



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 2, 2023 – 04:08 PM JST

PDB ID : 8H4R
Title : The Crystal Structure of CDK3 and CyclinE1 Complex with Dinaciclib from Biortus
Authors : Gui, W.; Wang, F.; Cheng, W.; Gao, J.; Huang, Y.; Ouyang, Z.
Deposited on : 2022-10-11
Resolution : 2.75 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35.1
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

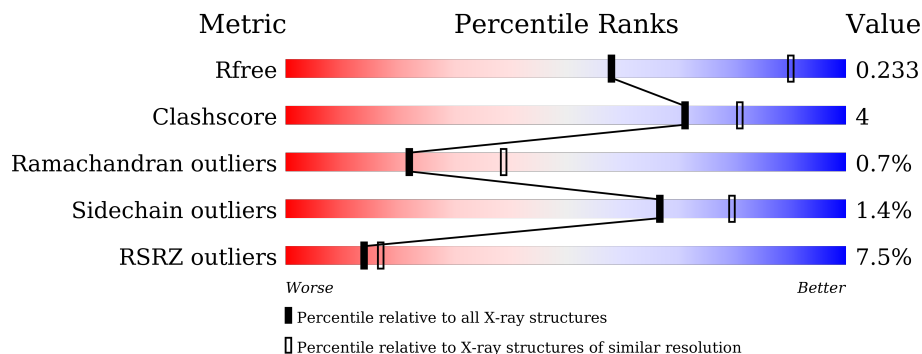
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.75 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}	130704	1235 (2.78-2.74)
Clashscore	141614	1277 (2.78-2.74)
Ramachandran outliers	138981	1257 (2.78-2.74)
Sidechain outliers	138945	1257 (2.78-2.74)
RSRZ outliers	127900	1207 (2.78-2.74)

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	533	 6% 47% 6% 46%
2	B	305	 3% 82% 8% 10%

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 4942 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 Glutathione S-transferase class-mu 26 kDa isozyme,Cyclin-dependent kinase 3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	N	O	P				S
1	A	287	2328	1508	392	419	1	8	0	1	0

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-9	SER	-	linker	UNP P08515
A	-8	ASP	-	linker	UNP P08515
A	-7	LEU	-	linker	UNP P08515
A	-6	GLU	-	linker	UNP P08515
A	-5	VAL	-	linker	UNP P08515
A	-4	LEU	-	linker	UNP P08515
A	-3	PHE	-	linker	UNP P08515
A	-2	GLN	-	linker	UNP P08515
A	-1	GLY	-	linker	UNP P08515
A	0	PRO	-	linker	UNP P08515

- Molecule 2 is a protein called G1/S-specific cyclin-E1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	275	2258	1468	369	404	17	0	1	0

There are 22 discrepancies between the modelled and reference sequences:

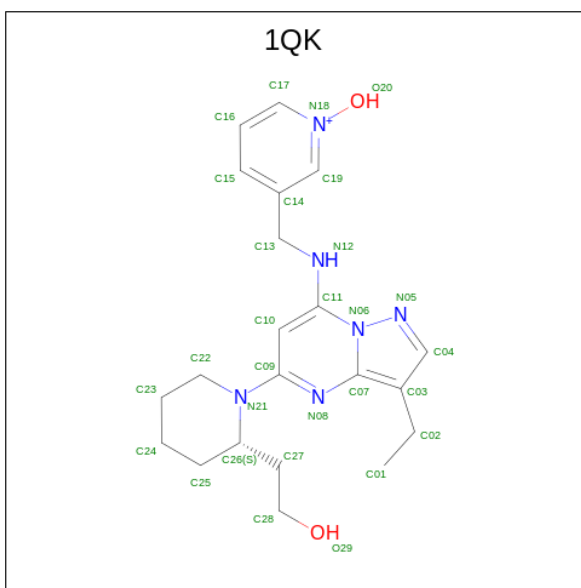
Chain	Residue	Modelled	Actual	Comment	Reference
B	74	MET	-	initiating methionine	UNP P24864
B	75	ASP	-	expression tag	UNP P24864
B	76	TYR	-	expression tag	UNP P24864
B	77	LYS	-	expression tag	UNP P24864
B	78	ASP	-	expression tag	UNP P24864

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Chain	Residue	Modelled	Actual	Comment	Reference
B	79	ASP	-	expression tag	UNP P24864
B	80	ASP	-	expression tag	UNP P24864
B	81	ASP	-	expression tag	UNP P24864
B	82	LYS	-	expression tag	UNP P24864
B	83	HIS	-	expression tag	UNP P24864
B	84	HIS	-	expression tag	UNP P24864
B	85	HIS	-	expression tag	UNP P24864
B	86	HIS	-	expression tag	UNP P24864
B	87	HIS	-	expression tag	UNP P24864
B	88	HIS	-	expression tag	UNP P24864
B	89	GLU	-	expression tag	UNP P24864
B	90	ASN	-	expression tag	UNP P24864
B	91	LEU	-	expression tag	UNP P24864
B	92	TYR	-	expression tag	UNP P24864
B	93	PHE	-	expression tag	UNP P24864
B	94	GLN	-	expression tag	UNP P24864
B	95	GLY	-	expression tag	UNP P24864

- Molecule 3 is 3-[(3-ethyl-5-[(2S)-2-(2-hydroxyethyl)piperidin-1-yl]pyrazolo[1,5-a]pyrimidin-7-yl]amino)methyl]-1-hydroxypyridinium (three-letter code: 1QK) (formula: C₂₁H₂₉N₆O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
			Total	C	N			O
3	A	1	29	21	6	2	0	0

- Molecule 4 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



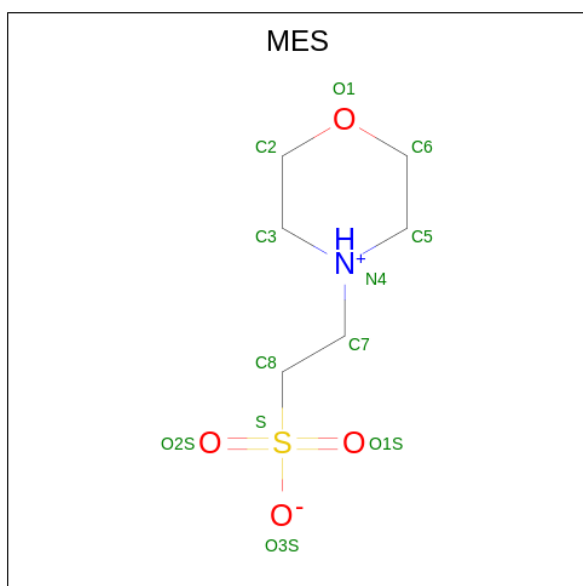
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	O	S	0	0
			5	4	1		
4	B	1	Total	O	S	0	0
			5	4	1		
4	B	1	Total	O	S	0	0
			5	4	1		
4	B	1	Total	O	S	0	0
			5	4	1		
4	B	1	Total	O	S	0	0
			5	4	1		

- Molecule 5 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



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

- Molecule 6 is 2-(N-MORPHOLINO)-ETHANESULFONIC ACID (three-letter code: MES) (formula: $C_6H_{13}NO_4S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	B	1	Total	C	N	O	S	0	0
			12	6	1	4	1		

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	117	Total 117	O 117	0	0
7	B	156	Total 156	O 156	0	0

4 Data and refinement statistics i

Property	Value	Source
Space group	P 63	Depositor
Cell constants a, b, c, α , β , γ	155.03Å 155.03Å 76.79Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	42.37 – 2.75 42.34 – 2.75	Depositor EDS
% Data completeness (in resolution range)	98.8 (42.37-2.75) 98.9 (42.34-2.75)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.05 (at 2.77Å)	Xtrriage
Refinement program	REFMAC 5.8.0352	Depositor
R, R_{free}	0.161 , 0.223 0.172 , 0.233	Depositor DCC
R_{free} test set	1385 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å ²)	28.6	Xtrriage
Anisotropy	0.122	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 49.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	0.033 for h,-h-k,-l	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	4942	wwPDB-VP
Average B, all atoms (Å ²)	38.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.97% 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: SO4, MES, 1QK, TPO, GOL

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	0.30	0/2375	0.58	0/3213
2	B	0.31	0/2317	0.57	0/3143
All	All	0.31	0/4692	0.58	0/6356

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	A	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	157	ARG	Sidechain

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	2328	0	2373	18	0
2	B	2258	0	2266	17	0
3	A	29	0	29	1	0
4	A	5	0	0	0	0
4	B	25	0	0	0	0
5	A	6	0	8	0	0
5	B	6	0	8	0	0
6	B	12	0	13	0	0
7	A	117	0	0	1	0
7	B	156	0	0	3	0
All	All	4942	0	4697	33	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 (33) 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:115:VAL:HG21	1:A:189:ILE:HD11	1.64	0.79
1:A:5:GLN:O	1:A:7:VAL:N	2.40	0.55
2:B:175:ARG:NH1	2:B:240:ARG:O	2.30	0.54
1:A:155:PRO:HD3	2:B:255:GLN:HB2	1.90	0.53
2:B:157:GLU:OE2	2:B:347:LYS:NZ	2.40	0.52
1:A:4:PHE:HA	1:A:22:LYS:O	2.10	0.51
1:A:111:LEU:HD11	1:A:133:LEU:HD13	1.93	0.50
1:A:219:LEU:HB2	1:A:269:TYR:OH	2.12	0.50
2:B:257:ALA:HB2	2:B:316:VAL:HG11	1.94	0.49
2:B:308:SER:OG	2:B:312:LEU:HD23	2.14	0.48
1:A:227:TRP:CE3	1:A:269:TYR:HB3	2.49	0.48
1:A:46:SER:HB3	7:A:575:HOH:O	2.14	0.47
1:A:122:ARG:HA	1:A:152:PHE:CZ	2.50	0.46
1:A:64:VAL:HG21	3:A:401:1QK:H15	1.98	0.46
1:A:216:PHE:HA	1:A:269:TYR:OH	2.18	0.44
2:B:374:ARG:HG2	2:B:374:ARG:HH11	1.83	0.43
1:A:8:GLU:HG3	1:A:20:LYS:HB3	1.99	0.43
1:A:72:ASN:O	1:A:73:GLU:CB	2.66	0.43
2:B:304:LEU:O	2:B:308:SER:HB3	2.19	0.43
2:B:332:VAL:N	2:B:333:PRO:HD2	2.34	0.43
2:B:355:GLU:HG2	2:B:356:ASP:OD1	2.19	0.42
2:B:128:LEU:HB2	7:B:631:HOH:O	2.18	0.42
2:B:348:HIS:HD2	7:B:630:HOH:O	2.02	0.42
2:B:167:TYR:HB3	2:B:245:THR:HB	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:34:LYS:HG3	1:A:77:TYR:CE1	2.55	0.42
1:A:155:PRO:HD3	2:B:255:GLN:CB	2.50	0.42
2:B:175:ARG:O	2:B:179:THR:HG23	2.19	0.42
1:A:95:PRO:O	1:A:199:ARG:NH1	2.54	0.41
1:A:209:ILE:HD11	1:A:213:PHE:CZ	2.56	0.41
1:A:38:ASP:OD1	1:A:39:LEU:HG	2.21	0.40
2:B:126:THR:HG22	7:B:623:HOH:O	2.20	0.40
2:B:273:GLN:O	2:B:277:GLN:HG3	2.22	0.40
2:B:294:PHE:HB2	2:B:299:LEU:HD21	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	285/533 (54%)	270 (95%)	12 (4%)	3 (1%)	14	25
2	B	274/305 (90%)	270 (98%)	3 (1%)	1 (0%)	34	53
All	All	559/838 (67%)	540 (97%)	15 (3%)	4 (1%)	22	39

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	73	GLU
1	A	164	VAL
1	A	7	VAL
2	B	308	SER

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	255/473 (54%)	248 (97%)	7 (3%)	44 65
2	B	249/275 (90%)	249 (100%)	0	100 100
All	All	504/748 (67%)	497 (99%)	7 (1%)	67 79

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	ASP
1	A	3	MET
1	A	8	GLU
1	A	111	LEU
1	A	217	ARG
1	A	239	SER
1	A	249	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	TPO	A	160	1	8,10,11	0.99	1 (12%)	10,14,16	0.94	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
1	TPO	A	160	1	-	1/9/11/13	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	160	TPO	P-OG1	2.26	1.63	1.59

There are no bond angle outliers.

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	160	TPO	O-C-CA-CB

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

10 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	SO4	B	401	-	4,4,4	0.34	0	6,6,6	0.20	0
4	SO4	B	402	-	4,4,4	0.37	0	6,6,6	0.09	0
4	SO4	B	403	-	4,4,4	0.37	0	6,6,6	0.06	0
4	SO4	A	402	-	4,4,4	0.35	0	6,6,6	0.05	0
6	MES	B	406	-	12,12,12	0.72	0	14,16,16	0.45	0
3	1QK	A	401	-	26,32,32	1.05	2 (7%)	30,44,44	1.21	3 (10%)
4	SO4	B	405	-	4,4,4	0.36	0	6,6,6	0.08	0
5	GOL	A	403	-	5,5,5	0.13	0	5,5,5	0.45	0
4	SO4	B	404	-	4,4,4	0.29	0	6,6,6	0.24	0
5	GOL	B	407	-	5,5,5	0.10	0	5,5,5	0.29	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	1QK	A	401	-	-	0/14/25/25	0/4/4/4
5	GOL	B	407	-	-	0/4/4/4	-
5	GOL	A	403	-	-	3/4/4/4	-
6	MES	B	406	-	-	5/6/14/14	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	401	1QK	C10-C09	3.13	1.44	1.39
3	A	401	1QK	C09-N08	2.26	1.35	1.32

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	401	1QK	N12-C11-N06	3.82	119.33	116.65
3	A	401	1QK	C09-N08-C07	-2.73	114.72	118.75
3	A	401	1QK	C22-N21-C26	-2.27	112.12	115.28

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	403	GOL	O1-C1-C2-C3

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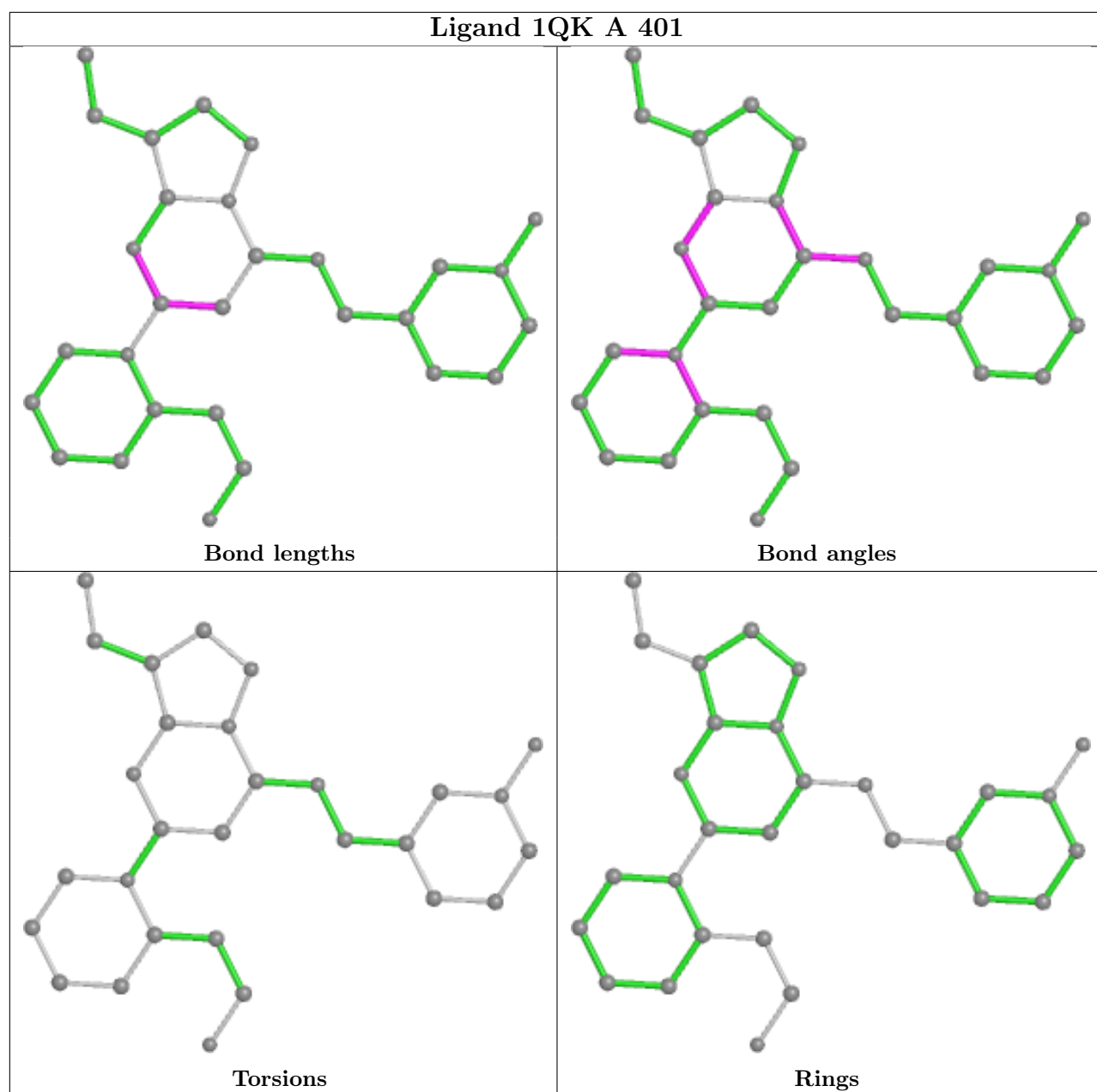
Mol	Chain	Res	Type	Atoms
5	A	403	GOL	O1-C1-C2-O2
6	B	406	MES	C8-C7-N4-C3
6	B	406	MES	C7-C8-S-O3S
6	B	406	MES	C7-C8-S-O1S
6	B	406	MES	C7-C8-S-O2S
5	A	403	GOL	C1-C2-C3-O3
6	B	406	MES	C8-C7-N4-C5

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	401	1QK	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.



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	286/533 (53%)	0.15	34 (11%) 4 5	15, 38, 90, 117	0
2	B	275/305 (90%)	-0.43	8 (2%) 51 61	11, 25, 64, 131	0
All	All	561/838 (66%)	-0.14	42 (7%) 14 17	11, 32, 81, 131	0

All (42) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	263	HIS	5.4
1	A	97	SER	5.1
2	B	102	GLY	4.8
2	B	262	LEU	4.8
1	A	25	GLU	4.7
1	A	98	GLU	4.6
1	A	7	VAL	4.4
1	A	24	ARG	4.3
1	A	3	MET	3.8
1	A	250	GLU	3.7
1	A	225	ASP	3.6
1	A	240	PHE	3.6
2	B	261	ASP	3.4
1	A	5	GLN	3.2
1	A	95	PRO	3.2
1	A	241	PRO	3.2
1	A	239	SER	2.9
1	A	2	ASP	2.9
2	B	103	SER	2.9
1	A	27	GLY	2.8
1	A	8	GLU	2.8
1	A	231	THR	2.7
1	A	237	LYS	2.7
1	A	96	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	242	LYS	2.5
1	A	72	ASN	2.5
1	A	4	PHE	2.5
1	A	226	THR	2.4
1	A	236	TYR	2.4
1	A	26	THR	2.4
2	B	260	ASN	2.3
1	A	6	LYS	2.3
1	A	94	THR	2.3
1	A	269	TYR	2.2
1	A	249	GLU	2.2
2	B	264	GLU	2.2
1	A	99	LEU	2.2
1	A	93	SER	2.2
2	B	114	GLU	2.2
1	A	217	ARG	2.1
1	A	206	ASP	2.1
1	A	243	TRP	2.1

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
1	TPO	A	160	11/12	0.99	0.16	13,19,23,26	0

6.3 Carbohydrates [i](#)

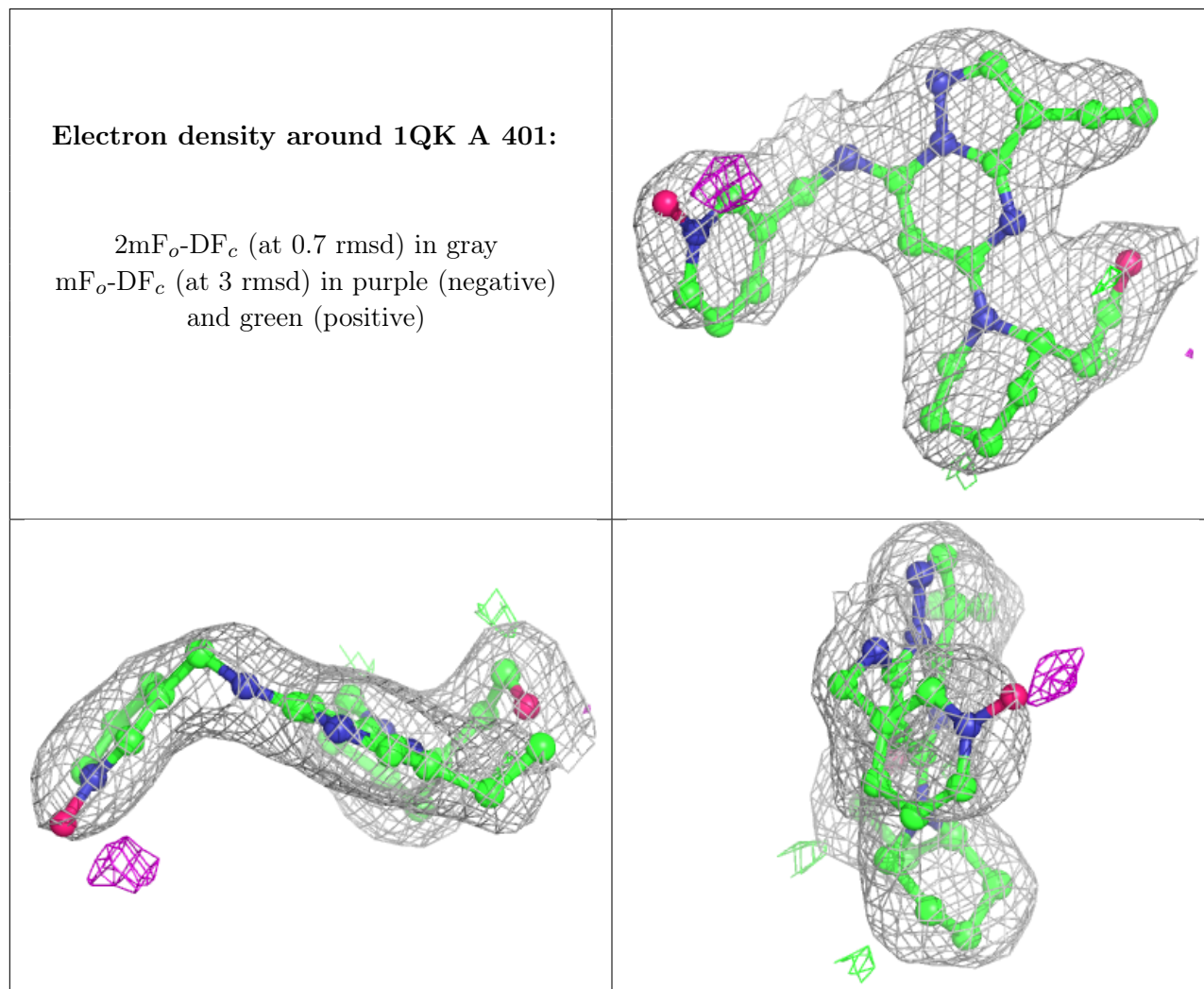
There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
5	GOL	B	407	6/6	0.77	0.35	66,79,88,89	0
6	MES	B	406	12/12	0.84	0.36	71,85,124,149	0
4	SO4	B	405	5/5	0.88	0.29	78,80,113,145	0
4	SO4	B	402	5/5	0.91	0.20	63,69,85,94	0
4	SO4	A	402	5/5	0.93	0.22	73,79,104,139	0
4	SO4	B	403	5/5	0.94	0.17	81,96,103,105	0
5	GOL	A	403	6/6	0.94	0.21	50,54,61,68	0
4	SO4	B	401	5/5	0.96	0.12	48,59,65,71	0
4	SO4	B	404	5/5	0.96	0.13	43,46,56,79	0
3	1QK	A	401	29/29	0.97	0.16	20,27,51,62	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.



6.5 Other polymers [i](#)

There are no such residues in this entry.