



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2026 – 08:45 AM UTC

PDB ID : 6HSF / pdb_00006hsf
Title : Crystal structure of Schistosoma mansoni HDAC8 mutant H292M complexed with PCI-34051
Authors : Shaik, T.B.; Marek, M.; Romier, C.
Deposited on : 2018-10-01
Resolution : 1.90 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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

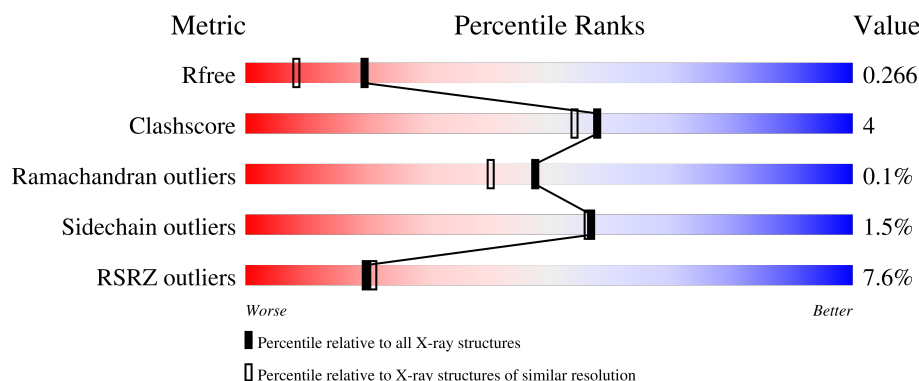
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.90 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}	180053	7789 (1.90-1.90)
Clashscore	190562	8410 (1.90-1.90)
Ramachandran outliers	187476	8333 (1.90-1.90)
Sidechain outliers	187428	8333 (1.90-1.90)
RSRZ outliers	180081	7790 (1.90-1.90)

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 $\leq 5\%$. 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	447	
1	B	447	
1	C	447	
1	D	447	

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 13896 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 Histone deacetylase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	396	Total	C	N	O	S	0	3	0
			3185	2057	528	584	16			
1	B	405	Total	C	N	O	S	0	6	0
			3259	2102	546	594	17			
1	C	406	Total	C	N	O	S	0	2	0
			3248	2094	544	594	16			
1	D	396	Total	C	N	O	S	0	3	0
			3185	2056	530	583	16			

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	HIS	-	expression tag	UNP A5H660
A	292	MET	HIS	engineered mutation	UNP A5H660
A	441	GLY	-	expression tag	UNP A5H660
A	442	SER	-	expression tag	UNP A5H660
A	443	LEU	-	expression tag	UNP A5H660
A	444	VAL	-	expression tag	UNP A5H660
A	445	PRO	-	expression tag	UNP A5H660
A	446	ARG	-	expression tag	UNP A5H660
B	0	HIS	-	expression tag	UNP A5H660
B	292	MET	HIS	engineered mutation	UNP A5H660
B	441	GLY	-	expression tag	UNP A5H660
B	442	SER	-	expression tag	UNP A5H660
B	443	LEU	-	expression tag	UNP A5H660
B	444	VAL	-	expression tag	UNP A5H660
B	445	PRO	-	expression tag	UNP A5H660
B	446	ARG	-	expression tag	UNP A5H660
C	0	HIS	-	expression tag	UNP A5H660
C	292	MET	HIS	engineered mutation	UNP A5H660
C	441	GLY	-	expression tag	UNP A5H660
C	442	SER	-	expression tag	UNP A5H660
C	443	LEU	-	expression tag	UNP A5H660

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Chain	Residue	Modelled	Actual	Comment	Reference
C	444	VAL	-	expression tag	UNP A5H660
C	445	PRO	-	expression tag	UNP A5H660
C	446	ARG	-	expression tag	UNP A5H660
D	0	HIS	-	expression tag	UNP A5H660
D	292	MET	HIS	engineered mutation	UNP A5H660
D	441	GLY	-	expression tag	UNP A5H660
D	442	SER	-	expression tag	UNP A5H660
D	443	LEU	-	expression tag	UNP A5H660
D	444	VAL	-	expression tag	UNP A5H660
D	445	PRO	-	expression tag	UNP A5H660
D	446	ARG	-	expression tag	UNP A5H660

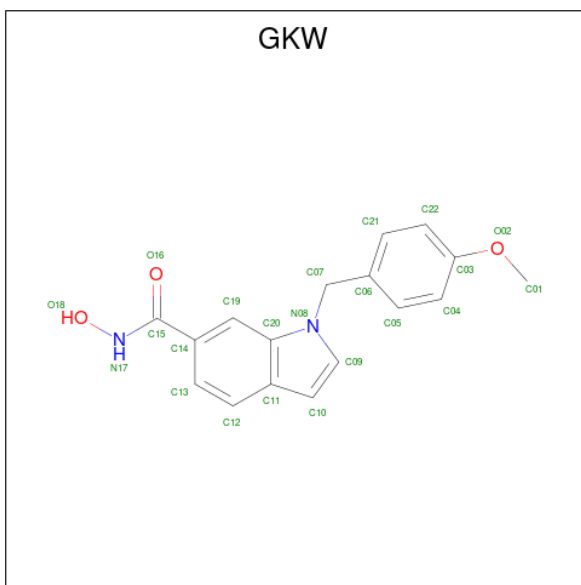
- Molecule 2 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Zn 1 1	0	0
2	B	1	Total Zn 1 1	0	0
2	C	1	Total Zn 1 1	0	0
2	D	1	Total Zn 1 1	0	0

- Molecule 3 is POTASSIUM ION (CCD ID: K) (formula: K).

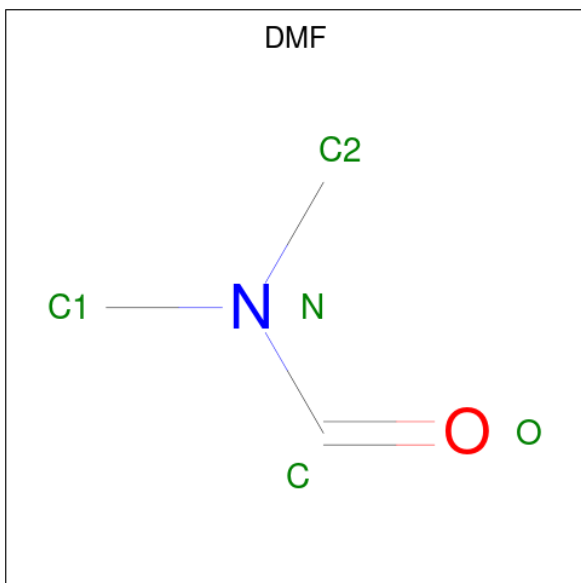
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	2	Total K 2 2	0	0
3	B	2	Total K 2 2	0	0
3	C	2	Total K 2 2	0	0
3	D	2	Total K 2 2	0	0

- Molecule 4 is 1-[(4-methoxyphenyl)methyl]- {N}-oxidanyl-indole-6-carboxamide (CCD ID: GKW) (formula: C₁₇H₁₆N₂O₃).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			22	17	2	3		
4	B	1	Total	C	N	O	0	0
			22	17	2	3		
4	C	1	Total	C	N	O	0	0
			22	17	2	3		
4	D	1	Total	C	N	O	0	0
			22	17	2	3		

- Molecule 5 is DIMETHYLFORMAMIDE (CCD ID: DMF) (formula: C_3H_7NO).



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

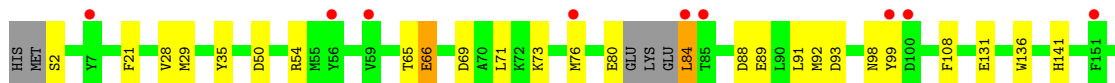
- Molecule 6 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).

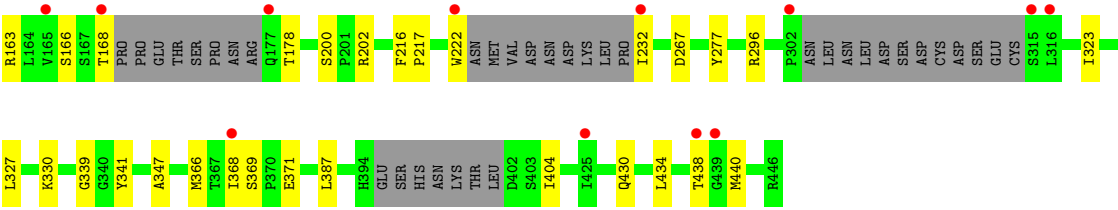


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
6	A	1	Total	C	O	0	0
			6	3	3		
6	A	1	Total	C	O	0	0
			6	3	3		
6	C	1	Total	C	O	0	0
			6	3	3		
6	C	1	Total	C	O	0	0
			6	3	3		
6	C	1	Total	C	O	0	0
			6	3	3		
6	D	1	Total	C	O	0	0
			6	3	3		
6	D	1	Total	C	O	0	0
			6	3	3		

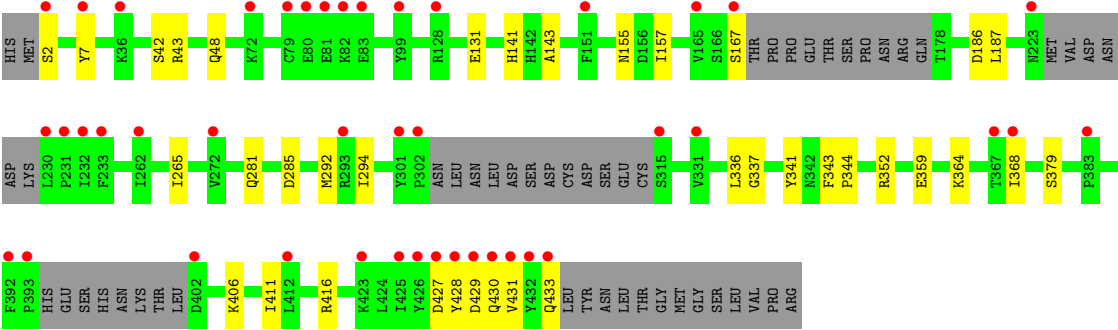
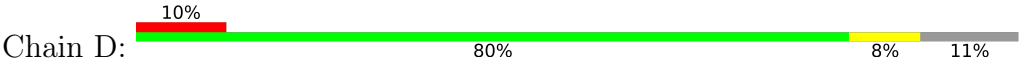
- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	174	Total	O	0	0
			174	174		
7	B	214	Total	O	0	0
			214	214		
7	C	212	Total	O	0	0
			212	212		
7	D	197	Total	O	0	0
			197	197		





● Molecule 1: Histone deacetylase



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	70.60Å 70.67Å 98.17Å 75.83° 78.25° 86.05°	Depositor
Resolution (Å)	43.37 – 1.90 43.37 – 1.90	Depositor EDS
% Data completeness (in resolution range)	97.6 (43.37-1.90) 97.6 (43.37-1.90)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.08 (at 1.89Å)	Xtriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.211 , 0.265 0.212 , 0.266	Depositor DCC
R_{free} test set	6938 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	22.8	Xtriage
Anisotropy	0.230	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 56.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.148 for -k,-h,-l	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	13896	wwPDB-VP
Average B, all atoms (Å ²)	30.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.19% 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, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: K, ZN, GKW, GOL, DMF

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	0.38	0/3277	0.56	0/4455
1	B	0.42	0/3366	0.55	0/4575
1	C	0.42	0/3343	0.57	0/4544
1	D	0.39	0/3280	0.55	0/4459
All	All	0.40	0/13266	0.56	0/18033

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3185	0	3075	25	0
1	B	3259	0	3178	30	0
1	C	3248	0	3154	40	0
1	D	3185	0	3086	21	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	2	0	0	0	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
4	A	22	0	0	0	0
4	B	22	0	0	3	0
4	C	22	0	0	2	0
4	D	22	0	0	1	0
5	A	30	0	42	3	0
5	B	20	0	28	3	0
5	C	20	0	28	2	0
5	D	10	0	14	1	0
6	A	12	0	16	0	0
6	C	18	0	23	1	0
6	D	12	0	16	0	0
7	A	174	0	0	0	0
7	B	214	0	0	3	0
7	C	212	0	0	10	0
7	D	197	0	0	2	0
All	All	13896	0	12660	115	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 4.

All (115) 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:C:29:MET:HE1	1:C:136:TRP:HD1	1.35	0.92
1:B:356:LEU:HG	7:B:711:HOH:O	1.82	0.79
1:A:12:ARG:HE	5:A:507:DMF:H12	1.49	0.77
1:C:65:THR:OG1	1:C:66:GLU:OE2	2.06	0.72
1:C:339:GLY:HA2	7:C:630:HOH:O	1.92	0.70
1:C:35:TYR:CE1	1:C:368:ILE:HG23	2.27	0.70
1:B:2:SER:N	1:B:131:GLU:OE2	2.26	0.69
1:C:29:MET:HE1	1:C:136:TRP:CD1	2.25	0.68
1:C:88:ASP:OD2	7:C:601:HOH:O	2.13	0.67
1:C:267:ASP:HB3	1:C:434:LEU:HD21	1.77	0.66
1:D:186:ASP:HB2	1:D:281:GLN:OE1	1.97	0.65
1:C:84:LEU:HD22	1:C:89:GLU:HG2	1.79	0.64
1:C:178:THR:HB	1:C:202:ARG:HH21	1.63	0.63
1:C:66:GLU:H	1:C:66:GLU:CD	2.05	0.63
1:B:141:HIS:NE2	4:B:504:GKW:O18	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:35:TYR:CE1	1:A:368:ILE:HG23	2.34	0.61
1:D:429:ASP:O	1:D:433:GLN:HG2	2.00	0.61
1:A:14:LEU:HD12	5:A:505:DMF:H23	1.84	0.59
1:A:186:ASP:HB2	1:A:281:GLN:OE1	2.02	0.59
1:B:341:TYR:OH	4:B:504:GKW:O16	2.16	0.59
1:C:28:VAL:HG12	1:C:29:MET:HE2	1.85	0.57
1:D:427:ASP:HB3	1:D:430:GLN:HB3	1.86	0.57
1:B:267:ASP:HB3	1:B:434:LEU:HD21	1.87	0.56
1:C:2:SER:N	1:C:131:GLU:OE2	2.39	0.56
1:C:366:MET:HA	5:C:506:DMF:H13	1.88	0.56
1:D:416:ARG:HH11	1:D:428:TYR:HE2	1.53	0.56
1:C:76:MET:HG2	7:C:679:HOH:O	2.05	0.55
1:D:352:ARG:HG2	5:D:506:DMF:H11	1.88	0.55
1:C:29:MET:CE	1:C:136:TRP:HD1	2.14	0.54
1:B:178:THR:HB	1:B:202:ARG:HH21	1.73	0.54
1:C:76:MET:HA	1:C:76:MET:HE2	1.90	0.54
1:A:249:LEU:HD13	1:A:253:ILE:HD13	1.89	0.53
1:B:141:HIS:H	1:B:141:HIS:CD2	2.27	0.52
1:D:337:GLY:HA2	7:D:606:HOH:O	2.09	0.52
1:D:143:ALA:HB3	1:D:155:ASN:HB2	1.92	0.52
1:D:187:LEU:HD23	1:D:292:MET:HE2	1.91	0.52
1:C:323:ILE:O	1:C:327:LEU:HG	2.11	0.51
1:C:28:VAL:HG12	1:C:29:MET:CE	2.40	0.51
1:B:369:SER:OG	1:B:371:GLU:OE2	2.28	0.50
1:A:91:LEU:HG	1:A:92:MET:HE2	1.93	0.50
1:A:343:PHE:HB2	1:A:344:PRO:HD3	1.94	0.50
1:D:141:HIS:H	1:D:141:HIS:CD2	2.30	0.50
1:A:392:PHE:O	1:A:392:PHE:CG	2.65	0.49
1:B:91:LEU:HD23	1:B:92:MET:HE2	1.93	0.49
1:B:416:ARG:HD2	7:B:614:HOH:O	2.12	0.49
1:D:359:GLU:HG2	1:D:364:LYS:O	2.12	0.49
1:A:43:ARG:H	5:A:508:DMF:C	2.26	0.48
1:B:35:TYR:CD1	1:B:368:ILE:HG23	2.47	0.48
1:C:368:ILE:H	6:C:509:GOL:H11	1.78	0.48
1:C:141:HIS:CD2	1:C:141:HIS:H	2.32	0.48
1:C:216:PHE:CE1	1:C:217:PRO:HB3	2.49	0.48
1:C:71:LEU:HG	1:C:108:PHE:HD1	1.79	0.47
1:D:341:TYR:OH	4:D:504:GKW:O16	2.22	0.47
1:C:91:LEU:HD23	1:C:92:MET:HE2	1.95	0.47
1:A:429:ASP:HA	1:A:432:TYR:HB3	1.96	0.47
1:C:141:HIS:NE2	4:C:504:GKW:O18	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:267:ASP:CB	1:C:434:LEU:HD21	2.44	0.47
1:D:2:SER:N	1:D:131:GLU:OE2	2.48	0.47
1:C:21:PHE:CE1	7:C:630:HOH:O	2.67	0.47
1:C:93:ASP:HA	1:C:98:ASN:ND2	2.30	0.47
1:C:330:LYS:C	5:C:505:DMF:H23	2.40	0.47
1:C:163:ARG:HG3	7:C:743:HOH:O	2.14	0.47
1:D:427:ASP:OD2	1:D:430:GLN:N	2.44	0.46
1:D:7:TYR:CZ	1:D:43:ARG:HG3	2.50	0.46
1:C:341:TYR:OH	4:C:504:GKW:O16	2.25	0.46
1:B:66:GLU:H	1:B:66:GLU:CD	2.24	0.45
1:A:264:PRO:HB2	1:A:435:TYR:CE2	2.52	0.45
1:B:282[B]:CYS:SG	1:B:323:ILE:HD11	2.57	0.45
1:B:277:TYR:HD1	1:B:332:PRO:HB2	1.82	0.45
1:A:368:ILE:HG21	1:A:387:LEU:HD22	1.98	0.45
1:B:277:TYR:CD1	1:B:332:PRO:HB2	2.51	0.45
1:C:73:LYS:NZ	1:C:88:ASP:OD1	2.40	0.44
1:C:296:ARG:NE	7:C:615:HOH:O	2.50	0.44
1:B:43[B]:ARG:HH12	1:B:45:PRO:HB3	1.82	0.44
1:D:157:ILE:HG12	1:D:336:LEU:CD1	2.47	0.44
1:A:412:LEU:HD21	1:A:435:TYR:CZ	2.53	0.44
1:A:141:HIS:H	1:A:141:HIS:CD2	2.36	0.44
1:B:409:ARG:HG3	1:B:443:LEU:HD22	1.99	0.44
1:D:187:LEU:HD21	1:D:294:ILE:HG13	1.99	0.44
1:A:43:ARG:NH2	1:B:96[A]:SER:OG	2.45	0.43
1:C:277:TYR:HB3	7:C:789:HOH:O	2.18	0.43
1:B:288:ALA:HB2	1:B:296:ARG:HA	2.00	0.43
1:D:167:SER:OG	7:D:601:HOH:O	2.20	0.43
1:D:265:ILE:HD12	1:D:411:ILE:HG21	1.99	0.43
1:A:365:LYS:O	1:A:366:MET:HE2	2.19	0.43
1:B:7:TYR:HE2	1:B:43[A]:ARG:HH21	1.65	0.43
1:C:440:MET:HE1	7:C:748:HOH:O	2.19	0.43
1:D:406:LYS:HD2	1:D:406:LYS:HA	1.62	0.43
1:A:253:ILE:HG22	1:A:295:PHE:CD1	2.54	0.43
1:B:241[A]:ARG:NH1	7:B:619:HOH:O	2.51	0.42
1:B:320:LEU:HB3	1:B:356:LEU:HD22	2.01	0.42
1:A:412:LEU:HD11	1:A:435:TYR:CD1	2.54	0.42
1:B:47:LEU:HD22	1:B:49:TRP:CE2	2.53	0.42
1:B:330:LYS:C	5:B:507:DMF:H23	2.44	0.42
1:B:356:LEU:HB2	5:B:508:DMF:H13	2.01	0.42
1:C:50:ASP:HA	7:C:759:HOH:O	2.20	0.42
1:B:47:LEU:HD23	1:B:48:GLN:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:412:LEU:HD21	1:A:435:TYR:CE1	2.54	0.42
1:A:412:LEU:HD11	1:A:435:TYR:CE1	2.54	0.42
1:D:343:PHE:HB2	1:D:344:PRO:HD3	2.01	0.42
1:C:69:ASP:OD1	7:C:602:HOH:O	2.21	0.42
1:C:368:ILE:HG21	1:C:387:LEU:CD2	2.50	0.42
1:A:412:LEU:HD23	1:A:412:LEU:HA	1.77	0.41
1:C:222:TRP:HE3	1:C:232:ILE:N	2.18	0.41
1:B:142:HIS:NE2	4:B:504:GKW:N17	2.68	0.41
1:B:18:SER:HB3	1:B:110:TYR:CE1	2.56	0.41
1:D:427:ASP:O	1:D:431:VAL:HG12	2.20	0.41
1:A:352:ARG:NH2	1:A:387:LEU:HD23	2.36	0.41
1:A:112:LEU:O	1:A:116:GLN:HG3	2.21	0.41
1:A:368:ILE:CG2	1:A:387:LEU:HD22	2.51	0.41
1:B:330:LYS:HA	5:B:507:DMF:H12	2.02	0.41
1:C:28:VAL:HG22	1:C:347:ALA:HA	2.03	0.41
1:C:369:SER:OG	1:C:371:GLU:OE2	2.39	0.41
1:A:35:TYR:CZ	1:A:373:PRO:HD3	2.55	0.41
1:B:123:SER:HG	1:B:163:ARG:HH11	1.69	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	387/447 (87%)	377 (97%)	10 (3%)	0	100	100
1	B	399/447 (89%)	391 (98%)	8 (2%)	0	100	100
1	C	396/447 (89%)	389 (98%)	6 (2%)	1 (0%)	36	29
1	D	389/447 (87%)	380 (98%)	9 (2%)	0	100	100
All	All	1571/1788 (88%)	1537 (98%)	33 (2%)	1 (0%)	48	40

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	99	TYR

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	345/392 (88%)	342 (99%)	3 (1%)	70	73
1	B	356/392 (91%)	353 (99%)	3 (1%)	73	75
1	C	353/392 (90%)	343 (97%)	10 (3%)	38	32
1	D	346/392 (88%)	341 (99%)	5 (1%)	59	59
All	All	1400/1568 (89%)	1379 (98%)	21 (2%)	57	56

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	223	ASN
1	A	285	ASP
1	A	292	MET
1	B	57	GLU
1	B	80	GLU
1	B	141	HIS
1	C	54	ARG
1	C	66	GLU
1	C	80	GLU
1	C	84	LEU
1	C	166	SER
1	C	168	THR
1	C	200	SER
1	C	404	ILE
1	C	430	GLN
1	C	438	THR
1	D	42	SER
1	D	48	GLN
1	D	285	ASP
1	D	368	ILE
1	D	379	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	10	GLN
1	A	33	ASN
1	A	246	ASN
1	D	10	GLN
1	D	48	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](#)

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 39 ligands modelled in this entry, 12 are monoatomic - leaving 27 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	DMF	D	506	-	4,4,4	0.27	0	4,4,4	0.42	0
5	DMF	B	506	-	4,4,4	0.36	0	4,4,4	0.40	0
5	DMF	C	505	-	4,4,4	0.34	0	4,4,4	0.43	0
4	GKW	B	504	2	24,24,24	2.58	6 (25%)	32,33,33	2.66	9 (28%)
6	GOL	C	509	-	5,5,5	0.42	0	5,5,5	0.35	0
5	DMF	D	505	-	4,4,4	0.33	0	4,4,4	0.48	0
6	GOL	A	511	-	5,5,5	0.38	0	5,5,5	0.27	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	DMF	C	508	-	4,4,4	0.34	0	4,4,4	0.27	0
6	GOL	C	511	-	5,5,5	0.33	0	5,5,5	0.78	0
5	DMF	B	508	-	4,4,4	0.34	0	4,4,4	0.64	0
5	DMF	C	507	-	4,4,4	0.27	0	4,4,4	0.37	0
6	GOL	A	512	-	5,5,5	0.30	0	5,5,5	0.36	0
5	DMF	B	507	-	4,4,4	0.33	0	4,4,4	0.37	0
4	GKW	C	504	2	24,24,24	2.63	7 (29%)	32,33,33	2.15	7 (21%)
5	DMF	A	506	-	4,4,4	0.31	0	4,4,4	0.56	0
5	DMF	A	509	-	4,4,4	0.50	0	4,4,4	0.27	0
6	GOL	D	507	-	5,5,5	0.36	0	5,5,5	0.53	0
5	DMF	B	505	-	4,4,4	0.33	0	4,4,4	0.53	0
4	GKW	D	504	2	24,24,24	2.53	7 (29%)	32,33,33	2.93	11 (34%)
5	DMF	A	507	-	4,4,4	0.28	0	4,4,4	0.29	0
5	DMF	A	508	-	4,4,4	0.36	0	4,4,4	0.43	0
6	GOL	D	508	-	5,5,5	0.34	0	5,5,5	0.63	0
5	DMF	A	505	-	4,4,4	0.40	0	4,4,4	0.43	0
6	GOL	C	510	-	5,5,5	0.36	0	5,5,5	0.39	0
5	DMF	A	510	-	4,4,4	0.30	0	4,4,4	0.41	0
5	DMF	C	506	-	4,4,4	0.29	0	4,4,4	0.34	0
4	GKW	A	504	2	24,24,24	2.57	5 (20%)	32,33,33	3.06	9 (28%)

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	DMF	D	506	-	-	2/2/2/2	-
5	DMF	B	506	-	-	0/2/2/2	-
5	DMF	C	505	-	-	2/2/2/2	-
4	GKW	B	504	2	-	2/12/12/12	0/3/3/3
6	GOL	C	509	-	-	0/4/4/4	-
5	DMF	D	505	-	-	0/2/2/2	-
6	GOL	A	511	-	-	2/4/4/4	-
5	DMF	C	508	-	-	2/2/2/2	-
6	GOL	C	511	-	-	2/4/4/4	-
5	DMF	B	508	-	-	0/2/2/2	-
5	DMF	C	507	-	-	2/2/2/2	-
6	GOL	A	512	-	-	2/4/4/4	-
5	DMF	B	507	-	-	2/2/2/2	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	GKW	C	504	2	-	4/12/12/12	0/3/3/3
5	DMF	A	506	-	-	0/2/2/2	-
5	DMF	A	509	-	-	0/2/2/2	-
6	GOL	D	507	-	-	4/4/4/4	-
5	DMF	B	505	-	-	2/2/2/2	-
4	GKW	D	504	2	-	1/12/12/12	0/3/3/3
5	DMF	A	507	-	-	0/2/2/2	-
5	DMF	A	508	-	-	2/2/2/2	-
6	GOL	D	508	-	-	0/4/4/4	-
5	DMF	A	505	-	-	0/2/2/2	-
6	GOL	C	510	-	-	4/4/4/4	-
5	DMF	A	510	-	-	2/2/2/2	-
5	DMF	C	506	-	-	0/2/2/2	-
4	GKW	A	504	2	-	3/12/12/12	0/3/3/3

All (25) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	504	GKW	C15-N17	9.50	1.44	1.32
4	B	504	GKW	C15-N17	9.20	1.44	1.32
4	D	504	GKW	C15-N17	8.95	1.44	1.32
4	A	504	GKW	C15-N17	8.88	1.44	1.32
4	B	504	GKW	O18-N17	-4.70	1.28	1.40
4	A	504	GKW	O18-N17	-4.62	1.28	1.40
4	C	504	GKW	O18-N17	-4.56	1.29	1.40
4	D	504	GKW	O18-N17	-4.38	1.29	1.40
4	D	504	GKW	C11-C20	-3.75	1.35	1.41
4	A	504	GKW	C11-C20	-3.71	1.35	1.41
4	C	504	GKW	C14-C15	3.55	1.58	1.50
4	A	504	GKW	C14-C15	3.50	1.57	1.50
4	B	504	GKW	C11-C20	-3.46	1.36	1.41
4	B	504	GKW	C14-C15	3.43	1.57	1.50
4	C	504	GKW	C11-C20	-3.26	1.36	1.41
4	D	504	GKW	C14-C15	3.21	1.57	1.50
4	D	504	GKW	C22-C03	2.44	1.43	1.38
4	D	504	GKW	C22-C21	2.42	1.42	1.38
4	D	504	GKW	C09-C10	2.32	1.42	1.35
4	A	504	GKW	C09-C10	2.32	1.42	1.35
4	B	504	GKW	C05-C04	2.27	1.42	1.38
4	C	504	GKW	C19-C20	2.26	1.43	1.39
4	C	504	GKW	C05-C04	2.23	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	504	GKW	C05-C06	2.20	1.43	1.38
4	B	504	GKW	C09-C10	2.15	1.41	1.35

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	504	GKW	C06-C07-N08	11.71	130.59	112.78
4	D	504	GKW	C06-C07-N08	9.81	127.69	112.78
4	B	504	GKW	C06-C07-N08	9.29	126.90	112.78
4	D	504	GKW	C07-N08-C20	-8.41	114.04	126.13
4	C	504	GKW	C06-C07-N08	7.93	124.83	112.78
4	A	504	GKW	C07-N08-C20	-7.67	115.11	126.13
4	B	504	GKW	C07-N08-C20	-7.47	115.39	126.13
4	D	504	GKW	C14-C15-N17	4.69	123.50	116.26
4	A	504	GKW	C14-C15-N17	4.56	123.30	116.26
4	A	504	GKW	C19-C20-N08	-4.46	127.28	132.13
4	D	504	GKW	C19-C20-N08	-4.42	127.32	132.13
4	C	504	GKW	C07-N08-C20	-4.40	119.81	126.13
4	B	504	GKW	C07-C06-C21	-4.12	113.17	120.75
4	C	504	GKW	C07-C06-C21	-4.11	113.17	120.75
4	A	504	GKW	C11-C20-N08	3.55	111.13	107.62
4	B	504	GKW	C19-C20-N08	-3.49	128.34	132.13
4	D	504	GKW	C07-C06-C05	-3.43	114.43	120.75
4	A	504	GKW	O16-C15-N17	-3.38	116.67	122.90
4	C	504	GKW	C07-C06-C05	3.24	126.72	120.75
4	B	504	GKW	C07-C06-C05	3.23	126.70	120.75
4	D	504	GKW	O16-C15-N17	-3.11	117.17	122.90
4	A	504	GKW	C10-C09-N08	-2.95	107.17	110.54
4	D	504	GKW	C10-C09-N08	-2.95	107.17	110.54
4	C	504	GKW	O16-C15-N17	-2.94	117.48	122.90
4	B	504	GKW	O16-C15-N17	-2.78	117.77	122.90
4	C	504	GKW	C14-C15-N17	2.71	120.44	116.26
4	B	504	GKW	C10-C09-N08	-2.68	107.48	110.54
4	D	504	GKW	C11-C20-N08	2.61	110.20	107.62
4	B	504	GKW	C14-C15-N17	2.47	120.07	116.26
4	A	504	GKW	C07-C06-C21	-2.46	116.21	120.75
4	B	504	GKW	C04-C05-C06	-2.29	117.99	121.00
4	D	504	GKW	C07-C06-C21	2.29	124.96	120.75
4	A	504	GKW	C20-C11-C10	-2.18	104.68	106.85
4	D	504	GKW	C12-C11-C20	-2.11	117.17	119.31
4	D	504	GKW	C22-C21-C06	-2.05	118.31	121.00
4	C	504	GKW	C19-C20-N08	-2.04	129.91	132.13

There are no chirality outliers.

All (40) torsion outliers are listed below:

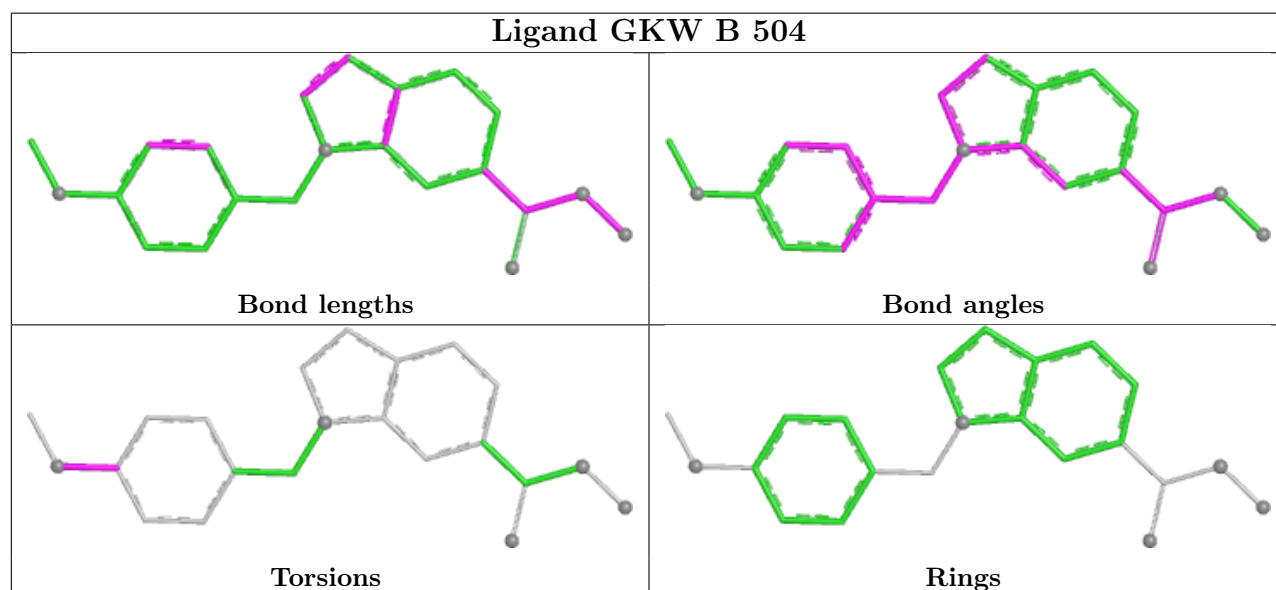
Mol	Chain	Res	Type	Atoms
6	A	511	GOL	O1-C1-C2-C3
6	A	512	GOL	O1-C1-C2-C3
6	C	510	GOL	O1-C1-C2-C3
6	C	511	GOL	O1-C1-C2-C3
6	D	507	GOL	C1-C2-C3-O3
4	A	504	GKW	C04-C03-O02-C01
4	A	504	GKW	C22-C03-O02-C01
4	B	504	GKW	C04-C03-O02-C01
4	B	504	GKW	C22-C03-O02-C01
5	D	506	DMF	O-C-N-C2
5	D	506	DMF	O-C-N-C1
5	C	508	DMF	O-C-N-C1
5	C	508	DMF	O-C-N-C2
4	C	504	GKW	C04-C03-O02-C01
6	C	510	GOL	C1-C2-C3-O3
6	D	507	GOL	O1-C1-C2-C3
4	C	504	GKW	C22-C03-O02-C01
6	A	511	GOL	O1-C1-C2-O2
6	C	510	GOL	O2-C2-C3-O3
6	D	507	GOL	O2-C2-C3-O3
6	A	512	GOL	O1-C1-C2-O2
6	C	510	GOL	O1-C1-C2-O2
5	A	510	DMF	O-C-N-C1
5	B	505	DMF	O-C-N-C1
6	D	507	GOL	O1-C1-C2-O2
5	B	507	DMF	O-C-N-C1
5	A	510	DMF	O-C-N-C2
5	B	505	DMF	O-C-N-C2
5	C	507	DMF	O-C-N-C1
5	B	507	DMF	O-C-N-C2
4	A	504	GKW	C06-C07-N08-C09
5	A	508	DMF	O-C-N-C1
5	C	507	DMF	O-C-N-C2
5	C	505	DMF	O-C-N-C2
4	C	504	GKW	C06-C07-N08-C20
4	D	504	GKW	C06-C07-N08-C09
6	C	511	GOL	O1-C1-C2-O2
5	A	508	DMF	O-C-N-C2
5	C	505	DMF	O-C-N-C1
4	C	504	GKW	C06-C07-N08-C09

There are no ring outliers.

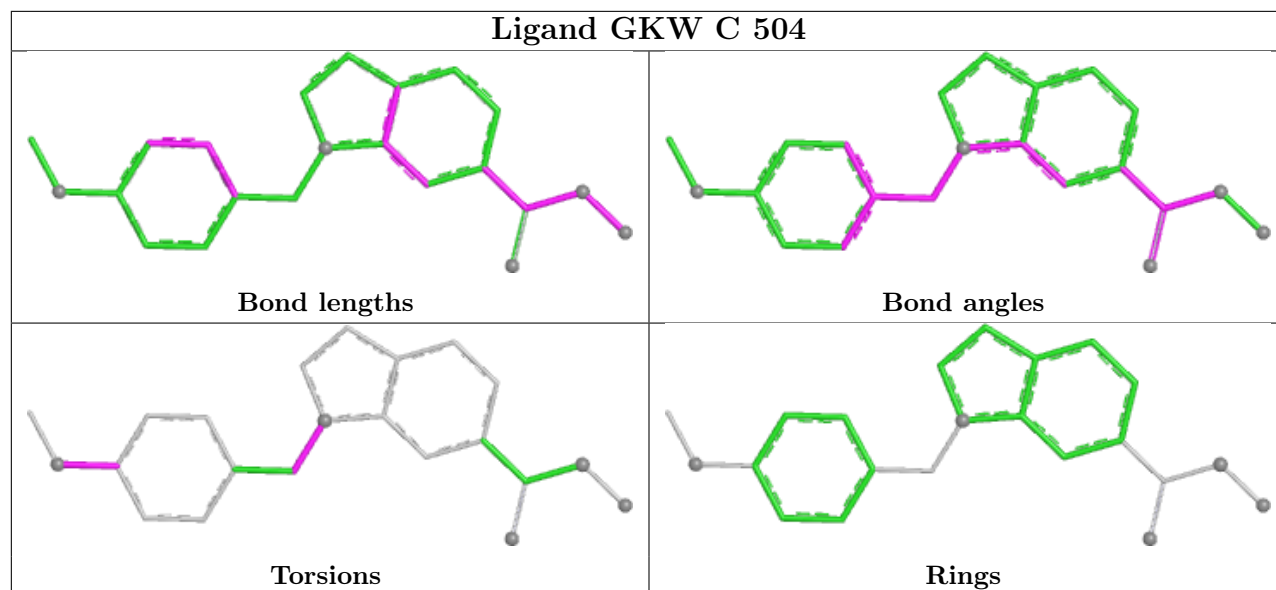
12 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	D	506	DMF	1	0
5	C	505	DMF	1	0
4	B	504	GKW	3	0
6	C	509	GOL	1	0
5	B	508	DMF	1	0
5	B	507	DMF	2	0
4	C	504	GKW	2	0
4	D	504	GKW	1	0
5	A	507	DMF	1	0
5	A	508	DMF	1	0
5	A	505	DMF	1	0
5	C	506	DMF	1	0

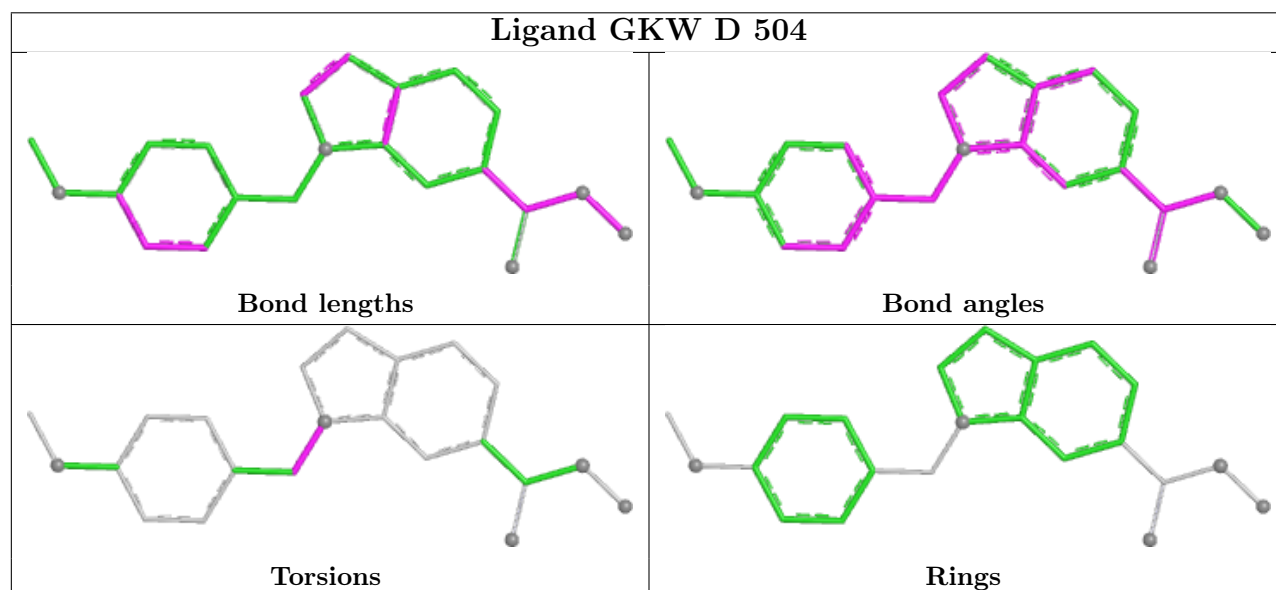
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



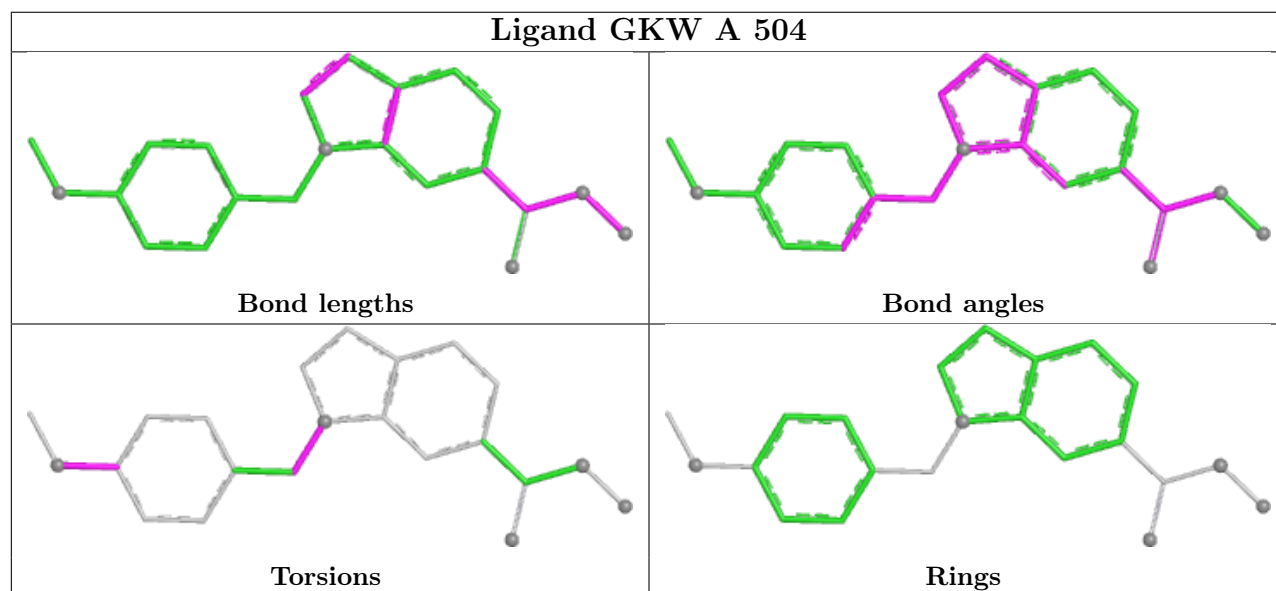
Ligand GKW C 504



Ligand GKW D 504



Ligand GKW A 504



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	396/447 (88%)	0.75	35 (8%)	15	16	10, 26, 60, 105	3 (0%)
1	B	405/447 (90%)	0.51	23 (5%)	29	31	12, 24, 48, 78	6 (1%)
1	C	406/447 (90%)	0.47	21 (5%)	33	35	10, 24, 47, 82	2 (0%)
1	D	396/447 (88%)	0.77	43 (10%)	10	11	10, 26, 57, 114	3 (0%)
All	All	1603/1788 (89%)	0.62	122 (7%)	20	21	10, 25, 52, 114	14 (0%)

All (122) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	222	TRP	6.9
1	A	392	PHE	6.3
1	A	428	TYR	6.1
1	C	84	LEU	5.7
1	D	432	TYR	5.6
1	A	425	ILE	5.5
1	D	426	TYR	5.2
1	A	383	PRO	5.2
1	A	426	TYR	5.2
1	D	230	LEU	5.0
1	C	222	TRP	4.9
1	A	432	TYR	4.8
1	B	232	ILE	4.8
1	A	435	TYR	4.7
1	C	232	ILE	4.6
1	A	231	PRO	4.5
1	B	438	THR	4.4
1	C	438	THR	4.3
1	A	232	ILE	4.2
1	D	231	PRO	4.1
1	C	99	TYR	4.0

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Mol	Chain	Res	Type	RSRZ
1	D	7	TYR	4.0
1	A	382	GLY	3.9
1	A	429	ASP	3.9
1	D	425	ILE	3.9
1	A	431	VAL	3.8
1	D	433	GLN	3.7
1	A	99	TYR	3.7
1	D	428	TYR	3.7
1	D	429	ASP	3.7
1	C	168	THR	3.6
1	D	99	TYR	3.5
1	D	392	PHE	3.5
1	A	434	LEU	3.5
1	A	168	THR	3.5
1	A	223	ASN	3.4
1	B	99	TYR	3.4
1	D	165	VAL	3.4
1	B	100	ASP	3.4
1	A	403	SER	3.3
1	B	56	TYR	3.3
1	D	80	GLU	3.3
1	B	168	THR	3.2
1	B	425	ILE	3.2
1	D	402	ASP	3.2
1	D	431	VAL	3.1
1	D	393	PRO	3.1
1	D	82	LYS	3.1
1	C	315	SER	3.1
1	B	302	PRO	3.0
1	D	232	ILE	3.0
1	D	383	PRO	3.0
1	A	177	GLN	2.8
1	A	80	GLU	2.8
1	A	302	PRO	2.8
1	D	81	GLU	2.8
1	A	402	ASP	2.8
1	D	293	ARG	2.8
1	A	391	TYR	2.8
1	B	7	TYR	2.8
1	D	430	GLN	2.7
1	D	83	GLU	2.7
1	D	315	SER	2.7

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Mol	Chain	Res	Type	RSRZ
1	B	84	LEU	2.7
1	D	167	SER	2.7
1	B	80	GLU	2.7
1	C	151	PHE	2.6
1	D	301	TYR	2.6
1	D	79	CYS	2.6
1	A	393	PRO	2.5
1	D	427	ASP	2.5
1	A	151[A]	PHE	2.5
1	B	177	GLN	2.5
1	D	302	PRO	2.5
1	A	385	PHE	2.4
1	B	437	LEU	2.4
1	A	384	ASP	2.4
1	A	292	MET	2.4
1	C	316	LEU	2.4
1	D	272	VAL	2.4
1	B	47	LEU	2.4
1	D	412	LEU	2.4
1	B	402	ASP	2.3
1	C	100	ASP	2.3
1	C	177	GLN	2.3
1	B	368	ILE	2.3
1	B	59	VAL	2.3
1	B	165	VAL	2.3
1	D	2	SER	2.3
1	A	293	ARG	2.3
1	D	151[A]	PHE	2.3
1	C	59	VAL	2.3
1	D	423	LYS	2.3
1	D	128	ARG	2.3
1	D	331	VAL	2.2
1	D	223	ASN	2.2
1	C	76	MET	2.2
1	D	36	LYS	2.2
1	D	367	THR	2.2
1	D	368	ILE	2.2
1	C	302	PRO	2.2
1	A	368	ILE	2.2
1	C	425	ILE	2.2
1	C	85	THR	2.2
1	A	406	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
1	C	7	TYR	2.1
1	C	56	TYR	2.1
1	C	368	ILE	2.1
1	B	272	VAL	2.1
1	B	91	LEU	2.1
1	A	83	GLU	2.1
1	A	222	TRP	2.1
1	C	439	GLY	2.1
1	D	72	LYS	2.1
1	A	386	GLU	2.1
1	D	233	PHE	2.1
1	A	250	GLU	2.0
1	D	262	ILE	2.0
1	C	165	VAL	2.0
1	A	84	LEU	2.0
1	B	446	ARG	2.0
1	B	413	GLU	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 oligosaccharides 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
5	DMF	B	505	5/5	0.67	0.27	45,58,58,59	0
6	GOL	C	509	6/6	0.70	0.19	51,55,67,80	0
4	GKW	C	504	22/22	0.76	0.28	31,74,101,105	0
5	DMF	C	508	5/5	0.77	0.29	40,43,56,76	0
4	GKW	B	504	22/22	0.77	0.27	33,85,98,100	0
4	GKW	A	504	22/22	0.78	0.23	38,75,80,81	0

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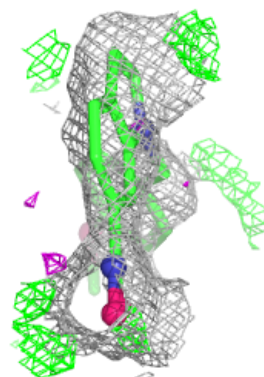
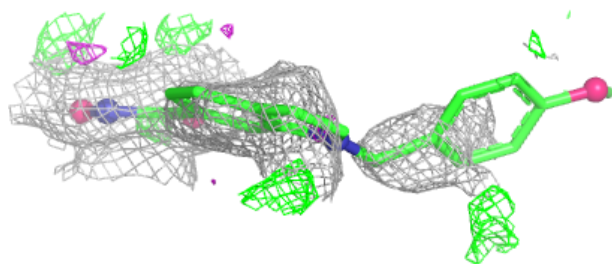
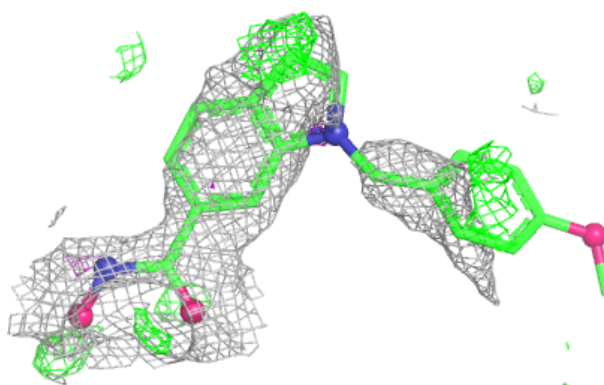
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
5	DMF	D	505	5/5	0.80	0.23	59,61,64,68	0
6	GOL	A	512	6/6	0.81	0.17	45,48,53,57	0
5	DMF	A	505	5/5	0.83	0.17	36,45,51,53	0
5	DMF	A	509	5/5	0.83	0.16	23,27,34,37	0
4	GKW	D	504	22/22	0.83	0.23	37,77,84,88	0
5	DMF	B	508	5/5	0.83	0.16	29,30,37,43	0
6	GOL	D	508	6/6	0.83	0.15	37,46,52,53	0
6	GOL	C	510	6/6	0.84	0.16	48,54,56,58	0
5	DMF	A	508	5/5	0.84	0.18	49,53,55,56	0
5	DMF	A	507	5/5	0.85	0.18	55,55,57,62	0
5	DMF	C	506	5/5	0.85	0.15	35,36,37,40	0
5	DMF	B	507	5/5	0.86	0.15	36,41,46,52	0
5	DMF	C	507	5/5	0.87	0.20	28,46,52,57	0
5	DMF	A	506	5/5	0.88	0.15	34,38,53,57	0
6	GOL	D	507	6/6	0.89	0.13	27,37,38,40	0
5	DMF	B	506	5/5	0.89	0.12	28,32,34,35	0
6	GOL	A	511	6/6	0.90	0.10	27,30,36,39	0
5	DMF	A	510	5/5	0.90	0.16	46,47,49,55	0
5	DMF	C	505	5/5	0.91	0.15	36,39,40,42	0
5	DMF	D	506	5/5	0.92	0.14	24,34,49,56	0
6	GOL	C	511	6/6	0.92	0.10	22,27,32,33	0
3	K	A	503	1/1	0.98	0.07	29,29,29,29	0
3	K	C	503	1/1	0.99	0.03	18,18,18,18	0
3	K	D	502	1/1	0.99	0.04	29,29,29,29	0
3	K	D	503	1/1	0.99	0.03	18,18,18,18	0
3	K	B	502	1/1	0.99	0.05	28,28,28,28	0
3	K	B	503	1/1	0.99	0.03	18,18,18,18	0
3	K	C	502	1/1	0.99	0.03	29,29,29,29	0
3	K	A	502	1/1	1.00	0.03	15,15,15,15	0
2	ZN	A	501	1/1	1.00	0.03	22,22,22,22	0
2	ZN	B	501	1/1	1.00	0.03	24,24,24,24	0
2	ZN	C	501	1/1	1.00	0.02	21,21,21,21	0
2	ZN	D	501	1/1	1.00	0.04	23,23,23,23	0

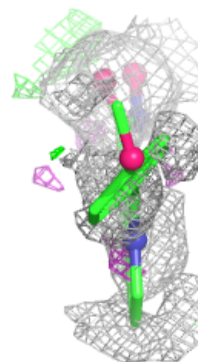
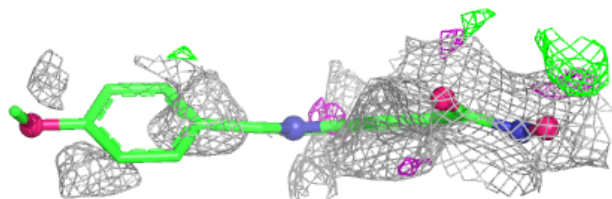
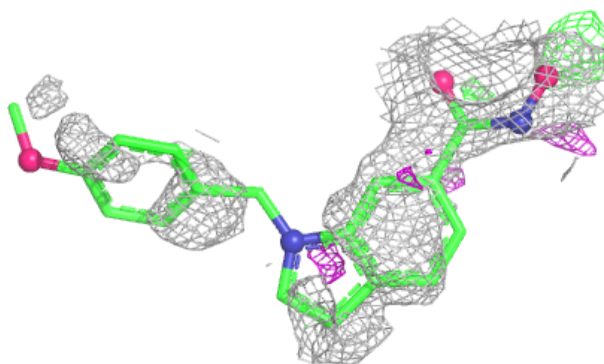
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around GKW C 504:

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

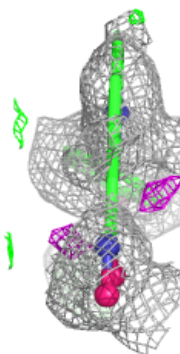
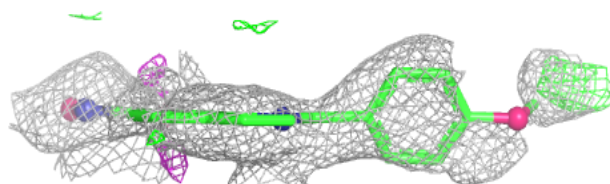
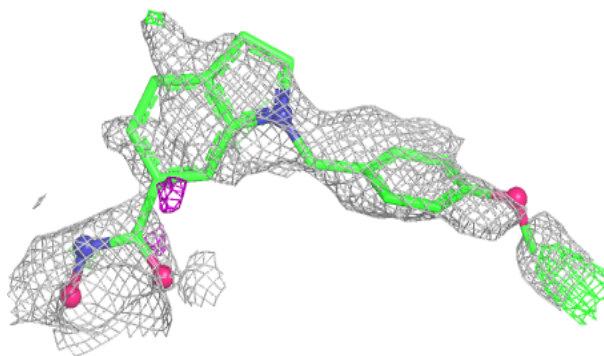
**Electron density around GKW B 504:**

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

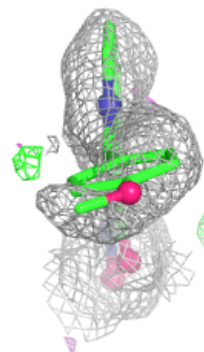
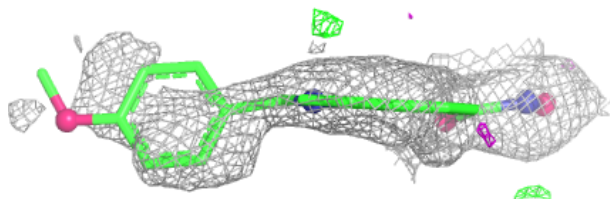
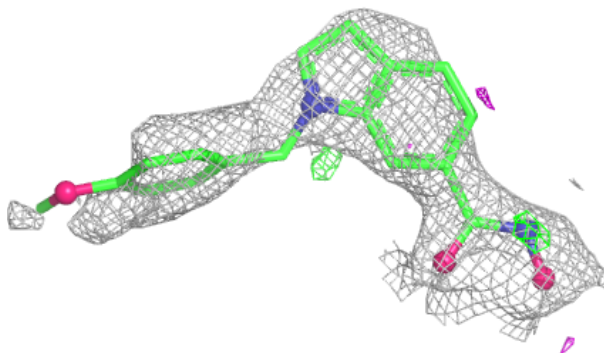


Electron density around GKW A 504:

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

**Electron density around GKW D 504:**

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



6.5 Other polymers [i](#)

There are no such residues in this entry.