



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 12:06 PM UTC

PDB ID : 3GLI / pdb_00003gli
Title : Crystal Structure of the E. coli clamp loader bound to Primer-Template DNA and Psi Peptide
Authors : Simonetta, K.R.; Cantor, A.J.; Kuriyan, J.
Deposited on : 2009-03-12
Resolution : 3.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

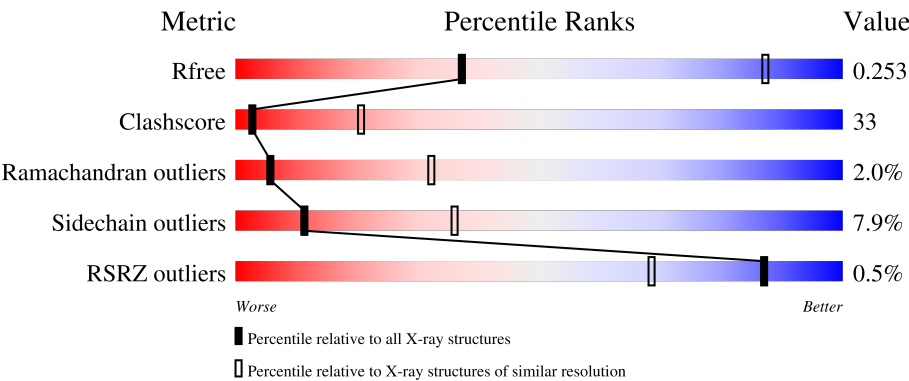
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 Å.

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



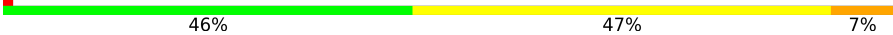
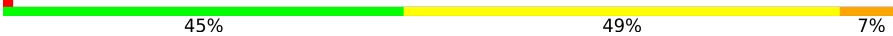
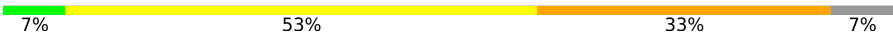
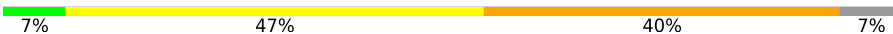
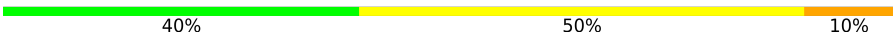
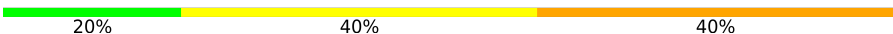
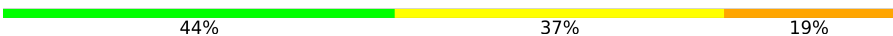
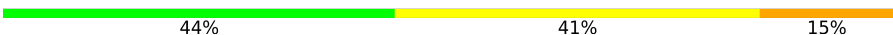
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1085 (3.54-3.46)
Clashscore	190562	1140 (3.54-3.46)
Ramachandran outliers	187476	1113 (3.54-3.46)
Sidechain outliers	187428	1114 (3.54-3.46)
RSRZ outliers	180081	1084 (3.54-3.46)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	343	% 45% 47% 5% ••
1	F	343	2% 44% 48% 6% •
2	B	395	48% 37% 5% 9%
2	C	395	44% 40% 8% 8%
2	D	395	41% 44% 7% 8%

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Mol	Chain	Length	Quality of chain
2	G	395	
2	H	395	
2	I	395	
3	E	334	
3	J	334	
4	K	15	
4	M	15	
5	L	10	
5	N	10	
6	O	27	
6	P	27	

2 Entry composition

There are 10 unique types of molecules in this entry. The entry contains 29139 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called DNA polymerase III subunit delta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	333	Total	C	N	O	S	0	0	0
			2650	1678	482	480	10			
1	F	334	Total	C	N	O	S	0	0	0
			2659	1684	484	481	10			

- Molecule 2 is a protein called DNA polymerase III subunit tau.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	359	Total	C	N	O	S	0	0	0
			2791	1753	506	516	16			
2	C	365	Total	C	N	O	S	0	0	0
			2838	1784	513	525	16			
2	D	362	Total	C	N	O	S	0	0	0
			2818	1770	510	522	16			
2	G	373	Total	C	N	O	S	0	0	0
			2903	1826	524	536	17			
2	H	365	Total	C	N	O	S	0	0	0
			2838	1784	513	525	16			
2	I	362	Total	C	N	O	S	0	0	0
			2818	1770	510	522	16			

There are 132 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-21	MET	-	expression tag	UNP P06710
B	-20	GLY	-	expression tag	UNP P06710
B	-19	SER	-	expression tag	UNP P06710
B	-18	SER	-	expression tag	UNP P06710
B	-17	HIS	-	expression tag	UNP P06710
B	-16	HIS	-	expression tag	UNP P06710
B	-15	HIS	-	expression tag	UNP P06710
B	-14	HIS	-	expression tag	UNP P06710

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-13	HIS	-	expression tag	UNP P06710
B	-12	HIS	-	expression tag	UNP P06710
B	-11	SER	-	expression tag	UNP P06710
B	-10	SER	-	expression tag	UNP P06710
B	-9	GLY	-	expression tag	UNP P06710
B	-8	LEU	-	expression tag	UNP P06710
B	-7	GLU	-	expression tag	UNP P06710
B	-6	VAL	-	expression tag	UNP P06710
B	-5	LEU	-	expression tag	UNP P06710
B	-4	PHE	-	expression tag	UNP P06710
B	-3	GLN	-	expression tag	UNP P06710
B	-2	GLY	-	expression tag	UNP P06710
B	-1	PRO	-	expression tag	UNP P06710
B	0	HIS	-	expression tag	UNP P06710
C	-21	MET	-	expression tag	UNP P06710
C	-20	GLY	-	expression tag	UNP P06710
C	-19	SER	-	expression tag	UNP P06710
C	-18	SER	-	expression tag	UNP P06710
C	-17	HIS	-	expression tag	UNP P06710
C	-16	HIS	-	expression tag	UNP P06710
C	-15	HIS	-	expression tag	UNP P06710
C	-14	HIS	-	expression tag	UNP P06710
C	-13	HIS	-	expression tag	UNP P06710
C	-12	HIS	-	expression tag	UNP P06710
C	-11	SER	-	expression tag	UNP P06710
C	-10	SER	-	expression tag	UNP P06710
C	-9	GLY	-	expression tag	UNP P06710
C	-8	LEU	-	expression tag	UNP P06710
C	-7	GLU	-	expression tag	UNP P06710
C	-6	VAL	-	expression tag	UNP P06710
C	-5	LEU	-	expression tag	UNP P06710
C	-4	PHE	-	expression tag	UNP P06710
C	-3	GLN	-	expression tag	UNP P06710
C	-2	GLY	-	expression tag	UNP P06710
C	-1	PRO	-	expression tag	UNP P06710
C	0	HIS	-	expression tag	UNP P06710
D	-21	MET	-	expression tag	UNP P06710
D	-20	GLY	-	expression tag	UNP P06710
D	-19	SER	-	expression tag	UNP P06710
D	-18	SER	-	expression tag	UNP P06710
D	-17	HIS	-	expression tag	UNP P06710
D	-16	HIS	-	expression tag	UNP P06710

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-15	HIS	-	expression tag	UNP P06710
D	-14	HIS	-	expression tag	UNP P06710
D	-13	HIS	-	expression tag	UNP P06710
D	-12	HIS	-	expression tag	UNP P06710
D	-11	SER	-	expression tag	UNP P06710
D	-10	SER	-	expression tag	UNP P06710
D	-9	GLY	-	expression tag	UNP P06710
D	-8	LEU	-	expression tag	UNP P06710
D	-7	GLU	-	expression tag	UNP P06710
D	-6	VAL	-	expression tag	UNP P06710
D	-5	LEU	-	expression tag	UNP P06710
D	-4	PHE	-	expression tag	UNP P06710
D	-3	GLN	-	expression tag	UNP P06710
D	-2	GLY	-	expression tag	UNP P06710
D	-1	PRO	-	expression tag	UNP P06710
D	0	HIS	-	expression tag	UNP P06710
G	-21	MET	-	expression tag	UNP P06710
G	-20	GLY	-	expression tag	UNP P06710
G	-19	SER	-	expression tag	UNP P06710
G	-18	SER	-	expression tag	UNP P06710
G	-17	HIS	-	expression tag	UNP P06710
G	-16	HIS	-	expression tag	UNP P06710
G	-15	HIS	-	expression tag	UNP P06710
G	-14	HIS	-	expression tag	UNP P06710
G	-13	HIS	-	expression tag	UNP P06710
G	-12	HIS	-	expression tag	UNP P06710
G	-11	SER	-	expression tag	UNP P06710
G	-10	SER	-	expression tag	UNP P06710
G	-9	GLY	-	expression tag	UNP P06710
G	-8	LEU	-	expression tag	UNP P06710
G	-7	GLU	-	expression tag	UNP P06710
G	-6	VAL	-	expression tag	UNP P06710
G	-5	LEU	-	expression tag	UNP P06710
G	-4	PHE	-	expression tag	UNP P06710
G	-3	GLN	-	expression tag	UNP P06710
G	-2	GLY	-	expression tag	UNP P06710
G	-1	PRO	-	expression tag	UNP P06710
G	0	HIS	-	expression tag	UNP P06710
H	-21	MET	-	expression tag	UNP P06710
H	-20	GLY	-	expression tag	UNP P06710
H	-19	SER	-	expression tag	UNP P06710
H	-18	SER	-	expression tag	UNP P06710

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Chain	Residue	Modelled	Actual	Comment	Reference
H	-17	HIS	-	expression tag	UNP P06710
H	-16	HIS	-	expression tag	UNP P06710
H	-15	HIS	-	expression tag	UNP P06710
H	-14	HIS	-	expression tag	UNP P06710
H	-13	HIS	-	expression tag	UNP P06710
H	-12	HIS	-	expression tag	UNP P06710
H	-11	SER	-	expression tag	UNP P06710
H	-10	SER	-	expression tag	UNP P06710
H	-9	GLY	-	expression tag	UNP P06710
H	-8	LEU	-	expression tag	UNP P06710
H	-7	GLU	-	expression tag	UNP P06710
H	-6	VAL	-	expression tag	UNP P06710
H	-5	LEU	-	expression tag	UNP P06710
H	-4	PHE	-	expression tag	UNP P06710
H	-3	GLN	-	expression tag	UNP P06710
H	-2	GLY	-	expression tag	UNP P06710
H	-1	PRO	-	expression tag	UNP P06710
H	0	HIS	-	expression tag	UNP P06710
I	-21	MET	-	expression tag	UNP P06710
I	-20	GLY	-	expression tag	UNP P06710
I	-19	SER	-	expression tag	UNP P06710
I	-18	SER	-	expression tag	UNP P06710
I	-17	HIS	-	expression tag	UNP P06710
I	-16	HIS	-	expression tag	UNP P06710
I	-15	HIS	-	expression tag	UNP P06710
I	-14	HIS	-	expression tag	UNP P06710
I	-13	HIS	-	expression tag	UNP P06710
I	-12	HIS	-	expression tag	UNP P06710
I	-11	SER	-	expression tag	UNP P06710
I	-10	SER	-	expression tag	UNP P06710
I	-9	GLY	-	expression tag	UNP P06710
I	-8	LEU	-	expression tag	UNP P06710
I	-7	GLU	-	expression tag	UNP P06710
I	-6	VAL	-	expression tag	UNP P06710
I	-5	LEU	-	expression tag	UNP P06710
I	-4	PHE	-	expression tag	UNP P06710
I	-3	GLN	-	expression tag	UNP P06710
I	-2	GLY	-	expression tag	UNP P06710
I	-1	PRO	-	expression tag	UNP P06710
I	0	HIS	-	expression tag	UNP P06710

- Molecule 3 is a protein called DNA polymerase III subunit delta'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	E	334	Total	C	N	O	S	0	0	0
			2601	1655	468	465	13			
3	J	334	Total	C	N	O	S	0	0	0
			2601	1655	468	465	13			

- Molecule 4 is a DNA chain called DNA (5'-D(*TP*TP*TP*TP*TP*TP*AP*TP*AP*GP*GP*CP*CP*AP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	K	14	Total	C	N	O	P	0	0	0
			287	138	48	87	14			
4	M	14	Total	C	N	O	P	0	0	0
			287	138	48	87	14			

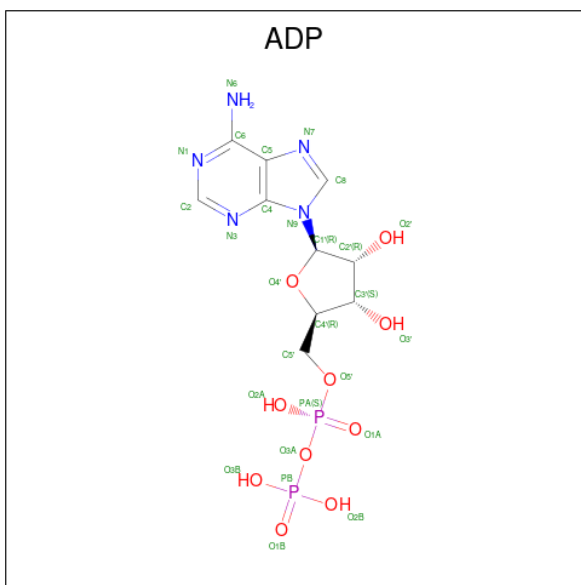
- Molecule 5 is a DNA chain called DNA (5'-D(*CP*TP*GP*GP*CP*CP*TP*AP*TP*A)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	L	10	Total	C	N	O	P	0	0	0
			200	97	35	59	9			
5	N	10	Total	C	N	O	P	0	0	0
			200	97	35	59	9			

- Molecule 6 is a protein called DNA polymerase III subunit psi.

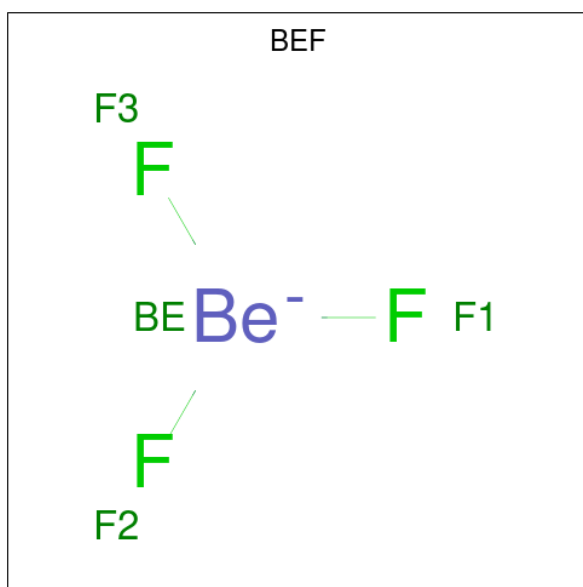
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
6	O	27	Total	C	N	O	0	0	0
			224	138	46	40			
6	P	27	Total	C	N	O	0	0	0
			224	138	46	40			

- Molecule 7 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
7	B	1	Total 27	C 10	N 5	O 10	P 2	0	0
7	C	1	Total 27	C 10	N 5	O 10	P 2	0	0
7	D	1	Total 27	C 10	N 5	O 10	P 2	0	0
7	G	1	Total 27	C 10	N 5	O 10	P 2	0	0
7	H	1	Total 27	C 10	N 5	O 10	P 2	0	0
7	I	1	Total 27	C 10	N 5	O 10	P 2	0	0

- Molecule 8 is BERYLLIUM TRIFLUORIDE ION (CCD ID: BEF) (formula: BeF_3).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	B	1	Total	Be	F	0	0
			4	1	3		
8	C	1	Total	Be	F	0	0
			4	1	3		
8	D	1	Total	Be	F	0	0
			4	1	3		
8	G	1	Total	Be	F	0	0
			4	1	3		
8	H	1	Total	Be	F	0	0
			4	1	3		
8	I	1	Total	Be	F	0	0
			4	1	3		

- Molecule 9 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	B	1	Total	Mg	0	0
			1	1		
9	C	1	Total	Mg	0	0
			1	1		
9	D	1	Total	Mg	0	0
			1	1		
9	G	1	Total	Mg	0	0
			1	1		
9	H	1	Total	Mg	0	0
			1	1		
9	I	1	Total	Mg	0	0
			1	1		

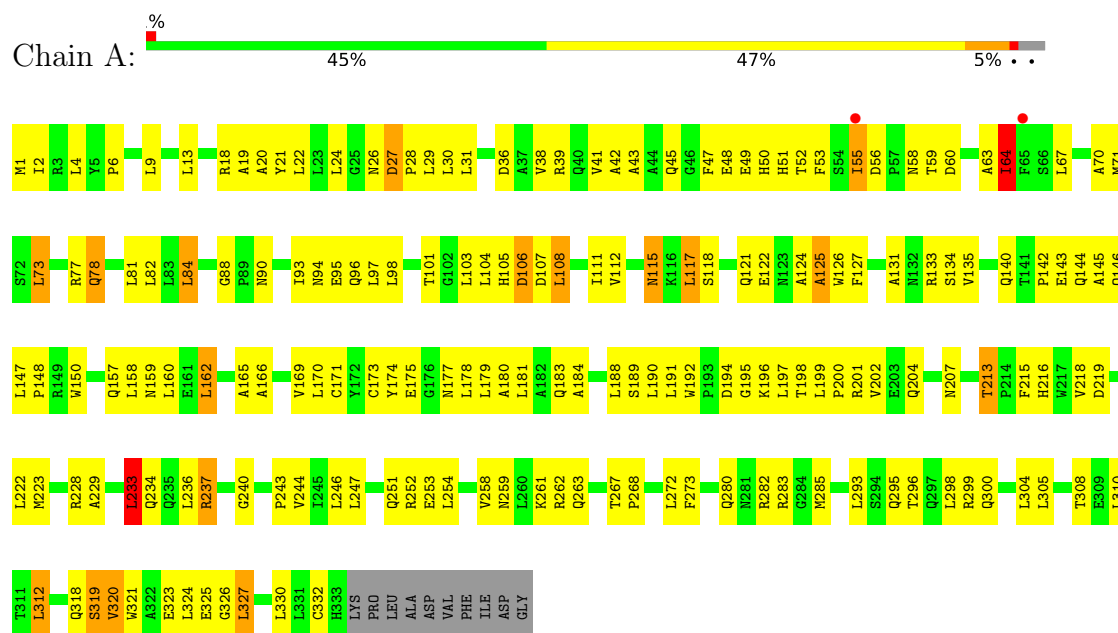
- Molecule 10 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
10	B	1	Total 1	Zn 1	0	0
10	C	1	Total 1	Zn 1	0	0
10	D	1	Total 1	Zn 1	0	0
10	E	1	Total 1	Zn 1	0	0
10	G	1	Total 1	Zn 1	0	0
10	H	1	Total 1	Zn 1	0	0
10	I	1	Total 1	Zn 1	0	0
10	J	1	Total 1	Zn 1	0	0

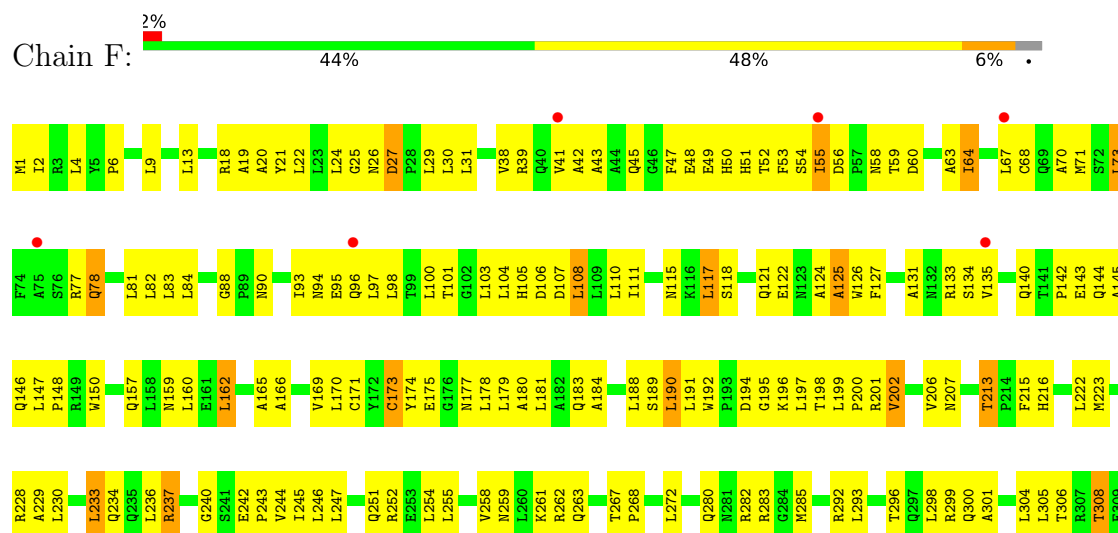
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: DNA polymerase III subunit delta



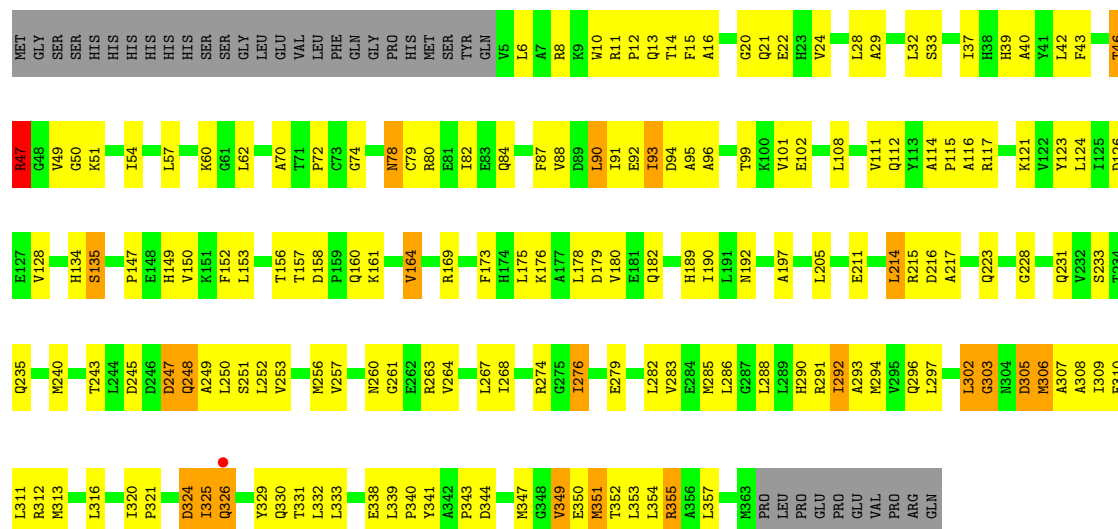
• Molecule 1: DNA polymerase III subunit delta





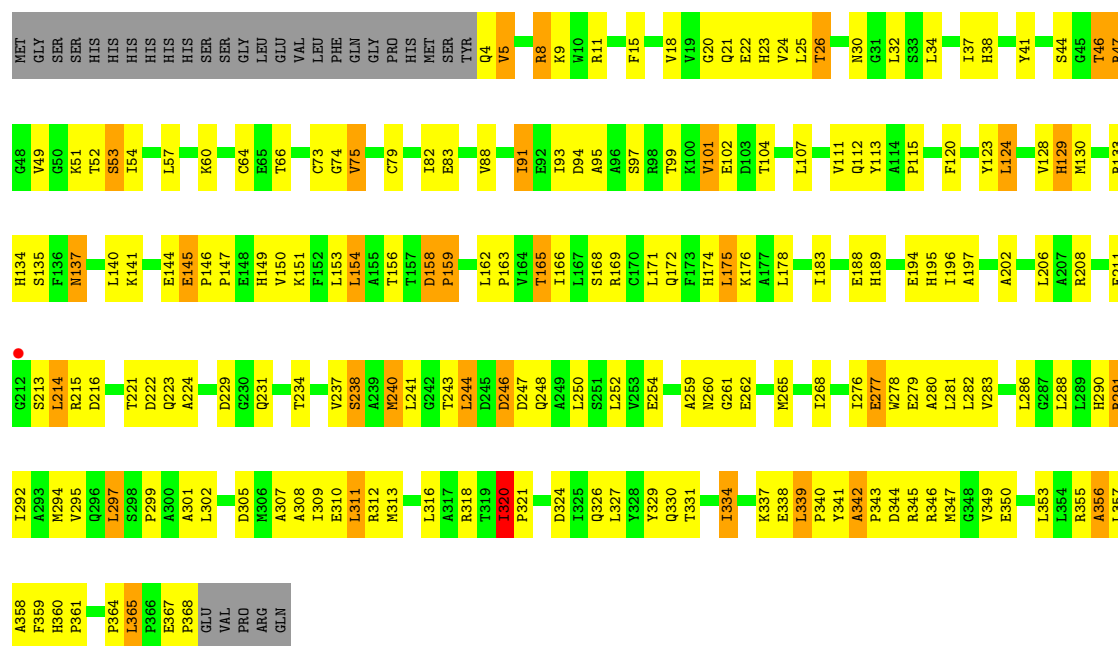
• Molecule 2: DNA polymerase III subunit tau

Chain B: 48% 37% 5% 9%



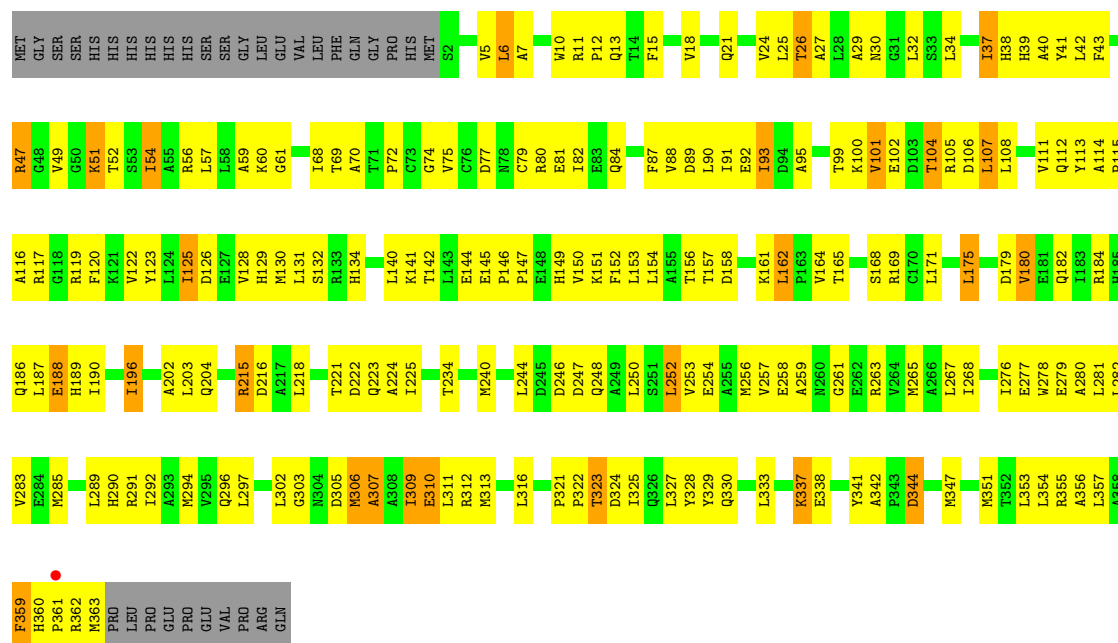
• Molecule 2: DNA polymerase III subunit tau

Chain C: 44% 40% 8% 8%

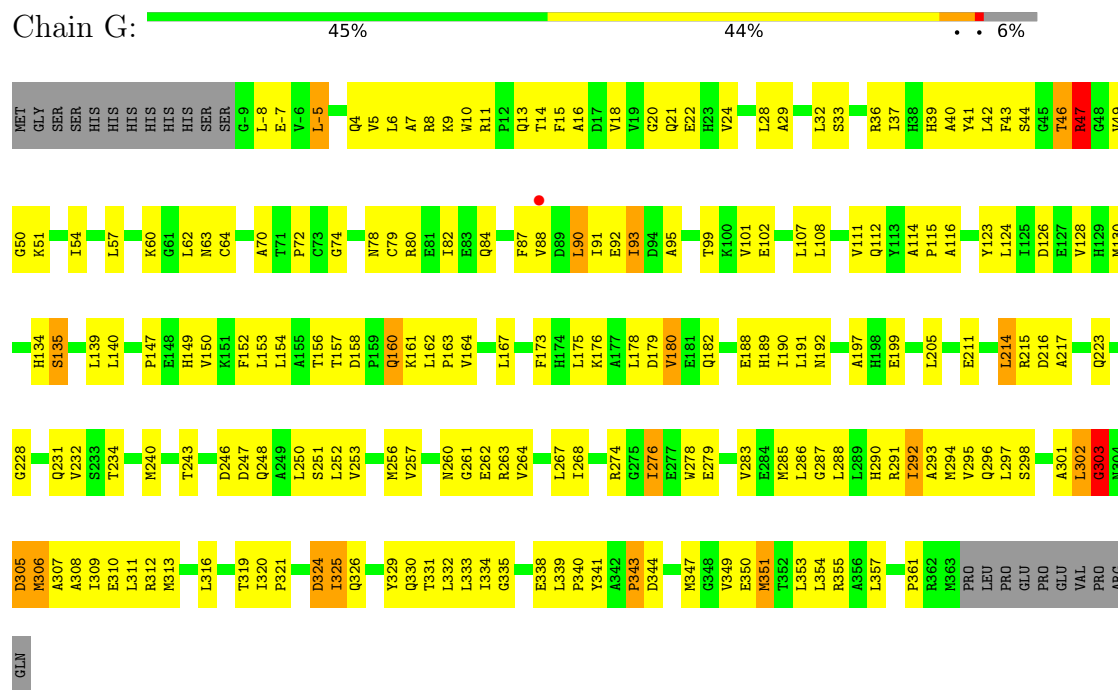


• Molecule 2: DNA polymerase III subunit tau

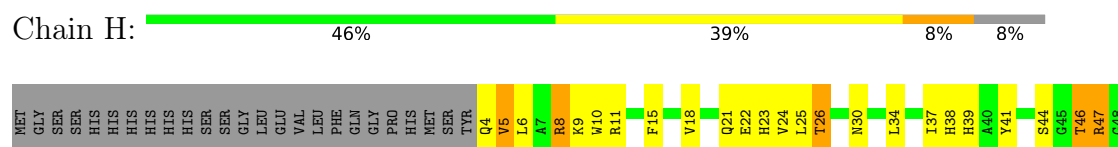
Chain D: 41% 44% 7% 8%

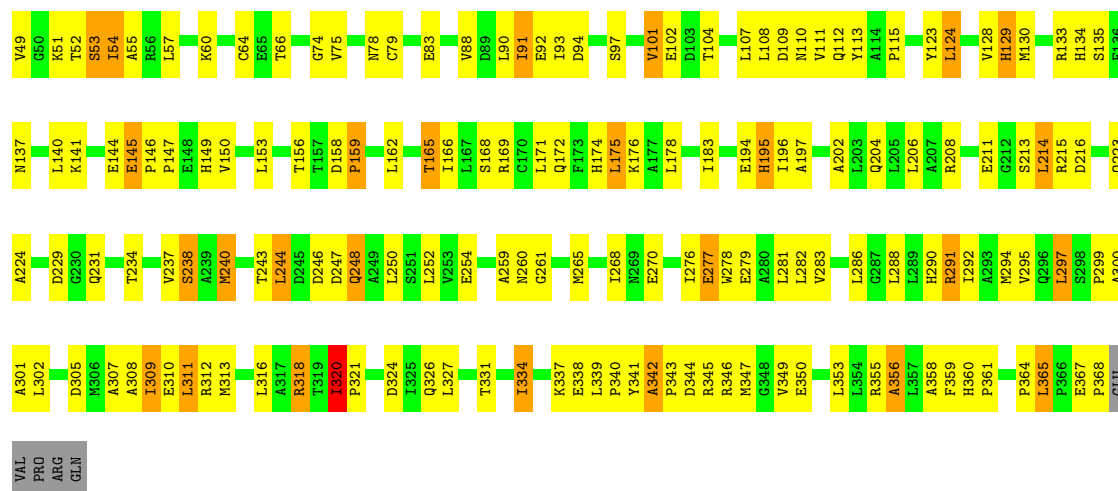


• Molecule 2: DNA polymerase III subunit tau

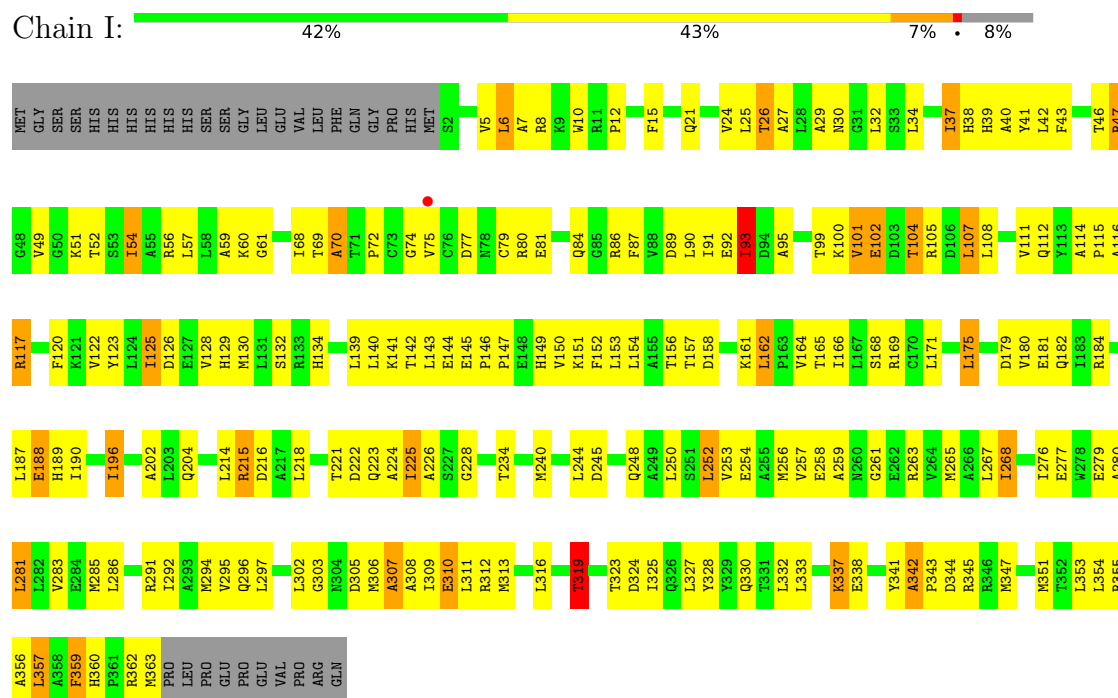


• Molecule 2: DNA polymerase III subunit tau



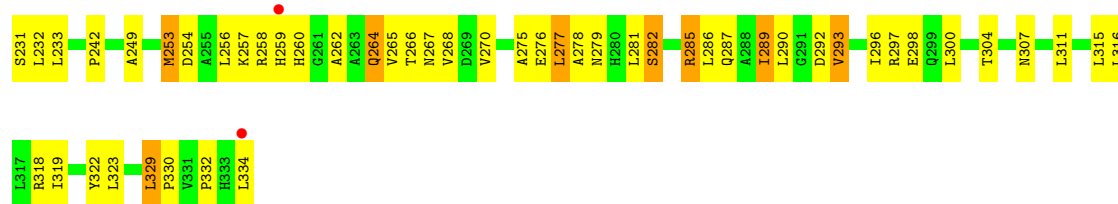


• Molecule 2: DNA polymerase III subunit tau

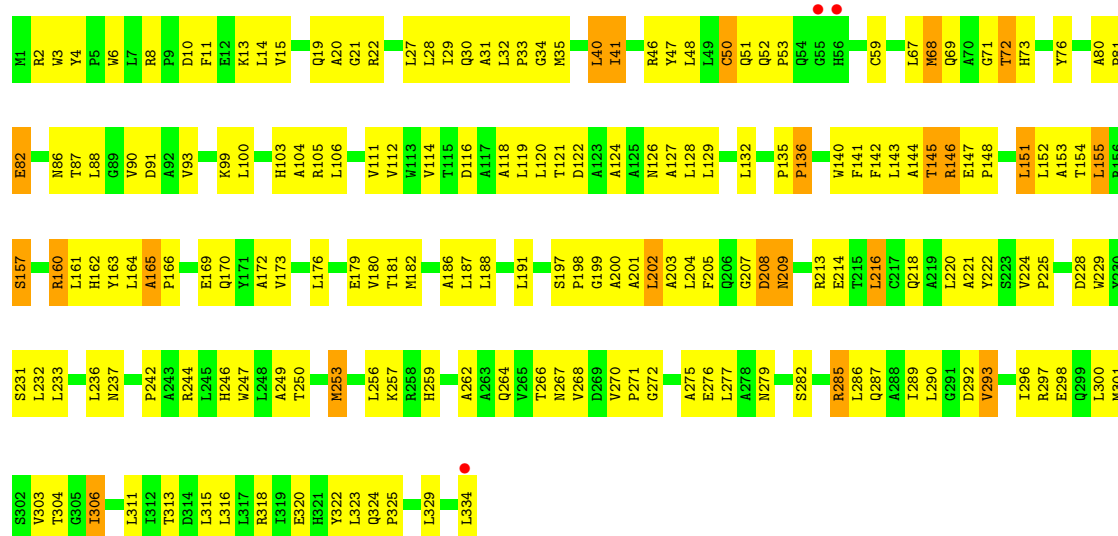


• Molecule 3: DNA polymerase III subunit delta'





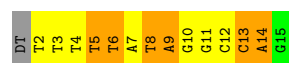
• Molecule 3: DNA polymerase III subunit delta'



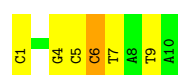
• Molecule 4: DNA (5'-D(*TP*TP*TP*TP*TP*TP*AP*TP*AP*GP*GP*CP*CP*AP*G)-3')



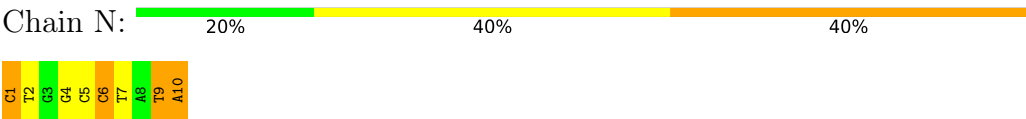
• Molecule 4: DNA (5'-D(*TP*TP*TP*TP*TP*TP*AP*TP*AP*GP*GP*CP*CP*AP*G)-3')



• Molecule 5: DNA (5'-D(*CP*TP*GP*GP*CP*CP*TP*AP*TP*A)-3')



• Molecule 5: DNA (5'-D(*CP*TP*GP*GP*CP*CP*TP*AP*TP*A)-3')



● Molecule 6: DNA polymerase III subunit psi



● Molecule 6: DNA polymerase III subunit psi



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	98.69Å 217.18Å 275.32Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	73.03 – 3.50 73.03 – 3.50	Depositor EDS
% Data completeness (in resolution range)	97.4 (73.03-3.50) 97.5 (73.03-3.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.61 (at 3.49Å)	Xtriage
Refinement program	PHENIX (phenix.refine)	Depositor
R, R_{free}	0.222 , 0.257 0.216 , 0.253	Depositor DCC
R_{free} test set	3721 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	95.9	Xtriage
Anisotropy	0.497	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 82.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	29139	wwPDB-VP
Average B, all atoms (Å ²)	114.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.49% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: BEF, ZN, MG, ADP

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	0.70	2/2697 (0.1%)	1.00	7/3664 (0.2%)
1	F	0.69	1/2706 (0.0%)	0.99	4/3675 (0.1%)
2	B	0.72	1/2835 (0.0%)	1.07	7/3841 (0.2%)
2	C	0.70	0/2885	1.09	16/3912 (0.4%)
2	D	0.75	0/2863	1.13	16/3879 (0.4%)
2	G	0.75	0/2951	1.10	15/3998 (0.4%)
2	H	0.83	0/2885	1.13	15/3912 (0.4%)
2	I	0.88	0/2863	1.18	16/3879 (0.4%)
3	E	0.92	0/2666	1.13	14/3639 (0.4%)
3	J	0.90	1/2666 (0.0%)	1.13	15/3639 (0.4%)
4	K	0.83	0/320	1.60	6/492 (1.2%)
4	M	0.87	0/320	1.58	8/492 (1.6%)
5	L	0.66	0/223	1.48	3/342 (0.9%)
5	N	0.70	0/223	1.52	5/342 (1.5%)
6	O	0.74	0/228	0.86	0/307
6	P	0.80	0/228	0.92	0/307
All	All	0.79	5/29559 (0.0%)	1.12	147/40320 (0.4%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	G	0	1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	55	ILE	CA-CB	5.94	1.60	1.53
3	J	306	ILE	CA-CB	-5.55	1.48	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	326	GLN	CB-CG	5.34	1.68	1.52
1	F	55	ILE	CA-CB	5.18	1.59	1.53
1	A	64	ILE	CA-CB	5.05	1.60	1.54

All (147) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	360	HIS	CA-C-N	-15.13	100.93	119.84
2	D	360	HIS	C-N-CA	-15.13	100.93	119.84
2	I	360	HIS	CA-C-N	-12.41	104.33	119.84
2	I	360	HIS	C-N-CA	-12.41	104.33	119.84
3	E	165	ALA	CA-C-N	8.57	125.83	119.66
3	E	165	ALA	C-N-CA	8.57	125.83	119.66
3	E	329	LEU	CA-C-N	8.56	128.60	119.78
3	E	329	LEU	C-N-CA	8.56	128.60	119.78
3	J	165	ALA	CA-C-N	8.23	125.59	119.66
3	J	165	ALA	C-N-CA	8.23	125.59	119.66
2	H	342	ALA	CA-C-N	7.98	129.82	119.84
2	H	342	ALA	C-N-CA	7.98	129.82	119.84
2	I	359	PHE	N-CA-C	-7.94	103.40	113.72
2	I	342	ALA	CA-C-N	7.78	129.56	119.84
2	I	342	ALA	C-N-CA	7.78	129.56	119.84
2	C	342	ALA	CA-C-N	7.66	129.41	119.84
2	C	342	ALA	C-N-CA	7.66	129.41	119.84
2	G	114	ALA	CA-C-N	7.56	127.84	119.90
2	G	114	ALA	C-N-CA	7.56	127.84	119.90
4	M	5	DT	O4'-C1'-N1	-7.52	97.13	108.40
2	B	114	ALA	CA-C-N	7.43	127.70	119.90
2	B	114	ALA	C-N-CA	7.43	127.70	119.90
2	D	342	ALA	CA-C-N	7.39	129.07	119.84
2	D	342	ALA	C-N-CA	7.39	129.07	119.84
2	I	303	GLY	N-CA-C	7.16	120.21	112.33
1	F	27	ASP	CA-C-N	7.16	126.78	119.19
1	F	27	ASP	C-N-CA	7.16	126.78	119.19
2	C	101	VAL	CB-CA-C	-7.15	102.66	112.02
3	E	216	LEU	N-CA-C	-7.13	103.58	111.36
3	J	209	ASN	N-CA-C	7.12	119.66	111.11
2	C	158	ASP	CA-C-N	7.01	127.61	120.04
2	C	158	ASP	C-N-CA	7.01	127.61	120.04
2	H	101	VAL	CB-CA-C	-6.94	102.93	112.02
4	K	5	DT	O4'-C1'-N1	-6.90	98.05	108.40
4	K	8	DT	P-O5'-C5'	-6.88	109.67	120.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	M	8	DT	P-O5'-C5'	-6.87	109.69	120.00
3	J	73	HIS	CA-C-N	6.60	128.09	119.84
3	J	73	HIS	C-N-CA	6.60	128.09	119.84
2	G	349	VAL	N-CA-C	-6.52	105.39	111.45
2	H	145	GLU	CA-C-N	6.33	126.90	120.38
2	H	145	GLU	C-N-CA	6.33	126.90	120.38
1	A	312	LEU	N-CA-C	6.28	117.92	111.14
2	B	349	VAL	N-CA-C	-6.28	105.61	111.45
3	J	208	ASP	N-CA-C	-6.20	105.58	113.01
3	J	146	ARG	N-CA-C	-6.19	104.46	111.14
4	K	9	DA	P-O3'-C3'	-6.16	110.96	120.20
1	A	27	ASP	CA-C-N	6.13	125.69	119.19
1	A	27	ASP	C-N-CA	6.13	125.69	119.19
2	I	101	VAL	CB-CA-C	-6.11	104.02	112.02
2	G	40	ALA	N-CA-C	6.09	118.31	108.32
2	H	158	ASP	CA-C-N	6.09	126.62	120.04
2	H	158	ASP	C-N-CA	6.09	126.62	120.04
2	I	319	THR	N-CA-C	6.08	117.77	111.03
5	N	1	DC	C4'-C3'-C2'	-6.06	93.31	102.40
2	D	162	LEU	CA-C-N	6.06	126.08	119.90
2	D	162	LEU	C-N-CA	6.06	126.08	119.90
2	C	145	GLU	CA-C-N	6.02	126.58	120.38
2	C	145	GLU	C-N-CA	6.02	126.58	120.38
2	G	361	PRO	CB-CA-C	-5.98	105.96	111.40
1	A	237	ARG	N-CA-C	-5.96	104.70	111.14
3	J	216	LEU	N-CA-C	-5.93	104.74	111.14
2	B	40	ALA	N-CA-C	5.91	118.02	108.32
2	C	339	LEU	CA-C-N	5.89	127.20	119.84
2	C	339	LEU	C-N-CA	5.89	127.20	119.84
2	B	292	ILE	CB-CA-C	-5.88	104.35	111.88
4	K	8	DT	C1'-O4'-C4'	-5.88	100.88	109.70
2	C	159	PRO	N-CA-C	-5.88	106.34	114.27
4	M	9	DA	P-O3'-C3'	-5.87	111.39	120.20
3	E	73	HIS	CA-C-N	5.86	127.17	119.84
3	E	73	HIS	C-N-CA	5.86	127.17	119.84
2	B	303	GLY	N-CA-C	5.83	118.64	111.93
2	I	360	HIS	N-CA-C	5.82	120.15	112.35
3	J	21	GLY	N-CA-C	-5.80	107.39	114.92
2	I	93	ILE	CB-CA-C	-5.76	103.00	110.84
4	M	8	DT	C1'-O4'-C4'	-5.76	101.06	109.70
2	C	320	ILE	CA-C-N	5.71	126.26	120.38
2	C	320	ILE	C-N-CA	5.71	126.26	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	J	40	LEU	N-CA-C	-5.70	105.14	111.36
2	G	303	GLY	N-CA-C	5.69	118.47	111.93
3	J	271	PRO	N-CA-C	-5.69	106.59	114.27
2	I	162	LEU	CA-C-N	5.68	126.94	119.84
2	I	162	LEU	C-N-CA	5.68	126.94	119.84
2	H	320	ILE	CA-C-N	5.64	126.19	120.38
2	H	320	ILE	C-N-CA	5.64	126.19	120.38
5	L	9	DT	C1'-O4'-C4'	-5.64	101.24	109.70
2	D	175	LEU	N-CA-C	-5.60	100.55	109.96
2	H	159	PRO	N-CA-C	-5.59	106.73	114.27
3	J	329	LEU	CA-C-N	5.59	125.53	119.78
3	J	329	LEU	C-N-CA	5.59	125.53	119.78
4	K	13	DC	C1'-O4'-C4'	-5.58	101.33	109.70
3	E	59	CYS	N-CA-C	5.57	117.80	111.11
5	N	10	DA	O5'-C5'-C4'	-5.50	102.56	110.80
3	E	155	LEU	N-CA-C	-5.49	105.39	111.71
2	C	5	VAL	N-CA-C	5.48	116.00	107.28
2	H	292	ILE	CB-CA-C	-5.45	104.73	111.70
2	D	359	PHE	N-CA-C	-5.44	106.64	113.72
2	I	70	ALA	N-CA-C	-5.42	106.50	113.23
5	L	6	DC	N1-C1'-C2'	-5.39	105.42	113.50
2	H	5	VAL	N-CA-C	5.36	115.56	107.80
4	M	13	DC	C1'-O4'-C4'	-5.35	101.67	109.70
2	D	321	PRO	CA-C-N	5.35	126.53	119.84
2	D	321	PRO	C-N-CA	5.35	126.53	119.84
2	G	292	ILE	CB-CA-C	-5.34	104.87	111.70
5	L	1	DC	C3'-C2'-C1'	-5.32	93.62	101.60
2	H	78	ASN	N-CA-C	5.32	117.15	111.36
2	H	129	HIS	N-CA-C	-5.32	106.57	113.16
2	C	292	ILE	CB-CA-C	-5.31	104.91	111.70
2	D	344	ASP	N-CA-C	-5.30	101.48	109.85
1	A	84	LEU	N-CA-C	5.29	117.33	110.40
3	E	282	SER	CA-C-N	5.29	125.35	119.32
3	E	282	SER	C-N-CA	5.29	125.35	119.32
3	J	59	CYS	N-CA-C	5.29	117.46	111.11
4	M	5	DT	C5'-C4'-O4'	-5.29	101.47	109.40
5	N	6	DC	N1-C1'-C2'	-5.27	105.59	113.50
2	G	287	GLY	N-CA-C	-5.27	106.39	112.50
2	D	101	VAL	CB-CA-C	-5.27	105.12	112.02
2	D	303	GLY	N-CA-C	5.24	119.27	112.25
4	M	14	DA	O4'-C1'-N9	-5.22	100.57	108.40
1	A	55	ILE	N-CA-C	5.22	115.13	107.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	268	ILE	CB-CA-C	-5.22	105.29	111.97
1	F	55	ILE	N-CA-C	5.21	115.13	107.15
2	H	158	ASP	N-CA-C	5.21	117.85	109.15
2	G	167	LEU	N-CA-C	-5.19	106.20	112.54
4	K	11	DG	C1'-O4'-C4'	-5.19	101.92	109.70
2	G	18	VAL	N-CA-C	5.17	116.24	109.21
2	D	309	ILE	CB-CA-C	-5.17	105.43	111.94
5	N	9	DT	C1'-O4'-C4'	-5.16	101.97	109.70
2	C	246	ASP	N-CA-C	5.15	121.78	110.80
3	E	21	GLY	N-CA-C	-5.13	108.25	114.92
5	N	1	DC	C3'-C2'-C1'	-5.13	93.90	101.60
2	G	11	ARG	CA-C-N	5.12	125.28	119.90
2	G	11	ARG	C-N-CA	5.12	125.28	119.90
2	G	298	SER	CA-C-N	-5.12	114.34	119.56
2	G	298	SER	C-N-CA	-5.12	114.34	119.56
4	M	6	DT	C1'-O4'-C4'	-5.11	102.03	109.70
2	I	102	GLU	N-CA-C	-5.11	104.98	111.11
3	E	289	ILE	CB-CA-C	-5.11	105.17	112.22
3	E	173	VAL	N-CA-C	-5.09	105.58	110.72
2	D	180	VAL	CB-CA-C	-5.09	105.37	111.88
3	J	72	THR	N-CA-C	5.08	117.37	108.52
2	G	246	ASP	N-CA-C	-5.08	105.65	111.14
2	B	78	ASN	N-CA-C	5.05	116.60	111.14
2	C	129	HIS	N-CA-C	-5.05	106.90	113.16
1	F	237	ARG	N-CA-C	-5.04	105.69	111.14
2	I	345	ARG	N-CA-C	-5.04	105.86	111.36
2	D	106	ASP	N-CA-C	-5.02	105.72	111.14
1	A	106	ASP	N-CA-C	-5.00	107.18	113.28

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	G	303	GLY	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2650	0	2703	187	0
1	F	2659	0	2716	192	0
2	B	2791	0	2841	180	1
2	C	2838	0	2886	223	0
2	D	2818	0	2863	218	1
2	G	2903	0	2949	185	1
2	H	2838	0	2886	233	1
2	I	2818	0	2863	233	1
3	E	2601	0	2603	173	1
3	J	2601	0	2603	195	0
4	K	287	0	161	22	0
4	M	287	0	161	22	0
5	L	200	0	115	3	0
5	N	200	0	115	6	0
6	O	224	0	221	27	0
6	P	224	0	221	32	0
7	B	27	0	12	4	0
7	C	27	0	12	4	0
7	D	27	0	12	5	0
7	G	27	0	12	5	0
7	H	27	0	12	4	0
7	I	27	0	12	4	0
8	B	4	0	0	0	0
8	C	4	0	0	0	0
8	D	4	0	0	0	0
8	G	4	0	0	0	0
8	H	4	0	0	0	0
8	I	4	0	0	0	0
9	B	1	0	0	0	0
9	C	1	0	0	0	0
9	D	1	0	0	0	0
9	G	1	0	0	0	0
9	H	1	0	0	0	0
9	I	1	0	0	0	0
10	B	1	0	0	0	0
10	C	1	0	0	0	0
10	D	1	0	0	0	0
10	E	1	0	0	0	0
10	G	1	0	0	0	0
10	H	1	0	0	0	0
10	I	1	0	0	0	0
10	J	1	0	0	0	0
All	All	29139	0	28979	1921	3

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 33.

All (1921) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:216:ASP:OD1	3:J:157:SER:HB3	1.35	1.25
2:D:361:PRO:HB2	3:J:272:GLY:HA2	1.23	1.17
2:I:90:LEU:CD1	2:I:122:VAL:HG12	1.86	1.05
3:J:114:VAL:HB	3:J:143:LEU:HD23	1.33	1.05
3:E:114:VAL:HB	3:E:143:LEU:HD23	1.39	1.03
2:B:350:GLU:HB3	2:C:294:MET:HE1	1.39	1.02
2:D:216:ASP:OD1	3:E:157:SER:HB3	1.60	1.01
2:D:90:LEU:CD1	2:D:122:VAL:HG12	1.91	1.00
3:E:2:ARG:HD3	3:E:4:TYR:CE1	1.95	1.00
2:I:90:LEU:HD12	2:I:122:VAL:HG12	1.43	0.98
3:E:3:TRP:HH2	3:E:8:ARG:HG3	1.27	0.98
3:J:114:VAL:HB	3:J:143:LEU:CD2	1.94	0.97
2:D:265:MET:HE2	3:E:257:LYS:HD3	1.48	0.96
2:B:179:ASP:HB3	2:B:182:GLN:HG3	1.43	0.95
2:D:361:PRO:CB	3:J:272:GLY:HA2	1.96	0.95
2:I:101:VAL:HG23	4:M:10:DG:OP1	1.66	0.95
3:J:3:TRP:HH2	3:J:8:ARG:HG3	1.29	0.95
2:C:244:LEU:HD12	2:C:244:LEU:H	1.32	0.94
2:I:265:MET:HE2	3:J:257:LYS:HD3	1.50	0.94
2:D:6:LEU:H	2:D:6:LEU:HD12	1.28	0.93
2:I:268:ILE:HD11	2:I:353:LEU:HD12	1.46	0.93
2:G:351:MET:HG2	2:H:290:HIS:HD2	1.31	0.93
4:M:3:DT:H6	4:M:3:DT:H5'	1.34	0.93
3:E:116:ASP:HB3	3:E:119:LEU:HD12	1.47	0.93
2:H:244:LEU:H	2:H:244:LEU:HD12	1.31	0.93
3:J:116:ASP:HB3	3:J:119:LEU:HD12	1.50	0.93
2:D:268:ILE:HD11	2:D:353:LEU:HD12	1.49	0.93
3:J:2:ARG:HD3	3:J:4:TYR:CE1	2.03	0.92
2:H:367:GLU:HG3	2:H:368:PRO:HD2	1.49	0.92
2:D:327:LEU:HD11	6:O:8:GLN:HG2	1.49	0.92
2:I:6:LEU:H	2:I:6:LEU:HD12	1.33	0.92
3:E:114:VAL:HB	3:E:143:LEU:CD2	2.00	0.91
2:G:14:THR:HG22	2:G:16:ALA:H	1.35	0.91
2:H:318:ARG:NH1	2:H:318:ARG:HB2	1.86	0.90
1:F:47:PHE:CE1	1:F:77:ARG:HD3	2.07	0.90
2:C:367:GLU:HG3	2:C:368:PRO:HD2	1.52	0.89
2:D:90:LEU:HD12	2:D:122:VAL:HG12	1.50	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:312:LEU:HD13	1:F:320:VAL:HG21	1.53	0.89
2:G:350:GLU:HB3	2:H:294:MET:HE1	1.51	0.89
1:A:71:MET:SD	1:A:103:LEU:HB3	2.12	0.89
2:G:179:ASP:HB3	2:G:182:GLN:HG3	1.55	0.89
4:K:3:DT:H5'	4:K:3:DT:H6	1.34	0.89
1:A:20:ALA:HB3	1:A:134:SER:HB3	1.52	0.89
2:I:179:ASP:HB3	2:I:182:GLN:HG3	1.54	0.89
2:H:47:ARG:HD2	2:I:164:VAL:HG22	1.52	0.89
3:E:296:ILE:HG13	3:E:315:LEU:HD13	1.54	0.88
1:F:93:ILE:O	1:F:97:LEU:HG	1.73	0.88
1:A:47:PHE:CE1	1:A:77:ARG:HD3	2.08	0.88
1:A:93:ILE:O	1:A:97:LEU:HG	1.73	0.88
2:I:128:VAL:HG12	2:I:156:THR:HB	1.54	0.88
2:H:115:PRO:HD3	2:H:149:HIS:HD2	1.39	0.88
2:D:128:VAL:HG12	2:D:156:THR:HB	1.53	0.88
2:G:351:MET:HG2	2:H:290:HIS:CD2	2.08	0.87
1:F:20:ALA:HB3	1:F:134:SER:HB3	1.56	0.87
2:C:318:ARG:HB2	2:C:318:ARG:NH1	1.89	0.87
1:F:71:MET:SD	1:F:103:LEU:HB3	2.15	0.87
2:H:318:ARG:HB2	2:H:318:ARG:HH11	1.38	0.87
2:B:14:THR:HG22	2:B:16:ALA:H	1.39	0.86
2:G:274:ARG:HH21	2:G:276:ILE:HD11	1.40	0.86
2:G:82:ILE:HG23	2:G:90:LEU:HD23	1.56	0.86
2:H:21:GLN:NE2	2:H:175:LEU:HB3	1.89	0.86
4:M:3:DT:H5'	4:M:3:DT:C6	2.11	0.86
2:C:21:GLN:NE2	2:C:175:LEU:HB3	1.91	0.86
2:D:179:ASP:HB3	2:D:182:GLN:HG3	1.56	0.86
2:H:101:VAL:HG23	4:M:12:DC:OP1	1.76	0.85
2:C:115:PRO:HD3	2:C:149:HIS:HD2	1.40	0.85
1:A:312:LEU:HD13	1:A:320:VAL:HG21	1.59	0.85
3:J:296:ILE:HG13	3:J:315:LEU:HD13	1.59	0.85
3:E:2:ARG:HD3	3:E:4:TYR:HE1	1.38	0.85
2:H:208:ARG:HE	2:H:305:ASP:HB3	1.42	0.85
2:B:351:MET:HG2	2:C:290:HIS:HD2	1.42	0.84
2:H:297:LEU:HA	6:P:25:LEU:HD12	1.58	0.84
2:B:82:ILE:HG23	2:B:90:LEU:HD23	1.59	0.84
1:A:19:ALA:HB1	1:A:104:LEU:HD22	1.60	0.84
2:C:47:ARG:HD2	2:D:164:VAL:HG22	1.59	0.84
1:F:95:GLU:HA	1:F:98:LEU:HD12	1.59	0.84
4:K:3:DT:H5'	4:K:3:DT:C6	2.12	0.84
2:B:302:LEU:HD22	2:B:306:MET:HG3	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:90:LEU:CD1	2:I:122:VAL:CG1	2.56	0.83
2:I:327:LEU:HD11	6:P:8:GLN:HG2	1.59	0.83
2:G:95:ALA:O	2:G:99:THR:HG22	1.76	0.83
1:F:19:ALA:HB1	1:F:104:LEU:HD22	1.60	0.83
2:G:274:ARG:NH2	2:G:276:ILE:HD11	1.94	0.83
2:G:291:ARG:HG2	2:G:306:MET:CE	2.09	0.83
2:B:95:ALA:O	2:B:99:THR:HG22	1.80	0.82
2:G:-8:LEU:HG	2:G:-8:LEU:O	1.77	0.82
4:M:2:DT:H2''	4:M:3:DT:H5''	1.61	0.82
1:A:95:GLU:HA	1:A:98:LEU:HD12	1.60	0.82
2:B:215:ARG:HH11	7:B:400:ADP:H5'1	1.42	0.82
2:G:215:ARG:HH11	7:G:406:ADP:H5'1	1.45	0.81
2:G:21:GLN:OE1	2:G:175:LEU:HB3	1.79	0.81
2:G:302:LEU:HD22	2:G:306:MET:HG3	1.61	0.81
2:I:125:ILE:N	2:I:125:ILE:HD12	1.94	0.81
1:A:49:GLU:HB2	1:A:78:GLN:HB3	1.63	0.81
2:B:51:LYS:HB2	7:B:400:ADP:O2B	1.81	0.81
2:B:291:ARG:HG2	2:B:306:MET:CE	2.11	0.80
2:C:318:ARG:HB2	2:C:318:ARG:HH11	1.45	0.80
2:C:208:ARG:HE	2:C:305:ASP:HB3	1.46	0.80
3:E:182:MET:HG3	3:E:205:PHE:CE1	2.17	0.80
1:A:18:ARG:HB3	1:A:133:ARG:O	1.82	0.80
2:D:51:LYS:HB2	7:D:404:ADP:O2B	1.82	0.80
2:I:129:HIS:CD2	2:I:130:MET:HG2	2.17	0.80
2:I:302:LEU:HD11	2:I:306:MET:HG3	1.62	0.80
2:C:327:LEU:HD23	2:C:361:PRO:HG3	1.64	0.80
3:J:256:LEU:HD11	3:J:287:GLN:HB2	1.63	0.79
1:A:165:ALA:HB1	1:A:199:LEU:HD22	1.65	0.79
2:G:51:LYS:HB2	7:G:406:ADP:O2B	1.81	0.79
2:D:362:ARG:O	2:D:363:MET:HG3	1.82	0.79
1:F:104:LEU:HD13	1:F:133:ARG:HD2	1.64	0.79
2:G:279:GLU:O	2:G:283:VAL:HG23	1.83	0.79
2:H:128:VAL:HG12	2:H:156:THR:HB	1.63	0.79
2:C:268:ILE:HD11	2:C:353:LEU:HD12	1.65	0.79
1:F:39:ARG:NH1	1:F:50:HIS:HB3	1.97	0.79
3:J:224:VAL:HB	3:J:225:PRO:HD3	1.64	0.79
3:E:67:LEU:HD22	3:E:72:THR:O	1.83	0.79
2:H:224:ALA:HA	2:H:240:MET:HE1	1.65	0.79
2:G:250:LEU:HD23	2:G:312:ARG:CZ	2.12	0.79
3:E:155:LEU:HD12	3:E:155:LEU:O	1.82	0.78
2:G:14:THR:HG22	2:G:16:ALA:N	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:267:THR:HB	1:F:268:PRO:HD2	1.64	0.78
2:B:250:LEU:HD23	2:B:312:ARG:CZ	2.14	0.78
2:I:26:THR:O	2:I:30:ASN:HB2	1.83	0.78
4:M:2:DT:H2"	4:M:3:DT:C5'	2.13	0.78
2:B:279:GLU:O	2:B:283:VAL:HG23	1.82	0.78
3:E:68:MET:HA	3:E:68:MET:HE3	1.65	0.78
2:G:101:VAL:HG21	2:G:134:HIS:HB3	1.64	0.78
3:J:155:LEU:HD12	3:J:155:LEU:O	1.83	0.78
1:A:104:LEU:HD13	1:A:133:ARG:HD2	1.66	0.78
1:F:18:ARG:HB3	1:F:133:ARG:O	1.84	0.78
1:A:267:THR:HB	1:A:268:PRO:HD2	1.66	0.77
2:B:14:THR:HG22	2:B:16:ALA:N	1.99	0.77
3:E:285:ARG:HH11	3:E:285:ARG:CG	1.97	0.77
2:D:101:VAL:HG23	4:K:10:DG:OP1	1.85	0.77
1:A:39:ARG:NH1	1:A:50:HIS:HB3	1.98	0.77
1:A:59:THR:HG23	1:A:63:ALA:HB3	1.67	0.77
2:B:101:VAL:HG21	2:B:134:HIS:HB3	1.66	0.77
2:C:91:ILE:HD12	2:C:123:TYR:CE2	2.19	0.77
2:H:318:ARG:HH11	2:H:318:ARG:CB	1.98	0.77
4:K:2:DT:H2"	4:K:3:DT:H5"	1.64	0.77
3:J:121:THR:HG22	3:J:122:ASP:N	1.99	0.76
2:D:90:LEU:CD1	2:D:122:VAL:CG1	2.63	0.76
1:F:49:GLU:HB2	1:F:78:GLN:HB3	1.67	0.76
2:G:252:LEU:HD23	2:G:267:LEU:HD12	1.67	0.76
3:J:3:TRP:CH2	3:J:8:ARG:HG3	2.19	0.76
1:F:59:THR:HG23	1:F:63:ALA:HB3	1.68	0.76
2:H:47:ARG:HG3	2:I:168:SER:HB2	1.66	0.76
3:J:46:ARG:HD2	3:J:68:MET:HG2	1.67	0.76
3:J:182:MET:HG3	3:J:205:PHE:CE1	2.19	0.76
2:D:95:ALA:O	2:D:99:THR:HG22	1.86	0.76
3:J:68:MET:HA	3:J:68:MET:HE3	1.67	0.76
2:B:351:MET:HG2	2:C:290:HIS:CD2	2.19	0.75
3:E:256:LEU:HD11	3:E:287:GLN:HB2	1.66	0.75
2:B:21:GLN:OE1	2:B:175:LEU:HB3	1.87	0.75
2:D:361:PRO:HG2	3:J:275:ALA:HB2	1.68	0.75
1:F:160:LEU:HD11	1:F:189:SER:HB3	1.68	0.75
1:F:98:LEU:HD23	1:F:126:TRP:HB3	1.67	0.75
1:A:104:LEU:HD13	1:A:133:ARG:CD	2.16	0.75
2:I:125:ILE:HD12	2:I:125:ILE:H	1.50	0.75
3:J:285:ARG:HH11	3:J:285:ARG:CG	1.98	0.75
1:A:38:VAL:CG1	1:A:111:ILE:HD11	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:165:ALA:HB1	1:F:199:LEU:HD22	1.69	0.75
2:C:93:ILE:HD13	2:C:107:LEU:HD13	1.68	0.75
2:G:260:ASN:HD22	2:G:263:ARG:H	1.34	0.75
2:C:18:VAL:HB	2:C:25:LEU:HD11	1.67	0.75
2:C:21:GLN:NE2	2:C:49:VAL:HG12	2.02	0.75
1:F:104:LEU:HD13	1:F:133:ARG:CD	2.16	0.75
2:G:115:PRO:HD3	2:G:149:HIS:HD2	1.51	0.75
2:C:128:VAL:HG12	2:C:156:THR:HB	1.66	0.75
2:C:265:MET:HE1	2:C:350:GLU:HG2	1.68	0.75
2:D:302:LEU:HD11	2:D:306:MET:HG3	1.67	0.74
1:A:160:LEU:HD11	1:A:189:SER:HB3	1.70	0.74
3:E:3:TRP:CH2	3:E:8:ARG:HG3	2.18	0.74
2:B:350:GLU:HB3	2:C:294:MET:CE	2.17	0.74
2:I:215:ARG:HG2	2:I:215:ARG:HH11	1.51	0.74
1:A:49:GLU:HB3	1:A:51:HIS:CE1	2.22	0.74
2:C:259:ALA:HB2	2:C:360:HIS:CE1	2.23	0.74
2:I:291:ARG:HH11	2:I:291:ARG:HG2	1.53	0.74
4:K:2:DT:H2''	4:K:3:DT:C5'	2.17	0.74
1:F:190:LEU:HD21	2:G:36:ARG:HD2	1.69	0.74
2:B:260:ASN:HD22	2:B:263:ARG:H	1.34	0.74
2:I:51:LYS:HB2	7:I:410:ADP:O2B	1.86	0.74
2:B:291:ARG:HG2	2:B:306:MET:HE1	1.70	0.74
2:G:268:ILE:HD11	2:G:353:LEU:HD12	1.68	0.74
2:H:367:GLU:HG3	2:H:368:PRO:CD	2.18	0.74
2:B:42:LEU:HD12	2:B:43:PHE:N	2.02	0.74
2:G:74:GLY:HA2	2:G:79:CYS:HB3	1.69	0.74
2:H:327:LEU:HD23	2:H:361:PRO:HG3	1.70	0.74
2:I:309:ILE:CG2	2:I:313:MET:HG2	2.18	0.74
2:H:259:ALA:HB2	2:H:360:HIS:CE1	2.23	0.73
2:D:26:THR:O	2:D:30:ASN:HB2	1.89	0.73
2:H:268:ILE:HD11	2:H:353:LEU:HD12	1.71	0.73
1:A:179:LEU:HD11	1:A:183:GLN:HE21	1.54	0.73
2:G:216:ASP:OD1	2:H:168:SER:HB2	1.88	0.73
2:H:265:MET:HE1	2:H:350:GLU:HG2	1.70	0.73
2:C:331:THR:HA	6:O:14:ILE:HD13	1.70	0.73
1:F:49:GLU:HB3	1:F:51:HIS:CE1	2.23	0.73
2:G:101:VAL:HG21	2:G:134:HIS:CB	2.19	0.73
2:B:252:LEU:HD23	2:B:267:LEU:HD12	1.71	0.73
2:C:224:ALA:HA	2:C:240:MET:HE1	1.70	0.73
2:D:129:HIS:CD2	2:D:130:MET:HG2	2.23	0.73
3:E:224:VAL:HB	3:E:225:PRO:HD3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:257:VAL:HG11	2:B:320:ILE:HG12	1.70	0.73
2:H:11:ARG:HG3	2:H:53:SER:HB3	1.71	0.73
3:E:29:ILE:HD13	3:E:40:LEU:HD23	1.70	0.73
2:C:246:ASP:HB3	2:C:309:ILE:HD12	1.71	0.72
2:C:318:ARG:HH11	2:C:318:ARG:CB	2.02	0.72
2:D:129:HIS:HD1	2:D:156:THR:HG1	1.34	0.72
2:D:309:ILE:CG2	2:D:313:MET:HG2	2.19	0.72
2:H:337:LYS:HE2	3:J:334:LEU:HD22	1.71	0.72
2:B:74:GLY:HA2	2:B:79:CYS:HB3	1.71	0.72
1:F:267:THR:OG1	1:F:272:LEU:HD21	1.88	0.72
2:G:291:ARG:HG2	2:G:306:MET:HE1	1.72	0.72
2:I:351:MET:HG2	3:J:253:MET:HE1	1.70	0.72
3:J:41:ILE:HD13	3:J:142:PHE:HB3	1.70	0.72
3:J:30:GLN:HE21	3:J:161:LEU:HD21	1.55	0.72
2:C:101:VAL:HG23	4:K:12:DC:OP1	1.90	0.72
2:B:115:PRO:HD3	2:B:149:HIS:HD2	1.53	0.71
2:C:341:TYR:HB2	2:D:333:LEU:HD11	1.72	0.71
2:H:18:VAL:HB	2:H:25:LEU:HD11	1.71	0.71
3:J:29:ILE:HD13	3:J:40:LEU:HD23	1.71	0.71
2:C:47:ARG:HG3	2:D:168:SER:HB2	1.72	0.71
2:G:354:LEU:HD11	2:H:294:MET:SD	2.30	0.71
2:B:101:VAL:HG23	4:K:14:DA:OP1	1.90	0.71
2:C:367:GLU:HG3	2:C:368:PRO:CD	2.20	0.71
3:J:2:ARG:HD3	3:J:4:TYR:HE1	1.53	0.71
3:J:50:CYS:HB3	3:J:53:PRO:HG3	1.72	0.71
2:I:90:LEU:HD13	2:I:122:VAL:CG1	2.19	0.71
3:E:121:THR:HG22	3:E:122:ASP:N	2.05	0.71
2:H:93:ILE:HD13	2:H:107:LEU:HD13	1.71	0.71
1:A:267:THR:OG1	1:A:272:LEU:HD21	1.91	0.71
2:B:274:ARG:HH21	2:B:276:ILE:HD11	1.55	0.71
2:G:108:LEU:O	2:G:111:VAL:HG12	1.90	0.71
1:A:117:LEU:HD12	1:A:122:GLU:HG2	1.73	0.71
2:H:297:LEU:HD23	6:P:25:LEU:CD1	2.20	0.71
2:I:95:ALA:O	2:I:99:THR:HG22	1.91	0.71
2:B:274:ARG:NH2	2:B:276:ILE:HD11	2.06	0.71
2:D:184:ARG:HD3	2:D:204:GLN:NE2	2.06	0.70
3:J:67:LEU:HD22	3:J:72:THR:O	1.91	0.70
2:D:38:HIS:HD2	2:D:40:ALA:H	1.38	0.70
2:B:179:ASP:HB3	2:B:182:GLN:CG	2.18	0.70
2:B:268:ILE:HD11	2:B:353:LEU:HD12	1.72	0.70
3:E:46:ARG:HD2	3:E:68:MET:HG2	1.70	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:117:LEU:HD12	1:F:122:GLU:HG2	1.73	0.70
2:G:4:GLN:HE21	2:G:9:LYS:HB2	1.57	0.70
2:B:101:VAL:HG21	2:B:134:HIS:CB	2.21	0.70
2:D:125:ILE:N	2:D:125:ILE:HD12	2.07	0.70
1:A:39:ARG:CZ	1:A:50:HIS:HB3	2.22	0.70
1:F:190:LEU:CD2	2:G:36:ARG:HD2	2.21	0.70
1:A:98:LEU:HD23	1:A:126:TRP:HB3	1.74	0.70
2:G:285:MET:HE1	2:G:353:LEU:HD21	1.73	0.70
2:H:51:LYS:HG2	7:H:408:ADP:O2B	1.92	0.70
1:A:38:VAL:HG11	1:A:111:ILE:HD11	1.72	0.70
1:A:162:LEU:HD22	1:A:166:ALA:HB3	1.72	0.70
3:E:50:CYS:HB3	3:E:53:PRO:HG3	1.74	0.70
2:G:101:VAL:HG23	4:M:14:DA:OP1	1.92	0.70
2:G:161:LYS:HE3	2:H:133:ARG:NH1	2.06	0.70
2:G:49:VAL:HG11	2:G:176:LYS:O	1.91	0.69
2:B:88:VAL:HG11	2:B:116:ALA:HB3	1.74	0.69
2:G:80:ARG:O	2:G:84:GLN:HG2	1.92	0.69
2:H:147:PRO:HB2	2:H:149:HIS:CE1	2.27	0.69
2:I:223:GLN:HA	3:J:160:ARG:HD2	1.74	0.69
2:C:134:HIS:CD2	4:K:12:DC:H4'	2.27	0.69
2:B:197:ALA:HB3	2:B:231:GLN:HG2	1.75	0.69
2:C:144:GLU:HB2	2:C:169:ARG:HE	1.56	0.69
3:E:103:HIS:H	3:E:103:HIS:CD2	2.10	0.69
3:J:285:ARG:HH11	3:J:285:ARG:HG3	1.58	0.69
1:F:334:LYS:HD3	1:F:334:LYS:C	2.18	0.69
2:H:341:TYR:HB2	2:I:333:LEU:HD11	1.74	0.69
1:A:28:PRO:HB3	2:B:164:VAL:HG21	1.75	0.69
1:A:222:LEU:HD12	1:A:285:MET:HE3	1.75	0.69
3:E:41:ILE:HD13	3:E:142:PHE:HB3	1.74	0.69
2:G:257:VAL:HG11	2:G:320:ILE:HG12	1.73	0.69
1:F:38:VAL:CG1	1:F:111:ILE:HD11	2.23	0.69
2:H:91:ILE:HD12	2:H:123:TYR:CE2	2.28	0.69
2:I:184:ARG:HD3	2:I:204:GLN:NE2	2.07	0.69
2:C:147:PRO:HB2	2:C:149:HIS:CE1	2.28	0.69
2:I:309:ILE:HG22	2:I:313:MET:HG2	1.75	0.68
2:D:38:HIS:HB3	2:D:41:TYR:CE1	2.28	0.68
2:H:299:PRO:HD3	6:P:28:GLU:HA	1.76	0.68
2:C:101:VAL:CG2	2:C:134:HIS:HB3	2.24	0.68
2:D:90:LEU:HD13	2:D:122:VAL:CG1	2.23	0.68
2:D:215:ARG:HG2	3:E:157:SER:HB2	1.76	0.68
1:F:162:LEU:HD22	1:F:166:ALA:HB3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:144:GLU:HB2	2:H:169:ARG:HE	1.57	0.68
3:E:30:GLN:HE21	3:E:161:LEU:HD21	1.59	0.68
2:G:291:ARG:HG2	2:G:306:MET:HE3	1.75	0.68
2:H:21:GLN:NE2	2:H:49:VAL:HG12	2.08	0.68
2:H:208:ARG:NE	2:H:305:ASP:HB3	2.07	0.68
3:E:88:LEU:HD23	3:E:120:LEU:HD23	1.75	0.68
2:H:101:VAL:CG2	2:H:134:HIS:HB3	2.23	0.68
1:F:304:LEU:HD23	1:F:327:LEU:HD13	1.76	0.68
2:C:129:HIS:ND1	2:C:156:THR:OG1	2.24	0.68
1:F:39:ARG:CZ	1:F:50:HIS:HB3	2.24	0.68
2:I:93:ILE:HD11	2:I:107:LEU:HD21	1.75	0.68
2:B:49:VAL:HG11	2:B:176:LYS:O	1.93	0.67
2:I:21:GLN:NE2	2:I:49:VAL:HG13	2.09	0.67
2:C:11:ARG:HG3	2:C:53:SER:HB3	1.75	0.67
2:B:80:ARG:O	2:B:84:GLN:HG2	1.93	0.67
2:C:112:GLN:NE2	2:C:113:TYR:HE1	1.93	0.67
2:D:215:ARG:HG2	2:D:215:ARG:HH11	1.58	0.67
2:I:38:HIS:HD2	2:I:40:ALA:H	1.39	0.67
2:I:302:LEU:CD1	2:I:306:MET:HG3	2.24	0.67
2:G:152:PHE:O	2:G:153:LEU:HD23	1.95	0.67
2:B:343:PRO:HG3	2:C:286:LEU:HB3	1.75	0.67
1:F:179:LEU:HD11	1:F:183:GLN:HE21	1.58	0.67
2:H:278:TRP:NE1	2:H:346:ARG:HB2	2.10	0.67
2:I:291:ARG:HG2	2:I:291:ARG:NH1	2.09	0.67
2:C:339:LEU:N	2:C:340:PRO:HD2	2.09	0.67
2:D:90:LEU:HD12	2:D:122:VAL:O	1.94	0.67
1:F:304:LEU:O	1:F:308:THR:HG23	1.94	0.67
2:H:46:THR:O	2:H:49:VAL:HG23	1.94	0.67
2:I:70:ALA:C	2:I:72:PRO:HD3	2.19	0.67
2:D:21:GLN:NE2	2:D:49:VAL:HG13	2.10	0.67
2:H:11:ARG:CG	2:H:53:SER:HB3	2.24	0.66
1:F:52:THR:HG22	1:F:81:LEU:HD23	1.77	0.66
1:F:222:LEU:HD12	1:F:285:MET:HE3	1.76	0.66
3:J:103:HIS:H	3:J:103:HIS:CD2	2.11	0.66
2:H:112:GLN:NE2	2:H:113:TYR:HE1	1.92	0.66
2:B:331:THR:HG23	6:O:17:TRP:CH2	2.31	0.66
2:G:197:ALA:HB3	2:G:231:GLN:HG2	1.78	0.66
2:G:47:ARG:O	2:G:47:ARG:HG2	1.95	0.66
2:H:129:HIS:ND1	2:H:156:THR:OG1	2.28	0.66
2:B:47:ARG:HD3	2:B:47:ARG:N	2.09	0.66
2:B:108:LEU:O	2:B:111:VAL:HG12	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:291:ARG:HG2	2:D:291:ARG:HH11	1.59	0.66
1:F:1:MET:HE1	1:F:127:PHE:CE2	2.29	0.66
2:I:24:VAL:HG21	2:I:175:LEU:HD22	1.78	0.66
1:A:49:GLU:HB3	1:A:51:HIS:HE1	1.58	0.66
2:C:101:VAL:HG22	2:C:134:HIS:HB3	1.77	0.66
2:I:362:ARG:O	2:I:363:MET:HG3	1.95	0.66
2:B:147:PRO:HB2	2:B:150:VAL:HG23	1.78	0.65
2:G:39:HIS:CD2	2:G:39:HIS:H	2.12	0.65
2:B:285:MET:HE1	2:B:353:LEU:HD21	1.77	0.65
2:C:208:ARG:NE	2:C:305:ASP:HB3	2.11	0.65
2:D:309:ILE:HG22	2:D:313:MET:HG2	1.77	0.65
1:F:49:GLU:HB3	1:F:51:HIS:HE1	1.61	0.65
2:I:93:ILE:HD11	2:I:107:LEU:CD2	2.26	0.65
3:J:169:GLU:O	3:J:173:VAL:HG23	1.96	0.65
4:M:8:DT:H2''	4:M:9:DA:O5'	1.95	0.65
1:F:101:THR:HG21	1:F:126:TRP:HB2	1.77	0.65
2:I:38:HIS:HB3	2:I:41:TYR:CE1	2.31	0.65
2:D:361:PRO:HG2	3:J:275:ALA:CB	2.25	0.65
1:F:64:ILE:HG12	1:F:64:ILE:O	1.97	0.65
2:H:246:ASP:HB3	2:H:309:ILE:HD12	1.78	0.65
1:A:71:MET:HB2	1:A:108:LEU:HG	1.78	0.65
2:I:150:VAL:O	2:I:151:LYS:HD3	1.96	0.65
2:B:47:ARG:O	2:B:47:ARG:HG2	1.95	0.65
2:D:61:GLY:HA2	2:D:72:PRO:HG3	1.78	0.65
2:I:309:ILE:O	2:I:311:LEU:N	2.29	0.65
3:J:32:LEU:O	3:J:35:MET:HB2	1.97	0.65
2:D:302:LEU:CD1	2:D:306:MET:HG3	2.26	0.65
2:G:115:PRO:HD3	2:G:149:HIS:CD2	2.31	0.65
2:G:32:LEU:HA	2:G:37:ILE:HD11	1.78	0.64
2:H:101:VAL:CG2	4:M:12:DC:H5''	2.27	0.64
1:A:1:MET:HE1	1:A:127:PHE:CE2	2.32	0.64
2:I:74:GLY:HA2	2:I:79:CYS:HB3	1.79	0.64
3:J:285:ARG:HG3	3:J:285:ARG:NH1	2.11	0.64
2:B:39:HIS:CD2	2:B:39:HIS:H	2.16	0.64
3:E:106:LEU:HD23	3:E:106:LEU:O	1.97	0.64
3:E:285:ARG:HG3	3:E:285:ARG:NH1	2.12	0.64
2:H:64:CYS:SG	2:H:66:THR:HG23	2.37	0.64
2:D:70:ALA:C	2:D:72:PRO:HD3	2.22	0.64
2:D:77:ASP:O	2:D:81:GLU:HG3	1.98	0.64
2:D:327:LEU:HD11	6:O:8:GLN:CG	2.25	0.64
2:D:74:GLY:HA2	2:D:79:CYS:HB3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:263:ARG:O	2:D:267:LEU:HB2	1.98	0.64
2:G:24:VAL:HG21	2:G:175:LEU:CD2	2.28	0.64
2:G:179:ASP:HB3	2:G:182:GLN:CG	2.27	0.64
3:E:20:ALA:CB	3:E:22:ARG:HG3	2.28	0.64
2:D:129:HIS:ND1	2:D:156:THR:OG1	2.24	0.63
2:G:252:LEU:HD21	2:G:267:LEU:HB2	1.78	0.63
2:I:61:GLY:HA2	2:I:72:PRO:HG3	1.80	0.63
2:G:42:LEU:HD12	2:G:43:PHE:N	2.12	0.63
2:C:104:THR:OG1	2:C:135:SER:HB2	1.99	0.63
2:D:309:ILE:O	2:D:311:LEU:N	2.32	0.63
2:B:252:LEU:HD21	2:B:267:LEU:HB2	1.80	0.63
1:A:282:ARG:HD3	1:A:285:MET:CE	2.29	0.63
2:B:32:LEU:HA	2:B:37:ILE:HD11	1.81	0.63
2:C:337:LYS:HE2	3:E:334:LEU:HD22	1.81	0.63
2:G:290:HIS:O	2:G:294:MET:HG3	1.97	0.63
2:I:90:LEU:HD12	2:I:122:VAL:O	1.99	0.63
2:H:104:THR:OG1	2:H:135:SER:HB2	1.98	0.63
1:A:48:GLU:O	1:A:50:HIS:CD2	2.52	0.62
2:B:115:PRO:HD3	2:B:149:HIS:CD2	2.32	0.62
2:B:291:ARG:HG2	2:B:306:MET:HE3	1.78	0.62
3:E:285:ARG:HH11	3:E:285:ARG:HG3	1.63	0.62
2:H:324:ASP:O	2:H:327:LEU:HB3	1.98	0.62
2:I:362:ARG:HD3	6:P:4:ARG:HG2	1.79	0.62
2:I:362:ARG:HG2	6:P:4:ARG:CZ	2.28	0.62
3:E:169:GLU:O	3:E:173:VAL:HG23	1.98	0.62
2:H:101:VAL:HG22	2:H:134:HIS:HB3	1.80	0.62
2:I:77:ASP:O	2:I:81:GLU:HG3	2.00	0.62
1:A:101:THR:HG21	1:A:126:TRP:HB2	1.79	0.62
2:B:354:LEU:HD11	2:C:294:MET:SD	2.39	0.62
2:I:70:ALA:O	2:I:72:PRO:HD3	1.99	0.62
1:F:71:MET:HB2	1:F:108:LEU:HG	1.81	0.62
3:J:106:LEU:O	3:J:106:LEU:HD23	2.00	0.62
1:A:282:ARG:HD3	1:A:285:MET:HE1	1.81	0.62
2:B:24:VAL:HG21	2:B:175:LEU:CD2	2.29	0.62
2:C:278:TRP:NE1	2:C:346:ARG:HB2	2.14	0.62
2:G:47:ARG:HD3	2:G:47:ARG:N	2.15	0.62
2:C:21:GLN:HE21	2:C:49:VAL:HG12	1.65	0.62
1:F:77:ARG:HG2	1:F:107:ASP:HA	1.81	0.62
2:D:252:LEU:HD13	2:D:285:MET:CE	2.30	0.61
2:D:277:GLU:O	2:D:280:ALA:HB3	2.00	0.61
1:A:48:GLU:O	1:A:50:HIS:HD2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:279:ASN:O	3:J:282:SER:HB2	1.99	0.61
2:H:115:PRO:HD3	2:H:149:HIS:CD2	2.28	0.61
2:C:297:LEU:HA	6:O:25:LEU:HD12	1.81	0.61
2:D:6:LEU:H	2:D:6:LEU:CD1	2.10	0.61
2:D:32:LEU:HD23	2:D:37:ILE:CD1	2.30	0.61
2:H:337:LYS:CE	3:J:334:LEU:HD22	2.31	0.61
3:J:121:THR:HG22	3:J:122:ASP:H	1.63	0.61
2:B:290:HIS:O	2:B:294:MET:HG3	2.00	0.61
1:F:237:ARG:HG3	1:F:321:TRP:CE2	2.36	0.61
2:C:15:PHE:CE1	2:C:57:LEU:HB3	2.35	0.61
3:E:11:PHE:CZ	3:E:15:VAL:HG21	2.34	0.61
2:G:350:GLU:HB3	2:H:294:MET:CE	2.27	0.61
1:F:48:GLU:HG3	1:F:49:GLU:H	1.65	0.61
1:F:147:LEU:HB3	1:F:148:PRO:HD3	1.83	0.61
2:C:46:THR:O	2:C:49:VAL:HG23	2.00	0.61
2:C:297:LEU:HD23	6:O:25:LEU:CD1	2.31	0.61
2:H:297:LEU:HD23	6:P:25:LEU:HD13	1.81	0.61
2:I:215:ARG:HG2	3:J:157:SER:HB2	1.82	0.61
2:D:87:PHE:CE2	2:D:89:ASP:HB2	2.36	0.61
1:F:160:LEU:HD22	1:F:195:GLY:HA2	1.83	0.61
3:J:20:ALA:CB	3:J:22:ARG:HG3	2.31	0.61
2:D:38:HIS:CD2	2:D:40:ALA:H	2.19	0.61
1:F:38:VAL:HG11	1:F:111:ILE:HD11	1.83	0.61
2:H:24:VAL:HG21	2:H:175:LEU:HD22	1.83	0.61
2:H:265:MET:HE2	2:I:294:MET:SD	2.41	0.61
3:J:46:ARG:CD	3:J:68:MET:HG2	2.31	0.61
3:J:213:ARG:HG2	3:J:213:ARG:HH11	1.66	0.61
2:D:125:ILE:HD12	2:D:125:ILE:H	1.65	0.61
2:D:291:ARG:HG2	2:D:291:ARG:NH1	2.14	0.61
2:H:47:ARG:HD2	2:I:164:VAL:CG2	2.26	0.61
2:I:7:ALA:O	7:I:410:ADP:O3'	2.19	0.61
2:I:257:VAL:HG12	2:I:328:TYR:CE2	2.36	0.61
1:F:169:VAL:HG21	1:F:199:LEU:HD11	1.83	0.60
3:J:88:LEU:HD23	3:J:120:LEU:HD23	1.83	0.60
4:K:8:DT:H2''	4:K:9:DA:O5'	2.01	0.60
1:F:48:GLU:O	1:F:50:HIS:CD2	2.54	0.60
2:B:260:ASN:ND2	2:B:263:ARG:H	1.98	0.60
2:H:101:VAL:HG23	4:M:12:DC:H5''	1.82	0.60
2:I:263:ARG:O	2:I:267:LEU:HB2	2.01	0.60
2:C:265:MET:HE2	2:D:294:MET:SD	2.41	0.60
2:G:338:GLU:C	2:G:340:PRO:HD2	2.25	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:41:TYR:CE2	2:H:171:LEU:HD12	2.37	0.60
2:I:69:THR:HG21	2:I:72:PRO:HA	1.83	0.60
2:C:21:GLN:HE22	2:C:175:LEU:HB3	1.67	0.60
2:C:295:VAL:HG22	2:C:302:LEU:HB2	1.83	0.60
1:F:318:GLN:H	1:F:318:GLN:CD	2.09	0.60
2:C:324:ASP:O	2:C:327:LEU:HB3	2.02	0.60
2:H:51:LYS:CG	7:H:408:ADP:O2B	2.50	0.60
2:H:297:LEU:HD22	6:P:25:LEU:HA	1.83	0.60
2:H:339:LEU:N	2:H:340:PRO:HD2	2.17	0.60
1:A:169:VAL:HG21	1:A:199:LEU:HD11	1.84	0.60
3:E:207:GLY:C	3:E:209:ASN:H	2.09	0.60
2:I:21:GLN:NE2	2:I:49:VAL:CG1	2.64	0.60
3:J:34:GLY:HA3	3:J:200:ALA:HB2	1.82	0.60
1:A:71:MET:CB	1:A:108:LEU:HG	2.32	0.60
1:A:147:LEU:HB3	1:A:148:PRO:HD3	1.83	0.60
2:H:299:PRO:HG2	6:P:28:GLU:HG2	1.84	0.60
1:A:64:ILE:O	1:A:64:ILE:HG12	2.01	0.60
2:D:24:VAL:HG21	2:D:175:LEU:HD22	1.84	0.59
2:I:8:ARG:NH1	3:J:135:PRO:HD2	2.17	0.59
2:I:147:PRO:HD2	2:I:150:VAL:HB	1.82	0.59
1:A:304:LEU:O	1:A:308:THR:HG23	2.01	0.59
2:C:51:LYS:HG2	7:C:402:ADP:O2B	2.01	0.59
2:C:115:PRO:HD3	2:C:149:HIS:CD2	2.30	0.59
2:C:367:GLU:CG	2:C:368:PRO:HD2	2.27	0.59
2:I:30:ASN:O	2:I:34:LEU:HG	2.02	0.59
1:A:160:LEU:HD22	1:A:195:GLY:HA2	1.82	0.59
2:B:152:PHE:O	2:B:153:LEU:HD23	2.02	0.59
2:B:256:MET:HA	2:B:357:LEU:HD21	1.85	0.59
2:D:261:GLY:HA3	3:E:260:HIS:ND1	2.17	0.59
1:F:306:THR:HG23	3:J:311:LEU:HD12	1.85	0.59
2:I:223:GLN:HG2	2:I:240:MET:SD	2.43	0.59
3:J:253:MET:HE2	3:J:290:LEU:HD21	1.85	0.59
2:H:243:THR:HG22	2:H:244:LEU:O	2.02	0.59
2:I:122:VAL:HG22	2:I:151:LYS:HB2	1.85	0.59
1:A:24:LEU:HD11	1:A:117:LEU:HD11	1.85	0.59
2:C:290:HIS:NE2	2:C:294:MET:HE1	2.17	0.59
3:J:29:ILE:CD1	3:J:40:LEU:HD23	2.33	0.59
2:C:101:VAL:HA	2:C:135:SER:HB3	1.84	0.59
2:C:340:PRO:HB2	2:C:341:TYR:CD1	2.36	0.59
2:D:30:ASN:O	2:D:34:LEU:HG	2.03	0.59
3:E:298:GLU:HA	3:E:298:GLU:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:331:THR:HG23	6:P:17:TRP:CH2	2.37	0.59
1:A:77:ARG:HG2	1:A:107:ASP:HA	1.85	0.59
2:C:111:VAL:HG13	2:C:150:VAL:HG21	1.83	0.59
3:E:76:TYR:HD1	3:E:111:VAL:CG2	2.16	0.59
2:G:24:VAL:HG22	2:G:173:PHE:HB3	1.85	0.59
2:H:297:LEU:HD23	6:P:25:LEU:HD12	1.85	0.59
2:H:321:PRO:O	2:H:324:ASP:HB2	2.03	0.59
3:J:72:THR:O	3:J:72:THR:HG23	2.03	0.59
3:J:99:LYS:CE	3:J:105:ARG:HH22	2.16	0.59
2:B:355:ARG:NH2	2:C:330:GLN:OE1	2.36	0.59
2:C:47:ARG:HD2	2:D:164:VAL:CG2	2.33	0.59
2:D:21:GLN:NE2	2:D:49:VAL:CG1	2.66	0.59
3:J:114:VAL:CB	3:J:143:LEU:CD2	2.77	0.59
2:C:265:MET:HE1	2:C:350:GLU:CG	2.32	0.59
1:F:198:THR:OG1	1:F:200:PRO:HG2	2.03	0.59
2:B:338:GLU:C	2:B:340:PRO:HD2	2.28	0.58
2:C:321:PRO:O	2:C:324:ASP:HB2	2.02	0.58
2:D:363:MET:SD	3:J:276:GLU:OE1	2.61	0.58
3:E:259:HIS:CE1	3:J:259:HIS:CE1	2.91	0.58
1:F:24:LEU:HD22	1:F:115:ASN:O	2.03	0.58
1:A:48:GLU:HG3	1:A:49:GLU:H	1.68	0.58
2:D:7:ALA:O	7:D:404:ADP:O3'	2.19	0.58
2:G:88:VAL:HG11	2:G:116:ALA:HB3	1.85	0.58
2:G:347:MET:HE1	2:H:291:ARG:HH21	1.67	0.58
2:I:6:LEU:H	2:I:6:LEU:CD1	2.13	0.58
1:A:52:THR:HG22	1:A:81:LEU:HD23	1.83	0.58
2:D:70:ALA:O	2:D:72:PRO:HD3	2.03	0.58
1:F:48:GLU:O	1:F:50:HIS:HD2	1.86	0.58
1:F:71:MET:CB	1:F:108:LEU:HG	2.33	0.58
2:H:299:PRO:CG	6:P:28:GLU:HG2	2.33	0.58
2:I:277:GLU:O	2:I:280:ALA:HB3	2.03	0.58
2:C:175:LEU:HD23	2:C:175:LEU:N	2.18	0.58
2:H:15:PHE:CE1	2:H:57:LEU:HB3	2.39	0.58
2:I:80:ARG:O	2:I:84:GLN:HG3	2.03	0.58
3:E:28:LEU:O	3:E:161:LEU:HD12	2.03	0.58
2:H:101:VAL:HA	2:H:135:SER:HB3	1.85	0.58
2:I:252:LEU:HD13	2:I:285:MET:CE	2.34	0.58
2:I:362:ARG:HG2	6:P:4:ARG:NE	2.18	0.58
3:J:68:MET:HE1	3:J:76:TYR:CD2	2.38	0.58
1:A:304:LEU:HD23	1:A:327:LEU:HD13	1.85	0.58
3:E:29:ILE:CD1	3:E:40:LEU:HD23	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:32:LEU:O	3:E:35:MET:HB2	2.03	0.58
2:H:282:LEU:O	2:H:286:LEU:HD12	2.02	0.58
2:C:137:ASN:H	2:C:137:ASN:HD22	1.51	0.58
2:D:80:ARG:O	2:D:84:GLN:HG3	2.03	0.58
2:D:309:ILE:HG21	2:D:313:MET:HG2	1.85	0.58
1:F:319:SER:O	1:F:321:TRP:N	2.36	0.58
2:D:351:MET:HG2	3:E:253:MET:HE1	1.85	0.58
2:G:178:LEU:HD12	2:G:214:LEU:HB2	1.85	0.58
3:J:11:PHE:CZ	3:J:15:VAL:HG21	2.39	0.58
2:D:26:THR:HG22	2:D:27:ALA:N	2.18	0.58
3:E:72:THR:O	3:E:72:THR:HG23	2.04	0.58
3:E:172:ALA:HB1	3:E:191:LEU:HD11	1.85	0.58
2:I:125:ILE:H	2:I:125:ILE:CD1	2.15	0.58
2:I:268:ILE:HD11	2:I:353:LEU:CD1	2.27	0.58
2:D:362:ARG:HD3	6:O:4:ARG:HG2	1.86	0.58
3:E:68:MET:HE1	3:E:76:TYR:CD2	2.39	0.58
3:E:259:HIS:ND1	3:J:259:HIS:CE1	2.71	0.57
1:F:21:TYR:CE1	1:F:135:VAL:HB	2.39	0.57
2:G:256:MET:HA	2:G:357:LEU:HD21	1.86	0.57
2:I:90:LEU:HD13	2:I:122:VAL:HG11	1.84	0.57
2:C:11:ARG:CG	2:C:53:SER:HB3	2.34	0.57
2:D:150:VAL:O	2:D:151:LYS:HD3	2.03	0.57
2:I:87:PHE:CE2	2:I:89:ASP:HB2	2.39	0.57
2:I:125:ILE:N	2:I:125:ILE:CD1	2.65	0.57
1:A:97:LEU:HD13	1:A:126:TRP:CH2	2.39	0.57
2:C:244:LEU:H	2:C:244:LEU:CD1	2.12	0.57
2:D:61:GLY:CA	2:D:72:PRO:HG3	2.35	0.57
2:D:122:VAL:HG22	2:D:151:LYS:HB2	1.86	0.57
2:I:323:THR:HG21	6:P:8:GLN:OE1	2.03	0.57
4:K:12:DC:H2''	4:K:13:DC:O5'	2.03	0.57
1:A:56:ASP:HB2	1:A:58:ASN:HB2	1.87	0.57
2:C:51:LYS:CG	7:C:402:ADP:O2B	2.52	0.57
2:D:114:ALA:HB1	2:D:115:PRO:HD2	1.86	0.57
3:E:99:LYS:CE	3:E:105:ARG:HH22	2.17	0.57
3:J:76:TYR:HD1	3:J:111:VAL:CG2	2.17	0.57
3:J:207:GLY:C	3:J:209:ASN:H	2.12	0.57
1:A:26:ASN:ND2	1:A:140:GLN:OE1	2.36	0.57
2:B:20:GLY:O	2:B:21:GLN:HB2	2.05	0.57
2:C:41:TYR:CE2	2:C:171:LEU:HD12	2.39	0.57
2:I:309:ILE:HG21	2:I:313:MET:HG2	1.85	0.57
3:J:285:ARG:CG	3:J:285:ARG:NH1	2.63	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:338:GLU:OE2	2:C:355:ARG:NH2	2.37	0.57
2:D:10:TRP:CE2	2:D:190:ILE:HG23	2.39	0.57
2:D:265:MET:HE2	3:E:257:LYS:CD	2.28	0.57
1:F:59:THR:HG23	1:F:63:ALA:CB	2.35	0.57
1:F:56:ASP:HB2	1:F:58:ASN:HB2	1.87	0.57
2:C:337:LYS:CE	3:E:334:LEU:HD22	2.35	0.57
2:D:93:ILE:HD11	2:D:107:LEU:CD2	2.35	0.57
1:F:244:VAL:HG21	4:M:5:DT:H71	1.84	0.57
2:H:331:THR:HA	6:P:14:ILE:HD13	1.87	0.57
3:J:199:GLY:HA2	3:J:202:LEU:HB2	1.87	0.57
6:P:25:LEU:O	6:P:26:GLN:C	2.47	0.57
2:I:129:HIS:ND1	2:I:156:THR:OG1	2.27	0.57
3:J:222:TYR:O	3:J:225:PRO:HD2	2.05	0.57
2:B:261:GLY:HA3	2:C:297:LEU:HD11	1.87	0.56
1:F:21:TYR:CD1	1:F:135:VAL:HB	2.40	0.56
2:I:32:LEU:HD23	2:I:37:ILE:CD1	2.34	0.56
3:J:213:ARG:HH21	3:J:267:ASN:HD22	1.52	0.56
2:G:147:PRO:HB2	2:G:150:VAL:HG23	1.86	0.56
3:J:298:GLU:OE1	3:J:298:GLU:HA	2.05	0.56
1:A:36:ASP:CG	2:B:169:ARG:HH22	2.13	0.56
2:B:214:LEU:O	2:B:217:ALA:HB3	2.05	0.56
2:C:115:PRO:CD	2:C:149:HIS:HD2	2.16	0.56
3:E:52:GLN:N	3:E:53:PRO:HD3	2.21	0.56
3:E:86:ASN:O	3:E:119:LEU:HD22	2.05	0.56
2:G:347:MET:CE	2:H:291:ARG:HH21	2.19	0.56
2:H:21:GLN:HE21	2:H:49:VAL:HG12	1.68	0.56
2:H:22:GLU:O	2:H:26:THR:HB	2.06	0.56
2:H:234:THR:O	2:H:238:SER:OG	2.22	0.56
2:H:265:MET:HE1	2:H:350:GLU:CG	2.35	0.56
2:I:47:ARG:HG2	2:I:47:ARG:O	2.06	0.56
2:C:290:HIS:CE1	2:C:294:MET:HE2	2.40	0.56
3:E:118:ALA:HB2	3:E:145:THR:HG22	1.87	0.56
1:F:1:MET:HE1	1:F:127:PHE:CZ	2.40	0.56
2:H:134:HIS:CD2	4:M:12:DC:H4'	2.40	0.56
2:I:38:HIS:CD2	2:I:40:ALA:H	2.21	0.56
2:I:114:ALA:HB1	2:I:115:PRO:HD2	1.87	0.56
2:B:8:ARG:NH1	2:C:146:PRO:HD2	2.21	0.56
2:C:346:ARG:O	2:C:347:MET:C	2.47	0.56
2:D:147:PRO:HD2	2:D:150:VAL:HB	1.87	0.56
1:F:198:THR:HG23	1:F:201:ARG:HD2	1.88	0.56
2:D:5:VAL:HG13	2:D:222:ASP:OD2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:285:ARG:CG	3:E:285:ARG:NH1	2.61	0.56
3:J:118:ALA:HB2	3:J:145:THR:HG22	1.87	0.56
2:C:128:VAL:HG22	2:C:128:VAL:O	2.06	0.56
2:B:292:ILE:CD1	2:B:316:LEU:HD23	2.36	0.56
3:J:172:ALA:HB1	3:J:191:LEU:HD11	1.87	0.56
1:A:188:LEU:HD13	1:A:197:LEU:HD13	1.87	0.56
2:D:254:GLU:OE2	2:D:312:ARG:HD2	2.05	0.56
3:E:99:LYS:HD3	3:E:105:ARG:NH2	2.21	0.56
2:G:128:VAL:O	2:G:128:VAL:HG22	2.06	0.56
2:H:113:TYR:N	2:H:113:TYR:CD1	2.73	0.56
3:J:46:ARG:NH1	3:J:69:GLN:HG3	2.21	0.56
1:A:24:LEU:HD22	1:A:115:ASN:O	2.05	0.56
1:F:98:LEU:CD2	1:F:126:TRP:HB3	2.36	0.56
1:F:259:ASN:O	1:F:263:GLN:HG3	2.06	0.56
2:H:214:LEU:HD12	2:H:214:LEU:O	2.07	0.56
1:A:318:GLN:CD	1:A:318:GLN:H	2.14	0.55
2:D:100:LYS:O	2:D:104:THR:HG23	2.06	0.55
1:F:199:LEU:N	1:F:200:PRO:HD2	2.21	0.55
2:H:21:GLN:HE22	2:H:175:LEU:HB3	1.66	0.55
2:H:137:ASN:HA	2:H:140:LEU:HG	1.86	0.55
2:I:254:GLU:OE1	2:I:312:ARG:NH1	2.38	0.55
6:P:26:GLN:O	6:P:28:GLU:N	2.38	0.55
1:A:198:THR:OG1	1:A:200:PRO:HG2	2.06	0.55
2:D:323:THR:HG21	6:O:8:GLN:OE1	2.06	0.55
3:E:292:ASP:HB3	3:E:315:LEU:CD1	2.35	0.55
2:G:260:ASN:ND2	2:G:263:ARG:H	2.04	0.55
3:J:46:ARG:HH12	3:J:69:GLN:HG3	1.72	0.55
1:A:59:THR:HG23	1:A:63:ALA:CB	2.35	0.55
2:C:307:ALA:C	2:C:309:ILE:H	2.14	0.55
2:D:223:GLN:HG2	2:D:240:MET:SD	2.47	0.55
1:F:213:THR:H	1:F:216:HIS:CD2	2.25	0.55
3:J:81:PRO:HB3	3:J:87:THR:O	2.06	0.55
3:J:82:GLU:OE1	3:J:82:GLU:HA	2.06	0.55
1:F:296:THR:O	1:F:300:GLN:HG3	2.07	0.55
6:O:9:LEU:HD12	6:O:16:GLN:NE2	2.22	0.55
1:A:199:LEU:N	1:A:200:PRO:HD2	2.22	0.55
2:D:15:PHE:CE2	2:D:57:LEU:HB3	2.42	0.55
3:J:99:LYS:HD3	3:J:105:ARG:NH2	2.21	0.55
3:J:121:THR:CG2	3:J:122:ASP:N	2.68	0.55
3:J:213:ARG:HG2	3:J:213:ARG:NH1	2.21	0.55
2:B:309:ILE:HG22	2:B:313:MET:HG2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:128:VAL:C	2:D:130:MET:H	2.13	0.55
2:D:15:PHE:HE2	2:D:57:LEU:HB3	1.71	0.55
2:I:254:GLU:OE2	2:I:312:ARG:HD2	2.05	0.55
2:B:347:MET:CE	2:C:291:ARG:HH21	2.20	0.55
2:C:309:ILE:HG22	2:C:313:MET:HG2	1.88	0.55
1:F:64:ILE:HD12	1:F:96:GLN:HG2	1.89	0.55
2:H:359:PHE:CZ	2:I:323:THR:HG23	2.41	0.55
2:I:309:ILE:O	2:I:310:GLU:C	2.50	0.55
3:J:229:TRP:O	3:J:316:LEU:HD13	2.06	0.55
2:G:293:ALA:O	2:G:296:GLN:HB2	2.06	0.55
2:H:112:GLN:NE2	2:H:113:TYR:CE1	2.75	0.55
2:D:341:TYR:N	2:D:341:TYR:CD1	2.73	0.55
2:H:111:VAL:HG13	2:H:150:VAL:HG21	1.89	0.55
2:H:338:GLU:OE2	2:H:355:ARG:NH2	2.40	0.55
3:J:48:LEU:HD13	3:J:140:TRP:CD1	2.42	0.55
3:J:176:LEU:HD11	3:J:201:ALA:HB1	1.88	0.55
2:D:93:ILE:HD11	2:D:107:LEU:HD21	1.89	0.54
2:H:297:LEU:CD2	6:P:25:LEU:HD12	2.38	0.54
2:B:344:ASP:HB3	2:B:347:MET:H	1.72	0.54
1:F:97:LEU:HD13	1:F:126:TRP:CH2	2.42	0.54
2:I:306:MET:O	2:I:307:ALA:C	2.50	0.54
2:C:24:VAL:HG21	2:C:175:LEU:HD22	1.88	0.54
2:C:64:CYS:SG	2:C:66:THR:HG23	2.47	0.54
2:D:32:LEU:HD23	2:D:37:ILE:HD13	1.89	0.54
2:D:254:GLU:OE1	2:D:312:ARG:NH1	2.41	0.54
3:E:48:LEU:HD13	3:E:140:TRP:CD1	2.42	0.54
2:H:30:ASN:O	2:H:34:LEU:HB2	2.08	0.54
2:I:68:ILE:HD11	2:I:120:PHE:HE2	1.72	0.54
2:D:362:ARG:HG2	6:O:4:ARG:CZ	2.38	0.54
1:A:213:THR:H	1:A:216:HIS:CD2	2.25	0.54
1:A:305:LEU:HD13	1:A:327:LEU:HD21	1.90	0.54
2:C:359:PHE:CD2	6:O:9:LEU:HD21	2.43	0.54
3:E:4:TYR:HB3	3:E:6:TRP:CZ2	2.43	0.54
1:F:26:ASN:ND2	1:F:140:GLN:OE1	2.41	0.54
2:H:175:LEU:N	2:H:175:LEU:HD23	2.23	0.54
2:H:359:PHE:CE2	2:I:323:THR:HG23	2.43	0.54
6:P:9:LEU:HD12	6:P:16:GLN:NE2	2.22	0.54
2:B:343:PRO:HG3	2:C:286:LEU:CB	2.37	0.54
2:C:30:ASN:O	2:C:34:LEU:HB2	2.07	0.54
3:E:46:ARG:CD	3:E:68:MET:HG2	2.36	0.54
3:E:152:LEU:HD12	3:E:153:ALA:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:290:HIS:CE1	2:H:294:MET:HE2	2.42	0.54
2:H:344:ASP:HB3	2:H:347:MET:HB2	1.90	0.54
3:J:179:GLU:CB	3:J:202:LEU:HD11	2.38	0.54
2:B:158:ASP:OD2	2:B:161:LYS:HE2	2.07	0.54
3:E:88:LEU:HD23	3:E:120:LEU:CD2	2.36	0.54
3:E:253:MET:HG3	3:E:253:MET:O	2.08	0.54
1:F:13:LEU:HD13	1:F:38:VAL:HG22	1.89	0.54
2:I:68:ILE:HD11	2:I:120:PHE:CE2	2.43	0.54
1:A:21:TYR:CD1	1:A:135:VAL:HB	2.43	0.54
1:A:64:ILE:HD12	1:A:96:GLN:HG2	1.88	0.54
2:C:21:GLN:OE1	2:C:21:GLN:HA	2.08	0.54
2:C:44:SER:CB	2:C:159:PRO:HG3	2.37	0.54
2:D:292:ILE:HD13	2:D:316:LEU:HB3	1.90	0.54
2:D:344:ASP:HB2	2:D:347:MET:H	1.72	0.54
1:F:71:MET:HB2	1:F:105:HIS:HE1	1.72	0.54
2:G:101:VAL:HG22	2:G:135:SER:N	2.22	0.54
2:I:56:ARG:HD3	2:I:92:GLU:OE1	2.07	0.54
2:C:49:VAL:HG11	2:C:176:LYS:O	2.08	0.54
2:C:290:HIS:CE1	2:C:294:MET:CE	2.91	0.54
1:F:267:THR:HB	1:F:268:PRO:CD	2.36	0.54
2:I:10:TRP:CE2	2:I:190:ILE:HG23	2.43	0.54
2:C:223:GLN:HB3	2:D:171:LEU:HD22	1.90	0.54
3:E:10:ASP:OD2	3:E:164:LEU:HD12	2.07	0.54
2:G:130:MET:CE	2:H:134:HIS:ND1	2.71	0.54
2:H:244:LEU:HD12	2:H:244:LEU:N	2.12	0.54
2:H:353:LEU:O	2:H:356:ALA:HB3	2.08	0.54
2:I:292:ILE:HG22	2:I:325:ILE:CD1	2.38	0.54
6:O:20:ARG:NH1	6:O:21:ARG:NH2	2.56	0.54
2:B:24:VAL:HG22	2:B:173:PHE:HB3	1.89	0.53
2:C:246:ASP:HB3	2:C:309:ILE:CD1	2.36	0.53
2:D:68:ILE:HD11	2:D:120:PHE:HE2	1.72	0.53
3:E:35:MET:HE3	3:E:164:LEU:HG	1.89	0.53
3:E:259:HIS:ND1	3:J:259:HIS:ND1	2.53	0.53
3:J:182:MET:HB2	3:J:187:LEU:HD21	1.89	0.53
2:C:344:ASP:HB3	2:C:347:MET:HB2	1.90	0.53
3:E:121:THR:HG22	3:E:122:ASP:H	1.74	0.53
2:I:215:ARG:HH11	2:I:215:ARG:CG	2.21	0.53
4:M:6:DT:H2"	4:M:7:DA:C8	2.43	0.53
2:B:260:ASN:ND2	2:B:263:ARG:HB2	2.24	0.53
2:D:24:VAL:HG21	2:D:175:LEU:CD2	2.39	0.53
3:E:179:GLU:CB	3:E:202:LEU:HD11	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:292:ASP:CG	3:E:318:ARG:HH21	2.16	0.53
2:I:5:VAL:HG13	2:I:222:ASP:OD2	2.07	0.53
3:J:152:LEU:HD12	3:J:153:ALA:H	1.73	0.53
2:B:253:VAL:HG12	2:B:316:LEU:HD21	1.91	0.53
2:C:112:GLN:NE2	2:C:113:TYR:CE1	2.74	0.53
2:C:282:LEU:O	2:C:286:LEU:HD12	2.08	0.53
2:D:68:ILE:HD11	2:D:120:PHE:CE2	2.43	0.53
2:D:122:VAL:HG12	2:D:122:VAL:O	2.08	0.53
2:G:228:GLY:HA3	2:G:231:GLN:O	2.08	0.53
1:A:71:MET:HB2	1:A:105:HIS:HE1	1.74	0.53
2:D:47:ARG:HG2	2:D:47:ARG:O	2.07	0.53
2:D:292:ILE:HG22	2:D:325:ILE:CD1	2.38	0.53
1:F:188:LEU:HD13	1:F:197:LEU:HD13	1.90	0.53
2:I:215:ARG:HG2	3:J:157:SER:O	2.08	0.53
3:J:292:ASP:HB3	3:J:315:LEU:CD1	2.37	0.53
1:A:21:TYR:CE1	1:A:135:VAL:HB	2.44	0.53
2:C:297:LEU:HD23	6:O:25:LEU:HD12	1.90	0.53
2:D:90:LEU:HD13	2:D:122:VAL:HG11	1.89	0.53
3:E:270:VAL:HG23	3:E:270:VAL:O	2.08	0.53
2:G:51:LYS:CB	7:G:406:ADP:O2B	2.53	0.53
2:H:290:HIS:CE1	2:H:294:MET:CE	2.92	0.53
2:H:297:LEU:CD2	6:P:25:LEU:HA	2.38	0.53
2:H:307:ALA:C	2:H:309:ILE:H	2.15	0.53
3:E:179:GLU:HB3	3:E:202:LEU:HD11	1.90	0.53
1:F:296:THR:HG23	1:F:299:ARG:NH1	2.23	0.53
2:G:240:MET:O	2:G:243:THR:HB	2.09	0.53
2:H:49:VAL:HG11	2:H:176:LYS:O	2.09	0.53
2:H:108:LEU:O	2:H:109:ASP:C	2.51	0.53
1:A:43:ALA:HA	1:A:47:PHE:O	2.09	0.53
2:C:214:LEU:HD12	2:C:214:LEU:O	2.09	0.53
2:C:353:LEU:O	2:C:356:ALA:HB3	2.07	0.53
2:G:-5:LEU:N	2:G:-5:LEU:HD23	2.23	0.53
2:G:292:ILE:CD1	2:G:316:LEU:HD23	2.38	0.53
2:H:51:LYS:N	7:H:408:ADP:O2B	2.41	0.53
2:I:292:ILE:O	2:I:296:GLN:HG3	2.08	0.53
3:J:179:GLU:HB3	3:J:202:LEU:HD11	1.90	0.53
1:A:325:GLU:HB2	2:B:294:MET:HE1	1.91	0.53
2:C:234:THR:O	2:C:238:SER:OG	2.25	0.53
2:G:-8:LEU:O	2:G:-5:LEU:HG	2.09	0.53
2:H:178:LEU:CD1	2:H:214:LEU:HB2	2.39	0.53
2:I:327:LEU:CD2	6:P:12:LEU:HG	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:47:PHE:CZ	1:F:77:ARG:HD3	2.44	0.53
2:H:60:LYS:NZ	2:H:83:GLU:HG3	2.24	0.53
2:H:342:ALA:HB1	2:H:343:PRO:HD2	1.90	0.53
1:A:29:LEU:HD23	1:A:178:LEU:HB3	1.91	0.52
1:A:237:ARG:HG3	1:A:321:TRP:CE2	2.44	0.52
3:E:182:MET:HG3	3:E:205:PHE:CD1	2.44	0.52
3:E:213:ARG:HH21	3:E:267:ASN:HD22	1.55	0.52
1:A:223:MET:HG3	1:A:285:MET:HG3	1.91	0.52
2:B:292:ILE:HD13	2:B:316:LEU:HD23	1.90	0.52
2:B:325:ILE:O	2:B:326:GLN:C	2.51	0.52
2:C:137:ASN:HA	2:C:140:LEU:HG	1.91	0.52
2:C:202:ALA:HB1	2:C:237:VAL:HG21	1.90	0.52
2:D:29:ALA:CB	2:D:70:ALA:HB1	2.39	0.52
2:G:126:ASP:HB3	2:H:141:LYS:HD2	1.92	0.52
1:A:244:VAL:HG21	4:K:5:DT:C7	2.39	0.52
2:C:22:GLU:O	2:C:26:THR:HB	2.08	0.52
2:H:147:PRO:HD2	2:H:150:VAL:HB	1.92	0.52
2:H:367:GLU:CG	2:H:368:PRO:HD2	2.30	0.52
2:I:61:GLY:CA	2:I:72:PRO:HG3	2.38	0.52
1:A:42:ALA:O	1:A:47:PHE:HB2	2.10	0.52
1:A:192:TRP:CZ2	1:A:201:ARG:HG2	2.44	0.52
2:B:178:LEU:HD12	2:B:214:LEU:HB2	1.92	0.52
2:D:29:ALA:HB1	2:D:70:ALA:HB1	1.89	0.52
2:D:323:THR:HG22	6:O:8:GLN:CD	2.34	0.52
2:H:44:SER:CB	2:H:159:PRO:HG3	2.38	0.52
2:H:213:SER:HB3	2:H:216:ASP:HB2	1.89	0.52
2:H:290:HIS:NE2	2:H:294:MET:HE1	2.24	0.52
3:J:86:ASN:O	3:J:119:LEU:HD22	2.09	0.52
3:E:182:MET:HB2	3:E:187:LEU:HD21	1.91	0.52
1:F:24:LEU:HD11	1:F:117:LEU:HD11	1.90	0.52
2:G:354:LEU:HD21	2:H:297:LEU:HB2	1.92	0.52
3:J:4:TYR:HB3	3:J:6:TRP:CZ2	2.45	0.52
3:J:33:PRO:C	3:J:35:MET:H	2.16	0.52
6:O:26:GLN:O	6:O:28:GLU:N	2.43	0.52
2:D:309:ILE:O	2:D:310:GLU:C	2.52	0.52
1:F:314:GLN:OE1	3:J:303:VAL:CG2	2.57	0.52
2:H:309:ILE:HG22	2:H:313:MET:HG2	1.91	0.52
2:I:128:VAL:C	2:I:130:MET:H	2.16	0.52
3:J:35:MET:HG2	3:J:197:SER:HB3	1.90	0.52
1:A:280:GLN:HA	1:A:283:ARG:HG3	1.91	0.52
3:E:19:GLN:HG2	3:E:47:TYR:OH	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:261:LYS:HE2	1:F:293:LEU:O	2.09	0.52
2:G:130:MET:HE3	2:H:134:HIS:ND1	2.25	0.52
2:H:130:MET:CE	2:I:134:HIS:CD2	2.92	0.52
4:M:12:DC:H2'	4:M:13:DC:O5'	2.10	0.52
2:B:147:PRO:HB2	2:B:150:VAL:CG2	2.39	0.52
2:B:161:LYS:HE3	2:C:133:ARG:NH1	2.24	0.52
3:E:199:GLY:HA2	3:E:202:LEU:HB2	1.92	0.52
1:F:177:ASN:HD21	1:F:180:ALA:HB2	1.73	0.52
2:H:346:ARG:O	2:H:347:MET:C	2.51	0.52
2:G:223:GLN:HG2	2:G:240:MET:SD	2.50	0.52
2:H:260:ASN:C	2:H:260:ASN:OD1	2.51	0.52
2:H:359:PHE:CD2	6:P:9:LEU:HD21	2.45	0.52
3:J:31:ALA:HB2	3:J:164:LEU:HB3	1.91	0.52
1:A:47:PHE:CZ	1:A:77:ARG:HD3	2.43	0.52
1:A:181:LEU:O	1:A:184:ALA:HB3	2.10	0.52
2:D:42:LEU:HA	2:D:154:LEU:O	2.10	0.52
2:D:111:VAL:HG13	2:D:150:VAL:HG21	1.92	0.52
1:F:64:ILE:HA	1:F:67:LEU:HD12	1.92	0.52
1:F:280:GLN:HA	1:F:283:ARG:HG3	1.91	0.52
1:A:1:MET:HE1	1:A:127:PHE:CZ	2.44	0.51
2:C:197:ALA:HB3	2:C:231:GLN:HG2	1.91	0.51
1:A:319:SER:O	1:A:321:TRP:N	2.43	0.51
2:D:323:THR:CG2	6:O:8:GLN:OE1	2.59	0.51
2:G:215:ARG:O	2:G:216:ASP:C	2.53	0.51
2:H:299:PRO:C	2:H:301:ALA:H	2.18	0.51
3:J:126:ASN:HA	3:J:129:LEU:HG	1.93	0.51
2:D:59:ALA:O	2:D:60:LYS:C	2.54	0.51
2:D:362:ARG:HG2	6:O:4:ARG:NE	2.25	0.51
3:E:82:GLU:OE1	3:E:82:GLU:HA	2.10	0.51
2:H:53:SER:OG	7:H:408:ADP:O1A	2.27	0.51
2:I:74:GLY:HA2	2:I:79:CYS:CB	2.40	0.51
3:E:46:ARG:NH1	3:E:69:GLN:HG3	2.26	0.51
1:F:9:LEU:HD11	1:F:13:LEU:HD21	1.92	0.51
1:F:181:LEU:O	1:F:184:ALA:HB3	2.09	0.51
1:F:236:LEU:HD13	1:F:246:LEU:HD21	1.92	0.51
2:I:261:GLY:HA2	2:I:357:LEU:HD21	1.93	0.51
2:I:344:ASP:HB2	2:I:347:MET:H	1.75	0.51
1:A:81:LEU:HD13	1:A:111:ILE:HG22	1.92	0.51
2:B:101:VAL:HG22	2:B:135:SER:N	2.26	0.51
2:D:6:LEU:HD12	2:D:6:LEU:N	2.12	0.51
1:F:55:ILE:CG2	1:F:93:ILE:HD13	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:254:GLU:OE2	2:H:312:ARG:CD	2.59	0.51
2:H:295:VAL:HG22	2:H:302:LEU:HB2	1.92	0.51
3:J:35:MET:HE3	3:J:164:LEU:HG	1.93	0.51
2:B:240:MET:O	2:B:243:THR:HB	2.11	0.51
3:J:20:ALA:HB1	3:J:22:ARG:HG3	1.93	0.51
3:J:52:GLN:N	3:J:53:PRO:HD3	2.26	0.51
1:A:2:ILE:HG13	1:A:18:ARG:NH1	2.25	0.51
2:B:51:LYS:CB	7:B:400:ADP:O2B	2.55	0.51
2:D:362:ARG:O	2:D:363:MET:CG	2.57	0.51
1:F:292:ARG:HH12	1:F:293:LEU:HD21	1.75	0.51
2:G:57:LEU:HD23	2:G:60:LYS:HD2	1.92	0.51
2:I:24:VAL:HG21	2:I:175:LEU:CD2	2.39	0.51
3:J:112:VAL:HB	3:J:141:PHE:CD1	2.46	0.51
3:J:182:MET:HG3	3:J:205:PHE:CD1	2.46	0.51
1:A:118:SER:OG	1:A:121:GLN:HG2	2.10	0.51
2:C:254:GLU:OE2	2:C:312:ARG:CD	2.59	0.51
2:D:302:LEU:HD11	2:D:306:MET:CG	2.39	0.51
1:F:42:ALA:O	1:F:47:PHE:HB2	2.11	0.51
2:H:282:LEU:HG	2:H:349:VAL:HG22	1.92	0.51
6:O:25:LEU:O	6:O:26:GLN:C	2.53	0.51
1:A:215:PHE:HE1	4:K:3:DT:C6	2.29	0.51
2:B:341:TYR:CE1	2:C:337:LYS:HE3	2.46	0.51
2:D:268:ILE:HG23	2:D:278:TRP:CH2	2.46	0.51
3:E:33:PRO:C	3:E:35:MET:H	2.18	0.51
3:E:34:GLY:HA3	3:E:200:ALA:HB2	1.92	0.51
1:F:118:SER:OG	1:F:121:GLN:HG2	2.11	0.51
2:G:50:GLY:O	2:G:51:LYS:C	2.54	0.51
2:I:341:TYR:N	2:I:341:TYR:CD1	2.78	0.51
2:B:46:THR:HG22	2:B:47:ARG:HD3	1.92	0.51
3:E:121:THR:CG2	3:E:122:ASP:N	2.74	0.51
1:F:78:GLN:HG3	1:F:108:LEU:HD22	1.93	0.51
2:G:309:ILE:HG22	2:G:313:MET:HG2	1.92	0.51
2:H:115:PRO:CD	2:H:149:HIS:HD2	2.19	0.51
3:J:285:ARG:O	3:J:286:LEU:C	2.52	0.51
4:M:9:DA:H2''	4:M:10:DG:O5'	2.11	0.51
1:A:42:ALA:C	1:A:47:PHE:HB2	2.35	0.50
1:A:194:ASP:HB3	1:A:196:LYS:HG2	1.94	0.50
1:F:192:TRP:CZ2	1:F:201:ARG:HG2	2.46	0.50
2:G:296:GLN:C	2:G:297:LEU:HD12	2.35	0.50
2:G:321:PRO:HB2	2:G:324:ASP:HB2	1.93	0.50
2:H:340:PRO:HB2	2:H:341:TYR:CD1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:145:GLU:N	2:I:146:PRO:HD3	2.26	0.50
1:A:237:ARG:O	1:A:240:GLY:N	2.41	0.50
1:F:244:VAL:HG21	4:M:5:DT:C7	2.41	0.50
1:A:267:THR:HB	1:A:268:PRO:CD	2.40	0.50
2:C:113:TYR:N	2:C:113:TYR:CD1	2.78	0.50
3:E:35:MET:HG2	3:E:197:SER:HB3	1.91	0.50
1:F:43:ALA:HA	1:F:47:PHE:O	2.12	0.50
1:F:81:LEU:HD13	1:F:111:ILE:HG22	1.94	0.50
2:H:112:GLN:HG3	2:H:113:TYR:CD1	2.47	0.50
1:A:77:ARG:NH1	1:A:106:ASP:HB3	2.27	0.50
3:E:4:TYR:HB3	3:E:6:TRP:CH2	2.46	0.50
1:F:282:ARG:HD3	1:F:285:MET:CE	2.42	0.50
2:G:128:VAL:HG12	2:G:156:THR:HB	1.92	0.50
2:H:327:LEU:C	2:H:327:LEU:HD12	2.36	0.50
2:I:29:ALA:CB	2:I:70:ALA:HB1	2.41	0.50
2:I:100:LYS:O	2:I:104:THR:HG23	2.12	0.50
1:A:174:TYR:HB2	1:A:181:LEU:HD13	1.94	0.50
1:A:215:PHE:CE1	4:K:3:DT:C6	3.00	0.50
2:D:268:ILE:HD11	2:D:353:LEU:CD1	2.31	0.50
3:E:112:VAL:HB	3:E:141:PHE:CD1	2.46	0.50
1:F:282:ARG:HD3	1:F:285:MET:HE1	1.92	0.50
2:I:32:LEU:HD23	2:I:37:ILE:HD13	1.94	0.50
3:J:253:MET:HG3	3:J:253:MET:O	2.11	0.50
2:B:288:LEU:O	2:B:292:ILE:HG13	2.11	0.50
2:D:42:LEU:HD12	2:D:154:LEU:O	2.11	0.50
2:G:178:LEU:CD1	2:G:214:LEU:HD22	2.41	0.50
2:H:21:GLN:OE1	2:H:21:GLN:HA	2.11	0.50
2:H:197:ALA:HB3	2:H:231:GLN:HG2	1.94	0.50
2:H:334:ILE:O	2:H:338:GLU:HG3	2.11	0.50
2:I:29:ALA:HB1	2:I:70:ALA:HB1	1.93	0.50
2:C:299:PRO:C	2:C:301:ALA:H	2.18	0.50
2:D:49:VAL:CG1	2:D:49:VAL:O	2.60	0.50
3:E:20:ALA:HB1	3:E:22:ARG:HG3	1.90	0.50
3:E:176:LEU:HD11	3:E:201:ALA:HB1	1.94	0.50
2:G:46:THR:O	2:G:47:ARG:C	2.54	0.50
2:I:91:ILE:HD12	2:I:123:TYR:CE2	2.46	0.50
1:A:97:LEU:HD12	1:A:126:TRP:CZ2	2.47	0.50
1:A:236:LEU:HD13	1:A:246:LEU:HD21	1.94	0.50
2:C:342:ALA:HB1	2:C:343:PRO:HD2	1.93	0.50
3:E:297:ARG:O	3:E:298:GLU:C	2.55	0.50
1:F:41:VAL:O	1:F:45:GLN:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:42:ALA:C	1:F:47:PHE:HB2	2.37	0.50
2:G:32:LEU:HD21	2:G:62:LEU:HD23	1.94	0.50
2:G:111:VAL:HA	2:G:123:TYR:OH	2.11	0.50
3:J:88:LEU:HD23	3:J:120:LEU:CD2	2.41	0.50
2:B:128:VAL:HG12	2:B:156:THR:HB	1.93	0.50
2:B:344:ASP:HB3	2:B:347:MET:HB2	1.93	0.50
2:C:246:ASP:O	2:C:247:ASP:C	2.54	0.50
2:C:260:ASN:C	2:C:260:ASN:OD1	2.54	0.50
2:D:101:VAL:CG2	2:D:134:HIS:HB3	2.42	0.50
2:D:215:ARG:HE	7:D:404:ADP:H5'1	1.77	0.50
3:E:94:ARG:HA	3:E:97:THR:OG1	2.12	0.50
1:F:77:ARG:NH1	1:F:106:ASP:HB3	2.26	0.50
1:A:29:LEU:HD22	1:A:179:LEU:HA	1.93	0.49
1:A:215:PHE:HE1	4:K:3:DT:C7	2.25	0.49
2:B:321:PRO:HB2	2:B:324:ASP:HB2	1.94	0.49
2:D:363:MET:SD	3:J:221:ALA:HB1	2.51	0.49
3:E:148:PRO:O	3:E:151:LEU:HB2	2.11	0.49
1:F:142:PRO:HD3	1:F:178:LEU:HD11	1.93	0.49
2:G:252:LEU:CD2	2:G:267:LEU:HB2	2.42	0.49
2:I:101:VAL:CG2	2:I:134:HIS:HB3	2.42	0.49
2:I:362:ARG:HG2	6:P:4:ARG:NH2	2.27	0.49
2:B:286:LEU:HD21	2:B:333:LEU:N	2.26	0.49
2:B:296:GLN:C	2:B:297:LEU:HD12	2.37	0.49
2:C:4:GLN:OE1	2:C:4:GLN:HA	2.10	0.49
2:D:75:VAL:O	2:D:75:VAL:HG12	2.12	0.49
3:E:2:ARG:CD	3:E:4:TYR:CE1	2.83	0.49
3:E:46:ARG:HH12	3:E:69:GLN:HG3	1.76	0.49
1:F:53:PHE:CD1	1:F:67:LEU:HD21	2.47	0.49
1:F:177:ASN:ND2	1:F:180:ALA:HB2	2.27	0.49
2:I:215:ARG:CG	3:J:157:SER:O	2.59	0.49
2:I:252:LEU:HD13	2:I:285:MET:HE2	1.92	0.49
4:K:9:DA:H2''	4:K:10:DG:O5'	2.12	0.49
6:P:20:ARG:NH1	6:P:21:ARG:NH2	2.61	0.49
2:B:302:LEU:HD12	2:B:310:GLU:HG3	1.94	0.49
2:D:306:MET:O	2:D:307:ALA:C	2.55	0.49
2:G:325:ILE:O	2:G:326:GLN:C	2.55	0.49
2:I:75:VAL:O	2:I:75:VAL:HG12	2.12	0.49
2:I:152:PHE:O	2:I:153:LEU:HD23	2.13	0.49
2:B:13:GLN:O	2:B:57:LEU:HD21	2.12	0.49
2:C:47:ARG:NH1	2:C:216:ASP:OD2	2.45	0.49
2:D:74:GLY:HA2	2:D:79:CYS:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:252:LEU:HD13	2:D:285:MET:HE2	1.93	0.49
2:D:291:ARG:O	2:D:294:MET:HB2	2.12	0.49
3:E:249:ALA:HB2	3:E:293:VAL:HG11	1.94	0.49
2:H:341:TYR:CE2	2:I:337:LYS:HG3	2.47	0.49
1:A:41:VAL:O	1:A:45:GLN:HG2	2.12	0.49
2:B:215:ARG:O	2:B:216:ASP:C	2.55	0.49
2:B:268:ILE:HD13	2:B:350:GLU:HG2	1.95	0.49
2:D:190:ILE:HD12	2:D:218:LEU:HD21	1.93	0.49
3:E:213:ARG:HG2	3:E:213:ARG:HH11	1.77	0.49
2:H:223:GLN:HB3	2:I:171:LEU:HD22	1.95	0.49
2:H:229:ASP:CB	2:I:30:ASN:HD21	2.25	0.49
2:B:15:PHE:HE2	2:B:57:LEU:HB3	1.78	0.49
2:B:42:LEU:HD12	2:B:42:LEU:C	2.38	0.49
2:C:213:SER:HB3	2:C:216:ASP:HB2	1.94	0.49
2:D:69:THR:HG21	2:D:72:PRO:HA	1.94	0.49
2:D:357:LEU:HD23	3:E:260:HIS:CE1	2.47	0.49
1:F:2:ILE:HG13	1:F:18:ARG:NH1	2.27	0.49
2:G:15:PHE:CE2	2:G:57:LEU:HB3	2.47	0.49
2:G:92:GLU:HG3	2:G:124:LEU:HG	1.93	0.49
2:I:324:ASP:OD1	6:P:8:GLN:NE2	2.45	0.49
3:J:80:ALA:HB1	3:J:81:PRO:CD	2.41	0.49
5:N:4:DG:H2''	5:N:5:DC:O5'	2.13	0.49
3:E:29:ILE:O	3:E:144:ALA:HA	2.13	0.49
2:G:286:LEU:HD21	2:G:333:LEU:N	2.28	0.49
2:H:144:GLU:HG2	2:H:145:GLU:HG3	1.95	0.49
1:A:233:LEU:O	1:A:234:GLN:C	2.56	0.49
2:B:126:ASP:HB3	2:C:141:LYS:HD2	1.95	0.49
2:B:260:ASN:HD22	2:B:263:ARG:CB	2.25	0.49
2:C:5:VAL:HG12	2:C:8:ARG:H	1.78	0.49
2:C:101:VAL:CG2	4:K:12:DC:H5''	2.43	0.49
3:E:4:TYR:CB	3:E:6:TRP:CZ2	2.95	0.49
3:E:285:ARG:O	3:E:286:LEU:C	2.55	0.49
1:F:310:LEU:HD21	3:J:306:ILE:CD1	2.43	0.49
2:G:51:LYS:N	7:G:406:ADP:O2B	2.46	0.49
2:H:229:ASP:HB2	2:I:30:ASN:HD21	1.78	0.49
2:I:12:PRO:HG3	7:I:410:ADP:C2	2.47	0.49
2:I:291:ARG:O	2:I:294:MET:HB2	2.13	0.49
3:J:148:PRO:O	3:J:151:LEU:HB2	2.12	0.49
1:A:55:ILE:HD11	1:A:82:LEU:HD22	1.95	0.49
1:F:237:ARG:HG3	1:F:321:TRP:CD2	2.48	0.49
2:G:344:ASP:HB3	2:G:347:MET:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:122:VAL:HG12	2:I:122:VAL:O	2.13	0.49
2:B:101:VAL:O	2:B:102:GLU:C	2.55	0.49
1:F:73:LEU:HD11	1:F:105:HIS:CD2	2.47	0.49
2:H:254:GLU:OE2	2:H:312:ARG:HD2	2.12	0.49
4:K:6:DT:H2"	4:K:7:DA:C8	2.47	0.49
1:A:147:LEU:HD23	1:A:171:CYS:SG	2.53	0.48
2:B:50:GLY:O	2:B:51:LYS:C	2.55	0.48
2:H:90:LEU:O	2:H:90:LEU:HG	2.13	0.48
1:A:296:THR:O	1:A:300:GLN:HG3	2.13	0.48
2:B:250:LEU:HA	2:B:288:LEU:HD13	1.95	0.48
2:B:347:MET:HE1	2:C:291:ARG:HH21	1.77	0.48
2:C:137:ASN:H	2:C:137:ASN:ND2	2.10	0.48
2:C:243:THR:HG22	2:C:244:LEU:O	2.12	0.48
2:G:13:GLN:O	2:G:57:LEU:HD21	2.13	0.48
3:J:99:LYS:CD	3:J:105:ARG:NH2	2.76	0.48
3:J:224:VAL:CB	3:J:225:PRO:HD3	2.37	0.48
1:A:150:TRP:CZ3	1:A:178:LEU:HD22	2.49	0.48
2:B:354:LEU:HD21	2:C:297:LEU:HB2	1.95	0.48
2:C:112:GLN:HG3	2:C:113:TYR:CD1	2.48	0.48
1:F:233:LEU:O	1:F:234:GLN:C	2.55	0.48
2:G:214:LEU:O	2:G:217:ALA:HB3	2.14	0.48
2:H:307:ALA:O	2:H:309:ILE:N	2.46	0.48
3:J:14:LEU:HD21	3:J:162:HIS:ND1	2.27	0.48
1:A:9:LEU:HD11	1:A:13:LEU:HD21	1.95	0.48
1:A:191:LEU:HA	1:A:191:LEU:HD23	1.60	0.48
1:A:259:ASN:O	1:A:263:GLN:HG3	2.14	0.48
2:G:20:GLY:HA2	2:G:22:GLU:OE2	2.13	0.48
2:G:101:VAL:HG21	2:G:134:HIS:HB2	1.95	0.48
2:H:94:ASP:C	2:H:94:ASP:OD1	2.56	0.48
2:I:256:MET:HE2	2:I:353:LEU:CD2	2.44	0.48
1:A:196:LYS:O	1:A:201:ARG:NH1	2.46	0.48
3:E:114:VAL:CB	3:E:143:LEU:CD2	2.82	0.48
3:E:259:HIS:HD1	3:J:259:HIS:CE1	2.30	0.48
2:G:5:VAL:HG21	2:H:39:HIS:ND1	2.27	0.48
2:G:250:LEU:HA	2:G:288:LEU:HD13	1.94	0.48
2:H:140:LEU:HD22	2:H:169:ARG:NH1	2.28	0.48
2:I:302:LEU:HD11	2:I:306:MET:CG	2.37	0.48
2:I:327:LEU:HD11	6:P:8:GLN:CG	2.38	0.48
3:J:163:TYR:CE2	3:J:165:ALA:HB2	2.48	0.48
1:A:147:LEU:O	1:A:148:PRO:C	2.54	0.48
2:B:15:PHE:CE2	2:B:57:LEU:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:285:MET:O	2:B:288:LEU:HB2	2.14	0.48
2:C:147:PRO:HD2	2:C:150:VAL:HB	1.95	0.48
2:D:186:GLN:NE2	2:D:190:ILE:HD11	2.29	0.48
3:E:300:LEU:HA	3:E:300:LEU:HD23	1.66	0.48
1:F:150:TRP:CZ3	1:F:178:LEU:HD22	2.48	0.48
1:F:305:LEU:HD13	1:F:327:LEU:HD21	1.96	0.48
1:F:310:LEU:CD2	3:J:306:ILE:HD12	2.43	0.48
3:J:170:GLN:OE1	3:J:170:GLN:HA	2.13	0.48
3:J:232:LEU:O	3:J:233:LEU:C	2.57	0.48
5:L:6:DC:H2''	5:L:7:DT:O5'	2.13	0.48
1:A:53:PHE:CE2	1:A:67:LEU:HD11	2.49	0.48
2:B:46:THR:O	2:B:47:ARG:C	2.55	0.48
2:C:15:PHE:HE1	2:C:57:LEU:HB3	1.78	0.48
2:H:215:ARG:O	2:H:216:ASP:C	2.56	0.48
2:I:47:ARG:HG3	3:J:157:SER:OG	2.13	0.48
2:I:306:MET:HB3	2:I:306:MET:HE3	1.66	0.48
2:I:356:ALA:O	2:I:359:PHE:HD2	1.97	0.48
1:A:53:PHE:CD1	1:A:67:LEU:HD21	2.48	0.48
1:A:73:LEU:HD12	1:A:73:LEU:H	1.79	0.48
2:C:215:ARG:O	2:C:216:ASP:C	2.57	0.48
2:C:254:GLU:OE2	2:C:312:ARG:HD2	2.14	0.48
2:C:290:HIS:NE2	2:C:294:MET:CE	2.76	0.48
2:C:307:ALA:O	2:C:309:ILE:N	2.47	0.48
2:D:145:GLU:N	2:D:146:PRO:HD3	2.28	0.48
3:E:155:LEU:HD12	3:E:155:LEU:C	2.39	0.48
3:E:253:MET:HE2	3:E:290:LEU:HD21	1.95	0.48
2:H:137:ASN:HD22	2:H:137:ASN:H	1.61	0.48
2:H:224:ALA:CA	2:H:240:MET:HE1	2.40	0.48
2:I:15:PHE:CE2	2:I:57:LEU:HB3	2.49	0.48
2:I:311:LEU:HD12	2:I:311:LEU:HA	1.54	0.48
3:J:76:TYR:HD1	3:J:111:VAL:HG23	1.79	0.48
4:M:10:DG:H2''	4:M:11:DG:O5'	2.14	0.48
1:A:27:ASP:O	1:A:31:LEU:HG	2.14	0.48
2:B:179:ASP:CB	2:B:182:GLN:HG3	2.31	0.48
2:C:338:GLU:C	2:C:340:PRO:HD2	2.38	0.48
2:D:128:VAL:C	2:D:130:MET:N	2.71	0.48
2:D:311:LEU:HD12	2:D:311:LEU:HA	1.57	0.48
2:H:23:HIS:HE1	2:H:174:HIS:O	1.97	0.48
1:A:48:GLU:HG3	1:A:49:GLU:N	2.29	0.48
2:B:264:VAL:HG21	2:B:357:LEU:HD11	1.96	0.48
2:C:73:CYS:O	2:C:75:VAL:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:316:LEU:HD23	2:C:320:ILE:HD11	1.96	0.48
2:D:324:ASP:OD1	6:O:8:GLN:NE2	2.47	0.48
3:E:126:ASN:HA	3:E:129:LEU:HG	1.94	0.48
1:F:53:PHE:CE2	1:F:67:LEU:HD11	2.49	0.48
2:H:47:ARG:HH11	2:I:164:VAL:CG2	2.27	0.48
2:H:338:GLU:HB3	2:I:333:LEU:HD21	1.96	0.48
2:I:347:MET:O	2:I:351:MET:HG3	2.14	0.48
1:A:55:ILE:CG2	1:A:93:ILE:HD13	2.44	0.47
1:A:261:LYS:HE2	1:A:293:LEU:O	2.13	0.47
2:C:297:LEU:HD13	2:C:297:LEU:C	2.39	0.47
3:E:170:GLN:OE1	3:E:170:GLN:HA	2.14	0.47
3:E:197:SER:C	3:E:198:PRO:O	2.55	0.47
3:E:257:LYS:HB3	3:E:262:ALA:HB3	1.96	0.47
1:F:188:LEU:CD1	1:F:202:VAL:HG22	2.44	0.47
2:G:10:TRP:CE2	2:G:190:ILE:HG23	2.49	0.47
2:G:338:GLU:C	2:G:340:PRO:CD	2.87	0.47
2:H:5:VAL:HG12	2:H:8:ARG:H	1.78	0.47
3:J:90:VAL:HG13	3:J:91:ASP:N	2.29	0.47
2:B:24:VAL:HG21	2:B:175:LEU:HD22	1.94	0.47
2:B:87:PHE:O	2:B:88:VAL:C	2.57	0.47
2:B:305:ASP:OD1	2:B:306:MET:N	2.47	0.47
2:B:350:GLU:CB	2:C:294:MET:HE1	2.28	0.47
3:E:147:GLU:HG3	3:E:147:GLU:O	2.13	0.47
1:F:147:LEU:O	1:F:148:PRO:C	2.56	0.47
2:I:42:LEU:HA	2:I:154:LEU:O	2.13	0.47
3:J:29:ILE:O	3:J:144:ALA:HA	2.14	0.47
3:J:51:GLN:OE1	3:J:106:LEU:HD21	2.15	0.47
1:A:2:ILE:HG13	1:A:18:ARG:HH12	1.79	0.47
1:A:177:ASN:HD21	1:A:180:ALA:HB2	1.79	0.47
2:C:268:ILE:HD11	2:C:353:LEU:CD1	2.40	0.47
2:D:32:LEU:HD23	2:D:37:ILE:HD11	1.97	0.47
2:D:91:ILE:HD12	2:D:123:TYR:CE2	2.49	0.47
3:E:222:TYR:O	3:E:225:PRO:HD2	2.14	0.47
3:E:229:TRP:O	3:E:316:LEU:HD13	2.14	0.47
1:F:147:LEU:HD23	1:F:171:CYS:SG	2.54	0.47
2:G:305:ASP:OD1	2:G:306:MET:N	2.47	0.47
2:H:128:VAL:HG13	2:H:162:LEU:HD21	1.95	0.47
2:I:49:VAL:CG1	2:I:49:VAL:O	2.62	0.47
4:M:4:DT:H2'	4:M:4:DT:O5'	2.14	0.47
2:C:147:PRO:HB2	2:C:149:HIS:ND1	2.29	0.47
3:E:224:VAL:HG12	3:E:225:PRO:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:4:GLN:OE1	2:H:4:GLN:HA	2.13	0.47
2:H:128:VAL:O	2:H:128:VAL:HG22	2.14	0.47
1:A:142:PRO:HD3	1:A:178:LEU:HD11	1.97	0.47
2:B:178:LEU:CD1	2:B:214:LEU:HD22	2.44	0.47
2:B:293:ALA:O	2:B:296:GLN:HB2	2.15	0.47
3:E:99:LYS:CD	3:E:105:ARG:NH2	2.77	0.47
2:I:306:MET:O	2:I:308:ALA:N	2.47	0.47
5:N:1:DC:H1'	5:N:2:DT:H71	1.97	0.47
3:E:285:ARG:HH11	3:E:285:ARG:HG2	1.78	0.47
2:G:329:TYR:O	2:G:330:GLN:C	2.57	0.47
2:H:144:GLU:HB2	2:H:169:ARG:NE	2.28	0.47
2:I:154:LEU:HA	2:I:154:LEU:HD23	1.59	0.47
3:J:4:TYR:HB3	3:J:6:TRP:CH2	2.49	0.47
3:J:297:ARG:O	3:J:301:MET:HG3	2.15	0.47
3:J:297:ARG:O	3:J:298:GLU:C	2.55	0.47
3:J:324:GLN:OE1	3:J:325:PRO:HD3	2.15	0.47
1:A:98:LEU:CD2	1:A:126:TRP:HB3	2.42	0.47
1:A:310:LEU:HD23	1:A:310:LEU:HA	1.75	0.47
2:B:252:LEU:CD2	2:B:267:LEU:HB2	2.43	0.47
2:B:350:GLU:OE1	2:C:290:HIS:HE1	1.98	0.47
2:C:102:GLU:OE1	2:C:102:GLU:HA	2.15	0.47
2:C:128:VAL:HG13	2:C:162:LEU:HD21	1.96	0.47
2:C:178:LEU:CD1	2:C:214:LEU:HB2	2.45	0.47
2:C:229:ASP:OD1	2:D:34:LEU:HD21	2.15	0.47
2:C:250:LEU:O	2:C:254:GLU:HG3	2.14	0.47
2:D:196:ILE:HD12	2:D:225:ILE:HD13	1.96	0.47
2:D:306:MET:O	2:D:309:ILE:N	2.47	0.47
3:E:276:GLU:OE1	2:I:363:MET:SD	2.72	0.47
1:F:2:ILE:HG13	1:F:18:ARG:HH12	1.80	0.47
1:F:174:TYR:O	1:F:175:GLU:C	2.58	0.47
1:F:223:MET:HG3	1:F:285:MET:HG3	1.97	0.47
1:F:237:ARG:O	1:F:240:GLY:N	2.39	0.47
2:H:140:LEU:HD22	2:H:169:ARG:CZ	2.45	0.47
2:H:178:LEU:HD12	2:H:214:LEU:HB2	1.96	0.47
3:J:292:ASP:CG	3:J:318:ARG:HH21	2.23	0.47
4:K:4:DT:H2'	4:K:4:DT:O5'	2.14	0.47
1:A:78:GLN:HG3	1:A:108:LEU:HD22	1.97	0.47
2:B:42:LEU:HD12	2:B:43:PHE:H	1.79	0.47
1:F:84:LEU:HD23	1:F:88:GLY:HA2	1.95	0.47
1:F:143:GLU:O	1:F:145:ALA:N	2.48	0.47
1:F:173:CYS:SG	1:F:206:VAL:CG1	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:24:VAL:HG21	2:G:175:LEU:HD22	1.96	0.47
2:I:221:THR:O	2:I:225:ILE:HG13	2.15	0.47
2:I:291:ARG:O	2:I:294:MET:N	2.48	0.47
5:N:9:DT:H2"	5:N:10:DA:C8	2.50	0.47
1:A:26:ASN:OD1	1:A:27:ASP:N	2.48	0.47
2:C:334:ILE:O	2:C:338:GLU:HG3	2.14	0.47
2:D:250:LEU:HD13	2:D:313:MET:HE1	1.96	0.47
3:E:222:TYR:CD2	3:E:222:TYR:C	2.93	0.47
1:F:48:GLU:HG3	1:F:49:GLU:N	2.28	0.47
2:H:279:GLU:O	2:H:283:VAL:HG23	2.14	0.47
3:J:155:LEU:HD12	3:J:155:LEU:C	2.40	0.47
1:A:67:LEU:O	1:A:70:ALA:HB3	2.15	0.47
2:B:91:ILE:HD13	2:B:123:TYR:CE2	2.50	0.47
2:C:244:LEU:HD12	2:C:244:LEU:N	2.13	0.47
1:F:55:ILE:HD11	1:F:82:LEU:HD22	1.96	0.47
2:G:101:VAL:O	2:G:102:GLU:C	2.58	0.47
2:H:23:HIS:CE1	2:H:24:VAL:HG23	2.50	0.47
3:J:4:TYR:CB	3:J:6:TRP:CZ2	2.97	0.47
3:J:244:ARG:HG2	3:J:247:TRP:CZ3	2.50	0.47
2:B:94:ASP:O	2:B:96:ALA:N	2.49	0.46
2:B:248:GLN:H	2:B:248:GLN:CD	2.23	0.46
2:D:125:ILE:N	2:D:125:ILE:CD1	2.78	0.46
2:H:124:LEU:HA	2:H:153:LEU:O	2.15	0.46
2:H:147:PRO:HB2	2:H:149:HIS:ND1	2.29	0.46
2:H:368:PRO:HG2	2:I:319:THR:O	2.15	0.46
2:I:250:LEU:HD13	2:I:313:MET:HE1	1.97	0.46
3:J:19:GLN:HG2	3:J:47:TYR:OH	2.15	0.46
3:J:28:LEU:O	3:J:161:LEU:HD12	2.14	0.46
1:A:73:LEU:HD12	1:A:73:LEU:N	2.30	0.46
2:B:51:LYS:N	7:B:400:ADP:O2B	2.48	0.46
2:B:91:ILE:HG22	2:B:93:ILE:CD1	2.46	0.46
2:B:128:VAL:O	2:B:128:VAL:HG22	2.13	0.46
2:C:347:MET:HG3	2:D:290:HIS:CE1	2.50	0.46
2:D:52:THR:OG1	2:D:126:ASP:OD1	2.33	0.46
2:D:215:ARG:HH11	2:D:215:ARG:CG	2.28	0.46
2:D:261:GLY:HA2	2:D:357:LEU:HD21	1.97	0.46
3:E:197:SER:OG	3:E:200:ALA:HB3	2.16	0.46
3:E:213:ARG:HG2	3:E:213:ARG:NH1	2.30	0.46
3:E:264:GLN:O	3:E:264:GLN:HG2	2.12	0.46
1:F:73:LEU:HD11	1:F:105:HIS:NE2	2.30	0.46
1:F:194:ASP:HB3	1:F:196:LYS:HG2	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:246:ASP:HB3	2:H:309:ILE:CD1	2.43	0.46
2:I:101:VAL:N	4:M:10:DG:OP1	2.48	0.46
2:I:128:VAL:HG22	2:I:128:VAL:O	2.13	0.46
2:B:111:VAL:HA	2:B:123:TYR:OH	2.15	0.46
2:C:60:LYS:NZ	2:C:83:GLU:HG3	2.30	0.46
2:D:43:PHE:N	2:D:154:LEU:O	2.39	0.46
2:D:344:ASP:OD2	2:D:347:MET:HE3	2.14	0.46
1:F:262:ARG:NH2	3:J:320:GLU:OE1	2.48	0.46
2:I:128:VAL:C	2:I:130:MET:N	2.72	0.46
3:J:198:PRO:O	3:J:200:ALA:N	2.46	0.46
2:C:140:LEU:HD22	2:C:169:ARG:NH1	2.31	0.46
2:C:297:LEU:HA	2:C:297:LEU:HD22	1.56	0.46
2:D:18:VAL:HG11	2:D:25:LEU:HD11	1.96	0.46
2:D:152:PHE:O	2:D:153:LEU:HD23	2.15	0.46
2:D:292:ILE:O	2:D:296:GLN:HG3	2.16	0.46
1:F:67:LEU:O	1:F:70:ALA:HB3	2.15	0.46
2:G:57:LEU:HD23	2:G:57:LEU:HA	1.66	0.46
2:H:101:VAL:HG21	2:H:134:HIS:HB3	1.97	0.46
2:H:101:VAL:HG21	4:M:12:DC:H5''	1.97	0.46
1:A:26:ASN:OD1	1:A:26:ASN:C	2.59	0.46
1:A:318:GLN:O	1:A:319:SER:C	2.59	0.46
2:B:78:ASN:O	2:B:82:ILE:HG13	2.16	0.46
2:B:228:GLY:HA3	2:B:231:GLN:O	2.16	0.46
2:C:140:LEU:HD23	2:C:166:ILE:HD13	1.97	0.46
3:E:20:ALA:HB3	3:E:22:ARG:HG3	1.97	0.46
3:E:51:GLN:OE1	3:E:106:LEU:HD21	2.16	0.46
1:F:215:PHE:HE1	4:M:3:DT:H72	1.80	0.46
1:F:230:LEU:HD13	2:G:301:ALA:HA	1.98	0.46
2:G:250:LEU:HD23	2:G:312:ARG:NH2	2.30	0.46
2:H:339:LEU:HB3	2:H:340:PRO:HD3	1.98	0.46
2:I:12:PRO:HD3	7:I:410:ADP:H2'	1.97	0.46
2:C:23:HIS:HE1	2:C:174:HIS:O	1.97	0.46
2:D:353:LEU:HA	2:D:353:LEU:HD23	1.70	0.46
3:E:80:ALA:HB1	3:E:81:PRO:CD	2.46	0.46
1:F:308:THR:HG22	1:F:323:GLU:OE1	2.16	0.46
2:G:189:HIS:O	2:G:192:ASN:HB2	2.16	0.46
2:B:10:TRP:CE2	2:B:190:ILE:HG23	2.51	0.46
2:B:57:LEU:HD23	2:B:60:LYS:HD2	1.97	0.46
2:B:260:ASN:HD22	2:B:263:ARG:N	2.08	0.46
2:D:142:THR:O	2:D:146:PRO:HG3	2.15	0.46
2:D:292:ILE:HG22	2:D:325:ILE:HD13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:124:ALA:O	1:F:125:ALA:C	2.57	0.46
2:H:341:TYR:HB2	2:I:333:LEU:CD1	2.42	0.46
1:A:39:ARG:HD3	1:A:50:HIS:ND1	2.30	0.46
1:A:84:LEU:HD23	1:A:88:GLY:HA2	1.98	0.46
1:A:97:LEU:CD1	1:A:126:TRP:CH2	2.99	0.46
2:D:202:ALA:HB2	2:D:234:THR:HA	1.97	0.46
2:G:15:PHE:HE2	2:G:57:LEU:HB3	1.80	0.46
2:G:47:ARG:NH2	2:G:211:GLU:O	2.49	0.46
1:A:64:ILE:HA	1:A:67:LEU:HD12	1.97	0.46
2:C:297:LEU:HD23	6:O:25:LEU:HD13	1.96	0.46
2:D:141:LYS:HA	2:D:141:LYS:HD2	1.60	0.46
2:D:256:MET:HE2	2:D:353:LEU:CD2	2.45	0.46
3:E:76:TYR:HD1	3:E:111:VAL:HG23	1.81	0.46
2:H:47:ARG:HD3	2:H:47:ARG:H	1.81	0.46
2:H:202:ALA:HB1	2:H:237:VAL:HG21	1.98	0.46
5:N:6:DC:H2'	5:N:7:DT:H71	1.97	0.46
2:C:297:LEU:CD2	6:O:25:LEU:HD12	2.46	0.46
2:H:229:ASP:OD1	2:I:34:LEU:HD21	2.16	0.46
2:I:15:PHE:HE2	2:I:57:LEU:HB3	1.81	0.46
3:J:114:VAL:CB	3:J:143:LEU:HD23	2.25	0.46
2:B:290:HIS:CD2	2:B:294:MET:HE2	2.51	0.45
2:D:56:ARG:HD3	2:D:92:GLU:OE1	2.16	0.45
2:G:4:GLN:NE2	2:G:9:LYS:HB2	2.27	0.45
2:I:101:VAL:HG21	2:I:134:HIS:HB3	1.98	0.45
2:I:142:THR:O	2:I:146:PRO:HG3	2.15	0.45
3:J:76:TYR:CD1	3:J:111:VAL:HG23	2.51	0.45
3:J:207:GLY:C	3:J:209:ASN:N	2.70	0.45
2:B:70:ALA:O	2:B:72:PRO:HD2	2.16	0.45
2:C:53:SER:OG	7:C:402:ADP:O1A	2.34	0.45
2:C:326:GLN:HB3	6:O:17:TRP:HB2	1.97	0.45
2:D:38:HIS:CD2	2:D:39:HIS:H	2.34	0.45
2:D:41:TYR:HB2	2:D:153:LEU:CD2	2.46	0.45
2:D:347:MET:O	2:D:351:MET:HG3	2.15	0.45
3:E:90:VAL:HG13	3:E:91:ASP:N	2.31	0.45
1:F:170:LEU:HB3	1:F:181:LEU:HD11	1.98	0.45
2:G:91:ILE:HG22	2:G:93:ILE:CD1	2.45	0.45
2:G:285:MET:O	2:G:288:LEU:HB2	2.16	0.45
2:G:292:ILE:HD13	2:G:316:LEU:HD23	1.98	0.45
2:G:294:MET:HA	2:G:297:LEU:HD13	1.98	0.45
3:J:172:ALA:HB1	3:J:191:LEU:CD1	2.46	0.45
1:A:27:ASP:HA	1:A:28:PRO:HD3	1.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:296:THR:HG23	1:A:299:ARG:NH1	2.31	0.45
2:D:128:VAL:HG13	2:D:162:LEU:HD21	1.98	0.45
2:D:215:ARG:HH11	3:E:157:SER:HB2	1.81	0.45
3:E:275:ALA:O	3:E:276:GLU:C	2.58	0.45
1:F:78:GLN:HG3	1:F:108:LEU:CD2	2.46	0.45
2:I:123:TYR:HB2	2:I:152:PHE:CD2	2.51	0.45
2:I:202:ALA:HB2	2:I:234:THR:HA	1.99	0.45
2:I:252:LEU:HA	2:I:267:LEU:HD23	1.98	0.45
2:B:91:ILE:HG22	2:B:93:ILE:HD13	1.98	0.45
2:C:32:LEU:CD2	2:C:37:ILE:HD11	2.47	0.45
3:E:135:PRO:C	3:E:136:PRO:O	2.59	0.45
1:F:4:LEU:HD13	1:F:9:LEU:HA	1.98	0.45
2:G:147:PRO:HB2	2:G:150:VAL:CG2	2.47	0.45
2:H:248:GLN:NE2	2:H:270:GLU:OE2	2.49	0.45
2:I:115:PRO:HD3	2:I:149:HIS:CD2	2.52	0.45
2:B:216:ASP:OD1	2:C:168:SER:HB2	2.16	0.45
2:C:278:TRP:O	2:C:279:GLU:C	2.58	0.45
2:D:101:VAL:HG11	2:D:105:ARG:CZ	2.47	0.45
3:E:172:ALA:HB1	3:E:191:LEU:CD1	2.45	0.45
2:G:339:LEU:N	2:G:340:PRO:CD	2.80	0.45
2:G:344:ASP:HB3	2:G:347:MET:H	1.81	0.45
2:I:323:THR:CG2	6:P:8:GLN:OE1	2.64	0.45
3:J:46:ARG:HH22	3:J:69:GLN:HE21	1.64	0.45
2:C:95:ALA:O	2:C:99:THR:HG22	2.16	0.45
2:D:221:THR:O	2:D:225:ILE:HG13	2.17	0.45
1:F:177:ASN:ND2	1:F:180:ALA:CB	2.80	0.45
1:F:262:ARG:HH22	3:J:320:GLU:CD	2.25	0.45
1:F:310:LEU:CD2	3:J:306:ILE:CD1	2.95	0.45
1:F:314:GLN:HB2	3:J:303:VAL:HG22	1.97	0.45
2:H:291:ARG:HE	2:H:291:ARG:HB2	1.60	0.45
2:I:256:MET:HE2	2:I:353:LEU:HD23	1.99	0.45
3:J:165:ALA:HA	3:J:166:PRO:HD3	1.80	0.45
1:A:254:LEU:HD12	1:A:254:LEU:HA	1.76	0.45
2:B:92:GLU:HG3	2:B:124:LEU:HG	1.98	0.45
2:C:47:ARG:HD3	2:C:47:ARG:H	1.81	0.45
2:D:154:LEU:HD23	2:D:154:LEU:HA	1.66	0.45
2:D:221:THR:O	2:D:224:ALA:HB3	2.17	0.45
2:D:250:LEU:HD22	2:D:313:MET:HE3	1.98	0.45
2:D:306:MET:HB3	2:D:306:MET:HE3	1.65	0.45
3:E:292:ASP:HB3	3:E:315:LEU:HD11	1.99	0.45
2:H:137:ASN:O	2:H:140:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:101:VAL:HG11	2:I:105:ARG:CZ	2.47	0.45
1:A:251:GLN:NE2	3:E:307:ASN:HD21	2.14	0.45
1:A:326:GLY:O	1:A:327:LEU:C	2.59	0.45
2:B:101:VAL:HG21	2:B:134:HIS:HB2	1.97	0.45
2:B:311:LEU:HD12	2:B:311:LEU:HA	1.82	0.45
2:C:359:PHE:O	2:C:360:HIS:C	2.59	0.45
2:D:60:LYS:HA	2:D:82:ILE:HD12	1.99	0.45
2:D:279:GLU:O	2:D:283:VAL:HG23	2.16	0.45
1:F:6:PRO:HG2	1:F:30:LEU:HD13	1.99	0.45
1:F:73:LEU:HD12	1:F:73:LEU:N	2.32	0.45
2:G:87:PHE:O	2:G:88:VAL:C	2.60	0.45
2:H:250:LEU:O	2:H:254:GLU:HG3	2.17	0.45
2:I:32:LEU:HD23	2:I:37:ILE:HD11	1.97	0.45
2:I:38:HIS:CD2	2:I:39:HIS:H	2.34	0.45
1:A:258:VAL:HA	1:A:298:LEU:HD13	1.98	0.45
2:C:144:GLU:HG2	2:C:145:GLU:HG3	1.99	0.45
1:F:29:LEU:HD22	1:F:179:LEU:HA	1.98	0.45
2:G:158:ASP:OD2	2:G:161:LYS:HE2	2.17	0.45
2:G:215:ARG:C	2:G:217:ALA:N	2.75	0.45
2:H:278:TRP:O	2:H:279:GLU:C	2.60	0.45
2:B:306:MET:O	2:B:308:ALA:N	2.50	0.45
2:C:20:GLY:O	2:C:21:GLN:HB2	2.17	0.45
2:C:124:LEU:HA	2:C:153:LEU:O	2.17	0.45
2:D:356:ALA:O	2:D:359:PHE:HD2	1.99	0.45
1:F:29:LEU:HD23	1:F:178:LEU:HB3	1.98	0.45
1:F:292:ARG:NH1	1:F:293:LEU:HD21	2.32	0.45
2:G:253:VAL:HG12	2:G:316:LEU:HD21	1.98	0.45
2:H:44:SER:HB3	2:H:159:PRO:HG3	1.99	0.45
2:H:261:GLY:HA3	2:I:297:LEU:HD11	1.98	0.45
2:H:359:PHE:O	2:H:360:HIS:C	2.60	0.45
2:I:139:LEU:O	2:I:140:LEU:C	2.60	0.45
2:I:265:MET:HE2	3:J:257:LYS:CD	2.35	0.45
3:J:257:LYS:HB3	3:J:262:ALA:HB3	1.98	0.45
3:J:270:VAL:O	3:J:270:VAL:HG23	2.17	0.45
6:O:2:THR:O	6:O:2:THR:HG22	2.16	0.45
6:P:27:GLY:O	6:P:28:GLU:C	2.59	0.45
1:A:282:ARG:HH11	1:A:285:MET:HE1	1.82	0.44
2:B:112:GLN:OE1	2:B:112:GLN:HA	2.17	0.44
2:B:291:ARG:HE	2:B:306:MET:HE3	1.81	0.44
2:C:47:ARG:NH2	2:C:211:GLU:O	2.50	0.44
2:C:339:LEU:HD11	2:C:345:ARG:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:257:VAL:HG12	2:D:328:TYR:CE2	2.52	0.44
2:D:291:ARG:O	2:D:294:MET:N	2.50	0.44
1:F:97:LEU:HD12	1:F:126:TRP:CZ2	2.52	0.44
2:G:78:ASN:O	2:G:82:ILE:HG13	2.16	0.44
2:H:326:GLN:HB3	6:P:17:TRP:HB2	1.98	0.44
2:I:141:LYS:HA	2:I:141:LYS:HD2	1.53	0.44
3:J:121:THR:CG2	3:J:122:ASP:H	2.27	0.44
2:D:215:ARG:NE	7:D:404:ADP:H5'1	2.33	0.44
1:F:27:ASP:O	1:F:31:LEU:HG	2.18	0.44
2:H:54:ILE:O	2:H:55:ALA:C	2.59	0.44
2:I:295:VAL:CG2	2:I:302:LEU:HB2	2.48	0.44
5:N:6:DC:H2''	5:N:7:DT:O5'	2.17	0.44
1:A:170:LEU:HB3	1:A:181:LEU:HD11	1.99	0.44
2:B:247:ASP:O	2:B:249:ALA:N	2.50	0.44
2:C:37:ILE:HG22	2:C:38:HIS:O	2.17	0.44
2:C:130:MET:CE	2:D:134:HIS:CD2	3.00	0.44
2:C:339:LEU:HB3	2:C:340:PRO:HD3	2.00	0.44
3:E:135:PRO:O	3:E:136:PRO:O	2.35	0.44
2:H:140:LEU:HA	2:H:140:LEU:HD23	1.81	0.44
2:H:265:MET:HE1	2:H:350:GLU:CD	2.43	0.44
2:H:339:LEU:HD11	2:H:345:ARG:O	2.18	0.44
3:J:147:GLU:O	3:J:147:GLU:HG3	2.16	0.44
5:L:4:DG:H2''	5:L:5:DC:O5'	2.17	0.44
1:A:13:LEU:HD13	1:A:38:VAL:HG22	1.99	0.44
1:A:124:ALA:O	1:A:125:ALA:C	2.60	0.44
2:B:332:LEU:HD23	2:B:352:THR:CG2	2.47	0.44
2:C:265:MET:HE1	2:C:350:GLU:CD	2.42	0.44
2:C:309:ILE:CG2	2:C:313:MET:HG2	2.47	0.44
3:E:254:ASP:CG	3:E:265:VAL:HB	2.42	0.44
1:F:52:THR:CG2	1:F:81:LEU:HD23	2.47	0.44
2:G:70:ALA:O	2:G:72:PRO:HD2	2.18	0.44
2:G:205:LEU:HD23	2:G:205:LEU:HA	1.87	0.44
3:J:300:LEU:HD23	3:J:300:LEU:HA	1.66	0.44
2:B:267:LEU:O	2:B:268:ILE:C	2.59	0.44
2:B:309:ILE:HG22	2:B:313:MET:CG	2.47	0.44
2:C:94:ASP:OD1	2:C:94:ASP:C	2.60	0.44
2:C:101:VAL:HG23	4:K:12:DC:H5''	1.99	0.44
2:D:355:ARG:NE	3:E:332:PRO:HD2	2.32	0.44
2:H:294:MET:O	2:H:297:LEU:N	2.50	0.44
2:I:21:GLN:HE22	2:I:49:VAL:CG1	2.30	0.44
2:I:140:LEU:HD23	2:I:140:LEU:HA	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:176:LEU:HD23	3:J:176:LEU:HA	1.76	0.44
2:B:338:GLU:C	2:B:340:PRO:CD	2.91	0.44
2:C:51:LYS:N	7:C:402:ADP:O2B	2.51	0.44
2:C:224:ALA:CA	2:C:240:MET:HE1	2.43	0.44
2:D:25:LEU:HD21	2:D:54:ILE:HD13	2.00	0.44
3:E:163:TYR:CE2	3:E:165:ALA:HB2	2.53	0.44
1:F:26:ASN:OD1	1:F:27:ASP:N	2.51	0.44
1:F:162:LEU:HD23	1:F:162:LEU:HA	1.68	0.44
1:F:318:GLN:O	1:F:319:SER:C	2.60	0.44
2:G:91:ILE:HG22	2:G:93:ILE:HD13	1.99	0.44
2:H:316:LEU:HD23	2:H:320:ILE:HD11	1.99	0.44
2:I:221:THR:O	2:I:224:ALA:HB3	2.18	0.44
2:I:354:LEU:O	2:I:355:ARG:C	2.58	0.44
3:J:10:ASP:OD2	3:J:164:LEU:HD12	2.17	0.44
3:J:151:LEU:HD12	3:J:151:LEU:HA	1.77	0.44
1:A:143:GLU:O	1:A:145:ALA:N	2.50	0.44
1:A:251:GLN:O	1:A:252:ARG:C	2.58	0.44
2:B:10:TRP:NE1	2:B:190:ILE:HG23	2.32	0.44
2:C:158:ASP:HA	2:C:159:PRO:HD3	1.59	0.44
2:C:318:ARG:NH1	2:C:318:ARG:CB	2.67	0.44
3:E:81:PRO:HB3	3:E:87:THR:O	2.16	0.44
3:E:224:VAL:CB	3:E:225:PRO:HD3	2.42	0.44
1:F:73:LEU:HD12	1:F:73:LEU:H	1.82	0.44
2:I:59:ALA:O	2:I:60:LYS:C	2.60	0.44
2:I:297:LEU:HA	2:I:297:LEU:HD12	1.79	0.44
3:J:116:ASP:HA	3:J:144:ALA:O	2.17	0.44
1:A:244:VAL:HG21	4:K:5:DT:C5	2.52	0.44
2:B:11:ARG:HA	2:B:12:PRO:HD3	1.79	0.44
2:B:351:MET:HE1	2:C:326:GLN:HE22	1.82	0.44
2:C:359:PHE:CZ	2:D:323:THR:HG23	2.52	0.44
2:D:101:VAL:HG21	2:D:134:HIS:HB3	1.99	0.44
2:D:125:ILE:H	2:D:125:ILE:CD1	2.31	0.44
3:E:76:TYR:CD1	3:E:111:VAL:HG23	2.53	0.44
1:F:258:VAL:HA	1:F:298:LEU:HD13	1.98	0.44
1:F:310:LEU:HD23	3:J:306:ILE:HD12	1.99	0.44
2:G:46:THR:HG22	2:G:47:ARG:HD3	2.00	0.44
2:G:179:ASP:OD1	2:G:180:VAL:N	2.51	0.44
2:G:261:GLY:HA3	2:H:297:LEU:HD11	2.00	0.44
2:H:166:ILE:HD13	2:H:166:ILE:HA	1.83	0.44
2:H:268:ILE:HD11	2:H:353:LEU:CD1	2.45	0.44
2:I:26:THR:HG22	2:I:27:ALA:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:143:LEU:HD12	2:I:143:LEU:HA	1.82	0.44
2:I:292:ILE:HG22	2:I:325:ILE:HD13	1.99	0.44
1:A:94:ASN:OD1	1:A:126:TRP:CZ2	2.71	0.44
1:A:213:THR:HG23	1:A:216:HIS:CD2	2.53	0.44
2:C:265:MET:HG3	2:D:297:LEU:HD23	2.00	0.44
1:F:196:LYS:O	1:F:201:ARG:NH1	2.50	0.44
3:J:286:LEU:HA	3:J:286:LEU:HD23	1.81	0.44
1:A:218:VAL:HG23	1:A:219:ASP:N	2.33	0.43
2:B:253:VAL:CG1	2:B:316:LEU:HD21	2.47	0.43
2:B:331:THR:HG23	6:O:17:TRP:HH2	1.78	0.43
1:F:39:ARG:HD3	1:F:50:HIS:ND1	2.33	0.43
2:G:112:GLN:OE1	2:G:112:GLN:HA	2.18	0.43
2:I:190:ILE:HD12	2:I:218:LEU:HD21	2.00	0.43
1:A:47:PHE:CE2	1:A:77:ARG:HB3	2.52	0.43
2:B:215:ARG:C	2:B:217:ALA:N	2.72	0.43
2:C:41:TYR:HB2	2:C:153:LEU:CD2	2.48	0.43
2:C:206:LEU:HG	2:C:237:VAL:HG11	1.99	0.43
2:C:339:LEU:N	2:C:340:PRO:CD	2.78	0.43
2:D:263:ARG:O	2:D:263:ARG:HG3	2.18	0.43
2:D:341:TYR:N	2:D:341:TYR:HD1	2.16	0.43
3:E:207:GLY:C	3:E:209:ASN:N	2.69	0.43
2:G:101:VAL:CG2	2:G:134:HIS:CB	2.94	0.43
2:G:268:ILE:HD13	2:G:350:GLU:HG2	1.99	0.43
2:G:302:LEU:HD12	2:G:310:GLU:HG3	2.00	0.43
2:B:32:LEU:HD21	2:B:62:LEU:HD23	2.00	0.43
1:F:243:PRO:O	1:F:244:VAL:C	2.61	0.43
1:F:316:TYR:CE2	5:N:10:DA:C2	3.06	0.43
2:G:8:ARG:NH1	2:H:146:PRO:HD2	2.34	0.43
2:G:10:TRP:NE1	2:G:190:ILE:HG23	2.32	0.43
2:G:260:ASN:ND2	2:G:263:ARG:HB2	2.33	0.43
2:G:310:GLU:O	2:G:311:LEU:C	2.60	0.43
2:G:319:THR:O	2:G:320:ILE:HG13	2.19	0.43
2:H:246:ASP:O	2:H:247:ASP:C	2.61	0.43
2:B:339:LEU:N	2:B:340:PRO:CD	2.82	0.43
1:F:47:PHE:CE2	1:F:77:ARG:HB3	2.52	0.43
1:F:190:LEU:HD21	2:G:36:ARG:CD	2.45	0.43
2:G:41:TYR:N	2:G:41:TYR:CD1	2.86	0.43
2:G:294:MET:C	2:G:296:GLN:N	2.73	0.43
2:I:6:LEU:C	2:I:8:ARG:N	2.75	0.43
2:I:342:ALA:HA	2:I:343:PRO:HD3	1.86	0.43
2:I:353:LEU:HD23	2:I:353:LEU:HA	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:220:LEU:C	3:J:222:TYR:N	2.74	0.43
1:A:28:PRO:CB	2:B:164:VAL:HG21	2.45	0.43
1:A:223:MET:CG	1:A:285:MET:HG3	2.48	0.43
2:C:32:LEU:HD23	2:C:37:ILE:HD11	2.01	0.43
2:C:51:LYS:O	2:C:52:THR:C	2.59	0.43
2:D:123:TYR:HB2	2:D:152:PHE:CD2	2.53	0.43
2:D:329:TYR:CD2	2:D:329:TYR:C	2.96	0.43
2:D:354:LEU:O	2:D:355:ARG:C	2.61	0.43
3:E:329:LEU:HA	3:E:330:PRO:HD3	1.89	0.43
1:F:26:ASN:OD1	1:F:26:ASN:C	2.62	0.43
1:F:254:LEU:HD12	1:F:254:LEU:HA	1.69	0.43
2:G:357:LEU:O	6:P:21:ARG:HD2	2.19	0.43
2:H:57:LEU:HD23	2:H:57:LEU:HA	1.80	0.43
2:H:265:MET:HG3	2:I:297:LEU:HD23	2.01	0.43
2:I:285:MET:O	2:I:286:LEU:C	2.62	0.43
2:I:344:ASP:OD2	2:I:347:MET:HE3	2.19	0.43
3:J:246:HIS:O	3:J:250:THR:HG23	2.19	0.43
2:B:341:TYR:CZ	2:C:337:LYS:HG3	2.54	0.43
2:C:74:GLY:HA2	2:C:79:CYS:HB3	2.01	0.43
2:D:277:GLU:HG2	2:D:280:ALA:H	1.84	0.43
3:E:286:LEU:HA	3:E:286:LEU:HD23	1.76	0.43
2:G:288:LEU:HD23	2:G:288:LEU:HA	1.68	0.43
2:H:344:ASP:C	2:H:344:ASP:OD1	2.60	0.43
3:J:203:ALA:O	3:J:204:LEU:C	2.62	0.43
3:J:220:LEU:O	3:J:221:ALA:C	2.61	0.43
1:A:273:PHE:HB3	1:A:283:ARG:HD2	2.00	0.43
2:B:47:ARG:NH2	2:B:211:GLU:O	2.51	0.43
3:E:14:LEU:HD21	3:E:162:HIS:ND1	2.33	0.43
3:E:319:ILE:O	3:E:322:TYR:HB2	2.19	0.43
1:F:55:ILE:HG22	1:F:93:ILE:HD13	2.00	0.43
1:F:68:CYS:SG	1:F:100:LEU:HD23	2.59	0.43
1:F:306:THR:HG23	3:J:311:LEU:CD1	2.48	0.43
1:F:310:LEU:HD23	1:F:310:LEU:HA	1.84	0.43
2:G:63:ASN:O	2:G:64:CYS:C	2.62	0.43
2:G:223:GLN:HB2	2:H:171:LEU:HD22	2.01	0.43
2:G:302:LEU:HD23	2:G:302:LEU:HA	1.57	0.43
2:H:327:LEU:HD12	2:H:327:LEU:O	2.19	0.43
2:I:41:TYR:HB2	2:I:153:LEU:HD22	2.00	0.43
2:I:309:ILE:O	2:I:312:ARG:N	2.50	0.43
3:J:186:ALA:O	3:J:187:LEU:C	2.61	0.43
4:K:10:DG:H2''	4:K:11:DG:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:94:ASN:OD1	1:A:126:TRP:NE1	2.51	0.43
1:A:319:SER:HB2	1:A:323:GLU:OE2	2.18	0.43
2:C:34:LEU:HD23	2:C:34:LEU:HA	1.75	0.43
3:E:249:ALA:HB2	3:E:293:VAL:CG1	2.49	0.43
3:E:277:LEU:HD23	3:E:281:LEU:HD13	2.00	0.43
2:G:44:SER:HA	2:G:156:THR:O	2.19	0.43
2:G:107:LEU:O	2:G:107:LEU:HG	2.16	0.43
2:G:306:MET:O	2:G:308:ALA:N	2.52	0.43
2:H:299:PRO:HD2	2:H:300:ALA:H	1.83	0.43
3:J:253:MET:HE2	3:J:290:LEU:CD2	2.48	0.43
1:A:177:ASN:ND2	1:A:180:ALA:CB	2.82	0.43
1:A:305:LEU:HD13	1:A:327:LEU:CD2	2.48	0.43
2:B:290:HIS:HD2	2:B:294:MET:HE2	1.83	0.43
2:B:294:MET:C	2:B:296:GLN:N	2.76	0.43
2:C:124:LEU:C	2:C:124:LEU:HD12	2.44	0.43
2:D:144:GLU:HB2	2:D:169:ARG:HE	1.83	0.43
2:G:42:LEU:HD12	2:G:42:LEU:C	2.43	0.43
2:H:307:ALA:C	2:H:309:ILE:N	2.77	0.43
2:I:144:GLU:HB2	2:I:169:ARG:HE	1.84	0.43
2:I:256:MET:HE1	2:I:332:LEU:HD21	2.01	0.43
6:O:27:GLY:O	6:O:28:GLU:C	2.62	0.43
1:A:228:ARG:O	1:A:229:ALA:C	2.62	0.43
2:B:49:VAL:O	2:B:49:VAL:CG1	2.66	0.43
2:B:189:HIS:O	2:B:192:ASN:HB2	2.19	0.43
2:C:24:VAL:HG21	2:C:175:LEU:CD2	2.49	0.43
2:C:47:ARG:HH11	2:D:164:VAL:CG2	2.32	0.43
3:E:35:MET:HG2	3:E:197:SER:CB	2.49	0.43
2:G:216:ASP:OD1	2:H:168:SER:CB	2.61	0.43
2:H:297:LEU:C	2:H:297:LEU:HD13	2.43	0.43
2:I:101:VAL:O	2:I:102:GLU:C	2.59	0.43
2:I:187:LEU:HD23	2:I:187:LEU:HA	1.81	0.43
3:J:27:LEU:HD12	3:J:27:LEU:HA	1.89	0.43
3:J:228:ASP:C	3:J:228:ASP:OD1	2.62	0.43
1:A:215:PHE:HE1	4:K:3:DT:C5	2.37	0.42
2:D:101:VAL:O	2:D:102:GLU:C	2.62	0.42
3:E:285:ARG:HD3	3:E:323:LEU:HA	2.01	0.42
1:F:22:LEU:HD13	1:F:127:PHE:CE1	2.54	0.42
1:F:25:GLY:O	1:F:115:ASN:HA	2.19	0.42
1:F:174:TYR:HB2	1:F:181:LEU:HD13	2.01	0.42
2:G:152:PHE:C	2:G:153:LEU:HD23	2.43	0.42
2:H:37:ILE:HG22	2:H:38:HIS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:276:ILE:HD11	2:H:281:LEU:HD22	2.00	0.42
2:I:6:LEU:C	2:I:8:ARG:H	2.26	0.42
2:I:114:ALA:HA	2:I:149:HIS:CD2	2.54	0.42
2:I:144:GLU:HB2	2:I:169:ARG:NE	2.33	0.42
1:F:64:ILE:HD12	1:F:96:GLN:CG	2.48	0.42
2:H:10:TRP:O	2:H:11:ARG:C	2.62	0.42
2:H:244:LEU:H	2:H:244:LEU:CD1	2.11	0.42
2:I:245:ASP:OD1	2:I:245:ASP:O	2.37	0.42
3:J:100:LEU:HD23	3:J:100:LEU:HA	1.85	0.42
3:J:233:LEU:HD12	3:J:237:ASN:HB2	2.02	0.42
2:C:341:TYR:HB2	2:D:333:LEU:CD1	2.43	0.42
2:D:187:LEU:HD23	2:D:187:LEU:HA	1.84	0.42
3:E:210:TRP:O	3:E:211:GLN:C	2.62	0.42
1:F:242:GLU:HB2	1:F:245:ILE:HG13	2.02	0.42
2:H:216:ASP:OD1	2:I:168:SER:HA	2.19	0.42
2:I:252:LEU:O	2:I:253:VAL:C	2.62	0.42
3:J:4:TYR:CG	3:J:6:TRP:CZ2	3.07	0.42
1:A:22:LEU:HD13	1:A:127:PHE:CE1	2.54	0.42
2:B:215:ARG:HG2	2:C:168:SER:O	2.18	0.42
3:E:194:SER:O	3:E:196:GLY:N	2.52	0.42
3:E:289:ILE:O	3:E:290:LEU:C	2.61	0.42
1:F:71:MET:HB2	1:F:105:HIS:CE1	2.54	0.42
1:F:247:LEU:CD2	1:F:324:LEU:HD21	2.50	0.42
1:F:251:GLN:O	1:F:252:ARG:C	2.61	0.42
2:G:28:LEU:O	2:G:29:ALA:C	2.62	0.42
2:G:101:VAL:CG2	2:G:134:HIS:HB2	2.49	0.42
2:G:188:GLU:O	2:G:189:HIS:C	2.62	0.42
2:H:24:VAL:HG21	2:H:175:LEU:CD2	2.50	0.42
2:I:104:THR:O	2:I:108:LEU:HG	2.19	0.42
2:I:362:ARG:O	2:I:363:MET:CG	2.64	0.42
3:J:103:HIS:O	3:J:104:ALA:C	2.62	0.42
1:A:262:ARG:HG2	1:A:295:GLN:OE1	2.19	0.42
2:B:101:VAL:CG2	2:B:134:HIS:CB	2.95	0.42
2:D:144:GLU:HB2	2:D:169:ARG:NE	2.34	0.42
3:E:275:ALA:O	3:E:277:LEU:N	2.53	0.42
1:F:223:MET:CG	1:F:285:MET:HG3	2.50	0.42
2:G:334:ILE:HG22	2:G:335:GLY:N	2.34	0.42
2:I:196:ILE:HD12	2:I:225:ILE:HD13	2.02	0.42
3:J:99:LYS:CD	3:J:105:ARG:HH22	2.32	0.42
1:A:4:LEU:HD13	1:A:9:LEU:HA	2.02	0.42
1:A:64:ILE:HD12	1:A:96:GLN:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:198:THR:HG23	1:A:201:ARG:HD2	2.02	0.42
2:B:235:GLN:H	2:B:235:GLN:HG3	1.64	0.42
2:C:44:SER:HB3	2:C:159:PRO:HG3	2.01	0.42
2:C:120:PHE:CE1	2:C:151:LYS:HE2	2.55	0.42
2:C:178:LEU:HD12	2:C:214:LEU:HB2	2.01	0.42
3:E:8:ARG:N	3:E:9:PRO:CD	2.82	0.42
3:E:31:ALA:HB2	3:E:164:LEU:HB3	2.02	0.42
1:F:146:GLN:H	1:F:146:GLN:HG3	1.66	0.42
2:H:277:GLU:H	2:H:277:GLU:HG3	1.72	0.42
2:H:288:LEU:HA	2:H:288:LEU:HD23	1.83	0.42
2:H:299:PRO:C	2:H:301:ALA:N	2.77	0.42
2:H:310:GLU:O	2:H:311:LEU:C	2.63	0.42
2:I:41:TYR:HB2	2:I:153:LEU:CD2	2.49	0.42
3:J:199:GLY:HA2	3:J:202:LEU:CB	2.49	0.42
3:J:285:ARG:HD3	3:J:323:LEU:HA	2.02	0.42
1:A:78:GLN:HG3	1:A:108:LEU:CD2	2.49	0.42
2:D:41:TYR:HB2	2:D:153:LEU:HD22	2.02	0.42
2:D:252:LEU:O	2:D:253:VAL:C	2.61	0.42
3:E:176:LEU:C	3:E:178:ARG:N	2.76	0.42
2:G:250:LEU:CD2	2:G:312:ARG:NE	2.82	0.42
2:G:264:VAL:HG21	2:G:357:LEU:HD11	2.01	0.42
2:H:51:LYS:O	2:H:52:THR:C	2.61	0.42
2:I:342:ALA:HB1	2:I:343:PRO:HD2	2.00	0.42
3:J:47:TYR:CD2	3:J:48:LEU:HD23	2.54	0.42
3:J:100:LEU:HD11	3:J:112:VAL:HG21	2.02	0.42
3:J:315:LEU:O	3:J:315:LEU:HG	2.19	0.42
1:A:251:GLN:C	1:A:253:GLU:N	2.76	0.42
2:B:13:GLN:O	2:B:57:LEU:CD2	2.68	0.42
2:B:223:GLN:HG2	2:B:240:MET:SD	2.58	0.42
2:B:250:LEU:HD23	2:B:312:ARG:NH2	2.34	0.42
2:D:250:LEU:HD13	2:D:313:MET:CE	2.49	0.42
2:D:356:ALA:HA	2:D:359:PHE:CD2	2.54	0.42
1:F:13:LEU:CD1	1:F:38:VAL:HG22	2.48	0.42
2:G:20:GLY:O	2:G:21:GLN:HB2	2.18	0.42
2:H:74:GLY:HA2	2:H:79:CYS:HB3	2.01	0.42
2:I:111:VAL:HG12	2:I:112:GLN:N	2.30	0.42
2:I:158:ASP:OD2	2:I:161:LYS:HE3	2.19	0.42
3:J:35:MET:HG2	3:J:197:SER:CB	2.50	0.42
3:J:121:THR:H	3:J:124:ALA:HB3	1.85	0.42
3:J:232:LEU:HB3	3:J:236:LEU:HD11	2.01	0.42
6:O:21:ARG:N	6:O:22:PRO:HD3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:LEU:HG	1:A:13:LEU:HG	2.02	0.42
1:A:162:LEU:HD23	1:A:162:LEU:HA	1.75	0.42
2:B:294:MET:HA	2:B:297:LEU:HD13	2.01	0.42
2:B:302:LEU:HD23	2:B:302:LEU:HA	1.62	0.42
2:D:282:LEU:HD23	2:D:282:LEU:HA	1.84	0.42
2:D:327:LEU:HA	2:D:327:LEU:HD23	1.70	0.42
1:F:94:ASN:OD1	1:F:126:TRP:CZ2	2.72	0.42
2:G:250:LEU:HD23	2:G:312:ARG:NE	2.34	0.42
2:G:351:MET:HE1	2:H:326:GLN:HE22	1.84	0.42
2:I:250:LEU:HD22	2:I:313:MET:HE3	2.02	0.42
2:I:327:LEU:HD23	2:I:327:LEU:HA	1.75	0.42
1:A:42:ALA:O	1:A:47:PHE:CD1	2.73	0.42
1:A:146:GLN:H	1:A:146:GLN:HG3	1.70	0.42
1:A:169:VAL:CG2	1:A:199:LEU:HD11	2.50	0.42
2:C:288:LEU:HD22	2:C:313:MET:SD	2.60	0.42
2:D:140:LEU:HD23	2:D:140:LEU:HA	1.75	0.42
2:D:158:ASP:OD2	2:D:161:LYS:HE3	2.19	0.42
3:E:13:LYS:HA	3:E:13:LYS:HD2	1.96	0.42
2:H:265:MET:HE2	2:I:294:MET:HE1	2.00	0.42
5:L:6:DC:H2'	5:L:7:DT:H71	2.01	0.42
6:O:20:ARG:O	6:O:21:ARG:HG3	2.19	0.42
1:A:177:ASN:ND2	1:A:180:ALA:HB2	2.34	0.41
2:B:49:VAL:O	2:B:49:VAL:HG12	2.20	0.41
2:B:351:MET:HG3	2:C:329:TYR:CZ	2.54	0.41
2:C:9:LYS:HD3	2:C:194:GLU:OE2	2.20	0.41
2:C:154:LEU:N	2:C:154:LEU:CD1	2.83	0.41
2:C:276:ILE:HD11	2:C:281:LEU:HD22	2.01	0.41
2:C:279:GLU:O	2:C:283:VAL:HG23	2.20	0.41
2:C:316:LEU:O	2:C:320:ILE:HG13	2.20	0.41
2:C:341:TYR:CE2	2:D:337:LYS:HG3	2.55	0.41
2:D:111:VAL:O	2:D:112:GLN:C	2.62	0.41
3:E:112:VAL:HB	3:E:141:PHE:CE1	2.55	0.41
3:E:165:ALA:HA	3:E:166:PRO:HD3	1.80	0.41
1:F:94:ASN:OD1	1:F:126:TRP:NE1	2.53	0.41
2:G:14:THR:CG2	2:G:16:ALA:H	2.19	0.41
2:G:232:VAL:O	2:G:232:VAL:HG12	2.20	0.41
2:G:292:ILE:HD11	2:G:316:LEU:HD23	2.02	0.41
2:H:140:LEU:HD21	2:H:165:THR:HB	2.02	0.41
2:H:204:GLN:O	2:H:208:ARG:HG3	2.20	0.41
2:I:43:PHE:N	2:I:154:LEU:O	2.42	0.41
2:I:215:ARG:CG	2:I:215:ARG:NH1	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:244:LEU:HD11	2:I:281:LEU:HA	2.01	0.41
3:J:197:SER:C	3:J:198:PRO:O	2.61	0.41
3:J:249:ALA:HB2	3:J:293:VAL:HG11	2.01	0.41
1:A:4:LEU:HD13	1:A:9:LEU:HD12	2.03	0.41
1:A:246:LEU:O	1:A:247:LEU:C	2.63	0.41
2:C:327:LEU:C	2:C:327:LEU:HD12	2.44	0.41
2:D:248:GLN:OE1	2:D:276:ILE:HD11	2.20	0.41
3:E:100:LEU:HD23	3:E:100:LEU:HA	1.88	0.41
2:G:128:VAL:O	2:G:128:VAL:CG2	2.67	0.41
2:I:8:ARG:CZ	3:J:135:PRO:HD2	2.51	0.41
2:I:292:ILE:HD13	2:I:316:LEU:HB3	2.00	0.41
3:J:68:MET:HA	3:J:68:MET:CE	2.42	0.41
3:J:152:LEU:HD12	3:J:153:ALA:N	2.35	0.41
4:M:2:DT:H6	4:M:2:DT:H2'	1.70	0.41
1:A:73:LEU:HD11	1:A:105:HIS:CD2	2.55	0.41
1:A:81:LEU:HD12	1:A:82:LEU:N	2.35	0.41
2:B:245:ASP:HB3	2:B:247:ASP:HB2	2.02	0.41
2:B:329:TYR:O	2:B:330:GLN:C	2.61	0.41
2:C:309:ILE:HG22	2:C:313:MET:CG	2.50	0.41
3:E:68:MET:HA	3:E:68:MET:CE	2.44	0.41
3:E:152:LEU:HD12	3:E:153:ALA:N	2.35	0.41
3:E:176:LEU:HD23	3:E:176:LEU:HA	1.68	0.41
1:F:20:ALA:CB	1:F:110:LEU:HD23	2.50	0.41
2:G:5:VAL:HG12	2:G:7:ALA:H	1.86	0.41
2:G:191:LEU:HD23	2:G:191:LEU:HA	1.78	0.41
2:G:267:LEU:O	2:G:268:ILE:C	2.62	0.41
2:H:92:GLU:HG3	2:H:124:LEU:HG	2.02	0.41
2:H:206:LEU:HG	2:H:237:VAL:HG11	2.01	0.41
2:H:288:LEU:HD22	2:H:313:MET:SD	2.60	0.41
2:I:130:MET:HE3	2:I:130:MET:HB3	1.85	0.41
2:I:267:LEU:HD12	2:I:267:LEU:HA	1.83	0.41
3:J:188:LEU:HD12	3:J:188:LEU:O	2.20	0.41
3:J:285:ARG:HD3	3:J:322:TYR:O	2.20	0.41
1:A:174:TYR:O	1:A:175:GLU:C	2.63	0.41
2:B:94:ASP:C	2:B:96:ALA:H	2.27	0.41
2:C:221:THR:O	2:C:222:ASP:C	2.63	0.41
2:D:125:ILE:HG21	2:D:131:LEU:HD11	2.03	0.41
1:F:42:ALA:O	1:F:47:PHE:CD1	2.74	0.41
2:G:215:ARG:NH2	2:H:169:ARG:CZ	2.84	0.41
2:G:343:PRO:HG3	2:H:286:LEU:HB3	2.02	0.41
2:H:15:PHE:HE1	2:H:57:LEU:HB3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:355:ARG:O	2:H:356:ALA:C	2.63	0.41
2:I:5:VAL:O	2:I:6:LEU:C	2.62	0.41
2:I:166:ILE:HD13	2:I:166:ILE:HA	1.93	0.41
2:I:250:LEU:HD13	2:I:313:MET:CE	2.51	0.41
3:J:20:ALA:HB3	3:J:22:ARG:HG3	2.01	0.41
3:J:176:LEU:HD11	3:J:201:ALA:CB	2.51	0.41
1:A:63:ALA:O	1:A:67:LEU:HG	2.20	0.41
1:A:81:LEU:CD1	1:A:111:ILE:HG22	2.51	0.41
2:B:303:GLY:H	2:B:306:MET:HG3	1.85	0.41
2:D:10:TRP:NE1	2:D:190:ILE:HG23	2.34	0.41
3:E:37:ASP:CG	3:E:38:ASP:N	2.78	0.41
1:F:53:PHE:CZ	1:F:67:LEU:HD11	2.55	0.41
1:F:56:ASP:CB	1:F:58:ASN:H	2.33	0.41
1:F:68:CYS:SG	1:F:100:LEU:CD2	3.09	0.41
2:G:42:LEU:HA	2:G:154:LEU:O	2.20	0.41
2:G:291:ARG:O	2:G:295:VAL:HG23	2.21	0.41
2:H:309:ILE:CG2	2:H:313:MET:HG2	2.50	0.41
2:H:320:ILE:HG22	2:H:321:PRO:HD2	2.01	0.41
2:I:25:LEU:HD21	2:I:54:ILE:HD13	2.02	0.41
2:I:84:GLN:C	2:I:86:ARG:H	2.29	0.41
2:I:343:PRO:HB3	3:J:246:HIS:ND1	2.34	0.41
3:J:128:LEU:O	3:J:132:LEU:HB2	2.20	0.41
1:A:158:LEU:O	1:A:160:LEU:HG	2.20	0.41
2:B:57:LEU:HD23	2:B:57:LEU:HA	1.65	0.41
2:B:82:ILE:HG23	2:B:90:LEU:CD2	2.39	0.41
2:B:121:LYS:N	2:B:149:HIS:O	2.53	0.41
2:D:309:ILE:O	2:D:312:ARG:N	2.46	0.41
2:G:160:GLN:O	2:G:160:GLN:HG3	2.21	0.41
2:G:278:TRP:O	2:G:279:GLU:C	2.63	0.41
2:H:6:LEU:HD23	2:H:6:LEU:HA	1.90	0.41
2:H:47:ARG:NH2	2:H:211:GLU:O	2.54	0.41
2:H:250:LEU:HD13	2:H:288:LEU:HD13	2.03	0.41
2:H:278:TRP:HE1	2:H:346:ARG:HB2	1.82	0.41
2:I:351:MET:CG	3:J:253:MET:HE1	2.46	0.41
3:J:135:PRO:C	3:J:136:PRO:O	2.63	0.41
3:J:292:ASP:HB3	3:J:315:LEU:HD11	2.01	0.41
1:A:18:ARG:HD3	1:A:133:ARG:O	2.21	0.41
1:A:27:ASP:CG	1:A:178:LEU:HD12	2.46	0.41
1:A:253:GLU:O	1:A:254:LEU:C	2.63	0.41
2:B:101:VAL:CG2	2:B:134:HIS:HB2	2.51	0.41
2:B:282:LEU:HD21	2:B:349:VAL:HG13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:353:LEU:O	2:C:357:LEU:HG	2.20	0.41
1:F:97:LEU:CD1	1:F:126:TRP:CH2	3.03	0.41
2:G:91:ILE:HD13	2:G:123:TYR:CE2	2.55	0.41
2:H:137:ASN:H	2:H:137:ASN:ND2	2.17	0.41
3:J:216:LEU:HD12	3:J:216:LEU:HA	1.83	0.41
2:B:205:LEU:HD23	2:B:205:LEU:HA	1.85	0.41
2:B:332:LEU:HD23	2:B:352:THR:HG21	2.02	0.41
2:C:44:SER:HA	2:C:156:THR:O	2.21	0.41
2:D:104:THR:O	2:D:108:LEU:HG	2.21	0.41
2:D:111:VAL:O	2:D:113:TYR:N	2.54	0.41
2:H:124:LEU:C	2:H:124:LEU:HD12	2.45	0.41
2:I:276:ILE:HG21	2:I:281:LEU:HD13	2.03	0.41
1:A:13:LEU:HD22	1:A:21:TYR:CZ	2.55	0.41
1:A:90:ASN:O	1:A:94:ASN:HB2	2.20	0.41
1:A:243:PRO:O	1:A:244:VAL:C	2.64	0.41
2:B:20:GLY:HA2	2:B:22:GLU:OE2	2.21	0.41
2:C:32:LEU:HD23	2:C:32:LEU:HA	1.86	0.41
2:C:261:GLY:O	2:C:262:GLU:C	2.64	0.41
2:C:282:LEU:HG	2:C:349:VAL:HG22	2.02	0.41
2:C:299:PRO:C	2:C:301:ALA:N	2.77	0.41
2:C:310:GLU:O	2:C:311:LEU:C	2.64	0.41
2:D:11:ARG:O	2:D:13:GLN:HG2	2.21	0.41
2:D:188:GLU:O	2:D:189:HIS:C	2.63	0.41
2:D:203:LEU:HD23	2:D:203:LEU:HA	1.72	0.41
2:D:244:LEU:HD11	2:D:281:LEU:HA	2.03	0.41
3:E:99:LYS:CD	3:E:105:ARG:HH22	2.34	0.41
3:E:232:LEU:O	3:E:233:LEU:C	2.62	0.41
3:E:253:MET:HE2	3:E:290:LEU:CD2	2.51	0.41
3:E:275:ALA:O	3:E:278:ALA:N	2.53	0.41
1:F:47:PHE:CD2	1:F:77:ARG:HB3	2.56	0.41
1:F:228:ARG:O	1:F:229:ALA:C	2.64	0.41
2:G:162:LEU:HA	2:G:163:PRO:HD3	1.94	0.41
2:G:341:TYR:CE1	2:H:337:LYS:HE3	2.56	0.41
7:G:406:ADP:N3	7:G:406:ADP:H2'	2.36	0.41
2:H:11:ARG:HG3	2:H:53:SER:CB	2.47	0.41
2:I:111:VAL:HG13	2:I:150:VAL:HG21	2.03	0.41
2:I:128:VAL:HG13	2:I:162:LEU:HD21	2.03	0.41
2:I:188:GLU:O	2:I:189:HIS:C	2.64	0.41
2:I:214:LEU:HA	2:I:214:LEU:HD23	1.83	0.41
3:J:13:LYS:HA	3:J:13:LYS:HD2	1.87	0.41
3:J:289:ILE:O	3:J:290:LEU:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:P:21:ARG:N	6:P:22:PRO:HD3	2.36	0.41
2:C:140:LEU:HD21	2:C:165:THR:HB	2.03	0.41
2:D:107:LEU:HD22	2:D:107:LEU:HA	1.80	0.41
2:D:258:GLU:O	2:D:259:ALA:HB3	2.21	0.41
3:E:103:HIS:H	3:E:103:HIS:HD2	1.65	0.41
3:E:133:GLU:HG2	3:E:134:GLU:HG2	2.02	0.41
3:E:282:SER:HB2	3:J:279:ASN:O	2.20	0.41
1:F:54:SER:HA	1:F:83:LEU:HB2	2.02	0.41
1:F:255:LEU:HD22	3:J:313:THR:HG21	2.02	0.41
2:G:311:LEU:HD12	2:G:311:LEU:HA	1.80	0.41
2:I:52:THR:OG1	2:I:126:ASP:OD1	2.39	0.41
2:I:181:GLU:OE1	2:I:181:GLU:HA	2.21	0.41
2:I:248:GLN:OE1	2:I:276:ILE:HD11	2.21	0.41
2:I:252:LEU:HD13	2:I:285:MET:HE1	2.03	0.41
2:I:258:GLU:O	2:I:259:ALA:HB3	2.19	0.41
3:J:224:VAL:HG12	3:J:225:PRO:N	2.34	0.41
3:J:242:PRO:O	3:J:297:ARG:HD2	2.21	0.41
1:A:47:PHE:CD2	1:A:77:ARG:HB3	2.56	0.40
1:A:81:LEU:HD12	1:A:82:LEU:H	1.86	0.40
1:A:117:LEU:H	1:A:117:LEU:HG	1.65	0.40
1:A:236:LEU:HA	1:A:236:LEU:HD23	1.81	0.40
1:A:330:LEU:C	1:A:332:CYS:H	2.28	0.40
2:C:60:LYS:HA	2:C:82:ILE:CD1	2.50	0.40
2:C:241:LEU:HD23	2:C:241:LEU:HA	1.91	0.40
2:C:358:ALA:HA	2:C:365:LEU:HB2	2.02	0.40
3:E:135:PRO:O	3:E:136:PRO:C	2.64	0.40
2:H:101:VAL:O	2:H:102:GLU:C	2.64	0.40
2:H:130:MET:HE3	2:I:134:HIS:CD2	2.56	0.40
2:B:310:GLU:O	2:B:311:LEU:C	2.65	0.40
2:C:5:VAL:HG12	2:C:5:VAL:O	2.16	0.40
2:D:246:ASP:O	2:D:247:ASP:C	2.63	0.40
3:E:242:PRO:O	3:E:297:ARG:HD2	2.21	0.40
1:F:191:LEU:HA	1:F:191:LEU:HD23	1.67	0.40
1:F:194:ASP:C	1:F:196:LYS:H	2.29	0.40
2:G:262:GLU:O	2:G:263:ARG:C	2.63	0.40
2:H:9:LYS:HD3	2:H:194:GLU:OE2	2.21	0.40
2:H:358:ALA:HA	2:H:365:LEU:HB2	2.02	0.40
2:I:46:THR:O	2:I:47:ARG:C	2.64	0.40
3:J:46:ARG:HH12	3:J:69:GLN:CG	2.32	0.40
3:J:126:ASN:O	3:J:127:ALA:C	2.63	0.40
1:A:55:ILE:HG22	1:A:93:ILE:HD13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:204:GLN:O	2:B:176:LYS:HE3	2.22	0.40
1:A:324:LEU:O	1:A:325:GLU:C	2.64	0.40
2:B:28:LEU:O	2:B:29:ALA:C	2.64	0.40
2:C:277:GLU:O	2:C:280:ALA:HB3	2.22	0.40
2:D:12:PRO:HG3	7:D:404:ADP:C2	2.57	0.40
2:D:115:PRO:HD3	2:D:149:HIS:CD2	2.57	0.40
1:F:90:ASN:O	1:F:94:ASN:HB2	2.21	0.40
1:F:262:ARG:NH2	3:J:320:GLU:CD	2.79	0.40
2:H:47:ARG:NH1	2:H:216:ASP:OD2	2.54	0.40
1:A:6:PRO:HG2	1:A:30:LEU:HD22	2.03	0.40
1:A:9:LEU:O	1:A:13:LEU:HG	2.21	0.40
2:C:282:LEU:HD23	2:C:282:LEU:HA	1.85	0.40
2:C:307:ALA:C	2:C:309:ILE:N	2.78	0.40
2:D:130:MET:HE3	2:D:130:MET:HB3	1.86	0.40
3:E:116:ASP:HA	3:E:144:ALA:O	2.21	0.40
3:E:198:PRO:O	3:E:200:ALA:N	2.52	0.40
3:E:258:ARG:C	3:E:260:HIS:N	2.78	0.40
1:F:326:GLY:O	1:F:327:LEU:C	2.65	0.40
2:G:139:LEU:O	2:G:140:LEU:C	2.65	0.40
2:G:332:LEU:O	2:G:333:LEU:C	2.63	0.40
2:I:42:LEU:HD12	2:I:154:LEU:O	2.21	0.40
2:I:279:GLU:O	2:I:283:VAL:HG23	2.22	0.40
2:I:323:THR:HG22	6:P:8:GLN:CD	2.46	0.40
1:A:22:LEU:HD23	1:A:112:VAL:HB	2.04	0.40
2:C:140:LEU:HD22	2:C:169:ARG:CZ	2.52	0.40
2:C:162:LEU:HA	2:C:163:PRO:HD3	1.99	0.40
2:C:188:GLU:O	2:C:189:HIS:C	2.64	0.40
2:D:119:ARG:HG2	2:D:120:PHE:CD2	2.57	0.40
2:D:289:LEU:HD23	2:D:289:LEU:HA	1.79	0.40
3:E:76:TYR:CD1	3:E:111:VAL:CG2	3.02	0.40
3:E:176:LEU:C	3:E:178:ARG:H	2.28	0.40
3:E:186:ALA:O	3:E:187:LEU:C	2.64	0.40
1:F:63:ALA:O	1:F:67:LEU:HG	2.21	0.40
1:F:242:GLU:HA	1:F:243:PRO:HD3	1.97	0.40
1:F:300:GLN:O	1:F:301:ALA:C	2.63	0.40
1:F:305:LEU:HD12	1:F:305:LEU:HA	1.74	0.40
2:G:199:GLU:CD	2:G:234:THR:H	2.30	0.40
2:G:303:GLY:H	2:G:306:MET:HG3	1.87	0.40
2:I:226:ALA:C	2:I:228:GLY:H	2.30	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:178:ARG:NH2	2:H:195:HIS:O[4_545]	2.03	0.17
2:D:88:VAL:CG2	2:G:88:VAL:CG2[2_555]	2.05	0.15
2:B:117:ARG:NH2	2:I:117:ARG:NE[2_555]	2.12	0.08

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	331/343 (96%)	293 (88%)	29 (9%)	9 (3%)	4	27
1	F	332/343 (97%)	295 (89%)	30 (9%)	7 (2%)	5	31
2	B	357/395 (90%)	314 (88%)	37 (10%)	6 (2%)	7	35
2	C	363/395 (92%)	317 (87%)	42 (12%)	4 (1%)	11	43
2	D	360/395 (91%)	310 (86%)	40 (11%)	10 (3%)	4	26
2	G	371/395 (94%)	334 (90%)	30 (8%)	7 (2%)	6	33
2	H	363/395 (92%)	315 (87%)	43 (12%)	5 (1%)	9	38
2	I	360/395 (91%)	315 (88%)	38 (11%)	7 (2%)	6	33
3	E	332/334 (99%)	299 (90%)	28 (8%)	5 (2%)	8	37
3	J	332/334 (99%)	299 (90%)	29 (9%)	4 (1%)	10	41
6	O	25/27 (93%)	20 (80%)	1 (4%)	4 (16%)	0	2
6	P	25/27 (93%)	20 (80%)	2 (8%)	3 (12%)	0	4
All	All	3551/3778 (94%)	3131 (88%)	349 (10%)	71 (2%)	6	32

All (71) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	60	ASP
1	A	159	ASN
1	A	320	VAL
2	B	247	ASP
2	B	248	GLN

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Mol	Chain	Res	Type
2	B	305	ASP
2	B	306	MET
2	B	307	ALA
2	D	116	ALA
1	F	60	ASP
1	F	159	ASN
1	F	320	VAL
2	G	247	ASP
2	G	248	GLN
2	G	305	ASP
2	G	306	MET
2	G	307	ALA
2	I	116	ALA
6	O	26	GLN
6	O	27	GLY
6	P	26	GLN
6	P	27	GLY
1	A	144	GLN
2	C	195	HIS
2	D	338	GLU
3	E	71	GLY
2	H	195	HIS
6	O	20	ARG
6	P	20	ARG
1	A	125	ALA
2	B	47	ARG
2	C	308	ALA
2	D	307	ALA
2	D	310	GLU
2	D	337	LYS
3	E	82	GLU
1	F	125	ALA
1	F	131	ALA
2	G	47	ARG
2	H	308	ALA
2	I	132	SER
2	I	307	ALA
2	I	310	GLU
3	J	71	GLY
1	A	131	ALA
2	C	356	ALA
2	C	364	PRO

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Mol	Chain	Res	Type
2	D	51	LYS
2	D	132	SER
3	E	136	PRO
1	F	144	GLN
2	I	188	GLU
2	I	337	LYS
2	I	338	GLU
3	J	82	GLU
3	J	136	PRO
1	A	115	ASN
1	A	233	LEU
1	A	327	LEU
2	D	188	GLU
1	F	233	LEU
2	H	110	ASN
2	H	356	ALA
6	O	19	LEU
2	D	323	THR
2	H	364	PRO
3	J	268	VAL
3	E	268	VAL
2	G	343	PRO
2	D	322	PRO
3	E	9	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	283/291 (97%)	269 (95%)	14 (5%)	22	48
1	F	284/291 (98%)	268 (94%)	16 (6%)	19	46
2	B	296/329 (90%)	275 (93%)	21 (7%)	13	38
2	C	302/329 (92%)	271 (90%)	31 (10%)	7	28
2	D	299/329 (91%)	280 (94%)	19 (6%)	16	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	G	308/329 (94%)	286 (93%)	22 (7%)	13	38
2	H	302/329 (92%)	271 (90%)	31 (10%)	7	28
2	I	299/329 (91%)	276 (92%)	23 (8%)	12	37
3	E	270/270 (100%)	242 (90%)	28 (10%)	7	27
3	J	270/270 (100%)	245 (91%)	25 (9%)	8	31
6	O	23/23 (100%)	21 (91%)	2 (9%)	9	33
6	P	23/23 (100%)	21 (91%)	2 (9%)	9	33
All	All	2959/3142 (94%)	2725 (92%)	234 (8%)	11	36

All (234) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	64	ILE
1	A	73	LEU
1	A	78	GLN
1	A	108	LEU
1	A	117	LEU
1	A	157	GLN
1	A	162	LEU
1	A	173	CYS
1	A	190	LEU
1	A	202	VAL
1	A	207	ASN
1	A	213	THR
1	A	233	LEU
1	A	319	SER
2	B	6	LEU
2	B	33	SER
2	B	46	THR
2	B	47	ARG
2	B	54	ILE
2	B	90	LEU
2	B	93	ILE
2	B	135	SER
2	B	157	THR
2	B	160	GLN
2	B	164	VAL
2	B	180	VAL
2	B	214	LEU
2	B	233	SER

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Mol	Chain	Res	Type
2	B	251	SER
2	B	276	ILE
2	B	302	LEU
2	B	324	ASP
2	B	325	ILE
2	B	351	MET
2	B	355	ARG
2	C	8	ARG
2	C	26	THR
2	C	46	THR
2	C	47	ARG
2	C	53	SER
2	C	54	ILE
2	C	75	VAL
2	C	88	VAL
2	C	91	ILE
2	C	97	SER
2	C	124	LEU
2	C	137	ASN
2	C	154	LEU
2	C	165	THR
2	C	172	GLN
2	C	175	LEU
2	C	183	ILE
2	C	196	ILE
2	C	214	LEU
2	C	238	SER
2	C	240	MET
2	C	244	LEU
2	C	248	GLN
2	C	252	LEU
2	C	277	GLU
2	C	291	ARG
2	C	297	LEU
2	C	311	LEU
2	C	320	ILE
2	C	334	ILE
2	C	365	LEU
2	D	6	LEU
2	D	26	THR
2	D	37	ILE
2	D	47	ARG

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Mol	Chain	Res	Type
2	D	54	ILE
2	D	93	ILE
2	D	104	THR
2	D	107	LEU
2	D	117	ARG
2	D	125	ILE
2	D	157	THR
2	D	165	THR
2	D	180	VAL
2	D	196	ILE
2	D	215	ARG
2	D	252	LEU
2	D	305	ASP
2	D	306	MET
2	D	330	GLN
3	E	41	ILE
3	E	50	CYS
3	E	68	MET
3	E	93	VAL
3	E	103	HIS
3	E	134	GLU
3	E	145	THR
3	E	146	ARG
3	E	151	LEU
3	E	154	THR
3	E	155	LEU
3	E	157	SER
3	E	160	ARG
3	E	180	VAL
3	E	181	THR
3	E	202	LEU
3	E	208	ASP
3	E	214	GLU
3	E	218	GLN
3	E	231	SER
3	E	253	MET
3	E	264	GLN
3	E	266	THR
3	E	277	LEU
3	E	285	ARG
3	E	293	VAL
3	E	304	THR

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Mol	Chain	Res	Type
3	E	311	LEU
1	F	64	ILE
1	F	73	LEU
1	F	78	GLN
1	F	108	LEU
1	F	117	LEU
1	F	157	GLN
1	F	162	LEU
1	F	173	CYS
1	F	190	LEU
1	F	202	VAL
1	F	207	ASN
1	F	213	THR
1	F	308	THR
1	F	314	GLN
1	F	319	SER
1	F	334	LYS
2	G	-7	GLU
2	G	-5	LEU
2	G	6	LEU
2	G	33	SER
2	G	46	THR
2	G	47	ARG
2	G	54	ILE
2	G	90	LEU
2	G	93	ILE
2	G	135	SER
2	G	157	THR
2	G	160	GLN
2	G	164	VAL
2	G	180	VAL
2	G	214	LEU
2	G	251	SER
2	G	276	ILE
2	G	302	LEU
2	G	324	ASP
2	G	325	ILE
2	G	351	MET
2	G	355	ARG
2	H	8	ARG
2	H	26	THR
2	H	46	THR

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Mol	Chain	Res	Type
2	H	47	ARG
2	H	53	SER
2	H	54	ILE
2	H	75	VAL
2	H	88	VAL
2	H	91	ILE
2	H	97	SER
2	H	124	LEU
2	H	165	THR
2	H	172	GLN
2	H	175	LEU
2	H	183	ILE
2	H	196	ILE
2	H	214	LEU
2	H	238	SER
2	H	240	MET
2	H	244	LEU
2	H	248	GLN
2	H	252	LEU
2	H	277	GLU
2	H	291	ARG
2	H	297	LEU
2	H	309	ILE
2	H	311	LEU
2	H	318	ARG
2	H	320	ILE
2	H	334	ILE
2	H	365	LEU
2	I	6	LEU
2	I	26	THR
2	I	37	ILE
2	I	47	ARG
2	I	54	ILE
2	I	93	ILE
2	I	104	THR
2	I	107	LEU
2	I	117	ARG
2	I	125	ILE
2	I	157	THR
2	I	165	THR
2	I	175	LEU
2	I	180	VAL

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Mol	Chain	Res	Type
2	I	196	ILE
2	I	215	ARG
2	I	225	ILE
2	I	252	LEU
2	I	281	LEU
2	I	305	ASP
2	I	319	THR
2	I	330	GLN
2	I	357	LEU
3	J	41	ILE
3	J	50	CYS
3	J	68	MET
3	J	93	VAL
3	J	145	THR
3	J	146	ARG
3	J	151	LEU
3	J	154	THR
3	J	155	LEU
3	J	157	SER
3	J	160	ARG
3	J	180	VAL
3	J	181	THR
3	J	202	LEU
3	J	208	ASP
3	J	214	GLU
3	J	218	GLN
3	J	231	SER
3	J	253	MET
3	J	264	GLN
3	J	266	THR
3	J	277	LEU
3	J	285	ARG
3	J	293	VAL
3	J	304	THR
6	O	2	THR
6	O	14	ILE
6	P	2	THR
6	P	14	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (71) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	HIS
1	A	177	ASN
1	A	207	ASN
1	A	216	HIS
1	A	234	GLN
1	A	235	GLN
1	A	266	HIS
1	A	333	HIS
2	B	39	HIS
2	B	84	GLN
2	B	185	HIS
2	B	260	ASN
2	B	290	HIS
2	B	304	ASN
2	C	23	HIS
2	C	112	GLN
2	C	137	ASN
2	C	149	HIS
2	C	185	HIS
2	C	290	HIS
2	D	38	HIS
2	D	78	ASN
2	D	84	GLN
2	D	134	HIS
2	D	172	GLN
2	D	174	HIS
2	D	204	GLN
2	D	330	GLN
3	E	30	GLN
3	E	52	GLN
3	E	54	GLN
3	E	103	HIS
3	E	267	ASN
3	E	307	ASN
1	F	51	HIS
1	F	105	HIS
1	F	177	ASN
1	F	207	ASN
1	F	216	HIS
1	F	234	GLN
1	F	235	GLN
1	F	333	HIS
2	G	4	GLN

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Mol	Chain	Res	Type
2	G	39	HIS
2	G	84	GLN
2	G	185	HIS
2	G	260	ASN
2	G	290	HIS
2	G	330	GLN
2	H	23	HIS
2	H	112	GLN
2	H	137	ASN
2	H	149	HIS
2	H	185	HIS
2	H	290	HIS
2	H	326	GLN
2	I	30	ASN
2	I	38	HIS
2	I	78	ASN
2	I	112	GLN
2	I	134	HIS
2	I	172	GLN
2	I	204	GLN
2	I	330	GLN
3	J	30	GLN
3	J	52	GLN
3	J	54	GLN
3	J	56	HIS
3	J	103	HIS
3	J	267	ASN
3	J	307	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 26 ligands modelled in this entry, 14 are monoatomic - leaving 12 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
8	BEF	C	403	7	0,3,3	-	-	-		
8	BEF	B	401	7	0,3,3	-	-	-		
8	BEF	H	409	7	0,3,3	-	-	-		
7	ADP	H	408	9,8	28,29,29	1.57	6 (21%)	43,45,45	1.73	9 (20%)
8	BEF	D	405	7	0,3,3	-	-	-		
7	ADP	B	400	9,8	28,29,29	1.47	5 (17%)	43,45,45	1.86	12 (27%)
7	ADP	I	410	9,8	28,29,29	1.56	5 (17%)	43,45,45	1.77	10 (23%)
8	BEF	I	411	7	0,3,3	-	-	-		
7	ADP	C	402	9,8	28,29,29	1.49	5 (17%)	43,45,45	1.85	9 (20%)
7	ADP	G	406	9,8	28,29,29	1.53	5 (17%)	43,45,45	1.81	11 (25%)
7	ADP	D	404	9,8	28,29,29	1.47	5 (17%)	43,45,45	1.90	12 (27%)
8	BEF	G	407	7	0,3,3	-	-	-		

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
7	ADP	H	408	9,8	-	0/16/32/32	0/3/3/3
7	ADP	B	400	9,8	-	4/16/32/32	0/3/3/3
7	ADP	I	410	9,8	-	0/16/32/32	0/3/3/3
7	ADP	C	402	9,8	-	3/16/32/32	0/3/3/3
7	ADP	G	406	9,8	-	4/16/32/32	0/3/3/3
7	ADP	D	404	9,8	-	3/16/32/32	0/3/3/3

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	C	402	ADP	C5-C4	4.79	1.47	1.39
7	G	406	ADP	C5-C4	4.77	1.47	1.39
7	H	408	ADP	C5-C4	4.69	1.47	1.39
7	D	404	ADP	C5-C4	4.63	1.47	1.39
7	B	400	ADP	C5-C4	4.41	1.47	1.39
7	I	410	ADP	C5-C4	3.72	1.45	1.39
7	I	410	ADP	C4-N9	-3.72	1.29	1.37
7	I	410	ADP	C5-N7	-3.55	1.32	1.39
7	C	402	ADP	C5-C6	2.94	1.49	1.41
7	H	408	ADP	C5-N7	-2.73	1.34	1.39
7	B	400	ADP	C5-N7	-2.57	1.34	1.39
7	G	406	ADP	C5-N7	-2.56	1.34	1.39
7	G	406	ADP	C4-N9	-2.54	1.32	1.37
7	H	408	ADP	C4-N9	-2.46	1.32	1.37
7	D	404	ADP	C5-N7	-2.46	1.34	1.39
7	C	402	ADP	C8-N7	2.45	1.36	1.31
7	H	408	ADP	PA-O3A	2.45	1.62	1.59
7	I	410	ADP	C8-N9	-2.34	1.33	1.37
7	B	400	ADP	PA-O3A	2.31	1.62	1.59
7	D	404	ADP	C5-C6	2.31	1.47	1.41
7	D	404	ADP	C8-N7	2.30	1.36	1.31
7	G	406	ADP	C8-N7	2.28	1.36	1.31
7	H	408	ADP	PB-O3B	2.24	1.63	1.54
7	B	400	ADP	C8-N7	2.23	1.36	1.31
7	D	404	ADP	C4-N9	-2.23	1.33	1.37
7	H	408	ADP	C8-N7	2.20	1.35	1.31
7	G	406	ADP	C5-C6	2.13	1.46	1.41
7	C	402	ADP	C4-N9	-2.13	1.33	1.37
7	B	400	ADP	C5-C6	2.12	1.46	1.41
7	I	410	ADP	PB-O1B	2.01	1.56	1.50
7	C	402	ADP	C5-N7	-2.01	1.35	1.39

All (63) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	D	404	ADP	C5-C4-N3	-6.03	118.41	126.72
7	C	402	ADP	C5-C4-N3	-5.89	118.60	126.72
7	B	400	ADP	C5-C4-N3	-5.74	118.81	126.72
7	I	410	ADP	C5-C4-N3	-5.23	119.52	126.72
7	D	404	ADP	N3-C4-N9	4.87	135.45	127.17
7	G	406	ADP	C5-C4-N3	-4.84	120.05	126.72
7	H	408	ADP	C5-C4-N3	-4.78	120.13	126.72
7	B	400	ADP	N3-C4-N9	4.73	135.22	127.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	C	402	ADP	N3-C4-N9	4.60	134.99	127.17
7	G	406	ADP	N3-C4-N9	4.30	134.48	127.17
7	H	408	ADP	N3-C4-N9	4.26	134.42	127.17
7	I	410	ADP	N3-C4-N9	4.23	134.36	127.17
7	C	402	ADP	C2-N3-C4	3.70	120.86	111.83
7	G	406	ADP	C4-N9-C8	3.58	109.50	105.74
7	B	400	ADP	C2-N3-C4	3.45	120.25	111.83
7	D	404	ADP	C2-N3-C4	3.39	120.12	111.83
7	C	402	ADP	C4-C5-N7	-3.38	106.72	110.58
7	I	410	ADP	O2B-PB-O1B	3.17	123.18	110.83
7	H	408	ADP	N3-C2-N1	-3.17	123.79	128.58
7	D	404	ADP	O2B-PB-O1B	3.12	122.97	110.83
7	H	408	ADP	C2-N3-C4	3.11	119.42	111.83
7	G	406	ADP	N3-C2-N1	-3.09	123.90	128.58
7	B	400	ADP	N3-C2-N1	-3.00	124.05	128.58
7	C	402	ADP	N3-C2-N1	-3.00	124.05	128.58
7	D	404	ADP	C4-C5-N7	-2.99	107.16	110.58
7	G	406	ADP	C2-N3-C4	2.95	119.04	111.83
7	I	410	ADP	C2-N3-C4	2.95	119.03	111.83
7	C	402	ADP	O2B-PB-O1B	2.92	122.19	110.83
7	H	408	ADP	O2B-PB-O1B	2.91	122.18	110.83
7	G	406	ADP	C4-C5-N7	-2.91	107.25	110.58
7	B	400	ADP	O2B-PB-O1B	2.88	122.06	110.83
7	B	400	ADP	C4-C5-N7	-2.82	107.36	110.58
7	I	410	ADP	C3'-C2'-C1'	2.76	106.68	101.46
7	G	406	ADP	O2B-PB-O1B	2.71	121.38	110.83
7	C	402	ADP	C4-N9-C8	2.63	108.50	105.74
7	D	404	ADP	C4-N9-C8	2.58	108.45	105.74
7	G	406	ADP	C2-N1-C6	2.57	122.96	118.73
7	H	408	ADP	C2'-C1'-N9	-2.54	106.99	113.30
7	B	400	ADP	C4-N9-C8	2.53	108.40	105.74
7	I	410	ADP	C4-N9-C8	2.52	108.38	105.74
7	D	404	ADP	N3-C2-N1	-2.51	124.78	128.58
7	H	408	ADP	C4-N9-C8	2.43	108.29	105.74
7	I	410	ADP	C4-C5-N7	-2.40	107.83	110.58
7	D	404	ADP	O3B-PB-O3A	-2.33	96.83	104.64
7	D	404	ADP	C3'-C2'-C1'	2.32	105.86	101.46
7	I	410	ADP	O3A-PA-O1A	-2.31	103.76	110.70
7	B	400	ADP	C2'-C1'-N9	-2.25	107.71	113.30
7	I	410	ADP	N3-C2-N1	-2.24	125.19	128.58
7	H	408	ADP	O3A-PA-O1A	-2.20	104.09	110.70
7	G	406	ADP	C5-N7-C8	2.16	106.85	103.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	400	ADP	O3B-PB-O2B	-2.16	99.70	107.80
7	B	400	ADP	O2'-C2'-C1'	-2.16	102.67	110.10
7	H	408	ADP	C2-N1-C6	2.15	122.26	118.73
7	B	400	ADP	C5-N7-C8	2.12	106.78	103.45
7	C	402	ADP	C5-N7-C8	2.12	106.78	103.45
7	G	406	ADP	N9-C8-N7	-2.12	110.93	113.94
7	D	404	ADP	C2'-C3'-C4'	2.07	106.60	102.61
7	G	406	ADP	O3A-PA-O1A	-2.05	104.53	110.70
7	I	410	ADP	C4'-O4'-C1'	2.04	113.97	109.47
7	B	400	ADP	C3'-C2'-C1'	2.03	105.31	101.46
7	D	404	ADP	O3A-PA-O1A	-2.03	104.61	110.70
7	C	402	ADP	C6-C5-N7	2.02	135.99	132.09
7	D	404	ADP	C5-N7-C8	2.02	106.63	103.45

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	B	400	ADP	C5'-O5'-PA-O1A
7	B	400	ADP	C5'-O5'-PA-O2A
7	B	400	ADP	C5'-O5'-PA-O3A
7	C	402	ADP	C5'-O5'-PA-O2A
7	D	404	ADP	C5'-O5'-PA-O2A
7	G	406	ADP	C5'-O5'-PA-O1A
7	G	406	ADP	C5'-O5'-PA-O2A
7	G	406	ADP	C5'-O5'-PA-O3A
7	G	406	ADP	O4'-C4'-C5'-O5'
7	C	402	ADP	C5'-O5'-PA-O1A
7	C	402	ADP	C5'-O5'-PA-O3A
7	D	404	ADP	C5'-O5'-PA-O3A
7	D	404	ADP	O4'-C4'-C5'-O5'
7	B	400	ADP	O4'-C4'-C5'-O5'

There are no ring outliers.

6 monomers are involved in 26 short contacts:

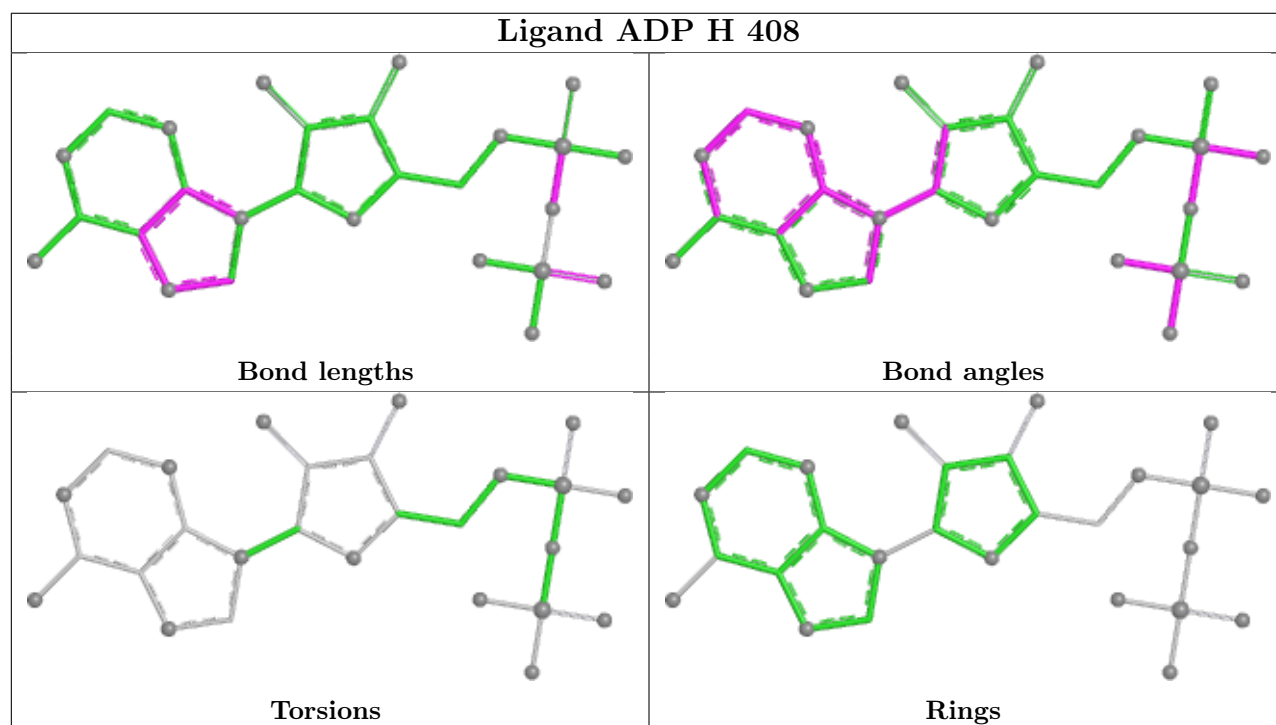
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	H	408	ADP	4	0
7	B	400	ADP	4	0
7	I	410	ADP	4	0
7	C	402	ADP	4	0

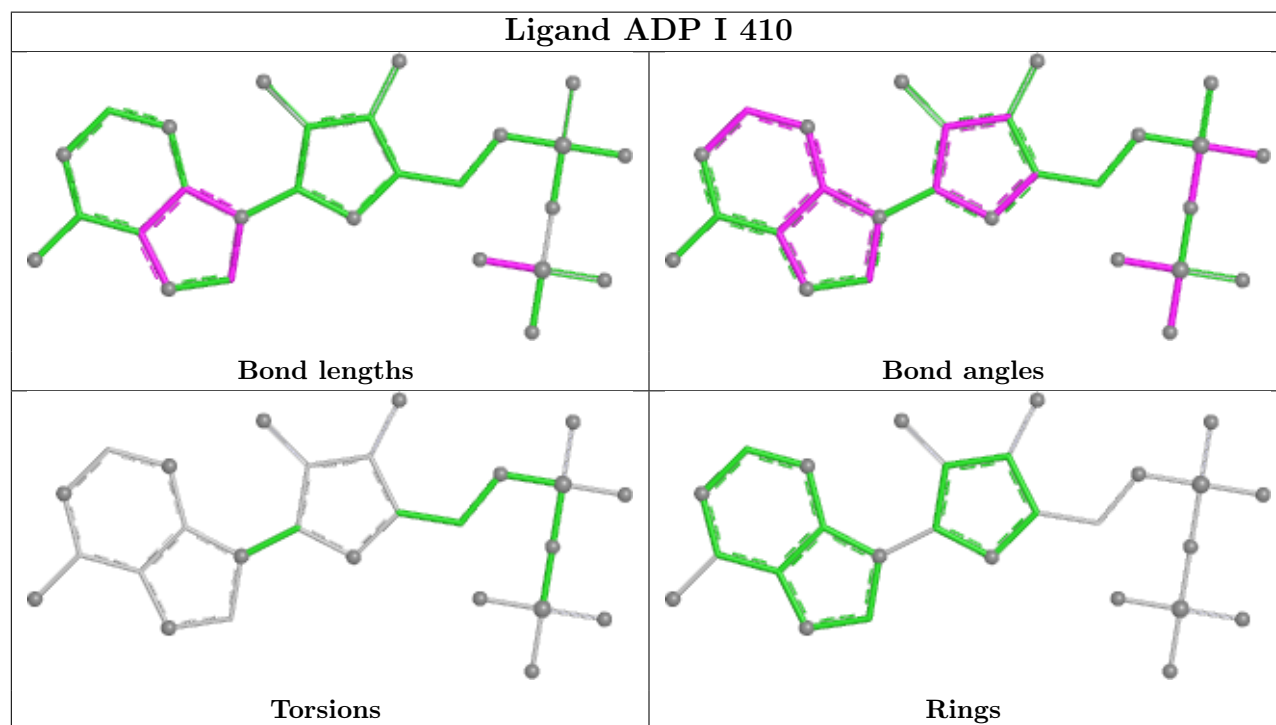
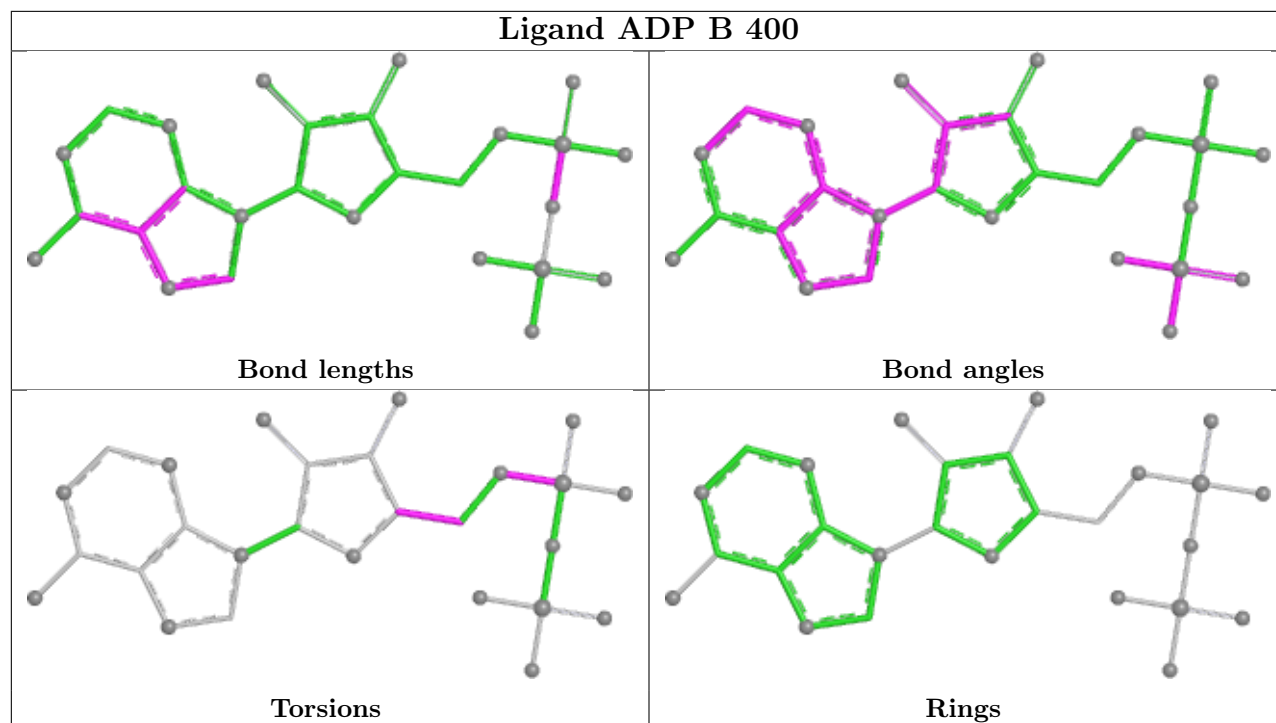
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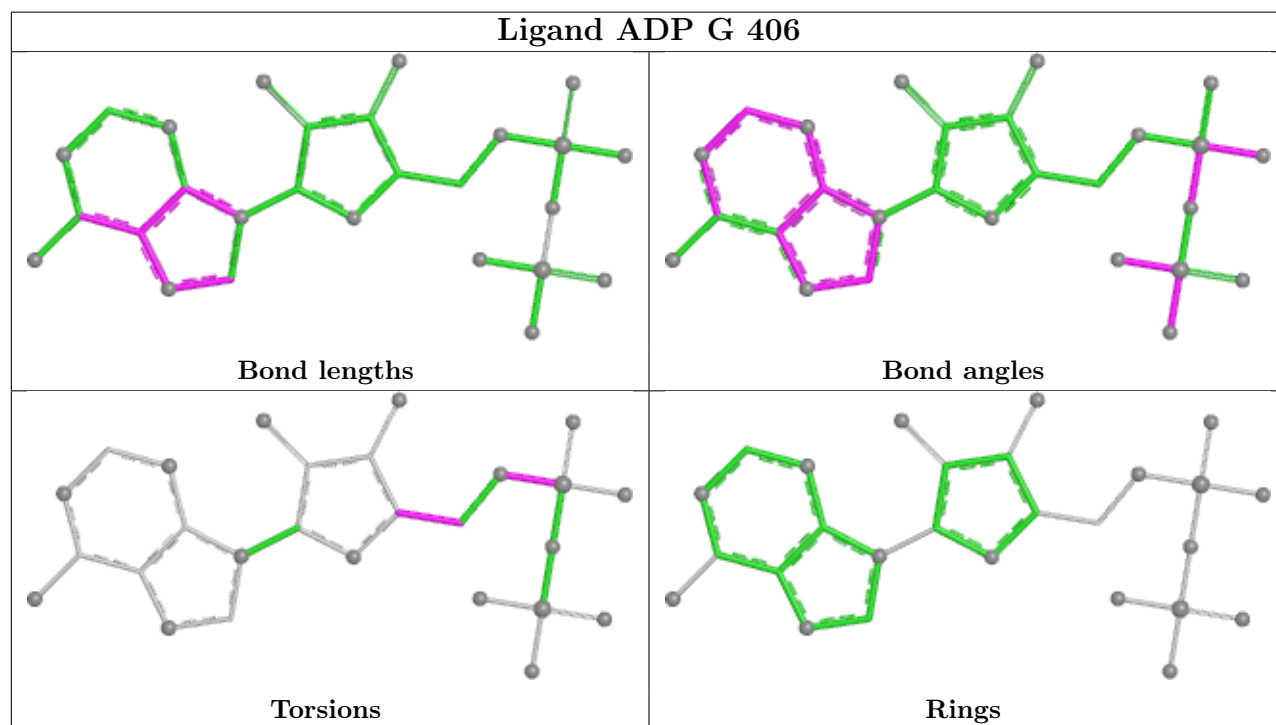
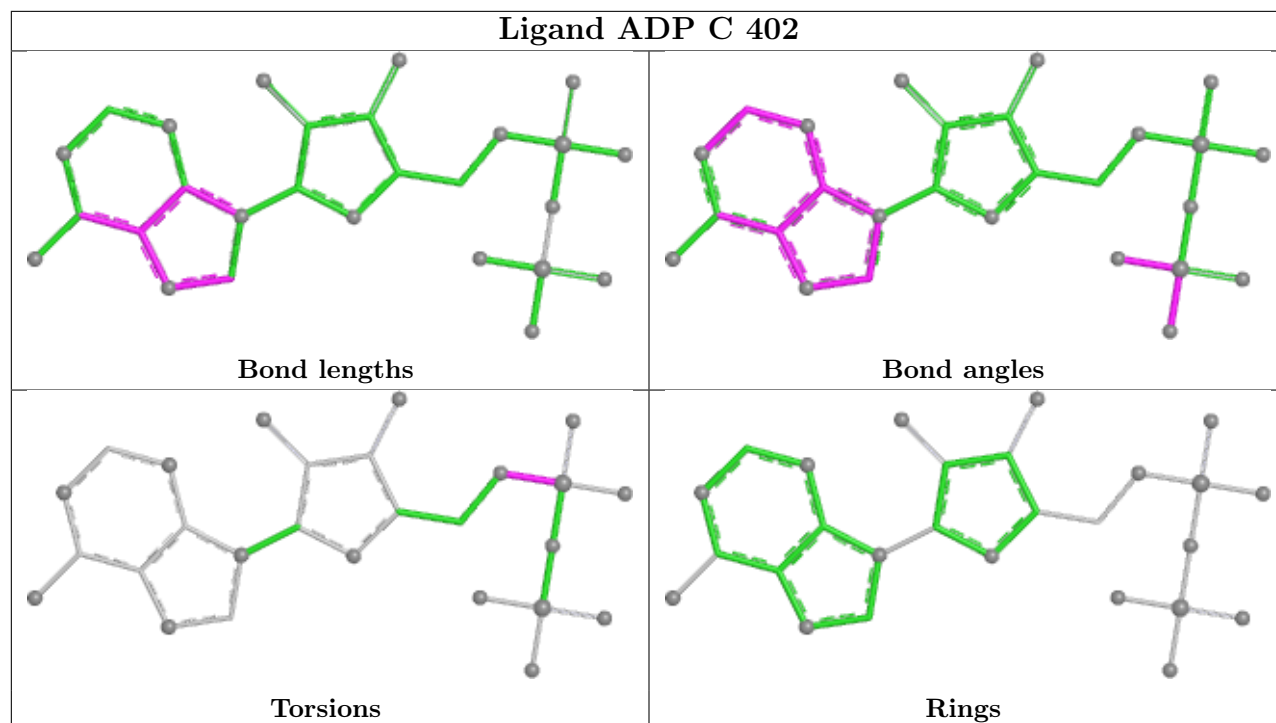
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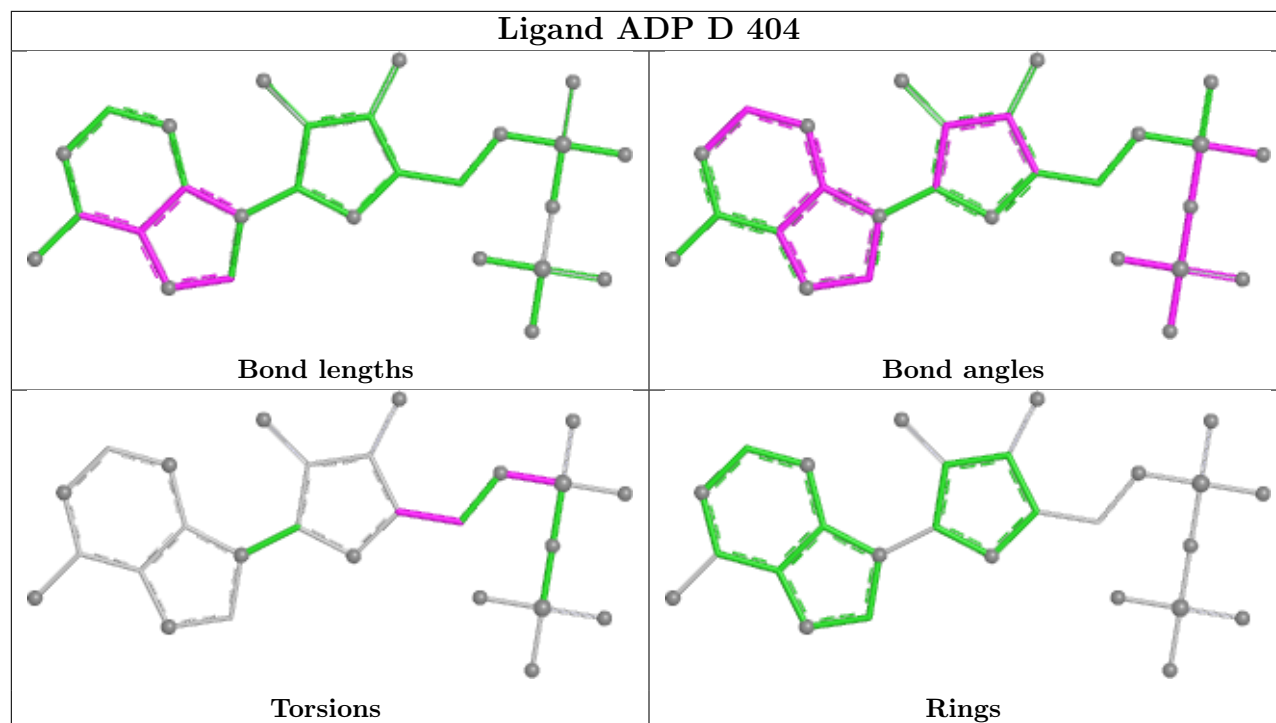
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	G	406	ADP	5	0
7	D	404	ADP	5	0

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.









5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	333/343 (97%)	0.09	2 (0%) 85 65	75, 139, 217, 248	0
1	F	334/343 (97%)	0.08	6 (1%) 67 42	78, 147, 225, 251	0
2	B	359/395 (90%)	-0.21	1 (0%) 90 76	81, 116, 159, 175	0
2	C	365/395 (92%)	-0.20	1 (0%) 90 76	76, 116, 166, 198	0
2	D	362/395 (91%)	-0.19	1 (0%) 90 76	77, 111, 154, 195	0
2	G	373/395 (94%)	-0.14	1 (0%) 90 76	71, 113, 164, 236	0
2	H	365/395 (92%)	-0.33	0 100 100	68, 88, 131, 164	0
2	I	362/395 (91%)	-0.29	1 (0%) 90 76	64, 86, 131, 171	0
3	E	334/334 (100%)	-0.25	2 (0%) 85 65	71, 92, 164, 216	0
3	J	334/334 (100%)	-0.22	3 (0%) 81 58	71, 92, 160, 222	0
4	K	14/15 (93%)	-0.02	0 100 100	89, 99, 195, 204	0
4	M	14/15 (93%)	-0.03	0 100 100	90, 95, 197, 219	0
5	L	10/10 (100%)	-0.19	0 100 100	96, 104, 110, 110	0
5	N	10/10 (100%)	-0.20	0 100 100	88, 97, 117, 119	0
6	O	27/27 (100%)	0.06	0 100 100	83, 125, 187, 193	0
6	P	27/27 (100%)	-0.08	0 100 100	69, 105, 163, 168	0
All	All	3623/3828 (94%)	-0.17	18 (0%) 87 68	64, 107, 188, 251	0

All (18) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	88	VAL	3.0
2	B	326	GLN	3.0
1	F	67	LEU	2.8
1	F	55	ILE	2.8
1	F	135	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
2	I	75	VAL	2.8
2	C	212	GLY	2.7
1	A	55	ILE	2.6
1	F	41	VAL	2.6
3	J	334	LEU	2.6
3	E	259	HIS	2.5
3	E	334	LEU	2.4
1	F	96	GLN	2.3
2	D	361	PRO	2.2
3	J	55	GLY	2.2
1	A	65	PHE	2.2
1	F	75	ALA	2.2
3	J	56	HIS	2.2

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
9	MG	B	412	1/1	0.81	0.19	86,86,86,86	0
8	BEF	D	405	4/4	0.84	0.13	81,82,82,83	0
8	BEF	C	403	4/4	0.84	0.16	85,86,86,87	0
9	MG	C	413	1/1	0.84	0.17	83,83,83,83	0
8	BEF	H	409	4/4	0.86	0.11	74,74,74,75	0
9	MG	G	415	1/1	0.87	0.19	92,92,92,92	0
8	BEF	G	407	4/4	0.90	0.11	94,94,94,95	0
8	BEF	B	401	4/4	0.90	0.15	96,96,96,97	0
8	BEF	I	411	4/4	0.90	0.12	81,81,82,83	0
9	MG	D	414	1/1	0.91	0.20	83,83,83,83	0

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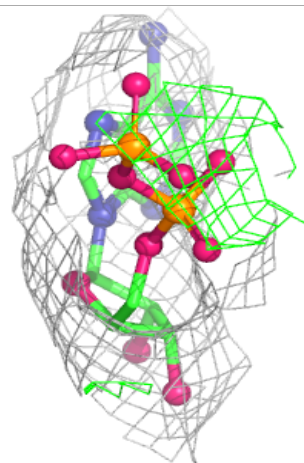
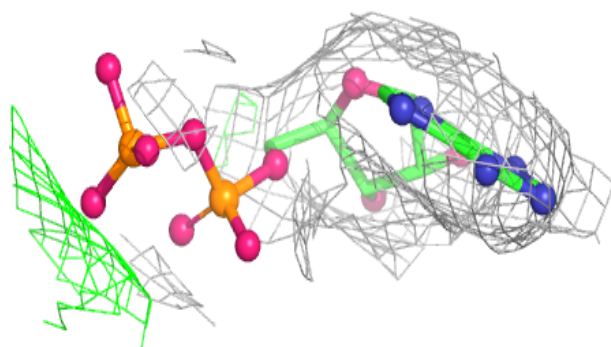
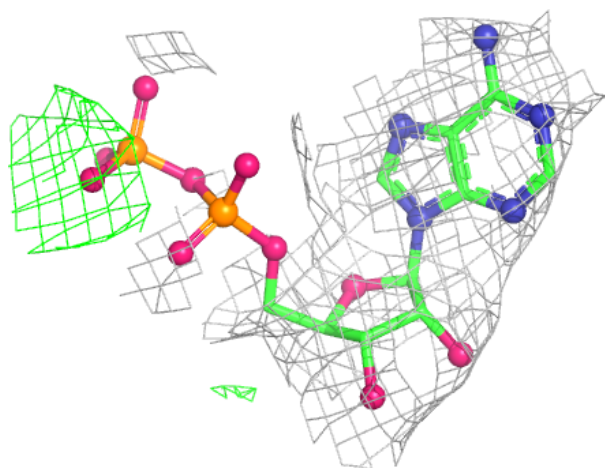
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
9	MG	H	416	1/1	0.91	0.20	66,66,66,66	0
9	MG	I	417	1/1	0.91	0.20	67,67,67,67	0
10	ZN	J	425	1/1	0.93	0.11	253,253,253,253	0
10	ZN	E	421	1/1	0.95	0.10	267,267,267,267	0
7	ADP	D	404	27/27	0.96	0.07	84,93,99,101	0
7	ADP	G	406	27/27	0.97	0.07	93,100,105,107	0
7	ADP	I	410	27/27	0.97	0.07	67,74,77,79	0
7	ADP	C	402	27/27	0.97	0.06	87,94,101,102	0
7	ADP	B	400	27/27	0.97	0.07	92,101,107,110	0
7	ADP	H	408	27/27	0.98	0.05	70,73,78,78	0
10	ZN	I	424	1/1	0.99	0.03	107,107,107,107	0
10	ZN	D	420	1/1	0.99	0.03	144,144,144,144	0
10	ZN	G	422	1/1	1.00	0.04	178,178,178,178	0
10	ZN	H	423	1/1	1.00	0.02	153,153,153,153	0
10	ZN	B	418	1/1	1.00	0.02	162,162,162,162	0
10	ZN	C	419	1/1	1.00	0.02	146,146,146,146	0

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

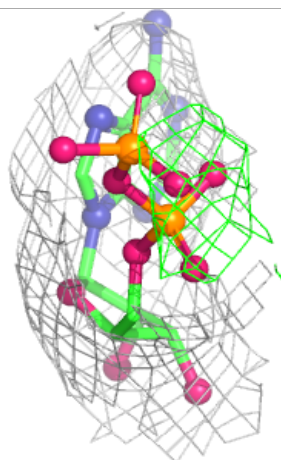
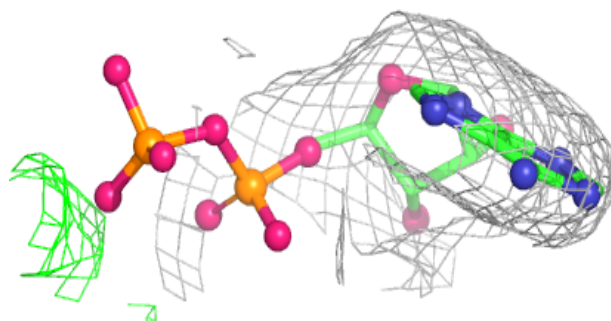
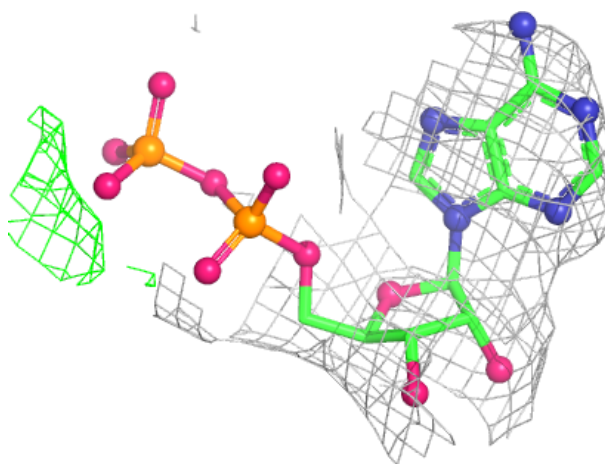
Electron density around ADP D 404:

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



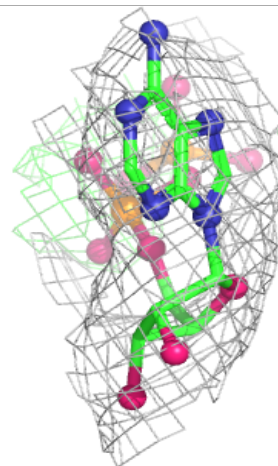
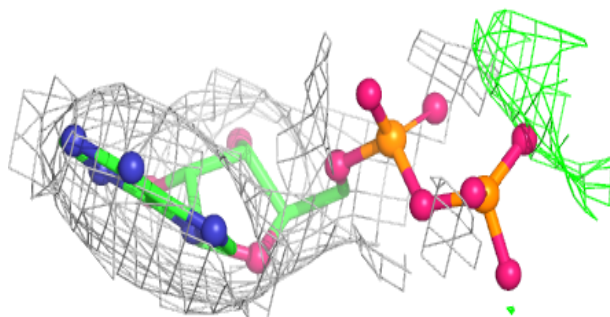
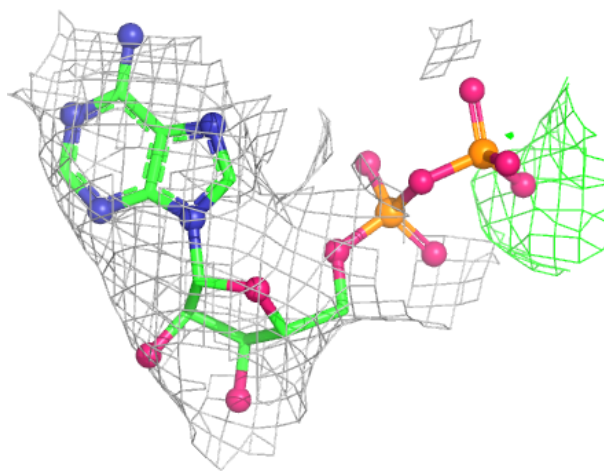
Electron density around ADP G 406:

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



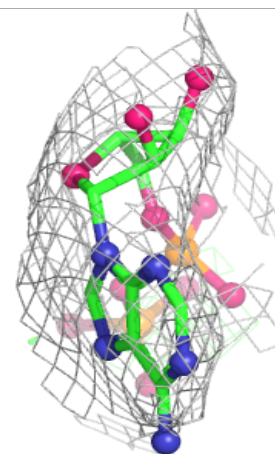
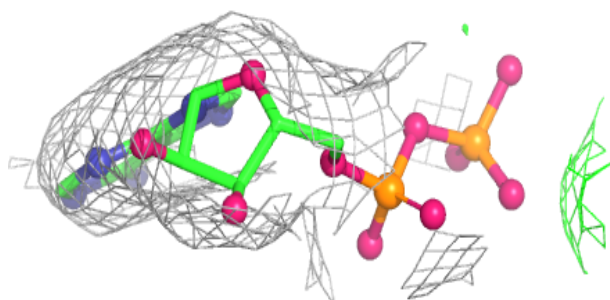
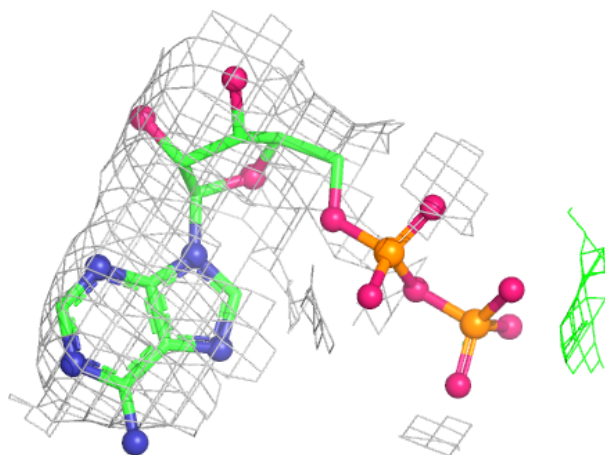
Electron density around ADP I 410:

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



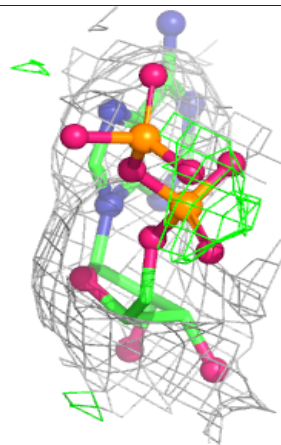
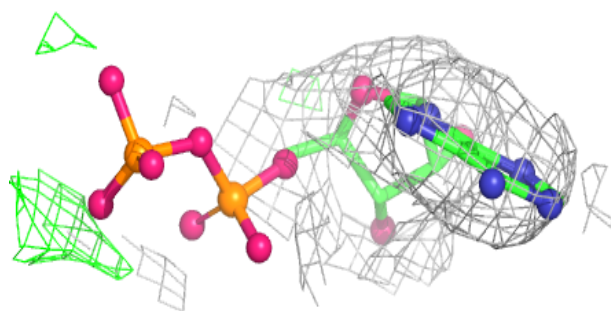
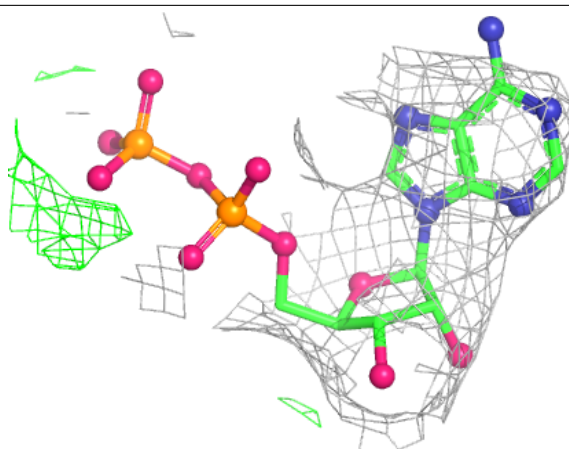
Electron density around ADP C 402:

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and green (positive)



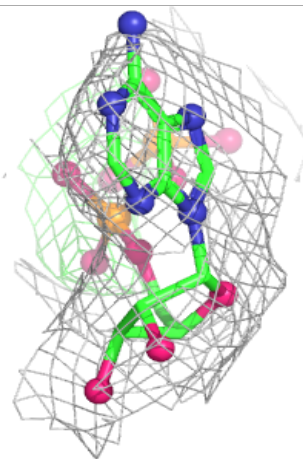
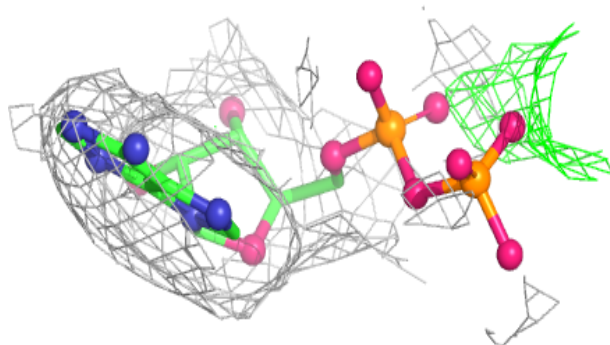
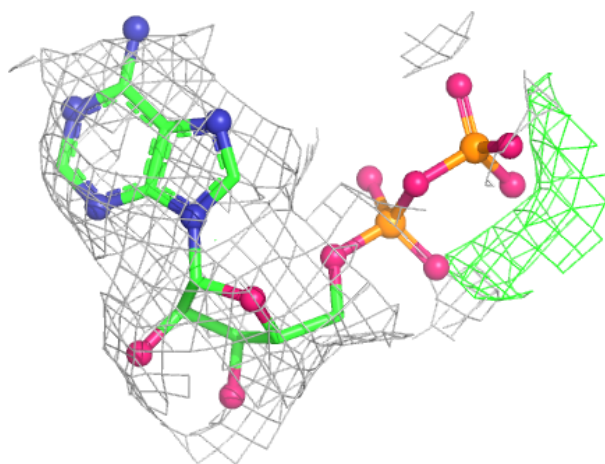
Electron density around ADP B 400:

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



Electron density around ADP H 408:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.