



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 08:13 PM UTC

PDB ID : 1G16 / pdb_00001g16
Title : CRYSTAL STRUCTURE OF SEC4-GDP
Authors : Stroupe, C.; Brunger, A.T.
Deposited on : 2000-10-10
Resolution : 1.80 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

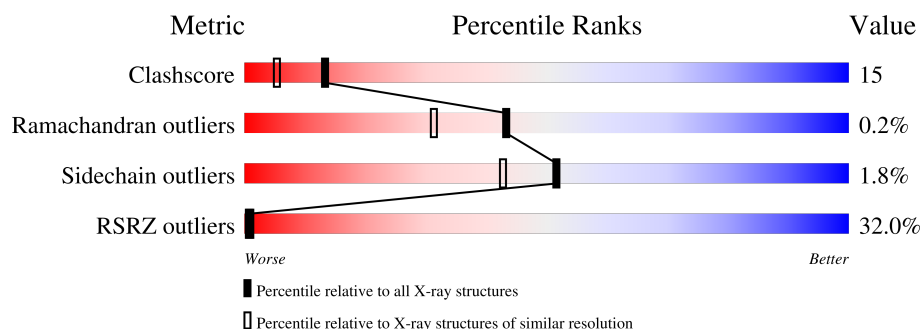
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.80 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	190562	8479 (1.80-1.80)
Ramachandran outliers	187476	8391 (1.80-1.80)
Sidechain outliers	187428	8390 (1.80-1.80)
RSRZ outliers	180081	7663 (1.80-1.80)

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	170	25% 69% 25% 6%
1	B	170	29% 75% 19% • 5%
1	C	170	34% 70% 27% • •
1	D	170	31% 64% 30% 6%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 5593 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 RAS-RELATED PROTEIN SEC4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	159	Total	C	N	O	S	Se	0	0	0
			1266	810	211	241	1	3			
1	B	161	Total	C	N	O	S	Se	0	0	0
			1280	817	213	246	1	3			
1	C	167	Total	C	N	O	S	Se	0	0	0
			1325	848	219	254	1	3			
1	D	160	Total	C	N	O	S	Se	0	0	0
			1274	814	212	244	1	3			

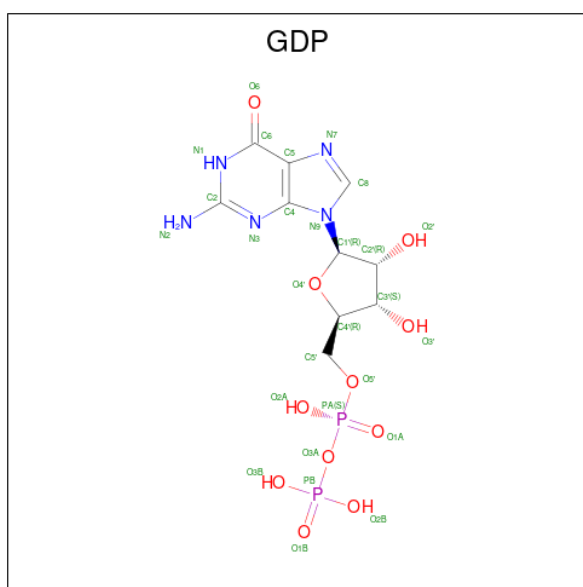
There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	21	MSE	MET	modified residue	UNP P07560
A	73	ILE	LEU	conflict	UNP P07560
A	94	MSE	MET	modified residue	UNP P07560
A	102	ILE	VAL	conflict	UNP P07560
A	137	MSE	MET	modified residue	UNP P07560
B	21	MSE	MET	modified residue	UNP P07560
B	73	ILE	LEU	conflict	UNP P07560
B	94	MSE	MET	modified residue	UNP P07560
B	102	ILE	VAL	conflict	UNP P07560
B	137	MSE	MET	modified residue	UNP P07560
C	21	MSE	MET	modified residue	UNP P07560
C	73	ILE	LEU	conflict	UNP P07560
C	94	MSE	MET	modified residue	UNP P07560
C	102	ILE	VAL	conflict	UNP P07560
C	137	MSE	MET	modified residue	UNP P07560
D	21	MSE	MET	modified residue	UNP P07560
D	73	ILE	LEU	conflict	UNP P07560
D	94	MSE	MET	modified residue	UNP P07560
D	102	ILE	VAL	conflict	UNP P07560
D	137	MSE	MET	modified residue	UNP P07560

- Molecule 2 is COBALT (II) ION (CCD ID: CO) (formula: Co).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	2	Total	Co	0	0
			2	2		
2	B	1	Total	Co	0	0
			1	1		
2	C	2	Total	Co	0	0
			2	2		
2	D	3	Total	Co	0	0
			3	3		

- Molecule 3 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
3	B	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
3	C	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
3	D	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	105	Total	O	0	0
			105	105		

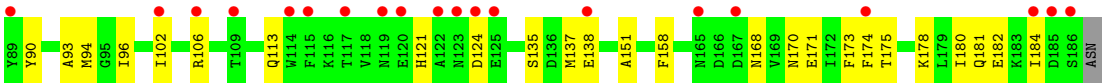
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	B	86	Total 86	O 86	0	0
4	C	70	Total 70	O 70	0	0
4	D	67	Total 67	O 67	0	0

- Molecule 1: RAS-RELATED PROTEIN SEC4





4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	56.01Å 56.38Å 59.37Å 95.25° 101.68° 116.20°	Depositor
Resolution (Å)	28.93 – 1.80 28.93 – 1.80	Depositor EDS
% Data completeness (in resolution range)	88.2 (28.93-1.80) 89.7 (28.93-1.80)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.07 (at 1.80Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.276 , 0.296 0.282 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å ²)	22.1	Xtriage
Anisotropy	0.180	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.40 , 44.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	5593	wwPDB-VP
Average B, all atoms (Å ²)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 44.05 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.6134e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GDP, CO

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	0.40	0/1280	0.83	1/1718 (0.1%)
1	B	0.41	0/1294	0.81	0/1737
1	C	0.41	0/1341	0.82	1/1803 (0.1%)
1	D	0.41	0/1288	0.79	1/1729 (0.1%)
All	All	0.41	0/5203	0.81	3/6987 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	80	GLU	N-CA-C	-6.92	103.41	112.41
1	A	99	VAL	N-CA-C	5.65	116.61	108.48
1	D	173	PHE	N-CA-C	5.61	117.48	111.36

There are no chirality outliers.

There are no planarity outliers.

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	1266	0	1290	37	0
1	B	1280	0	1299	33	0
1	C	1325	0	1348	51	0
1	D	1274	0	1294	41	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	A	2	0	0	0	0
2	B	1	0	0	0	0
2	C	2	0	0	0	0
2	D	3	0	0	0	0
3	A	28	0	12	0	0
3	B	28	0	12	1	0
3	C	28	0	12	0	0
3	D	28	0	12	0	0
4	A	105	0	0	2	0
4	B	86	0	0	3	0
4	C	70	0	0	0	0
4	D	67	0	0	5	0
All	All	5593	0	5279	156	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 15.

All (156) 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:85:ILE:H	1:B:85:ILE:HD12	1.21	1.05
1:C:181:GLN:O	1:C:184:ILE:HG22	1.64	0.96
1:C:46:ASN:HB2	1:C:49:PHE:HB2	1.50	0.91
1:C:79:GLN:HB2	1:D:171:GLU:OE2	1.78	0.82
1:A:37:LEU:HD13	1:A:73:ILE:HG21	1.64	0.80
1:C:181:GLN:NE2	1:C:184:ILE:HG21	1.96	0.80
1:D:81:ARG:O	1:D:84:THR:HG22	1.82	0.79
1:C:123:ASN:HD22	1:C:125:GLU:HG2	1.47	0.78
1:B:64:ILE:HD11	1:B:177:ALA:HB1	1.67	0.76
1:A:102:ILE:CD1	1:A:135:SER:HA	2.17	0.75
1:C:79:GLN:HB2	1:D:171:GLU:CD	2.13	0.73
1:D:102:ILE:CD1	1:D:135:SER:HA	2.19	0.72
1:B:102:ILE:CD1	1:B:135:SER:HA	2.20	0.71
1:D:37:LEU:HD13	1:D:73:ILE:HG21	1.72	0.70
1:D:93:ALA:O	1:D:94:MSE:HE2	1.91	0.70
1:D:87:THR:HG22	1:D:121:HIS:HD2	1.55	0.70
1:C:102:ILE:CD1	1:C:135:SER:HA	2.21	0.69
1:C:37:LEU:HD13	1:C:73:ILE:HG21	1.73	0.69
1:B:85:ILE:H	1:B:85:ILE:CD1	1.98	0.68
1:C:123:ASN:HD22	1:C:125:GLU:CG	2.06	0.67
1:B:37:LEU:HD13	1:B:73:ILE:HG21	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:ILE:HD13	1:A:135:SER:HA	1.76	0.66
1:D:102:ILE:HD13	1:D:135:SER:HA	1.77	0.66
1:C:94:MSE:HE1	1:C:123:ASN:ND2	2.11	0.66
1:C:79:GLN:HE22	1:D:168:ASN:ND2	1.92	0.66
1:C:82:PHE:O	1:C:85:ILE:HG12	1.96	0.66
1:A:44:LYS:NZ	1:A:46:ASN:HB2	2.11	0.66
1:C:102:ILE:HD13	1:C:135:SER:HA	1.79	0.65
1:C:64:ILE:O	1:C:67:LYS:HG2	1.97	0.65
1:B:93:ALA:O	1:B:94:MSE:HE2	1.98	0.64
1:C:83:ARG:NH1	1:D:178:LYS:HD3	2.13	0.64
1:B:64:ILE:HD12	1:B:69:VAL:HG21	1.80	0.62
1:D:42:GLU:O	1:D:44:LYS:HG3	1.99	0.62
1:D:138:GLU:HG2	4:D:660:HOH:O	1.99	0.62
1:B:102:ILE:HD13	1:B:135:SER:HA	1.80	0.62
1:B:79:GLN:HG2	1:B:82:PHE:HE2	1.64	0.61
1:A:102:ILE:HD11	1:A:135:SER:HA	1.83	0.61
1:B:85:ILE:HD11	1:B:114:TRP:HZ3	1.63	0.61
1:A:44:LYS:HZ1	1:A:46:ASN:HB2	1.66	0.61
1:D:170:ASN:ND2	4:D:424:HOH:O	2.32	0.61
1:B:19:SER:C	4:B:549:HOH:O	2.45	0.59
1:C:42:GLU:O	1:C:44:LYS:HG3	2.03	0.59
1:B:82:PHE:CE1	1:B:83:ARG:HD2	2.38	0.58
1:D:102:ILE:HD11	1:D:135:SER:HA	1.85	0.57
1:B:58:LYS:C	1:B:59:ILE:HD12	2.30	0.57
1:A:39:ARG:O	1:A:43:ASP:HA	2.04	0.57
1:B:55:ILE:O	1:B:55:ILE:HG13	2.05	0.56
1:A:93:ALA:O	1:A:94:MSE:HE2	2.06	0.56
1:B:102:ILE:HD11	1:B:135:SER:HA	1.86	0.56
1:C:93:ALA:O	1:C:94:MSE:HE2	2.05	0.56
1:B:79:GLN:HG2	1:B:82:PHE:CE2	2.40	0.56
1:B:39:ARG:O	1:B:43:ASP:HA	2.05	0.56
1:D:65:ASN:ND2	1:D:181:GLN:HG2	2.22	0.55
1:D:62:VAL:HG12	1:D:64:ILE:HG23	1.88	0.55
1:D:39:ARG:O	1:D:43:ASP:HA	2.07	0.54
1:A:58:LYS:C	1:A:59:ILE:HD12	2.32	0.54
1:C:102:ILE:HD11	1:C:135:SER:HA	1.88	0.54
1:C:58:LYS:C	1:C:59:ILE:HD12	2.33	0.53
1:C:62:VAL:HG23	1:C:64:ILE:HD13	1.89	0.53
1:B:76:THR:HG23	4:B:594:HOH:O	2.08	0.53
1:B:85:ILE:HD12	1:B:85:ILE:N	2.06	0.53
1:C:42:GLU:HB3	1:C:44:LYS:HE3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:140:ARG:HD2	1:C:20:ILE:HD12	1.92	0.52
1:C:63:ASP:C	1:C:64:ILE:HD12	2.34	0.52
1:A:55:ILE:N	4:A:518:HOH:O	2.42	0.52
1:C:63:ASP:O	1:C:64:ILE:HD12	2.09	0.51
1:D:58:LYS:C	1:D:59:ILE:HD12	2.36	0.51
1:B:94:MSE:HE1	1:B:123:ASN:CB	2.41	0.51
1:A:24:LEU:HG	1:A:89:TYR:CE2	2.46	0.51
1:A:44:LYS:NZ	1:A:46:ASN:CB	2.74	0.51
1:B:64:ILE:CD1	1:B:177:ALA:HB1	2.38	0.51
1:A:37:LEU:HD13	1:A:73:ILE:CG2	2.38	0.50
1:C:63:ASP:OD1	1:C:68:LYS:HD3	2.12	0.50
1:D:79:GLN:H	1:D:79:GLN:CD	2.19	0.50
1:B:77:ALA:O	1:B:79:GLN:HG3	2.12	0.49
1:D:174:PHE:O	1:D:178:LYS:HG3	2.13	0.49
1:A:26:ILE:HD12	1:A:96:ILE:CG2	2.43	0.49
1:A:62:VAL:CG1	1:A:63:ASP:N	2.76	0.48
1:C:64:ILE:O	1:C:65:ASN:HB2	2.13	0.48
1:A:44:LYS:HD3	1:A:45:PHE:N	2.28	0.48
1:A:98:LEU:HD12	1:A:98:LEU:N	2.28	0.48
1:A:180:ILE:O	1:A:184:ILE:HG13	2.14	0.48
1:C:64:ILE:O	1:C:67:LYS:HE2	2.14	0.47
1:B:82:PHE:HB3	4:B:566:HOH:O	2.15	0.47
1:A:86:THR:O	1:A:89:TYR:N	2.29	0.47
1:C:49:PHE:O	1:C:50:ILE:HD13	2.14	0.47
1:A:64:ILE:HD11	1:A:177:ALA:HB1	1.97	0.47
1:C:26:ILE:CD1	1:C:90:TYR:HE2	2.28	0.47
1:D:62:VAL:HG13	1:D:174:PHE:CE2	2.50	0.47
1:C:181:GLN:HE21	1:C:184:ILE:HG21	1.76	0.47
1:C:51:THR:HG22	1:C:52:THR:N	2.30	0.46
1:D:87:THR:HG22	1:D:121:HIS:CD2	2.43	0.46
1:A:22:LYS:HE2	1:A:24:LEU:HD11	1.97	0.46
1:B:26:ILE:HD12	1:B:96:ILE:CG2	2.45	0.46
1:C:38:VAL:HG22	1:C:58:LYS:NZ	2.30	0.46
1:A:57:PHE:CE1	1:A:59:ILE:HD11	2.51	0.46
1:B:94:MSE:HE1	1:B:123:ASN:ND2	2.30	0.46
1:B:94:MSE:HE1	1:B:123:ASN:CG	2.42	0.45
1:C:26:ILE:HD11	1:C:90:TYR:CE2	2.51	0.45
1:D:180:ILE:O	1:D:184:ILE:HG13	2.16	0.45
1:A:62:VAL:HG13	1:A:174:PHE:CE2	2.51	0.45
1:A:106:ARG:HB2	1:A:106:ARG:NH1	2.32	0.45
1:C:26:ILE:HD12	1:C:96:ILE:CG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:78:GLY:O	1:C:81:ARG:HB3	2.16	0.45
1:A:67:LYS:HA	1:A:67:LYS:HD3	1.78	0.45
1:B:151:ALA:CB	1:B:158:PHE:HB2	2.47	0.45
1:C:76:THR:HG22	1:C:77:ALA:O	2.16	0.45
1:C:94:MSE:SE	1:C:125:GLU:HG3	2.66	0.45
1:D:79:GLN:H	1:D:79:GLN:NE2	2.14	0.45
1:D:80:GLU:O	1:D:83:ARG:HB3	2.17	0.45
1:C:57:PHE:CE1	1:C:59:ILE:HD11	2.51	0.45
1:C:22:LYS:HE2	1:C:24:LEU:HD11	2.00	0.44
1:A:79:GLN:NE2	4:A:583:HOH:O	2.51	0.44
1:B:57:PHE:CE1	1:B:59:ILE:HD11	2.53	0.44
1:A:59:ILE:HD12	1:A:59:ILE:N	2.33	0.44
1:A:62:VAL:HG12	1:A:63:ASP:N	2.32	0.44
1:C:26:ILE:HD11	1:C:90:TYR:HE2	1.83	0.44
1:A:44:LYS:HD3	1:A:44:LYS:C	2.43	0.43
1:A:44:LYS:HZ1	1:A:46:ASN:CB	2.29	0.43
1:D:22:LYS:HE2	1:D:24:LEU:HD11	2.00	0.43
1:C:151:ALA:CB	1:C:158:PHE:HB2	2.47	0.43
1:A:38:VAL:HG22	1:A:58:LYS:NZ	2.33	0.43
1:D:67:LYS:HG2	1:D:68:LYS:N	2.34	0.43
1:D:151:ALA:CB	1:D:158:PHE:HB2	2.49	0.43
1:D:26:ILE:HD12	1:D:96:ILE:CG2	2.49	0.43
1:C:80:GLU:HG2	1:D:175:THR:OG1	2.19	0.43
1:D:57:PHE:CE1	1:D:59:ILE:HD11	2.54	0.42
1:C:76:THR:CG2	1:C:77:ALA:N	2.82	0.42
1:C:123:ASN:ND2	1:C:125:GLU:CG	2.80	0.42
1:A:151:ALA:CB	1:A:158:PHE:HB2	2.49	0.42
1:D:26:ILE:HD11	1:D:90:TYR:CE2	2.54	0.42
1:A:26:ILE:CD1	1:A:90:TYR:HE1	2.32	0.42
1:C:64:ILE:O	1:C:64:ILE:HG22	2.20	0.42
1:C:79:GLN:HG2	1:C:81:ARG:HH22	1.84	0.42
1:C:102:ILE:HD11	1:C:134:LYS:O	2.20	0.42
1:C:181:GLN:NE2	1:C:184:ILE:CG2	2.77	0.42
1:D:62:VAL:CG1	1:D:63:ASP:N	2.82	0.42
1:D:38:VAL:HG22	1:D:58:LYS:NZ	2.35	0.42
1:A:76:THR:O	1:A:79:GLN:HG3	2.19	0.42
1:B:59:ILE:HD12	1:B:59:ILE:N	2.35	0.42
1:C:26:ILE:HD12	1:C:96:ILE:HG23	2.02	0.42
1:D:178:LYS:O	1:D:182:GLU:HG3	2.20	0.42
1:B:38:VAL:HG22	1:B:58:LYS:NZ	2.35	0.42
1:C:82:PHE:CD1	1:C:85:ILE:HD11	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:174:PHE:O	1:A:178:LYS:HG3	2.20	0.41
1:A:57:PHE:CD1	1:A:57:PHE:C	2.98	0.41
1:A:70:LYS:HE3	1:A:70:LYS:HB2	1.82	0.41
1:D:77:ALA:HA	4:D:410:HOH:O	2.20	0.41
1:C:106:ARG:NH1	1:C:106:ARG:HB2	2.36	0.41
1:D:57:PHE:CD1	1:D:57:PHE:C	2.99	0.41
1:B:134:LYS:HG2	3:B:202:GDP:C6	2.56	0.40
1:D:59:ILE:HG22	4:D:681:HOH:O	2.21	0.40
1:D:137:MSE:HE2	4:D:562:HOH:O	2.21	0.40
1:D:59:ILE:HD12	1:D:59:ILE:N	2.36	0.40
1:B:106:ARG:HB2	1:B:106:ARG:NH1	2.36	0.40
1:D:106:ARG:HB2	1:D:106:ARG:NH1	2.37	0.40

There are no symmetry-related clashes.

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	155/170 (91%)	152 (98%)	2 (1%)	1 (1%)	21	11
1	B	157/170 (92%)	152 (97%)	5 (3%)	0	100	100
1	C	165/170 (97%)	161 (98%)	4 (2%)	0	100	100
1	D	156/170 (92%)	152 (97%)	4 (3%)	0	100	100
All	All	633/680 (93%)	617 (98%)	15 (2%)	1 (0%)	43	31

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	87	THR

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	139/146 (95%)	138 (99%)	1 (1%)	76	73
1	B	141/146 (97%)	137 (97%)	4 (3%)	38	26
1	C	146/146 (100%)	143 (98%)	3 (2%)	47	36
1	D	140/146 (96%)	138 (99%)	2 (1%)	59	52
All	All	566/584 (97%)	556 (98%)	10 (2%)	51	43

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	113	GLN
1	B	21	MSE
1	B	83	ARG
1	B	85	ILE
1	B	113	GLN
1	C	21	MSE
1	C	65	ASN
1	C	113	GLN
1	D	113	GLN
1	D	124	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	ASN
1	A	65	ASN
1	A	165	ASN
1	B	165	ASN
1	B	170	ASN
1	C	123	ASN
1	C	165	ASN
1	C	181	GLN
1	D	123	ASN

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Mol	Chain	Res	Type
1	D	127	GLN
1	D	165	ASN
1	D	168	ASN

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 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
3	GDP	C	203	2	29,30,30	2.91	12 (41%)	45,47,47	3.50	15 (33%)
3	GDP	D	204	2	29,30,30	3.01	14 (48%)	45,47,47	3.47	16 (35%)
3	GDP	A	201	2	29,30,30	2.81	12 (41%)	45,47,47	3.48	16 (35%)
3	GDP	B	202	2	29,30,30	2.83	13 (44%)	45,47,47	3.48	16 (35%)

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	GDP	C	203	2	-	2/16/32/32	0/3/3/3
3	GDP	D	204	2	-	3/16/32/32	0/3/3/3
3	GDP	A	201	2	-	2/16/32/32	0/3/3/3
3	GDP	B	202	2	-	3/16/32/32	0/3/3/3

All (51) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	204	GDP	PA-O3A	8.53	1.68	1.59
3	A	201	GDP	PA-O3A	8.18	1.68	1.59
3	C	203	GDP	PA-O3A	8.04	1.68	1.59
3	B	202	GDP	PA-O3A	6.79	1.66	1.59
3	C	203	GDP	O6-C6	5.87	1.34	1.23
3	D	204	GDP	O6-C6	5.87	1.34	1.23
3	B	202	GDP	C8-N9	5.84	1.50	1.37
3	D	204	GDP	C8-N9	5.83	1.50	1.37
3	B	202	GDP	O6-C6	5.83	1.34	1.23
3	C	203	GDP	C8-N9	5.67	1.50	1.37
3	A	201	GDP	C8-N9	5.61	1.50	1.37
3	A	201	GDP	O6-C6	5.60	1.34	1.23
3	C	203	GDP	C2-N1	5.54	1.51	1.37
3	D	204	GDP	C2-N1	5.40	1.50	1.37
3	B	202	GDP	C2-N1	5.31	1.50	1.37
3	A	201	GDP	C2-N1	4.80	1.49	1.37
3	B	202	GDP	PB-O2B	-3.93	1.40	1.54
3	D	204	GDP	PB-O2B	-3.85	1.40	1.54
3	C	203	GDP	O4'-C1'	3.40	1.49	1.42
3	C	203	GDP	C2-N3	-3.30	1.25	1.33
3	B	202	GDP	O4'-C1'	3.27	1.49	1.42
3	B	202	GDP	C8-N7	3.25	1.41	1.32
3	D	204	GDP	O4'-C1'	3.20	1.49	1.42
3	A	201	GDP	O4'-C1'	3.18	1.49	1.42
3	C	203	GDP	PB-O2B	-3.12	1.43	1.54
3	B	202	GDP	O4'-C4'	3.03	1.51	1.45
3	A	201	GDP	C8-N7	3.01	1.41	1.32
3	D	204	GDP	C8-N7	2.96	1.40	1.32
3	C	203	GDP	C8-N7	2.94	1.40	1.32
3	D	204	GDP	C5-N7	-2.87	1.33	1.39
3	A	201	GDP	C2-N3	-2.86	1.26	1.33
3	D	204	GDP	C5-C4	2.82	1.46	1.38
3	D	204	GDP	O4'-C4'	2.78	1.51	1.45
3	D	204	GDP	C2-N3	-2.70	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	202	GDP	C2-N3	-2.61	1.26	1.33
3	B	202	GDP	C5-N7	-2.60	1.33	1.39
3	C	203	GDP	C5-N7	-2.57	1.33	1.39
3	D	204	GDP	PB-O3B	2.57	1.64	1.54
3	C	203	GDP	O4'-C4'	2.56	1.50	1.45
3	A	201	GDP	C5-C4	2.56	1.45	1.38
3	B	202	GDP	C5-C4	2.54	1.45	1.38
3	A	201	GDP	C5-N7	-2.53	1.34	1.39
3	C	203	GDP	C5-C4	2.42	1.45	1.38
3	A	201	GDP	PB-O2B	-2.42	1.45	1.54
3	B	202	GDP	PB-O3B	2.37	1.63	1.54
3	A	201	GDP	O4'-C4'	2.30	1.50	1.45
3	A	201	GDP	O3'-C3'	2.18	1.48	1.43
3	C	203	GDP	C3'-C4'	2.17	1.58	1.53
3	D	204	GDP	O3'-C3'	2.07	1.48	1.43
3	B	202	GDP	C3'-C4'	2.01	1.58	1.53
3	D	204	GDP	C3'-C4'	2.00	1.58	1.53

All (63) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	203	GDP	N9-C8-N7	-10.89	93.21	113.40
3	B	202	GDP	N9-C8-N7	-10.88	93.23	113.40
3	D	204	GDP	N9-C8-N7	-10.68	93.60	113.40
3	A	201	GDP	N9-C8-N7	-10.64	93.67	113.40
3	C	203	GDP	C8-N7-C5	9.49	121.16	104.26
3	B	202	GDP	C8-N7-C5	9.40	121.00	104.26
3	D	204	GDP	C8-N7-C5	9.32	120.85	104.26
3	A	201	GDP	C8-N7-C5	9.31	120.84	104.26
3	A	201	GDP	C6-C5-N7	8.93	146.53	130.29
3	C	203	GDP	C6-C5-N7	8.82	146.35	130.29
3	B	202	GDP	C6-C5-N7	8.55	145.84	130.29
3	D	204	GDP	C6-C5-N7	8.54	145.83	130.29
3	A	201	GDP	C6-C5-C4	-6.28	109.39	118.83
3	D	204	GDP	N2-C2-N3	6.25	131.88	119.67
3	C	203	GDP	C6-C5-C4	-6.16	109.56	118.83
3	B	202	GDP	N2-C2-N3	6.08	131.54	119.67
3	D	204	GDP	C6-C5-C4	-6.06	109.71	118.83
3	B	202	GDP	C6-C5-C4	-6.05	109.73	118.83
3	A	201	GDP	N2-C2-N3	5.98	131.35	119.67
3	C	203	GDP	C8-N9-C4	5.88	117.05	106.03
3	B	202	GDP	C8-N9-C4	5.86	117.00	106.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	D	204	GDP	C8-N9-C4	5.83	116.95	106.03
3	C	203	GDP	N2-C2-N3	5.81	131.02	119.67
3	A	201	GDP	C8-N9-C4	5.71	116.73	106.03
3	C	203	GDP	C2-N3-C4	4.77	120.51	112.30
3	D	204	GDP	C5-C6-N1	4.55	124.83	113.25
3	A	201	GDP	C5-C6-N1	4.51	124.73	113.25
3	B	202	GDP	C5-C6-N1	4.48	124.66	113.25
3	A	201	GDP	C2-N3-C4	4.48	120.02	112.30
3	C	203	GDP	C5-C6-N1	4.43	124.52	113.25
3	B	202	GDP	C2-N3-C4	4.39	119.86	112.30
3	D	204	GDP	C2-N3-C4	4.31	119.72	112.30
3	C	203	GDP	C2-N1-C6	-4.20	117.50	125.11
3	A	201	GDP	C4-C5-N7	-4.16	104.08	110.67
3	C	203	GDP	C4-C5-N7	-4.15	104.09	110.67
3	D	204	GDP	O6-C6-C5	-4.03	115.88	126.53
3	B	202	GDP	O6-C6-C5	-4.02	115.92	126.53
3	D	204	GDP	N2-C2-N1	-3.99	108.34	116.76
3	B	202	GDP	C2-N1-C6	-3.97	117.91	125.11
3	B	202	GDP	C4-C5-N7	-3.94	104.42	110.67
3	D	204	GDP	C4-C5-N7	-3.92	104.46	110.67
3	C	203	GDP	O6-C6-C5	-3.92	116.19	126.53
3	B	202	GDP	N2-C2-N1	-3.90	108.53	116.76
3	A	201	GDP	C2-N1-C6	-3.88	118.08	125.11
3	A	201	GDP	N2-C2-N1	-3.87	108.59	116.76
3	A	201	GDP	O6-C6-C5	-3.81	116.46	126.53
3	D	204	GDP	C2-N1-C6	-3.79	118.24	125.11
3	C	203	GDP	N2-C2-N1	-3.69	108.98	116.76
3	C	203	GDP	O2'-C2'-C3'	3.00	121.43	111.82
3	B	202	GDP	C2'-C3'-C4'	2.81	108.03	102.61
3	D	204	GDP	C1'-N9-C8	-2.76	118.89	126.73
3	D	204	GDP	O2'-C2'-C3'	2.62	120.22	111.82
3	C	203	GDP	C1'-N9-C8	-2.60	119.34	126.73
3	B	202	GDP	C1'-N9-C8	-2.59	119.38	126.73
3	B	202	GDP	O2'-C2'-C3'	2.58	120.08	111.82
3	D	204	GDP	C2'-C3'-C4'	2.54	107.51	102.61
3	A	201	GDP	C2'-C3'-C4'	2.53	107.50	102.61
3	A	201	GDP	C1'-N9-C8	-2.48	119.68	126.73
3	A	201	GDP	O2'-C2'-C3'	2.43	119.61	111.82
3	C	203	GDP	C2'-C3'-C4'	2.40	107.24	102.61
3	B	202	GDP	O3'-C3'-C4'	-2.05	105.20	111.08
3	A	201	GDP	O2A-PA-O3A	-2.00	101.86	107.27
3	D	204	GDP	O3'-C3'-C4'	-2.00	105.33	111.08

There are no chirality outliers.

All (10) torsion outliers are listed below:

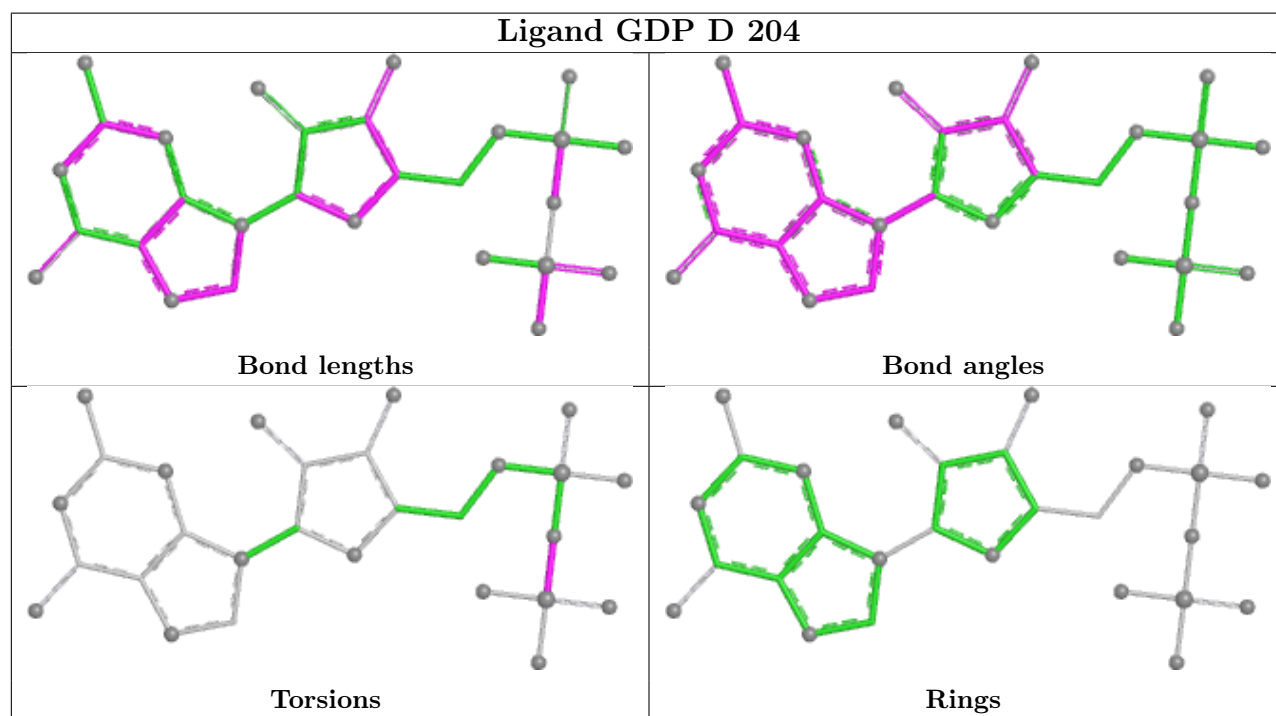
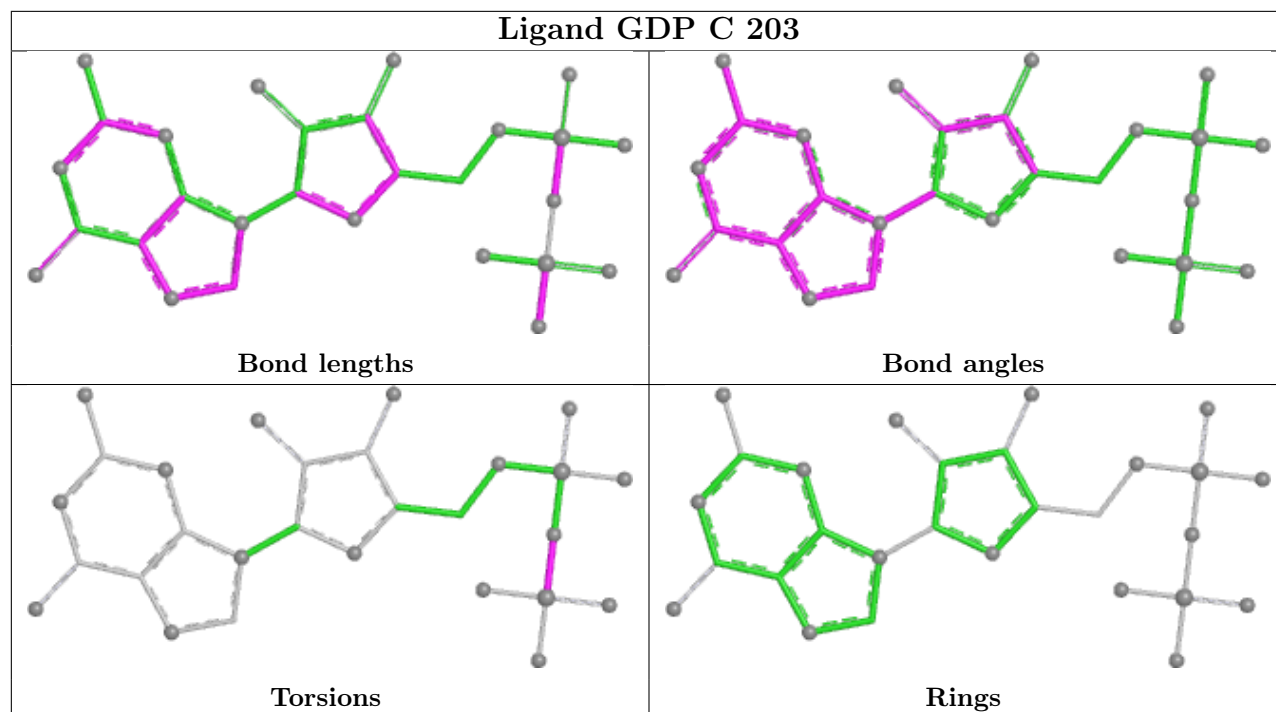
Mol	Chain	Res	Type	Atoms
3	A	201	GDP	PA-O3A-PB-O2B
3	B	202	GDP	PA-O3A-PB-O2B
3	C	203	GDP	PA-O3A-PB-O2B
3	D	204	GDP	PA-O3A-PB-O2B
3	B	202	GDP	PA-O3A-PB-O1B
3	D	204	GDP	PA-O3A-PB-O1B
3	B	202	GDP	PA-O3A-PB-O3B
3	D	204	GDP	PA-O3A-PB-O3B
3	A	201	GDP	PA-O3A-PB-O1B
3	C	203	GDP	PA-O3A-PB-O1B

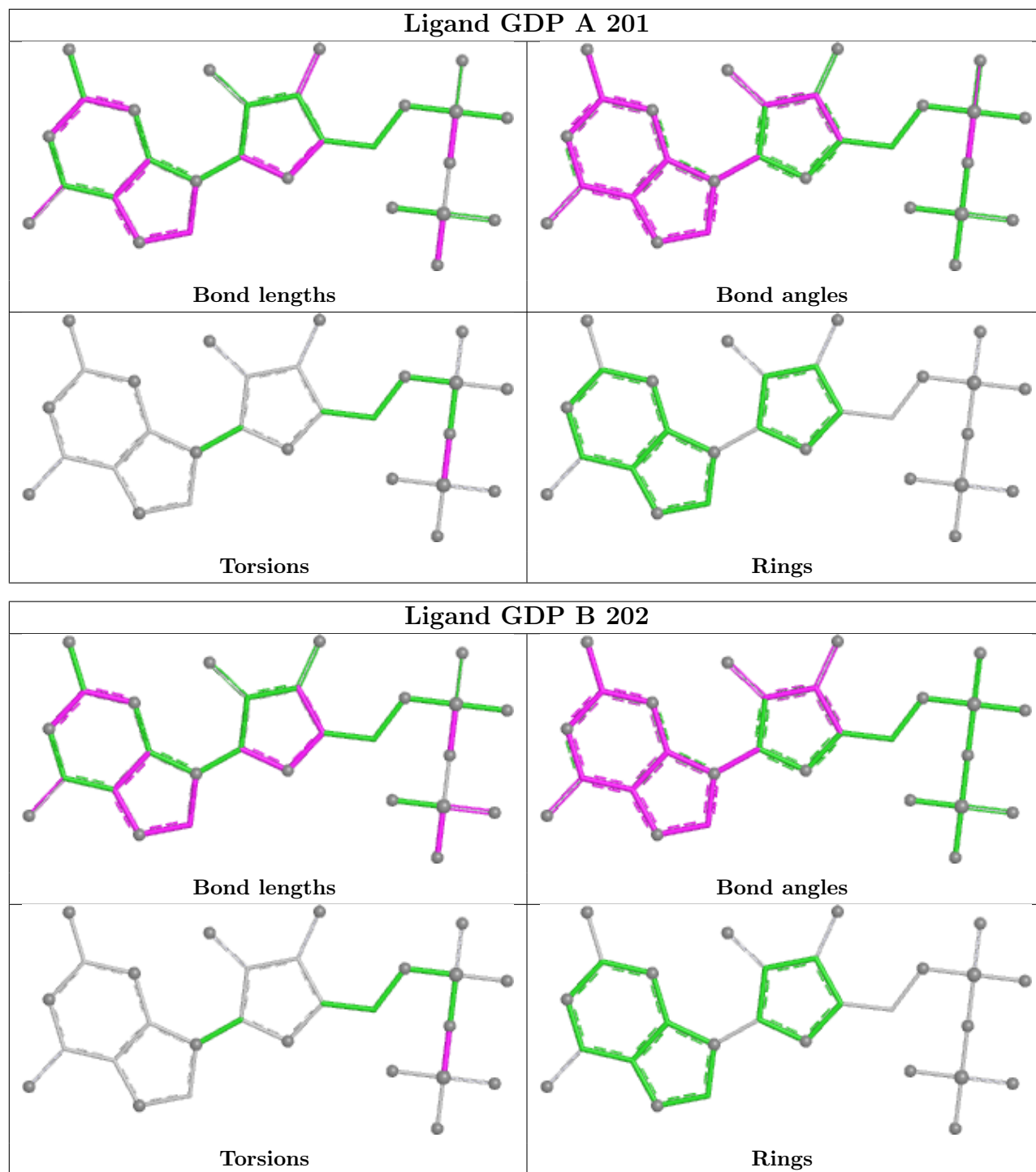
There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	202	GDP	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	156/170 (91%)	1.54	43 (27%)  	16, 29, 48, 56	0
1	B	158/170 (92%)	1.73	50 (31%)  	16, 30, 49, 53	0
1	C	164/170 (96%)	1.78	57 (34%)  	17, 32, 50, 54	0
1	D	157/170 (92%)	1.74	53 (33%)  	15, 31, 49, 55	0
All	All	635/680 (93%)	1.70	203 (31%)  	15, 30, 49, 56	0

All (203) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	51	THR	7.9
1	B	84	THR	6.5
1	B	82	PHE	5.8
1	A	86	THR	5.6
1	D	20	ILE	5.5
1	C	79	GLN	5.4
1	C	76	THR	5.4
1	D	78	GLY	5.2
1	B	86	THR	5.2
1	C	46	ASN	5.2
1	D	86	THR	5.1
1	A	87	THR	4.9
1	A	64	ILE	4.9
1	A	184	ILE	4.8
1	D	85	ILE	4.8
1	A	117	THR	4.8
1	A	46	ASN	4.8
1	C	48	SER	4.7
1	D	47	PRO	4.7
1	D	66	GLY	4.7
1	D	123	ASN	4.5

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Mol	Chain	Res	Type	RSRZ
1	A	62	VAL	4.5
1	B	184	ILE	4.5
1	C	53	ILE	4.5
1	C	85	ILE	4.5
1	D	167	ASP	4.4
1	C	184	ILE	4.4
1	A	88	ALA	4.4
1	B	69	VAL	4.4
1	C	49	PHE	4.3
1	D	64	ILE	4.3
1	C	123	ASN	4.2
1	B	117	THR	4.2
1	D	184	ILE	4.2
1	B	46	ASN	4.2
1	B	19	SER	4.1
1	D	79	GLN	4.1
1	B	65	ASN	4.1
1	B	85	ILE	4.1
1	D	65	ASN	4.1
1	D	57	PHE	4.0
1	B	47	PRO	4.0
1	D	88	ALA	4.0
1	B	78	GLY	3.8
1	D	44	LYS	3.8
1	C	54	GLY	3.8
1	B	87	THR	3.8
1	D	67	LYS	3.7
1	C	19	SER	3.7
1	D	77	ALA	3.6
1	A	59	ILE	3.6
1	A	47	PRO	3.6
1	A	141	VAL	3.6
1	B	124	ASP	3.6
1	D	43	ASP	3.5
1	D	87	THR	3.5
1	C	139	THR	3.5
1	C	55	ILE	3.5
1	B	89	TYR	3.4
1	B	106	ARG	3.4
1	C	120	GLU	3.4
1	C	118	VAL	3.4
1	B	77	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	C	65	ASN	3.4
1	D	117	THR	3.4
1	D	83	ARG	3.3
1	A	20	ILE	3.3
1	B	63	ASP	3.3
1	A	19	SER	3.3
1	B	120	GLU	3.3
1	A	93	ALA	3.3
1	D	62	VAL	3.3
1	C	116	LYS	3.2
1	B	57	PHE	3.2
1	C	82	PHE	3.2
1	B	139	THR	3.2
1	D	45	PHE	3.2
1	C	81	ARG	3.2
1	A	55	ILE	3.2
1	B	138	GLU	3.2
1	D	82	PHE	3.2
1	B	167	ASP	3.2
1	A	180	ILE	3.1
1	C	50	ILE	3.1
1	C	87	THR	3.1
1	C	88	ALA	3.1
1	B	55	ILE	3.1
1	C	66	GLY	3.1
1	A	175	THR	3.1
1	D	84	THR	3.1
1	B	118	VAL	3.1
1	D	138	GLU	3.1
1	C	86	THR	3.0
1	B	79	GLN	3.0
1	D	59	ILE	3.0
1	A	89	TYR	3.0
1	C	102	ILE	3.0
1	D	63	ASP	3.0
1	B	66	GLY	3.0
1	C	106	ARG	2.9
1	B	45	PHE	2.9
1	D	122	ALA	2.9
1	A	65	ASN	2.9
1	C	43	ASP	2.9
1	C	119	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	88	ALA	2.9
1	D	106	ARG	2.9
1	C	169	VAL	2.8
1	A	44	LYS	2.8
1	A	183	LYS	2.8
1	A	124	ASP	2.8
1	A	166	ASP	2.8
1	D	76	THR	2.8
1	C	167	ASP	2.8
1	A	57	PHE	2.8
1	A	174	PHE	2.8
1	C	59	ILE	2.8
1	B	186	SER	2.7
1	C	122	ALA	2.7
1	A	45	PHE	2.7
1	A	24	LEU	2.7
1	A	167	ASP	2.7
1	D	55	ILE	2.7
1	B	162	SER	2.7
1	A	178	LYS	2.7
1	C	158	PHE	2.7
1	C	185	ASP	2.7
1	C	47	PRO	2.7
1	A	102	ILE	2.7
1	B	64	ILE	2.7
1	C	52	THR	2.7
1	C	84	THR	2.7
1	C	20	ILE	2.6
1	C	64	ILE	2.6
1	B	41	VAL	2.6
1	D	56	ASP	2.6
1	D	73	ILE	2.6
1	D	81	ARG	2.6
1	C	125	GLU	2.6
1	C	151	ALA	2.6
1	C	74	TRP	2.6
1	B	116	LYS	2.6
1	B	20	ILE	2.5
1	C	77	ALA	2.5
1	B	114	TRP	2.5
1	C	73	ILE	2.5
1	D	74	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
1	D	102	ILE	2.5
1	B	76	THR	2.5
1	B	102	ILE	2.5
1	C	80	GLU	2.5
1	B	103	THR	2.5
1	C	117	THR	2.5
1	A	119	ASN	2.4
1	A	25	LEU	2.4
1	A	73	ILE	2.4
1	D	68	LYS	2.4
1	A	120	GLU	2.4
1	B	151	ALA	2.4
1	D	125	GLU	2.4
1	A	146	GLN	2.4
1	B	81	ARG	2.3
1	C	138	GLU	2.3
1	A	121	HIS	2.3
1	D	115	PHE	2.3
1	C	124	ASP	2.3
1	D	120	GLU	2.3
1	D	165	ASN	2.3
1	B	125	GLU	2.2
1	D	89	TYR	2.2
1	A	69	VAL	2.2
1	B	83	ARG	2.2
1	D	109	THR	2.2
1	A	113	GLN	2.2
1	D	185	ASP	2.2
1	D	114	TRP	2.2
1	B	73	ILE	2.2
1	C	115	PHE	2.2
1	D	174	PHE	2.2
1	A	85	ILE	2.2
1	D	119	ASN	2.2
1	D	61	THR	2.2
1	C	56	ASP	2.2
1	A	66	GLY	2.2
1	B	129	LEU	2.2
1	C	144	ALA	2.2
1	C	165	ASN	2.1
1	C	89	TYR	2.1
1	B	166	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	169	VAL	2.1
1	C	61	THR	2.1
1	D	29	SER	2.1
1	A	91	ARG	2.1
1	B	165	ASN	2.1
1	A	126	ALA	2.1
1	C	78	GLY	2.1
1	D	124	ASP	2.1
1	B	91	ARG	2.1
1	D	186	SER	2.0
1	C	121	HIS	2.0
1	A	40	PHE	2.0
1	B	146	GLN	2.0
1	D	46	ASN	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.

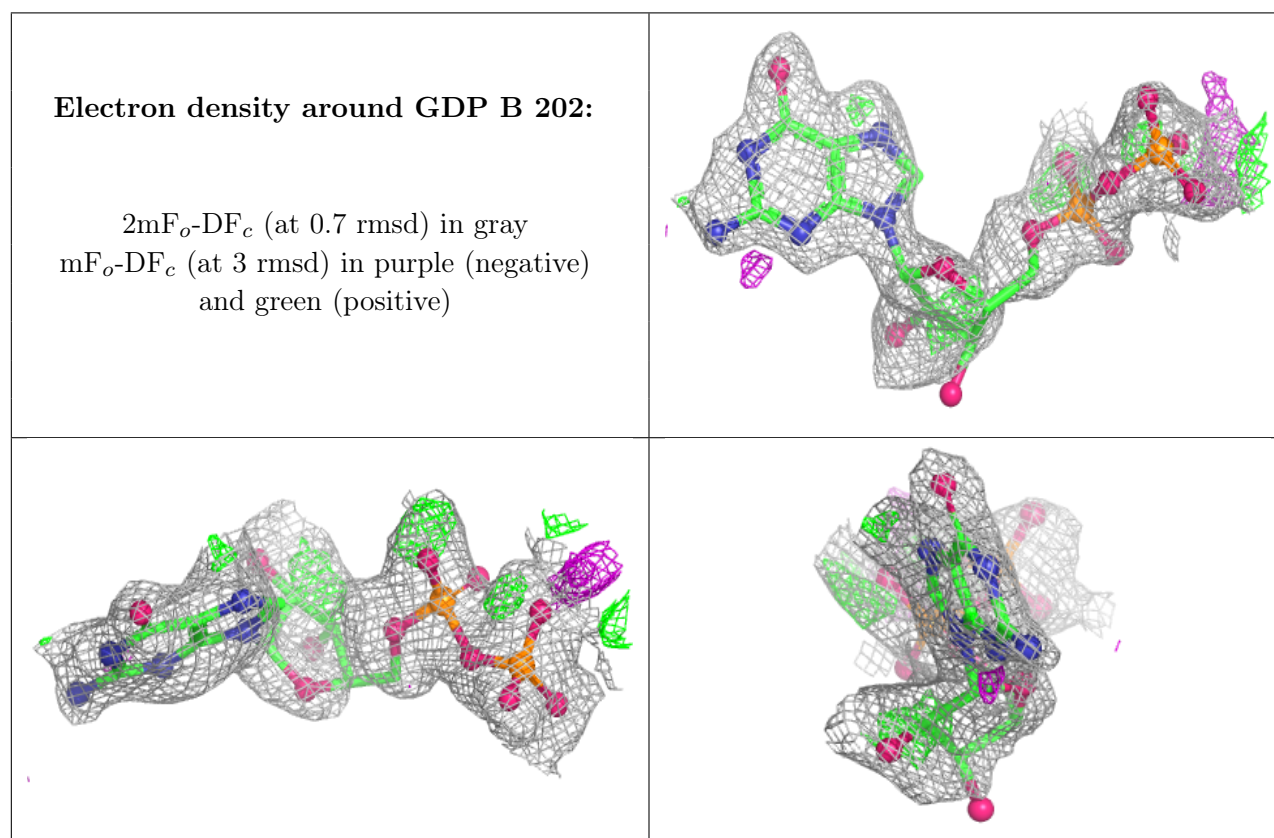
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	GDP	B	202	28/28	0.84	0.15	29,32,37,43	0
3	GDP	D	204	28/28	0.90	0.12	22,26,34,36	0
2	CO	D	307	1/1	0.91	0.12	32,32,32,32	0
2	CO	D	308	1/1	0.91	0.08	40,40,40,40	0
2	CO	B	304	1/1	0.94	0.10	24,24,24,24	0
2	CO	A	305	1/1	0.95	0.08	30,30,30,30	0
3	GDP	C	203	28/28	0.95	0.08	17,26,32,36	0
3	GDP	A	201	28/28	0.95	0.09	16,19,25,27	0
2	CO	C	302	1/1	0.97	0.11	12,12,12,12	0

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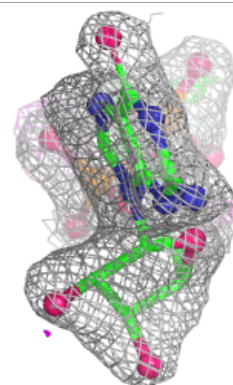
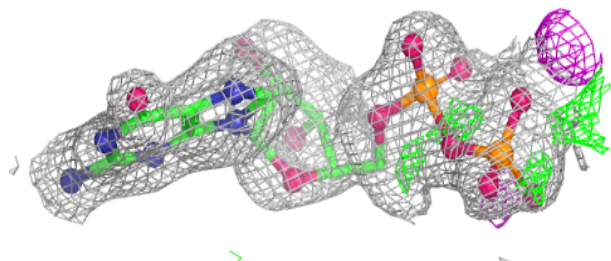
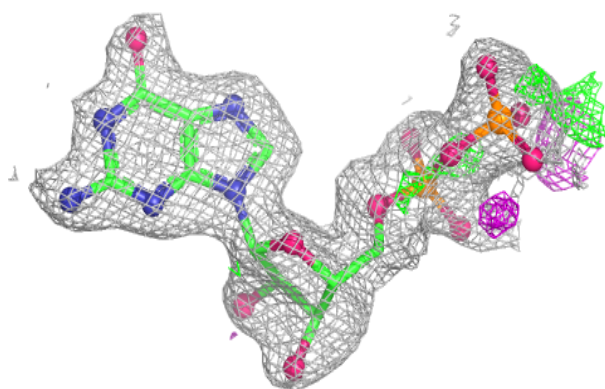
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	CO	D	303	1/1	0.97	0.13	19,19,19,19	0
2	CO	C	306	1/1	0.98	0.07	32,32,32,32	0
2	CO	A	301	1/1	0.99	0.09	10,10,10,10	0

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.

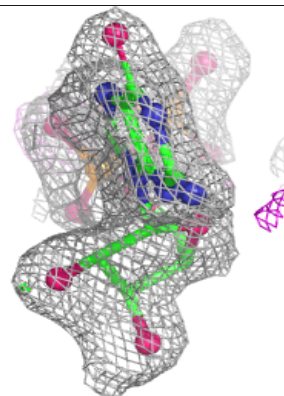
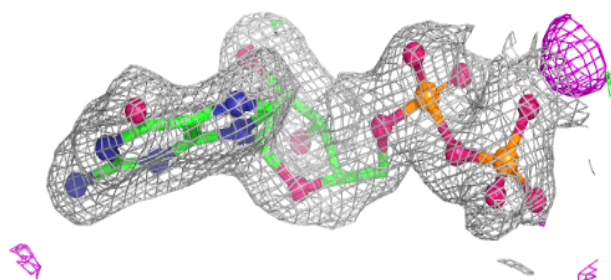
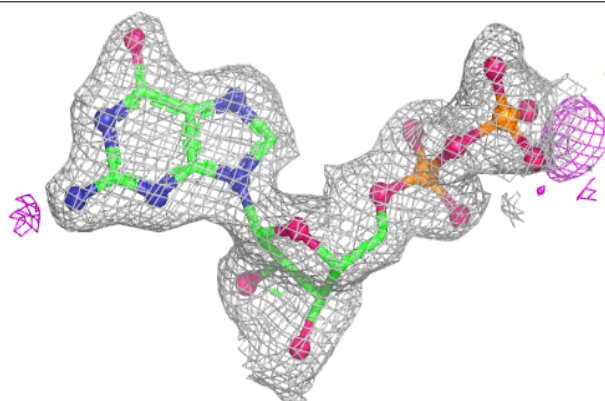


Electron density around GDP D 204:

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

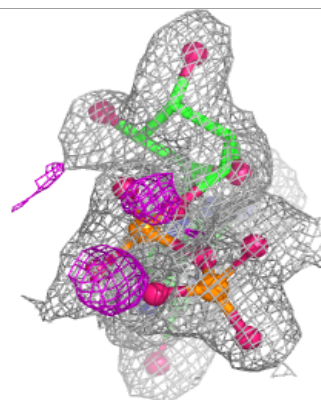
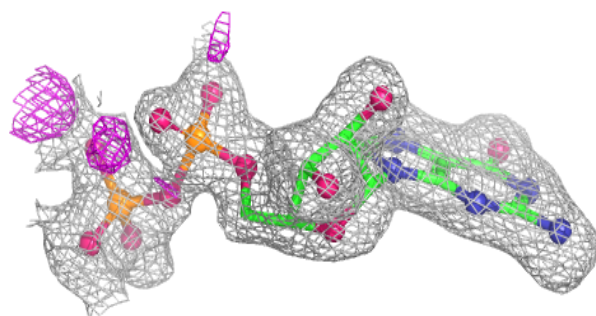
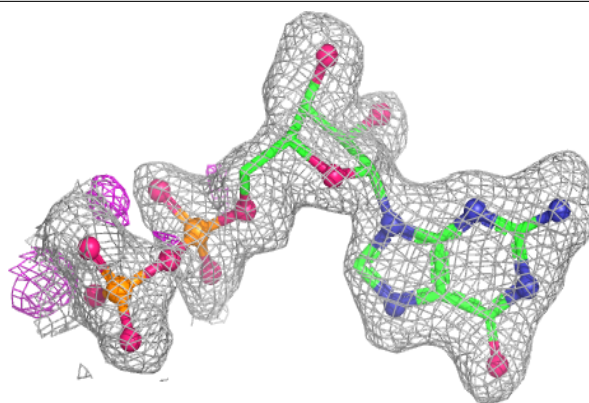
**Electron density around GDP C 203:**

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



Electron density around GDP A 201:

$2mF_o-DF_c$ (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.