wwPDB X-ray Structure Validation Summary Report (i)

Aug 14, 2023 – 07:55 PM EDT

PDB ID	:	1QZW
Title	:	Crystal structure of the complete core of archaeal SRP and implications for inter-domain communication
Authors	:	Rosendal, K.R.; Wild, K.; Montoya, G.; Sinning, I.
Deposited on	:	2003-09-18
Resolution	:	4.10 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:

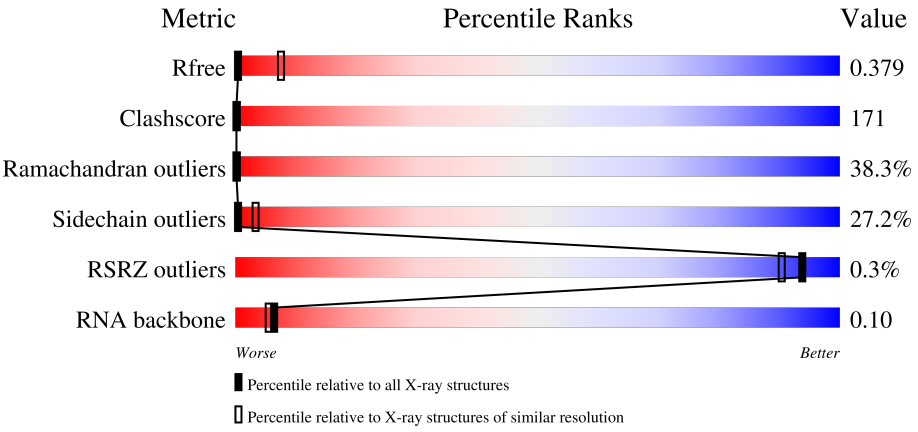
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

1 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 4.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1193 (4.50-3.70)
Clashscore	141614	1003 (4.44-3.76)
Ramachandran outliers	138981	1005 (4.48-3.72)
Sidechain outliers	138945	1199 (4.50-3.70)
RSRZ outliers	127900	1034 (4.50-3.70)
RNA backbone	3102	1049 (5.04-3.00)

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 <=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	B	47	. 32% 55% 11%
1	D	47	. 32% 53% 11%
1	F	47	. 32% 55% 11%
1	H	47	. 32% 53% 11%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
2	A	440	45% 41% 9%
2	C	440	45% 41% 9%
2	E	440	45% 41% 9%
2	G	440	45% 40% 9%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	GTP	B	179	X	-	-	-
1	GTP	D	179	X	-	-	-
1	GTP	F	179	X	-	-	-
1	GTP	H	179	X	-	-	-

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 17720 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 RNA chain called 7S RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	47	Total	C	N	O	P	0	0	0
			1031	452	197	332	50			
1	D	47	Total	C	N	O	P	0	0	0
			1031	452	197	332	50			
1	F	47	Total	C	N	O	P	0	0	0
			1031	452	197	332	50			
1	H	47	Total	C	N	O	P	0	0	0
			1031	452	197	332	50			

- Molecule 2 is a protein called Signal recognition 54 kDa protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A	432	Total	C	N	O	S	0	0	0
			3399	2173	574	637	15			
2	C	432	Total	C	N	O	S	0	0	0
			3399	2173	574	637	15			
2	E	432	Total	C	N	O	S	0	0	0
			3399	2173	574	637	15			
2	G	432	Total	C	N	O	S	0	0	0
			3399	2173	574	637	15			

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	MET	-	expression tag	UNP Q97ZE7
A	-6	GLY	-	expression tag	UNP Q97ZE7
A	-5	HIS	-	expression tag	UNP Q97ZE7
A	-4	HIS	-	expression tag	UNP Q97ZE7
A	-3	HIS	-	expression tag	UNP Q97ZE7
A	-2	HIS	-	expression tag	UNP Q97ZE7
A	-1	HIS	-	expression tag	UNP Q97ZE7
A	0	HIS	-	expression tag	UNP Q97ZE7
C	-7	MET	-	expression tag	UNP Q97ZE7

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
C	-6	GLY	-	expression tag	UNP Q97ZE7
C	-5	HIS	-	expression tag	UNP Q97ZE7
C	-4	HIS	-	expression tag	UNP Q97ZE7
C	-3	HIS	-	expression tag	UNP Q97ZE7
C	-2	HIS	-	expression tag	UNP Q97ZE7
C	-1	HIS	-	expression tag	UNP Q97ZE7
C	0	HIS	-	expression tag	UNP Q97ZE7
E	-7	MET	-	expression tag	UNP Q97ZE7
E	-6	GLY	-	expression tag	UNP Q97ZE7
E	-5	HIS	-	expression tag	UNP Q97ZE7
E	-4	HIS	-	expression tag	UNP Q97ZE7
E	-3	HIS	-	expression tag	UNP Q97ZE7
E	-2	HIS	-	expression tag	UNP Q97ZE7
E	-1	HIS	-	expression tag	UNP Q97ZE7
E	0	HIS	-	expression tag	UNP Q97ZE7
G	-7	MET	-	expression tag	UNP Q97ZE7
G	-6	GLY	-	expression tag	UNP Q97ZE7
G	-5	HIS	-	expression tag	UNP Q97ZE7
G	-4	HIS	-	expression tag	UNP Q97ZE7
G	-3	HIS	-	expression tag	UNP Q97ZE7
G	-2	HIS	-	expression tag	UNP Q97ZE7
G	-1	HIS	-	expression tag	UNP Q97ZE7
G	0	HIS	-	expression tag	UNP Q97ZE7

3 Residue-property plots (i)

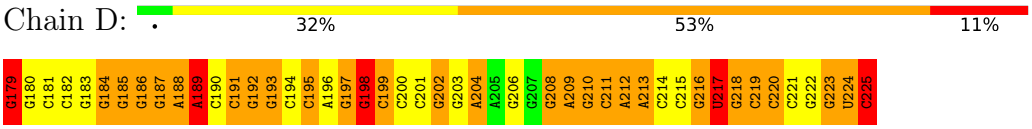
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: 7S RNA

Chain B:

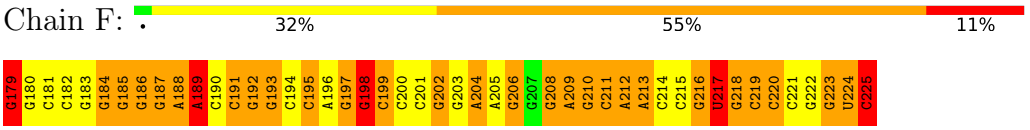
- Molecule 1: 7S RNA

Chain D:



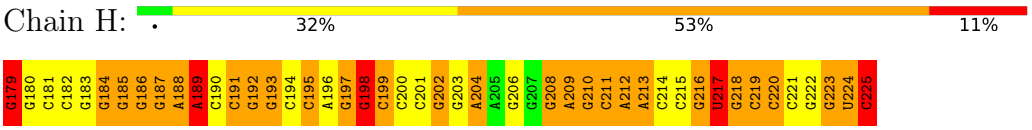
- Molecule 1: 7S RNA

Chain F:



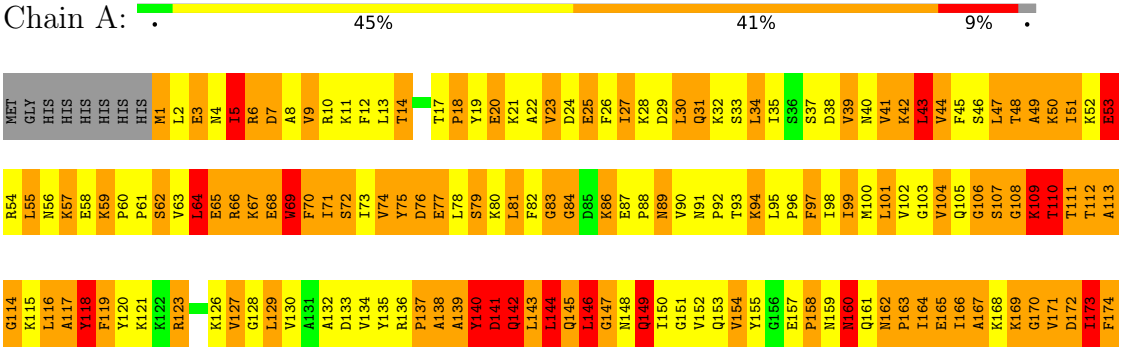
- Molecule 1: 7S RNA

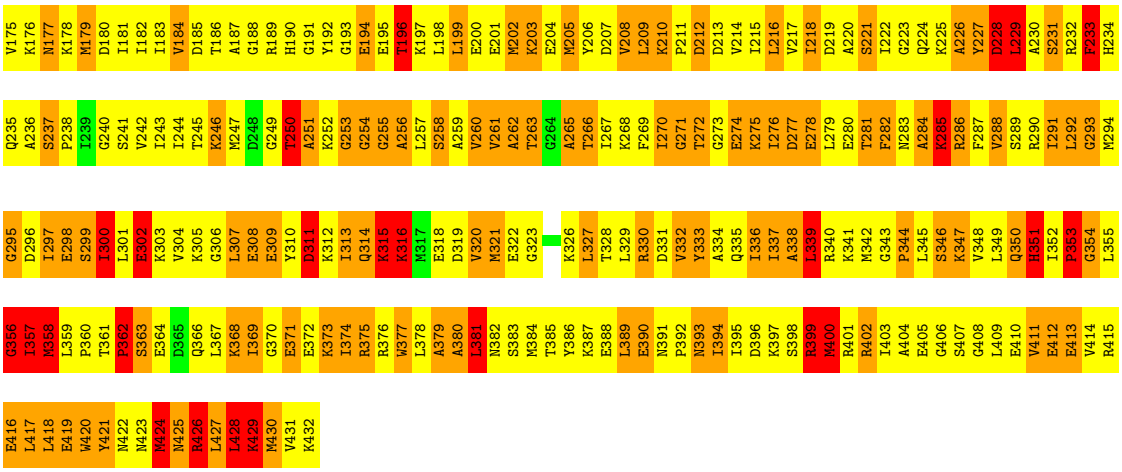
Chain H:



- Molecule 2: Signal recognition 54 kDa protein

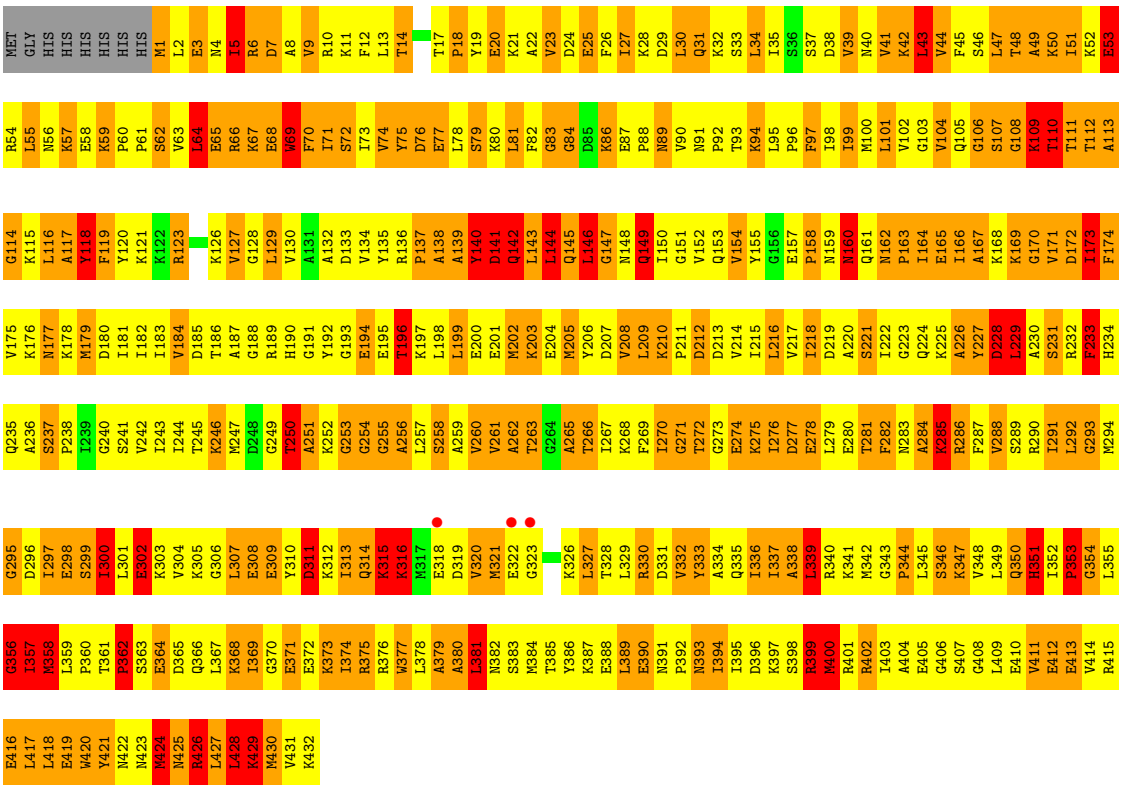
Chain A:





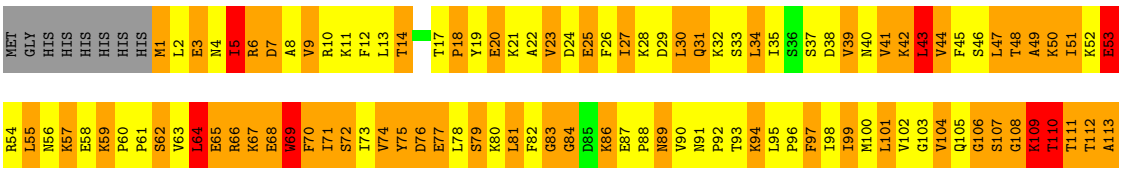
• Molecule 2: Signal recognition 54 kDa protein

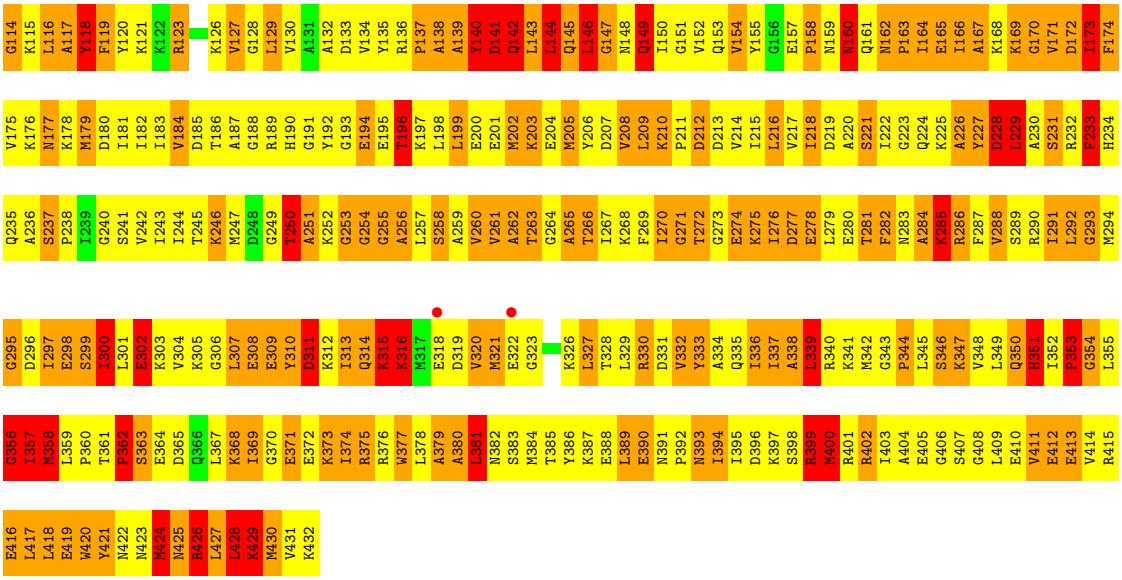
Chain C:



• Molecule 2: Signal recognition 54 kDa protein

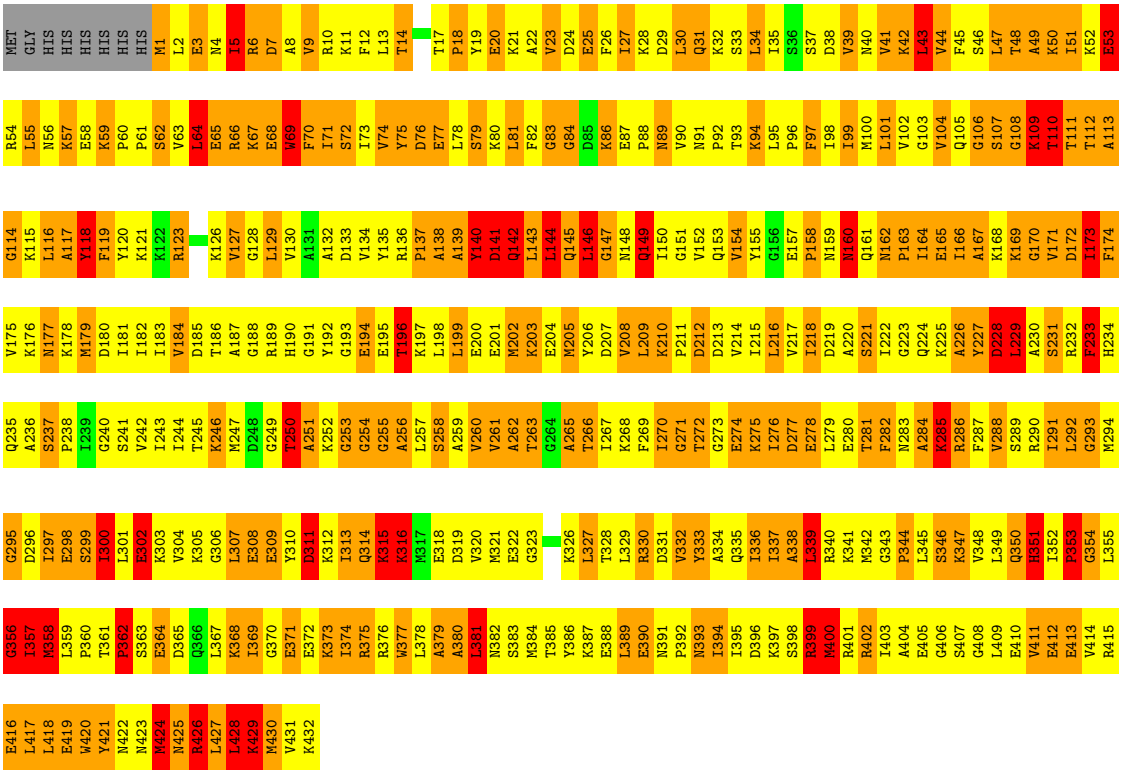
Chain E:





• Molecule 2: Signal recognition 54 kDa protein

Chain G:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α, β, γ	137.76Å 137.76Å 307.89Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	30.00 – 4.10 29.81 – 4.10	Depositor EDS
% Data completeness (in resolution range)	97.2 (30.00-4.10) 98.3 (29.81-4.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	1.90 (at 4.11Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.340 , 0.387 0.348 , 0.379	Depositor DCC
R_{free} test set	4666 reflections (9.26%)	wwPDB-VP
Wilson B-factor (Å^2)	167.7	Xtriage
Anisotropy	0.020	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.21 , 98.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	0.337 for -h,-k,l 0.339 for h,-h-k,-l 0.377 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	17720	wwPDB-VP
Average B, all atoms (Å^2)	70.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.22% 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: CCC, 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	B	0.88	0/1093	1.14	7/1706 (0.4%)
1	D	0.88	0/1093	1.14	7/1706 (0.4%)
1	F	0.88	0/1093	1.14	7/1706 (0.4%)
1	H	0.88	0/1093	1.14	7/1706 (0.4%)
2	A	0.63	0/3450	0.95	7/4636 (0.2%)
2	C	0.62	0/3450	0.96	7/4636 (0.2%)
2	E	0.62	0/3450	0.95	7/4636 (0.2%)
2	G	0.63	0/3450	0.95	7/4636 (0.2%)
All	All	0.69	0/18172	1.01	56/25368 (0.2%)

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	B	1	0
1	D	1	0
1	F	1	0
1	H	1	0
All	All	4	0

There are no bond length outliers.

The worst 5 of 56 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	217	U	C5'-C4'-C3'	-14.93	92.11	116.00
1	F	217	U	C5'-C4'-C3'	-14.90	92.15	116.00
1	B	217	U	C5'-C4'-C3'	-14.90	92.16	116.00
1	D	217	U	C5'-C4'-C3'	-14.89	92.18	116.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	217	U	N1-C1'-C2'	13.30	131.29	114.00

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	179	GTP	C3'
1	D	179	GTP	C3'
1	F	179	GTP	C3'
1	H	179	GTP	C3'

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	1031	0	514	96	1
1	D	1031	0	514	94	0
1	F	1031	0	514	93	1
1	H	1031	0	514	92	1
2	A	3399	0	3543	1366	5
2	C	3399	0	3543	1401	15
2	E	3399	0	3543	1413	17
2	G	3399	0	3543	1356	4
All	All	17720	0	16228	5797	22

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 171.

The worst 5 of 5797 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:A:59:LYS:O	2:A:59:LYS:HD3	1.18	1.34
2:A:151:GLY:HA2	2:G:151:GLY:CA	1.68	1.23
2:A:151:GLY:CA	2:G:151:GLY:HA2	1.73	1.18
2:E:48:THR:HA	2:E:51:ILE:HD12	1.29	1.15

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:153:GLN:HG3	2:E:153:GLN:CG	1.76	1.14

The worst 5 of 22 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)
2:C:59:LYS:O	2:E:361:THR:O[2_655]	1.08	1.12
2:C:315:LYS:CG	2:E:312:LYS:NZ[2_655]	1.56	0.64
2:C:61:PRO:CB	2:E:359:LEU:O[2_655]	1.59	0.61
2:C:361:THR:O	2:E:59:LYS:O[2_655]	1.59	0.61
2:A:59:LYS:CD	2:G:361:THR:O[2_665]	1.73	0.47

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	
2	A	430/440 (98%)	142 (33%)	123 (29%)	165 (38%)	0	0
2	C	430/440 (98%)	143 (33%)	123 (29%)	164 (38%)	0	0
2	E	430/440 (98%)	143 (33%)	122 (28%)	165 (38%)	0	0
2	G	430/440 (98%)	142 (33%)	123 (29%)	165 (38%)	0	0
All	All	1720/1760 (98%)	570 (33%)	491 (28%)	659 (38%)	0	0

5 of 659 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	18	PRO
2	A	20	GLU
2	A	23	VAL
2	A	33	SER
2	A	39	VAL

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
2	A	370/377 (98%)	270 (73%)	100 (27%)	0 3
2	C	370/377 (98%)	269 (73%)	101 (27%)	0 3
2	E	370/377 (98%)	269 (73%)	101 (27%)	0 3
2	G	370/377 (98%)	270 (73%)	100 (27%)	0 3
All	All	1480/1508 (98%)	1078 (73%)	402 (27%)	0 3

5 of 402 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	E	123	ARG
2	E	389	LEU
2	G	428	LEU
2	E	146	LEU
2	E	266	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 58 such sidechains are listed below:

Mol	Chain	Res	Type
2	C	425	ASN
2	G	350	GLN
2	E	162	ASN
2	G	335	GLN
2	G	161	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	B	46/47 (97%)	31 (67%)	3 (6%)
1	D	46/47 (97%)	31 (67%)	3 (6%)
1	F	46/47 (97%)	31 (67%)	3 (6%)
1	H	46/47 (97%)	31 (67%)	3 (6%)

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
All	All	184/188 (97%)	124 (67%)	12 (6%)

5 of 124 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	B	181	C
1	B	182	C
1	B	184	G
1	B	185	G
1	B	186	G

5 of 12 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	F	210	G
1	F	217	U
1	H	217	U
1	H	179	GTP
1	D	179	GTP

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

8 non-standard protein/DNA/RNA residues 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	$\#\|Z\| > 2$
1	CCC	F	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	CCC	H	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	GTP	B	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)
1	CCC	D	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	CCC	B	225	1	20,25,26	0.72	0	28,38,41	1.37	5 (17%)
1	GTP	H	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)
1	GTP	F	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.13	8 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	GTP	D	179	1	26,34,34	1.14	2 (7%)	32,54,54	2.12	8 (25%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	CCC	F	225	1	-	7/7/35/36	0/3/3/3
1	CCC	H	225	1	-	7/7/35/36	0/3/3/3
1	GTP	B	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	CCC	D	225	1	-	7/7/35/36	0/3/3/3
1	CCC	B	225	1	-	7/7/35/36	0/3/3/3
1	GTP	H	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	GTP	F	179	1	1/1/7/7	4/18/38/38	0/3/3/3
1	GTP	D	179	1	1/1/7/7	4/18/38/38	0/3/3/3

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	H	179	GTP	PG-O1G	3.02	1.60	1.50
1	F	179	GTP	PG-O1G	3.02	1.60	1.50
1	B	179	GTP	PG-O1G	3.02	1.60	1.50
1	D	179	GTP	PG-O1G	3.01	1.60	1.50
1	F	179	GTP	C8-N7	-2.14	1.31	1.35

The worst 5 of 52 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	179	GTP	PA-O3A-PB	-6.49	110.54	132.83
1	B	179	GTP	PA-O3A-PB	-6.49	110.57	132.83
1	D	179	GTP	PA-O3A-PB	-6.48	110.58	132.83
1	H	179	GTP	PA-O3A-PB	-6.48	110.60	132.83
1	B	179	GTP	O3G-PG-O2G	6.43	132.21	107.64

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	179	GTP	C3'
1	D	179	GTP	C3'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atom
1	F	179	GTP	C3'
1	H	179	GTP	C3'

5 of 44 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B	179	GTP	C5'-O5'-PA-O3A
1	B	179	GTP	C5'-O5'-PA-O1A
1	B	225	CCC	O4'-C4'-C5'-O5'
1	B	225	CCC	O4'-C1'-N1-C2
1	B	225	CCC	O4'-C1'-N1-C6

There are no ring outliers.

8 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	F	225	CCC	1	0
1	H	225	CCC	1	0
1	B	179	GTP	2	0
1	D	225	CCC	1	0
1	B	225	CCC	1	0
1	H	179	GTP	2	0
1	F	179	GTP	2	0
1	D	179	GTP	2	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

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, 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	B	45/47 (95%)	-0.26	0 100 100	71, 71, 71, 71	0
1	D	45/47 (95%)	-0.22	0 100 100	71, 71, 71, 71	0
1	F	45/47 (95%)	-0.27	0 100 100	71, 71, 71, 71	0
1	H	45/47 (95%)	-0.31	0 100 100	71, 71, 71, 71	0
2	A	432/440 (98%)	-0.66	0 100 100	71, 71, 71, 71	0
2	C	432/440 (98%)	-0.66	3 (0%) 87 82	71, 71, 71, 71	0
2	E	432/440 (98%)	-0.66	2 (0%) 91 85	71, 71, 71, 71	0
2	G	432/440 (98%)	-0.65	0 100 100	71, 71, 71, 71	0
All	All	1908/1948 (97%)	-0.62	5 (0%) 94 90	71, 71, 71, 71	0

All (5) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	C	323	GLY	3.1
2	E	318	GLU	2.7
2	C	318	GLU	2.3
2	C	322	GLU	2.1
2	E	322	GLU	2.0

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

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
1	CCC	B	225	23/24	0.84	0.23	70,70,70,70	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	CCC	H	225	23/24	0.88	0.27	70,70,70,70	0
1	CCC	D	225	23/24	0.89	0.23	70,70,70,70	0
1	GTP	D	179	32/32	0.89	0.14	70,70,70,70	0
1	CCC	F	225	23/24	0.91	0.25	70,70,70,70	0
1	GTP	F	179	32/32	0.92	0.12	70,70,70,70	0
1	GTP	H	179	32/32	0.93	0.12	70,70,70,70	0
1	GTP	B	179	32/32	0.93	0.11	70,70,70,70	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.