



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 15, 2026 – 05:45 pm BST

PDB ID : 34CO / pdb_000034co
Title : Homo sapiens Eukaryotic translation initiation factor 4E (eIF4E) in complex with synthetic mRNA cap analogs
Authors : Schneider, S.; Schwarz, A.
Deposited on : 2026-09-08
Resolution : 2.00 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 Phenix2.2
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.2
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	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

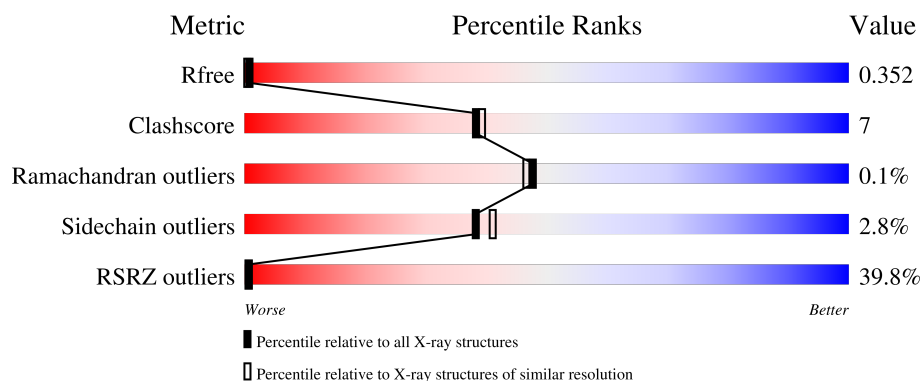
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 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	10052 (2.00-2.00)
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

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	193	18% 69% 25% • •
1	B	193	12% 71% 20% • 7%
1	C	193	59% 73% 22% • 5%
1	D	193	62% 74% 20% • 5%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 6388 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.

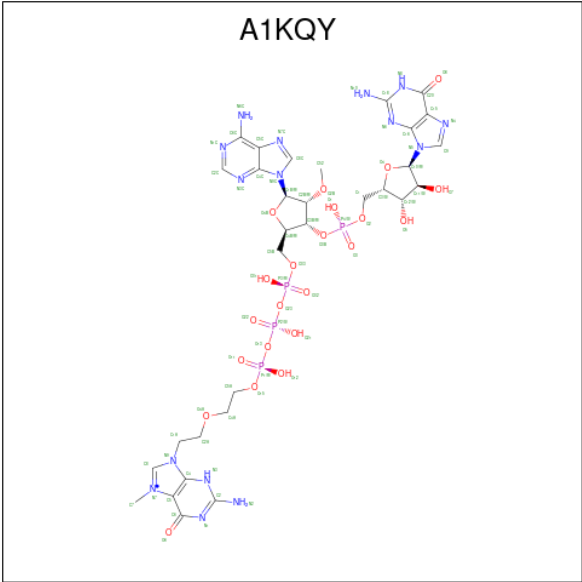
- Molecule 1 is a protein called Eukaryotic translation initiation factor 4E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	185	Total	C	N	O	S	1	1	0
			1530	976	270	278	6			
1	B	179	Total	C	N	O	S	1	1	0
			1491	953	263	269	6			
1	C	183	Total	C	N	O	S	1	1	0
			1520	970	268	276	6			
1	D	184	Total	C	N	O	S	1	1	0
			1527	975	269	277	6			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	25	GLY	-	expression tag	UNP P06730
A	26	PRO	-	expression tag	UNP P06730
A	27	MET	-	expression tag	UNP P06730
B	25	GLY	-	expression tag	UNP P06730
B	26	PRO	-	expression tag	UNP P06730
B	27	MET	-	expression tag	UNP P06730
C	25	GLY	-	expression tag	UNP P06730
C	26	PRO	-	expression tag	UNP P06730
C	27	MET	-	expression tag	UNP P06730
D	25	GLY	-	expression tag	UNP P06730
D	26	PRO	-	expression tag	UNP P06730
D	27	MET	-	expression tag	UNP P06730

- Molecule 2 is [(2 {R},3 {R},4 {R},5 {R})-5-(6-aminopurin-9-yl)-2-[[[2-[2-(2-azanyl-7-methyl-6-oxidanylidene-3 {H}-purin-9-yl)ethoxy]ethoxy-oxidanyl-phosphoryl]oxy-oxidanyl-phosphoryl]oxy-oxidanyl-phosphoryl]oxymethyl]-4-methoxy-oxolan-3-yl] [5-(2-azanyl-6-oxidanylidene-1 {H}-purin-9-yl)-3,4-bis(oxidanyl)oxolan-2-yl]methyl hydrogen phosphate (CCD ID: A1KQY) (formula: C₃₁H₄₄N₁₅O₂₂P₄).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total 49	C 21	N 10	O 15	P 3	0	0
2	B	1	Total 49	C 21	N 10	O 15	P 3	0	0
2	C	1	Total 49	C 21	N 10	O 15	P 3	0	0
2	D	1	Total 49	C 21	N 10	O 15	P 3	0	0

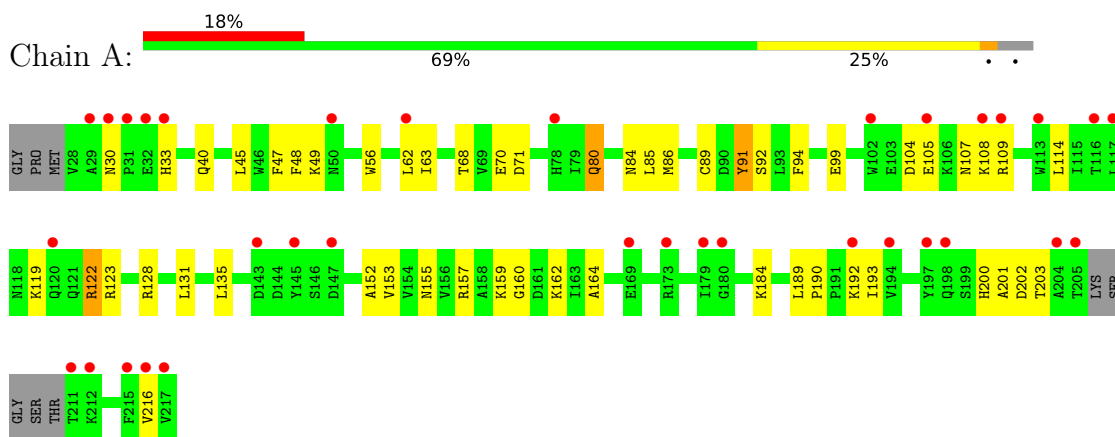
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	53	Total	O	0	0
			53	53		
3	B	38	Total	O	0	0
			38	38		
3	C	17	Total	O	0	0
			17	17		
3	D	16	Total	O	0	0
			16	16		

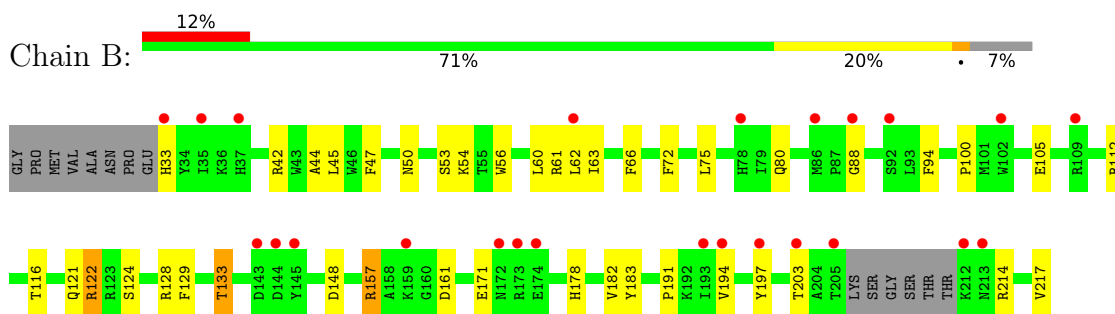
3 Residue-property plots [i](#)

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.

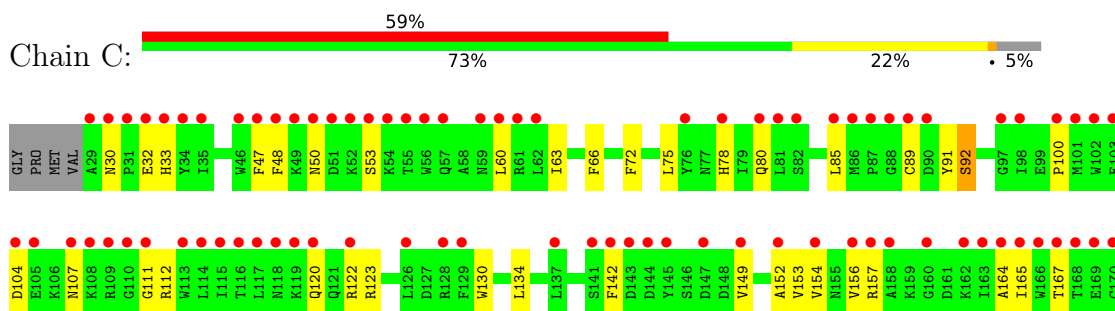
- Molecule 1: Eukaryotic translation initiation factor 4E

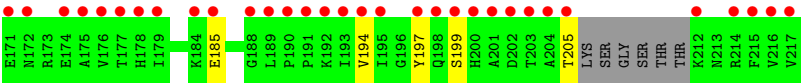


- Molecule 1: Eukaryotic translation initiation factor 4E

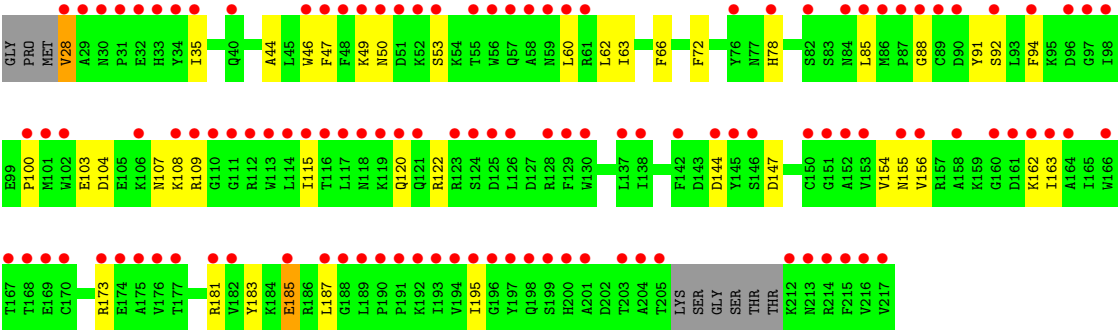
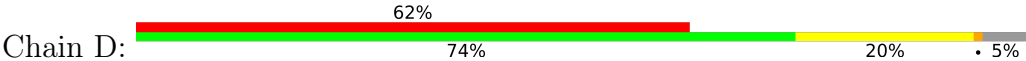


- Molecule 1: Eukaryotic translation initiation factor 4E





● Molecule 1: Eukaryotic translation initiation factor 4E



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	38.21Å 38.26Å 147.63Å 84.01° 87.43° 76.62°	Depositor
Resolution (Å)	48.98 – 2.00 48.98 – 2.00	Depositor EDS
% Data completeness (in resolution range)	97.6 (48.98-2.00) 97.6 (48.98-2.00)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.45 (at 2.00Å)	Xtriage
Refinement program	REFMAC 5.8.0431	Depositor
R, R_{free}	0.292 , 0.354 0.308 , 0.352	Depositor DCC
R_{free} test set	2664 reflections (4.87%)	wwPDB-VP
Wilson B-factor (Å ²)	24.2	Xtriage
Anisotropy	0.599	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 41.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.023 for -h,-k,-k+1	Xtriage
F_o, F_c correlation	0.88	EDS
Total number of atoms	6388	wwPDB-VP
Average B, all atoms (Å ²)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.31% 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: A1KQY

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	0.82	0/1572	1.27	10/2126 (0.5%)
1	B	0.75	0/1532	1.26	8/2070 (0.4%)
1	C	0.90	2/1562 (0.1%)	1.16	2/2112 (0.1%)
1	D	0.87	2/1569 (0.1%)	1.18	5/2122 (0.2%)
All	All	0.84	4/6235 (0.1%)	1.22	25/8430 (0.3%)

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
1	B	0	5
1	C	0	2
All	All	0	8

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	53[A]	SER	C-O	7.46	1.33	1.24
1	C	53[B]	SER	C-O	7.46	1.33	1.24
1	D	53[A]	SER	C-O	6.53	1.33	1.24
1	D	53[B]	SER	C-O	6.53	1.33	1.24

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	53[A]	SER	CA-C-O	8.05	129.24	119.49
1	C	53[B]	SER	CA-C-O	8.05	129.24	119.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	119	LYS	CB-CA-C	7.59	123.39	110.79
1	A	80	GLN	CB-CA-C	-7.46	96.26	109.62
1	D	120	GLN	N-CA-C	-7.39	104.51	113.97
1	A	99	GLU	CB-CA-C	6.74	119.22	109.11
1	B	129	PHE	CA-CB-CG	6.72	120.52	113.80
1	A	94	PHE	CA-CB-CG	-6.69	107.11	113.80
1	D	53[A]	SER	CA-C-O	6.49	129.30	118.91
1	D	53[B]	SER	CA-C-O	6.49	129.30	118.91
1	A	159	LYS	CB-CA-C	-6.16	100.76	111.23
1	A	203	THR	CA-CB-OG1	-5.86	100.80	109.60
1	B	161	ASP	CB-CA-C	5.77	120.15	109.54
1	B	116	THR	CA-CB-OG1	-5.73	101.00	109.60
1	D	185	GLU	N-CA-CB	5.63	118.32	109.94
1	A	202	ASP	CA-CB-CG	5.42	118.02	112.60
1	B	50	ASN	CB-CA-C	5.40	118.65	109.53
1	B	105	GLU	CB-CG-CD	5.27	121.56	112.60
1	A	91	TYR	N-CA-CB	5.21	119.18	110.85
1	B	105	GLU	CB-CA-C	-5.19	101.86	110.68
1	D	78	HIS	CB-CA-C	-5.18	99.04	109.55
1	B	94	PHE	CA-CB-CG	-5.15	108.65	113.80
1	B	133	THR	OG1-CB-CG2	-5.11	99.08	109.30
1	A	119	LYS	N-CA-CB	-5.06	102.69	110.12
1	A	99	GLU	CB-CG-CD	5.02	121.13	112.60

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	128	ARG	Sidechain
1	B	122	ARG	Sidechain
1	B	128	ARG	Sidechain
1	B	157	ARG	Sidechain
1	B	214	ARG	Sidechain
1	B	42	ARG	Sidechain
1	C	122	ARG	Sidechain
1	C	157	ARG	Sidechain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1530	0	1488	26	2
1	B	1491	0	1460	19	1
1	C	1520	0	1484	19	1
1	D	1527	0	1493	20	0
2	A	49	0	0	0	0
2	B	49	0	0	0	0
2	C	49	0	0	2	0
2	D	49	0	0	0	0
3	A	53	0	0	3	0
3	B	38	0	0	3	0
3	C	17	0	0	1	0
3	D	16	0	0	0	0
All	All	6388	0	5925	84	2

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 7.

All (84) 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:B:122:ARG:NH2	3:B:401:HOH:O	1.98	0.89
1:B:133:THR:HG1	1:B:183:TYR:HH	1.23	0.86
1:C:66:PHE:CE2	1:C:72:PHE:HB2	2.17	0.78
1:A:47:PHE:HB2	1:A:63:ILE:HD11	1.66	0.78
1:C:60:LEU:HD21	1:C:100:PRO:HG2	1.66	0.77
1:C:47:PHE:HB2	1:C:63:ILE:HD11	1.68	0.75
1:B:47:PHE:HB2	1:B:63:ILE:HD11	1.69	0.74
1:A:49:LYS:NZ	1:A:86:MET:SD	2.62	0.73
1:A:92:SER:OG	1:A:153:VAL:HG22	1.90	0.72
1:D:85:LEU:HB2	1:D:156:VAL:HG21	1.74	0.69
2:C:301:A1KQY:O3B	3:C:401:HOH:O	2.10	0.69
1:A:123:ARG:HD3	3:A:439:HOH:O	1.93	0.67
1:B:194:VAL:HG23	1:B:217:VAL:O	1.96	0.66
1:D:47:PHE:HB2	1:D:63:ILE:HD11	1.80	0.62
1:D:115:ILE:HD13	1:D:195:ILE:HG21	1.81	0.62
1:A:184:LYS:HG3	1:A:189:LEU:HB2	1.81	0.62
1:B:61:ARG:HD2	1:D:28:VAL:HB	1.82	0.60
1:C:142:PHE:HD2	1:C:149:VAL:HG21	1.67	0.59
1:C:85:LEU:HB2	1:C:156:VAL:HG21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:108:LYS:HG3	1:D:109:ARG:HG3	1.84	0.58
1:B:53[B]:SER:OG	1:B:54:LYS:HG3	2.02	0.58
1:D:60:LEU:HD21	1:D:100:PRO:HG2	1.86	0.58
1:D:49:LYS:HD3	1:D:50:ASN:H	1.68	0.57
1:D:44:ALA:HB1	1:D:62:LEU:HD11	1.89	0.55
1:D:104:ASP:HB3	1:D:107:ASN:HD22	1.72	0.54
1:B:60:LEU:HD21	1:B:100:PRO:HG2	1.90	0.54
1:A:157:ARG:HB2	1:A:160:GLY:O	2.07	0.54
1:A:200:HIS:O	1:A:201:ALA:C	2.52	0.53
1:C:112:ARG:O	1:C:197:TYR:CD2	2.62	0.53
1:C:66:PHE:CD2	1:C:72:PHE:HB2	2.46	0.51
1:A:108:LYS:HG3	1:A:109:ARG:HG3	1.92	0.51
1:D:91:TYR:HB2	1:D:154:VAL:CG1	2.41	0.50
1:A:104:ASP:HB3	1:A:107:ASN:HD22	1.76	0.50
1:D:94:PHE:CD1	1:D:100:PRO:HB3	2.46	0.50
1:A:114:LEU:HD11	1:A:162:LYS:HB3	1.93	0.50
1:D:50:ASN:HB2	1:D:88:GLY:O	2.11	0.49
1:D:154:VAL:HG23	1:D:163:ILE:HG12	1.94	0.49
1:C:130:TRP:O	1:C:134:LEU:HG	2.12	0.49
1:A:192:LYS:HD2	1:A:192:LYS:H	1.76	0.49
1:B:112:ARG:O	1:B:197:TYR:HA	2.12	0.49
1:C:75:LEU:HA	1:C:78:HIS:CD2	2.47	0.49
1:B:88:GLY:HA2	1:B:157:ARG:HH11	1.78	0.49
1:B:178:HIS:O	1:B:182:VAL:HG23	2.13	0.49
1:D:183:TYR:CZ	1:D:187:LEU:HD11	2.48	0.49
1:A:68:THR:OG1	1:A:71:ASP:OD2	2.31	0.48
1:A:155:ASN:ND2	3:A:402:HOH:O	2.44	0.48
1:D:155:ASN:HD22	1:D:162:LYS:HB2	1.78	0.48
1:A:56:TRP:HA	3:A:426:HOH:O	2.12	0.48
1:A:190:PRO:HB2	1:A:192:LYS:HD2	1.95	0.48
1:C:104:ASP:HB3	1:C:107:ASN:HD22	1.79	0.48
1:B:45:LEU:HD22	1:B:75:LEU:HD21	1.96	0.47
1:A:85:LEU:HD11	1:A:91:TYR:CE2	2.49	0.47
1:C:48:PHE:O	1:C:89:CYS:HA	2.14	0.47
1:A:190:PRO:HG2	1:A:193:ILE:HG12	1.97	0.47
1:C:120:GLN:HE22	1:C:123:ARG:HD3	1.80	0.46
1:A:152:ALA:HB1	1:A:164:ALA:O	2.15	0.45
1:B:66:PHE:CE1	1:B:72:PHE:HB2	2.52	0.45
1:D:49:LYS:HD3	1:D:50:ASN:N	2.30	0.45
1:D:66:PHE:CE2	1:D:72:PHE:HB2	2.52	0.45
1:C:152:ALA:HA	1:C:164:ALA:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:92:SER:OG	1:C:153:VAL:HG22	2.17	0.45
1:B:203:THR:HG21	3:B:423:HOH:O	2.17	0.44
1:C:112:ARG:HD2	1:C:164:ALA:HB1	1.99	0.43
1:D:103:GLU:H	1:D:103:GLU:CD	2.26	0.43
1:A:45:LEU:HD12	1:A:92:SER:O	2.18	0.43
1:A:131:LEU:O	1:A:135:LEU:HG	2.18	0.43
1:C:112:ARG:HA	1:C:165:ILE:O	2.18	0.43
1:A:122:ARG:HE	1:A:122:ARG:HB2	1.75	0.42
1:B:44:ALA:HB1	1:B:62:LEU:HD11	2.01	0.42
1:D:181:ARG:O	1:D:185:GLU:HG2	2.19	0.42
2:C:301:A1KQY:C5B	2:C:301:A1KQY:N3C	2.82	0.42
1:A:216:VAL:HG22	1:B:191:PRO:O	2.19	0.42
1:B:121:GLN:HA	1:B:124:SER:OG	2.18	0.42
1:D:46:TRP:HB2	1:D:92:SER:HB2	2.01	0.41
1:A:45:LEU:O	1:A:62:LEU:HD12	2.21	0.41
1:B:44:ALA:HB1	1:B:62:LEU:CD1	2.50	0.41
1:C:30:ASN:HD22	1:C:33:HIS:CD2	2.39	0.41
1:C:111:GLY:O	1:C:167:THR:N	2.48	0.41
1:A:80:GLN:OE1	1:A:84:ASN:ND2	2.48	0.41
1:B:56:TRP:HA	3:B:419:HOH:O	2.19	0.41
1:A:30:ASN:HB3	1:A:33:HIS:CE1	2.56	0.41
1:B:133:THR:OG1	1:B:183:TYR:OH	2.10	0.41
1:A:48:PHE:O	1:A:89:CYS:HA	2.21	0.40
1:C:91:TYR:HB2	1:C:154:VAL:CG1	2.52	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:ARG:NH2	1:B:171:GLU:CG[1_645]	1.34	0.86
1:A:70:GLU:OE2	1:C:80:GLN:OE1[1_545]	2.04	0.16

5.3 Torsion angles

5.3.1 Protein backbone

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	182/193 (94%)	171 (94%)	11 (6%)	0	100	100
1	B	176/193 (91%)	167 (95%)	9 (5%)	0	100	100
1	C	180/193 (93%)	171 (95%)	8 (4%)	1 (1%)	21	17
1	D	181/193 (94%)	172 (95%)	9 (5%)	0	100	100
All	All	719/772 (93%)	681 (95%)	37 (5%)	1 (0%)	48	46

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	32	GLU

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	164/171 (96%)	161 (98%)	3 (2%)	51	58
1	B	161/171 (94%)	158 (98%)	3 (2%)	50	56
1	C	164/171 (96%)	158 (96%)	6 (4%)	30	30
1	D	165/171 (96%)	159 (96%)	6 (4%)	31	31
All	All	654/684 (96%)	636 (97%)	18 (3%)	38	41

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	40	GLN
1	A	105	GLU
1	A	122	ARG
1	B	33	HIS
1	B	80	GLN
1	B	148	ASP
1	C	50	ASN

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Mol	Chain	Res	Type
1	C	92	SER
1	C	185	GLU
1	C	194	VAL
1	C	199	SER
1	C	205	THR
1	D	28	VAL
1	D	35	ILE
1	D	122	ARG
1	D	144	ASP
1	D	147	ASP
1	D	173	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	41	ASN
1	A	107	ASN
1	A	120	GLN
1	A	155	ASN
1	B	40	GLN
1	B	41	ASN
1	B	50	ASN
1	B	80	GLN
1	B	178	HIS
1	C	30	ASN
1	C	41	ASN
1	C	50	ASN
1	C	80	GLN
1	C	120	GLN
1	C	121	GLN
1	D	33	HIS
1	D	41	ASN
1	D	80	GLN
1	D	107	ASN
1	D	121	GLN
1	D	155	ASN

5.3.3 RNA ⓘ

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](#)

4 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	$\# Z > 2$
2	A1KQY	C	301	-	48,53,79	0.97	2 (4%)	58,80,121	2.22	14 (24%)
2	A1KQY	A	301	-	48,53,79	1.14	4 (8%)	58,80,121	2.12	14 (24%)
2	A1KQY	D	301	-	48,53,79	1.00	2 (4%)	58,80,121	2.07	11 (18%)
2	A1KQY	B	301	-	48,53,79	1.12	4 (8%)	58,80,121	2.03	11 (18%)

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
2	A1KQY	C	301	-	-	11/34/78/109	0/5/5/8
2	A1KQY	A	301	-	-	10/34/78/109	0/5/5/8
2	A1KQY	D	301	-	-	10/34/78/109	0/5/5/8
2	A1KQY	B	301	-	-	10/34/78/109	0/5/5/8

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	301	A1KQY	C5-N7	-3.25	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	301	A1KQY	C8C-N7C	3.01	1.37	1.31
2	A	301	A1KQY	C8C-N7C	2.87	1.37	1.31
2	C	301	A1KQY	C8C-N7C	2.85	1.37	1.31
2	B	301	A1KQY	O6-C6	2.84	1.28	1.23
2	B	301	A1KQY	C8C-N7C	2.76	1.36	1.31
2	B	301	A1KQY	C5-N7	-2.49	1.36	1.39
2	C	301	A1KQY	O6-C6	2.46	1.27	1.23
2	D	301	A1KQY	O6-C6	2.23	1.27	1.23
2	A	301	A1KQY	C2-N1	2.11	1.38	1.33
2	B	301	A1KQY	C2-N1	2.02	1.38	1.33
2	A	301	A1KQY	O6-C6	2.01	1.27	1.23

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	301	A1KQY	C5C-C4C-N3C	-7.16	117.40	126.75
2	A	301	A1KQY	C5C-C4C-N3C	-6.97	117.66	126.75
2	C	301	A1KQY	P2-O13-P1	-6.77	109.60	132.83
2	B	301	A1KQY	P2-O13-P1	-6.71	109.80	132.83
2	D	301	A1KQY	P2-O13-P1	-6.03	112.12	132.83
2	A	301	A1KQY	P2-O13-P1	-5.68	113.35	132.83
2	D	301	A1KQY	N3C-C2C-N1C	-5.54	119.93	128.60
2	B	301	A1KQY	C5C-C4C-N3C	-5.54	119.52	126.75
2	C	301	A1KQY	N3C-C2C-N1C	-5.53	119.94	128.60
2	B	301	A1KQY	P3-O23-P2	-5.14	115.17	132.83
2	A	301	A1KQY	N3C-C2C-N1C	-5.05	120.71	128.60
2	D	301	A1KQY	C5C-C4C-N3C	-4.92	120.33	126.75
2	D	301	A1KQY	N9C-C8C-N7C	-4.72	107.45	113.91
2	B	301	A1KQY	N3C-C2C-N1C	-4.68	121.28	128.60
2	C	301	A1KQY	C2C-N3C-C4C	4.58	122.57	111.75
2	D	301	A1KQY	P3-O23-P2	-4.56	117.19	132.83
2	A	301	A1KQY	P3-O23-P2	-4.54	117.24	132.83
2	C	301	A1KQY	N3C-C4C-N9C	4.53	134.55	127.08
2	A	301	A1KQY	N3C-C4C-N9C	4.25	134.08	127.08
2	A	301	A1KQY	C2C-N3C-C4C	4.20	121.68	111.75
2	C	301	A1KQY	P3-O23-P2	-3.90	119.44	132.83
2	D	301	A1KQY	C2C-N3C-C4C	3.77	120.65	111.75
2	D	301	A1KQY	C5C-N7C-C8C	3.64	108.68	103.51
2	A	301	A1KQY	C5C-N7C-C8C	3.58	108.60	103.51
2	C	301	A1KQY	O4B-C1B-N9C	3.58	115.11	108.06
2	B	301	A1KQY	C2C-N3C-C4C	3.52	120.06	111.75
2	B	301	A1KQY	N9C-C8C-N7C	-3.38	109.29	113.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	301	A1KQY	C4C-N9C-C8C	3.37	109.39	105.73
2	B	301	A1KQY	N3C-C4C-N9C	3.37	132.64	127.08
2	D	301	A1KQY	N3C-C4C-N9C	3.33	132.56	127.08
2	A	301	A1KQY	N9C-C8C-N7C	-3.23	109.50	113.91
2	C	301	A1KQY	C5C-N7C-C8C	3.17	108.02	103.51
2	D	301	A1KQY	C2A-C1A-N9	-3.17	105.32	111.75
2	B	301	A1KQY	C5C-N7C-C8C	3.17	108.01	103.51
2	C	301	A1KQY	N9C-C8C-N7C	-2.89	109.96	113.91
2	B	301	A1KQY	C2A-C1A-N9	-2.81	106.06	111.75
2	A	301	A1KQY	C4C-C5C-N7C	-2.74	107.28	110.62
2	D	301	A1KQY	C4C-C5C-N7C	-2.67	107.37	110.62
2	B	301	A1KQY	O6-C6-N1	-2.59	115.81	120.23
2	B	301	A1KQY	C4C-C5C-N7C	-2.54	107.52	110.62
2	C	301	A1KQY	C4C-C5C-N7C	-2.51	107.56	110.62
2	A	301	A1KQY	C6C-C5C-C4C	2.41	120.42	117.18
2	A	301	A1KQY	O33-C5B-C4B	-2.39	100.77	108.99
2	A	301	A1KQY	C2B-C1B-N9C	2.26	117.34	113.53
2	C	301	A1KQY	C1B-N9C-C8C	-2.19	122.18	127.14
2	C	301	A1KQY	C6C-C5C-C4C	2.18	120.12	117.18
2	A	301	A1KQY	C5C-C4C-N9C	2.13	108.26	105.78
2	C	301	A1KQY	P3-O33-C5B	-2.08	109.48	121.68
2	A	301	A1KQY	O12-P1-O15	2.04	117.21	107.75
2	C	301	A1KQY	C4C-N9C-C1B	2.01	131.39	126.59

There are no chirality outliers.

All (41) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	301	A1KQY	O4A-C4A-C5A-O15
2	A	301	A1KQY	C5A-O15-P1-O11
2	A	301	A1KQY	C5A-O15-P1-O13
2	A	301	A1KQY	C3B-C4B-C5B-O33
2	A	301	A1KQY	C2B-C1B-N9C-C8C
2	B	301	A1KQY	O4A-C4A-C5A-O15
2	B	301	A1KQY	C5A-O15-P1-O11
2	B	301	A1KQY	C5A-O15-P1-O12
2	B	301	A1KQY	C1B-C2B-O2B-C52
2	C	301	A1KQY	C5A-O15-P1-O11
2	C	301	A1KQY	C5A-O15-P1-O12
2	C	301	A1KQY	O4B-C4B-C5B-O33
2	D	301	A1KQY	P2-O13-P1-O15
2	D	301	A1KQY	C5A-O15-P1-O13

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Mol	Chain	Res	Type	Atoms
2	D	301	A1KQY	C5B-O33-P3-O32
2	D	301	A1KQY	C5B-O33-P3-O31
2	D	301	A1KQY	O4B-C4B-C5B-O33
2	D	301	A1KQY	C3B-C4B-C5B-O33
2	A	301	A1KQY	O4B-C4B-C5B-O33
2	C	301	A1KQY	C3B-C4B-C5B-O33
2	A	301	A1KQY	C2B-C1B-N9C-C4C
2	C	301	A1KQY	O4A-C4A-C5A-O15
2	C	301	A1KQY	O4B-C1B-N9C-C8C
2	A	301	A1KQY	P2-O13-P1-O15
2	A	301	A1KQY	P2-O23-P3-O33
2	B	301	A1KQY	P2-O13-P1-O15
2	C	301	A1KQY	P2-O13-P1-O15
2	B	301	A1KQY	C5A-C4A-O4A-C2A
2	C	301	A1KQY	O4B-C1B-N9C-C4C
2	C	301	A1KQY	C5A-O15-P1-O13
2	D	301	A1KQY	C5B-O33-P3-O23
2	C	301	A1KQY	C1A-C2A-O4A-C4A
2	D	301	A1KQY	C5A-O15-P1-O12
2	A	301	A1KQY	C5A-C4A-O4A-C2A
2	D	301	A1KQY	C5A-C4A-O4A-C2A
2	C	301	A1KQY	C5A-C4A-O4A-C2A
2	B	301	A1KQY	P2-O23-P3-O31
2	B	301	A1KQY	C1A-C2A-O4A-C4A
2	D	301	A1KQY	C1A-C2A-O4A-C4A
2	B	301	A1KQY	C5A-O15-P1-O13
2	B	301	A1KQY	P2-O23-P3-O32

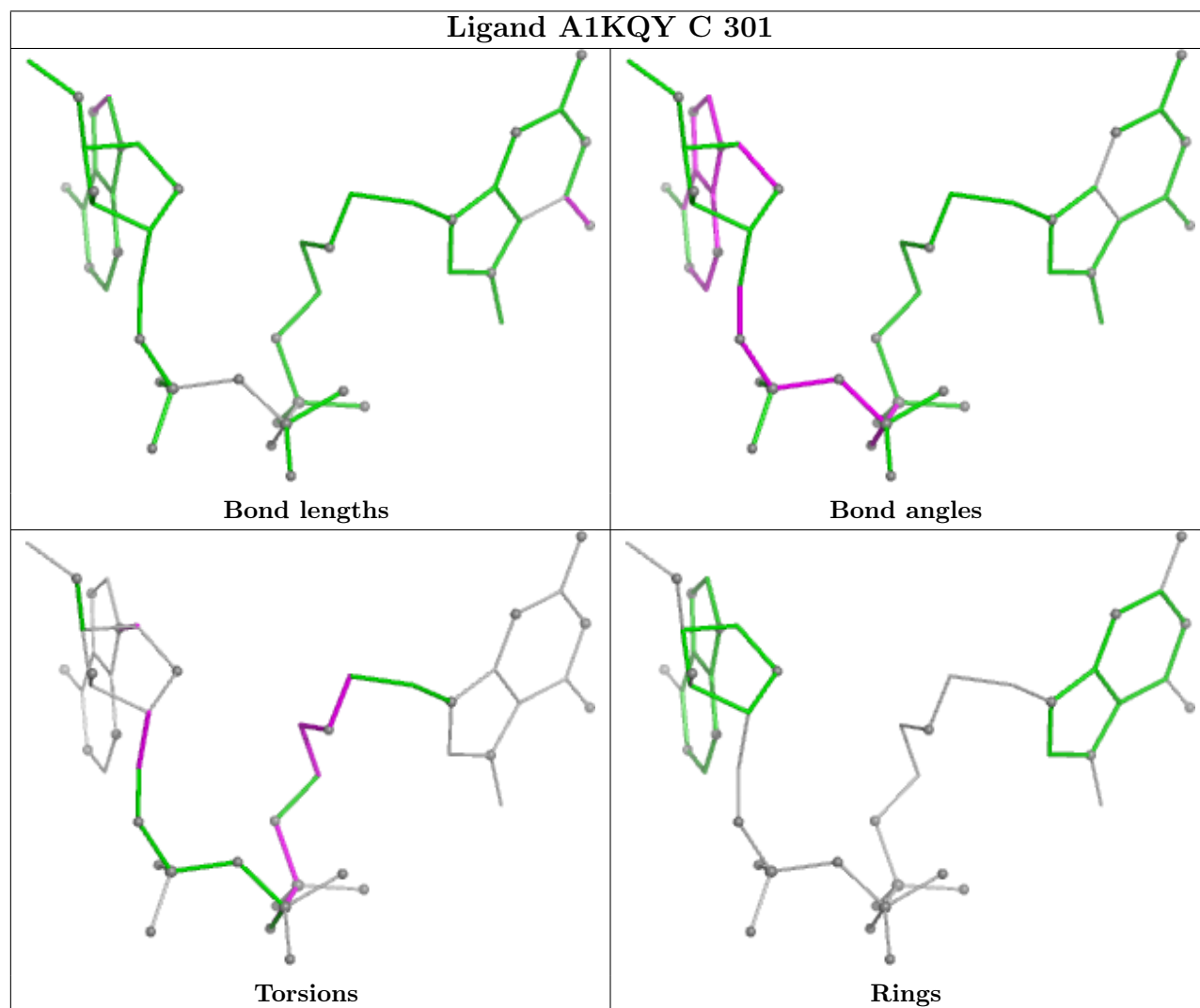
There are no ring outliers.

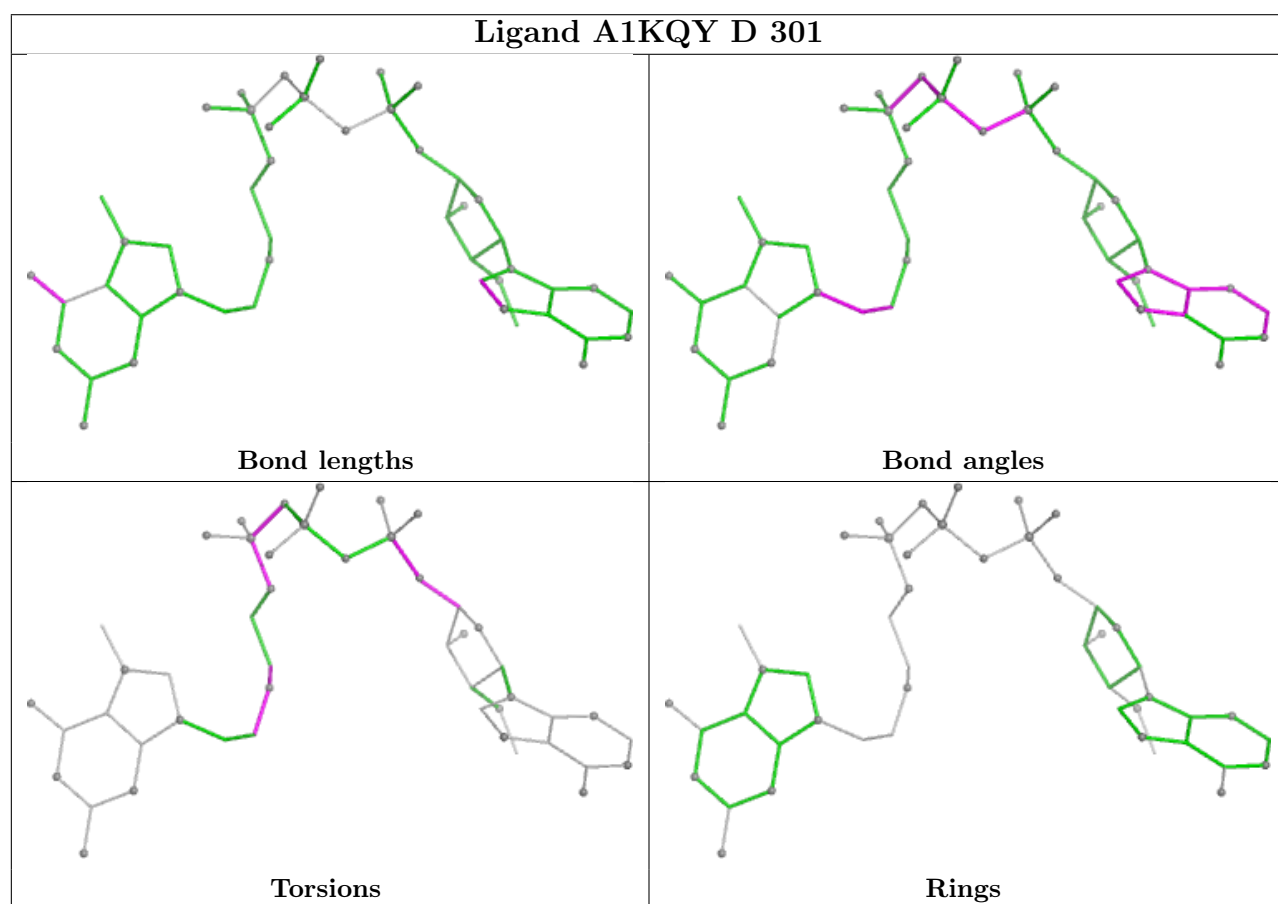
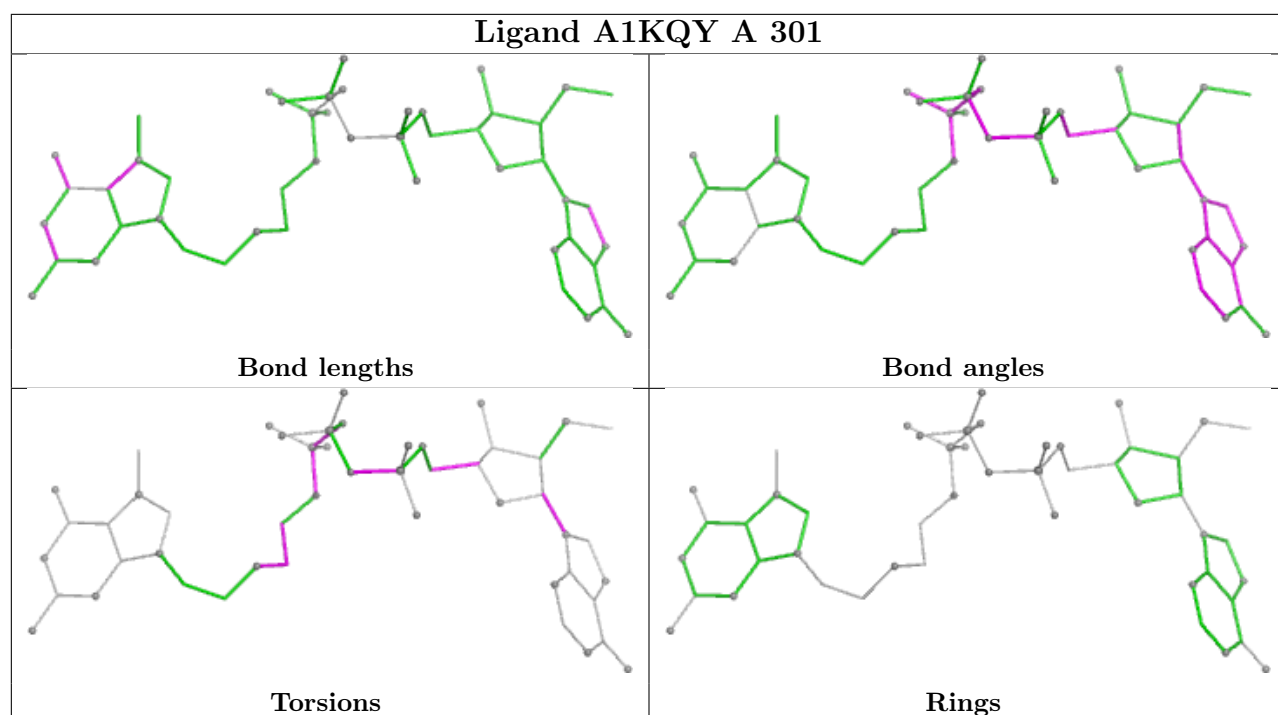
1 monomer is involved in 2 short contacts:

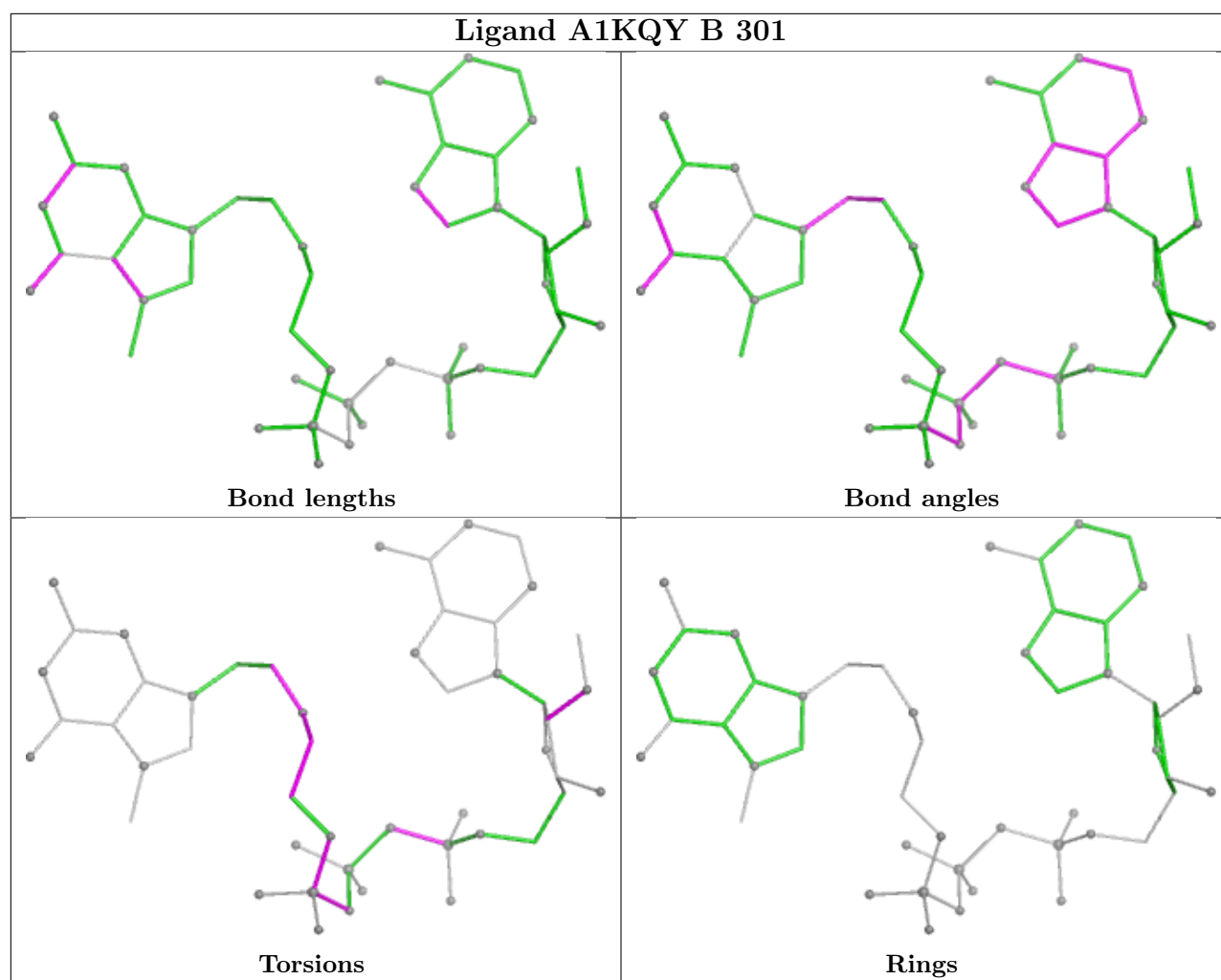
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	301	A1KQY	2	0

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	185/193 (95%)	1.26	34 (18%) 3 3	13, 26, 51, 75	2 (1%)
1	B	179/193 (92%)	1.02	24 (13%) 7 6	14, 26, 44, 57	2 (1%)
1	C	183/193 (94%)	2.65	114 (62%) 0 0	17, 52, 79, 93	2 (1%)
1	D	184/193 (95%)	2.55	119 (64%) 0 0	21, 49, 79, 109	2 (1%)
All	All	731/772 (94%)	1.87	291 (39%) 1 1	13, 35, 75, 109	8 (1%)

All (291) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	113	TRP	7.6
1	D	31	PRO	6.8
1	D	215	PHE	6.7
1	C	201	ALA	6.4
1	C	193	ILE	6.4
1	C	56	TRP	6.2
1	C	215	PHE	6.0
1	C	158	ALA	5.9
1	D	113	TRP	5.9
1	D	193	ILE	5.9
1	D	28	VAL	5.8
1	D	203	THR	5.7
1	C	217	VAL	5.6
1	C	203	THR	5.6
1	C	31	PRO	5.6
1	D	204	ALA	5.5
1	C	50	ASN	5.4
1	D	102	TRP	5.3
1	C	29	ALA	5.3
1	D	56	TRP	5.2
1	C	102	TRP	5.0

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Mol	Chain	Res	Type	RSRZ
1	D	214	ARG	5.0
1	D	164	ALA	4.9
1	C	49	LYS	4.8
1	C	216	VAL	4.8
1	C	167	THR	4.8
1	D	117	LEU	4.7
1	C	145	TYR	4.7
1	C	164	ALA	4.6
1	C	111	GLY	4.5
1	A	173	ARG	4.5
1	C	30	ASN	4.5
1	C	115	ILE	4.5
1	D	33	HIS	4.5
1	C	60	LEU	4.5
1	D	48	PHE	4.5
1	D	163	ILE	4.4
1	D	197	TYR	4.4
1	D	78	HIS	4.4
1	C	163	ILE	4.4
1	C	199	SER	4.4
1	C	100	PRO	4.3
1	D	205	THR	4.3
1	D	191	PRO	4.3
1	C	48	PHE	4.3
1	C	117	LEU	4.2
1	D	217	VAL	4.2
1	D	216	VAL	4.2
1	D	88	GLY	4.2
1	C	204	ALA	4.2
1	D	116	THR	4.2
1	C	195	ILE	4.2
1	D	111	GLY	4.1
1	D	115	ILE	4.1
1	C	52	LYS	4.1
1	D	85	LEU	4.1
1	C	188	GLY	4.1
1	D	198	GLN	4.1
1	D	114	LEU	4.0
1	C	53[A]	SER	4.0
1	D	173	ARG	4.0
1	D	110	GLY	4.0
1	C	205	THR	4.0

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Mol	Chain	Res	Type	RSRZ
1	C	194	VAL	4.0
1	C	185	GLU	4.0
1	C	120	GLN	3.9
1	C	137	LEU	3.9
1	A	29	ALA	3.9
1	A	108	LYS	3.9
1	D	200	HIS	3.8
1	D	158	ALA	3.8
1	C	114	LEU	3.8
1	C	110	GLY	3.8
1	C	55	THR	3.8
1	C	190	PRO	3.8
1	A	204	ALA	3.7
1	D	92	SER	3.7
1	C	176	VAL	3.7
1	C	200	HIS	3.7
1	D	162	LYS	3.7
1	D	100	PRO	3.7
1	C	59	ASN	3.6
1	D	124	SER	3.6
1	C	165	ILE	3.6
1	D	213	ASN	3.6
1	C	32	GLU	3.5
1	A	33	HIS	3.5
1	A	143	ASP	3.5
1	D	109	ARG	3.5
1	A	216	VAL	3.5
1	A	109	ARG	3.5
1	A	194	VAL	3.5
1	D	156	VAL	3.5
1	D	194	VAL	3.5
1	C	168	THR	3.5
1	C	81	LEU	3.4
1	D	60	LEU	3.4
1	C	197	TYR	3.4
1	D	50	ASN	3.4
1	A	205	THR	3.4
1	A	211	THR	3.4
1	C	88	GLY	3.4
1	C	85	LEU	3.4
1	D	86	MET	3.4
1	D	175	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	C	101	MET	3.4
1	A	198	GLN	3.4
1	C	189	LEU	3.4
1	B	212	LYS	3.3
1	D	195	ILE	3.3
1	C	109	ARG	3.3
1	D	55	THR	3.3
1	D	160	GLY	3.3
1	C	149	VAL	3.3
1	C	178	HIS	3.3
1	D	61	ARG	3.3
1	C	80	GLN	3.3
1	D	101	MET	3.3
1	D	201	ALA	3.2
1	C	170	CYS	3.2
1	A	179	ILE	3.2
1	C	90	ASP	3.2
1	C	119	LYS	3.2
1	B	144	ASP	3.2
1	B	78	HIS	3.2
1	D	188	GLY	3.2
1	C	191	PRO	3.1
1	D	212	LYS	3.1
1	C	57	GLN	3.1
1	C	202	ASP	3.1
1	C	105	GLU	3.1
1	D	137	LEU	3.1
1	D	187	LEU	3.1
1	C	54	LYS	3.1
1	C	160	GLY	3.1
1	B	205	THR	3.1
1	D	120	GLN	3.1
1	A	31	PRO	3.1
1	D	30	ASN	3.1
1	D	87	PRO	3.1
1	A	32	GLU	3.1
1	D	52	LYS	3.1
1	D	176	VAL	3.1
1	C	142	PHE	3.0
1	C	179	ILE	3.0
1	D	174	GLU	3.0
1	C	108	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
1	D	34	TYR	3.0
1	D	129	PHE	3.0
1	C	51	ASP	3.0
1	D	51	ASP	3.0
1	D	190	PRO	3.0
1	B	88	GLY	2.9
1	D	192	LYS	2.9
1	C	104	ASP	2.9
1	C	198	GLN	2.9
1	A	145	TYR	2.9
1	D	189	LEU	2.9
1	C	97	GLY	2.9
1	B	33	HIS	2.9
1	C	116	THR	2.9
1	C	87	PRO	2.9
1	C	61	ARG	2.9
1	D	146	SER	2.9
1	D	58	ALA	2.9
1	B	143	ASP	2.9
1	C	89	CYS	2.9
1	D	144	ASP	2.9
1	D	185	GLU	2.9
1	C	212	LYS	2.9
1	D	47	PHE	2.9
1	D	196	GLY	2.9
1	D	170	CYS	2.8
1	D	119	LYS	2.8
1	C	33	HIS	2.8
1	C	214	ARG	2.8
1	D	123	ARG	2.8
1	A	105	GLU	2.8
1	C	169	GLU	2.8
1	C	156	VAL	2.8
1	D	126	LEU	2.8
1	B	173	ARG	2.8
1	C	34	TYR	2.8
1	C	76	TYR	2.8
1	D	112	ARG	2.7
1	D	182	VAL	2.7
1	B	35	ILE	2.7
1	A	102	TRP	2.7
1	B	102	TRP	2.7

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Mol	Chain	Res	Type	RSRZ
1	D	152	ALA	2.7
1	C	107	ASN	2.7
1	C	172	ASN	2.7
1	D	90	ASP	2.7
1	C	129	PHE	2.6
1	C	177	THR	2.6
1	C	162	LYS	2.6
1	D	106	LYS	2.6
1	C	166	TRP	2.6
1	B	62	LEU	2.6
1	C	184	LYS	2.6
1	A	217	VAL	2.6
1	C	152	ALA	2.6
1	A	62	LEU	2.6
1	C	86	MET	2.6
1	D	128	ARG	2.6
1	C	154	VAL	2.5
1	D	97	GLY	2.5
1	D	118	ASN	2.5
1	B	145	TYR	2.5
1	D	108	LYS	2.5
1	D	84	ASN	2.5
1	D	155	ASN	2.5
1	D	166	TRP	2.5
1	B	109	ARG	2.5
1	D	145	TYR	2.5
1	C	103	GLU	2.5
1	D	177	THR	2.5
1	D	49	LYS	2.5
1	D	151	GLY	2.5
1	A	50	ASN	2.5
1	A	113	TRP	2.5
1	C	141	SER	2.4
1	C	78	HIS	2.4
1	C	118	ASN	2.4
1	D	121	GLN	2.4
1	D	96	ASP	2.4
1	D	161	ASP	2.4
1	D	76	TYR	2.4
1	B	172	ASN	2.4
1	C	147	ASP	2.4
1	D	46	TRP	2.4

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Mol	Chain	Res	Type	RSRZ
1	C	62	LEU	2.4
1	C	35	ILE	2.4
1	C	82	SER	2.4
1	D	167	THR	2.4
1	D	168	THR	2.4
1	A	169	GLU	2.3
1	A	180	GLY	2.3
1	A	192	LYS	2.3
1	D	181	ARG	2.3
1	D	89	CYS	2.3
1	B	159	LYS	2.3
1	A	215	PHE	2.3
1	B	92	SER	2.3
1	C	128	ARG	2.3
1	D	32	GLU	2.3
1	D	82	SER	2.3
1	B	193	ILE	2.3
1	D	138	ILE	2.3
1	C	174	GLU	2.2
1	C	98	ILE	2.2
1	D	98	ILE	2.2
1	B	86	MET	2.2
1	C	175	ALA	2.2
1	D	150	CYS	2.2
1	D	57	GLN	2.2
1	D	94	PHE	2.2
1	A	30	ASN	2.2
1	B	203	THR	2.2
1	B	213	ASN	2.2
1	A	147	ASP	2.2
1	C	122	ARG	2.2
1	C	192	LYS	2.2
1	D	142	PHE	2.2
1	C	143	ASP	2.2
1	C	144	ASP	2.2
1	B	37	HIS	2.2
1	D	53[A]	SER	2.2
1	D	199	SER	2.2
1	D	130	TRP	2.2
1	D	125	ASP	2.2
1	B	174	GLU	2.1
1	C	171	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	117	LEU	2.1
1	A	120	GLN	2.1
1	C	47	PHE	2.1
1	B	194	VAL	2.1
1	D	153	VAL	2.1
1	D	29	ALA	2.1
1	D	169	GLU	2.1
1	A	78	HIS	2.1
1	C	46	TRP	2.1
1	D	40	GLN	2.1
1	B	197	TYR	2.1
1	A	212	LYS	2.1
1	C	126	LEU	2.0
1	D	59	ASN	2.0
1	C	157	ARG	2.0
1	A	116	THR	2.0
1	A	197	TYR	2.0
1	D	35	ILE	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](#)

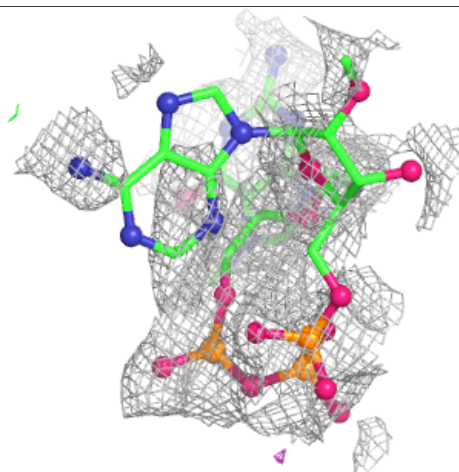
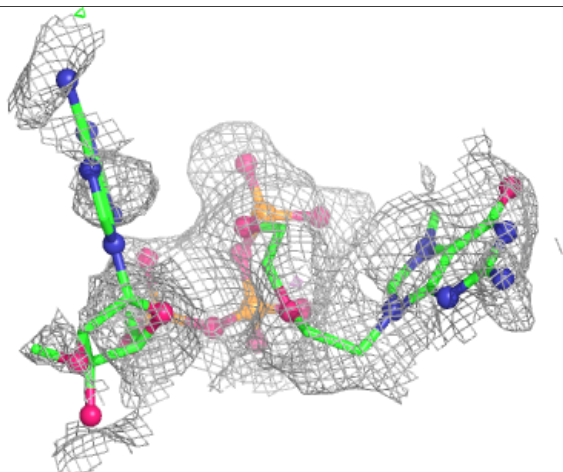
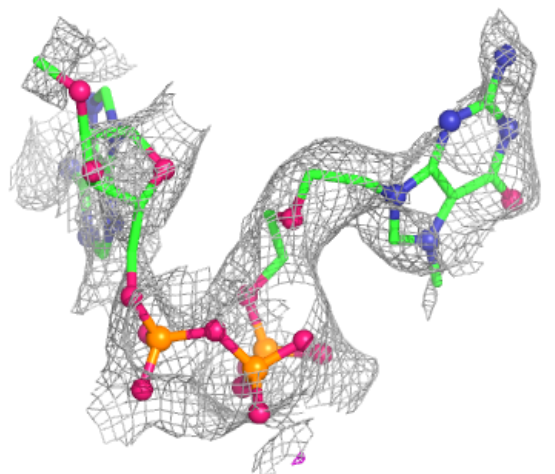
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	A1KQY	C	301	49/72	0.63	0.19	64,98,125,128	0
2	A1KQY	D	301	49/72	0.63	0.20	60,75,97,105	0
2	A1KQY	A	301	49/72	0.76	0.19	25,58,117,119	0
2	A1KQY	B	301	49/72	0.80	0.19	24,63,122,124	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.

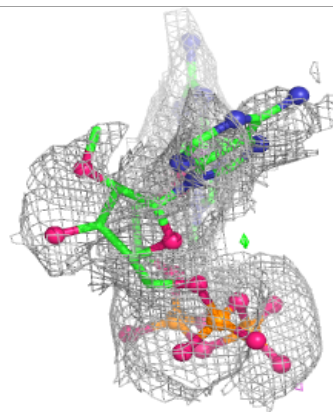
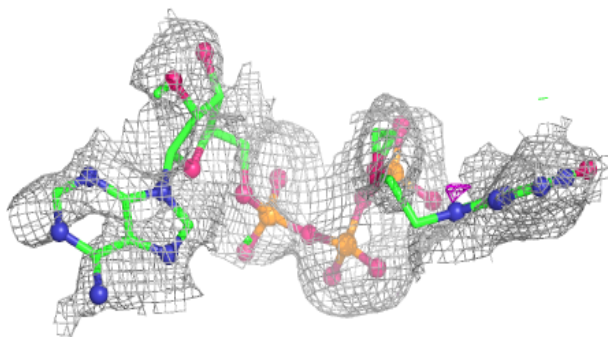
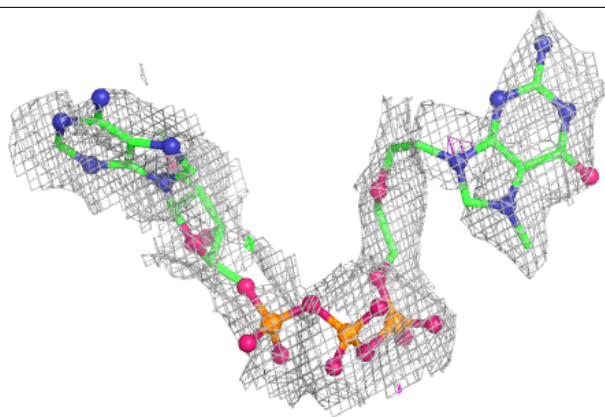
Electron density around A1KQY C 301:

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

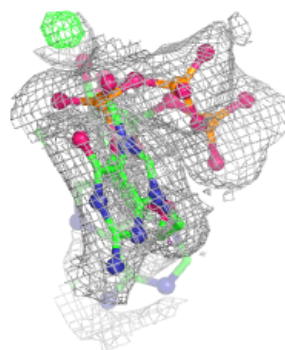
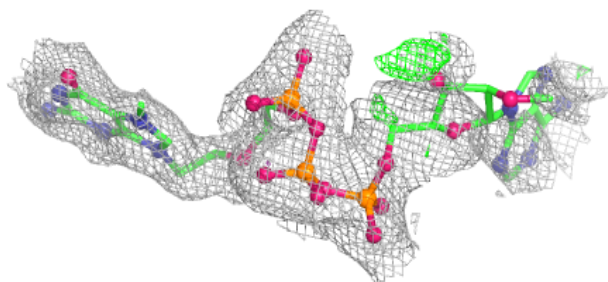
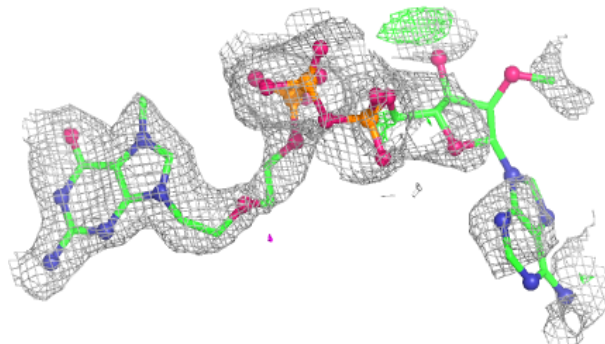


Electron density around A1KQY D 301:

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

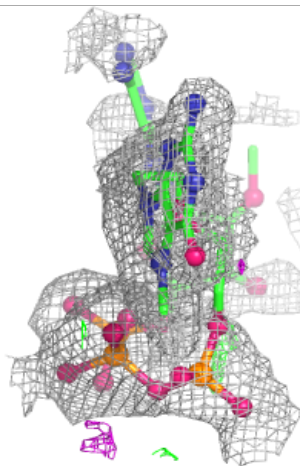
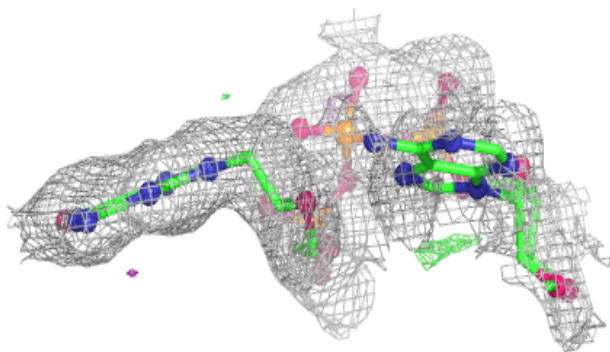
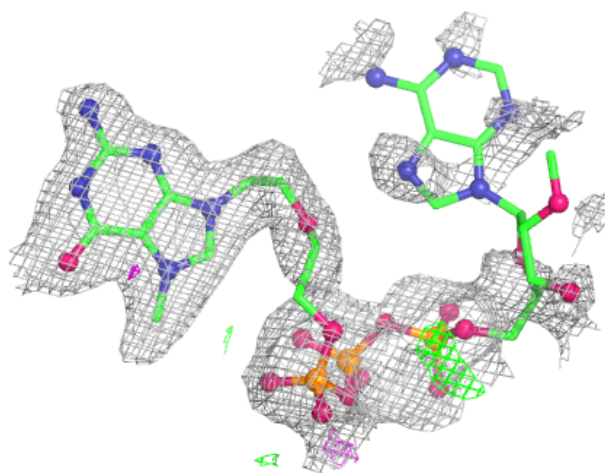
**Electron density around A1KQY A 301:**

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



Electron density around A1KQY B 301:

$2mF_o-DF_c$ (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.