



Full wwPDB EM Validation Report ⓘ

Mar 29, 2026 – 04:43 AM UTC

PDB ID : 6VE7 / pdb_00006ve7
EMDB ID : EMD-20858
Title : The inner junction complex of Chlamydomonas reinhardtii doublet microtubule
Authors : Khalifa, A.A.Z.; Ichikawa, M.; Bui, K.H.
Deposited on : 2019-12-30
Resolution : 3.60 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.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
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) : 2.49

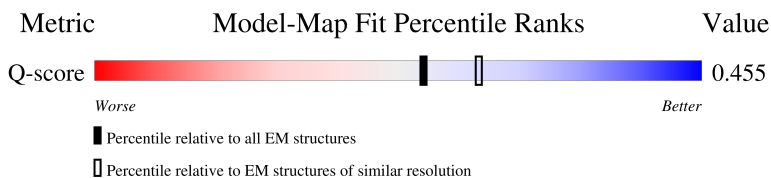
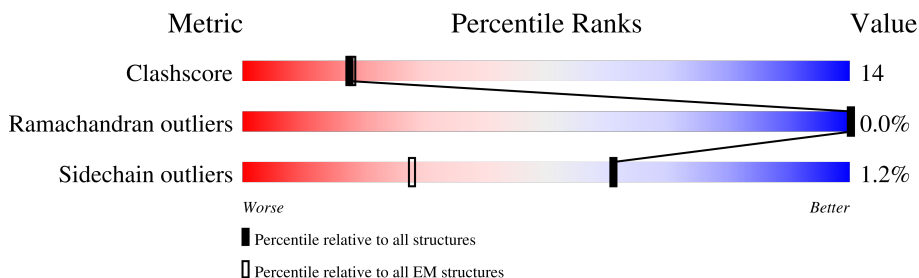
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 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	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	12797 (3.10 - 4.10)

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 $\leq 5\%$. 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	240	
2	B	633	
2	C	633	
3	0	451	

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Mol	Chain	Length	Quality of chain
3	1	451	
3	5	451	
3	6	451	
3	7	451	
3	D	451	
3	E	451	
3	F	451	
3	G	451	
3	L	451	
3	M	451	
3	P	451	
3	S	451	
3	X	451	
3	Y	451	
3	Z	451	
3	e	451	
3	f	451	
3	h	451	
3	k	451	
3	m	451	
3	o	451	
3	s	451	
3	y	451	
4	H	137	
5	4	443	

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Mol	Chain	Length	Quality of chain
5	8	443	
5	9	443	
5	I	443	
5	J	443	
5	K	443	
5	N	443	
5	O	443	
5	Q	443	
5	R	443	
5	T	443	
5	U	443	
5	V	443	
5	a	443	
5	b	443	
5	i	443	
5	j	443	
5	p	443	
5	q	443	
5	r	443	
5	t	443	
5	u	443	
5	v	443	
5	w	443	
6	W	86	
6	x	86	

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Mol	Chain	Length	Quality of chain
7	3	190	59%36%
7	c	190	6% 60%35%
7	g	190	60%34%
7	z	190	6% 60%35%
8	2	307	19% 68%24% 6%
8	d	307	31% 70%23% 6%
8	l	307	10% 68%25% 6%
8	n	307	11% 68%25% 6%

2 Entry composition [i](#)

There are 12 unique types of molecules in this entry. The entry contains 192224 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 Flagellar associated protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	179	Total	C	N	O	S	0	0
			1391	881	249	256	5		

- Molecule 2 is a protein called FAP52.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	619	Total	C	N	O	S	0	0
			4707	2963	820	898	26		
2	C	619	Total	C	N	O	S	0	0
			4707	2963	820	898	26		

- Molecule 3 is a protein called Tubulin alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	E	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	F	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	G	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	L	431	Total	C	N	O	S	0	0
			3349	2120	569	638	22		
3	M	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	P	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	S	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	X	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	Y	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	Z	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	e	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	f	431	Total	C	N	O	S	0	0
			3349	2120	569	638	22		
3	h	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	k	431	Total	C	N	O	S	0	0
			3349	2120	569	638	22		
3	m	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	o	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	s	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	y	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	0	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	1	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	5	436	Total	C	N	O	S	0	0
			3379	2138	575	644	22		
3	6	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		
3	7	428	Total	C	N	O	S	0	0
			3329	2109	566	632	22		

- Molecule 4 is a protein called Protein Flattop homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	H	135	Total	C	N	O	S	0	0
			1069	674	190	202	3		

- Molecule 5 is a protein called Tubulin beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	I	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	J	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	K	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	N	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	O	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	Q	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	R	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	T	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	U	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	V	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	b	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	i	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	j	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	p	437	Total	C	N	O	S	0	0
			3430	2152	585	663	30		
5	q	437	Total	C	N	O	S	0	0
			3430	2152	585	663	30		
5	r	437	Total	C	N	O	S	0	0
			3430	2152	585	663	30		
5	t	437	Total	C	N	O	S	0	0
			3430	2152	585	663	30		
5	u	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	v	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	w	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	4	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
5	8	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	9	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		

- Molecule 6 is a protein called FAP276.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	W	86	Total	C	N	O	S	0	0
			701	438	131	129	3		
6	x	86	Total	C	N	O	S	0	0
			701	438	131	129	3		

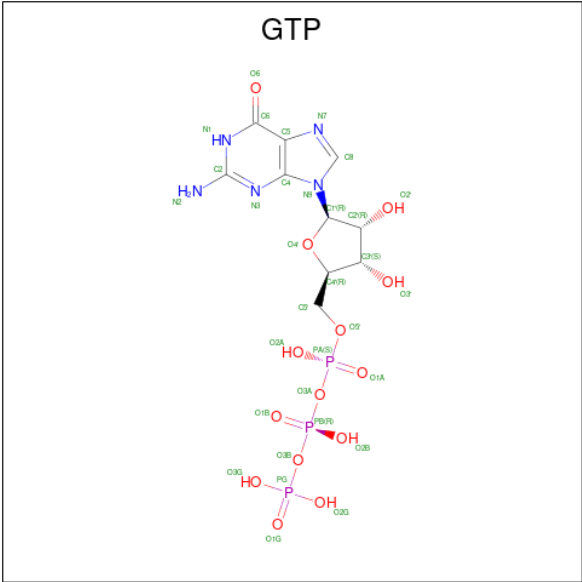
- Molecule 7 is a protein called Cilia- and flagella-associated protein 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	c	187	Total	C	N	O	S	0	0
			1538	988	267	276	7		
7	g	187	Total	C	N	O	S	0	0
			1538	988	267	276	7		
7	z	187	Total	C	N	O	S	0	0
			1538	988	267	276	7		
7	3	187	Total	C	N	O	S	0	0
			1538	988	267	276	7		

- Molecule 8 is a protein called PACRG.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	d	290	Total	C	N	O	S	0	0
			2271	1453	391	420	7		
8	l	290	Total	C	N	O	S	0	0
			2271	1453	391	420	7		
8	n	290	Total	C	N	O	S	0	0
			2271	1453	391	420	7		
8	2	290	Total	C	N	O	S	0	0
			2271	1453	391	420	7		

- Molecule 9 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: C₁₀H₁₆N₅O₁₄P₃).



Mol	Chain	Residues	Atoms					AltConf
9	D	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	E	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	F	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	G	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	L	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	M	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	P	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	S	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	X	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	Y	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	Z	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	e	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	f	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	h	1	Total	C	N	O	P	0
			32	10	5	14	3	

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Mol	Chain	Residues	Atoms					AltConf
9	k	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	m	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	o	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	s	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	y	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	0	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	1	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	5	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	6	1	Total	C	N	O	P	0
			32	10	5	14	3	
9	7	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 10 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

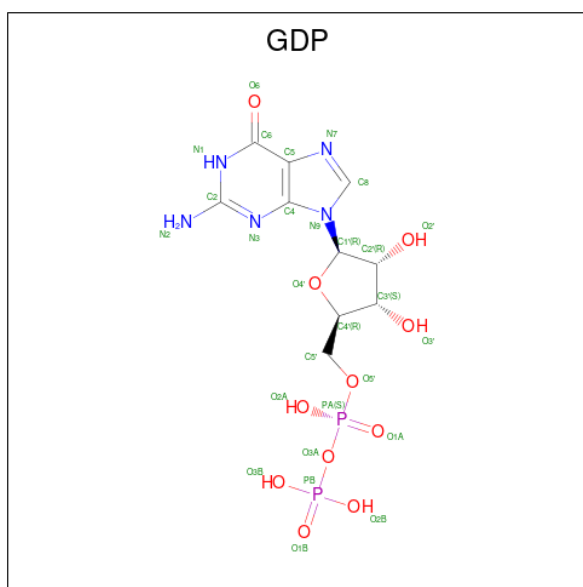
Mol	Chain	Residues	Atoms		AltConf
10	D	1	Total	Mg	0
			1	1	
10	E	1	Total	Mg	0
			1	1	
10	F	1	Total	Mg	0
			1	1	
10	G	1	Total	Mg	0
			1	1	
10	L	1	Total	Mg	0
			1	1	
10	M	1	Total	Mg	0
			1	1	
10	P	1	Total	Mg	0
			1	1	
10	S	1	Total	Mg	0
			1	1	
10	X	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
10	Y	1	Total 1	Mg 1	0
10	Z	1	Total 1	Mg 1	0
10	e	1	Total 1	Mg 1	0
10	f	1	Total 1	Mg 1	0
10	h	1	Total 1	Mg 1	0
10	k	1	Total 1	Mg 1	0
10	m	1	Total 1	Mg 1	0
10	o	1	Total 1	Mg 1	0
10	p	1	Total 1	Mg 1	0
10	s	1	Total 1	Mg 1	0
10	0	1	Total 1	Mg 1	0
10	1	1	Total 1	Mg 1	0
10	5	1	Total 1	Mg 1	0
10	6	1	Total 1	Mg 1	0
10	7	1	Total 1	Mg 1	0

- Molecule 11 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



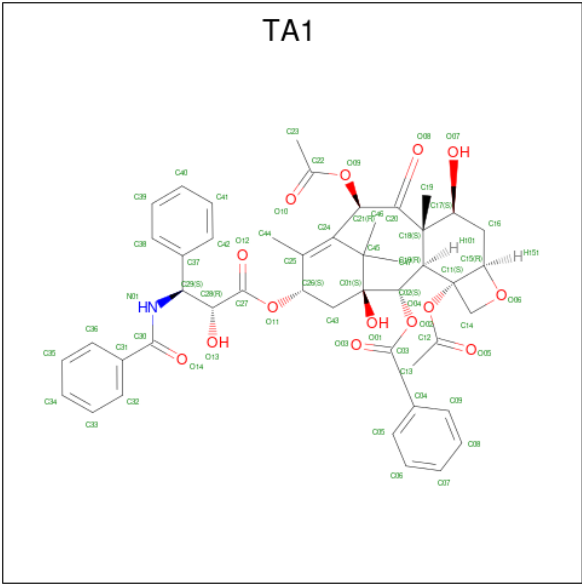
Mol	Chain	Residues	Atoms					AltConf
11	I	1	Total 28	C 10	N 5	O 11	P 2	0
11	J	1	Total 28	C 10	N 5	O 11	P 2	0
11	K	1	Total 28	C 10	N 5	O 11	P 2	0
11	N	1	Total 28	C 10	N 5	O 11	P 2	0
11	O	1	Total 28	C 10	N 5	O 11	P 2	0
11	Q	1	Total 28	C 10	N 5	O 11	P 2	0
11	R	1	Total 28	C 10	N 5	O 11	P 2	0
11	T	1	Total 28	C 10	N 5	O 11	P 2	0
11	U	1	Total 28	C 10	N 5	O 11	P 2	0
11	V	1	Total 28	C 10	N 5	O 11	P 2	0
11	a	1	Total 28	C 10	N 5	O 11	P 2	0
11	b	1	Total 28	C 10	N 5	O 11	P 2	0
11	i	1	Total 28	C 10	N 5	O 11	P 2	0
11	j	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
11	p	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	q	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	r	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	t	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	u	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	v	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	w	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	4	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	8	1	Total	C	N	O	P	0
			28	10	5	11	2	
11	9	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 12 is TAXOL (CCD ID: TA1) (formula: C₄₇H₅₁NO₁₄).



Mol	Chain	Residues	Atoms				AltConf
12	J	1	Total	C	N	O	0
			62	47	1	14	

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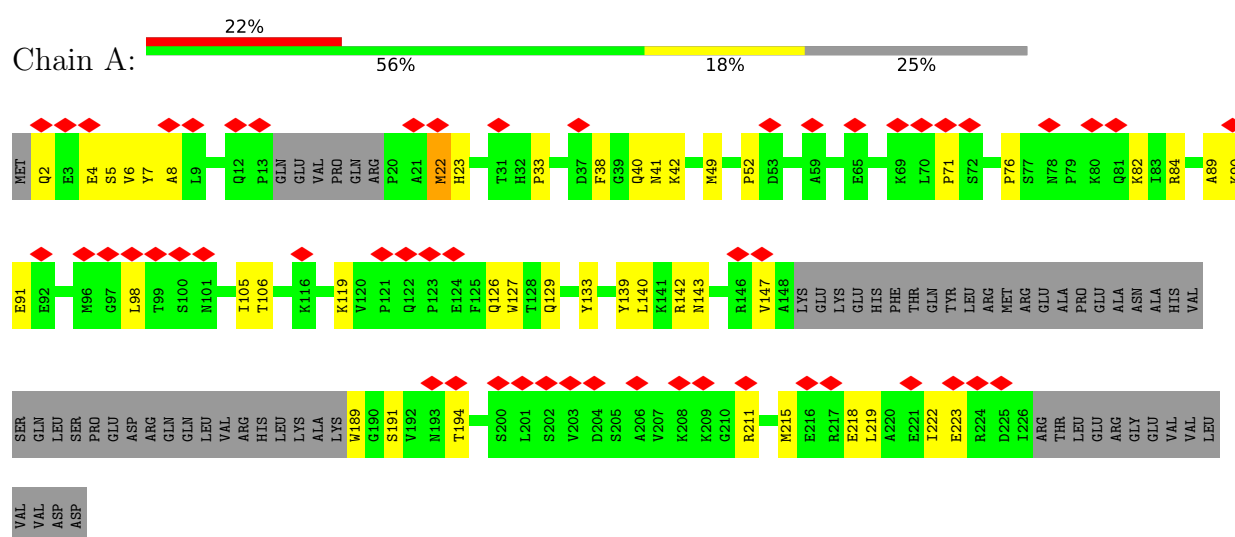
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Mol	Chain	Residues	Atoms				AltConf
12	V	1	Total	C	N	O	0
			62	47	1	14	
12	a	1	Total	C	N	O	0
			62	47	1	14	
12	b	1	Total	C	N	O	0
			62	47	1	14	
12	i	1	Total	C	N	O	0
			62	47	1	14	
12	j	1	Total	C	N	O	0
			62	47	1	14	
12	p	1	Total	C	N	O	0
			62	47	1	14	
12	q	1	Total	C	N	O	0
			62	47	1	14	
12	r	1	Total	C	N	O	0
			62	47	1	14	
12	t	1	Total	C	N	O	0
			62	47	1	14	
12	u	1	Total	C	N	O	0
			62	47	1	14	
12	v	1	Total	C	N	O	0
			62	47	1	14	
12	w	1	Total	C	N	O	0
			62	47	1	14	
12	4	1	Total	C	N	O	0
			62	47	1	14	
12	8	1	Total	C	N	O	0
			62	47	1	14	
12	9	1	Total	C	N	O	0
			62	47	1	14	

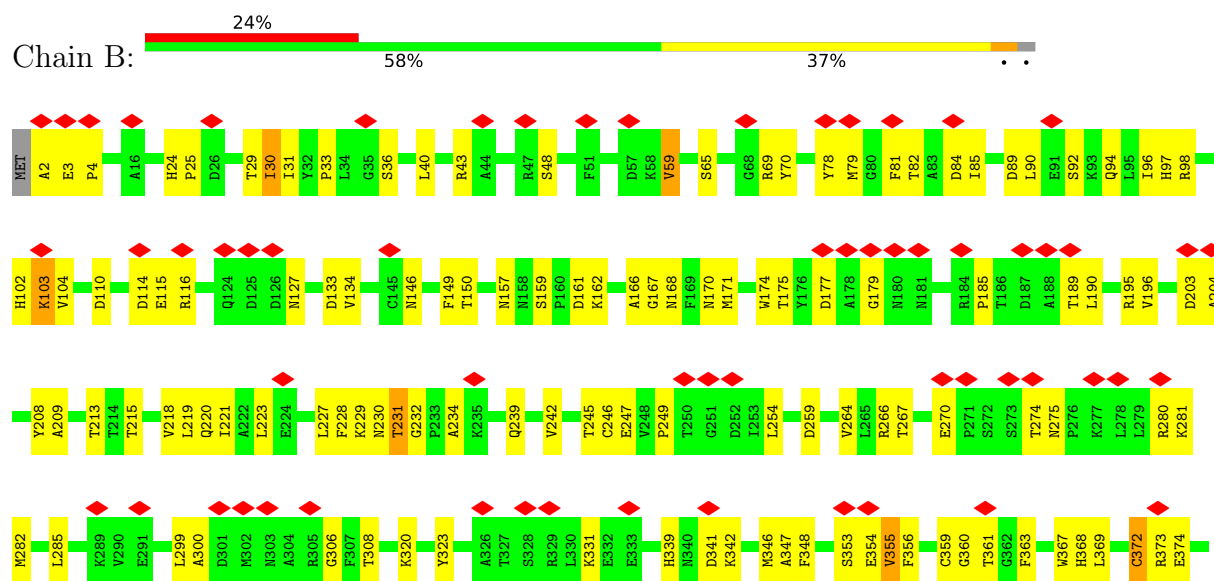
3 Residue-property plots

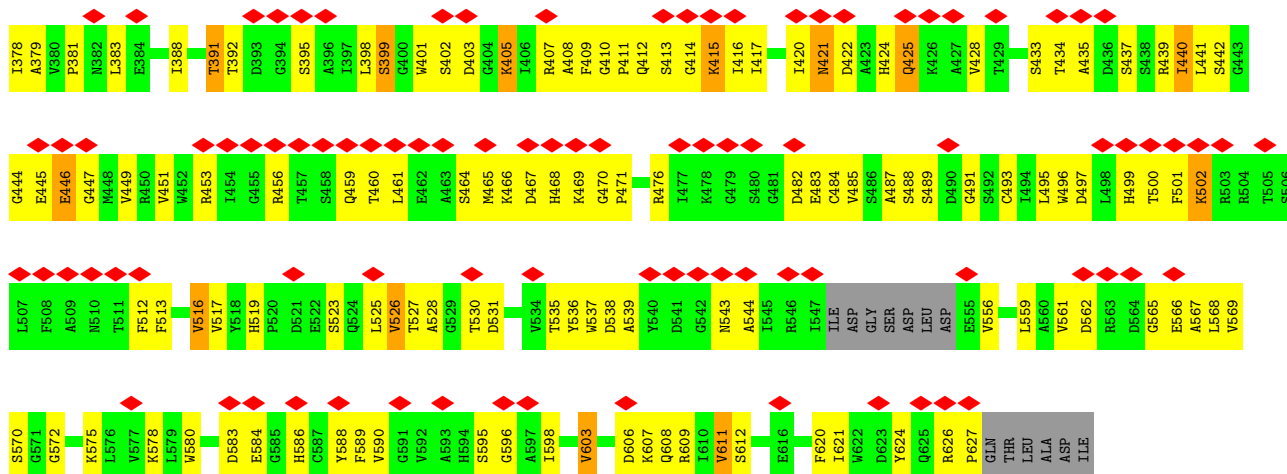
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

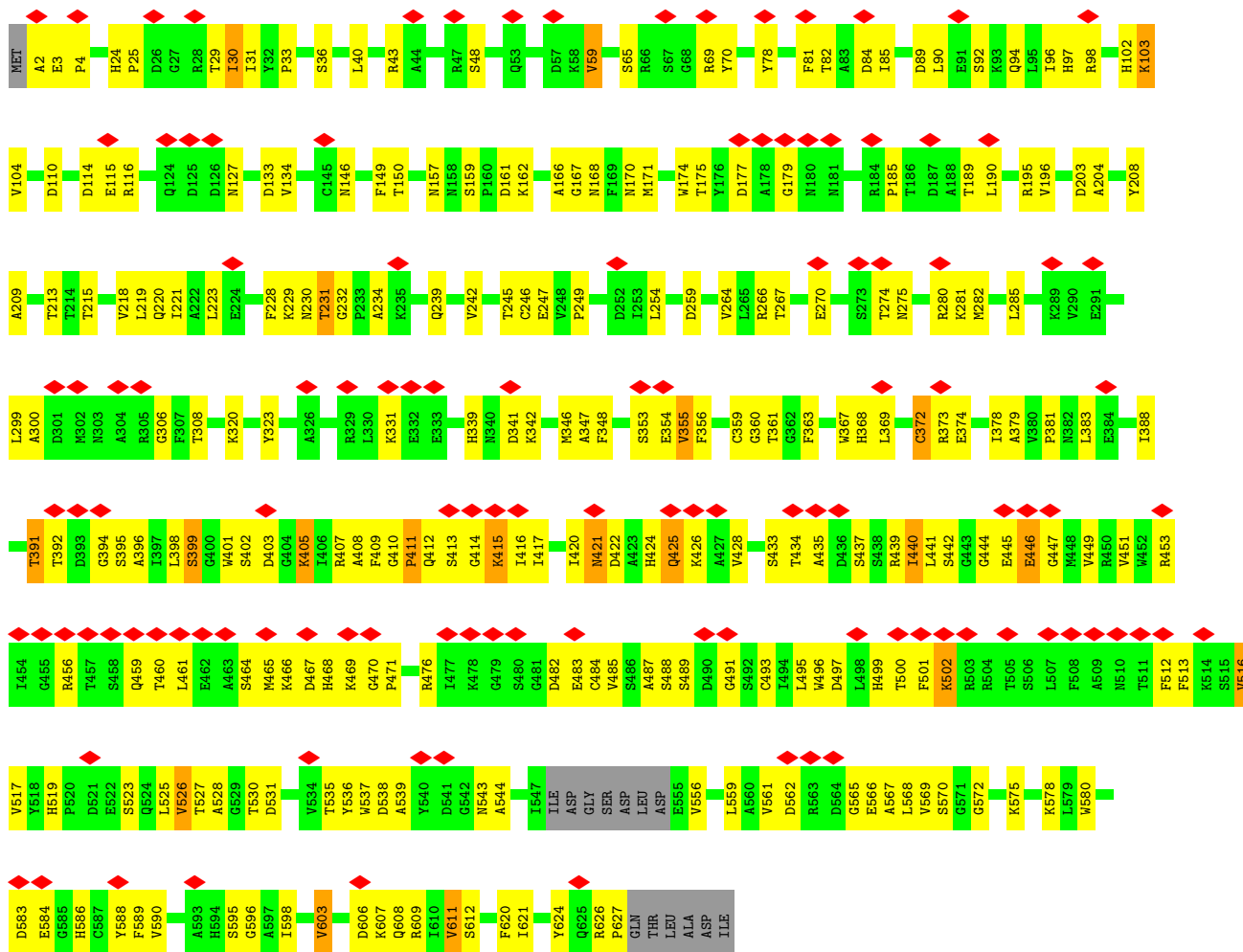


• Molecule 2: FAP52



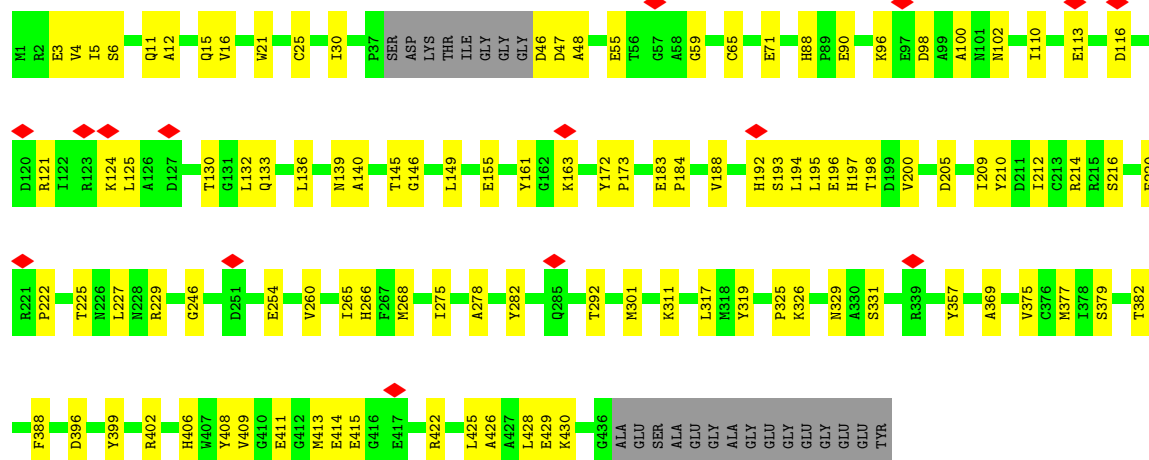


• Molecule 2: FAP52



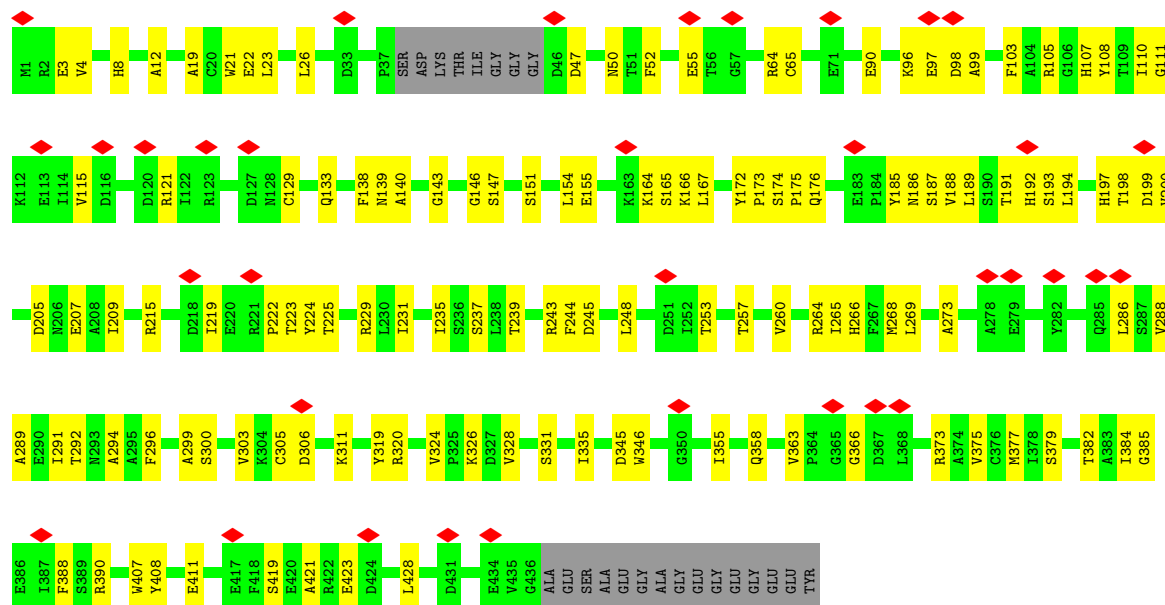
• Molecule 3: Tubulin alpha

Chain D:  71% 24% 5%



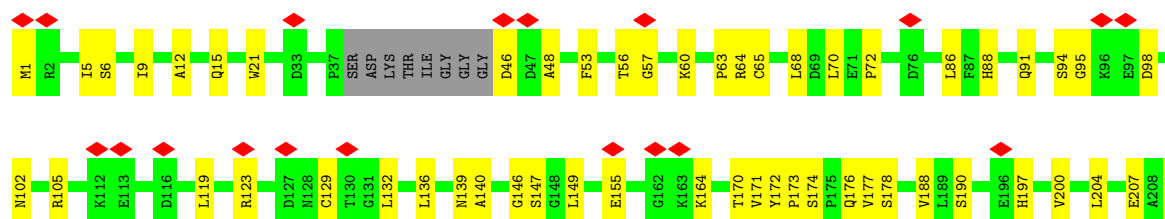
• Molecule 3: Tubulin alpha

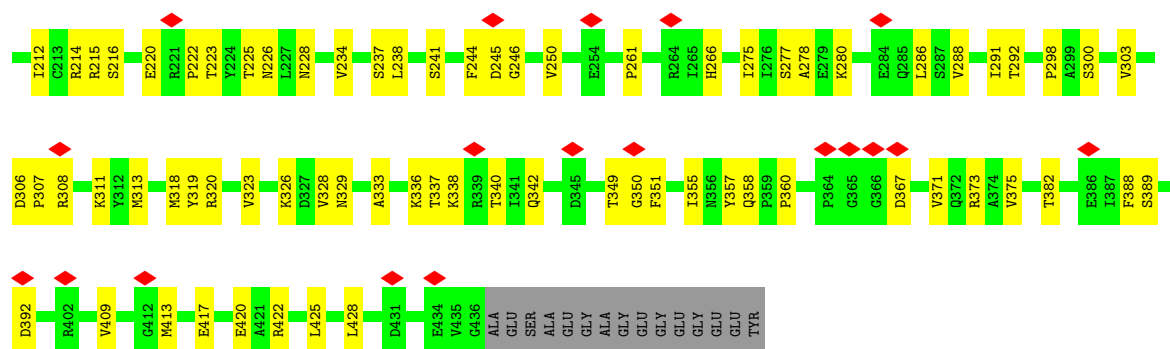
Chain E:  8% 66% 29% 5%



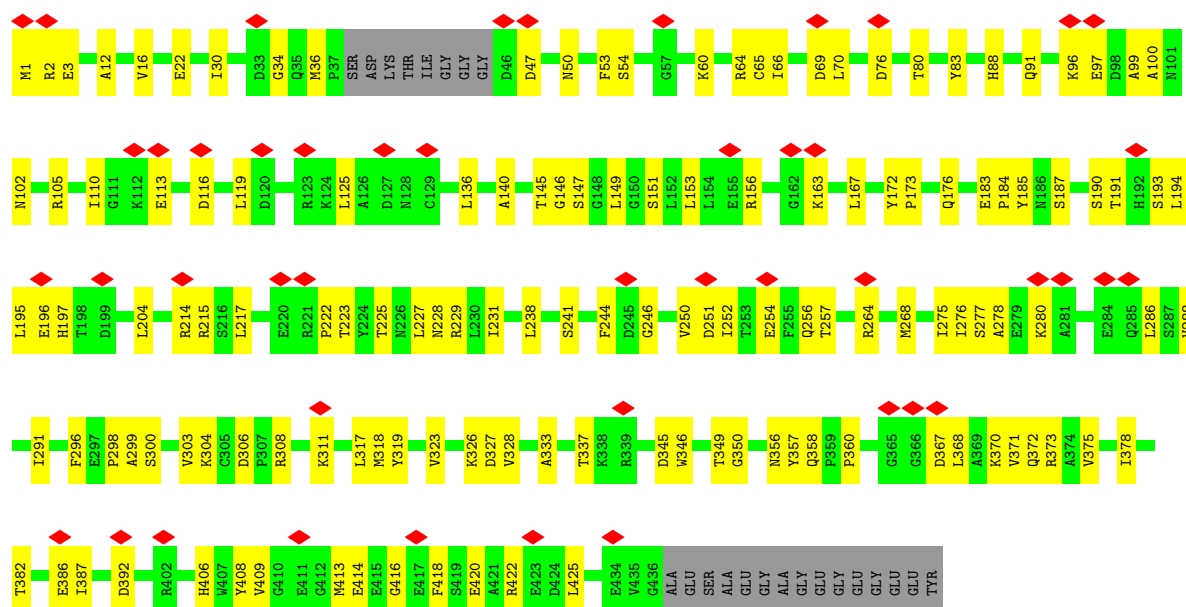
• Molecule 3: Tubulin alpha

Chain F:  8% 67% 28% 5%

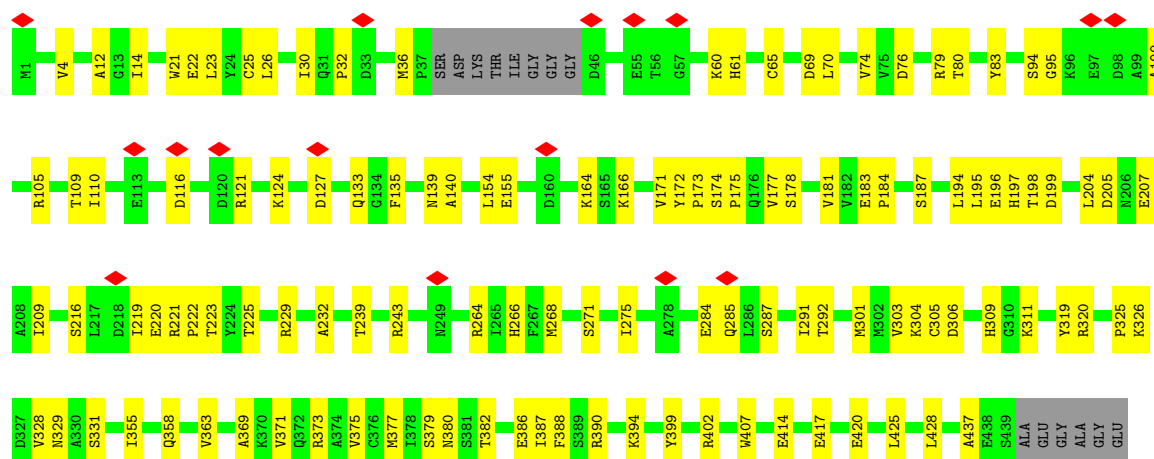




• Molecule 3: Tubulin alpha



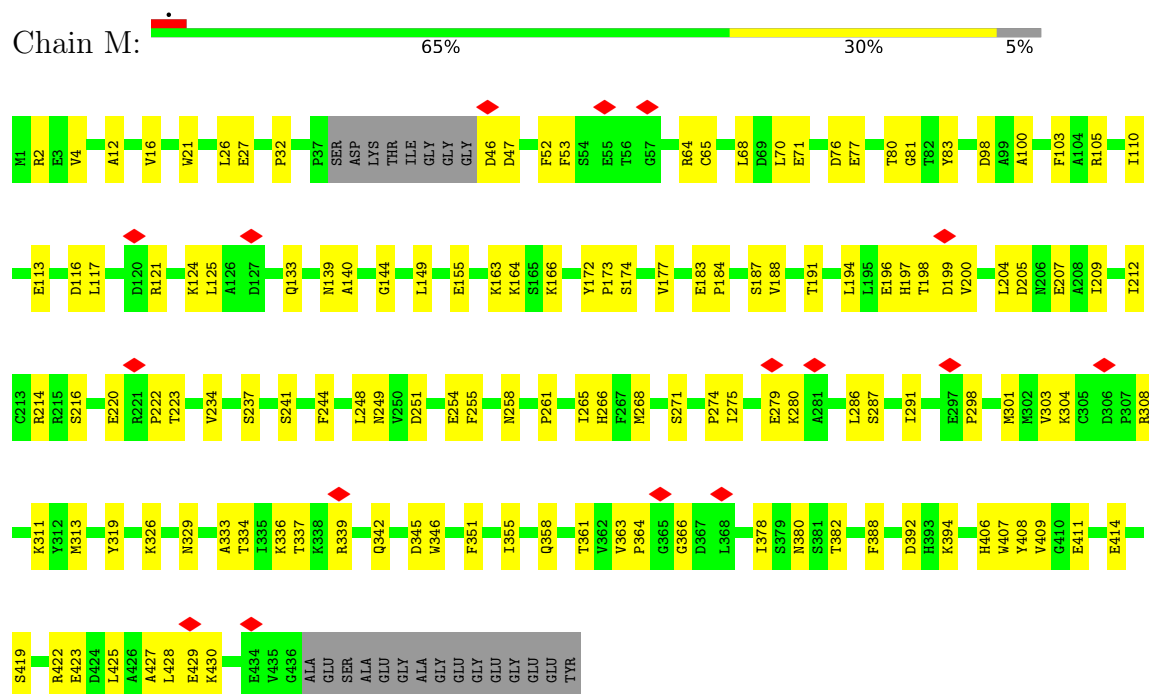
• Molecule 3: Tubulin alpha



GLY
GLU
GLY
GLU
GLU
TYR

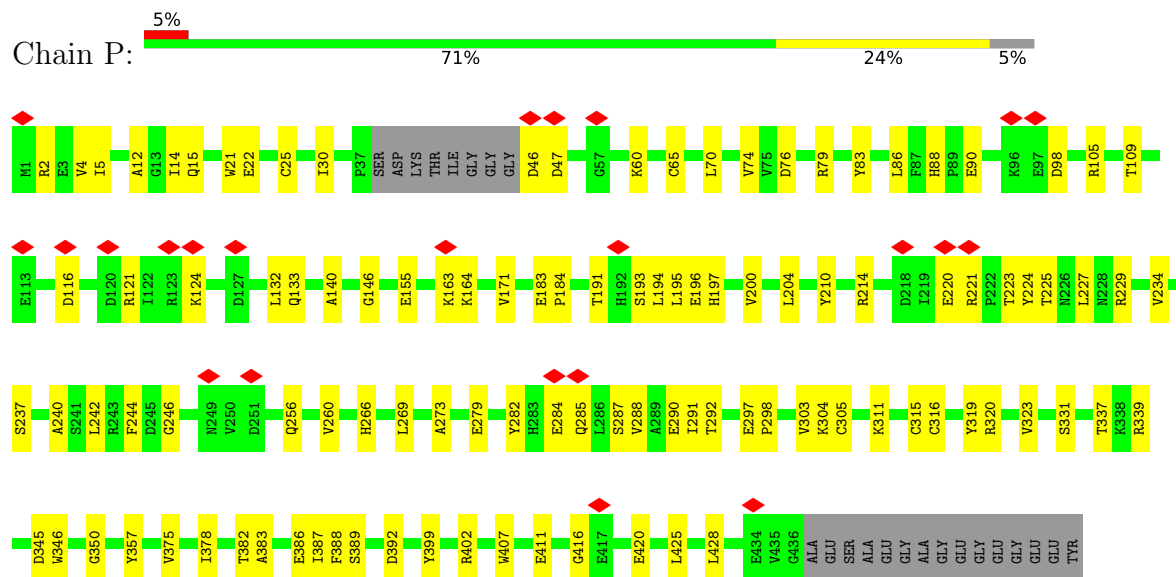
• Molecule 3: Tubulin alpha

Chain M:



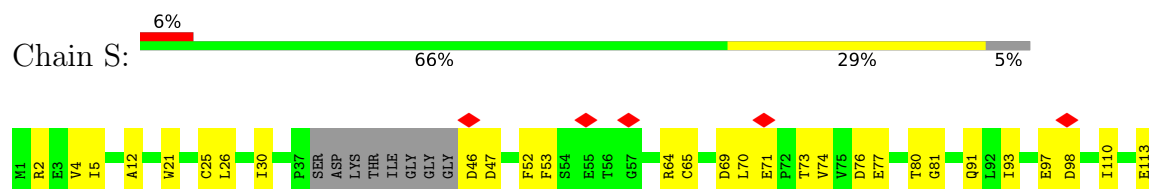
• Molecule 3: Tubulin alpha

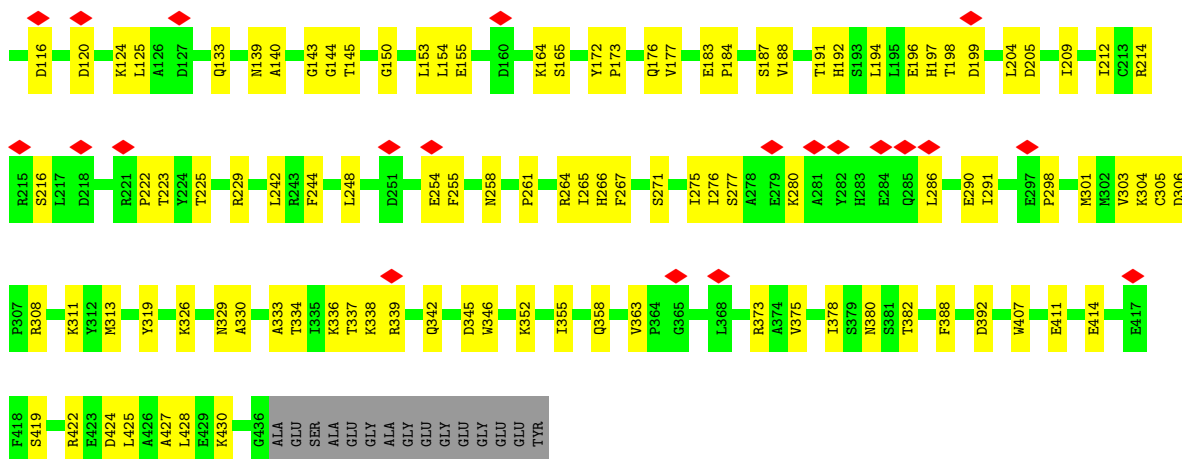
Chain P:



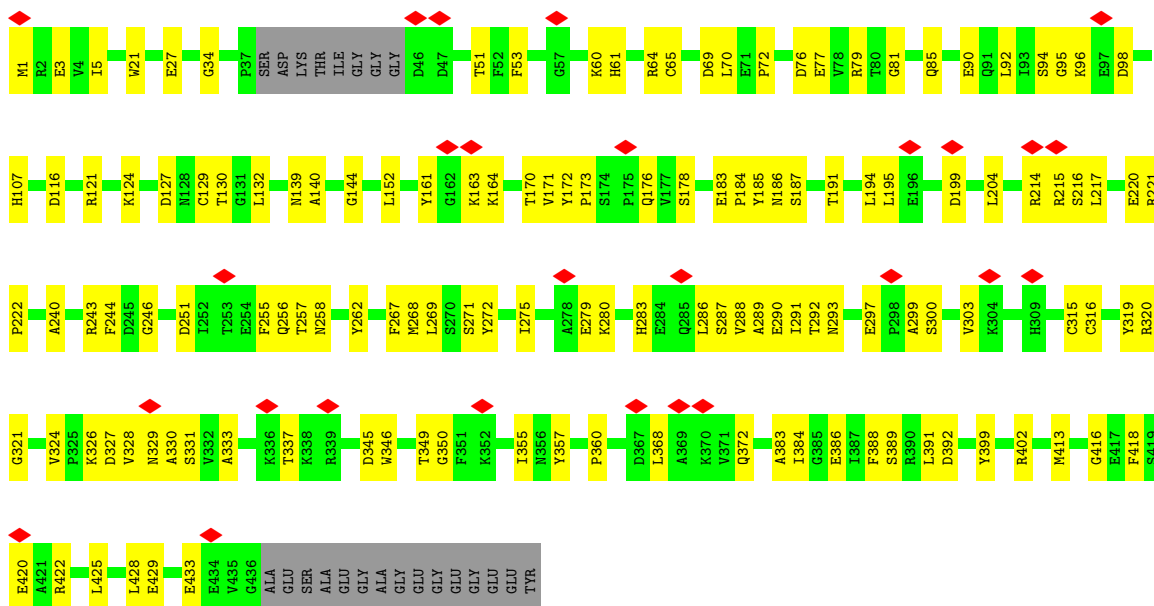
• Molecule 3: Tubulin alpha

Chain S:

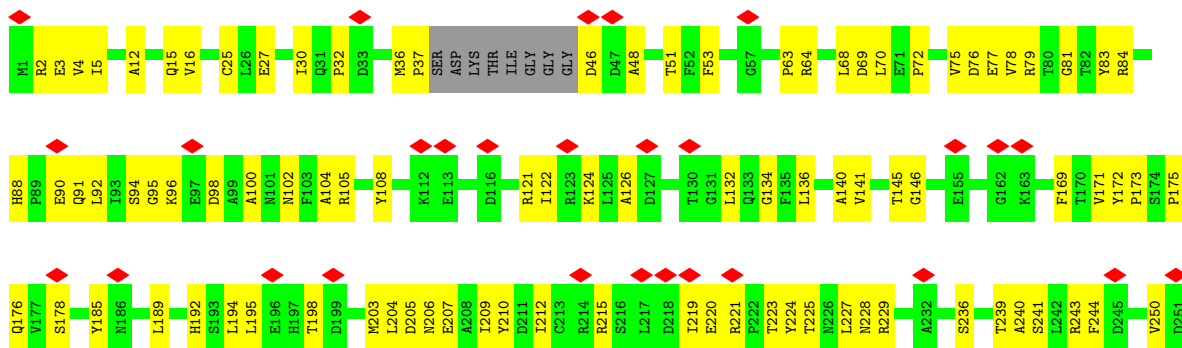


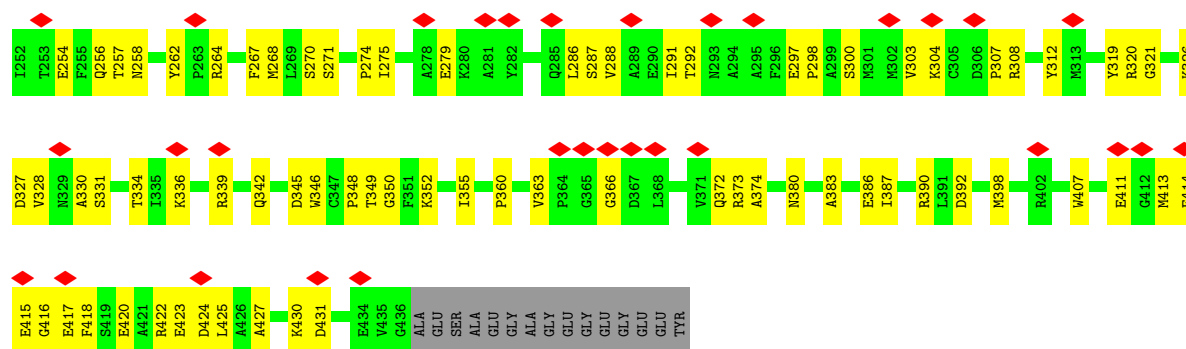


• Molecule 3: Tubulin alpha

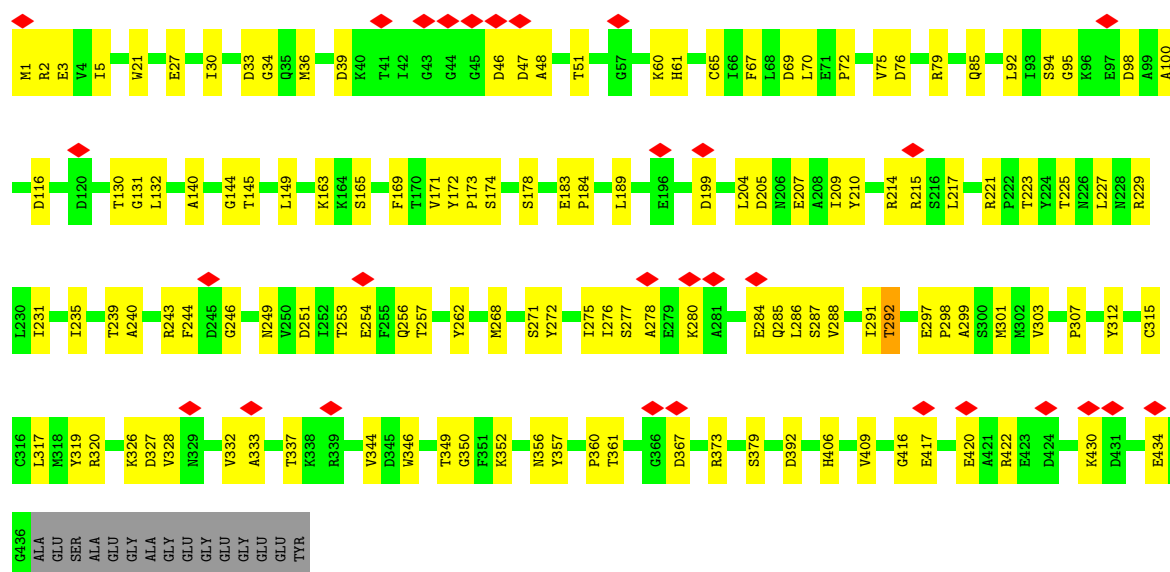


• Molecule 3: Tubulin alpha

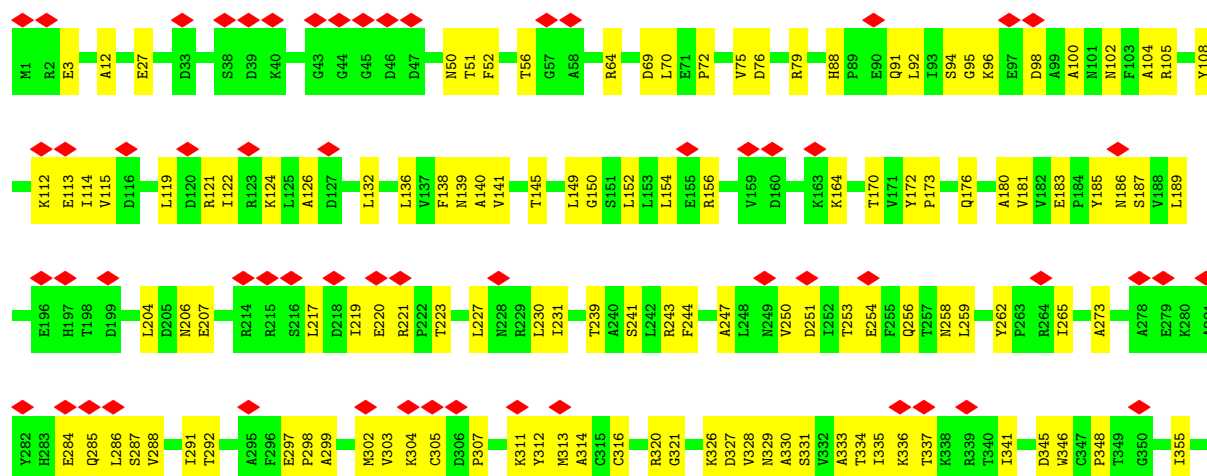




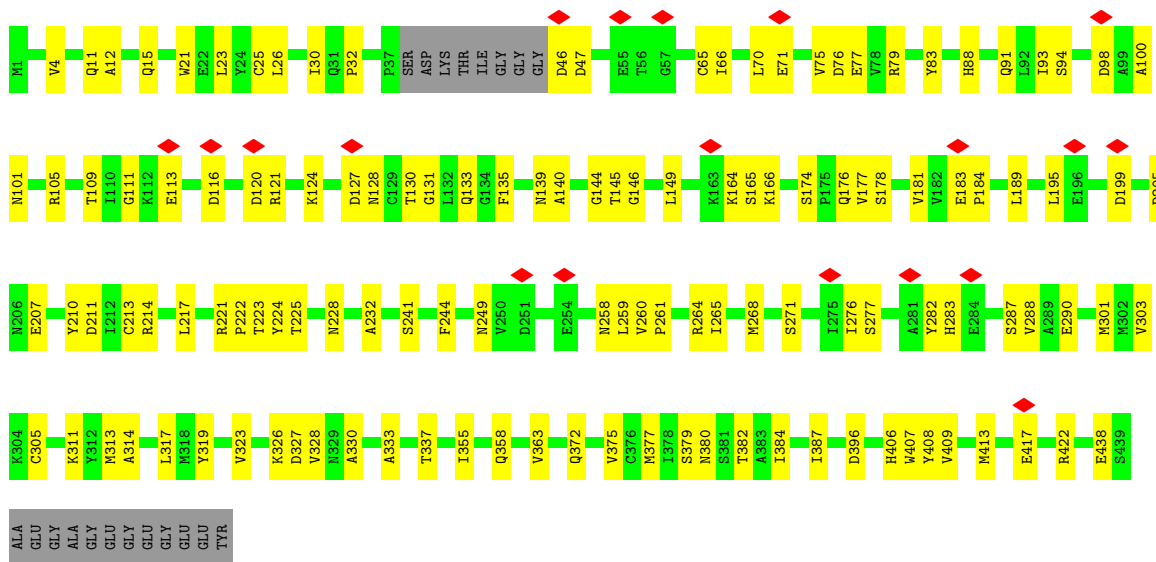
• Molecule 3: Tubulin alpha



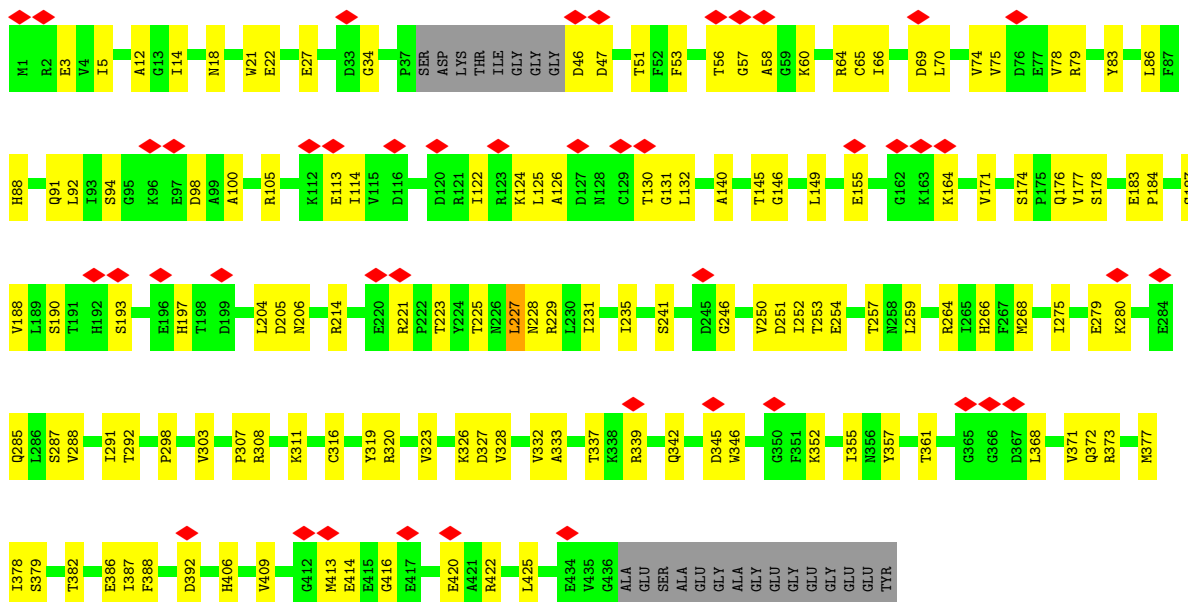
• Molecule 3: Tubulin alpha



- Molecule 3: Tubulin alpha

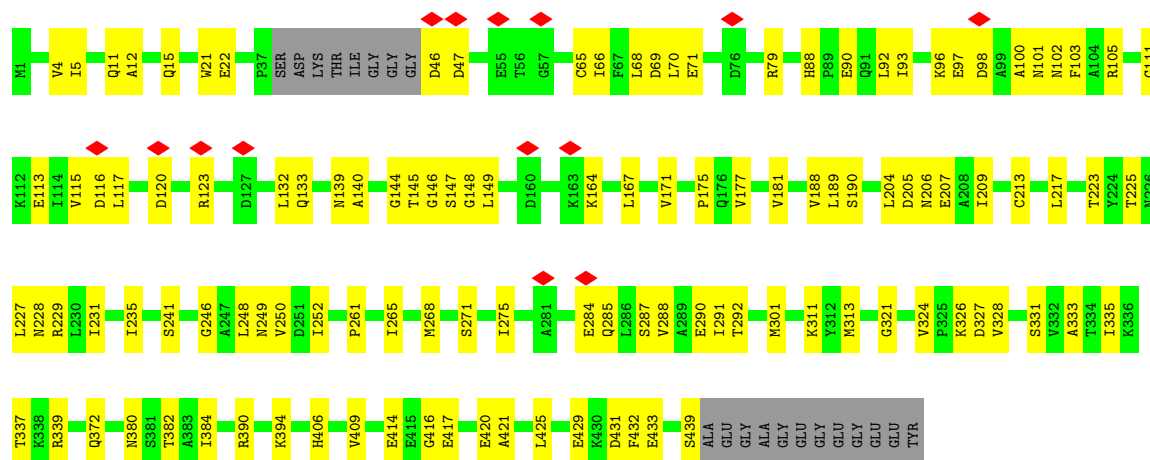


- Molecule 3: Tubulin alpha



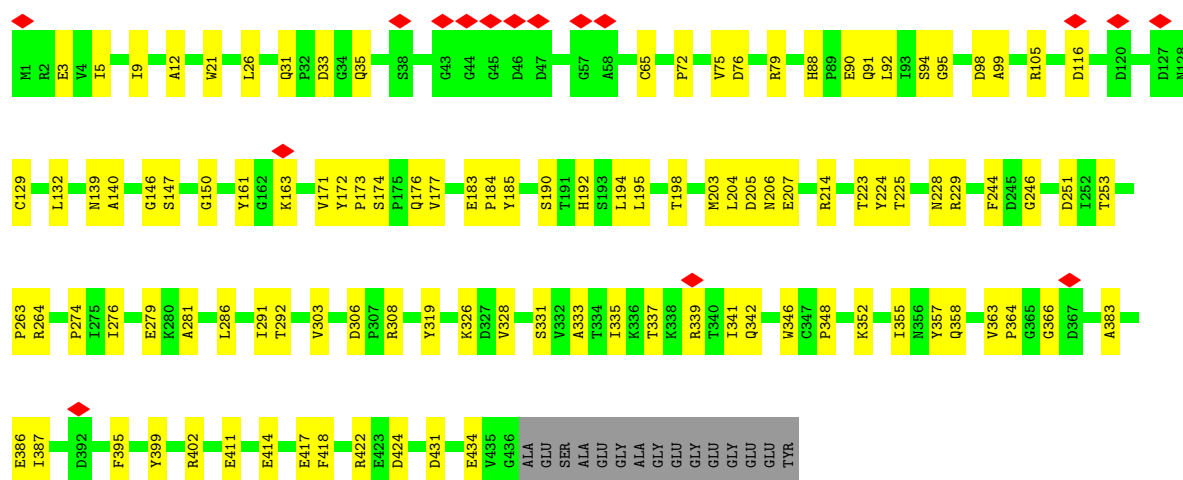
- Molecule 3: Tubulin alpha

Chain k: 



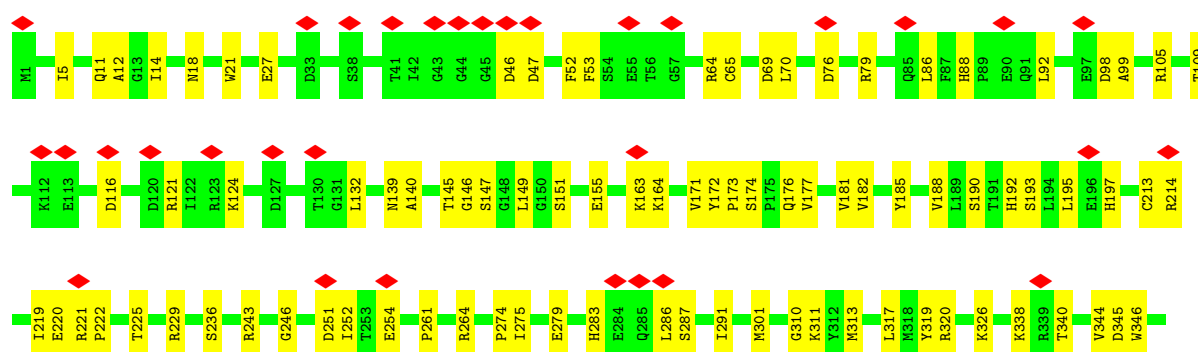
• Molecule 3: Tubulin alpha

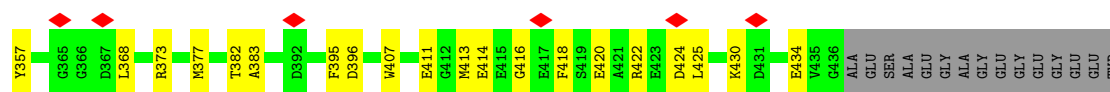
Chain m: 



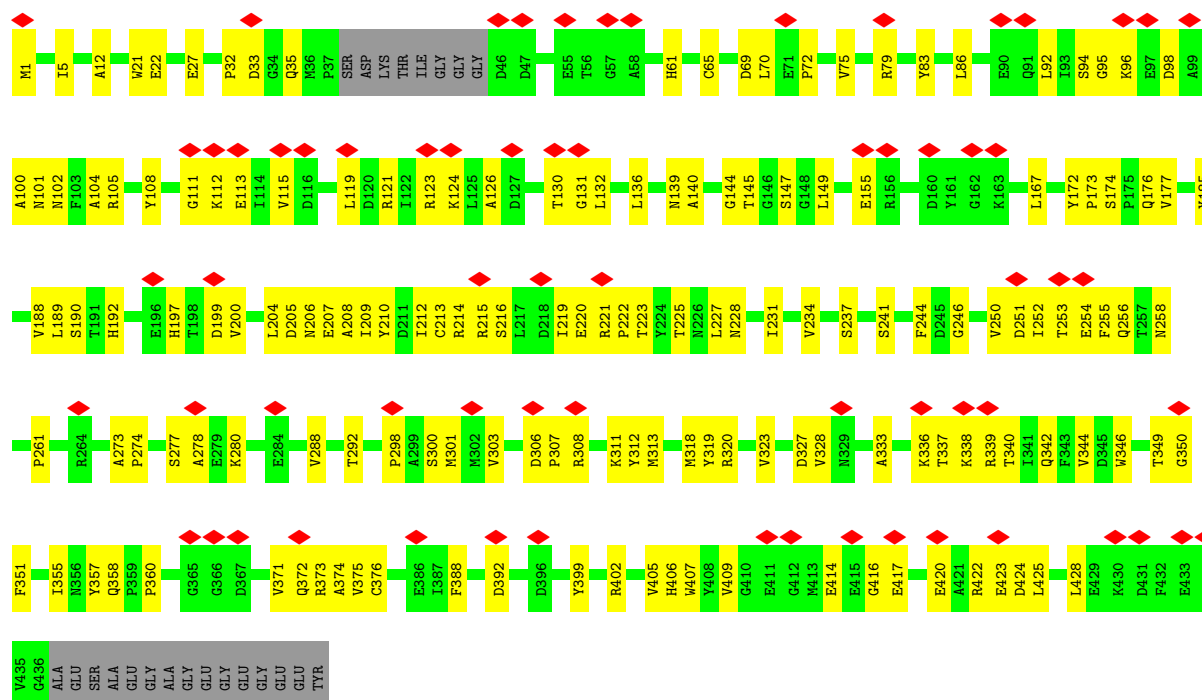
• Molecule 3: Tubulin alpha

Chain o: 

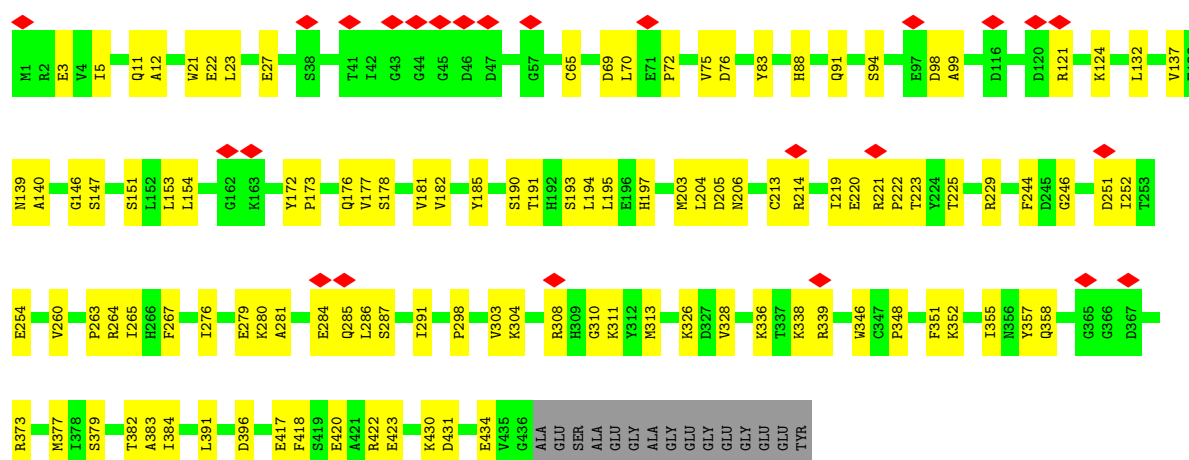
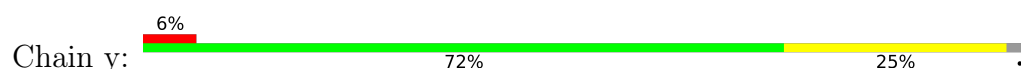




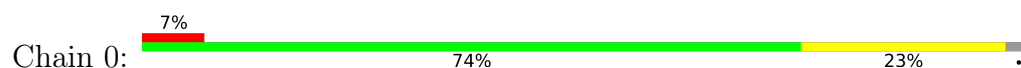
• Molecule 3: Tubulin alpha

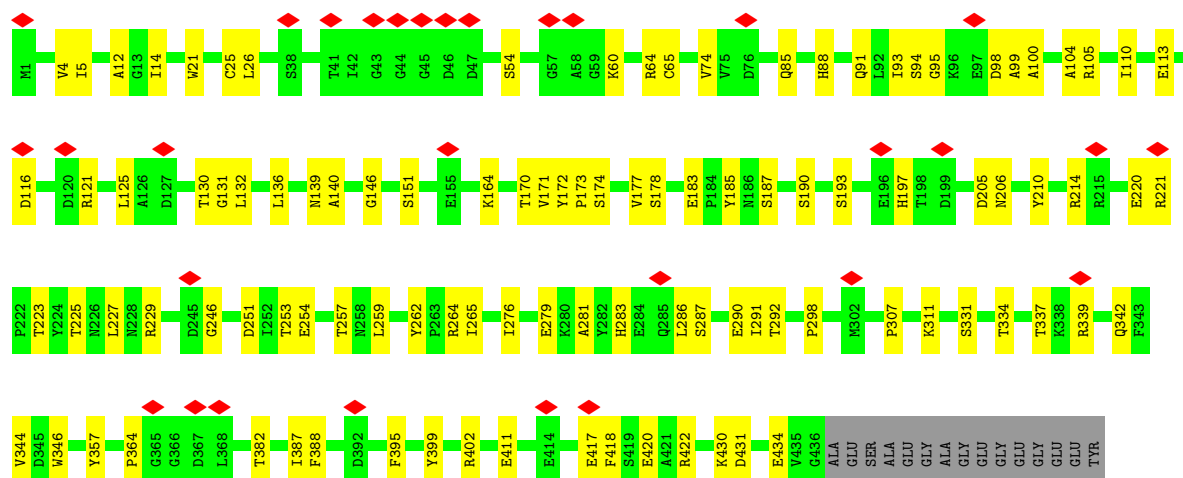


• Molecule 3: Tubulin alpha

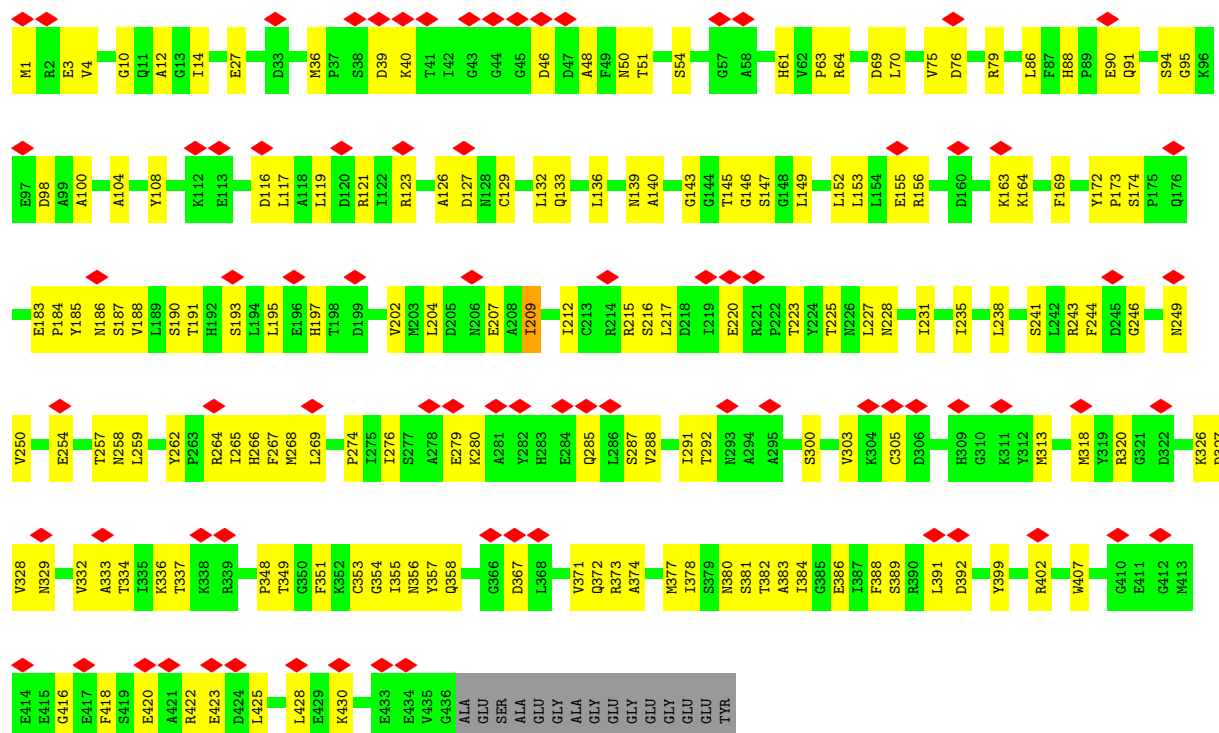


• Molecule 3: Tubulin alpha

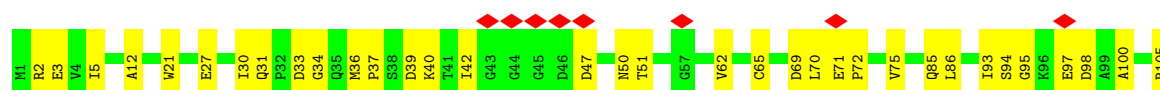


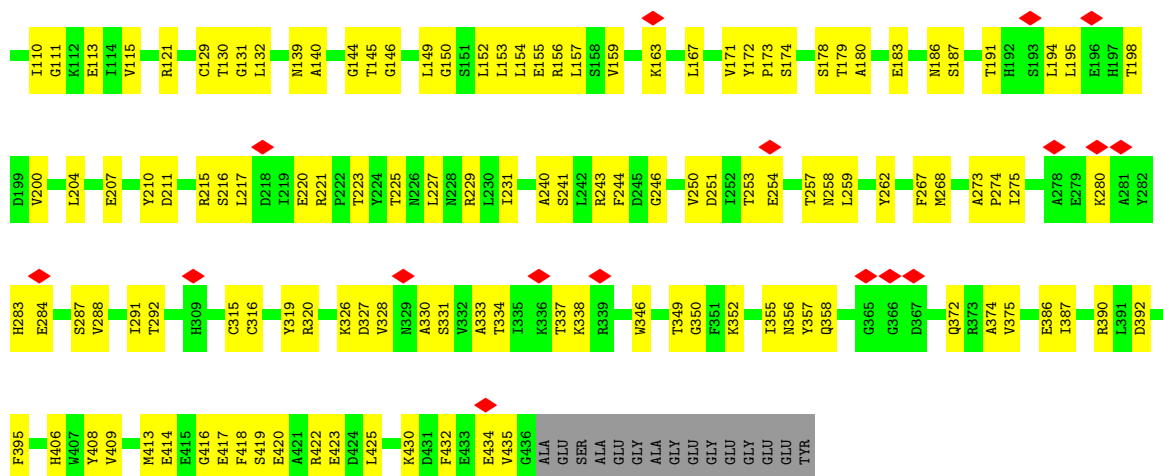


• Molecule 3: Tubulin alpha

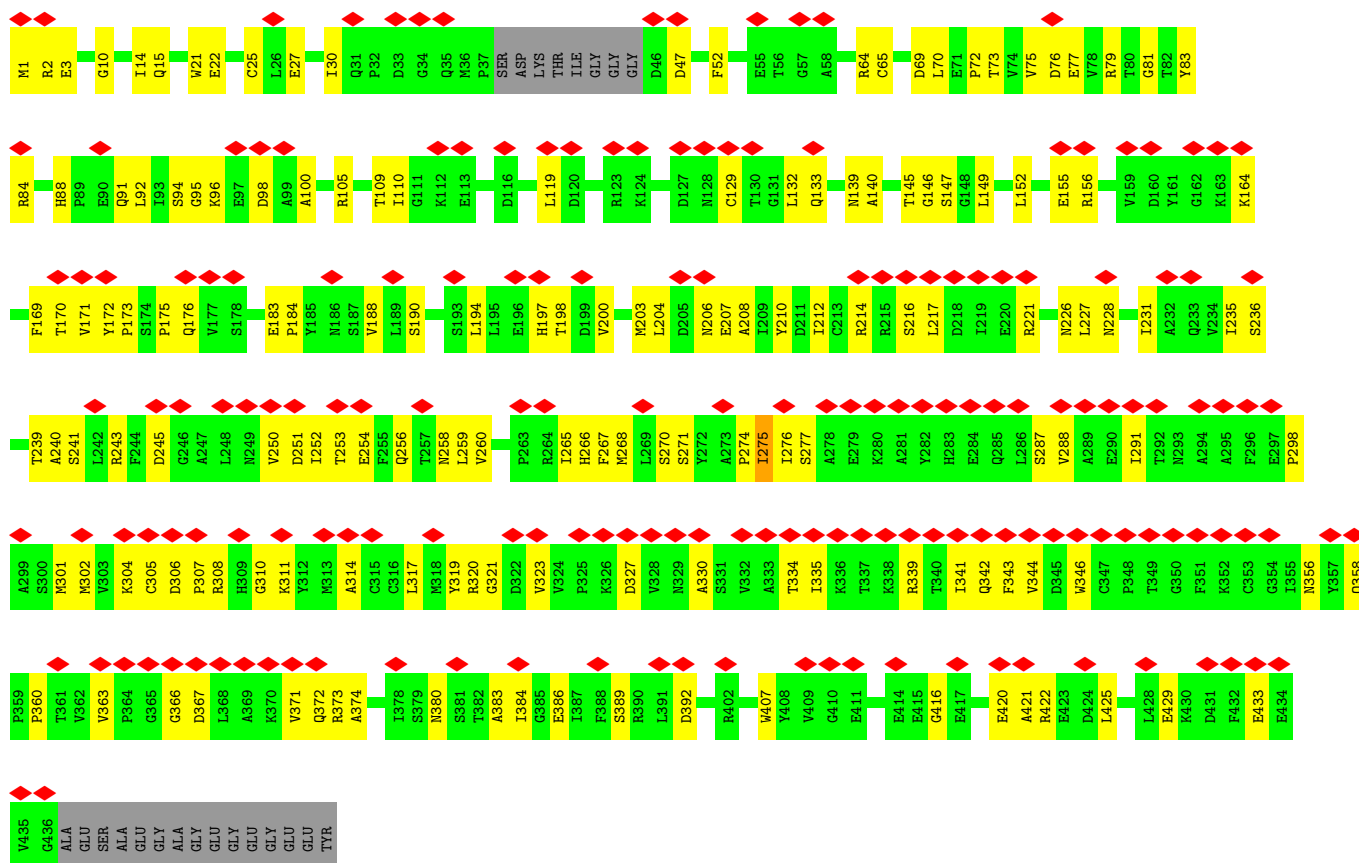
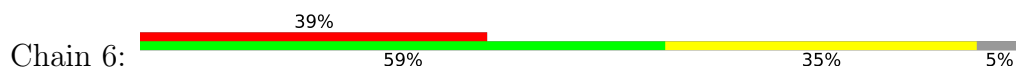


• Molecule 3: Tubulin alpha



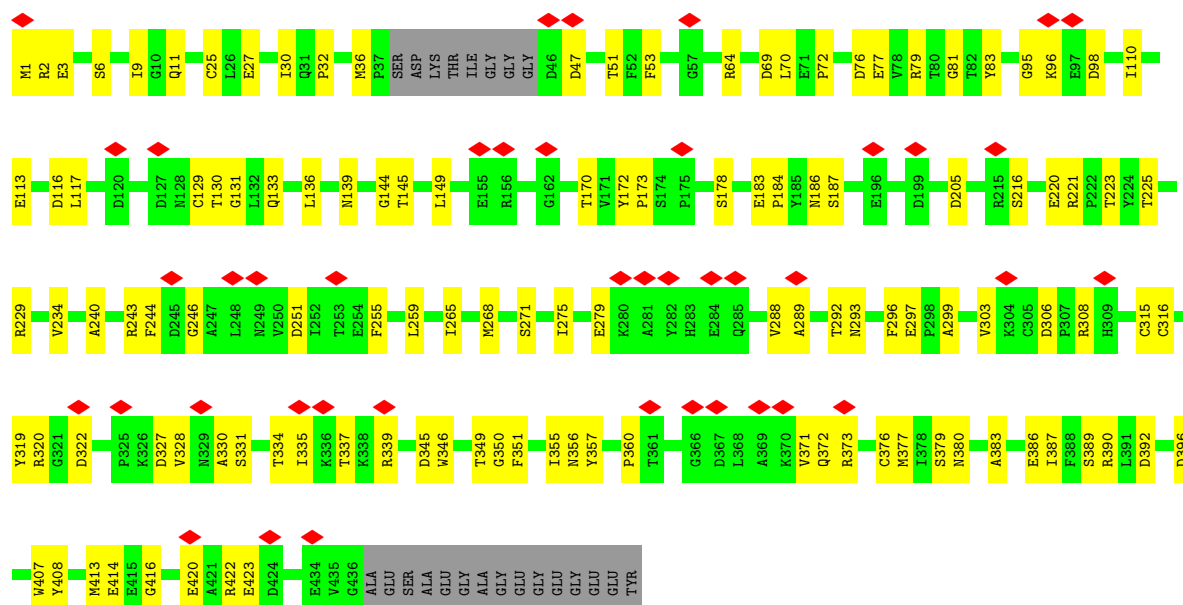


• Molecule 3: Tubulin alpha

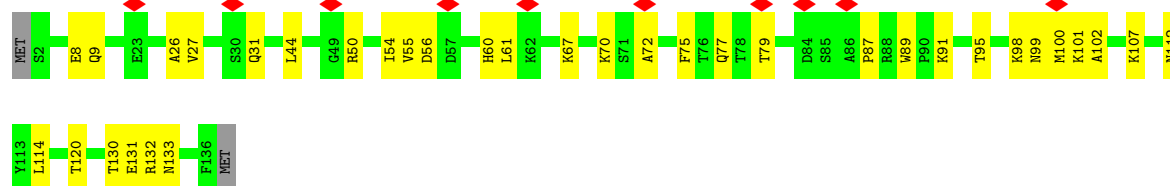
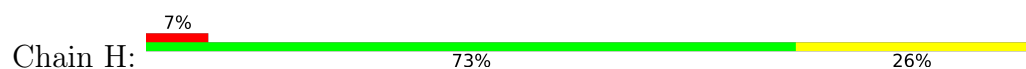


• Molecule 3: Tubulin alpha

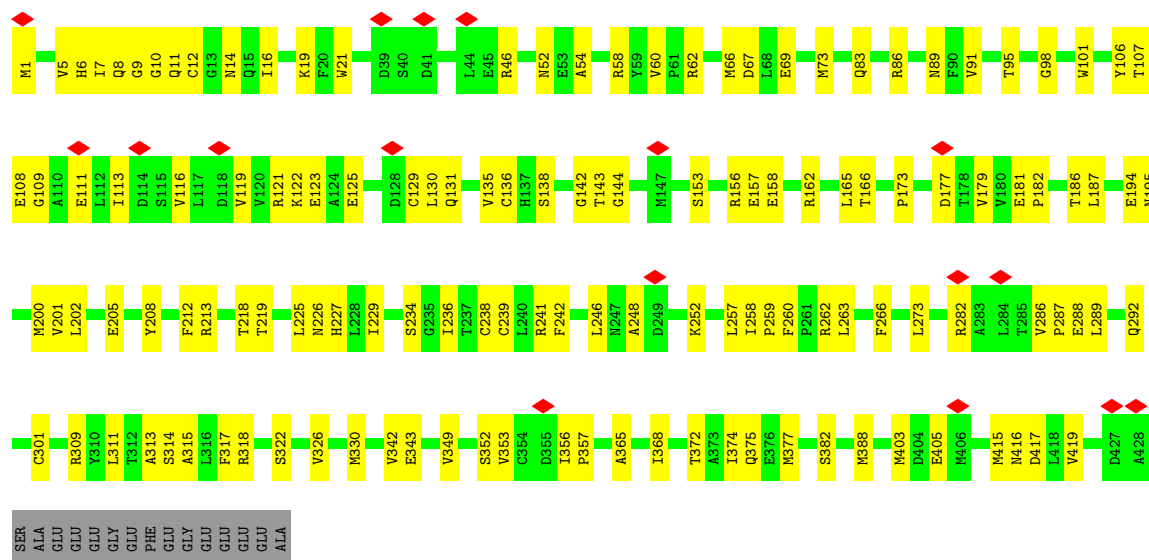




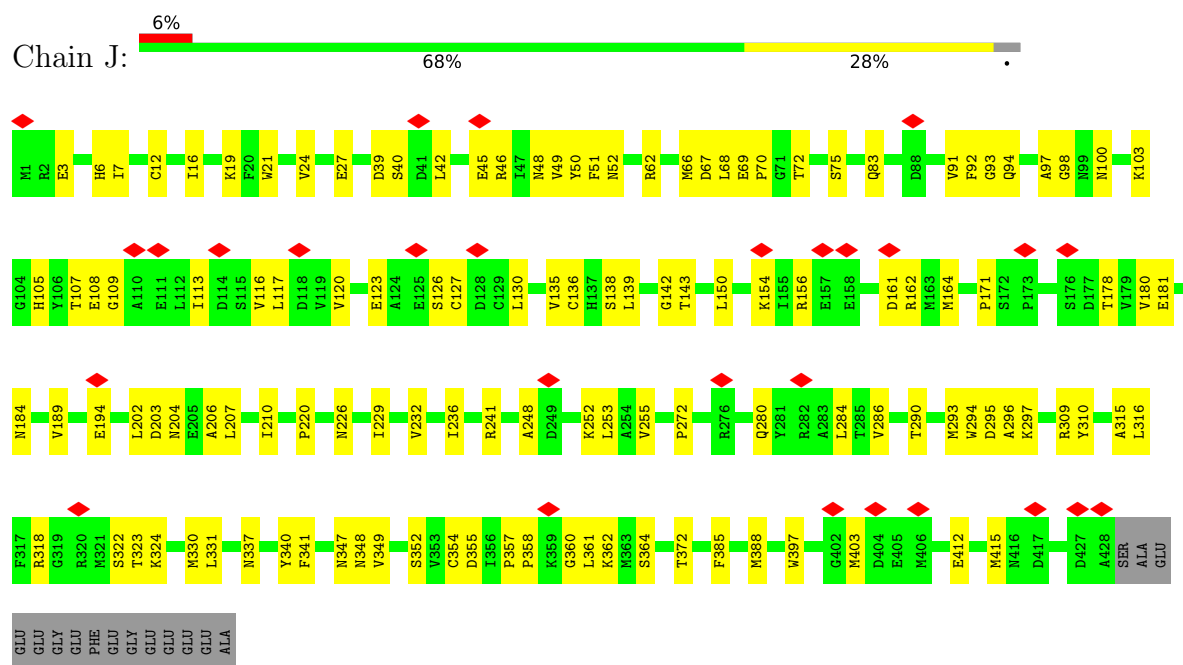
• Molecule 4: Protein Flattop homolog



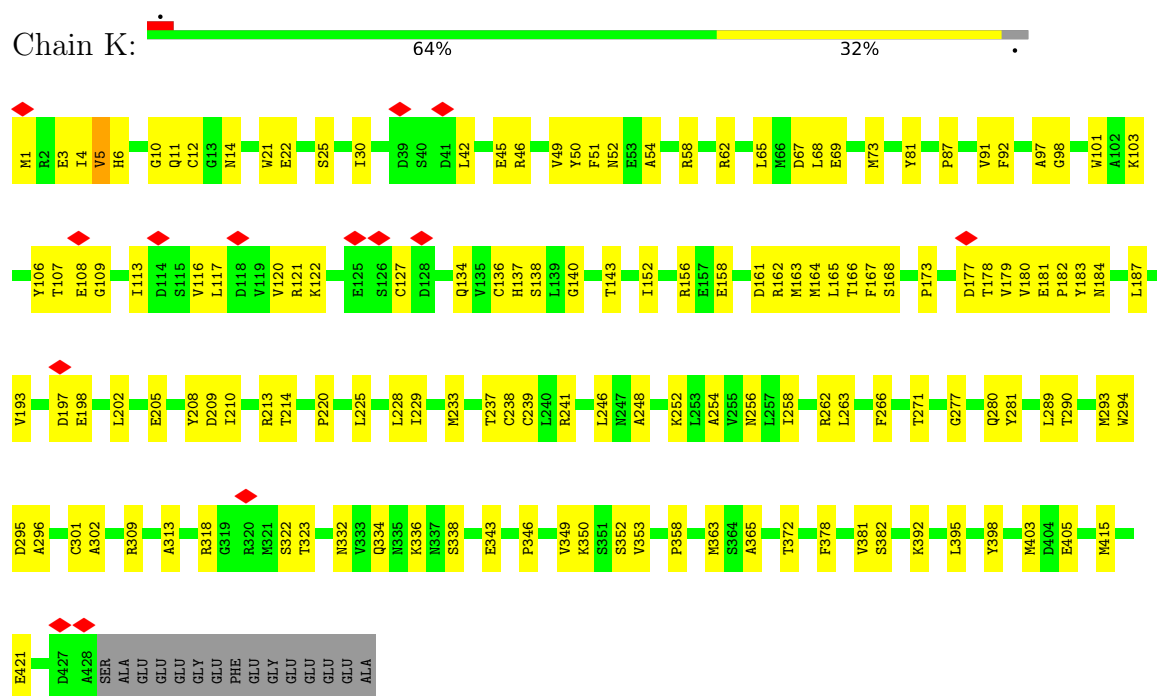
• Molecule 5: Tubulin beta



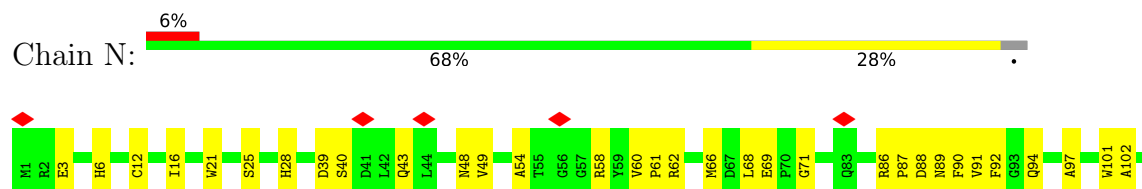
• Molecule 5: Tubulin beta

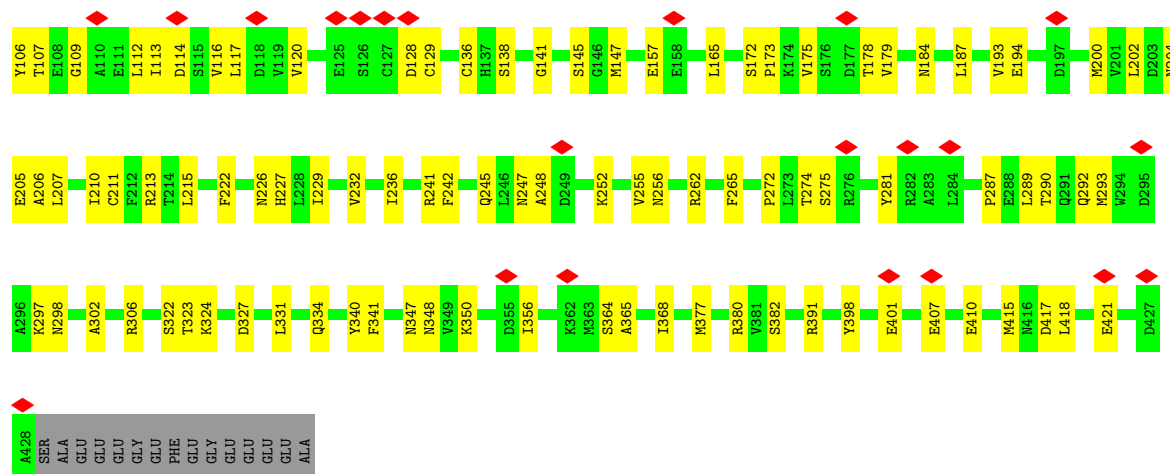


• Molecule 5: Tubulin beta

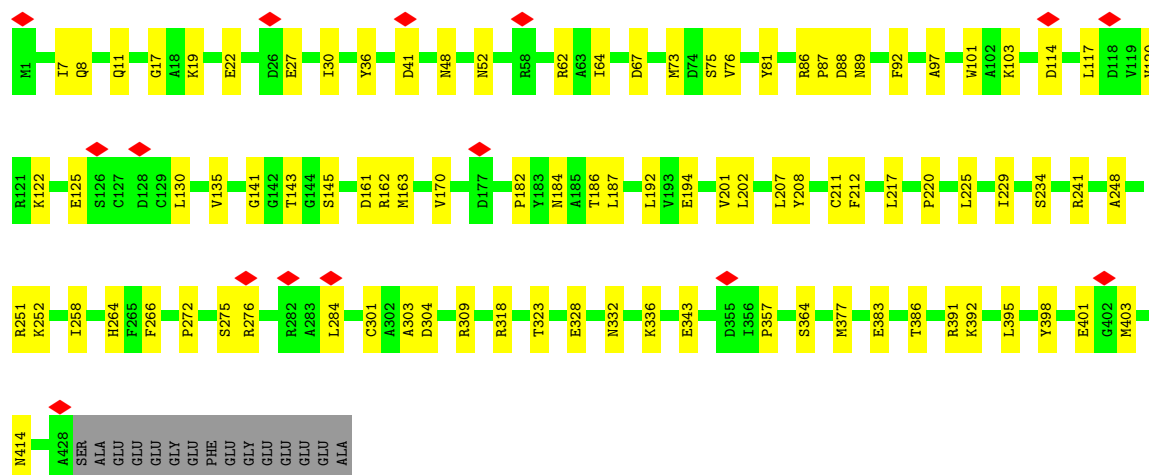
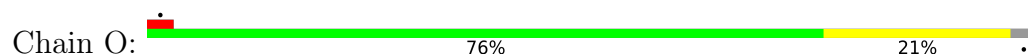


• Molecule 5: Tubulin beta

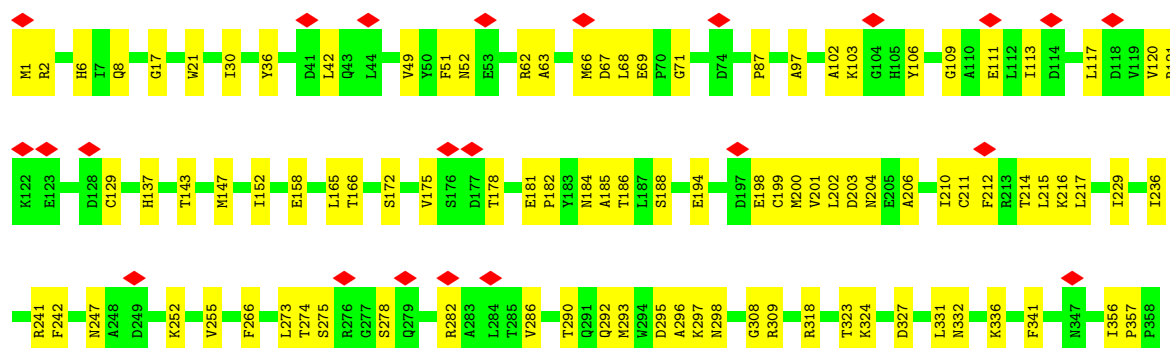
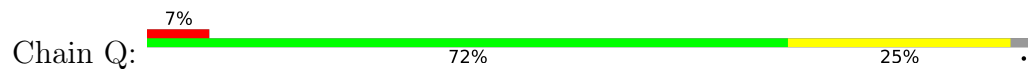


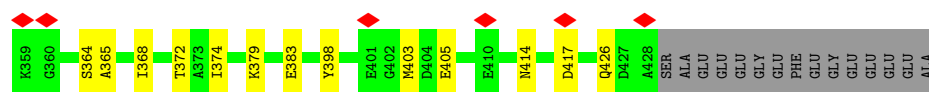


• Molecule 5: Tubulin beta

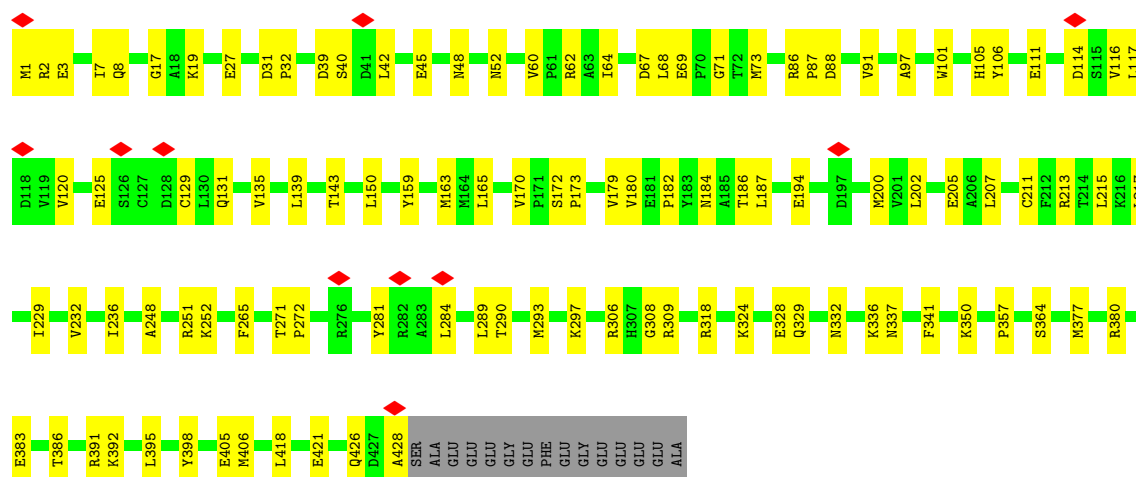


• Molecule 5: Tubulin beta

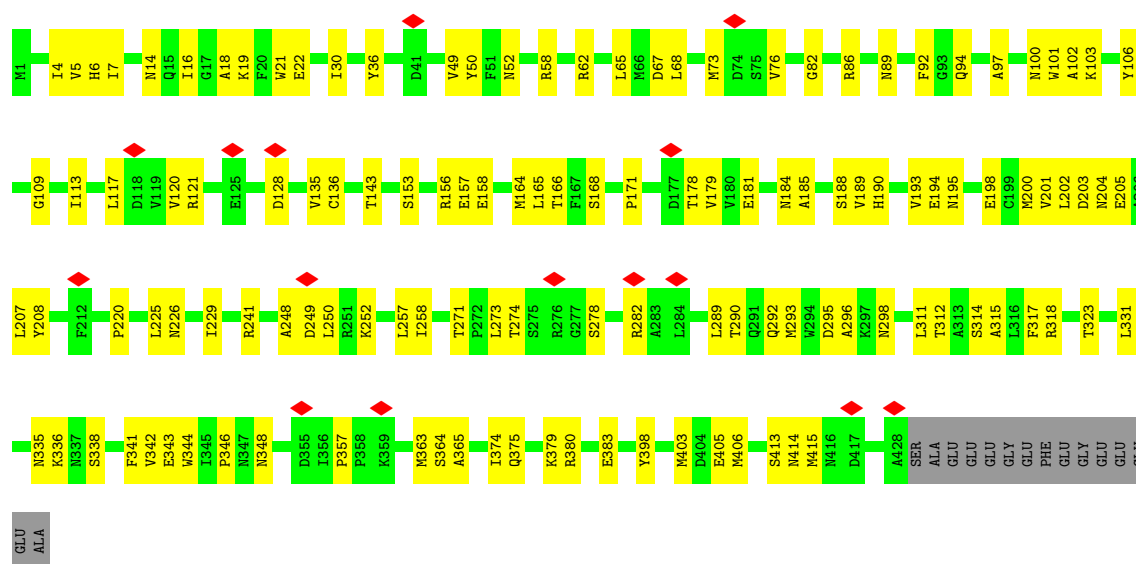




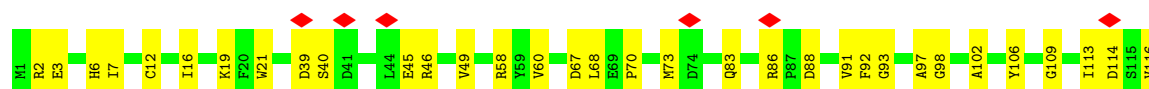
• Molecule 5: Tubulin beta

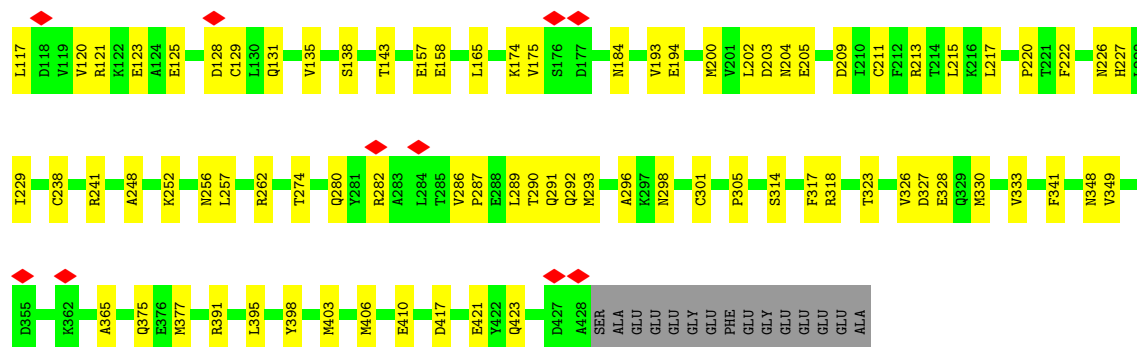


• Molecule 5: Tubulin beta

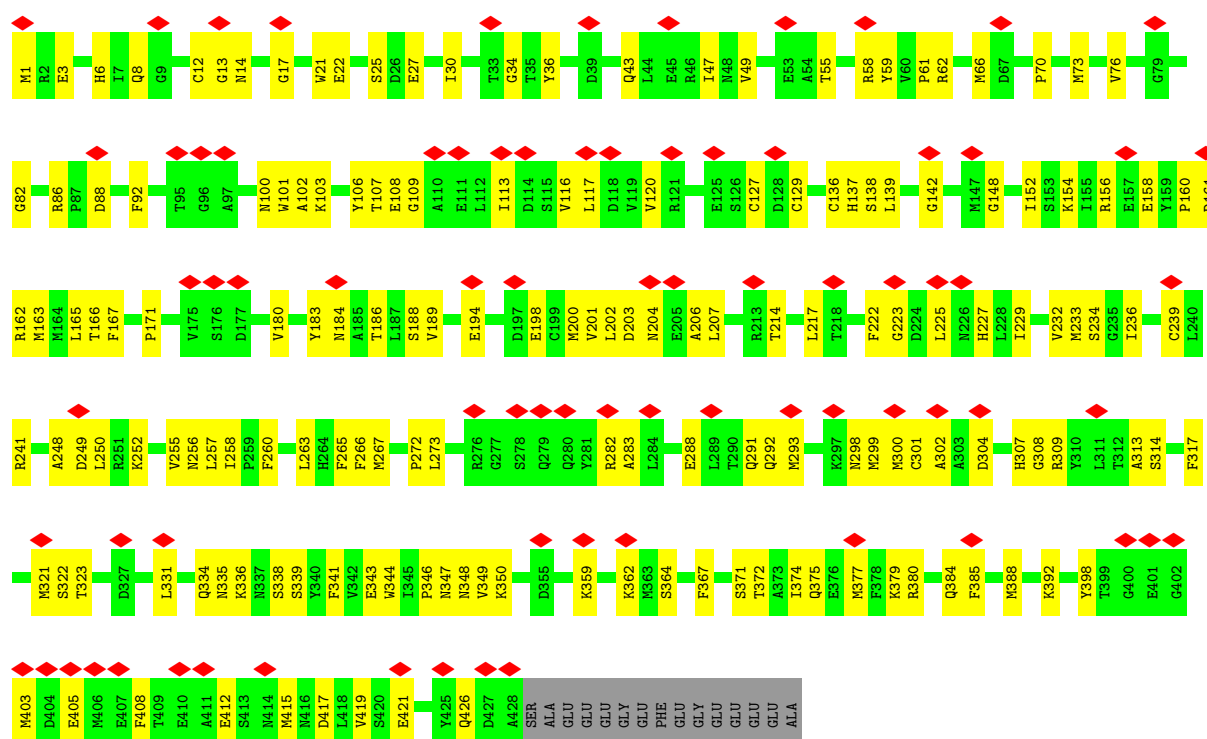


• Molecule 5: Tubulin beta

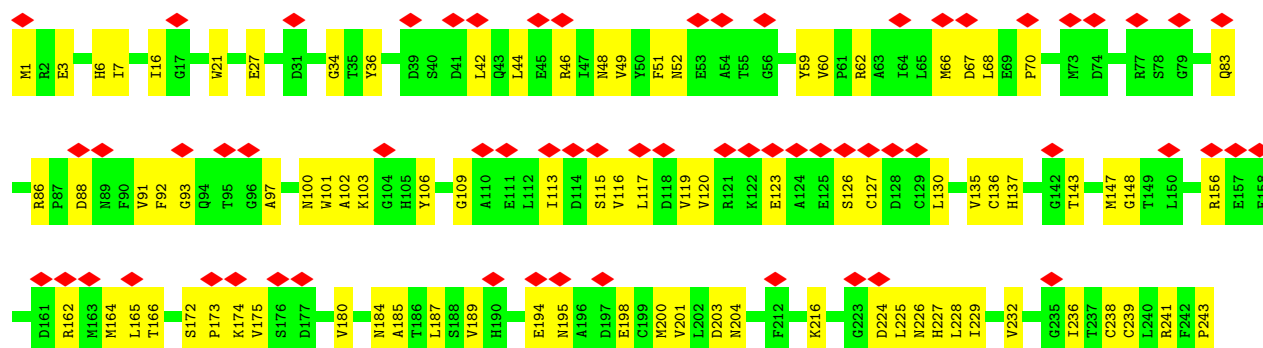


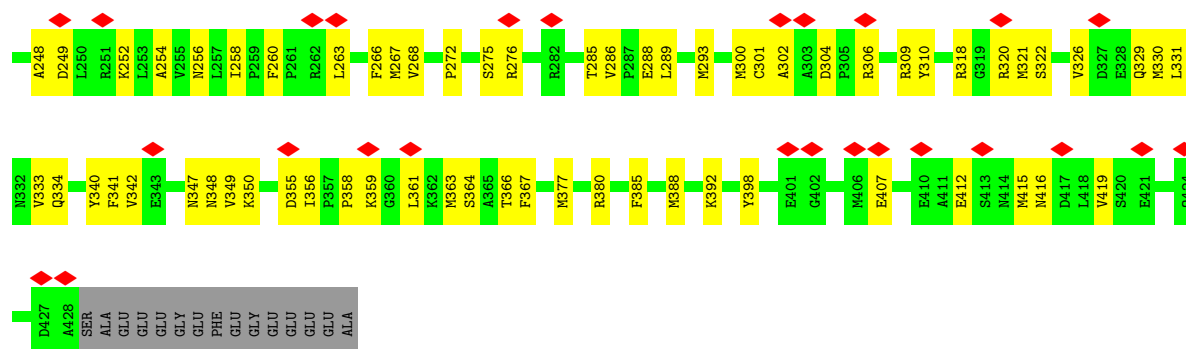


• Molecule 5: Tubulin beta

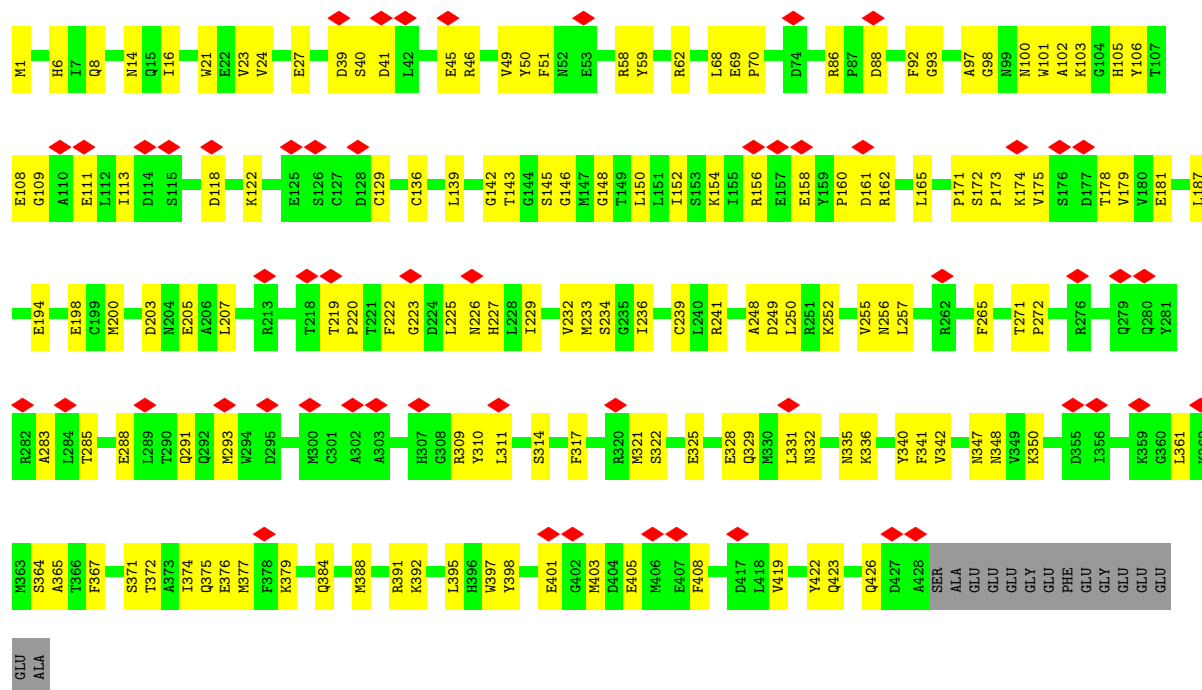


• Molecule 5: Tubulin beta

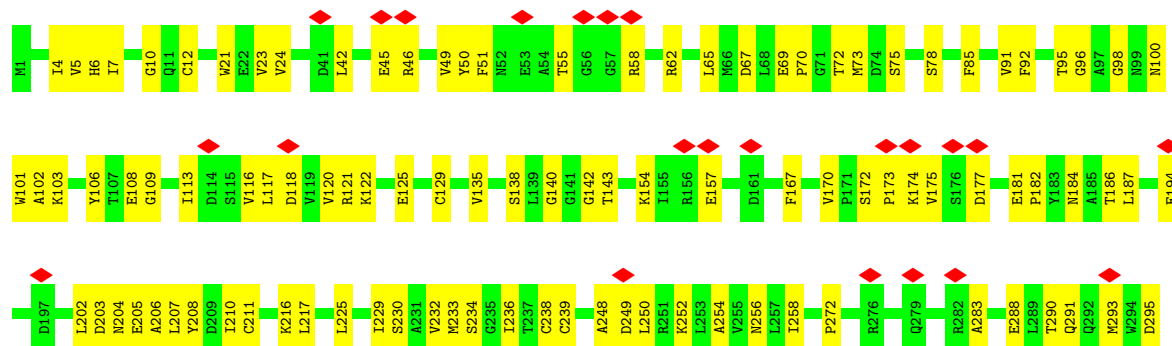


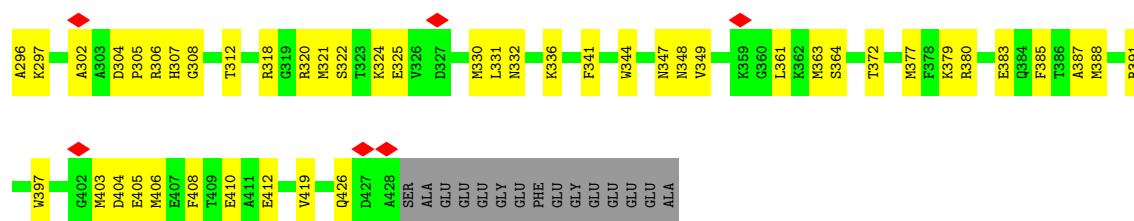


• Molecule 5: Tubulin beta

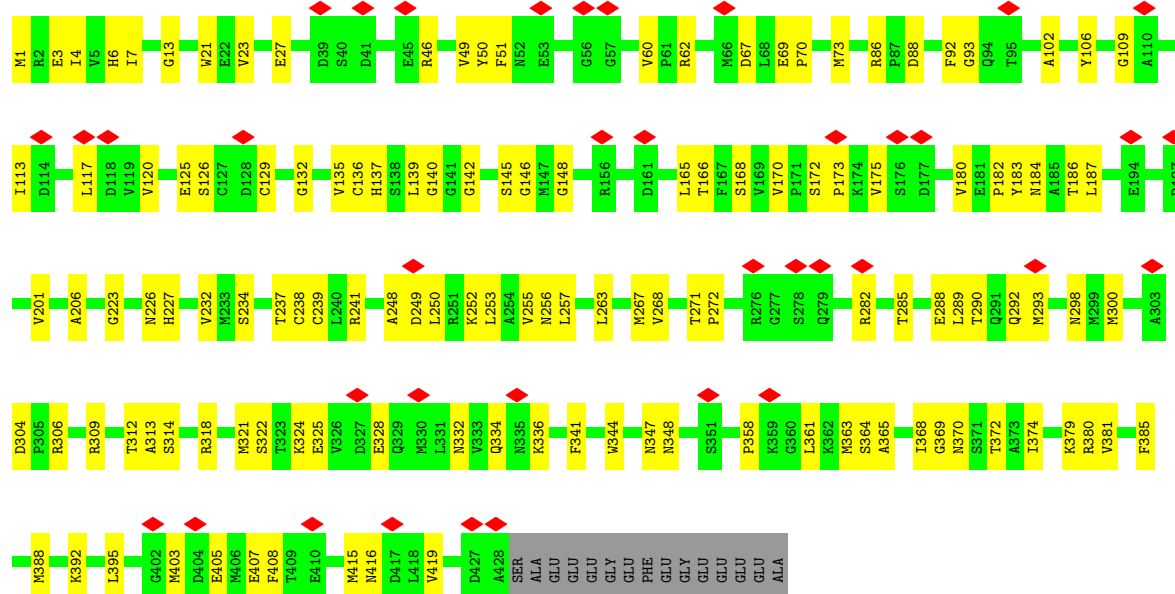


• Molecule 5: Tubulin beta

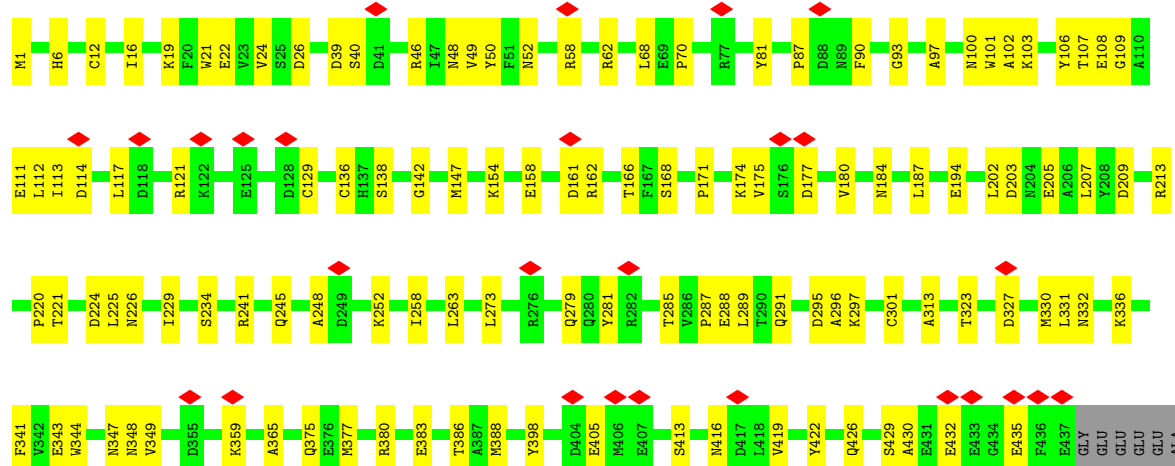
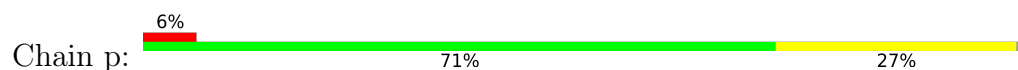




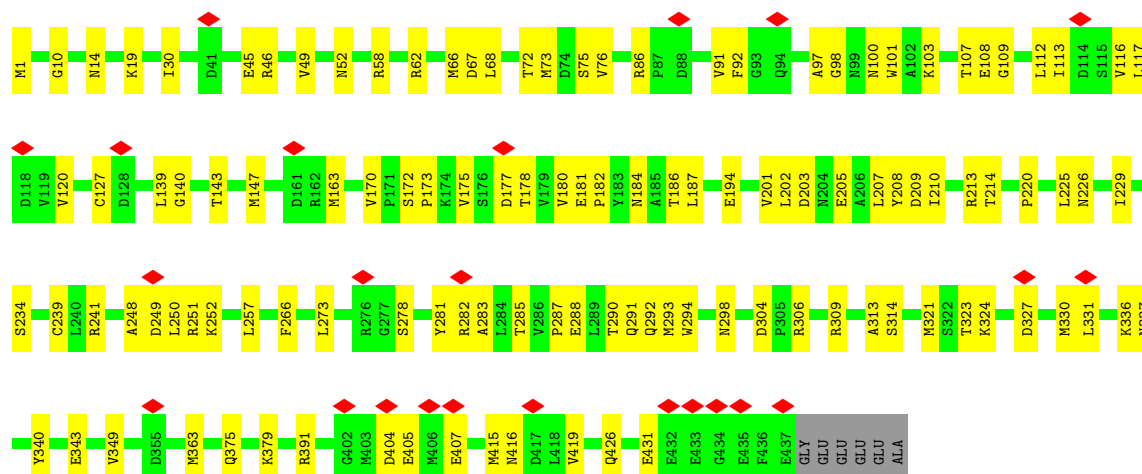
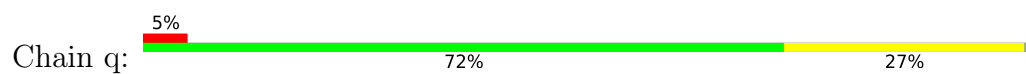
• Molecule 5: Tubulin beta



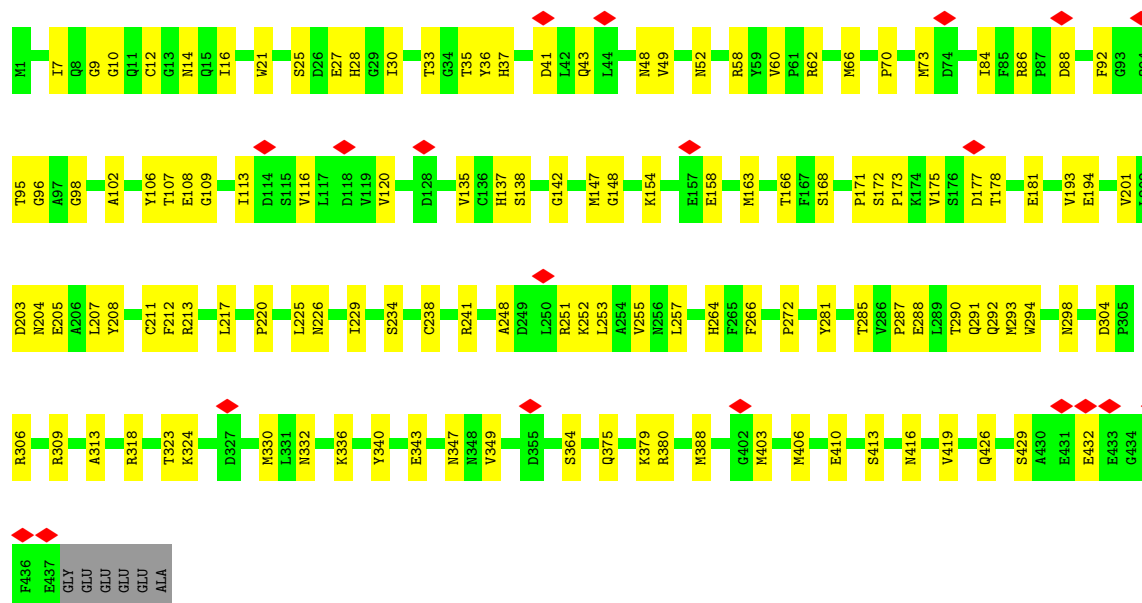
• Molecule 5: Tubulin beta



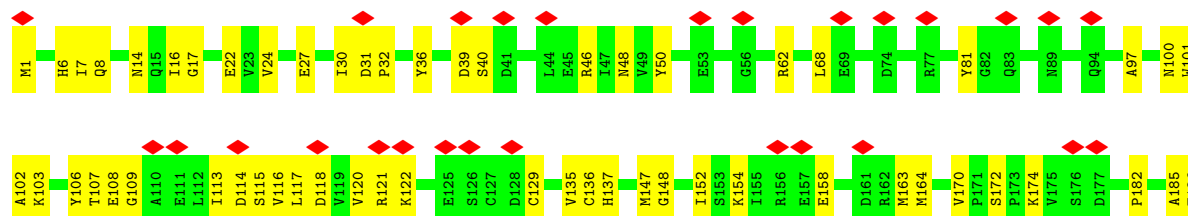
• Molecule 5: Tubulin beta

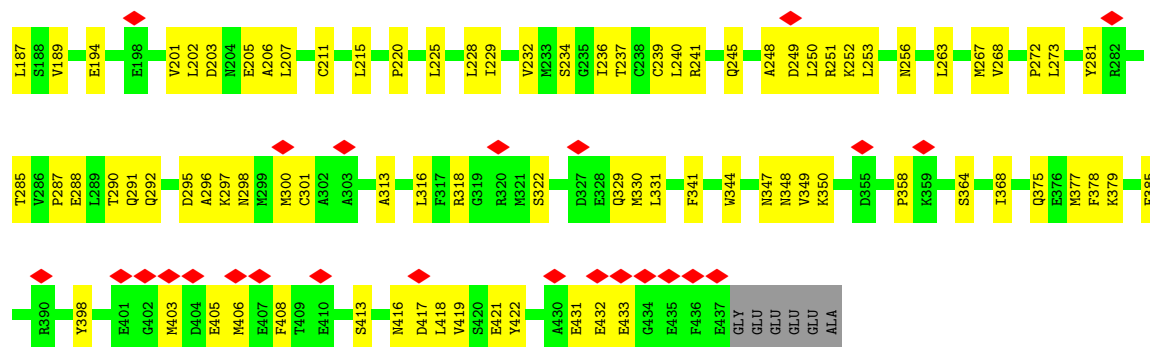


• Molecule 5: Tubulin beta



• Molecule 5: Tubulin beta



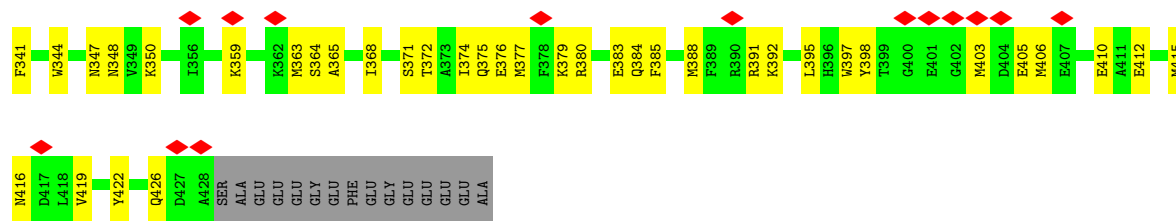


• Molecule 5: Tubulin beta

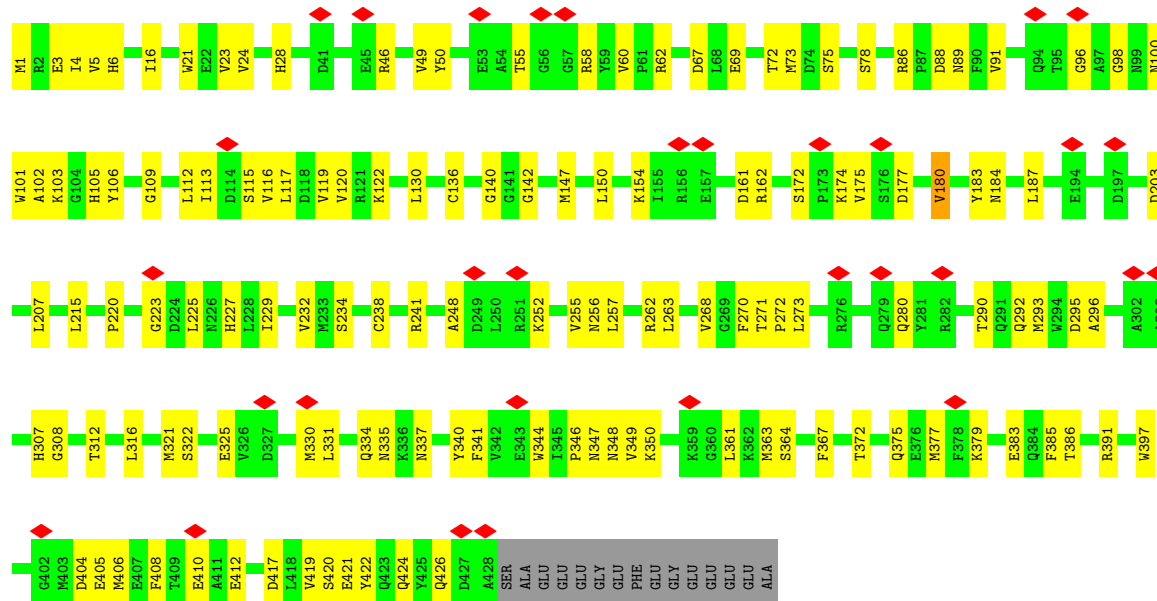


• Molecule 5: Tubulin beta

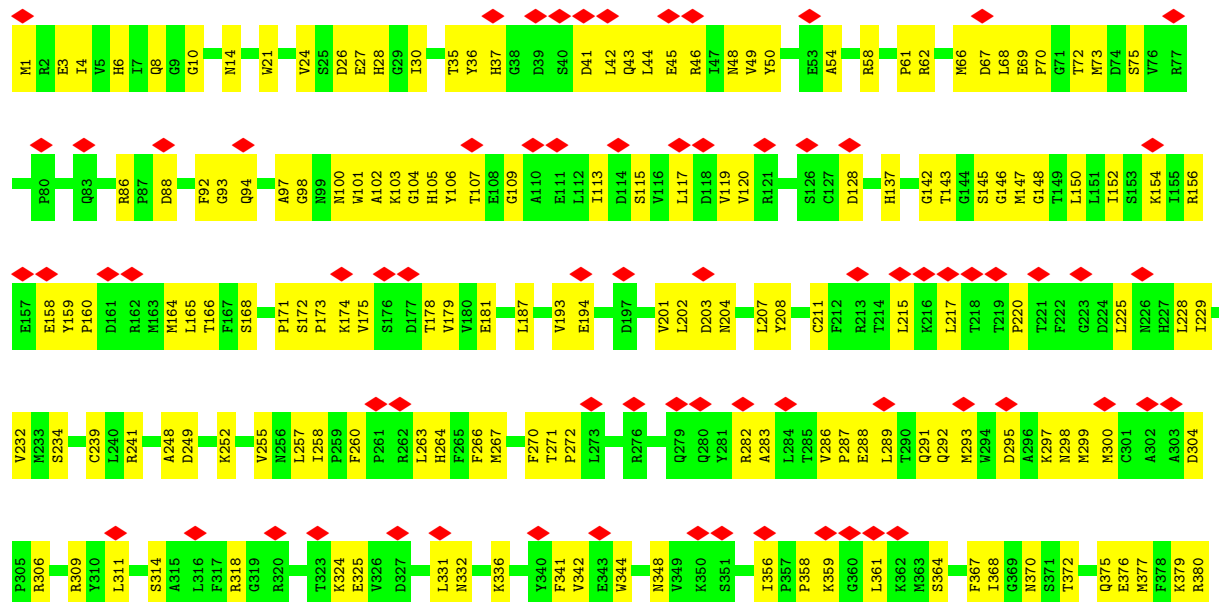


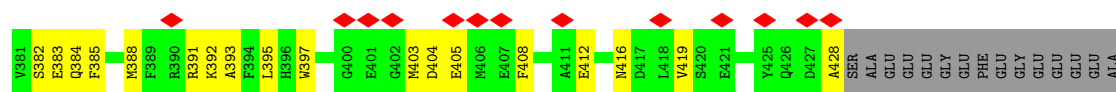


• Molecule 5: Tubulin beta

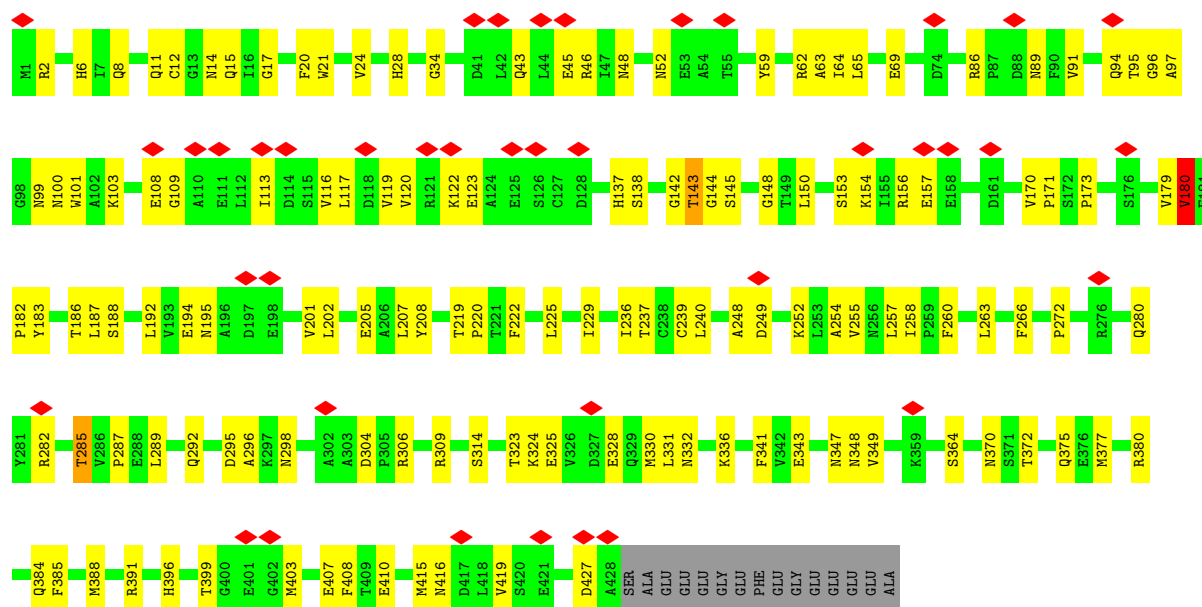


• Molecule 5: Tubulin beta

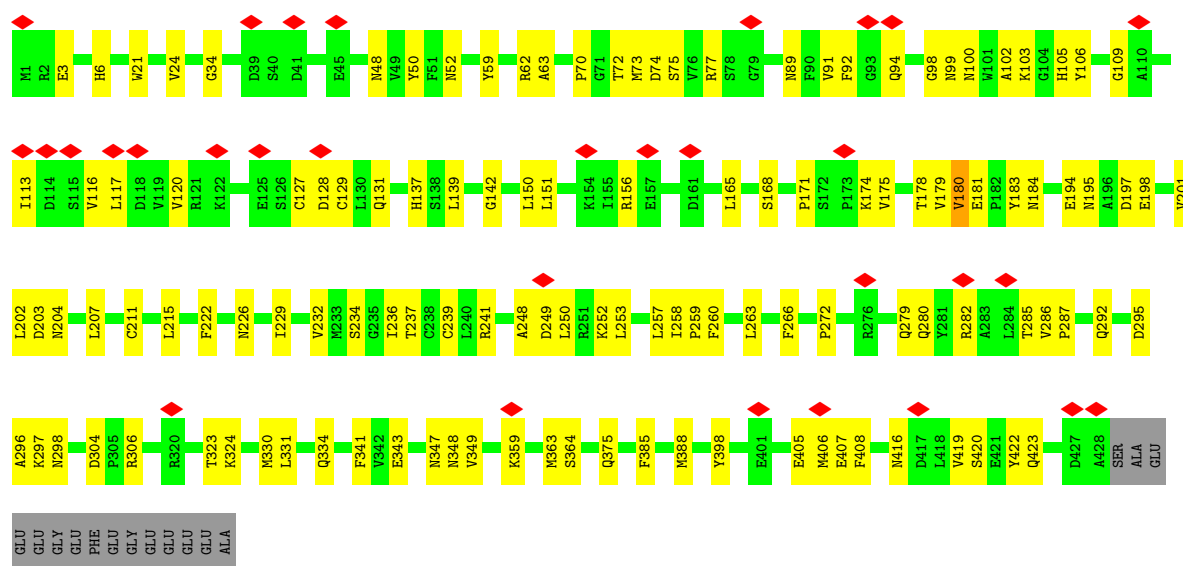




• Molecule 5: Tubulin beta

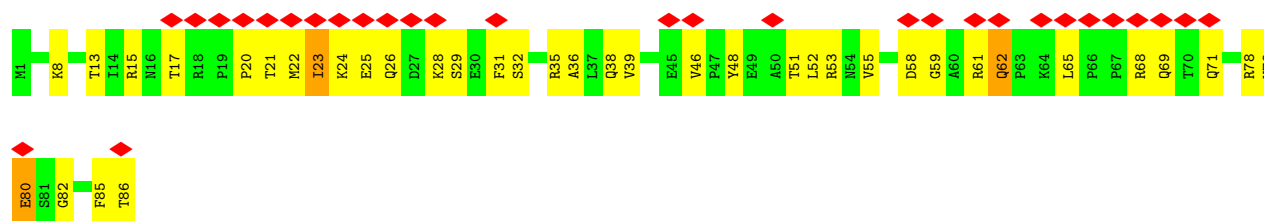


• Molecule 5: Tubulin beta

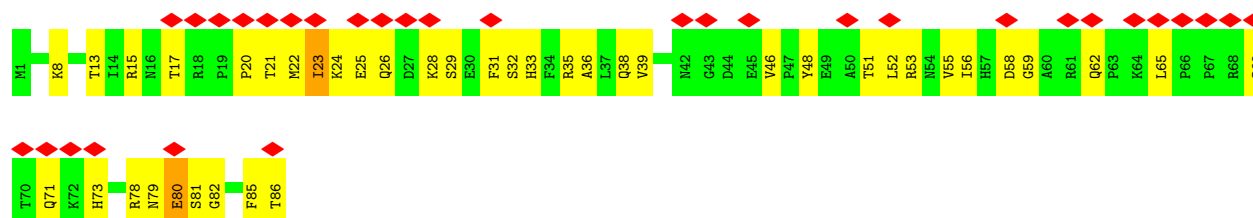


• Molecule 6: FAP276

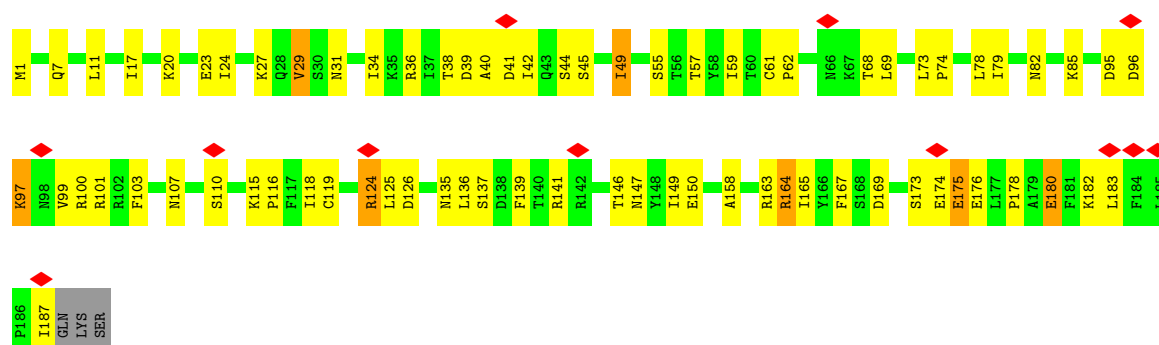




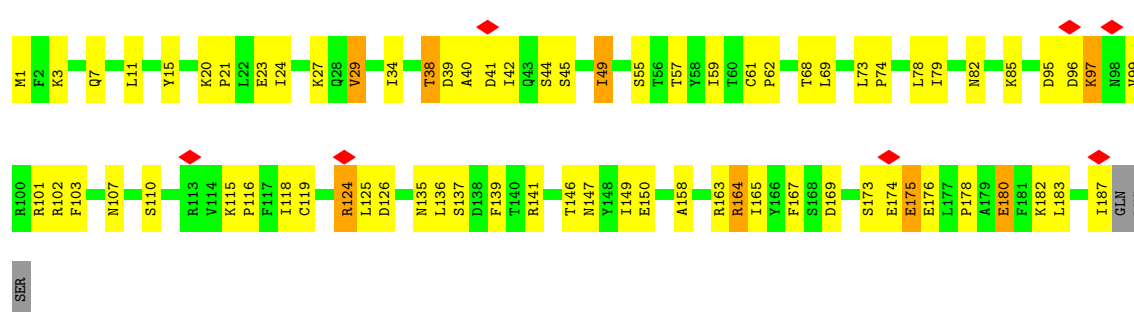
• Molecule 6: FAP276



• Molecule 7: Cilia- and flagella-associated protein 20

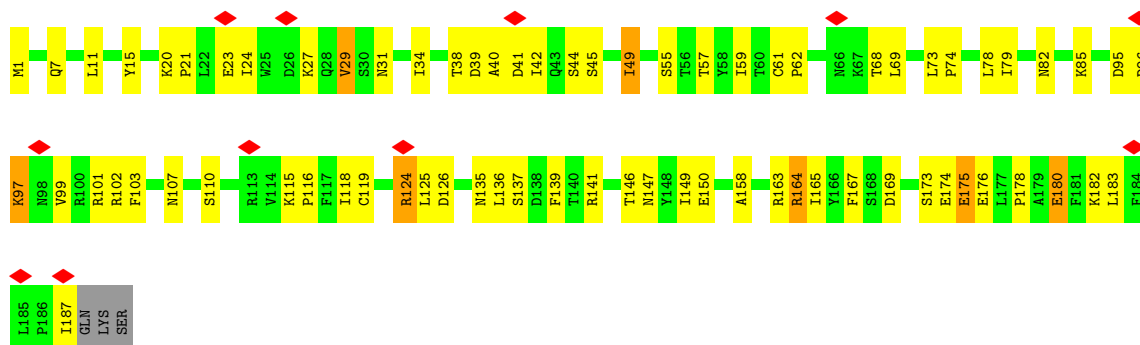


• Molecule 7: Cilia- and flagella-associated protein 20



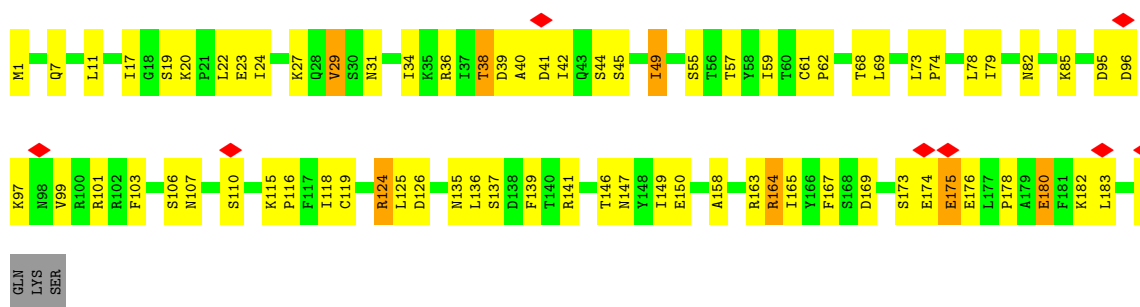
• Molecule 7: Cilia- and flagella-associated protein 20





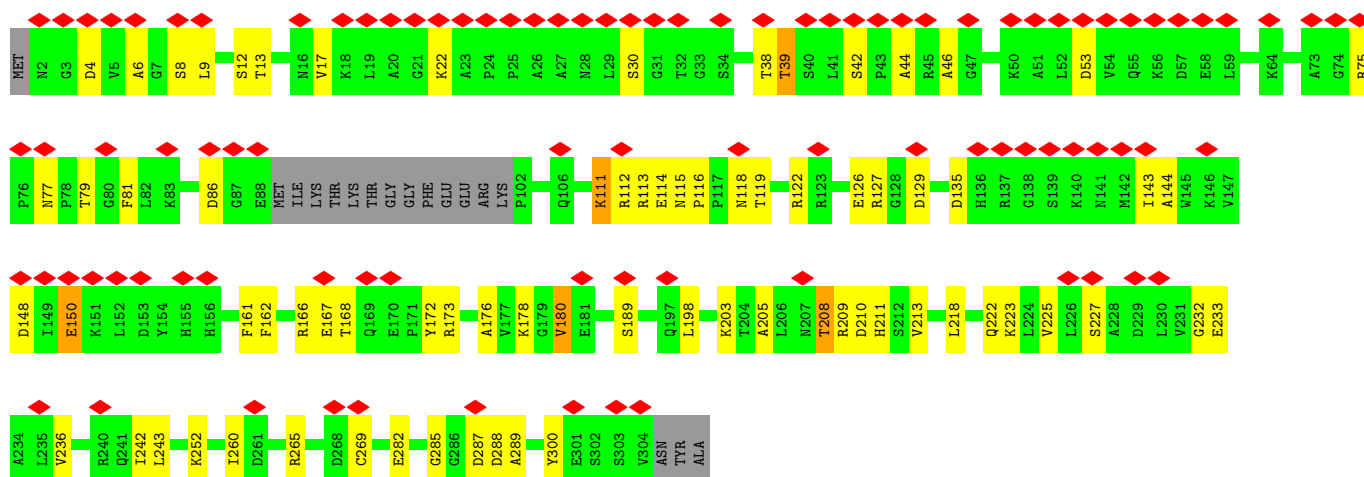
• Molecule 7: Cilia- and flagella-associated protein 20

Chain 3: 59% 36%



• Molecule 8: PACRG

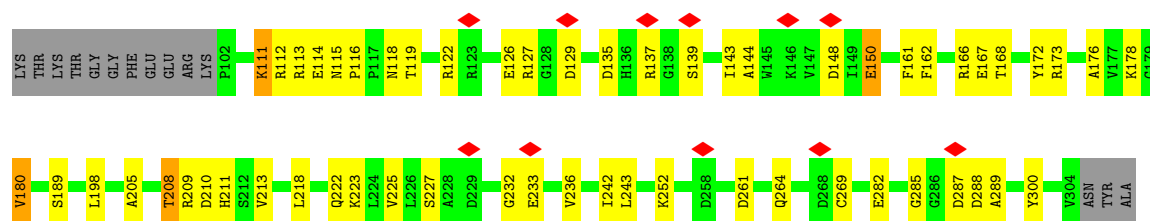
Chain d: 31% 70% 23% 6%



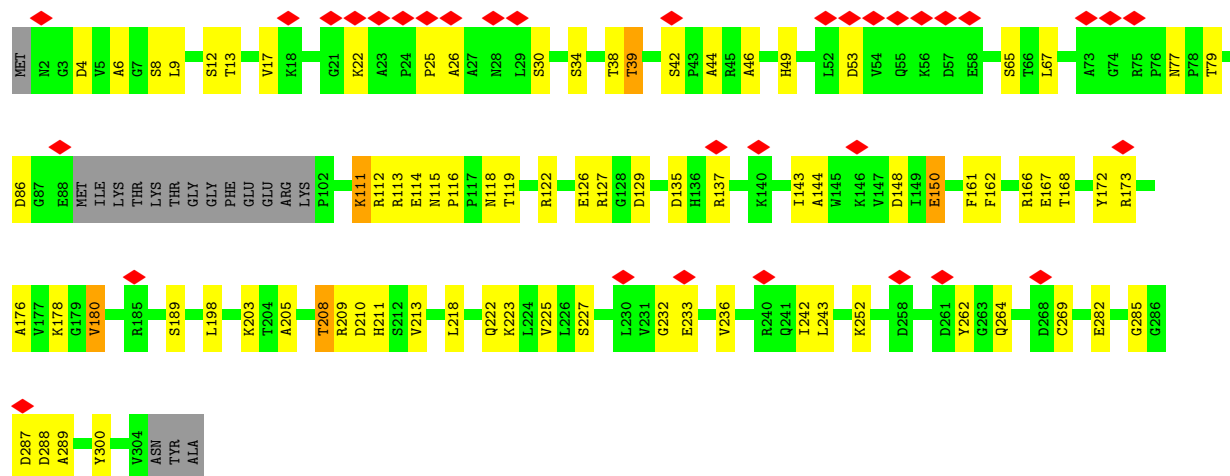
• Molecule 8: PACRG

Chain l: 10% 68% 25% 6%

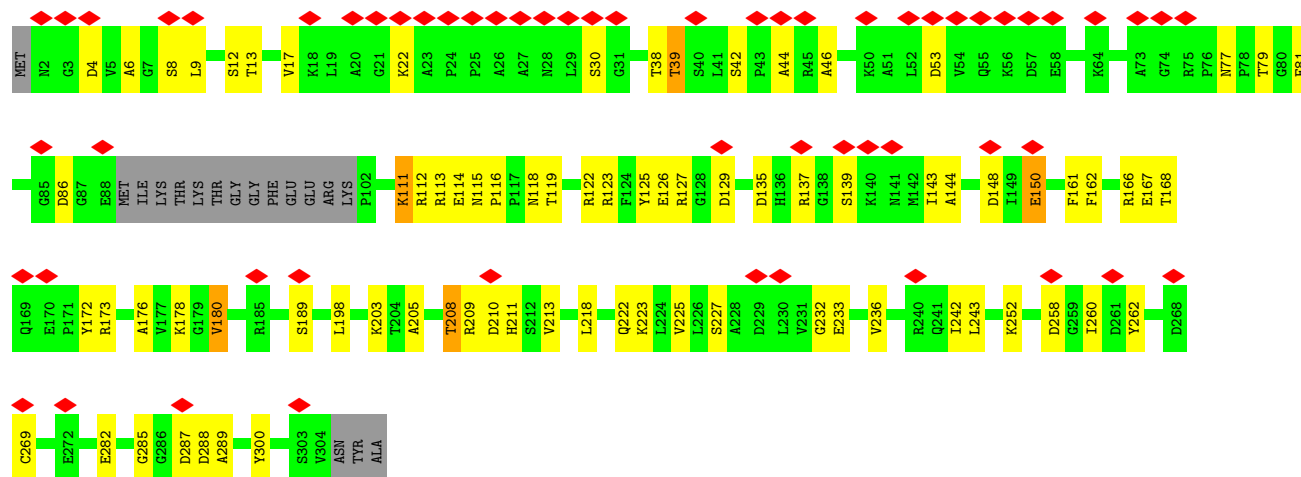




• Molecule 8: PACRG



• Molecule 8: PACRG



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	270713	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	45	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.185	Depositor
Minimum map value	-0.078	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.021	Depositor
Recommended contour level	0.04	Depositor
Map size (Å)	237.125, 204.75, 393.75	wwPDB
Map dimensions	450, 234, 271	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.875, 0.875, 0.875	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, GTP, TA1, GDP

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	0.18	0/1429	0.45	0/1933
2	B	0.22	0/4800	0.49	0/6511
2	C	0.22	0/4800	0.49	0/6511
3	0	0.20	0/3451	0.34	0/4678
3	1	0.18	0/3451	0.36	0/4678
3	5	0.25	0/3451	0.48	0/4678
3	6	0.15	0/3400	0.35	0/4609
3	7	0.17	0/3400	0.34	0/4609
3	D	0.22	0/3400	0.38	0/4609
3	E	0.27	0/3400	0.50	0/4609
3	F	0.19	0/3400	0.35	0/4609
3	G	0.20	0/3400	0.37	0/4609
3	L	0.22	0/3420	0.38	0/4636
3	M	0.23	0/3400	0.39	0/4609
3	P	0.20	0/3400	0.36	0/4609
3	S	0.21	0/3400	0.36	0/4609
3	X	0.22	0/3400	0.38	0/4609
3	Y	0.19	0/3400	0.37	0/4609
3	Z	0.19	0/3451	0.37	0/4678
3	e	0.17	0/3451	0.36	0/4678
3	f	0.22	0/3420	0.38	0/4636
3	h	0.18	0/3400	0.34	0/4609
3	k	0.24	0/3420	0.43	0/4636
3	m	0.22	0/3451	0.36	0/4678
3	o	0.21	0/3451	0.36	0/4678
3	s	0.18	0/3400	0.35	0/4609
3	y	0.22	0/3451	0.36	0/4678
4	H	0.21	0/1098	0.48	0/1490
5	4	0.17	0/3433	0.36	0/4646
5	8	0.28	0/3433	0.54	3/4646 (0.1%)
5	9	0.19	0/3433	0.35	1/4646 (0.0%)
5	I	0.22	0/3433	0.38	0/4646

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
5	J	0.19	0/3433	0.34	0/4646
5	K	0.22	0/3433	0.37	0/4646
5	N	0.19	0/3433	0.35	0/4646
5	O	0.22	0/3433	0.36	0/4646
5	Q	0.19	0/3433	0.37	0/4646
5	R	0.22	0/3433	0.38	0/4646
5	T	0.23	0/3433	0.39	0/4646
5	U	0.22	0/3433	0.38	0/4646
5	V	0.16	0/3433	0.35	0/4646
5	a	0.16	0/3433	0.33	0/4646
5	b	0.18	0/3433	0.35	0/4646
5	i	0.19	0/3433	0.35	0/4646
5	j	0.19	0/3433	0.37	0/4646
5	p	0.22	0/3505	0.35	0/4742
5	q	0.22	0/3505	0.39	2/4742 (0.0%)
5	r	0.22	0/3505	0.34	0/4742
5	t	0.23	0/3505	0.47	0/4742
5	u	0.19	0/3433	0.36	0/4646
5	v	0.17	0/3433	0.36	0/4646
5	w	0.18	0/3433	0.36	1/4646 (0.0%)
6	W	0.25	0/717	0.57	1/967 (0.1%)
6	x	0.25	0/717	0.57	1/967 (0.1%)
7	3	0.25	0/1572	0.44	0/2124
7	c	0.26	0/1572	0.44	0/2124
7	g	0.26	0/1572	0.44	0/2124
7	z	0.25	0/1572	0.44	0/2124
8	2	0.23	0/2325	0.47	1/3151 (0.0%)
8	d	0.23	0/2325	0.47	1/3151 (0.0%)
8	l	0.23	0/2325	0.47	1/3151 (0.0%)
8	n	0.23	0/2325	0.47	1/3151 (0.0%)
All	All	0.21	0/193897	0.39	13/262616 (0.0%)

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	l	111	LYS	CD-CE-NZ	6.72	133.39	111.90
8	2	111	LYS	CD-CE-NZ	6.71	133.37	111.90
8	d	111	LYS	CD-CE-NZ	6.70	133.35	111.90
8	n	111	LYS	CD-CE-NZ	6.70	133.33	111.90
5	8	180	VAL	N-CA-C	-5.88	106.68	111.91
5	q	30	ILE	CA-C-N	5.86	137.61	120.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	q	30	ILE	C-N-CA	5.86	137.61	120.97
5	w	180	VAL	N-CA-C	-5.50	107.12	112.29
5	9	180	VAL	N-CA-C	-5.25	107.23	111.91
5	8	285	THR	CA-C-N	5.16	123.49	120.24
5	8	285	THR	C-N-CA	5.16	123.49	120.24
6	x	80	GLU	N-CA-C	-5.12	108.29	114.75
6	W	80	GLU	N-CA-C	-5.12	108.29	114.75

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1391	0	1392	43	0
2	B	4707	0	4647	192	0
2	C	4707	0	4647	194	0
3	0	3379	0	3320	70	0
3	1	3379	0	3320	132	0
3	5	3379	0	3320	119	0
3	6	3329	0	3270	120	0
3	7	3329	0	3270	82	0
3	D	3329	0	3270	70	0
3	E	3329	0	3270	86	0
3	F	3329	0	3270	94	0
3	G	3329	0	3270	100	0
3	L	3349	0	3286	82	0
3	M	3329	0	3270	97	0
3	P	3329	0	3270	73	0
3	S	3329	0	3270	97	0
3	X	3329	0	3270	103	0
3	Y	3329	0	3270	139	0
3	Z	3379	0	3320	101	0
3	e	3379	0	3320	112	0
3	f	3349	0	3286	88	0
3	h	3329	0	3270	93	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	k	3349	0	3286	78	0
3	m	3379	0	3320	73	0
3	o	3379	0	3320	78	0
3	s	3329	0	3270	121	0
3	y	3379	0	3320	82	0
4	H	1069	0	1048	39	0
5	4	3359	0	3249	146	0
5	8	3359	0	3249	106	0
5	9	3359	0	3249	94	0
5	I	3359	0	3249	96	0
5	J	3359	0	3249	91	0
5	K	3359	0	3249	103	0
5	N	3359	0	3249	89	0
5	O	3359	0	3249	67	0
5	Q	3359	0	3249	77	0
5	R	3359	0	3249	78	0
5	T	3359	0	3249	89	0
5	U	3359	0	3249	82	0
5	V	3359	0	3249	132	0
5	a	3359	0	3249	99	0
5	b	3359	0	3249	113	0
5	i	3359	0	3249	113	0
5	j	3359	0	3249	97	0
5	p	3430	0	3301	90	0
5	q	3430	0	3301	93	0
5	r	3430	0	3301	94	0
5	t	3430	0	3301	99	0
5	u	3359	0	3249	96	0
5	v	3359	0	3249	113	0
5	w	3359	0	3249	101	0
6	W	701	0	697	33	0
6	x	701	0	697	36	0
7	3	1538	0	1555	48	0
7	c	1538	0	1555	45	0
7	g	1538	0	1555	50	0
7	z	1538	0	1555	45	0
8	2	2271	0	2279	42	0
8	d	2271	0	2279	35	0
8	l	2271	0	2279	46	0
8	n	2271	0	2279	41	0
9	0	32	0	11	3	0
9	1	32	0	12	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	5	32	0	11	2	0
9	6	32	0	11	4	0
9	7	32	0	11	2	0
9	D	32	0	11	1	0
9	E	32	0	11	2	0
9	F	32	0	11	2	0
9	G	32	0	11	3	0
9	L	32	0	11	1	0
9	M	32	0	11	1	0
9	P	32	0	11	2	0
9	S	32	0	11	3	0
9	X	32	0	11	1	0
9	Y	32	0	11	5	0
9	Z	32	0	11	2	0
9	e	32	0	11	1	0
9	f	32	0	11	3	0
9	h	32	0	11	3	0
9	k	32	0	11	2	0
9	m	32	0	11	2	0
9	o	32	0	11	2	0
9	s	32	0	12	1	0
9	y	32	0	11	2	0
10	0	1	0	0	0	0
10	1	1	0	0	0	0
10	5	1	0	0	0	0
10	6	1	0	0	0	0
10	7	1	0	0	0	0
10	D	1	0	0	0	0
10	E	1	0	0	0	0
10	F	1	0	0	0	0
10	G	1	0	0	0	0
10	L	1	0	0	0	0
10	M	1	0	0	0	0
10	P	1	0	0	0	0
10	S	1	0	0	0	0
10	X	1	0	0	0	0
10	Y	1	0	0	0	0
10	Z	1	0	0	0	0
10	e	1	0	0	0	0
10	f	1	0	0	0	0
10	h	1	0	0	0	0
10	k	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	m	1	0	0	0	0
10	o	1	0	0	0	0
10	p	1	0	0	0	0
10	s	1	0	0	0	0
11	4	28	0	11	2	0
11	8	28	0	11	0	0
11	9	28	0	11	1	0
11	I	28	0	11	2	0
11	J	28	0	11	2	0
11	K	28	0	11	0	0
11	N	28	0	11	1	0
11	O	28	0	11	2	0
11	Q	28	0	11	0	0
11	R	28	0	11	1	0
11	T	28	0	11	1	0
11	U	28	0	11	1	0
11	V	28	0	11	2	0
11	a	28	0	11	1	0
11	b	28	0	11	1	0
11	i	28	0	11	2	0
11	j	28	0	11	2	0
11	p	28	0	11	2	0
11	q	28	0	11	1	0
11	r	28	0	11	2	0
11	t	28	0	11	0	0
11	u	28	0	11	2	0
11	v	28	0	11	1	0
11	w	28	0	11	1	0
12	4	62	0	51	5	0
12	8	62	0	51	2	0
12	9	62	0	51	4	0
12	J	62	0	51	6	0
12	V	62	0	51	6	0
12	a	62	0	51	5	0
12	b	62	0	51	6	0
12	i	62	0	51	5	0
12	j	62	0	51	5	0
12	p	62	0	51	3	0
12	q	62	0	51	2	0
12	r	62	0	51	1	0
12	t	62	0	51	2	0
12	u	62	0	51	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	v	62	0	51	5	0
12	w	62	0	51	6	0
All	All	192224	0	186922	5133	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 14.

All (5133) 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)
3:5:288:VAL:HG21	3:5:327:ASP:HB3	1.39	1.03
3:e:288:VAL:HG21	3:e:327:ASP:HB3	1.47	0.96
5:8:8:GLN:HE21	5:8:65:LEU:HG	1.34	0.92
3:Y:288:VAL:HG21	3:Y:327:ASP:HB3	1.52	0.90
5:I:95:THR:HG21	5:I:108:GLU:HG2	1.54	0.90
5:Q:292:GLN:HG2	5:Q:298:ASN:HD21	1.33	0.90
5:w:248:ALA:HA	5:w:252:LYS:HD3	1.53	0.88
5:4:375:GLN:HB2	5:4:419:VAL:HG23	1.55	0.88
5:U:60:VAL:HG21	5:U:86:ARG:HG3	1.56	0.87
2:B:234:ALA:HB2	2:B:281:LYS:HB2	1.56	0.87
2:C:234:ALA:HB2	2:C:281:LYS:HB2	1.55	0.87
5:i:248:ALA:HA	5:i:252:LYS:HD3	1.55	0.87
3:h:214:ARG:HD2	5:8:324:LYS:HE2	1.57	0.86
1:A:2:GLN:HG2	2:C:414:GLY:HA3	1.57	0.86
5:r:58:ARG:HH12	5:8:280:GLN:HG2	1.41	0.85
5:J:100:ASN:HB2	5:J:103:LYS:HG2	1.59	0.84
2:B:127:ASN:HD22	2:B:149:PHE:HB2	1.42	0.83
2:C:127:ASN:HD22	2:C:149:PHE:HB2	1.42	0.83
5:N:66:MET:HE1	5:N:147:MET:HB3	1.60	0.83
5:q:202:LEU:HD23	5:q:229:ILE:HD12	1.59	0.82
5:w:341:PHE:HB3	5:w:348:ASN:HD21	1.42	0.82
3:1:209:ILE:HA	3:1:212:ILE:HG12	1.61	0.82
2:B:405:LYS:HD2	2:B:421:ASN:HB2	1.61	0.82
5:i:207:LEU:HD11	5:i:229:ILE:HD11	1.60	0.82
3:k:292:THR:HG21	3:k:331:SER:HB3	1.62	0.82
2:C:405:LYS:HD2	2:C:421:ASN:HB2	1.62	0.82
2:C:410:GLY:H	2:C:413:SER:HA	1.45	0.82
2:B:410:GLY:H	2:B:413:SER:HA	1.45	0.81
3:Z:145:THR:HG23	3:Z:149:LEU:HD12	1.61	0.81
5:b:272:PRO:HD3	5:b:364:SER:HA	1.63	0.81
3:1:371:VAL:HG12	3:1:373:ARG:H	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:311:LYS:H	3:P:382:THR:HG22	1.46	0.81
3:f:311:LYS:H	3:f:382:THR:HG22	1.45	0.81
6:W:68:ARG:HD3	5:i:320:ARG:HE	1.44	0.81
5:r:238:CYS:SG	5:r:318:ARG:NH1	2.54	0.81
5:8:248:ALA:HA	5:8:252:LYS:HD3	1.63	0.81
5:T:202:LEU:HD13	5:T:229:ILE:HD12	1.61	0.80
6:x:29:SER:HB2	6:x:32:SER:HB3	1.63	0.80
2:C:415:LYS:HD2	6:W:23:ILE:HA	1.62	0.80
6:W:29:SER:HB2	6:W:32:SER:HB3	1.63	0.80
5:N:48:ASN:O	5:N:62:ARG:NH1	2.15	0.80
5:t:375:GLN:HB2	5:t:419:VAL:HG23	1.64	0.80
5:4:248:ALA:HA	5:4:252:LYS:HD3	1.62	0.80
5:t:292:GLN:HG2	5:t:298:ASN:HD21	1.47	0.80
3:f:384:ILE:HD12	3:f:387:ILE:HD13	1.63	0.79
5:v:102:ALA:O	5:v:106:TYR:N	2.15	0.79
5:J:248:ALA:HA	5:J:252:LYS:HD3	1.65	0.79
6:x:23:ILE:HD12	6:x:25:GLU:H	1.47	0.79
6:W:23:ILE:HD12	6:W:25:GLU:H	1.47	0.79
4:H:55:VAL:HG22	4:H:61:LEU:HA	1.65	0.78
5:V:102:ALA:O	5:V:106:TYR:N	2.15	0.78
3:X:324:VAL:HG11	5:u:219:THR:HB	1.66	0.78
5:J:341:PHE:HB3	5:J:348:ASN:HD21	1.49	0.78
5:q:248:ALA:HA	5:q:252:LYS:HD3	1.65	0.78
6:x:82:GLY:HA3	3:6:94:SER:HB3	1.66	0.78
3:5:51:THR:HG21	3:5:243:ARG:HB3	1.66	0.78
4:H:60:HIS:NE2	3:k:431:ASP:OD1	2.15	0.78
5:i:23:VAL:HG22	12:i:502:TA1:H321	1.66	0.78
3:e:371:VAL:HG12	3:e:373:ARG:H	1.47	0.78
5:T:292:GLN:HG2	5:T:298:ASN:HD21	1.49	0.77
5:i:122:LYS:HZ1	8:l:264:GLN:HB3	1.47	0.77
5:b:248:ALA:HA	5:b:252:LYS:HD3	1.66	0.77
3:1:288:VAL:HG21	3:1:327:ASP:HB3	1.64	0.77
3:F:338:LYS:HZ2	3:F:340:THR:H	1.30	0.77
3:6:392:ASP:HA	3:6:422:ARG:HH12	1.48	0.77
5:b:234:SER:O	5:b:241:ARG:NH2	2.18	0.77
3:o:338:LYS:HZ2	3:o:340:THR:H	1.32	0.76
3:f:75:VAL:HG21	3:f:94:SER:HB2	1.67	0.76
5:R:163:MET:HE1	5:R:251:ARG:HA	1.67	0.76
5:8:100:ASN:HB2	5:8:103:LYS:HG2	1.67	0.76
5:v:23:VAL:HG22	12:v:502:TA1:H321	1.65	0.76
3:7:51:THR:HG21	3:7:243:ARG:HB3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4:GLU:HG2	2:C:396:ALA:HB2	1.68	0.76
3:6:335:ILE:HG22	3:6:341:ILE:HD13	1.66	0.76
5:8:377:MET:SD	5:8:380:ARG:NH2	2.59	0.76
5:J:49:VAL:HG11	5:J:241:ARG:HG2	1.67	0.76
3:M:311:LYS:H	3:M:382:THR:HG22	1.51	0.76
5:Q:242:PHE:HB3	5:Q:356:ILE:HD13	1.66	0.76
3:Z:246:GLY:HA3	3:Z:356:ASN:HA	1.68	0.76
3:S:336:LYS:O	3:S:339:ARG:NH2	2.19	0.75
3:Z:326:LYS:NZ	3:Z:327:ASP:OD1	2.20	0.75
2:C:381:PRO:HD2	6:W:59:GLY:HA3	1.66	0.75
3:X:1:MET:HE1	5:u:70:PRO:HG2	1.69	0.75
3:o:311:LYS:H	3:o:382:THR:HG22	1.51	0.75
3:1:204:LEU:HD13	3:1:209:ILE:HD11	1.69	0.75
3:1:326:LYS:NZ	3:1:327:ASP:OD1	2.20	0.75
5:I:242:PHE:HB3	5:I:356:ILE:HD13	1.68	0.75
3:L:326:LYS:HD2	5:T:220:PRO:HD2	1.69	0.74
8:d:265:ARG:NH2	5:j:88:ASP:OD1	2.19	0.74
3:e:399:TYR:O	3:e:402:ARG:NH1	2.18	0.74
5:r:248:ALA:HA	5:r:252:LYS:HD3	1.68	0.74
3:7:70:LEU:HB3	3:7:98:ASP:HA	1.68	0.74
5:9:100:ASN:HB2	5:9:103:LYS:HG2	1.69	0.74
3:E:26:LEU:HD21	3:E:363:VAL:HG12	1.69	0.74
1:A:49:MET:H	5:R:337:ASN:HD22	1.31	0.74
5:Q:215:LEU:HB3	5:Q:217:LEU:HD23	1.68	0.74
3:Z:288:VAL:HG21	3:Z:327:ASP:HB3	1.69	0.74
3:1:54:SER:OG	3:1:64:ARG:NH2	2.21	0.74
5:j:334:GLN:HE22	5:j:347:ASN:HA	1.50	0.74
5:v:334:GLN:HE22	5:v:347:ASN:HA	1.53	0.74
5:9:131:GLN:NE2	5:9:249:ASP:OD1	2.21	0.74
2:B:412:GLN:O	6:x:53:ARG:NH1	2.20	0.74
3:e:217:LEU:HD21	3:e:367:ASP:HB3	1.68	0.73
5:t:202:LEU:HD13	5:t:229:ILE:HD12	1.70	0.73
3:X:326:LYS:HD2	5:u:220:PRO:HD2	1.68	0.73
5:w:391:ARG:HG2	3:5:346:TRP:CD1	2.23	0.73
5:V:234:SER:O	5:V:241:ARG:NH2	2.22	0.73
5:q:292:GLN:HG2	5:q:298:ASN:HD21	1.52	0.73
5:4:102:ALA:O	5:4:106:TYR:N	2.21	0.73
3:5:75:VAL:HG21	3:5:94:SER:HB2	1.70	0.73
5:U:248:ALA:HA	5:U:252:LYS:HD3	1.69	0.73
5:a:341:PHE:HB3	5:a:348:ASN:HD21	1.54	0.73
5:t:7:ILE:HB	5:t:135:VAL:HG23	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:5:392:ASP:O	3:5:422:ARG:NH1	2.22	0.73
3:E:363:VAL:HG23	3:E:366:GLY:HA3	1.70	0.73
5:N:323:THR:HG22	3:f:223:THR:HA	1.71	0.73
3:0:292:THR:HG21	3:0:331:SER:HB3	1.71	0.73
5:8:113:ILE:HA	5:8:116:VAL:HG22	1.69	0.73
3:G:326:LYS:NZ	3:G:327:ASP:OD1	2.20	0.72
3:P:319:TYR:HD2	3:P:323:VAL:HG11	1.54	0.72
5:O:248:ALA:HA	5:O:252:LYS:HD3	1.71	0.72
5:w:91:VAL:HG21	5:w:116:VAL:HG22	1.71	0.72
5:9:341:PHE:HB3	5:9:348:ASN:HD21	1.53	0.72
3:D:254:GLU:HG2	5:U:98:GLY:HA2	1.70	0.72
3:F:176:GLN:HB3	5:J:331:LEU:HD11	1.71	0.72
3:h:75:VAL:HG21	3:h:94:SER:HB2	1.71	0.72
5:r:285:THR:OG1	5:r:288:GLU:OE2	2.08	0.72
5:v:375:GLN:HB2	5:v:419:VAL:HG23	1.71	0.72
3:6:217:LEU:HD21	3:6:367:ASP:HB3	1.70	0.72
3:7:289:ALA:O	3:7:293:ASN:ND2	2.23	0.72
3:L:135:PHE:HB2	3:L:166:LYS:HG3	1.71	0.72
3:Y:292:THR:HG21	3:Y:331:SER:HB3	1.70	0.72
3:o:176:GLN:HB3	5:t:331:LEU:HD11	1.70	0.72
5:b:102:ALA:O	5:b:106:TYR:N	2.23	0.72
7:3:74:PRO:HD2	7:3:169:ASP:HA	1.71	0.72
3:G:65:CYS:SG	3:G:66:ILE:N	2.63	0.72
5:K:248:ALA:HA	5:K:252:LYS:HD3	1.71	0.72
3:h:178:SER:HB2	5:8:347:ASN:HD22	1.55	0.72
7:c:74:PRO:HD2	7:c:169:ASP:HA	1.72	0.72
5:r:60:VAL:HG21	5:r:86:ARG:HG3	1.72	0.72
3:s:399:TYR:O	3:s:402:ARG:NH1	2.22	0.72
5:K:322:SER:HA	3:L:223:THR:HG22	1.71	0.71
3:S:311:LYS:H	3:S:382:THR:HG22	1.55	0.71
5:v:99:ASN:HA	5:v:142:GLY:HA3	1.72	0.71
5:8:8:GLN:NE2	5:8:65:LEU:HG	2.05	0.71
5:N:204:ASN:HA	5:N:207:LEU:HB2	1.69	0.71
3:h:34:GLY:HA3	3:h:60:LYS:HG3	1.72	0.71
5:v:272:PRO:HD3	5:v:364:SER:HA	1.72	0.71
5:u:248:ALA:HA	5:u:252:LYS:HD3	1.72	0.71
3:Y:96:LYS:HE2	5:b:129:CYS:HB2	1.72	0.71
7:g:74:PRO:HD2	7:g:169:ASP:HA	1.72	0.71
8:l:127:ARG:NH1	8:l:129:ASP:OD2	2.23	0.71
8:n:127:ARG:NH1	8:n:129:ASP:OD2	2.23	0.71
7:z:74:PRO:HD2	7:z:169:ASP:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:U:202:LEU:HD23	5:U:229:ILE:HD12	1.72	0.71
5:4:341:PHE:HB3	5:4:348:ASN:HD21	1.55	0.71
5:8:186:THR:HG22	5:8:415:MET:HE1	1.71	0.71
3:D:325:PRO:O	3:D:329:ASN:ND2	2.24	0.71
3:m:276:ILE:HD12	3:m:281:ALA:HA	1.73	0.71
3:M:336:LYS:O	3:M:339:ARG:NH2	2.24	0.71
5:b:1:MET:HB3	5:b:129:CYS:HB3	1.71	0.71
8:2:127:ARG:NH1	8:2:129:ASP:OD2	2.23	0.71
5:8:207:LEU:HD11	5:8:229:ILE:HD11	1.72	0.71
3:X:51:THR:HG21	3:X:243:ARG:HB3	1.73	0.71
8:d:127:ARG:NH1	8:d:129:ASP:OD2	2.23	0.71
2:B:415:LYS:HD2	6:x:23:ILE:HA	1.72	0.71
3:F:178:SER:HB2	5:J:347:ASN:HD22	1.55	0.71
5:N:292:GLN:HG2	5:N:298:ASN:HD21	1.55	0.71
5:O:202:LEU:HD13	5:O:229:ILE:HD12	1.71	0.71
5:O:48:ASN:O	5:O:62:ARG:NH2	2.23	0.70
5:a:68:LEU:HA	5:a:93:GLY:H	1.56	0.70
8:l:67:LEU:HD21	5:q:291:GLN:HG2	1.72	0.70
5:a:48:ASN:O	5:a:62:ARG:NH2	2.24	0.70
5:Q:202:LEU:HD13	5:Q:229:ILE:HD12	1.73	0.70
1:A:40:GLN:HE21	1:A:42:LYS:HB2	1.56	0.70
3:F:371:VAL:HG12	3:F:373:ARG:H	1.55	0.70
5:R:248:ALA:HA	5:R:252:LYS:HD3	1.74	0.70
5:V:267:MET:HG3	5:V:301:CYS:HB3	1.74	0.70
3:5:240:ALA:HB1	3:5:356:ASN:ND2	2.06	0.70
5:K:121:ARG:HH21	5:K:158:GLU:HG2	1.55	0.70
5:b:24:VAL:HG11	5:b:50:TYR:HD2	1.56	0.70
3:F:139:ASN:HB3	3:F:170:THR:HG22	1.73	0.70
5:j:50:TYR:OH	5:j:237:THR:OG1	2.08	0.70
7:c:34:ILE:HG23	7:c:49:ILE:HG22	1.72	0.70
3:O:399:TYR:O	3:O:402:ARG:NH1	2.23	0.70
7:3:34:ILE:HG23	7:3:49:ILE:HG22	1.72	0.70
7:3:149:ILE:HG22	7:3:150:GLU:HG2	1.73	0.70
3:P:146:GLY:N	9:P:501:GTP:O2B	2.24	0.70
5:Q:372:THR:HG21	5:Q:426:GLN:HB2	1.72	0.70
7:c:149:ILE:HG22	7:c:150:GLU:HG2	1.73	0.70
2:B:471:PRO:HD2	2:B:489:SER:HB3	1.73	0.70
5:j:234:SER:O	5:j:241:ARG:NH2	2.25	0.70
3:k:288:VAL:HG11	3:k:327:ASP:HB3	1.71	0.70
2:C:471:PRO:HD2	2:C:489:SER:HB3	1.73	0.70
3:G:288:VAL:HG21	3:G:327:ASP:HB3	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:71:GLU:HG3	3:M:98:ASP:HB3	1.73	0.70
6:W:24:LYS:HD3	6:W:55:VAL:HG13	1.74	0.69
7:g:34:ILE:HG23	7:g:49:ILE:HG22	1.72	0.69
5:v:234:SER:O	5:v:241:ARG:NH2	2.25	0.69
6:x:24:LYS:HD3	6:x:55:VAL:HG13	1.74	0.69
7:z:149:ILE:HG22	7:z:150:GLU:HG2	1.73	0.69
3:1:326:LYS:HD3	5:4:220:PRO:HD2	1.74	0.69
7:g:149:ILE:HG22	7:g:150:GLU:HG2	1.73	0.69
5:j:102:ALA:O	5:j:106:TYR:N	2.24	0.69
7:z:34:ILE:HG23	7:z:49:ILE:HG22	1.72	0.69
8:d:39:THR:HG21	8:d:122:ARG:HD3	1.74	0.69
3:s:215:ARG:NH2	3:s:300:SER:HA	2.08	0.69
5:u:23:VAL:HG22	12:u:502:TA1:H321	1.73	0.69
5:u:125:GLU:HG3	7:3:17:ILE:HG12	1.75	0.69
5:i:69:GLU:HG2	5:i:96:GLY:HA2	1.73	0.69
8:2:39:THR:HG21	8:2:122:ARG:HD3	1.74	0.69
5:T:380:ARG:O	5:T:383:GLU:HG2	1.93	0.69
3:X:183:GLU:HG3	3:X:184:PRO:HD3	1.75	0.69
3:D:326:LYS:HD2	5:U:220:PRO:HD2	1.73	0.69
5:N:331:LEU:HD11	3:f:176:GLN:HB3	1.72	0.69
5:j:272:PRO:HD3	5:j:364:SER:HA	1.73	0.69
5:4:266:PHE:HB3	5:4:368:ILE:HD11	1.72	0.69
3:S:339:ARG:O	3:S:342:GLN:NE2	2.26	0.69
5:V:292:GLN:O	5:V:298:ASN:ND2	2.24	0.69
5:i:330:MET:HB3	5:i:349:VAL:HG21	1.74	0.69
5:j:67:ASP:HB3	5:j:73:MET:HE3	1.75	0.69
5:r:324:LYS:HE2	3:0:214:ARG:HH22	1.57	0.69
5:w:330:MET:HB3	5:w:349:VAL:HG21	1.72	0.69
2:B:69:ARG:NH2	2:B:89:ASP:OD1	2.26	0.69
2:C:69:ARG:NH2	2:C:89:ASP:OD1	2.26	0.69
5:I:60:VAL:HG21	5:I:86:ARG:HG3	1.74	0.69
5:K:156:ARG:NH2	5:K:197:ASP:OD1	2.26	0.69
5:N:306:ARG:NH1	5:N:340:TYR:OH	2.26	0.69
5:R:179:VAL:HB	3:f:258:ASN:HB2	1.75	0.69
3:S:192:HIS:ND1	3:S:424:ASP:OD2	2.26	0.69
3:X:258:ASN:HB2	5:u:179:VAL:HB	1.75	0.69
5:b:391:ARG:O	3:e:262:TYR:OH	2.11	0.69
8:l:39:THR:HG21	8:l:122:ARG:HD3	1.74	0.69
3:m:348:PRO:HD2	5:p:388:MET:HE3	1.75	0.69
3:o:220:GLU:HG2	3:o:221:ARG:HG2	1.75	0.69
3:1:212:ILE:HD13	3:1:215:ARG:HH12	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:265:ILE:HG22	3:S:380:ASN:HD21	1.58	0.69
5:V:317:PHE:HB3	5:V:321:MET:HE1	1.73	0.69
5:V:375:GLN:HB2	5:V:419:VAL:HG23	1.75	0.69
8:n:39:THR:HG21	8:n:122:ARG:HD3	1.74	0.69
3:6:203:MET:HE1	3:6:267:PHE:HB3	1.74	0.69
3:D:311:LYS:H	3:D:382:THR:HG22	1.58	0.68
3:Z:163:LYS:HB3	8:l:137:ARG:HB2	1.75	0.68
5:r:49:VAL:HG11	5:r:241:ARG:HG2	1.74	0.68
3:F:64:ARG:NH1	3:F:129:CYS:SG	2.66	0.68
3:Y:298:PRO:HG3	3:Y:308:ARG:HE	1.58	0.68
5:v:292:GLN:O	5:v:298:ASN:ND2	2.27	0.68
3:M:188:VAL:HG13	3:M:425:LEU:HD11	1.76	0.68
3:Z:254:GLU:HB3	5:i:98:GLY:HA2	1.74	0.68
3:s:212:ILE:HG12	3:s:215:ARG:HH22	1.59	0.68
5:4:46:ARG:NH2	3:6:76:ASP:OD2	2.26	0.68
3:6:288:VAL:HG11	3:6:327:ASP:HB3	1.73	0.68
5:N:347:ASN:HD22	3:f:178:SER:HB2	1.57	0.68
5:Q:137:HIS:HE1	5:Q:152:ILE:HD11	1.57	0.68
5:u:359:LYS:HD3	12:u:502:TA1:H421	1.76	0.68
3:7:349:THR:HG22	3:7:350:GLY:H	1.57	0.68
5:9:260:PHE:HB2	5:9:263:LEU:HD13	1.76	0.68
8:n:137:ARG:HB2	3:5:163:LYS:HB3	1.74	0.68
5:J:207:LEU:HD11	5:J:229:ILE:HD11	1.76	0.68
3:D:145:THR:HG23	3:D:149:LEU:HD12	1.76	0.68
5:b:27:GLU:OE1	5:b:241:ARG:NH1	2.26	0.68
5:N:248:ALA:HA	5:N:252:LYS:HD3	1.74	0.68
5:T:52:ASN:OD1	5:T:62:ARG:NH2	2.27	0.68
3:m:292:THR:HG21	3:m:331:SER:HB3	1.75	0.68
3:0:311:LYS:H	3:0:382:THR:HG22	1.57	0.68
5:b:375:GLN:HB2	5:b:419:VAL:HG23	1.76	0.68
3:s:199:ASP:HB3	3:s:256:GLN:HE22	1.57	0.68
5:O:323:THR:HG22	3:P:223:THR:HA	1.76	0.68
5:Q:211:CYS:HA	5:Q:215:LEU:HB2	1.76	0.68
5:r:137:HIS:HE1	5:r:148:GLY:HA3	1.59	0.68
2:B:213:THR:HG22	2:B:215:THR:H	1.59	0.67
2:C:213:THR:HG22	2:C:215:THR:H	1.60	0.67
5:J:52:ASN:OD1	5:J:62:ARG:NH1	2.27	0.67
3:M:12:ALA:HB3	3:M:140:ALA:HB2	1.76	0.67
7:g:149:ILE:HG13	8:2:123:ARG:HH12	1.59	0.67
5:i:102:ALA:O	5:i:106:TYR:N	2.26	0.67
3:o:12:ALA:HB3	3:o:140:ALA:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:5:254:GLU:OE1	3:5:258:ASN:ND2	2.28	0.67
5:K:107:THR:OG1	5:K:108:GLU:OE2	2.12	0.67
5:u:102:ALA:O	5:u:106:TYR:N	2.25	0.67
3:Z:72:PRO:HB2	5:j:46:ARG:HH22	1.59	0.67
5:a:60:VAL:HG21	5:a:86:ARG:HG3	1.75	0.67
2:B:195:ARG:HD2	2:B:213:THR:HG21	1.76	0.67
3:D:71:GLU:HG3	3:D:98:ASP:HB3	1.76	0.67
3:M:271:SER:OG	3:M:301:MET:SD	2.51	0.67
5:O:161:ASP:OD2	5:O:162:ARG:NH1	2.27	0.67
5:R:165:LEU:HD11	5:R:200:MET:HE1	1.76	0.67
5:q:62:ARG:NH1	5:q:127:CYS:SG	2.68	0.67
5:9:74:ASP:OD1	5:9:77:ARG:NH2	2.28	0.67
5:b:51:PHE:O	5:b:62:ARG:NH2	2.28	0.67
5:r:48:ASN:O	5:r:62:ARG:NH2	2.28	0.67
6:x:20:PRO:O	6:x:23:ILE:HG23	1.94	0.67
5:4:272:PRO:HD3	5:4:364:SER:HA	1.75	0.67
3:6:311:LYS:HG3	3:6:342:GLN:HB3	1.77	0.67
5:9:48:ASN:O	5:9:62:ARG:NH2	2.27	0.67
5:9:279:GLN:NE2	12:9:502:TA1:O07	2.28	0.67
2:C:195:ARG:HD2	2:C:213:THR:HG21	1.76	0.67
3:E:19:ALA:HA	3:E:22:GLU:HG2	1.75	0.67
5:J:7:ILE:HB	5:J:135:VAL:HG12	1.76	0.67
3:L:220:GLU:O	3:L:221:ARG:NH1	2.27	0.67
3:S:12:ALA:HB3	3:S:140:ALA:HB2	1.77	0.67
8:n:67:LEU:HD21	5:r:291:GLN:HG2	1.77	0.67
5:w:174:LYS:HG3	5:w:175:VAL:HG23	1.75	0.67
5:w:334:GLN:HE22	5:w:347:ASN:HA	1.58	0.67
1:A:189:TRP:HB3	1:A:222:ILE:HG21	1.76	0.67
2:B:150:THR:HA	2:B:167:GLY:HA3	1.75	0.67
3:D:46:ASP:OD1	3:D:47:ASP:N	2.28	0.67
5:V:248:ALA:HA	5:V:252:LYS:HD3	1.76	0.67
2:B:84:ASP:OD2	2:B:98:ARG:NH1	2.28	0.67
2:C:150:THR:HA	2:C:167:GLY:HA3	1.75	0.67
3:G:176:GLN:HB3	5:9:331:LEU:HD11	1.75	0.67
3:P:337:THR:O	3:P:339:ARG:NH1	2.24	0.67
6:W:20:PRO:O	6:W:23:ILE:HG23	1.94	0.67
5:i:5:VAL:HG23	5:i:62:ARG:HG2	1.76	0.67
5:4:24:VAL:HG11	5:4:50:TYR:CD2	2.29	0.67
5:8:257:LEU:HD11	5:8:314:SER:OG	1.94	0.67
2:C:84:ASP:OD2	2:C:98:ARG:NH1	2.28	0.67
5:I:301:CYS:HB2	5:I:377:MET:HE1	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:b:341:PHE:HB3	5:b:348:ASN:HD21	1.58	0.67
5:j:304:ASP:OD1	5:j:306:ARG:NE	2.27	0.67
5:N:91:VAL:HG11	5:N:116:VAL:HG22	1.78	0.66
5:U:323:THR:HG22	3:k:223:THR:HA	1.77	0.66
5:p:341:PHE:HB3	5:p:348:ASN:HD21	1.61	0.66
3:D:12:ALA:HB3	3:D:140:ALA:HB2	1.77	0.66
3:m:176:GLN:HB3	5:q:331:LEU:HD11	1.77	0.66
5:r:173:PRO:HD2	5:r:205:GLU:HG3	1.76	0.66
5:4:24:VAL:HG11	5:4:50:TYR:HD2	1.60	0.66
3:5:395:PHE:HZ	3:5:418:PHE:HB3	1.59	0.66
5:K:289:LEU:HD23	5:K:365:ALA:HB2	1.76	0.66
3:Y:326:LYS:HE2	5:v:220:PRO:HD2	1.78	0.66
5:v:375:GLN:NE2	5:v:426:GLN:OE1	2.28	0.66
5:w:334:GLN:NE2	5:w:346:PRO:O	2.28	0.66
3:5:167:LEU:HG	3:5:200:VAL:HB	1.77	0.66
3:F:392:ASP:HA	3:F:422:ARG:HH12	1.60	0.66
5:U:292:GLN:O	5:U:298:ASN:ND2	2.29	0.66
3:h:176:GLN:HB3	5:8:331:LEU:HD11	1.78	0.66
5:t:285:THR:HB	5:t:287:PRO:HD2	1.77	0.66
3:7:396:ASP:OD2	3:7:422:ARG:NH2	2.28	0.66
2:B:353:SER:OG	2:B:606:ASP:N	2.28	0.66
3:P:399:TYR:O	3:P:402:ARG:NH1	2.28	0.66
5:V:8:GLN:HE21	5:V:14:ASN:HA	1.60	0.66
5:r:292:GLN:HG2	5:r:298:ASN:HD21	1.59	0.66
5:v:165:LEU:HD11	5:v:200:MET:HE2	1.77	0.66
1:A:6:VAL:HA	2:C:411:PRO:HB3	1.78	0.66
2:C:353:SER:OG	2:C:606:ASP:N	2.28	0.66
3:M:339:ARG:O	3:M:342:GLN:NE2	2.28	0.66
3:Y:146:GLY:N	9:Y:501:GTP:O2B	2.26	0.66
3:Z:183:GLU:HG3	3:Z:184:PRO:HD3	1.76	0.66
5:w:86:ARG:NH1	5:w:89:ASN:OD1	2.29	0.66
3:1:70:LEU:HB3	3:1:98:ASP:HA	1.77	0.66
4:H:8:GLU:HG3	5:O:304:ASP:H	1.61	0.66
3:P:214:ARG:NH1	3:P:220:GLU:OE1	2.28	0.66
6:x:23:ILE:HD12	6:x:25:GLU:N	2.09	0.66
6:W:23:ILE:HD12	6:W:25:GLU:N	2.09	0.65
5:i:140:GLY:O	5:i:184:ASN:ND2	2.19	0.65
5:w:375:GLN:HB2	5:w:419:VAL:HG23	1.77	0.65
5:J:69:GLU:OE2	5:J:97:ALA:N	2.28	0.65
3:k:177:VAL:N	3:k:207:GLU:OE2	2.25	0.65
5:v:55:THR:O	5:v:58:ARG:NH1	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:V:375:GLN:NE2	5:V:426:GLN:OE1	2.27	0.65
3:X:90:GLU:OE1	3:X:121:ARG:NH1	2.29	0.65
3:Z:346:TRP:CD1	5:i:391:ARG:HG2	2.32	0.65
3:f:12:ALA:HA	3:f:15:GLN:HB2	1.78	0.65
5:a:7:ILE:HB	5:a:135:VAL:HG23	1.76	0.65
3:e:392:ASP:HA	3:e:422:ARG:HH12	1.61	0.65
3:h:27:GLU:HG3	3:h:361:THR:HG21	1.78	0.65
3:y:195:LEU:HD21	3:y:264:ARG:HG2	1.79	0.65
5:8:48:ASN:O	5:8:62:ARG:NH2	2.29	0.65
3:Z:221:ARG:NH1	5:j:325:GLU:OE2	2.28	0.65
5:i:206:ALA:O	5:i:210:ILE:HG12	1.96	0.65
5:j:51:PHE:O	5:j:62:ARG:NH2	2.29	0.65
5:p:194:GLU:OE1	5:p:194:GLU:N	2.30	0.65
5:I:107:THR:OG1	5:I:108:GLU:OE2	2.15	0.65
3:7:183:GLU:HG3	3:7:184:PRO:HD3	1.78	0.65
5:a:52:ASN:OD1	5:a:62:ARG:NH1	2.29	0.65
5:9:202:LEU:HD13	5:9:229:ILE:HD12	1.79	0.65
3:F:204:LEU:HA	3:F:303:VAL:HG22	1.77	0.65
3:Y:69:ASP:OD1	3:Y:70:LEU:N	2.30	0.65
3:Y:220:GLU:O	3:Y:221:ARG:NH1	2.29	0.65
5:q:330:MET:HB3	5:q:349:VAL:HG21	1.77	0.65
2:C:556:VAL:HA	2:C:572:GLY:HA3	1.77	0.65
5:R:308:GLY:HA2	5:R:426:GLN:HE21	1.61	0.65
5:V:165:LEU:HD22	5:V:200:MET:HE1	1.78	0.65
5:V:223:GLY:O	5:V:227:HIS:N	2.29	0.65
3:h:288:VAL:HG21	3:h:327:ASP:HB3	1.77	0.65
5:p:48:ASN:O	5:p:62:ARG:NH2	2.30	0.65
3:1:353:CYS:SG	3:1:354:GLY:N	2.70	0.65
3:6:140:ALA:HA	3:6:171:VAL:HG12	1.79	0.65
3:6:200:VAL:HA	3:6:266:HIS:HB2	1.79	0.65
3:G:241:SER:HA	3:G:356:ASN:HD21	1.61	0.65
5:R:48:ASN:O	5:R:62:ARG:NH2	2.30	0.65
2:B:127:ASN:ND2	2:B:149:PHE:HB2	2.13	0.64
2:B:227:LEU:HD12	3:5:42:ILE:HG13	1.78	0.64
2:B:556:VAL:HA	2:B:572:GLY:HA3	1.77	0.64
5:O:67:ASP:HB3	5:O:73:MET:HE3	1.79	0.64
5:T:165:LEU:HD12	5:T:200:MET:HE1	1.78	0.64
5:U:292:GLN:HG2	5:U:298:ASN:HD21	1.62	0.64
2:C:127:ASN:ND2	2:C:149:PHE:HB2	2.13	0.64
3:f:70:LEU:HB3	3:f:98:ASP:HA	1.79	0.64
3:m:75:VAL:HG21	3:m:94:SER:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:a:100:ASN:HB3	5:a:103:LYS:HG2	1.78	0.64
5:r:432:GLU:HG2	7:z:31:ASN:HD22	1.61	0.64
5:O:86:ARG:HB3	5:O:88:ASP:OD2	1.98	0.64
5:V:309:ARG:H	5:V:372:THR:HG22	1.62	0.64
5:u:50:TYR:OH	5:u:237:THR:OG1	2.12	0.64
5:v:139:LEU:HB2	5:v:171:PRO:HD3	1.79	0.64
5:4:292:GLN:O	5:4:298:ASN:ND2	2.31	0.64
3:P:292:THR:HG1	3:P:331:SER:HG	1.45	0.64
5:p:331:LEU:HD11	3:y:176:GLN:HB3	1.78	0.64
3:s:83:TYR:HD1	3:s:86:LEU:HD11	1.63	0.64
3:s:204:LEU:HA	3:s:303:VAL:HG22	1.79	0.64
3:y:279:GLU:N	3:y:279:GLU:OE2	2.30	0.64
3:1:399:TYR:O	3:1:402:ARG:NH1	2.30	0.64
3:F:326:LYS:HD2	5:8:220:PRO:HD2	1.77	0.64
5:I:16:ILE:HD11	5:I:136:CYS:HB3	1.79	0.64
5:I:212:PHE:HD2	5:I:213:ARG:HD2	1.61	0.64
6:x:81:SER:O	3:6:94:SER:N	2.29	0.64
3:6:176:GLN:HG2	3:6:304:LYS:HZ1	1.62	0.64
3:E:269:LEU:HD21	3:E:384:ILE:HD13	1.78	0.64
5:N:184:ASN:OD1	5:N:398:TYR:OH	2.14	0.64
5:b:288:GLU:O	5:b:291:GLN:NE2	2.30	0.64
3:f:271:SER:OG	3:f:301:MET:SD	2.56	0.64
5:v:156:ARG:HD2	5:v:160:PRO:HA	1.80	0.64
5:v:331:LEU:O	5:v:335:ASN:ND2	2.31	0.64
5:w:232:VAL:HG11	5:w:268:VAL:HG21	1.80	0.64
5:V:341:PHE:HB3	5:V:348:ASN:HD21	1.63	0.64
3:Z:27:GLU:OE1	3:Z:243:ARG:NH2	2.31	0.64
3:h:319:TYR:HD2	3:h:323:VAL:HG11	1.63	0.64
3:o:275:ILE:HG13	3:o:368:LEU:HD11	1.80	0.64
5:r:309:ARG:NH1	5:r:426:GLN:O	2.31	0.64
5:t:27:GLU:OE1	5:t:241:ARG:NH1	2.30	0.64
7:z:141:ARG:NH2	7:z:147:ASN:OD1	2.31	0.64
3:0:339:ARG:O	3:0:342:GLN:NE2	2.30	0.64
5:9:207:LEU:HD11	5:9:229:ILE:HD11	1.78	0.64
6:W:82:GLY:HA3	3:Y:94:SER:HB3	1.78	0.64
7:g:141:ARG:NH2	7:g:147:ASN:OD1	2.31	0.64
3:G:414:GLU:HG3	3:G:416:GLY:H	1.63	0.64
3:e:292:THR:HG21	3:e:331:SER:HB3	1.80	0.64
5:r:220:PRO:HD2	3:y:326:LYS:HD2	1.80	0.64
7:3:141:ARG:NH2	7:3:147:ASN:OD1	2.31	0.64
5:8:375:GLN:HB2	5:8:419:VAL:HG23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:J:91:VAL:HG11	5:J:116:VAL:HG22	1.80	0.63
5:Q:318:ARG:HB3	5:Q:357:PRO:HA	1.80	0.63
5:R:68:LEU:HD12	5:R:97:ALA:HB2	1.79	0.63
3:S:271:SER:OG	3:S:301:MET:SD	2.56	0.63
3:Z:288:VAL:O	3:Z:292:THR:OG1	2.16	0.63
7:c:141:ARG:NH2	7:c:147:ASN:OD1	2.31	0.63
5:K:6:HIS:ND1	5:K:134:GLN:OE1	2.31	0.63
5:u:122:LYS:HD3	8:2:262:TYR:HA	1.81	0.63
5:w:102:ALA:O	5:w:106:TYR:N	2.31	0.63
5:4:42:LEU:HA	5:4:45:GLU:HG2	1.81	0.63
3:E:311:LYS:H	3:E:382:THR:HG22	1.62	0.63
5:J:48:ASN:O	5:J:62:ARG:NH2	2.30	0.63
3:e:230:LEU:HD23	3:e:302:MET:HE1	1.79	0.63
5:j:60:VAL:HG11	5:j:86:ARG:HG3	1.80	0.63
5:q:49:VAL:HG11	5:q:241:ARG:HG2	1.79	0.63
5:I:177:ASP:N	5:I:181:GLU:OE2	2.32	0.63
5:T:190:HIS:ND1	5:T:414:ASN:OD1	2.29	0.63
5:t:248:ALA:HA	5:t:252:LYS:HD3	1.79	0.63
5:8:225:LEU:O	5:8:229:ILE:HG12	1.97	0.63
5:i:174:LYS:HG3	5:i:175:VAL:HG23	1.79	0.63
8:n:135:ASP:HB2	8:n:144:ALA:HB2	1.80	0.63
3:o:139:ASN:OD1	3:o:140:ALA:N	2.31	0.63
5:u:100:ASN:HB3	5:u:103:LYS:HG2	1.80	0.63
5:K:6:HIS:HD2	5:K:21:TRP:HE1	1.44	0.63
5:T:121:ARG:NH2	5:T:158:GLU:OE1	2.27	0.63
5:U:193:VAL:HG11	5:U:262:ARG:HH21	1.63	0.63
3:X:215:ARG:HH22	3:X:300:SER:HA	1.63	0.63
3:Z:70:LEU:HB3	3:Z:98:ASP:HA	1.81	0.63
5:b:161:ASP:OD2	5:b:162:ARG:NH1	2.31	0.63
5:i:207:LEU:HB3	5:i:225:LEU:HD22	1.79	0.63
5:t:194:GLU:OE1	5:t:194:GLU:N	2.32	0.63
2:B:399:SER:OG	2:B:401:TRP:NE1	2.32	0.63
2:C:399:SER:OG	2:C:401:TRP:NE1	2.32	0.63
5:b:175:VAL:HG21	3:e:329:ASN:HD21	1.63	0.63
8:l:135:ASP:HB2	8:l:144:ALA:HB2	1.81	0.63
3:o:145:THR:HG23	3:o:149:LEU:HD12	1.79	0.63
5:t:330:MET:HB3	5:t:349:VAL:HG21	1.79	0.63
3:0:287:SER:OG	3:0:290:GLU:OE1	2.17	0.63
8:2:135:ASP:HB2	8:2:144:ALA:HB2	1.80	0.63
3:6:363:VAL:HG13	3:6:366:GLY:HA3	1.81	0.63
5:9:91:VAL:HG21	5:9:116:VAL:HG22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:381:PRO:HD2	6:x:59:GLY:HA3	1.81	0.63
3:E:194:LEU:O	3:E:198:THR:HG22	1.99	0.63
5:R:207:LEU:HD11	5:R:229:ILE:HD11	1.81	0.63
5:V:137:HIS:HE1	5:V:148:GLY:HA3	1.64	0.63
8:d:135:ASP:HB2	8:d:144:ALA:HB2	1.80	0.63
5:w:98:GLY:HA2	3:5:254:GLU:HB2	1.80	0.63
3:5:100:ALA:N	9:5:501:GTP:O2G	2.31	0.63
3:6:75:VAL:HG21	3:6:94:SER:HB2	1.81	0.63
5:I:109:GLY:O	5:I:113:ILE:HG12	1.98	0.63
3:o:140:ALA:HA	3:o:171:VAL:HG12	1.80	0.63
5:t:16:ILE:HD11	5:t:136:CYS:HB3	1.80	0.63
5:v:359:LYS:HE3	12:v:502:TA1:H421	1.81	0.63
5:4:234:SER:O	5:4:241:ARG:NH2	2.31	0.63
3:P:12:ALA:HB3	3:P:140:ALA:HB2	1.81	0.62
5:U:86:ARG:NH2	5:U:123:GLU:OE1	2.31	0.62
3:X:221:ARG:NH1	5:i:325:GLU:OE2	2.32	0.62
5:a:180:VAL:HG23	5:a:184:ASN:HD21	1.62	0.62
5:b:372:THR:OG1	5:b:422:TYR:O	2.12	0.62
3:h:221:ARG:NH1	5:8:325:GLU:OE2	2.32	0.62
5:v:248:ALA:HA	5:v:252:LYS:HD3	1.81	0.62
3:1:88:HIS:HD2	3:5:283:HIS:HB2	1.64	0.62
3:1:193:SER:O	3:1:197:HIS:ND1	2.26	0.62
5:b:173:PRO:HD3	5:b:377:MET:HE1	1.81	0.62
5:i:51:PHE:O	5:i:62:ARG:NH2	2.32	0.62
5:t:268:VAL:HG12	5:t:368:ILE:HG12	1.80	0.62
5:N:242:PHE:HB3	5:N:356:ILE:HD13	1.80	0.62
3:X:72:PRO:HB2	5:i:46:ARG:HH22	1.65	0.62
5:b:16:ILE:HD11	5:b:136:CYS:HB3	1.81	0.62
3:f:101:ASN:N	9:f:501:GTP:O2G	2.23	0.62
5:t:48:ASN:O	5:t:62:ARG:NH2	2.31	0.62
2:B:626:ARG:HG2	2:B:627:PRO:HD2	1.80	0.62
5:O:184:ASN:OD1	5:O:398:TYR:OH	2.16	0.62
5:a:137:HIS:HD2	5:a:166:THR:HG23	1.64	0.62
3:k:241:SER:OG	3:k:250:VAL:O	2.16	0.62
5:4:194:GLU:N	5:4:194:GLU:OE1	2.33	0.62
5:J:280:GLN:O	5:p:58:ARG:NH1	2.21	0.62
3:Y:241:SER:HB2	3:Y:250:VAL:H	1.64	0.62
5:u:7:ILE:HB	5:u:135:VAL:HG12	1.81	0.62
3:1:88:HIS:CD2	3:5:283:HIS:HB2	2.34	0.62
3:1:217:LEU:HD21	3:1:367:ASP:HB2	1.81	0.62
5:8:341:PHE:HB3	5:8:348:ASN:HD21	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:9:184:ASN:OD1	5:9:398:TYR:OH	2.17	0.62
2:C:626:ARG:HG2	2:C:627:PRO:HD2	1.80	0.62
3:G:276:ILE:HB	3:G:280:LYS:HB2	1.80	0.62
3:G:371:VAL:HG12	3:G:373:ARG:H	1.64	0.62
5:I:218:THR:HG23	5:I:219:THR:HG23	1.81	0.62
5:Q:324:LYS:HB3	3:S:222:PRO:HG2	1.81	0.62
3:0:174:SER:HB3	3:0:177:VAL:O	2.00	0.62
3:6:70:LEU:HB3	3:6:98:ASP:HA	1.82	0.62
5:K:42:LEU:HA	5:K:45:GLU:HG3	1.82	0.62
3:M:214:ARG:NH1	3:M:220:GLU:OE1	2.32	0.62
5:V:272:PRO:HD3	5:V:364:SER:HA	1.81	0.62
5:i:4:ILE:HG22	5:i:49:VAL:HG22	1.82	0.62
8:l:49:HIS:HB3	5:q:379:LYS:HE2	1.82	0.62
3:s:234:VAL:O	3:s:237:SER:OG	2.17	0.62
3:0:276:ILE:HD12	3:0:281:ALA:HA	1.80	0.62
3:1:204:LEU:HA	3:1:303:VAL:HG22	1.82	0.62
3:6:319:TYR:HD2	3:6:323:VAL:HG11	1.64	0.62
3:F:306:ASP:OD2	3:F:308:ARG:NH2	2.32	0.62
4:H:130:THR:HA	4:H:132:ARG:NH1	2.14	0.62
12:J:502:TA1:H091	12:J:502:TA1:H141	1.80	0.62
5:T:117:LEU:HA	5:T:120:VAL:HG12	1.80	0.62
5:V:55:THR:O	5:V:58:ARG:NH1	2.33	0.62
5:a:228:LEU:HD23	5:a:300:MET:HE2	1.81	0.62
3:e:336:LYS:NZ	3:e:348:PRO:O	2.33	0.62
5:K:252:LYS:NZ	9:L:501:GTP:O1G	2.26	0.62
3:5:97:GLU:OE2	3:5:105:ARG:NH2	2.32	0.62
5:8:385:PHE:HZ	5:8:408:PHE:HB3	1.64	0.62
3:F:212:ILE:HG12	3:F:215:ARG:HH22	1.64	0.62
3:G:215:ARG:NH1	3:G:299:ALA:O	2.32	0.62
3:G:319:TYR:HD2	3:G:323:VAL:HG11	1.64	0.62
5:a:137:HIS:HE1	5:a:148:GLY:HA3	1.65	0.62
5:p:248:ALA:HA	5:p:252:LYS:HD3	1.82	0.62
5:u:51:PHE:O	5:u:62:ARG:NH2	2.33	0.62
5:w:46:ARG:HH22	3:7:72:PRO:HB2	1.65	0.62
3:1:88:HIS:CE1	3:5:280:LYS:HG2	2.35	0.62
3:7:139:ASN:HB3	3:7:170:THR:HG22	1.81	0.62
3:G:204:LEU:HA	3:G:303:VAL:HG22	1.82	0.61
5:I:173:PRO:HD2	5:I:205:GLU:HG3	1.82	0.61
5:J:139:LEU:HB2	5:J:171:PRO:HD3	1.82	0.61
5:Q:405:GLU:OE1	5:Q:405:GLU:N	2.33	0.61
3:Y:75:VAL:HG21	3:Y:94:SER:HB2	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Y:98:ASP:O	3:Y:105:ARG:NH2	2.33	0.61
5:v:70:PRO:HB3	5:v:92:PHE:CG	2.35	0.61
3:1:75:VAL:HG21	3:1:94:SER:HB2	1.81	0.61
3:1:174:SER:OG	3:1:207:GLU:OE2	2.18	0.61
3:6:69:ASP:OD1	3:6:70:LEU:N	2.33	0.61
5:9:222:PHE:O	5:9:226:ASN:ND2	2.33	0.61
3:Y:121:ARG:HH21	3:Y:124:LYS:HD3	1.63	0.61
3:k:175:PRO:O	3:k:394:LYS:NZ	2.33	0.61
5:t:341:PHE:HB3	5:t:348:ASN:HD21	1.65	0.61
3:6:392:ASP:OD1	3:6:422:ARG:NH1	2.33	0.61
3:E:292:THR:HG21	3:E:331:SER:OG	2.01	0.61
4:H:89:TRP:O	4:H:91:LYS:N	2.32	0.61
5:b:257:LEU:HD11	5:b:314:SER:OG	2.00	0.61
5:q:194:GLU:OE1	5:q:194:GLU:N	2.33	0.61
5:u:304:ASP:OD1	5:u:306:ARG:NE	2.32	0.61
3:1:183:GLU:HG3	3:1:184:PRO:HD3	1.80	0.61
2:B:410:GLY:N	2:B:413:SER:HA	2.15	0.61
2:B:535:THR:OG1	2:B:543:ASN:ND2	2.33	0.61
2:C:410:GLY:N	2:C:413:SER:HA	2.15	0.61
3:L:239:THR:OG1	3:L:243:ARG:NH1	2.33	0.61
5:N:193:VAL:HG11	5:N:262:ARG:HH21	1.65	0.61
3:X:349:THR:HG23	5:u:176:SER:HB2	1.81	0.61
3:m:139:ASN:OD1	3:m:140:ALA:N	2.33	0.61
5:t:163:MET:HE1	5:t:251:ARG:HA	1.81	0.61
3:5:216:SER:O	3:5:280:LYS:NZ	2.31	0.61
2:B:78:TYR:HB2	2:B:81:PHE:HD2	1.66	0.61
2:C:78:TYR:HB2	2:C:81:PHE:HD2	1.66	0.61
2:C:535:THR:OG1	2:C:543:ASN:ND2	2.33	0.61
3:F:223:THR:HG23	3:F:225:THR:HG22	1.82	0.61
5:R:211:CYS:HA	5:R:215:LEU:HB2	1.83	0.61
5:V:142:GLY:N	11:V:501:GDP:O3B	2.32	0.61
3:h:155:GLU:HG2	3:h:197:HIS:NE2	2.15	0.61
3:m:339:ARG:O	3:m:342:GLN:NE2	2.33	0.61
5:t:68:LEU:HD21	5:t:147:MET:HE1	1.80	0.61
3:D:292:THR:HG1	3:D:331:SER:HG	1.45	0.61
3:G:1:MET:HE2	5:J:94:GLN:HB3	1.82	0.61
5:K:165:LEU:HD23	5:K:166:THR:H	1.66	0.61
5:U:86:ARG:HB3	5:U:88:ASP:OD2	2.00	0.61
3:X:346:TRP:CD1	5:u:391:ARG:HG2	2.35	0.61
5:a:249:ASP:H	5:a:252:LYS:HD3	1.66	0.61
5:r:109:GLY:HA2	5:r:147:MET:SD	2.41	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:5:392:ASP:C	3:5:422:ARG:HH12	2.08	0.61
3:6:271:SER:OG	3:6:301:MET:SD	2.58	0.61
3:7:292:THR:HG21	3:7:331:SER:HB3	1.82	0.61
2:B:383:LEU:HD22	2:B:403:ASP:HB3	1.82	0.61
2:B:526:VAL:HG23	2:B:559:LEU:HD13	1.83	0.61
3:G:100:ALA:HA	5:9:252:LYS:HB3	1.82	0.61
3:L:194:LEU:O	3:L:198:THR:HG22	2.01	0.61
5:Q:198:GLU:HG2	5:Q:266:PHE:HE2	1.65	0.61
5:w:60:VAL:HG21	5:w:86:ARG:HE	1.65	0.61
3:y:285:GLN:OE1	3:y:285:GLN:N	2.33	0.61
3:y:396:ASP:OD2	3:y:422:ARG:NH2	2.31	0.61
2:B:359:CYS:HB2	2:B:388:ILE:HB	1.83	0.61
2:C:359:CYS:HB2	2:C:388:ILE:HB	1.83	0.61
2:C:383:LEU:HD22	2:C:403:ASP:HB3	1.82	0.61
2:C:526:VAL:HG23	2:C:559:LEU:HD13	1.83	0.61
3:D:292:THR:OG1	3:D:331:SER:OG	2.15	0.61
5:N:165:LEU:HD11	5:N:200:MET:HE1	1.82	0.61
5:p:252:LYS:NZ	9:y:501:GTP:O1G	2.27	0.61
5:v:211:CYS:HB3	5:v:217:LEU:HD12	1.81	0.61
3:1:3:GLU:HG2	3:1:50:ASN:O	2.01	0.61
3:1:269:LEU:HD11	3:1:384:ILE:HG22	1.83	0.61
2:B:374:GLU:HG3	6:x:52:LEU:HD21	1.81	0.61
2:C:446:GLU:N	2:C:446:GLU:OE2	2.34	0.61
5:J:130:LEU:O	5:J:162:ARG:NE	2.33	0.61
3:P:2:ARG:HB3	3:P:242:LEU:HD12	1.83	0.61
5:b:256:ASN:HD22	5:b:350:LYS:HD2	1.66	0.61
3:h:311:LYS:H	3:h:382:THR:HG22	1.65	0.61
5:r:9:GLY:HA2	5:r:66:MET:SD	2.41	0.61
5:t:234:SER:O	5:t:241:ARG:NH2	2.34	0.61
5:u:180:VAL:HG12	5:u:183:TYR:HB2	1.83	0.61
3:0:146:GLY:N	9:0:501:GTP:O2B	2.32	0.61
5:8:237:THR:HG22	5:8:240:LEU:HB2	1.83	0.61
2:B:446:GLU:N	2:B:446:GLU:OE2	2.34	0.61
3:F:102:ASN:OD1	3:F:105:ARG:N	2.33	0.61
5:V:207:LEU:HB3	5:V:225:LEU:HD22	1.83	0.61
5:a:293:MET:HE1	5:a:366:THR:C	2.25	0.61
3:h:275:ILE:HG13	3:h:368:LEU:HD11	1.83	0.61
5:j:180:VAL:HG12	5:j:183:TYR:HB2	1.83	0.61
5:r:66:MET:HE1	5:r:147:MET:HB3	1.82	0.61
3:s:174:SER:OG	3:s:207:GLU:OE2	2.19	0.61
5:t:405:GLU:OE1	5:t:405:GLU:N	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:u:55:THR:O	5:u:58:ARG:NE	2.27	0.61
3:1:246:GLY:O	3:1:249:ASN:ND2	2.33	0.61
3:5:315:CYS:SG	3:5:316:CYS:N	2.74	0.61
2:C:363:PHE:HB2	2:C:378:ILE:O	2.01	0.60
3:F:146:GLY:N	9:F:501:GTP:O2B	2.26	0.60
5:Q:49:VAL:HG11	5:Q:241:ARG:HG2	1.83	0.60
5:T:207:LEU:HD11	5:T:229:ILE:HD11	1.83	0.60
3:Z:174:SER:OG	3:Z:207:GLU:OE2	2.18	0.60
5:i:6:HIS:HD2	5:i:21:TRP:HE1	1.48	0.60
5:v:223:GLY:O	5:v:227:HIS:N	2.32	0.60
2:C:372:CYS:SG	2:C:373:ARG:N	2.66	0.60
3:F:215:ARG:NH2	3:F:300:SER:HA	2.15	0.60
5:R:117:LEU:HA	5:R:120:VAL:HG12	1.83	0.60
3:Y:258:ASN:HB2	5:v:179:VAL:HB	1.83	0.60
5:v:412:GLU:HG2	5:v:416:ASN:HD21	1.66	0.60
2:B:363:PHE:HB2	2:B:378:ILE:O	2.01	0.60
3:E:187:SER:O	3:E:191:THR:HG23	2.02	0.60
3:G:214:ARG:HE	3:G:222:PRO:HG3	1.65	0.60
3:P:121:ARG:HH21	3:P:124:LYS:HD3	1.66	0.60
5:V:405:GLU:HA	5:V:408:PHE:HD2	1.64	0.60
3:X:399:TYR:O	3:X:402:ARG:NH1	2.33	0.60
3:f:282:TYR:O	3:f:283:HIS:ND1	2.35	0.60
3:s:273:ALA:O	3:s:375:VAL:N	2.29	0.60
5:w:161:ASP:OD1	5:w:162:ARG:NH1	2.35	0.60
5:4:385:PHE:HZ	5:4:408:PHE:HB3	1.66	0.60
1:A:84:ARG:HH22	3:L:199:ASP:HA	1.66	0.60
5:R:332:ASN:O	5:R:336:LYS:HB2	2.01	0.60
5:j:344:TRP:CD1	5:j:344:TRP:H	2.18	0.60
5:8:95:THR:OG1	5:8:108:GLU:OE1	2.18	0.60
2:C:415:LYS:HB3	6:W:22:MET:O	2.01	0.60
5:K:152:ILE:HG12	5:K:164:MET:HE1	1.83	0.60
5:K:173:PRO:HD2	5:K:205:GLU:HG3	1.81	0.60
3:f:174:SER:OG	3:f:207:GLU:OE2	2.18	0.60
3:k:205:ASP:O	3:k:209:ILE:HG13	2.01	0.60
3:m:326:LYS:HD3	5:p:220:PRO:HD2	1.82	0.60
5:w:140:GLY:O	5:w:184:ASN:ND2	2.24	0.60
2:B:372:CYS:SG	2:B:373:ARG:N	2.66	0.60
3:X:1:MET:N	3:X:130:THR:OG1	2.35	0.60
3:Y:210:TYR:CE1	3:Y:227:LEU:HD11	2.37	0.60
3:M:196:GLU:OE1	3:M:196:GLU:N	2.31	0.60
3:M:265:ILE:HG22	3:M:380:ASN:HD21	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h:132:LEU:O	3:h:164:LYS:NZ	2.29	0.60
5:t:234:SER:OG	12:t:502:TA1:H401	2.02	0.60
7:z:102:ARG:NH1	3:0:430:LYS:HB2	2.17	0.60
3:1:90:GLU:OE1	3:1:121:ARG:HD3	2.02	0.60
2:C:412:GLN:O	6:W:53:ARG:NH1	2.35	0.60
3:G:223:THR:HG23	3:G:225:THR:HG22	1.82	0.60
5:b:142:GLY:N	11:b:501:GDP:O3B	2.33	0.60
3:h:204:LEU:HA	3:h:303:VAL:HG22	1.83	0.60
3:m:147:SER:HB2	3:m:190:SER:HB3	1.84	0.60
5:r:52:ASN:OD1	5:r:62:ARG:NH1	2.35	0.60
6:x:78:ARG:NH1	3:6:76:ASP:OD2	2.35	0.60
5:4:174:LYS:HG3	5:4:175:VAL:HG23	1.83	0.60
2:B:485:VAL:HG22	2:B:495:LEU:HD23	1.84	0.60
2:C:485:VAL:HG22	2:C:495:LEU:HD23	1.84	0.60
3:P:76:ASP:OD1	3:P:79:ARG:NH1	2.34	0.60
5:V:70:PRO:HB3	5:V:92:PHE:CG	2.35	0.60
5:p:323:THR:HG22	3:y:223:THR:HA	1.82	0.60
5:r:27:GLU:OE1	5:r:241:ARG:NH1	2.28	0.60
5:v:268:VAL:HG13	5:v:368:ILE:HD13	1.84	0.60
3:D:212:ILE:O	3:D:216:SER:OG	2.19	0.60
5:I:6:HIS:HD2	5:I:21:TRP:HE1	1.48	0.60
3:k:167:LEU:HD11	3:k:252:ILE:HG23	1.83	0.60
5:u:282:ARG:NH2	5:u:292:GLN:OE1	2.32	0.60
3:1:100:ALA:N	9:1:501:GTP:O2G	2.35	0.60
3:1:285:GLN:N	3:1:285:GLN:OE1	2.35	0.60
3:5:259:LEU:HD11	3:5:316:CYS:HB2	1.83	0.60
3:6:298:PRO:HG3	3:6:308:ARG:HE	1.67	0.60
2:B:157:ASN:ND2	2:B:203:ASP:O	2.35	0.59
2:C:43:ARG:HH22	2:C:320:LYS:HZ1	1.49	0.59
5:J:178:THR:HB	5:J:181:GLU:HG3	1.83	0.59
5:T:143:THR:OG1	11:T:501:GDP:O2B	2.20	0.59
7:c:31:ASN:HD22	5:t:432:GLU:HG2	1.67	0.59
5:j:292:GLN:O	5:j:298:ASN:ND2	2.35	0.59
5:p:405:GLU:OE1	5:p:405:GLU:N	2.35	0.59
5:4:48:ASN:O	5:4:62:ARG:NH2	2.30	0.59
3:6:1:MET:N	3:6:3:GLU:OE2	2.35	0.59
3:6:100:ALA:N	9:6:501:GTP:O2G	2.35	0.59
2:C:157:ASN:ND2	2:C:203:ASP:O	2.36	0.59
3:D:396:ASP:OD2	3:D:422:ARG:NH2	2.33	0.59
5:T:157:GLU:OE1	5:T:157:GLU:N	2.36	0.59
3:e:335:ILE:HG23	3:e:341:ILE:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:j:140:GLY:O	5:j:184:ASN:ND2	2.34	0.59
3:m:192:HIS:ND1	3:m:424:ASP:OD2	2.34	0.59
2:B:483:GLU:HG3	2:B:484:CYS:H	1.67	0.59
2:C:203:ASP:OD2	2:C:208:TYR:N	2.29	0.59
2:C:483:GLU:HG3	2:C:484:CYS:H	1.67	0.59
5:J:202:LEU:HD13	5:J:229:ILE:HD12	1.83	0.59
5:Q:200:MET:HG3	5:Q:266:PHE:HB2	1.82	0.59
5:V:70:PRO:HA	5:V:73:MET:HE2	1.84	0.59
3:s:338:LYS:HZ2	3:s:339:ARG:H	1.50	0.59
3:y:12:ALA:HB3	3:y:140:ALA:HB2	1.84	0.59
3:0:98:ASP:OD1	3:0:99:ALA:N	2.36	0.59
5:4:309:ARG:NH2	5:4:428:ALA:O	2.36	0.59
2:B:31:ILE:HG12	2:B:40:LEU:HG	1.83	0.59
2:B:220:GLN:HE21	2:B:230:ASN:HB2	1.68	0.59
2:B:439:ARG:HG2	2:B:453:ARG:HA	1.84	0.59
2:C:220:GLN:HE21	2:C:230:ASN:HB2	1.68	0.59
2:C:439:ARG:HG2	2:C:453:ARG:HA	1.84	0.59
5:N:292:GLN:O	5:N:298:ASN:ND2	2.36	0.59
5:U:406:MET:N	5:U:406:MET:SD	2.76	0.59
3:X:315:CYS:SG	3:X:316:CYS:N	2.75	0.59
3:Z:253:THR:O	3:Z:257:THR:HG23	2.01	0.59
5:r:98:GLY:HA2	3:y:254:GLU:HG2	1.84	0.59
5:4:325:GLU:OE2	3:6:221:ARG:NE	2.36	0.59
5:4:376:GLU:HA	5:4:379:LYS:HD3	1.83	0.59
3:L:12:ALA:HB3	3:L:140:ALA:HB2	1.85	0.59
3:S:5:ILE:HD12	3:S:125:LEU:HG	1.85	0.59
3:Y:223:THR:HG22	5:b:322:SER:HA	1.82	0.59
7:g:149:ILE:HG21	8:2:123:ARG:NH1	2.17	0.59
3:k:46:ASP:OD1	3:k:47:ASP:N	2.35	0.59
5:v:184:ASN:OD1	5:v:398:TYR:OH	2.14	0.59
5:4:72:THR:O	5:4:75:SER:OG	2.15	0.59
2:B:203:ASP:OD2	2:B:208:TYR:N	2.29	0.59
2:C:31:ILE:HG12	2:C:40:LEU:HG	1.83	0.59
2:C:525:LEU:HB2	2:C:537:TRP:HB2	1.83	0.59
3:G:12:ALA:HB3	3:G:140:ALA:HB2	1.82	0.59
5:U:121:ARG:NH2	5:U:158:GLU:OE1	2.31	0.59
3:Y:416:GLY:O	3:Y:420:GLU:HG2	2.03	0.59
5:i:55:THR:O	5:i:58:ARG:NE	2.28	0.59
8:n:49:HIS:HB3	5:r:379:LYS:HE2	1.83	0.59
5:p:347:ASN:ND2	3:y:178:SER:HB2	2.17	0.59
5:u:347:ASN:ND2	3:5:178:SER:O	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:v:16:ILE:HD11	5:v:136:CYS:HB3	1.85	0.59
3:0:139:ASN:OD1	3:0:140:ALA:N	2.36	0.59
5:8:222:PHE:HD1	5:8:225:LEU:HD12	1.68	0.59
2:B:525:LEU:HB2	2:B:537:TRP:HB2	1.84	0.59
5:K:202:LEU:HD13	5:K:229:ILE:HD12	1.84	0.59
3:M:223:THR:HA	5:T:323:THR:HG22	1.84	0.59
5:T:14:ASN:HD21	5:T:65:LEU:HB3	1.68	0.59
5:b:328:GLU:OE1	5:b:332:ASN:ND2	2.35	0.59
3:1:136:LEU:HD11	3:1:169:PHE:HE2	1.67	0.59
3:7:240:ALA:O	3:7:244:PHE:N	2.35	0.59
4:H:72:ALA:HB1	3:k:382:THR:HG21	1.84	0.59
5:Q:206:ALA:O	5:Q:210:ILE:HG12	2.02	0.59
3:X:144:GLY:N	9:X:501:GTP:O3B	2.35	0.59
3:Z:251:ASP:OD2	3:Z:253:THR:OG1	2.19	0.59
3:Z:277:SER:OG	3:Z:278:ALA:N	2.36	0.59
5:q:10:GLY:O	5:q:14:ASN:ND2	2.36	0.59
5:q:375:GLN:HB2	5:q:419:VAL:HG23	1.84	0.59
5:t:24:VAL:HG11	5:t:50:TYR:HD2	1.67	0.59
3:5:3:GLU:HG2	3:5:50:ASN:O	2.03	0.59
5:9:6:HIS:HD2	5:9:21:TRP:HE1	1.50	0.59
1:A:40:GLN:HG2	1:A:41:ASN:N	2.18	0.59
2:B:383:LEU:HD11	2:B:407:ARG:HH12	1.67	0.59
2:C:383:LEU:HD11	2:C:407:ARG:HH12	1.67	0.59
4:H:54:ILE:HG13	4:H:55:VAL:HG23	1.85	0.59
3:S:298:PRO:HG3	3:S:308:ARG:HE	1.67	0.59
3:S:319:TYR:CD1	3:S:375:VAL:HG22	2.37	0.59
5:U:165:LEU:HD11	5:U:200:MET:HE1	1.85	0.59
5:a:102:ALA:O	5:a:106:TYR:N	2.19	0.59
5:b:70:PRO:HB3	5:b:92:PHE:CG	2.37	0.59
3:h:371:VAL:HG12	3:h:373:ARG:H	1.68	0.59
5:8:263:LEU:O	5:8:370:ASN:ND2	2.29	0.59
5:8:309:ARG:H	5:8:372:THR:HG1	1.50	0.59
9:E:501:GTP:O1G	5:I:252:LYS:NZ	2.31	0.59
3:L:371:VAL:HG12	3:L:373:ARG:H	1.68	0.59
5:R:67:ASP:HB3	5:R:73:MET:HE3	1.85	0.59
3:X:292:THR:HG21	3:X:331:SER:HB3	1.85	0.59
8:l:68:SER:HA	5:q:337:ASN:HD21	1.67	0.59
2:C:43:ARG:NH2	2:C:320:LYS:HZ1	2.01	0.58
5:J:109:GLY:O	5:J:113:ILE:HG12	2.02	0.58
5:O:7:ILE:HB	5:O:135:VAL:HG12	1.85	0.58
3:m:399:TYR:O	3:m:402:ARG:NH1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:p:288:GLU:HA	5:p:291:GLN:HE21	1.68	0.58
3:y:75:VAL:HG21	3:y:94:SER:HB2	1.85	0.58
3:1:88:HIS:N	3:1:91:GLN:OE1	2.34	0.58
3:6:320:ARG:HB3	3:6:374:ALA:HB3	1.85	0.58
2:B:43:ARG:HH22	2:B:320:LYS:HZ1	1.50	0.58
3:E:385:GLY:HA2	3:E:388:PHE:HD2	1.68	0.58
5:K:178:THR:HG22	5:K:180:VAL:H	1.67	0.58
5:Q:252:LYS:NZ	9:S:501:GTP:O1G	2.29	0.58
5:R:106:TYR:HE2	8:L:78:PRO:HA	1.68	0.58
5:R:252:LYS:HE2	5:R:350:LYS:HE2	1.86	0.58
3:X:345:ASP:OD1	3:X:346:TRP:N	2.36	0.58
5:i:211:CYS:HB3	5:i:217:LEU:HD12	1.84	0.58
5:j:385:PHE:HZ	5:j:408:PHE:HB3	1.67	0.58
5:t:137:HIS:HE1	5:t:152:ILE:HD11	1.68	0.58
5:w:5:VAL:HG23	5:w:62:ARG:HG2	1.86	0.58
5:4:204:ASN:HA	5:4:207:LEU:HB2	1.85	0.58
5:4:372:THR:O	5:4:375:GLN:HG2	2.03	0.58
5:9:178:THR:HB	5:9:181:GLU:HG2	1.85	0.58
5:I:309:ARG:H	5:I:372:THR:HG1	1.51	0.58
5:J:180:VAL:O	5:J:184:ASN:ND2	2.36	0.58
5:N:407:GLU:OE1	5:N:407:GLU:N	2.34	0.58
5:U:49:VAL:HG11	5:U:241:ARG:HG2	1.85	0.58
3:k:225:THR:O	3:k:229:ARG:HG2	2.04	0.58
3:s:288:VAL:HG21	3:s:327:ASP:CG	2.28	0.58
5:u:70:PRO:HB3	5:u:92:PHE:CG	2.38	0.58
5:8:91:VAL:HG21	5:8:116:VAL:HG12	1.85	0.58
3:L:414:GLU:HG2	3:L:417:GLU:OE1	2.03	0.58
3:e:244:PHE:CG	3:e:358:GLN:HG2	2.39	0.58
5:r:58:ARG:NH1	5:8:280:GLN:HG2	2.15	0.58
5:u:142:GLY:N	11:u:501:GDP:O3B	2.35	0.58
5:v:161:ASP:OD2	5:v:162:ARG:NH1	2.37	0.58
5:K:256:ASN:HD22	5:K:350:LYS:HD2	1.68	0.58
3:L:325:PRO:O	3:L:329:ASN:ND2	2.36	0.58
5:Q:292:GLN:O	5:Q:298:ASN:ND2	2.36	0.58
3:Y:195:LEU:HD21	3:Y:264:ARG:HD2	1.85	0.58
3:Y:414:GLU:N	3:Y:417:GLU:OE2	2.34	0.58
5:j:257:LEU:HD11	5:j:314:SER:OG	2.04	0.58
5:q:140:GLY:O	5:q:184:ASN:ND2	2.36	0.58
5:t:295:ASP:OD1	5:t:296:ALA:N	2.36	0.58
5:v:321:MET:HE2	5:v:363:MET:HE3	1.86	0.58
5:V:252:LYS:NZ	9:e:501:GTP:O1G	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:i:142:GLY:N	11:i:501:GDP:O3B	2.36	0.58
3:k:101:ASN:HA	3:k:144:GLY:H	1.68	0.58
3:k:111:GLY:O	3:k:115:VAL:HG13	2.03	0.58
5:r:137:HIS:HD2	5:r:166:THR:HG23	1.67	0.58
3:y:121:ARG:HE	3:y:124:LYS:HE2	1.68	0.58
3:D:388:PHE:CZ	3:D:428:LEU:HD23	2.39	0.58
5:O:143:THR:N	11:O:501:GDP:O3B	2.37	0.58
3:P:214:ARG:NH2	3:P:220:GLU:O	2.37	0.58
5:V:161:ASP:OD1	5:V:162:ARG:NH1	2.33	0.58
6:W:61:ARG:HD3	5:i:42:LEU:HG	1.85	0.58
5:a:46:ARG:HH22	3:s:72:PRO:HB2	1.68	0.58
5:a:256:ASN:HD22	5:a:350:LYS:HD2	1.69	0.58
5:i:122:LYS:NZ	8:l:261:ASP:O	2.30	0.58
3:s:75:VAL:HG11	3:s:94:SER:HB2	1.84	0.58
3:5:217:LEU:HD11	3:5:275:ILE:HG12	1.85	0.58
3:7:144:GLY:N	9:7:501:GTP:O3B	2.36	0.58
1:A:4:GLU:CG	2:C:396:ALA:HB2	2.32	0.58
2:C:177:ASP:OD1	2:C:179:GLY:N	2.32	0.58
2:C:456:ARG:HA	2:C:456:ARG:HE	1.68	0.58
3:L:121:ARG:HH21	3:L:124:LYS:HD3	1.69	0.58
5:b:194:GLU:N	5:b:194:GLU:OE1	2.37	0.58
3:h:392:ASP:HA	3:h:422:ARG:HH12	1.68	0.58
9:o:501:GTP:O1G	5:t:252:LYS:NZ	2.26	0.58
5:p:49:VAL:HG11	5:p:241:ARG:HG2	1.86	0.58
5:9:34:GLY:O	5:9:59:TYR:N	2.35	0.58
2:B:456:ARG:HA	2:B:456:ARG:HE	1.68	0.58
3:E:98:ASP:OD1	3:E:99:ALA:N	2.37	0.58
5:I:343:GLU:OE1	5:I:343:GLU:N	2.35	0.58
3:X:53:PHE:O	3:X:64:ARG:NH2	2.35	0.58
3:Y:105:ARG:HG3	3:Y:411:GLU:HG2	1.85	0.58
7:c:82:ASN:ND2	7:c:126:ASP:O	2.35	0.58
3:0:139:ASN:HB3	3:0:170:THR:HG22	1.84	0.58
7:3:82:ASN:ND2	7:3:126:ASP:O	2.35	0.58
3:6:15:GLN:HB3	3:6:228:ASN:HD21	1.69	0.58
3:6:317:LEU:HB3	3:6:319:TYR:HE1	1.68	0.58
2:B:43:ARG:NH2	2:B:320:LYS:HZ1	2.02	0.58
2:B:177:ASP:OD1	2:B:179:GLY:N	2.32	0.58
3:G:196:GLU:HG3	3:G:197:HIS:CE1	2.39	0.58
5:N:292:GLN:HG2	5:N:298:ASN:ND2	2.19	0.58
5:O:101:TRP:CD1	5:O:145:SER:HG	2.22	0.58
5:a:173:PRO:HA	5:a:380:ARG:NE	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:b:165:LEU:HD11	5:b:200:MET:HE1	1.85	0.58
3:e:3:GLU:HG2	3:e:50:ASN:O	2.03	0.58
3:s:254:GLU:O	3:s:258:ASN:ND2	2.37	0.58
5:4:68:LEU:HD11	5:4:147:MET:HE3	1.86	0.58
3:5:292:THR:HG21	3:5:331:SER:HB3	1.85	0.58
2:B:468:HIS:CD2	2:B:469:LYS:H	2.22	0.57
5:N:290:THR:HA	5:N:293:MET:HE3	1.86	0.57
5:V:292:GLN:HG2	5:V:298:ASN:HD21	1.69	0.57
3:X:127:ASP:OD2	8:2:125:TYR:OH	2.22	0.57
3:Y:423:GLU:O	3:Y:427:ALA:N	2.32	0.57
5:r:163:MET:HE1	5:r:251:ARG:HA	1.86	0.57
3:6:240:ALA:HB1	3:6:358:GLN:NE2	2.19	0.57
5:8:137:HIS:CE1	5:8:148:GLY:HA3	2.39	0.57
5:9:137:HIS:HB2	5:9:168:SER:HA	1.86	0.57
2:C:468:HIS:CD2	2:C:469:LYS:H	2.22	0.57
3:D:5:ILE:HG12	3:D:132:LEU:HD11	1.86	0.57
3:F:140:ALA:HA	3:F:171:VAL:HG22	1.85	0.57
5:K:178:THR:HB	5:K:181:GLU:HG3	1.86	0.57
3:S:334:THR:O	3:S:337:THR:OG1	2.19	0.57
3:f:319:TYR:HD2	3:f:323:VAL:HG11	1.69	0.57
7:g:176:GLU:OE1	7:g:176:GLU:N	2.35	0.57
3:m:146:GLY:N	9:m:501:GTP:O2B	2.27	0.57
5:v:249:ASP:OD1	5:v:250:LEU:N	2.37	0.57
7:z:176:GLU:OE1	7:z:176:GLU:N	2.35	0.57
5:4:100:ASN:HB3	5:4:103:LYS:HG2	1.86	0.57
3:6:77:GLU:O	3:6:81:GLY:N	2.37	0.57
2:B:453:ARG:HB3	2:B:460:THR:HB	1.86	0.57
3:E:103:PHE:H	3:E:408:TYR:HE1	1.52	0.57
3:E:205:ASP:O	3:E:209:ILE:HG13	2.04	0.57
3:P:155:GLU:HG2	3:P:197:HIS:NE2	2.19	0.57
3:S:286:LEU:O	3:S:373:ARG:NE	2.33	0.57
7:c:176:GLU:N	7:c:176:GLU:OE1	2.35	0.57
3:f:91:GLN:HG2	3:f:121:ARG:HE	1.68	0.57
5:j:70:PRO:HB3	5:j:92:PHE:CG	2.39	0.57
5:p:295:ASP:OD1	5:p:296:ALA:N	2.37	0.57
5:q:91:VAL:HG21	5:q:116:VAL:HG22	1.86	0.57
7:z:82:ASN:ND2	7:z:126:ASP:O	2.35	0.57
7:3:176:GLU:OE1	7:3:176:GLU:N	2.35	0.57
5:9:156:ARG:NH1	5:9:197:ASP:OD1	2.35	0.57
2:C:453:ARG:HB3	2:C:460:THR:HB	1.86	0.57
3:E:151:SER:HB2	3:E:193:SER:OG	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:J:330:MET:HB3	5:J:349:VAL:HG21	1.86	0.57
5:a:272:PRO:HD3	5:a:364:SER:HA	1.86	0.57
7:g:82:ASN:ND2	7:g:126:ASP:O	2.35	0.57
3:h:326:LYS:NZ	3:h:327:ASP:OD1	2.37	0.57
3:k:227:LEU:O	3:k:231:ILE:HG12	2.04	0.57
5:8:6:HIS:HD2	5:8:21:TRP:HE1	1.52	0.57
4:H:107:LYS:O	5:U:213:ARG:NH2	2.32	0.57
5:J:290:THR:HA	5:J:293:MET:HG2	1.86	0.57
3:M:121:ARG:CZ	3:M:124:LYS:HE2	2.33	0.57
3:M:268:MET:HE2	3:M:380:ASN:HD22	1.70	0.57
5:Q:201:VAL:HG21	5:Q:374:ILE:HD11	1.86	0.57
5:R:271:THR:HG21	5:R:289:LEU:HA	1.85	0.57
5:U:7:ILE:HB	5:U:135:VAL:HG12	1.87	0.57
3:s:241:SER:HB2	3:s:250:VAL:H	1.68	0.57
3:s:288:VAL:O	3:s:292:THR:HG23	2.04	0.57
3:7:265:ILE:HG22	3:7:380:ASN:HD21	1.70	0.57
3:G:146:GLY:N	9:G:501:GTP:O2B	2.24	0.57
5:J:142:GLY:N	11:J:501:GDP:O3B	2.38	0.57
3:M:166:LYS:N	3:M:199:ASP:OD2	2.28	0.57
5:N:157:GLU:N	5:N:157:GLU:OE1	2.37	0.57
5:N:206:ALA:O	5:N:210:ILE:HG12	2.04	0.57
5:b:68:LEU:HD12	5:b:143:THR:HG22	1.85	0.57
3:e:145:THR:HA	3:e:149:LEU:HD13	1.87	0.57
5:r:171:PRO:HG3	5:r:181:GLU:OE2	2.04	0.57
3:5:194:LEU:O	3:5:198:THR:HG22	2.04	0.57
2:B:115:GLU:OE1	2:B:115:GLU:N	2.38	0.57
3:M:200:VAL:HA	3:M:266:HIS:HB2	1.86	0.57
5:V:313:ALA:HB3	5:V:349:VAL:HG12	1.87	0.57
7:c:61:CYS:HB3	7:c:62:PRO:HD3	1.87	0.57
3:f:211:ASP:OD1	3:f:214:ARG:NH2	2.38	0.57
3:s:306:ASP:OD1	3:s:308:ARG:NH2	2.38	0.57
5:v:100:ASN:HB3	5:v:103:LYS:HG2	1.87	0.57
5:4:288:GLU:HA	5:4:291:GLN:HE21	1.70	0.57
5:9:263:LEU:HG	5:9:422:TYR:HE1	1.69	0.57
3:E:4:VAL:HG12	3:E:133:GLN:HB2	1.85	0.57
3:F:132:LEU:O	3:F:164:LYS:NZ	2.25	0.57
3:G:286:LEU:HB3	3:G:291:ILE:HD11	1.86	0.57
3:G:392:ASP:HB3	3:G:422:ARG:HH22	1.69	0.57
5:O:87:PRO:HD3	5:r:281:TYR:HE2	1.70	0.57
3:X:139:ASN:OD1	3:X:140:ALA:N	2.37	0.57
3:Z:75:VAL:HG21	3:Z:94:SER:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:u:4:ILE:HG22	5:u:49:VAL:HG22	1.87	0.57
3:y:276:ILE:HD12	3:y:281:ALA:HA	1.86	0.57
3:7:319:TYR:HB2	3:7:355:ILE:HD13	1.86	0.57
1:A:49:MET:H	5:R:337:ASN:ND2	2.00	0.57
2:B:78:TYR:HB2	2:B:81:PHE:CD2	2.39	0.57
2:C:78:TYR:HB2	2:C:81:PHE:CD2	2.39	0.57
2:C:115:GLU:OE1	2:C:115:GLU:N	2.38	0.57
3:F:223:THR:HA	5:J:323:THR:HG22	1.87	0.57
3:G:88:HIS:N	3:G:91:GLN:OE1	2.38	0.57
3:G:256:GLN:HE21	5:J:397:TRP:HH2	1.51	0.57
5:T:201:VAL:HG21	5:T:374:ILE:HD11	1.86	0.57
5:a:91:VAL:HG11	5:a:116:VAL:HG22	1.87	0.57
7:c:85:LYS:O	7:c:107:ASN:ND2	2.34	0.57
3:f:224:TYR:O	3:f:228:ASN:ND2	2.37	0.57
7:g:61:CYS:HB3	7:g:62:PRO:HD3	1.87	0.57
5:q:100:ASN:HB3	5:q:103:LYS:HG2	1.86	0.57
5:t:113:ILE:HG21	5:t:154:LYS:HE2	1.86	0.57
7:z:61:CYS:HB3	7:z:62:PRO:HD3	1.87	0.57
3:0:193:SER:O	3:0:197:HIS:ND1	2.38	0.57
7:3:61:CYS:HB3	7:3:62:PRO:HD3	1.87	0.57
5:4:137:HIS:HD2	5:4:166:THR:HG23	1.69	0.57
3:5:227:LEU:O	3:5:231:ILE:HG12	2.05	0.57
3:G:183:GLU:HG3	3:G:184:PRO:HD3	1.87	0.57
5:V:109:GLY:O	5:V:113:ILE:HG12	2.05	0.57
5:V:335:ASN:HD22	5:V:336:LYS:HD2	1.70	0.57
3:Y:27:GLU:OE2	3:Y:320:ARG:NH2	2.38	0.57
5:b:375:GLN:NE2	5:b:426:GLN:OE1	2.38	0.57
3:m:98:ASP:OD1	3:m:99:ALA:N	2.37	0.57
3:s:108:TYR:HA	3:s:112:LYS:HE2	1.86	0.57
3:s:392:ASP:HA	3:s:422:ARG:HH12	1.70	0.57
5:v:142:GLY:N	11:v:501:GDP:O3B	2.37	0.57
5:v:302:ALA:HB3	5:v:377:MET:HE1	1.86	0.57
5:w:23:VAL:HG22	12:w:502:TA1:H321	1.87	0.57
5:8:8:GLN:HE21	5:8:65:LEU:CG	2.15	0.57
3:S:188:VAL:HG13	3:S:425:LEU:HD11	1.87	0.56
5:V:260:PHE:HB2	5:V:263:LEU:HG	1.87	0.56
3:Y:320:ARG:HG2	3:Y:360:PRO:HD3	1.87	0.56
3:k:271:SER:OG	3:k:301:MET:SD	2.62	0.56
3:s:338:LYS:HZ2	3:s:340:THR:H	1.53	0.56
5:u:272:PRO:HD3	5:u:364:SER:HA	1.85	0.56
5:9:102:ALA:O	5:9:106:TYR:N	2.25	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:9:292:GLN:HG2	5:9:298:ASN:HD21	1.70	0.56
2:C:114:ASP:HB3	2:C:116:ARG:HG2	1.87	0.56
3:Z:225:THR:O	3:Z:229:ARG:HG3	2.05	0.56
3:e:320:ARG:HG2	3:e:360:PRO:HD3	1.86	0.56
8:2:260:ILE:HA	7:3:36:ARG:HB2	1.87	0.56
3:5:71:GLU:HG2	3:5:98:ASP:HB3	1.87	0.56
2:B:114:ASP:HB3	2:B:116:ARG:HG2	1.87	0.56
3:D:377:MET:SD	3:D:379:SER:HB3	2.45	0.56
5:K:290:THR:HA	5:K:293:MET:HG2	1.86	0.56
3:L:174:SER:OG	3:L:207:GLU:HB3	2.06	0.56
3:L:271:SER:OG	3:L:301:MET:SD	2.63	0.56
3:L:377:MET:SD	3:L:379:SER:HB3	2.46	0.56
5:O:130:LEU:HB3	5:O:162:ARG:HE	1.69	0.56
5:T:184:ASN:OD1	5:T:398:TYR:OH	2.23	0.56
3:X:327:ASP:O	3:X:331:SER:N	2.25	0.56
3:Y:12:ALA:HB3	3:Y:140:ALA:HB2	1.87	0.56
5:b:397:TRP:HH2	3:e:256:GLN:HE21	1.52	0.56
3:f:396:ASP:OD2	3:f:422:ARG:NH2	2.26	0.56
5:i:288:GLU:O	5:i:291:GLN:NE2	2.32	0.56
5:j:27:GLU:HG3	12:j:502:TA1:H411	1.86	0.56
5:p:295:ASP:OD1	5:p:297:LYS:N	2.35	0.56
5:q:234:SER:OG	12:q:502:TA1:H401	2.04	0.56
5:q:313:ALA:HB3	5:q:349:VAL:HG12	1.87	0.56
5:t:211:CYS:SG	5:t:220:PRO:HB3	2.45	0.56
5:u:67:ASP:HB3	5:u:73:MET:HE3	1.88	0.56
5:w:6:HIS:HD2	5:w:21:TRP:HE1	1.52	0.56
3:7:334:THR:O	3:7:337:THR:OG1	2.22	0.56
2:B:424:HIS:NE2	2:B:442:SER:O	2.28	0.56
5:Q:42:LEU:HD21	5:Q:356:ILE:HG12	1.88	0.56
5:a:252:LYS:HB3	3:s:100:ALA:HA	1.87	0.56
3:f:139:ASN:OD1	3:f:140:ALA:N	2.38	0.56
5:w:4:ILE:HG22	5:w:49:VAL:HG22	1.88	0.56
5:4:104:GLY:HA2	5:4:147:MET:HE2	1.88	0.56
5:8:187:LEU:HD21	5:8:403:MET:HE1	1.88	0.56
3:L:319:TYR:CD1	3:L:375:VAL:HG22	2.40	0.56
3:P:210:TYR:CE1	3:P:227:LEU:HD11	2.41	0.56
3:P:316:CYS:SG	3:P:378:ILE:HB	2.46	0.56
3:X:204:LEU:HA	3:X:303:VAL:HG22	1.86	0.56
3:Y:140:ALA:HA	3:Y:171:VAL:HG12	1.88	0.56
3:Z:3:GLU:HA	3:Z:51:THR:HA	1.88	0.56
3:o:301:MET:HE1	3:o:377:MET:HE1	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:t:109:GLY:O	5:t:113:ILE:HG12	2.06	0.56
3:6:183:GLU:HG3	3:6:184:PRO:HD3	1.86	0.56
2:B:69:ARG:HE	2:B:70:TYR:H	1.54	0.56
3:E:296:PHE:HE1	3:E:377:MET:HG3	1.70	0.56
5:V:148:GLY:O	5:V:152:ILE:N	2.27	0.56
5:V:154:LYS:O	5:V:158:GLU:HG3	2.06	0.56
3:Z:34:GLY:O	3:Z:61:HIS:N	2.27	0.56
3:k:12:ALA:HB3	3:k:140:ALA:HB2	1.87	0.56
3:m:76:ASP:OD2	5:q:46:ARG:NH2	2.38	0.56
3:o:146:GLY:N	9:o:501:GTP:O2B	2.27	0.56
5:u:344:TRP:CD1	5:u:344:TRP:H	2.22	0.56
3:5:174:SER:OG	3:5:207:GLU:OE2	2.24	0.56
2:C:424:HIS:NE2	2:C:442:SER:O	2.28	0.56
2:C:456:ARG:HA	2:C:456:ARG:NE	2.20	0.56
5:R:7:ILE:HB	5:R:135:VAL:HG12	1.88	0.56
3:S:392:ASP:HB3	3:S:422:ARG:HH12	1.71	0.56
5:T:194:GLU:N	5:T:194:GLU:OE1	2.39	0.56
3:Z:100:ALA:N	9:Z:501:GTP:O2G	2.39	0.56
7:g:85:LYS:O	7:g:107:ASN:ND2	2.34	0.56
5:t:295:ASP:OD1	5:t:297:LYS:N	2.39	0.56
7:z:85:LYS:O	7:z:107:ASN:ND2	2.34	0.56
3:5:3:GLU:HB2	3:5:129:CYS:SG	2.46	0.56
3:5:240:ALA:HB1	3:5:356:ASN:HD21	1.69	0.56
3:6:371:VAL:HG12	3:6:373:ARG:H	1.70	0.56
2:B:275:ASN:HA	8:n:26:ALA:HB2	1.87	0.56
2:C:69:ARG:HE	2:C:70:TYR:H	1.54	0.56
3:M:100:ALA:HA	5:T:252:LYS:HB3	1.87	0.56
5:V:379:LYS:HE2	5:V:379:LYS:HA	1.87	0.56
3:Z:333:ALA:O	3:Z:337:THR:HG23	2.06	0.56
3:s:371:VAL:HG12	3:s:373:ARG:H	1.71	0.56
5:u:405:GLU:OE1	5:u:405:GLU:N	2.37	0.56
3:1:333:ALA:O	3:1:337:THR:HG23	2.06	0.56
3:6:94:SER:OG	3:6:95:GLY:N	2.34	0.56
3:6:416:GLY:O	3:6:420:GLU:HG2	2.05	0.56
2:B:456:ARG:HA	2:B:456:ARG:NE	2.20	0.56
2:B:497:ASP:OD2	2:B:500:THR:OG1	2.21	0.56
2:C:497:ASP:OD2	2:C:500:THR:OG1	2.21	0.56
3:E:155:GLU:HA	3:E:197:HIS:CD2	2.40	0.56
3:F:328:VAL:HG21	3:F:355:ILE:HD11	1.87	0.56
3:S:26:LEU:HD13	3:S:363:VAL:HG12	1.87	0.56
6:W:38:GLN:O	6:W:38:GLN:NE2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:q:109:GLY:O	5:q:113:ILE:HG12	2.05	0.56
3:y:311:LYS:H	3:y:382:THR:HG22	1.70	0.56
3:E:21:TRP:CZ2	3:E:65:CYS:HB3	2.40	0.56
3:F:88:HIS:N	3:F:91:GLN:OE1	2.37	0.56
5:Q:295:ASP:OD1	5:Q:296:ALA:N	2.39	0.56
3:Y:102:ASN:OD1	3:Y:104:ALA:N	2.39	0.56
3:s:1:MET:HE2	5:9:70:PRO:HG3	1.88	0.56
3:6:188:VAL:HG13	3:6:425:LEU:HD11	1.88	0.56
3:6:287:SER:O	3:6:291:ILE:HG12	2.05	0.56
5:I:6:HIS:HD2	5:I:21:TRP:NE1	2.03	0.55
5:I:315:ALA:HB1	5:I:317:PHE:HE1	1.71	0.55
5:T:49:VAL:HG11	5:T:241:ARG:HG2	1.87	0.55
5:T:292:GLN:O	5:T:298:ASN:ND2	2.38	0.55
5:V:372:THR:O	5:V:375:GLN:HG2	2.06	0.55
3:Y:141:VAL:HG13	3:Y:173:PRO:HD3	1.87	0.55
5:b:86:ARG:HB3	5:b:88:ASP:OD1	2.06	0.55
3:f:46:ASP:OD1	3:f:47:ASP:N	2.38	0.55
3:h:183:GLU:HG3	3:h:184:PRO:HD3	1.87	0.55
5:j:248:ALA:HA	5:j:252:LYS:HD3	1.88	0.55
5:t:114:ASP:OD1	5:t:115:SER:N	2.39	0.55
6:x:38:GLN:NE2	6:x:38:GLN:O	2.39	0.55
3:y:98:ASP:OD1	3:y:99:ALA:N	2.38	0.55
3:y:203:MET:HE2	3:y:267:PHE:HB3	1.88	0.55
2:B:339:HIS:NE2	2:B:360:GLY:HA3	2.21	0.55
3:F:222:PRO:O	5:J:322:SER:OG	2.22	0.55
3:M:298:PRO:HG3	3:M:308:ARG:HE	1.70	0.55
3:S:216:SER:HB3	3:S:275:ILE:O	2.06	0.55
7:g:103:PHE:CE2	7:g:139:PHE:HB3	2.41	0.55
3:h:27:GLU:OE2	3:h:320:ARG:NH2	2.37	0.55
5:j:139:LEU:HD13	5:j:170:VAL:HA	1.86	0.55
7:z:103:PHE:CE2	7:z:139:PHE:HB3	2.41	0.55
5:4:69:GLU:N	5:4:93:GLY:O	2.35	0.55
3:5:153:LEU:O	3:5:157:LEU:HD23	2.06	0.55
3:5:225:THR:O	3:5:229:ARG:HG3	2.05	0.55
3:6:146:GLY:N	9:6:501:GTP:O2B	2.32	0.55
2:C:484:CYS:HB3	2:C:496:TRP:HB2	1.88	0.55
5:N:302:ALA:H	5:N:377:MET:HE2	1.70	0.55
3:P:315:CYS:N	3:P:350:GLY:O	2.39	0.55
5:V:256:ASN:HD21	3:e:181:VAL:H	1.54	0.55
5:V:334:GLN:HE22	5:V:347:ASN:HA	1.71	0.55
3:Y:254:GLU:OE2	5:v:99:ASN:ND2	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:e:307:PRO:HB2	3:e:312:TYR:HE1	1.71	0.55
3:f:213:CYS:HA	3:f:217:LEU:HD13	1.87	0.55
5:i:234:SER:HB2	12:i:502:TA1:H401	1.88	0.55
3:m:65:CYS:O	3:m:91:GLN:NE2	2.37	0.55
5:p:347:ASN:HD22	3:y:178:SER:HB2	1.71	0.55
5:4:4:ILE:HG22	5:4:49:VAL:HG22	1.88	0.55
3:6:306:ASP:OD1	3:6:308:ARG:NH2	2.39	0.55
2:B:484:CYS:HB3	2:B:496:TRP:HB2	1.88	0.55
2:C:339:HIS:NE2	2:C:360:GLY:HA3	2.21	0.55
5:K:208:TYR:HE2	3:S:329:ASN:HD22	1.54	0.55
5:N:86:ARG:HB3	5:N:88:ASP:OD1	2.06	0.55
5:T:311:LEU:HD23	5:T:342:VAL:HG21	1.87	0.55
3:X:132:LEU:O	3:X:164:LYS:NZ	2.38	0.55
7:c:103:PHE:CE2	7:c:139:PHE:HB3	2.41	0.55
3:e:51:THR:HG21	3:e:243:ARG:HB3	1.88	0.55
3:h:223:THR:HG23	3:h:225:THR:HG22	1.87	0.55
3:y:265:ILE:HG21	3:y:313:MET:HE1	1.88	0.55
5:4:26:ASP:HB3	5:4:359:LYS:NZ	2.21	0.55
5:8:150:LEU:O	5:8:154:LYS:HG2	2.07	0.55
5:9:117:LEU:HA	5:9:120:VAL:HG12	1.89	0.55
2:C:195:ARG:NH1	5:i:78:SER:O	2.40	0.55
5:T:405:GLU:N	5:T:405:GLU:OE1	2.40	0.55
5:V:194:GLU:OE1	5:V:194:GLU:N	2.39	0.55
3:Y:392:ASP:OD1	3:Y:425:LEU:HB3	2.06	0.55
5:a:66:MET:HE1	5:a:147:MET:HB3	1.89	0.55
3:e:12:ALA:HB3	3:e:140:ALA:HB2	1.86	0.55
3:k:188:VAL:HG12	3:k:421:ALA:HB1	1.89	0.55
5:p:46:ARG:NH2	3:y:76:ASP:OD2	2.39	0.55
5:p:416:ASN:HA	5:p:419:VAL:HG12	1.87	0.55
5:w:112:LEU:HD12	5:w:147:MET:HE1	1.87	0.55
5:4:257:LEU:HD11	5:4:314:SER:OG	2.06	0.55
3:5:387:ILE:HA	3:5:390:ARG:HD2	1.88	0.55
1:A:219:LEU:O	1:A:223:GLU:HG2	2.06	0.55
5:N:211:CYS:HA	5:N:215:LEU:HB2	1.88	0.55
3:P:220:GLU:O	3:P:221:ARG:NH1	2.40	0.55
5:T:165:LEU:HD13	5:T:198:GLU:HB2	1.89	0.55
3:Y:88:HIS:N	3:Y:91:GLN:OE1	2.40	0.55
3:e:286:LEU:O	3:e:373:ARG:NE	2.38	0.55
3:h:88:HIS:N	3:h:91:GLN:OE1	2.39	0.55
5:v:344:TRP:CD1	5:v:344:TRP:H	2.23	0.55
5:w:142:GLY:N	11:w:501:GDP:O3B	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:3:103:PHE:CE2	7:3:139:PHE:HB3	2.41	0.55
3:5:27:GLU:OE2	3:5:320:ARG:NH2	2.39	0.55
2:B:97:HIS:NE2	2:B:134:VAL:O	2.39	0.55
5:I:153:SER:O	5:I:157:GLU:HG2	2.07	0.55
5:J:295:ASP:OD1	5:J:296:ALA:N	2.40	0.55
5:K:14:ASN:HD21	5:K:65:LEU:HB3	1.71	0.55
5:N:109:GLY:O	5:N:113:ILE:HG12	2.05	0.55
5:O:207:LEU:HD11	5:O:229:ILE:HD11	1.87	0.55
3:X:34:GLY:O	3:X:61:HIS:N	2.38	0.55
5:i:172:SER:HB3	5:i:175:VAL:O	2.06	0.55
3:k:71:GLU:HG3	3:k:98:ASP:HB3	1.89	0.55
3:m:279:GLU:H	3:m:279:GLU:CD	2.14	0.55
5:p:375:GLN:HB2	5:p:419:VAL:HG23	1.89	0.55
5:t:225:LEU:O	5:t:229:ILE:HG12	2.06	0.55
5:v:174:LYS:HD2	5:v:175:VAL:HG23	1.88	0.55
2:C:97:HIS:NE2	2:C:134:VAL:O	2.39	0.55
3:G:298:PRO:HG3	3:G:308:ARG:HE	1.72	0.55
5:R:87:PRO:HD3	5:q:281:TYR:HE2	1.72	0.55
5:V:86:ARG:HB3	5:V:88:ASP:OD1	2.07	0.55
5:q:143:THR:HG23	5:q:147:MET:HE3	1.88	0.55
3:6:64:ARG:NH1	3:6:129:CYS:SG	2.80	0.55
5:8:8:GLN:OE1	5:8:17:GLY:HA3	2.07	0.55
5:8:260:PHE:HB2	5:8:263:LEU:HG	1.88	0.55
3:Y:348:PRO:HG2	5:v:384:GLN:HG2	1.88	0.55
5:a:293:MET:HE3	5:a:367:PHE:HB2	1.89	0.55
5:r:142:GLY:N	11:r:501:GDP:O3B	2.39	0.55
5:v:232:VAL:HG11	5:v:268:VAL:HG11	1.89	0.55
5:w:69:GLU:HG2	5:w:96:GLY:HA2	1.89	0.55
3:y:69:ASP:OD1	3:y:70:LEU:N	2.39	0.55
7:3:85:LYS:O	7:3:107:ASN:ND2	2.34	0.55
5:8:328:GLU:OE2	5:8:332:ASN:ND2	2.40	0.55
3:L:172:TYR:CG	3:L:173:PRO:HD2	2.42	0.55
5:Q:364:SER:OG	5:Q:365:ALA:N	2.40	0.55
3:Z:79:ARG:NH2	3:Z:92:LEU:O	2.39	0.55
3:Z:239:THR:OG1	3:Z:243:ARG:NH1	2.34	0.55
5:a:116:VAL:O	5:a:120:VAL:HG23	2.07	0.55
3:e:132:LEU:HD23	3:e:164:LYS:HE3	1.88	0.55
5:u:117:LEU:HA	5:u:120:VAL:HG12	1.89	0.55
5:u:290:THR:HA	5:u:293:MET:HG2	1.89	0.55
5:u:323:THR:HG22	3:5:223:THR:HA	1.88	0.55
5:v:288:GLU:O	5:v:291:GLN:NE2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:69:ASP:OD1	3:1:70:LEU:N	2.41	0.55
3:1:94:SER:OG	3:1:95:GLY:N	2.40	0.55
3:G:406:HIS:NE2	5:9:259:PRO:O	2.36	0.54
5:N:16:ILE:HG22	5:N:226:ASN:ND2	2.22	0.54
3:Z:163:LYS:HD2	8:l:137:ARG:HA	1.88	0.54
5:b:311:LEU:HD23	5:b:342:VAL:HG21	1.89	0.54
5:b:384:GLN:HG2	3:e:348:PRO:HG2	1.89	0.54
5:p:87:PRO:HA	5:p:90:PHE:HD2	1.72	0.54
5:q:431:GLU:OE2	5:q:431:GLU:N	2.40	0.54
3:s:319:TYR:HD2	3:s:323:VAL:HG11	1.72	0.54
5:v:109:GLY:O	5:v:113:ILE:HG12	2.06	0.54
3:1:257:THR:HG21	5:4:98:GLY:O	2.06	0.54
3:6:208:ALA:O	3:6:212:ILE:HG12	2.08	0.54
2:C:424:HIS:CD2	2:C:428:VAL:HG12	2.43	0.54
3:D:406:HIS:HA	3:D:409:VAL:HG12	1.88	0.54
3:F:234:VAL:O	3:F:237:SER:OG	2.22	0.54
3:F:277:SER:OG	3:F:278:ALA:N	2.39	0.54
3:G:102:ASN:HB3	3:G:105:ARG:HB2	1.89	0.54
3:G:406:HIS:HA	3:G:409:VAL:HG22	1.90	0.54
5:K:49:VAL:HG11	5:K:241:ARG:HG2	1.88	0.54
3:S:345:ASP:OD1	3:S:346:TRP:N	2.40	0.54
3:Z:280:LYS:O	3:Z:284:GLU:HG2	2.07	0.54
8:l:112:ARG:HA	8:l:209:ARG:HB2	1.89	0.54
3:s:167:LEU:HD13	3:s:200:VAL:HB	1.89	0.54
3:s:210:TYR:CE1	3:s:227:LEU:HD11	2.42	0.54
3:0:334:THR:O	3:0:337:THR:OG1	2.23	0.54
5:4:258:ILE:O	5:4:258:ILE:HG13	2.07	0.54
3:5:220:GLU:HG3	3:5:221:ARG:HG2	1.89	0.54
3:6:386:GLU:O	3:6:389:SER:OG	2.22	0.54
5:9:142:GLY:N	11:9:501:GDP:O3B	2.41	0.54
2:B:424:HIS:CD2	2:B:428:VAL:HG12	2.43	0.54
4:H:130:THR:HA	4:H:132:ARG:HH12	1.72	0.54
5:I:208:TYR:HE2	3:M:329:ASN:HD22	1.56	0.54
5:I:405:GLU:N	5:I:405:GLU:OE1	2.41	0.54
5:V:344:TRP:CD1	5:V:344:TRP:H	2.24	0.54
5:a:320:ARG:HH11	5:a:355:ASP:HA	1.73	0.54
5:b:118:ASP:O	5:b:122:LYS:HG2	2.07	0.54
5:j:69:GLU:N	5:j:93:GLY:O	2.38	0.54
3:m:383:ALA:O	3:m:386:GLU:HG2	2.08	0.54
8:n:112:ARG:HA	8:n:209:ARG:HB2	1.89	0.54
3:s:212:ILE:HG12	3:s:215:ARG:NH2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:336:LYS:NZ	3:1:348:PRO:O	2.40	0.54
3:1:372:GLN:OE1	3:1:372:GLN:N	2.39	0.54
3:6:236:SER:O	3:6:243:ARG:NH2	2.41	0.54
5:9:407:GLU:OE2	5:9:407:GLU:N	2.34	0.54
2:B:482:ASP:HB3	2:B:499:HIS:CE1	2.42	0.54
2:C:482:ASP:HB3	2:C:499:HIS:CE1	2.42	0.54
3:D:196:GLU:OE1	3:D:196:GLU:N	2.40	0.54
3:F:246:GLY:HA2	3:F:357:TYR:CE2	2.42	0.54
3:M:427:ALA:HA	3:M:430:LYS:HE2	1.90	0.54
5:N:39:ASP:OD1	5:N:40:SER:N	2.40	0.54
5:Q:194:GLU:OE1	5:Q:194:GLU:N	2.41	0.54
6:W:53:ARG:HH11	6:W:55:VAL:HG21	1.72	0.54
3:X:216:SER:HB3	3:X:275:ILE:O	2.08	0.54
3:Y:104:ALA:HB2	3:Y:413:MET:HG3	1.89	0.54
3:Y:185:TYR:HE1	3:Y:398:MET:HE2	1.72	0.54
5:a:156:ARG:HD2	5:a:164:MET:HE3	1.89	0.54
5:i:67:ASP:HB3	5:i:73:MET:HE3	1.88	0.54
5:r:375:GLN:HB2	5:r:419:VAL:HG23	1.89	0.54
5:t:101:TRP:CE3	5:t:187:LEU:HD23	2.42	0.54
5:t:172:SER:OG	5:t:205:GLU:HG3	2.07	0.54
3:y:22:GLU:OE1	3:y:83:TYR:OH	2.14	0.54
3:y:280:LYS:O	3:y:284:GLU:HG3	2.06	0.54
1:A:129:GLN:OE1	4:H:77:GLN:NE2	2.39	0.54
3:F:222:PRO:HG2	5:J:324:LYS:HD3	1.88	0.54
5:Q:102:ALA:O	5:Q:106:TYR:N	2.39	0.54
5:R:213:ARG:HH11	5:R:297:LYS:HE2	1.72	0.54
5:R:391:ARG:NH2	3:f:438:GLU:HA	2.23	0.54
5:T:178:THR:HG23	5:T:181:GLU:HB2	1.90	0.54
5:U:68:LEU:HD12	5:U:97:ALA:HB2	1.88	0.54
6:W:26:GLN:HE22	6:W:28:LYS:HG2	1.73	0.54
3:Y:279:GLU:OE1	3:Y:279:GLU:N	2.41	0.54
3:Z:189:LEU:HD22	3:Z:417:GLU:HG3	1.88	0.54
8:d:112:ARG:HA	8:d:209:ARG:HB2	1.89	0.54
7:g:118:ILE:HD13	3:m:264:ARG:HH12	1.72	0.54
5:q:405:GLU:OE1	5:q:405:GLU:N	2.40	0.54
6:x:53:ARG:HH11	6:x:55:VAL:HG21	1.72	0.54
5:4:252:LYS:NZ	9:6:501:GTP:O1G	2.38	0.54
5:4:282:ARG:HH21	5:4:288:GLU:HB3	1.71	0.54
12:4:502:TA1:H131	12:4:502:TA1:H291	1.90	0.54
5:8:101:TRP:CE3	5:8:187:LEU:HD23	2.43	0.54
1:A:5:SER:O	1:A:8:ALA:N	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:346:MET:HE1	2:C:356:PHE:HB2	1.90	0.54
3:G:372:GLN:OE1	3:G:372:GLN:N	2.40	0.54
5:I:282:ARG:NH2	5:I:288:GLU:OE2	2.40	0.54
5:K:67:ASP:HB3	5:K:73:MET:HE3	1.89	0.54
5:K:382:SER:HB2	5:K:415:MET:HE3	1.90	0.54
3:M:407:TRP:HZ2	5:T:258:ILE:HD11	1.71	0.54
5:R:290:THR:HG21	5:R:329:GLN:HB3	1.90	0.54
3:S:196:GLU:OE2	3:S:196:GLU:N	2.38	0.54
5:U:227:HIS:O	5:U:227:HIS:ND1	2.40	0.54
3:Y:203:MET:HE2	3:Y:267:PHE:HB3	1.90	0.54
3:Z:204:LEU:HA	3:Z:303:VAL:HG22	1.89	0.54
3:k:406:HIS:HA	3:k:409:VAL:HG12	1.90	0.54
5:r:304:ASP:OD2	5:r:306:ARG:NH2	2.41	0.54
5:t:100:ASN:HB3	5:t:103:LYS:HG2	1.89	0.54
5:v:268:VAL:HG12	5:v:269:GLY:H	1.71	0.54
6:x:26:GLN:HE22	6:x:28:LYS:HG2	1.73	0.54
3:1:267:PHE:HB2	3:1:384:ILE:HD12	1.89	0.54
8:2:112:ARG:HA	8:2:209:ARG:HB2	1.89	0.54
5:4:70:PRO:HB3	5:4:92:PHE:CG	2.43	0.54
5:8:194:GLU:OE1	5:8:194:GLU:N	2.40	0.54
5:J:117:LEU:HA	5:J:120:VAL:HG12	1.90	0.54
5:K:6:HIS:HD2	5:K:21:TRP:NE1	2.05	0.54
3:L:305:CYS:SG	3:L:306:ASP:N	2.81	0.54
3:L:311:LYS:H	3:L:382:THR:HG22	1.72	0.54
5:Q:51:PHE:O	5:Q:62:ARG:NH2	2.39	0.54
3:Z:69:ASP:OD1	3:Z:70:LEU:N	2.41	0.54
3:Z:246:GLY:HA2	3:Z:357:TYR:CZ	2.43	0.54
5:b:6:HIS:CD2	5:b:21:TRP:HE1	2.25	0.54
7:c:78:LEU:HG	7:c:165:ILE:HG12	1.89	0.54
3:f:146:GLY:N	9:f:501:GTP:O2B	2.22	0.54
5:p:117:LEU:HD11	5:p:154:LYS:HB3	1.89	0.54
5:q:278:SER:OG	5:q:282:ARG:NE	2.41	0.54
7:3:78:LEU:HG	7:3:165:ILE:HG12	1.89	0.54
2:B:346:MET:HE1	2:B:356:PHE:HB2	1.90	0.54
3:D:12:ALA:HA	3:D:15:GLN:HB2	1.89	0.54
3:G:214:ARG:NH2	5:9:324:LYS:HD2	2.23	0.54
3:G:223:THR:HA	5:9:323:THR:HG22	1.88	0.54
5:N:227:HIS:O	5:N:227:HIS:ND1	2.38	0.54
5:a:3:GLU:HB2	5:a:127:CYS:HB3	1.89	0.54
3:e:88:HIS:N	3:e:91:GLN:OE1	2.40	0.54
3:e:122:ILE:O	3:e:126:ALA:N	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:78:LEU:HG	7:g:165:ILE:HG12	1.89	0.54
5:q:177:ASP:OD2	11:q:501:GDP:O2'	2.26	0.54
5:r:406:MET:O	5:r:410:GLU:HG2	2.08	0.54
3:y:220:GLU:HG2	3:y:221:ARG:HG2	1.90	0.54
3:6:98:ASP:O	3:6:105:ARG:NH2	2.38	0.54
5:9:52:ASN:OD1	5:9:62:ARG:NH1	2.41	0.54
2:B:355:VAL:HA	2:B:368:HIS:HA	1.89	0.54
3:G:254:GLU:OE1	5:J:98:GLY:N	2.40	0.54
5:R:290:THR:HA	5:R:293:MET:HE3	1.90	0.54
3:h:414:GLU:HG2	3:h:416:GLY:H	1.72	0.54
3:k:4:VAL:HG12	3:k:133:GLN:HB2	1.89	0.54
5:p:24:VAL:HG11	5:p:50:TYR:HD2	1.72	0.54
5:p:39:ASP:OD1	5:p:40:SER:N	2.41	0.54
3:s:27:GLU:OE2	3:s:320:ARG:NH2	2.40	0.54
5:t:318:ARG:HG3	5:t:358:PRO:HD3	1.90	0.54
3:1:123:ARG:HH12	3:1:126:ALA:HB3	1.73	0.54
5:4:142:GLY:N	11:4:501:GDP:O3B	2.36	0.54
5:8:116:VAL:O	5:8:120:VAL:HG23	2.08	0.54
5:8:309:ARG:NH1	5:8:427:ASP:OD2	2.41	0.54
2:C:355:VAL:HA	2:C:368:HIS:HA	1.90	0.54
3:E:105:ARG:HB2	3:E:411:GLU:OE2	2.08	0.54
3:E:176:GLN:NE2	3:E:207:GLU:OE2	2.40	0.54
3:E:296:PHE:CE1	3:E:377:MET:HG3	2.43	0.54
3:L:223:THR:OG1	3:L:225:THR:HG22	2.07	0.54
5:R:309:ARG:NH1	5:R:428:ALA:O	2.41	0.54
5:V:163:MET:HE1	5:V:165:LEU:HG	1.89	0.54
3:Y:51:THR:HG21	3:Y:243:ARG:HB3	1.90	0.54
5:b:317:PHE:HB3	5:b:321:MET:HE1	1.90	0.54
5:j:186:THR:HG23	5:j:187:LEU:HD12	1.89	0.54
3:k:414:GLU:HG2	3:k:417:GLU:OE1	2.08	0.54
5:w:308:GLY:HA2	5:w:426:GLN:HE21	1.73	0.54
7:z:78:LEU:HG	7:z:165:ILE:HG12	1.89	0.54
3:1:212:ILE:HD12	3:1:215:ARG:HH22	1.73	0.54
5:4:6:HIS:CD2	5:4:21:TRP:HE1	2.26	0.54
5:4:46:ARG:HH22	3:6:72:PRO:HB2	1.71	0.54
5:4:286:VAL:HG13	5:4:287:PRO:HD3	1.90	0.54
5:4:331:LEU:HD21	3:6:176:GLN:HB3	1.90	0.54
3:5:152:LEU:O	3:5:156:ARG:HG2	2.07	0.54
3:5:406:HIS:HA	3:5:409:VAL:HG22	1.90	0.54
5:K:309:ARG:H	5:K:372:THR:HG1	1.54	0.53
3:L:268:MET:HE2	3:L:380:ASN:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:204:LEU:HA	3:S:303:VAL:HG22	1.90	0.53
8:l:126:GLU:OE1	8:l:172:TYR:OH	2.20	0.53
5:4:293:MET:HB2	5:4:367:PHE:HB2	1.90	0.53
5:8:156:ARG:HG3	5:8:195:ASN:HB3	1.89	0.53
1:A:127:TRP:CE2	3:k:390:ARG:HD3	2.43	0.53
2:B:146:ASN:HD21	2:B:170:ASN:HD22	1.56	0.53
2:C:146:ASN:HD21	2:C:170:ASN:HD22	1.56	0.53
2:C:391:THR:HB	2:C:395:SER:HB2	1.91	0.53
5:K:52:ASN:OD1	5:K:62:ARG:NH2	2.42	0.53
5:K:313:ALA:HB3	5:K:349:VAL:HG12	1.89	0.53
5:N:92:PHE:HE1	5:N:94:GLN:HE22	1.55	0.53
5:N:117:LEU:HA	5:N:120:VAL:HG12	1.90	0.53
5:T:273:LEU:H	5:T:292:GLN:HE22	1.55	0.53
5:U:194:GLU:OE1	5:U:194:GLU:N	2.41	0.53
3:h:339:ARG:NH1	3:h:339:ARG:HA	2.23	0.53
3:k:66:ILE:HD11	3:k:93:ILE:HD12	1.90	0.53
5:q:207:LEU:HB3	5:q:225:LEU:HD22	1.90	0.53
3:s:21:TRP:CZ2	3:s:65:CYS:HB3	2.43	0.53
3:y:213:CYS:SG	3:y:222:PRO:HB3	2.48	0.53
7:z:44:SER:OG	7:z:163:ARG:NH1	2.39	0.53
7:3:29:VAL:HG12	7:3:57:THR:HG23	1.90	0.53
5:4:271:THR:HG22	5:4:289:LEU:HD13	1.90	0.53
2:B:391:THR:HB	2:B:395:SER:HB2	1.91	0.53
5:I:54:ALA:HB3	5:I:58:ARG:HB2	1.90	0.53
3:L:116:ASP:OD1	3:L:116:ASP:N	2.41	0.53
5:O:194:GLU:N	5:O:194:GLU:OE1	2.41	0.53
5:T:295:ASP:OD1	5:T:296:ALA:N	2.42	0.53
5:U:238:CYS:HB3	5:U:318:ARG:NH1	2.23	0.53
3:Y:298:PRO:HB3	3:Y:307:PRO:HD2	1.91	0.53
7:c:29:VAL:HG12	7:c:57:THR:HG23	1.90	0.53
8:d:126:GLU:OE1	8:d:172:TYR:OH	2.20	0.53
7:g:44:SER:OG	7:g:163:ARG:NH1	2.39	0.53
8:n:126:GLU:OE1	8:n:172:TYR:OH	2.20	0.53
5:p:245:GLN:O	3:y:11:GLN:NE2	2.41	0.53
3:y:139:ASN:OD1	3:y:140:ALA:N	2.42	0.53
2:B:412:GLN:HB3	6:x:53:ARG:HH22	1.73	0.53
2:B:567:ALA:HA	2:B:580:TRP:O	2.08	0.53
2:C:567:ALA:HA	2:C:580:TRP:O	2.08	0.53
3:G:22:GLU:OE1	3:G:83:TYR:OH	2.18	0.53
5:R:172:SER:HB2	5:R:205:GLU:HG2	1.89	0.53
5:U:3:GLU:N	5:U:3:GLU:OE1	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Y:185:TYR:HD2	3:Y:418:PHE:HE2	1.55	0.53
5:p:226:ASN:OD1	11:p:501:GDP:N1	2.40	0.53
5:v:288:GLU:HA	5:v:291:GLN:HE21	1.73	0.53
5:w:347:ASN:ND2	3:7:178:SER:O	2.41	0.53
3:1:215:ARG:NH2	3:1:300:SER:HA	2.24	0.53
3:7:53:PHE:O	3:7:64:ARG:NH2	2.40	0.53
3:F:319:TYR:CE2	3:F:328:VAL:HG22	2.43	0.53
3:G:100:ALA:N	9:G:501:GTP:O2G	2.41	0.53
5:K:246:LEU:HB3	5:K:353:VAL:HG12	1.91	0.53
3:M:113:GLU:OE1	3:M:113:GLU:N	2.42	0.53
5:N:102:ALA:O	5:N:106:TYR:N	2.40	0.53
5:O:88:ASP:OD2	5:O:88:ASP:N	2.40	0.53
5:Q:117:LEU:HA	5:Q:120:VAL:HG12	1.91	0.53
5:U:327:ASP:HB3	3:k:177:VAL:HG13	1.91	0.53
7:c:44:SER:OG	7:c:163:ARG:NH1	2.39	0.53
3:e:241:SER:OG	3:e:250:VAL:O	2.24	0.53
3:f:189:LEU:HD11	3:f:417:GLU:HG2	1.91	0.53
5:j:6:HIS:HD2	5:j:21:TRP:HE1	1.57	0.53
5:q:416:ASN:HA	5:q:419:VAL:HG12	1.90	0.53
5:t:116:VAL:O	5:t:120:VAL:HG13	2.08	0.53
5:t:385:PHE:HZ	5:t:408:PHE:HB3	1.74	0.53
5:w:55:THR:O	5:w:58:ARG:NE	2.35	0.53
7:z:29:VAL:HG12	7:z:57:THR:HG23	1.90	0.53
8:2:126:GLU:OE1	8:2:172:TYR:OH	2.20	0.53
7:3:44:SER:OG	7:3:163:ARG:NH1	2.39	0.53
3:7:216:SER:HB3	3:7:275:ILE:O	2.08	0.53
2:C:249:PRO:HD3	2:C:299:LEU:HD11	1.91	0.53
3:D:319:TYR:CD1	3:D:375:VAL:HG22	2.43	0.53
4:H:120:THR:HA	5:T:94:GLN:HB2	1.89	0.53
5:O:22:GLU:HG3	5:O:81:TYR:CD2	2.44	0.53
3:P:5:ILE:HG12	3:P:132:LEU:HD11	1.91	0.53
7:g:29:VAL:HG12	7:g:57:THR:HG23	1.90	0.53
5:j:4:ILE:HG22	5:j:49:VAL:HG22	1.91	0.53
5:j:249:ASP:OD1	5:j:250:LEU:N	2.41	0.53
3:y:181:VAL:HG13	3:y:182:VAL:HG23	1.91	0.53
5:8:8:GLN:CD	5:8:14:ASN:HA	2.33	0.53
5:8:8:GLN:HG3	5:8:14:ASN:HD22	1.73	0.53
5:9:295:ASP:OD1	5:9:296:ALA:N	2.41	0.53
2:B:249:PRO:HD3	2:B:299:LEU:HD11	1.91	0.53
3:D:399:TYR:O	3:D:402:ARG:NH1	2.42	0.53
5:J:203:ASP:OD1	5:J:204:ASN:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:T:18:ALA:O	5:T:22:GLU:HG3	2.08	0.53
5:U:109:GLY:O	5:U:113:ILE:HG12	2.09	0.53
5:b:69:GLU:N	5:b:93:GLY:O	2.36	0.53
7:c:73:LEU:HB2	7:c:167:PHE:HB3	1.91	0.53
5:4:1:MET:HG3	3:6:72:PRO:HG2	1.89	0.53
3:6:204:LEU:HG	3:6:302:MET:HB2	1.90	0.53
5:9:211:CYS:HA	5:9:215:LEU:HB2	1.91	0.53
3:E:103:PHE:HB2	3:E:186:ASN:HB3	1.91	0.53
3:F:319:TYR:CD1	3:F:375:VAL:HG22	2.44	0.53
5:a:123:GLU:O	5:a:126:SER:OG	2.24	0.53
5:a:416:ASN:HA	5:a:419:VAL:HG12	1.91	0.53
8:d:119:THR:HG23	8:d:122:ARG:H	1.74	0.53
3:e:3:GLU:HA	3:e:51:THR:HA	1.91	0.53
3:e:102:ASN:OD1	3:e:104:ALA:N	2.41	0.53
3:f:328:VAL:HG21	3:f:355:ILE:HD11	1.89	0.53
7:g:73:LEU:HB2	7:g:167:PHE:HB3	1.91	0.53
3:h:187:SER:O	3:h:190:SER:OG	2.26	0.53
3:m:5:ILE:HG12	3:m:132:LEU:HD11	1.91	0.53
5:u:320:ARG:NH1	5:u:321:MET:O	2.41	0.53
3:y:213:CYS:SG	3:y:219:ILE:HB	2.49	0.53
7:z:73:LEU:HB2	7:z:167:PHE:HB3	1.91	0.53
8:2:119:THR:HG23	8:2:122:ARG:H	1.74	0.53
7:3:73:LEU:HB2	7:3:167:PHE:HB3	1.91	0.53
5:4:68:LEU:HD12	5:4:143:THR:HG22	1.90	0.53
3:5:287:SER:O	3:5:291:ILE:HG12	2.08	0.53
3:G:392:ASP:HB3	3:G:422:ARG:NH2	2.23	0.53
5:I:67:ASP:HB3	5:I:73:MET:HE3	1.91	0.53
5:I:121:ARG:NE	5:I:158:GLU:OE2	2.41	0.53
3:Y:15:GLN:HB3	3:Y:228:ASN:HD21	1.74	0.53
3:Y:100:ALA:N	9:Y:501:GTP:O2G	2.39	0.53
5:b:109:GLY:O	5:b:113:ILE:HG12	2.08	0.53
7:c:39:ASP:OD1	7:c:40:ALA:N	2.42	0.53
8:l:119:THR:HG23	8:l:122:ARG:H	1.74	0.53
5:u:3:GLU:HA	5:u:49:VAL:HA	1.91	0.53
3:y:214:ARG:NH2	3:y:220:GLU:O	2.42	0.53
7:3:39:ASP:OD1	7:3:40:ALA:N	2.42	0.53
5:8:11:GLN:O	5:8:15:GLN:HG3	2.09	0.53
5:9:330:MET:HB3	5:9:349:VAL:HG21	1.91	0.53
2:C:409:PHE:HB3	2:C:413:SER:HB2	1.90	0.53
3:D:96:LYS:HE3	5:R:129:CYS:HB2	1.90	0.53
3:D:246:GLY:HA2	3:D:357:TYR:CD2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:I:313:ALA:HB3	5:I:349:VAL:HG12	1.91	0.53
5:J:39:ASP:OD1	5:J:40:SER:N	2.41	0.53
5:U:292:GLN:HG2	5:U:298:ASN:ND2	2.24	0.53
5:V:249:ASP:OD1	5:V:250:LEU:N	2.41	0.53
5:V:288:GLU:O	5:V:291:GLN:NE2	2.41	0.53
6:W:82:GLY:O	3:Y:79:ARG:NH2	2.42	0.53
5:i:101:TRP:CE3	5:i:187:LEU:HD23	2.44	0.53
5:i:344:TRP:CD1	5:i:344:TRP:H	2.25	0.53
3:k:265:ILE:HG22	3:k:380:ASN:HD21	1.74	0.53
8:l:205:ALA:O	8:l:208:THR:OG1	2.26	0.53
3:m:223:THR:HA	5:q:323:THR:HG22	1.90	0.53
8:n:119:THR:HG23	8:n:122:ARG:H	1.74	0.53
5:u:165:LEU:HD11	5:u:250:LEU:HD23	1.91	0.53
7:z:39:ASP:OD1	7:z:40:ALA:N	2.42	0.53
3:6:88:HIS:N	3:6:91:GLN:OE1	2.42	0.53
3:F:288:VAL:O	3:F:292:THR:HG23	2.08	0.52
3:G:70:LEU:HD12	3:G:99:ALA:HB2	1.92	0.52
3:L:94:SER:OG	3:L:95:GLY:N	2.41	0.52
5:T:102:ALA:O	5:T:106:TYR:N	2.42	0.52
5:U:203:ASP:OD1	5:U:204:ASN:N	2.41	0.52
3:Y:392:ASP:HA	3:Y:422:ARG:HH12	1.73	0.52
8:d:205:ALA:O	8:d:208:THR:OG1	2.26	0.52
3:e:395:PHE:HZ	3:e:418:PHE:HB3	1.73	0.52
7:g:39:ASP:OD1	7:g:40:ALA:N	2.42	0.52
8:n:205:ALA:O	8:n:208:THR:OG1	2.26	0.52
3:s:199:ASP:HB3	3:s:256:GLN:NE2	2.22	0.52
3:s:319:TYR:CD1	3:s:375:VAL:HG22	2.44	0.52
5:t:416:ASN:HA	5:t:419:VAL:HG12	1.90	0.52
5:w:379:LYS:HG3	5:w:419:VAL:HG21	1.89	0.52
3:0:98:ASP:O	3:0:105:ARG:NH2	2.30	0.52
5:8:64:ILE:HD12	5:8:120:VAL:HG22	1.90	0.52
5:8:207:LEU:HB3	5:8:225:LEU:HD22	1.91	0.52
5:9:194:GLU:N	5:9:194:GLU:OE1	2.42	0.52
5:9:282:ARG:NH2	5:9:292:GLN:OE1	2.36	0.52
2:B:409:PHE:HB3	2:B:413:SER:HB2	1.90	0.52
5:I:179:VAL:HB	3:M:258:ASN:HB2	1.91	0.52
5:q:287:PRO:O	5:q:291:GLN:HG3	2.09	0.52
5:t:174:LYS:HE3	5:t:205:GLU:OE1	2.09	0.52
7:3:57:THR:HB	7:3:158:ALA:HB2	1.91	0.52
5:4:101:TRP:CE3	5:4:187:LEU:HD23	2.44	0.52
5:4:193:VAL:HA	5:4:264:HIS:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:5:144:GLY:N	9:5:501:GTP:O3B	2.42	0.52
3:6:139:ASN:OD1	3:6:140:ALA:N	2.42	0.52
3:D:193:SER:O	3:D:197:HIS:ND1	2.41	0.52
3:E:384:ILE:HG13	3:E:388:PHE:CE2	2.43	0.52
3:P:46:ASP:OD1	3:P:47:ASP:N	2.42	0.52
5:T:289:LEU:HD23	5:T:365:ALA:HB2	1.90	0.52
5:U:67:ASP:O	5:U:92:PHE:HA	2.09	0.52
5:V:255:VAL:HG23	3:e:407:TRP:CD1	2.45	0.52
3:Y:256:GLN:HE21	5:v:397:TRP:HH2	1.58	0.52
5:b:139:LEU:HB2	5:b:171:PRO:HD3	1.90	0.52
5:b:223:GLY:O	5:b:227:HIS:N	2.38	0.52
7:c:57:THR:HB	7:c:158:ALA:HB2	1.91	0.52
3:f:265:ILE:HG22	3:f:380:ASN:HD21	1.75	0.52
5:i:225:LEU:O	5:i:229:ILE:HG12	2.09	0.52
5:v:49:VAL:HG11	5:v:241:ARG:HG2	1.91	0.52
3:0:54:SER:OG	3:0:64:ARG:NH2	2.43	0.52
8:2:205:ALA:O	8:2:208:THR:OG1	2.26	0.52
3:6:231:ILE:O	3:6:235:ILE:HG12	2.09	0.52
2:C:426:LYS:NZ	5:i:320:ARG:HH22	2.06	0.52
4:H:131:GLU:C	4:H:132:ARG:HD2	2.34	0.52
5:J:318:ARG:HG3	5:J:358:PRO:HD3	1.91	0.52
5:Q:274:THR:HG23	5:Q:278:SER:HB2	1.90	0.52
5:V:27:GLU:HA	5:V:359:LYS:HZ1	1.75	0.52
3:X:283:HIS:HB2	3:Y:88:HIS:CD2	2.43	0.52
7:g:57:THR:HB	7:g:158:ALA:HB2	1.91	0.52
5:q:73:MET:SD	5:q:92:PHE:HB3	2.49	0.52
5:t:154:LYS:O	5:t:158:GLU:HG3	2.09	0.52
7:z:57:THR:HB	7:z:158:ALA:HB2	1.91	0.52
3:1:146:GLY:N	9:1:501:GTP:O2B	2.25	0.52
3:5:70:LEU:HB3	3:5:98:ASP:HA	1.91	0.52
5:8:144:GLY:O	5:8:145:SER:C	2.52	0.52
5:9:341:PHE:HB3	5:9:348:ASN:ND2	2.22	0.52
2:B:425:GLN:HB2	2:B:446:GLU:HG2	1.91	0.52
2:C:425:GLN:HB2	2:C:446:GLU:HG2	1.91	0.52
3:D:100:ALA:HA	5:R:252:LYS:HB3	1.92	0.52
3:D:278:ALA:HA	3:D:369:ALA:HB2	1.92	0.52
3:E:47:ASP:HA	3:E:50:ASN:HB3	1.90	0.52
5:I:11:GLN:HE22	3:M:248:LEU:HA	1.75	0.52
5:J:100:ASN:HD22	5:J:103:LYS:HE3	1.73	0.52
5:K:137:HIS:HB2	5:K:168:SER:HA	1.91	0.52
3:L:4:VAL:HG12	3:L:133:GLN:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:X:199:ASP:CG	3:X:256:GLN:HE22	2.17	0.52
3:Y:122:ILE:O	3:Y:126:ALA:N	2.35	0.52
3:Z:178:SER:O	5:j:347:ASN:ND2	2.42	0.52
5:b:283:ALA:O	5:b:288:GLU:HG3	2.10	0.52
3:h:100:ALA:N	9:h:501:GTP:O2G	2.43	0.52
3:k:416:GLY:O	3:k:420:GLU:HG2	2.09	0.52
3:o:69:ASP:OD1	3:o:70:LEU:N	2.43	0.52
3:o:192:HIS:ND1	3:o:424:ASP:OD2	2.42	0.52
5:w:397:TRP:CE2	3:5:257:THR:HA	2.44	0.52
3:y:431:ASP:OD1	7:3:118:ILE:HD11	2.09	0.52
7:z:124:ARG:C	7:z:124:ARG:HD2	2.35	0.52
5:Q:198:GLU:HG2	5:Q:266:PHE:CE2	2.44	0.52
5:U:211:CYS:HA	5:U:215:LEU:HB2	1.91	0.52
3:Y:94:SER:OG	3:Y:95:GLY:N	2.41	0.52
5:b:225:LEU:O	5:b:229:ILE:HG12	2.09	0.52
3:e:265:ILE:HG22	3:e:380:ASN:HD21	1.75	0.52
3:f:145:THR:HG23	3:f:149:LEU:HD12	1.92	0.52
7:g:124:ARG:HD2	7:g:124:ARG:C	2.35	0.52
5:q:309:ARG:NH1	5:q:426:GLN:O	2.43	0.52
5:u:27:GLU:OE1	5:u:241:ARG:NH1	2.43	0.52
7:z:115:LYS:HB3	7:z:116:PRO:HD2	1.91	0.52
3:E:165:SER:HA	3:E:199:ASP:OD2	2.09	0.52
5:K:106:TYR:HE2	5:K:403:MET:HG2	1.74	0.52
5:K:117:LEU:HA	5:K:120:VAL:HG12	1.92	0.52
5:O:392:LYS:HG3	5:O:395:LEU:HD13	1.91	0.52
5:T:16:ILE:HD11	5:T:136:CYS:HB3	1.92	0.52
5:V:100:ASN:HB3	5:V:103:LYS:HG2	1.92	0.52
7:c:103:PHE:HE2	7:c:139:PHE:HB3	1.74	0.52
3:e:333:ALA:O	3:e:337:THR:HG23	2.09	0.52
7:g:115:LYS:HB3	7:g:116:PRO:HD2	1.91	0.52
3:y:146:GLY:N	9:y:501:GTP:O2B	2.39	0.52
3:1:104:ALA:O	3:1:108:TYR:N	2.37	0.52
7:3:124:ARG:HD2	7:3:124:ARG:C	2.35	0.52
5:8:170:VAL:HG11	5:8:201:VAL:HB	1.92	0.52
5:9:72:THR:O	5:9:75:SER:OG	2.27	0.52
2:C:306:GLY:HA3	2:C:323:TYR:O	2.10	0.52
5:I:194:GLU:OE1	5:I:194:GLU:N	2.43	0.52
5:I:352:SER:OG	5:I:353:VAL:N	2.43	0.52
5:J:161:ASP:OD2	5:J:162:ARG:NH1	2.42	0.52
3:P:193:SER:O	3:P:197:HIS:ND1	2.43	0.52
7:c:124:ARG:HD2	7:c:124:ARG:C	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:j:3:GLU:HA	5:j:49:VAL:HA	1.92	0.52
5:j:388:MET:O	5:j:392:LYS:N	2.42	0.52
3:o:139:ASN:ND2	3:o:146:GLY:O	2.41	0.52
5:w:24:VAL:HG11	5:w:50:TYR:CD2	2.45	0.52
3:7:246:GLY:HA2	3:7:357:TYR:CZ	2.44	0.52
3:7:345:ASP:OD1	3:7:346:TRP:N	2.43	0.52
3:L:14:ILE:HD11	3:L:74:VAL:HB	1.91	0.52
3:L:175:PRO:HB3	3:L:390:ARG:NH1	2.25	0.52
3:P:21:TRP:CZ2	3:P:65:CYS:HB3	2.45	0.52
3:S:144:GLY:N	9:S:501:GTP:O3B	2.39	0.52
5:T:109:GLY:O	5:T:113:ILE:HG12	2.09	0.52
5:U:143:THR:OG1	11:U:501:GDP:O2B	2.21	0.52
3:Y:72:PRO:HB2	5:b:46:ARG:HH22	1.74	0.52
5:i:302:ALA:HB3	5:i:377:MET:HE1	1.91	0.52
5:i:304:ASP:OD1	5:i:306:ARG:NE	2.36	0.52
3:m:195:LEU:HD21	3:m:264:ARG:HE	1.73	0.52
8:n:38:THR:HG23	8:n:126:GLU:HB3	1.91	0.52
3:o:147:SER:HB3	3:o:190:SER:HB3	1.91	0.52
5:r:41:ASP:OD1	5:r:41:ASP:N	2.43	0.52
5:t:8:GLN:CD	5:t:17:GLY:HA3	2.34	0.52
5:t:117:LEU:HA	5:t:120:VAL:HG22	1.91	0.52
5:v:252:LYS:HB3	3:l:100:ALA:HA	1.91	0.52
7:3:103:PHE:HE2	7:3:139:PHE:HB3	1.74	0.52
5:4:6:HIS:HD2	5:4:21:TRP:HE1	1.58	0.52
2:B:306:GLY:HA3	2:B:323:TYR:O	2.10	0.52
3:F:319:TYR:HD2	3:F:323:VAL:HG11	1.76	0.52
3:G:386:GLU:HG3	3:G:387:ILE:N	2.25	0.52
5:O:211:CYS:SG	5:O:220:PRO:HB3	2.50	0.52
5:T:331:LEU:O	5:T:335:ASN:ND2	2.42	0.52
5:U:91:VAL:HG11	5:U:116:VAL:HG22	1.92	0.52
3:X:98:ASP:OD1	3:X:98:ASP:N	2.43	0.52
5:b:309:ARG:H	5:b:372:THR:HG22	1.75	0.52
7:c:115:LYS:HB3	7:c:116:PRO:HD2	1.91	0.52
3:e:104:ALA:HB2	3:e:413:MET:SD	2.50	0.52
8:l:38:THR:HG23	8:l:126:GLU:HB3	1.92	0.52
3:s:102:ASN:HB3	3:s:105:ARG:HB2	1.91	0.52
5:w:50:TYR:CE2	5:w:241:ARG:HD3	2.45	0.52
3:y:5:ILE:HG12	3:y:132:LEU:HD11	1.92	0.52
3:0:151:SER:HB2	3:0:193:SER:HB2	1.92	0.52
7:3:115:LYS:HB3	7:3:116:PRO:HD2	1.91	0.52
3:E:264:ARG:O	3:E:266:HIS:ND1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:69:ASP:OD1	3:G:70:LEU:N	2.42	0.51
3:L:69:ASP:OD1	3:L:70:LEU:N	2.42	0.51
5:N:322:SER:HB2	3:f:221:ARG:HB3	1.91	0.51
5:O:52:ASN:OD1	5:O:62:ARG:NH1	2.43	0.51
5:Q:290:THR:HA	5:Q:293:MET:HG2	1.92	0.51
5:U:157:GLU:OE1	5:U:157:GLU:N	2.42	0.51
5:V:3:GLU:HB3	5:V:62:ARG:HH12	1.74	0.51
3:Y:307:PRO:HB2	3:Y:312:TYR:HE1	1.75	0.51
3:Y:336:LYS:NZ	3:Y:348:PRO:O	2.43	0.51
5:a:289:LEU:O	5:a:293:MET:HG2	2.10	0.51
3:f:12:ALA:HB3	3:f:140:ALA:HB2	1.91	0.51
3:f:305:CYS:HB2	3:f:387:ILE:HD11	1.91	0.51
3:k:333:ALA:O	3:k:337:THR:HG23	2.10	0.51
5:v:86:ARG:HB3	5:v:88:ASP:OD1	2.10	0.51
3:0:5:ILE:HG12	3:0:132:LEU:HD11	1.91	0.51
3:1:39:ASP:OD2	3:1:61:HIS:NE2	2.43	0.51
3:5:3:GLU:OE2	3:5:50:ASN:ND2	2.44	0.51
3:5:241:SER:HB3	3:5:250:VAL:H	1.74	0.51
3:6:320:ARG:HG2	3:6:360:PRO:HD3	1.93	0.51
5:9:70:PRO:HA	5:9:73:MET:HE2	1.93	0.51
2:B:82:THR:HA	2:B:103:LYS:HA	1.92	0.51
2:B:493:CYS:HG	2:B:513:PHE:HD2	1.57	0.51
4:H:102:ALA:HB3	5:U:333:VAL:HG22	1.91	0.51
5:J:123:GLU:O	5:J:126:SER:OG	2.23	0.51
3:X:70:LEU:HB3	3:X:98:ASP:HA	1.91	0.51
3:Z:76:ASP:HA	3:Z:79:ARG:HD2	1.92	0.51
5:b:8:GLN:O	5:b:14:ASN:ND2	2.44	0.51
8:d:38:THR:HG23	8:d:126:GLU:HB3	1.91	0.51
3:f:165:SER:HA	3:f:199:ASP:OD1	2.10	0.51
5:q:290:THR:HA	5:q:293:MET:HG2	1.93	0.51
5:r:194:GLU:OE1	5:r:194:GLU:N	2.42	0.51
3:y:396:ASP:OD1	3:y:422:ARG:NE	2.42	0.51
3:1:3:GLU:HB2	3:1:129:CYS:SG	2.50	0.51
8:2:38:THR:HG23	8:2:126:GLU:HB3	1.91	0.51
5:4:27:GLU:HG2	5:4:359:LYS:HE2	1.93	0.51
5:9:249:ASP:H	5:9:252:LYS:HD3	1.74	0.51
2:C:82:THR:HA	2:C:103:LYS:HA	1.92	0.51
3:E:176:GLN:OE1	3:E:176:GLN:N	2.40	0.51
3:F:9:ILE:HG22	3:F:68:LEU:HD22	1.91	0.51
5:J:107:THR:OG1	5:J:108:GLU:OE1	2.27	0.51
5:R:180:VAL:HG23	5:R:184:ASN:HD21	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:133:GLN:HG3	3:S:242:LEU:HD11	1.92	0.51
7:g:103:PHE:HE2	7:g:139:PHE:HB3	1.74	0.51
5:p:68:LEU:HD12	5:p:97:ALA:HB2	1.92	0.51
5:r:70:PRO:HB3	5:r:92:PHE:CG	2.46	0.51
3:0:185:TYR:HD2	3:0:418:PHE:HE2	1.56	0.51
3:7:172:TYR:CG	3:7:173:PRO:HD2	2.45	0.51
2:C:70:TYR:HB3	2:C:89:ASP:HA	1.92	0.51
3:D:121:ARG:HH21	3:D:124:LYS:HD3	1.74	0.51
5:I:259:PRO:HG2	5:I:260:PHE:HD1	1.76	0.51
3:M:216:SER:HB3	3:M:275:ILE:O	2.10	0.51
5:O:392:LYS:HE3	5:O:395:LEU:HD22	1.91	0.51
5:T:406:MET:N	5:T:406:MET:SD	2.84	0.51
5:U:88:ASP:OD2	5:U:88:ASP:N	2.40	0.51
3:Y:90:GLU:OE1	3:Y:121:ARG:HD3	2.11	0.51
5:b:361:LEU:HD21	12:b:502:TA1:H171	1.92	0.51
8:d:282:GLU:OE1	8:d:300:TYR:OH	2.21	0.51
3:h:146:GLY:N	9:h:501:GTP:O2B	2.28	0.51
3:h:246:GLY:HA2	3:h:357:TYR:CE2	2.45	0.51
3:s:155:GLU:HA	3:s:197:HIS:CD2	2.45	0.51
3:s:246:GLY:HA2	3:s:357:TYR:CE2	2.45	0.51
5:u:101:TRP:CE3	5:u:187:LEU:HD23	2.46	0.51
5:u:321:MET:HE2	5:u:363:MET:HE3	1.93	0.51
5:w:24:VAL:HG11	5:w:50:TYR:HD2	1.76	0.51
3:1:209:ILE:HB	3:1:227:LEU:HD22	1.91	0.51
3:7:3:GLU:HA	3:7:51:THR:HA	1.91	0.51
2:B:69:ARG:HG3	2:B:70:TYR:H	1.76	0.51
2:B:70:TYR:HB3	2:B:89:ASP:HA	1.92	0.51
2:C:69:ARG:HG3	2:C:70:TYR:H	1.76	0.51
4:H:44:LEU:HD23	4:H:44:LEU:H	1.76	0.51
5:J:98:GLY:HA3	5:J:103:LYS:HD2	1.92	0.51
3:L:140:ALA:HA	3:L:171:VAL:HG12	1.93	0.51
5:O:117:LEU:HA	5:O:120:VAL:HG12	1.92	0.51
5:U:39:ASP:OD1	5:U:40:SER:N	2.43	0.51
3:Z:315:CYS:HA	3:Z:379:SER:HA	1.92	0.51
5:a:68:LEU:HD11	5:a:97:ALA:HB2	1.93	0.51
12:b:502:TA1:C12	12:b:502:TA1:H432	2.41	0.51
3:h:53:PHE:O	3:h:64:ARG:NH2	2.31	0.51
5:j:182:PRO:O	5:j:186:THR:HG22	2.11	0.51
5:q:172:SER:HB3	5:q:175:VAL:O	2.10	0.51
3:s:277:SER:OG	3:s:278:ALA:N	2.43	0.51
7:z:103:PHE:HE2	7:z:139:PHE:HB3	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:0:60:LYS:NZ	3:0:85:GLN:O	2.37	0.51
3:0:140:ALA:HA	3:0:171:VAL:HG12	1.92	0.51
8:2:282:GLU:OE1	8:2:300:TYR:OH	2.21	0.51
5:4:137:HIS:CD2	5:4:166:THR:HG23	2.45	0.51
12:4:502:TA1:C12	12:4:502:TA1:H432	2.40	0.51
3:G:246:GLY:HA2	3:G:357:TYR:CE2	2.45	0.51
5:I:238:CYS:HB3	5:I:318:ARG:HH11	1.75	0.51
5:O:11:GLN:HE22	3:k:248:LEU:HA	1.75	0.51
3:P:392:ASP:OD1	3:P:425:LEU:HD23	2.09	0.51
5:T:68:LEU:HD12	5:T:97:ALA:HB2	1.92	0.51
3:X:140:ALA:HA	3:X:171:VAL:HG22	1.92	0.51
5:a:275:SER:OG	5:a:276:ARG:N	2.44	0.51
3:o:213:CYS:SG	3:o:219:ILE:HB	2.51	0.51
3:o:236:SER:OG	3:o:320:ARG:NH1	2.43	0.51
5:q:68:LEU:HD12	5:q:97:ALA:HB2	1.91	0.51
5:q:68:LEU:HG	5:q:147:MET:HE1	1.92	0.51
5:r:323:THR:HG22	3:0:223:THR:HA	1.92	0.51
3:s:298:PRO:HG3	3:s:308:ARG:HE	1.76	0.51
5:u:385:PHE:HZ	5:u:408:PHE:HB3	1.75	0.51
5:w:215:LEU:HD21	5:w:273:LEU:HD22	1.92	0.51
3:y:185:TYR:HD2	3:y:418:PHE:HE2	1.58	0.51
5:4:358:PRO:HB2	5:4:361:LEU:HB2	1.93	0.51
5:9:63:ALA:O	5:9:89:ASN:ND2	2.43	0.51
2:C:528:ALA:HB1	2:C:556:VAL:HG13	1.93	0.51
3:E:225:THR:O	3:E:229:ARG:HG3	2.10	0.51
5:K:323:THR:HG22	3:L:223:THR:HA	1.92	0.51
5:N:16:ILE:HD11	5:N:136:CYS:HB3	1.92	0.51
3:P:12:ALA:HA	3:P:15:GLN:HB2	1.93	0.51
5:U:289:LEU:HD23	5:U:365:ALA:HB2	1.92	0.51
3:Y:141:VAL:HG12	3:Y:171:VAL:O	2.11	0.51
3:Z:5:ILE:HG12	3:Z:132:LEU:HD11	1.91	0.51
3:Z:116:ASP:OD1	3:Z:116:ASP:N	2.41	0.51
7:c:100:ARG:NH1	3:o:434:GLU:OE2	2.43	0.51
3:e:422:ARG:HA	3:e:425:LEU:HD12	1.92	0.51
3:h:241:SER:HB3	3:h:250:VAL:H	1.75	0.51
5:j:165:LEU:HD11	5:j:250:LEU:HD23	1.92	0.51
3:m:251:ASP:OD2	3:m:253:THR:OG1	2.28	0.51
3:o:98:ASP:OD1	3:o:99:ALA:N	2.44	0.51
5:r:343:GLU:OE1	5:r:343:GLU:N	2.44	0.51
5:r:429:SER:N	5:r:435:GLU:OE2	2.36	0.51
5:u:140:GLY:O	5:u:184:ASN:ND2	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:v:54:ALA:HB3	5:v:58:ARG:HB2	1.92	0.51
5:w:344:TRP:CD1	5:w:344:TRP:H	2.27	0.51
3:1:215:ARG:HH22	3:1:300:SER:HA	1.76	0.51
5:4:1:MET:SD	5:4:1:MET:N	2.75	0.51
3:5:69:ASP:OD1	3:5:70:LEU:N	2.44	0.51
3:6:216:SER:HB2	3:6:275:ILE:O	2.10	0.51
2:B:566:GLU:OE1	2:B:624:TYR:OH	2.29	0.51
3:F:212:ILE:HG12	3:F:215:ARG:NH2	2.26	0.51
5:J:51:PHE:O	5:J:62:ARG:NH2	2.44	0.51
5:K:11:GLN:HE22	3:S:248:LEU:HA	1.76	0.51
3:P:388:PHE:CZ	3:P:425:LEU:HG	2.46	0.51
5:T:332:ASN:O	5:T:336:LYS:HG2	2.10	0.51
3:X:27:GLU:CD	3:X:243:ARG:HH12	2.19	0.51
3:X:76:ASP:HA	3:X:79:ARG:HB2	1.93	0.51
3:Y:205:ASP:O	3:Y:209:ILE:HG13	2.11	0.51
3:s:5:ILE:HG12	3:s:132:LEU:HD11	1.92	0.51
5:v:225:LEU:O	5:v:229:ILE:HG12	2.11	0.51
3:1:117:LEU:O	3:1:121:ARG:HG2	2.11	0.51
5:4:10:GLY:HA2	5:4:143:THR:OG1	2.11	0.51
2:B:528:ALA:HB1	2:B:556:VAL:HG13	1.93	0.51
2:B:567:ALA:HB3	2:B:624:TYR:HE1	1.76	0.51
2:C:566:GLU:OE1	2:C:624:TYR:OH	2.29	0.51
3:D:139:ASN:OD1	3:D:140:ALA:N	2.43	0.51
3:F:245:ASP:OD1	3:F:245:ASP:N	2.40	0.51
3:G:296:PHE:HE2	3:G:317:LEU:HD21	1.76	0.51
4:H:75:PHE:O	4:H:79:THR:HG23	2.11	0.51
3:L:225:THR:O	3:L:229:ARG:HG3	2.10	0.51
3:P:319:TYR:CD1	3:P:375:VAL:HG22	2.45	0.51
5:U:296:ALA:HB1	5:U:305:PRO:HD2	1.92	0.51
12:V:502:TA1:H141	12:V:502:TA1:H091	1.92	0.51
3:Y:270:SER:OG	3:Y:271:SER:N	2.44	0.51
3:Z:246:GLY:O	3:Z:249:ASN:ND2	2.43	0.51
5:b:405:GLU:HA	5:b:408:PHE:HD2	1.75	0.51
3:e:189:LEU:HD22	3:e:417:GLU:HG2	1.93	0.51
3:f:183:GLU:HG3	3:f:184:PRO:HD3	1.92	0.51
3:h:259:LEU:HD11	3:h:316:CYS:HB3	1.93	0.51
3:h:298:PRO:HB3	3:h:307:PRO:HD2	1.92	0.51
5:p:330:MET:HB3	5:p:349:VAL:HG21	1.93	0.51
3:s:417:GLU:HA	3:s:420:GLU:HB2	1.92	0.51
5:w:117:LEU:HA	5:w:120:VAL:HG12	1.92	0.51
5:4:97:ALA:HB2	5:4:143:THR:HG23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:567:ALA:HB3	2:C:624:TYR:HE1	1.76	0.51
3:D:88:HIS:CE1	3:D:90:GLU:HG2	2.46	0.51
3:F:311:LYS:H	3:F:382:THR:HG22	1.76	0.51
3:L:23:LEU:HD22	3:L:232:ALA:HB1	1.91	0.51
5:N:68:LEU:HD12	5:N:97:ALA:HB2	1.92	0.51
5:V:49:VAL:HG11	5:V:241:ARG:HG2	1.93	0.51
5:V:225:LEU:O	5:V:229:ILE:HG12	2.10	0.51
6:W:78:ARG:NH1	3:Y:76:ASP:OD1	2.44	0.51
3:X:69:ASP:OD1	3:X:70:LEU:N	2.44	0.51
3:X:287:SER:OG	3:X:290:GLU:HG2	2.11	0.51
3:Z:262:TYR:OH	5:i:391:ARG:HG3	2.11	0.51
3:e:75:VAL:HG21	3:e:94:SER:HB2	1.93	0.51
3:f:287:SER:OG	3:f:290:GLU:HG3	2.11	0.51
6:x:71:GLN:HA	3:7:220:GLU:OE2	2.10	0.51
3:1:215:ARG:HG3	3:1:216:SER:N	2.26	0.51
3:1:313:MET:HE3	3:1:382:THR:HB	1.93	0.51
5:9:156:ARG:HG3	5:9:195:ASN:HB3	1.92	0.51
3:F:298:PRO:HB3	3:F:307:PRO:HD2	1.93	0.50
5:U:175:VAL:HG22	5:U:205:GLU:OE2	2.11	0.50
3:Z:172:TYR:HB3	3:Z:205:ASP:OD1	2.11	0.50
5:a:203:ASP:OD1	5:a:204:ASN:N	2.44	0.50
3:f:66:ILE:HD11	3:f:93:ILE:HD12	1.91	0.50
3:m:72:PRO:HG2	5:q:1:MET:HG3	1.93	0.50
3:s:223:THR:HG23	3:s:225:THR:HG22	1.92	0.50
3:0:100:ALA:N	9:0:501:GTP:O2G	2.44	0.50
3:0:395:PHE:CD1	3:0:422:ARG:HD3	2.47	0.50
3:1:246:GLY:HA2	3:1:357:TYR:CZ	2.46	0.50
3:6:226:ASN:ND2	3:6:367:ASP:OD2	2.43	0.50
5:9:292:GLN:HG2	5:9:298:ASN:ND2	2.25	0.50
3:E:286:LEU:O	3:E:373:ARG:NH2	2.44	0.50
5:K:209:ASP:O	5:K:213:ARG:N	2.40	0.50
5:Q:129:CYS:SG	3:S:97:GLU:HG2	2.51	0.50
5:V:331:LEU:HD11	3:e:176:GLN:HB3	1.93	0.50
6:W:62:GLN:HE21	5:i:42:LEU:HD11	1.76	0.50
3:X:416:GLY:O	3:X:420:GLU:HG2	2.10	0.50
3:Y:339:ARG:O	3:Y:342:GLN:NE2	2.44	0.50
5:a:286:VAL:HG11	5:a:326:VAL:HG22	1.93	0.50
3:o:88:HIS:CE1	3:s:280:LYS:HG2	2.46	0.50
3:s:328:VAL:HG21	3:s:355:ILE:HD11	1.93	0.50
5:u:12:CYS:HB3	5:u:138:SER:OG	2.12	0.50
5:u:207:LEU:HG	5:u:225:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:155:GLU:HG2	3:1:197:HIS:CE1	2.46	0.50
3:1:235:ILE:HA	3:1:238:LEU:HG	1.92	0.50
5:8:109:GLY:O	5:8:113:ILE:HG12	2.10	0.50
3:E:245:ASP:N	3:E:245:ASP:OD1	2.45	0.50
3:F:392:ASP:CA	3:F:422:ARG:HH12	2.24	0.50
5:J:295:ASP:OD1	5:J:297:LYS:N	2.40	0.50
5:K:22:GLU:HG2	5:K:81:TYR:CD2	2.46	0.50
5:N:6:HIS:HD2	5:N:21:TRP:HE1	1.58	0.50
5:N:49:VAL:HG11	5:N:241:ARG:HG2	1.94	0.50
5:V:265:PHE:HB2	5:V:374:ILE:HD12	1.94	0.50
3:Z:2:ARG:HH21	3:Z:47:ASP:CG	2.20	0.50
3:m:88:HIS:CG	3:m:90:GLU:HG2	2.46	0.50
3:o:286:LEU:O	3:o:373:ARG:NE	2.41	0.50
5:w:252:LYS:HE2	5:w:350:LYS:HE2	1.94	0.50
5:4:228:LEU:HD23	5:4:300:MET:HE1	1.93	0.50
3:6:421:ALA:O	3:6:425:LEU:HG	2.11	0.50
2:C:408:ALA:HB3	2:C:417:ILE:HB	1.93	0.50
3:E:288:VAL:HA	3:E:291:ILE:HG12	1.92	0.50
3:F:326:LYS:HD3	5:8:219:THR:HA	1.92	0.50
5:K:68:LEU:HD12	5:K:97:ALA:HB2	1.93	0.50
5:N:417:ASP:O	5:N:421:GLU:HG2	2.12	0.50
5:R:139:LEU:HD12	5:R:170:VAL:HG12	1.93	0.50
3:S:139:ASN:OD1	3:S:140:ALA:N	2.40	0.50
5:a:260:PHE:HB2	5:a:263:LEU:HD13	1.94	0.50
3:h:3:GLU:OE1	3:h:64:ARG:NH1	2.44	0.50
3:o:193:SER:O	3:o:197:HIS:ND1	2.44	0.50
5:r:137:HIS:HB2	5:r:168:SER:HA	1.92	0.50
5:u:6:HIS:CD2	5:u:21:TRP:HE1	2.30	0.50
7:3:44:SER:OG	7:3:45:SER:N	2.44	0.50
2:B:408:ALA:HB3	2:B:417:ILE:HB	1.93	0.50
2:C:519:HIS:CE1	2:C:565:GLY:HA3	2.46	0.50
3:E:12:ALA:HB3	3:E:140:ALA:HB2	1.93	0.50
3:M:204:LEU:HA	3:M:303:VAL:HG22	1.94	0.50
5:Q:52:ASN:OD1	5:Q:62:ARG:NH2	2.45	0.50
5:R:143:THR:N	11:R:501:GDP:O3B	2.42	0.50
5:U:290:THR:HA	5:U:293:MET:HE3	1.92	0.50
3:X:21:TRP:CZ2	3:X:65:CYS:HB3	2.47	0.50
3:X:139:ASN:HB3	3:X:170:THR:HG22	1.93	0.50
5:a:101:TRP:CE3	5:a:187:LEU:HD23	2.46	0.50
5:b:101:TRP:CE3	5:b:187:LEU:HD23	2.47	0.50
7:c:44:SER:OG	7:c:45:SER:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:l:282:GLU:OE1	8:l:300:TYR:OH	2.21	0.50
8:n:282:GLU:OE1	8:n:300:TYR:OH	2.21	0.50
5:v:24:VAL:HG11	5:v:50:TYR:HD2	1.76	0.50
3:y:286:LEU:O	3:y:373:ARG:NE	2.42	0.50
3:0:14:ILE:HD11	3:0:74:VAL:HB	1.94	0.50
3:0:279:GLU:CD	3:0:279:GLU:H	2.19	0.50
5:4:344:TRP:CD1	5:4:344:TRP:H	2.28	0.50
3:6:239:THR:OG1	3:6:243:ARG:NE	2.38	0.50
5:8:173:PRO:HD2	5:8:205:GLU:HG3	1.93	0.50
2:B:348:PHE:HZ	2:B:611:VAL:HG21	1.77	0.50
2:B:519:HIS:CE1	2:B:565:GLY:HA3	2.46	0.50
3:E:237:SER:HA	3:E:320:ARG:HD2	1.93	0.50
3:F:178:SER:HB2	5:J:347:ASN:ND2	2.23	0.50
5:J:361:LEU:HD21	12:J:502:TA1:H171	1.93	0.50
5:K:121:ARG:NH2	5:K:158:GLU:HG2	2.26	0.50
3:M:144:GLY:N	9:M:501:GTP:O3B	2.42	0.50
5:N:178:THR:HG22	5:N:179:VAL:H	1.77	0.50
5:V:137:HIS:CE1	5:V:148:GLY:HA3	2.46	0.50
5:a:106:TYR:OH	5:a:407:GLU:OE1	2.29	0.50
5:b:6:HIS:HD2	5:b:21:TRP:HE1	1.59	0.50
5:b:24:VAL:HG11	5:b:50:TYR:CD2	2.41	0.50
5:j:239:CYS:SG	5:j:248:ALA:N	2.85	0.50
3:m:98:ASP:O	3:m:105:ARG:NH2	2.33	0.50
5:v:371:SER:O	5:v:374:ILE:HG12	2.12	0.50
5:4:178:THR:HG23	5:4:181:GLU:HB2	1.94	0.50
5:9:239:CYS:HB3	5:9:248:ALA:H	1.76	0.50
2:C:348:PHE:HZ	2:C:611:VAL:HG21	1.77	0.50
3:E:96:LYS:HD3	5:I:129:CYS:HB2	1.94	0.50
5:I:273:LEU:H	5:I:292:GLN:HE22	1.58	0.50
3:P:70:LEU:HB3	3:P:98:ASP:HA	1.93	0.50
5:R:86:ARG:HB3	5:R:88:ASP:OD1	2.11	0.50
5:R:184:ASN:OD1	5:R:398:TYR:OH	2.27	0.50
3:S:4:VAL:HG12	3:S:133:GLN:HB2	1.94	0.50
5:V:347:ASN:ND2	3:e:180:ALA:O	2.44	0.50
3:X:60:LYS:NZ	3:X:85:GLN:O	2.45	0.50
3:X:217:LEU:HD21	3:X:368:LEU:HD22	1.93	0.50
3:Y:172:TYR:CD1	3:Y:173:PRO:HD2	2.47	0.50
3:Y:178:SER:O	5:b:347:ASN:ND2	2.44	0.50
3:Z:257:THR:HA	5:i:397:TRP:CE2	2.47	0.50
5:b:271:THR:O	5:b:365:ALA:N	2.37	0.50
7:g:44:SER:OG	7:g:45:SER:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:j:328:GLU:OE1	5:j:332:ASN:ND2	2.44	0.50
3:m:246:GLY:HA2	3:m:357:TYR:CE2	2.47	0.50
5:q:143:THR:HG23	5:q:147:MET:CE	2.42	0.50
5:q:177:ASP:N	5:q:181:GLU:OE2	2.45	0.50
3:s:174:SER:HB3	3:s:177:VAL:O	2.11	0.50
3:s:213:CYS:SG	3:s:222:PRO:HB3	2.51	0.50
5:v:14:ASN:ND2	5:v:73:MET:SD	2.85	0.50
7:z:44:SER:OG	7:z:45:SER:N	2.44	0.50
3:1:318:MET:HE1	3:1:378:ILE:HG12	1.94	0.50
5:8:252:LYS:HA	5:8:255:VAL:HG12	1.94	0.50
1:A:211:ARG:O	1:A:215:MET:HG2	2.12	0.50
2:B:65:SER:OG	2:B:69:ARG:HB3	2.12	0.50
2:B:449:VAL:HB	2:B:466:LYS:HB2	1.93	0.50
2:C:65:SER:OG	2:C:69:ARG:HB3	2.12	0.50
2:C:449:VAL:HB	2:C:466:LYS:HB2	1.93	0.50
5:I:142:GLY:N	11:I:501:GDP:O3B	2.35	0.50
3:Y:185:TYR:CD2	3:Y:418:PHE:HE2	2.29	0.50
5:v:322:SER:HA	3:1:223:THR:HG22	1.94	0.50
3:0:21:TRP:CZ2	3:0:65:CYS:HB3	2.47	0.50
3:1:392:ASP:HA	3:1:422:ARG:HH12	1.76	0.50
3:5:2:ARG:HH21	3:5:47:ASP:CG	2.20	0.50
3:5:155:GLU:O	3:5:159:VAL:HG13	2.12	0.50
5:9:109:GLY:O	5:9:113:ILE:HG12	2.11	0.50
5:9:272:PRO:HD3	5:9:364:SER:HA	1.93	0.50
3:D:11:GLN:HE21	3:D:15:GLN:HE21	1.60	0.50
3:F:15:GLN:HB3	3:F:228:ASN:HD21	1.77	0.50
3:G:136:LEU:HD12	3:G:167:LEU:HB3	1.93	0.50
4:H:131:GLU:O	4:H:132:ARG:HD2	2.12	0.50
3:M:139:ASN:OD1	3:M:140:ALA:N	2.45	0.50
5:N:341:PHE:HB3	5:N:348:ASN:HD21	1.77	0.50
3:P:25:CYS:SG	3:P:86:LEU:HD11	2.52	0.50
5:R:87:PRO:HD3	5:q:281:TYR:CE2	2.47	0.50
5:R:105:HIS:CD2	5:R:150:LEU:HB2	2.47	0.50
5:V:34:GLY:O	5:V:59:TYR:N	2.45	0.50
5:V:117:LEU:HA	5:V:120:VAL:HG12	1.93	0.50
3:X:186:ASN:OD1	3:X:187:SER:N	2.45	0.50
3:Y:328:VAL:HG21	3:Y:355:ILE:HD11	1.92	0.50
3:e:94:SER:OG	3:e:95:GLY:N	2.45	0.50
3:f:408:TYR:O	3:f:413:MET:HB2	2.12	0.50
5:p:100:ASN:HB3	5:p:103:LYS:HG2	1.93	0.50
5:w:46:ARG:NH2	3:7:72:PRO:HB2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:w:341:PHE:HB3	5:w:348:ASN:ND2	2.20	0.50
3:0:210:TYR:CE1	3:0:227:LEU:HD11	2.46	0.50
3:7:320:ARG:HG2	3:7:360:PRO:HD3	1.94	0.50
5:8:143:THR:O	5:8:144:GLY:C	2.53	0.50
2:B:266:ARG:HD2	2:B:285:LEU:HD21	1.94	0.49
2:C:43:ARG:HH22	2:C:320:LYS:NZ	2.10	0.49
3:D:110:ILE:O	3:D:113:GLU:HG2	2.12	0.49
5:K:184:ASN:OD1	5:K:398:TYR:OH	2.30	0.49
3:L:109:THR:OG1	3:L:110:ILE:HG13	2.12	0.49
3:M:345:ASP:OD1	3:M:346:TRP:N	2.44	0.49
3:P:388:PHE:CZ	3:P:428:LEU:HD23	2.47	0.49
5:V:267:MET:SD	5:V:299:MET:HB3	2.52	0.49
3:Z:21:TRP:CZ2	3:Z:65:CYS:HB3	2.47	0.49
3:Z:60:LYS:NZ	3:Z:85:GLN:O	2.45	0.49
3:h:345:ASP:OD1	3:h:346:TRP:N	2.44	0.49
3:s:79:ARG:HG3	3:s:92:LEU:HD23	1.92	0.49
5:u:234:SER:O	5:u:241:ARG:NH2	2.45	0.49
5:4:171:PRO:O	5:4:380:ARG:NH2	2.45	0.49
3:6:2:ARG:HA	3:6:133:GLN:HE21	1.76	0.49
5:8:180:VAL:HG12	5:8:183:TYR:HB2	1.94	0.49
1:A:38:PHE:CZ	5:R:328:GLU:HB3	2.47	0.49
1:A:126:GLN:HB2	1:A:129:GLN:NE2	2.27	0.49
2:B:43:ARG:HH22	2:B:320:LYS:NZ	2.10	0.49
2:C:209:ALA:HB2	2:C:223:LEU:HD11	1.92	0.49
4:H:99:ASN:ND2	5:U:328:GLU:OE2	2.45	0.49
3:M:27:GLU:HG3	3:M:361:THR:HG21	1.93	0.49
3:Y:236:SER:O	3:Y:243:ARG:NH2	2.45	0.49
3:Y:239:THR:OG1	3:Y:243:ARG:NE	2.38	0.49
5:a:304:ASP:OD1	5:a:306:ARG:NE	2.40	0.49
5:b:23:VAL:HG22	12:b:502:TA1:H321	1.94	0.49
5:b:100:ASN:HB3	5:b:103:LYS:HG2	1.93	0.49
3:f:76:ASP:OD1	3:f:77:GLU:N	2.45	0.49
5:i:122:LYS:NZ	8:l:264:GLN:HB3	2.24	0.49
5:i:249:ASP:OD1	5:i:250:LEU:N	2.44	0.49
5:j:109:GLY:O	5:j:113:ILE:HG12	2.11	0.49
8:l:176:ALA:O	8:l:180:VAL:HG22	2.12	0.49
3:m:105:ARG:HG3	3:m:411:GLU:HG3	1.94	0.49
3:m:194:LEU:O	3:m:198:THR:HG22	2.12	0.49
5:q:163:MET:HE1	5:q:251:ARG:HG3	1.92	0.49
3:s:206:ASN:OD1	3:s:207:GLU:N	2.45	0.49
5:t:237:THR:HG22	5:t:240:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:241:SER:HB2	3:1:250:VAL:H	1.77	0.49
3:5:149:LEU:O	3:5:150:GLY:C	2.54	0.49
5:8:28:HIS:O	5:8:43:GLN:HB3	2.12	0.49
2:C:266:ARG:HD2	2:C:285:LEU:HD21	1.94	0.49
4:H:55:VAL:HG21	5:O:391:ARG:HD3	1.95	0.49
5:I:236:ILE:HD12	5:I:368:ILE:HD11	1.94	0.49
3:L:139:ASN:OD1	3:L:140:ALA:N	2.42	0.49
3:M:77:GLU:O	3:M:81:GLY:N	2.45	0.49
3:P:105:ARG:HG3	3:P:411:GLU:HG3	1.93	0.49
5:V:129:CYS:HB2	3:e:96:LYS:HD2	1.92	0.49
3:Y:346:TRP:HB2	5:v:388:MET:HA	1.94	0.49
3:Z:27:GLU:HB3	3:Z:361:THR:HG21	1.94	0.49
5:b:220:PRO:HD2	3:e:326:LYS:HD3	1.94	0.49
5:b:265:PHE:HB2	5:b:374:ILE:HD12	1.93	0.49
8:d:176:ALA:O	8:d:180:VAL:HG22	2.12	0.49
3:e:150:GLY:O	3:e:154:LEU:HG	2.12	0.49
3:e:305:CYS:SG	3:e:384:ILE:HA	2.52	0.49
8:n:176:ALA:O	8:n:180:VAL:HG22	2.12	0.49
3:o:225:THR:O	3:o:229:ARG:HG3	2.11	0.49
5:w:385:PHE:CE2	5:w:412:GLU:HB2	2.48	0.49
8:2:176:ALA:O	8:2:180:VAL:HG22	2.13	0.49
5:4:137:HIS:HB2	5:4:168:SER:HA	1.94	0.49
3:6:274:PRO:HD2	3:6:374:ALA:HA	1.94	0.49
2:B:209:ALA:HB2	2:B:223:LEU:HD11	1.93	0.49
2:B:434:THR:HG23	2:B:439:ARG:O	2.12	0.49
2:C:493:CYS:HG	2:C:513:PHE:HD2	1.60	0.49
4:H:98:LYS:NZ	5:T:128:ASP:O	2.42	0.49
5:K:352:SER:OG	5:K:353:VAL:N	2.44	0.49
5:V:232:VAL:O	5:V:236:ILE:HG12	2.12	0.49
8:d:44:ALA:O	8:d:118:ASN:ND2	2.42	0.49
3:e:227:LEU:O	3:e:231:ILE:HG12	2.12	0.49
3:f:76:ASP:HA	3:f:79:ARG:HD2	1.94	0.49
3:h:145:THR:O	3:h:149:LEU:HB3	2.13	0.49
3:h:174:SER:HB3	3:h:177:VAL:O	2.13	0.49
5:i:109:GLY:O	5:i:113:ILE:HG12	2.12	0.49
5:j:385:PHE:CZ	5:j:408:PHE:HB3	2.46	0.49
3:k:102:ASN:HB3	3:k:105:ARG:HB2	1.94	0.49
5:p:202:LEU:HD13	5:p:229:ILE:HD12	1.93	0.49
5:q:208:TYR:CE1	5:q:225:LEU:HD11	2.47	0.49
5:w:232:VAL:HG22	5:w:270:PHE:HB2	1.94	0.49
5:w:322:SER:HA	3:7:223:THR:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:258:ASN:HB2	5:4:179:VAL:HB	1.95	0.49
3:6:206:ASN:OD1	3:6:207:GLU:N	2.46	0.49
3:6:298:PRO:HB3	3:6:307:PRO:HD2	1.94	0.49
5:8:201:VAL:C	5:8:202:LEU:HD12	2.36	0.49
5:9:24:VAL:HG11	5:9:50:TYR:HD2	1.77	0.49
1:A:82:LYS:HA	3:L:196:GLU:HG2	1.94	0.49
2:B:583:ASP:OD2	2:B:584:GLU:HG3	2.11	0.49
2:C:434:THR:HG23	2:C:439:ARG:O	2.12	0.49
5:K:14:ASN:HD22	5:K:65:LEU:HD23	1.78	0.49
5:U:125:GLU:OE1	5:U:125:GLU:N	2.45	0.49
5:V:22:GLU:O	5:V:25:SER:OG	2.26	0.49
3:X:257:THR:HA	5:u:397:TRP:CE2	2.47	0.49
3:Y:2:ARG:HD3	5:v:69:GLU:OE2	2.11	0.49
3:h:288:VAL:O	3:h:292:THR:HG23	2.13	0.49
5:i:406:MET:O	5:i:410:GLU:HG2	2.11	0.49
8:l:44:ALA:O	8:l:118:ASN:ND2	2.42	0.49
3:s:333:ALA:O	3:s:337:THR:HG23	2.13	0.49
5:t:215:LEU:HD21	5:t:273:LEU:HD22	1.95	0.49
5:u:322:SER:HA	3:5:223:THR:HG22	1.95	0.49
5:u:379:LYS:O	5:u:383:GLU:HG3	2.12	0.49
8:2:44:ALA:O	8:2:118:ASN:ND2	2.42	0.49
2:B:575:LYS:HG3	2:B:596:GLY:H	1.77	0.49
2:C:575:LYS:HG3	2:C:596:GLY:H	1.77	0.49
2:C:583:ASP:OD2	2:C:584:GLU:HG3	2.11	0.49
5:J:272:PRO:HD3	5:J:364:SER:HA	1.93	0.49
5:O:89:ASN:HD21	5:O:122:LYS:NZ	2.10	0.49
5:Q:30:ILE:HG22	5:Q:36:TYR:HA	1.93	0.49
5:Q:66:MET:HE1	5:Q:147:MET:HB3	1.94	0.49
5:Q:273:LEU:H	5:Q:292:GLN:HE22	1.59	0.49
5:R:39:ASP:OD1	5:R:40:SER:N	2.45	0.49
3:S:53:PHE:O	3:S:64:ARG:NH2	2.45	0.49
3:X:199:ASP:CB	3:X:256:GLN:HE22	2.26	0.49
3:Z:271:SER:OG	3:Z:301:MET:SD	2.67	0.49
5:a:330:MET:HB3	5:a:349:VAL:HG21	1.95	0.49
8:d:6:ALA:HB2	8:d:178:LYS:HD3	1.95	0.49
3:e:132:LEU:O	3:e:164:LYS:NZ	2.40	0.49
5:j:405:GLU:HA	5:j:408:PHE:HD2	1.76	0.49
3:k:217:LEU:HD11	3:k:275:ILE:HD11	1.95	0.49
5:t:30:ILE:HG22	5:t:36:TYR:HA	1.95	0.49
5:v:309:ARG:H	5:v:372:THR:HG22	1.77	0.49
3:y:246:GLY:HA2	3:y:357:TYR:CE2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:257:THR:HA	5:4:397:TRP:CE2	2.48	0.49
8:2:6:ALA:HB2	8:2:178:LYS:HD3	1.95	0.49
3:6:265:ILE:HG22	3:6:380:ASN:HD21	1.78	0.49
3:7:69:ASP:OD1	3:7:70:LEU:N	2.45	0.49
2:B:274:THR:HG21	8:n:25:PRO:HB2	1.95	0.49
3:S:427:ALA:HA	3:S:430:LYS:HE2	1.95	0.49
5:T:67:ASP:O	5:T:92:PHE:HA	2.13	0.49
3:X:271:SER:OG	3:X:272:TYR:N	2.46	0.49
3:Y:286:LEU:O	3:Y:373:ARG:NE	2.38	0.49
5:a:109:GLY:O	5:a:113:ILE:HG12	2.12	0.49
3:e:79:ARG:HG3	3:e:92:LEU:HD23	1.95	0.49
3:f:319:TYR:HB2	3:f:355:ILE:HD13	1.94	0.49
3:k:69:ASP:OD1	3:k:70:LEU:N	2.41	0.49
3:k:425:LEU:O	3:k:429:GLU:HG2	2.12	0.49
8:n:44:ALA:O	8:n:118:ASN:ND2	2.42	0.49
3:o:21:TRP:CZ2	3:o:65:CYS:HB3	2.48	0.49
5:r:313:ALA:HB3	5:r:349:VAL:HG12	1.93	0.49
5:4:288:GLU:O	5:4:291:GLN:NE2	2.46	0.49
3:6:132:LEU:O	3:6:164:LYS:NZ	2.31	0.49
5:I:6:HIS:HE1	5:I:136:CYS:SG	2.36	0.49
5:V:282:ARG:HH21	5:V:288:GLU:HB3	1.76	0.49
3:Y:63:PRO:O	3:Y:91:GLN:NE2	2.43	0.49
3:Y:287:SER:O	3:Y:291:ILE:HG12	2.13	0.49
5:b:174:LYS:HZ3	5:b:205:GLU:HG2	1.78	0.49
3:f:32:PRO:HB3	3:f:83:TYR:CE1	2.48	0.49
3:h:66:ILE:HD11	3:h:125:LEU:HD23	1.94	0.49
3:k:68:LEU:HD22	3:k:149:LEU:HD21	1.94	0.49
3:k:205:ASP:OD1	3:k:206:ASN:N	2.45	0.49
3:m:319:TYR:HB2	3:m:355:ILE:HD13	1.93	0.49
5:p:12:CYS:HB3	5:p:138:SER:HB2	1.95	0.49
5:p:107:THR:OG1	5:p:108:GLU:N	2.46	0.49
5:p:174:LYS:HE2	5:p:175:VAL:HG23	1.93	0.49
5:r:388:MET:HE3	3:y:348:PRO:HD2	1.94	0.49
5:w:232:VAL:HG11	5:w:268:VAL:CG2	2.42	0.49
3:5:349:THR:OG1	3:5:350:GLY:N	2.46	0.49
3:G:345:ASP:OD1	3:G:346:TRP:N	2.45	0.49
5:J:318:ARG:NH2	5:J:357:PRO:O	2.42	0.49
3:S:21:TRP:CZ2	3:S:65:CYS:HB3	2.48	0.49
3:S:172:TYR:HB3	3:S:205:ASP:OD1	2.13	0.49
3:S:212:ILE:HG23	3:S:275:ILE:HD12	1.95	0.49
3:S:338:LYS:C	3:S:339:ARG:HE	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:407:TRP:O	3:S:411:GLU:HG2	2.12	0.49
5:V:273:LEU:H	5:V:292:GLN:HE22	1.60	0.49
3:Y:430:LYS:NZ	3:Y:431:ASP:OD1	2.46	0.49
5:b:16:ILE:HD12	5:b:233:MET:HE1	1.93	0.49
3:f:406:HIS:HA	3:f:409:VAL:HG12	1.95	0.49
3:h:34:GLY:HA2	3:h:86:LEU:HD23	1.95	0.49
3:h:193:SER:O	3:h:197:HIS:ND1	2.46	0.49
3:h:316:CYS:SG	3:h:378:ILE:HB	2.53	0.49
5:j:172:SER:HB3	5:j:175:VAL:O	2.13	0.49
5:q:210:ILE:O	5:q:214:THR:OG1	2.29	0.49
5:r:234:SER:OG	12:r:502:TA1:H401	2.13	0.49
5:u:109:GLY:O	5:u:113:ILE:HG12	2.12	0.49
3:l:10:GLY:O	3:l:14:ILE:HG12	2.13	0.49
3:l:188:VAL:HG22	3:l:425:LEU:HD21	1.94	0.49
2:B:168:ASN:O	2:B:196:VAL:HA	2.12	0.49
2:B:354:GLU:O	2:B:369:LEU:N	2.43	0.49
2:B:476:ARG:NH1	2:B:517:VAL:HG22	2.28	0.49
2:C:168:ASN:O	2:C:196:VAL:HA	2.12	0.49
2:C:275:ASN:HA	8:l:26:ALA:HB2	1.94	0.49
2:C:354:GLU:O	2:C:369:LEU:N	2.43	0.49
5:K:54:ALA:HB3	5:K:58:ARG:HB2	1.95	0.49
3:M:334:THR:O	3:M:337:THR:OG1	2.22	0.49
5:N:194:GLU:OE1	5:N:194:GLU:N	2.46	0.49
5:R:405:GLU:OE2	5:R:405:GLU:N	2.46	0.49
5:V:344:TRP:HA	3:e:397:LEU:HG	1.93	0.49
5:a:225:LEU:O	5:a:229:ILE:HG12	2.13	0.49
5:a:238:CYS:SG	5:a:318:ARG:NH1	2.86	0.49
5:j:226:ASN:OD1	11:j:501:GDP:N2	2.46	0.49
8:l:6:ALA:HB2	8:l:178:LYS:HD3	1.95	0.49
3:m:3:GLU:N	3:m:3:GLU:OE1	2.46	0.49
8:n:6:ALA:HB2	8:n:178:LYS:HD3	1.95	0.49
5:p:289:LEU:HD23	5:p:365:ALA:HB2	1.94	0.49
5:q:309:ARG:HG3	5:q:340:TYR:C	2.37	0.49
5:v:105:HIS:CD2	5:v:150:LEU:HB2	2.48	0.49
6:x:82:GLY:O	3:6:79:ARG:NH2	2.46	0.49
7:z:20:LYS:HD3	7:z:23:GLU:OE1	2.13	0.49
5:4:255:VAL:HG22	3:6:407:TRP:CD2	2.48	0.49
3:5:145:THR:O	3:5:146:GLY:C	2.54	0.49
5:8:222:PHE:CD1	5:8:225:LEU:HD12	2.47	0.49
5:8:239:CYS:HB3	5:8:248:ALA:H	1.78	0.49
5:9:253:LEU:O	5:9:257:LEU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:172:TYR:HB3	3:D:205:ASP:OD1	2.12	0.48
3:E:146:GLY:N	9:E:501:GTP:O2B	2.31	0.48
3:E:222:PRO:O	5:I:322:SER:OG	2.29	0.48
3:E:269:LEU:HD22	3:E:303:VAL:HG11	1.94	0.48
5:O:303:ALA:HB2	5:O:377:MET:HE2	1.94	0.48
5:O:401:GLU:OE1	5:O:401:GLU:N	2.46	0.48
3:S:52:PHE:C	3:S:64:ARG:HG2	2.38	0.48
5:V:257:LEU:HD11	5:V:314:SER:OG	2.12	0.48
5:V:283:ALA:O	5:V:288:GLU:HG3	2.13	0.48
3:X:77:GLU:O	3:X:81:GLY:N	2.44	0.48
3:X:388:PHE:CZ	3:X:428:LEU:HD23	2.48	0.48
3:Y:206:ASN:OD1	9:Y:501:GTP:N2	2.45	0.48
5:a:189:VAL:HG21	5:a:415:MET:SD	2.53	0.48
3:f:25:CYS:HA	3:f:30:ILE:HB	1.95	0.48
7:g:20:LYS:HD3	7:g:23:GLU:OE1	2.13	0.48
3:k:384:ILE:HD11	3:k:432:PHE:CZ	2.48	0.48
5:q:73:MET:HA	5:q:76:VAL:HG22	1.95	0.48
5:u:249:ASP:OD1	5:u:250:LEU:N	2.46	0.48
5:w:100:ASN:HB3	5:w:103:LYS:HG2	1.94	0.48
3:6:27:GLU:CD	3:6:243:ARG:HH12	2.20	0.48
2:C:476:ARG:NH1	2:C:517:VAL:HG22	2.28	0.48
3:E:52:PHE:O	3:E:64:ARG:HG2	2.13	0.48
5:K:343:GLU:OE2	5:K:343:GLU:N	2.46	0.48
3:M:172:TYR:HB3	3:M:205:ASP:OD1	2.13	0.48
3:P:200:VAL:HA	3:P:266:HIS:HB2	1.94	0.48
5:T:292:GLN:HG2	5:T:298:ASN:ND2	2.22	0.48
12:V:502:TA1:C12	12:V:502:TA1:H432	2.43	0.48
3:X:319:TYR:HB2	3:X:355:ILE:HD13	1.93	0.48
7:c:20:LYS:HD3	7:c:23:GLU:OE1	2.13	0.48
7:c:97:LYS:H	7:c:97:LYS:HG2	1.46	0.48
3:e:285:GLN:OE1	3:e:285:GLN:N	2.42	0.48
3:h:69:ASP:OD1	3:h:70:LEU:N	2.45	0.48
5:i:204:ASN:O	5:i:208:TYR:N	2.46	0.48
3:m:26:LEU:HD21	3:m:364:PRO:HD3	1.94	0.48
5:r:178:THR:HG22	3:y:352:LYS:HZ3	1.78	0.48
5:w:177:ASP:O	3:5:352:LYS:HA	2.12	0.48
5:w:321:MET:HE2	5:w:363:MET:HE3	1.96	0.48
8:2:258:ASP:OD2	7:3:22:LEU:HB2	2.13	0.48
5:4:8:GLN:HE21	5:4:14:ASN:HA	1.78	0.48
3:6:25:CYS:HA	3:6:30:ILE:HB	1.95	0.48
5:8:34:GLY:O	5:8:59:TYR:N	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:8:171:PRO:HB2	5:8:380:ARG:HH12	1.79	0.48
3:E:377:MET:SD	3:E:379:SER:HB3	2.53	0.48
3:F:6:SER:HA	3:F:136:LEU:HB3	1.95	0.48
5:J:72:THR:O	5:J:75:SER:OG	2.18	0.48
5:O:272:PRO:HG3	5:O:284:LEU:HD11	1.95	0.48
5:Q:6:HIS:HD2	5:Q:21:TRP:HE1	1.61	0.48
5:T:30:ILE:HG22	5:T:36:TYR:HA	1.95	0.48
6:W:68:ARG:HE	5:i:320:ARG:HH21	1.60	0.48
3:X:94:SER:OG	3:X:95:GLY:N	2.45	0.48
3:Z:256:GLN:HE21	5:i:397:TRP:HH2	1.61	0.48
5:a:331:LEU:HD11	3:s:176:GLN:HB3	1.95	0.48
3:h:298:PRO:HG3	3:h:308:ARG:HE	1.78	0.48
5:i:232:VAL:O	5:i:236:ILE:HG12	2.13	0.48
3:k:21:TRP:CZ2	3:k:65:CYS:HB3	2.47	0.48
3:m:76:ASP:HA	3:m:79:ARG:HD2	1.96	0.48
3:o:11:GLN:NE2	5:t:245:GLN:O	2.47	0.48
3:s:94:SER:OG	3:s:95:GLY:N	2.46	0.48
3:s:319:TYR:CE2	3:s:328:VAL:HG22	2.48	0.48
5:t:8:GLN:HE21	5:t:14:ASN:HA	1.77	0.48
5:u:161:ASP:OD1	5:u:162:ARG:NH1	2.40	0.48
5:w:3:GLU:HA	5:w:49:VAL:HA	1.96	0.48
5:w:372:THR:HG21	5:w:426:GLN:HB2	1.95	0.48
3:y:251:ASP:HB3	3:y:254:GLU:HG3	1.95	0.48
3:1:172:TYR:CD1	3:1:173:PRO:HD2	2.48	0.48
3:1:328:VAL:HG11	3:1:353:CYS:SG	2.53	0.48
7:3:20:LYS:HD3	7:3:23:GLU:OE1	2.13	0.48
5:4:202:LEU:HG	5:4:300:MET:HB2	1.96	0.48
3:5:274:PRO:HD2	3:5:374:ALA:HA	1.95	0.48
3:5:328:VAL:HG21	3:5:355:ILE:HD11	1.95	0.48
3:6:339:ARG:O	3:6:342:GLN:NE2	2.46	0.48
2:B:85:ILE:HD11	2:B:102:HIS:HD2	1.77	0.48
2:B:421:ASN:ND2	2:B:422:ASP:OD2	2.47	0.48
2:C:85:ILE:HD11	2:C:102:HIS:HD2	1.77	0.48
2:C:421:ASN:ND2	2:C:422:ASP:OD2	2.47	0.48
4:H:99:ASN:HD21	5:U:328:GLU:CD	2.21	0.48
5:J:316:LEU:HG	5:J:352:SER:OG	2.14	0.48
5:J:341:PHE:HB3	5:J:348:ASN:ND2	2.24	0.48
3:P:240:ALA:O	3:P:244:PHE:N	2.42	0.48
5:Q:97:ALA:O	5:Q:103:LYS:HD2	2.12	0.48
5:U:417:ASP:O	5:U:421:GLU:HG2	2.14	0.48
3:X:214:ARG:NH2	5:i:324:LYS:HD2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Y:16:VAL:HA	3:Y:228:ASN:HB3	1.95	0.48
3:Y:136:LEU:HD11	3:Y:169:PHE:CE2	2.48	0.48
3:Y:223:THR:OG1	3:Y:225:THR:HG22	2.14	0.48
3:Z:51:THR:HG21	3:Z:243:ARG:HB3	1.95	0.48
5:a:388:MET:O	5:a:392:LYS:N	2.46	0.48
3:f:260:VAL:HG13	3:f:265:ILE:O	2.13	0.48
5:j:313:ALA:HA	5:j:369:GLY:HA2	1.95	0.48
3:k:287:SER:O	3:k:291:ILE:HG12	2.14	0.48
5:t:182:PRO:O	5:t:186:THR:HG23	2.14	0.48
5:t:186:THR:HA	5:t:189:VAL:HG22	1.95	0.48
5:t:206:ALA:HB3	5:t:300:MET:O	2.13	0.48
5:t:417:ASP:O	5:t:421:GLU:HG2	2.13	0.48
5:v:380:ARG:O	5:v:383:GLU:HG2	2.12	0.48
5:w:404:ASP:OD1	5:w:404:ASP:N	2.44	0.48
3:0:254:GLU:HA	3:0:257:THR:HG22	1.95	0.48
3:6:79:ARG:HG3	3:6:92:LEU:HD23	1.94	0.48
3:6:132:LEU:HD23	3:6:164:LYS:HE3	1.95	0.48
5:9:359:LYS:C	5:9:359:LYS:HD3	2.38	0.48
3:D:220:GLU:H	3:D:220:GLU:CD	2.21	0.48
3:G:34:GLY:HA3	3:G:60:LYS:HG2	1.95	0.48
5:I:200:MET:HG3	5:I:266:PHE:HB2	1.95	0.48
5:T:165:LEU:HD21	5:T:250:LEU:HD21	1.96	0.48
5:U:174:LYS:HB2	5:U:205:GLU:CD	2.38	0.48
3:X:289:ALA:O	3:X:293:ASN:ND2	2.46	0.48
3:Y:145:THR:HB	9:Y:501:GTP:O1B	2.14	0.48
3:Y:215:ARG:HH22	3:Y:300:SER:HA	1.79	0.48
3:Y:392:ASP:CA	3:Y:422:ARG:HH12	2.27	0.48
7:g:118:ILE:HD11	3:m:431:ASP:OD1	2.12	0.48
5:j:137:HIS:CE1	5:j:148:GLY:HA3	2.48	0.48
5:j:256:ASN:O	5:j:312:THR:HG21	2.12	0.48
8:n:232:GLY:O	8:n:236:VAL:HG23	2.13	0.48
5:t:398:TYR:O	5:t:403:MET:HB2	2.12	0.48
5:v:255:VAL:HG23	3:1:407:TRP:CD1	2.48	0.48
3:1:288:VAL:O	3:1:292:THR:HG23	2.12	0.48
5:4:1:MET:HE3	3:6:96:LYS:HZ2	1.78	0.48
5:4:86:ARG:HB3	5:4:88:ASP:OD1	2.14	0.48
3:5:33:ASP:HA	3:5:85:GLN:HB2	1.96	0.48
3:6:2:ARG:NH2	3:6:47:ASP:OD1	2.41	0.48
3:6:251:ASP:OD1	3:6:252:ILE:N	2.46	0.48
3:G:275:ILE:HG13	3:G:368:LEU:HD11	1.95	0.48
5:J:284:LEU:HB2	5:J:362:LYS:HE3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:3:GLU:HB2	5:K:127:CYS:HB3	1.95	0.48
5:K:238:CYS:SG	5:K:318:ARG:NH1	2.86	0.48
5:O:211:CYS:SG	5:O:217:LEU:HD12	2.54	0.48
5:Q:1:MET:SD	5:Q:1:MET:N	2.82	0.48
5:R:173:PRO:HD2	5:R:205:GLU:HG3	1.95	0.48
5:V:43:GLN:O	5:V:47:ILE:HB	2.13	0.48
3:Z:246:GLY:HA2	3:Z:357:TYR:CE2	2.48	0.48
5:b:45:GLU:HG3	5:b:46:ARG:HG2	1.96	0.48
5:i:173:PRO:HA	5:i:380:ARG:NE	2.28	0.48
5:j:142:GLY:N	11:j:501:GDP:O3B	2.47	0.48
5:j:309:ARG:H	5:j:372:THR:HG22	1.78	0.48
5:j:381:VAL:HG23	5:j:415:MET:HE1	1.95	0.48
8:l:232:GLY:O	8:l:236:VAL:HG23	2.13	0.48
3:m:224:TYR:O	3:m:228:ASN:ND2	2.46	0.48
8:n:262:TYR:HB2	5:w:88:ASP:OD2	2.14	0.48
5:r:290:THR:HA	5:r:293:MET:HG2	1.94	0.48
5:u:6:HIS:HD2	5:u:21:TRP:HE1	1.61	0.48
5:w:6:HIS:HD2	5:w:21:TRP:NE1	2.12	0.48
5:w:180:VAL:HG12	5:w:183:TYR:HB2	1.95	0.48
3:1:63:PRO:HD3	3:1:86:LEU:HD22	1.95	0.48
3:1:276:ILE:HG23	3:1:280:LYS:HB2	1.95	0.48
5:4:26:ASP:HB3	5:4:359:LYS:HZ2	1.78	0.48
5:8:295:ASP:OD1	5:8:296:ALA:N	2.46	0.48
2:C:267:THR:HG22	2:C:282:MET:HG2	1.94	0.48
4:H:27:VAL:O	4:H:31:GLN:HG2	2.13	0.48
5:I:375:GLN:HB2	5:I:419:VAL:HG23	1.96	0.48
3:L:399:TYR:O	3:L:402:ARG:NH1	2.46	0.48
5:N:252:LYS:HB3	3:f:100:ALA:HA	1.94	0.48
5:Q:67:ASP:HA	5:Q:143:THR:HG21	1.96	0.48
5:Q:109:GLY:O	5:Q:113:ILE:HG12	2.14	0.48
5:U:375:GLN:OE1	5:U:423:GLN:HG3	2.13	0.48
3:X:279:GLU:H	3:X:279:GLU:CD	2.20	0.48
3:e:251:ASP:OD1	3:e:253:THR:OG1	2.25	0.48
3:f:174:SER:HB3	3:f:177:VAL:O	2.13	0.48
5:j:23:VAL:HG22	12:j:502:TA1:H321	1.95	0.48
3:o:53:PHE:O	3:o:64:ARG:NH2	2.44	0.48
5:p:313:ALA:HB3	5:p:349:VAL:HG12	1.94	0.48
5:v:372:THR:OG1	5:v:422:TYR:O	2.23	0.48
5:w:220:PRO:HD2	3:5:326:LYS:HD2	1.96	0.48
7:z:97:LYS:H	7:z:97:LYS:HG2	1.46	0.48
8:2:232:GLY:O	8:2:236:VAL:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:84:ARG:NH2	3:L:198:THR:O	2.46	0.48
1:A:90:LYS:HE2	3:L:437:ALA:HB1	1.94	0.48
2:B:267:THR:HG22	2:B:282:MET:HG2	1.94	0.48
2:B:588:TYR:HD2	2:B:627:PRO:HG3	1.78	0.48
2:C:588:TYR:HD2	2:C:627:PRO:HG3	1.79	0.48
3:E:107:HIS:HB3	3:E:108:TYR:CD1	2.49	0.48
3:F:21:TRP:CZ2	3:F:65:CYS:HB3	2.49	0.48
3:F:139:ASN:OD1	3:F:140:ALA:N	2.46	0.48
3:F:286:LEU:HB3	3:F:291:ILE:HD11	1.96	0.48
3:F:333:ALA:O	3:F:337:THR:HG23	2.14	0.48
5:I:7:ILE:HB	5:I:135:VAL:HG12	1.95	0.48
3:P:204:LEU:HA	3:P:303:VAL:HG22	1.95	0.48
5:Q:111:GLU:OE1	5:Q:111:GLU:N	2.46	0.48
3:S:70:LEU:HB3	3:S:98:ASP:HA	1.96	0.48
3:S:267:PHE:HE2	3:S:428:LEU:HD11	1.77	0.48
5:T:203:ASP:OD2	5:T:205:GLU:HG2	2.13	0.48
5:V:76:VAL:O	5:V:82:GLY:HA3	2.14	0.48
5:V:101:TRP:HB3	5:V:398:TYR:HE2	1.79	0.48
8:d:232:GLY:O	8:d:236:VAL:HG23	2.13	0.48
7:g:97:LYS:H	7:g:97:LYS:HG2	1.46	0.48
5:j:4:ILE:HG13	5:j:132:GLY:O	2.14	0.48
3:m:328:VAL:HG21	3:m:355:ILE:HD11	1.95	0.48
3:m:395:PHE:CD1	3:m:422:ARG:HD3	2.49	0.48
3:o:195:LEU:HD21	3:o:264:ARG:HG2	1.95	0.48
3:o:279:GLU:H	3:o:279:GLU:CD	2.18	0.48
5:r:347:ASN:ND2	3:0:178:SER:HB2	2.28	0.48
5:u:223:GLY:O	5:u:227:HIS:N	2.45	0.48
3:5:246:GLY:HA3	3:5:356:ASN:HA	1.94	0.48
3:6:254:GLU:O	3:6:258:ASN:ND2	2.47	0.48
3:6:310:GLY:C	3:6:311:LYS:HD2	2.39	0.48
5:9:128:ASP:OD1	5:9:129:CYS:N	2.47	0.48
5:9:263:LEU:HG	5:9:422:TYR:CE1	2.48	0.48
1:A:143:ASN:O	1:A:147:VAL:HG23	2.13	0.48
2:B:445:GLU:HB3	2:B:446:GLU:OE2	2.14	0.48
2:B:570:SER:HB3	2:B:578:LYS:HG3	1.95	0.48
2:C:570:SER:HB3	2:C:578:LYS:HG3	1.95	0.48
3:E:253:THR:O	3:E:257:THR:HG23	2.14	0.48
3:F:147:SER:HB3	3:F:190:SER:HB2	1.95	0.48
5:I:382:SER:HB2	5:I:415:MET:HE3	1.96	0.48
5:J:6:HIS:HD2	5:J:21:TRP:HE1	1.61	0.48
5:K:50:TYR:O	5:K:62:ARG:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:177:ASP:N	5:K:181:GLU:OE1	2.47	0.48
3:M:244:PHE:CE2	3:M:358:GLN:HG2	2.49	0.48
5:Q:185:ALA:O	5:Q:188:SER:OG	2.29	0.48
5:T:290:THR:HA	5:T:293:MET:HG2	1.95	0.48
5:U:252:LYS:HB3	3:k:100:ALA:HA	1.96	0.48
3:X:72:PRO:HB2	5:i:46:ARG:NH2	2.27	0.48
5:b:174:LYS:NZ	5:b:205:GLU:HG2	2.28	0.48
7:c:101:ARG:NH2	7:c:116:PRO:O	2.47	0.48
8:n:210:ASP:HB3	8:n:213:VAL:HG22	1.96	0.48
3:o:27:GLU:OE1	3:o:243:ARG:NH1	2.37	0.48
3:o:121:ARG:HH21	3:o:124:LYS:HE2	1.79	0.48
3:o:287:SER:O	3:o:291:ILE:HG12	2.13	0.48
5:p:22:GLU:HG2	5:p:81:TYR:CD1	2.49	0.48
5:u:252:LYS:HA	5:u:255:VAL:HG12	1.94	0.48
5:w:225:LEU:O	5:w:229:ILE:HG12	2.14	0.48
7:3:101:ARG:NH2	7:3:116:PRO:O	2.47	0.48
3:7:389:SER:HA	3:7:392:ASP:HB3	1.96	0.48
2:B:159:SER:O	2:B:161:ASP:N	2.41	0.48
2:B:218:VAL:HG22	2:B:242:VAL:HG21	1.95	0.48
3:E:319:TYR:CE2	3:E:328:VAL:HG22	2.49	0.48
5:I:318:ARG:HB3	5:I:357:PRO:HA	1.96	0.48
5:K:46:ARG:NH2	3:L:76:ASP:OD1	2.44	0.48
5:K:193:VAL:HG11	5:K:262:ARG:HH21	1.79	0.48
3:M:194:LEU:O	3:M:198:THR:HG22	2.13	0.48
5:V:167:PHE:CE2	5:V:233:MET:HG2	2.49	0.48
3:X:72:PRO:HG3	3:X:95:GLY:O	2.14	0.48
3:X:240:ALA:O	3:X:244:PHE:N	2.46	0.48
3:Y:78:VAL:HG23	3:Y:92:LEU:HD21	1.95	0.48
3:Y:225:THR:O	3:Y:229:ARG:HG3	2.14	0.48
8:d:210:ASP:HB3	8:d:213:VAL:HG22	1.96	0.48
3:e:139:ASN:OD1	3:e:140:ALA:N	2.47	0.48
3:f:4:VAL:HG12	3:f:133:GLN:HB2	1.96	0.48
7:g:101:ARG:NH2	7:g:116:PRO:O	2.47	0.48
5:j:117:LEU:HA	5:j:120:VAL:HG12	1.96	0.48
8:l:210:ASP:HB3	8:l:213:VAL:HG22	1.96	0.48
5:p:343:GLU:OE2	5:p:430:ALA:N	2.32	0.48
5:r:207:LEU:HD11	5:r:229:ILE:HD11	1.96	0.48
5:v:120:VAL:O	5:v:124:ALA:N	2.47	0.48
7:z:101:ARG:NH2	7:z:116:PRO:O	2.47	0.48
3:0:298:PRO:HB3	3:0:307:PRO:HD2	1.96	0.48
3:1:220:GLU:H	3:1:220:GLU:CD	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2:210:ASP:HB3	8:2:213:VAL:HG22	1.96	0.48
5:4:215:LEU:HD23	5:4:217:LEU:HD11	1.94	0.48
5:8:12:CYS:HB3	5:8:138:SER:HB2	1.95	0.48
2:C:159:SER:O	2:C:161:ASP:N	2.41	0.47
2:C:445:GLU:HB3	2:C:446:GLU:OE2	2.14	0.47
3:F:388:PHE:CZ	3:F:428:LEU:HD23	2.48	0.47
5:K:4:ILE:HG22	5:K:5:VAL:N	2.29	0.47
5:Q:332:ASN:O	5:Q:336:LYS:HG2	2.14	0.47
5:R:194:GLU:OE1	5:R:194:GLU:N	2.47	0.47
5:T:6:HIS:HE1	5:T:136:CYS:SG	2.37	0.47
5:U:341:PHE:HB3	5:U:348:ASN:HD21	1.78	0.47
5:V:288:GLU:HA	5:V:291:GLN:HE21	1.79	0.47
5:V:377:MET:SD	5:V:380:ARG:NH2	2.82	0.47
3:Z:286:LEU:O	3:Z:373:ARG:NE	2.44	0.47
3:Z:307:PRO:HB2	3:Z:312:TYR:HE1	1.79	0.47
5:i:121:ARG:O	5:i:125:GLU:HG3	2.12	0.47
5:i:296:ALA:HB1	5:i:305:PRO:HD2	1.97	0.47
5:j:282:ARG:HH21	5:j:288:GLU:HB3	1.78	0.47
5:r:193:VAL:HA	5:r:264:HIS:HE1	1.79	0.47
5:u:330:MET:HB3	5:u:349:VAL:HG21	1.96	0.47
5:w:172:SER:HA	5:w:203:ASP:OD2	2.13	0.47
5:w:372:THR:O	5:w:375:GLN:HG2	2.14	0.47
3:1:116:ASP:OD1	3:1:117:LEU:N	2.47	0.47
5:4:395:LEU:HD11	5:4:405:GLU:OE1	2.14	0.47
3:7:271:SER:HB3	3:7:377:MET:HE3	1.95	0.47
2:B:221:ILE:HG22	2:B:228:PHE:HA	1.96	0.47
2:C:218:VAL:HG22	2:C:242:VAL:HG21	1.95	0.47
3:G:326:LYS:HD2	5:J:220:PRO:HD2	1.96	0.47
4:H:95:THR:HG21	3:M:117:LEU:HD13	1.95	0.47
5:I:106:TYR:HE2	5:I:403:MET:HG2	1.78	0.47
5:J:27:GLU:OE2	5:J:318:ARG:NH2	2.47	0.47
5:J:156:ARG:HD3	5:J:164:MET:HE3	1.96	0.47
5:T:208:TYR:HE1	5:T:225:LEU:HD11	1.78	0.47
5:V:180:VAL:HG12	5:V:183:TYR:HB2	1.95	0.47
7:c:61:CYS:SG	7:c:69:LEU:HD22	2.54	0.47
3:f:120:ASP:O	3:f:124:LYS:HG2	2.13	0.47
7:g:61:CYS:SG	7:g:69:LEU:HD22	2.54	0.47
5:q:178:THR:HB	5:q:181:GLU:HG3	1.95	0.47
3:s:318:MET:HE3	3:s:318:MET:HB2	1.81	0.47
5:u:126:SER:O	5:u:126:SER:OG	2.32	0.47
7:z:61:CYS:SG	7:z:69:LEU:HD22	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:186:ASN:OD1	3:1:187:SER:N	2.47	0.47
7:3:61:CYS:SG	7:3:69:LEU:HD22	2.54	0.47
5:4:3:GLU:HA	5:4:49:VAL:HA	1.96	0.47
5:4:295:ASP:OD2	5:4:297:LYS:HG3	2.14	0.47
3:5:145:THR:HA	3:5:149:LEU:HD13	1.96	0.47
3:5:191:THR:HA	3:5:194:LEU:HG	1.96	0.47
2:C:221:ILE:HG22	2:C:228:PHE:HA	1.96	0.47
2:C:562:ASP:OD2	2:C:624:TYR:OH	2.30	0.47
3:E:97:GLU:OE2	5:I:131:GLN:NE2	2.47	0.47
4:H:26:ALA:HA	3:k:339:ARG:NH2	2.29	0.47
4:H:114:LEU:HB3	5:U:209:ASP:OD1	2.13	0.47
5:K:106:TYR:CE2	5:K:403:MET:HG2	2.50	0.47
5:N:173:PRO:HD3	5:N:380:ARG:NE	2.29	0.47
3:P:383:ALA:O	3:P:386:GLU:HG2	2.13	0.47
5:R:52:ASN:OD1	5:R:62:ARG:NH1	2.47	0.47
3:S:110:ILE:O	3:S:113:GLU:HG2	2.14	0.47
5:T:67:ASP:HB3	5:T:73:MET:HE3	1.95	0.47
5:V:8:GLN:CD	5:V:17:GLY:HA3	2.39	0.47
3:X:329:ASN:OD1	5:u:175:VAL:HG21	2.14	0.47
5:b:322:SER:HB3	5:b:325:GLU:CD	2.38	0.47
5:i:256:ASN:O	5:i:312:THR:HG21	2.14	0.47
3:k:171:VAL:HG22	3:k:204:LEU:HD11	1.96	0.47
3:s:33:ASP:O	3:s:35:GLN:N	2.43	0.47
5:w:109:GLY:O	5:w:113:ILE:HG12	2.14	0.47
5:w:223:GLY:O	5:w:227:HIS:N	2.47	0.47
3:6:15:GLN:HB3	3:6:228:ASN:ND2	2.28	0.47
2:B:516:VAL:HB	2:B:527:THR:HG22	1.95	0.47
2:B:562:ASP:OD2	2:B:624:TYR:OH	2.30	0.47
3:G:54:SER:OG	3:G:64:ARG:NH2	2.48	0.47
5:I:107:THR:HG1	5:I:108:GLU:CD	2.21	0.47
5:K:51:PHE:O	5:K:62:ARG:NH2	2.42	0.47
3:P:196:GLU:N	3:P:196:GLU:OE2	2.47	0.47
3:P:416:GLY:O	3:P:420:GLU:HG2	2.15	0.47
5:Q:210:ILE:O	5:Q:214:THR:OG1	2.28	0.47
5:R:125:GLU:OE2	5:R:159:TYR:OH	2.29	0.47
3:S:155:GLU:HG2	3:S:197:HIS:CE1	2.49	0.47
5:U:184:ASN:OD1	5:U:398:TYR:OH	2.24	0.47
5:V:12:CYS:HB3	5:V:138:SER:HB3	1.97	0.47
5:V:201:VAL:HG22	5:V:266:PHE:O	2.14	0.47
3:Y:274:PRO:HD2	3:Y:374:ALA:HA	1.95	0.47
12:a:502:TA1:C12	12:a:502:TA1:H432	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:3:LYS:HD2	8:2:38:THR:HB	1.95	0.47
5:i:205:GLU:OE1	5:i:205:GLU:N	2.47	0.47
5:i:321:MET:HE2	5:i:363:MET:HE3	1.95	0.47
3:k:147:SER:OG	3:k:148:GLY:N	2.47	0.47
5:q:45:GLU:HG3	5:q:46:ARG:HG2	1.96	0.47
5:r:330:MET:HB3	5:r:349:VAL:HG21	1.97	0.47
3:0:430:LYS:O	3:0:434:GLU:N	2.45	0.47
5:4:66:MET:HE1	5:4:147:MET:HB3	1.96	0.47
5:4:156:ARG:HD3	5:4:164:MET:SD	2.54	0.47
2:B:171:MET:HB2	2:B:171:MET:HE3	1.75	0.47
2:B:254:LEU:HD23	2:B:264:VAL:HG22	1.97	0.47
2:C:254:LEU:HD23	2:C:264:VAL:HG22	1.97	0.47
2:C:502:LYS:HA	2:C:502:LYS:HD2	1.51	0.47
2:C:516:VAL:HB	2:C:527:THR:HG22	1.95	0.47
3:D:325:PRO:HG2	5:U:222:PHE:HE2	1.78	0.47
3:E:345:ASP:OD1	3:E:346:TRP:N	2.46	0.47
3:G:319:TYR:CD1	3:G:375:VAL:HG22	2.50	0.47
5:I:101:TRP:CE3	5:I:187:LEU:HD23	2.49	0.47
3:P:297:GLU:OE2	3:P:298:PRO:HD2	2.14	0.47
3:S:69:ASP:OD1	3:S:70:LEU:N	2.46	0.47
5:T:248:ALA:HA	5:T:252:LYS:HD2	1.95	0.47
5:V:293:MET:HE2	5:V:367:PHE:HB2	1.95	0.47
5:V:385:PHE:CE2	5:V:412:GLU:HB2	2.50	0.47
3:X:79:ARG:NH2	3:X:92:LEU:O	2.46	0.47
3:Y:363:VAL:HG13	3:Y:366:GLY:HA3	1.96	0.47
3:Z:392:ASP:O	3:Z:422:ARG:NH1	2.47	0.47
8:d:148:ASP:HB2	8:d:150:GLU:OE2	2.15	0.47
3:e:287:SER:O	3:e:291:ILE:HG12	2.14	0.47
5:i:167:PHE:CZ	5:i:233:MET:HG2	2.50	0.47
3:k:324:VAL:O	3:k:328:VAL:HG23	2.15	0.47
5:t:148:GLY:O	5:t:152:ILE:HG13	2.15	0.47
5:w:406:MET:O	5:w:410:GLU:HG2	2.14	0.47
3:0:116:ASP:OD2	3:0:116:ASP:N	2.47	0.47
3:1:202:VAL:HG22	3:1:268:MET:HG3	1.97	0.47
3:F:94:SER:OG	3:F:95:GLY:N	2.47	0.47
5:I:258:ILE:HG22	5:I:263:LEU:O	2.15	0.47
5:J:178:THR:HG22	5:J:180:VAL:H	1.78	0.47
5:K:69:GLU:OE1	3:S:2:ARG:HG2	2.15	0.47
3:L:109:THR:HG1	3:L:110:ILE:HG13	1.79	0.47
3:M:255:PHE:HZ	3:M:378:ILE:HD12	1.79	0.47
5:Q:309:ARG:NH2	5:Q:341:PHE:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:419:SER:HA	3:S:422:ARG:HB3	1.95	0.47
5:U:102:ALA:O	5:U:106:TYR:N	2.46	0.47
5:V:341:PHE:HB3	5:V:348:ASN:ND2	2.28	0.47
5:b:376:GLU:HA	5:b:379:LYS:HD3	1.96	0.47
3:e:115:VAL:O	3:e:119:LEU:HG	2.15	0.47
7:g:102:ARG:HH22	3:m:434:GLU:CD	2.22	0.47
5:i:24:VAL:HG11	5:i:50:TYR:CD2	2.48	0.47
5:j:239:CYS:CB	5:j:248:ALA:H	2.27	0.47
5:p:109:GLY:O	5:p:113:ILE:HG12	2.14	0.47
3:s:205:ASP:O	3:s:209:ILE:HG13	2.14	0.47
5:w:271:THR:OG1	5:w:292:GLN:OE1	2.26	0.47
3:l:241:SER:HA	3:l:356:ASN:HD21	1.80	0.47
8:2:148:ASP:HB2	8:2:150:GLU:OE2	2.15	0.47
5:4:117:LEU:HA	5:4:120:VAL:HG22	1.97	0.47
3:6:81:GLY:O	3:6:84:ARG:NH1	2.47	0.47
5:9:201:VAL:HG12	5:9:266:PHE:O	2.15	0.47
2:B:69:ARG:HG3	2:B:70:TYR:N	2.29	0.47
2:B:239:GLN:HB2	2:B:259:ASP:OD1	2.14	0.47
2:B:398:LEU:HD13	2:B:440:ILE:HG21	1.96	0.47
2:B:528:ALA:HB2	2:B:559:LEU:HD11	1.95	0.47
2:C:69:ARG:HG3	2:C:70:TYR:N	2.29	0.47
2:C:171:MET:HE3	2:C:171:MET:HB2	1.75	0.47
2:C:239:GLN:HB2	2:C:259:ASP:OD1	2.14	0.47
2:C:528:ALA:HB2	2:C:559:LEU:HD11	1.95	0.47
3:E:167:LEU:HG	3:E:200:VAL:HB	1.96	0.47
3:E:296:PHE:HD2	3:E:335:ILE:HD12	1.80	0.47
3:F:72:PRO:HB2	5:J:46:ARG:HH22	1.79	0.47
3:F:388:PHE:CZ	3:F:425:LEU:HD22	2.50	0.47
5:I:156:ARG:HD2	5:I:195:ASN:HA	1.96	0.47
5:I:226:ASN:OD1	11:I:501:GDP:N2	2.47	0.47
5:I:239:CYS:HB3	5:I:248:ALA:H	1.80	0.47
5:I:248:ALA:HA	5:I:252:LYS:HD3	1.95	0.47
5:I:388:MET:HG2	3:M:346:TRP:O	2.15	0.47
5:I:403:MET:HE2	5:I:403:MET:HB3	1.80	0.47
12:J:502:TA1:C12	12:J:502:TA1:H432	2.44	0.47
5:K:109:GLY:O	5:K:113:ILE:HG12	2.14	0.47
3:L:25:CYS:HA	3:L:30:ILE:HB	1.96	0.47
3:L:205:ASP:O	3:L:209:ILE:HG13	2.14	0.47
3:M:105:ARG:NH2	3:M:110:ILE:HD11	2.30	0.47
3:M:212:ILE:HG23	3:M:275:ILE:HD12	1.96	0.47
3:M:425:LEU:O	3:M:429:GLU:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:R:232:VAL:O	5:R:236:ILE:HG12	2.15	0.47
3:S:194:LEU:O	3:S:198:THR:HG22	2.15	0.47
5:T:249:ASP:OD1	5:T:250:LEU:N	2.47	0.47
5:V:343:GLU:OE1	5:V:343:GLU:N	2.47	0.47
6:W:58:ASP:OD1	6:W:59:GLY:N	2.48	0.47
3:Y:189:LEU:HD13	3:Y:413:MET:HE1	1.96	0.47
5:a:113:ILE:O	5:a:117:LEU:HG	2.15	0.47
5:a:321:MET:HE2	5:a:363:MET:HE2	1.97	0.47
3:e:204:LEU:HA	3:e:303:VAL:HB	1.96	0.47
3:h:124:LYS:HE3	3:h:124:LYS:HB3	1.79	0.47
12:i:502:TA1:C12	12:i:502:TA1:H432	2.44	0.47
8:l:148:ASP:HB2	8:l:150:GLU:OE2	2.15	0.47
8:n:148:ASP:HB2	8:n:150:GLU:OE2	2.15	0.47
3:o:76:ASP:OD1	5:t:46:ARG:NH2	2.47	0.47
3:o:174:SER:HB3	3:o:177:VAL:O	2.14	0.47
5:p:166:THR:HG22	5:p:168:SER:HB3	1.97	0.47
5:t:285:THR:OG1	5:t:288:GLU:HG2	2.15	0.47
5:t:405:GLU:HA	5:t:408:PHE:HD1	1.79	0.47
5:w:256:ASN:O	5:w:312:THR:HG21	2.15	0.47
5:w:272:PRO:HD3	5:w:364:SER:HA	1.96	0.47
6:x:58:ASP:OD1	6:x:59:GLY:N	2.48	0.47
3:y:377:MET:SD	3:y:379:SER:HB3	2.55	0.47
3:1:388:PHE:CE1	3:1:425:LEU:HG	2.50	0.47
5:4:201:VAL:C	5:4:202:LEU:HD12	2.40	0.47
5:4:283:ALA:O	5:4:288:GLU:HG3	2.15	0.47
3:6:176:GLN:HG2	3:6:304:LYS:NZ	2.28	0.47
3:7:25:CYS:O	3:7:30:ILE:N	2.48	0.47
5:8:154:LYS:O	5:8:157:GLU:HG3	2.15	0.47
2:B:424:HIS:HD2	2:B:428:VAL:HG12	1.79	0.47
2:B:502:LYS:HD2	2:B:502:LYS:HA	1.51	0.47
2:C:398:LEU:HD13	2:C:440:ILE:HG21	1.96	0.47
3:F:53:PHE:O	3:F:64:ARG:NH2	2.48	0.47
3:F:70:LEU:HB3	3:F:98:ASP:HA	1.97	0.47
3:F:298:PRO:HG3	3:F:308:ARG:HE	1.79	0.47
3:F:311:LYS:HD2	3:F:342:GLN:HB3	1.95	0.47
4:H:50:ARG:HD3	4:H:50:ARG:HA	1.70	0.47
5:I:10:GLY:HA2	5:I:143:THR:OG1	2.15	0.47
5:I:182:PRO:O	5:I:186:THR:HG23	2.14	0.47
5:K:107:THR:OG1	5:K:108:GLU:N	2.48	0.47
5:Q:308:GLY:HA2	5:Q:426:GLN:NE2	2.30	0.47
5:R:1:MET:N	5:R:3:GLU:OE1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:70:LEU:HD12	3:S:145:THR:HG22	1.96	0.47
3:S:264:ARG:O	3:S:266:HIS:ND1	2.47	0.47
5:V:334:GLN:NE2	5:V:346:PRO:O	2.48	0.47
3:Y:5:ILE:HG13	3:Y:132:LEU:HD11	1.97	0.47
3:Z:317:LEU:HB3	3:Z:319:TYR:CE1	2.50	0.47
8:d:162:PHE:CD2	8:d:198:LEU:HD22	2.50	0.47
3:e:185:TYR:O	3:e:189:LEU:HG	2.14	0.47
7:g:178:PRO:O	7:g:182:LYS:HE3	2.15	0.47
8:l:162:PHE:CD2	8:l:198:LEU:HD22	2.50	0.47
3:m:172:TYR:CG	3:m:173:PRO:HD2	2.50	0.47
8:n:162:PHE:CD2	8:n:198:LEU:HD22	2.50	0.47
5:p:46:ARG:HH22	3:y:72:PRO:HB2	1.80	0.47
5:r:193:VAL:HA	5:r:264:HIS:CE1	2.50	0.47
3:s:336:LYS:HE3	3:s:351:PHE:HE1	1.80	0.47
8:2:162:PHE:CD2	8:2:198:LEU:HD22	2.50	0.47
2:C:374:GLU:HG3	6:W:52:LEU:HD21	1.97	0.47
2:C:424:HIS:HD2	2:C:428:VAL:HG12	1.79	0.47
3:D:216:SER:HB2	3:D:275:ILE:O	2.14	0.47
5:J:67:ASP:OD1	5:J:143:THR:HG21	2.15	0.47
5:K:67:ASP:O	5:K:92:PHE:HA	2.14	0.47
3:L:26:LEU:HD23	3:L:363:VAL:HG12	1.97	0.47
3:M:32:PRO:HB3	3:M:83:TYR:CE1	2.49	0.47
5:N:54:ALA:HB3	5:N:58:ARG:HB2	1.96	0.47
3:P:291:ILE:HD12	3:P:375:VAL:HG23	1.96	0.47
5:T:315:ALA:HB1	5:T:317:PHE:CE1	2.49	0.47
5:V:249:ASP:O	5:V:252:LYS:HG2	2.15	0.47
5:V:252:LYS:HB3	3:e:100:ALA:HA	1.97	0.47
3:X:222:PRO:HG2	5:i:324:LYS:HB2	1.97	0.47
3:Z:33:ASP:HA	3:Z:85:GLN:HB2	1.96	0.47
5:a:165:LEU:HD12	5:a:166:THR:H	1.80	0.47
5:a:226:ASN:OD1	11:a:501:GDP:N2	2.44	0.47
3:f:205:ASP:OD1	3:f:303:VAL:HA	2.14	0.47
5:r:332:ASN:O	5:r:336:LYS:HG2	2.15	0.47
5:t:1:MET:HA	5:t:129:CYS:HB3	1.96	0.47
5:u:263:LEU:O	5:u:370:ASN:ND2	2.46	0.47
5:v:237:THR:HG22	5:v:240:LEU:HD13	1.97	0.47
5:v:273:LEU:H	5:v:292:GLN:HE22	1.63	0.47
5:w:290:THR:HA	5:w:293:MET:HG2	1.96	0.47
7:z:178:PRO:O	7:z:182:LYS:HE3	2.15	0.47
3:1:274:PRO:HD2	3:1:374:ALA:HA	1.97	0.47
5:4:263:LEU:O	5:4:370:ASN:ND2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:379:LYS:O	5:4:383:GLU:HG3	2.15	0.47
3:5:110:ILE:O	3:5:113:GLU:HG2	2.15	0.47
3:7:251:ASP:O	3:7:255:PHE:N	2.47	0.47
3:7:306:ASP:OD2	3:7:308:ARG:NH2	2.48	0.47
1:A:33:PRO:O	1:A:41:ASN:HA	2.15	0.47
1:A:133:TYR:HE2	3:k:433:GLU:HB2	1.79	0.47
2:B:489:SER:C	2:B:512:PHE:HB2	2.40	0.47
2:C:489:SER:C	2:C:512:PHE:HB2	2.40	0.47
3:E:305:CYS:SG	3:E:306:ASP:N	2.88	0.47
4:H:72:ALA:HA	3:k:311:LYS:HG3	1.97	0.47
5:I:106:TYR:CE2	5:I:403:MET:HG2	2.49	0.47
5:K:239:CYS:HB3	5:K:248:ALA:H	1.80	0.47
3:M:164:LYS:HA	3:M:164:LYS:HD3	1.70	0.47
5:N:173:PRO:HD3	5:N:380:ARG:CZ	2.44	0.47
5:O:208:TYR:CE1	5:O:225:LEU:HD11	2.50	0.47
3:P:234:VAL:O	3:P:237:SER:OG	2.26	0.47
5:Q:172:SER:HB3	5:Q:175:VAL:O	2.14	0.47
5:R:406:MET:N	5:R:406:MET:SD	2.88	0.47
5:T:16:ILE:HG22	5:T:226:ASN:CG	2.39	0.47
3:Z:416:GLY:O	3:Z:420:GLU:HG2	2.15	0.47
3:f:144:GLY:N	9:f:501:GTP:O3B	2.48	0.47
7:g:118:ILE:HD13	3:m:264:ARG:NH1	2.29	0.47
5:j:145:SER:OG	5:j:146:GLY:N	2.47	0.47
3:k:97:GLU:CD	3:k:105:ARG:HH22	2.23	0.47
8:l:211:HIS:NE2	8:l:252:LYS:HE3	2.30	0.47
3:m:214:ARG:HD2	5:q:324:LYS:HE2	1.96	0.47
5:q:163:MET:HE3	5:q:163:MET:HB2	1.83	0.47
8:2:211:HIS:NE2	8:2:252:LYS:HE3	2.31	0.47
7:3:178:PRO:O	7:3:182:LYS:HE3	2.15	0.47
5:4:145:SER:OG	5:4:146:GLY:N	2.48	0.47
5:4:324:LYS:HD3	3:6:214:ARG:HH21	1.80	0.47
3:5:139:ASN:OD1	3:5:140:ALA:N	2.47	0.47
3:5:246:GLY:HA2	3:5:357:TYR:CZ	2.50	0.47
3:7:3:GLU:HB2	3:7:129:CYS:SG	2.55	0.47
2:C:353:SER:N	2:C:354:GLU:OE1	2.47	0.46
3:E:97:GLU:HG2	5:I:129:CYS:SG	2.55	0.46
5:I:98:GLY:N	3:M:254:GLU:HG3	2.31	0.46
5:J:70:PRO:HB3	5:J:92:PHE:CG	2.50	0.46
3:L:22:GLU:OE2	3:L:229:ARG:NH1	2.47	0.46
5:N:287:PRO:HA	5:N:290:THR:HG22	1.97	0.46
5:Q:184:ASN:OD1	5:Q:398:TYR:OH	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:T:50:TYR:O	5:T:62:ARG:HG2	2.14	0.46
5:T:101:TRP:HB3	5:T:398:TYR:HE1	1.80	0.46
5:V:184:ASN:OD1	5:V:398:TYR:OH	2.28	0.46
5:V:309:ARG:NE	5:V:339:SER:O	2.44	0.46
3:X:246:GLY:HA2	3:X:357:TYR:CE2	2.50	0.46
3:Y:204:LEU:HA	3:Y:303:VAL:HG22	1.97	0.46
7:c:178:PRO:O	7:c:182:LYS:HE3	2.15	0.46
7:c:180:GLU:H	7:c:180:GLU:HG2	1.48	0.46
8:d:211:HIS:NE2	8:d:252:LYS:HE3	2.31	0.46
5:j:170:VAL:HG11	5:j:201:VAL:HB	1.96	0.46
5:j:271:THR:O	5:j:365:ALA:N	2.47	0.46
3:o:185:TYR:CD2	3:o:418:PHE:HE2	2.33	0.46
5:p:111:GLU:OE1	5:p:111:GLU:N	2.48	0.46
5:r:177:ASP:OD2	11:r:501:GDP:O2'	2.33	0.46
5:t:207:LEU:HD11	5:t:229:ILE:HD11	1.97	0.46
5:u:228:LEU:HD23	5:u:300:MET:HE2	1.98	0.46
5:u:271:THR:HB	5:u:365:ALA:HB3	1.96	0.46
5:w:72:THR:O	5:w:75:SER:OG	2.19	0.46
5:w:234:SER:OG	12:w:502:TA1:H401	2.15	0.46
5:w:238:CYS:SG	5:w:316:LEU:HD21	2.55	0.46
3:0:4:VAL:HB	3:0:136:LEU:HD23	1.96	0.46
3:1:254:GLU:OE2	5:4:98:GLY:N	2.45	0.46
8:2:46:ALA:HB2	8:2:116:PRO:HD2	1.97	0.46
5:4:67:ASP:HB3	5:4:73:MET:HE3	1.96	0.46
5:4:252:LYS:HB3	3:6:100:ALA:HA	1.97	0.46
5:4:318:ARG:HB2	5:4:356:ILE:O	2.16	0.46
3:5:320:ARG:HA	3:5:356:ASN:OD1	2.16	0.46
3:6:119:LEU:HD11	3:6:156:ARG:HB3	1.96	0.46
3:6:245:ASP:O	3:6:356:ASN:ND2	2.39	0.46
5:8:52:ASN:OD1	5:8:62:ARG:NH1	2.47	0.46
2:B:353:SER:N	2:B:354:GLU:OE1	2.47	0.46
2:B:412:GLN:HE22	6:x:33:HIS:HD2	1.62	0.46
2:C:274:THR:HG21	8:l:25:PRO:HB2	1.98	0.46
5:J:194:GLU:OE1	5:J:194:GLU:N	2.47	0.46
5:K:122:LYS:HE2	5:K:122:LYS:HB3	1.79	0.46
3:M:155:GLU:HG2	3:M:197:HIS:CE1	2.50	0.46
3:P:183:GLU:HG2	3:P:184:PRO:HD3	1.97	0.46
3:P:273:ALA:O	3:P:375:VAL:N	2.34	0.46
3:S:414:GLU:OE1	3:S:414:GLU:N	2.48	0.46
3:Y:32:PRO:HB3	3:Y:83:TYR:CE1	2.51	0.46
3:Y:414:GLU:OE2	3:Y:416:GLY:N	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Z:144:GLY:N	9:Z:501:GTP:O3B	2.48	0.46
5:a:51:PHE:O	5:a:62:ARG:NH2	2.49	0.46
7:c:39:ASP:OD1	7:c:41:ASP:N	2.48	0.46
3:e:220:GLU:H	3:e:220:GLU:CD	2.22	0.46
3:h:285:GLN:OE1	3:h:285:GLN:N	2.48	0.46
5:i:379:LYS:HG2	5:i:419:VAL:HG21	1.97	0.46
3:m:140:ALA:HA	3:m:171:VAL:HG12	1.97	0.46
8:n:211:HIS:NE2	8:n:252:LYS:HE3	2.31	0.46
5:p:332:ASN:O	5:p:336:LYS:HG2	2.15	0.46
5:r:137:HIS:CE1	5:r:148:GLY:HA3	2.44	0.46
5:r:272:PRO:HD3	5:r:364:SER:HA	1.97	0.46
3:s:145:THR:HA	3:s:149:LEU:HD13	1.97	0.46
5:v:376:GLU:HA	5:v:379:LYS:HG2	1.96	0.46
5:w:101:TRP:CE3	5:w:187:LEU:HD23	2.49	0.46
3:y:23:LEU:O	3:y:27:GLU:N	2.45	0.46
7:3:39:ASP:OD1	7:3:41:ASP:N	2.48	0.46
3:7:322:ASP:OD1	3:7:372:GLN:HB3	2.16	0.46
2:B:347:ALA:HB2	2:B:388:ILE:HG23	1.98	0.46
2:C:347:ALA:HB2	2:C:388:ILE:HG23	1.98	0.46
3:F:63:PRO:HD3	3:F:86:LEU:HD22	1.95	0.46
5:I:130:LEU:O	5:I:162:ARG:NE	2.49	0.46
5:J:24:VAL:HG11	5:J:50:TYR:HD2	1.80	0.46
3:P:246:GLY:HA2	3:P:357:TYR:CE2	2.50	0.46
5:Q:203:ASP:OD1	5:Q:204:ASN:N	2.49	0.46
5:R:91:VAL:HG11	5:R:116:VAL:HG22	1.98	0.46
3:Z:76:ASP:OD2	5:j:46:ARG:NH2	2.42	0.46
3:Z:94:SER:OG	3:Z:95:GLY:N	2.48	0.46
8:d:46:ALA:HB2	8:d:116:PRO:HD2	1.98	0.46
3:e:185:TYR:HD2	3:e:418:PHE:HE1	1.64	0.46
8:n:46:ALA:HB2	8:n:116:PRO:HD2	1.98	0.46
5:p:19:LYS:HA	5:p:19:LYS:HD2	1.71	0.46
5:r:86:ARG:HB3	5:r:88:ASP:OD1	2.15	0.46
5:t:113:ILE:HA	5:t:116:VAL:HG22	1.97	0.46
5:t:256:ASN:ND2	5:t:350:LYS:HD2	2.30	0.46
5:w:391:ARG:HG3	3:5:262:TYR:OH	2.15	0.46
3:0:387:ILE:HG13	3:0:388:PHE:HD1	1.80	0.46
3:1:76:ASP:HA	3:1:79:ARG:HD2	1.96	0.46
3:1:430:LYS:HA	3:1:430:LYS:HE3	1.95	0.46
7:3:180:GLU:H	7:3:180:GLU:HG2	1.48	0.46
5:8:86:ARG:NH2	5:8:123:GLU:HG2	2.30	0.46
5:9:385:PHE:HZ	5:9:408:PHE:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:231:THR:OG1	2:C:232:GLY:N	2.46	0.46
3:D:225:THR:O	3:D:229:ARG:HG3	2.15	0.46
3:G:96:LYS:HD2	3:G:96:LYS:N	2.30	0.46
3:G:147:SER:OG	3:G:190:SER:HB3	2.15	0.46
5:I:119:VAL:O	5:I:123:GLU:HG2	2.15	0.46
5:I:201:VAL:HG21	5:I:374:ILE:HD11	1.98	0.46
5:I:311:LEU:HD23	5:I:342:VAL:HG21	1.97	0.46
5:O:212:PHE:HE2	3:k:326:LYS:HE2	1.80	0.46
5:Q:379:LYS:O	5:Q:383:GLU:HG3	2.16	0.46
3:S:276:ILE:HG22	3:S:277:SER:N	2.31	0.46
3:X:195:LEU:HD11	3:X:428:LEU:HD22	1.97	0.46
3:Y:175:PRO:HB2	3:Y:176:GLN:OE1	2.15	0.46
5:a:334:GLN:HE22	5:a:347:ASN:ND2	2.13	0.46
5:b:39:ASP:OD1	5:b:40:SER:N	2.48	0.46
5:b:285:THR:OG1	5:b:288:GLU:HG2	2.15	0.46
3:h:114:ILE:HD11	3:h:149:LEU:HD11	1.98	0.46
5:i:307:HIS:O	5:i:426:GLN:NE2	2.49	0.46
3:k:287:SER:OG	3:k:290:GLU:HG3	2.15	0.46
8:l:46:ALA:HB2	8:l:116:PRO:HD2	1.98	0.46
3:s:215:ARG:HG3	3:s:216:SER:N	2.30	0.46
5:t:239:CYS:HB3	5:t:248:ALA:H	1.80	0.46
5:4:165:LEU:HD12	5:4:166:THR:H	1.80	0.46
5:4:299:MET:HE2	5:4:299:MET:N	2.31	0.46
5:4:405:GLU:HA	5:4:408:PHE:HD2	1.80	0.46
5:9:3:GLU:OE1	5:9:127:CYS:HB3	2.15	0.46
2:B:231:THR:OG1	2:B:232:GLY:N	2.46	0.46
2:B:468:HIS:NE2	2:B:488:SER:HB2	2.30	0.46
3:F:212:ILE:O	3:F:216:SER:OG	2.30	0.46
3:G:191:THR:OG1	3:G:425:LEU:HD21	2.15	0.46
5:N:281:TYR:CE2	5:Q:87:PRO:HD3	2.51	0.46
5:N:410:GLU:HG3	8:d:81:PHE:HE2	1.81	0.46
5:R:328:GLU:OE1	5:R:332:ASN:ND2	2.48	0.46
5:V:62:ARG:NH1	5:V:127:CYS:SG	2.89	0.46
7:c:103:PHE:CD1	7:c:119:CYS:HB3	2.51	0.46
7:g:39:ASP:OD1	7:g:41:ASP:N	2.48	0.46
5:i:143:THR:H	11:i:501:GDP:PB	2.39	0.46
5:i:239:CYS:SG	5:i:248:ALA:N	2.88	0.46
5:q:52:ASN:HD22	5:q:86:ARG:HH12	1.63	0.46
5:r:154:LYS:O	5:r:158:GLU:HG3	2.15	0.46
5:v:10:GLY:HA2	5:v:143:THR:HB	1.98	0.46
6:x:13:THR:O	6:x:17:THR:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:1:51:THR:HG21	3:1:243:ARG:HB3	1.98	0.46
3:1:139:ASN:OD1	3:1:140:ALA:N	2.48	0.46
3:1:318:MET:SD	3:1:318:MET:N	2.88	0.46
3:5:5:ILE:HG12	3:5:132:LEU:HD11	1.96	0.46
3:6:317:LEU:HB3	3:6:319:TYR:CE1	2.49	0.46
5:8:282:ARG:NH2	5:8:292:GLN:OE1	2.35	0.46
1:A:7:TYR:CZ	2:C:394:GLY:HA3	2.50	0.46
2:C:468:HIS:NE2	2:C:488:SER:HB2	2.30	0.46
3:D:121:ARG:O	3:D:125:LEU:N	2.48	0.46
3:E:273:ALA:O	3:E:375:VAL:N	2.44	0.46
3:G:217:LEU:HD13	3:G:367:ASP:OD1	2.15	0.46
5:J:105:HIS:O	5:J:150:LEU:HD22	2.16	0.46
5:K:180:VAL:HG13	5:K:183:TYR:HD2	1.81	0.46
3:L:178:SER:HB3	3:L:183:GLU:OE2	2.16	0.46
3:L:219:ILE:HG13	3:L:219:ILE:O	2.15	0.46
5:N:28:HIS:HA	5:N:43:GLN:OE1	2.15	0.46
5:N:87:PRO:HA	5:N:90:PHE:HD2	1.80	0.46
5:Q:121:ARG:HH21	5:Q:158:GLU:CD	2.23	0.46
5:Q:166:THR:HB	5:Q:199:CYS:HA	1.98	0.46
5:U:287:PRO:HA	5:U:290:THR:HG22	1.97	0.46
5:b:179:VAL:HB	3:e:258:ASN:HB2	1.97	0.46
3:e:313:MET:HE2	3:e:435:VAL:HG21	1.97	0.46
3:e:326:LYS:NZ	3:e:327:ASP:OD1	2.43	0.46
3:e:392:ASP:CA	3:e:422:ARG:HH12	2.28	0.46
3:f:135:PHE:HB2	3:f:166:LYS:HG3	1.98	0.46
5:j:252:LYS:HA	5:j:255:VAL:HG22	1.98	0.46
5:j:415:MET:HE2	5:j:415:MET:HB3	1.60	0.46
5:p:52:ASN:OD1	5:p:62:ARG:NH1	2.48	0.46
5:r:95:THR:OG1	5:r:96:GLY:N	2.48	0.46
5:v:388:MET:O	5:v:392:LYS:N	2.48	0.46
5:w:105:HIS:CD2	5:w:150:LEU:HB2	2.50	0.46
7:z:39:ASP:OD1	7:z:41:ASP:N	2.48	0.46
7:z:103:PHE:CD1	7:z:119:CYS:HB3	2.51	0.46
3:0:94:SER:OG	3:0:95:GLY:N	2.49	0.46
3:1:228:ASN:OD1	9:1:501:GTP:N1	2.44	0.46
3:5:223:THR:OG1	3:5:225:THR:HG22	2.16	0.46
3:7:27:GLU:CD	3:7:243:ARG:HH12	2.24	0.46
2:B:90:LEU:C	2:B:92:SER:H	2.24	0.46
2:C:4:PRO:HD2	2:C:589:PHE:HA	1.96	0.46
2:C:90:LEU:C	2:C:92:SER:H	2.24	0.46
2:C:354:GLU:OE1	2:C:354:GLU:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:192:HIS:ND1	3:D:192:HIS:O	2.49	0.46
3:E:215:ARG:NH2	3:E:299:ALA:O	2.48	0.46
3:F:261:PRO:HG3	3:F:313:MET:HE2	1.97	0.46
3:G:413:MET:HE2	3:G:413:MET:HB3	1.80	0.46
5:I:273:LEU:N	5:I:292:GLN:HE22	2.13	0.46
5:J:3:GLU:OE1	5:J:127:CYS:HB3	2.16	0.46
5:J:293:MET:HG3	5:J:294:TRP:N	2.29	0.46
5:K:405:GLU:OE1	5:K:405:GLU:N	2.48	0.46
3:M:319:TYR:HB2	3:M:355:ILE:HD13	1.97	0.46
5:N:12:CYS:O	5:N:16:ILE:HG23	2.15	0.46
5:O:332:ASN:O	5:O:336:LYS:HG2	2.15	0.46
5:R:391:ARG:HH22	3:f:438:GLU:HA	1.80	0.46
3:S:305:CYS:SG	3:S:306:ASP:N	2.89	0.46
5:T:314:SER:OG	5:T:315:ALA:N	2.48	0.46
5:T:318:ARG:HB3	5:T:357:PRO:HA	1.98	0.46
5:U:274:THR:HG21	5:U:282:ARG:HD3	1.97	0.46
6:W:13:THR:O	6:W:17:THR:HG23	2.16	0.46
5:b:293:MET:HB2	5:b:367:PHE:HB2	1.97	0.46
7:g:103:PHE:CD1	7:g:119:CYS:HB3	2.51	0.46
3:h:231:ILE:HG22	3:h:235:ILE:HD11	1.98	0.46
3:h:377:MET:SD	3:h:379:SER:HB3	2.55	0.46
5:j:239:CYS:HB3	5:j:248:ALA:H	1.81	0.46
3:k:311:LYS:O	3:k:382:THR:HG22	2.15	0.46
3:m:279:GLU:OE1	3:m:279:GLU:N	2.44	0.46
5:p:413:SER:HB3	8:2:203:LYS:HE2	1.98	0.46
5:q:293:MET:HG3	5:q:294:TRP:N	2.31	0.46
3:s:136:LEU:HD12	3:s:136:LEU:HA	1.82	0.46
3:s:147:SER:HB3	3:s:190:SER:HB3	1.98	0.46
5:u:111:GLU:OE2	8:2:139:SER:OG	2.31	0.46
5:u:122:LYS:NZ	8:2:262:TYR:O	2.47	0.46
5:w:347:ASN:ND2	3:7:178:SER:OG	2.49	0.46
3:1:12:ALA:HB3	3:1:140:ALA:HB2	1.96	0.46
7:3:103:PHE:CD1	7:3:119:CYS:HB3	2.51	0.46
5:4:208:TYR:CE1	5:4:225:LEU:HD21	2.51	0.46
5:4:249:ASP:O	5:4:252:LYS:HG2	2.15	0.46
3:5:333:ALA:O	3:5:337:THR:HG23	2.16	0.46
3:5:416:GLY:O	3:5:420:GLU:HG2	2.16	0.46
5:8:86:ARG:HH22	5:8:123:GLU:HG2	1.81	0.46
2:B:354:GLU:OE1	2:B:354:GLU:N	2.49	0.46
2:B:412:GLN:HB3	6:x:53:ARG:NH2	2.31	0.46
2:B:446:GLU:N	2:B:446:GLU:CD	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:537:TRP:HA	2:B:543:ASN:HA	1.98	0.46
2:C:446:GLU:N	2:C:446:GLU:CD	2.74	0.46
2:C:537:TRP:HA	2:C:543:ASN:HA	1.98	0.46
5:K:289:LEU:HD21	5:K:363:MET:HG2	1.98	0.46
3:L:287:SER:O	3:L:291:ILE:HG12	2.15	0.46
5:Q:247:ASN:ND2	3:S:73:THR:HG21	2.31	0.46
5:V:103:LYS:HB2	5:V:108:GLU:HG3	1.96	0.46
5:V:322:SER:HA	3:e:223:THR:HG22	1.98	0.46
3:X:5:ILE:HG12	3:X:132:LEU:HD11	1.97	0.46
3:Z:51:THR:HG21	3:Z:243:ARG:HD3	1.97	0.46
5:a:36:TYR:CD1	5:a:44:LEU:HD21	2.51	0.46
5:a:232:VAL:O	5:a:236:ILE:HG12	2.15	0.46
3:e:72:PRO:HG3	3:e:95:GLY:O	2.16	0.46
3:e:141:VAL:HG23	3:e:170:THR:OG1	2.16	0.46
5:i:308:GLY:HA2	5:i:426:GLN:HE21	1.80	0.46
3:m:204:LEU:HA	3:m:303:VAL:HG22	1.98	0.46
8:n:34:SER:HB2	3:5:62:VAL:HG21	1.98	0.46
5:p:221:THR:OG1	5:p:224:ASP:OD1	2.31	0.46
5:q:58:ARG:NH1	5:9:280:GLN:HE21	2.14	0.46
3:s:113:GLU:OE1	3:s:113:GLU:N	2.48	0.46
3:s:349:THR:OG1	3:s:350:GLY:N	2.48	0.46
3:s:372:GLN:OE1	3:s:372:GLN:N	2.42	0.46
5:u:218:THR:OG1	5:u:219:THR:N	2.49	0.46
5:v:267:MET:HE2	5:v:301:CYS:HB3	1.98	0.46
5:w:405:GLU:N	5:w:405:GLU:OE1	2.48	0.46
3:0:206:ASN:OD1	9:0:501:GTP:N2	2.48	0.46
3:1:336:LYS:HE3	3:1:351:PHE:HE1	1.81	0.46
3:5:246:GLY:HA2	3:5:357:TYR:CE2	2.51	0.46
5:8:86:ARG:NH2	5:8:89:ASN:OD1	2.49	0.46
2:B:4:PRO:HD2	2:B:589:PHE:HA	1.97	0.46
2:B:379:ALA:HB3	6:x:56:ILE:HA	1.97	0.46
3:D:172:TYR:CG	3:D:173:PRO:HD2	2.51	0.46
3:E:328:VAL:HG21	3:E:355:ILE:HD11	1.97	0.46
3:F:216:SER:HB2	3:F:275:ILE:O	2.16	0.46
5:I:165:LEU:HD23	5:I:166:THR:N	2.31	0.46
5:J:113:ILE:HG21	5:J:154:LYS:HG3	1.98	0.46
5:K:98:GLY:HA2	3:S:254:GLU:HA	1.98	0.46
5:K:237:THR:OG1	5:K:241:ARG:NE	2.49	0.46
5:N:324:LYS:HB3	3:f:222:PRO:HD2	1.98	0.46
3:S:46:ASP:CG	3:S:47:ASP:H	2.23	0.46
3:S:165:SER:HA	3:S:199:ASP:OD1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:V:13:GLY:HA2	5:V:136:CYS:SG	2.55	0.46
5:V:362:LYS:N	5:V:362:LYS:HD2	2.31	0.46
3:Z:67:PHE:HB2	3:Z:92:LEU:HD23	1.96	0.46
3:h:12:ALA:HB3	3:h:140:ALA:HB2	1.97	0.46
3:h:287:SER:O	3:h:291:ILE:HG12	2.16	0.46
5:i:7:ILE:HB	5:i:135:VAL:HG12	1.97	0.46
5:i:379:LYS:O	5:i:383:GLU:HG3	2.16	0.46
5:j:223:GLY:O	5:j:227:HIS:N	2.43	0.46
5:t:27:GLU:OE2	12:t:502:TA1:H411	2.15	0.46
5:u:324:LYS:HD2	3:5:210:TYR:CG	2.51	0.46
5:v:262:ARG:HE	5:v:262:ARG:HB3	1.56	0.46
5:v:385:PHE:CE2	5:v:412:GLU:HB2	2.51	0.46
5:4:239:CYS:SG	5:4:248:ALA:N	2.87	0.46
3:6:241:SER:HB2	3:6:250:VAL:H	1.79	0.46
3:7:371:VAL:HG12	3:7:373:ARG:H	1.79	0.46
5:8:292:GLN:O	5:8:298:ASN:ND2	2.48	0.46
3:G:333:ALA:O	3:G:337:THR:HG23	2.15	0.46
5:K:179:VAL:HB	3:S:258:ASN:HB2	1.98	0.46
3:M:26:LEU:HD11	3:M:364:PRO:HD3	1.97	0.46
3:M:53:PHE:O	3:M:64:ARG:NH2	2.48	0.46
3:P:191:THR:HA	3:P:194:LEU:HG	1.97	0.46
5:T:258:ILE:HG13	5:T:258:ILE:O	2.16	0.46
5:V:379:LYS:HE3	5:V:419:VAL:HG11	1.98	0.46
3:X:116:ASP:N	3:X:116:ASP:OD1	2.47	0.46
3:X:326:LYS:O	3:X:330:ALA:N	2.49	0.46
3:Z:1:MET:HE2	3:Z:1:MET:HB3	1.72	0.46
5:b:203:ASP:O	5:b:207:LEU:HD23	2.16	0.46
12:b:502:TA1:H091	12:b:502:TA1:H141	1.97	0.46
3:e:76:ASP:HA	3:e:79:ARG:HD2	1.97	0.46
3:e:172:TYR:CD1	3:e:173:PRO:HD2	2.50	0.46
5:j:318:ARG:HG3	5:j:358:PRO:HD3	1.98	0.46
3:m:306:ASP:OD2	3:m:308:ARG:NH2	2.49	0.46
5:r:293:MET:HG3	5:r:294:TRP:N	2.31	0.46
5:r:416:ASN:HA	5:r:419:VAL:HG12	1.97	0.46
5:t:32:PRO:HD3	5:t:81:TYR:CZ	2.51	0.46
5:t:118:ASP:O	5:t:122:LYS:HG3	2.16	0.46
5:u:406:MET:O	5:u:410:GLU:HG2	2.16	0.46
3:1:27:GLU:CD	3:1:243:ARG:HH12	2.24	0.46
8:2:9:LEU:HB2	8:2:173:ARG:HH12	1.81	0.46
5:8:341:PHE:HB3	5:8:348:ASN:ND2	2.31	0.46
1:A:22:MET:O	1:A:23:HIS:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:412:GLN:HE22	6:x:33:HIS:CD2	2.34	0.45
2:B:424:HIS:HE2	2:B:442:SER:C	2.20	0.45
3:E:219:ILE:HG13	3:E:219:ILE:O	2.16	0.45
5:K:258:ILE:HD11	3:L:407:TRP:HZ2	1.81	0.45
3:M:174:SER:HB3	3:M:177:VAL:O	2.16	0.45
5:N:265:PHE:HE2	5:N:418:LEU:HD11	1.81	0.45
5:R:272:PRO:HD3	5:R:364:SER:HA	1.97	0.45
3:S:77:GLU:O	3:S:81:GLY:N	2.36	0.45
5:U:211:CYS:O	5:U:217:LEU:N	2.44	0.45
5:U:330:MET:HB3	5:U:349:VAL:HG21	1.99	0.45
5:V:239:CYS:SG	5:V:248:ALA:N	2.89	0.45
3:Y:326:LYS:CE	5:v:220:PRO:HD2	2.46	0.45
3:Z:204:LEU:HD13	3:Z:209:ILE:HD11	1.98	0.45
3:Z:406:HIS:HA	3:Z:409:VAL:HG12	1.98	0.45
5:a:42:LEU:HD11	5:a:243:PRO:HD3	1.97	0.45
5:b:249:ASP:OD1	5:b:250:LEU:N	2.50	0.45
8:d:9:LEU:HB2	8:d:173:ARG:HH12	1.81	0.45
3:h:140:ALA:HA	3:h:171:VAL:HG22	1.98	0.45
3:h:333:ALA:O	3:h:337:THR:HG23	2.15	0.45
3:h:392:ASP:CA	3:h:422:ARG:HH12	2.29	0.45
5:j:263:LEU:O	5:j:370:ASN:ND2	2.49	0.45
8:l:9:LEU:HB2	8:l:173:ARG:HH12	1.81	0.45
8:n:9:LEU:HB2	8:n:173:ARG:HH12	1.81	0.45
3:o:214:ARG:NH2	3:o:220:GLU:O	2.49	0.45
3:o:317:LEU:HB3	3:o:319:TYR:CE1	2.50	0.45
5:p:207:LEU:HB3	5:p:225:LEU:HD22	1.98	0.45
5:r:102:ALA:O	5:r:106:TYR:N	2.49	0.45
3:5:330:ALA:O	3:5:334:THR:HG23	2.17	0.45
3:5:386:GLU:O	3:5:390:ARG:HG3	2.17	0.45
5:9:285:THR:HB	5:9:287:PRO:HD2	1.99	0.45
2:C:414:GLY:C	2:C:415:LYS:HG2	2.39	0.45
4:H:100:MET:HE1	5:U:291:GLN:HB2	1.98	0.45
5:J:66:MET:HG3	5:J:66:MET:O	2.15	0.45
3:P:288:VAL:O	3:P:292:THR:HG23	2.17	0.45
5:Q:286:VAL:O	5:Q:290:THR:HG22	2.16	0.45
5:R:377:MET:SD	5:R:380:ARG:NH2	2.90	0.45
3:S:258:ASN:HD21	3:S:352:LYS:HB2	1.81	0.45
5:T:4:ILE:HG22	5:T:5:VAL:N	2.31	0.45
6:W:31:PHE:HE2	6:W:35:ARG:HH21	1.63	0.45
3:Y:422:ARG:HA	3:Y:422:ARG:HD2	1.83	0.45
5:b:40:SER:OG	5:b:41:ASP:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h:223:THR:HA	5:8:323:THR:HG22	1.98	0.45
5:j:1:MET:HB3	5:j:129:CYS:HB3	1.97	0.45
3:k:100:ALA:N	9:k:501:GTP:O2G	2.50	0.45
3:k:139:ASN:OD1	3:k:140:ALA:N	2.48	0.45
5:p:142:GLY:N	11:p:501:GDP:O3B	2.49	0.45
3:s:115:VAL:O	3:s:119:LEU:HG	2.16	0.45
5:v:108:GLU:HA	5:v:111:GLU:CD	2.42	0.45
5:w:325:GLU:OE2	3:7:221:ARG:NH1	2.49	0.45
6:x:31:PHE:HE2	6:x:35:ARG:HH21	1.63	0.45
6:x:35:ARG:O	6:x:39:VAL:HG23	2.16	0.45
3:y:263:PRO:HD2	7:3:116:PRO:HG3	1.98	0.45
3:0:417:GLU:HA	3:0:420:GLU:HB2	1.97	0.45
3:1:143:GLY:O	3:1:186:ASN:ND2	2.49	0.45
3:1:328:VAL:O	3:1:332:VAL:HG22	2.16	0.45
7:3:95:ASP:OD2	7:3:146:THR:OG1	2.26	0.45
5:4:4:ILE:O	5:4:62:ARG:NH1	2.45	0.45
5:4:143:THR:HG1	11:4:501:GDP:PB	2.38	0.45
5:4:148:GLY:O	5:4:152:ILE:N	2.40	0.45
5:4:379:LYS:O	5:4:382:SER:OG	2.29	0.45
5:9:139:LEU:HB2	5:9:171:PRO:HD3	1.97	0.45
2:B:414:GLY:C	2:B:415:LYS:HG2	2.39	0.45
2:C:424:HIS:HE2	2:C:442:SER:C	2.20	0.45
3:D:183:GLU:HG2	3:D:184:PRO:HD3	1.98	0.45
3:D:205:ASP:O	3:D:209:ILE:HG13	2.16	0.45
3:D:282:TYR:O	3:L:60:LYS:HD3	2.15	0.45
3:D:408:TYR:O	3:D:413:MET:HB2	2.17	0.45
3:E:419:SER:O	3:E:423:GLU:HG2	2.16	0.45
3:F:417:GLU:HA	3:F:420:GLU:HB2	1.97	0.45
3:G:163:LYS:HA	3:G:163:LYS:HD2	1.60	0.45
5:I:257:LEU:HD21	5:I:314:SER:OG	2.16	0.45
5:J:16:ILE:HD11	5:J:136:CYS:HB3	1.99	0.45
5:K:87:PRO:HD3	5:R:281:TYR:HE2	1.81	0.45
3:L:21:TRP:CZ2	3:L:65:CYS:HB3	2.51	0.45
3:M:103:PHE:HB3	3:M:408:TYR:HE2	1.81	0.45
5:O:187:LEU:HD21	5:O:403:MET:HE1	1.99	0.45
5:O:272:PRO:HD3	5:O:364:SER:HA	1.99	0.45
3:S:304:LYS:HD2	3:S:304:LYS:HA	1.65	0.45
5:T:166:THR:HG22	5:T:168:SER:HB3	1.98	0.45
5:T:203:ASP:OD2	5:T:204:ASN:N	2.50	0.45
5:U:203:ASP:HB2	5:U:377:MET:HE1	1.97	0.45
6:W:35:ARG:O	6:W:39:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:X:172:TYR:CD1	3:X:173:PRO:HD2	2.51	0.45
3:Z:272:TYR:HD2	3:Z:275:ILE:HG12	1.81	0.45
5:a:184:ASN:OD1	5:a:398:TYR:OH	2.29	0.45
5:a:224:ASP:O	5:a:227:HIS:HB3	2.16	0.45
3:e:52:PHE:C	3:e:64:ARG:HG2	2.40	0.45
3:h:205:ASP:OD1	3:h:206:ASN:N	2.50	0.45
3:h:253:THR:O	3:h:257:THR:HG23	2.16	0.45
5:i:70:PRO:HB3	5:i:92:PHE:CD1	2.51	0.45
5:r:253:LEU:O	5:r:257:LEU:HB2	2.17	0.45
5:u:174:LYS:HB2	5:u:174:LYS:HE3	1.65	0.45
5:v:268:VAL:HG12	5:v:269:GLY:N	2.32	0.45
6:x:48:TYR:O	6:x:51:THR:OG1	2.29	0.45
3:0:172:TYR:CG	3:0:173:PRO:HD2	2.51	0.45
3:1:265:ILE:HG22	3:1:380:ASN:HD21	1.81	0.45
5:4:36:TYR:CZ	5:4:44:LEU:HD11	2.52	0.45
5:4:50:TYR:CE2	5:4:241:ARG:HD3	2.52	0.45
3:5:34:GLY:HA2	3:5:86:LEU:HD23	1.98	0.45
3:6:392:ASP:CA	3:6:422:ARG:HH12	2.23	0.45
3:7:172:TYR:CD1	3:7:173:PRO:HD2	2.52	0.45
5:8:8:GLN:HG3	5:8:14:ASN:ND2	2.31	0.45
2:B:588:TYR:CD2	2:B:627:PRO:HG3	2.51	0.45
3:F:56:THR:OG1	3:F:57:GLY:N	2.49	0.45
3:F:220:GLU:C	3:F:222:PRO:HD3	2.42	0.45
3:G:268:MET:HE2	3:G:268:MET:HB3	1.84	0.45
3:G:349:THR:OG1	3:G:350:GLY:N	2.50	0.45
5:K:332:ASN:O	5:K:336:LYS:HG2	2.16	0.45
3:M:12:ALA:O	3:M:16:VAL:HG13	2.17	0.45
3:M:21:TRP:CZ2	3:M:65:CYS:HB3	2.51	0.45
5:U:6:HIS:HD2	5:U:21:TRP:HE1	1.64	0.45
3:X:185:TYR:HD2	3:X:418:PHE:HE1	1.63	0.45
3:Y:297:GLU:HG3	3:Y:300:SER:H	1.81	0.45
3:Z:130:THR:OG1	3:Z:131:GLY:N	2.50	0.45
3:Z:172:TYR:CD1	3:Z:173:PRO:HD2	2.51	0.45
5:a:310:TYR:N	5:a:340:TYR:O	2.45	0.45
5:b:256:ASN:ND2	5:b:350:LYS:HD2	2.30	0.45
3:f:26:LEU:HD23	3:f:363:VAL:HG12	1.98	0.45
5:i:372:THR:HG21	5:i:426:GLN:HB2	1.99	0.45
5:j:126:SER:O	5:j:126:SER:OG	2.32	0.45
5:j:332:ASN:O	5:j:336:LYS:HG2	2.17	0.45
8:l:122:ARG:O	8:l:126:GLU:HG2	2.17	0.45
3:o:246:GLY:HA2	3:o:357:TYR:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s:102:ASN:OD1	3:s:104:ALA:N	2.49	0.45
3:s:414:GLU:HG2	3:s:417:GLU:OE1	2.16	0.45
5:t:185:ALA:O	5:t:189:VAL:HG13	2.16	0.45
5:v:274:THR:HG22	12:v:502:TA1:H162	1.97	0.45
3:1:36:MET:HG2	3:1:39:ASP:OD2	2.16	0.45
3:1:39:ASP:HB3	3:1:40:LYS:HD2	1.99	0.45
5:4:232:VAL:HG12	5:4:270:PHE:HB2	1.98	0.45
3:7:205:ASP:OD1	3:7:303:VAL:HA	2.16	0.45
5:9:232:VAL:O	5:9:236:ILE:HG12	2.17	0.45
3:F:5:ILE:HG12	3:F:132:LEU:HD11	1.99	0.45
3:L:36:MET:HG2	3:L:61:HIS:CE1	2.52	0.45
3:P:225:THR:O	3:P:229:ARG:HG3	2.17	0.45
5:Q:282:ARG:NH2	5:Q:292:GLN:OE1	2.50	0.45
5:T:58:ARG:NH2	5:U:280:GLN:HE21	2.13	0.45
5:U:19:LYS:HD2	5:U:19:LYS:HA	1.72	0.45
5:U:114:ASP:N	5:U:114:ASP:OD1	2.49	0.45
5:U:391:ARG:HA	5:U:391:ARG:HD3	1.83	0.45
5:V:379:LYS:NZ	5:V:419:VAL:HG11	2.32	0.45
6:W:48:TYR:O	6:W:51:THR:OG1	2.29	0.45
3:X:326:LYS:CD	5:u:220:PRO:HD2	2.41	0.45
3:Y:349:THR:OG1	3:Y:350:GLY:N	2.50	0.45
7:c:95:ASP:OD2	7:c:146:THR:OG1	2.26	0.45
3:e:388:PHE:CE1	3:e:428:LEU:HD22	2.51	0.45
3:f:127:ASP:OD1	3:f:128:ASN:N	2.49	0.45
3:m:244:PHE:CE2	3:m:358:GLN:HG2	2.51	0.45
8:n:122:ARG:O	8:n:126:GLU:HG2	2.17	0.45
5:p:327:ASP:HB3	3:y:177:VAL:HG13	1.99	0.45
5:q:182:PRO:O	5:q:186:THR:HG23	2.17	0.45
3:s:213:CYS:SG	3:s:219:ILE:HB	2.57	0.45
5:t:170:VAL:HG11	5:t:201:VAL:HB	1.97	0.45
5:v:27:GLU:HB2	5:v:359:LYS:HE2	1.98	0.45
3:1:223:THR:OG1	3:1:225:THR:HG22	2.16	0.45
3:6:358:GLN:OE1	3:6:358:GLN:N	2.38	0.45
5:8:384:GLN:O	5:8:388:MET:HG2	2.17	0.45
1:A:22:MET:HB3	3:D:426:ALA:CB	2.47	0.45
1:A:40:GLN:NE2	1:A:42:LYS:HB2	2.30	0.45
1:A:76:PRO:HG3	3:L:420:GLU:CD	2.41	0.45
2:C:487:ALA:HB2	2:C:516:VAL:CG1	2.47	0.45
2:C:588:TYR:CD2	2:C:627:PRO:HG3	2.51	0.45
3:E:174:SER:OG	3:E:207:GLU:OE1	2.34	0.45
3:F:241:SER:HB2	3:F:250:VAL:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:87:PRO:HD3	3:M:116:ASP:OD1	2.17	0.45
5:K:140:GLY:O	5:K:184:ASN:ND2	2.45	0.45
3:M:392:ASP:HB3	3:M:422:ARG:NH1	2.32	0.45
5:N:256:ASN:ND2	5:N:350:LYS:HB2	2.30	0.45
5:T:7:ILE:HB	5:T:135:VAL:HG12	1.98	0.45
5:U:2:ARG:HB3	5:U:131:GLN:HE21	1.81	0.45
5:a:285:THR:HG23	5:a:288:GLU:H	1.81	0.45
3:e:105:ARG:HG3	3:e:411:GLU:HG2	1.99	0.45
3:e:328:VAL:HG21	3:e:355:ILE:HD11	1.98	0.45
3:f:113:GLU:OE1	3:f:113:GLU:N	2.49	0.45
3:h:155:GLU:HG2	3:h:197:HIS:CD2	2.52	0.45
5:j:267:MET:HB2	5:j:374:ILE:HD11	1.99	0.45
12:j:502:TA1:H472	12:j:502:TA1:H021	1.79	0.45
3:m:177:VAL:HG13	5:q:327:ASP:HB3	1.98	0.45
3:o:172:TYR:CD1	3:o:173:PRO:HD2	2.51	0.45
5:q:66:MET:HE1	5:q:147:MET:HB3	1.99	0.45
5:q:239:CYS:HB3	5:q:248:ALA:H	1.81	0.45
3:s:172:TYR:CG	3:s:173:PRO:HD2	2.51	0.45
3:6:256:GLN:O	3:6:260:VAL:HG12	2.17	0.45
5:9:174:LYS:HD2	5:9:175:VAL:HG23	1.98	0.45
2:B:428:VAL:HA	2:B:444:GLY:HA2	1.99	0.45
2:B:487:ALA:HB2	2:B:516:VAL:CG1	2.47	0.45
2:C:428:VAL:HA	2:C:444:GLY:HA2	1.99	0.45
2:C:607:LYS:HD3	2:C:608:GLN:H	1.81	0.45
3:F:280:LYS:HG2	3:y:88:HIS:CE1	2.51	0.45
4:H:8:GLU:HG3	5:O:304:ASP:HB2	1.97	0.45
5:K:210:ILE:O	5:K:214:THR:OG1	2.30	0.45
3:L:328:VAL:HG21	3:L:355:ILE:HD11	1.98	0.45
3:P:60:LYS:HE2	3:P:60:LYS:HB2	1.81	0.45
3:P:195:LEU:HB3	3:P:196:GLU:OE2	2.17	0.45
3:S:150:GLY:O	3:S:154:LEU:HG	2.17	0.45
5:U:410:GLU:HG3	8:2:81:PHE:HE2	1.81	0.45
5:V:304:ASP:OD2	5:V:307:HIS:NE2	2.50	0.45
3:Y:25:CYS:HA	3:Y:30:ILE:HB	1.99	0.45
3:Z:240:ALA:O	3:Z:244:PHE:HB2	2.17	0.45
3:Z:349:THR:OG1	3:Z:350:GLY:N	2.49	0.45
5:a:27:GLU:HA	5:a:359:LYS:HD3	1.98	0.45
5:a:268:VAL:HA	5:a:367:PHE:O	2.16	0.45
5:a:309:ARG:HD3	5:a:342:VAL:HA	1.98	0.45
5:b:375:GLN:OE1	5:b:423:GLN:HG3	2.16	0.45
8:d:122:ARG:O	8:d:126:GLU:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:h:79:ARG:HG3	3:h:92:LEU:HD23	1.99	0.45
3:h:98:ASP:O	3:h:105:ARG:NH2	2.46	0.45
3:h:188:VAL:HG22	3:h:425:LEU:HD21	1.97	0.45
5:i:238:CYS:SG	5:i:318:ARG:NH1	2.90	0.45
5:j:314:SER:N	5:j:368:ILE:O	2.50	0.45
3:o:407:TRP:O	3:o:411:GLU:HG2	2.16	0.45
3:s:1:MET:HA	5:9:94:GLN:HE22	1.82	0.45
5:t:313:ALA:HB3	5:t:349:VAL:HG12	1.99	0.45
5:u:4:ILE:HG13	5:u:132:GLY:O	2.16	0.45
5:w:130:LEU:O	5:w:162:ARG:NE	2.40	0.45
3:y:423:GLU:OE2	7:3:106:SER:OG	2.30	0.45
8:2:122:ARG:O	8:2:126:GLU:HG2	2.17	0.45
3:5:39:ASP:OD1	3:5:40:LYS:N	2.49	0.45
3:5:414:GLU:HG2	3:5:417:GLU:OE1	2.17	0.45
5:9:105:HIS:ND1	5:9:150:LEU:HB2	2.31	0.45
5:9:249:ASP:OD1	5:9:250:LEU:N	2.50	0.45
5:9:343:GLU:OE1	5:9:343:GLU:N	2.50	0.45
2:B:33:PRO:HB3	2:B:59:VAL:HG11	1.98	0.45
2:B:572:GLY:O	2:B:598:ILE:HG22	2.17	0.45
2:B:607:LYS:HD3	2:B:608:GLN:H	1.81	0.45
2:C:612:SER:OG	2:C:620:PHE:HB2	2.17	0.45
3:D:102:ASN:ND2	3:D:411:GLU:OE1	2.50	0.45
5:I:262:ARG:HH22	5:I:417:ASP:HB2	1.82	0.45
5:K:21:TRP:O	5:K:25:SER:OG	2.30	0.45
5:N:21:TRP:CZ3	5:N:61:PRO:HB3	2.51	0.45
5:N:88:ASP:OD1	5:N:89:ASN:N	2.50	0.45
3:P:25:CYS:HA	3:P:30:ILE:HB	1.98	0.45
3:S:71:GLU:HG3	3:S:74:VAL:HG22	1.98	0.45
3:S:187:SER:O	3:S:191:THR:HG23	2.17	0.45
5:T:76:VAL:O	5:T:82:GLY:HA3	2.17	0.45
5:V:255:VAL:HG23	3:e:407:TRP:CG	2.52	0.45
3:X:3:GLU:HB2	3:X:129:CYS:SG	2.57	0.45
3:X:280:LYS:HG2	3:Y:88:HIS:CE1	2.52	0.45
3:Z:163:LYS:HD3	3:Z:163:LYS:C	2.42	0.45
5:a:6:HIS:HD2	5:a:21:TRP:HE1	1.64	0.45
5:b:331:LEU:O	5:b:335:ASN:ND2	2.50	0.45
3:e:187:SER:OG	3:e:391:LEU:HD11	2.17	0.45
3:h:253:THR:OG1	3:h:254:GLU:N	2.48	0.45
5:i:100:ASN:HB3	5:i:103:LYS:HG2	1.98	0.45
5:j:13:GLY:HA2	5:j:136:CYS:SG	2.57	0.45
3:o:188:VAL:HG22	3:o:425:LEU:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:o:254:GLU:HG2	5:q:98:GLY:HA2	1.99	0.45
3:s:228:ASN:OD1	9:s:501:GTP:N1	2.45	0.45
3:s:241:SER:OG	3:s:250:VAL:O	2.22	0.45
5:u:172:SER:HB3	5:u:175:VAL:O	2.16	0.45
5:v:130:LEU:O	5:v:162:ARG:NE	2.46	0.45
3:y:191:THR:HA	3:y:194:LEU:HG	1.99	0.45
7:z:95:ASP:OD2	7:z:146:THR:OG1	2.26	0.45
5:4:41:ASP:OD1	5:4:41:ASP:N	2.43	0.45
3:7:246:GLY:HA3	3:7:356:ASN:HA	1.97	0.45
5:8:20:PHE:O	5:8:24:VAL:HG13	2.16	0.45
5:8:396:HIS:HA	5:8:399:THR:OG1	2.17	0.45
2:B:392:THR:HG21	2:B:435:ALA:C	2.42	0.45
2:B:415:LYS:HB3	6:x:22:MET:O	2.17	0.45
2:B:612:SER:OG	2:B:620:PHE:HB2	2.17	0.45
2:C:33:PRO:HB3	2:C:59:VAL:HG11	1.98	0.45
2:C:572:GLY:O	2:C:598:ILE:HG22	2.17	0.45
3:D:195:LEU:HB3	3:D:196:GLU:OE1	2.16	0.45
3:E:407:TRP:O	3:E:411:GLU:HG3	2.16	0.45
3:F:226:ASN:ND2	3:F:367:ASP:OD2	2.50	0.45
5:I:234:SER:O	5:I:241:ARG:NH2	2.49	0.45
3:L:174:SER:HB3	3:L:177:VAL:O	2.16	0.45
3:M:406:HIS:HA	3:M:409:VAL:HG12	1.98	0.45
5:N:113:ILE:O	5:N:117:LEU:HG	2.16	0.45
5:N:175:VAL:HG22	5:N:205:GLU:OE2	2.16	0.45
5:N:289:LEU:HD23	5:N:365:ALA:HB2	1.98	0.45
3:P:386:GLU:HG3	3:P:387:ILE:H	1.82	0.45
5:Q:66:MET:HE2	5:Q:66:MET:HB2	1.82	0.45
5:R:31:ASP:OD2	5:R:32:PRO:HD2	2.17	0.45
3:X:327:ASP:OD1	3:X:328:VAL:N	2.49	0.45
3:Y:192:HIS:ND1	3:Y:424:ASP:OD2	2.50	0.45
5:b:156:ARG:HD2	5:b:160:PRO:HA	1.99	0.45
5:b:239:CYS:SG	5:b:248:ALA:N	2.90	0.45
7:g:135:ASN:C	7:g:137:SER:H	2.25	0.45
7:g:180:GLU:H	7:g:180:GLU:HG2	1.48	0.45
5:j:395:LEU:HD23	5:j:395:LEU:HA	1.80	0.45
3:k:268:MET:HE2	3:k:268:MET:HB3	1.89	0.45
3:o:105:ARG:HA	3:o:109:THR:HB	1.97	0.45
5:u:232:VAL:HG11	5:u:268:VAL:HG21	1.99	0.45
5:v:285:THR:OG1	5:v:288:GLU:HG2	2.16	0.45
7:z:135:ASN:C	7:z:137:SER:H	2.25	0.45
3:1:153:LEU:O	3:1:156:ARG:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:286:VAL:CG1	5:4:287:PRO:HD3	2.47	0.45
3:5:31:GLN:HG2	3:5:37:PRO:HD3	1.99	0.45
5:8:45:GLU:OE2	5:8:46:ARG:NE	2.50	0.45
1:A:105:ILE:HG13	1:A:106:THR:H	1.82	0.45
2:C:166:ALA:HB2	2:C:171:MET:HE2	1.98	0.45
3:D:6:SER:HA	3:D:136:LEU:HB3	1.99	0.45
3:F:349:THR:OG1	3:F:350:GLY:N	2.49	0.45
3:G:288:VAL:CG2	3:G:327:ASP:HB3	2.45	0.45
4:H:61:LEU:H	4:H:61:LEU:HD12	1.82	0.45
5:K:198:GLU:HG2	5:K:266:PHE:HE2	1.82	0.45
3:L:264:ARG:O	3:L:266:HIS:ND1	2.44	0.45
3:M:46:ASP:CG	3:M:47:ASP:H	2.25	0.45
5:N:21:TRP:O	5:N:25:SER:OG	2.30	0.45
5:N:327:ASP:HB3	3:f:177:VAL:HG13	1.99	0.45
5:O:201:VAL:HG22	5:O:266:PHE:O	2.16	0.45
5:T:6:HIS:HD2	5:T:21:TRP:HE1	1.65	0.45
5:T:364:SER:OG	5:T:365:ALA:N	2.50	0.45
3:Y:53:PHE:O	3:Y:64:ARG:NH2	2.45	0.45
3:Y:413:MET:CE	3:Y:417:GLU:HG3	2.47	0.45
3:Z:214:ARG:NH2	5:j:324:LYS:HD2	2.32	0.45
5:a:115:SER:O	5:a:119:VAL:HG23	2.17	0.45
5:b:391:ARG:HG2	3:e:346:TRP:CD1	2.52	0.45
7:c:17:ILE:HG12	5:j:125:GLU:HG2	1.99	0.45
7:g:95:ASP:OD2	7:g:146:THR:OG1	2.26	0.45
5:j:416:ASN:HA	5:j:419:VAL:HG12	1.99	0.45
3:m:21:TRP:CZ2	3:m:65:CYS:HB3	2.52	0.45
3:o:310:GLY:HA3	3:o:383:ALA:HB2	1.99	0.45
5:p:102:ALA:O	5:p:106:TYR:N	2.43	0.45
5:q:201:VAL:C	5:q:202:LEU:HD12	2.42	0.45
5:q:249:ASP:OD1	5:q:250:LEU:N	2.49	0.45
3:s:251:ASP:O	3:s:255:PHE:N	2.50	0.45
5:t:341:PHE:HB3	5:t:348:ASN:ND2	2.32	0.45
5:u:16:ILE:HD11	5:u:136:CYS:HB3	1.98	0.45
5:v:258:ILE:HG13	5:v:258:ILE:O	2.17	0.45
3:1:185:TYR:HD2	3:1:418:PHE:HE2	1.64	0.45
3:1:227:LEU:O	3:1:231:ILE:HG12	2.17	0.45
3:1:244:PHE:CE2	3:1:358:GLN:HG2	2.53	0.45
3:6:253:THR:OG1	3:6:254:GLU:N	2.49	0.45
5:8:119:VAL:HG13	5:8:122:LYS:NZ	2.32	0.45
5:8:137:HIS:HE1	5:8:148:GLY:HA3	1.81	0.45
5:9:304:ASP:CG	5:9:306:ARG:HE	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:ALA:HB2	2:B:171:MET:HE2	1.98	0.44
2:B:525:LEU:O	2:B:536:TYR:HA	2.17	0.44
2:B:536:TYR:O	2:B:544:ALA:N	2.50	0.44
2:C:392:THR:HG21	2:C:435:ALA:C	2.42	0.44
2:C:536:TYR:O	2:C:544:ALA:N	2.50	0.44
3:D:46:ASP:C	3:D:48:ALA:H	2.25	0.44
3:D:200:VAL:HA	3:D:266:HIS:HB2	1.98	0.44
3:F:1:MET:HB3	5:8:94:GLN:HE22	1.82	0.44
3:F:155:GLU:HA	3:F:197:HIS:CD2	2.52	0.44
3:F:388:PHE:HZ	3:F:425:LEU:HD22	1.82	0.44
5:I:19:LYS:HD2	5:I:19:LYS:HA	1.84	0.44
5:I:121:ARG:O	5:I:125:GLU:HG2	2.16	0.44
5:J:388:MET:HE2	5:J:388:MET:HB3	1.86	0.44
5:J:403:MET:HE2	5:J:403:MET:HB3	1.87	0.44
5:K:256:ASN:OD1	3:L:181:VAL:HB	2.17	0.44
3:M:419:SER:O	3:M:423:GLU:HG3	2.16	0.44
3:P:246:GLY:HA2	3:P:357:TYR:CD2	2.52	0.44
3:P:269:LEU:HD21	3:P:305:CYS:HB3	1.98	0.44
5:R:88:ASP:OD1	5:R:88:ASP:N	2.49	0.44
5:R:272:PRO:HG3	5:R:284:LEU:HD21	2.00	0.44
3:S:120:ASP:HB3	3:S:124:LYS:HZ1	1.82	0.44
5:V:204:ASN:HA	5:V:207:LEU:HB2	2.00	0.44
3:X:222:PRO:O	5:i:322:SER:OG	2.30	0.44
3:Y:15:GLN:HB3	3:Y:228:ASN:ND2	2.31	0.44
3:e:284:GLU:HG3	3:e:286:LEU:HG	2.00	0.44
5:i:12:CYS:HB3	5:i:138:SER:OG	2.17	0.44
8:l:285:GLY:HA3	8:l:289:ALA:HB2	1.98	0.44
8:n:285:GLY:HA3	8:n:289:ALA:HB2	1.98	0.44
5:p:1:MET:HA	5:p:129:CYS:HB3	1.99	0.44
5:p:383:GLU:HA	5:p:386:THR:HG22	1.98	0.44
5:r:288:GLU:OE2	5:r:288:GLU:N	2.51	0.44
3:s:227:LEU:O	3:s:231:ILE:HG12	2.17	0.44
5:t:290:THR:HG21	5:t:329:GLN:HB3	1.98	0.44
5:u:203:ASP:OD1	5:u:204:ASN:N	2.50	0.44
5:v:304:ASP:OD2	5:v:307:HIS:NE2	2.50	0.44
3:y:328:VAL:HG21	3:y:355:ILE:HD11	1.98	0.44
3:0:262:TYR:HB2	3:0:265:ILE:HD13	1.99	0.44
3:1:262:TYR:OH	5:4:391:ARG:O	2.31	0.44
5:4:115:SER:O	5:4:119:VAL:HG23	2.16	0.44
5:4:324:LYS:HB2	3:6:210:TYR:CZ	2.53	0.44
5:4:388:MET:HB2	5:4:393:ALA:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:388:MET:O	5:4:392:LYS:N	2.50	0.44
3:5:37:PRO:HB2	3:5:39:ASP:OD1	2.17	0.44
3:7:259:LEU:HD11	3:7:316:CYS:HB2	1.99	0.44
2:B:367:TRP:CE3	2:B:374:GLU:HB3	2.52	0.44
2:B:584:GLU:OE1	2:B:586:HIS:NE2	2.50	0.44
2:C:367:TRP:CE3	2:C:374:GLU:HB3	2.52	0.44
3:D:146:GLY:N	9:D:501:GTP:O2B	2.47	0.44
3:E:175:PRO:HG3	3:E:390:ARG:HD3	1.98	0.44
3:E:231:ILE:O	3:E:235:ILE:HG13	2.17	0.44
3:E:294:ALA:O	3:E:300:SER:OG	2.25	0.44
5:K:198:GLU:OE2	5:K:254:ALA:HB2	2.17	0.44
5:K:252:LYS:HB3	3:L:100:ALA:HA	1.99	0.44
5:N:247:ASN:HD21	3:f:71:GLU:HG2	1.82	0.44
5:N:272:PRO:HD3	5:N:364:SER:HA	1.98	0.44
5:U:117:LEU:HA	5:U:120:VAL:HG12	1.99	0.44
5:V:252:LYS:HG3	5:V:350:LYS:NZ	2.33	0.44
3:Y:326:LYS:O	3:Y:330:ALA:N	2.50	0.44
3:Z:223:THR:HG22	5:j:322:SER:HA	1.98	0.44
7:c:135:ASN:C	7:c:137:SER:H	2.25	0.44
3:e:121:ARG:HE	3:e:124:LYS:HE2	1.81	0.44
3:h:388:PHE:CZ	3:h:425:LEU:HG	2.52	0.44
5:i:10:GLY:HA2	5:i:143:THR:HB	1.99	0.44
3:m:274:PRO:HG3	3:m:286:LEU:HD13	1.99	0.44
5:q:404:ASP:N	5:q:404:ASP:OD1	2.50	0.44
5:r:211:CYS:O	5:r:217:LEU:HB2	2.17	0.44
5:r:309:ARG:HG3	5:r:340:TYR:C	2.42	0.44
3:1:123:ARG:NH2	3:1:127:ASP:OD1	2.50	0.44
3:1:188:VAL:HG23	3:1:391:LEU:HD11	1.99	0.44
7:3:135:ASN:C	7:3:137:SER:H	2.25	0.44
3:5:21:TRP:CZ2	3:5:65:CYS:HB3	2.53	0.44
3:7:223:THR:OG1	3:7:225:THR:HG22	2.17	0.44
3:7:279:GLU:H	3:7:279:GLU:CD	2.25	0.44
3:7:315:CYS:SG	3:7:379:SER:HB3	2.58	0.44
1:A:191:SER:HA	1:A:194:THR:HG22	2.00	0.44
1:A:218:GLU:O	1:A:222:ILE:HG13	2.18	0.44
2:B:79:MET:HE3	5:w:280:GLN:OE1	2.17	0.44
2:B:561:VAL:O	2:B:603:VAL:HG21	2.18	0.44
2:C:190:LEU:HG	2:C:228:PHE:HB2	1.99	0.44
2:C:525:LEU:O	2:C:536:TYR:HA	2.17	0.44
2:C:584:GLU:OE1	2:C:586:HIS:NE2	2.50	0.44
3:E:3:GLU:HB2	3:E:129:CYS:SG	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:76:ASP:O	3:G:80:THR:HG23	2.18	0.44
3:G:277:SER:OG	3:G:278:ALA:N	2.51	0.44
3:P:116:ASP:OD1	3:P:116:ASP:N	2.50	0.44
5:Q:68:LEU:HD11	5:Q:147:MET:HE1	1.99	0.44
5:Q:181:GLU:N	5:Q:182:PRO:HD2	2.33	0.44
5:U:403:MET:HE2	5:U:403:MET:HB3	1.83	0.44
5:V:139:LEU:HD11	5:V:188:SER:OG	2.16	0.44
3:Z:172:TYR:CG	3:Z:173:PRO:HD2	2.52	0.44
3:Z:328:VAL:O	3:Z:332:VAL:HG12	2.17	0.44
12:a:502:TA1:H141	12:a:502:TA1:H091	2.00	0.44
8:d:285:GLY:HA3	8:d:289:ALA:HB2	1.98	0.44
3:k:22:GLU:CD	3:k:229:ARG:HH12	2.25	0.44
3:m:79:ARG:HG3	3:m:92:LEU:HD23	1.98	0.44
3:m:414:GLU:HG2	3:m:417:GLU:OE1	2.18	0.44
3:o:430:LYS:O	3:o:434:GLU:HG2	2.16	0.44
5:p:171:PRO:HB2	5:p:380:ARG:HH12	1.82	0.44
5:q:173:PRO:HD2	5:q:205:GLU:HG3	1.99	0.44
5:q:201:VAL:HG22	5:q:266:PHE:O	2.18	0.44
5:q:257:LEU:HD11	5:q:314:SER:HB2	1.99	0.44
5:q:304:ASP:OD2	5:q:306:ARG:NH2	2.50	0.44
5:w:154:LYS:HD3	5:w:154:LYS:HA	1.80	0.44
3:y:298:PRO:HG3	3:y:308:ARG:HE	1.82	0.44
7:z:118:ILE:HD13	3:0:264:ARG:NH1	2.32	0.44
7:z:180:GLU:H	7:z:180:GLU:HG2	1.48	0.44
3:1:416:GLY:O	3:1:420:GLU:HG2	2.18	0.44
8:2:285:GLY:HA3	8:2:289:ALA:HB2	1.98	0.44
5:4:311:LEU:HD23	5:4:342:VAL:HG11	2.00	0.44
5:8:153:SER:OG	5:8:195:ASN:ND2	2.51	0.44
2:B:190:LEU:HG	2:B:228:PHE:HB2	1.99	0.44
2:B:363:PHE:CB	2:B:379:ALA:HA	2.47	0.44
2:B:403:ASP:OD1	2:B:405:LYS:N	2.47	0.44
2:C:363:PHE:CB	2:C:379:ALA:HA	2.47	0.44
2:C:403:ASP:OD1	2:C:405:LYS:N	2.47	0.44
2:C:561:VAL:O	2:C:603:VAL:HG21	2.18	0.44
3:D:4:VAL:HG12	3:D:133:GLN:HB2	1.99	0.44
3:E:296:PHE:CE2	3:E:335:ILE:HG21	2.53	0.44
3:F:12:ALA:HB3	3:F:140:ALA:HB2	1.99	0.44
5:I:16:ILE:HG22	5:I:226:ASN:OD1	2.18	0.44
5:J:293:MET:HE1	5:J:315:ALA:HB1	2.00	0.44
5:N:274:THR:HG22	5:N:275:SER:O	2.17	0.44
3:P:22:GLU:OE1	3:P:83:TYR:OH	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:X:176:GLN:HB3	5:i:331:LEU:HD11	2.00	0.44
3:Y:194:LEU:O	3:Y:198:THR:HG22	2.18	0.44
3:Y:209:ILE:HB	3:Y:227:LEU:HD22	1.99	0.44
5:a:6:HIS:CD2	5:a:21:TRP:HE1	2.36	0.44
3:f:23:LEU:HD22	3:f:232:ALA:HB1	1.99	0.44
3:f:276:ILE:HG22	3:f:277:SER:O	2.18	0.44
7:g:38:THR:H	7:g:38:THR:HG1	1.54	0.44
5:i:194:GLU:OE1	5:i:194:GLU:N	2.51	0.44
3:m:161:TYR:O	3:m:163:LYS:N	2.49	0.44
3:o:338:LYS:HA	3:o:338:LYS:HD2	1.84	0.44
3:s:192:HIS:ND1	3:s:424:ASP:OD2	2.50	0.44
5:u:46:ARG:NH2	3:5:72:PRO:HB2	2.32	0.44
5:w:16:ILE:HD11	5:w:136:CYS:HB3	1.98	0.44
5:w:172:SER:HB3	5:w:175:VAL:O	2.17	0.44
5:w:377:MET:HE2	5:w:377:MET:HB2	1.85	0.44
12:w:502:TA1:C12	12:w:502:TA1:H432	2.48	0.44
3:y:193:SER:O	3:y:197:HIS:ND1	2.50	0.44
3:0:290:GLU:OE1	3:0:290:GLU:N	2.50	0.44
5:4:35:THR:HG23	5:4:37:HIS:CD2	2.53	0.44
5:4:286:VAL:HG11	5:4:325:GLU:HB3	2.00	0.44
3:5:432:PHE:O	3:5:435:VAL:HG22	2.17	0.44
3:6:155:GLU:HG2	3:6:197:HIS:CE1	2.53	0.44
3:6:321:GLY:HA3	3:6:372:GLN:O	2.18	0.44
2:B:526:VAL:CG2	2:B:559:LEU:HD13	2.46	0.44
2:B:562:ASP:OD2	2:B:566:GLU:HB2	2.17	0.44
3:D:55:GLU:OE2	3:D:59:GLY:N	2.51	0.44
3:D:116:ASP:OD1	3:D:116:ASP:N	2.50	0.44
3:F:238:LEU:HD22	3:F:318:MET:HE3	2.00	0.44
3:G:195:LEU:HD21	3:G:264:ARG:HD2	2.00	0.44
3:G:227:LEU:O	3:G:231:ILE:HG12	2.16	0.44
5:I:98:GLY:H	3:M:254:GLU:HG3	1.82	0.44
5:I:143:THR:OG1	5:I:144:GLY:N	2.50	0.44
3:M:392:ASP:HB3	3:M:422:ARG:HH12	1.82	0.44
5:N:3:GLU:HG3	5:N:62:ARG:HH12	1.83	0.44
5:N:6:HIS:CD2	5:N:21:TRP:HE1	2.36	0.44
5:O:114:ASP:OD1	5:O:114:ASP:N	2.51	0.44
3:S:91:GLN:O	3:S:93:ILE:HG13	2.18	0.44
5:T:19:LYS:HD2	5:T:19:LYS:HA	1.74	0.44
6:W:15:ARG:HD3	6:W:15:ARG:HA	1.86	0.44
3:Y:392:ASP:O	3:Y:422:ARG:NH1	2.49	0.44
3:Z:165:SER:HA	3:Z:199:ASP:OD2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:a:172:SER:HB3	5:a:175:VAL:O	2.17	0.44
7:c:164:ARG:HA	7:c:164:ARG:HD2	1.75	0.44
5:j:271:THR:HG22	5:j:289:LEU:HG	1.98	0.44
3:k:117:LEU:HA	3:k:120:ASP:OD1	2.16	0.44
3:m:333:ALA:O	3:m:337:THR:HG23	2.17	0.44
3:o:261:PRO:HG3	3:o:313:MET:HE2	1.99	0.44
5:p:287:PRO:O	5:p:291:GLN:HG3	2.18	0.44
5:q:209:ASP:OD1	5:q:213:ARG:NH1	2.51	0.44
5:q:336:LYS:HE2	5:q:336:LYS:HB2	1.69	0.44
5:u:46:ARG:HH22	3:5:72:PRO:HB2	1.82	0.44
5:v:6:HIS:CD2	5:v:21:TRP:HE1	2.36	0.44
5:v:239:CYS:HB3	5:v:248:ALA:H	1.82	0.44
5:w:383:GLU:HA	5:w:386:THR:HG22	1.99	0.44
3:y:220:GLU:CD	3:y:220:GLU:H	2.25	0.44
3:1:147:SER:HB3	3:1:190:SER:HB3	2.00	0.44
3:1:264:ARG:O	3:1:266:HIS:ND1	2.51	0.44
3:5:251:ASP:OD1	3:5:251:ASP:N	2.51	0.44
3:5:395:PHE:CZ	3:5:418:PHE:HB3	2.47	0.44
5:8:99:ASN:HA	5:8:142:GLY:HA3	2.00	0.44
2:B:608:GLN:HB2	2:B:624:TYR:HB3	1.99	0.44
2:C:526:VAL:CG2	2:C:559:LEU:HD13	2.46	0.44
2:C:562:ASP:OD2	2:C:566:GLU:HB2	2.17	0.44
3:F:72:PRO:HG3	3:F:95:GLY:O	2.18	0.44
3:F:174:SER:OG	3:F:207:GLU:OE2	2.35	0.44
5:J:12:CYS:HB3	5:J:138:SER:HB3	2.00	0.44
5:K:165:LEU:HD23	5:K:166:THR:N	2.33	0.44
3:L:164:LYS:HA	3:L:164:LYS:HD3	1.83	0.44
3:L:304:LYS:HD2	3:L:304:LYS:HA	1.79	0.44
5:N:128:ASP:OD1	5:N:129:CYS:N	2.51	0.44
3:S:164:LYS:HA	3:S:164:LYS:HD3	1.75	0.44
5:U:58:ARG:HD3	5:p:281:TYR:CE1	2.52	0.44
5:V:30:ILE:HA	5:V:36:TYR:HA	2.00	0.44
5:V:186:THR:HG22	5:V:415:MET:SD	2.57	0.44
6:W:85:PHE:CE2	3:X:220:GLU:HB3	2.53	0.44
3:X:297:GLU:OE2	3:X:299:ALA:N	2.46	0.44
3:Y:219:ILE:HD12	3:Y:219:ILE:HA	1.88	0.44
5:a:329:GLN:O	5:a:333:VAL:HG23	2.16	0.44
3:e:70:LEU:HB3	3:e:98:ASP:HA	1.99	0.44
3:e:152:LEU:O	3:e:156:ARG:HG2	2.17	0.44
3:f:116:ASP:N	3:f:116:ASP:OD1	2.50	0.44
7:g:164:ARG:HD2	7:g:164:ARG:HA	1.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:i:91:VAL:HG11	5:i:116:VAL:HG23	1.98	0.44
5:p:114:ASP:N	5:p:114:ASP:OD1	2.49	0.44
5:t:292:GLN:HG2	5:t:298:ASN:ND2	2.24	0.44
5:t:344:TRP:CD1	5:t:344:TRP:H	2.35	0.44
5:t:431:GLU:HB3	5:t:433:GLU:OE2	2.17	0.44
5:u:113:ILE:HG21	5:u:154:LYS:HG3	2.00	0.44
3:5:30:ILE:HD13	3:5:36:MET:HB3	1.99	0.44
3:G:110:ILE:O	3:G:113:GLU:HG3	2.18	0.44
3:G:228:ASN:OD1	9:G:501:GTP:N1	2.44	0.44
5:J:98:GLY:C	5:J:100:ASN:H	2.26	0.44
5:J:108:GLU:OE1	5:J:108:GLU:N	2.47	0.44
5:K:392:LYS:HA	5:K:395:LEU:HD13	2.00	0.44
3:M:187:SER:O	3:M:191:THR:HG23	2.18	0.44
3:P:284:GLU:HG3	3:P:285:GLN:N	2.33	0.44
5:Q:182:PRO:O	5:Q:186:THR:HG23	2.18	0.44
5:V:206:ALA:HB3	5:V:300:MET:O	2.18	0.44
5:V:388:MET:O	5:V:392:LYS:N	2.51	0.44
3:X:333:ALA:O	3:X:337:THR:HG23	2.17	0.44
3:Z:297:GLU:HG3	3:Z:299:ALA:H	1.83	0.44
5:b:374:ILE:HD11	5:b:422:TYR:CZ	2.52	0.44
3:e:172:TYR:CG	3:e:173:PRO:HD2	2.53	0.44
3:e:311:LYS:H	3:e:382:THR:HG22	1.83	0.44
3:e:415:GLU:HA	3:e:418:PHE:HD2	1.82	0.44
5:i:272:PRO:HD3	5:i:364:SER:HA	1.99	0.44
3:k:15:GLN:O	3:k:228:ASN:ND2	2.50	0.44
3:o:145:THR:O	3:o:149:LEU:HB2	2.17	0.44
5:p:121:ARG:NH2	5:p:158:GLU:OE2	2.45	0.44
3:s:12:ALA:HB3	3:s:140:ALA:HB2	1.99	0.44
5:t:68:LEU:HD12	5:t:97:ALA:HB2	1.98	0.44
5:u:273:LEU:HD12	5:u:273:LEU:HA	1.86	0.44
5:v:102:ALA:HB2	5:v:403:MET:SD	2.58	0.44
3:0:220:GLU:O	3:0:221:ARG:NH1	2.51	0.44
3:1:328:VAL:HG21	3:1:355:ILE:HD11	1.99	0.44
5:4:109:GLY:O	5:4:113:ILE:HG12	2.18	0.44
3:5:94:SER:OG	3:5:95:GLY:N	2.50	0.44
3:5:111:GLY:O	3:5:115:VAL:HG13	2.17	0.44
2:B:29:THR:C	2:B:30:ILE:HD13	2.43	0.44
2:C:29:THR:C	2:C:30:ILE:HD13	2.43	0.44
2:C:608:GLN:HB2	2:C:624:TYR:HB3	1.99	0.44
3:D:414:GLU:CD	3:D:415:GLU:H	2.26	0.44
3:F:68:LEU:HD21	3:F:149:LEU:HD23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:172:TYR:CG	3:F:173:PRO:HD2	2.52	0.44
3:F:174:SER:HB3	3:F:177:VAL:O	2.18	0.44
3:G:116:ASP:OD1	3:G:116:ASP:N	2.50	0.44
5:J:360:GLY:HA3	12:J:502:TA1:H441	2.00	0.44
5:K:161:ASP:OD1	5:K:162:ARG:N	2.51	0.44
3:L:76:ASP:O	3:L:80:THR:HG23	2.18	0.44
3:M:274:PRO:HG3	3:M:286:LEU:HD13	1.98	0.44
5:Q:274:THR:HG22	5:Q:275:SER:O	2.18	0.44
5:R:309:ARG:NH2	5:R:341:PHE:O	2.51	0.44
3:S:330:ALA:O	3:S:334:THR:HG23	2.18	0.44
3:X:178:SER:O	5:i:347:ASN:ND2	2.50	0.44
3:Y:224:TYR:HB3	9:Y:501:GTP:O6	2.17	0.44
3:Z:210:TYR:CE1	3:Z:227:LEU:HD11	2.53	0.44
3:Z:317:LEU:HB3	3:Z:319:TYR:HE1	1.80	0.44
5:a:97:ALA:O	5:a:103:LYS:HD2	2.17	0.44
5:a:377:MET:HE2	5:a:377:MET:HB2	1.89	0.44
5:b:219:THR:O	5:b:219:THR:OG1	2.30	0.44
5:b:403:MET:HE2	5:b:403:MET:HB3	1.89	0.44
12:b:502:TA1:H141	12:b:502:TA1:C09	2.48	0.44
7:c:118:ILE:HD13	3:o:264:ARG:NH1	2.33	0.44
3:e:204:LEU:HD11	3:e:231:ILE:HD12	1.98	0.44
3:h:388:PHE:CE1	3:h:425:LEU:HG	2.52	0.44
3:h:406:HIS:HA	3:h:409:VAL:HG22	2.00	0.44
5:j:341:PHE:HB3	5:j:348:ASN:ND2	2.33	0.44
3:k:164:LYS:HD3	3:k:164:LYS:HA	1.81	0.44
5:p:174:LYS:HG2	5:p:205:GLU:CD	2.43	0.44
5:u:332:ASN:O	5:u:336:LYS:HG2	2.18	0.44
5:v:372:THR:O	5:v:375:GLN:HG2	2.18	0.44
6:x:15:ARG:HD3	6:x:15:ARG:HA	1.86	0.44
6:x:23:ILE:CD1	6:x:25:GLU:HG3	2.48	0.44
3:y:21:TRP:CZ2	3:y:65:CYS:HB3	2.52	0.44
3:y:338:LYS:C	3:y:339:ARG:HE	2.26	0.44
7:z:164:ARG:HD2	7:z:164:ARG:HA	1.75	0.44
3:6:429:GLU:O	3:6:433:GLU:HG2	2.18	0.44
3:7:72:PRO:HG3	3:7:95:GLY:O	2.17	0.44
5:8:21:TRP:CZ2	5:8:63:ALA:HB2	2.53	0.44
5:8:117:LEU:HD11	5:8:154:LYS:HB3	2.00	0.44
5:8:254:ALA:O	5:8:258:ILE:HG12	2.18	0.44
5:9:116:VAL:HG11	5:9:151:LEU:HD12	2.00	0.44
2:B:229:LYS:NZ	3:5:39:ASP:O	2.50	0.44
2:C:415:LYS:CD	6:W:23:ILE:HA	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:164:LYS:HA	3:E:164:LYS:HD3	1.80	0.44
3:G:96:LYS:HB3	5:9:129:CYS:SG	2.58	0.44
3:G:319:TYR:CE2	3:G:328:VAL:HG22	2.53	0.44
5:K:378:PHE:HA	5:K:381:VAL:HG12	1.99	0.44
3:M:298:PRO:HA	3:M:301:MET:HG2	2.00	0.44
5:R:7:ILE:HD13	5:R:64:ILE:HB	2.00	0.44
5:R:101:TRP:CE3	5:R:187:LEU:HD23	2.53	0.44
6:W:23:ILE:CD1	6:W:25:GLU:HG3	2.48	0.44
3:Y:175:PRO:HB3	3:Y:390:ARG:HD3	1.99	0.44
3:Y:345:ASP:OD1	3:Y:345:ASP:N	2.51	0.44
5:a:267:MET:HE2	5:a:301:CYS:SG	2.58	0.44
5:b:97:ALA:HB2	5:b:143:THR:HG23	1.99	0.44
3:e:145:THR:HG23	3:e:149:LEU:HD13	2.00	0.44
3:h:46:ASP:CG	3:h:47:ASP:H	2.25	0.44
3:h:386:GLU:HG3	3:h:387:ILE:N	2.32	0.44
5:i:140:GLY:HA2	5:i:181:GLU:HG3	2.00	0.44
5:i:283:ALA:O	5:i:288:GLU:HG3	2.18	0.44
5:j:232:VAL:HG11	5:j:268:VAL:CG2	2.47	0.44
3:k:213:CYS:HA	3:k:217:LEU:HD13	2.00	0.44
3:o:274:PRO:HG3	3:o:286:LEU:HD22	1.98	0.44
5:p:359:LYS:HE3	5:p:359:LYS:HB3	1.90	0.44
3:l:195:LEU:HD12	3:l:267:PHE:HZ	1.83	0.44
3:l:388:PHE:CE1	3:l:428:LEU:HD22	2.53	0.44
3:5:150:GLY:O	3:5:154:LEU:HG	2.18	0.44
3:5:253:THR:O	3:5:257:THR:HG23	2.17	0.44
3:7:225:THR:O	3:7:229:ARG:HG3	2.17	0.44
5:9:406:MET:N	5:9:406:MET:SD	2.90	0.44
2:B:110:ASP:N	2:B:110:ASP:OD1	2.51	0.43
2:C:110:ASP:OD1	2:C:110:ASP:N	2.51	0.43
3:D:301:MET:HE1	3:D:377:MET:HE1	2.00	0.43
3:G:288:VAL:HG21	3:G:327:ASP:CB	2.47	0.43
3:M:241:SER:HB2	3:M:249:ASN:OD1	2.18	0.43
5:O:194:GLU:OE2	5:O:414:ASN:ND2	2.45	0.43
3:S:388:PHE:CZ	3:S:428:LEU:HD22	2.53	0.43
5:T:282:ARG:NH2	5:T:292:GLN:OE1	2.49	0.43
3:X:388:PHE:CE2	3:X:428:LEU:HD23	2.53	0.43
5:a:318:ARG:HB2	5:a:356:ILE:O	2.17	0.43
5:b:105:HIS:CD2	5:b:150:LEU:HB2	2.52	0.43
3:f:164:LYS:HD3	3:f:164:LYS:HA	1.78	0.43
3:f:319:TYR:CD1	3:f:375:VAL:HG22	2.53	0.43
5:i:72:THR:O	5:i:75:SER:OG	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:q:173:PRO:HD3	5:q:203:ASP:OD1	2.17	0.43
3:s:69:ASP:OD1	3:s:70:LEU:N	2.50	0.43
5:t:31:ASP:OD1	5:t:32:PRO:HD2	2.18	0.43
5:v:6:HIS:HD2	5:v:21:TRP:HE1	1.66	0.43
5:v:21:TRP:CE3	5:v:61:PRO:HB3	2.53	0.43
3:y:172:TYR:CG	3:y:173:PRO:HD2	2.53	0.43
3:0:286:LEU:HB3	3:0:291:ILE:HD11	2.00	0.43
3:6:268:MET:HG2	3:6:380:ASN:HB2	2.00	0.43
5:8:304:ASP:CG	5:8:306:ARG:HH21	2.26	0.43
5:9:286:VAL:N	5:9:363:MET:HE1	2.33	0.43
2:C:441:LEU:HD13	2:C:451:VAL:HB	1.99	0.43
3:E:172:TYR:CG	3:E:173:PRO:HD2	2.53	0.43
3:F:246:GLY:HA2	3:F:357:TYR:CZ	2.53	0.43
4:H:8:GLU:HG2	4:H:9:GLN:H	1.82	0.43
5:J:6:HIS:CD2	5:J:21:TRP:HE1	2.36	0.43
3:L:216:SER:HB3	3:L:275:ILE:O	2.18	0.43
3:M:363:VAL:HG23	3:M:366:GLY:HA3	1.99	0.43
3:M:388:PHE:CZ	3:M:428:LEU:HD23	2.53	0.43
5:N:101:TRP:CE3	5:N:187:LEU:HD23	2.53	0.43
5:N:175:VAL:O	5:N:175:VAL:HG23	2.17	0.43
3:P:90:GLU:HB3	3:P:121:ARG:HD2	2.00	0.43
5:Q:6:HIS:HD2	5:Q:21:TRP:NE1	2.16	0.43
5:R:383:GLU:HA	5:R:386:THR:HG22	2.00	0.43
3:S:77:GLU:HA	3:S:80:THR:HG22	2.00	0.43
3:X:191:THR:HA	3:X:194:LEU:HG	2.01	0.43
3:X:320:ARG:HG2	3:X:360:PRO:HD3	1.99	0.43
3:X:413:MET:HE2	3:X:413:MET:HB3	1.89	0.43
3:Z:430:LYS:O	3:Z:434:GLU:HG2	2.18	0.43
5:a:86:ARG:HB3	5:a:88:ASP:OD1	2.18	0.43
5:a:156:ARG:HG3	5:a:195:ASN:HB3	2.00	0.43
5:b:252:LYS:HA	5:b:255:VAL:HG12	2.01	0.43
5:b:388:MET:O	5:b:392:LYS:N	2.51	0.43
3:f:372:GLN:N	3:f:372:GLN:OE1	2.51	0.43
3:h:56:THR:OG1	3:h:57:GLY:N	2.52	0.43
3:o:163:LYS:HE3	3:o:163:LYS:HB3	1.91	0.43
5:q:112:LEU:O	5:q:116:VAL:HG23	2.17	0.43
3:s:252:ILE:HA	3:s:255:PHE:HB3	1.98	0.43
5:v:39:ASP:OD1	5:v:40:SER:N	2.51	0.43
5:w:255:VAL:HG23	3:7:407:TRP:CD1	2.52	0.43
3:1:172:TYR:CG	3:1:173:PRO:HD2	2.53	0.43
7:3:164:ARG:HA	7:3:164:ARG:HD2	1.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:150:LEU:O	5:4:154:LYS:HG2	2.19	0.43
3:5:268:MET:HE2	3:5:268:MET:HB3	1.82	0.43
3:7:268:MET:HE2	3:7:380:ASN:HB2	1.99	0.43
3:7:330:ALA:O	3:7:334:THR:HG23	2.18	0.43
5:9:234:SER:OG	12:9:502:TA1:H401	2.18	0.43
5:9:304:ASP:OD1	5:9:306:ARG:NE	2.36	0.43
2:B:3:GLU:HA	2:B:590:VAL:O	2.18	0.43
2:C:3:GLU:HA	2:C:590:VAL:O	2.18	0.43
2:C:578:LYS:HD3	2:C:580:TRP:HZ2	1.83	0.43
2:C:588:TYR:HB3	2:C:589:PHE:HD1	1.83	0.43
3:E:188:VAL:HG12	3:E:421:ALA:HB1	2.00	0.43
3:G:3:GLU:HG2	3:G:50:ASN:O	2.18	0.43
5:J:42:LEU:HA	5:J:45:GLU:HG2	2.00	0.43
5:V:203:ASP:OD1	5:V:301:CYS:HA	2.18	0.43
3:Y:77:GLU:O	3:Y:81:GLY:N	2.44	0.43
3:Z:46:ASP:C	3:Z:48:ALA:H	2.26	0.43
5:b:325:GLU:O	5:b:329:GLN:HG2	2.18	0.43
3:e:241:SER:HB2	3:e:250:VAL:H	1.83	0.43
3:h:268:MET:HE2	3:h:268:MET:HB3	1.81	0.43
5:i:290:THR:HA	5:i:293:MET:HG2	1.99	0.43
3:m:183:GLU:HG3	3:m:184:PRO:HD3	2.00	0.43
8:n:49:HIS:CB	5:r:379:LYS:HE2	2.49	0.43
3:o:14:ILE:O	3:o:18:ASN:ND2	2.48	0.43
3:o:116:ASP:OD1	3:o:116:ASP:N	2.51	0.43
5:p:6:HIS:HD2	5:p:21:TRP:HE1	1.65	0.43
5:p:16:ILE:HD11	5:p:136:CYS:HB3	2.00	0.43
5:p:101:TRP:CE3	5:p:187:LEU:HD23	2.54	0.43
5:p:203:ASP:O	5:p:207:LEU:HD23	2.18	0.43
5:p:344:TRP:CD1	5:p:344:TRP:H	2.36	0.43
3:s:70:LEU:HB2	3:s:98:ASP:HA	2.00	0.43
3:s:388:PHE:CZ	3:s:428:LEU:HD23	2.52	0.43
5:w:1:MET:SD	3:7:96:LYS:HA	2.58	0.43
3:y:310:GLY:HA3	3:y:383:ALA:HB2	2.00	0.43
3:y:336:LYS:HE3	3:y:351:PHE:CE1	2.53	0.43
5:4:304:ASP:CG	5:4:306:ARG:HH21	2.26	0.43
5:4:384:GLN:O	5:4:388:MET:HG2	2.18	0.43
3:7:32:PRO:HB3	3:7:83:TYR:CE1	2.54	0.43
3:7:327:ASP:OD1	3:7:328:VAL:N	2.51	0.43
5:8:97:ALA:HB2	5:8:143:THR:OG1	2.19	0.43
2:B:441:LEU:HD13	2:B:451:VAL:HB	1.99	0.43
2:B:578:LYS:HD3	2:B:580:TRP:HZ2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:588:TYR:HB3	2:B:589:PHE:HD1	1.83	0.43
2:C:246:CYS:SG	2:C:247:GLU:N	2.91	0.43
3:D:3:GLU:OE2	3:D:130:THR:N	2.51	0.43
3:D:388:PHE:CD2	3:D:429:GLU:HG3	2.53	0.43
3:E:23:LEU:O	3:E:26:LEU:HG	2.18	0.43
3:G:145:THR:O	3:G:149:LEU:HB2	2.17	0.43
3:G:185:TYR:HD2	3:G:418:PHE:HE2	1.65	0.43
3:G:187:SER:O	3:G:191:THR:HG23	2.17	0.43
5:I:246:LEU:HB3	5:I:353:VAL:HG12	2.00	0.43
3:M:116:ASP:OD2	3:M:116:ASP:N	2.49	0.43
3:M:172:TYR:CG	3:M:173:PRO:HD2	2.53	0.43
3:M:174:SER:OG	3:M:207:GLU:HB3	2.17	0.43
5:O:87:PRO:HD3	5:r:281:TYR:CE2	2.50	0.43
3:S:244:PHE:CE2	3:S:358:GLN:HG2	2.54	0.43
5:T:185:ALA:O	5:T:188:SER:OG	2.32	0.43
5:T:271:THR:OG1	5:T:365:ALA:HB3	2.18	0.43
5:V:308:GLY:HA2	5:V:426:GLN:HE21	1.83	0.43
3:X:383:ALA:O	3:X:386:GLU:HG2	2.18	0.43
3:Y:257:THR:HA	5:v:397:TRP:CE2	2.54	0.43
3:Z:217:LEU:HD21	3:Z:367:ASP:HB3	2.00	0.43
3:Z:287:SER:O	3:Z:291:ILE:HG12	2.18	0.43
3:Z:344:VAL:HG11	3:Z:346:TRP:CZ2	2.53	0.43
5:b:145:SER:OG	5:b:146:GLY:N	2.51	0.43
7:c:96:ASP:OD1	7:c:146:THR:HB	2.19	0.43
3:e:136:LEU:HG	3:e:138:PHE:CE1	2.53	0.43
3:e:183:GLU:HA	3:e:186:ASN:HD21	1.83	0.43
3:e:206:ASN:OD1	3:e:207:GLU:N	2.52	0.43
3:e:220:GLU:O	3:e:221:ARG:NH1	2.51	0.43
3:f:288:VAL:HG11	3:f:327:ASP:HB3	2.01	0.43
3:f:317:LEU:HB3	3:f:319:TYR:HE1	1.83	0.43
5:i:405:GLU:OE1	5:i:405:GLU:N	2.49	0.43
5:j:282:ARG:HH12	5:j:292:GLN:CD	2.27	0.43
5:j:282:ARG:NH1	5:j:292:GLN:OE1	2.45	0.43
3:k:145:THR:HB	9:k:501:GTP:PB	2.59	0.43
3:m:12:ALA:HB3	3:m:140:ALA:HB2	2.00	0.43
3:m:286:LEU:HB3	3:m:291:ILE:HD11	1.99	0.43
12:p:502:TA1:H021	12:p:502:TA1:H472	1.73	0.43
5:r:172:SER:HB2	5:r:175:VAL:O	2.19	0.43
3:s:261:PRO:HG3	3:s:313:MET:HE2	2.00	0.43
3:s:338:LYS:NZ	3:s:339:ARG:H	2.15	0.43
5:t:406:MET:HE2	5:t:406:MET:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:v:502:TA1:C12	12:v:502:TA1:H432	2.48	0.43
6:x:73:HIS:NE2	5:4:44:LEU:O	2.49	0.43
3:0:344:VAL:HG21	3:0:346:TRP:CZ2	2.54	0.43
3:1:279:GLU:OE2	3:1:280:LYS:HG2	2.19	0.43
3:1:420:GLU:O	3:1:423:GLU:HG3	2.19	0.43
5:4:28:HIS:HA	5:4:43:GLN:HB3	1.99	0.43
5:4:267:MET:O	5:4:368:ILE:HD12	2.18	0.43
3:5:130:THR:OG1	3:5:131:GLY:N	2.51	0.43
5:8:407:GLU:O	5:8:410:GLU:HG2	2.18	0.43
5:9:258:ILE:HG13	5:9:258:ILE:O	2.18	0.43
5:9:375:GLN:HB2	5:9:419:VAL:HG23	1.99	0.43
2:B:413:SER:O	2:B:414:GLY:C	2.61	0.43
2:C:229:LYS:NZ	3:Z:39:ASP:O	2.51	0.43
2:C:413:SER:O	2:C:414:GLY:C	2.61	0.43
2:C:476:ARG:NH1	2:C:516:VAL:O	2.51	0.43
3:G:70:LEU:HB3	3:G:97:GLU:O	2.18	0.43
3:G:145:THR:HA	3:G:149:LEU:HD13	1.99	0.43
5:I:9:GLY:HA3	5:I:66:MET:HE3	2.01	0.43
5:I:315:ALA:HB1	5:I:317:PHE:CE1	2.50	0.43
5:J:286:VAL:O	5:J:290:THR:HG22	2.18	0.43
3:M:4:VAL:HG12	3:M:133:GLN:HB2	2.01	0.43
5:R:318:ARG:HB3	5:R:357:PRO:HA	1.99	0.43
3:S:76:ASP:OD1	3:S:77:GLU:N	2.52	0.43
3:S:388:PHE:CE2	3:S:428:LEU:HD22	2.54	0.43
5:T:189:VAL:O	5:T:193:VAL:HG23	2.18	0.43
5:V:256:ASN:HD21	3:e:181:VAL:N	2.15	0.43
3:X:161:TYR:O	3:X:163:LYS:N	2.49	0.43
3:X:262:TYR:OH	5:u:391:ARG:HG3	2.19	0.43
3:X:349:THR:HG22	3:X:350:GLY:H	1.84	0.43
3:X:389:SER:HA	3:X:392:ASP:OD1	2.19	0.43
3:X:392:ASP:CA	3:X:422:ARG:HH12	2.31	0.43
3:Z:72:PRO:HG3	3:Z:95:GLY:O	2.18	0.43
3:e:321:GLY:HA3	3:e:372:GLN:O	2.18	0.43
3:e:326:LYS:O	3:e:330:ALA:N	2.46	0.43
7:g:96:ASP:OD1	7:g:146:THR:HB	2.19	0.43
3:h:372:GLN:OE1	3:h:372:GLN:N	2.51	0.43
5:j:137:HIS:NE2	5:j:148:GLY:HA3	2.32	0.43
8:n:203:LYS:HE2	5:r:413:SER:HB3	2.00	0.43
5:r:113:ILE:HG21	5:r:154:LYS:HE2	2.00	0.43
3:s:220:GLU:O	3:s:221:ARG:NH1	2.52	0.43
5:t:288:GLU:O	5:t:291:GLN:NE2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:t:379:LYS:HE3	5:t:379:LYS:HB2	1.80	0.43
5:v:334:GLN:NE2	5:v:347:ASN:HA	2.28	0.43
5:w:262:ARG:HE	5:w:262:ARG:HB3	1.61	0.43
3:y:121:ARG:NE	3:y:124:LYS:HE2	2.32	0.43
3:y:287:SER:O	3:y:291:ILE:HG12	2.17	0.43
7:3:96:ASP:OD1	7:3:146:THR:HB	2.19	0.43
3:5:211:ASP:O	3:5:215:ARG:HG3	2.19	0.43
3:7:11:GLN:N	9:7:501:GTP:O2A	2.49	0.43
3:7:76:ASP:HA	3:7:79:ARG:HB2	2.00	0.43
3:7:339:ARG:NH1	3:7:339:ARG:HA	2.33	0.43
5:9:295:ASP:OD1	5:9:297:LYS:N	2.38	0.43
5:9:420:SER:HA	5:9:423:GLN:CD	2.44	0.43
1:A:40:GLN:HG2	1:A:41:ASN:H	1.82	0.43
2:B:159:SER:O	2:B:159:SER:OG	2.32	0.43
2:B:170:ASN:OD1	2:B:170:ASN:N	2.52	0.43
2:B:246:CYS:SG	2:B:247:GLU:N	2.91	0.43
2:B:476:ARG:NH1	2:B:516:VAL:O	2.51	0.43
2:C:170:ASN:OD1	2:C:170:ASN:N	2.52	0.43
2:C:420:ILE:HG12	2:C:459:GLN:NE2	2.34	0.43
3:E:244:PHE:CE2	3:E:358:GLN:HG2	2.54	0.43
3:G:30:ILE:HD13	3:G:36:MET:HB3	1.99	0.43
3:L:105:ARG:NH2	3:L:110:ILE:HD11	2.34	0.43
5:N:334:GLN:NE2	5:N:348:ASN:OD1	2.52	0.43
3:P:164:LYS:HD3	3:P:164:LYS:HA	1.75	0.43
5:Q:323:THR:HG22	3:S:223:THR:HA	2.00	0.43
5:R:182:PRO:O	5:R:186:THR:HG23	2.19	0.43
5:U:83:GLN:O	5:p:281:TYR:OH	2.27	0.43
5:V:137:HIS:HD2	5:V:166:THR:HG23	1.83	0.43
5:V:201:VAL:C	5:V:202:LEU:HD12	2.44	0.43
3:Z:209:ILE:HB	3:Z:227:LEU:HD22	2.00	0.43
5:a:83:GLN:OE1	5:a:83:GLN:N	2.52	0.43
3:f:377:MET:SD	3:f:379:SER:HB3	2.59	0.43
5:i:95:THR:HG21	8:l:139:SER:O	2.19	0.43
5:i:341:PHE:HB3	5:i:348:ASN:ND2	2.33	0.43
5:j:321:MET:HE2	5:j:363:MET:HE3	1.99	0.43
3:o:213:CYS:SG	3:o:222:PRO:HB3	2.59	0.43
5:q:178:THR:HG22	5:q:180:VAL:H	1.83	0.43
3:s:349:THR:HG21	5:9:179:VAL:O	2.18	0.43
3:s:420:GLU:O	3:s:423:GLU:HG2	2.19	0.43
5:t:256:ASN:HD22	5:t:350:LYS:HD2	1.83	0.43
5:u:388:MET:O	5:u:392:LYS:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:v:332:ASN:O	5:v:336:LYS:HG2	2.19	0.43
7:z:96:ASP:OD1	7:z:146:THR:HB	2.19	0.43
3:1:132:LEU:HD23	3:1:164:LYS:HE3	2.00	0.43
7:3:7:GLN:HB3	7:3:11:LEU:HD22	2.01	0.43
3:6:175:PRO:HB2	3:6:304:LYS:HZ2	1.84	0.43
3:7:32:PRO:HB3	3:7:83:TYR:HE1	1.82	0.43
3:7:420:GLU:HA	3:7:423:GLU:OE1	2.18	0.43
2:B:157:ASN:HD22	2:B:204:ALA:HA	1.83	0.43
2:B:420:ILE:HG12	2:B:459:GLN:NE2	2.34	0.43
3:E:191:THR:O	3:E:192:HIS:C	2.62	0.43
3:E:223:THR:HG22	3:E:224:TYR:H	1.83	0.43
5:I:89:ASN:HD21	5:I:122:LYS:NZ	2.16	0.43
5:J:385:PHE:CE2	5:J:412:GLU:HB2	2.54	0.43
3:L:303:VAL:HG11	3:L:387:ILE:HD13	2.00	0.43
3:M:205:ASP:O	3:M:209:ILE:HG13	2.19	0.43
3:M:311:LYS:H	3:M:382:THR:CG2	2.27	0.43
3:S:172:TYR:CG	3:S:173:PRO:HD2	2.54	0.43
5:V:252:LYS:HA	5:V:255:VAL:HG12	1.99	0.43
3:Y:319:TYR:HB2	3:Y:355:ILE:HD13	2.00	0.43
3:Z:268:MET:HE2	3:Z:268:MET:HB3	1.83	0.43
3:Z:297:GLU:OE2	3:Z:299:ALA:N	2.49	0.43
5:a:1:MET:SD	3:s:96:LYS:HA	2.59	0.43
5:a:130:LEU:O	5:a:162:ARG:NE	2.52	0.43
5:a:135:VAL:HG12	5:a:166:THR:HA	1.99	0.43
5:b:232:VAL:O	5:b:236:ILE:HG12	2.18	0.43
7:c:7:GLN:HB3	7:c:11:LEU:HD22	2.01	0.43
3:f:261:PRO:HG3	3:f:313:MET:HE2	1.99	0.43
3:f:326:LYS:O	3:f:330:ALA:N	2.49	0.43
3:k:79:ARG:HG3	3:k:92:LEU:HD23	2.01	0.43
5:q:46:ARG:HA	5:q:46:ARG:HD3	1.88	0.43
5:q:139:LEU:HD12	5:q:170:VAL:HG12	2.00	0.43
5:q:285:THR:OG1	5:q:288:GLU:HG2	2.19	0.43
5:r:30:ILE:HG22	5:r:36:TYR:HA	2.00	0.43
5:r:203:ASP:OD1	5:r:204:ASN:N	2.51	0.43
3:s:188:VAL:HG13	3:s:425:LEU:HD11	2.01	0.43
3:s:336:LYS:HE3	3:s:351:PHE:CE1	2.54	0.43
5:u:275:SER:OG	5:u:276:ARG:N	2.52	0.43
5:u:388:MET:HE2	5:u:388:MET:HB3	1.93	0.43
7:z:125:LEU:HD23	7:z:125:LEU:HA	1.92	0.43
12:4:502:TA1:H021	12:4:502:TA1:H472	1.79	0.43
5:8:2:ARG:NH2	5:8:249:ASP:OD2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:8:201:VAL:HG22	5:8:266:PHE:O	2.18	0.43
5:8:416:ASN:HA	5:8:419:VAL:HG12	1.99	0.43
5:9:50:TYR:OH	5:9:237:THR:OG1	2.19	0.43
2:C:157:ASN:HD22	2:C:204:ALA:HA	1.83	0.43
2:C:159:SER:O	2:C:159:SER:OG	2.32	0.43
2:C:162:LYS:HG2	2:C:175:THR:HB	2.00	0.43
2:C:392:THR:HG22	2:C:437:SER:HB3	2.01	0.43
3:D:21:TRP:CZ2	3:D:65:CYS:HB3	2.53	0.43
3:F:318:MET:HE2	3:F:318:MET:HB2	1.90	0.43
3:F:336:LYS:HE3	3:F:351:PHE:CE1	2.54	0.43
3:F:349:THR:OG1	5:8:179:VAL:HA	2.18	0.43
3:G:311:LYS:H	3:G:382:THR:HG22	1.83	0.43
4:H:55:VAL:HG12	4:H:56:ASP:O	2.18	0.43
5:K:263:LEU:HD21	5:K:421:GLU:HB3	2.00	0.43
5:O:217:LEU:HD23	5:O:217:LEU:HA	1.82	0.43
5:T:171:PRO:HB3	5:T:181:GLU:HG2	2.00	0.43
6:W:69:GLN:O	6:W:71:GLN:N	2.52	0.43
3:Y:4:VAL:HG23	3:Y:134:GLY:O	2.19	0.43
3:Y:176:GLN:HB3	5:b:331:LEU:HD11	2.01	0.43
5:b:97:ALA:O	5:b:103:LYS:HD2	2.18	0.43
5:b:310:TYR:N	5:b:340:TYR:O	2.47	0.43
5:b:321:MET:HE3	5:b:321:MET:HB2	1.87	0.43
8:d:218:LEU:O	8:d:222:GLN:HG3	2.19	0.43
3:e:297:GLU:OE2	3:e:299:ALA:N	2.41	0.43
3:f:241:SER:HB2	3:f:249:ASN:OD1	2.19	0.43
3:h:5:ILE:HG12	3:h:132:LEU:HD11	1.99	0.43
3:h:328:VAL:O	3:h:332:VAL:HG12	2.19	0.43
3:k:88:HIS:CE1	3:k:90:GLU:HG3	2.53	0.43
3:m:9:ILE:HD13	3:m:150:GLY:HA2	2.00	0.43
3:m:185:TYR:HD2	3:m:418:PHE:HE2	1.66	0.43
3:o:185:TYR:HD2	3:o:418:PHE:HE2	1.65	0.43
5:p:24:VAL:HG11	5:p:50:TYR:CD2	2.50	0.43
3:s:338:LYS:HA	3:s:338:LYS:HD2	1.73	0.43
3:s:406:HIS:HA	3:s:409:VAL:HG22	2.01	0.43
5:t:22:GLU:HG2	5:t:81:TYR:CD1	2.54	0.43
5:t:39:ASP:OD1	5:t:40:SER:N	2.50	0.43
5:t:107:THR:OG1	5:t:108:GLU:N	2.51	0.43
5:t:377:MET:HE2	5:t:377:MET:HA	2.01	0.43
6:x:69:GLN:O	6:x:71:GLN:N	2.52	0.43
7:z:7:GLN:HB3	7:z:11:LEU:HD22	2.01	0.43
8:2:218:LEU:O	8:2:222:GLN:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:30:ILE:HA	5:4:36:TYR:HA	2.01	0.43
3:5:172:TYR:CD1	3:5:173:PRO:HD2	2.54	0.43
5:8:69:GLU:HG2	5:8:96:GLY:HA2	1.99	0.43
2:B:162:LYS:HG2	2:B:175:THR:HB	2.00	0.43
2:B:392:THR:HG22	2:B:437:SER:HB3	2.01	0.43
2:C:24:HIS:CD2	2:C:25:PRO:HD2	2.54	0.43
5:I:69:GLU:OE2	3:M:2:ARG:HG2	2.19	0.43
5:K:6:HIS:HE1	5:K:136:CYS:SG	2.42	0.43
5:K:101:TRP:CE3	5:K:187:LEU:HD23	2.53	0.43
5:K:181:GLU:N	5:K:182:PRO:HD2	2.33	0.43
3:M:234:VAL:O	3:M:237:SER:OG	2.35	0.43
3:M:261:PRO:HG3	3:M:313:MET:HE2	2.01	0.43
5:Q:327:ASP:HB3	3:S:177:VAL:HG13	2.01	0.43
5:R:19:LYS:HD2	5:R:19:LYS:HA	1.83	0.43
5:R:202:LEU:HD13	5:R:229:ILE:HD12	2.00	0.43
5:U:128:ASP:OD1	5:U:129:CYS:N	2.52	0.43
3:X:121:ARG:HH21	3:X:124:LYS:HD3	1.82	0.43
3:X:184:PRO:HA	3:X:391:LEU:CD1	2.49	0.43
3:Y:207:GLU:O	3:Y:210:TYR:HB2	2.19	0.43
3:Y:407:TRP:CD1	5:b:255:VAL:HG23	2.54	0.43
3:Z:215:ARG:NH1	3:Z:299:ALA:O	2.41	0.43
5:a:70:PRO:HB3	5:a:92:PHE:CG	2.54	0.43
5:b:105:HIS:ND1	5:b:105:HIS:O	2.52	0.43
5:b:395:LEU:HD11	5:b:405:GLU:OE1	2.18	0.43
7:g:7:GLN:HB3	7:g:11:LEU:HD22	2.01	0.43
7:g:125:LEU:HD23	7:g:125:LEU:HA	1.92	0.43
5:i:117:LEU:HA	5:i:120:VAL:HG12	2.00	0.43
5:i:173:PRO:HA	5:i:380:ARG:CZ	2.48	0.43
5:i:249:ASP:O	5:i:252:LYS:HG2	2.18	0.43
5:i:361:LEU:HD21	12:i:502:TA1:H171	2.00	0.43
8:l:218:LEU:O	8:l:222:GLN:HG3	2.19	0.43
8:n:218:LEU:O	8:n:222:GLN:HG3	2.19	0.43
3:o:181:VAL:HG23	5:t:347:ASN:O	2.19	0.43
3:s:70:LEU:HD11	3:s:149:LEU:HD11	2.01	0.43
5:w:73:MET:HE1	5:w:91:VAL:O	2.19	0.43
5:w:307:HIS:O	5:w:426:GLN:NE2	2.52	0.43
3:y:205:ASP:OD1	3:y:206:ASN:N	2.52	0.43
3:y:260:VAL:HG13	3:y:265:ILE:O	2.19	0.43
3:y:304:LYS:HA	3:y:304:LYS:HD2	1.80	0.43
3:0:26:LEU:HD21	3:0:364:PRO:HD3	2.00	0.43
3:1:3:GLU:OE1	3:1:64:ARG:NH1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:46:ARG:HD3	5:4:46:ARG:HA	1.80	0.43
3:5:171:VAL:HA	3:5:204:LEU:O	2.19	0.43
3:5:274:PRO:HB3	3:5:291:ILE:HD12	2.01	0.43
3:6:145:THR:O	3:6:149:LEU:HB3	2.18	0.43
5:9:105:HIS:O	5:9:150:LEU:HD22	2.18	0.43
2:B:24:HIS:CD2	2:B:25:PRO:HD2	2.54	0.43
3:E:111:GLY:O	3:E:115:VAL:HG13	2.18	0.43
3:G:16:VAL:HA	3:G:228:ASN:HB3	2.00	0.43
3:G:215:ARG:HH22	3:G:300:SER:HA	1.84	0.43
4:H:70:LYS:HG2	4:H:75:PHE:CE2	2.54	0.43
5:K:103:LYS:HB2	5:K:108:GLU:OE2	2.18	0.43
5:K:220:PRO:HG3	3:S:326:LYS:HD2	2.01	0.43
3:M:220:GLU:C	3:M:222:PRO:HD3	2.44	0.43
5:N:222:PHE:HB3	11:N:501:GDP:O6	2.18	0.43
5:O:234:SER:O	5:O:241:ARG:NH2	2.52	0.43
5:O:258:ILE:HD11	3:P:407:TRP:HZ2	1.83	0.43
3:P:224:TYR:HB3	9:P:501:GTP:O6	2.19	0.43
5:R:170:VAL:HG22	5:R:202:LEU:O	2.19	0.43
3:S:25:CYS:HA	3:S:30:ILE:HB	2.01	0.43
5:V:6:HIS:CD2	5:V:21:TRP:HE1	2.37	0.43
3:Y:407:TRP:CG	5:b:255:VAL:HG23	2.54	0.43
3:Z:140:ALA:HA	3:Z:171:VAL:HG22	2.01	0.43
12:b:502:TA1:H142	12:b:502:TA1:H192	2.01	0.43
3:h:264:ARG:O	3:h:266:HIS:ND1	2.52	0.43
5:j:206:ALA:HB3	5:j:300:MET:O	2.19	0.43
5:j:249:ASP:O	5:j:252:LYS:HG2	2.19	0.43
5:r:73:MET:SD	5:r:92:PHE:HB3	2.59	0.43
5:v:98:GLY:C	5:v:100:ASN:H	2.27	0.43
5:w:28:HIS:NE2	5:w:241:ARG:HD2	2.34	0.43
3:y:417:GLU:HA	3:y:420:GLU:HB2	2.01	0.43
3:1:152:LEU:O	3:1:156:ARG:HG2	2.18	0.43
5:4:412:GLU:HG2	5:4:416:ASN:HD21	1.84	0.43
5:9:234:SER:O	5:9:241:ARG:NH2	2.52	0.43
3:E:90:GLU:HB3	3:E:121:ARG:HD2	2.01	0.42
3:E:324:VAL:HG22	3:E:326:LYS:HG2	2.00	0.42
3:F:188:VAL:HG22	3:F:425:LEU:HD11	2.01	0.42
4:H:112:ASN:O	5:U:174:LYS:HD2	2.19	0.42
5:J:19:LYS:HA	5:J:19:LYS:HD2	1.75	0.42
5:K:301:CYS:SG	5:K:302:ALA:N	2.92	0.42
3:M:279:GLU:OE2	3:M:280:LYS:HG3	2.19	0.42
5:O:19:LYS:HA	5:O:19:LYS:HD2	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:V:405:GLU:OE1	5:V:405:GLU:N	2.52	0.42
3:X:269:LEU:HD12	3:X:384:ILE:HD12	2.01	0.42
3:Y:172:TYR:CG	3:Y:173:PRO:HD2	2.53	0.42
5:a:341:PHE:HB3	5:a:348:ASN:ND2	2.28	0.42
5:b:58:ARG:HG2	5:b:59:TYR:N	2.34	0.42
7:c:79:ILE:HG23	7:c:183:LEU:HD21	2.01	0.42
3:f:317:LEU:HG	3:f:377:MET:HG2	2.01	0.42
5:i:385:PHE:CE2	5:i:412:GLU:HB2	2.54	0.42
5:j:253:LEU:HA	5:j:253:LEU:HD23	1.82	0.42
3:k:96:LYS:HB2	3:k:96:LYS:HE3	1.83	0.42
3:k:113:GLU:N	3:k:113:GLU:OE2	2.52	0.42
3:m:174:SER:HB3	3:m:177:VAL:O	2.19	0.42
3:m:363:VAL:HG23	3:m:366:GLY:HA3	2.01	0.42
3:o:279:GLU:OE1	3:o:279:GLU:N	2.34	0.42
3:o:317:LEU:HB3	3:o:319:TYR:HE1	1.82	0.42
5:q:234:SER:O	5:q:241:ARG:NH2	2.52	0.42
3:s:344:VAL:HG11	3:s:346:TRP:CZ2	2.54	0.42
5:t:267:MET:HG3	5:t:301:CYS:SG	2.59	0.42
3:1:388:PHE:CZ	3:1:425:LEU:HG	2.54	0.42
3:5:180:ALA:HB3	3:5:183:GLU:HB3	2.00	0.42
3:6:227:LEU:O	3:6:231:ILE:HG12	2.18	0.42
3:6:341:ILE:HD12	3:6:343:PHE:HE1	1.82	0.42
3:7:130:THR:OG1	3:7:131:GLY:N	2.52	0.42
5:8:272:PRO:HD3	5:8:364:SER:HA	2.01	0.42
5:9:334:GLN:HE22	5:9:347:ASN:HD22	1.66	0.42
5:9:405:GLU:N	5:9:405:GLU:OE1	2.51	0.42
1:A:139:TYR:O	1:A:142:ARG:HG3	2.19	0.42
2:B:497:ASP:OD1	2:B:497:ASP:N	2.52	0.42
2:C:447:GLY:HA2	2:C:470:GLY:O	2.19	0.42
3:D:317:LEU:HB3	3:D:319:TYR:CE1	2.54	0.42
3:E:286:LEU:O	3:E:373:ARG:NE	2.52	0.42
3:F:215:ARG:HG3	3:F:216:SER:N	2.34	0.42
3:G:257:THR:HG21	5:J:98:GLY:O	2.19	0.42
5:I:91:VAL:HG11	5:I:116:VAL:HG23	2.00	0.42
5:J:83:GLN:N	5:J:83:GLN:OE1	2.53	0.42
5:K:295:ASP:OD1	5:K:296:ALA:N	2.49	0.42
5:K:318:ARG:HE	5:K:358:PRO:HD3	1.83	0.42
3:M:46:ASP:OD1	3:M:47:ASP:N	2.51	0.42
3:M:52:PHE:C	3:M:64:ARG:HG2	2.44	0.42
3:M:183:GLU:HG2	3:M:184:PRO:HD3	2.02	0.42
5:N:236:ILE:HD11	5:N:368:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:N:401:GLU:N	5:N:401:GLU:OE1	2.51	0.42
5:O:97:ALA:O	5:O:103:LYS:HD2	2.19	0.42
5:O:163:MET:HE3	5:O:251:ARG:HA	2.02	0.42
3:P:171:VAL:HG22	3:P:204:LEU:HD11	2.01	0.42
3:S:311:LYS:H	3:S:382:THR:CG2	2.28	0.42
5:a:302:ALA:HB3	5:a:377:MET:HE1	2.00	0.42
3:h:227:LEU:O	3:h:231:ILE:HG12	2.19	0.42
5:i:6:HIS:CD2	5:i:21:TRP:HE1	2.34	0.42
3:o:52:PHE:C	3:o:64:ARG:HG2	2.44	0.42
5:r:7:ILE:HB	5:r:135:VAL:HG12	2.01	0.42
5:r:60:VAL:HG23	5:r:84:ILE:O	2.19	0.42
5:u:206:ALA:HB3	5:u:300:MET:O	2.19	0.42
5:w:417:ASP:O	5:w:421:GLU:HG2	2.18	0.42
3:0:251:ASP:OD2	3:0:253:THR:OG1	2.36	0.42
7:3:79:ILE:HG23	7:3:183:LEU:HD21	2.01	0.42
3:5:280:LYS:O	3:5:284:GLU:HG2	2.18	0.42
3:6:73:THR:O	3:6:77:GLU:HG2	2.19	0.42
3:6:79:ARG:NH2	3:6:92:LEU:O	2.52	0.42
5:8:391:ARG:HD3	5:8:391:ARG:HA	1.85	0.42
5:9:203:ASP:OD1	5:9:204:ASN:N	2.52	0.42
1:A:98:LEU:HB2	5:T:413:SER:OG	2.19	0.42
2:B:447:GLY:HA2	2:B:470:GLY:O	2.19	0.42
3:D:210:TYR:CE1	3:D:227:LEU:HD11	2.55	0.42
3:G:416:GLY:O	3:G:420:GLU:HG2	2.20	0.42
5:J:68:LEU:HA	5:J:93:GLY:H	1.84	0.42
5:J:310:TYR:N	5:J:340:TYR:O	2.49	0.42
5:K:1:MET:N	5:K:3:GLU:OE1	2.30	0.42
3:L:204:LEU:HA	3:L:303:VAL:HG22	2.02	0.42
3:L:292:THR:HG21	3:L:331:SER:OG	2.20	0.42
5:N:12:CYS:HB3	5:N:138:SER:HB3	2.01	0.42
3:P:2:ARG:NH2	3:P:47:ASP:OD2	2.51	0.42
5:Q:137:HIS:CE1	5:Q:152:ILE:HD11	2.46	0.42
5:Q:165:LEU:HD11	5:Q:200:MET:HE1	2.00	0.42
5:T:153:SER:OG	5:T:195:ASN:ND2	2.52	0.42
3:X:216:SER:O	3:X:280:LYS:NZ	2.48	0.42
3:Y:3:GLU:HA	3:Y:51:THR:HA	2.01	0.42
5:a:239:CYS:HB3	5:a:248:ALA:H	1.85	0.42
5:a:318:ARG:HG3	5:a:358:PRO:HD3	2.01	0.42
5:b:148:GLY:O	5:b:152:ILE:N	2.47	0.42
5:b:397:TRP:CH2	3:e:256:GLN:HG2	2.54	0.42
3:e:273:ALA:O	3:e:375:VAL:N	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:116:PRO:HG3	3:m:263:PRO:HD2	2.00	0.42
3:h:21:TRP:CZ2	3:h:65:CYS:HB3	2.54	0.42
3:h:328:VAL:HG21	3:h:355:ILE:HD11	2.01	0.42
3:k:147:SER:HB2	3:k:190:SER:HB3	2.00	0.42
3:m:206:ASN:OD1	9:m:501:GTP:N2	2.52	0.42
5:p:258:ILE:HG22	5:p:263:LEU:O	2.19	0.42
3:s:111:GLY:O	3:s:115:VAL:HG23	2.19	0.42
5:w:203:ASP:O	5:w:207:LEU:HD23	2.19	0.42
3:y:244:PHE:CZ	3:y:358:GLN:HG2	2.54	0.42
7:z:124:ARG:HH12	7:z:126:ASP:HA	1.84	0.42
3:1:4:VAL:HG12	3:1:133:GLN:HB2	2.01	0.42
3:1:259:LEU:HD12	3:1:259:LEU:HA	1.85	0.42
7:3:125:LEU:HD23	7:3:125:LEU:HA	1.93	0.42
5:4:128:ASP:OD1	3:6:96:LYS:HE2	2.19	0.42
3:7:110:ILE:O	3:7:113:GLU:HG2	2.19	0.42
2:B:412:GLN:C	2:B:414:GLY:H	2.28	0.42
2:C:497:ASP:OD1	2:C:497:ASP:N	2.52	0.42
3:D:188:VAL:HG22	3:D:425:LEU:HD11	2.01	0.42
3:E:185:TYR:O	3:E:189:LEU:HD23	2.19	0.42
3:E:289:ALA:O	3:E:292:THR:HG22	2.19	0.42
5:I:108:GLU:HA	5:I:111:GLU:OE1	2.18	0.42
5:J:16:ILE:HG22	5:J:226:ASN:OD1	2.19	0.42
5:J:309:ARG:H	5:J:372:THR:HG1	1.64	0.42
5:K:91:VAL:HG11	5:K:116:VAL:HG22	2.01	0.42
5:K:258:ILE:HG13	5:K:258:ILE:O	2.20	0.42
3:M:336:LYS:HE3	3:M:351:PHE:CE1	2.55	0.42
5:O:30:ILE:HG22	5:O:36:TYR:HA	2.02	0.42
3:P:304:LYS:HA	3:P:304:LYS:HD2	1.70	0.42
5:Q:212:PHE:O	5:Q:216:LYS:HD3	2.18	0.42
5:U:12:CYS:HB3	5:U:138:SER:HB3	2.02	0.42
5:V:343:GLU:CD	5:V:343:GLU:H	2.28	0.42
5:V:417:ASP:O	5:V:421:GLU:HG2	2.19	0.42
5:b:165:LEU:HD12	5:b:198:GLU:HB2	2.01	0.42
5:b:200:MET:N	5:b:200:MET:SD	2.93	0.42
7:c:42:ILE:O	7:c:44:SER:N	2.48	0.42
8:d:115:ASN:ND2	8:d:166:ARG:HG2	2.34	0.42
8:d:242:ILE:HG13	8:d:243:LEU:HD12	2.01	0.42
7:g:1:MET:HE1	7:g:24:ILE:HB	2.01	0.42
7:g:124:ARG:HH12	7:g:126:ASP:HA	1.84	0.42
5:j:232:VAL:HG11	5:j:268:VAL:HG21	2.01	0.42
8:l:115:ASN:ND2	8:l:166:ARG:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:m:174:SER:OG	3:m:207:GLU:OE2	2.37	0.42
3:o:396:ASP:OD2	3:o:422:ARG:NH2	2.31	0.42
3:s:274:PRO:HD2	3:s:374:ALA:HA	2.01	0.42
3:s:307:PRO:HB2	3:s:312:TYR:HE1	1.83	0.42
5:v:325:GLU:O	5:v:329:GLN:HG2	2.19	0.42
5:v:406:MET:O	5:v:410:GLU:HG2	2.18	0.42
7:z:1:MET:HE1	7:z:24:ILE:HB	2.01	0.42
8:2:115:ASN:ND2	8:2:166:ARG:HG2	2.34	0.42
8:2:242:ILE:HG13	8:2:243:LEU:HD12	2.01	0.42
5:4:178:THR:OG1	5:4:179:VAL:N	2.52	0.42
5:4:260:PHE:HB2	5:4:263:LEU:HG	2.02	0.42
5:4:341:PHE:HB3	5:4:348:ASN:ND2	2.28	0.42
3:6:10:GLY:O	3:6:14:ILE:HG12	2.20	0.42
5:9:100:ASN:HD22	5:9:103:LYS:HE3	1.84	0.42
2:C:412:GLN:C	2:C:414:GLY:H	2.28	0.42
3:G:225:THR:O	3:G:229:ARG:HG3	2.19	0.42
5:J:226:ASN:OD1	11:J:501:GDP:N2	2.52	0.42
12:J:502:TA1:H472	12:J:502:TA1:C20	2.50	0.42
3:L:76:ASP:HA	3:L:79:ARG:HD2	2.01	0.42
3:L:388:PHE:CZ	3:L:428:LEU:HD23	2.54	0.42
3:M:76:ASP:OD1	3:M:77:GLU:N	2.53	0.42
3:M:394:LYS:HB3	5:T:346:PRO:HG2	2.02	0.42
5:Q:255:VAL:HG23	3:S:407:TRP:CD1	2.55	0.42
5:T:178:THR:OG1	5:T:179:VAL:N	2.50	0.42
5:T:403:MET:HE2	5:T:403:MET:HB3	1.78	0.42
5:V:21:TRP:CE3	5:V:61:PRO:HB3	2.55	0.42
12:V:502:TA1:H021	12:V:502:TA1:H472	1.78	0.42
3:X:268:MET:HE2	3:X:268:MET:HB3	1.79	0.42
3:Y:104:ALA:HB2	3:Y:413:MET:SD	2.60	0.42
5:a:258:ILE:HG13	3:s:407:TRP:HZ2	1.84	0.42
5:a:322:SER:OG	3:s:222:PRO:O	2.35	0.42
7:c:124:ARG:HH12	7:c:126:ASP:HA	1.84	0.42
7:g:42:ILE:O	7:g:44:SER:N	2.49	0.42
3:h:372:GLN:H	3:h:372:GLN:CD	2.27	0.42
5:i:23:VAL:HG21	5:i:230:SER:OG	2.20	0.42
5:i:170:VAL:HG22	5:i:202:LEU:O	2.19	0.42
3:k:103:PHE:CD1	3:k:189:LEU:HD23	2.55	0.42
5:p:6:HIS:CD2	5:p:21:TRP:HE1	2.36	0.42
5:p:285:THR:HB	5:p:287:PRO:HD2	2.01	0.42
5:r:10:GLY:O	5:r:14:ASN:HB2	2.20	0.42
3:s:121:ARG:HE	3:s:124:LYS:HE3	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s:130:THR:OG1	3:s:131:GLY:N	2.53	0.42
5:u:173:PRO:HA	5:u:380:ARG:NE	2.34	0.42
12:u:502:TA1:H142	12:u:502:TA1:H192	2.01	0.42
5:v:26:ASP:HB3	5:v:359:LYS:NZ	2.35	0.42
5:v:252:LYS:HG3	5:v:350:LYS:NZ	2.33	0.42
5:w:420:SER:O	5:w:424:GLN:HG2	2.20	0.42
3:y:204:LEU:HA	3:y:303:VAL:HG22	2.02	0.42
3:1:123:ARG:NH1	3:1:123:ARG:HA	2.34	0.42
3:1:349:THR:HB	5:4:179:VAL:HA	2.02	0.42
7:3:42:ILE:O	7:3:44:SER:N	2.48	0.42
7:3:124:ARG:HH12	7:3:126:ASP:HA	1.84	0.42
5:4:21:TRP:CE3	5:4:61:PRO:HB3	2.54	0.42
3:6:270:SER:OG	3:6:271:SER:N	2.53	0.42
3:7:9:ILE:HG22	3:7:145:THR:HG22	2.01	0.42
5:9:180:VAL:HG12	5:9:183:TYR:HB2	2.01	0.42
2:B:146:ASN:HD21	2:B:170:ASN:ND2	2.17	0.42
2:B:405:LYS:HE2	2:B:405:LYS:HB2	1.75	0.42
2:C:146:ASN:HD21	2:C:170:ASN:ND2	2.17	0.42
3:E:239:THR:O	3:E:243:ARG:HG2	2.20	0.42
3:G:53:PHE:O	3:G:64:ARG:NH2	2.43	0.42
3:G:153:LEU:HD23	3:G:153:LEU:HA	1.86	0.42
3:G:214:ARG:HD3	3:G:214:ARG:HA	1.88	0.42
3:G:296:PHE:CE2	3:G:317:LEU:HD21	2.54	0.42
5:O:41:ASP:OD1	5:O:41:ASP:N	2.52	0.42
5:R:392:LYS:HG2	5:R:395:LEU:HD12	2.02	0.42
3:S:214:ARG:HA	3:S:214:ARG:HD3	1.89	0.42
3:S:255:PHE:HZ	3:S:378:ILE:HD12	1.85	0.42
5:b:102:ALA:HB1	5:b:401:GLU:HB2	2.01	0.42
5:b:222:PHE:HE2	3:e:247:ALA:HB1	1.85	0.42
7:c:125:LEU:HD23	7:c:125:LEU:HA	1.92	0.42
7:g:79:ILE:HG23	7:g:183:LEU:HD21	2.01	0.42
3:h:392:ASP:OD1	3:h:425:LEU:HD23	2.19	0.42
5:i:254:ALA:O	5:i:258:ILE:HG12	2.19	0.42
3:m:3:GLU:HB2	3:m:129:CYS:SG	2.59	0.42
8:n:115:ASN:ND2	8:n:166:ARG:HG2	2.34	0.42
3:o:172:TYR:CG	3:o:173:PRO:HD2	2.55	0.42
5:p:161:ASP:OD1	5:p:162:ARG:N	2.53	0.42
5:q:343:GLU:OE1	5:q:343:GLU:N	2.49	0.42
7:z:42:ILE:O	7:z:44:SER:N	2.48	0.42
7:z:79:ILE:HG23	7:z:183:LEU:HD21	2.01	0.42
3:1:320:ARG:HB3	3:1:374:ALA:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:332:ASN:O	5:4:336:LYS:HG2	2.19	0.42
3:5:12:ALA:HB3	3:5:140:ALA:HB2	2.01	0.42
3:6:147:SER:HB3	3:6:190:SER:HB3	2.00	0.42
12:9:502:TA1:C12	12:9:502:TA1:H432	2.49	0.42
2:B:174:TRP:CD2	2:B:185:PRO:HB3	2.54	0.42
2:C:2:ALA:C	2:C:4:PRO:HD3	2.44	0.42
2:C:133:ASP:OD1	2:C:134:VAL:N	2.52	0.42
3:F:56:THR:HG22	3:F:60:LYS:O	2.20	0.42
3:F:244:PHE:CE2	3:F:358:GLN:HG2	2.55	0.42
3:G:191:THR:O	3:G:194:LEU:HG	2.19	0.42
3:G:406:HIS:H	3:G:406:HIS:CD2	2.37	0.42
5:O:309:ARG:HH22	5:O:343:GLU:CD	2.27	0.42
5:O:383:GLU:HA	5:O:386:THR:HG22	2.02	0.42
5:Q:403:MET:HE2	5:Q:403:MET:HB3	1.79	0.42
5:R:27:GLU:OE2	5:R:318:ARG:NH2	2.42	0.42
5:U:257:LEU:HD11	5:U:314:SER:OG	2.18	0.42
5:U:395:LEU:HA	5:U:395:LEU:HD23	1.83	0.42
5:V:203:ASP:OD1	5:V:302:ALA:N	2.53	0.42
5:V:371:SER:O	5:V:374:ILE:HG12	2.19	0.42
3:Z:352:LYS:HA	5:i:177:ASP:O	2.19	0.42
3:e:27:GLU:HG2	3:e:361:THR:HB	2.02	0.42
3:e:259:LEU:HD22	3:e:316:CYS:SG	2.60	0.42
3:f:105:ARG:HA	3:f:109:THR:OG1	2.19	0.42
5:j:403:MET:HE3	5:j:407:GLU:OE1	2.20	0.42
3:o:147:SER:O	3:o:151:SER:OG	2.36	0.42
5:p:87:PRO:HA	5:p:90:PHE:CD2	2.53	0.42
5:r:324:LYS:HE2	3:0:214:ARG:NH2	2.29	0.42
3:s:123:ARG:HH12	3:s:126:ALA:HB3	1.84	0.42
3:s:246:GLY:HA2	3:s:357:TYR:CZ	2.55	0.42
5:t:378:PHE:HE2	5:t:422:TYR:HE2	1.66	0.42
5:u:209:ASP:HB3	5:u:213:ARG:NH1	2.35	0.42
5:u:239:CYS:CB	5:u:248:ALA:H	2.32	0.42
5:u:403:MET:HE2	5:u:403:MET:HB3	1.84	0.42
5:v:412:GLU:HG2	5:v:416:ASN:ND2	2.33	0.42
3:1:163:LYS:H	3:1:163:LYS:HD2	1.85	0.42
3:1:287:SER:O	3:1:291:ILE:HG12	2.19	0.42
7:3:1:MET:HE1	7:3:24:ILE:HB	2.01	0.42
3:5:153:LEU:HA	3:5:153:LEU:HD23	1.88	0.42
3:6:169:PHE:CE2	3:6:235:ILE:HD12	2.55	0.42
3:6:203:MET:O	3:6:204:LEU:HD12	2.20	0.42
3:6:276:ILE:HG22	3:6:277:SER:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4:GLU:CD	2:C:396:ALA:HB2	2.45	0.42
1:A:119:LYS:HB3	1:A:119:LYS:HE3	1.91	0.42
2:B:2:ALA:C	2:B:4:PRO:HD3	2.44	0.42
2:B:559:LEU:HD22	2:B:568:LEU:HD11	2.02	0.42
2:C:174:TRP:CD2	2:C:185:PRO:HB3	2.54	0.42
2:C:559:LEU:HD22	2:C:568:LEU:HD11	2.02	0.42
3:D:155:GLU:HG2	3:D:197:HIS:CE1	2.55	0.42
3:E:260:VAL:HG13	3:E:265:ILE:O	2.20	0.42
3:L:311:LYS:H	3:L:382:THR:CG2	2.33	0.42
3:M:68:LEU:HD21	3:M:149:LEU:HD13	2.02	0.42
5:O:8:GLN:CD	5:O:17:GLY:HA3	2.45	0.42
3:P:287:SER:OG	3:P:290:GLU:HG3	2.20	0.42
3:P:303:VAL:HG11	3:P:387:ILE:HD13	2.01	0.42
5:R:42:LEU:HA	5:R:45:GLU:OE2	2.20	0.42
5:R:114:ASP:N	5:R:114:ASP:OD1	2.53	0.42
5:R:211:CYS:HB3	5:R:217:LEU:HD12	2.01	0.42
3:S:290:GLU:OE2	3:S:291:ILE:HG12	2.20	0.42
3:S:333:ALA:O	3:S:337:THR:HG23	2.20	0.42
5:T:274:THR:HG23	5:T:278:SER:HB2	2.02	0.42
5:T:363:MET:HE2	5:T:363:MET:HB3	1.80	0.42
5:V:107:THR:OG1	5:V:108:GLU:N	2.53	0.42
3:X:429:GLU:O	3:X:433:GLU:HG2	2.20	0.42
3:Z:205:ASP:O	3:Z:209:ILE:HG13	2.20	0.42
3:Z:227:LEU:O	3:Z:231:ILE:HG12	2.20	0.42
7:c:36:ARG:HB2	8:d:260:ILE:HA	2.01	0.42
5:i:239:CYS:CB	5:i:248:ALA:H	2.33	0.42
3:k:11:GLN:HE21	3:k:15:GLN:HE21	1.66	0.42
8:l:242:ILE:HG13	8:l:243:LEU:HD12	2.01	0.42
3:m:335:ILE:HG23	3:m:341:ILE:HD12	2.00	0.42
8:n:242:ILE:HG13	8:n:243:LEU:HD12	2.01	0.42
5:p:46:ARG:HA	5:p:46:ARG:HD3	1.78	0.42
5:p:184:ASN:OD1	5:p:398:TYR:OH	2.34	0.42
5:q:14:ASN:HD21	5:q:67:ASP:HB2	1.84	0.42
5:q:52:ASN:OD1	5:q:62:ARG:NH2	2.53	0.42
5:r:21:TRP:O	5:r:25:SER:OG	2.31	0.42
5:r:208:TYR:CE1	5:r:225:LEU:HD11	2.55	0.42
5:v:265:PHE:HB2	5:v:374:ILE:HD12	2.01	0.42
5:w:207:LEU:HB3	5:w:225:LEU:HG	2.01	0.42
3:0:164:LYS:HD3	3:0:164:LYS:HA	1.90	0.42
5:4:255:VAL:HG13	3:6:407:TRP:CD1	2.54	0.42
5:4:404:ASP:CG	5:4:405:GLU:H	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:5:392:ASP:OD1	3:5:425:LEU:HD13	2.20	0.42
3:7:1:MET:N	3:7:3:GLU:OE2	2.52	0.42
3:7:389:SER:O	3:7:392:ASP:HB3	2.20	0.42
2:B:133:ASP:OD1	2:B:134:VAL:N	2.52	0.42
2:C:219:LEU:HD23	2:C:231:THR:O	2.20	0.42
2:C:270:GLU:HB3	2:C:280:ARG:HD2	2.01	0.42
2:C:405:LYS:HE2	2:C:405:LYS:HB2	1.75	0.42
4:H:133:ASN:ND2	3:L:127:ASP:OD1	2.53	0.42
3:L:369:ALA:O	3:L:371:VAL:HG23	2.20	0.42
3:P:389:SER:HA	3:P:392:ASP:OD2	2.19	0.42
5:T:156:ARG:HH11	5:T:164:MET:HE1	1.85	0.42
5:U:45:GLU:O	5:U:46:ARG:HD3	2.19	0.42
5:V:165:LEU:HD23	5:V:198:GLU:HB2	2.02	0.42
5:V:384:GLN:O	5:V:388:MET:HG2	2.19	0.42
3:Y:257:THR:HG21	5:v:98:GLY:O	2.20	0.42
3:Y:383:ALA:O	3:Y:386:GLU:HG2	2.19	0.42
3:Z:346:TRP:O	5:i:388:MET:HB3	2.19	0.42
7:c:1:MET:HE1	7:c:24:ILE:HB	2.01	0.42
8:d:167:GLU:HG2	8:d:172:TYR:HB2	2.02	0.42
3:e:108:TYR:O	3:e:112:LYS:HD3	2.19	0.42
3:f:111:GLY:CA	3:f:149:LEU:HD21	2.49	0.42
3:h:225:THR:O	3:h:229:ARG:HG3	2.19	0.42
3:h:279:GLU:OE2	3:h:280:LYS:HG3	2.20	0.42
3:h:311:LYS:HG3	3:h:342:GLN:HB3	2.02	0.42
5:i:383:GLU:O	5:i:387:ALA:N	2.50	0.42
8:l:167:GLU:HG2	8:l:172:TYR:HB2	2.02	0.42
8:n:167:GLU:HG2	8:n:172:TYR:HB2	2.02	0.42
3:o:86:LEU:HD23	3:o:86:LEU:HA	1.85	0.42
3:o:222:PRO:O	5:t:322:SER:OG	2.31	0.42
5:r:35:THR:HG23	5:r:37:HIS:CD2	2.55	0.42
5:t:228:LEU:O	5:t:232:VAL:HG23	2.20	0.42
5:u:307:HIS:O	5:u:426:GLN:NE2	2.52	0.42
3:y:3:GLU:O	3:y:132:LEU:HD12	2.20	0.42
3:y:430:LYS:O	3:y:434:GLU:HG2	2.20	0.42
3:0:210:TYR:CD1	3:0:227:LEU:HD21	2.55	0.42
3:1:136:LEU:HD11	3:1:169:PHE:CE2	2.50	0.42
5:4:103:LYS:HA	5:4:107:THR:HG22	2.02	0.42
5:4:359:LYS:HE3	12:4:502:TA1:H421	2.02	0.42
3:6:330:ALA:O	3:6:334:THR:HG23	2.20	0.42
5:8:385:PHE:CZ	5:8:408:PHE:HB3	2.50	0.42
2:B:219:LEU:HD23	2:B:231:THR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:25:CYS:HA	3:D:30:ILE:HB	2.02	0.42
4:H:9:GLN:NE2	5:O:301:CYS:O	2.52	0.42
5:I:69:GLU:HG2	3:M:251:ASP:OD2	2.19	0.42
3:L:154:LEU:HD23	3:L:154:LEU:HA	1.94	0.42
5:O:7:ILE:HD13	5:O:64:ILE:HB	2.01	0.42
5:O:318:ARG:HB3	5:O:357:PRO:HA	2.01	0.42
5:O:328:GLU:OE1	5:O:332:ASN:ND2	2.53	0.42
3:P:237:SER:CB	3:P:320:ARG:HD2	2.50	0.42
5:Q:331:LEU:HD11	3:S:176:GLN:HB3	2.02	0.42
5:R:2:ARG:HG3	5:R:131:GLN:HE21	1.85	0.42
5:R:69:GLU:C	5:R:71:GLY:H	2.28	0.42
5:R:265:PHE:HE2	5:R:418:LEU:HD21	1.84	0.42
5:U:70:PRO:HD3	5:U:93:GLY:O	2.20	0.42
5:V:1:MET:SD	3:e:96:LYS:HA	2.60	0.42
5:a:200:MET:HE2	5:a:200:MET:HB2	1.96	0.42
5:a:216:LYS:HB3	5:a:216:LYS:HE3	1.89	0.42
5:a:388:MET:HE2	5:a:388:MET:HB3	1.89	0.42
5:b:16:ILE:HG22	5:b:226:ASN:OD1	2.19	0.42
3:e:304:LYS:HD2	3:e:304:LYS:HA	1.83	0.42
3:h:228:ASN:OD1	9:h:501:GTP:N1	2.42	0.42
5:i:385:PHE:HZ	5:i:408:PHE:HB3	1.85	0.42
5:j:166:THR:HG22	5:j:168:SER:HB3	2.01	0.42
5:j:285:THR:OG1	5:j:288:GLU:HG2	2.20	0.42
3:m:116:ASP:OD1	3:m:116:ASP:N	2.51	0.42
5:p:432:GLU:HG2	7:3:31:ASN:HD22	1.84	0.42
3:s:22:GLU:OE1	3:s:83:TYR:OH	2.30	0.42
5:w:334:GLN:NE2	5:w:347:ASN:HA	2.31	0.42
3:y:251:ASP:OD2	3:y:252:ILE:N	2.52	0.42
3:0:225:THR:O	3:0:229:ARG:HG3	2.19	0.42
3:1:187:SER:O	3:1:191:THR:HG23	2.20	0.42
3:1:383:ALA:O	3:1:386:GLU:HG2	2.20	0.42
8:2:167:GLU:HG2	8:2:172:TYR:HB2	2.02	0.42
3:5:273:ALA:O	3:5:375:VAL:N	2.48	0.42
3:5:334:THR:O	3:5:338:LYS:HG3	2.19	0.42
3:7:6:SER:HA	3:7:136:LEU:HB3	2.02	0.42
3:7:116:ASP:OD1	3:7:117:LEU:N	2.53	0.42
2:B:270:GLU:HB3	2:B:280:ARG:HD2	2.02	0.41
2:C:363:PHE:HB3	2:C:379:ALA:HA	2.02	0.41
2:C:441:LEU:HD22	2:C:451:VAL:HG23	2.02	0.41
3:F:46:ASP:C	3:F:48:ALA:H	2.28	0.41
5:K:225:LEU:O	5:K:228:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:320:ARG:HG2	3:L:358:GLN:O	2.20	0.41
5:O:141:GLY:HA3	11:O:501:GDP:O3A	2.19	0.41
3:P:109:THR:HG21	3:P:411:GLU:OE2	2.20	0.41
5:R:106:TYR:HD2	8:l:78:PRO:HG3	1.85	0.41
3:S:71:GLU:HB2	3:S:73:THR:HG22	2.02	0.41
3:S:183:GLU:CD	3:S:184:PRO:HD3	2.45	0.41
3:S:276:ILE:HG23	3:S:280:LYS:HE2	2.02	0.41
3:S:388:PHE:CZ	3:S:425:LEU:HD22	2.55	0.41
5:U:73:MET:SD	5:U:92:PHE:HB3	2.59	0.41
5:V:156:ARG:HD2	5:V:160:PRO:HA	2.02	0.41
5:V:234:SER:HB2	12:V:502:TA1:H401	2.02	0.41
5:V:335:ASN:O	5:V:338:SER:OG	2.35	0.41
5:V:379:LYS:HE3	5:V:419:VAL:HG21	2.01	0.41
3:X:388:PHE:CZ	3:X:425:LEU:HD22	2.55	0.41
3:Y:46:ASP:C	3:Y:48:ALA:H	2.28	0.41
3:Z:169:PHE:CE2	3:Z:235:ILE:HG12	2.55	0.41
12:a:502:TA1:H381	12:a:502:TA1:H131	2.02	0.41
5:b:325:GLU:O	5:b:328:GLU:HG3	2.20	0.41
3:e:113:GLU:HG3	3:e:114:ILE:HG23	2.02	0.41
3:e:298:PRO:HB3	3:e:307:PRO:HD2	2.02	0.41
5:i:65:LEU:HD11	5:i:85:PHE:CD2	2.55	0.41
5:i:95:THR:OG1	5:i:108:GLU:OE1	2.37	0.41
5:i:216:LYS:HA	5:i:216:LYS:HD3	1.85	0.41
5:j:379:LYS:HG2	5:j:419:VAL:HG21	2.01	0.41
5:r:107:THR:OG1	5:r:108:GLU:N	2.52	0.41
5:r:287:PRO:HA	5:r:290:THR:HG22	2.02	0.41
3:s:123:ARG:HA	3:s:123:ARG:NH1	2.35	0.41
5:v:41:ASP:O	5:v:45:GLU:HG2	2.19	0.41
6:x:78:ARG:HG3	5:4:1:MET:HE1	2.02	0.41
3:y:346:TRP:CD1	3:y:346:TRP:H	2.37	0.41
3:1:334:THR:O	3:1:337:THR:OG1	2.28	0.41
5:4:211:CYS:HB3	5:4:217:LEU:HD12	2.02	0.41
3:5:430:LYS:O	3:5:434:GLU:HG2	2.20	0.41
3:6:259:LEU:HD12	3:6:314:ALA:HB3	2.02	0.41
3:6:344:VAL:HG21	3:6:346:TRP:CZ2	2.55	0.41
3:7:2:ARG:NH2	3:7:47:ASP:OD2	2.38	0.41
3:7:186:ASN:OD1	3:7:187:SER:N	2.53	0.41
5:9:6:HIS:CD2	5:9:21:TRP:HE1	2.34	0.41
1:A:142:ARG:NH2	1:A:143:ASN:OD1	2.53	0.41
2:B:363:PHE:HB3	2:B:379:ALA:HA	2.02	0.41
2:B:441:LEU:HD22	2:B:451:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:222:PRO:HG2	5:R:324:LYS:CB	2.50	0.41
3:F:119:LEU:O	3:F:123:ARG:HG2	2.20	0.41
3:G:318:MET:HE2	3:G:318:MET:HB2	1.97	0.41
4:H:100:MET:HG2	4:H:101:LYS:N	2.34	0.41
5:I:52:ASN:OD1	5:I:62:ARG:NH2	2.52	0.41
5:I:286:VAL:N	5:I:287:PRO:HD2	2.35	0.41
5:J:354:CYS:SG	5:J:355:ASP:N	2.93	0.41
5:K:280:GLN:HG3	5:K:281:TYR:CD1	2.55	0.41
3:M:121:ARG:NH1	3:M:124:LYS:HE2	2.35	0.41
3:P:279:GLU:HA	3:P:282:TYR:HD2	1.86	0.41
5:T:341:PHE:HB3	5:T:348:ASN:HD21	1.85	0.41
5:V:258:ILE:HG13	5:V:258:ILE:O	2.20	0.41
5:a:67:ASP:OD2	5:a:143:THR:HG21	2.20	0.41
5:b:154:LYS:O	5:b:158:GLU:HG2	2.20	0.41
5:b:172:SER:HA	5:b:203:ASP:OD2	2.20	0.41
3:e:239:THR:OG1	3:e:243:ARG:NE	2.47	0.41
3:h:14:ILE:HD11	3:h:74:VAL:HG13	2.01	0.41
5:j:256:ASN:C	5:j:257:LEU:HD12	2.45	0.41
3:k:116:ASP:OD1	3:k:117:LEU:N	2.54	0.41
3:m:203:MET:SD	3:m:387:ILE:HD11	2.60	0.41
3:m:205:ASP:OD1	3:m:206:ASN:N	2.53	0.41
3:s:35:GLN:HA	3:s:61:HIS:HD1	1.83	0.41
3:s:101:ASN:HA	3:s:144:GLY:N	2.35	0.41
5:t:102:ALA:O	5:t:106:TYR:HB2	2.19	0.41
5:u:68:LEU:O	5:u:69:GLU:HG3	2.20	0.41
5:v:43:GLN:O	5:v:47:ILE:HB	2.20	0.41
5:v:194:GLU:OE1	5:v:194:GLU:N	2.46	0.41
5:v:415:MET:HE3	5:v:415:MET:HB3	1.66	0.41
5:w:67:ASP:OD2	5:w:72:THR:HG21	2.20	0.41
3:y:153:LEU:HD12	3:y:153:LEU:HA	1.93	0.41
3:y:244:PHE:CE2	3:y:358:GLN:HG2	2.55	0.41
3:1:1:MET:HE2	5:4:94:GLN:HB3	2.02	0.41
5:4:158:GLU:C	5:4:160:PRO:HD3	2.45	0.41
3:5:195:LEU:HD12	3:5:267:PHE:HZ	1.86	0.41
3:5:408:TYR:O	3:5:413:MET:HB2	2.19	0.41
12:9:502:TA1:C20	12:9:502:TA1:H472	2.50	0.41
1:A:52:PRO:HD3	5:R:306:ARG:HB3	2.02	0.41
3:G:251:ASP:OD1	3:G:252:ILE:N	2.52	0.41
3:G:311:LYS:H	3:G:382:THR:CG2	2.32	0.41
5:I:107:THR:OG1	5:I:108:GLU:N	2.54	0.41
5:J:100:ASN:ND2	5:J:103:LYS:HE3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:220:GLU:C	3:L:222:PRO:HD3	2.44	0.41
3:L:309:HIS:ND1	3:L:386:GLU:OE2	2.49	0.41
5:N:324:LYS:HB2	3:f:210:TYR:CE1	2.55	0.41
5:O:192:LEU:O	5:O:264:HIS:NE2	2.53	0.41
5:Q:178:THR:OG1	5:Q:181:GLU:HB3	2.19	0.41
3:S:153:LEU:HD23	3:S:153:LEU:HA	1.92	0.41
5:T:100:ASN:HB3	5:T:103:LYS:HG2	2.03	0.41
3:X:267:PHE:HE2	3:X:428:LEU:HD21	1.85	0.41
3:X:297:GLU:HG3	3:X:299:ALA:H	1.84	0.41
3:Y:81:GLY:O	3:Y:84:ARG:NH1	2.50	0.41
3:Y:104:ALA:O	3:Y:108:TYR:N	2.50	0.41
3:Y:105:ARG:CG	3:Y:411:GLU:HG2	2.51	0.41
3:Z:276:ILE:HB	3:Z:280:LYS:HB2	2.02	0.41
5:a:16:ILE:HD11	5:a:136:CYS:HB3	2.01	0.41
5:a:361:LEU:HD11	12:a:502:TA1:O05	2.20	0.41
5:b:49:VAL:HG11	5:b:241:ARG:HG2	2.01	0.41
5:b:178:THR:HG23	5:b:181:GLU:HB2	2.01	0.41
3:e:326:LYS:HG3	3:e:327:ASP:N	2.35	0.41
3:e:330:ALA:O	3:e:334:THR:HG23	2.20	0.41
5:i:332:ASN:O	5:i:336:LYS:HG2	2.21	0.41
3:m:31:GLN:O	3:m:33:ASP:N	2.53	0.41
3:o:79:ARG:HG3	3:o:92:LEU:HD23	2.02	0.41
5:q:404:ASP:OD1	5:q:407:GLU:HG3	2.21	0.41
5:r:388:MET:HE2	5:r:388:MET:HB3	1.92	0.41
3:s:402:ARG:O	3:s:405:VAL:HG22	2.20	0.41
5:t:6:HIS:HE1	5:t:136:CYS:SG	2.43	0.41
5:u:128:ASP:OD2	7:3:19:SER:OG	2.31	0.41
5:w:331:LEU:HG	5:w:335:ASN:HD21	1.84	0.41
3:0:25:CYS:SG	3:0:26:LEU:N	2.94	0.41
5:8:6:HIS:HD2	5:8:21:TRP:NE1	2.16	0.41
1:A:23:HIS:CD2	3:D:430:LYS:HG3	2.55	0.41
2:C:415:LYS:NZ	6:W:23:ILE:HG22	2.35	0.41
5:I:219:THR:O	5:I:219:THR:OG1	2.37	0.41
3:M:32:PRO:HB3	3:M:83:TYR:HE1	1.85	0.41
3:M:76:ASP:O	3:M:80:THR:HG23	2.20	0.41
5:N:172:SER:OG	5:N:205:GLU:OE2	2.32	0.41
5:N:255:VAL:HG23	3:f:407:TRP:CG	2.55	0.41
5:N:256:ASN:HD21	3:f:181:VAL:HG23	1.85	0.41
3:P:14:ILE:HD11	3:P:74:VAL:HB	2.02	0.41
5:Q:69:GLU:C	5:Q:71:GLY:H	2.29	0.41
3:S:286:LEU:HA	3:S:290:GLU:OE2	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:T:257:LEU:HD12	5:T:312:THR:OG1	2.21	0.41
6:W:79:ASN:HA	6:W:85:PHE:CZ	2.56	0.41
3:X:392:ASP:HA	3:X:422:ARG:HH12	1.85	0.41
3:Y:36:MET:HG2	3:Y:37:PRO:HD2	2.02	0.41
3:Y:102:ASN:HB3	3:Y:105:ARG:HD3	2.02	0.41
5:a:385:PHE:CE2	5:a:412:GLU:HB2	2.55	0.41
5:b:165:LEU:HD12	5:b:165:LEU:HA	1.83	0.41
3:e:244:PHE:CD2	3:e:358:GLN:HG2	2.56	0.41
3:e:345:ASP:N	3:e:345:ASP:OD1	2.53	0.41
3:f:124:LYS:HA	3:f:127:ASP:OD2	2.21	0.41
3:h:113:GLU:OE1	3:h:113:GLU:N	2.53	0.41
3:h:352:LYS:HD3	3:h:352:LYS:HA	1.87	0.41
5:i:154:LYS:O	5:i:157:GLU:HG2	2.20	0.41
5:i:391:ARG:HA	5:i:391:ARG:HD3	1.78	0.41
5:j:249:ASP:H	5:j:252:LYS:HD3	1.86	0.41
5:j:290:THR:HA	5:j:293:MET:HE3	2.02	0.41
3:k:246:GLY:O	3:k:249:ASN:ND2	2.54	0.41
3:m:94:SER:OG	3:m:95:GLY:N	2.54	0.41
3:o:416:GLY:O	3:o:420:GLU:HG3	2.20	0.41
5:q:273:LEU:HD23	5:q:273:LEU:HA	1.92	0.41
5:r:201:VAL:HG22	5:r:266:PHE:O	2.20	0.41
5:r:285:THR:HB	5:r:287:PRO:HD2	2.02	0.41
3:s:72:PRO:HG3	3:s:95:GLY:O	2.20	0.41
3:s:244:PHE:CZ	3:s:358:GLN:HG3	2.56	0.41
3:s:320:ARG:HG2	3:s:360:PRO:HD3	2.02	0.41
3:s:349:THR:OG1	5:9:179:VAL:HA	2.20	0.41
5:t:201:VAL:O	5:t:202:LEU:HD23	2.20	0.41
5:u:225:LEU:O	5:u:229:ILE:HG12	2.21	0.41
5:v:25:SER:O	5:v:30:ILE:HG12	2.20	0.41
5:v:314:SER:OG	5:v:368:ILE:HB	2.19	0.41
5:v:341:PHE:HB3	5:v:348:ASN:HD21	1.86	0.41
5:w:337:ASN:HB3	5:w:340:TYR:CD2	2.55	0.41
12:w:502:TA1:C09	12:w:502:TA1:H141	2.50	0.41
12:w:502:TA1:H141	12:w:502:TA1:H091	2.02	0.41
3:1:119:LEU:HD11	3:1:156:ARG:HB3	2.01	0.41
5:4:203:ASP:O	5:4:207:LEU:HD23	2.20	0.41
5:4:287:PRO:O	5:4:291:GLN:HG3	2.20	0.41
3:6:416:GLY:C	3:6:420:GLU:HG2	2.46	0.41
3:7:2:ARG:HG2	3:7:133:GLN:HE21	1.85	0.41
3:7:383:ALA:O	3:7:386:GLU:HG2	2.20	0.41
5:9:73:MET:HE3	5:9:92:PHE:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4:GLU:HB3	2:C:396:ALA:N	2.36	0.41
1:A:89:ALA:O	1:A:91:GLU:N	2.53	0.41
2:B:89:ASP:HB2	2:B:96:ILE:CG1	2.51	0.41
2:C:89:ASP:HB2	2:C:96:ILE:CG1	2.51	0.41
3:E:200:VAL:HG13	3:E:268:MET:CE	2.50	0.41
3:E:428:LEU:HD12	3:E:428:LEU:HA	1.83	0.41
5:I:83:GLN:OE1	5:I:83:GLN:N	2.53	0.41
5:I:289:LEU:HD23	5:I:365:ALA:HB2	2.03	0.41
5:I:416:ASN:HA	5:I:419:VAL:HG12	2.02	0.41
5:K:238:CYS:HB2	5:K:318:ARG:HH11	1.85	0.41
3:M:304:LYS:HD2	3:M:304:LYS:HA	1.75	0.41
3:P:345:ASP:OD1	3:P:346:TRP:N	2.54	0.41
5:R:421:GLU:H	5:R:421:GLU:HG2	1.73	0.41
3:S:116:ASP:OD1	3:S:116:ASP:N	2.52	0.41
5:U:286:VAL:HG11	5:U:326:VAL:HG12	2.02	0.41
5:V:217:LEU:HD12	5:V:217:LEU:HA	1.89	0.41
12:V:502:TA1:H141	12:V:502:TA1:C09	2.51	0.41
3:X:286:LEU:HB3	3:X:291:ILE:HD11	2.02	0.41
3:Y:212:ILE:HG23	3:Y:275:ILE:HD12	2.02	0.41
3:Y:240:ALA:O	3:Y:244:PHE:N	2.53	0.41
5:a:34:GLY:O	5:a:59:TYR:N	2.51	0.41
8:d:203:LYS:HE2	5:t:413:SER:HB3	2.01	0.41
7:g:27:LYS:HA	7:g:59:ILE:HG22	2.03	0.41
3:h:18:ASN:HD21	3:h:78:VAL:HG22	1.85	0.41
3:h:122:ILE:O	3:h:126:ALA:N	2.54	0.41
3:h:416:GLY:O	3:h:420:GLU:HG2	2.21	0.41
5:i:403:MET:HE2	5:i:403:MET:HB3	1.86	0.41
5:j:173:PRO:HA	5:j:380:ARG:NE	2.36	0.41
5:j:238:CYS:SG	5:j:318:ARG:NH1	2.94	0.41
3:m:31:GLN:NE2	3:m:35:GLN:O	2.54	0.41
3:m:352:LYS:HA	5:p:177:ASP:O	2.21	0.41
8:n:264:GLN:HB3	5:w:122:LYS:NZ	2.36	0.41
3:o:311:LYS:HB2	3:o:344:VAL:HG13	2.01	0.41
5:p:301:CYS:SG	5:p:377:MET:HE3	2.61	0.41
5:q:203:ASP:O	5:q:207:LEU:HD23	2.21	0.41
5:r:12:CYS:HB3	5:r:138:SER:HB2	2.03	0.41
5:r:16:ILE:HG22	5:r:226:ASN:CG	2.45	0.41
5:t:97:ALA:O	5:t:103:LYS:HD2	2.21	0.41
5:t:249:ASP:OD2	5:t:250:LEU:N	2.54	0.41
12:u:502:TA1:C12	12:u:502:TA1:H432	2.51	0.41
5:v:7:ILE:HB	5:v:135:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:x:36:ALA:HB1	6:x:46:VAL:HG11	2.03	0.41
6:x:79:ASN:HA	6:x:85:PHE:CZ	2.56	0.41
3:y:336:LYS:HE3	3:y:351:PHE:HE1	1.85	0.41
7:z:27:LYS:HA	7:z:59:ILE:HG22	2.03	0.41
3:5:47:ASP:HA	3:5:50:ASN:HB3	2.02	0.41
3:6:194:LEU:O	3:6:198:THR:HG22	2.20	0.41
5:8:285:THR:HB	5:8:287:PRO:HD2	2.02	0.41
12:8:502:TA1:H472	12:8:502:TA1:H021	1.75	0.41
3:E:143:GLY:O	3:E:147:SER:HB3	2.20	0.41
3:E:248:LEU:HD12	3:E:248:LEU:HA	1.89	0.41
3:F:200:VAL:HA	3:F:266:HIS:HB2	2.03	0.41
3:F:320:ARG:HG2	3:F:360:PRO:HD3	2.02	0.41
5:J:252:LYS:HA	5:J:255:VAL:HG12	2.02	0.41
5:K:164:MET:HE3	5:K:164:MET:HB2	1.77	0.41
5:K:277:GLY:O	5:K:280:GLN:HG2	2.20	0.41
3:M:121:ARG:O	3:M:125:LEU:HB2	2.20	0.41
3:M:333:ALA:O	3:M:337:THR:HG23	2.21	0.41
3:M:414:GLU:OE1	3:M:414:GLU:N	2.53	0.41
3:P:256:GLN:O	3:P:260:VAL:HG12	2.21	0.41
5:R:60:VAL:HG21	5:R:86:ARG:HG3	2.02	0.41
5:R:111:GLU:OE2	8:l:75:ARG:NH1	2.44	0.41
5:T:343:GLU:HG3	5:T:344:TRP:N	2.35	0.41
6:W:36:ALA:HB1	6:W:46:VAL:HG11	2.03	0.41
3:Y:331:SER:O	3:Y:334:THR:OG1	2.27	0.41
3:Z:285:GLN:HG3	3:e:56:THR:HA	2.03	0.41
3:Z:288:VAL:HG21	3:Z:327:ASP:CB	2.43	0.41
8:d:77:ASN:OD1	8:d:77:ASN:N	2.54	0.41
8:d:161:PHE:HB3	8:d:180:VAL:HG13	2.03	0.41
5:i:45:GLU:HG3	5:i:46:ARG:HG2	2.02	0.41
5:i:203:ASP:OD1	5:i:204:ASN:N	2.52	0.41
5:i:377:MET:HE2	5:i:377:MET:HB2	1.84	0.41
5:i:404:ASP:OD1	5:i:404:ASP:N	2.52	0.41
3:k:261:PRO:HG3	3:k:313:MET:HE2	2.02	0.41
8:l:77:ASN:OD1	8:l:77:ASN:N	2.54	0.41
8:l:143:ILE:HD12	8:l:143:ILE:HA	1.95	0.41
8:n:77:ASN:OD1	8:n:77:ASN:N	2.54	0.41
3:o:46:ASP:OD1	3:o:47:ASP:N	2.54	0.41
5:q:321:MET:HE2	5:q:363:MET:HE3	2.01	0.41
5:r:33:THR:OG1	5:r:35:THR:HG22	2.21	0.41
5:r:171:PRO:HB2	5:r:380:ARG:HH12	1.86	0.41
5:r:347:ASN:HD22	3:0:178:SER:HB2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:v:118:ASP:O	5:v:122:LYS:HB2	2.20	0.41
5:v:271:THR:O	5:v:365:ALA:N	2.49	0.41
5:w:385:PHE:HZ	5:w:408:PHE:HB3	1.85	0.41
3:y:121:ARG:O	3:y:124:LYS:HG3	2.20	0.41
3:y:182:VAL:HG12	3:y:182:VAL:O	2.20	0.41
3:0:279:GLU:OE1	3:0:279:GLU:N	2.50	0.41
3:1:3:GLU:HA	3:1:51:THR:HA	2.03	0.41
3:1:381:SER:O	3:1:384:ILE:HG23	2.19	0.41
8:2:77:ASN:OD1	8:2:77:ASN:N	2.54	0.41
7:3:27:LYS:HA	7:3:59:ILE:HG22	2.03	0.41
5:4:113:ILE:HG23	5:4:117:LEU:HD23	2.02	0.41
5:4:225:LEU:O	5:4:229:ILE:HG12	2.21	0.41
3:6:139:ASN:HB3	3:6:170:THR:HG22	2.02	0.41
3:6:152:LEU:HA	3:6:155:GLU:OE1	2.20	0.41
3:7:414:GLU:OE1	3:7:414:GLU:N	2.53	0.41
5:9:103:LYS:HB3	5:9:103:LYS:HE2	1.80	0.41
2:B:89:ASP:O	2:B:90:LEU:HD23	2.21	0.41
2:B:195:ARG:NH1	5:w:78:SER:O	2.36	0.41
2:B:523:SER:HB2	2:B:539:ALA:HB3	2.03	0.41
2:C:89:ASP:O	2:C:90:LEU:HD23	2.21	0.41
2:C:369:LEU:HD11	2:C:609:ARG:HD2	2.01	0.41
2:C:523:SER:HB2	2:C:539:ALA:HB3	2.03	0.41
3:F:329:ASN:HD22	5:8:208:TYR:HE2	1.67	0.41
3:G:151:SER:HB2	3:G:193:SER:HB2	2.02	0.41
3:G:238:LEU:HD11	3:G:378:ILE:HD11	2.02	0.41
3:G:304:LYS:HA	3:G:304:LYS:HD2	1.81	0.41
4:H:60:HIS:O	4:H:61:LEU:C	2.63	0.41
4:H:67:LYS:HA	3:k:439:SER:HA	2.02	0.41
5:J:253:LEU:HA	5:J:253:LEU:HD23	1.82	0.41
5:K:163:MET:HE2	5:K:197:ASP:HB3	2.02	0.41
5:K:334:GLN:O	5:K:338:SER:OG	2.26	0.41
5:K:346:PRO:HG2	3:L:394:LYS:HB3	2.03	0.41
5:O:161:ASP:OD1	5:O:161:ASP:N	2.53	0.41
5:R:284:LEU:HD23	5:R:284:LEU:HA	1.86	0.41
5:T:73:MET:SD	5:T:92:PHE:HB3	2.60	0.41
5:V:139:LEU:HD23	5:V:171:PRO:HD3	2.02	0.41
5:V:234:SER:CB	12:V:502:TA1:H401	2.50	0.41
3:Y:36:MET:HE3	3:Y:36:MET:HB3	1.88	0.41
5:b:98:GLY:N	3:e:254:GLU:OE2	2.53	0.41
7:c:27:LYS:HA	7:c:59:ILE:HG22	2.03	0.41
8:n:143:ILE:HD12	8:n:143:ILE:HA	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:o:5:ILE:HG12	3:o:132:LEU:HD11	2.03	0.41
3:o:164:LYS:HD3	3:o:164:LYS:HA	1.91	0.41
3:o:251:ASP:OD1	3:o:252:ILE:N	2.54	0.41
5:p:112:LEU:HD12	5:p:147:MET:HE1	2.02	0.41
5:q:72:THR:O	5:q:75:SER:OG	2.18	0.41
5:r:28:HIS:HA	5:r:43:GLN:OE1	2.21	0.41
3:s:338:LYS:HZ2	3:s:339:ARG:N	2.14	0.41
3:s:416:GLY:O	3:s:420:GLU:HG2	2.21	0.41
5:w:256:ASN:C	5:w:257:LEU:HD12	2.45	0.41
3:y:172:TYR:OH	3:y:391:LEU:HD22	2.19	0.41
3:0:12:ALA:HB3	3:0:140:ALA:HB2	2.02	0.41
3:0:91:GLN:O	3:0:93:ILE:HG13	2.20	0.41
3:0:110:ILE:O	3:0:113:GLU:HG2	2.21	0.41
3:0:246:GLY:HA2	3:0:357:TYR:CE2	2.55	0.41
3:1:392:ASP:OD2	3:1:425:LEU:HD23	2.21	0.41
8:2:161:PHE:HB3	8:2:180:VAL:HG13	2.03	0.41
5:4:158:GLU:HG3	5:4:159:TYR:CD2	2.55	0.41
3:7:297:GLU:OE2	3:7:299:ALA:N	2.47	0.41
3:7:387:ILE:HA	3:7:390:ARG:HG3	2.03	0.41
12:8:502:TA1:H472	12:8:502:TA1:C20	2.51	0.41
1:A:5:SER:H	2:C:411:PRO:HG3	1.85	0.41
2:B:369:LEU:HD11	2:B:609:ARG:HD2	2.01	0.41
2:B:469:LYS:NZ	3:6:84:ARG:HH21	2.18	0.41
2:B:491:GLY:HA3	2:B:512:PHE:HA	2.03	0.41
2:C:491:GLY:HA3	2:C:512:PHE:HA	2.03	0.41
3:E:154:LEU:HD23	3:E:154:LEU:HA	1.82	0.41
3:F:389:SER:HA	3:F:392:ASP:OD2	2.21	0.41
3:G:241:SER:HB2	3:G:250:VAL:H	1.85	0.41
5:I:19:LYS:NZ	5:I:227:HIS:HB2	2.36	0.41
5:I:46:ARG:HD3	5:I:46:ARG:HA	1.74	0.41
5:I:202:LEU:HD13	5:I:229:ILE:HG12	2.03	0.41
5:J:206:ALA:O	5:J:210:ILE:HG13	2.20	0.41
3:P:88:HIS:CD2	3:0:283:HIS:HB2	2.56	0.41
5:U:293:MET:HE1	5:U:317:PHE:CE2	2.56	0.41
5:b:371:SER:O	5:b:374:ILE:HG12	2.20	0.41
3:h:56:THR:HG23	3:h:58:ALA:H	1.85	0.41
3:h:413:MET:HE2	3:h:413:MET:HB3	1.95	0.41
5:p:174:LYS:HG2	5:p:205:GLU:OE2	2.21	0.41
5:p:347:ASN:O	3:y:181:VAL:HG23	2.21	0.41
5:q:283:ALA:O	5:q:288:GLU:HG3	2.21	0.41
3:s:301:MET:HE3	3:s:307:PRO:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:t:121:ARG:HH21	5:t:158:GLU:CD	2.29	0.41
5:u:226:ASN:OD1	11:u:501:GDP:N1	2.52	0.41
5:v:282:ARG:NH2	5:v:292:GLN:OE1	2.39	0.41
3:y:88:HIS:N	3:y:91:GLN:OE1	2.50	0.41
3:0:104:ALA:CB	3:0:411:GLU:HB2	2.51	0.41
3:0:187:SER:O	3:0:190:SER:OG	2.35	0.41
3:1:145:THR:O	3:1:149:LEU:HB3	2.20	0.41
7:3:38:THR:H	7:3:38:THR:HG1	1.47	0.41
3:6:145:THR:HB	9:6:501:GTP:O1B	2.21	0.41
3:6:310:GLY:HA3	3:6:383:ALA:HB2	2.03	0.41
3:7:246:GLY:HA2	3:7:357:TYR:CE2	2.56	0.41
5:8:182:PRO:O	5:8:186:THR:HG23	2.20	0.41
2:B:341:ASP:OD2	2:B:361:THR:HG21	2.21	0.41
2:B:373:ARG:NH2	6:x:46:VAL:O	2.51	0.41
2:B:383:LEU:H	2:B:383:LEU:HG	1.66	0.41
2:B:439:ARG:NH1	2:B:501:PHE:HZ	2.19	0.41
2:C:341:ASP:OD2	2:C:361:THR:HG21	2.21	0.41
2:C:383:LEU:H	2:C:383:LEU:HG	1.66	0.41
2:C:439:ARG:NH1	2:C:501:PHE:HZ	2.19	0.41
3:D:12:ALA:O	3:D:16:VAL:HG13	2.21	0.41
3:D:214:ARG:HD3	3:D:214:ARG:HA	1.87	0.41
3:D:268:MET:HE2	3:D:268:MET:HB3	1.78	0.41
3:E:55:GLU:OE1	3:E:55:GLU:N	2.53	0.41
3:E:172:TYR:CD1	3:E:173:PRO:HD2	2.56	0.41
3:G:2:ARG:HH21	3:G:47:ASP:CG	2.28	0.41
3:G:244:PHE:CE2	3:G:358:GLN:HG2	2.56	0.41
5:I:8:GLN:HG3	5:I:14:ASN:HA	2.02	0.41
5:I:326:VAL:O	5:I:330:MET:HG2	2.21	0.41
5:J:232:VAL:O	5:J:236:ILE:HG12	2.20	0.41
5:K:25:SER:O	5:K:30:ILE:HG12	2.21	0.41
5:K:271:THR:OG1	5:K:365:ALA:HB3	2.21	0.41
3:L:155:GLU:HG2	3:L:197:HIS:CE1	2.56	0.41
3:L:194:LEU:HD12	3:L:195:LEU:N	2.35	0.41
3:L:284:GLU:HG3	3:L:285:GLN:N	2.35	0.41
3:M:105:ARG:HG3	3:M:411:GLU:HG2	2.03	0.41
5:N:60:VAL:HG11	5:t:281:TYR:CD1	2.56	0.41
5:N:112:LEU:O	5:N:116:VAL:HG23	2.20	0.41
5:N:141:GLY:O	5:N:145:SER:OG	2.31	0.41
5:N:232:VAL:O	5:N:236:ILE:HG12	2.21	0.41
5:N:391:ARG:HD3	5:N:391:ARG:HA	1.90	0.41
5:O:182:PRO:O	5:O:186:THR:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:O:275:SER:OG	5:O:276:ARG:N	2.54	0.41
3:P:4:VAL:HG12	3:P:133:GLN:HB2	2.03	0.41
3:P:163:LYS:H	3:P:163:LYS:HG2	1.72	0.41
5:Q:21:TRP:CZ2	5:Q:63:ALA:HB2	2.55	0.41
5:R:8:GLN:CD	5:R:17:GLY:HA3	2.46	0.41
3:S:143:GLY:HA3	9:S:501:GTP:PB	2.61	0.41
5:T:86:ARG:NE	5:T:89:ASN:OD1	2.54	0.41
5:T:375:GLN:O	5:T:379:LYS:HG2	2.20	0.41
5:U:256:ASN:ND2	3:k:181:VAL:H	2.18	0.41
5:V:3:GLU:HB3	5:V:62:ARG:NH1	2.35	0.41
5:V:100:ASN:OD1	5:V:102:ALA:N	2.49	0.41
5:V:398:TYR:O	5:V:403:MET:HB2	2.20	0.41
3:X:251:ASP:O	3:X:255:PHE:N	2.53	0.41
3:X:288:VAL:HG11	3:X:327:ASP:OD1	2.21	0.41
3:Y:68:LEU:HD23	3:Y:69:ASP:N	2.36	0.41
3:Y:104:ALA:HB3	3:Y:411:GLU:HB3	2.01	0.41
3:Y:203:MET:C	3:Y:204:LEU:HD12	2.46	0.41
3:Y:298:PRO:HG3	3:Y:308:ARG:NE	2.32	0.41
3:Y:321:GLY:HA3	3:Y:372:GLN:O	2.21	0.41
3:Y:417:GLU:H	3:Y:417:GLU:CD	2.29	0.41
3:Z:30:ILE:HD13	3:Z:36:MET:HB3	2.03	0.41
5:a:174:LYS:HG3	5:a:175:VAL:HG23	2.03	0.41
5:b:249:ASP:O	5:b:252:LYS:HG2	2.21	0.41
3:f:111:GLY:HA2	3:f:149:LEU:HD21	2.03	0.41
5:i:118:ASP:O	5:i:122:LYS:HG3	2.21	0.41
5:j:361:LEU:HD21	12:j:502:TA1:H171	2.03	0.41
5:j:405:GLU:OE1	5:j:405:GLU:N	2.54	0.41
8:l:161:PHE:HB3	8:l:180:VAL:HG13	2.03	0.41
3:m:225:THR:O	3:m:229:ARG:HG3	2.20	0.41
8:n:161:PHE:HB3	8:n:180:VAL:HG13	2.03	0.41
3:o:326:LYS:HD3	5:q:220:PRO:HG2	2.02	0.41
3:o:395:PHE:CE1	3:o:422:ARG:HD3	2.56	0.41
3:o:396:ASP:OD1	3:o:422:ARG:NE	2.42	0.41
5:p:429:SER:N	5:p:435:GLU:OE2	2.54	0.41
5:q:19:LYS:HG3	5:q:226:ASN:HB2	2.02	0.41
5:q:107:THR:OG1	5:q:108:GLU:N	2.54	0.41
5:q:225:LEU:O	5:q:229:ILE:HG12	2.21	0.41
5:r:52:ASN:HD22	5:r:86:ARG:HH12	1.67	0.41
5:r:257:LEU:HD23	5:r:266:PHE:CZ	2.56	0.41
3:s:32:PRO:HA	3:s:86:LEU:HD21	2.02	0.41
3:s:253:THR:O	5:9:98:GLY:HA2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s:254:GLU:OE1	5:9:99:ASN:N	2.53	0.41
5:u:115:SER:O	5:u:119:VAL:HG23	2.21	0.41
5:u:379:LYS:HG2	5:u:419:VAL:HG21	2.01	0.41
5:v:395:LEU:HD11	5:v:405:GLU:OE2	2.21	0.41
5:w:263:LEU:HG	5:w:422:TYR:CE1	2.56	0.41
7:z:175:GLU:OE1	7:z:175:GLU:N	2.54	0.41
3:0:88:HIS:N	3:0:91:GLN:OE1	2.53	0.41
3:0:130:THR:OG1	3:0:131:GLY:N	2.54	0.41
3:0:183:GLU:O	3:0:187:SER:HB3	2.21	0.41
3:0:259:LEU:HD12	3:0:259:LEU:HA	1.92	0.41
3:1:246:GLY:HA2	3:1:357:TYR:CE2	2.56	0.41
3:1:377:MET:O	3:1:378:ILE:HD13	2.21	0.41
3:1:422:ARG:HA	3:1:422:ARG:HD2	1.89	0.41
5:4:356:ILE:HD13	5:4:356:ILE:HA	1.82	0.41
5:4:403:MET:HB3	5:4:403:MET:HE2	1.77	0.41
3:5:93:ILE:HD11	3:5:121:ARG:HG3	2.02	0.41
3:5:186:ASN:OD1	3:5:187:SER:N	2.54	0.41
3:5:292:THR:HB	3:5:319:TYR:OH	2.21	0.41
3:6:172:TYR:CG	3:6:173:PRO:HD2	2.55	0.41
3:7:3:GLU:N	3:7:3:GLU:OE1	2.53	0.41
5:8:330:MET:SD	5:8:349:VAL:HG11	2.61	0.41
5:8:343:GLU:N	5:8:343:GLU:OE2	2.54	0.41
3:F:409:VAL:HA	3:F:413:MET:O	2.21	0.41
5:I:12:CYS:SG	5:I:138:SER:OG	2.77	0.41
5:I:208:TYR:CE1	5:I:225:LEU:HD11	2.56	0.41
3:L:166:LYS:N	3:L:199:ASP:OD1	2.34	0.41
3:L:171:VAL:HA	3:L:204:LEU:O	2.21	0.41
3:L:184:PRO:O	3:L:187:SER:OG	2.36	0.41
3:L:388:PHE:CZ	3:L:425:LEU:HD22	2.57	0.41
5:N:202:LEU:HD22	5:N:229:ILE:HD12	2.03	0.41
5:N:245:GLN:O	3:f:11:GLN:NE2	2.54	0.41
5:O:125:GLU:HG3	8:n:65:SER:HB2	2.02	0.41
5:Q:324:LYS:CB	3:S:222:PRO:HG2	2.51	0.41
3:S:205:ASP:O	3:S:209:ILE:HG13	2.21	0.41
3:S:298:PRO:HA	3:S:301:MET:HG2	2.03	0.41
3:S:319:TYR:HB2	3:S:355:ILE:HD13	2.02	0.41
3:X:161:TYR:HA	8:2:137:ARG:HD3	2.03	0.41
3:X:321:GLY:HA3	3:X:372:GLN:O	2.20	0.41
3:Y:352:LYS:HD2	5:v:177:ASP:O	2.21	0.41
3:Y:386:GLU:HG3	3:Y:387:ILE:N	2.35	0.41
3:Z:298:PRO:HB3	3:Z:307:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:a:49:VAL:HG11	5:a:241:ARG:HG2	2.03	0.41
7:c:175:GLU:OE1	7:c:175:GLU:N	2.54	0.41
8:d:143:ILE:HD12	8:d:143:ILE:HA	1.95	0.41
3:e:69:ASP:OD1	3:e:70:LEU:N	2.54	0.41
3:f:21:TRP:CZ2	3:f:65:CYS:HB3	2.56	0.41
3:f:195:LEU:HD21	3:f:264:ARG:HD2	2.03	0.41
3:f:268:MET:HE2	3:f:268:MET:HB3	1.71	0.41
7:g:74:PRO:O	7:g:136:LEU:HB3	2.21	0.41
7:g:175:GLU:OE1	7:g:175:GLU:N	2.54	0.41
5:i:182:PRO:O	5:i:186:THR:HG23	2.21	0.41
3:k:5:ILE:HG12	3:k:132:LEU:HD11	2.02	0.41
3:k:284:GLU:HG3	3:k:285:GLN:N	2.36	0.41
3:o:413:MET:HG2	3:o:414:GLU:H	1.86	0.41
5:p:234:SER:O	5:p:241:ARG:NH2	2.54	0.41
5:p:422:TYR:O	5:p:426:GLN:HB2	2.20	0.41
3:s:288:VAL:HG21	3:s:327:ASP:HB2	2.02	0.41
5:t:152:ILE:HG12	5:t:164:MET:CE	2.51	0.41
5:u:293:MET:HG3	5:u:294:TRP:N	2.36	0.41
5:u:351:SER:HB2	3:5:179:THR:HG23	2.03	0.41
5:v:207:LEU:HB3	5:v:225:LEU:HG	2.03	0.41
5:v:392:LYS:HE3	5:v:405:GLU:OE1	2.21	0.41
5:w:115:SER:O	5:w:119:VAL:HG23	2.20	0.41
5:w:293:MET:HB2	5:w:367:PHE:HB2	2.02	0.41
3:y:147:SER:O	3:y:151:SER:OG	2.35	0.41
7:z:74:PRO:O	7:z:136:LEU:HB3	2.21	0.41
7:3:175:GLU:OE1	7:3:175:GLU:N	2.54	0.41
5:4:105:HIS:ND1	5:4:105:HIS:O	2.54	0.41
3:7:331:SER:O	3:7:335:ILE:HG12	2.20	0.41
5:8:188:SER:O	5:8:192:LEU:HG	2.21	0.41
5:9:3:GLU:H	5:9:3:GLU:CD	2.29	0.41
2:C:491:GLY:CA	2:C:512:PHE:HA	2.52	0.40
3:E:8:HIS:NE2	3:E:138:PHE:CD2	2.90	0.40
3:E:166:LYS:HE2	3:E:166:LYS:HB2	1.85	0.40
3:F:204:LEU:HD13	3:F:209:ILE:HD11	2.03	0.40
3:G:125:LEU:HD12	3:G:125:LEU:HA	1.89	0.40
5:I:257:LEU:HD23	5:I:257:LEU:HA	1.82	0.40
5:J:189:VAL:HG11	5:J:415:MET:SD	2.61	0.40
3:M:70:LEU:HB3	3:M:98:ASP:HA	2.02	0.40
3:M:163:LYS:HA	3:M:163:LYS:HD2	1.93	0.40
5:N:114:ASP:N	5:N:114:ASP:OD1	2.54	0.40
5:O:27:GLU:OE2	5:O:318:ARG:NH2	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:O:170:VAL:HG22	5:O:202:LEU:O	2.21	0.40
3:S:70:LEU:HB3	3:S:97:GLU:O	2.21	0.40
3:S:225:THR:O	3:S:229:ARG:HG3	2.21	0.40
5:U:215:LEU:HD23	5:U:215:LEU:HA	1.92	0.40
3:Y:209:ILE:HA	3:Y:212:ILE:HB	2.03	0.40
7:c:74:PRO:O	7:c:136:LEU:HB3	2.22	0.40
3:f:130:THR:OG1	3:f:131:GLY:N	2.54	0.40
3:f:259:LEU:HD12	3:f:314:ALA:HB3	2.02	0.40
3:h:51:THR:O	3:h:64:ARG:HD2	2.21	0.40
3:h:251:ASP:OD2	3:h:252:ILE:N	2.54	0.40
5:i:295:ASP:OD1	5:i:297:LYS:N	2.54	0.40
3:k:145:THR:O	3:k:146:GLY:C	2.63	0.40
3:k:335:ILE:HD13	3:k:335:ILE:HA	1.90	0.40
3:m:346:TRP:O	5:p:388:MET:HB3	2.21	0.40
5:p:174:LYS:HG3	5:p:175:VAL:HG23	2.03	0.40
5:r:116:VAL:O	5:r:120:VAL:HG23	2.21	0.40
5:t:203:ASP:O	5:t:207:LEU:HG	2.21	0.40
5:t:253:LEU:HD11	5:t:316:LEU:HD21	2.03	0.40
5:u:244:GLY:HA2	5:u:355:ASP:CG	2.46	0.40
5:v:113:ILE:O	5:v:117:LEU:HG	2.21	0.40
3:y:137:VAL:HG21	3:y:154:LEU:HD21	2.03	0.40
3:0:121:ARG:O	3:0:125:LEU:N	2.55	0.40
3:1:389:SER:O	3:1:392:ASP:HB2	2.20	0.40
8:2:143:ILE:HD12	8:2:143:ILE:HA	1.95	0.40
7:3:74:PRO:O	7:3:136:LEU:HB3	2.21	0.40
5:4:54:ALA:HB3	5:4:58:ARG:HB2	2.02	0.40
5:4:173:PRO:HD3	5:4:377:MET:HE1	2.03	0.40
3:6:52:PHE:C	3:6:64:ARG:HG2	2.46	0.40
3:7:288:VAL:HG21	3:7:327:ASP:CG	2.46	0.40
3:7:408:TYR:O	3:7:413:MET:HB2	2.21	0.40
5:8:100:ASN:ND2	5:8:103:LYS:HE3	2.36	0.40
5:8:285:THR:O	5:8:289:LEU:HD13	2.21	0.40
5:9:198:GLU:HB3	5:9:266:PHE:CE2	2.56	0.40
2:B:299:LEU:HD23	2:B:300:ALA:N	2.36	0.40
2:B:491:GLY:CA	2:B:512:PHE:HA	2.52	0.40
3:D:161:TYR:O	3:D:163:LYS:N	2.43	0.40
3:F:171:VAL:HA	3:F:204:LEU:O	2.20	0.40
3:G:172:TYR:CG	3:G:173:PRO:HD2	2.55	0.40
3:G:306:ASP:OD2	3:G:308:ARG:NH2	2.54	0.40
5:K:10:GLY:HA2	5:K:143:THR:OG1	2.21	0.40
3:M:191:THR:HA	3:M:194:LEU:HG	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:430:LYS:HE3	3:M:430:LYS:HB2	1.89	0.40
5:O:67:ASP:O	5:O:92:PHE:HA	2.21	0.40
5:O:75:SER:OG	5:O:76:VAL:N	2.54	0.40
5:Q:210:ILE:HD11	5:Q:297:LYS:O	2.21	0.40
5:Q:414:ASN:HA	5:Q:417:ASP:OD1	2.22	0.40
3:S:120:ASP:HB3	3:S:124:LYS:NZ	2.37	0.40
3:S:261:PRO:HG3	3:S:313:MET:HE2	2.03	0.40
3:X:161:TYR:HB3	3:X:164:LYS:HB3	2.03	0.40
3:Y:304:LYS:HA	3:Y:304:LYS:HD2	1.89	0.40
5:a:194:GLU:OE1	5:a:194:GLU:N	2.41	0.40
5:a:198:GLU:OE1	5:a:254:ALA:HB2	2.21	0.40
5:b:332:ASN:O	5:b:336:LYS:HG2	2.21	0.40
8:d:4:ASP:HA	8:d:223:LYS:NZ	2.37	0.40
3:f:91:GLN:HG2	3:f:121:ARG:NE	2.35	0.40
3:f:244:PHE:CE2	3:f:358:GLN:HG2	2.56	0.40
7:g:15:TYR:O	7:g:21:PRO:HB3	2.20	0.40
3:h:259:LEU:HD21	3:h:316:CYS:SG	2.62	0.40
3:k:102:ASN:H	3:k:144:GLY:HA3	1.86	0.40
8:l:4:ASP:HA	8:l:223:LYS:NZ	2.36	0.40
8:l:68:SER:HA	5:q:337:ASN:ND2	2.35	0.40
8:n:4:ASP:HA	8:n:223:LYS:NZ	2.36	0.40
3:o:155:GLU:HA	3:o:197:HIS:CD2	2.56	0.40
5:p:26:ASP:OD2	12:p:502:TA1:H331	2.21	0.40
5:q:101:TRP:CE3	5:q:187:LEU:HD23	2.56	0.40
3:s:234:VAL:HG13	3:s:376:CYS:SG	2.61	0.40
5:u:239:CYS:SG	5:u:248:ALA:N	2.93	0.40
5:w:295:ASP:OD1	5:w:296:ALA:N	2.54	0.40
7:z:15:TYR:O	7:z:21:PRO:HB3	2.20	0.40
7:z:118:ILE:HD11	3:0:431:ASP:OD1	2.21	0.40
8:2:4:ASP:HA	8:2:223:LYS:NZ	2.36	0.40
12:4:502:TA1:C09	12:4:502:TA1:H141	2.51	0.40
3:5:27:GLU:OE1	3:5:243:ARG:NH2	2.50	0.40
3:5:145:THR:HG23	3:5:149:LEU:HD22	2.02	0.40
3:5:419:SER:O	3:5:423:GLU:HG3	2.21	0.40
3:7:77:GLU:O	3:7:81:GLY:N	2.53	0.40
3:7:296:PHE:HZ	3:7:351:PHE:HE2	1.67	0.40
5:8:236:ILE:HD13	5:8:236:ILE:HA	1.85	0.40
5:9:198:GLU:HB3	5:9:266:PHE:HE2	1.86	0.40
2:B:399:SER:HG	2:B:401:TRP:NE1	2.19	0.40
2:C:530:THR:OG1	2:C:531:ASP:N	2.55	0.40
3:F:214:ARG:HD3	3:F:214:ARG:HA	1.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:119:LEU:HD11	3:G:156:ARG:HB3	2.04	0.40
3:G:408:TYR:O	3:G:413:MET:HB2	2.21	0.40
5:N:107:THR:HA	8:d:75:ARG:HH12	1.87	0.40
5:Q:2:ARG:NH2	3:S:71:GLU:HB2	2.37	0.40
5:T:338:SER:O	5:T:338:SER:OG	2.34	0.40
5:U:12:CYS:O	5:U:16:ILE:HG23	2.21	0.40
5:U:16:ILE:HG22	5:U:226:ASN:OD1	2.22	0.40
5:V:139:LEU:HB3	5:V:171:PRO:HD3	2.03	0.40
5:V:189:VAL:HG11	5:V:415:MET:HG2	2.03	0.40
5:V:323:THR:HG22	3:e:223:THR:HA	2.03	0.40
3:Y:262:TYR:OH	5:v:391:ARG:HG3	2.21	0.40
3:Y:268:MET:HG2	3:Y:380:ASN:HB2	2.04	0.40
3:Z:100:ALA:HA	5:j:252:LYS:HB3	2.02	0.40
5:a:201:VAL:HG22	5:a:266:PHE:O	2.20	0.40
5:b:108:GLU:HA	5:b:111:GLU:OE2	2.21	0.40
5:b:229:ILE:HA	5:b:232:VAL:HG22	2.04	0.40
3:e:219:ILE:HG13	3:e:221:ARG:H	1.86	0.40
3:e:259:LEU:HD12	3:e:314:ALA:HB3	2.02	0.40
3:f:88:HIS:HA	3:o:283:HIS:HD2	1.86	0.40
3:k:123:ARG:HD2	3:k:123:ARG:HA	1.82	0.40
8:l:113:ARG:HH11	8:l:209:ARG:NH2	2.20	0.40
8:l:115:ASN:HD21	8:l:166:ARG:HG2	1.85	0.40
8:n:113:ARG:HH11	8:n:209:ARG:NH2	2.19	0.40
5:p:273:LEU:HD23	5:p:273:LEU:HA	1.92	0.40
5:q:66:MET:HE2	5:q:66:MET:HB2	1.82	0.40
12:q:502:TA1:C20	12:q:502:TA1:H472	2.52	0.40
3:s:208:ALA:O	3:s:212:ILE:HG13	2.21	0.40
3:s:346:TRP:HB2	5:9:388:MET:HA	2.03	0.40
5:u:249:ASP:O	5:u:252:LYS:HG2	2.21	0.40
3:y:190:SER:O	3:y:193:SER:OG	2.32	0.40
3:0:174:SER:HA	3:0:205:ASP:OD1	2.22	0.40
3:1:46:ASP:C	3:1:48:ALA:H	2.28	0.40
3:1:269:LEU:HD21	3:1:305:CYS:HB3	2.03	0.40
8:2:113:ARG:HH11	8:2:209:ARG:NH2	2.19	0.40
5:4:172:SER:HB3	5:4:175:VAL:O	2.21	0.40
3:5:244:PHE:CE2	3:5:358:GLN:HG2	2.56	0.40
3:6:21:TRP:CZ2	3:6:65:CYS:HB3	2.56	0.40
3:6:22:GLU:OE1	3:6:83:TYR:OH	2.25	0.40
3:7:234:VAL:HG13	3:7:376:CYS:SG	2.61	0.40
5:8:336:LYS:HE3	5:8:336:LYS:HB3	1.86	0.40
5:9:165:LEU:HD13	5:9:198:GLU:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:9:416:ASN:HA	5:9:419:VAL:HG12	2.02	0.40
2:B:530:THR:OG1	2:B:531:ASP:N	2.55	0.40
2:B:607:LYS:HD3	2:B:608:GLN:N	2.36	0.40
2:C:299:LEU:HD23	2:C:300:ALA:N	2.36	0.40
2:C:399:SER:HG	2:C:401:TRP:NE1	2.20	0.40
3:E:96:LYS:NZ	5:I:1:MET:HG2	2.36	0.40
3:F:311:LYS:H	3:F:382:THR:CG2	2.33	0.40
12:J:502:TA1:H192	12:J:502:TA1:H142	2.03	0.40
3:L:32:PRO:HB3	3:L:83:TYR:CE1	2.56	0.40
3:M:287:SER:O	3:M:291:ILE:HG12	2.22	0.40
5:N:3:GLU:HG3	5:N:62:ARG:NH1	2.36	0.40
5:N:69:GLU:C	5:N:71:GLY:H	2.30	0.40
5:N:213:ARG:NH2	5:N:297:LYS:HE2	2.36	0.40
5:N:382:SER:HB2	5:N:415:MET:HE3	2.03	0.40
5:O:212:PHE:CE2	3:k:326:LYS:HE2	2.57	0.40
5:Q:8:GLN:NE2	5:Q:17:GLY:HA3	2.37	0.40
5:Q:236:ILE:HD11	5:Q:368:ILE:HD11	2.03	0.40
5:Q:374:ILE:HD12	5:Q:374:ILE:HA	1.91	0.40
5:T:415:MET:HE2	5:T:415:MET:HB3	1.92	0.40
5:V:214:THR:HG21	5:V:273:LEU:HB2	2.03	0.40
3:X:107:HIS:CD2	3:X:152:LEU:HB2	2.56	0.40
3:X:386:GLU:O	3:X:389:SER:OG	2.34	0.40
3:Y:415:GLU:O	3:Y:418:PHE:HB2	2.21	0.40
3:Y:416:GLY:C	3:Y:420:GLU:HG2	2.46	0.40
3:Z:320:ARG:HG2	3:Z:360:PRO:HD3	2.04	0.40
5:a:101:TRP:HZ3	5:a:106:TYR:HE1	1.68	0.40
5:a:185:ALA:O	5:a:189:VAL:HG13	2.21	0.40
5:a:361:LEU:HD21	12:a:502:TA1:H171	2.04	0.40
5:b:398:TYR:O	5:b:403:MET:HB2	2.21	0.40
3:f:333:ALA:O	3:f:337:THR:HG23	2.21	0.40
3:h:22:GLU:OE1	3:h:83:TYR:OH	2.25	0.40
3:h:130:THR:OG1	3:h:131:GLY:N	2.54	0.40
12:i:502:TA1:H021	12:i:502:TA1:H472	1.76	0.40
5:j:7:ILE:HB	5:j:135:VAL:HG12	2.03	0.40
5:j:27:GLU:OE1	5:j:241:ARG:NH1	2.54	0.40
5:j:234:SER:OG	12:j:502:TA1:H401	2.21	0.40
3:o:345:ASP:OD1	3:o:346:TRP:N	2.54	0.40
5:p:70:PRO:HD3	5:p:93:GLY:O	2.22	0.40
5:p:154:LYS:O	5:p:158:GLU:HG3	2.22	0.40
5:p:209:ASP:HB3	5:p:213:ARG:NH1	2.37	0.40
5:q:391:ARG:HD3	5:q:391:ARG:HA	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:r:252:LYS:HA	5:r:255:VAL:HG12	2.04	0.40
3:s:70:LEU:HD21	3:s:149:LEU:HD21	2.04	0.40
5:t:272:PRO:HD3	5:t:364:SER:HA	2.03	0.40
5:v:180:VAL:HG22	5:v:183:TYR:HB2	2.04	0.40
5:w:361:LEU:HD21	12:w:502:TA1:H171	2.04	0.40
3:y:384:ILE:HD12	3:y:384:ILE:HA	1.92	0.40
3:5:156:ARG:HA	3:5:159:VAL:HG22	2.04	0.40
3:5:194:LEU:HD12	3:5:195:LEU:N	2.36	0.40
3:5:372:GLN:OE1	3:5:372:GLN:N	2.55	0.40
3:7:30:ILE:HD13	3:7:36:MET:HB3	2.02	0.40
3:7:416:GLY:O	3:7:420:GLU:HG2	2.22	0.40
1:A:140:LEU:HD23	1:A:140:LEU:HA	1.91	0.40
2:C:607:LYS:HD3	2:C:608:GLN:N	2.36	0.40
3:D:194:LEU:O	3:D:198:THR:HG22	2.21	0.40
3:D:260:VAL:HG13	3:D:265:ILE:O	2.22	0.40
3:E:105:ARG:CZ	3:E:110:ILE:HD11	2.51	0.40
3:E:139:ASN:OD1	3:E:140:ALA:N	2.53	0.40
3:F:228:ASN:OD1	9:F:501:GTP:N1	2.49	0.40
3:G:360:PRO:O	3:G:370:LYS:NZ	2.53	0.40
5:J:337:ASN:HB3	5:J:340:TYR:CD2	2.57	0.40
5:K:12:CYS:HB3	5:K:138:SER:HB3	2.03	0.40
5:K:167:PHE:CZ	5:K:233:MET:HG2	2.56	0.40
5:K:293:MET:HG3	5:K:294:TRP:N	2.35	0.40
3:M:326:LYS:HB3	3:M:326:LYS:HE3	1.84	0.40
5:O:258:ILE:HG13	5:O:258:ILE:O	2.22	0.40
5:T:4:ILE:O	5:T:62:ARG:HD3	2.20	0.40
5:T:203:ASP:O	5:T:207:LEU:HG	2.21	0.40
5:U:301:CYS:HB2	5:U:377:MET:HE2	2.04	0.40
5:V:66:MET:SD	5:V:116:VAL:HG21	2.61	0.40
5:V:222:PHE:HB3	11:V:501:GDP:O6	2.22	0.40
5:V:309:ARG:NE	5:V:341:PHE:O	2.55	0.40
3:X:96:LYS:HB2	5:i:129:CYS:SG	2.61	0.40
3:Z:392:ASP:HB3	3:Z:422:ARG:HH12	1.87	0.40
5:a:137:HIS:CE1	5:a:148:GLY:HA3	2.50	0.40
8:d:113:ARG:HH11	8:d:209:ARG:NH2	2.20	0.40
3:f:88:HIS:HA	3:o:283:HIS:CD2	2.57	0.40
3:f:223:THR:C	3:f:225:THR:H	2.30	0.40
3:k:321:GLY:HA3	3:k:372:GLN:O	2.21	0.40
5:p:279:GLN:HG3	12:p:502:TA1:O07	2.22	0.40
5:q:117:LEU:HA	5:q:120:VAL:HG22	2.04	0.40
5:q:292:GLN:O	5:q:298:ASN:ND2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:q:415:MET:HB3	5:q:415:MET:HE2	1.87	0.40
5:r:212:PHE:HD2	5:r:213:ARG:HD2	1.87	0.40
5:r:403:MET:HE2	5:r:403:MET:HB3	1.96	0.40
3:s:139:ASN:OD1	3:s:140:ALA:N	2.54	0.40
3:s:185:TYR:O	3:s:189:LEU:HG	2.21	0.40
3:s:214:ARG:HH21	3:s:222:PRO:HD3	1.86	0.40
3:s:311:LYS:HD2	3:s:342:GLN:HB3	2.04	0.40
5:t:236:ILE:HD13	5:t:236:ILE:HA	1.88	0.40
5:v:234:SER:OG	12:v:502:TA1:H401	2.21	0.40
5:v:388:MET:HE2	5:v:388:MET:HB3	1.96	0.40
3:y:214:ARG:NH1	3:y:220:GLU:HA	2.36	0.40
3:y:225:THR:O	3:y:229:ARG:HG3	2.21	0.40
3:0:139:ASN:ND2	3:0:146:GLY:O	2.43	0.40
3:1:329:ASN:OD1	5:4:175:VAL:HG11	2.22	0.40
3:6:109:THR:OG1	3:6:110:ILE:HG13	2.22	0.40
3:6:305:CYS:SG	3:6:384:ILE:HA	2.61	0.40
3:7:145:THR:O	3:7:149:LEU:HB3	2.21	0.40
5:8:388:MET:HE2	5:8:388:MET:HB3	1.88	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	173/240 (72%)	150 (87%)	21 (12%)	2 (1%)	10	41
2	B	615/633 (97%)	541 (88%)	72 (12%)	2 (0%)	36	65
2	C	615/633 (97%)	541 (88%)	72 (12%)	2 (0%)	36	65
3	0	434/451 (96%)	408 (94%)	26 (6%)	0	100	100
3	1	434/451 (96%)	409 (94%)	25 (6%)	0	100	100
3	5	434/451 (96%)	402 (93%)	32 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	6	424/451 (94%)	398 (94%)	26 (6%)	0	100	100
3	7	424/451 (94%)	401 (95%)	23 (5%)	0	100	100
3	D	424/451 (94%)	396 (93%)	28 (7%)	0	100	100
3	E	424/451 (94%)	393 (93%)	31 (7%)	0	100	100
3	F	424/451 (94%)	395 (93%)	29 (7%)	0	100	100
3	G	424/451 (94%)	400 (94%)	24 (6%)	0	100	100
3	L	427/451 (95%)	399 (93%)	28 (7%)	0	100	100
3	M	424/451 (94%)	394 (93%)	30 (7%)	0	100	100
3	P	424/451 (94%)	394 (93%)	30 (7%)	0	100	100
3	S	424/451 (94%)	389 (92%)	35 (8%)	0	100	100
3	X	424/451 (94%)	398 (94%)	26 (6%)	0	100	100
3	Y	424/451 (94%)	393 (93%)	31 (7%)	0	100	100
3	Z	434/451 (96%)	406 (94%)	28 (6%)	0	100	100
3	e	434/451 (96%)	411 (95%)	23 (5%)	0	100	100
3	f	427/451 (95%)	397 (93%)	30 (7%)	0	100	100
3	h	424/451 (94%)	399 (94%)	25 (6%)	0	100	100
3	k	427/451 (95%)	391 (92%)	36 (8%)	0	100	100
3	m	434/451 (96%)	408 (94%)	26 (6%)	0	100	100
3	o	434/451 (96%)	407 (94%)	27 (6%)	0	100	100
3	s	424/451 (94%)	398 (94%)	26 (6%)	0	100	100
3	y	434/451 (96%)	413 (95%)	21 (5%)	0	100	100
4	H	133/137 (97%)	115 (86%)	18 (14%)	0	100	100
5	4	426/443 (96%)	400 (94%)	26 (6%)	0	100	100
5	8	426/443 (96%)	400 (94%)	25 (6%)	1 (0%)	43	72
5	9	426/443 (96%)	399 (94%)	27 (6%)	0	100	100
5	I	426/443 (96%)	404 (95%)	22 (5%)	0	100	100
5	J	426/443 (96%)	404 (95%)	22 (5%)	0	100	100
5	K	426/443 (96%)	398 (93%)	28 (7%)	0	100	100
5	N	426/443 (96%)	403 (95%)	23 (5%)	0	100	100
5	O	426/443 (96%)	405 (95%)	21 (5%)	0	100	100
5	Q	426/443 (96%)	397 (93%)	29 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	R	426/443 (96%)	396 (93%)	30 (7%)	0	100	100
5	T	426/443 (96%)	400 (94%)	26 (6%)	0	100	100
5	U	426/443 (96%)	396 (93%)	30 (7%)	0	100	100
5	V	426/443 (96%)	396 (93%)	30 (7%)	0	100	100
5	a	426/443 (96%)	406 (95%)	20 (5%)	0	100	100
5	b	426/443 (96%)	398 (93%)	28 (7%)	0	100	100
5	i	426/443 (96%)	397 (93%)	29 (7%)	0	100	100
5	j	426/443 (96%)	399 (94%)	27 (6%)	0	100	100
5	p	435/443 (98%)	414 (95%)	21 (5%)	0	100	100
5	q	435/443 (98%)	415 (95%)	20 (5%)	0	100	100
5	r	435/443 (98%)	418 (96%)	17 (4%)	0	100	100
5	t	435/443 (98%)	416 (96%)	19 (4%)	0	100	100
5	u	426/443 (96%)	395 (93%)	31 (7%)	0	100	100
5	v	426/443 (96%)	393 (92%)	33 (8%)	0	100	100
5	w	426/443 (96%)	405 (95%)	21 (5%)	0	100	100
6	W	84/86 (98%)	69 (82%)	15 (18%)	0	100	100
6	x	84/86 (98%)	69 (82%)	15 (18%)	0	100	100
7	3	185/190 (97%)	170 (92%)	15 (8%)	0	100	100
7	c	185/190 (97%)	170 (92%)	15 (8%)	0	100	100
7	g	185/190 (97%)	170 (92%)	15 (8%)	0	100	100
7	z	185/190 (97%)	170 (92%)	15 (8%)	0	100	100
8	2	286/307 (93%)	268 (94%)	18 (6%)	0	100	100
8	d	286/307 (93%)	268 (94%)	18 (6%)	0	100	100
8	l	286/307 (93%)	268 (94%)	18 (6%)	0	100	100
8	n	286/307 (93%)	267 (93%)	19 (7%)	0	100	100
All	All	24113/25259 (96%)	22489 (93%)	1617 (7%)	7 (0%)	100	100

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	372	CYS
2	C	372	CYS
5	8	143	THR

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Mol	Chain	Res	Type
1	A	22	MET
2	B	411	PRO
2	C	411	PRO
1	A	71	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	150/206 (73%)	150 (100%)	0	100	100
2	B	505/517 (98%)	467 (92%)	38 (8%)	12	39
2	C	505/517 (98%)	467 (92%)	38 (8%)	12	39
3	0	366/374 (98%)	366 (100%)	0	100	100
3	1	366/374 (98%)	365 (100%)	1 (0%)	86	83
3	5	366/374 (98%)	366 (100%)	0	100	100
3	6	361/374 (96%)	360 (100%)	1 (0%)	86	83
3	7	361/374 (96%)	361 (100%)	0	100	100
3	D	361/374 (96%)	361 (100%)	0	100	100
3	E	361/374 (96%)	361 (100%)	0	100	100
3	F	361/374 (96%)	361 (100%)	0	100	100
3	G	361/374 (96%)	361 (100%)	0	100	100
3	L	363/374 (97%)	363 (100%)	0	100	100
3	M	361/374 (96%)	361 (100%)	0	100	100
3	P	361/374 (96%)	361 (100%)	0	100	100
3	S	361/374 (96%)	361 (100%)	0	100	100
3	X	361/374 (96%)	361 (100%)	0	100	100
3	Y	361/374 (96%)	361 (100%)	0	100	100
3	Z	366/374 (98%)	365 (100%)	1 (0%)	86	83
3	e	366/374 (98%)	366 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	f	363/374 (97%)	363 (100%)	0	100	100
3	h	361/374 (96%)	360 (100%)	1 (0%)	86	83
3	k	363/374 (97%)	362 (100%)	1 (0%)	86	83
3	m	366/374 (98%)	366 (100%)	0	100	100
3	o	366/374 (98%)	365 (100%)	1 (0%)	86	83
3	s	361/374 (96%)	361 (100%)	0	100	100
3	y	366/374 (98%)	366 (100%)	0	100	100
4	H	119/121 (98%)	119 (100%)	0	100	100
5	4	368/379 (97%)	368 (100%)	0	100	100
5	8	368/379 (97%)	367 (100%)	1 (0%)	86	83
5	9	368/379 (97%)	368 (100%)	0	100	100
5	I	368/379 (97%)	367 (100%)	1 (0%)	86	83
5	J	368/379 (97%)	368 (100%)	0	100	100
5	K	368/379 (97%)	367 (100%)	1 (0%)	86	83
5	N	368/379 (97%)	368 (100%)	0	100	100
5	O	368/379 (97%)	368 (100%)	0	100	100
5	Q	368/379 (97%)	368 (100%)	0	100	100
5	R	368/379 (97%)	368 (100%)	0	100	100
5	T	368/379 (97%)	368 (100%)	0	100	100
5	U	368/379 (97%)	368 (100%)	0	100	100
5	V	368/379 (97%)	368 (100%)	0	100	100
5	a	368/379 (97%)	368 (100%)	0	100	100
5	b	368/379 (97%)	368 (100%)	0	100	100
5	i	368/379 (97%)	368 (100%)	0	100	100
5	j	368/379 (97%)	368 (100%)	0	100	100
5	p	375/379 (99%)	374 (100%)	1 (0%)	86	83
5	q	375/379 (99%)	375 (100%)	0	100	100
5	r	375/379 (99%)	375 (100%)	0	100	100
5	t	375/379 (99%)	373 (100%)	2 (0%)	81	80
5	u	368/379 (97%)	368 (100%)	0	100	100
5	v	368/379 (97%)	368 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	w	368/379 (97%)	368 (100%)	0	100	100
6	W	77/77 (100%)	70 (91%)	7 (9%)	9	33
6	x	77/77 (100%)	70 (91%)	7 (9%)	9	33
7	3	173/176 (98%)	158 (91%)	15 (9%)	9	34
7	c	173/176 (98%)	158 (91%)	15 (9%)	9	34
7	g	173/176 (98%)	158 (91%)	15 (9%)	9	34
7	z	173/176 (98%)	158 (91%)	15 (9%)	9	34
8	2	244/258 (95%)	220 (90%)	24 (10%)	7	31
8	d	244/258 (95%)	220 (90%)	24 (10%)	7	31
8	l	244/258 (95%)	220 (90%)	24 (10%)	7	31
8	n	244/258 (95%)	220 (90%)	24 (10%)	7	31
All	All	20671/21323 (97%)	20413 (99%)	258 (1%)	61	73

All (258) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	30	ILE
2	B	36	SER
2	B	48	SER
2	B	59	VAL
2	B	94	GLN
2	B	103	LYS
2	B	104	VAL
2	B	189	THR
2	B	231	THR
2	B	245	THR
2	B	308	THR
2	B	331	LYS
2	B	342	LYS
2	B	355	VAL
2	B	391	THR
2	B	399	SER
2	B	402	SER
2	B	405	LYS
2	B	415	LYS
2	B	416	ILE
2	B	421	ASN
2	B	425	GLN

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Mol	Chain	Res	Type
2	B	433	SER
2	B	440	ILE
2	B	446	GLU
2	B	461	LEU
2	B	464	SER
2	B	465	MET
2	B	467	ASP
2	B	502	LYS
2	B	516	VAL
2	B	526	VAL
2	B	538	ASP
2	B	569	VAL
2	B	595	SER
2	B	603	VAL
2	B	611	VAL
2	B	621	ILE
2	C	30	ILE
2	C	36	SER
2	C	48	SER
2	C	59	VAL
2	C	94	GLN
2	C	103	LYS
2	C	104	VAL
2	C	189	THR
2	C	231	THR
2	C	245	THR
2	C	308	THR
2	C	331	LYS
2	C	342	LYS
2	C	355	VAL
2	C	391	THR
2	C	399	SER
2	C	402	SER
2	C	405	LYS
2	C	415	LYS
2	C	416	ILE
2	C	421	ASN
2	C	425	GLN
2	C	433	SER
2	C	440	ILE
2	C	446	GLU
2	C	461	LEU

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Mol	Chain	Res	Type
2	C	464	SER
2	C	465	MET
2	C	467	ASP
2	C	502	LYS
2	C	516	VAL
2	C	526	VAL
2	C	538	ASP
2	C	569	VAL
2	C	595	SER
2	C	603	VAL
2	C	611	VAL
2	C	621	ILE
5	I	5	VAL
5	K	5	VAL
6	W	8	LYS
6	W	21	THR
6	W	23	ILE
6	W	62	GLN
6	W	65	LEU
6	W	80	GLU
6	W	86	THR
3	Z	292	THR
7	c	29	VAL
7	c	38	THR
7	c	49	ILE
7	c	55	SER
7	c	68	THR
7	c	97	LYS
7	c	99	VAL
7	c	110	SER
7	c	124	ARG
7	c	164	ARG
7	c	173	SER
7	c	174	GLU
7	c	175	GLU
7	c	180	GLU
7	c	187	ILE
8	d	8	SER
8	d	12	SER
8	d	13	THR
8	d	17	VAL
8	d	22	LYS

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Mol	Chain	Res	Type
8	d	30	SER
8	d	39	THR
8	d	42	SER
8	d	53	ASP
8	d	79	THR
8	d	86	ASP
8	d	111	LYS
8	d	114	GLU
8	d	150	GLU
8	d	168	THR
8	d	180	VAL
8	d	189	SER
8	d	208	THR
8	d	225	VAL
8	d	227	SER
8	d	233	GLU
8	d	269	CYS
8	d	287	ASP
8	d	288	ASP
7	g	29	VAL
7	g	38	THR
7	g	49	ILE
7	g	55	SER
7	g	68	THR
7	g	97	LYS
7	g	99	VAL
7	g	110	SER
7	g	124	ARG
7	g	164	ARG
7	g	173	SER
7	g	174	GLU
7	g	175	GLU
7	g	180	GLU
7	g	187	ILE
3	h	227	LEU
3	k	235	ILE
8	l	8	SER
8	l	12	SER
8	l	13	THR
8	l	17	VAL
8	l	22	LYS
8	l	30	SER

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Mol	Chain	Res	Type
8	l	39	THR
8	l	42	SER
8	l	53	ASP
8	l	79	THR
8	l	86	ASP
8	l	111	LYS
8	l	114	GLU
8	l	150	GLU
8	l	168	THR
8	l	180	VAL
8	l	189	SER
8	l	208	THR
8	l	225	VAL
8	l	227	SER
8	l	233	GLU
8	l	269	CYS
8	l	287	ASP
8	l	288	ASP
8	n	8	SER
8	n	12	SER
8	n	13	THR
8	n	17	VAL
8	n	22	LYS
8	n	30	SER
8	n	39	THR
8	n	42	SER
8	n	53	ASP
8	n	79	THR
8	n	86	ASP
8	n	111	LYS
8	n	114	GLU
8	n	150	GLU
8	n	168	THR
8	n	180	VAL
8	n	189	SER
8	n	208	THR
8	n	225	VAL
8	n	227	SER
8	n	233	GLU
8	n	269	CYS
8	n	287	ASP
8	n	288	ASP

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Mol	Chain	Res	Type
3	o	182	VAL
5	p	180	VAL
5	t	263	LEU
5	t	418	LEU
6	x	8	LYS
6	x	21	THR
6	x	23	ILE
6	x	62	GLN
6	x	65	LEU
6	x	80	GLU
6	x	86	THR
7	z	29	VAL
7	z	38	THR
7	z	49	ILE
7	z	55	SER
7	z	68	THR
7	z	97	LYS
7	z	99	VAL
7	z	110	SER
7	z	124	ARG
7	z	164	ARG
7	z	173	SER
7	z	174	GLU
7	z	175	GLU
7	z	180	GLU
7	z	187	ILE
3	1	209	ILE
8	2	8	SER
8	2	12	SER
8	2	13	THR
8	2	17	VAL
8	2	22	LYS
8	2	30	SER
8	2	39	THR
8	2	42	SER
8	2	53	ASP
8	2	79	THR
8	2	86	ASP
8	2	111	LYS
8	2	114	GLU
8	2	150	GLU
8	2	168	THR

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Mol	Chain	Res	Type
8	2	180	VAL
8	2	189	SER
8	2	208	THR
8	2	225	VAL
8	2	227	SER
8	2	233	GLU
8	2	269	CYS
8	2	287	ASP
8	2	288	ASP
7	3	29	VAL
7	3	38	THR
7	3	49	ILE
7	3	55	SER
7	3	68	THR
7	3	97	LYS
7	3	99	VAL
7	3	110	SER
7	3	124	ARG
7	3	164	ARG
7	3	173	SER
7	3	174	GLU
7	3	175	GLU
7	3	180	GLU
7	3	187	ILE
3	6	275	ILE
5	8	180	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (370) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	2	GLN
1	A	122	GLN
1	A	193	ASN
1	A	197	GLN
2	B	157	ASN
2	B	170	ASN
2	B	412	GLN
2	B	459	GLN
2	B	468	HIS
2	B	557	ASN
2	C	157	ASN
2	C	170	ASN

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Mol	Chain	Res	Type
2	C	412	GLN
2	C	459	GLN
2	C	468	HIS
2	C	557	ASN
3	D	8	HIS
3	D	15	GLN
3	D	28	HIS
3	D	31	GLN
3	D	61	HIS
3	D	102	ASN
3	D	293	ASN
3	D	329	ASN
3	D	393	HIS
3	E	101	ASN
3	E	107	HIS
3	E	206	ASN
3	E	293	ASN
3	E	356	ASN
3	F	226	ASN
3	F	293	ASN
3	G	31	GLN
3	G	101	ASN
3	G	107	HIS
3	G	133	GLN
3	G	256	GLN
3	G	283	HIS
3	G	356	ASN
4	H	99	ASN
4	H	110	GLN
4	H	133	ASN
5	I	6	HIS
5	I	11	GLN
5	I	94	GLN
5	I	131	GLN
5	I	195	ASN
5	I	264	HIS
5	I	292	GLN
5	I	298	ASN
5	I	334	GLN
5	J	8	GLN
5	J	48	ASN
5	J	100	ASN

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Mol	Chain	Res	Type
5	J	416	ASN
5	K	11	GLN
5	K	14	ASN
5	K	99	ASN
5	K	227	HIS
5	K	279	GLN
5	K	347	ASN
5	K	426	GLN
3	L	8	HIS
3	L	18	ASN
3	L	61	HIS
3	L	91	GLN
3	L	128	ASN
3	L	197	HIS
3	L	329	ASN
3	L	406	HIS
3	M	8	HIS
3	M	18	ASN
3	M	31	GLN
3	M	91	GLN
3	M	101	ASN
3	M	107	HIS
3	M	128	ASN
3	M	206	ASN
3	M	342	GLN
3	M	380	ASN
5	N	6	HIS
5	N	37	HIS
5	N	226	ASN
5	N	245	GLN
5	N	264	HIS
5	N	280	GLN
5	N	298	ASN
5	N	329	GLN
5	N	334	GLN
5	O	11	GLN
5	O	37	HIS
5	O	48	ASN
5	O	89	ASN
5	O	131	GLN
3	P	31	GLN
3	P	88	HIS

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Mol	Chain	Res	Type
3	P	133	GLN
3	P	226	ASN
3	P	266	HIS
5	Q	14	ASN
5	Q	83	GLN
5	Q	137	HIS
5	Q	298	ASN
5	Q	334	GLN
5	R	11	GLN
5	R	89	ASN
5	R	131	GLN
5	R	298	ASN
5	R	426	GLN
3	S	8	HIS
3	S	11	GLN
3	S	18	ASN
3	S	91	GLN
3	S	101	ASN
3	S	206	ASN
3	S	293	ASN
3	S	342	GLN
3	S	380	ASN
5	T	6	HIS
5	T	14	ASN
5	T	195	ASN
5	T	245	GLN
5	T	256	ASN
5	T	298	ASN
5	T	347	ASN
5	T	348	ASN
5	U	6	HIS
5	U	37	HIS
5	U	131	GLN
5	U	256	ASN
5	U	264	HIS
5	U	280	GLN
5	U	298	ASN
5	U	329	GLN
5	U	348	ASN
5	U	414	ASN
5	V	8	GLN
5	V	48	ASN

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Mol	Chain	Res	Type
5	V	89	ASN
5	V	94	GLN
5	V	131	GLN
5	V	137	HIS
5	V	195	ASN
5	V	291	GLN
5	V	298	ASN
5	V	334	GLN
5	V	335	ASN
5	V	348	ASN
6	W	62	GLN
6	W	79	ASN
3	X	8	HIS
3	X	176	GLN
3	X	256	GLN
3	X	380	ASN
3	X	406	HIS
3	Y	11	GLN
3	Y	342	GLN
3	Y	380	ASN
3	Y	393	HIS
3	Y	406	HIS
3	Z	18	ASN
3	Z	31	GLN
3	Z	176	GLN
3	Z	249	ASN
5	a	8	GLN
5	a	48	ASN
5	a	137	HIS
5	a	227	HIS
5	a	264	HIS
5	a	291	GLN
5	a	347	ASN
5	b	8	GLN
5	b	105	HIS
5	b	256	ASN
5	b	264	HIS
5	b	335	ASN
5	b	347	ASN
5	b	348	ASN
5	b	416	ASN
7	c	31	ASN

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Mol	Chain	Res	Type
7	c	52	GLN
7	c	66	ASN
7	c	155	GLN
8	d	155	HIS
8	d	197	GLN
8	d	247	ASN
3	e	50	ASN
3	e	186	ASN
3	e	256	GLN
3	e	293	ASN
3	e	329	ASN
3	e	380	ASN
3	f	15	GLN
3	f	91	GLN
3	f	102	ASN
3	f	293	ASN
3	f	356	ASN
3	f	380	ASN
7	g	155	GLN
3	h	18	ASN
3	h	35	GLN
3	h	133	GLN
3	h	206	ASN
3	h	283	HIS
3	h	356	ASN
3	h	393	HIS
5	i	6	HIS
5	i	279	GLN
5	i	414	ASN
5	i	423	GLN
5	i	426	GLN
5	j	8	GLN
5	j	334	GLN
5	j	423	GLN
3	k	15	GLN
3	k	18	ASN
3	k	61	HIS
3	k	91	GLN
3	k	102	ASN
3	k	206	ASN
3	k	226	ASN
3	k	249	ASN

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Mol	Chain	Res	Type
3	k	266	HIS
3	k	293	ASN
3	k	309	HIS
3	k	356	ASN
8	l	155	HIS
8	l	197	GLN
8	l	247	ASN
3	m	18	ASN
3	m	31	GLN
3	m	35	GLN
3	m	50	ASN
3	m	176	GLN
3	m	249	ASN
3	m	256	GLN
3	m	293	ASN
8	n	155	HIS
8	n	197	GLN
8	n	247	ASN
3	o	8	HIS
3	o	35	GLN
3	o	61	HIS
3	o	107	HIS
3	o	249	ASN
3	o	283	HIS
3	o	293	ASN
5	p	131	GLN
5	p	247	ASN
5	p	256	ASN
5	p	291	GLN
5	q	14	ASN
5	q	48	ASN
5	q	94	GLN
5	q	99	ASN
5	q	190	HIS
5	q	298	ASN
5	q	424	GLN
5	r	8	GLN
5	r	37	HIS
5	r	99	ASN
5	r	190	HIS
5	r	298	ASN
5	r	414	ASN

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Mol	Chain	Res	Type
5	r	424	GLN
3	s	256	GLN
3	s	293	ASN
3	s	329	ASN
3	s	406	HIS
5	t	6	HIS
5	t	8	GLN
5	t	105	HIS
5	t	137	HIS
5	t	204	ASN
5	t	247	ASN
5	t	256	ASN
5	t	279	GLN
5	t	291	GLN
5	t	298	ASN
5	t	424	GLN
5	u	280	GLN
5	u	298	ASN
5	u	347	ASN
5	u	396	HIS
5	v	14	ASN
5	v	83	GLN
5	v	195	ASN
5	v	291	GLN
5	v	334	GLN
5	v	416	ASN
5	w	6	HIS
5	w	8	GLN
5	w	105	HIS
5	w	334	GLN
5	w	335	ASN
5	w	347	ASN
5	w	348	ASN
5	w	375	GLN
5	w	424	GLN
5	w	426	GLN
3	y	35	GLN
3	y	101	ASN
3	y	226	ASN
3	y	266	HIS
3	y	293	ASN
3	y	356	ASN

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Mol	Chain	Res	Type
7	z	31	ASN
7	z	155	GLN
3	0	18	ASN
3	0	61	HIS
3	0	107	HIS
3	0	226	ASN
3	0	249	ASN
3	0	293	ASN
3	1	31	GLN
3	1	356	ASN
3	1	406	HIS
8	2	155	HIS
8	2	197	GLN
7	3	31	ASN
7	3	52	GLN
7	3	66	ASN
7	3	155	GLN
5	4	8	GLN
5	4	94	GLN
5	4	131	GLN
5	4	137	HIS
5	4	291	GLN
5	4	416	ASN
3	5	18	ASN
3	5	31	GLN
3	6	8	HIS
3	6	11	GLN
3	6	133	GLN
3	6	249	ASN
3	6	266	HIS
3	6	380	ASN
3	7	31	GLN
3	7	50	ASN
3	7	133	GLN
3	7	176	GLN
3	7	192	HIS
3	7	266	HIS
3	7	342	GLN
3	7	380	ASN
5	8	6	HIS
5	8	8	GLN
5	8	48	ASN

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Mol	Chain	Res	Type
5	8	94	GLN
5	8	100	ASN
5	8	137	HIS
5	8	195	ASN
5	8	204	ASN
5	8	247	ASN
5	8	264	HIS
5	8	298	ASN
5	8	348	ASN
5	8	416	ASN
5	9	8	GLN
5	9	37	HIS
5	9	48	ASN
5	9	100	ASN
5	9	105	HIS
5	9	204	ASN
5	9	256	ASN
5	9	279	GLN
5	9	280	GLN
5	9	347	ASN
5	9	348	ASN
5	9	416	ASN

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 88 ligands modelled in this entry, 24 are monoatomic - leaving 64 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	M	501	10	33,34,34	3.73	16 (48%)	50,54,54	1.62	8 (16%)
11	GDP	N	501	-	29,30,30	3.71	14 (48%)	45,47,47	2.21	13 (28%)
9	GTP	y	501	10	33,34,34	3.69	16 (48%)	50,54,54	1.60	8 (16%)
9	GTP	S	501	10	33,34,34	3.76	16 (48%)	50,54,54	1.60	8 (16%)
9	GTP	Z	501	10	33,34,34	3.72	16 (48%)	50,54,54	1.60	8 (16%)
11	GDP	I	501	-	29,30,30	3.73	12 (41%)	45,47,47	2.28	13 (28%)
11	GDP	9	501	-	29,30,30	3.76	13 (44%)	45,47,47	2.04	11 (24%)
9	GTP	0	501	10	33,34,34	3.69	16 (48%)	50,54,54	1.61	8 (16%)
11	GDP	U	501	-	29,30,30	3.71	13 (44%)	45,47,47	2.06	13 (28%)
9	GTP	e	501	10	33,34,34	3.77	16 (48%)	50,54,54	1.61	8 (16%)
11	GDP	r	501	-	29,30,30	3.74	13 (44%)	45,47,47	2.10	11 (24%)
12	TA1	w	502	-	68,68,68	0.57	1 (1%)	105,105,105	0.76	4 (3%)
12	TA1	4	502	-	68,68,68	0.52	1 (1%)	105,105,105	0.82	5 (4%)
11	GDP	a	501	-	29,30,30	3.78	13 (44%)	45,47,47	2.07	12 (26%)
11	GDP	t	501	-	29,30,30	3.74	13 (44%)	45,47,47	2.07	11 (24%)
12	TA1	u	502	-	68,68,68	0.71	2 (2%)	105,105,105	0.81	4 (3%)
9	GTP	Y	501	10	33,34,34	3.77	16 (48%)	50,54,54	1.63	8 (16%)
9	GTP	7	501	10	33,34,34	3.76	16 (48%)	50,54,54	1.62	8 (16%)
12	TA1	j	502	-	68,68,68	0.65	1 (1%)	105,105,105	0.87	4 (3%)
11	GDP	w	501	-	29,30,30	3.76	13 (44%)	45,47,47	2.06	11 (24%)
11	GDP	4	501	-	29,30,30	3.74	14 (48%)	45,47,47	2.30	12 (26%)
9	GTP	h	501	10	33,34,34	3.70	16 (48%)	50,54,54	1.57	8 (16%)
9	GTP	f	501	10	33,34,34	3.65	16 (48%)	50,54,54	1.60	8 (16%)
11	GDP	K	501	-	29,30,30	3.72	13 (44%)	45,47,47	2.33	13 (28%)
11	GDP	Q	501	-	29,30,30	3.76	13 (44%)	45,47,47	2.09	14 (31%)
11	GDP	b	501	-	29,30,30	3.76	12 (41%)	45,47,47	2.16	11 (24%)
9	GTP	s	501	10	33,34,34	3.74	16 (48%)	50,54,54	1.59	9 (18%)
12	TA1	V	502	-	68,68,68	0.56	2 (2%)	105,105,105	0.79	3 (2%)
9	GTP	6	501	10	33,34,34	3.76	16 (48%)	50,54,54	1.64	9 (18%)
9	GTP	F	501	10	33,34,34	3.68	16 (48%)	50,54,54	1.60	8 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
9	GTP	G	501	10	33,34,34	3.70	16 (48%)	50,54,54	1.59	8 (16%)
9	GTP	D	501	10	33,34,34	3.68	16 (48%)	50,54,54	1.65	9 (18%)
9	GTP	5	501	10	33,34,34	3.69	16 (48%)	50,54,54	1.61	8 (16%)
12	TA1	8	502	-	68,68,68	0.59	1 (1%)	105,105,105	0.79	4 (3%)
11	GDP	p	501	-	29,30,30	3.71	13 (44%)	45,47,47	2.01	11 (24%)
11	GDP	u	501	-	29,30,30	3.73	12 (41%)	45,47,47	2.03	11 (24%)
11	GDP	O	501	-	29,30,30	3.71	14 (48%)	45,47,47	2.22	12 (26%)
12	TA1	q	502	-	68,68,68	0.89	2 (2%)	105,105,105	0.89	6 (5%)
11	GDP	v	501	-	29,30,30	3.75	13 (44%)	45,47,47	2.14	12 (26%)
12	TA1	b	502	-	68,68,68	0.72	1 (1%)	105,105,105	0.80	4 (3%)
9	GTP	L	501	10	33,34,34	3.68	16 (48%)	50,54,54	1.65	8 (16%)
12	TA1	t	502	-	68,68,68	0.84	2 (2%)	105,105,105	0.86	4 (3%)
12	TA1	J	502	-	68,68,68	0.58	1 (1%)	105,105,105	0.78	4 (3%)
11	GDP	V	501	-	29,30,30	3.82	13 (44%)	45,47,47	2.42	13 (28%)
11	GDP	8	501	-	29,30,30	3.73	13 (44%)	45,47,47	2.10	11 (24%)
9	GTP	E	501	10	33,34,34	3.75	16 (48%)	50,54,54	1.61	8 (16%)
9	GTP	P	501	10	33,34,34	3.74	16 (48%)	50,54,54	1.65	9 (18%)
11	GDP	q	501	-	29,30,30	3.73	12 (41%)	45,47,47	2.11	11 (24%)
11	GDP	i	501	-	29,30,30	3.73	13 (44%)	45,47,47	2.17	11 (24%)
12	TA1	v	502	-	68,68,68	0.42	0	105,105,105	0.84	5 (4%)
9	GTP	X	501	10	33,34,34	3.74	16 (48%)	50,54,54	1.60	8 (16%)
9	GTP	m	501	10	33,34,34	3.70	16 (48%)	50,54,54	1.61	8 (16%)
12	TA1	p	502	-	68,68,68	0.63	2 (2%)	105,105,105	0.82	4 (3%)
12	TA1	9	502	-	68,68,68	0.64	2 (2%)	105,105,105	0.82	4 (3%)
11	GDP	J	501	-	29,30,30	3.73	13 (44%)	45,47,47	2.10	11 (24%)
12	TA1	r	502	-	68,68,68	0.64	1 (1%)	105,105,105	0.84	4 (3%)
9	GTP	o	501	10	33,34,34	3.70	16 (48%)	50,54,54	1.63	8 (16%)
11	GDP	R	501	-	29,30,30	3.73	14 (48%)	45,47,47	2.34	14 (31%)
11	GDP	j	501	-	29,30,30	3.76	12 (41%)	45,47,47	2.22	11 (24%)
9	GTP	k	501	10	33,34,34	3.67	16 (48%)	50,54,54	1.60	8 (16%)
9	GTP	l	501	10	33,34,34	3.79	16 (48%)	50,54,54	1.63	8 (16%)
12	TA1	i	502	-	68,68,68	0.64	1 (1%)	105,105,105	0.79	4 (3%)
11	GDP	T	501	-	29,30,30	3.71	12 (41%)	45,47,47	2.13	13 (28%)
12	TA1	a	502	-	68,68,68	0.60	2 (2%)	105,105,105	0.82	4 (3%)

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	M	501	10	-	5/22/38/38	0/3/3/3
11	GDP	N	501	-	-	6/16/32/32	0/3/3/3
9	GTP	y	501	10	-	5/22/38/38	0/3/3/3
9	GTP	S	501	10	-	5/22/38/38	0/3/3/3
9	GTP	Z	501	10	-	4/22/38/38	0/3/3/3
11	GDP	I	501	-	-	4/16/32/32	0/3/3/3
11	GDP	9	501	-	-	3/16/32/32	0/3/3/3
9	GTP	0	501	10	-	5/22/38/38	0/3/3/3
11	GDP	U	501	-	-	4/16/32/32	0/3/3/3
9	GTP	e	501	10	-	4/22/38/38	0/3/3/3
11	GDP	r	501	-	-	5/16/32/32	0/3/3/3
12	TA1	w	502	-	-	11/41/127/127	0/7/7/7
12	TA1	4	502	-	-	5/41/127/127	0/7/7/7
11	GDP	a	501	-	-	1/16/32/32	0/3/3/3
11	GDP	t	501	-	-	4/16/32/32	0/3/3/3
12	TA1	u	502	-	-	14/41/127/127	0/7/7/7
9	GTP	Y	501	10	-	6/22/38/38	0/3/3/3
9	GTP	7	501	10	-	4/22/38/38	0/3/3/3
12	TA1	j	502	-	-	11/41/127/127	0/7/7/7
11	GDP	w	501	-	-	3/16/32/32	0/3/3/3
11	GDP	4	501	-	-	1/16/32/32	0/3/3/3
9	GTP	h	501	10	-	2/22/38/38	0/3/3/3
9	GTP	f	501	10	-	3/22/38/38	0/3/3/3
11	GDP	K	501	-	-	4/16/32/32	0/3/3/3
11	GDP	Q	501	-	-	5/16/32/32	0/3/3/3
11	GDP	b	501	-	-	4/16/32/32	0/3/3/3
9	GTP	s	501	10	-	3/22/38/38	0/3/3/3
12	TA1	V	502	-	-	5/41/127/127	0/7/7/7
9	GTP	6	501	10	-	4/22/38/38	0/3/3/3
9	GTP	F	501	10	-	4/22/38/38	0/3/3/3
9	GTP	G	501	10	-	5/22/38/38	0/3/3/3
9	GTP	D	501	10	-	4/22/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	GTP	5	501	10	-	4/22/38/38	0/3/3/3
12	TA1	8	502	-	-	4/41/127/127	0/7/7/7
11	GDP	p	501	-	-	5/16/32/32	0/3/3/3
11	GDP	u	501	-	-	5/16/32/32	0/3/3/3
11	GDP	O	501	-	-	5/16/32/32	0/3/3/3
12	TA1	q	502	-	-	4/41/127/127	0/7/7/7
11	GDP	v	501	-	-	5/16/32/32	0/3/3/3
12	TA1	b	502	-	-	10/41/127/127	0/7/7/7
9	GTP	L	501	10	-	4/22/38/38	0/3/3/3
12	TA1	t	502	-	-	2/41/127/127	0/7/7/7
12	TA1	J	502	-	-	4/41/127/127	0/7/7/7
11	GDP	V	501	-	-	5/16/32/32	0/3/3/3
11	GDP	8	501	-	-	4/16/32/32	0/3/3/3
9	GTP	E	501	10	-	5/22/38/38	0/3/3/3
9	GTP	P	501	10	-	5/22/38/38	0/3/3/3
11	GDP	q	501	-	-	5/16/32/32	0/3/3/3
11	GDP	i	501	-	-	6/16/32/32	0/3/3/3
12	TA1	v	502	-	-	5/41/127/127	0/7/7/7
9	GTP	X	501	10	-	3/22/38/38	0/3/3/3
9	GTP	m	501	10	-	5/22/38/38	0/3/3/3
12	TA1	p	502	-	-	1/41/127/127	0/7/7/7
12	TA1	9	502	-	-	0/41/127/127	0/7/7/7
11	GDP	J	501	-	-	5/16/32/32	0/3/3/3
12	TA1	r	502	-	-	4/41/127/127	0/7/7/7
9	GTP	o	501	10	-	5/22/38/38	0/3/3/3
11	GDP	R	501	-	-	5/16/32/32	0/3/3/3
11	GDP	j	501	-	-	2/16/32/32	0/3/3/3
9	GTP	k	501	10	-	2/22/38/38	0/3/3/3
9	GTP	l	501	10	-	3/22/38/38	0/3/3/3
12	TA1	i	502	-	-	9/41/127/127	0/7/7/7
11	GDP	T	501	-	-	5/16/32/32	0/3/3/3
12	TA1	a	502	-	-	2/41/127/127	0/7/7/7

All (716) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	p	501	GDP	C3'-C4'	-9.18	1.29	1.53
11	J	501	GDP	C3'-C4'	-9.13	1.29	1.53
11	w	501	GDP	C3'-C4'	-9.10	1.29	1.53
11	i	501	GDP	C3'-C4'	-9.07	1.30	1.53
11	R	501	GDP	C3'-C4'	-9.06	1.30	1.53
11	u	501	GDP	C3'-C4'	-9.05	1.30	1.53
11	V	501	GDP	C3'-C4'	-9.04	1.30	1.53
11	j	501	GDP	C3'-C4'	-9.04	1.30	1.53
11	9	501	GDP	C3'-C4'	-9.03	1.30	1.53
11	I	501	GDP	C3'-C4'	-9.02	1.30	1.53
11	r	501	GDP	C3'-C4'	-9.02	1.30	1.53
11	Q	501	GDP	C3'-C4'	-9.01	1.30	1.53
11	q	501	GDP	C3'-C4'	-8.99	1.30	1.53
11	t	501	GDP	C3'-C4'	-8.99	1.30	1.53
11	O	501	GDP	C3'-C4'	-8.99	1.30	1.53
11	4	501	GDP	C3'-C4'	-8.98	1.30	1.53
11	v	501	GDP	C3'-C4'	-8.98	1.30	1.53
11	K	501	GDP	C3'-C4'	-8.97	1.30	1.53
11	T	501	GDP	C3'-C4'	-8.95	1.30	1.53
11	U	501	GDP	C3'-C4'	-8.95	1.30	1.53
11	N	501	GDP	C3'-C4'	-8.93	1.30	1.53
11	a	501	GDP	C3'-C4'	-8.90	1.30	1.53
11	8	501	GDP	C3'-C4'	-8.90	1.30	1.53
11	b	501	GDP	C3'-C4'	-8.90	1.30	1.53
9	7	501	GTP	O4'-C1'	8.67	1.62	1.42
9	0	501	GTP	O4'-C1'	8.62	1.61	1.42
9	X	501	GTP	O4'-C1'	8.58	1.61	1.42
9	M	501	GTP	O4'-C1'	8.58	1.61	1.42
9	y	501	GTP	O4'-C1'	8.57	1.61	1.42
9	P	501	GTP	O4'-C1'	8.56	1.61	1.42
9	m	501	GTP	O4'-C1'	8.56	1.61	1.42
9	S	501	GTP	O4'-C1'	8.52	1.61	1.42
9	D	501	GTP	O4'-C1'	8.50	1.61	1.42
9	k	501	GTP	O4'-C1'	8.49	1.61	1.42
9	E	501	GTP	O4'-C1'	8.49	1.61	1.42
9	h	501	GTP	O4'-C1'	8.48	1.61	1.42
9	o	501	GTP	O4'-C1'	8.48	1.61	1.42
9	6	501	GTP	O4'-C1'	8.48	1.61	1.42
9	1	501	GTP	O4'-C1'	8.46	1.61	1.42
9	Y	501	GTP	O4'-C1'	8.46	1.61	1.42
9	f	501	GTP	O4'-C1'	8.45	1.61	1.42
9	L	501	GTP	O4'-C1'	8.45	1.61	1.42
9	G	501	GTP	O4'-C1'	8.44	1.61	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	e	501	GTP	O4'-C1'	8.43	1.61	1.42
9	5	501	GTP	O4'-C1'	8.43	1.61	1.42
9	F	501	GTP	O4'-C1'	8.39	1.61	1.42
9	s	501	GTP	O4'-C1'	8.39	1.61	1.42
9	Z	501	GTP	O4'-C1'	8.36	1.61	1.42
11	j	501	GDP	O4'-C4'	8.12	1.63	1.45
11	9	501	GDP	O4'-C4'	8.06	1.62	1.45
11	w	501	GDP	O4'-C4'	8.06	1.62	1.45
11	t	501	GDP	O4'-C4'	8.04	1.62	1.45
11	i	501	GDP	O4'-C4'	8.04	1.62	1.45
11	R	501	GDP	O4'-C4'	8.04	1.62	1.45
11	Q	501	GDP	O4'-C4'	8.01	1.62	1.45
11	O	501	GDP	O4'-C4'	7.99	1.62	1.45
11	u	501	GDP	O4'-C4'	7.99	1.62	1.45
11	b	501	GDP	O4'-C4'	7.99	1.62	1.45
11	8	501	GDP	O4'-C4'	7.97	1.62	1.45
11	q	501	GDP	O4'-C4'	7.97	1.62	1.45
11	U	501	GDP	O4'-C4'	7.97	1.62	1.45
11	T	501	GDP	O4'-C4'	7.96	1.62	1.45
11	K	501	GDP	O4'-C4'	7.96	1.62	1.45
11	I	501	GDP	O4'-C4'	7.96	1.62	1.45
11	a	501	GDP	O4'-C4'	7.94	1.62	1.45
11	r	501	GDP	O4'-C4'	7.94	1.62	1.45
9	E	501	GTP	C2'-C1'	-7.93	1.28	1.53
11	V	501	GDP	O4'-C4'	7.93	1.62	1.45
11	J	501	GDP	O4'-C4'	7.93	1.62	1.45
9	Z	501	GTP	C2'-C1'	-7.92	1.28	1.53
9	m	501	GTP	C2'-C1'	-7.91	1.28	1.53
9	5	501	GTP	C2'-C1'	-7.89	1.28	1.53
11	p	501	GDP	O4'-C4'	7.89	1.62	1.45
9	L	501	GTP	C2'-C1'	-7.88	1.28	1.53
9	Y	501	GTP	C2'-C1'	-7.88	1.28	1.53
9	G	501	GTP	C2'-C1'	-7.88	1.28	1.53
11	N	501	GDP	O4'-C4'	7.88	1.62	1.45
11	v	501	GDP	O4'-C4'	7.87	1.62	1.45
9	M	501	GTP	C2'-C1'	-7.87	1.28	1.53
9	f	501	GTP	C2'-C1'	-7.86	1.28	1.53
9	0	501	GTP	C2'-C1'	-7.85	1.28	1.53
9	P	501	GTP	C2'-C1'	-7.85	1.28	1.53
9	X	501	GTP	C2'-C1'	-7.85	1.28	1.53
9	S	501	GTP	C2'-C1'	-7.85	1.28	1.53
9	h	501	GTP	C2'-C1'	-7.85	1.28	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	y	501	GTP	C2'-C1'	-7.84	1.28	1.53
9	D	501	GTP	C2'-C1'	-7.84	1.28	1.53
9	F	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	1	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	e	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	s	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	o	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	k	501	GTP	C2'-C1'	-7.83	1.28	1.53
9	6	501	GTP	C2'-C1'	-7.82	1.28	1.53
9	7	501	GTP	C2'-C1'	-7.79	1.29	1.53
11	4	501	GDP	O4'-C4'	7.76	1.62	1.45
11	a	501	GDP	PA-O3A	7.50	1.67	1.59
11	4	501	GDP	PA-O3A	7.33	1.67	1.59
11	v	501	GDP	PA-O3A	7.29	1.67	1.59
11	w	501	GDP	PA-O3A	7.24	1.67	1.59
11	Q	501	GDP	PA-O3A	7.24	1.67	1.59
11	b	501	GDP	PA-O3A	7.23	1.67	1.59
11	a	501	GDP	C4-N3	7.21	1.50	1.34
11	j	501	GDP	PA-O3A	7.19	1.67	1.59
11	v	501	GDP	C4-N3	7.19	1.50	1.34
11	V	501	GDP	C4-N3	7.17	1.50	1.34
11	9	501	GDP	C4-N3	7.17	1.50	1.34
11	9	501	GDP	PA-O3A	7.17	1.67	1.59
11	b	501	GDP	C4-N3	7.15	1.50	1.34
11	w	501	GDP	C4-N3	7.15	1.50	1.34
11	t	501	GDP	C4-N3	7.14	1.50	1.34
11	r	501	GDP	PA-O3A	7.13	1.67	1.59
11	Q	501	GDP	C4-N3	7.13	1.50	1.34
11	q	501	GDP	C4-N3	7.12	1.50	1.34
11	N	501	GDP	PA-O3A	7.12	1.67	1.59
11	V	501	GDP	PA-O3A	7.12	1.67	1.59
11	8	501	GDP	PA-O3A	7.10	1.67	1.59
11	r	501	GDP	C4-N3	7.10	1.50	1.34
11	T	501	GDP	C4-N3	7.09	1.50	1.34
11	j	501	GDP	C4-N3	7.08	1.50	1.34
11	u	501	GDP	C4-N3	7.07	1.50	1.34
11	O	501	GDP	PA-O3A	7.06	1.67	1.59
11	V	501	GDP	C2-N2	7.05	1.50	1.34
11	i	501	GDP	PA-O3A	7.03	1.67	1.59
11	I	501	GDP	C4-N3	7.03	1.50	1.34
11	U	501	GDP	C4-N3	7.02	1.50	1.34
11	b	501	GDP	C2-N2	7.01	1.50	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	a	501	GDP	C2-N2	7.00	1.50	1.34
11	J	501	GDP	C4-N3	7.00	1.50	1.34
11	i	501	GDP	C4-N3	7.00	1.50	1.34
11	8	501	GDP	C4-N3	7.00	1.50	1.34
11	q	501	GDP	PA-O3A	6.96	1.67	1.59
11	Q	501	GDP	C2-N2	6.96	1.50	1.34
11	v	501	GDP	C2-N2	6.96	1.50	1.34
11	r	501	GDP	C2-N2	6.94	1.50	1.34
11	K	501	GDP	PA-O3A	6.94	1.67	1.59
11	U	501	GDP	PA-O3A	6.93	1.67	1.59
11	9	501	GDP	C2-N2	6.93	1.50	1.34
11	R	501	GDP	PA-O3A	6.93	1.67	1.59
11	I	501	GDP	PA-O3A	6.93	1.67	1.59
11	p	501	GDP	C4-N3	6.93	1.50	1.34
11	t	501	GDP	C2-N2	6.93	1.50	1.34
11	p	501	GDP	C2-N2	6.92	1.50	1.34
11	u	501	GDP	C2-N2	6.92	1.50	1.34
11	J	501	GDP	PA-O3A	6.92	1.67	1.59
11	t	501	GDP	PA-O3A	6.92	1.67	1.59
11	4	501	GDP	C4-N3	6.92	1.50	1.34
9	1	501	GTP	PA-O3A	6.91	1.67	1.59
11	K	501	GDP	C4-N3	6.91	1.50	1.34
11	q	501	GDP	C2-N2	6.91	1.50	1.34
11	T	501	GDP	C2-N2	6.90	1.50	1.34
11	u	501	GDP	PA-O3A	6.89	1.66	1.59
11	w	501	GDP	C2-N2	6.88	1.50	1.34
9	e	501	GTP	PA-O3A	6.87	1.66	1.59
11	U	501	GDP	C2-N2	6.87	1.50	1.34
11	O	501	GDP	C4-N3	6.86	1.49	1.34
11	j	501	GDP	C2-N2	6.85	1.50	1.34
11	8	501	GDP	C2-N2	6.84	1.50	1.34
11	R	501	GDP	C4-N3	6.83	1.49	1.34
11	J	501	GDP	C2-N2	6.82	1.50	1.34
11	i	501	GDP	C2-N2	6.80	1.50	1.34
11	4	501	GDP	C2-N2	6.79	1.50	1.34
11	N	501	GDP	C4-N3	6.78	1.49	1.34
11	p	501	GDP	PA-O3A	6.78	1.66	1.59
11	I	501	GDP	C2-N2	6.76	1.50	1.34
9	Y	501	GTP	PA-O3A	6.72	1.66	1.59
11	N	501	GDP	C2-N2	6.71	1.49	1.34
11	R	501	GDP	C2-N2	6.69	1.49	1.34
9	6	501	GTP	PA-O3A	6.68	1.66	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	T	501	GDP	PA-O3A	6.68	1.66	1.59
11	K	501	GDP	C2-N2	6.67	1.49	1.34
11	O	501	GDP	C2-N2	6.65	1.49	1.34
9	Y	501	GTP	C4-N3	6.65	1.49	1.34
9	6	501	GTP	C2-N3	6.64	1.49	1.33
9	7	501	GTP	PA-O3A	6.62	1.66	1.59
9	Y	501	GTP	C2-N3	6.60	1.49	1.33
9	6	501	GTP	C4-N3	6.59	1.49	1.34
9	7	501	GTP	C4-N3	6.59	1.49	1.34
9	7	501	GTP	C2-N3	6.58	1.49	1.33
9	P	501	GTP	C4-N3	6.58	1.49	1.34
9	P	501	GTP	C2-N3	6.58	1.49	1.33
9	Z	501	GTP	C4-N3	6.57	1.49	1.34
9	5	501	GTP	C4-N3	6.57	1.49	1.34
9	e	501	GTP	C2-N3	6.57	1.49	1.33
9	1	501	GTP	C2-N3	6.56	1.49	1.33
9	s	501	GTP	PA-O3A	6.56	1.66	1.59
9	E	501	GTP	C4-N3	6.56	1.49	1.34
9	G	501	GTP	C4-N3	6.56	1.49	1.34
9	5	501	GTP	C2-N3	6.55	1.49	1.33
9	X	501	GTP	C2-N3	6.55	1.49	1.33
9	S	501	GTP	PA-O3A	6.55	1.66	1.59
9	k	501	GTP	C4-N3	6.54	1.49	1.34
9	X	501	GTP	PA-O3A	6.54	1.66	1.59
9	s	501	GTP	C4-N3	6.54	1.49	1.34
9	E	501	GTP	C2-N3	6.54	1.49	1.33
9	f	501	GTP	C4-N3	6.54	1.49	1.34
9	X	501	GTP	C4-N3	6.53	1.49	1.34
9	D	501	GTP	C4-N3	6.53	1.49	1.34
9	o	501	GTP	C2-N3	6.53	1.49	1.33
9	o	501	GTP	C4-N3	6.53	1.49	1.34
9	1	501	GTP	C4-N3	6.52	1.49	1.34
9	s	501	GTP	C2-N3	6.52	1.49	1.33
9	D	501	GTP	C2-N3	6.51	1.49	1.33
9	Z	501	GTP	C2-N3	6.51	1.49	1.33
9	f	501	GTP	C2-N3	6.51	1.49	1.33
9	M	501	GTP	C2-N3	6.51	1.49	1.33
9	h	501	GTP	C4-N3	6.51	1.49	1.34
9	0	501	GTP	C4-N3	6.50	1.49	1.34
9	y	501	GTP	C4-N3	6.50	1.49	1.34
9	h	501	GTP	C2-N3	6.50	1.48	1.33
9	M	501	GTP	C4-N3	6.50	1.49	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	e	501	GTP	C4-N3	6.50	1.49	1.34
9	L	501	GTP	C4-N3	6.49	1.49	1.34
9	S	501	GTP	C4-N3	6.49	1.49	1.34
9	S	501	GTP	C2-N3	6.48	1.48	1.33
9	F	501	GTP	C2-N3	6.47	1.48	1.33
9	m	501	GTP	C4-N3	6.47	1.49	1.34
9	G	501	GTP	C2-N3	6.47	1.48	1.33
9	y	501	GTP	C2-N3	6.47	1.48	1.33
9	k	501	GTP	C2-N3	6.47	1.48	1.33
9	L	501	GTP	C2-N3	6.46	1.48	1.33
9	F	501	GTP	C4-N3	6.46	1.49	1.34
9	0	501	GTP	C2-N3	6.46	1.48	1.33
9	m	501	GTP	C2-N3	6.44	1.48	1.33
9	Z	501	GTP	PA-O3A	6.43	1.66	1.59
9	G	501	GTP	PA-O3A	6.36	1.66	1.59
9	E	501	GTP	PA-O3A	6.32	1.66	1.59
9	P	501	GTP	PA-O3A	6.32	1.66	1.59
9	h	501	GTP	PA-O3A	6.31	1.66	1.59
9	M	501	GTP	PA-O3A	6.23	1.66	1.59
9	l	501	GTP	PB-O3A	6.22	1.66	1.59
9	s	501	GTP	O4'-C4'	-6.22	1.31	1.45
9	F	501	GTP	O4'-C4'	-6.21	1.31	1.45
9	E	501	GTP	PB-O3B	6.19	1.66	1.59
9	6	501	GTP	O4'-C4'	-6.19	1.31	1.45
9	P	501	GTP	O4'-C4'	-6.18	1.31	1.45
9	D	501	GTP	O4'-C4'	-6.18	1.31	1.45
9	o	501	GTP	PA-O3A	6.17	1.66	1.59
9	m	501	GTP	PA-O3A	6.17	1.66	1.59
9	F	501	GTP	PA-O3A	6.16	1.66	1.59
9	k	501	GTP	O4'-C4'	-6.16	1.31	1.45
9	y	501	GTP	O4'-C4'	-6.15	1.31	1.45
9	e	501	GTP	O4'-C4'	-6.15	1.31	1.45
9	o	501	GTP	O4'-C4'	-6.15	1.31	1.45
9	f	501	GTP	O4'-C4'	-6.14	1.31	1.45
9	e	501	GTP	PB-O3A	6.14	1.66	1.59
9	l	501	GTP	O4'-C4'	-6.14	1.31	1.45
9	h	501	GTP	O4'-C4'	-6.14	1.31	1.45
9	0	501	GTP	PA-O3A	6.14	1.66	1.59
9	G	501	GTP	O4'-C4'	-6.13	1.31	1.45
9	E	501	GTP	O4'-C4'	-6.12	1.31	1.45
9	0	501	GTP	O4'-C4'	-6.12	1.31	1.45
9	5	501	GTP	PA-O3A	6.12	1.66	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	5	501	GTP	O4'-C4'	-6.11	1.31	1.45
9	S	501	GTP	PB-O3B	6.10	1.66	1.59
9	Y	501	GTP	O4'-C4'	-6.10	1.31	1.45
9	L	501	GTP	O4'-C4'	-6.09	1.31	1.45
9	Z	501	GTP	O4'-C4'	-6.08	1.31	1.45
9	S	501	GTP	O4'-C4'	-6.07	1.31	1.45
9	M	501	GTP	O4'-C4'	-6.07	1.31	1.45
9	S	501	GTP	PB-O3A	6.06	1.66	1.59
9	D	501	GTP	PA-O3A	6.05	1.66	1.59
9	X	501	GTP	O4'-C4'	-6.04	1.31	1.45
9	m	501	GTP	O4'-C4'	-6.02	1.31	1.45
9	y	501	GTP	PA-O3A	6.02	1.66	1.59
9	X	501	GTP	PB-O3A	6.01	1.66	1.59
9	L	501	GTP	PA-O3A	6.01	1.66	1.59
9	7	501	GTP	O4'-C4'	-5.98	1.31	1.45
9	k	501	GTP	PA-O3A	5.97	1.65	1.59
9	f	501	GTP	PA-O3A	5.97	1.65	1.59
12	q	502	TA1	O02-C02	-5.94	1.35	1.45
9	7	501	GTP	PB-O3A	5.94	1.65	1.59
9	P	501	GTP	PB-O3B	5.91	1.65	1.59
9	M	501	GTP	PB-O3B	5.89	1.65	1.59
9	6	501	GTP	PB-O3B	5.87	1.65	1.59
9	1	501	GTP	PB-O3B	5.87	1.65	1.59
9	M	501	GTP	PB-O3A	5.86	1.65	1.59
9	Y	501	GTP	PB-O3A	5.84	1.65	1.59
9	7	501	GTP	PB-O3B	5.79	1.65	1.59
9	6	501	GTP	PB-O3A	5.79	1.65	1.59
9	P	501	GTP	PB-O3A	5.78	1.65	1.59
9	s	501	GTP	PB-O3A	5.78	1.65	1.59
9	L	501	GTP	PB-O3B	5.76	1.65	1.59
9	Y	501	GTP	PB-O3B	5.75	1.65	1.59
9	Z	501	GTP	PB-O3A	5.73	1.65	1.59
9	s	501	GTP	PB-O3B	5.71	1.65	1.59
9	o	501	GTP	PB-O3B	5.68	1.65	1.59
9	e	501	GTP	PB-O3B	5.67	1.65	1.59
9	E	501	GTP	PB-O3A	5.66	1.65	1.59
9	m	501	GTP	PB-O3A	5.66	1.65	1.59
9	o	501	GTP	PB-O3A	5.63	1.65	1.59
9	5	501	GTP	PB-O3A	5.63	1.65	1.59
9	Z	501	GTP	PB-O3B	5.61	1.65	1.59
9	m	501	GTP	PB-O3B	5.57	1.65	1.59
11	V	501	GDP	C2-N3	5.57	1.46	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	X	501	GTP	PB-O3B	5.56	1.65	1.59
9	y	501	GTP	PB-O3B	5.55	1.65	1.59
9	y	501	GTP	PB-O3A	5.52	1.65	1.59
9	G	501	GTP	PB-O3A	5.51	1.65	1.59
9	0	501	GTP	PB-O3A	5.51	1.65	1.59
9	G	501	GTP	PB-O3B	5.50	1.65	1.59
9	0	501	GTP	PB-O3B	5.50	1.65	1.59
9	F	501	GTP	PB-O3A	5.50	1.65	1.59
9	h	501	GTP	PB-O3B	5.50	1.65	1.59
9	D	501	GTP	PB-O3B	5.48	1.65	1.59
9	k	501	GTP	PB-O3A	5.47	1.65	1.59
9	h	501	GTP	PB-O3A	5.47	1.65	1.59
9	f	501	GTP	PB-O3A	5.41	1.65	1.59
9	D	501	GTP	PB-O3A	5.39	1.65	1.59
9	5	501	GTP	PB-O3B	5.39	1.65	1.59
9	k	501	GTP	PB-O3B	5.37	1.65	1.59
9	F	501	GTP	PB-O3B	5.35	1.65	1.59
9	L	501	GTP	PB-O3A	5.30	1.65	1.59
11	b	501	GDP	C2-N3	5.20	1.45	1.33
11	j	501	GDP	C2-N3	5.16	1.45	1.33
11	v	501	GDP	C2-N3	5.15	1.45	1.33
11	4	501	GDP	C2-N3	5.14	1.45	1.33
11	a	501	GDP	C2-N3	5.14	1.45	1.33
11	K	501	GDP	C2-N3	5.12	1.45	1.33
11	I	501	GDP	C2-N3	5.12	1.45	1.33
11	R	501	GDP	C2-N3	5.11	1.45	1.33
11	Q	501	GDP	C2-N3	5.09	1.45	1.33
11	T	501	GDP	C2-N3	5.08	1.45	1.33
11	t	501	GDP	C2-N3	5.08	1.45	1.33
11	w	501	GDP	C2-N3	5.06	1.45	1.33
11	9	501	GDP	C2-N3	5.05	1.45	1.33
11	J	501	GDP	C2-N3	5.05	1.45	1.33
11	i	501	GDP	C2-N3	5.04	1.45	1.33
11	8	501	GDP	C2-N3	5.03	1.45	1.33
11	u	501	GDP	C2-N3	5.03	1.45	1.33
11	q	501	GDP	C2-N3	5.03	1.45	1.33
11	r	501	GDP	C2-N3	5.03	1.45	1.33
12	b	502	TA1	O02-C02	-5.03	1.36	1.45
9	Y	501	GTP	C2-N2	4.99	1.45	1.34
11	O	501	GDP	C2-N3	4.98	1.45	1.33
11	N	501	GDP	C2-N3	4.95	1.45	1.33
11	p	501	GDP	C2-N3	4.95	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	U	501	GDP	C2-N3	4.93	1.45	1.33
9	1	501	GTP	C2-N2	4.91	1.45	1.34
9	7	501	GTP	C2-N2	4.89	1.45	1.34
9	Z	501	GTP	C2-N2	4.89	1.45	1.34
9	s	501	GTP	C2-N2	4.89	1.45	1.34
9	6	501	GTP	C2-N2	4.88	1.45	1.34
9	m	501	GTP	C2-N2	4.87	1.45	1.34
9	e	501	GTP	C2-N2	4.87	1.45	1.34
9	f	501	GTP	C2-N2	4.87	1.45	1.34
9	h	501	GTP	C2-N2	4.87	1.45	1.34
9	G	501	GTP	C2-N2	4.85	1.45	1.34
9	5	501	GTP	C2-N2	4.85	1.45	1.34
9	0	501	GTP	C2-N2	4.84	1.45	1.34
9	P	501	GTP	C2-N2	4.84	1.45	1.34
9	o	501	GTP	C2-N2	4.84	1.45	1.34
9	E	501	GTP	C2-N2	4.84	1.45	1.34
9	F	501	GTP	C2-N2	4.83	1.45	1.34
9	M	501	GTP	C2-N2	4.83	1.45	1.34
9	L	501	GTP	C2-N2	4.83	1.45	1.34
9	S	501	GTP	C2-N2	4.82	1.45	1.34
9	D	501	GTP	C2-N2	4.81	1.45	1.34
9	X	501	GTP	C2-N2	4.80	1.45	1.34
9	f	501	GTP	PB-O3B	4.78	1.64	1.59
9	k	501	GTP	C2-N2	4.76	1.45	1.34
9	y	501	GTP	C2-N2	4.75	1.45	1.34
12	t	502	TA1	O02-C02	-4.66	1.37	1.45
12	u	502	TA1	O02-C02	-4.66	1.37	1.45
11	V	501	GDP	C6-N1	4.65	1.47	1.38
12	i	502	TA1	O02-C02	-4.54	1.37	1.45
12	t	502	TA1	O09-C21	4.23	1.54	1.44
12	j	502	TA1	O02-C02	-4.19	1.38	1.45
12	r	502	TA1	O02-C02	-4.17	1.38	1.45
11	R	501	GDP	C6-N1	3.95	1.46	1.38
11	V	501	GDP	O4'-C1'	-3.84	1.33	1.42
11	4	501	GDP	O4'-C1'	-3.74	1.33	1.42
11	K	501	GDP	O4'-C1'	-3.74	1.33	1.42
11	R	501	GDP	O4'-C1'	-3.73	1.33	1.42
12	8	502	TA1	O02-C02	-3.72	1.39	1.45
11	4	501	GDP	C6-N1	3.71	1.45	1.38
11	K	501	GDP	C6-N1	3.70	1.45	1.38
11	N	501	GDP	C6-N1	3.69	1.45	1.38
11	I	501	GDP	O4'-C1'	-3.68	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	O	501	GDP	O4'-C1'	-3.66	1.33	1.42
11	O	501	GDP	C6-N1	3.62	1.45	1.38
11	N	501	GDP	O4'-C1'	-3.61	1.33	1.42
11	r	501	GDP	O4'-C1'	-3.61	1.33	1.42
11	T	501	GDP	O4'-C1'	-3.61	1.33	1.42
11	j	501	GDP	C6-N1	3.60	1.45	1.38
11	q	501	GDP	O4'-C1'	-3.59	1.33	1.42
12	9	502	TA1	O02-C02	-3.58	1.39	1.45
11	a	501	GDP	C6-N1	3.56	1.45	1.38
12	J	502	TA1	O02-C02	-3.55	1.39	1.45
11	J	501	GDP	C6-N1	3.55	1.45	1.38
11	b	501	GDP	O4'-C1'	-3.53	1.33	1.42
11	U	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	t	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	8	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	Q	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	a	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	j	501	GDP	O4'-C1'	-3.52	1.33	1.42
11	i	501	GDP	O4'-C1'	-3.51	1.33	1.42
11	I	501	GDP	C6-N1	3.51	1.45	1.38
11	v	501	GDP	O4'-C1'	-3.51	1.33	1.42
11	9	501	GDP	O4'-C1'	-3.50	1.33	1.42
11	w	501	GDP	O4'-C1'	-3.49	1.33	1.42
11	p	501	GDP	O4'-C1'	-3.49	1.33	1.42
11	u	501	GDP	O4'-C1'	-3.47	1.34	1.42
11	Q	501	GDP	C6-N1	3.47	1.45	1.38
11	U	501	GDP	C6-N1	3.46	1.45	1.38
11	i	501	GDP	C6-N1	3.45	1.45	1.38
11	u	501	GDP	C6-N1	3.45	1.45	1.38
11	t	501	GDP	C6-N1	3.45	1.45	1.38
11	9	501	GDP	C6-N1	3.41	1.45	1.38
11	b	501	GDP	C6-N1	3.41	1.45	1.38
11	J	501	GDP	O4'-C1'	-3.41	1.34	1.42
9	Y	501	GTP	C6-N1	3.41	1.45	1.38
11	8	501	GDP	C6-N1	3.40	1.45	1.38
9	s	501	GTP	C6-N1	3.38	1.45	1.38
11	r	501	GDP	C6-N1	3.37	1.45	1.38
11	w	501	GDP	C6-N1	3.36	1.45	1.38
12	p	502	TA1	O02-C02	-3.35	1.39	1.45
11	q	501	GDP	C6-N1	3.34	1.45	1.38
11	v	501	GDP	C6-N1	3.34	1.45	1.38
11	p	501	GDP	C6-N1	3.33	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	J	501	GDP	O6-C6	-3.32	1.17	1.23
9	y	501	GTP	C6-N1	3.32	1.45	1.38
9	G	501	GTP	C6-N1	3.32	1.45	1.38
9	Z	501	GTP	C6-N1	3.31	1.45	1.38
9	h	501	GTP	C6-N1	3.31	1.45	1.38
9	f	501	GTP	C6-N1	3.30	1.45	1.38
9	k	501	GTP	C6-N1	3.29	1.45	1.38
9	1	501	GTP	C6-N1	3.29	1.45	1.38
11	8	501	GDP	O6-C6	-3.27	1.17	1.23
9	F	501	GTP	C6-N1	3.27	1.45	1.38
11	I	501	GDP	O2'-C2'	-3.27	1.34	1.43
11	R	501	GDP	O2'-C2'	-3.26	1.34	1.43
11	T	501	GDP	C6-N1	3.26	1.45	1.38
12	w	502	TA1	O02-C02	-3.26	1.39	1.45
9	e	501	GTP	C6-N1	3.26	1.45	1.38
9	E	501	GTP	C6-N1	3.26	1.44	1.38
11	O	501	GDP	O2'-C2'	-3.25	1.34	1.43
9	o	501	GTP	C6-N1	3.25	1.44	1.38
9	7	501	GTP	C6-N1	3.25	1.44	1.38
9	5	501	GTP	C6-N1	3.25	1.44	1.38
11	N	501	GDP	O2'-C2'	-3.24	1.34	1.43
11	T	501	GDP	O2'-C2'	-3.24	1.34	1.43
9	D	501	GTP	C6-N1	3.24	1.44	1.38
9	L	501	GTP	C6-N1	3.24	1.44	1.38
11	8	501	GDP	O2'-C2'	-3.23	1.35	1.43
11	i	501	GDP	O2'-C2'	-3.23	1.35	1.43
9	X	501	GTP	C6-N1	3.22	1.44	1.38
9	6	501	GTP	C6-N1	3.22	1.44	1.38
11	U	501	GDP	O2'-C2'	-3.22	1.35	1.43
11	q	501	GDP	O2'-C2'	-3.20	1.35	1.43
9	M	501	GTP	C6-N1	3.20	1.44	1.38
9	0	501	GTP	C6-N1	3.20	1.44	1.38
11	K	501	GDP	O2'-C2'	-3.20	1.35	1.43
11	9	501	GDP	O2'-C2'	-3.20	1.35	1.43
11	j	501	GDP	O2'-C2'	-3.20	1.35	1.43
9	m	501	GTP	C6-N1	3.20	1.44	1.38
11	Q	501	GDP	O2'-C2'	-3.20	1.35	1.43
11	w	501	GDP	O2'-C2'	-3.20	1.35	1.43
11	u	501	GDP	O2'-C2'	-3.19	1.35	1.43
9	S	501	GTP	C6-N1	3.19	1.44	1.38
11	p	501	GDP	O2'-C2'	-3.18	1.35	1.43
9	s	501	GTP	C2-N1	3.18	1.45	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	N	501	GDP	O6-C6	-3.17	1.17	1.23
11	4	501	GDP	O2'-C2'	-3.17	1.35	1.43
11	r	501	GDP	O2'-C2'	-3.16	1.35	1.43
11	T	501	GDP	O6-C6	-3.16	1.17	1.23
11	t	501	GDP	O2'-C2'	-3.16	1.35	1.43
11	i	501	GDP	O6-C6	-3.16	1.17	1.23
11	p	501	GDP	O6-C6	-3.15	1.17	1.23
11	J	501	GDP	O2'-C2'	-3.15	1.35	1.43
11	b	501	GDP	O6-C6	-3.15	1.17	1.23
9	l	501	GTP	C2-N1	3.15	1.45	1.37
11	b	501	GDP	O2'-C2'	-3.14	1.35	1.43
9	P	501	GTP	C6-N1	3.14	1.44	1.38
9	e	501	GTP	C2-N1	3.13	1.45	1.37
11	9	501	GDP	O6-C6	-3.13	1.17	1.23
11	r	501	GDP	O6-C6	-3.13	1.17	1.23
11	v	501	GDP	O6-C6	-3.13	1.17	1.23
12	a	502	TA1	O02-C02	-3.12	1.40	1.45
11	a	501	GDP	O2'-C2'	-3.12	1.35	1.43
9	Y	501	GTP	C2-N1	3.12	1.45	1.37
11	t	501	GDP	O6-C6	-3.11	1.17	1.23
11	q	501	GDP	O6-C6	-3.11	1.17	1.23
11	j	501	GDP	O6-C6	-3.11	1.17	1.23
9	h	501	GTP	C2-N1	3.10	1.45	1.37
11	K	501	GDP	O6-C6	-3.10	1.17	1.23
11	u	501	GDP	O6-C6	-3.09	1.17	1.23
11	w	501	GDP	O6-C6	-3.09	1.17	1.23
11	U	501	GDP	O6-C6	-3.09	1.17	1.23
11	v	501	GDP	O2'-C2'	-3.08	1.35	1.43
11	a	501	GDP	O6-C6	-3.08	1.17	1.23
9	Z	501	GTP	C2-N1	3.07	1.45	1.37
9	F	501	GTP	C2-N1	3.07	1.45	1.37
9	E	501	GTP	C2-N1	3.07	1.45	1.37
11	4	501	GDP	O6-C6	-3.07	1.17	1.23
11	Q	501	GDP	O6-C6	-3.06	1.17	1.23
9	o	501	GTP	C2-N1	3.06	1.45	1.37
11	I	501	GDP	O6-C6	-3.05	1.17	1.23
9	f	501	GTP	C2-N1	3.04	1.45	1.37
9	X	501	GTP	C2-N1	3.04	1.45	1.37
9	k	501	GTP	C2-N1	3.04	1.45	1.37
9	6	501	GTP	C2-N1	3.03	1.45	1.37
9	S	501	GTP	C2-N1	3.03	1.45	1.37
9	G	501	GTP	C2-N1	3.03	1.45	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	0	501	GTP	C2-N1	3.03	1.45	1.37
9	7	501	GTP	C2-N1	3.02	1.45	1.37
9	m	501	GTP	C2-N1	3.02	1.45	1.37
9	M	501	GTP	C2-N1	3.02	1.45	1.37
11	V	501	GDP	O2'-C2'	-3.01	1.35	1.43
9	y	501	GTP	C2-N1	3.01	1.44	1.37
9	5	501	GTP	C2-N1	3.01	1.44	1.37
9	L	501	GTP	C2-N1	3.00	1.44	1.37
9	D	501	GTP	C2-N1	2.98	1.44	1.37
9	P	501	GTP	C2-N1	2.98	1.44	1.37
11	O	501	GDP	O6-C6	-2.97	1.17	1.23
9	6	501	GTP	C5-C6	2.95	1.55	1.44
9	e	501	GTP	C5-C6	2.94	1.55	1.44
11	R	501	GDP	O6-C6	-2.94	1.18	1.23
9	F	501	GTP	C5-C6	2.93	1.55	1.44
9	1	501	GTP	C5-C6	2.92	1.55	1.44
9	Y	501	GTP	C5-C6	2.91	1.55	1.44
9	s	501	GTP	C5-C6	2.90	1.55	1.44
12	p	502	TA1	O09-C21	2.90	1.51	1.44
12	V	502	TA1	O02-C02	-2.89	1.40	1.45
9	h	501	GTP	C5-C6	2.89	1.55	1.44
11	K	501	GDP	C5-N7	-2.89	1.33	1.39
9	G	501	GTP	C5-C6	2.89	1.55	1.44
9	o	501	GTP	C5-C6	2.86	1.55	1.44
9	X	501	GTP	C5-C6	2.86	1.55	1.44
11	I	501	GDP	C5-N7	-2.85	1.33	1.39
9	7	501	GTP	C5-C6	2.84	1.55	1.44
9	Z	501	GTP	C5-C6	2.84	1.55	1.44
9	5	501	GTP	C5-C6	2.84	1.55	1.44
12	4	502	TA1	O02-C02	-2.84	1.40	1.45
9	y	501	GTP	C5-C6	2.83	1.55	1.44
11	j	501	GDP	C5-N7	-2.83	1.33	1.39
9	L	501	GTP	C5-C6	2.82	1.54	1.44
9	f	501	GTP	C5-C6	2.82	1.54	1.44
9	E	501	GTP	C5-C6	2.81	1.54	1.44
9	S	501	GTP	C5-C6	2.80	1.54	1.44
11	J	501	GDP	C5-N7	-2.80	1.33	1.39
9	D	501	GTP	C5-C6	2.79	1.54	1.44
11	u	501	GDP	C5-N7	-2.79	1.33	1.39
11	R	501	GDP	C5-N7	-2.78	1.33	1.39
11	i	501	GDP	C5-N7	-2.78	1.33	1.39
9	0	501	GTP	C5-N7	-2.77	1.33	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	k	501	GTP	C5-C6	2.77	1.54	1.44
9	0	501	GTP	C5-C6	2.77	1.54	1.44
9	M	501	GTP	C5-C6	2.77	1.54	1.44
9	m	501	GTP	C5-C6	2.77	1.54	1.44
9	P	501	GTP	C5-C6	2.77	1.54	1.44
11	v	501	GDP	C5-N7	-2.76	1.33	1.39
11	O	501	GDP	C5-N7	-2.76	1.33	1.39
11	w	501	GDP	C5-N7	-2.76	1.33	1.39
9	D	501	GTP	C5-N7	-2.75	1.33	1.39
11	r	501	GDP	C5-N7	-2.75	1.33	1.39
9	m	501	GTP	C5-N7	-2.75	1.33	1.39
9	5	501	GTP	C5-N7	-2.74	1.33	1.39
11	V	501	GDP	C5-N7	-2.73	1.33	1.39
11	q	501	GDP	C5-N7	-2.73	1.33	1.39
9	k	501	GTP	C5-N7	-2.73	1.33	1.39
11	8	501	GDP	C5-N7	-2.73	1.33	1.39
9	f	501	GTP	C5-N7	-2.72	1.33	1.39
9	X	501	GTP	C5-N7	-2.72	1.33	1.39
11	p	501	GDP	C5-N7	-2.71	1.33	1.39
11	T	501	GDP	C5-N7	-2.71	1.33	1.39
9	y	501	GTP	C5-N7	-2.71	1.33	1.39
11	9	501	GDP	C5-N7	-2.71	1.33	1.39
9	1	501	GTP	C5-N7	-2.69	1.33	1.39
9	P	501	GTP	C5-N7	-2.69	1.33	1.39
9	7	501	GTP	C5-N7	-2.69	1.33	1.39
11	N	501	GDP	C5-N7	-2.69	1.33	1.39
9	o	501	GTP	C5-N7	-2.69	1.33	1.39
9	M	501	GTP	C5-N7	-2.69	1.33	1.39
11	b	501	GDP	C5-N7	-2.68	1.33	1.39
9	Z	501	GTP	C5-N7	-2.68	1.33	1.39
9	S	501	GTP	C5-N7	-2.67	1.33	1.39
11	Q	501	GDP	C5-N7	-2.67	1.33	1.39
9	F	501	GTP	C5-N7	-2.66	1.33	1.39
11	U	501	GDP	C5-N7	-2.66	1.33	1.39
9	E	501	GTP	C5-N7	-2.66	1.33	1.39
9	6	501	GTP	C5-N7	-2.65	1.33	1.39
9	L	501	GTP	C5-N7	-2.65	1.33	1.39
11	t	501	GDP	C5-N7	-2.65	1.33	1.39
11	4	501	GDP	C5-N7	-2.65	1.33	1.39
11	a	501	GDP	C5-N7	-2.65	1.33	1.39
9	h	501	GTP	C5-N7	-2.62	1.33	1.39
9	G	501	GTP	C5-N7	-2.62	1.33	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	9	502	TA1	O09-C21	2.61	1.50	1.44
11	V	501	GDP	O6-C6	-2.61	1.18	1.23
9	7	501	GTP	O2'-C2'	2.59	1.49	1.43
9	s	501	GTP	O2'-C2'	2.58	1.49	1.43
9	s	501	GTP	C5-N7	-2.57	1.33	1.39
9	y	501	GTP	O3'-C3'	-2.57	1.36	1.43
9	P	501	GTP	O2'-C2'	2.56	1.49	1.43
9	m	501	GTP	O2'-C2'	2.56	1.49	1.43
9	S	501	GTP	O2'-C2'	2.56	1.49	1.43
9	m	501	GTP	O3'-C3'	-2.55	1.36	1.43
9	e	501	GTP	C5-N7	-2.55	1.34	1.39
9	1	501	GTP	O2'-C2'	2.55	1.49	1.43
9	F	501	GTP	O2'-C2'	2.55	1.49	1.43
9	o	501	GTP	O3'-C3'	-2.54	1.36	1.43
9	L	501	GTP	O3'-C3'	-2.54	1.36	1.43
9	6	501	GTP	O2'-C2'	2.54	1.49	1.43
9	e	501	GTP	O2'-C2'	2.54	1.49	1.43
9	X	501	GTP	O3'-C3'	-2.54	1.36	1.43
9	E	501	GTP	O2'-C2'	2.53	1.49	1.43
9	Z	501	GTP	O2'-C2'	2.53	1.49	1.43
9	Y	501	GTP	O2'-C2'	2.53	1.49	1.43
9	G	501	GTP	O3'-C3'	-2.53	1.36	1.43
9	f	501	GTP	O3'-C3'	-2.53	1.36	1.43
9	D	501	GTP	O2'-C2'	2.53	1.49	1.43
9	F	501	GTP	O3'-C3'	-2.53	1.36	1.43
9	k	501	GTP	O3'-C3'	-2.53	1.36	1.43
9	o	501	GTP	O2'-C2'	2.52	1.49	1.43
9	h	501	GTP	O3'-C3'	-2.52	1.36	1.43
9	7	501	GTP	O3'-C3'	-2.52	1.36	1.43
9	E	501	GTP	O3'-C3'	-2.52	1.36	1.43
9	0	501	GTP	O2'-C2'	2.52	1.49	1.43
9	D	501	GTP	O3'-C3'	-2.51	1.36	1.43
9	k	501	GTP	O2'-C2'	2.51	1.49	1.43
9	P	501	GTP	O3'-C3'	-2.51	1.36	1.43
9	0	501	GTP	O3'-C3'	-2.51	1.36	1.43
9	5	501	GTP	O3'-C3'	-2.51	1.36	1.43
9	h	501	GTP	O2'-C2'	2.50	1.49	1.43
9	Y	501	GTP	C5-N7	-2.50	1.34	1.39
9	Y	501	GTP	O3'-C3'	-2.50	1.36	1.43
9	y	501	GTP	O2'-C2'	2.50	1.49	1.43
9	S	501	GTP	O3'-C3'	-2.50	1.36	1.43
9	f	501	GTP	O2'-C2'	2.49	1.49	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	L	501	GTP	O2'-C2'	2.49	1.49	1.43
9	e	501	GTP	O3'-C3'	-2.49	1.36	1.43
9	X	501	GTP	O2'-C2'	2.49	1.49	1.43
9	6	501	GTP	O3'-C3'	-2.49	1.36	1.43
9	G	501	GTP	O2'-C2'	2.49	1.49	1.43
9	M	501	GTP	O2'-C2'	2.49	1.49	1.43
9	Z	501	GTP	O3'-C3'	-2.49	1.36	1.43
9	M	501	GTP	O3'-C3'	-2.48	1.36	1.43
9	5	501	GTP	O2'-C2'	2.47	1.49	1.43
11	b	501	GDP	C2-N1	2.47	1.43	1.37
9	1	501	GTP	O3'-C3'	-2.47	1.36	1.43
9	s	501	GTP	O3'-C3'	-2.45	1.36	1.43
11	p	501	GDP	C2-N1	2.44	1.43	1.37
11	t	501	GDP	C2-N1	2.43	1.43	1.37
11	Q	501	GDP	C2-N1	2.42	1.43	1.37
11	a	501	GDP	C2-N1	2.42	1.43	1.37
11	u	501	GDP	C2-N1	2.40	1.43	1.37
11	9	501	GDP	C2-N1	2.39	1.43	1.37
11	r	501	GDP	C2-N1	2.38	1.43	1.37
11	U	501	GDP	C2-N1	2.38	1.43	1.37
11	j	501	GDP	C2-N1	2.38	1.43	1.37
11	N	501	GDP	C2-N1	2.37	1.43	1.37
12	q	502	TA1	O08-C20	2.37	1.25	1.21
11	V	501	GDP	C5-C6	2.37	1.53	1.44
11	4	501	GDP	C2-N1	2.37	1.43	1.37
11	V	501	GDP	C2-N1	2.37	1.43	1.37
11	J	501	GDP	C2-N1	2.36	1.43	1.37
11	R	501	GDP	C2-N1	2.35	1.43	1.37
11	K	501	GDP	C2-N1	2.35	1.43	1.37
11	8	501	GDP	C2-N1	2.35	1.43	1.37
11	v	501	GDP	C2-N1	2.34	1.43	1.37
11	w	501	GDP	C2-N1	2.33	1.43	1.37
11	q	501	GDP	C2-N1	2.32	1.43	1.37
9	S	501	GTP	O6-C6	-2.30	1.19	1.23
11	I	501	GDP	C2-N1	2.30	1.43	1.37
11	T	501	GDP	C2-N1	2.28	1.43	1.37
11	O	501	GDP	C2-N1	2.28	1.43	1.37
9	X	501	GTP	O6-C6	-2.26	1.19	1.23
9	m	501	GTP	O6-C6	-2.26	1.19	1.23
9	Y	501	GTP	O6-C6	-2.26	1.19	1.23
9	5	501	GTP	O6-C6	-2.26	1.19	1.23
9	D	501	GTP	O6-C6	-2.26	1.19	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	L	501	GTP	O6-C6	-2.24	1.19	1.23
9	E	501	GTP	O6-C6	-2.23	1.19	1.23
9	P	501	GTP	O6-C6	-2.23	1.19	1.23
9	M	501	GTP	O6-C6	-2.23	1.19	1.23
11	i	501	GDP	C2-N1	2.22	1.43	1.37
9	0	501	GTP	O6-C6	-2.22	1.19	1.23
12	V	502	TA1	O09-C21	2.21	1.49	1.44
9	f	501	GTP	O6-C6	-2.20	1.19	1.23
9	h	501	GTP	O6-C6	-2.20	1.19	1.23
9	y	501	GTP	O6-C6	-2.19	1.19	1.23
9	k	501	GTP	O6-C6	-2.19	1.19	1.23
9	o	501	GTP	O6-C6	-2.18	1.19	1.23
11	4	501	GDP	C5-C6	2.17	1.52	1.44
9	F	501	GTP	O6-C6	-2.16	1.19	1.23
11	N	501	GDP	C4-N9	-2.16	1.32	1.38
9	e	501	GTP	O6-C6	-2.16	1.19	1.23
9	7	501	GTP	O6-C6	-2.16	1.19	1.23
11	p	501	GDP	C4-N9	-2.16	1.32	1.38
9	6	501	GTP	O6-C6	-2.16	1.19	1.23
9	Z	501	GTP	O6-C6	-2.14	1.19	1.23
9	1	501	GTP	O6-C6	-2.14	1.19	1.23
11	J	501	GDP	C4-N9	-2.13	1.32	1.38
11	R	501	GDP	C5-C6	2.13	1.52	1.44
9	G	501	GTP	O6-C6	-2.12	1.19	1.23
11	O	501	GDP	C5-C6	2.11	1.52	1.44
12	a	502	TA1	O09-C21	2.11	1.49	1.44
9	s	501	GTP	O6-C6	-2.11	1.19	1.23
11	4	501	GDP	C4-N9	-2.09	1.32	1.38
11	t	501	GDP	C5-C6	2.09	1.52	1.44
11	U	501	GDP	C4-N9	-2.08	1.32	1.38
12	u	502	TA1	O09-C21	-2.08	1.40	1.44
11	9	501	GDP	C5-C6	2.06	1.52	1.44
11	a	501	GDP	C5-C6	2.05	1.52	1.44
11	r	501	GDP	C5-C6	2.05	1.52	1.44
11	O	501	GDP	C4-N9	-2.04	1.32	1.38
11	v	501	GDP	C5-C6	2.04	1.52	1.44
11	8	501	GDP	C4-N9	-2.03	1.32	1.38
11	w	501	GDP	C5-C6	2.02	1.52	1.44
11	N	501	GDP	C5-C6	2.02	1.52	1.44
11	K	501	GDP	C4-N9	-2.01	1.32	1.38
11	R	501	GDP	C4-N9	-2.01	1.32	1.38
11	i	501	GDP	C5-C6	2.00	1.51	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	Q	501	GDP	C5-C6	2.00	1.51	1.44

All (549) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	b	501	GDP	C1'-N9-C8	-6.58	108.03	126.73
11	v	501	GDP	C1'-N9-C8	-6.55	108.14	126.73
11	I	501	GDP	C1'-N9-C8	-6.54	108.16	126.73
11	4	501	GDP	C1'-N9-C8	-6.45	108.40	126.73
11	i	501	GDP	C1'-N9-C8	-6.41	108.52	126.73
11	q	501	GDP	C1'-N9-C8	-6.39	108.56	126.73
11	T	501	GDP	C1'-N9-C8	-6.39	108.58	126.73
11	r	501	GDP	C1'-N9-C8	-6.39	108.58	126.73
11	K	501	GDP	C1'-N9-C8	-6.35	108.69	126.73
11	V	501	GDP	C5-C4-N3	-6.34	118.30	128.39
11	j	501	GDP	C1'-N9-C8	-6.31	108.81	126.73
11	w	501	GDP	C1'-N9-C8	-6.30	108.84	126.73
11	Q	501	GDP	C1'-N9-C8	-6.28	108.88	126.73
11	u	501	GDP	C1'-N9-C8	-6.26	108.93	126.73
11	O	501	GDP	C1'-N9-C8	-6.21	109.08	126.73
11	t	501	GDP	C1'-N9-C8	-6.20	109.12	126.73
11	a	501	GDP	C1'-N9-C8	-6.15	109.25	126.73
11	9	501	GDP	C1'-N9-C8	-6.15	109.25	126.73
11	R	501	GDP	C1'-N9-C8	-6.08	109.46	126.73
11	p	501	GDP	C1'-N9-C8	-6.07	109.50	126.73
11	V	501	GDP	C1'-N9-C8	-6.05	109.54	126.73
11	8	501	GDP	C1'-N9-C8	-5.97	109.76	126.73
11	R	501	GDP	C5-C4-N3	-5.97	118.88	128.39
11	J	501	GDP	C1'-N9-C8	-5.96	109.80	126.73
11	U	501	GDP	C1'-N9-C8	-5.87	110.05	126.73
11	4	501	GDP	C5-C4-N3	-5.71	119.30	128.39
11	N	501	GDP	C1'-N9-C8	-5.63	110.73	126.73
11	K	501	GDP	C5-C4-N3	-5.62	119.44	128.39
11	j	501	GDP	C5-C4-N3	-5.58	119.52	128.39
11	O	501	GDP	C5-C4-N3	-5.54	119.56	128.39
11	I	501	GDP	C5-C4-N3	-5.53	119.59	128.39
11	V	501	GDP	C2-N3-C4	5.50	121.77	112.30
9	7	501	GTP	C5-C4-N3	-5.38	119.83	128.39
9	P	501	GTP	C5-C4-N3	-5.35	119.87	128.39
11	i	501	GDP	C5-C4-N3	-5.32	119.92	128.39
9	L	501	GTP	C5-C4-N3	-5.31	119.95	128.39
9	M	501	GTP	C5-C4-N3	-5.29	119.97	128.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	X	501	GTP	C5-C4-N3	-5.29	119.97	128.39
9	1	501	GTP	C5-C4-N3	-5.28	119.99	128.39
9	6	501	GTP	C5-C4-N3	-5.27	120.00	128.39
9	5	501	GTP	C5-C4-N3	-5.25	120.04	128.39
11	R	501	GDP	C2-N3-C4	5.24	121.33	112.30
9	0	501	GTP	C5-C4-N3	-5.21	120.10	128.39
9	D	501	GTP	C5-C4-N3	-5.20	120.11	128.39
11	N	501	GDP	C5-C4-N3	-5.19	120.12	128.39
9	m	501	GTP	C5-C4-N3	-5.19	120.13	128.39
9	o	501	GTP	C5-C4-N3	-5.17	120.16	128.39
9	E	501	GTP	C5-C4-N3	-5.17	120.17	128.39
9	S	501	GTP	C5-C4-N3	-5.15	120.19	128.39
9	y	501	GTP	C5-C4-N3	-5.12	120.24	128.39
9	k	501	GTP	C5-C4-N3	-5.12	120.25	128.39
9	e	501	GTP	C5-C4-N3	-5.09	120.29	128.39
11	v	501	GDP	C1'-N9-C4	5.08	141.50	126.49
9	f	501	GTP	C5-C4-N3	-5.07	120.32	128.39
11	b	501	GDP	C1'-N9-C4	5.06	141.44	126.49
11	J	501	GDP	C5-C4-N3	-5.06	120.33	128.39
11	I	501	GDP	C1'-N9-C4	5.04	141.38	126.49
9	Z	501	GTP	C5-C4-N3	-5.03	120.38	128.39
11	i	501	GDP	C1'-N9-C4	5.03	141.34	126.49
9	F	501	GTP	C5-C4-N3	-5.02	120.40	128.39
11	8	501	GDP	C5-C4-N3	-4.99	120.44	128.39
9	G	501	GTP	C5-C4-N3	-4.99	120.44	128.39
11	b	501	GDP	C5-C4-N3	-4.98	120.46	128.39
9	h	501	GTP	C5-C4-N3	-4.98	120.47	128.39
11	r	501	GDP	C1'-N9-C4	4.97	141.17	126.49
11	j	501	GDP	C1'-N9-C4	4.95	141.11	126.49
11	T	501	GDP	C1'-N9-C4	4.94	141.08	126.49
11	q	501	GDP	C1'-N9-C4	4.94	141.08	126.49
11	4	501	GDP	C1'-N9-C4	4.94	141.07	126.49
11	w	501	GDP	C1'-N9-C4	4.94	141.06	126.49
9	Y	501	GTP	C5-C4-N3	-4.92	120.56	128.39
11	4	501	GDP	C2-N3-C4	4.92	120.77	112.30
9	s	501	GTP	C5-C4-N3	-4.91	120.57	128.39
11	v	501	GDP	C5-C4-N3	-4.89	120.61	128.39
11	u	501	GDP	C1'-N9-C4	4.88	140.89	126.49
11	T	501	GDP	C5-C4-N3	-4.88	120.63	128.39
11	q	501	GDP	C5-C4-N3	-4.86	120.65	128.39
11	r	501	GDP	C5-C4-N3	-4.85	120.67	128.39
11	O	501	GDP	C2-N3-C4	4.85	120.65	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	w	501	GDP	C5-C4-N3	-4.85	120.67	128.39
11	K	501	GDP	C1'-N9-C4	4.84	140.78	126.49
11	Q	501	GDP	C1'-N9-C4	4.84	140.78	126.49
11	K	501	GDP	C2-N3-C4	4.83	120.62	112.30
11	O	501	GDP	C1'-N9-C4	4.82	140.71	126.49
11	t	501	GDP	C1'-N9-C4	4.79	140.64	126.49
11	t	501	GDP	C5-C4-N3	-4.78	120.78	128.39
11	a	501	GDP	C5-C4-N3	-4.78	120.78	128.39
11	N	501	GDP	C2-N3-C4	4.78	120.53	112.30
11	j	501	GDP	C2-N3-C4	4.78	120.53	112.30
11	9	501	GDP	C5-C4-N3	-4.77	120.80	128.39
11	9	501	GDP	C1'-N9-C4	4.75	140.52	126.49
11	a	501	GDP	C1'-N9-C4	4.75	140.51	126.49
11	u	501	GDP	C5-C4-N3	-4.74	120.84	128.39
11	Q	501	GDP	C5-C4-N3	-4.71	120.90	128.39
9	Y	501	GTP	C2-N3-C4	4.67	120.34	112.30
11	I	501	GDP	C2-N3-C4	4.66	120.33	112.30
11	8	501	GDP	C1'-N9-C4	4.65	140.23	126.49
11	R	501	GDP	C1'-N9-C4	4.65	140.21	126.49
9	L	501	GTP	C2-N3-C4	4.63	120.28	112.30
11	i	501	GDP	C2-N3-C4	4.63	120.28	112.30
11	U	501	GDP	C5-C4-N3	-4.63	121.02	128.39
9	7	501	GTP	C2-N3-C4	4.61	120.24	112.30
9	X	501	GTP	C2-N3-C4	4.59	120.21	112.30
9	5	501	GTP	C2-N3-C4	4.59	120.20	112.30
11	V	501	GDP	N9-C8-N7	-4.58	104.91	113.40
9	F	501	GTP	C2-N3-C4	4.57	120.17	112.30
9	o	501	GTP	C2-N3-C4	4.57	120.16	112.30
9	S	501	GTP	C2-N3-C4	4.56	120.15	112.30
9	M	501	GTP	C2-N3-C4	4.55	120.14	112.30
9	m	501	GTP	C2-N3-C4	4.55	120.14	112.30
11	J	501	GDP	C2-N3-C4	4.55	120.13	112.30
11	p	501	GDP	C1'-N9-C4	4.55	139.91	126.49
9	y	501	GTP	C2-N3-C4	4.52	120.09	112.30
11	J	501	GDP	C1'-N9-C4	4.52	139.85	126.49
9	Z	501	GTP	C2-N3-C4	4.52	120.08	112.30
11	8	501	GDP	C2-N3-C4	4.52	120.08	112.30
9	P	501	GTP	C2-N3-C4	4.51	120.08	112.30
9	1	501	GTP	C2-N3-C4	4.51	120.07	112.30
9	0	501	GTP	C2-N3-C4	4.50	120.05	112.30
9	G	501	GTP	C2-N3-C4	4.49	120.04	112.30
9	D	501	GTP	C2-N3-C4	4.48	120.02	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	e	501	GTP	C2-N3-C4	4.48	120.02	112.30
9	f	501	GTP	C2-N3-C4	4.47	119.99	112.30
9	6	501	GTP	C2-N3-C4	4.46	119.98	112.30
11	U	501	GDP	C1'-N9-C4	4.46	139.65	126.49
9	E	501	GTP	C2-N3-C4	4.45	119.97	112.30
9	s	501	GTP	C2-N3-C4	4.44	119.95	112.30
9	k	501	GTP	C2-N3-C4	4.44	119.95	112.30
11	V	501	GDP	C1'-N9-C4	4.44	139.60	126.49
11	V	501	GDP	N9-C4-N3	4.43	134.82	125.95
12	b	502	TA1	C24-C21-C20	4.42	122.94	113.31
9	h	501	GTP	C2-N3-C4	4.42	119.91	112.30
11	p	501	GDP	C5-C4-N3	-4.40	121.39	128.39
12	u	502	TA1	C24-C21-C20	4.38	122.85	113.31
12	a	502	TA1	C24-C21-C20	4.37	122.84	113.31
11	a	501	GDP	C2-N3-C4	4.34	119.78	112.30
11	b	501	GDP	C2-N3-C4	4.33	119.77	112.30
11	q	501	GDP	C2-N3-C4	4.33	119.76	112.30
11	r	501	GDP	C2-N3-C4	4.33	119.76	112.30
11	v	501	GDP	C2-N3-C4	4.33	119.76	112.30
12	9	502	TA1	C24-C21-C20	4.29	122.65	113.31
11	9	501	GDP	C2-N3-C4	4.29	119.69	112.30
11	w	501	GDP	C2-N3-C4	4.29	119.68	112.30
12	j	502	TA1	C24-C21-C20	4.28	122.64	113.31
11	U	501	GDP	C2-N3-C4	4.26	119.64	112.30
11	t	501	GDP	C2-N3-C4	4.26	119.63	112.30
12	w	502	TA1	C24-C21-C20	4.25	122.57	113.31
11	T	501	GDP	C2-N3-C4	4.21	119.55	112.30
11	Q	501	GDP	C2-N3-C4	4.20	119.53	112.30
11	R	501	GDP	N9-C8-N7	-4.19	105.63	113.40
11	N	501	GDP	C1'-N9-C4	4.19	138.85	126.49
11	u	501	GDP	C2-N3-C4	4.18	119.51	112.30
11	N	501	GDP	N9-C8-N7	-4.16	105.69	113.40
11	4	501	GDP	N9-C8-N7	-4.15	105.71	113.40
11	R	501	GDP	C2-N1-C6	-4.11	117.66	125.11
11	V	501	GDP	C2-N1-C6	-4.11	117.66	125.11
11	K	501	GDP	N9-C8-N7	-4.11	105.79	113.40
12	V	502	TA1	C24-C21-C20	4.08	122.19	113.31
12	v	502	TA1	C24-C21-C20	4.05	122.14	113.31
11	p	501	GDP	C2-N3-C4	4.04	119.25	112.30
11	p	501	GDP	N9-C8-N7	-4.03	105.92	113.40
11	R	501	GDP	N9-C4-N3	4.03	134.00	125.95
11	I	501	GDP	N9-C4-N3	4.01	133.98	125.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	O	501	GDP	N9-C8-N7	-4.01	105.97	113.40
11	K	501	GDP	N9-C4-N3	4.00	133.96	125.95
11	4	501	GDP	C2-N1-C6	-4.00	117.85	125.11
12	J	502	TA1	C24-C21-C20	3.99	122.00	113.31
11	K	501	GDP	C2-N1-C6	-3.98	117.88	125.11
11	I	501	GDP	N9-C8-N7	-3.97	106.04	113.40
12	q	502	TA1	C47-C45-C46	-3.97	95.03	106.29
11	J	501	GDP	N9-C8-N7	-3.96	106.05	113.40
12	8	502	TA1	C24-C21-C20	3.95	121.92	113.31
11	U	501	GDP	N9-C8-N7	-3.95	106.08	113.40
11	4	501	GDP	N9-C4-N3	3.93	133.81	125.95
11	j	501	GDP	N9-C4-N3	3.92	133.80	125.95
11	b	501	GDP	N9-C8-N7	-3.91	106.14	113.40
11	q	501	GDP	N9-C8-N7	-3.91	106.15	113.40
11	t	501	GDP	N9-C8-N7	-3.88	106.20	113.40
11	r	501	GDP	N9-C8-N7	-3.88	106.21	113.40
11	v	501	GDP	N9-C8-N7	-3.86	106.23	113.40
11	T	501	GDP	N9-C8-N7	-3.86	106.24	113.40
11	9	501	GDP	N9-C8-N7	-3.86	106.25	113.40
11	Q	501	GDP	N9-C8-N7	-3.85	106.25	113.40
12	4	502	TA1	C24-C21-C20	3.83	121.66	113.31
11	i	501	GDP	N9-C8-N7	-3.83	106.29	113.40
11	N	501	GDP	C2-N1-C6	-3.83	118.17	125.11
11	u	501	GDP	N9-C8-N7	-3.82	106.31	113.40
11	a	501	GDP	N9-C8-N7	-3.81	106.33	113.40
11	O	501	GDP	C2-N1-C6	-3.81	118.20	125.11
11	8	501	GDP	N9-C8-N7	-3.81	106.34	113.40
11	j	501	GDP	N9-C8-N7	-3.80	106.35	113.40
11	I	501	GDP	C2-N1-C6	-3.77	118.27	125.11
11	w	501	GDP	N9-C8-N7	-3.77	106.42	113.40
11	j	501	GDP	C2-N1-C6	-3.74	118.32	125.11
12	i	502	TA1	C24-C21-C20	3.74	121.46	113.31
11	J	501	GDP	C2-N1-C6	-3.71	118.37	125.11
11	O	501	GDP	N9-C4-N3	3.70	133.35	125.95
11	i	501	GDP	N9-C4-N3	3.70	133.34	125.95
11	V	501	GDP	O6-C6-C5	-3.62	116.98	126.53
11	i	501	GDP	C2-N1-C6	-3.61	118.56	125.11
12	p	502	TA1	C24-C21-C20	3.61	121.16	113.31
11	b	501	GDP	N9-C4-N3	3.58	133.11	125.95
12	r	502	TA1	C24-C21-C20	3.55	121.05	113.31
12	j	502	TA1	C18-C20-C21	3.55	128.98	121.38
12	t	502	TA1	C24-C21-C20	3.54	121.02	113.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	J	501	GDP	N9-C4-N3	3.52	133.00	125.95
11	K	501	GDP	O6-C6-C5	-3.45	117.43	126.53
11	v	501	GDP	N9-C4-N3	3.45	132.84	125.95
11	N	501	GDP	C4'-O4'-C1'	-3.43	101.88	109.47
11	T	501	GDP	N9-C4-N3	3.42	132.79	125.95
11	8	501	GDP	C2-N1-C6	-3.38	118.99	125.11
11	N	501	GDP	N9-C4-N3	3.37	132.69	125.95
11	q	501	GDP	N9-C4-N3	3.34	132.63	125.95
11	w	501	GDP	N9-C4-N3	3.32	132.58	125.95
9	L	501	GTP	C2-N1-C6	-3.31	119.10	125.11
9	M	501	GTP	C2-N1-C6	-3.31	119.11	125.11
11	Q	501	GDP	N9-C4-N3	3.29	132.54	125.95
11	r	501	GDP	N9-C4-N3	3.28	132.52	125.95
11	R	501	GDP	O6-C6-C5	-3.28	117.87	126.53
11	a	501	GDP	N9-C4-N3	3.27	132.50	125.95
9	P	501	GTP	N9-C4-N3	3.26	132.47	125.95
11	b	501	GDP	C2-N1-C6	-3.25	119.21	125.11
11	8	501	GDP	N9-C4-N3	3.25	132.44	125.95
9	P	501	GTP	C2-N1-C6	-3.24	119.23	125.11
9	X	501	GTP	C2-N1-C6	-3.24	119.23	125.11
11	N	501	GDP	O6-C6-C5	-3.24	117.98	126.53
9	E	501	GTP	C2-N1-C6	-3.24	119.23	125.11
9	6	501	GTP	C2-N1-C6	-3.23	119.26	125.11
9	D	501	GTP	C2-N1-C6	-3.23	119.26	125.11
9	7	501	GTP	C2-N1-C6	-3.21	119.28	125.11
9	1	501	GTP	C2-N1-C6	-3.20	119.30	125.11
11	t	501	GDP	N9-C4-N3	3.20	132.35	125.95
9	S	501	GTP	C2-N1-C6	-3.20	119.31	125.11
11	9	501	GDP	N9-C4-N3	3.20	132.35	125.95
11	u	501	GDP	N9-C4-N3	3.19	132.33	125.95
9	o	501	GTP	C2-N1-C6	-3.18	119.34	125.11
9	m	501	GTP	C2-N1-C6	-3.17	119.36	125.11
9	7	501	GTP	N9-C4-N3	3.16	132.28	125.95
9	k	501	GTP	C2-N1-C6	-3.16	119.38	125.11
9	5	501	GTP	C2-N1-C6	-3.16	119.38	125.11
9	0	501	GTP	C2-N1-C6	-3.16	119.39	125.11
9	f	501	GTP	C2-N1-C6	-3.14	119.41	125.11
11	I	501	GDP	O6-C6-C5	-3.14	118.24	126.53
11	J	501	GDP	O6-C6-C5	-3.13	118.26	126.53
9	y	501	GTP	C2-N1-C6	-3.13	119.43	125.11
11	T	501	GDP	C2-N1-C6	-3.11	119.46	125.11
12	q	502	TA1	C17-C18-C20	3.11	109.55	102.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	D	501	GTP	N9-C4-N3	3.10	132.16	125.95
11	v	501	GDP	C2-N1-C6	-3.10	119.48	125.11
11	w	501	GDP	C2-N1-C6	-3.10	119.49	125.11
9	G	501	GTP	N9-C8-N7	-3.10	107.65	113.40
9	e	501	GTP	C2-N1-C6	-3.10	119.50	125.11
9	Y	501	GTP	N9-C8-N7	-3.09	107.67	113.40
11	9	501	GDP	C2-N1-C6	-3.09	119.51	125.11
9	M	501	GTP	N9-C4-N3	3.09	132.13	125.95
12	4	502	TA1	C18-C20-C21	3.09	127.99	121.38
11	u	501	GDP	C2-N1-C6	-3.08	119.52	125.11
11	U	501	GDP	C2-N1-C6	-3.08	119.53	125.11
9	F	501	GTP	C2-N1-C6	-3.08	119.53	125.11
12	J	502	TA1	C47-C45-C46	-3.08	97.55	106.29
9	Z	501	GTP	C2-N1-C6	-3.08	119.53	125.11
11	j	501	GDP	O6-C6-C5	-3.08	118.41	126.53
9	e	501	GTP	N9-C8-N7	-3.08	107.70	113.40
11	t	501	GDP	C2-N1-C6	-3.07	119.55	125.11
9	h	501	GTP	C2-N1-C6	-3.06	119.55	125.11
9	E	501	GTP	N9-C8-N7	-3.06	107.73	113.40
9	G	501	GTP	C2-N1-C6	-3.06	119.56	125.11
9	m	501	GTP	N9-C8-N7	-3.06	107.73	113.40
9	6	501	GTP	N9-C4-N3	3.05	132.06	125.95
9	L	501	GTP	N9-C4-N3	3.05	132.05	125.95
9	L	501	GTP	N9-C8-N7	-3.05	107.75	113.40
11	r	501	GDP	C2-N1-C6	-3.04	119.59	125.11
9	F	501	GTP	N9-C8-N7	-3.04	107.76	113.40
11	U	501	GDP	N9-C4-N3	3.04	132.04	125.95
9	0	501	GTP	N9-C8-N7	-3.04	107.76	113.40
11	a	501	GDP	C2-N1-C6	-3.04	119.60	125.11
11	q	501	GDP	C2-N1-C6	-3.04	119.60	125.11
11	Q	501	GDP	C2-N1-C6	-3.04	119.60	125.11
9	E	501	GTP	N9-C4-N3	3.03	132.02	125.95
11	4	501	GDP	O6-C6-C5	-3.03	118.54	126.53
9	s	501	GTP	N9-C8-N7	-3.02	107.79	113.40
9	S	501	GTP	N9-C8-N7	-3.02	107.80	113.40
9	M	501	GTP	N9-C8-N7	-3.01	107.83	113.40
11	p	501	GDP	C2-N1-C6	-3.00	119.66	125.11
9	f	501	GTP	N9-C8-N7	-3.00	107.83	113.40
9	k	501	GTP	N9-C4-N3	3.00	131.96	125.95
11	J	501	GDP	C5-C6-N1	3.00	120.89	113.25
9	h	501	GTP	N9-C8-N7	-3.00	107.84	113.40
9	1	501	GTP	N9-C8-N7	-3.00	107.84	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	Z	501	GTP	N9-C8-N7	-2.99	107.85	113.40
9	0	501	GTP	N9-C4-N3	2.99	131.94	125.95
9	s	501	GTP	C2-N1-C6	-2.99	119.69	125.11
9	1	501	GTP	N9-C4-N3	2.99	131.92	125.95
11	K	501	GDP	C5-C6-N1	2.98	120.85	113.25
9	y	501	GTP	N9-C8-N7	-2.98	107.88	113.40
9	5	501	GTP	N9-C4-N3	2.98	131.91	125.95
9	X	501	GTP	N9-C8-N7	-2.98	107.88	113.40
9	Y	501	GTP	C2-N1-C6	-2.98	119.71	125.11
9	X	501	GTP	N9-C4-N3	2.98	131.90	125.95
9	D	501	GTP	N9-C8-N7	-2.97	107.89	113.40
12	j	502	TA1	O08-C20-C21	-2.97	115.71	119.28
11	p	501	GDP	N9-C4-N3	2.97	131.89	125.95
12	8	502	TA1	C47-C45-C46	-2.97	97.87	106.29
11	N	501	GDP	C5-C6-N1	2.96	120.80	113.25
9	o	501	GTP	N9-C8-N7	-2.96	107.91	113.40
9	6	501	GTP	N9-C8-N7	-2.96	107.92	113.40
9	o	501	GTP	N9-C4-N3	2.95	131.86	125.95
11	R	501	GDP	C5-C6-N1	2.95	120.76	113.25
12	r	502	TA1	C47-C45-C46	-2.95	97.93	106.29
9	7	501	GTP	N9-C8-N7	-2.95	107.94	113.40
11	4	501	GDP	C5-C6-N1	2.94	120.72	113.25
11	V	501	GDP	C8-N7-C5	2.93	109.48	104.26
9	P	501	GTP	N9-C8-N7	-2.92	107.98	113.40
11	I	501	GDP	C5-C6-N1	2.92	120.69	113.25
11	j	501	GDP	C5-C6-N1	2.92	120.68	113.25
9	m	501	GTP	N9-C4-N3	2.92	131.79	125.95
12	r	502	TA1	C18-C20-C21	2.92	127.63	121.38
11	O	501	GDP	O6-C6-C5	-2.90	118.88	126.53
9	k	501	GTP	N9-C8-N7	-2.89	108.03	113.40
9	S	501	GTP	N9-C4-N3	2.89	131.74	125.95
9	5	501	GTP	N9-C8-N7	-2.89	108.04	113.40
11	i	501	GDP	C5-C6-N1	2.89	120.61	113.25
9	y	501	GTP	N9-C4-N3	2.89	131.73	125.95
9	f	501	GTP	N9-C4-N3	2.88	131.72	125.95
11	O	501	GDP	C5-C6-N1	2.87	120.56	113.25
11	K	501	GDP	C4'-O4'-C1'	-2.85	103.17	109.47
11	8	501	GDP	C5-C6-N1	2.84	120.48	113.25
11	i	501	GDP	O6-C6-C5	-2.83	119.05	126.53
9	Z	501	GTP	N9-C4-N3	2.81	131.58	125.95
11	V	501	GDP	C5-C6-N1	2.81	120.40	113.25
9	e	501	GTP	N9-C4-N3	2.80	131.55	125.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	9	502	TA1	C18-C20-C21	2.79	127.35	121.38
12	t	502	TA1	C10-C18-C17	-2.78	101.27	106.55
12	p	502	TA1	C47-C45-C46	-2.78	98.40	106.29
11	V	501	GDP	C2'-C1'-N9	-2.77	105.55	113.25
12	t	502	TA1	C47-C45-C46	-2.77	98.44	106.29
12	9	502	TA1	C47-C45-C46	-2.76	98.45	106.29
12	a	502	TA1	C47-C45-C46	-2.76	98.46	106.29
12	v	502	TA1	C18-C20-C21	2.75	127.28	121.38
9	Y	501	GTP	N9-C4-N3	2.74	131.43	125.95
11	b	501	GDP	O6-C6-C5	-2.74	119.31	126.53
11	b	501	GDP	C5-C6-N1	2.73	120.21	113.25
9	Y	501	GTP	C5-C6-N1	2.73	120.20	113.25
9	L	501	GTP	C5-C6-N1	2.73	120.20	113.25
12	i	502	TA1	C18-C20-C21	2.73	127.22	121.38
12	u	502	TA1	C18-C20-C21	2.72	127.22	121.38
9	G	501	GTP	N9-C4-N3	2.72	131.40	125.95
11	8	501	GDP	O6-C6-C5	-2.72	119.35	126.53
11	v	501	GDP	C5-C6-N1	2.72	120.18	113.25
9	M	501	GTP	C5-C6-N1	2.72	120.17	113.25
9	h	501	GTP	N9-C4-N3	2.71	131.38	125.95
12	a	502	TA1	O11-C26-C25	2.71	116.28	109.85
9	S	501	GTP	C5-C6-N1	2.71	120.14	113.25
9	P	501	GTP	C5-C6-N1	2.70	120.12	113.25
12	p	502	TA1	C18-C20-C21	2.69	127.15	121.38
9	X	501	GTP	C5-C6-N1	2.69	120.09	113.25
9	o	501	GTP	C5-C6-N1	2.68	120.09	113.25
9	5	501	GTP	C5-C6-N1	2.68	120.08	113.25
11	a	501	GDP	C5-C6-N1	2.68	120.07	113.25
11	w	501	GDP	C5-C6-N1	2.68	120.07	113.25
9	D	501	GTP	C5-C6-N1	2.67	120.06	113.25
9	E	501	GTP	C5-C6-N1	2.67	120.06	113.25
12	w	502	TA1	C18-C20-C21	2.67	127.10	121.38
11	9	501	GDP	C5-C6-N1	2.67	120.05	113.25
9	M	501	GTP	O6-C6-C5	-2.67	119.48	126.53
9	7	501	GTP	C5-C6-N1	2.67	120.05	113.25
9	s	501	GTP	N9-C4-N3	2.67	131.29	125.95
11	R	501	GDP	C8-N7-C5	2.67	109.01	104.26
11	T	501	GDP	C5-C6-N1	2.66	120.03	113.25
9	P	501	GTP	O6-C6-C5	-2.65	119.54	126.53
12	i	502	TA1	C47-C45-C46	-2.65	98.77	106.29
9	m	501	GTP	C5-C6-N1	2.65	119.99	113.25
11	q	501	GDP	C5-C6-N1	2.65	119.99	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	f	501	GTP	C5-C6-N1	2.64	119.98	113.25
11	U	501	GDP	C5-C6-N1	2.64	119.98	113.25
9	Z	501	GTP	C5-C6-N1	2.64	119.97	113.25
11	R	501	GDP	C2'-C1'-N9	-2.64	105.90	113.25
9	k	501	GTP	C5-C6-N1	2.64	119.97	113.25
9	6	501	GTP	C5-C6-N1	2.64	119.96	113.25
12	q	502	TA1	C19-C18-C20	-2.62	99.77	106.56
9	F	501	GTP	N9-C4-N3	2.62	131.20	125.95
9	F	501	GTP	C5-C6-N1	2.61	119.91	113.25
11	U	501	GDP	O6-C6-C5	-2.61	119.63	126.53
11	Q	501	GDP	C5-C6-N1	2.61	119.91	113.25
9	0	501	GTP	C5-C6-N1	2.61	119.90	113.25
9	G	501	GTP	C5-C6-N1	2.61	119.90	113.25
11	r	501	GDP	C5-C6-N1	2.61	119.89	113.25
9	E	501	GTP	O6-C6-C5	-2.61	119.65	126.53
9	y	501	GTP	C5-C6-N1	2.61	119.89	113.25
11	t	501	GDP	C5-C6-N1	2.60	119.88	113.25
12	b	502	TA1	C47-C45-C46	-2.60	98.91	106.29
11	4	501	GDP	C8-N7-C5	2.60	108.89	104.26
9	D	501	GTP	O6-C6-C5	-2.59	119.68	126.53
9	L	501	GTP	O6-C6-C5	-2.59	119.69	126.53
11	u	501	GDP	C5-C6-N1	2.59	119.85	113.25
9	k	501	GTP	O6-C6-C5	-2.58	119.71	126.53
11	Q	501	GDP	O6-C6-C5	-2.58	119.71	126.53
11	p	501	GDP	C5-C6-N1	2.58	119.82	113.25
9	S	501	GTP	O6-C6-C5	-2.58	119.72	126.53
11	T	501	GDP	O6-C6-C5	-2.58	119.72	126.53
11	V	501	GDP	C8-N9-C4	2.58	110.86	106.03
11	w	501	GDP	O6-C6-C5	-2.58	119.73	126.53
9	h	501	GTP	C5-C6-N1	2.57	119.81	113.25
9	e	501	GTP	C5-C6-N1	2.57	119.79	113.25
11	N	501	GDP	C8-N7-C5	2.57	108.84	104.26
11	u	501	GDP	O6-C6-C5	-2.57	119.75	126.53
12	t	502	TA1	C18-C20-C21	2.56	126.87	121.38
9	1	501	GTP	C5-C6-N1	2.56	119.77	113.25
9	7	501	GTP	O6-C6-C5	-2.55	119.79	126.53
9	s	501	GTP	C5-C6-N1	2.55	119.75	113.25
11	a	501	GDP	O6-C6-C5	-2.55	119.80	126.53
11	v	501	GDP	O6-C6-C5	-2.55	119.80	126.53
9	o	501	GTP	O6-C6-C5	-2.55	119.81	126.53
9	m	501	GTP	O6-C6-C5	-2.54	119.82	126.53
11	9	501	GDP	O6-C6-C5	-2.54	119.83	126.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	O	501	GDP	C8-N7-C5	2.53	108.78	104.26
9	0	501	GTP	O6-C6-C5	-2.52	119.87	126.53
12	b	502	TA1	C18-C20-C21	2.52	126.78	121.38
9	f	501	GTP	O6-C6-C5	-2.52	119.88	126.53
9	5	501	GTP	O6-C6-C5	-2.51	119.90	126.53
11	p	501	GDP	O6-C6-C5	-2.51	119.91	126.53
9	y	501	GTP	O6-C6-C5	-2.50	119.92	126.53
11	I	501	GDP	C4'-O4'-C1'	-2.50	103.95	109.47
12	4	502	TA1	C47-C45-C46	-2.49	99.22	106.29
11	q	501	GDP	O6-C6-C5	-2.49	119.95	126.53
12	V	502	TA1	C47-C45-C46	-2.49	99.22	106.29
12	a	502	TA1	C18-C20-C21	2.49	126.71	121.38
11	K	501	GDP	C8-N7-C5	2.49	108.69	104.26
9	X	501	GTP	O6-C6-C5	-2.49	119.97	126.53
11	t	501	GDP	C8-N7-C5	2.48	108.68	104.26
11	r	501	GDP	C8-N7-C5	2.45	108.63	104.26
9	Z	501	GTP	O6-C6-C5	-2.45	120.06	126.53
11	p	501	GDP	C8-N7-C5	2.44	108.61	104.26
11	U	501	GDP	C4'-O4'-C1'	-2.44	104.09	109.47
11	t	501	GDP	O6-C6-C5	-2.44	120.10	126.53
11	p	501	GDP	C8-N9-C4	2.43	110.59	106.03
12	4	502	TA1	O08-C20-C21	-2.43	116.36	119.28
9	Y	501	GTP	O6-C6-C5	-2.43	120.12	126.53
11	q	501	GDP	C8-N7-C5	2.43	108.58	104.26
12	r	502	TA1	O08-C20-C21	-2.42	116.37	119.28
11	U	501	GDP	C8-N7-C5	2.42	108.57	104.26
11	r	501	GDP	O6-C6-C5	-2.42	120.14	126.53
9	h	501	GTP	O6-C6-C5	-2.41	120.17	126.53
11	b	501	GDP	C8-N7-C5	2.41	108.55	104.26
11	4	501	GDP	C8-N9-C4	2.41	110.54	106.03
11	K	501	GDP	C8-N9-C4	2.40	110.52	106.03
11	b	501	GDP	C8-N9-C4	2.40	110.52	106.03
9	1	501	GTP	O6-C6-C5	-2.40	120.20	126.53
11	I	501	GDP	C8-N7-C5	2.40	108.53	104.26
11	4	501	GDP	C4'-O4'-C1'	-2.39	104.19	109.47
11	v	501	GDP	C8-N7-C5	2.39	108.52	104.26
11	9	501	GDP	C8-N7-C5	2.39	108.52	104.26
11	K	501	GDP	O4'-C1'-C2'	-2.39	101.51	106.62
11	u	501	GDP	C8-N7-C5	2.38	108.51	104.26
11	Q	501	GDP	C8-N7-C5	2.38	108.50	104.26
9	s	501	GTP	O6-C6-C5	-2.38	120.25	126.53
11	T	501	GDP	C4'-O4'-C1'	-2.38	104.22	109.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	G	501	GTP	O6-C6-C5	-2.38	120.26	126.53
9	6	501	GTP	O6-C6-C5	-2.38	120.26	126.53
11	T	501	GDP	C8-N7-C5	2.37	108.49	104.26
11	a	501	GDP	C8-N7-C5	2.37	108.48	104.26
11	8	501	GDP	C8-N7-C5	2.36	108.47	104.26
11	I	501	GDP	C8-N9-C4	2.36	110.46	106.03
9	e	501	GTP	O6-C6-C5	-2.36	120.31	126.53
9	F	501	GTP	O6-C6-C5	-2.35	120.32	126.53
11	N	501	GDP	C8-N9-C4	2.34	110.42	106.03
11	w	501	GDP	C8-N7-C5	2.33	108.41	104.26
11	i	501	GDP	C8-N7-C5	2.33	108.41	104.26
11	q	501	GDP	C8-N9-C4	2.31	110.36	106.03
11	v	501	GDP	C8-N9-C4	2.31	110.36	106.03
11	J	501	GDP	C8-N9-C4	2.31	110.35	106.03
11	j	501	GDP	C8-N7-C5	2.31	108.37	104.26
11	T	501	GDP	C8-N9-C4	2.30	110.34	106.03
11	Q	501	GDP	C8-N9-C4	2.30	110.34	106.03
11	U	501	GDP	O4'-C1'-C2'	-2.29	101.70	106.62
11	J	501	GDP	C8-N7-C5	2.29	108.34	104.26
11	R	501	GDP	C8-N9-C4	2.29	110.31	106.03
12	i	502	TA1	O08-C20-C21	-2.28	116.54	119.28
12	v	502	TA1	C47-C45-C46	-2.28	99.81	106.29
11	U	501	GDP	C8-N9-C4	2.28	110.29	106.03
11	v	501	GDP	C2'-C3'-C4'	2.27	107.00	102.61
12	8	502	TA1	C18-C20-C21	2.27	126.24	121.38
12	j	502	TA1	C47-C45-C46	-2.26	99.89	106.29
11	r	501	GDP	C8-N9-C4	2.25	110.25	106.03
11	t	501	GDP	C8-N9-C4	2.25	110.24	106.03
11	a	501	GDP	C8-N9-C4	2.24	110.23	106.03
11	9	501	GDP	C8-N9-C4	2.24	110.22	106.03
11	I	501	GDP	O4'-C1'-C2'	-2.23	101.85	106.62
12	V	502	TA1	C18-C20-C21	2.23	126.15	121.38
9	e	501	GTP	C8-N7-C5	2.23	108.23	104.26
11	O	501	GDP	C8-N9-C4	2.23	110.20	106.03
12	w	502	TA1	C47-C45-C46	-2.23	99.97	106.29
9	F	501	GTP	C8-N7-C5	2.23	108.22	104.26
11	R	501	GDP	C4'-O4'-C1'	-2.22	104.56	109.47
11	u	501	GDP	C8-N9-C4	2.21	110.17	106.03
9	G	501	GTP	C8-N7-C5	2.21	108.20	104.26
9	m	501	GTP	C8-N7-C5	2.21	108.20	104.26
12	9	502	TA1	C44-C25-C24	-2.21	122.69	125.32
12	u	502	TA1	C47-C45-C46	-2.21	100.02	106.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	1	501	GTP	C8-N7-C5	2.20	108.17	104.26
11	i	501	GDP	C8-N9-C4	2.20	110.14	106.03
9	0	501	GTP	C8-N7-C5	2.19	108.17	104.26
9	6	501	GTP	C8-N7-C5	2.19	108.17	104.26
11	T	501	GDP	O4'-C1'-C2'	-2.19	101.93	106.62
11	N	501	GDP	O4'-C1'-C2'	-2.19	101.93	106.62
12	v	502	TA1	C10-C18-C20	2.18	119.89	116.30
9	X	501	GTP	C8-N7-C5	2.18	108.14	104.26
11	w	501	GDP	C8-N9-C4	2.17	110.09	106.03
12	u	502	TA1	O08-C20-C21	-2.17	116.67	119.28
9	L	501	GTP	C8-N7-C5	2.17	108.12	104.26
11	j	501	GDP	C8-N9-C4	2.16	110.08	106.03
9	Y	501	GTP	C8-N7-C5	2.16	108.11	104.26
11	R	501	GDP	O4'-C1'-C2'	-2.16	102.00	106.62
11	V	501	GDP	C4'-O4'-C1'	-2.15	104.71	109.47
9	h	501	GTP	C8-N7-C5	2.15	108.09	104.26
9	s	501	GTP	C8-N7-C5	2.15	108.09	104.26
12	v	502	TA1	O08-C20-C21	-2.14	116.70	119.28
9	o	501	GTP	C8-N7-C5	2.14	108.08	104.26
12	8	502	TA1	C44-C25-C24	-2.14	122.78	125.32
9	7	501	GTP	C8-N7-C5	2.13	108.06	104.26
9	M	501	GTP	C8-N7-C5	2.12	108.04	104.26
11	8	501	GDP	C8-N9-C4	2.12	110.00	106.03
9	E	501	GTP	C8-N7-C5	2.12	108.04	104.26
9	y	501	GTP	C8-N7-C5	2.12	108.03	104.26
12	4	502	TA1	C10-C18-C20	2.11	119.78	116.30
9	S	501	GTP	C8-N7-C5	2.11	108.02	104.26
12	b	502	TA1	O02-C02-C01	-2.10	100.39	104.74
9	P	501	GTP	C1'-N9-C8	-2.10	120.77	126.73
9	5	501	GTP	C8-N7-C5	2.10	107.99	104.26
9	f	501	GTP	C8-N7-C5	2.09	107.99	104.26
9	6	501	GTP	C3'-C2'-C1'	2.09	105.41	101.46
12	w	502	TA1	O08-C20-C21	-2.09	116.77	119.28
12	J	502	TA1	C18-C20-C21	2.09	125.85	121.38
11	a	501	GDP	C2'-C3'-C4'	2.08	106.64	102.61
9	Z	501	GTP	C8-N7-C5	2.08	107.96	104.26
9	s	501	GTP	C4'-O4'-C1'	-2.07	104.89	109.47
9	D	501	GTP	C8-N7-C5	2.07	107.95	104.26
11	O	501	GDP	C2'-C1'-N9	-2.07	107.49	113.25
12	q	502	TA1	C44-C25-C24	-2.05	122.88	125.32
11	Q	501	GDP	O4'-C1'-C2'	-2.05	102.23	106.62
9	D	501	GTP	C3'-C2'-C1'	2.05	105.33	101.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	Q	501	GDP	C4'-O4'-C1'	-2.05	104.95	109.47
9	P	501	GTP	C8-N7-C5	2.04	107.90	104.26
12	p	502	TA1	O08-C20-C21	-2.04	116.83	119.28
12	J	502	TA1	O11-C26-C25	2.04	114.69	109.85
11	Q	501	GDP	C2'-C3'-C4'	2.01	106.48	102.61
12	q	502	TA1	C18-C20-C21	2.00	125.67	121.38
12	q	502	TA1	C47-C45-C24	2.00	120.78	112.78
9	k	501	GTP	C8-N7-C5	2.00	107.83	104.26

There are no chirality outliers.

All (291) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
9	E	501	GTP	C5'-O5'-PA-O2A
9	G	501	GTP	C5'-O5'-PA-O3A
9	G	501	GTP	C5'-O5'-PA-O1A
9	L	501	GTP	C5'-O5'-PA-O3A
9	L	501	GTP	C5'-O5'-PA-O1A
9	M	501	GTP	O4'-C4'-C5'-O5'
9	P	501	GTP	C5'-O5'-PA-O2A
9	S	501	GTP	O4'-C4'-C5'-O5'
9	X	501	GTP	O4'-C4'-C5'-O5'
9	Y	501	GTP	C5'-O5'-PA-O3A
9	Y	501	GTP	C5'-O5'-PA-O1A
9	Y	501	GTP	C5'-O5'-PA-O2A
9	m	501	GTP	C5'-O5'-PA-O3A
9	m	501	GTP	C5'-O5'-PA-O1A
9	o	501	GTP	C5'-O5'-PA-O1A
9	y	501	GTP	C5'-O5'-PA-O3A
9	y	501	GTP	C5'-O5'-PA-O1A
9	0	501	GTP	C5'-O5'-PA-O3A
9	0	501	GTP	C5'-O5'-PA-O1A
9	6	501	GTP	C5'-O5'-PA-O3A
9	6	501	GTP	C5'-O5'-PA-O1A
11	I	501	GDP	C5'-O5'-PA-O2A
11	J	501	GDP	C5'-O5'-PA-O3A
11	J	501	GDP	C5'-O5'-PA-O1A
11	J	501	GDP	C5'-O5'-PA-O2A
11	K	501	GDP	C5'-O5'-PA-O3A
11	K	501	GDP	C5'-O5'-PA-O1A
11	K	501	GDP	C5'-O5'-PA-O2A
11	N	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
11	N	501	GDP	C5'-O5'-PA-O2A
11	O	501	GDP	C5'-O5'-PA-O3A
11	O	501	GDP	C5'-O5'-PA-O1A
11	O	501	GDP	C5'-O5'-PA-O2A
11	Q	501	GDP	C5'-O5'-PA-O3A
11	Q	501	GDP	C5'-O5'-PA-O1A
11	Q	501	GDP	C5'-O5'-PA-O2A
11	R	501	GDP	C5'-O5'-PA-O3A
11	R	501	GDP	C5'-O5'-PA-O1A
11	R	501	GDP	C5'-O5'-PA-O2A
11	U	501	GDP	C5'-O5'-PA-O3A
11	U	501	GDP	C5'-O5'-PA-O1A
11	U	501	GDP	C5'-O5'-PA-O2A
11	V	501	GDP	C5'-O5'-PA-O3A
11	V	501	GDP	C5'-O5'-PA-O2A
11	i	501	GDP	C5'-O5'-PA-O3A
11	i	501	GDP	C5'-O5'-PA-O1A
11	i	501	GDP	C5'-O5'-PA-O2A
11	p	501	GDP	C5'-O5'-PA-O3A
11	p	501	GDP	C5'-O5'-PA-O2A
11	q	501	GDP	C5'-O5'-PA-O3A
11	q	501	GDP	C5'-O5'-PA-O1A
11	q	501	GDP	C5'-O5'-PA-O2A
11	r	501	GDP	C5'-O5'-PA-O3A
11	r	501	GDP	C5'-O5'-PA-O1A
11	r	501	GDP	C5'-O5'-PA-O2A
11	t	501	GDP	C5'-O5'-PA-O3A
11	t	501	GDP	C5'-O5'-PA-O1A
11	t	501	GDP	C5'-O5'-PA-O2A
11	u	501	GDP	C5'-O5'-PA-O3A
11	u	501	GDP	C5'-O5'-PA-O2A
11	v	501	GDP	C5'-O5'-PA-O2A
11	9	501	GDP	C5'-O5'-PA-O3A
11	9	501	GDP	C5'-O5'-PA-O1A
11	9	501	GDP	C5'-O5'-PA-O2A
12	j	502	TA1	C27-C28-C29-N01
12	u	502	TA1	C27-C28-C29-N01
12	w	502	TA1	C27-C28-C29-N01
12	w	502	TA1	O13-C28-C29-C37
12	V	502	TA1	O14-C30-C31-C32
12	b	502	TA1	O14-C30-C31-C32
12	b	502	TA1	O14-C30-C31-C36

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Mol	Chain	Res	Type	Atoms
12	r	502	TA1	O14-C30-C31-C32
12	4	502	TA1	O14-C30-C31-C32
12	V	502	TA1	O14-C30-C31-C36
12	r	502	TA1	O14-C30-C31-C36
12	4	502	TA1	O14-C30-C31-C36
12	V	502	TA1	N01-C30-C31-C36
12	4	502	TA1	N01-C30-C31-C36
12	V	502	TA1	N01-C30-C31-C32
12	b	502	TA1	N01-C30-C31-C32
12	b	502	TA1	N01-C30-C31-C36
12	q	502	TA1	N01-C30-C31-C36
12	r	502	TA1	N01-C30-C31-C32
12	r	502	TA1	N01-C30-C31-C36
12	v	502	TA1	N01-C30-C31-C32
12	4	502	TA1	N01-C30-C31-C32
12	q	502	TA1	O14-C30-C31-C32
12	q	502	TA1	O14-C30-C31-C36
12	v	502	TA1	O14-C30-C31-C32
12	v	502	TA1	O14-C30-C31-C36
12	q	502	TA1	N01-C30-C31-C32
12	v	502	TA1	N01-C30-C31-C36
12	w	502	TA1	O14-C30-C31-C32
12	i	502	TA1	N01-C30-C31-C32
12	w	502	TA1	N01-C30-C31-C32
12	i	502	TA1	O14-C30-C31-C32
12	w	502	TA1	O14-C30-C31-C36
12	j	502	TA1	N01-C30-C31-C32
12	w	502	TA1	N01-C30-C31-C36
9	E	501	GTP	O4'-C4'-C5'-O5'
9	M	501	GTP	C3'-C4'-C5'-O5'
9	P	501	GTP	O4'-C4'-C5'-O5'
9	S	501	GTP	C3'-C4'-C5'-O5'
9	X	501	GTP	C3'-C4'-C5'-O5'
9	7	501	GTP	O4'-C4'-C5'-O5'
9	7	501	GTP	C3'-C4'-C5'-O5'
11	p	501	GDP	C3'-C4'-C5'-O5'
12	i	502	TA1	N01-C30-C31-C36
12	i	502	TA1	O14-C30-C31-C36
12	j	502	TA1	O14-C30-C31-C32
12	j	502	TA1	N01-C30-C31-C36
12	u	502	TA1	N01-C30-C31-C32
12	j	502	TA1	O14-C30-C31-C36

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Mol	Chain	Res	Type	Atoms
12	w	502	TA1	C13-C12-O04-C11
12	u	502	TA1	O14-C30-C31-C32
12	J	502	TA1	O02-C03-C04-C05
12	j	502	TA1	C13-C12-O04-C11
12	w	502	TA1	O05-C12-O04-C11
12	u	502	TA1	O14-C30-C31-C36
12	u	502	TA1	N01-C30-C31-C36
12	J	502	TA1	O02-C03-C04-C09
12	j	502	TA1	O05-C12-O04-C11
12	u	502	TA1	C13-C12-O04-C11
9	P	501	GTP	C3'-C4'-C5'-O5'
9	e	501	GTP	C3'-C4'-C5'-O5'
12	u	502	TA1	O05-C12-O04-C11
9	D	501	GTP	C3'-C4'-C5'-O5'
9	E	501	GTP	C3'-C4'-C5'-O5'
12	J	502	TA1	O03-C03-C04-C05
12	J	502	TA1	O03-C03-C04-C09
11	p	501	GDP	O4'-C4'-C5'-O5'
12	t	502	TA1	C23-C22-O09-C21
9	f	501	GTP	C3'-C4'-C5'-O5'
11	T	501	GDP	C3'-C4'-C5'-O5'
9	e	501	GTP	O4'-C4'-C5'-O5'
12	b	502	TA1	O13-C28-C29-C37
12	i	502	TA1	O13-C28-C29-C37
12	j	502	TA1	O13-C28-C29-C37
12	u	502	TA1	O13-C28-C29-C37
12	w	502	TA1	O13-C28-C29-N01
9	Z	501	GTP	C3'-C4'-C5'-O5'
12	i	502	TA1	C27-C28-C29-N01
9	5	501	GTP	C3'-C4'-C5'-O5'
9	Y	501	GTP	PA-O3A-PB-O1B
9	k	501	GTP	PB-O3A-PA-O2A
11	O	501	GDP	PB-O3A-PA-O1A
11	R	501	GDP	PB-O3A-PA-O1A
11	V	501	GDP	PB-O3A-PA-O1A
11	b	501	GDP	PB-O3A-PA-O1A
11	i	501	GDP	PB-O3A-PA-O1A
11	j	501	GDP	PB-O3A-PA-O1A
11	r	501	GDP	PB-O3A-PA-O1A
11	u	501	GDP	PB-O3A-PA-O1A
11	v	501	GDP	PB-O3A-PA-O1A
11	N	501	GDP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
12	u	502	TA1	C23-C22-O09-C21
9	D	501	GTP	O4'-C4'-C5'-O5'
11	T	501	GDP	O4'-C4'-C5'-O5'
9	E	501	GTP	C5'-O5'-PA-O3A
9	E	501	GTP	C5'-O5'-PA-O1A
9	F	501	GTP	C5'-O5'-PA-O3A
9	F	501	GTP	C5'-O5'-PA-O2A
9	G	501	GTP	C5'-O5'-PA-O2A
9	L	501	GTP	C5'-O5'-PA-O2A
9	M	501	GTP	C5'-O5'-PA-O3A
9	M	501	GTP	C5'-O5'-PA-O1A
9	M	501	GTP	C5'-O5'-PA-O2A
9	P	501	GTP	C5'-O5'-PA-O3A
9	P	501	GTP	C5'-O5'-PA-O1A
9	S	501	GTP	C5'-O5'-PA-O3A
9	S	501	GTP	C5'-O5'-PA-O1A
9	S	501	GTP	C5'-O5'-PA-O2A
9	X	501	GTP	C5'-O5'-PA-O1A
9	m	501	GTP	C5'-O5'-PA-O2A
9	o	501	GTP	C5'-O5'-PA-O3A
9	o	501	GTP	C5'-O5'-PA-O2A
9	s	501	GTP	C5'-O5'-PA-O2A
9	y	501	GTP	C5'-O5'-PA-O2A
9	0	501	GTP	C5'-O5'-PA-O2A
9	6	501	GTP	C5'-O5'-PA-O2A
9	7	501	GTP	C5'-O5'-PA-O1A
11	I	501	GDP	C5'-O5'-PA-O3A
11	I	501	GDP	C5'-O5'-PA-O1A
11	N	501	GDP	C5'-O5'-PA-O1A
11	T	501	GDP	C5'-O5'-PA-O3A
11	T	501	GDP	C5'-O5'-PA-O1A
11	V	501	GDP	C5'-O5'-PA-O1A
11	b	501	GDP	C5'-O5'-PA-O3A
11	b	501	GDP	C5'-O5'-PA-O1A
11	p	501	GDP	C5'-O5'-PA-O1A
11	u	501	GDP	C5'-O5'-PA-O1A
11	v	501	GDP	C5'-O5'-PA-O3A
11	v	501	GDP	C5'-O5'-PA-O1A
11	w	501	GDP	C5'-O5'-PA-O1A
11	8	501	GDP	C5'-O5'-PA-O3A
11	8	501	GDP	C5'-O5'-PA-O1A
11	N	501	GDP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
12	t	502	TA1	O10-C22-O09-C21
11	J	501	GDP	C3'-C4'-C5'-O5'
12	a	502	TA1	C23-C22-O09-C21
9	D	501	GTP	PB-O3A-PA-O2A
9	F	501	GTP	PB-O3A-PA-O2A
9	G	501	GTP	PB-O3A-PA-O2A
9	e	501	GTP	PA-O3A-PB-O1B
9	h	501	GTP	PB-O3A-PA-O2A
9	o	501	GTP	PB-O3A-PA-O2A
9	s	501	GTP	PB-O3A-PA-O2A
9	y	501	GTP	PB-O3A-PA-O2A
9	0	501	GTP	PB-O3A-PA-O2A
9	5	501	GTP	PB-O3A-PA-O2A
11	q	501	GDP	PB-O3A-PA-O1A
12	w	502	TA1	O11-C27-C28-O13
12	8	502	TA1	O14-C30-C31-C36
11	T	501	GDP	C4'-C5'-O5'-PA
12	8	502	TA1	N01-C30-C31-C36
12	j	502	TA1	O13-C28-C29-N01
12	u	502	TA1	O13-C28-C29-N01
9	f	501	GTP	O4'-C4'-C5'-O5'
11	4	501	GDP	C3'-C4'-C5'-O5'
12	i	502	TA1	O11-C27-C28-O13
9	1	501	GTP	PA-O3A-PB-O1B
9	6	501	GTP	PB-O3A-PA-O2A
11	w	501	GDP	PB-O3A-PA-O1A
11	8	501	GDP	PB-O3A-PA-O1A
11	K	501	GDP	C4'-C5'-O5'-PA
11	Q	501	GDP	C4'-C5'-O5'-PA
12	u	502	TA1	O10-C22-O09-C21
9	Z	501	GTP	O4'-C4'-C5'-O5'
12	V	502	TA1	C27-C28-C29-N01
12	b	502	TA1	O11-C27-C28-O13
12	b	502	TA1	C27-C28-C29-N01
12	u	502	TA1	O11-C27-C28-O13
12	v	502	TA1	C27-C28-C29-N01
12	j	502	TA1	O11-C27-C28-C29
12	j	502	TA1	O12-C27-C28-C29
11	I	501	GDP	C4'-C5'-O5'-PA
9	5	501	GTP	O4'-C4'-C5'-O5'
11	N	501	GDP	O4'-C4'-C5'-O5'
12	a	502	TA1	O10-C22-O09-C21

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Mol	Chain	Res	Type	Atoms
9	k	501	GTP	C3'-C4'-C5'-O5'
9	l	501	GTP	C3'-C4'-C5'-O5'
9	D	501	GTP	PB-O3A-PA-O1A
9	F	501	GTP	PB-O3A-PA-O1A
9	Y	501	GTP	PB-O3A-PA-O2A
9	Z	501	GTP	PB-O3A-PA-O1A
9	Z	501	GTP	PB-O3A-PA-O2A
9	f	501	GTP	PB-O3A-PA-O2A
9	m	501	GTP	PB-O3A-PA-O2A
9	o	501	GTP	PB-O3A-PA-O1A
9	s	501	GTP	PB-O3A-PA-O1A
9	y	501	GTP	PB-O3A-PA-O1A
9	0	501	GTP	PB-O3A-PA-O1A
9	5	501	GTP	PB-O3A-PA-O1A
9	7	501	GTP	PB-O3A-PA-O2A
11	J	501	GDP	PB-O3A-PA-O1A
11	a	501	GDP	PB-O3A-PA-O1A
11	i	501	GDP	PB-O3A-PA-O2A
11	r	501	GDP	PB-O3A-PA-O2A
12	8	502	TA1	O14-C30-C31-C32
12	b	502	TA1	O12-C27-C28-O13
9	L	501	GTP	C4'-C5'-O5'-PA
12	8	502	TA1	N01-C30-C31-C32
11	i	501	GDP	C3'-C4'-C5'-O5'
11	U	501	GDP	C4'-C5'-O5'-PA
12	u	502	TA1	O12-C27-C28-O13
12	b	502	TA1	O02-C03-C04-C05
12	b	502	TA1	O11-C27-C28-C29
12	i	502	TA1	O11-C27-C28-C29
12	p	502	TA1	O11-C27-C28-C29
12	u	502	TA1	O11-C27-C28-C29
12	4	502	TA1	O11-C27-C28-C29
12	i	502	TA1	O12-C27-C28-O13
12	w	502	TA1	O12-C27-C28-O13
9	G	501	GTP	PB-O3A-PA-O1A
9	Y	501	GTP	PA-O3A-PB-O2B
9	e	501	GTP	PA-O3A-PB-O2B
9	h	501	GTP	PB-O3A-PA-O1A
9	m	501	GTP	PB-O3A-PA-O1A
9	l	501	GTP	PA-O3A-PB-O2B
11	O	501	GDP	PB-O3A-PA-O2A
11	R	501	GDP	PB-O3A-PA-O2A

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Mol	Chain	Res	Type	Atoms
11	V	501	GDP	PB-O3A-PA-O2A
11	b	501	GDP	PB-O3A-PA-O2A
11	j	501	GDP	PB-O3A-PA-O2A
11	q	501	GDP	PB-O3A-PA-O2A
11	t	501	GDP	PB-O3A-PA-O1A
11	u	501	GDP	PB-O3A-PA-O2A
11	v	501	GDP	PB-O3A-PA-O2A
11	w	501	GDP	PB-O3A-PA-O2A
11	8	501	GDP	PB-O3A-PA-O2A
11	Q	501	GDP	C3'-C4'-C5'-O5'

There are no ring outliers.

60 monomers are involved in 150 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	M	501	GTP	1	0
11	N	501	GDP	1	0
9	y	501	GTP	2	0
9	S	501	GTP	3	0
9	Z	501	GTP	2	0
11	I	501	GDP	2	0
11	9	501	GDP	1	0
9	0	501	GTP	3	0
11	U	501	GDP	1	0
9	e	501	GTP	1	0
11	r	501	GDP	2	0
12	w	502	TA1	6	0
12	4	502	TA1	5	0
11	a	501	GDP	1	0
12	u	502	TA1	4	0
9	Y	501	GTP	5	0
9	7	501	GTP	2	0
12	j	502	TA1	5	0
11	w	501	GDP	1	0
11	4	501	GDP	2	0
9	h	501	GTP	3	0
9	f	501	GTP	3	0
11	b	501	GDP	1	0
9	s	501	GTP	1	0
12	V	502	TA1	6	0
9	6	501	GTP	4	0
9	F	501	GTP	2	0

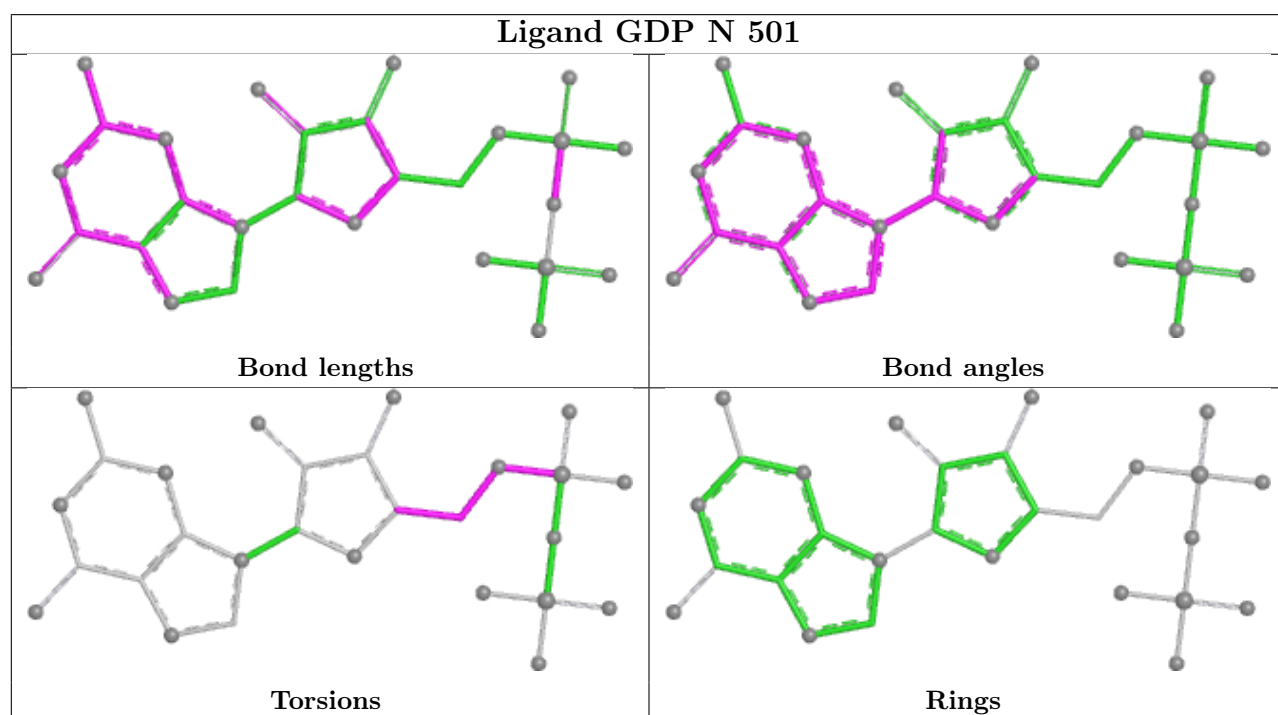
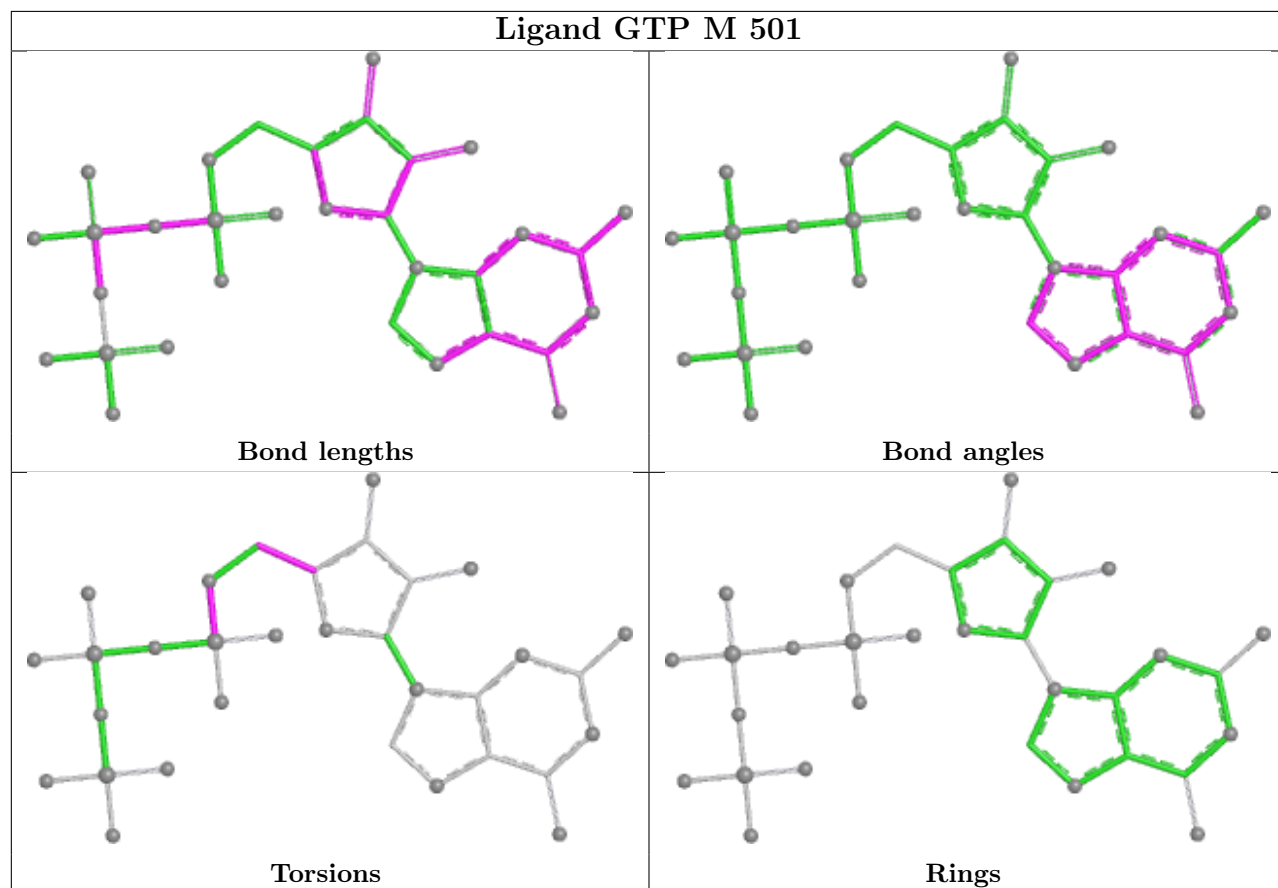
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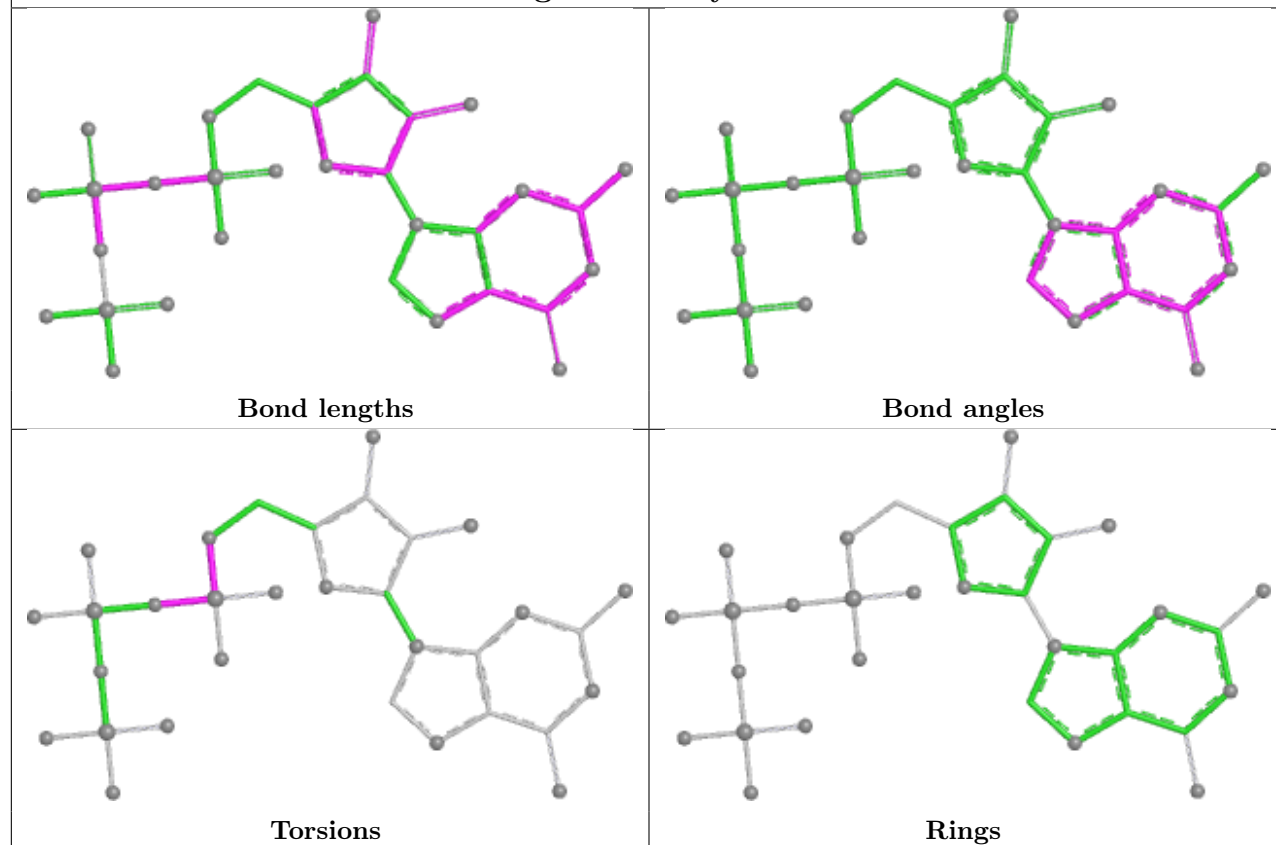
Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	G	501	GTP	3	0
9	D	501	GTP	1	0
9	5	501	GTP	2	0
12	8	502	TA1	2	0
11	p	501	GDP	2	0
11	u	501	GDP	2	0
11	O	501	GDP	2	0
12	q	502	TA1	2	0
11	v	501	GDP	1	0
12	b	502	TA1	6	0
9	L	501	GTP	1	0
12	t	502	TA1	2	0
12	J	502	TA1	6	0
11	V	501	GDP	2	0
9	E	501	GTP	2	0
9	P	501	GTP	2	0
11	q	501	GDP	1	0
11	i	501	GDP	2	0
12	v	502	TA1	5	0
9	X	501	GTP	1	0
9	m	501	GTP	2	0
12	p	502	TA1	3	0
12	9	502	TA1	4	0
11	J	501	GDP	2	0
12	r	502	TA1	1	0
9	o	501	GTP	2	0
11	R	501	GDP	1	0
11	j	501	GDP	2	0
9	k	501	GTP	2	0
9	l	501	GTP	3	0
12	i	502	TA1	5	0
11	T	501	GDP	1	0
12	a	502	TA1	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and

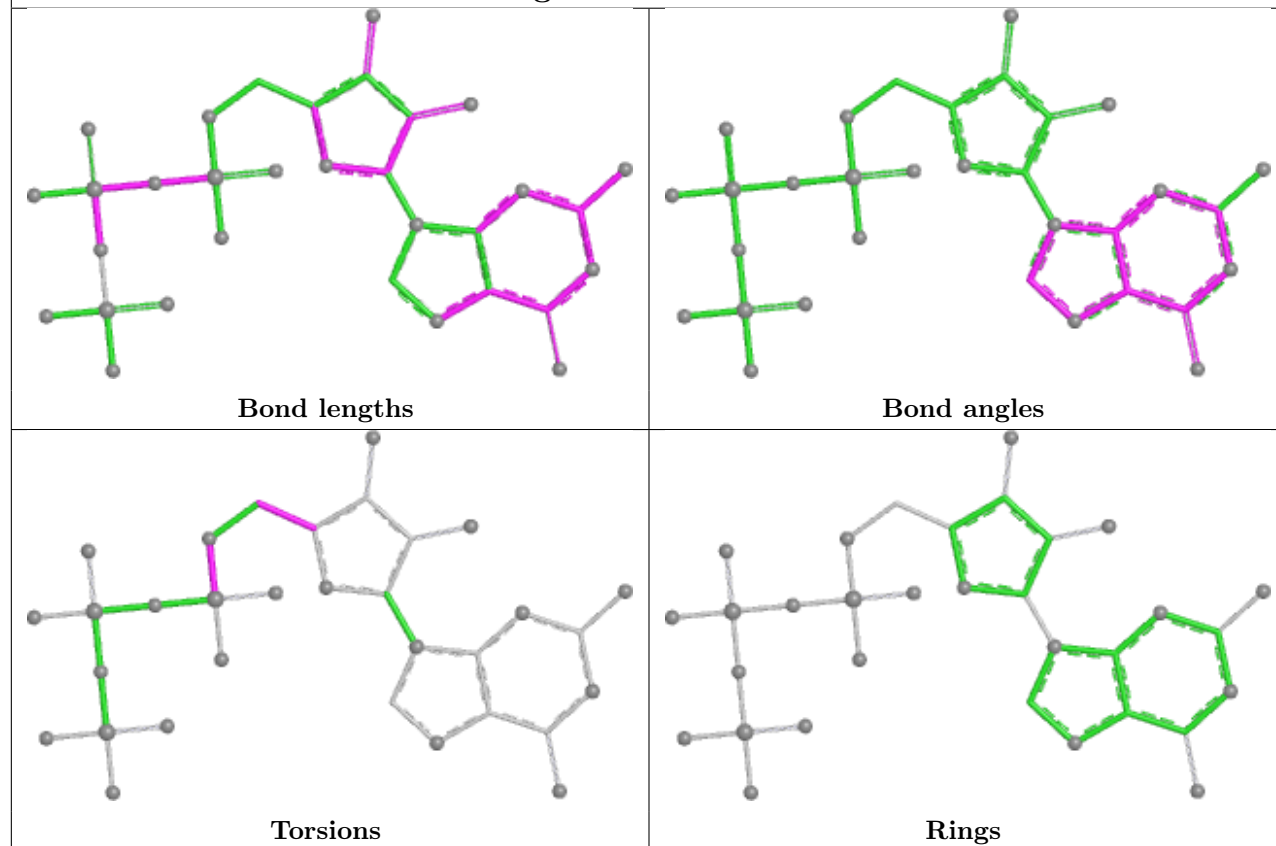
any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



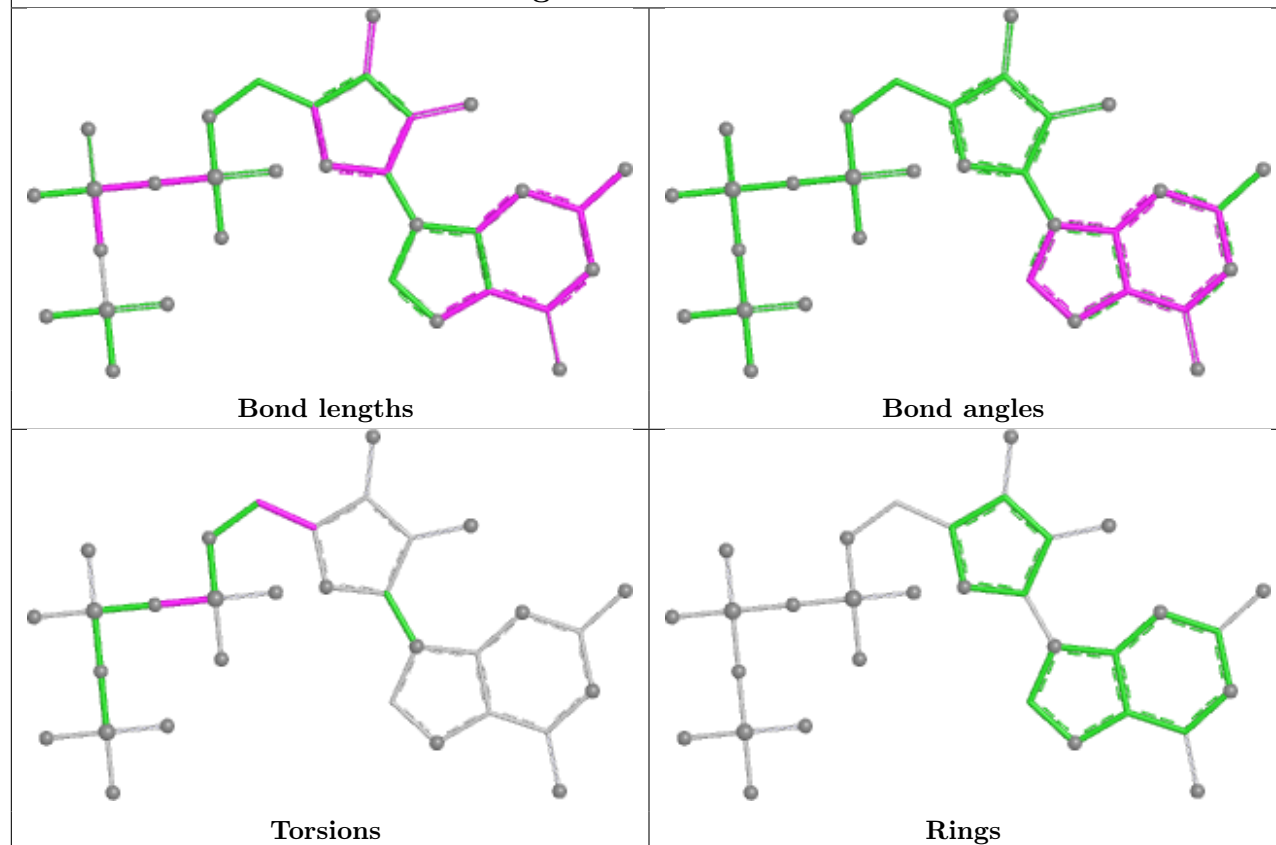
Ligand GTP y 501



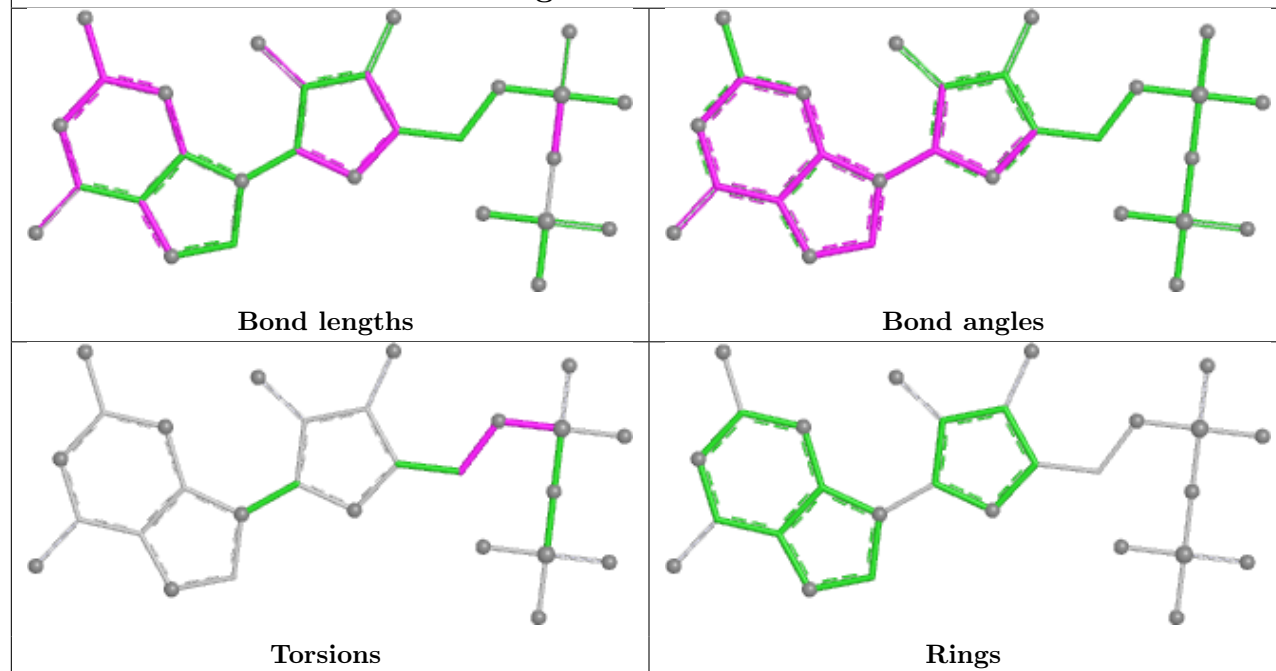
Ligand GTP S 501

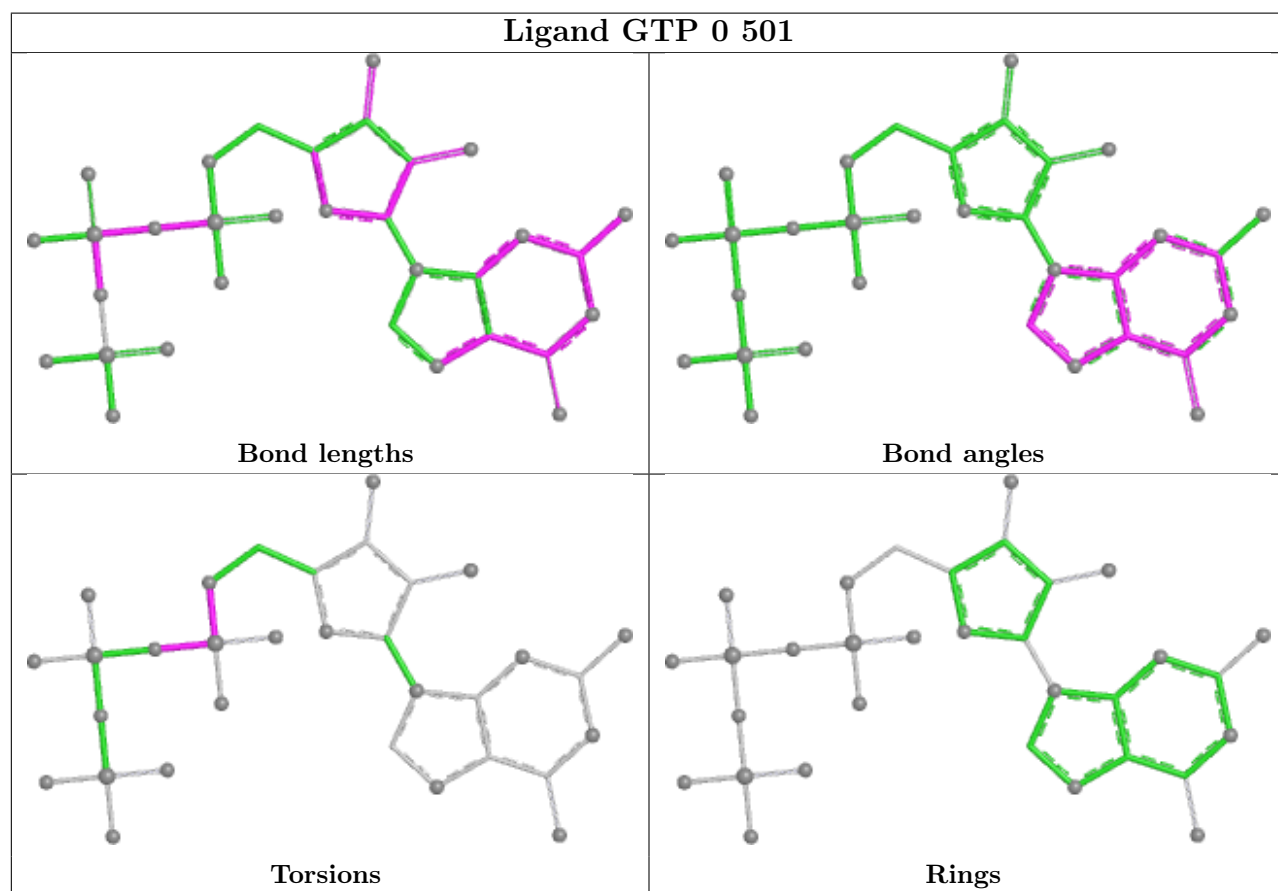
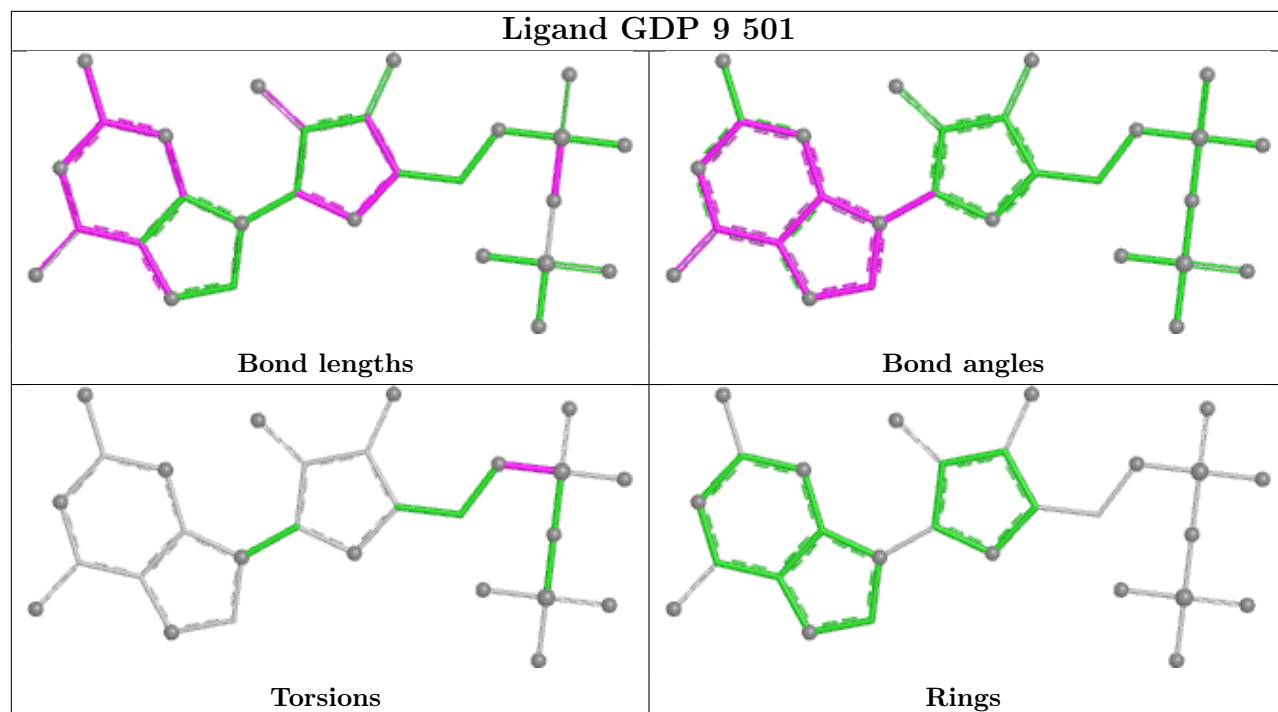


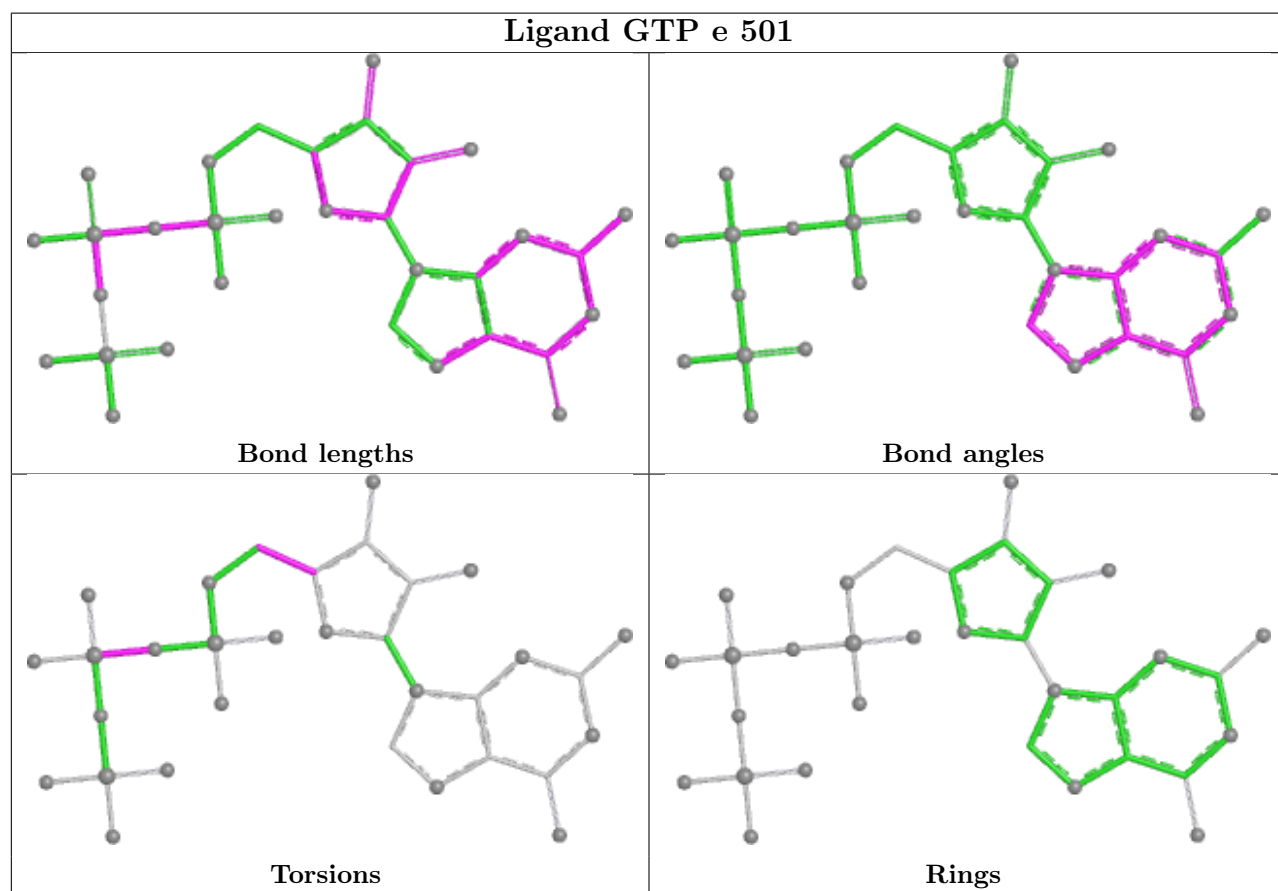
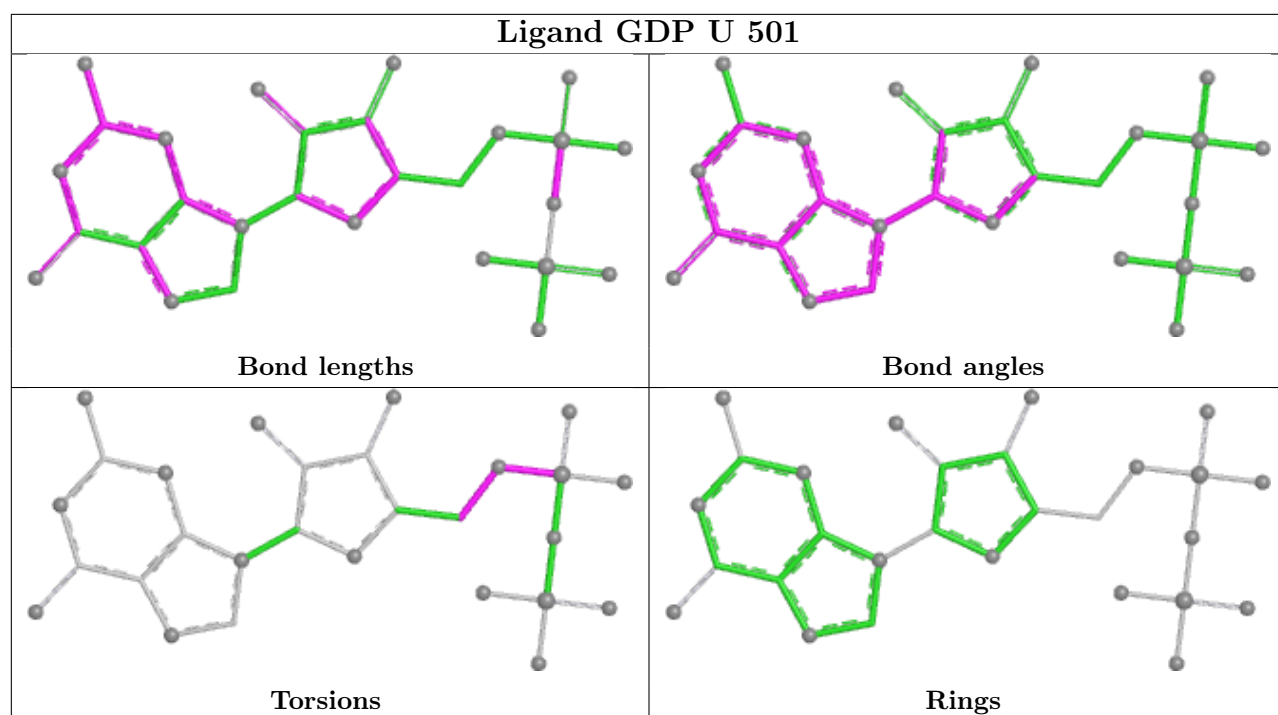
Ligand GTP Z 501

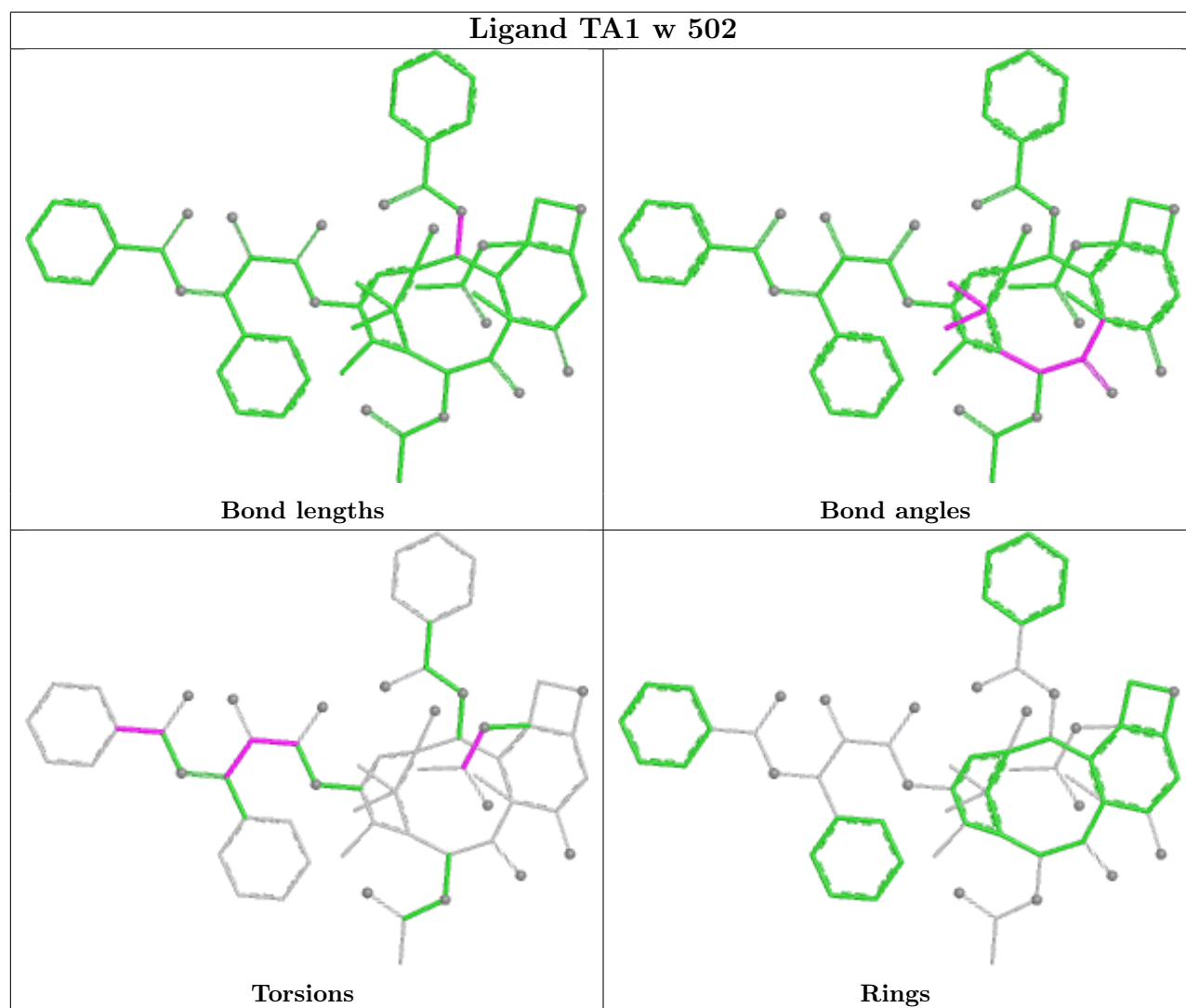
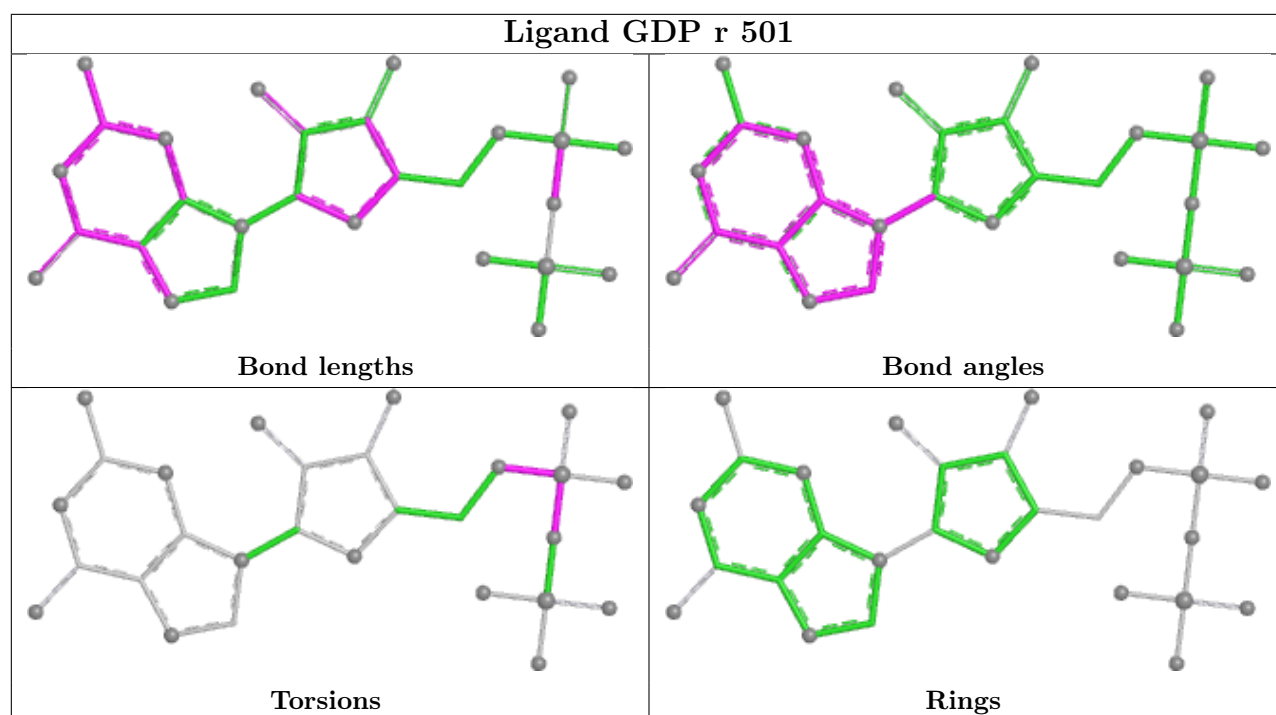


Ligand GDP I 501

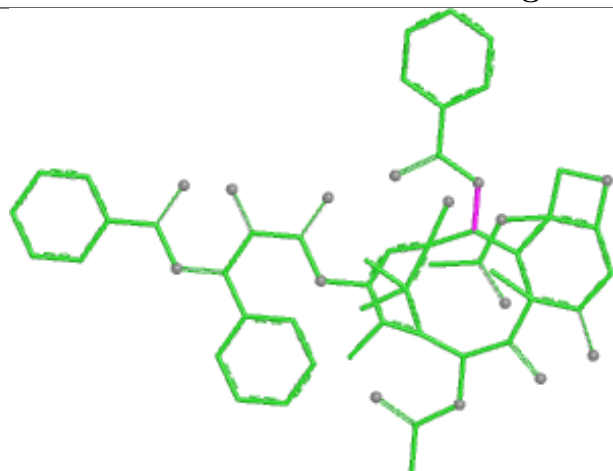




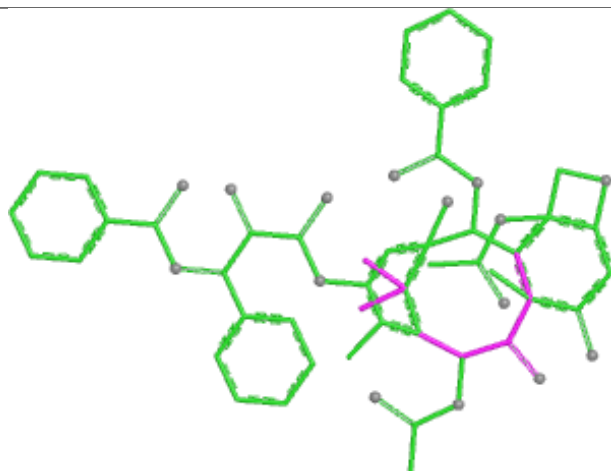




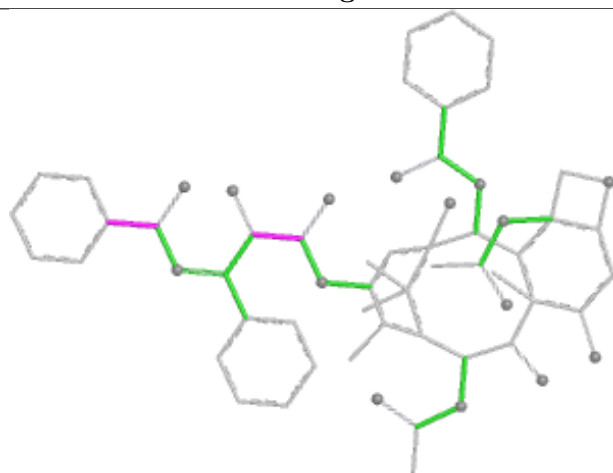
Ligand TA1 4 502



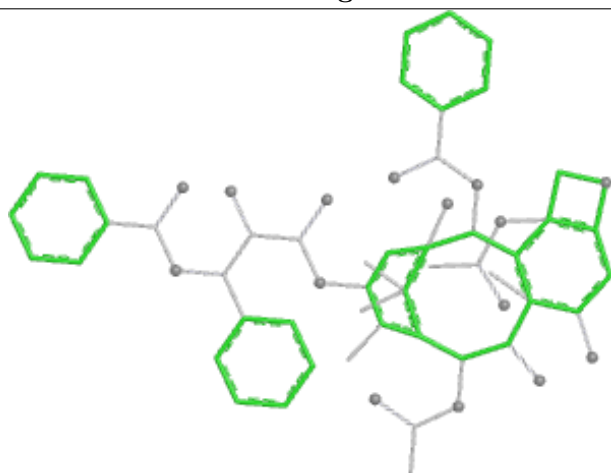
Bond lengths



Bond angles

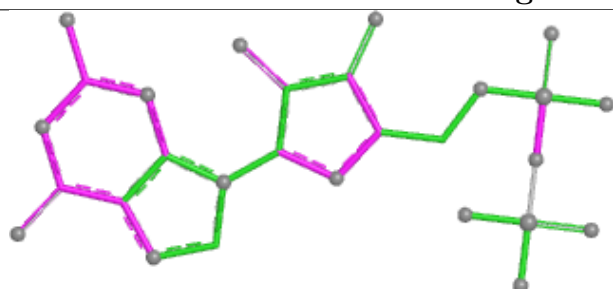


Torsions

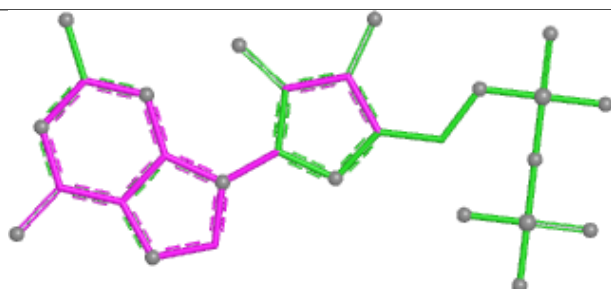


Rings

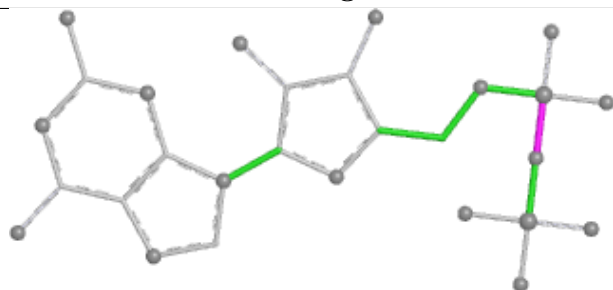
Ligand GDP a 501



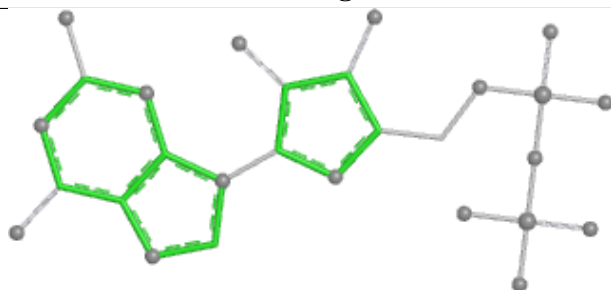
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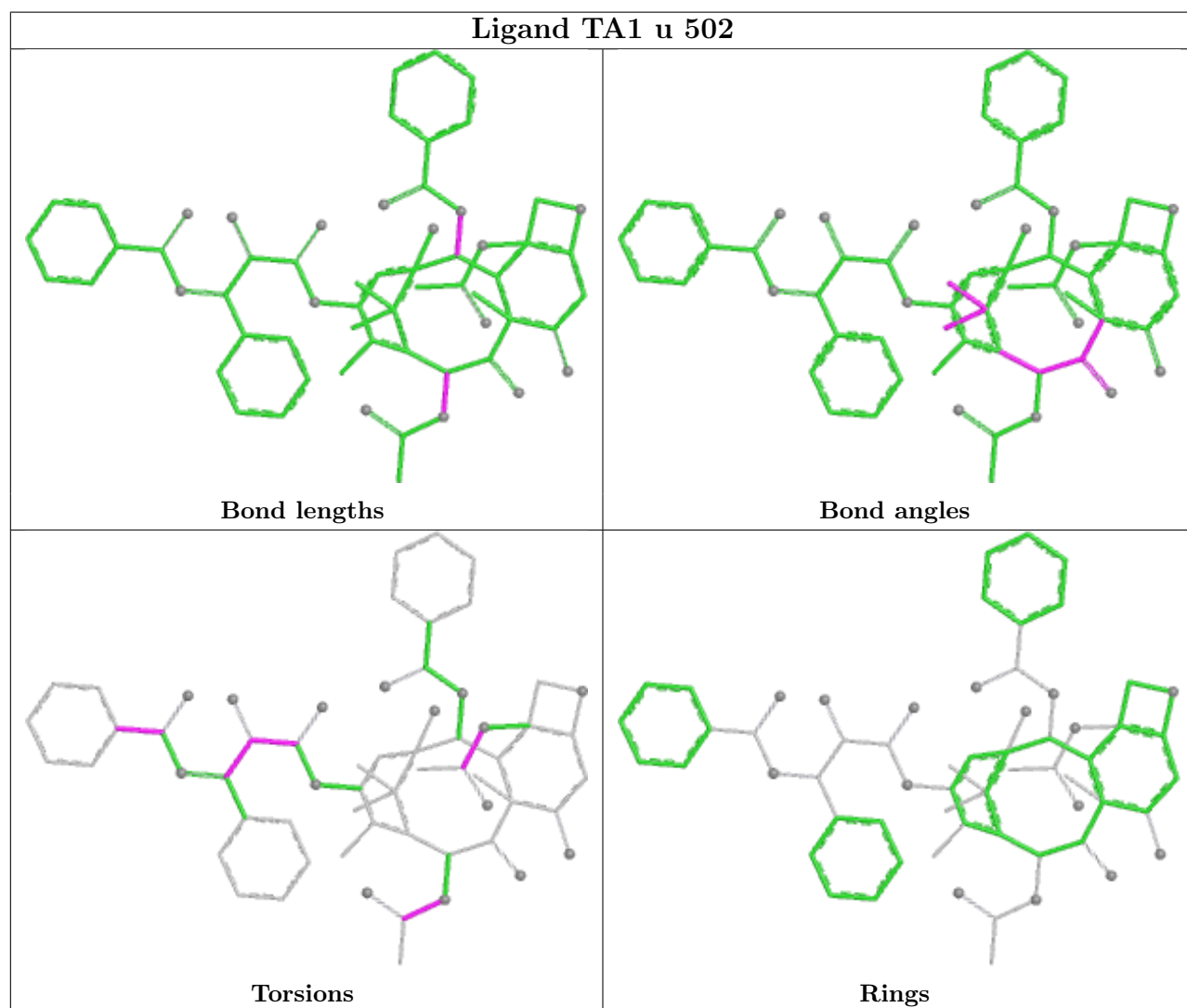
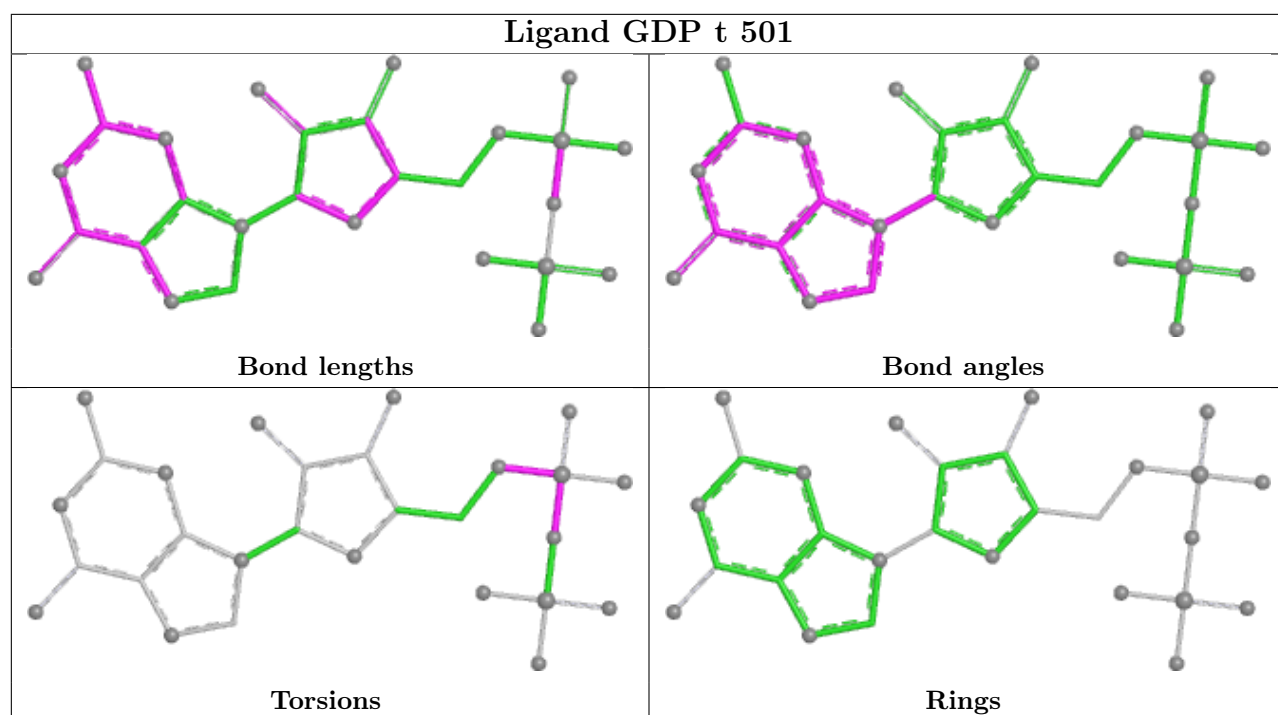
Bond angles

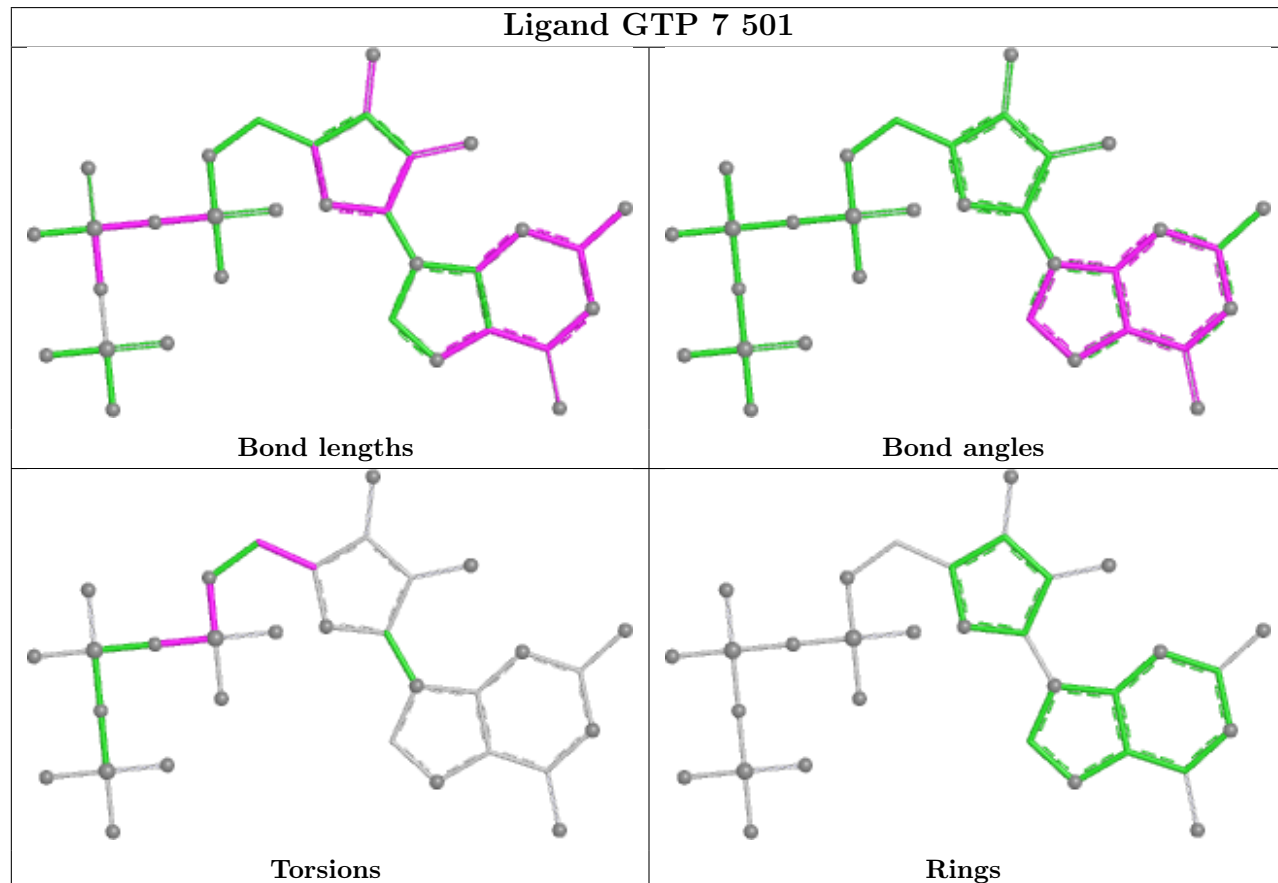
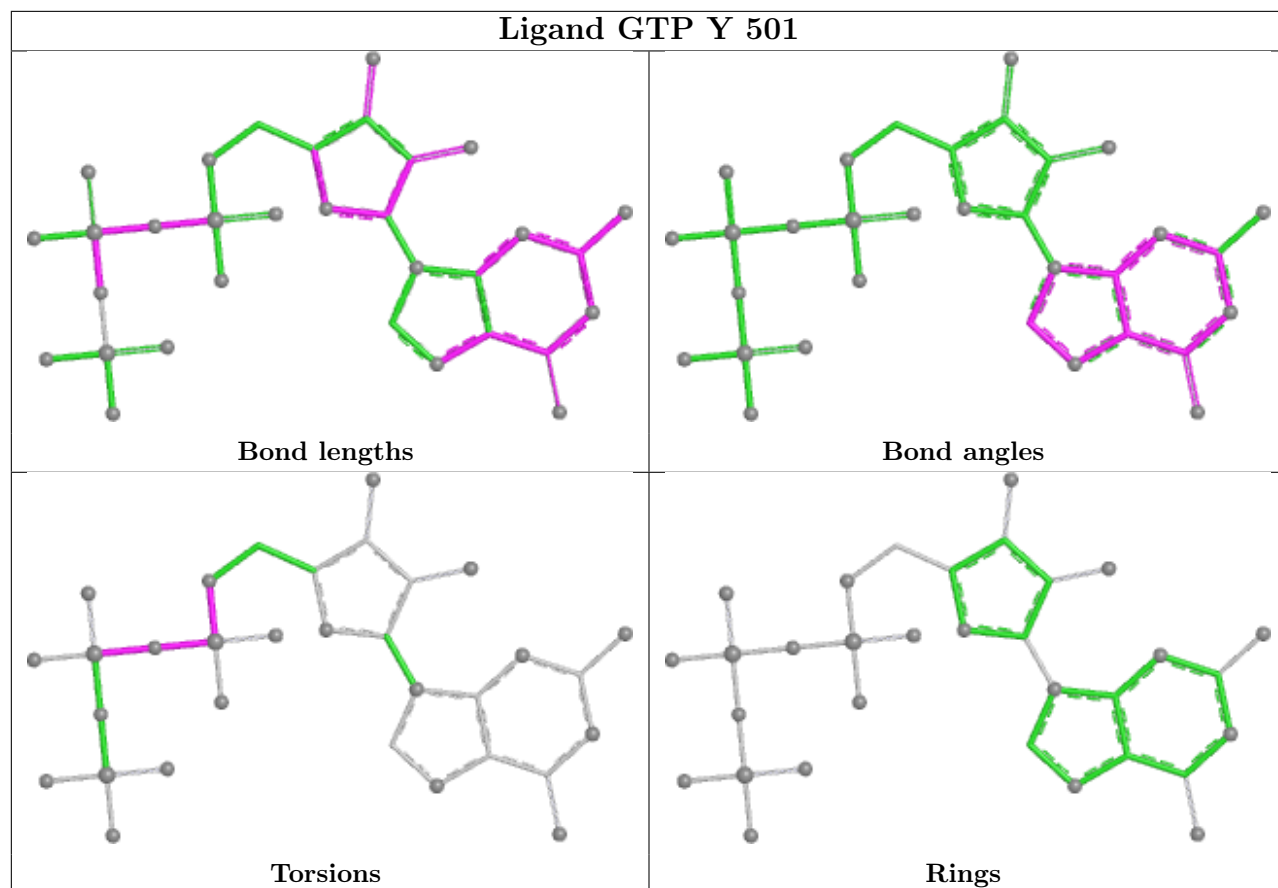


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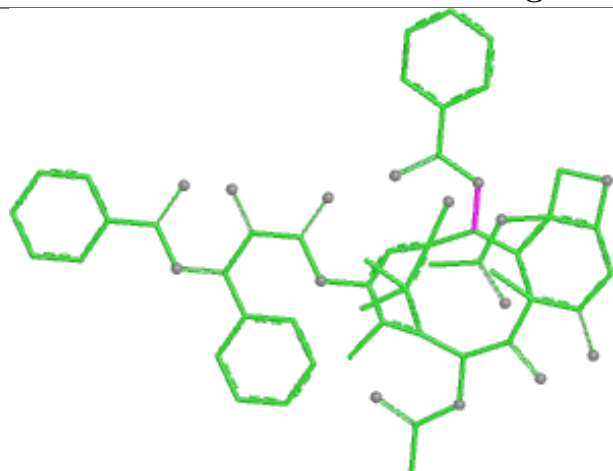


Rings

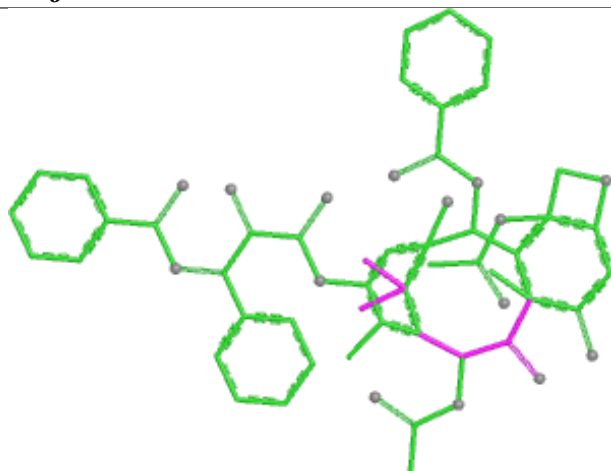




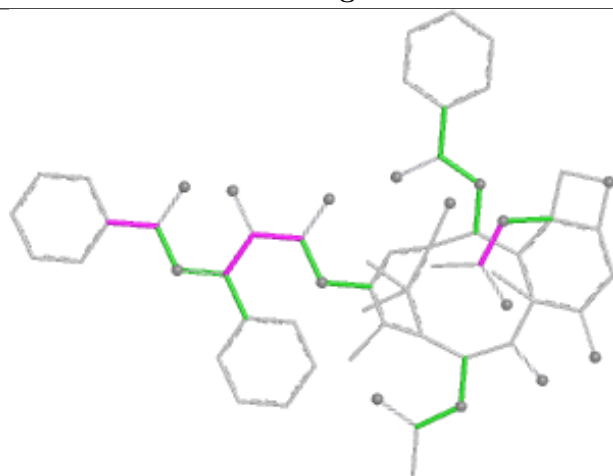
Ligand TA1 j 502



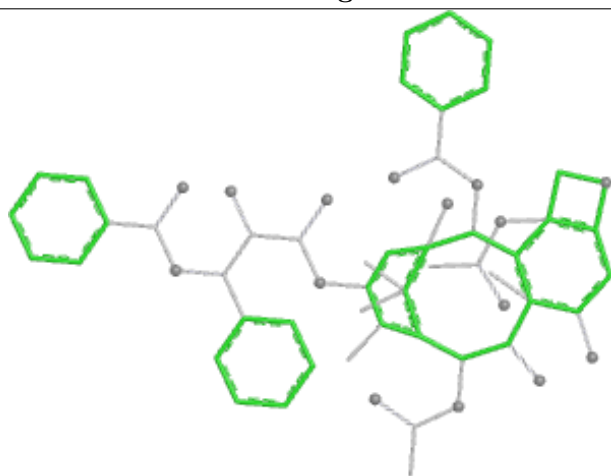
Bond lengths



Bond angles

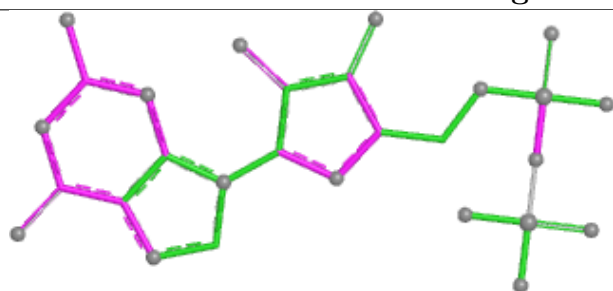


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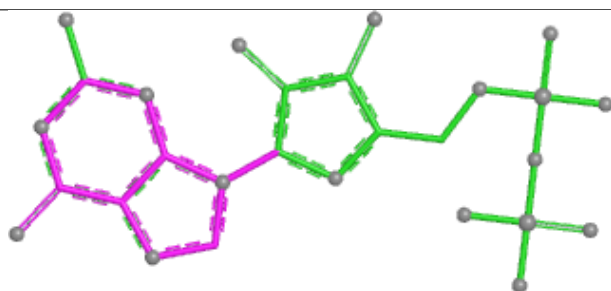


Rings

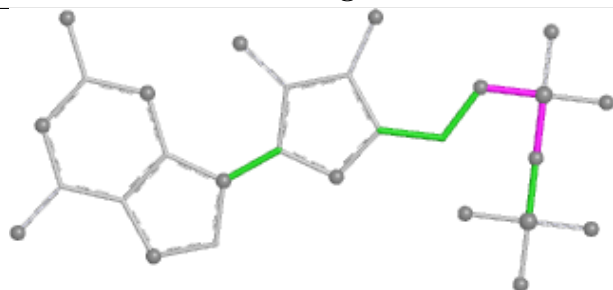
Ligand GDP w 501



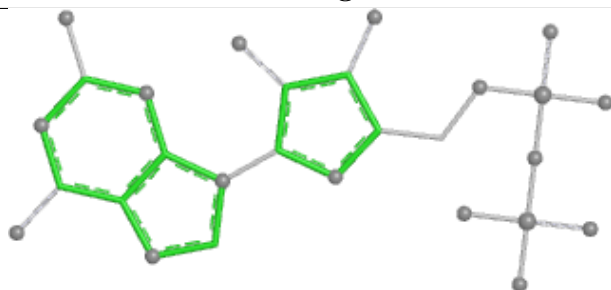
Bond lengths



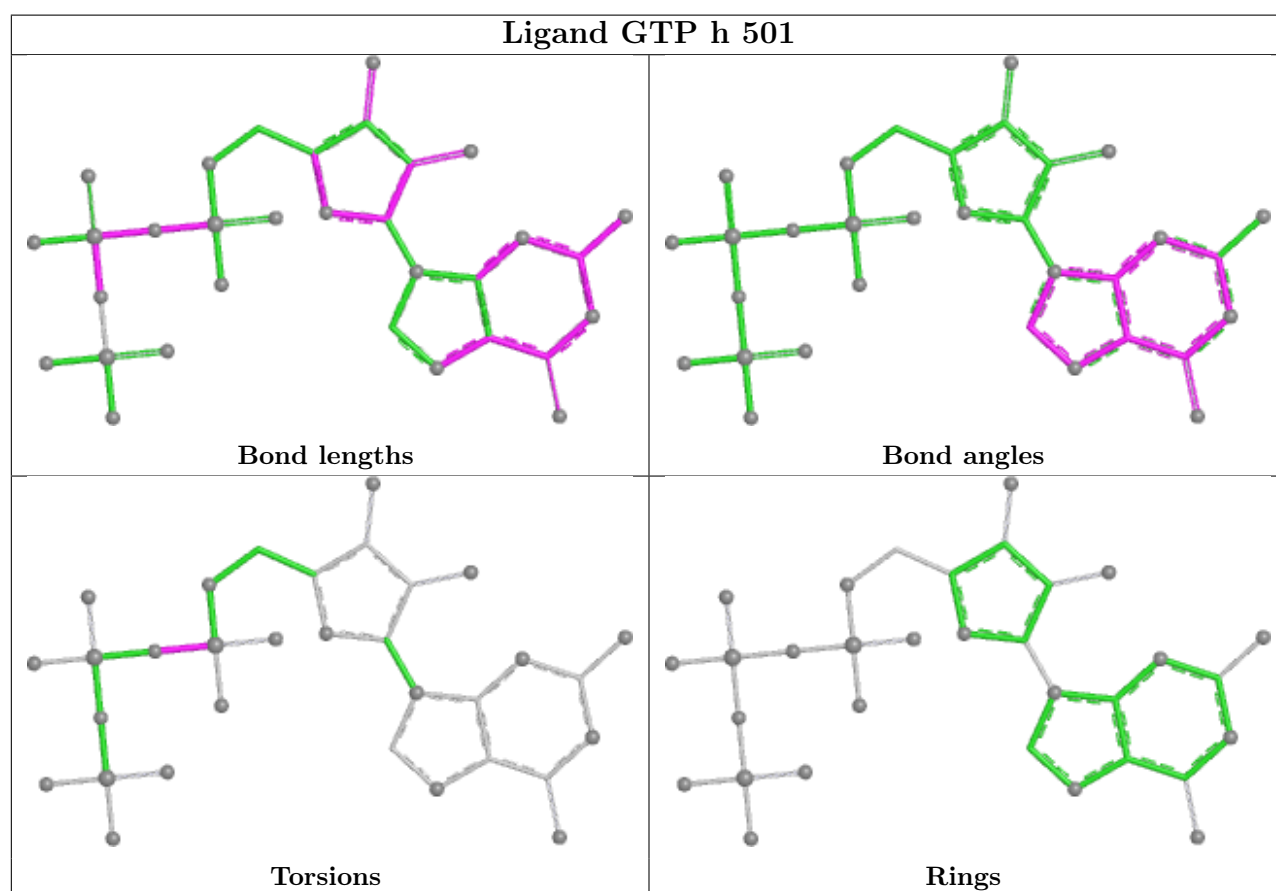
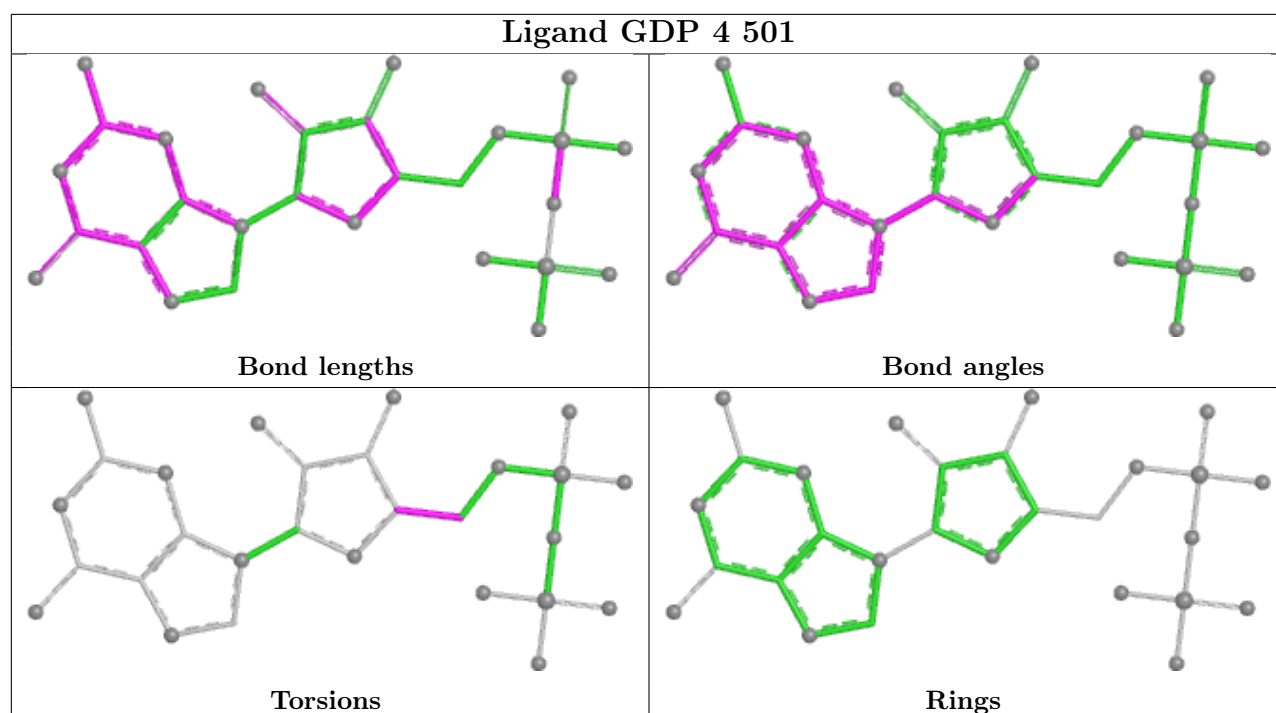
Bond angles



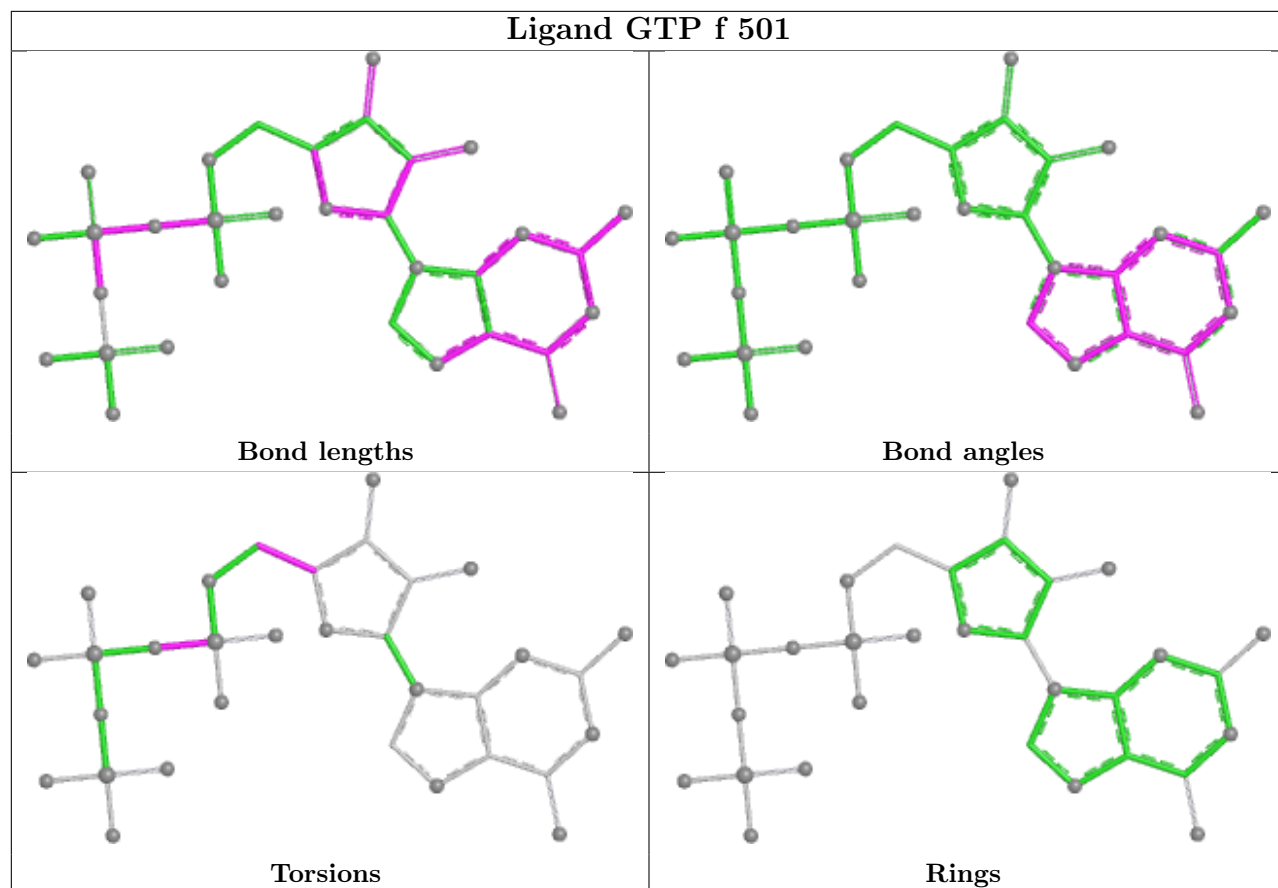
Torsions



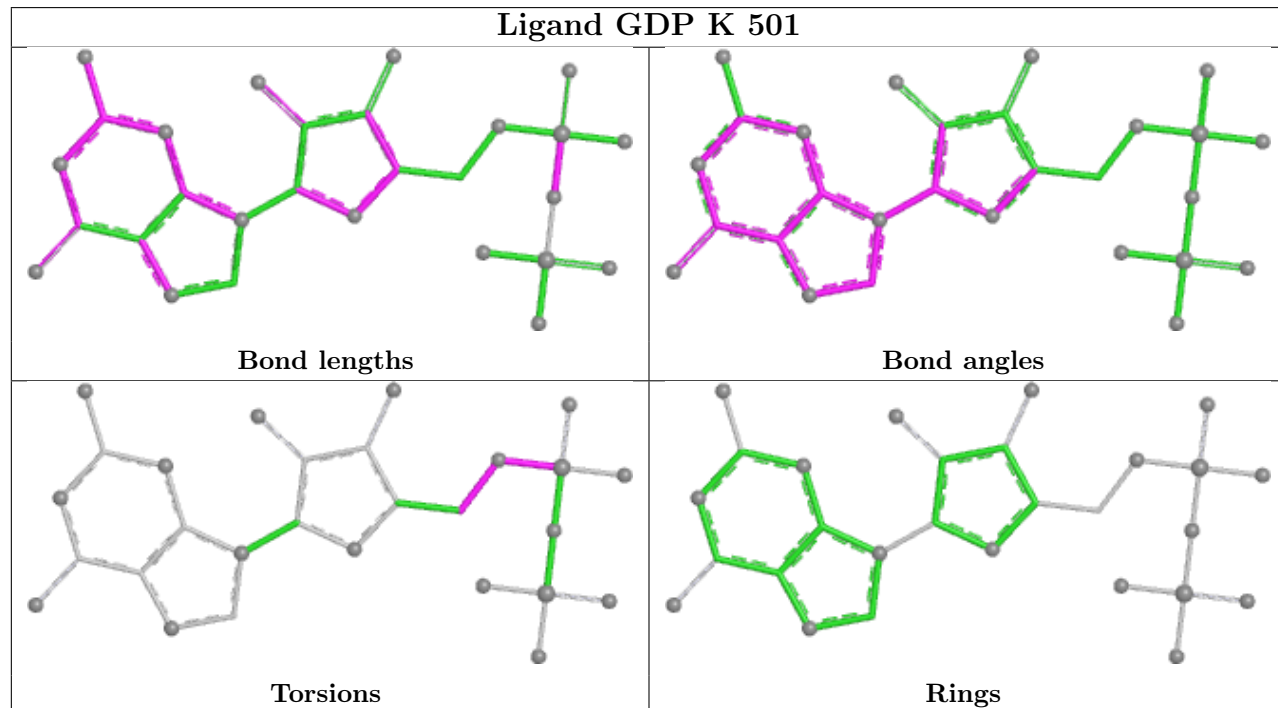
Rings

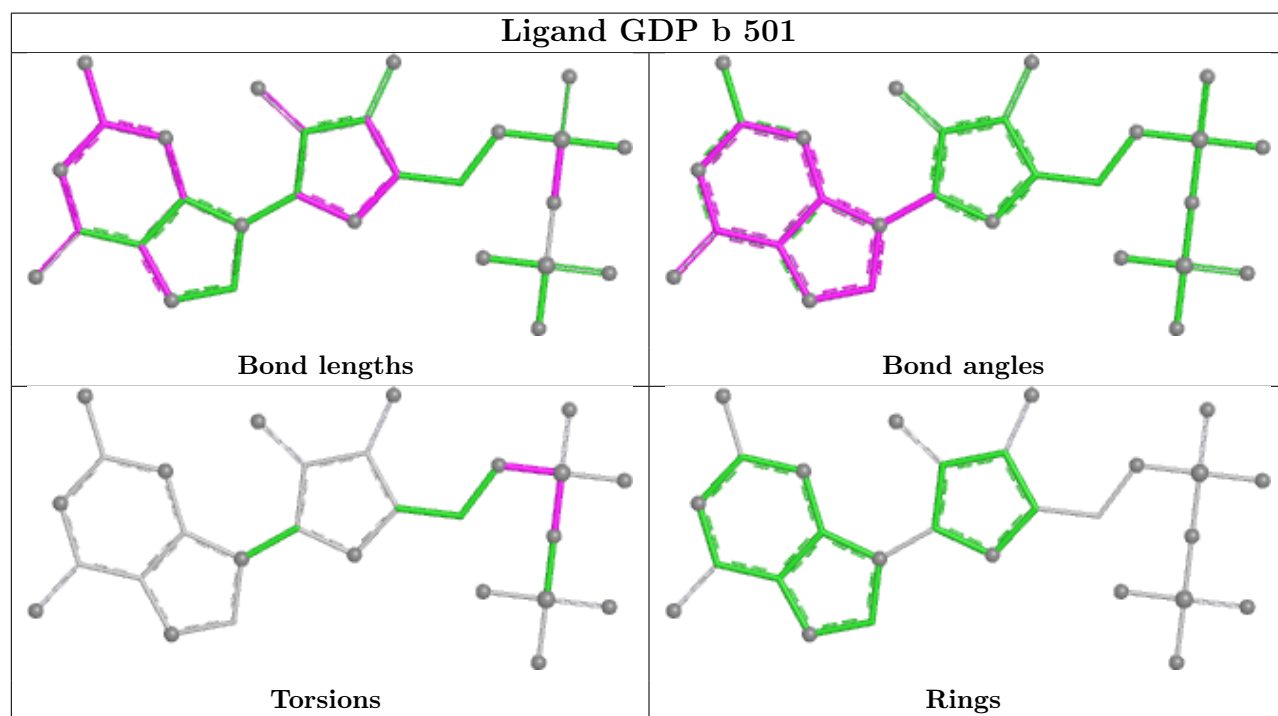
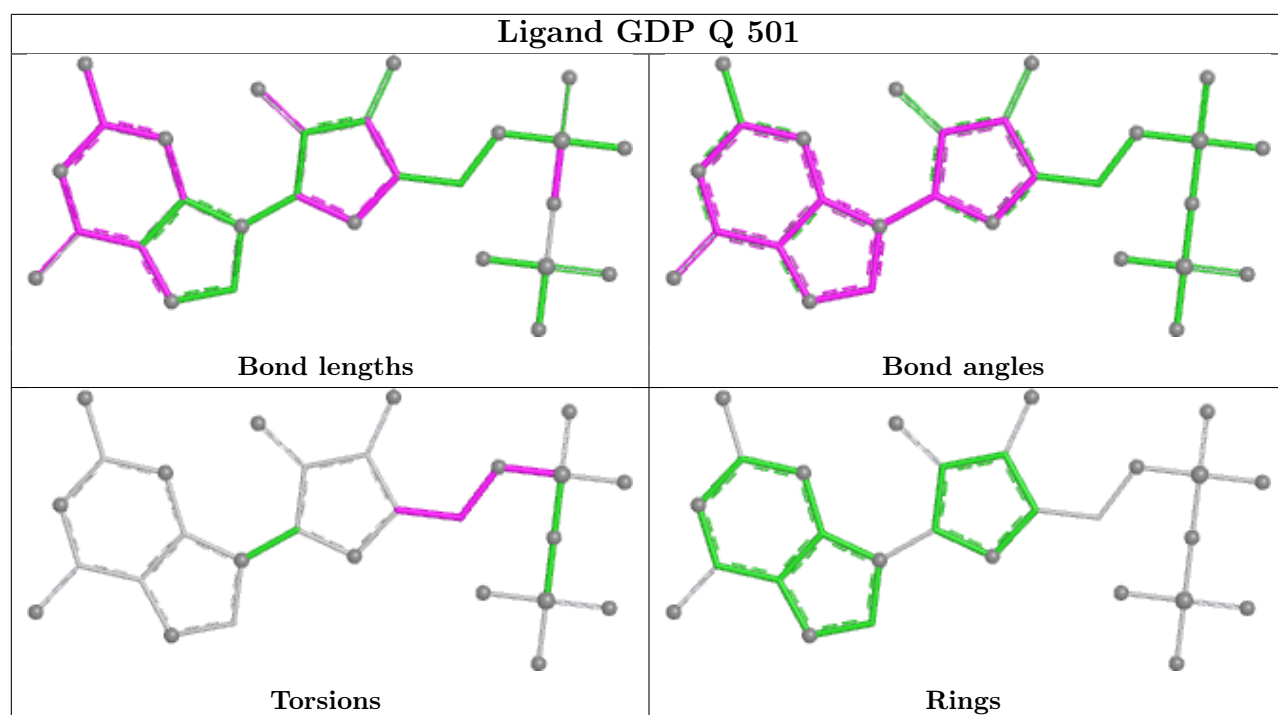


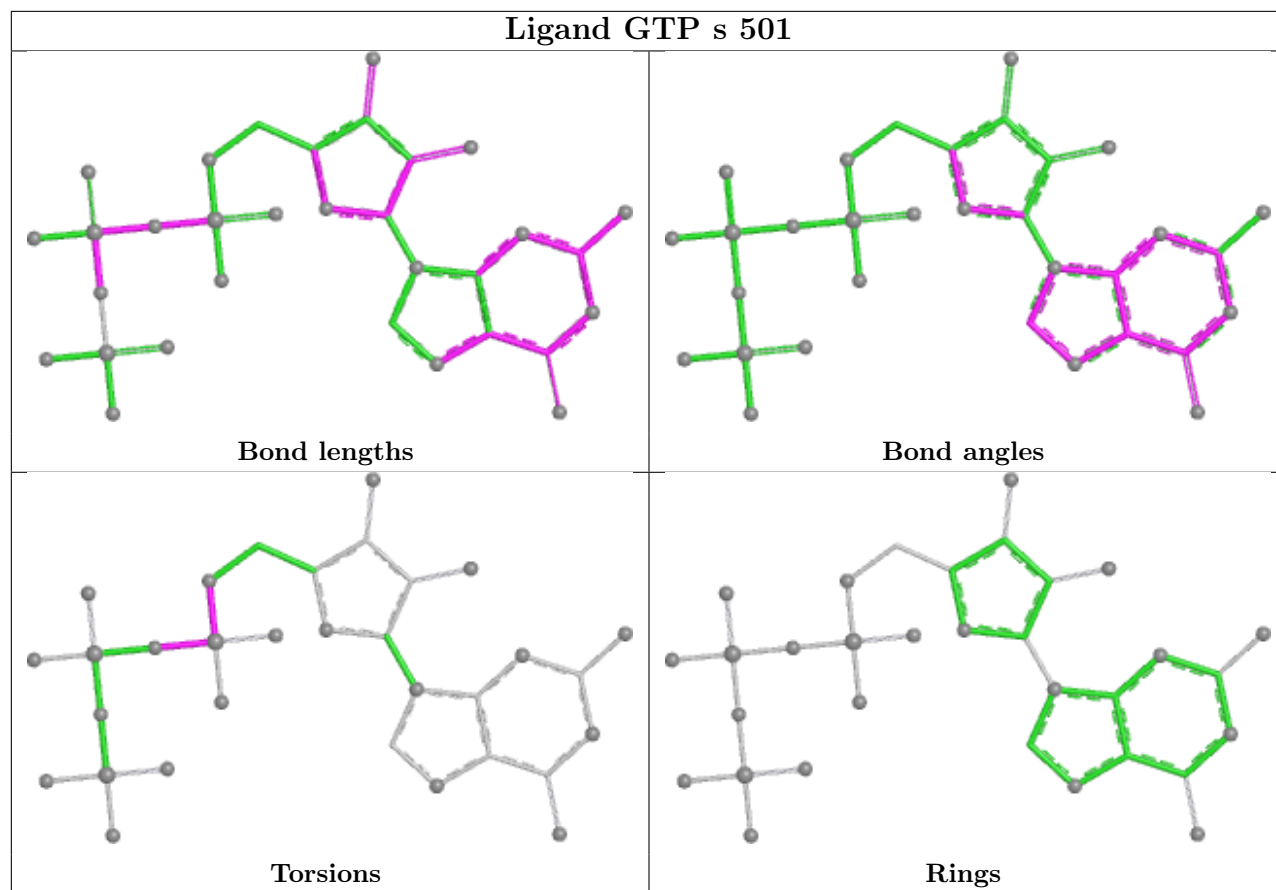
Ligand GTP f 501

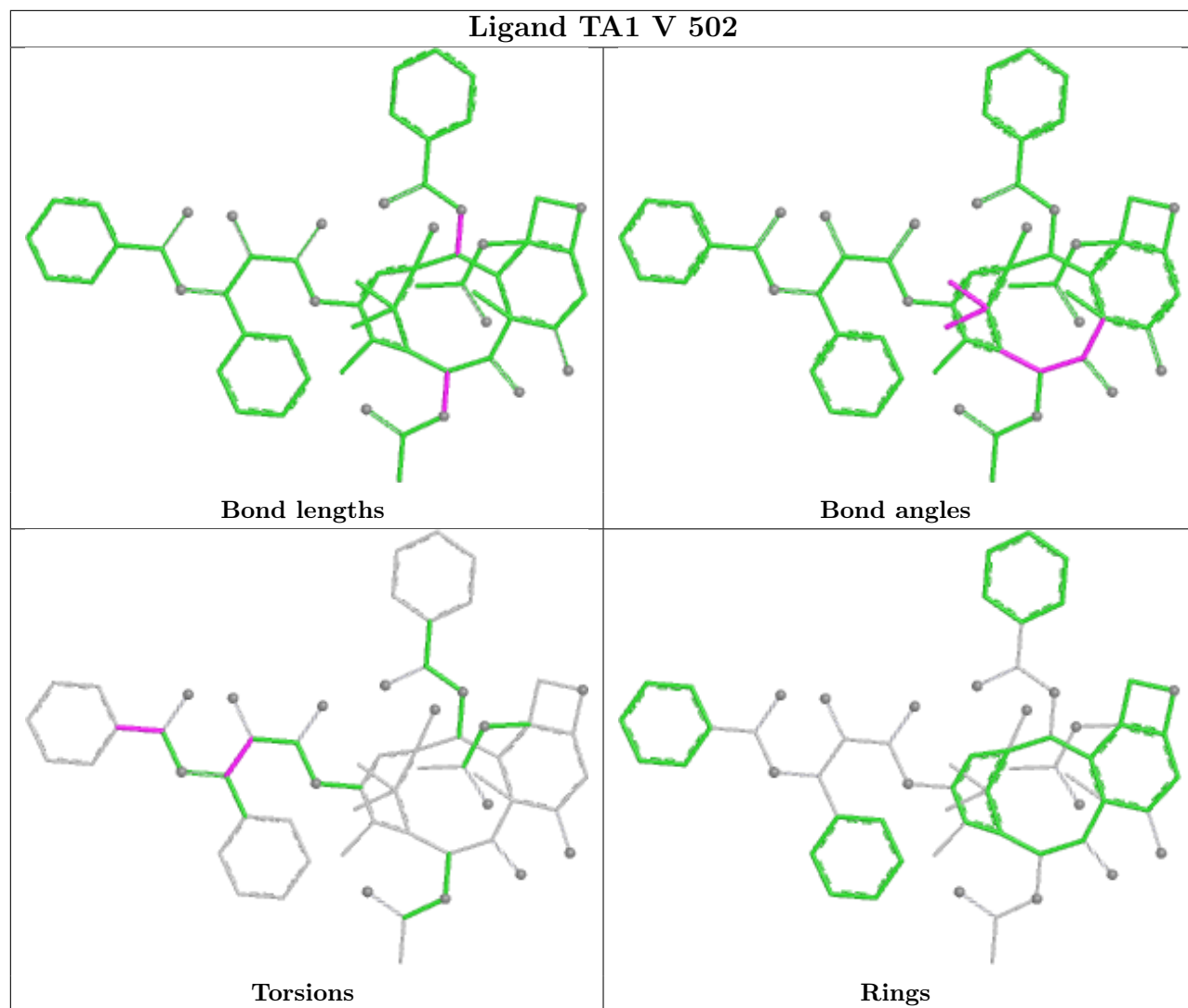


Ligand GDP K 501

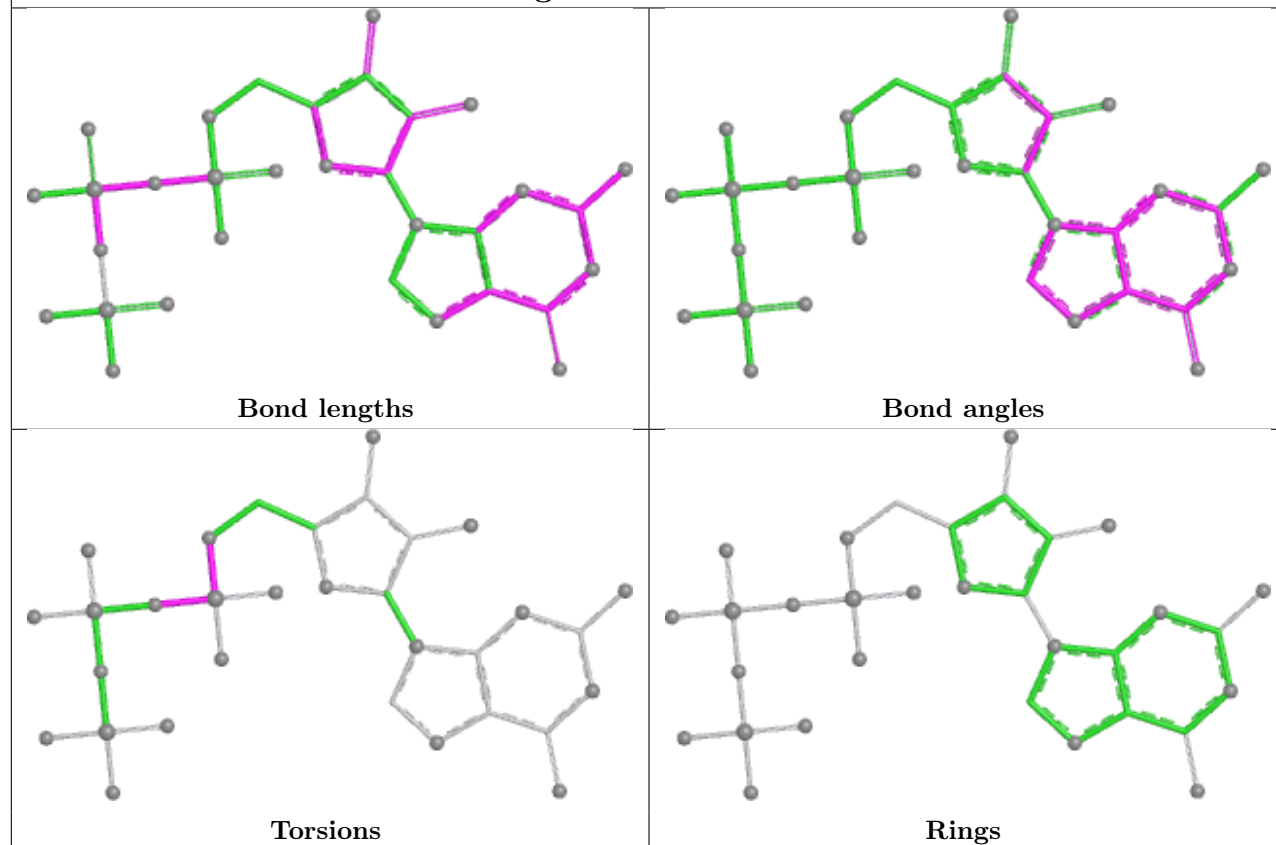




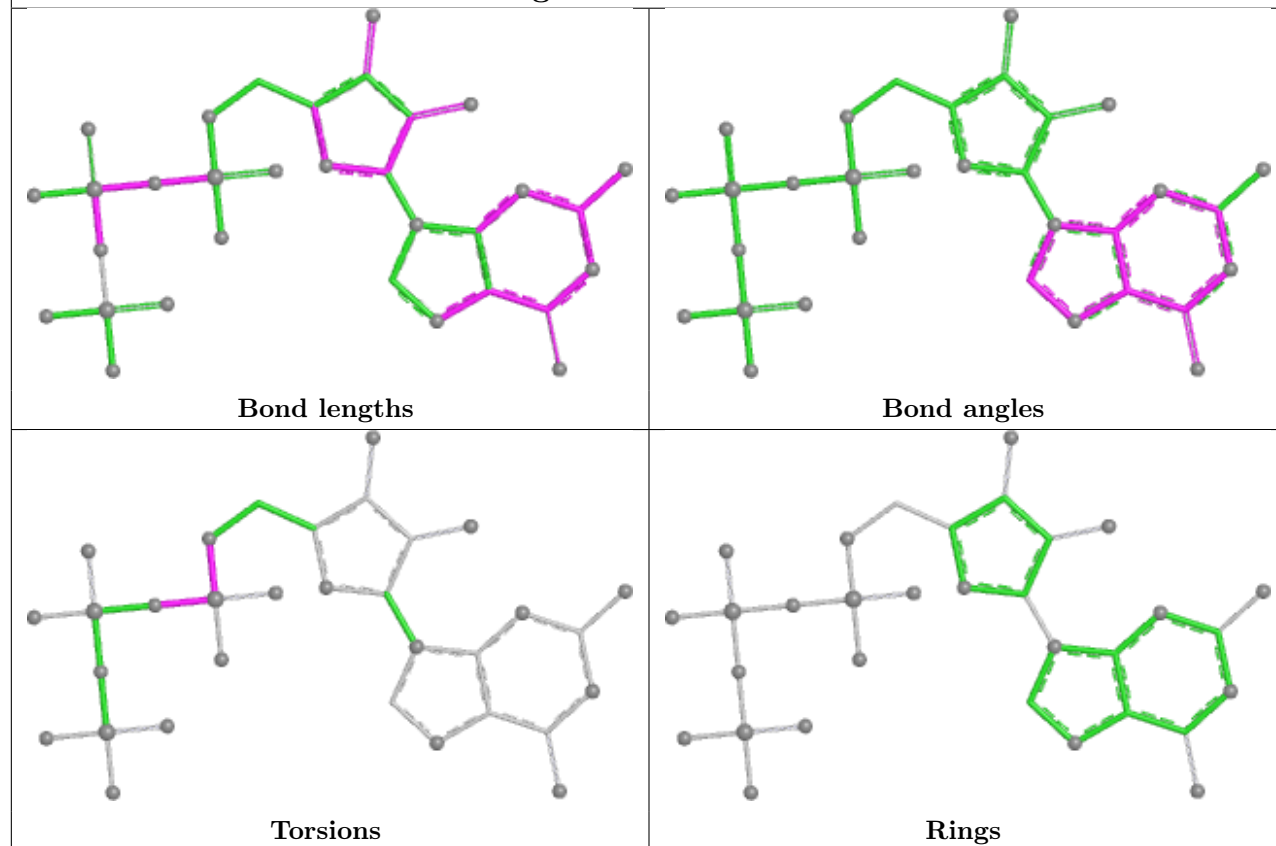


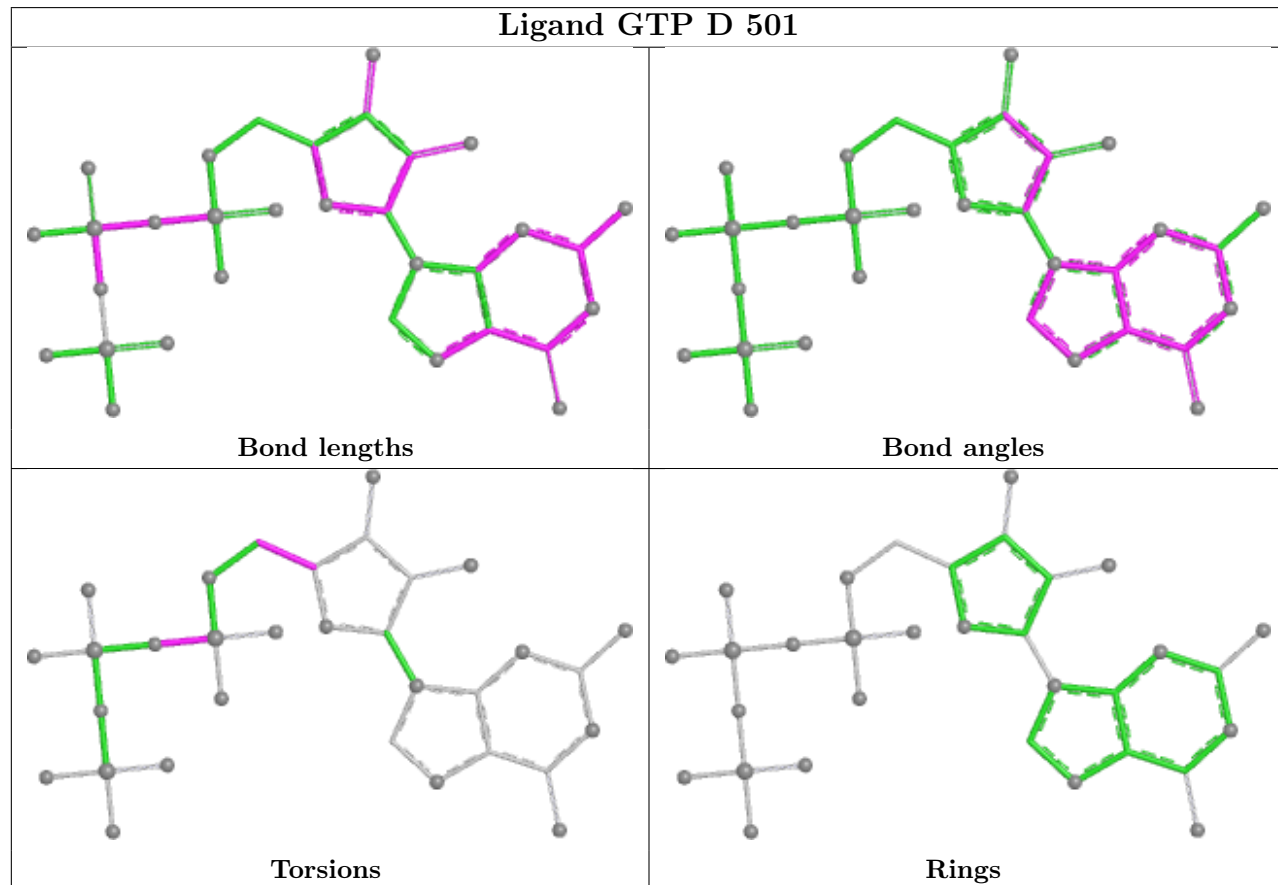
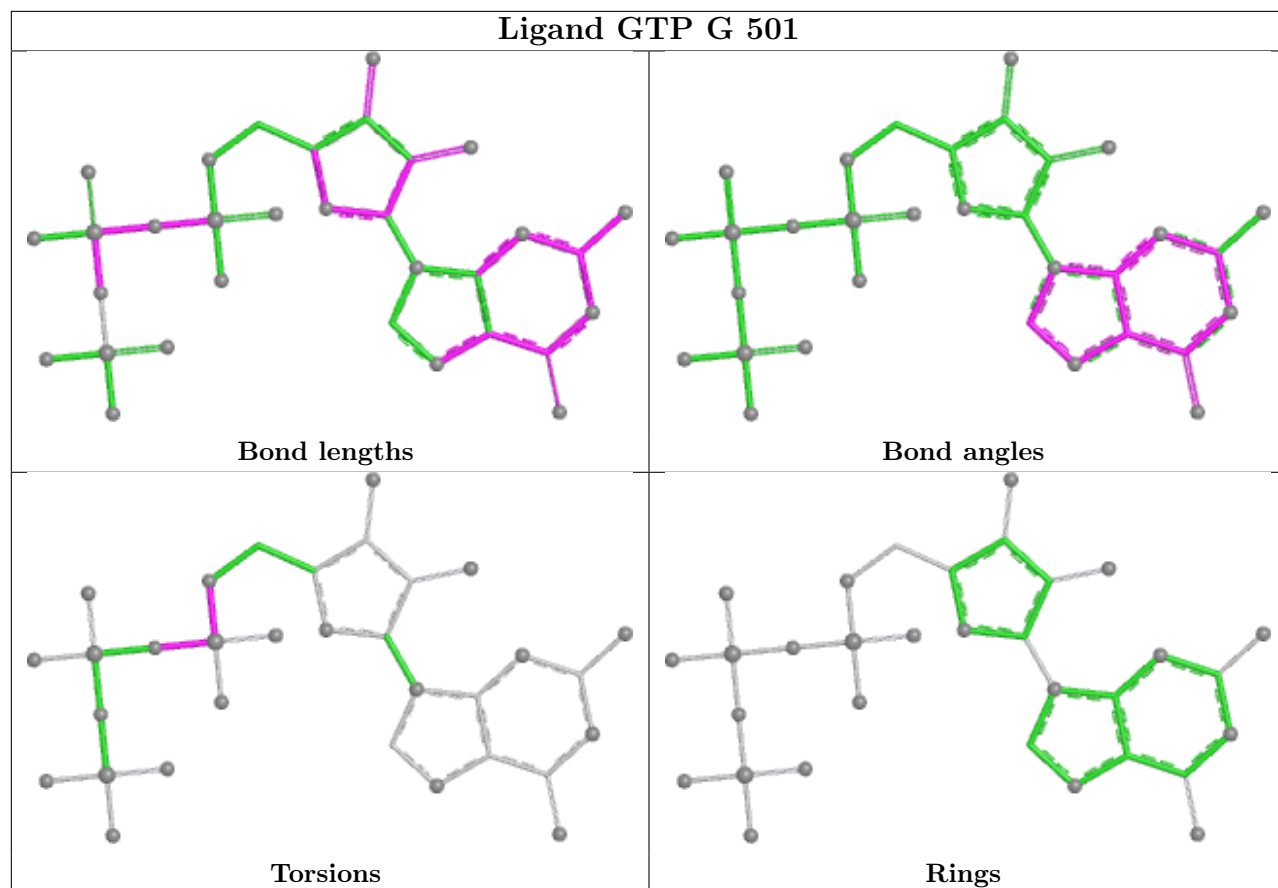


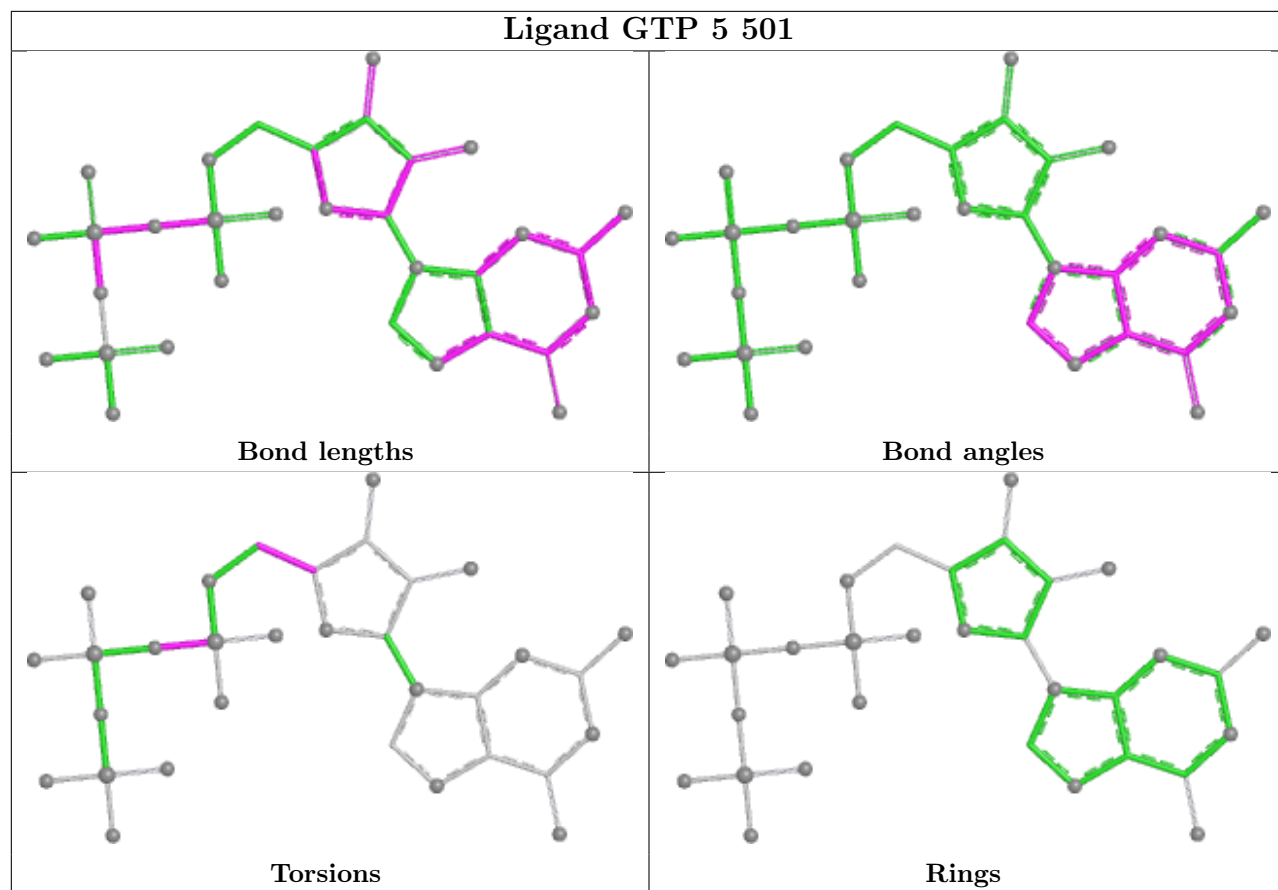
Ligand GTP 6 501



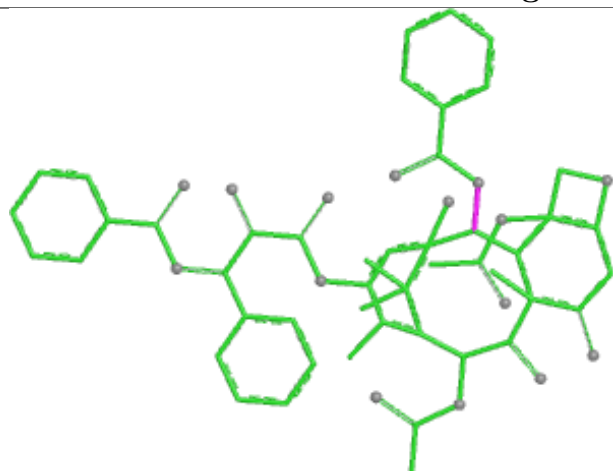
Ligand GTP F 501



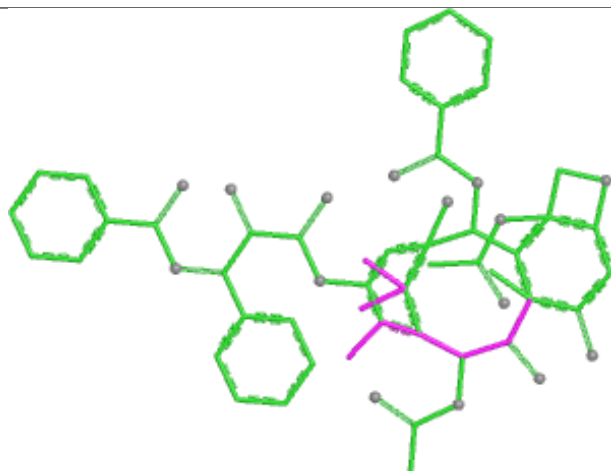




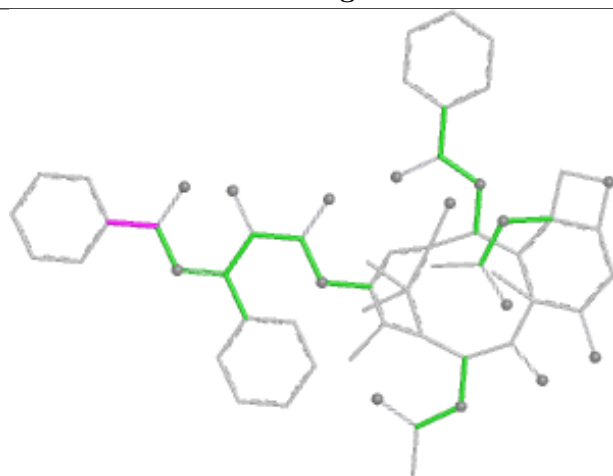
Ligand TA1 8 502



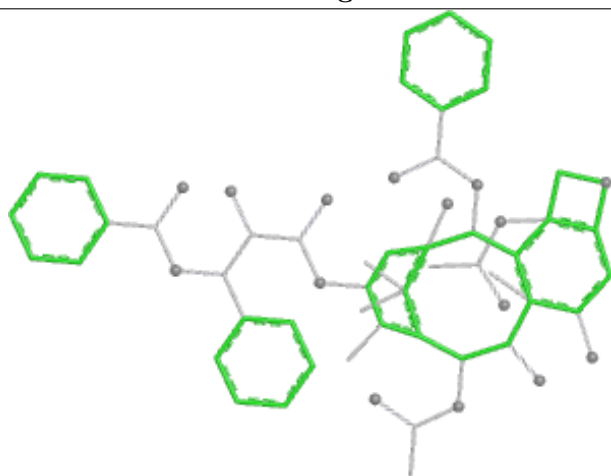
Bond lengths



Bond angles

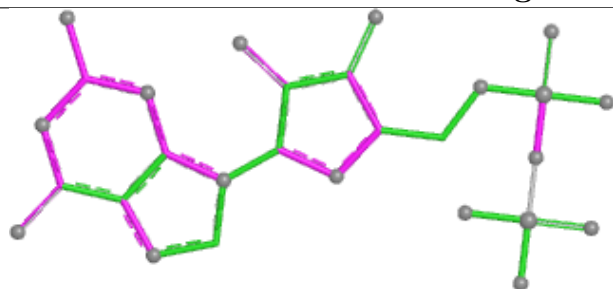


Torsions

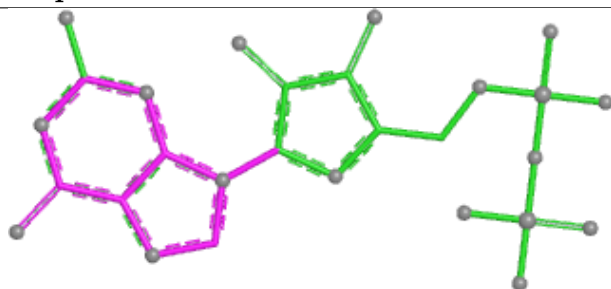


Rings

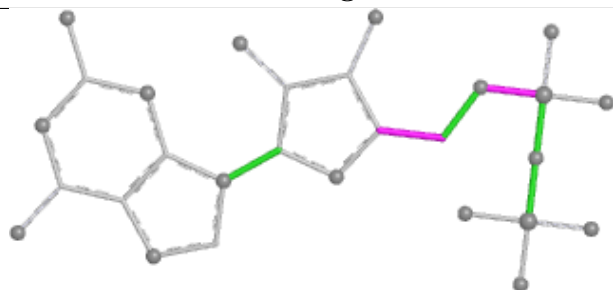
Ligand GDP p 501



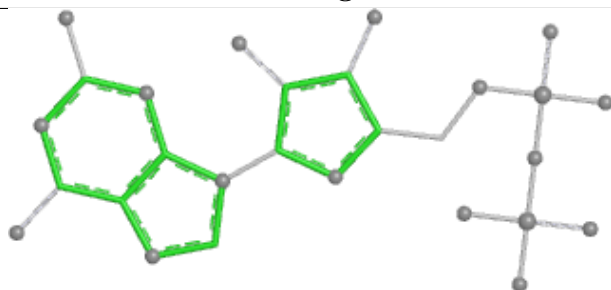
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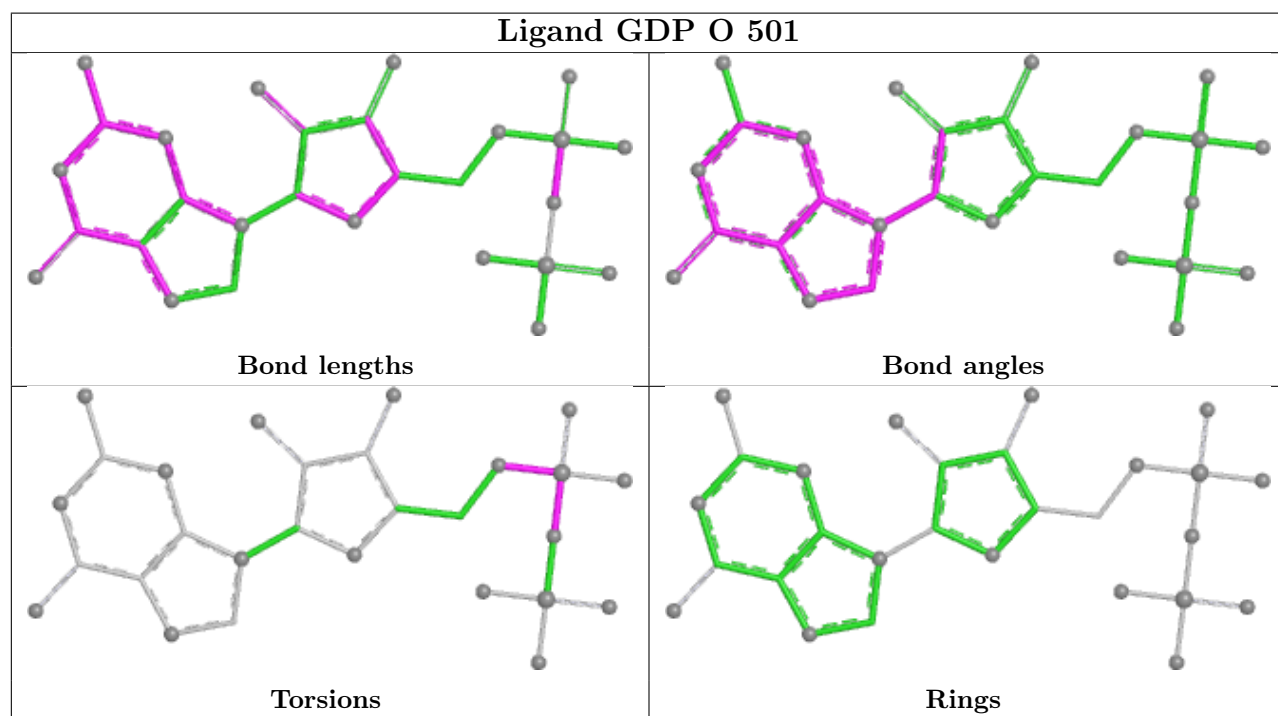
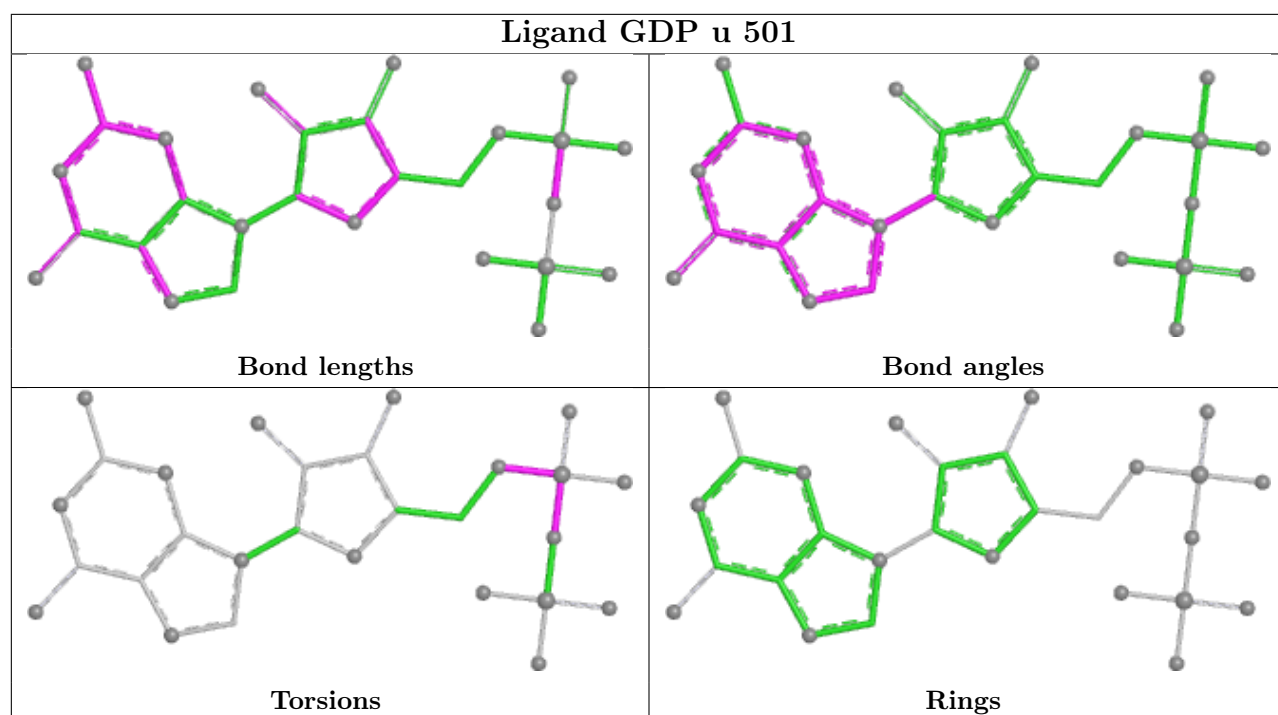
Bond angles

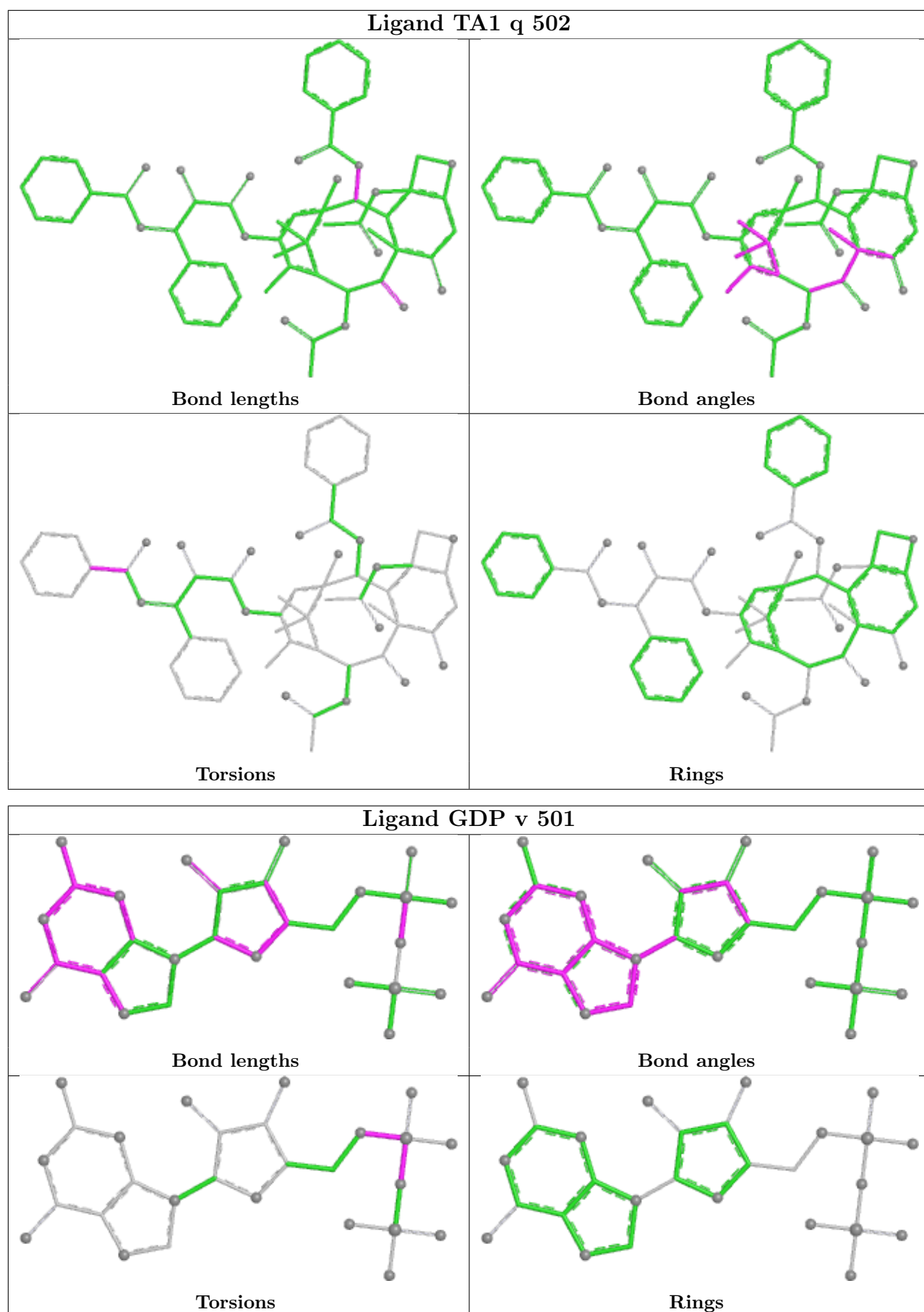


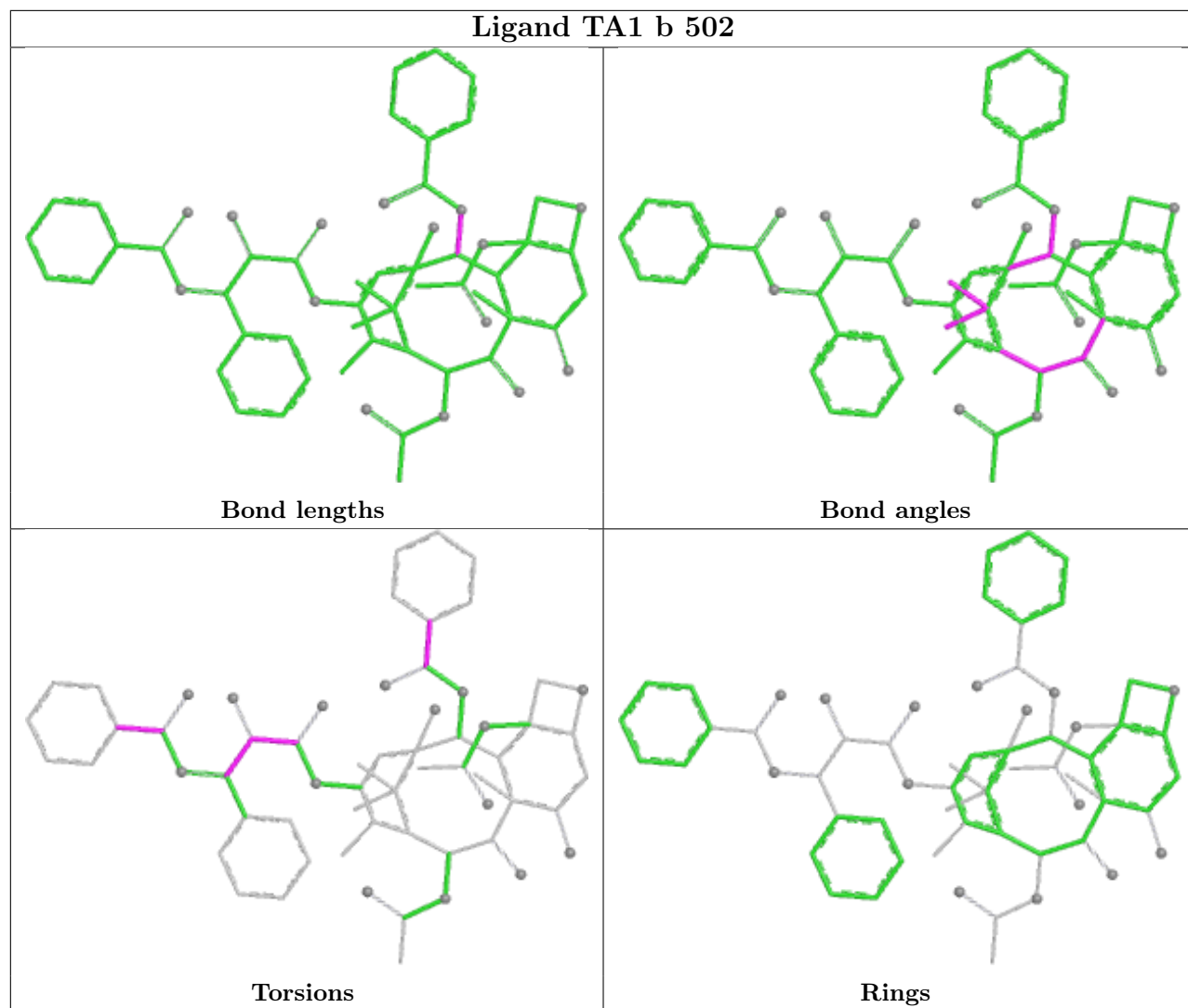
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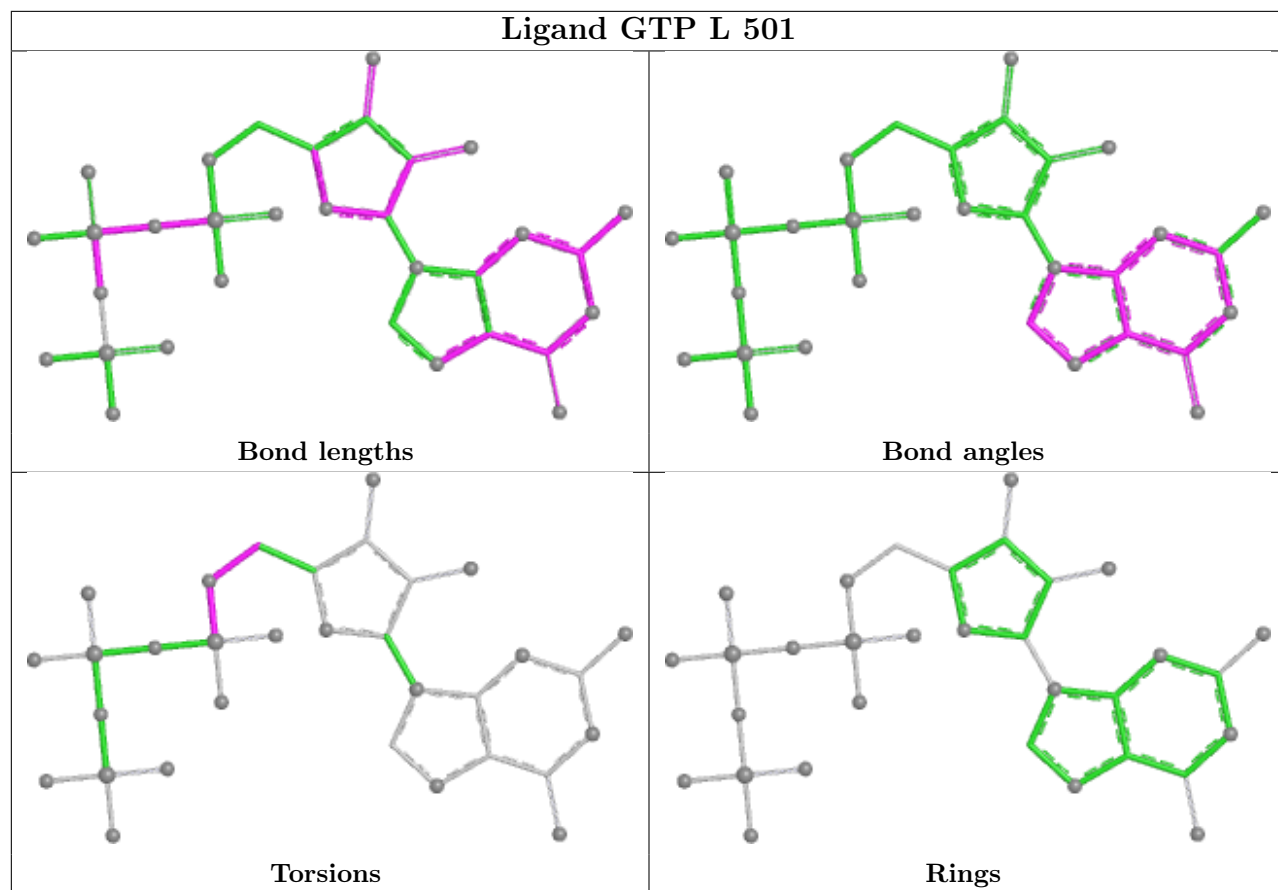


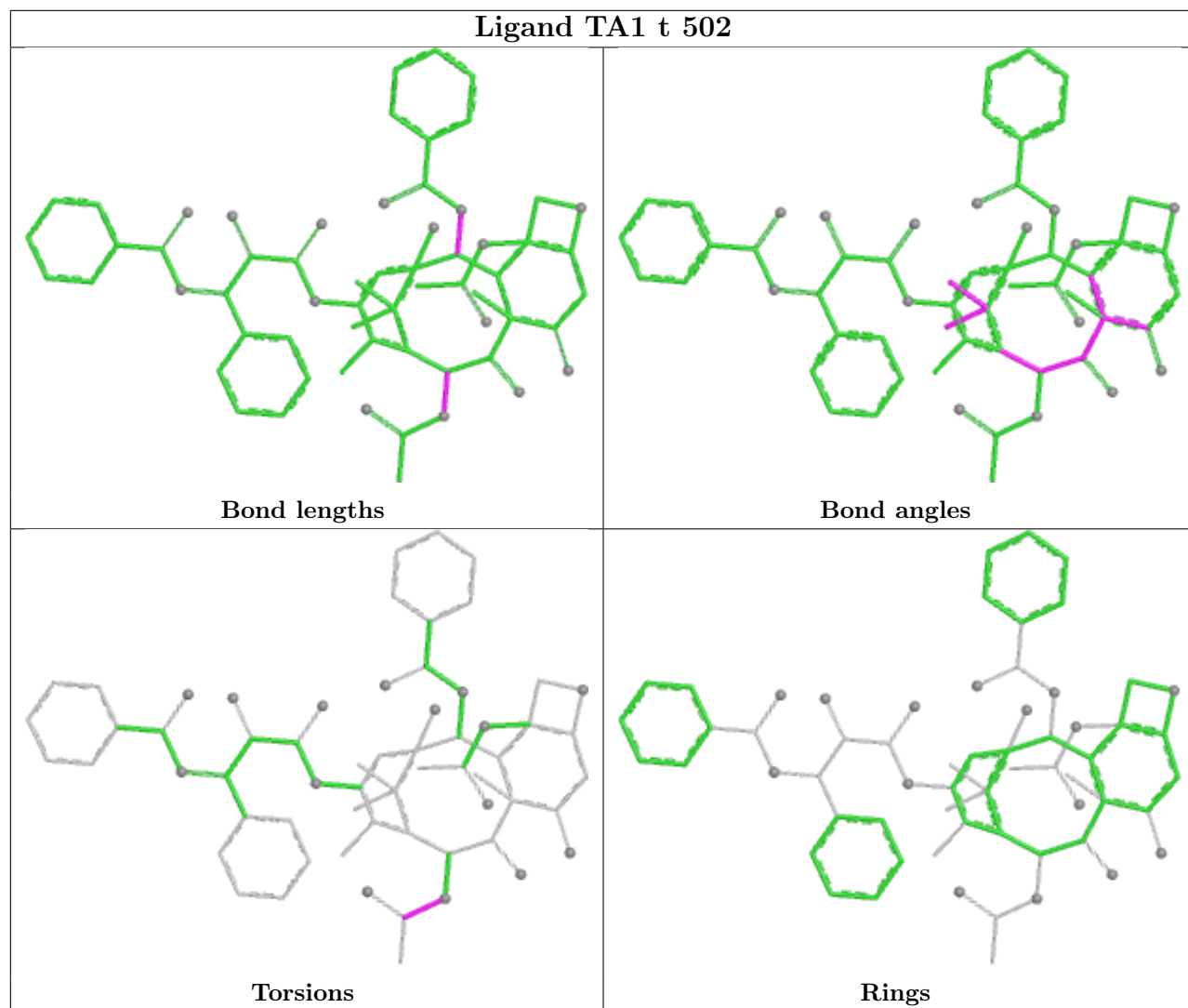
Rings



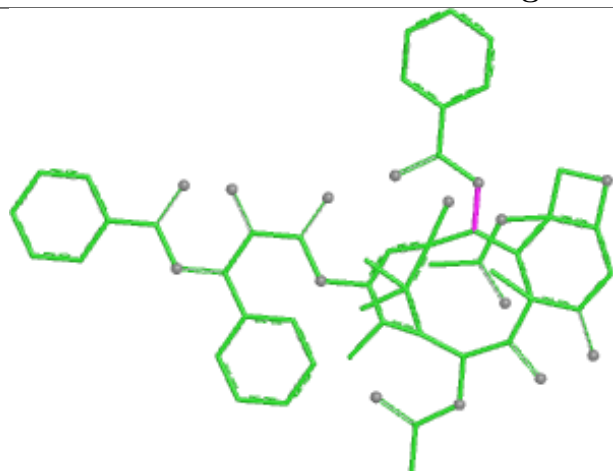




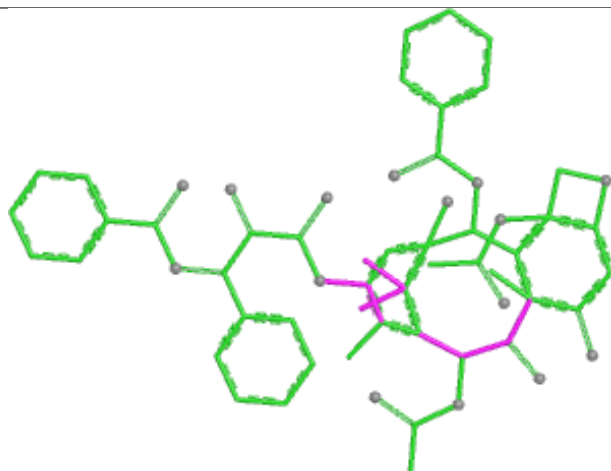




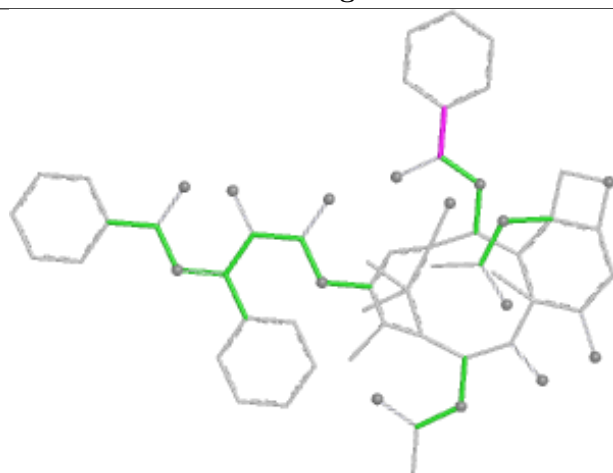
Ligand TA1 J 502



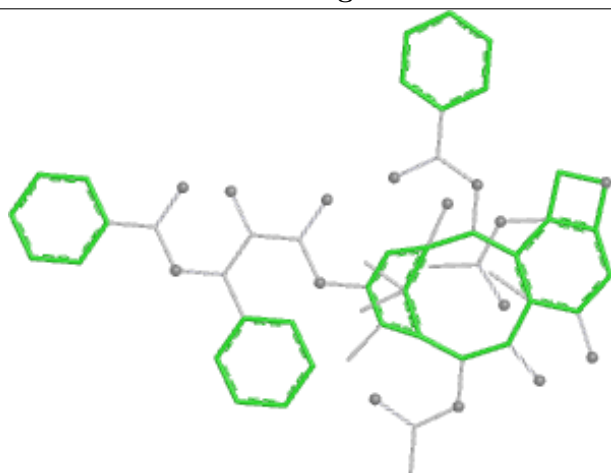
Bond lengths



Bond angles

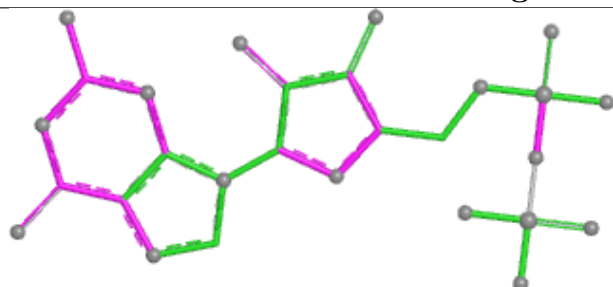


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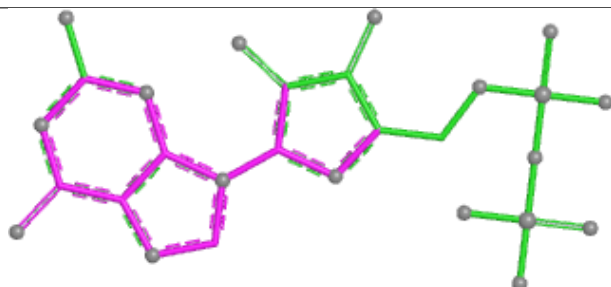


Rings

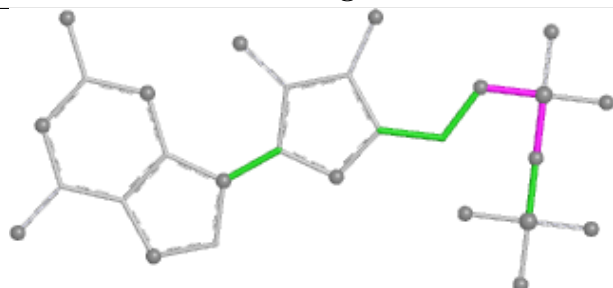
Ligand GDP V 501



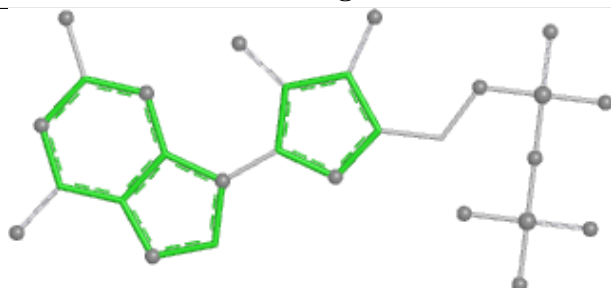
Bond lengths



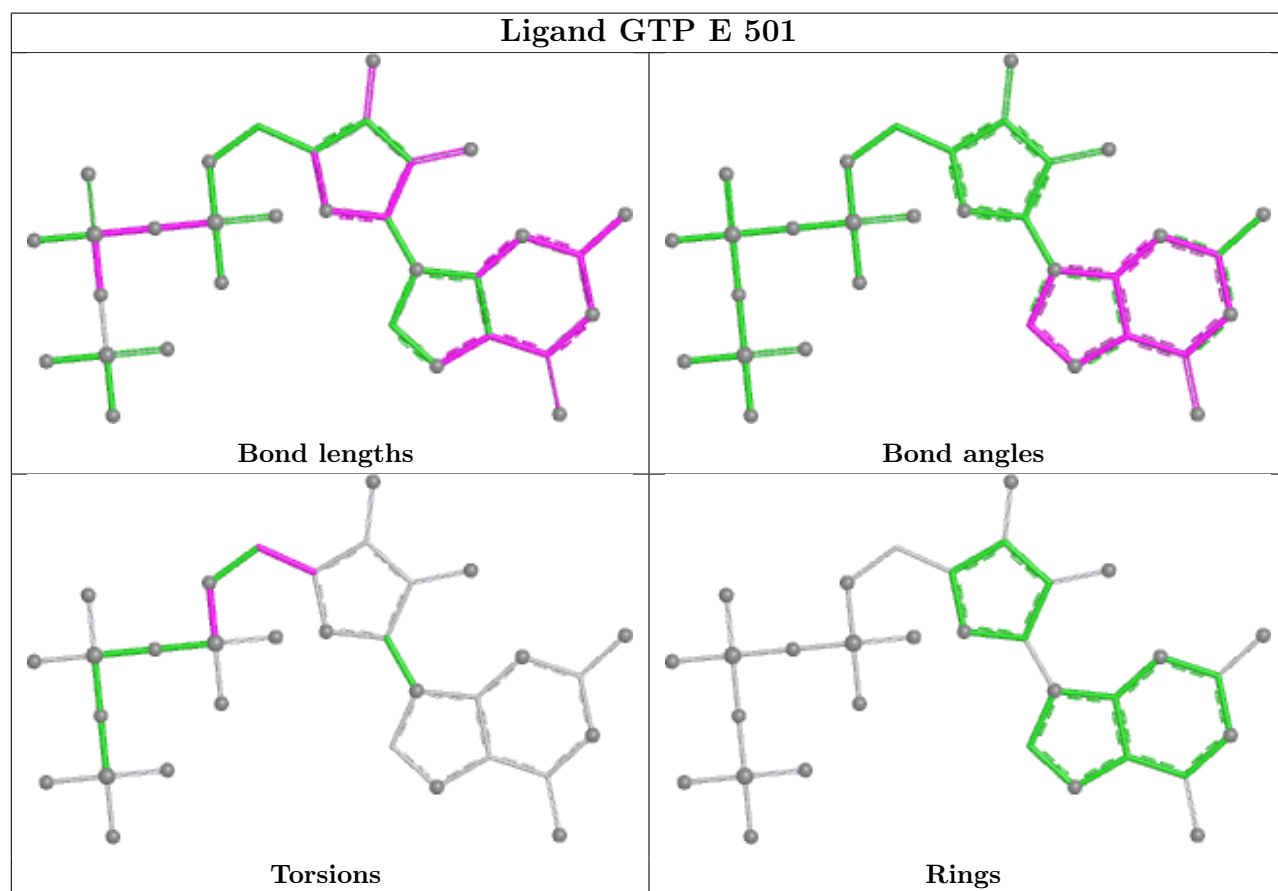
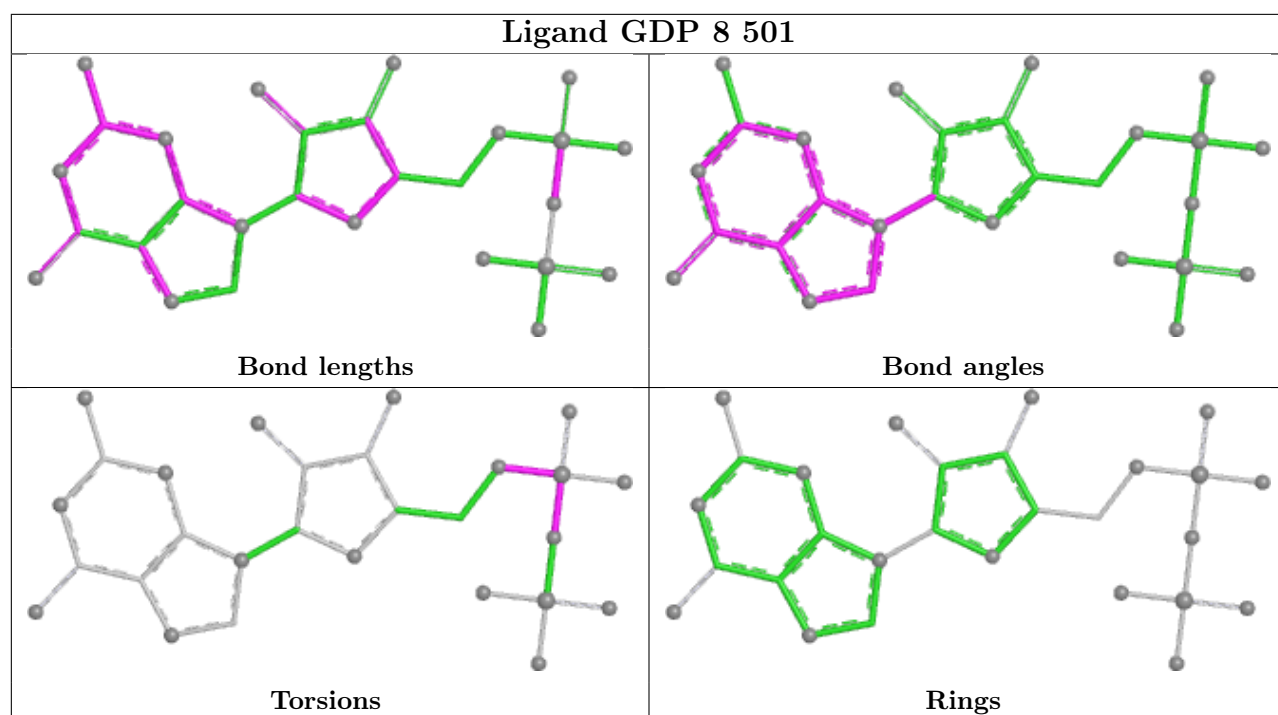
Bond angles



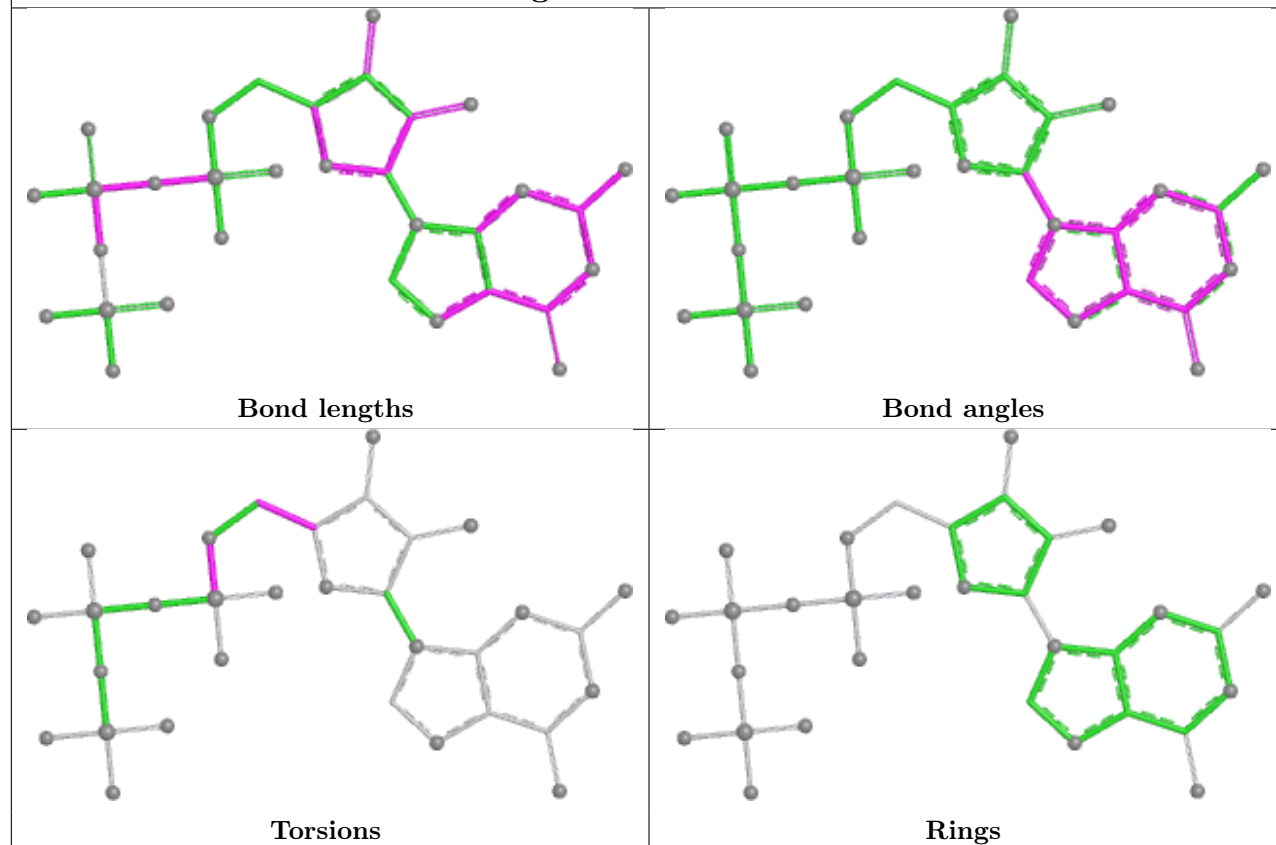
Torsions



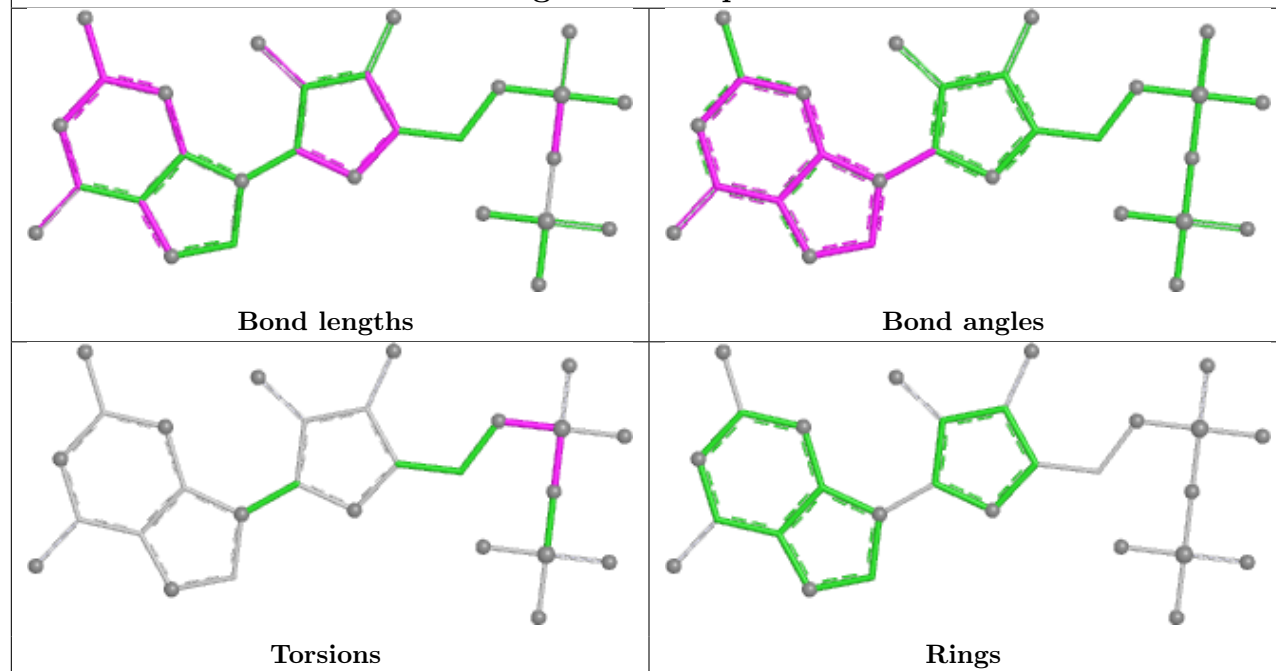
Rings

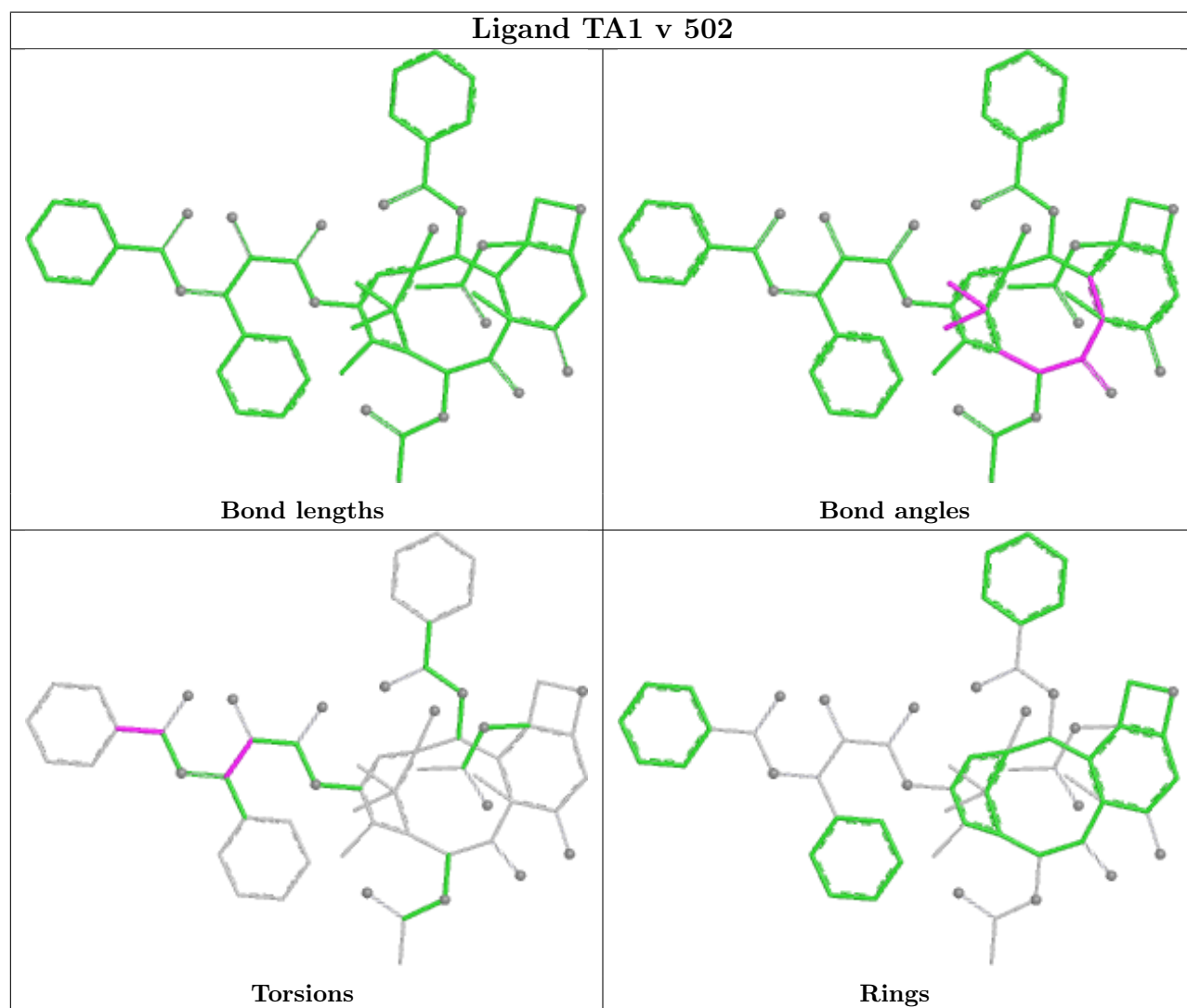
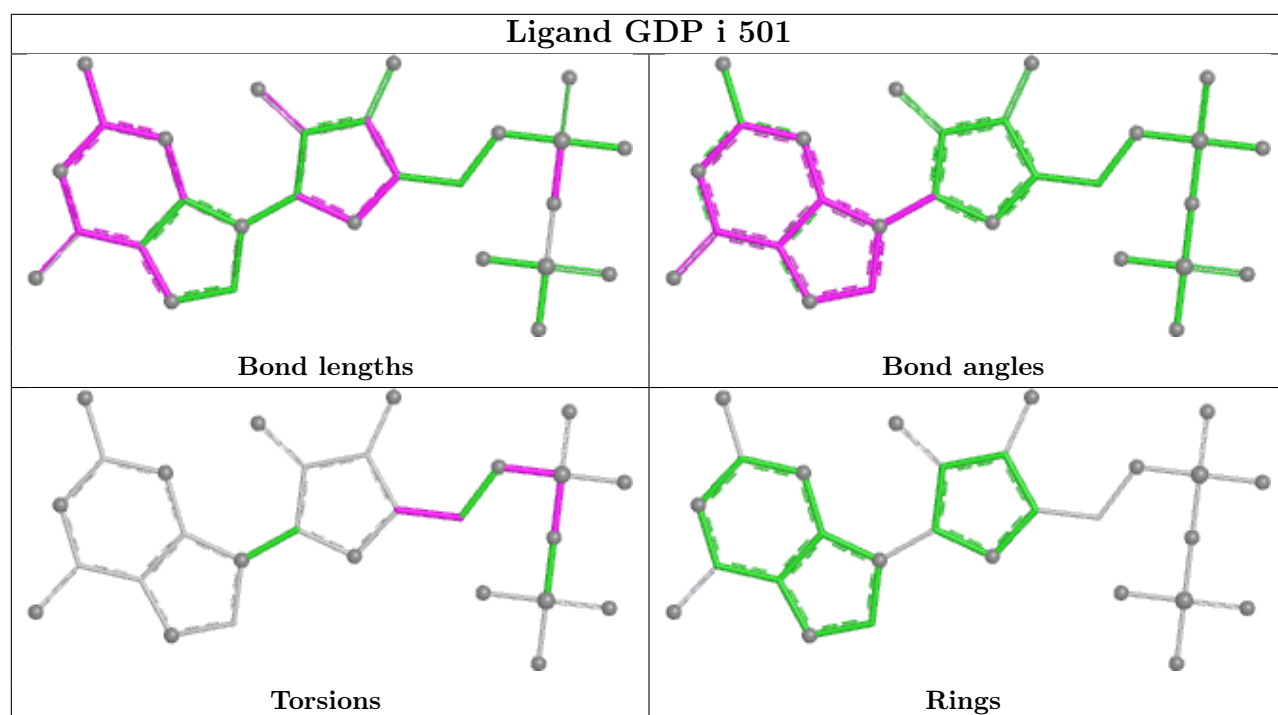


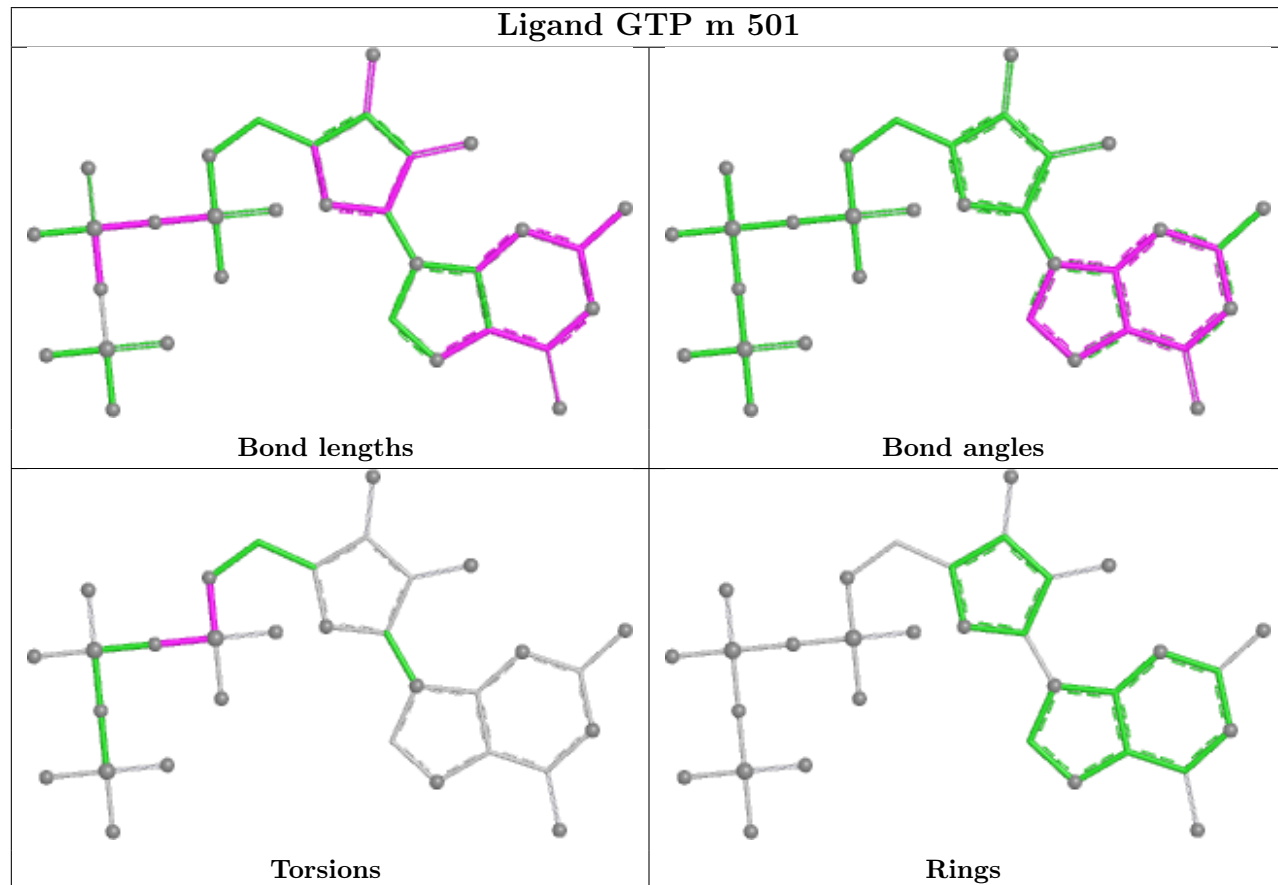
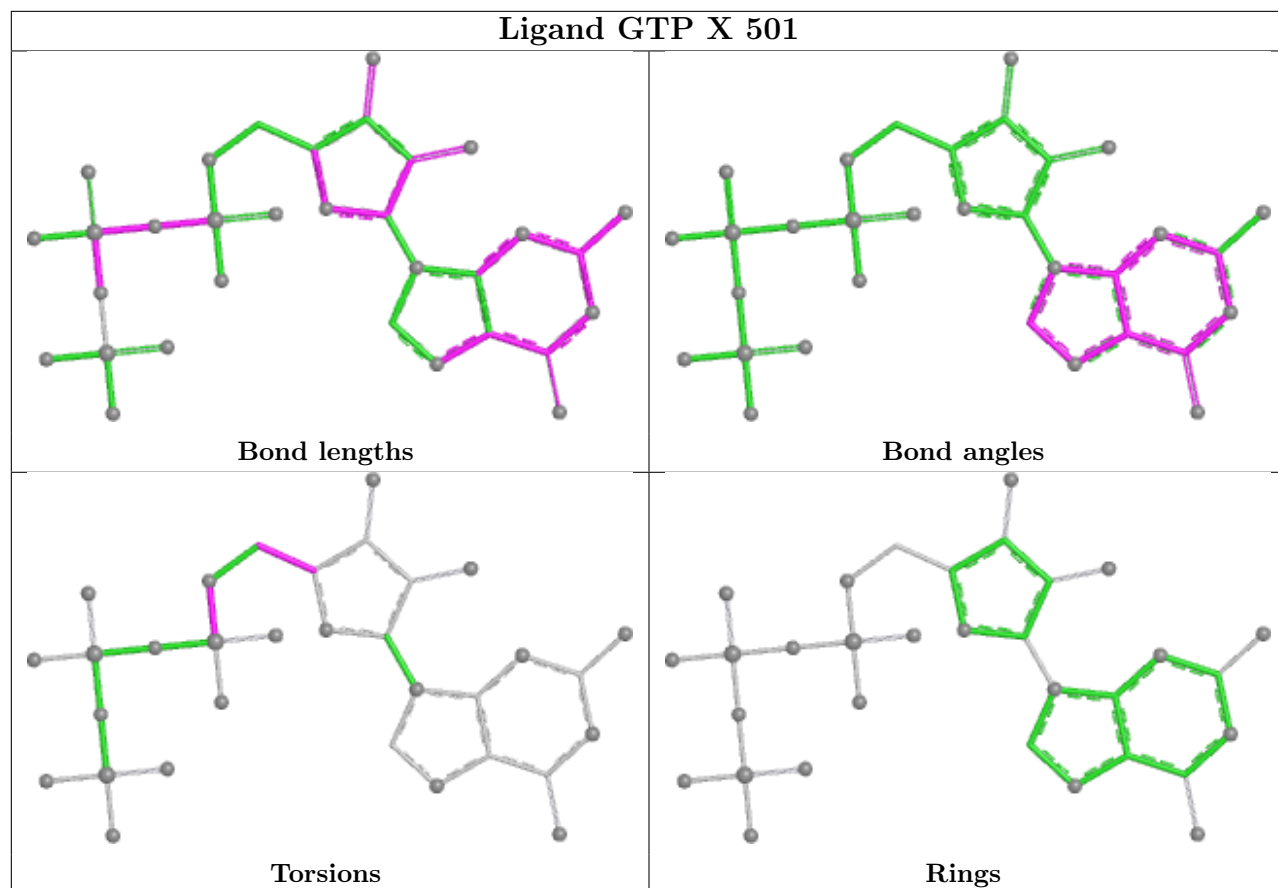
Ligand GTP P 501



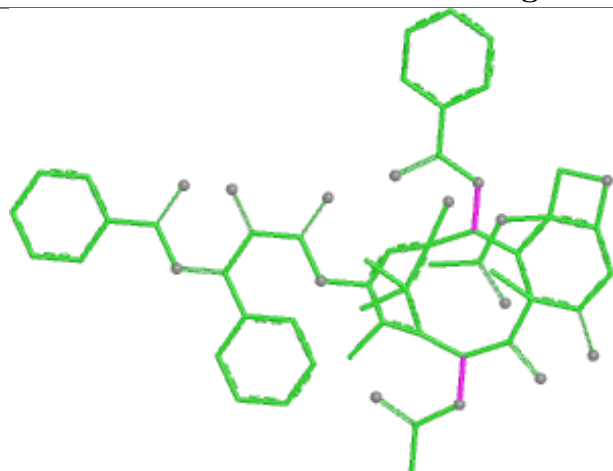
Ligand GDP q 501



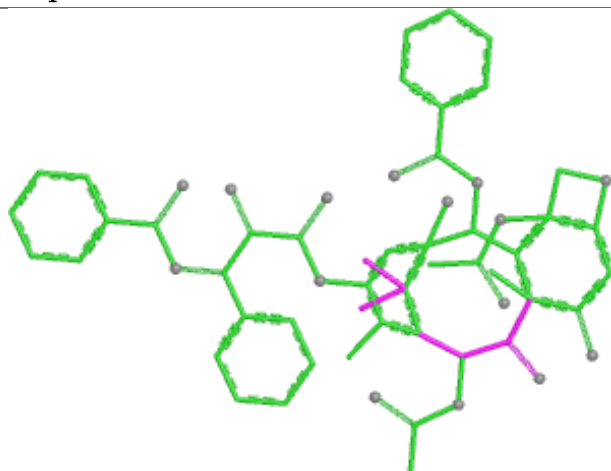




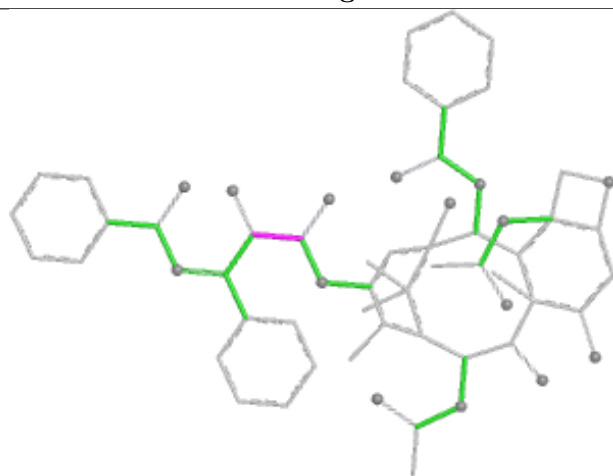
Ligand TA1 p 502



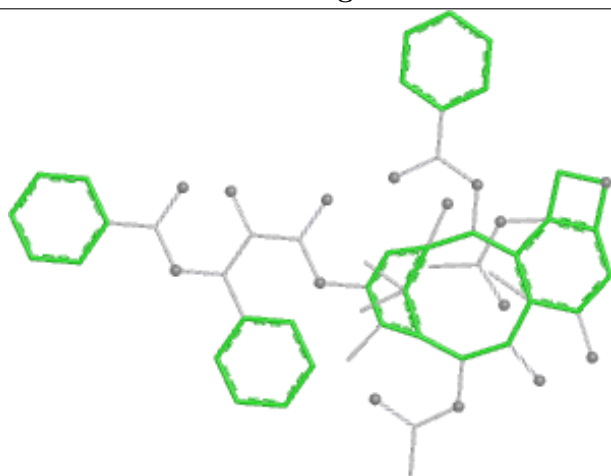
Bond lengths



Bond angles

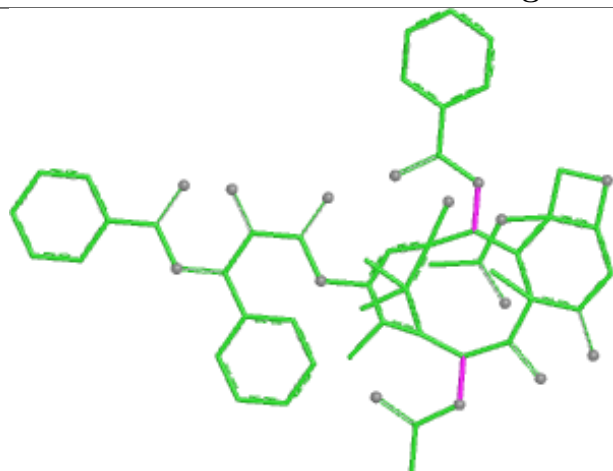


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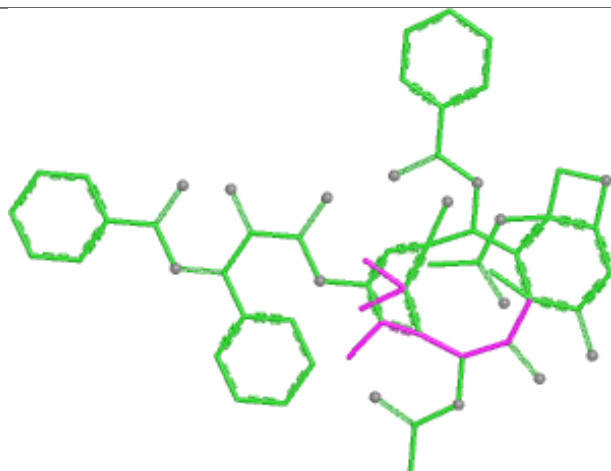


Rings

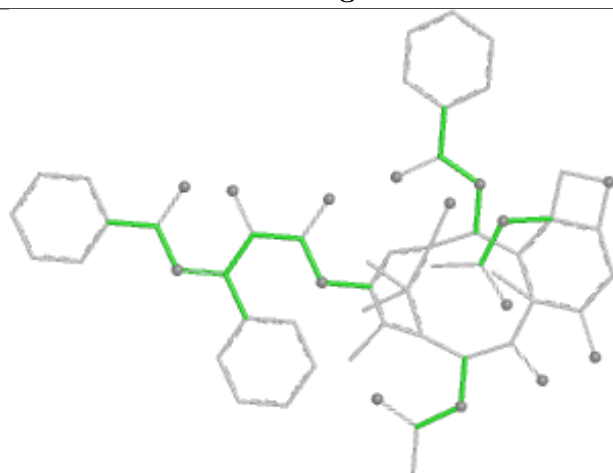
Ligand TA1 9 502



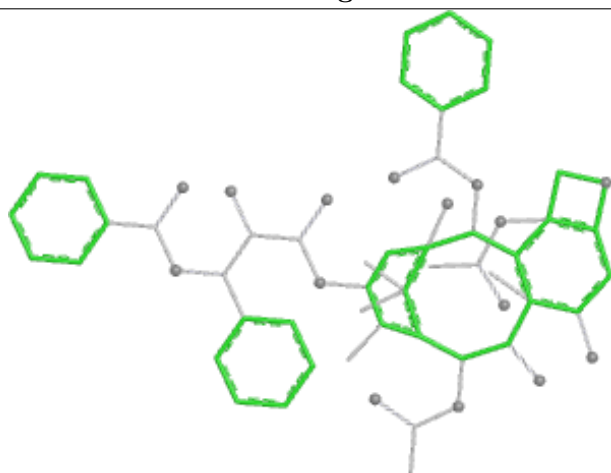
Bond lengths



Bond angles

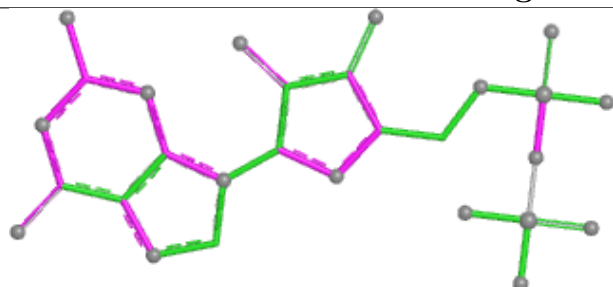


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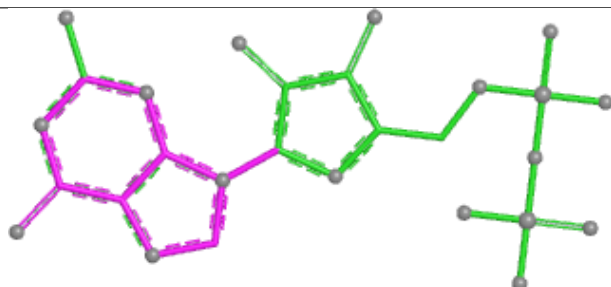


Rings

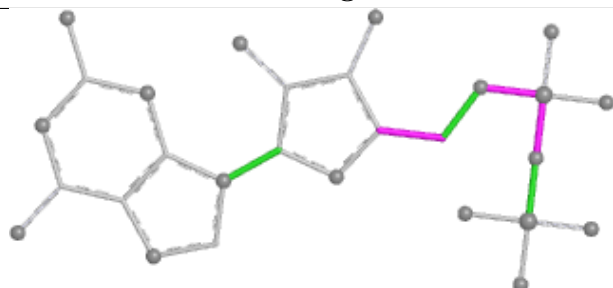
Ligand GDP J 501



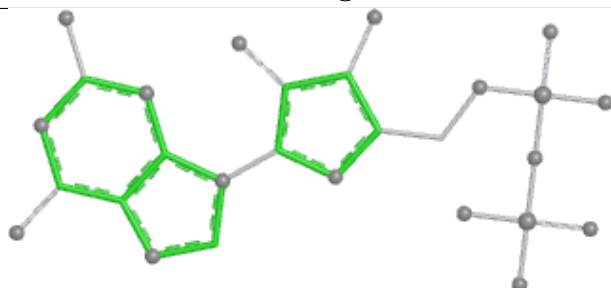
Bond lengths



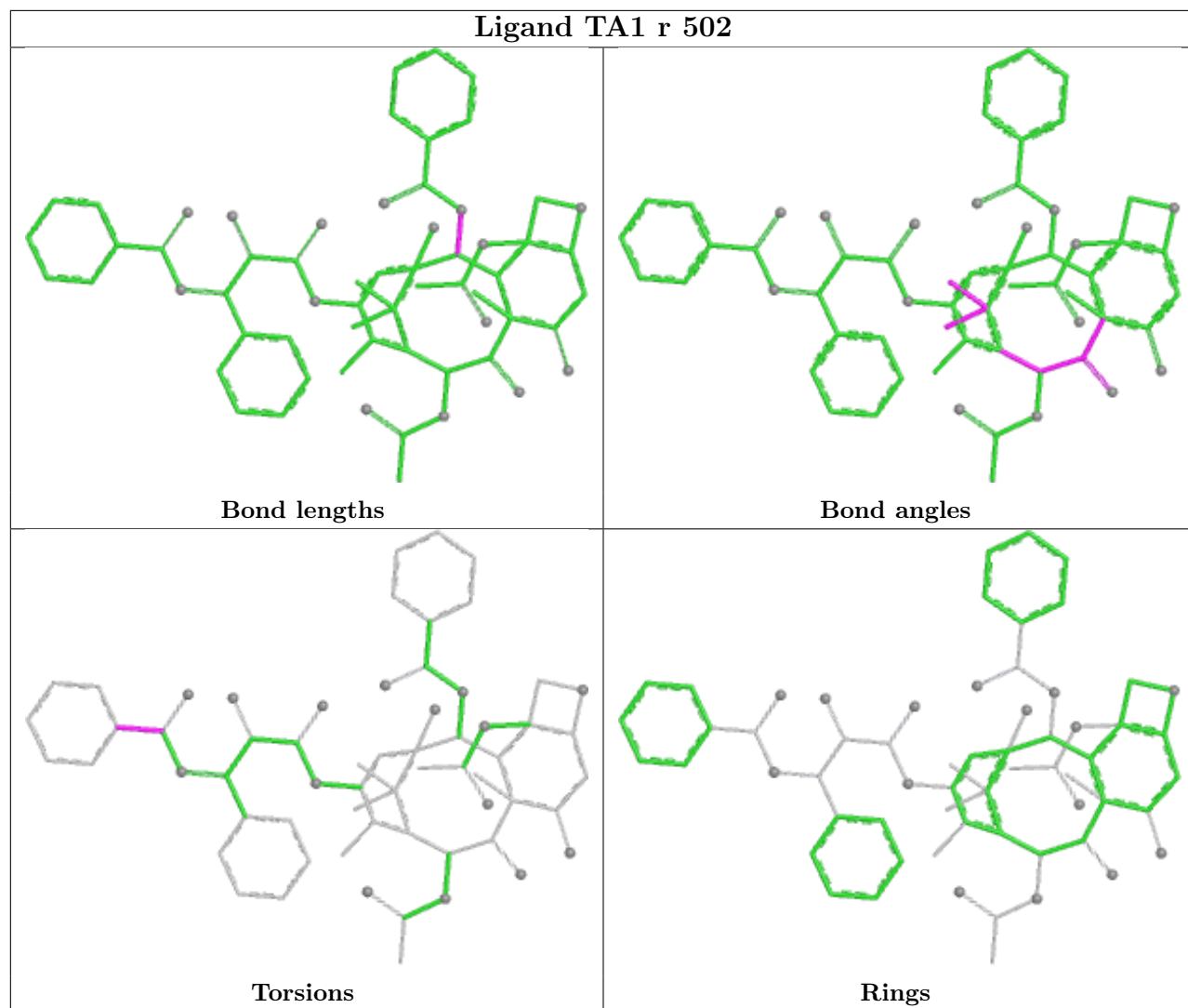
Bond angles



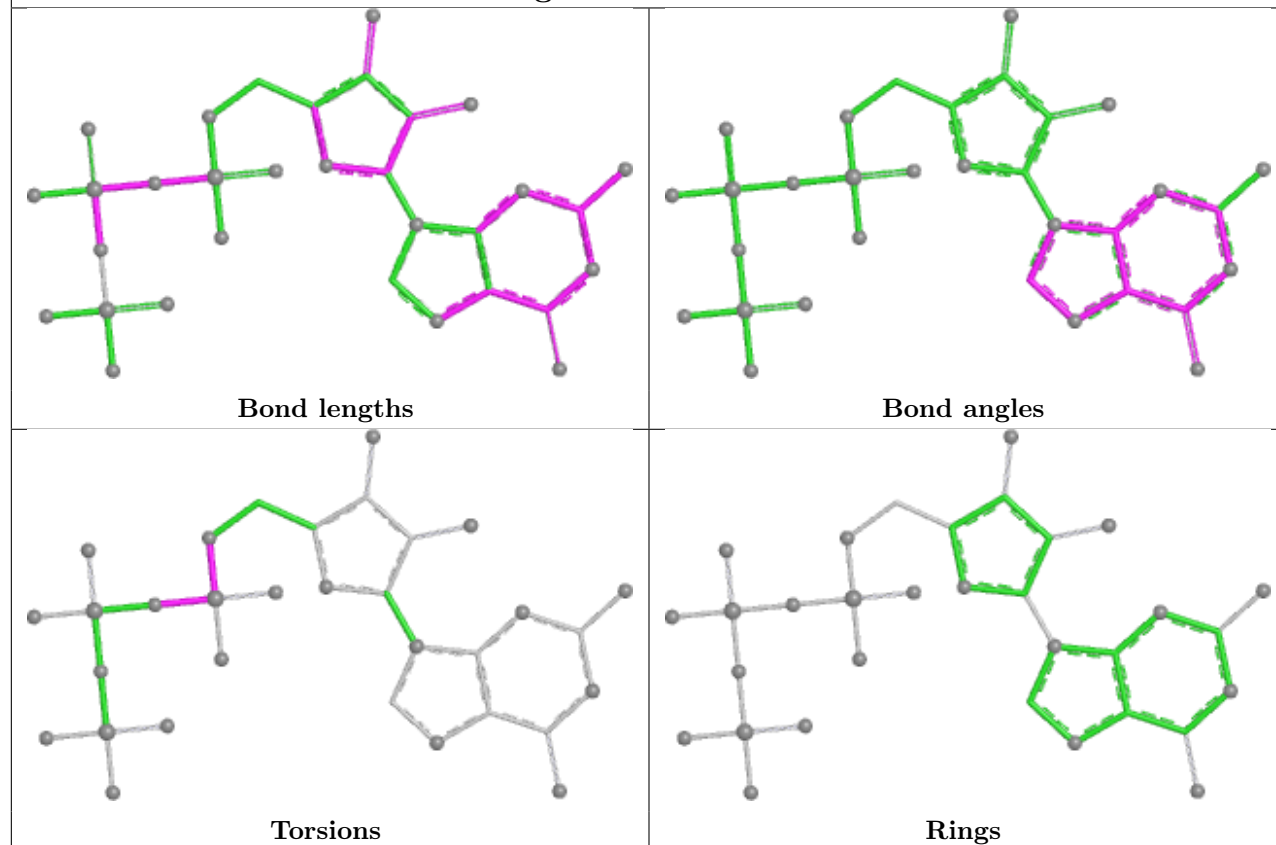
Torsions



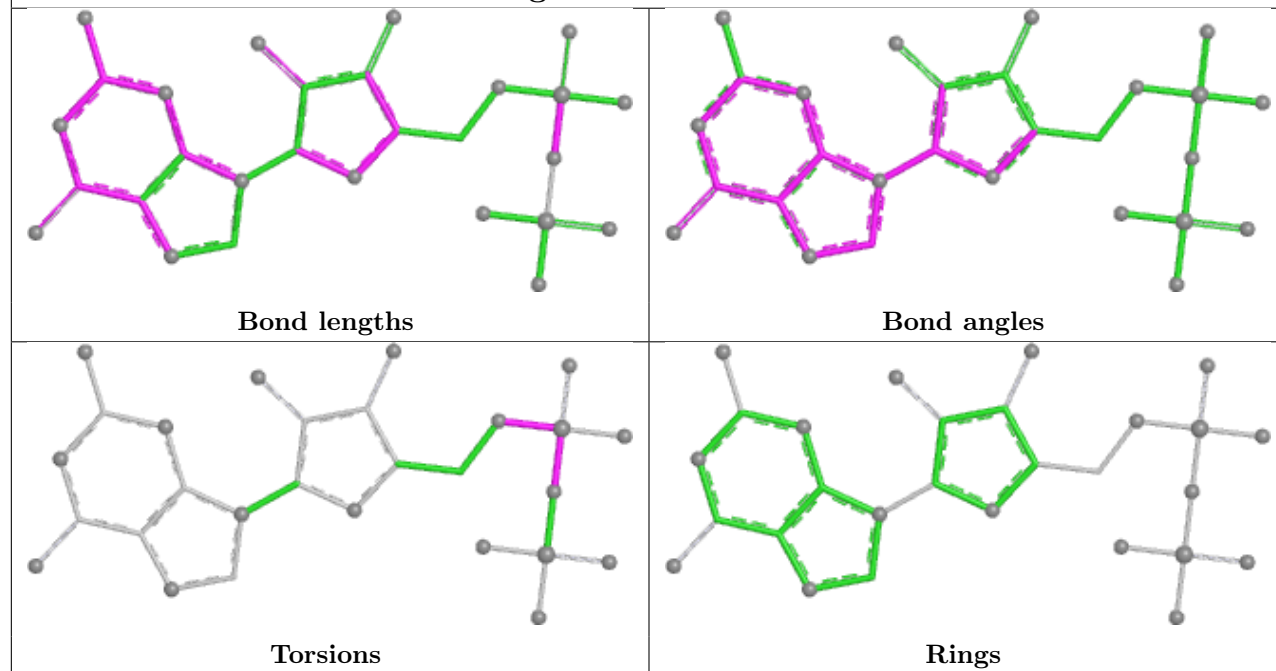
Rings

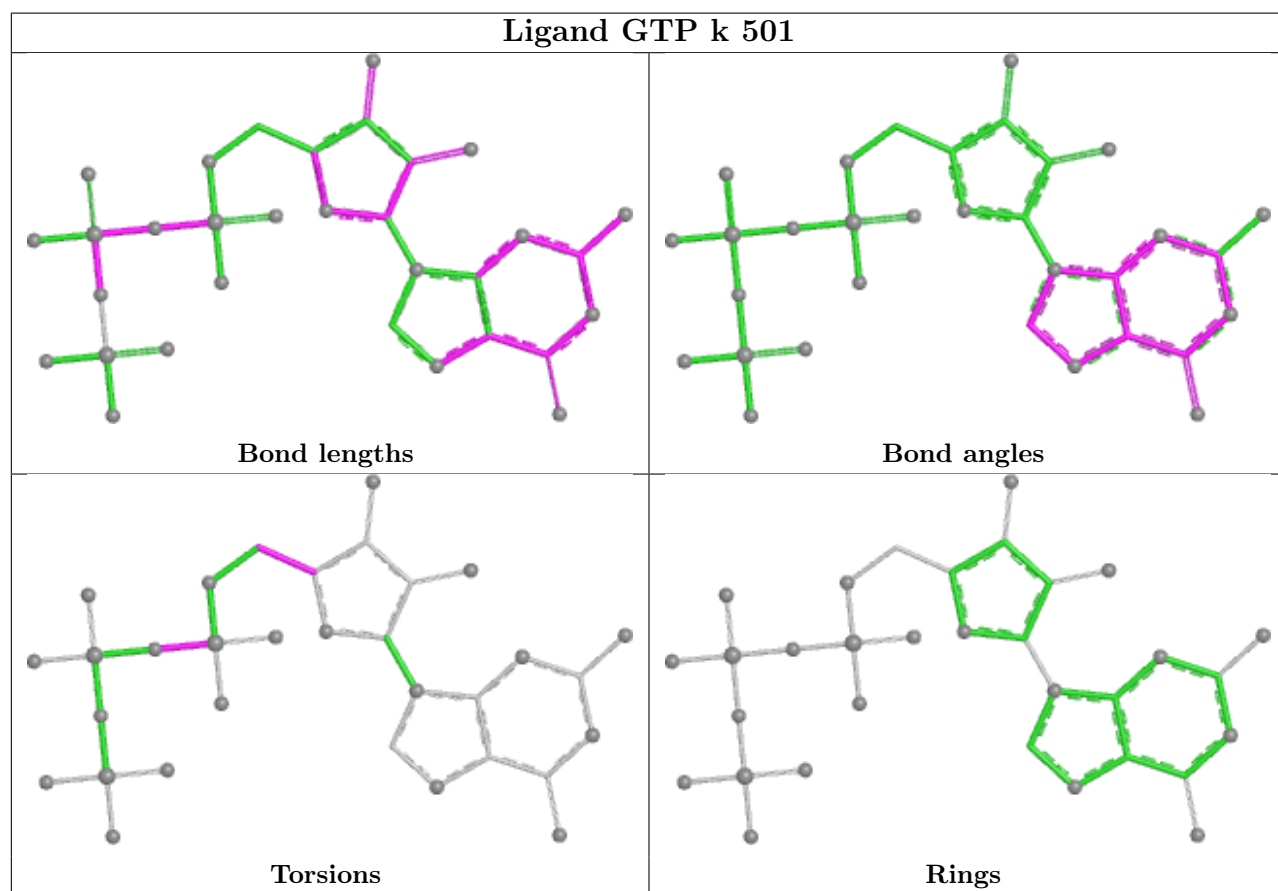
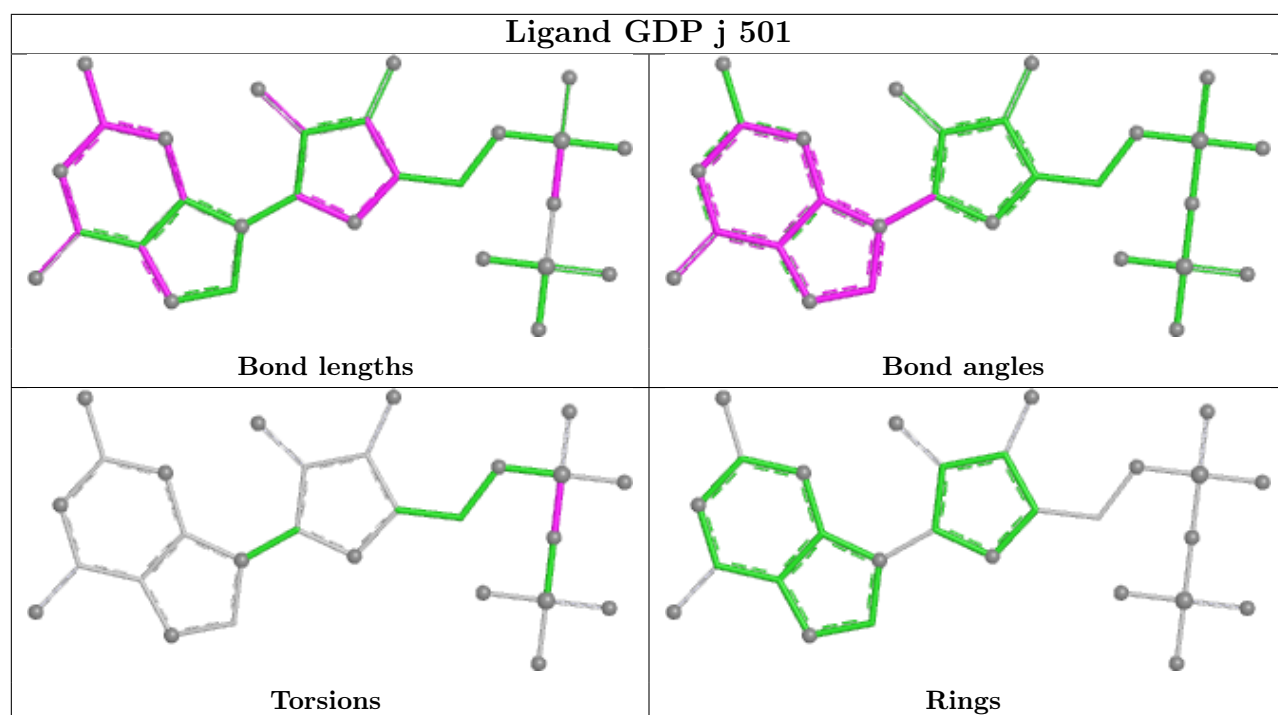


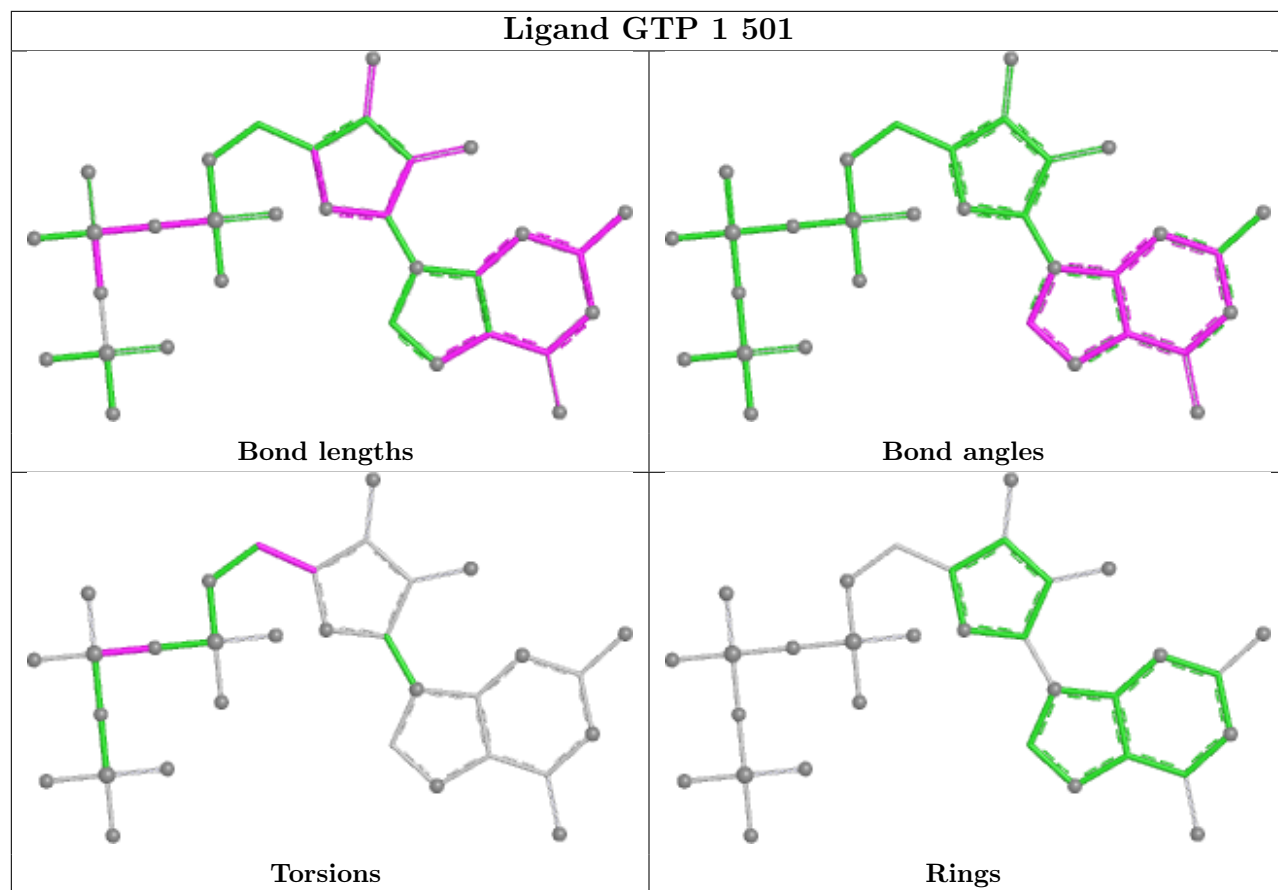
Ligand GTP o 501



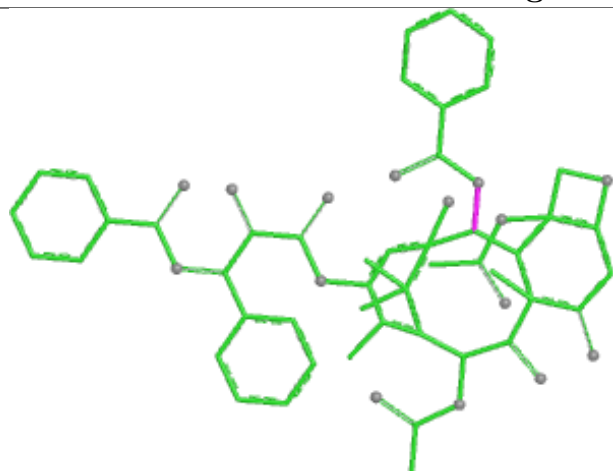
Ligand GDP R 501



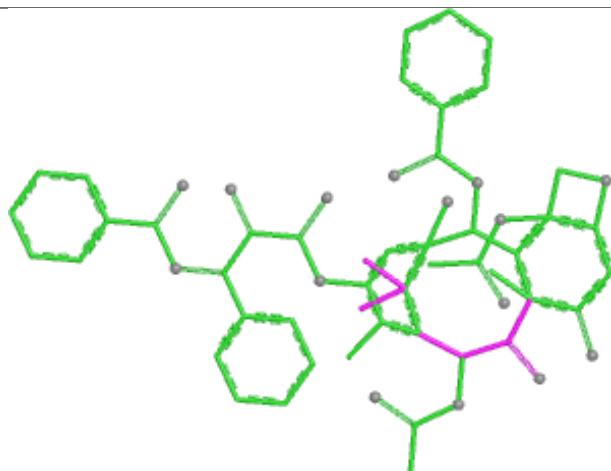




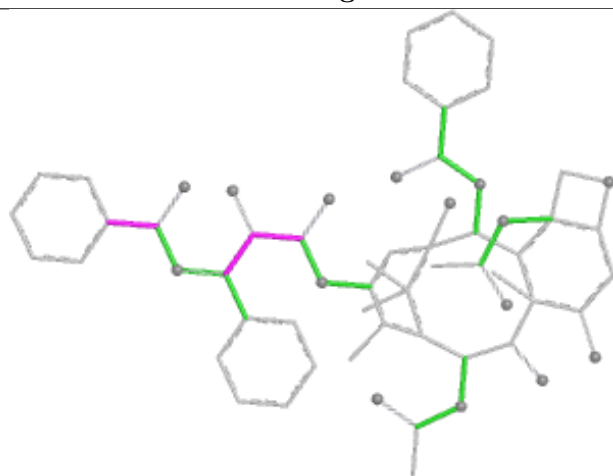
Ligand TA1 i 502



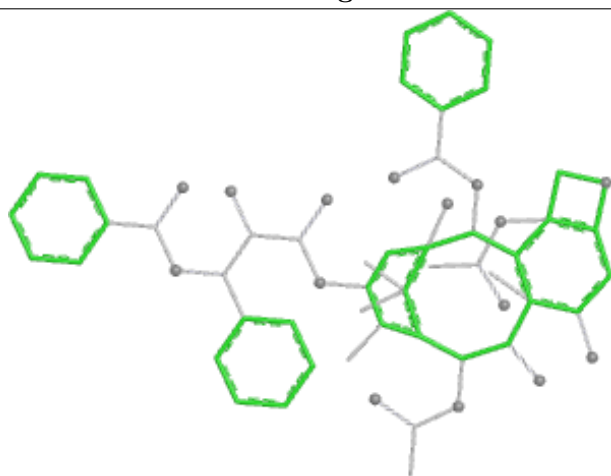
Bond lengths



Bond angles

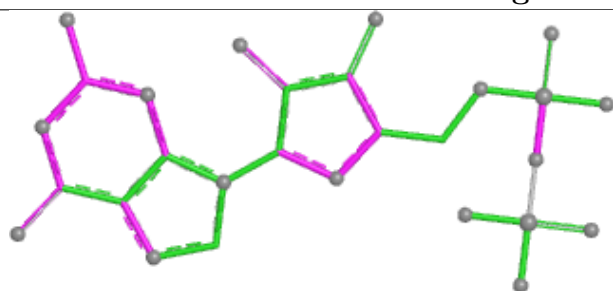


Torsions

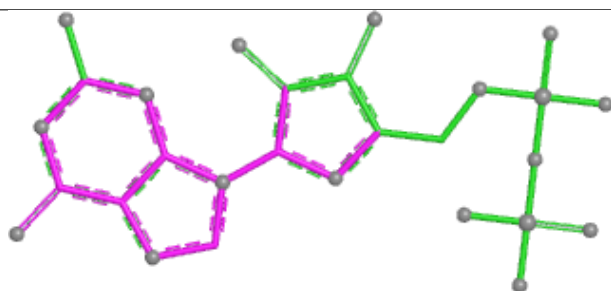


Rings

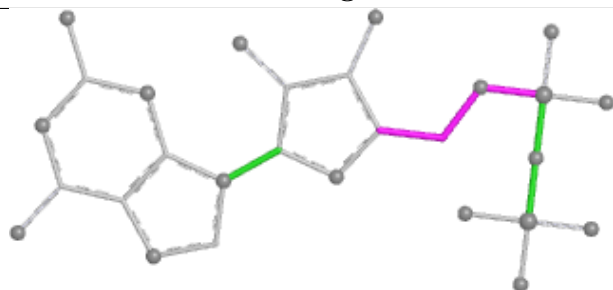
Ligand GDP T 501



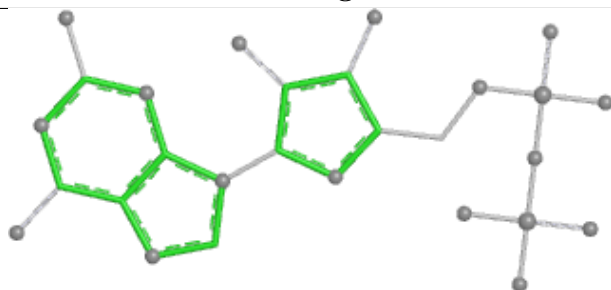
Bond lengths



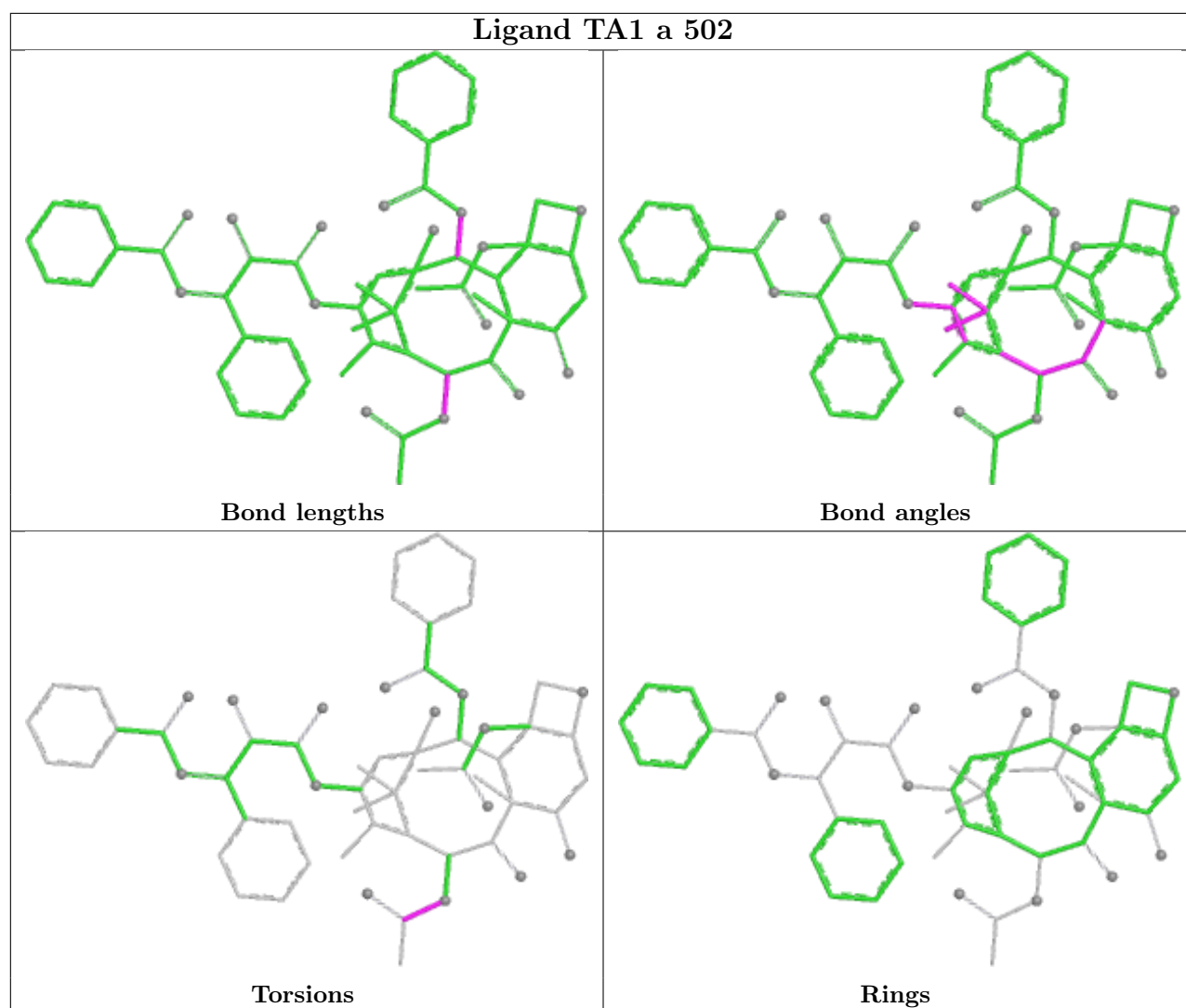
Bond angles



Torsions



Rings



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

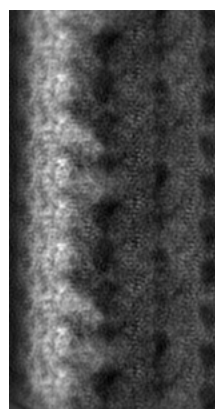
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-20858. These allow visual inspection of the internal detail of the map and identification of artifacts.

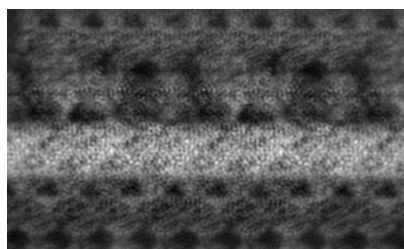
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

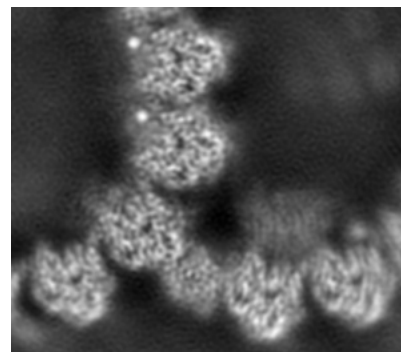
6.1.1 Primary map



X



Y

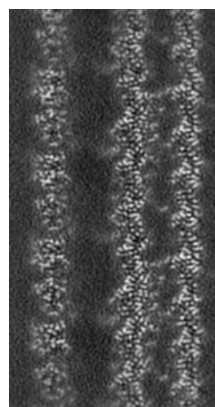


Z

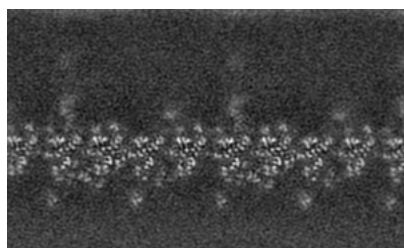
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

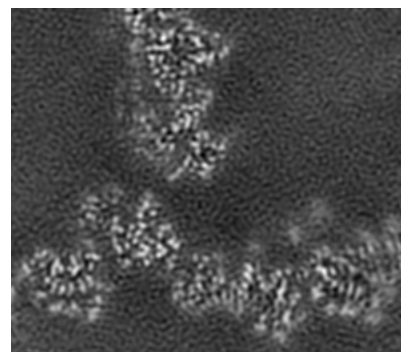
6.2.1 Primary map



X Index: 135



Y Index: 117

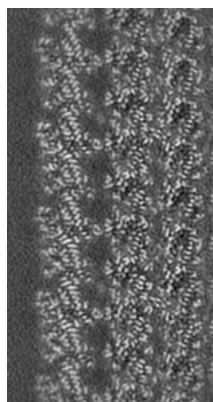


Z Index: 225

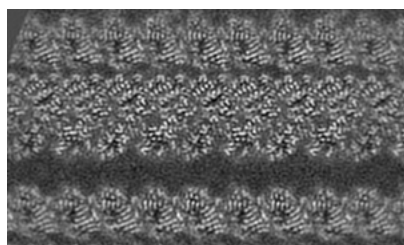
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

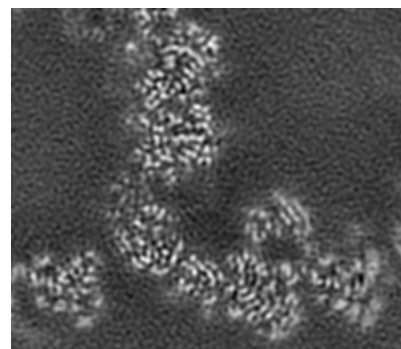
6.3.1 Primary map



X Index: 111



Y Index: 45

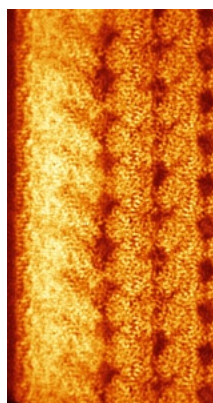


Z Index: 281

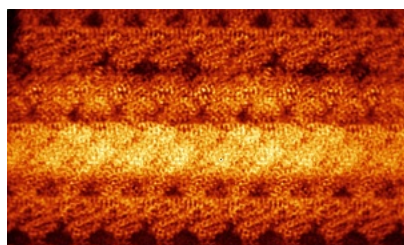
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

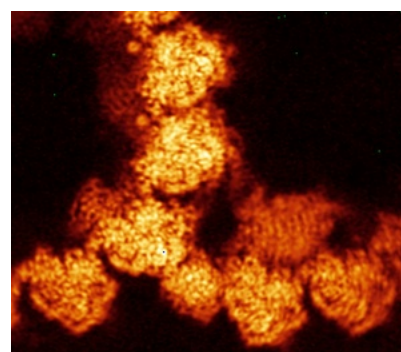
6.4.1 Primary map



X



Y

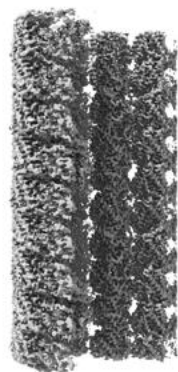


Z

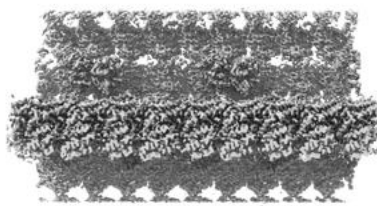
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

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 0.04. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

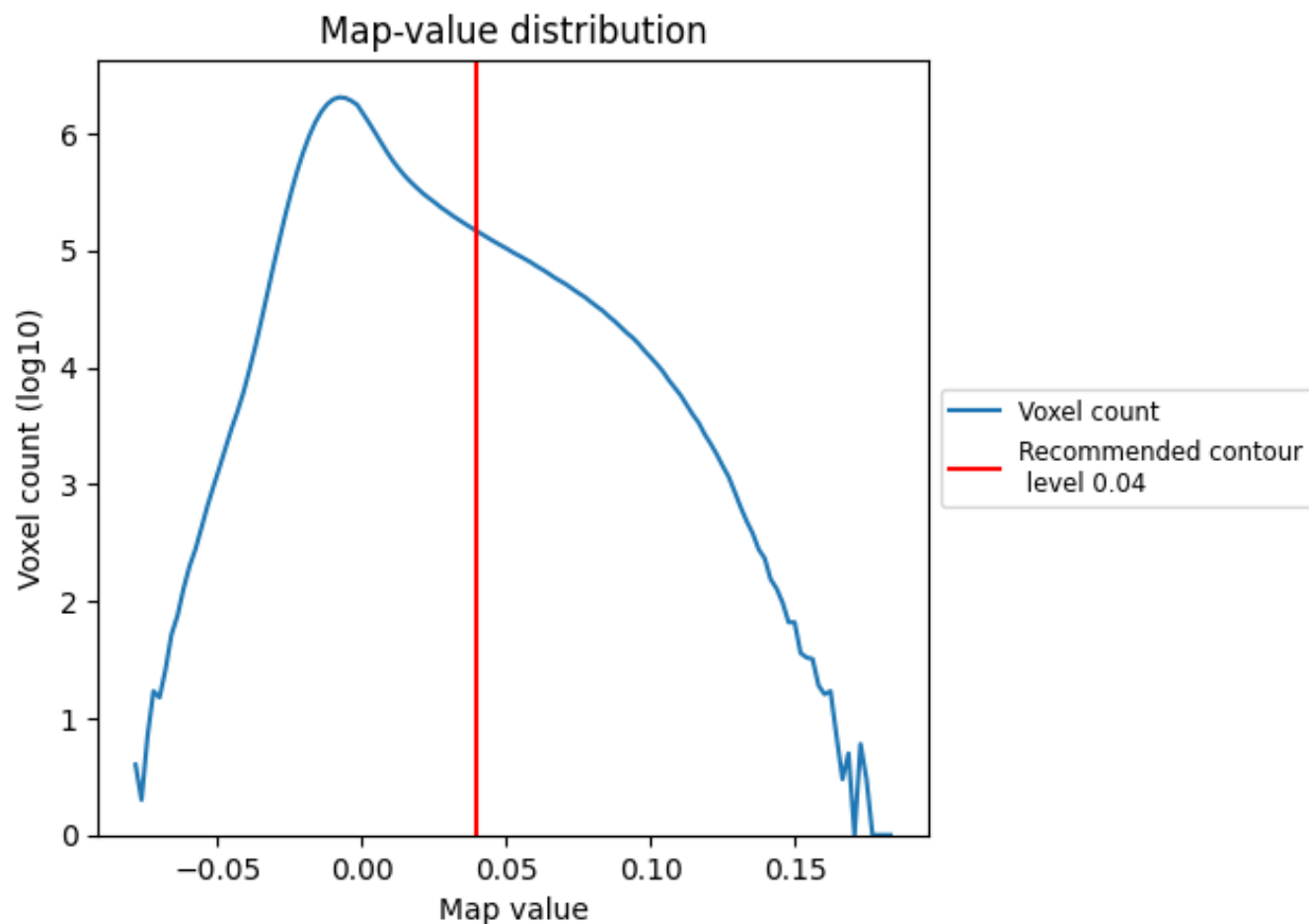
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

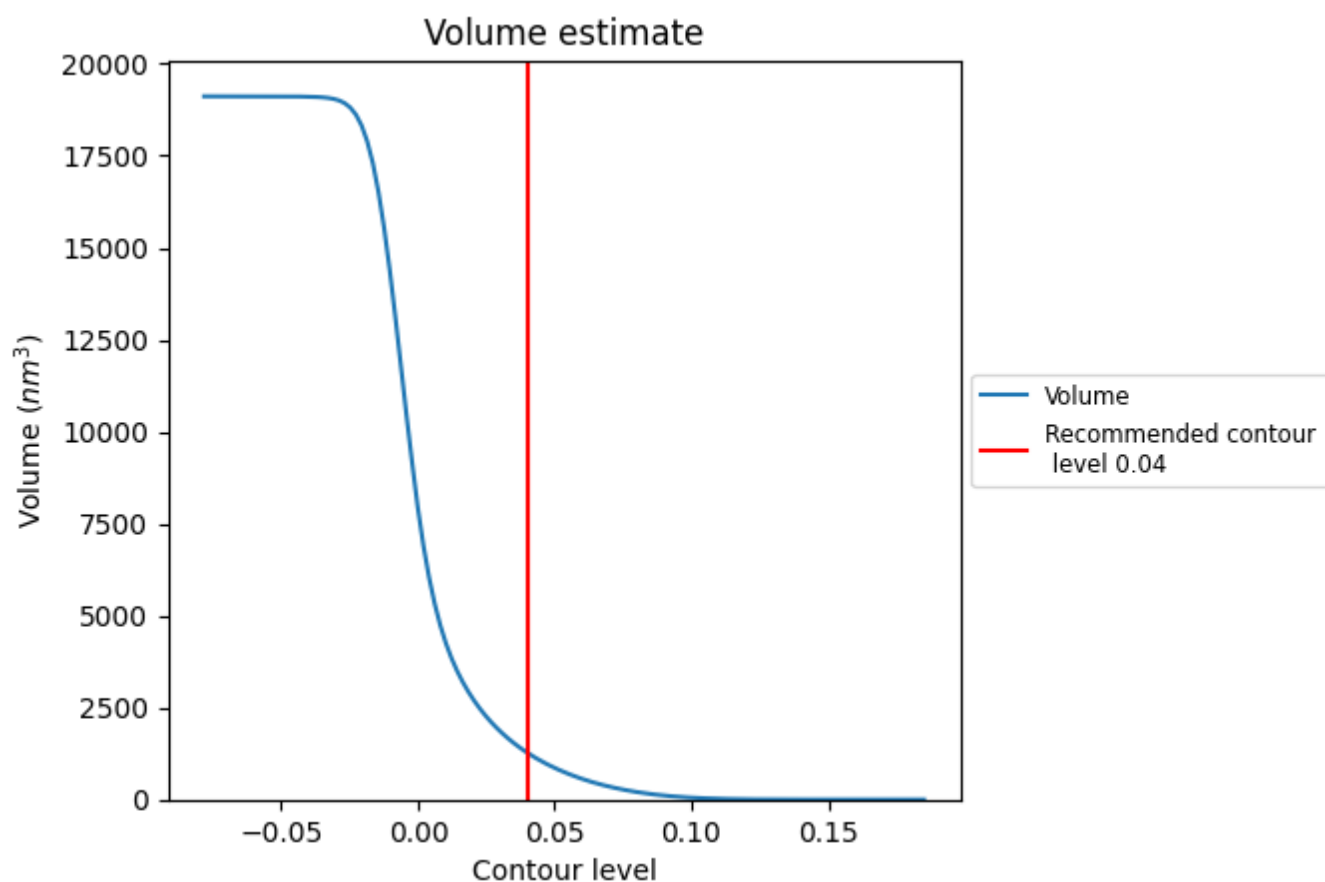
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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 [i](#)



The volume at the recommended contour level is 1273 nm³; this corresponds to an approximate mass of 1150 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.

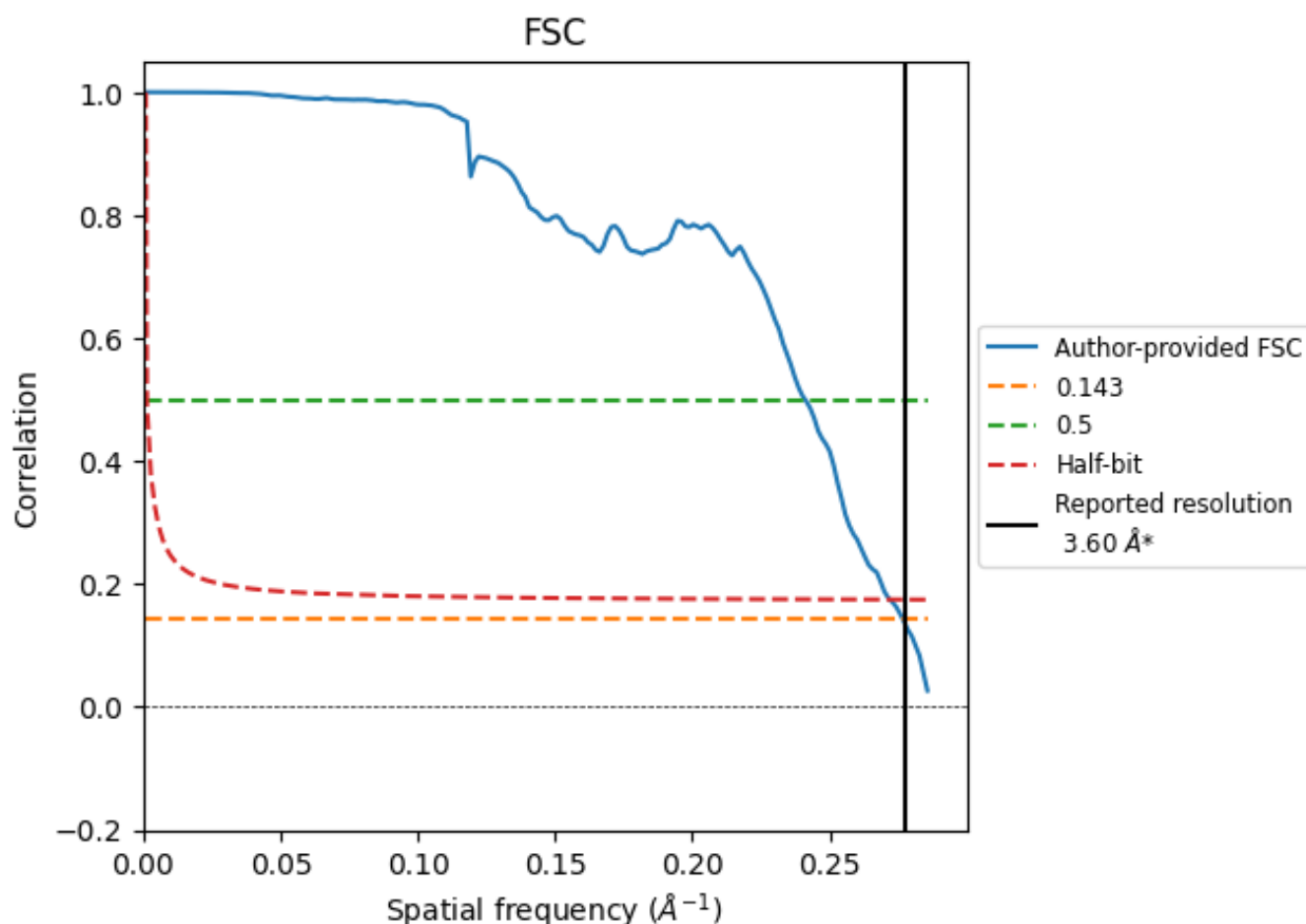
7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8.2 Resolution estimates [i](#)

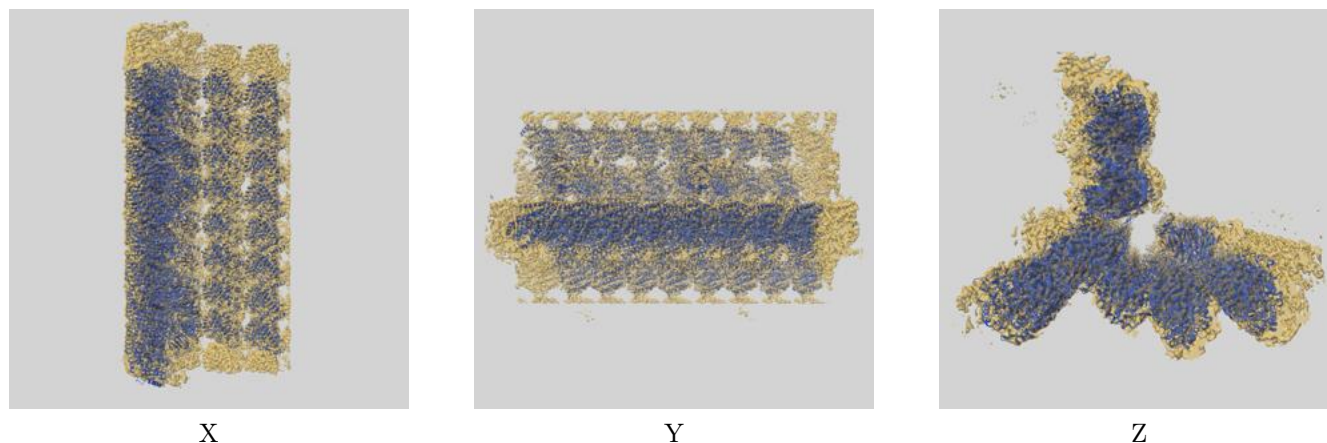
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	3.62	4.15	3.68
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

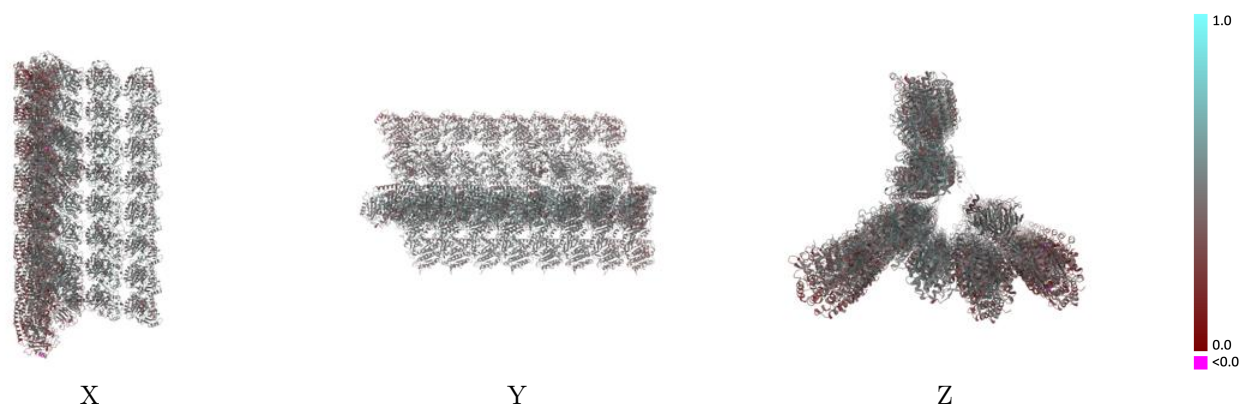
This section contains information regarding the fit between EMDB map EMD-20858 and PDB model 6VE7. Per-residue inclusion information can be found in section [3](#) on page [16](#).

9.1 Map-model overlay [i](#)



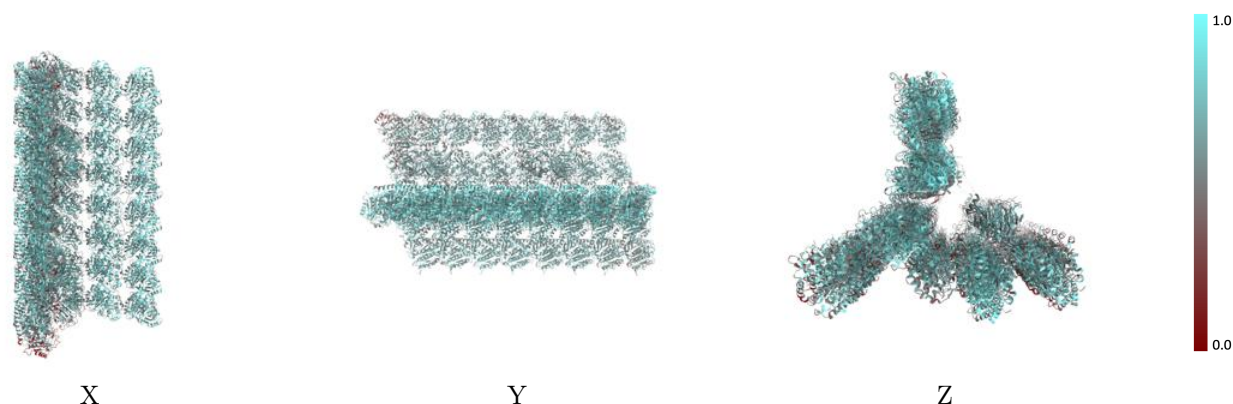
The images above show the 3D surface view of the map at the recommended contour level 0.04 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



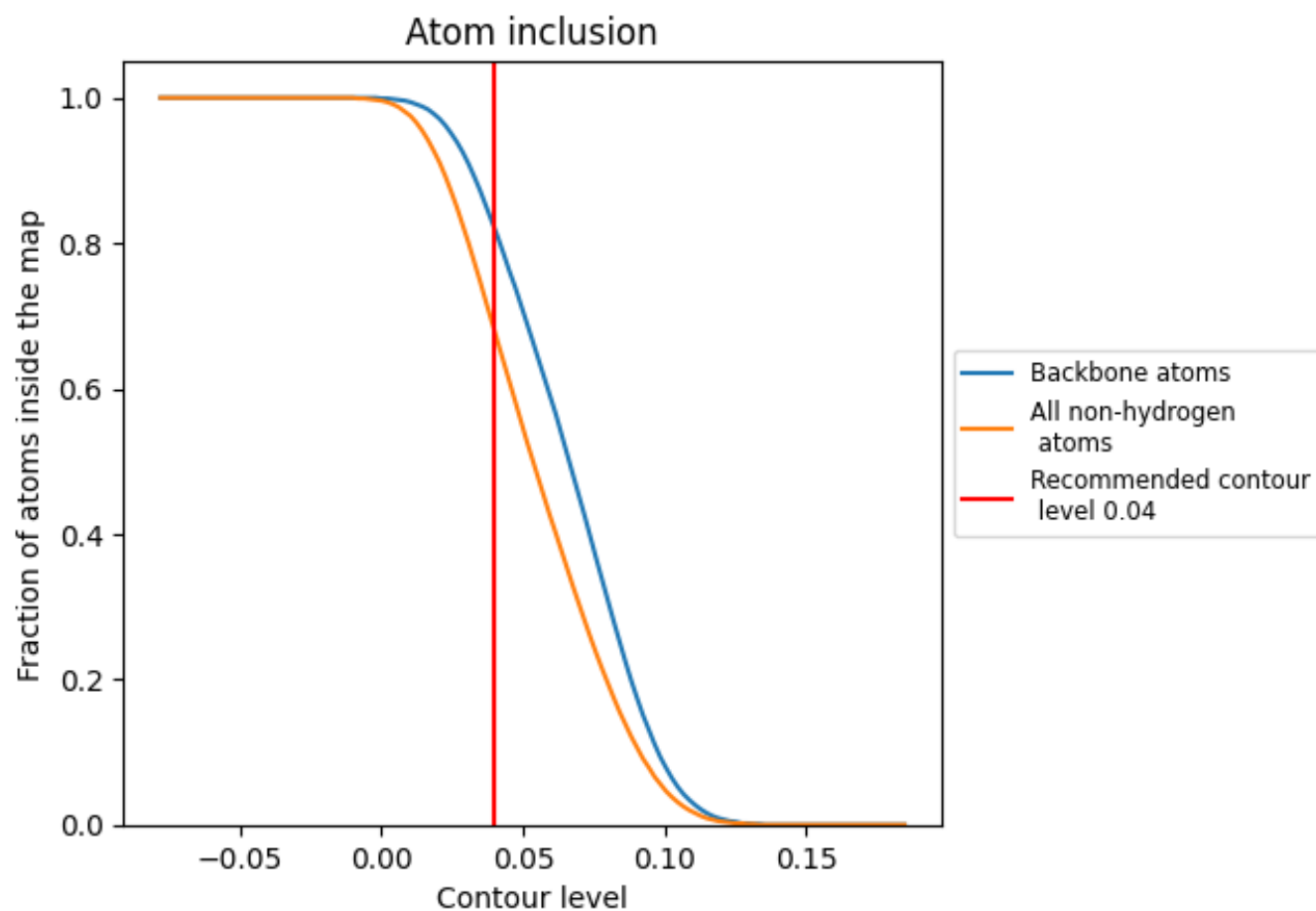
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 [i](#)



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 (0.04).

9.4 Atom inclusion [i](#)



At the recommended contour level, 82% of all backbone atoms, 68% 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 (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6790	 0.4550
0	 0.6970	 0.4940
1	 0.6240	 0.4110
2	 0.5900	 0.4670
3	 0.7390	 0.5060
4	 0.5820	 0.3770
5	 0.7120	 0.4520
6	 0.4700	 0.3470
7	 0.6560	 0.4360
8	 0.6680	 0.4440
9	 0.6880	 0.4460
A	 0.5730	 0.4350
B	 0.5520	 0.4100
C	 0.5970	 0.4340
D	 0.7480	 0.4970
E	 0.6890	 0.4540
F	 0.6900	 0.4590
G	 0.6780	 0.4530
H	 0.7070	 0.4720
I	 0.7300	 0.4820
J	 0.7080	 0.4600
K	 0.7460	 0.4880
L	 0.7400	 0.4840
M	 0.7440	 0.4870
N	 0.7010	 0.4680
O	 0.7470	 0.5000
P	 0.7170	 0.4820
Q	 0.6910	 0.4490
R	 0.7540	 0.5030
S	 0.7210	 0.4680
T	 0.7510	 0.4900
U	 0.7520	 0.5030
V	 0.5930	 0.3600
W	 0.5100	 0.4170
X	 0.7300	 0.4640



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Chain	Atom inclusion	Q-score
Y	 0.6470	 0.4090
Z	 0.7060	 0.4440
a	 0.5720	 0.3800
b	 0.6460	 0.3960
c	 0.7220	 0.4960
d	 0.4850	 0.4430
e	 0.6250	 0.3940
f	 0.7330	 0.4900
g	 0.7430	 0.4980
h	 0.6420	 0.4370
i	 0.7330	 0.4560
j	 0.6930	 0.4290
k	 0.7460	 0.4960
l	 0.6890	 0.4890
m	 0.7310	 0.5050
n	 0.6760	 0.4800
o	 0.6850	 0.4800
p	 0.7260	 0.5030
q	 0.7180	 0.4950
r	 0.7080	 0.4990
s	 0.6130	 0.4120
t	 0.6470	 0.4490
u	 0.7340	 0.4620
v	 0.6420	 0.3930
w	 0.6990	 0.4490
x	 0.4650	 0.3960
y	 0.7270	 0.5020
z	 0.7100	 0.4840