



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 14, 2023 – 03:33 PM EDT

PDB ID : 1S0V
Title : Structural basis for substrate selection by T7 RNA polymerase
Authors : Temiakov, D.; Patlan, V.; Anikin, M.; McAllister, W.T.; Yokoyama, S.; Vassilyev, D.G.; RIKEN Structural Genomics/Proteomics Initiative (RSGI)
Deposited on : 2004-01-05
Resolution : 3.20 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 : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35

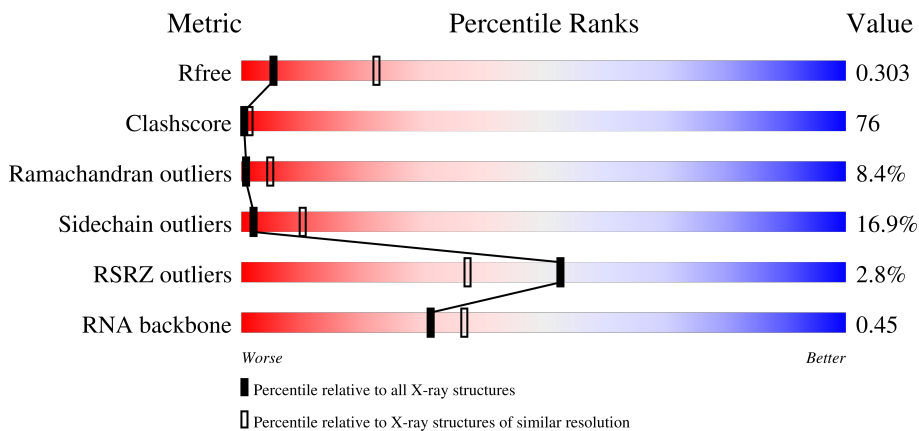
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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}	130704	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)

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	E	18	
1	H	18	
1	K	18	
1	N	18	

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Mol	Chain	Length	Quality of chain
2	F	12	
2	I	12	
2	L	12	
2	O	12	
3	G	10	
3	J	10	
3	M	10	
3	P	10	
4	A	883	
4	B	883	
4	C	883	
4	D	883	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
6	APC	A	2000	-	-	X	-
6	APC	B	2001	-	-	X	-
6	APC	C	2002	-	-	X	-

2 Entry composition i

There are 7 unique types of molecules in this entry. The entry contains 30899 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 DNA chain called 5'-D(*G*GP*GP*AP*AP*TP*CP*GP*AP*TP*AP*TP*CP*GP*CP*CP*GP*C)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	E	17	Total 346	C 165	N 66	O 99	P 16	0	0	0
1	H	17	Total 346	C 165	N 66	O 99	P 16	0	0	0
1	K	17	Total 346	C 165	N 66	O 99	P 16	0	0	0
1	N	17	Total 346	C 165	N 66	O 99	P 16	0	0	0

- Molecule 2 is a RNA chain called 5'-R(*AP*AP*CP*U*GP*CP*GP*GP*CP*GP*AP*U)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	F	8	Total 171	C 77	N 33	O 54	P 7	0	0	0
2	I	8	Total 171	C 77	N 33	O 54	P 7	0	0	0
2	L	8	Total 171	C 77	N 33	O 54	P 7	0	0	0
2	O	8	Total 171	C 77	N 33	O 54	P 7	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
3	G	9	Total 179	C 87	N 30	O 54	P 8	0	0	0
3	J	9	Total 179	C 87	N 30	O 54	P 8	0	0	0
3	M	9	Total 179	C 87	N 30	O 54	P 8	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
3	P	9	179	87	30	54	8	0	0	0

- Molecule 4 is a protein called DNA-directed RNA polymerase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	A	857	6746	4296	1173	1242	35	0	0	0
4	B	857	6746	4296	1173	1242	35	0	0	0
4	C	857	6746	4296	1173	1242	35	0	0	0
4	D	857	6746	4296	1173	1242	35	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	497	LEU	-	insertion	UNP P00573
B	497	LEU	-	insertion	UNP P00573
C	497	LEU	-	insertion	UNP P00573
D	497	LEU	-	insertion	UNP P00573

- Molecule 5 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
5	F	1	1	1	0	0
5	A	1	1	1	0	0
5	B	2	2	2	0	0
5	C	2	2	2	0	0
5	D	2	2	2	0	0

- Molecule 6 is DIPHOSPHOMETHYLPHOSPHONIC ACID ADENOSYL ESTER (three-letter code: APC) (formula: C₁₁H₁₈N₅O₁₂P₃).


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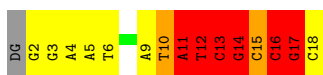
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	M	10	Total O 10 10	0	0
7	N	14	Total O 14 14	0	0
7	O	15	Total O 15 15	0	0
7	P	6	Total O 6 6	0	0
7	A	237	Total O 237 237	0	0
7	B	212	Total O 212 212	0	0
7	C	201	Total O 201 201	0	0
7	D	173	Total O 173 173	0	0

3 Residue-property plots [i](#)

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

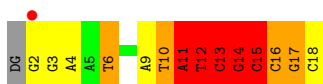
- Molecule 1: 5'-D(*G*GP*GP*AP*AP*TP*CP*GP*AP*TP*AP*TP*CP*GP*CP*CP*GP*C)-3'

Chain E: 



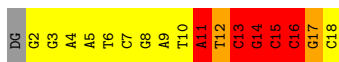
- Molecule 1: 5'-D(*G*GP*GP*AP*AP*TP*CP*GP*AP*TP*AP*TP*CP*GP*CP*CP*GP*C)-3'

Chain H: 



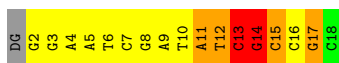
- Molecule 1: 5'-D(*G*GP*GP*AP*AP*TP*CP*GP*AP*TP*AP*TP*CP*GP*CP*CP*GP*C)-3'

Chain K: 



- Molecule 1: 5'-D(*G*GP*GP*AP*AP*TP*CP*GP*AP*TP*AP*TP*CP*GP*CP*CP*GP*C)-3'

Chain N: 



- Molecule 2: 5'-R(*AP*AP*CP*U*GP*CP*GP*GP*CP*GP*AP*U)-3'

Chain F: 



- Molecule 2: 5'-R(*AP*AP*CP*U*GP*CP*GP*GP*CP*GP*AP*U)-3'

Chain I: 

A A C U G1 C2 G3 G4 C5 G6 A7 U8

● Molecule 2: 5'-R(*AP*AP*CP*U*GP*CP*GP*GP*CP*GP*AP*U)-3'

Chain L: 

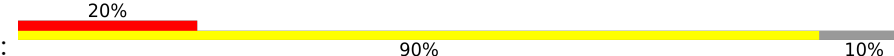
A A C U G1 C2 G3 G4 C5 G6 A7 U8

● Molecule 2: 5'-R(*AP*AP*CP*U*GP*CP*GP*GP*CP*GP*AP*U)-3'

Chain O: 

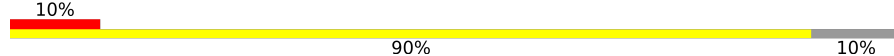
A A C U G1 C2 G3 G4 C5 G6 A7 U8

● Molecule 3: 5'-D(*GP*TP*CP*GP*AP*TP*TP*CP*CP*C)-3'

Chain G: 

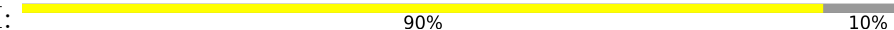
G1 T2 C3 G4 A5 T6 T7 C8 C9 DC

● Molecule 3: 5'-D(*GP*TP*CP*GP*AP*TP*TP*CP*CP*C)-3'

Chain J: 


G1 T2 C3 G4 A5 T6 T7 C8 C9 DC

● Molecule 3: 5'-D(*GP*TP*CP*GP*AP*TP*TP*CP*CP*C)-3'

Chain M: 

G1 T2 C3 G4 A5 T6 T7 C8 C9 DC

● Molecule 3: 5'-D(*GP*TP*CP*GP*AP*TP*TP*CP*CP*C)-3'

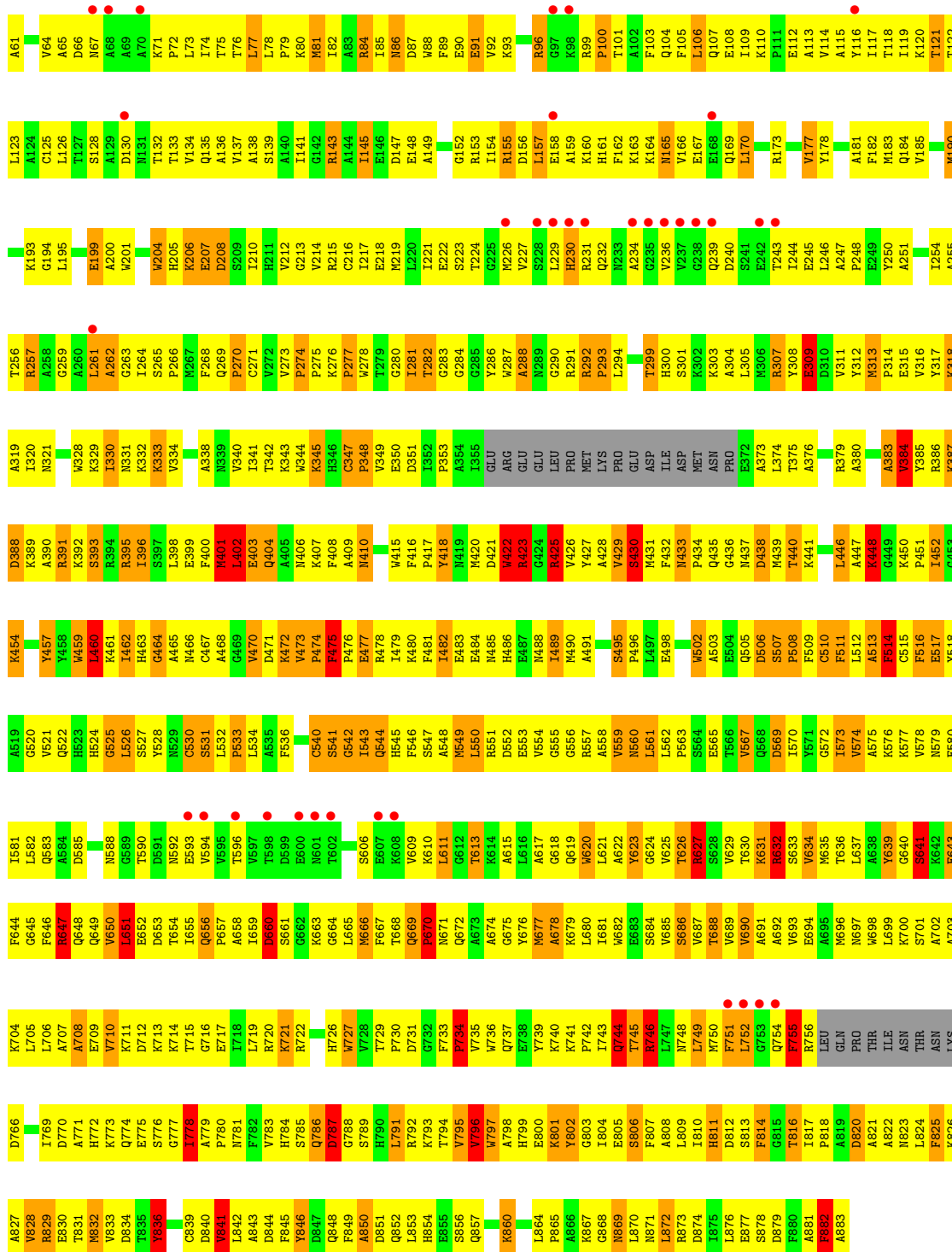
Chain P: 

G1 T2 C3 G4 A5 T6 T7 C8 C9 DC

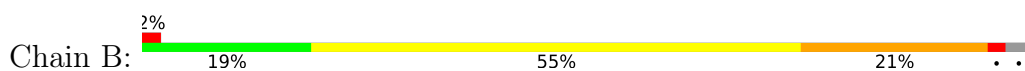
● Molecule 4: DNA-directed RNA polymerase

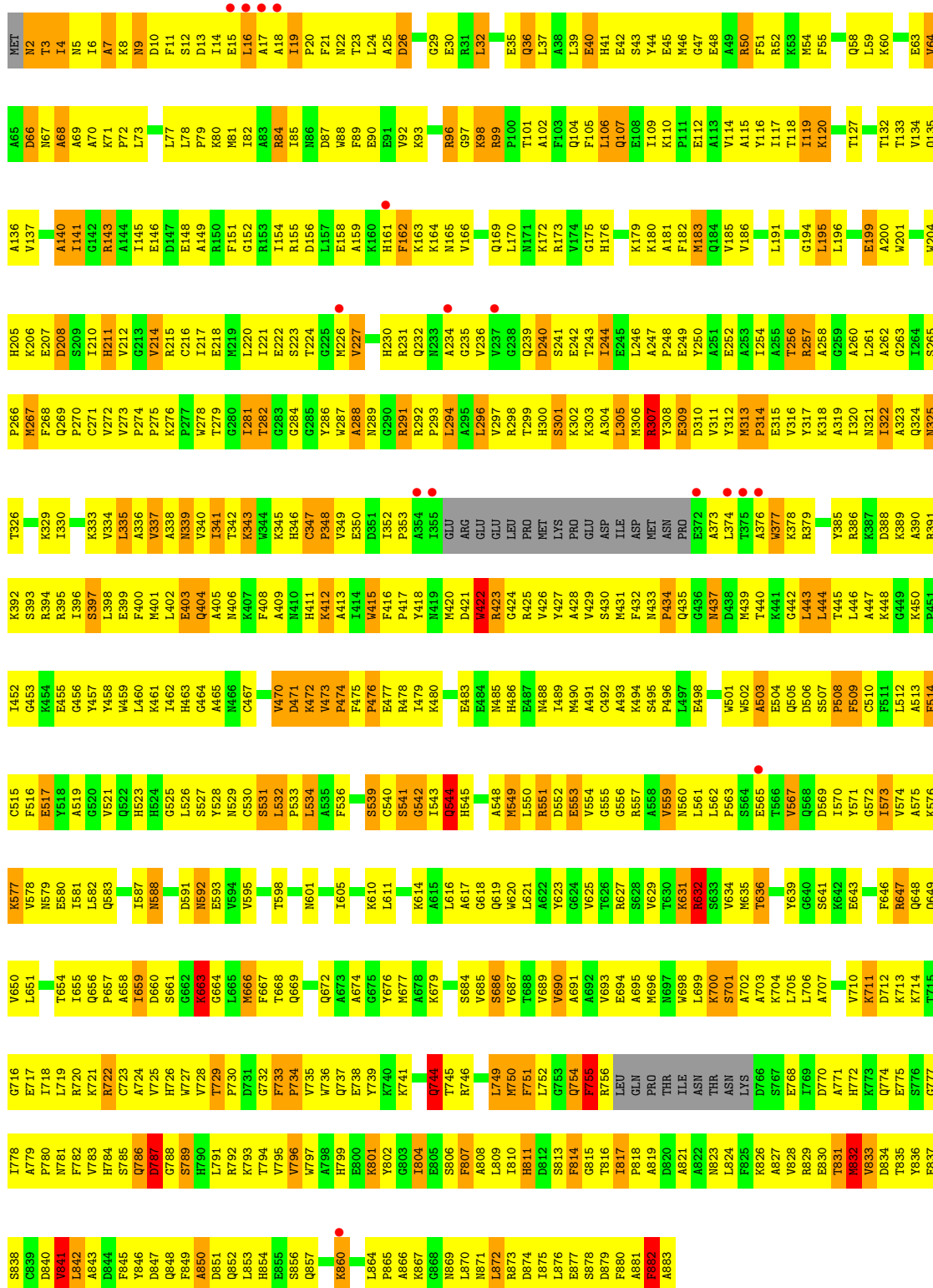
Chain A: 

MET N2 T3 I4 N5 I6 A7 K8 N9 F10 D10 F11 S12 D13 I14 E15 L16 A17 A18 I19 P20 F21 N22 T23 L24 A25 D26 H27 Y28 G29 E30 E31 R31 L32 A33 A34 R35 E36 Q36 L37 L38 A38 L39 E40 H41 E42 E43 S43 Y44 E45 M46 C47 E48 A49 R50 F51 R52 K53 M54 M55 F56 E56 R57 Q58 L59 K60

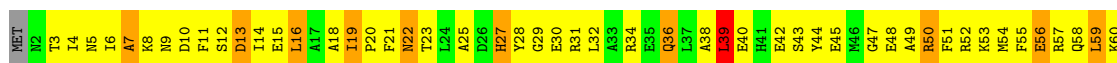


• Molecule 4: DNA-directed RNA polymerase





● Molecule 4: DNA-directed RNA polymerase



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	81.13Å 87.70Å 206.53Å 91.93° 91.02° 110.66°	Depositor
Resolution (Å)	40.00 – 3.20 39.88 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (40.00-3.20) 83.4 (39.88-3.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.42 (at 3.01Å)	Xtrriage
Refinement program	CNS	Depositor
R, R_{free}	0.255 , 0.307 0.248 , 0.303	Depositor DCC
R_{free} test set	4474 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å ²)	59.0	Xtrriage
Anisotropy	0.201	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 112.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.53$, $\langle L^2 \rangle = 0.37$	Xtrriage
Estimated twinning fraction	0.014 for -h,-k,l	Xtrriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	30899	wwPDB-VP
Average B, all atoms (Å ²)	89.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.34% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	E	1.74	9/388 (2.3%)	1.60	9/597 (1.5%)
1	H	1.62	7/388 (1.8%)	1.47	6/597 (1.0%)
1	K	1.59	7/388 (1.8%)	1.31	1/597 (0.2%)
1	N	1.26	3/388 (0.8%)	1.27	4/597 (0.7%)
2	F	2.39	9/191 (4.7%)	2.00	11/297 (3.7%)
2	I	2.25	7/191 (3.7%)	1.68	2/297 (0.7%)
2	L	1.65	1/191 (0.5%)	1.36	0/297
2	O	1.47	0/191	1.38	0/297
3	G	0.82	0/199	0.92	0/305
3	J	0.78	0/199	0.93	0/305
3	M	0.88	0/199	0.86	0/305
3	P	0.94	0/199	1.07	0/305
4	A	1.20	22/6897 (0.3%)	1.14	24/9329 (0.3%)
4	B	1.21	24/6897 (0.3%)	1.14	24/9329 (0.3%)
4	C	0.97	5/6897 (0.1%)	0.97	7/9329 (0.1%)
4	D	0.92	3/6897 (0.0%)	0.91	4/9329 (0.0%)
All	All	1.14	97/30700 (0.3%)	1.09	92/42112 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	E	0	6
1	H	0	9
1	K	0	6
1	N	0	4
2	F	0	4
2	I	0	2
2	L	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	O	0	3
3	P	0	1
4	A	0	1
4	B	0	1
4	D	0	1
All	All	0	39

All (97) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	502	TRP	CB-CG	-13.18	1.26	1.50
1	K	14	DG	C5-C6	-11.28	1.31	1.42
4	A	467	CYS	CB-SG	-10.63	1.64	1.82
2	I	8	U	N1-C6	-9.75	1.29	1.38
2	I	7	A	C5-C6	-8.93	1.33	1.41
4	A	271	CYS	CB-SG	-8.70	1.67	1.82
2	F	7	A	C5-C6	-8.57	1.33	1.41
1	E	11	DA	C5-C6	-8.44	1.33	1.41
2	I	8	U	N1-C2	-8.39	1.30	1.38
4	B	310	ASP	CB-CG	8.28	1.69	1.51
1	H	12	DT	C2-O2	8.07	1.28	1.22
4	B	805	GLU	CG-CD	7.74	1.63	1.51
2	I	8	U	C4-C5	-7.73	1.36	1.43
2	F	5	C	N1-C2	-7.63	1.32	1.40
4	A	482	ILE	CA-CB	-7.61	1.37	1.54
1	H	11	DA	N3-C4	-7.16	1.30	1.34
2	F	6	G	C5-C6	7.14	1.49	1.42
1	K	14	DG	C2-N3	-7.13	1.27	1.32
2	F	6	G	C6-N1	-7.09	1.34	1.39
4	B	63	GLU	CG-CD	7.08	1.62	1.51
1	H	14	DG	C5-C6	-7.06	1.35	1.42
4	B	330	ILE	CA-CB	-7.02	1.38	1.54
4	B	416	PHE	CB-CG	-6.93	1.39	1.51
2	L	5	C	C4-C5	-6.88	1.37	1.43
1	K	11	DA	C5-C6	-6.86	1.34	1.41
1	E	11	DA	N9-C4	-6.77	1.33	1.37
1	K	16	DC	N1-C2	-6.72	1.33	1.40
1	E	12	DT	N1-C2	-6.68	1.32	1.38
4	C	807	PHE	CB-CG	-6.60	1.40	1.51
4	B	498	GLU	CG-CD	6.55	1.61	1.51
4	B	683	GLU	CG-CD	6.46	1.61	1.51
1	K	14	DG	C2-N2	-6.40	1.28	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	30	GLU	CG-CD	6.34	1.61	1.51
4	A	384	VAL	CA-CB	-6.24	1.41	1.54
1	N	11	DA	C5-C6	-6.15	1.35	1.41
4	A	448	LYS	CD-CE	6.12	1.66	1.51
4	B	516	PHE	CB-CG	-6.06	1.41	1.51
4	A	727	TRP	CB-CG	6.05	1.61	1.50
2	F	1	G	C5-C6	6.01	1.48	1.42
2	F	7	A	N3-C4	-5.89	1.31	1.34
4	B	635	MET	CG-SD	5.88	1.96	1.81
4	A	35	GLU	CG-CD	5.84	1.60	1.51
4	C	30	GLU	CB-CG	5.82	1.63	1.52
1	K	13	DC	N1-C2	-5.82	1.34	1.40
4	D	797	TRP	CB-CG	-5.79	1.39	1.50
1	E	13	DC	C4-N4	-5.76	1.28	1.33
4	A	347	CYS	CB-SG	-5.76	1.72	1.81
4	A	775	GLU	CG-CD	5.75	1.60	1.51
2	I	7	A	C5'-C4'	-5.74	1.44	1.51
4	D	504	GLU	CG-CD	5.73	1.60	1.51
4	D	504	GLU	CB-CG	5.71	1.63	1.52
1	H	11	DA	C5-C4	-5.68	1.34	1.38
2	F	8	U	C2-O2	-5.66	1.17	1.22
4	B	51	PHE	CB-CG	-5.66	1.41	1.51
4	C	802	TYR	CB-CG	-5.64	1.43	1.51
1	E	10	DT	N1-C2	-5.63	1.33	1.38
1	E	12	DT	C4-C5	-5.62	1.39	1.45
4	B	66	ASP	CB-CG	5.60	1.63	1.51
1	N	14	DG	C5-C6	-5.57	1.36	1.42
2	I	7	A	N1-C2	-5.54	1.29	1.34
4	A	459	TRP	CB-CG	5.50	1.60	1.50
4	A	477	GLU	CG-CD	5.47	1.60	1.51
1	H	12	DT	C3'-O3'	-5.47	1.36	1.44
4	B	271	CYS	CB-SG	-5.45	1.73	1.81
4	B	63	GLU	CB-CG	5.44	1.62	1.52
4	A	514	PHE	CB-CG	-5.43	1.42	1.51
2	F	7	A	C8-N7	5.41	1.35	1.31
4	B	559	VAL	CB-CG2	-5.36	1.41	1.52
4	B	432	PHE	CE2-CZ	-5.34	1.27	1.37
4	C	347	CYS	CB-SG	5.33	1.91	1.82
4	B	416	PHE	CE2-CZ	5.33	1.47	1.37
2	F	8	U	C2-N3	-5.30	1.34	1.37
4	A	805	GLU	CG-CD	5.29	1.59	1.51
4	B	287	TRP	CB-CG	-5.26	1.40	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	820	ASP	CB-CG	5.25	1.62	1.51
4	B	326	THR	CA-CB	5.23	1.67	1.53
4	B	836	TYR	CD1-CE1	5.23	1.47	1.39
4	A	91	GLU	CB-CG	5.22	1.62	1.52
1	E	14	DG	N3-C4	-5.20	1.31	1.35
1	H	14	DG	N9-C4	-5.19	1.33	1.38
4	B	408	PHE	CB-CG	-5.17	1.42	1.51
4	A	639	TYR	CG-CD1	-5.15	1.32	1.39
1	E	12	DT	C3'-O3'	-5.15	1.37	1.44
1	N	13	DC	C3'-O3'	-5.14	1.37	1.44
4	A	808	ALA	CA-CB	-5.11	1.41	1.52
1	H	12	DT	C5-C6	-5.10	1.30	1.34
4	B	408	PHE	CD2-CE2	-5.10	1.29	1.39
4	B	855	GLU	CG-CD	5.10	1.59	1.51
4	A	530	CYS	CB-SG	-5.08	1.73	1.81
4	B	805	GLU	CB-CG	5.03	1.61	1.52
4	A	422	TRP	CZ3-CH2	5.03	1.48	1.40
4	A	795	VAL	CB-CG2	-5.02	1.42	1.52
1	E	11	DA	C3'-O3'	-5.02	1.37	1.44
1	K	15	DC	N1-C2	-5.02	1.35	1.40
4	A	623	TYR	CD2-CE2	5.01	1.46	1.39
4	A	483	GLU	CG-CD	5.01	1.59	1.51
2	I	8	U	C3'-O3'	5.00	1.49	1.42

All (92) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	460	LEU	CB-CG-CD1	-10.01	93.98	111.00
1	E	14	DG	O5'-P-OP1	-9.17	97.45	105.70
4	A	460	LEU	CB-CG-CD2	9.03	126.35	111.00
4	D	791	LEU	CA-CB-CG	8.79	135.52	115.30
4	A	425	ARG	NE-CZ-NH1	-8.45	116.07	120.30
1	E	13	DC	C5'-C4'-O4'	-8.23	93.67	109.30
4	B	425	ARG	NE-CZ-NH2	-8.00	116.30	120.30
4	B	444	LEU	CA-CB-CG	-7.97	96.96	115.30
2	F	4	G	O4'-C4'-C3'	-7.96	96.04	104.00
4	B	635	MET	CA-CB-CG	7.91	126.75	113.30
4	A	627	ARG	NE-CZ-NH1	7.66	124.13	120.30
2	F	8	U	N1-C1'-C2'	-7.58	103.66	112.00
4	A	507	SER	C-N-CD	-7.58	103.93	120.60
1	H	13	DC	OP2-P-O3'	7.03	120.66	105.20
4	A	448	LYS	CD-CE-NZ	6.95	127.68	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	13	DC	N1-C1'-C2'	-6.88	99.52	112.60
4	B	423	ARG	NE-CZ-NH1	6.77	123.69	120.30
4	A	778	ILE	CG1-CB-CG2	-6.74	96.58	111.40
2	I	8	U	C2'-C3'-O3'	6.72	124.46	113.70
1	H	14	DG	O5'-P-OP2	-6.66	99.71	105.70
2	F	8	U	C4'-C3'-O3'	6.65	126.30	113.00
2	F	5	C	N1-C2-O2	-6.63	114.92	118.90
4	D	492	CYS	CA-CB-SG	-6.50	102.29	114.00
1	H	15	DC	N1-C1'-C2'	-6.49	100.26	112.60
1	K	12	DT	OP1-P-O3'	6.48	119.46	105.20
4	A	423	ARG	NE-CZ-NH1	-6.45	117.08	120.30
4	B	569	ASP	CB-CG-OD1	6.42	124.08	118.30
4	C	534	LEU	CA-CB-CG	6.36	129.94	115.30
1	H	14	DG	N9-C1'-C2'	-6.36	100.52	112.60
4	B	330	ILE	CB-CA-C	-6.30	99.01	111.60
2	F	6	G	O4'-C4'-C3'	-6.29	97.71	104.00
4	A	441	LYS	CD-CE-NZ	-6.26	97.30	111.70
4	B	16	LEU	CA-CB-CG	6.24	129.65	115.30
4	A	569	ASP	CB-CG-OD1	-6.23	112.69	118.30
4	B	425	ARG	NE-CZ-NH1	6.21	123.40	120.30
4	D	39	LEU	CA-CB-CG	6.17	129.50	115.30
4	A	387	LYS	CD-CE-NZ	6.06	125.64	111.70
4	B	296	LEU	CA-CB-CG	-6.04	101.40	115.30
2	I	8	U	O4'-C4'-C3'	-6.04	97.96	104.00
4	C	632	ARG	NE-CZ-NH1	6.01	123.30	120.30
4	B	347	CYS	CA-CB-SG	-6.00	103.19	114.00
4	A	660	ASP	CB-CG-OD1	5.99	123.69	118.30
2	F	7	A	C5'-C4'-C3'	-5.96	106.46	116.00
4	B	810	ILE	CG1-CB-CG2	-5.95	98.30	111.40
1	E	17	DG	C5'-C4'-C3'	-5.93	103.43	114.10
4	D	792	ARG	NE-CZ-NH1	5.92	123.26	120.30
1	N	11	DA	N9-C1'-C2'	-5.90	101.39	112.60
4	C	307	ARG	NE-CZ-NH1	5.78	123.19	120.30
4	B	637	LEU	CA-CB-CG	-5.73	102.11	115.30
4	C	296	LEU	CA-CB-CG	-5.71	102.17	115.30
1	E	18	DC	C2'-C3'-O3'	-5.70	93.81	112.60
2	F	6	G	OP1-P-O3'	-5.69	92.69	105.20
4	A	450	LYS	C-N-CA	-5.68	98.14	122.00
1	N	12	DT	O5'-P-OP2	-5.67	100.60	105.70
1	H	15	DC	OP2-P-O3'	5.65	117.64	105.20
4	B	532	LEU	CA-CB-CG	-5.65	102.31	115.30
4	A	651	LEU	CA-CB-CG	5.59	128.17	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	470	VAL	CB-CA-C	-5.54	100.88	111.40
4	B	562	LEU	CA-CB-CG	5.53	128.02	115.30
1	E	16	DC	N1-C1'-C2'	-5.52	102.11	112.60
4	B	345	LYS	CD-CE-NZ	5.52	124.39	111.70
4	C	444	LEU	CB-CG-CD1	-5.44	101.75	111.00
2	F	5	C	N3-C2-O2	5.42	125.69	121.90
2	F	8	U	C1'-C2'-O2'	5.42	126.85	110.60
4	B	332	LYS	CD-CE-NZ	5.42	124.16	111.70
4	A	396	ILE	CG1-CB-CG2	-5.42	99.49	111.40
4	B	632	ARG	NE-CZ-NH1	5.41	123.00	120.30
1	E	11	DA	O5'-P-OP2	-5.41	100.83	105.70
4	A	475	PHE	C-N-CD	5.36	139.66	128.40
2	F	8	U	O5'-P-OP1	5.35	117.12	110.70
1	E	14	DG	O5'-P-OP2	5.31	117.08	110.70
4	B	426	VAL	CB-CA-C	-5.29	101.34	111.40
4	A	836	TYR	CA-CB-CG	-5.24	103.45	113.40
4	B	402	LEU	CA-CB-CG	-5.23	103.27	115.30
4	A	318	LYS	CD-CE-NZ	5.22	123.71	111.70
4	C	471	ASP	CB-CG-OD1	5.20	122.98	118.30
1	N	11	DA	O4'-C1'-N9	5.19	111.63	108.00
4	B	448	LYS	CD-CE-NZ	5.17	123.59	111.70
4	B	59	LEU	CA-CB-CG	-5.17	103.41	115.30
1	N	13	DC	N1-C1'-C2'	-5.16	102.80	112.60
4	C	627	ARG	NE-CZ-NH1	5.14	122.87	120.30
4	A	513	ALA	O-C-N	5.12	130.89	122.70
1	E	12	DT	C6-N1-C1'	5.09	128.03	120.40
4	A	489	ILE	CB-CA-C	-5.09	101.43	111.60
4	A	514	PHE	CB-CG-CD2	-5.08	117.25	120.80
4	B	719	LEU	CA-CB-CG	-5.07	103.64	115.30
2	F	6	G	N1-C2-N3	5.04	126.93	123.90
4	A	787	ASP	CB-CG-OD1	5.04	122.84	118.30
1	E	15	DC	N1-C1'-C2'	-5.03	103.04	112.60
4	A	446	LEU	CB-CG-CD2	-5.03	102.45	111.00
4	B	650	VAL	CB-CA-C	-5.02	101.85	111.40
4	B	576	LYS	CD-CE-NZ	5.02	123.24	111.70

There are no chirality outliers.

All (39) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	A	836	TYR	Sidechain
4	B	836	TYR	Sidechain

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Mol	Chain	Res	Type	Group
4	D	518	TYR	Sidechain
1	E	11	DA	Sidechain
1	E	12	DT	Sidechain
1	E	13	DC	Sidechain
1	E	14	DG	Sidechain
1	E	16	DC	Sidechain
1	E	17	DG	Sidechain
2	F	3	G	Sidechain
2	F	6	G	Sidechain
2	F	7	A	Sidechain
2	F	8	U	Sidechain
1	H	10	DT	Sidechain
1	H	11	DA	Sidechain
1	H	12	DT	Sidechain
1	H	13	DC	Sidechain
1	H	14	DG	Sidechain
1	H	15	DC	Sidechain
1	H	16	DC	Sidechain
1	H	17	DG	Sidechain
1	H	6	DT	Sidechain
2	I	5	C	Sidechain
2	I	6	G	Sidechain
1	K	11	DA	Sidechain
1	K	13	DC	Sidechain
1	K	14	DG	Sidechain
1	K	15	DC	Sidechain
1	K	16	DC	Sidechain
1	K	17	DG	Sidechain
2	L	8	U	Sidechain
1	N	13	DC	Sidechain
1	N	14	DG	Sidechain
1	N	15	DC	Sidechain
1	N	17	DG	Sidechain
2	O	4	G	Sidechain
2	O	6	G	Sidechain
2	O	8	U	Sidechain
3	P	2	DT	Sidechain

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	E	346	0	190	28	0
1	H	346	0	192	66	0
1	K	346	0	190	57	0
1	N	346	0	192	38	0
2	F	171	0	89	10	0
2	I	171	0	89	11	0
2	L	171	0	89	14	0
2	O	171	0	89	5	0
3	G	179	0	104	13	0
3	J	179	0	104	17	0
3	M	179	0	104	13	0
3	P	179	0	104	8	0
4	A	6746	0	6708	1151	0
4	B	6746	0	6708	1190	0
4	C	6746	0	6708	1007	0
4	D	6746	0	6708	899	0
5	A	1	0	0	0	0
5	B	2	0	0	0	0
5	C	2	0	0	0	0
5	D	2	0	0	0	0
5	F	1	0	0	0	0
6	A	31	0	13	16	0
6	B	31	0	13	9	0
6	C	31	0	14	16	0
6	D	31	0	13	7	0
7	A	237	0	0	82	0
7	B	212	0	0	68	0
7	C	201	0	0	70	0
7	D	173	0	0	53	0
7	E	39	0	0	1	0
7	F	9	0	0	1	0
7	G	9	0	0	1	0
7	H	19	0	0	9	0
7	I	14	0	0	4	0
7	J	13	0	0	0	0
7	K	20	0	0	7	0
7	L	8	0	0	0	0
7	M	10	0	0	2	0
7	N	14	0	0	3	0
7	O	15	0	0	2	0
7	P	6	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	30899	0	28421	4458	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 76.

All (4458) 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)
4:A:313:MET:CE	4:A:313:MET:SD	2.05	1.44
4:C:631:LYS:NZ	6:C:2002:APC:H3A2	1.52	1.22
2:F:1:G:H5''	7:F:3008:HOH:O	1.40	1.19
4:A:631:LYS:NZ	6:A:2000:APC:H3A2	1.58	1.18
4:A:546:PHE:CE1	4:A:783:VAL:HG22	1.78	1.16
4:A:631:LYS:HZ1	6:A:2000:APC:H3A2	0.97	1.13
4:B:452:ILE:HG23	4:B:453:GLY:N	1.57	1.13
4:A:281:ILE:HG22	4:A:282:THR:HG23	1.20	1.13
4:D:720:ARG:HG2	4:D:720:ARG:HH11	0.95	1.12
4:B:59:LEU:HD23	4:B:64:VAL:HG22	1.17	1.12
4:A:109:ILE:HD13	4:A:145:ILE:HG22	1.31	1.11
4:A:471:ASP:OD1	4:A:472:LYS:HD2	1.47	1.11
1:K:12:DT:H2''	1:K:13:DC:H5'	1.16	1.11
4:A:722:ARG:HB2	4:A:769:ILE:HD13	1.27	1.11
4:C:281:ILE:HG22	4:C:282:THR:HG22	1.18	1.11
4:A:804:ILE:HG12	4:A:820:ASP:HB3	1.33	1.10
4:B:452:ILE:CG2	4:B:453:GLY:H	1.64	1.10
1:N:12:DT:H2''	1:N:13:DC:H5'	1.33	1.10
4:A:647:ARG:HD2	4:A:675:GLY:HA2	1.34	1.10
4:B:816:THR:HG22	4:B:817:ILE:H	1.09	1.09
4:A:560:ASN:O	4:A:881:ALA:HB2	1.50	1.09
4:D:36:GLN:OE1	4:D:273:VAL:HG22	1.52	1.09
4:C:158:GLU:HG2	4:C:195:LEU:HD22	1.10	1.08
4:A:871:ASN:HD21	4:A:873:ARG:HB2	1.08	1.08
4:D:718:ILE:H	4:D:718:ILE:HD12	1.11	1.08
4:C:556:GLY:HA2	4:C:561:LEU:HD22	1.35	1.08
4:B:435:GLN:HG2	4:B:810:ILE:HG23	1.36	1.07
4:C:19:ILE:HG12	4:C:20:PRO:HD2	1.30	1.07
1:E:12:DT:H2''	1:E:13:DC:H5'	1.37	1.06
4:B:706:LEU:HD21	4:B:849:PHE:HB2	1.33	1.06
4:B:720:ARG:HG2	4:B:720:ARG:HH11	1.19	1.06
4:B:433:ASN:HB2	4:B:434:PRO:HD3	1.34	1.06
1:H:13:DC:H2''	1:H:14:DG:H5'	1.32	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:433:ASN:HB2	4:B:434:PRO:CD	1.87	1.05
4:D:512:LEU:HA	4:D:515:CYS:SG	1.97	1.05
4:C:333:LYS:HB3	4:C:516:PHE:CE2	1.91	1.05
4:C:536:PHE:HB3	4:C:882:PHE:HB3	1.35	1.05
4:B:473:VAL:HG13	4:B:474:PRO:HD2	1.36	1.04
1:H:9:DA:H5''	7:H:484:HOH:O	1.57	1.04
4:A:281:ILE:HG22	4:A:282:THR:CG2	1.86	1.03
4:B:829:ARG:HH22	4:B:882:PHE:HA	1.16	1.03
4:C:158:GLU:HG2	4:C:195:LEU:CD2	1.89	1.03
4:D:120:LYS:HG3	4:D:752:LEU:HD21	1.38	1.03
4:A:16:LEU:HD13	4:A:38:ALA:HB2	1.41	1.02
4:B:268:PHE:HB3	4:B:286:TYR:OH	1.59	1.02
4:B:829:ARG:NH2	4:B:882:PHE:HA	1.73	1.02
4:C:792:ARG:O	4:C:796:VAL:HG23	1.59	1.02
4:C:54:MET:O	4:C:58:GLN:HG2	1.58	1.01
4:D:737:GLN:HE22	4:D:778:ILE:HA	1.23	1.01
4:A:794:THR:OG1	4:A:831:THR:HG21	1.58	1.01
1:E:12:DT:H2''	1:E:13:DC:C5'	1.90	1.01
4:A:829:ARG:HH11	4:A:829:ARG:HG3	1.18	1.01
4:B:751:PHE:HB3	4:B:752:LEU:HD12	1.36	1.01
4:A:688:THR:HG22	4:A:689:VAL:HG13	1.41	1.01
4:C:342:THR:HG22	4:C:348:PRO:HG2	1.40	1.00
4:D:560:ASN:O	4:D:881:ALA:HB2	1.60	1.00
4:D:794:THR:OG1	4:D:831:THR:HG21	1.58	1.00
4:A:304:ALA:O	4:A:307:ARG:HG3	1.62	1.00
4:C:437:ASN:H	4:C:437:ASN:HD22	1.10	1.00
4:C:457:TYR:CD1	4:C:521:VAL:HG11	1.97	1.00
4:B:418:TYR:HE2	4:B:428:ALA:HB2	1.27	1.00
4:C:651:LEU:HD13	4:C:651:LEU:O	1.61	1.00
4:A:690:VAL:HG23	7:A:3200:HOH:O	1.61	0.99
4:A:687:VAL:HG23	7:A:3114:HOH:O	1.61	0.99
4:A:786:GLN:HE21	4:A:786:GLN:HA	1.27	0.99
4:D:198:GLY:HA3	7:D:3152:HOH:O	1.61	0.99
4:A:841:VAL:HG12	7:A:3070:HOH:O	1.60	0.99
4:C:84:ARG:HH12	4:C:87:ASP:HB2	1.27	0.99
4:B:669:GLN:HG2	4:B:672:GLN:HG3	1.45	0.98
4:D:790:HIS:HE1	4:D:831:THR:HG23	1.28	0.98
4:A:463:HIS:HA	4:A:466:ASN:HD22	1.27	0.98
4:C:281:ILE:HG22	4:C:282:THR:CG2	1.92	0.98
4:D:32:LEU:H	4:D:32:LEU:HD12	1.29	0.97
4:A:280:GLY:HA2	4:A:317:TYR:OH	1.62	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:11:PHE:HB3	4:B:41:HIS:HE1	1.28	0.97
4:A:169:GLN:O	4:A:173:ARG:HG2	1.65	0.97
4:B:14:ILE:HD12	4:B:14:ILE:H	1.28	0.97
4:C:423:ARG:HH11	4:C:423:ARG:HB2	1.26	0.97
4:C:551:ARG:NE	4:C:872:LEU:HD21	1.80	0.96
4:B:84:ARG:HD2	4:B:219:MET:HG2	1.47	0.96
4:B:407:LYS:HG2	4:B:408:PHE:CE2	2.00	0.96
4:A:562:LEU:HD21	4:A:870:LEU:CD1	1.94	0.96
4:A:80:LYS:HE2	4:A:223:SER:O	1.66	0.95
4:B:59:LEU:HD23	4:B:64:VAL:CG2	1.95	0.95
4:C:631:LYS:HZ1	6:C:2002:APC:H3A2	1.29	0.95
4:A:308:TYR:HE2	4:A:734:PRO:HG2	1.29	0.95
1:K:15:DC:H2''	1:K:16:DC:O5'	1.64	0.95
4:A:379:ARG:HD3	4:A:660:ASP:OD2	1.66	0.95
4:C:92:VAL:HG12	4:C:99:ARG:HG3	1.44	0.95
4:C:338:ALA:HB2	4:C:509:PHE:HE1	1.28	0.95
4:A:404:GLN:HE21	4:A:404:GLN:HA	1.30	0.95
4:C:706:LEU:HD22	4:C:725:VAL:HG13	1.49	0.94
4:A:546:PHE:HE1	4:A:783:VAL:HG22	1.28	0.94
4:C:341:ILE:HD12	4:C:348:PRO:HB3	1.49	0.94
1:K:12:DT:H2''	1:K:13:DC:C5'	1.96	0.94
4:B:505:GLN:N	4:B:505:GLN:NE2	2.14	0.94
4:A:544:GLN:HG2	4:A:559:VAL:HG21	1.47	0.94
4:C:133:THR:HA	4:C:243:THR:HG22	1.49	0.94
4:D:16:LEU:HD13	4:D:38:ALA:HB2	1.50	0.94
4:C:629:VAL:HG22	4:C:654:THR:HG21	1.50	0.93
4:B:490:MET:SD	4:B:522:GLN:HG3	2.07	0.93
4:C:236:VAL:HB	4:C:239:GLN:HB2	1.49	0.93
1:H:15:DC:H2''	1:H:16:DC:O5'	1.66	0.93
4:A:421:ASP:OD2	4:A:425:ARG:HB2	1.67	0.93
4:A:105:PHE:HB3	4:A:204:TRP:HZ2	1.34	0.93
4:C:404:GLN:HG2	4:C:432:PHE:CG	2.04	0.93
4:C:632:ARG:HH22	6:C:2002:APC:H5'1	1.31	0.93
4:B:116:TYR:OH	4:B:752:LEU:HD22	1.69	0.93
2:I:4:G:H2'	2:I:5:C:H6	1.33	0.93
4:B:492:CYS:O	4:B:496:PRO:HD3	1.68	0.93
4:A:154:ILE:HG23	4:A:190:MET:CE	1.99	0.92
4:A:457:TYR:CZ	4:A:461:LYS:HD3	2.05	0.92
4:A:457:TYR:CE2	4:A:461:LYS:HD3	2.03	0.92
4:C:457:TYR:CE1	4:C:521:VAL:HG11	2.04	0.92
4:D:380:ALA:O	4:D:384:VAL:HG23	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:281:ILE:CG2	4:C:282:THR:HG22	2.00	0.92
4:D:264:ILE:HG23	4:D:292:ARG:HB2	1.52	0.92
1:H:13:DC:H2''	1:H:14:DG:C5'	1.99	0.92
4:B:163:LYS:HZ3	4:B:166:VAL:HB	1.35	0.92
4:D:718:ILE:HD12	4:D:718:ILE:N	1.85	0.92
4:A:85:ILE:HG12	4:A:219:MET:SD	2.10	0.92
4:C:778:ILE:HG23	4:C:779:ALA:N	1.83	0.92
4:C:334:VAL:HG21	4:C:513:ALA:HB2	1.49	0.92
4:A:5:ASN:HD21	4:A:7:ALA:HB3	1.34	0.91
4:A:871:ASN:HD21	4:A:873:ARG:CB	1.83	0.91
4:C:333:LYS:HD3	4:C:516:PHE:HD2	1.34	0.91
4:D:810:ILE:HB	4:D:813:SER:OG	1.70	0.91
4:A:828:VAL:HG23	4:A:829:ARG:H	1.33	0.91
4:B:11:PHE:HB3	4:B:41:HIS:CE1	2.05	0.91
4:C:556:GLY:CA	4:C:561:LEU:HD22	2.00	0.91
4:A:280:GLY:O	4:A:282:THR:N	2.04	0.91
4:B:706:LEU:HD11	4:B:849:PHE:CD2	2.05	0.91
4:C:560:ASN:O	4:C:881:ALA:HB2	1.70	0.91
4:A:341:ILE:HD12	4:A:348:PRO:HB3	1.49	0.91
4:C:249:GLU:H	4:C:249:GLU:CD	1.73	0.91
4:A:502:TRP:CD2	4:A:512:LEU:HD13	2.06	0.91
4:B:646:PHE:O	4:B:650:VAL:HG23	1.69	0.91
4:D:718:ILE:H	4:D:718:ILE:CD1	1.84	0.91
4:A:825:PHE:CE1	4:A:829:ARG:NH1	2.39	0.91
4:D:552:ASP:HB2	4:D:691:ALA:HB2	1.53	0.91
4:D:720:ARG:HG2	4:D:720:ARG:NH1	1.74	0.91
4:B:85:ILE:HG12	4:B:219:MET:SD	2.11	0.90
4:B:448:LYS:HD2	7:B:3017:HOH:O	1.70	0.90
4:A:103:PHE:O	4:A:107:GLN:HG3	1.71	0.90
6:A:2000:APC:H4'	7:A:3238:HOH:O	1.70	0.90
4:A:423:ARG:NH2	4:A:784:HIS:ND1	2.18	0.90
4:C:751:PHE:HB3	4:C:752:LEU:HD12	1.51	0.90
4:A:294:LEU:HD13	4:A:429:VAL:HG21	1.52	0.90
4:A:829:ARG:HH11	4:A:829:ARG:CG	1.84	0.90
4:C:460:LEU:HA	4:C:534:LEU:HD21	1.54	0.90
4:B:137:VAL:HG12	4:B:217:ILE:HD11	1.54	0.90
4:A:464:GLY:HA3	4:A:514:PHE:CE2	2.07	0.90
4:C:536:PHE:HB3	4:C:882:PHE:CB	2.01	0.90
4:D:273:VAL:HA	4:D:415:TRP:CZ3	2.06	0.90
4:A:204:TRP:CH2	4:A:212:VAL:HG21	2.06	0.90
4:B:702:ALA:HB1	4:B:849:PHE:CE2	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:551:ARG:HH21	4:C:872:LEU:HD11	1.37	0.90
4:A:452:ILE:HG22	4:A:528:TYR:O	1.72	0.89
4:B:163:LYS:NZ	4:B:166:VAL:HB	1.87	0.89
3:P:9:DC:H4'	7:P:872:HOH:O	1.72	0.89
4:B:793:LYS:HA	7:B:3141:HOH:O	1.71	0.89
4:D:473:VAL:HG22	4:D:477:GLU:HG3	1.54	0.89
4:B:296:LEU:O	4:B:296:LEU:HG	1.69	0.89
4:C:333:LYS:HB3	4:C:516:PHE:CD2	2.07	0.89
4:B:571:TYR:CE2	4:B:631:LYS:HG3	2.08	0.89
4:C:452:ILE:HD11	4:C:457:TYR:HA	1.52	0.89
4:C:96:ARG:HB3	7:C:3133:HOH:O	1.72	0.89
4:D:864:LEU:HA	7:D:3079:HOH:O	1.72	0.89
4:D:854:HIS:CD2	4:D:856:SER:H	1.90	0.89
4:B:77:LEU:HD12	4:B:224:THR:HG21	1.55	0.88
4:B:236:VAL:HB	4:B:239:GLN:HB2	1.54	0.88
4:B:430:SER:O	4:B:431:MET:C	2.09	0.88
4:C:109:ILE:HD11	4:C:149:ALA:HB2	1.54	0.88
4:A:154:ILE:HG23	4:A:190:MET:HE1	1.54	0.88
4:B:585:ASP:O	4:B:614:LYS:HA	1.73	0.88
4:B:452:ILE:HG23	4:B:453:GLY:H	0.76	0.88
4:C:421:ASP:O	4:C:423:ARG:N	2.07	0.88
4:B:231:ARG:HG2	4:B:234:ALA:HB2	1.55	0.88
1:H:12:DT:C4'	4:B:423:ARG:HE	1.86	0.88
4:A:60:LYS:HZ1	4:A:61:ALA:HB2	1.39	0.88
4:A:546:PHE:HD2	4:A:692:ALA:HA	1.39	0.88
4:A:105:PHE:HB3	4:A:204:TRP:CZ2	2.09	0.88
4:A:563:PRO:HB3	4:A:878:SER:HA	1.55	0.88
4:B:110:LYS:HD3	4:B:111:PRO:HD2	1.55	0.88
4:B:695:ALA:O	4:B:699:LEU:HD13	1.72	0.88
4:D:231:ARG:HG2	4:D:234:ALA:HB2	1.53	0.88
4:A:452:ILE:HD11	4:A:457:TYR:HB2	1.55	0.88
4:C:221:ILE:HG12	4:C:227:VAL:HG23	1.55	0.87
1:N:7:DC:H2''	1:N:8:DG:O5'	1.73	0.87
4:B:264:ILE:HG23	4:B:292:ARG:HB2	1.56	0.87
1:N:2:DG:H2''	1:N:3:DG:H8	1.40	0.87
1:E:12:DT:C2'	1:E:13:DC:H5'	2.04	0.87
4:A:155:ARG:HB2	4:A:163:LYS:HE3	1.55	0.87
4:D:333:LYS:HB3	4:D:516:PHE:CE2	2.10	0.87
4:C:437:ASN:H	4:C:437:ASN:ND2	1.70	0.87
4:A:308:TYR:O	4:A:311:VAL:HG23	1.75	0.87
4:B:829:ARG:HG3	4:B:829:ARG:HH11	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:420:MET:HA	4:B:425:ARG:O	1.75	0.87
4:A:231:ARG:HG2	4:A:234:ALA:HB2	1.54	0.87
4:A:871:ASN:ND2	4:A:873:ARG:HB2	1.90	0.86
4:B:118:THR:HG23	4:B:141:ILE:HD13	1.55	0.86
1:H:2:DG:H2''	1:H:3:DG:C8	2.10	0.86
4:B:408:PHE:HD1	4:B:414:ILE:HG21	1.40	0.86
4:D:536:PHE:HB3	4:D:882:PHE:HB3	1.57	0.86
4:C:84:ARG:O	4:C:84:ARG:HD3	1.75	0.86
4:D:89:PHE:O	4:D:93:LYS:HG3	1.74	0.86
4:D:437:ASN:ND2	4:D:440:THR:H	1.73	0.86
4:D:39:LEU:HD23	7:D:3105:HOH:O	1.74	0.86
4:D:204:TRP:HE3	7:D:3053:HOH:O	1.56	0.86
4:D:724:ALA:HB2	4:D:738:GLU:HG3	1.57	0.86
4:A:383:ALA:O	4:A:385:TYR:N	2.08	0.86
4:B:300:HIS:HE2	4:B:422:TRP:HZ3	1.21	0.86
4:C:828:VAL:HG23	4:C:829:ARG:H	1.40	0.86
4:D:137:VAL:O	4:D:141:ILE:HG13	1.75	0.86
4:A:791:LEU:HD11	4:A:809:LEU:HD22	1.55	0.86
4:C:317:TYR:O	4:C:321:ASN:ND2	2.07	0.86
4:C:574:VAL:O	4:C:578:VAL:HG23	1.75	0.86
4:B:706:LEU:HD21	4:B:849:PHE:CB	2.05	0.86
4:C:570:ILE:HA	4:C:573:ILE:CG2	2.05	0.86
4:D:308:TYR:HE2	4:D:734:PRO:HG2	1.39	0.86
4:A:109:ILE:HD11	4:A:145:ILE:O	1.76	0.85
4:B:122:THR:HG21	4:B:226:MET:HE2	1.56	0.85
4:C:84:ARG:NH1	4:C:87:ASP:HB2	1.91	0.85
4:C:845:PHE:O	4:C:848:GLN:HB2	1.75	0.85
4:B:463:HIS:CB	4:B:534:LEU:HD22	2.06	0.85
4:C:690:VAL:O	4:C:693:VAL:HB	1.76	0.85
4:B:408:PHE:N	4:B:408:PHE:HD2	1.72	0.85
4:D:804:ILE:HG23	4:D:816:THR:HG21	1.57	0.85
4:A:647:ARG:CD	4:A:675:GLY:HA2	2.05	0.85
1:N:12:DT:H2''	1:N:13:DC:C5'	2.06	0.85
4:B:737:GLN:HE21	4:B:739:TYR:HE2	1.22	0.85
4:C:338:ALA:O	4:C:340:VAL:N	2.10	0.85
3:P:1:DG:H1'	3:P:2:DT:H71	1.56	0.85
4:C:227:VAL:HB	4:C:244:ILE:HD12	1.58	0.85
4:C:276:LYS:HE2	7:C:3084:HOH:O	1.76	0.85
4:A:59:LEU:HA	4:A:64:VAL:CG2	2.06	0.85
4:B:37:LEU:H	4:B:37:LEU:HD12	1.42	0.85
4:C:404:GLN:HA	4:C:404:GLN:HE21	1.39	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:117:ILE:HG21	4:D:145:ILE:HD13	1.58	0.85
4:A:386:ARG:O	4:A:389:LYS:N	2.09	0.85
4:A:574:VAL:HG11	4:A:685:VAL:HG12	1.56	0.85
4:B:333:LYS:O	4:B:337:VAL:HG23	1.77	0.85
4:B:111:PRO:HG2	4:B:112:GLU:OE1	1.77	0.84
4:D:705:LEU:HB3	4:D:857:GLN:NE2	1.92	0.84
4:B:473:VAL:HG13	4:B:474:PRO:CD	2.07	0.84
4:A:256:THR:HG23	7:A:3067:HOH:O	1.77	0.84
4:A:505:GLN:O	4:A:507:SER:N	2.10	0.84
4:C:232:GLN:HB2	4:C:241:SER:O	1.77	0.84
4:B:423:ARG:HG3	4:B:781:ASN:HD22	1.40	0.84
4:C:452:ILE:HD11	4:C:457:TYR:CA	2.07	0.84
4:A:881:ALA:O	4:A:882:PHE:C	2.14	0.84
4:C:158:GLU:CG	4:C:195:LEU:HD22	2.01	0.84
1:H:9:DA:N6	3:J:1:DG:N2	2.26	0.84
4:C:92:VAL:CG1	4:C:99:ARG:HG3	2.06	0.84
4:C:278:TRP:CE3	4:C:284:GLY:HA3	2.13	0.84
4:A:727:TRP:CE2	4:A:735:VAL:HG11	2.12	0.84
4:C:559:VAL:HG23	4:C:561:LEU:HD13	1.58	0.84
4:A:452:ILE:HD11	4:A:457:TYR:CA	2.07	0.84
4:B:17:ALA:HA	7:B:3012:HOH:O	1.78	0.84
4:B:168:GLU:O	4:B:172:LYS:HG2	1.77	0.84
4:A:721:LYS:HD3	4:A:722:ARG:H	1.41	0.84
4:B:632:ARG:HD2	6:B:2001:APC:HN61	1.43	0.84
4:B:728:VAL:HG22	4:B:734:PRO:HA	1.60	0.84
4:B:816:THR:HG22	4:B:817:ILE:N	1.91	0.84
4:B:201:TRP:HB3	7:B:3009:HOH:O	1.78	0.83
4:C:423:ARG:HB2	4:C:423:ARG:NH1	1.93	0.83
4:A:816:THR:HG22	4:A:817:ILE:H	1.43	0.83
4:C:636:THR:HG22	4:C:639:TYR:HD2	1.41	0.83
4:A:646:PHE:O	4:A:650:VAL:HG23	1.78	0.83
4:A:731:ASP:OD1	4:A:792:ARG:NH2	2.11	0.83
4:A:720:ARG:HG2	4:A:720:ARG:HH11	1.42	0.83
4:B:574:VAL:HG21	4:B:685:VAL:HG12	1.57	0.83
4:B:339:ASN:O	4:B:343:LYS:CD	2.26	0.83
4:B:432:PHE:HE2	4:B:444:LEU:HD21	1.40	0.83
4:B:505:GLN:N	4:B:505:GLN:HE21	1.75	0.83
4:C:275:PRO:HG2	4:C:324:GLN:HG2	1.61	0.83
4:A:386:ARG:HD2	7:A:3138:HOH:O	1.76	0.83
4:A:574:VAL:O	4:A:578:VAL:HG23	1.76	0.83
4:C:437:ASN:HD22	4:C:437:ASN:N	1.72	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:744:GLN:HA	4:D:756:ARG:CZ	2.08	0.83
4:A:66:ASP:OD2	4:A:752:LEU:HD23	1.79	0.83
4:A:833:VAL:HG13	4:A:872:LEU:HB3	1.58	0.83
4:C:404:GLN:HG2	4:C:432:PHE:CB	2.09	0.83
4:C:551:ARG:HE	4:C:872:LEU:HD21	1.42	0.83
4:C:728:VAL:HG22	4:C:734:PRO:HA	1.59	0.83
4:B:691:ALA:O	4:B:694:GLU:HB2	1.79	0.83
4:A:280:GLY:HA2	4:A:317:TYR:CZ	2.13	0.82
4:B:437:ASN:C	4:B:437:ASN:HD22	1.81	0.82
4:B:172:LYS:HB3	4:B:172:LYS:NZ	1.93	0.82
4:B:122:THR:HG21	4:B:226:MET:CE	2.09	0.82
4:B:881:ALA:O	4:B:882:PHE:C	2.14	0.82
4:D:59:LEU:HD23	4:D:64:VAL:HG22	1.59	0.82
4:D:329:LYS:HG2	4:D:445:THR:O	1.78	0.82
4:D:778:ILE:HG23	4:D:779:ALA:N	1.93	0.82
4:B:846:TYR:HA	4:B:849:PHE:HE1	1.42	0.82
4:C:582:LEU:HB3	4:C:621:LEU:HD21	1.62	0.82
4:C:663:LYS:HD3	4:C:664:GLY:H	1.45	0.82
4:A:881:ALA:O	4:A:882:PHE:O	1.98	0.82
4:D:668:THR:HG22	4:D:669:GLN:HE21	1.45	0.82
1:E:14:DG:H2'	1:E:15:DC:C6	2.15	0.82
4:A:278:TRP:CE3	4:A:284:GLY:HA3	2.15	0.82
4:B:345:LYS:NZ	4:B:351:ASP:H	1.77	0.82
4:B:574:VAL:O	4:B:574:VAL:CG1	2.26	0.82
4:C:308:TYR:O	4:C:311:VAL:HG23	1.79	0.82
4:D:828:VAL:HB	4:D:883:ALA:HA	1.61	0.82
4:B:298:ARG:HG3	4:B:420:MET:O	1.78	0.82
4:B:574:VAL:O	4:B:574:VAL:HG12	1.76	0.82
4:C:579:ASN:HA	4:C:582:LEU:HD12	1.62	0.82
4:C:169:GLN:O	4:C:173:ARG:HG2	1.80	0.82
4:D:275:PRO:HG2	4:D:324:GLN:HG2	1.61	0.82
4:D:470:VAL:HG12	4:D:473:VAL:HG11	1.61	0.82
4:A:486:HIS:HD2	4:A:518:TYR:CE1	1.98	0.82
1:N:10:DT:H5'	4:D:641:SER:CA	2.09	0.82
4:A:512:LEU:HG	4:A:516:PHE:HE1	1.43	0.82
4:B:231:ARG:HD2	4:B:240:ASP:OD2	1.80	0.82
4:B:408:PHE:N	4:B:408:PHE:CD2	2.47	0.82
4:A:19:ILE:HG13	7:A:3121:HOH:O	1.78	0.81
4:C:236:VAL:CB	4:C:239:GLN:HB2	2.10	0.81
4:D:486:HIS:HA	4:D:489:ILE:HD12	1.59	0.81
4:B:229:LEU:HD11	4:B:242:GLU:HG2	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:342:THR:HG22	4:D:348:PRO:HG2	1.62	0.81
1:H:13:DC:O4'	4:B:427:TYR:HE2	1.60	0.81
4:A:421:ASP:OD1	4:A:423:ARG:HD3	1.79	0.81
4:D:541:SER:HA	4:D:544:GLN:NE2	1.95	0.81
4:D:870:LEU:HD22	4:D:872:LEU:HD23	1.62	0.81
2:I:4:G:H2'	2:I:5:C:C6	2.16	0.81
4:C:231:ARG:HG2	4:C:234:ALA:HB2	1.63	0.81
4:C:271:CYS:SG	4:C:417:PRO:HD3	2.20	0.81
4:B:51:PHE:O	4:B:51:PHE:CD2	2.34	0.81
4:C:550:LEU:HD21	4:C:865:PRO:HG2	1.62	0.81
4:D:308:TYR:CE2	4:D:734:PRO:HG2	2.14	0.81
4:C:249:GLU:CD	4:C:249:GLU:N	2.31	0.81
4:A:401:MET:O	4:A:403:GLU:N	2.14	0.81
4:C:631:LYS:HZ3	6:C:2002:APC:H3A2	1.43	0.81
4:D:16:LEU:HD22	4:D:38:ALA:HA	1.61	0.81
4:D:699:LEU:O	4:D:778:ILE:HG21	1.80	0.81
4:B:632:ARG:O	4:B:636:THR:HG23	1.79	0.81
4:B:742:PRO:HB3	4:B:744:GLN:OE1	1.81	0.81
4:A:583:GLN:HB2	7:A:3056:HOH:O	1.79	0.81
4:D:80:LYS:HD3	4:D:224:THR:HB	1.62	0.81
4:A:184:GLN:HG3	7:A:3137:HOH:O	1.81	0.81
4:B:587:ILE:HG22	4:B:588:ASN:ND2	1.96	0.81
4:D:551:ARG:HB2	4:D:868:GLY:H	1.45	0.81
4:A:303:LYS:HD2	7:D:3155:HOH:O	1.81	0.80
4:B:470:VAL:O	4:B:470:VAL:HG12	1.81	0.80
4:C:291:ARG:HG3	7:C:3104:HOH:O	1.81	0.80
4:C:610:LYS:HE3	7:C:3172:HOH:O	1.80	0.80
4:D:871:ASN:HD21	4:D:873:ARG:HB2	1.46	0.80
4:A:280:GLY:HA2	4:A:317:TYR:CE1	2.16	0.80
4:B:275:PRO:HD2	7:B:3116:HOH:O	1.81	0.80
4:D:286:TYR:CE1	4:D:417:PRO:HG3	2.15	0.80
4:B:126:LEU:HD13	4:B:246:LEU:HB2	1.61	0.80
4:B:869:ASN:N	4:B:869:ASN:ND2	2.28	0.80
4:A:15:GLU:HB3	4:A:19:ILE:HG12	1.63	0.80
4:D:840:ASP:O	4:D:842:LEU:N	2.14	0.80
4:A:669:GLN:HG2	4:A:672:GLN:HE21	1.47	0.80
4:A:801:LYS:C	4:A:801:LYS:HD3	2.01	0.80
4:A:278:TRP:CZ3	4:A:284:GLY:HA3	2.17	0.80
4:A:624:GLY:HA3	7:A:3045:HOH:O	1.79	0.80
4:D:582:LEU:HD11	4:D:625:VAL:HG21	1.62	0.80
4:A:502:TRP:CG	4:A:512:LEU:HD13	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:158:GLU:HA	4:B:195:LEU:HD13	1.63	0.80
4:C:631:LYS:CE	6:C:2002:APC:H3A2	2.11	0.80
4:D:448:LYS:NZ	4:D:806:SER:HB3	1.96	0.80
1:H:6:DT:C6	1:H:6:DT:H5'	2.16	0.80
4:A:802:TYR:O	4:A:804:ILE:N	2.13	0.80
4:B:537:ASP:H	4:B:882:PHE:HD2	1.28	0.80
4:B:669:GLN:CG	4:B:672:GLN:HG3	2.11	0.80
4:C:211:HIS:O	4:C:214:VAL:HG23	1.81	0.80
4:D:552:ASP:OD1	4:D:555:GLY:N	2.11	0.80
7:I:777:HOH:O	4:B:386:ARG:HD3	1.82	0.79
1:N:2:DG:H2''	1:N:3:DG:C8	2.16	0.79
4:D:14:ILE:H	4:D:14:ILE:HD12	1.45	0.79
4:D:281:ILE:HG22	4:D:282:THR:HG22	1.62	0.79
4:D:489:ILE:O	4:D:492:CYS:SG	2.40	0.79
4:A:15:GLU:HG3	4:A:18:ALA:H	1.45	0.79
4:A:478:ARG:HH12	4:A:882:PHE:HZ	1.29	0.79
4:A:610:LYS:O	4:A:610:LYS:HG2	1.79	0.79
4:C:214:VAL:HA	4:C:217:ILE:HD12	1.65	0.79
4:D:125:CYS:O	4:D:128:SER:HB3	1.81	0.79
4:D:490:MET:O	4:D:493:ALA:HB3	1.81	0.79
4:A:462:ILE:HG12	4:A:479:ILE:HD11	1.64	0.79
4:B:881:ALA:O	4:B:883:ALA:OXT	1.99	0.79
4:A:157:LEU:HB3	7:A:3133:HOH:O	1.80	0.79
4:A:452:ILE:HD11	4:A:457:TYR:CB	2.13	0.79
4:A:526:LEU:HD12	4:A:526:LEU:N	1.97	0.79
4:C:78:LEU:N	4:C:79:PRO:HD2	1.97	0.79
4:D:804:ILE:HG12	4:D:820:ASP:HB3	1.63	0.79
1:H:14:DG:H2''	1:H:15:DC:C5'	2.13	0.79
4:A:119:ILE:O	4:A:123:LEU:HD12	1.81	0.79
4:B:770:ASP:C	4:B:770:ASP:OD1	2.21	0.79
4:A:342:THR:HG21	4:A:398:LEU:HD21	1.61	0.79
4:D:860:LYS:HD2	4:D:860:LYS:O	1.83	0.79
4:A:806:SER:O	4:A:816:THR:HG23	1.82	0.79
4:B:748:ASN:ND2	4:B:751:PHE:HB2	1.98	0.79
4:C:19:ILE:HD13	7:C:3117:HOH:O	1.83	0.79
4:C:59:LEU:HD22	4:C:64:VAL:HG13	1.65	0.79
4:C:158:GLU:HA	4:C:195:LEU:HD13	1.63	0.79
4:D:139:SER:HB2	4:D:210:ILE:CD1	2.13	0.79
4:C:396:ILE:HG22	7:C:3188:HOH:O	1.82	0.79
4:C:299:THR:HG22	4:C:300:HIS:N	1.98	0.79
4:A:291:ARG:HB2	7:A:3193:HOH:O	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:452:ILE:HD11	4:A:457:TYR:HA	1.65	0.78
4:C:47:GLY:HA3	4:C:265:SER:O	1.83	0.78
4:C:563:PRO:HB3	4:C:877:GLU:O	1.82	0.78
4:A:16:LEU:HD13	4:A:38:ALA:CB	2.13	0.78
4:B:24:LEU:HD13	4:B:37:LEU:HD11	1.62	0.78
4:B:712:ASP:HB3	7:B:3078:HOH:O	1.84	0.78
4:B:814:PHE:HB3	4:B:824:LEU:HD21	1.65	0.78
4:D:475:PHE:HE2	4:D:879:ASP:HB3	1.48	0.78
4:A:871:ASN:HB3	4:A:874:ASP:OD2	1.83	0.78
4:B:816:THR:CG2	4:B:817:ILE:H	1.89	0.78
4:A:133:THR:HA	4:A:243:THR:HG22	1.65	0.78
4:B:449:GLY:HA3	4:B:529:ASN:ND2	1.99	0.78
4:C:404:GLN:HG2	4:C:432:PHE:HB2	1.65	0.78
4:C:778:ILE:CG2	4:C:779:ALA:N	2.46	0.78
4:D:806:SER:O	4:D:816:THR:HG23	1.81	0.78
4:A:748:ASN:ND2	4:A:751:PHE:H	1.82	0.78
4:C:505:GLN:O	4:C:508:PRO:HD3	1.82	0.78
1:K:11:DA:C8	4:C:639:TYR:HB3	2.18	0.78
4:A:546:PHE:CE1	4:A:783:VAL:CG2	2.63	0.78
4:A:791:LEU:CD1	4:A:809:LEU:HD22	2.14	0.78
4:B:446:LEU:HD12	4:B:817:ILE:HG23	1.64	0.78
4:C:84:ARG:HA	4:C:84:ARG:HH11	1.47	0.78
4:A:44:TYR:OH	4:A:292:ARG:HB3	1.83	0.78
4:A:475:PHE:O	4:A:479:ILE:HG12	1.84	0.78
4:D:427:TYR:HA	4:D:435:GLN:HE22	1.48	0.78
4:B:869:ASN:N	4:B:869:ASN:HD22	1.81	0.78
4:C:448:LYS:HE3	4:C:806:SER:OG	1.84	0.78
4:D:323:ALA:O	4:D:325:ASN:N	2.16	0.78
4:A:546:PHE:CZ	4:A:783:VAL:HG22	2.19	0.78
4:A:562:LEU:HD21	4:A:870:LEU:HD12	1.65	0.78
4:A:860:LYS:HD2	4:A:860:LYS:O	1.84	0.78
4:C:545:HIS:O	4:C:549:MET:HG2	1.84	0.78
4:D:454:LYS:HG3	4:D:455:GLU:H	1.48	0.78
1:N:15:DC:C2	1:N:16:DC:C5	2.72	0.77
4:D:475:PHE:CE2	4:D:879:ASP:HB3	2.19	0.77
4:B:423:ARG:HH12	4:B:784:HIS:HB3	1.48	0.77
4:B:274:PRO:HD3	4:B:415:TRP:CZ3	2.19	0.77
4:B:398:LEU:HD21	4:B:439:MET:HE1	1.65	0.77
4:C:706:LEU:HD22	4:C:725:VAL:HG22	1.67	0.77
4:A:727:TRP:HA	4:A:848:GLN:HE21	1.46	0.77
4:B:80:LYS:O	4:B:223:SER:HB2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:159:ALA:O	4:D:163:LYS:HB2	1.84	0.77
1:H:2:DG:H2''	1:H:3:DG:H8	1.48	0.77
2:O:4:G:O2'	2:O:5:C:H5'	1.85	0.77
4:B:631:LYS:HE2	6:B:2001:APC:H3A2	1.67	0.77
4:C:155:ARG:HB2	4:C:163:LYS:NZ	2.00	0.77
4:C:460:LEU:HG	4:C:460:LEU:O	1.84	0.77
4:B:233:ASN:HD22	4:B:239:GLN:NE2	1.82	0.77
4:B:264:ILE:C	4:B:266:PRO:HD3	2.05	0.77
4:B:273:VAL:O	4:B:274:PRO:O	2.02	0.77
4:C:181:ALA:O	4:C:185:VAL:HG22	1.85	0.77
4:D:563:PRO:HB2	7:D:3032:HOH:O	1.85	0.77
4:A:468:ALA:HB2	4:A:511:PHE:CE1	2.20	0.77
4:D:57:ARG:O	4:D:60:LYS:HB3	1.85	0.77
4:A:141:ILE:HG22	4:A:145:ILE:HD11	1.66	0.77
4:A:664:GLY:HA2	4:A:667:PHE:HD2	1.50	0.77
4:B:407:LYS:HG2	4:B:408:PHE:CD2	2.19	0.77
4:B:489:ILE:HG22	4:B:515:CYS:HB3	1.67	0.77
4:B:663:LYS:HG2	4:B:664:GLY:H	1.49	0.77
4:C:81:MET:O	4:C:85:ILE:HG13	1.85	0.77
4:C:275:PRO:HB2	4:C:324:GLN:OE1	1.85	0.77
4:D:51:PHE:CE2	4:D:55:PHE:HB2	2.20	0.77
4:D:55:PHE:CZ	4:D:59:LEU:HD21	2.20	0.77
4:D:720:ARG:HH11	4:D:720:ARG:CG	1.86	0.77
1:H:14:DG:H2''	1:H:15:DC:H5'	1.67	0.77
4:B:5:ASN:HD22	4:B:8:LYS:HG3	1.49	0.77
4:C:337:VAL:HG21	4:C:512:LEU:HD21	1.66	0.77
4:C:433:ASN:CA	7:C:3164:HOH:O	2.33	0.77
1:K:11:DA:H2'	1:K:12:DT:C7	2.14	0.76
4:A:60:LYS:O	4:A:60:LYS:NZ	2.18	0.76
4:A:825:PHE:CZ	4:A:829:ARG:NH2	2.52	0.76
4:D:744:GLN:HA	4:D:756:ARG:NE	2.00	0.76
4:C:401:MET:O	4:C:404:GLN:HB3	1.85	0.76
4:C:516:PHE:O	4:C:519:ALA:HB3	1.84	0.76
4:D:95:LYS:HD3	7:D:3062:HOH:O	1.85	0.76
4:A:210:ILE:O	4:A:214:VAL:HG23	1.85	0.76
4:A:390:ALA:O	4:A:392:LYS:N	2.18	0.76
4:A:495:SER:HA	7:A:3203:HOH:O	1.85	0.76
4:B:582:LEU:HB3	4:B:621:LEU:HD11	1.65	0.76
4:C:55:PHE:O	4:C:58:GLN:HB2	1.85	0.76
4:D:473:VAL:N	4:D:567:VAL:HG21	2.00	0.76
4:A:281:ILE:CG1	4:A:309:GLU:HA	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:87:ASP:O	4:A:91:GLU:HG3	1.85	0.76
4:B:423:ARG:CG	4:B:781:ASN:HD22	1.98	0.76
4:D:651:LEU:O	4:D:651:LEU:HD13	1.85	0.76
4:B:690:VAL:O	4:B:693:VAL:HG23	1.84	0.76
4:A:512:LEU:HG	4:A:516:PHE:CE1	2.21	0.76
4:B:784:HIS:O	4:B:786:GLN:N	2.18	0.76
4:B:790:HIS:HE1	4:B:831:THR:HG23	1.50	0.76
4:A:92:VAL:HG11	4:A:100:PRO:HD2	1.66	0.76
4:B:390:ALA:C	4:B:392:LYS:H	1.87	0.76
4:B:418:TYR:CD2	4:B:428:ALA:HA	2.21	0.76
4:A:454:LYS:N	4:A:526:LEU:HD23	2.00	0.76
4:C:15:GLU:HG3	4:C:18:ALA:H	1.49	0.76
4:C:744:GLN:CB	7:C:3076:HOH:O	2.34	0.76
4:A:548:ALA:O	4:A:550:LEU:N	2.18	0.76
4:C:778:ILE:CG2	4:C:779:ALA:H	1.99	0.76
4:D:790:HIS:CE1	4:D:831:THR:HG23	2.16	0.76
4:A:464:GLY:HA3	4:A:514:PHE:CZ	2.21	0.75
4:C:308:TYR:OH	4:C:734:PRO:O	2.05	0.75
4:D:540:CYS:O	4:D:542:GLY:N	2.18	0.75
4:A:84:ARG:O	4:A:84:ARG:HD3	1.87	0.75
4:A:668:THR:HG22	4:A:669:GLN:OE1	1.86	0.75
4:A:825:PHE:CE1	4:A:829:ARG:CZ	2.68	0.75
4:A:290:GLY:O	4:A:293:PRO:HD3	1.86	0.75
4:C:308:TYR:OH	4:C:733:PHE:HE2	1.69	0.75
4:D:228:SER:HB3	7:D:3168:HOH:O	1.86	0.75
4:A:457:TYR:HD1	4:A:521:VAL:HG21	1.52	0.75
4:A:816:THR:OG1	4:A:824:LEU:HD22	1.87	0.75
4:C:299:THR:HG22	4:C:300:HIS:H	1.51	0.75
4:D:829:ARG:HH11	4:D:829:ARG:HG3	1.51	0.75
4:D:141:ILE:O	4:D:145:ILE:HG12	1.87	0.75
4:B:719:LEU:HD23	4:B:854:HIS:NE2	2.01	0.75
4:C:5:ASN:HD21	4:C:7:ALA:HB3	1.50	0.75
4:D:465:ALA:CB	4:D:478:ARG:HB3	2.16	0.75
4:D:871:ASN:ND2	4:D:873:ARG:HB2	2.00	0.75
4:A:280:GLY:CA	4:A:317:TYR:OH	2.35	0.75
4:B:391:ARG:HG3	7:B:3101:HOH:O	1.86	0.75
4:B:463:HIS:HB2	4:B:534:LEU:HD22	1.68	0.75
4:C:539:SER:HA	7:C:3124:HOH:O	1.86	0.75
4:D:297:VAL:HG12	4:D:299:THR:HG22	1.68	0.75
4:A:273:VAL:CG2	4:A:273:VAL:O	2.35	0.75
4:A:463:HIS:HA	4:A:466:ASN:ND2	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:10:DT:H5'	4:D:641:SER:N	2.02	0.75
4:D:435:GLN:HB3	4:D:810:ILE:HG12	1.69	0.75
4:A:544:GLN:CG	4:A:559:VAL:HG21	2.16	0.74
1:H:15:DC:H2''	1:H:16:DC:C5'	2.18	0.74
7:I:777:HOH:O	4:B:386:ARG:CD	2.33	0.74
4:A:486:HIS:CD2	4:A:518:TYR:HE1	2.06	0.74
4:B:55:PHE:CD2	4:B:55:PHE:O	2.40	0.74
4:C:810:ILE:O	4:C:810:ILE:HG22	1.86	0.74
4:A:514:PHE:HD1	4:A:515:CYS:N	1.85	0.74
4:A:793:LYS:O	4:A:796:VAL:HG23	1.86	0.74
4:B:56:GLU:OE1	4:B:57:ARG:HA	1.87	0.74
4:C:4:ILE:HD12	4:C:256:THR:HG23	1.69	0.74
4:C:324:GLN:HE21	4:C:418:TYR:H	1.36	0.74
4:D:454:LYS:HG3	4:D:455:GLU:N	2.03	0.74
4:A:825:PHE:CE1	4:A:829:ARG:NH2	2.55	0.74
4:B:92:VAL:HA	7:B:3193:HOH:O	1.88	0.74
4:B:871:ASN:HB3	4:B:874:ASP:OD2	1.88	0.74
4:D:351:ASP:HA	7:D:3124:HOH:O	1.86	0.74
4:B:143:ARG:O	4:B:146:GLU:HB3	1.86	0.74
4:B:475:PHE:O	4:B:476:PRO:C	2.23	0.74
4:C:109:ILE:CD1	4:C:149:ALA:HB2	2.17	0.74
4:C:141:ILE:O	4:C:145:ILE:HG12	1.86	0.74
4:A:60:LYS:O	4:A:60:LYS:HG2	1.86	0.74
4:A:77:LEU:HD23	4:A:119:ILE:HD12	1.70	0.74
4:A:418:TYR:HD2	4:A:426:VAL:CG1	2.01	0.74
4:B:651:LEU:HD22	4:B:651:LEU:O	1.86	0.74
4:C:749:LEU:HD12	4:C:750:MET:HG2	1.69	0.74
4:A:275:PRO:HD2	7:A:3206:HOH:O	1.88	0.74
4:B:71:LYS:N	4:B:72:PRO:HD2	2.03	0.74
4:B:846:TYR:HA	4:B:849:PHE:CE1	2.23	0.74
4:B:855:GLU:O	4:B:858:LEU:HD12	1.87	0.74
4:C:84:ARG:HH12	4:C:87:ASP:CB	2.00	0.74
4:A:116:TYR:OH	4:A:752:LEU:HD22	1.88	0.74
4:C:706:LEU:CD2	4:C:725:VAL:HG13	2.18	0.74
4:A:395:ARG:HG3	4:A:395:ARG:O	1.88	0.74
4:B:537:ASP:O	4:B:882:PHE:HB2	1.87	0.74
4:B:663:LYS:CG	4:B:664:GLY:H	2.00	0.74
4:C:738:GLU:HA	4:C:774:GLN:HE22	1.53	0.74
4:C:744:GLN:HB3	4:C:756:ARG:HB3	1.70	0.74
4:D:250:TYR:O	4:D:254:ILE:HG13	1.88	0.74
4:B:172:LYS:HB3	4:B:172:LYS:HZ2	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:636:THR:HG21	4:B:649:GLN:HE22	1.53	0.73
4:C:656:GLN:N	4:C:657:PRO:HD2	2.02	0.73
4:D:663:LYS:HG2	4:D:664:GLY:H	1.52	0.73
1:H:12:DT:H4'	4:B:423:ARG:HE	1.52	0.73
4:B:780:PRO:HA	4:B:783:VAL:HG23	1.70	0.73
4:C:866:ALA:HB2	7:C:3189:HOH:O	1.86	0.73
4:C:850:ALA:O	4:C:853:LEU:HG	1.89	0.73
4:B:226:MET:O	4:B:247:ALA:HB2	1.88	0.73
4:B:278:TRP:CE3	4:B:284:GLY:HA3	2.23	0.73
4:B:557:ARG:O	4:B:557:ARG:HG2	1.86	0.73
4:B:662:GLY:O	4:B:663:LYS:O	2.06	0.73
4:C:655:ILE:HD12	4:C:674:ALA:HB2	1.69	0.73
4:C:492:CYS:HA	7:C:3071:HOH:O	1.89	0.73
4:C:744:GLN:HB2	7:C:3076:HOH:O	1.89	0.73
4:D:457:TYR:CE1	4:D:521:VAL:HG11	2.23	0.73
4:D:881:ALA:O	4:D:882:PHE:C	2.27	0.73
1:K:13:DC:H2''	1:K:14:DG:C5'	2.18	0.73
4:A:100:PRO:HG2	4:A:103:PHE:HB2	1.69	0.73
4:A:380:ALA:O	4:A:384:VAL:HG23	1.87	0.73
4:C:210:ILE:O	4:C:214:VAL:HG22	1.89	0.73
4:C:636:THR:HG22	4:C:639:TYR:CD2	2.22	0.73
4:C:778:ILE:HG23	4:C:779:ALA:H	1.51	0.73
4:D:417:PRO:O	4:D:429:VAL:HG23	1.87	0.73
4:D:457:TYR:CD1	4:D:521:VAL:HG11	2.24	0.73
4:A:562:LEU:HD21	4:A:870:LEU:HD11	1.69	0.73
4:C:337:VAL:HG12	4:C:338:ALA:N	2.03	0.73
4:A:54:MET:O	4:A:58:GLN:HG2	1.89	0.73
4:C:70:ALA:C	4:C:72:PRO:HD2	2.09	0.73
4:C:281:ILE:HG12	4:C:309:GLU:HA	1.70	0.73
4:D:14:ILE:CG2	4:D:288:ALA:HB1	2.19	0.73
1:K:13:DC:H2''	1:K:14:DG:O5'	1.89	0.73
4:B:748:ASN:ND2	4:B:751:PHE:H	1.86	0.73
4:D:330:ILE:HG13	4:D:408:PHE:O	1.88	0.73
1:K:11:DA:H2'	1:K:12:DT:H72	1.69	0.73
4:A:138:ALA:O	4:A:213:GLY:HA3	1.89	0.73
4:A:281:ILE:CG2	4:A:282:THR:HG23	2.11	0.73
4:B:291:ARG:HB2	7:B:3037:HOH:O	1.89	0.73
4:C:739:TYR:HB2	4:C:774:GLN:OE1	1.89	0.73
4:D:623:TYR:HA	4:D:666:MET:HE1	1.70	0.73
2:I:1:G:H5''	7:I:873:HOH:O	1.89	0.72
4:C:269:GLN:O	4:C:430:SER:HB3	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:278:TRP:HB2	4:D:321:ASN:HD21	1.53	0.72
4:A:514:PHE:CD1	4:A:515:CYS:N	2.57	0.72
4:A:736:TRP:HB2	7:A:3116:HOH:O	1.88	0.72
4:C:728:VAL:HG22	4:C:734:PRO:CA	2.19	0.72
4:D:833:VAL:CG2	4:D:875:ILE:HB	2.19	0.72
4:A:428:ALA:H	4:A:435:GLN:HE22	1.34	0.72
4:A:829:ARG:HG3	4:A:829:ARG:NH1	1.98	0.72
4:B:345:LYS:HZ3	4:B:351:ASP:H	1.37	0.72
4:B:418:TYR:HE2	4:B:428:ALA:CB	2.01	0.72
4:A:59:LEU:HA	4:A:64:VAL:HG22	1.70	0.72
4:B:119:ILE:O	4:B:122:THR:HB	1.88	0.72
4:B:395:ARG:O	4:B:398:LEU:N	2.22	0.72
4:B:454:LYS:HE2	7:B:3020:HOH:O	1.88	0.72
4:C:423:ARG:NH2	4:C:784:HIS:ND1	2.37	0.72
4:D:39:LEU:HD22	4:D:272:VAL:CG2	2.19	0.72
2:F:1:G:H2'	2:F:2:C:C6	2.24	0.72
4:D:272:VAL:O	4:D:415:TRP:HZ3	1.72	0.72
4:D:472:LYS:HA	4:D:567:VAL:HG11	1.71	0.72
4:D:505:GLN:N	4:D:505:GLN:NE2	2.37	0.72
4:B:339:ASN:O	4:B:343:LYS:HD2	1.88	0.72
4:A:113:ALA:O	4:A:117:ILE:HG13	1.89	0.72
4:B:268:PHE:CB	4:B:286:TYR:OH	2.35	0.72
4:B:314:PRO:O	4:B:316:VAL:N	2.23	0.72
4:B:567:VAL:HG13	4:B:880:PHE:CG	2.25	0.72
4:C:423:ARG:HD2	4:C:781:ASN:ND2	2.03	0.72
4:D:328:TRP:O	4:D:414:ILE:N	2.20	0.72
1:H:3:DG:N3	7:H:1116:HOH:O	2.22	0.72
4:B:432:PHE:CE2	4:B:444:LEU:HD21	2.23	0.72
4:B:578:VAL:HG22	4:B:680:LEU:HB3	1.72	0.72
4:C:459:TRP:HB3	4:C:534:LEU:HD13	1.70	0.72
4:D:327:ALA:HB2	4:D:415:TRP:NE1	2.05	0.72
4:D:448:LYS:CE	4:D:806:SER:HB3	2.19	0.72
4:D:593:GLU:O	4:D:610:LYS:N	2.19	0.72
4:A:182:PHE:O	4:A:185:VAL:HG22	1.90	0.72
4:A:423:ARG:NH2	4:A:784:HIS:HB3	2.05	0.72
4:B:281:ILE:CD1	4:B:309:GLU:HA	2.20	0.72
4:B:505:GLN:HE21	4:B:505:GLN:H	1.36	0.72
4:B:741:LYS:HB2	4:B:770:ASP:HB2	1.70	0.72
4:C:420:MET:HA	4:C:425:ARG:O	1.89	0.72
4:D:766:ASP:HB3	7:D:3085:HOH:O	1.88	0.72
4:A:84:ARG:HD3	4:A:84:ARG:C	2.10	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:502:TRP:CE2	4:A:512:LEU:HD13	2.25	0.71
4:B:471:ASP:O	4:B:472:LYS:HD2	1.90	0.71
4:C:335:LEU:HD21	4:C:339:ASN:HD22	1.55	0.71
4:A:421:ASP:O	4:A:423:ARG:N	2.22	0.71
4:B:300:HIS:NE2	4:B:422:TRP:CZ3	2.56	0.71
4:C:78:LEU:HG	4:C:78:LEU:O	1.88	0.71
4:C:247:ALA:HB1	4:C:249:GLU:OE1	1.90	0.71
4:D:352:ILE:HD12	4:D:352:ILE:N	2.05	0.71
4:D:443:LEU:N	4:D:443:LEU:HD23	2.04	0.71
1:E:15:DC:H2''	1:E:16:DC:H5'	1.71	0.71
4:B:281:ILE:HD13	4:B:309:GLU:HA	1.72	0.71
4:C:291:ARG:HB2	7:C:3192:HOH:O	1.89	0.71
4:C:433:ASN:OD1	4:C:435:GLN:N	2.21	0.71
4:C:663:LYS:CD	4:C:664:GLY:H	2.03	0.71
4:C:797:TRP:CZ2	4:C:801:LYS:HG3	2.26	0.71
4:B:423:ARG:CG	4:B:781:ASN:ND2	2.53	0.71
4:B:609:VAL:O	4:B:611:LEU:N	2.23	0.71
4:C:551:ARG:HD2	7:C:3087:HOH:O	1.91	0.71
4:A:666:MET:N	4:A:666:MET:SD	2.64	0.71
4:B:236:VAL:HG21	4:B:239:GLN:NE2	2.06	0.71
4:B:274:PRO:HD3	4:B:415:TRP:CH2	2.25	0.71
4:B:454:LYS:HB2	7:B:3020:HOH:O	1.90	0.71
4:B:623:TYR:HA	4:B:666:MET:HE1	1.71	0.71
4:C:557:ARG:HB2	4:C:562:LEU:HD12	1.70	0.71
4:A:5:ASN:ND2	4:A:7:ALA:HB3	2.06	0.71
4:A:457:TYR:CE1	4:A:521:VAL:HG11	2.25	0.71
4:B:308:TYR:CE2	4:B:734:PRO:HG2	2.25	0.71
4:B:617:ALA:HB2	4:B:676:TYR:OH	1.91	0.71
4:D:541:SER:HA	4:D:544:GLN:HE21	1.53	0.71
4:A:351:ASP:HA	7:A:3222:HOH:O	1.89	0.71
4:B:100:PRO:HG2	4:B:103:PHE:HB2	1.71	0.71
4:C:40:GLU:CD	4:C:286:TYR:HB3	2.10	0.71
4:D:231:ARG:CG	4:D:234:ALA:HB2	2.21	0.71
1:H:14:DG:H2''	1:H:15:DC:O5'	1.90	0.71
4:A:423:ARG:NH2	4:A:784:HIS:CG	2.59	0.71
4:B:11:PHE:CZ	4:B:44:TYR:HB3	2.24	0.71
4:B:564:SER:OG	4:B:566:THR:N	2.20	0.71
4:C:201:TRP:O	4:C:204:TRP:HB2	1.90	0.71
4:C:828:VAL:O	4:C:831:THR:HG22	1.89	0.71
4:D:257:ARG:O	4:D:261:LEU:HB2	1.91	0.71
4:D:324:GLN:HG3	4:D:417:PRO:HA	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:720:ARG:HG2	4:A:720:ARG:NH1	2.03	0.71
4:B:816:THR:HG21	4:B:820:ASP:HB3	1.73	0.71
4:D:269:GLN:HE22	4:D:407:LYS:HE2	1.56	0.71
4:A:109:ILE:CD1	4:A:145:ILE:O	2.39	0.71
4:A:643:GLU:HB2	7:A:3076:HOH:O	1.90	0.71
4:A:786:GLN:HA	4:A:786:GLN:NE2	2.03	0.71
4:A:828:VAL:HB	4:A:883:ALA:HA	1.73	0.71
4:B:390:ALA:O	4:B:393:SER:N	2.24	0.71
4:D:435:GLN:HA	4:D:810:ILE:HD11	1.72	0.71
4:D:772:HIS:O	4:D:773:LYS:C	2.28	0.71
4:A:161:HIS:O	4:A:164:LYS:HG2	1.90	0.70
4:A:786:GLN:OE1	4:A:841:VAL:HG11	1.91	0.70
4:B:213:GLY:O	4:B:217:ILE:HG13	1.91	0.70
4:C:553:GLU:HA	4:C:870:LEU:HD12	1.73	0.70
4:D:116:TYR:OH	4:D:752:LEU:HD22	1.90	0.70
4:D:428:ALA:H	4:D:435:GLN:NE2	1.89	0.70
4:A:633:SER:HB2	7:A:3199:HOH:O	1.91	0.70
4:A:810:ILE:HB	4:A:813:SER:HB3	1.72	0.70
4:B:849:PHE:O	4:B:852:GLN:N	2.22	0.70
4:C:120:LYS:HG3	4:C:752:LEU:HD11	1.74	0.70
4:A:827:ALA:O	4:A:830:GLU:HB2	1.91	0.70
4:B:312:TYR:HA	7:B:3069:HOH:O	1.89	0.70
4:B:645:GLY:O	4:B:647:ARG:N	2.24	0.70
4:C:338:ALA:HB2	4:C:509:PHE:CE1	2.20	0.70
4:D:264:ILE:CG2	4:D:292:ARG:HB2	2.21	0.70
4:D:810:ILE:HG22	4:D:810:ILE:O	1.89	0.70
4:A:89:PHE:HA	4:A:103:PHE:CE1	2.26	0.70
4:A:158:GLU:HG2	4:A:195:LEU:HD23	1.74	0.70
4:A:281:ILE:HG12	4:A:309:GLU:HA	1.73	0.70
4:A:720:ARG:O	4:A:721:LYS:O	2.09	0.70
4:B:475:PHE:O	4:B:477:GLU:N	2.25	0.70
4:B:777:GLY:O	4:B:780:PRO:HD2	1.92	0.70
4:D:29:GLY:HA2	7:D:3080:HOH:O	1.91	0.70
4:A:480:LYS:O	4:A:484:GLU:HG3	1.91	0.70
4:C:40:GLU:OE2	4:C:286:TYR:HD1	1.74	0.70
4:C:67:ASN:O	4:C:69:ALA:N	2.25	0.70
4:C:572:GLY:O	4:C:575:ALA:HB3	1.91	0.70
4:D:221:ILE:HG12	4:D:227:VAL:HG23	1.73	0.70
1:E:12:DT:H2"	1:E:13:DC:H5"	1.71	0.70
4:C:330:ILE:HG13	4:C:408:PHE:O	1.91	0.70
4:D:306:MET:O	4:D:308:TYR:N	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:432:PHE:CE1	4:D:444:LEU:HD11	2.26	0.70
4:D:739:TYR:OH	4:D:781:ASN:OD1	2.10	0.70
4:A:78:LEU:N	4:A:79:PRO:HD2	2.06	0.70
4:A:525:GLY:O	4:A:527:SER:N	2.24	0.70
4:B:326:THR:HA	7:B:3162:HOH:O	1.90	0.70
4:C:333:LYS:HD3	4:C:516:PHE:CD2	2.22	0.70
4:C:703:ALA:HB2	4:C:778:ILE:HG12	1.73	0.70
4:D:36:GLN:CD	4:D:273:VAL:HG22	2.12	0.70
4:D:268:PHE:CD2	4:D:429:VAL:HG12	2.26	0.70
4:A:4:ILE:HD12	7:A:3067:HOH:O	1.92	0.70
4:A:16:LEU:HA	4:A:37:LEU:HD22	1.73	0.70
4:B:632:ARG:HD3	6:B:2001:APC:N7	2.07	0.70
4:B:868:GLY:C	4:B:869:ASN:HD22	1.95	0.70
4:C:105:PHE:HE1	4:C:208:ASP:HB3	1.56	0.70
4:D:14:ILE:HG23	4:D:288:ALA:HB1	1.74	0.70
4:A:611:LEU:HD12	4:A:669:GLN:HB2	1.74	0.70
4:A:647:ARG:HG3	4:A:674:ALA:O	1.92	0.70
4:C:270:PRO:HG3	4:C:430:SER:OG	1.92	0.70
4:D:402:LEU:HD23	4:D:443:LEU:CD1	2.22	0.70
2:I:1:G:H2'	2:I:2:C:C6	2.27	0.70
4:B:416:PHE:CE1	4:B:433:ASN:HA	2.26	0.70
4:B:544:GLN:HG3	4:B:561:LEU:HD11	1.74	0.70
4:B:557:ARG:HD3	7:B:3119:HOH:O	1.91	0.70
4:B:734:PRO:HG2	4:B:734:PRO:O	1.91	0.70
4:C:551:ARG:CG	4:C:551:ARG:HH11	2.05	0.70
4:D:882:PHE:O	4:D:883:ALA:HB3	1.92	0.70
1:K:11:DA:C2	1:K:12:DT:C4	2.80	0.69
4:A:746:ARG:HH12	4:A:754:GLN:H	1.37	0.69
4:B:264:ILE:O	4:B:266:PRO:HD3	1.92	0.69
4:B:298:ARG:HE	4:B:419:ASN:HB3	1.57	0.69
4:B:647:ARG:O	4:B:648:GLN:C	2.31	0.69
4:B:788:GLY:O	4:B:792:ARG:HG3	1.92	0.69
4:D:71:LYS:HD3	7:D:3030:HOH:O	1.92	0.69
4:D:779:ALA:O	4:D:783:VAL:HG22	1.90	0.69
4:A:273:VAL:O	4:A:273:VAL:HG23	1.91	0.69
4:B:308:TYR:HA	4:B:311:VAL:CG2	2.21	0.69
4:A:721:LYS:HD3	4:A:722:ARG:N	2.07	0.69
4:B:278:TRP:HA	7:B:3014:HOH:O	1.92	0.69
4:C:322:ILE:HG13	7:C:3131:HOH:O	1.91	0.69
4:C:570:ILE:O	4:C:574:VAL:HG23	1.93	0.69
4:D:324:GLN:HG2	4:D:324:GLN:O	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:471:ASP:O	4:D:472:LYS:HD2	1.92	0.69
4:A:14:ILE:HD12	4:A:14:ILE:N	2.07	0.69
4:A:19:ILE:HG23	4:A:20:PRO:HD2	1.73	0.69
4:A:275:PRO:HD3	4:A:415:TRP:HB3	1.74	0.69
4:B:307:ARG:HD3	4:B:736:TRP:CE3	2.28	0.69
4:B:390:ALA:C	4:B:392:LYS:N	2.46	0.69
4:B:824:LEU:O	4:B:828:VAL:HG23	1.92	0.69
4:D:573:ILE:HA	4:D:576:LYS:HD2	1.73	0.69
4:A:452:ILE:CD1	4:A:457:TYR:HB2	2.22	0.69
4:B:473:VAL:CG1	4:B:477:GLU:HB2	2.23	0.69
4:B:801:LYS:C	4:B:801:LYS:HD3	2.13	0.69
4:C:29:GLY:HA3	7:C:3129:HOH:O	1.93	0.69
4:B:512:LEU:O	4:B:515:CYS:N	2.25	0.69
4:B:829:ARG:NH2	4:B:882:PHE:CA	2.54	0.69
4:D:158:GLU:HA	4:D:195:LEU:HD22	1.75	0.69
1:H:12:DT:H4'	4:B:423:ARG:NE	2.08	0.69
1:K:7:DC:H2''	1:K:8:DG:O5'	1.91	0.69
4:A:6:ILE:O	4:A:8:LYS:N	2.22	0.69
4:A:236:VAL:HG11	4:A:239:GLN:CD	2.13	0.69
4:A:474:PRO:HG2	4:A:477:GLU:HG3	1.75	0.69
4:B:418:TYR:CE2	4:B:428:ALA:HB2	2.18	0.69
4:B:549:MET:CE	4:B:841:VAL:HG21	2.22	0.69
4:C:25:ALA:HA	4:C:29:GLY:O	1.92	0.69
4:C:308:TYR:HE2	4:C:734:PRO:HG2	1.57	0.69
4:D:120:LYS:HD2	4:D:752:LEU:HD11	1.73	0.69
4:D:206:LYS:HD3	4:D:206:LYS:H	1.57	0.69
4:D:210:ILE:O	4:D:214:VAL:HG23	1.93	0.69
4:D:274:PRO:HD3	4:D:415:TRP:CH2	2.27	0.69
4:D:657:PRO:O	4:D:661:SER:HB2	1.92	0.69
4:B:132:THR:HG21	7:B:3161:HOH:O	1.92	0.69
4:B:390:ALA:O	4:B:392:LYS:N	2.25	0.69
4:B:423:ARG:HH12	4:B:784:HIS:CB	2.06	0.69
4:D:337:VAL:HG21	4:D:512:LEU:HD21	1.74	0.69
1:H:3:DG:N2	7:H:948:HOH:O	2.25	0.69
4:A:311:VAL:HG12	4:A:312:TYR:N	2.08	0.69
4:A:526:LEU:CD1	4:A:526:LEU:H	2.06	0.69
4:A:665:LEU:H	4:A:665:LEU:HD12	1.58	0.69
4:B:247:ALA:HB3	4:B:250:TYR:HB2	1.76	0.69
4:B:452:ILE:CG2	4:B:453:GLY:N	2.33	0.69
4:D:333:LYS:NZ	4:D:516:PHE:HB3	2.08	0.69
4:A:308:TYR:CE2	4:A:734:PRO:HG2	2.21	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:109:ILE:HD12	4:B:109:ILE:N	2.08	0.68
4:B:308:TYR:HA	4:B:311:VAL:HG23	1.75	0.68
4:C:428:ALA:H	4:C:435:GLN:NE2	1.90	0.68
4:D:390:ALA:HB1	4:D:394:ARG:HH21	1.58	0.68
4:D:470:VAL:HG12	4:D:473:VAL:CG1	2.23	0.68
4:A:275:PRO:HD3	4:A:415:TRP:CB	2.22	0.68
4:A:4:ILE:HD11	4:A:256:THR:OG1	1.92	0.68
4:A:59:LEU:HD23	4:A:64:VAL:CG2	2.23	0.68
4:A:236:VAL:HG11	4:A:239:GLN:CG	2.24	0.68
4:A:404:GLN:HA	4:A:404:GLN:NE2	2.08	0.68
4:A:668:THR:HG22	4:A:669:GLN:CD	2.14	0.68
4:C:840:ASP:O	4:C:842:LEU:N	2.27	0.68
4:D:433:ASN:HB2	4:D:434:PRO:CD	2.23	0.68
4:B:571:TYR:HE1	7:B:3067:HOH:O	1.75	0.68
4:B:261:LEU:O	4:B:263:GLY:N	2.27	0.68
4:B:301:SER:O	4:B:304:ALA:N	2.27	0.68
4:C:335:LEU:HD11	4:C:406:ASN:OD1	1.94	0.68
4:A:11:PHE:CE1	4:A:44:TYR:HB3	2.29	0.68
4:B:840:ASP:O	4:B:842:LEU:N	2.27	0.68
4:A:551:ARG:HB2	4:A:868:GLY:H	1.58	0.68
4:B:31:ARG:HB3	4:B:31:ARG:HH11	1.59	0.68
4:B:720:ARG:HG2	4:B:720:ARG:NH1	1.92	0.68
4:B:730:PRO:CD	4:B:786:GLN:HE21	2.06	0.68
4:B:801:LYS:HD3	4:B:801:LYS:O	1.94	0.68
4:D:55:PHE:HA	4:D:58:GLN:HG3	1.75	0.68
4:D:326:THR:O	4:D:415:TRP:HD1	1.76	0.68
4:D:437:ASN:HD21	4:D:440:THR:H	1.41	0.68
1:E:12:DT:H5''	4:A:422:TRP:CH2	2.29	0.68
4:A:486:HIS:CD2	4:A:518:TYR:CE1	2.80	0.68
4:A:655:ILE:HD12	4:A:674:ALA:HB2	1.76	0.68
4:B:301:SER:O	4:B:304:ALA:HB3	1.94	0.68
4:B:354:ALA:HA	7:B:3118:HOH:O	1.94	0.68
4:C:17:ALA:HB2	7:C:3201:HOH:O	1.92	0.68
4:C:40:GLU:OE1	4:C:286:TYR:HB3	1.92	0.68
4:C:432:PHE:CZ	4:C:444:LEU:HD21	2.28	0.68
4:C:465:ALA:O	4:C:470:VAL:HG23	1.94	0.68
4:D:433:ASN:HB2	4:D:434:PRO:HD2	1.74	0.68
4:B:564:SER:OG	4:B:565:GLU:N	2.25	0.68
4:B:706:LEU:HD11	4:B:849:PHE:HD2	1.58	0.68
4:D:233:ASN:HD22	4:D:239:GLN:NE2	1.92	0.68
4:A:552:ASP:OD2	7:A:3223:HOH:O	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:134:VAL:HG12	4:C:242:GLU:O	1.94	0.68
4:C:159:ALA:O	4:C:163:LYS:HB2	1.93	0.68
4:C:173:ARG:CZ	4:C:182:PHE:HB2	2.23	0.68
4:A:404:GLN:HE21	4:A:404:GLN:CA	2.02	0.67
4:B:299:THR:HG21	4:B:305:LEU:HA	1.76	0.67
4:C:146:GLU:OE2	4:C:201:TRP:HB3	1.94	0.67
4:C:338:ALA:C	4:C:340:VAL:N	2.46	0.67
4:C:340:VAL:O	4:C:342:THR:N	2.27	0.67
4:C:475:PHE:CE2	4:C:879:ASP:HB3	2.29	0.67
4:C:514:PHE:CG	4:C:514:PHE:O	2.47	0.67
4:C:785:SER:HA	7:C:3159:HOH:O	1.93	0.67
4:D:55:PHE:CE1	4:D:59:LEU:HD21	2.30	0.67
4:D:100:PRO:HG2	4:D:103:PHE:CB	2.23	0.67
4:D:161:HIS:O	4:D:164:LYS:HG2	1.94	0.67
4:A:631:LYS:NZ	6:A:2000:APC:C3A	2.49	0.67
4:A:748:ASN:HD22	4:A:751:PHE:H	1.40	0.67
4:B:418:TYR:HD2	4:B:428:ALA:HA	1.59	0.67
4:B:571:TYR:OH	4:B:635:MET:HE3	1.94	0.67
4:D:333:LYS:HB3	4:D:516:PHE:CD2	2.28	0.67
4:D:718:ILE:HD12	7:D:3025:HOH:O	1.94	0.67
4:D:829:ARG:HG3	4:D:829:ARG:NH1	2.07	0.67
4:A:526:LEU:N	4:A:526:LEU:CD1	2.57	0.67
4:A:744:GLN:HA	4:A:756:ARG:NH2	2.09	0.67
4:B:552:ASP:C	4:B:552:ASP:OD1	2.32	0.67
4:B:623:TYR:HA	4:B:666:MET:CE	2.23	0.67
4:C:50:ARG:HG2	4:C:50:ARG:NH1	2.07	0.67
4:C:866:ALA:HB1	7:C:3057:HOH:O	1.94	0.67
1:H:12:DT:O4'	4:B:423:ARG:NH2	2.27	0.67
1:N:14:DG:N7	7:N:81:HOH:O	2.27	0.67
4:A:78:LEU:HD21	4:A:116:TYR:HB2	1.74	0.67
4:A:423:ARG:NH2	4:A:784:HIS:CB	2.58	0.67
4:A:464:GLY:CA	4:A:514:PHE:CE2	2.78	0.67
4:A:551:ARG:NH2	4:A:872:LEU:HD11	2.10	0.67
4:B:269:GLN:NE2	4:B:407:LYS:NZ	2.42	0.67
4:B:418:TYR:HD2	4:B:427:TYR:O	1.78	0.67
4:C:32:LEU:HB2	7:C:3157:HOH:O	1.94	0.67
4:C:475:PHE:HE2	4:C:879:ASP:HB3	1.58	0.67
4:D:330:ILE:HD11	4:D:405:ALA:HA	1.75	0.67
4:D:855:GLU:O	4:D:858:LEU:HD12	1.94	0.67
4:A:495:SER:HB3	4:A:498:GLU:HG3	1.77	0.67
4:A:510:CYS:O	4:A:513:ALA:N	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:630:THR:O	7:A:3199:HOH:O	2.12	0.67
4:C:2:ASN:O	7:C:3169:HOH:O	2.11	0.67
4:C:59:LEU:CD2	4:C:64:VAL:HG13	2.24	0.67
4:A:109:ILE:HG13	4:A:149:ALA:HB2	1.75	0.67
4:A:428:ALA:HB3	4:A:433:ASN:HD22	1.57	0.67
4:B:449:GLY:HA3	4:B:529:ASN:HD21	1.58	0.67
4:B:829:ARG:HG3	4:B:829:ARG:NH1	2.05	0.67
4:C:24:LEU:HD21	4:C:287:TRP:CE2	2.29	0.67
4:C:330:ILE:CG1	4:C:408:PHE:O	2.43	0.67
4:C:631:LYS:HZ1	6:C:2002:APC:C3A	2.07	0.67
4:D:303:LYS:HG3	4:D:304:ALA:N	2.10	0.67
4:A:716:GLY:HA3	7:A:3184:HOH:O	1.93	0.67
4:A:802:TYR:CD2	4:A:802:TYR:N	2.61	0.67
4:A:849:PHE:HD2	4:A:853:LEU:HD21	1.60	0.67
4:B:794:THR:OG1	4:B:831:THR:HG21	1.92	0.67
4:C:632:ARG:NH2	6:C:2002:APC:H5'1	2.08	0.67
4:D:778:ILE:CG2	4:D:779:ALA:N	2.57	0.67
4:D:797:TRP:HE1	4:D:802:TYR:HE2	1.41	0.67
4:A:518:TYR:O	4:A:518:TYR:CD1	2.48	0.67
4:C:279:THR:HG22	7:C:3038:HOH:O	1.95	0.67
4:C:338:ALA:C	4:C:340:VAL:H	1.96	0.67
4:C:534:LEU:HD12	4:C:821:ALA:CB	2.25	0.67
4:D:19:ILE:HD12	4:D:20:PRO:HD2	1.77	0.67
4:D:656:GLN:N	4:D:657:PRO:HD2	2.10	0.67
4:D:769:ILE:H	4:D:769:ILE:HD12	1.60	0.67
4:A:746:ARG:HG3	4:A:756:ARG:HB2	1.77	0.67
4:B:64:VAL:HG21	4:B:127:THR:HG21	1.76	0.67
4:B:77:LEU:CD1	4:B:224:THR:HG21	2.25	0.67
4:B:423:ARG:CB	4:B:423:ARG:HH11	2.08	0.67
4:B:449:GLY:CA	4:B:529:ASN:HD21	2.08	0.67
4:C:9:ASN:HA	4:C:12:SER:HB3	1.76	0.67
4:C:308:TYR:CZ	4:C:733:PHE:HE2	2.12	0.67
4:C:349:VAL:HG11	4:C:508:PRO:HG3	1.77	0.67
4:A:428:ALA:HB3	4:A:433:ASN:ND2	2.09	0.67
4:A:843:ALA:O	4:A:846:TYR:N	2.27	0.67
4:B:254:ILE:HG22	4:B:255:ALA:N	2.10	0.67
4:B:549:MET:HE2	4:B:841:VAL:HG21	1.76	0.67
4:B:720:ARG:HH11	4:B:720:ARG:CG	2.03	0.67
4:C:77:LEU:C	4:C:79:PRO:HD2	2.15	0.67
4:C:707:ALA:O	4:C:722:ARG:HB3	1.95	0.67
4:A:786:GLN:HE21	4:A:786:GLN:CA	2.03	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:105:PHE:CE1	4:C:208:ASP:HB3	2.30	0.66
4:C:443:LEU:O	4:C:444:LEU:HD23	1.95	0.66
4:C:460:LEU:HA	4:C:534:LEU:CD2	2.24	0.66
4:D:39:LEU:HD22	4:D:272:VAL:HG23	1.76	0.66
4:D:272:VAL:O	4:D:415:TRP:CZ3	2.47	0.66
4:D:635:MET:HE1	6:D:2003:APC:H3'	1.77	0.66
4:A:46:MET:HG2	7:A:3162:HOH:O	1.94	0.66
4:B:671:ASN:O	4:B:674:ALA:HB3	1.96	0.66
4:B:850:ALA:O	4:B:852:GLN:N	2.28	0.66
4:C:706:LEU:HD22	4:C:725:VAL:CG1	2.24	0.66
4:A:548:ALA:C	4:A:550:LEU:H	1.97	0.66
4:A:669:GLN:O	4:A:670:PRO:C	2.33	0.66
4:B:35:GLU:O	4:B:38:ALA:HB3	1.96	0.66
4:B:731:ASP:HB3	4:B:789:SER:OG	1.96	0.66
4:D:89:PHE:HZ	4:D:106:LEU:HB3	1.60	0.66
4:D:269:GLN:HG2	4:D:408:PHE:HZ	1.59	0.66
4:A:881:ALA:O	4:A:883:ALA:OXT	2.14	0.66
4:C:551:ARG:CD	4:C:872:LEU:HD21	2.24	0.66
4:D:109:ILE:HD13	4:D:114:VAL:HG22	1.76	0.66
4:D:744:GLN:HG2	4:D:756:ARG:HB3	1.75	0.66
4:D:829:ARG:HH22	4:D:882:PHE:HA	1.61	0.66
4:A:308:TYR:OH	4:A:734:PRO:O	2.14	0.66
4:A:540:CYS:O	4:A:541:SER:C	2.33	0.66
4:A:828:VAL:HG23	4:A:829:ARG:N	2.06	0.66
4:B:233:ASN:HD22	4:B:239:GLN:CD	1.97	0.66
4:B:424:GLY:O	4:B:792:ARG:NH1	2.29	0.66
4:C:50:ARG:HG2	4:C:50:ARG:HH11	1.60	0.66
4:C:50:ARG:HH11	4:C:50:ARG:CG	2.08	0.66
4:C:105:PHE:O	4:C:107:GLN:N	2.29	0.66
4:D:84:ARG:O	4:D:84:ARG:HD3	1.94	0.66
4:D:275:PRO:HD2	7:D:3108:HOH:O	1.94	0.66
4:D:560:ASN:OD1	4:D:568:GLN:HB2	1.95	0.66
4:A:418:TYR:HD2	4:A:426:VAL:HG12	1.60	0.66
4:A:574:VAL:HG11	4:A:685:VAL:CG1	2.25	0.66
4:A:769:ILE:H	4:A:769:ILE:HD12	1.60	0.66
4:B:437:ASN:HB2	7:B:3149:HOH:O	1.95	0.66
4:A:30:GLU:HB3	4:A:34:ARG:NH2	2.10	0.66
4:A:44:TYR:CE2	4:A:266:PRO:HB3	2.31	0.66
4:A:157:LEU:HD23	7:A:3133:HOH:O	1.95	0.66
4:B:525:GLY:O	4:B:527:SER:N	2.28	0.66
4:C:36:GLN:HG3	4:C:273:VAL:HG22	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:286:TYR:CZ	4:C:417:PRO:HG3	2.31	0.66
4:C:553:GLU:HG2	4:C:554:VAL:H	1.60	0.66
4:C:562:LEU:HD21	4:C:870:LEU:HG	1.77	0.66
4:C:605:ILE:HG23	7:C:3098:HOH:O	1.96	0.66
4:D:402:LEU:HD23	4:D:443:LEU:HD11	1.77	0.66
4:A:119:ILE:O	4:A:122:THR:HB	1.95	0.66
4:A:459:TRP:HE1	4:A:822:ALA:HA	1.61	0.66
4:A:463:HIS:HD2	7:A:3167:HOH:O	1.77	0.66
4:A:485:ASN:HB3	4:A:488:ASN:HD22	1.61	0.66
4:A:869:ASN:N	4:A:869:ASN:ND2	2.44	0.66
4:B:336:ALA:O	4:B:340:VAL:HG23	1.95	0.66
4:B:616:LEU:O	4:B:619:GLN:N	2.29	0.66
4:C:553:GLU:CD	4:C:553:GLU:H	1.99	0.66
4:D:23:THR:O	4:D:27:HIS:HB2	1.96	0.66
4:D:337:VAL:O	4:D:341:ILE:HG12	1.96	0.66
4:D:574:VAL:O	4:D:578:VAL:HG23	1.95	0.66
4:A:281:ILE:HD11	4:A:309:GLU:N	2.11	0.66
4:A:563:PRO:HB3	4:A:877:GLU:O	1.96	0.66
4:B:825:PHE:O	4:B:829:ARG:NH1	2.29	0.66
4:D:425:ARG:HB3	4:D:427:TYR:HE1	1.61	0.66
1:K:12:DT:C2	1:K:13:DC:C5	2.83	0.66
4:B:291:ARG:CG	7:B:3037:HOH:O	2.44	0.66
4:B:475:PHE:HA	4:B:478:ARG:HD2	1.78	0.66
4:B:730:PRO:CD	4:B:786:GLN:NE2	2.59	0.66
4:A:80:LYS:HD3	4:A:224:THR:HG22	1.76	0.65
4:B:173:ARG:HH11	4:B:182:PHE:HD1	1.44	0.65
4:B:273:VAL:O	4:B:274:PRO:C	2.32	0.65
4:B:536:PHE:HB3	4:B:882:PHE:HB3	1.76	0.65
4:A:475:PHE:HD2	7:A:3202:HOH:O	1.79	0.65
4:A:737:GLN:O	4:A:774:GLN:NE2	2.29	0.65
4:B:37:LEU:HD12	4:B:37:LEU:N	2.09	0.65
4:B:639:TYR:HE1	7:B:3084:HOH:O	1.79	0.65
4:B:726:HIS:CD2	4:B:735:VAL:O	2.49	0.65
4:C:182:PHE:O	4:C:186:VAL:HG23	1.97	0.65
4:C:340:VAL:O	4:C:341:ILE:C	2.33	0.65
4:C:551:ARG:HH11	4:C:551:ARG:HG3	1.61	0.65
4:D:718:ILE:CD1	7:D:3025:HOH:O	2.43	0.65
4:A:433:ASN:C	4:A:433:ASN:OD1	2.34	0.65
4:B:159:ALA:O	4:B:160:LYS:C	2.32	0.65
4:B:330:ILE:HD12	4:B:405:ALA:HB1	1.78	0.65
4:B:428:ALA:H	4:B:435:GLN:HE22	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:551:ARG:NH2	4:C:872:LEU:HD11	2.11	0.65
4:D:106:LEU:HA	4:D:109:ILE:HD11	1.78	0.65
4:D:252:GLU:O	4:D:255:ALA:HB3	1.97	0.65
4:D:508:PRO:O	4:D:511:PHE:N	2.29	0.65
4:D:553:GLU:OE1	4:D:869:ASN:HB2	1.97	0.65
4:D:629:VAL:HG13	4:D:654:THR:HG21	1.77	0.65
4:A:24:LEU:HD21	4:A:287:TRP:CE2	2.31	0.65
4:A:668:THR:HG22	4:A:669:GLN:NE2	2.11	0.65
4:B:780:PRO:HD2	4:B:781:ASN:H	1.61	0.65
4:C:64:VAL:HG21	4:C:127:THR:HG21	1.77	0.65
4:C:298:ARG:HB2	4:C:421:ASP:HA	1.79	0.65
4:D:796:VAL:HA	7:D:3013:HOH:O	1.96	0.65
1:E:5:DA:C2	3:G:7:DT:O2	2.50	0.65
4:A:3:THR:HB	4:A:52:ARG:NH1	2.12	0.65
4:B:236:VAL:HG21	4:B:239:GLN:HE21	1.60	0.65
4:B:266:PRO:HG2	4:B:268:PHE:CZ	2.31	0.65
4:B:552:ASP:OD1	4:B:552:ASP:O	2.14	0.65
4:B:663:LYS:HE2	4:B:666:MET:HE1	1.77	0.65
4:B:705:LEU:O	4:B:707:ALA:N	2.29	0.65
4:B:790:HIS:CE1	4:B:831:THR:HG23	2.30	0.65
4:D:236:VAL:HG21	4:D:239:GLN:NE2	2.11	0.65
1:N:16:DC:H2''	1:N:17:DG:O5'	1.97	0.65
4:A:141:ILE:O	4:A:145:ILE:HG12	1.96	0.65
4:A:292:ARG:H	4:A:293:PRO:HD3	1.62	0.65
4:A:632:ARG:O	4:A:633:SER:C	2.34	0.65
4:B:257:ARG:HG2	4:B:257:ARG:HH11	1.60	0.65
4:B:728:VAL:O	7:B:3081:HOH:O	2.15	0.65
4:C:631:LYS:HE2	4:C:635:MET:SD	2.36	0.65
4:D:9:ASN:HA	4:D:12:SER:HB2	1.79	0.65
3:G:7:DT:H2''	3:G:8:DC:C6	2.31	0.65
1:K:13:DC:H2''	1:K:14:DG:H5'	1.78	0.65
4:A:590:THR:HG1	4:A:613:THR:HG1	1.41	0.65
4:B:446:LEU:HD12	4:B:817:ILE:CG2	2.27	0.65
4:B:540:CYS:O	4:B:541:SER:C	2.35	0.65
4:C:551:ARG:NH2	4:C:836:TYR:O	2.30	0.65
4:C:801:LYS:HD3	4:C:801:LYS:C	2.17	0.65
4:D:109:ILE:HG12	4:D:145:ILE:HG22	1.79	0.65
4:D:475:PHE:N	4:D:476:PRO:HD2	2.11	0.65
4:A:154:ILE:HG23	4:A:190:MET:HE2	1.76	0.65
4:B:119:ILE:HD13	4:B:119:ILE:N	2.11	0.65
4:D:218:GLU:O	4:D:222:GLU:HB2	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:428:ALA:H	4:D:435:GLN:HE21	1.43	0.65
4:A:19:ILE:CG2	7:A:3120:HOH:O	2.45	0.65
4:A:221:ILE:HG23	4:A:227:VAL:O	1.97	0.65
4:A:744:GLN:HA	4:A:756:ARG:CZ	2.27	0.65
4:A:793:LYS:HA	4:A:796:VAL:CG2	2.27	0.65
4:B:14:ILE:HD12	4:B:14:ILE:N	2.08	0.65
4:B:631:LYS:CE	6:B:2001:APC:H3A2	2.26	0.65
4:B:807:PHE:HA	4:B:815:GLY:O	1.96	0.65
4:C:474:PRO:HB2	4:C:476:PRO:HD2	1.78	0.65
4:D:340:VAL:O	4:D:341:ILE:C	2.35	0.65
1:K:17:DG:H2 [?]	1:K:18:DC:C5	2.32	0.65
4:A:16:LEU:HD22	4:A:38:ALA:HA	1.77	0.65
4:B:296:LEU:O	4:B:296:LEU:CG	2.44	0.65
4:C:346:HIS:HA	4:C:395:ARG:HH11	1.61	0.65
4:C:595:VAL:HG21	7:C:3085:HOH:O	1.97	0.65
4:D:737:GLN:NE2	4:D:778:ILE:HA	2.06	0.65
4:A:26:ASP:HB2	7:A:3183:HOH:O	1.97	0.64
4:B:122:THR:CG2	4:B:226:MET:CE	2.74	0.64
4:B:138:ALA:HB2	4:B:214:VAL:HG13	1.79	0.64
4:B:435:GLN:CG	4:B:810:ILE:HG23	2.20	0.64
4:B:559:VAL:HG23	4:B:559:VAL:O	1.98	0.64
4:C:727:TRP:CE3	4:C:735:VAL:HG13	2.32	0.64
4:D:564:SER:O	7:D:3040:HOH:O	2.14	0.64
4:A:40:GLU:HG2	4:A:286:TYR:HD1	1.62	0.64
4:A:421:ASP:O	4:A:422:TRP:C	2.31	0.64
4:B:33:ALA:O	4:B:37:LEU:HD13	1.97	0.64
4:B:281:ILE:CG2	4:B:282:THR:HG23	2.27	0.64
4:B:828:VAL:CG1	4:B:883:ALA:HA	2.28	0.64
4:D:134:VAL:H	4:D:243:THR:HA	1.62	0.64
4:D:426:VAL:HG21	4:D:791:LEU:HD21	1.78	0.64
4:A:50:ARG:NH1	4:A:50:ARG:HG2	2.11	0.64
4:A:78:LEU:N	4:A:79:PRO:CD	2.60	0.64
4:A:817:ILE:HB	4:A:818:PRO:HD2	1.79	0.64
4:B:449:GLY:C	4:B:529:ASN:HD21	2.01	0.64
4:C:746:ARG:HD3	4:C:755:PHE:O	1.97	0.64
4:C:837:GLU:CG	4:C:872:LEU:HD12	2.27	0.64
4:D:471:ASP:C	4:D:472:LYS:HD2	2.17	0.64
1:E:14:DG:H2 [?]	1:E:15:DC:C5	2.31	0.64
4:B:37:LEU:H	4:B:37:LEU:CD1	2.10	0.64
4:B:58:GLN:HG3	4:B:67:ASN:HD22	1.63	0.64
4:B:275:PRO:O	4:B:277:PRO:HD3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:702:ALA:O	4:B:706:LEU:HD12	1.96	0.64
4:C:342:THR:HG22	4:C:348:PRO:CG	2.24	0.64
4:C:400:PHE:CE1	4:C:431:MET:HE2	2.32	0.64
4:D:269:GLN:HG2	4:D:408:PHE:CZ	2.33	0.64
4:D:326:THR:O	4:D:415:TRP:CD1	2.50	0.64
4:D:402:LEU:CD2	4:D:443:LEU:HD11	2.28	0.64
4:D:438:ASP:OD2	4:D:508:PRO:HG2	1.97	0.64
4:D:471:ASP:OD1	4:D:472:LYS:HD3	1.97	0.64
4:A:274:PRO:HG3	4:A:415:TRP:CE2	2.32	0.64
4:A:476:PRO:O	4:A:479:ILE:N	2.28	0.64
4:B:473:VAL:CG1	4:B:474:PRO:N	2.59	0.64
4:C:433:ASN:HA	7:C:3164:HOH:O	1.93	0.64
4:A:257:ARG:HG2	4:A:257:ARG:HH11	1.62	0.64
4:B:231:ARG:CG	4:B:234:ALA:HB2	2.27	0.64
4:B:486:HIS:CE1	4:B:490:MET:HG3	2.32	0.64
2:F:7:A:H2'	2:F:8:U:H6	1.62	0.64
4:B:46:MET:HE1	4:B:269:GLN:HE22	1.61	0.64
4:B:401:MET:HE3	4:B:440:THR:HG21	1.80	0.64
4:B:423:ARG:NH1	4:B:784:HIS:HB3	2.13	0.64
4:B:446:LEU:HB2	4:B:531:SER:O	1.98	0.64
4:B:720:ARG:NH1	4:B:720:ARG:CG	2.59	0.64
4:B:779:ALA:N	4:B:780:PRO:CD	2.60	0.64
4:C:475:PHE:N	4:C:476:PRO:HD2	2.13	0.64
4:D:135:GLN:HG3	7:D:3160:HOH:O	1.97	0.64
4:D:572:GLY:O	4:D:575:ALA:N	2.30	0.64
4:A:545:HIS:CE1	4:A:787:ASP:HA	2.33	0.64
4:B:5:ASN:ND2	4:B:7:ALA:N	2.46	0.64
4:B:492:CYS:SG	4:B:502:TRP:CD1	2.90	0.64
4:D:281:ILE:HD12	4:D:317:TYR:OH	1.96	0.64
4:A:10:ASP:O	4:A:13:ASP:HB2	1.98	0.64
4:A:502:TRP:CD1	4:A:512:LEU:CD1	2.81	0.64
4:B:469:GLY:O	4:B:471:ASP:N	2.31	0.64
4:C:163:LYS:HB3	4:C:164:LYS:HZ3	1.63	0.64
4:D:161:HIS:HE1	7:D:3114:HOH:O	1.80	0.64
4:D:421:ASP:O	4:D:423:ARG:N	2.31	0.64
4:C:423:ARG:HE	4:C:781:ASN:HD22	1.45	0.64
4:C:744:GLN:HB3	7:C:3076:HOH:O	1.96	0.64
4:D:311:VAL:HG12	4:D:312:TYR:N	2.13	0.64
4:D:734:PRO:HG2	4:D:734:PRO:O	1.97	0.64
1:K:17:DG:H2''	1:K:18:DC:C6	2.33	0.63
4:A:582:LEU:HD11	4:A:625:VAL:HG21	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:5:ASN:HD21	4:B:7:ALA:N	1.95	0.63
4:B:433:ASN:CB	4:B:434:PRO:CD	2.63	0.63
4:B:751:PHE:HB3	4:B:752:LEU:CD1	2.19	0.63
4:C:292:ARG:N	4:C:293:PRO:HD3	2.13	0.63
4:C:423:ARG:HD2	4:C:781:ASN:CB	2.27	0.63
4:B:217:ILE:O	4:B:221:ILE:HG13	1.98	0.63
4:C:424:GLY:HA3	7:C:3159:HOH:O	1.98	0.63
4:A:634:VAL:HG23	4:A:685:VAL:HG11	1.80	0.63
4:C:335:LEU:HD21	4:C:339:ASN:ND2	2.13	0.63
4:D:273:VAL:CA	4:D:415:TRP:CZ3	2.82	0.63
4:D:804:ILE:CG2	4:D:816:THR:HG21	2.29	0.63
4:B:113:ALA:O	4:B:117:ILE:HG13	1.98	0.63
4:B:463:HIS:HB3	4:B:534:LEU:HD22	1.79	0.63
4:B:537:ASP:N	4:B:882:PHE:HD2	1.96	0.63
4:C:881:ALA:O	4:C:883:ALA:N	2.31	0.63
4:C:882:PHE:H	4:C:882:PHE:HD1	1.44	0.63
4:D:10:ASP:O	4:D:13:ASP:HB3	1.98	0.63
4:D:550:LEU:HD21	4:D:865:PRO:HG2	1.81	0.63
4:D:649:GLN:HA	4:D:652:GLU:OE2	1.98	0.63
4:B:777:GLY:O	4:B:781:ASN:HB2	1.98	0.63
4:C:423:ARG:NE	4:C:781:ASN:HD22	1.96	0.63
4:A:92:VAL:HG12	4:A:99:ARG:HG3	1.80	0.63
4:B:51:PHE:CE2	4:B:55:PHE:HD1	2.16	0.63
4:B:860:LYS:HD2	4:B:860:LYS:O	1.99	0.63
4:D:278:TRP:HB2	4:D:321:ASN:ND2	2.13	0.63
4:D:432:PHE:HE1	4:D:440:THR:HG23	1.64	0.63
4:D:552:ASP:CB	4:D:691:ALA:HB2	2.28	0.63
4:A:65:ALA:HB3	4:A:120:LYS:HE3	1.79	0.63
4:A:871:ASN:ND2	4:A:871:ASN:O	2.32	0.63
4:C:530:CYS:SG	4:C:818:PRO:HG2	2.39	0.63
4:C:552:ASP:OD1	4:C:555:GLY:N	2.27	0.63
4:C:881:ALA:O	4:C:882:PHE:C	2.37	0.63
4:D:141:ILE:HG22	4:D:145:ILE:HD11	1.80	0.63
4:D:274:PRO:HD3	4:D:415:TRP:CZ3	2.33	0.63
4:D:446:LEU:O	4:D:531:SER:HB2	1.99	0.63
1:H:12:DT:C4'	4:B:423:ARG:NE	2.59	0.63
4:A:383:ALA:C	4:A:385:TYR:N	2.52	0.63
4:A:446:LEU:O	4:A:531:SER:HB2	1.99	0.63
4:A:472:LYS:HA	4:A:567:VAL:HG11	1.81	0.63
4:A:716:GLY:CA	7:A:3184:HOH:O	2.47	0.63
4:B:14:ILE:H	4:B:14:ILE:CD1	2.03	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:281:ILE:HG22	4:B:282:THR:HG23	1.80	0.63
4:B:329:LYS:HD3	4:B:447:ALA:HA	1.78	0.63
4:B:549:MET:HG2	4:B:836:TYR:HE1	1.63	0.63
4:B:830:GLU:HA	4:B:876:LEU:HD21	1.80	0.63
4:C:296:LEU:HG	4:C:296:LEU:O	1.99	0.63
4:D:95:LYS:HB2	4:D:95:LYS:NZ	2.13	0.63
1:E:16:DC:H2'	1:E:17:DG:H5'	1.81	0.63
4:A:304:ALA:O	4:A:307:ARG:CG	2.44	0.63
4:A:437:ASN:ND2	4:A:440:THR:OG1	2.32	0.63
4:A:478:ARG:O	4:A:482:ILE:HG12	1.98	0.63
4:A:729:THR:N	4:A:733:PHE:O	2.31	0.63
4:B:27:HIS:HA	7:B:3169:HOH:O	1.98	0.63
4:B:278:TRP:CZ3	4:B:284:GLY:HA3	2.33	0.63
4:B:297:VAL:O	4:B:297:VAL:HG12	1.95	0.63
4:B:626:THR:O	4:B:628:SER:N	2.31	0.63
4:B:730:PRO:HD2	4:B:786:GLN:NE2	2.13	0.63
4:C:110:LYS:HE2	4:C:112:GLU:OE1	1.98	0.63
4:D:28:TYR:O	4:D:32:LEU:HD13	1.99	0.63
4:D:221:ILE:HG12	4:D:227:VAL:O	1.99	0.63
4:D:452:ILE:HG23	4:D:453:GLY:H	1.63	0.63
4:A:270:PRO:HD2	4:A:408:PHE:CE2	2.34	0.62
4:A:280:GLY:O	4:A:281:ILE:C	2.35	0.62
4:A:459:TRP:O	4:A:460:LEU:O	2.16	0.62
4:A:570:ILE:O	4:A:573:ILE:HG23	1.99	0.62
4:B:539:SER:OG	4:B:560:ASN:ND2	2.32	0.62
4:C:163:LYS:HB3	4:C:164:LYS:NZ	2.13	0.62
4:C:313:MET:HA	7:C:3099:HOH:O	1.99	0.62
4:C:317:TYR:C	4:C:321:ASN:ND2	2.52	0.62
4:D:139:SER:HB2	4:D:210:ILE:HD13	1.81	0.62
2:L:1:G:H2'	2:L:2:C:C6	2.34	0.62
4:A:118:THR:O	4:A:122:THR:OG1	2.03	0.62
4:A:423:ARG:O	4:A:785:SER:HA	1.99	0.62
4:B:163:LYS:O	4:B:166:VAL:HG23	1.98	0.62
4:C:563:PRO:HD2	4:C:874:ASP:HB3	1.80	0.62
4:C:824:LEU:HD12	4:C:824:LEU:O	1.99	0.62
4:D:133:THR:HA	4:D:243:THR:HG22	1.79	0.62
4:D:590:THR:O	4:D:614:LYS:HB2	1.99	0.62
4:A:4:ILE:CD1	4:A:256:THR:HA	2.29	0.62
4:A:630:THR:HA	7:A:3199:HOH:O	1.98	0.62
4:B:728:VAL:HG22	4:B:734:PRO:CA	2.29	0.62
4:B:828:VAL:HG11	4:B:883:ALA:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:725:VAL:HB	4:D:737:GLN:HB3	1.81	0.62
4:A:457:TYR:CE2	4:A:461:LYS:CD	2.82	0.62
4:A:540:CYS:O	4:A:542:GLY:N	2.33	0.62
4:C:346:HIS:HA	4:C:395:ARG:NH1	2.14	0.62
4:C:423:ARG:HD2	4:C:781:ASN:HB3	1.81	0.62
4:C:474:PRO:HB2	4:C:476:PRO:CG	2.29	0.62
4:D:698:TRP:CE3	4:D:699:LEU:HD23	2.34	0.62
4:D:725:VAL:HG23	4:D:774:GLN:NE2	2.14	0.62
1:H:10:DT:OP2	4:B:641:SER:CB	2.48	0.62
4:A:106:LEU:HD21	4:A:212:VAL:HG13	1.81	0.62
4:A:544:GLN:OE1	4:A:559:VAL:HG23	1.99	0.62
4:B:158:GLU:HG2	4:B:195:LEU:HD22	1.81	0.62
4:B:403:GLU:OE1	4:B:404:GLN:N	2.32	0.62
4:B:571:TYR:CD2	4:B:631:LYS:HA	2.35	0.62
4:B:668:THR:O	4:B:670:PRO:HD3	1.99	0.62
4:A:632:ARG:HB3	4:A:649:GLN:HE21	1.63	0.62
4:B:508:PRO:O	4:B:511:PHE:N	2.32	0.62
4:B:553:GLU:HG3	7:B:3114:HOH:O	2.00	0.62
4:B:569:ASP:CG	4:B:627:ARG:HH21	2.02	0.62
4:B:610:LYS:O	4:B:611:LEU:O	2.17	0.62
4:C:137:VAL:O	4:C:140:ALA:HB3	1.99	0.62
4:D:169:GLN:HB3	4:D:182:PHE:CE2	2.34	0.62
4:D:540:CYS:O	4:D:541:SER:C	2.37	0.62
4:A:11:PHE:HB3	4:A:41:HIS:CE1	2.34	0.62
4:A:823:ASN:O	4:A:824:LEU:C	2.36	0.62
4:B:578:VAL:HG13	4:B:680:LEU:HD23	1.80	0.62
4:D:327:ALA:HB2	4:D:415:TRP:HE1	1.61	0.62
4:D:582:LEU:CD1	4:D:625:VAL:HG21	2.28	0.62
2:L:6:G:OP1	4:C:394:ARG:NH1	2.32	0.62
4:A:392:LYS:O	4:A:396:ILE:HG12	1.99	0.62
4:A:425:ARG:HD3	4:A:811:HIS:CD2	2.35	0.62
4:A:512:LEU:O	4:A:516:PHE:CE1	2.53	0.62
4:A:540:CYS:HB3	4:A:543:ILE:HG13	1.82	0.62
4:A:793:LYS:HA	4:A:796:VAL:HG23	1.82	0.62
4:B:122:THR:CG2	4:B:226:MET:HE1	2.28	0.62
4:C:303:LYS:NZ	4:C:303:LYS:CB	2.63	0.62
4:C:875:ILE:CG2	4:C:875:ILE:O	2.48	0.62
4:A:132:THR:O	4:A:132:THR:HG22	1.99	0.62
4:A:588:ASN:HB3	7:A:3224:HOH:O	1.99	0.62
4:B:391:ARG:CG	7:B:3101:HOH:O	2.46	0.62
4:B:689:VAL:HG23	4:B:689:VAL:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:748:ASN:HD22	4:B:751:PHE:H	1.46	0.62
4:D:488:ASN:O	4:D:491:ALA:HB3	2.00	0.62
4:A:24:LEU:HD11	4:A:287:TRP:CG	2.35	0.62
4:A:578:VAL:HG13	4:A:680:LEU:HB3	1.82	0.62
4:A:632:ARG:HH21	6:A:2000:APC:C8	2.12	0.62
4:A:818:PRO:O	4:A:821:ALA:HB3	1.98	0.62
4:B:26:ASP:HB3	7:B:3098:HOH:O	2.00	0.62
4:B:475:PHE:O	4:B:478:ARG:N	2.32	0.62
4:B:792:ARG:O	4:B:796:VAL:HG23	2.00	0.62
4:D:324:GLN:HA	4:D:418:TYR:CD1	2.35	0.62
4:D:705:LEU:HD12	4:D:853:LEU:HD22	1.81	0.62
4:A:226:MET:HA	4:A:250:TYR:CD1	2.35	0.61
4:B:24:LEU:HD22	4:B:33:ALA:HA	1.80	0.61
4:B:464:GLY:HA3	4:B:514:PHE:CE2	2.35	0.61
4:C:557:ARG:HB3	4:C:557:ARG:HH11	1.64	0.61
1:H:6:DT:H5'	1:H:6:DT:H6	1.65	0.61
4:A:704:LYS:HE3	4:A:860:LYS:NZ	2.15	0.61
4:A:798:ALA:HB2	4:A:827:ALA:CB	2.30	0.61
4:A:825:PHE:CD1	4:A:829:ARG:NH1	2.63	0.61
4:C:398:LEU:HD23	4:C:398:LEU:O	1.99	0.61
4:C:549:MET:HE1	4:C:786:GLN:HG2	1.83	0.61
4:C:635:MET:CE	6:C:2002:APC:H8	2.30	0.61
4:C:882:PHE:CD1	4:C:882:PHE:N	2.68	0.61
4:A:112:GLU:O	4:A:115:ALA:HB3	2.00	0.61
4:B:470:VAL:HG21	4:B:481:PHE:CD2	2.35	0.61
4:B:726:HIS:HD2	4:B:735:VAL:O	1.82	0.61
4:C:730:PRO:HD3	4:C:786:GLN:HE22	1.66	0.61
4:D:304:ALA:HA	4:D:307:ARG:HD2	1.81	0.61
4:A:231:ARG:CG	4:A:234:ALA:HB2	2.30	0.61
4:A:347:CYS:O	4:A:349:VAL:N	2.33	0.61
4:A:786:GLN:OE1	4:A:841:VAL:HG21	2.00	0.61
4:B:88:TRP:CZ2	4:B:215:ARG:HD3	2.35	0.61
4:B:823:ASN:N	4:B:823:ASN:HD22	1.98	0.61
4:C:14:ILE:CG2	4:C:288:ALA:HB1	2.31	0.61
4:C:19:ILE:HG12	4:C:20:PRO:CD	2.20	0.61
4:C:728:VAL:HG22	4:C:734:PRO:CB	2.30	0.61
4:D:11:PHE:CE1	4:D:44:TYR:HB3	2.35	0.61
4:D:273:VAL:HA	4:D:415:TRP:HZ3	1.61	0.61
4:A:386:ARG:O	4:A:388:ASP:N	2.34	0.61
4:A:459:TRP:CZ3	4:A:475:PHE:HE1	2.18	0.61
4:A:563:PRO:HB3	4:A:878:SER:CA	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:538:GLY:HA2	4:B:882:PHE:O	2.00	0.61
4:B:574:VAL:CG2	4:B:685:VAL:HG12	2.30	0.61
4:B:783:VAL:O	4:B:786:GLN:N	2.31	0.61
4:D:139:SER:HB2	4:D:210:ILE:HD11	1.83	0.61
4:D:592:ASN:O	4:D:593:GLU:HB2	2.00	0.61
4:B:292:ARG:O	4:B:293:PRO:O	2.19	0.61
4:B:485:ASN:O	4:B:486:HIS:C	2.39	0.61
4:C:291:ARG:HG2	7:C:3066:HOH:O	2.00	0.61
4:C:455:GLU:O	4:C:458:TYR:HB3	2.00	0.61
4:C:643:GLU:OE2	4:C:679:LYS:HD2	2.00	0.61
4:C:727:TRP:HB3	4:C:845:PHE:CD1	2.36	0.61
4:D:221:ILE:CG1	4:D:227:VAL:HG23	2.30	0.61
4:D:422:TRP:CD1	4:D:422:TRP:C	2.74	0.61
4:A:459:TRP:O	4:A:460:LEU:C	2.36	0.61
4:A:778:ILE:HG23	4:A:779:ALA:N	2.16	0.61
4:A:817:ILE:HB	4:A:818:PRO:CD	2.30	0.61
4:B:460:LEU:N	4:B:534:LEU:HD11	2.15	0.61
4:B:631:LYS:NZ	6:B:2001:APC:H3A2	2.16	0.61
4:B:676:TYR:CE1	4:B:680:LEU:HD11	2.36	0.61
4:C:495:SER:HB2	4:C:498:GLU:HB2	1.82	0.61
4:D:187:GLU:O	4:D:191:LEU:HG	2.00	0.61
4:D:329:LYS:HD2	4:D:447:ALA:HA	1.82	0.61
4:B:571:TYR:CD2	4:B:631:LYS:HG3	2.34	0.61
4:B:682:TRP:O	4:B:686:SER:OG	2.16	0.61
4:B:706:LEU:O	4:B:723:CYS:O	2.19	0.61
4:C:405:ALA:HB2	4:C:443:LEU:HD13	1.81	0.61
4:D:448:LYS:HZ2	4:D:806:SER:HB3	1.64	0.61
4:D:573:ILE:O	4:D:577:LYS:HG3	2.01	0.61
4:D:643:GLU:OE1	4:D:679:LYS:HD3	2.01	0.61
4:A:727:TRP:CD2	4:A:735:VAL:CG1	2.84	0.61
4:B:55:PHE:CE2	4:B:59:LEU:HD11	2.36	0.61
4:B:206:LYS:O	4:B:210:ILE:HG12	2.01	0.61
4:C:292:ARG:HG3	4:C:292:ARG:O	2.00	0.61
4:C:849:PHE:CD2	4:C:853:LEU:HD21	2.35	0.61
4:D:327:ALA:HA	4:D:415:TRP:CD1	2.35	0.61
4:D:631:LYS:CE	6:D:2003:APC:H3A2	2.31	0.61
4:A:77:LEU:CD2	4:A:119:ILE:HD12	2.31	0.61
4:A:390:ALA:O	4:A:393:SER:N	2.33	0.61
4:B:281:ILE:HG22	4:B:282:THR:N	2.15	0.61
4:B:326:THR:O	4:B:415:TRP:CD1	2.54	0.61
4:B:582:LEU:HD13	4:B:621:LEU:HD12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:155:ARG:HB2	4:C:163:LYS:HZ2	1.65	0.61
4:C:303:LYS:HB2	4:C:303:LYS:HZ2	1.65	0.61
4:C:461:LYS:O	4:C:464:GLY:N	2.33	0.61
4:C:570:ILE:HA	4:C:573:ILE:HG22	1.81	0.61
4:C:828:VAL:HG23	4:C:829:ARG:N	2.12	0.61
4:D:330:ILE:HG21	4:D:409:ALA:HA	1.81	0.61
4:D:432:PHE:CE1	4:D:440:THR:HG23	2.36	0.61
4:D:859:ASP:HA	7:D:3136:HOH:O	2.00	0.61
1:H:10:DT:H5'	4:B:641:SER:N	2.15	0.60
1:N:11:DA:C6	4:D:639:TYR:CE2	2.89	0.60
4:A:373:ALA:HB2	7:A:3006:HOH:O	2.01	0.60
4:B:551:ARG:HG3	7:B:3047:HOH:O	2.01	0.60
4:C:84:ARG:NH1	4:C:84:ARG:HA	2.15	0.60
4:C:386:ARG:HB3	7:C:3082:HOH:O	2.01	0.60
4:C:754:GLN:O	4:C:755:PHE:O	2.19	0.60
4:A:14:ILE:HA	7:A:3082:HOH:O	2.00	0.60
4:A:402:LEU:HG	4:A:439:MET:CE	2.31	0.60
4:A:457:TYR:OH	4:A:461:LYS:HD3	2.00	0.60
4:A:516:PHE:N	4:A:516:PHE:HD1	1.99	0.60
4:B:329:LYS:CG	4:B:329:LYS:O	2.49	0.60
4:A:316:VAL:HG13	4:A:792:ARG:HE	1.66	0.60
4:A:488:ASN:O	4:A:491:ALA:HB3	2.01	0.60
4:A:682:TRP:O	4:A:682:TRP:CG	2.54	0.60
4:B:269:GLN:HG2	4:B:404:GLN:OE1	2.00	0.60
4:B:345:LYS:NZ	4:B:351:ASP:N	2.48	0.60
4:B:423:ARG:CD	4:B:781:ASN:ND2	2.64	0.60
4:B:427:TYR:CE1	4:B:811:HIS:NE2	2.69	0.60
4:B:439:MET:O	4:B:442:GLY:N	2.33	0.60
4:B:536:PHE:HE2	4:B:825:PHE:HB2	1.65	0.60
4:C:208:ASP:O	4:C:212:VAL:HG23	2.01	0.60
4:C:236:VAL:O	4:C:240:ASP:HB2	2.01	0.60
4:C:329:LYS:CD	4:C:447:ALA:HA	2.31	0.60
4:C:788:GLY:C	4:C:792:ARG:NH1	2.54	0.60
4:C:823:ASN:O	4:C:826:LYS:N	2.32	0.60
1:N:15:DC:C2'	1:N:16:DC:OP2	2.48	0.60
7:N:1048:HOH:O	4:D:772:HIS:HD2	1.83	0.60
4:A:25:ALA:O	4:A:29:GLY:N	2.32	0.60
4:A:496:PRO:HD2	7:A:3203:HOH:O	2.00	0.60
4:A:802:TYR:OH	4:A:830:GLU:OE2	2.20	0.60
4:B:677:MET:HG3	4:B:681:ILE:HD13	1.82	0.60
4:C:35:GLU:HG2	4:C:272:VAL:HG21	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:631:LYS:O	4:C:632:ARG:C	2.37	0.60
4:D:373:ALA:HB1	4:D:377:TRP:HE1	1.67	0.60
4:D:486:HIS:NE2	4:D:490:MET:HG3	2.16	0.60
1:H:3:DG:H2''	1:H:4:DA:C8	2.36	0.60
1:N:8:DG:H4'	7:N:1048:HOH:O	2.02	0.60
4:A:791:LEU:O	4:A:795:VAL:HG23	2.02	0.60
4:B:347:CYS:HB3	4:B:350:GLU:CG	2.32	0.60
4:B:433:ASN:CB	4:B:434:PRO:HD3	2.11	0.60
4:B:875:ILE:HG22	4:B:876:LEU:N	2.15	0.60
4:C:551:ARG:HE	4:C:872:LEU:CD2	2.14	0.60
4:D:207:GLU:HB3	4:D:211:HIS:NE2	2.15	0.60
4:D:292:ARG:H	4:D:293:PRO:HD3	1.65	0.60
4:A:390:ALA:C	4:A:392:LYS:N	2.52	0.60
4:A:459:TRP:HZ3	4:A:475:PHE:HE1	1.50	0.60
4:A:882:PHE:HD1	4:A:882:PHE:H	1.47	0.60
4:B:84:ARG:CD	4:B:219:MET:HG2	2.25	0.60
4:B:320:ILE:O	4:B:324:GLN:HB2	2.01	0.60
4:B:398:LEU:O	4:B:398:LEU:HD23	2.01	0.60
4:C:266:PRO:HG2	4:C:268:PHE:CZ	2.37	0.60
4:C:651:LEU:HD13	4:C:651:LEU:C	2.22	0.60
1:H:9:DA:N6	3:J:1:DG:H21	2.00	0.60
4:A:47:GLY:O	4:A:50:ARG:HB3	2.01	0.60
4:A:159:ALA:O	4:A:163:LYS:HB2	2.02	0.60
4:A:342:THR:HG22	4:A:348:PRO:HG3	1.83	0.60
4:A:546:PHE:CD2	4:A:692:ALA:HA	2.30	0.60
4:A:574:VAL:HG12	4:A:684:SER:HB3	1.82	0.60
4:A:610:LYS:O	4:A:611:LEU:C	2.38	0.60
4:B:59:LEU:HA	4:B:64:VAL:HG22	1.82	0.60
4:B:120:LYS:NZ	4:B:752:LEU:HD11	2.17	0.60
4:B:454:LYS:HG3	4:B:455:GLU:N	2.15	0.60
4:B:460:LEU:HA	4:B:534:LEU:HD21	1.82	0.60
4:B:680:LEU:HD12	4:B:680:LEU:N	2.15	0.60
4:C:175:GLY:O	4:C:176:HIS:C	2.37	0.60
4:D:729:THR:HB	4:D:789:SER:HB2	1.83	0.60
1:N:15:DC:H2''	1:N:16:DC:O5'	2.01	0.60
4:A:89:PHE:HA	4:A:103:PHE:HE1	1.64	0.60
4:A:329:LYS:HG2	4:A:447:ALA:HA	1.84	0.60
4:B:73:LEU:HD21	4:B:77:LEU:HD22	1.83	0.60
4:B:181:ALA:O	4:B:185:VAL:HG13	2.00	0.60
4:B:291:ARG:HG3	7:B:3037:HOH:O	2.00	0.60
4:B:437:ASN:C	4:B:437:ASN:ND2	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:333:LYS:CB	4:C:516:PHE:CD2	2.84	0.60
4:D:833:VAL:HG22	4:D:875:ILE:HB	1.83	0.60
4:A:116:TYR:CE2	4:A:752:LEU:HD13	2.37	0.60
4:A:633:SER:OG	4:A:646:PHE:CG	2.44	0.60
4:B:398:LEU:HD23	4:B:398:LEU:C	2.21	0.60
4:C:492:CYS:SG	4:C:501:TRP:HE3	2.25	0.60
4:D:113:ALA:O	4:D:117:ILE:HG13	2.01	0.60
4:D:571:TYR:CD1	4:D:631:LYS:HA	2.37	0.60
4:A:82:ILE:HG21	4:A:112:GLU:OE2	2.01	0.60
4:A:536:PHE:HB3	4:A:882:PHE:HB3	1.84	0.60
4:A:842:LEU:O	4:A:845:PHE:HB3	2.02	0.60
4:B:292:ARG:N	4:B:293:PRO:HD3	2.16	0.60
4:B:300:HIS:NE2	4:B:422:TRP:HZ3	1.97	0.60
4:C:14:ILE:HG21	4:C:288:ALA:HB1	1.83	0.60
4:D:54:MET:O	4:D:58:GLN:HG2	2.02	0.60
4:D:213:GLY:O	4:D:217:ILE:HG13	2.02	0.60
4:A:159:ALA:HB1	4:A:163:LYS:N	2.17	0.59
4:A:342:THR:CG2	4:A:398:LEU:HD21	2.33	0.59
4:A:689:VAL:O	4:A:690:VAL:C	2.39	0.59
4:A:778:ILE:CG2	4:A:779:ALA:N	2.65	0.59
4:B:571:TYR:CE1	7:B:3067:HOH:O	2.51	0.59
4:B:780:PRO:O	4:B:781:ASN:C	2.35	0.59
4:C:324:GLN:HG3	4:C:417:PRO:HA	1.84	0.59
4:D:646:PHE:O	4:D:647:ARG:O	2.19	0.59
2:F:3:G:O2'	4:A:389:LYS:NZ	2.35	0.59
4:A:380:ALA:O	4:A:383:ALA:HB3	2.02	0.59
4:A:428:ALA:N	4:A:435:GLN:HE22	2.00	0.59
4:A:669:GLN:CG	4:A:672:GLN:HE21	2.15	0.59
4:A:712:ASP:HA	7:A:3088:HOH:O	2.00	0.59
4:B:66:ASP:OD1	4:B:120:LYS:HE3	2.01	0.59
4:B:698:TRP:O	4:B:701:SER:N	2.35	0.59
4:C:496:PRO:HA	7:C:3071:HOH:O	2.02	0.59
4:C:525:GLY:O	4:C:527:SER:N	2.35	0.59
4:D:95:LYS:HD2	7:D:3092:HOH:O	2.02	0.59
4:D:846:TYR:HA	4:D:849:PHE:CE1	2.36	0.59
2:O:4:G:H2'	2:O:5:C:H6	1.67	0.59
4:A:741:LYS:HB2	4:A:770:ASP:HB2	1.84	0.59
4:B:21:PHE:C	4:B:23:THR:H	2.05	0.59
4:B:163:LYS:HB3	4:B:164:LYS:NZ	2.17	0.59
4:B:418:TYR:CE2	4:B:428:ALA:CB	2.82	0.59
4:B:473:VAL:CG1	4:B:474:PRO:CD	2.79	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:299:THR:CG2	4:C:300:HIS:H	2.13	0.59
4:C:333:LYS:NZ	7:C:3010:HOH:O	2.34	0.59
4:D:3:THR:HG23	7:D:3098:HOH:O	2.00	0.59
4:A:585:ASP:O	4:A:588:ASN:O	2.19	0.59
4:B:398:LEU:HD21	4:B:439:MET:CE	2.33	0.59
4:B:561:LEU:HD23	4:B:875:ILE:HD11	1.84	0.59
4:B:861:MET:O	4:B:862:PRO:C	2.40	0.59
4:C:78:LEU:HD11	4:C:115:ALA:HB3	1.84	0.59
4:C:330:ILE:HG12	7:C:3016:HOH:O	2.02	0.59
4:C:695:ALA:O	4:C:699:LEU:HD12	2.03	0.59
4:C:875:ILE:O	4:C:875:ILE:HG22	2.01	0.59
4:D:322:ILE:HG22	4:D:323:ALA:N	2.17	0.59
4:D:623:TYR:HA	4:D:666:MET:CE	2.32	0.59
4:A:205:HIS:HB3	4:A:207:GLU:HG2	1.84	0.59
4:A:849:PHE:CD2	4:A:853:LEU:HD21	2.37	0.59
4:C:14:ILE:HG21	4:C:288:ALA:CB	2.33	0.59
4:C:318:LYS:HE2	4:C:796:VAL:HG13	1.84	0.59
4:D:19:ILE:HG23	4:D:20:PRO:HD2	1.84	0.59
4:D:53:LYS:O	4:D:56:GLU:HB3	2.02	0.59
4:D:229:LEU:HA	4:D:244:ILE:HD13	1.84	0.59
3:M:5:DA:H2''	3:M:6:DT:H72	1.84	0.59
4:A:92:VAL:HG22	7:A:3011:HOH:O	2.01	0.59
4:A:294:LEU:CD1	4:A:429:VAL:HG21	2.29	0.59
4:B:663:LYS:CG	4:B:664:GLY:N	2.66	0.59
4:B:751:PHE:C	4:B:752:LEU:HD12	2.23	0.59
4:C:24:LEU:HD22	4:C:273:VAL:HG21	1.85	0.59
4:C:78:LEU:N	4:C:79:PRO:CD	2.65	0.59
4:C:306:MET:O	4:C:308:TYR:N	2.35	0.59
4:C:706:LEU:O	4:C:723:CYS:O	2.20	0.59
4:C:726:HIS:HB2	4:C:736:TRP:CD1	2.37	0.59
4:C:850:ALA:C	4:C:852:GLN:H	2.06	0.59
4:D:100:PRO:HG2	4:D:103:PHE:HB2	1.83	0.59
4:D:725:VAL:HG23	4:D:774:GLN:HE21	1.66	0.59
4:A:15:GLU:HG2	4:A:18:ALA:O	2.03	0.59
4:A:96:ARG:NE	7:A:3009:HOH:O	2.33	0.59
4:A:143:ARG:HD3	7:A:3118:HOH:O	2.01	0.59
4:A:178:TYR:HD1	4:A:178:TYR:H	1.47	0.59
4:C:837:GLU:HG3	4:C:872:LEU:HD12	1.85	0.59
4:D:710:VAL:CG1	4:D:720:ARG:HB3	2.33	0.59
2:I:5:C:N3	2:I:6:G:N7	2.50	0.59
1:N:10:DT:H5'	4:D:641:SER:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:80:LYS:CD	4:A:224:THR:HG22	2.32	0.59
4:A:629:VAL:HG12	4:A:629:VAL:O	2.02	0.59
4:A:727:TRP:CH2	4:A:735:VAL:HG21	2.38	0.59
4:B:36:GLN:HA	4:B:36:GLN:OE1	2.03	0.59
4:B:770:ASP:OD1	4:B:772:HIS:N	2.36	0.59
4:C:281:ILE:CG1	4:C:309:GLU:HA	2.33	0.59
4:C:452:ILE:HD11	4:C:457:TYR:N	2.18	0.59
4:D:273:VAL:C	4:D:415:TRP:CE3	2.76	0.59
4:A:660:ASP:HB3	7:A:3072:HOH:O	2.02	0.59
4:A:727:TRP:CE3	4:A:735:VAL:HG13	2.37	0.59
4:A:802:TYR:N	4:A:802:TYR:HD2	1.99	0.59
4:B:40:GLU:OE1	4:B:288:ALA:HB3	2.02	0.59
4:C:21:PHE:C	4:C:23:THR:N	2.54	0.59
4:C:308:TYR:HH	4:C:733:PHE:HE2	1.49	0.59
3:J:1:DG:H1'	3:J:2:DT:H71	1.83	0.59
4:A:720:ARG:HH21	4:A:857:GLN:HE22	1.51	0.59
4:B:473:VAL:HG12	4:B:474:PRO:N	2.17	0.59
4:B:514:PHE:CG	4:B:514:PHE:O	2.56	0.59
4:B:576:LYS:O	4:B:579:ASN:N	2.36	0.59
4:C:724:ALA:HB2	4:C:738:GLU:HG3	1.85	0.59
4:D:479:ILE:HG22	4:D:483:GLU:CD	2.23	0.59
4:D:726:HIS:CD2	4:D:736:TRP:CE2	2.90	0.59
1:H:13:DC:C4'	4:B:427:TYR:HE2	2.15	0.58
1:K:9:DA:H5'	7:K:731:HOH:O	2.01	0.58
4:A:425:ARG:NH2	4:A:784:HIS:CE1	2.71	0.58
4:C:268:PHE:HB3	4:C:430:SER:HA	1.85	0.58
4:D:465:ALA:HB1	4:D:478:ARG:HB3	1.84	0.58
4:D:616:LEU:HD13	4:D:676:TYR:HB2	1.85	0.58
4:D:619:GLN:NE2	4:D:668:THR:H	2.01	0.58
4:D:668:THR:HG22	4:D:669:GLN:NE2	2.17	0.58
4:A:40:GLU:O	4:A:43:SER:HB2	2.04	0.58
4:A:810:ILE:O	4:A:812:ASP:N	2.36	0.58
4:C:252:GLU:HG2	7:C:3072:HOH:O	2.02	0.58
4:C:632:ARG:HA	4:C:635:MET:HG2	1.85	0.58
4:C:727:TRP:CZ2	4:C:735:VAL:HG11	2.38	0.58
4:C:728:VAL:HG13	4:C:733:PHE:C	2.24	0.58
4:D:472:LYS:HG3	4:D:567:VAL:HG11	1.84	0.58
4:A:108:GLU:HG3	7:A:3115:HOH:O	2.02	0.58
4:A:404:GLN:HG2	4:A:432:PHE:CB	2.33	0.58
4:A:549:MET:HB3	4:A:836:TYR:HE1	1.67	0.58
4:A:570:ILE:O	4:A:574:VAL:HG23	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:619:GLN:O	4:A:622:ALA:HB3	2.03	0.58
4:B:236:VAL:CB	4:B:239:GLN:HB2	2.31	0.58
4:B:748:ASN:HD21	4:B:751:PHE:HB2	1.67	0.58
4:C:50:ARG:CZ	4:C:267:MET:HE3	2.33	0.58
4:C:501:TRP:HB2	7:C:3116:HOH:O	2.03	0.58
4:D:458:TYR:O	4:D:462:ILE:HG12	2.03	0.58
4:D:473:VAL:CG2	4:D:477:GLU:HG3	2.32	0.58
4:D:560:ASN:O	4:D:878:SER:OG	2.18	0.58
3:G:4:DG:H1'	3:G:5:DA:C8	2.38	0.58
4:A:48:GLU:O	4:A:49:ALA:C	2.42	0.58
4:B:585:ASP:OD2	4:B:613:THR:HB	2.03	0.58
4:B:814:PHE:CE2	4:B:828:VAL:HG13	2.39	0.58
4:C:92:VAL:HG12	4:C:99:ARG:CG	2.27	0.58
4:C:161:HIS:O	4:C:163:LYS:N	2.36	0.58
4:C:329:LYS:HG3	4:C:445:THR:CG2	2.32	0.58
4:C:588:ASN:HD22	4:C:588:ASN:N	2.02	0.58
4:C:816:THR:HG22	4:C:817:ILE:HG13	1.86	0.58
4:D:475:PHE:O	4:D:476:PRO:C	2.37	0.58
4:D:496:PRO:HD2	7:D:3035:HOH:O	2.02	0.58
4:A:516:PHE:N	4:A:516:PHE:CD1	2.70	0.58
4:A:551:ARG:HH21	4:A:872:LEU:HD11	1.67	0.58
4:A:727:TRP:CD2	4:A:735:VAL:HG13	2.39	0.58
4:B:46:MET:O	4:B:49:ALA:HB3	2.03	0.58
4:B:55:PHE:O	4:B:55:PHE:HD2	1.87	0.58
4:B:182:PHE:O	4:B:185:VAL:HG22	2.02	0.58
4:B:850:ALA:C	4:B:852:GLN:H	2.06	0.58
4:C:299:THR:HG21	4:C:304:ALA:HB3	1.85	0.58
4:C:319:ALA:CB	4:C:792:ARG:HB3	2.34	0.58
4:C:322:ILE:HG21	4:C:795:VAL:HG12	1.85	0.58
4:C:477:GLU:HA	4:C:480:LYS:HB3	1.86	0.58
4:C:882:PHE:O	4:C:883:ALA:HB3	2.02	0.58
4:D:619:GLN:O	4:D:622:ALA:HB3	2.03	0.58
4:A:502:TRP:CD1	4:A:512:LEU:HD13	2.39	0.58
4:B:206:LYS:HB2	7:B:3155:HOH:O	2.02	0.58
4:B:389:LYS:O	4:B:392:LYS:HB3	2.03	0.58
4:C:423:ARG:NH1	4:C:423:ARG:CB	2.67	0.58
4:C:432:PHE:HZ	4:C:444:LEU:HD21	1.67	0.58
4:C:579:ASN:HA	4:C:582:LEU:HB2	1.86	0.58
4:D:40:GLU:OE1	4:D:288:ALA:N	2.34	0.58
4:D:830:GLU:HG2	4:D:876:LEU:CD2	2.34	0.58
4:A:392:LYS:O	4:A:392:LYS:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:461:LYS:O	4:A:462:ILE:C	2.40	0.58
4:A:582:LEU:HB2	4:A:621:LEU:HD21	1.86	0.58
4:A:792:ARG:HG3	4:A:792:ARG:HH11	1.68	0.58
4:B:99:ARG:NH1	4:B:99:ARG:HG2	2.19	0.58
4:B:162:PHE:CD1	4:B:190:MET:SD	2.97	0.58
4:B:423:ARG:HD2	4:B:781:ASN:HD21	1.68	0.58
4:B:702:ALA:CB	4:B:849:PHE:CE2	2.84	0.58
4:B:751:PHE:CB	4:B:752:LEU:HD12	2.23	0.58
4:D:77:LEU:HD11	4:D:224:THR:OG1	2.03	0.58
4:D:230:HIS:NE2	4:D:245:GLU:HB2	2.19	0.58
4:D:308:TYR:CE2	4:D:734:PRO:O	2.56	0.58
4:D:619:GLN:NE2	4:D:666:MET:O	2.36	0.58
4:D:680:LEU:O	4:D:683:GLU:N	2.37	0.58
4:A:3:THR:HB	4:A:52:ARG:HH12	1.69	0.58
4:B:5:ASN:HD21	4:B:7:ALA:CA	2.17	0.58
4:B:54:MET:O	4:B:58:GLN:HG2	2.03	0.58
4:B:423:ARG:HD2	4:B:781:ASN:ND2	2.18	0.58
4:C:19:ILE:CG1	4:C:20:PRO:HD2	2.20	0.58
4:C:452:ILE:HG22	4:C:528:TYR:O	2.04	0.58
4:C:553:GLU:HG2	4:C:554:VAL:N	2.19	0.58
4:C:849:PHE:HD2	4:C:853:LEU:HD21	1.68	0.58
4:A:50:ARG:HG2	4:A:50:ARG:HH11	1.68	0.58
4:A:270:PRO:HB3	4:A:416:PHE:CE1	2.39	0.58
4:A:400:PHE:O	4:A:401:MET:C	2.42	0.58
4:A:511:PHE:CD2	4:A:511:PHE:O	2.57	0.58
4:B:753:GLY:O	4:B:754:GLN:HG2	2.04	0.58
4:B:843:ALA:HA	4:B:864:LEU:HD21	1.85	0.58
4:B:861:MET:O	4:B:862:PRO:O	2.21	0.58
4:C:433:ASN:HB2	4:C:434:PRO:HD2	1.85	0.58
4:C:701:SER:O	4:C:704:LYS:HB3	2.04	0.58
4:C:727:TRP:NE1	4:C:782:PHE:CD1	2.72	0.58
4:D:292:ARG:N	4:D:293:PRO:HD3	2.18	0.58
4:D:720:ARG:NH1	4:D:720:ARG:CG	2.52	0.58
4:A:105:PHE:C	4:A:107:GLN:H	2.07	0.58
4:A:463:HIS:O	4:A:466:ASN:N	2.36	0.58
4:B:439:MET:HG3	4:B:509:PHE:CG	2.38	0.58
4:C:401:MET:O	4:C:404:GLN:CB	2.52	0.58
4:C:476:PRO:HG2	4:C:477:GLU:H	1.69	0.58
4:C:737:GLN:OE1	4:C:778:ILE:HD13	2.04	0.58
4:D:748:ASN:HB2	4:D:753:GLY:CA	2.33	0.58
4:D:794:THR:OG1	4:D:831:THR:CG2	2.45	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:448:LYS:HG2	7:A:3094:HOH:O	2.04	0.57
4:A:623:TYR:HD1	4:A:663:LYS:HE3	1.69	0.57
4:A:727:TRP:CZ2	4:A:735:VAL:HG11	2.39	0.57
4:A:788:GLY:C	4:A:792:ARG:HH12	2.08	0.57
4:B:41:HIS:O	4:B:42:GLU:C	2.43	0.57
4:B:582:LEU:HD13	4:B:621:LEU:CD1	2.33	0.57
4:C:308:TYR:O	4:C:310:ASP:N	2.37	0.57
4:D:870:LEU:HD23	4:D:870:LEU:C	2.25	0.57
1:E:14:DG:C2'	1:E:15:DC:C6	2.85	0.57
4:A:135:GLN:HB2	7:A:3052:HOH:O	2.02	0.57
4:A:416:PHE:CE2	4:A:434:PRO:HD3	2.40	0.57
4:A:471:ASP:OD1	4:A:472:LYS:CD	2.38	0.57
4:A:669:GLN:HB3	4:A:672:GLN:HG3	1.86	0.57
4:B:99:ARG:HG2	4:B:99:ARG:HH11	1.68	0.57
4:B:123:LEU:O	4:B:127:THR:HG23	2.04	0.57
4:B:436:GLY:HA3	7:B:3166:HOH:O	2.03	0.57
4:B:450:LYS:HB3	4:B:819:ALA:HB3	1.86	0.57
4:B:823:ASN:O	4:B:826:LYS:N	2.36	0.57
4:C:67:ASN:C	4:C:69:ALA:H	2.06	0.57
4:D:84:ARG:HB2	4:D:223:SER:HB3	1.87	0.57
4:B:737:GLN:HG2	4:B:774:GLN:NE2	2.18	0.57
4:C:275:PRO:CG	4:C:324:GLN:HG2	2.34	0.57
4:C:308:TYR:CE2	4:C:734:PRO:HG2	2.38	0.57
4:C:326:THR:O	4:C:415:TRP:CD1	2.57	0.57
4:C:700:LYS:HA	4:C:778:ILE:HG21	1.86	0.57
4:C:787:ASP:C	4:C:787:ASP:OD1	2.42	0.57
4:D:100:PRO:O	4:D:104:GLN:HG2	2.04	0.57
4:D:155:ARG:HA	4:D:163:LYS:HE3	1.86	0.57
4:D:323:ALA:C	4:D:325:ASN:H	2.07	0.57
4:D:814:PHE:CE1	4:D:883:ALA:CB	2.87	0.57
3:M:2:DT:H2''	3:M:3:DC:O5'	2.02	0.57
4:A:462:ILE:CD1	4:A:478:ARG:HD2	2.34	0.57
4:A:657:PRO:O	4:A:661:SER:OG	2.13	0.57
4:A:828:VAL:O	4:A:831:THR:HG22	2.04	0.57
4:B:21:PHE:C	4:B:23:THR:N	2.58	0.57
4:B:164:LYS:NZ	4:B:164:LYS:N	2.52	0.57
4:B:492:CYS:SG	4:B:502:TRP:HD1	2.25	0.57
4:B:642:LYS:HG2	4:B:682:TRP:CZ3	2.38	0.57
4:D:61:ALA:HB3	4:D:63:GLU:HG3	1.84	0.57
4:D:270:PRO:HD2	4:D:408:PHE:CE2	2.39	0.57
4:D:471:ASP:CG	4:D:472:LYS:HD3	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4:G:H5'	4:B:386:ARG:HD3	1.86	0.57
3:P:3:DC:H5'	7:D:3034:HOH:O	2.04	0.57
4:A:651:LEU:HD11	4:A:656:GLN:HE22	1.70	0.57
4:A:712:ASP:O	4:A:716:GLY:N	2.36	0.57
4:B:261:LEU:C	4:B:263:GLY:H	2.07	0.57
4:B:281:ILE:HD11	4:B:308:TYR:C	2.24	0.57
4:C:281:ILE:HG12	4:C:309:GLU:CA	2.34	0.57
4:C:281:ILE:CD1	4:C:309:GLU:HA	2.34	0.57
4:C:531:SER:OG	7:C:3088:HOH:O	2.17	0.57
4:C:583:GLN:O	4:C:587:ILE:HG12	2.05	0.57
4:C:704:LYS:NZ	4:C:775:GLU:OE2	2.32	0.57
4:D:486:HIS:NE2	4:D:490:MET:CG	2.67	0.57
4:A:438:ASP:O	4:A:439:MET:C	2.42	0.57
4:A:849:PHE:O	4:A:852:GLN:N	2.38	0.57
4:A:882:PHE:N	4:A:882:PHE:CD1	2.71	0.57
4:B:823:ASN:O	4:B:824:LEU:C	2.40	0.57
4:C:727:TRP:CE2	4:C:735:VAL:HG11	2.39	0.57
4:D:870:LEU:CD2	4:D:872:LEU:HD23	2.34	0.57
4:A:461:LYS:HE3	4:A:479:ILE:HG23	1.84	0.57
4:A:468:ALA:HB2	4:A:511:PHE:CD1	2.38	0.57
4:A:514:PHE:CD1	4:A:514:PHE:C	2.76	0.57
4:B:298:ARG:HE	4:B:419:ASN:CB	2.18	0.57
4:B:828:VAL:O	4:B:831:THR:HG22	2.05	0.57
4:C:10:ASP:OD1	7:C:3066:HOH:O	2.18	0.57
4:D:297:VAL:HG21	4:D:733:PHE:HZ	1.69	0.57
4:D:543:ILE:HG22	4:D:543:ILE:O	2.05	0.57
4:D:632:ARG:HH22	6:D:2003:APC:C5'	2.18	0.57
4:A:562:LEU:CD2	4:A:870:LEU:HD11	2.35	0.57
4:A:643:GLU:HG3	4:A:682:TRP:CG	2.39	0.57
4:B:571:TYR:HD2	4:B:631:LYS:HA	1.69	0.57
4:C:322:ILE:HG22	4:C:323:ALA:N	2.19	0.57
4:D:19:ILE:CG2	7:D:3014:HOH:O	2.51	0.57
4:D:720:ARG:NH1	4:D:721:LYS:O	2.38	0.57
4:A:374:LEU:H	4:A:374:LEU:HD12	1.68	0.57
4:A:404:GLN:HG2	4:A:432:PHE:HB2	1.86	0.57
4:B:557:ARG:HB2	4:B:562:LEU:HD12	1.86	0.57
4:B:677:MET:SD	4:B:681:ILE:CD1	2.93	0.57
4:B:780:PRO:HA	4:B:783:VAL:CG2	2.35	0.57
4:C:579:ASN:HA	4:C:582:LEU:CD1	2.33	0.57
4:D:88:TRP:O	4:D:92:VAL:HG23	2.04	0.57
4:D:236:VAL:HB	4:D:239:GLN:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:439:MET:HG3	4:D:509:PHE:CD2	2.40	0.57
4:A:137:VAL:HG12	4:A:217:ILE:HD11	1.86	0.57
4:A:429:VAL:HG12	4:A:430:SER:N	2.18	0.57
4:A:779:ALA:O	4:A:783:VAL:HG23	2.05	0.57
4:B:162:PHE:HD1	4:B:190:MET:SD	2.27	0.57
4:B:264:ILE:O	4:B:264:ILE:HG22	2.05	0.57
4:B:702:ALA:HB1	4:B:849:PHE:HE2	1.67	0.57
4:C:711:LYS:HG2	4:C:718:ILE:HA	1.87	0.57
4:D:42:GLU:O	4:D:43:SER:C	2.43	0.57
4:D:338:ALA:HB2	4:D:509:PHE:CE1	2.40	0.57
4:D:551:ARG:HB2	4:D:868:GLY:N	2.16	0.57
1:E:12:DT:C2'	1:E:13:DC:C5'	2.69	0.56
4:A:88:TRP:HE3	4:A:91:GLU:OE1	1.88	0.56
4:A:109:ILE:CD1	4:A:149:ALA:HB2	2.35	0.56
4:A:312:TYR:CZ	4:A:314:PRO:HG3	2.40	0.56
4:A:502:TRP:CG	4:A:512:LEU:CD1	2.88	0.56
4:A:583:GLN:CB	7:A:3056:HOH:O	2.46	0.56
4:A:685:VAL:O	4:A:687:VAL:N	2.37	0.56
4:A:777:GLY:O	4:A:781:ASN:OD1	2.23	0.56
4:A:828:VAL:CG2	4:A:829:ARG:H	2.14	0.56
4:B:457:TYR:CE1	4:B:521:VAL:HG11	2.40	0.56
4:B:536:PHE:CE2	4:B:825:PHE:HD2	2.23	0.56
4:B:571:TYR:OH	4:B:635:MET:CE	2.52	0.56
4:B:734:PRO:O	4:B:734:PRO:CG	2.52	0.56
4:C:676:TYR:O	4:C:677:MET:C	2.43	0.56
4:C:721:LYS:HG2	4:C:722:ARG:N	2.19	0.56
4:D:201:TRP:HA	4:D:204:TRP:HD1	1.69	0.56
4:D:401:MET:HE3	4:D:440:THR:HG21	1.87	0.56
4:A:423:ARG:HG2	4:A:781:ASN:HD22	1.70	0.56
4:A:807:PHE:CD1	4:A:807:PHE:N	2.73	0.56
4:B:42:GLU:O	4:B:43:SER:C	2.44	0.56
4:B:163:LYS:NZ	4:B:167:GLU:N	2.54	0.56
4:B:532:LEU:O	4:B:818:PRO:HD3	2.04	0.56
4:C:5:ASN:ND2	4:C:7:ALA:HB3	2.19	0.56
4:C:632:ARG:HH22	6:C:2002:APC:C5'	2.13	0.56
4:D:505:GLN:NE2	4:D:505:GLN:CA	2.66	0.56
4:D:745:THR:HB	4:D:756:ARG:NH1	2.21	0.56
1:H:17:DG:H3'	4:B:57:ARG:NH2	2.20	0.56
7:K:1088:HOH:O	4:C:641:SER:HA	2.06	0.56
4:A:155:ARG:CB	4:A:163:LYS:HE3	2.31	0.56
4:A:268:PHE:HB3	4:A:430:SER:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:308:TYR:CE2	4:A:736:TRP:HZ3	2.23	0.56
4:A:379:ARG:HE	4:A:656:GLN:HG2	1.70	0.56
4:A:383:ALA:O	4:A:384:VAL:C	2.41	0.56
4:A:579:ASN:HA	4:A:582:LEU:CD1	2.35	0.56
4:A:820:ASP:O	4:A:823:ASN:HB2	2.06	0.56
4:B:66:ASP:OD1	4:B:752:LEU:HD21	2.05	0.56
4:B:173:ARG:NH1	4:B:182:PHE:CD1	2.74	0.56
4:B:541:SER:O	4:B:542:GLY:C	2.43	0.56
4:B:616:LEU:O	4:B:618:GLY:N	2.38	0.56
4:B:632:ARG:CD	6:B:2001:APC:HN61	2.16	0.56
4:B:841:VAL:HG12	7:B:3081:HOH:O	2.05	0.56
4:C:334:VAL:HG21	4:C:513:ALA:CB	2.29	0.56
4:C:472:LYS:HE3	7:C:3049:HOH:O	2.05	0.56
4:C:534:LEU:HD12	4:C:821:ALA:HB2	1.86	0.56
4:C:831:THR:CG2	4:C:832:MET:N	2.69	0.56
4:D:420:MET:HA	4:D:425:ARG:O	2.04	0.56
4:D:512:LEU:O	4:D:515:CYS:HB2	2.05	0.56
4:A:436:GLY:HA3	4:A:440:THR:HB	1.87	0.56
4:A:508:PRO:HG2	4:A:509:PHE:H	1.69	0.56
4:A:734:PRO:HG2	4:A:734:PRO:O	2.05	0.56
4:A:816:THR:HG22	4:A:817:ILE:N	2.18	0.56
4:B:51:PHE:CD2	4:B:51:PHE:C	2.78	0.56
4:B:56:GLU:OE1	4:B:57:ARG:CA	2.53	0.56
4:B:233:ASN:CB	4:B:239:GLN:HB3	2.35	0.56
4:B:335:LEU:HD21	4:B:406:ASN:OD1	2.06	0.56
4:B:465:ALA:O	4:B:468:ALA:HB3	2.05	0.56
4:B:541:SER:O	4:B:544:GLN:HB3	2.04	0.56
4:B:634:VAL:HG22	4:B:634:VAL:O	2.05	0.56
4:B:695:ALA:O	4:B:699:LEU:CD1	2.50	0.56
4:B:846:TYR:CD2	4:B:864:LEU:HD11	2.40	0.56
4:C:152:GLY:O	4:C:156:ASP:OD2	2.22	0.56
4:C:474:PRO:HB2	4:C:476:PRO:CD	2.36	0.56
4:C:551:ARG:CG	4:C:551:ARG:NH1	2.68	0.56
4:C:741:LYS:HB2	4:C:770:ASP:HB2	1.86	0.56
4:D:303:LYS:HG3	4:D:304:ALA:H	1.68	0.56
4:D:390:ALA:HB1	4:D:394:ARG:NH2	2.19	0.56
4:A:14:ILE:HG13	7:A:3082:HOH:O	2.05	0.56
4:A:109:ILE:HD13	4:A:145:ILE:CG2	2.20	0.56
4:A:792:ARG:O	4:A:796:VAL:HG22	2.06	0.56
4:A:798:ALA:HB2	4:A:827:ALA:HB1	1.86	0.56
4:B:19:ILE:CD1	4:B:20:PRO:HD2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:210:ILE:O	4:B:214:VAL:HG22	2.06	0.56
4:B:446:LEU:HD13	4:B:806:SER:HB3	1.88	0.56
4:B:587:ILE:O	4:B:614:LYS:HE3	2.05	0.56
4:B:620:TRP:CD2	4:B:677:MET:HE2	2.41	0.56
4:D:437:ASN:C	4:D:437:ASN:HD22	2.07	0.56
4:A:81:MET:SD	4:A:85:ILE:HD11	2.45	0.56
4:A:143:ARG:HG2	7:A:3010:HOH:O	2.05	0.56
4:A:314:PRO:HD2	4:A:315:GLU:H	1.70	0.56
4:A:620:TRP:HA	4:A:620:TRP:CE3	2.40	0.56
4:B:5:ASN:HB3	4:B:8:LYS:HE3	1.88	0.56
4:B:89:PHE:HZ	4:B:106:LEU:O	1.89	0.56
4:B:783:VAL:O	4:B:784:HIS:O	2.24	0.56
4:B:827:ALA:O	4:B:828:VAL:C	2.44	0.56
4:C:335:LEU:HD21	4:C:406:ASN:OD1	2.06	0.56
4:D:669:GLN:HG3	4:D:672:GLN:NE2	2.21	0.56
4:D:712:ASP:HB2	4:D:719:LEU:HD11	1.88	0.56
4:D:828:VAL:HA	4:D:831:THR:CG2	2.35	0.56
4:A:347:CYS:SG	4:A:350:GLU:HG2	2.46	0.56
4:A:486:HIS:HE1	7:A:3212:HOH:O	1.89	0.56
4:A:854:HIS:HD2	4:A:856:SER:OG	1.89	0.56
4:B:109:ILE:HG13	4:B:149:ALA:HB2	1.88	0.56
4:B:199:GLU:HG2	4:B:201:TRP:HD1	1.70	0.56
4:B:550:LEU:HD11	4:B:695:ALA:HB2	1.88	0.56
4:B:795:VAL:O	4:B:796:VAL:C	2.39	0.56
4:B:804:ILE:HA	7:B:3072:HOH:O	2.04	0.56
4:C:42:GLU:O	4:C:46:MET:HE2	2.06	0.56
4:C:275:PRO:HB2	4:C:324:GLN:CD	2.25	0.56
4:C:421:ASP:O	4:C:422:TRP:C	2.44	0.56
4:C:452:ILE:HG13	4:C:456:GLY:HA3	1.86	0.56
4:C:485:ASN:O	4:C:489:ILE:HG13	2.06	0.56
4:C:711:LYS:HG2	4:C:717:GLU:O	2.06	0.56
4:D:199:GLU:OE2	4:D:202:SER:HB2	2.04	0.56
4:D:824:LEU:O	4:D:828:VAL:HG22	2.06	0.56
1:K:11:DA:H2'	1:K:12:DT:H73	1.88	0.56
4:A:316:VAL:HG13	4:A:792:ARG:NE	2.20	0.56
4:A:390:ALA:C	4:A:392:LYS:H	2.10	0.56
4:A:534:LEU:HD23	4:A:534:LEU:N	2.19	0.56
4:A:700:LYS:NZ	7:A:3017:HOH:O	2.25	0.56
4:B:86:ASN:HB3	7:B:3090:HOH:O	2.04	0.56
4:B:173:ARG:NH1	4:B:182:PHE:HD1	2.03	0.56
4:B:478:ARG:O	4:B:481:PHE:HB3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:626:THR:O	4:B:627:ARG:C	2.43	0.56
4:C:278:TRP:CZ3	4:C:284:GLY:HA3	2.41	0.56
4:C:423:ARG:CD	4:C:781:ASN:ND2	2.68	0.56
4:C:882:PHE:HD1	4:C:882:PHE:N	2.02	0.56
4:D:421:ASP:O	4:D:421:ASP:OD1	2.24	0.56
4:A:80:LYS:CE	4:A:224:THR:HG22	2.36	0.56
4:A:348:PRO:C	4:A:349:VAL:CG2	2.74	0.56
4:A:656:GLN:N	4:A:657:PRO:HD2	2.21	0.56
4:B:89:PHE:CZ	4:B:106:LEU:O	2.58	0.56
4:B:620:TRP:O	4:B:623:TYR:HB3	2.05	0.56
4:B:730:PRO:HD2	4:B:786:GLN:HE21	1.69	0.56
4:B:746:ARG:NH2	4:B:753:GLY:HA2	2.21	0.56
4:B:779:ALA:O	4:B:783:VAL:HG22	2.06	0.56
4:B:846:TYR:CD1	4:B:850:ALA:HB2	2.41	0.56
4:C:273:VAL:O	4:C:274:PRO:C	2.42	0.56
4:C:281:ILE:HG22	4:C:282:THR:N	2.21	0.56
4:C:322:ILE:HG21	4:C:795:VAL:CG1	2.36	0.56
4:D:313:MET:O	4:D:317:TYR:HD2	1.89	0.56
4:D:432:PHE:CZ	4:D:444:LEU:HD11	2.40	0.56
4:D:812:ASP:OD1	4:D:812:ASP:N	2.38	0.56
1:E:9:DA:N6	3:G:1:DG:N2	2.54	0.56
4:A:281:ILE:HG13	4:A:309:GLU:HA	1.88	0.56
4:A:333:LYS:CB	4:A:516:PHE:CD2	2.89	0.56
4:B:329:LYS:HG2	4:B:445:THR:O	2.05	0.56
4:B:639:TYR:HA	7:B:3018:HOH:O	2.04	0.56
4:B:737:GLN:HE22	4:B:777:GLY:C	2.09	0.56
4:B:849:PHE:O	4:B:852:GLN:HB2	2.06	0.56
4:C:341:ILE:CD1	4:C:348:PRO:HB3	2.29	0.56
4:C:416:PHE:HB2	4:C:418:TYR:HE1	1.70	0.56
4:C:512:LEU:HD12	4:C:512:LEU:O	2.06	0.56
4:C:532:LEU:HD23	4:C:532:LEU:O	2.06	0.56
4:D:30:GLU:HB3	4:D:34:ARG:HH21	1.70	0.56
3:J:1:DG:H1'	3:J:2:DT:C7	2.36	0.55
4:A:433:ASN:HB2	4:A:434:PRO:HD2	1.88	0.55
4:A:545:HIS:HE1	4:A:787:ASP:HA	1.71	0.55
4:C:116:TYR:OH	4:C:752:LEU:HD22	2.06	0.55
4:C:205:HIS:O	4:C:207:GLU:N	2.39	0.55
4:C:543:ILE:HD13	4:C:689:VAL:HG11	1.88	0.55
4:C:571:TYR:CE2	4:C:631:LYS:HE3	2.42	0.55
4:C:814:PHE:N	4:C:814:PHE:CD1	2.75	0.55
1:N:12:DT:H5'	4:D:781:ASN:HD21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:14:ILE:HD11	4:A:290:GLY:HA2	1.86	0.55
4:A:236:VAL:HB	4:A:239:GLN:HB2	1.88	0.55
4:A:342:THR:HG22	4:A:348:PRO:CG	2.35	0.55
4:A:563:PRO:CB	4:A:878:SER:HA	2.33	0.55
4:A:706:LEU:HD11	4:A:849:PHE:CD2	2.41	0.55
4:A:715:THR:CG2	4:A:717:GLU:HB2	2.36	0.55
4:A:824:LEU:O	4:A:827:ALA:N	2.39	0.55
4:B:407:LYS:CG	4:B:408:PHE:CE2	2.85	0.55
4:B:576:LYS:NZ	7:B:3102:HOH:O	2.39	0.55
4:C:16:LEU:HD21	4:C:41:HIS:ND1	2.20	0.55
4:C:50:ARG:NH1	4:C:50:ARG:CG	2.69	0.55
4:C:105:PHE:C	4:C:107:GLN:H	2.10	0.55
4:C:155:ARG:O	4:C:155:ARG:HG2	2.06	0.55
4:C:421:ASP:C	4:C:423:ARG:N	2.57	0.55
4:C:423:ARG:HD2	4:C:781:ASN:CG	2.26	0.55
4:D:744:GLN:HB3	4:D:756:ARG:HB2	1.88	0.55
4:A:292:ARG:N	4:A:293:PRO:HD3	2.21	0.55
4:A:526:LEU:HD12	4:A:526:LEU:H	1.66	0.55
4:B:71:LYS:N	4:B:72:PRO:CD	2.69	0.55
4:B:182:PHE:O	4:B:186:VAL:HG23	2.06	0.55
4:B:423:ARG:CG	4:B:423:ARG:HH11	2.19	0.55
4:B:473:VAL:HG11	4:B:477:GLU:CB	2.36	0.55
4:B:525:GLY:C	4:B:527:SER:H	2.10	0.55
4:B:698:TRP:CZ2	4:B:864:LEU:HG	2.41	0.55
4:C:711:LYS:CG	4:C:718:ILE:HA	2.36	0.55
4:D:505:GLN:N	4:D:505:GLN:HE21	2.04	0.55
4:D:717:GLU:O	4:D:719:LEU:HD12	2.07	0.55
4:D:772:HIS:O	4:D:775:GLU:N	2.38	0.55
1:E:10:DT:OP2	4:A:645:GLY:HA3	2.05	0.55
1:N:9:DA:H2''	1:N:10:DT:OP1	2.05	0.55
4:A:59:LEU:HD23	4:A:64:VAL:HG22	1.88	0.55
4:A:578:VAL:CG1	4:A:680:LEU:HB3	2.36	0.55
4:A:650:VAL:O	4:A:654:THR:HG22	2.07	0.55
4:B:291:ARG:CB	7:B:3037:HOH:O	2.51	0.55
4:B:411:HIS:O	4:B:413:ALA:N	2.40	0.55
4:B:489:ILE:CG2	4:B:515:CYS:HB3	2.37	0.55
4:B:492:CYS:O	4:B:496:PRO:CD	2.50	0.55
1:K:9:DA:N6	3:M:1:DG:N2	2.54	0.55
4:A:778:ILE:CG2	4:A:779:ALA:H	2.19	0.55
4:B:308:TYR:HE2	4:B:734:PRO:HG2	1.72	0.55
4:B:780:PRO:CD	4:B:781:ASN:H	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:817:ILE:HG12	4:D:820:ASP:OD2	2.05	0.55
3:J:1:DG:H4'	3:J:2:DT:H5'	1.87	0.55
4:A:474:PRO:HB2	4:A:476:PRO:HD2	1.88	0.55
4:A:632:ARG:HG2	7:A:3022:HOH:O	2.06	0.55
4:B:588:ASN:O	4:B:614:LYS:HD2	2.06	0.55
4:C:395:ARG:HE	4:C:399:GLU:CG	2.20	0.55
4:D:826:LYS:HD2	7:D:3041:HOH:O	2.05	0.55
4:A:308:TYR:O	4:A:311:VAL:N	2.35	0.55
4:A:350:GLU:O	7:A:3222:HOH:O	2.18	0.55
4:A:401:MET:N	4:A:401:MET:SD	2.79	0.55
4:A:669:GLN:HG2	4:A:672:GLN:NE2	2.20	0.55
4:A:797:TRP:CZ2	4:A:801:LYS:HG3	2.40	0.55
4:B:137:VAL:HG12	4:B:217:ILE:CD1	2.34	0.55
4:B:275:PRO:CD	7:B:3116:HOH:O	2.48	0.55
4:B:285:GLY:HA2	4:B:324:GLN:HE22	1.71	0.55
4:B:854:HIS:HD1	4:B:855:GLU:H	1.55	0.55
4:C:173:ARG:NH2	4:C:182:PHE:HB2	2.22	0.55
4:C:582:LEU:HD11	4:C:625:VAL:HG21	1.88	0.55
4:C:623:TYR:HA	4:C:666:MET:HE1	1.89	0.55
4:C:807:PHE:N	4:C:807:PHE:CD1	2.74	0.55
4:D:277:PRO:HA	7:D:3029:HOH:O	2.06	0.55
4:D:286:TYR:CZ	4:D:417:PRO:HG3	2.41	0.55
4:A:707:ALA:O	4:A:708:ALA:O	2.25	0.55
4:B:345:LYS:HZ1	4:B:351:ASP:H	1.55	0.55
4:B:569:ASP:O	4:B:569:ASP:OD1	2.24	0.55
4:B:689:VAL:O	4:B:690:VAL:C	2.45	0.55
4:C:183:MET:HE3	4:C:186:VAL:HG21	1.89	0.55
4:C:744:GLN:HA	4:C:756:ARG:HD3	1.89	0.55
4:D:743:ILE:O	4:D:756:ARG:NH2	2.40	0.55
4:A:317:TYR:O	4:A:321:ASN:ND2	2.33	0.55
4:A:619:GLN:O	4:A:623:TYR:N	2.37	0.55
4:A:630:THR:O	4:A:631:LYS:O	2.25	0.55
4:A:779:ALA:HB3	4:A:780:PRO:CD	2.37	0.55
4:A:829:ARG:O	4:A:833:VAL:HG23	2.06	0.55
4:B:76:THR:CG2	7:B:3212:HOH:O	2.54	0.55
4:B:345:LYS:O	4:B:346:HIS:C	2.45	0.55
4:C:40:GLU:OE2	4:C:286:TYR:CD1	2.58	0.55
4:C:684:SER:O	4:C:687:VAL:HG22	2.07	0.55
4:C:770:ASP:OD1	4:C:770:ASP:O	2.25	0.55
4:D:448:LYS:CD	4:D:806:SER:HB3	2.36	0.55
4:D:652:GLU:O	4:D:657:PRO:HD3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:14:ILE:N	4:A:14:ILE:CD1	2.69	0.55
4:A:287:TRP:O	4:A:288:ALA:O	2.25	0.55
4:B:388:ASP:C	4:B:388:ASP:OD1	2.45	0.55
4:B:803:GLY:O	4:B:804:ILE:O	2.25	0.55
4:B:813:SER:C	4:B:814:PHE:CD1	2.81	0.55
4:C:106:LEU:HG	4:C:212:VAL:HG13	1.89	0.55
4:C:579:ASN:OD1	4:C:582:LEU:HD12	2.07	0.55
4:C:710:VAL:HG13	4:C:710:VAL:O	2.07	0.55
4:D:311:VAL:CG1	4:D:312:TYR:N	2.70	0.55
4:D:816:THR:HG22	4:D:817:ILE:H	1.71	0.55
1:E:5:DA:H2	3:G:7:DT:O2	1.89	0.54
1:E:9:DA:C2	4:A:644:PHE:CD1	2.95	0.54
4:A:177:VAL:HB	7:A:3038:HOH:O	2.06	0.54
4:B:398:LEU:HG	4:B:439:MET:HE2	1.89	0.54
4:B:419:ASN:O	4:B:426:VAL:HA	2.07	0.54
4:B:587:ILE:HG22	4:B:588:ASN:HD22	1.71	0.54
4:C:21:PHE:C	4:C:23:THR:H	2.11	0.54
4:C:278:TRP:CD2	4:C:284:GLY:HA3	2.42	0.54
4:C:448:LYS:CE	4:C:806:SER:OG	2.54	0.54
4:D:241:SER:O	4:D:243:THR:HG23	2.06	0.54
4:A:13:ASP:HB3	4:A:14:ILE:HD12	1.88	0.54
4:B:266:PRO:HG2	4:B:268:PHE:CE1	2.41	0.54
4:B:398:LEU:C	4:B:398:LEU:CD2	2.75	0.54
4:B:532:LEU:HG	4:B:533:PRO:HD2	1.90	0.54
4:B:545:HIS:O	4:B:546:PHE:C	2.42	0.54
4:B:662:GLY:C	4:B:663:LYS:O	2.45	0.54
4:B:849:PHE:O	4:B:850:ALA:C	2.46	0.54
4:C:45:GLU:O	4:C:48:GLU:HB3	2.07	0.54
4:C:340:VAL:C	4:C:342:THR:N	2.60	0.54
4:C:433:ASN:OD1	4:C:433:ASN:C	2.46	0.54
4:C:728:VAL:HG22	4:C:734:PRO:HB3	1.89	0.54
4:C:777:GLY:O	4:C:781:ASN:OD1	2.25	0.54
4:C:814:PHE:CE1	4:C:883:ALA:CB	2.91	0.54
4:D:155:ARG:CA	4:D:163:LYS:HE3	2.37	0.54
4:D:558:ALA:HB1	4:D:570:ILE:HD13	1.88	0.54
1:K:12:DT:H5 ⁷	4:C:422:TRP:CH2	2.42	0.54
4:A:641:SER:HB2	4:A:646:PHE:HE1	1.73	0.54
4:B:27:HIS:HD2	7:B:3169:HOH:O	1.88	0.54
4:B:109:ILE:O	4:B:110:LYS:C	2.46	0.54
4:B:318:LYS:O	4:B:319:ALA:C	2.45	0.54
4:B:564:SER:HG	4:B:566:THR:H	1.53	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:84:ARG:HB2	4:C:223:SER:HB3	1.89	0.54
4:C:278:TRP:CD1	4:C:320:ILE:HG22	2.43	0.54
4:C:334:VAL:CG2	4:C:513:ALA:HB2	2.29	0.54
1:H:12:DT:C2'	1:H:13:DC:H6	2.19	0.54
3:P:9:DC:H2''	7:P:1110:HOH:O	2.06	0.54
4:A:35:GLU:O	4:A:36:GLN:C	2.46	0.54
4:A:640:GLY:O	4:A:641:SER:C	2.46	0.54
4:B:334:VAL:HG12	4:B:443:LEU:HD23	1.88	0.54
4:B:423:ARG:NH2	4:B:784:HIS:ND1	2.53	0.54
4:B:454:LYS:HG3	4:B:455:GLU:H	1.72	0.54
4:B:639:TYR:CA	7:B:3018:HOH:O	2.55	0.54
4:B:784:HIS:O	4:B:785:SER:C	2.44	0.54
4:C:403:GLU:N	7:C:3123:HOH:O	2.39	0.54
4:C:508:PRO:HB2	4:C:509:PHE:HD2	1.71	0.54
4:C:509:PHE:HD2	4:C:509:PHE:H	1.54	0.54
4:C:576:LYS:O	4:C:580:GLU:HG3	2.07	0.54
4:D:577:LYS:O	4:D:581:ILE:HG13	2.07	0.54
4:D:632:ARG:HH22	6:D:2003:APC:H5'2	1.72	0.54
2:I:8:U:O3'	4:B:812:ASP:OD2	2.24	0.54
4:A:11:PHE:HB3	4:A:41:HIS:HE1	1.72	0.54
4:A:316:VAL:HG13	4:A:792:ARG:HD2	1.89	0.54
4:A:649:GLN:O	4:A:650:VAL:C	2.46	0.54
4:A:793:LYS:O	4:A:794:THR:C	2.45	0.54
4:B:181:ALA:HA	4:B:184:GLN:NE2	2.22	0.54
4:B:573:ILE:HD13	7:B:3102:HOH:O	2.07	0.54
4:B:677:MET:O	4:B:678:ALA:C	2.44	0.54
4:B:810:ILE:O	4:B:813:SER:HB2	2.07	0.54
4:C:793:LYS:NZ	4:C:835:THR:OG1	2.32	0.54
4:C:833:VAL:HG22	4:C:872:LEU:O	2.08	0.54
4:D:47:GLY:O	4:D:50:ARG:HB3	2.08	0.54
4:D:446:LEU:HG	4:D:533:PRO:HD3	1.90	0.54
4:A:13:ASP:CG	4:A:291:ARG:HH21	2.10	0.54
4:A:76:THR:C	4:A:79:PRO:HD2	2.27	0.54
4:A:204:TRP:HH2	4:A:212:VAL:HG21	1.67	0.54
4:A:555:GLY:O	4:A:558:ALA:HB3	2.08	0.54
4:A:620:TRP:CE2	4:A:677:MET:HB2	2.43	0.54
4:A:669:GLN:O	4:A:672:GLN:N	2.41	0.54
4:A:720:ARG:HH21	4:A:857:GLN:NE2	2.06	0.54
4:B:473:VAL:HG11	4:B:477:GLU:HB2	1.88	0.54
4:B:742:PRO:HB3	4:B:744:GLN:CD	2.27	0.54
4:B:803:GLY:O	4:B:804:ILE:C	2.46	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:656:GLN:HA	4:C:656:GLN:HE21	1.72	0.54
4:D:50:ARG:NH1	4:D:267:MET:HG2	2.23	0.54
4:D:258:ALA:O	4:D:259:GLY:O	2.26	0.54
4:D:512:LEU:CA	4:D:515:CYS:SG	2.86	0.54
4:D:817:ILE:HB	4:D:818:PRO:CD	2.38	0.54
4:A:88:TRP:CE3	4:A:91:GLU:OE1	2.61	0.54
4:A:120:LYS:HG3	4:A:752:LEU:HD21	1.90	0.54
4:A:275:PRO:O	4:A:277:PRO:HD3	2.07	0.54
4:A:471:ASP:O	4:A:472:LYS:HG3	2.08	0.54
4:A:474:PRO:O	4:A:477:GLU:HB2	2.07	0.54
4:B:211:HIS:O	4:B:214:VAL:HG23	2.08	0.54
4:B:297:VAL:HG12	4:B:299:THR:HG22	1.88	0.54
4:B:790:HIS:HE1	4:B:831:THR:CG2	2.20	0.54
4:B:814:PHE:CD1	4:B:814:PHE:N	2.76	0.54
4:C:6:ILE:HD13	7:C:3031:HOH:O	2.06	0.54
4:C:273:VAL:HG23	4:C:274:PRO:O	2.08	0.54
4:C:726:HIS:CD2	4:C:736:TRP:CE2	2.96	0.54
4:D:19:ILE:CD1	4:D:20:PRO:HD2	2.36	0.54
4:D:21:PHE:C	4:D:23:THR:N	2.61	0.54
4:D:744:GLN:HE21	4:D:756:ARG:H	1.56	0.54
4:A:216:CYS:O	4:A:219:MET:N	2.40	0.54
4:A:395:ARG:O	4:A:399:GLU:HG3	2.08	0.54
4:A:428:ALA:H	4:A:435:GLN:NE2	2.04	0.54
4:A:636:THR:HG21	6:A:2000:APC:N6	2.23	0.54
6:A:2000:APC:C4'	7:A:3238:HOH:O	2.41	0.54
4:B:728:VAL:HG13	4:B:733:PHE:C	2.28	0.54
4:B:823:ASN:O	4:B:825:PHE:N	2.40	0.54
4:B:882:PHE:HE2	7:B:3089:HOH:O	1.90	0.54
4:C:161:HIS:C	4:C:163:LYS:N	2.62	0.54
4:C:474:PRO:CB	4:C:476:PRO:HD2	2.37	0.54
4:D:882:PHE:O	4:D:883:ALA:CB	2.56	0.54
1:H:15:DC:H2''	1:H:16:DC:H5'	1.89	0.54
4:A:44:TYR:CD2	4:A:266:PRO:HB3	2.43	0.54
4:A:485:ASN:HD22	4:A:488:ASN:ND2	2.06	0.54
4:A:654:THR:O	4:A:658:ALA:HB2	2.07	0.54
4:A:810:ILE:O	4:A:810:ILE:HG22	2.07	0.54
4:B:201:TRP:CD2	7:B:3009:HOH:O	2.61	0.54
4:B:754:GLN:O	4:B:755:PHE:O	2.25	0.54
4:C:120:LYS:HD2	4:C:751:PHE:HE2	1.72	0.54
4:C:199:GLU:HB2	7:C:3075:HOH:O	2.08	0.54
4:C:312:TYR:CE1	4:C:314:PRO:HG3	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:457:TYR:CE1	4:C:521:VAL:CG1	2.87	0.54
4:D:201:TRP:O	4:D:204:TRP:HB2	2.07	0.54
4:D:507:SER:O	4:D:511:PHE:N	2.41	0.54
1:H:12:DT:H2''	1:H:13:DC:H5'	1.89	0.54
3:M:8:DC:H2''	3:M:9:DC:OP2	2.07	0.54
4:A:573:ILE:O	4:A:576:LYS:HB2	2.07	0.54
4:A:656:GLN:O	4:A:658:ALA:N	2.41	0.54
4:B:42:GLU:HG2	4:B:46:MET:HE1	1.89	0.54
4:B:144:ALA:O	4:B:145:ILE:C	2.46	0.54
4:B:163:LYS:C	4:B:166:VAL:HG23	2.28	0.54
4:B:229:LEU:HD21	4:B:242:GLU:CD	2.29	0.54
4:B:333:LYS:O	4:B:337:VAL:CG2	2.54	0.54
4:B:439:MET:O	4:B:440:THR:C	2.43	0.54
4:B:610:LYS:O	4:B:611:LEU:C	2.46	0.54
4:C:89:PHE:HZ	4:C:106:LEU:O	1.91	0.54
4:C:306:MET:C	4:C:308:TYR:N	2.61	0.54
4:C:830:GLU:O	4:C:831:THR:C	2.46	0.54
4:C:846:TYR:HA	4:C:849:PHE:CE1	2.42	0.54
4:D:21:PHE:C	4:D:23:THR:H	2.10	0.54
4:D:530:CYS:HB3	4:D:818:PRO:HG2	1.90	0.54
4:D:551:ARG:HH11	4:D:551:ARG:HG3	1.73	0.54
4:D:594:VAL:HA	4:D:609:VAL:HA	1.90	0.54
4:D:829:ARG:O	4:D:833:VAL:HG23	2.08	0.54
2:F:6:G:O2'	2:F:7:A:H5'	2.07	0.53
4:A:36:GLN:HG3	4:A:273:VAL:HG22	1.91	0.53
4:A:134:VAL:O	4:A:134:VAL:HG22	2.08	0.53
4:A:459:TRP:HZ3	4:A:475:PHE:CE1	2.25	0.53
4:A:544:GLN:OE1	4:A:559:VAL:CG2	2.56	0.53
4:A:648:GLN:O	4:A:652:GLU:HG2	2.08	0.53
4:A:755:PHE:N	4:A:755:PHE:CD1	2.77	0.53
4:A:882:PHE:HD1	4:A:882:PHE:N	2.05	0.53
4:C:291:ARG:CG	7:C:3066:HOH:O	2.56	0.53
4:C:398:LEU:HD23	4:C:398:LEU:C	2.29	0.53
4:C:539:SER:HB2	4:C:544:GLN:OE1	2.08	0.53
4:C:706:LEU:HD22	4:C:725:VAL:CG2	2.36	0.53
4:D:264:ILE:HG22	4:D:292:ARG:HG2	1.89	0.53
4:D:508:PRO:O	4:D:510:CYS:N	2.41	0.53
1:N:11:DA:C5	4:D:639:TYR:CE2	2.96	0.53
4:A:78:LEU:O	4:A:82:ILE:HG13	2.08	0.53
4:A:292:ARG:HG3	4:A:292:ARG:O	2.09	0.53
4:A:316:VAL:HG13	4:A:792:ARG:CD	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:563:PRO:HB3	4:A:877:GLU:C	2.28	0.53
4:A:594:VAL:HA	4:A:609:VAL:HA	1.89	0.53
4:A:825:PHE:CD1	4:A:825:PHE:C	2.81	0.53
4:B:76:THR:HG22	7:B:3212:HOH:O	2.07	0.53
4:B:645:GLY:C	4:B:647:ARG:N	2.60	0.53
4:B:730:PRO:HD3	4:B:786:GLN:NE2	2.24	0.53
4:B:816:THR:HG21	4:B:820:ASP:CB	2.38	0.53
4:B:843:ALA:HA	4:B:864:LEU:CD2	2.38	0.53
4:C:514:PHE:CD1	4:C:514:PHE:C	2.81	0.53
4:C:705:LEU:HD21	4:C:860:LYS:HE3	1.90	0.53
4:D:19:ILE:HG21	7:D:3014:HOH:O	2.08	0.53
4:D:274:PRO:HB3	4:D:325:ASN:OD1	2.07	0.53
4:D:523:HIS:O	4:D:524:HIS:ND1	2.41	0.53
4:A:19:ILE:HG22	7:A:3120:HOH:O	2.04	0.53
4:A:105:PHE:O	4:A:107:GLN:N	2.41	0.53
4:A:236:VAL:HG11	4:A:239:GLN:HG3	1.89	0.53
4:B:201:TRP:CG	7:B:3009:HOH:O	2.60	0.53
4:B:710:VAL:HG13	4:B:710:VAL:O	2.08	0.53
4:B:840:ASP:O	4:B:841:VAL:C	2.46	0.53
4:C:421:ASP:C	4:C:423:ARG:H	2.10	0.53
4:C:739:TYR:HD2	4:C:774:GLN:HA	1.73	0.53
4:C:791:LEU:HD23	4:C:791:LEU:C	2.29	0.53
4:D:14:ILE:HG21	4:D:288:ALA:HB1	1.89	0.53
4:D:302:LYS:HE3	4:D:306:MET:CE	2.38	0.53
4:A:328:TRP:HA	4:A:446:LEU:HA	1.91	0.53
4:A:333:LYS:HB2	4:A:516:PHE:CD2	2.43	0.53
4:A:546:PHE:CZ	4:A:783:VAL:CG2	2.88	0.53
4:A:651:LEU:CD1	4:A:656:GLN:NE2	2.72	0.53
4:B:69:ALA:O	4:B:72:PRO:HD2	2.08	0.53
4:B:112:GLU:H	4:B:112:GLU:CD	2.11	0.53
4:B:465:ALA:HB1	4:B:470:VAL:HB	1.89	0.53
4:B:633:SER:HB3	4:B:646:PHE:CD1	2.43	0.53
4:C:826:LYS:O	4:C:830:GLU:HG3	2.08	0.53
4:C:840:ASP:O	4:C:843:ALA:N	2.41	0.53
4:D:419:ASN:HD22	4:D:419:ASN:N	2.06	0.53
2:I:5:C:C2	2:I:6:G:C8	2.96	0.53
4:A:11:PHE:CZ	4:A:44:TYR:HB3	2.43	0.53
4:A:229:LEU:HD13	4:A:244:ILE:HD13	1.90	0.53
4:A:374:LEU:C	4:A:376:ALA:H	2.12	0.53
4:A:423:ARG:HH21	4:A:784:HIS:CB	2.22	0.53
4:A:643:GLU:HG3	4:A:682:TRP:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:809:LEU:C	4:A:810:ILE:HG13	2.28	0.53
4:B:427:TYR:HE1	4:B:811:HIS:NE2	2.06	0.53
4:C:88:TRP:O	4:C:92:VAL:HG23	2.07	0.53
4:C:452:ILE:HG23	4:C:453:GLY:H	1.74	0.53
4:C:719:LEU:N	4:C:719:LEU:HD12	2.24	0.53
4:C:830:GLU:HG2	4:C:876:LEU:CD2	2.38	0.53
4:D:677:MET:O	4:D:680:LEU:HB2	2.08	0.53
4:D:810:ILE:HB	4:D:813:SER:CB	2.39	0.53
7:I:777:HOH:O	4:B:386:ARG:HD2	2.02	0.53
4:A:796:VAL:O	4:A:797:TRP:C	2.45	0.53
4:A:881:ALA:C	4:A:882:PHE:O	2.45	0.53
4:B:50:ARG:CG	4:B:50:ARG:HH11	2.22	0.53
4:B:99:ARG:NH2	7:B:3046:HOH:O	2.40	0.53
4:B:430:SER:O	4:B:430:SER:OG	2.21	0.53
4:B:696:MET:O	4:B:700:LYS:HB2	2.08	0.53
4:B:795:VAL:O	4:B:796:VAL:O	2.27	0.53
4:D:537:ASP:O	4:D:882:PHE:HB2	2.08	0.53
4:D:619:GLN:HG2	4:D:666:MET:O	2.09	0.53
4:A:165:ASN:OD1	4:A:165:ASN:N	2.35	0.53
4:A:457:TYR:HE1	4:A:521:VAL:HG11	1.70	0.53
4:A:729:THR:OG1	4:A:733:PHE:HB3	2.08	0.53
4:B:278:TRP:N	4:B:321:ASN:OD1	2.27	0.53
4:B:631:LYS:O	4:B:632:ARG:C	2.47	0.53
4:C:14:ILE:HA	7:C:3014:HOH:O	2.09	0.53
4:C:118:THR:HG23	4:C:141:ILE:HD13	1.90	0.53
4:C:553:GLU:O	4:C:554:VAL:C	2.47	0.53
4:D:754:GLN:O	4:D:755:PHE:O	2.27	0.53
1:H:10:DT:H4'	4:B:639:TYR:O	2.08	0.53
2:L:4:G:H1'	4:C:389:LYS:NZ	2.23	0.53
1:N:10:DT:H3	6:D:2003:APC:HN62	1.56	0.53
4:A:30:GLU:HB2	7:A:3035:HOH:O	2.09	0.53
4:A:136:ALA:O	4:A:139:SER:HB3	2.08	0.53
4:A:828:VAL:C	4:A:830:GLU:N	2.61	0.53
4:B:21:PHE:O	4:B:21:PHE:HD1	1.91	0.53
4:B:68:ALA:HB3	4:B:261:LEU:HD21	1.91	0.53
4:C:80:LYS:HD2	4:C:224:THR:CG2	2.39	0.53
4:C:90:GLU:OE2	4:C:93:LYS:HD2	2.08	0.53
4:C:472:LYS:HA	4:C:567:VAL:HG11	1.89	0.53
4:C:592:ASN:O	4:C:593:GLU:HB2	2.09	0.53
4:C:849:PHE:O	4:C:852:GLN:N	2.42	0.53
4:D:230:HIS:O	4:D:230:HIS:ND1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:281:ILE:HD12	4:D:317:TYR:HH	1.73	0.53
1:H:13:DC:H4'	4:B:427:TYR:CE2	2.44	0.53
4:A:446:LEU:HB2	4:A:531:SER:O	2.09	0.53
4:B:407:LYS:HE2	4:B:408:PHE:CE2	2.44	0.53
4:B:737:GLN:NE2	4:B:739:TYR:HE2	1.99	0.53
4:C:96:ARG:HG2	4:C:96:ARG:HH11	1.74	0.53
4:C:737:GLN:OE1	4:C:778:ILE:HA	2.08	0.53
4:D:402:LEU:O	4:D:403:GLU:C	2.47	0.53
4:D:428:ALA:N	4:D:435:GLN:NE2	2.55	0.53
4:D:854:HIS:CG	4:D:855:GLU:N	2.76	0.53
3:M:5:DA:H2''	3:M:6:DT:C7	2.39	0.53
4:A:502:TRP:O	4:A:505:GLN:HB2	2.09	0.53
4:B:416:PHE:HE1	4:B:432:PHE:O	1.92	0.53
4:B:423:ARG:NH1	4:B:784:HIS:CB	2.71	0.53
4:B:793:LYS:HG3	7:B:3181:HOH:O	2.08	0.53
4:C:82:ILE:CD1	4:C:112:GLU:HA	2.39	0.53
4:C:509:PHE:N	4:C:509:PHE:CD2	2.76	0.53
4:C:512:LEU:O	4:C:516:PHE:HD1	1.92	0.53
4:C:698:TRP:CZ2	4:C:864:LEU:HG	2.44	0.53
4:D:32:LEU:H	4:D:32:LEU:CD1	2.08	0.53
4:D:100:PRO:HG2	4:D:103:PHE:HB3	1.90	0.53
4:D:349:VAL:O	4:D:349:VAL:HG12	2.09	0.53
4:D:570:ILE:HA	4:D:573:ILE:HG22	1.91	0.53
4:D:571:TYR:HD1	4:D:631:LYS:HA	1.72	0.53
4:D:711:LYS:C	4:D:719:LEU:HD13	2.29	0.53
4:D:817:ILE:HB	4:D:818:PRO:HD2	1.90	0.53
4:D:849:PHE:O	4:D:852:GLN:N	2.34	0.53
3:J:4:DG:H1'	3:J:5:DA:C8	2.44	0.52
4:A:109:ILE:CG1	4:A:149:ALA:HB2	2.39	0.52
4:B:11:PHE:CE1	4:B:44:TYR:HB3	2.43	0.52
4:B:663:LYS:HG2	4:B:664:GLY:N	2.21	0.52
4:B:669:GLN:CB	4:B:672:GLN:HE21	2.22	0.52
4:C:158:GLU:OE1	4:C:195:LEU:HB3	2.08	0.52
4:C:871:ASN:ND2	4:C:873:ARG:HB2	2.24	0.52
4:D:233:ASN:HD22	4:D:239:GLN:HE21	1.56	0.52
4:D:543:ILE:HG21	4:D:689:VAL:HG11	1.91	0.52
4:D:744:GLN:CA	4:D:756:ARG:CZ	2.85	0.52
2:O:2:C:H5	7:O:443:HOH:O	1.92	0.52
4:A:569:ASP:O	4:A:573:ILE:HG22	2.08	0.52
4:A:664:GLY:HA2	4:A:667:PHE:CD2	2.39	0.52
4:A:727:TRP:CE2	4:A:735:VAL:CG1	2.88	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:307:ARG:HB3	4:B:736:TRP:CZ3	2.44	0.52
4:B:486:HIS:HE1	4:B:490:MET:HG3	1.73	0.52
4:C:19:ILE:HG23	4:C:20:PRO:N	2.23	0.52
4:C:36:GLN:HG3	4:C:273:VAL:CG2	2.38	0.52
4:C:320:ILE:O	4:C:324:GLN:HB2	2.09	0.52
4:C:845:PHE:O	4:C:848:GLN:N	2.41	0.52
4:D:114:VAL:HA	4:D:117:ILE:HD12	1.91	0.52
4:D:545:HIS:O	4:D:546:PHE:C	2.47	0.52
4:D:557:ARG:NH2	7:D:3021:HOH:O	2.43	0.52
4:D:739:TYR:HD2	4:D:774:GLN:HA	1.74	0.52
1:E:11:DA:H2'	1:E:12:DT:C7	2.39	0.52
3:J:5:DA:H2''	3:J:6:DT:H72	1.91	0.52
1:N:6:DT:C6	1:N:6:DT:H5'	2.44	0.52
4:A:626:THR:O	4:A:627:ARG:C	2.48	0.52
4:A:646:PHE:O	4:A:647:ARG:C	2.48	0.52
4:A:755:PHE:N	4:A:755:PHE:HD1	2.07	0.52
4:B:21:PHE:C	4:B:21:PHE:CD1	2.82	0.52
4:B:122:THR:HG22	4:B:123:LEU:N	2.24	0.52
4:B:146:GLU:O	4:B:147:ASP:C	2.46	0.52
4:B:272:VAL:HG11	4:B:411:HIS:HD2	1.73	0.52
4:C:205:HIS:C	4:C:207:GLU:H	2.12	0.52
4:C:322:ILE:CG2	4:C:795:VAL:CG1	2.88	0.52
4:C:474:PRO:O	4:C:478:ARG:HG3	2.09	0.52
4:C:551:ARG:HD3	4:C:872:LEU:HD21	1.91	0.52
4:C:788:GLY:O	4:C:792:ARG:NH1	2.42	0.52
4:C:830:GLU:HG2	4:C:876:LEU:HD21	1.91	0.52
4:D:154:ILE:O	4:D:159:ALA:HB3	2.09	0.52
4:D:731:ASP:OD1	4:D:792:ARG:NH2	2.42	0.52
4:D:751:PHE:HB3	4:D:752:LEU:HD12	1.90	0.52
1:H:12:DT:C5'	4:B:423:ARG:HE	2.22	0.52
4:A:269:GLN:O	4:A:430:SER:HB2	2.10	0.52
4:A:383:ALA:C	4:A:385:TYR:H	2.11	0.52
4:A:544:GLN:HG2	4:A:559:VAL:CG2	2.30	0.52
4:A:551:ARG:O	4:A:868:GLY:HA3	2.08	0.52
4:B:19:ILE:HG23	4:B:20:PRO:CD	2.39	0.52
4:C:278:TRP:CD1	4:C:320:ILE:CG2	2.92	0.52
4:C:315:GLU:OE1	4:C:796:VAL:HG11	2.08	0.52
4:C:770:ASP:O	4:C:772:HIS:N	2.42	0.52
4:C:794:THR:OG1	4:C:831:THR:HG21	2.09	0.52
4:C:843:ALA:HA	4:C:864:LEU:HD21	1.92	0.52
4:D:207:GLU:O	4:D:211:HIS:CE1	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:323:ALA:C	4:D:325:ASN:N	2.61	0.52
4:D:384:VAL:HA	7:D:3158:HOH:O	2.10	0.52
4:D:458:TYR:C	4:D:458:TYR:CD2	2.82	0.52
4:D:833:VAL:O	4:D:837:GLU:HG3	2.09	0.52
1:H:18:DC:H2''	4:B:63:GLU:OE1	2.10	0.52
2:O:6:G:O2'	2:O:7:A:H5'	2.09	0.52
4:A:476:PRO:HG2	4:A:477:GLU:H	1.74	0.52
4:A:546:PHE:HE2	4:A:696:MET:CG	2.22	0.52
4:A:694:GLU:OE1	4:A:865:PRO:HB3	2.10	0.52
4:B:231:ARG:HG2	4:B:234:ALA:CB	2.35	0.52
4:B:327:ALA:HB1	4:B:447:ALA:HB3	1.91	0.52
4:B:407:LYS:HG2	4:B:408:PHE:HE2	1.66	0.52
4:B:430:SER:O	4:B:432:PHE:N	2.43	0.52
4:B:569:ASP:O	4:B:572:GLY:N	2.41	0.52
4:B:810:ILE:N	4:B:813:SER:HB3	2.25	0.52
4:C:116:TYR:O	4:C:119:ILE:HG12	2.10	0.52
4:C:325:ASN:O	4:C:415:TRP:CD1	2.62	0.52
4:C:433:ASN:N	7:C:3164:HOH:O	2.41	0.52
4:D:116:TYR:CE2	4:D:752:LEU:HD22	2.44	0.52
3:G:5:DA:N6	7:G:73:HOH:O	2.43	0.52
1:K:14:DG:H3'	7:K:520:HOH:O	2.08	0.52
4:A:34:ARG:NH2	7:A:3166:HOH:O	2.43	0.52
4:A:42:GLU:O	4:A:45:GLU:N	2.42	0.52
4:A:422:TRP:CD1	4:A:423:ARG:HG3	2.45	0.52
4:A:433:ASN:OD1	4:A:435:GLN:N	2.41	0.52
4:B:58:GLN:NE2	7:B:3136:HOH:O	2.41	0.52
4:B:278:TRP:CD2	4:B:284:GLY:HA3	2.44	0.52
4:B:422:TRP:CD1	4:B:422:TRP:C	2.83	0.52
4:B:473:VAL:HG12	4:B:477:GLU:HB2	1.91	0.52
4:B:720:ARG:NH1	4:B:721:LYS:O	2.43	0.52
4:C:591:ASP:OD1	7:C:3122:HOH:O	2.19	0.52
4:D:232:GLN:HB2	4:D:241:SER:O	2.09	0.52
4:D:322:ILE:HG21	4:D:795:VAL:HG12	1.92	0.52
4:D:506:ASP:O	4:D:508:PRO:HD2	2.09	0.52
4:D:777:GLY:O	4:D:778:ILE:C	2.46	0.52
4:A:16:LEU:HB3	4:A:37:LEU:HB3	1.92	0.52
4:A:134:VAL:HA	4:A:137:VAL:HB	1.92	0.52
4:A:299:THR:HG22	4:A:300:HIS:H	1.75	0.52
4:B:267:MET:HE3	4:B:431:MET:SD	2.50	0.52
4:B:330:ILE:HD11	4:B:405:ALA:HA	1.90	0.52
4:B:699:LEU:HD11	4:B:842:LEU:HD11	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:872:LEU:O	4:B:874:ASP:N	2.43	0.52
4:B:882:PHE:O	4:B:883:ALA:HB3	2.09	0.52
4:D:95:LYS:HB2	4:D:95:LYS:HZ2	1.75	0.52
3:G:4:DG:H2''	3:G:5:DA:C8	2.45	0.52
1:N:11:DA:H2''	1:N:12:DT:O5'	2.10	0.52
4:A:141:ILE:CG2	4:A:145:ILE:HD11	2.39	0.52
4:A:596:THR:HG23	4:A:606:SER:O	2.09	0.52
4:A:627:ARG:NH2	6:A:2000:APC:O2G	2.43	0.52
4:A:830:GLU:O	4:A:831:THR:C	2.47	0.52
4:B:276:LYS:HB2	4:B:287:TRP:CD2	2.45	0.52
4:B:403:GLU:O	4:B:404:GLN:C	2.48	0.52
4:B:422:TRP:NE1	4:B:781:ASN:ND2	2.57	0.52
4:C:685:VAL:C	4:C:687:VAL:H	2.13	0.52
4:C:846:TYR:HD2	4:C:864:LEU:HD11	1.74	0.52
4:D:337:VAL:HG12	4:D:341:ILE:HD11	1.92	0.52
4:D:809:LEU:O	4:D:810:ILE:HG13	2.10	0.52
4:D:848:GLN:OE1	4:D:848:GLN:HA	2.09	0.52
4:A:166:VAL:O	4:A:167:GLU:C	2.47	0.52
4:A:206:LYS:O	4:A:210:ILE:HG12	2.10	0.52
4:A:437:ASN:O	4:A:438:ASP:C	2.46	0.52
4:A:620:TRP:CZ2	4:A:677:MET:HB2	2.45	0.52
4:A:871:ASN:O	4:A:874:ASP:OD2	2.28	0.52
4:B:48:GLU:HG3	4:B:262:ALA:HB1	1.92	0.52
4:B:157:LEU:O	4:B:160:LYS:N	2.32	0.52
4:B:779:ALA:N	4:B:780:PRO:HD3	2.25	0.52
4:B:780:PRO:HB3	7:B:3018:HOH:O	2.10	0.52
4:B:849:PHE:HD1	4:B:849:PHE:H	1.56	0.52
4:C:4:ILE:CD1	4:C:256:THR:HG23	2.37	0.52
4:C:333:LYS:CD	4:C:516:PHE:HD2	2.15	0.52
4:C:455:GLU:OE1	4:C:455:GLU:HA	2.09	0.52
4:D:404:GLN:HG2	4:D:432:PHE:CB	2.40	0.52
2:I:5:C:N3	2:I:6:G:C8	2.78	0.52
4:A:281:ILE:HG22	4:A:282:THR:N	2.23	0.52
4:A:281:ILE:HG13	4:A:309:GLU:CG	2.40	0.52
4:A:459:TRP:CH2	4:A:825:PHE:CE2	2.98	0.52
4:B:450:LYS:N	4:B:529:ASN:HD21	2.07	0.52
4:B:471:ASP:C	4:B:472:LYS:HD2	2.31	0.52
4:B:722:ARG:NH1	4:B:768:GLU:OE2	2.42	0.52
4:D:66:ASP:OD2	4:D:752:LEU:HD23	2.10	0.52
4:D:236:VAL:O	4:D:240:ASP:HB2	2.09	0.52
4:D:501:TRP:HA	4:D:504:GLU:CD	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:582:LEU:HD22	4:D:620:TRP:HB2	1.92	0.52
4:D:613:THR:HG22	4:D:676:TYR:HE1	1.75	0.52
1:H:9:DA:N6	3:J:1:DG:H22	2.05	0.51
4:A:270:PRO:HB3	4:A:416:PHE:CD1	2.45	0.51
4:A:457:TYR:CD1	4:A:521:VAL:HG21	2.40	0.51
4:A:521:VAL:HG12	4:A:522:GLN:N	2.24	0.51
4:A:810:ILE:CD1	7:A:3145:HOH:O	2.58	0.51
4:B:105:PHE:C	4:B:107:GLN:H	2.13	0.51
4:B:194:GLY:O	4:B:196:LEU:HD23	2.11	0.51
4:C:42:GLU:OE1	4:C:46:MET:HE1	2.09	0.51
4:C:93:LYS:HA	4:C:99:ARG:NH2	2.25	0.51
4:C:404:GLN:HA	4:C:404:GLN:NE2	2.19	0.51
4:C:569:ASP:O	4:C:572:GLY:N	2.43	0.51
4:C:649:GLN:O	4:C:650:VAL:C	2.48	0.51
4:D:466:ASN:OD1	4:D:478:ARG:NH1	2.44	0.51
4:A:459:TRP:CZ3	4:A:475:PHE:CE1	2.99	0.51
4:B:516:PHE:O	4:B:519:ALA:HB3	2.10	0.51
4:C:155:ARG:HB2	4:C:163:LYS:HZ3	1.74	0.51
4:C:215:ARG:O	4:C:218:GLU:HB2	2.10	0.51
4:C:405:ALA:CB	4:C:443:LEU:HD13	2.41	0.51
4:C:579:ASN:O	4:C:582:LEU:HB2	2.09	0.51
4:C:729:THR:OG1	4:C:733:PHE:N	2.40	0.51
4:D:745:THR:CG2	7:D:3056:HOH:O	2.59	0.51
1:E:3:DG:H2"	1:E:4:DA:C8	2.45	0.51
4:A:50:ARG:HH11	4:A:50:ARG:CG	2.23	0.51
4:A:379:ARG:HE	4:A:656:GLN:CG	2.23	0.51
4:A:812:ASP:N	4:A:812:ASP:OD1	2.38	0.51
4:B:194:GLY:O	4:B:196:LEU:CD2	2.59	0.51
4:B:704:LYS:HG3	4:B:775:GLU:OE1	2.10	0.51
4:B:875:ILE:O	4:B:877:GLU:N	2.43	0.51
4:C:15:GLU:CG	4:C:18:ALA:H	2.22	0.51
4:C:668:THR:HB	4:C:669:GLN:NE2	2.25	0.51
4:D:84:ARG:CB	4:D:223:SER:HB3	2.41	0.51
4:D:814:PHE:CE1	4:D:883:ALA:HB1	2.45	0.51
1:H:17:DG:H2"	1:H:18:DC:C5	2.46	0.51
4:A:551:ARG:HB2	4:A:868:GLY:N	2.24	0.51
4:A:729:THR:HB	4:A:789:SER:HB2	1.92	0.51
4:B:339:ASN:O	4:B:343:LYS:CG	2.59	0.51
4:B:381:ALA:C	4:B:383:ALA:H	2.14	0.51
4:B:639:TYR:C	7:B:3018:HOH:O	2.48	0.51
4:C:32:LEU:N	7:C:3157:HOH:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:36:GLN:OE1	4:C:36:GLN:HA	2.10	0.51
4:C:51:PHE:CZ	4:C:261:LEU:HD23	2.45	0.51
4:C:400:PHE:CZ	4:C:431:MET:HE2	2.44	0.51
4:D:338:ALA:O	4:D:342:THR:HG23	2.10	0.51
4:D:472:LYS:CA	4:D:567:VAL:HG11	2.38	0.51
1:H:12:DT:H2''	1:H:13:DC:H6	1.76	0.51
1:H:15:DC:C2	1:H:16:DC:C5	2.99	0.51
1:K:11:DA:C8	4:C:639:TYR:CG	2.98	0.51
1:N:12:DT:H4'	4:D:423:ARG:HD2	1.93	0.51
4:A:292:ARG:N	4:A:293:PRO:CD	2.73	0.51
4:A:513:ALA:O	7:A:3098:HOH:O	2.19	0.51
4:A:689:VAL:O	4:A:691:ALA:N	2.44	0.51
4:A:754:GLN:O	4:A:755:PHE:O	2.28	0.51
4:B:112:GLU:CD	4:B:112:GLU:N	2.63	0.51
4:B:136:ALA:O	4:B:139:SER:HB3	2.10	0.51
4:B:322:ILE:HG22	4:B:323:ALA:N	2.24	0.51
4:B:432:PHE:CE2	4:B:444:LEU:HD11	2.44	0.51
4:B:580:GLU:O	4:B:581:ILE:C	2.47	0.51
4:C:239:GLN:O	4:C:241:SER:N	2.43	0.51
4:C:643:GLU:OE2	4:C:679:LYS:HA	2.11	0.51
4:D:6:ILE:C	4:D:8:LYS:H	2.13	0.51
4:D:475:PHE:HE2	4:D:879:ASP:CB	2.21	0.51
4:D:486:HIS:O	4:D:487:GLU:C	2.47	0.51
4:D:578:VAL:HG13	4:D:680:LEU:HB3	1.93	0.51
4:D:724:ALA:HB1	4:D:737:GLN:O	2.10	0.51
4:D:849:PHE:O	4:D:850:ALA:C	2.48	0.51
2:L:4:G:O2'	2:L:5:C:H5'	2.10	0.51
4:A:213:GLY:O	4:A:217:ILE:HG13	2.11	0.51
4:A:430:SER:OG	4:A:431:MET:N	2.41	0.51
4:A:439:MET:HG3	4:A:509:PHE:CD2	2.45	0.51
4:B:55:PHE:CD2	4:B:59:LEU:HD11	2.45	0.51
4:B:417:PRO:O	4:B:429:VAL:HG23	2.10	0.51
4:B:854:HIS:ND1	4:B:855:GLU:N	2.58	0.51
4:C:109:ILE:H	4:C:109:ILE:HD12	1.74	0.51
4:C:294:LEU:N	4:C:294:LEU:HD23	2.25	0.51
4:C:462:ILE:O	4:C:465:ALA:HB3	2.11	0.51
4:D:15:GLU:OE2	4:D:18:ALA:HB3	2.11	0.51
4:D:308:TYR:HE2	4:D:734:PRO:O	1.94	0.51
4:D:538:GLY:O	4:D:539:SER:C	2.49	0.51
4:D:726:HIS:CD2	4:D:736:TRP:NE1	2.78	0.51
4:D:859:ASP:C	4:D:861:MET:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:40:GLU:OE1	4:A:286:TYR:HB3	2.10	0.51
4:B:19:ILE:HG23	4:B:20:PRO:HD2	1.92	0.51
4:B:157:LEU:O	4:B:158:GLU:C	2.48	0.51
4:B:172:LYS:HB3	4:B:172:LYS:HZ3	1.76	0.51
4:B:576:LYS:O	4:B:577:LYS:C	2.49	0.51
4:C:59:LEU:HD22	4:C:64:VAL:CG1	2.39	0.51
4:D:259:GLY:O	4:D:262:ALA:N	2.43	0.51
4:D:277:PRO:CA	7:D:3029:HOH:O	2.59	0.51
4:D:306:MET:O	4:D:309:GLU:N	2.42	0.51
4:D:324:GLN:HA	4:D:418:TYR:CE1	2.45	0.51
4:D:835:THR:HG22	4:D:836:TYR:CD2	2.46	0.51
1:N:11:DA:C4'	4:D:780:PRO:HG3	2.40	0.51
4:A:268:PHE:CB	4:A:430:SER:HA	2.40	0.51
4:A:303:LYS:NZ	7:A:3108:HOH:O	2.42	0.51
4:A:726:HIS:HB2	4:A:736:TRP:CD1	2.45	0.51
4:A:746:ARG:HH12	4:A:754:GLN:N	2.06	0.51
4:A:843:ALA:O	4:A:844:ASP:C	2.48	0.51
4:B:82:ILE:CD1	4:B:112:GLU:HG3	2.41	0.51
4:B:308:TYR:HA	4:B:311:VAL:HG21	1.91	0.51
4:B:505:GLN:N	4:B:505:GLN:CD	2.58	0.51
4:B:585:ASP:OD2	4:B:613:THR:CB	2.58	0.51
4:B:744:GLN:HB3	4:B:756:ARG:HB3	1.92	0.51
4:C:308:TYR:CZ	4:C:733:PHE:CE2	2.97	0.51
4:C:437:ASN:ND2	4:C:440:THR:OG1	2.44	0.51
4:C:840:ASP:O	4:C:841:VAL:C	2.50	0.51
4:D:207:GLU:O	4:D:211:HIS:CG	2.64	0.51
4:D:221:ILE:HA	4:D:224:THR:O	2.11	0.51
4:D:797:TRP:NE1	4:D:802:TYR:HE2	2.08	0.51
4:A:418:TYR:HD2	4:A:426:VAL:HG11	1.75	0.51
4:A:548:ALA:C	4:A:550:LEU:N	2.63	0.51
6:A:2000:APC:H5'2	7:A:3048:HOH:O	2.11	0.51
4:B:61:ALA:C	4:B:63:GLU:H	2.14	0.51
4:B:158:GLU:HG2	4:B:195:LEU:CB	2.41	0.51
4:B:571:TYR:HE2	4:B:631:LYS:HG3	1.68	0.51
4:B:729:THR:HG23	4:B:733:PHE:O	2.10	0.51
4:B:783:VAL:O	4:B:784:HIS:C	2.48	0.51
4:C:345:LYS:NZ	4:C:352:ILE:HG12	2.24	0.51
4:C:824:LEU:O	4:C:828:VAL:HG22	2.10	0.51
4:D:327:ALA:CB	4:D:415:TRP:NE1	2.73	0.51
4:D:455:GLU:O	4:D:458:TYR:HB3	2.11	0.51
4:D:843:ALA:O	4:D:846:TYR:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:15:DC:H2''	1:N:16:DC:OP2	2.09	0.51
4:A:115:ALA:O	4:A:119:ILE:HG12	2.11	0.51
4:A:480:LYS:HE3	4:A:484:GLU:CD	2.31	0.51
4:A:514:PHE:O	4:A:515:CYS:C	2.45	0.51
4:A:721:LYS:CD	4:A:722:ARG:H	2.17	0.51
4:B:4:ILE:HD12	4:B:256:THR:HG23	1.92	0.51
4:B:535:ALA:HA	4:B:815:GLY:HA2	1.94	0.51
4:B:871:ASN:O	4:B:872:LEU:C	2.49	0.51
4:C:313:MET:O	4:C:317:TYR:HD2	1.94	0.51
4:D:7:ALA:HA	4:D:11:PHE:HD2	1.76	0.51
1:H:14:DG:C4	1:H:15:DC:C5	2.99	0.50
1:K:15:DC:H6	1:K:15:DC:H5'	1.75	0.50
4:B:40:GLU:O	4:B:41:HIS:C	2.48	0.50
4:B:42:GLU:HG2	4:B:46:MET:CE	2.41	0.50
4:C:307:ARG:HD3	4:C:736:TRP:CD2	2.45	0.50
4:C:329:LYS:HG3	4:C:445:THR:HG23	1.93	0.50
4:C:333:LYS:CD	4:C:516:PHE:CD2	2.93	0.50
4:C:442:GLY:O	4:C:444:LEU:N	2.44	0.50
4:C:852:GLN:NE2	7:C:3094:HOH:O	2.21	0.50
4:D:71:LYS:N	4:D:72:PRO:HD2	2.25	0.50
4:D:377:TRP:HA	7:D:3074:HOH:O	2.10	0.50
4:D:452:ILE:HD11	4:D:457:TYR:HA	1.94	0.50
1:H:9:DA:C2	4:B:644:PHE:CD1	2.98	0.50
1:H:9:DA:C5'	7:H:484:HOH:O	2.32	0.50
1:K:10:DT:H4'	4:C:639:TYR:O	2.12	0.50
4:A:308:TYR:HE2	4:A:734:PRO:CG	2.12	0.50
4:A:651:LEU:HD11	4:A:656:GLN:NE2	2.25	0.50
4:A:685:VAL:C	4:A:687:VAL:H	2.13	0.50
4:B:478:ARG:O	4:B:479:ILE:C	2.48	0.50
4:B:777:GLY:C	4:B:780:PRO:HD2	2.31	0.50
4:B:780:PRO:CD	4:B:781:ASN:N	2.73	0.50
4:C:60:LYS:HG2	4:C:60:LYS:O	2.12	0.50
4:C:120:LYS:HD2	4:C:751:PHE:CE2	2.46	0.50
4:C:205:HIS:C	4:C:207:GLU:N	2.64	0.50
4:C:291:ARG:CB	7:C:3192:HOH:O	2.54	0.50
4:C:737:GLN:HE22	4:C:777:GLY:C	2.14	0.50
4:C:779:ALA:N	4:C:780:PRO:HD2	2.26	0.50
4:C:837:GLU:HG2	4:C:872:LEU:HD12	1.93	0.50
4:D:676:TYR:CZ	4:D:680:LEU:HD11	2.46	0.50
4:A:223:SER:OG	4:A:224:THR:HG23	2.11	0.50
4:A:421:ASP:OD2	4:A:427:TYR:HE1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:611:LEU:HD11	4:A:669:GLN:NE2	2.27	0.50
4:B:70:ALA:C	4:B:72:PRO:HD2	2.31	0.50
4:B:422:TRP:CE2	4:B:781:ASN:ND2	2.79	0.50
4:B:426:VAL:C	4:B:427:TYR:HD1	2.14	0.50
4:B:505:GLN:NE2	4:B:505:GLN:H	1.94	0.50
4:B:791:LEU:O	4:B:794:THR:N	2.42	0.50
4:B:821:ALA:O	4:B:822:ALA:C	2.49	0.50
4:B:824:LEU:O	4:B:824:LEU:HG	2.11	0.50
4:C:569:ASP:O	4:C:573:ILE:HG22	2.11	0.50
4:D:158:GLU:HA	4:D:195:LEU:HD13	1.94	0.50
4:D:215:ARG:HA	4:D:218:GLU:OE1	2.10	0.50
4:D:275:PRO:HG2	4:D:324:GLN:CG	2.38	0.50
4:D:448:LYS:NZ	4:D:806:SER:CB	2.73	0.50
4:D:789:SER:HA	4:D:792:ARG:CZ	2.41	0.50
4:A:82:ILE:CG2	4:A:112:GLU:OE2	2.59	0.50
4:A:281:ILE:HD11	4:A:309:GLU:H	1.75	0.50
4:B:120:LYS:HG3	4:B:752:LEU:HD11	1.94	0.50
4:B:508:PRO:O	4:B:509:PHE:C	2.49	0.50
4:B:632:ARG:HH11	6:B:2001:APC:C8	2.24	0.50
4:C:291:ARG:C	4:C:293:PRO:HD3	2.31	0.50
4:D:205:HIS:C	4:D:207:GLU:H	2.14	0.50
4:D:236:VAL:HG11	4:D:239:GLN:CD	2.31	0.50
1:K:11:DA:C8	4:C:639:TYR:CB	2.93	0.50
1:K:11:DA:C2'	1:K:12:DT:C7	2.89	0.50
1:N:12:DT:O4'	4:D:423:ARG:CZ	2.58	0.50
4:A:463:HIS:O	4:A:464:GLY:C	2.48	0.50
4:A:610:LYS:O	4:A:610:LYS:CG	2.51	0.50
4:B:159:ALA:HA	4:B:162:PHE:HB3	1.94	0.50
4:B:272:VAL:CG1	4:B:411:HIS:HD2	2.25	0.50
4:B:422:TRP:CD1	4:B:423:ARG:N	2.80	0.50
4:B:470:VAL:HG11	4:B:478:ARG:HA	1.93	0.50
4:B:770:ASP:OD1	4:B:770:ASP:O	2.29	0.50
4:C:43:SER:OG	4:C:269:GLN:HG3	2.12	0.50
4:C:672:GLN:HG3	7:C:3033:HOH:O	2.10	0.50
4:D:19:ILE:HG23	4:D:20:PRO:CD	2.41	0.50
4:D:70:ALA:C	4:D:72:PRO:HD2	2.32	0.50
4:D:665:LEU:HB2	7:D:3125:HOH:O	2.12	0.50
4:D:702:ALA:HB2	4:D:861:MET:CE	2.41	0.50
4:D:706:LEU:HD11	4:D:849:PHE:CG	2.46	0.50
4:D:828:VAL:HA	4:D:831:THR:HG22	1.93	0.50
4:A:386:ARG:CD	7:A:3138:HOH:O	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:572:GLY:O	4:A:576:LYS:HG3	2.12	0.50
4:B:14:ILE:HG23	4:B:288:ALA:HB1	1.93	0.50
4:B:51:PHE:O	4:B:55:PHE:HB2	2.11	0.50
4:B:84:ARG:HD3	4:B:84:ARG:C	2.31	0.50
4:B:631:LYS:HZ1	6:B:2001:APC:H3A2	1.76	0.50
4:B:638:ALA:O	4:B:780:PRO:HB3	2.11	0.50
4:C:9:ASN:CA	4:C:12:SER:HB3	2.41	0.50
4:C:474:PRO:C	4:C:476:PRO:HD2	2.32	0.50
4:D:150:ARG:HG3	4:D:201:TRP:CD1	2.46	0.50
4:D:209:SER:HB2	7:D:3053:HOH:O	2.11	0.50
4:D:335:LEU:O	4:D:339:ASN:HB2	2.12	0.50
4:D:685:VAL:C	4:D:687:VAL:H	2.15	0.50
4:D:706:LEU:HD23	4:D:853:LEU:HD23	1.94	0.50
4:A:42:GLU:O	4:A:43:SER:C	2.50	0.50
4:A:333:LYS:CB	4:A:516:PHE:HD2	2.23	0.50
4:A:579:ASN:HA	4:A:582:LEU:HG	1.93	0.50
4:B:405:ALA:O	4:B:409:ALA:N	2.45	0.50
4:B:412:LYS:O	4:B:413:ALA:HB2	2.12	0.50
4:B:475:PHE:HB2	4:B:476:PRO:CD	2.42	0.50
4:B:479:ILE:O	4:B:480:LYS:C	2.49	0.50
4:C:446:LEU:H	4:C:533:PRO:HD3	1.76	0.50
4:C:446:LEU:HD12	4:C:817:ILE:HG23	1.93	0.50
4:D:92:VAL:CG1	4:D:99:ARG:HG3	2.41	0.50
4:D:304:ALA:HB1	7:D:3038:HOH:O	2.10	0.50
4:D:485:ASN:O	4:D:489:ILE:HG13	2.12	0.50
4:D:585:ASP:O	4:D:614:LYS:HA	2.12	0.50
4:D:706:LEU:HD21	4:D:849:PHE:HD2	1.76	0.50
3:J:5:DA:C2	3:J:6:DT:C2	2.99	0.50
1:K:11:DA:H8	4:C:639:TYR:HB3	1.74	0.50
1:K:16:DC:H2''	1:K:17:DG:H5'	1.93	0.50
4:A:19:ILE:HG23	4:A:20:PRO:CD	2.39	0.50
4:A:21:PHE:C	4:A:23:THR:N	2.64	0.50
4:B:159:ALA:HB1	4:B:163:LYS:N	2.27	0.50
4:B:162:PHE:HE1	4:B:190:MET:HG2	1.76	0.50
4:B:450:LYS:N	4:B:529:ASN:ND2	2.60	0.50
4:B:500:THR:O	4:B:503:ALA:HB3	2.11	0.50
4:C:22:ASN:O	4:C:26:ASP:HB3	2.11	0.50
4:C:248:PRO:HB2	4:C:249:GLU:OE2	2.12	0.50
4:C:306:MET:O	4:C:307:ARG:C	2.51	0.50
4:C:490:MET:HA	4:C:490:MET:HE3	1.94	0.50
4:C:656:GLN:N	4:C:657:PRO:CD	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:402:LEU:CD2	4:D:443:LEU:CD1	2.88	0.50
4:D:794:THR:O	4:D:795:VAL:C	2.49	0.50
4:D:857:GLN:C	4:D:859:ASP:H	2.15	0.50
1:H:10:DT:OP2	4:B:641:SER:HB3	2.12	0.50
1:K:10:DT:H5'	4:C:641:SER:CA	2.42	0.50
3:P:4:DG:H2''	3:P:5:DA:C8	2.47	0.50
4:A:42:GLU:HG2	4:A:46:MET:CE	2.42	0.50
4:A:422:TRP:HD1	7:A:3029:HOH:O	1.95	0.50
4:A:719:LEU:HD22	4:A:854:HIS:CE1	2.47	0.50
4:A:829:ARG:NE	4:A:878:SER:O	2.42	0.50
4:A:846:TYR:CD1	4:A:850:ALA:HB2	2.47	0.50
4:B:268:PHE:HD2	4:B:429:VAL:HG12	1.77	0.50
4:D:115:ALA:O	4:D:119:ILE:HG12	2.11	0.50
4:D:433:ASN:CB	4:D:434:PRO:CD	2.88	0.50
4:D:508:PRO:O	4:D:509:PHE:C	2.48	0.50
1:H:15:DC:OP2	7:H:411:HOH:O	2.19	0.49
1:K:16:DC:H2''	1:K:17:DG:C5'	2.42	0.49
1:N:10:DT:C5'	4:D:641:SER:N	2.75	0.49
4:A:273:VAL:O	4:A:274:PRO:C	2.50	0.49
4:A:338:ALA:C	4:A:340:VAL:N	2.66	0.49
4:A:786:GLN:C	4:A:788:GLY:N	2.63	0.49
4:B:92:VAL:HG11	4:B:100:PRO:HD2	1.94	0.49
4:C:14:ILE:HG12	4:C:288:ALA:HB1	1.94	0.49
4:C:221:ILE:HG23	4:C:227:VAL:O	2.12	0.49
4:C:232:GLN:NE2	7:C:3040:HOH:O	2.45	0.49
4:C:272:VAL:HG13	4:C:411:HIS:HD2	1.76	0.49
4:C:417:PRO:O	4:C:429:VAL:HG23	2.12	0.49
4:C:632:ARG:CZ	6:C:2002:APC:C8	2.90	0.49
4:C:668:THR:HB	4:C:669:GLN:HE22	1.75	0.49
4:D:72:PRO:HG3	4:D:257:ARG:HG3	1.94	0.49
4:D:404:GLN:HG2	4:D:432:PHE:HB2	1.94	0.49
4:D:489:ILE:HA	4:D:492:CYS:SG	2.52	0.49
4:D:560:ASN:C	4:D:881:ALA:HB2	2.30	0.49
4:D:797:TRP:CH2	4:D:801:LYS:HG3	2.47	0.49
1:H:13:DC:C4'	4:B:427:TYR:CE2	2.95	0.49
1:H:14:DG:H2''	1:H:15:DC:H6	1.77	0.49
1:H:18:DC:C2'	4:B:63:GLU:OE1	2.60	0.49
3:J:6:DT:H2''	3:J:7:DT:H71	1.94	0.49
1:K:5:DA:N6	3:M:5:DA:N6	2.60	0.49
4:A:71:LYS:N	4:A:72:PRO:HD2	2.27	0.49
4:A:401:MET:C	4:A:403:GLU:H	2.14	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:704:LYS:O	4:A:707:ALA:HB3	2.12	0.49
4:B:51:PHE:HE2	4:B:55:PHE:HD1	1.57	0.49
4:B:261:LEU:C	4:B:263:GLY:N	2.63	0.49
4:B:578:VAL:HG13	4:B:680:LEU:CD2	2.40	0.49
4:B:860:LYS:O	4:B:862:PRO:HD2	2.12	0.49
4:D:544:GLN:HG2	4:D:561:LEU:HD11	1.93	0.49
4:D:745:THR:H	4:D:756:ARG:HD3	1.76	0.49
3:G:6:DT:H2''	3:G:7:DT:OP2	2.12	0.49
1:N:15:DC:N3	1:N:16:DC:C4	2.80	0.49
4:A:84:ARG:HG3	4:A:222:GLU:HG2	1.93	0.49
4:A:182:PHE:O	4:A:185:VAL:CG2	2.59	0.49
4:A:344:TRP:O	4:A:345:LYS:HG3	2.12	0.49
4:A:473:VAL:O	4:A:473:VAL:CG1	2.60	0.49
4:A:543:ILE:O	4:A:544:GLN:C	2.50	0.49
4:A:715:THR:HB	4:A:717:GLU:HB2	1.94	0.49
4:B:55:PHE:CD2	4:B:55:PHE:C	2.84	0.49
4:B:155:ARG:HH21	4:B:749:LEU:HB2	1.77	0.49
4:B:647:ARG:HD3	7:B:3138:HOH:O	2.11	0.49
4:B:829:ARG:NH1	4:B:829:ARG:CG	2.68	0.49
4:C:316:VAL:O	4:C:317:TYR:C	2.50	0.49
4:C:458:TYR:CE1	4:C:479:ILE:HD11	2.47	0.49
4:C:474:PRO:HB2	4:C:476:PRO:HG2	1.94	0.49
4:C:711:LYS:HE2	4:C:716:GLY:O	2.12	0.49
4:C:870:LEU:HA	7:C:3053:HOH:O	2.11	0.49
4:A:136:ALA:HA	7:A:3053:HOH:O	2.11	0.49
4:A:425:ARG:HD3	4:A:811:HIS:HD2	1.76	0.49
4:A:488:ASN:O	4:A:491:ALA:N	2.45	0.49
4:A:720:ARG:HE	4:A:854:HIS:H	1.60	0.49
4:B:193:LYS:HG3	4:B:194:GLY:H	1.77	0.49
4:B:203:SER:O	4:B:205:HIS:N	2.38	0.49
4:B:232:GLN:HG3	4:B:243:THR:CG2	2.43	0.49
4:B:826:LYS:HG2	4:B:830:GLU:HG3	1.94	0.49
4:C:250:TYR:O	4:C:254:ILE:HG13	2.12	0.49
4:C:461:LYS:O	4:C:462:ILE:C	2.49	0.49
4:C:669:GLN:NE2	4:C:669:GLN:N	2.60	0.49
4:C:854:HIS:O	4:C:857:GLN:HG2	2.13	0.49
4:D:379:ARG:HD2	7:D:3122:HOH:O	2.12	0.49
4:D:551:ARG:O	4:D:868:GLY:HA3	2.12	0.49
3:M:5:DA:C2'	3:M:6:DT:H72	2.42	0.49
4:A:60:LYS:O	4:A:60:LYS:CG	2.56	0.49
4:A:402:LEU:HG	4:A:439:MET:HE1	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:460:LEU:O	4:A:461:LYS:C	2.50	0.49
4:A:772:HIS:O	4:A:773:LYS:C	2.50	0.49
4:B:272:VAL:HG11	4:B:411:HIS:CD2	2.48	0.49
4:B:421:ASP:O	4:B:424:GLY:N	2.45	0.49
4:B:459:TRP:CZ3	4:B:536:PHE:CZ	3.01	0.49
4:B:485:ASN:ND2	4:B:501:TRP:CZ2	2.80	0.49
4:C:324:GLN:CG	4:C:417:PRO:HA	2.42	0.49
4:C:345:LYS:HZ3	4:C:352:ILE:HG12	1.77	0.49
4:D:10:ASP:O	4:D:13:ASP:CB	2.61	0.49
4:D:139:SER:CA	4:D:210:ILE:HD13	2.42	0.49
4:D:830:GLU:HG2	4:D:876:LEU:HD21	1.94	0.49
1:E:15:DC:H2''	1:E:16:DC:C5'	2.41	0.49
2:F:1:G:C2	2:F:2:C:C2	3.01	0.49
4:A:264:ILE:HG22	4:A:292:ARG:HD3	1.95	0.49
4:A:465:ALA:CB	4:A:478:ARG:HB3	2.43	0.49
4:A:480:LYS:HG2	7:A:3046:HOH:O	2.13	0.49
4:A:524:HIS:O	4:A:525:GLY:O	2.30	0.49
4:A:629:VAL:HG11	4:A:677:MET:CE	2.43	0.49
4:A:643:GLU:OE2	4:A:679:LYS:HA	2.13	0.49
4:B:60:LYS:HE2	4:B:61:ALA:HB2	1.95	0.49
4:B:334:VAL:HG12	4:B:443:LEU:CD2	2.42	0.49
4:B:454:LYS:N	4:B:526:LEU:HD22	2.27	0.49
4:B:512:LEU:C	4:B:514:PHE:N	2.64	0.49
4:B:544:GLN:HA	4:B:559:VAL:HG21	1.94	0.49
4:B:560:ASN:OD1	4:B:568:GLN:HB2	2.12	0.49
4:C:84:ARG:HH11	4:C:84:ARG:CA	2.22	0.49
4:C:423:ARG:CD	4:C:781:ASN:HD22	2.25	0.49
4:D:330:ILE:CG1	4:D:408:PHE:O	2.60	0.49
4:D:646:PHE:O	4:D:647:ARG:C	2.51	0.49
4:D:810:ILE:CB	4:D:813:SER:OG	2.53	0.49
4:D:814:PHE:CE1	4:D:883:ALA:HB2	2.47	0.49
4:A:169:GLN:O	4:A:173:ARG:CG	2.50	0.49
4:A:401:MET:C	4:A:403:GLU:N	2.63	0.49
4:A:462:ILE:O	4:A:465:ALA:N	2.45	0.49
4:A:485:ASN:HA	7:A:3028:HOH:O	2.12	0.49
4:B:292:ARG:O	4:B:292:ARG:CG	2.61	0.49
4:B:546:PHE:CE1	4:B:783:VAL:HG13	2.47	0.49
4:B:726:HIS:CD2	4:B:736:TRP:CE2	3.01	0.49
4:C:24:LEU:CD2	4:C:273:VAL:HG21	2.42	0.49
4:D:259:GLY:O	4:D:260:ALA:C	2.50	0.49
4:D:518:TYR:O	4:D:522:GLN:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:810:ILE:N	4:D:813:SER:OG	2.46	0.49
1:K:7:DC:C6	1:K:8:DG:N7	2.80	0.49
4:B:111:PRO:HG2	4:B:112:GLU:CD	2.33	0.49
4:B:281:ILE:HD11	4:B:309:GLU:N	2.28	0.49
4:B:388:ASP:O	4:B:389:LYS:C	2.51	0.49
4:B:404:GLN:HB3	4:B:432:PHE:CD1	2.48	0.49
4:B:703:ALA:O	4:B:704:LYS:C	2.50	0.49
4:B:804:ILE:CG2	4:B:807:PHE:CE2	2.96	0.49
4:B:826:LYS:O	4:B:830:GLU:HG3	2.13	0.49
4:C:340:VAL:HA	4:C:343:LYS:HD3	1.95	0.49
4:C:549:MET:HB3	4:C:836:TYR:CE1	2.48	0.49
4:C:734:PRO:O	4:C:734:PRO:HG2	2.13	0.49
4:C:786:GLN:O	4:C:789:SER:HB3	2.12	0.49
4:D:78:LEU:N	4:D:79:PRO:HD2	2.27	0.49
4:D:381:ALA:O	4:D:384:VAL:HB	2.12	0.49
4:D:840:ASP:C	4:D:842:LEU:N	2.65	0.49
1:H:3:DG:H1'	7:H:1116:HOH:O	2.12	0.49
1:H:15:DC:N3	1:H:16:DC:C4	2.80	0.49
4:A:617:ALA:O	4:A:620:TRP:N	2.46	0.49
4:B:105:PHE:HB3	4:B:204:TRP:CZ2	2.48	0.49
4:B:810:ILE:O	4:B:811:HIS:HB2	2.11	0.49
4:B:846:TYR:O	4:B:847:ASP:C	2.50	0.49
4:C:151:PHE:O	4:C:154:ILE:HG13	2.13	0.49
4:C:552:ASP:HB2	4:C:691:ALA:HB2	1.94	0.49
4:C:846:TYR:CD1	4:C:850:ALA:HB2	2.48	0.49
4:D:452:ILE:HG23	4:D:526:LEU:O	2.13	0.49
1:H:17:DG:H2''	1:H:18:DC:C6	2.47	0.49
4:A:51:PHE:CZ	4:A:261:LEU:HB3	2.47	0.49
4:A:159:ALA:HA	4:A:162:PHE:HB3	1.94	0.49
4:A:178:TYR:CD1	4:A:178:TYR:N	2.77	0.49
4:A:631:LYS:HG2	4:A:632:ARG:N	2.28	0.49
4:A:721:LYS:HE2	7:A:3021:HOH:O	2.12	0.49
4:B:263:GLY:C	7:B:3137:HOH:O	2.51	0.49
4:B:292:ARG:O	4:B:292:ARG:HG3	2.13	0.49
4:B:463:HIS:O	4:B:467:CYS:SG	2.71	0.49
4:C:36:GLN:CG	4:C:273:VAL:HG22	2.41	0.49
4:C:475:PHE:O	4:C:479:ILE:HG12	2.13	0.49
4:C:553:GLU:CG	4:C:554:VAL:H	2.25	0.49
4:C:730:PRO:HD3	4:C:786:GLN:NE2	2.27	0.49
4:D:84:ARG:CG	4:D:223:SER:HB3	2.43	0.49
4:D:116:TYR:HE2	4:D:752:LEU:HD13	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:275:PRO:HB2	4:D:324:GLN:CD	2.33	0.49
1:E:16:DC:H2''	1:E:17:DG:C5'	2.42	0.48
1:H:9:DA:C5	4:B:644:PHE:CZ	3.01	0.48
1:K:9:DA:N6	3:M:1:DG:H22	2.11	0.48
4:A:89:PHE:HA	4:A:103:PHE:CZ	2.47	0.48
4:A:532:LEU:HA	4:A:533:PRO:HD2	1.64	0.48
4:A:619:GLN:NE2	4:A:666:MET:O	2.46	0.48
4:B:13:ASP:O	4:B:15:GLU:N	2.43	0.48
4:B:301:SER:O	4:B:304:ALA:CB	2.59	0.48
4:B:698:TRP:O	4:B:701:SER:HB2	2.12	0.48
4:C:82:ILE:HD13	4:C:112:GLU:HA	1.95	0.48
4:C:786:GLN:NE2	4:C:841:VAL:HG11	2.28	0.48
4:C:871:ASN:HD21	4:C:873:ARG:HB2	1.78	0.48
4:D:347:CYS:O	4:D:349:VAL:N	2.46	0.48
4:D:646:PHE:O	4:D:650:VAL:HG23	2.13	0.48
1:H:16:DC:H2''	1:H:17:DG:OP2	2.13	0.48
1:K:13:DC:C2	1:K:14:DG:C8	3.00	0.48
1:N:14:DG:C4	1:N:15:DC:C5	3.02	0.48
4:A:340:VAL:O	4:A:341:ILE:C	2.49	0.48
4:A:559:VAL:HG23	4:A:559:VAL:O	2.12	0.48
4:A:634:VAL:O	4:A:637:LEU:HB3	2.13	0.48
4:A:720:ARG:HG2	4:A:720:ARG:O	2.13	0.48
4:A:797:TRP:CZ2	4:A:830:GLU:OE1	2.67	0.48
4:B:32:LEU:HD12	4:B:32:LEU:HA	1.67	0.48
4:B:418:TYR:HB3	4:B:426:VAL:CG1	2.44	0.48
4:B:549:MET:HG2	4:B:836:TYR:CE1	2.46	0.48
4:B:680:LEU:HD12	4:B:680:LEU:H	1.75	0.48
4:C:330:ILE:HG12	4:C:408:PHE:O	2.13	0.48
4:D:92:VAL:HG11	4:D:103:PHE:CG	2.48	0.48
4:D:158:GLU:CA	4:D:195:LEU:HD22	2.43	0.48
4:D:231:ARG:HG2	4:D:234:ALA:CB	2.36	0.48
4:D:338:ALA:C	4:D:340:VAL:H	2.16	0.48
1:K:11:DA:H2''	1:K:12:DT:O5'	2.12	0.48
4:A:6:ILE:HD11	4:A:259:GLY:C	2.33	0.48
4:A:39:LEU:O	4:A:42:GLU:N	2.46	0.48
4:A:85:ILE:O	4:A:85:ILE:HG22	2.13	0.48
4:A:89:PHE:CZ	4:A:106:LEU:O	2.65	0.48
4:A:333:LYS:HB3	4:A:516:PHE:CD2	2.48	0.48
4:A:463:HIS:O	4:A:465:ALA:N	2.46	0.48
4:A:512:LEU:O	4:A:516:PHE:CD1	2.66	0.48
4:A:633:SER:HB3	4:A:646:PHE:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:637:LEU:O	4:A:637:LEU:HG	2.11	0.48
4:A:668:THR:HG22	4:A:669:GLN:HE22	1.79	0.48
4:A:670:PRO:O	4:A:671:ASN:C	2.52	0.48
4:A:744:GLN:H	4:A:744:GLN:HG3	1.36	0.48
4:A:745:THR:HG22	4:A:746:ARG:N	2.28	0.48
4:A:777:GLY:O	4:A:781:ASN:HB2	2.12	0.48
4:B:109:ILE:N	4:B:109:ILE:CD1	2.75	0.48
4:B:109:ILE:HG22	4:B:110:LYS:O	2.13	0.48
4:B:347:CYS:HA	4:B:348:PRO:HD3	1.68	0.48
4:B:428:ALA:N	4:B:435:GLN:HE22	2.08	0.48
4:B:546:PHE:CE2	4:B:696:MET:HG3	2.48	0.48
4:B:556:GLY:C	4:B:558:ALA:H	2.17	0.48
4:B:670:PRO:O	4:B:671:ASN:C	2.48	0.48
4:B:794:THR:CG2	4:B:828:VAL:HA	2.43	0.48
4:B:860:LYS:O	4:B:862:PRO:CD	2.61	0.48
4:C:252:GLU:HA	7:C:3072:HOH:O	2.13	0.48
4:C:297:VAL:HG21	4:C:733:PHE:HZ	1.78	0.48
4:C:846:TYR:CD2	4:C:864:LEU:HD11	2.48	0.48
4:D:62:GLY:C	4:D:64:VAL:H	2.17	0.48
4:D:230:HIS:HB3	7:D:3168:HOH:O	2.13	0.48
4:D:269:GLN:NE2	4:D:407:LYS:HE2	2.25	0.48
4:D:485:ASN:OD1	4:D:485:ASN:N	2.46	0.48
4:D:745:THR:HG21	7:D:3056:HOH:O	2.13	0.48
4:A:401:MET:HG3	4:A:440:THR:HG23	1.96	0.48
4:A:477:GLU:O	4:A:480:LYS:N	2.46	0.48
4:A:619:GLN:O	4:A:622:ALA:N	2.47	0.48
4:B:84:ARG:HD3	4:B:84:ARG:O	2.13	0.48
4:B:264:ILE:O	4:B:292:ARG:NH1	2.45	0.48
4:B:850:ALA:C	4:B:852:GLN:N	2.64	0.48
4:C:78:LEU:HD21	4:C:82:ILE:HD11	1.96	0.48
4:C:303:LYS:NZ	4:C:303:LYS:HB2	2.28	0.48
4:C:490:MET:O	4:C:493:ALA:HB3	2.14	0.48
4:C:502:TRP:CZ3	4:C:503:ALA:HB2	2.48	0.48
4:C:512:LEU:HG	4:C:516:PHE:HE1	1.77	0.48
4:C:706:LEU:CD2	4:C:725:VAL:HG22	2.42	0.48
4:C:850:ALA:O	4:C:852:GLN:N	2.42	0.48
4:D:84:ARG:HG3	4:D:223:SER:HB3	1.95	0.48
4:D:273:VAL:CA	4:D:415:TRP:CE3	2.96	0.48
4:D:468:ALA:HA	4:D:505:GLN:HB3	1.96	0.48
4:D:779:ALA:O	4:D:783:VAL:CG2	2.61	0.48
3:J:2:DT:H2''	3:J:3:DC:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:8:U:O4	6:C:2002:APC:H1'	2.14	0.48
4:A:193:LYS:HA	7:A:3220:HOH:O	2.12	0.48
4:A:274:PRO:HD3	4:A:415:TRP:CZ3	2.48	0.48
4:A:304:ALA:HA	4:A:307:ARG:HD2	1.96	0.48
4:A:639:TYR:HA	4:A:780:PRO:HB3	1.95	0.48
4:A:770:ASP:O	4:A:772:HIS:N	2.47	0.48
4:A:817:ILE:CB	4:A:818:PRO:CD	2.89	0.48
4:B:116:TYR:CE2	4:B:120:LYS:HB2	2.48	0.48
4:B:126:LEU:CD1	4:B:246:LEU:HB2	2.39	0.48
4:B:450:LYS:HG2	4:B:451:PRO:HD2	1.94	0.48
4:B:787:ASP:OD1	4:B:788:GLY:N	2.46	0.48
4:C:464:GLY:HA3	4:C:514:PHE:CE2	2.48	0.48
4:C:489:ILE:O	4:C:492:CYS:HB2	2.13	0.48
4:C:755:PHE:N	4:C:755:PHE:CD1	2.80	0.48
4:D:161:HIS:C	4:D:163:LYS:H	2.17	0.48
4:D:490:MET:C	4:D:493:ALA:HB3	2.33	0.48
4:D:544:GLN:HG2	4:D:561:LEU:CD1	2.43	0.48
2:F:4:G:H2'	2:F:5:C:O4'	2.13	0.48
4:A:65:ALA:HB3	4:A:120:LYS:CE	2.42	0.48
4:A:105:PHE:CB	4:A:204:TRP:CZ2	2.89	0.48
4:A:278:TRP:CZ3	4:A:284:GLY:CA	2.93	0.48
4:A:546:PHE:HE2	4:A:696:MET:HG3	1.78	0.48
4:B:34:ARG:O	4:B:38:ALA:HB2	2.14	0.48
4:B:705:LEU:C	4:B:707:ALA:H	2.17	0.48
4:C:36:GLN:HE21	4:C:273:VAL:HG22	1.78	0.48
4:C:173:ARG:NH1	4:C:182:PHE:HB2	2.28	0.48
4:C:299:THR:HG21	4:C:304:ALA:CB	2.44	0.48
4:D:88:TRP:CZ2	4:D:215:ARG:NH2	2.81	0.48
4:D:452:ILE:HG23	4:D:453:GLY:N	2.28	0.48
4:D:502:TRP:CD1	4:D:512:LEU:HD13	2.49	0.48
4:D:631:LYS:O	4:D:632:ARG:C	2.51	0.48
2:F:5:C:O2	2:F:5:C:H2'	2.14	0.48
1:K:5:DA:H2''	1:K:6:DT:OP2	2.13	0.48
1:K:11:DA:C4	1:K:12:DT:H72	2.48	0.48
4:A:81:MET:O	4:A:85:ILE:HG13	2.14	0.48
4:A:617:ALA:O	4:A:618:GLY:C	2.52	0.48
4:A:649:GLN:O	4:A:653:ASP:HB2	2.14	0.48
4:A:680:LEU:O	4:A:681:ILE:C	2.50	0.48
4:A:709:GLU:HB2	4:A:722:ARG:HE	1.79	0.48
4:A:794:THR:O	4:A:795:VAL:C	2.51	0.48
4:B:304:ALA:O	4:B:307:ARG:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:422:TRP:CZ2	4:B:781:ASN:ND2	2.82	0.48
4:B:616:LEU:C	4:B:618:GLY:N	2.66	0.48
4:B:787:ASP:O	4:B:790:HIS:HB3	2.14	0.48
4:C:183:MET:HA	4:C:186:VAL:HB	1.96	0.48
4:C:400:PHE:CZ	4:C:431:MET:CE	2.96	0.48
4:C:404:GLN:CG	4:C:432:PHE:HB2	2.41	0.48
4:C:473:VAL:O	4:C:474:PRO:O	2.32	0.48
4:C:689:VAL:O	4:C:690:VAL:C	2.52	0.48
4:C:711:LYS:HG2	4:C:717:GLU:C	2.34	0.48
4:D:121:THR:O	4:D:124:ALA:HB3	2.14	0.48
4:D:261:LEU:C	4:D:263:GLY:N	2.66	0.48
4:D:387:LYS:HD3	7:D:3157:HOH:O	2.12	0.48
4:D:752:LEU:HD12	4:D:752:LEU:N	2.29	0.48
4:D:828:VAL:CA	4:D:831:THR:HG22	2.43	0.48
2:L:8:U:O4	6:C:2002:APC:N3	2.47	0.48
4:A:418:TYR:CD2	4:A:426:VAL:HG12	2.47	0.48
4:A:540:CYS:HB3	4:A:543:ILE:CG1	2.44	0.48
4:A:864:LEU:HD12	4:A:864:LEU:N	2.29	0.48
4:B:457:TYR:CD1	4:B:521:VAL:HG11	2.49	0.48
4:B:467:CYS:O	4:B:506:ASP:HB2	2.14	0.48
4:B:535:ALA:O	4:B:536:PHE:HD1	1.96	0.48
4:B:823:ASN:N	4:B:823:ASN:ND2	2.60	0.48
4:C:97:GLY:O	4:C:98:LYS:C	2.52	0.48
4:C:298:ARG:HA	7:C:3165:HOH:O	2.14	0.48
4:C:307:ARG:HD3	4:C:736:TRP:CE3	2.49	0.48
4:C:324:GLN:HE21	4:C:418:TYR:N	2.09	0.48
4:C:744:GLN:HB2	4:C:744:GLN:HE21	1.46	0.48
4:D:442:GLY:C	4:D:444:LEU:H	2.17	0.48
4:D:477:GLU:H	4:D:477:GLU:HG2	1.37	0.48
4:D:783:VAL:O	4:D:786:GLN:HB2	2.14	0.48
4:A:82:ILE:HG12	4:A:115:ALA:CB	2.44	0.48
4:A:138:ALA:HB1	4:A:214:VAL:HG23	1.96	0.48
4:A:786:GLN:NE2	4:A:786:GLN:CA	2.70	0.48
4:B:552:ASP:OD1	4:B:554:VAL:N	2.46	0.48
6:B:2001:APC:O2B	6:B:2001:APC:O1A	2.32	0.48
4:C:199:GLU:HG2	4:C:201:TRP:HD1	1.78	0.48
4:C:392:LYS:O	4:C:396:ILE:HG12	2.14	0.48
4:C:629:VAL:O	4:C:629:VAL:HG12	2.14	0.48
4:C:646:PHE:O	4:C:649:GLN:HB2	2.14	0.48
4:D:343:LYS:HA	7:D:3020:HOH:O	2.13	0.48
4:D:646:PHE:HE2	4:D:682:TRP:HE3	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:12:DT:H2'	1:H:13:DC:C6	2.49	0.48
4:A:19:ILE:HG21	7:A:3120:HOH:O	2.08	0.48
4:A:393:SER:O	4:A:396:ILE:N	2.45	0.48
4:A:647:ARG:O	4:A:648:GLN:C	2.53	0.48
4:B:525:GLY:C	4:B:527:SER:N	2.66	0.48
4:B:642:LYS:HG2	4:B:682:TRP:HZ3	1.77	0.48
4:B:790:HIS:C	4:B:790:HIS:ND1	2.67	0.48
4:B:810:ILE:H	4:B:813:SER:HB3	1.79	0.48
4:C:54:MET:SD	4:C:54:MET:C	2.93	0.48
4:C:101:THR:HA	4:C:104:GLN:NE2	2.28	0.48
4:C:349:VAL:O	4:C:349:VAL:HG12	2.13	0.48
4:C:435:GLN:HA	4:C:810:ILE:HD11	1.96	0.48
4:C:515:CYS:O	4:C:516:PHE:C	2.51	0.48
4:D:134:VAL:HG12	4:D:242:GLU:O	2.13	0.48
4:D:322:ILE:HG13	7:D:3013:HOH:O	2.13	0.48
4:D:579:ASN:HD21	4:D:625:VAL:HG12	1.79	0.48
4:D:752:LEU:HB2	4:D:753:GLY:H	1.54	0.48
4:A:77:LEU:HD11	4:A:226:MET:SD	2.54	0.47
4:A:286:TYR:CE2	4:A:417:PRO:HG3	2.49	0.47
4:A:379:ARG:HD3	4:A:660:ASP:CG	2.34	0.47
4:A:438:ASP:OD1	4:A:507:SER:HB3	2.14	0.47
4:A:502:TRP:CG	4:A:503:ALA:N	2.81	0.47
4:A:530:CYS:HB3	4:A:818:PRO:HG2	1.96	0.47
4:A:580:GLU:HG3	7:A:3111:HOH:O	2.13	0.47
4:B:5:ASN:HD21	4:B:7:ALA:C	2.17	0.47
4:B:21:PHE:O	4:B:21:PHE:CD1	2.67	0.47
4:B:687:VAL:HG23	4:B:687:VAL:O	2.14	0.47
4:B:840:ASP:O	4:B:843:ALA:N	2.47	0.47
4:C:36:GLN:HG2	4:C:273:VAL:HG13	1.96	0.47
4:C:292:ARG:O	4:C:292:ARG:CG	2.62	0.47
4:C:391:ARG:O	4:C:391:ARG:HG2	2.14	0.47
4:C:397:SER:OG	4:C:398:LEU:N	2.42	0.47
4:C:421:ASP:OD2	4:C:423:ARG:NH1	2.44	0.47
4:C:657:PRO:HG2	4:C:658:ALA:H	1.79	0.47
4:C:816:THR:HG22	4:C:817:ILE:N	2.29	0.47
4:D:564:SER:C	7:D:3040:HOH:O	2.51	0.47
4:D:647:ARG:O	4:D:649:GLN:N	2.47	0.47
4:D:833:VAL:HG22	4:D:875:ILE:HD12	1.95	0.47
4:A:216:CYS:HA	4:A:219:MET:CE	2.44	0.47
4:A:277:PRO:HA	4:A:321:ASN:OD1	2.14	0.47
4:A:518:TYR:CD1	4:A:518:TYR:C	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:632:ARG:HA	4:A:635:MET:HG2	1.96	0.47
4:B:67:ASN:O	4:B:69:ALA:N	2.47	0.47
4:B:199:GLU:O	4:B:201:TRP:N	2.41	0.47
4:B:201:TRP:CB	7:B:3009:HOH:O	2.50	0.47
4:B:423:ARG:HG3	4:B:781:ASN:ND2	2.14	0.47
4:B:439:MET:HG3	4:B:509:PHE:CD2	2.49	0.47
4:B:470:VAL:O	4:B:470:VAL:CG1	2.52	0.47
4:B:501:TRP:O	4:B:505:GLN:NE2	2.47	0.47
4:B:592:ASN:OD1	4:B:592:ASN:N	2.47	0.47
4:C:416:PHE:CZ	4:C:434:PRO:HD3	2.49	0.47
4:C:831:THR:HG22	4:C:832:MET:N	2.29	0.47
4:D:120:LYS:HG3	4:D:752:LEU:CD2	2.27	0.47
4:D:445:THR:OG1	4:D:533:PRO:HD2	2.15	0.47
4:D:569:ASP:OD2	4:D:572:GLY:N	2.45	0.47
1:K:8:DG:H2''	1:K:9:DA:C8	2.49	0.47
4:A:30:GLU:OE1	4:A:30:GLU:HA	2.13	0.47
4:A:274:PRO:HD3	4:A:415:TRP:CH2	2.48	0.47
4:A:318:LYS:HE3	4:A:800:GLU:OE2	2.14	0.47
4:A:403:GLU:O	4:A:404:GLN:C	2.52	0.47
4:A:416:PHE:CE2	4:A:434:PRO:CD	2.98	0.47
4:A:751:PHE:HB3	4:A:752:LEU:HD12	1.96	0.47
4:A:829:ARG:NH2	4:A:878:SER:O	2.47	0.47
4:B:106:LEU:HD11	4:B:212:VAL:HG13	1.95	0.47
4:B:155:ARG:NE	4:B:749:LEU:HD23	2.28	0.47
4:B:461:LYS:HG2	4:B:482:ILE:HG21	1.96	0.47
4:B:504:GLU:HB3	7:B:3140:HOH:O	2.13	0.47
4:C:557:ARG:HD3	7:C:3150:HOH:O	2.15	0.47
4:C:575:ALA:O	4:C:578:VAL:HB	2.13	0.47
4:C:811:HIS:CD2	4:C:811:HIS:N	2.82	0.47
4:D:345:LYS:NZ	4:D:351:ASP:O	2.43	0.47
4:D:592:ASN:OD1	4:D:611:LEU:HA	2.15	0.47
4:A:60:LYS:HG3	7:A:3125:HOH:O	2.14	0.47
4:A:418:TYR:CD2	4:A:426:VAL:CG1	2.90	0.47
4:A:545:HIS:O	4:A:546:PHE:C	2.52	0.47
4:A:629:VAL:HG11	4:A:677:MET:HE2	1.96	0.47
4:B:272:VAL:CG1	4:B:411:HIS:CD2	2.98	0.47
4:B:329:LYS:O	4:B:330:ILE:C	2.52	0.47
4:C:686:SER:HA	4:C:693:VAL:HG21	1.96	0.47
4:C:777:GLY:C	4:C:780:PRO:HD2	2.35	0.47
4:C:794:THR:O	4:C:795:VAL:C	2.50	0.47
4:D:830:GLU:HA	4:D:876:LEU:HD21	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:59:LEU:CA	4:A:64:VAL:HG22	2.41	0.47
4:A:105:PHE:C	4:A:107:GLN:N	2.67	0.47
4:A:152:GLY:O	4:A:156:ASP:OD2	2.32	0.47
4:A:559:VAL:O	4:A:560:ASN:HB2	2.14	0.47
4:A:739:TYR:HB2	4:A:774:GLN:OE1	2.14	0.47
4:B:51:PHE:HE2	4:B:55:PHE:CD1	2.33	0.47
4:B:512:LEU:O	4:B:513:ALA:C	2.49	0.47
4:B:669:GLN:HB3	4:B:672:GLN:HB2	1.97	0.47
4:B:696:MET:HG2	4:B:779:ALA:HB1	1.95	0.47
4:C:161:HIS:O	4:C:164:LYS:HG2	2.14	0.47
4:C:727:TRP:NE1	4:C:782:PHE:HD1	2.11	0.47
4:D:168:GLU:O	4:D:172:LYS:HG2	2.15	0.47
4:D:720:ARG:HD2	4:D:852:GLN:O	2.14	0.47
1:K:2:DG:H1'	7:K:268:HOH:O	2.14	0.47
1:K:11:DA:C2	1:K:12:DT:N3	2.83	0.47
2:L:6:G:C2	2:L:7:A:C8	3.03	0.47
3:M:4:DG:H4'	3:M:5:DA:OP1	2.15	0.47
1:N:4:DA:C6	1:N:5:DA:C6	3.02	0.47
4:A:85:ILE:HG23	4:A:219:MET:SD	2.54	0.47
4:A:313:MET:HG3	4:A:313:MET:O	2.15	0.47
4:A:473:VAL:HG13	4:A:477:GLU:HB2	1.96	0.47
4:A:477:GLU:O	4:A:480:LYS:HB3	2.13	0.47
4:B:308:TYR:CA	4:B:311:VAL:HG23	2.44	0.47
4:B:634:VAL:O	4:B:637:LEU:HB2	2.14	0.47
4:B:726:HIS:CD2	4:B:736:TRP:CD2	3.03	0.47
4:B:794:THR:HG21	4:B:828:VAL:HA	1.97	0.47
4:C:39:LEU:HD22	4:C:272:VAL:HG23	1.95	0.47
4:C:180:LYS:O	4:C:183:MET:N	2.41	0.47
4:C:183:MET:O	4:C:186:VAL:HB	2.15	0.47
4:C:559:VAL:CG2	4:C:561:LEU:HD13	2.37	0.47
4:D:333:LYS:HZ2	4:D:516:PHE:HB3	1.78	0.47
4:D:387:LYS:HE2	7:D:3158:HOH:O	2.14	0.47
4:D:631:LYS:HE2	4:D:635:MET:SD	2.55	0.47
2:I:2:C:H2'	2:I:3:G:H8	1.80	0.47
3:J:7:DT:H2''	3:J:8:DC:C6	2.49	0.47
2:L:2:C:O5'	2:L:2:C:H6	1.98	0.47
1:N:2:DG:C2'	1:N:3:DG:C8	2.95	0.47
4:A:42:GLU:O	4:A:46:MET:N	2.44	0.47
4:A:80:LYS:HE2	4:A:224:THR:HG22	1.96	0.47
4:A:99:ARG:HD2	4:A:99:ARG:N	2.29	0.47
4:A:103:PHE:O	4:A:107:GLN:NE2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:141:ILE:HB	4:A:213:GLY:HA2	1.97	0.47
4:A:190:MET:HB3	7:A:3103:HOH:O	2.14	0.47
4:A:632:ARG:HH22	6:A:2000:APC:H5'2	1.79	0.47
4:A:676:TYR:O	4:A:677:MET:C	2.51	0.47
4:A:791:LEU:HA	4:A:814:PHE:HE2	1.80	0.47
4:A:828:VAL:CB	4:A:883:ALA:HA	2.44	0.47
4:A:869:ASN:N	4:A:869:ASN:HD22	2.13	0.47
4:B:44:TYR:HD1	4:B:44:TYR:H	1.63	0.47
4:B:159:ALA:O	4:B:161:HIS:N	2.47	0.47
4:B:279:THR:HG22	7:B:3148:HOH:O	2.14	0.47
4:B:469:GLY:C	4:B:471:ASP:H	2.15	0.47
4:B:652:GLU:O	4:B:657:PRO:HD3	2.13	0.47
4:C:71:LYS:N	4:C:72:PRO:HD2	2.30	0.47
4:C:101:THR:HA	4:C:104:GLN:CD	2.35	0.47
4:C:109:ILE:HD12	4:C:109:ILE:N	2.29	0.47
4:C:616:LEU:HD13	4:C:676:TYR:HB2	1.95	0.47
4:D:14:ILE:HD12	4:D:14:ILE:N	2.23	0.47
4:D:143:ARG:O	4:D:147:ASP:OD2	2.32	0.47
4:D:236:VAL:CG2	4:D:239:GLN:HB2	2.45	0.47
4:D:316:VAL:O	4:D:317:TYR:C	2.52	0.47
4:D:435:GLN:HA	4:D:810:ILE:CD1	2.43	0.47
4:D:515:CYS:O	4:D:516:PHE:C	2.51	0.47
4:D:521:VAL:O	4:D:525:GLY:N	2.46	0.47
4:D:558:ALA:CB	4:D:570:ILE:HD13	2.45	0.47
4:D:629:VAL:HG22	4:D:654:THR:HG21	1.95	0.47
4:D:797:TRP:CZ2	4:D:801:LYS:HG3	2.50	0.47
4:D:836:TYR:CD2	4:D:836:TYR:N	2.81	0.47
3:P:5:DA:H2''	3:P:6:DT:H72	1.97	0.47
4:A:86:ASN:O	4:A:90:GLU:HG2	2.15	0.47
4:A:280:GLY:HA2	4:A:317:TYR:HE1	1.74	0.47
4:A:801:LYS:C	4:A:801:LYS:CD	2.80	0.47
4:B:24:LEU:O	4:B:25:ALA:C	2.52	0.47
4:B:314:PRO:C	4:B:316:VAL:N	2.65	0.47
4:B:428:ALA:H	4:B:435:GLN:NE2	2.11	0.47
4:B:647:ARG:O	4:B:650:VAL:N	2.48	0.47
4:B:656:GLN:N	4:B:657:PRO:HD2	2.29	0.47
4:B:806:SER:O	4:B:816:THR:HG23	2.14	0.47
4:C:117:ILE:HG21	4:C:145:ILE:HD13	1.97	0.47
4:C:337:VAL:HG12	4:C:338:ALA:H	1.79	0.47
4:C:417:PRO:O	4:C:418:TYR:HD1	1.98	0.47
4:C:579:ASN:HA	4:C:582:LEU:CG	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:651:LEU:HB2	4:C:674:ALA:CB	2.45	0.47
4:C:830:GLU:HA	4:C:876:LEU:HD21	1.96	0.47
4:D:159:ALA:HB3	4:D:163:LYS:HD3	1.96	0.47
4:D:308:TYR:OH	4:D:734:PRO:O	2.26	0.47
4:D:472:LYS:C	4:D:567:VAL:HG21	2.35	0.47
4:D:631:LYS:HD3	4:D:635:MET:SD	2.54	0.47
4:A:77:LEU:CD1	4:A:226:MET:SD	3.03	0.47
4:A:311:VAL:HG12	4:A:312:TYR:H	1.77	0.47
4:A:631:LYS:O	4:A:632:ARG:C	2.53	0.47
4:A:635:MET:HE1	6:A:2000:APC:H3'	1.97	0.47
4:A:706:LEU:HD11	4:A:849:PHE:CG	2.50	0.47
4:A:797:TRP:CH2	4:A:801:LYS:HG3	2.50	0.47
4:B:49:ALA:O	4:B:50:ARG:C	2.52	0.47
4:B:56:GLU:CD	4:B:57:ARG:N	2.68	0.47
4:B:166:VAL:O	4:B:167:GLU:C	2.53	0.47
4:B:485:ASN:N	4:B:485:ASN:OD1	2.44	0.47
4:B:778:ILE:O	4:B:778:ILE:HG13	2.14	0.47
4:C:452:ILE:HG23	4:C:453:GLY:N	2.29	0.47
4:C:517:GLU:OE1	4:C:517:GLU:HA	2.14	0.47
4:D:31:ARG:O	4:D:32:LEU:C	2.53	0.47
4:D:166:VAL:O	4:D:167:GLU:C	2.53	0.47
4:D:374:LEU:O	4:D:378:LYS:HB2	2.14	0.47
4:D:416:PHE:O	4:D:418:TYR:CE1	2.68	0.47
4:D:647:ARG:O	4:D:648:GLN:C	2.53	0.47
4:A:679:LYS:O	4:A:680:LEU:C	2.51	0.47
4:A:794:THR:HG1	4:A:831:THR:HG21	1.76	0.47
4:B:411:HIS:C	4:B:413:ALA:N	2.67	0.47
4:B:492:CYS:SG	4:B:502:TRP:HB3	2.55	0.47
4:B:567:VAL:HG13	4:B:880:PHE:CD2	2.50	0.47
4:B:648:GLN:O	4:B:649:GLN:C	2.53	0.47
4:C:274:PRO:HA	4:C:275:PRO:HD3	1.77	0.47
4:C:314:PRO:HD3	7:C:3099:HOH:O	2.13	0.47
4:C:727:TRP:HB3	4:C:845:PHE:CE1	2.50	0.47
4:C:746:ARG:NH1	4:C:754:GLN:O	2.47	0.47
4:C:870:LEU:HD23	4:C:871:ASN:C	2.35	0.47
4:D:419:ASN:ND2	4:D:429:VAL:HG22	2.30	0.47
4:D:448:LYS:HZ1	4:D:806:SER:HA	1.79	0.47
1:E:14:DG:C2'	1:E:15:DC:H6	2.28	0.46
3:G:4:DG:C1'	3:G:5:DA:C8	2.98	0.46
4:A:390:ALA:O	4:A:391:ARG:C	2.52	0.46
4:A:420:MET:HA	4:A:425:ARG:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:439:MET:HG3	4:A:509:PHE:CE2	2.49	0.46
4:A:647:ARG:CG	4:A:675:GLY:HA2	2.45	0.46
4:A:711:LYS:CB	4:A:711:LYS:NZ	2.78	0.46
4:B:36:GLN:OE1	4:B:36:GLN:CA	2.63	0.46
4:B:254:ILE:O	4:B:255:ALA:C	2.52	0.46
4:B:403:GLU:O	4:B:405:ALA:N	2.48	0.46
4:B:570:ILE:O	4:B:570:ILE:HG13	2.14	0.46
4:B:675:GLY:O	4:B:678:ALA:HB3	2.15	0.46
4:B:729:THR:HB	4:B:789:SER:HB2	1.96	0.46
4:C:4:ILE:CD1	7:C:3146:HOH:O	2.62	0.46
4:C:404:GLN:HE21	4:C:404:GLN:CA	2.15	0.46
4:C:616:LEU:O	4:C:617:ALA:C	2.53	0.46
4:D:631:LYS:HE2	6:D:2003:APC:H3A2	1.97	0.46
4:D:706:LEU:CD2	4:D:853:LEU:HD23	2.44	0.46
4:D:782:PHE:CE2	4:D:786:GLN:OE1	2.68	0.46
4:D:823:ASN:O	4:D:826:LYS:N	2.48	0.46
1:H:12:DT:C2'	1:H:13:DC:C6	2.98	0.46
4:A:303:LYS:HE2	4:A:740:LYS:HZ1	1.81	0.46
4:A:308:TYR:CE2	4:A:736:TRP:CZ3	3.03	0.46
4:A:311:VAL:CG1	4:A:312:TYR:N	2.77	0.46
4:A:410:ASN:HD22	4:A:410:ASN:N	2.12	0.46
4:B:116:TYR:C	4:B:116:TYR:CD2	2.89	0.46
4:B:247:ALA:CB	4:B:250:TYR:CD1	2.99	0.46
4:B:268:PHE:CD2	4:B:429:VAL:HG12	2.51	0.46
4:B:787:ASP:O	4:B:790:HIS:N	2.48	0.46
4:C:84:ARG:HD2	4:C:222:GLU:OE1	2.14	0.46
4:C:140:ALA:O	4:C:143:ARG:N	2.48	0.46
4:C:246:LEU:HG	4:C:247:ALA:N	2.29	0.46
4:C:540:CYS:O	4:C:541:SER:C	2.54	0.46
4:C:598:THR:OG1	4:C:605:ILE:HD13	2.16	0.46
4:C:623:TYR:HD1	4:C:663:LYS:HE2	1.80	0.46
4:D:828:VAL:O	4:D:831:THR:HG22	2.16	0.46
2:F:7:A:H2'	2:F:8:U:C6	2.46	0.46
4:A:347:CYS:HB3	4:A:350:GLU:CG	2.45	0.46
4:A:347:CYS:HB3	4:A:350:GLU:HB2	1.97	0.46
4:A:386:ARG:C	4:A:388:ASP:N	2.68	0.46
4:A:403:GLU:O	4:A:406:ASN:N	2.48	0.46
4:A:473:VAL:HA	4:A:474:PRO:HD2	1.62	0.46
4:A:711:LYS:NZ	4:A:711:LYS:HB2	2.30	0.46
4:A:871:ASN:O	4:A:872:LEU:C	2.54	0.46
4:B:643:GLU:C	4:B:645:GLY:N	2.66	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:416:PHE:HB2	4:C:418:TYR:CE1	2.51	0.46
4:C:450:LYS:HD2	4:C:817:ILE:CD1	2.46	0.46
4:C:659:ILE:HG22	4:C:660:ASP:N	2.29	0.46
4:D:21:PHE:CD1	4:D:21:PHE:O	2.68	0.46
4:D:373:ALA:O	4:D:377:TRP:CD1	2.68	0.46
4:D:739:TYR:CD2	4:D:774:GLN:HA	2.50	0.46
4:D:784:HIS:O	4:D:787:ASP:N	2.49	0.46
4:A:59:LEU:HD23	4:A:64:VAL:CG1	2.46	0.46
4:A:261:LEU:C	4:A:263:GLY:H	2.19	0.46
4:A:281:ILE:HG22	4:A:282:THR:HG22	1.86	0.46
4:A:796:VAL:O	4:A:799:HIS:N	2.40	0.46
4:B:324:GLN:HG3	4:B:418:TYR:H	1.80	0.46
4:B:450:LYS:HB3	4:B:819:ALA:CB	2.45	0.46
4:B:520:GLY:HA3	4:B:528:TYR:CE1	2.50	0.46
4:B:549:MET:HE1	4:B:782:PHE:HE2	1.81	0.46
4:C:92:VAL:HG12	4:C:92:VAL:O	2.15	0.46
4:C:729:THR:O	4:C:732:GLY:N	2.29	0.46
4:D:390:ALA:CB	4:D:394:ARG:HH21	2.28	0.46
4:D:684:SER:O	4:D:687:VAL:HG22	2.16	0.46
3:M:9:DC:H2''	7:M:350:HOH:O	2.15	0.46
1:N:12:DT:C2'	1:N:13:DC:H5'	2.22	0.46
4:A:89:PHE:HZ	4:A:106:LEU:O	1.99	0.46
4:A:274:PRO:HA	4:A:415:TRP:CG	2.50	0.46
4:A:646:PHE:O	4:A:647:ARG:O	2.33	0.46
4:A:726:HIS:CD2	4:A:736:TRP:CE2	3.03	0.46
4:B:158:GLU:HA	4:B:195:LEU:CD1	2.42	0.46
4:B:469:GLY:C	4:B:471:ASP:N	2.68	0.46
4:B:644:PHE:C	4:B:644:PHE:CD2	2.89	0.46
4:C:165:ASN:ND2	7:C:3138:HOH:O	2.48	0.46
4:C:475:PHE:N	4:C:476:PRO:CD	2.78	0.46
4:C:549:MET:CE	4:C:786:GLN:HG2	2.46	0.46
4:C:698:TRP:O	4:C:701:SER:HB2	2.16	0.46
4:C:727:TRP:CD1	4:C:782:PHE:HE1	2.33	0.46
4:C:777:GLY:O	4:C:781:ASN:CG	2.54	0.46
4:D:21:PHE:C	4:D:21:PHE:CD1	2.89	0.46
4:D:76:THR:C	4:D:79:PRO:HD2	2.36	0.46
4:D:328:TRP:CG	4:D:416:PHE:HE2	2.33	0.46
4:D:541:SER:O	4:D:542:GLY:C	2.53	0.46
4:D:588:ASN:O	4:D:614:LYS:HG3	2.15	0.46
4:D:593:GLU:O	4:D:610:LYS:HB3	2.16	0.46
4:D:632:ARG:HG2	4:D:653:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:797:TRP:HD1	4:D:827:ALA:HB1	1.81	0.46
3:G:1:DG:H1'	3:G:2:DT:H72	1.98	0.46
1:H:3:DG:N2	3:J:9:DC:O2	2.48	0.46
4:A:109:ILE:HG12	4:A:148:GLU:HB3	1.97	0.46
4:A:520:GLY:HA3	4:A:528:TYR:CE2	2.50	0.46
4:A:727:TRP:CH2	4:A:735:VAL:CG2	2.99	0.46
4:B:60:LYS:O	4:B:60:LYS:HG2	2.15	0.46
4:B:432:PHE:C	4:B:432:PHE:CD2	2.89	0.46
4:B:459:TRP:CH2	4:B:825:PHE:CD2	3.04	0.46
4:C:82:ILE:HA	4:C:85:ILE:HD12	1.96	0.46
4:C:268:PHE:O	4:C:430:SER:HB2	2.15	0.46
4:C:329:LYS:HD3	4:C:447:ALA:HA	1.98	0.46
4:C:338:ALA:O	4:C:339:ASN:C	2.43	0.46
4:C:655:ILE:O	4:C:655:ILE:HG22	2.15	0.46
4:C:754:GLN:HB3	4:C:755:PHE:HD1	1.80	0.46
4:C:829:ARG:NH2	4:C:878:SER:O	2.47	0.46
4:D:81:MET:O	4:D:85:ILE:HG13	2.15	0.46
4:D:89:PHE:CZ	4:D:106:LEU:HB3	2.46	0.46
4:D:476:PRO:HG2	4:D:477:GLU:OE2	2.15	0.46
4:D:613:THR:HG22	4:D:676:TYR:CE1	2.51	0.46
4:A:139:SER:HB2	4:A:210:ILE:CD1	2.46	0.46
4:A:446:LEU:HD12	4:A:531:SER:O	2.15	0.46
4:A:541:SER:O	4:A:542:GLY:C	2.52	0.46
4:A:577:LYS:HB3	4:A:684:SER:OG	2.15	0.46
4:A:829:ARG:NH1	4:A:829:ARG:CG	2.57	0.46
4:B:172:LYS:NZ	4:B:172:LYS:CB	2.70	0.46
4:B:482:ILE:O	4:B:485:ASN:N	2.48	0.46
4:B:680:LEU:H	4:B:680:LEU:CD1	2.29	0.46
4:B:748:ASN:ND2	4:B:751:PHE:N	2.60	0.46
4:C:349:VAL:HG13	4:C:503:ALA:O	2.16	0.46
4:C:551:ARG:HH12	4:C:867:LYS:HZ3	1.63	0.46
4:C:577:LYS:O	4:C:581:ILE:HG13	2.15	0.46
4:C:840:ASP:OD2	4:C:867:LYS:NZ	2.49	0.46
4:C:849:PHE:O	4:C:850:ALA:C	2.54	0.46
4:D:122:THR:O	4:D:125:CYS:N	2.48	0.46
4:D:205:HIS:C	4:D:207:GLU:N	2.69	0.46
4:D:422:TRP:CD1	4:D:422:TRP:O	2.69	0.46
4:A:230:HIS:CE1	4:A:232:GLN:HE21	2.34	0.46
4:A:404:GLN:NE2	4:A:404:GLN:CA	2.73	0.46
4:A:429:VAL:O	4:A:430:SER:O	2.33	0.46
4:A:517:GLU:OE1	4:A:517:GLU:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:644:PHE:C	4:A:644:PHE:CD2	2.88	0.46
4:B:55:PHE:HE2	4:B:59:LEU:HD11	1.79	0.46
4:B:105:PHE:O	4:B:107:GLN:N	2.49	0.46
4:B:229:LEU:CD1	4:B:242:GLU:HG2	2.41	0.46
4:B:460:LEU:HD12	4:B:460:LEU:O	2.15	0.46
4:B:475:PHE:HB2	4:B:476:PRO:HD2	1.98	0.46
4:B:556:GLY:HA2	4:B:561:LEU:HD13	1.98	0.46
4:B:727:TRP:CZ2	4:B:782:PHE:HA	2.51	0.46
4:C:42:GLU:HG2	4:C:46:MET:HE2	1.96	0.46
4:C:550:LEU:C	4:C:867:LYS:HG3	2.36	0.46
4:D:55:PHE:CZ	4:D:59:LEU:HD11	2.51	0.46
4:D:221:ILE:HG23	4:D:227:VAL:O	2.16	0.46
4:D:502:TRP:CG	4:D:512:LEU:HD13	2.50	0.46
4:D:825:PHE:O	4:D:828:VAL:HG23	2.16	0.46
4:A:475:PHE:O	4:A:476:PRO:C	2.50	0.46
4:B:30:GLU:O	4:B:31:ARG:C	2.53	0.46
4:B:67:ASN:O	4:B:68:ALA:C	2.54	0.46
4:B:164:LYS:N	4:B:164:LYS:HZ2	2.13	0.46
4:B:408:PHE:CD1	4:B:414:ILE:HG21	2.31	0.46
4:C:257:ARG:HG2	4:C:257:ARG:HH11	1.81	0.46
4:C:319:ALA:HB2	4:C:792:ARG:HB3	1.97	0.46
4:C:418:TYR:HD2	4:C:426:VAL:HG11	1.80	0.46
4:C:435:GLN:HG2	4:C:810:ILE:HG12	1.97	0.46
4:C:506:ASP:O	4:C:508:PRO:HD2	2.15	0.46
4:C:534:LEU:CD1	4:C:818:PRO:HA	2.46	0.46
4:C:786:GLN:O	4:C:788:GLY:N	2.49	0.46
4:C:848:GLN:OE1	4:C:848:GLN:HA	2.15	0.46
4:D:281:ILE:HG12	4:D:309:GLU:HA	1.97	0.46
4:D:470:VAL:CG1	4:D:473:VAL:HG11	2.40	0.46
4:D:543:ILE:HG21	4:D:689:VAL:CG1	2.45	0.46
4:D:744:GLN:HB3	4:D:756:ARG:CB	2.45	0.46
4:A:147:ASP:HB3	4:A:750:MET:CE	2.46	0.46
4:A:404:GLN:O	4:A:407:LYS:HB3	2.16	0.46
4:A:656:GLN:C	4:A:658:ALA:N	2.68	0.46
4:A:746:ARG:HB3	4:A:746:ARG:CZ	2.45	0.46
4:A:831:THR:CG2	4:A:832:MET:N	2.78	0.46
4:B:72:PRO:HG3	4:B:257:ARG:HG3	1.97	0.46
4:B:163:LYS:HA	4:B:163:LYS:HD2	1.71	0.46
4:B:322:ILE:O	4:B:323:ALA:C	2.52	0.46
4:B:433:ASN:HB2	4:B:434:PRO:HD2	1.88	0.46
4:C:14:ILE:CG2	4:C:288:ALA:CB	2.91	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:180:LYS:O	4:C:181:ALA:C	2.54	0.46
4:C:462:ILE:CD1	4:C:479:ILE:HD11	2.45	0.46
4:C:646:PHE:HD1	4:C:649:GLN:OE1	1.99	0.46
4:C:700:LYS:O	4:C:701:SER:C	2.54	0.46
4:C:809:LEU:HA	4:C:813:SER:O	2.17	0.46
4:D:135:GLN:HB3	7:D:3160:HOH:O	2.15	0.46
4:D:139:SER:CB	4:D:210:ILE:HD13	2.45	0.46
4:D:182:PHE:O	4:D:186:VAL:HG23	2.16	0.46
4:D:468:ALA:HB2	4:D:511:PHE:CE1	2.51	0.46
4:D:699:LEU:HD11	4:D:782:PHE:CD2	2.50	0.46
1:K:15:DC:H6	1:K:15:DC:C5'	2.28	0.45
4:A:158:GLU:CD	4:A:195:LEU:HB3	2.37	0.45
4:A:480:LYS:HG3	4:A:484:GLU:OE1	2.16	0.45
4:B:163:LYS:HB3	4:B:164:LYS:HZ2	1.79	0.45
4:B:164:LYS:HD3	4:B:164:LYS:HA	1.78	0.45
4:B:199:GLU:C	4:B:201:TRP:H	2.20	0.45
4:B:620:TRP:CD2	4:B:677:MET:CE	2.99	0.45
4:B:676:TYR:O	4:B:677:MET:C	2.53	0.45
4:B:797:TRP:CZ2	4:B:801:LYS:HG3	2.51	0.45
4:C:89:PHE:CZ	4:C:106:LEU:O	2.68	0.45
4:C:148:GLU:OE1	4:C:749:LEU:HB2	2.15	0.45
4:C:164:LYS:HZ3	4:C:164:LYS:N	2.14	0.45
4:C:551:ARG:HE	4:C:872:LEU:HD11	1.80	0.45
4:D:116:TYR:HH	4:D:752:LEU:HD22	1.82	0.45
4:D:236:VAL:O	4:D:240:ASP:CB	2.64	0.45
4:D:460:LEU:HD13	4:D:532:LEU:HD23	1.97	0.45
1:E:4:DA:H2''	1:E:5:DA:OP2	2.15	0.45
1:H:9:DA:H62	3:J:1:DG:H22	1.64	0.45
1:K:2:DG:H2''	1:K:3:DG:C8	2.52	0.45
2:L:1:G:C2	2:L:2:C:C2	3.04	0.45
4:A:92:VAL:CG1	4:A:99:ARG:HG3	2.45	0.45
4:A:704:LYS:HE3	4:A:860:LYS:CE	2.46	0.45
4:A:798:ALA:HB1	4:A:804:ILE:HD12	1.98	0.45
4:A:801:LYS:HD3	4:A:801:LYS:O	2.13	0.45
4:A:828:VAL:C	4:A:830:GLU:H	2.19	0.45
4:B:257:ARG:HG2	4:B:257:ARG:NH1	2.30	0.45
4:B:279:THR:HG23	4:B:279:THR:O	2.15	0.45
4:B:373:ALA:O	4:B:377:TRP:CD1	2.70	0.45
4:B:384:VAL:O	4:B:384:VAL:HG12	2.16	0.45
4:C:110:LYS:O	4:C:114:VAL:HG23	2.16	0.45
4:C:334:VAL:O	4:C:337:VAL:HB	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:432:PHE:HE1	4:C:440:THR:HG23	1.81	0.45
4:C:437:ASN:ND2	4:C:440:THR:H	2.13	0.45
4:C:548:ALA:C	4:C:550:LEU:H	2.19	0.45
4:C:882:PHE:O	4:C:883:ALA:CB	2.64	0.45
4:D:501:TRP:HA	4:D:504:GLU:OE2	2.16	0.45
4:D:705:LEU:HB3	4:D:857:GLN:HE22	1.78	0.45
1:H:14:DG:H5'	1:H:14:DG:H8	1.82	0.45
4:A:113:ALA:O	4:A:114:VAL:C	2.54	0.45
4:A:153:ARG:HD2	7:A:3089:HOH:O	2.17	0.45
4:A:261:LEU:O	4:A:263:GLY:N	2.50	0.45
4:A:416:PHE:HA	4:A:417:PRO:HD2	1.75	0.45
4:B:552:ASP:HB3	4:B:691:ALA:HB2	1.99	0.45
4:C:556:GLY:HA3	4:C:561:LEU:HD22	1.91	0.45
4:C:567:VAL:O	4:C:567:VAL:HG12	2.15	0.45
4:C:656:GLN:H	4:C:657:PRO:HD2	1.78	0.45
4:D:47:GLY:HA3	4:D:265:SER:O	2.16	0.45
4:D:126:LEU:HD11	4:D:227:VAL:HG12	1.97	0.45
4:D:342:THR:CG2	4:D:348:PRO:HG2	2.41	0.45
4:D:440:THR:O	4:D:444:LEU:HD12	2.16	0.45
4:D:656:GLN:N	4:D:657:PRO:CD	2.77	0.45
4:D:696:MET:O	4:D:700:LYS:HB2	2.16	0.45
4:D:704:LYS:HE3	4:D:860:LYS:NZ	2.32	0.45
4:D:709:GLU:O	4:D:711:LYS:HG3	2.16	0.45
1:E:2:DG:C2	7:E:42:HOH:O	2.56	0.45
4:A:145:ILE:HG12	4:A:145:ILE:H	1.55	0.45
4:A:281:ILE:HG13	4:A:309:GLU:HG2	1.98	0.45
4:B:232:GLN:HG3	4:B:243:THR:HG23	1.98	0.45
4:B:314:PRO:C	4:B:316:VAL:H	2.20	0.45
4:B:577:LYS:O	4:B:580:GLU:HB2	2.16	0.45
4:B:690:VAL:C	4:B:693:VAL:HG23	2.36	0.45
4:B:698:TRP:O	4:B:699:LEU:C	2.54	0.45
4:B:770:ASP:OD2	4:B:773:LYS:HD2	2.17	0.45
4:C:425:ARG:NH2	4:C:787:ASP:OD2	2.49	0.45
4:C:433:ASN:C	7:C:3164:HOH:O	2.52	0.45
4:D:669:GLN:HG3	4:D:672:GLN:HE21	1.80	0.45
3:J:5:DA:C2'	3:J:6:DT:H72	2.47	0.45
2:L:4:G:H1'	4:C:389:LYS:HZ1	1.80	0.45
4:A:112:GLU:CD	4:A:112:GLU:H	2.19	0.45
4:A:278:TRP:CD2	4:A:284:GLY:HA3	2.49	0.45
4:A:462:ILE:HG22	4:A:463:HIS:N	2.31	0.45
4:A:664:GLY:O	4:A:667:PHE:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:167:GLU:O	4:B:168:GLU:C	2.54	0.45
4:B:225:GLY:HA2	7:B:3035:HOH:O	2.16	0.45
4:B:685:VAL:O	4:B:687:VAL:N	2.49	0.45
4:C:164:LYS:NZ	4:C:164:LYS:N	2.64	0.45
4:C:814:PHE:CE1	4:C:883:ALA:HB1	2.52	0.45
4:D:42:GLU:O	4:D:45:GLU:N	2.50	0.45
4:D:322:ILE:HG21	7:D:3013:HOH:O	2.16	0.45
1:K:12:DT:N3	1:K:13:DC:C5	2.85	0.45
1:K:16:DC:H2''	1:K:17:DG:O5'	2.15	0.45
7:M:542:HOH:O	4:C:164:LYS:HB3	2.16	0.45
4:A:109:ILE:HG13	4:A:149:ALA:CB	2.46	0.45
4:A:148:GLU:OE2	4:A:749:LEU:HB2	2.15	0.45
4:A:208:ASP:OD2	4:A:208:ASP:N	2.50	0.45
4:A:330:ILE:HA	4:A:330:ILE:HD13	1.39	0.45
4:A:416:PHE:CZ	4:A:434:PRO:HD3	2.51	0.45
4:A:423:ARG:O	4:A:785:SER:HB2	2.16	0.45
4:A:518:TYR:O	4:A:518:TYR:HD1	1.98	0.45
4:A:746:ARG:NH1	4:A:754:GLN:H	2.11	0.45
4:B:6:ILE:C	4:B:8:LYS:H	2.19	0.45
4:B:404:GLN:HE21	4:B:404:GLN:HB2	1.35	0.45
4:B:436:GLY:O	4:B:441:LYS:HE2	2.15	0.45
4:B:552:ASP:CB	4:B:691:ALA:HB2	2.46	0.45
4:C:140:ALA:O	4:C:141:ILE:C	2.55	0.45
4:D:6:ILE:O	4:D:8:LYS:N	2.39	0.45
4:D:316:VAL:HG22	4:D:731:ASP:OD2	2.15	0.45
4:D:322:ILE:HD13	4:D:322:ILE:HA	1.79	0.45
4:D:448:LYS:HZ2	4:D:806:SER:CB	2.29	0.45
1:H:9:DA:C6	4:B:644:PHE:CE1	3.04	0.45
4:A:385:TYR:CD2	4:A:385:TYR:C	2.90	0.45
4:A:778:ILE:O	4:A:779:ALA:C	2.54	0.45
4:A:849:PHE:O	4:A:850:ALA:C	2.55	0.45
4:B:36:GLN:HB3	4:B:37:LEU:HD12	1.97	0.45
4:B:334:VAL:CG1	4:B:443:LEU:HD23	2.46	0.45
4:B:402:LEU:HD23	4:B:402:LEU:HA	1.45	0.45
4:B:418:TYR:HE1	7:B:3028:HOH:O	1.99	0.45
4:B:455:GLU:O	4:B:458:TYR:HB3	2.16	0.45
4:B:459:TRP:HH2	4:B:825:PHE:CE2	2.34	0.45
4:B:726:HIS:HB2	4:B:736:TRP:CD1	2.52	0.45
4:B:804:ILE:HG22	4:B:807:PHE:CE2	2.52	0.45
4:C:279:THR:CG2	7:C:3038:HOH:O	2.59	0.45
4:D:84:ARG:HH11	4:D:84:ARG:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:220:LEU:HD21	4:D:226:MET:HE2	1.99	0.45
4:D:633:SER:HA	4:D:649:GLN:HE22	1.82	0.45
4:D:859:ASP:OD2	4:D:860:LYS:N	2.50	0.45
1:H:15:DC:H3'	7:H:334:HOH:O	2.16	0.45
4:A:318:LYS:O	4:A:319:ALA:C	2.55	0.45
4:A:421:ASP:C	4:A:423:ARG:N	2.70	0.45
4:A:473:VAL:O	4:A:473:VAL:HG13	2.17	0.45
4:B:19:ILE:O	4:B:21:PHE:N	2.42	0.45
4:B:486:HIS:C	4:B:486:HIS:ND1	2.71	0.45
4:B:620:TRP:CH2	4:B:677:MET:HE3	2.52	0.45
4:C:161:HIS:C	4:C:163:LYS:H	2.20	0.45
4:C:269:GLN:HE21	4:C:269:GLN:HB3	1.56	0.45
4:D:246:LEU:HD23	4:D:247:ALA:O	2.17	0.45
4:D:462:ILE:HD12	4:D:475:PHE:HD1	1.82	0.45
4:D:702:ALA:O	4:D:703:ALA:C	2.55	0.45
3:G:4:DG:H2''	3:G:5:DA:H8	1.81	0.45
1:H:10:DT:H5'	4:B:641:SER:H	1.79	0.45
1:N:10:DT:H5'	4:D:641:SER:CB	2.46	0.45
4:A:786:GLN:O	4:A:787:ASP:C	2.54	0.45
4:B:205:HIS:O	4:B:207:GLU:N	2.50	0.45
4:B:400:PHE:O	4:B:401:MET:C	2.50	0.45
4:B:419:ASN:O	4:B:420:MET:CG	2.65	0.45
4:C:287:TRP:O	4:C:288:ALA:O	2.35	0.45
4:C:507:SER:HA	4:C:508:PRO:HD2	1.62	0.45
4:C:849:PHE:O	4:C:852:GLN:HB2	2.17	0.45
4:D:5:ASN:HA	4:D:52:ARG:NH1	2.32	0.45
4:D:829:ARG:HH12	4:D:883:ALA:H	1.64	0.45
1:E:6:DT:H6	1:E:6:DT:H2'	1.55	0.45
1:H:15:DC:N3	1:H:16:DC:C5	2.85	0.45
4:A:8:LYS:O	4:A:12:SER:HB2	2.16	0.45
4:A:60:LYS:HG3	7:A:3023:HOH:O	2.16	0.45
4:A:688:THR:CG2	4:A:689:VAL:HG13	2.30	0.45
4:A:802:TYR:C	4:A:804:ILE:H	2.17	0.45
4:B:50:ARG:HH11	4:B:50:ARG:HG2	1.82	0.45
4:B:267:MET:HE3	4:B:267:MET:HB3	1.83	0.45
4:B:345:LYS:HZ1	4:B:351:ASP:N	2.13	0.45
4:B:549:MET:HE1	4:B:841:VAL:HG21	1.96	0.45
4:C:3:THR:HB	4:C:52:ARG:CZ	2.46	0.45
4:C:323:ALA:O	4:C:324:GLN:C	2.55	0.45
4:C:329:LYS:HG3	4:C:445:THR:HG22	1.99	0.45
4:C:432:PHE:CE1	4:C:440:THR:HG23	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:553:GLU:CG	4:C:554:VAL:N	2.80	0.45
4:D:331:ASN:ND2	4:D:334:VAL:HG23	2.32	0.45
4:D:402:LEU:HD21	4:D:439:MET:HE3	1.99	0.45
4:D:439:MET:CE	4:D:443:LEU:HD11	2.47	0.45
4:D:502:TRP:CE3	4:D:503:ALA:N	2.85	0.45
4:D:816:THR:HG22	4:D:817:ILE:N	2.32	0.45
4:A:47:GLY:HA3	4:A:265:SER:O	2.18	0.44
4:A:474:PRO:C	4:A:476:PRO:HD2	2.37	0.44
4:A:554:VAL:O	4:A:557:ARG:HB3	2.17	0.44
4:B:138:ALA:O	4:B:213:GLY:HA3	2.17	0.44
4:B:164:LYS:N	4:B:164:LYS:HZ3	2.15	0.44
4:B:347:CYS:HB3	4:B:350:GLU:HG3	1.99	0.44
4:B:532:LEU:HG	4:B:533:PRO:CD	2.47	0.44
4:B:571:TYR:HD1	4:B:571:TYR:H	1.65	0.44
4:B:579:ASN:HA	4:B:582:LEU:HB2	1.98	0.44
4:B:643:GLU:HG3	4:B:682:TRP:HB3	1.99	0.44
4:C:488:ASN:O	4:C:491:ALA:HB3	2.16	0.44
4:C:651:LEU:C	4:C:651:LEU:CD1	2.86	0.44
4:C:845:PHE:O	4:C:848:GLN:CB	2.57	0.44
4:D:729:THR:HG23	4:D:733:PHE:O	2.17	0.44
4:A:19:ILE:HD13	4:A:19:ILE:HA	1.89	0.44
4:A:205:HIS:C	4:A:207:GLU:N	2.70	0.44
4:A:572:GLY:O	4:A:575:ALA:HB3	2.18	0.44
4:B:194:GLY:O	4:B:195:LEU:C	2.56	0.44
4:B:404:GLN:O	4:B:404:GLN:HG3	2.17	0.44
4:B:416:PHE:HD1	4:B:430:SER:OG	2.01	0.44
4:B:570:ILE:HA	4:B:573:ILE:HG22	1.98	0.44
4:B:640:GLY:O	4:B:641:SER:O	2.36	0.44
4:B:643:GLU:HG3	4:B:682:TRP:CB	2.47	0.44
4:B:784:HIS:C	4:B:786:GLN:N	2.69	0.44
4:C:71:LYS:N	4:C:72:PRO:CD	2.81	0.44
4:C:210:ILE:O	4:C:214:VAL:CG2	2.63	0.44
4:C:313:MET:O	4:C:317:TYR:CD2	2.70	0.44
4:C:323:ALA:O	4:C:325:ASN:N	2.49	0.44
4:C:460:LEU:O	4:C:514:PHE:CE2	2.70	0.44
4:D:133:THR:C	4:D:135:GLN:N	2.71	0.44
4:D:340:VAL:O	4:D:343:LYS:HG2	2.17	0.44
4:D:345:LYS:O	4:D:346:HIS:C	2.51	0.44
4:D:511:PHE:O	4:D:514:PHE:HB3	2.16	0.44
4:D:631:LYS:HD2	4:D:632:ARG:NH1	2.32	0.44
4:A:56:GLU:HB2	7:A:3057:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:333:LYS:HB3	4:A:516:PHE:CE2	2.52	0.44
4:A:417:PRO:C	4:A:418:TYR:HD1	2.21	0.44
4:A:505:GLN:O	4:A:506:ASP:C	2.51	0.44
4:A:739:TYR:CD2	4:A:773:LYS:HB3	2.52	0.44
4:A:746:ARG:HB3	4:A:746:ARG:NH1	2.32	0.44
4:B:473:VAL:HG12	4:B:474:PRO:O	2.18	0.44
4:B:685:VAL:C	4:B:687:VAL:N	2.70	0.44
4:B:701:SER:O	4:B:702:ALA:C	2.55	0.44
4:C:14:ILE:O	4:C:14:ILE:HG22	2.18	0.44
4:C:155:ARG:O	4:C:155:ARG:CG	2.65	0.44
4:C:617:ALA:O	4:C:621:LEU:HG	2.18	0.44
4:C:620:TRP:CZ3	4:C:667:PHE:HZ	2.35	0.44
4:D:306:MET:C	4:D:308:TYR:N	2.70	0.44
4:D:327:ALA:CA	4:D:415:TRP:NE1	2.81	0.44
4:D:443:LEU:HD23	4:D:443:LEU:H	1.81	0.44
4:D:706:LEU:HD21	4:D:849:PHE:CD2	2.53	0.44
2:F:4:G:H4'	4:A:389:LYS:HD3	1.99	0.44
1:K:6:DT:C6	1:K:6:DT:H5'	2.52	0.44
1:K:15:DC:H2''	1:K:16:DC:C5'	2.46	0.44
4:A:42:GLU:C	4:A:46:MET:HE2	2.38	0.44
4:A:308:TYR:OH	4:A:733:PHE:CE2	2.70	0.44
4:A:788:GLY:O	4:A:789:SER:C	2.56	0.44
4:A:846:TYR:HD1	4:A:850:ALA:HB2	1.82	0.44
4:B:19:ILE:HD13	4:B:20:PRO:HD2	1.98	0.44
4:B:169:GLN:HE21	4:B:169:GLN:HB3	1.51	0.44
4:B:430:SER:OG	4:B:432:PHE:O	2.34	0.44
4:B:460:LEU:CA	4:B:534:LEU:HD11	2.48	0.44
4:B:570:ILE:O	4:B:570:ILE:CG1	2.59	0.44
4:B:609:VAL:O	4:B:609:VAL:HG22	2.17	0.44
4:B:626:THR:C	4:B:628:SER:N	2.70	0.44
4:C:536:PHE:HB3	4:C:882:PHE:HB2	1.94	0.44
4:C:728:VAL:CG2	4:C:734:PRO:HB3	2.47	0.44
4:D:49:ALA:O	4:D:52:ARG:HB2	2.17	0.44
4:D:300:HIS:HA	7:D:3088:HOH:O	2.17	0.44
4:D:326:THR:C	4:D:415:TRP:CD1	2.91	0.44
4:D:502:TRP:CZ3	4:D:503:ALA:HB2	2.52	0.44
4:D:795:VAL:HG12	7:D:3013:HOH:O	2.18	0.44
4:D:857:GLN:C	4:D:859:ASP:N	2.70	0.44
1:H:15:DC:OP1	7:H:313:HOH:O	2.21	0.44
4:A:60:LYS:NZ	4:A:61:ALA:HB2	2.22	0.44
4:A:86:ASN:HD22	4:A:86:ASN:N	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:286:TYR:N	4:A:286:TYR:CD2	2.86	0.44
4:A:400:PHE:O	4:A:401:MET:O	2.36	0.44
4:A:631:LYS:NZ	6:A:2000:APC:O2A	2.39	0.44
4:A:697:ASN:O	4:A:698:TRP:C	2.55	0.44
4:B:273:VAL:C	4:B:274:PRO:O	2.56	0.44
4:B:340:VAL:O	4:B:343:LYS:HG3	2.17	0.44
4:B:421:ASP:OD2	4:B:425:ARG:HB2	2.17	0.44
4:B:665:LEU:HA	4:B:665:LEU:HD23	1.82	0.44
4:B:823:ASN:C	4:B:825:PHE:N	2.70	0.44
4:C:305:LEU:C	4:C:305:LEU:CD2	2.86	0.44
4:D:482:ILE:HD12	4:D:514:PHE:HZ	1.83	0.44
4:D:646:PHE:HA	4:D:649:GLN:OE1	2.17	0.44
1:K:13:DC:C2'	1:K:14:DG:H5'	2.45	0.44
4:A:16:LEU:HA	4:A:37:LEU:CD2	2.46	0.44
4:A:264:ILE:HG22	4:A:264:ILE:O	2.18	0.44
4:A:699:LEU:O	4:A:702:ALA:HB3	2.18	0.44
4:A:710:VAL:O	4:A:710:VAL:HG13	2.18	0.44
4:A:794:THR:OG1	4:A:831:THR:CG2	2.48	0.44
4:A:797:TRP:CZ3	4:A:801:LYS:HB2	2.52	0.44
4:B:278:TRP:CZ3	4:B:284:GLY:CA	2.99	0.44
4:B:329:LYS:O	4:B:445:THR:HG23	2.17	0.44
4:B:460:LEU:HA	4:B:534:LEU:HD11	1.99	0.44
4:B:512:LEU:O	4:B:514:PHE:N	2.51	0.44
4:B:556:GLY:O	4:B:558:ALA:N	2.51	0.44
4:B:737:GLN:C	4:B:774:GLN:HE22	2.21	0.44
4:B:780:PRO:HD2	4:B:781:ASN:N	2.31	0.44
4:B:796:VAL:HG21	7:B:3141:HOH:O	2.18	0.44
4:C:69:ALA:HA	4:C:257:ARG:HD2	1.99	0.44
4:C:270:PRO:HD2	4:C:408:PHE:CE2	2.53	0.44
4:C:291:ARG:HD2	7:C:3077:HOH:O	2.17	0.44
4:C:307:ARG:HH11	4:C:307:ARG:HG3	1.82	0.44
4:C:308:TYR:CE2	4:C:734:PRO:O	2.71	0.44
4:C:571:TYR:HD1	4:C:634:VAL:HG11	1.83	0.44
4:C:824:LEU:HD12	4:C:824:LEU:C	2.37	0.44
4:D:14:ILE:HG21	4:D:288:ALA:CB	2.48	0.44
4:D:333:LYS:HZ1	4:D:516:PHE:HB3	1.83	0.44
4:D:338:ALA:C	4:D:340:VAL:N	2.70	0.44
4:D:486:HIS:NE2	4:D:490:MET:HG2	2.33	0.44
4:D:611:LEU:HB2	4:D:616:LEU:HD21	2.00	0.44
4:D:870:LEU:HD23	4:D:871:ASN:N	2.33	0.44
4:A:133:THR:O	4:A:137:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:320:ILE:HG23	4:A:418:TYR:O	2.18	0.44
4:B:40:GLU:O	4:B:43:SER:HB2	2.17	0.44
4:B:50:ARG:HG2	4:B:50:ARG:NH1	2.33	0.44
4:B:170:LEU:C	4:B:170:LEU:HD13	2.38	0.44
4:B:199:GLU:HG2	4:B:201:TRP:CD1	2.51	0.44
4:B:220:LEU:O	4:B:223:SER:N	2.46	0.44
4:B:269:GLN:NE2	4:B:407:LYS:HZ3	2.15	0.44
4:B:296:LEU:O	4:B:420:MET:HE2	2.18	0.44
4:B:651:LEU:HA	4:B:655:ILE:HD12	1.99	0.44
4:B:699:LEU:HD12	4:B:699:LEU:H	1.82	0.44
4:C:685:VAL:O	4:C:687:VAL:N	2.51	0.44
4:D:14:ILE:CG2	4:D:288:ALA:CB	2.91	0.44
4:D:743:ILE:HD12	4:D:766:ASP:HB3	2.00	0.44
4:D:804:ILE:H	4:D:804:ILE:HG13	1.47	0.44
4:D:840:ASP:O	4:D:841:VAL:C	2.54	0.44
4:A:347:CYS:C	4:A:349:VAL:N	2.68	0.44
4:A:436:GLY:HA3	4:A:440:THR:CB	2.48	0.44
4:A:446:LEU:HD13	4:A:817:ILE:HG23	1.99	0.44
4:A:462:ILE:O	4:A:463:HIS:C	2.55	0.44
4:A:578:VAL:O	4:A:581:ILE:N	2.50	0.44
4:A:802:TYR:HD2	4:A:802:TYR:H	1.63	0.44
4:B:164:LYS:HZ3	4:B:164:LYS:H	1.65	0.44
4:B:505:GLN:HG3	4:B:511:PHE:CD2	2.53	0.44
4:C:236:VAL:CG1	4:C:239:GLN:HB2	2.48	0.44
4:C:450:LYS:O	4:C:529:ASN:HA	2.18	0.44
4:C:550:LEU:O	4:C:867:LYS:HG3	2.18	0.44
4:D:161:HIS:C	4:D:163:LYS:N	2.71	0.44
4:D:233:ASN:O	4:D:236:VAL:HG23	2.17	0.44
4:D:523:HIS:C	4:D:524:HIS:HD1	2.21	0.44
1:E:12:DT:C2	1:E:13:DC:C6	3.06	0.44
1:K:3:DG:H5'	7:K:268:HOH:O	2.17	0.44
1:K:10:DT:H5'	4:C:641:SER:HA	1.99	0.44
1:N:10:DT:H4'	4:D:639:TYR:O	2.17	0.44
4:A:73:LEU:C	4:A:75:THR:H	2.20	0.44
4:A:282:THR:OG1	4:A:283:GLY:N	2.45	0.44
4:A:676:TYR:O	4:A:678:ALA:N	2.50	0.44
4:B:227:VAL:HB	4:B:245:GLU:O	2.17	0.44
4:B:322:ILE:HD13	4:B:322:ILE:HA	1.73	0.44
4:B:495:SER:N	4:B:496:PRO:CD	2.80	0.44
4:B:570:ILE:HG23	4:B:571:TYR:N	2.32	0.44
4:B:752:LEU:HB2	4:B:753:GLY:H	1.69	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:269:GLN:C	4:C:430:SER:HB3	2.38	0.44
4:C:296:LEU:HA	4:C:296:LEU:HD12	1.85	0.44
4:C:832:MET:O	4:C:833:VAL:C	2.56	0.44
4:D:459:TRP:O	4:D:462:ILE:N	2.51	0.44
4:D:778:ILE:O	4:D:782:PHE:HB2	2.18	0.44
1:E:13:DC:H5'	1:E:13:DC:H6	1.82	0.43
1:E:15:DC:H2'	1:E:16:DC:C6	2.53	0.43
4:A:78:LEU:CD1	4:A:119:ILE:HG13	2.48	0.43
4:A:215:ARG:NH1	4:A:218:GLU:OE2	2.47	0.43
4:A:226:MET:O	4:A:247:ALA:CB	2.66	0.43
4:A:286:TYR:H	4:A:286:TYR:HD2	1.66	0.43
4:A:620:TRP:NE1	4:A:677:MET:HB2	2.33	0.43
4:A:713:LYS:O	4:A:714:LYS:HD3	2.18	0.43
4:B:84:ARG:O	4:B:84:ARG:NH1	2.51	0.43
4:B:398:LEU:CD2	4:B:439:MET:CE	2.96	0.43
4:B:421:ASP:O	4:B:422:TRP:C	2.55	0.43
4:B:556:GLY:O	4:B:559:VAL:N	2.51	0.43
4:B:616:LEU:O	4:B:617:ALA:C	2.56	0.43
4:C:402:LEU:HD23	4:C:402:LEU:HA	1.79	0.43
4:D:268:PHE:CD2	4:D:429:VAL:CG1	3.00	0.43
1:K:2:DG:N2	7:K:239:HOH:O	2.50	0.43
1:K:7:DC:H6	1:K:7:DC:H2'	1.47	0.43
4:A:110:LYS:O	4:A:113:ALA:HB3	2.18	0.43
4:A:276:LYS:O	4:A:277:PRO:C	2.57	0.43
4:A:320:ILE:CG2	4:A:418:TYR:O	2.67	0.43
4:A:388:ASP:O	4:A:388:ASP:CG	2.56	0.43
4:A:804:ILE:HG23	4:A:816:THR:HG21	2.00	0.43
4:A:826:LYS:O	4:A:827:ALA:C	2.56	0.43
4:B:233:ASN:HB3	4:B:239:GLN:HB3	2.00	0.43
4:C:66:ASP:OD2	4:C:66:ASP:N	2.51	0.43
4:C:136:ALA:HA	7:C:3021:HOH:O	2.17	0.43
4:C:220:LEU:HD21	4:C:226:MET:CE	2.49	0.43
4:C:317:TYR:C	4:C:321:ASN:HD21	2.21	0.43
4:C:462:ILE:CD1	4:C:479:ILE:CD1	2.96	0.43
4:C:462:ILE:HG23	4:C:478:ARG:HD2	2.00	0.43
4:C:698:TRP:NE1	4:C:864:LEU:HA	2.33	0.43
4:C:706:LEU:HD11	4:C:849:PHE:CG	2.54	0.43
4:C:721:LYS:HG2	4:C:722:ARG:H	1.81	0.43
4:C:818:PRO:O	4:C:821:ALA:HB3	2.18	0.43
4:D:422:TRP:O	4:D:422:TRP:HD1	2.00	0.43
4:D:532:LEU:HA	4:D:533:PRO:HD2	1.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:125:CYS:O	4:A:128:SER:HB3	2.18	0.43
4:A:320:ILE:HG23	4:A:320:ILE:HD12	1.74	0.43
4:A:521:VAL:O	4:A:525:GLY:N	2.51	0.43
4:A:647:ARG:HD2	4:A:675:GLY:CA	2.25	0.43
4:A:780:PRO:O	4:A:784:HIS:HB2	2.18	0.43
4:B:46:MET:CE	4:B:269:GLN:HE22	2.30	0.43
4:B:459:TRP:O	4:B:460:LEU:C	2.56	0.43
4:B:556:GLY:C	4:B:558:ALA:N	2.72	0.43
4:B:582:LEU:HD23	4:B:582:LEU:HA	1.86	0.43
4:C:231:ARG:CG	4:C:234:ALA:HB2	2.42	0.43
4:C:532:LEU:HA	4:C:533:PRO:HD2	1.77	0.43
4:C:541:SER:O	4:C:542:GLY:C	2.56	0.43
4:C:570:ILE:O	4:C:573:ILE:HG23	2.18	0.43
4:C:592:ASN:ND2	4:C:611:LEU:CD2	2.81	0.43
4:C:727:TRP:CD2	4:C:735:VAL:CG1	3.01	0.43
4:C:737:GLN:O	4:C:774:GLN:NE2	2.51	0.43
4:C:808:ALA:HB3	4:C:815:GLY:HA3	2.00	0.43
4:D:122:THR:HG21	4:D:226:MET:CE	2.48	0.43
4:D:232:GLN:O	4:D:233:ASN:C	2.56	0.43
4:D:379:ARG:HD3	4:D:660:ASP:OD2	2.18	0.43
4:D:402:LEU:CD2	4:D:439:MET:HE3	2.48	0.43
4:D:794:THR:HA	4:D:797:TRP:HB3	1.99	0.43
1:K:11:DA:N1	1:K:12:DT:C4	2.86	0.43
4:A:65:ALA:CB	4:A:120:LYS:HG2	2.48	0.43
4:A:234:ALA:HA	4:A:240:ASP:OD2	2.18	0.43
4:A:276:LYS:O	4:A:277:PRO:O	2.36	0.43
4:A:422:TRP:C	4:A:422:TRP:CD1	2.91	0.43
4:A:651:LEU:HA	4:A:655:ILE:HB	1.99	0.43
4:A:820:ASP:N	4:A:820:ASP:OD1	2.51	0.43
4:B:86:ASN:ND2	7:B:3033:HOH:O	2.37	0.43
4:B:577:LYS:CB	4:B:684:SER:HB3	2.47	0.43
4:C:68:ALA:O	4:C:257:ARG:HD2	2.17	0.43
4:C:298:ARG:HG3	4:C:420:MET:O	2.17	0.43
4:C:306:MET:C	4:C:308:TYR:H	2.20	0.43
4:C:308:TYR:HA	4:C:311:VAL:CG2	2.48	0.43
4:C:646:PHE:O	4:C:647:ARG:C	2.56	0.43
4:D:169:GLN:HB3	4:D:182:PHE:CZ	2.53	0.43
4:D:545:HIS:O	4:D:549:MET:HG2	2.18	0.43
4:D:744:GLN:HA	4:D:756:ARG:NH2	2.33	0.43
4:D:825:PHE:O	4:D:828:VAL:CG2	2.67	0.43
4:D:829:ARG:HB3	4:D:876:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:51:PHE:HZ	4:A:261:LEU:HD23	1.83	0.43
4:A:204:TRP:CZ3	4:A:212:VAL:HG21	2.50	0.43
4:A:643:GLU:OE2	4:A:679:LYS:CA	2.67	0.43
4:B:307:ARG:HD3	4:B:736:TRP:CD2	2.52	0.43
4:B:324:GLN:HE21	4:B:417:PRO:HA	1.84	0.43
4:B:394:ARG:HE	4:B:394:ARG:HB2	1.49	0.43
4:C:47:GLY:CA	4:C:265:SER:O	2.59	0.43
4:C:269:GLN:C	4:C:430:SER:CB	2.87	0.43
4:C:374:LEU:C	4:C:376:ALA:H	2.22	0.43
4:C:452:ILE:CG1	4:C:457:TYR:N	2.81	0.43
4:C:696:MET:O	4:C:700:LYS:HB2	2.18	0.43
4:C:755:PHE:N	4:C:755:PHE:HD1	2.16	0.43
4:C:778:ILE:HA	4:C:778:ILE:HD12	1.65	0.43
4:D:401:MET:HG3	4:D:440:THR:OG1	2.19	0.43
4:D:461:LYS:HE3	4:D:479:ILE:HG23	2.00	0.43
4:D:554:VAL:O	4:D:557:ARG:HB3	2.19	0.43
4:D:743:ILE:O	4:D:743:ILE:HG22	2.19	0.43
4:D:830:GLU:HG2	4:D:876:LEU:HD22	2.00	0.43
1:H:9:DA:H2''	1:H:10:DT:OP1	2.18	0.43
4:A:73:LEU:HD11	4:A:254:ILE:HG13	2.00	0.43
4:A:77:LEU:C	4:A:79:PRO:HD2	2.39	0.43
4:A:147:ASP:HB3	4:A:750:MET:HE1	2.01	0.43
4:B:306:MET:O	4:B:308:TYR:N	2.52	0.43
4:B:341:ILE:O	4:B:343:LYS:N	2.51	0.43
4:B:831:THR:HG23	4:B:832:MET:N	2.33	0.43
4:C:50:ARG:NH1	4:C:267:MET:HE3	2.33	0.43
4:C:248:PRO:HD2	4:C:249:GLU:OE2	2.19	0.43
4:C:397:SER:O	4:C:398:LEU:C	2.56	0.43
4:C:485:ASN:OD1	4:C:485:ASN:N	2.51	0.43
4:C:563:PRO:HD3	4:C:874:ASP:O	2.19	0.43
4:D:276:LYS:O	4:D:277:PRO:C	2.56	0.43
4:D:472:LYS:CG	4:D:567:VAL:HG11	2.49	0.43
4:D:489:ILE:HG13	4:D:489:ILE:H	1.40	0.43
4:D:837:GLU:HG2	4:D:872:LEU:HD12	2.01	0.43
3:J:5:DA:H2''	3:J:6:DT:C7	2.48	0.43
2:L:5:C:H5''	4:C:390:ALA:HB1	2.01	0.43
4:A:8:LYS:HB3	4:A:9:ASN:H	1.49	0.43
4:A:109:ILE:O	4:A:110:LYS:C	2.55	0.43
4:A:122:THR:O	4:A:126:LEU:HG	2.19	0.43
4:A:178:TYR:O	4:A:181:ALA:HB3	2.18	0.43
4:A:274:PRO:HA	4:A:275:PRO:HD3	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:308:TYR:HA	4:A:311:VAL:HG23	1.99	0.43
4:A:344:TRP:O	4:A:345:LYS:CB	2.66	0.43
4:A:459:TRP:NE1	4:A:822:ALA:HA	2.29	0.43
4:A:461:LYS:HE3	4:A:479:ILE:CG2	2.48	0.43
4:A:465:ALA:HB2	4:A:482:ILE:HD11	2.00	0.43
4:A:502:TRP:CE2	4:A:512:LEU:CD1	2.97	0.43
4:A:545:HIS:H	4:A:545:HIS:CD2	2.36	0.43
4:A:549:MET:HB3	4:A:836:TYR:CE1	2.51	0.43
4:A:635:MET:HE1	6:A:2000:APC:C3'	2.49	0.43
4:B:78:LEU:N	4:B:79:PRO:HD2	2.34	0.43
4:B:400:PHE:CD1	4:B:400:PHE:C	2.91	0.43
4:B:407:LYS:CG	4:B:408:PHE:HE2	2.27	0.43
4:B:416:PHE:CD1	4:B:430:SER:OG	2.71	0.43
4:B:435:GLN:HG2	4:B:810:ILE:HG12	2.00	0.43
4:B:504:GLU:C	4:B:505:GLN:O	2.56	0.43
4:C:502:TRP:O	4:C:504:GLU:N	2.51	0.43
4:C:555:GLY:O	4:C:556:GLY:C	2.57	0.43
4:D:21:PHE:CE1	4:D:25:ALA:HB2	2.54	0.43
4:D:78:LEU:O	4:D:82:ILE:HG13	2.18	0.43
4:D:95:LYS:HE3	7:D:3065:HOH:O	2.17	0.43
4:D:452:ILE:HG22	4:D:528:TYR:O	2.18	0.43
4:D:485:ASN:O	4:D:486:HIS:C	2.57	0.43
4:D:583:GLN:HB3	7:D:3135:HOH:O	2.19	0.43
4:A:396:ILE:HG23	4:A:396:ILE:HD12	1.65	0.43
4:A:402:LEU:HG	4:A:439:MET:HE3	2.01	0.43
4:A:793:LYS:CA	4:A:796:VAL:HG23	2.48	0.43
4:B:13:ASP:OD1	4:B:14:ILE:N	2.51	0.43
4:B:163:LYS:HA	4:B:166:VAL:HG23	2.00	0.43
4:B:220:LEU:C	4:B:222:GLU:N	2.70	0.43
4:B:233:ASN:ND2	4:B:239:GLN:CD	2.70	0.43
4:B:865:PRO:HA	7:B:3135:HOH:O	2.19	0.43
4:C:70:ALA:O	4:C:73:LEU:HB2	2.18	0.43
4:C:105:PHE:C	4:C:107:GLN:N	2.70	0.43
4:C:246:LEU:HD12	4:C:247:ALA:H	1.83	0.43
4:C:412:LYS:O	4:C:413:ALA:HB2	2.19	0.43
4:C:846:TYR:O	4:C:847:ASP:C	2.57	0.43
4:C:881:ALA:O	4:C:883:ALA:OXT	2.37	0.43
4:D:159:ALA:CB	4:D:163:LYS:HD3	2.49	0.43
4:D:419:ASN:HB3	4:D:420:MET:H	1.53	0.43
4:D:741:LYS:HA	4:D:742:PRO:HD3	1.79	0.43
4:D:744:GLN:NE2	4:D:756:ARG:H	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:8:DC:H2''	3:G:9:DC:OP2	2.19	0.43
4:A:57:ARG:HA	4:A:60:LYS:HB3	2.01	0.43
4:A:78:LEU:HD13	4:A:119:ILE:HG13	2.00	0.43
4:A:201:TRP:O	4:A:204:TRP:HB2	2.19	0.43
4:A:219:MET:O	4:A:222:GLU:HB3	2.19	0.43
4:A:525:GLY:O	4:A:526:LEU:C	2.57	0.43
4:A:615:ALA:O	4:A:618:GLY:N	2.51	0.43
4:A:630:THR:O	4:A:631:LYS:C	2.55	0.43
4:B:61:ALA:C	4:B:63:GLU:N	2.71	0.43
4:B:109:ILE:HD12	4:B:109:ILE:H	1.78	0.43
4:B:122:THR:HG22	4:B:226:MET:HE1	2.01	0.43
4:B:261:LEU:HD12	4:B:261:LEU:HA	1.81	0.43
4:B:421:ASP:OD1	4:B:424:GLY:N	2.50	0.43
4:B:437:ASN:O	4:B:441:LYS:HG2	2.19	0.43
4:B:455:GLU:HG2	4:B:822:ALA:HB2	2.00	0.43
4:B:724:ALA:HB2	4:B:738:GLU:HG3	2.00	0.43
4:C:67:ASN:C	4:C:69:ALA:N	2.69	0.43
4:C:120:LYS:HG3	4:C:752:LEU:CD1	2.46	0.43
4:C:289:ASN:HB2	7:C:3014:HOH:O	2.17	0.43
4:C:308:TYR:O	4:C:309:GLU:C	2.56	0.43
4:C:373:ALA:O	4:C:377:TRP:CD1	2.71	0.43
4:C:531:SER:O	4:C:817:ILE:HG22	2.18	0.43
4:C:548:ALA:O	4:C:550:LEU:N	2.52	0.43
4:D:126:LEU:HD13	4:D:246:LEU:HB2	2.00	0.43
4:A:14:ILE:CD1	4:A:14:ILE:H	2.32	0.43
4:A:159:ALA:HB3	4:A:163:LYS:HD3	2.01	0.43
4:A:223:SER:HA	7:A:3147:HOH:O	2.19	0.43
4:A:517:GLU:O	4:A:520:GLY:N	2.42	0.43
4:A:546:PHE:HA	4:A:549:MET:HG2	2.01	0.43
4:A:619:GLN:HA	4:A:622:ALA:HB3	2.01	0.43
4:B:14:ILE:O	4:B:14:ILE:HG22	2.19	0.43
4:B:56:GLU:OE1	4:B:57:ARG:N	2.52	0.43
4:B:141:ILE:O	4:B:145:ILE:HG12	2.19	0.43
4:B:158:GLU:HG2	4:B:195:LEU:CD2	2.47	0.43
4:B:520:GLY:HA3	4:B:528:TYR:CZ	2.54	0.43
4:B:596:THR:CG2	4:B:605:ILE:HG23	2.49	0.43
4:B:643:GLU:HB2	7:B:3053:HOH:O	2.19	0.43
4:B:726:HIS:CD2	4:B:736:TRP:CD1	3.06	0.43
4:C:9:ASN:HA	4:C:12:SER:CB	2.47	0.43
4:C:164:LYS:C	4:C:166:VAL:H	2.22	0.43
4:C:710:VAL:HG21	4:C:856:SER:OG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:727:TRP:CD1	4:C:782:PHE:CE1	3.06	0.43
4:D:164:LYS:NZ	7:D:3179:HOH:O	2.50	0.43
4:D:303:LYS:HE2	4:D:307:ARG:HH12	1.84	0.43
4:D:306:MET:O	4:D:309:GLU:HB2	2.19	0.43
4:A:617:ALA:C	4:A:621:LEU:HD12	2.40	0.42
4:A:631:LYS:HZ2	6:A:2000:APC:PA	2.41	0.42
4:A:742:PRO:HB3	4:A:744:GLN:OE1	2.19	0.42
4:A:840:ASP:O	4:A:841:VAL:C	2.56	0.42
4:B:6:ILE:HG23	4:B:10:ASP:CG	2.39	0.42
4:B:17:ALA:O	4:B:21:PHE:HE2	2.02	0.42
4:B:80:LYS:HD3	4:B:224:THR:HG23	1.99	0.42
4:B:110:LYS:CD	4:B:111:PRO:HD2	2.39	0.42
4:B:620:TRP:CE2	4:B:677:MET:HE2	2.54	0.42
4:B:623:TYR:HA	4:B:666:MET:HE2	2.00	0.42
4:B:744:GLN:HA	4:B:756:ARG:HD3	2.01	0.42
4:C:8:LYS:HB2	7:C:3187:HOH:O	2.18	0.42
4:C:786:GLN:O	4:C:789:SER:N	2.51	0.42
4:D:134:VAL:HB	4:D:244:ILE:HG12	2.01	0.42
4:D:340:VAL:HG11	4:D:497:LEU:HD11	2.01	0.42
4:D:352:ILE:HA	4:D:353:PRO:HD2	1.54	0.42
4:D:478:ARG:O	4:D:481:PHE:HB3	2.19	0.42
4:D:520:GLY:O	4:D:524:HIS:HB2	2.18	0.42
4:D:535:ALA:HA	4:D:814:PHE:O	2.19	0.42
4:A:24:LEU:O	4:A:25:ALA:C	2.56	0.42
4:A:89:PHE:O	4:A:93:LYS:HG3	2.19	0.42
4:A:246:LEU:HD23	4:A:251:ALA:HB2	2.01	0.42
4:A:266:PRO:HD2	4:A:292:ARG:NH1	2.34	0.42
4:A:610:LYS:O	4:A:611:LEU:O	2.37	0.42
4:A:640:GLY:O	4:A:641:SER:O	2.37	0.42
4:B:31:ARG:HB3	4:B:31:ARG:NH1	2.32	0.42
4:B:142:GLY:O	4:B:143:ARG:C	2.57	0.42
4:B:259:GLY:O	4:B:262:ALA:N	2.52	0.42
4:B:504:GLU:O	4:B:505:GLN:O	2.37	0.42
4:B:714:LYS:HD3	4:B:714:LYS:HA	1.77	0.42
4:B:798:ALA:O	4:B:802:TYR:O	2.38	0.42
4:B:864:LEU:O	4:B:865:PRO:O	2.36	0.42
4:C:632:ARG:NH1	6:C:2002:APC:C8	2.83	0.42
4:D:106:LEU:HD11	4:D:215:ARG:HG2	2.01	0.42
4:D:231:ARG:NH1	4:D:242:GLU:HB2	2.34	0.42
4:D:337:VAL:HG12	4:D:341:ILE:CD1	2.48	0.42
4:D:442:GLY:O	4:D:444:LEU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:677:MET:O	4:D:678:ALA:C	2.55	0.42
4:D:861:MET:HA	4:D:862:PRO:HD2	1.84	0.42
3:M:4:DG:C2	3:M:5:DA:C2	3.07	0.42
4:A:84:ARG:NH1	4:A:91:GLU:OE2	2.52	0.42
4:A:205:HIS:O	4:A:208:ASP:N	2.52	0.42
4:A:331:ASN:O	4:A:333:LYS:N	2.53	0.42
4:A:347:CYS:C	4:A:349:VAL:H	2.22	0.42
4:A:703:ALA:O	4:A:704:LYS:C	2.57	0.42
4:A:720:ARG:O	4:A:721:LYS:C	2.57	0.42
4:A:810:ILE:N	4:A:813:SER:O	2.46	0.42
4:B:150:ARG:C	4:B:152:GLY:N	2.70	0.42
4:B:152:GLY:C	4:B:154:ILE:N	2.72	0.42
4:B:301:SER:O	4:B:302:LYS:C	2.56	0.42
4:B:305:LEU:O	4:B:307:ARG:N	2.53	0.42
4:B:533:PRO:HA	4:B:816:THR:O	2.18	0.42
4:B:613:THR:HG21	7:B:3104:HOH:O	2.19	0.42
4:B:682:TRP:CD1	4:B:682:TRP:C	2.90	0.42
4:C:305:LEU:O	4:C:305:LEU:HD23	2.19	0.42
4:C:318:LYS:HE2	4:C:796:VAL:CG1	2.48	0.42
4:C:326:THR:O	4:C:415:TRP:HD1	1.99	0.42
4:C:428:ALA:H	4:C:435:GLN:HE22	1.66	0.42
4:C:699:LEU:O	4:C:778:ILE:HG12	2.19	0.42
4:D:68:ALA:HB3	4:D:261:LEU:HD21	2.01	0.42
4:D:125:CYS:O	4:D:128:SER:CB	2.62	0.42
4:D:334:VAL:HG12	4:D:443:LEU:HD22	2.01	0.42
4:D:474:PRO:HA	4:D:880:PHE:CE1	2.54	0.42
4:A:308:TYR:OH	4:A:733:PHE:HE2	2.02	0.42
4:A:675:GLY:O	4:A:678:ALA:HB3	2.18	0.42
4:A:793:LYS:HB3	4:A:831:THR:OG1	2.19	0.42
4:A:801:LYS:HD3	4:A:802:TYR:CD2	2.54	0.42
4:B:19:ILE:HG23	4:B:20:PRO:N	2.34	0.42
4:B:36:GLN:O	4:B:39:LEU:N	2.45	0.42
4:B:51:PHE:CE2	4:B:55:PHE:CD1	3.03	0.42
4:B:144:ALA:O	4:B:147:ASP:N	2.53	0.42
4:B:511:PHE:O	4:B:514:PHE:HB3	2.19	0.42
4:B:749:LEU:HD12	4:B:750:MET:HG3	2.01	0.42
4:C:36:GLN:NE2	4:C:273:VAL:HG22	2.34	0.42
4:C:162:PHE:CE2	4:C:165:ASN:HB2	2.54	0.42
4:C:462:ILE:HG12	4:C:479:ILE:HD11	2.02	0.42
4:C:512:LEU:O	4:C:516:PHE:CD1	2.71	0.42
4:C:693:VAL:HG12	4:C:694:GLU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:89:PHE:CD2	4:D:107:GLN:OE1	2.73	0.42
4:D:147:ASP:HB3	4:D:750:MET:HE2	2.01	0.42
4:D:207:GLU:O	4:D:211:HIS:CD2	2.73	0.42
4:D:247:ALA:HA	4:D:248:PRO:HD3	1.80	0.42
4:D:486:HIS:HA	4:D:489:ILE:CD1	2.40	0.42
4:D:579:ASN:ND2	4:D:625:VAL:HG12	2.35	0.42
3:G:3:DC:C4	3:G:4:DG:N7	2.88	0.42
1:H:14:DG:H2'	1:H:15:DC:C5	2.55	0.42
4:A:226:MET:HG3	4:A:250:TYR:HD1	1.83	0.42
4:A:236:VAL:HG11	4:A:239:GLN:OE1	2.19	0.42
4:A:276:LYS:HB2	4:A:287:TRP:CD2	2.54	0.42
4:A:395:ARG:O	4:A:399:GLU:CG	2.68	0.42
4:A:704:LYS:O	4:A:707:ALA:N	2.47	0.42
4:A:830:GLU:O	4:A:832:MET:N	2.51	0.42
4:C:41:HIS:CD2	4:C:41:HIS:C	2.92	0.42
4:C:205:HIS:HB3	4:C:208:ASP:OD2	2.18	0.42
4:C:650:VAL:HG11	4:C:674:ALA:HA	2.00	0.42
4:C:698:TRP:O	4:C:701:SER:N	2.53	0.42
4:C:714:LYS:HD3	4:C:714:LYS:HA	1.74	0.42
4:C:799:HIS:HA	4:C:804:ILE:O	2.20	0.42
4:D:64:VAL:HG21	4:D:127:THR:HG21	2.01	0.42
4:D:116:TYR:CZ	4:D:752:LEU:HD22	2.54	0.42
4:D:122:THR:O	4:D:125:CYS:HB2	2.19	0.42
4:D:303:LYS:HE2	4:D:307:ARG:NH1	2.34	0.42
4:D:326:THR:C	4:D:415:TRP:HD1	2.22	0.42
4:D:727:TRP:CE2	4:D:735:VAL:CG1	3.03	0.42
4:A:88:TRP:HA	4:A:91:GLU:CD	2.40	0.42
4:A:163:LYS:HD2	4:A:163:LYS:HA	1.93	0.42
4:A:166:VAL:HG12	4:A:170:LEU:HD12	2.01	0.42
4:A:333:LYS:CB	4:A:516:PHE:CE2	3.03	0.42
4:A:333:LYS:HE3	4:A:516:PHE:HB3	2.01	0.42
4:A:556:GLY:CA	4:A:561:LEU:HB2	2.49	0.42
4:A:722:ARG:CB	4:A:769:ILE:HD13	2.19	0.42
4:A:832:MET:O	4:A:834:ASP:N	2.53	0.42
4:B:39:LEU:O	4:B:40:GLU:C	2.57	0.42
4:B:264:ILE:CG2	4:B:292:ARG:HB2	2.39	0.42
4:B:305:LEU:O	4:B:306:MET:C	2.57	0.42
4:B:381:ALA:C	4:B:383:ALA:N	2.71	0.42
4:B:518:TYR:CE1	4:B:522:GLN:NE2	2.88	0.42
4:B:690:VAL:O	4:B:691:ALA:C	2.58	0.42
4:C:286:TYR:CE2	4:C:417:PRO:HG3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:322:ILE:HA	4:C:322:ILE:HD13	1.74	0.42
4:C:329:LYS:HD2	4:C:447:ALA:HA	2.02	0.42
4:C:556:GLY:C	4:C:561:LEU:HB2	2.40	0.42
4:C:833:VAL:HG11	4:C:873:ARG:HD3	2.01	0.42
4:C:834:ASP:O	4:C:837:GLU:N	2.44	0.42
4:D:113:ALA:O	4:D:114:VAL:C	2.57	0.42
4:D:257:ARG:NH1	4:D:261:LEU:HD13	2.34	0.42
4:D:384:VAL:O	4:D:384:VAL:HG12	2.19	0.42
4:D:425:ARG:HB3	4:D:427:TYR:CE1	2.49	0.42
4:D:579:ASN:OD1	4:D:625:VAL:HB	2.18	0.42
4:D:631:LYS:CD	4:D:635:MET:SD	3.08	0.42
4:D:794:THR:CB	4:D:831:THR:HG21	2.47	0.42
4:D:836:TYR:N	4:D:836:TYR:HD2	2.16	0.42
4:A:121:THR:OG1	4:A:751:PHE:HE1	2.02	0.42
4:A:215:ARG:O	4:A:219:MET:HG3	2.20	0.42
4:A:348:PRO:C	4:A:349:VAL:HG23	2.37	0.42
4:A:407:LYS:HB2	4:A:407:LYS:HE3	1.85	0.42
4:A:457:TYR:CD2	4:A:457:TYR:C	2.93	0.42
4:A:471:ASP:OD1	4:A:471:ASP:C	2.55	0.42
4:A:488:ASN:O	4:A:491:ALA:CB	2.67	0.42
4:A:510:CYS:O	4:A:512:LEU:N	2.53	0.42
4:A:543:ILE:O	4:A:544:GLN:O	2.37	0.42
4:A:656:GLN:C	4:A:658:ALA:H	2.22	0.42
4:A:779:ALA:HB3	4:A:780:PRO:HD3	2.02	0.42
4:B:208:ASP:N	4:B:208:ASP:OD2	2.53	0.42
4:B:432:PHE:O	4:B:432:PHE:HD2	2.01	0.42
4:B:545:HIS:HE1	4:B:787:ASP:HA	1.84	0.42
4:B:567:VAL:CG1	4:B:880:PHE:CG	3.01	0.42
4:B:581:ILE:O	4:B:584:ALA:HB3	2.20	0.42
4:B:643:GLU:O	4:B:644:PHE:C	2.56	0.42
4:B:793:LYS:CG	7:B:3181:HOH:O	2.66	0.42
4:B:804:ILE:HG21	4:B:807:PHE:CE2	2.54	0.42
4:B:840:ASP:HB3	4:B:843:ALA:HB3	2.02	0.42
4:C:132:THR:HG21	4:C:244:ILE:O	2.20	0.42
4:C:161:HIS:O	4:C:162:PHE:C	2.58	0.42
4:C:247:ALA:HA	4:C:248:PRO:HD3	1.89	0.42
4:C:257:ARG:HG2	4:C:257:ARG:NH1	2.34	0.42
4:C:631:LYS:NZ	6:C:2002:APC:C3A	2.47	0.42
4:C:756:ARG:HG3	7:C:3143:HOH:O	2.20	0.42
4:D:166:VAL:HG11	4:D:183:MET:CE	2.50	0.42
4:D:239:GLN:O	4:D:241:SER:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:396:ILE:HD13	4:D:396:ILE:HA	1.84	0.42
4:D:473:VAL:N	4:D:567:VAL:CG2	2.79	0.42
4:D:631:LYS:HE2	4:D:635:MET:CE	2.50	0.42
4:D:643:GLU:HB2	4:D:682:TRP:CD1	2.54	0.42
4:D:712:ASP:O	4:D:716:GLY:N	2.46	0.42
4:D:728:VAL:HG22	4:D:734:PRO:HA	2.01	0.42
4:D:745:THR:O	4:D:746:ARG:HG3	2.20	0.42
2:L:3:G:H5''	4:C:172:LYS:CD	2.50	0.42
1:N:12:DT:H5'	4:D:781:ASN:ND2	2.34	0.42
4:A:13:ASP:OD2	4:A:291:ARG:NH2	2.50	0.42
4:A:19:ILE:O	4:A:21:PHE:N	2.49	0.42
4:A:65:ALA:HB3	4:A:120:LYS:CD	2.49	0.42
4:A:281:ILE:HG23	4:A:305:LEU:HD11	2.01	0.42
4:A:308:TYR:C	4:A:311:VAL:HG23	2.37	0.42
4:A:668:THR:CG2	4:A:669:GLN:HE22	2.32	0.42
4:A:686:SER:HA	4:A:693:VAL:HG21	2.01	0.42
4:B:19:ILE:CG2	4:B:20:PRO:N	2.83	0.42
4:B:205:HIS:C	4:B:207:GLU:N	2.72	0.42
4:B:530:CYS:SG	4:B:818:PRO:HG2	2.60	0.42
4:B:661:SER:CB	7:B:3192:HOH:O	2.68	0.42
4:B:709:GLU:O	4:B:709:GLU:HG2	2.20	0.42
4:B:726:HIS:CD2	4:B:736:TRP:CG	3.08	0.42
4:C:42:GLU:HG2	4:C:46:MET:CE	2.49	0.42
4:C:109:ILE:HD13	4:C:145:ILE:HG22	2.01	0.42
4:C:191:LEU:O	4:C:196:LEU:HD22	2.20	0.42
4:C:322:ILE:CG1	7:C:3131:HOH:O	2.59	0.42
4:C:330:ILE:HA	4:C:330:ILE:HD13	1.74	0.42
4:D:36:GLN:CA	4:D:36:GLN:HE21	2.28	0.42
4:D:133:THR:HA	4:D:243:THR:CG2	2.48	0.42
4:D:161:HIS:CE1	7:D:3114:HOH:O	2.64	0.42
4:D:339:ASN:O	4:D:343:LYS:HD3	2.20	0.42
4:D:632:ARG:HH22	6:D:2003:APC:H5'1	1.85	0.42
1:H:11:DA:N3	4:B:784:HIS:HE1	2.17	0.42
4:A:254:ILE:HG22	4:A:255:ALA:N	2.34	0.42
4:A:333:LYS:O	4:A:334:VAL:C	2.58	0.42
4:A:505:GLN:O	4:A:508:PRO:HD3	2.19	0.42
4:B:11:PHE:C	4:B:13:ASP:N	2.73	0.42
4:B:19:ILE:HG22	4:B:21:PHE:HB3	2.01	0.42
4:B:19:ILE:HD12	4:B:20:PRO:HD2	2.00	0.42
4:B:280:GLY:HA2	4:B:317:TYR:OH	2.20	0.42
4:B:308:TYR:CE2	4:B:734:PRO:O	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:347:CYS:HB3	4:B:350:GLU:HG2	2.00	0.42
4:C:63:GLU:O	4:C:66:ASP:HB2	2.20	0.42
4:C:101:THR:HG23	4:C:104:GLN:HE22	1.84	0.42
4:C:216:CYS:O	4:C:217:ILE:C	2.57	0.42
4:C:303:LYS:NZ	4:C:303:LYS:HB3	2.35	0.42
4:C:571:TYR:HD1	4:C:634:VAL:CG1	2.33	0.42
4:C:713:LYS:HD2	4:C:713:LYS:HA	1.83	0.42
4:C:789:SER:O	4:C:793:LYS:HG3	2.19	0.42
4:C:845:PHE:O	4:C:846:TYR:C	2.58	0.42
4:D:423:ARG:NH2	4:D:784:HIS:ND1	2.67	0.42
4:D:809:LEU:HA	4:D:813:SER:O	2.19	0.42
4:D:854:HIS:HD2	4:D:856:SER:H	1.55	0.42
4:A:71:LYS:N	4:A:72:PRO:CD	2.82	0.42
4:A:100:PRO:HG2	4:A:103:PHE:CB	2.46	0.42
4:A:254:ILE:O	4:A:255:ALA:C	2.58	0.42
4:A:292:ARG:O	4:A:292:ARG:CG	2.63	0.42
4:A:481:PHE:O	4:A:482:ILE:C	2.54	0.42
4:A:489:ILE:O	4:A:490:MET:C	2.56	0.42
4:A:553:GLU:OE1	4:A:553:GLU:N	2.53	0.42
4:A:801:LYS:CD	4:A:802:TYR:CD2	3.02	0.42
4:B:6:ILE:O	4:B:8:LYS:N	2.44	0.42
4:B:158:GLU:HA	4:B:195:LEU:HD22	2.01	0.42
4:B:170:LEU:HD22	4:B:179:LYS:HG2	2.01	0.42
4:B:247:ALA:HB3	4:B:250:TYR:CD1	2.55	0.42
4:B:339:ASN:O	4:B:343:LYS:HD3	2.15	0.42
4:B:352:ILE:HA	4:B:353:PRO:HD2	1.69	0.42
4:B:561:LEU:N	4:B:561:LEU:HD12	2.35	0.42
4:C:260:ALA:O	4:C:261:LEU:C	2.59	0.42
4:C:329:LYS:HD3	4:C:446:LEU:O	2.20	0.42
4:C:553:GLU:CD	4:C:553:GLU:N	2.71	0.42
4:D:281:ILE:HG22	4:D:282:THR:CG2	2.42	0.42
1:N:11:DA:H4'	4:D:780:PRO:HG3	2.00	0.41
3:P:7:DT:H2''	3:P:8:DC:OP2	2.21	0.41
4:A:21:PHE:C	4:A:23:THR:H	2.23	0.41
4:A:108:GLU:CG	7:A:3115:HOH:O	2.63	0.41
4:A:291:ARG:CB	7:A:3193:HOH:O	2.56	0.41
4:A:291:ARG:CG	7:A:3193:HOH:O	2.67	0.41
4:A:330:ILE:HG21	4:A:409:ALA:HA	2.02	0.41
4:A:659:ILE:HG22	4:A:660:ASP:N	2.35	0.41
4:A:864:LEU:HD12	4:A:864:LEU:H	1.84	0.41
4:B:179:LYS:O	4:B:750:MET:SD	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:247:ALA:CB	4:B:250:TYR:HD1	2.33	0.41
4:B:416:PHE:CD2	4:B:416:PHE:N	2.88	0.41
4:B:578:VAL:HG21	4:B:681:ILE:HD12	2.01	0.41
4:C:9:ASN:C	4:C:12:SER:HB3	2.40	0.41
4:C:292:ARG:N	4:C:293:PRO:CD	2.82	0.41
4:C:385:TYR:O	4:C:386:ARG:C	2.56	0.41
4:C:402:LEU:HG	4:C:439:MET:CE	2.50	0.41
4:C:473:VAL:HA	4:C:474:PRO:HD2	1.90	0.41
4:C:610:LYS:HD2	7:C:3085:HOH:O	2.19	0.41
4:C:619:GLN:O	4:C:666:MET:HG3	2.20	0.41
4:C:870:LEU:HD23	4:C:871:ASN:N	2.35	0.41
4:D:32:LEU:HD12	4:D:32:LEU:N	2.12	0.41
4:D:161:HIS:O	4:D:163:LYS:N	2.53	0.41
4:D:264:ILE:HG22	4:D:264:ILE:O	2.19	0.41
4:D:459:TRP:O	4:D:460:LEU:C	2.56	0.41
1:K:14:DG:C4	1:K:15:DC:C5	3.08	0.41
4:A:244:ILE:HG22	4:A:245:GLU:N	2.34	0.41
4:A:348:PRO:HB2	4:A:349:VAL:HG23	2.03	0.41
4:A:401:MET:O	4:A:404:GLN:N	2.53	0.41
4:A:421:ASP:OD2	4:A:427:TYR:CE1	2.71	0.41
4:A:693:VAL:HG12	4:A:694:GLU:N	2.35	0.41
4:B:6:ILE:O	4:B:10:ASP:HB3	2.19	0.41
4:B:155:ARG:NH2	4:B:749:LEU:HB2	2.34	0.41
4:B:472:LYS:C	4:B:567:VAL:HG21	2.40	0.41
4:B:537:ASP:N	4:B:882:PHE:CD2	2.73	0.41
4:B:541:SER:O	4:B:542:GLY:O	2.38	0.41
4:B:650:VAL:O	4:B:654:THR:HG23	2.20	0.41
4:B:773:LYS:HE3	7:B:3124:HOH:O	2.19	0.41
4:B:864:LEU:HA	4:B:865:PRO:HD2	1.72	0.41
4:C:261:LEU:O	4:C:263:GLY:N	2.52	0.41
4:C:420:MET:SD	4:C:733:PHE:CE1	3.13	0.41
4:C:437:ASN:ND2	4:C:440:THR:CB	2.83	0.41
4:C:635:MET:HG3	6:C:2002:APC:N7	2.36	0.41
4:C:850:ALA:C	4:C:852:GLN:N	2.72	0.41
4:D:291:ARG:O	4:D:292:ARG:HB2	2.20	0.41
1:H:13:DC:O4'	4:B:427:TYR:CE2	2.53	0.41
1:K:3:DG:C2	1:K:4:DA:C2	3.08	0.41
4:A:40:GLU:HG2	4:A:286:TYR:CD1	2.49	0.41
4:A:454:LYS:H	4:A:526:LEU:HD23	1.81	0.41
4:A:482:ILE:O	4:A:482:ILE:HG22	2.20	0.41
4:A:706:LEU:HD11	4:A:849:PHE:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:115:ALA:O	4:B:119:ILE:HG12	2.21	0.41
4:B:345:LYS:HB3	4:B:345:LYS:HE2	1.68	0.41
4:B:381:ALA:O	4:B:383:ALA:N	2.53	0.41
4:B:537:ASP:O	4:B:882:PHE:CD2	2.72	0.41
4:B:587:ILE:HD13	4:B:587:ILE:HA	1.83	0.41
4:B:655:ILE:HG12	4:B:667:PHE:CE1	2.55	0.41
4:B:738:GLU:HG2	4:B:738:GLU:O	2.20	0.41
4:C:55:PHE:CE2	4:C:59:LEU:HD21	2.55	0.41
4:C:58:GLN:HA	4:C:58:GLN:NE2	2.35	0.41
4:C:423:ARG:HD2	4:C:781:ASN:HD22	1.81	0.41
4:C:448:LYS:CG	4:C:806:SER:OG	2.69	0.41
4:C:461:LYS:O	4:C:463:HIS:N	2.53	0.41
4:C:727:TRP:CD2	4:C:735:VAL:HG13	2.55	0.41
4:C:738:GLU:CA	4:C:774:GLN:HE22	2.28	0.41
4:D:116:TYR:HE2	4:D:752:LEU:HD22	1.86	0.41
4:D:570:ILE:HG23	4:D:571:TYR:N	2.35	0.41
4:D:733:PHE:HA	4:D:734:PRO:HD2	1.93	0.41
1:K:14:DG:H2'	1:K:15:DC:C6	2.56	0.41
2:L:7:A:H2'	2:L:8:U:H6	1.85	0.41
4:A:261:LEU:C	4:A:263:GLY:N	2.72	0.41
4:A:314:PRO:CD	4:A:315:GLU:H	2.33	0.41
4:A:462:ILE:CD1	4:A:475:PHE:CD1	3.03	0.41
4:A:475:PHE:HD2	4:A:475:PHE:H	1.68	0.41
4:A:668:THR:O	4:A:670:PRO:HD3	2.20	0.41
4:B:250:TYR:O	4:B:251:ALA:C	2.59	0.41
4:B:464:GLY:HA3	4:B:514:PHE:CZ	2.55	0.41
4:B:592:ASN:O	4:B:593:GLU:HB2	2.20	0.41
4:B:617:ALA:O	4:B:621:LEU:HD12	2.19	0.41
4:B:745:THR:O	4:B:746:ARG:HB2	2.20	0.41
4:B:793:LYS:HE2	4:B:835:THR:OG1	2.20	0.41
4:B:881:ALA:O	4:B:883:ALA:N	2.52	0.41
4:C:278:TRP:HB2	4:C:321:ASN:OD1	2.20	0.41
4:C:330:ILE:HG13	4:C:409:ALA:HA	2.00	0.41
4:C:788:GLY:C	4:C:792:ARG:HH12	2.24	0.41
4:D:19:ILE:CG2	4:D:20:PRO:N	2.84	0.41
4:D:19:ILE:HD13	4:D:19:ILE:HA	1.95	0.41
4:D:146:GLU:HG3	4:D:204:TRP:CE2	2.55	0.41
4:D:191:LEU:HD23	4:D:195:LEU:O	2.21	0.41
4:D:261:LEU:C	4:D:263:GLY:H	2.23	0.41
4:D:717:GLU:HA	7:D:3025:HOH:O	2.20	0.41
4:D:734:PRO:O	4:D:734:PRO:CG	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:735:VAL:HG23	4:D:736:TRP:N	2.35	0.41
4:A:31:ARG:NH2	4:A:32:LEU:HD11	2.34	0.41
4:A:59:LEU:HD23	4:A:64:VAL:HG21	1.99	0.41
4:A:689:VAL:C	4:A:691:ALA:N	2.72	0.41
4:A:743:ILE:HA	7:A:3130:HOH:O	2.19	0.41
4:A:873:ARG:O	4:A:876:LEU:HD12	2.20	0.41
4:B:111:PRO:HG2	4:B:112:GLU:H	1.86	0.41
4:B:451:PRO:O	4:B:452:ILE:C	2.58	0.41
4:B:569:ASP:CG	4:B:569:ASP:O	2.58	0.41
4:B:589:GLY:O	4:B:614:LYS:HD2	2.20	0.41
4:C:329:LYS:CG	4:C:445:THR:HG23	2.50	0.41
4:C:452:ILE:HG13	4:C:456:GLY:CA	2.50	0.41
4:C:620:TRP:NE1	4:C:677:MET:HB2	2.36	0.41
4:C:827:ALA:O	4:C:828:VAL:C	2.54	0.41
4:D:455:GLU:OE1	4:D:455:GLU:HA	2.19	0.41
4:D:642:LYS:HB3	4:D:682:TRP:CH2	2.56	0.41
4:D:724:ALA:HA	4:D:774:GLN:NE2	2.35	0.41
4:D:778:ILE:CG2	4:D:779:ALA:H	2.30	0.41
4:A:112:GLU:CD	4:A:112:GLU:N	2.74	0.41
4:A:454:LYS:HA	4:A:526:LEU:HD21	2.01	0.41
4:A:588:ASN:N	4:A:588:ASN:HD22	2.19	0.41
4:A:632:ARG:O	4:A:636:THR:HG23	2.20	0.41
4:B:329:LYS:O	4:B:329:LYS:HG3	2.20	0.41
4:B:612:GLY:O	4:B:613:THR:C	2.58	0.41
4:B:615:ALA:O	4:B:616:LEU:C	2.58	0.41
4:B:771:ALA:O	4:B:772:HIS:C	2.57	0.41
4:B:845:PHE:CD1	4:B:845:PHE:O	2.73	0.41
4:C:135:GLN:OE1	4:C:210:ILE:HG21	2.21	0.41
4:C:137:VAL:O	4:C:141:ILE:HG13	2.20	0.41
4:C:158:GLU:HA	4:C:195:LEU:CD1	2.43	0.41
4:C:176:HIS:O	4:C:179:LYS:HB2	2.20	0.41
4:C:336:ALA:O	4:C:337:VAL:O	2.38	0.41
4:C:337:VAL:HG21	4:C:512:LEU:CD2	2.45	0.41
4:C:416:PHE:HA	4:C:417:PRO:HD2	1.99	0.41
4:C:486:HIS:O	4:C:489:ILE:HB	2.20	0.41
4:C:534:LEU:HD12	4:C:818:PRO:HA	2.03	0.41
4:C:543:ILE:O	4:C:544:GLN:O	2.39	0.41
4:C:557:ARG:HB3	4:C:557:ARG:NH1	2.33	0.41
4:C:559:VAL:O	4:C:560:ASN:HB2	2.21	0.41
4:D:125:CYS:HB3	4:D:137:VAL:HG22	2.02	0.41
4:D:133:THR:C	4:D:135:GLN:H	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:420:MET:HG2	4:D:425:ARG:O	2.20	0.41
4:D:646:PHE:HD1	4:D:649:GLN:OE1	2.03	0.41
4:D:829:ARG:HH11	4:D:829:ARG:CG	2.25	0.41
1:K:6:DT:H2''	1:K:7:DC:OP2	2.20	0.41
1:N:9:DA:N6	3:P:1:DG:N2	2.68	0.41
4:A:14:ILE:HG23	4:A:288:ALA:HB1	2.02	0.41
4:A:78:LEU:HD12	4:A:78:LEU:HA	1.83	0.41
4:A:384:VAL:HG12	4:A:384:VAL:O	2.20	0.41
4:A:544:GLN:O	4:A:547:SER:N	2.54	0.41
4:A:825:PHE:HE1	4:A:829:ARG:CZ	2.26	0.41
4:B:114:VAL:HG13	4:B:145:ILE:HD12	2.03	0.41
4:B:233:ASN:HB2	4:B:239:GLN:O	2.21	0.41
4:B:474:PRO:HA	4:B:880:PHE:CE1	2.56	0.41
4:B:475:PHE:C	4:B:477:GLU:N	2.74	0.41
4:B:477:GLU:O	4:B:480:LYS:HB3	2.20	0.41
4:B:505:GLN:NE2	4:B:505:GLN:CA	2.79	0.41
4:B:817:ILE:HG13	4:B:820:ASP:HB2	2.02	0.41
4:C:446:LEU:CD1	4:C:817:ILE:HG23	2.50	0.41
4:C:556:GLY:O	4:C:561:LEU:HB2	2.21	0.41
4:C:557:ARG:O	4:C:557:ARG:HG2	2.19	0.41
4:D:21:PHE:O	4:D:21:PHE:HD1	2.03	0.41
4:D:92:VAL:HG11	4:D:103:PHE:CD1	2.54	0.41
4:D:254:ILE:HG13	4:D:254:ILE:H	1.70	0.41
4:D:304:ALA:HA	4:D:307:ARG:HG3	2.03	0.41
4:D:416:PHE:HA	4:D:417:PRO:HD2	1.80	0.41
4:D:440:THR:C	4:D:442:GLY:N	2.74	0.41
4:D:732:GLY:O	4:D:734:PRO:HD3	2.19	0.41
4:D:744:GLN:CG	4:D:756:ARG:HB3	2.46	0.41
4:D:828:VAL:CB	4:D:883:ALA:HA	2.40	0.41
1:N:17:DG:P	4:D:57:ARG:HH12	2.44	0.41
4:A:257:ARG:CD	4:A:261:LEU:HD13	2.49	0.41
4:A:290:GLY:C	4:A:292:ARG:H	2.24	0.41
4:A:457:TYR:CD1	4:A:521:VAL:HG11	2.55	0.41
4:A:511:PHE:CD2	4:A:511:PHE:C	2.93	0.41
4:A:635:MET:CE	6:A:2000:APC:H2'	2.51	0.41
4:A:709:GLU:HB2	4:A:722:ARG:NE	2.35	0.41
4:A:792:ARG:HH11	4:A:792:ARG:CG	2.30	0.41
4:B:57:ARG:O	4:B:60:LYS:HB3	2.21	0.41
4:B:268:PHE:CD1	4:B:286:TYR:CE2	3.09	0.41
4:B:323:ALA:HB1	4:B:809:LEU:HD11	2.02	0.41
4:B:461:LYS:HD3	4:B:483:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:633:SER:O	4:B:634:VAL:C	2.54	0.41
4:B:676:TYR:CD1	4:B:680:LEU:HD11	2.56	0.41
4:B:730:PRO:HD3	7:B:3081:HOH:O	2.21	0.41
4:C:272:VAL:HG13	4:C:411:HIS:CD2	2.55	0.41
4:C:297:VAL:CG2	4:C:733:PHE:HZ	2.34	0.41
4:C:322:ILE:O	4:C:323:ALA:C	2.59	0.41
4:C:393:SER:C	4:C:395:ARG:H	2.24	0.41
4:C:619:GLN:NE2	4:C:668:THR:H	2.19	0.41
4:C:711:LYS:HG3	4:C:718:ILE:HA	2.03	0.41
4:D:282:THR:OG1	4:D:283:GLY:N	2.52	0.41
4:D:439:MET:HE3	4:D:443:LEU:HD11	2.02	0.41
4:D:678:ALA:O	4:D:679:LYS:C	2.59	0.41
4:D:702:ALA:O	4:D:704:LYS:N	2.54	0.41
1:K:12:DT:O4'	4:C:423:ARG:NH2	2.54	0.41
4:A:110:LYS:O	4:A:114:VAL:HG23	2.21	0.41
4:A:308:TYR:HH	4:A:733:PHE:HE2	1.68	0.41
4:A:374:LEU:C	4:A:376:ALA:N	2.74	0.41
4:A:437:ASN:O	4:A:438:ASP:O	2.39	0.41
4:A:514:PHE:O	4:A:517:GLU:N	2.45	0.41
4:A:559:VAL:CG1	7:A:3104:HOH:O	2.68	0.41
4:A:630:THR:CA	7:A:3199:HOH:O	2.62	0.41
4:A:678:ALA:O	4:A:679:LYS:C	2.59	0.41
4:A:701:SER:O	4:A:702:ALA:C	2.59	0.41
4:A:715:THR:HG21	4:A:717:GLU:OE2	2.21	0.41
4:A:794:THR:HG21	4:A:828:VAL:HG13	2.02	0.41
4:B:105:PHE:CE1	4:B:208:ASP:HB3	2.55	0.41
4:B:335:LEU:HG	4:B:339:ASN:ND2	2.36	0.41
4:B:569:ASP:OD1	4:B:572:GLY:N	2.50	0.41
4:B:581:ILE:O	4:B:584:ALA:N	2.50	0.41
4:B:619:GLN:HE22	4:B:668:THR:H	1.68	0.41
4:B:636:THR:O	4:B:637:LEU:C	2.59	0.41
4:B:673:ALA:O	4:B:676:TYR:HB3	2.20	0.41
4:B:700:LYS:HE3	4:B:775:GLU:HG2	2.03	0.41
4:B:705:LEU:C	4:B:707:ALA:N	2.75	0.41
4:B:805:GLU:HB2	7:B:3030:HOH:O	2.21	0.41
4:C:36:GLN:NE2	4:C:271:CYS:HB3	2.35	0.41
4:C:78:LEU:HD11	4:C:115:ALA:CB	2.51	0.41
4:C:199:GLU:HG2	4:C:201:TRP:CD1	2.55	0.41
4:C:269:GLN:O	4:C:430:SER:CB	2.65	0.41
4:C:301:SER:O	4:C:302:LYS:C	2.59	0.41
4:C:308:TYR:CE2	4:C:736:TRP:HZ3	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:385:TYR:O	4:C:388:ASP:N	2.54	0.41
4:C:395:ARG:O	4:C:396:ILE:C	2.58	0.41
4:C:445:THR:OG1	4:C:532:LEU:HA	2.21	0.41
4:C:576:LYS:HB3	7:C:3018:HOH:O	2.19	0.41
4:C:617:ALA:O	4:C:618:GLY:C	2.58	0.41
4:C:632:ARG:CZ	6:C:2002:APC:N7	2.84	0.41
4:C:696:MET:HG2	4:C:779:ALA:HB1	2.02	0.41
4:C:698:TRP:HE3	4:C:699:LEU:HG	1.85	0.41
4:C:699:LEU:HD22	4:C:782:PHE:CG	2.56	0.41
4:C:702:ALA:O	4:C:703:ALA:C	2.56	0.41
4:C:729:THR:OG1	4:C:733:PHE:HB3	2.21	0.41
4:D:6:ILE:HB	4:D:11:PHE:CE2	2.55	0.41
4:D:12:SER:O	4:D:13:ASP:C	2.59	0.41
4:D:150:ARG:HH21	4:D:187:GLU:CD	2.22	0.41
4:D:323:ALA:O	4:D:324:GLN:C	2.55	0.41
4:D:400:PHE:O	4:D:404:GLN:HB2	2.21	0.41
4:D:457:TYR:HH	4:D:518:TYR:HE2	1.67	0.41
4:D:570:ILE:O	4:D:573:ILE:HG22	2.20	0.41
4:D:582:LEU:CD2	4:D:620:TRP:HB2	2.49	0.41
4:D:840:ASP:C	4:D:842:LEU:H	2.23	0.41
4:D:843:ALA:HB2	4:D:864:LEU:HD21	2.03	0.41
1:E:12:DT:C2'	1:E:13:DC:H6	2.33	0.41
4:A:103:PHE:CE2	7:A:3227:HOH:O	2.57	0.41
4:A:199:GLU:O	4:A:201:TRP:N	2.44	0.41
4:A:341:ILE:O	4:A:342:THR:C	2.58	0.41
4:A:505:GLN:C	4:A:507:SER:N	2.71	0.41
4:A:705:LEU:O	4:A:708:ALA:HB3	2.21	0.41
4:A:727:TRP:O	4:A:734:PRO:HA	2.21	0.41
4:A:734:PRO:O	4:A:734:PRO:CG	2.68	0.41
4:A:825:PHE:C	4:A:825:PHE:HD1	2.22	0.41
4:B:634:VAL:O	4:B:634:VAL:CG2	2.69	0.41
4:B:678:ALA:O	4:B:681:ILE:N	2.54	0.41
4:C:3:THR:HG23	4:C:258:ALA:HB3	2.02	0.41
4:C:11:PHE:CE1	4:C:44:TYR:HB3	2.56	0.41
4:C:106:LEU:HG	4:C:212:VAL:CG1	2.51	0.41
4:C:397:SER:O	4:C:400:PHE:N	2.44	0.41
4:C:421:ASP:O	4:C:424:GLY:N	2.48	0.41
4:C:452:ILE:HG13	4:C:456:GLY:C	2.41	0.41
4:C:733:PHE:HB2	4:C:792:ARG:HH21	1.86	0.41
4:D:36:GLN:HG2	4:D:272:VAL:HB	2.02	0.41
4:D:77:LEU:HD21	4:D:226:MET:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:133:THR:HG22	4:D:243:THR:HG22	2.03	0.41
4:D:201:TRP:HA	4:D:204:TRP:CD1	2.51	0.41
4:D:402:LEU:HD23	4:D:402:LEU:HA	1.59	0.41
4:D:448:LYS:HD2	4:D:806:SER:HB3	2.03	0.41
4:D:482:ILE:HD12	4:D:514:PHE:CZ	2.55	0.41
4:D:563:PRO:HB3	4:D:877:GLU:C	2.42	0.41
4:D:619:GLN:CG	4:D:666:MET:O	2.68	0.41
4:D:698:TRP:CZ3	4:D:699:LEU:HD23	2.56	0.41
4:D:827:ALA:O	4:D:828:VAL:C	2.59	0.41
2:I:4:G:H4'	4:B:389:LYS:HE3	2.03	0.40
1:K:12:DT:H4'	4:C:423:ARG:NH1	2.36	0.40
1:N:15:DC:N3	1:N:16:DC:C5	2.89	0.40
4:A:19:ILE:CG2	4:A:20:PRO:N	2.84	0.40
4:A:646:PHE:N	4:A:646:PHE:CD1	2.88	0.40
4:A:658:ALA:O	4:A:661:SER:HB2	2.21	0.40
4:A:741:LYS:HE2	4:A:741:LYS:HB3	1.82	0.40
4:B:150:ARG:C	4:B:152:GLY:H	2.23	0.40
4:B:341:ILE:N	4:B:341:ILE:HD12	2.36	0.40
4:B:502:TRP:CE3	4:B:512:LEU:HD22	2.56	0.40
4:B:645:GLY:O	4:B:646:PHE:C	2.59	0.40
4:B:646:PHE:O	4:B:647:ARG:O	2.39	0.40
4:B:797:TRP:CH2	4:B:801:LYS:HG3	2.56	0.40
4:C:834:ASP:O	4:C:837:GLU:HB2	2.21	0.40
4:D:347:CYS:HB3	4:D:350:GLU:CG	2.50	0.40
4:D:349:VAL:HG13	4:D:503:ALA:HB1	2.03	0.40
4:D:417:PRO:C	4:D:429:VAL:HG23	2.40	0.40
4:D:437:ASN:ND2	4:D:437:ASN:C	2.75	0.40
4:D:588:ASN:HB3	4:D:589:GLY:H	1.65	0.40
4:D:642:LYS:O	4:D:646:PHE:CD2	2.74	0.40
1:H:15:DC:C5'	7:H:642:HOH:O	2.69	0.40
4:A:74:ILE:O	4:A:74:ILE:HG22	2.21	0.40
4:A:103:PHE:CD2	4:A:107:GLN:NE2	2.89	0.40
4:A:126:LEU:HD23	4:A:132:THR:HG23	2.03	0.40
4:A:304:ALA:C	4:A:307:ARG:HG3	2.36	0.40
4:A:433:ASN:CB	4:A:434:PRO:HD2	2.50	0.40
4:A:620:TRP:HZ3	4:A:623:TYR:HD2	1.69	0.40
4:A:816:THR:HG21	4:A:820:ASP:HB2	2.03	0.40
4:A:867:LYS:N	4:A:867:LYS:HD2	2.36	0.40
4:B:230:HIS:CE1	4:B:232:GLN:HE21	2.39	0.40
4:B:329:LYS:CD	4:B:447:ALA:HA	2.45	0.40
4:B:418:TYR:CD2	4:B:427:TYR:O	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:680:LEU:N	4:B:680:LEU:CD1	2.80	0.40
4:C:13:ASP:CB	7:C:3077:HOH:O	2.69	0.40
4:C:281:ILE:HA	4:C:281:ILE:HD12	1.83	0.40
4:C:402:LEU:CD1	4:C:439:MET:HE3	2.51	0.40
4:C:425:ARG:HB2	4:C:427:TYR:HE1	1.86	0.40
4:C:563:PRO:CD	4:C:874:ASP:HB3	2.48	0.40
4:C:720:ARG:HG2	4:C:720:ARG:HH11	1.85	0.40
4:D:296:LEU:O	4:D:296:LEU:HG	2.21	0.40
4:D:327:ALA:HB2	4:D:415:TRP:CE2	2.56	0.40
4:D:439:MET:HG3	4:D:509:PHE:CE2	2.56	0.40
4:D:539:SER:HB3	4:D:559:VAL:HG12	2.02	0.40
4:D:733:PHE:HB2	4:D:792:ARG:NH2	2.37	0.40
4:D:735:VAL:CG2	4:D:736:TRP:N	2.85	0.40
4:D:827:ALA:O	4:D:831:THR:HG22	2.21	0.40
1:K:5:DA:H1'	7:K:712:HOH:O	2.20	0.40
2:L:6:G:C6	2:L:7:A:N7	2.89	0.40
3:M:7:DT:H2''	3:M:8:DC:C6	2.56	0.40
4:A:51:PHE:CD2	4:A:262:ALA:HB2	2.56	0.40
4:A:58:GLN:HG3	4:A:67:ASN:ND2	2.36	0.40
4:A:386:ARG:HE	4:A:386:ARG:HB2	1.20	0.40
4:B:105:PHE:C	4:B:107:GLN:N	2.75	0.40
4:B:779:ALA:O	4:B:783:VAL:CG2	2.69	0.40
4:C:491:ALA:O	4:C:494:LYS:N	2.55	0.40
4:C:576:LYS:HD3	7:C:3018:HOH:O	2.21	0.40
4:C:712:ASP:O	4:C:716:GLY:N	2.55	0.40
4:C:729:THR:HA	4:C:730:PRO:HD3	1.88	0.40
4:C:730:PRO:CD	4:C:786:GLN:NE2	2.84	0.40
4:D:236:VAL:CB	4:D:239:GLN:HB2	2.51	0.40
4:D:274:PRO:HA	4:D:275:PRO:HD3	1.93	0.40
4:D:571:TYR:CD1	4:D:634:VAL:CG1	3.04	0.40
4:D:737:GLN:HG2	4:D:774:GLN:OE1	2.20	0.40
4:D:744:GLN:HE21	4:D:756:ARG:N	2.18	0.40
3:J:6:DT:C2'	3:J:7:DT:H71	2.50	0.40
3:M:4:DG:H2''	3:M:5:DA:C8	2.57	0.40
2:O:6:G:H3'	7:O:144:HOH:O	2.20	0.40
4:A:39:LEU:O	4:A:40:GLU:C	2.60	0.40
4:A:56:GLU:HG3	7:A:3057:HOH:O	2.20	0.40
4:A:404:GLN:HG2	4:A:432:PHE:CD2	2.55	0.40
4:A:550:LEU:HD21	4:A:865:PRO:HG2	2.04	0.40
4:A:635:MET:HE1	6:A:2000:APC:H2'	2.03	0.40
4:A:704:LYS:HE3	4:A:860:LYS:HZ1	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:88:TRP:O	4:B:92:VAL:HG23	2.22	0.40
4:B:108:GLU:HA	4:B:108:GLU:OE2	2.21	0.40
4:B:109:ILE:CD1	4:B:109:ILE:H	2.33	0.40
4:B:116:TYR:CE2	4:B:752:LEU:HD13	2.56	0.40
4:B:220:LEU:O	4:B:222:GLU:N	2.54	0.40
4:B:252:GLU:O	4:B:253:ALA:C	2.58	0.40
4:B:572:GLY:O	4:B:575:ALA:HB3	2.21	0.40
4:B:577:LYS:HB3	4:B:684:SER:HB3	2.03	0.40
4:B:643:GLU:O	4:B:645:GLY:N	2.54	0.40
4:B:790:HIS:C	4:B:790:HIS:HD1	2.24	0.40
4:B:810:ILE:HB	4:B:813:SER:HB2	2.03	0.40
4:C:59:LEU:HA	4:C:64:VAL:HG22	2.03	0.40
4:C:84:ARG:CB	4:C:223:SER:HB3	2.49	0.40
4:C:463:HIS:HE1	4:C:532:LEU:HD11	1.86	0.40
4:C:540:CYS:HB2	4:C:559:VAL:HG12	2.04	0.40
4:D:141:ILE:O	4:D:145:ILE:CG1	2.66	0.40
4:D:294:LEU:HD13	4:D:419:ASN:HD21	1.86	0.40
4:D:508:PRO:C	4:D:510:CYS:N	2.73	0.40
4:D:726:HIS:CD2	4:D:735:VAL:O	2.74	0.40
4:A:24:LEU:HD21	4:A:287:TRP:CD2	2.56	0.40
4:A:868:GLY:N	7:A:3164:HOH:O	2.54	0.40
4:A:868:GLY:C	4:A:869:ASN:HD22	2.25	0.40
4:B:185:VAL:O	4:B:188:ALA:HB3	2.22	0.40
4:B:215:ARG:O	4:B:219:MET:HE3	2.21	0.40
4:B:229:LEU:HD11	4:B:242:GLU:CG	2.42	0.40
4:B:306:MET:O	4:B:309:GLU:N	2.51	0.40
4:C:261:LEU:HD12	4:C:261:LEU:HA	1.82	0.40
4:C:483:GLU:O	4:C:486:HIS:N	2.52	0.40
4:C:523:HIS:CD2	4:C:523:HIS:N	2.90	0.40
4:C:525:GLY:C	4:C:527:SER:H	2.24	0.40
4:C:551:ARG:HE	4:C:872:LEU:CG	2.34	0.40
4:C:749:LEU:CD1	4:C:750:MET:HG2	2.46	0.40
4:C:756:ARG:CG	7:C:3143:HOH:O	2.70	0.40
4:C:786:GLN:C	4:C:788:GLY:N	2.75	0.40
4:C:817:ILE:HD12	4:C:819:ALA:HB3	2.04	0.40
4:D:22:ASN:HA	4:D:25:ALA:HB3	2.03	0.40
4:D:549:MET:HE3	4:D:836:TYR:HE1	1.86	0.40
4:D:702:ALA:HB2	4:D:861:MET:HE1	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
4	A	851/883 (96%)	570 (67%)	198 (23%)	83 (10%)	0	3
4	B	851/883 (96%)	578 (68%)	188 (22%)	85 (10%)	0	3
4	C	851/883 (96%)	608 (71%)	178 (21%)	65 (8%)	1	7
4	D	851/883 (96%)	623 (73%)	174 (20%)	54 (6%)	1	10
All	All	3404/3532 (96%)	2379 (70%)	738 (22%)	287 (8%)	1	5

All (287) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	7	ALA
4	A	194	GLY
4	A	199	GLU
4	A	281	ILE
4	A	288	ALA
4	A	309	GLU
4	A	353	PRO
4	A	387	LYS
4	A	391	ARG
4	A	402	LEU
4	A	430	SER
4	A	506	ASP
4	A	508	PRO
4	A	526	LEU
4	A	549	MET
4	A	592	ASN
4	A	631	LYS
4	A	686	SER
4	A	708	ALA
4	A	721	LYS
4	A	744	GLN
4	A	745	THR

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Mol	Chain	Res	Type
4	A	746	ARG
4	A	755	PHE
4	A	803	GLY
4	A	850	ALA
4	B	262	ALA
4	B	274	PRO
4	B	293	PRO
4	B	391	ARG
4	B	452	ILE
4	B	539	SER
4	B	610	LYS
4	B	611	LEU
4	B	646	PHE
4	B	647	ARG
4	B	663	LYS
4	B	690	VAL
4	B	706	LEU
4	B	755	PHE
4	B	784	HIS
4	B	785	SER
4	B	796	VAL
4	B	804	ILE
4	B	841	VAL
4	B	851	ASP
4	C	68	ALA
4	C	106	LEU
4	C	240	ASP
4	C	288	ALA
4	C	309	GLU
4	C	337	VAL
4	C	422	TRP
4	C	503	ALA
4	C	508	PRO
4	C	526	LEU
4	C	539	SER
4	C	631	LYS
4	C	744	GLN
4	C	745	THR
4	C	755	PHE
4	C	771	ALA
4	C	841	VAL
4	D	307	ARG

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Mol	Chain	Res	Type
4	D	324	GLN
4	D	353	PRO
4	D	508	PRO
4	D	539	SER
4	D	541	SER
4	D	592	ASN
4	D	647	ARG
4	D	663	LYS
4	D	755	PHE
4	D	841	VAL
4	A	60	LYS
4	A	106	LEU
4	A	177	VAL
4	A	200	ALA
4	A	332	LYS
4	A	375	THR
4	A	384	VAL
4	A	401	MET
4	A	422	TRP
4	A	438	ASP
4	A	474	PRO
4	A	544	GLN
4	A	632	ARG
4	A	641	SER
4	A	678	ALA
4	A	771	ALA
4	A	811	HIS
4	A	882	PHE
4	B	14	ILE
4	B	36	GLN
4	B	106	LEU
4	B	167	GLU
4	B	176	HIS
4	B	194	GLY
4	B	298	ARG
4	B	307	ARG
4	B	314	PRO
4	B	315	GLU
4	B	412	LYS
4	B	430	SER
4	B	431	MET
4	B	470	VAL

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Mol	Chain	Res	Type
4	B	526	LEU
4	B	542	GLY
4	B	589	GLY
4	B	592	ASN
4	B	641	SER
4	B	721	LYS
4	B	746	ARG
4	B	865	PRO
4	B	873	ARG
4	B	876	LEU
4	C	7	ALA
4	C	162	PHE
4	C	307	ARG
4	C	314	PRO
4	C	339	ASN
4	C	443	LEU
4	C	474	PRO
4	C	544	GLN
4	C	686	SER
4	C	690	VAL
4	C	796	VAL
4	C	811	HIS
4	C	882	PHE
4	D	7	ALA
4	D	119	ILE
4	D	167	GLU
4	D	259	GLY
4	D	292	ARG
4	D	422	TRP
4	D	443	LEU
4	D	452	ILE
4	D	593	GLU
4	D	648	GLN
4	D	745	THR
4	D	882	PHE
4	A	100	PRO
4	A	262	ALA
4	A	277	PRO
4	A	460	LEU
4	A	511	PHE
4	A	525	GLY
4	A	541	SER

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Mol	Chain	Res	Type
4	A	542	GLY
4	A	647	ARG
4	A	660	ASP
4	A	734	PRO
4	A	797	TRP
4	A	825	PHE
4	A	872	LEU
4	B	7	ALA
4	B	68	ALA
4	B	150	ARG
4	B	199	GLU
4	B	200	ALA
4	B	260	ALA
4	B	348	PRO
4	B	382	ALA
4	B	505	GLN
4	B	508	PRO
4	B	551	ARG
4	B	593	GLU
4	B	617	ALA
4	B	627	ARG
4	B	628	SER
4	B	678	ALA
4	B	810	ILE
4	B	862	PRO
4	C	98	LYS
4	C	140	ALA
4	C	199	GLU
4	C	206	LYS
4	C	262	ALA
4	C	549	MET
4	C	647	ARG
4	C	850	ALA
4	C	851	ASP
4	D	240	ASP
4	D	288	ALA
4	D	309	GLU
4	D	314	PRO
4	D	348	PRO
4	D	405	ALA
4	D	544	GLN
4	D	589	GLY

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Mol	Chain	Res	Type
4	A	160	LYS
4	A	204	TRP
4	A	274	PRO
4	A	345	LYS
4	A	425	ARG
4	A	464	GLY
4	A	611	LEU
4	A	670	PRO
4	A	677	MET
4	A	796	VAL
4	B	50	ARG
4	B	160	LYS
4	B	277	PRO
4	B	395	ARG
4	B	396	ILE
4	B	476	PRO
4	B	580	GLU
4	B	631	LYS
4	B	648	GLN
4	B	705	LEU
4	B	752	LEU
4	B	811	HIS
4	B	824	LEU
4	B	850	ALA
4	C	200	ALA
4	C	353	PRO
4	C	476	PRO
4	C	592	ASN
4	C	787	ASP
4	D	65	ALA
4	D	260	ALA
4	D	631	LYS
4	D	722	ARG
4	A	4	ILE
4	A	313	MET
4	A	348	PRO
4	A	383	ALA
4	A	560	ASN
4	A	690	VAL
4	B	115	ALA
4	B	265	SER
4	B	342	THR

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Mol	Chain	Res	Type
4	B	557	ARG
4	B	780	PRO
4	C	102	ALA
4	C	348	PRO
4	C	541	SER
4	C	542	GLY
4	C	632	ARG
4	C	663	LYS
4	C	701	SER
4	C	832	MET
4	D	63	GLU
4	D	162	PHE
4	D	467	CYS
4	D	474	PRO
4	D	691	ALA
4	D	704	LYS
4	D	744	GLN
4	A	292	ARG
4	A	593	GLU
4	B	254	ILE
4	C	4	ILE
4	C	211	HIS
4	C	235	GLY
4	C	341	ILE
4	C	648	GLN
4	C	872	LEU
4	D	275	PRO
4	D	336	ALA
4	D	715	THR
4	D	811	HIS
4	D	850	ALA
4	D	860	LYS
4	A	710	VAL
4	B	270	PRO
4	B	479	ILE
4	C	804	ILE
4	D	114	VAL
4	D	194	GLY
4	D	693	VAL
4	A	533	PRO
4	A	650	VAL
4	C	19	ILE

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Mol	Chain	Res	Type
4	C	141	ILE
4	C	322	ILE
4	C	567	VAL
4	A	841	VAL
4	B	353	PRO
4	C	194	GLY
4	C	833	VAL
4	D	337	VAL
4	A	270	PRO
4	A	567	VAL
4	A	669	GLN
4	D	97	GLY
4	D	4	ILE

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
4	A	703/729 (96%)	573 (82%)	130 (18%)	1 8
4	B	703/729 (96%)	573 (82%)	130 (18%)	1 8
4	C	703/729 (96%)	594 (84%)	109 (16%)	2 12
4	D	703/729 (96%)	598 (85%)	105 (15%)	3 14
All	All	2812/2916 (96%)	2338 (83%)	474 (17%)	2 10

All (474) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	8	LYS
4	A	16	LEU
4	A	19	ILE
4	A	23	THR
4	A	27	HIS
4	A	36	GLN
4	A	50	ARG
4	A	53	LYS

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Mol	Chain	Res	Type
4	A	56	GLU
4	A	57	ARG
4	A	60	LYS
4	A	77	LEU
4	A	81	MET
4	A	84	ARG
4	A	86	ASN
4	A	96	ARG
4	A	101	THR
4	A	104	GLN
4	A	121	THR
4	A	130	ASP
4	A	143	ARG
4	A	145	ILE
4	A	155	ARG
4	A	157	LEU
4	A	165	ASN
4	A	170	LEU
4	A	183	MET
4	A	190	MET
4	A	206	LYS
4	A	207	GLU
4	A	208	ASP
4	A	230	HIS
4	A	248	PRO
4	A	257	ARG
4	A	261	LEU
4	A	282	THR
4	A	293	PRO
4	A	299	THR
4	A	301	SER
4	A	307	ARG
4	A	309	GLU
4	A	330	ILE
4	A	333	LYS
4	A	343	LYS
4	A	388	ASP
4	A	393	SER
4	A	395	ARG
4	A	401	MET
4	A	402	LEU
4	A	403	GLU

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Mol	Chain	Res	Type
4	A	404	GLN
4	A	410	ASN
4	A	418	TYR
4	A	422	TRP
4	A	423	ARG
4	A	429	VAL
4	A	430	SER
4	A	433	ASN
4	A	440	THR
4	A	448	LYS
4	A	451	PRO
4	A	452	ILE
4	A	454	LYS
4	A	457	TYR
4	A	462	ILE
4	A	470	VAL
4	A	472	LYS
4	A	473	VAL
4	A	475	PHE
4	A	495	SER
4	A	510	CYS
4	A	514	PHE
4	A	516	PHE
4	A	517	GLU
4	A	531	SER
4	A	540	CYS
4	A	543	ILE
4	A	550	LEU
4	A	559	VAL
4	A	561	LEU
4	A	565	GLU
4	A	573	ILE
4	A	574	VAL
4	A	613	THR
4	A	620	TRP
4	A	626	THR
4	A	627	ARG
4	A	632	ARG
4	A	634	VAL
4	A	641	SER
4	A	643	GLU
4	A	647	ARG

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Mol	Chain	Res	Type
4	A	651	LEU
4	A	656	GLN
4	A	660	ASP
4	A	666	MET
4	A	670	PRO
4	A	688	THR
4	A	730	PRO
4	A	734	PRO
4	A	744	GLN
4	A	746	ARG
4	A	749	LEU
4	A	751	PHE
4	A	752	LEU
4	A	755	PHE
4	A	766	ASP
4	A	776	SER
4	A	778	ILE
4	A	786	GLN
4	A	787	ASP
4	A	791	LEU
4	A	796	VAL
4	A	801	LYS
4	A	802	TYR
4	A	806	SER
4	A	814	PHE
4	A	816	THR
4	A	820	ASP
4	A	828	VAL
4	A	829	ARG
4	A	832	MET
4	A	839	CYS
4	A	841	VAL
4	A	846	TYR
4	A	851	ASP
4	A	860	LYS
4	A	869	ASN
4	A	879	ASP
4	A	882	PHE
4	B	13	ASP
4	B	15	GLU
4	B	16	LEU
4	B	19	ILE

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Mol	Chain	Res	Type
4	B	21	PHE
4	B	22	ASN
4	B	24	LEU
4	B	27	HIS
4	B	32	LEU
4	B	36	GLN
4	B	39	LEU
4	B	50	ARG
4	B	56	GLU
4	B	66	ASP
4	B	71	LYS
4	B	84	ARG
4	B	86	ASN
4	B	96	ARG
4	B	99	ARG
4	B	101	THR
4	B	120	LYS
4	B	123	LEU
4	B	132	THR
4	B	143	ARG
4	B	164	LYS
4	B	166	VAL
4	B	168	GLU
4	B	172	LYS
4	B	184	GLN
4	B	206	LYS
4	B	207	GLU
4	B	209	SER
4	B	214	VAL
4	B	224	THR
4	B	252	GLU
4	B	256	THR
4	B	257	ARG
4	B	261	LEU
4	B	264	ILE
4	B	267	MET
4	B	272	VAL
4	B	273	VAL
4	B	277	PRO
4	B	279	THR
4	B	291	ARG
4	B	299	THR

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Mol	Chain	Res	Type
4	B	305	LEU
4	B	314	PRO
4	B	332	LYS
4	B	337	VAL
4	B	343	LYS
4	B	349	VAL
4	B	351	ASP
4	B	378	LYS
4	B	379	ARG
4	B	388	ASP
4	B	394	ARG
4	B	397	SER
4	B	402	LEU
4	B	404	GLN
4	B	408	PHE
4	B	419	ASN
4	B	422	TRP
4	B	423	ARG
4	B	437	ASN
4	B	441	LYS
4	B	452	ILE
4	B	454	LYS
4	B	461	LYS
4	B	472	LYS
4	B	483	GLU
4	B	492	CYS
4	B	494	LYS
4	B	495	SER
4	B	497	LEU
4	B	500	THR
4	B	512	LEU
4	B	514	PHE
4	B	527	SER
4	B	532	LEU
4	B	540	CYS
4	B	552	ASP
4	B	560	ASN
4	B	567	VAL
4	B	569	ASP
4	B	582	LEU
4	B	592	ASN
4	B	621	LEU

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Mol	Chain	Res	Type
4	B	626	THR
4	B	627	ARG
4	B	633	SER
4	B	643	GLU
4	B	651	LEU
4	B	654	THR
4	B	656	GLN
4	B	666	MET
4	B	668	THR
4	B	683	GLU
4	B	690	VAL
4	B	693	VAL
4	B	697	ASN
4	B	722	ARG
4	B	731	ASP
4	B	734	PRO
4	B	735	VAL
4	B	744	GLN
4	B	749	LEU
4	B	752	LEU
4	B	769	ILE
4	B	770	ASP
4	B	776	SER
4	B	780	PRO
4	B	783	VAL
4	B	785	SER
4	B	786	GLN
4	B	790	HIS
4	B	801	LYS
4	B	809	LEU
4	B	813	SER
4	B	828	VAL
4	B	832	MET
4	B	841	VAL
4	B	842	LEU
4	B	849	PHE
4	B	859	ASP
4	B	860	LYS
4	B	867	LYS
4	B	869	ASN
4	B	870	LEU
4	B	877	GLU

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Mol	Chain	Res	Type
4	C	2	ASN
4	C	3	THR
4	C	9	ASN
4	C	16	LEU
4	C	26	ASP
4	C	32	LEU
4	C	36	GLN
4	C	37	LEU
4	C	40	GLU
4	C	50	ARG
4	C	64	VAL
4	C	66	ASP
4	C	84	ARG
4	C	96	ARG
4	C	99	ARG
4	C	107	GLN
4	C	119	ILE
4	C	120	LYS
4	C	143	ARG
4	C	170	LEU
4	C	183	MET
4	C	195	LEU
4	C	208	ASP
4	C	214	VAL
4	C	227	VAL
4	C	230	HIS
4	C	244	ILE
4	C	256	THR
4	C	257	ARG
4	C	267	MET
4	C	281	ILE
4	C	282	THR
4	C	291	ARG
4	C	294	LEU
4	C	301	SER
4	C	305	LEU
4	C	313	MET
4	C	325	ASN
4	C	335	LEU
4	C	343	LYS
4	C	347	CYS
4	C	350	GLU

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Mol	Chain	Res	Type
4	C	377	TRP
4	C	378	LYS
4	C	379	ARG
4	C	397	SER
4	C	403	GLU
4	C	404	GLN
4	C	412	LYS
4	C	415	TRP
4	C	422	TRP
4	C	423	ARG
4	C	434	PRO
4	C	437	ASN
4	C	467	CYS
4	C	470	VAL
4	C	471	ASP
4	C	472	LYS
4	C	473	VAL
4	C	509	PHE
4	C	510	CYS
4	C	514	PHE
4	C	517	GLU
4	C	531	SER
4	C	532	LEU
4	C	544	GLN
4	C	551	ARG
4	C	553	GLU
4	C	559	VAL
4	C	565	GLU
4	C	573	ILE
4	C	577	LYS
4	C	588	ASN
4	C	601	ASN
4	C	614	LYS
4	C	636	THR
4	C	659	ILE
4	C	661	SER
4	C	663	LYS
4	C	666	MET
4	C	700	LYS
4	C	711	LYS
4	C	722	ARG
4	C	729	THR

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Mol	Chain	Res	Type
4	C	733	PHE
4	C	734	PRO
4	C	744	GLN
4	C	749	LEU
4	C	750	MET
4	C	751	PHE
4	C	754	GLN
4	C	755	PHE
4	C	768	GLU
4	C	783	VAL
4	C	786	GLN
4	C	787	ASP
4	C	789	SER
4	C	801	LYS
4	C	814	PHE
4	C	817	ILE
4	C	831	THR
4	C	832	MET
4	C	838	SER
4	C	841	VAL
4	C	842	LEU
4	C	860	LYS
4	C	869	ASN
4	C	880	PHE
4	C	882	PHE
4	D	13	ASP
4	D	16	LEU
4	D	19	ILE
4	D	22	ASN
4	D	27	HIS
4	D	36	GLN
4	D	39	LEU
4	D	48	GLU
4	D	50	ARG
4	D	56	GLU
4	D	59	LEU
4	D	84	ARG
4	D	95	LYS
4	D	101	THR
4	D	109	ILE
4	D	120	LYS
4	D	131	ASN

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Mol	Chain	Res	Type
4	D	143	ARG
4	D	145	ILE
4	D	171	ASN
4	D	183	MET
4	D	190	MET
4	D	206	LYS
4	D	215	ARG
4	D	219	MET
4	D	232	GLN
4	D	236	VAL
4	D	257	ARG
4	D	269	GLN
4	D	271	CYS
4	D	281	ILE
4	D	282	THR
4	D	289	ASN
4	D	299	THR
4	D	305	LEU
4	D	335	LEU
4	D	341	ILE
4	D	348	PRO
4	D	350	GLU
4	D	351	ASP
4	D	378	LYS
4	D	391	ARG
4	D	394	ARG
4	D	398	LEU
4	D	403	GLU
4	D	412	LYS
4	D	419	ASN
4	D	422	TRP
4	D	425	ARG
4	D	435	GLN
4	D	437	ASN
4	D	441	LYS
4	D	444	LEU
4	D	448	LYS
4	D	450	LYS
4	D	452	ILE
4	D	467	CYS
4	D	472	LYS
4	D	477	GLU

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Mol	Chain	Res	Type
4	D	492	CYS
4	D	495	SER
4	D	497	LEU
4	D	499	ASN
4	D	510	CYS
4	D	514	PHE
4	D	518	TYR
4	D	530	CYS
4	D	540	CYS
4	D	559	VAL
4	D	571	TYR
4	D	601	ASN
4	D	606	SER
4	D	632	ARG
4	D	652	GLU
4	D	656	GLN
4	D	661	SER
4	D	666	MET
4	D	700	LYS
4	D	705	LEU
4	D	718	ILE
4	D	720	ARG
4	D	721	LYS
4	D	722	ARG
4	D	723	CYS
4	D	730	PRO
4	D	734	PRO
4	D	735	VAL
4	D	749	LEU
4	D	750	MET
4	D	752	LEU
4	D	776	SER
4	D	783	VAL
4	D	786	GLN
4	D	787	ASP
4	D	791	LEU
4	D	801	LYS
4	D	812	ASP
4	D	813	SER
4	D	820	ASP
4	D	828	VAL
4	D	842	LEU

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Mol	Chain	Res	Type
4	D	851	ASP
4	D	857	GLN
4	D	860	LYS
4	D	882	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (125) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	5	ASN
4	A	41	HIS
4	A	86	ASN
4	A	171	ASN
4	A	184	GLN
4	A	205	HIS
4	A	211	HIS
4	A	230	HIS
4	A	232	GLN
4	A	239	GLN
4	A	269	GLN
4	A	289	ASN
4	A	404	GLN
4	A	410	ASN
4	A	419	ASN
4	A	435	GLN
4	A	437	ASN
4	A	466	ASN
4	A	486	HIS
4	A	488	ASN
4	A	545	HIS
4	A	588	ASN
4	A	649	GLN
4	A	656	GLN
4	A	669	GLN
4	A	672	GLN
4	A	748	ASN
4	A	754	GLN
4	A	781	ASN
4	A	823	ASN
4	A	848	GLN
4	A	854	HIS
4	A	857	GLN
4	A	869	ASN

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Mol	Chain	Res	Type
4	A	871	ASN
4	B	5	ASN
4	B	22	ASN
4	B	86	ASN
4	B	107	GLN
4	B	161	HIS
4	B	169	GLN
4	B	171	ASN
4	B	205	HIS
4	B	232	GLN
4	B	233	ASN
4	B	239	GLN
4	B	269	GLN
4	B	324	GLN
4	B	404	GLN
4	B	419	ASN
4	B	435	GLN
4	B	437	ASN
4	B	499	ASN
4	B	505	GLN
4	B	529	ASN
4	B	544	GLN
4	B	545	HIS
4	B	560	ASN
4	B	588	ASN
4	B	619	GLN
4	B	656	GLN
4	B	672	GLN
4	B	726	HIS
4	B	748	ASN
4	B	772	HIS
4	B	774	GLN
4	B	781	ASN
4	B	786	GLN
4	B	823	ASN
4	B	848	GLN
4	B	869	ASN
4	C	5	ASN
4	C	58	GLN
4	C	86	ASN
4	C	104	GLN
4	C	107	GLN

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Mol	Chain	Res	Type
4	C	169	GLN
4	C	171	ASN
4	C	230	HIS
4	C	232	GLN
4	C	269	GLN
4	C	289	ASN
4	C	324	GLN
4	C	339	ASN
4	C	410	ASN
4	C	435	GLN
4	C	437	ASN
4	C	523	HIS
4	C	560	ASN
4	C	588	ASN
4	C	656	GLN
4	C	669	GLN
4	C	726	HIS
4	C	737	GLN
4	C	744	GLN
4	C	754	GLN
4	C	781	ASN
4	C	786	GLN
4	C	799	HIS
4	D	22	ASN
4	D	41	HIS
4	D	86	ASN
4	D	107	GLN
4	D	161	HIS
4	D	239	GLN
4	D	289	ASN
4	D	331	ASN
4	D	410	ASN
4	D	419	ASN
4	D	435	GLN
4	D	437	ASN
4	D	499	ASN
4	D	544	GLN
4	D	619	GLN
4	D	669	GLN
4	D	726	HIS
4	D	737	GLN
4	D	744	GLN

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Mol	Chain	Res	Type
4	D	748	ASN
4	D	754	GLN
4	D	790	HIS
4	D	823	ASN
4	D	854	HIS
4	D	857	GLN
4	D	871	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	F	7/12 (58%)	0	0
2	I	7/12 (58%)	1 (14%)	0
2	L	7/12 (58%)	0	0
2	O	7/12 (58%)	0	0
All	All	28/48 (58%)	1 (3%)	0

All (1) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	I	8	U

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	APC	C	2002	5	27,33,33	2.02	6 (22%)	31,52,52	1.46	5 (16%)
6	APC	D	2003	5	27,33,33	1.94	5 (18%)	31,52,52	1.50	7 (22%)
6	APC	A	2000	5	27,33,33	1.89	5 (18%)	31,52,52	1.67	9 (29%)
6	APC	B	2001	5	27,33,33	1.95	7 (25%)	31,52,52	1.70	7 (22%)

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
6	APC	C	2002	5	-	6/15/38/38	0/3/3/3
6	APC	D	2003	5	-	9/15/38/38	0/3/3/3
6	APC	A	2000	5	-	6/15/38/38	0/3/3/3
6	APC	B	2001	5	-	7/15/38/38	0/3/3/3

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	D	2003	APC	PB-O3B	7.27	1.66	1.58
6	A	2000	APC	PB-O3B	6.67	1.65	1.58
6	C	2002	APC	PB-O3B	5.61	1.64	1.58
6	C	2002	APC	PA-O5'	5.59	1.65	1.57
6	B	2001	APC	PA-O5'	4.70	1.64	1.57
6	B	2001	APC	PB-O3B	4.59	1.63	1.58
6	D	2003	APC	C2-N3	3.70	1.38	1.32
6	B	2001	APC	C2-N3	3.65	1.38	1.32
6	C	2002	APC	C2-N3	3.48	1.37	1.32
6	B	2001	APC	O4'-C1'	3.40	1.45	1.41
6	A	2000	APC	C2-N3	3.18	1.37	1.32
6	A	2000	APC	PA-O5'	3.00	1.61	1.57
6	B	2001	APC	PB-O2B	-2.88	1.49	1.56
6	B	2001	APC	PA-O2A	-2.61	1.50	1.56
6	C	2002	APC	PA-O2A	-2.58	1.50	1.56
6	D	2003	APC	PA-O5'	2.57	1.61	1.57
6	A	2000	APC	C8-N7	-2.46	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	B	2001	APC	C5'-C4'	2.35	1.58	1.51
6	A	2000	APC	PB-O2B	-2.34	1.50	1.56
6	C	2002	APC	C2-N1	2.29	1.38	1.33
6	C	2002	APC	PB-O2B	-2.18	1.51	1.56
6	D	2003	APC	PA-O2A	-2.14	1.51	1.56
6	D	2003	APC	PB-O2B	-2.08	1.51	1.56

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	B	2001	APC	O1A-PA-C3A	-4.48	97.24	109.07
6	A	2000	APC	O1A-PA-C3A	3.52	118.37	109.07
6	B	2001	APC	PB-O3B-PG	-3.48	120.37	132.62
6	B	2001	APC	C2'-C3'-C4'	3.39	109.23	102.64
6	D	2003	APC	O2B-PB-O1B	3.23	120.85	110.07
6	C	2002	APC	C5-C6-N6	3.15	125.14	120.35
6	C	2002	APC	O2B-PB-O1B	3.07	120.31	110.07
6	D	2003	APC	O2A-PA-O1A	3.05	120.24	110.07
6	C	2002	APC	C2'-C3'-C4'	2.96	108.40	102.64
6	A	2000	APC	O3G-PG-O3B	2.94	114.49	104.64
6	A	2000	APC	O2A-PA-O1A	2.92	119.80	110.07
6	C	2002	APC	O2A-PA-O1A	2.91	119.80	110.07
6	B	2001	APC	O2B-PB-O1B	2.90	119.77	110.07
6	A	2000	APC	O2B-PB-O1B	2.82	119.50	110.07
6	A	2000	APC	PB-O3B-PG	-2.72	123.02	132.62
6	B	2001	APC	O2A-PA-O1A	2.53	118.51	110.07
6	D	2003	APC	O2'-C2'-C3'	2.53	119.99	111.82
6	A	2000	APC	C1'-N9-C4	2.49	131.02	126.64
6	C	2002	APC	PB-O3B-PG	-2.30	124.51	132.62
6	B	2001	APC	C5-C6-N6	2.25	123.78	120.35
6	A	2000	APC	O4'-C4'-C3'	2.23	109.53	105.11
6	D	2003	APC	C2'-C3'-C4'	2.23	106.97	102.64
6	A	2000	APC	O4'-C1'-C2'	2.16	110.08	106.93
6	B	2001	APC	O2A-PA-C3A	2.14	115.32	106.58
6	D	2003	APC	O2B-PB-C3A	2.14	115.31	106.58
6	A	2000	APC	C2'-C3'-C4'	2.13	106.78	102.64
6	D	2003	APC	O4'-C1'-C2'	2.09	109.97	106.93
6	D	2003	APC	C5-C6-N6	2.07	123.50	120.35

There are no chirality outliers.

All (28) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	A	2000	APC	PB-C3A-PA-O1A
6	A	2000	APC	PB-C3A-PA-O2A
6	A	2000	APC	PB-C3A-PA-O5'
6	A	2000	APC	O4'-C4'-C5'-O5'
6	B	2001	APC	PA-C3A-PB-O1B
6	B	2001	APC	PA-C3A-PB-O2B
6	B	2001	APC	PA-C3A-PB-O3B
6	B	2001	APC	C5'-O5'-PA-O1A
6	B	2001	APC	O4'-C4'-C5'-O5'
6	C	2002	APC	PA-C3A-PB-O1B
6	C	2002	APC	PA-C3A-PB-O2B
6	C	2002	APC	PA-C3A-PB-O3B
6	C	2002	APC	PB-C3A-PA-O1A
6	C	2002	APC	PB-C3A-PA-O2A
6	D	2003	APC	PB-O3B-PG-O2G
6	D	2003	APC	PB-O3B-PG-O3G
6	D	2003	APC	PA-C3A-PB-O1B
6	D	2003	APC	PA-C3A-PB-O2B
6	D	2003	APC	PA-C3A-PB-O3B
6	D	2003	APC	PB-C3A-PA-O1A
6	D	2003	APC	PB-C3A-PA-O2A
6	D	2003	APC	PB-C3A-PA-O5'
6	A	2000	APC	C3'-C4'-C5'-O5'
6	A	2000	APC	PA-C3A-PB-O2B
6	B	2001	APC	PB-C3A-PA-O1A
6	B	2001	APC	C5'-O5'-PA-O2A
6	C	2002	APC	O4'-C4'-C5'-O5'
6	D	2003	APC	O4'-C4'-C5'-O5'

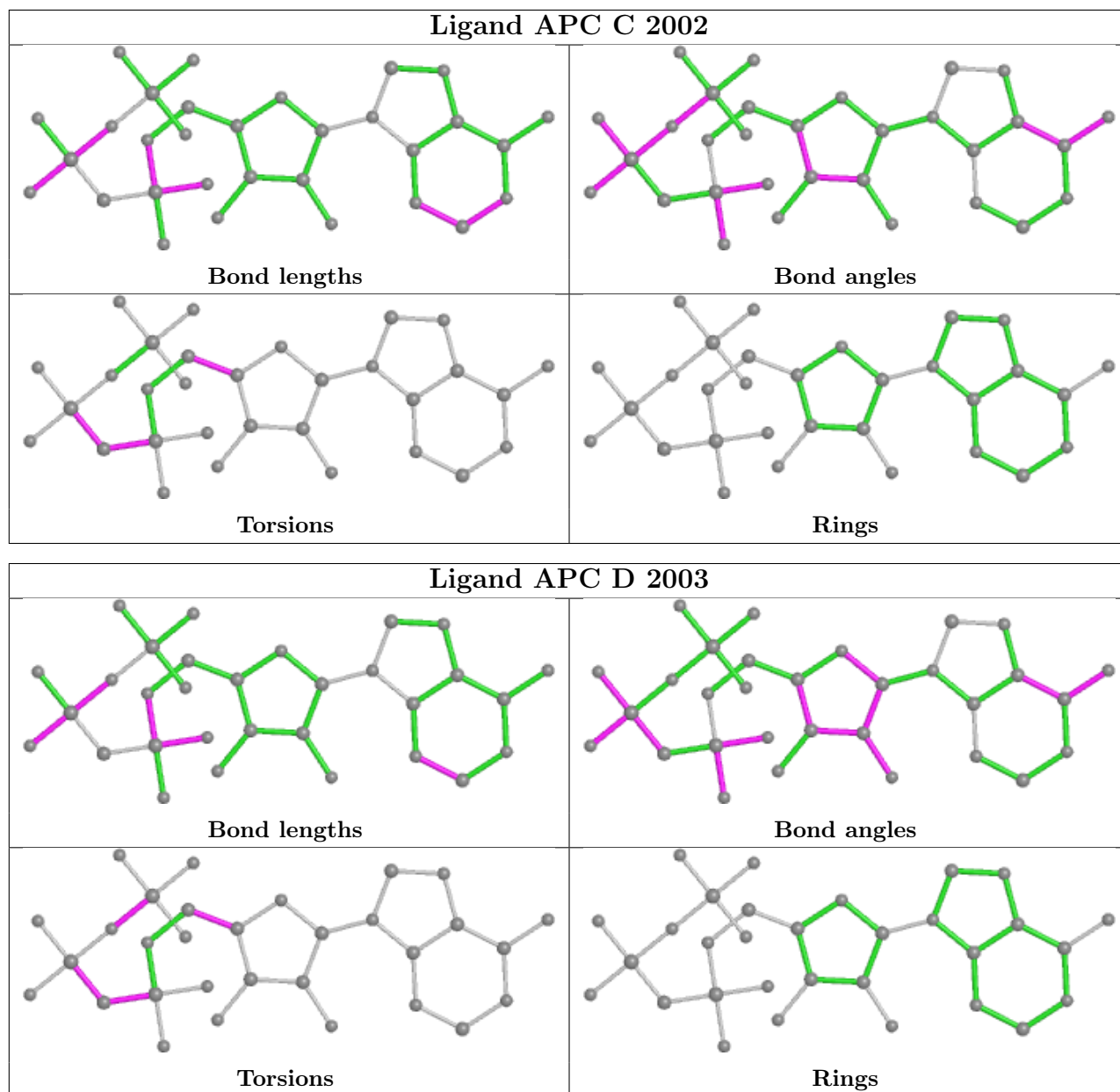
There are no ring outliers.

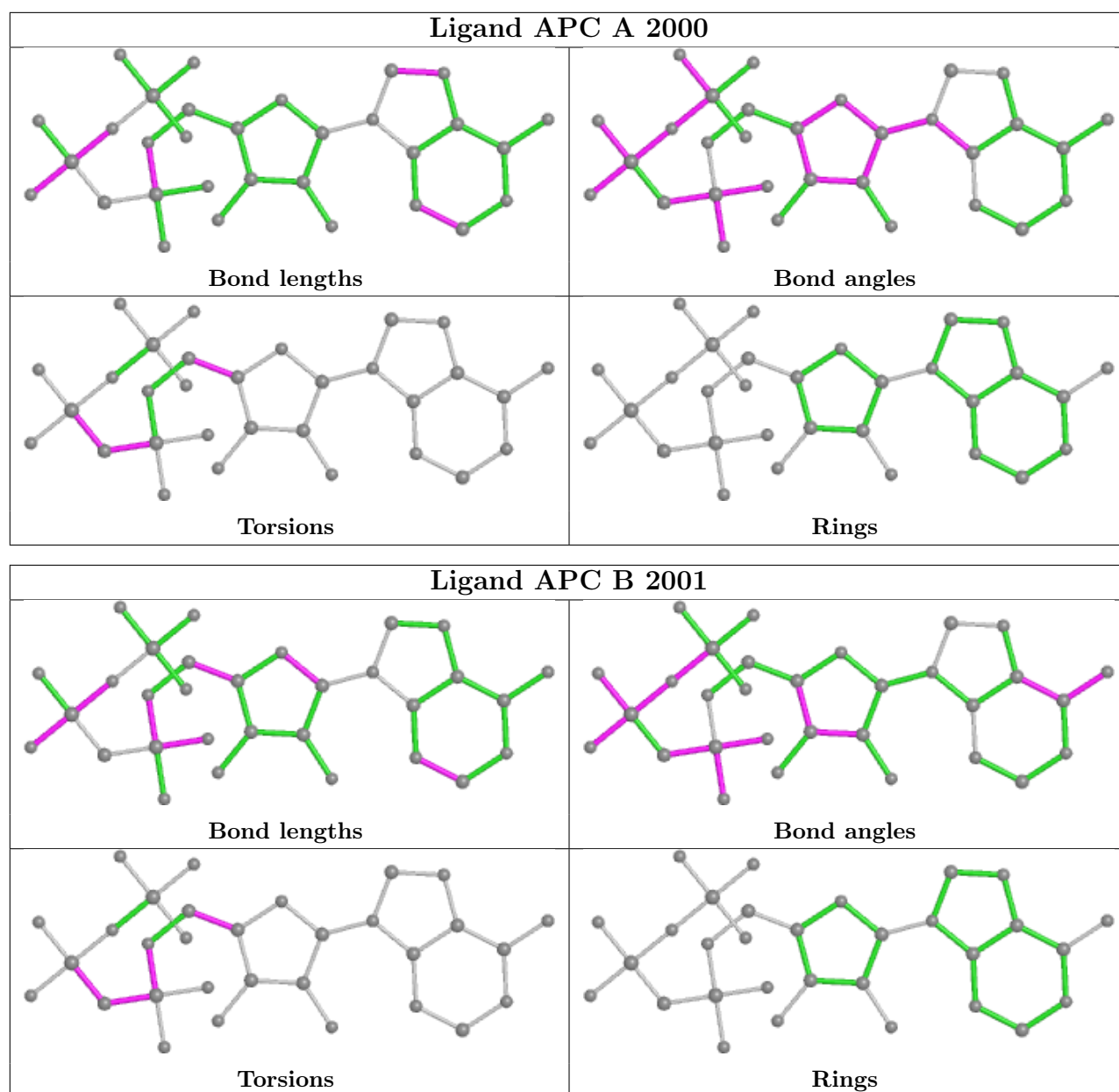
4 monomers are involved in 48 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	C	2002	APC	16	0
6	D	2003	APC	7	0
6	A	2000	APC	16	0
6	B	2001	APC	9	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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	E	17/18 (94%)	-0.25	0 100 100	19, 58, 179, 181	0
1	H	17/18 (94%)	0.17	1 (5%) 22 13	21, 75, 158, 171	0
1	K	17/18 (94%)	0.11	0 100 100	48, 94, 157, 159	0
1	N	17/18 (94%)	0.09	0 100 100	51, 102, 172, 173	0
2	F	8/12 (66%)	-0.50	0 100 100	17, 23, 82, 93	0
2	I	8/12 (66%)	-0.02	0 100 100	17, 38, 82, 92	0
2	L	8/12 (66%)	0.19	0 100 100	47, 52, 113, 118	0
2	O	8/12 (66%)	0.14	0 100 100	51, 80, 132, 144	0
3	G	9/10 (90%)	0.91	2 (22%) 0 0	146, 153, 176, 183	0
3	J	9/10 (90%)	-0.03	1 (11%) 5 3	130, 138, 162, 163	0
3	M	9/10 (90%)	-0.22	0 100 100	134, 146, 155, 158	0
3	P	9/10 (90%)	1.30	1 (11%) 5 3	157, 167, 172, 172	0
4	A	857/883 (97%)	-0.28	37 (4%) 35 22	15, 76, 141, 153	0
4	B	857/883 (97%)	-0.41	16 (1%) 66 53	10, 69, 131, 150	0
4	C	857/883 (97%)	-0.30	16 (1%) 66 53	47, 93, 134, 160	0
4	D	857/883 (97%)	-0.05	26 (3%) 50 34	41, 102, 144, 156	0
All	All	3564/3692 (96%)	-0.25	100 (2%) 53 37	10, 89, 142, 183	0

All (100) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	P	1	DG	8.1
4	D	235	GLY	7.0
3	G	1	DG	6.4
4	A	235	GLY	6.4
4	A	601	ASN	5.8

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Mol	Chain	Res	Type	RSRZ
4	D	238	GLY	5.1
4	C	372	GLU	4.7
4	B	17	ALA	4.7
4	A	236	VAL	4.5
4	B	129	ALA	4.5
4	B	16	LEU	4.3
4	D	237	VAL	4.2
4	D	226	MET	4.2
4	A	98	LYS	3.9
4	C	375	THR	3.9
4	A	116	TYR	3.7
4	D	816	THR	3.7
4	B	243	THR	3.7
4	A	753	GLY	3.7
4	D	169	GLN	3.6
4	B	94	ALA	3.6
4	A	752	LEU	3.6
4	D	601	ASN	3.5
4	A	226	MET	3.5
4	A	239	GLN	3.5
4	A	608	LYS	3.5
4	A	598	THR	3.4
4	B	372	GLU	3.4
4	C	16	LEU	3.3
4	A	168	GLU	3.3
4	D	110	LYS	3.3
4	B	374	LEU	3.3
4	D	603	GLY	3.3
4	A	242	GLU	3.3
4	A	596	THR	3.2
4	B	130	ASP	3.2
4	B	237	VAL	3.2
4	B	18	ALA	3.2
4	C	237	VAL	3.2
4	C	376	ALA	3.2
4	A	67	ASN	3.1
4	A	234	ALA	3.1
4	C	354	ALA	3.1
4	C	226	MET	3.0
4	A	70	ALA	3.0
4	C	374	LEU	2.9
4	D	354	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
4	D	606	SER	2.9
4	B	230	HIS	2.9
4	C	860	LYS	2.8
4	C	234	ALA	2.8
4	A	228	SER	2.8
4	A	231	ARG	2.8
4	A	607	GLU	2.8
4	A	229	LEU	2.8
4	B	594	VAL	2.7
4	A	237	VAL	2.7
4	C	355	ILE	2.7
4	D	752	LEU	2.7
4	A	754	GLN	2.6
4	A	602	THR	2.6
4	A	158	GLU	2.6
4	D	746	ARG	2.6
4	D	602	THR	2.6
4	A	600	GLU	2.6
4	C	18	ALA	2.6
4	A	261	LEU	2.5
4	A	751	PHE	2.5
4	A	243	THR	2.5
4	A	9	ASN	2.4
4	D	609	VAL	2.4
4	C	17	ALA	2.4
4	D	65	ALA	2.4
4	D	530	CYS	2.4
4	A	130	ASP	2.4
4	A	97	GLY	2.3
4	A	238	GLY	2.3
4	B	226	MET	2.3
4	D	234	ALA	2.3
4	D	244	ILE	2.3
4	A	593	GLU	2.3
4	B	242	GLU	2.3
4	C	15	GLU	2.3
4	A	594	VAL	2.2
4	A	68	ALA	2.2
4	C	161	HIS	2.2
1	H	2	DG	2.2
3	J	1	DG	2.2
4	C	565	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
4	D	86	ASN	2.2
4	D	594	VAL	2.2
3	G	2	DT	2.1
4	B	203	SER	2.1
4	D	883	ALA	2.1
4	D	229	LEU	2.1
4	D	93	LYS	2.0
4	A	230	HIS	2.0
4	D	216	CYS	2.0
4	D	202	SER	2.0
4	B	100	PRO	2.0

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

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

6.3 Carbohydrates [i](#)

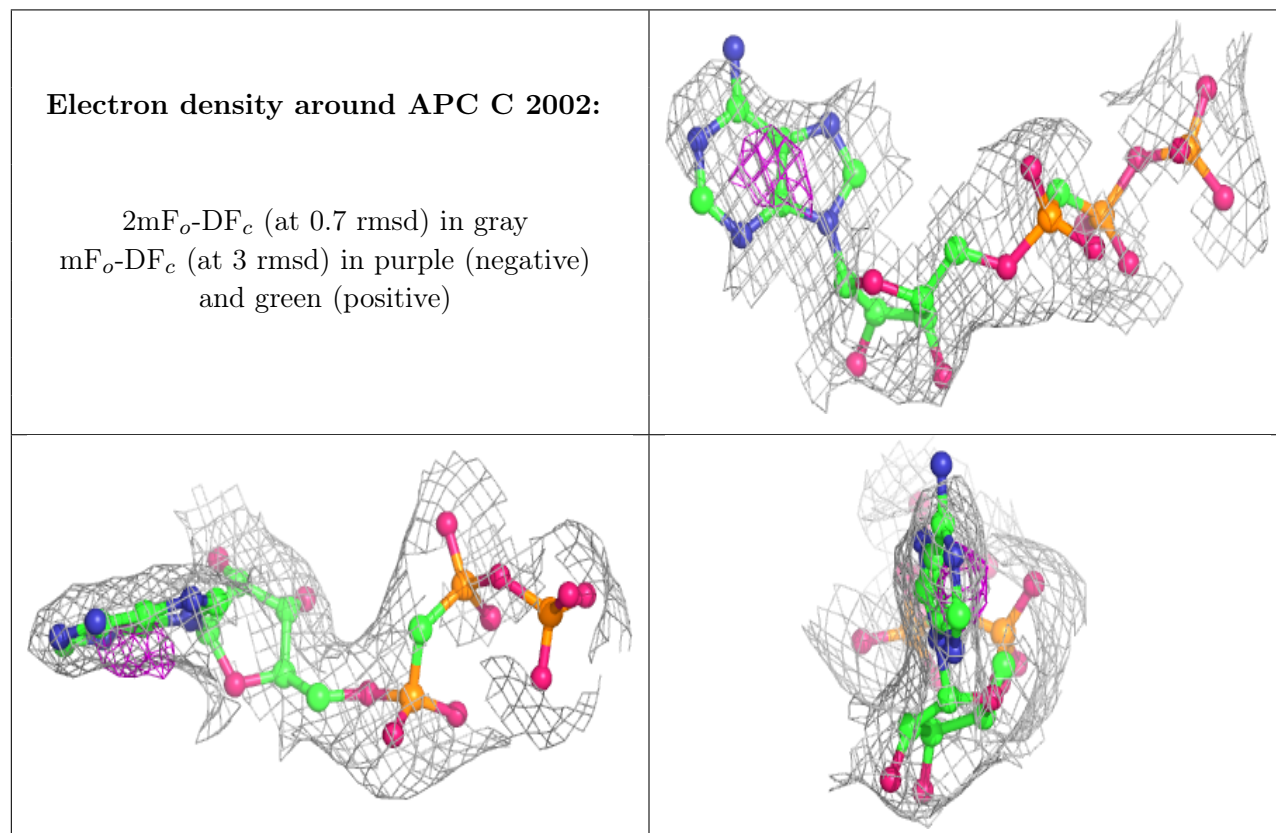
There are no monosaccharides in this entry.

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.

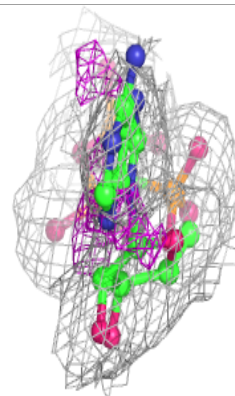
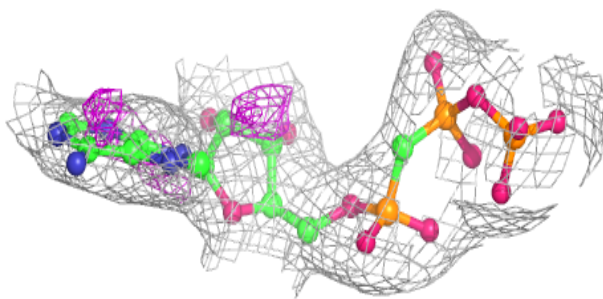
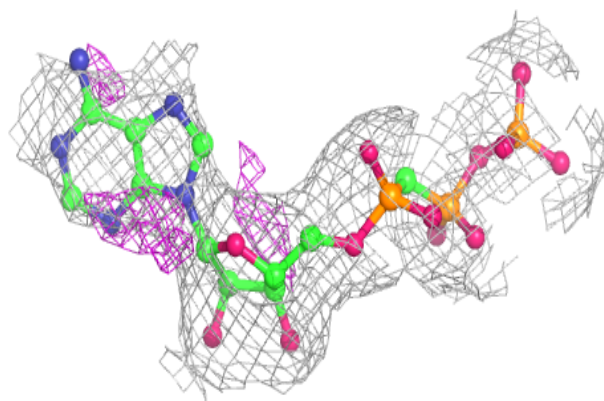
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
5	MG	D	3004	1/1	0.69	0.30	79,79,79,79	0
6	APC	C	2002	31/31	0.93	0.23	65,70,77,78	0
6	APC	B	2001	31/31	0.94	0.21	28,47,63,68	0
5	MG	A	3001	1/1	0.94	0.13	22,22,22,22	0
6	APC	D	2003	31/31	0.94	0.17	48,57,61,63	0
6	APC	A	2000	31/31	0.95	0.19	34,58,80,82	0
5	MG	F	3005	1/1	0.96	0.15	18,18,18,18	0
5	MG	B	3002	1/1	0.97	0.53	65,65,65,65	0
5	MG	D	3008	1/1	0.97	0.17	16,16,16,16	0
5	MG	B	3006	1/1	0.97	0.17	34,34,34,34	0
5	MG	C	3003	1/1	0.99	0.27	41,41,41,41	0
5	MG	C	3007	1/1	0.99	0.17	46,46,46,46	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.

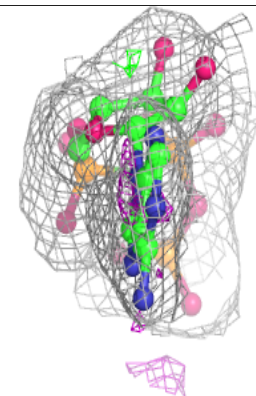
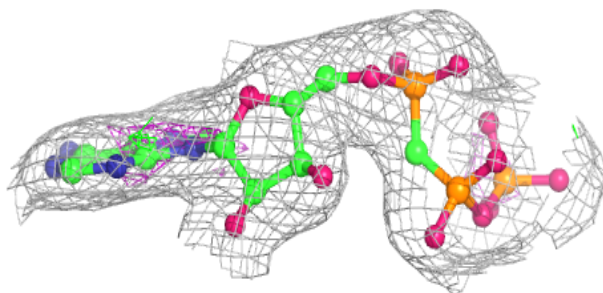
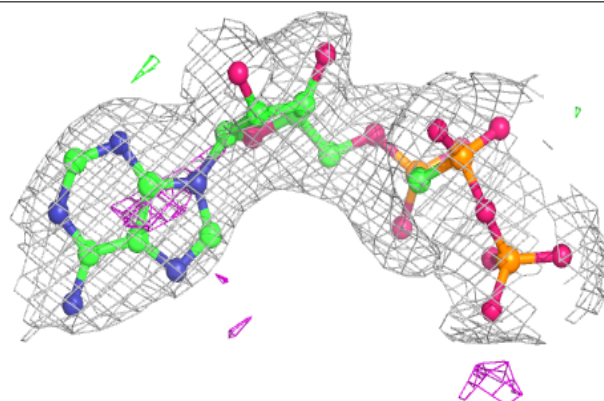


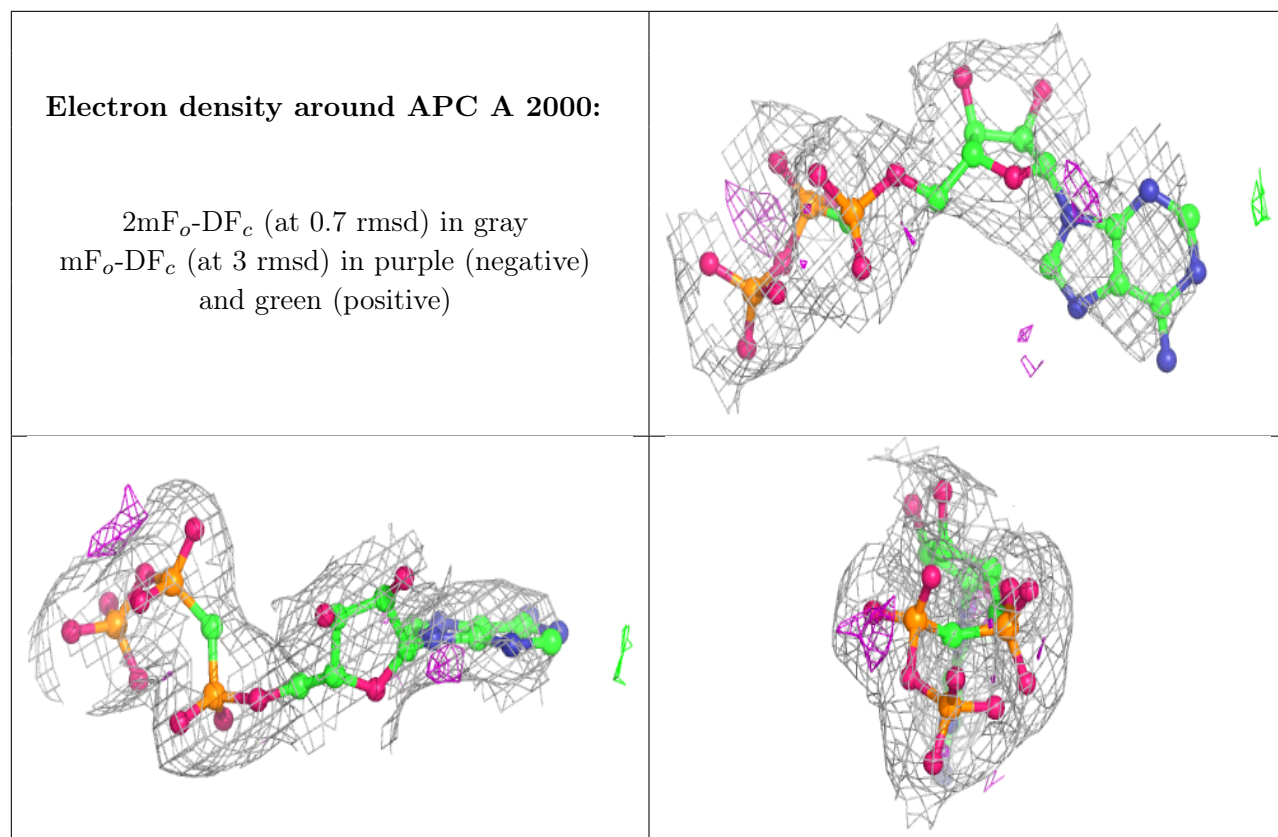
Electron density around APC B 2001:

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

**Electron density around APC D 2003:**

$2mF_o-DF_c$ (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.