wwPDB X-ray Structure Validation Summary Report (i)

Apr 29, 2025 – 12:54 PM EDT

PDB ID	:	3NBZ / pdb_00003nbz
Title	:	Crystal structure of the HIV-1 Rev NES-CRM1-RanGTP nuclear export complex (crystal I)
Authors	:	Guttler, T.; Madl, T.; Neumann, P.; Deichsel, D.; Corsini, L.; Monecke, T.; Ficner, R.; Sattler, M.; Gorlich, D.
Deposited on	:	2010-06-04
Resolution	:	2.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

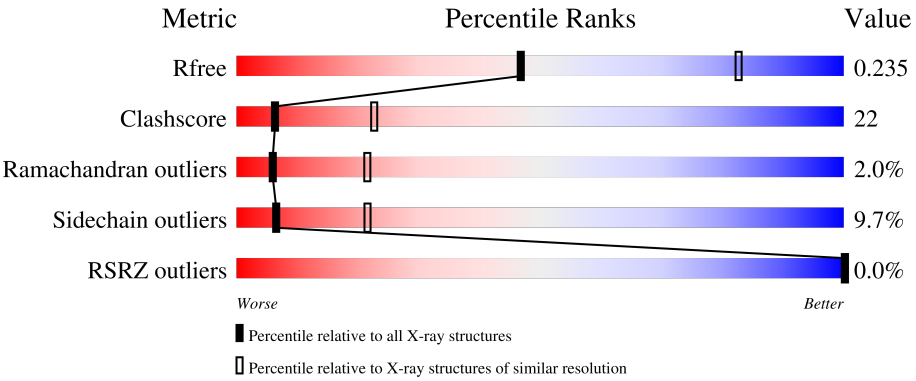
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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))
R_{free}	164625	3657 (2.80-2.80)
Clashscore	180529	4123 (2.80-2.80)
Ramachandran outliers	177936	4071 (2.80-2.80)
Sidechain outliers	177891	4073 (2.80-2.80)
RSRZ outliers	164620	3659 (2.80-2.80)

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 <=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	1073	57% 34% 6% ·
1	D	1073	56% 35% 6% ·
2	B	362	42% 32% 7% 20%
2	E	362	43% 31% 6% 19%

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Mol	Chain	Length	Quality of chain
3	C	176	60% 32% 7%
3	F	176	55% 38% 6%

2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 25144 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 Exportin-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1038	Total	C	N	O	S	0	0	0
			8394	5387	1411	1543	53			
1	D	1038	Total	C	N	O	S	0	0	0
			8394	5387	1411	1543	53			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP Q6P5F9
A	0	SER	-	expression tag	UNP Q6P5F9
D	-1	GLY	-	expression tag	UNP Q6P5F9
D	0	SER	-	expression tag	UNP Q6P5F9

- Molecule 2 is a protein called Snurportin-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	291	Total	C	N	O	S	0	0	0
			2339	1491	403	430	15			
2	E	293	Total	C	N	O	S	0	0	0
			2354	1500	405	434	15			

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-1	GLY	-	expression tag	UNP O95149
B	0	SER	-	expression tag	UNP O95149
B	1	PRO	-	expression tag	UNP O95149
B	2	VAL	-	expression tag	UNP O95149
B	3	PRO	-	expression tag	UNP O95149
B	4	LEU	-	expression tag	UNP O95149
B	5	GLN	-	expression tag	UNP O95149
B	6	LEU	-	expression tag	UNP O95149

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Chain	Residue	Modelled	Actual	Comment	Reference
B	7	PRO	-	expression tag	UNP O95149
B	8	PRO	-	expression tag	UNP O95149
B	9	LEU	-	expression tag	UNP O95149
B	10	GLU	-	expression tag	UNP O95149
B	11	ARG	-	expression tag	UNP O95149
B	12	LEU	-	expression tag	UNP O95149
B	13	THR	-	expression tag	UNP O95149
B	14	LEU	-	expression tag	UNP O95149
E	-1	GLY	-	expression tag	UNP O95149
E	0	SER	-	expression tag	UNP O95149
E	1	PRO	-	expression tag	UNP O95149
E	2	VAL	-	expression tag	UNP O95149
E	3	PRO	-	expression tag	UNP O95149
E	4	LEU	-	expression tag	UNP O95149
E	5	GLN	-	expression tag	UNP O95149
E	6	LEU	-	expression tag	UNP O95149
E	7	PRO	-	expression tag	UNP O95149
E	8	PRO	-	expression tag	UNP O95149
E	9	LEU	-	expression tag	UNP O95149
E	10	GLU	-	expression tag	UNP O95149
E	11	ARG	-	expression tag	UNP O95149
E	12	LEU	-	expression tag	UNP O95149
E	13	THR	-	expression tag	UNP O95149
E	14	LEU	-	expression tag	UNP O95149

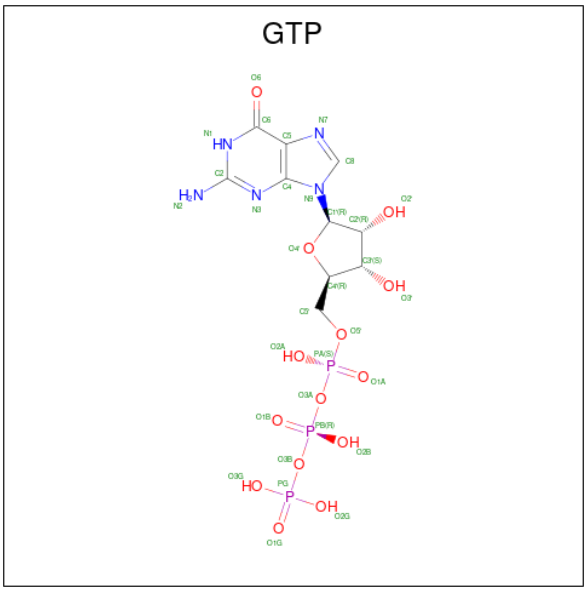
- Molecule 3 is a protein called GTP-binding nuclear protein Ran.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	173	Total	C	N	O	S	0	0	0
			1405	914	246	240	5			
3	F	173	Total	C	N	O	S	0	0	0
			1405	914	246	240	5			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	69	LEU	GLN	engineered mutation	UNP P62826
F	69	LEU	GLN	engineered mutation	UNP P62826

- Molecule 4 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C N O P 32 10 5 14 3	0	0
4	F	1	Total C N O P 32 10 5 14 3	0	0

- Molecule 5 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	C	1	Total Mg 1 1	0	0
5	F	1	Total Mg 1 1	0	0

- Molecule 6 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	C	1	Total Na 1 1	0	0
6	D	1	Total Na 1 1	0	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	237	Total O 237 237	0	0

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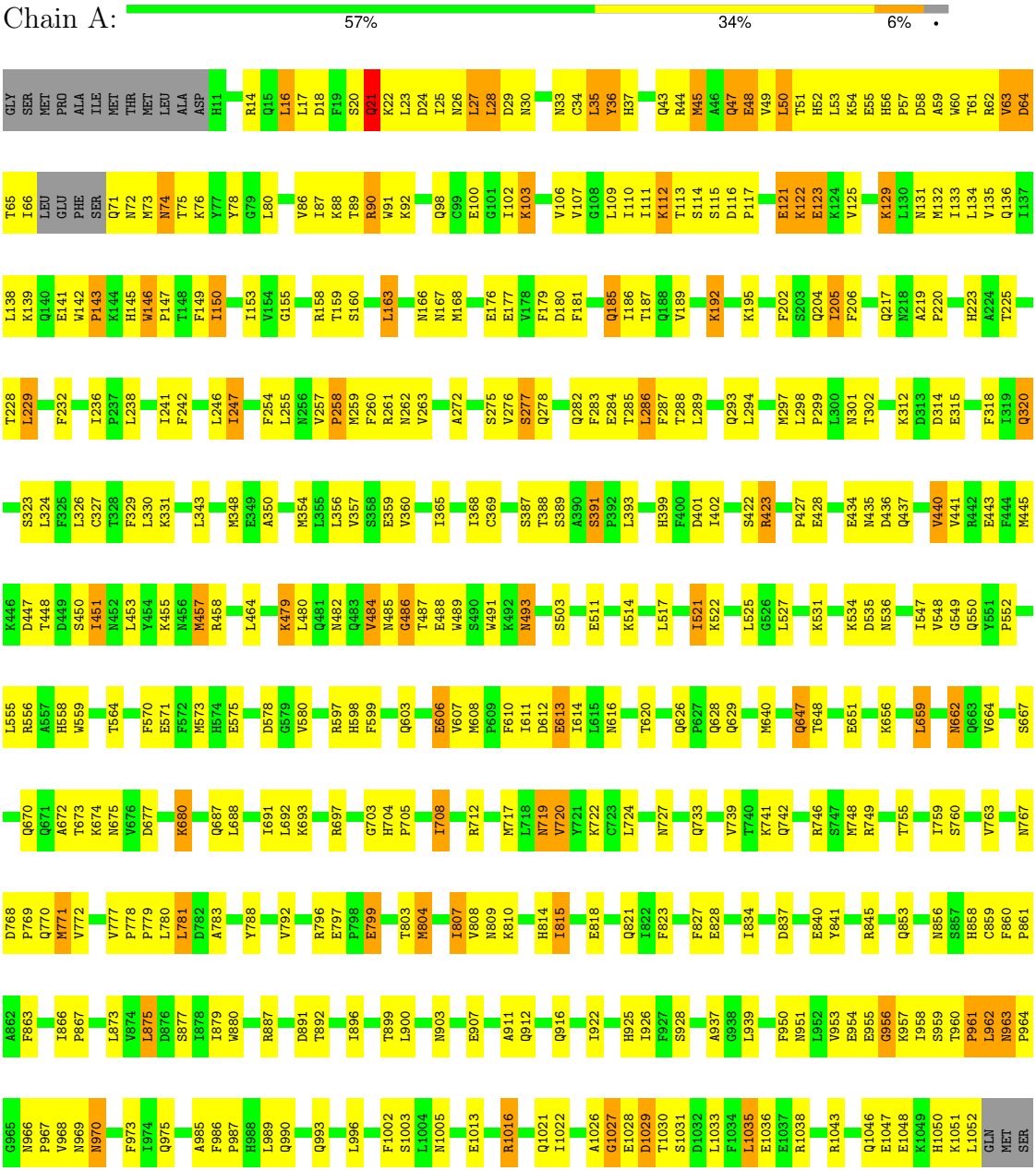
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	B	94	Total O 94 94	0	0
7	C	53	Total O 53 53	0	0
7	D	279	Total O 279 279	0	0
7	E	71	Total O 71 71	0	0
7	F	51	Total O 51 51	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

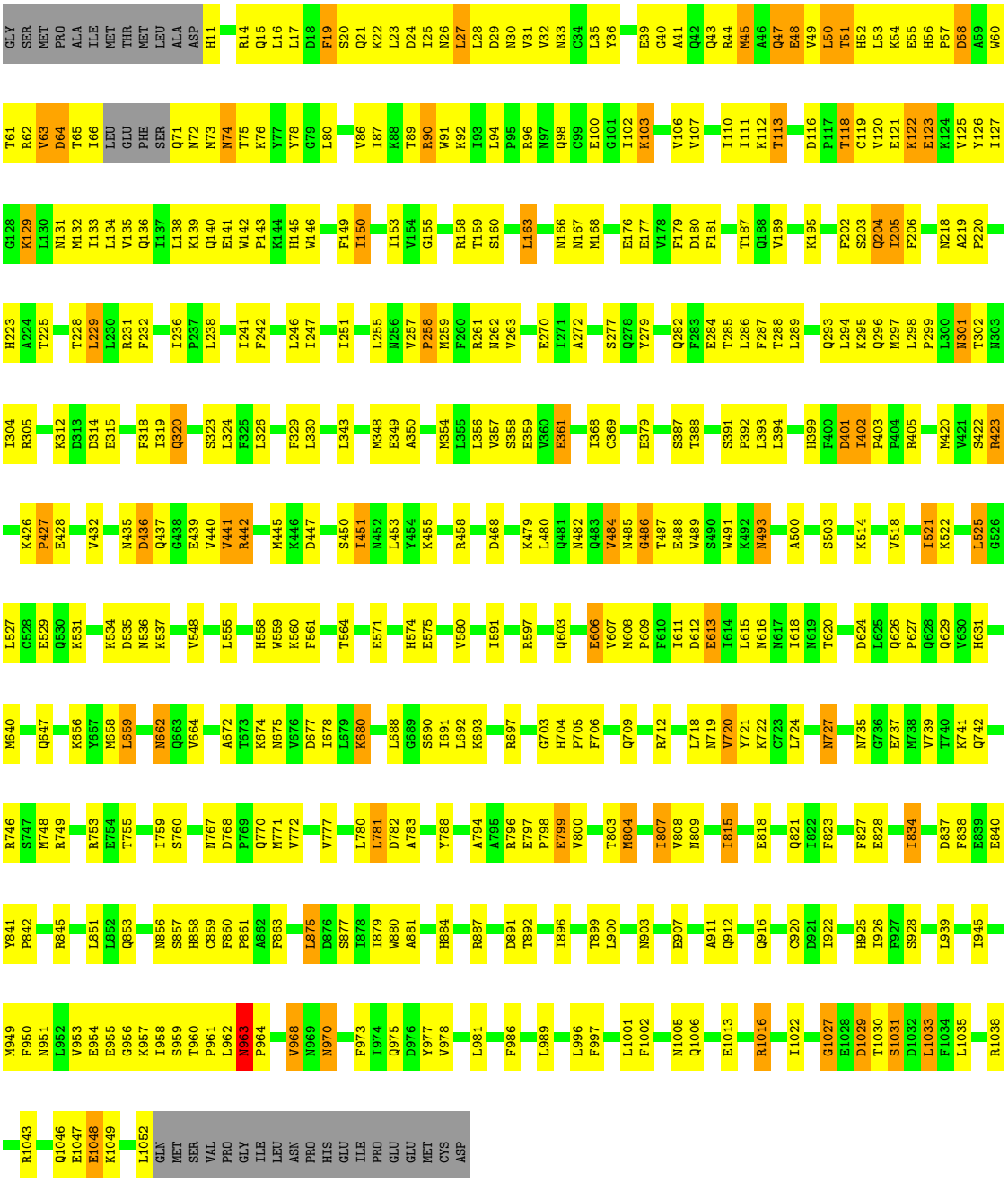
- Molecule 1: Exportin-1

Chain A:



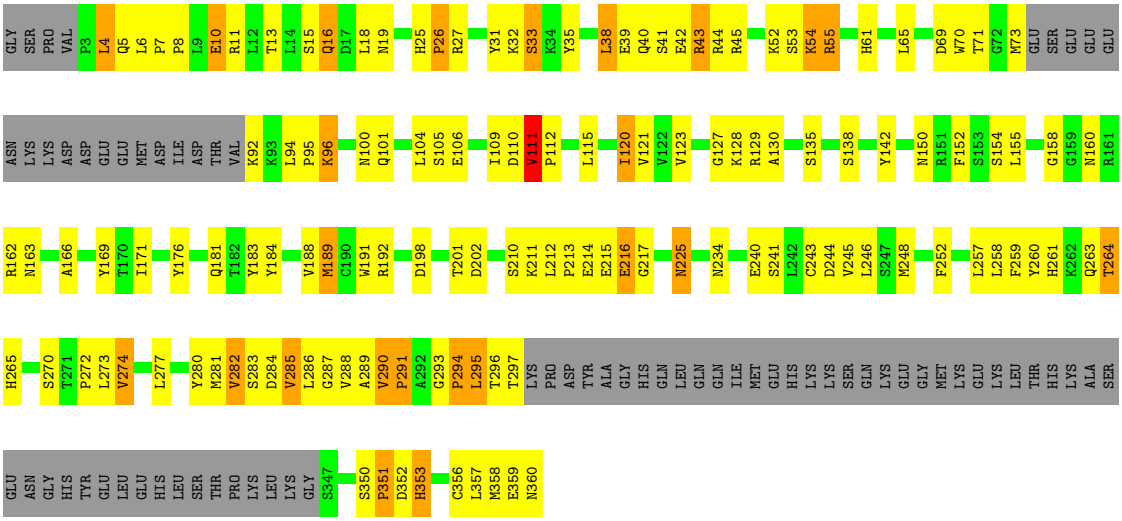
• Molecule 1: Exportin-1

Chain D:



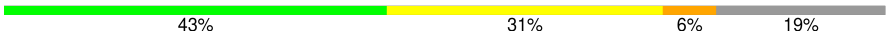
• Molecule 2: Snurportin-1

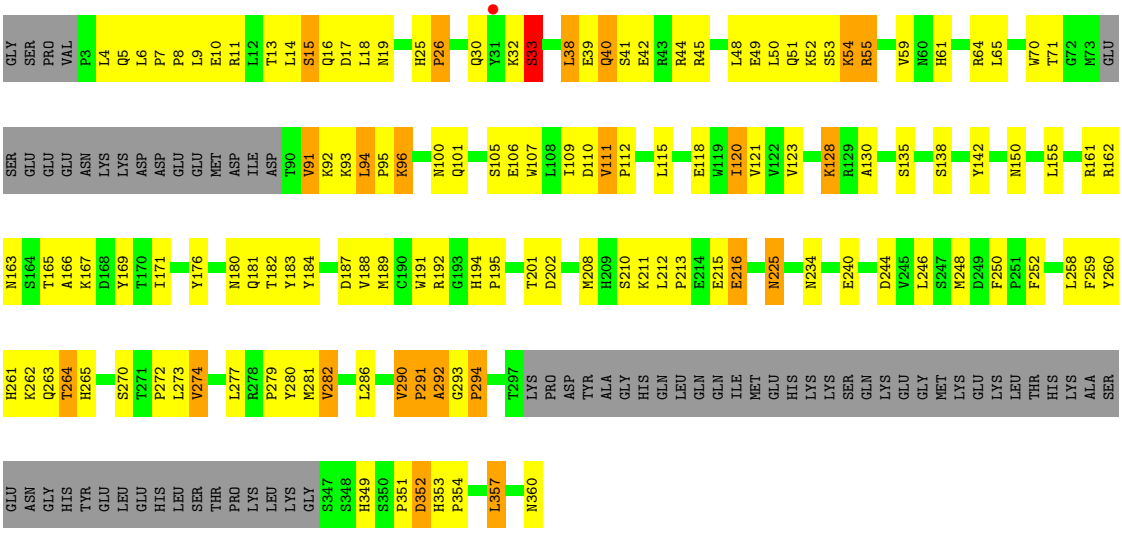
Chain B:



• Molecule 2: Snurportin-1

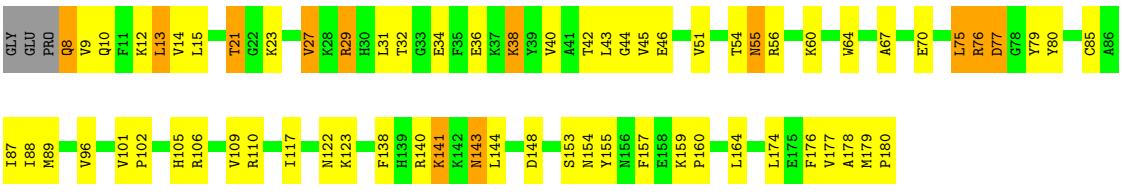
Chain E:





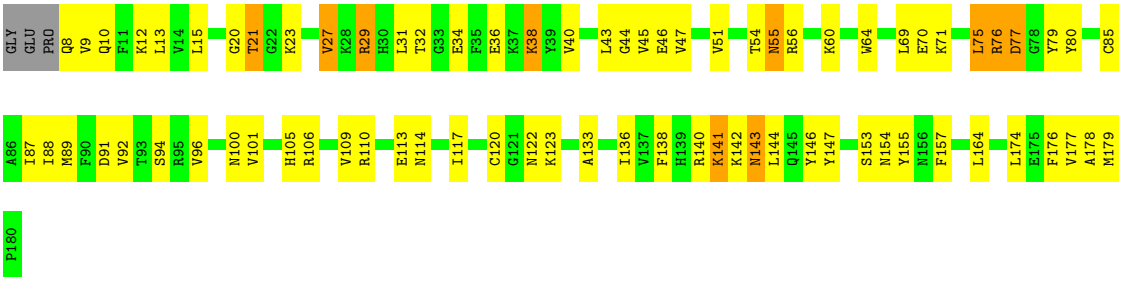
• Molecule 3: GTP-binding nuclear protein Ran

Chain C:



• Molecule 3: GTP-binding nuclear protein Ran

Chain F:


GLY GLU PRO Q8 V9 Q10 F11 K12 L13 V14 L15 G20 T21 G22 K23 V27 K28 R29 H30 L31 T32 G33 E34 F35 E36 K37 K38 Y39 V40 L43 G44 V45 E46 V47 V51 T54 N55 R56 K60 W64 L69 E70 K71 L75 R76 D77 G78 Y79 Y80 C85
A86 I87 I88 M89 F90 D91 V92 T93 S94 R95 V96 N100 V101 H105 R106 V109 R110 E113 N114 I117 C120 G121 N122 K123 A133 I136 V137 F138 H139 R140 K141 K142 N143 L144 Q145 Y146 Y147 S153 N154 Y155 N156 F157 L164 L174 E175 F176 V177 A178 M179
P180

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	72.66Å 224.62Å 164.02Å 90.00° 100.82° 90.00°	Depositor
Resolution (Å)	38.90 – 2.80 38.90 – 2.80	Depositor EDS
% Data completeness (in resolution range)	90.1 (38.90-2.80) 81.4 (38.90-2.80)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.99 (at 2.81Å)	Xtriage
Refinement program	PHENIX 1.6.1_357	Depositor
R, R_{free}	0.226 , 0.285 0.226 , 0.235	Depositor DCC
R_{free} test set	5702 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å^2)	40.3	Xtriage
Anisotropy	0.458	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 37.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.43$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	0.119 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	25144	wwPDB-VP
Average B, all atoms (Å^2)	51.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.24% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, NA, GTP

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	0.41	0/8566	0.80	6/11604 (0.1%)
1	D	0.41	0/8566	0.79	7/11604 (0.1%)
2	B	0.42	0/2404	0.91	8/3263 (0.2%)
2	E	0.42	0/2419	0.91	10/3283 (0.3%)
3	C	0.40	0/1440	0.78	0/1945
3	F	0.40	0/1440	0.79	0/1945
All	All	0.41	0/24835	0.82	31/33644 (0.1%)

There are no bond length outliers.

The worst 5 of 31 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	225	ASN	CA-C-N	9.92	129.71	119.19
2	B	225	ASN	C-N-CA	9.92	129.71	119.19
2	E	225	ASN	CA-C-N	9.07	129.26	119.28
2	E	225	ASN	C-N-CA	9.07	129.26	119.28
1	A	488	GLU	N-CA-C	-8.29	101.32	112.26

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	8394	0	8460	356	0
1	D	8394	0	8460	373	0
2	B	2339	0	2295	122	0
2	E	2354	0	2311	115	0
3	C	1405	0	1434	55	0
3	F	1405	0	1434	68	0
4	C	32	0	12	4	0
4	F	32	0	12	2	0
5	C	1	0	0	0	0
5	F	1	0	0	0	0
6	C	1	0	0	0	0
6	D	1	0	0	0	0
7	A	237	0	0	17	0
7	B	94	0	0	7	0
7	C	53	0	0	6	0
7	D	279	0	0	23	0
7	E	71	0	0	3	0
7	F	51	0	0	6	0
All	All	25144	0	24418	1065	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 22.

The worst 5 of 1065 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)
2:E:290:VAL:H	2:E:291:PRO:HD3	1.09	1.10
2:B:52:LYS:HZ3	2:B:264:THR:HA	1.03	1.06
2:E:52:LYS:HZ3	2:E:264:THR:HA	1.19	1.01
1:A:131:ASN:HD21	1:A:166:ASN:HD21	1.12	0.95
1:D:964:PRO:HG2	1:D:968:VAL:HB	1.49	0.94

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	1034/1073 (96%)	931 (90%)	85 (8%)	18 (2%)	7 26
1	D	1034/1073 (96%)	933 (90%)	83 (8%)	18 (2%)	7 26
2	B	285/362 (79%)	251 (88%)	23 (8%)	11 (4%)	2 9
2	E	287/362 (79%)	249 (87%)	28 (10%)	10 (4%)	3 10
3	C	171/176 (97%)	157 (92%)	13 (8%)	1 (1%)	22 51
3	F	171/176 (97%)	154 (90%)	16 (9%)	1 (1%)	22 51
All	All	2982/3222 (93%)	2675 (90%)	248 (8%)	59 (2%)	6 21

5 of 59 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	123	GLU
1	A	963	ASN
2	B	216	GLU
1	D	123	GLU
1	D	963	ASN

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	942/973 (97%)	851 (90%)	91 (10%)	6 21
1	D	942/973 (97%)	857 (91%)	85 (9%)	8 25
2	B	263/327 (80%)	237 (90%)	26 (10%)	6 21
2	E	265/327 (81%)	242 (91%)	23 (9%)	8 26
3	C	152/154 (99%)	133 (88%)	19 (12%)	3 12
3	F	152/154 (99%)	132 (87%)	20 (13%)	3 11
All	All	2716/2908 (93%)	2452 (90%)	264 (10%)	6 21

5 of 264 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	E	128	LYS
2	E	264	THR
3	F	113	GLU
2	B	96	LYS
2	B	33	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 140 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	916	GLN
1	D	970	ASN
2	E	163	ASN
1	A	1006	GLN
1	A	990	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 6 ligands modelled in this entry, 4 are monoatomic - leaving 2 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	$\#\|Z\|>2$
4	GTP	C	217	5	29,34,34	1.19	2 (6%)	35,54,54	1.34	4 (11%)
4	GTP	F	217	5	29,34,34	1.15	1 (3%)	35,54,54	1.26	4 (11%)

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
4	GTP	C	217	5	-	2/18/38/38	0/3/3/3
4	GTP	F	217	5	-	7/18/38/38	0/3/3/3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	217	GTP	C5-C6	-3.84	1.39	1.47
4	F	217	GTP	C5-C6	-3.82	1.39	1.47
4	C	217	GTP	O4'-C4'	-2.04	1.40	1.45

The worst 5 of 8 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	217	GTP	C8-N7-C5	3.80	109.02	102.55
4	F	217	GTP	C8-N7-C5	3.62	108.71	102.55
4	C	217	GTP	C5-C6-N1	2.78	119.37	114.07
4	F	217	GTP	C2-N1-C6	-2.74	120.09	125.11
4	F	217	GTP	C5-C6-N1	2.70	119.21	114.07

There are no chirality outliers.

5 of 9 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	C	217	GTP	PB-O3B-PG-O3G
4	F	217	GTP	PB-O3B-PG-O2G
4	F	217	GTP	C5'-O5'-PA-O2A
4	F	217	GTP	O4'-C4'-C5'-O5'
4	F	217	GTP	C3'-C4'-C5'-O5'

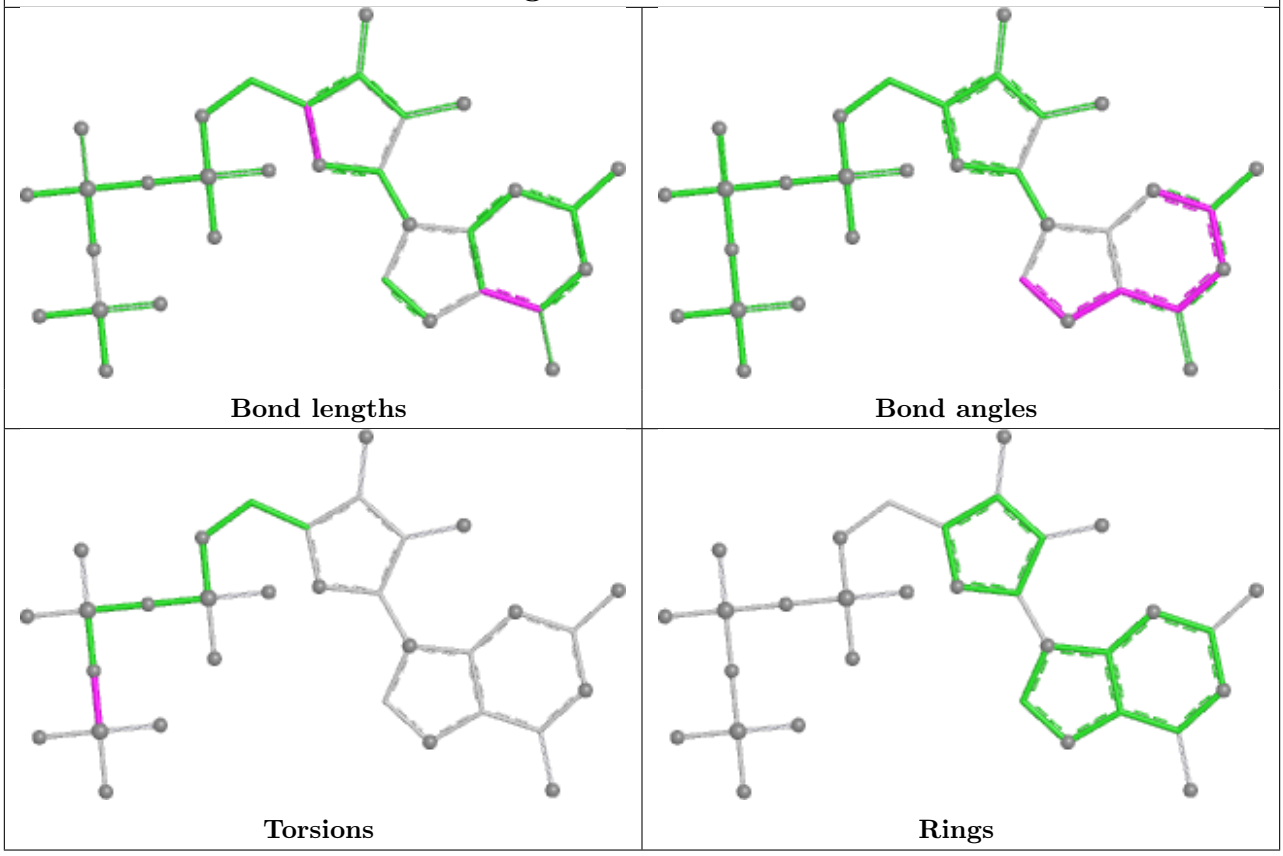
There are no ring outliers.

2 monomers are involved in 6 short contacts:

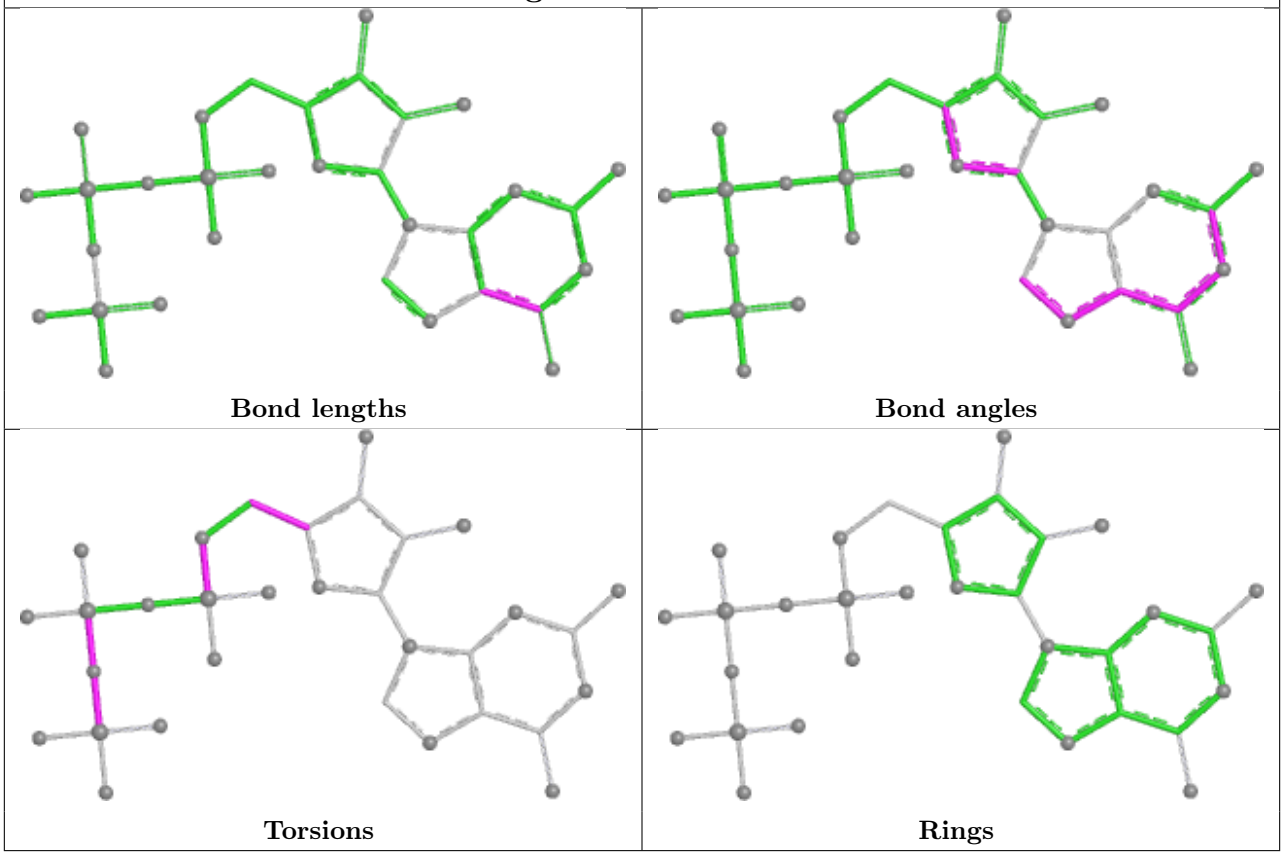
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	C	217	GTP	4	0
4	F	217	GTP	2	0

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 then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand GTP C 217



Ligand GTP F 217



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	1038/1073 (96%)	-1.39	0 100 100	14, 47, 107, 152	0
1	D	1038/1073 (96%)	-1.39	0 100 100	14, 47, 103, 176	0
2	B	291/362 (80%)	-1.40	0 100 100	15, 44, 116, 167	0
2	E	293/362 (80%)	-1.35	1 (0%) 90 87	15, 45, 123, 167	0
3	C	173/176 (98%)	-1.52	0 100 100	21, 39, 79, 132	0
3	F	173/176 (98%)	-1.58	0 100 100	20, 39, 79, 106	0
All	All	3006/3222 (93%)	-1.41	1 (0%) 100 100	14, 45, 106, 176	0

All (1) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	E	31	TYR	2.6

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates

There are no monosaccharides in this entry.

6.4 Ligands

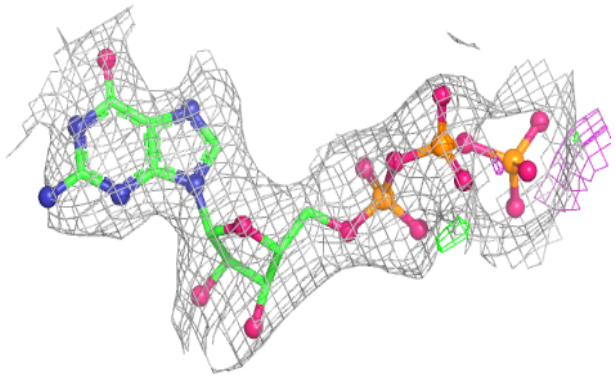
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

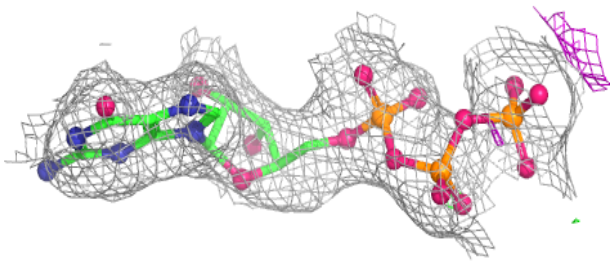
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
6	NA	C	1	1/1	0.99	0.05	42,42,42,42	0
6	NA	D	1072	1/1	0.99	0.08	52,52,52,52	0
5	MG	C	218	1/1	1.00	0.01	14,14,14,14	0
5	MG	F	218	1/1	1.00	0.02	26,26,26,26	0
4	GTP	C	217	32/32	1.00	0.03	12,29,37,71	0
4	GTP	F	217	32/32	1.00	0.03	16,34,50,56	0

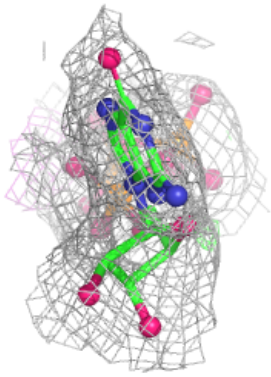
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around GTP C 217:

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

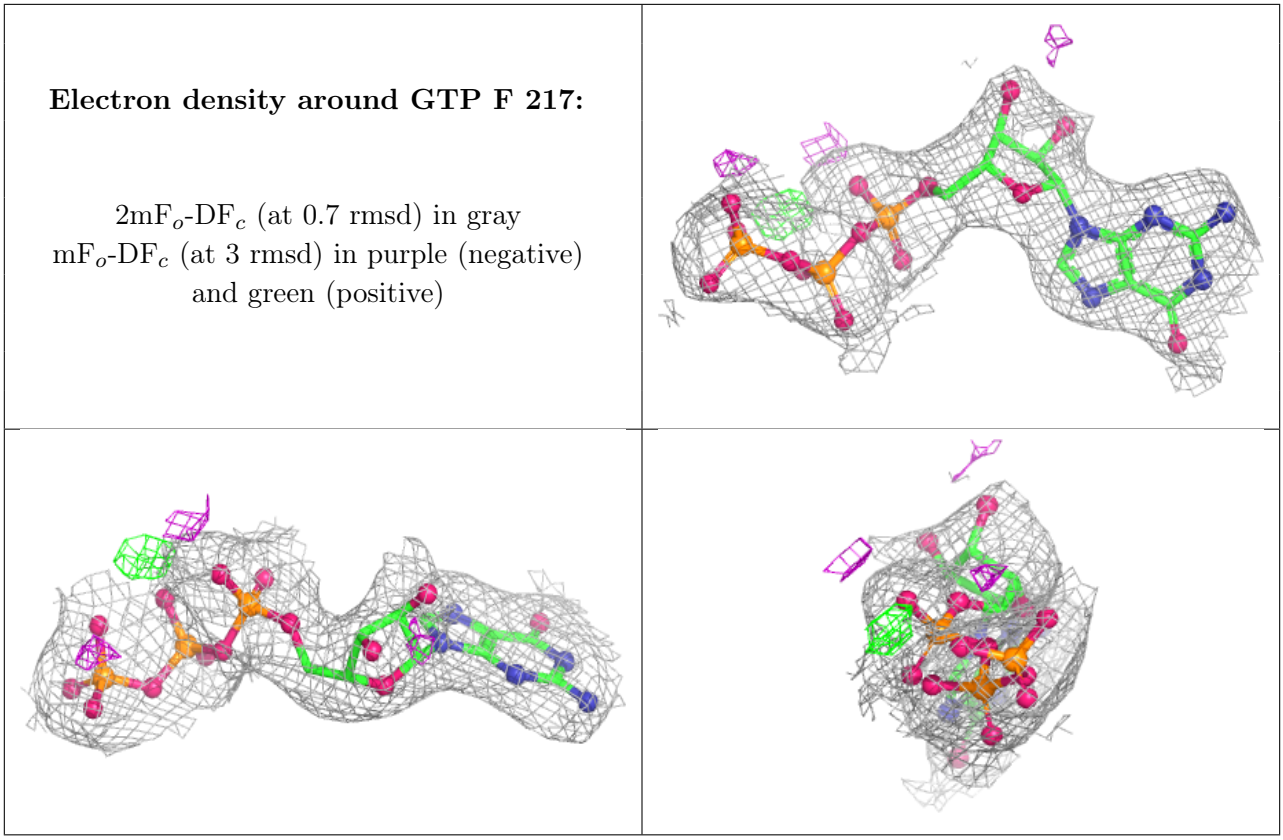






Electron density around GTP F 217:

$2mF_o$-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.