Full wwPDB EM Validation Report

Jan 24, 2026 – 07:51 PM EST

PDB ID	:	9YA2 / pdb_00009ya2
EMDB ID	:	EMD-72718
Title	:	Cryo-EM structure of intraconoidal microtubule 1 (ICMT1) from Toxoplasma gondii (8-nm repeat)
Authors	:	Zeng, J.; Zhang, R.
Deposited on	:	2025-09-15
Resolution	:	3.34 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

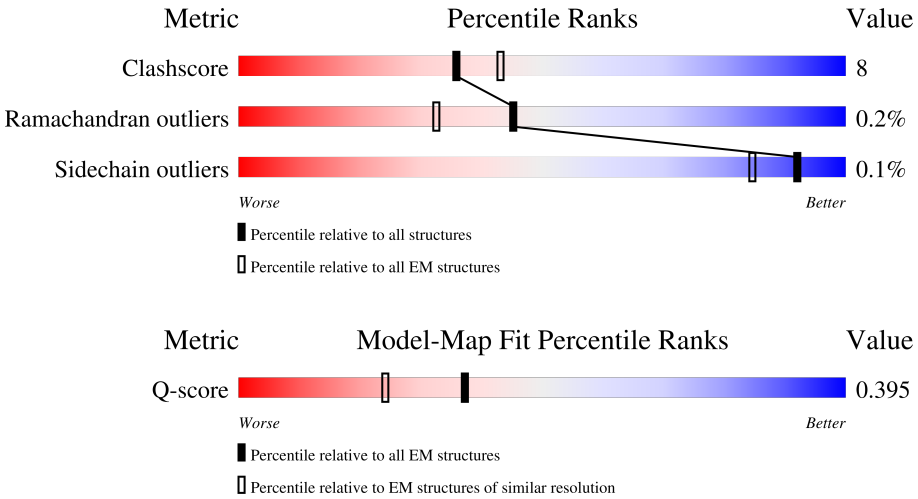
EMDB validation analysis	:	0.0.1.dev129
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.34 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	14446 (2.84 - 3.84)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	351	13% · 83%
1	B	351	16% · 83%
1	C	351	13% · 83%
1	D	351	11% 6% 83%

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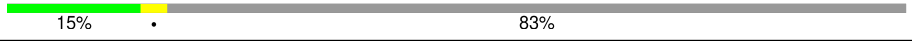
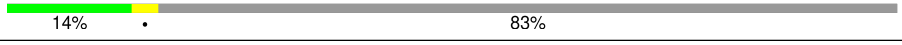
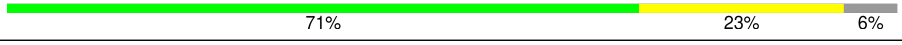
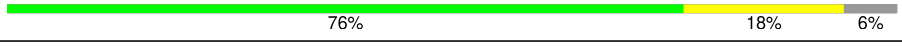
Mol	Chain	Length	Quality of chain
1	E	351	
1	F	351	
1	G	351	
1	H	351	
1	I	351	
1	J	351	
1	K	351	
2	A0	453	
2	A2	453	
2	A4	453	
2	A6	453	
2	A8	453	
2	B0	453	
2	B2	453	
2	B4	453	
2	B6	453	
2	B8	453	
2	C0	453	
2	C2	453	
2	C4	453	
2	C6	453	
2	C8	453	
2	D0	453	
2	D2	453	
2	D4	453	

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Mol	Chain	Length	Quality of chain
2	D6	453	75% 19% 6%
2	D8	453	72% 23% 6%
2	E0	453	81% 14% 6%
2	E2	453	80% 15% 6%
2	E4	453	82% 12% 6%
2	E6	453	77% 17% 6%
2	E8	453	78% 16% 6%
2	F0	453	77% 17% 6%
3	A1	449	71% 24% 5%
3	A3	449	72% 22% 5%
3	A5	449	76% 19% 5%
3	A7	449	82% 13% 5%
3	A9	449	77% 18% 5%
3	B1	449	73% 21% 5%
3	B3	449	77% 18% 5%
3	B5	449	69% 25% 5%
3	B7	449	78% 17% 5%
3	B9	449	80% 14% 5%
3	C1	449	74% 20% 5%
3	C3	449	77% 18% 5%
3	C5	449	71% 24% 5%
3	C7	449	76% 19% 5%
3	C9	449	72% 22% 5%
3	D1	449	77% 17% 5%
3	D3	449	74% 20% 5%

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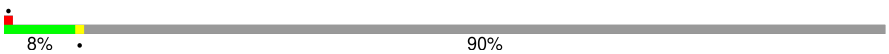
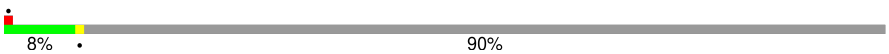
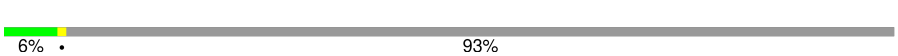
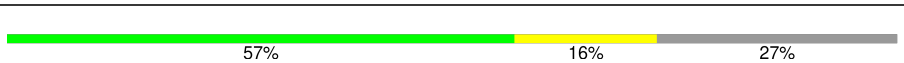
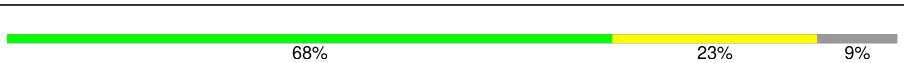
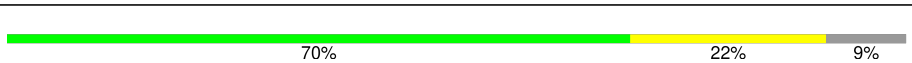
Mol	Chain	Length	Quality of chain
3	D5	449	
3	D7	449	
3	D9	449	
3	E1	449	
3	E3	449	
3	E5	449	
3	E7	449	
3	E9	449	
3	F1	449	
4	L	1678	
4	M	1678	
4	N	1678	
4	Q	1678	
4	V	1678	
4	W	1678	
5	O	583	
5	P	583	
6	R	336	
6	S	336	
6	T	336	
6	U	336	
7	a	220	
7	b	220	
7	c	220	
7	d	220	

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Mol	Chain	Length	Quality of chain
7	e	220	66% 25% 9%
7	f	220	67% 24% 9%
7	g	220	69% 22% 9%
7	h	220	69% 22% 9%
7	i	220	74% 18% 9%
7	j	220	70% 21% 9%
7	m	220	6% 68% 23% 9%
7	n	220	6% 70% 20% 9%
7	o	220	67% 25% 9%
7	p	220	74% 17% 9%
7	q	220	75% 17% 9%
7	r	220	70% 21% 9%
7	s	220	72% 19% 9%
7	t	220	69% 23% 9%
7	u	220	75% 16% 9%
7	v	220	68% 23% 9%
7	w	220	75% 17% 9%
7	x	220	76% 15% 9%
8	k	189	57% 20% 23%
8	l	189	53% 23% 23%

2 Entry composition (i)

There are 11 unique types of molecules in this entry. The entry contains 231266 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Microtubule associated protein SPM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	59	Total	C	N	O	S	0	0
			464	306	74	83	1		
1	B	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	C	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	D	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	E	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	F	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	G	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	H	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	I	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	J	60	Total	C	N	O	S	0	0
			471	311	75	84	1		
1	K	60	Total	C	N	O	S	0	0
			471	311	75	84	1		

There are 11 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	93	ARG	PRO	conflict	UNP A0A7J6K285
B	93	ARG	PRO	conflict	UNP A0A7J6K285
C	93	ARG	PRO	conflict	UNP A0A7J6K285
D	93	ARG	PRO	conflict	UNP A0A7J6K285
E	93	ARG	PRO	conflict	UNP A0A7J6K285
F	93	ARG	PRO	conflict	UNP A0A7J6K285
G	93	ARG	PRO	conflict	UNP A0A7J6K285
H	93	ARG	PRO	conflict	UNP A0A7J6K285

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Chain	Residue	Modelled	Actual	Comment	Reference
I	93	ARG	PRO	conflict	UNP A0A7J6K285
J	93	ARG	PRO	conflict	UNP A0A7J6K285
K	93	ARG	PRO	conflict	UNP A0A7J6K285

- Molecule 2 is a protein called Tubulin alpha chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	A8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	B8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	C8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	D6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	D8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E2	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E4	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E6	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	E8	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		
2	F0	428	Total	C	N	O	S	0	0
			3325	2105	569	625	26		

- Molecule 3 is a protein called Tubulin beta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	A9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	B9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	C3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	C9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	D9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E3	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E5	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E7	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	E9	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		
3	F1	426	Total	C	N	O	S	0	0
			3331	2094	569	641	27		

- Molecule 4 is a protein called ICMAP2, TGME49_224700.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		
4	M	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		
4	N	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		
4	Q	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	V	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		
4	W	162	Total	C	N	O	S	0	0
			1334	868	226	231	9		

- Molecule 5 is a protein called TLAP3 (apical cap protein AC5), TGME49_235380.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	O	219	Total	C	N	O	S	0	0
			1736	1078	328	328	2		
5	P	219	Total	C	N	O	S	0	0
			1736	1078	328	328	2		

- Molecule 6 is a protein called TLAP4 (thioredoxin-like associated protein), TGME49_201760.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	R	113	Total	C	N	O	S	0	0
			954	592	182	179	1		
6	S	22	Total	C	N	O	S	0	0
			182	112	38	31	1		
6	T	113	Total	C	N	O	S	0	0
			954	592	182	179	1		
6	U	91	Total	C	N	O		0	0
			772	480	144	148			

- Molecule 7 is a protein called TRXL1, TGME49_232410.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	a	161	Total	C	N	O	S	0	0
			1289	824	224	236	5		
7	b	161	Total	C	N	O	S	0	0
			1289	824	224	236	5		
7	c	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	d	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	e	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	f	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	g	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
7	h	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	i	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	j	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	m	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	n	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	o	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	p	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	q	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	r	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	s	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	t	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	u	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	v	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	w	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		
7	x	201	Total	C	N	O	S	0	0
			1608	1021	283	297	7		

- Molecule 8 is a protein called TRXL2, TGME49_225790.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	k	145	Total	C	N	O	S	0	0
			1187	770	209	203	5		
8	l	145	Total	C	N	O	S	0	0
			1187	770	209	203	5		

There are 46 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
k	167	SER	-	expression tag	UNP A0A7J6K232

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Chain	Residue	Modelled	Actual	Comment	Reference
k	168	ALA	-	expression tag	UNP A0A7J6K232
k	169	GLN	-	expression tag	UNP A0A7J6K232
k	170	ARG	-	expression tag	UNP A0A7J6K232
k	171	LEU	-	expression tag	UNP A0A7J6K232
k	172	ARG	-	expression tag	UNP A0A7J6K232
k	173	THR	-	expression tag	UNP A0A7J6K232
k	174	LEU	-	expression tag	UNP A0A7J6K232
k	175	ASN	-	expression tag	UNP A0A7J6K232
k	176	ASP	-	expression tag	UNP A0A7J6K232
k	177	ALA	-	expression tag	UNP A0A7J6K232
k	178	THR	-	expression tag	UNP A0A7J6K232
k	179	ASP	-	expression tag	UNP A0A7J6K232
k	180	PRO	-	expression tag	UNP A0A7J6K232
k	181	TRP	-	expression tag	UNP A0A7J6K232
k	182	LYS	-	expression tag	UNP A0A7J6K232
k	183	LYS	-	expression tag	UNP A0A7J6K232
k	184	ARG	-	expression tag	UNP A0A7J6K232
k	185	LEU	-	expression tag	UNP A0A7J6K232
k	186	PRO	-	expression tag	UNP A0A7J6K232
k	187	GLN	-	expression tag	UNP A0A7J6K232
k	188	ASN	-	expression tag	UNP A0A7J6K232
k	189	VAL	-	expression tag	UNP A0A7J6K232
l	167	SER	-	expression tag	UNP A0A7J6K232
l	168	ALA	-	expression tag	UNP A0A7J6K232
l	169	GLN	-	expression tag	UNP A0A7J6K232
l	170	ARG	-	expression tag	UNP A0A7J6K232
l	171	LEU	-	expression tag	UNP A0A7J6K232
l	172	ARG	-	expression tag	UNP A0A7J6K232
l	173	THR	-	expression tag	UNP A0A7J6K232
l	174	LEU	-	expression tag	UNP A0A7J6K232
l	175	ASN	-	expression tag	UNP A0A7J6K232
l	176	ASP	-	expression tag	UNP A0A7J6K232
l	177	ALA	-	expression tag	UNP A0A7J6K232
l	178	THR	-	expression tag	UNP A0A7J6K232
l	179	ASP	-	expression tag	UNP A0A7J6K232
l	180	PRO	-	expression tag	UNP A0A7J6K232
l	181	TRP	-	expression tag	UNP A0A7J6K232
l	182	LYS	-	expression tag	UNP A0A7J6K232
l	183	LYS	-	expression tag	UNP A0A7J6K232
l	184	ARG	-	expression tag	UNP A0A7J6K232
l	185	LEU	-	expression tag	UNP A0A7J6K232
l	186	PRO	-	expression tag	UNP A0A7J6K232

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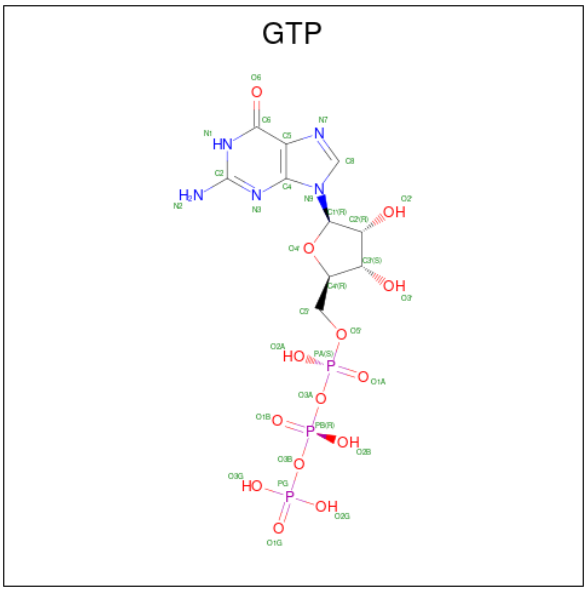
Chain	Residue	Modelled	Actual	Comment	Reference
l	187	GLN	-	expression tag	UNP A0A7J6K232
l	188	ASN	-	expression tag	UNP A0A7J6K232
l	189	VAL	-	expression tag	UNP A0A7J6K232

- Molecule 9 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
9	A0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	A2	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	A4	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	A6	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	A8	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	B0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	B2	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	B4	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	B6	1	Total	C	N	O	P	0
			32	10	5	14	3	

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Mol	Chain	Residues	Atoms					AltConf
9	B8	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	C0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	C3	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	C4	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	C6	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	C8	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	D0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	D2	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	D4	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	D6	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	D8	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E2	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E4	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E6	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E8	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	F0	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 10 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
10	A0	1	Total	Mg	0
			1	1	
10	A2	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms	AltConf
10	A5	1	Total Mg 1 1	0
10	A7	1	Total Mg 1 1	0
10	A8	1	Total Mg 1 1	0
10	B0	1	Total Mg 1 1	0
10	B2	1	Total Mg 1 1	0
10	B4	1	Total Mg 1 1	0
10	B6	1	Total Mg 1 1	0
10	B8	1	Total Mg 1 1	0
10	C0	1	Total Mg 1 1	0
10	C2	1	Total Mg 1 1	0
10	C4	1	Total Mg 1 1	0
10	C6	1	Total Mg 1 1	0
10	C8	1	Total Mg 1 1	0
10	D0	1	Total Mg 1 1	0
10	D2	1	Total Mg 1 1	0
10	D4	1	Total Mg 1 1	0
10	D6	1	Total Mg 1 1	0
10	D8	1	Total Mg 1 1	0
10	E1	1	Total Mg 1 1	0
10	E2	1	Total Mg 1 1	0
10	E4	1	Total Mg 1 1	0

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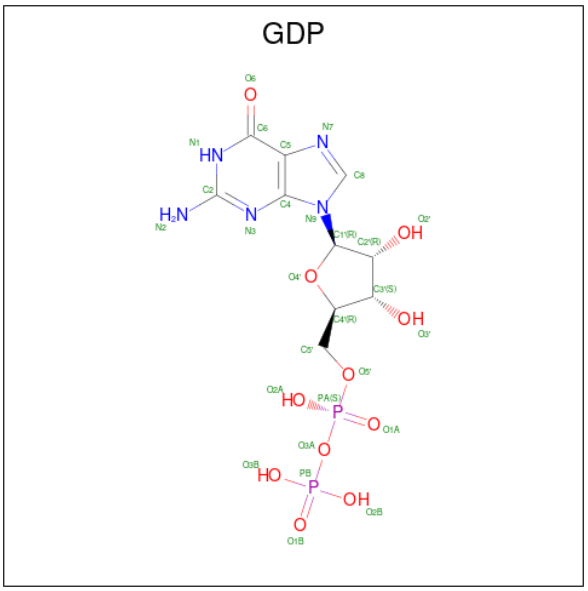
Mol	Chain	Residues	Atoms	AltConf
10	E6	1	Total Mg 1 1	0
10	E9	1	Total Mg 1 1	0
10	F0	1	Total Mg 1 1	0

- Molecule 11 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
11	A1	1	Total C N O P 28 10 5 11 2	0
11	A3	1	Total C N O P 28 10 5 11 2	0
11	A5	1	Total C N O P 28 10 5 11 2	0
11	A7	1	Total C N O P 28 10 5 11 2	0
11	A9	1	Total C N O P 28 10 5 11 2	0
11	B1	1	Total C N O P 28 10 5 11 2	0
11	B3	1	Total C N O P 28 10 5 11 2	0
11	B5	1	Total C N O P 28 10 5 11 2	0

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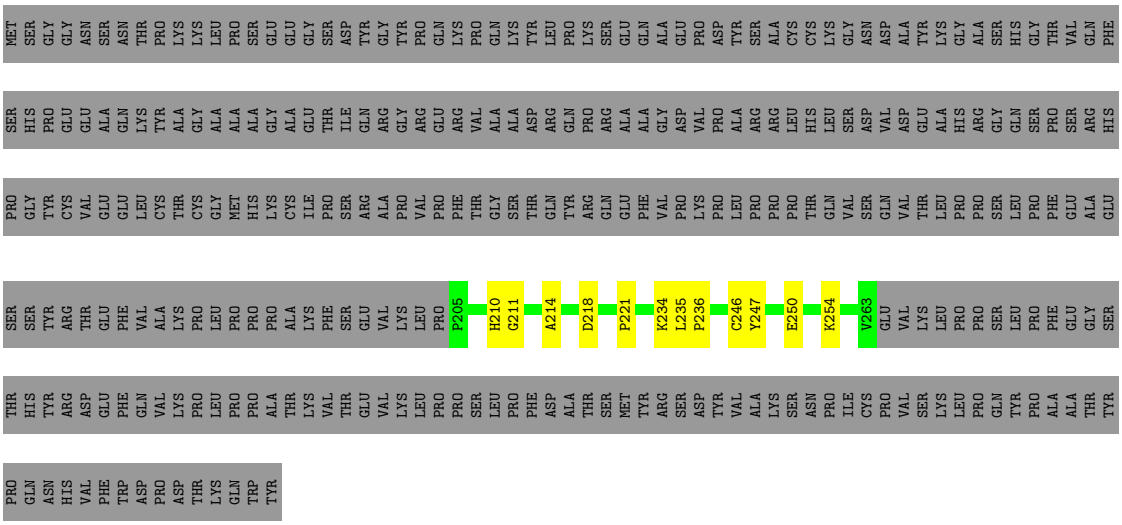
Mol	Chain	Residues	Atoms					AltConf
11	B7	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	B9	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	C1	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	C3	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	C5	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	C7	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	C9	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	D1	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	D3	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	D5	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	D7	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	D9	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	E1	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	E3	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	E5	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	E7	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	E9	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	F1	1	Total	C	N	O	P	0
			28	10	5	11	2	

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

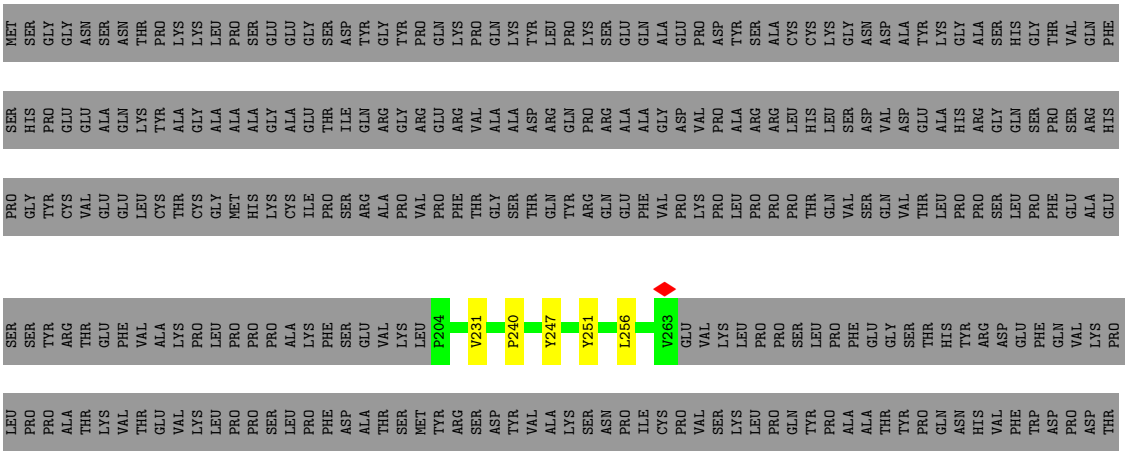
• Molecule 1: Microtubule associated protein SPM1

Chain A:



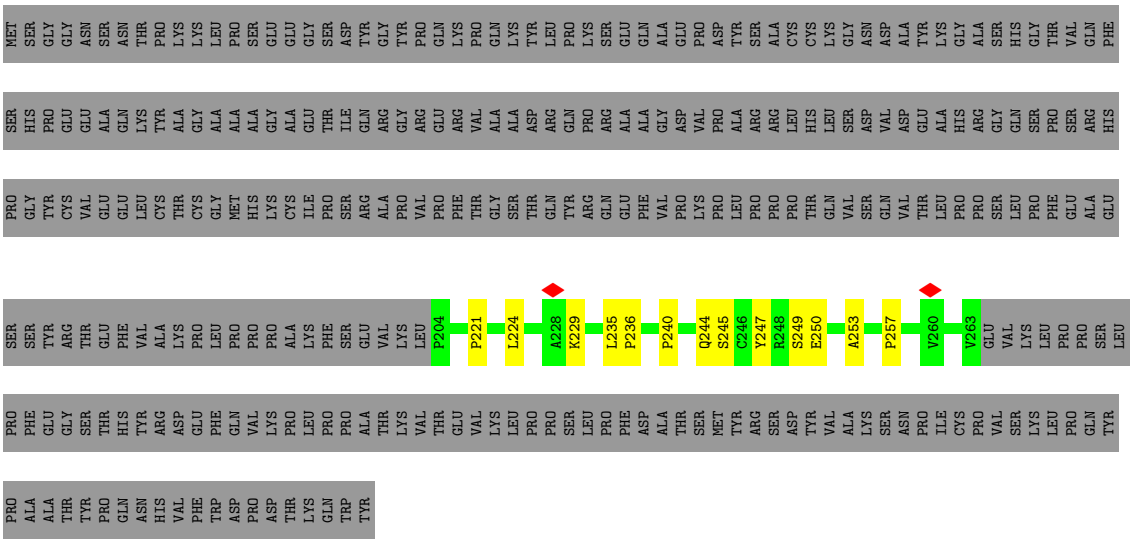
• Molecule 1: Microtubule associated protein SPM1

Chain B:



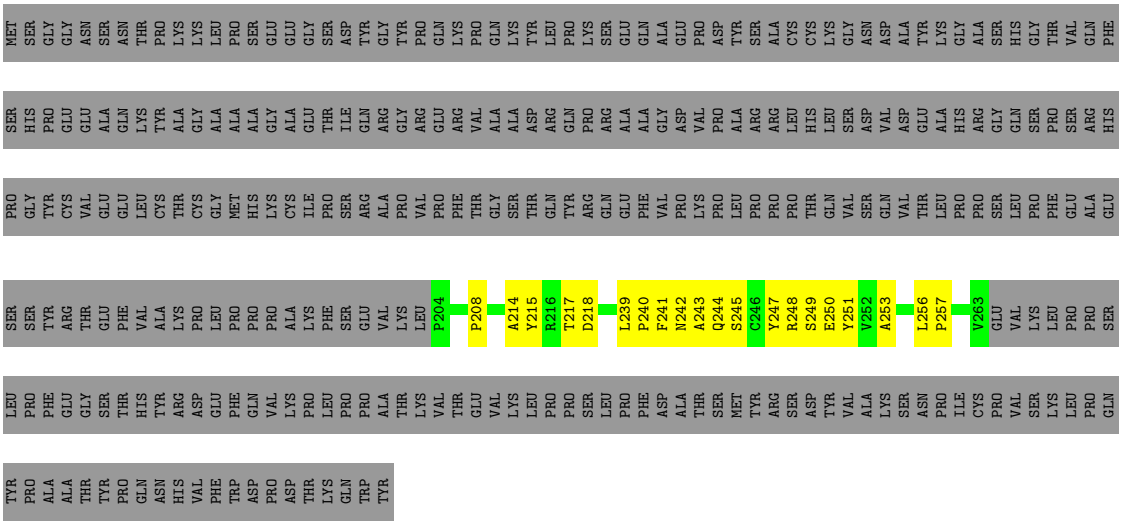
• Molecule 1: Microtubule associated protein SPM1

Chain C:



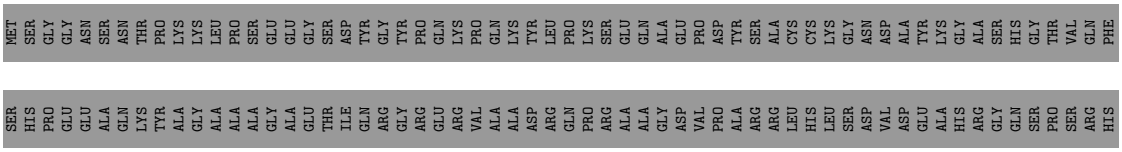
• Molecule 1: Microtubule associated protein SPM1

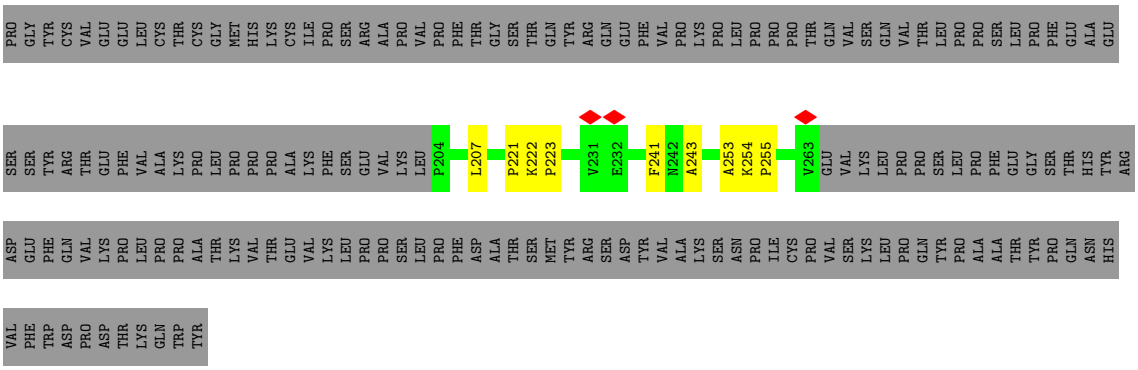
Chain D:



• Molecule 1: Microtubule associated protein SPM1

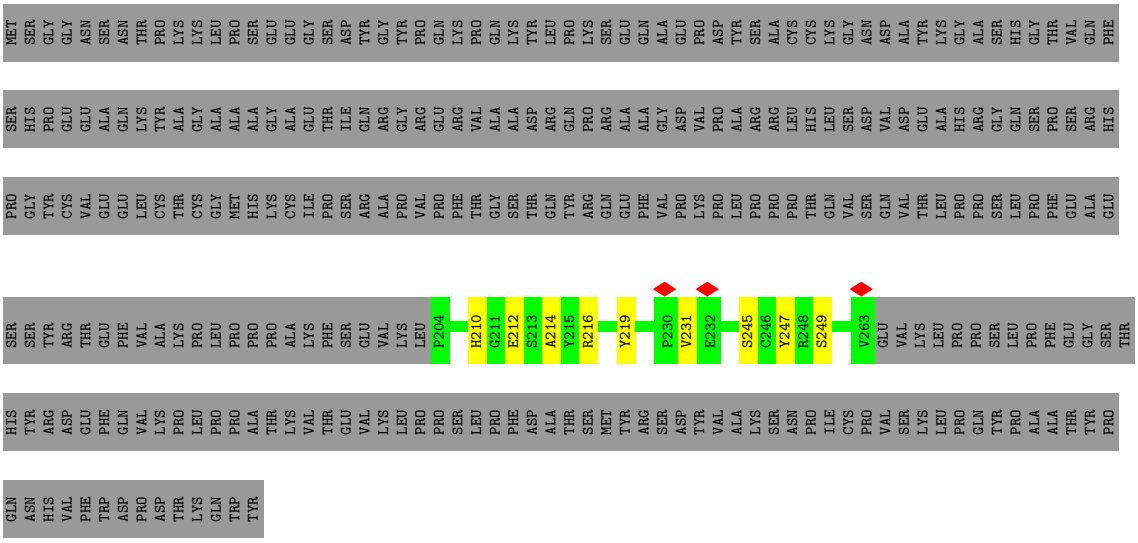
Chain E:





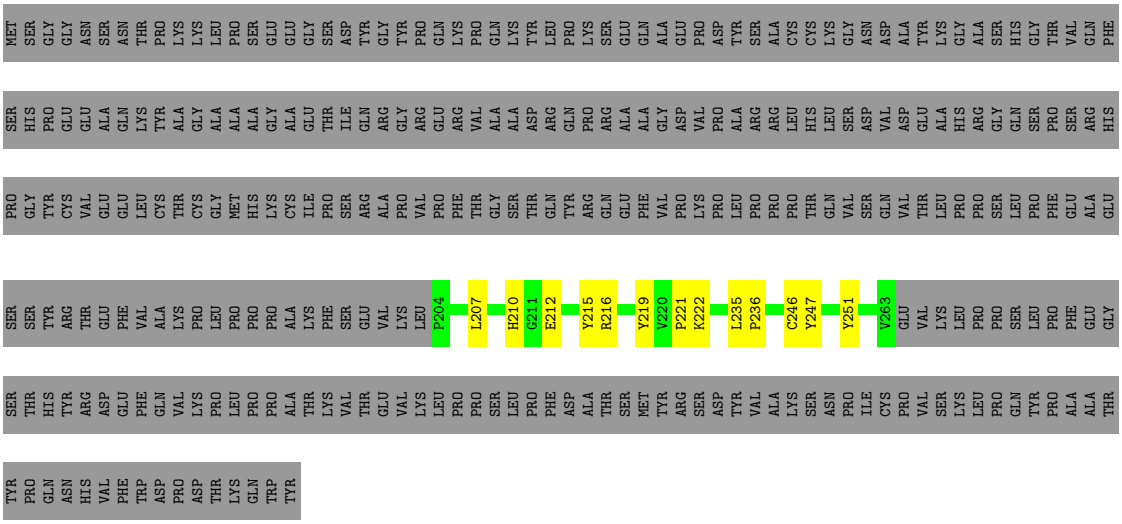
• Molecule 1: Microtubule associated protein SPM1

Chain F:



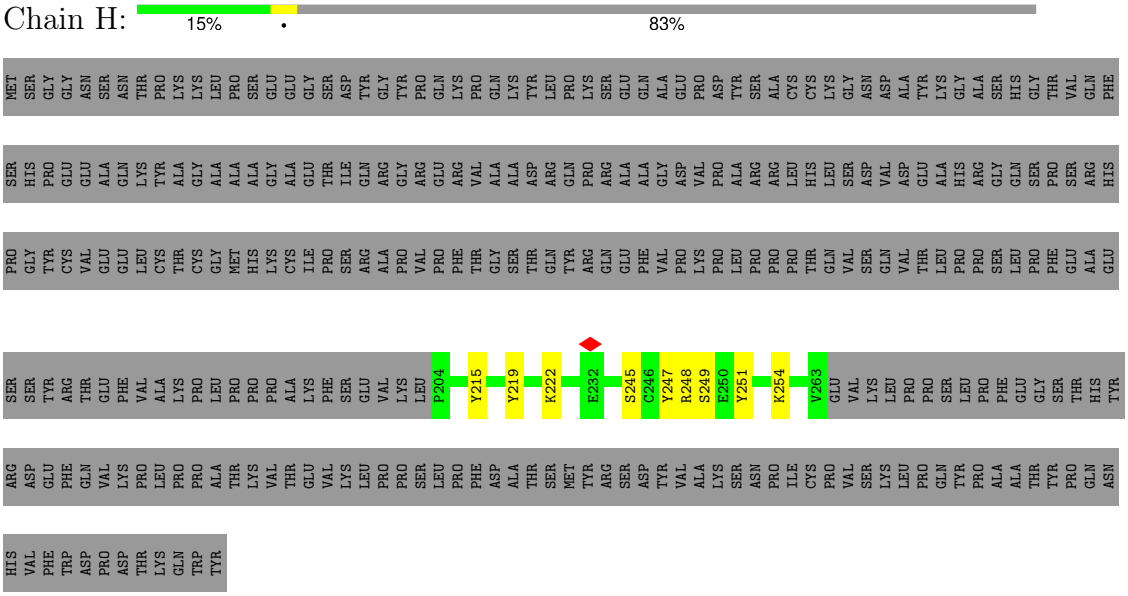
• Molecule 1: Microtubule associated protein SPM1

Chain G:



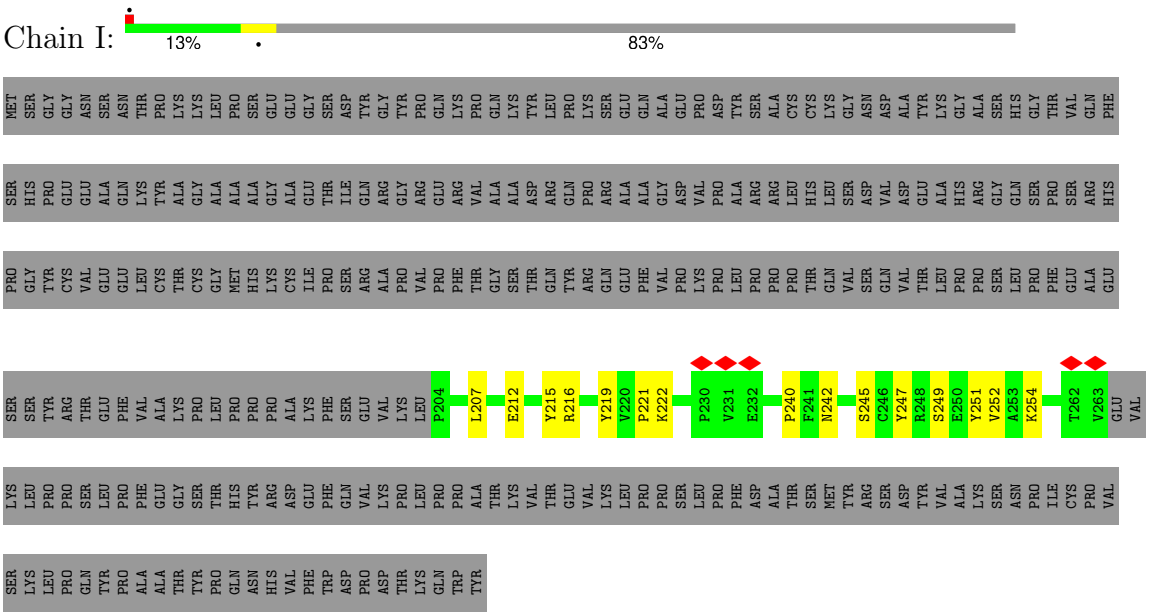
• Molecule 1: Microtubule associated protein SPM1

Chain H:



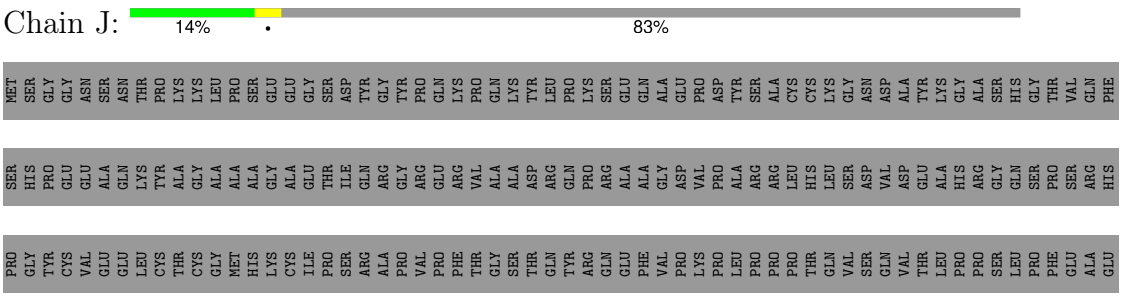
• Molecule 1: Microtubule associated protein SPM1

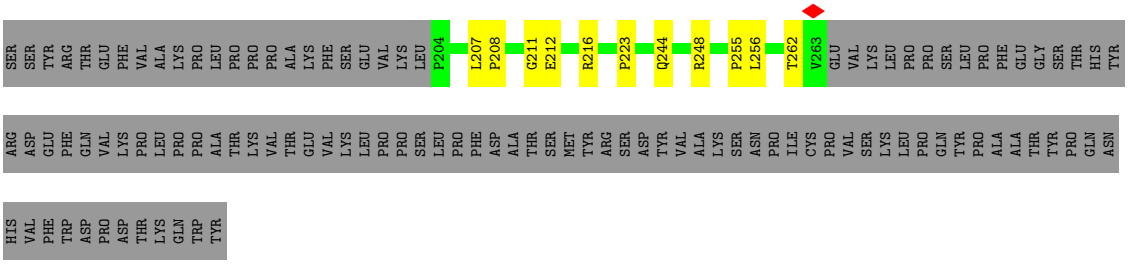
Chain I:



• Molecule 1: Microtubule associated protein SPM1

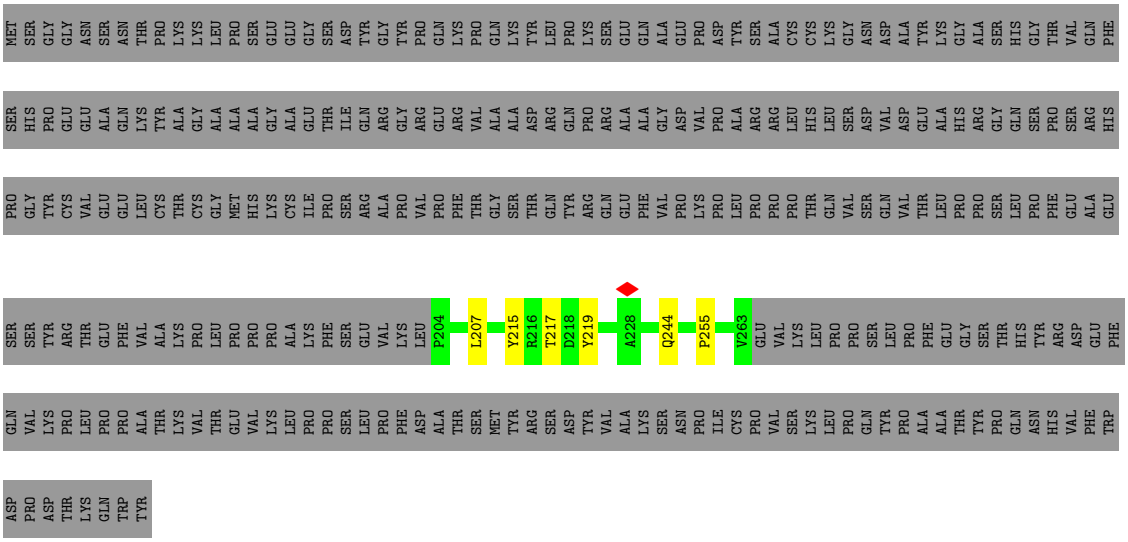
Chain J:





• Molecule 1: Microtubule associated protein SPM1

Chain K:

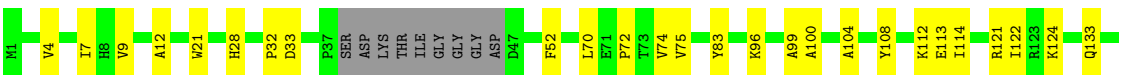


• Molecule 2: Tubulin alpha chain

Chain A0:

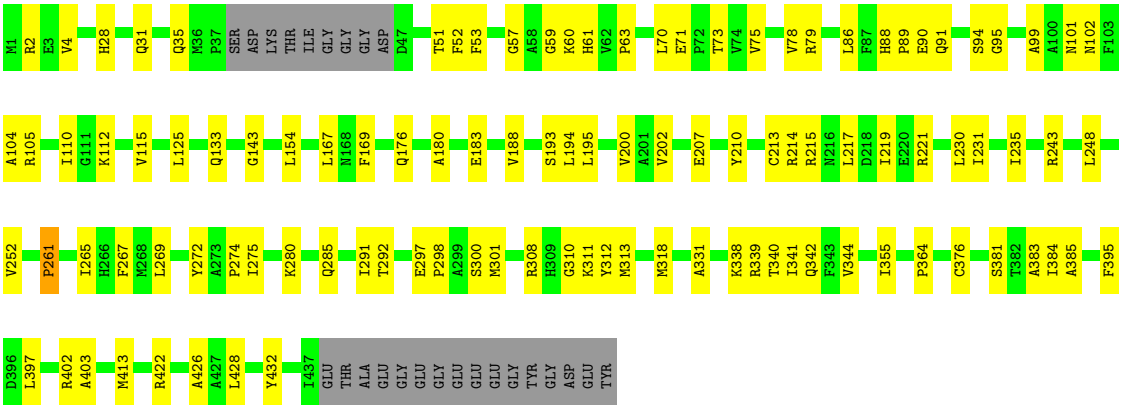
• Molecule 2: Tubulin alpha chain

Chain A2:



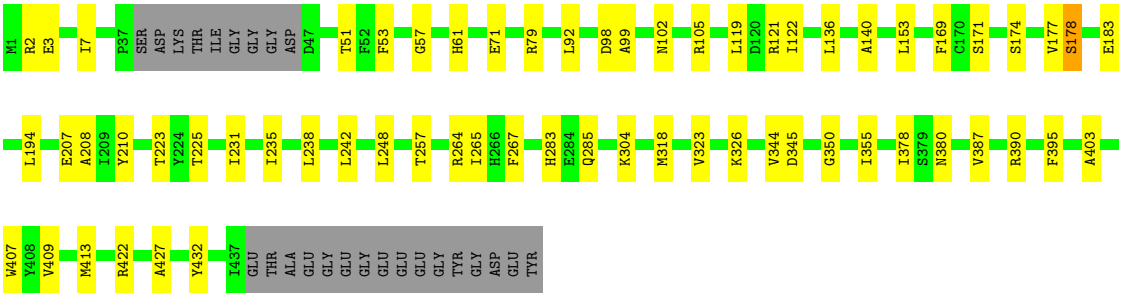
• Molecule 2: Tubulin alpha chain

Chain A4:



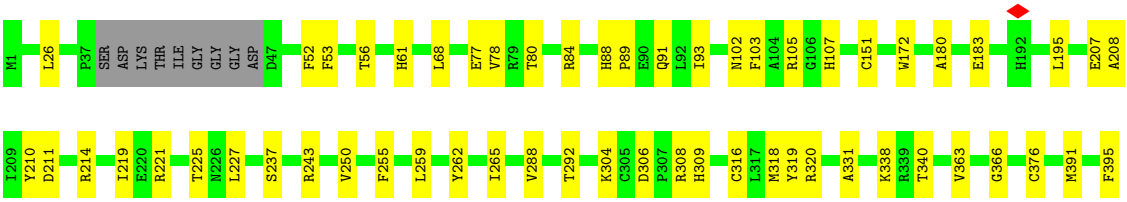
• Molecule 2: Tubulin alpha chain

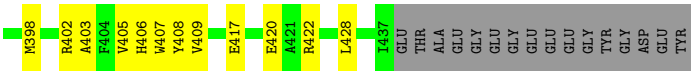
Chain A6:



• Molecule 2: Tubulin alpha chain

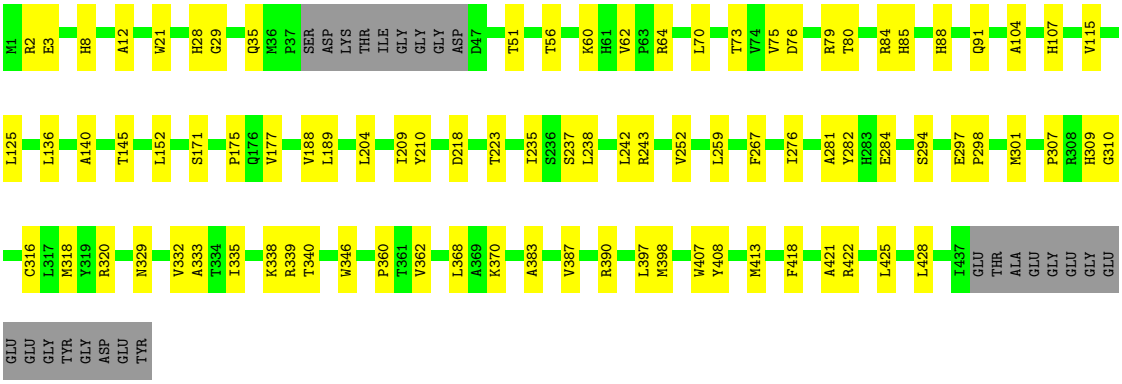
Chain A8:





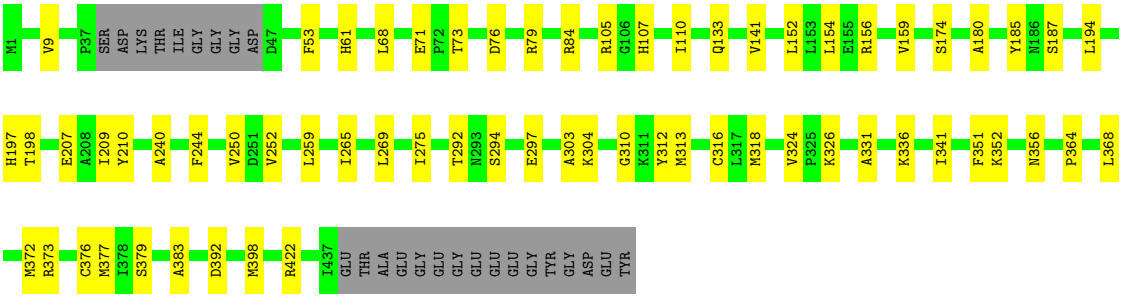
• Molecule 2: Tubulin alpha chain

Chain B0:



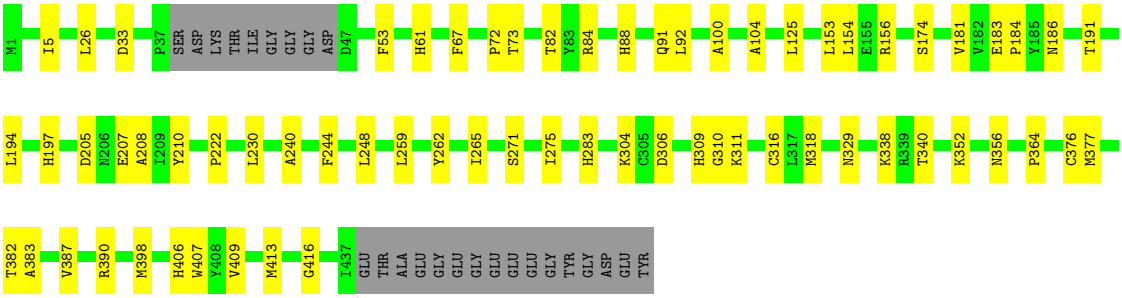
• Molecule 2: Tubulin alpha chain

Chain B2:



• Molecule 2: Tubulin alpha chain

Chain B4:

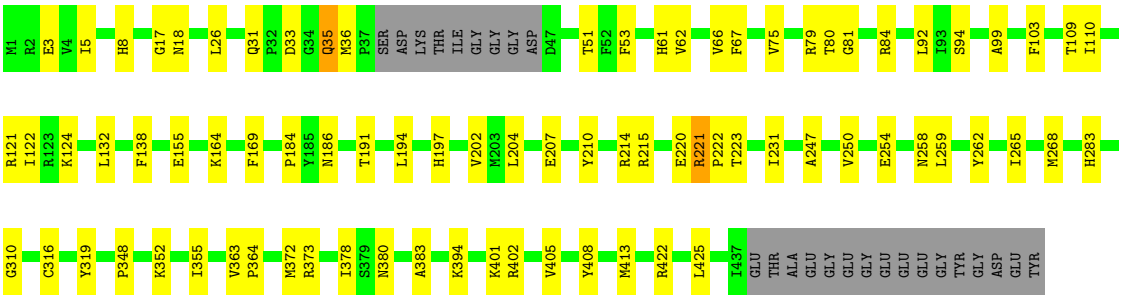


• Molecule 2: Tubulin alpha chain

Chain B6:

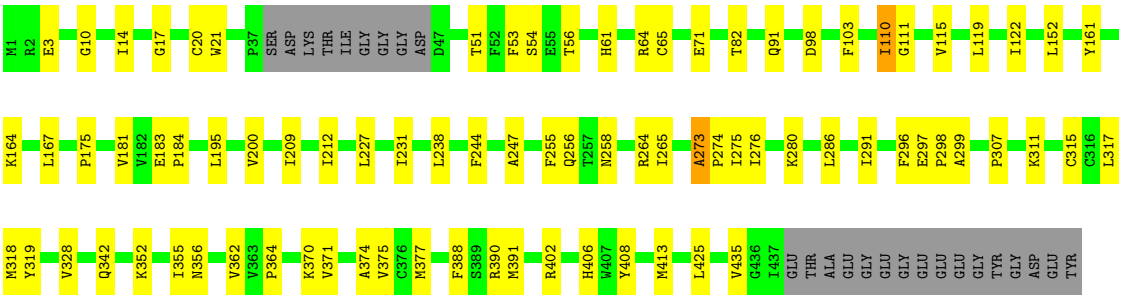
• Molecule 2: Tubulin alpha chain

Chain B8:



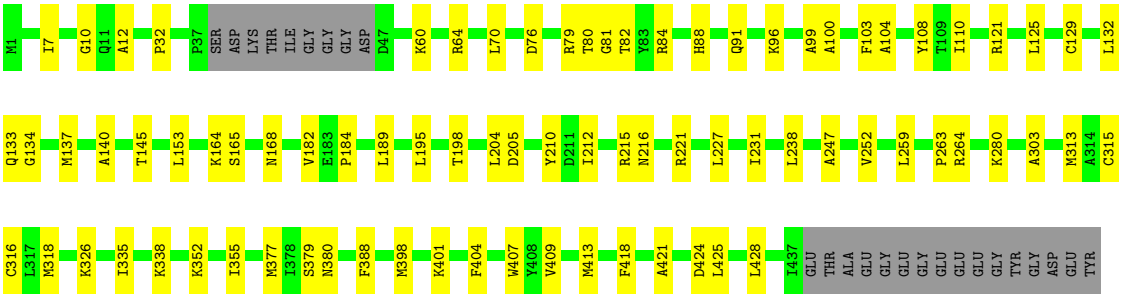
• Molecule 2: Tubulin alpha chain

Chain C0:



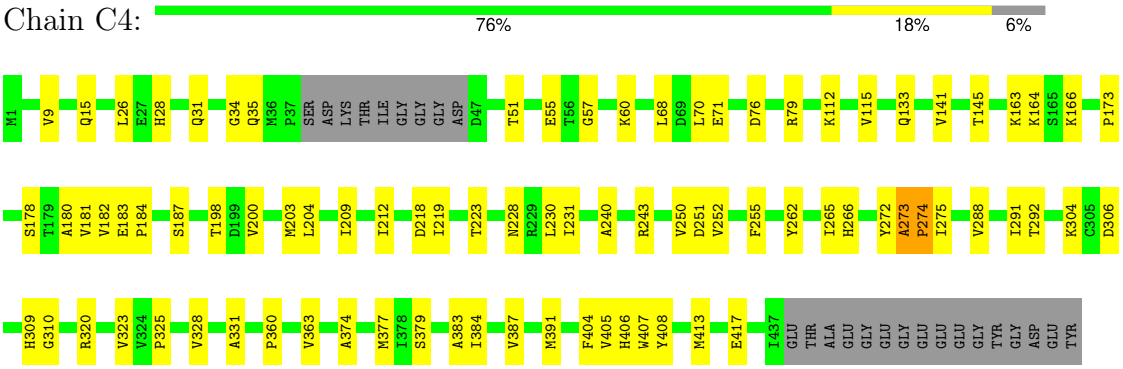
• Molecule 2: Tubulin alpha chain

Chain C2:



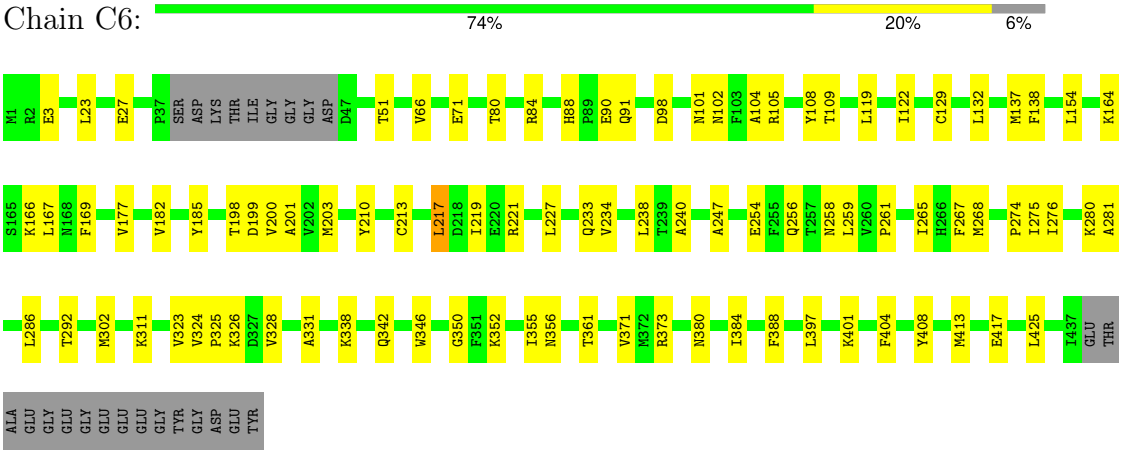
• Molecule 2: Tubulin alpha chain

Chain C4:



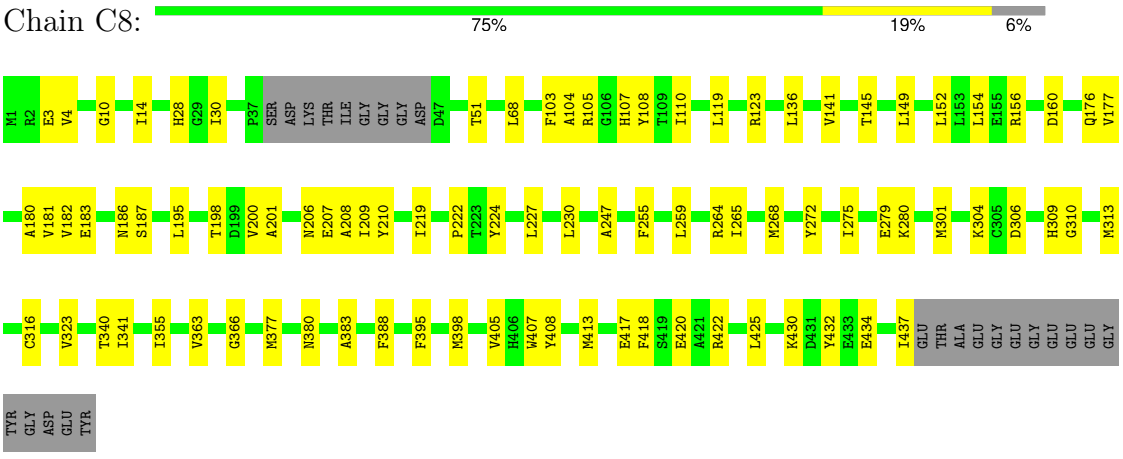
• Molecule 2: Tubulin alpha chain

Chain C6:



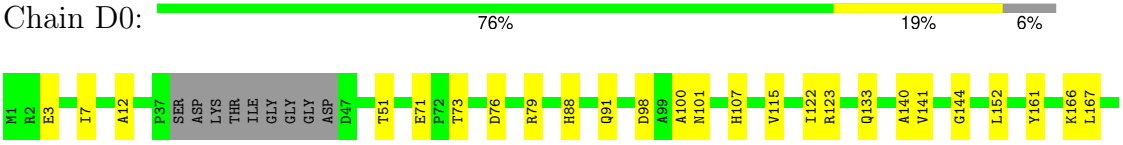
• Molecule 2: Tubulin alpha chain

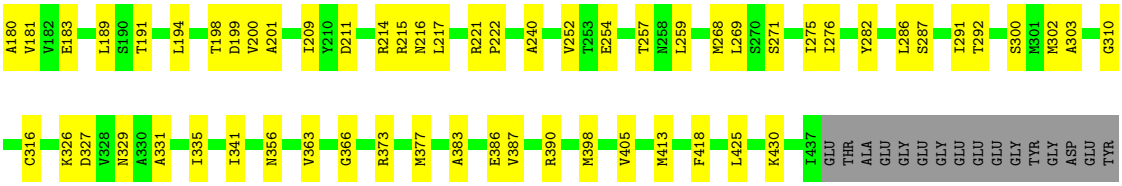
Chain C8:



• Molecule 2: Tubulin alpha chain

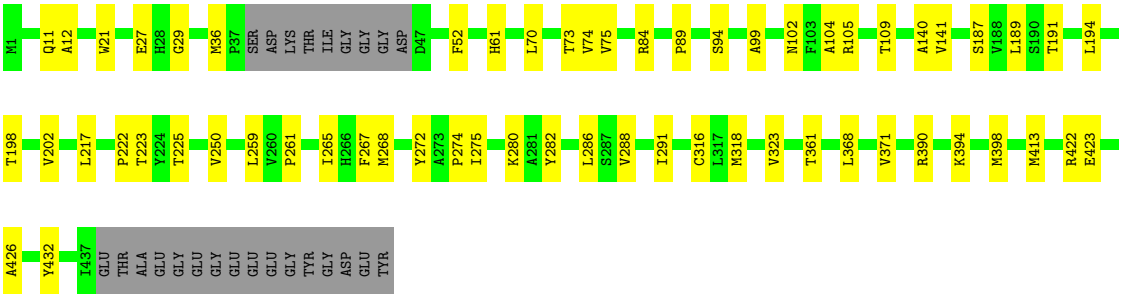
Chain D0:





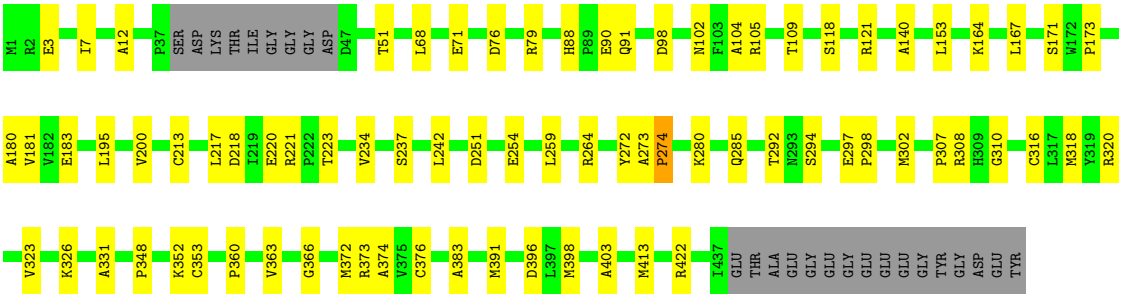
• Molecule 2: Tubulin alpha chain

Chain D2:



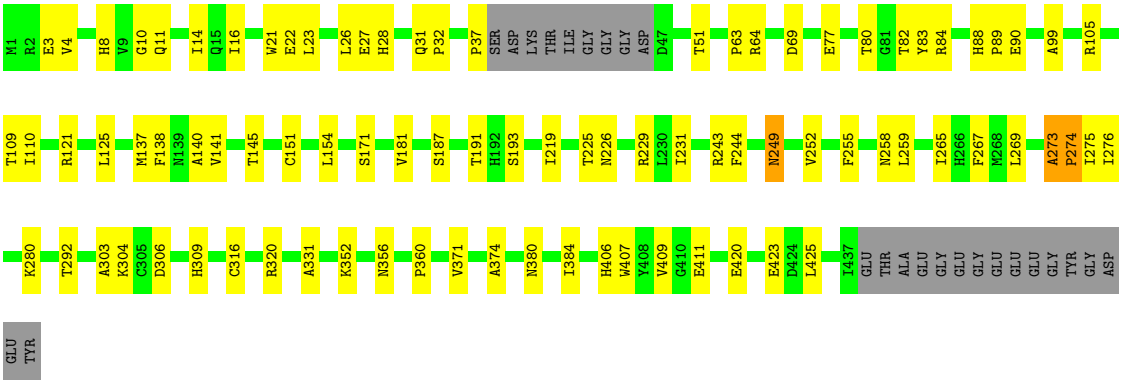
• Molecule 2: Tubulin alpha chain

Chain D4:



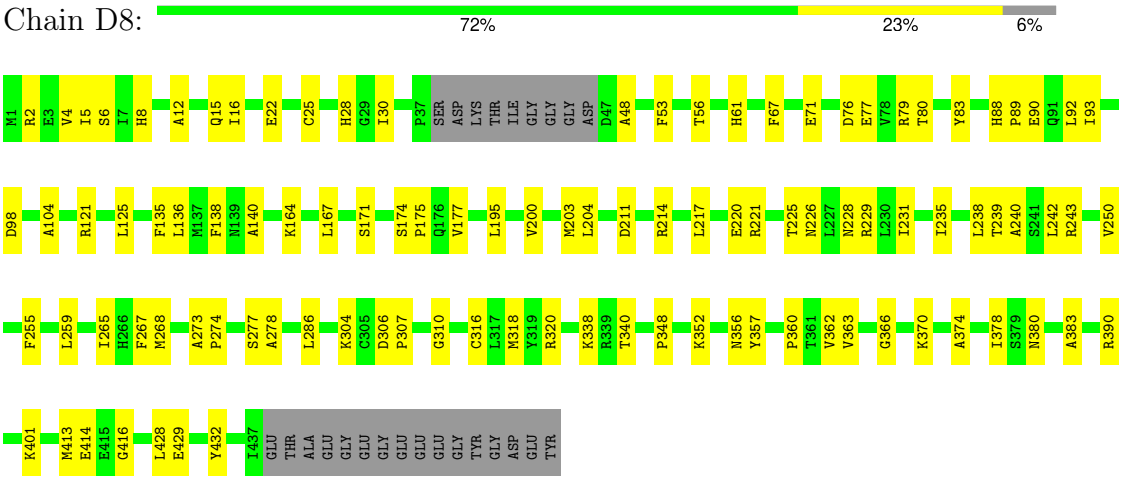
• Molecule 2: Tubulin alpha chain

Chain D6:



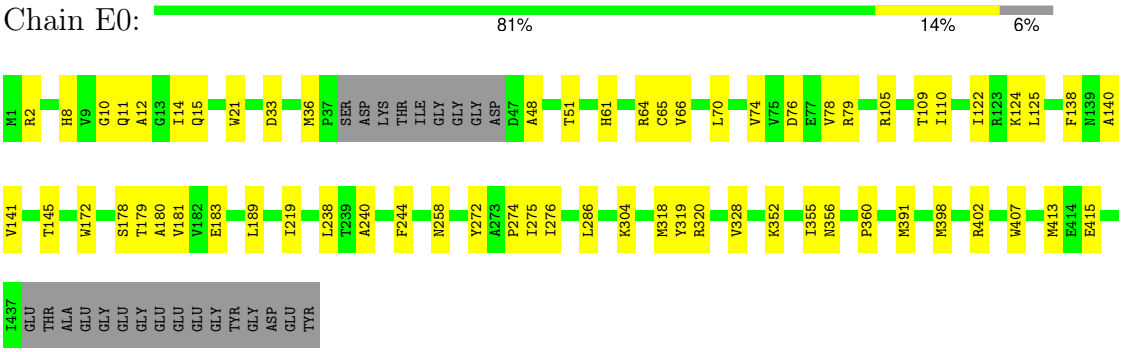
• Molecule 2: Tubulin alpha chain

Chain D8:



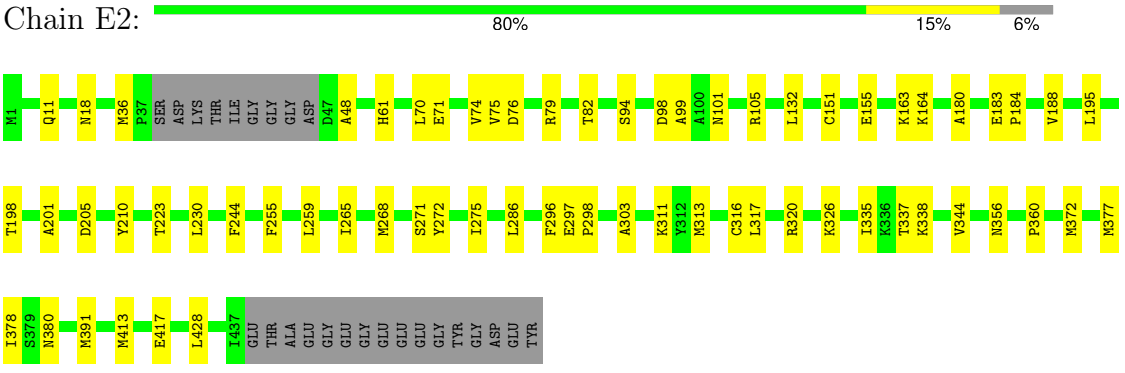
• Molecule 2: Tubulin alpha chain

Chain E0:



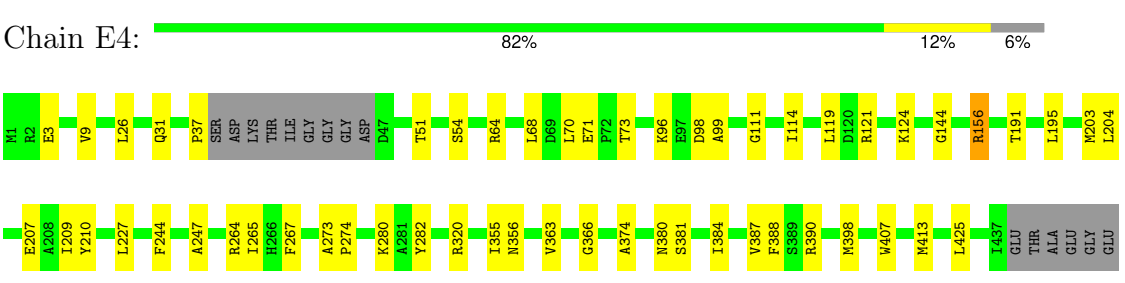
• Molecule 2: Tubulin alpha chain

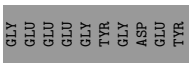
Chain E2:



• Molecule 2: Tubulin alpha chain

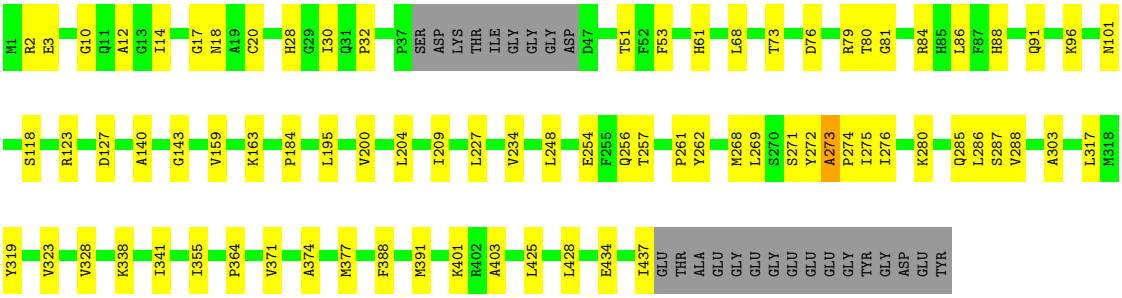
Chain E4:





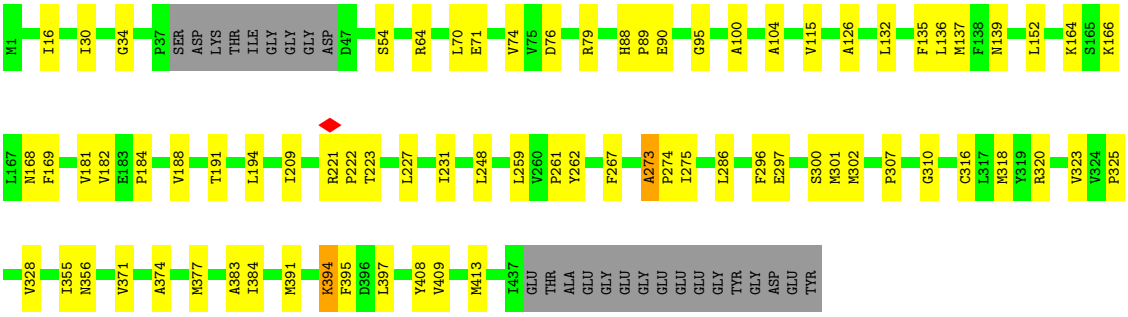
• Molecule 2: Tubulin alpha chain

Chain E6:



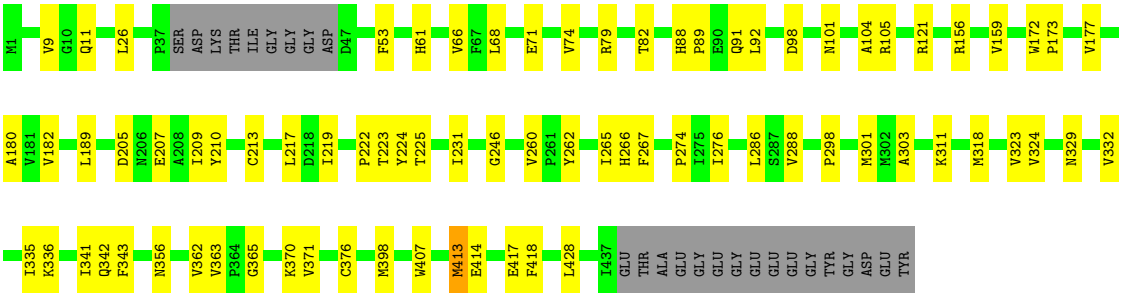
• Molecule 2: Tubulin alpha chain

Chain E8:



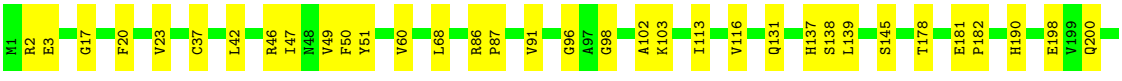
• Molecule 2: Tubulin alpha chain

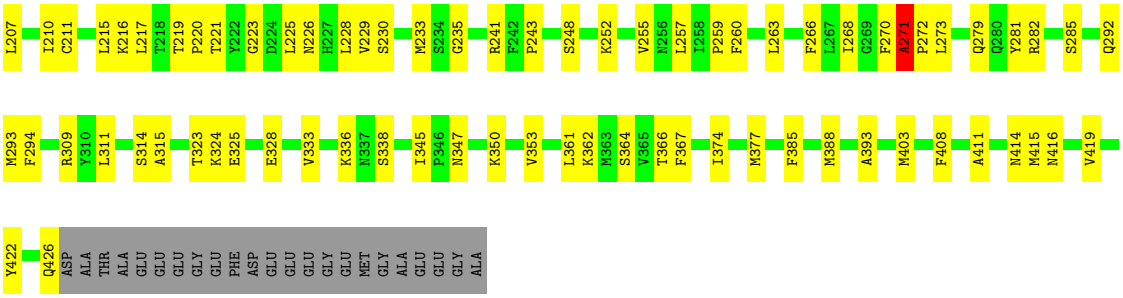
Chain F0:



• Molecule 3: Tubulin beta chain

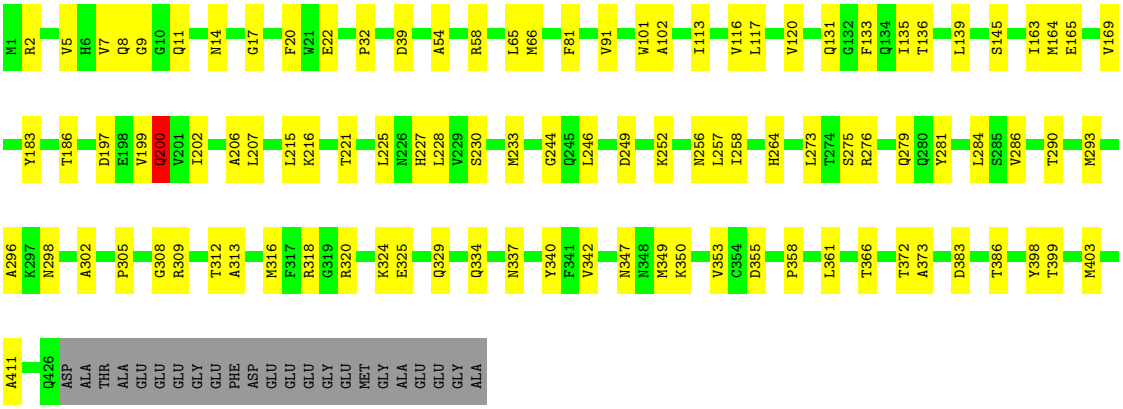
Chain A1:





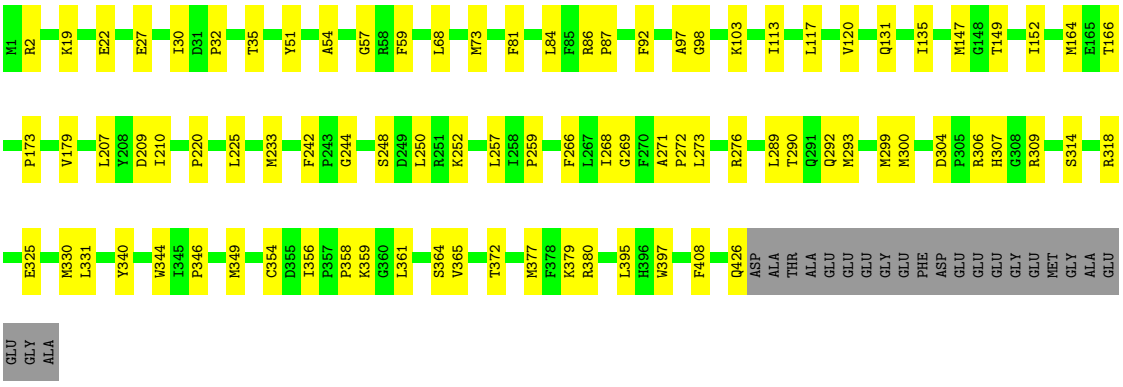
• Molecule 3: Tubulin beta chain

Chain A3:



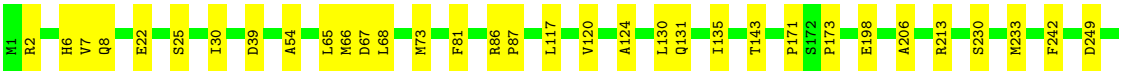
• Molecule 3: Tubulin beta chain

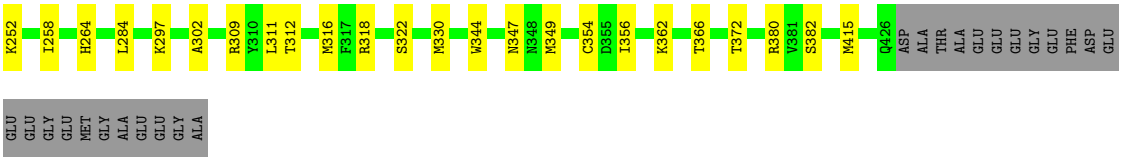
Chain A5:



• Molecule 3: Tubulin beta chain

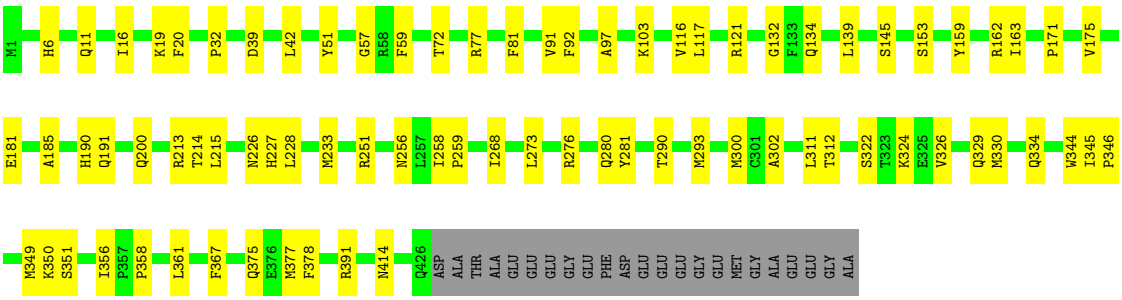
Chain A7:





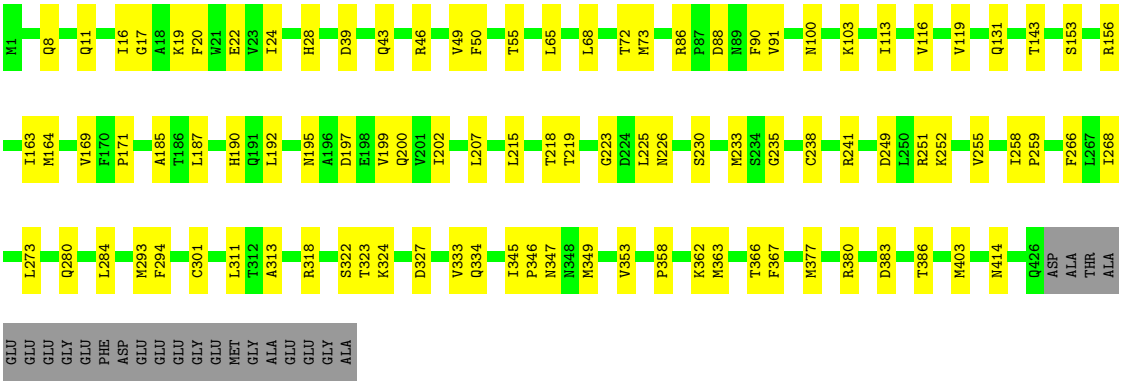
• Molecule 3: Tubulin beta chain

Chain A9:



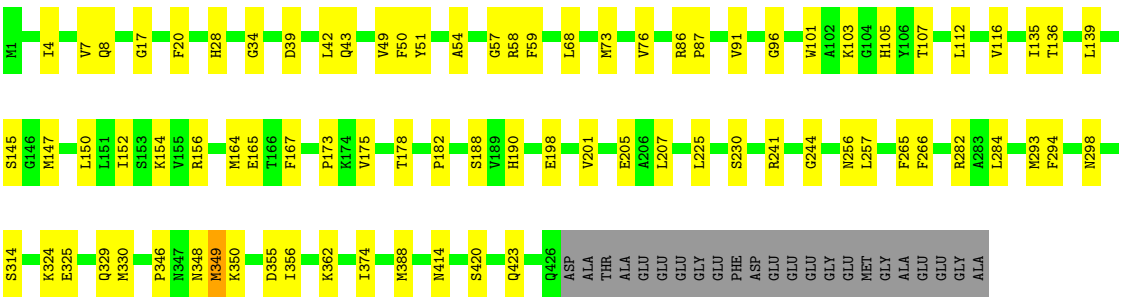
• Molecule 3: Tubulin beta chain

Chain B1:



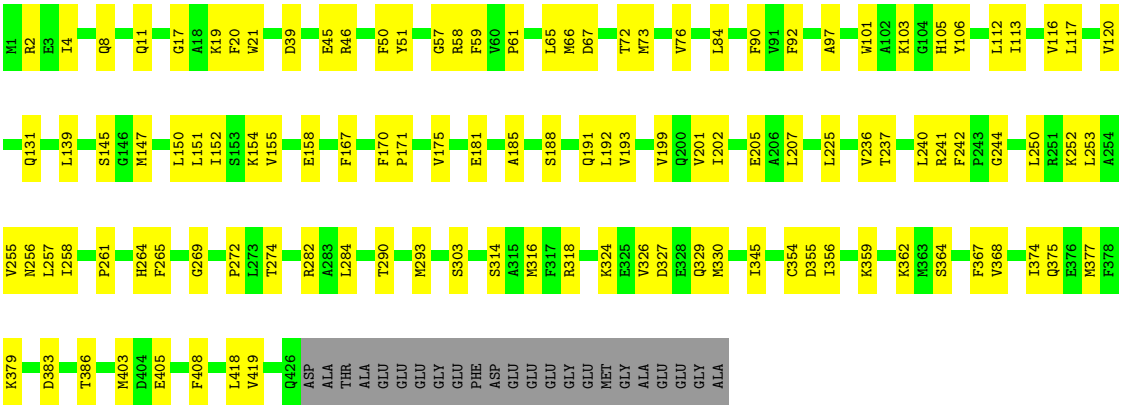
• Molecule 3: Tubulin beta chain

Chain B3:



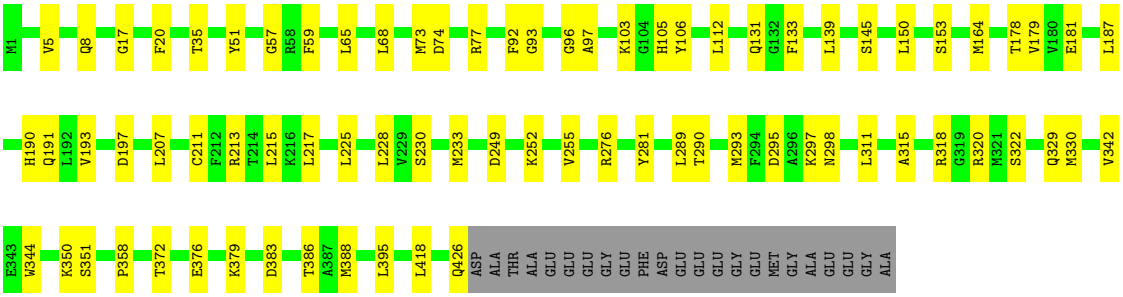
• Molecule 3: Tubulin beta chain

Chain B5:



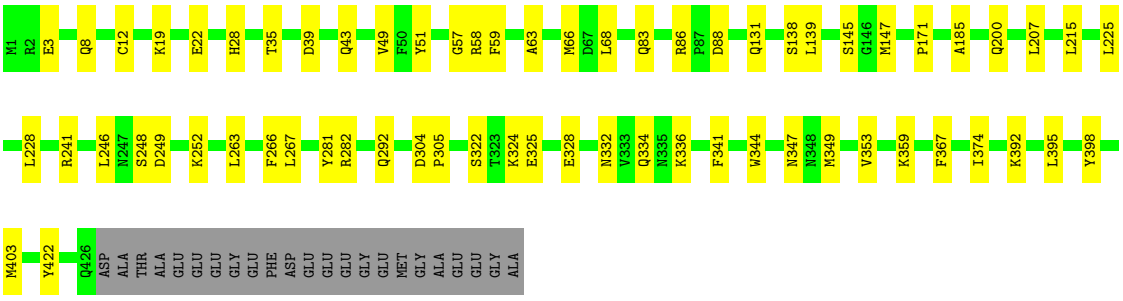
• Molecule 3: Tubulin beta chain

Chain B7:



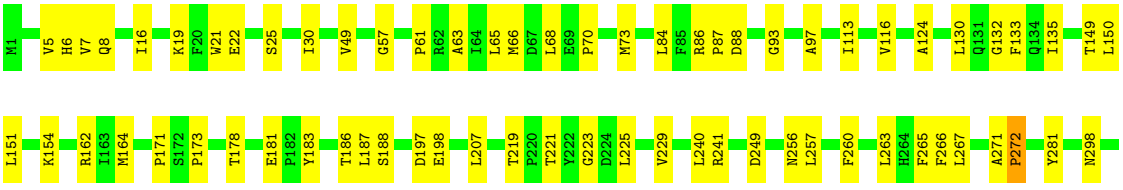
• Molecule 3: Tubulin beta chain

Chain B9:



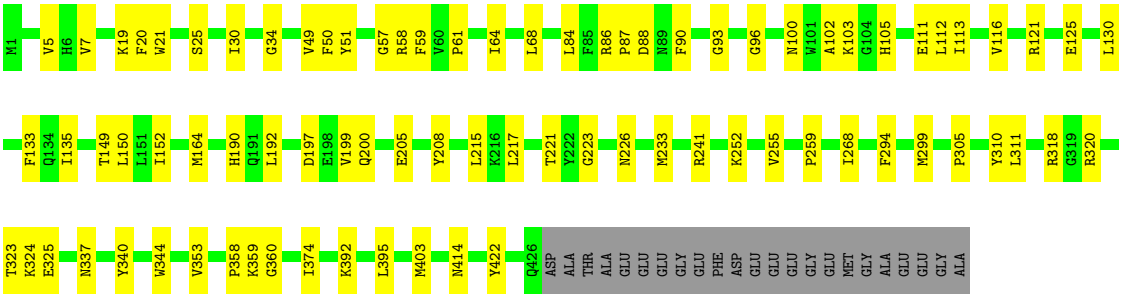
• Molecule 3: Tubulin beta chain

Chain C1:



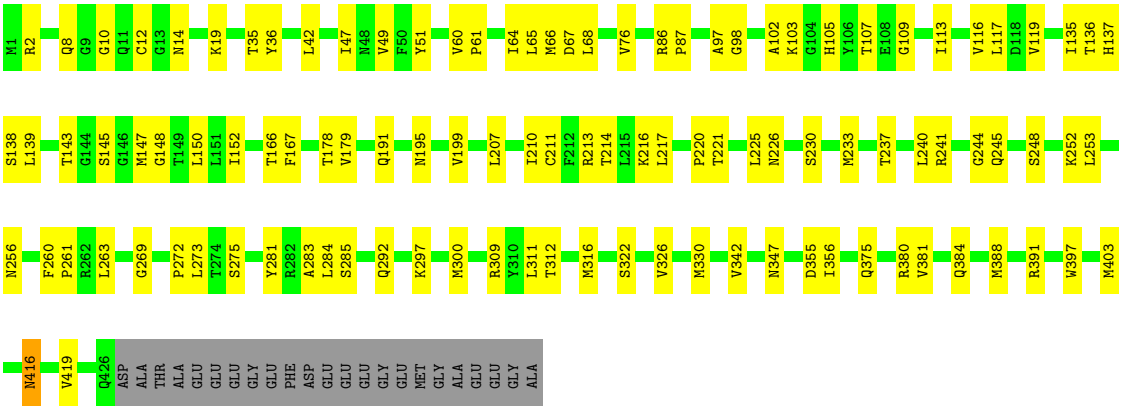
• Molecule 3: Tubulin beta chain

Chain C3:



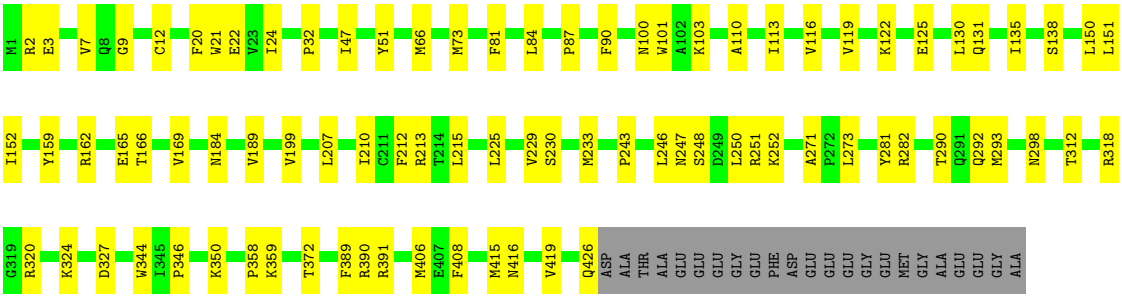
• Molecule 3: Tubulin beta chain

Chain C5:



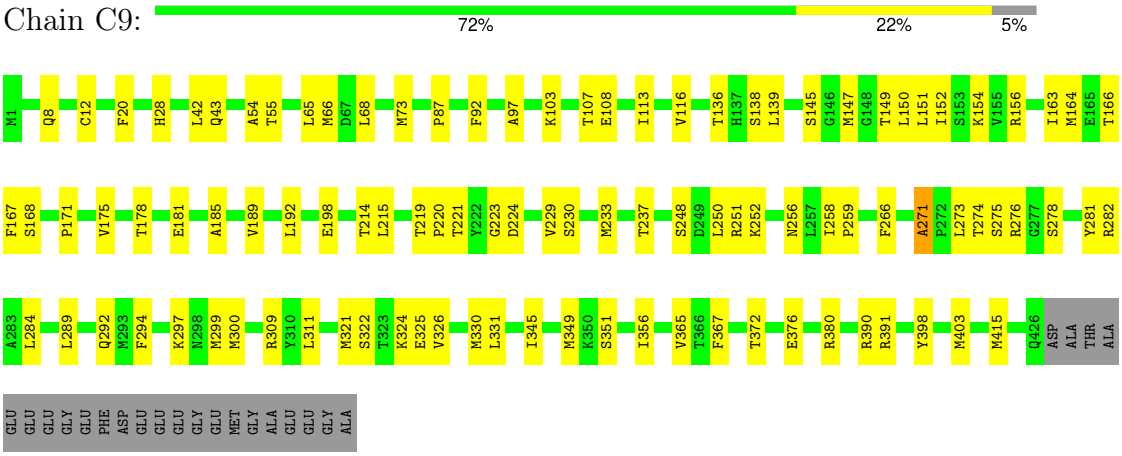
• Molecule 3: Tubulin beta chain

Chain C7:



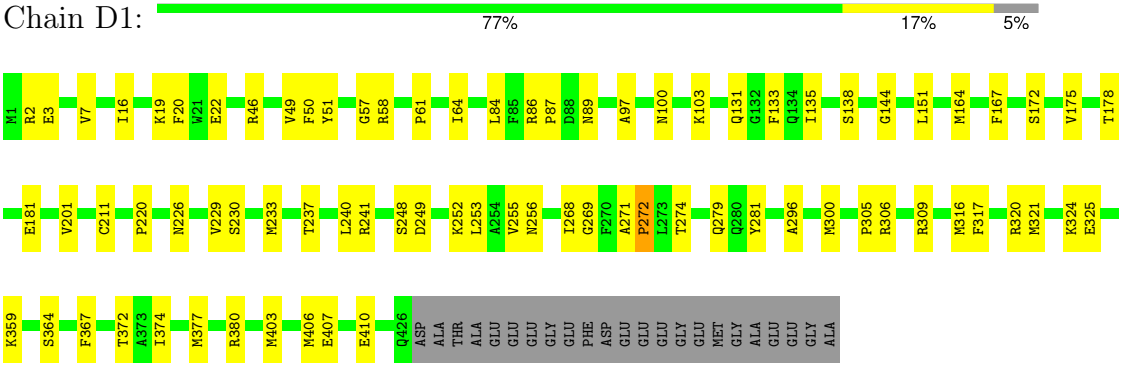
• Molecule 3: Tubulin beta chain

Chain C9:



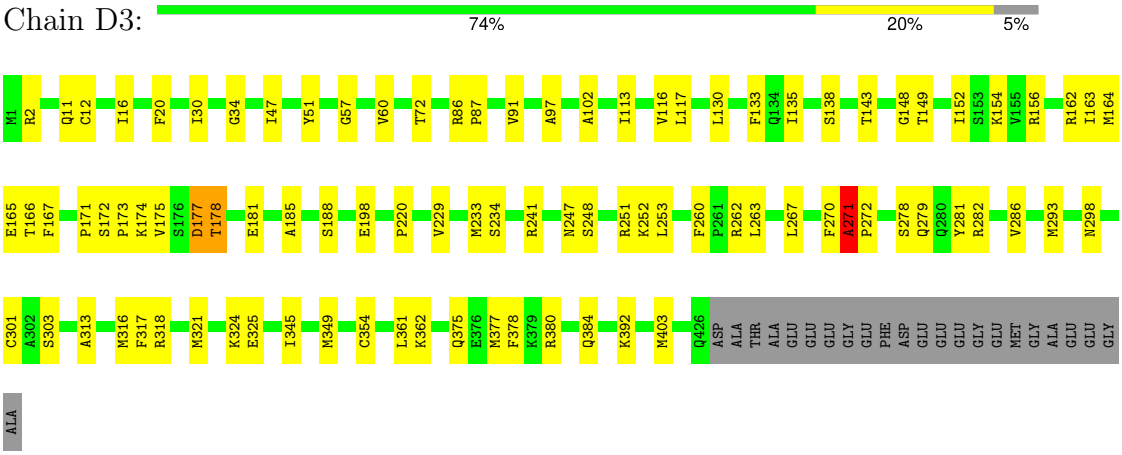
• Molecule 3: Tubulin beta chain

Chain D1:



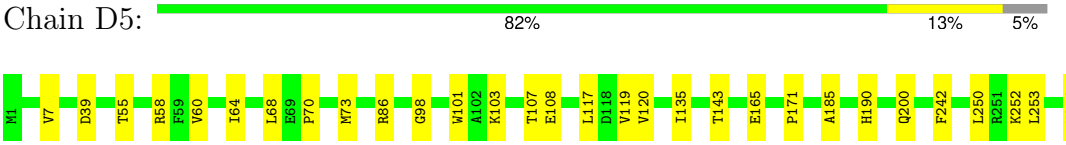
• Molecule 3: Tubulin beta chain

Chain D3:



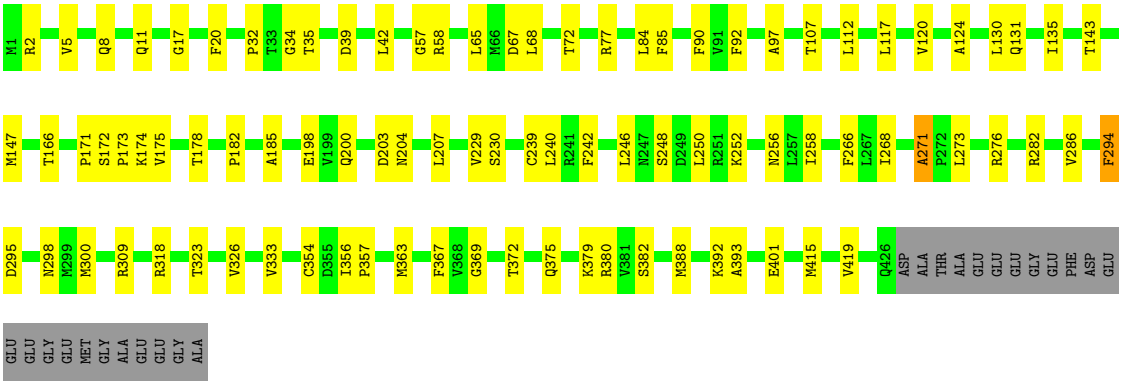
• Molecule 3: Tubulin beta chain

Chain D5:



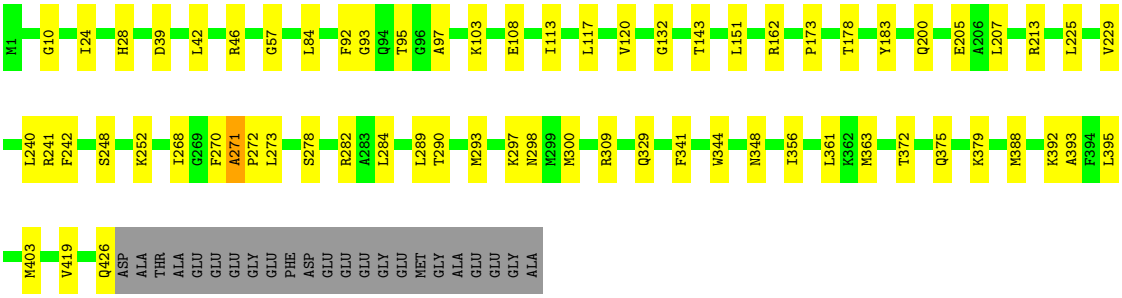
• Molecule 3: Tubulin beta chain

Chain D7:



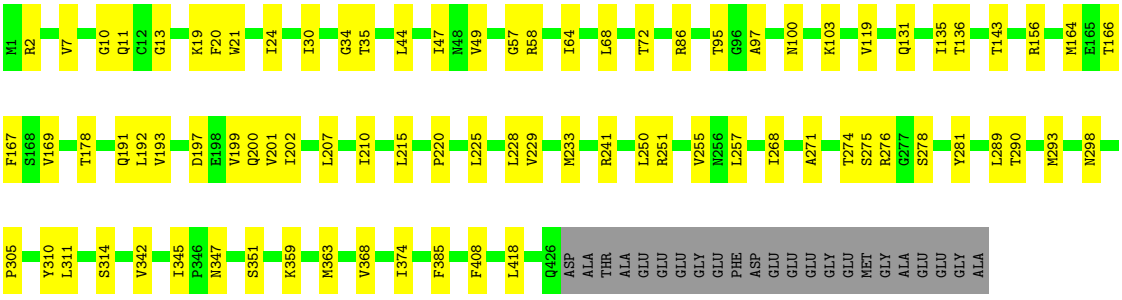
• Molecule 3: Tubulin beta chain

Chain D9:



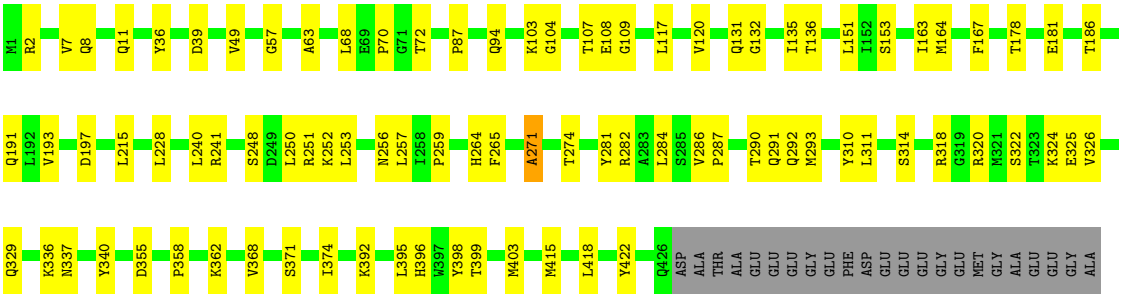
• Molecule 3: Tubulin beta chain

Chain E1:



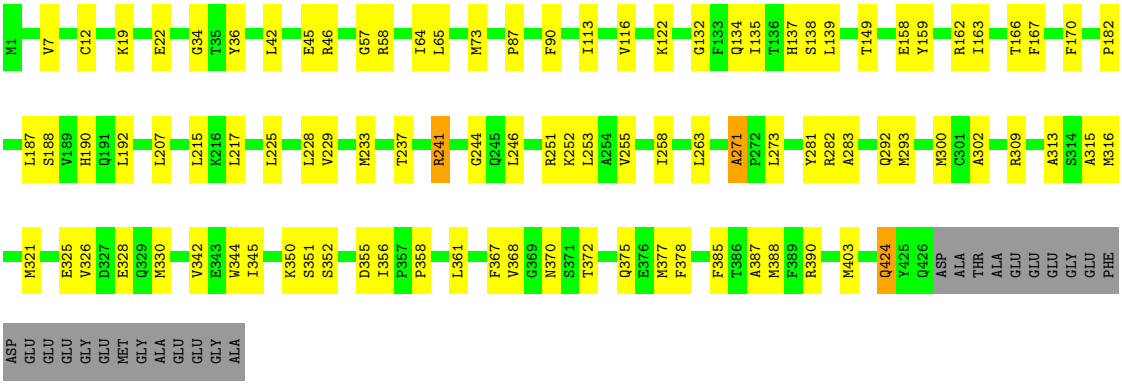
• Molecule 3: Tubulin beta chain

Chain E3:



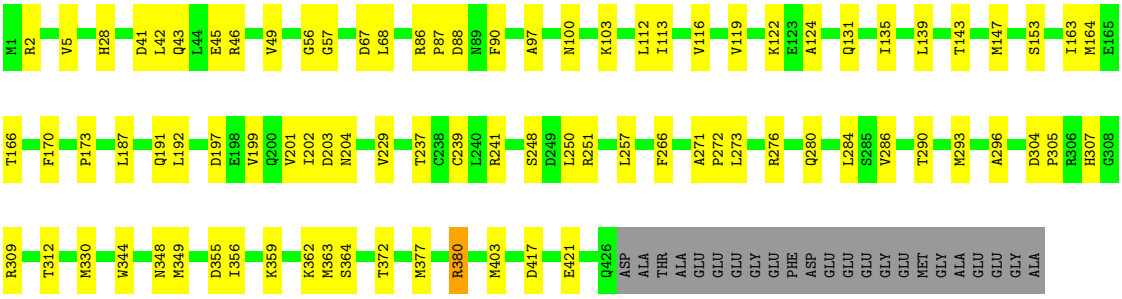
• Molecule 3: Tubulin beta chain

Chain E5:



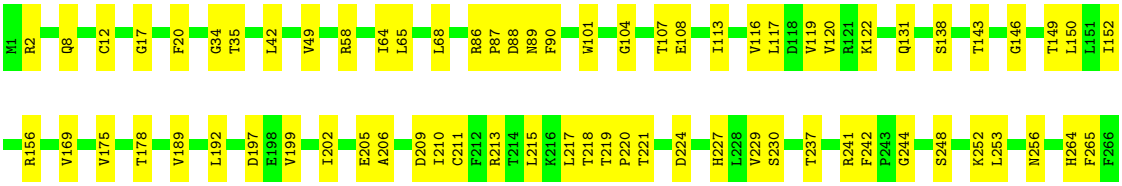
• Molecule 3: Tubulin beta chain

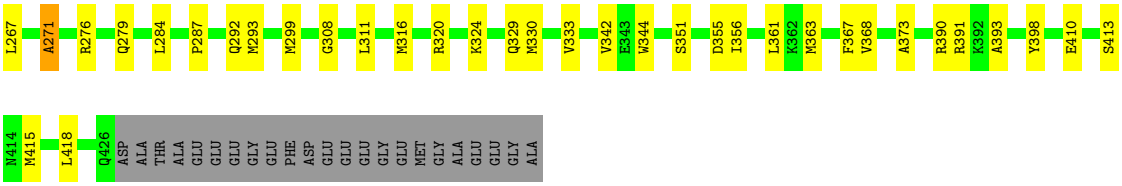
Chain E7:



• Molecule 3: Tubulin beta chain

Chain E9:



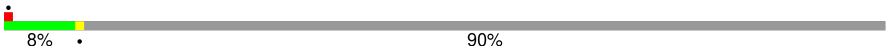


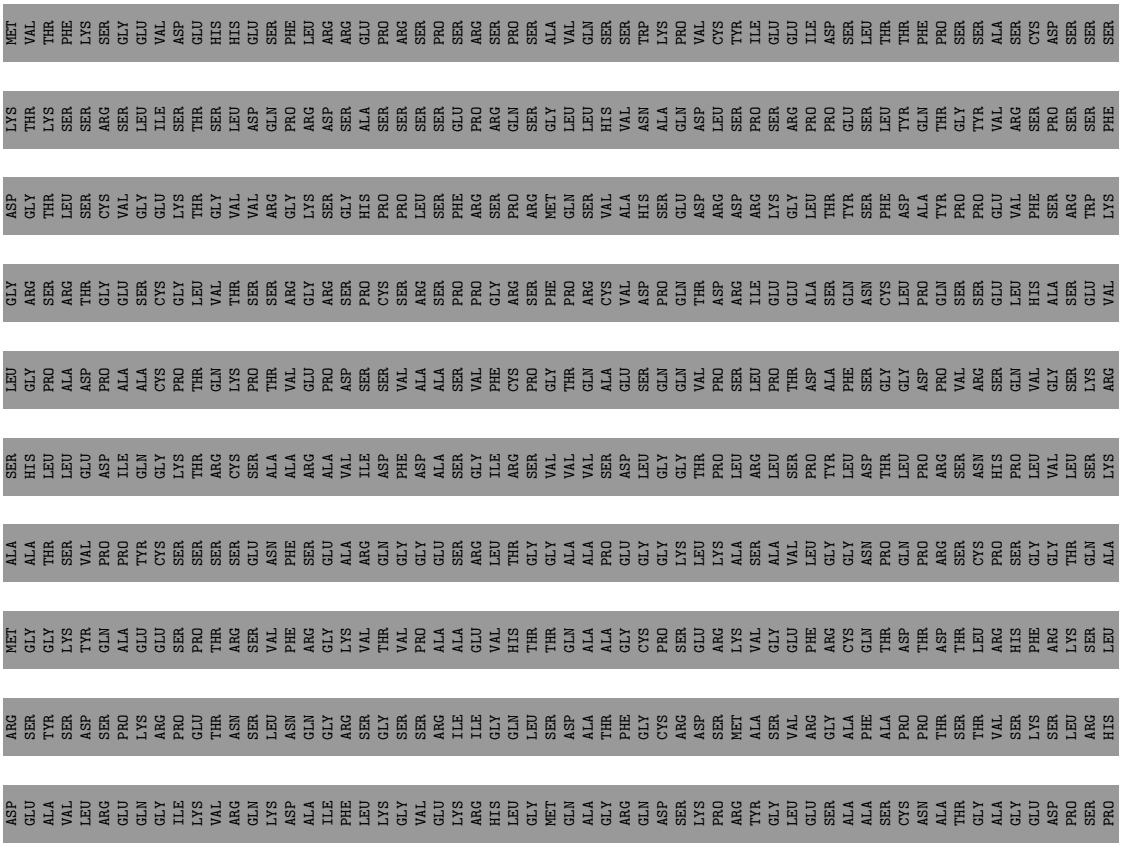
• Molecule 3: Tubulin beta chain

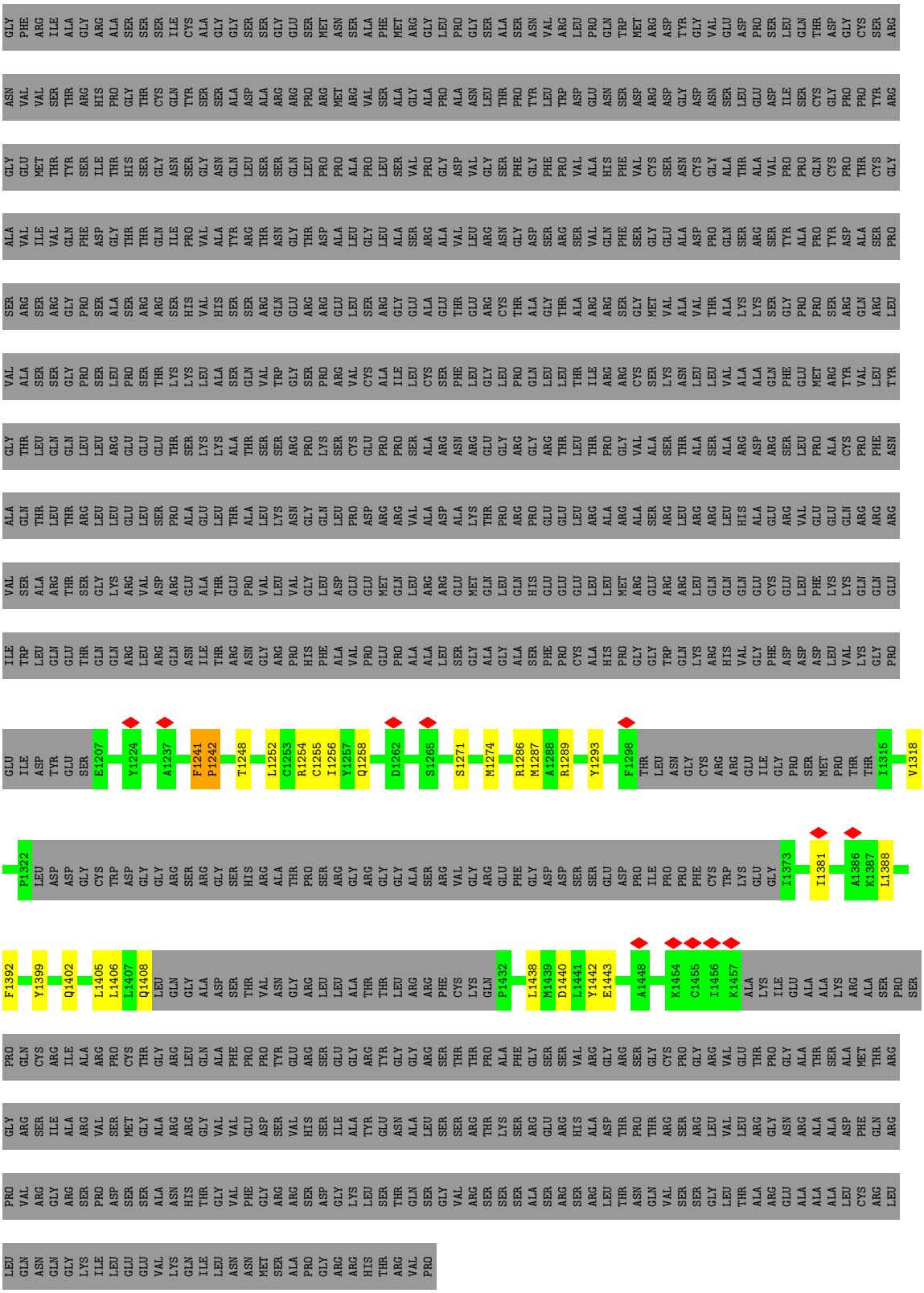
Chain F1:

• Molecule 4: ICMAP2, TGME49_224700

Chain L:

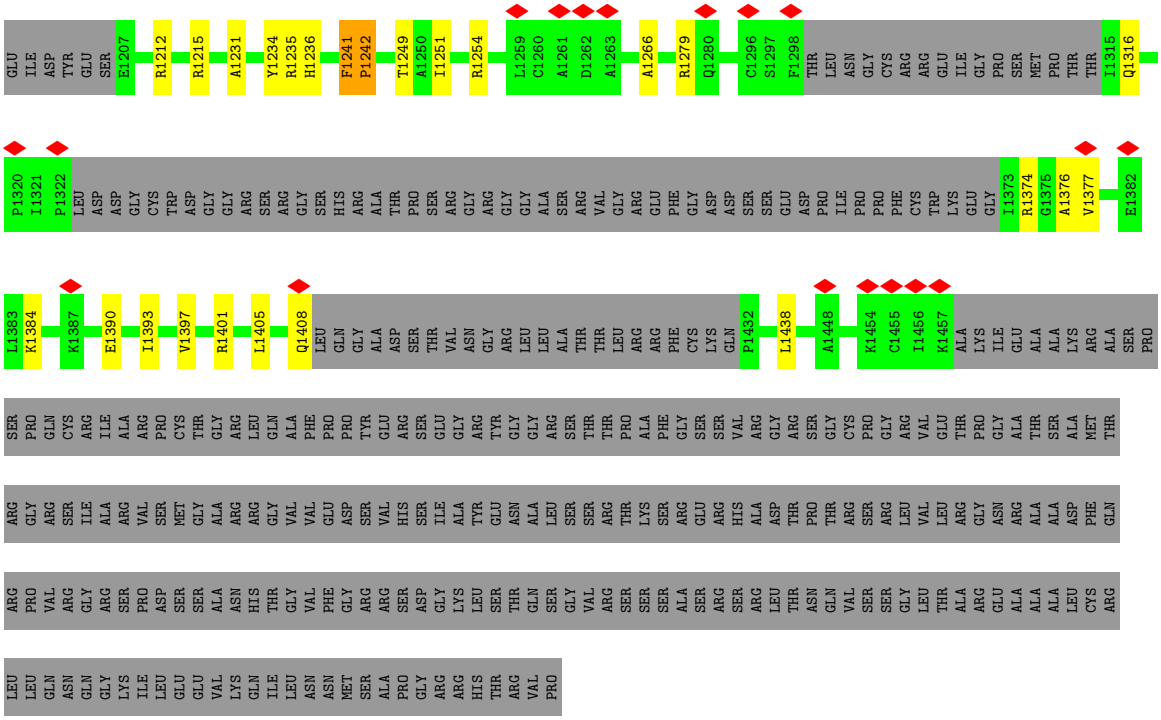






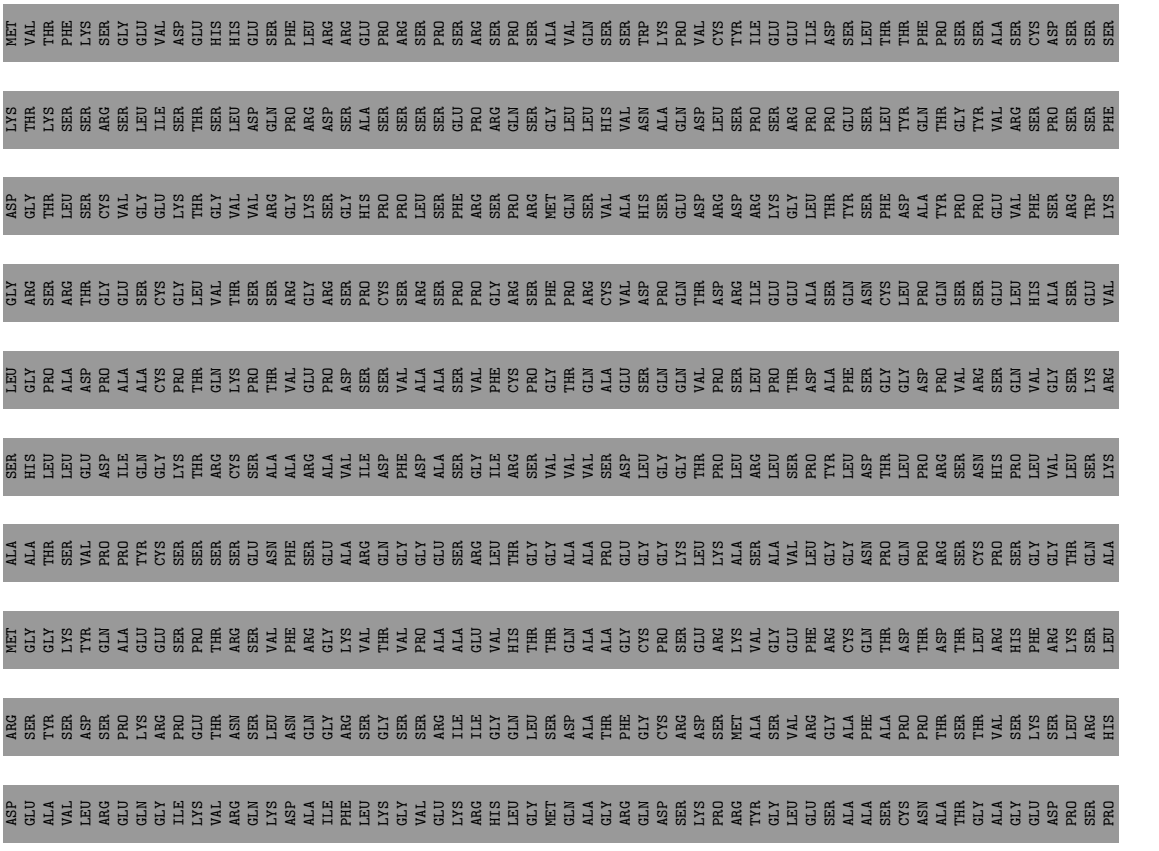
• Molecule 4: ICMAP2, TGME49_224700

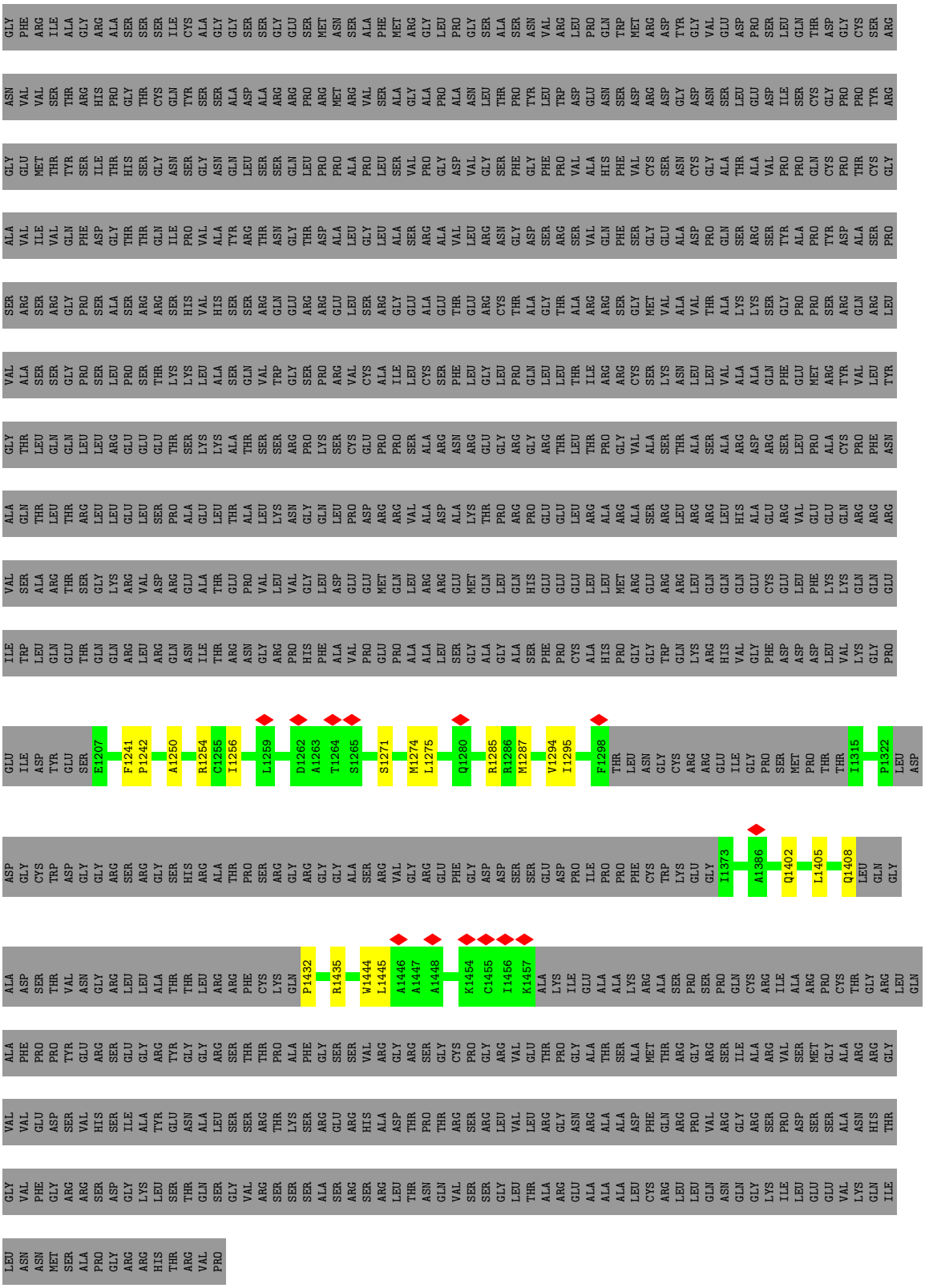
Chain M:



- Molecule 4: ICMAP2, TGME49_224700

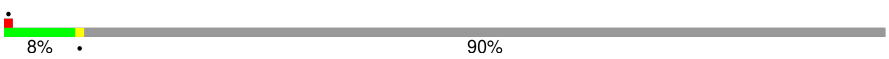
Chain N:

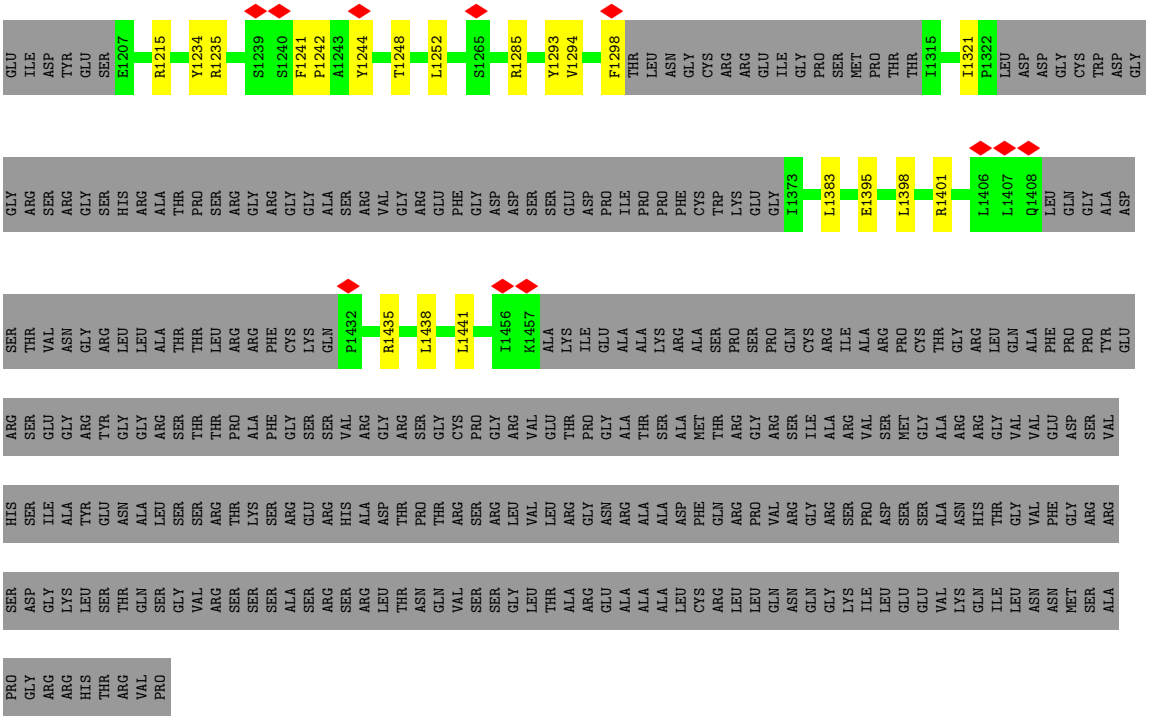




• Molecule 4: ICMAP2, TGME49_224700

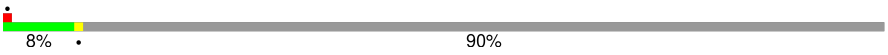
Chain Q:

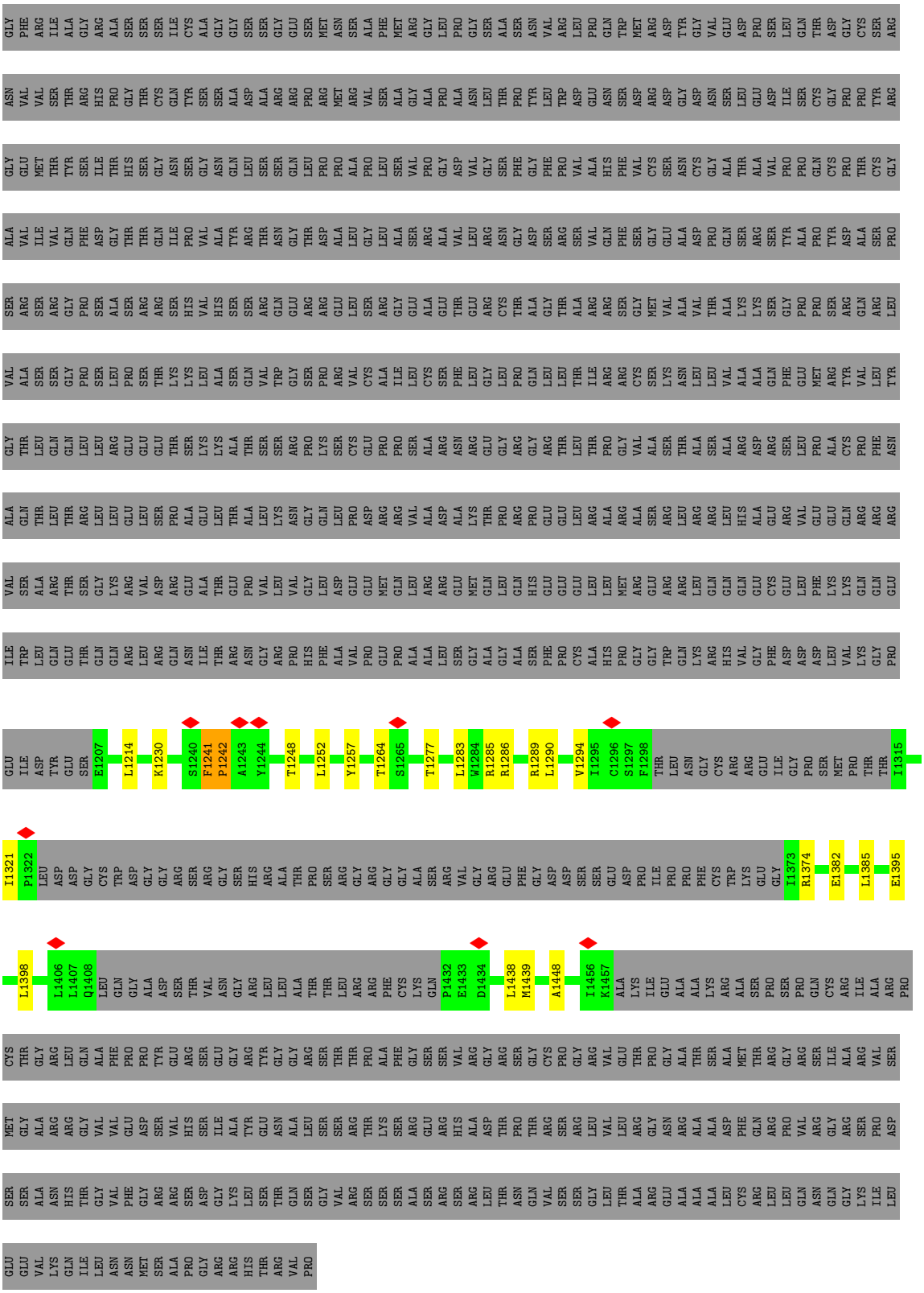




• Molecule 4: ICMAP2, TGME49_224700

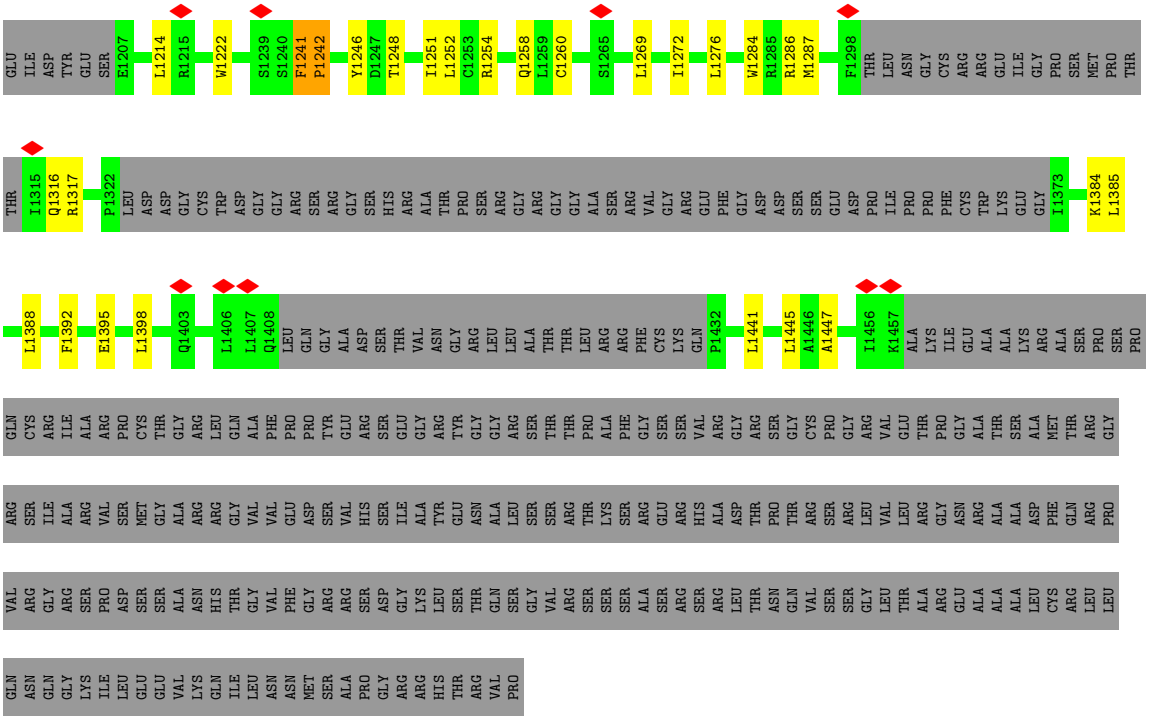
Chain V:





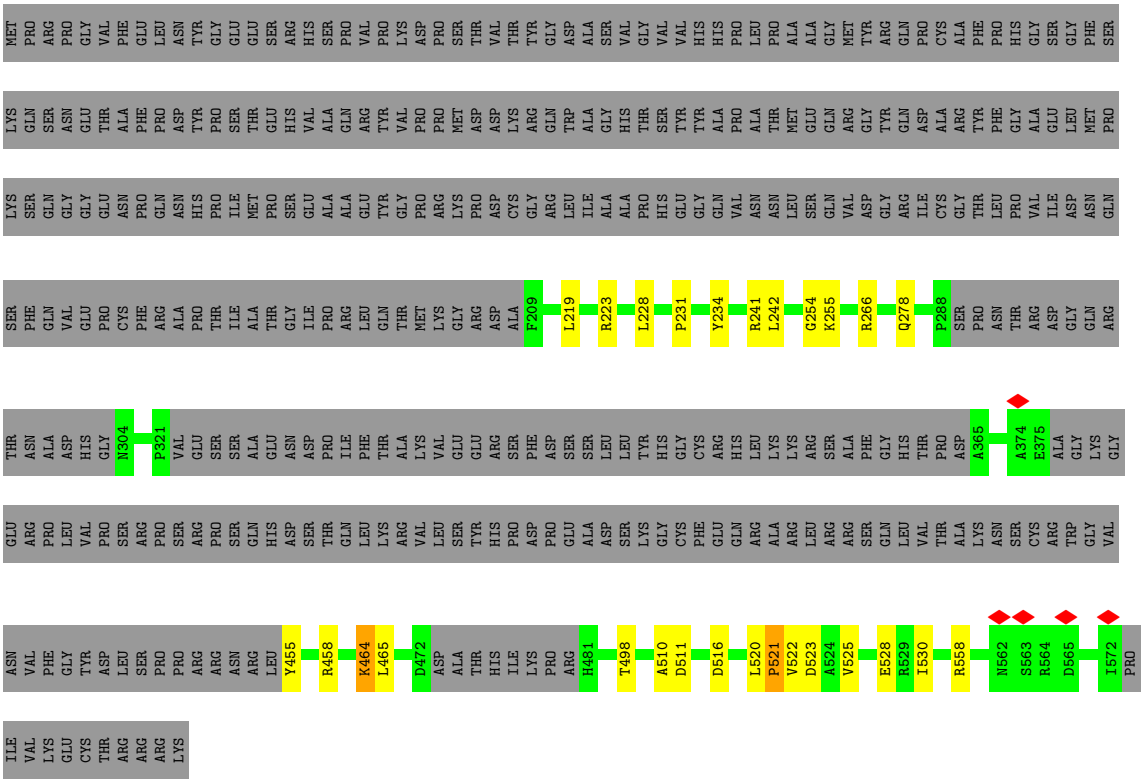
• Molecule 4: ICMAP2, TGME49_224700

Chain W:



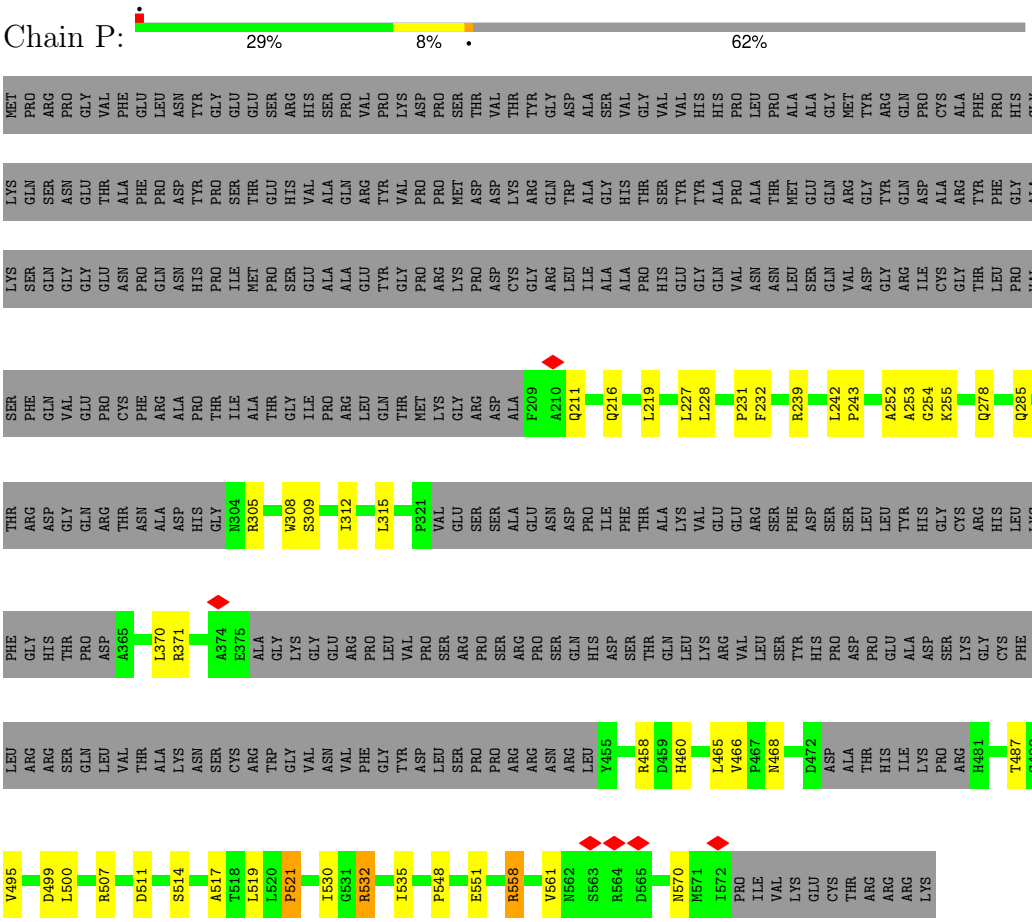
• Molecule 5: TLAP3 (apical cap protein AC5), TGME49_235380

Chain O:



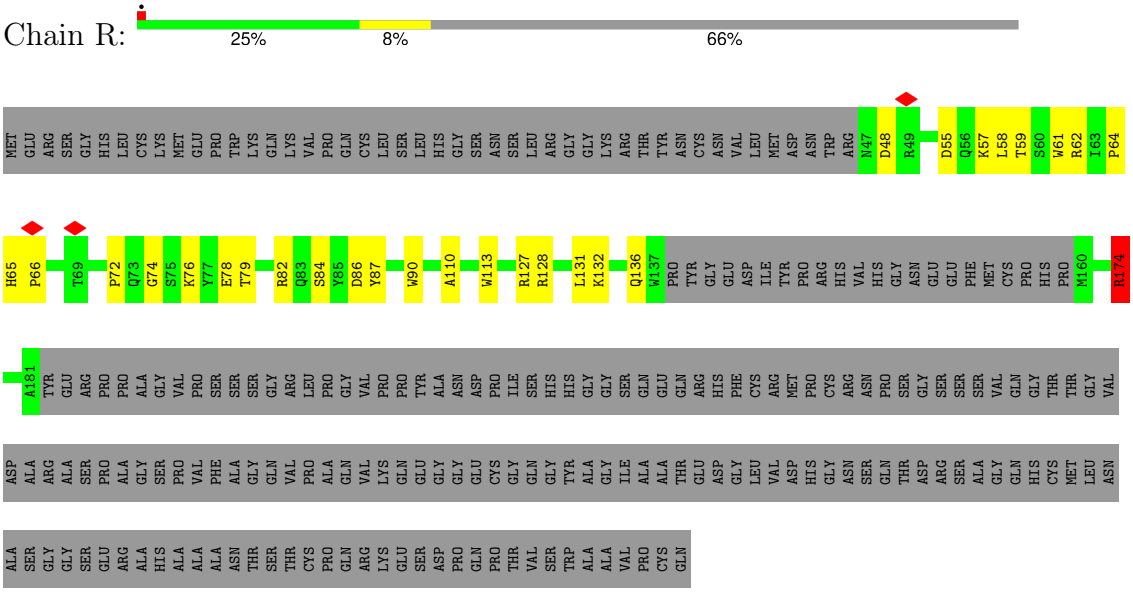
• Molecule 5: TLAP3 (apical cap protein AC5), TGME49_235380

Chain P:



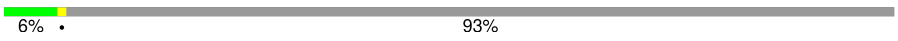
• Molecule 6: TLAP4 (thioredoxin-like associated protein), TGME49_201760

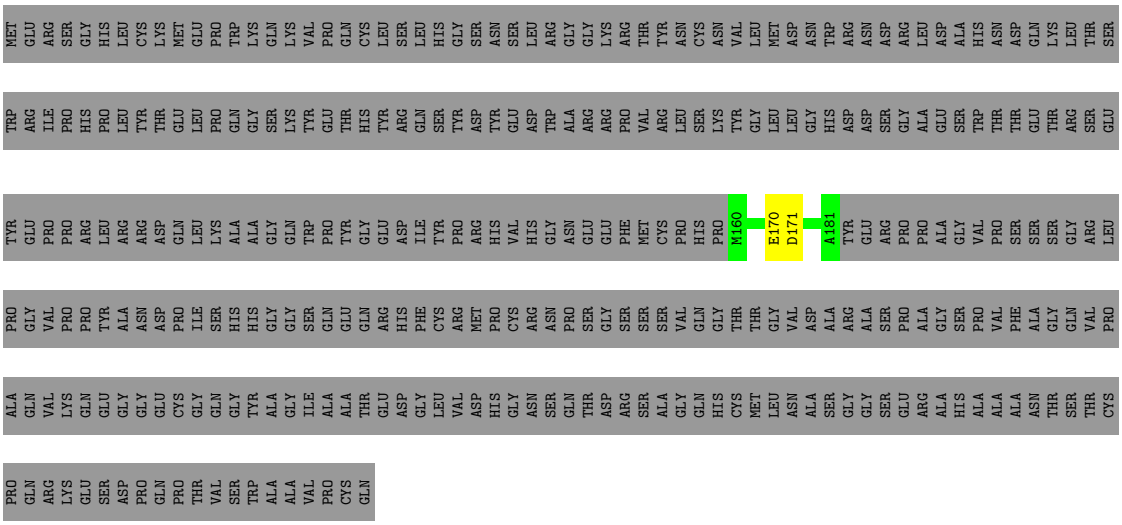
Chain R:



• Molecule 6: TLAP4 (thioredoxin-like associated protein), TGME49_201760

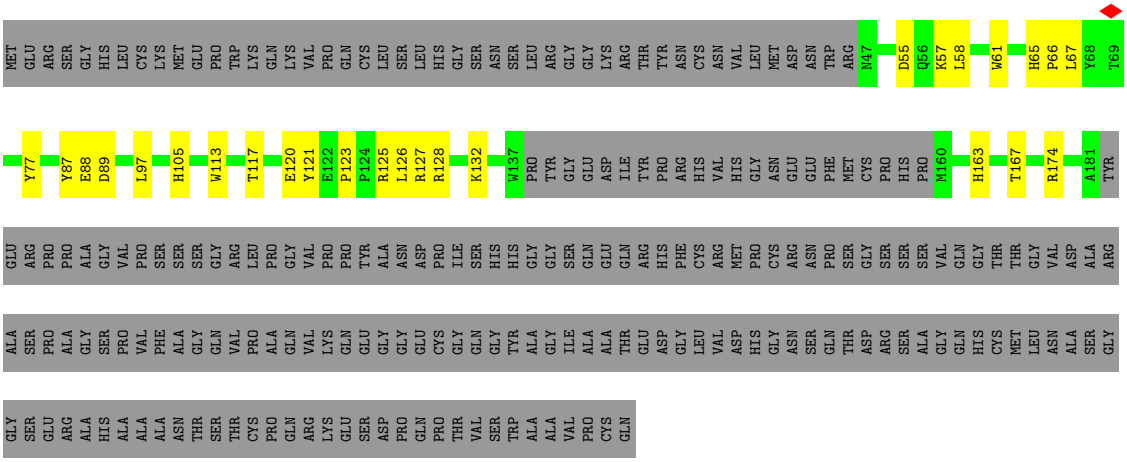
Chain S:





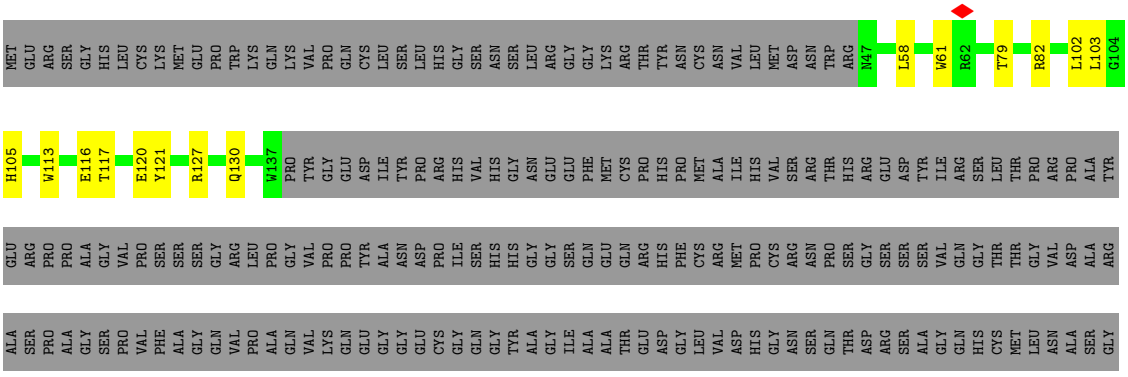
• Molecule 6: TLAP4 (thioredoxin-like associated protein), TGME49_201760

Chain T:



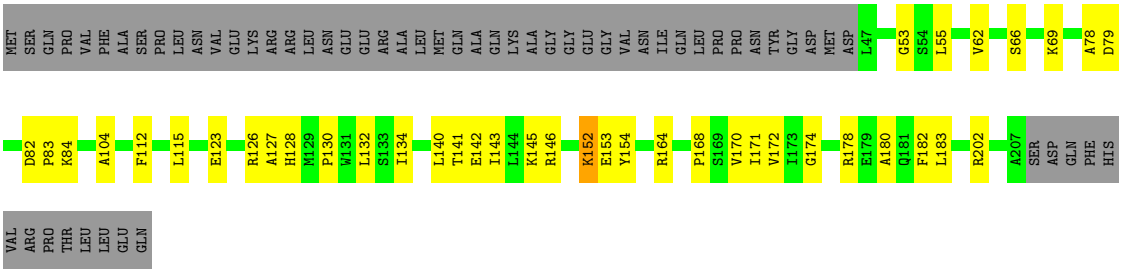
• Molecule 6: TLAP4 (thioredoxin-like associated protein), TGME49_201760

Chain U:



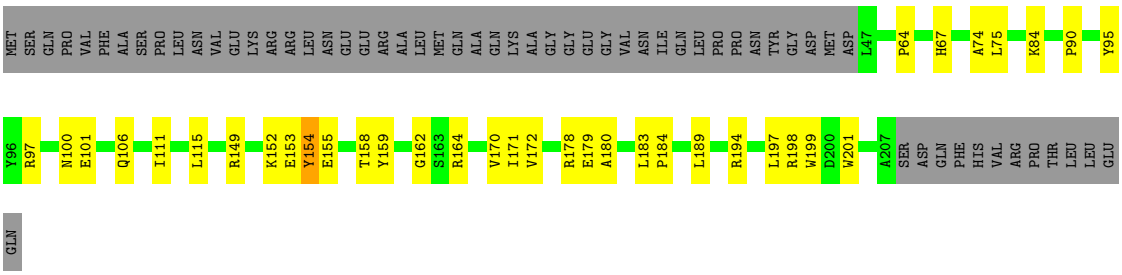
• Molecule 7: TRXL1, TGME49_232410

Chain a:



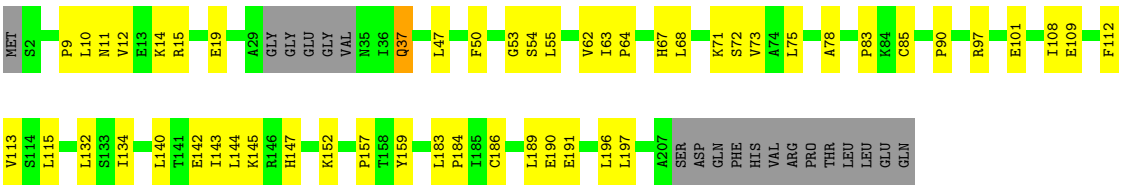
• Molecule 7: TRXL1, TGME49_232410

Chain b:



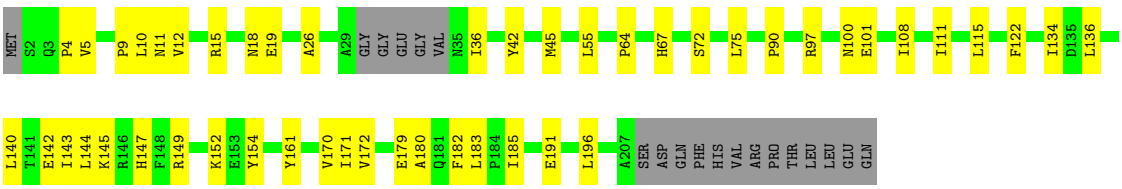
• Molecule 7: TRXL1, TGME49_232410

Chain c:



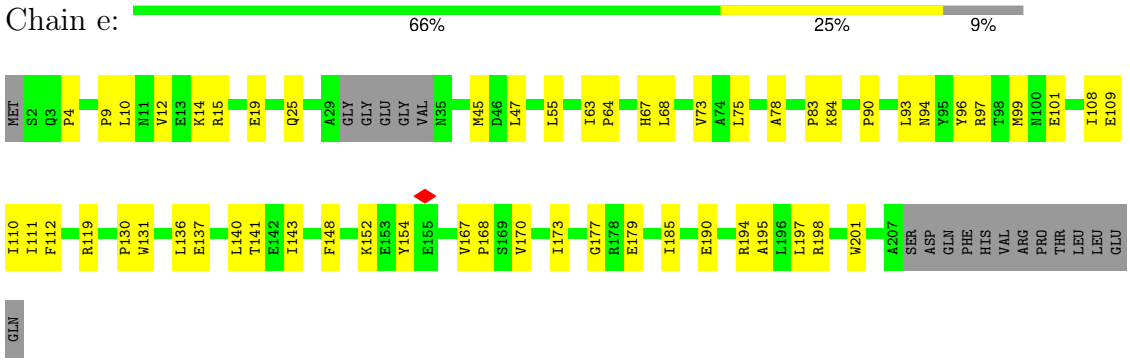
• Molecule 7: TRXL1, TGME49_232410

Chain d:



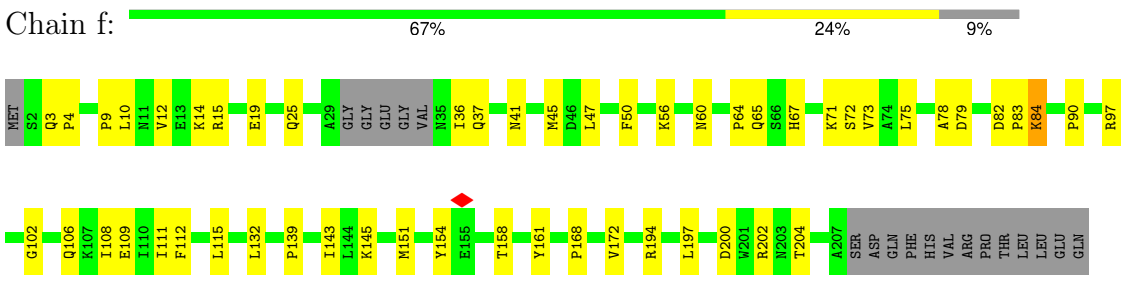
• Molecule 7: TRXL1, TGME49_232410

Chain e:



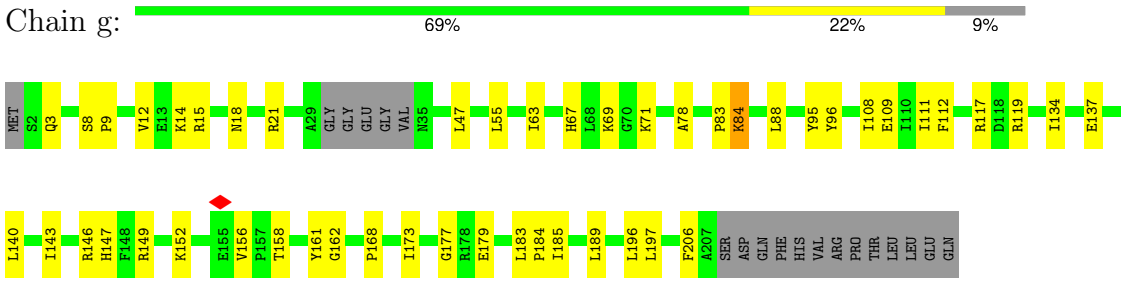
• Molecule 7: TRXL1, TGME49_232410

Chain f:



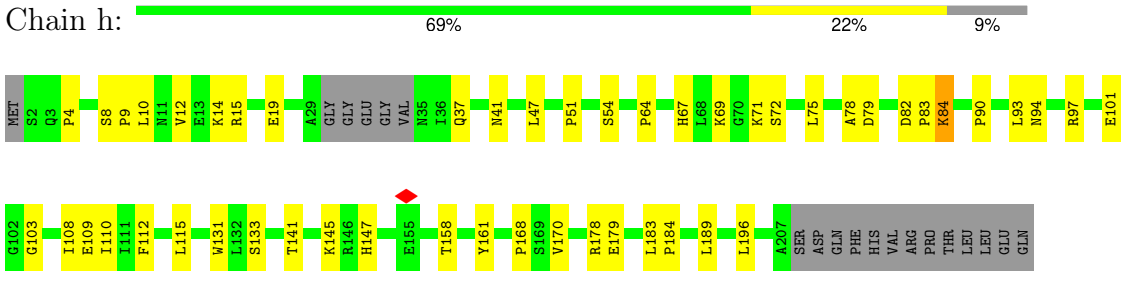
• Molecule 7: TRXL1, TGME49_232410

Chain g:



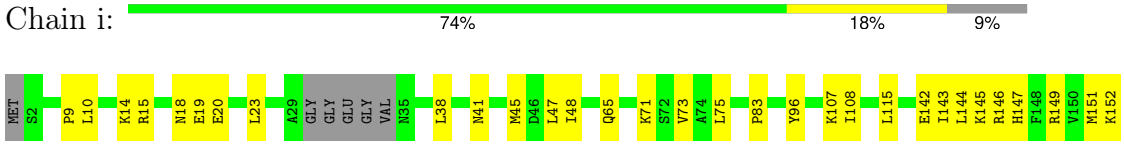
• Molecule 7: TRXL1, TGME49_232410

Chain h:



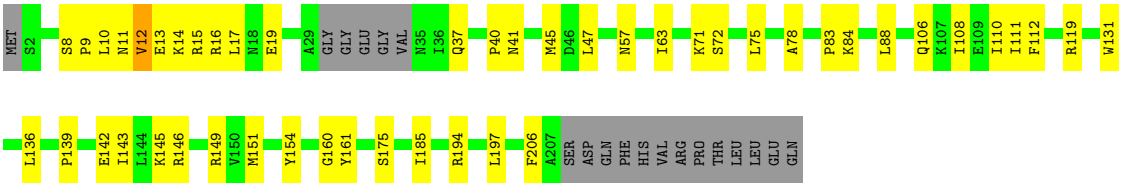
• Molecule 7: TRXL1, TGME49_232410

Chain i:



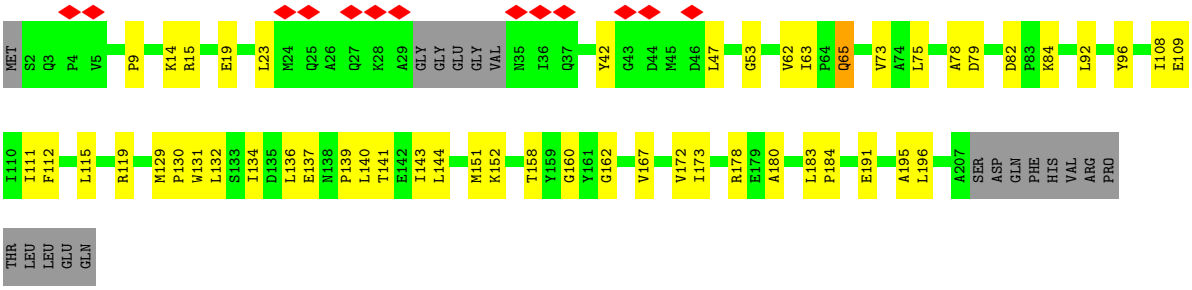
• Molecule 7: TRXL1, TGME49_232410

Chain j:



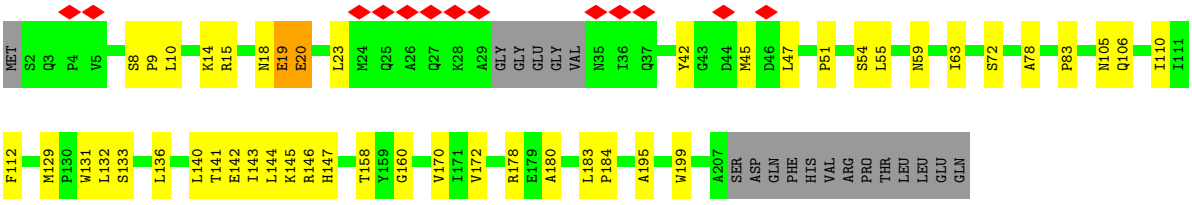
• Molecule 7: TRXL1, TGME49_232410

Chain m:



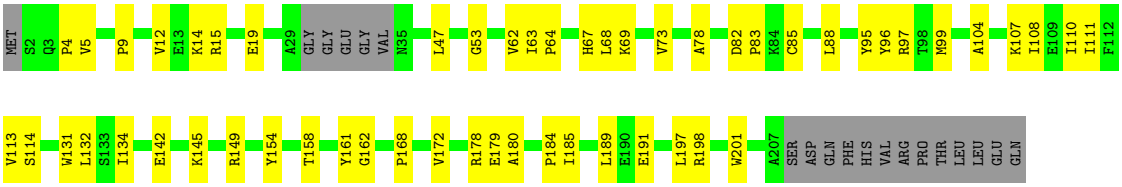
• Molecule 7: TRXL1, TGME49_232410

Chain n:



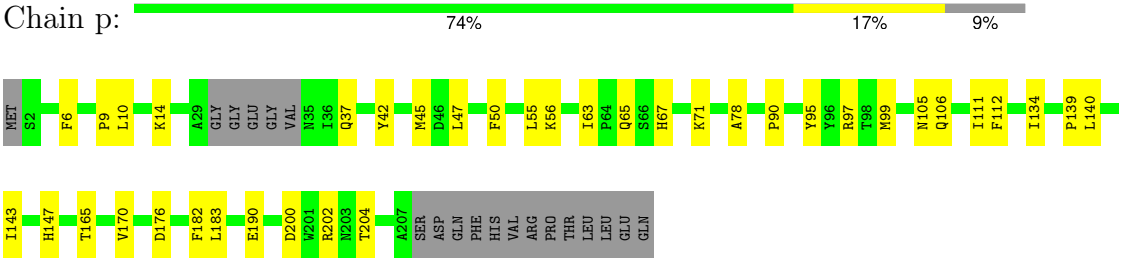
• Molecule 7: TRXL1, TGME49_232410

Chain o:



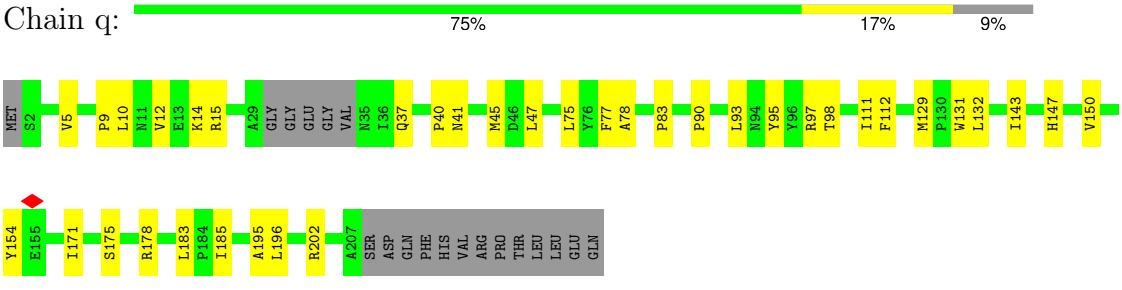
• Molecule 7: TRXL1, TGME49_232410

Chain p:



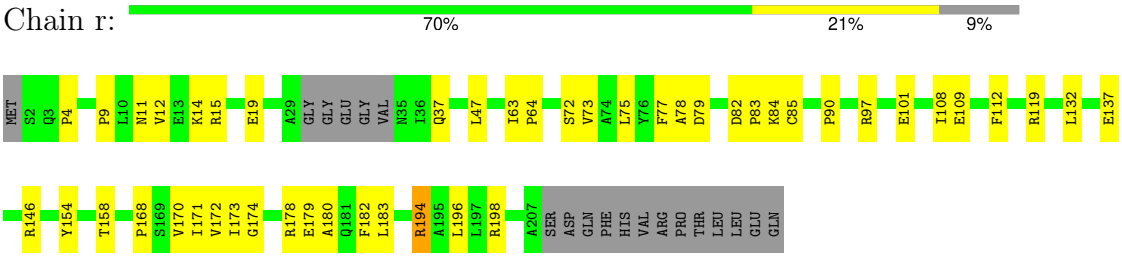
• Molecule 7: TRXL1, TGME49_232410

Chain q:



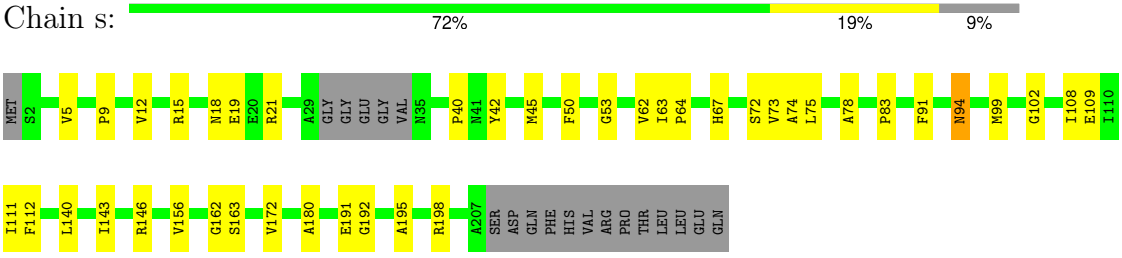
• Molecule 7: TRXL1, TGME49_232410

Chain r:



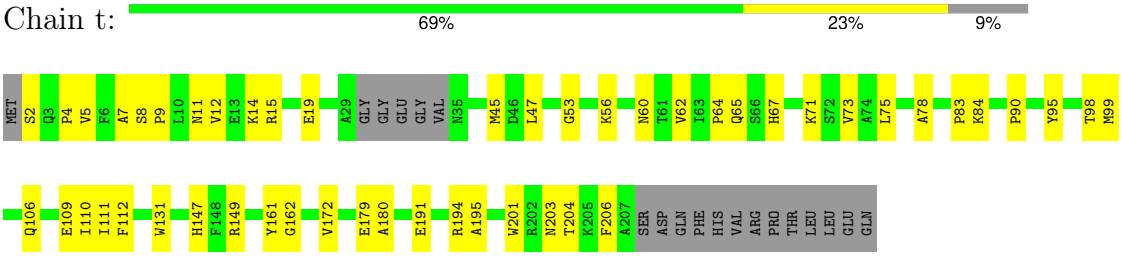
• Molecule 7: TRXL1, TGME49_232410

Chain s:



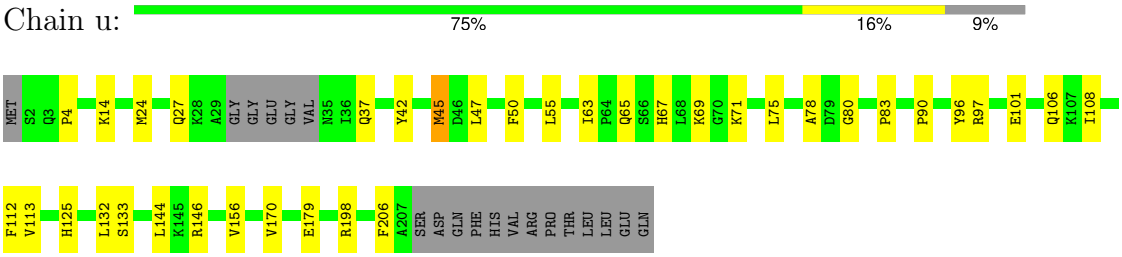
• Molecule 7: TRXL1, TGME49_232410

Chain t:



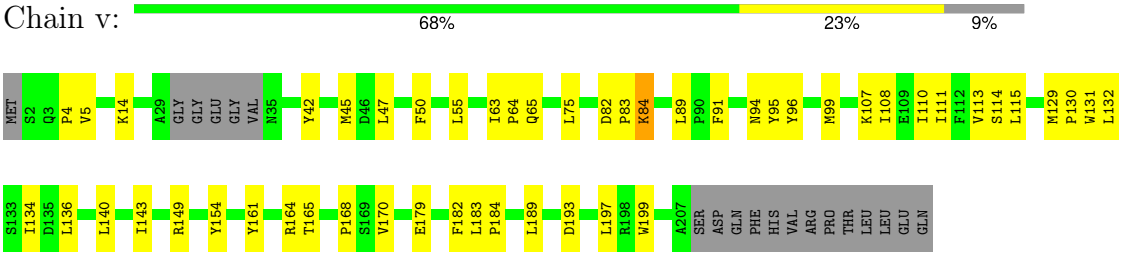
• Molecule 7: TRXL1, TGME49_232410

Chain u:



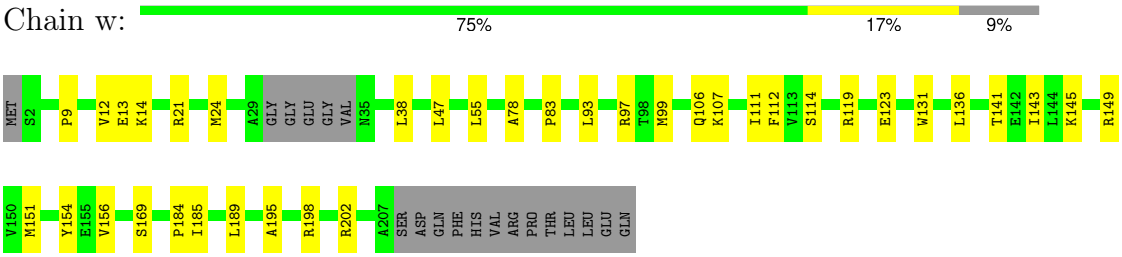
• Molecule 7: TRXL1, TGME49_232410

Chain v:



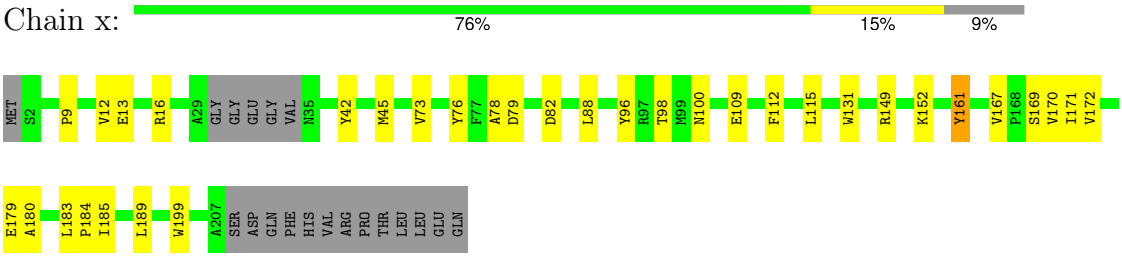
• Molecule 7: TRXL1, TGME49_232410

Chain w:



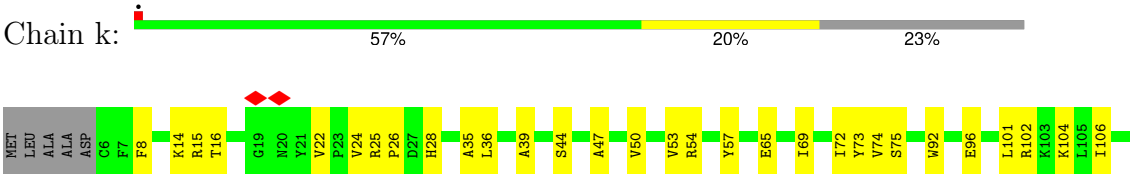
• Molecule 7: TRXL1, TGME49_232410

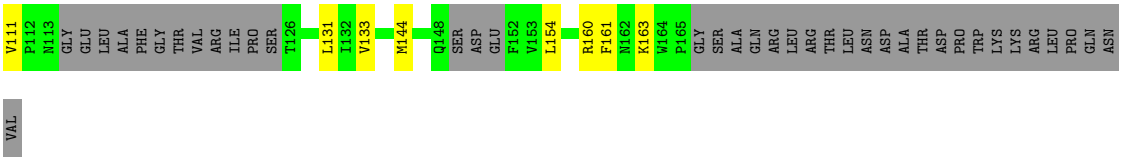
Chain x:



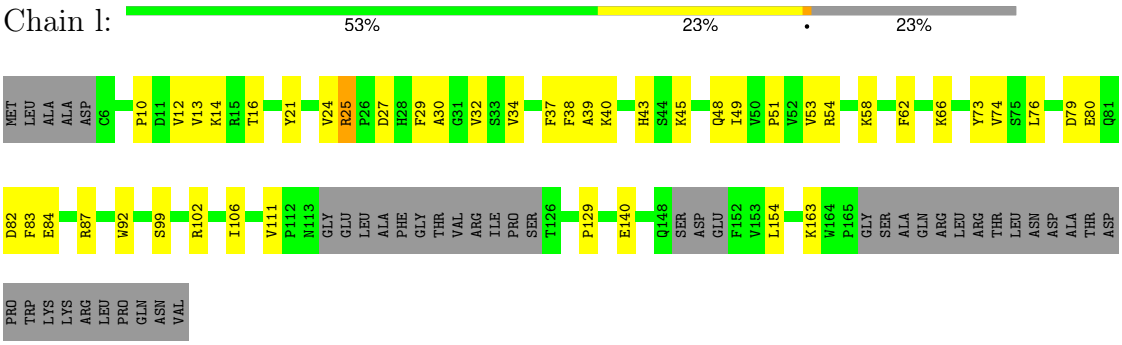
• Molecule 8: TRXL2, TGME49_225790

Chain k:





• Molecule 8: TRXL2, TGME49_225790



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	57592	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	5000	Depositor
Maximum defocus (nm)	25000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.205	Depositor
Minimum map value	-0.068	Depositor
Average map value	0.021	Depositor
Map value standard deviation	0.096	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	536.0, 536.0, 536.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.34, 1.34, 1.34	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GDP, GTP, 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	0.24	0/483	0.60	0/667
1	B	0.23	0/491	0.60	0/679
1	C	0.27	0/491	0.86	2/679 (0.3%)
1	D	0.31	0/491	0.90	1/679 (0.1%)
1	E	0.28	0/491	0.61	0/679
1	F	0.25	0/491	0.59	0/679
1	G	0.24	0/491	0.55	0/679
1	H	0.29	0/491	0.65	0/679
1	I	0.29	0/491	0.67	0/679
1	J	0.24	0/491	0.60	0/679
1	K	0.24	0/491	0.60	0/679
2	A0	0.25	0/3398	0.61	4/4606 (0.1%)
2	A2	0.26	0/3398	0.64	0/4606
2	A4	0.26	0/3398	0.66	0/4606
2	A6	0.26	0/3398	0.64	2/4606 (0.0%)
2	A8	0.24	0/3398	0.53	0/4606
2	B0	0.22	0/3398	0.54	0/4606
2	B2	0.23	0/3398	0.52	1/4606 (0.0%)
2	B4	0.22	0/3398	0.52	0/4606
2	B6	0.23	0/3398	0.51	0/4606
2	B8	0.27	1/3398 (0.0%)	0.54	1/4606 (0.0%)
2	C0	0.22	0/3398	0.57	0/4606
2	C2	0.26	0/3398	0.63	2/4606 (0.0%)
2	C4	0.24	0/3398	0.66	1/4606 (0.0%)
2	C6	0.26	0/3398	0.63	2/4606 (0.0%)
2	C8	0.25	0/3398	0.58	0/4606
2	D0	0.26	0/3398	0.60	1/4606 (0.0%)
2	D2	0.25	0/3398	0.58	0/4606
2	D4	0.27	0/3398	0.62	0/4606
2	D6	0.26	0/3398	0.58	0/4606
2	D8	0.27	0/3398	0.61	0/4606
2	E0	0.22	0/3398	0.54	0/4606

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
2	E2	0.25	0/3398	0.61	0/4606
2	E4	0.23	0/3398	0.60	1/4606 (0.0%)
2	E6	0.24	0/3398	0.61	2/4606 (0.0%)
2	E8	0.24	0/3398	0.59	3/4606 (0.1%)
2	F0	0.25	0/3398	0.59	1/4606 (0.0%)
3	A1	0.27	0/3404	0.70	5/4606 (0.1%)
3	A3	0.24	0/3404	0.62	1/4606 (0.0%)
3	A5	0.25	0/3404	0.65	4/4606 (0.1%)
3	A7	0.21	0/3404	0.54	2/4606 (0.0%)
3	A9	0.23	0/3404	0.56	0/4606
3	B1	0.23	0/3404	0.59	0/4606
3	B3	0.25	0/3404	0.62	4/4606 (0.1%)
3	B5	0.26	0/3404	0.63	0/4606
3	B7	0.25	0/3404	0.60	0/4606
3	B9	0.23	0/3404	0.59	0/4606
3	C1	0.27	0/3404	0.68	0/4606
3	C3	0.24	0/3404	0.63	1/4606 (0.0%)
3	C5	0.26	0/3404	0.68	2/4606 (0.0%)
3	C7	0.24	0/3404	0.63	1/4606 (0.0%)
3	C9	0.27	0/3404	0.64	0/4606
3	D1	0.25	0/3404	0.62	0/4606
3	D3	0.26	0/3404	0.62	5/4606 (0.1%)
3	D5	0.24	0/3404	0.61	3/4606 (0.1%)
3	D7	0.24	0/3404	0.60	1/4606 (0.0%)
3	D9	0.26	0/3404	0.64	2/4606 (0.0%)
3	E1	0.26	0/3404	0.64	1/4606 (0.0%)
3	E3	0.24	0/3404	0.58	0/4606
3	E5	0.26	1/3404 (0.0%)	0.60	0/4606
3	E7	0.26	0/3404	0.63	1/4606 (0.0%)
3	E9	0.24	0/3404	0.63	4/4606 (0.1%)
3	F1	0.25	0/3404	0.69	2/4606 (0.0%)
4	L	0.23	0/1364	0.68	0/1841
4	M	0.23	0/1364	0.68	0/1841
4	N	0.22	0/1364	0.64	0/1841
4	Q	0.24	0/1364	0.69	0/1841
4	V	0.27	0/1364	0.67	0/1841
4	W	0.23	0/1364	0.66	0/1841
5	O	0.28	0/1768	0.81	5/2392 (0.2%)
5	P	0.30	0/1768	0.82	0/2392
6	R	0.32	0/982	0.78	1/1332 (0.1%)
6	S	0.26	0/186	0.67	0/251
6	T	0.31	0/982	0.79	0/1332
6	U	0.27	0/796	0.67	0/1081

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
7	a	0.30	0/1321	0.79	2/1788 (0.1%)
7	b	0.28	0/1321	0.71	1/1788 (0.1%)
7	c	0.27	0/1645	0.69	2/2225 (0.1%)
7	d	0.26	0/1645	0.63	1/2225 (0.0%)
7	e	0.26	0/1645	0.61	0/2225
7	f	0.29	0/1645	0.71	1/2225 (0.0%)
7	g	0.32	0/1645	0.63	1/2225 (0.0%)
7	h	0.28	0/1645	0.66	1/2225 (0.0%)
7	i	0.27	0/1645	0.68	2/2225 (0.1%)
7	j	0.28	0/1645	0.71	4/2225 (0.2%)
7	m	0.26	0/1645	0.64	1/2225 (0.0%)
7	n	0.28	0/1645	0.70	4/2225 (0.2%)
7	o	0.26	0/1645	0.60	0/2225
7	p	0.29	0/1645	0.65	0/2225
7	q	0.25	0/1645	0.56	0/2225
7	r	0.27	0/1645	0.64	1/2225 (0.0%)
7	s	0.27	0/1645	0.65	2/2225 (0.1%)
7	t	0.26	0/1645	0.62	1/2225 (0.0%)
7	u	0.28	0/1645	0.69	1/2225 (0.0%)
7	v	0.27	0/1645	0.63	1/2225 (0.0%)
7	w	0.24	0/1645	0.61	0/2225
7	x	0.27	0/1645	0.63	0/2225
8	k	0.26	0/1218	0.64	0/1646
8	l	0.33	0/1218	0.88	0/1646
All	All	0.25	2/234889 (0.0%)	0.63	95/318163 (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	D	0	2
2	A2	0	1
2	A6	0	1
2	B0	0	1
2	C0	0	1
2	C4	0	2
2	C8	0	1
2	D2	0	1
2	D4	0	2
2	D6	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	D8	0	1
2	E4	0	2
2	E6	0	1
2	E8	0	2
3	A1	0	2
3	A3	0	1
3	A5	0	1
3	B3	0	1
3	C1	0	1
3	C5	0	2
3	C7	0	1
3	C9	0	1
3	D1	0	1
3	D3	0	1
3	D5	0	2
3	D7	0	2
3	D9	0	1
3	E1	0	1
3	E3	0	1
3	E5	0	3
3	E7	0	2
3	E9	0	1
3	F1	0	2
4	L	0	1
4	M	0	1
4	N	0	1
4	Q	0	1
4	V	0	1
4	W	0	1
5	P	0	3
6	R	0	2
6	T	0	1
7	a	0	1
7	b	0	1
7	p	0	1
7	x	0	1
8	l	0	2
All	All	0	64

All (2) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B8	35	GLN	C-N	5.96	1.42	1.33
3	E5	241	ARG	C-N	-5.21	1.26	1.33

All (95) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	253	ALA	CA-C-N	9.24	154.31	121.59
1	C	253	ALA	C-N-CA	9.24	154.31	121.59
3	B3	349	MET	CB-CG-SD	-9.05	85.56	112.70
5	O	498	THR	CA-C-N	8.80	138.34	121.54
5	O	498	THR	C-N-CA	8.80	138.34	121.54
6	R	174	ARG	CG-CD-NE	-8.51	93.28	112.00
3	D3	270	PHE	CA-C-N	-7.97	114.96	122.37
3	D3	270	PHE	C-N-CA	-7.97	114.96	122.37
3	C3	360	GLY	N-CA-C	-7.47	105.58	113.58
3	D3	271	ALA	N-CA-C	6.95	118.76	108.76
2	D0	141	VAL	N-CA-C	-6.91	106.76	113.53
7	i	192	GLY	CA-C-N	6.79	133.20	122.61
7	i	192	GLY	C-N-CA	6.79	133.20	122.61
3	A1	270	PHE	CA-C-N	-6.74	115.41	122.28
3	A1	270	PHE	C-N-CA	-6.74	115.41	122.28
2	C4	182	VAL	N-CA-C	-6.56	106.12	112.29
3	F1	285	SER	CA-C-N	6.55	124.36	120.24
3	F1	285	SER	C-N-CA	6.55	124.36	120.24
7	n	19	GLU	CB-CA-C	6.54	120.69	109.24
2	C2	182	VAL	CA-C-N	6.42	129.06	120.58
2	C2	182	VAL	C-N-CA	6.42	129.06	120.58
3	A1	285	SER	CA-C-N	6.41	124.28	120.24
3	A1	285	SER	C-N-CA	6.41	124.28	120.24
3	A5	30	ILE	CA-C-N	6.41	130.41	120.68
3	A5	30	ILE	C-N-CA	6.41	130.41	120.68
3	D5	270	PHE	CA-C-N	-6.36	115.79	122.28
3	D5	270	PHE	C-N-CA	-6.36	115.79	122.28
5	O	464	LYS	CA-CB-CG	6.34	126.77	114.10
7	v	84	LYS	CA-CB-CG	6.17	126.43	114.10
3	C5	285	SER	CA-C-N	6.16	124.12	120.24
3	C5	285	SER	C-N-CA	6.16	124.12	120.24
7	j	12	VAL	CA-C-N	-6.15	110.83	121.66
7	j	12	VAL	C-N-CA	-6.15	110.83	121.66
7	j	84	LYS	CA-CB-CG	6.09	126.29	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A0	50	ASN	CA-C-N	6.01	137.09	126.45
2	A0	50	ASN	C-N-CA	6.01	137.09	126.45
7	h	84	LYS	CA-CB-CG	6.00	126.11	114.10
2	E4	413	MET	CB-CG-SD	-5.88	95.07	112.70
3	D9	270	PHE	CA-C-N	-5.77	115.77	122.00
3	D9	270	PHE	C-N-CA	-5.77	115.77	122.00
3	E9	107	THR	CA-C-N	5.77	132.56	121.54
3	E9	107	THR	C-N-CA	5.77	132.56	121.54
7	u	45	MET	CB-CG-SD	5.73	129.89	112.70
3	A1	271	ALA	N-CA-C	5.72	119.60	110.73
3	D5	271	ALA	N-CA-C	5.71	119.58	110.73
7	g	84	LYS	CA-CB-CG	5.69	125.47	114.10
2	B8	221	ARG	CB-CG-CD	5.67	124.33	111.30
2	E6	159	VAL	N-CA-C	-5.52	108.12	113.53
7	c	191	GLU	CA-CB-CG	5.51	125.12	114.10
3	B3	349	MET	CA-CB-CG	5.48	125.06	114.10
3	C7	350	LYS	CB-CG-CD	5.44	123.82	111.30
7	t	84	LYS	CA-CB-CG	5.44	124.98	114.10
2	A6	178	SER	CA-C-N	5.43	130.06	122.08
2	A6	178	SER	C-N-CA	5.43	130.06	122.08
3	B3	54	ALA	CA-C-N	5.42	131.07	122.61
3	B3	54	ALA	C-N-CA	5.42	131.07	122.61
2	B2	209	ILE	N-CA-C	-5.41	107.09	113.42
7	s	192	GLY	CA-C-N	5.39	131.84	121.54
7	s	192	GLY	C-N-CA	5.39	131.84	121.54
7	a	152	LYS	CA-C-N	5.38	131.81	121.54
7	a	152	LYS	C-N-CA	5.38	131.81	121.54
2	E8	182	VAL	CA-C-N	5.37	127.67	120.58
2	E8	182	VAL	C-N-CA	5.37	127.67	120.58
7	b	84	LYS	CA-CB-CG	5.36	124.82	114.10
7	m	84	LYS	CA-CB-CG	5.35	124.80	114.10
7	n	19	GLU	CA-CB-CG	5.33	124.76	114.10
2	A0	114	ILE	N-CA-C	-5.33	107.64	112.96
2	C6	217	LEU	CA-C-N	5.31	132.72	123.91
2	C6	217	LEU	C-N-CA	5.31	132.72	123.91
2	E8	394	LYS	CB-CG-CD	-5.29	99.14	111.30
3	E9	88	ASP	N-CA-C	-5.27	107.86	114.56
3	D3	177	ASP	CA-C-N	5.25	131.57	121.54
3	D3	177	ASP	C-N-CA	5.25	131.57	121.54
1	D	243	ALA	N-CA-C	-5.23	101.77	109.62
7	n	20	GLU	N-CA-CB	5.21	117.77	110.12
7	c	19	GLU	N-CA-CB	5.20	118.88	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	n	19	GLU	N-CA-CB	-5.20	102.88	110.47
3	E1	276	ARG	CB-CG-CD	-5.18	99.38	111.30
3	D7	392	LYS	CB-CG-CD	5.17	123.20	111.30
7	d	191	GLU	CA-CB-CG	5.15	124.40	114.10
2	F0	413	MET	CB-CG-SD	5.14	128.13	112.70
3	E7	56	GLY	N-CA-C	-5.12	107.92	114.37
3	E9	108	GLU	CA-CB-CG	5.12	124.34	114.10
7	f	84	LYS	CA-CB-CG	5.11	124.32	114.10
3	A7	54	ALA	CA-C-N	5.10	130.57	122.61
3	A7	54	ALA	C-N-CA	5.10	130.57	122.61
2	E6	256	GLN	CA-CB-CG	5.09	124.28	114.10
7	r	194	ARG	CA-CB-CG	5.06	124.22	114.10
5	O	510	ALA	CA-C-N	5.04	131.17	121.54
5	O	510	ALA	C-N-CA	5.04	131.17	121.54
7	j	13	GLU	CA-CB-CG	5.04	124.17	114.10
3	A3	200	GLN	CA-CB-CG	5.02	124.14	114.10
2	A0	415	GLU	CA-CB-CG	5.00	124.11	114.10
3	A5	54	ALA	CA-C-N	5.00	131.09	121.54
3	A5	54	ALA	C-N-CA	5.00	131.09	121.54

There are no chirality outliers.

All (64) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A1	137	HIS	Peptide
3	A1	271	ALA	Peptide
2	A2	373	ARG	Sidechain
3	A3	200	GLN	Peptide
3	A5	271	ALA	Peptide
2	A6	99	ALA	Peptide
2	B0	284	GLU	Peptide
3	B3	348	ASN	Peptide
2	C0	273	ALA	Peptide
3	C1	271	ALA	Peptide
2	C4	273	ALA	Peptide
2	C4	304	LYS	Peptide
3	C5	107	THR	Peptide
3	C5	137	HIS	Peptide
3	C7	271	ALA	Peptide
2	C8	279	GLU	Peptide
3	C9	271	ALA	Peptide
1	D	217	THR	Peptide

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Mol	Chain	Res	Type	Group
1	D	242	ASN	Peptide
3	D1	271	ALA	Peptide
2	D2	109	THR	Peptide
3	D3	271	ALA	Peptide
2	D4	109	THR	Peptide
2	D4	273	ALA	Peptide
3	D5	107	THR	Peptide
3	D5	271	ALA	Peptide
2	D6	273	ALA	Peptide
3	D7	271	ALA	Peptide
3	D7	294	PHE	Peptide
2	D8	273	ALA	Peptide
3	D9	271	ALA	Peptide
3	E1	271	ALA	Peptide
3	E3	271	ALA	Peptide
2	E4	156	ARG	Sidechain
2	E4	273	ALA	Peptide
3	E5	137	HIS	Peptide
3	E5	271	ALA	Peptide
3	E5	424	GLN	Peptide
2	E6	273	ALA	Peptide
3	E7	271	ALA	Peptide
3	E7	380	ARG	Sidechain
2	E8	262	TYR	Peptide
2	E8	273	ALA	Peptide
3	E9	271	ALA	Peptide
3	F1	260	PHE	Peptide
3	F1	271	ALA	Peptide
4	L	1241	PHE	Peptide
4	M	1241	PHE	Peptide
4	N	1241	PHE	Peptide
5	P	468	ASN	Peptide
5	P	532	ARG	Sidechain
5	P	558	ARG	Sidechain
4	Q	1241	PHE	Peptide
6	R	174	ARG	Peptide
6	R	87	TYR	Peptide
6	T	87	TYR	Peptide
4	V	1241	PHE	Peptide
4	W	1241	PHE	Peptide
7	a	128	HIS	Peptide
7	b	154	TYR	Peptide

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Mol	Chain	Res	Type	Group
8	l	25	ARG	Sidechain
8	l	66	LYS	Peptide
7	p	97	ARG	Sidechain
7	x	161	TYR	Peptide

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	464	0	469	10	0
1	B	471	0	476	4	0
1	C	471	0	475	12	0
1	D	471	0	476	19	0
1	E	471	0	476	9	0
1	F	471	0	476	7	0
1	G	471	0	476	10	0
1	H	471	0	476	9	0
1	I	471	0	476	13	0
1	J	471	0	476	12	0
1	K	471	0	476	5	0
2	A0	3325	0	3252	58	0
2	A2	3325	0	3252	66	0
2	A4	3325	0	3252	68	0
2	A6	3325	0	3252	45	0
2	A8	3325	0	3251	49	0
2	B0	3325	0	3252	61	0
2	B2	3325	0	3252	40	0
2	B4	3325	0	3252	46	0
2	B6	3325	0	3252	36	0
2	B8	3325	0	3251	59	0
2	C0	3325	0	3252	53	0
2	C2	3325	0	3252	54	0
2	C4	3325	0	3252	52	0
2	C6	3325	0	3252	64	0
2	C8	3325	0	3252	61	0
2	D0	3325	0	3252	54	0
2	D2	3325	0	3252	40	0
2	D4	3325	0	3252	53	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D6	3325	0	3252	63	0
2	D8	3325	0	3252	66	0
2	E0	3325	0	3252	42	0
2	E2	3325	0	3252	42	0
2	E4	3325	0	3252	35	0
2	E6	3325	0	3252	47	0
2	E8	3325	0	3252	43	0
2	F0	3325	0	3252	52	0
3	A1	3331	0	3207	77	0
3	A3	3331	0	3209	74	0
3	A5	3331	0	3207	59	0
3	A7	3331	0	3207	37	0
3	A9	3331	0	3207	55	0
3	B1	3331	0	3209	65	0
3	B3	3331	0	3207	55	0
3	B5	3331	0	3207	75	0
3	B7	3331	0	3209	53	0
3	B9	3331	0	3209	40	0
3	C1	3331	0	3209	60	0
3	C3	3331	0	3207	52	0
3	C5	3331	0	3209	73	0
3	C7	3331	0	3209	58	0
3	C9	3331	0	3209	73	0
3	D1	3331	0	3209	54	0
3	D3	3331	0	3207	65	0
3	D5	3331	0	3207	33	0
3	D7	3331	0	3207	57	0
3	D9	3331	0	3207	39	0
3	E1	3331	0	3207	53	0
3	E3	3331	0	3209	59	0
3	E5	3331	0	3207	59	0
3	E7	3331	0	3207	57	0
3	E9	3331	0	3206	70	0
3	F1	3331	0	3207	63	0
4	L	1334	0	1345	15	0
4	M	1334	0	1345	17	0
4	N	1334	0	1345	11	0
4	Q	1334	0	1345	15	0
4	V	1334	0	1345	17	0
4	W	1334	0	1345	18	0
5	O	1736	0	1725	22	0
5	P	1736	0	1725	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	R	954	0	899	23	0
6	S	182	0	183	1	0
6	T	954	0	899	21	0
6	U	772	0	716	14	0
7	a	1289	0	1274	29	0
7	b	1289	0	1274	31	0
7	c	1608	0	1590	36	0
7	d	1608	0	1590	35	0
7	e	1608	0	1590	42	0
7	f	1608	0	1590	39	0
7	g	1608	0	1590	32	0
7	h	1608	0	1590	40	0
7	i	1608	0	1590	26	0
7	j	1608	0	1590	29	0
7	m	1608	0	1590	35	0
7	n	1608	0	1590	35	0
7	o	1608	0	1590	38	0
7	p	1608	0	1590	28	0
7	q	1608	0	1590	27	0
7	r	1608	0	1590	32	0
7	s	1608	0	1590	31	0
7	t	1608	0	1590	31	0
7	u	1608	0	1590	26	0
7	v	1608	0	1590	34	0
7	w	1608	0	1590	26	0
7	x	1608	0	1590	20	0
8	k	1187	0	1180	26	0
8	l	1187	0	1180	29	0
9	A0	32	0	12	0	0
9	A2	32	0	12	0	0
9	A4	32	0	12	0	0
9	A6	32	0	12	0	0
9	A8	32	0	12	0	0
9	B0	32	0	12	0	0
9	B2	32	0	12	0	0
9	B4	32	0	12	0	0
9	B6	32	0	12	0	0
9	B8	32	0	12	0	0
9	C0	32	0	12	0	0
9	C3	32	0	12	0	0
9	C4	32	0	12	0	0
9	C6	32	0	12	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	C8	32	0	12	0	0
9	D0	32	0	12	0	0
9	D2	32	0	12	0	0
9	D4	32	0	12	0	0
9	D6	32	0	12	0	0
9	D8	32	0	12	0	0
9	E0	32	0	12	0	0
9	E2	32	0	12	0	0
9	E4	32	0	12	1	0
9	E6	32	0	12	0	0
9	E8	32	0	12	0	0
9	F0	32	0	12	0	0
10	A0	1	0	0	0	0
10	A2	1	0	0	0	0
10	A5	1	0	0	0	0
10	A7	1	0	0	0	0
10	A8	1	0	0	0	0
10	B0	1	0	0	0	0
10	B2	1	0	0	0	0
10	B4	1	0	0	0	0
10	B6	1	0	0	0	0
10	B8	1	0	0	0	0
10	C0	1	0	0	0	0
10	C2	1	0	0	0	0
10	C4	1	0	0	0	0
10	C6	1	0	0	0	0
10	C8	1	0	0	0	0
10	D0	1	0	0	0	0
10	D2	1	0	0	0	0
10	D4	1	0	0	0	0
10	D6	1	0	0	0	0
10	D8	1	0	0	0	0
10	E1	1	0	0	0	0
10	E2	1	0	0	0	0
10	E4	1	0	0	0	0
10	E6	1	0	0	0	0
10	E9	1	0	0	0	0
10	F0	1	0	0	0	0
11	A1	28	0	12	1	0
11	A3	28	0	12	0	0
11	A5	28	0	12	0	0
11	A7	28	0	12	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	A9	28	0	12	0	0
11	B1	28	0	12	0	0
11	B3	28	0	12	1	0
11	B5	28	0	12	0	0
11	B7	28	0	12	0	0
11	B9	28	0	12	0	0
11	C1	28	0	12	0	0
11	C3	28	0	12	0	0
11	C5	28	0	12	0	0
11	C7	28	0	12	0	0
11	C9	28	0	12	0	0
11	D1	28	0	12	0	0
11	D3	28	0	12	0	0
11	D5	28	0	12	0	0
11	D7	28	0	12	0	0
11	D9	28	0	12	0	0
11	E1	28	0	12	0	0
11	E3	28	0	12	0	0
11	E5	28	0	12	2	0
11	E7	28	0	12	1	0
11	E9	28	0	12	0	0
11	F1	28	0	12	0	0
All	All	231266	0	224728	3480	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 8.

All (3480) 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)
3:A3:258:ILE:HD12	3:A3:264:HIS:HB3	1.57	0.86
1:D:245:SER:O	1:D:249:SER:HB3	1.77	0.84
2:B4:407:TRP:HE1	3:B5:258:ILE:HG23	1.42	0.83
3:D3:130:LEU:HB3	3:D3:162:ARG:HE	1.46	0.80
7:h:12:VAL:HG12	7:h:15:ARG:HH21	1.45	0.80
1:I:245:SER:O	1:I:249:SER:HB3	1.82	0.80
7:t:2:SER:HA	7:t:11:ASN:HD21	1.47	0.79
7:w:14:LYS:HD3	7:w:47:LEU:HD23	1.67	0.77
2:B6:268:MET:HE2	2:B6:378:ILE:HG22	1.67	0.77
2:D0:221:ARG:HH12	7:p:190:GLU:HB2	1.47	0.76
2:A4:2:ARG:HH12	5:O:266:ARG:HH12	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:f:71:LYS:HD3	7:f:109:GLU:HG2	1.66	0.76
3:C1:390:ARG:HH22	3:C1:391:ARG:HH21	1.34	0.76
2:A0:3:GLU:HA	2:A0:51:THR:HA	1.69	0.75
2:A2:212:ILE:HD12	2:A2:215:ARG:HH12	1.52	0.75
2:A6:178:SER:HB2	3:A7:347:ASN:HD22	1.51	0.75
3:D3:377:MET:HA	3:D3:380:ARG:HB2	1.67	0.75
3:C1:6:HIS:HB3	3:C1:63:ALA:HA	1.67	0.75
7:a:79:ASP:HB2	7:a:82:ASP:HB2	1.68	0.75
3:B1:8:GLN:HE22	3:B1:17:GLY:HA3	1.53	0.74
3:D3:102:ALA:HB2	3:D3:403:MET:HE2	1.67	0.74
2:D6:274:PRO:HG3	2:D6:374:ALA:HA	1.69	0.74
2:A2:133:GLN:HE22	2:A2:253:THR:HG23	1.52	0.74
4:M:1231:ALA:HB1	4:M:1235:ARG:HH12	1.52	0.74
4:Q:1398:LEU:HB2	4:Q:1401:ARG:HH21	1.53	0.74
3:E5:57:GLY:HA3	7:u:83:PRO:HB2	1.69	0.74
1:G:247:TYR:O	1:G:251:TYR:HB2	1.86	0.74
7:e:84:LYS:HB3	7:e:168:PRO:HD3	1.69	0.74
3:C5:230:SER:HA	3:C5:233:MET:HG2	1.71	0.73
2:D6:258:ASN:HD22	2:D6:352:LYS:HD3	1.53	0.73
8:l:14:LYS:HZ1	8:l:83:PHE:HZ	1.37	0.73
2:A2:133:GLN:HE21	2:A2:252:VAL:HB	1.54	0.73
7:a:115:LEU:HD21	7:a:145:LYS:HZ3	1.52	0.73
2:B8:202:VAL:HA	2:B8:268:MET:HB2	1.71	0.73
3:A7:242:PHE:HB3	3:A7:356:ILE:HD13	1.70	0.72
5:P:211:GLN:HA	5:P:216:GLN:HE22	1.55	0.72
2:D2:222:PRO:HD2	3:D3:324:LYS:HD2	1.71	0.72
7:i:14:LYS:HE3	7:i:45:MET:HG2	1.71	0.72
3:B7:35:THR:HG22	7:g:83:PRO:HG3	1.70	0.72
7:m:14:LYS:HB2	7:m:47:LEU:HD22	1.70	0.72
3:D9:375:GLN:HB2	3:D9:419:VAL:HG13	1.72	0.72
2:D4:234:VAL:HG21	2:D4:302:MET:HE1	1.72	0.71
7:n:63:ILE:HD11	7:n:132:LEU:HD21	1.71	0.71
3:B5:258:ILE:HD12	3:B5:264:HIS:HB3	1.71	0.71
3:A5:395:LEU:HD21	3:A5:408:PHE:HE2	1.55	0.71
2:B8:31:GLN:HE21	2:B8:33:ASP:HB3	1.55	0.71
3:E9:218:THR:HG23	6:T:174:ARG:HH22	1.54	0.71
7:e:94:ASN:HA	7:e:97:ARG:HE	1.56	0.71
7:c:11:ASN:HA	7:c:14:LYS:HG2	1.73	0.71
3:A5:2:ARG:HB3	3:A5:131:GLN:HB2	1.73	0.70
3:C7:2:ARG:HB3	3:C7:131:GLN:HB2	1.73	0.70
2:C0:274:PRO:HG3	2:C0:374:ALA:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B1:131:GLN:HE22	3:B1:249:ASP:HB3	1.56	0.70
3:C9:178:THR:HB	3:C9:181:GLU:HG3	1.73	0.70
3:C1:66:MET:HE1	3:C1:151:LEU:HD22	1.74	0.70
2:C4:31:GLN:HE21	2:C4:35:GLN:HB2	1.56	0.70
2:D0:3:GLU:HA	2:D0:51:THR:HA	1.73	0.70
3:E1:257:LEU:HD21	3:E1:314:SER:HB2	1.72	0.70
2:C0:258:ASN:HB3	2:C0:352:LYS:HG3	1.72	0.70
3:D7:295:ASP:H	3:D7:298:ASN:HD21	1.37	0.70
7:j:57:ASN:HD22	7:j:63:ILE:HD11	1.56	0.70
3:C1:19:LYS:HA	3:C1:22:GLU:HG3	1.74	0.70
2:A6:387:VAL:HA	2:A6:390:ARG:HH12	1.56	0.70
3:C1:6:HIS:CD2	3:C1:21:TRP:HE1	2.10	0.70
3:E9:361:LEU:HA	6:U:105:HIS:HE1	1.55	0.70
2:A6:285:GLN:HB2	2:B0:56:THR:HA	1.73	0.69
3:A5:377:MET:HA	3:A5:380:ARG:HE	1.56	0.69
2:D0:286:LEU:HB3	2:D0:291:ILE:HD11	1.75	0.69
3:B5:405:GLU:HG3	4:M:1234:TYR:HE2	1.56	0.69
2:F0:71:GLU:HB3	2:F0:98:ASP:HB2	1.73	0.69
3:C7:281:TYR:HD2	3:D1:87:PRO:HD3	1.58	0.69
3:D7:11:GLN:HG3	3:D7:72:THR:HG21	1.75	0.69
3:B5:152:ILE:HG22	3:B5:191:GLN:HE22	1.57	0.69
7:h:93:LEU:HB3	7:h:97:ARG:HH21	1.57	0.69
2:E2:76:ASP:HA	2:E2:79:ARG:HD2	1.74	0.69
3:E3:11:GLN:HG3	3:E3:72:THR:HG21	1.74	0.69
3:E9:2:ARG:HB3	3:E9:131:GLN:HB2	1.72	0.69
2:C2:316:CYS:HA	2:C2:352:LYS:HB2	1.73	0.68
2:E4:195:LEU:HD21	2:E4:264:ARG:HH21	1.58	0.68
3:F1:248:SER:HA	3:F1:252:LYS:HD2	1.76	0.68
7:p:14:LYS:HG3	7:p:47:LEU:HB3	1.74	0.68
3:D9:248:SER:HA	3:D9:252:LYS:HG3	1.76	0.68
7:x:73:VAL:HG12	7:x:109:GLU:HB3	1.74	0.68
2:F0:180:ALA:HA	3:F1:256:ASN:HD21	1.58	0.68
2:A2:121:ARG:HE	2:A2:124:LYS:HD3	1.59	0.68
2:A6:71:GLU:HB2	2:A6:98:ASP:HB3	1.73	0.68
7:e:10:LEU:HG	7:e:143:ILE:HG12	1.76	0.68
3:E5:215:LEU:HB3	3:E5:217:LEU:HD13	1.75	0.68
3:E7:135:ILE:HB	3:E7:166:THR:HG22	1.76	0.68
7:b:153:GLU:H	7:b:164:ARG:HH12	1.41	0.68
3:A3:293:MET:HA	3:A3:298:ASN:HD21	1.59	0.68
3:C9:248:SER:HA	3:C9:252:LYS:HD3	1.75	0.68
2:C6:234:VAL:HG21	2:C6:302:MET:HE1	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B6:272:TYR:HB3	2:B6:275:ILE:HD11	1.75	0.67
2:C2:70:LEU:HD12	2:C2:99:ALA:HB2	1.77	0.67
2:C6:203:MET:HE1	2:C6:267:PHE:HB3	1.75	0.67
2:E2:244:PHE:HA	5:P:558:ARG:HG3	1.76	0.67
2:E2:101:ASN:HD22	3:E3:256:ASN:HD21	1.39	0.67
2:E4:54:SER:HB3	2:E4:64:ARG:HE	1.59	0.67
2:A0:123:ARG:HH21	2:A0:124:LYS:HD2	1.60	0.67
2:B2:152:LEU:HG	2:B2:156:ARG:HH22	1.59	0.67
7:b:172:VAL:HG13	7:b:180:ALA:HB3	1.77	0.67
2:A0:288:VAL:HG21	2:A0:327:ASP:HB3	1.75	0.67
3:A3:334:GLN:HE22	3:A3:347:ASN:HA	1.58	0.67
7:r:73:VAL:HA	7:r:109:GLU:O	1.94	0.67
3:A1:211:CYS:HA	3:A1:215:LEU:HB2	1.77	0.67
3:D3:220:PRO:HD2	2:D4:326:LYS:HD3	1.77	0.67
3:D9:293:MET:HA	3:D9:298:ASN:HD22	1.59	0.67
2:F0:365:GLY:HA3	6:T:127:ARG:HH11	1.59	0.67
2:D6:292:THR:HG21	2:D6:331:ALA:HB1	1.76	0.67
7:e:14:LYS:HZ1	7:e:45:MET:HB3	1.60	0.66
2:A2:219:ILE:HG13	7:b:198:ARG:HH22	1.59	0.66
7:c:63:ILE:HD11	7:c:132:LEU:HD21	1.75	0.66
2:B0:259:LEU:HD21	2:B0:316:CYS:HB2	1.75	0.66
2:D6:105:ARG:HH21	2:D6:110:ILE:HD13	1.60	0.66
4:M:1374:ARG:HE	4:M:1377:VAL:HG23	1.61	0.66
2:E0:272:TYR:HB3	2:E0:275:ILE:HD11	1.77	0.66
3:B5:326:VAL:HG12	3:B5:330:MET:HE2	1.78	0.66
3:B7:74:ASP:HA	3:B7:77:ARG:HD3	1.77	0.66
2:C2:88:HIS:HB3	2:C2:91:GLN:HG2	1.77	0.66
3:D1:317:PHE:HB3	3:D1:321:MET:HE3	1.77	0.66
7:d:9:PRO:HB2	7:d:143:ILE:HG23	1.77	0.66
7:u:24:MET:HB2	7:u:27:GLN:HE21	1.61	0.66
7:w:112:PHE:HB2	7:w:131:TRP:HE1	1.60	0.66
3:A1:314:SER:HA	3:A1:350:LYS:HB3	1.77	0.66
3:E9:390:ARG:HE	3:E9:391:ARG:HG3	1.60	0.66
2:B6:88:HIS:HB3	2:B6:91:GLN:HG2	1.76	0.66
7:i:10:LEU:HD12	7:i:143:ILE:HG22	1.78	0.66
2:A6:223:THR:HG22	3:A7:322:SER:HA	1.76	0.66
3:D1:19:LYS:HG2	3:D1:22:GLU:HG3	1.78	0.66
3:A1:98:GLY:H	3:A1:103:LYS:HD3	1.59	0.65
3:E1:34:GLY:HA3	3:E1:58:ARG:HE	1.60	0.65
3:D7:229:VAL:HA	3:D7:300:MET:HE1	1.78	0.65
3:C7:20:PHE:HB2	3:C7:233:MET:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E6:184:PRO:HA	2:E6:391:MET:HE1	1.78	0.65
5:O:464:LYS:HD2	5:O:465:LEU:H	1.61	0.65
2:A6:57:GLY:HA2	5:P:254:GLY:H	1.62	0.65
3:B3:139:LEU:HA	3:B3:145:SER:HB3	1.79	0.65
3:B5:303:SER:HB3	3:B5:377:MET:HE3	1.76	0.65
3:C5:381:VAL:HA	3:C5:384:GLN:HE21	1.62	0.65
2:D0:271:SER:HB3	2:D0:377:MET:HB3	1.77	0.65
2:E2:188:VAL:HG23	2:E2:391:MET:HE2	1.77	0.65
1:F:212:GLU:HG3	1:F:216:ARG:HG3	1.79	0.65
8:l:45:LYS:HA	8:l:48:GLN:HG2	1.78	0.65
7:q:9:PRO:HB2	7:q:143:ILE:HG23	1.78	0.65
1:A:214:ALA:O	1:A:218:ASP:HB2	1.96	0.65
3:E1:215:LEU:HD22	5:P:570:ASN:HD21	1.61	0.65
3:B9:139:LEU:HA	3:B9:145:SER:HB3	1.77	0.65
3:A9:153:SER:HB3	3:A9:191:GLN:HE22	1.61	0.65
7:f:9:PRO:HB2	7:f:143:ILE:HG23	1.77	0.65
2:A6:208:ALA:HB2	2:A6:304:LYS:HG2	1.79	0.65
7:e:194:ARG:HH12	7:e:198:ARG:HH21	1.43	0.65
2:B4:318:MET:HB2	2:B4:376:CYS:HB3	1.78	0.65
2:B8:109:THR:HG22	2:B8:110:ILE:HG23	1.77	0.65
3:D9:309:ARG:H	3:D9:372:THR:HG22	1.62	0.65
7:p:9:PRO:HB2	7:p:143:ILE:HG23	1.78	0.65
2:D6:3:GLU:HA	2:D6:51:THR:HA	1.79	0.64
7:d:171:ILE:HD13	7:d:182:PHE:HD1	1.62	0.64
3:A3:164:MET:HB3	3:A3:197:ASP:H	1.61	0.64
3:C3:190:HIS:HB2	3:C3:414:ASN:HD21	1.62	0.64
3:D3:260:PHE:HB2	3:D3:263:LEU:HD12	1.79	0.64
3:A1:207:LEU:HB3	3:A1:225:LEU:HD22	1.79	0.64
2:C2:335:ILE:HA	2:C2:338:LYS:HZ2	1.63	0.64
2:A0:391:MET:HG3	2:A0:394:LYS:HD2	1.79	0.64
2:A4:176:GLN:HB2	3:A5:331:LEU:HD11	1.79	0.64
3:C5:139:LEU:HA	3:C5:145:SER:HB3	1.79	0.64
2:D4:274:PRO:HG2	2:D4:374:ALA:HA	1.80	0.64
3:E7:304:ASP:HB3	3:E7:307:HIS:CE1	2.33	0.64
2:C8:105:ARG:HH12	3:C9:251:ARG:HD3	1.62	0.64
3:D1:133:PHE:HB2	3:D1:164:MET:HG3	1.80	0.64
2:C2:100:ALA:HA	3:C3:252:LYS:HG3	1.79	0.64
3:E7:67:ASP:HA	3:E7:143:THR:HG21	1.78	0.64
7:d:170:VAL:HG12	7:d:185:ILE:HD11	1.80	0.64
7:h:158:THR:HB	7:h:161:TYR:HB2	1.78	0.64
7:m:112:PHE:HB2	7:m:131:TRP:HE1	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:p:14:LYS:HE2	7:p:45:MET:HG3	1.79	0.64
2:A4:194:LEU:HB3	2:A4:267:PHE:HE1	1.63	0.64
2:C0:184:PRO:HA	2:C0:391:MET:HE1	1.80	0.64
2:E4:320:ARG:HB3	2:E4:374:ALA:HB3	1.79	0.64
2:A8:407:TRP:HE1	3:A9:258:ILE:HB	1.63	0.63
3:B9:51:TYR:HB3	3:B9:59:PHE:HB3	1.79	0.63
3:C9:103:LYS:HA	3:C9:107:THR:HB	1.79	0.63
1:D:208:PRO:HB2	7:t:162:GLY:HA2	1.80	0.63
8:l:25:ARG:HD2	7:n:20:GLU:HG3	1.80	0.63
2:A0:332:VAL:HG13	2:A0:351:PHE:HD2	1.63	0.63
3:B9:35:THR:HG22	7:h:83:PRO:HG3	1.79	0.63
3:B9:325:GLU:HA	3:B9:328:GLU:HG3	1.80	0.63
3:C5:102:ALA:HB2	3:C5:403:MET:HE2	1.78	0.63
2:C8:417:GLU:HA	2:C8:420:GLU:HG2	1.80	0.63
2:A4:384:ILE:HG12	2:A4:432:TYR:CZ	2.34	0.63
3:A3:91:VAL:HG21	3:A3:116:VAL:HG12	1.80	0.63
2:B4:174:SER:HB3	2:B4:205:ASP:HB3	1.79	0.63
2:E0:76:ASP:HA	2:E0:79:ARG:HG3	1.80	0.63
2:E0:402:ARG:HH12	2:E0:415:GLU:HG3	1.63	0.63
7:h:14:LYS:HB2	7:h:47:LEU:HD12	1.81	0.63
7:o:149:ARG:HD2	7:o:161:TYR:HB3	1.81	0.63
7:r:9:PRO:HA	7:r:12:VAL:HG22	1.80	0.63
3:B9:66:MET:HB3	3:B9:147:MET:HE1	1.81	0.63
2:C6:210:TYR:HB3	3:C7:324:LYS:HZ3	1.64	0.63
2:D0:7:ILE:HD11	2:D0:122:ILE:HD11	1.80	0.63
3:D9:132:GLY:HA2	3:D9:162:ARG:HB3	1.81	0.63
2:B8:75:VAL:HG13	2:B8:92:LEU:HD12	1.81	0.63
2:C0:265:ILE:HD11	2:C0:435:VAL:HG21	1.80	0.63
2:A4:310:GLY:HA3	2:A4:383:ALA:HB2	1.81	0.63
2:E8:273:ALA:HA	2:E8:275:ILE:HG12	1.81	0.63
7:i:9:PRO:HB2	7:i:143:ILE:HG23	1.81	0.63
7:p:14:LYS:HE3	7:p:47:LEU:HD22	1.80	0.63
3:B5:150:LEU:HD23	3:B5:154:LYS:HZ2	1.64	0.62
3:C5:260:PHE:HB2	3:C5:263:LEU:HD23	1.80	0.62
1:D:256:LEU:HD12	1:D:257:PRO:HD2	1.81	0.62
2:D4:398:MET:HE3	3:D5:345:ILE:HG23	1.81	0.62
3:C1:267:LEU:HD13	3:C1:371:SER:HB3	1.81	0.62
2:E0:78:VAL:HA	1:F:247:TYR:HE2	1.65	0.62
2:B2:364:PRO:HG2	1:E:254:LYS:HE3	1.81	0.62
4:V:1285:ARG:HE	4:V:1289:ARG:HH12	1.47	0.62
7:h:9:PRO:HA	7:h:12:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:w:151:MET:HE1	7:w:156:VAL:HG12	1.80	0.62
3:A1:260:PHE:HB2	3:A1:263:LEU:HD23	1.80	0.62
3:C7:320:ARG:HH22	1:J:211:GLY:HA2	1.63	0.62
2:B0:223:THR:HG22	3:B1:322:SER:HA	1.82	0.62
3:C9:276:ARG:HD3	5:P:499:ASP:HA	1.81	0.62
3:A5:242:PHE:HB3	3:A5:356:ILE:HD13	1.80	0.62
2:B0:73:THR:HA	3:B1:46:ARG:HH21	1.64	0.62
3:B1:200:GLN:HG2	3:B1:268:ILE:HD11	1.82	0.62
2:B8:220:GLU:HG2	2:B8:221:ARG:HG2	1.82	0.62
2:C6:276:ILE:HD12	2:C6:281:ALA:HA	1.80	0.62
2:D8:414:GLU:HG2	2:D8:416:GLY:H	1.65	0.62
3:E5:166:THR:HG21	3:E5:192:LEU:HD11	1.82	0.62
2:E8:54:SER:HA	2:E8:64:ARG:HH21	1.65	0.62
2:A0:271:SER:HB2	2:A0:377:MET:HG2	1.80	0.62
2:B8:408:TYR:HB3	2:B8:413:MET:HE2	1.79	0.62
3:C1:281:TYR:HE1	3:C5:87:PRO:HD3	1.65	0.62
2:E6:273:ALA:HA	2:E6:275:ILE:HG12	1.82	0.62
7:g:88:LEU:HD11	7:g:185:ILE:HD13	1.82	0.62
7:v:5:VAL:HG21	7:v:161:TYR:HE1	1.64	0.62
2:A4:338:LYS:HE3	2:A4:340:THR:HB	1.82	0.62
3:A5:330:MET:HE2	3:A5:349:MET:HE3	1.81	0.62
3:A7:22:GLU:HB2	3:A7:81:PHE:HD2	1.63	0.62
3:B5:327:ASP:HA	3:B5:330:MET:HE3	1.82	0.62
3:C3:100:ASN:HB3	3:C3:103:LYS:HG2	1.80	0.62
4:N:1271:SER:HA	4:N:1274:MET:HE2	1.80	0.62
7:d:172:VAL:HG23	7:d:180:ALA:HB3	1.82	0.62
7:f:25:GLN:HE22	7:f:36:ILE:HG21	1.64	0.62
7:i:115:LEU:HD13	7:i:145:LYS:HE2	1.82	0.62
2:B0:338:LYS:HZ2	2:B0:340:THR:H	1.47	0.62
3:E3:337:ASN:HB2	3:E3:340:TYR:HD2	1.65	0.62
3:E7:257:LEU:HD23	3:E7:312:THR:HG23	1.81	0.62
2:A8:259:LEU:HD21	2:A8:316:CYS:HB2	1.81	0.62
2:C8:405:VAL:HG13	2:C8:418:PHE:HE2	1.65	0.62
3:D1:7:VAL:HB	3:D1:135:ILE:HG12	1.82	0.62
3:D5:313:ALA:HB3	3:D5:349:MET:HG2	1.82	0.62
2:E2:272:TYR:HB3	2:E2:275:ILE:HD11	1.82	0.62
3:E3:318:ARG:HD2	3:E3:358:PRO:HD3	1.80	0.62
2:A0:280:LYS:HZ1	2:A4:90:GLU:HG3	1.64	0.61
3:B5:101:TRP:HE1	3:B5:188:SER:HB2	1.65	0.61
3:E3:2:ARG:HB3	3:E3:131:GLN:HB2	1.82	0.61
3:E3:136:THR:HG22	3:E3:167:PHE:HB2	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F1:30:ILE:HG13	3:F1:51:TYR:HE1	1.65	0.61
3:C5:98:GLY:HA2	2:C6:254:GLU:HG2	1.82	0.61
3:C9:271:ALA:HB1	3:C9:292:GLN:HB3	1.83	0.61
3:D7:248:SER:HA	3:D7:252:LYS:HD3	1.83	0.61
7:q:90:PRO:HA	7:q:93:LEU:HD12	1.83	0.61
2:A0:200:VAL:HG11	2:A0:255:PHE:HE2	1.66	0.61
3:A3:207:LEU:HB3	3:A3:225:LEU:HG	1.82	0.61
2:A4:298:PRO:HG2	2:A4:308:ARG:HH11	1.64	0.61
3:A9:227:HIS:HD2	5:P:312:ILE:HG23	1.66	0.61
2:A0:135:PHE:HB2	2:A0:166:LYS:HG2	1.82	0.61
3:A3:308:GLY:HA3	3:A3:373:ALA:HB2	1.82	0.61
2:E0:320:ARG:HH21	2:E0:360:PRO:HA	1.66	0.61
3:E5:187:LEU:HD12	3:E5:190:HIS:HE1	1.65	0.61
3:E5:207:LEU:HB3	3:E5:225:LEU:HD11	1.83	0.61
7:b:178:ARG:HH12	7:b:180:ALA:HB2	1.65	0.61
8:l:27:ASP:HB2	8:l:30:ALA:HB3	1.83	0.61
3:A1:257:LEU:HD11	3:A1:314:SER:HB3	1.82	0.61
3:A7:318:ARG:HA	3:A7:354:CYS:HB2	1.82	0.61
3:E5:65:LEU:HB3	3:E5:73:MET:HE1	1.82	0.61
4:M:1254:ARG:HH21	4:M:1266:ALA:HB1	1.65	0.61
2:A0:210:TYR:CE2	3:A1:324:LYS:HE3	2.36	0.61
2:C2:81:GLY:HA2	1:I:216:ARG:HD3	1.81	0.61
3:E3:274:THR:HB	3:E3:282:ARG:HH11	1.66	0.61
2:E8:181:VAL:HB	3:E9:256:ASN:HB2	1.83	0.61
7:f:14:LYS:HD3	7:f:47:LEU:HB2	1.82	0.61
7:g:149:ARG:HH22	7:g:162:GLY:H	1.47	0.61
7:j:16:ARG:HE	7:j:17:LEU:HD22	1.66	0.61
8:l:45:LYS:HZ2	8:l:129:PRO:HD2	1.65	0.61
3:A3:165:GLU:HG2	3:A3:200:GLN:HE22	1.65	0.61
2:D2:84:ARG:HH21	7:o:197:LEU:HD21	1.66	0.61
3:D3:60:VAL:HG21	3:D3:86:ARG:HG3	1.81	0.61
2:E4:244:PHE:HB2	2:E4:356:ASN:HD21	1.66	0.61
2:B8:214:ARG:HE	2:B8:215:ARG:HG3	1.66	0.61
3:D9:10:GLY:HA2	3:D9:143:THR:HG23	1.83	0.61
3:E7:45:GLU:HG2	3:E7:46:ARG:HG2	1.81	0.61
3:E9:342:VAL:HG22	3:E9:344:TRP:H	1.66	0.61
2:D0:133:GLN:HB3	2:D0:252:VAL:HG11	1.83	0.60
7:i:10:LEU:HD11	7:i:144:LEU:HD12	1.81	0.60
2:D0:405:VAL:HG13	2:D0:418:PHE:HE2	1.66	0.60
3:D1:178:THR:HB	3:D1:181:GLU:HG3	1.82	0.60
2:D4:213:CYS:HA	2:D4:217:LEU:HD13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:l:106:ILE:HG13	8:l:111:VAL:HB	1.83	0.60
3:A9:311:LEU:HD23	3:A9:312:THR:HG23	1.84	0.60
2:C2:64:ARG:HG3	2:C2:125:LEU:HD21	1.82	0.60
3:C7:248:SER:HA	3:C7:252:LYS:HD3	1.82	0.60
3:E3:57:GLY:HA3	7:t:83:PRO:HB2	1.84	0.60
3:F1:276:ARG:HB3	6:T:97:LEU:HD22	1.83	0.60
2:A0:364:PRO:HB2	5:O:242:LEU:HB2	1.83	0.60
2:A8:78:VAL:HA	1:C:247:TYR:HE1	1.67	0.60
2:C4:112:LYS:HA	2:C4:115:VAL:HG12	1.82	0.60
2:C6:286:LEU:HD13	2:C6:371:VAL:HG13	1.82	0.60
2:E8:104:ALA:HB2	2:E8:413:MET:HG2	1.83	0.60
2:C6:71:GLU:HB3	2:C6:98:ASP:HB3	1.83	0.60
2:D8:239:THR:HA	2:D8:242:LEU:HD23	1.84	0.60
3:B1:187:LEU:HD13	3:B1:403:MET:HE1	1.83	0.60
2:C8:105:ARG:HE	2:C8:110:ILE:HG13	1.66	0.60
3:D1:320:ARG:HH22	1:K:217:THR:HG21	1.67	0.60
3:E7:204:ASN:HD21	11:E7:501:GDP:H1'	1.66	0.60
2:B0:237:SER:HA	2:B0:320:ARG:HD2	1.84	0.60
3:C3:192:LEU:HD21	3:C3:199:VAL:HG21	1.83	0.60
3:C5:253:LEU:HD11	3:C5:316:MET:HE1	1.82	0.60
2:C8:313:MET:HE3	2:C8:380:ASN:HB3	1.82	0.60
7:f:10:LEU:HD22	7:f:47:LEU:HD11	1.83	0.60
7:g:14:LYS:HD2	7:g:47:LEU:HB2	1.83	0.60
7:g:78:ALA:HB3	7:g:112:PHE:HE1	1.67	0.60
3:B3:175:VAL:HG21	2:B4:329:ASN:HB3	1.84	0.60
3:B7:290:THR:HG21	3:B7:329:GLN:HG2	1.82	0.60
2:D6:181:VAL:HG12	3:D7:256:ASN:HD22	1.67	0.60
3:E5:7:VAL:HB	3:E5:135:ILE:HG13	1.83	0.60
3:E9:35:THR:HG22	7:w:83:PRO:HG3	1.84	0.60
2:F0:66:VAL:HG23	2:F0:91:GLN:HB2	1.84	0.60
7:c:10:LEU:HD13	7:c:147:HIS:HB2	1.84	0.60
7:r:172:VAL:HG23	7:r:180:ALA:HB3	1.83	0.60
3:B3:173:PRO:HD2	3:B3:205:GLU:HG2	1.82	0.60
3:C9:113:ILE:HA	3:C9:116:VAL:HG12	1.84	0.60
3:E1:49:VAL:HG11	3:E1:241:ARG:HG2	1.84	0.60
7:b:158:THR:HB	7:b:159:TYR:HD1	1.65	0.60
7:c:113:VAL:HG22	7:c:134:ILE:HD12	1.84	0.60
7:p:42:TYR:HA	7:p:45:MET:HB2	1.83	0.60
7:t:4:PRO:HG3	7:t:179:GLU:HB2	1.83	0.60
3:A9:375:GLN:HA	3:A9:378:PHE:HD2	1.67	0.60
3:E5:321:MET:HE1	3:E5:326:VAL:HB	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:M:1236:HIS:HB3	4:M:1249:THR:HG21	1.84	0.60
3:C1:257:LEU:HD21	3:C1:314:SER:HB2	1.84	0.59
4:L:1271:SER:HA	4:L:1274:MET:HE2	1.82	0.59
2:A4:31:GLN:HE22	7:a:104:ALA:HB2	1.67	0.59
2:B0:422:ARG:HH22	2:B0:425:LEU:HD22	1.66	0.59
2:E4:71:GLU:HB3	2:E4:98:ASP:HB2	1.83	0.59
2:F0:105:ARG:HH22	3:F1:251:ARG:HG2	1.67	0.59
7:t:191:GLU:HB2	7:t:195:ALA:HB2	1.83	0.59
2:A4:213:CYS:HA	2:A4:217:LEU:HD13	1.82	0.59
3:B1:19:LYS:HD2	3:B1:226:ASN:HB2	1.85	0.59
3:B1:377:MET:HA	3:B1:380:ARG:HE	1.66	0.59
2:B4:262:TYR:HD1	2:B4:265:ILE:HD11	1.67	0.59
3:B5:193:VAL:HG21	3:B5:418:LEU:HD21	1.84	0.59
3:C9:73:MET:HE1	3:C9:92:PHE:HA	1.84	0.59
5:P:517:ALA:H	5:P:521:PRO:HD2	1.66	0.59
3:B1:91:VAL:HG11	3:B1:116:VAL:HG12	1.83	0.59
3:B5:139:LEU:HA	3:B5:145:SER:HB3	1.84	0.59
3:C5:135:ILE:HG12	3:C5:152:ILE:HD11	1.83	0.59
3:E5:385:PHE:HA	3:E5:388:MET:HE2	1.84	0.59
3:E9:361:LEU:HA	6:U:105:HIS:CE1	2.38	0.59
7:v:149:ARG:HE	7:v:164:ARG:HB2	1.67	0.59
3:B5:242:PHE:HB3	3:B5:356:ILE:HD13	1.85	0.59
3:C7:119:VAL:HG13	3:C7:122:LYS:HE3	1.84	0.59
2:D2:286:LEU:HD13	2:D2:371:VAL:HG13	1.85	0.59
2:D6:16:ILE:HD11	2:D6:231:ILE:HB	1.84	0.59
2:E0:244:PHE:HB2	2:E0:356:ASN:HD21	1.66	0.59
7:f:14:LYS:HB2	7:f:47:LEU:HD12	1.85	0.59
3:A9:57:GLY:HA3	7:c:83:PRO:HB2	1.83	0.59
2:B4:398:MET:HE2	3:B5:345:ILE:HG23	1.83	0.59
2:B8:3:GLU:HA	2:B8:51:THR:HA	1.85	0.59
3:C5:237:THR:HG23	3:C5:240:LEU:HD13	1.84	0.59
3:F1:271:ALA:HB1	3:F1:292:GLN:HG2	1.83	0.59
7:w:151:MET:HE3	7:w:154:TYR:HA	1.85	0.59
1:A:247:TYR:HE2	2:A4:78:VAL:HA	1.68	0.59
2:C4:320:ARG:HH11	2:C4:360:PRO:HA	1.67	0.59
3:C9:175:VAL:HG11	2:D0:329:ASN:HA	1.84	0.59
3:E3:284:LEU:HB3	3:E3:362:LYS:HE3	1.84	0.59
3:E5:45:GLU:HG2	3:E5:46:ARG:HG2	1.85	0.59
2:E6:204:LEU:HD12	2:E6:209:ILE:HD11	1.83	0.59
2:A6:102:ASN:HB3	2:A6:105:ARG:HG3	1.85	0.59
3:B3:136:THR:HG22	3:B3:167:PHE:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B3:198:GLU:HG2	3:B3:266:PHE:HE2	1.66	0.59
2:C2:137:MET:HB2	2:C2:168:ASN:HA	1.85	0.59
2:D4:91:GLN:HG2	2:D4:121:ARG:HE	1.67	0.59
2:E4:26:LEU:HD11	1:H:254:LYS:HG2	1.85	0.59
2:F0:104:ALA:HB2	2:F0:413:MET:HG2	1.84	0.59
2:A0:178:SER:HB3	3:A1:347:ASN:HD22	1.66	0.59
2:B8:222:PRO:HD2	3:B9:324:LYS:HB2	1.83	0.59
3:C1:272:PRO:HG3	3:C1:364:SER:HA	1.85	0.59
3:C5:416:ASN:C	3:C5:416:ASN:HD22	2.07	0.59
2:C6:311:LYS:HA	2:C6:342:GLN:HE22	1.68	0.59
2:D4:3:GLU:HA	2:D4:51:THR:HA	1.85	0.59
3:D7:375:GLN:HB2	3:D7:419:VAL:HG13	1.84	0.59
2:E4:119:LEU:HD11	2:E4:156:ARG:HG3	1.85	0.59
3:F1:7:VAL:HG22	3:F1:64:ILE:HB	1.83	0.59
7:a:152:LYS:HA	7:a:164:ARG:HH21	1.68	0.59
8:k:106:ILE:HG23	8:k:111:VAL:HB	1.85	0.59
3:B7:51:TYR:HB3	3:B7:59:PHE:HB3	1.85	0.59
3:C5:391:ARG:HD3	2:C6:346:TRP:HB3	1.84	0.59
3:E1:210:ILE:HD11	3:E1:298:ASN:HA	1.84	0.59
2:E4:210:TYR:HE1	2:E4:227:LEU:HD11	1.68	0.59
3:E5:134:GLN:HE21	3:E5:167:PHE:HE2	1.49	0.59
7:h:94:ASN:HA	7:h:97:ARG:HE	1.68	0.59
7:h:184:PRO:HG3	7:h:189:LEU:HD23	1.85	0.59
7:s:63:ILE:HB	7:s:67:HIS:ND1	2.17	0.59
3:A3:102:ALA:HB2	3:A3:403:MET:HE2	1.83	0.58
2:B0:177:VAL:HG21	3:B1:327:ASP:HB3	1.85	0.58
2:C6:80:THR:HA	2:C6:84:ARG:HE	1.68	0.58
3:A5:257:LEU:HD11	3:A5:314:SER:HB2	1.84	0.58
2:B0:398:MET:HE1	3:B1:345:ILE:HG12	1.84	0.58
3:D7:200:GLN:HG2	3:D7:268:ILE:HD12	1.86	0.58
7:p:95:TYR:O	7:p:99:MET:HB3	2.03	0.58
7:r:11:ASN:HB3	7:r:15:ARG:HH12	1.68	0.58
7:t:5:VAL:HG11	7:t:149:ARG:HD3	1.85	0.58
3:A9:51:TYR:HB3	3:A9:59:PHE:HB3	1.85	0.58
3:A9:358:PRO:HG2	3:A9:361:LEU:HB2	1.84	0.58
2:B8:319:TYR:HB2	2:B8:355:ILE:HG22	1.84	0.58
3:F1:217:LEU:HA	6:R:174:ARG:HH12	1.68	0.58
3:F1:356:ILE:HD12	6:T:113:TRP:HB3	1.85	0.58
3:F1:358:PRO:HG2	3:F1:361:LEU:HB2	1.86	0.58
7:j:119:ARG:HH12	7:j:136:LEU:HB3	1.67	0.58
2:A4:269:LEU:HG	2:A4:301:MET:HE2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B0:204:LEU:HD12	2:B0:209:ILE:HD11	1.84	0.58
2:B4:244:PHE:HB2	2:B4:356:ASN:HD21	1.68	0.58
3:E7:192:LEU:HD21	3:E7:199:VAL:HG21	1.85	0.58
7:b:153:GLU:HA	7:b:164:ARG:HH22	1.68	0.58
7:c:64:PRO:HD2	7:c:67:HIS:CD2	2.38	0.58
3:A7:2:ARG:HB3	3:A7:131:GLN:HB2	1.85	0.58
2:C4:187:SER:HB3	2:C4:391:MET:HE3	1.85	0.58
2:E4:280:LYS:HZ3	2:E8:89:PRO:HB2	1.68	0.58
3:E7:68:LEU:HD22	3:E7:97:ALA:HB2	1.86	0.58
3:E9:101:TRP:H	3:E9:398:TYR:HE1	1.52	0.58
3:E9:284:LEU:HD13	3:E9:363:MET:HG2	1.85	0.58
1:F:231:VAL:HG21	5:P:561:VAL:H	1.67	0.58
4:N:1285:ARG:HH22	4:N:1295:ILE:H	1.50	0.58
7:m:78:ALA:HB3	7:m:112:PHE:HE1	1.69	0.58
3:A3:281:TYR:HD1	3:A7:87:PRO:HD3	1.67	0.58
3:B3:34:GLY:HA3	3:B3:58:ARG:HB2	1.86	0.58
2:E2:320:ARG:HH12	2:E2:360:PRO:HA	1.67	0.58
6:S:170:GLU:CD	6:S:171:ASP:H	2.12	0.58
7:e:9:PRO:HA	7:e:12:VAL:HG22	1.86	0.58
7:v:183:LEU:HD11	7:v:199:TRP:HB2	1.85	0.58
3:A5:304:ASP:HB3	3:A5:307:HIS:CE1	2.38	0.58
2:C6:138:PHE:HE1	2:C6:169:PHE:HD1	1.51	0.58
2:C8:224:TYR:HA	2:C8:227:LEU:HD12	1.86	0.58
3:E1:68:LEU:HD22	3:E1:97:ALA:HB2	1.86	0.58
2:F0:207:GLU:HA	2:F0:210:TYR:HB2	1.84	0.58
2:B2:265:ILE:HG21	2:B2:313:MET:HE1	1.85	0.58
3:B3:282:ARG:HH12	3:B3:284:LEU:HB2	1.68	0.58
2:B6:217:LEU:HD11	2:B6:275:ILE:HG22	1.86	0.58
2:B8:53:PHE:HB3	2:B8:61:HIS:HB3	1.86	0.58
3:D7:135:ILE:HB	3:D7:166:THR:HG22	1.86	0.58
2:E6:3:GLU:HA	2:E6:51:THR:HA	1.86	0.58
7:s:72:SER:HB3	7:s:108:ILE:HG22	1.86	0.58
7:v:42:TYR:HA	7:v:45:MET:HG3	1.86	0.58
3:A3:320:ARG:HH21	6:R:78:GLU:HB3	1.69	0.58
3:C5:68:LEU:HD12	3:C5:97:ALA:HB2	1.86	0.58
3:C5:178:THR:HA	2:C6:258:ASN:HD21	1.68	0.58
2:E0:64:ARG:HG2	2:E0:125:LEU:HD22	1.85	0.58
2:E0:398:MET:HG2	3:E1:345:ILE:HG22	1.84	0.58
2:A0:222:PRO:O	3:A1:324:LYS:HD3	2.03	0.58
2:A2:195:LEU:HD21	2:A2:264:ARG:HH22	1.69	0.58
2:A8:225:THR:HG21	1:C:250:GLU:HG3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A0:398:MET:HE1	3:A1:345:ILE:HG12	1.85	0.57
3:A1:182:PRO:HG2	3:A1:388:MET:HE1	1.86	0.57
3:C5:220:PRO:HG2	2:C6:326:LYS:HG3	1.85	0.57
2:C8:3:GLU:HA	2:C8:51:THR:HA	1.86	0.57
2:D0:209:ILE:HG13	2:D0:302:MET:HG2	1.86	0.57
3:F1:257:LEU:HD21	3:F1:314:SER:HB2	1.86	0.57
6:U:117:THR:O	6:U:121:TYR:HB2	2.04	0.57
7:a:123:GLU:HA	7:a:126:ARG:HB2	1.85	0.57
7:n:42:TYR:HA	7:n:45:MET:HE1	1.84	0.57
2:B4:259:LEU:HD11	2:B4:316:CYS:HB2	1.86	0.57
3:B7:139:LEU:HA	3:B7:145:SER:HB3	1.86	0.57
3:C7:189:VAL:HG21	3:C7:415:MET:HE2	1.85	0.57
2:C8:176:GLN:HB3	3:C9:331:LEU:HD11	1.86	0.57
3:E1:156:ARG:HE	3:E1:164:MET:HE2	1.69	0.57
7:c:10:LEU:HD12	7:c:143:ILE:HG12	1.85	0.57
7:x:115:LEU:HD12	7:x:167:VAL:HG11	1.86	0.57
3:A3:399:THR:HA	3:A3:403:MET:HB2	1.85	0.57
2:D4:102:ASN:HB3	2:D4:105:ARG:HB2	1.86	0.57
7:e:9:PRO:HB2	7:e:143:ILE:HG13	1.85	0.57
7:r:119:ARG:HH21	7:r:137:GLU:HG2	1.68	0.57
7:u:24:MET:HA	7:u:27:GLN:HG3	1.85	0.57
2:A4:57:GLY:HA2	5:O:254:GLY:HA3	1.86	0.57
2:C6:199:ASP:HB3	2:C6:256:GLN:HE22	1.70	0.57
2:C6:311:LYS:HD2	2:C6:342:GLN:HE22	1.68	0.57
3:C9:330:MET:HB3	3:C9:349:MET:HG3	1.85	0.57
3:F1:207:LEU:HB3	3:F1:225:LEU:HD12	1.87	0.57
3:A5:220:PRO:HD2	2:A6:326:LYS:HE2	1.86	0.57
2:B8:138:PHE:HD1	2:B8:169:PHE:HB2	1.70	0.57
3:C3:318:ARG:HE	3:C3:358:PRO:HD3	1.69	0.57
2:C4:34:GLY:HA3	2:C4:60:LYS:HD2	1.86	0.57
2:C6:119:LEU:HD23	2:C6:122:ILE:HD12	1.85	0.57
2:D4:218:ASP:HB3	7:r:194:ARG:HH22	1.68	0.57
2:D4:320:ARG:HH21	2:D4:360:PRO:HA	1.70	0.57
3:E1:220:PRO:HD2	2:E2:326:LYS:HD3	1.85	0.57
7:e:93:LEU:HB3	7:e:97:ARG:HH21	1.69	0.57
8:k:101:LEU:HA	8:k:104:LYS:HD2	1.87	0.57
3:A1:60:VAL:HG11	3:A1:86:ARG:HB2	1.87	0.57
2:A2:70:LEU:HD12	2:A2:99:ALA:HB2	1.87	0.57
2:B2:71:GLU:HB3	2:B2:73:THR:HG22	1.86	0.57
2:B4:222:PRO:HD2	3:B5:324:LYS:HG2	1.86	0.57
2:C0:238:LEU:HD13	2:C0:318:MET:HE1	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C6:177:VAL:HG11	2:C6:210:TYR:HE2	1.69	0.57
2:C8:259:LEU:HD21	2:C8:316:CYS:HB2	1.86	0.57
2:D4:140:ALA:HA	2:D4:171:SER:HB3	1.86	0.57
2:D6:320:ARG:HB3	2:D6:374:ALA:HB3	1.86	0.57
3:E9:113:ILE:HA	3:E9:116:VAL:HG12	1.86	0.57
7:a:143:ILE:HD12	7:a:146:ARG:HD2	1.87	0.57
7:u:97:ARG:O	7:u:101:GLU:HB2	2.03	0.57
2:D2:11:GLN:HA	2:D2:74:VAL:HG11	1.86	0.57
2:E0:178:SER:HB2	3:E1:347:ASN:HD22	1.70	0.57
2:F0:205:ASP:HB2	2:F0:303:ALA:HA	1.86	0.57
7:o:99:MET:HE3	7:o:107:LYS:HE3	1.86	0.57
2:B6:318:MET:HB2	2:B6:376:CYS:HB3	1.86	0.57
3:B9:200:GLN:HB3	3:B9:266:PHE:HB2	1.87	0.57
2:D4:167:LEU:HA	2:D4:200:VAL:HB	1.87	0.57
3:E1:44:LEU:HG	3:E1:47:ILE:HD12	1.86	0.57
7:e:14:LYS:HE2	7:e:47:LEU:HD22	1.87	0.57
3:A1:219:THR:HA	2:A2:326:LYS:HD2	1.86	0.57
3:B7:215:LEU:HD21	5:P:371:ARG:HH22	1.69	0.57
3:C5:179:VAL:HG13	2:C6:350:GLY:HA3	1.87	0.57
3:D3:11:GLN:HA	3:D3:72:THR:HG21	1.86	0.57
3:E9:215:LEU:HD11	6:U:102:LEU:HD11	1.85	0.57
4:W:1395:GLU:HA	4:W:1398:LEU:HG	1.86	0.57
7:r:9:PRO:HD3	7:r:146:ARG:HD2	1.86	0.57
2:A0:188:VAL:HG13	2:A0:425:LEU:HD12	1.87	0.57
2:B0:3:GLU:HA	2:B0:51:THR:HA	1.86	0.57
3:B1:163:ILE:HD11	3:B1:251:ARG:HE	1.68	0.57
3:B5:274:THR:HG22	3:B5:282:ARG:HE	1.69	0.57
3:B9:359:LYS:HB3	1:G:207:LEU:HD23	1.85	0.57
2:D8:220:GLU:HG2	2:D8:221:ARG:HG2	1.87	0.57
2:A4:292:THR:HG21	2:A4:331:ALA:HB1	1.87	0.56
3:B5:11:GLN:HA	3:B5:72:THR:HG21	1.85	0.56
3:B5:253:LEU:HD21	3:B5:368:VAL:HG11	1.86	0.56
3:C9:28:HIS:HA	3:C9:43:GLN:HG2	1.87	0.56
2:D0:180:ALA:HB3	2:D0:183:GLU:HB2	1.86	0.56
3:D3:271:ALA:HB2	3:D3:298:ASN:HD21	1.68	0.56
3:E3:257:LEU:HD21	3:E3:314:SER:HB2	1.87	0.56
2:E6:17:GLY:HA2	2:E6:20:CYS:HB2	1.87	0.56
3:E7:237:THR:HG23	3:E7:241:ARG:HE	1.70	0.56
7:c:55:LEU:HB3	7:c:132:LEU:HD23	1.87	0.56
7:i:15:ARG:O	7:i:19:GLU:HG2	2.04	0.56
8:k:57:TYR:HA	8:k:69:ILE:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:r:4:PRO:HG3	7:r:179:GLU:HB2	1.86	0.56
3:A5:268:ILE:H	3:A5:299:MET:HE1	1.71	0.56
3:A5:276:ARG:HH22	5:P:288:PRO:HG3	1.70	0.56
3:B1:8:GLN:HB2	3:B1:65:LEU:HA	1.87	0.56
2:B2:294:SER:HA	2:B2:297:GLU:HG3	1.87	0.56
2:B8:207:GLU:HA	2:B8:210:TYR:HB2	1.87	0.56
3:C7:22:GLU:HA	3:C7:81:PHE:HD2	1.70	0.56
3:C9:259:PRO:HG2	3:C9:311:LEU:HD23	1.88	0.56
2:D2:250:VAL:HG11	2:D2:318:MET:HE1	1.87	0.56
2:D4:12:ALA:HB3	2:D4:140:ALA:HB2	1.87	0.56
2:D6:267:PHE:HB3	2:D6:384:ILE:HD13	1.87	0.56
1:F:245:SER:O	1:F:249:SER:HB3	2.05	0.56
3:A1:323:THR:HG22	3:A1:353:VAL:HG21	1.87	0.56
3:A1:416:ASN:HA	3:A1:419:VAL:HG22	1.86	0.56
3:A3:199:VAL:HG23	3:A3:264:HIS:CE1	2.41	0.56
3:B1:218:THR:HG23	3:B1:219:THR:HG23	1.86	0.56
2:B2:207:GLU:HG3	2:B2:304:LYS:HE3	1.87	0.56
3:C1:323:THR:HG22	3:C1:353:VAL:HG21	1.85	0.56
2:C2:80:THR:HA	2:C2:84:ARG:HE	1.70	0.56
3:C3:49:VAL:HG11	3:C3:241:ARG:HG2	1.87	0.56
2:D6:11:GLN:HE22	3:D7:246:LEU:HA	1.70	0.56
2:E2:48:ALA:HB2	5:P:558:ARG:HD2	1.87	0.56
3:E7:284:LEU:HD22	3:E7:362:LYS:HE2	1.87	0.56
4:L:1241:PHE:CD2	4:L:1242:PRO:HD3	2.41	0.56
7:b:199:TRP:HD1	7:b:201:TRP:HE3	1.54	0.56
7:o:154:TYR:HE1	7:o:158:THR:HG22	1.71	0.56
7:t:75:LEU:HD23	7:t:111:ILE:HB	1.85	0.56
7:u:97:ARG:HH12	7:w:149:ARG:HH22	1.54	0.56
3:A1:272:PRO:HG3	3:A1:364:SER:HA	1.88	0.56
2:A2:417:GLU:HA	2:A2:420:GLU:HG2	1.88	0.56
3:B1:39:ASP:HA	7:d:90:PRO:HG3	1.87	0.56
3:C7:100:ASN:HB3	3:C7:103:LYS:HD3	1.88	0.56
2:D0:189:LEU:HD13	2:D0:413:MET:HE1	1.86	0.56
3:D9:57:GLY:HA3	7:r:83:PRO:HB2	1.86	0.56
2:E6:2:ARG:HG2	2:E6:51:THR:HG22	1.86	0.56
7:d:10:LEU:HD21	7:d:144:LEU:HD12	1.87	0.56
7:w:195:ALA:HA	7:w:198:ARG:HG3	1.86	0.56
3:A5:248:SER:HA	3:A5:252:LYS:HD2	1.88	0.56
2:A6:407:TRP:HZ2	3:A7:258:ILE:HB	1.68	0.56
2:B4:104:ALA:HB2	2:B4:413:MET:HE2	1.85	0.56
2:B4:240:ALA:HB1	2:B4:356:ASN:HD22	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C5:98:GLY:H	3:C5:103:LYS:HD2	1.69	0.56
2:E2:271:SER:HB3	2:E2:377:MET:HB3	1.86	0.56
3:E5:87:PRO:HA	3:E5:90:PHE:HD2	1.69	0.56
2:E6:88:HIS:HB3	2:E6:91:GLN:HB2	1.87	0.56
3:F1:217:LEU:HA	6:R:174:ARG:HH22	1.69	0.56
7:u:113:VAL:HG21	7:u:144:LEU:HD11	1.87	0.56
7:x:115:LEU:HD13	7:x:152:LYS:HG3	1.87	0.56
1:A:214:ALA:O	1:A:218:ASP:CB	2.54	0.56
3:B1:249:ASP:H	3:B1:252:LYS:HB3	1.71	0.56
3:B7:178:THR:HG23	3:B7:181:GLU:HG3	1.86	0.56
3:C1:221:THR:HG23	3:C1:223:GLY:H	1.70	0.56
3:C5:12:CYS:HB3	3:C5:138:SER:HB3	1.87	0.56
2:D2:75:VAL:HG11	2:D2:94:SER:HB2	1.87	0.56
2:D4:104:ALA:HB2	2:D4:413:MET:HE2	1.88	0.56
3:D5:98:GLY:H	3:D5:103:LYS:HD2	1.71	0.56
2:E2:265:ILE:HG21	2:E2:313:MET:HE1	1.87	0.56
2:B2:244:PHE:HB2	2:B2:356:ASN:HD21	1.71	0.56
3:C5:66:MET:HE1	3:C5:148:GLY:HA2	1.87	0.56
2:E8:301:MET:HE1	2:E8:307:PRO:HD3	1.88	0.56
7:c:72:SER:HB3	7:c:108:ILE:HG22	1.88	0.56
7:n:14:LYS:HB2	7:n:47:LEU:HD22	1.86	0.56
3:A5:259:PRO:HB3	3:A5:344:TRP:HH2	1.71	0.56
2:A8:219:ILE:HG12	7:e:198:ARG:HH22	1.71	0.56
2:C6:326:LYS:HE2	5:P:458:ARG:HH12	1.70	0.56
2:D8:338:LYS:HE3	2:D8:340:THR:HG22	1.88	0.56
2:E6:323:VAL:HG23	2:E6:355:ILE:HG23	1.87	0.56
3:E9:390:ARG:HH21	3:E9:391:ARG:HD2	1.70	0.56
8:l:10:PRO:HG2	8:l:12:VAL:HG22	1.88	0.56
2:A8:417:GLU:HA	2:A8:420:GLU:HG2	1.88	0.56
3:C7:230:SER:HA	3:C7:233:MET:HG2	1.87	0.56
3:E9:113:ILE:HD13	3:E9:150:LEU:HG	1.87	0.56
1:H:247:TYR:O	1:H:251:TYR:HB2	2.05	0.56
7:e:110:ILE:HB	7:e:131:TRP:CG	2.41	0.56
7:m:15:ARG:O	7:m:19:GLU:HB3	2.06	0.56
2:B8:18:ASN:HB3	1:G:219:TYR:HE2	1.71	0.56
3:B9:246:LEU:HB2	3:B9:353:VAL:H	1.71	0.56
1:D:215:TYR:HD1	2:D8:22:GLU:HB3	1.69	0.56
3:D1:406:MET:HE3	3:D1:410:GLU:HB2	1.87	0.56
3:D3:117:LEU:HD21	3:D3:154:LYS:HB3	1.87	0.56
2:D8:370:LYS:HG2	7:t:203:ASN:HD21	1.69	0.56
2:E6:319:TYR:HB3	2:E6:323:VAL:HG21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E9:217:LEU:HD21	3:E9:276:ARG:HD2	1.87	0.56
5:P:216:GLN:HA	5:P:219:LEU:HG	1.88	0.56
7:g:12:VAL:HG12	7:g:15:ARG:HH22	1.71	0.56
7:j:9:PRO:HB2	7:j:143:ILE:HG23	1.87	0.56
2:A2:308:ARG:HA	2:A2:342:GLN:HE22	1.71	0.55
3:A3:8:GLN:HB2	3:A3:65:LEU:HA	1.87	0.55
3:B3:49:VAL:HG21	3:B3:241:ARG:HG2	1.89	0.55
3:B7:320:ARG:HH22	1:G:246:CYS:HA	1.72	0.55
3:A5:209:ASP:HB3	3:A5:210:ILE:HD12	1.88	0.55
3:A7:311:LEU:HD23	3:A7:312:THR:HG23	1.88	0.55
3:D1:97:ALA:HA	3:D1:103:LYS:HE3	1.89	0.55
2:D4:403:ALA:HB2	3:D5:344:TRP:HZ3	1.69	0.55
3:D7:34:GLY:HA3	3:D7:58:ARG:HG3	1.87	0.55
3:E1:193:VAL:HG21	3:E1:418:LEU:HD21	1.88	0.55
3:E9:189:VAL:HA	3:E9:192:LEU:HB3	1.88	0.55
7:b:155:GLU:HA	7:b:159:TYR:CZ	2.42	0.55
8:l:32:VAL:HA	8:l:163:LYS:HZ2	1.72	0.55
8:l:76:LEU:HA	8:l:102:ARG:HH22	1.71	0.55
7:w:99:MET:HE3	7:w:107:LYS:HD2	1.87	0.55
2:B2:76:ASP:HA	2:B2:79:ARG:HE	1.71	0.55
2:B4:183:GLU:HA	2:B4:186:ASN:HB2	1.88	0.55
3:C3:86:ARG:HD2	3:C3:88:ASP:HB2	1.88	0.55
2:D0:211:ASP:HA	2:D0:214:ARG:HG2	1.88	0.55
3:D3:173:PRO:HG2	3:D3:380:ARG:HB3	1.87	0.55
2:D4:220:GLU:HG2	2:D4:221:ARG:HG3	1.88	0.55
2:E8:139:ASN:HD21	2:E8:168:ASN:HD21	1.52	0.55
3:A5:290:THR:HA	3:A5:293:MET:HE2	1.87	0.55
3:B9:58:ARG:HH12	3:B9:83:GLN:HE22	1.55	0.55
2:C0:364:PRO:HB2	1:I:254:LYS:HE2	1.88	0.55
3:C7:87:PRO:HA	3:C7:90:PHE:HD2	1.71	0.55
2:D0:254:GLU:HA	2:D0:257:THR:HG22	1.88	0.55
2:D4:180:ALA:HB3	2:D4:183:GLU:HB2	1.88	0.55
3:E3:186:THR:HG22	3:E3:415:MET:HE1	1.88	0.55
3:E9:68:LEU:HD12	3:E9:143:THR:HG22	1.88	0.55
7:m:75:LEU:HD13	7:m:173:ILE:HG13	1.88	0.55
3:A5:135:ILE:HB	3:A5:166:THR:HG22	1.88	0.55
3:A9:6:HIS:HD2	3:A9:134:GLN:HG3	1.71	0.55
3:B7:97:ALA:HA	3:B7:103:LYS:HE2	1.89	0.55
2:D6:90:GLU:HG2	2:D6:121:ARG:HD2	1.88	0.55
3:F1:44:LEU:HD12	3:F1:47:ILE:HD13	1.87	0.55
7:g:67:HIS:CE1	7:i:20:GLU:HG3	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A6:140:ALA:HA	2:A6:171:SER:HB3	1.87	0.55
2:B4:153:LEU:HA	2:B4:156:ARG:HG2	1.88	0.55
2:C2:7:ILE:HG21	2:C2:153:LEU:HD21	1.87	0.55
2:C4:288:VAL:HG11	2:C4:323:VAL:HG13	1.88	0.55
3:C7:243:PRO:HA	3:C7:247:ASN:HD21	1.72	0.55
2:C8:323:VAL:HG13	2:C8:355:ILE:HG23	1.88	0.55
3:C9:309:ARG:H	3:C9:372:THR:HB	1.71	0.55
3:D5:64:ILE:HD12	3:D5:119:VAL:HG12	1.89	0.55
2:D8:5:ILE:HD12	2:D8:125:LEU:HG	1.88	0.55
2:E2:71:GLU:HB3	2:E2:98:ASP:HB3	1.89	0.55
3:E7:280:GLN:HE22	3:F1:58:ARG:HD2	1.72	0.55
2:B6:403:ALA:HB2	3:B7:344:TRP:HZ3	1.72	0.55
3:C1:6:HIS:CE1	3:C1:8:GLN:HE21	2.23	0.55
2:C4:204:LEU:HD22	2:C4:231:ILE:HD12	1.88	0.55
2:C8:247:ALA:HB3	2:C8:355:ILE:HB	1.88	0.55
2:C8:272:TYR:HB3	2:C8:275:ILE:HD11	1.89	0.55
3:D1:138:SER:HB3	3:D1:144:GLY:HA3	1.88	0.55
2:D4:167:LEU:HG	2:D4:200:VAL:HG11	1.89	0.55
3:D5:396:HIS:HA	3:D5:399:THR:HG22	1.87	0.55
2:D8:104:ALA:HB2	2:D8:413:MET:HE2	1.89	0.55
3:E3:193:VAL:HA	3:E3:264:HIS:HE1	1.71	0.55
6:R:79:THR:HG22	6:R:82:ARG:HG2	1.88	0.55
7:i:183:LEU:HD11	7:i:199:TRP:HB2	1.87	0.55
3:B3:51:TYR:HB3	3:B3:59:PHE:HB3	1.87	0.55
2:B8:191:THR:HA	2:B8:194:LEU:HG	1.89	0.55
7:e:4:PRO:HG3	7:e:179:GLU:HB2	1.88	0.55
7:h:183:LEU:HD23	7:h:196:LEU:HA	1.88	0.55
2:A4:79:ARG:HH22	2:A4:94:SER:HB2	1.72	0.55
2:A6:2:ARG:HH21	2:A6:242:LEU:HD12	1.71	0.55
3:C1:173:PRO:HG3	3:C1:380:ARG:HD2	1.88	0.55
2:C6:413:MET:HE2	2:C6:417:GLU:HB2	1.89	0.55
4:N:1274:MET:HG3	4:N:1275:LEU:HD12	1.88	0.55
7:e:148:PHE:HZ	7:e:173:ILE:HD13	1.72	0.55
7:w:55:LEU:HD22	7:w:111:ILE:HG12	1.88	0.55
3:A3:101:TRP:HE3	3:A3:403:MET:HE1	1.72	0.55
2:B0:104:ALA:HB2	2:B0:413:MET:HE2	1.87	0.55
3:A1:17:GLY:HA2	3:A1:20:PHE:HB3	1.89	0.54
3:A3:215:LEU:HD21	3:A3:273:LEU:HD22	1.90	0.54
2:E2:105:ARG:HH22	3:E3:251:ARG:HD3	1.71	0.54
3:E5:7:VAL:HG22	3:E5:64:ILE:HB	1.89	0.54
3:E5:229:VAL:HG12	3:E5:233:MET:HE2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E7:284:LEU:HD21	3:E7:363:MET:HB2	1.89	0.54
7:g:55:LEU:HD21	7:g:111:ILE:HD13	1.89	0.54
3:A1:223:GLY:HA2	3:A1:226:ASN:HD22	1.72	0.54
2:A2:195:LEU:HD13	2:A2:428:LEU:HD12	1.89	0.54
3:A7:230:SER:HA	3:A7:233:MET:HB2	1.90	0.54
2:A8:221:ARG:HD2	7:e:190:GLU:HB3	1.88	0.54
3:B1:16:ILE:HA	3:B1:226:ASN:HB3	1.89	0.54
3:B5:207:LEU:HB3	3:B5:225:LEU:HG	1.88	0.54
2:C6:88:HIS:HB3	2:C6:91:GLN:HG2	1.89	0.54
7:e:15:ARG:O	7:e:19:GLU:HG3	2.07	0.54
7:j:9:PRO:HA	7:j:12:VAL:HG22	1.89	0.54
3:A1:91:VAL:HG21	3:A1:116:VAL:HG12	1.89	0.54
2:A2:346:TRP:HH2	2:A2:436:GLY:HA2	1.72	0.54
2:A4:75:VAL:HA	2:A4:78:VAL:HG12	1.90	0.54
3:A7:330:MET:HB3	3:A7:349:MET:HE1	1.89	0.54
2:B2:240:ALA:HB1	2:B2:356:ASN:HD22	1.72	0.54
2:B8:81:GLY:HA3	1:G:215:TYR:HE2	1.71	0.54
2:E6:73:THR:HA	3:E7:46:ARG:HH22	1.72	0.54
6:R:58:LEU:HA	6:R:61:TRP:HD1	1.73	0.54
3:C1:333:VAL:HG22	3:C1:336:LYS:HE2	1.89	0.54
2:D0:181:VAL:HG12	3:D1:256:ASN:HB2	1.88	0.54
3:D3:248:SER:HA	3:D3:252:LYS:HG3	1.89	0.54
2:F0:298:PRO:HA	2:F0:301:MET:HE1	1.90	0.54
4:W:1252:LEU:HD21	4:W:1441:LEU:HB3	1.89	0.54
2:A8:214:ARG:HH12	3:A9:324:LYS:HG2	1.72	0.54
3:B5:290:THR:HG21	3:B5:329:GLN:HB3	1.89	0.54
3:B5:359:LYS:HB3	1:E:207:LEU:HD22	1.89	0.54
2:D4:71:GLU:HG3	2:D4:98:ASP:HB2	1.90	0.54
3:D7:42:LEU:HD13	3:D7:356:ILE:HG12	1.89	0.54
3:D7:67:ASP:HA	3:D7:143:THR:HG21	1.90	0.54
3:E7:42:LEU:HD13	3:E7:356:ILE:HD11	1.89	0.54
7:u:78:ALA:HB3	7:u:112:PHE:HE1	1.72	0.54
2:A2:72:PRO:HD2	3:A3:2:ARG:HH11	1.72	0.54
3:A5:207:LEU:HD13	3:A5:225:LEU:HB3	1.89	0.54
2:B0:218:ASP:HB3	7:f:194:ARG:HH22	1.72	0.54
2:C2:12:ALA:HB3	2:C2:140:ALA:HB2	1.89	0.54
2:C4:55:GLU:HG3	2:C4:57:GLY:H	1.71	0.54
3:C7:73:MET:HE3	3:C7:90:PHE:HD1	1.73	0.54
2:C8:107:HIS:HD2	2:C8:152:LEU:HB2	1.71	0.54
3:D3:375:GLN:HA	3:D3:378:PHE:HB2	1.90	0.54
2:D8:362:VAL:HB	2:D8:370:LYS:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E0:274:PRO:HB2	2:E0:276:ILE:HG13	1.89	0.54
3:E9:276:ARG:HA	3:E9:279:GLN:HE21	1.73	0.54
1:F:210:HIS:NE2	7:v:154:TYR:HB2	2.22	0.54
3:F1:172:SER:HB2	3:F1:204:ASN:H	1.73	0.54
1:B:256:LEU:HD11	2:D2:29:GLY:HA2	1.90	0.54
3:B5:253:LEU:HD11	3:B5:368:VAL:HG21	1.88	0.54
2:B6:3:GLU:HA	2:B6:51:THR:HA	1.89	0.54
3:C1:6:HIS:HE1	3:C1:8:GLN:HE21	1.55	0.54
2:C4:166:LYS:HD2	2:C4:198:THR:HA	1.89	0.54
3:C5:49:VAL:HG11	3:C5:241:ARG:HG2	1.89	0.54
2:C6:3:GLU:OE2	2:C6:129:CYS:HB3	2.08	0.54
5:P:312:ILE:HA	5:P:315:LEU:HB2	1.89	0.54
7:e:73:VAL:HA	7:e:109:GLU:O	2.08	0.54
7:e:140:LEU:HA	7:e:143:ILE:HG22	1.90	0.54
7:w:78:ALA:HB3	7:w:112:PHE:HE1	1.73	0.54
2:A0:269:LEU:HD23	2:A0:303:ALA:HB3	1.90	0.54
2:B4:88:HIS:HB3	2:B4:91:GLN:HG3	1.89	0.54
3:B7:388:MET:HE3	2:B8:348:PRO:HD2	1.89	0.54
2:B8:26:LEU:HD21	2:B8:363:VAL:HG12	1.89	0.54
2:C2:132:LEU:HG	2:C2:164:LYS:HE2	1.90	0.54
7:w:9:PRO:HA	7:w:12:VAL:HG22	1.89	0.54
3:A1:207:LEU:HD23	3:A1:210:ILE:HD11	1.90	0.54
2:C0:297:GLU:HG3	2:C0:299:ALA:H	1.72	0.54
3:C3:51:TYR:HB3	3:C3:59:PHE:HB3	1.89	0.54
3:D1:58:ARG:HH21	3:D1:84:LEU:HA	1.72	0.54
2:D2:12:ALA:HB3	2:D2:140:ALA:HB2	1.90	0.54
3:E3:2:ARG:HD2	3:E3:240:LEU:HD23	1.90	0.54
3:E5:113:ILE:HA	3:E5:116:VAL:HG12	1.90	0.54
7:i:48:ILE:HD11	7:i:65:GLN:HG2	1.89	0.54
7:i:75:LEU:HG	7:i:173:ILE:HG13	1.90	0.54
7:r:73:VAL:HG12	7:r:109:GLU:HB3	1.88	0.54
3:C3:200:GLN:HG3	3:C3:268:ILE:HD11	1.90	0.54
3:E1:44:LEU:HD22	7:s:91:PHE:HE2	1.73	0.54
7:h:97:ARG:HH22	7:j:160:GLY:HA3	1.73	0.54
7:j:15:ARG:O	7:j:19:GLU:HG3	2.08	0.54
3:A1:333:VAL:HA	3:A1:336:LYS:HG2	1.90	0.53
2:A4:51:THR:HG21	2:A4:243:ARG:HB2	1.90	0.53
3:A7:7:VAL:HG13	3:A7:66:MET:HE1	1.91	0.53
2:D4:298:PRO:HG2	2:D4:308:ARG:HE	1.73	0.53
3:D9:229:VAL:HA	3:D9:300:MET:HE1	1.88	0.53
2:E4:3:GLU:HA	2:E4:51:THR:HA	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E5:358:PRO:HG2	3:E5:361:LEU:HB2	1.88	0.53
11:E5:501:GDP:H8	2:E6:248:LEU:HD21	1.73	0.53
7:c:9:PRO:HA	7:c:12:VAL:HG22	1.90	0.53
7:g:119:ARG:HH22	7:g:137:GLU:HB3	1.72	0.53
7:o:68:LEU:HD23	7:o:73:VAL:HG21	1.91	0.53
7:s:172:VAL:HG23	7:s:180:ALA:HB3	1.89	0.53
2:A0:247:ALA:HB3	2:A0:355:ILE:HB	1.90	0.53
2:B4:271:SER:HB2	2:B4:377:MET:HB3	1.91	0.53
3:B5:201:VAL:HG21	3:B5:374:ILE:HD11	1.90	0.53
2:C8:14:ILE:HD11	2:C8:68:LEU:H	1.71	0.53
2:D2:288:VAL:HA	2:D2:291:ILE:HG22	1.90	0.53
3:E3:164:MET:HB3	3:E3:197:ASP:H	1.73	0.53
3:E5:19:LYS:HD2	3:E5:22:GLU:HG3	1.90	0.53
3:E5:387:ALA:HA	3:E5:390:ARG:HE	1.72	0.53
3:E7:57:GLY:N	7:v:84:LYS:HZ3	2.06	0.53
3:E9:253:LEU:HD21	3:E9:368:VAL:HG21	1.91	0.53
7:c:53:GLY:HA2	7:c:62:VAL:HG21	1.90	0.53
7:m:191:GLU:HB2	7:m:195:ALA:HB2	1.91	0.53
3:A1:68:LEU:HB3	3:A1:96:GLY:HA2	1.91	0.53
7:c:78:ALA:HB3	7:c:112:PHE:HE1	1.72	0.53
7:h:78:ALA:HB3	7:h:112:PHE:HE1	1.73	0.53
7:q:75:LEU:HD23	7:q:111:ILE:HB	1.90	0.53
3:B7:311:LEU:HD12	3:B7:342:VAL:HG11	1.89	0.53
3:C5:68:LEU:HD21	3:C5:109:GLY:HA2	1.91	0.53
3:D1:296:ALA:H	3:D1:306:ARG:HH12	1.56	0.53
2:D6:191:THR:HG21	2:D6:425:LEU:HD12	1.89	0.53
3:E5:293:MET:HE3	3:E5:367:PHE:HB2	1.88	0.53
3:F1:284:LEU:HD23	3:F1:362:LYS:HG2	1.90	0.53
7:d:72:SER:HB3	7:d:108:ILE:HG22	1.90	0.53
7:d:171:ILE:HD11	7:d:179:GLU:HG2	1.90	0.53
7:f:172:VAL:HG11	7:f:204:THR:HG21	1.89	0.53
7:r:78:ALA:HB3	7:r:112:PHE:HE1	1.74	0.53
2:A0:102:ASN:HB3	2:A0:105:ARG:HB2	1.91	0.53
2:A4:397:LEU:HD11	3:A5:346:PRO:HD3	1.89	0.53
2:B2:84:ARG:HH21	7:e:197:LEU:HD21	1.73	0.53
2:D2:191:THR:HA	2:D2:194:LEU:HB3	1.90	0.53
3:D3:174:LYS:HG3	3:D3:175:VAL:HG22	1.91	0.53
2:D4:195:LEU:HD21	2:D4:264:ARG:HH21	1.74	0.53
3:E1:215:LEU:HD11	3:E1:228:LEU:HD21	1.91	0.53
3:E1:274:THR:HG22	3:E1:275:SER:H	1.73	0.53
3:E3:49:VAL:HG21	3:E3:241:ARG:HG2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:o:14:LYS:HG3	7:o:47:LEU:HB2	1.91	0.53
7:s:9:PRO:HA	7:s:12:VAL:HG22	1.91	0.53
7:v:113:VAL:HG12	7:v:134:ILE:HB	1.89	0.53
2:A0:177:VAL:HG11	2:A0:210:TYR:HE1	1.74	0.53
2:A6:265:ILE:HG22	2:A6:380:ASN:HD21	1.74	0.53
2:B2:9:VAL:HG12	2:B2:68:LEU:HB2	1.91	0.53
2:B8:364:PRO:HG2	1:G:222:LYS:HB3	1.90	0.53
2:C0:328:VAL:HG11	2:C0:355:ILE:HD11	1.91	0.53
2:C4:240:ALA:HB2	2:C4:320:ARG:HH21	1.74	0.53
2:C4:310:GLY:HA3	2:C4:383:ALA:HB2	1.90	0.53
3:C5:221:THR:HG21	5:P:460:HIS:HB2	1.91	0.53
2:D2:217:LEU:HD21	2:D2:368:LEU:HD23	1.90	0.53
2:E6:401:LYS:HZ1	3:E7:344:TRP:CD1	2.27	0.53
2:E8:137:MET:HB3	2:E8:168:ASN:HA	1.91	0.53
7:x:172:VAL:HG23	7:x:180:ALA:HB3	1.89	0.53
2:A4:99:ALA:HB2	2:A4:110:ILE:HD11	1.91	0.53
2:A6:53:PHE:HB3	2:A6:61:HIS:HB3	1.89	0.53
2:A8:102:ASN:HB2	2:A8:105:ARG:HB3	1.90	0.53
3:B3:57:GLY:HA3	7:e:83:PRO:HB2	1.90	0.53
3:B3:91:VAL:HG21	3:B3:116:VAL:HG22	1.90	0.53
2:B8:5:ILE:HG12	2:B8:132:LEU:HD11	1.90	0.53
2:C2:238:LEU:HD13	2:C2:318:MET:HE1	1.90	0.53
2:C2:404:PHE:HD1	2:C2:407:TRP:HH2	1.56	0.53
3:C3:359:LYS:NZ	1:I:207:LEU:HB3	2.24	0.53
2:C6:185:TYR:HB3	2:C6:408:TYR:HE2	1.73	0.53
2:E2:296:PHE:HE2	2:E2:317:LEU:HD21	1.73	0.53
7:b:100:ASN:HD21	7:b:106:GLN:HG3	1.74	0.53
2:A4:53:PHE:HB3	2:A4:61:HIS:HB3	1.90	0.53
3:C3:221:THR:HG23	3:C3:223:GLY:H	1.73	0.53
3:D7:242:PHE:HB3	3:D7:356:ILE:HD13	1.89	0.53
2:E2:259:LEU:HD11	2:E2:268:MET:HE1	1.89	0.53
1:G:221:PRO:HG3	7:h:101:GLU:HB3	1.90	0.53
8:k:160:ARG:HA	8:k:163:LYS:HE2	1.91	0.53
7:u:96:TYR:HA	7:u:108:ILE:HD11	1.91	0.53
2:A0:274:PRO:HD3	2:A0:374:ALA:HA	1.91	0.53
2:A2:259:LEU:HD13	2:A2:268:MET:HG2	1.91	0.53
3:B5:57:GLY:HA3	7:f:83:PRO:HB2	1.91	0.53
2:B6:319:TYR:HE1	2:B6:328:VAL:HG13	1.74	0.53
2:C6:371:VAL:HG12	2:C6:373:ARG:H	1.74	0.53
2:D0:76:ASP:HA	2:D0:79:ARG:HE	1.74	0.53
3:D1:172:SER:HB2	3:D1:175:VAL:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:308:GLY:HA3	3:D5:373:ALA:HB2	1.91	0.53
2:D6:252:VAL:HA	2:D6:255:PHE:HD2	1.74	0.53
3:E1:20:PHE:HB2	3:E1:233:MET:HE3	1.90	0.53
2:F0:398:MET:HG3	3:F1:345:ILE:HD13	1.90	0.53
7:f:84:LYS:HB2	7:f:168:PRO:HD3	1.91	0.53
7:n:78:ALA:HB3	7:n:112:PHE:HE1	1.74	0.53
7:x:112:PHE:HB2	7:x:131:TRP:HE1	1.73	0.53
2:A6:178:SER:HB3	2:A6:183:GLU:HG2	1.90	0.53
2:C0:200:VAL:HG23	2:C0:256:GLN:HG3	1.91	0.53
3:C1:113:ILE:HA	3:C1:116:VAL:HG12	1.90	0.53
3:C1:178:THR:H	2:C2:352:LYS:HD2	1.74	0.53
2:C4:51:THR:HG21	2:C4:243:ARG:HG2	1.91	0.53
1:D:240:PRO:HG2	7:s:163:SER:HB2	1.91	0.53
3:D3:178:THR:HG23	3:D3:181:GLU:HG3	1.90	0.53
2:D4:396:ASP:HB3	2:D4:422:ARG:HH12	1.74	0.53
3:D7:309:ARG:H	3:D7:372:THR:HG22	1.72	0.53
3:E1:169:VAL:HG12	3:E1:202:ILE:HB	1.90	0.53
2:F0:407:TRP:HZ2	3:F1:258:ILE:HD11	1.73	0.53
3:F1:102:ALA:HB2	3:F1:403:MET:HE2	1.91	0.53
4:N:1432:PRO:HD2	4:N:1435:ARG:HH21	1.74	0.53
5:P:242:LEU:HD12	5:P:243:PRO:HD2	1.90	0.53
7:h:72:SER:HB3	7:h:108:ILE:HG22	1.91	0.53
7:r:183:LEU:HD13	7:r:196:LEU:HA	1.91	0.53
2:A0:174:SER:HB3	2:A0:207:GLU:HG3	1.92	0.52
3:A1:259:PRO:HG2	3:A1:311:LEU:HD23	1.90	0.52
3:A3:54:ALA:HB3	3:A3:58:ARG:HB3	1.89	0.52
3:B1:301:CYS:HB3	3:B1:377:MET:HE1	1.91	0.52
3:B5:244:GLY:HA2	3:B5:355:ASP:HB2	1.91	0.52
2:C0:175:PRO:HB3	2:C0:390:ARG:HD3	1.90	0.52
2:D2:70:LEU:HD12	2:D2:99:ALA:HB2	1.90	0.52
3:D5:165:GLU:HG3	3:D5:250:LEU:HD22	1.91	0.52
3:E3:163:ILE:HD13	3:E3:250:LEU:HG	1.91	0.52
3:F1:49:VAL:HG11	3:F1:241:ARG:HG2	1.91	0.52
4:Q:1294:VAL:HG23	4:Q:1321:ILE:HD13	1.91	0.52
7:p:63:ILE:HB	7:p:67:HIS:HD2	1.74	0.52
3:A3:5:VAL:HB	3:A3:133:PHE:HD1	1.74	0.52
3:A5:35:THR:HG22	7:a:83:PRO:HG3	1.91	0.52
2:A6:238:LEU:HD11	2:A6:378:ILE:HD11	1.92	0.52
3:A9:32:PRO:HB3	3:A9:81:PHE:HA	1.90	0.52
3:B1:164:MET:HB3	3:B1:197:ASP:H	1.75	0.52
2:B6:88:HIS:HB3	2:B6:91:GLN:HE21	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E0:12:ALA:HB3	2:E0:140:ALA:HB2	1.90	0.52
2:E6:76:ASP:HA	2:E6:79:ARG:HD2	1.92	0.52
7:e:75:LEU:HD23	7:e:111:ILE:HB	1.91	0.52
7:x:183:LEU:HD11	7:x:199:TRP:HB2	1.91	0.52
3:A9:190:HIS:HB2	3:A9:414:ASN:HB3	1.89	0.52
2:B0:136:LEU:HD13	2:B0:235:ILE:HD11	1.91	0.52
2:C2:247:ALA:HB3	2:C2:355:ILE:HB	1.90	0.52
2:D2:223:THR:HG23	2:D2:225:THR:H	1.73	0.52
3:D9:272:PRO:HG2	3:D9:361:LEU:HD13	1.92	0.52
1:E:254:LYS:HD2	1:E:255:PRO:HD2	1.90	0.52
3:E7:2:ARG:HB3	3:E7:131:GLN:HB2	1.92	0.52
3:E7:272:PRO:HG3	3:E7:364:SER:HA	1.91	0.52
3:F1:28:HIS:HD1	3:F1:47:ILE:HD12	1.73	0.52
4:V:1257:TYR:HD1	4:V:1283:LEU:HD11	1.75	0.52
7:d:9:PRO:HA	7:d:12:VAL:HG22	1.90	0.52
7:q:15:ARG:HG2	7:q:45:MET:HE1	1.92	0.52
7:v:99:MET:HE2	7:v:107:LYS:HD2	1.90	0.52
3:A1:139:LEU:HA	3:A1:145:SER:HB2	1.92	0.52
3:C3:87:PRO:HA	3:C3:90:PHE:HD2	1.74	0.52
3:C3:337:ASN:HB2	3:C3:340:TYR:HB2	1.91	0.52
2:D2:102:ASN:HB2	2:D2:105:ARG:HB3	1.91	0.52
3:D9:200:GLN:HG2	3:D9:268:ILE:HD12	1.91	0.52
3:E5:271:ALA:HA	3:E5:273:LEU:HD13	1.92	0.52
7:s:78:ALA:HB3	7:s:112:PHE:HE1	1.75	0.52
3:A1:3:GLU:HA	3:A1:49:VAL:HA	1.91	0.52
2:B0:339:ARG:NH2	4:Q:1234:TYR:HB3	2.24	0.52
2:B2:141:VAL:HG12	2:B2:187:SER:HA	1.92	0.52
2:B2:392:ASP:HA	2:B2:422:ARG:HH12	1.74	0.52
3:B5:51:TYR:HB3	3:B5:59:PHE:HB3	1.90	0.52
3:C5:248:SER:HA	3:C5:252:LYS:HD2	1.91	0.52
3:C7:12:CYS:HB2	3:C7:138:SER:HB3	1.91	0.52
2:C8:206:ASN:HB3	2:C8:210:TYR:CZ	2.45	0.52
2:D0:107:HIS:HD2	2:D0:152:LEU:HB2	1.74	0.52
2:E6:28:HIS:HB2	2:E6:30:ILE:HG12	1.92	0.52
3:E7:131:GLN:HE22	3:E7:250:LEU:HB2	1.74	0.52
2:E8:100:ALA:HA	3:E9:252:LYS:HG3	1.92	0.52
2:E8:132:LEU:HB2	2:E8:164:LYS:HZ1	1.75	0.52
3:E9:217:LEU:HB2	3:E9:220:PRO:HD3	1.91	0.52
4:N:1250:ALA:HB1	4:N:1254:ARG:HH12	1.74	0.52
7:n:184:PRO:HD2	7:n:195:ALA:HB1	1.90	0.52
7:p:134:ILE:HD13	7:p:140:LEU:HD22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:t:14:LYS:HD3	7:t:47:LEU:HD13	1.91	0.52
2:A2:364:PRO:HB2	5:P:242:LEU:HB3	1.92	0.52
2:A8:221:ARG:HG3	3:A9:322:SER:HB2	1.91	0.52
3:B1:171:PRO:HG2	3:B1:185:ALA:HB2	1.91	0.52
3:B1:313:ALA:HB3	3:B1:349:MET:HB3	1.91	0.52
3:B3:178:THR:HG21	11:B3:501:GDP:H5'	1.92	0.52
2:B8:31:GLN:HE22	2:B8:35:GLN:H	1.58	0.52
1:C:240:PRO:HG3	7:e:154:TYR:CG	2.45	0.52
3:C1:86:ARG:HD2	3:C1:88:ASP:HB2	1.91	0.52
2:D2:222:PRO:HG2	3:D3:324:LYS:HZ1	1.74	0.52
2:E4:121:ARG:HH21	2:E4:124:LYS:HG2	1.73	0.52
3:E7:330:MET:HG3	3:E7:349:MET:HG3	1.91	0.52
3:E9:104:GLY:HA3	3:E9:146:GLY:HA3	1.92	0.52
2:F0:223:THR:HG23	2:F0:225:THR:HG22	1.90	0.52
1:J:255:PRO:HG3	7:m:178:ARG:HH22	1.75	0.52
5:P:309:SER:HB2	5:P:312:ILE:HG22	1.91	0.52
6:R:64:PRO:HB3	6:R:72:PRO:HG3	1.92	0.52
7:a:153:GLU:H	7:a:164:ARG:HE	1.56	0.52
8:k:25:ARG:HH12	7:m:23:LEU:HD12	1.73	0.52
7:o:5:VAL:HG11	7:o:149:ARG:HD3	1.91	0.52
3:A5:244:GLY:HA3	3:A5:354:CYS:HA	1.91	0.52
2:C2:195:LEU:HD13	2:C2:264:ARG:HH22	1.75	0.52
2:C6:259:LEU:HD21	2:C6:268:MET:HG2	1.92	0.52
2:C8:123:ARG:HH22	2:C8:160:ASP:HB3	1.75	0.52
3:C9:326:VAL:HG22	3:C9:351:SER:HB2	1.90	0.52
3:D5:242:PHE:HB3	3:D5:356:ILE:HG13	1.92	0.52
3:D7:2:ARG:HH21	3:D7:240:LEU:HD12	1.75	0.52
3:D9:271:ALA:HA	3:D9:273:LEU:HG	1.91	0.52
8:k:15:ARG:HH21	8:k:16:THR:HG22	1.75	0.52
2:A2:12:ALA:HB3	2:A2:140:ALA:HB2	1.92	0.52
2:A8:195:LEU:HD21	2:A8:428:LEU:HD12	1.92	0.52
2:B4:191:THR:HA	2:B4:194:LEU:HG	1.92	0.52
3:B7:8:GLN:HB2	3:B7:65:LEU:HA	1.92	0.52
3:B7:68:LEU:HB3	3:B7:96:GLY:HA2	1.92	0.52
3:B9:68:LEU:HD21	3:B9:147:MET:HG3	1.92	0.52
3:C1:124:ALA:HB1	3:C1:130:LEU:HD13	1.90	0.52
3:C7:320:ARG:NH2	1:J:212:GLU:H	2.08	0.52
3:C9:166:THR:HG21	3:C9:192:LEU:HD11	1.91	0.52
3:D1:309:ARG:H	3:D1:372:THR:HB	1.75	0.52
3:E9:116:VAL:HA	3:E9:119:VAL:HG12	1.91	0.52
2:F0:311:LYS:HD3	2:F0:342:GLN:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:212:GLU:OE1	1:I:216:ARG:HB2	2.10	0.52
8:l:73:TYR:HB2	8:l:92:TRP:HE1	1.75	0.52
3:A5:22:GLU:HG2	3:A5:81:PHE:CD2	2.45	0.52
3:A5:68:LEU:HD12	3:A5:97:ALA:HB2	1.92	0.52
3:B7:293:MET:HA	3:B7:298:ASN:HD21	1.74	0.52
2:B8:262:TYR:HD2	2:B8:265:ILE:HD12	1.74	0.52
2:C0:212:ILE:HD11	2:C0:275:ILE:HG21	1.92	0.52
2:C6:27:GLU:HB3	2:C6:361:THR:HG21	1.91	0.52
3:D7:282:ARG:HB2	3:E1:86:ARG:HH12	1.74	0.52
2:D8:71:GLU:HB3	2:D8:98:ASP:HB3	1.92	0.52
2:D8:211:ASP:HA	2:D8:214:ARG:HG2	1.91	0.52
2:D8:250:VAL:HG12	2:D8:352:LYS:HE3	1.92	0.52
2:E2:337:THR:HG22	2:E2:338:LYS:H	1.74	0.52
3:E3:70:PRO:HD3	3:E3:94:GLN:HA	1.92	0.52
3:E3:286:VAL:HB	3:E3:325:GLU:HG3	1.92	0.52
7:b:67:HIS:HD2	7:d:19:GLU:HB3	1.75	0.52
7:c:140:LEU:HA	7:c:143:ILE:HG22	1.92	0.52
7:t:15:ARG:HG2	7:t:45:MET:HE1	1.91	0.52
7:u:65:GLN:HE21	7:u:206:PHE:HZ	1.58	0.52
7:u:97:ARG:HH22	7:w:149:ARG:HH12	1.57	0.52
3:A1:46:ARG:HB2	3:A1:241:ARG:HA	1.91	0.52
3:A1:190:HIS:HB2	3:A1:414:ASN:HD21	1.74	0.52
2:A2:70:LEU:HD21	2:A2:149:LEU:HD13	1.92	0.52
2:A4:274:PRO:HG3	2:A4:291:ILE:HD12	1.92	0.52
3:B5:383:ASP:HA	3:B5:386:THR:HG22	1.92	0.52
3:C5:191:GLN:HE21	3:C5:195:ASN:HD21	1.57	0.52
2:C6:3:GLU:HA	2:C6:51:THR:HA	1.91	0.52
3:F1:2:ARG:HB3	3:F1:131:GLN:HB2	1.92	0.52
4:L:1399:TYR:HA	4:L:1402:GLN:HG2	1.92	0.52
7:j:14:LYS:HG2	7:j:45:MET:HE2	1.91	0.52
2:A0:265:ILE:HG22	2:A0:380:ASN:HD21	1.75	0.51
2:A0:409:VAL:HA	2:A0:413:MET:HB2	1.92	0.51
2:A4:104:ALA:HB2	2:A4:413:MET:HE2	1.91	0.51
2:B4:84:ARG:HH21	7:f:197:LEU:HD21	1.75	0.51
3:B7:372:THR:HG21	3:B7:426:GLN:HB2	1.92	0.51
3:C1:333:VAL:HA	3:C1:336:LYS:HG2	1.91	0.51
3:C7:32:PRO:HA	3:C7:84:LEU:HD11	1.92	0.51
2:D6:32:PRO:HB3	2:D6:83:TYR:HE1	1.75	0.51
3:F1:149:THR:HA	3:F1:152:ILE:HB	1.91	0.51
7:g:158:THR:HB	7:g:161:TYR:HB2	1.92	0.51
7:t:78:ALA:HB3	7:t:112:PHE:HE1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A3:246:LEU:HB2	3:A3:353:VAL:H	1.75	0.51
2:A4:311:LYS:HA	2:A4:342:GLN:HB2	1.92	0.51
3:B3:207:LEU:HB3	3:B3:225:LEU:HD22	1.93	0.51
3:C5:211:CYS:HB2	3:C5:217:LEU:HD12	1.92	0.51
3:C9:281:TYR:HB3	3:D3:86:ARG:HG2	1.91	0.51
2:E0:219:ILE:HD13	7:u:198:ARG:HH12	1.75	0.51
3:E7:28:HIS:HA	3:E7:43:GLN:HG2	1.91	0.51
7:p:71:LYS:HD3	7:p:106:GLN:HG2	1.93	0.51
7:v:63:ILE:HG21	7:v:132:LEU:HD22	1.92	0.51
2:A0:323:VAL:HG22	2:A0:373:ARG:HD3	1.91	0.51
3:B1:323:THR:HG22	3:B1:353:VAL:HG21	1.92	0.51
3:C1:49:VAL:HG11	3:C1:241:ARG:HB3	1.92	0.51
3:C1:61:PRO:HD3	3:C1:84:LEU:HG	1.91	0.51
2:C4:406:HIS:HD1	2:C4:407:TRP:CD1	2.28	0.51
2:C6:167:LEU:HD21	2:C6:238:LEU:HD21	1.93	0.51
3:D3:135:ILE:HB	3:D3:166:THR:HG22	1.93	0.51
2:D4:294:SER:HA	2:D4:297:GLU:HG3	1.93	0.51
3:D7:57:GLY:HA3	7:q:83:PRO:HB2	1.92	0.51
2:E0:240:ALA:HB1	2:E0:356:ASN:HD22	1.75	0.51
3:E3:132:GLY:HA3	3:E3:163:ILE:HG22	1.92	0.51
3:F1:290:THR:HG21	3:F1:329:GLN:HB3	1.92	0.51
5:P:239:ARG:HD2	6:R:86:ASP:HB3	1.92	0.51
4:W:1214:LEU:HD22	4:W:1447:ALA:HB1	1.91	0.51
2:A2:360:PRO:HD2	2:A2:372:MET:HA	1.91	0.51
2:A4:248:LEU:HD23	2:A4:355:ILE:HD12	1.92	0.51
3:A7:284:LEU:H	3:B1:55:THR:HB	1.75	0.51
2:B2:156:ARG:HG2	4:W:1246:TYR:CZ	2.45	0.51
3:C5:66:MET:HE3	3:C5:147:MET:HG3	1.92	0.51
3:D7:77:ARG:HH22	3:D7:92:PHE:HZ	1.58	0.51
2:F0:53:PHE:HB3	2:F0:61:HIS:HB3	1.91	0.51
3:F1:229:VAL:HA	3:F1:300:MET:HE1	1.91	0.51
1:J:262:THR:HA	5:O:455:TYR:HE1	1.74	0.51
4:L:1406:LEU:HD22	4:Q:1298:PHE:HE1	1.75	0.51
4:V:1382:GLU:HA	4:V:1385:LEU:HD12	1.93	0.51
3:A3:358:PRO:HG2	3:A3:361:LEU:HD13	1.93	0.51
3:B1:207:LEU:HB3	3:B1:225:LEU:HD22	1.93	0.51
2:B6:133:GLN:HG2	2:B6:242:LEU:HD21	1.92	0.51
2:C2:32:PRO:HG2	1:I:221:PRO:HG3	1.92	0.51
2:C4:163:LYS:HG3	2:C4:164:LYS:HG3	1.92	0.51
3:E1:2:ARG:HB2	3:E1:131:GLN:HB2	1.93	0.51
2:E4:70:LEU:HD21	2:E4:114:ILE:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E4:388:PHE:HB3	2:E4:425:LEU:HD11	1.92	0.51
2:E6:32:PRO:HA	2:E6:86:LEU:HD12	1.91	0.51
2:A0:195:LEU:HD21	2:A0:264:ARG:HH21	1.74	0.51
3:A1:294:PHE:HE2	3:A1:333:VAL:HG11	1.75	0.51
2:B6:259:LEU:HD21	2:B6:316:CYS:HB2	1.92	0.51
3:C1:164:MET:HB3	3:C1:197:ASP:H	1.75	0.51
2:C2:204:LEU:HD21	2:C2:231:ILE:HD12	1.93	0.51
3:C3:392:LYS:HE2	3:C3:395:LEU:HG	1.92	0.51
2:C8:207:GLU:HB3	2:C8:304:LYS:NZ	2.26	0.51
2:D2:398:MET:HE3	3:D3:345:ILE:HG23	1.91	0.51
3:D7:124:ALA:HB1	3:D7:130:LEU:HD13	1.93	0.51
3:E3:7:VAL:HG11	3:E3:151:LEU:HD23	1.93	0.51
3:E7:139:LEU:HD12	3:E7:170:PHE:HE1	1.74	0.51
3:F1:276:ARG:HA	3:F1:279:GLN:HB2	1.93	0.51
5:P:519:LEU:HB2	5:P:521:PRO:HG3	1.91	0.51
7:h:71:LYS:HZ1	7:h:109:GLU:HB2	1.76	0.51
7:j:10:LEU:HD22	7:j:47:LEU:HD21	1.92	0.51
7:t:65:GLN:HE21	7:t:206:PHE:HZ	1.59	0.51
7:t:73:VAL:HA	7:t:109:GLU:O	2.11	0.51
1:A:221:PRO:HG3	7:b:101:GLU:HG2	1.93	0.51
3:A7:316:MET:HE2	3:A7:366:THR:HG23	1.93	0.51
3:B3:68:LEU:HB3	3:B3:96:GLY:HA2	1.92	0.51
2:C0:82:THR:HG21	1:I:252:VAL:HA	1.91	0.51
2:C4:274:PRO:HG3	2:C4:374:ALA:HA	1.91	0.51
3:C5:42:LEU:HD12	1:J:248:ARG:HH22	1.75	0.51
3:D9:173:PRO:HD2	3:D9:205:GLU:OE2	2.11	0.51
3:E9:138:SER:HA	3:E9:169:VAL:HG23	1.92	0.51
7:a:127:ALA:HB1	7:c:157:PRO:HG3	1.93	0.51
7:n:136:LEU:HA	7:n:141:THR:HG21	1.92	0.51
3:A1:263:LEU:HD13	3:A1:422:TYR:CE2	2.46	0.51
2:A8:292:THR:HG21	2:A8:331:ALA:HB1	1.92	0.51
2:B2:292:THR:HG21	2:B2:331:ALA:HB1	1.93	0.51
2:B6:53:PHE:HB3	2:B6:61:HIS:HB3	1.92	0.51
3:D1:407:GLU:HA	3:D1:410:GLU:HB3	1.93	0.51
2:E6:80:THR:HA	2:E6:84:ARG:HH11	1.76	0.51
2:E6:317:LEU:HG	2:E6:377:MET:HB3	1.93	0.51
7:m:96:TYR:HA	7:m:108:ILE:HD11	1.93	0.51
3:B1:334:GLN:HE22	3:B1:347:ASN:HA	1.76	0.51
2:C0:388:PHE:HB3	2:C0:425:LEU:HD21	1.92	0.51
2:D4:280:LYS:HG2	2:D8:89:PRO:HD2	1.92	0.51
2:D4:298:PRO:HB3	2:D4:307:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:39:ASP:HA	7:p:90:PRO:HG3	1.93	0.51
3:D5:171:PRO:HG2	3:D5:185:ALA:HB2	1.91	0.51
3:E5:163:ILE:HD11	3:E5:251:ARG:HB2	1.91	0.51
2:F0:213:CYS:HA	2:F0:217:LEU:HB2	1.93	0.51
7:m:75:LEU:HD21	7:m:144:LEU:HD13	1.92	0.51
7:m:158:THR:HG23	7:m:160:GLY:H	1.75	0.51
7:n:170:VAL:HG23	7:n:183:LEU:HB2	1.93	0.51
7:r:82:ASP:HB3	7:r:85:CYS:HB2	1.93	0.51
7:v:63:ILE:HD12	7:v:64:PRO:HD2	1.92	0.51
7:v:96:TYR:HA	7:v:108:ILE:HD11	1.93	0.51
3:A7:309:ARG:H	3:A7:372:THR:HG22	1.75	0.51
3:C5:207:LEU:HD22	3:C5:225:LEU:HG	1.93	0.51
3:C5:213:ARG:NH2	3:C5:297:LYS:HG3	2.26	0.51
3:C5:244:GLY:HA2	3:C5:355:ASP:H	1.76	0.51
2:E4:280:LYS:HD2	2:E8:88:HIS:HE2	1.76	0.51
3:E9:42:LEU:HD13	3:E9:356:ILE:HD11	1.92	0.51
3:F1:361:LEU:HD13	6:T:105:HIS:HB2	1.92	0.51
4:M:1374:ARG:HD2	4:M:1376:ALA:H	1.76	0.51
6:U:79:THR:HG23	6:U:82:ARG:H	1.76	0.51
7:b:75:LEU:HD23	7:b:111:ILE:HB	1.93	0.51
7:j:142:GLU:HA	7:j:145:LYS:HD3	1.93	0.51
2:A0:284:GLU:HB2	2:A0:286:LEU:HD12	1.93	0.50
2:A6:79:ARG:HG3	2:A6:92:LEU:HD22	1.93	0.50
3:A7:117:LEU:HA	3:A7:120:VAL:HG12	1.92	0.50
2:A8:214:ARG:HH22	3:A9:324:LYS:HD2	1.75	0.50
2:C8:398:MET:HE1	3:C9:345:ILE:HA	1.91	0.50
2:D6:265:ILE:HG22	2:D6:380:ASN:HD21	1.76	0.50
3:E7:57:GLY:HA3	7:v:83:PRO:HB2	1.93	0.50
2:F0:332:VAL:HA	2:F0:335:ILE:HG12	1.93	0.50
3:A1:207:LEU:HD13	3:A1:225:LEU:HB3	1.93	0.50
3:A3:227:HIS:HA	3:A3:230:SER:HB3	1.94	0.50
3:C7:282:ARG:HB2	3:D1:86:ARG:HH12	1.76	0.50
2:C8:310:GLY:HA3	2:C8:383:ALA:HB2	1.94	0.50
3:C9:8:GLN:HE21	3:C9:65:LEU:HG	1.76	0.50
2:E2:223:THR:HG22	3:E3:322:SER:HA	1.92	0.50
2:E2:265:ILE:HG22	2:E2:380:ASN:HD21	1.75	0.50
2:E2:296:PHE:CE2	2:E2:317:LEU:HD21	2.46	0.50
3:E7:164:MET:H	3:E7:197:ASP:HB3	1.76	0.50
2:B0:298:PRO:HB3	2:B0:307:PRO:HD2	1.93	0.50
3:B5:66:MET:HE1	3:B5:151:LEU:HD22	1.92	0.50
2:C0:286:LEU:HD22	2:C0:371:VAL:HG12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E5:302:ALA:HB3	3:E5:377:MET:HE1	1.93	0.50
4:N:1402:GLN:HA	4:N:1405:LEU:HG	1.93	0.50
4:Q:1252:LEU:HD21	4:Q:1441:LEU:HB3	1.93	0.50
7:r:154:TYR:HE1	7:r:158:THR:HG22	1.75	0.50
2:A4:261:PRO:HG2	2:A4:265:ILE:HB	1.94	0.50
2:B6:223:THR:HG22	3:B7:322:SER:HA	1.92	0.50
3:C1:207:LEU:HB3	3:C1:225:LEU:HG	1.94	0.50
2:C2:129:CYS:HB3	2:C2:132:LEU:HB3	1.94	0.50
2:C8:195:LEU:HD21	2:C8:264:ARG:HH21	1.76	0.50
3:E5:244:GLY:HA2	3:E5:355:ASP:HB2	1.94	0.50
3:E7:87:PRO:HA	3:E7:90:PHE:HD2	1.77	0.50
3:E9:287:PRO:HG3	3:E9:329:GLN:HE22	1.77	0.50
7:o:88:LEU:HD11	7:o:185:ILE:HD13	1.92	0.50
7:p:55:LEU:HD11	7:p:111:ILE:HD13	1.92	0.50
7:x:184:PRO:HG3	7:x:189:LEU:HD12	1.94	0.50
3:A1:37:CYS:HA	6:T:67:LEU:HD22	1.93	0.50
3:A3:221:THR:HG21	5:P:219:LEU:HA	1.92	0.50
2:C4:223:THR:HG22	3:C5:322:SER:HA	1.92	0.50
3:E3:287:PRO:HG3	3:E3:329:GLN:HE21	1.76	0.50
2:E4:203:MET:HE3	2:E4:267:PHE:HD2	1.77	0.50
3:E7:286:VAL:HG22	3:E7:363:MET:HE1	1.93	0.50
1:H:245:SER:O	1:H:249:SER:HB3	2.11	0.50
7:a:78:ALA:HB3	7:a:112:PHE:HE1	1.76	0.50
7:h:110:ILE:HB	7:h:131:TRP:CG	2.47	0.50
8:l:38:PHE:HA	8:l:74:VAL:O	2.11	0.50
7:m:119:ARG:HH21	7:m:137:GLU:HG2	1.76	0.50
2:A2:7:ILE:HD13	2:A2:122:ILE:HD11	1.94	0.50
2:A8:318:MET:HB2	2:A8:376:CYS:HB3	1.93	0.50
3:B1:19:LYS:HE2	3:B1:223:GLY:HA2	1.93	0.50
2:B2:174:SER:HB2	2:B2:207:GLU:HG2	1.94	0.50
2:C2:134:GLY:HA3	2:C2:165:SER:HB3	1.92	0.50
2:C2:313:MET:HE3	2:C2:380:ASN:HB3	1.94	0.50
2:D6:273:ALA:HA	2:D6:275:ILE:HD12	1.94	0.50
3:E3:392:LYS:HD2	3:E3:395:LEU:HD13	1.93	0.50
2:E6:269:LEU:HD22	2:E6:303:ALA:HB3	1.94	0.50
2:E6:276:ILE:HG23	2:E6:280:LYS:HB3	1.93	0.50
2:E8:408:TYR:HB3	2:E8:413:MET:HG3	1.93	0.50
3:F1:49:VAL:HG21	3:F1:240:LEU:HB3	1.94	0.50
7:a:172:VAL:HG13	7:a:180:ALA:HB3	1.94	0.50
7:d:5:VAL:HG11	7:d:149:ARG:HD3	1.94	0.50
7:j:14:LYS:HD2	7:j:47:LEU:HD22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:q:97:ARG:HH22	7:s:5:VAL:HG13	1.76	0.50
7:s:9:PRO:HB2	7:s:143:ILE:HG13	1.92	0.50
3:A1:86:ARG:HE	3:A1:87:PRO:HD2	1.76	0.50
2:A2:227:LEU:HG	3:A3:324:LYS:HZ1	1.77	0.50
3:B1:116:VAL:HA	3:B1:119:VAL:HG12	1.92	0.50
2:B8:402:ARG:HD3	2:B8:405:VAL:HG11	1.93	0.50
3:B9:267:LEU:HD21	3:B9:374:ILE:HG12	1.93	0.50
3:C3:215:LEU:HB3	3:C3:217:LEU:HD23	1.94	0.50
3:C3:323:THR:HG22	3:C3:353:VAL:HG21	1.93	0.50
3:D7:68:LEU:HD22	3:D7:97:ALA:HB2	1.93	0.50
2:D8:140:ALA:HA	2:D8:171:SER:HB3	1.94	0.50
2:E0:238:LEU:HA	2:E0:318:MET:HE3	1.92	0.50
4:V:1289:ARG:HH21	4:V:1294:VAL:HG22	1.77	0.50
7:b:97:ARG:HH12	7:d:161:TYR:HA	1.77	0.50
3:A3:249:ASP:H	3:A3:252:LYS:HB2	1.76	0.50
2:A4:207:GLU:HA	2:A4:210:TYR:HD2	1.77	0.50
1:B:247:TYR:O	1:B:251:TYR:HB2	2.12	0.50
2:B0:29:GLY:HA2	1:C:224:LEU:HD12	1.92	0.50
2:B0:339:ARG:HH11	4:Q:1235:ARG:HD2	1.77	0.50
3:B1:169:VAL:HG12	3:B1:202:ILE:HB	1.94	0.50
3:B1:238:CYS:HA	3:B1:241:ARG:HE	1.76	0.50
3:B3:165:GLU:HG3	3:B3:198:GLU:HB2	1.94	0.50
2:B8:247:ALA:HB3	2:B8:355:ILE:HD11	1.94	0.50
3:B9:39:ASP:HA	7:h:90:PRO:HG3	1.93	0.50
3:E1:278:SER:HA	3:E1:281:TYR:HB2	1.94	0.50
3:E9:248:SER:HB2	3:E9:316:MET:HE1	1.93	0.50
3:A1:178:THR:HB	3:A1:181:GLU:HG3	1.93	0.50
2:A2:207:GLU:HG3	2:A2:304:LYS:NZ	2.27	0.50
3:A9:11:GLN:HB2	3:A9:72:THR:HG21	1.94	0.50
3:A9:213:ARG:HG3	3:A9:214:THR:HG23	1.93	0.50
2:B0:175:PRO:HB3	2:B0:390:ARG:HD2	1.94	0.50
3:B1:284:LEU:HG	3:B1:363:MET:HE2	1.93	0.50
2:B4:387:VAL:HG23	2:B4:390:ARG:HH22	1.77	0.50
3:B5:45:GLU:HG2	3:B5:46:ARG:HG2	1.93	0.50
3:B9:57:GLY:HA3	7:h:83:PRO:HB2	1.93	0.50
2:C6:323:VAL:HG22	2:C6:373:ARG:HG2	1.93	0.50
3:C7:320:ARG:HH21	1:J:212:GLU:H	1.59	0.50
3:C9:221:THR:HG23	3:C9:223:GLY:H	1.76	0.50
2:D0:73:THR:HG22	3:D1:46:ARG:HH12	1.76	0.50
2:D0:101:ASN:HA	2:D0:144:GLY:H	1.75	0.50
3:D3:278:SER:HA	3:D3:281:TYR:HD2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E2:286:LEU:HD11	2:E2:372:MET:H	1.77	0.50
2:E8:267:PHE:HB3	2:E8:384:ILE:HD13	1.93	0.50
3:F1:257:LEU:HD13	3:F1:312:THR:HG22	1.93	0.50
7:b:64:PRO:HD2	7:b:67:HIS:HD1	1.76	0.50
7:f:50:PHE:HD2	7:f:65:GLN:HG3	1.77	0.50
7:n:55:LEU:HB3	7:n:132:LEU:HD23	1.93	0.50
7:p:105:ASN:HD22	7:r:37:GLN:HE22	1.59	0.50
7:t:9:PRO:HA	7:t:12:VAL:HG22	1.94	0.50
2:A2:274:PRO:HB2	2:A2:371:VAL:HG21	1.92	0.49
3:B1:284:LEU:HD23	3:B1:362:LYS:HE3	1.93	0.49
2:B6:285:GLN:HB3	2:C0:56:THR:HA	1.93	0.49
3:C9:66:MET:HE3	3:C9:147:MET:HG2	1.95	0.49
3:D1:167:PHE:CG	3:D1:233:MET:HE3	2.47	0.49
2:D8:226:ASN:HA	2:D8:229:ARG:HG2	1.94	0.49
3:D9:95:THR:HG21	3:D9:108:GLU:HB3	1.94	0.49
3:E1:11:GLN:HG3	3:E1:72:THR:HG21	1.93	0.49
3:E9:149:THR:HA	3:E9:152:ILE:HD12	1.93	0.49
3:E9:320:ARG:HH12	6:U:116:GLU:HA	1.76	0.49
1:I:215:TYR:O	1:I:219:TYR:HB2	2.12	0.49
7:f:15:ARG:O	7:f:19:GLU:HG2	2.11	0.49
7:f:158:THR:HB	7:f:161:TYR:HB2	1.93	0.49
7:j:78:ALA:HB3	7:j:112:PHE:HE1	1.77	0.49
7:t:53:GLY:HA2	7:t:62:VAL:HG21	1.94	0.49
2:A0:206:ASN:HB3	2:A0:210:TYR:CZ	2.47	0.49
1:D:244:GLN:HE22	1:D:248:ARG:HB3	1.77	0.49
3:D9:392:LYS:HG3	3:D9:395:LEU:HD23	1.94	0.49
4:W:1251:ILE:HG23	4:W:1384:LYS:HB3	1.93	0.49
7:s:94:ASN:HD22	7:s:94:ASN:C	2.20	0.49
2:A0:107:HIS:C	2:A0:112:LYS:HZ1	2.20	0.49
3:A5:173:PRO:HG3	3:A5:380:ARG:HG3	1.94	0.49
2:A8:103:PHE:H	2:A8:408:TYR:HE1	1.58	0.49
3:B7:215:LEU:HB3	3:B7:217:LEU:HG	1.94	0.49
2:C0:115:VAL:HG21	2:C0:152:LEU:HD22	1.94	0.49
3:C3:102:ALA:HB2	3:C3:403:MET:HE2	1.94	0.49
2:D0:269:LEU:HD22	2:D0:303:ALA:HB2	1.94	0.49
2:D2:272:TYR:HB3	2:D2:275:ILE:HD11	1.94	0.49
3:D7:271:ALA:HA	3:D7:273:LEU:HG	1.95	0.49
3:E3:259:PRO:HG2	3:E3:311:LEU:HD21	1.94	0.49
3:E3:290:THR:HA	3:E3:293:MET:HE3	1.93	0.49
7:a:130:PRO:HB3	7:c:159:TYR:CG	2.47	0.49
7:s:50:PHE:HD1	7:s:140:LEU:HD21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:w:119:ARG:HH12	7:w:123:GLU:HB3	1.76	0.49
3:A3:11:GLN:HA	3:A3:14:ASN:HB2	1.94	0.49
3:A3:244:GLY:HA2	3:A3:355:ASP:HB2	1.94	0.49
2:A6:344:VAL:HG13	2:A6:345:ASP:H	1.78	0.49
3:A9:334:GLN:HE21	3:A9:349:MET:HG2	1.75	0.49
2:B6:241:SER:HB2	2:B6:249:ASN:HB2	1.94	0.49
3:B7:5:VAL:HB	3:B7:133:PHE:HD1	1.77	0.49
2:C0:276:ILE:HD11	2:C0:280:LYS:HB2	1.92	0.49
2:C4:180:ALA:HB3	2:C4:183:GLU:HB2	1.94	0.49
2:C6:132:LEU:HD23	2:C6:164:LYS:HE3	1.94	0.49
3:C9:289:LEU:HD23	3:C9:365:VAL:HG13	1.93	0.49
3:D1:16:ILE:HA	3:D1:226:ASN:HB3	1.94	0.49
2:D2:222:PRO:HG2	3:D3:324:LYS:NZ	2.27	0.49
2:D8:93:ILE:HD11	2:D8:121:ARG:HG3	1.94	0.49
2:D8:259:LEU:HD21	2:D8:316:CYS:HB2	1.94	0.49
3:E1:64:ILE:HD12	3:E1:119:VAL:HG12	1.95	0.49
2:E6:81:GLY:HA3	1:H:215:TYR:HE2	1.78	0.49
2:E8:223:THR:HG21	3:E9:324:LYS:H	1.76	0.49
6:R:76:LYS:HB3	7:b:162:GLY:HA3	1.93	0.49
7:a:170:VAL:HG23	7:a:183:LEU:HB2	1.93	0.49
7:c:71:LYS:HD2	7:c:109:GLU:HG2	1.94	0.49
7:d:142:GLU:HA	7:d:145:LYS:HB2	1.95	0.49
7:q:129:MET:HE3	7:q:131:TRP:HE1	1.77	0.49
2:A4:101:ASN:HD22	2:A4:143:GLY:HA2	1.77	0.49
2:A6:2:ARG:HH21	2:A6:242:LEU:HA	1.78	0.49
2:B4:208:ALA:HB2	2:B4:304:LYS:HB2	1.95	0.49
2:C0:244:PHE:HB2	2:C0:356:ASN:HD21	1.77	0.49
4:M:1254:ARG:NH2	4:M:1266:ALA:HB1	2.27	0.49
4:N:1285:ARG:HH22	4:N:1294:VAL:HA	1.76	0.49
7:d:11:ASN:HB3	7:d:15:ARG:HH12	1.78	0.49
7:e:185:ILE:HD13	7:e:195:ALA:HB3	1.94	0.49
7:g:140:LEU:HA	7:g:143:ILE:HG22	1.93	0.49
7:n:112:PHE:CG	7:n:129:MET:HE1	2.47	0.49
7:t:172:VAL:HG11	7:t:204:THR:HG21	1.93	0.49
2:A0:177:VAL:HG11	2:A0:210:TYR:CE1	2.48	0.49
3:A5:113:ILE:HA	3:A5:147:MET:HE1	1.94	0.49
3:A5:257:LEU:HB3	3:A5:266:PHE:HE2	1.77	0.49
3:B1:24:ILE:HG23	3:B1:241:ARG:HH12	1.76	0.49
3:B3:73:MET:HA	3:B3:76:VAL:HG12	1.93	0.49
2:B4:311:LYS:H	2:B4:382:THR:HG22	1.76	0.49
3:B5:117:LEU:HA	3:B5:120:VAL:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B6:137:MET:HE1	2:B6:154:LEU:HD11	1.95	0.49
2:B6:262:TYR:HB2	2:B6:265:ILE:HG22	1.93	0.49
2:C8:200:VAL:HG11	2:C8:255:PHE:HE2	1.77	0.49
3:D3:271:ALA:HB2	3:D3:298:ASN:ND2	2.28	0.49
2:D4:223:THR:HG22	3:D5:322:SER:HA	1.94	0.49
2:D6:84:ARG:HH12	7:q:98:THR:HG21	1.76	0.49
2:E2:184:PRO:HA	2:E2:391:MET:HE3	1.94	0.49
2:E2:244:PHE:HB2	2:E2:356:ASN:HD21	1.77	0.49
2:E6:53:PHE:HB3	2:E6:61:HIS:HB3	1.95	0.49
3:A3:206:ALA:HB2	3:A3:302:ALA:HB2	1.95	0.49
3:A9:200:GLN:HG2	3:A9:268:ILE:HD11	1.94	0.49
3:B5:155:VAL:HA	3:B5:158:GLU:HG2	1.95	0.49
3:B5:265:PHE:HB3	3:B5:374:ILE:HD13	1.95	0.49
3:B7:17:GLY:HA2	3:B7:20:PHE:HB3	1.95	0.49
3:C5:136:THR:HG22	3:C5:167:PHE:HB2	1.95	0.49
2:C8:208:ALA:HB2	2:C8:304:LYS:H	1.78	0.49
3:C9:189:VAL:HG11	3:C9:415:MET:HG3	1.95	0.49
2:D2:189:LEU:HD21	2:D2:413:MET:HE3	1.95	0.49
2:E2:195:LEU:HD13	2:E2:428:LEU:HD21	1.94	0.49
2:E8:115:VAL:HG11	2:E8:152:LEU:HD22	1.93	0.49
2:E8:310:GLY:HA3	2:E8:383:ALA:HB2	1.94	0.49
8:k:50:VAL:O	8:k:54:ARG:HB2	2.13	0.49
2:A6:3:GLU:HA	2:A6:51:THR:HA	1.95	0.49
3:B5:4:ILE:HD11	3:B5:240:LEU:HD13	1.93	0.49
3:B7:281:TYR:HD2	3:C1:87:PRO:HD3	1.77	0.49
2:C2:259:LEU:HD21	2:C2:316:CYS:HB2	1.95	0.49
3:D3:318:ARG:HG2	3:D3:354:CYS:HB2	1.93	0.49
2:E6:18:ASN:HD21	1:H:215:TYR:HD1	1.59	0.49
2:E6:195:LEU:HD12	2:E6:428:LEU:HD12	1.95	0.49
7:n:106:GLN:HG3	7:p:6:PHE:HZ	1.77	0.49
7:r:174:GLY:HA3	7:r:178:ARG:HD3	1.95	0.49
2:A0:324:VAL:HG12	2:A0:326:LYS:H	1.78	0.49
2:A2:210:TYR:HE1	2:A2:227:LEU:HD11	1.78	0.49
3:A7:8:GLN:HG3	3:A7:65:LEU:HD13	1.94	0.49
3:C7:32:PRO:HD3	3:C7:81:PHE:HE1	1.78	0.49
2:D2:288:VAL:HG11	2:D2:323:VAL:HG13	1.94	0.49
3:D9:207:LEU:HB3	3:D9:225:LEU:HG	1.94	0.49
2:E0:2:ARG:HG2	2:E0:51:THR:HG22	1.95	0.49
3:E3:320:ARG:HH12	1:F:214:ALA:HB2	1.78	0.49
2:E8:325:PRO:HA	2:E8:328:VAL:HG22	1.95	0.49
2:F0:26:LEU:HD21	2:F0:363:VAL:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F0:82:THR:HG21	6:T:123:PRO:HD3	1.93	0.49
5:P:487:THR:HG22	5:P:489:LEU:H	1.77	0.49
7:i:142:GLU:HA	7:i:145:LYS:HB2	1.95	0.49
7:o:15:ARG:O	7:o:19:GLU:HG3	2.13	0.49
7:u:4:PRO:HG3	7:u:179:GLU:HG2	1.94	0.49
2:A2:191:THR:HG21	2:A2:425:LEU:HD13	1.95	0.49
3:A5:289:LEU:HD23	3:A5:365:VAL:HG23	1.95	0.49
3:A9:16:ILE:HG22	3:A9:226:ASN:CG	2.38	0.49
3:B1:68:LEU:HD12	3:B1:143:THR:HG22	1.95	0.49
3:B9:248:SER:HA	3:B9:252:LYS:HD2	1.94	0.49
3:C1:298:ASN:ND2	3:C1:298:ASN:O	2.45	0.49
3:C3:113:ILE:HA	3:C3:116:VAL:HG12	1.93	0.49
2:D4:292:THR:HG21	2:D4:331:ALA:HB1	1.93	0.49
3:E3:284:LEU:HD23	3:E3:362:LYS:HG2	1.94	0.49
2:E4:207:GLU:HA	2:E4:210:TYR:HB2	1.95	0.49
3:E5:252:LYS:HA	3:E5:255:VAL:HG12	1.95	0.49
3:E9:311:LEU:HD12	3:E9:342:VAL:HG11	1.94	0.49
3:E9:410:GLU:HA	3:E9:413:SER:HB3	1.94	0.49
7:h:170:VAL:HG23	7:h:183:LEU:HB2	1.95	0.49
7:s:146:ARG:HD2	7:s:156:VAL:HG21	1.94	0.49
2:A2:244:PHE:HB2	2:A2:356:ASN:HD21	1.78	0.48
2:B0:408:TYR:HB3	2:B0:413:MET:HE3	1.94	0.48
3:C9:136:THR:HG22	3:C9:167:PHE:HB2	1.95	0.48
2:D4:76:ASP:HA	2:D4:79:ARG:HG2	1.94	0.48
3:D5:117:LEU:HA	3:D5:120:VAL:HG12	1.93	0.48
2:E0:105:ARG:HA	2:E0:109:THR:HG22	1.95	0.48
2:E2:180:ALA:HB3	2:E2:183:GLU:HB3	1.94	0.48
2:E2:255:PHE:HZ	2:E2:378:ILE:HG21	1.78	0.48
3:E5:229:VAL:HA	3:E5:300:MET:HE1	1.94	0.48
3:E9:175:VAL:HG22	3:E9:205:GLU:HB3	1.95	0.48
3:E9:308:GLY:HA3	3:E9:373:ALA:HB2	1.95	0.48
1:J:244:GLN:HG2	7:m:162:GLY:HA3	1.95	0.48
4:L:1440:ASP:HA	4:L:1443:GLU:OE1	2.13	0.48
4:Q:1285:ARG:HH22	4:Q:1294:VAL:HG22	1.78	0.48
7:g:67:HIS:HD2	7:i:23:LEU:HD12	1.78	0.48
7:j:151:MET:HE2	7:j:154:TYR:HA	1.95	0.48
3:A7:7:VAL:HB	3:A7:135:ILE:HG13	1.94	0.48
2:A8:210:TYR:HE1	2:A8:227:LEU:HD21	1.77	0.48
2:B2:398:MET:HG3	3:B3:346:PRO:HD2	1.95	0.48
2:C4:292:THR:HG21	2:C4:331:ALA:HB1	1.94	0.48
3:C5:272:PRO:HG3	3:C5:284:LEU:HD11	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C9:12:CYS:HB3	3:C9:138:SER:HB2	1.94	0.48
3:D1:248:SER:HA	3:D1:252:LYS:HD3	1.95	0.48
2:D4:323:VAL:HG22	2:D4:373:ARG:HG2	1.94	0.48
2:D8:200:VAL:HG11	2:D8:255:PHE:HE1	1.77	0.48
2:E6:434:GLU:HA	2:E6:437:ILE:HD12	1.95	0.48
3:F1:135:ILE:HB	3:F1:166:THR:HG22	1.95	0.48
7:g:146:ARG:HD2	7:g:156:VAL:HG11	1.95	0.48
7:h:75:LEU:O	7:h:170:VAL:HA	2.13	0.48
8:l:13:VAL:HG13	8:l:24:VAL:H	1.77	0.48
8:l:51:PRO:HA	8:l:54:ARG:HE	1.79	0.48
3:A1:248:SER:HA	3:A1:252:LYS:HG3	1.96	0.48
3:A1:374:ILE:HD11	3:A1:377:MET:HE3	1.94	0.48
3:A5:397:TRP:NE1	2:A6:257:THR:HA	2.28	0.48
3:A9:39:ASP:HA	7:c:90:PRO:HG3	1.95	0.48
3:B3:257:LEU:HD21	3:B3:314:SER:HB2	1.94	0.48
2:B4:416:GLY:HA3	4:Q:1383:LEU:HD11	1.94	0.48
3:C1:7:VAL:HB	3:C1:135:ILE:HG13	1.95	0.48
3:C1:57:GLY:HA3	7:i:83:PRO:HB2	1.95	0.48
3:C1:219:THR:HA	2:C2:326:LYS:HZ1	1.77	0.48
3:C5:35:THR:HG22	8:k:44:SER:HB3	1.93	0.48
2:C6:137:MET:HE1	2:C6:154:LEU:HB2	1.95	0.48
3:C7:113:ILE:HA	3:C7:116:VAL:HG12	1.95	0.48
3:C7:416:ASN:HA	3:C7:419:VAL:HG22	1.95	0.48
3:C9:156:ARG:HH21	3:C9:164:MET:HG3	1.78	0.48
3:C9:171:PRO:HG2	3:C9:185:ALA:HB2	1.95	0.48
3:D3:156:ARG:HE	3:D3:164:MET:HG3	1.78	0.48
2:D6:27:GLU:CD	2:D6:243:ARG:HH12	2.21	0.48
3:D7:318:ARG:HA	3:D7:354:CYS:HB2	1.95	0.48
3:E1:13:GLY:HA2	3:E1:136:THR:HG22	1.94	0.48
3:E9:271:ALA:HB1	3:E9:292:GLN:HB3	1.95	0.48
2:F0:177:VAL:HA	3:F1:331:LEU:HD21	1.95	0.48
7:c:115:LEU:HD22	7:c:152:LYS:HZ2	1.78	0.48
8:k:36:LEU:HD23	8:k:72:ILE:HB	1.95	0.48
7:n:146:ARG:HH22	7:n:158:THR:HA	1.77	0.48
3:A1:138:SER:HB3	11:A1:501:GDP:H5'	1.96	0.48
2:A6:387:VAL:HA	2:A6:390:ARG:NH1	2.28	0.48
3:A9:290:THR:HG21	3:A9:329:GLN:HB3	1.94	0.48
3:A9:326:VAL:O	3:A9:330:MET:HG2	2.13	0.48
3:D3:91:VAL:HG11	3:D3:116:VAL:HG22	1.95	0.48
2:E2:259:LEU:HD22	2:E2:316:CYS:HB2	1.96	0.48
2:E4:70:LEU:HD12	2:E4:99:ALA:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:l:80:GLU:O	8:l:84:GLU:HG2	2.12	0.48
8:l:99:SER:HB2	8:l:102:ARG:HB3	1.95	0.48
7:n:14:LYS:HA	7:n:47:LEU:HD13	1.95	0.48
7:v:114:SER:HB3	7:v:136:LEU:HD13	1.95	0.48
2:A0:362:VAL:HB	2:A0:370:LYS:HB3	1.96	0.48
3:B5:171:PRO:HG2	3:B5:185:ALA:HB2	1.95	0.48
3:B5:293:MET:SD	3:B5:367:PHE:HB2	2.53	0.48
3:B7:193:VAL:HG11	3:B7:418:LEU:HD22	1.95	0.48
2:C2:210:TYR:CG	3:C3:324:LYS:HD3	2.48	0.48
3:C9:215:LEU:HD21	3:C9:273:LEU:HD22	1.96	0.48
3:E1:167:PHE:CE2	3:E1:233:MET:HG2	2.48	0.48
3:E3:117:LEU:HA	3:E3:120:VAL:HG12	1.95	0.48
1:K:244:GLN:HE22	7:o:162:GLY:HA3	1.79	0.48
7:h:10:LEU:HG	7:h:47:LEU:HD11	1.95	0.48
8:l:29:PHE:HB3	8:l:34:VAL:HG21	1.94	0.48
7:v:84:LYS:HB2	7:v:168:PRO:HD3	1.94	0.48
3:A5:207:LEU:HB3	3:A5:225:LEU:HD22	1.96	0.48
3:B7:252:LYS:HG3	3:B7:350:LYS:NZ	2.28	0.48
2:C2:212:ILE:HG23	2:C2:216:ASN:HD22	1.77	0.48
2:C4:384:ILE:HD12	2:C4:387:VAL:HG21	1.95	0.48
1:E:223:PRO:HG3	7:h:178:ARG:HD2	1.95	0.48
4:L:1252:LEU:HD11	4:L:1442:TYR:HD1	1.79	0.48
4:W:1276:LEU:C	4:W:1284:TRP:HE1	2.21	0.48
7:f:97:ARG:HH12	7:h:161:TYR:HA	1.77	0.48
7:p:50:PHE:HB2	7:p:65:GLN:HG3	1.95	0.48
7:q:14:LYS:HB3	7:q:47:LEU:HD13	1.95	0.48
2:A8:53:PHE:HB3	2:A8:61:HIS:HB3	1.96	0.48
2:B0:310:GLY:HA3	2:B0:383:ALA:HB2	1.95	0.48
2:B0:407:TRP:HE1	3:B1:258:ILE:HB	1.77	0.48
2:B4:406:HIS:HA	2:B4:409:VAL:HG22	1.94	0.48
3:B9:3:GLU:HA	3:B9:49:VAL:HA	1.96	0.48
2:C4:181:VAL:HG12	3:C5:256:ASN:HB2	1.95	0.48
2:D6:249:ASN:C	2:D6:249:ASN:HD22	2.19	0.48
3:E1:290:THR:HG22	3:E1:293:MET:HE2	1.96	0.48
3:E3:193:VAL:HG11	3:E3:418:LEU:HD11	1.96	0.48
2:E4:265:ILE:HG22	2:E4:380:ASN:HD21	1.77	0.48
2:E8:248:LEU:HB2	2:E8:355:ILE:H	1.79	0.48
2:F0:286:LEU:HD13	2:F0:371:VAL:HG23	1.96	0.48
7:d:55:LEU:HD11	7:d:111:ILE:HD12	1.96	0.48
7:h:64:PRO:HD2	7:h:67:HIS:CE1	2.49	0.48
7:q:37:GLN:HE22	7:q:40:PRO:HA	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:q:185:ILE:HD13	7:q:195:ALA:HB3	1.95	0.48
7:r:79:ASP:HB3	7:r:82:ASP:HB2	1.95	0.48
2:A2:33:ASP:HB3	6:R:90:TRP:HZ3	1.78	0.48
3:A3:117:LEU:HA	3:A3:120:VAL:HG12	1.95	0.48
3:A5:117:LEU:HA	3:A5:120:VAL:HG12	1.96	0.48
3:B1:156:ARG:HH22	3:B1:197:ASP:HB2	1.78	0.48
3:B3:7:VAL:HB	3:B3:135:ILE:HG13	1.95	0.48
3:B7:293:MET:HE1	3:B7:315:ALA:HB2	1.94	0.48
3:B9:398:TYR:HB3	3:B9:403:MET:HE2	1.94	0.48
2:C2:377:MET:HE3	2:C2:379:SER:HB3	1.95	0.48
3:C5:36:TYR:HD2	8:k:47:ALA:HB1	1.79	0.48
2:C6:404:PHE:HZ	3:C7:312:THR:HG21	1.78	0.48
3:C7:7:VAL:HG11	3:C7:151:LEU:HD22	1.95	0.48
3:C9:149:THR:HA	3:C9:152:ILE:HG12	1.95	0.48
2:E8:126:ALA:HA	2:E8:132:LEU:HD21	1.96	0.48
2:E8:286:LEU:HD21	2:E8:371:VAL:HG23	1.96	0.48
7:v:95:TYR:HE1	7:v:197:LEU:HD23	1.79	0.48
3:A9:330:MET:HE3	3:A9:351:SER:HB3	1.95	0.48
2:B8:422:ARG:HH12	2:B8:425:LEU:HD22	1.78	0.48
2:C4:178:SER:HB3	3:C5:347:ASN:ND2	2.29	0.48
2:D6:11:GLN:HE22	3:D7:246:LEU:HD12	1.78	0.48
2:E4:31:GLN:HE22	2:E4:37:PRO:HD3	1.79	0.48
6:T:120:GLU:HA	6:T:127:ARG:HH22	1.79	0.48
7:b:95:TYR:HE1	7:b:197:LEU:HD23	1.79	0.48
7:d:183:LEU:HD23	7:d:196:LEU:HA	1.96	0.48
7:g:183:LEU:HD13	7:g:196:LEU:HA	1.96	0.48
7:o:97:ARG:HH12	7:q:5:VAL:HG12	1.79	0.48
7:x:9:PRO:HA	7:x:12:VAL:HG22	1.96	0.48
3:A1:235:GLY:HA3	3:A1:366:THR:HG21	1.95	0.48
2:A2:181:VAL:HG12	3:A3:256:ASN:OD1	2.14	0.48
3:A7:173:PRO:HB3	3:A7:380:ARG:HD2	1.95	0.48
2:A8:398:MET:HE3	3:A9:346:PRO:HD2	1.96	0.48
2:B0:80:THR:HA	2:B0:84:ARG:HE	1.78	0.48
3:B3:8:GLN:OE1	3:B3:17:GLY:HA3	2.12	0.48
3:B7:57:GLY:HA3	7:g:83:PRO:HB2	1.95	0.48
2:B8:33:ASP:HB2	7:h:103:GLY:HA2	1.96	0.48
3:C9:219:THR:HA	2:D0:326:LYS:NZ	2.29	0.48
3:D1:237:THR:HG23	3:D1:240:LEU:HD12	1.96	0.48
2:D4:320:ARG:HG2	2:D4:360:PRO:HD3	1.96	0.48
2:D6:420:GLU:HA	2:D6:423:GLU:HB3	1.95	0.48
3:D7:173:PRO:HD2	3:D7:380:ARG:HH21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E1:21:TRP:HA	3:E1:24:ILE:HG22	1.94	0.48
3:E3:68:LEU:HD21	3:E3:109:GLY:HA2	1.95	0.48
3:E5:170:PHE:HE1	3:E5:378:PHE:HE1	1.62	0.48
3:E5:325:GLU:HA	3:E5:328:GLU:HG3	1.96	0.48
2:F0:288:VAL:HG21	2:F0:323:VAL:HG23	1.95	0.48
1:G:235:LEU:HD12	1:G:236:PRO:HD2	1.95	0.48
1:H:215:TYR:O	1:H:219:TYR:HB2	2.14	0.48
7:e:64:PRO:HD2	7:e:67:HIS:CE1	2.49	0.48
7:i:10:LEU:HD13	7:i:147:HIS:HB2	1.95	0.48
7:m:92:LEU:HA	7:m:196:LEU:HD21	1.94	0.48
7:n:142:GLU:HA	7:n:145:LYS:HG2	1.94	0.48
7:n:172:VAL:HG23	7:n:180:ALA:HB3	1.96	0.48
7:s:75:LEU:HD23	7:s:111:ILE:HB	1.95	0.48
7:v:50:PHE:HD2	7:v:65:GLN:HG3	1.78	0.48
7:v:91:PHE:CD1	7:v:193:ASP:HB3	2.49	0.48
3:A1:102:ALA:HB2	3:A1:403:MET:HE2	1.95	0.47
3:A1:113:ILE:HA	3:A1:116:VAL:HG22	1.95	0.47
2:A8:107:HIS:CE1	2:A8:151:CYS:HB3	2.49	0.47
3:A9:171:PRO:HG2	3:A9:185:ALA:HB2	1.95	0.47
2:D0:166:LYS:H	2:D0:199:ASP:HB2	1.79	0.47
3:D1:316:MET:HE3	3:D1:316:MET:HB3	1.71	0.47
2:D6:181:VAL:H	3:D7:256:ASN:HD22	1.61	0.47
2:D8:203:MET:HE3	2:D8:267:PHE:HD2	1.79	0.47
3:E1:57:GLY:HA3	7:s:83:PRO:HB2	1.95	0.47
3:E1:268:ILE:HG12	3:E1:368:VAL:HG22	1.96	0.47
3:E9:224:ASP:HA	3:E9:227:HIS:HB3	1.96	0.47
7:d:134:ILE:HD13	7:d:140:LEU:HD22	1.96	0.47
7:i:172:VAL:HG23	7:i:180:ALA:HB3	1.95	0.47
7:j:149:ARG:HH11	7:j:161:TYR:HB3	1.77	0.47
7:s:140:LEU:HA	7:s:143:ILE:HG22	1.96	0.47
2:A2:136:LEU:HD22	2:A2:169:PHE:HE2	1.79	0.47
2:A6:208:ALA:HA	2:A6:304:LYS:HE3	1.95	0.47
2:A6:323:VAL:HG13	2:A6:355:ILE:HG23	1.96	0.47
2:C4:262:TYR:HB2	2:C4:265:ILE:HD13	1.96	0.47
2:C8:104:ALA:HB2	2:C8:413:MET:HE3	1.96	0.47
3:D3:47:ILE:HG12	3:D3:51:TYR:HB2	1.95	0.47
2:D8:310:GLY:HA3	2:D8:383:ALA:HB2	1.96	0.47
3:E3:8:GLN:HE22	3:E3:63:ALA:HB1	1.78	0.47
2:E6:328:VAL:HG21	2:E6:355:ILE:HG12	1.96	0.47
3:F1:417:ASP:O	3:F1:421:GLU:HG3	2.14	0.47
7:j:175:SER:HA	7:j:206:PHE:HE1	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:m:73:VAL:HA	7:m:109:GLU:O	2.14	0.47
7:r:170:VAL:HG23	7:r:183:LEU:HB2	1.95	0.47
2:A2:9:VAL:HG13	2:A2:146:GLY:HA2	1.95	0.47
2:A6:395:PHE:HD2	2:A6:422:ARG:HH21	1.61	0.47
3:A9:42:LEU:HD21	1:C:245:SER:HB3	1.96	0.47
2:B0:88:HIS:HB3	2:B0:91:GLN:HG2	1.95	0.47
3:B1:28:HIS:HA	3:B1:43:GLN:HG2	1.96	0.47
2:B4:364:PRO:HG2	1:E:222:LYS:HB3	1.96	0.47
3:B5:375:GLN:HE21	3:B5:419:VAL:HG13	1.78	0.47
2:C2:189:LEU:HD21	2:C2:418:PHE:HA	1.97	0.47
3:C3:5:VAL:HG23	3:C3:130:LEU:HD11	1.95	0.47
2:D4:88:HIS:CE1	2:D4:90:GLU:HG3	2.49	0.47
2:E6:12:ALA:HB3	2:E6:140:ALA:HB2	1.96	0.47
3:E7:49:VAL:HG11	3:E7:241:ARG:HG2	1.95	0.47
1:J:207:LEU:HD12	1:J:208:PRO:HD2	1.95	0.47
5:P:465:LEU:HD12	5:P:466:VAL:HG23	1.95	0.47
7:h:79:ASP:HB3	7:h:82:ASP:HB2	1.96	0.47
8:k:131:LEU:HB2	8:k:144:MET:HB3	1.96	0.47
7:x:13:GLU:HA	7:x:16:ARG:HG2	1.96	0.47
3:A5:361:LEU:HD12	5:P:285:GLN:HG2	1.97	0.47
2:B0:276:ILE:HD12	2:B0:281:ALA:HA	1.96	0.47
2:B4:5:ILE:HG23	2:B4:125:LEU:HD22	1.97	0.47
3:C1:65:LEU:HB3	3:C1:73:MET:HE1	1.95	0.47
2:C6:200:VAL:HG13	2:C6:268:MET:HE2	1.96	0.47
2:D8:12:ALA:HB3	2:D8:140:ALA:HB2	1.96	0.47
4:M:1401:ARG:HH21	4:V:1321:ILE:HD12	1.79	0.47
7:e:90:PRO:HA	7:e:93:LEU:HD12	1.95	0.47
7:f:78:ALA:HB3	7:f:112:PHE:HE1	1.79	0.47
2:A0:67:PHE:HB2	2:A0:92:LEU:HG	1.97	0.47
2:A4:88:HIS:HD2	2:A4:91:GLN:HB2	1.79	0.47
3:A9:281:TYR:HD2	3:B3:87:PRO:HD3	1.80	0.47
2:B2:53:PHE:HB3	2:B2:61:HIS:HB3	1.96	0.47
3:B5:58:ARG:HH21	3:B5:84:LEU:HD12	1.80	0.47
3:C3:68:LEU:HA	3:C3:93:GLY:HA3	1.95	0.47
3:D1:377:MET:HA	3:D1:380:ARG:HD2	1.96	0.47
2:E6:209:ILE:HG22	2:E6:227:LEU:HD22	1.95	0.47
2:F0:414:GLU:HG3	2:F0:417:GLU:HG2	1.95	0.47
4:L:1248:THR:HG23	4:L:1438:LEU:HD13	1.97	0.47
6:U:116:GLU:O	6:U:120:GLU:HG2	2.14	0.47
7:b:153:GLU:N	7:b:164:ARG:HH12	2.09	0.47
7:d:15:ARG:HG2	7:d:45:MET:HE1	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:e:99:MET:HE1	7:e:201:TRP:CD1	2.48	0.47
7:f:64:PRO:HD2	7:f:67:HIS:CE1	2.49	0.47
7:g:134:ILE:HD13	7:g:140:LEU:HD23	1.95	0.47
7:i:151:MET:HE3	7:i:152:LYS:HB2	1.96	0.47
2:A0:34:GLY:HA3	2:A0:60:LYS:HZ3	1.80	0.47
3:A1:198:GLU:HG2	3:A1:266:PHE:HE2	1.80	0.47
3:A3:2:ARG:HG2	3:A3:131:GLN:HE22	1.79	0.47
3:A5:32:PRO:HD3	3:A5:81:PHE:CE1	2.50	0.47
3:B3:244:GLY:HA2	3:B3:355:ASP:HB2	1.97	0.47
3:B5:97:ALA:HA	3:B5:103:LYS:HE2	1.95	0.47
2:C0:183:GLU:HG2	2:C0:184:PRO:HD3	1.96	0.47
4:W:1222:TRP:HZ2	4:W:1316:GLN:HG3	1.79	0.47
8:l:40:LYS:HE3	8:l:43:HIS:HB2	1.97	0.47
8:l:73:TYR:HB2	8:l:92:TRP:NE1	2.30	0.47
7:p:10:LEU:O	7:p:14:LYS:HB2	2.14	0.47
7:w:184:PRO:HB2	7:w:189:LEU:HB2	1.96	0.47
2:A0:282:TYR:CE1	7:a:202:ARG:HD2	2.49	0.47
2:A2:7:ILE:HG23	2:A2:137:MET:HG3	1.96	0.47
3:A3:7:VAL:HB	3:A3:135:ILE:HG13	1.96	0.47
3:A3:183:TYR:HB3	3:A3:398:TYR:HE2	1.80	0.47
3:A3:313:ALA:HB3	3:A3:349:MET:HB3	1.97	0.47
3:A5:32:PRO:HA	3:A5:84:LEU:HD13	1.96	0.47
2:A8:402:ARG:HG3	2:A8:405:VAL:HG21	1.95	0.47
2:B0:2:ARG:HG2	2:B0:51:THR:HG22	1.97	0.47
2:B0:76:ASP:HA	2:B0:79:ARG:HG2	1.96	0.47
3:B3:20:PHE:HA	3:B3:230:SER:OG	2.15	0.47
2:B4:73:THR:HB	3:B5:2:ARG:HH22	1.78	0.47
3:B5:113:ILE:HA	3:B5:116:VAL:HG12	1.96	0.47
2:B6:265:ILE:HG13	2:B6:432:TYR:CZ	2.50	0.47
3:C3:205:GLU:HA	3:C3:208:TYR:HB2	1.97	0.47
2:C6:247:ALA:HB3	2:C6:355:ILE:HB	1.96	0.47
2:C8:210:TYR:CE2	3:C9:324:LYS:HD2	2.50	0.47
2:D0:217:LEU:HG	2:D0:275:ILE:HG22	1.96	0.47
2:D0:287:SER:HA	2:D0:373:ARG:HH11	1.80	0.47
3:D3:163:ILE:HD11	3:D3:251:ARG:HG3	1.95	0.47
3:D5:60:VAL:HG21	3:D5:86:ARG:HG3	1.97	0.47
2:D6:151:CYS:SG	2:D6:193:SER:HB3	2.54	0.47
3:D7:20:PHE:HA	3:D7:230:SER:HB2	1.97	0.47
2:D8:274:PRO:HG3	2:D8:374:ALA:HA	1.95	0.47
2:E0:66:VAL:HG11	2:E0:122:ILE:HD11	1.97	0.47
3:E7:276:ARG:NH1	3:E7:276:ARG:HA	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E8:409:VAL:HA	2:E8:413:MET:HB2	1.97	0.47
3:E9:206:ALA:O	3:E9:210:ILE:HG12	2.15	0.47
2:F0:262:TYR:HB2	2:F0:265:ILE:HG12	1.97	0.47
6:T:117:THR:O	6:T:121:TYR:HB2	2.14	0.47
7:d:97:ARG:HD3	7:f:161:TYR:CE1	2.50	0.47
7:g:8:SER:HB2	7:g:147:HIS:HA	1.97	0.47
7:h:37:GLN:HE22	7:h:41:ASN:H	1.63	0.47
7:h:141:THR:O	7:h:145:LYS:HG3	2.14	0.47
8:k:15:ARG:HB3	8:k:22:VAL:HG13	1.96	0.47
8:k:65:GLU:HB2	7:m:42:TYR:H	1.79	0.47
7:m:184:PRO:HD2	7:m:195:ALA:HB1	1.96	0.47
7:n:51:PRO:HG2	7:n:54:SER:HB3	1.96	0.47
7:o:9:PRO:HA	7:o:12:VAL:HG22	1.96	0.47
7:o:99:MET:HE1	7:o:201:TRP:CE2	2.50	0.47
7:r:75:LEU:O	7:r:170:VAL:HA	2.13	0.47
3:A1:279:GLN:HB3	5:O:231:PRO:HG3	1.96	0.47
3:A7:198:GLU:HA	3:A7:264:HIS:HB2	1.96	0.47
3:B7:164:MET:HB3	3:B7:197:ASP:H	1.80	0.47
3:B9:12:CYS:HB3	3:B9:138:SER:HB2	1.96	0.47
2:C4:325:PRO:HG3	5:O:458:ARG:HE	1.79	0.47
2:C8:177:VAL:HG11	2:C8:210:TYR:HE1	1.80	0.47
3:D7:32:PRO:HA	3:D7:84:LEU:HD11	1.97	0.47
3:D9:117:LEU:HA	3:D9:120:VAL:HG12	1.96	0.47
2:E8:394:LYS:HZ3	2:E8:397:LEU:HB3	1.78	0.47
3:E9:65:LEU:HD22	3:E9:90:PHE:HE1	1.79	0.47
3:F1:217:LEU:HD23	6:R:174:ARG:HH12	1.80	0.47
7:h:115:LEU:HD21	7:h:145:LYS:HD3	1.97	0.47
2:A4:214:ARG:NH1	2:A4:215:ARG:HG3	2.29	0.47
3:A7:213:ARG:HD2	3:A7:297:LYS:HD2	1.96	0.47
3:A9:259:PRO:HG2	3:A9:311:LEU:HD21	1.97	0.47
2:B0:140:ALA:HA	2:B0:171:SER:HB3	1.96	0.47
3:B1:280:GLN:HE22	3:B5:58:ARG:HD2	1.80	0.47
3:B1:318:ARG:HE	3:B1:358:PRO:HD3	1.80	0.47
2:B4:67:PHE:HB2	2:B4:92:LEU:HA	1.97	0.47
2:B8:184:PRO:HG3	2:B8:394:LYS:HE3	1.97	0.47
3:B9:263:LEU:HB2	3:B9:422:TYR:HE1	1.79	0.47
2:C0:17:GLY:HA2	2:C0:20:CYS:HB3	1.97	0.47
2:C0:53:PHE:HB3	2:C0:61:HIS:HB3	1.96	0.47
3:C1:321:MET:HE2	3:C1:321:MET:HB3	1.75	0.47
3:C7:281:TYR:CD2	3:D1:87:PRO:HD3	2.43	0.47
3:C9:198:GLU:HG2	3:C9:266:PHE:HE2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D3:293:MET:HA	3:D3:298:ASN:HD22	1.80	0.47
2:D4:318:MET:HB2	2:D4:376:CYS:HB3	1.96	0.47
2:D8:135:PHE:CE2	2:D8:164:LYS:HE2	2.49	0.47
2:D8:429:GLU:HA	2:D8:432:TYR:HD2	1.80	0.47
2:E8:16:ILE:HD11	2:E8:231:ILE:HG21	1.97	0.47
3:F1:68:LEU:HD12	3:F1:143:THR:HG22	1.97	0.47
7:a:140:LEU:HA	7:a:143:ILE:HG22	1.96	0.47
7:e:63:ILE:HG23	7:e:67:HIS:ND1	2.29	0.47
7:f:75:LEU:HD23	7:f:111:ILE:HB	1.96	0.47
7:m:115:LEU:HD12	7:m:167:VAL:HB	1.97	0.47
7:m:134:ILE:HG12	7:m:140:LEU:HD23	1.96	0.47
7:u:112:PHE:HB3	7:u:133:SER:HB2	1.97	0.47
7:v:55:LEU:HD23	7:v:132:LEU:HD13	1.96	0.47
2:A0:395:PHE:CD1	2:A0:422:ARG:HD3	2.50	0.47
3:B1:259:PRO:HG2	3:B1:311:LEU:HD21	1.97	0.47
3:B5:318:ARG:HG2	3:B5:354:CYS:HB3	1.96	0.47
2:B8:258:ASN:ND2	2:B8:352:LYS:HD2	2.30	0.47
3:B9:131:GLN:HE22	3:B9:249:ASP:HB3	1.80	0.47
3:B9:392:LYS:HG3	3:B9:395:LEU:HD12	1.96	0.47
3:C5:10:GLY:HA2	3:C5:143:THR:HB	1.97	0.47
2:D2:280:LYS:HE3	2:D6:90:GLU:OE1	2.15	0.47
3:D9:213:ARG:HH12	3:D9:297:LYS:HE3	1.80	0.47
2:E0:189:LEU:HD13	2:E0:413:MET:HE1	1.96	0.47
2:E2:36:MET:HE2	2:E2:61:HIS:NE2	2.30	0.47
2:E6:68:LEU:HD11	2:E6:118:SER:HB2	1.95	0.47
2:E6:274:PRO:HG3	2:E6:374:ALA:HA	1.97	0.47
3:E7:187:LEU:HD13	3:E7:403:MET:HE1	1.97	0.47
3:E9:221:THR:HG22	2:F0:324:VAL:HG23	1.97	0.47
7:d:64:PRO:HD2	7:d:67:HIS:CD2	2.51	0.47
7:i:41:ASN:O	7:i:45:MET:HB2	2.15	0.47
7:s:9:PRO:HG3	7:s:146:ARG:HH21	1.79	0.47
7:t:8:SER:HB2	7:t:147:HIS:HA	1.97	0.47
3:A1:252:LYS:HB3	3:A1:350:LYS:HZ1	1.80	0.46
2:A2:272:TYR:HD2	2:A2:275:ILE:HG23	1.80	0.46
3:A3:383:ASP:HA	3:A3:386:THR:HG22	1.97	0.46
2:B2:310:GLY:HA3	2:B2:383:ALA:HB2	1.97	0.46
3:B5:73:MET:HE1	3:B5:92:PHE:HA	1.97	0.46
2:B6:387:VAL:HA	2:B6:390:ARG:NH1	2.31	0.46
3:B7:179:VAL:HG12	2:B8:258:ASN:OD1	2.15	0.46
3:B7:376:GLU:HA	3:B7:379:LYS:HG2	1.95	0.46
2:B8:99:ALA:HA	2:B8:110:ILE:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B9:49:VAL:HG11	3:B9:241:ARG:HG2	1.97	0.46
3:B9:349:MET:HE1	3:B9:367:PHE:HE1	1.80	0.46
2:C0:298:PRO:HB3	2:C0:307:PRO:HD2	1.97	0.46
2:C2:205:ASP:HB3	2:C2:303:ALA:HA	1.97	0.46
3:C9:97:ALA:HA	3:C9:103:LYS:HE2	1.96	0.46
3:E5:149:THR:HG21	3:E5:188:SER:HB2	1.96	0.46
6:T:128:ARG:HG3	6:T:132:LYS:HE2	1.97	0.46
7:f:115:LEU:HD21	7:f:145:LYS:HD3	1.97	0.46
7:j:88:LEU:HD22	7:j:185:ILE:HG21	1.97	0.46
7:m:136:LEU:HA	7:m:141:THR:HG21	1.96	0.46
7:r:15:ARG:O	7:r:19:GLU:HB3	2.15	0.46
3:A3:284:LEU:HD12	5:P:232:PHE:HZ	1.79	0.46
3:A5:272:PRO:HG3	3:A5:364:SER:HA	1.97	0.46
3:A9:42:LEU:HD22	3:A9:356:ILE:HD11	1.96	0.46
2:C2:315:CYS:HB3	2:C2:377:MET:HE1	1.97	0.46
3:C5:14:ASN:HB3	3:C5:76:VAL:HG21	1.97	0.46
3:D3:377:MET:HG2	3:D3:380:ARG:HD3	1.97	0.46
2:E0:11:GLN:HG3	2:E0:74:VAL:HG21	1.97	0.46
3:E3:178:THR:HB	3:E3:181:GLU:HB3	1.96	0.46
11:E5:501:GDP:C8	2:E6:248:LEU:HD21	2.50	0.46
3:E7:28:HIS:HE2	3:E7:241:ARG:HH11	1.62	0.46
2:E8:274:PRO:HG3	2:E8:374:ALA:HA	1.97	0.46
3:E9:276:ARG:HA	3:E9:279:GLN:HG2	1.96	0.46
2:F0:274:PRO:HB2	2:F0:276:ILE:HG12	1.97	0.46
3:F1:198:GLU:HG3	3:F1:200:GLN:HE22	1.80	0.46
4:Q:1438:LEU:HA	4:Q:1441:LEU:HD12	1.97	0.46
6:R:132:LYS:HA	6:R:136:GLN:HB2	1.97	0.46
4:V:1230:LYS:HG3	4:V:1277:THR:HG21	1.97	0.46
7:c:9:PRO:HB2	7:c:143:ILE:HG13	1.97	0.46
7:g:69:LYS:HA	7:g:206:PHE:HB3	1.96	0.46
7:g:117:ARG:HH12	7:g:152:LYS:HE2	1.80	0.46
7:m:23:LEU:HD23	7:m:23:LEU:HA	1.76	0.46
2:A2:373:ARG:CZ	5:P:255:LYS:HD2	2.46	0.46
2:A4:60:LYS:HD2	2:A4:60:LYS:HA	1.76	0.46
2:C0:209:ILE:HD13	2:C0:231:ILE:HD11	1.97	0.46
2:C4:200:VAL:HA	2:C4:266:HIS:HB2	1.96	0.46
2:C4:209:ILE:HA	2:C4:212:ILE:HG12	1.96	0.46
2:C4:272:TYR:HB3	2:C4:275:ILE:HD11	1.96	0.46
3:D1:51:TYR:HE1	3:D1:61:PRO:HG3	1.81	0.46
2:D8:53:PHE:HB3	2:D8:61:HIS:HB3	1.97	0.46
2:D8:229:ARG:HH12	2:D8:366:GLY:HA2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E1:200:GLN:HG2	3:E1:268:ILE:HD11	1.98	0.46
3:E1:385:PHE:HZ	3:E1:408:PHE:HB3	1.81	0.46
7:v:75:LEU:HD23	7:v:111:ILE:HB	1.97	0.46
2:A0:322:ASP:HB3	2:A0:373:ARG:NH2	2.30	0.46
3:A5:57:GLY:HA3	7:a:83:PRO:HB2	1.97	0.46
2:A8:88:HIS:HB3	2:A8:91:GLN:HG3	1.97	0.46
2:B2:105:ARG:HG3	2:B2:110:ILE:HD13	1.96	0.46
3:B3:156:ARG:HA	3:B3:156:ARG:HD2	1.63	0.46
3:B3:190:HIS:CE1	3:B3:414:ASN:HD22	2.32	0.46
3:C5:143:THR:HG23	3:C5:147:MET:HE2	1.97	0.46
2:C8:154:LEU:HD23	2:C8:154:LEU:HA	1.80	0.46
1:D:218:ASP:HB2	2:D8:363:VAL:HB	1.96	0.46
1:D:239:LEU:HD21	3:D7:357:PRO:HG2	1.98	0.46
3:D1:269:GLY:HA2	3:D1:300:MET:HE2	1.96	0.46
2:D8:401:LYS:HB2	3:D9:344:TRP:CH2	2.51	0.46
2:E0:328:VAL:HG21	2:E0:355:ILE:HD11	1.97	0.46
3:E7:41:ASP:CG	7:v:94:ASN:HD22	2.23	0.46
7:g:3:GLN:HE22	7:g:179:GLU:H	1.62	0.46
8:k:15:ARG:HB2	8:k:24:VAL:HB	1.97	0.46
7:q:111:ILE:HD13	7:q:132:LEU:HB2	1.97	0.46
7:s:191:GLU:HG2	7:s:195:ALA:HB2	1.96	0.46
2:A2:33:ASP:HB3	6:R:90:TRP:CZ3	2.51	0.46
2:A2:307:PRO:HB2	2:A2:312:TYR:HE1	1.81	0.46
3:A3:113:ILE:HA	3:A3:116:VAL:HG22	1.97	0.46
2:A4:180:ALA:HB3	2:A4:183:GLU:HG3	1.98	0.46
2:A4:318:MET:HB2	2:A4:376:CYS:HB3	1.96	0.46
3:A5:19:LYS:HA	3:A5:22:GLU:HB2	1.97	0.46
2:A8:208:ALA:HA	2:A8:304:LYS:HE2	1.97	0.46
3:A9:97:ALA:HA	3:A9:103:LYS:HD2	1.97	0.46
2:B0:70:LEU:HD12	2:B0:145:THR:HG22	1.96	0.46
2:B0:397:LEU:HD11	3:B1:346:PRO:HD3	1.98	0.46
3:B7:68:LEU:HA	3:B7:93:GLY:HA3	1.97	0.46
3:C3:344:TRP:CD1	3:C3:344:TRP:H	2.33	0.46
3:C5:113:ILE:HA	3:C5:116:VAL:HG12	1.97	0.46
3:D7:276:ARG:HD2	5:P:551:GLU:HA	1.98	0.46
3:E1:35:THR:HG22	7:s:83:PRO:HG3	1.97	0.46
2:E4:407:TRP:CH2	3:E5:258:ILE:HB	2.50	0.46
3:E7:273:LEU:HD23	3:E7:273:LEU:HA	1.79	0.46
2:E8:135:PHE:HB2	2:E8:166:LYS:HG2	1.97	0.46
6:R:110:ALA:HA	6:R:113:TRP:HD1	1.81	0.46
6:T:58:LEU:HA	6:T:61:TRP:HD1	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:V:1241:PHE:CD2	4:V:1242:PRO:HD3	2.51	0.46
4:V:1285:ARG:NE	4:V:1289:ARG:HH12	2.11	0.46
7:e:152:LYS:HD2	7:e:167:VAL:HG21	1.97	0.46
7:g:18:ASN:HA	7:g:21:ARG:HG2	1.97	0.46
7:g:96:TYR:HA	7:g:108:ILE:HD11	1.98	0.46
7:g:173:ILE:HD11	7:g:177:GLY:HA2	1.96	0.46
7:i:146:ARG:HD2	7:i:156:VAL:HG21	1.96	0.46
7:o:96:TYR:HA	7:o:108:ILE:HD11	1.98	0.46
2:A0:373:ARG:CZ	5:O:255:LYS:HZ2	2.28	0.46
2:A2:271:SER:HB3	2:A2:301:MET:HE2	1.97	0.46
3:A3:216:LYS:HB3	3:A3:275:SER:HB3	1.97	0.46
3:A5:273:LEU:HB2	3:A5:292:GLN:HE22	1.79	0.46
2:B2:269:LEU:HD22	2:B2:303:ALA:HB3	1.98	0.46
3:B3:101:TRP:HE1	3:B3:188:SER:HB3	1.81	0.46
2:B4:310:GLY:HA3	2:B4:383:ALA:HB2	1.98	0.46
3:B5:257:LEU:HD21	3:B5:314:SER:HB2	1.97	0.46
2:B6:76:ASP:HA	2:B6:79:ARG:HD2	1.98	0.46
3:B7:217:LEU:HD21	5:P:370:LEU:HD11	1.97	0.46
2:B8:79:ARG:HE	2:B8:92:LEU:HB3	1.81	0.46
1:C:229:LYS:HE2	1:C:229:LYS:HB2	1.78	0.46
3:C3:19:LYS:HZ3	3:C3:226:ASN:C	2.24	0.46
3:D1:3:GLU:HA	3:D1:49:VAL:HA	1.98	0.46
3:D1:272:PRO:HG3	3:D1:364:SER:HA	1.97	0.46
2:D2:27:GLU:HB2	2:D2:361:THR:HG21	1.98	0.46
2:D4:242:LEU:HD21	2:D4:251:ASP:HB2	1.97	0.46
3:D5:296:ALA:HB2	3:D5:306:ARG:HH12	1.79	0.46
2:D8:16:ILE:HD11	2:D8:138:PHE:HB3	1.98	0.46
4:V:1214:LEU:HD21	4:V:1448:ALA:HA	1.97	0.46
7:e:119:ARG:HH22	7:e:137:GLU:HG2	1.80	0.46
7:h:51:PRO:HD2	7:h:54:SER:HB2	1.97	0.46
3:A9:175:VAL:HG22	2:B0:333:ALA:HB2	1.97	0.46
2:B0:238:LEU:HD23	2:B0:318:MET:HG3	1.96	0.46
3:B3:182:PRO:HD2	3:B3:388:MET:HE1	1.98	0.46
2:B4:154:LEU:HB3	2:B4:197:HIS:HB3	1.97	0.46
2:B6:259:LEU:HD12	2:B6:268:MET:HE1	1.96	0.46
2:C6:105:ARG:HA	2:C6:109:THR:OG1	2.15	0.46
2:C6:154:LEU:HD11	2:C6:166:LYS:HD2	1.98	0.46
3:C7:390:ARG:NH1	3:C7:391:ARG:HB3	2.30	0.46
3:D1:2:ARG:HE	3:D1:2:ARG:HB2	1.62	0.46
3:D1:403:MET:HB3	3:D1:407:GLU:OE2	2.15	0.46
3:D3:57:GLY:HA3	7:o:83:PRO:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D5:316:MET:HG3	3:D5:352:SER:HB2	1.98	0.46
2:D6:276:ILE:HD11	2:D6:280:LYS:HD2	1.97	0.46
2:E0:105:ARG:HH22	3:E1:251:ARG:HD2	1.80	0.46
2:E4:282:TYR:CZ	7:w:202:ARG:HD2	2.51	0.46
3:E5:122:LYS:HB2	3:E5:122:LYS:HE2	1.72	0.46
2:E8:184:PRO:HB3	2:E8:391:MET:HE1	1.97	0.46
3:E9:49:VAL:HG11	3:E9:241:ARG:HG2	1.98	0.46
4:Q:1395:GLU:HG2	4:Q:1435:ARG:HH21	1.81	0.46
7:e:75:LEU:O	7:e:170:VAL:HA	2.16	0.46
8:l:84:GLU:HA	8:l:87:ARG:HG3	1.98	0.46
7:r:63:ILE:HD11	7:r:132:LEU:HD11	1.98	0.46
7:x:170:VAL:HG23	7:x:183:LEU:HB2	1.97	0.46
2:A0:109:THR:HG22	2:A0:110:ILE:H	1.81	0.46
2:A2:242:LEU:HD11	2:A2:252:VAL:HG23	1.98	0.46
3:A7:39:ASP:HA	7:b:90:PRO:HG3	1.97	0.46
3:A7:66:MET:HE3	3:A7:66:MET:HB2	1.86	0.46
3:B5:236:VAL:HA	3:B5:316:MET:HG3	1.96	0.46
3:C5:311:LEU:HD23	3:C5:342:VAL:HG11	1.96	0.46
3:C9:275:SER:HB3	3:C9:278:SER:HB2	1.97	0.46
3:D3:253:LEU:HD13	3:D3:316:MET:HE3	1.96	0.46
3:D3:392:LYS:HA	3:D3:392:LYS:HD3	1.73	0.46
3:E5:246:LEU:HD23	3:E5:352:SER:HA	1.97	0.46
3:E9:330:MET:HA	3:E9:333:VAL:HG22	1.97	0.46
2:F0:318:MET:HB2	2:F0:376:CYS:SG	2.56	0.46
3:F1:173:PRO:HG3	3:F1:380:ARG:HD3	1.98	0.46
3:F1:284:LEU:HB3	3:F1:362:LYS:HE2	1.97	0.46
4:Q:1285:ARG:HH12	4:Q:1294:VAL:HA	1.81	0.46
4:W:1254:ARG:O	4:W:1258:GLN:HG2	2.15	0.46
8:l:16:THR:HA	8:l:21:TYR:CE2	2.51	0.46
7:t:95:TYR:O	7:t:99:MET:HB3	2.15	0.46
7:u:42:TYR:HA	7:u:45:MET:HE2	1.98	0.46
3:A3:361:LEU:HD11	5:P:228:LEU:HD23	1.97	0.46
3:A5:51:TYR:HB3	3:A5:59:PHE:HB3	1.97	0.46
3:A5:395:LEU:HD21	3:A5:408:PHE:CE2	2.43	0.46
2:B0:407:TRP:CG	3:B1:255:VAL:HG23	2.51	0.46
3:B3:103:LYS:HA	3:B3:107:THR:HG22	1.97	0.46
3:C1:5:VAL:HB	3:C1:133:PHE:HD1	1.80	0.46
2:C4:70:LEU:HB2	2:C4:145:THR:HG21	1.98	0.46
2:C8:280:LYS:HZ2	2:D2:89:PRO:HD2	1.81	0.46
1:D:214:ALA:HB2	2:D8:225:THR:HG23	1.98	0.46
2:D2:141:VAL:HG12	2:D2:187:SER:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D3:303:SER:HB3	3:D3:377:MET:HE3	1.98	0.46
2:D4:363:VAL:HG23	2:D4:366:GLY:HA3	1.98	0.46
3:D7:107:THR:HG21	3:D7:401:GLU:HB2	1.97	0.46
2:D8:2:ARG:CZ	5:P:532:ARG:HH21	2.29	0.46
2:E0:258:ASN:HD22	2:E0:352:LYS:HD3	1.81	0.46
3:E1:164:MET:HB3	3:E1:197:ASP:H	1.81	0.46
3:E5:228:LEU:HD11	3:E5:273:LEU:HD21	1.98	0.46
2:E6:401:LYS:HZ1	3:E7:344:TRP:CG	2.33	0.46
2:F0:156:ARG:HA	2:F0:159:VAL:HG12	1.97	0.46
7:w:9:PRO:O	7:w:13:GLU:HG2	2.16	0.46
3:A1:200:GLN:HB3	3:A1:268:ILE:HG13	1.98	0.46
3:A1:388:MET:HB3	3:A1:393:ALA:HB3	1.96	0.46
2:A2:201:ALA:HB3	2:A2:267:PHE:HA	1.98	0.46
2:A2:210:TYR:CE1	3:A3:324:LYS:HD2	2.51	0.46
2:A2:407:TRP:CH2	3:A3:258:ILE:HG23	2.50	0.46
3:A7:25:SER:HB2	3:A7:30:ILE:HB	1.98	0.46
2:A8:180:ALA:HB3	2:A8:183:GLU:HG3	1.98	0.46
2:B0:320:ARG:HD3	2:B0:360:PRO:HG3	1.98	0.46
3:B5:272:PRO:HD3	3:B5:364:SER:HA	1.98	0.46
2:B6:286:LEU:HD11	2:B6:372:MET:H	1.80	0.46
3:B7:211:CYS:HA	3:B7:215:LEU:HB2	1.98	0.46
2:C0:247:ALA:HB3	2:C0:355:ILE:HB	1.97	0.46
3:C1:183:TYR:O	3:C1:187:LEU:HG	2.16	0.46
3:C3:149:THR:HA	3:C3:152:ILE:HG12	1.97	0.46
2:C8:198:THR:HG21	2:C8:201:ALA:HB2	1.98	0.46
2:C8:207:GLU:HA	2:C8:210:TYR:CD1	2.51	0.46
3:D3:30:ILE:HG23	3:D3:34:GLY:HA2	1.98	0.46
3:D3:171:PRO:HG2	3:D3:185:ALA:HB2	1.97	0.46
3:D3:272:PRO:HG2	3:D3:361:LEU:HD13	1.98	0.46
2:D4:218:ASP:HB3	7:r:194:ARG:NH2	2.30	0.46
2:D6:31:GLN:HG3	2:D6:37:PRO:HD3	1.98	0.46
2:E6:123:ARG:HH12	2:E6:127:ASP:HB3	1.81	0.46
3:F1:259:PRO:HG3	3:F1:311:LEU:HD22	1.97	0.46
4:Q:1395:GLU:HA	4:Q:1398:LEU:HG	1.98	0.46
6:R:127:ARG:HH11	6:R:128:ARG:NH1	2.13	0.46
7:f:115:LEU:HA	7:f:115:LEU:HD23	1.78	0.46
7:v:5:VAL:HG21	7:v:161:TYR:CE1	2.49	0.46
7:x:78:ALA:HB3	7:x:112:PHE:HE1	1.81	0.46
2:A0:175:PRO:HB3	2:A0:390:ARG:HD2	1.98	0.45
2:A2:100:ALA:HA	3:A3:252:LYS:HD3	1.97	0.45
2:A2:209:ILE:HD12	2:A2:227:LEU:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:131:GLN:HE22	3:A5:250:LEU:HB2	1.81	0.45
3:B5:105:HIS:CD2	3:B5:150:LEU:HD12	2.51	0.45
3:B9:8:GLN:HE22	3:B9:63:ALA:HB1	1.81	0.45
3:C3:19:LYS:HE3	3:C3:19:LYS:HB3	1.71	0.45
2:C8:209:ILE:HG23	2:C8:230:LEU:HD22	1.97	0.45
3:D1:16:ILE:HD11	3:D1:229:VAL:HG21	1.97	0.45
3:D1:253:LEU:HD11	3:D1:316:MET:SD	2.56	0.45
3:D3:149:THR:HG21	3:D3:188:SER:HB2	1.99	0.45
3:D3:177:ASP:HB2	2:D4:353:CYS:H	1.82	0.45
2:D4:360:PRO:HG3	2:D4:374:ALA:HB2	1.97	0.45
3:D5:70:PRO:HA	3:D5:73:MET:HE2	1.97	0.45
2:D6:10:GLY:HA2	2:D6:145:THR:HG23	1.98	0.45
2:D8:320:ARG:HH21	2:D8:360:PRO:HA	1.81	0.45
3:E1:201:VAL:HG21	3:E1:374:ILE:HD11	1.98	0.45
2:E2:230:LEU:HD23	2:E2:275:ILE:HD13	1.98	0.45
3:E5:282:ARG:HD3	3:E5:283:ALA:H	1.81	0.45
3:E9:34:GLY:HA3	3:E9:58:ARG:HG2	1.98	0.45
2:F0:362:VAL:HG11	2:F0:370:LYS:HG2	1.98	0.45
7:e:136:LEU:HA	7:e:141:THR:HG21	1.97	0.45
2:A6:194:LEU:HG	2:A6:267:PHE:HE2	1.80	0.45
3:A9:171:PRO:HB3	3:A9:181:GLU:HB3	1.97	0.45
2:B0:210:TYR:CD2	3:B1:324:LYS:HD3	2.51	0.45
2:B2:318:MET:HB2	2:B2:376:CYS:HB3	1.97	0.45
2:B4:26:LEU:HD11	2:B4:364:PRO:HD2	1.98	0.45
3:B5:192:LEU:HD21	3:B5:199:VAL:HG21	1.99	0.45
3:B7:230:SER:HA	3:B7:233:MET:HB3	1.98	0.45
2:C2:104:ALA:HA	2:C2:108:TYR:HD2	1.81	0.45
3:C3:7:VAL:HG22	3:C3:64:ILE:HD13	1.98	0.45
2:C6:101:ASN:HB3	2:C6:182:VAL:HG21	1.98	0.45
2:D0:222:PRO:HD2	3:D1:324:LYS:HZ2	1.82	0.45
3:D7:239:CYS:HB3	3:D7:248:SER:H	1.82	0.45
3:D9:282:ARG:HH12	3:D9:284:LEU:HD22	1.80	0.45
3:E7:312:THR:HA	3:E7:348:ASN:HB3	1.97	0.45
3:F1:108:GLU:O	3:F1:111:GLU:HG3	2.15	0.45
3:F1:353:VAL:HG12	3:F1:355:ASP:H	1.81	0.45
7:m:9:PRO:HB2	7:m:143:ILE:HG23	1.98	0.45
7:r:84:LYS:NZ	7:r:168:PRO:HD2	2.32	0.45
7:w:141:THR:O	7:w:145:LYS:HG2	2.16	0.45
2:A6:283:HIS:CE1	2:B0:85:HIS:O	2.69	0.45
3:A9:391:ARG:HD3	2:B0:346:TRP:CD1	2.51	0.45
2:B0:362:VAL:HG21	2:B0:370:LYS:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C9:220:PRO:HD2	2:D0:326:LYS:HZ3	1.82	0.45
2:D0:215:ARG:HH22	2:D0:300:SER:HB2	1.82	0.45
2:D2:36:MET:HG3	2:D2:61:HIS:CE1	2.52	0.45
2:D4:7:ILE:HG21	2:D4:153:LEU:HD21	1.98	0.45
3:D9:242:PHE:HB3	3:D9:356:ILE:HD13	1.97	0.45
3:E1:44:LEU:HA	3:E1:47:ILE:HG13	1.99	0.45
2:E4:144:GLY:H	9:E4:501:GTP:PG	2.40	0.45
3:E5:263:LEU:HB3	3:E5:370:ASN:HD21	1.82	0.45
2:E6:80:THR:HA	2:E6:84:ARG:HD2	1.98	0.45
3:E9:241:ARG:HH21	3:E9:242:PHE:HE1	1.64	0.45
7:b:199:TRP:HE1	7:b:201:TRP:HB3	1.82	0.45
7:c:142:GLU:HA	7:c:145:LYS:HB2	1.99	0.45
7:h:4:PRO:HG3	7:h:179:GLU:HB2	1.99	0.45
7:h:112:PHE:H	7:h:133:SER:HA	1.81	0.45
3:A1:220:PRO:HB2	5:O:223:ARG:NH1	2.31	0.45
3:A1:293:MET:HE1	3:A1:315:ALA:HA	1.99	0.45
3:A1:294:PHE:HD2	3:A1:333:VAL:HG21	1.81	0.45
2:B0:298:PRO:HA	2:B0:301:MET:HG2	1.96	0.45
3:B1:49:VAL:HG23	3:B1:50:PHE:HD1	1.81	0.45
1:C:245:SER:O	1:C:249:SER:HB3	2.17	0.45
2:C8:141:VAL:HG12	2:C8:187:SER:HA	1.97	0.45
3:D5:200:GLN:HB3	3:D5:268:ILE:HD11	1.98	0.45
2:D6:406:HIS:HA	2:D6:409:VAL:HG12	1.98	0.45
3:E1:192:LEU:HD21	3:E1:199:VAL:HG11	1.99	0.45
2:E2:82:THR:HA	7:t:98:THR:HG23	1.98	0.45
3:E5:12:CYS:HB2	3:E5:138:SER:HB2	1.99	0.45
3:E7:296:ALA:HB2	3:E7:305:PRO:HD2	1.99	0.45
3:E9:64:ILE:HA	3:E9:89:ASN:HB3	1.98	0.45
2:F0:224:TYR:CE2	3:F1:323:THR:HG21	2.51	0.45
7:f:41:ASN:O	7:f:45:MET:HG3	2.16	0.45
7:h:12:VAL:HG12	7:h:15:ARG:NH2	2.24	0.45
7:m:75:LEU:HA	7:m:111:ILE:O	2.17	0.45
7:q:78:ALA:HB3	7:q:112:PHE:HE1	1.81	0.45
7:r:194:ARG:HH12	7:r:198:ARG:HH21	1.65	0.45
2:A0:182:VAL:HG11	3:A1:255:VAL:HG12	1.99	0.45
2:A0:219:ILE:HG13	2:A0:222:PRO:HG3	1.98	0.45
3:A5:233:MET:HE2	3:A5:233:MET:HB3	1.78	0.45
3:B3:293:MET:HE1	3:B3:330:MET:HE1	1.98	0.45
3:B3:420:SER:HA	3:B3:423:GLN:HG2	1.98	0.45
3:B5:112:LEU:HD22	3:B5:147:MET:HE2	1.98	0.45
3:B5:284:LEU:HD23	3:B5:362:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B7:276:ARG:NH1	3:B7:276:ARG:HA	2.32	0.45
1:C:235:LEU:HD12	1:C:236:PRO:HD2	1.98	0.45
2:C0:54:SER:HB2	2:C0:64:ARG:HD3	1.98	0.45
2:C0:209:ILE:HA	2:C0:212:ILE:HG22	1.97	0.45
3:C1:164:MET:H	3:C1:197:ASP:HB3	1.82	0.45
2:C2:10:GLY:HA2	2:C2:145:THR:HG23	1.98	0.45
2:C2:409:VAL:HA	2:C2:413:MET:HB3	1.99	0.45
3:C3:259:PRO:HG2	3:C3:311:LEU:HD21	1.99	0.45
3:C3:320:ARG:HD2	3:C3:320:ARG:HA	1.72	0.45
2:C8:222:PRO:HG2	3:C9:324:LYS:HE3	1.99	0.45
2:D0:115:VAL:HG21	2:D0:152:LEU:HD23	1.99	0.45
2:D8:217:LEU:HD12	2:D8:277:SER:HB2	1.97	0.45
3:E3:104:GLY:HA2	3:E3:109:GLY:HA3	1.99	0.45
2:E8:323:VAL:HG23	2:E8:355:ILE:HG23	1.99	0.45
3:E9:117:LEU:HA	3:E9:120:VAL:HG12	1.99	0.45
4:M:1390:GLU:HG2	4:M:1393:ILE:HD11	1.98	0.45
7:b:184:PRO:HB2	7:b:189:LEU:HB3	1.99	0.45
7:d:4:PRO:HG3	7:d:179:GLU:HB2	1.99	0.45
7:g:184:PRO:HB2	7:g:189:LEU:HB2	1.97	0.45
8:l:79:ASP:HB3	8:l:82:ASP:HB2	1.98	0.45
7:n:105:ASN:HD21	7:p:37:GLN:HE22	1.63	0.45
7:p:10:LEU:HD12	7:p:147:HIS:CG	2.51	0.45
7:p:47:LEU:HD21	7:p:176:ASP:HA	1.98	0.45
7:p:170:VAL:HG23	7:p:183:LEU:HB2	1.98	0.45
7:t:64:PRO:HD2	7:t:67:HIS:ND1	2.31	0.45
7:x:171:ILE:HD11	7:x:179:GLU:HB2	1.99	0.45
3:A1:37:CYS:HB3	6:T:67:LEU:HD13	1.98	0.45
3:A1:271:ALA:HB1	3:A1:292:GLN:HB3	1.99	0.45
3:A3:2:ARG:HG2	3:A3:131:GLN:NE2	2.32	0.45
3:A3:276:ARG:HH11	5:P:227:LEU:HD12	1.80	0.45
2:A6:283:HIS:HB3	2:B0:62:VAL:HG11	1.98	0.45
3:A9:163:ILE:HD11	3:A9:251:ARG:HB2	1.98	0.45
3:B1:49:VAL:HG21	3:B1:241:ARG:HG3	1.97	0.45
2:B2:377:MET:HE3	2:B2:379:SER:HB3	1.99	0.45
2:B4:283:HIS:HB3	2:B8:62:VAL:HG11	1.97	0.45
2:C2:195:LEU:HD11	2:C2:428:LEU:HD22	1.98	0.45
2:C4:306:ASP:HB3	2:C4:309:HIS:CE1	2.52	0.45
3:C5:42:LEU:HD21	3:C5:356:ILE:HG13	1.99	0.45
3:C5:397:TRP:HH2	2:C6:256:GLN:HE21	1.64	0.45
2:C6:177:VAL:HG13	3:C7:327:ASP:HB3	1.98	0.45
2:D2:104:ALA:HB2	2:D2:413:MET:HE2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E0:48:ALA:H	5:O:558:ARG:HD3	1.82	0.45
2:E4:73:THR:HA	3:E5:46:ARG:HH21	1.80	0.45
3:E5:309:ARG:HD3	3:E5:342:VAL:HA	1.98	0.45
3:E5:316:MET:HE1	3:E5:368:VAL:HG22	1.98	0.45
2:E6:271:SER:HB2	2:E6:377:MET:HG3	1.97	0.45
3:F1:205:GLU:HB2	3:F1:302:ALA:HB2	1.98	0.45
7:e:168:PRO:HG2	7:e:185:ILE:HG21	1.99	0.45
7:i:15:ARG:HG2	7:i:45:MET:HE1	1.98	0.45
8:k:8:PHE:HZ	8:k:26:PRO:HA	1.81	0.45
7:q:10:LEU:HD12	7:q:147:HIS:CG	2.52	0.45
7:q:77:PHE:HE2	7:q:171:ILE:HD12	1.81	0.45
7:r:14:LYS:HD2	7:r:47:LEU:HD13	1.99	0.45
2:A2:292:THR:HG21	2:A2:331:ALA:HB1	1.98	0.45
2:A4:154:LEU:HD12	2:A4:193:SER:HB3	1.97	0.45
3:A7:284:LEU:HD23	3:A7:362:LYS:HB3	1.99	0.45
2:A8:250:VAL:HG13	2:A8:255:PHE:HE1	1.82	0.45
3:B1:100:ASN:HB3	3:B1:103:LYS:HG2	1.98	0.45
3:B1:235:GLY:HA3	3:B1:366:THR:HG21	1.98	0.45
2:C0:311:LYS:HZ1	2:C0:342:GLN:HB2	1.81	0.45
3:C5:309:ARG:HD3	3:C5:342:VAL:HA	1.98	0.45
2:C6:388:PHE:HB3	2:C6:425:LEU:HD12	1.98	0.45
2:C8:182:VAL:HG22	3:C9:256:ASN:HD21	1.81	0.45
2:D0:88:HIS:HB3	2:D0:91:GLN:HG3	1.99	0.45
2:D4:234:VAL:HG22	2:D4:272:TYR:HB2	1.98	0.45
2:E6:285:GLN:HG3	2:E6:287:SER:HB3	1.99	0.45
3:E9:211:CYS:HB3	3:E9:220:PRO:HG3	1.99	0.45
3:E9:293:MET:HE3	3:E9:367:PHE:HB2	1.98	0.45
2:F0:9:VAL:HG12	2:F0:68:LEU:HB2	1.98	0.45
2:F0:11:GLN:HG2	2:F0:74:VAL:HG11	1.98	0.45
7:a:134:ILE:HG12	7:a:140:LEU:HD22	1.98	0.45
7:c:97:ARG:O	7:c:101:GLU:HG2	2.17	0.45
8:k:74:VAL:HG13	8:k:102:ARG:HG3	1.99	0.45
7:m:172:VAL:HG13	7:m:180:ALA:HB3	1.98	0.45
7:o:95:TYR:O	7:o:99:MET:HB3	2.17	0.45
2:A2:4:VAL:HG11	2:A2:136:LEU:HG	1.98	0.45
2:A2:108:TYR:C	2:A2:112:LYS:HZ3	2.25	0.45
2:A6:121:ARG:HA	2:A6:121:ARG:HD2	1.61	0.45
3:A7:382:SER:HB2	3:A7:415:MET:HE1	1.98	0.45
3:B1:215:LEU:HD11	3:B1:273:LEU:HD22	1.99	0.45
2:B4:338:LYS:HE3	2:B4:340:THR:HG22	1.97	0.45
3:B7:289:LEU:O	3:B7:293:MET:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B9:207:LEU:HD23	3:B9:225:LEU:HB3	1.97	0.45
3:B9:282:ARG:HH22	3:B9:292:GLN:CD	2.25	0.45
3:B9:334:GLN:HA	3:B9:341:PHE:CE2	2.52	0.45
3:C1:260:PHE:HB2	3:C1:263:LEU:HD13	1.98	0.45
3:C7:138:SER:HA	3:C7:169:VAL:HG22	1.98	0.45
3:D7:198:GLU:HG2	3:D7:266:PHE:HE2	1.82	0.45
3:D9:183:TYR:HE2	3:D9:395:LEU:HD13	1.82	0.45
3:E1:229:VAL:HG12	3:E1:233:MET:HE2	1.99	0.45
2:E6:288:VAL:HG22	2:E6:323:VAL:HG12	1.99	0.45
3:E7:309:ARG:H	3:E7:372:THR:HG22	1.82	0.45
3:E9:211:CYS:HA	3:E9:215:LEU:HB3	1.98	0.45
2:F0:105:ARG:HH12	3:F1:251:ARG:HG2	1.81	0.45
4:W:1284:TRP:HA	4:W:1287:MET:HE2	1.98	0.45
7:a:153:GLU:N	7:a:164:ARG:HE	2.15	0.45
7:c:37:GLN:NE2	7:c:37:GLN:C	2.75	0.45
7:n:8:SER:HA	7:n:9:PRO:HD3	1.81	0.45
7:r:72:SER:HB3	7:r:108:ILE:HG22	1.98	0.45
7:v:140:LEU:HA	7:v:143:ILE:HG12	1.99	0.45
3:A3:32:PRO:HB3	3:A3:81:PHE:HD1	1.81	0.45
3:A3:290:THR:HA	3:A3:293:MET:HE3	1.98	0.45
3:A7:68:LEU:HD12	3:A7:143:THR:HG22	1.98	0.45
2:A8:207:GLU:HA	2:A8:210:TYR:CD2	2.52	0.45
2:C0:296:PHE:CZ	2:C0:377:MET:HE1	2.52	0.45
2:C2:82:THR:HG21	1:I:221:PRO:HD3	1.99	0.45
3:C3:25:SER:HB2	3:C3:30:ILE:HB	1.97	0.45
3:C3:57:GLY:HA3	7:j:83:PRO:HB2	1.99	0.45
2:C4:406:HIS:CD2	3:C5:261:PRO:HD3	2.52	0.45
3:C5:105:HIS:CD2	3:C5:150:LEU:HD13	2.51	0.45
3:D1:131:GLN:HE22	3:D1:249:ASP:HB2	1.81	0.45
3:D3:165:GLU:HG2	3:D3:198:GLU:HB2	1.99	0.45
3:D3:384:GLN:HE21	2:D4:348:PRO:HB2	1.82	0.45
3:D7:131:GLN:HE21	3:D7:250:LEU:HB2	1.82	0.45
2:D8:167:LEU:HG	2:D8:200:VAL:HB	1.99	0.45
2:E0:179:THR:HB	3:E1:351:SER:HB2	1.99	0.45
3:F1:30:ILE:HG13	3:F1:51:TYR:CE1	2.47	0.45
4:M:1251:ILE:HG23	4:M:1384:LYS:HB3	1.98	0.45
6:U:58:LEU:HA	6:U:61:TRP:HD1	1.80	0.45
7:d:75:LEU:O	7:d:170:VAL:HA	2.17	0.45
8:l:54:ARG:CZ	7:n:160:GLY:HA3	2.47	0.45
8:l:58:LYS:HA	8:l:62:PHE:HD2	1.82	0.45
7:o:4:PRO:HG3	7:o:179:GLU:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:272:TYR:HD2	2:A4:275:ILE:HG12	1.81	0.45
3:A5:32:PRO:HB3	3:A5:81:PHE:HA	1.98	0.45
2:B4:183:GLU:HG2	2:B4:184:PRO:HD3	1.99	0.45
2:B8:223:THR:HG22	3:B9:322:SER:HA	1.99	0.45
3:C1:25:SER:HB2	3:C1:30:ILE:HB	1.98	0.45
2:C6:198:THR:HG21	2:C6:201:ALA:HB2	1.99	0.45
2:D0:71:GLU:HG2	2:D0:98:ASP:HB3	1.99	0.45
3:D3:313:ALA:HB3	3:D3:349:MET:HE2	1.99	0.45
3:D7:117:LEU:HA	3:D7:120:VAL:HG12	1.99	0.45
2:D8:174:SER:HB2	2:D8:177:VAL:O	2.17	0.45
3:E1:207:LEU:HB3	3:E1:225:LEU:HD22	1.98	0.45
4:M:1279:ARG:HG3	4:M:1316:GLN:HE22	1.81	0.45
7:f:56:LYS:HE3	7:f:60:ASN:HA	1.99	0.45
7:u:146:ARG:HH12	7:u:156:VAL:HG21	1.82	0.45
7:v:50:PHE:HD1	7:v:140:LEU:HD21	1.82	0.45
7:x:88:LEU:HD11	7:x:185:ILE:HG12	1.98	0.45
3:A1:198:GLU:HB3	3:A1:200:GLN:NE2	2.32	0.44
3:A3:39:ASP:HA	6:R:74:GLY:H	1.82	0.44
2:A4:112:LYS:HA	2:A4:115:VAL:HG12	1.98	0.44
3:A5:98:GLY:H	3:A5:103:LYS:NZ	2.15	0.44
3:A7:249:ASP:H	3:A7:252:LYS:HG3	1.82	0.44
2:B0:75:VAL:HG13	2:B0:79:ARG:HH21	1.82	0.44
2:D6:306:ASP:HB3	2:D6:309:HIS:CE1	2.52	0.44
3:D9:341:PHE:HD2	3:D9:348:ASN:HD22	1.65	0.44
3:E3:320:ARG:HA	3:E3:320:ARG:HD2	1.79	0.44
3:E9:415:MET:HE2	3:E9:415:MET:HA	1.99	0.44
3:F1:224:ASP:HA	3:F1:227:HIS:HB2	1.99	0.44
4:L:1286:ARG:NE	4:L:1289:ARG:HH21	2.14	0.44
5:O:231:PRO:HA	6:T:55:ASP:HA	1.97	0.44
4:V:1395:GLU:HA	4:V:1398:LEU:HG	1.98	0.44
7:h:97:ARG:NH2	7:j:160:GLY:HA3	2.31	0.44
8:l:53:VAL:HA	8:l:154:LEU:HD21	1.99	0.44
7:p:78:ALA:HB3	7:p:112:PHE:HE2	1.81	0.44
2:A4:385:ALA:HB2	2:A4:432:TYR:HD2	1.81	0.44
3:A9:19:LYS:HG3	3:A9:226:ASN:HB2	2.00	0.44
3:B3:145:SER:HB2	3:B3:188:SER:HB3	2.00	0.44
3:B3:150:LEU:HD11	3:B3:154:LYS:HE2	2.00	0.44
3:B3:265:PHE:HB3	3:B3:374:ILE:HD13	1.98	0.44
2:C6:213:CYS:HA	2:C6:217:LEU:HD23	1.99	0.44
3:C9:284:LEU:HD23	3:C9:284:LEU:HA	1.91	0.44
3:D1:230:SER:HA	3:D1:233:MET:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D7:5:VAL:HG21	3:D7:124:ALA:HB2	1.99	0.44
3:E5:313:ALA:HB1	3:E5:367:PHE:HE1	1.82	0.44
2:E8:136:LEU:HD22	2:E8:169:PHE:HE2	1.81	0.44
4:M:1241:PHE:CD2	4:M:1242:PRO:HD3	2.51	0.44
7:t:71:LYS:NZ	7:t:106:GLN:HG2	2.32	0.44
7:u:63:ILE:HD11	7:u:67:HIS:CD2	2.51	0.44
7:u:97:ARG:HH22	7:w:149:ARG:NH1	2.15	0.44
7:w:169:SER:HA	7:w:185:ILE:HD11	1.99	0.44
3:A3:286:VAL:HB	3:A3:325:GLU:HG2	1.99	0.44
2:A8:26:LEU:HG	1:C:257:PRO:HD3	1.98	0.44
2:B2:324:VAL:HG22	2:B2:326:LYS:H	1.83	0.44
3:B3:42:LEU:HB3	1:E:241:PHE:HE2	1.82	0.44
2:B8:254:GLU:HG2	2:B8:352:LYS:HE2	1.99	0.44
3:C1:66:MET:HE2	3:C1:116:VAL:HG21	1.99	0.44
3:C1:132:GLY:HA2	3:C1:162:ARG:HB3	1.98	0.44
3:C1:133:PHE:HD2	3:C1:164:MET:HE1	1.83	0.44
3:C3:164:MET:H	3:C3:197:ASP:HB2	1.81	0.44
3:C7:135:ILE:HG21	3:C7:152:ILE:HD11	1.99	0.44
2:C8:180:ALA:HB3	2:C8:183:GLU:HG3	2.00	0.44
2:D0:363:VAL:HG23	2:D0:366:GLY:HA3	1.98	0.44
3:D1:296:ALA:HB2	3:D1:305:PRO:HD2	2.00	0.44
3:D3:234:SER:HB2	3:D3:241:ARG:HH12	1.81	0.44
3:D3:282:ARG:HH22	3:D3:362:LYS:HZ1	1.65	0.44
2:E2:198:THR:HG21	2:E2:201:ALA:HB2	1.99	0.44
2:E2:311:LYS:HE3	2:E2:344:VAL:HA	1.99	0.44
3:E5:158:GLU:HG2	3:E5:159:TYR:CD1	2.52	0.44
3:E7:163:ILE:HD11	3:E7:251:ARG:HB2	1.99	0.44
2:E8:88:HIS:CE1	2:E8:90:GLU:HB2	2.52	0.44
3:E9:361:LEU:HD23	6:U:105:HIS:CE1	2.52	0.44
4:M:1249:THR:HG22	4:M:1438:LEU:HD21	1.98	0.44
4:V:1248:THR:HG22	4:V:1252:LEU:HD23	1.99	0.44
7:q:129:MET:HE3	7:q:131:TRP:NE1	2.32	0.44
3:A3:133:PHE:HD2	3:A3:164:MET:HE1	1.82	0.44
3:A7:6:HIS:CE1	3:A7:8:GLN:HE22	2.35	0.44
2:A8:107:HIS:HE1	2:A8:151:CYS:HB3	1.83	0.44
3:A9:256:ASN:OD1	3:A9:350:LYS:HD3	2.18	0.44
3:B3:201:VAL:HG21	3:B3:374:ILE:HD11	1.98	0.44
3:B5:39:ASP:HA	7:f:90:PRO:HG3	1.98	0.44
2:C8:306:ASP:HB3	2:C8:309:HIS:CE1	2.53	0.44
3:C9:166:THR:HG22	3:C9:168:SER:HB3	1.98	0.44
1:D:247:TYR:HA	2:D6:22:GLU:CD	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D2:194:LEU:HG	2:D2:267:PHE:HE1	1.82	0.44
2:D2:423:GLU:HA	2:D2:426:ALA:HB3	2.00	0.44
2:D6:82:THR:HB	2:D6:83:TYR:CZ	2.52	0.44
2:D6:360:PRO:HG2	2:D6:371:VAL:HG13	1.99	0.44
2:D6:407:TRP:HZ2	3:D7:258:ILE:HD12	1.83	0.44
3:D9:39:ASP:HA	7:r:90:PRO:HG3	1.99	0.44
2:E2:151:CYS:O	2:E2:155:GLU:HG2	2.18	0.44
2:E2:320:ARG:HG3	2:E2:356:ASN:HB3	2.00	0.44
3:E5:42:LEU:HD21	1:H:248:ARG:HH12	1.81	0.44
4:N:1405:LEU:HA	4:N:1408:GLN:HB2	1.98	0.44
6:R:48:ASP:HB2	7:b:154:TYR:CE1	2.52	0.44
6:T:57:LYS:HD3	6:T:57:LYS:HA	1.76	0.44
7:e:55:LEU:HD22	7:e:111:ILE:HD12	1.97	0.44
7:m:65:GLN:HE21	7:m:65:GLN:C	2.23	0.44
7:o:63:ILE:HD11	7:o:132:LEU:HD11	2.00	0.44
7:o:82:ASP:HB2	7:o:85:CYS:HB2	2.00	0.44
7:u:14:LYS:HG3	7:u:47:LEU:HB3	1.99	0.44
2:A4:4:VAL:HB	2:A4:52:PHE:HE1	1.83	0.44
2:B0:387:VAL:HG23	2:B0:390:ARG:HH12	1.82	0.44
2:B2:180:ALA:HA	3:B3:350:LYS:HE2	2.00	0.44
3:B9:86:ARG:HD2	3:B9:88:ASP:HB2	1.99	0.44
2:C4:288:VAL:HA	2:C4:291:ILE:HG12	2.00	0.44
3:C9:139:LEU:HD13	3:C9:168:SER:HB2	1.99	0.44
3:E3:107:THR:HG22	3:E3:108:GLU:H	1.83	0.44
2:E4:96:LYS:HD3	2:E4:96:LYS:HA	1.77	0.44
2:E6:286:LEU:HD11	2:E6:371:VAL:HG23	1.99	0.44
1:G:212:GLU:HG3	1:G:216:ARG:HG3	1.99	0.44
1:K:255:PRO:HG3	7:o:178:ARG:HD2	1.99	0.44
8:k:39:ALA:O	8:k:75:SER:HA	2.18	0.44
7:m:63:ILE:HD11	7:m:132:LEU:HD13	2.00	0.44
7:n:18:ASN:HD22	7:n:45:MET:HG3	1.82	0.44
7:n:59:ASN:HD21	7:p:9:PRO:HA	1.83	0.44
7:p:165:THR:HG21	7:p:182:PHE:HZ	1.83	0.44
1:A:210:HIS:HB3	7:d:154:TYR:HH	1.83	0.44
2:A2:137:MET:HE3	2:A2:154:LEU:HD13	1.99	0.44
3:B1:187:LEU:HA	3:B1:190:HIS:CE1	2.52	0.44
3:B1:190:HIS:HB2	3:B1:414:ASN:HD22	1.83	0.44
3:B5:17:GLY:HA2	3:B5:20:PHE:HB3	2.00	0.44
2:C0:21:TRP:CZ2	2:C0:65:CYS:HB3	2.53	0.44
3:C5:191:GLN:NE2	3:C5:195:ASN:HD21	2.15	0.44
2:C6:292:THR:HG21	2:C6:331:ALA:HB1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C8:10:GLY:HA2	2:C8:145:THR:HG23	2.00	0.44
3:C9:214:THR:HG22	3:C9:297:LYS:HZ3	1.81	0.44
2:D6:28:HIS:CE1	2:D6:243:ARG:HD2	2.53	0.44
2:D6:137:MET:HE1	2:D6:154:LEU:HD11	2.00	0.44
3:D7:294:PHE:CZ	3:D7:333:VAL:HG11	2.52	0.44
2:D8:204:LEU:HD21	2:D8:231:ILE:HG12	2.00	0.44
3:E9:199:VAL:HG23	3:E9:264:HIS:HD2	1.83	0.44
3:F1:199:VAL:HG23	3:F1:264:HIS:HD2	1.83	0.44
1:J:223:PRO:HG3	7:n:178:ARG:HH21	1.82	0.44
6:R:127:ARG:HG2	6:R:131:LEU:HD23	1.98	0.44
7:f:111:ILE:HG12	7:f:132:LEU:HB2	2.00	0.44
7:f:200:ASP:O	7:f:204:THR:HG22	2.18	0.44
7:g:9:PRO:HA	7:g:12:VAL:HG22	1.99	0.44
7:s:18:ASN:HA	7:s:21:ARG:HH12	1.81	0.44
3:A1:294:PHE:CE2	3:A1:333:VAL:HG11	2.53	0.44
2:A2:104:ALA:O	2:A2:108:TYR:HB2	2.17	0.44
3:A7:206:ALA:HB2	3:A7:302:ALA:HB2	1.99	0.44
3:A9:91:VAL:HG21	3:A9:116:VAL:HG22	2.00	0.44
2:B8:75:VAL:HG11	2:B8:94:SER:HB2	1.98	0.44
2:B8:258:ASN:HD22	2:B8:352:LYS:HD2	1.83	0.44
2:C0:408:TYR:HB3	2:C0:413:MET:HG2	2.00	0.44
2:C6:338:LYS:HB2	2:C6:338:LYS:HE2	1.84	0.44
3:C7:318:ARG:HH12	3:C7:358:PRO:HB3	1.81	0.44
2:C8:219:ILE:HG12	7:o:198:ARG:HH22	1.82	0.44
2:D0:100:ALA:O	3:D1:255:VAL:HG11	2.18	0.44
2:D2:202:VAL:HG22	2:D2:268:MET:HB2	1.99	0.44
2:D4:68:LEU:HD11	2:D4:118:SER:HB3	1.99	0.44
2:D6:259:LEU:HD11	2:D6:316:CYS:HB2	2.00	0.44
3:E7:290:THR:HA	3:E7:293:MET:HE3	1.99	0.44
7:a:53:GLY:HA2	7:a:62:VAL:HG21	1.99	0.44
7:d:42:TYR:HA	7:d:45:MET:HG3	2.00	0.44
7:g:55:LEU:HB3	7:g:63:ILE:HG23	1.99	0.44
7:h:8:SER:HB2	7:h:147:HIS:HA	1.99	0.44
7:j:9:PRO:HD3	7:j:146:ARG:HG2	1.98	0.44
3:A3:8:GLN:HG3	3:A3:65:LEU:HD13	1.99	0.44
3:A3:186:THR:HG22	3:A3:411:ALA:HB1	2.00	0.44
3:A3:290:THR:HG21	3:A3:329:GLN:HG2	1.99	0.44
3:A3:316:MET:HE2	3:A3:366:THR:HG23	2.00	0.44
2:A4:102:ASN:HB3	2:A4:105:ARG:HG3	1.98	0.44
2:A4:230:LEU:HD11	2:A4:275:ILE:HG23	1.99	0.44
2:A8:84:ARG:HD3	7:c:197:LEU:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B1:11:GLN:HB3	3:B1:72:THR:HG21	1.99	0.44
2:B6:311:LYS:HZ3	2:B6:344:VAL:HA	1.81	0.44
2:B8:310:GLY:HA3	2:B8:383:ALA:HB2	2.00	0.44
3:C5:64:ILE:HG12	3:C5:119:VAL:HG13	1.99	0.44
3:C5:283:ALA:HA	3:C9:55:THR:H	1.82	0.44
2:C6:210:TYR:HE1	2:C6:227:LEU:HD11	1.83	0.44
3:C7:282:ARG:HA	3:D1:86:ARG:HH22	1.82	0.44
3:D7:388:MET:HE2	2:D8:348:PRO:HD2	1.99	0.44
2:D8:363:VAL:HB	2:D8:366:GLY:HA3	2.00	0.44
2:E0:391:MET:HE3	2:E0:391:MET:HB3	1.77	0.44
1:I:222:LYS:HE3	8:l:140:GLU:HG3	2.00	0.44
6:U:127:ARG:HA	6:U:130:GLN:HE21	1.83	0.44
7:b:171:ILE:HD11	7:b:179:GLU:HG2	1.98	0.44
7:i:18:ASN:ND2	7:i:45:MET:HG3	2.32	0.44
8:k:25:ARG:NH2	8:k:28:HIS:HA	2.33	0.44
7:m:15:ARG:O	7:m:19:GLU:CB	2.65	0.44
7:o:69:LYS:HB2	7:o:69:LYS:HE3	1.74	0.44
7:r:75:LEU:HD23	7:r:173:ILE:HG21	2.00	0.44
2:A2:74:VAL:HG13	2:A2:75:VAL:HG13	2.00	0.44
2:A2:238:LEU:HD13	2:A2:318:MET:HE3	2.00	0.44
2:A2:306:ASP:HB3	2:A2:309:HIS:CD2	2.53	0.44
3:A3:309:ARG:H	3:A3:372:THR:HG22	1.82	0.44
2:A6:119:LEU:HA	2:A6:122:ILE:HG12	1.99	0.44
2:B4:82:THR:HG21	1:E:221:PRO:HD3	1.99	0.44
2:B4:306:ASP:HB3	2:B4:309:HIS:CE1	2.53	0.44
3:B5:65:LEU:HB2	3:B5:90:PHE:HA	1.99	0.44
2:B6:311:LYS:NZ	2:B6:344:VAL:HA	2.33	0.44
3:B7:281:TYR:CD2	3:C1:87:PRO:HD3	2.53	0.44
2:B8:250:VAL:HG22	2:B8:352:LYS:HE3	2.00	0.44
2:C0:71:GLU:HB3	2:C0:98:ASP:HB3	1.99	0.44
3:C1:319:GLY:HA2	3:C1:357:PRO:HG3	1.99	0.44
3:C3:294:PHE:HD1	3:C3:310:TYR:HE2	1.65	0.44
2:C6:66:VAL:HG11	2:C6:122:ILE:HG12	2.00	0.44
2:C8:434:GLU:HA	2:C8:437:ILE:HG12	2.00	0.44
2:D0:123:ARG:HH21	2:D0:161:TYR:HE1	1.64	0.44
2:D2:422:ARG:HD2	2:D2:422:ARG:HA	1.68	0.44
2:D4:164:LYS:HD3	2:D4:164:LYS:HA	1.69	0.44
3:D5:252:LYS:HG3	3:D5:350:LYS:HZ2	1.82	0.44
2:D6:226:ASN:HA	2:D6:229:ARG:HG2	1.98	0.44
3:D9:113:ILE:HD11	3:D9:151:LEU:HB2	1.99	0.44
3:E9:265:PHE:HE2	3:E9:418:LEU:HD21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:b:194:ARG:HH11	7:b:197:LEU:HD12	1.83	0.44
7:f:79:ASP:HB3	7:f:82:ASP:HB2	2.00	0.44
7:h:84:LYS:HB3	7:h:168:PRO:HD3	2.00	0.44
7:v:130:PRO:HD2	7:v:131:TRP:CE3	2.53	0.44
7:w:93:LEU:O	7:w:97:ARG:HG2	2.18	0.44
2:A2:408:TYR:HB3	2:A2:413:MET:HG3	1.99	0.43
3:A3:131:GLN:HB3	3:A3:163:ILE:HD11	2.00	0.43
3:A7:171:PRO:HB2	3:A7:380:ARG:HH22	1.83	0.43
2:A8:68:LEU:HD23	2:A8:93:ILE:HB	2.00	0.43
2:A8:262:TYR:HD2	2:A8:265:ILE:HD11	1.81	0.43
2:A8:398:MET:HE2	3:A9:345:ILE:HG23	1.99	0.43
2:B0:188:VAL:HG12	2:B0:421:ALA:HB1	1.99	0.43
2:B0:294:SER:HA	2:B0:297:GLU:HG2	1.99	0.43
3:B1:113:ILE:HA	3:B1:116:VAL:HG22	2.00	0.43
3:B3:284:LEU:HD23	3:B3:362:LYS:HG2	1.99	0.43
3:B3:293:MET:HG3	3:B3:294:PHE:CD2	2.53	0.43
3:B5:175:VAL:HG12	3:B5:205:GLU:OE2	2.17	0.43
2:B8:36:MET:HG2	2:B8:61:HIS:HE1	1.83	0.43
2:B8:210:TYR:HB3	3:B9:324:LYS:NZ	2.33	0.43
2:B8:221:ARG:HH12	3:B9:325:GLU:HB3	1.82	0.43
2:C2:421:ALA:HA	2:C2:424:ASP:HB3	1.99	0.43
2:C4:203:MET:HG3	2:C4:384:ILE:HD11	1.99	0.43
3:C5:388:MET:HE2	3:C5:388:MET:HB3	1.91	0.43
2:D8:77:GLU:HA	2:D8:80:THR:HG22	2.00	0.43
3:E7:5:VAL:HG21	3:E7:124:ALA:HB2	2.00	0.43
4:V:1248:THR:HG21	4:V:1438:LEU:HD21	2.00	0.43
7:h:93:LEU:HB3	7:h:97:ARG:NH2	2.27	0.43
7:o:142:GLU:HA	7:o:145:LYS:HB2	2.00	0.43
7:t:64:PRO:HD2	7:t:67:HIS:CE1	2.52	0.43
2:A0:352:LYS:HA	2:A0:352:LYS:HD3	1.87	0.43
2:A2:370:LYS:HE3	2:A2:370:LYS:HB3	1.83	0.43
3:A3:136:THR:HG21	3:A3:233:MET:HE1	1.98	0.43
2:B2:154:LEU:HB3	2:B2:197:HIS:HB3	2.01	0.43
2:B2:210:TYR:HB3	3:B3:324:LYS:NZ	2.33	0.43
3:B3:68:LEU:HG	3:B3:147:MET:HE3	2.01	0.43
2:B8:121:ARG:HH11	2:B8:124:LYS:HE2	1.84	0.43
3:B9:215:LEU:HD11	3:B9:228:LEU:HD21	2.00	0.43
3:C3:5:VAL:HB	3:C3:133:PHE:HD1	1.83	0.43
2:C4:141:VAL:HG23	2:C4:173:PRO:HD3	1.99	0.43
2:C4:184:PRO:HA	2:C4:391:MET:HE1	2.00	0.43
2:C6:240:ALA:HB1	2:C6:356:ASN:HD22	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C7:212:PHE:HB3	3:C7:213:ARG:HH11	1.83	0.43
3:C7:290:THR:HA	3:C7:293:MET:HG2	2.01	0.43
3:C7:359:LYS:HD2	3:C7:359:LYS:HA	1.72	0.43
3:C9:150:LEU:O	3:C9:154:LYS:HG2	2.18	0.43
3:C9:294:PHE:CZ	3:C9:349:MET:HE1	2.52	0.43
2:D0:198:THR:HG21	2:D0:201:ALA:HB2	2.00	0.43
3:D7:35:THR:HG22	7:q:83:PRO:HG3	1.99	0.43
3:D7:174:LYS:HG3	3:D7:175:VAL:HG23	1.99	0.43
2:E0:33:ASP:HB3	7:s:102:GLY:O	2.19	0.43
2:E6:96:LYS:HE3	2:E6:96:LYS:HB3	1.82	0.43
2:E8:296:PHE:CE1	2:E8:377:MET:HE1	2.54	0.43
3:E9:356:ILE:HD12	6:U:113:TRP:HB3	2.01	0.43
3:F1:60:VAL:HG21	3:F1:86:ARG:HH11	1.82	0.43
7:x:79:ASP:HB3	7:x:82:ASP:HB2	2.00	0.43
2:A0:292:THR:HG21	2:A0:331:ALA:HB1	2.00	0.43
3:A1:361:LEU:HD11	5:O:228:LEU:HD23	1.98	0.43
1:B:240:PRO:HB2	7:q:154:TYR:HD2	1.83	0.43
2:B0:115:VAL:HG21	2:B0:152:LEU:HG	2.00	0.43
3:B1:19:LYS:HA	3:B1:22:GLU:HG3	1.99	0.43
2:B4:230:LEU:HD22	2:B4:275:ILE:HD12	1.99	0.43
3:B5:67:ASP:HB3	3:B5:73:MET:HE2	2.01	0.43
2:B6:288:VAL:HA	2:B6:291:ILE:HG12	2.01	0.43
2:B8:66:VAL:HG21	2:B8:122:ILE:HD11	2.01	0.43
2:B8:259:LEU:HD11	2:B8:316:CYS:HB2	2.01	0.43
2:B8:268:MET:HE1	2:B8:380:ASN:HB2	2.01	0.43
2:C4:9:VAL:HG23	2:C4:68:LEU:HD22	1.99	0.43
2:C4:133:GLN:HE22	2:C4:251:ASP:HB3	1.84	0.43
3:C7:47:ILE:HG22	3:C7:51:TYR:HB2	2.00	0.43
3:C7:166:THR:HG23	3:C7:199:VAL:HA	2.00	0.43
3:C9:68:LEU:HD22	3:C9:97:ALA:HB2	1.99	0.43
3:C9:139:LEU:HA	3:C9:145:SER:HB3	1.99	0.43
2:D0:240:ALA:HB1	2:D0:356:ASN:HD22	1.82	0.43
3:D1:211:CYS:SG	3:D1:220:PRO:HB3	2.59	0.43
2:D2:259:LEU:HD13	2:D2:316:CYS:HB2	2.01	0.43
2:D4:251:ASP:OD2	2:D4:254:GLU:HG2	2.18	0.43
2:D6:154:LEU:HD12	2:D6:193:SER:HB2	2.01	0.43
3:D9:289:LEU:HD11	3:D9:363:MET:HG3	2.00	0.43
3:E3:310:TYR:CD1	3:E3:371:SER:HB2	2.53	0.43
3:E3:392:LYS:HD3	3:E3:392:LYS:HA	1.74	0.43
3:E5:34:GLY:HA3	3:E5:58:ARG:NH1	2.33	0.43
3:E7:116:VAL:HA	3:E7:119:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E7:173:PRO:HB3	3:E7:380:ARG:HE	1.82	0.43
3:E7:257:LEU:HB3	3:E7:266:PHE:CZ	2.53	0.43
2:F0:246:GLY:HA3	2:F0:356:ASN:HA	2.00	0.43
3:F1:217:LEU:HD23	6:R:174:ARG:NH1	2.33	0.43
6:T:163:HIS:HB2	6:T:167:THR:HG21	2.00	0.43
7:e:96:TYR:HA	7:e:108:ILE:HD11	1.99	0.43
7:e:173:ILE:HD11	7:e:177:GLY:HA2	2.01	0.43
7:m:53:GLY:HA2	7:m:62:VAL:HG21	2.01	0.43
7:n:15:ARG:O	7:n:19:GLU:HB2	2.18	0.43
2:A8:363:VAL:HG23	2:A8:366:GLY:HA3	1.99	0.43
2:B4:53:PHE:HB3	2:B4:61:HIS:HB3	2.00	0.43
3:B7:330:MET:HE3	3:B7:351:SER:HB2	2.00	0.43
2:B8:155:GLU:HA	2:B8:197:HIS:CE1	2.52	0.43
2:C0:110:ILE:HG23	2:C0:111:GLY:H	1.84	0.43
3:C1:198:GLU:HG3	3:C1:266:PHE:HE2	1.84	0.43
2:C4:133:GLN:HE21	2:C4:252:VAL:HB	1.83	0.43
3:C5:51:TYR:HE2	3:C5:61:PRO:HG3	1.82	0.43
3:C7:3:GLU:H	3:C7:130:LEU:HA	1.84	0.43
2:C8:407:TRP:CH2	3:C9:258:ILE:HB	2.53	0.43
3:D1:274:THR:HG21	3:D1:279:GLN:HA	1.99	0.43
2:D2:265:ILE:HG23	2:D2:432:TYR:CZ	2.52	0.43
2:D2:274:PRO:HD3	2:D2:291:ILE:HD11	1.99	0.43
3:D3:167:PHE:CE2	3:D3:233:MET:HG2	2.53	0.43
2:D8:175:PRO:HB3	2:D8:390:ARG:HD2	2.00	0.43
2:E2:210:TYR:CG	3:E3:324:LYS:HD3	2.53	0.43
3:E9:244:GLY:HA2	3:E9:355:ASP:HB2	1.99	0.43
4:L:1256:ILE:HG23	4:L:1287:MET:HE1	2.00	0.43
7:c:14:LYS:HD2	7:c:47:LEU:HD12	2.01	0.43
7:d:115:LEU:HD23	7:d:152:LYS:HZ2	1.84	0.43
7:d:122:PHE:CD2	7:d:136:LEU:HB2	2.53	0.43
7:f:71:LYS:HE2	7:f:106:GLN:HG2	2.00	0.43
7:g:84:LYS:HB2	7:g:168:PRO:HD3	2.00	0.43
7:m:130:PRO:HD2	7:m:131:TRP:CE3	2.53	0.43
7:n:146:ARG:HD2	7:n:146:ARG:HA	1.75	0.43
7:n:146:ARG:NH2	7:n:158:THR:HA	2.33	0.43
7:v:165:THR:HB	7:v:182:PHE:HZ	1.83	0.43
7:x:76:TYR:HA	7:x:169:SER:O	2.17	0.43
1:A:246:CYS:O	1:A:250:GLU:HG2	2.19	0.43
2:A0:104:ALA:HB2	2:A0:413:MET:HG2	2.00	0.43
3:A3:169:VAL:HG12	3:A3:202:ILE:HB	2.01	0.43
3:A5:152:ILE:HA	3:A5:164:MET:HE1	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A8:211:ASP:HA	2:A8:214:ARG:HE	1.84	0.43
3:B1:73:MET:HE3	3:B1:90:PHE:HD1	1.83	0.43
2:B6:401:LYS:HE3	3:B7:344:TRP:CD2	2.52	0.43
3:C1:171:PRO:HB3	3:C1:181:GLU:CD	2.44	0.43
3:C1:316:MET:HA	3:C1:352:SER:HB3	2.00	0.43
3:C3:105:HIS:CD2	3:C3:150:LEU:HD13	2.53	0.43
2:C6:274:PRO:HB2	2:C6:276:ILE:HG23	1.99	0.43
3:C7:101:TRP:HB2	3:C7:184:ASN:HB3	2.00	0.43
2:C8:28:HIS:HB2	2:C8:30:ILE:HG12	2.00	0.43
1:D:253:ALA:HA	2:D6:26:LEU:HD13	2.00	0.43
2:D0:326:LYS:HG3	2:D0:327:ASP:N	2.32	0.43
3:E3:39:ASP:HA	7:t:90:PRO:HG3	2.00	0.43
2:E4:26:LEU:HD12	2:E4:363:VAL:HG12	2.00	0.43
2:E4:111:GLY:HA2	2:E4:114:ILE:HG22	1.99	0.43
2:E4:274:PRO:HG2	2:E4:374:ALA:HA	2.00	0.43
3:E7:202:ILE:HG21	3:E7:229:VAL:HG22	2.00	0.43
2:F0:335:ILE:HB	2:F0:341:ILE:HD11	1.99	0.43
2:F0:336:LYS:HD3	2:F0:343:PHE:HE2	1.84	0.43
4:W:1317:ARG:HD3	4:W:1317:ARG:HA	1.85	0.43
7:b:153:GLU:HA	7:b:164:ARG:NH2	2.32	0.43
7:d:26:ALA:HA	7:d:36:ILE:HD12	1.99	0.43
7:q:77:PHE:CG	7:q:150:VAL:HG11	2.53	0.43
3:A1:273:LEU:HD23	3:A1:273:LEU:HA	1.86	0.43
3:A1:362:LYS:HB2	5:O:234:TYR:HB2	2.00	0.43
3:A3:309:ARG:HD3	3:A3:342:VAL:HA	2.01	0.43
2:A4:313:MET:HG2	2:A4:344:VAL:HG11	2.00	0.43
2:A6:264:ARG:HH12	2:A6:427:ALA:HB1	1.83	0.43
3:A9:132:GLY:HA2	3:A9:162:ARG:HB3	2.00	0.43
3:A9:215:LEU:HD11	3:A9:273:LEU:HB3	1.99	0.43
3:B1:20:PHE:HA	3:B1:230:SER:HB2	2.00	0.43
3:B5:131:GLN:HE22	3:B5:250:LEU:HB2	1.82	0.43
2:B6:64:ARG:HH21	2:B6:128:ASN:HD21	1.67	0.43
3:B7:68:LEU:HD23	3:B7:112:LEU:HD13	2.00	0.43
3:B9:19:LYS:HD2	3:B9:22:GLU:HG3	1.99	0.43
3:C7:66:MET:HG3	3:C7:116:VAL:HG21	2.00	0.43
2:C8:388:PHE:HB3	2:C8:425:LEU:HD11	2.01	0.43
3:D1:268:ILE:HG23	3:D1:300:MET:HE3	2.01	0.43
2:D2:73:THR:HG23	3:D3:247:ASN:HD22	1.83	0.43
2:D4:310:GLY:HA3	2:D4:383:ALA:HB2	1.99	0.43
2:D6:154:LEU:HA	2:D6:154:LEU:HD23	1.78	0.43
2:E0:48:ALA:N	5:O:558:ARG:HD3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E0:141:VAL:HG21	2:E0:172:TRP:CE3	2.53	0.43
2:E8:70:LEU:HA	2:E8:95:GLY:HA3	2.00	0.43
2:E8:297:GLU:HB3	2:E8:300:SER:HB2	2.00	0.43
5:O:516:ASP:OD1	5:O:520:LEU:HA	2.19	0.43
4:Q:1215:ARG:HD3	4:Q:1293:TYR:CE2	2.53	0.43
7:c:75:LEU:HD11	7:c:144:LEU:HD13	2.01	0.43
7:x:96:TYR:O	7:x:100:ASN:HB2	2.19	0.43
1:A:235:LEU:HD23	1:A:236:PRO:HD2	2.00	0.43
3:A1:233:MET:HE3	3:A1:233:MET:HB3	1.90	0.43
2:A2:133:GLN:NE2	2:A2:252:VAL:HB	2.28	0.43
2:A2:222:PRO:C	3:A3:324:LYS:HE2	2.44	0.43
2:A2:320:ARG:O	2:A2:373:ARG:HA	2.19	0.43
2:A4:63:PRO:HD2	2:A4:86:LEU:O	2.18	0.43
3:A5:149:THR:HA	3:A5:152:ILE:HD12	2.01	0.43
2:A6:283:HIS:HE1	2:B0:85:HIS:O	2.01	0.43
1:B:231:VAL:H	5:P:507:ARG:HH22	1.66	0.43
3:B3:28:HIS:HA	3:B3:43:GLN:HG2	2.01	0.43
3:B7:207:LEU:HB3	3:B7:225:LEU:HG	1.99	0.43
3:C3:318:ARG:NE	3:C3:358:PRO:HD3	2.32	0.43
2:C6:401:LYS:HD2	3:C7:344:TRP:CD1	2.52	0.43
3:C7:110:ALA:HB2	3:C7:150:LEU:HD21	2.01	0.43
2:C8:4:VAL:HG21	2:C8:136:LEU:HD13	2.00	0.43
2:C8:68:LEU:HG	2:C8:149:LEU:HD21	2.00	0.43
2:C8:103:PHE:HB2	2:C8:186:ASN:HD22	1.84	0.43
2:C8:259:LEU:HD13	2:C8:268:MET:HE2	2.00	0.43
3:C9:152:ILE:HG22	3:C9:164:MET:HE1	2.01	0.43
1:D:215:TYR:CD1	2:D8:22:GLU:HB3	2.52	0.43
3:D1:50:PHE:HD2	3:D1:241:ARG:HD3	1.82	0.43
2:D4:285:GLN:HB3	2:D8:56:THR:HA	2.01	0.43
3:D5:7:VAL:HG22	3:D5:64:ILE:HB	2.01	0.43
3:D5:382:SER:HB2	3:D5:415:MET:HG2	2.01	0.43
3:D7:379:LYS:HD3	3:D7:379:LYS:HA	1.81	0.43
2:F0:101:ASN:HB3	2:F0:182:VAL:HG21	2.01	0.43
3:F1:238:CYS:SG	3:F1:316:MET:HE2	2.59	0.43
4:W:1269:LEU:HA	4:W:1272:ILE:HD12	2.00	0.43
7:a:174:GLY:HA3	7:a:178:ARG:HE	1.84	0.43
7:c:12:VAL:HG12	7:c:15:ARG:NH2	2.33	0.43
7:e:68:LEU:HD23	7:e:73:VAL:HG21	2.01	0.43
7:f:72:SER:O	7:f:108:ILE:HA	2.17	0.43
7:i:96:TYR:HA	7:i:108:ILE:HD11	2.00	0.43
7:n:140:LEU:HG	7:n:144:LEU:HD23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:q:183:LEU:HD13	7:q:196:LEU:HA	1.99	0.43
7:u:55:LEU:HD23	7:u:132:LEU:HD23	2.01	0.43
7:u:69:LYS:NZ	7:w:38:LEU:HB3	2.34	0.43
7:v:4:PRO:HG3	7:v:179:GLU:HB2	2.01	0.43
2:A0:188:VAL:HG12	2:A0:421:ALA:HB1	1.99	0.43
3:A1:49:VAL:HG13	3:A1:50:PHE:CD2	2.54	0.43
3:A1:221:THR:HG21	5:O:219:LEU:HA	2.00	0.43
3:A1:309:ARG:HG3	3:A1:426:GLN:HA	2.00	0.43
2:A4:167:LEU:HG	2:A4:200:VAL:HB	2.01	0.43
2:B2:156:ARG:HA	2:B2:159:VAL:HG12	2.00	0.43
3:B3:39:ASP:HA	7:e:90:PRO:HG3	2.00	0.43
3:B3:330:MET:SD	3:B3:349:MET:HE2	2.58	0.43
3:B5:21:TRP:HZ3	3:B5:50:PHE:HB3	1.83	0.43
2:B6:31:GLN:HE22	2:B6:37:PRO:HD3	1.84	0.43
3:B7:330:MET:HB2	3:B7:330:MET:HE2	1.78	0.43
2:C0:181:VAL:HG22	3:C1:256:ASN:OD1	2.18	0.43
3:C3:135:ILE:HG21	3:C3:152:ILE:HG21	2.01	0.43
3:C5:47:ILE:HG22	3:C5:51:TYR:HB2	2.01	0.43
2:C6:397:LEU:HD11	3:C7:346:PRO:HD3	2.00	0.43
3:C7:165:GLU:HB2	3:C7:250:LEU:HD21	2.01	0.43
2:C8:265:ILE:HG23	2:C8:432:TYR:HE2	1.84	0.43
3:C9:282:ARG:HH12	3:C9:292:GLN:NE2	2.17	0.43
2:D0:221:ARG:HG2	3:D1:325:GLU:OE2	2.18	0.43
3:D3:16:ILE:HD11	3:D3:229:VAL:HG11	2.00	0.43
3:D3:286:VAL:HB	3:D3:325:GLU:HG2	2.00	0.43
2:D6:14:ILE:HD11	2:D6:69:ASP:HB2	2.00	0.43
2:D6:82:THR:HB	2:D6:83:TYR:CE2	2.54	0.43
2:D8:195:LEU:HD22	2:D8:428:LEU:HD12	2.01	0.43
3:E7:239:CYS:HB3	3:E7:248:SER:H	1.83	0.43
2:E8:209:ILE:HB	2:E8:227:LEU:HD22	2.01	0.43
3:E9:237:THR:HG23	3:E9:241:ARG:HH11	1.84	0.43
4:L:1405:LEU:HA	4:L:1408:GLN:HB2	2.01	0.43
4:V:1439:MET:HE3	4:V:1439:MET:HB3	1.78	0.43
7:b:149:ARG:HD2	7:b:149:ARG:HA	1.86	0.43
2:A4:71:GLU:HG3	2:A4:73:THR:HG22	2.00	0.43
2:A4:169:PHE:CD1	2:A4:202:VAL:HG12	2.54	0.43
2:A4:338:LYS:HD2	2:A4:339:ARG:N	2.33	0.43
3:A7:124:ALA:HB1	3:A7:130:LEU:HD22	2.01	0.43
3:B1:200:GLN:HG3	3:B1:266:PHE:HB2	2.00	0.43
2:B2:275:ILE:HG22	2:B2:368:LEU:HD21	2.00	0.43
3:B5:73:MET:HA	3:B5:76:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B8:8:HIS:CE1	2:B8:17:GLY:HA3	2.53	0.43
2:B8:36:MET:HG2	2:B8:61:HIS:CE1	2.53	0.43
2:B8:80:THR:HA	2:B8:84:ARG:NH1	2.34	0.43
2:B8:259:LEU:HD21	2:B8:316:CYS:HB2	1.99	0.43
2:C2:221:ARG:HG3	3:C3:325:GLU:HB2	2.01	0.43
3:C7:389:PHE:HE1	3:C7:408:PHE:HB3	1.84	0.43
2:C8:222:PRO:C	3:C9:324:LYS:HE2	2.44	0.43
3:D5:298:ASN:O	3:D5:299:MET:HE2	2.19	0.43
2:D6:88:HIS:ND1	2:D6:89:PRO:HD2	2.34	0.43
2:E2:132:LEU:HB3	2:E2:164:LYS:HD2	2.01	0.43
3:E5:252:LYS:HB3	3:E5:350:LYS:HZ1	1.84	0.43
2:E8:259:LEU:HD21	2:E8:316:CYS:HB2	2.00	0.43
2:F0:121:ARG:HD2	2:F0:121:ARG:HA	1.77	0.43
4:N:1256:ILE:HG12	4:N:1445:LEU:HB2	2.01	0.43
7:h:115:LEU:HD23	7:h:115:LEU:HA	1.81	0.43
7:j:75:LEU:HD23	7:j:111:ILE:HB	2.01	0.43
8:l:37:PHE:CE1	8:l:53:VAL:HG11	2.53	0.43
2:A0:22:GLU:HG2	5:O:241:ARG:HH12	1.84	0.43
2:A0:88:HIS:HB3	2:A0:91:GLN:HB2	2.00	0.43
3:A1:23:VAL:HG11	3:A1:230:SER:HB3	2.01	0.43
3:A1:281:TYR:CD2	3:A5:87:PRO:HD3	2.53	0.43
3:A3:337:ASN:HB3	3:A3:340:TYR:HB2	2.01	0.43
2:A4:280:LYS:HB3	2:A8:89:PRO:HG3	2.01	0.43
2:A8:395:PHE:HE2	2:A8:422:ARG:HB2	1.84	0.43
3:B5:375:GLN:HG2	3:B5:379:LYS:HE3	1.99	0.43
3:B7:295:ASP:HB3	3:B7:297:LYS:HG2	2.01	0.43
3:B9:281:TYR:CD2	3:C3:87:PRO:HD3	2.53	0.43
3:B9:304:ASP:HA	3:B9:305:PRO:HD3	1.91	0.43
2:C0:3:GLU:HG3	2:C0:64:ARG:NH2	2.34	0.43
2:C0:291:ILE:HD12	2:C0:375:VAL:HG13	2.00	0.43
3:C7:162:ARG:HH22	3:C7:251:ARG:HH21	1.67	0.43
3:C9:42:LEU:HD13	3:C9:356:ILE:HD11	2.00	0.43
3:C9:107:THR:HG22	3:C9:108:GLU:H	1.84	0.43
2:D6:360:PRO:HG3	2:D6:374:ALA:HB2	2.01	0.43
3:D7:85:PHE:HB2	3:D7:90:PHE:HE1	1.84	0.43
2:D8:76:ASP:HA	2:D8:79:ARG:HE	1.83	0.43
2:E0:8:HIS:HD2	2:E0:138:PHE:HB2	1.83	0.43
2:E2:70:LEU:HD12	2:E2:99:ALA:HB2	2.01	0.43
3:E3:248:SER:HB2	3:E3:252:LYS:HG2	2.01	0.43
3:E3:336:LYS:HE3	3:E3:336:LYS:HB3	1.71	0.43
3:F1:337:ASN:HB3	3:F1:340:TYR:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:231:PRO:HA	6:R:55:ASP:HA	2.01	0.43
7:c:184:PRO:HG3	7:c:189:LEU:HD23	2.01	0.43
8:l:25:ARG:HE	7:n:23:LEU:HD12	1.84	0.43
7:o:113:VAL:HG12	7:o:134:ILE:HB	2.00	0.43
7:o:189:LEU:HD23	7:o:189:LEU:HA	1.88	0.43
2:A0:326:LYS:HD3	2:A0:326:LYS:HA	1.66	0.42
2:A4:35:GLN:HA	2:A4:59:GLY:HA3	2.02	0.42
2:A4:285:GLN:HB2	2:A8:56:THR:HA	2.01	0.42
2:A4:385:ALA:HB2	2:A4:432:TYR:CD2	2.54	0.42
3:A5:395:LEU:HA	3:A5:395:LEU:HD23	1.78	0.42
3:A9:77:ARG:HH22	3:A9:92:PHE:HZ	1.67	0.42
3:A9:391:ARG:HD3	2:B0:346:TRP:CG	2.54	0.42
2:B0:64:ARG:HA	2:B0:125:LEU:HD11	2.01	0.42
2:C0:161:TYR:HB3	2:C0:164:LYS:HG2	2.01	0.42
2:C2:388:PHE:HB3	2:C2:425:LEU:HD11	2.01	0.42
3:C5:67:ASP:HA	3:C5:143:THR:HG21	2.00	0.42
2:C6:324:VAL:HG12	2:C6:326:LYS:HG2	2.00	0.42
3:C7:9:GLY:HA3	3:C7:66:MET:HE2	2.00	0.42
3:C9:20:PHE:HA	3:C9:230:SER:HB2	2.00	0.42
3:C9:224:ASP:HB3	5:P:487:THR:HG23	2.00	0.42
2:D6:219:ILE:HG13	7:s:198:ARG:HH21	1.84	0.42
2:D6:255:PHE:O	2:D6:259:LEU:HB2	2.19	0.42
3:D7:2:ARG:HB3	3:D7:131:GLN:HB2	2.01	0.42
3:D7:112:LEU:HB3	3:D7:147:MET:HE1	2.01	0.42
3:D7:204:ASN:HA	3:D7:207:LEU:HD12	2.01	0.42
3:D7:367:PHE:HE1	3:D7:369:GLY:HA3	1.84	0.42
2:D8:286:LEU:HD23	2:D8:286:LEU:HA	1.87	0.42
2:D8:306:ASP:HA	2:D8:307:PRO:HD3	1.86	0.42
3:D9:46:ARG:HG2	3:D9:240:LEU:O	2.19	0.42
2:E0:109:THR:HG23	2:E0:110:ILE:HG23	2.01	0.42
3:E3:265:PHE:HB2	3:E3:374:ILE:HD12	2.01	0.42
3:E7:359:LYS:HD3	3:E7:359:LYS:HA	1.86	0.42
8:l:37:PHE:CE2	8:l:39:ALA:HB2	2.54	0.42
7:o:184:PRO:HG3	7:o:189:LEU:HD12	2.01	0.42
7:s:15:ARG:O	7:s:19:GLU:HG3	2.19	0.42
7:v:170:VAL:HG23	7:v:183:LEU:HB2	2.00	0.42
7:w:93:LEU:HB3	7:w:97:ARG:HH12	1.83	0.42
2:A8:237:SER:HA	2:A8:320:ARG:HD2	2.01	0.42
2:B0:362:VAL:HG13	2:B0:368:LEU:HD12	2.01	0.42
3:B3:256:ASN:ND2	3:B3:350:LYS:HE3	2.33	0.42
2:B6:112:LYS:HA	2:B6:115:VAL:HG12	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B9:28:HIS:HA	3:B9:43:GLN:HG2	2.01	0.42
3:C7:372:THR:HG21	3:C7:426:GLN:HB2	2.01	0.42
3:C9:164:MET:HE2	3:C9:164:MET:HB2	1.81	0.42
2:D0:12:ALA:HB3	2:D0:140:ALA:HB2	2.01	0.42
3:D3:317:PHE:CD2	3:D3:321:MET:HE1	2.54	0.42
2:D4:237:SER:HA	2:D4:320:ARG:HH11	1.83	0.42
2:D6:304:LYS:HD2	2:D6:304:LYS:HA	1.83	0.42
2:E6:388:PHE:HB3	2:E6:425:LEU:HD11	2.00	0.42
3:E7:100:ASN:HB3	3:E7:103:LYS:HB2	2.00	0.42
3:E9:267:LEU:HB3	3:E9:299:MET:SD	2.59	0.42
2:F0:79:ARG:HE	2:F0:92:LEU:HB3	1.83	0.42
4:W:1388:LEU:HD22	4:W:1392:PHE:HD2	1.83	0.42
7:c:144:LEU:HD23	7:c:144:LEU:HA	1.91	0.42
7:u:75:LEU:O	7:u:170:VAL:HA	2.19	0.42
1:A:234:LYS:HA	1:A:234:LYS:HD2	1.82	0.42
2:A0:2:ARG:HG3	2:A0:51:THR:HB	2.01	0.42
2:A4:217:LEU:HD11	2:A4:275:ILE:HG22	2.00	0.42
2:A6:7:ILE:HG21	2:A6:153:LEU:HD21	2.01	0.42
2:A6:248:LEU:HD23	2:A6:355:ILE:HD13	2.00	0.42
3:B3:293:MET:HA	3:B3:298:ASN:HD22	1.83	0.42
3:B7:318:ARG:HD3	3:B7:358:PRO:HD3	1.99	0.42
2:B8:265:ILE:HG22	2:B8:380:ASN:HD21	1.84	0.42
2:B8:268:MET:HE2	2:B8:378:ILE:HG22	2.02	0.42
3:C3:34:GLY:HA3	3:C3:58:ARG:HB2	2.00	0.42
2:C4:76:ASP:HA	2:C4:79:ARG:HB2	2.01	0.42
2:C6:217:LEU:HD21	2:C6:275:ILE:HG22	2.01	0.42
2:C6:280:LYS:HA	2:C6:280:LYS:HD3	1.83	0.42
3:C9:163:ILE:HD11	3:C9:251:ARG:HB2	2.01	0.42
2:D0:282:TYR:HB3	7:p:202:ARG:CZ	2.50	0.42
2:D0:335:ILE:HG23	2:D0:341:ILE:HD13	2.01	0.42
3:D1:100:ASN:HB3	3:D1:103:LYS:HD3	2.02	0.42
2:D2:73:THR:HG23	3:D3:247:ASN:ND2	2.34	0.42
3:D7:286:VAL:HG22	3:D7:363:MET:HE1	2.02	0.42
2:E0:181:VAL:O	2:E0:398:MET:HE1	2.19	0.42
5:P:489:LEU:HG	5:P:494:LEU:HA	2.01	0.42
6:R:65:HIS:CG	6:R:66:PRO:HD3	2.54	0.42
7:f:72:SER:HB3	7:f:108:ILE:HG22	2.00	0.42
7:j:110:ILE:O	7:j:131:TRP:HB2	2.20	0.42
7:m:112:PHE:CD1	7:m:129:MET:HE1	2.55	0.42
7:o:78:ALA:O	7:o:114:SER:HA	2.19	0.42
7:o:104:ALA:HB1	7:q:41:ASN:HD22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:s:53:GLY:HA2	7:s:62:VAL:HG21	2.00	0.42
1:A:211:GLY:O	3:A7:356:ILE:HG13	2.18	0.42
3:A1:47:ILE:HG22	3:A1:51:TYR:HB2	2.02	0.42
2:A2:282:TYR:CE2	5:P:252:ALA:HA	2.54	0.42
2:A4:28:HIS:HE2	2:A4:243:ARG:HD2	1.84	0.42
3:A9:228:LEU:HB3	3:A9:300:MET:HE2	2.02	0.42
3:B5:171:PRO:HB3	3:B5:181:GLU:HB3	1.99	0.42
2:B6:335:ILE:HD11	2:B6:341:ILE:HG13	2.01	0.42
3:C5:19:LYS:HG3	3:C5:226:ASN:HB2	2.02	0.42
3:C5:375:GLN:HB3	3:C5:419:VAL:HG23	2.02	0.42
2:C6:104:ALA:HA	2:C6:108:TYR:HD2	1.85	0.42
2:C6:219:ILE:HG22	2:C6:221:ARG:H	1.84	0.42
3:C7:159:TYR:HB3	3:C7:162:ARG:HG2	2.01	0.42
2:C8:430:LYS:HA	2:C8:430:LYS:HD3	1.82	0.42
2:D2:282:TYR:HB3	7:q:202:ARG:CZ	2.49	0.42
3:E5:403:MET:HE3	3:E5:403:MET:HB2	1.78	0.42
3:E9:156:ARG:HH22	3:E9:197:ASP:HB2	1.83	0.42
3:F1:289:LEU:HD22	3:F1:363:MET:HE2	2.01	0.42
1:J:223:PRO:HG3	7:n:178:ARG:NH2	2.34	0.42
4:M:1390:GLU:HA	4:M:1393:ILE:HG12	2.01	0.42
4:V:1264:THR:H	4:V:1374:ARG:HH22	1.67	0.42
7:c:37:GLN:C	7:c:37:GLN:HE21	2.28	0.42
7:f:3:GLN:OE1	7:f:4:PRO:HA	2.20	0.42
7:j:8:SER:HB3	7:j:11:ASN:HB2	2.01	0.42
7:o:110:ILE:HB	7:o:131:TRP:CG	2.54	0.42
7:s:99:MET:HE3	7:s:99:MET:HB3	1.65	0.42
7:t:201:TRP:CD1	7:t:201:TRP:H	2.36	0.42
2:A0:112:LYS:H	2:A0:112:LYS:HG2	1.70	0.42
3:A1:282:ARG:HA	3:A5:86:ARG:HH12	1.84	0.42
2:A2:225:THR:HG21	6:R:84:SER:HB3	2.01	0.42
2:A4:70:LEU:HA	2:A4:95:GLY:HA3	2.02	0.42
2:A4:133:GLN:HB3	2:A4:252:VAL:HG22	2.01	0.42
3:A9:227:HIS:CD2	5:P:312:ILE:HG23	2.51	0.42
2:B2:207:GLU:HA	2:B2:210:TYR:HB2	2.02	0.42
2:B2:312:TYR:HE2	2:B2:341:ILE:HD11	1.84	0.42
3:B3:4:ILE:HB	3:B3:50:PHE:HE1	1.84	0.42
2:B4:248:LEU:HD23	2:B4:248:LEU:HA	1.90	0.42
3:B7:383:ASP:HA	3:B7:386:THR:HG22	2.00	0.42
2:B8:401:LYS:HE2	3:B9:344:TRP:CD2	2.54	0.42
3:B9:171:PRO:HG2	3:B9:185:ALA:HB2	2.02	0.42
3:C1:186:THR:HG22	3:C1:415:MET:HE2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C2:168:ASN:HD22	2:C2:198:THR:HG21	1.83	0.42
2:C2:215:ARG:HH21	2:C2:216:ASN:ND2	2.17	0.42
2:C4:31:GLN:HA	1:J:256:LEU:HD21	2.02	0.42
2:C4:405:VAL:HA	2:C4:408:TYR:HB2	2.00	0.42
3:C5:8:GLN:HE21	3:C5:65:LEU:HG	1.84	0.42
2:C6:102:ASN:HB3	2:C6:105:ARG:HB2	2.01	0.42
2:C8:119:LEU:HD11	2:C8:156:ARG:HB3	2.01	0.42
2:D0:181:VAL:HG22	2:D0:398:MET:HE1	2.00	0.42
2:D4:173:PRO:HG2	2:D4:391:MET:HE2	2.02	0.42
3:D5:253:LEU:HD11	3:D5:316:MET:HE1	2.01	0.42
2:D6:99:ALA:HA	2:D6:110:ILE:HD11	2.01	0.42
3:D7:276:ARG:HG2	5:P:548:PRO:HB2	2.01	0.42
3:E5:237:THR:HG23	3:E5:241:ARG:HH21	1.84	0.42
2:E8:320:ARG:HG3	2:E8:356:ASN:HD22	1.83	0.42
4:M:1397:VAL:HG12	4:M:1401:ARG:NH1	2.35	0.42
7:a:115:LEU:HD23	7:a:152:LYS:HG2	2.00	0.42
7:d:97:ARG:HD3	7:f:161:TYR:HE1	1.84	0.42
7:g:71:LYS:HE2	7:g:109:GLU:HB2	2.01	0.42
7:q:175:SER:H	7:q:178:ARG:NH1	2.17	0.42
3:A1:215:LEU:HD11	3:A1:273:LEU:HD22	2.01	0.42
2:A4:318:MET:HE3	2:A4:318:MET:HB3	1.86	0.42
3:A5:269:GLY:HA2	3:A5:300:MET:HE2	2.02	0.42
3:A5:379:LYS:HA	3:A5:379:LYS:HD2	1.86	0.42
3:A7:86:ARG:HA	3:A7:87:PRO:HD3	1.94	0.42
3:B5:19:LYS:HD3	3:B5:19:LYS:HA	1.84	0.42
3:B5:269:GLY:H	3:B5:367:PHE:HB3	1.85	0.42
2:B6:271:SER:HB3	2:B6:377:MET:HB3	2.02	0.42
3:B7:131:GLN:HE22	3:B7:249:ASP:HB2	1.84	0.42
2:C0:119:LEU:HA	2:C0:122:ILE:HB	2.01	0.42
3:C3:299:MET:HG3	3:C3:305:PRO:HG2	2.02	0.42
3:C7:207:LEU:HB3	3:C7:225:LEU:HG	2.00	0.42
2:C8:363:VAL:HG23	2:C8:366:GLY:HA3	2.00	0.42
3:C9:390:ARG:HG3	3:C9:391:ARG:HG3	2.01	0.42
3:D1:281:TYR:HE2	3:D5:58:ARG:NH1	2.18	0.42
3:D3:97:ALA:HB3	3:D3:143:THR:HB	2.01	0.42
3:D3:267:LEU:HD22	3:D3:301:CYS:HB3	2.01	0.42
2:E0:276:ILE:HD12	2:E0:286:LEU:HD11	2.02	0.42
3:E3:286:VAL:HG11	3:E3:326:VAL:HA	2.01	0.42
3:E9:8:GLN:HG2	3:E9:17:GLY:HA3	2.01	0.42
2:F0:172:TRP:CD2	2:F0:173:PRO:HD2	2.54	0.42
3:F1:149:THR:HA	3:F1:152:ILE:HD12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F1:165:GLU:HG3	3:F1:198:GLU:HG2	2.02	0.42
1:K:215:TYR:O	1:K:219:TYR:HB2	2.20	0.42
4:W:1260:CYS:SG	4:W:1286:ARG:HB2	2.59	0.42
7:i:71:LYS:HG2	7:i:107:LYS:HA	2.00	0.42
7:i:149:ARG:HH12	7:i:164:ARG:HD3	1.84	0.42
8:k:14:LYS:HD3	8:k:96:GLU:OE2	2.20	0.42
8:k:35:ALA:HB2	8:k:133:VAL:HG12	2.01	0.42
7:v:89:LEU:HD11	7:v:129:MET:HG2	2.01	0.42
2:A2:21:TRP:CZ3	2:A2:52:PHE:HB3	2.55	0.42
2:A2:32:PRO:HG3	2:A2:83:TYR:HE1	1.85	0.42
2:A6:207:GLU:HA	2:A6:210:TYR:HB2	2.01	0.42
2:A8:403:ALA:HB2	3:A9:344:TRP:HZ3	1.85	0.42
3:A9:159:TYR:HB3	3:A9:162:ARG:HG2	2.01	0.42
2:B0:267:PHE:HE2	2:B0:428:LEU:HD21	1.84	0.42
3:B7:105:HIS:CE1	3:B7:150:LEU:HD12	2.55	0.42
2:C0:10:GLY:O	2:C0:14:ILE:HG12	2.20	0.42
2:C2:133:GLN:HG3	2:C2:252:VAL:HB	2.02	0.42
3:C3:20:PHE:CE2	3:C3:233:MET:HG2	2.54	0.42
2:C8:108:TYR:HE2	2:C8:413:MET:HG2	1.85	0.42
3:E1:135:ILE:HB	3:E1:166:THR:HG22	2.01	0.42
3:E1:305:PRO:HB2	3:E1:310:TYR:CE1	2.55	0.42
2:E4:381:SER:H	2:E4:384:ILE:HD12	1.84	0.42
2:E6:338:LYS:HD3	2:E6:341:ILE:HD12	2.01	0.42
3:E7:203:ASP:HB3	3:E7:377:MET:HE1	2.02	0.42
2:E8:76:ASP:HA	2:E8:79:ARG:HB2	2.02	0.42
3:E9:219:THR:HB	2:F0:324:VAL:HG21	2.01	0.42
7:c:183:LEU:HD23	7:c:196:LEU:HA	2.02	0.42
7:f:25:GLN:HE22	7:f:36:ILE:HD13	1.85	0.42
7:i:14:LYS:HG3	7:i:47:LEU:HB2	2.01	0.42
7:j:41:ASN:O	7:j:45:MET:HG3	2.20	0.42
7:j:72:SER:HB3	7:j:108:ILE:HG22	2.02	0.42
8:k:53:VAL:HA	8:k:154:LEU:HD21	2.01	0.42
7:n:9:PRO:HB2	7:n:143:ILE:HG23	2.01	0.42
7:n:112:PHE:HD2	7:n:133:SER:HB2	1.84	0.42
7:p:139:PRO:O	7:p:143:ILE:HG12	2.20	0.42
7:r:97:ARG:O	7:r:101:GLU:HB2	2.20	0.42
7:t:7:ALA:HB3	7:t:161:TYR:HE2	1.85	0.42
7:u:80:GLY:HA2	7:u:125:HIS:CD2	2.55	0.42
1:A:254:LYS:HB3	2:A4:364:PRO:HG2	2.00	0.42
3:A1:216:LYS:HE3	3:A1:216:LYS:HB3	1.87	0.42
2:A2:28:HIS:CE1	2:A2:243:ARG:HD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A3:279:GLN:HB3	5:P:231:PRO:HG3	2.01	0.42
3:A5:268:ILE:N	3:A5:299:MET:HE1	2.32	0.42
2:A6:2:ARG:NH2	2:A6:242:LEU:HA	2.35	0.42
2:B2:107:HIS:HD2	2:B2:152:LEU:HB2	1.85	0.42
3:B5:170:PHE:HD2	3:B5:201:VAL:HG13	1.85	0.42
3:B5:405:GLU:HA	3:B5:408:PHE:CD1	2.55	0.42
3:C1:265:PHE:HB3	3:C1:374:ILE:HD13	2.00	0.42
3:C5:210:ILE:HG23	3:C5:214:THR:HB	2.01	0.42
3:C5:326:VAL:HG13	3:C5:330:MET:HE3	2.02	0.42
3:C5:380:ARG:NH1	3:C5:384:GLN:HE22	2.18	0.42
3:C7:292:GLN:HG2	3:C7:298:ASN:ND2	2.34	0.42
3:C7:406:MET:HE3	3:C7:406:MET:O	2.20	0.42
2:C8:105:ARG:HA	2:C8:105:ARG:HD2	1.91	0.42
3:D1:359:LYS:HG3	1:K:207:LEU:HD23	2.02	0.42
3:D3:178:THR:H	2:D4:352:LYS:HA	1.84	0.42
3:D3:279:GLN:HA	3:D3:282:ARG:HD2	2.02	0.42
3:D7:171:PRO:HG2	3:D7:185:ALA:HB2	2.01	0.42
3:D7:182:PRO:HG2	3:D7:388:MET:HE3	2.00	0.42
2:D8:2:ARG:NH2	2:D8:48:ALA:HA	2.34	0.42
2:D8:25:CYS:O	2:D8:30:ILE:HG22	2.20	0.42
2:D8:28:HIS:CE1	2:D8:243:ARG:HH11	2.37	0.42
2:D8:304:LYS:HD3	2:D8:304:LYS:HA	1.86	0.42
3:E1:311:LEU:HD23	3:E1:342:VAL:HG21	2.01	0.42
3:E3:291:GLN:NE2	3:E7:122:LYS:HB2	2.35	0.42
2:E4:191:THR:HG21	2:E4:425:LEU:HD13	2.02	0.42
3:E5:42:LEU:HD13	3:E5:356:ILE:HD11	2.02	0.42
3:E5:132:GLY:HA2	3:E5:162:ARG:HB3	2.01	0.42
3:E5:372:THR:O	3:E5:375:GLN:HG2	2.20	0.42
2:F0:329:ASN:HA	2:F0:332:VAL:HG22	2.02	0.42
3:F1:46:ARG:HD3	3:F1:46:ARG:HA	1.89	0.42
1:I:247:TYR:O	1:I:251:TYR:HB2	2.19	0.42
4:L:1286:ARG:HE	4:L:1289:ARG:HH21	1.67	0.42
7:f:73:VAL:HA	7:f:109:GLU:O	2.20	0.42
7:j:71:LYS:HD3	7:j:106:GLN:HE22	1.85	0.42
7:p:56:LYS:HE2	7:p:56:LYS:HB2	1.91	0.42
7:q:95:TYR:HA	7:q:98:THR:HG22	2.02	0.42
7:u:97:ARG:NH1	7:w:149:ARG:HH22	2.17	0.42
7:x:115:LEU:HD23	7:x:115:LEU:HA	1.68	0.42
2:A4:340:THR:HG23	2:A4:341:ILE:HG23	2.02	0.42
3:B3:7:VAL:O	3:B3:135:ILE:HA	2.20	0.42
3:B3:112:LEU:HD23	3:B3:147:MET:HE2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:244:GLN:HE22	1:C:249:SER:N	2.17	0.42
3:C1:16:ILE:HD11	3:C1:229:VAL:HG11	2.02	0.42
3:C1:207:LEU:HD21	3:C1:229:VAL:HG23	2.01	0.42
3:C1:240:LEU:HD21	3:C1:249:ASP:HB2	2.00	0.42
2:C2:76:ASP:HA	2:C2:79:ARG:HD2	2.01	0.42
2:C2:96:LYS:HD2	2:C2:96:LYS:HA	1.76	0.42
2:C2:184:PRO:HG2	2:C2:398:MET:HE1	2.01	0.42
2:C2:227:LEU:O	2:C2:231:ILE:HG12	2.20	0.42
3:C5:139:LEU:HD23	3:C5:145:SER:HA	2.02	0.42
3:C9:237:THR:HG22	3:C9:250:LEU:HD11	2.02	0.42
2:D0:310:GLY:HA3	2:D0:383:ALA:HB2	2.01	0.42
2:D0:430:LYS:HA	2:D0:430:LYS:HD3	1.68	0.42
3:D3:164:MET:HE3	3:D3:164:MET:HB3	1.85	0.42
2:D6:269:LEU:HD22	2:D6:303:ALA:HB2	2.02	0.42
2:D8:238:LEU:HA	2:D8:318:MET:SD	2.60	0.42
2:D8:370:LYS:HB3	2:D8:370:LYS:HE3	1.80	0.42
3:D9:97:ALA:HA	3:D9:103:LYS:HE3	2.02	0.42
3:D9:278:SER:HB3	3:E3:87:PRO:HG2	2.02	0.42
3:E3:215:LEU:HD11	3:E3:228:LEU:HD21	2.02	0.42
3:E3:396:HIS:HA	3:E3:399:THR:HG22	2.01	0.42
3:E5:36:TYR:HE1	7:u:90:PRO:HG2	1.84	0.42
6:R:57:LYS:HA	6:R:57:LYS:HD3	1.82	0.42
4:W:1441:LEU:HD23	4:W:1441:LEU:HA	1.90	0.42
7:f:139:PRO:O	7:f:143:ILE:HG12	2.20	0.42
3:A1:42:LEU:HB2	6:T:77:TYR:CD1	2.54	0.42
3:A1:139:LEU:H	3:A1:139:LEU:HD12	1.84	0.42
2:A2:268:MET:HG3	2:A2:380:ASN:HB2	2.01	0.42
3:A3:22:GLU:HG2	3:A3:81:PHE:CD2	2.55	0.42
3:A3:318:ARG:HD3	3:A3:358:PRO:HD3	2.02	0.42
2:A8:77:GLU:HA	2:A8:80:THR:HG22	2.01	0.42
2:B0:282:TYR:HD1	7:f:202:ARG:HD2	1.84	0.42
2:B4:100:ALA:O	3:B5:255:VAL:HG11	2.19	0.42
3:C1:240:LEU:HA	3:C1:240:LEU:HD23	1.90	0.42
2:C2:81:GLY:HA3	1:I:215:TYR:HE2	1.84	0.42
2:C8:395:PHE:HB3	2:C8:422:ARG:NH2	2.34	0.42
3:C9:230:SER:HA	3:C9:233:MET:HE2	2.02	0.42
3:D3:12:CYS:HB2	3:D3:138:SER:HB2	2.01	0.42
2:D8:4:VAL:HB	2:D8:136:LEU:HD23	2.01	0.42
2:E0:10:GLY:O	2:E0:14:ILE:HG12	2.20	0.42
3:E1:7:VAL:HB	3:E1:135:ILE:HG13	2.02	0.42
3:E1:289:LEU:HD11	3:E1:363:MET:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E2:296:PHE:CE1	2:E2:335:ILE:HG21	2.55	0.42
2:E2:297:GLU:HA	2:E2:298:PRO:HD3	1.93	0.42
3:E3:271:ALA:HB1	3:E3:292:GLN:HB3	2.02	0.42
2:F0:189:LEU:HD11	2:F0:418:PHE:HD1	1.84	0.42
2:F0:209:ILE:HD13	2:F0:231:ILE:HD11	2.02	0.42
7:a:66:SER:HA	7:a:69:LYS:NZ	2.35	0.42
7:b:183:LEU:HD11	7:b:199:TRP:HE3	1.85	0.42
7:g:55:LEU:HA	7:g:55:LEU:HD23	1.89	0.42
7:q:9:PRO:HA	7:q:12:VAL:HG22	2.01	0.42
7:v:14:LYS:HB2	7:v:47:LEU:HD23	2.01	0.42
3:A1:229:VAL:O	3:A1:233:MET:HG2	2.20	0.41
2:A2:70:LEU:HD22	2:A2:114:ILE:HD12	2.01	0.41
3:A9:280:GLN:HG3	3:A9:281:TYR:CD1	2.54	0.41
2:B0:107:HIS:CD2	2:B0:152:LEU:HB2	2.55	0.41
3:B3:356:ILE:HD12	1:E:243:ALA:HB1	2.01	0.41
3:B5:61:PRO:HD3	3:B5:84:LEU:HG	2.01	0.41
3:B5:170:PHE:HE2	3:B5:201:VAL:HG22	1.84	0.41
3:B7:395:LEU:HA	3:B7:395:LEU:HD12	1.82	0.41
2:B8:132:LEU:HB3	2:B8:164:LYS:HE2	2.01	0.41
2:B8:204:LEU:HD13	2:B8:231:ILE:HD12	2.01	0.41
2:C0:402:ARG:HH22	2:C0:406:HIS:HB3	1.84	0.41
2:C6:23:LEU:HD11	2:C6:233:GLN:NE2	2.35	0.41
3:C9:274:THR:HG22	3:C9:282:ARG:HD3	2.00	0.41
2:D0:200:VAL:HG13	2:D0:268:MET:HE2	2.02	0.41
3:D1:7:VAL:HG11	3:D1:151:LEU:HD23	2.02	0.41
3:D7:382:SER:HB3	3:D7:415:MET:HE1	2.02	0.41
3:D9:84:LEU:HD12	3:D9:84:LEU:HA	1.90	0.41
3:E1:19:LYS:HA	3:E1:19:LYS:HD3	1.90	0.41
3:E3:103:LYS:HD3	3:E3:108:GLU:OE2	2.19	0.41
3:E3:374:ILE:HD11	3:E3:422:TYR:CZ	2.55	0.41
3:E5:271:ALA:HB1	3:E5:292:GLN:HB3	2.02	0.41
3:E5:344:TRP:CD1	3:E5:345:ILE:HG13	2.55	0.41
2:E6:10:GLY:O	2:E6:14:ILE:HG12	2.20	0.41
3:E9:12:CYS:HB3	3:E9:138:SER:HB2	2.02	0.41
3:E9:227:HIS:CD2	6:U:103:LEU:HD23	2.55	0.41
2:F0:88:HIS:HA	2:F0:89:PRO:HD3	1.90	0.41
5:O:223:ARG:H	5:O:223:ARG:HG2	1.65	0.41
7:a:141:THR:O	7:a:145:LYS:HG2	2.20	0.41
7:c:50:PHE:HB3	7:c:54:SER:HB2	2.02	0.41
7:h:15:ARG:O	7:h:19:GLU:HG3	2.20	0.41
7:s:64:PRO:HD2	7:s:67:HIS:CE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:195:LEU:HD12	2:A4:428:LEU:HD13	2.02	0.41
2:A6:174:SER:HB2	2:A6:177:VAL:HB	2.01	0.41
2:A6:223:THR:OG1	2:A6:225:THR:HG22	2.20	0.41
2:A8:52:PHE:HE2	2:A8:243:ARG:HH11	1.68	0.41
2:A8:306:ASP:HB3	2:A8:309:HIS:CE1	2.56	0.41
2:B0:242:LEU:HD11	2:B0:252:VAL:HG23	2.01	0.41
3:B1:16:ILE:HG22	3:B1:226:ASN:CG	2.45	0.41
3:B7:105:HIS:HD2	3:B7:106:TYR:CE1	2.38	0.41
3:B7:187:LEU:HA	3:B7:190:HIS:CE1	2.54	0.41
3:B7:213:ARG:H	3:B7:213:ARG:HD3	1.85	0.41
2:B8:283:HIS:ND1	2:C2:60:LYS:HE3	2.35	0.41
2:C0:273:ALA:H	2:C0:375:VAL:HG23	1.84	0.41
2:C0:274:PRO:HD3	2:C0:375:VAL:HG22	2.03	0.41
2:C4:209:ILE:HD11	2:C4:230:LEU:HB2	2.01	0.41
2:C4:413:MET:HE3	2:C4:417:GLU:HG2	2.02	0.41
2:C8:195:LEU:HD11	2:C8:264:ARG:HE	1.84	0.41
1:D:251:TYR:HD2	2:D6:22:GLU:HG2	1.84	0.41
3:D3:262:ARG:HG3	3:D3:263:LEU:H	1.85	0.41
2:D4:181:VAL:HG22	3:D5:256:ASN:OD1	2.19	0.41
2:D4:242:LEU:HD23	2:D4:242:LEU:HA	1.81	0.41
3:D7:39:ASP:HA	7:q:90:PRO:HG3	2.02	0.41
2:E0:11:GLN:O	2:E0:15:GLN:HG3	2.20	0.41
2:E0:304:LYS:HD2	2:E0:304:LYS:HA	1.89	0.41
3:E1:10:GLY:HA2	3:E1:143:THR:HG23	2.03	0.41
3:E3:320:ARG:HH11	3:E3:355:ASP:HB2	1.85	0.41
2:E4:204:LEU:HD12	2:E4:209:ILE:HD11	2.02	0.41
3:E9:87:PRO:HA	3:E9:90:PHE:HD2	1.85	0.41
3:F1:150:LEU:O	3:F1:154:LYS:HG3	2.19	0.41
1:J:212:GLU:OE2	1:J:216:ARG:HB2	2.20	0.41
7:b:74:ALA:HB2	7:b:199:TRP:CH2	2.55	0.41
7:b:115:LEU:HB3	7:b:152:LYS:HD2	2.02	0.41
7:b:170:VAL:HG13	7:b:183:LEU:HD12	2.00	0.41
7:n:72:SER:HB3	7:n:199:TRP:HE1	1.85	0.41
7:t:191:GLU:HG2	7:t:194:ARG:HH21	1.85	0.41
2:A0:280:LYS:HZ3	2:A4:89:PRO:HG2	1.84	0.41
3:A1:293:MET:HE2	3:A1:367:PHE:HD2	1.85	0.41
2:A2:96:LYS:HD2	3:A3:2:ARG:HG3	2.01	0.41
2:A4:188:VAL:HG21	2:A4:395:PHE:HB2	2.03	0.41
3:C1:150:LEU:O	3:C1:154:LYS:HG2	2.20	0.41
3:C1:313:ALA:HA	3:C1:369:GLY:HA2	2.02	0.41
3:C3:61:PRO:HD3	3:C3:84:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C8:407:TRP:HH2	3:C9:258:ILE:HB	1.85	0.41
1:D:215:TYR:CE2	2:D8:83:TYR:HD2	2.38	0.41
2:D0:167:LEU:HD13	2:D0:200:VAL:HB	2.01	0.41
2:D0:383:ALA:O	2:D0:386:GLU:HG3	2.20	0.41
3:D1:57:GLY:HA3	7:n:83:PRO:HB2	2.03	0.41
2:D4:259:LEU:HD13	2:D4:316:CYS:HB2	2.01	0.41
3:D5:377:MET:HE2	3:D5:377:MET:HB2	1.77	0.41
2:D6:64:ARG:HA	2:D6:125:LEU:HD11	2.02	0.41
2:D6:320:ARG:HE	2:D6:356:ASN:HD22	1.67	0.41
3:E3:7:VAL:HB	3:E3:135:ILE:HG13	2.01	0.41
3:E3:36:TYR:HE2	7:t:90:PRO:HG2	1.86	0.41
2:E8:30:ILE:HG13	2:E8:34:GLY:HA2	2.01	0.41
4:N:1287:MET:HG3	4:N:1444:TRP:CZ2	2.55	0.41
5:O:523:ASP:OD1	5:O:525:VAL:HG13	2.20	0.41
5:P:305:ARG:HA	5:P:308:TRP:CD1	2.56	0.41
5:P:490:HIS:HB2	5:P:495:VAL:O	2.19	0.41
6:T:65:HIS:CG	6:T:66:PRO:HD3	2.55	0.41
7:a:84:LYS:HB3	7:a:168:PRO:HD3	2.02	0.41
7:c:68:LEU:HD13	7:c:73:VAL:HG21	2.02	0.41
7:d:10:LEU:HD23	7:d:147:HIS:HB2	2.02	0.41
7:e:194:ARG:HH12	7:e:198:ARG:NH2	2.14	0.41
7:m:139:PRO:O	7:m:143:ILE:HG12	2.20	0.41
7:n:15:ARG:O	7:n:19:GLU:CB	2.69	0.41
7:o:158:THR:OG1	7:o:161:TYR:HB2	2.20	0.41
7:v:115:LEU:HD23	7:v:115:LEU:HA	1.78	0.41
7:v:184:PRO:HG3	7:v:189:LEU:HD12	2.02	0.41
7:w:114:SER:HB3	7:w:136:LEU:HD13	2.02	0.41
7:x:149:ARG:HG2	7:x:161:TYR:CD2	2.56	0.41
2:A2:274:PRO:HG3	2:A2:373:ARG:O	2.20	0.41
3:A3:228:LEU:HD11	3:A3:273:LEU:HD11	2.01	0.41
2:A4:221:ARG:HD3	3:A5:325:GLU:CD	2.46	0.41
2:A4:422:ARG:HH12	2:A4:426:ALA:HB2	1.85	0.41
3:A5:73:MET:HG3	3:A5:92:PHE:HD1	1.86	0.41
2:B2:372:MET:HG2	2:B2:373:ARG:HG2	2.02	0.41
3:B5:8:GLN:OE1	3:B5:17:GLY:HA3	2.20	0.41
3:B9:332:ASN:O	3:B9:336:LYS:HG2	2.20	0.41
2:C0:200:VAL:HG11	2:C0:255:PHE:HE1	1.86	0.41
2:C0:319:TYR:CE1	2:C0:375:VAL:HG12	2.55	0.41
2:C8:408:TYR:HB3	2:C8:413:MET:SD	2.61	0.41
1:D:240:PRO:HB2	7:s:162:GLY:C	2.45	0.41
1:D:241:PHE:N	7:s:162:GLY:HA2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D1:64:ILE:HA	3:D1:89:ASN:HB3	2.03	0.41
3:D3:20:PHE:CD1	3:D3:233:MET:HE2	2.56	0.41
3:D5:68:LEU:H	3:D5:143:THR:HG21	1.84	0.41
2:D6:141:VAL:HG12	2:D6:187:SER:HA	2.01	0.41
2:D6:225:THR:HG22	2:D6:229:ARG:HH12	1.84	0.41
2:D8:67:PHE:HB2	2:D8:92:LEU:HA	2.02	0.41
2:E0:70:LEU:HD12	2:E0:145:THR:HG22	2.02	0.41
2:E0:319:TYR:HB2	2:E0:355:ILE:HG12	2.03	0.41
2:E2:413:MET:HE3	2:E2:417:GLU:HB3	2.02	0.41
3:E7:113:ILE:HA	3:E7:116:VAL:HG12	2.01	0.41
2:E8:71:GLU:HG3	2:E8:74:VAL:HG12	2.02	0.41
7:g:9:PRO:HB2	7:g:143:ILE:HG13	2.02	0.41
7:o:184:PRO:HG2	7:o:191:GLU:OE2	2.20	0.41
7:t:56:LYS:HG2	7:t:60:ASN:HA	2.03	0.41
7:w:9:PRO:HB2	7:w:143:ILE:HD12	2.03	0.41
2:A0:22:GLU:CG	5:O:241:ARG:HH12	2.33	0.41
3:A5:309:ARG:H	3:A5:372:THR:HG23	1.85	0.41
3:A9:117:LEU:HB3	3:A9:121:ARG:NH1	2.36	0.41
3:A9:293:MET:SD	3:A9:367:PHE:HB2	2.60	0.41
3:B1:86:ARG:HD2	3:B1:88:ASP:HB3	2.03	0.41
2:B2:76:ASP:HA	2:B2:79:ARG:HG2	2.03	0.41
2:B6:154:LEU:HB3	2:B6:197:HIS:HB3	2.02	0.41
2:B6:175:PRO:HB3	2:B6:390:ARG:NE	2.35	0.41
2:C0:65:CYS:H	2:C0:91:GLN:NE2	2.19	0.41
2:C0:103:PHE:HD2	2:C0:413:MET:HE1	1.86	0.41
2:C0:315:CYS:HB3	2:C0:377:MET:HE2	2.02	0.41
3:C1:346:PRO:HB2	3:C1:347:ASN:HD22	1.85	0.41
2:C2:88:HIS:CD2	2:C2:121:ARG:HH21	2.38	0.41
2:C4:273:ALA:HA	2:C4:275:ILE:HD12	2.03	0.41
2:C4:377:MET:HE2	2:C4:379:SER:HB3	2.02	0.41
3:C7:292:GLN:HG2	3:C7:298:ASN:HD22	1.85	0.41
3:D3:362:LYS:HE2	3:D3:362:LYS:HB2	1.92	0.41
3:D7:372:THR:O	3:D7:375:GLN:HG2	2.20	0.41
3:D9:282:ARG:NH1	3:D9:284:LEU:HD13	2.36	0.41
3:E3:153:SER:HB3	3:E3:191:GLN:HE21	1.85	0.41
3:E3:253:LEU:HD21	3:E3:368:VAL:HG21	2.02	0.41
2:E6:254:GLU:HA	2:E6:257:THR:HG22	2.02	0.41
3:E7:112:LEU:HG	3:E7:147:MET:HE1	2.01	0.41
2:F0:222:PRO:HD2	3:F1:324:LYS:NZ	2.36	0.41
3:F1:293:MET:HE2	3:F1:367:PHE:CD1	2.56	0.41
4:L:1254:ARG:O	4:L:1258:GLN:HG2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:c:142:GLU:HA	7:c:145:LYS:HD2	2.02	0.41
7:f:9:PRO:HA	7:f:12:VAL:HG22	2.02	0.41
7:n:110:ILE:HB	7:n:131:TRP:CG	2.55	0.41
7:w:21:ARG:HA	7:w:24:MET:SD	2.61	0.41
2:A2:113:GLU:HG2	2:A2:114:ILE:HG13	2.03	0.41
3:A3:113:ILE:HG23	3:A3:117:LEU:HD23	2.02	0.41
3:A3:139:LEU:HA	3:A3:145:SER:HB3	2.01	0.41
3:A3:296:ALA:HB2	3:A3:305:PRO:HD2	2.03	0.41
3:A5:27:GLU:HG2	3:A5:359:LYS:HG2	2.01	0.41
2:A6:231:ILE:O	2:A6:235:ILE:HG12	2.20	0.41
2:A8:338:LYS:HG3	2:A8:340:THR:HG22	2.02	0.41
3:A9:175:VAL:HG11	2:B0:329:ASN:HB3	2.02	0.41
2:B0:12:ALA:HB3	2:B0:140:ALA:HB2	2.03	0.41
2:B8:372:MET:HG2	2:B8:373:ARG:HG2	2.03	0.41
3:C3:121:ARG:O	3:C3:125:GLU:HG2	2.20	0.41
2:C4:71:GLU:HB3	3:C5:2:ARG:HH22	1.85	0.41
3:C5:113:ILE:HG23	3:C5:117:LEU:HD23	2.03	0.41
3:C5:166:THR:HG23	3:C5:199:VAL:HA	2.02	0.41
3:C5:416:ASN:HA	3:C5:419:VAL:HG12	2.02	0.41
2:C6:311:LYS:HD2	2:C6:342:GLN:NE2	2.33	0.41
3:C7:207:LEU:HA	3:C7:210:ILE:HG22	2.03	0.41
3:C9:151:LEU:HA	3:C9:151:LEU:HD12	1.81	0.41
3:C9:322:SER:HB3	3:C9:325:GLU:HG2	2.03	0.41
3:C9:376:GLU:HB3	3:C9:380:ARG:HH22	1.86	0.41
1:D:251:TYR:CZ	2:D6:23:LEU:HD13	2.55	0.41
2:D2:194:LEU:HD12	2:D2:198:THR:HG21	2.01	0.41
3:D9:290:THR:HG21	3:D9:329:GLN:HB3	2.02	0.41
2:E4:363:VAL:HG23	2:E4:366:GLY:HA3	2.01	0.41
3:E5:315:ALA:HB3	3:E5:351:SER:HA	2.02	0.41
3:E5:326:VAL:O	3:E5:330:MET:HG2	2.20	0.41
3:E7:417:ASP:O	3:E7:421:GLU:HG2	2.21	0.41
3:E9:122:LYS:HA	3:E9:122:LYS:HE3	2.03	0.41
6:U:102:LEU:HG	6:U:103:LEU:HD22	2.03	0.41
4:W:1241:PHE:CD2	4:W:1242:PRO:HD3	2.55	0.41
7:m:79:ASP:HB3	7:m:82:ASP:HB2	2.03	0.41
7:o:64:PRO:HD2	7:o:67:HIS:CE1	2.55	0.41
7:r:171:ILE:HG12	7:r:182:PHE:HD1	1.85	0.41
2:A2:272:TYR:CD2	2:A2:274:PRO:HD2	2.55	0.41
2:A4:231:ILE:O	2:A4:235:ILE:HG12	2.20	0.41
2:A8:288:VAL:HG13	2:A8:319:TYR:HE2	1.86	0.41
2:B0:332:VAL:HA	2:B0:335:ILE:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B0:338:LYS:HZ2	2:B0:340:THR:N	2.16	0.41
3:B1:383:ASP:HA	3:B1:386:THR:HG22	2.03	0.41
3:B3:178:THR:HG22	2:B4:352:LYS:NZ	2.36	0.41
3:B7:153:SER:HB3	3:B7:191:GLN:NE2	2.36	0.41
2:C0:362:VAL:HG21	2:C0:370:LYS:HG3	2.03	0.41
2:C0:370:LYS:NZ	8:k:161:PHE:HA	2.36	0.41
3:C1:68:LEU:HB2	3:C1:97:ALA:HB2	2.02	0.41
3:C1:313:ALA:HB1	3:C1:367:PHE:HE1	1.85	0.41
2:C2:103:PHE:CE2	2:C2:189:LEU:HB2	2.56	0.41
2:C2:401:LYS:HZ1	3:C3:344:TRP:CG	2.38	0.41
3:C3:374:ILE:HD11	3:C3:422:TYR:CZ	2.55	0.41
3:C5:60:VAL:HG21	3:C5:86:ARG:HH21	1.86	0.41
2:C6:325:PRO:HA	2:C6:328:VAL:HB	2.02	0.41
2:C8:301:MET:HE1	2:C8:377:MET:HE1	2.01	0.41
3:C9:299:MET:HE1	3:C9:367:PHE:HD2	1.84	0.41
2:D0:276:ILE:HD13	2:D0:286:LEU:HD11	2.01	0.41
3:D5:267:LEU:HD21	3:D5:374:ILE:HG22	2.02	0.41
2:D8:231:ILE:O	2:D8:235:ILE:HG12	2.21	0.41
2:D8:357:TYR:HB3	5:P:535:ILE:HG21	2.03	0.41
1:E:253:ALA:HB3	7:e:101:GLU:HG3	2.03	0.41
2:E0:36:MET:HE2	2:E0:61:HIS:CE1	2.56	0.41
3:E1:156:ARG:HH21	3:E1:164:MET:HB2	1.86	0.41
3:E3:281:TYR:CD2	3:E7:87:PRO:HD3	2.55	0.41
3:E3:398:TYR:HB3	3:E3:403:MET:HE1	2.02	0.41
3:E5:139:LEU:HD22	3:E5:170:PHE:CE2	2.55	0.41
2:E6:364:PRO:HG2	1:H:222:LYS:HB3	2.02	0.41
3:E9:65:LEU:HD22	3:E9:90:PHE:CE1	2.56	0.41
2:F0:260:VAL:HG11	2:F0:266:HIS:HA	2.01	0.41
5:P:305:ARG:HG3	5:P:305:ARG:HH11	1.85	0.41
4:Q:1285:ARG:HA	4:Q:1285:ARG:HD2	1.81	0.41
6:T:57:LYS:NZ	7:a:153:GLU:HG2	2.35	0.41
6:U:58:LEU:HD12	6:U:61:TRP:HD1	1.85	0.41
4:V:1286:ARG:HH12	4:V:1290:LEU:HG	1.85	0.41
7:a:152:LYS:HZ2	7:a:154:TYR:HD2	1.67	0.41
7:b:95:TYR:CE1	7:b:197:LEU:HD23	2.56	0.41
7:d:100:ASN:HD21	7:d:108:ILE:HG13	1.86	0.41
7:e:78:ALA:HB3	7:e:112:PHE:HE1	1.84	0.41
7:i:73:VAL:HG13	7:i:173:ILE:HB	2.03	0.41
3:A1:411:ALA:O	3:A1:415:MET:HB2	2.21	0.41
3:A3:256:ASN:HD22	3:A3:350:LYS:HD2	1.86	0.41
2:A4:91:GLN:NE2	2:A4:125:LEU:HD11	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A6:136:LEU:HD22	2:A6:169:PHE:HE2	1.85	0.41
3:B1:230:SER:HA	3:B1:233:MET:HG2	2.03	0.41
3:B3:178:THR:HG22	2:B4:352:LYS:HZ3	1.86	0.41
2:B4:72:PRO:HD2	3:B5:2:ARG:HH21	1.85	0.41
3:B5:106:TYR:HE1	3:B5:403:MET:HG2	1.84	0.41
3:B9:281:TYR:HD1	3:C3:58:ARG:HD3	1.84	0.41
2:C0:317:LEU:HB3	2:C0:319:TYR:CE1	2.55	0.41
2:C4:15:GLN:HB3	2:C4:228:ASN:ND2	2.36	0.41
2:C4:26:LEU:HD21	2:C4:363:VAL:HG12	2.03	0.41
2:C6:258:ASN:HD22	2:C6:352:LYS:HD3	1.85	0.41
3:C7:7:VAL:O	3:C7:135:ILE:HG13	2.21	0.41
1:D:215:TYR:HA	2:D8:22:GLU:CD	2.46	0.41
2:D0:387:VAL:HA	2:D0:390:ARG:NH1	2.36	0.41
3:D1:20:PHE:HA	3:D1:230:SER:HB2	2.03	0.41
2:D4:372:MET:HE2	2:D4:372:MET:HB3	1.96	0.41
2:D8:15:GLN:HB3	2:D8:228:ASN:HD21	1.86	0.41
3:D9:92:PHE:HB3	3:D9:93:GLY:H	1.75	0.41
3:D9:379:LYS:HD3	3:D9:419:VAL:HG11	2.01	0.41
3:E1:100:ASN:ND2	3:E1:103:LYS:HG3	2.36	0.41
2:E2:205:ASP:OD1	2:E2:303:ALA:HA	2.21	0.41
2:E4:247:ALA:HB3	2:E4:355:ILE:HB	2.02	0.41
2:E4:387:VAL:HA	2:E4:390:ARG:NH1	2.36	0.41
2:F0:213:CYS:HB3	2:F0:219:ILE:HD11	2.02	0.41
2:F0:222:PRO:HD2	3:F1:324:LYS:HZ2	1.85	0.41
3:F1:121:ARG:O	3:F1:125:GLU:HG3	2.21	0.41
4:N:1287:MET:HG3	4:N:1444:TRP:CE2	2.55	0.41
4:V:1286:ARG:HA	4:V:1286:ARG:HD2	1.82	0.41
7:b:64:PRO:HD2	7:b:67:HIS:ND1	2.35	0.41
7:e:14:LYS:HD3	7:e:47:LEU:HD13	2.02	0.41
7:f:151:MET:HE1	7:f:154:TYR:HA	2.02	0.41
7:j:139:PRO:O	7:j:143:ILE:HG12	2.21	0.41
7:n:10:LEU:HB2	7:n:147:HIS:ND1	2.35	0.41
7:p:200:ASP:O	7:p:204:THR:HG22	2.21	0.41
7:s:74:ALA:HB2	7:s:172:VAL:HG12	2.02	0.41
7:t:15:ARG:O	7:t:19:GLU:HG3	2.20	0.41
7:t:110:ILE:O	7:t:131:TRP:HB2	2.20	0.41
2:A0:137:MET:HE2	2:A0:154:LEU:HD13	2.03	0.41
2:A0:391:MET:HA	2:A0:394:LYS:HB2	2.02	0.41
3:A1:228:LEU:HA	3:A1:228:LEU:HD23	1.89	0.41
3:A3:9:GLY:HA2	3:A3:66:MET:SD	2.61	0.41
2:A4:214:ARG:HH11	2:A4:215:ARG:HG3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A5:304:ASP:OD2	3:A5:306:ARG:HG2	2.21	0.41
2:A6:238:LEU:HA	2:A6:318:MET:SD	2.61	0.41
2:A6:403:ALA:HB2	3:A7:344:TRP:HZ3	1.86	0.41
2:A8:78:VAL:HA	1:C:247:TYR:CE1	2.51	0.41
2:A8:172:TRP:HZ2	2:A8:391:MET:HG2	1.86	0.41
3:A9:20:PHE:HB2	3:A9:233:MET:HE3	2.02	0.41
3:A9:281:TYR:HD2	3:B3:86:ARG:HA	1.86	0.41
2:B0:189:LEU:HD11	2:B0:418:PHE:HE1	1.86	0.41
3:B1:153:SER:HA	3:B1:195:ASN:HD22	1.85	0.41
3:B1:192:LEU:HD21	3:B1:199:VAL:HG11	2.02	0.41
2:B2:133:GLN:HG3	2:B2:252:VAL:HG12	2.02	0.41
2:B2:185:TYR:HE2	2:B2:398:MET:HE3	1.86	0.41
2:B2:259:LEU:HD21	2:B2:316:CYS:HB2	2.02	0.41
3:B3:105:HIS:CD2	3:B3:150:LEU:HD13	2.56	0.41
3:B3:325:GLU:O	3:B3:329:GLN:HB2	2.20	0.41
2:B4:33:ASP:HB3	7:f:102:GLY:O	2.20	0.41
2:B4:181:VAL:HG23	3:B5:256:ASN:HD22	1.85	0.41
2:B4:207:GLU:HA	2:B4:210:TYR:HB2	2.02	0.41
2:B6:332:VAL:O	2:B6:336:LYS:HG2	2.21	0.41
2:B8:67:PHE:HB2	2:B8:92:LEU:HD13	2.03	0.41
3:C3:21:TRP:CZ3	3:C3:50:PHE:HB3	2.56	0.41
2:C4:28:HIS:CE1	2:C4:243:ARG:HD2	2.55	0.41
2:C4:408:TYR:O	2:C4:413:MET:HB3	2.21	0.41
2:C8:340:THR:HG23	2:C8:341:ILE:HD12	2.02	0.41
3:C9:229:VAL:HG22	3:C9:300:MET:HE1	2.02	0.41
2:D0:194:LEU:HD12	2:D0:194:LEU:HA	1.93	0.41
2:D0:259:LEU:HD11	2:D0:316:CYS:HB2	2.02	0.41
3:D1:321:MET:HE2	3:D1:321:MET:HB2	1.99	0.41
2:D2:73:THR:HB	3:D3:2:ARG:HH22	1.86	0.41
3:D3:113:ILE:HD12	3:D3:116:VAL:HB	2.02	0.41
3:D3:148:GLY:O	3:D3:152:ILE:HG12	2.21	0.41
2:D4:88:HIS:HB3	2:D4:91:GLN:HG3	2.02	0.41
3:D5:7:VAL:HB	3:D5:135:ILE:HD13	2.03	0.41
3:D5:268:ILE:HA	3:D5:367:PHE:O	2.20	0.41
2:D6:8:HIS:HD1	2:D6:138:PHE:HB2	1.86	0.41
2:D6:21:TRP:CE3	2:D6:63:PRO:HB3	2.56	0.41
3:D7:17:GLY:HA2	3:D7:20:PHE:HB3	2.02	0.41
3:D7:323:THR:HA	3:D7:326:VAL:HG12	2.02	0.41
2:D8:30:ILE:HD12	2:D8:61:HIS:CD2	2.55	0.41
2:D8:240:ALA:HB1	2:D8:356:ASN:ND2	2.36	0.41
2:D8:265:ILE:HG12	2:D8:380:ASN:HD21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D8:268:MET:HB3	2:D8:378:ILE:HG22	2.03	0.41
2:E0:180:ALA:HB3	2:E0:183:GLU:HB3	2.02	0.41
3:E1:305:PRO:HB2	3:E1:310:TYR:HE1	1.86	0.41
2:E2:75:VAL:HG21	2:E2:94:SER:HB2	2.01	0.41
2:E6:101:ASN:ND2	2:E6:143:GLY:HA2	2.35	0.41
2:E6:234:VAL:HG22	2:E6:272:TYR:HB2	2.03	0.41
2:E6:261:PRO:HB2	2:E6:262:TYR:HD1	1.85	0.41
3:E7:153:SER:HB3	3:E7:191:GLN:HE21	1.86	0.41
3:E7:290:THR:HA	3:E7:293:MET:HG2	2.03	0.41
2:E8:231:ILE:HD13	2:E8:302:MET:HE3	2.02	0.41
3:E9:265:PHE:CE2	3:E9:418:LEU:HD21	2.56	0.41
2:F0:224:TYR:HB2	3:F1:245:GLN:HE21	1.84	0.41
3:F1:256:ASN:HD22	3:F1:350:LYS:HG3	1.85	0.41
4:M:1212:ARG:HA	4:M:1215:ARG:HG2	2.01	0.41
5:O:528:GLU:HG3	5:O:530:ILE:HG23	2.03	0.41
6:T:125:ARG:HH12	6:T:126:LEU:HD13	1.86	0.41
4:W:1385:LEU:HD11	4:W:1445:LEU:HD21	2.03	0.41
7:a:55:LEU:HG	7:a:132:LEU:HD12	2.02	0.41
7:a:171:ILE:HD13	7:a:182:PHE:HD2	1.86	0.41
7:c:78:ALA:HB1	7:c:85:CYS:SG	2.61	0.41
7:e:55:LEU:HB2	7:e:63:ILE:HB	2.03	0.41
7:h:69:LYS:HD2	7:h:69:LYS:HA	1.78	0.41
7:j:19:GLU:HB3	7:j:40:PRO:HD3	2.02	0.41
8:k:65:GLU:HA	7:m:42:TYR:CZ	2.55	0.41
7:o:68:LEU:HD21	7:o:111:ILE:HD11	2.02	0.41
7:o:172:VAL:HG12	7:o:180:ALA:HB3	2.02	0.41
7:p:10:LEU:HG	7:p:143:ILE:HG22	2.03	0.41
7:r:63:ILE:HA	7:r:64:PRO:HD3	1.93	0.41
7:u:50:PHE:HB3	7:u:55:LEU:HD13	2.02	0.41
2:A0:408:TYR:HB3	2:A0:413:MET:HG3	2.02	0.41
2:A4:312:TYR:HA	2:A4:381:SER:HA	2.02	0.41
2:A6:265:ILE:HG23	2:A6:432:TYR:CZ	2.56	0.41
3:A9:276:ARG:HD3	3:A9:276:ARG:HA	1.85	0.41
2:B0:8:HIS:HE1	2:B0:21:TRP:HE1	1.69	0.41
2:B2:194:LEU:O	2:B2:198:THR:HG22	2.21	0.41
3:B3:152:ILE:HA	3:B3:164:MET:HE1	2.02	0.41
2:B4:406:HIS:CD2	3:B5:261:PRO:HB3	2.56	0.41
3:B5:167:PHE:HD1	3:B5:202:ILE:HD11	1.85	0.41
2:C0:167:LEU:HD23	2:C0:200:VAL:HB	2.03	0.41
2:C0:227:LEU:O	2:C0:231:ILE:HG12	2.21	0.41
2:C2:121:ARG:HA	2:C2:121:ARG:HD2	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C2:259:LEU:HD11	2:C2:316:CYS:HB2	2.02	0.41
2:C4:250:VAL:HG13	2:C4:255:PHE:HE1	1.86	0.41
3:C9:294:PHE:HZ	3:C9:349:MET:HE1	1.85	0.41
3:D3:349:MET:HE3	3:D3:349:MET:HB2	1.73	0.41
3:D5:101:TRP:H	3:D5:398:TYR:HE1	1.68	0.41
3:D5:190:HIS:HA	3:D5:414:ASN:HD21	1.85	0.41
3:D5:374:ILE:HD11	3:D5:422:TYR:CZ	2.56	0.41
2:D8:93:ILE:H	2:D8:93:ILE:HD12	1.86	0.41
2:E8:188:VAL:HG11	2:E8:395:PHE:CD1	2.56	0.41
7:d:18:ASN:ND2	7:d:45:MET:HB3	2.36	0.41
7:d:75:LEU:HD23	7:d:111:ILE:HB	2.01	0.41
7:g:69:LYS:HD2	7:i:38:LEU:HD11	2.03	0.41
7:m:183:LEU:HA	7:m:184:PRO:HD3	1.89	0.41
7:o:149:ARG:HE	7:o:149:ARG:HB2	1.69	0.41
7:x:42:TYR:HA	7:x:45:MET:HG3	2.02	0.41
2:A0:54:SER:HB2	2:A0:64:ARG:HE	1.87	0.40
3:A1:385:PHE:HE2	3:A1:408:PHE:HD2	1.67	0.40
3:A3:17:GLY:HA2	3:A3:20:PHE:HB3	2.04	0.40
3:A3:293:MET:HE3	3:A3:293:MET:HB3	1.95	0.40
2:A4:213:CYS:SG	2:A4:219:ILE:HB	2.61	0.40
2:A4:297:GLU:HG3	2:A4:300:SER:H	1.86	0.40
2:A8:211:ASP:HA	2:A8:214:ARG:HG2	2.03	0.40
3:B1:293:MET:SD	3:B1:367:PHE:HB2	2.60	0.40
2:B2:336:LYS:HD3	2:B2:351:PHE:HE2	1.86	0.40
2:B6:147:SER:HB2	2:B6:190:SER:HB3	2.02	0.40
2:B8:103:PHE:HB2	2:B8:186:ASN:HD22	1.86	0.40
3:C1:149:THR:HG21	3:C1:188:SER:HB3	2.02	0.40
2:C2:280:LYS:HZ3	2:C6:90:GLU:HB2	1.86	0.40
3:C3:252:LYS:HA	3:C3:255:VAL:HG12	2.03	0.40
3:C5:216:LYS:HE2	3:C5:275:SER:HB2	2.03	0.40
3:C7:215:LEU:HD21	3:C7:273:LEU:HD22	2.04	0.40
2:D0:189:LEU:HD11	2:D0:418:PHE:CE1	2.57	0.40
3:D1:201:VAL:HG21	3:D1:374:ILE:HD11	2.04	0.40
3:D3:172:SER:HA	3:D3:173:PRO:HD3	1.88	0.40
3:D9:24:ILE:HD13	3:D9:24:ILE:HA	1.96	0.40
3:D9:403:MET:HE3	3:D9:403:MET:HB2	1.91	0.40
2:E0:21:TRP:CZ2	2:E0:65:CYS:HB3	2.56	0.40
3:E5:182:PRO:HB2	3:E5:388:MET:HE1	2.02	0.40
3:E5:253:LEU:HD11	3:E5:316:MET:SD	2.61	0.40
3:E5:281:TYR:CE1	3:E9:86:ARG:HA	2.56	0.40
3:E7:86:ARG:HG3	3:E7:88:ASP:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F0:267:PHE:HE2	2:F0:428:LEU:HD21	1.86	0.40
3:F1:193:VAL:HG21	3:F1:418:LEU:HD21	2.03	0.40
4:L:1293:TYR:HD1	4:L:1318:VAL:HG22	1.86	0.40
6:R:59:THR:HA	6:R:62:ARG:NH1	2.36	0.40
6:T:126:LEU:HD12	6:T:126:LEU:HA	1.89	0.40
7:c:186:CYS:HA	7:c:190:GLU:HG2	2.03	0.40
7:e:130:PRO:HD2	7:e:131:TRP:CE3	2.56	0.40
7:g:95:TYR:HE1	7:g:197:LEU:HD23	1.86	0.40
8:k:73:TYR:CZ	8:k:75:SER:HB2	2.56	0.40
3:A1:42:LEU:HD21	3:A1:243:PRO:HD2	2.03	0.40
3:A1:211:CYS:HB2	3:A1:217:LEU:HD11	2.02	0.40
3:A1:217:LEU:HB2	3:A1:220:PRO:HG3	2.04	0.40
3:A1:325:GLU:HA	3:A1:328:GLU:OE2	2.22	0.40
3:A3:281:TYR:CD1	3:A7:87:PRO:HD3	2.53	0.40
2:A4:402:ARG:HD3	2:A4:402:ARG:HA	1.83	0.40
3:A5:179:VAL:HG22	2:A6:350:GLY:HA2	2.04	0.40
2:A8:406:HIS:HA	2:A8:409:VAL:HG12	2.03	0.40
3:B1:294:PHE:CD2	3:B1:333:VAL:HG21	2.56	0.40
3:B5:237:THR:HG23	3:B5:241:ARG:NH1	2.36	0.40
3:B7:73:MET:HG2	3:B7:92:PHE:HE1	1.87	0.40
3:B7:228:LEU:HD11	5:P:371:ARG:HH21	1.86	0.40
3:C3:111:GLU:HG2	3:C3:112:LEU:HD22	2.03	0.40
2:C4:325:PRO:HA	2:C4:328:VAL:HG12	2.03	0.40
3:C5:269:GLY:HA2	3:C5:300:MET:HG3	2.02	0.40
3:C7:229:VAL:HG22	3:C7:233:MET:HE3	2.04	0.40
2:C8:200:VAL:HG13	2:C8:268:MET:HG2	2.02	0.40
2:D0:287:SER:O	2:D0:291:ILE:HG12	2.20	0.40
2:D2:21:TRP:HZ3	2:D2:52:PHE:HB3	1.86	0.40
3:D3:133:PHE:HB3	3:D3:135:ILE:HD11	2.02	0.40
2:D8:88:HIS:CD2	2:D8:90:GLU:HB2	2.56	0.40
3:D9:42:LEU:HD13	3:D9:356:ILE:HD11	2.03	0.40
2:E0:124:LYS:HA	2:E0:124:LYS:HD2	1.79	0.40
2:E2:11:GLN:HG2	2:E2:74:VAL:HG21	2.01	0.40
3:E5:58:ARG:HH11	3:E5:58:ARG:HA	1.87	0.40
3:E9:202:ILE:HG21	3:E9:229:VAL:HG22	2.04	0.40
4:L:1255:CYS:HB3	4:L:1381:ILE:HG23	2.03	0.40
4:L:1388:LEU:HD13	4:L:1392:PHE:CE2	2.57	0.40
4:M:1405:LEU:HA	4:M:1408:GLN:HB2	2.02	0.40
4:V:1289:ARG:NH2	4:V:1294:VAL:HG22	2.37	0.40
4:W:1248:THR:HG23	4:W:1392:PHE:CE2	2.55	0.40
7:c:63:ILE:HA	7:c:64:PRO:HD3	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:d:11:ASN:HB3	7:d:15:ARG:NH1	2.35	0.40
7:h:84:LYS:CB	7:h:168:PRO:HD3	2.52	0.40
8:k:35:ALA:HA	8:k:133:VAL:HA	2.04	0.40
7:r:77:PHE:O	7:r:168:PRO:HA	2.22	0.40
2:A0:372:MET:HG2	2:A0:373:ARG:HE	1.86	0.40
3:A1:2:ARG:HB3	3:A1:131:GLN:HG2	2.03	0.40
3:A3:257:LEU:HA	3:A3:312:THR:HG21	2.03	0.40
2:A6:409:VAL:HA	2:A6:413:MET:O	2.21	0.40
3:A7:67:ASP:OD1	3:A7:73:MET:HE1	2.22	0.40
2:A8:68:LEU:HD23	2:A8:68:LEU:HA	1.90	0.40
2:B0:35:GLN:NE2	2:B0:60:LYS:HG2	2.36	0.40
3:B1:16:ILE:HD13	3:B1:16:ILE:HG21	1.88	0.40
3:B1:103:LYS:HB3	3:B1:103:LYS:HE2	1.91	0.40
3:B5:154:LYS:HB2	3:B5:154:LYS:HE2	1.80	0.40
1:C:221:PRO:HG2	7:d:101:GLU:HG3	2.04	0.40
3:C1:396:HIS:CG	2:C2:263:PRO:HD3	2.55	0.40
3:C5:273:LEU:H	3:C5:292:GLN:NE2	2.19	0.40
3:C7:21:TRP:HA	3:C7:24:ILE:HG22	2.02	0.40
2:C8:181:VAL:HG13	2:C8:182:VAL:HG13	2.02	0.40
3:C9:398:TYR:HB3	3:C9:403:MET:SD	2.62	0.40
2:D0:191:THR:HG21	2:D0:425:LEU:HB2	2.02	0.40
2:D0:216:ASN:HB3	2:D0:275:ILE:O	2.22	0.40
2:D0:292:THR:HG21	2:D0:331:ALA:HB1	2.02	0.40
3:D1:268:ILE:HA	3:D1:367:PHE:O	2.20	0.40
2:D6:77:GLU:HA	2:D6:80:THR:HG22	2.03	0.40
2:D6:109:THR:OG1	2:D6:411:GLU:HB3	2.21	0.40
2:D6:140:ALA:HA	2:D6:171:SER:HB3	2.03	0.40
3:D7:8:GLN:HE21	3:D7:65:LEU:HD22	1.87	0.40
3:D9:388:MET:HB3	3:D9:393:ALA:HB3	2.03	0.40
3:E1:30:ILE:HD11	3:E1:47:ILE:HD13	2.03	0.40
3:E1:359:LYS:HE3	3:E1:359:LYS:HB3	1.99	0.40
2:E2:18:ASN:HB3	1:F:219:TYR:HE1	1.87	0.40
2:E4:9:VAL:HG22	2:E4:68:LEU:HD12	2.03	0.40
3:E7:201:VAL:HG22	3:E7:266:PHE:O	2.22	0.40
2:E8:191:THR:HA	2:E8:194:LEU:HG	2.04	0.40
2:E8:221:ARG:HB3	2:E8:222:PRO:HD3	2.03	0.40
3:E9:20:PHE:HA	3:E9:230:SER:HB2	2.04	0.40
2:F0:82:THR:HA	7:x:98:THR:HB	2.04	0.40
1:G:210:HIS:CE1	7:j:154:TYR:HB2	2.55	0.40
1:H:247:TYR:HA	1:H:251:TYR:HD2	1.87	0.40
1:I:240:PRO:HG2	1:I:242:ASN:HD21	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:d:149:ARG:HD2	7:d:161:TYR:HB3	2.02	0.40
8:k:54:ARG:HA	8:k:92:TRP:HZ3	1.86	0.40
8:l:45:LYS:O	8:l:49:ILE:HG12	2.21	0.40
7:m:151:MET:HE3	7:m:152:LYS:H	1.86	0.40
7:o:53:GLY:HA2	7:o:62:VAL:HG21	2.03	0.40
7:o:85:CYS:SG	7:o:168:PRO:HB3	2.61	0.40
7:s:19:GLU:HB3	7:s:40:PRO:HD2	2.03	0.40
2:A0:68:LEU:HD12	2:A0:68:LEU:HA	1.83	0.40
3:A5:372:THR:HG21	3:A5:426:GLN:HB3	2.04	0.40
3:A9:139:LEU:HA	3:A9:145:SER:HB2	2.03	0.40
3:A9:302:ALA:C	3:A9:377:MET:HE1	2.47	0.40
2:B0:28:HIS:CE1	2:B0:243:ARG:HD2	2.57	0.40
2:B6:100:ALA:O	3:B7:255:VAL:HG11	2.22	0.40
2:C0:195:LEU:HG	2:C0:264:ARG:HH12	1.87	0.40
2:C4:15:GLN:HE22	3:C5:245:GLN:HA	1.87	0.40
2:C4:404:PHE:HZ	3:C5:312:THR:HG21	1.85	0.40
3:C5:281:TYR:CD2	3:C9:87:PRO:HD3	2.57	0.40
3:C5:283:ALA:HB2	3:C9:54:ALA:HA	2.03	0.40
3:C9:214:THR:HG22	3:C9:297:LYS:NZ	2.37	0.40
3:C9:281:TYR:HD1	3:D3:87:PRO:HD3	1.87	0.40
1:D:250:GLU:HG2	2:D6:22:GLU:OE2	2.21	0.40
2:D2:390:ARG:O	2:D2:394:LYS:HG2	2.22	0.40
2:E0:407:TRP:CG	3:E1:255:VAL:HG23	2.57	0.40
2:E4:398:MET:HE2	3:E5:345:ILE:HG23	2.02	0.40
2:E6:200:VAL:HG13	2:E6:268:MET:HE1	2.03	0.40
2:E8:316:CYS:SG	2:E8:318:MET:HE3	2.61	0.40
3:E9:209:ASP:HB2	3:E9:213:ARG:NH2	2.36	0.40
5:O:521:PRO:HB2	5:O:522:VAL:H	1.68	0.40
7:j:194:ARG:HH12	7:j:197:LEU:HB2	1.86	0.40
7:o:201:TRP:CD1	7:o:201:TRP:H	2.38	0.40
7:s:42:TYR:HA	7:s:45:MET:HB2	2.03	0.40
7:v:75:LEU:O	7:v:170:VAL:HA	2.21	0.40
2:A2:167:LEU:HD11	2:A2:252:VAL:HG13	2.02	0.40
3:A5:306:ARG:HB2	3:A5:340:TYR:CZ	2.56	0.40
3:A5:318:ARG:HG2	3:A5:358:PRO:HD3	2.02	0.40
2:A8:308:ARG:CZ	4:W:1241:PHE:HB3	2.52	0.40
2:B2:250:VAL:HG11	2:B2:352:LYS:HE3	2.02	0.40
2:B4:100:ALA:HA	3:B5:252:LYS:HD3	2.03	0.40
2:C0:3:GLU:HA	2:C0:51:THR:HG23	2.03	0.40
3:C1:70:PRO:HD3	3:C1:93:GLY:O	2.22	0.40
3:C1:304:ASP:HB3	3:C1:307:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C3:68:LEU:HB3	3:C3:96:GLY:HA2	2.04	0.40
3:C3:164:MET:HB3	3:C3:197:ASP:H	1.86	0.40
2:C6:265:ILE:HG22	2:C6:380:ASN:HD21	1.85	0.40
2:C6:326:LYS:HE2	5:P:458:ARG:NH1	2.33	0.40
2:C6:384:ILE:HD12	2:C6:384:ILE:HA	1.98	0.40
3:C7:246:LEU:HD12	3:C7:246:LEU:HA	1.95	0.40
2:C8:207:GLU:HB3	2:C8:304:LYS:HZ2	1.87	0.40
3:C9:321:MET:HE2	3:C9:321:MET:HB3	1.70	0.40
2:D6:4:VAL:HG22	2:D6:51:THR:HB	2.03	0.40
2:D6:244:PHE:HD2	2:D6:356:ASN:HD21	1.69	0.40
3:D7:172:SER:HB3	3:D7:203:ASP:HB3	2.03	0.40
2:D8:6:SER:HB3	2:D8:8:HIS:NE2	2.37	0.40
3:D9:28:HIS:NE2	3:D9:241:ARG:HD2	2.36	0.40
3:D9:372:THR:HG21	3:D9:426:GLN:HB2	2.03	0.40
3:E1:131:GLN:HE22	3:E1:250:LEU:HB2	1.86	0.40
3:E3:281:TYR:HD2	3:E7:87:PRO:HD3	1.86	0.40
2:F0:88:HIS:HB3	2:F0:91:GLN:HE22	1.85	0.40
4:Q:1244:TYR:O	4:Q:1248:THR:HG23	2.22	0.40
6:T:88:GLU:HG2	6:T:89:ASP:H	1.86	0.40
7:a:142:GLU:HG3	7:a:146:ARG:NH1	2.37	0.40
7:s:73:VAL:HA	7:s:109:GLU:O	2.20	0.40
7:t:172:VAL:HG12	7:t:180:ALA:HB3	2.02	0.40
7:u:71:LYS:HE2	7:u:106:GLN:HB3	2.03	0.40
7:v:82:ASP:HA	7:v:83:PRO:HD3	1.97	0.40
7:v:110:ILE:HB	7:v:131:TRP:CG	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	57/351 (16%)	45 (79%)	12 (21%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	58/351 (16%)	52 (90%)	6 (10%)	0	100	100
1	C	58/351 (16%)	53 (91%)	5 (9%)	0	100	100
1	D	58/351 (16%)	50 (86%)	8 (14%)	0	100	100
1	E	58/351 (16%)	53 (91%)	5 (9%)	0	100	100
1	F	58/351 (16%)	52 (90%)	6 (10%)	0	100	100
1	G	58/351 (16%)	52 (90%)	6 (10%)	0	100	100
1	H	58/351 (16%)	53 (91%)	5 (9%)	0	100	100
1	I	58/351 (16%)	54 (93%)	4 (7%)	0	100	100
1	J	58/351 (16%)	49 (84%)	9 (16%)	0	100	100
1	K	58/351 (16%)	54 (93%)	4 (7%)	0	100	100
2	A0	424/453 (94%)	391 (92%)	33 (8%)	0	100	100
2	A2	424/453 (94%)	391 (92%)	32 (8%)	1 (0%)	44	72
2	A4	424/453 (94%)	387 (91%)	35 (8%)	2 (0%)	25	56
2	A6	424/453 (94%)	379 (89%)	45 (11%)	0	100	100
2	A8	424/453 (94%)	413 (97%)	11 (3%)	0	100	100
2	B0	424/453 (94%)	413 (97%)	11 (3%)	0	100	100
2	B2	424/453 (94%)	415 (98%)	9 (2%)	0	100	100
2	B4	424/453 (94%)	410 (97%)	14 (3%)	0	100	100
2	B6	424/453 (94%)	406 (96%)	18 (4%)	0	100	100
2	B8	424/453 (94%)	409 (96%)	15 (4%)	0	100	100
2	C0	424/453 (94%)	391 (92%)	32 (8%)	1 (0%)	44	72
2	C2	424/453 (94%)	381 (90%)	42 (10%)	1 (0%)	44	72
2	C4	424/453 (94%)	383 (90%)	38 (9%)	3 (1%)	19	50
2	C6	424/453 (94%)	384 (91%)	39 (9%)	1 (0%)	44	72
2	C8	424/453 (94%)	392 (92%)	32 (8%)	0	100	100
2	D0	424/453 (94%)	393 (93%)	31 (7%)	0	100	100
2	D2	424/453 (94%)	379 (89%)	44 (10%)	1 (0%)	44	72
2	D4	424/453 (94%)	390 (92%)	33 (8%)	1 (0%)	44	72
2	D6	424/453 (94%)	395 (93%)	28 (7%)	1 (0%)	44	72
2	D8	424/453 (94%)	383 (90%)	40 (9%)	1 (0%)	44	72
2	E0	424/453 (94%)	398 (94%)	26 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	E2	424/453 (94%)	390 (92%)	33 (8%)	1 (0%)	44	72
2	E4	424/453 (94%)	385 (91%)	39 (9%)	0	100	100
2	E6	424/453 (94%)	381 (90%)	41 (10%)	2 (0%)	25	56
2	E8	424/453 (94%)	384 (91%)	39 (9%)	1 (0%)	44	72
2	F0	424/453 (94%)	410 (97%)	14 (3%)	0	100	100
3	A1	424/449 (94%)	384 (91%)	39 (9%)	1 (0%)	44	72
3	A3	424/449 (94%)	402 (95%)	22 (5%)	0	100	100
3	A5	424/449 (94%)	386 (91%)	38 (9%)	0	100	100
3	A7	424/449 (94%)	405 (96%)	19 (4%)	0	100	100
3	A9	424/449 (94%)	403 (95%)	21 (5%)	0	100	100
3	B1	424/449 (94%)	401 (95%)	23 (5%)	0	100	100
3	B3	424/449 (94%)	405 (96%)	19 (4%)	0	100	100
3	B5	424/449 (94%)	404 (95%)	20 (5%)	0	100	100
3	B7	424/449 (94%)	405 (96%)	19 (4%)	0	100	100
3	B9	424/449 (94%)	404 (95%)	20 (5%)	0	100	100
3	C1	424/449 (94%)	391 (92%)	32 (8%)	1 (0%)	44	72
3	C3	424/449 (94%)	402 (95%)	22 (5%)	0	100	100
3	C5	424/449 (94%)	384 (91%)	40 (9%)	0	100	100
3	C7	424/449 (94%)	383 (90%)	40 (9%)	1 (0%)	44	72
3	C9	424/449 (94%)	382 (90%)	42 (10%)	0	100	100
3	D1	424/449 (94%)	381 (90%)	42 (10%)	1 (0%)	44	72
3	D3	424/449 (94%)	380 (90%)	43 (10%)	1 (0%)	44	72
3	D5	424/449 (94%)	382 (90%)	40 (9%)	2 (0%)	25	56
3	D7	424/449 (94%)	386 (91%)	36 (8%)	2 (0%)	25	56
3	D9	424/449 (94%)	383 (90%)	40 (9%)	1 (0%)	44	72
3	E1	424/449 (94%)	382 (90%)	40 (9%)	2 (0%)	25	56
3	E3	424/449 (94%)	396 (93%)	28 (7%)	0	100	100
3	E5	424/449 (94%)	376 (89%)	48 (11%)	0	100	100
3	E7	424/449 (94%)	384 (91%)	39 (9%)	1 (0%)	44	72
3	E9	424/449 (94%)	388 (92%)	33 (8%)	3 (1%)	19	50
3	F1	424/449 (94%)	380 (90%)	41 (10%)	3 (1%)	19	50

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	L	154/1678 (9%)	150 (97%)	3 (2%)	1 (1%)	22	53
4	M	154/1678 (9%)	152 (99%)	1 (1%)	1 (1%)	22	53
4	N	154/1678 (9%)	151 (98%)	2 (1%)	1 (1%)	22	53
4	Q	154/1678 (9%)	148 (96%)	5 (3%)	1 (1%)	22	53
4	V	154/1678 (9%)	150 (97%)	3 (2%)	1 (1%)	22	53
4	W	154/1678 (9%)	148 (96%)	5 (3%)	1 (1%)	22	53
5	O	209/583 (36%)	174 (83%)	32 (15%)	3 (1%)	9	35
5	P	209/583 (36%)	160 (77%)	42 (20%)	7 (3%)	3	20
6	R	109/336 (32%)	85 (78%)	24 (22%)	0	100	100
6	S	20/336 (6%)	17 (85%)	3 (15%)	0	100	100
6	T	109/336 (32%)	85 (78%)	24 (22%)	0	100	100
6	U	89/336 (26%)	73 (82%)	16 (18%)	0	100	100
7	a	159/220 (72%)	138 (87%)	21 (13%)	0	100	100
7	b	159/220 (72%)	137 (86%)	22 (14%)	0	100	100
7	c	197/220 (90%)	185 (94%)	12 (6%)	0	100	100
7	d	197/220 (90%)	182 (92%)	15 (8%)	0	100	100
7	e	197/220 (90%)	184 (93%)	13 (7%)	0	100	100
7	f	197/220 (90%)	184 (93%)	13 (7%)	0	100	100
7	g	197/220 (90%)	187 (95%)	10 (5%)	0	100	100
7	h	197/220 (90%)	189 (96%)	8 (4%)	0	100	100
7	i	197/220 (90%)	183 (93%)	14 (7%)	0	100	100
7	j	197/220 (90%)	187 (95%)	10 (5%)	0	100	100
7	m	197/220 (90%)	181 (92%)	16 (8%)	0	100	100
7	n	197/220 (90%)	181 (92%)	16 (8%)	0	100	100
7	o	197/220 (90%)	187 (95%)	10 (5%)	0	100	100
7	p	197/220 (90%)	186 (94%)	11 (6%)	0	100	100
7	q	197/220 (90%)	186 (94%)	11 (6%)	0	100	100
7	r	197/220 (90%)	185 (94%)	12 (6%)	0	100	100
7	s	197/220 (90%)	185 (94%)	12 (6%)	0	100	100
7	t	197/220 (90%)	188 (95%)	9 (5%)	0	100	100
7	u	197/220 (90%)	188 (95%)	9 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	v	197/220 (90%)	186 (94%)	11 (6%)	0	100	100
7	w	197/220 (90%)	179 (91%)	18 (9%)	0	100	100
7	x	197/220 (90%)	181 (92%)	16 (8%)	0	100	100
8	k	139/189 (74%)	133 (96%)	6 (4%)	0	100	100
8	l	139/189 (74%)	122 (88%)	17 (12%)	0	100	100
All	All	28890/45109 (64%)	26676 (92%)	2162 (8%)	52 (0%)	45	72

All (52) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	C4	219	ILE
3	C7	125	GLU
3	D3	178	THR
3	D7	178	THR
3	E1	95	THR
2	E2	163	LYS
3	F1	55	THR
5	O	511	ASP
5	O	521	PRO
5	P	511	ASP
5	P	521	PRO
3	A1	338	SER
2	C0	110	ILE
2	C2	110	ILE
3	D5	55	THR
3	D9	178	THR
2	E6	163	LYS
3	F1	296	ALA
5	O	278	GLN
5	P	278	GLN
2	A2	273	ALA
2	C4	274	PRO
3	D7	393	ALA
3	E1	178	THR
2	E6	403	ALA
3	E7	355	ASP
3	E9	178	THR
5	P	253	ALA
2	C4	218	ASP
2	D8	278	ALA

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Mol	Chain	Res	Type
4	L	1242	PRO
2	A4	261	PRO
2	C6	261	PRO
3	E9	351	SER
3	F1	259	PRO
5	P	500	LEU
4	W	1242	PRO
2	A4	403	ALA
3	D5	108	GLU
3	E9	393	ALA
5	P	514	SER
3	C1	272	PRO
4	M	1242	PRO
2	D6	274	PRO
2	E8	261	PRO
3	D1	272	PRO
2	D2	261	PRO
5	P	530	ILE
4	Q	1242	PRO
4	V	1242	PRO
2	D4	274	PRO
4	N	1242	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	54/305 (18%)	54 (100%)	0	100	100
1	B	55/305 (18%)	55 (100%)	0	100	100
1	C	55/305 (18%)	55 (100%)	0	100	100
1	D	55/305 (18%)	55 (100%)	0	100	100
1	E	55/305 (18%)	55 (100%)	0	100	100
1	F	55/305 (18%)	55 (100%)	0	100	100
1	G	55/305 (18%)	55 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	H	55/305 (18%)	55 (100%)	0	100	100
1	I	55/305 (18%)	55 (100%)	0	100	100
1	J	55/305 (18%)	55 (100%)	0	100	100
1	K	55/305 (18%)	55 (100%)	0	100	100
2	A0	359/379 (95%)	359 (100%)	0	100	100
2	A2	359/379 (95%)	359 (100%)	0	100	100
2	A4	359/379 (95%)	359 (100%)	0	100	100
2	A6	359/379 (95%)	359 (100%)	0	100	100
2	A8	359/379 (95%)	359 (100%)	0	100	100
2	B0	359/379 (95%)	358 (100%)	1 (0%)	91	94
2	B2	359/379 (95%)	359 (100%)	0	100	100
2	B4	359/379 (95%)	359 (100%)	0	100	100
2	B6	359/379 (95%)	359 (100%)	0	100	100
2	B8	359/379 (95%)	359 (100%)	0	100	100
2	C0	359/379 (95%)	359 (100%)	0	100	100
2	C2	359/379 (95%)	359 (100%)	0	100	100
2	C4	359/379 (95%)	359 (100%)	0	100	100
2	C6	359/379 (95%)	359 (100%)	0	100	100
2	C8	359/379 (95%)	359 (100%)	0	100	100
2	D0	359/379 (95%)	359 (100%)	0	100	100
2	D2	359/379 (95%)	359 (100%)	0	100	100
2	D4	359/379 (95%)	359 (100%)	0	100	100
2	D6	359/379 (95%)	358 (100%)	1 (0%)	91	94
2	D8	359/379 (95%)	359 (100%)	0	100	100
2	E0	359/379 (95%)	359 (100%)	0	100	100
2	E2	359/379 (95%)	359 (100%)	0	100	100
2	E4	359/379 (95%)	359 (100%)	0	100	100
2	E6	359/379 (95%)	359 (100%)	0	100	100
2	E8	359/379 (95%)	359 (100%)	0	100	100
2	F0	359/379 (95%)	359 (100%)	0	100	100
3	A1	364/381 (96%)	364 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A3	364/381 (96%)	364 (100%)	0	100	100
3	A5	364/381 (96%)	364 (100%)	0	100	100
3	A7	364/381 (96%)	364 (100%)	0	100	100
3	A9	364/381 (96%)	364 (100%)	0	100	100
3	B1	364/381 (96%)	364 (100%)	0	100	100
3	B3	364/381 (96%)	364 (100%)	0	100	100
3	B5	364/381 (96%)	364 (100%)	0	100	100
3	B7	364/381 (96%)	364 (100%)	0	100	100
3	B9	364/381 (96%)	363 (100%)	1 (0%)	91	94
3	C1	364/381 (96%)	364 (100%)	0	100	100
3	C3	364/381 (96%)	364 (100%)	0	100	100
3	C5	364/381 (96%)	363 (100%)	1 (0%)	91	94
3	C7	364/381 (96%)	364 (100%)	0	100	100
3	C9	364/381 (96%)	364 (100%)	0	100	100
3	D1	364/381 (96%)	364 (100%)	0	100	100
3	D3	364/381 (96%)	364 (100%)	0	100	100
3	D5	364/381 (96%)	364 (100%)	0	100	100
3	D7	364/381 (96%)	364 (100%)	0	100	100
3	D9	364/381 (96%)	364 (100%)	0	100	100
3	E1	364/381 (96%)	363 (100%)	1 (0%)	91	94
3	E3	364/381 (96%)	364 (100%)	0	100	100
3	E5	364/381 (96%)	363 (100%)	1 (0%)	91	94
3	E7	364/381 (96%)	364 (100%)	0	100	100
3	E9	364/381 (96%)	364 (100%)	0	100	100
3	F1	364/381 (96%)	363 (100%)	1 (0%)	91	94
4	L	143/1401 (10%)	143 (100%)	0	100	100
4	M	143/1401 (10%)	143 (100%)	0	100	100
4	N	143/1401 (10%)	143 (100%)	0	100	100
4	Q	143/1401 (10%)	143 (100%)	0	100	100
4	V	143/1401 (10%)	143 (100%)	0	100	100
4	W	143/1401 (10%)	143 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	O	193/502 (38%)	193 (100%)	0	100	100
5	P	193/502 (38%)	193 (100%)	0	100	100
6	R	101/280 (36%)	101 (100%)	0	100	100
6	S	20/280 (7%)	20 (100%)	0	100	100
6	T	101/280 (36%)	101 (100%)	0	100	100
6	U	81/280 (29%)	81 (100%)	0	100	100
7	a	139/190 (73%)	139 (100%)	0	100	100
7	b	139/190 (73%)	139 (100%)	0	100	100
7	c	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	d	174/190 (92%)	174 (100%)	0	100	100
7	e	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	f	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	g	174/190 (92%)	174 (100%)	0	100	100
7	h	174/190 (92%)	174 (100%)	0	100	100
7	i	174/190 (92%)	174 (100%)	0	100	100
7	j	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	m	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	n	174/190 (92%)	174 (100%)	0	100	100
7	o	174/190 (92%)	174 (100%)	0	100	100
7	p	174/190 (92%)	174 (100%)	0	100	100
7	q	174/190 (92%)	174 (100%)	0	100	100
7	r	174/190 (92%)	174 (100%)	0	100	100
7	s	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	t	174/190 (92%)	174 (100%)	0	100	100
7	u	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	v	174/190 (92%)	174 (100%)	0	100	100
7	w	174/190 (92%)	173 (99%)	1 (1%)	84	90
7	x	174/190 (92%)	174 (100%)	0	100	100
8	k	127/164 (77%)	127 (100%)	0	100	100
8	l	127/164 (77%)	127 (100%)	0	100	100
All	All	24961/38153 (65%)	24946 (100%)	15 (0%)	92	96

All (15) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B0	309	HIS
3	B9	347	ASN
3	C5	416	ASN
2	D6	249	ASN
3	E1	191	GLN
3	E5	424	GLN
3	F1	332	ASN
7	c	37	GLN
7	e	25	GLN
7	f	37	GLN
7	j	37	GLN
7	m	65	GLN
7	s	94	ASN
7	u	37	GLN
7	w	106	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (336) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	210	HIS
2	A0	101	ASN
2	A0	216	ASN
2	A0	266	HIS
2	A0	329	ASN
3	A1	14	ASN
3	A1	184	ASN
3	A1	190	HIS
3	A1	191	GLN
3	A1	226	ASN
3	A1	256	ASN
3	A1	298	ASN
3	A1	334	GLN
2	A2	133	GLN
2	A2	216	ASN
2	A2	309	HIS
2	A2	329	ASN
2	A2	356	ASN
3	A3	200	GLN
3	A3	227	HIS
3	A3	245	GLN
3	A3	298	ASN

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Mol	Chain	Res	Type
3	A3	334	GLN
3	A3	375	GLN
3	A3	414	ASN
2	A4	15	GLN
2	A4	50	ASN
2	A4	88	HIS
2	A4	101	ASN
2	A4	102	ASN
3	A5	14	ASN
3	A5	15	GLN
3	A5	256	ASN
3	A5	292	GLN
3	A5	396	HIS
2	A6	88	HIS
2	A6	186	ASN
2	A6	283	HIS
2	A6	329	ASN
3	A7	6	HIS
3	A7	8	GLN
3	A7	14	ASN
3	A7	200	GLN
3	A7	204	ASN
3	A7	279	GLN
3	A7	335	ASN
3	A7	416	ASN
3	A7	426	GLN
3	A9	8	GLN
3	A9	191	GLN
3	A9	227	HIS
2	B0	35	GLN
2	B0	50	ASN
2	B0	206	ASN
3	B1	14	ASN
3	B1	131	GLN
3	B1	137	HIS
3	B1	280	GLN
3	B1	334	GLN
3	B1	348	ASN
2	B2	11	GLN
2	B2	15	GLN
2	B2	356	ASN
3	B3	6	HIS

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Mol	Chain	Res	Type
3	B3	100	ASN
3	B3	191	GLN
3	B3	329	GLN
3	B3	348	ASN
3	B3	414	ASN
2	B4	18	ASN
2	B4	35	GLN
2	B4	139	ASN
2	B4	356	ASN
3	B5	131	GLN
3	B5	291	GLN
3	B5	337	ASN
3	B5	414	ASN
2	B6	91	GLN
2	B6	309	HIS
3	B7	15	GLN
3	B7	195	ASN
3	B7	247	ASN
2	B8	31	GLN
2	B8	101	ASN
2	B8	139	ASN
2	B8	216	ASN
2	B8	358	GLN
3	B9	8	GLN
3	B9	83	GLN
3	B9	94	GLN
3	B9	131	GLN
3	B9	227	HIS
3	B9	256	ASN
3	B9	335	ASN
3	B9	416	ASN
3	B9	423	GLN
1	C	261	GLN
2	C0	11	GLN
2	C0	50	ASN
2	C0	91	GLN
2	C0	101	ASN
2	C0	107	HIS
2	C0	233	GLN
2	C0	249	ASN
2	C0	285	GLN
2	C0	309	HIS

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Mol	Chain	Res	Type
3	C1	6	HIS
3	C1	52	ASN
3	C1	94	GLN
3	C1	247	ASN
3	C1	298	ASN
3	C1	334	GLN
3	C1	416	ASN
2	C2	31	GLN
2	C2	329	ASN
2	C2	358	GLN
3	C3	8	GLN
3	C3	11	GLN
3	C3	15	GLN
3	C3	134	GLN
3	C3	204	ASN
3	C3	292	GLN
3	C3	298	ASN
3	C3	348	ASN
3	C3	414	ASN
3	C3	423	GLN
2	C4	15	GLN
2	C4	31	GLN
2	C4	102	ASN
2	C4	133	GLN
2	C4	216	ASN
2	C4	329	ASN
3	C5	52	ASN
3	C5	195	ASN
3	C5	348	ASN
3	C5	384	GLN
3	C5	416	ASN
2	C6	233	GLN
2	C6	256	GLN
2	C6	329	ASN
2	C6	342	GLN
3	C7	334	GLN
3	C7	347	ASN
3	C7	370	ASN
3	C7	396	HIS
3	C7	423	GLN
3	C7	426	GLN
2	C8	15	GLN

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Mol	Chain	Res	Type
2	C8	35	GLN
2	C8	216	ASN
3	C9	8	GLN
3	C9	14	ASN
3	C9	94	GLN
3	C9	100	ASN
3	C9	329	GLN
1	D	244	GLN
2	D0	50	ASN
2	D0	91	GLN
2	D0	192	HIS
2	D0	283	HIS
2	D0	329	ASN
3	D1	8	GLN
3	D1	89	ASN
3	D1	190	HIS
3	D1	375	GLN
3	D1	396	HIS
3	D1	424	GLN
2	D2	11	GLN
2	D2	15	GLN
2	D2	50	ASN
2	D2	85	HIS
2	D2	91	GLN
2	D2	107	HIS
2	D2	128	ASN
2	D2	176	GLN
2	D2	258	ASN
2	D2	293	ASN
3	D3	28	HIS
3	D3	100	ASN
3	D3	105	HIS
3	D3	134	GLN
3	D3	184	ASN
3	D3	298	ASN
3	D3	384	GLN
2	D4	35	GLN
2	D4	85	HIS
2	D4	91	GLN
3	D5	15	GLN
3	D5	48	ASN
3	D5	100	ASN

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Mol	Chain	Res	Type
3	D5	137	HIS
3	D5	256	ASN
3	D5	292	GLN
3	D5	298	ASN
3	D5	335	ASN
3	D5	414	ASN
2	D6	11	GLN
2	D6	15	GLN
2	D6	85	HIS
2	D6	216	ASN
2	D6	249	ASN
2	D6	258	ASN
2	D6	356	ASN
3	D7	245	GLN
3	D7	256	ASN
3	D7	298	ASN
3	D7	414	ASN
3	D7	426	GLN
2	D8	50	ASN
2	D8	192	HIS
2	D8	216	ASN
3	D9	99	ASN
3	D9	298	ASN
3	D9	348	ASN
3	D9	375	GLN
2	E0	18	ASN
2	E0	61	HIS
2	E0	168	ASN
2	E0	258	ASN
2	E0	356	ASN
2	E0	393	HIS
3	E1	14	ASN
3	E1	334	GLN
3	E1	347	ASN
3	E1	375	GLN
2	E2	101	ASN
2	E2	233	GLN
2	E2	283	HIS
2	E2	356	ASN
3	E3	8	GLN
3	E3	28	HIS
3	E3	245	GLN

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Mol	Chain	Res	Type
3	E3	264	HIS
3	E3	307	HIS
3	E3	335	ASN
3	E3	426	GLN
2	E4	18	ASN
2	E4	35	GLN
2	E4	216	ASN
2	E4	256	GLN
2	E4	258	ASN
2	E4	358	GLN
3	E5	6	HIS
3	E5	15	GLN
3	E5	134	GLN
3	E5	195	ASN
3	E5	292	GLN
3	E5	424	GLN
2	E6	107	HIS
3	E7	14	ASN
3	E7	48	ASN
3	E7	191	GLN
3	E7	204	ASN
3	E7	280	GLN
3	E7	334	GLN
3	E7	335	ASN
2	E8	102	ASN
2	E8	133	GLN
2	E8	139	ASN
2	E8	216	ASN
2	E8	356	ASN
3	E9	48	ASN
3	E9	99	ASN
3	E9	195	ASN
3	E9	264	HIS
3	E9	279	GLN
2	F0	28	HIS
2	F0	31	GLN
2	F0	258	ASN
2	F0	393	HIS
3	F1	15	GLN
3	F1	264	HIS
3	F1	292	GLN
3	F1	332	ASN

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Mol	Chain	Res	Type
4	L	1228	GLN
4	L	1245	ASN
4	M	1316	GLN
4	M	1403	GLN
4	N	1245	ASN
4	N	1280	GLN
5	O	556	HIS
5	P	216	GLN
5	P	481	HIS
4	Q	1245	ASN
6	R	54	ASN
6	U	130	GLN
4	V	1280	GLN
4	V	1402	GLN
7	a	94	ASN
7	a	105	ASN
7	b	67	HIS
7	b	94	ASN
7	c	37	GLN
7	d	67	HIS
7	d	100	ASN
7	e	25	GLN
7	e	41	ASN
7	f	25	GLN
7	f	37	GLN
7	f	41	ASN
7	f	125	HIS
7	g	11	ASN
7	g	41	ASN
7	h	37	GLN
7	h	128	HIS
7	i	65	GLN
7	i	125	HIS
8	k	113	ASN
8	l	17	GLN
8	l	18	GLN
8	l	147	GLN
7	m	125	HIS
7	n	37	GLN
7	n	59	ASN
7	n	100	ASN
7	n	203	ASN

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Mol	Chain	Res	Type
7	o	27	GLN
7	o	203	ASN
7	p	11	ASN
7	p	18	ASN
7	p	37	GLN
7	p	203	ASN
7	q	11	ASN
7	r	37	GLN
7	r	59	ASN
7	s	94	ASN
7	t	11	ASN
7	t	18	ASN
7	u	27	GLN
7	u	65	GLN
7	v	181	GLN
7	w	3	GLN
7	w	25	GLN
7	x	94	ASN
7	x	106	GLN
7	x	128	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 78 ligands modelled in this entry, 26 are monoatomic - leaving 52 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	$\#\|Z\| > 2$
9	GTP	A8	501	-	29,34,34	1.26	2 (6%)	35,54,54	1.39	6 (17%)
9	GTP	E8	501	-	29,34,34	1.28	3 (10%)	35,54,54	1.32	5 (14%)
11	GDP	C3	502	-	25,30,30	0.98	1 (4%)	30,47,47	1.15	3 (10%)
9	GTP	A2	501	-	29,34,34	1.22	2 (6%)	35,54,54	1.33	4 (11%)
9	GTP	E6	501	10	29,34,34	1.27	3 (10%)	35,54,54	1.34	6 (17%)
11	GDP	B7	501	-	25,30,30	0.94	1 (4%)	30,47,47	1.08	1 (3%)
9	GTP	C3	501	10	29,34,34	1.21	2 (6%)	35,54,54	1.31	5 (14%)
11	GDP	B3	501	-	25,30,30	0.96	1 (4%)	30,47,47	1.10	2 (6%)
9	GTP	B8	501	10	29,34,34	1.23	2 (6%)	35,54,54	1.34	4 (11%)
11	GDP	E3	501	-	25,30,30	0.97	1 (4%)	30,47,47	1.02	2 (6%)
9	GTP	A4	501	10	29,34,34	1.20	1 (3%)	35,54,54	1.32	4 (11%)
11	GDP	E9	502	-	25,30,30	0.97	1 (4%)	30,47,47	1.06	2 (6%)
11	GDP	D9	501	-	25,30,30	0.94	1 (4%)	30,47,47	1.15	2 (6%)
11	GDP	C1	501	-	25,30,30	1.00	1 (4%)	30,47,47	1.15	4 (13%)
11	GDP	D3	501	-	25,30,30	0.98	1 (4%)	30,47,47	1.12	3 (10%)
9	GTP	C8	501	10	29,34,34	1.24	2 (6%)	35,54,54	1.31	4 (11%)
9	GTP	C4	501	10	29,34,34	1.19	2 (6%)	35,54,54	1.29	4 (11%)
11	GDP	E7	501	-	25,30,30	1.01	1 (4%)	30,47,47	1.16	2 (6%)
9	GTP	B2	501	-	29,34,34	1.18	1 (3%)	35,54,54	1.33	3 (8%)
9	GTP	F0	501	10	29,34,34	1.20	2 (6%)	35,54,54	1.35	5 (14%)
11	GDP	C7	501	-	25,30,30	0.99	1 (4%)	30,47,47	1.11	3 (10%)
11	GDP	C9	501	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	1 (3%)
9	GTP	A0	501	10	29,34,34	1.19	2 (6%)	35,54,54	1.38	5 (14%)
11	GDP	E5	501	-	25,30,30	0.99	1 (4%)	30,47,47	1.11	1 (3%)
11	GDP	A7	502	-	25,30,30	0.93	1 (4%)	30,47,47	1.12	2 (6%)
9	GTP	B4	501	-	29,34,34	1.19	1 (3%)	35,54,54	1.33	3 (8%)
9	GTP	D6	501	10	29,34,34	1.26	1 (3%)	35,54,54	1.35	4 (11%)
9	GTP	B0	501	10	29,34,34	1.21	2 (6%)	35,54,54	1.30	5 (14%)
9	GTP	C0	501	10	29,34,34	1.19	2 (6%)	35,54,54	1.30	4 (11%)
9	GTP	D8	501	10	29,34,34	1.20	1 (3%)	35,54,54	1.28	4 (11%)
9	GTP	C6	501	10	29,34,34	1.25	2 (6%)	35,54,54	1.35	5 (14%)
9	GTP	E2	501	10	29,34,34	1.22	2 (6%)	35,54,54	1.34	4 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
11	GDP	A1	501	-	25,30,30	0.98	1 (4%)	30,47,47	1.04	1 (3%)
11	GDP	A5	502	-	25,30,30	0.95	1 (4%)	30,47,47	1.16	3 (10%)
11	GDP	B1	501	-	25,30,30	0.99	1 (4%)	30,47,47	1.26	3 (10%)
11	GDP	D5	501	-	25,30,30	0.99	1 (4%)	30,47,47	1.14	3 (10%)
11	GDP	D7	501	-	25,30,30	0.98	1 (4%)	30,47,47	1.14	2 (6%)
9	GTP	E4	501	10	29,34,34	1.22	2 (6%)	35,54,54	1.38	5 (14%)
9	GTP	B6	501	10	29,34,34	1.20	2 (6%)	35,54,54	1.26	4 (11%)
11	GDP	E1	502	-	25,30,30	0.98	1 (4%)	30,47,47	1.12	3 (10%)
11	GDP	A9	501	-	25,30,30	0.97	1 (4%)	30,47,47	1.15	3 (10%)
11	GDP	B5	501	-	25,30,30	0.98	1 (4%)	30,47,47	1.04	1 (3%)
9	GTP	D0	501	10	29,34,34	1.22	2 (6%)	35,54,54	1.34	4 (11%)
11	GDP	F1	501	-	25,30,30	0.97	1 (4%)	30,47,47	1.10	2 (6%)
9	GTP	A6	501	10	29,34,34	1.25	2 (6%)	35,54,54	1.37	5 (14%)
9	GTP	E0	501	10	29,34,34	1.24	2 (6%)	35,54,54	1.42	6 (17%)
9	GTP	D2	501	10	29,34,34	1.21	2 (6%)	35,54,54	1.38	5 (14%)
11	GDP	A3	501	-	25,30,30	1.07	2 (8%)	30,47,47	1.26	3 (10%)
11	GDP	C5	501	-	25,30,30	0.97	1 (4%)	30,47,47	1.05	2 (6%)
11	GDP	D1	501	-	25,30,30	0.96	1 (4%)	30,47,47	1.11	2 (6%)
9	GTP	D4	501	10	29,34,34	1.22	2 (6%)	35,54,54	1.24	4 (11%)
11	GDP	B9	501	-	25,30,30	0.95	1 (4%)	30,47,47	1.25	4 (13%)

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
9	GTP	A8	501	-	-	5/18/38/38	0/3/3/3
9	GTP	E8	501	-	-	6/18/38/38	0/3/3/3
11	GDP	C3	502	-	-	3/12/32/32	0/3/3/3
9	GTP	A2	501	-	-	6/18/38/38	0/3/3/3
9	GTP	E6	501	10	-	6/18/38/38	0/3/3/3
11	GDP	B7	501	-	-	2/12/32/32	0/3/3/3
9	GTP	C3	501	10	-	7/18/38/38	0/3/3/3
11	GDP	B3	501	-	-	3/12/32/32	0/3/3/3
9	GTP	B8	501	10	-	9/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
11	GDP	E3	501	-	-	0/12/32/32	0/3/3/3
9	GTP	A4	501	10	-	6/18/38/38	0/3/3/3
11	GDP	E9	502	-	-	4/12/32/32	0/3/3/3
11	GDP	D9	501	-	-	6/12/32/32	0/3/3/3
11	GDP	C1	501	-	-	4/12/32/32	0/3/3/3
11	GDP	D3	501	-	-	5/12/32/32	0/3/3/3
9	GTP	C8	501	10	-	6/18/38/38	0/3/3/3
9	GTP	C4	501	10	-	7/18/38/38	0/3/3/3
11	GDP	E7	501	-	-	8/12/32/32	0/3/3/3
9	GTP	B2	501	-	-	8/18/38/38	0/3/3/3
9	GTP	F0	501	10	-	10/18/38/38	0/3/3/3
11	GDP	C7	501	-	-	4/12/32/32	0/3/3/3
11	GDP	C9	501	-	-	3/12/32/32	0/3/3/3
9	GTP	A0	501	10	-	9/18/38/38	0/3/3/3
11	GDP	E5	501	-	-	4/12/32/32	0/3/3/3
11	GDP	A7	502	-	-	3/12/32/32	0/3/3/3
9	GTP	B4	501	-	-	5/18/38/38	0/3/3/3
9	GTP	D6	501	10	-	4/18/38/38	0/3/3/3
9	GTP	B0	501	10	-	7/18/38/38	0/3/3/3
9	GTP	C0	501	10	-	2/18/38/38	0/3/3/3
9	GTP	D8	501	10	-	4/18/38/38	0/3/3/3
9	GTP	C6	501	10	-	3/18/38/38	0/3/3/3
9	GTP	E2	501	10	-	7/18/38/38	0/3/3/3
11	GDP	A1	501	-	-	2/12/32/32	0/3/3/3
11	GDP	A5	502	-	-	1/12/32/32	0/3/3/3
11	GDP	B1	501	-	-	3/12/32/32	0/3/3/3
11	GDP	D5	501	-	-	3/12/32/32	0/3/3/3
11	GDP	D7	501	-	-	4/12/32/32	0/3/3/3
9	GTP	E4	501	10	-	8/18/38/38	0/3/3/3
9	GTP	B6	501	10	-	6/18/38/38	0/3/3/3
11	GDP	E1	502	-	-	2/12/32/32	0/3/3/3
11	GDP	A9	501	-	-	5/12/32/32	0/3/3/3
11	GDP	B5	501	-	-	2/12/32/32	0/3/3/3
9	GTP	D0	501	10	-	6/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
11	GDP	F1	501	-	-	2/12/32/32	0/3/3/3
9	GTP	A6	501	10	-	5/18/38/38	0/3/3/3
9	GTP	E0	501	10	-	9/18/38/38	0/3/3/3
9	GTP	D2	501	10	-	1/18/38/38	0/3/3/3
11	GDP	A3	501	-	-	11/12/32/32	0/3/3/3
11	GDP	C5	501	-	-	4/12/32/32	0/3/3/3
11	GDP	D1	501	-	-	3/12/32/32	0/3/3/3
9	GTP	D4	501	10	-	7/18/38/38	0/3/3/3
11	GDP	B9	501	-	-	3/12/32/32	0/3/3/3

All (76) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	C6	501	GTP	C5-C6	-4.50	1.38	1.47
9	C8	501	GTP	C5-C6	-4.46	1.38	1.47
9	D0	501	GTP	C5-C6	-4.46	1.38	1.47
9	C3	501	GTP	C5-C6	-4.46	1.38	1.47
9	A8	501	GTP	C5-C6	-4.44	1.38	1.47
9	E0	501	GTP	C5-C6	-4.44	1.38	1.47
9	B0	501	GTP	C5-C6	-4.42	1.38	1.47
9	A6	501	GTP	C5-C6	-4.42	1.38	1.47
9	D4	501	GTP	C5-C6	-4.40	1.38	1.47
9	E8	501	GTP	C5-C6	-4.39	1.38	1.47
9	A2	501	GTP	C5-C6	-4.39	1.38	1.47
9	B6	501	GTP	C5-C6	-4.39	1.38	1.47
9	E2	501	GTP	C5-C6	-4.38	1.38	1.47
9	E6	501	GTP	C5-C6	-4.38	1.38	1.47
9	D2	501	GTP	C5-C6	-4.36	1.38	1.47
9	D6	501	GTP	C5-C6	-4.34	1.38	1.47
9	E4	501	GTP	C5-C6	-4.33	1.38	1.47
9	B4	501	GTP	C5-C6	-4.32	1.38	1.47
9	A0	501	GTP	C5-C6	-4.31	1.38	1.47
9	D8	501	GTP	C5-C6	-4.30	1.38	1.47
9	A4	501	GTP	C5-C6	-4.30	1.38	1.47
9	C4	501	GTP	C5-C6	-4.28	1.39	1.47
9	C0	501	GTP	C5-C6	-4.27	1.39	1.47
9	B8	501	GTP	C5-C6	-4.27	1.39	1.47
9	F0	501	GTP	C5-C6	-4.24	1.39	1.47
9	B2	501	GTP	C5-C6	-4.21	1.39	1.47
11	A9	501	GDP	C6-N1	-2.72	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	E7	501	GDP	C6-N1	-2.70	1.33	1.37
11	A3	501	GDP	PA-O3A	2.68	1.62	1.59
11	F1	501	GDP	C6-N1	-2.66	1.33	1.37
11	B5	501	GDP	C6-N1	-2.65	1.33	1.37
11	C9	501	GDP	C6-N1	-2.64	1.33	1.37
11	E1	502	GDP	C6-N1	-2.63	1.33	1.37
11	C7	501	GDP	C6-N1	-2.62	1.33	1.37
11	D5	501	GDP	C6-N1	-2.61	1.33	1.37
11	D7	501	GDP	C6-N1	-2.61	1.33	1.37
11	D9	501	GDP	C6-N1	-2.56	1.33	1.37
11	E3	501	GDP	C6-N1	-2.56	1.33	1.37
11	B3	501	GDP	C6-N1	-2.55	1.33	1.37
11	B1	501	GDP	C6-N1	-2.55	1.33	1.37
11	D3	501	GDP	C6-N1	-2.54	1.33	1.37
11	E5	501	GDP	C6-N1	-2.54	1.33	1.37
11	B7	501	GDP	C6-N1	-2.52	1.33	1.37
11	B9	501	GDP	C6-N1	-2.50	1.34	1.37
11	C5	501	GDP	C6-N1	-2.50	1.34	1.37
11	E9	502	GDP	C6-N1	-2.50	1.34	1.37
11	C3	502	GDP	C6-N1	-2.48	1.34	1.37
11	D1	501	GDP	C6-N1	-2.46	1.34	1.37
11	A1	501	GDP	C6-N1	-2.46	1.34	1.37
11	A3	501	GDP	C6-N1	-2.42	1.34	1.37
11	A5	502	GDP	C6-N1	-2.41	1.34	1.37
11	A7	502	GDP	C6-N1	-2.40	1.34	1.37
11	C1	501	GDP	C6-N1	-2.39	1.34	1.37
9	E2	501	GTP	C2-N3	2.27	1.38	1.33
9	C4	501	GTP	C2-N3	2.22	1.38	1.33
9	E6	501	GTP	C2-N3	2.18	1.38	1.33
9	C3	501	GTP	C2-N3	2.17	1.38	1.33
9	F0	501	GTP	C2-N3	2.16	1.38	1.33
9	E8	501	GTP	C2-N3	2.14	1.38	1.33
9	E4	501	GTP	C2-N3	2.14	1.38	1.33
9	C6	501	GTP	C2-N3	2.12	1.38	1.33
9	B8	501	GTP	C2-N3	2.11	1.38	1.33
9	D2	501	GTP	C2-N3	2.11	1.38	1.33
9	A2	501	GTP	C2-N3	2.10	1.38	1.33
9	B0	501	GTP	C2-N3	2.10	1.38	1.33
9	A8	501	GTP	C2-N3	2.09	1.38	1.33
9	E0	501	GTP	C2-N3	2.08	1.38	1.33
9	A0	501	GTP	C2-N3	2.07	1.38	1.33
9	A6	501	GTP	C2-N3	2.06	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	D0	501	GTP	C2-N3	2.06	1.38	1.33
9	C8	501	GTP	C2-N3	2.06	1.38	1.33
9	C0	501	GTP	C2-N3	2.05	1.38	1.33
9	E6	501	GTP	PA-O3A	2.04	1.61	1.59
9	B6	501	GTP	C2-N3	2.02	1.38	1.33
9	D4	501	GTP	C2-N3	2.02	1.38	1.33
9	E8	501	GTP	PA-O3A	2.00	1.61	1.59

All (177) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F0	501	GTP	C8-N7-C5	3.86	109.11	102.55
9	C4	501	GTP	C8-N7-C5	3.73	108.90	102.55
9	B8	501	GTP	C8-N7-C5	3.71	108.87	102.55
9	B2	501	GTP	C8-N7-C5	3.71	108.87	102.55
9	C8	501	GTP	C8-N7-C5	3.68	108.82	102.55
9	B4	501	GTP	C8-N7-C5	3.68	108.81	102.55
9	D2	501	GTP	C8-N7-C5	3.67	108.80	102.55
9	E6	501	GTP	C8-N7-C5	3.65	108.77	102.55
9	D6	501	GTP	C8-N7-C5	3.65	108.77	102.55
9	A6	501	GTP	C8-N7-C5	3.65	108.76	102.55
9	D8	501	GTP	C8-N7-C5	3.63	108.73	102.55
9	E0	501	GTP	C8-N7-C5	3.62	108.71	102.55
9	B6	501	GTP	C8-N7-C5	3.61	108.70	102.55
9	E4	501	GTP	C8-N7-C5	3.61	108.70	102.55
9	E8	501	GTP	C8-N7-C5	3.60	108.68	102.55
9	B0	501	GTP	C8-N7-C5	3.60	108.68	102.55
9	A2	501	GTP	C8-N7-C5	3.60	108.67	102.55
9	A0	501	GTP	C8-N7-C5	3.58	108.64	102.55
9	A8	501	GTP	C8-N7-C5	3.56	108.61	102.55
9	E2	501	GTP	C8-N7-C5	3.54	108.57	102.55
9	C0	501	GTP	C8-N7-C5	3.53	108.56	102.55
9	D0	501	GTP	C8-N7-C5	3.52	108.55	102.55
9	A4	501	GTP	C8-N7-C5	3.52	108.55	102.55
9	D4	501	GTP	C8-N7-C5	3.51	108.53	102.55
9	C6	501	GTP	C8-N7-C5	3.48	108.47	102.55
9	C3	501	GTP	C8-N7-C5	3.38	108.31	102.55
9	E2	501	GTP	C5-C6-N1	3.27	120.31	114.07
9	E2	501	GTP	C2-N1-C6	-3.20	119.25	125.11
9	E6	501	GTP	C5-C6-N1	3.09	119.97	114.07
9	B0	501	GTP	C5-C6-N1	3.09	119.96	114.07
9	A2	501	GTP	C5-C6-N1	3.08	119.95	114.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B8	501	GTP	C2-N1-C6	-3.08	119.47	125.11
9	E4	501	GTP	C5-C6-N1	3.08	119.94	114.07
9	A6	501	GTP	C5-C6-N1	3.07	119.93	114.07
9	E8	501	GTP	C5-C6-N1	3.07	119.93	114.07
9	F0	501	GTP	C2-N1-C6	-3.07	119.50	125.11
9	E8	501	GTP	C2-N1-C6	-3.06	119.52	125.11
9	E4	501	GTP	C2-N1-C6	-3.04	119.55	125.11
9	B2	501	GTP	C5-C6-N1	3.03	119.85	114.07
9	E6	501	GTP	C2-N1-C6	-3.03	119.57	125.11
9	C8	501	GTP	C5-C6-N1	3.02	119.84	114.07
9	F0	501	GTP	C5-C6-N1	3.02	119.84	114.07
9	B8	501	GTP	C5-C6-N1	3.02	119.83	114.07
9	A2	501	GTP	C2-N1-C6	-3.02	119.59	125.11
9	D8	501	GTP	C5-C6-N1	3.01	119.81	114.07
9	A8	501	GTP	C5-C6-N1	3.00	119.80	114.07
9	B0	501	GTP	C2-N1-C6	-3.00	119.62	125.11
9	A8	501	GTP	C2-N1-C6	-3.00	119.62	125.11
9	C4	501	GTP	C2-N1-C6	-2.99	119.64	125.11
9	A4	501	GTP	C5-C6-N1	2.99	119.77	114.07
9	C4	501	GTP	C5-C6-N1	2.98	119.76	114.07
9	C8	501	GTP	C2-N1-C6	-2.97	119.67	125.11
11	B9	501	GDP	C8-N7-C5	2.97	107.60	102.55
9	D6	501	GTP	C5-C6-N1	2.96	119.72	114.07
9	C6	501	GTP	C5-C6-N1	2.96	119.72	114.07
9	D0	501	GTP	C5-C6-N1	2.96	119.72	114.07
9	A6	501	GTP	C2-N1-C6	-2.96	119.70	125.11
9	D2	501	GTP	C5-C6-N1	2.96	119.71	114.07
9	B2	501	GTP	C2-N1-C6	-2.94	119.72	125.11
9	D2	501	GTP	C2-N1-C6	-2.94	119.72	125.11
9	D8	501	GTP	C2-N1-C6	-2.94	119.72	125.11
9	E0	501	GTP	C5-C6-N1	2.94	119.68	114.07
9	A0	501	GTP	C5-C6-N1	2.94	119.68	114.07
9	B4	501	GTP	C5-C6-N1	2.93	119.67	114.07
11	B1	501	GDP	C8-N7-C5	2.93	107.53	102.55
11	B9	501	GDP	O4'-C1'-N9	2.92	112.62	108.75
9	C0	501	GTP	C5-C6-N1	2.92	119.64	114.07
9	A0	501	GTP	C2-N1-C6	-2.92	119.77	125.11
9	C3	501	GTP	C5-C6-N1	2.91	119.62	114.07
9	D4	501	GTP	C5-C6-N1	2.91	119.62	114.07
11	C3	502	GDP	C8-N7-C5	2.90	107.49	102.55
11	C1	501	GDP	C8-N7-C5	2.90	107.48	102.55
11	E3	501	GDP	C8-N7-C5	2.88	107.45	102.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	B1	501	GDP	C4'-O4'-C1'	2.88	112.56	109.92
11	D3	501	GDP	C8-N7-C5	2.87	107.44	102.55
9	E0	501	GTP	C2-N1-C6	-2.86	119.88	125.11
11	A1	501	GDP	C8-N7-C5	2.85	107.41	102.55
11	C7	501	GDP	C8-N7-C5	2.85	107.40	102.55
9	D0	501	GTP	C2-N1-C6	-2.85	119.89	125.11
11	F1	501	GDP	C8-N7-C5	2.84	107.39	102.55
11	D5	501	GDP	C8-N7-C5	2.84	107.38	102.55
11	E7	501	GDP	C8-N7-C5	2.83	107.37	102.55
9	C3	501	GTP	C2-N1-C6	-2.83	119.94	125.11
11	E9	502	GDP	C8-N7-C5	2.82	107.35	102.55
11	A9	501	GDP	C8-N7-C5	2.82	107.35	102.55
9	D6	501	GTP	C2-N1-C6	-2.82	119.95	125.11
11	C5	501	GDP	C8-N7-C5	2.82	107.34	102.55
11	C9	501	GDP	C8-N7-C5	2.81	107.34	102.55
9	B6	501	GTP	C5-C6-N1	2.81	119.44	114.07
11	A5	502	GDP	C8-N7-C5	2.80	107.32	102.55
11	B7	501	GDP	C8-N7-C5	2.80	107.31	102.55
11	B3	501	GDP	C8-N7-C5	2.79	107.30	102.55
9	B4	501	GTP	C2-N1-C6	-2.79	120.00	125.11
11	B5	501	GDP	C8-N7-C5	2.79	107.30	102.55
11	A7	502	GDP	C8-N7-C5	2.79	107.29	102.55
11	D9	501	GDP	C8-N7-C5	2.78	107.28	102.55
11	D1	501	GDP	C8-N7-C5	2.77	107.26	102.55
9	A4	501	GTP	C2-N1-C6	-2.77	120.04	125.11
11	E1	502	GDP	C8-N7-C5	2.77	107.26	102.55
9	C6	501	GTP	C2-N1-C6	-2.76	120.05	125.11
11	E5	501	GDP	C8-N7-C5	2.74	107.22	102.55
9	B6	501	GTP	C2-N1-C6	-2.73	120.11	125.11
11	A5	502	GDP	O4'-C1'-N9	2.72	112.36	108.75
11	A3	501	GDP	C8-N7-C5	2.71	107.16	102.55
9	C0	501	GTP	C2-N1-C6	-2.69	120.18	125.11
9	A0	501	GTP	O2B-PB-O3A	2.69	114.54	107.27
11	D7	501	GDP	C8-N7-C5	2.67	107.10	102.55
11	D5	501	GDP	C4'-O4'-C1'	2.62	112.32	109.92
9	D4	501	GTP	C2-N1-C6	-2.59	120.37	125.11
11	A3	501	GDP	O2A-PA-O3A	2.58	114.26	107.27
9	A6	501	GTP	O2B-PB-O3A	2.54	114.13	107.27
9	A2	501	GTP	O6-C6-C5	-2.48	119.41	124.32
9	A8	501	GTP	O6-C6-C5	-2.46	119.44	124.32
9	F0	501	GTP	O2B-PB-O3A	2.39	113.74	107.27
9	E6	501	GTP	O2A-PA-O3A	2.39	113.74	107.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	C6	501	GTP	O3G-PG-O3B	2.36	112.55	104.64
9	A8	501	GTP	O2B-PB-O3A	2.35	113.61	107.27
9	E0	501	GTP	O2B-PB-O3A	2.32	113.55	107.27
11	C1	501	GDP	C4'-O4'-C1'	2.31	112.05	109.92
9	D2	501	GTP	C4'-O4'-C1'	2.31	112.04	109.92
11	D3	501	GDP	C4'-O4'-C1'	2.30	112.03	109.92
11	E7	501	GDP	C4'-O4'-C1'	2.29	112.02	109.92
9	A6	501	GTP	O6-C6-C5	-2.28	119.81	124.32
11	D9	501	GDP	C5-C6-N1	2.26	118.38	114.07
9	E0	501	GTP	O2A-PA-O3A	2.24	113.33	107.27
9	D4	501	GTP	O2B-PB-O3A	2.23	113.29	107.27
9	E0	501	GTP	O6-C6-C5	-2.22	119.91	124.32
9	E4	501	GTP	O6-C6-C5	-2.22	119.91	124.32
9	D0	501	GTP	O6-C6-C5	-2.21	119.94	124.32
9	E6	501	GTP	O2B-PB-O3A	2.20	113.21	107.27
9	B0	501	GTP	O6-C6-C5	-2.20	119.97	124.32
11	C3	502	GDP	C4'-O4'-C1'	2.19	111.93	109.92
9	B8	501	GTP	O6-C6-C5	-2.19	119.98	124.32
11	E1	502	GDP	C4'-O4'-C1'	2.19	111.93	109.92
9	C8	501	GTP	O6-C6-C5	-2.18	119.99	124.32
9	C0	501	GTP	C4'-O4'-C1'	2.18	111.92	109.92
11	B1	501	GDP	C5-C6-N1	2.18	118.22	114.07
9	E6	501	GTP	O6-C6-C5	-2.18	120.01	124.32
11	B9	501	GDP	C5-C6-N1	2.17	118.22	114.07
9	C3	501	GTP	O6-C6-C5	-2.16	120.03	124.32
11	A3	501	GDP	O3B-PB-O3A	2.16	111.87	104.64
11	A7	502	GDP	C5-C6-N1	2.16	118.19	114.07
9	E2	501	GTP	O6-C6-C5	-2.16	120.05	124.32
9	C3	501	GTP	O3G-PG-O3B	2.14	111.83	104.64
11	D1	501	GDP	C5-C6-N1	2.13	118.14	114.07
11	B9	501	GDP	C4'-O4'-C1'	-2.13	107.97	109.92
9	E8	501	GTP	O6-C6-C5	-2.13	120.10	124.32
11	C1	501	GDP	C2'-C3'-C4'	2.13	106.72	102.61
9	B0	501	GTP	O2A-PA-O3A	2.13	113.02	107.27
9	B6	501	GTP	O6-C6-C5	-2.12	120.12	124.32
11	D5	501	GDP	C5-C6-N1	2.12	118.11	114.07
11	A9	501	GDP	O3B-PB-O3A	2.11	111.72	104.64
11	D7	501	GDP	C5-C6-N1	2.10	118.08	114.07
9	A0	501	GTP	O6-C6-C5	-2.10	120.16	124.32
9	E4	501	GTP	O2A-PA-O3A	2.10	112.95	107.27
11	F1	501	GDP	C5-C6-N1	2.10	118.07	114.07
9	C4	501	GTP	O6-C6-C5	-2.09	120.18	124.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	C6	501	GTP	O6-C6-C5	-2.09	120.18	124.32
9	D8	501	GTP	O6-C6-C5	-2.07	120.21	124.32
9	D2	501	GTP	O6-C6-C5	-2.07	120.22	124.32
11	E1	502	GDP	C5-C6-N1	2.06	118.00	114.07
9	F0	501	GTP	O2A-PA-O3A	2.06	112.84	107.27
9	D6	501	GTP	O6-C6-C5	-2.06	120.24	124.32
11	A5	502	GDP	C5-C6-N1	2.04	117.97	114.07
11	E9	502	GDP	C5-C6-N1	2.04	117.96	114.07
11	C3	502	GDP	C5-C6-N1	2.04	117.96	114.07
11	C5	501	GDP	C5-C6-N1	2.03	117.95	114.07
9	A4	501	GTP	O6-C6-C5	-2.03	120.30	124.32
9	E8	501	GTP	O2A-PA-O3A	2.03	112.75	107.27
11	B3	501	GDP	C5-C6-N1	2.02	117.92	114.07
11	A9	501	GDP	C5-C6-N1	2.02	117.92	114.07
11	D3	501	GDP	C2'-C3'-C4'	2.02	106.51	102.61
11	C7	501	GDP	O2A-PA-O3A	2.02	112.72	107.27
11	E3	501	GDP	C5-C6-N1	2.01	117.90	114.07
11	C7	501	GDP	C5-C6-N1	2.01	117.90	114.07
11	C1	501	GDP	C5-C6-N1	2.01	117.90	114.07
9	A8	501	GTP	O2A-PA-O3A	2.01	112.70	107.27

There are no chirality outliers.

All (253) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
9	A0	501	GTP	C5'-O5'-PA-O3A
9	A0	501	GTP	C5'-O5'-PA-O1A
9	A0	501	GTP	C5'-O5'-PA-O2A
9	A2	501	GTP	C5'-O5'-PA-O3A
9	A2	501	GTP	C5'-O5'-PA-O1A
9	A4	501	GTP	C5'-O5'-PA-O3A
9	A4	501	GTP	C5'-O5'-PA-O1A
9	A4	501	GTP	C5'-O5'-PA-O2A
9	A6	501	GTP	PB-O3A-PA-O5'
9	A6	501	GTP	C5'-O5'-PA-O3A
9	A6	501	GTP	C5'-O5'-PA-O1A
9	A6	501	GTP	C5'-O5'-PA-O2A
9	A8	501	GTP	C5'-O5'-PA-O3A
9	A8	501	GTP	C5'-O5'-PA-O2A
9	B0	501	GTP	C5'-O5'-PA-O3A
9	B0	501	GTP	C5'-O5'-PA-O1A
9	B0	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
9	B2	501	GTP	C5'-O5'-PA-O3A
9	B2	501	GTP	C5'-O5'-PA-O1A
9	B2	501	GTP	C5'-O5'-PA-O2A
9	B4	501	GTP	C5'-O5'-PA-O3A
9	B4	501	GTP	C5'-O5'-PA-O1A
9	B4	501	GTP	C5'-O5'-PA-O2A
9	B6	501	GTP	C5'-O5'-PA-O3A
9	B6	501	GTP	C5'-O5'-PA-O1A
9	B6	501	GTP	C5'-O5'-PA-O2A
9	B8	501	GTP	C5'-O5'-PA-O3A
9	B8	501	GTP	C5'-O5'-PA-O1A
9	B8	501	GTP	C5'-O5'-PA-O2A
9	B8	501	GTP	O4'-C4'-C5'-O5'
9	C3	501	GTP	C5'-O5'-PA-O3A
9	C3	501	GTP	C5'-O5'-PA-O1A
9	C3	501	GTP	C5'-O5'-PA-O2A
9	C4	501	GTP	PB-O3B-PG-O2G
9	C4	501	GTP	C5'-O5'-PA-O3A
9	C4	501	GTP	C5'-O5'-PA-O1A
9	C4	501	GTP	C5'-O5'-PA-O2A
9	C8	501	GTP	C5'-O5'-PA-O3A
9	C8	501	GTP	C5'-O5'-PA-O1A
9	C8	501	GTP	C5'-O5'-PA-O2A
9	D0	501	GTP	C5'-O5'-PA-O3A
9	D0	501	GTP	C5'-O5'-PA-O1A
9	D0	501	GTP	C5'-O5'-PA-O2A
9	D4	501	GTP	PB-O3A-PA-O5'
9	D6	501	GTP	O4'-C4'-C5'-O5'
9	D8	501	GTP	C5'-O5'-PA-O3A
9	D8	501	GTP	C5'-O5'-PA-O2A
9	E0	501	GTP	C5'-O5'-PA-O3A
9	E0	501	GTP	C5'-O5'-PA-O1A
9	E0	501	GTP	C5'-O5'-PA-O2A
9	E2	501	GTP	C5'-O5'-PA-O3A
9	E2	501	GTP	C5'-O5'-PA-O1A
9	E4	501	GTP	C5'-O5'-PA-O3A
9	E4	501	GTP	C5'-O5'-PA-O1A
9	E4	501	GTP	C5'-O5'-PA-O2A
9	E6	501	GTP	C5'-O5'-PA-O3A
9	E6	501	GTP	C5'-O5'-PA-O1A
9	E6	501	GTP	C5'-O5'-PA-O2A
9	E8	501	GTP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
9	E8	501	GTP	C5'-O5'-PA-O1A
9	E8	501	GTP	C5'-O5'-PA-O2A
9	F0	501	GTP	C5'-O5'-PA-O3A
9	F0	501	GTP	C5'-O5'-PA-O1A
9	F0	501	GTP	C5'-O5'-PA-O2A
11	A3	501	GDP	PA-O3A-PB-O3B
11	A3	501	GDP	C5'-O5'-PA-O3A
11	A3	501	GDP	C5'-O5'-PA-O1A
11	A3	501	GDP	C5'-O5'-PA-O2A
11	A7	502	GDP	C5'-O5'-PA-O3A
11	A7	502	GDP	C5'-O5'-PA-O1A
11	A7	502	GDP	C5'-O5'-PA-O2A
11	A9	501	GDP	C5'-O5'-PA-O3A
11	A9	501	GDP	C5'-O5'-PA-O1A
11	A9	501	GDP	C5'-O5'-PA-O2A
11	B1	501	GDP	C5'-O5'-PA-O3A
11	B1	501	GDP	C5'-O5'-PA-O1A
11	B1	501	GDP	C5'-O5'-PA-O2A
11	B3	501	GDP	C5'-O5'-PA-O3A
11	B3	501	GDP	C5'-O5'-PA-O2A
11	B5	501	GDP	PA-O3A-PB-O2B
11	B7	501	GDP	C5'-O5'-PA-O3A
11	B7	501	GDP	C5'-O5'-PA-O2A
11	B9	501	GDP	C5'-O5'-PA-O3A
11	B9	501	GDP	C5'-O5'-PA-O1A
11	B9	501	GDP	C5'-O5'-PA-O2A
11	C1	501	GDP	C5'-O5'-PA-O3A
11	C1	501	GDP	C5'-O5'-PA-O2A
11	C3	502	GDP	C5'-O5'-PA-O3A
11	C3	502	GDP	C5'-O5'-PA-O1A
11	C3	502	GDP	C5'-O5'-PA-O2A
11	C5	501	GDP	O4'-C4'-C5'-O5'
11	C7	501	GDP	C5'-O5'-PA-O3A
11	C7	501	GDP	C5'-O5'-PA-O1A
11	C9	501	GDP	C5'-O5'-PA-O3A
11	D1	501	GDP	C5'-O5'-PA-O1A
11	D1	501	GDP	C5'-O5'-PA-O2A
11	D5	501	GDP	C5'-O5'-PA-O3A
11	D5	501	GDP	C5'-O5'-PA-O2A
11	D7	501	GDP	C5'-O5'-PA-O3A
11	D7	501	GDP	C5'-O5'-PA-O1A
11	D9	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
11	D9	501	GDP	C5'-O5'-PA-O1A
11	E1	502	GDP	C5'-O5'-PA-O3A
11	E1	502	GDP	C5'-O5'-PA-O2A
11	E7	501	GDP	PA-O3A-PB-O3B
11	E7	501	GDP	C5'-O5'-PA-O3A
11	E7	501	GDP	C5'-O5'-PA-O1A
11	E7	501	GDP	C5'-O5'-PA-O2A
11	E9	502	GDP	PA-O3A-PB-O2B
11	E9	502	GDP	C5'-O5'-PA-O3A
11	E9	502	GDP	C5'-O5'-PA-O2A
11	F1	501	GDP	C5'-O5'-PA-O3A
11	F1	501	GDP	C5'-O5'-PA-O2A
9	A2	501	GTP	O4'-C4'-C5'-O5'
9	A2	501	GTP	C3'-C4'-C5'-O5'
9	B2	501	GTP	O4'-C4'-C5'-O5'
9	B2	501	GTP	C3'-C4'-C5'-O5'
9	B6	501	GTP	O4'-C4'-C5'-O5'
9	B6	501	GTP	C3'-C4'-C5'-O5'
9	B8	501	GTP	C3'-C4'-C5'-O5'
9	C3	501	GTP	O4'-C4'-C5'-O5'
9	C3	501	GTP	C3'-C4'-C5'-O5'
9	C4	501	GTP	O4'-C4'-C5'-O5'
9	C6	501	GTP	C3'-C4'-C5'-O5'
9	D6	501	GTP	C3'-C4'-C5'-O5'
9	E2	501	GTP	O4'-C4'-C5'-O5'
11	A3	501	GDP	C3'-C4'-C5'-O5'
11	E7	501	GDP	C3'-C4'-C5'-O5'
9	A0	501	GTP	O4'-C4'-C5'-O5'
9	A0	501	GTP	C3'-C4'-C5'-O5'
9	C4	501	GTP	C3'-C4'-C5'-O5'
9	C8	501	GTP	O4'-C4'-C5'-O5'
9	D4	501	GTP	O4'-C4'-C5'-O5'
9	D4	501	GTP	C3'-C4'-C5'-O5'
9	E2	501	GTP	C3'-C4'-C5'-O5'
9	E4	501	GTP	O4'-C4'-C5'-O5'
9	E4	501	GTP	C3'-C4'-C5'-O5'
11	A1	501	GDP	O4'-C4'-C5'-O5'
11	A1	501	GDP	C3'-C4'-C5'-O5'
11	E7	501	GDP	O4'-C4'-C5'-O5'
9	C8	501	GTP	C3'-C4'-C5'-O5'
11	C5	501	GDP	C3'-C4'-C5'-O5'
9	C6	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
11	A3	501	GDP	O4'-C4'-C5'-O5'
11	D9	501	GDP	C3'-C4'-C5'-O5'
9	C0	501	GTP	C4'-C5'-O5'-PA
9	F0	501	GTP	PB-O3A-PA-O1A
11	C5	501	GDP	PB-O3A-PA-O1A
9	D0	501	GTP	C4'-C5'-O5'-PA
9	A0	501	GTP	PB-O3A-PA-O5'
9	B8	501	GTP	PB-O3A-PA-O5'
9	A4	501	GTP	C3'-C4'-C5'-O5'
11	D3	501	GDP	PA-O3A-PB-O1B
11	E5	501	GDP	PA-O3A-PB-O1B
11	E7	501	GDP	PA-O3A-PB-O1B
9	E0	501	GTP	PB-O3B-PG-O3G
9	D0	501	GTP	PA-O3A-PB-O2B
9	E8	501	GTP	PB-O3A-PA-O2A
9	F0	501	GTP	C3'-C4'-C5'-O5'
11	C1	501	GDP	C3'-C4'-C5'-O5'
11	D3	501	GDP	C3'-C4'-C5'-O5'
9	A4	501	GTP	C4'-C5'-O5'-PA
9	A8	501	GTP	C4'-C5'-O5'-PA
9	B0	501	GTP	C4'-C5'-O5'-PA
9	E2	501	GTP	C4'-C5'-O5'-PA
9	E6	501	GTP	C4'-C5'-O5'-PA
9	E8	501	GTP	C4'-C5'-O5'-PA
9	F0	501	GTP	C4'-C5'-O5'-PA
11	C9	501	GDP	C4'-C5'-O5'-PA
11	D9	501	GDP	O4'-C4'-C5'-O5'
9	A2	501	GTP	C5'-O5'-PA-O2A
9	C0	501	GTP	C5'-O5'-PA-O3A
9	D8	501	GTP	C5'-O5'-PA-O1A
9	E2	501	GTP	C5'-O5'-PA-O2A
11	C7	501	GDP	C5'-O5'-PA-O2A
11	C9	501	GDP	C5'-O5'-PA-O2A
11	D1	501	GDP	C5'-O5'-PA-O3A
11	D7	501	GDP	C5'-O5'-PA-O2A
11	D9	501	GDP	C5'-O5'-PA-O2A
9	A0	501	GTP	C4'-C5'-O5'-PA
9	A6	501	GTP	C4'-C5'-O5'-PA
9	B2	501	GTP	C4'-C5'-O5'-PA
9	B4	501	GTP	C4'-C5'-O5'-PA
9	B6	501	GTP	C4'-C5'-O5'-PA
9	B8	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
9	C3	501	GTP	C4'-C5'-O5'-PA
9	C4	501	GTP	C4'-C5'-O5'-PA
9	C8	501	GTP	C4'-C5'-O5'-PA
9	D8	501	GTP	C4'-C5'-O5'-PA
9	E0	501	GTP	C4'-C5'-O5'-PA
9	C6	501	GTP	C4'-C5'-O5'-PA
9	A0	501	GTP	PA-O3A-PB-O2B
9	A8	501	GTP	PB-O3A-PA-O1A
9	B2	501	GTP	PA-O3A-PB-O2B
9	E0	501	GTP	PA-O3A-PB-O2B
9	E0	501	GTP	PB-O3A-PA-O1A
9	E6	501	GTP	PB-O3A-PA-O2A
11	A3	501	GDP	PB-O3A-PA-O2A
11	A9	501	GDP	PB-O3A-PA-O2A
9	B0	501	GTP	C3'-C4'-C5'-O5'
9	E4	501	GTP	C4'-C5'-O5'-PA
11	C1	501	GDP	C4'-C5'-O5'-PA
9	A2	501	GTP	C4'-C5'-O5'-PA
9	D6	501	GTP	C4'-C5'-O5'-PA
11	E7	501	GDP	C4'-C5'-O5'-PA
9	A4	501	GTP	O4'-C4'-C5'-O5'
9	B4	501	GTP	C3'-C4'-C5'-O5'
9	A0	501	GTP	PA-O3A-PB-O1B
9	A8	501	GTP	PB-O3A-PA-O2A
11	C5	501	GDP	PB-O3A-PA-O2A
11	C7	501	GDP	PB-O3A-PA-O2A
9	D4	501	GTP	C4'-C5'-O5'-PA
11	A3	501	GDP	C4'-C5'-O5'-PA
11	D5	501	GDP	C3'-C4'-C5'-O5'
9	D4	501	GTP	PB-O3B-PG-O1G
11	A3	501	GDP	PA-O3A-PB-O1B
9	D4	501	GTP	PB-O3B-PG-O2G
9	D4	501	GTP	PB-O3B-PG-O3G
9	E0	501	GTP	PB-O3B-PG-O2G
9	E2	501	GTP	PB-O3B-PG-O2G
11	A3	501	GDP	PA-O3A-PB-O2B
11	A5	502	GDP	PA-O3A-PB-O2B
11	D3	501	GDP	PA-O3A-PB-O2B
11	D3	501	GDP	PA-O3A-PB-O3B
11	E5	501	GDP	PA-O3A-PB-O2B
11	E5	501	GDP	PA-O3A-PB-O3B
11	E9	502	GDP	PA-O3A-PB-O3B

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Mol	Chain	Res	Type	Atoms
11	B3	501	GDP	C4'-C5'-O5'-PA
9	F0	501	GTP	O4'-C4'-C5'-O5'
9	D0	501	GTP	C3'-C4'-C5'-O5'
11	D3	501	GDP	O4'-C4'-C5'-O5'
9	B0	501	GTP	PA-O3A-PB-O1B
9	B0	501	GTP	PA-O3A-PB-O2B
9	B2	501	GTP	PA-O3A-PB-O1B
9	B8	501	GTP	PA-O3A-PB-O2B
9	E0	501	GTP	PA-O3A-PB-O1B
9	E4	501	GTP	PA-O3A-PB-O1B
9	E4	501	GTP	PA-O3A-PB-O2B
9	E6	501	GTP	PB-O3A-PA-O1A
9	E8	501	GTP	PB-O3A-PA-O1A
9	F0	501	GTP	PA-O3A-PB-O1B
9	F0	501	GTP	PA-O3A-PB-O2B
9	F0	501	GTP	PB-O3A-PA-O2A
11	A9	501	GDP	PB-O3A-PA-O1A
11	D7	501	GDP	PB-O3A-PA-O2A
11	B5	501	GDP	C3'-C4'-C5'-O5'
11	E5	501	GDP	C3'-C4'-C5'-O5'
9	B8	501	GTP	PA-O3A-PB-O1B
9	C3	501	GTP	PA-O3A-PB-O2B
9	D2	501	GTP	PG-O3B-PB-O2B
9	D6	501	GTP	PG-O3B-PB-O2B
11	A3	501	GDP	PB-O3A-PA-O1A
11	D9	501	GDP	PB-O3A-PA-O2A

There are no ring outliers.

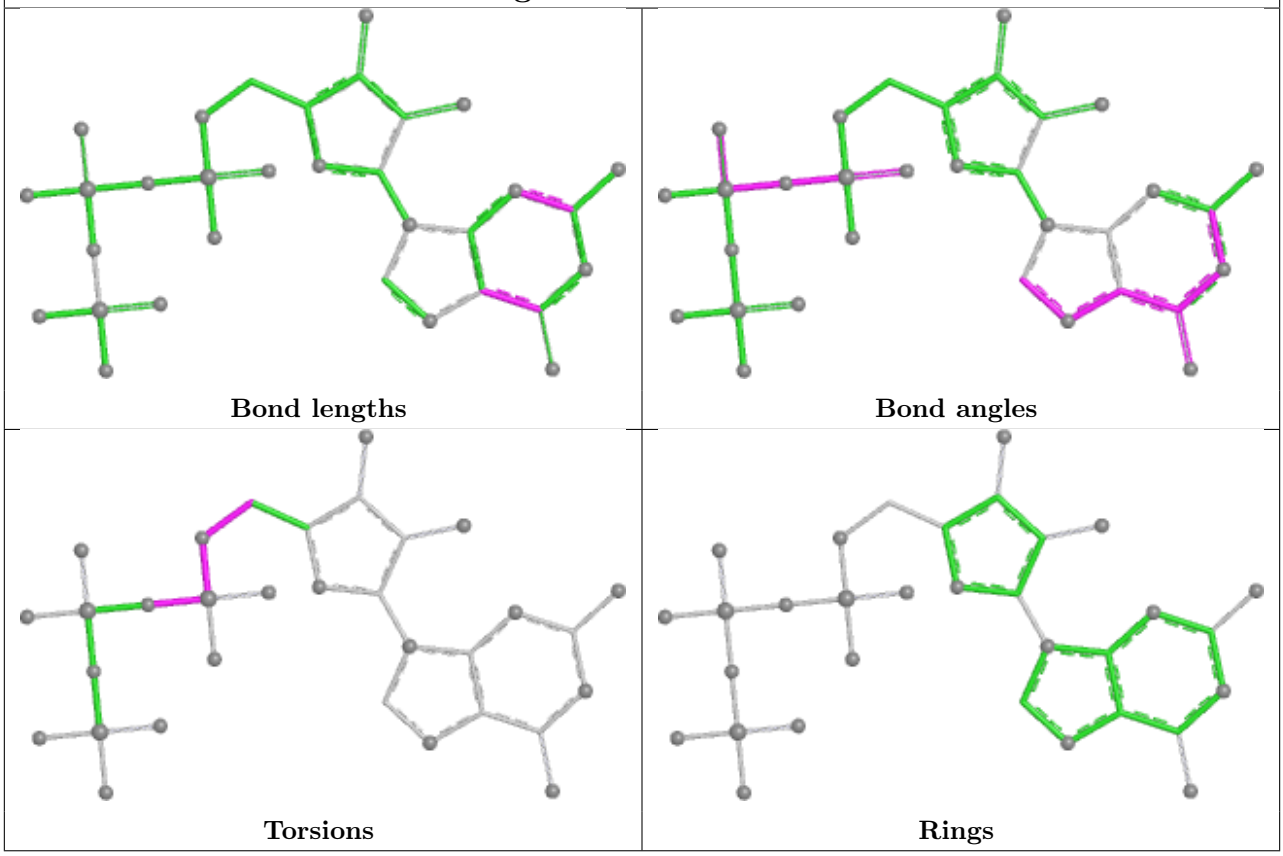
5 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
11	B3	501	GDP	1	0
11	E7	501	GDP	1	0
11	E5	501	GDP	2	0
11	A1	501	GDP	1	0
9	E4	501	GTP	1	0

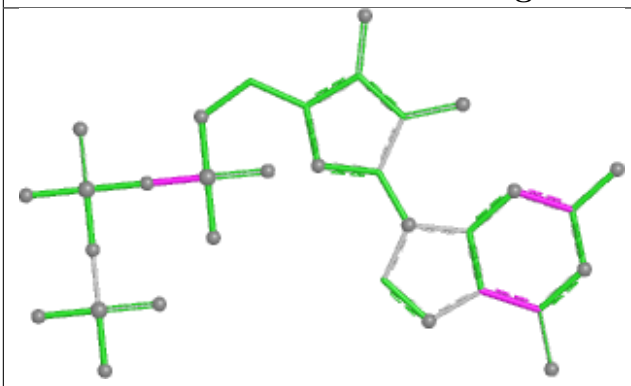
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

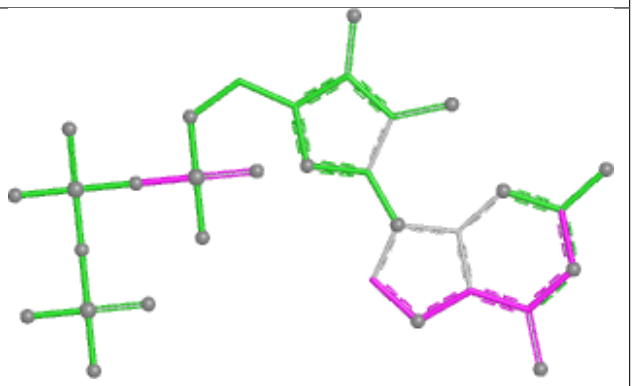
Ligand GTP A8 501



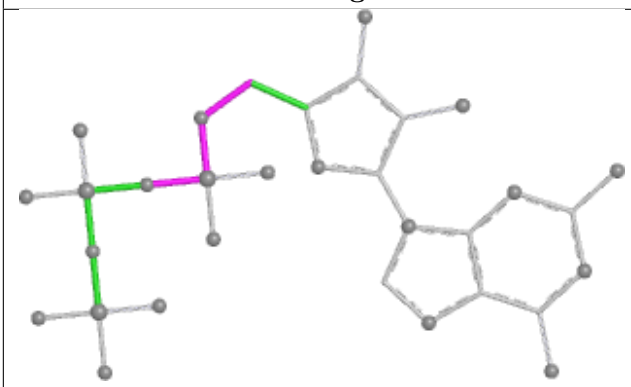
Ligand GTP E8 501



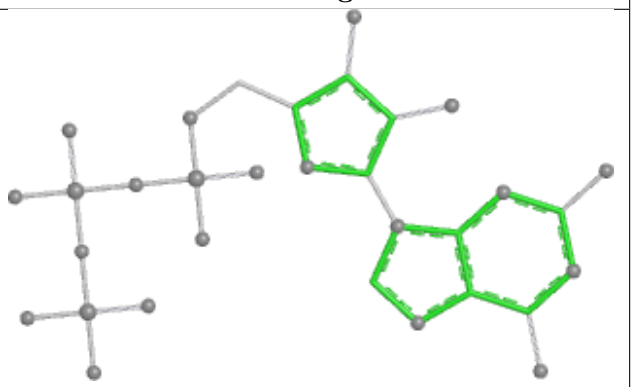
Bond lengths



Bond angles

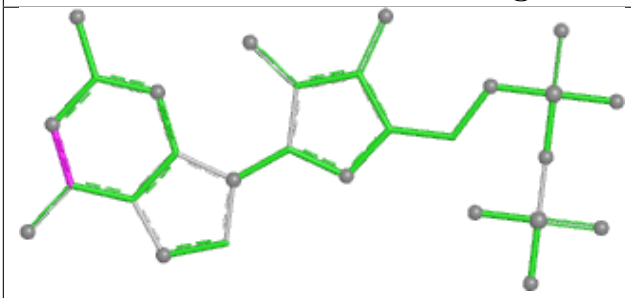


Torsions



Rings

Ligand GDP C3 502



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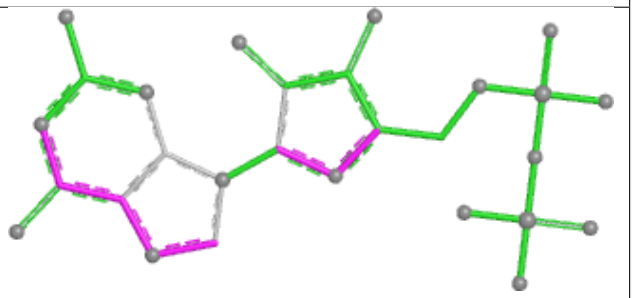
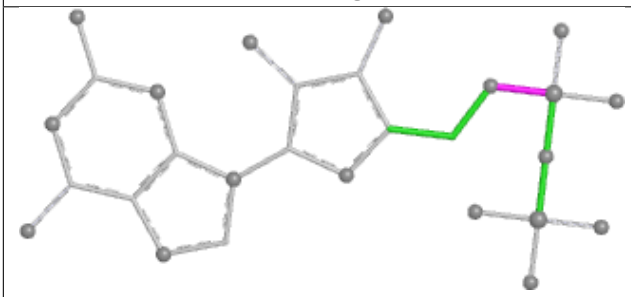


Bond angles



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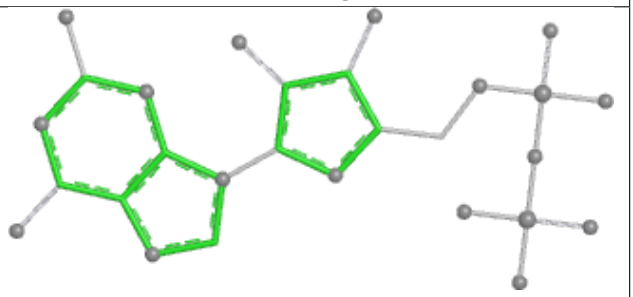
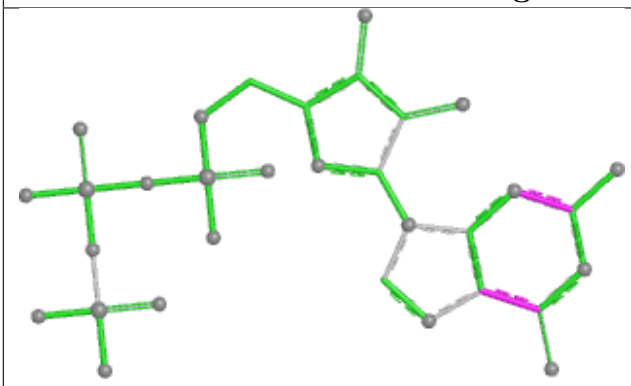
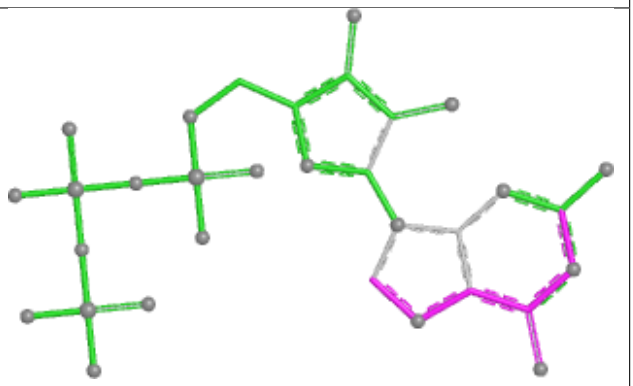


Rings

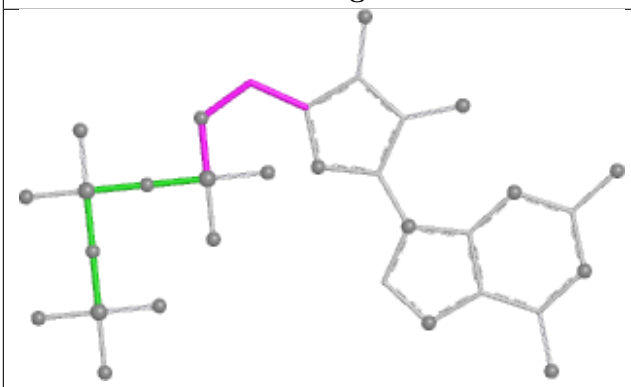
Ligand GTP A2 501



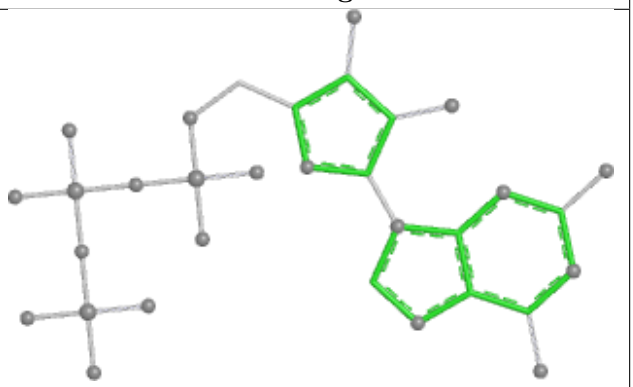
Bond lengths



Bond angles

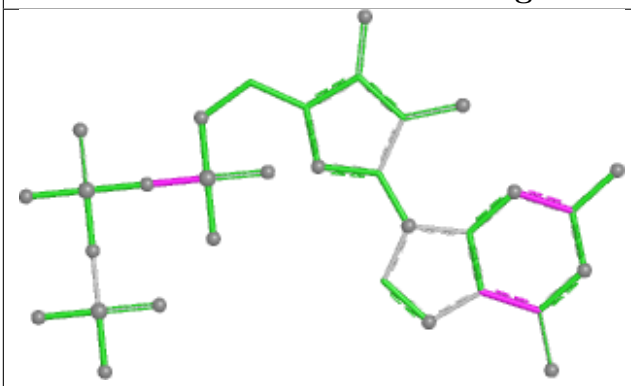


Torsions

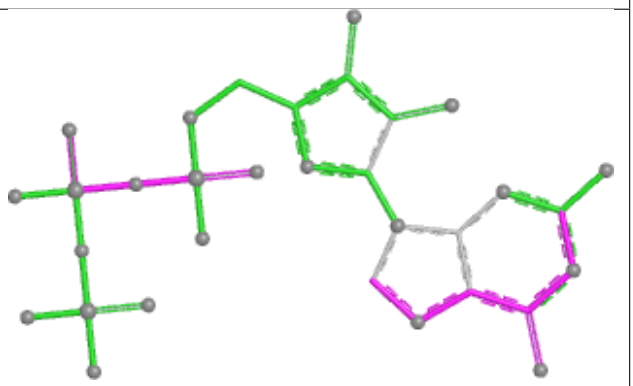


Rings

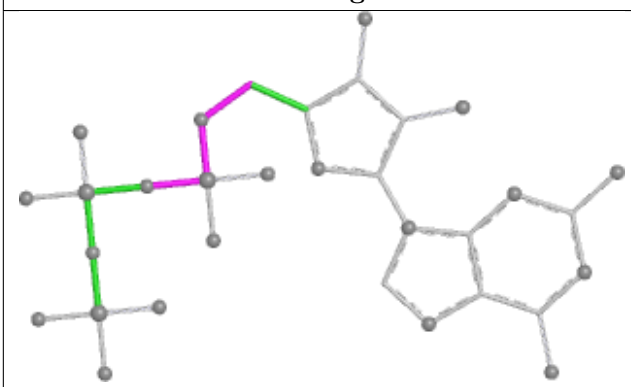
Ligand GTP E6 501



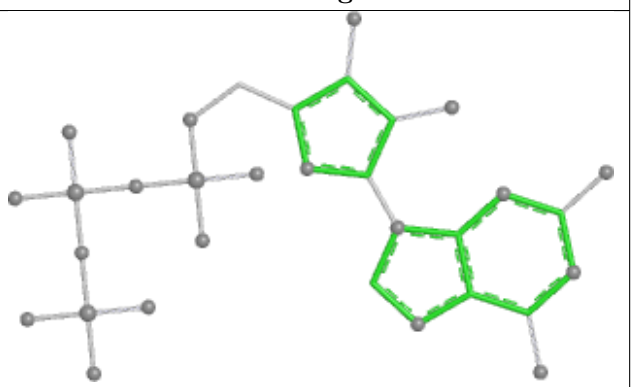
Bond lengths



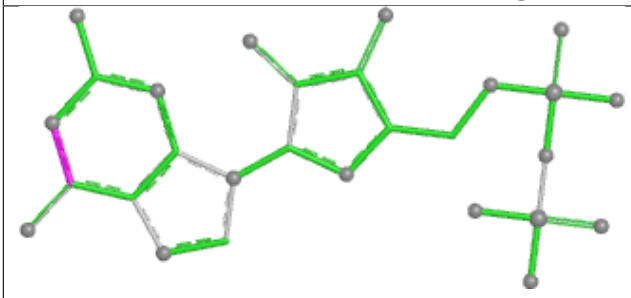
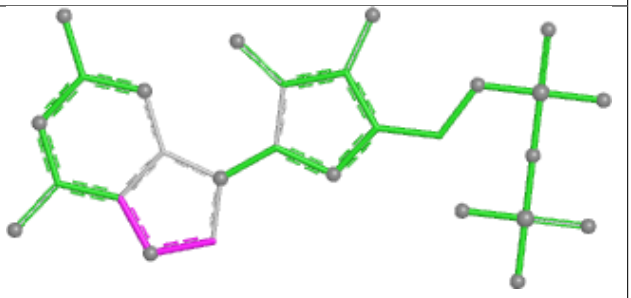
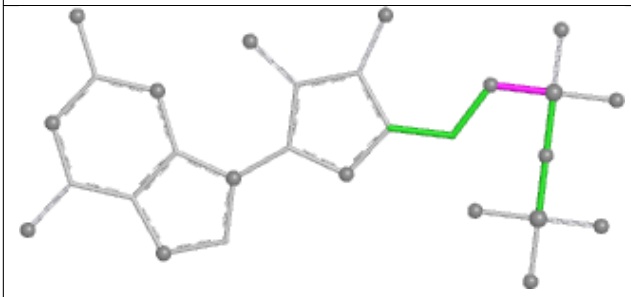
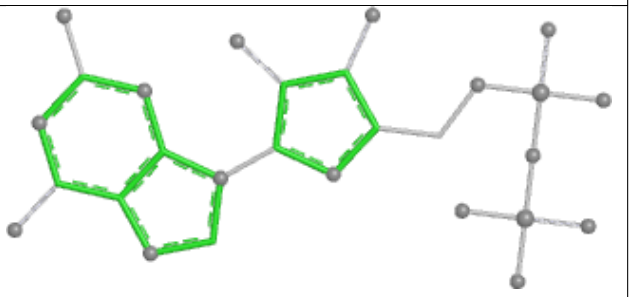
Bond angles



Torsions



Rings

Ligand GDP B7 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

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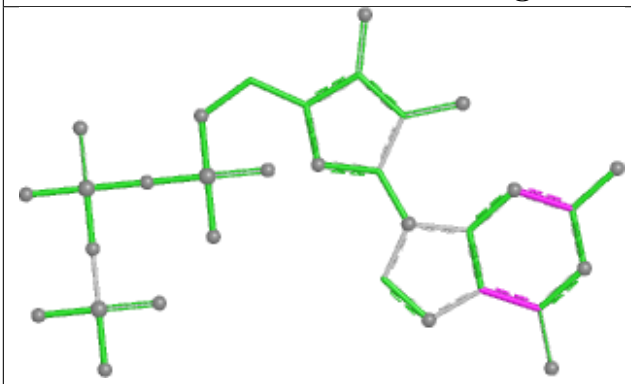
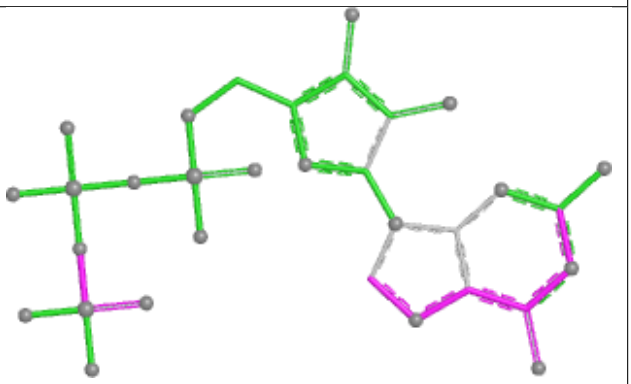
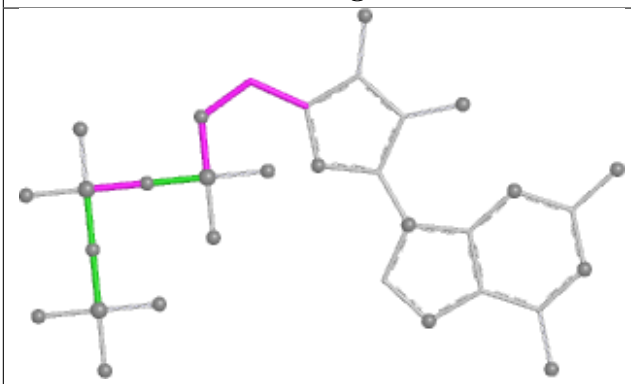
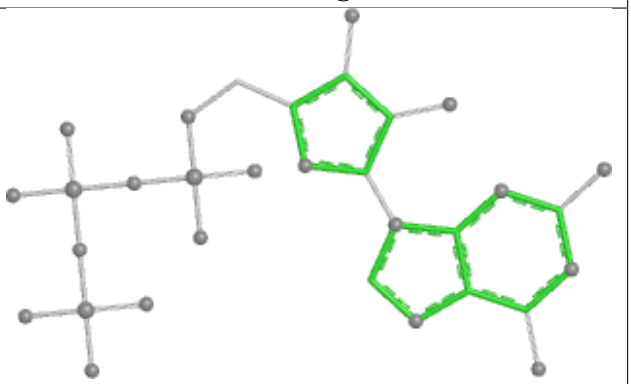
 Bond lengths	 Bond angles
 Torsions	 Rings

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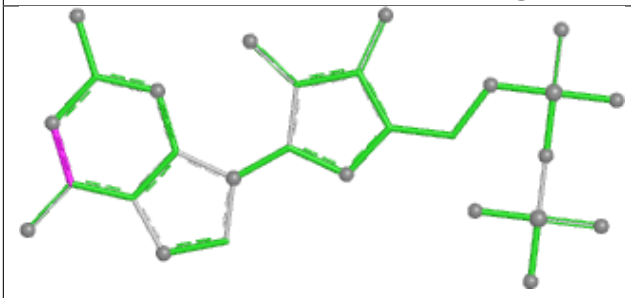
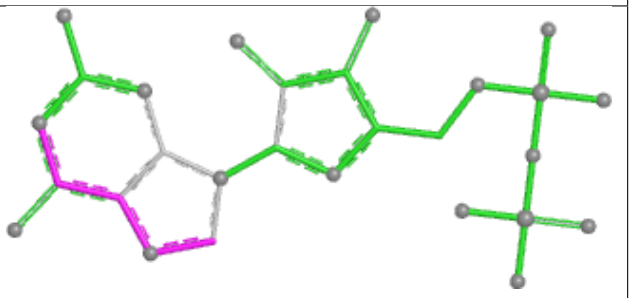
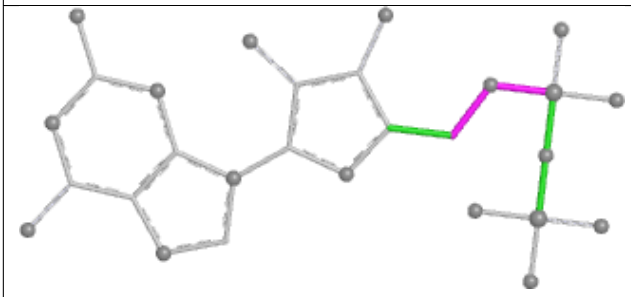
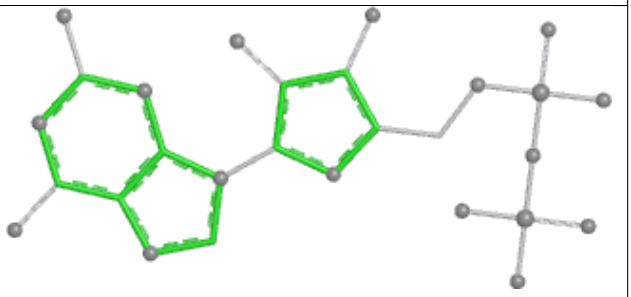
 Bond lengths	 Bond angles
 Torsions	 Rings

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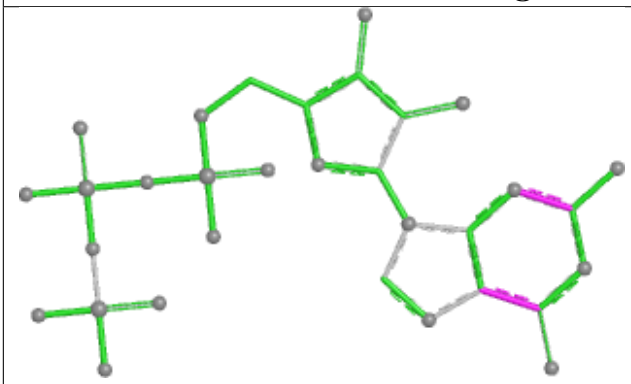
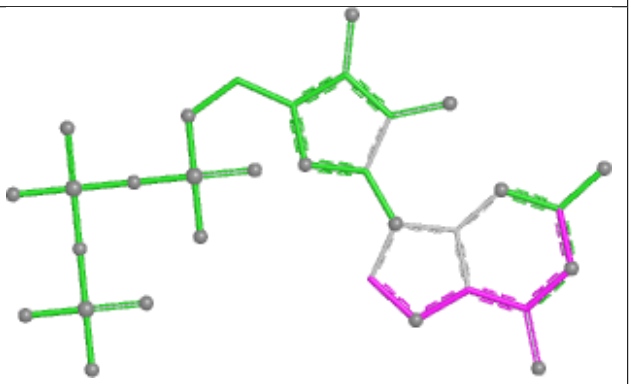
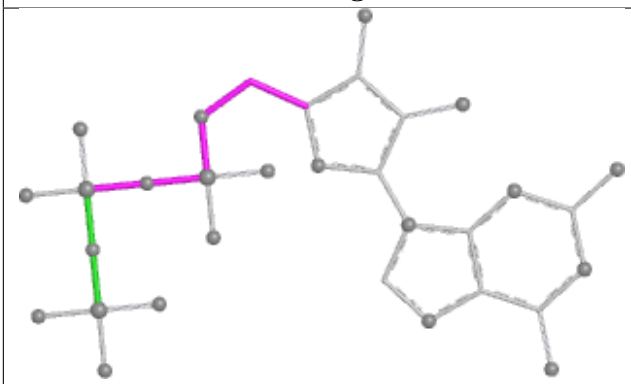
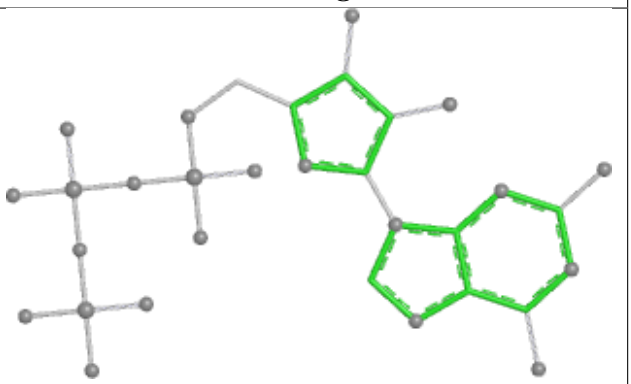
 Bond lengths	 Bond angles
 Torsions	 Rings

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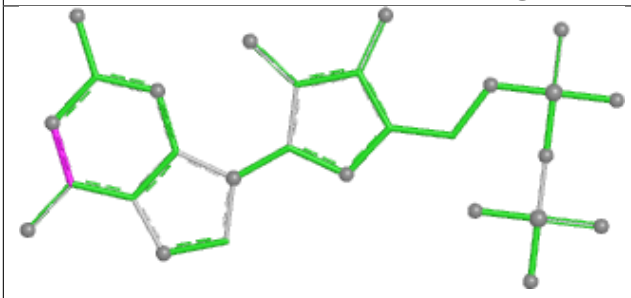	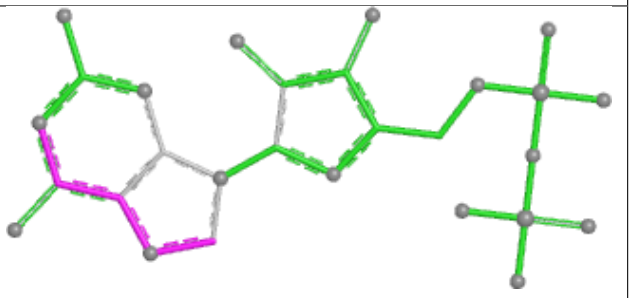
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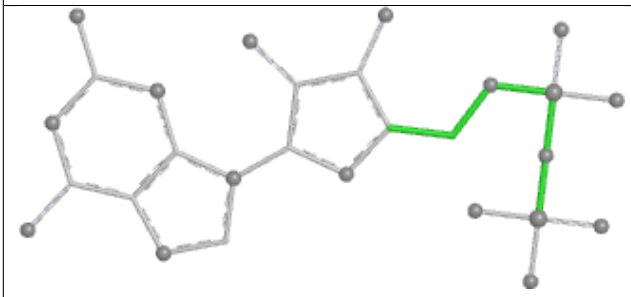	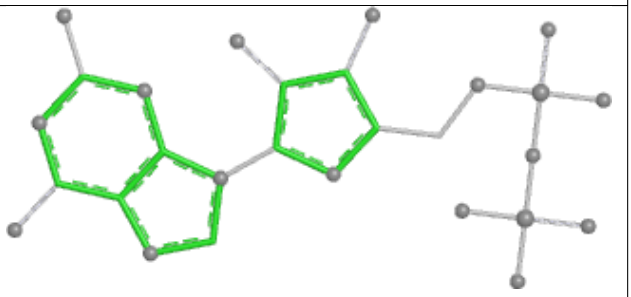
Torsions	Rings

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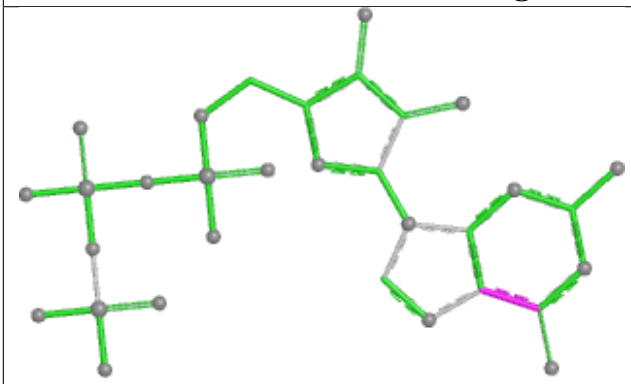	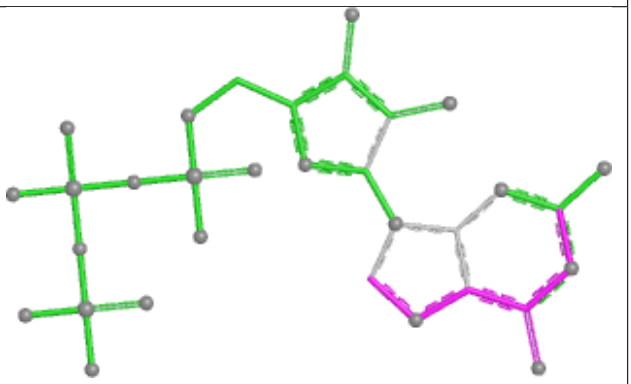
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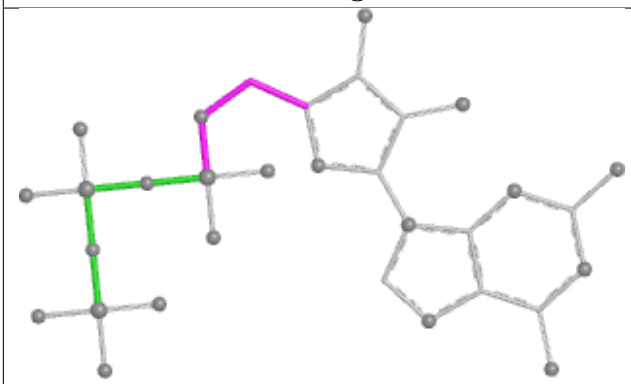	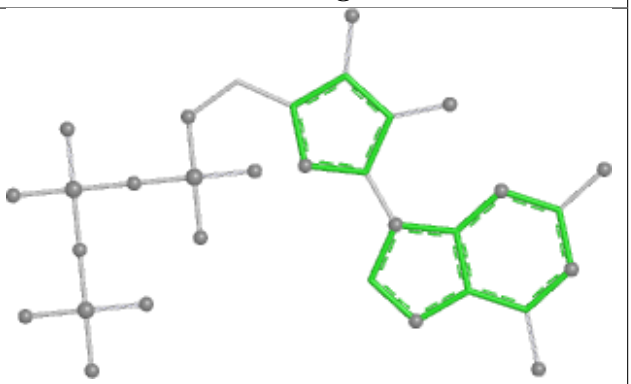
Torsions	Rings

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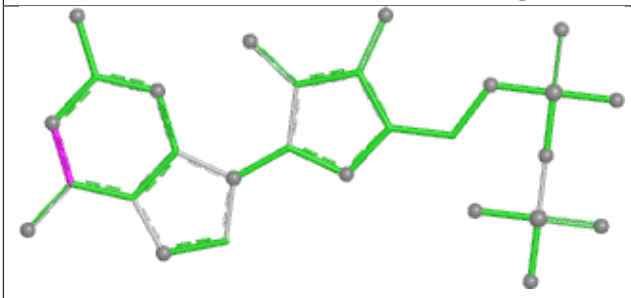
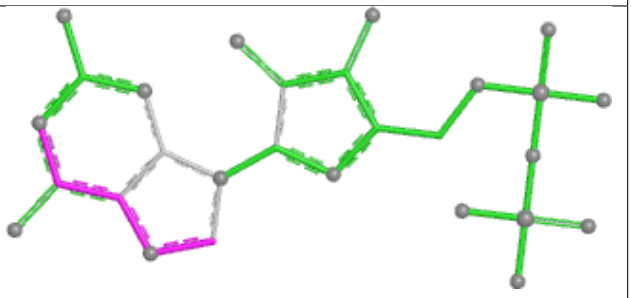
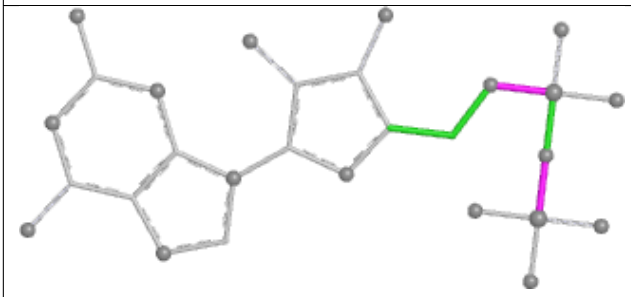
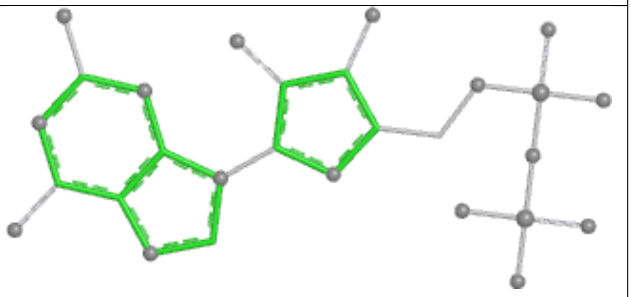
 Bond lengths	 Bond angles
 Torsions	 Rings

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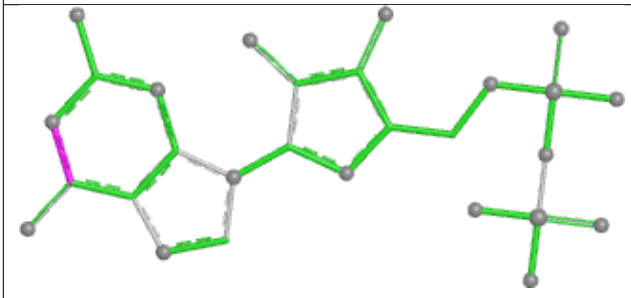
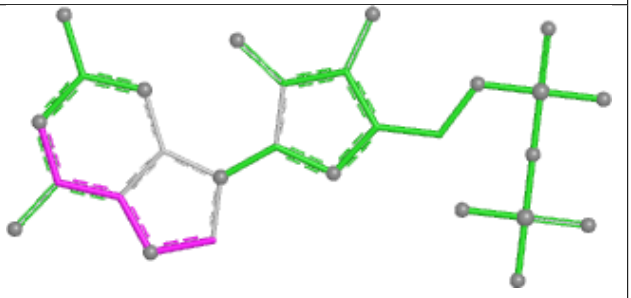
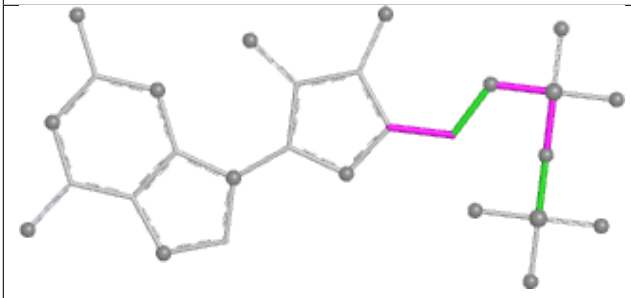
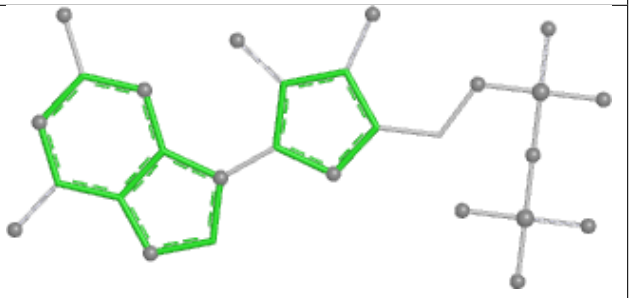
 Bond lengths	 Bond angles
 Torsions	 Rings

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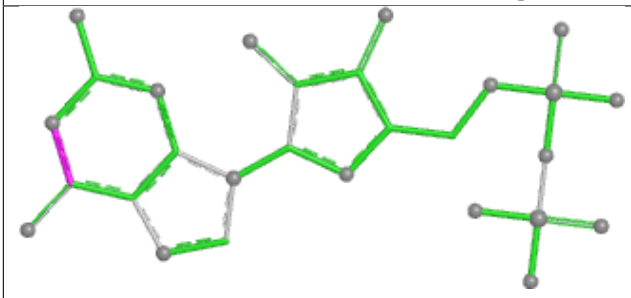	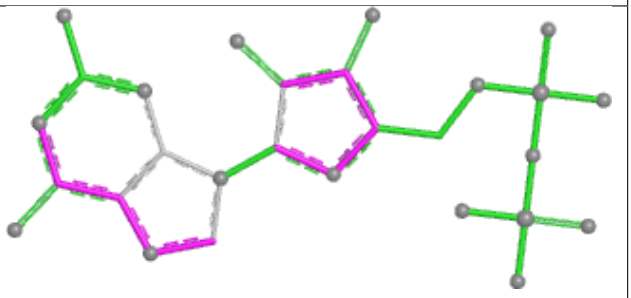
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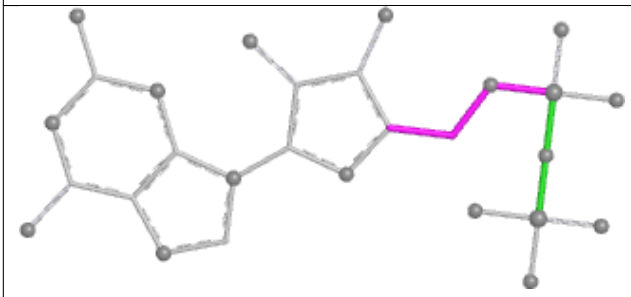	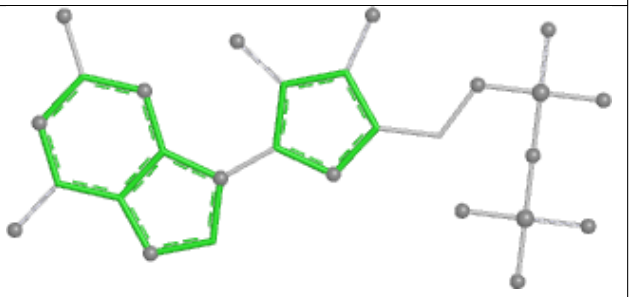
Torsions	Rings

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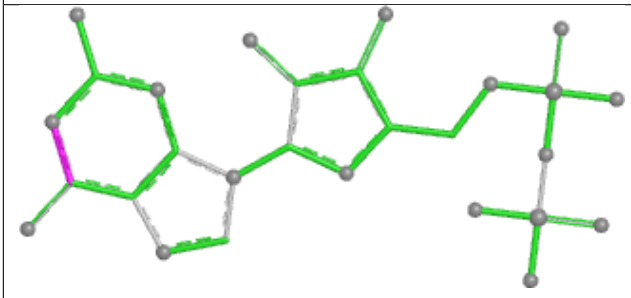	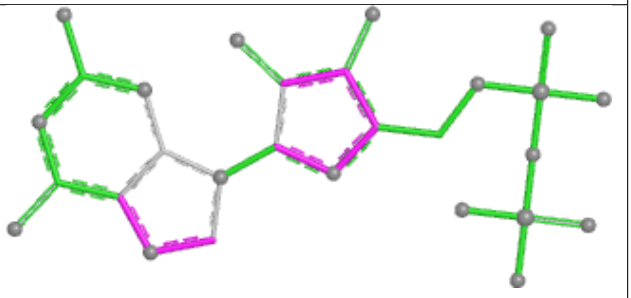
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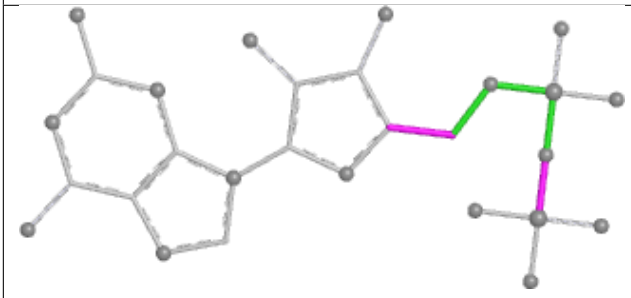
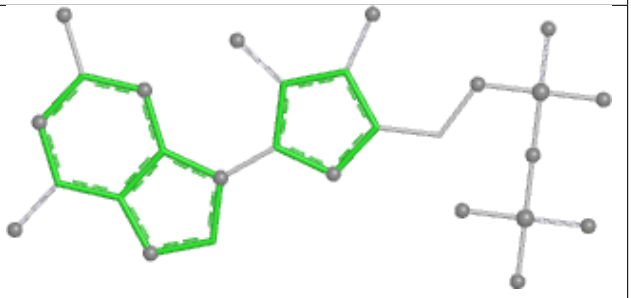
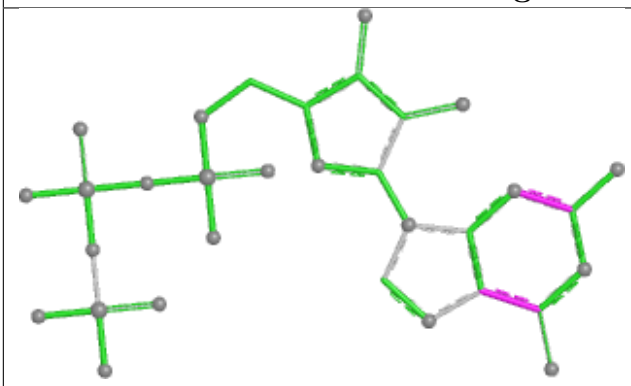
	
Torsions	Rings

Ligand GTP C8 501



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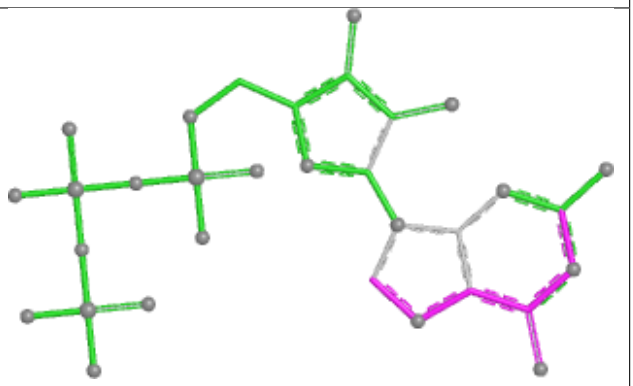

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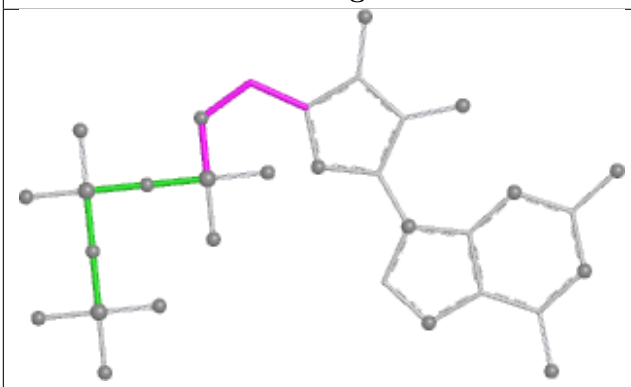

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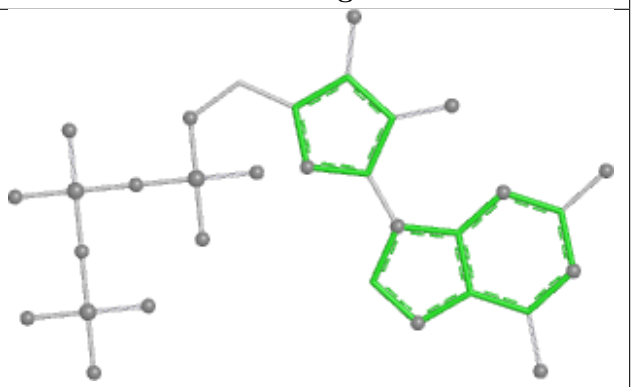
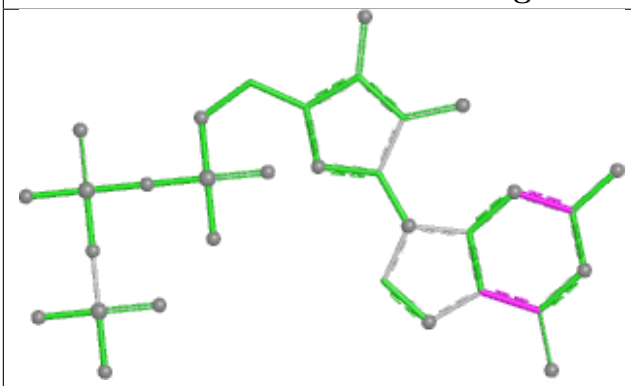


Rings

Ligand GTP C4 501



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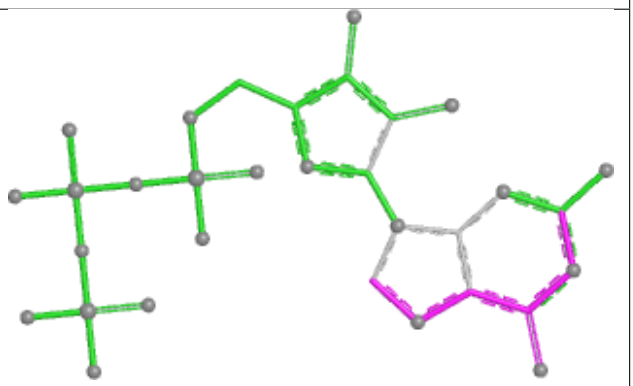

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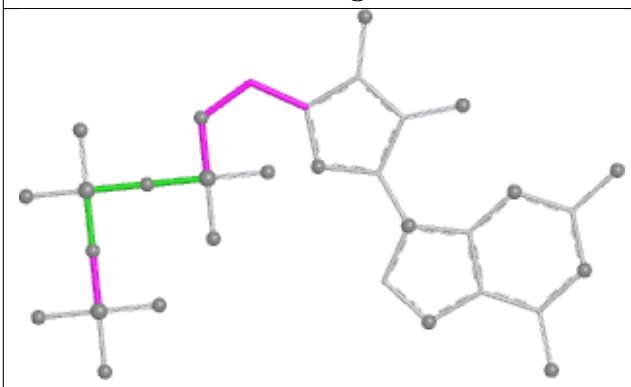

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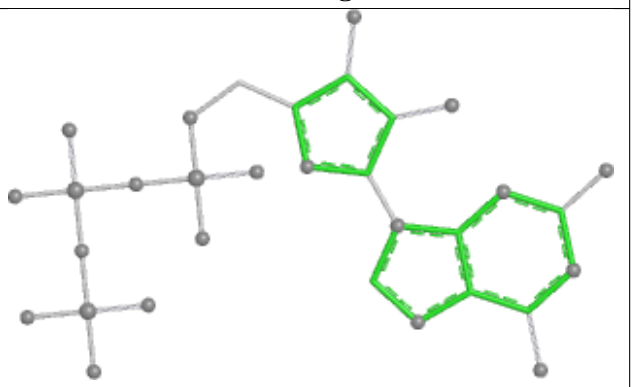
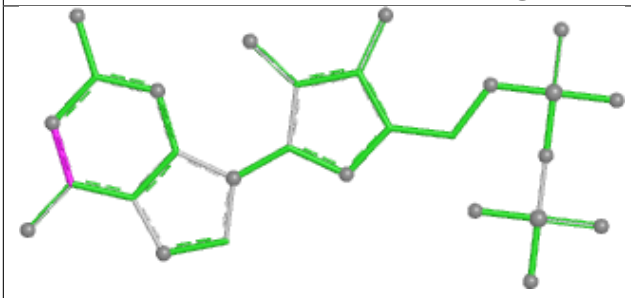
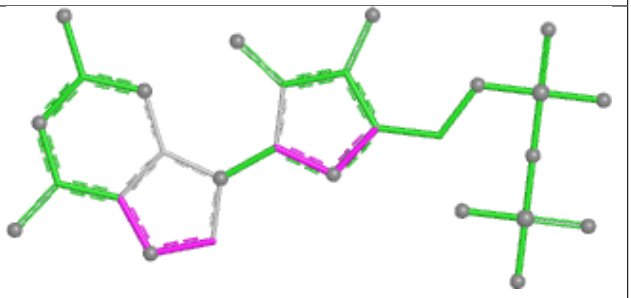
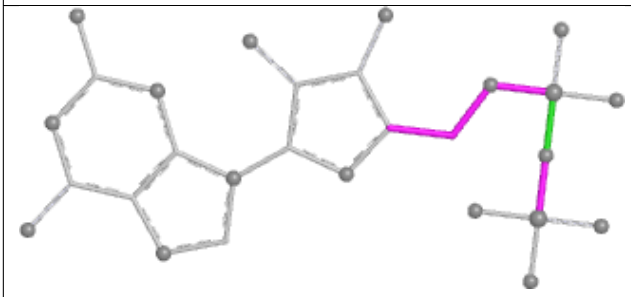
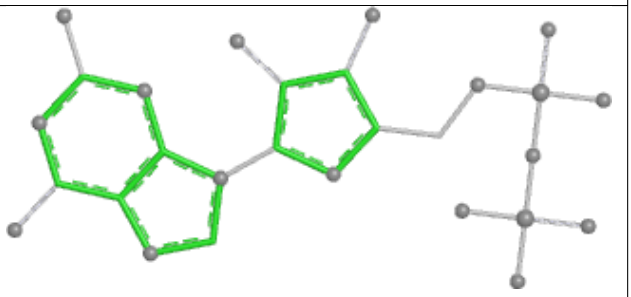


Rings

Ligand GDP E7 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

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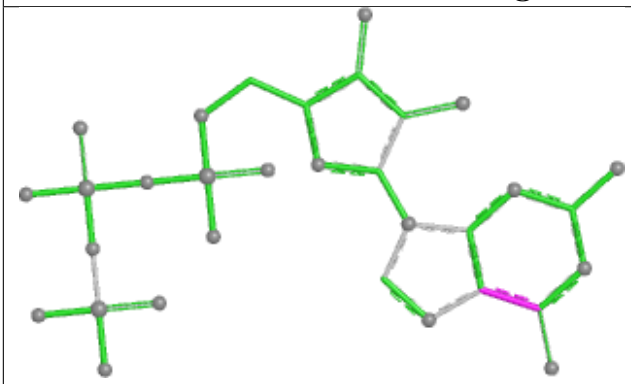
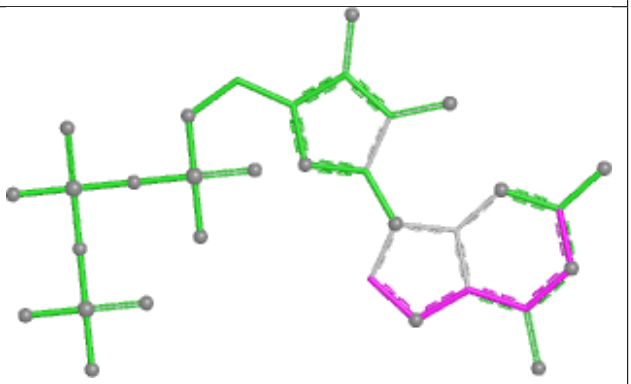
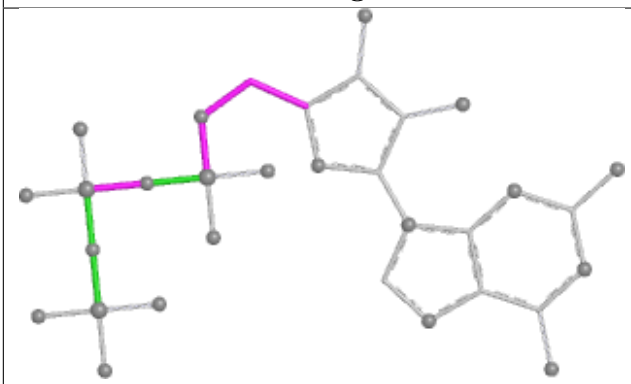
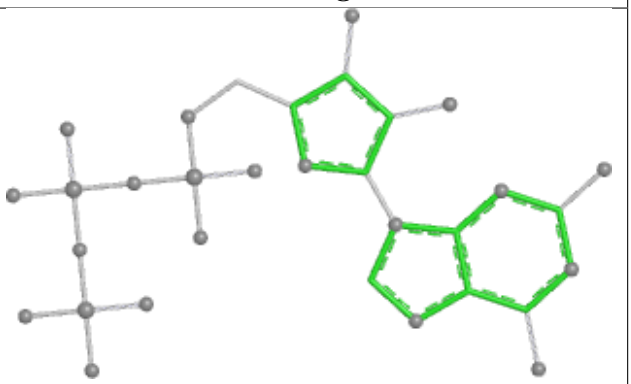
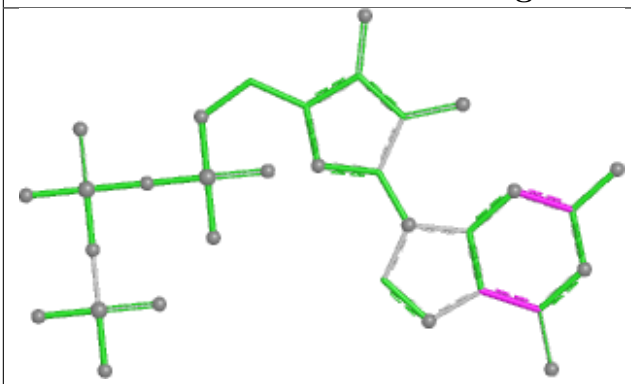
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GTP F0 501



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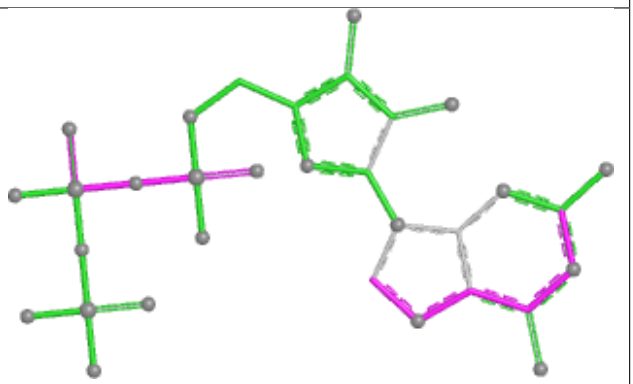

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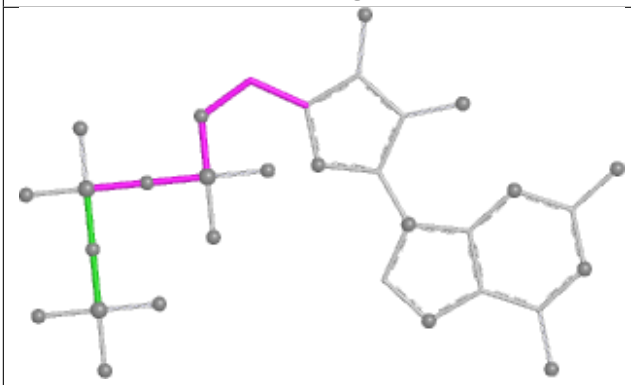

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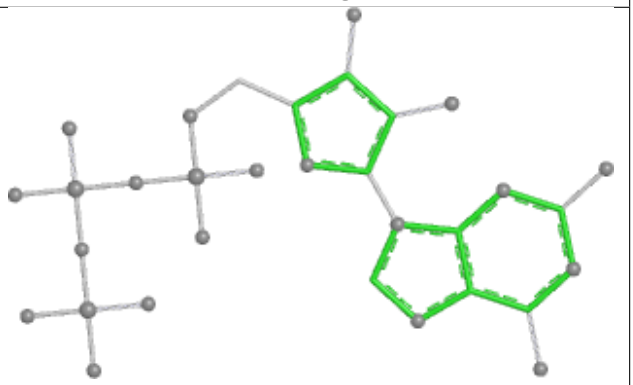
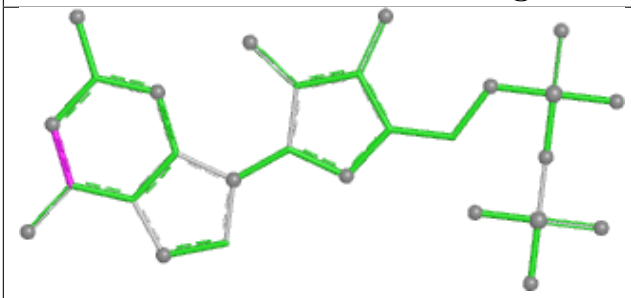


Rings

Ligand GDP C7 501



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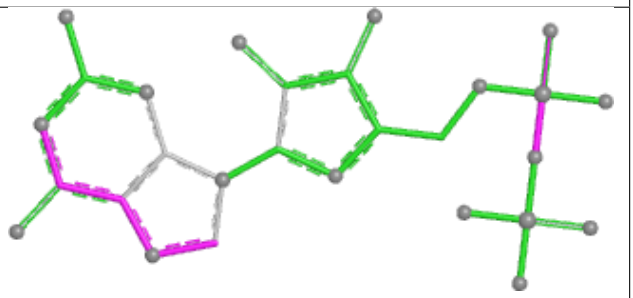

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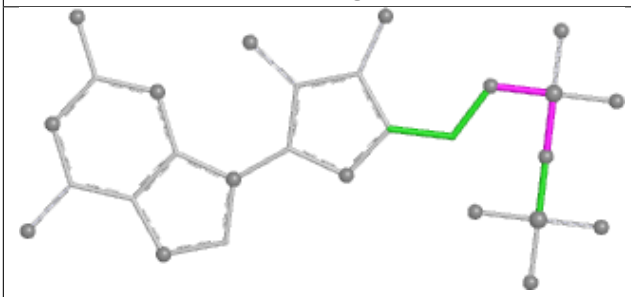

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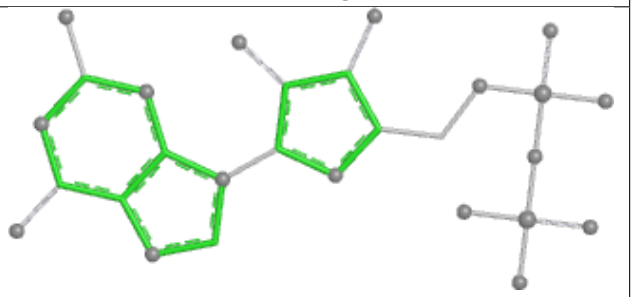
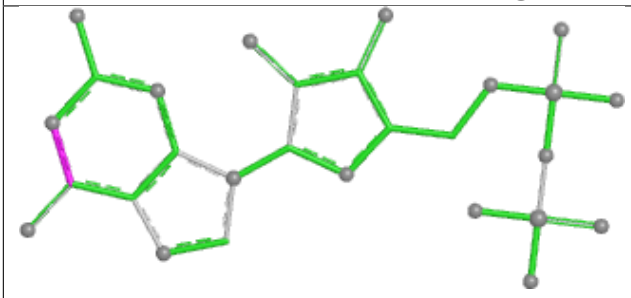


Rings

Ligand GDP C9 501



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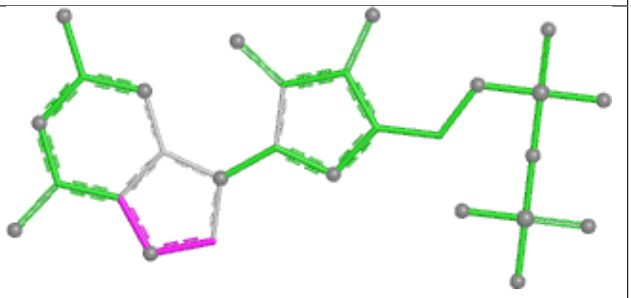
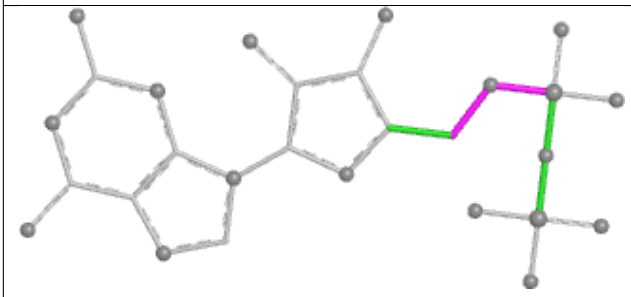
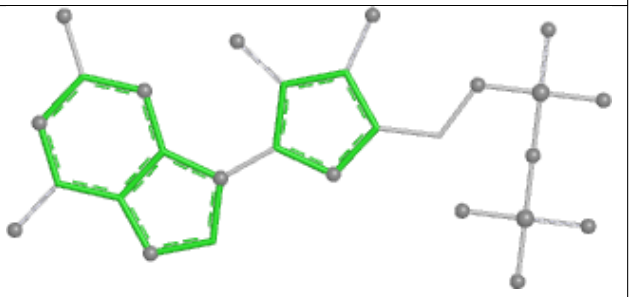


Bond angles

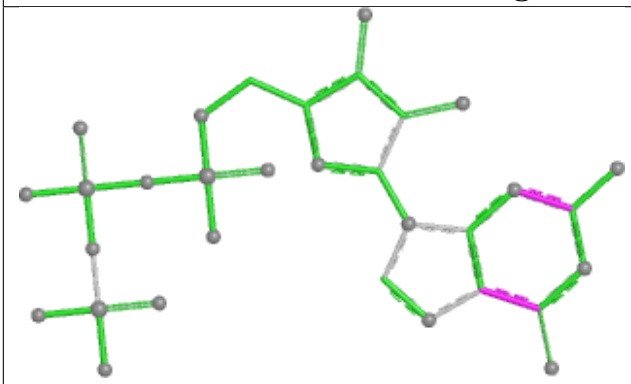


Torsions

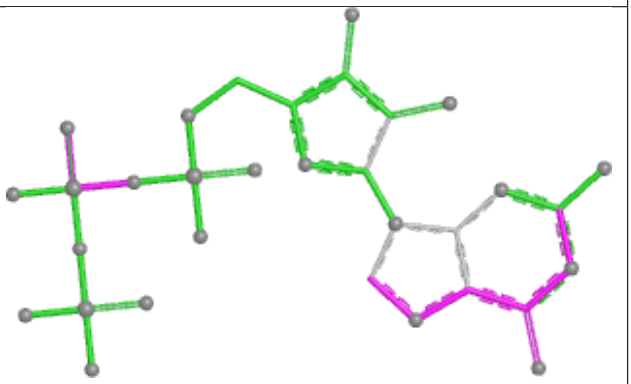


Rings

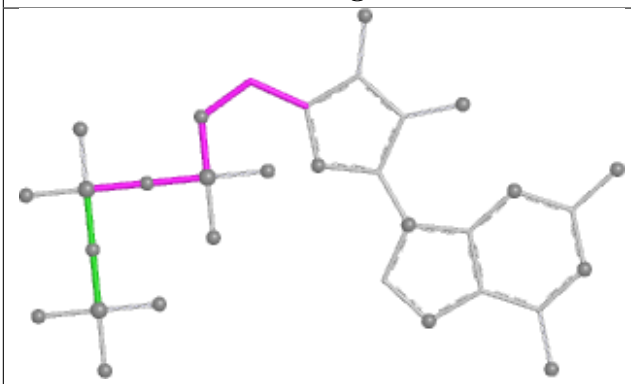
Ligand GTP A0 501



Bond lengths



Bond angles



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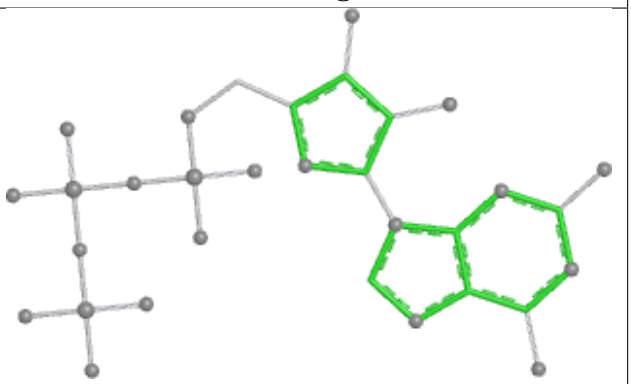
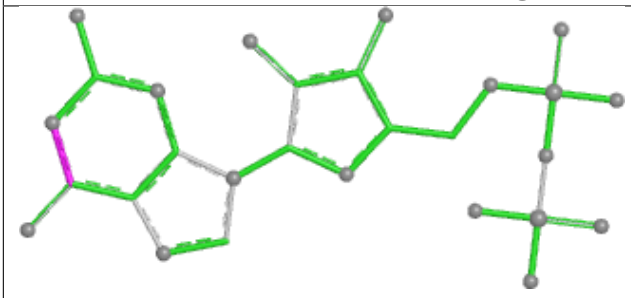
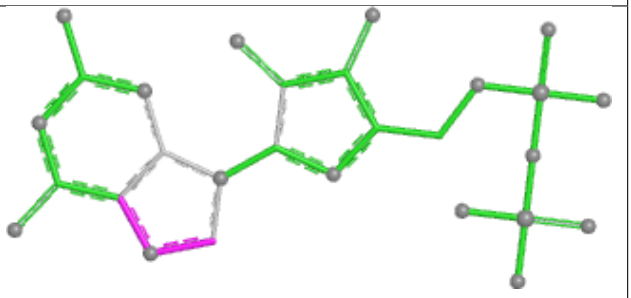
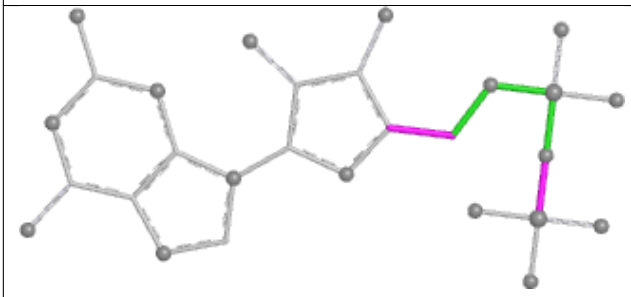
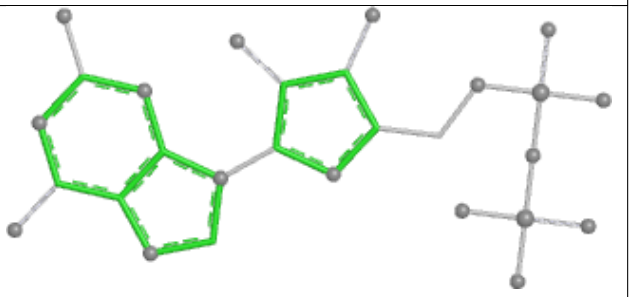
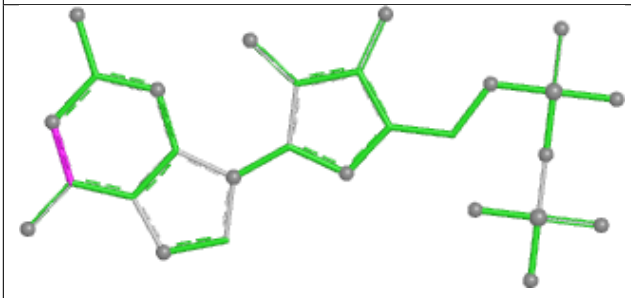
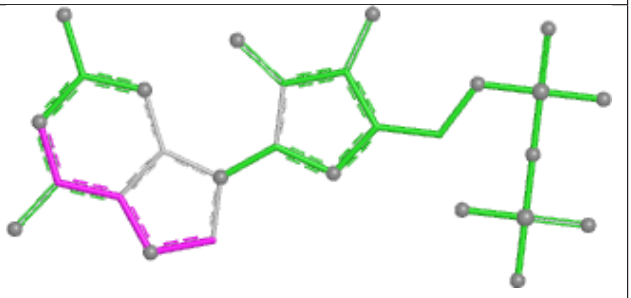
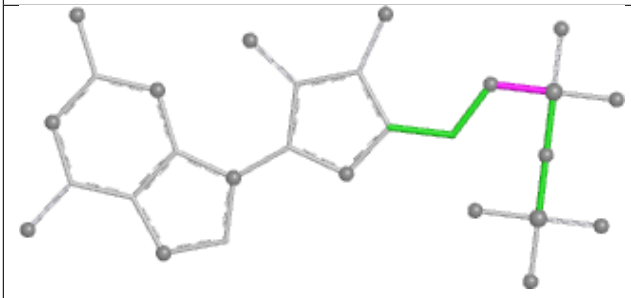
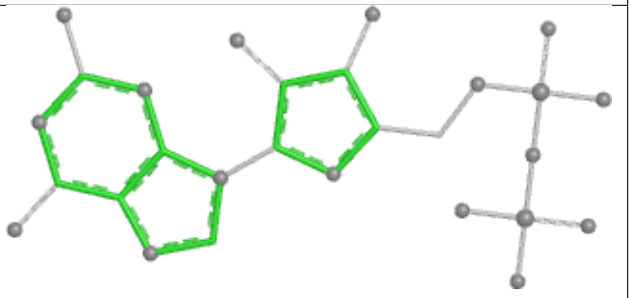
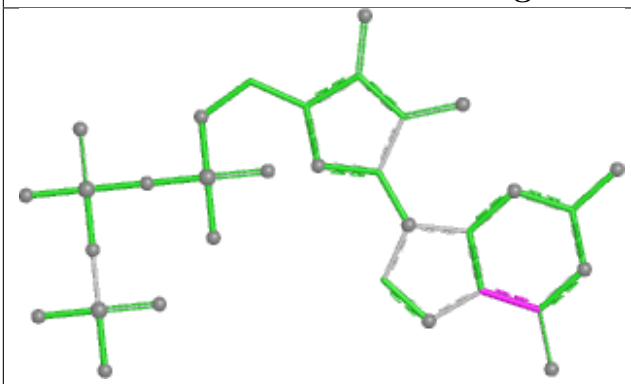


Rings

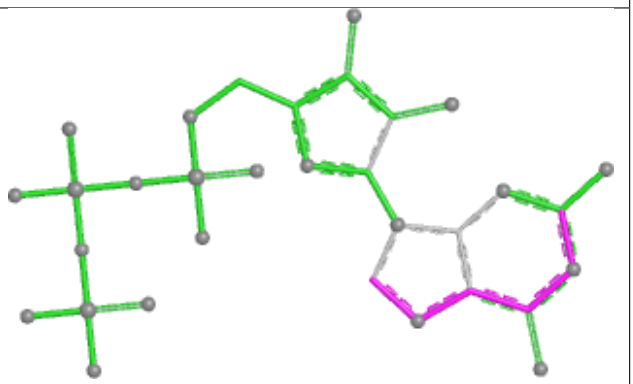
Ligand GDP E5 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP A7 502	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GTP B4 501



Bond lengths



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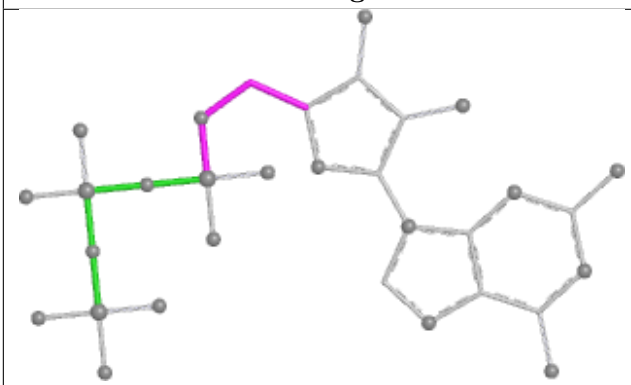

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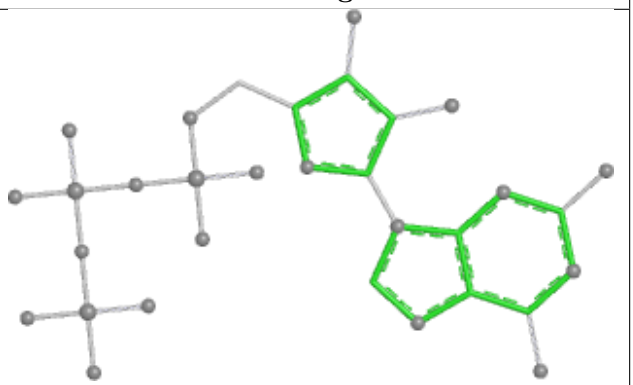
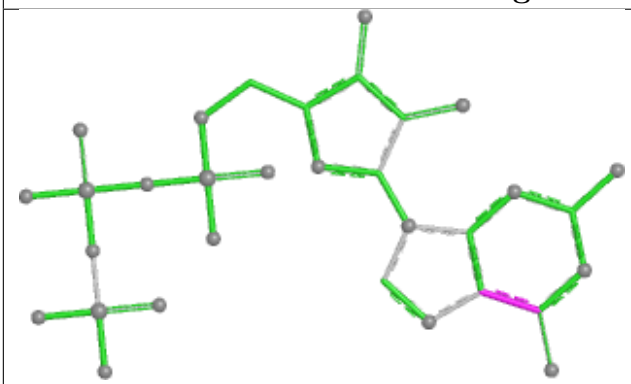


Rings

Ligand GTP D6 501



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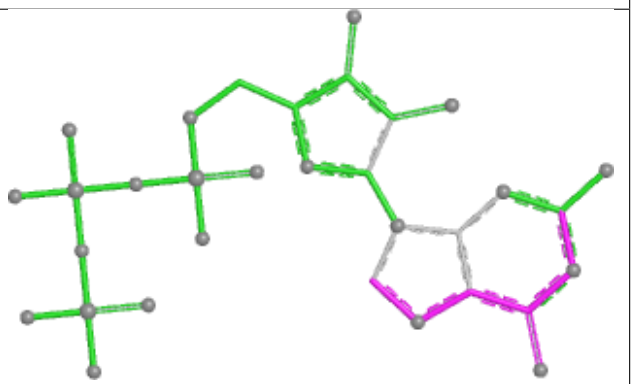

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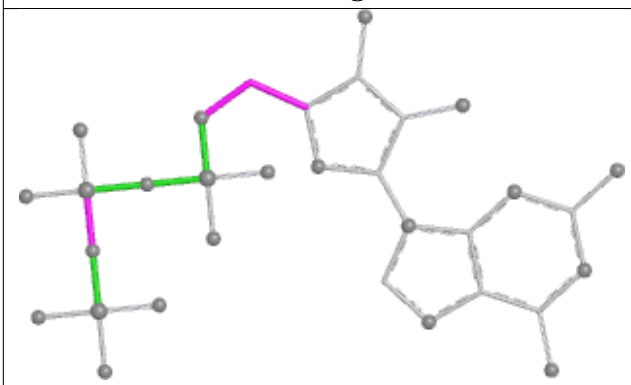

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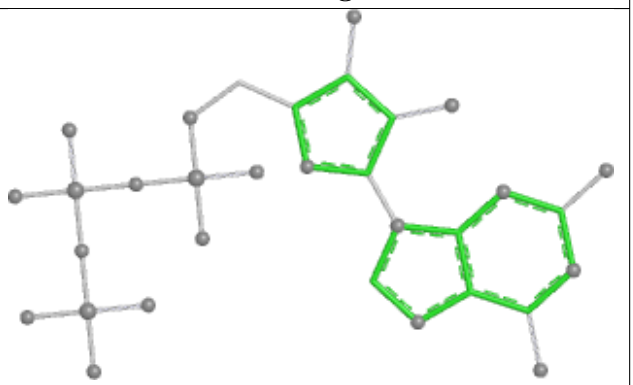
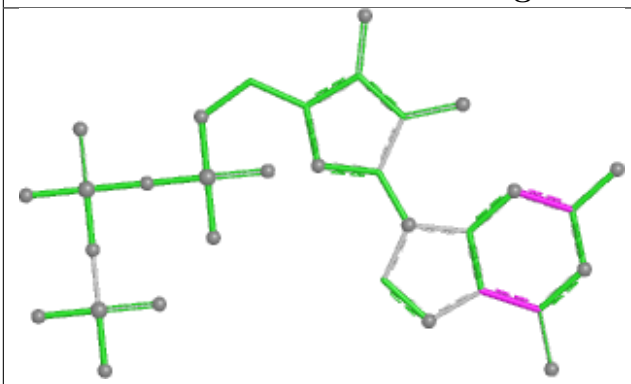


Rings

Ligand GTP B0 501



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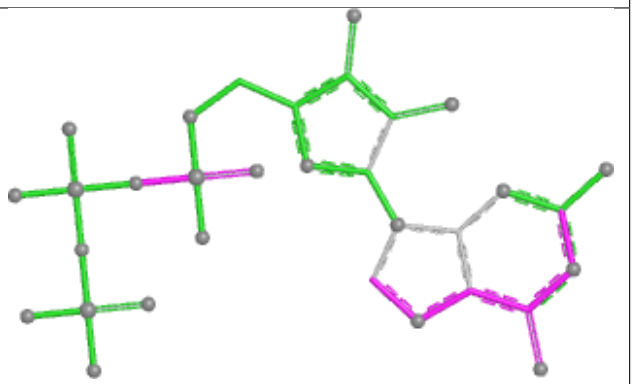

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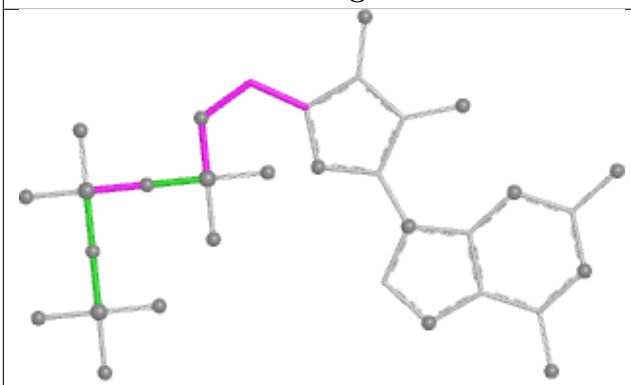

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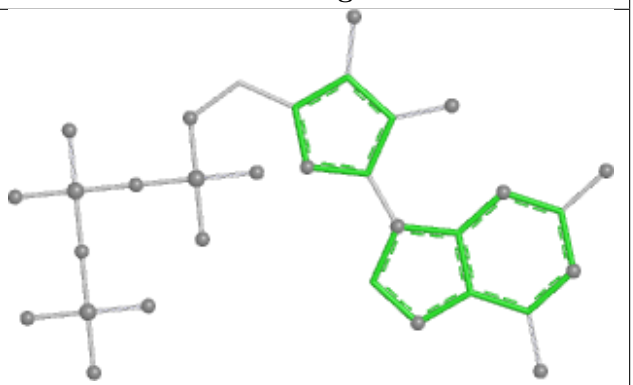
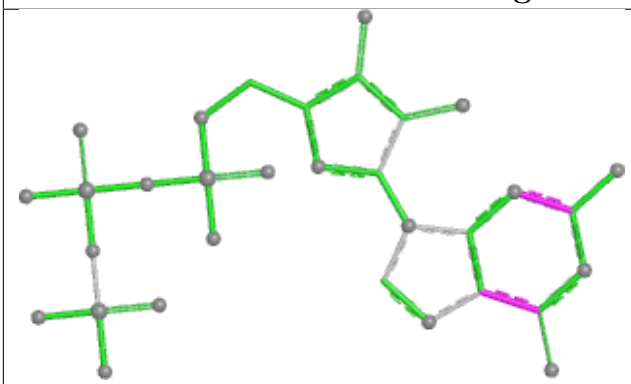


Rings

Ligand GTP C0 501



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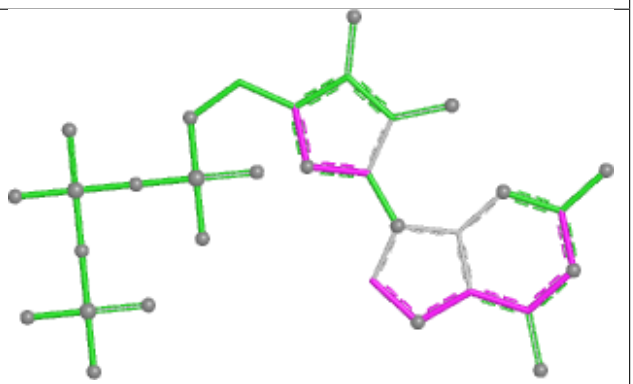

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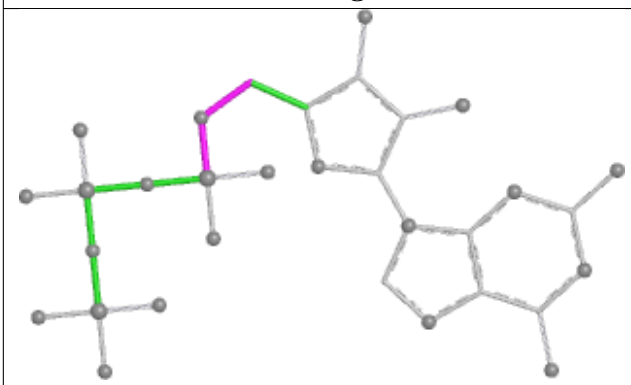

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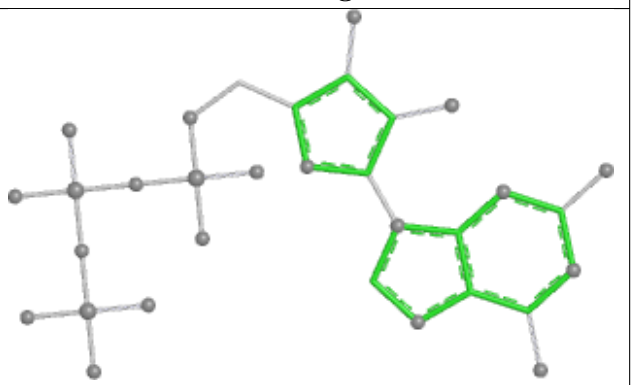
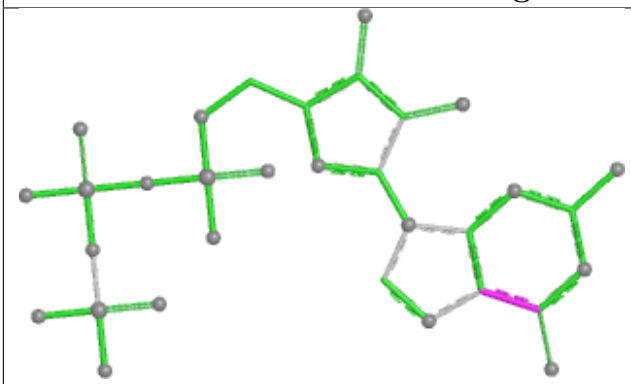


Rings

Ligand GTP D8 501



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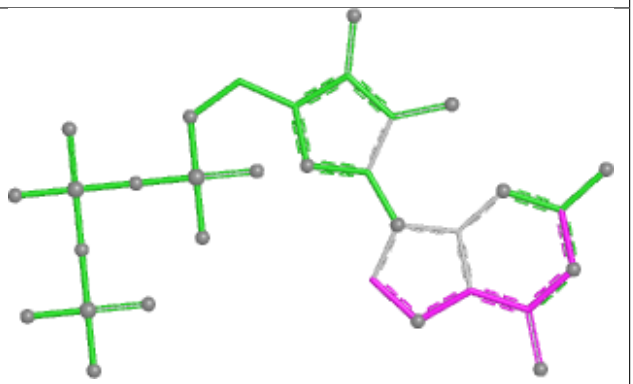

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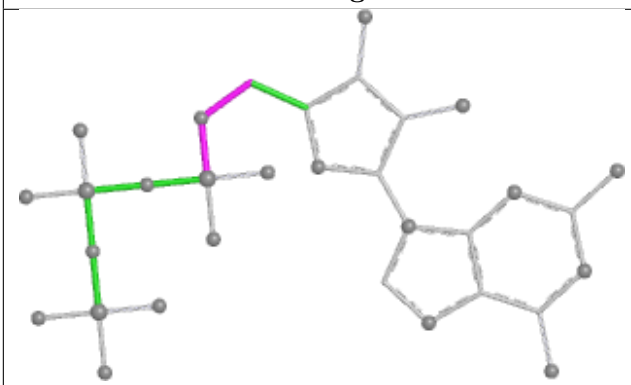

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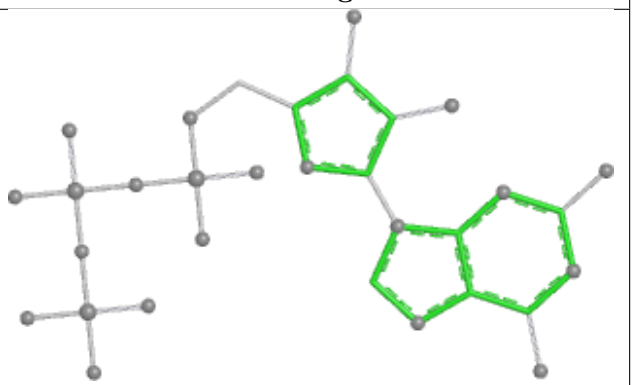
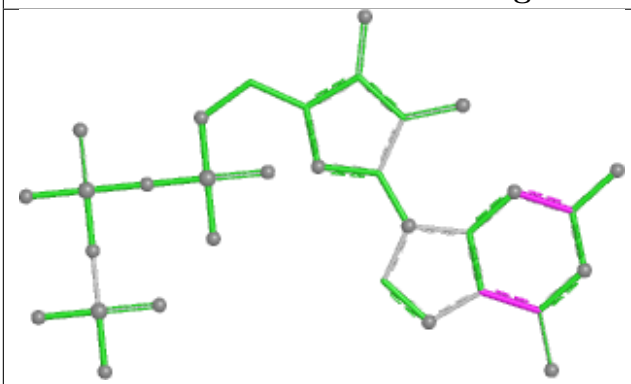


Rings

Ligand GTP C6 501



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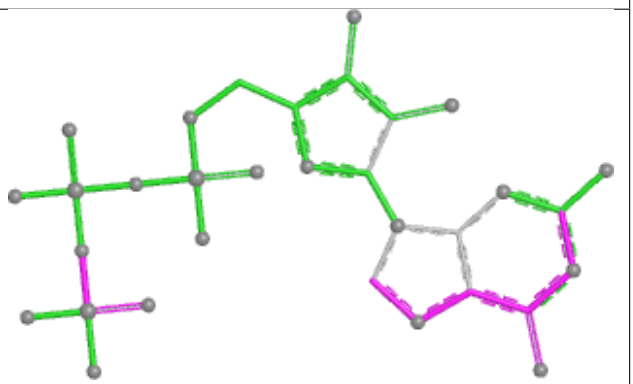

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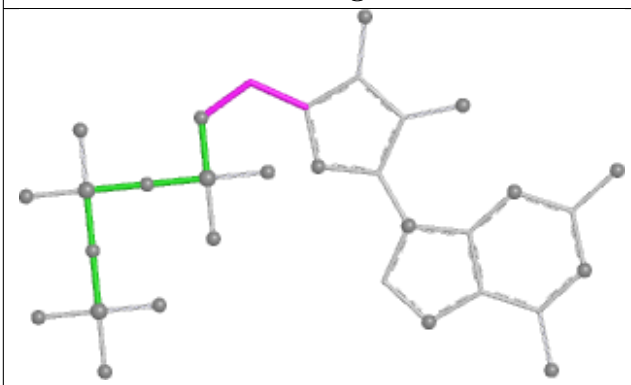

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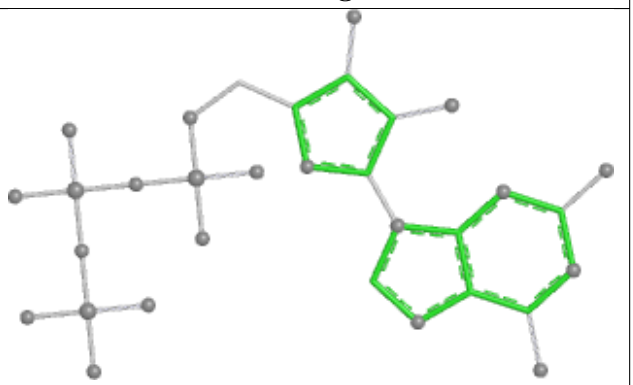
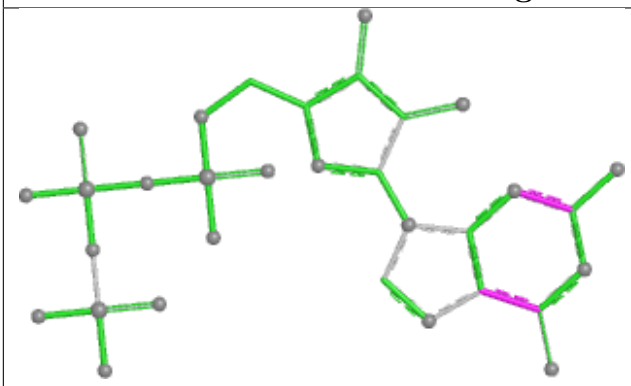


Rings

Ligand GTP E2 501



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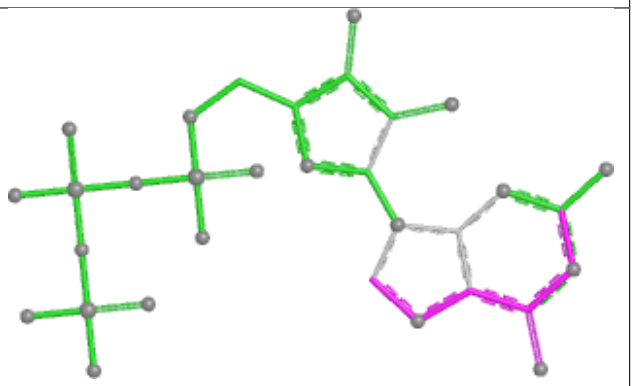

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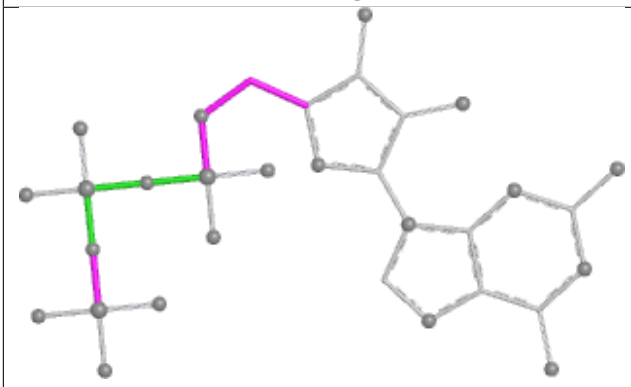

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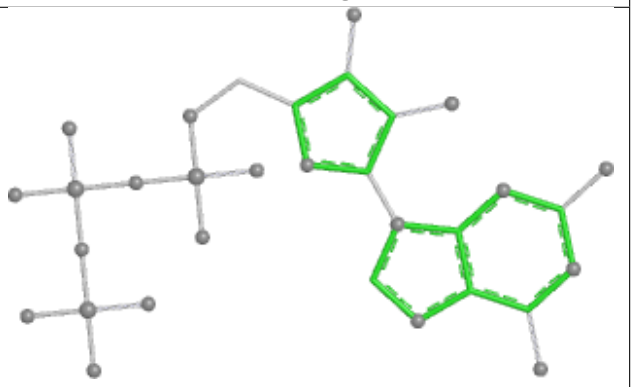
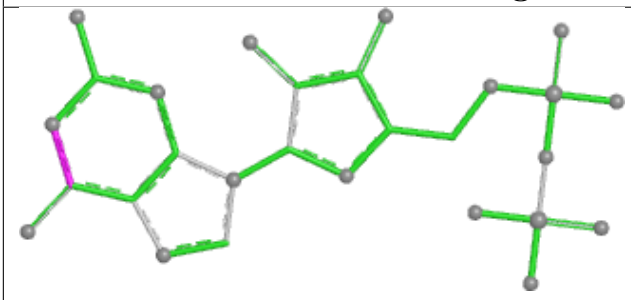


Rings

Ligand GDP A1 501



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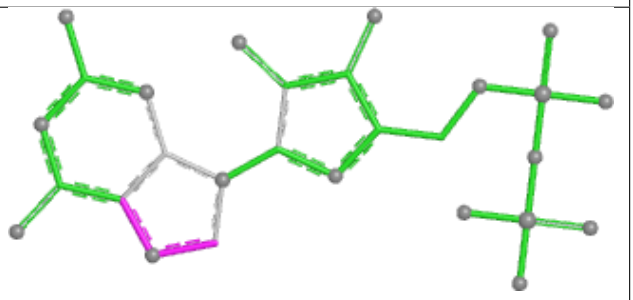
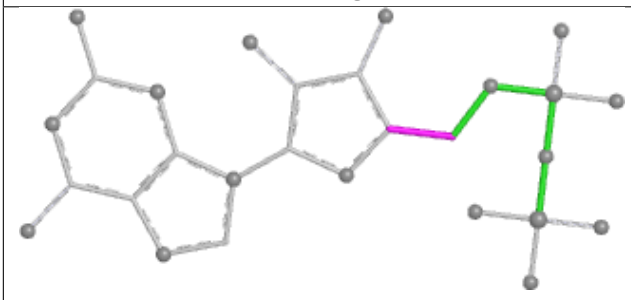


Bond angles



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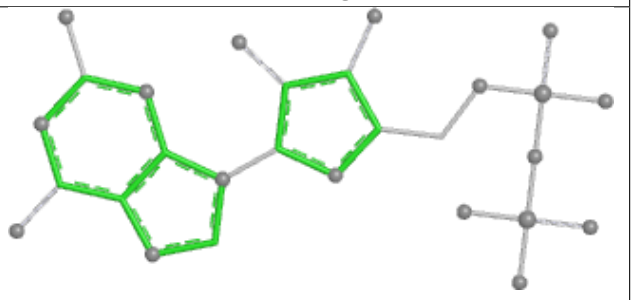
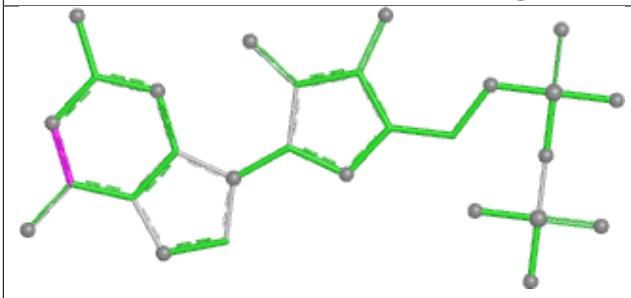
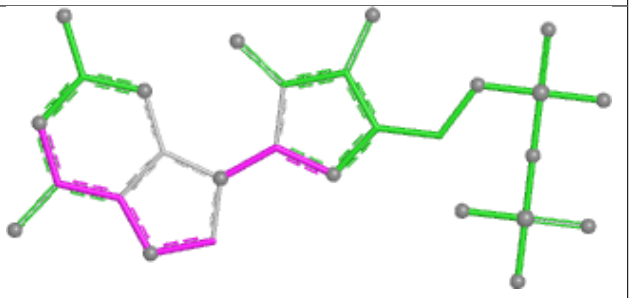
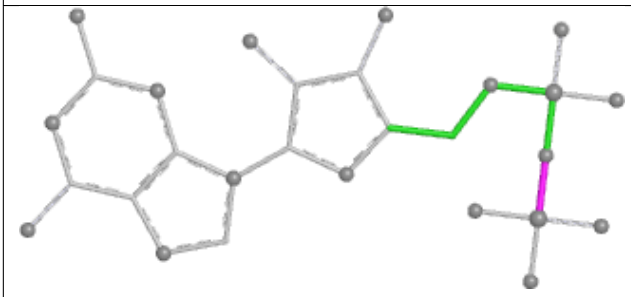
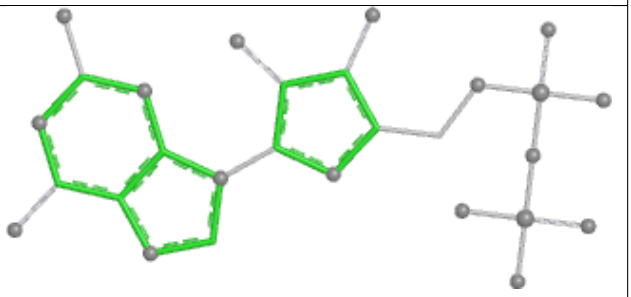
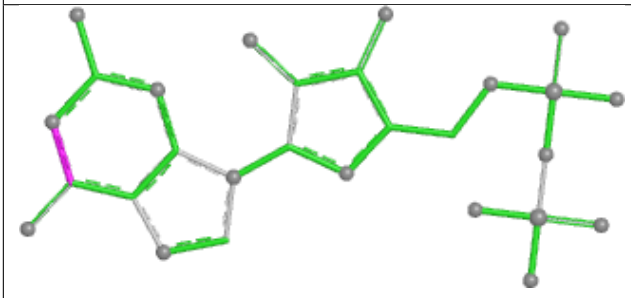
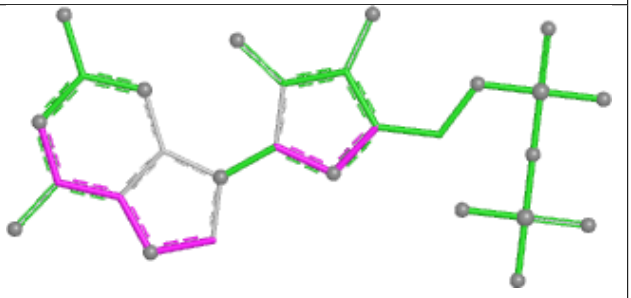
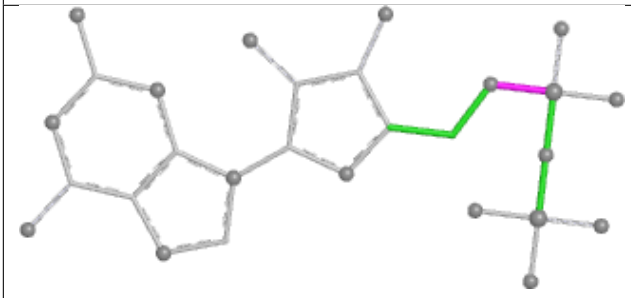
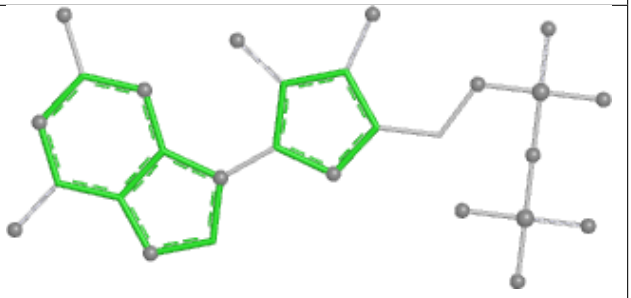
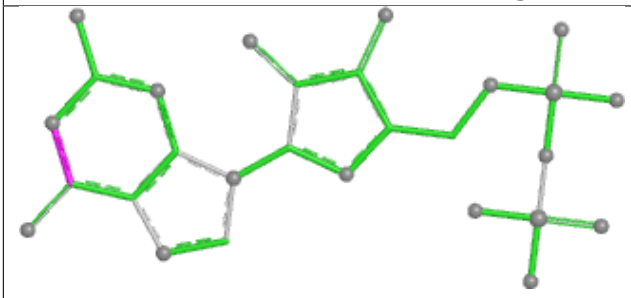
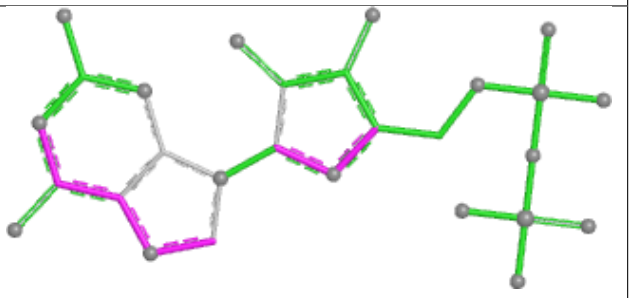
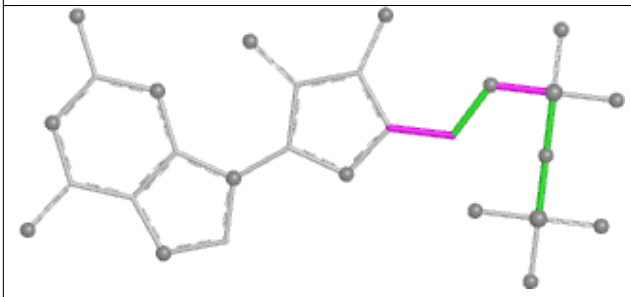
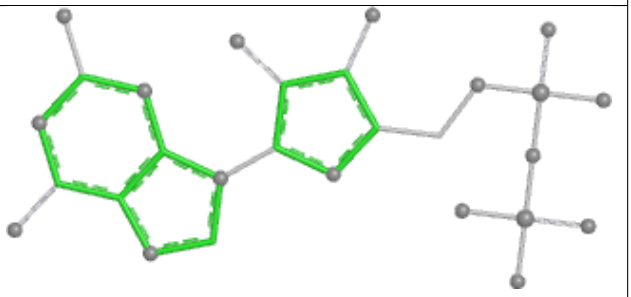


Rings

Ligand GDP A5 502	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP B1 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP D5 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

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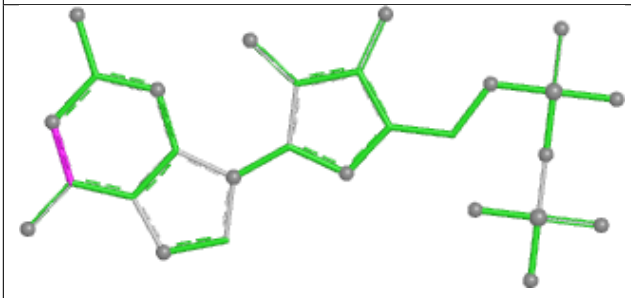
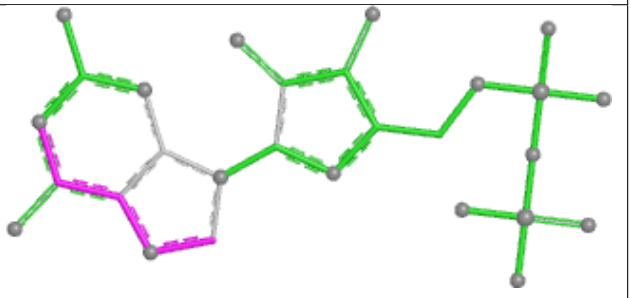
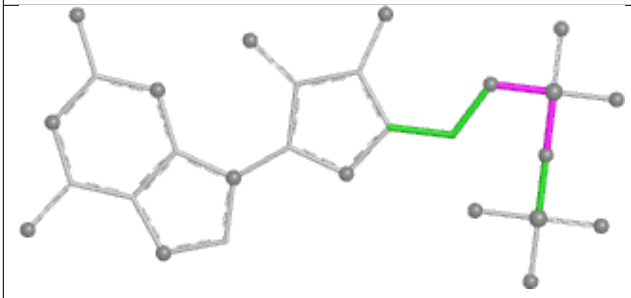
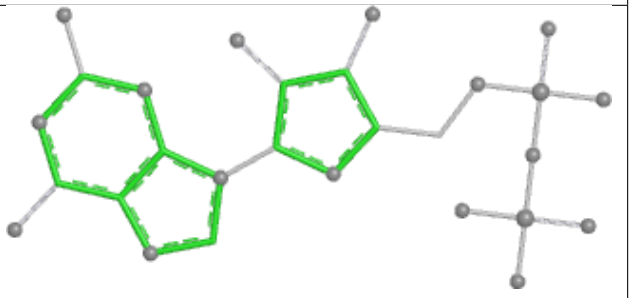
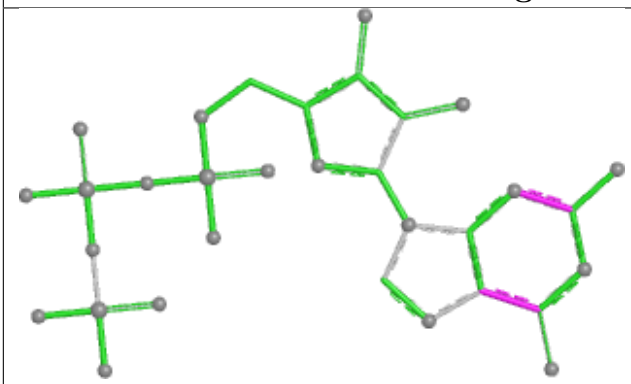
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GTP E4 501



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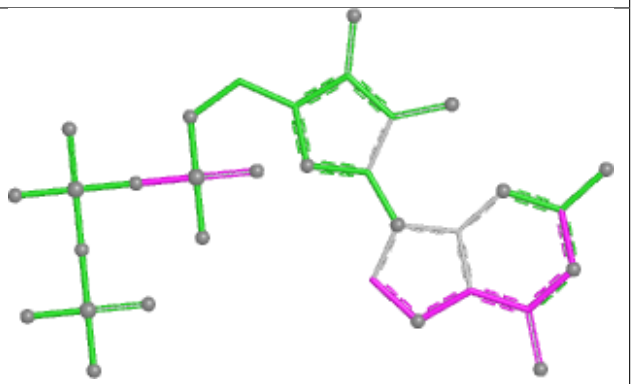

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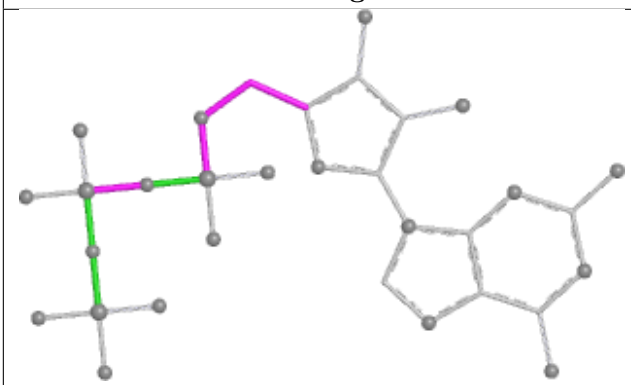

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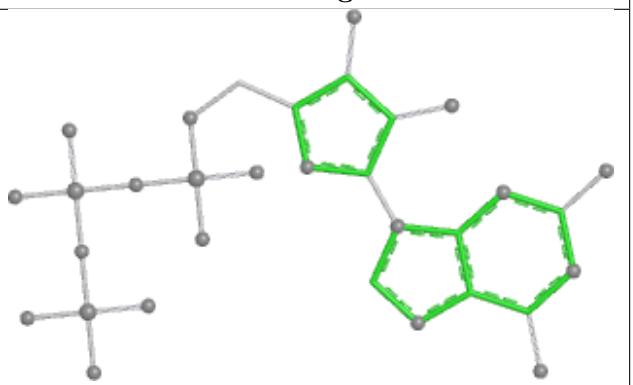
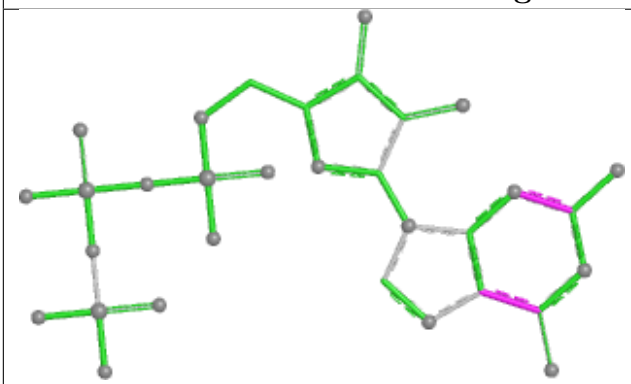


Rings

Ligand GTP B6 501



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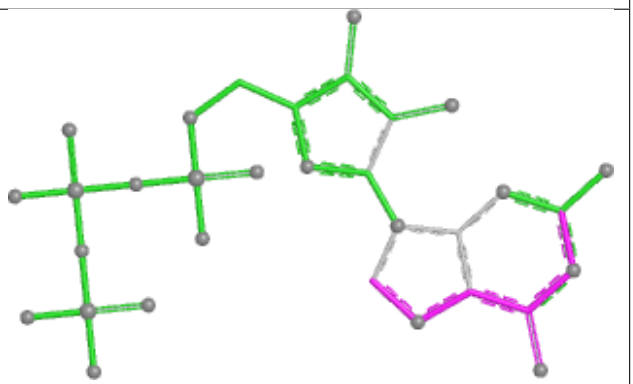

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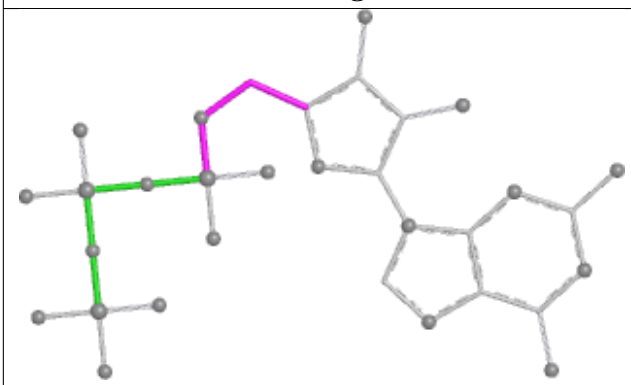

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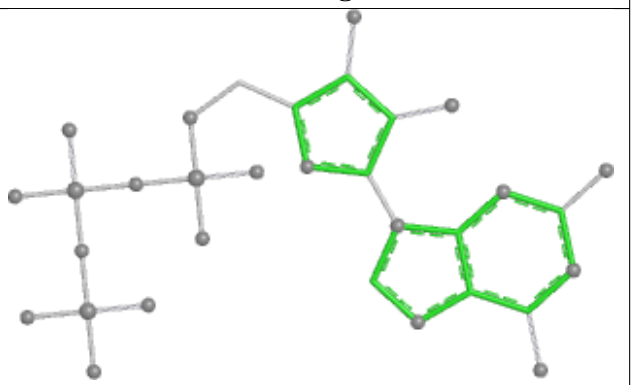

Rings

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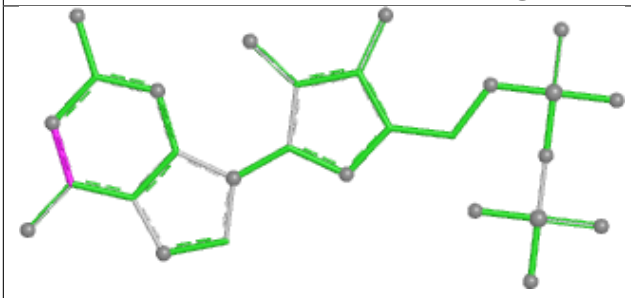
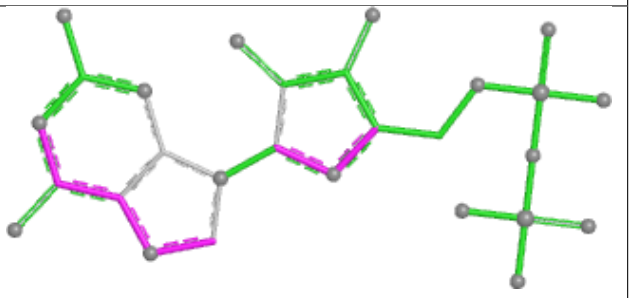
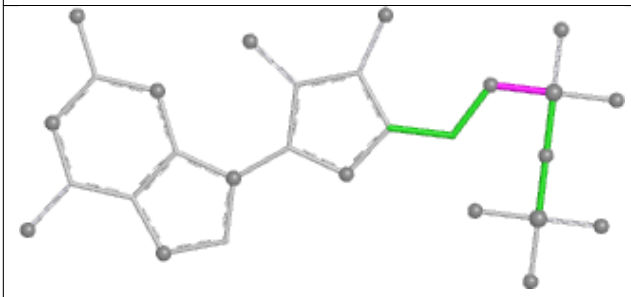
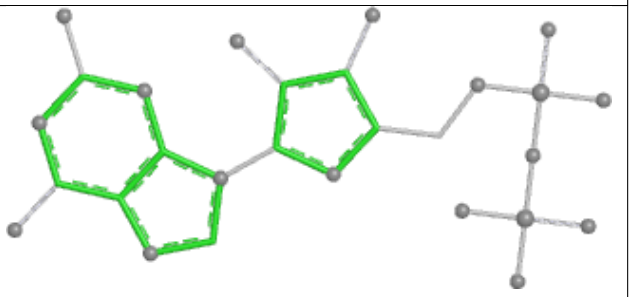
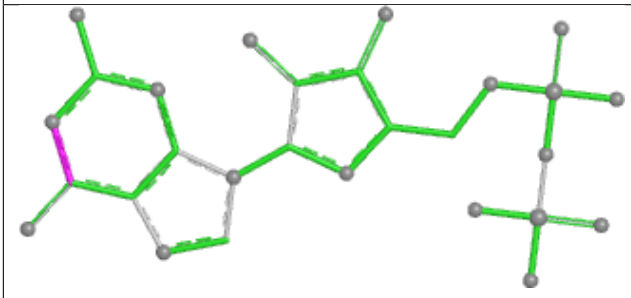
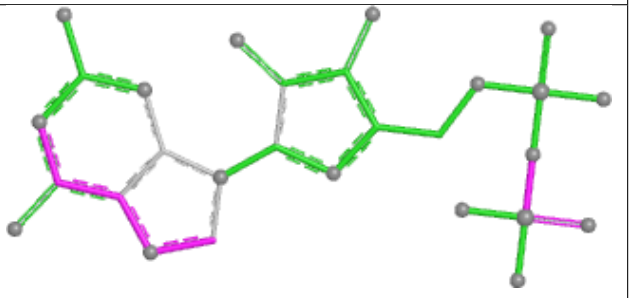
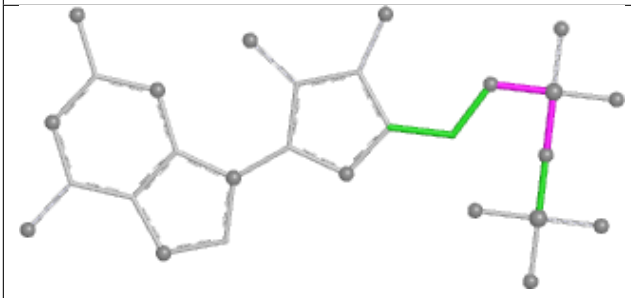
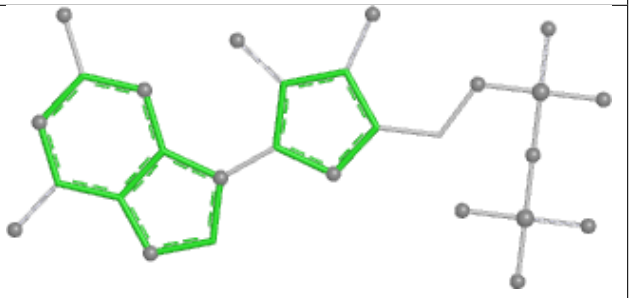
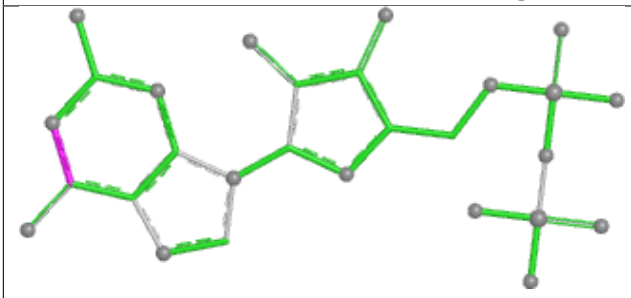
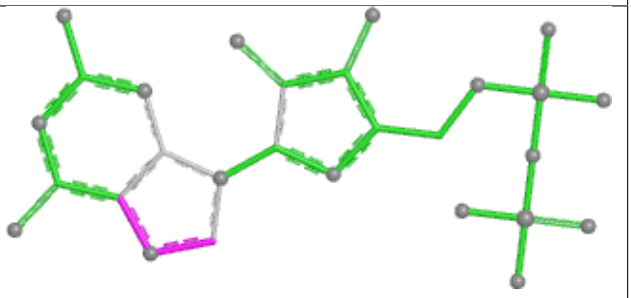
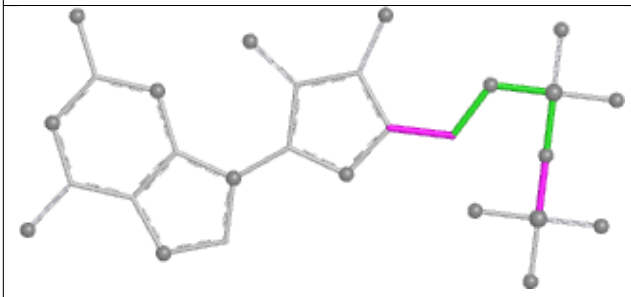
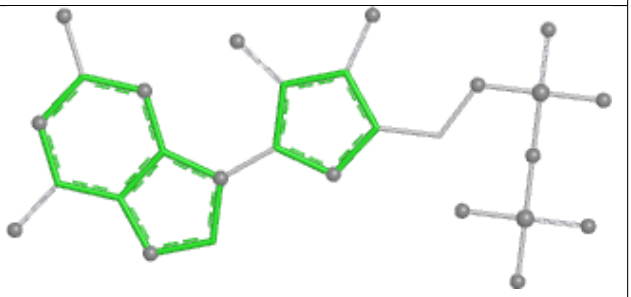
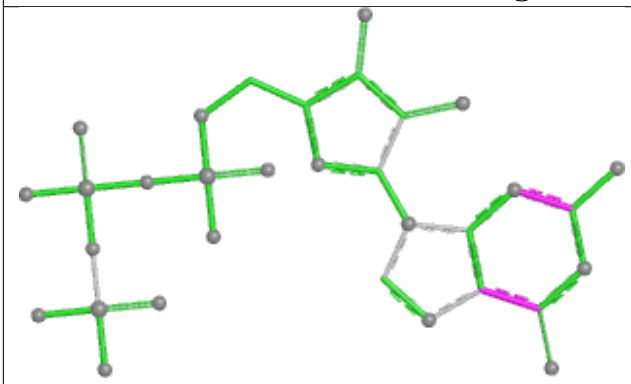
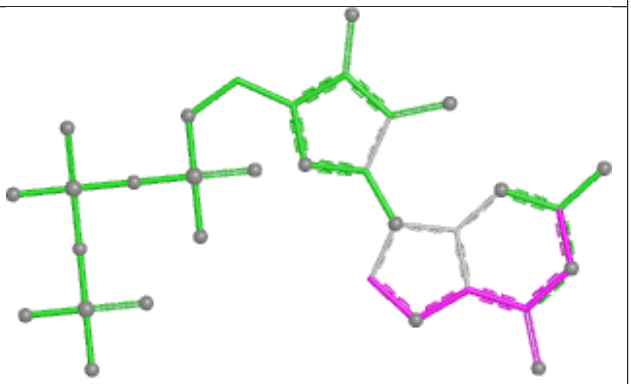
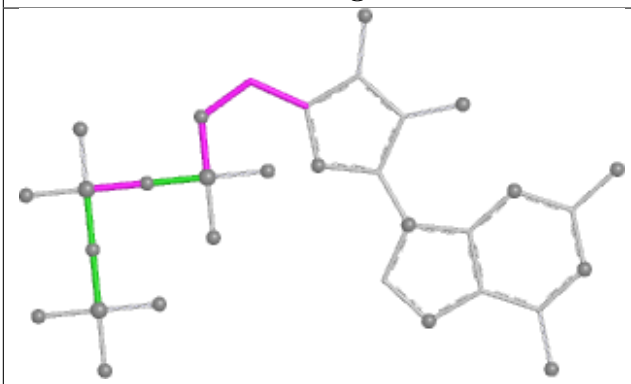
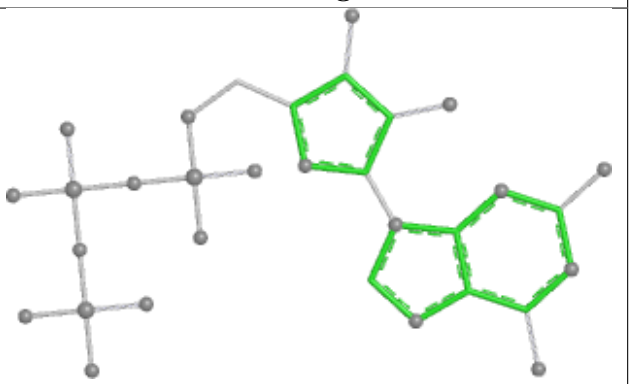
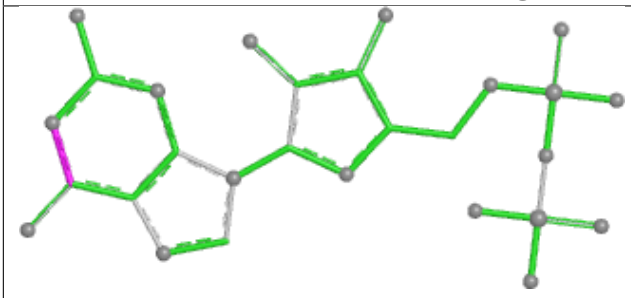
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP A9 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP B5 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GTP D0 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP F1 501



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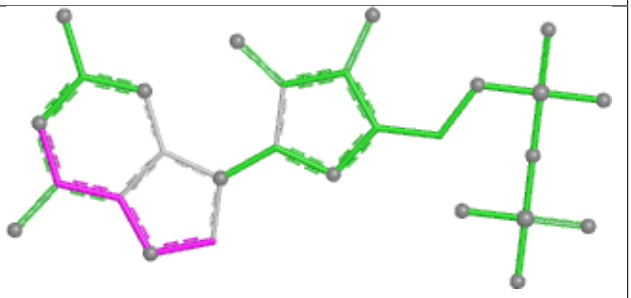

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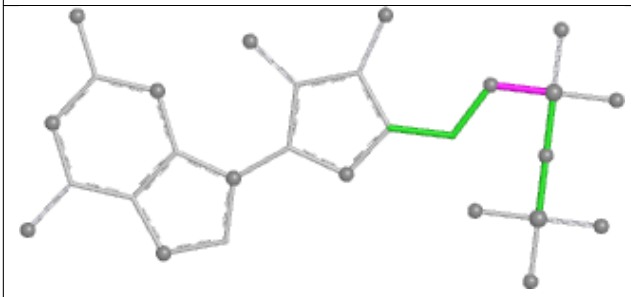

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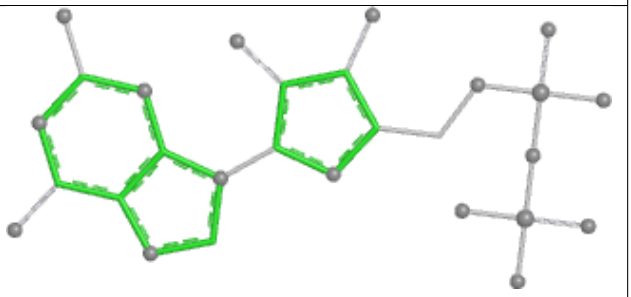
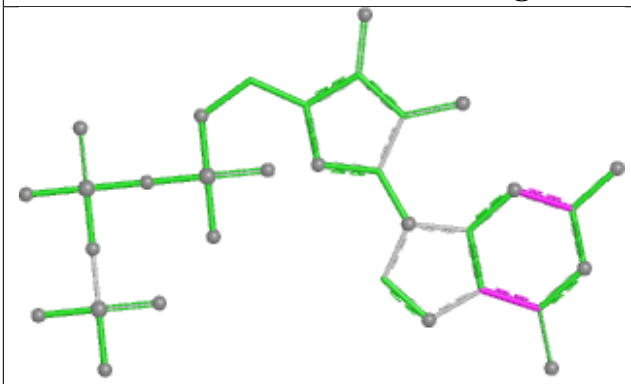


Rings

Ligand GTP A6 501



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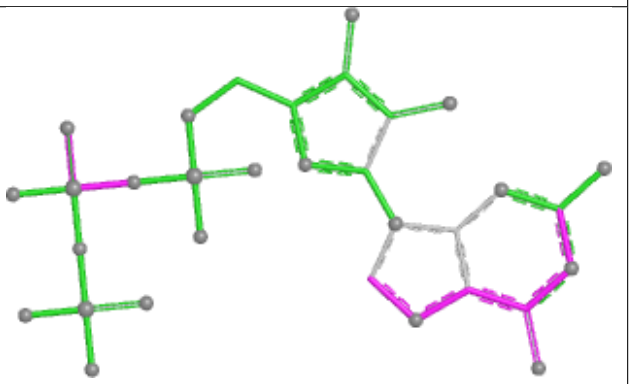

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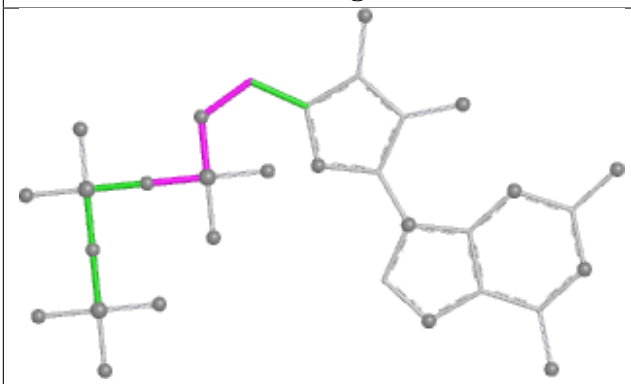

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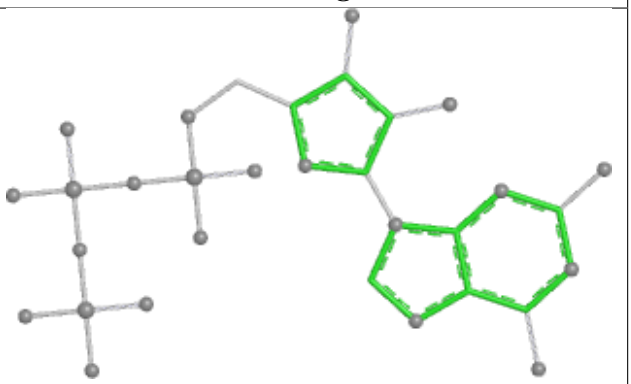
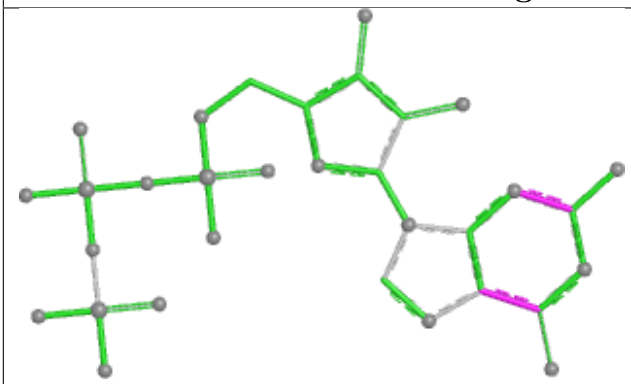


Rings

Ligand GTP E0 501



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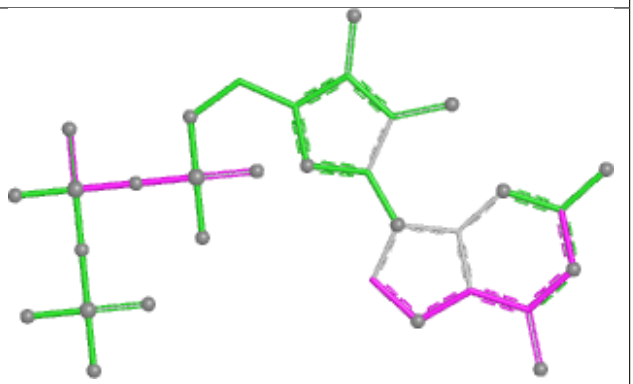

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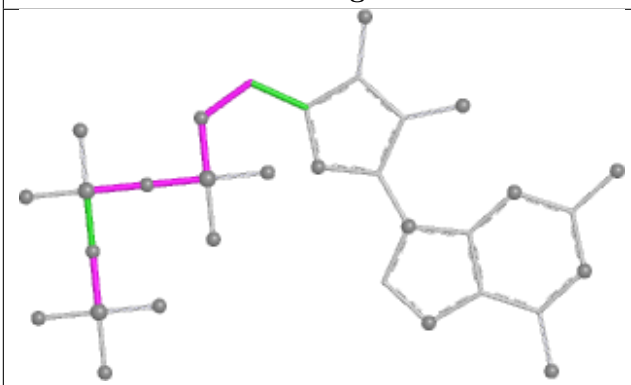

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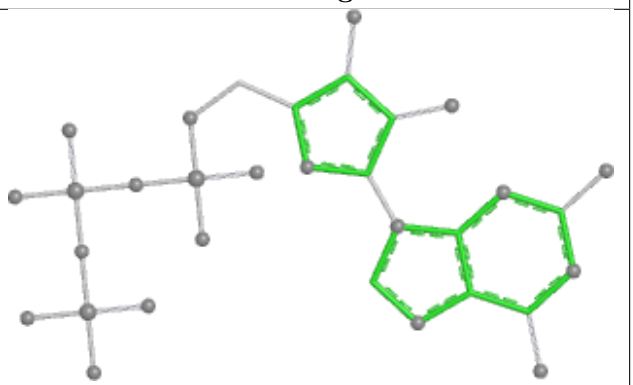
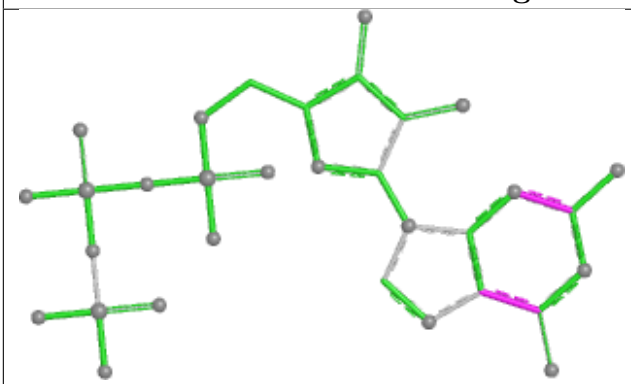


Rings

Ligand GTP D2 501



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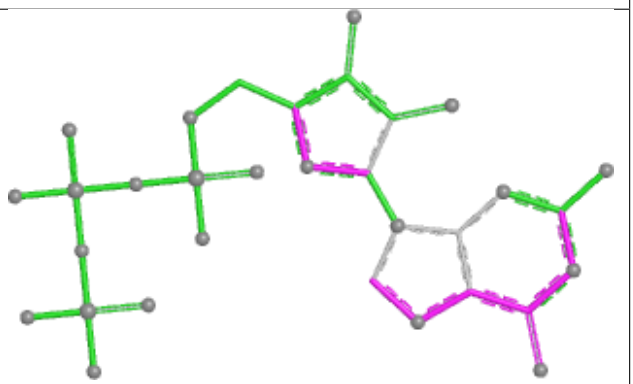

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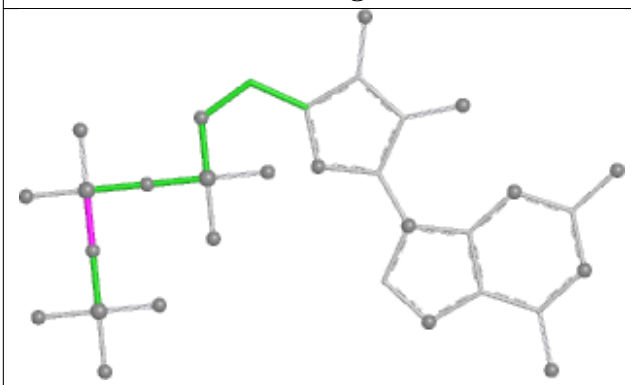

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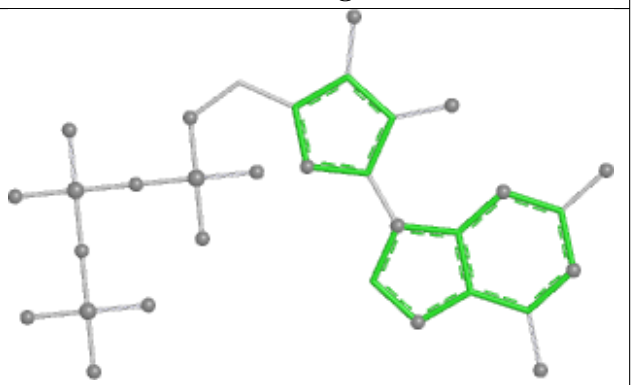
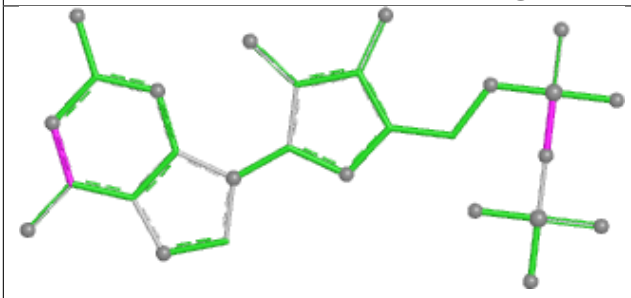
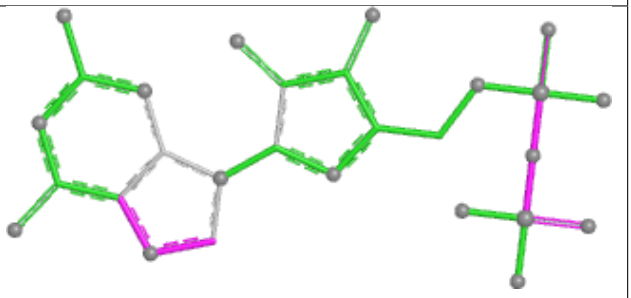
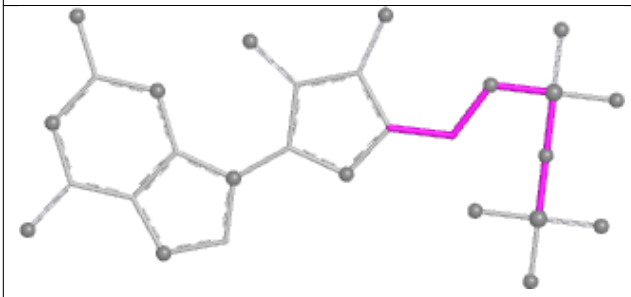
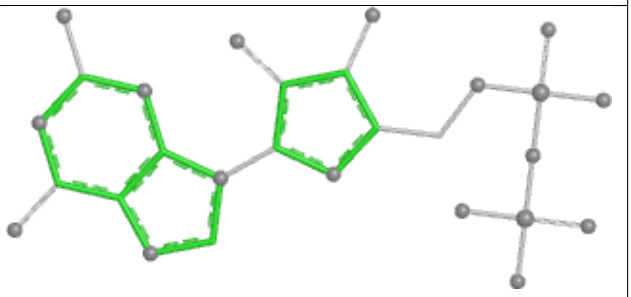
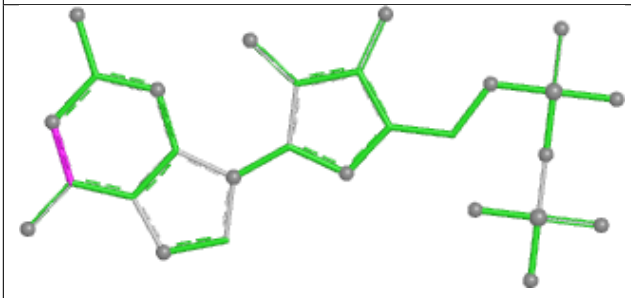
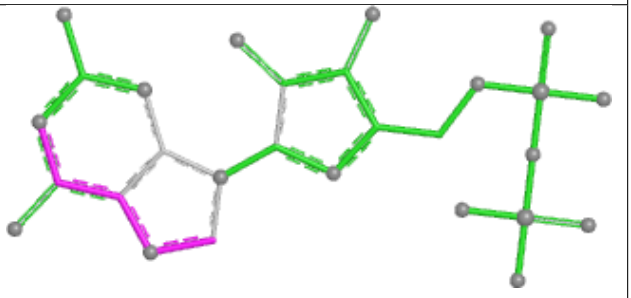
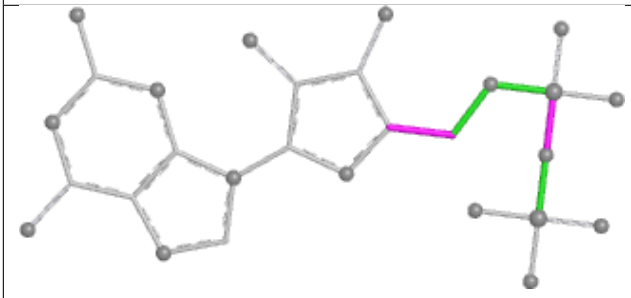
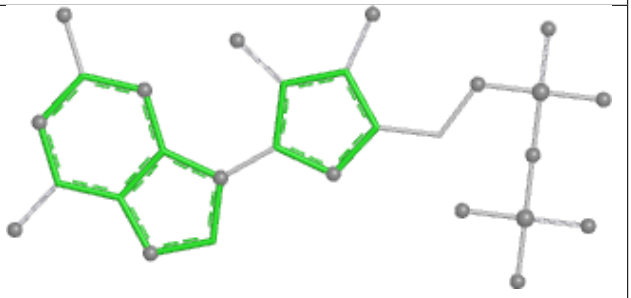
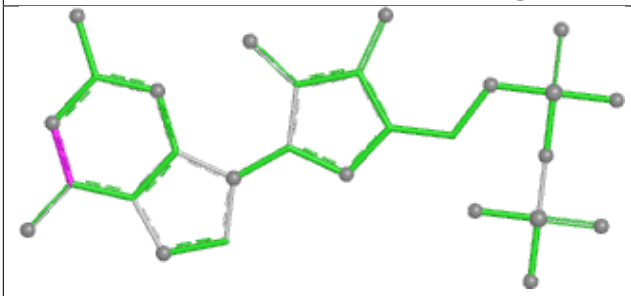


Rings

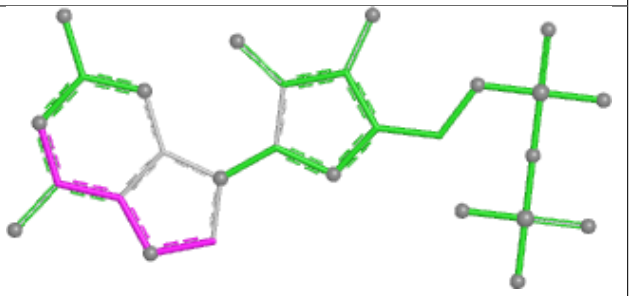
Ligand GDP A3 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand GDP C5 501	
 Bond lengths	 Bond angles
 Torsions	 Rings

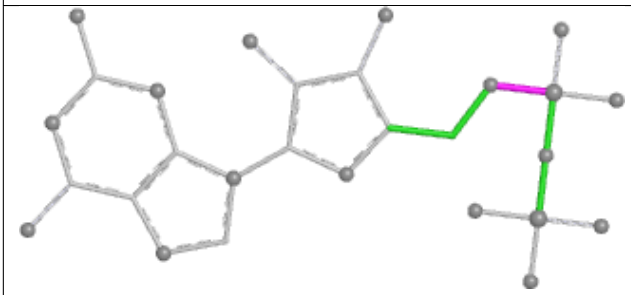
Ligand GDP D1 501



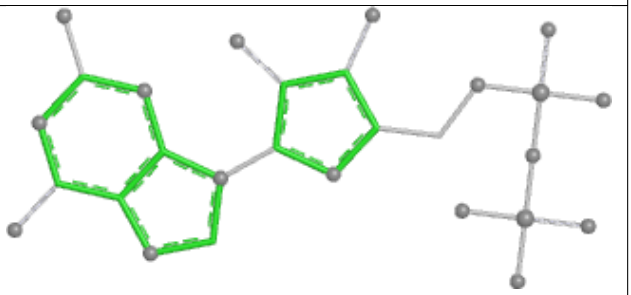
Bond lengths



Bond angles

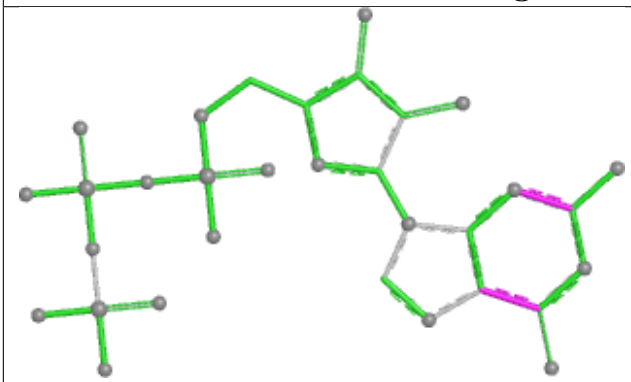


Torsions

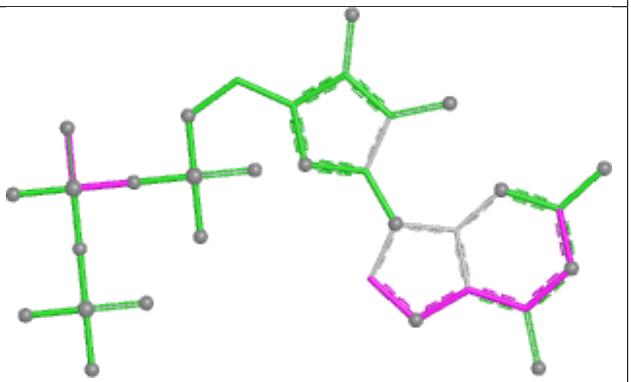


Rings

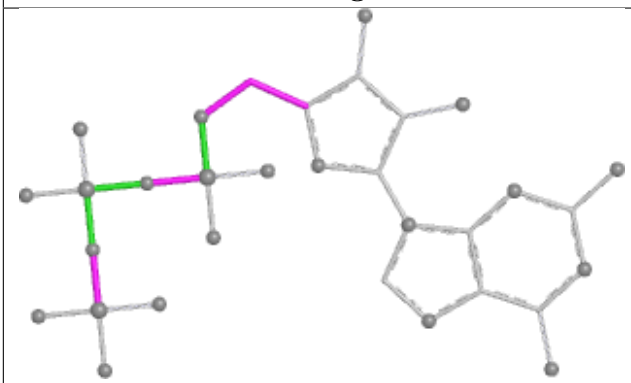
Ligand GTP D4 501



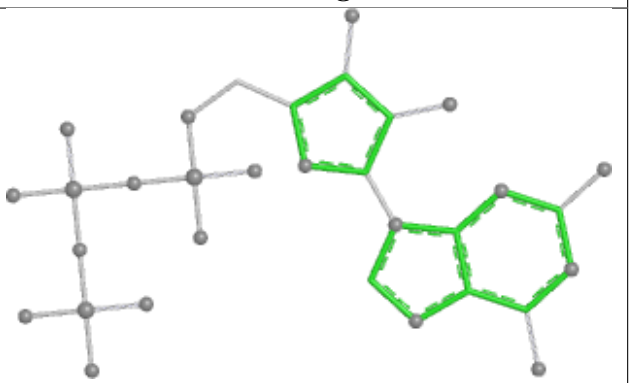
Bond lengths



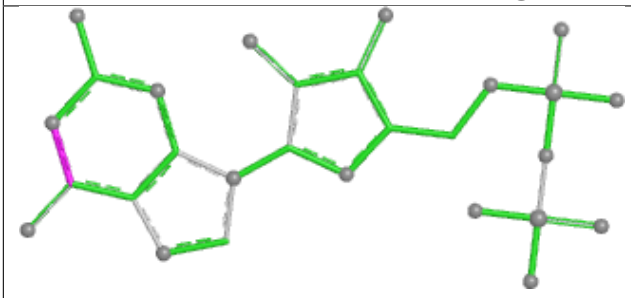
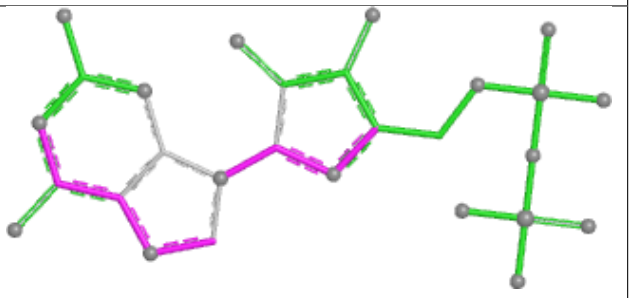
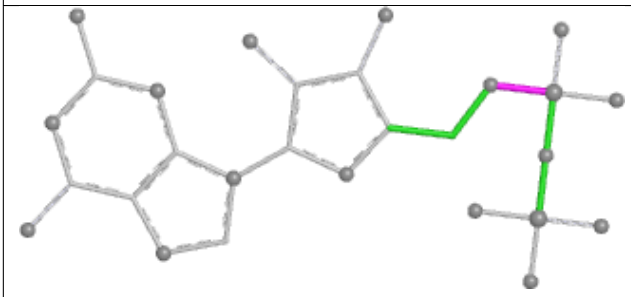
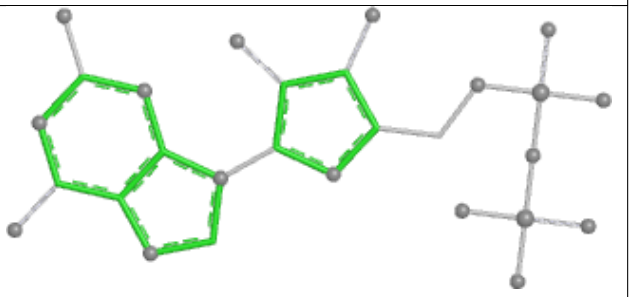
Bond angles



Torsions



Rings

Ligand GDP B9 501	
 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.

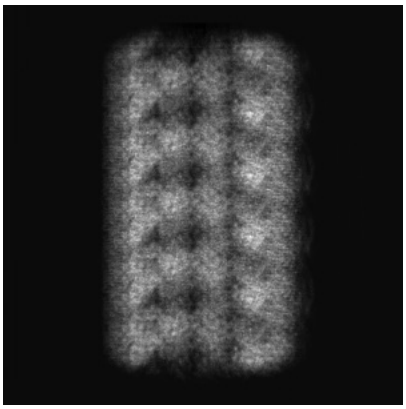
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-72718. These allow visual inspection of the internal detail of the map and identification of artifacts.

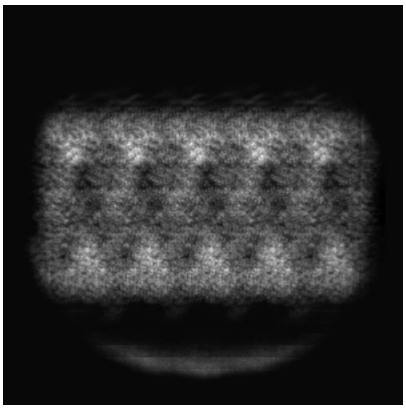
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

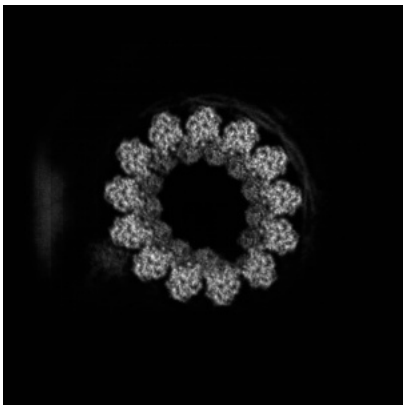
6.1.1 Primary map



X

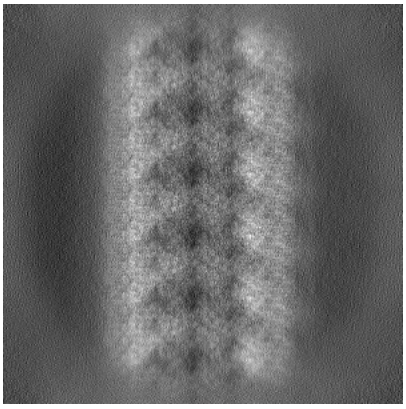


Y

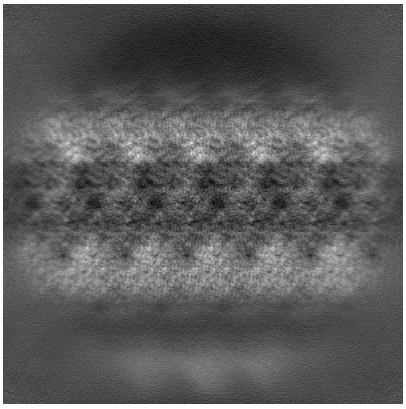


Z

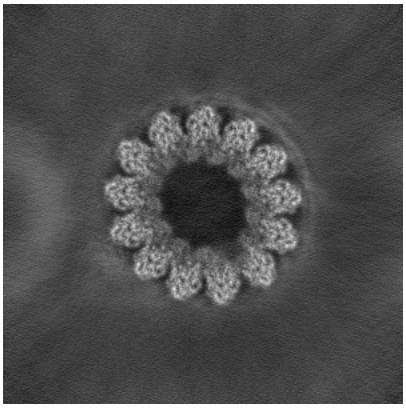
6.1.2 Raw map



X



Y

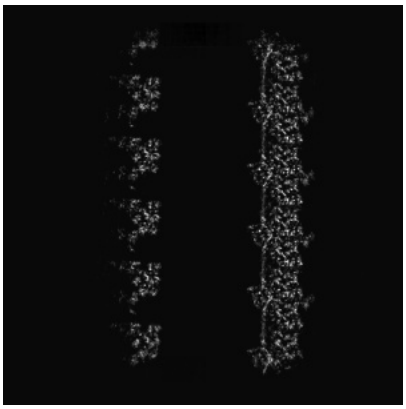


Z

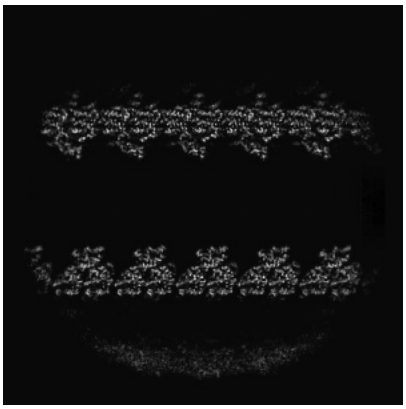
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

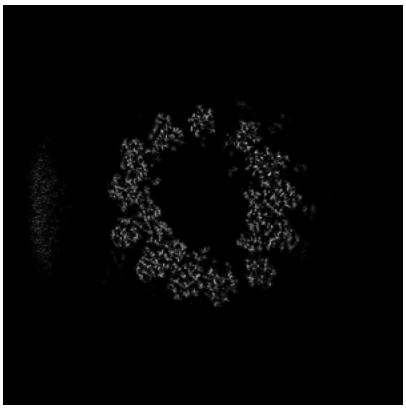
6.2.1 Primary map



X Index: 200

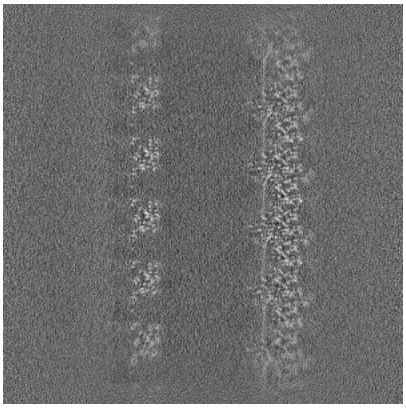


Y Index: 200

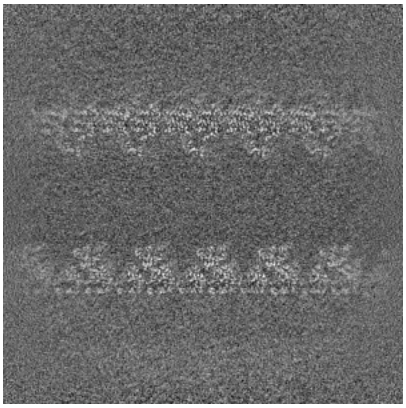


Z Index: 200

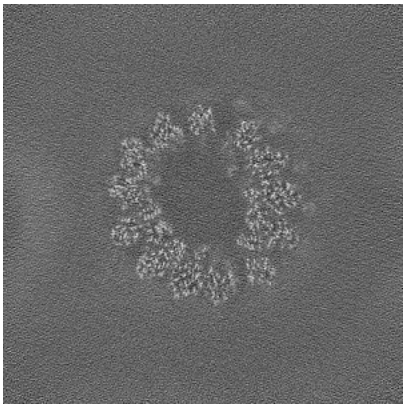
6.2.2 Raw map



X Index: 200



Y Index: 200

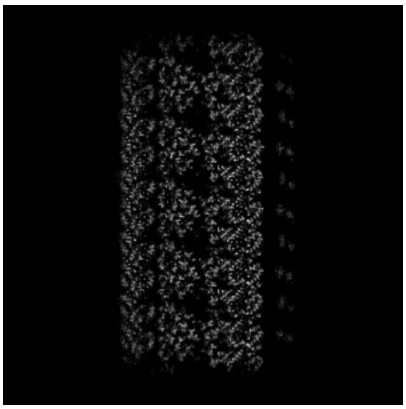


Z Index: 200

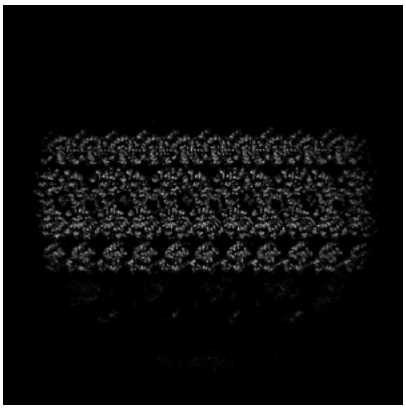
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

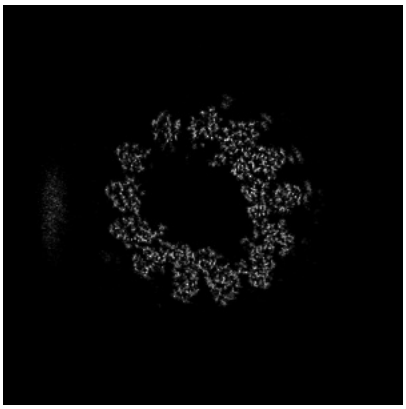
6.3.1 Primary map



X Index: 265

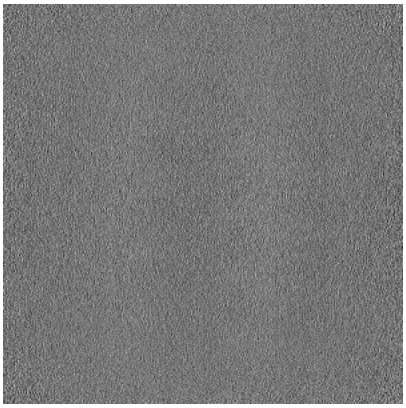


Y Index: 129

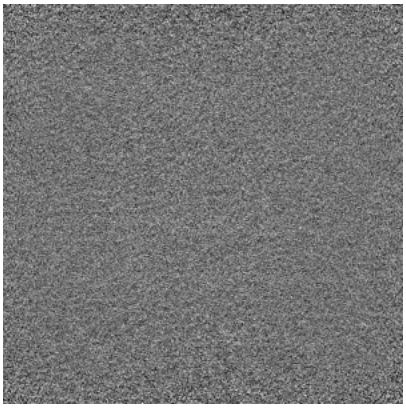


Z Index: 126

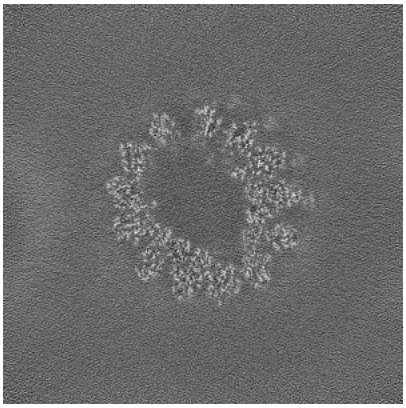
6.3.2 Raw map



X Index: 0



Y Index: 1

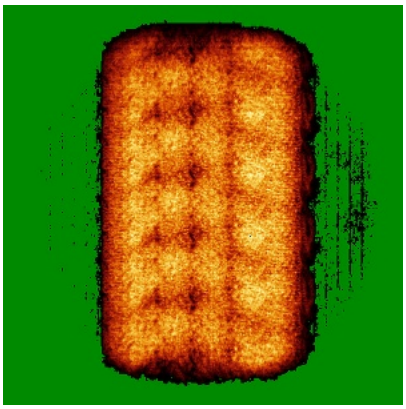


Z Index: 194

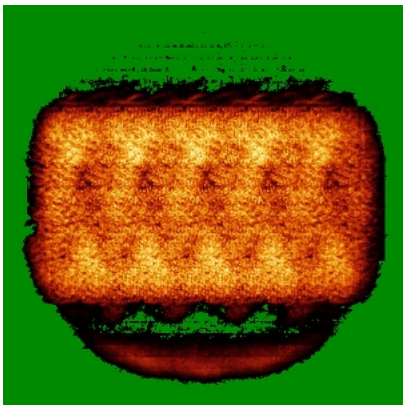
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

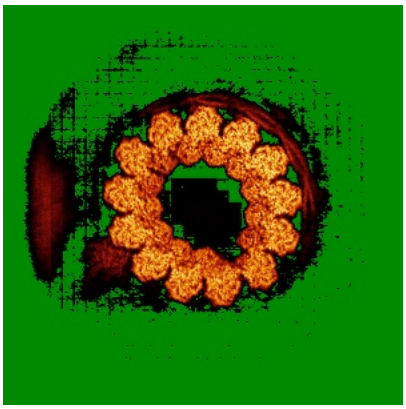
6.4.1 Primary map



X

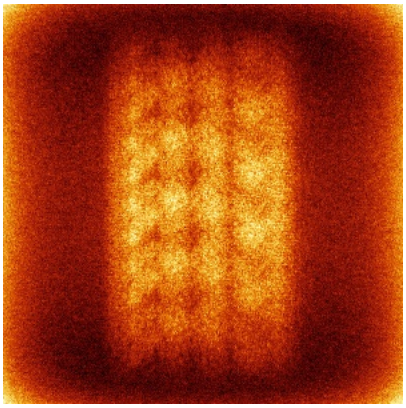


Y

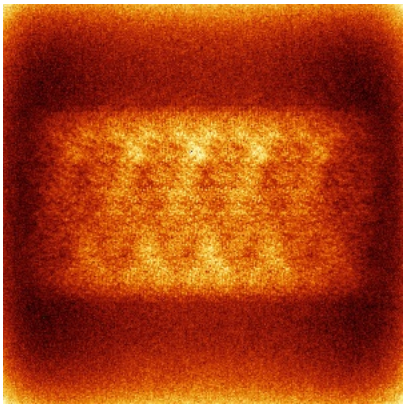


Z

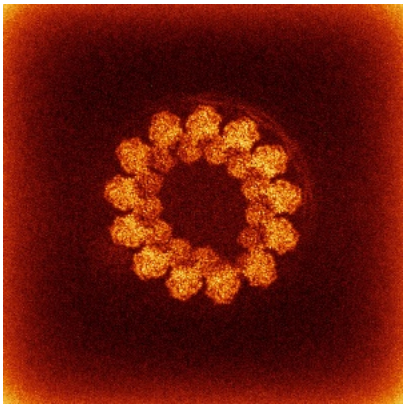
6.4.2 Raw map



X



Y

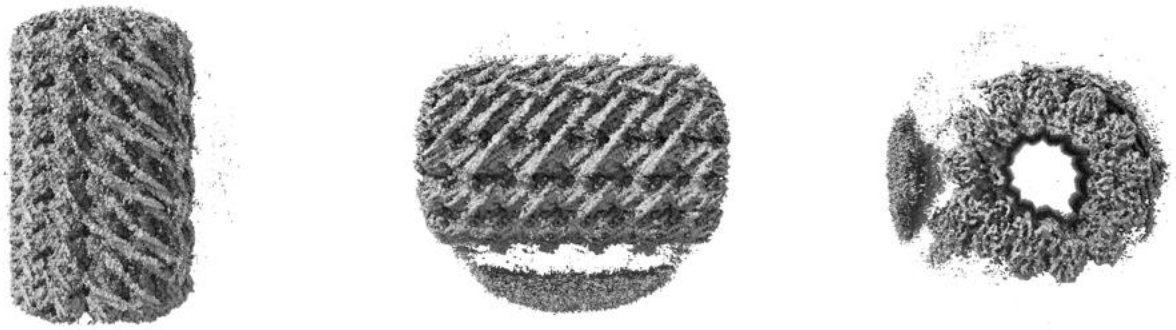


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

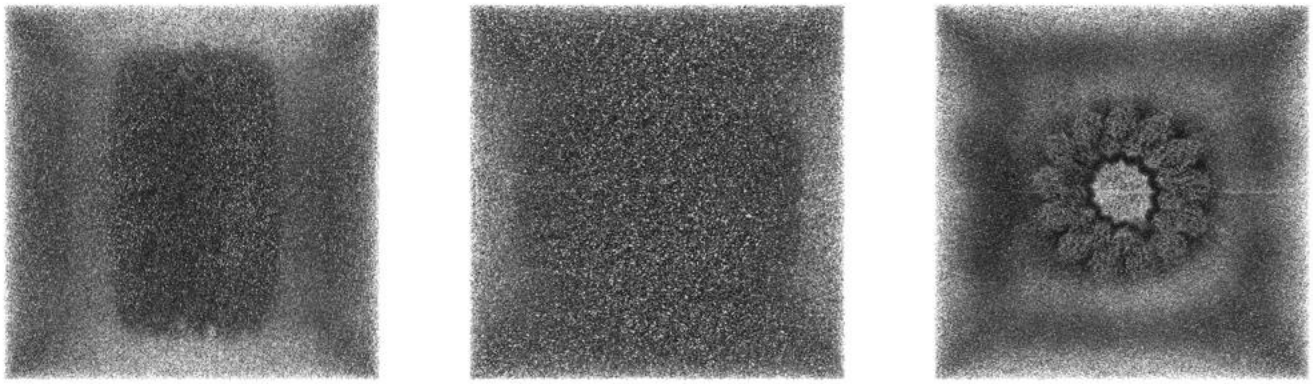
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

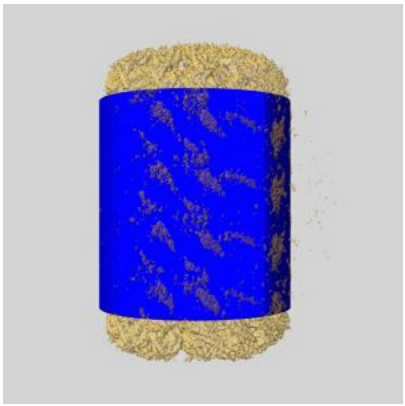
6.6 Mask visualisation (i)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

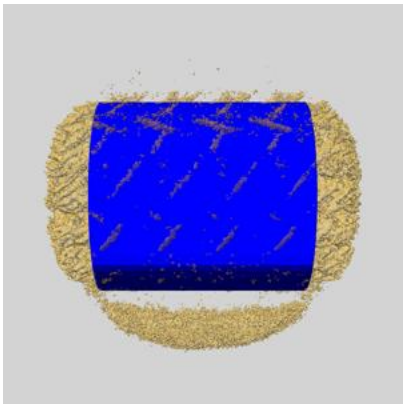
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

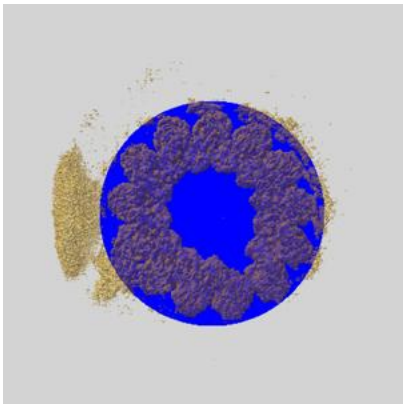
6.6.1 emd_72718_msk_1.map (i)



X



Y

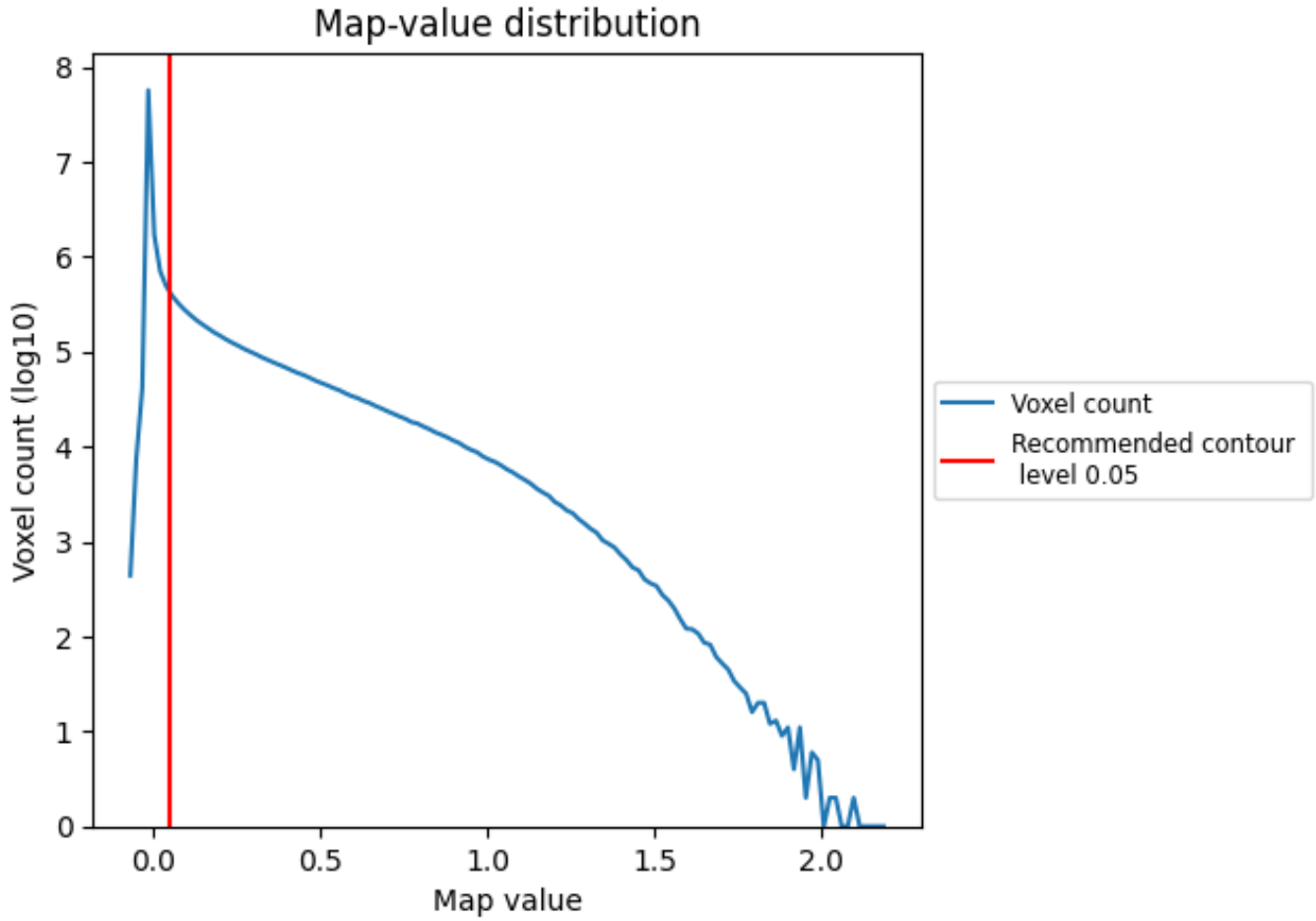


Z

7 Map analysis

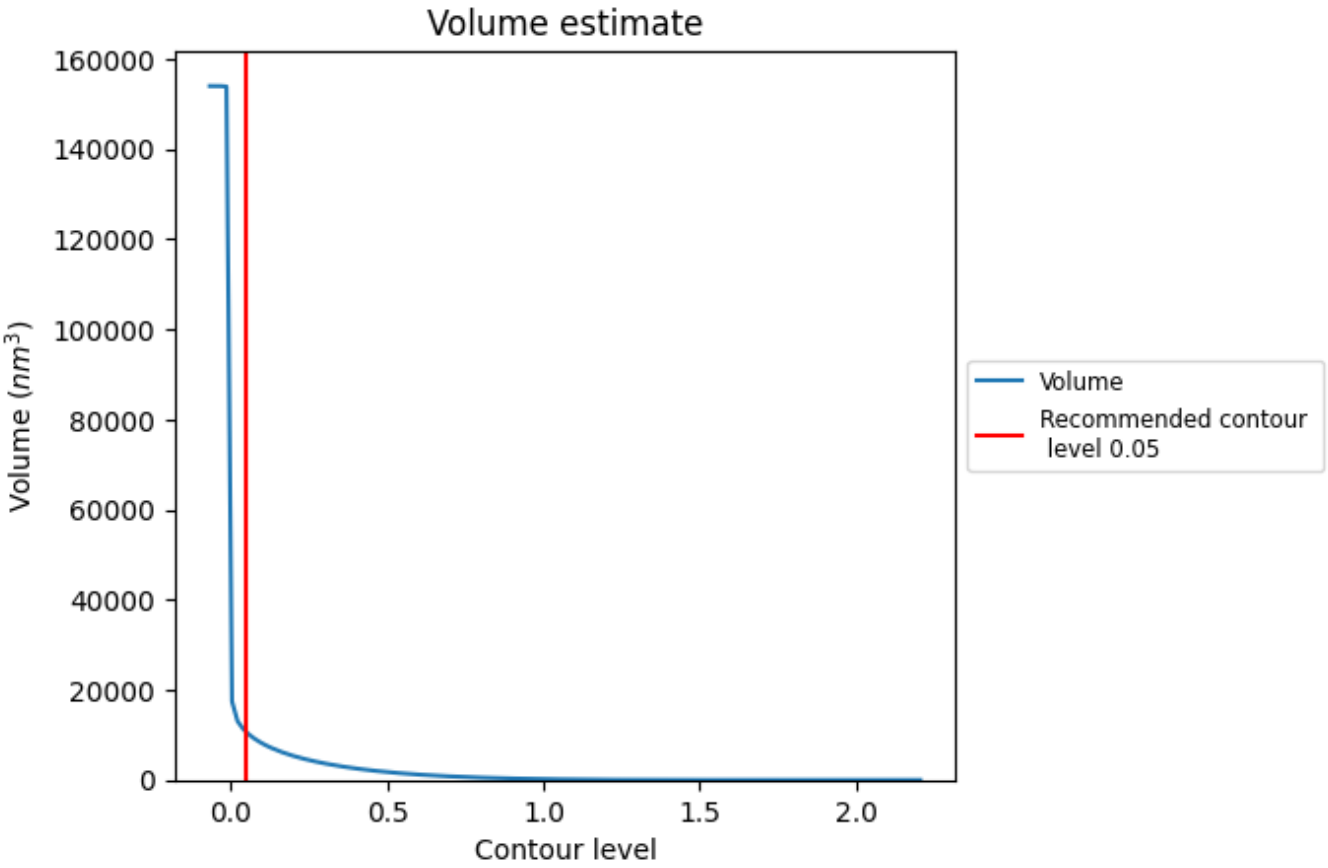
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

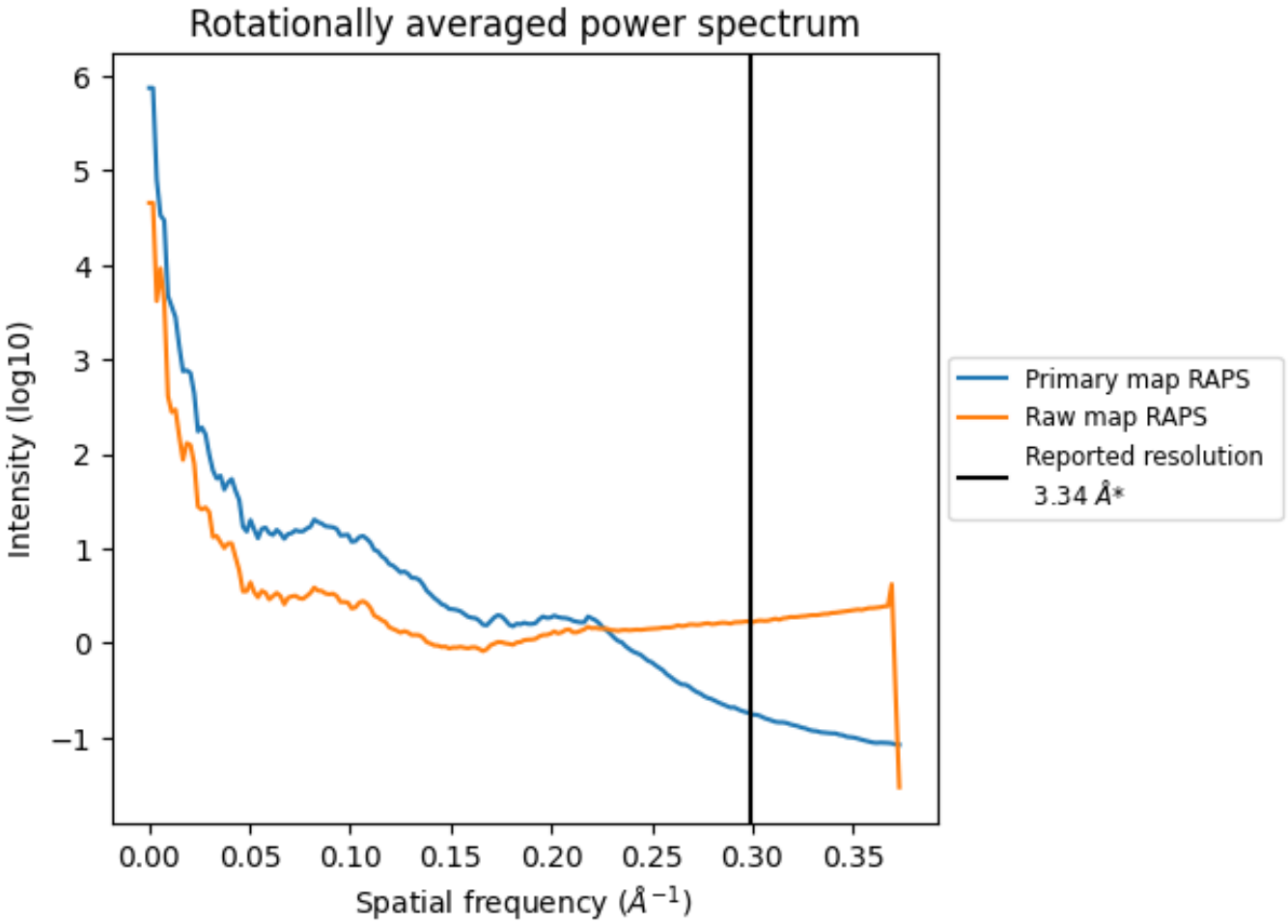
7.2 Volume estimate



The volume at the recommended contour level is 10584 nm^3; this corresponds to an approximate mass of 9561 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

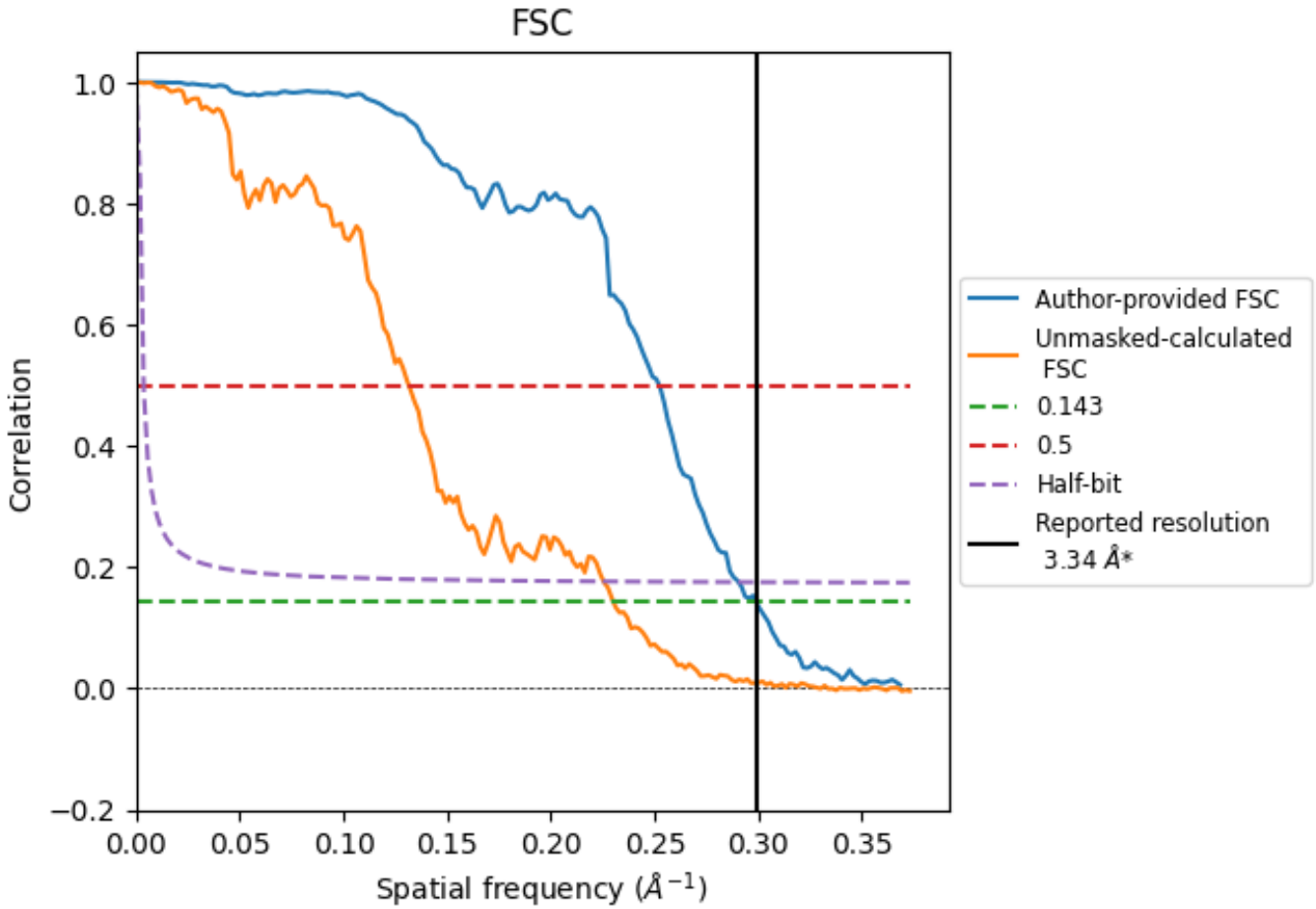


*Reported resolution corresponds to spatial frequency of 0.299 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.299 Å^{-1}

8.2 Resolution estimates (i)

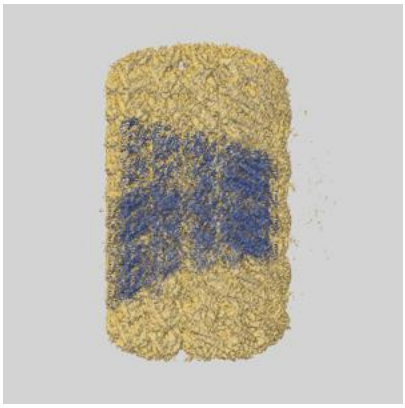
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.34	-	-
Author-provided FSC curve	3.34	3.96	3.44
Unmasked-calculated*	4.34	7.60	4.43

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.34 differs from the reported value 3.34 by more than 10 %

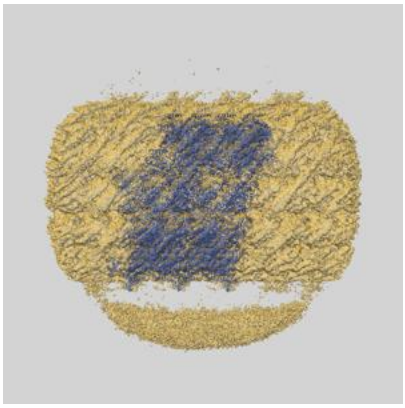
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-72718 and PDB model 9YA2. Per-residue inclusion information can be found in section 3 on page 19.

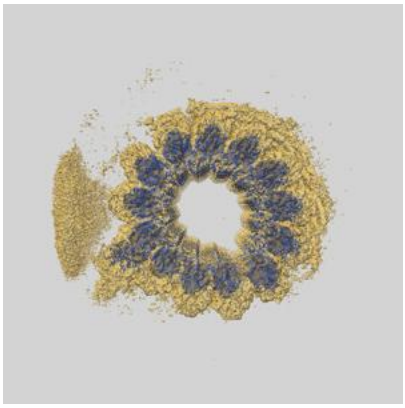
9.1 Map-model overlay



X



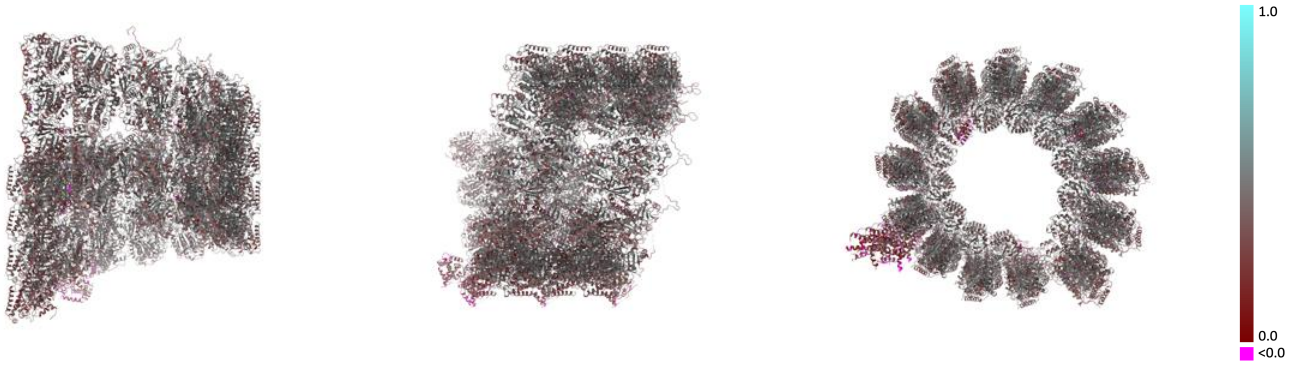
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

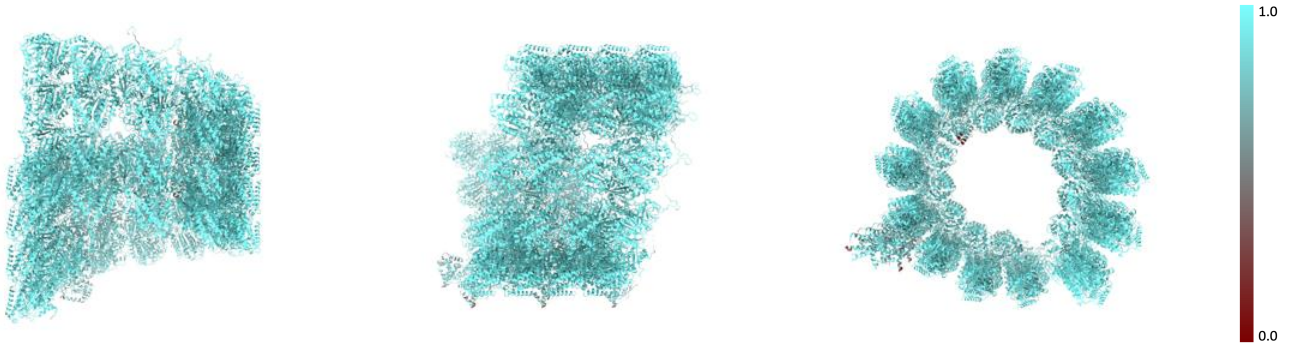
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

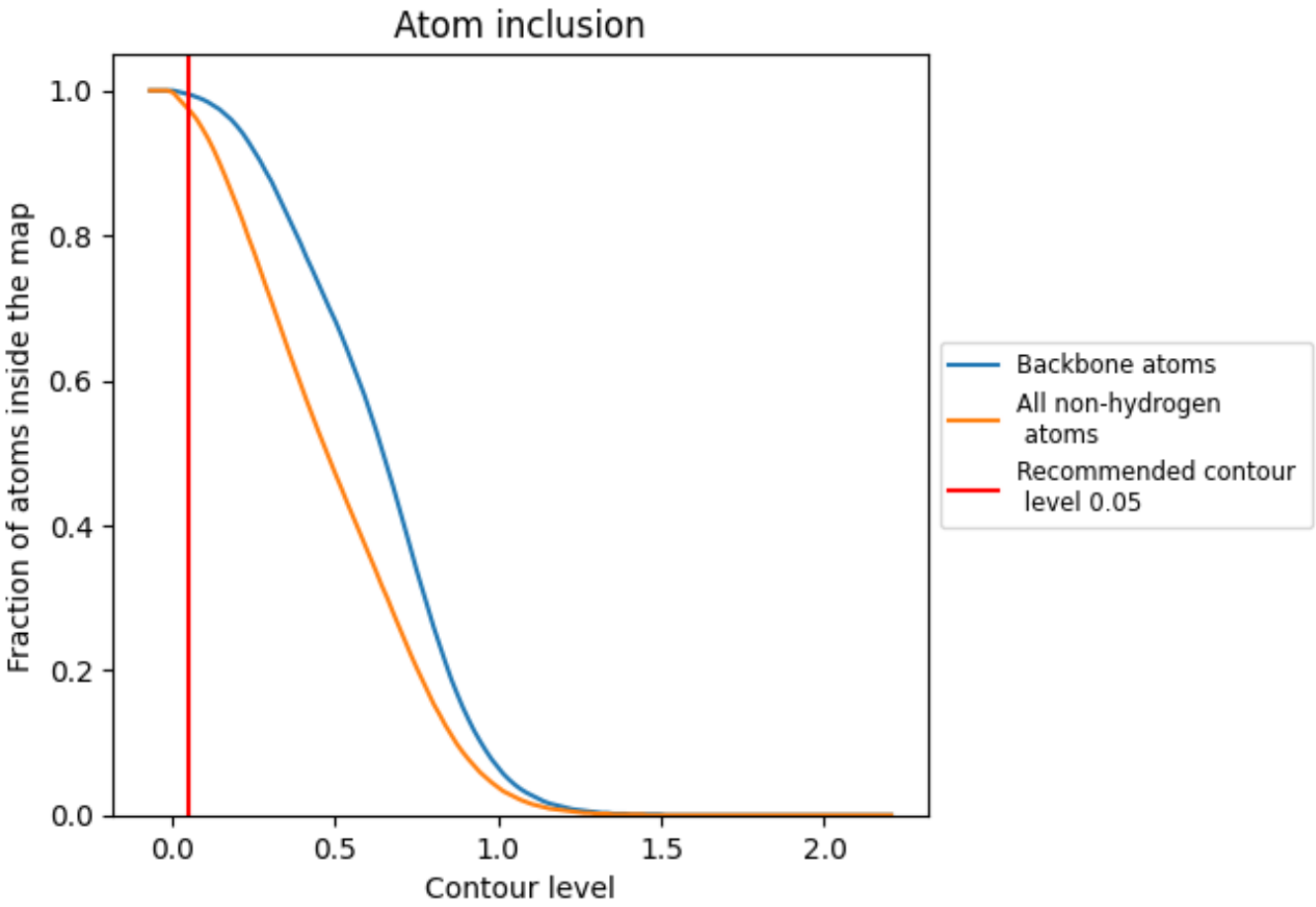
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion (i)



At the recommended contour level, 100% of all backbone atoms, 97% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9740	0.3950
A	0.9580	0.3710
A0	0.9900	0.4020
A1	0.9850	0.3950
A2	0.9910	0.3960
A3	0.9710	0.3350
A4	0.9910	0.4120
A5	0.9890	0.4100
A6	0.9890	0.4060
A7	0.9810	0.3730
A8	0.9830	0.4030
A9	0.9880	0.4070
B	0.9420	0.3870
B0	0.9860	0.4020
B1	0.9860	0.3890
B2	0.9890	0.4080
B3	0.9860	0.4130
B4	0.9860	0.4090
B5	0.9840	0.3900
B6	0.9870	0.4070
B7	0.9850	0.4110
B8	0.9840	0.4030
B9	0.9840	0.3960
C	0.9160	0.3690
C0	0.9900	0.4160
C1	0.9830	0.3990
C2	0.9850	0.4010
C3	0.9800	0.3760
C4	0.9850	0.4030
C5	0.9830	0.4080
C6	0.9860	0.3990
C7	0.9830	0.3920
C8	0.9890	0.4340
C9	0.9860	0.4330
D	0.8810	0.1270

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Chain	Atom inclusion	Q-score
D0	0.9900	0.4380
D1	0.9880	0.4310
D2	0.9910	0.4360
D3	0.9890	0.4410
D4	0.9910	0.4340
D5	0.9900	0.4430
D6	0.9910	0.4340
D7	0.9890	0.4390
D8	0.9900	0.4290
D9	0.9890	0.4330
E	0.9160	0.3410
E0	0.9920	0.4210
E1	0.9940	0.4240
E2	0.9910	0.4240
E3	0.9920	0.4280
E4	0.9880	0.4020
E5	0.9900	0.4200
E6	0.9940	0.4230
E7	0.9900	0.4180
E8	0.9830	0.3910
E9	0.9870	0.4100
F	0.9140	0.3570
F0	0.9840	0.3850
F1	0.9910	0.4070
G	0.9290	0.3540
H	0.9460	0.3580
I	0.8660	0.3380
J	0.9610	0.3750
K	0.9570	0.3820
L	0.7910	0.2090
M	0.7520	0.1490
N	0.7980	0.1980
O	0.9200	0.3270
P	0.9100	0.3050
Q	0.7850	0.1870
R	0.9170	0.3060
S	0.9420	0.3510
T	0.9240	0.3170
U	0.9260	0.3230
V	0.7790	0.1570
W	0.8070	0.1890
a	0.9850	0.3830

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Chain	Atom inclusion	Q-score
b	0.9780	0.3730
c	0.9780	0.4050
d	0.9790	0.3920
e	0.9800	0.4010
f	0.9830	0.3910
g	0.9830	0.3980
h	0.9780	0.3990
i	0.9750	0.3920
j	0.9760	0.3830
k	0.9410	0.3150
l	0.9630	0.3320
m	0.8950	0.3390
n	0.8940	0.3260
o	0.9810	0.4180
p	0.9820	0.4260
q	0.9750	0.4330
r	0.9830	0.4250
s	0.9800	0.4260
t	0.9830	0.4300
u	0.9800	0.4010
v	0.9780	0.4110
w	0.9730	0.3850
x	0.9590	0.3910