYR:CE2	1:A:391:ILE:HG21	2.52	0.45
2:B:107:LYS:CB	2:B:154:VAL:HG11	2.44	0.45
2:B:469:ASP:HA	2:B:470:PRO:HD2	1.83	0.45
1:A:25:GLU:HB3	1:A:41:VAL:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:344:SER:HB2	2:B:349:THR:OG1	2.16	0.45
1:A:16:ILE:HD12	1:A:18:TRP:CD1	2.51	0.45
1:A:379:PRO:HG3	1:A:391:ILE:HG23	1.98	0.45
1:A:340:GLU:OE1	1:A:340:GLU:HA	2.17	0.45
2:B:157:HIS:CG	2:B:185:LEU:HD12	2.52	0.45
1:A:302:ILE:HD12	6:A:401:HOH:O	2.17	0.45
1:A:327:LYS:HG2	1:A:346:ILE:HD12	1.98	0.45
2:B:97:ALA:CB	2:B:100:ARG:HH11	2.30	0.45
1:A:19:HIS:HB2	1:A:387:ILE:CD1	2.47	0.45
2:B:441:LEU:HB3	2:B:450:ILE:HD13	1.99	0.45
1:A:195:ASN:HD22	1:A:195:ASN:N	2.15	0.44
2:B:322:SER:C	2:B:324:THR:H	2.24	0.44
1:A:232:LYS:CE	1:A:234:ILE:HD11	2.22	0.44
2:B:108:LEU:HD23	2:B:110:LEU:HG	1.98	0.44
1:A:199:GLY:O	2:B:213:ARG:NH2	2.51	0.44
1:A:122:ASP:O	1:A:131:LYS:HE2	2.18	0.44
2:B:49:ILE:HD12	2:B:58:PHE:O	2.17	0.44
2:B:339:ARG:HG3	2:B:339:ARG:HH11	1.82	0.44
2:B:350:ALA:HB3	2:B:351:GLU:OE1	2.17	0.44
2:B:40:TRP:CZ3	2:B:42:SER:HB2	2.53	0.44
1:A:41:VAL:CG2	1:A:42:ASN:N	2.78	0.44
1:A:288:LEU:HB3	1:A:292:LYS:HB2	2.00	0.44
2:B:46:ILE:HD13	2:B:447:VAL:CG2	2.47	0.44
2:B:372:ILE:N	2:B:372:ILE:HD12	2.33	0.44
2:B:388:THR:CB	2:B:404:LEU:HD12	2.47	0.44
1:A:16:ILE:HD11	1:A:388:GLY:CA	2.44	0.44
2:B:203:THR:HG21	2:B:222:ARG:HD3	1.99	0.44
2:B:419:ILE:HG23	2:B:448:ARG:HH21	1.82	0.44
1:A:115:HIS:HD2	6:A:585:HOH:O	2.00	0.43
2:B:141:ASN:OD1	2:B:143:SER:N	2.45	0.43
2:B:450:ILE:N	2:B:450:ILE:CD1	2.81	0.43
2:B:492:ASN:ND2	2:B:493:LEU:HG	2.33	0.43
2:B:499:ILE:HD11	6:B:686:HOH:O	2.18	0.43
1:A:112:ILE:HG13	1:A:121:SER:HB2	2.00	0.43
2:B:141:ASN:OD1	2:B:141:ASN:C	2.61	0.43
2:B:403:ILE:HD13	2:B:469:ASP:HA	1.99	0.43
2:B:114:GLU:HG3	6:B:607:HOH:O	2.18	0.43
2:B:38:PRO:HD2	2:B:449:ARG:HB3	2.01	0.43
2:B:38:PRO:HB3	2:B:71:SER:O	2.18	0.43
2:B:159:GLN:H	2:B:159:GLN:CD	2.27	0.43
2:B:317:GLY:O	2:B:318:GLN:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:137:ASP:OD2	1:A:142:TYR:HA	2.18	0.42
1:A:129:GLY:O	1:A:130:ILE:HG22	2.19	0.42
2:B:123:LEU:HB2	2:B:139:LEU:HD13	2.02	0.42
1:A:120:LEU:HB3	1:A:133:TRP:CZ2	2.54	0.42
1:A:331:ILE:HD13	1:A:343:ILE:HG23	2.01	0.42
2:B:332:ARG:NH2	3:B:7:NDG:H8C3	2.35	0.42
1:A:332:LYS:HE3	6:A:455:HOH:O	2.20	0.42
2:B:328:LEU:HB3	2:B:371:LEU:HB3	2.00	0.42
1:A:311:ILE:O	1:A:311:ILE:CG2	2.67	0.42
2:B:157:HIS:CD2	2:B:185:LEU:HD12	2.55	0.42
2:B:343:VAL:HG23	6:B:624:HOH:O	2.20	0.42
1:A:135:ARG:NH1	1:A:142:TYR:O	2.50	0.41
1:A:144:LEU:HD12	1:A:206:HIS:C	2.44	0.41
1:A:199:GLY:HA3	1:A:204:SER:C	2.42	0.41
2:B:86:ASN:OD1	5:B:1:NAG:O5	2.35	0.41
2:B:441:LEU:CB	2:B:450:ILE:HD13	2.50	0.41
2:B:227:GLU:HG2	2:B:228:GLY:N	2.35	0.41
1:A:93:GLU:HA	6:A:472:HOH:O	2.19	0.41
1:A:19:HIS:HB2	1:A:387:ILE:HD11	2.01	0.41
1:A:106:GLN:HB2	6:A:618:HOH:O	2.20	0.41
2:B:37:GLU:HA	2:B:38:PRO:HD3	1.87	0.41
2:B:44:GLN:HE21	2:B:44:GLN:HB2	1.65	0.41
1:A:88:LYS:HB2	1:A:92:SER:CB	2.42	0.41
1:A:239:ASP:HB3	1:A:261:ASN:CG	2.45	0.41
2:B:403:ILE:HD13	2:B:470:PRO:HD2	2.01	0.41
1:A:282:PRO:HD2	6:A:482:HOH:O	2.21	0.40
1:A:342:ARG:HH11	1:A:342:ARG:HG3	1.86	0.40
2:B:141:ASN:HB3	2:B:144:ARG:CD	2.51	0.40
2:B:351:GLU:H	2:B:351:GLU:CD	2.29	0.40
1:A:37:LEU:HB3	1:A:48:PHE:HB3	2.02	0.40
1:A:281:SER:HB2	1:A:282:PRO:CD	2.33	0.40
2:B:127:TRP:CZ3	2:B:135:GLU:OE2	2.75	0.40
2:B:67:GLN:HB2	2:B:142:LEU:HD22	2.03	0.40
2:B:69:ASP:OD2	2:B:71:SER:HB2	2.22	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	381/389 (98%)	344 (90%)	28 (7%)	9 (2%)	5	2
2	B	472/476 (99%)	424 (90%)	36 (8%)	12 (2%)	4	2
All	All	853/865 (99%)	768 (90%)	64 (8%)	21 (2%)	4	2

All (21) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	335	GLU
1	A	336	ASN
2	B	318	GLN
1	A	71	VAL
1	A	200	PRO
1	A	337	GLU
2	B	188	PRO
2	B	319	GLU
2	B	353	HIS
1	A	130	ILE
2	B	96	PRO
2	B	193	ARG
2	B	386	ASN
2	B	406	GLU
1	A	61	ASN
1	A	94	ASP
1	A	322	GLY
2	B	366	ILE
2	B	509	ALA
2	B	95	PRO
2	B	56	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	343/349 (98%)	315 (92%)	28 (8%)	9 8
2	B	389/390 (100%)	369 (95%)	20 (5%)	20 21
All	All	732/739 (99%)	684 (93%)	48 (7%)	14 12

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

Mol	Chain	Res	Type
1	A	16	ILE
1	A	24	SER
1	A	53	LEU
1	A	59	THR
1	A	61	ASN
1	A	67	THR
1	A	69	ILE
1	A	71	VAL
1	A	110	VAL
1	A	125	ILE
1	A	126	SER
1	A	131	LYS
1	A	135	ARG
1	A	142	TYR
1	A	144	LEU
1	A	191	GLN
1	A	197	GLU
1	A	214	VAL
1	A	284	PRO
1	A	302	ILE
1	A	311	ILE
1	A	317	GLN
1	A	327	LYS
1	A	335	GLU
1	A	340	GLU
1	A	342	ARG
1	A	387	ILE

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Mol	Chain	Res	Type
1	A	391	ILE
2	B	37	GLU
2	B	44	GLN
2	B	61	SER
2	B	93	LEU
2	B	98	ARG
2	B	119	LEU
2	B	122	LEU
2	B	135	GLU
2	B	142	LEU
2	B	154	VAL
2	B	213	ARG
2	B	224	LYS
2	B	232	LEU
2	B	263	SER
2	B	316	GLU
2	B	351	GLU
2	B	362	ARG
2	B	382	THR
2	B	396	ASP
2	B	481	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	ASN
1	A	107	ASN
1	A	116	ASN
1	A	195	ASN
1	A	238	ASN
1	A	317	GLN
1	A	336	ASN
1	A	349	ASN
1	A	360	GLN
1	A	365	GLN
2	B	44	GLN
2	B	53	GLN
2	B	67	GLN
2	B	83	GLN
2	B	159	GLN
2	B	276	GLN
2	B	285	HIS

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Mol	Chain	Res	Type
2	B	454	ASN
2	B	471	HIS
2	B	489	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 9 ligands modelled in this entry, 1 is monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
5	NAG	B	1	2	14,14,15	1.12	1 (7%)	17,19,21	1.52	4 (23%)
3	NDG	B	7	-	14,14,15	0.79	0	17,19,21	0.56	0
3	NDG	B	2	-	14,14,15	0.65	0	17,19,21	0.78	0
5	NAG	B	3	2	14,14,15	0.54	0	17,19,21	0.92	1 (5%)
5	NAG	B	4	-	14,14,15	0.65	0	17,19,21	1.09	2 (11%)
5	NAG	B	6	2	14,14,15	0.49	0	17,19,21	0.77	0
3	NDG	A	1	-	14,14,15	0.70	0	17,19,21	0.97	1 (5%)
5	NAG	B	5	2	14,14,15	0.51	0	17,19,21	0.87	1 (5%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	NAG	B	1	2	-	4/6/23/26	0/1/1/1
3	NDG	B	7	-	-	4/6/23/26	0/1/1/1
3	NDG	B	2	-	-	4/6/23/26	0/1/1/1
5	NAG	B	3	2	-	3/6/23/26	0/1/1/1
5	NAG	B	4	-	-	2/6/23/26	0/1/1/1
5	NAG	B	6	2	-	2/6/23/26	0/1/1/1
3	NDG	A	1	-	-	4/6/23/26	0/1/1/1
5	NAG	B	5	2	-	4/6/23/26	0/1/1/1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	B	1	NAG	C1-C2	-3.40	1.47	1.52

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	B	1	NAG	C1-C2-N2	-3.51	104.91	110.43
5	B	3	NAG	C2-N2-C7	-2.66	119.34	122.90
5	B	4	NAG	C3-C4-C5	2.58	114.91	110.23
5	B	1	NAG	O5-C5-C4	-2.51	104.71	110.83
5	B	1	NAG	C2-N2-C7	-2.51	119.53	122.90
5	B	4	NAG	C2-N2-C7	-2.45	119.62	122.90
5	B	1	NAG	O5-C1-C2	2.41	115.02	111.29
3	A	1	NDG	C4-C3-C2	2.30	114.39	111.02
5	B	5	NAG	C2-N2-C7	-2.12	120.05	122.90

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1	NDG	C8-C7-N2-C2
3	A	1	NDG	O7-C7-N2-C2
3	B	2	NDG	C8-C7-N2-C2
3	B	2	NDG	O7-C7-N2-C2
3	B	7	NDG	C8-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
3	B	7	NDG	O7-C7-N2-C2
5	B	1	NAG	C8-C7-N2-C2
5	B	1	NAG	O7-C7-N2-C2
5	B	5	NAG	O7-C7-N2-C2
5	B	6	NAG	C8-C7-N2-C2
5	B	6	NAG	O7-C7-N2-C2
5	B	5	NAG	C8-C7-N2-C2
3	B	7	NDG	O5-C5-C6-O6
3	A	1	NDG	O5-C5-C6-O6
5	B	3	NAG	C8-C7-N2-C2
5	B	3	NAG	O7-C7-N2-C2
5	B	5	NAG	O5-C5-C6-O6
3	A	1	NDG	C4-C5-C6-O6
3	B	7	NDG	C4-C5-C6-O6
3	B	2	NDG	O5-C5-C6-O6
5	B	5	NAG	C4-C5-C6-O6
3	B	2	NDG	C4-C5-C6-O6
5	B	4	NAG	C4-C5-C6-O6
5	B	4	NAG	O5-C5-C6-O6
5	B	1	NAG	C4-C5-C6-O6
5	B	1	NAG	O5-C5-C6-O6
5	B	3	NAG	O5-C5-C6-O6

There are no ring outliers.

3 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	1	NAG	1	0
3	B	7	NDG	1	0
5	B	5	NAG	2	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, 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	383/389 (98%)	0.58	38 (9%) 14 14	14, 37, 89, 135	0
2	B	474/476 (99%)	0.71	64 (13%) 8 8	15, 42, 102, 147	0
All	All	857/865 (99%)	0.65	102 (11%) 10 10	14, 40, 98, 147	0

All (102) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	91	GLY	7.1
2	B	119	LEU	6.8
2	B	315	GLY	6.1
1	A	199	GLY	5.9
2	B	61	SER	5.5
1	A	90	ASP	5.1
2	B	261	TRP	5.0
2	B	95	PRO	5.0
2	B	320	ARG	4.9
2	B	318	GLN	4.9
2	B	98	ARG	4.8
2	B	96	PRO	4.8
2	B	385	MET	4.5
2	B	93	LEU	4.5
2	B	464	CYS	4.4
1	A	387	ILE	4.4
1	A	281	SER	4.3
2	B	97	ALA	4.1
1	A	397	ILE	4.1
1	A	57	GLY	4.0
2	B	494	GLU	3.7
1	A	391	ILE	3.7
2	B	435	LYS	3.6
2	B	314	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
2	B	117	ALA	3.6
1	A	198	GLY	3.5
1	A	34	ASP	3.5
1	A	322	GLY	3.4
2	B	317	GLY	3.4
2	B	267	ILE	3.4
2	B	192	SER	3.4
2	B	229	ALA	3.4
1	A	339	ARG	3.3
2	B	190	THR	3.2
1	A	129	GLY	3.2
1	A	60	ASN	3.2
2	B	127	TRP	3.2
2	B	91	VAL	3.1
2	B	286	GLY	3.0
2	B	408	LEU	3.0
2	B	353	HIS	3.0
2	B	230	GLY	3.0
2	B	502	GLY	3.0
2	B	191	ALA	2.9
2	B	171	ARG	2.9
2	B	120	GLY	2.8
1	A	113	ILE	2.8
1	A	116	ASN	2.8
2	B	285	HIS	2.8
2	B	94	ALA	2.8
2	B	463	GLU	2.8
2	B	416	ILE	2.7
1	A	353	SER	2.7
1	A	48	PHE	2.7
2	B	410	SER	2.7
2	B	228	GLY	2.7
2	B	316	GLU	2.7
1	A	278	GLN	2.7
2	B	434	VAL	2.7
1	A	220	ILE	2.6
2	B	501	SER	2.6
1	A	27	ILE	2.6
1	A	62	ASN	2.5
2	B	357	GLY	2.5
2	B	405	GLY	2.5
1	A	369	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	128	GLU	2.4
1	A	338	HIS	2.4
2	B	172	ASN	2.4
1	A	15	SER	2.4
2	B	189	GLU	2.4
1	A	33	ILE	2.4
2	B	359	GLN	2.4
2	B	352	SER	2.3
2	B	358	ASP	2.3
1	A	53	LEU	2.3
2	B	76	LEU	2.3
2	B	510	PRO	2.3
2	B	83	GLN	2.3
1	A	357	LYS	2.3
1	A	337	GLU	2.3
1	A	179	ASP	2.3
2	B	384	VAL	2.2
2	B	71	SER	2.2
2	B	56	GLY	2.2
1	A	61	ASN	2.2
2	B	507	PRO	2.2
2	B	118	GLY	2.2
1	A	392	PRO	2.1
2	B	476	HIS	2.1
1	A	336	ASN	2.1
1	A	106	GLN	2.1
1	A	69	ILE	2.1
2	B	74	HIS	2.1
2	B	411	ASN	2.1
2	B	509	ALA	2.1
2	B	499	ILE	2.1
1	A	197	GLU	2.0
1	A	276	THR	2.0
2	B	41	ARG	2.0
2	B	489	HIS	2.0
2	B	368	SER	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 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, 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
3	NDG	B	7	14/15	0.15	0.23	170,170,170,170	0
5	NAG	B	6	14/15	0.28	0.27	192,195,198,199	0
3	NDG	B	2	14/15	0.50	0.22	136,136,136,136	0
5	NAG	B	5	14/15	0.54	0.23	107,108,109,109	0
5	NAG	B	1	14/15	0.57	0.31	166,166,166,166	0
5	NAG	B	3	14/15	0.57	0.25	113,113,114,114	0
3	NDG	A	1	14/15	0.63	0.21	146,146,146,146	0
5	NAG	B	4	14/15	0.82	0.15	46,52,53,54	0
4	CA	B	801	1/1	0.96	0.05	62,62,62,62	0

6.5 Other polymers (i)

There are no such residues in this entry.