WORLDWIDE PDB

PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

Oct 23, 2024 – 09:59 AM EDT

PDB ID	:	3R7W
Title	:	Crystal Structure of Gtr1p-Gtr2p complex
Authors	:	Gong, R.; Li, L.; Liu, Y.; Wang, P.; Yang, H.; Wang, L.; Cheng, J.; Guan, K.L.; Xu, Y.
Deposited on	:	2011-03-23
Resolution	:	2.77 Å(reported)

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

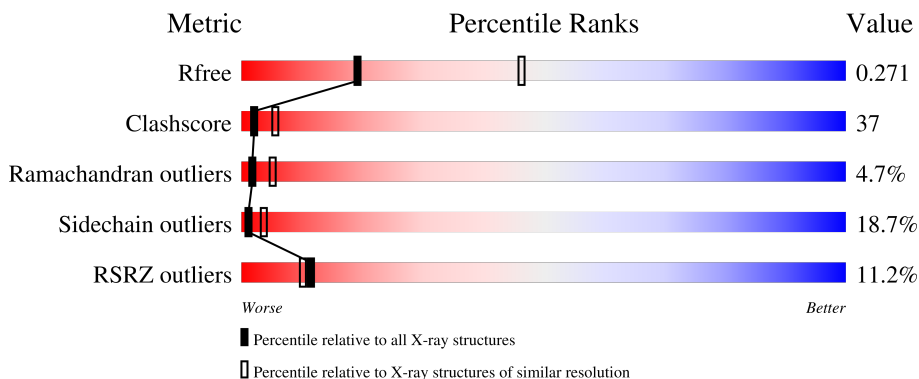|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 2.77 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	Percentile Ranks	Value
Rfree		0.271
Clashscore		37
Ramachandran outliers		4.7%
Sidechain outliers		18.7%
RSRZ outliers		11.2%

Worse   *Better*

▉ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	4924 (2.80-2.76)
Clashscore	180529	5458 (2.80-2.76)
Ramachandran outliers	177936	5386 (2.80-2.76)
Sidechain outliers	177891	5388 (2.80-2.76)
RSRZ outliers	164620	4926 (2.80-2.76)

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	307	3% / 40% 42% 12% 6%
1	C	307	4% / 44% 40% 9% · 6%
2	B	331	14% / 34% 40% 14% · 11%
2	D	331	16% / 24% 35% 9% · 31%

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 9011 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 GTP-binding protein GTR1.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	289	Total 2344	C 1513	N 388	O 425	S 5	Se 13	0	0	0
1	C	290	Total 2353	C 1518	N 390	O 427	S 5	Se 13	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	4	PRO	-	expression tag	UNP Q00582
A	5	LEU	-	expression tag	UNP Q00582
A	6	GLY	-	expression tag	UNP Q00582
A	7	SER	-	expression tag	UNP Q00582
C	4	PRO	-	expression tag	UNP Q00582
C	5	LEU	-	expression tag	UNP Q00582
C	6	GLY	-	expression tag	UNP Q00582
C	7	SER	-	expression tag	UNP Q00582

- Molecule 2 is a protein called GTP-binding protein GTR2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	B	294	Total 2348	C 1508	N 371	O 455	S 4	Se 10	0	0	0
2	D	229	Total 1830	C 1182	N 294	O 342	S 4	Se 8	0	0	0

- Molecule 3 is PHOSPHOAMINOPHOSPHONIC ACID-GUANYLATE ESTER (three-letter code: GNP) (formula: $C_{10}H_{17}N_6O_{13}P_3$).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			32	10	6	13	3		
3	B	1	Total	C	N	O	P	0	0
			32	10	6	13	3		
3	C	1	Total	C	N	O	P	0	0
			32	10	6	13	3		
3	D	1	Total	C	N	O	P	0	0
			32	10	6	13	3		

- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

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

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	C	2	Total 2	O 2	0	0

3 Residue-property plots ⓘ

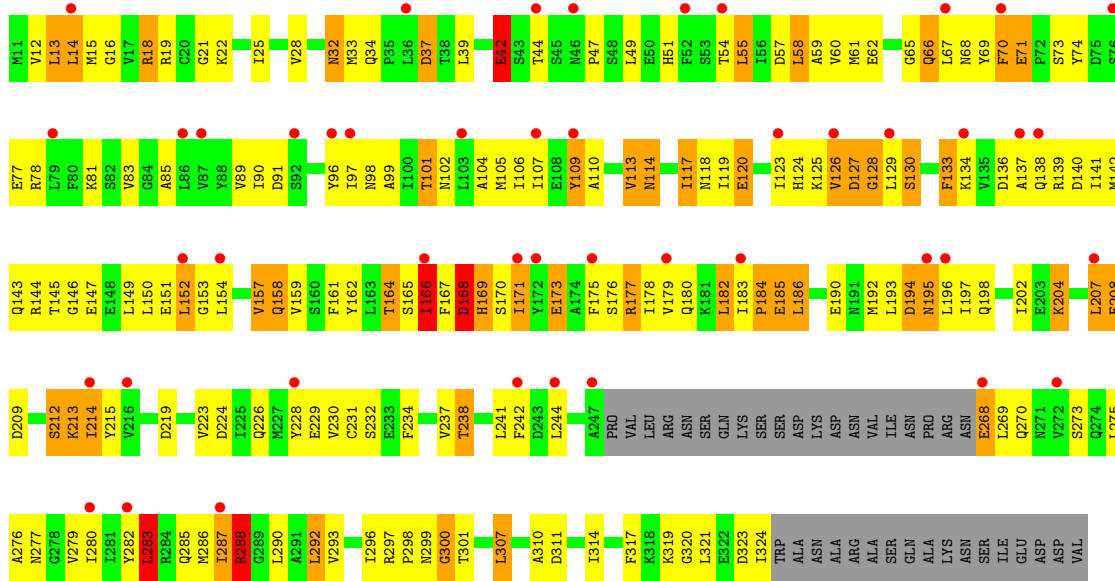These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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.
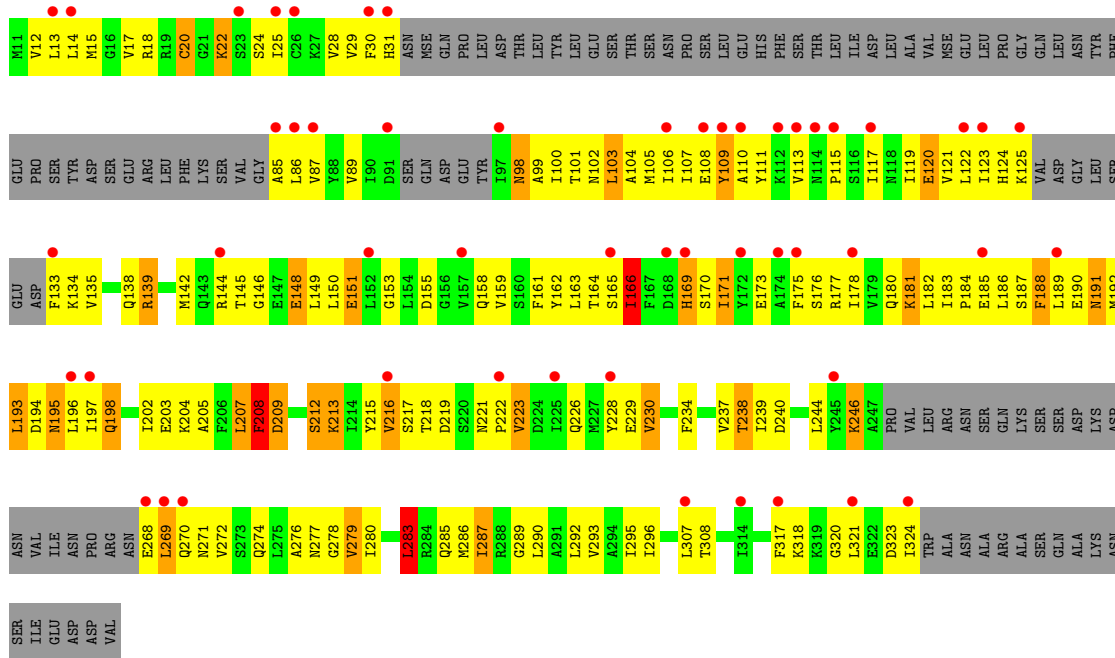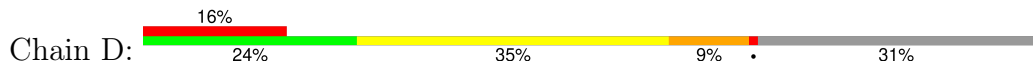
- Molecule 1: GTP-binding protein GTR1

- Molecule 1: GTP-binding protein GTR1

N301 K304 F308 F309 Q310

• **Molecule 2: GTP-binding protein GTR2**

Chain B:

14%

34%   40%   14%   •   11%

M11 V12 L13 L14 M15 G16 V17 R18 R19 C20 G21 K22 I25 V28 N32 M33 Q34 P35 L36 D37 T38 L39 E42 S43 T44 S45 N46 P47 S48 L49 E50 H51 F52 S53 T54 L55 I56 D57 L58 A59 V60 M61 E62 G65 Q66 L67 N68 Y69 F70 E71 P72 S73 Y74 D75 S76

E77 R78 L79 F80 K81 S82 V83 G84 A85 L86 V87 Y88 V89 I90 D91 S92 Y96 I97 N98 A99 I100 T101 N102 L103 A104 M105 I106 I107 E108 Y109 A110 V113 N114 I117 N118 I119 E120 I123 H124 K125 V126 D127 G128 L129 S130 F133 K134 V135 D136 A137 Q138 R139 D140 I141 M142

Q143 R144 T145 G146 E147 E148 L149 L150 E151 L152 G153 L154 V157 Q158 V159 S160 F161 Y162 L163 T164 S165 I166 Y167 D168 H169 S170 I171 Y172 E173 A174 F175 S176 R177 I178 V179 Q180 K181 L182 I183 P184 E185 L186 E190 N191 M192 L193 D194 N195 L196 I197 Q198 I202 E203 K204 L207 F208

D209 S212 K213 I214 Y215 V216 D219 V223 D224 I225 Q226 M227 Y228 E229 V230 C231 S232 F233 F234 V237 T238 L241 F242 D243 L244 A247 PRO VAL LEU ARG ASN SER GLN LYS SER ASP LYS ASN VAL ILE ASN PRO ARG ASN E268 L269 Q270 N271 V272 S273 Q274 L275

A276 N277 G278 V279 I280 I281 Y282 L283 R284 Q285 M286 I287 R288 G289 L290 A291 L292 V293 I296 R297 P298 N299 G300 T301 L307 A310 D311 I314 F317 K318 K319 G320 L321 E322 D323 I324 TRP ALA ASN ALA ARG ALA SER GLN ALA LYS ASN SER ILE GLU ASP ASP VAL

• **Molecule 2: GTP-binding protein GTR2**

Chain D:

16%

24%   35%   9%   •   31%

M11 V12 L13 L14 M15 G16 V17 R18 R19 C20 G21 K22 S23 S24 I25 C26 K27 V28 V29 F30 H31 ASN MSE GLN PRO LEU ASP THR LEU TYR LEU GLU SER THR SER ASN PRO SER LEU GLU HIS PHE SER THR LEU ILE ASP LEU ALA VAL MSE GLU LEU PRO GLY GLN LEU LEU ASN TYR PHE

GLU PRO SER TYR ASP SER GLU ARG LEU PHE LYS SER VAL GLY A85 L86 V87 Y88 V89 I90 D91 SER GLN ASP GLU TYR I97 N98 A99 I100 T101 N102 L103 A104 M105 I106 I107 E108 Y109 A110 Y111 K112 V113 N114 P115 S116 I117 N118 I119 E120 V121 L122 I123 H124 K125 VAL ASP GLY LEU SER

GLU ASP F133 K134 V135 Q138 R139 M142 Q143 R144 T145 G146 E147 E148 L149 L150 E151 L152 G153 L154 D155 G156 V157 Q158 V159 S160 F161 Y162 L163 T164 S165 I166 Y167 D168 H169 S170 I171 Y172 E173 A174 F175 S176 R177 I178 V179 Q180 K181 L182 I183 P184 E185 L186 S187 F188 L189 E190 N191 M192

L193 D194 N195 L196 I197 Q198 I202 E203 K204 A205 F206 L207 F208 D209 S212 K213 I214 Y215 V216 S217 T218 D219 S220 N221 P222 V223 D224 I225 Q226 M227 Y228 E229 V230 F234 V237 T238 I239 D240 L244 Y245 K246 A247 PRO VAL LEU ARG ASN SER GLN LYS SER ASP LYS ASP

ASN VAL ILE ASN PRO ARG ASN E268 L269 Q270 N271 V272 S273 Q274 L275 A276 N277 G278 V279 I280 L283 R284 Q285 M286 I287 R288 G289 L290 A291 L292 V293 A294 I295 I296 L307 T308 I314 F317 K318 K319 G320 L321 E322 D323 I324 TRP ALA ASN ALA ARG ALA SER GLN ALA LYS ASN

SER ILE GLU ASP VAL

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	68.91Å 148.44Å 98.51Å 90.00° 100.61° 90.00°	Depositor
Resolution (Å)	44.06 – 2.77 44.06 – 2.77	Depositor EDS
% Data completeness (in resolution range)	95.0 (44.06-2.77) 95.1 (44.06-2.77)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.94 (at 2.77Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.7_650)	Depositor
R, R_{free}	0.236 , 0.283 0.227 , 0.271	Depositor DCC
R_{free} test set	2290 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å^2)	73.4	Xtriage
Anisotropy	0.218	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 45.5	EDS
L-test for twinning[2]	$< |L| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	9011	wwPDB-VP
Average B, all atoms (Å^2)	97.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 22.89 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 5.2042e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: GNP, 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	0.62	0/2375	0.77	1/3165 (0.0%)
1	C	0.59	0/2384	0.76	1/3177 (0.0%)
2	B	0.46	0/2378	0.64	1/3205 (0.0%)
2	D	0.45	0/1847	0.68	1/2480 (0.0%)
All	All	0.54	0/8984	0.71	4/12027 (0.0%)

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	C	0	1
2	B	0	1
2	D	0	1
All	All	0	3

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	283	LEU	CA-CB-CG	6.88	131.13	115.30
2	B	283	LEU	CA-CB-CG	6.74	130.79	115.30
1	C	267	LEU	CA-CB-CG	5.91	128.88	115.30
1	A	9	LEU	CA-CB-CG	5.37	127.66	115.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	268	GLU	Peptide
1	C	53	GLY	Peptide
2	D	208	PHE	Peptide

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	2344	0	2396	169	0
1	C	2353	0	2404	146	0
2	B	2348	0	2348	172	0
2	D	1830	0	1866	193	0
3	A	32	0	13	1	0
3	B	32	0	13	7	0
3	C	32	0	13	5	0
3	D	32	0	13	5	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	2	0	0	0	0
5	C	2	0	0	0	0
All	All	9011	0	9066	662	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 37.

All (662) 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:C:131:VAL:HG12	1:C:132:GLN:H	1.05	1.13
2:D:238:THR:HB	2:D:271:ASN:HD22	1.11	1.08
2:D:212:SER:HA	2:D:213:LYS:HB2	1.36	1.07
2:B:70:PHE:HA	2:B:71:GLU:HB3	1.40	1.01
2:B:164:THR:HG22	2:B:171:ILE:HA	1.39	1.01
2:D:192:MSE:HE1	2:D:320:GLY:HA3	1.42	1.01
1:A:126:HIS:ND1	1:A:164:THR:HG22	1.75	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:ASN:H	1:A:54:ASN:HD22	0.99	0.99
1:A:250:MSE:HE1	2:B:241:LEU:HD11	1.46	0.98
2:B:120:GLU:HG2	2:B:178:ILE:HG12	1.41	0.98
2:B:139:ARG:HA	2:B:142:MSE:HE2	1.45	0.98
2:B:70:PHE:HA	2:B:71:GLU:CB	1.94	0.96
2:D:193:LEU:HD22	2:D:317:PHE:HE1	1.29	0.96
2:D:287:ILE:HD11	2:D:321:LEU:HB3	1.45	0.96
1:C:131:VAL:HG12	1:C:132:GLN:N	1.81	0.93
1:A:186:MSE:HE1	1:A:217:CYS:HB3	1.50	0.92
2:B:166:ILE:HA	2:B:171:ILE:HG12	1.52	0.90
2:D:181:LYS:HA	2:D:186:LEU:HD21	1.54	0.88
2:B:165:SER:HB2	2:B:168:ASP:HB2	1.54	0.88
1:A:125:LEU:HD11	1:A:143:MSE:HG3	1.56	0.87
1:C:131:VAL:CG1	1:C:132:GLN:H	1.86	0.87
2:D:171:ILE:HD12	2:D:171:ILE:H	1.36	0.87
2:D:215:TYR:OH	2:D:223:VAL:HG11	1.74	0.86
2:D:198:GLN:OE1	2:D:198:GLN:HA	1.74	0.85
2:D:188:PHE:HA	2:D:191:ASN:HB2	1.58	0.85
2:D:209:ASP:HB2	2:D:212:SER:O	1.77	0.85
1:A:11:LEU:HD21	1:A:22:MSE:HE1	1.59	0.84
1:A:255:GLN:O	1:A:258:THR:HB	1.76	0.84
1:C:193:LEU:HD13	1:C:207:LEU:CD2	2.06	0.84
1:A:126:HIS:ND1	1:A:164:THR:CG2	2.40	0.84
1:A:109:LEU:HD23	1:A:156:PHE:CD2	2.13	0.83
2:B:193:LEU:HB2	2:B:317:PHE:HE1	1.41	0.83
1:A:8:LYS:HE3	1:A:60:TRP:CZ2	2.13	0.83
1:A:54:ASN:HD22	1:A:54:ASN:N	1.76	0.83
1:A:195:LYS:O	1:A:199:ILE:HG13	1.79	0.83
1:A:101:ASP:O	1:A:104:ILE:HD13	1.77	0.82
2:D:209:ASP:HB2	2:D:212:SER:C	2.00	0.81
2:D:142:MSE:HE2	2:D:161:PHE:HB2	1.61	0.81
2:D:234:PHE:O	2:D:238:THR:HG22	1.81	0.81
2:D:164:THR:HG22	2:D:165:SER:H	1.46	0.81
1:A:29:ASN:HD22	1:A:255:GLN:NE2	1.78	0.80
2:B:149:LEU:HD13	2:B:157:VAL:HG21	1.63	0.80
2:D:120:GLU:HG2	2:D:178:ILE:HG12	1.61	0.80
2:B:25:ILE:HA	2:B:28:VAL:HG12	1.63	0.80
2:B:286:MSE:HE2	2:B:292:LEU:HB2	1.64	0.80
2:B:107:ILE:HD11	2:B:149:LEU:HD21	1.61	0.80
1:A:23:ARG:HG2	1:A:23:ARG:HH21	1.44	0.80
1:A:109:LEU:HD23	1:A:156:PHE:HD2	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:26:ILE:HD11	1:A:27:PHE:CZ	2.18	0.79
2:D:193:LEU:HD23	2:D:193:LEU:H	1.47	0.79
1:C:242:ARG:HB2	2:D:244:LEU:HD12	1.65	0.79
1:A:93:VAL:HG11	1:A:128:MSE:HE1	1.64	0.79
1:C:113:ARG:HD3	1:C:154:PHE:O	1.83	0.79
1:C:50:ARG:HG3	1:C:50:ARG:HH11	1.48	0.78
1:C:94:GLU:O	1:C:94:GLU:HG2	1.83	0.78
2:D:134:LYS:HD3	2:D:163:LEU:HD13	1.65	0.78
2:D:87:VAL:HA	2:D:120:GLU:O	1.84	0.78
2:D:277:ASN:HD22	2:D:279:VAL:CG2	1.98	0.77
2:D:215:TYR:C	2:D:217:SER:H	1.87	0.76
1:A:295:GLN:HG3	1:A:299:LEU:HD11	1.66	0.76
2:D:209:ASP:HB2	2:D:213:LYS:N	1.99	0.76
1:C:123:VAL:HG11	1:C:159:LEU:HD21	1.66	0.76
1:A:293:ILE:HD11	1:A:297:LEU:HD12	1.68	0.76
1:A:304:LYS:HA	1:A:305:ALA:C	2.06	0.76
1:A:254:LYS:NZ	1:A:254:LYS:HB3	2.01	0.75
2:B:323:ASP:O	2:B:324:ILE:HG13	1.87	0.75
1:C:23:ARG:HG3	1:C:59:LEU:HD12	1.69	0.75
1:A:156:PHE:O	1:A:157:PRO:O	2.04	0.75
2:B:277:ASN:OD1	2:B:279:VAL:HG23	1.87	0.75
1:C:11:LEU:HD21	1:C:22:MSE:HE1	1.69	0.74
2:B:234:PHE:O	2:B:238:THR:HG22	1.86	0.74
2:D:238:THR:HB	2:D:271:ASN:ND2	1.96	0.74
2:D:212:SER:HA	2:D:213:LYS:CB	2.15	0.74
2:D:193:LEU:HD22	2:D:317:PHE:CE1	2.20	0.74
2:D:205:ALA:HB1	2:D:292:LEU:HD11	1.70	0.74
1:C:29:ASN:ND2	1:C:251:LYS:HE3	2.03	0.74
1:A:293:ILE:HG13	1:A:294:PRO:HD2	1.69	0.74
1:A:54:ASN:H	1:A:54:ASN:ND2	1.80	0.73
1:A:250:MSE:CE	2:B:241:LEU:HD11	2.18	0.73
2:B:13:LEU:HD12	2:B:83:VAL:HG21	1.71	0.73
1:A:180:CYS:HA	1:A:183:ILE:HD12	1.70	0.73
2:B:25:ILE:HG22	2:B:166:ILE:HG13	1.71	0.73
2:D:119:ILE:HB	2:D:159:VAL:HA	1.71	0.72
1:C:23:ARG:HG3	1:C:59:LEU:CD1	2.19	0.72
2:B:198:GLN:HA	2:B:198:GLN:NE2	2.03	0.72
1:C:104:ILE:HD13	1:C:105:PHE:H	1.55	0.72
1:C:104:ILE:HD13	1:C:105:PHE:N	2.04	0.72
2:B:18:ARG:HG2	2:B:19:ARG:HG2	1.71	0.71
1:A:26:ILE:HD11	1:A:27:PHE:CE2	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:LEU:CD2	1:A:156:PHE:HD2	2.03	0.71
2:B:15:MSE:HA	2:B:22:LYS:HZ3	1.54	0.71
1:C:140:PHE:CE1	1:C:144:MSE:HE3	2.26	0.70
2:B:298:PRO:O	2:B:300:GLY:N	2.21	0.70
1:C:200:MSE:HE1	1:C:301:ASN:HD22	1.55	0.70
2:D:209:ASP:CB	2:D:213:LYS:H	2.04	0.70
1:C:25:ILE:CD1	1:C:166:ILE:HG13	2.21	0.70
2:D:17:VAL:HG22	2:D:18:ARG:H	1.55	0.70
2:D:124:HIS:HA	2:D:164:THR:HB	1.74	0.70
2:D:189:LEU:HD13	2:D:189:LEU:O	1.92	0.70
1:A:207:LEU:HD13	1:A:282:MSE:HE1	1.74	0.69
2:B:283:LEU:HB2	2:B:293:VAL:HG22	1.74	0.69
1:C:193:LEU:HD13	1:C:207:LEU:HD22	1.74	0.69
2:D:102:ASN:O	2:D:106:ILE:HG13	1.92	0.69
2:D:119:ILE:HG21	2:D:159:VAL:HG22	1.75	0.69
2:D:124:HIS:CG	2:D:125:LYS:N	2.61	0.68
1:A:305:ALA:N	1:A:309:PHE:HD1	1.91	0.68
1:A:12:MSE:CE	1:A:87:LEU:HD21	2.24	0.68
2:B:193:LEU:HB2	2:B:317:PHE:CE1	2.26	0.68
2:B:226:GLN:O	2:B:230:VAL:HG23	1.92	0.68
1:A:305:ALA:H	1:A:309:PHE:HD1	1.41	0.68
2:D:286:MSE:HE2	2:D:292:LEU:HB2	1.76	0.68
1:A:78:ASP:HB2	1:A:82:GLN:OE1	1.92	0.68
1:C:209:GLU:HB2	1:C:216:ILE:HD11	1.76	0.68
2:D:209:ASP:HB2	2:D:213:LYS:H	1.58	0.68
1:A:186:MSE:CE	1:A:217:CYS:HB3	2.23	0.68
2:D:146:GLY:O	2:D:150:LEU:HB2	1.94	0.68
2:D:212:SER:CA	2:D:213:LYS:HB2	2.19	0.68
2:B:13:LEU:HD21	2:B:61:MSE:HE3	1.76	0.67
1:C:125:LEU:HD22	1:C:140:PHE:CD1	2.30	0.67
2:B:180:GLN:O	2:B:186:LEU:HG	1.95	0.67
2:B:215:TYR:CD1	2:B:215:TYR:O	2.47	0.67
2:D:286:MSE:HE3	2:D:317:PHE:CE2	2.30	0.67
2:B:70:PHE:CA	2:B:71:GLU:CB	2.73	0.67
1:C:203:LEU:HD12	1:C:203:LEU:O	1.95	0.67
2:D:193:LEU:HD23	2:D:193:LEU:N	2.10	0.67
1:A:93:VAL:HG11	1:A:128:MSE:CE	2.24	0.66
2:B:130:SER:HB2	2:B:133:PHE:HB2	1.77	0.66
1:A:152:SER:N	1:A:157:PRO:HG2	2.10	0.66
1:C:126:HIS:HE1	3:C:500:GNP:N7	1.93	0.66
1:A:156:PHE:HB2	1:A:157:PRO:HD3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:23:ARG:HG2	1:A:23:ARG:NH2	2.10	0.66
1:A:259:LYS:HE3	2:B:229:GLU:OE1	1.96	0.65
2:B:198:GLN:HA	2:B:198:GLN:HE21	1.59	0.65
1:C:200:MSE:CE	1:C:301:ASN:HD22	2.08	0.65
2:D:277:ASN:HD22	2:D:279:VAL:HG21	1.60	0.65
1:C:265:LYS:HD3	2:D:276:ALA:HA	1.79	0.65
1:C:17:SER:HB2	1:C:90:VAL:HG22	1.78	0.65
2:B:39:LEU:HA	3:B:500:GNP:O2'	1.96	0.65
1:A:295:GLN:HG3	1:A:299:LEU:CD1	2.26	0.65
2:B:165:SER:O	2:B:167:PHE:N	2.27	0.65
1:C:207:LEU:HG	1:C:282:MSE:HE1	1.77	0.65
2:D:176:SER:HB3	2:D:215:TYR:CG	2.32	0.65
2:D:100:ILE:HG21	2:D:144:ARG:HB3	1.79	0.64
1:C:22:MSE:HE3	1:C:175:TRP:HZ2	1.61	0.64
1:C:32:ALA:HB1	1:C:166:ILE:HG23	1.79	0.64
2:B:49:LEU:HD11	2:B:59:ALA:HB1	1.79	0.64
1:C:50:ARG:HG3	1:C:50:ARG:NH1	2.12	0.64
1:C:207:LEU:HG	1:C:282:MSE:CE	2.28	0.64
1:A:241:LYS:O	1:A:245:LYS:HG3	1.97	0.64
2:D:100:ILE:HG13	2:D:145:THR:HG23	1.79	0.64
1:A:200:MSE:HE1	1:A:301:ASN:HB2	1.78	0.64
2:B:85:ALA:HB2	2:B:182:LEU:HD11	1.79	0.64
1:C:293:ILE:HG13	1:C:294:PRO:HD2	1.80	0.64
2:D:171:ILE:H	2:D:171:ILE:CD1	2.05	0.64
2:B:197:ILE:HG21	2:B:202:ILE:HD12	1.80	0.64
2:B:190:GLU:O	2:B:194:ASP:HB2	1.96	0.64
2:B:287:ILE:HD11	2:B:321:LEU:HB3	1.80	0.64
1:A:265:LYS:HD3	2:B:276:ALA:HA	1.79	0.63
1:C:140:PHE:CZ	1:C:144:MSE:HE3	2.33	0.63
2:D:181:LYS:CA	2:D:186:LEU:HD21	2.26	0.63
1:C:128:MSE:HG3	1:C:128:MSE:O	1.97	0.63
2:D:24:SER:O	2:D:28:VAL:HG23	1.99	0.63
1:A:203:LEU:HD12	1:A:203:LEU:O	1.98	0.63
2:B:33:MSE:HE2	2:B:37:ASP:HB2	1.81	0.63
2:B:73:SER:HB2	1:C:192:ASN:HD21	1.64	0.63
1:C:109:LEU:CD1	1:C:151:SER:HA	2.28	0.63
1:A:192:ASN:N	1:A:192:ASN:HD22	1.96	0.63
2:D:101:THR:HG22	2:D:148:GLU:HG3	1.79	0.63
1:C:166:ILE:HD13	3:C:500:GNP:N7	2.14	0.63
2:D:12:VAL:HG22	2:D:85:ALA:HB3	1.80	0.63
1:A:25:ILE:HD12	1:A:166:ILE:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:119:ILE:H	2:B:158:GLN:HG2	1.64	0.62
2:D:125:LYS:HE3	3:D:500:GNP:N3	2.14	0.62
2:B:74:TYR:CE1	1:C:308:PHE:HE1	2.17	0.62
2:D:197:ILE:HG22	2:D:197:ILE:O	1.98	0.62
2:D:25:ILE:HD11	2:D:124:HIS:CE1	2.35	0.62
2:D:277:ASN:HB3	2:D:279:VAL:HG23	1.80	0.62
1:A:267:LEU:C	1:A:267:LEU:HD12	2.20	0.62
2:B:65:GLY:O	2:B:66:GLN:HG3	1.99	0.62
1:A:25:ILE:HD12	1:A:166:ILE:CD1	2.29	0.62
1:A:166:ILE:HG22	1:A:167:TRP:CD1	2.35	0.62
1:A:156:PHE:CB	1:A:157:PRO:HD3	2.30	0.62
2:D:25:ILE:HG23	2:D:171:ILE:HG21	1.82	0.61
2:D:283:LEU:O	2:D:283:LEU:HD12	2.00	0.61
1:A:278:LEU:HD21	1:A:284:CYS:SG	2.39	0.61
2:D:270:GLN:HA	2:D:283:LEU:O	2.00	0.61
2:B:212:SER:HB2	2:B:214:ILE:HD13	1.83	0.61
1:A:98:VAL:O	1:A:102:ILE:HG13	2.01	0.61
2:D:145:THR:O	2:D:149:LEU:HD12	2.00	0.61
2:B:22:LYS:HG2	3:B:500:GNP:O1B	2.01	0.61
2:D:185:GLU:HA	2:D:185:GLU:OE2	2.02	0.60
2:D:207:LEU:HD22	2:D:290:LEU:HD23	1.82	0.60
1:C:29:ASN:HD21	1:C:251:LYS:HE3	1.66	0.60
1:C:259:LYS:HE2	2:D:229:GLU:CD	2.22	0.60
2:B:70:PHE:HA	2:B:71:GLU:HB2	1.84	0.60
1:A:207:LEU:HD13	1:A:282:MSE:CE	2.31	0.60
2:B:137:ALA:O	2:B:141:ILE:HB	2.01	0.60
2:B:173:GLU:O	2:B:177:ARG:HG3	2.00	0.60
2:B:298:PRO:C	2:B:300:GLY:H	2.05	0.60
2:D:85:ALA:HA	2:D:117:ILE:HG23	1.84	0.60
1:C:93:VAL:HG11	1:C:128:MSE:HE1	1.83	0.60
1:C:101:ASP:O	1:C:104:ILE:HD13	2.01	0.60
2:B:192:MSE:O	2:B:196:LEU:HB2	2.03	0.59
1:A:109:LEU:CD2	1:A:156:PHE:CD2	2.83	0.59
2:B:223:VAL:O	2:B:224:ASP:HB3	2.02	0.59
2:B:126:VAL:HG12	2:B:126:VAL:O	2.02	0.59
2:B:133:PHE:O	2:B:136:ASP:HB2	2.02	0.59
1:C:169:GLU:CD	1:C:169:GLU:H	2.05	0.59
2:D:107:ILE:HG21	2:D:149:LEU:HD21	1.84	0.59
2:D:277:ASN:HB3	2:D:279:VAL:H	1.67	0.59
1:A:4:PRO:HG2	1:A:5:LEU:H	1.67	0.59
2:B:143:GLN:O	2:B:147:GLU:HG3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:HIS:HE1	1:A:104:ILE:HD11	1.67	0.59
1:A:207:LEU:HB3	1:A:282:MSE:CE	2.32	0.59
2:D:222:PRO:O	2:D:223:VAL:HB	2.03	0.59
2:D:223:VAL:HG12	2:D:223:VAL:O	2.02	0.58
2:D:277:ASN:HD22	2:D:279:VAL:HG23	1.67	0.58
2:B:124:HIS:CD2	2:B:125:LYS:N	2.71	0.58
1:C:18:GLY:HA2	3:C:500:GNP:O1A	2.02	0.58
1:C:180:CYS:HA	1:C:183:ILE:HD12	1.85	0.58
1:A:185:ASN:HB2	1:A:189:HIS:CD2	2.38	0.58
2:D:280:ILE:HB	2:D:296:ILE:HB	1.86	0.58
2:B:67:LEU:HB3	2:B:71:GLU:OE2	2.03	0.58
2:B:234:PHE:O	2:B:238:THR:CG2	2.51	0.58
2:D:86:LEU:O	2:D:120:GLU:HB2	2.03	0.58
2:B:98:ASN:O	2:B:101:THR:HG23	2.04	0.58
2:B:125:LYS:HE2	3:B:500:GNP:N2	2.18	0.58
2:D:218:THR:HG23	2:D:219:ASP:O	2.03	0.58
1:A:55:MSE:HE1	1:A:183:ILE:CG1	2.34	0.58
2:D:145:THR:O	2:D:149:LEU:HB2	2.04	0.58
1:A:96:THR:HG22	1:A:97:GLU:HG2	1.86	0.57
1:A:156:PHE:CB	1:A:157:PRO:CD	2.82	0.57
1:C:100:LYS:O	1:C:103:GLU:HB3	2.04	0.57
2:B:125:LYS:O	2:B:125:LYS:HD3	2.04	0.57
1:C:93:VAL:HG11	1:C:128:MSE:CE	2.34	0.57
2:D:13:LEU:HB3	2:D:15:MSE:HE3	1.87	0.57
1:C:22:MSE:CE	1:C:175:TRP:HZ2	2.16	0.57
2:D:166:ILE:H	2:D:171:ILE:CG1	2.18	0.57
1:A:104:ILE:HG12	1:A:105:PHE:N	2.19	0.57
1:A:174:ALA:O	1:A:178:ILE:HG13	2.05	0.57
1:C:193:LEU:HD13	1:C:207:LEU:HD21	1.84	0.57
2:D:103:LEU:HD12	2:D:145:THR:HG22	1.85	0.57
2:B:140:ASP:O	2:B:143:GLN:HB2	2.04	0.57
2:D:25:ILE:O	2:D:29:VAL:HG23	2.04	0.57
1:C:125:LEU:HB3	1:C:128:MSE:HE1	1.86	0.56
1:A:123:VAL:O	1:A:161:GLY:HA2	2.05	0.56
1:A:169:GLU:HG2	1:A:245:LYS:HG2	1.87	0.56
1:C:200:MSE:HE3	1:C:200:MSE:HA	1.85	0.56
1:C:126:HIS:CE1	3:C:500:GNP:N7	2.73	0.56
2:B:125:LYS:HG2	3:B:500:GNP:C2	2.35	0.56
2:D:283:LEU:HB2	2:D:293:VAL:HG22	1.87	0.56
2:B:287:ILE:CD1	2:B:321:LEU:HB3	2.34	0.56
2:B:270:GLN:HA	2:B:283:LEU:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:106:ILE:HA	2:D:109:TYR:CZ	2.41	0.56
1:A:24:SER:HB3	1:A:30:TYR:CG	2.41	0.55
1:A:254:LYS:HB3	1:A:254:LYS:HZ2	1.68	0.55
2:B:159:VAL:HB	2:B:161:PHE:CE2	2.41	0.55
1:C:22:MSE:HE3	1:C:175:TRP:CZ2	2.39	0.55
1:A:55:MSE:HE1	1:A:183:ILE:HG12	1.88	0.55
2:B:280:ILE:HB	2:B:296:ILE:HB	1.87	0.55
1:A:305:ALA:HA	1:A:309:PHE:CD1	2.42	0.55
2:D:215:TYR:C	2:D:217:SER:N	2.55	0.55
2:D:20:CYS:SG	2:D:89:VAL:HG13	2.47	0.55
2:D:109:TYR:O	2:D:113:VAL:HG23	2.06	0.55
1:A:12:MSE:HE3	1:A:87:LEU:HD21	1.87	0.55
1:C:26:ILE:CD1	1:C:175:TRP:CG	2.90	0.55
2:B:165:SER:C	2:B:167:PHE:H	2.10	0.55
1:C:18:GLY:HA2	3:C:500:GNP:PA	2.47	0.55
1:C:50:ARG:HB3	1:C:54:ASN:OD1	2.06	0.55
1:A:37:ARG:H	1:A:37:ARG:HD3	1.71	0.55
2:D:166:ILE:HA	2:D:171:ILE:HG12	1.89	0.55
1:A:125:LEU:CD1	1:A:143:MSE:HG3	2.34	0.55
2:B:77:GLU:O	2:B:81:LYS:HG3	2.07	0.54
2:D:138:GLN:HE22	2:D:163:LEU:HD11	1.72	0.54
2:B:213:LYS:HD3	2:B:232:SER:OG	2.07	0.54
1:C:14:ARG:O	1:C:17:SER:OG	2.23	0.54
1:A:293:ILE:CG1	1:A:294:PRO:HD2	2.36	0.54
2:B:28:VAL:HG11	2:B:166:ILE:CG1	2.37	0.54
2:B:124:HIS:CG	2:B:125:LYS:N	2.75	0.54
1:A:253:PHE:HB2	2:B:237:VAL:HG21	1.90	0.54
1:A:23:ARG:HH21	1:A:23:ARG:CG	2.19	0.54
2:D:142:MSE:HG2	2:D:161:PHE:CD2	2.43	0.54
2:B:12:VAL:HB	2:B:60:VAL:HG22	1.90	0.54
1:C:8:LYS:HE3	1:C:60:TRP:CE2	2.43	0.54
2:B:286:MSE:HE3	2:B:317:PHE:CE2	2.43	0.54
2:D:25:ILE:HA	2:D:166:ILE:HD11	1.90	0.54
2:D:169:HIS:HD2	2:D:228:TYR:CE2	2.26	0.54
1:C:25:ILE:HD12	1:C:166:ILE:HG13	1.90	0.53
1:C:36:ARG:NH1	1:C:36:ARG:HB3	2.23	0.53
2:D:104:ALA:CB	2:D:148:GLU:HB3	2.38	0.53
2:B:90:ILE:HG22	2:B:90:ILE:O	2.09	0.53
1:C:166:ILE:HG22	1:C:167:TRP:CD1	2.42	0.53
2:D:188:PHE:O	2:D:192:MSE:N	2.31	0.53
1:A:151:SER:C	1:A:157:PRO:HD2	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:28:VAL:HG12	2:D:28:VAL:O	2.08	0.53
2:D:193:LEU:N	2:D:193:LEU:CD2	2.71	0.53
2:B:179:VAL:HG12	2:B:179:VAL:O	2.08	0.53
2:B:231:CYS:HB3	2:B:293:VAL:HG11	1.90	0.53
1:C:48:HIS:O	1:C:49:LEU:HB3	2.09	0.53
2:B:25:ILE:HA	2:B:28:VAL:CG1	2.37	0.53
1:A:131:VAL:HG22	1:A:136:ARG:CG	2.39	0.52
2:B:118:ASN:HA	2:B:158:GLN:HG2	1.91	0.52
2:D:181:LYS:HB3	2:D:186:LEU:HD21	1.91	0.52
2:B:109:TYR:O	2:B:113:VAL:HG23	2.10	0.52
2:D:221:ASN:HB3	2:D:222:PRO:HD2	1.90	0.52
1:A:156:PHE:HB2	1:A:157:PRO:CD	2.39	0.52
2:B:55:LEU:HD13	2:B:288:ARG:NE	2.25	0.52
1:C:169:GLU:HG2	1:C:245:LYS:HG2	1.90	0.52
2:D:142:MSE:HG2	2:D:161:PHE:CE2	2.45	0.52
2:D:234:PHE:O	2:D:238:THR:CG2	2.54	0.52
2:D:323:ASP:O	2:D:324:ILE:HD12	2.09	0.52
1:C:87:LEU:HB2	1:C:112:LEU:HD21	1.91	0.52
1:C:123:VAL:CG1	1:C:159:LEU:HD21	2.38	0.52
1:A:125:LEU:HG	1:A:140:PHE:HD1	1.75	0.52
1:C:94:GLU:O	1:C:94:GLU:CG	2.57	0.52
2:D:166:ILE:HG21	3:D:500:GNP:O6	2.10	0.52
2:B:166:ILE:CA	2:B:171:ILE:HG12	2.32	0.52
1:C:35:THR:O	1:C:38:LEU:HB2	2.10	0.52
2:B:120:GLU:HG2	2:B:178:ILE:CG1	2.27	0.51
1:A:52:LEU:HD12	1:A:55:MSE:HE3	1.91	0.51
2:D:89:VAL:HG23	2:D:124:HIS:CB	2.40	0.51
1:A:192:ASN:HD22	1:A:192:ASN:H	1.58	0.51
2:B:307:LEU:O	2:B:311:ASP:HB2	2.11	0.51
2:D:89:VAL:HG23	2:D:124:HIS:HB3	1.92	0.51
2:D:274:GLN:HE21	2:D:278:GLY:HA2	1.75	0.51
1:A:157:PRO:HA	1:A:158:ASN:C	2.31	0.51
2:B:77:GLU:OE1	2:B:113:VAL:HG21	2.10	0.51
2:D:286:MSE:HE3	2:D:317:PHE:CD2	2.46	0.51
2:B:168:ASP:HB3	2:B:170:SER:H	1.75	0.51
2:D:188:PHE:O	2:D:192:MSE:HG3	2.11	0.51
2:B:123:ILE:O	2:B:126:VAL:HG23	2.10	0.51
2:D:207:LEU:HD22	2:D:290:LEU:CD2	2.40	0.51
1:A:26:ILE:HG13	1:A:27:PHE:CD2	2.46	0.51
1:A:151:SER:OG	1:A:157:PRO:HD3	2.11	0.51
1:A:299:LEU:HD12	1:A:299:LEU:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:29:VAL:HG12	2:D:30:PHE:CD1	2.46	0.51
2:D:164:THR:HG22	2:D:165:SER:N	2.22	0.51
2:D:190:GLU:O	2:D:194:ASP:CB	2.59	0.51
2:D:238:THR:CB	2:D:271:ASN:HD22	2.02	0.50
2:B:169:HIS:ND1	2:B:229:GLU:CG	2.75	0.50
1:A:29:ASN:ND2	1:A:255:GLN:NE2	2.55	0.50
1:A:55:MSE:HE1	1:A:183:ILE:HA	1.93	0.50
2:B:19:ARG:HA	3:B:500:GNP:H5'2	1.94	0.50
2:D:86:LEU:HD22	2:D:87:VAL:N	2.26	0.50
2:D:106:ILE:HA	2:D:109:TYR:OH	2.12	0.50
2:D:197:ILE:HG21	2:D:202:ILE:HD12	1.93	0.50
2:D:269:LEU:HD12	2:D:285:GLN:HB2	1.93	0.50
1:A:144:MSE:O	1:A:148:SER:HB2	2.12	0.50
1:C:64:GLY:HA2	1:C:69:MSE:HE2	1.94	0.50
2:D:186:LEU:HD12	2:D:186:LEU:H	1.76	0.50
1:A:94:GLU:OE1	1:A:130:LEU:HD13	2.12	0.50
1:A:131:VAL:HG22	1:A:136:ARG:HG2	1.93	0.50
2:B:69:TYR:HE1	2:B:101:THR:OG1	1.93	0.50
2:D:190:GLU:O	2:D:190:GLU:HG2	2.10	0.50
2:B:70:PHE:CA	2:B:71:GLU:HB3	2.28	0.50
1:C:207:LEU:HD12	1:C:282:MSE:HE2	1.94	0.50
1:C:264:PHE:HE2	1:C:267:LEU:HB3	1.77	0.50
1:A:278:LEU:N	1:A:278:LEU:HD23	2.26	0.49
1:C:123:VAL:O	1:C:161:GLY:HA2	2.12	0.49
2:B:151:GLU:O	2:B:153:GLY:N	2.44	0.49
2:D:22:LYS:HB2	3:D:500:GNP:O1B	2.12	0.49
2:B:123:ILE:O	2:B:126:VAL:CG2	2.59	0.49
1:C:89:HIS:HE1	1:C:104:ILE:HD11	1.77	0.49
2:D:87:VAL:HG22	2:D:120:GLU:HB3	1.93	0.49
2:D:209:ASP:CB	2:D:213:LYS:N	2.68	0.49
1:A:88:ILE:HG12	1:A:178:ILE:HD13	1.94	0.49
1:A:109:LEU:HD22	1:A:154:PHE:HB2	1.94	0.49
1:C:26:ILE:HD12	1:C:175:TRP:CG	2.47	0.49
1:C:293:ILE:HG13	1:C:294:PRO:CD	2.42	0.49
2:D:269:LEU:HD13	2:D:269:LEU:O	2.11	0.49
1:C:35:THR:HA	1:C:38:LEU:HD22	1.94	0.49
2:B:33:MSE:HG2	2:B:34:GLN:H	1.77	0.49
1:C:275:VAL:HG22	1:C:285:PHE:CD1	2.47	0.49
2:D:283:LEU:HD12	2:D:283:LEU:C	2.32	0.49
1:A:219:SER:OG	1:A:220:ASN:ND2	2.45	0.49
1:A:299:LEU:HD12	1:A:299:LEU:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:32:ALA:HB1	1:A:166:ILE:HG23	1.93	0.49
2:B:126:VAL:O	2:B:127:ASP:O	2.31	0.49
2:D:177:ARG:HD3	2:D:180:GLN:NE2	2.27	0.49
2:D:286:MSE:HE2	2:D:292:LEU:CB	2.43	0.48
1:A:47:SER:HB3	1:A:49:LEU:CD2	2.43	0.48
2:B:28:VAL:HG11	2:B:166:ILE:HG12	1.94	0.48
2:B:207:LEU:HD23	2:B:208:PHE:H	1.78	0.48
2:B:310:ALA:O	2:B:314:ILE:HG13	2.14	0.48
1:A:152:SER:HA	1:A:157:PRO:HD2	1.96	0.48
2:D:195:ASN:HB3	2:D:196:LEU:HD22	1.94	0.48
1:C:144:MSE:O	1:C:148:SER:HB2	2.13	0.48
1:A:55:MSE:HE2	1:A:184:PRO:CD	2.43	0.48
1:A:171:LEU:HD23	1:A:171:LEU:HA	1.60	0.48
2:B:69:TYR:CD1	2:B:105:MSE:SE	3.17	0.48
2:B:73:SER:CB	1:C:192:ASN:HD21	2.27	0.48
1:C:24:SER:HB3	1:C:30:TYR:CG	2.49	0.48
1:A:151:SER:O	1:A:157:PRO:HD2	2.14	0.48
2:D:120:GLU:HG3	2:D:162:TYR:CE2	2.49	0.48
2:B:169:HIS:ND1	2:B:229:GLU:HG2	2.28	0.48
1:A:125:LEU:O	1:A:128:MSE:HE3	2.14	0.48
1:A:168:ASP:OD2	1:A:170:SER:OG	2.26	0.48
1:C:11:LEU:HD13	1:C:19:LYS:HB3	1.94	0.48
1:A:55:MSE:CE	1:A:183:ILE:HA	2.44	0.47
2:B:197:ILE:CG2	2:B:202:ILE:HD12	2.44	0.47
2:B:207:LEU:HD11	2:B:321:LEU:HD11	1.96	0.47
2:D:190:GLU:O	2:D:194:ASP:HB2	2.14	0.47
1:A:19:LYS:HA	1:A:22:MSE:HE2	1.96	0.47
1:A:239:ASP:C	1:A:239:ASP:OD1	2.50	0.47
2:B:99:ALA:HA	2:B:102:ASN:ND2	2.30	0.47
2:B:22:LYS:HZ1	2:B:65:GLY:CA	2.28	0.47
2:B:33:MSE:HG2	2:B:34:GLN:N	2.28	0.47
1:A:8:LYS:HE3	1:A:60:TRP:CE2	2.49	0.47
1:C:131:VAL:CG1	1:C:132:GLN:N	2.54	0.47
2:D:14:LEU:O	2:D:15:MSE:HG3	2.15	0.47
2:D:138:GLN:CG	2:D:142:MSE:HE3	2.45	0.47
1:A:33:PHE:O	1:A:35:THR:N	2.47	0.47
2:B:119:ILE:N	2:B:119:ILE:HD12	2.30	0.47
2:B:207:LEU:CD2	2:B:290:LEU:HD13	2.44	0.47
1:C:102:ILE:HD13	1:C:146:ASN:ND2	2.30	0.47
2:D:177:ARG:NH1	2:D:180:GLN:HE22	2.13	0.47
1:A:125:LEU:HD11	1:A:143:MSE:CG	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:22:LYS:HB3	2:B:89:VAL:HG11	1.97	0.47
2:B:66:GLN:HB3	2:B:67:LEU:H	1.50	0.47
2:B:138:GLN:O	2:B:140:ASP:N	2.48	0.47
1:A:4:PRO:CG	1:A:5:LEU:H	2.27	0.47
2:B:184:PRO:O	2:B:185:GLU:HB2	2.15	0.47
1:C:23:ARG:O	1:C:27:PHE:HB2	2.15	0.47
1:C:203:LEU:O	1:C:204:GLU:HB3	2.15	0.47
2:B:58:LEU:HD13	2:B:58:LEU:O	2.14	0.47
2:B:126:VAL:HG12	2:B:134:LYS:HE2	1.97	0.47
1:C:11:LEU:HD21	1:C:22:MSE:CE	2.42	0.47
2:D:135:VAL:HG13	2:D:139:ARG:HH21	1.80	0.47
2:B:69:TYR:HD1	2:B:105:MSE:SE	2.48	0.46
1:C:8:LYS:HE3	1:C:60:TRP:CZ2	2.50	0.46
1:C:61:ASP:C	1:C:61:ASP:OD1	2.52	0.46
1:C:206:ILE:HB	1:C:208:PHE:HE1	1.80	0.46
2:D:86:LEU:HD22	2:D:87:VAL:H	1.80	0.46
2:D:107:ILE:O	2:D:110:ALA:HB3	2.15	0.46
2:D:124:HIS:CG	2:D:125:LYS:H	2.30	0.46
1:C:88:ILE:HG12	1:C:178:ILE:HD13	1.96	0.46
1:A:22:MSE:HE2	1:A:22:MSE:HB2	1.76	0.46
1:A:151:SER:HB3	1:A:157:PRO:CG	2.45	0.46
1:A:304:LYS:HA	1:A:305:ALA:O	2.14	0.46
2:B:77:GLU:OE1	2:B:77:GLU:HA	2.15	0.46
1:C:253:PHE:HB2	2:D:237:VAL:HG21	1.96	0.46
2:D:103:LEU:HD13	2:D:104:ALA:N	2.31	0.46
2:D:180:GLN:O	2:D:183:ILE:HG22	2.14	0.46
1:A:73:PHE:HE1	1:A:108:ALA:HA	1.79	0.46
2:B:286:MSE:HE3	2:B:317:PHE:CD2	2.50	0.46
1:C:17:SER:HB2	1:C:90:VAL:CG2	2.43	0.46
1:C:78:ASP:O	1:C:82:GLN:HG3	2.15	0.46
1:C:206:ILE:HB	1:C:208:PHE:CE1	2.51	0.46
1:A:61:ASP:OD1	1:A:61:ASP:C	2.53	0.46
1:A:215:VAL:HG21	1:A:243:PHE:HB3	1.97	0.46
1:C:136:ARG:H	1:C:136:ARG:HG2	1.52	0.46
2:D:103:LEU:HD12	2:D:145:THR:CG2	2.45	0.46
1:A:7:SER:CB	1:A:182:LEU:HD13	2.46	0.46
1:A:267:LEU:HB2	2:B:273:SER:HB2	1.97	0.46
2:B:146:GLY:O	2:B:150:LEU:HG	2.14	0.46
1:C:125:LEU:O	1:C:128:MSE:HE3	2.15	0.46
1:C:279:SER:C	1:C:281:ASN:H	2.18	0.46
2:D:202:ILE:HG22	2:D:203:GLU:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:242:PHE:CD1	2:B:242:PHE:C	2.89	0.46
2:B:98:ASN:O	2:B:102:ASN:OD1	2.33	0.45
2:B:197:ILE:HG22	2:B:197:ILE:O	2.15	0.45
2:B:197:ILE:O	2:B:198:GLN:CD	2.55	0.45
1:C:183:ILE:CG2	1:C:186:MSE:HE2	2.45	0.45
1:C:269:LEU:HB3	1:C:273:ILE:HB	1.98	0.45
1:A:109:LEU:HD23	1:A:156:PHE:CE2	2.50	0.45
2:D:207:LEU:HD22	2:D:208:PHE:H	1.80	0.45
2:D:240:ASP:O	2:D:244:LEU:HD23	2.16	0.45
1:A:128:MSE:O	1:A:128:MSE:HG3	2.15	0.45
2:D:25:ILE:HD11	2:D:124:HIS:CD2	2.52	0.45
2:D:122:LEU:O	2:D:124:HIS:N	2.45	0.45
1:A:303:LYS:O	1:A:306:LYS:HB2	2.16	0.45
1:C:52:LEU:HD23	1:C:52:LEU:HA	1.56	0.45
2:D:124:HIS:CD2	2:D:125:LYS:HB2	2.51	0.45
2:D:138:GLN:HE21	2:D:163:LEU:HD21	1.80	0.45
2:B:321:LEU:HD23	2:B:321:LEU:HA	1.77	0.45
1:C:128:MSE:HE3	1:C:128:MSE:HB2	1.87	0.45
1:A:25:ILE:HD11	1:A:166:ILE:HG13	1.99	0.45
1:A:277:GLU:C	1:A:278:LEU:HD23	2.37	0.45
1:C:82:GLN:HE21	1:C:82:GLN:HB3	1.67	0.45
1:C:155:GLY:O	1:C:157:PRO:HD3	2.17	0.45
2:D:274:GLN:NE2	2:D:278:GLY:HA2	2.32	0.45
1:A:52:LEU:HD23	1:A:52:LEU:HA	1.66	0.45
2:B:179:VAL:O	2:B:179:VAL:CG1	2.65	0.45
2:D:119:ILE:HD13	2:D:158:GLN:H	1.82	0.45
2:D:221:ASN:HB3	2:D:222:PRO:CD	2.46	0.45
1:C:25:ILE:HD11	1:C:166:ILE:HG13	1.98	0.45
2:D:14:LEU:C	2:D:15:MSE:HG3	2.38	0.45
2:D:119:ILE:N	2:D:119:ILE:HD12	2.32	0.45
1:C:239:ASP:O	1:C:242:ARG:HB3	2.16	0.45
2:D:171:ILE:HG22	2:D:175:PHE:CE2	2.52	0.45
2:D:181:LYS:CB	2:D:186:LEU:HD21	2.47	0.45
2:D:197:ILE:CG2	2:D:202:ILE:HD12	2.47	0.45
2:D:212:SER:CA	2:D:213:LYS:CB	2.88	0.45
1:A:193:LEU:HD13	1:A:207:LEU:HG	1.98	0.44
2:B:142:MSE:HG2	2:B:161:PHE:CD1	2.52	0.44
1:C:4:PRO:HG2	1:C:5:LEU:H	1.81	0.44
1:C:4:PRO:CG	1:C:5:LEU:H	2.29	0.44
2:D:85:ALA:CA	2:D:117:ILE:HG23	2.45	0.44
1:A:47:SER:O	1:A:58:ASN:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:119:ILE:HB	2:B:158:GLN:O	2.16	0.44
2:D:113:VAL:HG12	2:D:113:VAL:O	2.17	0.44
2:D:169:HIS:CG	2:D:229:GLU:HG2	2.52	0.44
2:D:197:ILE:O	2:D:198:GLN:OE1	2.34	0.44
2:D:209:ASP:O	2:D:289:GLY:O	2.35	0.44
1:A:47:SER:HB3	1:A:49:LEU:HD21	1.98	0.44
2:B:55:LEU:HD11	2:B:288:ARG:HD2	2.00	0.44
2:D:209:ASP:HB3	2:D:213:LYS:H	1.80	0.44
2:D:215:TYR:HB3	2:D:217:SER:N	2.33	0.44
1:C:4:PRO:O	1:C:5:LEU:HD23	2.18	0.44
1:C:218:SER:HG	1:C:243:PHE:HZ	1.60	0.44
1:A:107:LYS:O	1:A:110:LYS:HB3	2.18	0.44
2:D:170:SER:HA	2:D:173:GLU:HB3	2.00	0.44
2:B:269:LEU:HB3	2:B:285:GLN:HB2	1.99	0.44
1:C:272:ASN:HB3	1:C:291:MSE:HG2	2.00	0.44
2:D:171:ILE:HG22	2:D:175:PHE:HE2	1.83	0.44
2:D:286:MSE:SE	2:D:318:LYS:HB2	2.68	0.44
1:A:88:ILE:HD13	1:A:175:TRP:CH2	2.53	0.44
2:B:120:GLU:HG3	2:B:162:TYR:CE2	2.53	0.44
2:B:124:HIS:CG	2:B:125:LYS:H	2.36	0.44
2:D:246:LYS:HE2	2:D:246:LYS:HB2	1.74	0.44
2:B:13:LEU:HD13	2:B:15:MSE:HE1	1.99	0.44
2:B:114:ASN:HB3	2:B:117:ILE:HG13	2.00	0.44
1:C:249:ILE:CD1	2:D:240:ASP:HB3	2.47	0.44
2:D:14:LEU:HD23	2:D:15:MSE:N	2.33	0.44
1:A:81:PHE:HD1	1:A:112:LEU:HD13	1.82	0.43
1:C:196:PHE:O	1:C:196:PHE:CD2	2.71	0.43
1:C:59:LEU:HD23	1:C:59:LEU:HA	1.72	0.43
2:D:99:ALA:O	2:D:103:LEU:HB2	2.18	0.43
1:A:206:ILE:H	1:A:206:ILE:HD12	1.83	0.43
2:D:22:LYS:HG3	3:D:500:GNP:O3G	2.18	0.43
1:A:157:PRO:HB3	1:A:159:LEU:H	1.83	0.43
1:A:197:LYS:HG3	1:A:198:GLU:N	2.32	0.43
2:B:32:ASN:C	2:B:32:ASN:HD22	2.22	0.43
1:C:62:CYS:HB3	1:C:72:TYR:CE1	2.53	0.43
1:C:239:ASP:C	1:C:239:ASP:OD1	2.57	0.43
1:C:259:LYS:HE2	2:D:229:GLU:OE2	2.18	0.43
1:A:55:MSE:HE2	1:A:184:PRO:HD3	2.01	0.43
1:A:68:PHE:O	1:A:71:ASN:HB2	2.19	0.43
1:A:126:HIS:O	1:A:127:LYS:HB2	2.18	0.43
2:B:16:GLY:H	2:B:22:LYS:NZ	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:74:TYR:O	2:B:78:ARG:HB2	2.19	0.43
1:C:101:ASP:O	1:C:104:ILE:CD1	2.67	0.43
1:A:180:CYS:C	1:A:182:LEU:N	2.72	0.43
1:A:307:GLU:O	1:A:308:PHE:O	2.37	0.43
2:B:14:LEU:HD13	2:B:22:LYS:O	2.18	0.43
2:D:119:ILE:HD13	2:D:158:GLN:N	2.34	0.43
2:B:42:GLU:CD	2:B:42:GLU:H	2.21	0.43
1:C:125:LEU:HD23	1:C:140:PHE:HA	2.00	0.43
1:C:207:LEU:CG	1:C:282:MSE:CE	2.97	0.43
2:D:151:GLU:O	2:D:153:GLY:O	2.36	0.43
2:B:33:MSE:HE2	2:B:37:ASP:CB	2.48	0.43
2:B:231:CYS:CB	2:B:293:VAL:HG11	2.49	0.43
2:D:86:LEU:HD13	2:D:86:LEU:C	2.38	0.43
2:B:104:ALA:O	2:B:107:ILE:HG12	2.19	0.43
1:C:193:LEU:HD22	1:C:207:LEU:HD23	2.01	0.43
1:A:207:LEU:CD1	1:A:282:MSE:HE1	2.44	0.42
1:C:269:LEU:O	1:C:270:ASN:HB2	2.19	0.42
2:D:119:ILE:HG22	2:D:159:VAL:HG13	2.01	0.42
1:A:207:LEU:HB3	1:A:282:MSE:HE2	2.00	0.42
1:A:298:VAL:HG12	1:A:299:LEU:N	2.33	0.42
1:C:97:GLU:O	1:C:98:VAL:C	2.57	0.42
1:C:143:MSE:HE2	1:C:147:LEU:HD21	2.01	0.42
1:C:195:LYS:O	1:C:199:ILE:HG13	2.19	0.42
1:A:78:ASP:O	1:A:82:GLN:HB2	2.19	0.42
2:D:183:ILE:HG13	2:D:184:PRO:HD2	2.01	0.42
2:B:102:ASN:O	2:B:106:ILE:HG13	2.19	0.42
2:B:119:ILE:N	2:B:158:GLN:HG2	2.31	0.42
2:B:195:ASN:O	2:B:198:GLN:N	2.43	0.42
1:C:55:MSE:HE2	1:C:55:MSE:HB3	1.72	0.42
1:C:131:VAL:HG21	1:C:139:LEU:HD23	2.01	0.42
1:A:148:SER:O	1:A:152:SER:HB2	2.18	0.42
1:A:157:PRO:HG3	1:A:159:LEU:HB2	2.02	0.42
1:A:180:CYS:C	1:A:182:LEU:H	2.23	0.42
2:D:171:ILE:HD12	2:D:171:ILE:N	2.18	0.42
1:A:33:PHE:CD1	1:A:36:ARG:NH1	2.87	0.42
1:A:55:MSE:HE2	1:A:184:PRO:HD2	2.01	0.42
2:B:215:TYR:O	2:B:215:TYR:HD1	1.98	0.42
2:B:283:LEU:HA	2:B:292:LEU:O	2.19	0.42
2:B:176:SER:OG	2:B:215:TYR:N	2.52	0.42
2:B:223:VAL:HG12	2:B:224:ASP:O	2.19	0.42
1:C:33:PHE:O	1:C:35:THR:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:213:LYS:CA	2:D:213:LYS:HE3	2.49	0.42
1:A:245:LYS:O	1:A:249:ILE:HG13	2.19	0.42
1:A:251:LYS:HD2	1:A:255:GLN:HE22	1.85	0.42
2:D:188:PHE:CD1	2:D:191:ASN:HB3	2.54	0.42
2:B:215:TYR:HD2	2:B:228:TYR:CD1	2.38	0.42
2:B:297:ARG:CZ	2:B:297:ARG:HB2	2.50	0.42
1:C:22:MSE:HG2	1:C:171:LEU:HD21	2.02	0.42
1:C:52:LEU:HD11	1:C:216:ILE:HD12	2.01	0.42
1:C:125:LEU:CD2	1:C:140:PHE:HA	2.50	0.42
1:C:183:ILE:HG21	1:C:186:MSE:HE2	2.00	0.42
2:D:98:ASN:HD21	2:D:102:ASN:ND2	2.17	0.42
2:D:283:LEU:C	2:D:283:LEU:CD1	2.88	0.42
1:A:200:MSE:HE1	1:A:301:ASN:CB	2.49	0.42
2:B:319:LYS:HA	2:B:319:LYS:HD2	1.66	0.42
1:C:249:ILE:HD13	2:D:240:ASP:HB3	2.02	0.42
2:D:12:VAL:C	2:D:13:LEU:HD23	2.40	0.42
2:D:209:ASP:OD1	2:D:213:LYS:NZ	2.43	0.42
2:D:222:PRO:O	2:D:223:VAL:CB	2.68	0.42
2:D:272:VAL:HG11	2:D:307:LEU:HD11	2.01	0.42
2:B:107:ILE:HA	2:B:110:ALA:HB3	2.01	0.41
2:B:282:TYR:O	2:B:293:VAL:HA	2.19	0.41
2:D:119:ILE:HD12	2:D:119:ILE:H	1.84	0.41
1:A:50:ARG:NH1	1:A:53:GLY:O	2.51	0.41
1:A:297:LEU:C	1:A:297:LEU:HD13	2.41	0.41
2:B:97:ILE:HD13	2:B:144:ARG:HH12	1.85	0.41
2:B:204:LYS:HE2	2:B:204:LYS:HB2	1.71	0.41
2:B:207:LEU:CD2	2:B:290:LEU:HB3	2.51	0.41
2:D:15:MSE:O	2:D:89:VAL:HG12	2.20	0.41
2:D:100:ILE:HG12	2:D:144:ARG:CB	2.50	0.41
1:A:192:ASN:N	1:A:192:ASN:ND2	2.67	0.41
2:B:180:GLN:HA	2:B:183:ILE:HD12	2.02	0.41
1:C:45:GLU:O	1:C:45:GLU:HG2	2.20	0.41
2:D:100:ILE:HG12	2:D:144:ARG:HB2	2.03	0.41
2:D:218:THR:HG23	2:D:219:ASP:N	2.36	0.41
2:D:226:GLN:O	2:D:230:VAL:HG23	2.20	0.41
1:A:25:ILE:CD1	1:A:166:ILE:HG13	2.50	0.41
1:A:166:ILE:HD12	1:A:166:ILE:HA	1.47	0.41
2:B:209:ASP:HB3	2:B:212:SER:OG	2.20	0.41
2:D:17:VAL:HG22	2:D:18:ARG:N	2.28	0.41
1:A:112:LEU:HD12	1:A:112:LEU:HA	1.87	0.41
1:C:112:LEU:HB3	1:C:156:PHE:CZ	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:133:LEU:C	1:C:135:LYS:H	2.24	0.41
2:D:25:ILE:HD11	2:D:124:HIS:CG	2.55	0.41
2:D:125:LYS:HG3	3:D:500:GNP:C2	2.51	0.41
1:A:262:SER:HB3	2:B:275:LEU:HB3	2.03	0.41
2:B:195:ASN:ND2	2:B:196:LEU:HD22	2.36	0.41
1:C:51:PHE:O	1:C:55:MSE:HB2	2.21	0.41
1:C:304:LYS:HE3	1:C:304:LYS:O	2.21	0.41
1:A:18:GLY:HA2	3:A:500:GNP:O1A	2.19	0.41
2:B:128:GLY:C	2:B:129:LEU:HD12	2.40	0.41
1:A:125:LEU:HB3	1:A:128:MSE:HE1	2.03	0.41
1:A:206:ILE:HD12	1:A:206:ILE:N	2.35	0.41
1:A:305:ALA:HA	1:A:309:PHE:HD1	1.85	0.41
1:A:308:PHE:HB2	1:A:309:PHE:H	1.65	0.41
2:B:125:LYS:HG2	3:B:500:GNP:N1	2.35	0.41
2:B:169:HIS:HB2	2:B:229:GLU:OE2	2.21	0.41
2:B:286:MSE:HE2	2:B:292:LEU:CB	2.43	0.41
1:C:24:SER:HB3	1:C:30:TYR:HB2	2.03	0.41
1:C:177:GLN:HE21	1:C:177:GLN:HB3	1.66	0.41
2:D:24:SER:O	2:D:166:ILE:HD11	2.21	0.41
1:A:305:ALA:CA	1:A:309:PHE:HD1	2.34	0.41
2:D:189:LEU:O	2:D:193:LEU:HD21	2.21	0.41
2:B:127:ASP:O	2:B:129:LEU:N	2.53	0.40
1:C:19:LYS:HG2	1:C:90:VAL:CG1	2.50	0.40
1:C:125:LEU:N	1:C:125:LEU:CD1	2.84	0.40
1:A:141:GLN:O	1:A:141:GLN:NE2	2.54	0.40
1:A:259:LYS:HB3	2:B:226:GLN:HG3	2.03	0.40
1:C:36:ARG:HB3	1:C:36:ARG:CZ	2.51	0.40
1:C:263:GLY:O	1:C:264:PHE:C	2.59	0.40
1:A:128:MSE:HE3	1:A:128:MSE:HB2	1.80	0.40
1:A:131:VAL:HG22	1:A:136:ARG:HG3	2.02	0.40
2:D:101:THR:O	2:D:105:MSE:HB2	2.21	0.40
1:A:11:LEU:HD11	1:A:22:MSE:CE	2.51	0.40
2:B:13:LEU:HD13	2:B:15:MSE:CE	2.52	0.40
2:B:124:HIS:HE2	3:B:500:GNP:C5	2.33	0.40
2:B:287:ILE:H	2:B:287:ILE:HG12	1.63	0.40
1:C:52:LEU:HB3	1:C:53:GLY:H	1.71	0.40
1:C:241:LYS:O	1:C:245:LYS:HG3	2.20	0.40
1:C:241:LYS:O	1:C:244:GLU:HG2	2.21	0.40
1:C:175:TRP:O	1:C:176:SER:C	2.60	0.40
2:D:215:TYR:O	2:D:216:VAL:HB	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	285/307 (93%)	247 (87%)	32 (11%)	6 (2%)	5	18
1	C	286/307 (93%)	245 (86%)	35 (12%)	6 (2%)	5	18
2	B	290/331 (88%)	225 (78%)	38 (13%)	27 (9%)	0	1
2	D	219/331 (66%)	170 (78%)	37 (17%)	12 (6%)	1	4
All	All	1080/1276 (85%)	887 (82%)	142 (13%)	51 (5%)	2	5

All (51) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	156	PHE
1	A	157	PRO
1	A	306	LYS
1	A	308	PHE
2	B	18	ARG
2	B	68	ASN
2	B	71	GLU
2	B	127	ASP
2	B	152	LEU
2	B	166	ILE
2	B	213	LYS
2	B	299	ASN
2	D	115	PRO
2	D	155	ASP
2	D	166	ILE
2	D	182	LEU
2	D	187	SER
2	D	216	VAL
1	A	34	ASP
2	B	55	LEU
2	B	70	PHE
2	B	91	ASP

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Mol	Chain	Res	Type
2	B	128	GLY
1	C	34	ASP
1	C	53	GLY
1	C	98	VAL
2	D	22	LYS
2	D	123	ILE
2	D	151	GLU
2	D	223	VAL
2	B	168	ASP
2	B	194	ASP
2	B	320	GLY
2	D	103	LEU
1	A	185	ASN
2	B	37	ASP
2	B	42	GLU
2	B	66	GLN
2	B	130	SER
2	B	288	ARG
2	B	21	GLY
2	B	185	GLU
2	B	212	SER
1	C	134	ASP
1	C	131	VAL
2	B	126	VAL
2	B	184	PRO
2	B	300	GLY
2	B	47	PRO
2	D	279	VAL
1	C	163	PRO

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	270/274 (98%)	209 (77%)	61 (23%)	1	2
1	C	271/274 (99%)	226 (83%)	45 (17%)	2	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles		
2	B	269/292 (92%)	221 (82%)	48 (18%)		1	4
2	D	208/292 (71%)	172 (83%)	36 (17%)		1	5
All	All	1018/1132 (90%)	828 (81%)	190 (19%)		1	4

All (190) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	9	LEU
1	A	11	LEU
1	A	12	MSE
1	A	21	SER
1	A	22	MSE
1	A	23	ARG
1	A	26	ILE
1	A	36	ARG
1	A	37	ARG
1	A	38	LEU
1	A	54	ASN
1	A	56	THR
1	A	58	ASN
1	A	59	LEU
1	A	67	VAL
1	A	69	MSE
1	A	70	GLU
1	A	71	ASN
1	A	87	LEU
1	A	96	THR
1	A	103	GLU
1	A	104	ILE
1	A	109	LEU
1	A	112	LEU
1	A	113	ARG
1	A	116	SER
1	A	120	LYS
1	A	128	MSE
1	A	132	GLN
1	A	134	ASP
1	A	143	MSE
1	A	146	ASN
1	A	148	SER
1	A	158	ASN

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Mol	Chain	Res	Type
1	A	164	THR
1	A	166	ILE
1	A	169	GLU
1	A	171	LEU
1	A	177	GLN
1	A	192	ASN
1	A	196	PHE
1	A	197	LYS
1	A	211	THR
1	A	213	PHE
1	A	214	LEU
1	A	238	LEU
1	A	247	SER
1	A	251	LYS
1	A	254	LYS
1	A	255	GLN
1	A	258	THR
1	A	262	SER
1	A	264	PHE
1	A	267	LEU
1	A	272	ASN
1	A	273	ILE
1	A	278	LEU
1	A	287	VAL
1	A	288	LEU
1	A	295	GLN
1	A	306	LYS
2	B	13	LEU
2	B	14	LEU
2	B	32	ASN
2	B	42	GLU
2	B	44	THR
2	B	51	HIS
2	B	54	THR
2	B	57	ASP
2	B	58	LEU
2	B	62	GLU
2	B	96	TYR
2	B	101	THR
2	B	109	TYR
2	B	113	VAL
2	B	114	ASN

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Mol	Chain	Res	Type
2	B	117	ILE
2	B	120	GLU
2	B	133	PHE
2	B	145	THR
2	B	152	LEU
2	B	154	LEU
2	B	157	VAL
2	B	158	GLN
2	B	164	THR
2	B	166	ILE
2	B	168	ASP
2	B	169	HIS
2	B	171	ILE
2	B	173	GLU
2	B	175	PHE
2	B	177	ARG
2	B	182	LEU
2	B	186	LEU
2	B	195	ASN
2	B	204	LYS
2	B	207	LEU
2	B	208	PHE
2	B	214	ILE
2	B	219	ASP
2	B	238	THR
2	B	244	LEU
2	B	268	GLU
2	B	283	LEU
2	B	287	ILE
2	B	288	ARG
2	B	292	LEU
2	B	301	THR
2	B	307	LEU
1	C	11	LEU
1	C	14	ARG
1	C	17	SER
1	C	26	ILE
1	C	36	ARG
1	C	37	ARG
1	C	38	LEU
1	C	45	GLU
1	C	49	LEU

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Mol	Chain	Res	Type
1	C	50	ARG
1	C	59	LEU
1	C	70	GLU
1	C	82	GLN
1	C	87	LEU
1	C	90	VAL
1	C	94	GLU
1	C	97	GLU
1	C	99	LEU
1	C	104	ILE
1	C	112	LEU
1	C	123	VAL
1	C	132	GLN
1	C	136	ARG
1	C	153	GLU
1	C	166	ILE
1	C	169	GLU
1	C	190	GLN
1	C	195	LYS
1	C	207	LEU
1	C	211	THR
1	C	213	PHE
1	C	214	LEU
1	C	218	SER
1	C	248	ASN
1	C	255	GLN
1	C	258	THR
1	C	267	LEU
1	C	276	SER
1	C	278	LEU
1	C	287	VAL
1	C	288	LEU
1	C	292	ASN
1	C	296	GLU
1	C	297	LEU
1	C	304	LYS
2	D	20	CYS
2	D	31	HIS
2	D	98	ASN
2	D	108	GLU
2	D	109	TYR
2	D	111	TYR

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Mol	Chain	Res	Type
2	D	120	GLU
2	D	121	VAL
2	D	133	PHE
2	D	139	ARG
2	D	148	GLU
2	D	166	ILE
2	D	169	HIS
2	D	171	ILE
2	D	181	LYS
2	D	188	PHE
2	D	191	ASN
2	D	193	LEU
2	D	195	ASN
2	D	198	GLN
2	D	204	LYS
2	D	207	LEU
2	D	208	PHE
2	D	209	ASP
2	D	212	SER
2	D	213	LYS
2	D	230	VAL
2	D	238	THR
2	D	239	ILE
2	D	246	LYS
2	D	268	GLU
2	D	269	LEU
2	D	283	LEU
2	D	287	ILE
2	D	295	ILE
2	D	308	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (31) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	54	ASN
1	A	89	HIS
1	A	132	GLN
1	A	190	GLN
1	A	192	ASN
1	A	220	ASN
1	A	255	GLN
1	A	272	ASN

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Mol	Chain	Res	Type
1	A	281	ASN
2	B	32	ASN
2	B	158	GLN
2	B	180	GLN
2	B	195	ASN
2	B	198	GLN
2	B	274	GLN
1	C	29	ASN
1	C	82	GLN
1	C	89	HIS
1	C	126	HIS
1	C	146	ASN
1	C	177	GLN
1	C	192	ASN
1	C	248	ASN
1	C	281	ASN
1	C	301	ASN
2	D	98	ASN
2	D	169	HIS
2	D	180	GLN
2	D	195	ASN
2	D	274	GLN
2	D	277	ASN

5.3.3　RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5　Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6　Ligand geometry ⓘ

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	GNP	D	500	4	29,34,34	1.97	7 (24%)	33,54,54	2.33	7 (21%)
3	GNP	B	500	4	29,34,34	1.87	7 (24%)	33,54,54	2.51	11 (33%)
3	GNP	C	500	4	29,34,34	1.69	8 (27%)	33,54,54	2.23	9 (27%)
3	GNP	A	500	4	29,34,34	1.71	9 (31%)	33,54,54	2.69	12 (36%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	GNP	D	500	4	-	6/14/38/38	0/3/3/3
3	GNP	B	500	4	-	3/14/38/38	0/3/3/3
3	GNP	C	500	4	-	5/14/38/38	0/3/3/3
3	GNP	A	500	4	-	9/14/38/38	0/3/3/3

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	500	GNP	PA-O3A	-5.49	1.53	1.59
3	B	500	GNP	PA-O3A	-4.58	1.54	1.59
3	D	500	GNP	PB-O3A	-4.11	1.54	1.59
3	B	500	GNP	C6-N1	4.02	1.39	1.33
3	D	500	GNP	C6-N1	3.93	1.39	1.33
3	C	500	GNP	PA-O3A	-3.92	1.55	1.59
3	B	500	GNP	PG-O1G	3.88	1.52	1.46
3	A	500	GNP	C6-N1	3.73	1.39	1.33
3	D	500	GNP	PG-O1G	3.71	1.51	1.46
3	A	500	GNP	PG-O1G	3.70	1.51	1.46
3	B	500	GNP	PB-O3A	-3.50	1.54	1.59
3	A	500	GNP	PA-O3A	-3.41	1.55	1.59
3	C	500	GNP	C6-N1	3.23	1.38	1.33
3	C	500	GNP	PG-O1G	3.18	1.51	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	500	GNP	PB-O2B	-3.00	1.48	1.56
3	B	500	GNP	PB-O2B	-2.99	1.48	1.56
3	D	500	GNP	PB-O2B	-2.85	1.49	1.56
3	C	500	GNP	PB-O3A	-2.76	1.55	1.59
3	A	500	GNP	PB-O2B	-2.51	1.50	1.56
3	A	500	GNP	PG-O2G	-2.43	1.50	1.56
3	C	500	GNP	O4'-C1'	2.33	1.43	1.40
3	A	500	GNP	PB-O3A	-2.25	1.56	1.59
3	B	500	GNP	C8-N7	-2.19	1.30	1.34
3	A	500	GNP	C8-N7	-2.19	1.30	1.34
3	C	500	GNP	PG-O3G	-2.16	1.51	1.56
3	A	500	GNP	PG-O3G	-2.14	1.51	1.56
3	C	500	GNP	PG-O2G	-2.07	1.51	1.56
3	D	500	GNP	C8-N7	-2.07	1.30	1.34
3	A	500	GNP	O4'-C1'	2.05	1.43	1.40
3	D	500	GNP	PG-O3G	-2.02	1.51	1.56
3	B	500	GNP	PG-O2G	-2.02	1.51	1.56

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B	500	GNP	C5-C6-N1	-8.45	112.12	123.42
3	A	500	GNP	C5-C6-N1	-8.31	112.31	123.42
3	D	500	GNP	C5-C6-N1	-8.24	112.40	123.42
3	C	500	GNP	C5-C6-N1	-7.35	113.59	123.42
3	A	500	GNP	C2-N1-C6	6.59	125.13	115.96
3	B	500	GNP	C2-N1-C6	6.51	125.01	115.96
3	C	500	GNP	C2-N1-C6	5.83	124.07	115.96
3	D	500	GNP	C2-N1-C6	5.80	124.03	115.96
3	A	500	GNP	O1G-PG-N3B	-5.21	104.10	111.77
3	D	500	GNP	O2B-PB-O1B	3.96	118.36	109.87
3	B	500	GNP	O2B-PB-O1B	3.93	118.29	109.87
3	D	500	GNP	O3G-PG-O1G	-3.67	104.25	113.45
3	A	500	GNP	O3A-PB-N3B	3.66	116.73	106.59
3	B	500	GNP	O3G-PG-O1G	-3.42	104.87	113.45
3	B	500	GNP	C2-N3-C4	-3.38	111.84	115.48
3	C	500	GNP	O2G-PG-O3G	3.28	116.42	107.59
3	A	500	GNP	C2-N3-C4	-3.25	111.98	115.48
3	C	500	GNP	N3-C2-N1	-3.16	123.19	127.21
3	A	500	GNP	O3'-C3'-C4'	-3.15	102.04	111.08
3	D	500	GNP	O2G-PG-O3G	3.08	115.87	107.59
3	D	500	GNP	C2-N3-C4	-3.02	112.23	115.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	500	GNP	O2B-PB-O1B	3.02	116.34	109.87
3	B	500	GNP	O2G-PG-O3G	2.88	115.32	107.59
3	A	500	GNP	N3-C2-N1	-2.84	123.60	127.21
3	B	500	GNP	N3-C2-N1	-2.82	123.62	127.21
3	C	500	GNP	O5'-PA-O1A	-2.82	97.76	108.94
3	A	500	GNP	O1B-PB-N3B	-2.73	107.75	111.77
3	A	500	GNP	N2-C2-N3	2.65	121.92	117.79
3	B	500	GNP	C4'-O4'-C1'	-2.60	107.55	109.92
3	C	500	GNP	O3G-PG-O1G	-2.54	107.08	113.45
3	B	500	GNP	O1B-PB-N3B	-2.49	108.10	111.77
3	C	500	GNP	O1G-PG-N3B	-2.47	108.14	111.77
3	A	500	GNP	O4'-C1'-N9	-2.35	105.63	108.75
3	C	500	GNP	C2-N3-C4	-2.29	113.02	115.48
3	D	500	GNP	N3-C2-N1	-2.24	124.36	127.21
3	C	500	GNP	O2B-PB-O1B	2.24	114.66	109.87
3	B	500	GNP	O1G-PG-N3B	-2.16	108.59	111.77
3	A	500	GNP	C4-C5-C6	-2.09	118.04	121.23
3	B	500	GNP	C4-C5-C6	-2.02	118.15	121.23

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	500	GNP	PB-N3B-PG-O1G
3	A	500	GNP	PG-N3B-PB-O1B
3	A	500	GNP	PG-N3B-PB-O3A
3	A	500	GNP	C5'-O5'-PA-O3A
3	A	500	GNP	C5'-O5'-PA-O1A
3	B	500	GNP	PG-N3B-PB-O1B
3	B	500	GNP	PA-O3A-PB-O2B
3	C	500	GNP	PB-N3B-PG-O1G
3	C	500	GNP	PG-N3B-PB-O1B
3	C	500	GNP	PG-N3B-PB-O3A
3	D	500	GNP	PB-N3B-PG-O1G
3	D	500	GNP	PG-N3B-PB-O1B
3	D	500	GNP	PG-N3B-PB-O3A
3	D	500	GNP	O4'-C4'-C5'-O5'
3	D	500	GNP	C3'-C4'-C5'-O5'
3	A	500	GNP	O4'-C4'-C5'-O5'
3	A	500	GNP	C3'-C4'-C5'-O5'
3	B	500	GNP	PG-N3B-PB-O3A
3	D	500	GNP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
3	C	500	GNP	PA-O3A-PB-O2B
3	A	500	GNP	PB-O3A-PA-O1A
3	A	500	GNP	PA-O3A-PB-O1B
3	C	500	GNP	PA-O3A-PB-O1B

There are no ring outliers.

4 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	500	GNP	5	0
3	B	500	GNP	7	0
3	C	500	GNP	5	0
3	A	500	GNP	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 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 GNP D 500

Bond lengths

Bond angles

Torsions

Rings

Ligand GNP B 500

Bond lengths

Bond angles

Torsions

Rings

Ligand GNP C 500

Bond lengths

Bond angles

Torsions

Rings

Ligand GNP A 500

Bond lengths

Bond angles

Torsions

Rings
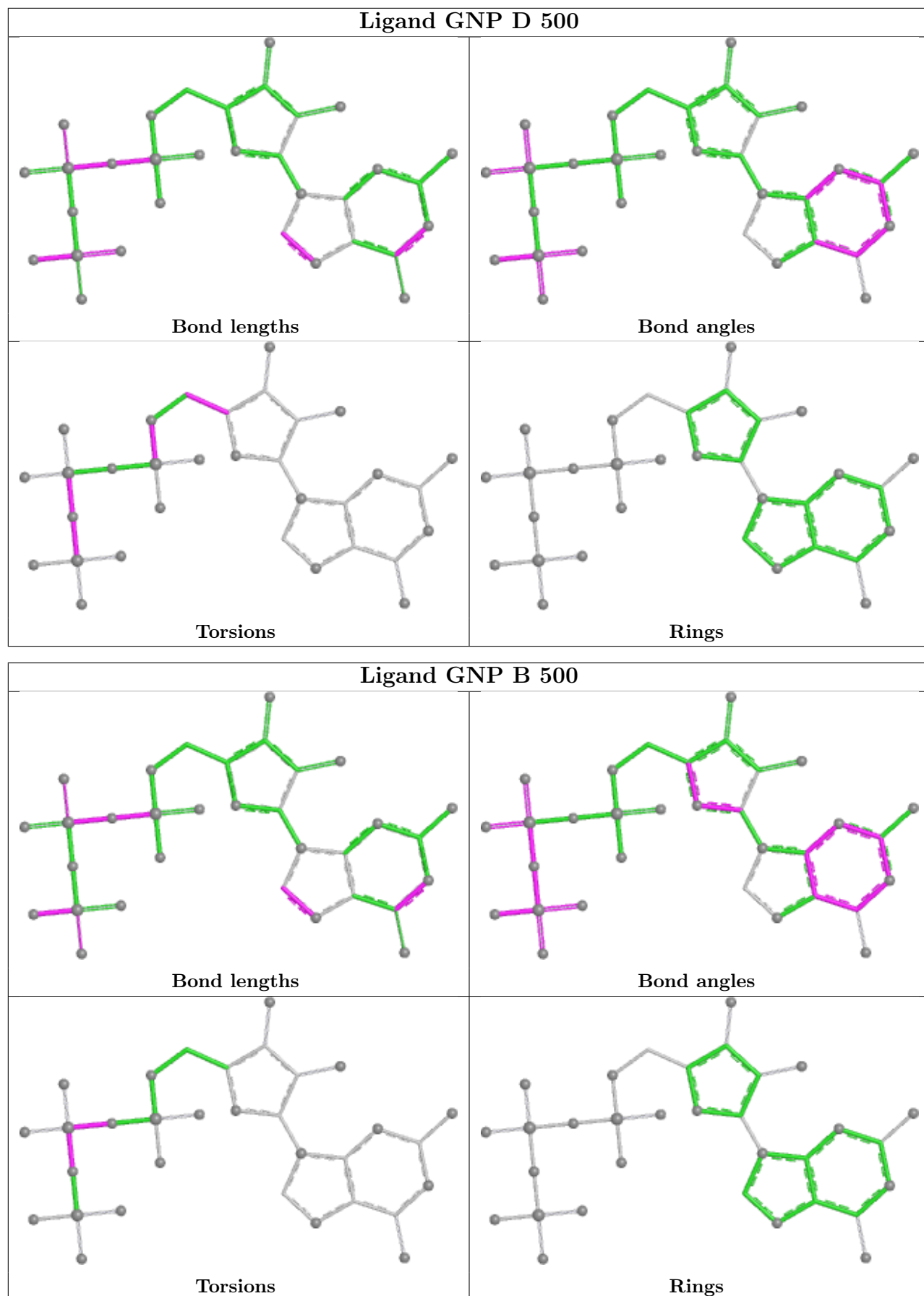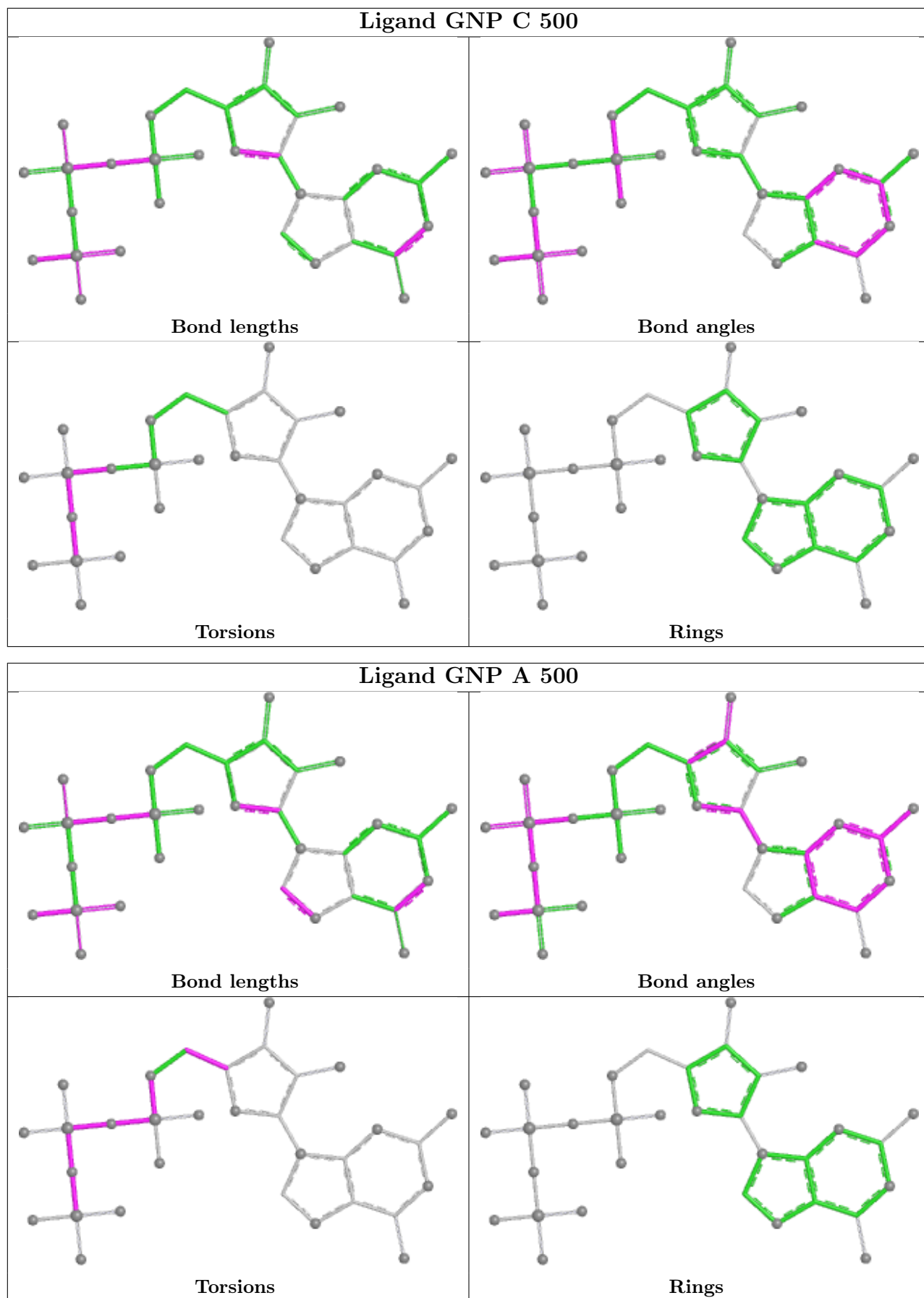
5.7 Other polymers ⓘ

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, 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(Å²)	Q<0.9
1	A	276/307 (89%)	0.43	10 (3%)	46	40	56, 72, 112, 132	0
1	C	277/307 (90%)	0.38	11 (3%)	43	37	55, 71, 98, 122	0
2	B	284/331 (85%)	0.99	46 (16%)	5	5	65, 120, 156, 164	0
2	D	221/331 (66%)	1.28	52 (23%)	2	3	62, 120, 181, 188	0
All	All	1058/1276 (82%)	0.75	119 (11%)	11	10	55, 85, 160, 188	0

All (119) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	D	152	LEU	5.6
2	D	174	ALA	5.3
2	D	175	PHE	5.1
2	D	216	VAL	4.9
2	D	123	ILE	4.7
2	D	268	GLU	4.6
2	D	125	LYS	4.4
2	D	14	LEU	4.3
2	D	321	LEU	4.3
2	D	110	ALA	4.0
2	D	13	LEU	3.9
2	B	247	ALA	3.8
2	B	67	LEU	3.8
2	D	30	PHE	3.8
2	B	36	LEU	3.7
2	B	152	LEU	3.6
2	D	97	ILE	3.5
2	D	87	VAL	3.5
2	B	70	PHE	3.4
1	C	42	ILE	3.4
2	B	166	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
2	B	14	LEU	3.4
2	D	85	ALA	3.3
2	D	165	SER	3.3
1	A	17	SER	3.2
2	B	196	LEU	3.2
2	D	25	ILE	3.1
1	C	125	LEU	3.1
2	D	113	VAL	3.1
2	B	107	ILE	3.1
2	B	171	ILE	3.1
2	D	86	LEU	3.1
2	B	287	ILE	3.0
2	B	216	VAL	3.0
1	A	302	ILE	3.0
2	B	87	VAL	3.0
2	D	91	ASP	2.9
2	B	46	ASN	2.9
1	C	54	ASN	2.9
2	D	112	LYS	2.8
2	D	324	ILE	2.8
2	D	115	PRO	2.7
2	B	54	THR	2.7
2	B	79	LEU	2.7
2	B	86	LEU	2.7
2	D	196	LEU	2.7
2	B	179	VAL	2.7
2	B	137	ALA	2.7
2	B	207	LEU	2.7
2	B	134	LYS	2.6
2	B	175	PHE	2.6
2	B	76	SER	2.6
1	C	166	ILE	2.6
2	B	97	ILE	2.6
2	D	157	VAL	2.6
2	B	123	ILE	2.6
2	D	108	GLU	2.6
1	C	203	LEU	2.6
2	B	242	PHE	2.6
2	D	169	HIS	2.6
2	D	117	ILE	2.6
2	D	144	ARG	2.6
2	D	314	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
2	B	109	TYR	2.5
2	B	183	ILE	2.5
2	D	185	GLU	2.5
2	D	225	ILE	2.5
1	C	280	SER	2.5
1	C	50	ARG	2.5
2	D	189	LEU	2.4
2	D	228	TYR	2.4
2	D	245	TYR	2.4
2	B	195	ASN	2.4
2	D	168	ASP	2.4
2	B	272	VAL	2.4
1	C	196	PHE	2.4
1	A	297	LEU	2.4
2	B	103	LEU	2.4
1	A	104	ILE	2.4
2	D	172	TYR	2.4
2	D	114	ASN	2.4
2	B	44	THR	2.3
2	D	133	PHE	2.3
1	A	121	ILE	2.3
1	C	293	ILE	2.3
1	C	4	PRO	2.3
1	A	207	LEU	2.3
2	B	244	LEU	2.3
2	B	96	TYR	2.2
2	D	109	TYR	2.2
2	D	31	HIS	2.2
2	B	138	GLN	2.2
2	B	280	ILE	2.2
2	D	307	LEU	2.2
2	D	26	CYS	2.2
2	D	222	PRO	2.2
2	D	317	PHE	2.2
2	B	126	VAL	2.2
2	B	268	GLU	2.1
2	B	92	SER	2.1
2	D	197	ILE	2.1
2	D	270	GLN	2.1
1	A	125	LEU	2.1
2	B	52	PHE	2.1
2	B	172	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	38	LEU	2.1
1	A	238	LEU	2.1
2	D	122	LEU	2.1
2	D	23	SER	2.1
2	B	129	LEU	2.1
2	B	214	ILE	2.1
2	D	106	ILE	2.1
2	D	178	ILE	2.1
2	D	269	LEU	2.1
1	C	10	LEU	2.0
2	B	228	TYR	2.0
1	A	308	PHE	2.0
2	B	154	LEU	2.0
2	B	282	TYR	2.0

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, 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(Å^2)	Q<0.9
4	MG	D	600	1/1	0.08	0.19	198,198,198,198	0
3	GNP	D	500	32/32	0.65	0.12	165,189,200,203	0
4	MG	B	600	1/1	0.81	0.09	154,154,154,154	0
3	GNP	B	500	32/32	0.91	0.08	125,142,154,156	0
3	GNP	A	500	32/32	0.95	0.08	59,68,73,74	0
3	GNP	C	500	32/32	0.96	0.08	58,66,74,76	0
4	MG	A	600	1/1	0.98	0.08	62,62,62,62	0
4	MG	C	600	1/1	0.99	0.05	63,63,63,63	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.
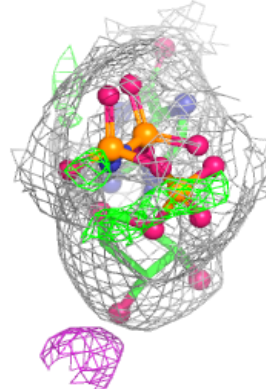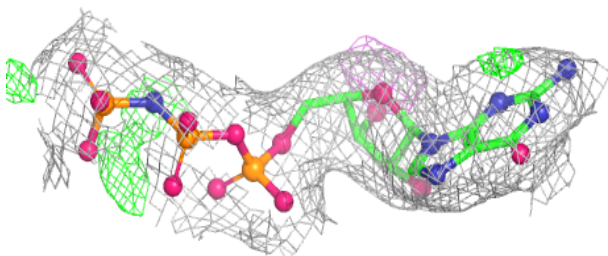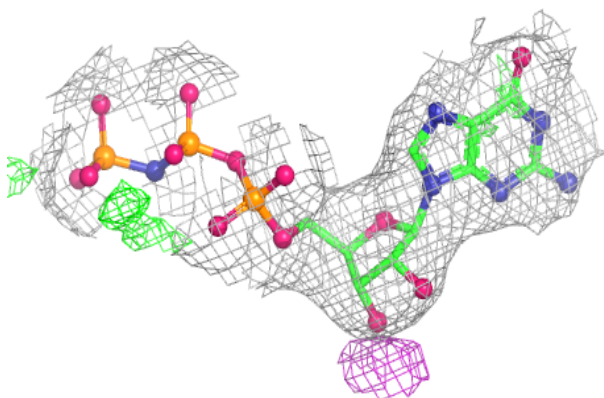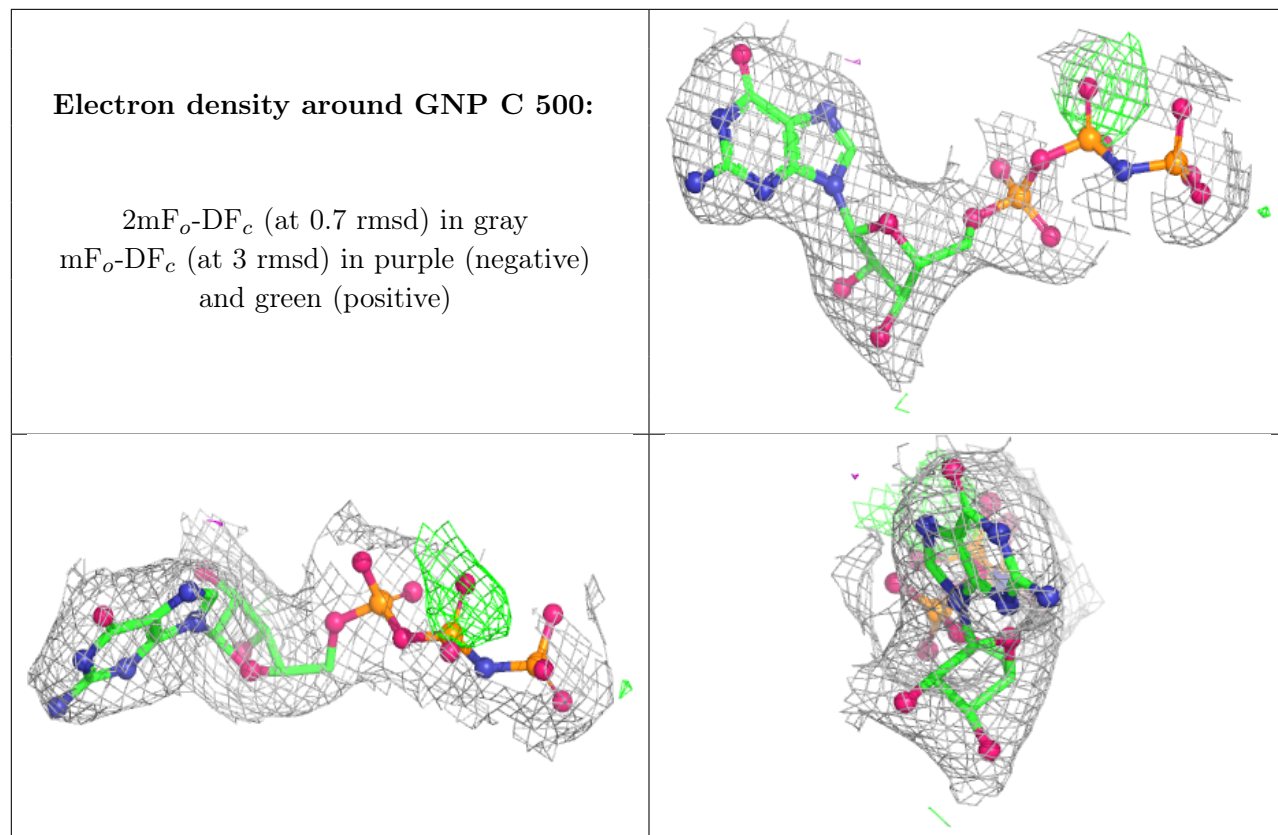
Electron density around GNP D 500:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
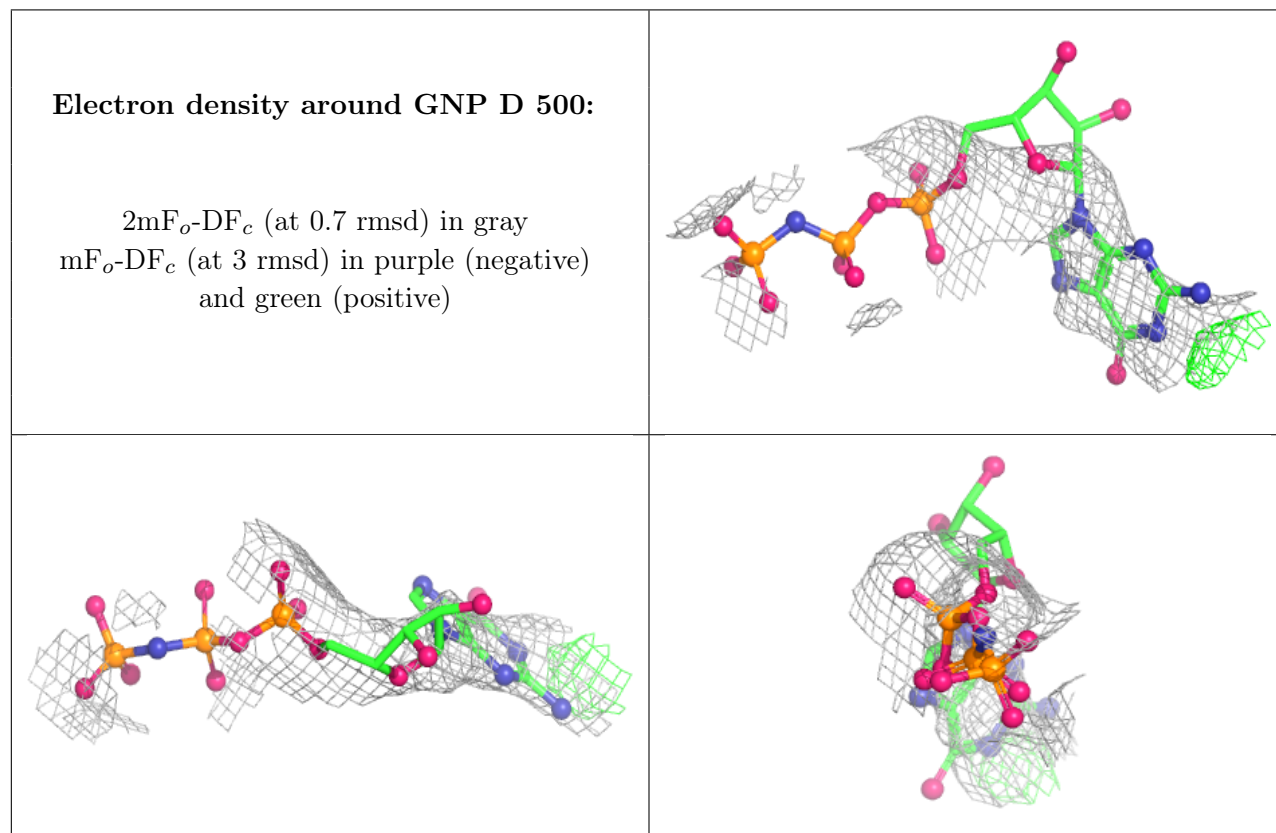
Electron density around GNP B 500:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
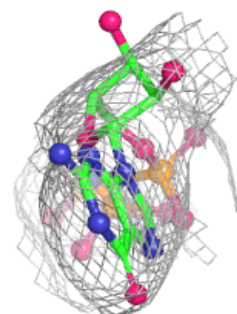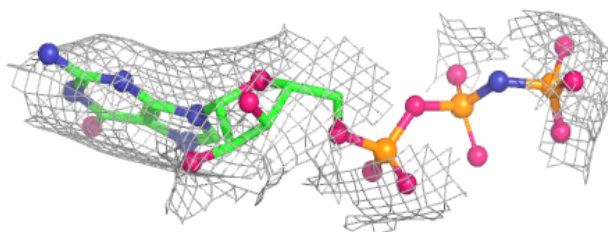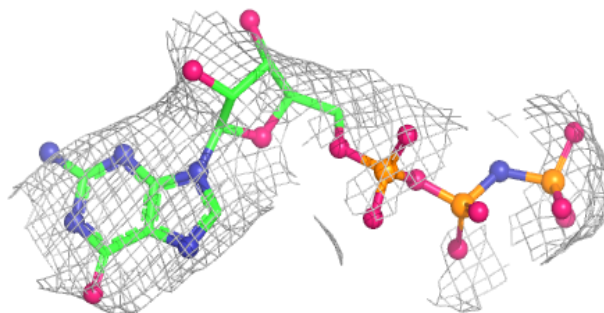
Electron density around GNP A 500:

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

Electron density around GNP C 500:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.