



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 09:10 PM JST

PDB ID : 9VZ9 / pdb_00009vz9
Title : Crystal structure of T2R-TTL-TZ3 complex
Authors : Lun, T.; Chengyong, W.
Deposited on : 2025-07-22
Resolution : 2.53 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 : 1.8.5 (274361), CSD as541be (2020)
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 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

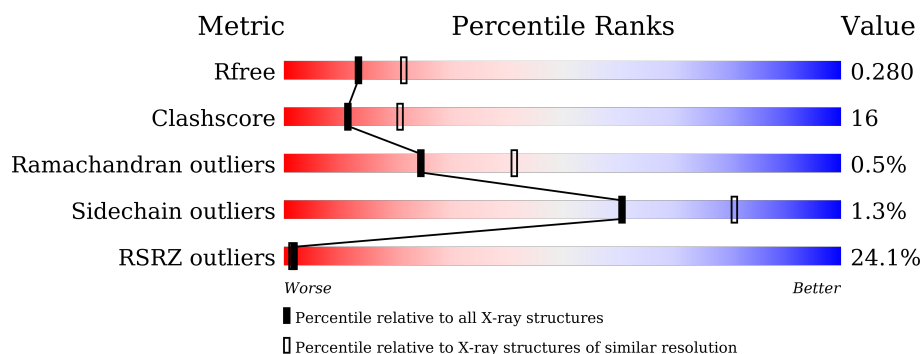
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.53 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	7383 (2.54-2.50)
Clashscore	190562	8079 (2.54-2.50)
Ramachandran outliers	187476	7944 (2.54-2.50)
Sidechain outliers	187428	7946 (2.54-2.50)
RSRZ outliers	180081	7387 (2.54-2.50)

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	440	12% 74% 25% .
1	C	440	4% 78% 22% .
2	B	431	10% 68% 30% ..
2	D	431	54% 60% 37% ..
3	E	136	24% 63% 26% 11%
4	F	380	39% 56% 30% . 13%

2 Entry composition

There are 11 unique types of molecules in this entry. The entry contains 17464 atoms, of which 38 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 Detyrosinated tubulin alpha-1B chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	437	Total	C	N	O	S	0	0	0
			3405	2154	580	649	22			
1	C	440	Total	C	N	O	S	0	0	0
			3433	2172	583	656	22			

- Molecule 2 is a protein called Tubulin beta chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	427	Total	C	N	O	S	0	0	0
			3351	2104	572	649	26			
2	D	421	Total	C	N	O	S	0	0	0
			3300	2076	559	638	27			

- Molecule 3 is a protein called Stathmin-4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	E	121	Total	C	N	O	S	0	0	0
			1000	617	181	197	5			

- Molecule 4 is a protein called Tubulin-tyrosine ligase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	F	332	Total	C	N	O	S	0	0	0
			2713	1740	466	493	14			

There are 35 discrepancies between the modelled and reference sequences:

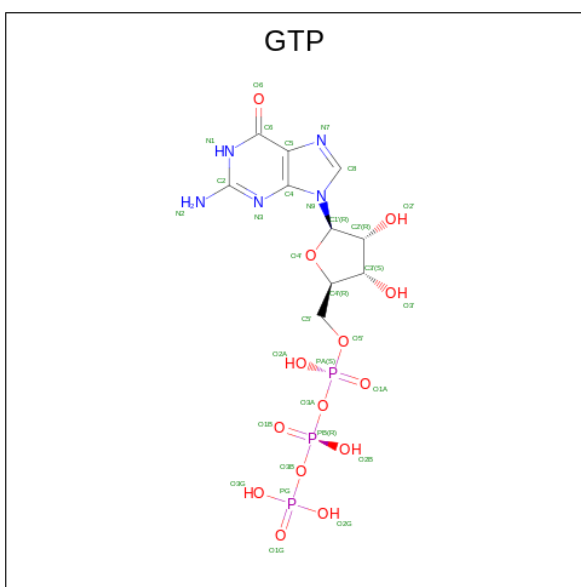
Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	ALA	deletion	UNP A0A8V0Z8P0
F	?	-	GLU	deletion	UNP A0A8V0Z8P0
F	?	-	MET	deletion	UNP A0A8V0Z8P0
F	?	-	GLN	deletion	UNP A0A8V0Z8P0

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Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	GLN	deletion	UNP A0A8V0Z8P0
F	?	-	GLN	deletion	UNP A0A8V0Z8P0
F	?	-	LEU	deletion	UNP A0A8V0Z8P0
F	?	-	LEU	deletion	UNP A0A8V0Z8P0
F	?	-	GLU	deletion	UNP A0A8V0Z8P0
F	?	-	GLY	deletion	UNP A0A8V0Z8P0
F	?	-	ASP	deletion	UNP A0A8V0Z8P0
F	?	-	GLN	deletion	UNP A0A8V0Z8P0
F	?	-	THR	deletion	UNP A0A8V0Z8P0
F	?	-	LEU	deletion	UNP A0A8V0Z8P0
F	?	-	VAL	deletion	UNP A0A8V0Z8P0
F	?	-	LEU	deletion	UNP A0A8V0Z8P0
F	?	-	ALA	deletion	UNP A0A8V0Z8P0
F	?	-	SER	deletion	UNP A0A8V0Z8P0
F	?	-	SER	deletion	UNP A0A8V0Z8P0
F	?	-	THR	deletion	UNP A0A8V0Z8P0
F	?	-	HIS	deletion	UNP A0A8V0Z8P0
F	?	-	PRO	deletion	UNP A0A8V0Z8P0
F	?	-	GLU	deletion	UNP A0A8V0Z8P0
F	?	-	SER	deletion	UNP A0A8V0Z8P0
F	?	-	VAL	deletion	UNP A0A8V0Z8P0
F	?	-	ASP	deletion	UNP A0A8V0Z8P0
F	?	-	SER	deletion	UNP A0A8V0Z8P0
F	?	-	ASP	deletion	UNP A0A8V0Z8P0
F	?	-	LYS	deletion	UNP A0A8V0Z8P0
F	?	-	ASN	deletion	UNP A0A8V0Z8P0
F	?	-	HIS	deletion	UNP A0A8V0Z8P0
F	?	-	GLY	deletion	UNP A0A8V0Z8P0
F	?	-	PHE	deletion	UNP A0A8V0Z8P0
F	379	HIS	-	expression tag	UNP A0A8V0Z8P0
F	380	HIS	-	expression tag	UNP A0A8V0Z8P0

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



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

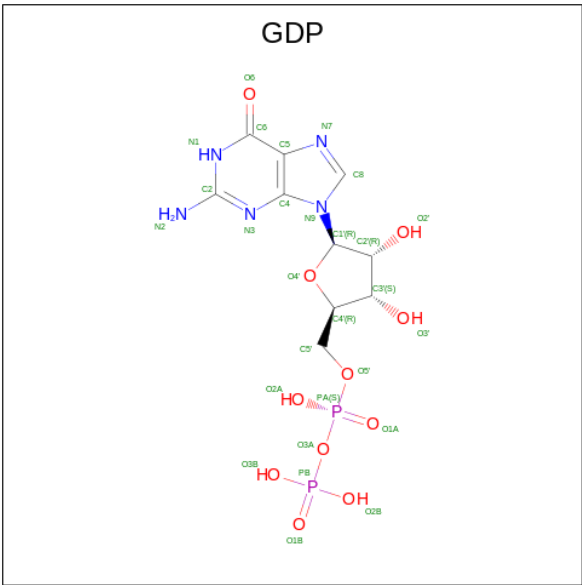
- Molecule 6 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	1	Total	Ca	1	0
			1	1		
6	C	1	Total	Ca	1	0
			1	1		

- Molecule 7 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

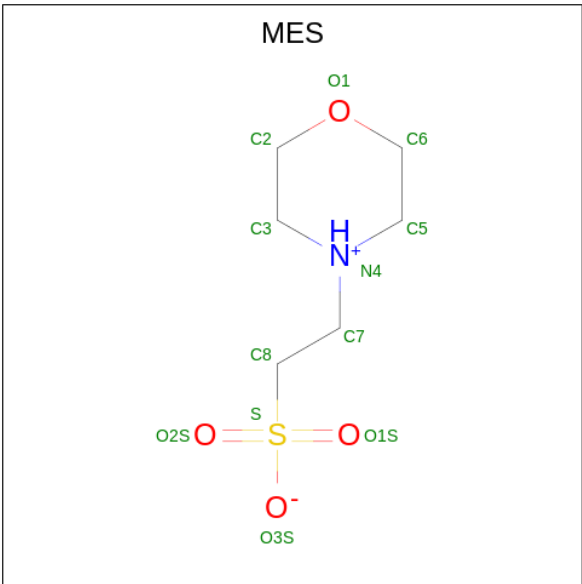
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	A	1	Total	Mg	1	0
			1	1		
7	B	1	Total	Mg	1	0
			1	1		
7	C	1	Total	Mg	1	0
			1	1		

- Molecule 8 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



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

- Molecule 9 is 2-(N-MORPHOLINO)-ETHANESULFONIC ACID (CCD ID: MES) (formula: C₆H₁₃NO₄S).



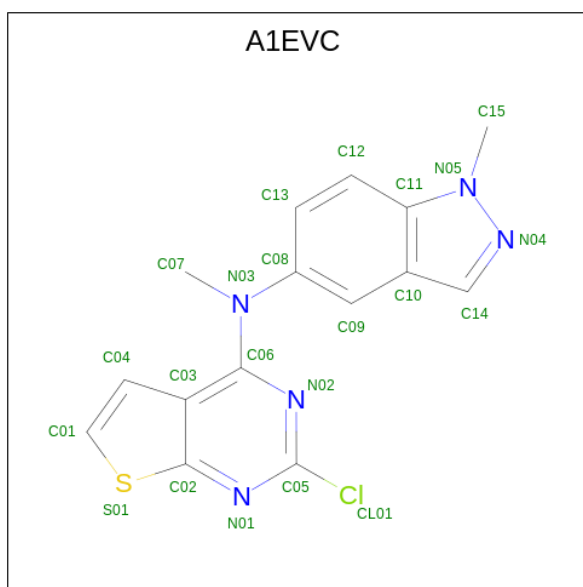
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
9	B	1	Total	C	N	O	S	12	0
			12	6	1	4	1		

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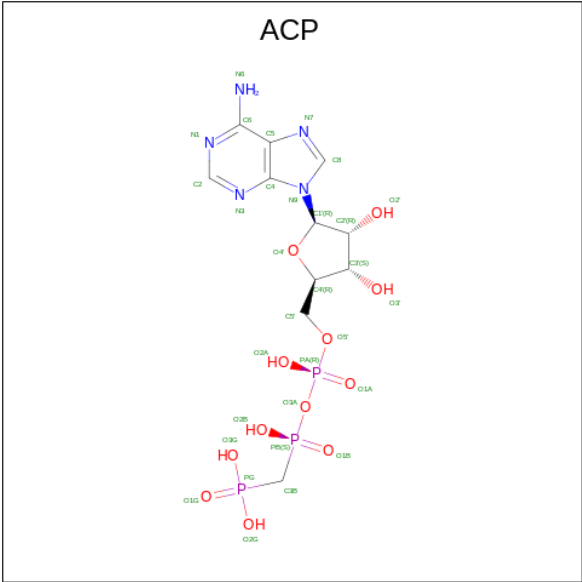
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
9	B	1	Total	C	N	O	S	12	0
			12	6	1	4	1		

- Molecule 10 is 2-chloranyl- {N}-methyl- {N}-(1-methylindazol-5-yl)thieno[2,3-d]pyrimidin-4-amine (CCD ID: A1EVC) (formula: C₁₅H₁₂ClN₅S) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
10	B	1	Total	C	Cl	H	N	S	0	0
			34	15	1	12	5	1		
10	D	1	Total	C	Cl	H	N	S	0	0
			34	15	1	12	5	1		

- Molecule 11 is PHOSPHOMETHYLPHOSPHONIC ACID ADENYLATE ESTER (CCD ID: ACP) (formula: C₁₁H₁₈N₅O₁₂P₃).

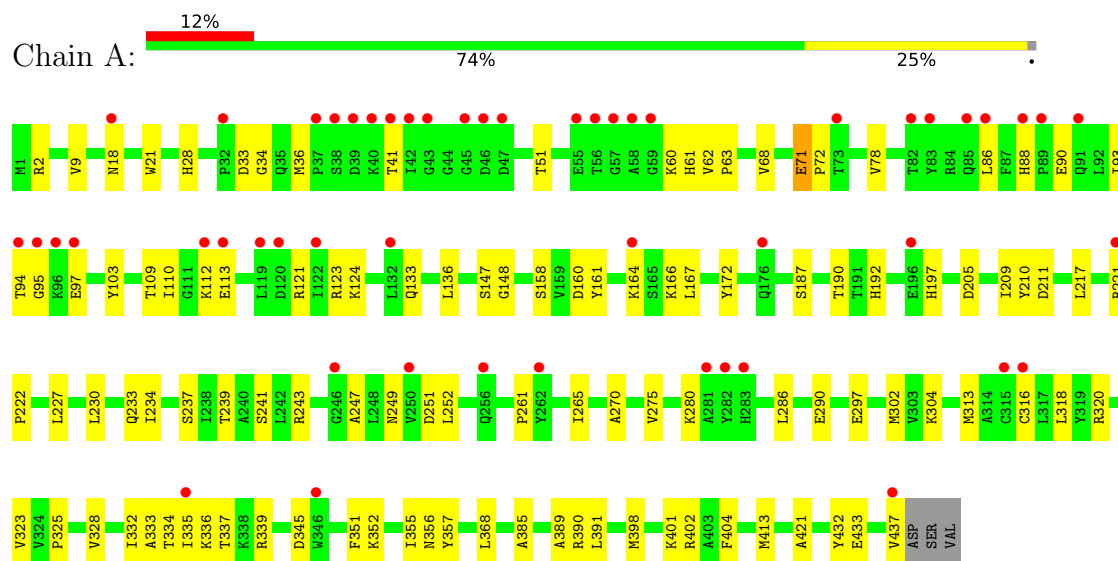


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
11	F	1	Total	C	H	N	O	P	
			45	11	14	5	12	3	

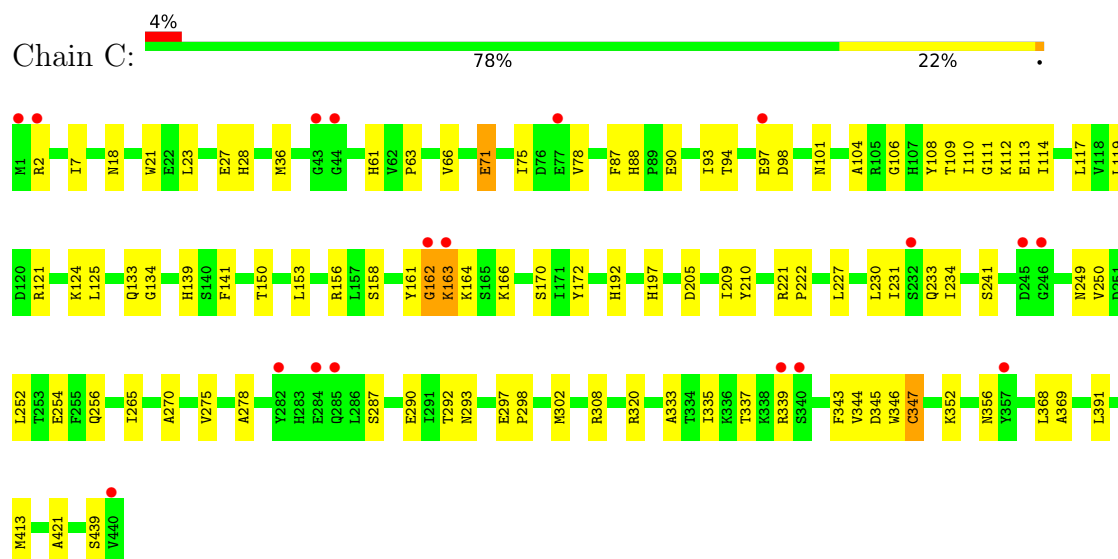
3 Residue-property plots [i](#)

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.

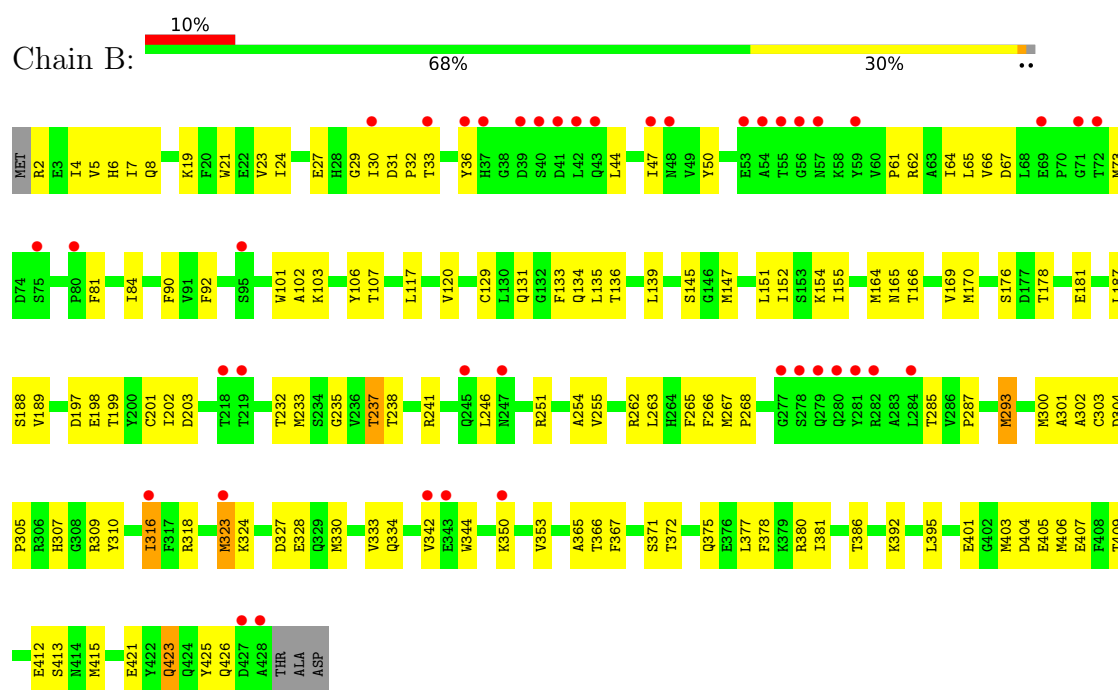
- Molecule 1: Detyrosinated tubulin alpha-1B chain



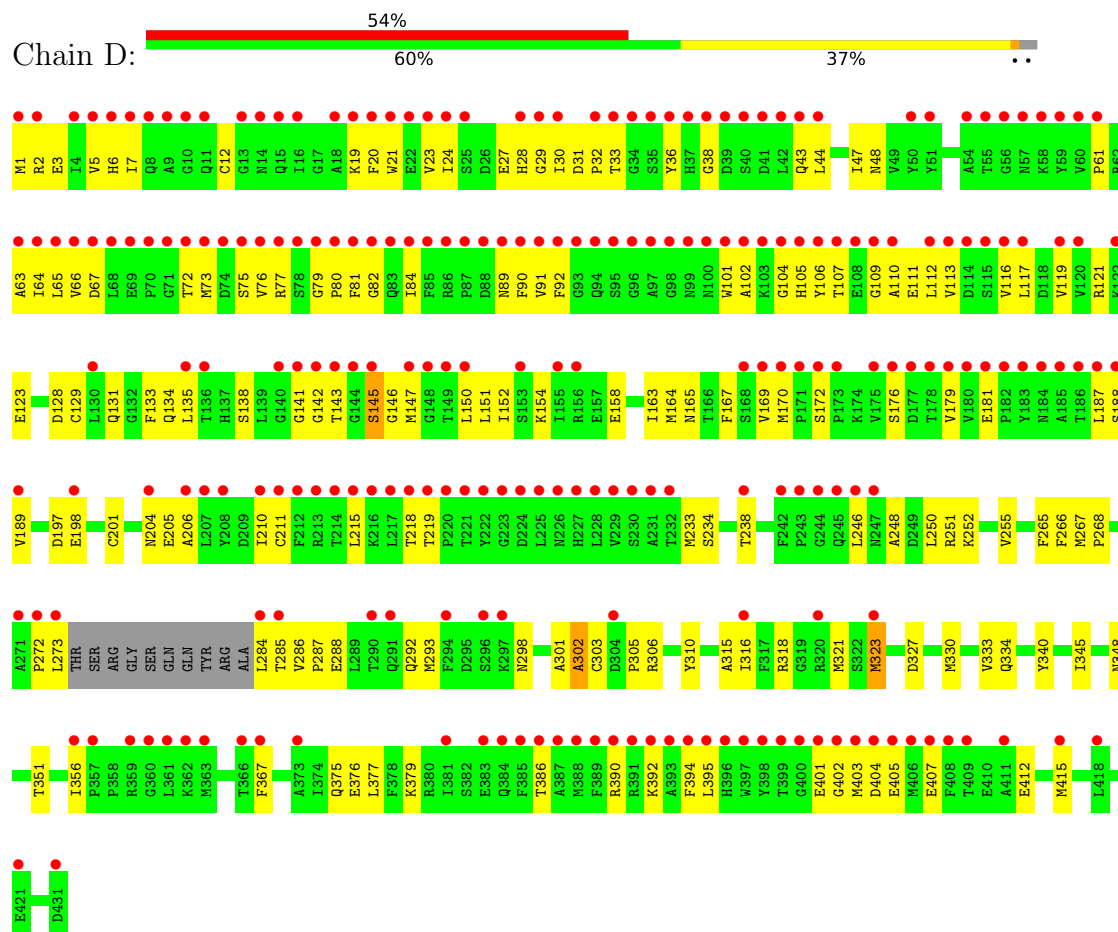
- Molecule 1: Detyrosinated tubulin alpha-1B chain



- Molecule 2: Tubulin beta chain

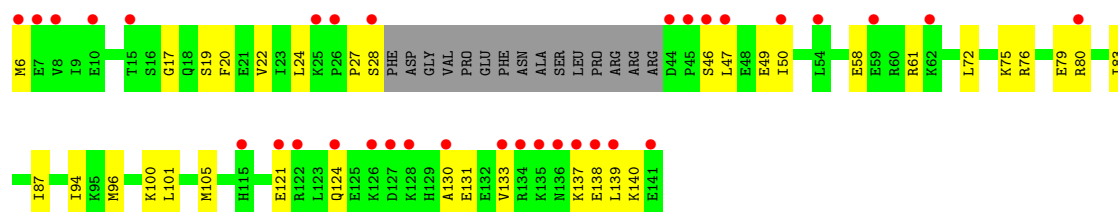


- Molecule 2: Tubulin beta chain



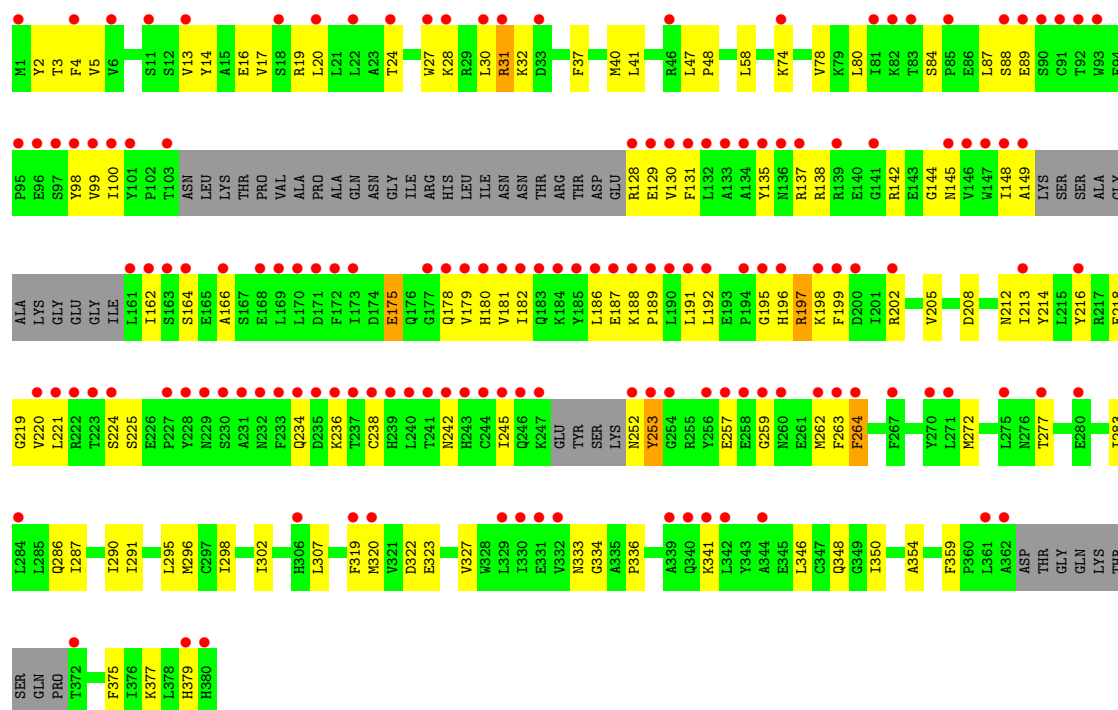
- Molecule 3: Stathmin-4

Chain E: 



• Molecule 4: Tubulin-tyrosine ligase

Chain F: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	105.09Å 157.48Å 179.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.39 – 2.53 50.39 – 2.53	Depositor EDS
% Data completeness (in resolution range)	99.4 (50.39-2.53) 99.4 (50.39-2.53)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.86 (at 2.54Å)	Xtriage
Refinement program	PHENIX (???)	Depositor
R, R_{free}	0.253 , 0.281 0.253 , 0.280	Depositor DCC
R_{free} test set	4932 reflections (4.93%)	wwPDB-VP
Wilson B-factor (Å ²)	54.8	Xtriage
Anisotropy	0.114	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 36.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	17464	wwPDB-VP
Average B, all atoms (Å ²)	63.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.53% 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: A1EVC, GDP, CA, GTP, MES, ACP, MG

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	0.17	0/3482	0.36	0/4728
1	C	0.18	0/3511	0.35	0/4768
2	B	0.14	0/3426	0.33	0/4643
2	D	0.13	0/3373	0.32	0/4570
3	E	0.13	0/1008	0.27	0/1337
4	F	0.12	0/2775	0.27	0/3752
All	All	0.15	0/17575	0.33	0/23798

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

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	A	3405	0	3312	98	0
1	C	3433	0	3337	73	0
2	B	3351	0	3216	111	0
2	D	3300	0	3176	148	0
3	E	1000	0	1018	34	0
4	F	2713	0	2659	104	0
5	A	32	0	12	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	C	32	0	12	0	0
6	A	1	0	0	0	0
6	C	1	0	0	0	0
7	A	1	0	0	0	0
7	B	1	0	0	0	0
7	C	1	0	0	0	0
8	B	28	0	12	0	0
8	D	28	0	12	0	0
9	B	24	0	26	0	0
10	B	22	12	0	1	0
10	D	22	12	0	1	0
11	F	31	14	14	0	0
All	All	17426	38	16806	546	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 16.

All (546) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:133:GLN:HE21	1:A:252:LEU:H	1.11	0.96
2:D:395:LEU:HD21	2:D:405:GLU:HG2	1.46	0.96
2:B:170:MET:HE2	2:B:377:LEU:HD21	1.48	0.95
2:D:330:MET:HG3	2:D:351:THR:HG21	1.48	0.93
4:F:221:LEU:HD22	4:F:262:MET:HE3	1.49	0.92
4:F:242:ASN:HB2	4:F:245:ILE:HB	1.50	0.91
3:E:6:MET:HE2	3:E:24:LEU:HD22	1.53	0.89
2:D:145:SER:OG	2:D:188:SER:OG	1.88	0.88
2:D:141:GLY:O	2:D:143:THR:N	2.05	0.87
2:D:315:ALA:HB3	2:D:351:THR:HG22	1.57	0.86
1:A:72:PRO:HB3	1:A:94:THR:HG21	1.56	0.86
1:A:90:GLU:OE1	1:A:124:LYS:NZ	2.08	0.85
2:B:323:MET:HE3	2:B:353:VAL:HG11	1.58	0.84
2:B:66:VAL:HG12	2:B:147:MET:HE1	1.59	0.83
2:B:309:ARG:HH21	2:B:342:VAL:HA	1.44	0.83
4:F:186:LEU:HD12	4:F:320:MET:HG2	1.61	0.82
1:A:239:THR:OG1	1:A:243:ARG:NH1	2.11	0.81
2:D:66:VAL:HG12	2:D:147:MET:HE1	1.62	0.81
1:A:161:TYR:HB3	1:A:164:LYS:HG2	1.62	0.81
4:F:138:ARG:NH1	4:F:144:GLY:O	2.12	0.81
1:A:112:LYS:NZ	1:A:113:GLU:OE2	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:PRO:HD3	1:A:86:LEU:HG	1.64	0.80
2:D:1:MET:HE3	2:D:128:ASP:HB2	1.65	0.79
2:B:406:MET:HE3	2:B:409:THR:HB	1.65	0.79
2:D:170:MET:HE2	2:D:377:LEU:HD21	1.64	0.78
2:D:134:GLN:HA	2:D:165:ASN:O	1.84	0.78
4:F:19:ARG:HD3	4:F:20:LEU:HD12	1.64	0.77
4:F:137:ARG:O	4:F:137:ARG:NH1	2.14	0.77
2:D:145:SER:HG	2:D:188:SER:HG	1.25	0.77
1:A:161:TYR:HB3	1:A:164:LYS:CG	2.15	0.77
2:D:44:LEU:HA	2:D:47:ILE:HB	1.68	0.75
2:D:176:SER:OG	2:D:181:GLU:OE1	2.02	0.75
4:F:214:TYR:HB3	4:F:375:PHE:HB3	1.68	0.75
4:F:3:THR:HG22	4:F:28:LYS:HG3	1.69	0.75
4:F:31:ARG:HH21	4:F:32:LYS:HG3	1.51	0.74
4:F:19:ARG:CD	4:F:20:LEU:HD12	2.18	0.74
1:C:93:ILE:HD11	1:C:121:ARG:HG3	1.69	0.73
2:B:81:PHE:O	2:B:84:ILE:HG22	1.88	0.73
2:D:301:ALA:O	2:D:303:CYS:N	2.22	0.73
2:D:285:THR:HG23	2:D:288:GLU:H	1.54	0.72
2:B:392:LYS:HE3	2:B:405:GLU:OE2	1.90	0.71
2:B:233:MET:O	2:B:237:THR:OG1	2.09	0.71
4:F:31:ARG:NH2	4:F:32:LYS:HG3	2.06	0.70
2:D:21:TRP:CZ3	2:D:61:PRO:HB3	2.27	0.70
1:C:221:ARG:HD2	2:D:327:ASP:OD2	1.91	0.70
4:F:100:ILE:HD12	4:F:128:ARG:N	2.07	0.70
4:F:135:TYR:OH	4:F:164:SER:O	2.09	0.69
4:F:144:GLY:HA3	4:F:187:GLU:OE1	1.92	0.69
1:A:63:PRO:CD	1:A:86:LEU:HG	2.23	0.69
1:A:93:ILE:HD11	1:A:121:ARG:HG3	1.75	0.69
1:A:265:ILE:HG21	1:A:313:MET:HE1	1.75	0.68
4:F:37:PHE:CZ	4:F:40:MET:HE3	2.28	0.68
4:F:138:ARG:HB3	4:F:145:ASN:OD1	1.94	0.68
1:C:250:VAL:HG11	1:C:352:LYS:HE3	1.75	0.67
2:B:316:ILE:HG23	2:B:366:THR:HB	1.76	0.67
3:E:46:SER:HB3	3:E:49:GLU:HG3	1.77	0.66
1:A:133:GLN:NE2	1:A:252:LEU:H	1.90	0.66
3:E:96:MET:O	3:E:100:LYS:HD3	1.96	0.66
1:A:233:GLN:HG3	1:A:368:LEU:CD1	2.25	0.66
1:A:211:ASP:OD2	1:A:304:LYS:NZ	2.16	0.65
1:C:335:ILE:HG23	1:C:339:ARG:HG3	1.79	0.65
4:F:213:ILE:CD1	4:F:296:MET:HE2	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:254:GLU:HG2	1:C:352:LYS:HE2	1.79	0.65
4:F:221:LEU:HD22	4:F:262:MET:CE	2.24	0.65
2:B:134:GLN:HA	2:B:165:ASN:O	1.96	0.65
2:B:330:MET:O	2:B:334:GLN:HG3	1.96	0.65
1:A:172:TYR:HB3	1:A:205:ASP:HA	1.78	0.65
1:C:241:SER:HA	1:C:249:ASN:OD1	1.97	0.65
4:F:87:LEU:O	4:F:88:SER:OG	2.12	0.65
4:F:188:LYS:HD3	4:F:323:GLU:OE1	1.97	0.65
3:E:130:ALA:O	3:E:133:VAL:HG12	1.96	0.65
4:F:135:TYR:CD2	4:F:166:ALA:HB2	2.32	0.65
2:D:321:MET:O	2:D:323:MET:HE2	1.97	0.65
4:F:5:VAL:HG12	4:F:30:LEU:HB2	1.79	0.64
2:B:66:VAL:CG1	2:B:147:MET:HE1	2.27	0.64
1:A:97:GLU:O	1:A:110:ILE:HD13	1.97	0.64
2:D:20:PHE:CZ	2:D:24:ILE:HD13	2.32	0.64
2:D:66:VAL:CG1	2:D:147:MET:HE1	2.27	0.64
2:D:1:MET:HE3	2:D:128:ASP:CB	2.28	0.64
4:F:225:SER:HB3	4:F:252:ASN:HB3	1.80	0.64
3:E:6:MET:HE2	3:E:24:LEU:CD2	2.27	0.64
4:F:186:LEU:HD12	4:F:320:MET:CG	2.26	0.64
2:B:170:MET:HG3	2:B:377:LEU:HD11	1.78	0.63
4:F:197:ARG:HH22	4:F:257:GLU:CD	2.06	0.63
3:E:121:GLU:O	3:E:124:GLN:HG3	1.97	0.63
2:B:293:MET:HE3	2:B:365:ALA:HB1	1.81	0.63
1:C:230:LEU:O	1:C:234:ILE:HD12	1.97	0.63
1:C:28:HIS:O	1:C:36:MET:HE3	1.98	0.63
1:C:119:LEU:HD11	1:C:156:ARG:HB3	1.82	0.62
1:A:402:ARG:HH11	1:A:402:ARG:HG3	1.65	0.62
2:B:189:VAL:CB	2:B:415:MET:HE3	2.30	0.62
1:A:133:GLN:HE21	1:A:252:LEU:HG	1.65	0.62
4:F:20:LEU:O	4:F:24:THR:HG23	2.00	0.62
2:D:395:LEU:HD21	2:D:405:GLU:CG	2.24	0.62
1:A:21:TRP:CZ3	1:A:63:PRO:HB3	2.34	0.62
1:A:275:VAL:HG13	1:A:368:LEU:HD21	1.81	0.61
2:D:5:VAL:HB	2:D:133:PHE:CD1	2.35	0.61
2:B:189:VAL:HB	2:B:415:MET:HE3	1.81	0.61
2:D:172:SER:OG	2:D:205:GLU:HB2	2.00	0.61
3:E:46:SER:O	3:E:50:ILE:HG12	1.99	0.61
3:E:58:GLU:HG3	3:E:61:ARG:NH2	2.14	0.61
1:C:333:ALA:O	1:C:337:THR:HG23	2.01	0.61
2:D:272:PRO:HB3	2:D:284:LEU:CD2	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:187:SER:HB3	1:A:391:LEU:HD21	1.82	0.61
2:B:117:LEU:HD11	2:B:154:LYS:HD3	1.81	0.61
1:A:166:LYS:NZ	1:A:197:HIS:O	2.22	0.60
1:A:133:GLN:NE2	1:A:251:ASP:HA	2.17	0.60
2:D:1:MET:HG3	2:D:128:ASP:HB3	1.83	0.60
2:B:324:LYS:O	2:B:328:GLU:HG3	2.02	0.60
2:D:63:ALA:O	2:D:64:ILE:HD13	2.02	0.60
4:F:74:LYS:HB3	4:F:181:VAL:HG11	1.84	0.60
2:D:7:ILE:O	2:D:135:LEU:HD12	2.01	0.60
1:C:97:GLU:O	1:C:110:ILE:HG21	2.01	0.60
2:D:316:ILE:HG13	10:D:502:A1EVC:S01	2.41	0.60
2:D:110:ALA:O	2:D:113:VAL:HG12	2.02	0.60
1:C:278:ALA:HA	1:C:369:ALA:HB2	1.84	0.59
1:A:71:GLU:HG2	1:A:72:PRO:N	2.15	0.59
1:A:221:ARG:HD2	2:B:327:ASP:OD2	2.02	0.59
2:B:67:ASP:O	2:B:92:PHE:HA	2.02	0.59
1:C:75:ILE:HD12	1:C:94:THR:HG22	1.84	0.59
1:A:62:VAL:HG13	1:A:86:LEU:O	2.01	0.59
1:A:187:SER:CB	1:A:391:LEU:HD21	2.32	0.59
2:B:323:MET:CE	2:B:353:VAL:HG11	2.31	0.59
1:C:88:HIS:HE1	1:C:90:GLU:HG3	1.68	0.59
2:D:105:HIS:O	2:D:150:LEU:HD22	2.03	0.59
1:C:166:LYS:HE2	1:C:197:HIS:O	2.03	0.58
2:D:65:LEU:HD23	2:D:76:VAL:HG11	1.85	0.58
2:B:262:ARG:NH1	2:B:421:GLU:OE1	2.36	0.58
2:B:406:MET:CE	2:B:409:THR:HB	2.33	0.58
2:D:246:LEU:HD13	2:D:248:ALA:HB2	1.85	0.58
3:E:58:GLU:HG3	3:E:61:ARG:HH21	1.69	0.58
2:B:101:TRP:CE3	2:B:187:LEU:HD13	2.38	0.58
2:D:73:MET:HE3	2:D:90:PHE:HD2	1.66	0.58
2:D:81:PHE:O	2:D:84:ILE:HG22	2.03	0.58
2:D:285:THR:HG22	2:D:288:GLU:CG	2.33	0.58
2:D:5:VAL:HB	2:D:133:PHE:HD1	1.69	0.58
2:B:189:VAL:HG21	2:B:415:MET:CE	2.33	0.58
1:C:101:ASN:ND2	2:D:252:LYS:HE2	2.19	0.58
1:A:97:GLU:HG3	2:B:2:ARG:NH1	2.19	0.58
2:D:64:ILE:HD12	2:D:119:VAL:HG12	1.86	0.58
2:D:67:ASP:OD1	2:D:143:THR:HG21	2.04	0.58
1:A:333:ALA:O	1:A:337:THR:HG23	2.04	0.57
1:A:335:ILE:HG23	1:A:339:ARG:HG3	1.86	0.57
1:C:88:HIS:CE1	1:C:90:GLU:HG3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:141:PHE:CE1	1:C:170:SER:HB3	2.39	0.57
2:B:386:THR:HG22	2:B:412:GLU:OE2	2.04	0.57
2:D:345:ILE:HG22	2:D:348:ASN:HB3	1.86	0.57
2:B:73:MET:HE3	2:B:90:PHE:HD2	1.68	0.57
2:B:406:MET:HE3	2:B:406:MET:HA	1.87	0.57
1:A:210:TYR:OH	1:A:221:ARG:HG3	2.04	0.57
4:F:99:VAL:O	4:F:100:ILE:HD13	2.05	0.57
1:A:18:ASN:OD1	1:A:78:VAL:HG22	2.05	0.57
1:C:71:GLU:HB3	1:C:98:ASP:HB3	1.87	0.57
2:B:378:PHE:HD1	2:B:415:MET:HE2	1.69	0.57
2:D:102:ALA:HB2	2:D:403:MET:SD	2.45	0.57
2:B:6:HIS:CD2	2:B:21:TRP:HE1	2.23	0.57
1:C:292:THR:HG22	1:C:335:ILE:CD1	2.35	0.57
1:A:88:HIS:CE1	1:A:90:GLU:HG3	2.40	0.57
4:F:346:LEU:O	4:F:350:ILE:HG13	2.03	0.57
1:A:88:HIS:HE1	1:A:90:GLU:HG3	1.70	0.56
2:B:293:MET:CE	2:B:365:ALA:HB1	2.34	0.56
1:A:133:GLN:HE21	1:A:252:LEU:N	1.91	0.56
1:C:172:TYR:HB3	1:C:205:ASP:HA	1.88	0.56
2:D:330:MET:HE2	2:D:351:THR:CG2	2.35	0.56
1:A:230:LEU:O	1:A:234:ILE:HD12	2.05	0.56
1:A:398:MET:HE3	1:A:404:PHE:HD2	1.70	0.56
2:D:21:TRP:CH2	2:D:61:PRO:HB3	2.39	0.56
4:F:191:LEU:HD22	4:F:196:HIS:CE1	2.40	0.56
2:D:316:ILE:N	2:D:316:ILE:HD12	2.20	0.56
1:A:133:GLN:NE2	1:A:252:LEU:HG	2.20	0.56
1:C:298:PRO:HG2	1:C:308:ARG:NH2	2.21	0.56
2:D:330:MET:O	2:D:334:GLN:HG3	2.06	0.56
4:F:192:LEU:HD21	4:F:262:MET:HE1	1.88	0.56
2:B:238:THR:HG21	2:B:316:ILE:HD11	1.87	0.56
1:C:320:ARG:HA	1:C:356:ASN:O	2.06	0.56
4:F:78:VAL:HG21	4:F:181:VAL:HG21	1.88	0.56
2:D:80:PRO:O	2:D:81:PHE:HB2	2.05	0.56
2:D:107:THR:O	2:D:111:GLU:HG3	2.06	0.56
1:A:261:PRO:HG3	1:A:313:MET:HB3	1.88	0.56
2:D:29:GLY:C	2:D:30:ILE:HD12	2.30	0.55
2:D:293:MET:CG	2:D:367:PHE:HB2	2.37	0.55
2:B:169:VAL:HA	2:B:202:ILE:O	2.07	0.55
1:C:21:TRP:CZ3	1:C:63:PRO:HB3	2.40	0.55
4:F:213:ILE:HD11	4:F:296:MET:HE2	1.88	0.55
1:A:21:TRP:CH2	1:A:63:PRO:HB3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:404:ASP:OD1	2:D:405:GLU:N	2.40	0.55
2:D:272:PRO:HB3	2:D:284:LEU:HD21	1.89	0.55
4:F:148:ILE:O	4:F:182:ILE:HA	2.07	0.55
1:A:36:MET:HB3	1:A:61:HIS:CE1	2.42	0.55
1:A:103:TYR:CE1	1:A:148:GLY:HA2	2.41	0.55
2:D:7:ILE:O	2:D:135:LEU:HA	2.07	0.55
2:D:117:LEU:HD11	2:D:154:LYS:HB3	1.88	0.55
1:C:249:ASN:OD1	1:C:356:ASN:ND2	2.36	0.54
4:F:20:LEU:HD23	4:F:348:GLN:OE1	2.07	0.54
2:D:176:SER:HG	2:D:181:GLU:CD	2.14	0.54
2:D:73:MET:CE	2:D:90:PHE:HB3	2.37	0.54
4:F:148:ILE:HD13	4:F:162:ILE:HG12	1.89	0.54
1:A:28:HIS:O	1:A:36:MET:HE3	2.07	0.54
4:F:138:ARG:HB3	4:F:145:ASN:CG	2.32	0.54
1:C:275:VAL:HG13	1:C:368:LEU:HD21	1.89	0.54
2:D:330:MET:O	2:D:333:VAL:HG12	2.08	0.54
4:F:219:GLY:HA3	4:F:264:PHE:CZ	2.43	0.54
1:A:112:LYS:HE2	3:E:61:ARG:HH22	1.73	0.54
2:B:73:MET:HE3	2:B:90:PHE:CD2	2.42	0.54
4:F:135:TYR:HE1	4:F:145:ASN:HB3	1.73	0.54
2:B:19:LYS:O	2:B:23:VAL:HG23	2.08	0.54
4:F:283:ILE:HG23	4:F:327:VAL:HG22	1.89	0.54
2:B:330:MET:O	2:B:333:VAL:HG12	2.07	0.54
2:D:101:TRP:NE1	2:D:146:GLY:HA2	2.23	0.54
4:F:205:VAL:HG21	4:F:291:ILE:HD13	1.90	0.53
2:D:206:ALA:O	2:D:210:ILE:HG13	2.08	0.53
2:B:309:ARG:NH2	2:B:342:VAL:HA	2.18	0.53
4:F:31:ARG:NH1	4:F:31:ARG:HA	2.23	0.53
2:D:310:TYR:CE1	2:D:367:PHE:HZ	2.27	0.53
2:B:301:ALA:O	2:B:303:CYS:N	2.42	0.53
1:A:9:VAL:HG22	1:A:68:VAL:CG1	2.38	0.53
1:A:210:TYR:CZ	1:A:222:PRO:HD2	2.44	0.53
2:B:375:GLN:OE1	2:B:423:GLN:HG2	2.09	0.53
1:C:287:SER:OG	1:C:290:GLU:HG3	2.09	0.53
2:D:72:THR:O	2:D:76:VAL:HG23	2.09	0.53
3:E:75:LYS:O	3:E:79:GLU:HG3	2.09	0.53
4:F:135:TYR:CE1	4:F:145:ASN:HB3	2.44	0.53
2:B:36:TYR:CE2	2:B:44:LEU:HD11	2.43	0.53
2:B:323:MET:HE3	2:B:353:VAL:CG1	2.33	0.53
1:A:265:ILE:HD12	1:A:265:ILE:N	2.24	0.52
1:C:265:ILE:HG22	1:C:265:ILE:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:67:ASP:O	2:D:92:PHE:HA	2.09	0.52
2:D:386:THR:O	2:D:390:ARG:HG2	2.10	0.52
2:B:237:THR:HB	2:B:241:ARG:HE	1.74	0.52
1:A:34:GLY:HA3	1:A:60:LYS:HG3	1.92	0.52
1:A:241:SER:HB2	1:A:249:ASN:O	2.10	0.52
2:B:44:LEU:HA	2:B:47:ILE:HB	1.91	0.52
1:C:7:ILE:HG21	1:C:153:LEU:HD21	1.92	0.52
2:D:266:PHE:O	2:D:268:PRO:HD3	2.09	0.52
4:F:135:TYR:CE2	4:F:166:ALA:HB2	2.45	0.52
1:A:302:MET:N	1:A:302:MET:HE2	2.24	0.52
2:B:238:THR:OG1	2:B:318:ARG:HD2	2.09	0.52
2:D:138:SER:HA	2:D:169:VAL:HB	1.91	0.52
2:B:102:ALA:HB2	2:B:403:MET:SD	2.49	0.52
2:B:378:PHE:CD1	2:B:415:MET:HE2	2.45	0.52
1:C:139:HIS:CD2	1:C:150:THR:HG21	2.45	0.52
1:C:221:ARG:NE	2:D:323:MET:HB3	2.24	0.52
2:D:179:VAL:HG21	2:D:394:PHE:CZ	2.45	0.52
2:D:246:LEU:HD12	2:D:246:LEU:O	2.08	0.52
4:F:224:SER:OG	4:F:238:CYS:HA	2.09	0.52
1:A:221:ARG:NE	2:B:323:MET:HB3	2.25	0.52
1:A:328:VAL:O	1:A:332:ILE:HG13	2.10	0.52
2:D:386:THR:HG22	2:D:412:GLU:OE2	2.10	0.52
4:F:213:ILE:HD12	4:F:296:MET:HE2	1.90	0.52
2:B:395:LEU:HD21	2:B:405:GLU:HG2	1.91	0.51
1:A:210:TYR:CE1	1:A:222:PRO:HD2	2.45	0.51
1:C:97:GLU:HG3	2:D:2:ARG:NH1	2.25	0.51
2:B:103:LYS:HE2	2:B:401:GLU:OE2	2.10	0.51
2:D:392:LYS:HD2	2:D:405:GLU:OE2	2.10	0.51
2:D:211:CYS:HA	2:D:215:LEU:HB2	1.92	0.51
2:B:166:THR:OG1	2:B:199:THR:HG22	2.10	0.51
2:B:203:ASP:CG	2:B:380:ARG:HH22	2.17	0.51
2:D:27:GLU:OE2	2:D:234:SER:OG	2.25	0.51
2:B:21:TRP:CZ3	2:B:61:PRO:HB3	2.45	0.51
3:E:138:GLU:C	3:E:140:LYS:H	2.19	0.51
4:F:197:ARG:NH2	4:F:257:GLU:OE2	2.43	0.51
1:A:161:TYR:HB3	1:A:164:LYS:HG3	1.92	0.51
1:C:108:TYR:O	1:C:112:LYS:HG2	2.11	0.51
1:C:162:GLY:HA2	3:E:94:ILE:HD11	1.92	0.51
2:D:201:CYS:SG	2:D:265:PHE:HB3	2.51	0.51
4:F:192:LEU:HD21	4:F:262:MET:CE	2.40	0.51
2:B:151:LEU:O	2:B:155:ILE:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:158:SER:OG	1:C:166:LYS:HE3	2.12	0.50
4:F:74:LYS:O	4:F:78:VAL:HG23	2.11	0.50
1:C:18:ASN:OD1	1:C:78:VAL:HG22	2.11	0.50
1:C:21:TRP:CH2	1:C:63:PRO:HB3	2.46	0.50
2:D:12:CYS:SG	2:D:169:VAL:HG21	2.50	0.50
1:C:292:THR:HG22	1:C:335:ILE:HD12	1.92	0.50
2:D:7:ILE:HG21	2:D:151:LEU:CD2	2.41	0.50
1:A:357:TYR:CE2	3:E:17:GLY:HA2	2.46	0.50
2:D:377:LEU:C	2:D:377:LEU:HD23	2.36	0.50
4:F:128:ARG:N	4:F:128:ARG:HD2	2.26	0.50
2:B:139:LEU:HD22	2:B:188:SER:HB3	1.93	0.50
4:F:263:PHE:CE2	4:F:341:LYS:HD3	2.47	0.50
2:D:32:PRO:O	2:D:84:ILE:HB	2.11	0.50
2:D:64:ILE:HD11	2:D:123:GLU:HG3	1.93	0.50
2:D:189:VAL:HB	2:D:415:MET:HE3	1.93	0.50
4:F:191:LEU:HD23	4:F:196:HIS:O	2.12	0.50
4:F:208:ASP:OD2	4:F:212:ASN:HB2	2.12	0.50
2:D:64:ILE:HD12	2:D:119:VAL:CG1	2.41	0.50
2:D:65:LEU:N	2:D:65:LEU:HD12	2.27	0.50
4:F:286:GLN:O	4:F:290:ILE:HG13	2.12	0.50
1:A:112:LYS:HE2	3:E:61:ARG:NH2	2.26	0.50
2:B:29:GLY:C	2:B:30:ILE:HD12	2.37	0.50
3:E:131:GLU:OE1	3:E:131:GLU:HA	2.12	0.50
4:F:148:ILE:HD13	4:F:162:ILE:CG1	2.41	0.50
1:C:66:VAL:HG23	1:C:125:LEU:HD12	1.93	0.49
3:E:96:MET:HE3	3:E:100:LYS:HE2	1.94	0.49
2:D:23:VAL:O	2:D:27:GLU:HG3	2.11	0.49
2:D:20:PHE:CE1	2:D:24:ILE:HG21	2.47	0.49
4:F:377:LYS:HD3	4:F:379:HIS:HE1	1.77	0.49
2:B:31:ASP:HB2	2:B:32:PRO:HD2	1.95	0.49
4:F:202:ARG:HB3	4:F:220:VAL:HG12	1.95	0.49
4:F:334:GLY:C	4:F:336:PRO:HD3	2.37	0.49
2:D:106:TYR:CD1	3:E:133:VAL:HG11	2.47	0.49
2:D:401:GLU:HA	3:E:137:LYS:HD2	1.95	0.49
3:E:130:ALA:HA	3:E:133:VAL:HG12	1.94	0.49
1:A:123:ARG:HH22	1:A:160:ASP:HB3	1.78	0.49
2:D:73:MET:HE3	2:D:90:PHE:CD2	2.46	0.49
3:E:101:LEU:O	3:E:105:MET:HG2	2.12	0.49
1:A:93:ILE:CD1	1:A:121:ARG:HG3	2.40	0.49
1:A:433:GLU:O	1:A:437:VAL:HG23	2.13	0.49
2:D:21:TRP:CE3	2:D:61:PRO:HB3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:6:HIS:CE1	2:D:21:TRP:HE1	2.31	0.49
4:F:130:VAL:HG12	4:F:130:VAL:O	2.12	0.49
4:F:191:LEU:HD23	4:F:196:HIS:C	2.38	0.49
1:C:112:LYS:NZ	1:C:113:GLU:OE2	2.45	0.48
2:D:112:LEU:O	2:D:116:VAL:HG23	2.13	0.48
2:B:2:ARG:HB3	2:B:131:GLN:CG	2.43	0.48
2:D:31:ASP:HB2	2:D:32:PRO:HD2	1.95	0.48
1:A:71:GLU:HG2	1:A:72:PRO:CD	2.43	0.48
2:D:73:MET:HE3	2:D:90:PHE:HB3	1.95	0.48
2:B:101:TRP:HD1	2:B:145:SER:OG	1.96	0.48
1:C:252:LEU:O	1:C:256:GLN:HG3	2.13	0.48
2:D:272:PRO:HB3	2:D:284:LEU:HD22	1.95	0.48
1:C:344:VAL:HG21	1:C:346:TRP:CE2	2.49	0.48
4:F:198:LYS:HG2	4:F:199:PHE:H	1.78	0.48
2:B:65:LEU:HD22	2:B:90:PHE:CE2	2.49	0.48
2:D:73:MET:SD	2:D:92:PHE:HB3	2.54	0.48
2:D:285:THR:HG22	2:D:288:GLU:HG3	1.94	0.48
3:E:80:ARG:HA	3:E:83:ILE:HG22	1.96	0.48
4:F:131:PHE:CG	4:F:182:ILE:HD11	2.48	0.48
1:C:221:ARG:CZ	2:D:323:MET:HB3	2.44	0.48
2:D:1:MET:HE3	2:D:128:ASP:CG	2.38	0.48
1:C:36:MET:HB3	1:C:61:HIS:CE1	2.49	0.48
3:E:139:LEU:O	3:E:139:LEU:HG	2.14	0.48
1:A:247:ALA:HB3	3:E:19:SER:OG	2.14	0.48
2:D:285:THR:OG1	2:D:287:PRO:HD2	2.13	0.48
4:F:98:TYR:O	4:F:181:VAL:HG23	2.14	0.48
2:D:19:LYS:O	2:D:23:VAL:HG23	2.14	0.47
4:F:135:TYR:HD2	4:F:166:ALA:HB2	1.78	0.47
4:F:198:LYS:HG2	4:F:199:PHE:N	2.28	0.47
2:B:293:MET:HE3	2:B:365:ALA:CB	2.43	0.47
2:D:63:ALA:O	2:D:89:ASN:ND2	2.41	0.47
4:F:142:ARG:O	4:F:142:ARG:HG2	2.13	0.47
1:A:323:VAL:HG12	1:A:355:ILE:HD13	1.97	0.47
1:A:345:ASP:HB3	3:E:28:SER:HB2	1.95	0.47
2:B:2:ARG:HA	2:B:129:CYS:O	2.14	0.47
2:B:21:TRP:CZ3	2:B:24:ILE:HD11	2.49	0.47
2:B:310:TYR:CD1	2:B:371:SER:HB2	2.49	0.47
2:D:286:VAL:HB	2:D:287:PRO:HD3	1.96	0.47
4:F:213:ILE:HD13	4:F:295:LEU:CD1	2.45	0.47
1:A:398:MET:HE3	1:A:404:PHE:CD2	2.49	0.47
2:B:23:VAL:O	2:B:27:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:251:ARG:O	2:B:255:VAL:HG23	2.14	0.47
1:C:265:ILE:N	1:C:265:ILE:HD12	2.29	0.47
2:B:4:ILE:O	2:B:62:ARG:HD2	2.15	0.47
1:A:71:GLU:HG2	1:A:72:PRO:HD2	1.96	0.47
4:F:283:ILE:HG23	4:F:327:VAL:CG2	2.44	0.47
2:B:267:MET:HG2	2:B:301:ALA:HB3	1.95	0.47
2:D:7:ILE:HG21	2:D:151:LEU:HD21	1.96	0.47
1:A:192:HIS:CG	1:A:421:ALA:HA	2.50	0.47
1:A:209:ILE:HG22	1:A:227:LEU:CD2	2.45	0.47
2:D:152:ILE:HG23	2:D:164:MET:HG2	1.96	0.47
2:D:101:TRP:CE3	2:D:187:LEU:HD13	2.50	0.47
1:A:2:ARG:O	1:A:51:THR:HG22	2.14	0.46
2:B:404:ASP:OD1	2:B:405:GLU:N	2.47	0.46
2:D:170:MET:O	2:D:204:ASN:HB2	2.16	0.46
3:E:72:LEU:O	3:E:76:ARG:HG2	2.15	0.46
4:F:216:TYR:CE2	4:F:218:GLU:HB2	2.50	0.46
2:B:64:ILE:HD12	2:B:120:VAL:HG22	1.96	0.46
2:B:36:TYR:CD2	2:B:44:LEU:HD11	2.51	0.46
1:A:147:SER:HB2	1:A:190:THR:HB	1.98	0.46
2:B:7:ILE:O	2:B:135:LEU:HD12	2.16	0.46
2:B:197:ASP:C	2:B:198:GLU:HG3	2.40	0.46
2:B:377:LEU:C	2:B:377:LEU:HD23	2.40	0.46
1:C:270:ALA:O	1:C:302:MET:HG2	2.15	0.46
4:F:191:LEU:HA	4:F:197:ARG:O	2.16	0.46
4:F:350:ILE:O	4:F:354:ALA:HB3	2.16	0.46
2:B:316:ILE:CG2	2:B:366:THR:HB	2.44	0.46
2:B:189:VAL:HG11	2:B:415:MET:HE3	1.96	0.46
2:D:323:MET:HE3	2:D:323:MET:H	1.80	0.46
4:F:19:ARG:HD2	4:F:20:LEU:HD12	1.97	0.46
2:D:1:MET:HB2	2:D:3:GLU:OE2	2.15	0.46
2:B:189:VAL:CG1	2:B:415:MET:HE3	2.46	0.45
1:C:164:LYS:HE2	1:C:164:LYS:HB2	1.77	0.45
2:D:163:ILE:HG21	2:D:250:LEU:HB3	1.98	0.45
2:B:65:LEU:N	2:B:65:LEU:HD12	2.31	0.45
2:B:304:ASP:HB3	2:B:307:HIS:CG	2.51	0.45
2:B:7:ILE:O	2:B:135:LEU:HA	2.15	0.45
1:C:302:MET:N	1:C:302:MET:HE2	2.32	0.45
2:D:65:LEU:CD2	2:D:76:VAL:HG11	2.45	0.45
2:D:211:CYS:O	2:D:215:LEU:HB2	2.16	0.45
2:B:178:THR:O	2:B:181:GLU:HG3	2.16	0.45
2:D:66:VAL:HA	2:D:91:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:77:ARG:O	2:D:82:GLY:HA3	2.16	0.45
1:A:385:ALA:HB2	1:A:432:TYR:CG	2.52	0.45
2:B:350:LYS:HB2	10:B:505:A1EVC:C14	2.47	0.45
2:D:1:MET:HB3	2:D:48:ASN:ND2	2.31	0.45
2:D:104:GLY:O	2:D:109:GLY:HA3	2.16	0.45
4:F:178:GLN:N	4:F:178:GLN:OE1	2.50	0.45
2:B:5:VAL:HB	2:B:133:PHE:CD1	2.51	0.45
2:D:267:MET:HG2	2:D:301:ALA:HB3	1.98	0.45
2:D:170:MET:HG3	2:D:377:LEU:HD11	1.99	0.45
2:B:232:THR:OG1	2:B:300:MET:HE3	2.17	0.45
2:D:117:LEU:HD11	2:D:154:LYS:CB	2.47	0.45
2:B:152:ILE:HG23	2:B:164:MET:HG2	1.99	0.45
2:B:293:MET:HE2	2:B:366:THR:C	2.42	0.45
2:D:306:ARG:HA	2:D:340:TYR:CE1	2.51	0.45
4:F:14:TYR:HB3	4:F:41:LEU:HD13	1.98	0.45
4:F:216:TYR:CZ	4:F:218:GLU:HB2	2.52	0.45
1:A:72:PRO:CB	1:A:94:THR:HG21	2.38	0.45
1:A:336:LYS:HG2	3:E:24:LEU:HD13	1.99	0.45
2:D:65:LEU:HD22	2:D:90:PHE:CE2	2.52	0.45
1:A:320:ARG:HA	1:A:356:ASN:O	2.17	0.44
2:B:266:PHE:O	2:B:268:PRO:HD3	2.17	0.44
2:D:267:MET:HE1	2:D:305:PRO:HG3	1.98	0.44
4:F:4:PHE:HB3	4:F:27:TRP:CZ3	2.53	0.44
1:A:265:ILE:O	1:A:265:ILE:HG22	2.17	0.44
2:D:189:VAL:CB	2:D:415:MET:HE3	2.46	0.44
1:A:133:GLN:HE22	1:A:251:ASP:HA	1.81	0.44
1:A:402:ARG:HG3	1:A:402:ARG:NH1	2.31	0.44
2:B:106:TYR:OH	2:B:407:GLU:OE2	2.25	0.44
1:C:163:LYS:HD3	1:C:163:LYS:HA	1.54	0.44
1:C:227:LEU:O	1:C:231:ILE:HG13	2.17	0.44
1:C:23:LEU:O	1:C:27:GLU:HG3	2.17	0.44
1:C:93:ILE:HG22	1:C:114:ILE:HD11	1.99	0.44
2:D:121:ARG:NE	2:D:158:GLU:OE2	2.44	0.44
4:F:148:ILE:HG13	4:F:149:ALA:N	2.32	0.44
1:A:270:ALA:HB3	1:A:302:MET:HG2	1.99	0.44
1:A:345:ASP:O	3:E:28:SER:N	2.51	0.44
2:D:2:ARG:O	2:D:131:GLN:NE2	2.40	0.44
2:B:61:PRO:HD3	2:B:84:ILE:HG12	2.00	0.44
1:C:293:ASN:HD21	1:C:339:ARG:HH21	1.64	0.44
1:A:401:LYS:HG3	2:B:344:TRP:CD2	2.53	0.44
2:B:103:LYS:HA	2:B:107:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1:MET:CE	2:D:128:ASP:HB2	2.41	0.44
2:D:206:ALA:HB2	2:D:302:ALA:N	2.32	0.44
2:D:403:MET:HE3	2:D:407:GLU:CD	2.43	0.44
1:A:316:CYS:HA	1:A:352:LYS:O	2.18	0.44
2:B:31:ASP:HB2	2:B:32:PRO:CD	2.48	0.44
1:C:124:LYS:HE2	1:C:124:LYS:HB3	1.81	0.44
2:D:75:SER:O	2:D:79:GLY:N	2.48	0.44
2:B:304:ASP:HB3	2:B:307:HIS:ND1	2.34	0.43
2:D:36:TYR:CE1	2:D:38:GLY:HA3	2.53	0.43
2:B:21:TRP:CE3	2:B:24:ILE:HD11	2.53	0.43
2:B:285:THR:HB	2:B:287:PRO:HD2	1.98	0.43
2:B:372:THR:CB	2:B:426:GLN:HB2	2.48	0.43
1:A:136:LEU:HD23	1:A:167:LEU:HB2	2.00	0.43
2:D:330:MET:HA	2:D:333:VAL:HG12	2.01	0.43
1:A:28:HIS:CE1	1:A:243:ARG:HB3	2.53	0.43
1:A:158:SER:OG	1:A:166:LYS:HE2	2.19	0.43
1:A:265:ILE:CG2	1:A:313:MET:HE1	2.48	0.43
1:C:134:GLY:HA2	1:C:164:LYS:HG3	2.00	0.43
1:C:391:LEU:HD23	1:C:391:LEU:HA	1.90	0.43
2:B:263:LEU:HD11	2:B:425:TYR:CD2	2.54	0.43
4:F:214:TYR:HB3	4:F:375:PHE:CB	2.45	0.43
2:B:145:SER:OG	2:B:188:SER:OG	2.12	0.43
4:F:31:ARG:HG3	4:F:32:LYS:N	2.33	0.43
4:F:197:ARG:HB3	4:F:224:SER:O	2.18	0.43
4:F:298:ILE:HD12	4:F:302:ILE:HD13	1.99	0.43
1:C:93:ILE:CD1	1:C:121:ARG:HG3	2.45	0.43
1:C:106:GLY:O	1:C:111:GLY:HA3	2.19	0.43
3:E:47:LEU:HD12	3:E:47:LEU:O	2.19	0.43
4:F:192:LEU:HD12	4:F:192:LEU:N	2.34	0.43
1:C:209:ILE:HG23	1:C:230:LEU:HD23	2.01	0.43
2:D:238:THR:OG1	2:D:318:ARG:HD2	2.19	0.43
4:F:199:PHE:CD2	4:F:221:LEU:HD23	2.54	0.43
1:A:270:ALA:HB3	1:A:302:MET:CG	2.49	0.43
2:D:218:THR:HG23	2:D:219:THR:N	2.34	0.43
4:F:234:GLN:O	4:F:236:LYS:N	2.52	0.43
1:C:345:ASP:OD2	1:C:439:SER:N	2.32	0.42
4:F:205:VAL:CG2	4:F:291:ILE:HD13	2.49	0.42
4:F:307:LEU:HD23	4:F:307:LEU:HA	1.82	0.42
2:B:293:MET:HG3	2:B:367:PHE:HB2	2.01	0.42
2:D:172:SER:CB	2:D:205:GLU:HB2	2.48	0.42
1:A:334:THR:O	1:A:337:THR:OG1	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:31:ASP:HB2	2:D:32:PRO:CD	2.47	0.42
1:A:94:THR:HG22	1:A:95:GLY:O	2.19	0.42
1:A:124:LYS:HB3	1:A:124:LYS:HE2	1.72	0.42
1:A:351:PHE:O	3:E:22:VAL:HG12	2.19	0.42
1:C:2:ARG:NH2	1:C:133:GLN:OE1	2.52	0.42
4:F:175:GLU:HG2	4:F:175:GLU:O	2.18	0.42
4:F:199:PHE:CE2	4:F:221:LEU:HD23	2.54	0.42
4:F:208:ASP:CG	4:F:212:ASN:HB2	2.44	0.42
4:F:272:MET:HG2	4:F:277:THR:O	2.19	0.42
2:B:21:TRP:CE3	2:B:61:PRO:HB3	2.55	0.42
1:C:117:LEU:HD11	1:C:121:ARG:NH2	2.34	0.42
4:F:195:GLY:C	4:F:197:ARG:HG3	2.44	0.42
2:D:375:GLN:OE1	2:D:379:LYS:HE3	2.19	0.42
1:A:209:ILE:HG22	1:A:227:LEU:HD22	2.02	0.42
1:C:66:VAL:HG23	1:C:125:LEU:CD1	2.50	0.42
1:C:233:GLN:HG3	1:C:368:LEU:CD1	2.50	0.42
2:D:91:VAL:HG11	2:D:116:VAL:HG22	2.01	0.42
2:B:31:ASP:CG	2:B:33:THR:HG22	2.45	0.42
1:C:210:TYR:CE1	1:C:222:PRO:HD2	2.55	0.42
4:F:16:GLU:O	4:F:20:LEU:HD13	2.19	0.42
4:F:189:PRO:HA	4:F:322:ASP:HA	2.02	0.42
1:A:217:LEU:HD21	1:A:368:LEU:HD23	2.02	0.42
2:B:170:MET:HE3	2:B:381:ILE:HD11	2.02	0.42
1:C:161:TYR:O	1:C:162:GLY:C	2.62	0.42
2:D:31:ASP:CG	2:D:33:THR:HG22	2.45	0.42
4:F:263:PHE:CZ	4:F:341:LYS:HD3	2.55	0.42
2:B:50:TYR:OH	2:B:237:THR:CG2	2.68	0.41
2:D:197:ASP:C	2:D:198:GLU:HG3	2.45	0.41
1:C:192:HIS:CG	1:C:421:ALA:HA	2.55	0.41
2:D:211:CYS:HA	2:D:215:LEU:HD12	2.02	0.41
2:D:288:GLU:O	2:D:292:GLN:HG3	2.20	0.41
2:D:402:GLY:C	3:E:133:VAL:HG23	2.45	0.41
3:E:83:ILE:O	3:E:87:ILE:HG13	2.20	0.41
1:C:163:LYS:O	1:C:164:LYS:C	2.64	0.41
2:D:2:ARG:NH1	2:D:129:CYS:SG	2.92	0.41
2:D:251:ARG:O	2:D:255:VAL:HG23	2.21	0.41
2:D:285:THR:CG2	2:D:288:GLU:H	2.27	0.41
2:B:176:SER:HB2	2:B:181:GLU:OE1	2.20	0.41
2:B:235:GLY:HA3	2:B:366:THR:OG1	2.21	0.41
4:F:31:ARG:NE	4:F:32:LYS:H	2.19	0.41
4:F:253:TYR:CZ	4:F:259:GLY:HA2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:96:MET:CE	3:E:100:LYS:HE2	2.51	0.41
2:B:267:MET:HE1	2:B:305:PRO:HG3	2.01	0.41
2:D:273:LEU:HD11	2:D:298:ASN:HA	2.01	0.41
1:A:33:ASP:O	1:A:60:LYS:HE2	2.20	0.41
1:A:325:PRO:HB3	3:E:20:PHE:CE1	2.55	0.41
1:C:75:ILE:HB	1:C:94:THR:CG2	2.50	0.41
2:D:285:THR:CG2	2:D:288:GLU:HG3	2.51	0.41
4:F:2:TYR:CZ	4:F:359:PHE:HB3	2.55	0.41
4:F:80:LEU:HD12	4:F:84:SER:OG	2.20	0.41
1:A:237:SER:O	1:A:318:LEU:HD23	2.20	0.41
1:A:286:LEU:HA	1:A:290:GLU:OE1	2.21	0.41
2:B:201:CYS:SG	2:B:265:PHE:HB3	2.61	0.41
2:B:395:LEU:HD12	2:B:395:LEU:HA	1.86	0.41
1:C:343:PHE:HD2	1:C:347:CYS:SG	2.42	0.41
4:F:287:ILE:HG23	4:F:319:PHE:CZ	2.55	0.41
1:A:413:MET:HE2	1:A:413:MET:HB3	1.97	0.41
2:D:63:ALA:C	2:D:64:ILE:HD13	2.46	0.41
2:D:167:PHE:CE2	2:D:233:MET:HG2	2.56	0.41
2:D:375:GLN:O	2:D:376:GLU:C	2.63	0.41
4:F:58:LEU:HD23	4:F:58:LEU:HA	1.93	0.41
4:F:213:ILE:HD13	4:F:295:LEU:HD12	2.02	0.41
1:C:210:TYR:CZ	1:C:222:PRO:HD2	2.56	0.40
4:F:47:LEU:HD23	4:F:48:PRO:HD2	2.03	0.40
4:F:138:ARG:HB3	4:F:145:ASN:ND2	2.36	0.40
2:B:8:GLN:HB3	2:B:136:THR:OG1	2.21	0.40
1:C:63:PRO:HG2	1:C:87:PHE:CE1	2.57	0.40
2:D:28:HIS:HA	2:D:43:GLN:HB3	2.03	0.40
1:A:280:LYS:HE2	1:A:280:LYS:HB3	1.86	0.40
2:B:30:ILE:HD12	2:B:30:ILE:N	2.37	0.40
2:B:198:GLU:OE2	2:B:254:ALA:HB2	2.21	0.40
1:C:104:ALA:HB2	1:C:413:MET:SD	2.62	0.40
1:A:389:ALA:O	1:A:390:ARG:C	2.62	0.40
4:F:13:VAL:O	4:F:17:VAL:HG23	2.22	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	435/440 (99%)	421 (97%)	13 (3%)	1 (0%)	43	62
1	C	438/440 (100%)	424 (97%)	12 (3%)	2 (0%)	24	41
2	B	425/431 (99%)	408 (96%)	16 (4%)	1 (0%)	43	62
2	D	417/431 (97%)	402 (96%)	12 (3%)	3 (1%)	18	32
3	E	117/136 (86%)	114 (97%)	2 (2%)	1 (1%)	14	26
4	F	322/380 (85%)	306 (95%)	14 (4%)	2 (1%)	21	36
All	All	2154/2258 (95%)	2075 (96%)	69 (3%)	10 (0%)	24	41

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	D	142	GLY
2	D	302	ALA
4	F	129	GLU
2	B	302	ALA
3	E	27	PRO
1	A	109	THR
1	C	109	THR
4	F	253	TYR
2	D	145	SER
1	C	162	GLY

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	366/371 (99%)	363 (99%)	3 (1%)	73	88
1	C	370/371 (100%)	366 (99%)	4 (1%)	65	83
2	B	367/372 (99%)	360 (98%)	7 (2%)	50	74
2	D	362/372 (97%)	360 (99%)	2 (1%)	78	90
3	E	109/122 (89%)	109 (100%)	0	100	100
4	F	295/338 (87%)	287 (97%)	8 (3%)	39	65
All	All	1869/1946 (96%)	1845 (99%)	24 (1%)	61	81

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	41	THR
1	A	71	GLU
1	A	297	GLU
2	B	237	THR
2	B	246	LEU
2	B	293	MET
2	B	316	ILE
2	B	323	MET
2	B	413	SER
2	B	423	GLN
1	C	71	GLU
1	C	163	LYS
1	C	297	GLU
1	C	347	CYS
2	D	323	MET
2	D	356	ILE
4	F	31	ARG
4	F	89	GLU
4	F	175	GLU
4	F	179	VAL
4	F	180	HIS
4	F	197	ARG
4	F	264	PHE
4	F	333	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	133	GLN

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Mol	Chain	Res	Type
1	A	372	GLN
2	B	332	ASN
4	F	379	HIS

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 14 ligands modelled in this entry, 5 are monoatomic - leaving 9 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
5	GTP	A	501	7	30,34,34	0.82	1 (3%)	46,54,54	1.76	11 (23%)
10	A1EVC	B	505	-	24,25,25	3.43	11 (45%)	31,37,37	6.62	12 (38%)
8	GDP	B	501	7	28,30,30	1.13	3 (10%)	44,47,47	1.84	8 (18%)
5	GTP	C	501	7	30,34,34	0.83	1 (3%)	46,54,54	1.77	11 (23%)
8	GDP	D	501	-	28,30,30	1.14	3 (10%)	44,47,47	1.85	9 (20%)
9	MES	B	502	-	12,12,12	1.12	1 (8%)	14,16,16	0.78	0
11	ACP	F	401	-	30,33,33	2.05	2 (6%)	45,52,52	1.03	3 (6%)
10	A1EVC	D	502	-	24,25,25	3.44	10 (41%)	31,37,37	6.76	13 (41%)
9	MES	B	503	-	12,12,12	1.10	1 (8%)	14,16,16	0.76	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	GTP	A	501	7	-	7/22/38/38	0/3/3/3
10	A1EVC	B	505	-	-	0/8/8/8	0/4/4/4
8	GDP	B	501	7	-	3/16/32/32	0/3/3/3
5	GTP	C	501	7	-	4/22/38/38	0/3/3/3
8	GDP	D	501	-	-	4/16/32/32	0/3/3/3
9	MES	B	502	-	-	5/6/14/14	0/1/1/1
11	ACP	F	401	-	-	3/19/38/38	0/3/3/3
10	A1EVC	D	502	-	-	0/8/8/8	0/4/4/4
9	MES	B	503	-	-	2/6/14/14	0/1/1/1

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	D	502	A1EVC	N05-N04	-13.22	1.30	1.37
10	B	505	A1EVC	N05-N04	-13.12	1.30	1.37
11	F	401	ACP	PB-O3A	10.33	1.69	1.58
10	D	502	A1EVC	C06-N03	4.33	1.48	1.39
10	B	505	A1EVC	C06-N03	4.31	1.48	1.39
10	D	502	A1EVC	C14-N04	-3.84	1.27	1.32
10	B	505	A1EVC	C14-N04	-3.72	1.27	1.32
10	B	505	A1EVC	C10-C14	3.46	1.46	1.42
10	D	502	A1EVC	C10-C14	3.39	1.46	1.42
10	D	502	A1EVC	C10-C11	3.28	1.46	1.41
10	D	502	A1EVC	C11-N05	3.15	1.43	1.36
8	B	501	GDP	C5-C4	3.13	1.47	1.38
8	D	501	GDP	C5-C4	3.12	1.47	1.38
10	B	505	A1EVC	C10-C11	3.06	1.45	1.41
10	B	505	A1EVC	C11-N05	3.02	1.43	1.36
9	B	502	MES	C8-S	2.96	1.81	1.77
10	B	505	A1EVC	C03-C06	-2.93	1.38	1.42
9	B	503	MES	C8-S	2.82	1.81	1.77
10	D	502	A1EVC	C03-C06	-2.75	1.38	1.42
10	B	505	A1EVC	C08-N03	2.70	1.48	1.42
10	D	502	A1EVC	C08-N03	2.52	1.48	1.42
8	D	501	GDP	C6-N1	-2.47	1.34	1.38
8	B	501	GDP	C6-N1	-2.40	1.34	1.38
10	D	502	A1EVC	C05-CL01	2.23	1.79	1.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	C	501	GTP	C2-N3	2.23	1.38	1.33
11	F	401	ACP	PB-O2B	-2.20	1.51	1.56
5	A	501	GTP	C2-N3	2.17	1.38	1.33
10	D	502	A1EVC	C05-N01	2.17	1.36	1.32
10	B	505	A1EVC	C05-CL01	2.15	1.79	1.73
8	D	501	GDP	C5-N7	-2.15	1.34	1.39
8	B	501	GDP	C5-N7	-2.12	1.35	1.39
10	B	505	A1EVC	C05-N01	2.05	1.36	1.32
10	B	505	A1EVC	C09-C08	2.01	1.43	1.39

All (67) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	D	502	A1EVC	C11-N05-N04	20.30	122.75	111.62
10	D	502	A1EVC	C10-C11-N05	-20.19	99.37	106.68
10	B	505	A1EVC	C11-N05-N04	19.96	122.56	111.62
10	B	505	A1EVC	C10-C11-N05	-19.19	99.73	106.68
10	D	502	A1EVC	C10-C14-N04	13.82	122.54	112.06
10	B	505	A1EVC	C10-C14-N04	13.72	122.46	112.06
10	D	502	A1EVC	C14-N04-N05	-12.36	96.41	106.42
10	B	505	A1EVC	C14-N04-N05	-12.32	96.45	106.42
10	B	505	A1EVC	C11-C10-C14	-9.45	98.79	104.48
10	D	502	A1EVC	C11-C10-C14	-9.23	98.92	104.48
10	B	505	A1EVC	C15-N05-C11	-8.16	117.93	128.39
10	D	502	A1EVC	C15-N05-C11	-7.66	118.57	128.39
8	B	501	GDP	C5-C4-N3	-6.13	118.51	128.46
8	D	501	GDP	C5-C4-N3	-6.06	118.63	128.46
10	D	502	A1EVC	C02-C03-C04	-5.83	107.76	111.23
10	B	505	A1EVC	C02-C03-C04	-5.28	108.09	111.23
5	C	501	GTP	C5-C4-N3	-5.01	120.33	128.46
8	B	501	GDP	C2-N3-C4	4.88	120.99	112.30
5	A	501	GTP	C5-C4-N3	-4.86	120.58	128.46
8	D	501	GDP	C2-N3-C4	4.80	120.85	112.30
10	B	505	A1EVC	C09-C10-C14	4.73	143.20	135.50
10	D	502	A1EVC	C12-C11-N05	4.64	138.34	132.07
8	D	501	GDP	N9-C4-N3	4.61	135.20	125.94
8	B	501	GDP	N9-C4-N3	4.58	135.14	125.94
5	C	501	GTP	C2-N3-C4	4.50	120.32	112.30
10	D	502	A1EVC	C09-C10-C14	4.40	142.66	135.50
5	A	501	GTP	C2-N3-C4	4.36	120.07	112.30
10	B	505	A1EVC	C12-C11-N05	4.23	137.78	132.07
5	A	501	GTP	PA-O3A-PB	-3.72	120.06	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	501	GDP	PA-O3A-PB	-3.70	120.14	132.83
11	F	401	ACP	PB-O3A-PA	-3.66	120.96	132.56
5	C	501	GTP	PA-O3A-PB	-3.65	120.29	132.83
5	A	501	GTP	PB-O3B-PG	-3.59	120.50	132.83
5	C	501	GTP	PB-O3B-PG	-3.57	120.58	132.83
8	B	501	GDP	PA-O3A-PB	-3.36	121.28	132.83
5	C	501	GTP	N9-C4-N3	3.23	132.43	125.94
8	B	501	GDP	C6-C5-N7	3.09	136.00	130.25
8	D	501	GDP	C6-C5-N7	3.09	135.99	130.25
5	A	501	GTP	N9-C4-N3	3.09	132.14	125.94
10	D	502	A1EVC	C03-C04-C01	3.02	122.87	111.61
10	B	505	A1EVC	C03-C04-C01	2.91	122.47	111.61
11	F	401	ACP	O2B-PB-O1B	2.90	119.75	110.07
5	A	501	GTP	C2-N1-C6	-2.88	119.85	125.10
5	C	501	GTP	C2-N1-C6	-2.85	119.90	125.10
10	D	502	A1EVC	N02-C06-N03	2.77	119.01	116.12
11	F	401	ACP	O1G-PG-C3B	-2.75	105.31	111.24
8	B	501	GDP	C4-C5-N7	-2.59	106.62	110.72
5	A	501	GTP	N9-C8-N7	-2.57	108.55	113.39
5	C	501	GTP	N9-C8-N7	-2.52	108.64	113.39
5	C	501	GTP	C5-C6-N1	2.51	119.57	113.19
8	D	501	GDP	C4-C5-N7	-2.51	106.75	110.72
5	A	501	GTP	C5-C6-N1	2.50	119.53	113.19
5	A	501	GTP	C8-N7-C5	2.49	108.75	104.24
5	C	501	GTP	C8-N7-C5	2.48	108.72	104.24
8	B	501	GDP	C3'-C2'-C1'	2.47	106.12	101.43
10	B	505	A1EVC	C05-N02-C06	2.40	117.69	110.86
5	C	501	GTP	O6-C6-C5	-2.38	120.28	126.60
5	A	501	GTP	O6-C6-C5	-2.37	120.31	126.60
10	D	502	A1EVC	C05-N02-C06	2.33	117.50	110.86
10	D	502	A1EVC	C04-C01-S01	-2.15	109.45	113.96
8	D	501	GDP	C3'-C2'-C1'	2.14	105.49	101.43
8	D	501	GDP	O6-C6-C5	-2.11	121.00	126.60
10	B	505	A1EVC	C04-C01-S01	-2.10	109.57	113.96
8	B	501	GDP	O6-C6-C5	-2.10	121.04	126.60
5	C	501	GTP	C3'-C2'-C1'	2.04	105.30	101.43
5	A	501	GTP	C3'-C2'-C1'	2.03	105.28	101.43
8	D	501	GDP	C2'-C3'-C4'	2.01	106.54	102.64

There are no chirality outliers.

All (28) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	501	GTP	PB-O3B-PG-O2G
5	A	501	GTP	C5'-O5'-PA-O1A
5	A	501	GTP	C5'-O5'-PA-O2A
5	C	501	GTP	C5'-O5'-PA-O1A
5	C	501	GTP	C5'-O5'-PA-O2A
8	B	501	GDP	C5'-O5'-PA-O2A
8	D	501	GDP	PA-O3A-PB-O3B
8	D	501	GDP	C5'-O5'-PA-O3A
8	D	501	GDP	C5'-O5'-PA-O1A
9	B	502	MES	C8-C7-N4-C3
9	B	502	MES	C8-C7-N4-C5
9	B	502	MES	C7-C8-S-O1S
9	B	502	MES	C7-C8-S-O3S
9	B	503	MES	C8-C7-N4-C3
9	B	503	MES	C8-C7-N4-C5
5	A	501	GTP	PB-O3B-PG-O3G
5	A	501	GTP	C5'-O5'-PA-O3A
5	C	501	GTP	C5'-O5'-PA-O3A
8	B	501	GDP	C5'-O5'-PA-O1A
11	F	401	ACP	C5'-O5'-PA-O2A
9	B	502	MES	C7-C8-S-O2S
5	A	501	GTP	C4'-C5'-O5'-PA
5	C	501	GTP	C4'-C5'-O5'-PA
5	A	501	GTP	PB-O3B-PG-O1G
8	D	501	GDP	PA-O3A-PB-O1B
8	B	501	GDP	C5'-O5'-PA-O3A
11	F	401	ACP	C5'-O5'-PA-O3A
11	F	401	ACP	O4'-C4'-C5'-O5'

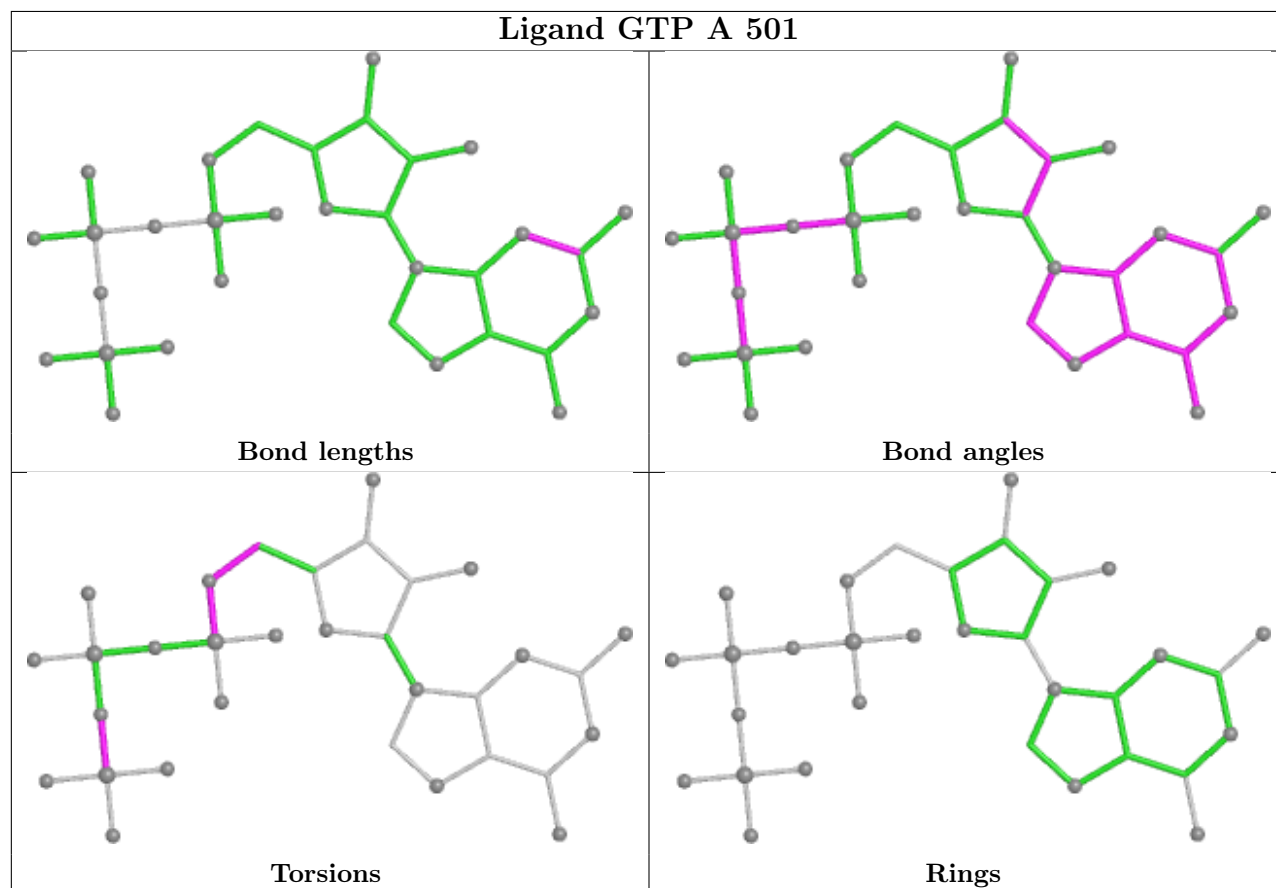
There are no ring outliers.

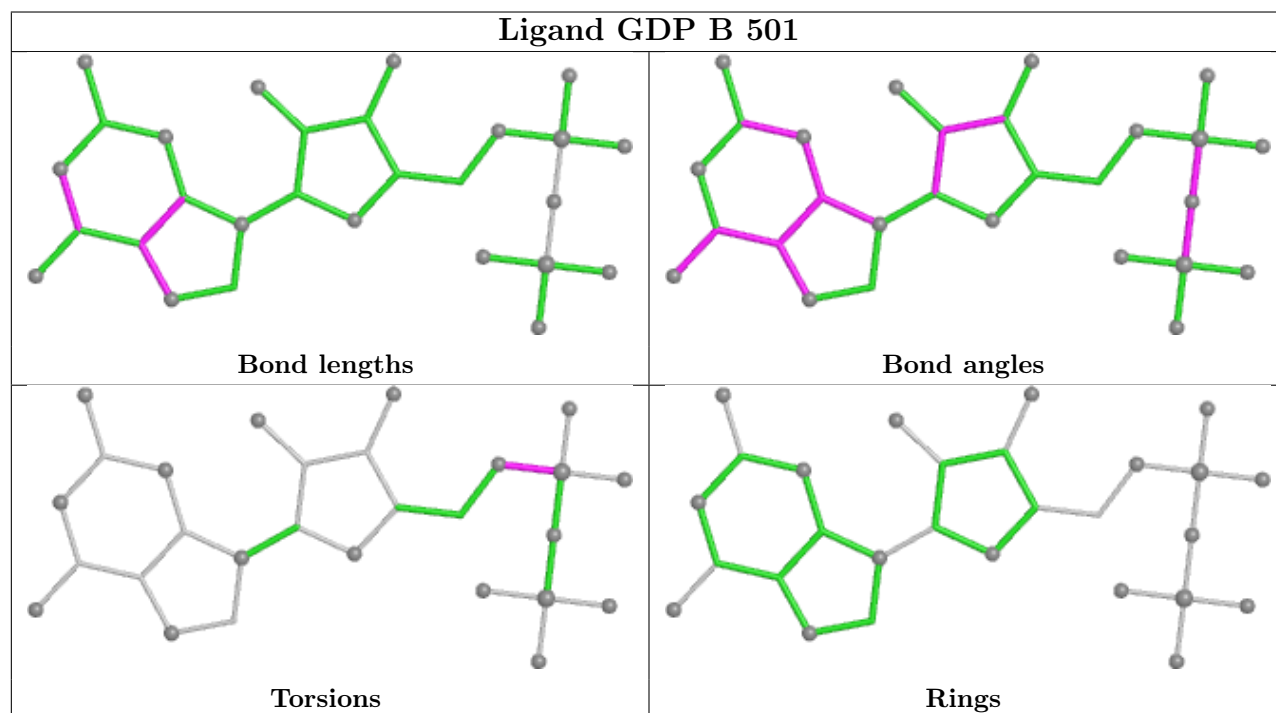
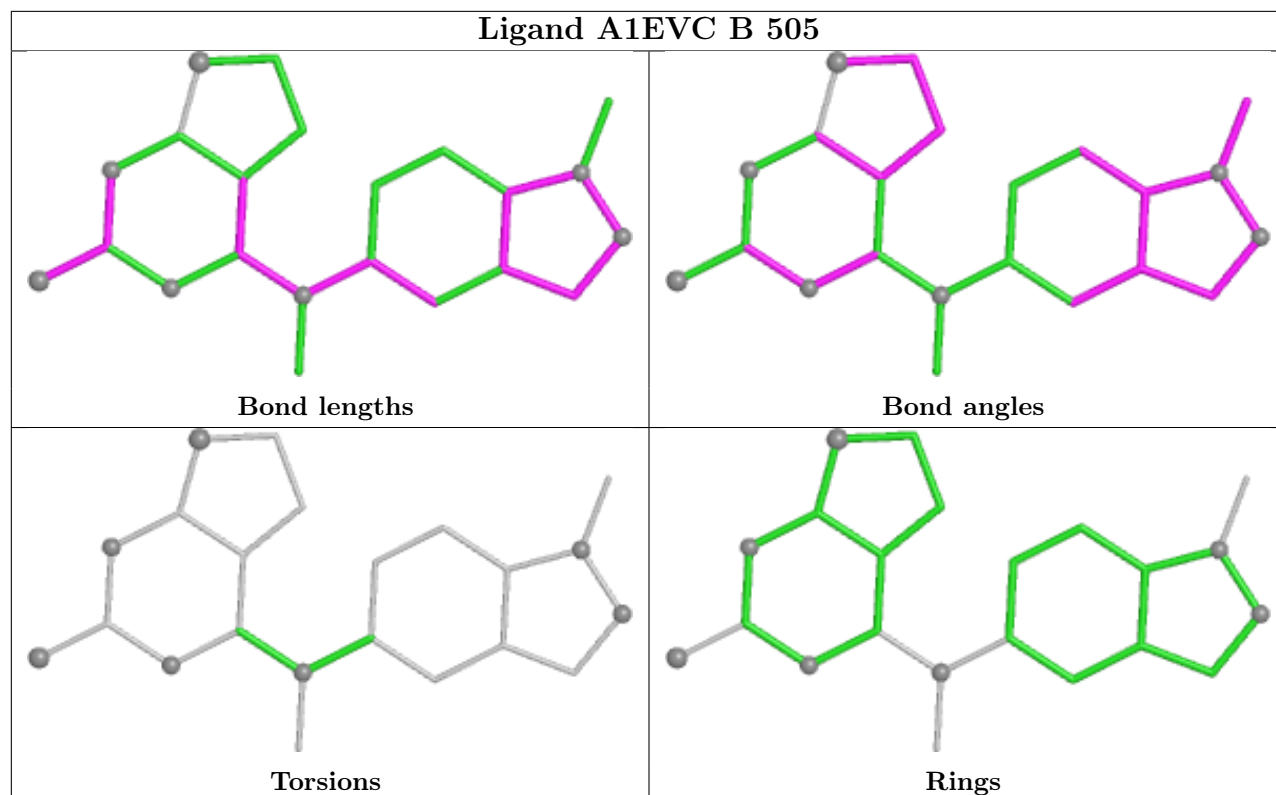
2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	B	505	A1EVC	1	0
10	D	502	A1EVC	1	0

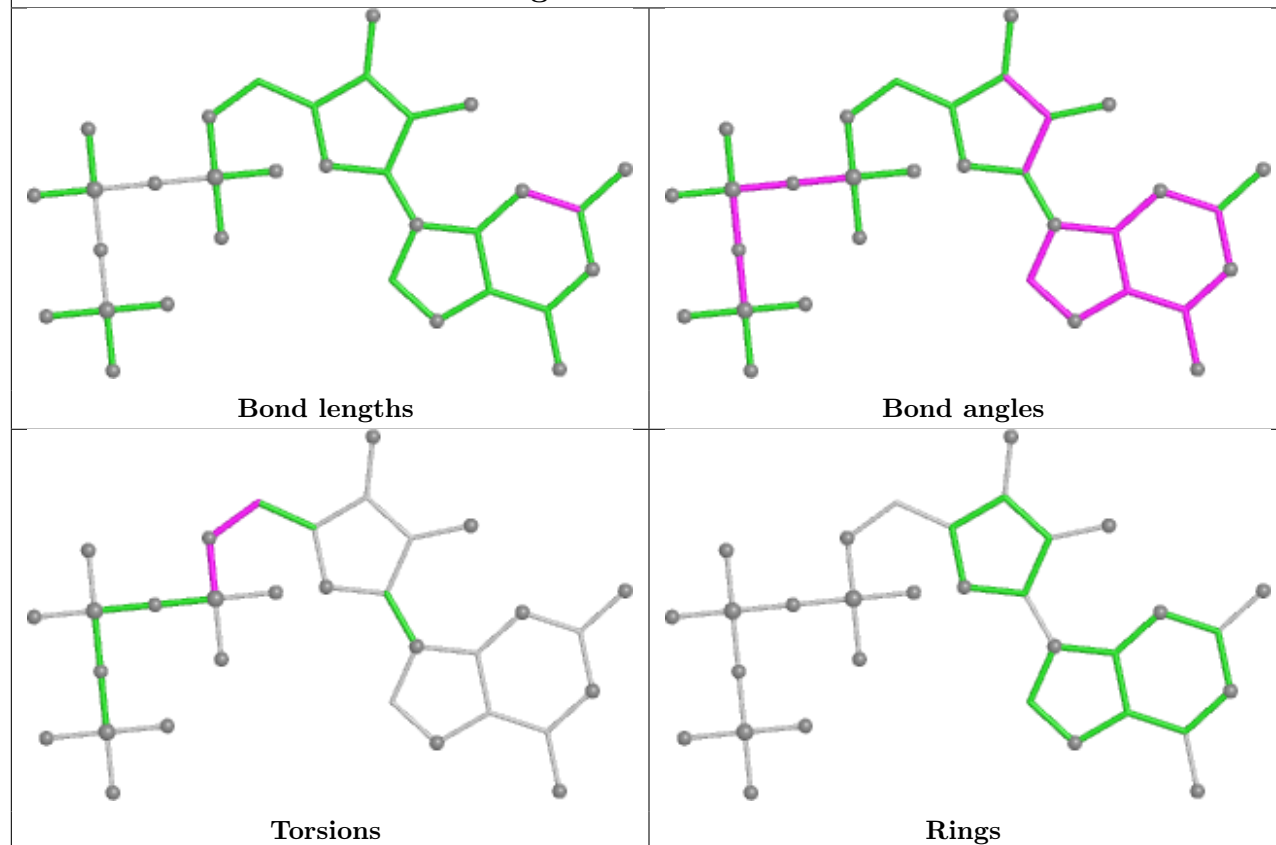
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

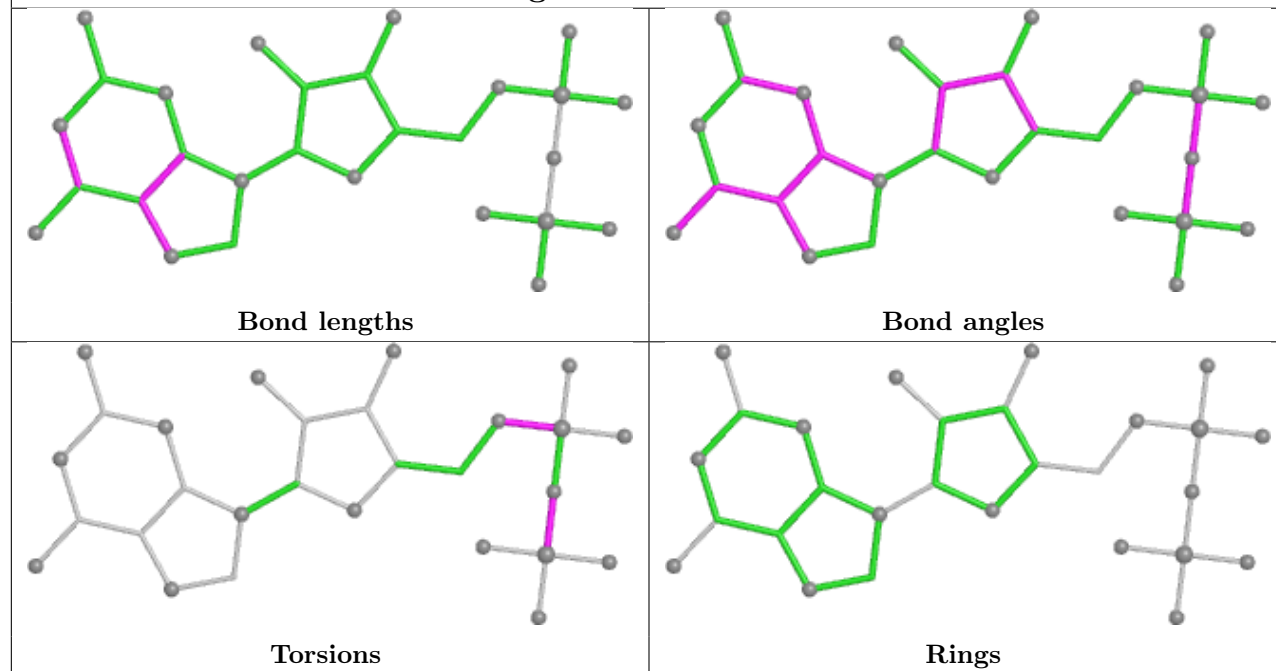


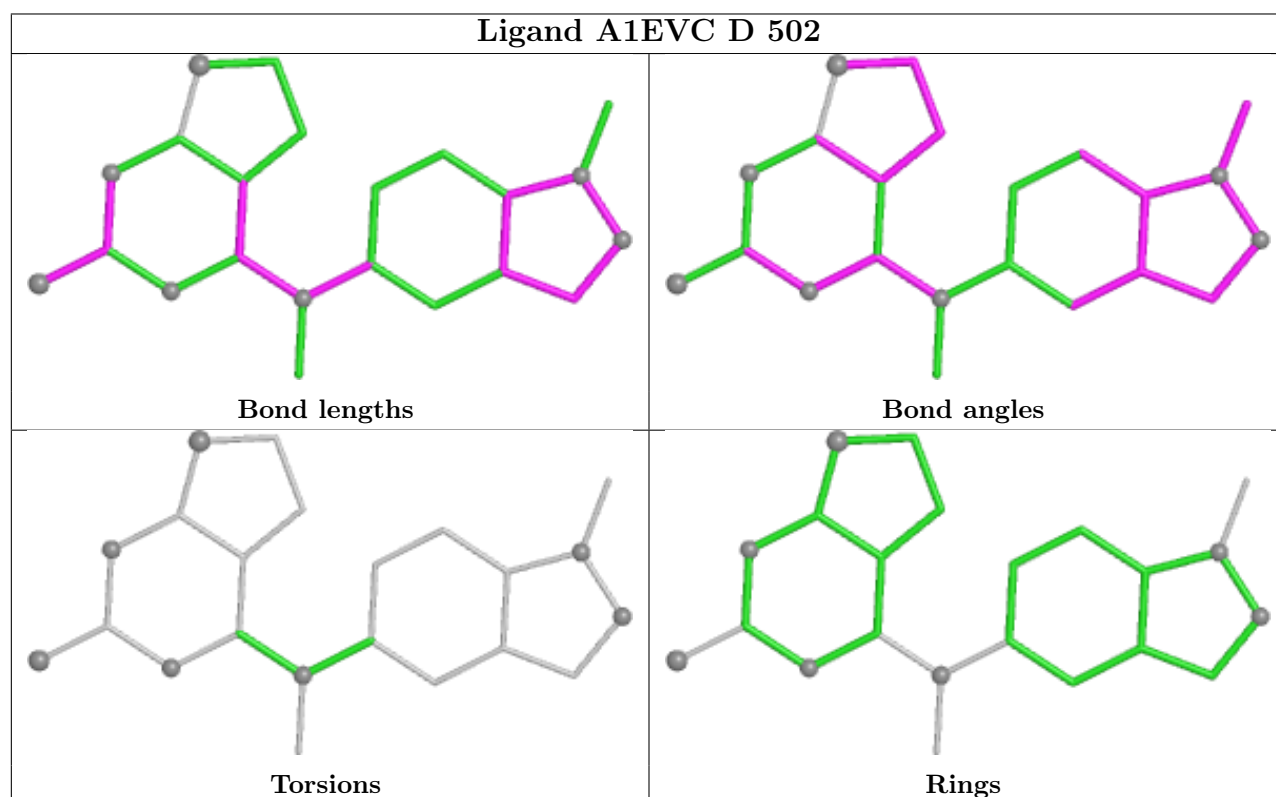
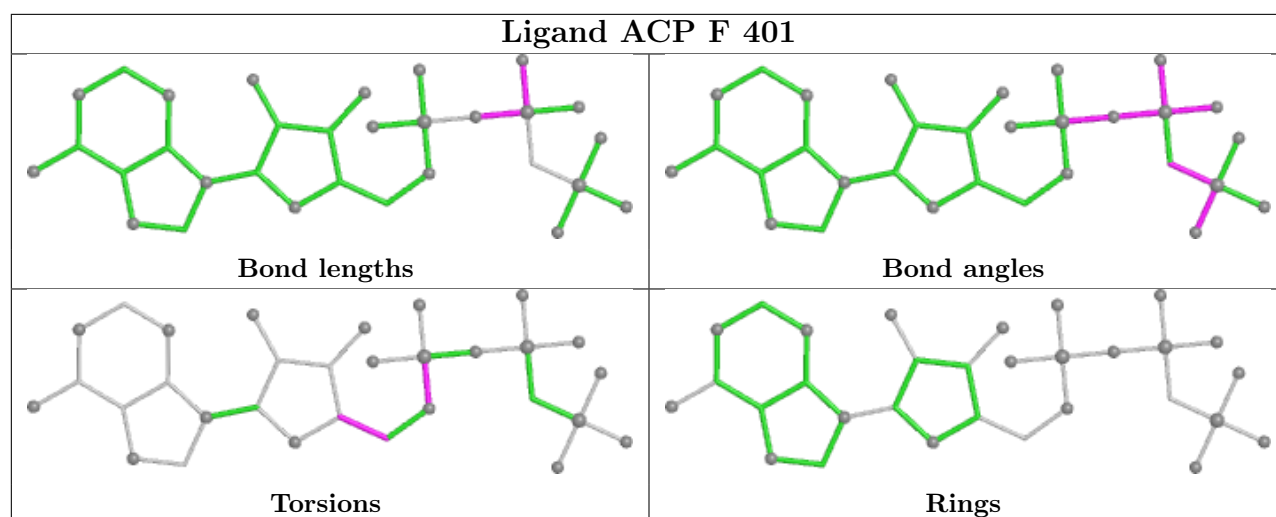


Ligand GTP C 501



Ligand GDP D 501





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	437/440 (99%)	0.84	51 (11%) 9 7	36, 53, 76, 88	0
1	C	440/440 (100%)	0.36	18 (4%) 41 38	29, 45, 64, 83	0
2	B	427/431 (99%)	0.83	41 (9%) 13 12	34, 51, 81, 107	0
2	D	421/431 (97%)	2.34	234 (55%) 0 0	41, 79, 111, 118	0
3	E	121/136 (88%)	1.32	33 (27%) 1 1	46, 65, 103, 111	0
4	F	332/380 (87%)	1.94	148 (44%) 0 0	46, 78, 139, 149	0
All	All	2178/2258 (96%)	1.23	525 (24%) 2 1	29, 58, 107, 149	0

All (525) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	F	148	ILE	6.7
2	D	397	TRP	6.5
4	F	149	ALA	6.3
2	D	180	VAL	6.2
2	D	395	LEU	6.1
4	F	253	TYR	6.1
2	D	91	VAL	6.0
4	F	162	ILE	6.0
2	D	247	ASN	5.9
2	D	80	PRO	5.8
2	D	98	GLY	5.8
2	D	179	VAL	5.8
4	F	146	VAL	5.8
2	D	391	ARG	5.7
4	F	161	LEU	5.6
2	D	116	VAL	5.6
2	D	183	TYR	5.6
2	D	85	PHE	5.5
4	F	245	ILE	5.5

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Mol	Chain	Res	Type	RSRZ
2	D	68	LEU	5.4
4	F	134	ALA	5.3
2	D	389	PHE	5.3
2	D	223	GLY	5.3
4	F	186	LEU	5.2
4	F	98	TYR	5.1
4	F	198	LYS	5.1
2	D	109	GLY	5.1
2	D	117	LEU	5.1
2	D	92	PHE	5.1
2	D	99	ASN	5.0
2	D	393	ALA	5.0
2	D	398	TYR	5.0
2	D	394	PHE	4.9
2	D	107	THR	4.9
2	D	42	LEU	4.9
2	D	208	TYR	4.8
2	D	120	VAL	4.8
4	F	132	LEU	4.8
4	F	233	PHE	4.8
4	F	130	VAL	4.8
2	D	90	PHE	4.7
2	D	93	GLY	4.7
2	D	178	THR	4.7
2	D	1	MET	4.6
4	F	169	LEU	4.6
2	D	212	PHE	4.6
4	F	99	VAL	4.6
4	F	263	PHE	4.6
4	F	194	PRO	4.5
2	D	406	MET	4.5
2	D	102	ALA	4.4
2	D	141	GLY	4.4
2	D	64	ILE	4.4
2	D	220	PRO	4.4
2	D	83	GLN	4.4
4	F	147	TRP	4.4
2	D	225	LEU	4.4
2	D	219	THR	4.3
4	F	103	THR	4.3
2	D	246	LEU	4.3
4	F	166	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
2	D	143	THR	4.3
4	F	163	SER	4.3
2	D	396	HIS	4.3
4	F	172	PHE	4.3
2	D	96	GLY	4.3
2	D	55	THR	4.2
4	F	184	LYS	4.2
2	D	112	LEU	4.2
2	D	140	GLY	4.2
2	B	218	THR	4.2
2	D	101	TRP	4.2
2	D	245	GLN	4.2
2	D	71	GLY	4.2
4	F	228	TYR	4.1
2	D	106	TYR	4.1
1	A	42	ILE	4.1
2	D	244	GLY	4.1
2	D	73	MET	4.1
2	D	170	MET	4.1
2	D	226	ASN	4.1
1	A	437	VAL	4.1
2	D	16	ILE	4.0
4	F	362	ALA	4.0
2	D	356	ILE	4.0
4	F	182	ILE	4.0
2	D	65	LEU	4.0
2	D	32	PRO	4.0
2	D	217	LEU	4.0
4	F	101	TYR	4.0
2	D	9	ALA	4.0
2	D	67	ASP	4.0
2	D	171	PRO	4.0
2	D	81	PHE	3.9
4	F	131	PHE	3.9
2	D	63	ALA	3.9
2	B	247	ASN	3.9
4	F	231	ALA	3.9
2	B	42	LEU	3.9
2	D	284	LEU	3.9
2	D	70	PRO	3.9
4	F	256	TYR	3.9
2	D	54	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
2	D	385	PHE	3.9
2	D	110	ALA	3.8
2	D	84	ILE	3.8
4	F	190	LEU	3.8
2	D	186	THR	3.8
4	F	135	TYR	3.8
3	E	141	GLU	3.8
2	B	278	SER	3.8
2	D	113	VAL	3.8
2	B	245	GLN	3.8
2	D	144	GLY	3.7
2	D	222	TYR	3.7
2	D	94	GLN	3.7
2	D	43	GLN	3.7
2	D	19	LYS	3.7
2	D	6	HIS	3.6
2	B	40	SER	3.6
4	F	173	ILE	3.6
4	F	247	LYS	3.6
2	D	36	TYR	3.6
4	F	164	SER	3.6
2	D	400	GLY	3.6
2	B	57	ASN	3.6
4	F	244	CYS	3.6
4	F	185	TYR	3.6
2	D	5	VAL	3.6
2	D	77	ARG	3.6
1	A	97	GLU	3.5
1	C	357	TYR	3.5
2	D	82	GLY	3.5
2	D	176	SER	3.5
2	D	273	LEU	3.5
4	F	199	PHE	3.5
2	D	362	LYS	3.5
3	E	28	SER	3.5
2	D	30	ILE	3.5
1	A	281	ALA	3.5
4	F	242	ASN	3.4
2	D	189	VAL	3.4
4	F	170	LEU	3.4
2	D	115	SER	3.4
4	F	372	THR	3.4

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Mol	Chain	Res	Type	RSRZ
2	B	48	ASN	3.4
2	D	215	LEU	3.4
2	D	399	THR	3.4
1	A	46	ASP	3.3
2	D	361	LEU	3.3
2	D	142	GLY	3.3
4	F	320	MET	3.3
1	A	282	TYR	3.3
2	B	280	GLN	3.3
2	D	187	LEU	3.3
2	D	72	THR	3.3
4	F	181	VAL	3.3
2	D	44	LEU	3.3
2	D	228	LEU	3.3
1	C	440	VAL	3.3
2	D	23	VAL	3.3
2	D	175	VAL	3.3
2	D	221	THR	3.3
4	F	331	GLU	3.3
2	D	210	ILE	3.3
4	F	224	SER	3.3
2	D	408	PHE	3.3
2	D	431	ASP	3.3
2	D	86	ARG	3.3
4	F	187	GLU	3.3
2	D	8	GLN	3.2
2	D	114	ASP	3.2
2	D	404	ASP	3.2
3	E	134	ARG	3.2
4	F	240	LEU	3.2
2	D	37	HIS	3.2
2	D	386	THR	3.2
2	D	11	GLN	3.2
3	E	139	LEU	3.2
4	F	180	HIS	3.2
2	D	216	LYS	3.2
1	A	82	THR	3.2
2	D	87	PRO	3.2
4	F	28	LYS	3.2
2	D	360	GLY	3.2
1	A	41	THR	3.2
4	F	241	THR	3.2

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Mol	Chain	Res	Type	RSRZ
2	D	367	PHE	3.1
2	D	182	PRO	3.1
2	D	97	ALA	3.1
2	D	231	ALA	3.1
2	D	387	ALA	3.1
4	F	267	PHE	3.1
1	A	37	PRO	3.1
4	F	33	ASP	3.1
4	F	191	LEU	3.1
2	B	72	THR	3.1
4	F	339	ALA	3.1
3	E	135	LYS	3.1
2	D	61	PRO	3.1
2	D	89	ASN	3.1
2	D	59	TYR	3.1
4	F	237	THR	3.1
2	D	15	GLN	3.1
3	E	59	GLU	3.1
2	D	39	ASP	3.1
2	B	277	GLY	3.1
2	D	76	VAL	3.1
2	D	218	THR	3.0
4	F	236	LYS	3.0
1	A	58	ALA	3.0
4	F	239	HIS	3.0
4	F	188	LYS	3.0
2	B	323	MET	3.0
4	F	89	GLU	3.0
2	D	105	HIS	3.0
4	F	22	LEU	3.0
4	F	361	LEU	3.0
4	F	90	SER	3.0
2	D	104	GLY	3.0
2	D	206	ALA	3.0
2	D	403	MET	3.0
2	B	281	TYR	3.0
2	D	243	PRO	3.0
4	F	227	PRO	3.0
4	F	183	GLN	3.0
3	E	133	VAL	3.0
2	D	409	THR	3.0
4	F	133	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
2	D	207	LEU	3.0
1	C	97	GLU	2.9
2	D	421	GLU	2.9
3	E	138	GLU	2.9
4	F	179	VAL	2.9
4	F	277	THR	2.9
2	D	20	PHE	2.9
2	D	95	SER	2.9
2	D	69	GLU	2.9
4	F	258	GLU	2.9
4	F	192	LEU	2.9
2	D	381	ILE	2.9
1	A	262	TYR	2.9
2	D	88	ASP	2.9
2	D	2	ARG	2.8
2	D	172	SER	2.8
2	D	103	LYS	2.8
3	E	115	HIS	2.8
4	F	243	HIS	2.8
2	D	21	TRP	2.8
3	E	121	GLU	2.8
1	C	339	ARG	2.8
2	D	40	SER	2.8
2	B	55	THR	2.8
2	D	18	ALA	2.8
2	B	39	ASP	2.8
2	B	282	ARG	2.8
2	B	350	LYS	2.8
2	D	227	HIS	2.8
4	F	254	GLY	2.8
4	F	306	HIS	2.8
2	B	316	ILE	2.8
2	D	35	SER	2.8
2	B	33	THR	2.8
1	A	86	LEU	2.8
2	D	291	GLN	2.8
3	E	7	GLU	2.8
1	C	340	SER	2.8
2	D	14	ASN	2.8
2	D	66	VAL	2.8
4	F	92	THR	2.8
1	C	245	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
2	D	28	HIS	2.8
2	D	119	VAL	2.7
2	D	150	LEU	2.7
2	D	411	ALA	2.7
4	F	74	LYS	2.7
2	D	181	GLU	2.7
4	F	141	GLY	2.7
3	E	25	LYS	2.7
1	A	85	GLN	2.7
4	F	380	HIS	2.7
2	D	304	ASP	2.7
4	F	91	CYS	2.7
2	D	7	ILE	2.7
2	D	78	SER	2.7
2	D	145	SER	2.7
3	E	137	LYS	2.7
2	D	383	GLU	2.7
4	F	246	GLN	2.7
2	D	224	ASP	2.7
4	F	200	ASP	2.7
2	D	57	ASN	2.7
2	D	100	ASN	2.7
2	D	184	ASN	2.7
2	B	75	SER	2.7
4	F	97	SER	2.7
4	F	271	LEU	2.7
2	D	50	TYR	2.7
2	D	51	TYR	2.7
2	D	33	THR	2.7
2	D	290	THR	2.7
2	D	29	GLY	2.6
2	D	56	GLY	2.6
1	A	112	LYS	2.6
2	B	47	ILE	2.6
2	D	24	ILE	2.6
2	D	242	PHE	2.6
2	D	401	GLU	2.6
3	E	10	GLU	2.6
2	B	428	ALA	2.6
4	F	24	THR	2.6
4	F	223	THR	2.6
1	A	95	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
2	D	10	GLY	2.6
3	E	128	LYS	2.6
4	F	6	VAL	2.6
2	B	279	GLN	2.6
2	B	30	ILE	2.6
2	D	60	VAL	2.6
2	D	229	VAL	2.6
4	F	232	ASN	2.6
2	D	296	SER	2.6
1	A	120	ASP	2.6
3	E	45	PRO	2.6
4	F	177	GLY	2.6
4	F	260	ASN	2.6
1	A	83	TYR	2.6
1	A	221	ARG	2.5
4	F	202	ARG	2.5
4	F	262	MET	2.5
1	A	40	LYS	2.5
2	B	95	SER	2.5
2	D	25	SER	2.5
4	F	171	ASP	2.5
4	F	330	ILE	2.5
4	F	4	PHE	2.5
2	D	392	LYS	2.5
1	A	56	THR	2.5
2	D	230	SER	2.5
2	D	211	CYS	2.5
2	D	323	MET	2.5
4	F	259	GLY	2.5
4	F	178	GLN	2.5
2	D	390	ARG	2.5
2	B	80	PRO	2.5
1	A	57	GLY	2.5
2	B	71	GLY	2.5
1	A	96	LYS	2.5
4	F	93	TRP	2.5
3	E	8	VAL	2.5
2	D	373	ALA	2.5
2	D	214	THR	2.5
1	A	59	GLY	2.4
2	B	56	GLY	2.4
4	F	100	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
4	F	20	LEU	2.4
2	D	320	ARG	2.4
2	D	363	MET	2.4
2	D	232	THR	2.4
4	F	230	SER	2.4
2	D	41	ASP	2.4
4	F	196	HIS	2.4
4	F	46	ARG	2.4
4	F	229	ASN	2.4
2	B	69	GLU	2.4
4	F	257	GLU	2.4
2	D	74	ASP	2.4
2	D	130	LEU	2.4
2	D	418	LEU	2.4
3	E	124	GLN	2.4
2	D	359	ARG	2.4
4	F	264	PHE	2.4
4	F	220	VAL	2.4
4	F	252	ASN	2.4
2	D	271	ALA	2.4
2	D	122	LYS	2.4
2	D	272	PRO	2.4
2	D	357	PRO	2.4
4	F	129	GLU	2.4
1	A	45	GLY	2.4
1	C	43	GLY	2.4
2	D	79	GLY	2.4
4	F	195	GLY	2.4
2	D	415	MET	2.4
4	F	136	ASN	2.4
2	D	149	THR	2.3
4	F	83	THR	2.3
1	A	38	SER	2.3
2	D	153	SER	2.3
4	F	31	ARG	2.3
4	F	81	ILE	2.3
4	F	222	ARG	2.3
2	B	37	HIS	2.3
4	F	340	GLN	2.3
3	E	127	ASP	2.3
2	B	36	TYR	2.3
4	F	13	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
2	B	54	ALA	2.3
1	A	346	TRP	2.3
2	D	188	SER	2.3
1	A	176	GLN	2.3
2	D	135	LEU	2.3
2	B	427	ASP	2.3
1	C	163	LYS	2.3
3	E	62	LYS	2.3
4	F	216	TYR	2.3
1	A	196	GLU	2.3
4	F	189	PRO	2.3
2	D	136	THR	2.3
2	D	213	ARG	2.3
1	A	43	GLY	2.3
2	D	34	GLY	2.3
4	F	18	SER	2.3
1	A	122	ILE	2.3
1	A	39	ASP	2.3
2	D	177	ASP	2.3
1	A	316	CYS	2.3
2	D	108	GLU	2.3
1	A	73	THR	2.3
4	F	234	GLN	2.3
3	E	46	SER	2.3
1	A	132	LEU	2.3
3	E	126	LYS	2.3
4	F	235	ASP	2.3
2	B	343	GLU	2.3
2	D	169	VAL	2.3
4	F	332	VAL	2.3
4	F	128	ARG	2.3
2	D	185	ALA	2.2
2	D	402	GLY	2.2
4	F	379	HIS	2.2
1	A	119	LEU	2.2
2	B	342	VAL	2.2
3	E	26	PRO	2.2
2	D	204	ASN	2.2
3	E	130	ALA	2.2
1	C	282	TYR	2.2
1	A	88	HIS	2.2
1	A	94	THR	2.2

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Mol	Chain	Res	Type	RSRZ
2	D	285	THR	2.2
1	A	164	LYS	2.2
4	F	284	LEU	2.2
4	F	280	GLU	2.2
4	F	319	PHE	2.2
2	D	173	PRO	2.2
4	F	95	PRO	2.2
2	D	58	LYS	2.2
2	D	238	THR	2.2
1	A	246	GLY	2.2
1	C	246	GLY	2.2
4	F	1	MET	2.2
4	F	11	SER	2.2
1	C	284	GLU	2.2
1	C	2	ARG	2.2
4	F	85	PRO	2.2
2	D	297	LYS	2.2
2	D	147	MET	2.2
3	E	15	THR	2.2
2	D	13	GLY	2.2
4	F	275	LEU	2.2
4	F	342	LEU	2.2
1	A	335	ILE	2.2
3	E	50	ILE	2.2
1	A	55	GLU	2.2
1	A	113	GLU	2.2
3	E	44	ASP	2.2
4	F	27	TRP	2.2
1	A	256	GLN	2.1
4	F	145	ASN	2.1
3	E	54	LEU	2.1
4	F	221	LEU	2.1
4	F	213	ILE	2.1
2	D	22	GLU	2.1
2	D	198	GLU	2.1
1	C	232	SER	2.1
3	E	80	ARG	2.1
4	F	82	LYS	2.1
1	A	283	HIS	2.1
1	A	91	GLN	2.1
1	C	285	GLN	2.1
2	D	384	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
2	D	366	THR	2.1
4	F	139	ARG	2.1
4	F	238	CYS	2.1
2	D	388	MET	2.1
1	A	18	ASN	2.1
3	E	136	ASN	2.1
2	B	284	LEU	2.1
3	E	47	LEU	2.1
2	D	156	ARG	2.1
3	E	122	ARG	2.1
4	F	137	ARG	2.1
2	D	316	ILE	2.1
2	D	405	GLU	2.1
4	F	168	GLU	2.1
2	B	59	TYR	2.1
2	B	41	ASP	2.1
2	B	43	GLN	2.1
1	A	250	VAL	2.1
2	D	294	PHE	2.1
4	F	30	LEU	2.1
1	C	44	GLY	2.1
1	C	162	GLY	2.1
2	D	38	GLY	2.1
2	D	148	GLY	2.1
2	D	155	ILE	2.1
4	F	341	LYS	2.1
4	F	270	TYR	2.1
1	A	89	PRO	2.1
1	A	315	CYS	2.1
3	E	6	MET	2.1
4	F	329	LEU	2.0
2	B	53	GLU	2.0
2	D	407	GLU	2.0
4	F	96	GLU	2.0
2	D	4	ILE	2.0
2	D	75	SER	2.0
2	D	168	SER	2.0
4	F	88	SER	2.0
4	F	344	ALA	2.0
1	C	77	GLU	2.0
2	B	219	THR	2.0
1	A	32	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	47	ASP	2.0
1	C	1	MET	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](#)

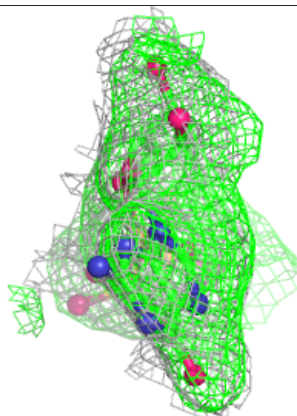
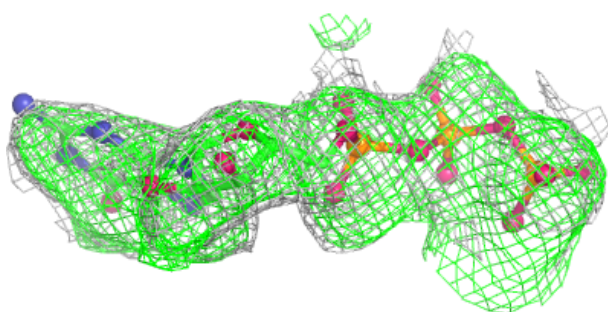
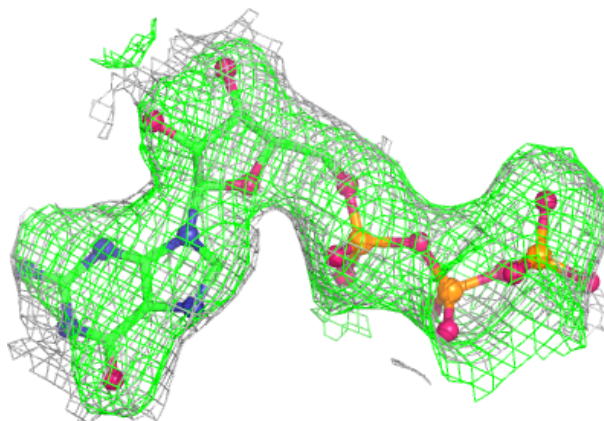
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists 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
5	GTP	A	501	32/32	-	-	42,43,45,47	32
5	GTP	C	501	32/32	-	-	35,37,40,41	32
6	CA	A	502	1/1	-	-	78,78,78,78	1
6	CA	C	502	1/1	-	-	59,59,59,59	1
7	MG	A	503	1/1	-	-	49,49,49,49	1
7	MG	B	504	1/1	-	-	51,51,51,51	1
7	MG	C	503	1/1	-	-	42,42,42,42	1
8	GDP	B	501	28/28	-	-	38,44,46,47	28
8	GDP	D	501	28/28	-	-	77,84,89,90	28
9	MES	B	502	12/12	-	-	43,45,47,47	12
9	MES	B	503	12/12	-	-	59,61,62,62	12
10	A1EVC	B	505	22/22	0.89	0.14	37,44,60,72	0
10	A1EVC	D	502	22/22	0.91	0.12	44,56,68,85	0
11	ACP	F	401	31/31	-	-	85,96,116,117	45

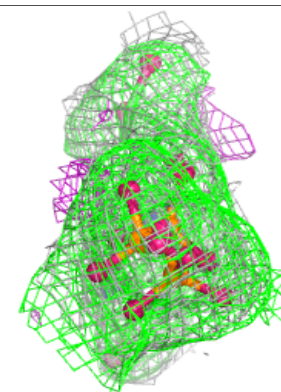
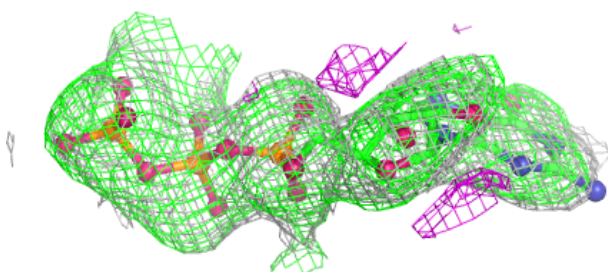
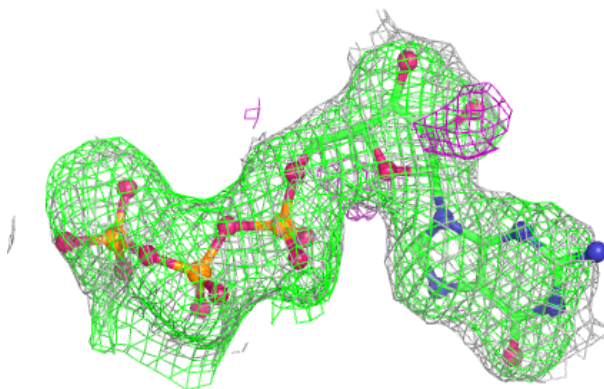
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around GTP A 501:

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

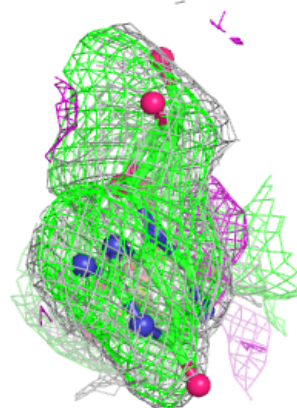
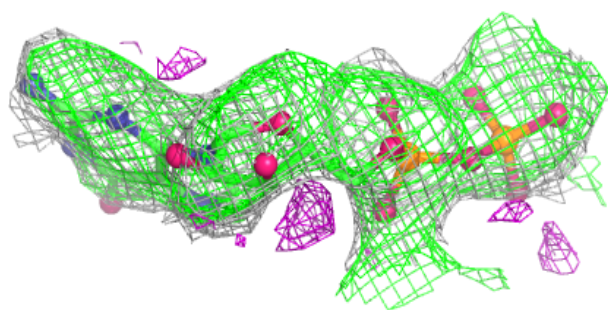
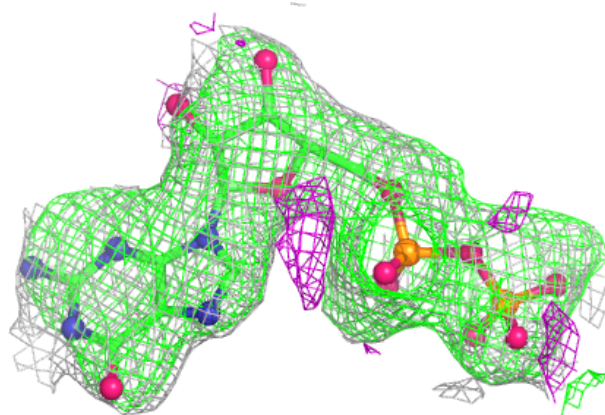
**Electron density around GTP C 501:**

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



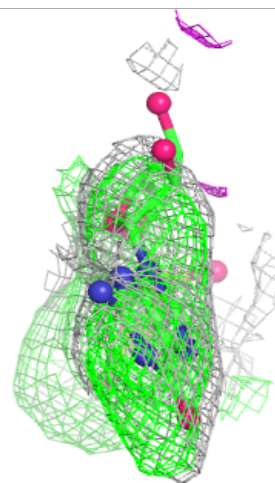
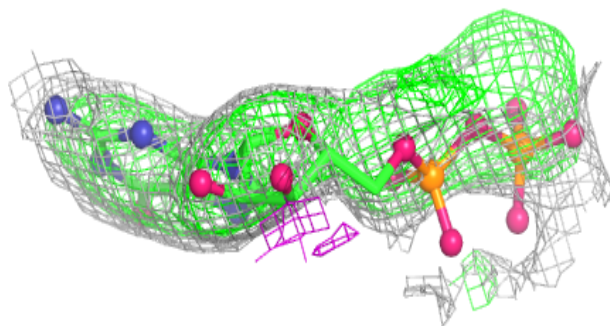
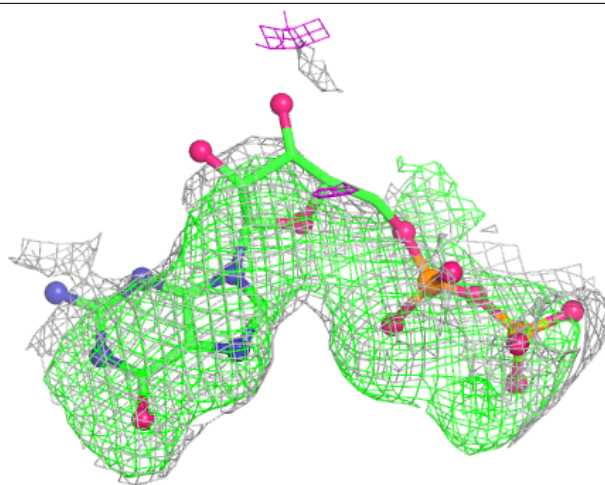
Electron density around GDP B 501:

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



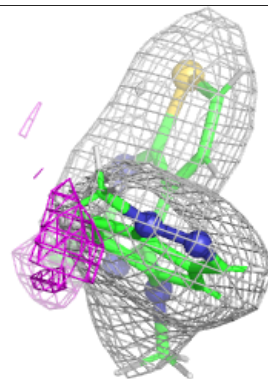
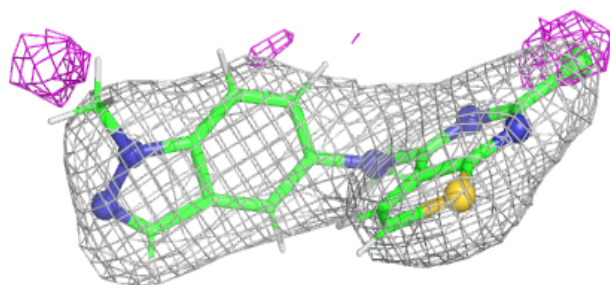
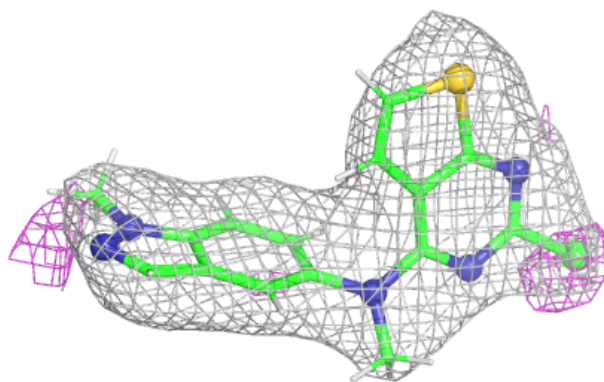
Electron density around GDP D 501:

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



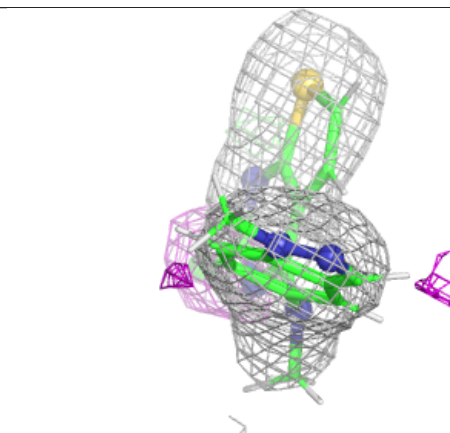
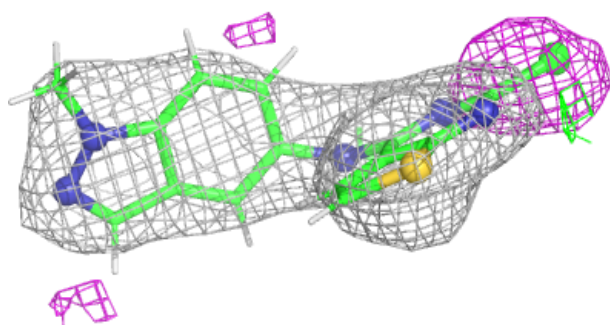
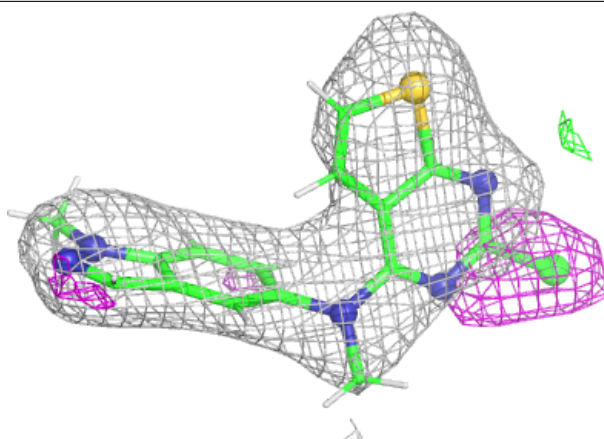
Electron density around A1EVC B 505:

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

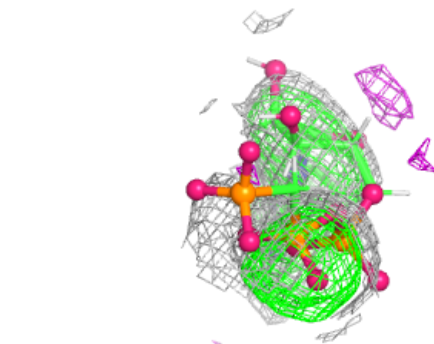
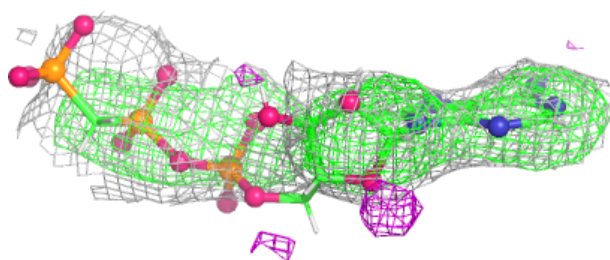
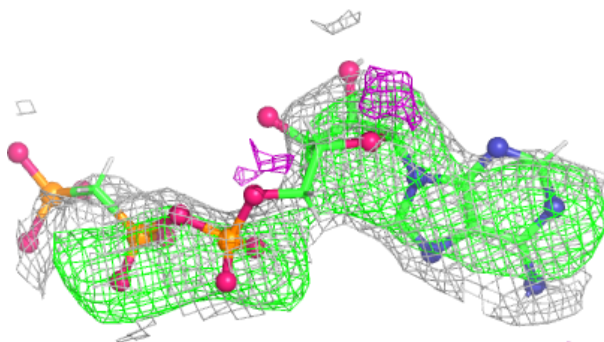


Electron density around A1EVC D 502:

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

**Electron density around ACP F 401:**

$2mF_o-DF_c$ (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.