



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 9, 2023 – 10:15 PM JST

PDB ID : 7WRX
Title : Structure of Deinococcus radiodurans HerA-ADP complex
Authors : Cheng, K.
Deposited on : 2022-01-27
Resolution : 3.40 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

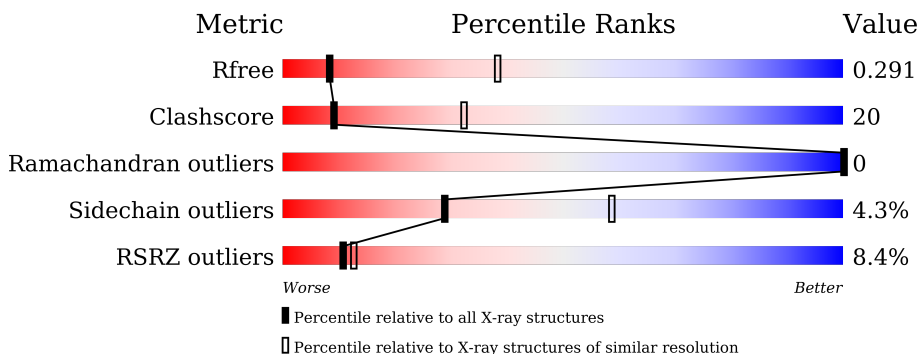
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 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	1026 (3.48-3.32)
Clashscore	141614	1055 (3.48-3.32)
Ramachandran outliers	138981	1038 (3.48-3.32)
Sidechain outliers	138945	1038 (3.48-3.32)
RSRZ outliers	127900	2173 (3.50-3.30)

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

Mol	Chain	Length	Quality of chain
1	A	618	 8% 67% 26% 5%
1	B	618	 8% 61% 32% 5%
1	C	618	 7% 68% 27% 5%
1	D	618	 9% 68% 26% 5%
1	E	618	 9% 60% 34% 5%
1	F	618	 10% 68% 26% 5%

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Mol	Chain	Length	Quality of chain	
1	G	618	7%	67% 27% . .
1	H	618	5%	69% 26% . .
1	I	618	9%	64% 29% . .
1	J	618	9%	64% 29% . 5%
1	K	618	8%	53% 39% . .
1	L	618	7%	56% 37% . .

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
3	ADP	A	1001	-	-	X	-
3	ADP	E	1001	-	-	X	-

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 55302 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

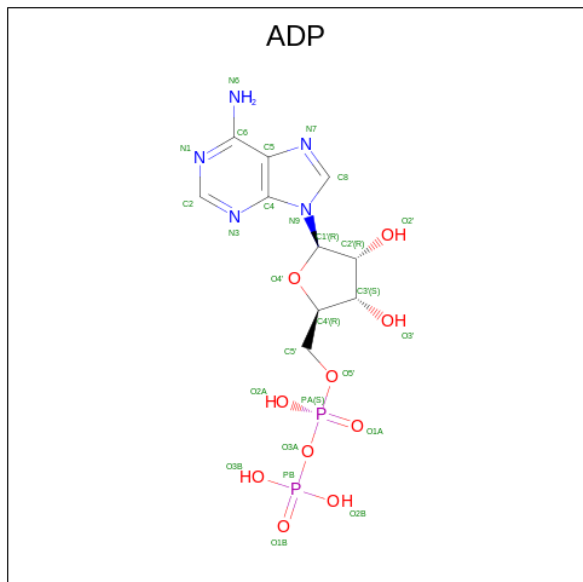
- Molecule 1 is a protein called HerA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	H	594	4591	2907	815	860	9	0	0	0
1	A	591	4575	2897	812	857	9	0	0	0
1	B	590	4567	2893	811	854	9	0	0	0
1	C	594	4591	2907	815	860	9	0	0	0
1	D	591	4575	2897	812	857	9	0	0	0
1	E	590	4571	2896	811	855	9	0	0	0
1	F	591	4575	2897	812	857	9	0	0	0
1	G	594	4591	2907	815	860	9	0	0	0
1	I	594	4591	2907	815	860	9	0	0	0
1	J	590	4567	2893	811	854	9	0	0	0
1	K	594	4591	2907	815	860	9	0	0	0
1	L	594	4591	2907	815	860	9	0	0	0

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	H	1	Total 1	Mg 1	0	0
2	D	1	Total 1	Mg 1	0	0

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).

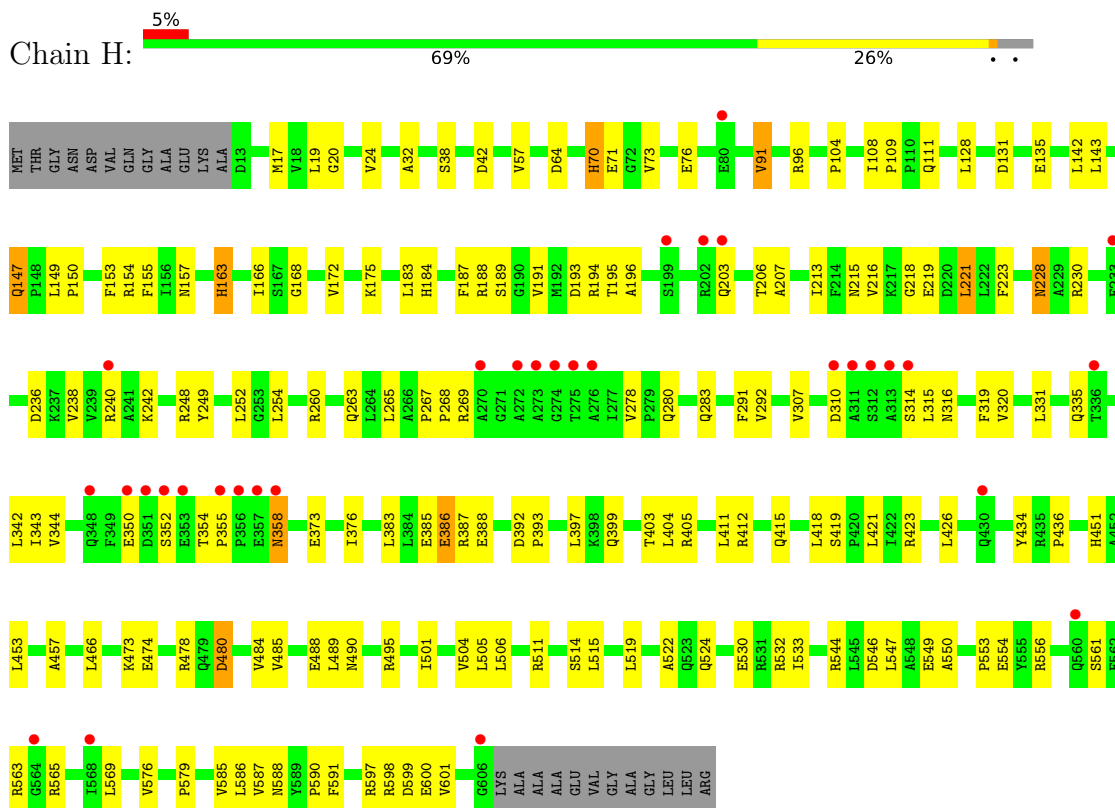


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
3	H	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	C	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	D	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	E	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	F	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	G	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	I	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	J	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	K	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	L	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

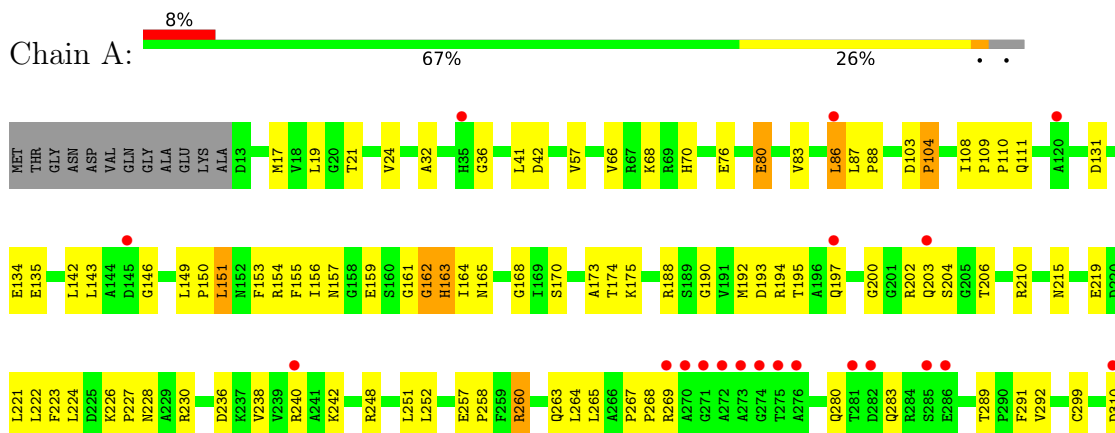
3 Residue-property plots

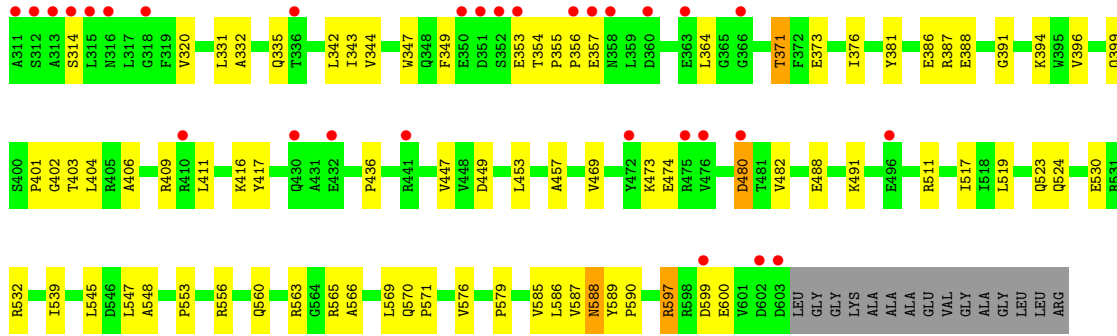
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: HerA

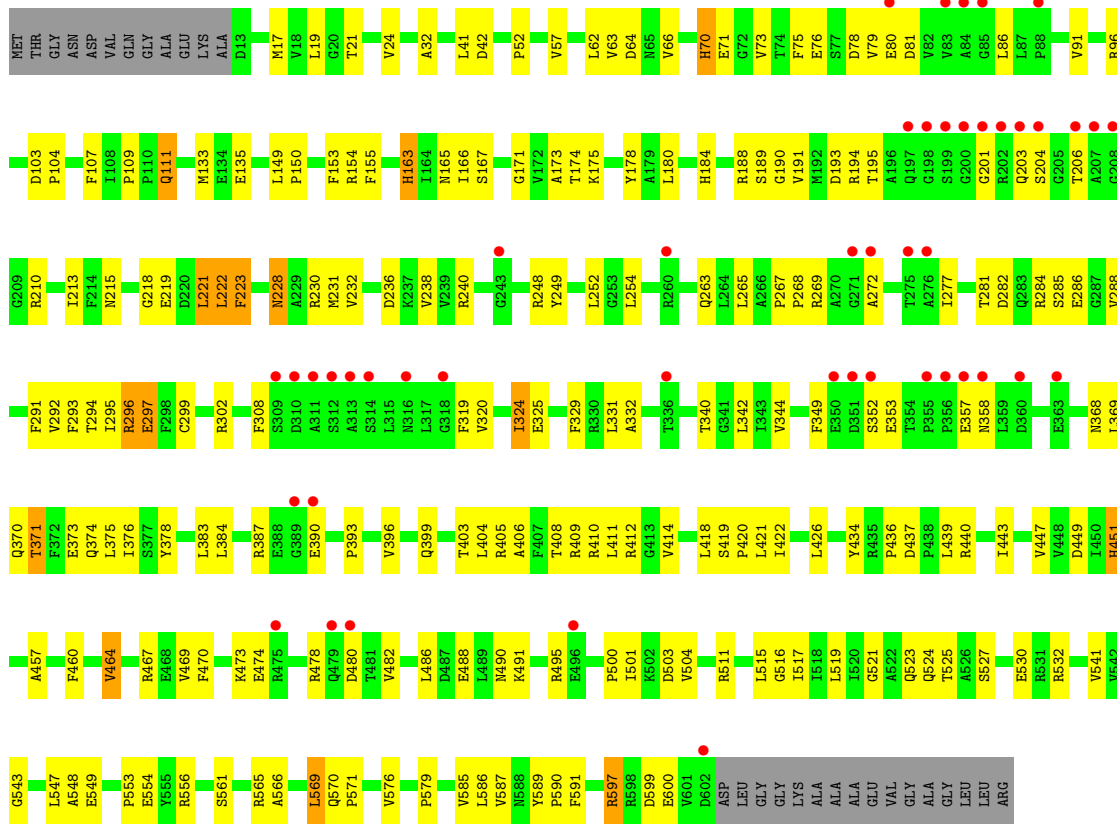


- Molecule 1: HerA

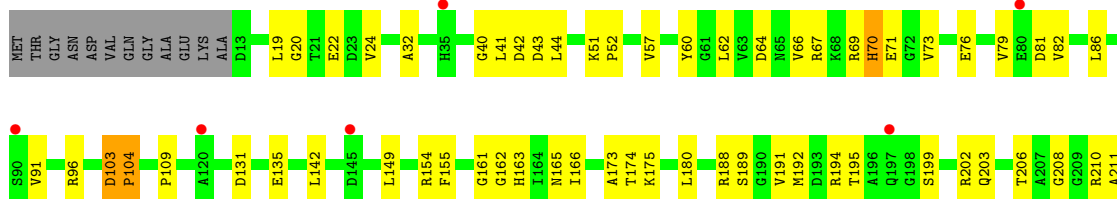


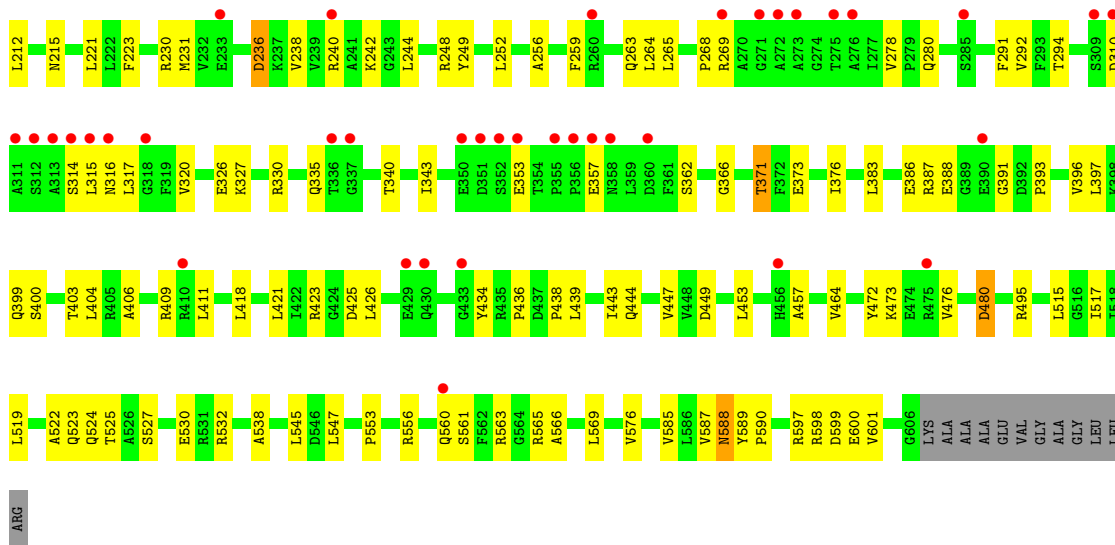


• Molecule 1: HerA

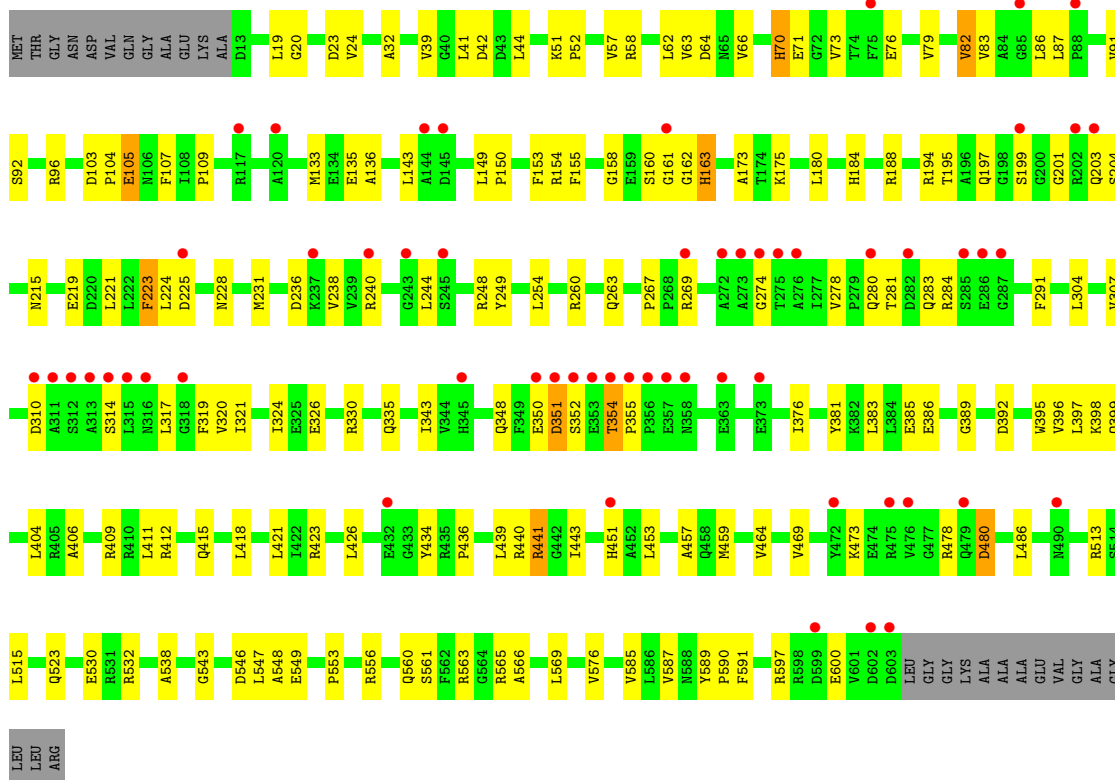


• Molecule 1: HerA



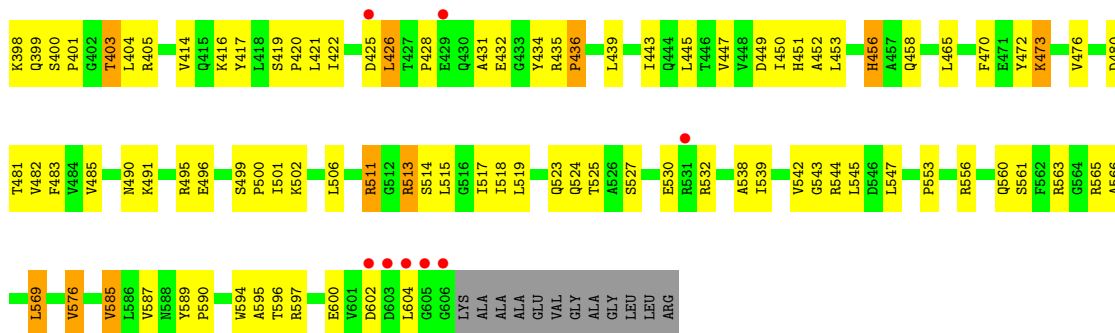


• Molecule 1: HerA

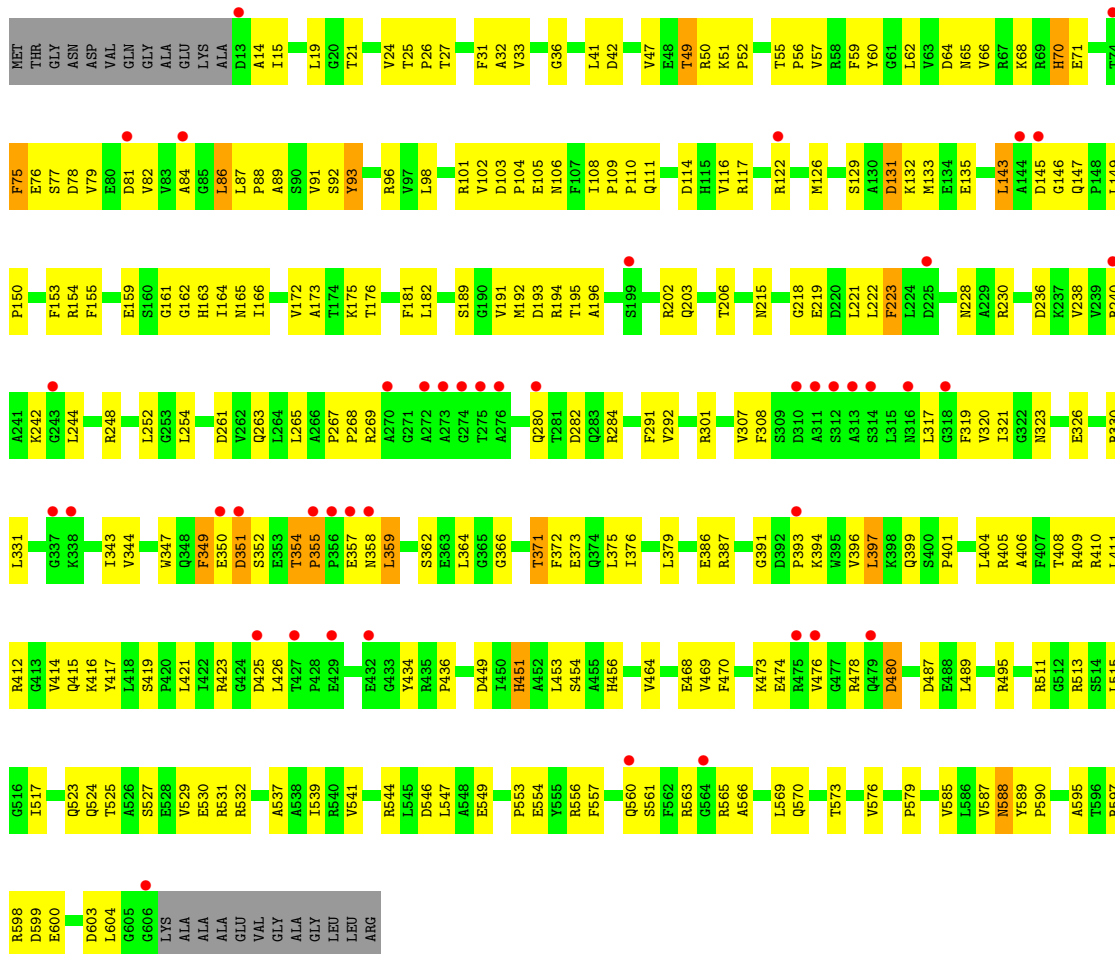


• Molecule 1: HerA





• Molecule 1: HerA



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	106.01Å 202.87Å 411.85Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	10.00 – 3.40 10.00 – 3.40	Depositor EDS
% Data completeness (in resolution range)	97.6 (10.00-3.40) 97.6 (10.00-3.40)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.73 (at 3.37Å)	Xtrriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.276 , 0.291 0.276 , 0.291	Depositor DCC
R_{free} test set	5820 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	80.1	Xtrriage
Anisotropy	0.431	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.38 , 39.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	55302	wwPDB-VP
Average B, all atoms (Å ²)	70.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.98% 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: ADP, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.40	1/4670 (0.0%)	0.59	3/6338 (0.0%)
1	B	0.46	0/4662	0.64	1/6327 (0.0%)
1	C	0.40	2/4686 (0.0%)	0.59	3/6359 (0.0%)
1	D	0.35	0/4670	0.57	0/6338
1	E	0.38	0/4665	0.58	0/6329
1	F	0.47	4/4670 (0.1%)	0.58	2/6338 (0.0%)
1	G	0.36	0/4686	0.59	2/6359 (0.0%)
1	H	0.36	0/4686	0.59	0/6359
1	I	0.57	1/4686 (0.0%)	0.70	1/6359 (0.0%)
1	J	0.36	0/4662	0.60	2/6327 (0.0%)
1	K	0.58	1/4686 (0.0%)	0.79	5/6359 (0.1%)
1	L	0.44	2/4686 (0.0%)	0.63	5/6359 (0.1%)
All	All	0.43	11/56115 (0.0%)	0.63	24/76151 (0.0%)

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

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

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	355	PRO	N-CA	13.83	1.70	1.47
1	F	356	PRO	N-CA	13.64	1.70	1.47
1	C	104	PRO	N-CA	12.91	1.69	1.47
1	L	355	PRO	N-CA	12.62	1.68	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	436	PRO	N-CD	-10.51	1.33	1.47
1	A	150	PRO	N-CD	10.30	1.62	1.47
1	I	355	PRO	C-N	8.62	1.50	1.34
1	F	354	THR	C-N	6.03	1.45	1.34
1	L	354	THR	C-N	5.95	1.45	1.34
1	F	355	PRO	C-N	5.95	1.45	1.34
1	C	103	ASP	C-N	5.53	1.44	1.34

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	104	PRO	N-CA-C	-8.91	88.94	112.10
1	L	355	PRO	CA-N-CD	-8.55	99.53	111.50
1	F	356	PRO	CA-N-CD	-8.41	99.72	111.50
1	C	104	PRO	CA-N-CD	-8.38	99.77	111.50
1	F	355	PRO	CA-N-CD	-8.14	100.11	111.50
1	K	436	PRO	N-CA-CB	-7.05	94.84	103.30
1	C	480	ASP	CB-CG-OD1	6.97	124.57	118.30
1	K	436	PRO	CA-N-CD	6.64	120.99	111.70
1	K	143	LEU	CA-CB-CG	6.34	129.88	115.30
1	A	104	PRO	N-CA-C	-6.29	95.76	112.10
1	G	387	ARG	CB-CA-C	5.89	122.19	110.40
1	A	162	GLY	C-N-CA	5.78	136.14	121.70
1	L	351	ASP	N-CA-CB	-5.74	100.28	110.60
1	L	146	GLY	C-N-CA	-5.64	107.60	121.70
1	I	104	PRO	N-CA-C	-5.61	97.52	112.10
1	L	355	PRO	N-CD-CG	5.51	111.46	103.20
1	A	150	PRO	N-CA-CB	5.47	109.86	103.30
1	J	283	GLN	N-CA-CB	-5.44	100.80	110.60
1	K	104	PRO	N-CA-C	-5.26	98.42	112.10
1	G	389	GLY	N-CA-C	5.26	126.25	113.10
1	J	383	LEU	CA-CB-CG	5.15	127.14	115.30
1	B	358	ASN	N-CA-C	-5.09	97.26	111.00
1	K	604	LEU	CA-CB-CG	5.03	126.88	115.30
1	L	349	PHE	N-CA-CB	-5.02	101.57	110.60

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	D	439	LEU	Mainchain
1	G	231	MET	Mainchain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4575	0	4570	170	1
1	B	4567	0	4566	208	3
1	C	4591	0	4587	156	2
1	D	4575	0	4569	172	1
1	E	4571	0	4568	209	5
1	F	4575	0	4570	136	0
1	G	4591	0	4587	149	0
1	H	4591	0	4587	165	1
1	I	4591	0	4587	213	0
1	J	4567	0	4566	216	1
1	K	4591	0	4587	333	1
1	L	4591	0	4587	235	1
2	D	1	0	0	0	0
2	H	1	0	0	0	0
3	A	27	0	12	9	0
3	B	27	0	12	6	0
3	C	27	0	12	3	0
3	D	27	0	12	3	0
3	E	27	0	12	15	0
3	F	27	0	12	3	0
3	G	27	0	12	2	0
3	H	27	0	12	1	0
3	I	27	0	12	0	0
3	J	27	0	12	4	0
3	K	27	0	12	6	0
3	L	27	0	12	1	0
All	All	55302	0	55075	2203	8

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 20.

All (2203) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:355:PRO:N	1:F:355:PRO:CA	1.70	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:104:PRO:N	1:C:104:PRO:CA	1.69	1.45
1:F:356:PRO:N	1:F:356:PRO:CA	1.70	1.36
1:L:354:THR:OG1	1:L:355:PRO:HD2	1.21	1.35
1:I:87:LEU:HD12	1:I:88:PRO:CD	1.54	1.35
1:L:355:PRO:N	1:L:355:PRO:CA	1.68	1.33
1:K:192:MET:O	1:K:196:ALA:HB2	1.23	1.31
1:I:87:LEU:CD1	1:I:88:PRO:HD2	1.63	1.25
1:J:396:VAL:CG2	1:J:404:LEU:HD11	1.68	1.22
1:I:41:LEU:O	1:I:63:VAL:HG12	1.34	1.19
1:K:473:LYS:HG2	1:K:517:ILE:HG12	1.19	1.19
1:E:175:LYS:NZ	1:E:523:GLN:C	1.94	1.18
1:J:282:ASP:CB	1:K:202:ARG:HH12	1.56	1.16
1:L:354:THR:OG1	1:L:355:PRO:CD	1.93	1.15
1:B:396:VAL:HG23	1:B:404:LEU:HD11	1.21	1.15
1:I:42:ASP:OD1	1:I:565:ARG:NH1	1.81	1.13
1:J:282:ASP:HB3	1:K:202:ARG:HH12	1.03	1.10
1:G:155:PHE:HA	1:G:161:GLY:HA3	1.12	1.10
1:D:82:VAL:HG22	1:D:87:LEU:HD22	1.25	1.09
1:J:455:ALA:HB2	1:K:511:ARG:HD2	1.31	1.09
1:K:473:LYS:HG2	1:K:517:ILE:CG1	1.83	1.08
1:B:219:GLU:HA	1:B:222:LEU:HD11	1.34	1.08
1:D:103:ASP:HB3	1:D:104:PRO:CD	1.83	1.08
1:J:354:THR:HG21	1:J:381:TYR:CE2	1.88	1.08
1:I:142:LEU:O	1:I:588:ASN:ND2	1.86	1.06
1:L:473:LYS:NZ	1:L:480:ASP:O	1.87	1.06
1:L:87:LEU:HD12	1:L:88:PRO:CD	1.85	1.06
1:H:223:PHE:CD1	1:H:601:VAL:HG21	1.91	1.06
1:A:155:PHE:CD2	1:A:579:PRO:HG2	1.90	1.05
1:F:57:VAL:HA	1:F:104:PRO:HG2	1.37	1.05
1:K:472:TYR:CE1	1:K:476:VAL:HG11	1.90	1.05
1:K:490:ASN:OD1	1:K:491:LYS:N	1.89	1.05
1:C:155:PHE:HA	1:C:161:GLY:HA3	1.38	1.04
1:B:219:GLU:HA	1:B:222:LEU:CD1	1.87	1.04
1:L:87:LEU:HD12	1:L:88:PRO:HD2	1.05	1.04
1:B:296:ARG:HH11	1:B:296:ARG:HG2	1.17	1.03
1:G:155:PHE:CA	1:G:161:GLY:HA3	1.88	1.03
1:J:219:GLU:OE1	1:J:283:GLN:HB2	1.57	1.03
1:D:82:VAL:CG2	1:D:87:LEU:HD22	1.87	1.03
1:J:349:PHE:HB2	1:J:352:SER:HB3	1.34	1.03
1:E:42:ASP:OD1	1:E:565:ARG:NH1	1.91	1.02
1:J:396:VAL:HG23	1:J:404:LEU:HD11	1.40	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:354:THR:HG21	1:J:381:TYR:HE2	1.17	1.02
1:E:175:LYS:NZ	1:E:523:GLN:O	1.90	1.02
1:B:42:ASP:OD1	1:B:565:ARG:NH1	1.91	1.02
1:D:103:ASP:HB3	1:D:104:PRO:HD3	1.03	1.02
1:A:42:ASP:OD1	1:A:565:ARG:NH1	1.92	1.01
1:B:277:ILE:HD11	1:B:434:TYR:CD2	1.95	1.01
1:C:42:ASP:OD1	1:C:565:ARG:NH1	1.92	1.01
1:A:349:PHE:CZ	1:A:356:PRO:HB3	1.96	1.01
1:L:376:ILE:HD13	1:L:411:LEU:HB3	1.42	1.01
1:H:42:ASP:OD1	1:H:565:ARG:NH1	1.95	1.00
1:K:192:MET:O	1:K:196:ALA:CB	2.09	1.00
1:K:235:GLU:OE2	1:K:248:ARG:NH1	1.93	1.00
1:J:396:VAL:HG21	1:J:404:LEU:HD11	1.41	1.00
1:D:103:ASP:CB	1:D:104:PRO:HD3	1.92	0.99
1:G:42:ASP:OD1	1:G:565:ARG:NH1	1.95	0.99
1:G:155:PHE:HA	1:G:161:GLY:CA	1.92	0.98
1:D:42:ASP:OD1	1:D:565:ARG:NH1	1.95	0.98
1:D:135:GLU:OE2	1:D:154:ARG:NH2	1.97	0.97
1:G:103:ASP:HB3	1:G:104:PRO:HD3	1.41	0.97
1:K:42:ASP:OD1	1:K:565:ARG:NH1	1.95	0.97
1:K:472:TYR:OH	1:K:476:VAL:HG21	1.64	0.97
1:D:70:HIS:HB3	1:D:73:VAL:HG21	1.44	0.97
1:F:42:ASP:OD1	1:F:565:ARG:NH1	1.97	0.96
1:J:174:THR:HG22	3:J:1001:ADP:H5'2	1.47	0.96
1:J:282:ASP:HB3	1:K:202:ARG:NH1	1.78	0.96
1:D:70:HIS:HB3	1:D:73:VAL:CG2	1.95	0.96
1:B:174:THR:HG22	3:B:1001:ADP:H5'2	1.48	0.96
1:B:215:ASN:ND2	1:B:449:ASP:OD1	1.99	0.95
1:A:388:GLU:O	1:A:388:GLU:CD	2.05	0.95
1:D:175:LYS:HG3	3:D:1001:ADP:O1B	1.64	0.95
1:E:175:LYS:HZ2	1:E:523:GLN:C	1.67	0.94
1:J:598:ARG:O	1:J:601:VAL:HG12	1.68	0.94
1:K:383:LEU:HD22	1:K:396:VAL:HG12	1.48	0.94
1:L:223:PHE:HE1	1:L:284:ARG:HB2	1.32	0.93
1:H:376:ILE:HD13	1:H:411:LEU:HB3	1.50	0.93
1:J:349:PHE:CZ	1:J:356:PRO:HB3	2.03	0.93
1:L:14:ALA:HA	1:L:117:ARG:HG2	1.49	0.93
1:L:87:LEU:CD1	1:L:88:PRO:HD2	1.97	0.93
1:L:86:LEU:H	1:L:86:LEU:HD22	1.30	0.92
1:D:161:GLY:CA	1:D:513:ARG:HE	1.83	0.92
1:K:142:LEU:HD12	1:K:248:ARG:HG2	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:354:THR:HG1	1:L:355:PRO:HD2	0.83	0.91
1:I:33:VAL:HB	1:I:93:TYR:CD2	2.06	0.91
1:I:219:GLU:HG3	1:I:222:LEU:HD22	1.52	0.91
1:J:396:VAL:HG13	1:J:396:VAL:O	1.68	0.91
1:K:247:ASP:O	1:K:251:LEU:HD12	1.69	0.91
1:A:386:GLU:HB3	1:A:391:GLY:HA2	1.53	0.91
1:I:173:ALA:HB1	1:I:543:GLY:HA3	1.51	0.91
1:E:174:THR:HG22	3:E:1001:ADP:O4'	1.71	0.90
1:K:473:LYS:CG	1:K:517:ILE:CG1	2.48	0.90
1:H:242:LYS:NZ	1:H:588:ASN:ND2	2.20	0.90
1:D:161:GLY:CA	1:D:513:ARG:HH21	1.82	0.90
1:C:57:VAL:HA	1:C:104:PRO:HG2	1.51	0.90
1:L:223:PHE:CE1	1:L:284:ARG:HB2	2.07	0.90
1:J:354:THR:CG2	1:J:381:TYR:CE2	2.56	0.89
1:J:324:ILE:CD1	1:J:407:PHE:CE2	2.54	0.89
1:K:142:LEU:HG	1:K:252:LEU:HD11	1.53	0.89
1:B:295:ILE:HD13	1:B:422:ILE:HG22	1.54	0.89
1:F:597:ARG:NH2	1:F:599:ASP:OD2	2.05	0.89
1:H:223:PHE:CZ	1:H:598:ARG:HD2	2.08	0.88
1:C:104:PRO:N	1:C:104:PRO:C	2.25	0.88
1:A:174:THR:HG22	3:A:1001:ADP:H5'2	1.54	0.88
1:H:223:PHE:CZ	1:H:598:ARG:CD	2.56	0.88
1:A:155:PHE:HA	1:A:161:GLY:HA3	1.55	0.88
1:B:223:PHE:HA	1:B:284:ARG:NH1	1.87	0.88
1:L:42:ASP:OD1	1:L:565:ARG:NH1	2.07	0.88
1:A:155:PHE:HD2	1:A:579:PRO:HG2	1.38	0.88
1:G:387:ARG:C	1:G:388:GLU:OE1	2.10	0.88
1:K:174:THR:HB	3:K:1001:ADP:H5'2	1.55	0.88
1:B:268:PRO:CG	1:B:292:VAL:HG12	2.04	0.87
1:K:57:VAL:HA	1:K:104:PRO:HG2	1.57	0.87
1:H:147:GLN:HA	1:H:147:GLN:NE2	1.87	0.87
1:J:405:ARG:O	1:J:409:ARG:N	2.06	0.87
1:F:135:GLU:OE2	1:F:154:ARG:NH2	2.08	0.87
1:K:215:ASN:O	1:K:215:ASN:ND2	2.07	0.87
1:A:473:LYS:NZ	1:A:480:ASP:O	2.08	0.87
1:J:597:ARG:HG3	1:J:599:ASP:OD1	1.73	0.87
1:G:238:VAL:HG11	1:G:248:ARG:HH21	1.40	0.86
1:K:215:ASN:ND2	1:K:218:GLY:O	2.06	0.86
1:B:218:GLY:HA2	1:B:451:HIS:CG	2.11	0.86
1:K:472:TYR:CZ	1:K:476:VAL:HG21	2.10	0.86
1:B:210:ARG:HB2	1:B:482:VAL:HG22	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:174:THR:CB	3:E:1001:ADP:H5'2	2.05	0.86
1:A:86:LEU:O	1:A:86:LEU:HD22	1.76	0.86
1:B:268:PRO:HG2	1:B:292:VAL:HG12	1.57	0.86
1:L:350:GLU:OE1	1:L:351:ASP:HB2	1.74	0.85
1:E:174:THR:HB	3:E:1001:ADP:H5'2	1.58	0.85
1:I:375:LEU:HD12	1:I:375:LEU:O	1.76	0.85
1:K:174:THR:CB	3:K:1001:ADP:H5'2	2.05	0.85
1:I:142:LEU:CB	1:I:588:ASN:HD21	1.88	0.85
1:K:472:TYR:HE1	1:K:476:VAL:HG11	1.36	0.85
1:C:238:VAL:HG11	1:C:248:ARG:HH21	1.41	0.85
1:K:304:LEU:O	1:K:304:LEU:HD22	1.76	0.85
1:H:223:PHE:HD1	1:H:601:VAL:HG21	1.39	0.85
1:D:352:SER:OG	1:D:385:GLU:OE2	1.95	0.85
1:A:349:PHE:HE1	1:A:356:PRO:HG3	1.42	0.85
1:E:473:LYS:HG3	1:E:517:ILE:HD11	1.57	0.85
1:B:296:ARG:HB2	1:B:340:THR:O	1.76	0.84
1:J:42:ASP:OD1	1:J:565:ARG:NH1	2.09	0.84
1:A:142:LEU:HG	1:A:252:LEU:HD11	1.59	0.84
1:G:387:ARG:O	1:G:388:GLU:CD	2.15	0.84
1:J:198:GLY:O	1:L:597:ARG:NH2	2.09	0.84
1:E:249:TYR:CE1	1:E:590:PRO:HB2	2.12	0.84
1:K:269:ARG:HG3	1:K:269:ARG:O	1.76	0.84
1:C:103:ASP:HB3	1:C:104:PRO:HD3	1.58	0.84
1:J:324:ILE:HD13	1:J:407:PHE:CE2	2.13	0.84
1:L:354:THR:HG1	1:L:355:PRO:CD	1.77	0.83
1:D:136:ALA:HB2	1:D:154:ARG:HE	1.43	0.83
1:J:349:PHE:HZ	1:J:356:PRO:HB3	1.42	0.83
1:K:246:ALA:O	1:K:251:LEU:HD11	1.78	0.83
1:D:396:VAL:HG23	1:D:404:LEU:HD11	1.59	0.83
1:I:87:LEU:HD12	1:I:88:PRO:HD2	0.83	0.83
1:L:357:GLU:OE2	1:L:358:ASN:OD1	1.95	0.83
1:E:248:ARG:HH11	1:E:590:PRO:HA	1.41	0.83
1:B:331:LEU:HD23	1:B:342:LEU:HD21	1.60	0.82
1:L:218:GLY:HA2	1:L:451:HIS:CD2	2.14	0.82
1:A:230:ARG:NH1	1:A:599:ASP:OD1	2.12	0.82
1:C:135:GLU:OE2	1:C:154:ARG:NH2	2.13	0.82
1:J:455:ALA:HB2	1:K:511:ARG:CD	2.09	0.82
1:G:135:GLU:OE2	1:G:154:ARG:NH2	2.12	0.82
1:E:175:LYS:HZ1	1:E:523:GLN:C	1.81	0.82
1:F:238:VAL:HG11	1:F:248:ARG:HH21	1.45	0.82
1:J:401:PRO:HB2	1:K:397:LEU:HB3	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:349:PHE:CE1	1:A:356:PRO:HG3	2.15	0.82
1:B:490:ASN:OD1	1:B:491:LYS:N	2.13	0.81
1:J:215:ASN:HD21	1:J:219:GLU:H	1.27	0.81
1:C:230:ARG:NH1	1:C:599:ASP:OD1	2.12	0.81
1:I:142:LEU:HG	1:I:252:LEU:HD11	1.62	0.81
1:J:378:TYR:OH	1:J:382:LYS:NZ	2.12	0.81
1:H:238:VAL:HG11	1:H:248:ARG:HH21	1.45	0.81
1:J:349:PHE:CB	1:J:352:SER:HB3	2.11	0.81
1:E:213:ILE:HG13	1:E:485:VAL:HB	1.61	0.81
1:H:319:PHE:HZ	1:G:315:LEU:HD21	1.46	0.81
1:E:175:LYS:HZ1	1:E:524:GLN:N	1.79	0.81
1:F:566:ALA:HA	1:F:569:LEU:HG	1.62	0.81
1:G:173:ALA:O	3:G:1001:ADP:O3B	1.97	0.81
1:E:176:THR:OG1	3:E:1001:ADP:O3B	1.99	0.81
1:E:149:LEU:HD12	1:E:150:PRO:HD2	1.62	0.81
1:E:175:LYS:NZ	1:E:524:GLN:N	2.28	0.81
1:J:238:VAL:HG11	1:J:248:ARG:HH21	1.46	0.81
1:K:315:LEU:HB3	1:K:317:LEU:HD13	1.60	0.80
1:J:566:ALA:HA	1:J:569:LEU:HG	1.63	0.80
1:K:247:ASP:O	1:K:251:LEU:CD1	2.29	0.80
1:C:208:GLY:O	1:C:480:ASP:HB2	1.81	0.80
1:E:249:TYR:CE1	1:E:590:PRO:CB	2.64	0.80
1:I:101:ARG:NH2	1:I:131:ASP:OD2	2.14	0.80
1:C:210:ARG:NH1	1:C:443:ILE:O	2.14	0.80
1:J:282:ASP:CB	1:K:202:ARG:NH1	2.41	0.80
1:B:296:ARG:HG2	1:B:296:ARG:NH1	1.91	0.80
1:J:402:GLY:HA3	1:K:319:PHE:CD1	2.17	0.80
1:J:324:ILE:HD12	1:J:407:PHE:CZ	2.16	0.80
1:A:57:VAL:HA	1:A:104:PRO:HG2	1.64	0.80
1:F:282:ASP:N	1:F:282:ASP:OD1	2.09	0.80
1:K:215:ASN:ND2	1:K:451:HIS:HD2	1.80	0.80
1:K:472:TYR:CE1	1:K:476:VAL:CG1	2.64	0.80
1:K:513:ARG:HH11	1:K:513:ARG:HB2	1.48	0.79
1:A:320:VAL:HG22	1:A:399:GLN:HG2	1.62	0.79
1:F:386:GLU:HB3	1:F:391:GLY:HA2	1.65	0.79
1:G:109:PRO:HG3	1:I:66:VAL:HG13	1.64	0.79
1:K:213:ILE:HD13	1:K:221:LEU:CD2	2.12	0.79
1:K:597:ARG:CG	1:K:600:GLU:HG3	2.12	0.79
1:D:162:GLY:HA3	1:D:538:ALA:CB	2.13	0.79
1:L:238:VAL:HG11	1:L:248:ARG:HH21	1.47	0.79
1:K:383:LEU:HD23	1:K:396:VAL:HG13	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:423:ARG:HG2	1:I:423:ARG:HH11	1.48	0.78
1:G:386:GLU:HB3	1:G:391:GLY:HA2	1.63	0.78
1:B:396:VAL:CG2	1:B:404:LEU:HD11	2.11	0.78
1:K:383:LEU:CD2	1:K:396:VAL:HG12	2.12	0.78
1:D:201:GLY:HA2	1:D:204:SER:OG	1.83	0.78
1:K:155:PHE:HA	1:K:161:GLY:HA3	1.66	0.78
1:C:400:SER:HB2	1:D:398:LYS:NZ	1.99	0.78
1:D:161:GLY:HA2	1:D:513:ARG:HE	1.46	0.78
1:B:223:PHE:CE1	1:B:284:ARG:HB2	2.19	0.77
1:I:405:ARG:HH21	1:I:405:ARG:HG3	1.49	0.77
1:K:213:ILE:HG13	1:K:485:VAL:HB	1.65	0.77
1:J:396:VAL:O	1:J:396:VAL:CG1	2.33	0.77
1:K:57:VAL:HG13	1:K:104:PRO:HD2	1.67	0.77
1:H:242:LYS:NZ	1:H:588:ASN:HD21	1.82	0.77
1:J:324:ILE:CD1	1:J:407:PHE:CZ	2.66	0.77
1:H:230:ARG:NH1	1:H:599:ASP:OD1	2.17	0.77
1:K:473:LYS:CG	1:K:517:ILE:HG13	2.14	0.77
1:H:412:ARG:HH11	1:H:415:GLN:HE22	1.33	0.77
1:L:26:PRO:HD3	1:L:109:PRO:HG3	1.64	0.77
1:C:202:ARG:NH2	1:C:202:ARG:HG3	2.00	0.77
1:E:175:LYS:HZ3	1:E:524:GLN:HA	1.48	0.77
1:K:304:LEU:HD13	1:K:321:ILE:HG23	1.67	0.76
1:C:202:ARG:HG3	1:C:202:ARG:HH21	1.49	0.76
1:K:473:LYS:HD2	1:K:515:LEU:O	1.84	0.76
1:A:76:GLU:HA	1:B:21:THR:HG21	1.67	0.76
1:B:478:ARG:HG3	1:B:516:GLY:HA3	1.66	0.76
1:I:33:VAL:CB	1:I:93:TYR:CD2	2.68	0.76
1:L:49:THR:OG1	1:L:114:ASP:OD2	2.04	0.76
1:A:197:GLN:OE1	1:A:197:GLN:HA	1.84	0.76
1:A:248:ARG:NH1	1:A:589:TYR:O	2.19	0.76
1:L:349:PHE:HB2	1:L:352:SER:HB3	1.65	0.76
1:J:402:GLY:C	1:K:319:PHE:CE1	2.58	0.76
1:K:136:ALA:HA	1:K:195:THR:CG2	2.15	0.76
1:D:354:THR:OG1	1:D:355:PRO:HD2	1.85	0.76
1:K:135:GLU:OE2	1:K:154:ARG:NH2	2.17	0.76
1:B:387:ARG:HB2	1:B:390:GLU:HG2	1.68	0.76
1:D:162:GLY:HA3	1:D:538:ALA:HB2	1.68	0.76
1:K:286:GLU:HG2	1:K:286:GLU:O	1.85	0.76
1:I:33:VAL:HB	1:I:93:TYR:HD2	1.47	0.75
1:K:173:ALA:HB1	1:K:543:GLY:HA3	1.67	0.75
1:K:296:ARG:NH1	1:K:339:GLY:O	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:513:ARG:HB2	1:K:513:ARG:NH1	2.00	0.75
1:E:210:ARG:NH1	1:E:443:ILE:O	2.19	0.75
1:K:355:PRO:HB2	1:K:357:GLU:HG3	1.68	0.75
1:K:449:ASP:OD1	1:K:451:HIS:CD2	2.39	0.75
1:C:315:LEU:HD22	1:D:319:PHE:HZ	1.50	0.75
1:I:397:LEU:HB3	1:K:401:PRO:HG2	1.67	0.75
1:A:155:PHE:CE2	1:A:579:PRO:HG2	2.21	0.75
1:B:219:GLU:CA	1:B:222:LEU:CD1	2.64	0.75
1:D:350:GLU:HG2	1:D:351:ASP:N	2.01	0.75
1:G:230:ARG:NH1	1:G:599:ASP:OD1	2.20	0.75
1:L:218:GLY:H	1:L:451:HIS:HB2	1.50	0.75
1:D:566:ALA:HA	1:D:569:LEU:HG	1.67	0.75
1:K:597:ARG:HG3	1:K:600:GLU:HG3	1.69	0.74
1:L:86:LEU:HD22	1:L:86:LEU:N	2.02	0.74
1:E:174:THR:CG2	3:E:1001:ADP:O4'	2.34	0.74
1:J:402:GLY:C	1:K:319:PHE:CD1	2.61	0.74
1:J:402:GLY:CA	1:K:319:PHE:CD1	2.70	0.74
1:D:70:HIS:CB	1:D:73:VAL:HG21	2.18	0.74
1:F:165:ASN:HD21	1:F:523:GLN:HE22	1.33	0.74
1:B:282:ASP:OD2	1:C:202:ARG:HD3	1.88	0.74
1:E:101:ARG:HH12	1:E:132:LYS:HE2	1.52	0.74
1:I:588:ASN:HD22	1:I:588:ASN:H	1.36	0.74
1:H:315:LEU:HD22	1:L:319:PHE:HZ	1.52	0.74
1:L:154:ARG:NH1	1:L:159:GLU:OE2	2.20	0.74
1:J:87:LEU:O	1:J:87:LEU:HD22	1.88	0.74
1:L:215:ASN:HB3	1:L:449:ASP:HA	1.69	0.74
1:E:149:LEU:HD21	1:E:576:VAL:HG21	1.67	0.74
1:E:225:ASP:OD1	1:E:226:LYS:N	2.21	0.74
1:K:384:LEU:HD22	1:K:405:ARG:HH11	1.52	0.73
1:H:320:VAL:HG22	1:H:399:GLN:HG2	1.68	0.73
1:D:76:GLU:HB3	1:E:71:GLU:OE2	1.87	0.73
1:I:23:ASP:OD1	1:K:69:ARG:NE	2.21	0.73
1:I:135:GLU:OE2	1:I:154:ARG:NH2	2.19	0.73
1:L:597:ARG:NH2	1:L:599:ASP:OD2	2.22	0.73
1:H:149:LEU:HD23	1:H:587:VAL:HG11	1.70	0.73
1:A:146:GLY:HA2	1:A:251:LEU:HD23	1.70	0.73
1:I:376:ILE:HD13	1:I:411:LEU:HB3	1.70	0.73
1:J:103:ASP:HB3	1:J:104:PRO:HD3	1.71	0.73
1:H:549:GLU:OE2	1:L:531:ARG:NH2	2.22	0.73
1:A:388:GLU:O	1:A:388:GLU:OE1	2.05	0.73
1:I:397:LEU:HD22	1:I:397:LEU:N	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:386:GLU:HB3	1:C:391:GLY:HA2	1.71	0.73
1:F:173:ALA:O	3:F:1001:ADP:O1B	2.06	0.73
1:E:219:GLU:OE1	1:E:283:GLN:HB2	1.88	0.73
1:I:511:ARG:NH1	1:K:456:HIS:HE1	1.86	0.73
1:L:133:MET:SD	1:L:150:PRO:HB2	2.28	0.73
1:A:349:PHE:HZ	1:A:356:PRO:HB3	1.50	0.73
1:K:383:LEU:CD2	1:K:396:VAL:CG1	2.66	0.73
1:L:86:LEU:H	1:L:86:LEU:CD2	2.01	0.73
1:H:135:GLU:OE2	1:H:154:ARG:NH2	2.20	0.73
1:G:263:GLN:HE21	1:G:265:LEU:HD21	1.54	0.72
1:K:309:SER:HB2	1:K:500:PRO:HD2	1.71	0.72
1:G:323:ASN:OD1	1:I:405:ARG:HD2	1.89	0.72
1:J:402:GLY:CA	1:K:319:PHE:HD1	2.01	0.72
1:C:396:VAL:HG23	1:C:404:LEU:HD11	1.70	0.72
1:L:215:ASN:ND2	1:L:449:ASP:OD1	2.21	0.72
1:H:19:LEU:HD13	1:H:32:ALA:HB2	1.72	0.72
1:H:412:ARG:HH11	1:H:415:GLN:NE2	1.87	0.72
1:A:149:LEU:HD21	1:A:576:VAL:HG21	1.70	0.72
1:B:218:GLY:CA	1:B:451:HIS:CD2	2.72	0.72
1:J:310:ASP:OD2	1:J:314:SER:HB3	1.90	0.72
1:J:359:LEU:HD22	1:J:374:GLN:NE2	2.04	0.72
1:A:149:LEU:HD22	1:A:587:VAL:HG11	1.70	0.72
1:B:219:GLU:HA	1:B:222:LEU:HD12	1.72	0.72
1:K:473:LYS:HG3	1:K:517:ILE:HG13	1.72	0.72
1:J:135:GLU:OE2	1:J:154:ARG:NH2	2.21	0.71
1:E:320:VAL:HG22	1:E:399:GLN:HG2	1.72	0.71
1:B:349:PHE:HB2	1:B:352:SER:HB3	1.72	0.71
1:L:248:ARG:NH1	1:L:589:TYR:O	2.23	0.71
1:C:400:SER:HB2	1:D:398:LYS:HZ3	1.56	0.71
1:I:228:ASN:ND2	1:I:600:GLU:HB3	2.05	0.71
1:I:29:PHE:CZ	1:I:47:VAL:HG11	2.26	0.71
1:I:338:LYS:HE3	1:I:428:PRO:HG2	1.73	0.71
1:K:310:ASP:OD2	1:K:456:HIS:CG	2.43	0.71
1:E:386:GLU:HB3	1:E:391:GLY:HA2	1.71	0.71
1:L:163:HIS:HB2	1:L:537:ALA:HA	1.73	0.71
1:C:208:GLY:O	1:C:480:ASP:CB	2.39	0.71
1:E:173:ALA:HB1	1:E:543:GLY:HA3	1.73	0.71
1:F:248:ARG:NH1	1:F:589:TYR:O	2.24	0.71
1:A:83:VAL:HG21	1:B:17:MET:HE2	1.72	0.71
3:A:1001:ADP:O1A	3:A:1001:ADP:H3'	1.90	0.71
1:C:155:PHE:CA	1:C:161:GLY:HA3	2.18	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:566:ALA:HA	1:I:569:LEU:HG	1.72	0.70
1:J:21:THR:HG23	1:L:79:VAL:HG21	1.72	0.70
1:H:149:LEU:HD12	1:H:150:PRO:HD2	1.73	0.70
1:B:218:GLY:HA3	1:B:451:HIS:CD2	2.26	0.70
1:J:406:ALA:HA	1:J:409:ARG:HG2	1.74	0.70
1:K:174:THR:CG2	3:K:1001:ADP:H5'2	2.21	0.70
1:K:400:SER:HG	1:K:403:THR:HG1	1.35	0.70
1:L:192:MET:O	1:L:196:ALA:HB2	1.92	0.70
1:L:291:PHE:HB2	1:L:436:PRO:HG3	1.74	0.70
1:K:396:VAL:HG23	1:K:396:VAL:O	1.91	0.70
1:A:291:PHE:HB2	1:A:436:PRO:HG3	1.74	0.70
1:D:263:GLN:HB2	1:D:443:ILE:HG21	1.74	0.70
1:B:248:ARG:NH1	1:B:589:TYR:O	2.25	0.70
1:I:405:ARG:HG3	1:I:405:ARG:NH2	2.06	0.70
1:K:304:LEU:CD1	1:K:321:ILE:HG23	2.21	0.70
1:B:75:PHE:CD1	1:C:71:GLU:HG3	2.27	0.70
1:B:174:THR:CG2	3:B:1001:ADP:H5'2	2.20	0.70
1:I:373:GLU:OE1	1:I:373:GLU:N	2.24	0.70
1:K:368:ASN:HD22	1:K:370:GLN:HG2	1.56	0.70
1:A:238:VAL:HG11	1:A:248:ARG:HH21	1.55	0.69
1:B:103:ASP:HB3	1:B:104:PRO:HD3	1.72	0.69
1:G:309:SER:O	1:G:309:SER:OG	2.04	0.69
1:A:83:VAL:HG21	1:B:17:MET:CE	2.22	0.69
1:C:315:LEU:HG	1:C:316:ASN:N	2.07	0.69
1:I:71:GLU:OE1	1:K:76:GLU:HB3	1.93	0.69
1:K:142:LEU:HG	1:K:252:LEU:CD1	2.22	0.69
1:A:103:ASP:HB3	1:A:104:PRO:HD3	1.74	0.69
1:B:470:PHE:CE1	1:B:515:LEU:HD23	2.27	0.69
1:D:136:ALA:HB2	1:D:154:ARG:NE	2.06	0.69
1:G:597:ARG:HG2	1:G:600:GLU:HG3	1.75	0.69
1:I:353:GLU:OE1	1:I:353:GLU:HA	1.91	0.69
3:J:1001:ADP:O1A	3:J:1001:ADP:H3'	1.92	0.69
1:I:261:ASP:HB2	1:I:444:GLN:H	1.55	0.69
1:A:174:THR:CG2	3:A:1001:ADP:H5'2	2.22	0.69
1:F:598:ARG:O	1:F:601:VAL:HG12	1.91	0.69
1:I:511:ARG:HH12	1:K:456:HIS:HE1	1.37	0.69
1:C:383:LEU:HG	1:C:404:LEU:HD13	1.74	0.69
1:D:58:ARG:HB2	1:D:103:ASP:HB2	1.74	0.69
1:K:310:ASP:OD2	1:K:456:HIS:CD2	2.46	0.69
1:L:566:ALA:HA	1:L:569:LEU:HG	1.75	0.69
1:C:19:LEU:HD13	1:C:32:ALA:HB2	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:19:LEU:HD13	1:D:32:ALA:HB2	1.75	0.69
1:F:142:LEU:HG	1:F:252:LEU:HD11	1.73	0.69
1:J:87:LEU:HD13	1:J:87:LEU:H	1.56	0.69
1:K:530:GLU:OE2	1:K:532:ARG:HD3	1.93	0.69
1:D:392:ASP:O	1:D:396:VAL:HG12	1.93	0.69
1:J:579:PRO:O	1:L:544:ARG:NH1	2.26	0.69
1:K:383:LEU:HD23	1:K:396:VAL:CG1	2.21	0.69
1:H:218:GLY:HA2	1:H:451:HIS:HB2	1.75	0.68
1:I:356:PRO:HA	1:I:359:LEU:HD22	1.75	0.68
1:K:103:ASP:HB3	1:K:104:PRO:HD3	1.74	0.68
1:H:223:PHE:CZ	1:H:598:ARG:HD3	2.27	0.68
1:A:153:PHE:CE2	1:A:195:THR:HG21	2.27	0.68
1:B:373:GLU:OE1	1:B:373:GLU:N	2.23	0.68
1:D:350:GLU:HG2	1:D:351:ASP:H	1.57	0.68
1:K:247:ASP:OD1	1:K:247:ASP:N	2.24	0.68
1:K:350:GLU:OE1	1:K:350:GLU:HA	1.93	0.68
1:D:161:GLY:CA	1:D:513:ARG:NH2	2.55	0.68
1:B:297:GLU:HA	1:B:297:GLU:OE2	1.92	0.68
1:B:383:LEU:HD22	1:B:404:LEU:HD22	1.76	0.68
1:J:218:GLY:HA2	1:J:451:HIS:CB	2.23	0.68
1:D:87:LEU:HD23	1:D:87:LEU:C	2.13	0.68
1:E:228:ASN:ND2	1:E:600:GLU:OE1	2.21	0.68
1:I:155:PHE:HA	1:I:161:GLY:HA3	1.73	0.68
1:L:60:TYR:HE1	1:L:103:ASP:HB2	1.57	0.68
1:L:149:LEU:HD22	1:L:587:VAL:HG11	1.76	0.68
1:B:135:GLU:OE2	1:B:154:ARG:NH2	2.27	0.68
1:B:293:PHE:O	1:B:422:ILE:HA	1.92	0.68
1:D:348:GLN:OE1	1:J:348:GLN:NE2	2.21	0.68
1:E:19:LEU:HD13	1:E:32:ALA:HB2	1.75	0.68
1:B:267:PRO:HD3	1:B:449:ASP:O	1.94	0.68
1:C:142:LEU:HG	1:C:252:LEU:HD11	1.74	0.68
1:C:149:LEU:HD13	1:C:585:VAL:HG21	1.75	0.68
1:A:149:LEU:HD13	1:A:585:VAL:HG21	1.76	0.68
1:L:84:ALA:HB3	1:L:86:LEU:CD2	2.24	0.68
1:L:102:VAL:HG23	1:L:105:GLU:HA	1.76	0.68
1:L:349:PHE:HB2	1:L:352:SER:CB	2.24	0.68
1:B:180:LEU:HD11	1:B:221:LEU:HD21	1.74	0.67
1:B:597:ARG:NH2	1:B:599:ASP:OD2	2.27	0.67
1:F:263:GLN:HE21	1:F:265:LEU:HD21	1.57	0.67
1:H:219:GLU:CD	1:H:283:GLN:HB2	2.14	0.67
1:H:354:THR:HG23	1:H:355:PRO:HD2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:78:ASP:O	1:L:82:VAL:HG23	1.93	0.67
1:I:399:GLN:OE1	1:I:399:GLN:HA	1.94	0.67
1:K:280:GLN:HG2	1:K:452:ALA:CB	2.25	0.67
1:C:22:GLU:OE2	1:C:67:ARG:NH2	2.25	0.67
1:I:142:LEU:HG	1:I:252:LEU:CD1	2.24	0.67
1:H:358:ASN:OD1	1:H:358:ASN:N	2.27	0.67
1:D:161:GLY:CA	1:D:513:ARG:NE	2.57	0.67
1:A:76:GLU:HB3	1:B:71:GLU:OE2	1.94	0.67
1:B:277:ILE:HD11	1:B:434:TYR:CE2	2.30	0.67
1:J:380:GLU:OE2	1:J:412:ARG:NH2	2.21	0.67
1:L:19:LEU:HD13	1:L:32:ALA:HB2	1.76	0.67
1:C:41:LEU:HB2	1:D:107:PHE:HB3	1.77	0.67
1:C:597:ARG:CG	1:C:600:GLU:HG3	2.24	0.67
1:G:279:PRO:HB2	1:G:281:THR:HG23	1.76	0.67
1:K:228:ASN:ND2	1:K:600:GLU:OE1	2.28	0.66
1:H:223:PHE:HZ	1:H:598:ARG:CD	2.05	0.66
1:I:386:GLU:HB3	1:I:391:GLY:HA2	1.76	0.66
1:I:423:ARG:HG2	1:I:423:ARG:NH1	2.08	0.66
1:J:548:ALA:HB2	1:K:556:ARG:HB2	1.77	0.66
1:A:347:TRP:CZ2	1:A:354:THR:HG21	2.30	0.66
1:I:495:ARG:NH2	1:I:554:GLU:OE2	2.28	0.66
1:K:163:HIS:HB3	1:K:519:LEU:O	1.94	0.66
1:L:362:SER:N	1:L:366:GLY:O	2.27	0.66
1:L:373:GLU:N	1:L:373:GLU:OE1	2.27	0.66
1:H:388:GLU:HG3	1:E:388:GLU:HG2	1.75	0.66
1:E:149:LEU:CD2	1:E:587:VAL:HG11	2.25	0.66
1:E:184:HIS:CE1	1:E:188:ARG:HG3	2.30	0.66
1:J:231:MET:CE	1:J:256:ALA:HB1	2.24	0.66
1:J:349:PHE:O	1:J:349:PHE:CD1	2.47	0.66
1:A:142:LEU:HG	1:A:252:LEU:CD1	2.26	0.66
1:J:401:PRO:CB	1:K:397:LEU:HB3	2.26	0.66
1:I:41:LEU:O	1:I:63:VAL:O	2.14	0.66
1:I:142:LEU:CB	1:I:588:ASN:ND2	2.59	0.66
1:I:215:ASN:HB2	1:I:221:LEU:HB2	1.77	0.66
1:J:215:ASN:HB2	1:J:221:LEU:HB2	1.76	0.66
1:A:155:PHE:HA	1:A:161:GLY:CA	2.24	0.66
1:E:469:VAL:O	1:E:473:LYS:HG2	1.96	0.66
1:G:238:VAL:HG11	1:G:248:ARG:NH2	2.10	0.66
1:K:248:ARG:HA	1:K:251:LEU:HD13	1.78	0.66
1:C:248:ARG:NH1	1:C:589:TYR:O	2.29	0.66
1:H:267:PRO:HB3	1:H:421:LEU:HD21	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:277:ILE:HD11	1:B:434:TYR:HD2	1.60	0.65
1:C:155:PHE:HA	1:C:161:GLY:CA	2.20	0.65
1:A:143:LEU:HD12	1:A:143:LEU:C	2.15	0.65
1:B:478:ARG:O	1:B:478:ARG:HG2	1.96	0.65
1:B:495:ARG:NH2	1:B:554:GLU:OE2	2.29	0.65
1:E:175:LYS:HZ3	1:E:524:GLN:CA	2.10	0.65
1:A:153:PHE:CD2	1:A:195:THR:HG21	2.32	0.65
1:E:175:LYS:HD2	1:E:522:ALA:HB1	1.77	0.65
1:B:218:GLY:HA2	1:B:451:HIS:CD2	2.31	0.65
1:K:189:SER:OG	1:K:191:VAL:HG12	1.95	0.65
1:H:412:ARG:NH1	1:H:415:GLN:HE22	1.92	0.65
1:I:142:LEU:HB3	1:I:588:ASN:HD21	1.60	0.65
1:J:398:LYS:HG3	1:J:398:LYS:O	1.96	0.65
1:J:553:PRO:HA	1:J:556:ARG:HD3	1.77	0.65
1:K:188:ARG:HH11	1:K:188:ARG:HG2	1.61	0.65
1:L:103:ASP:HB3	1:L:104:PRO:HD3	1.77	0.65
1:C:242:LYS:HB2	1:C:244:LEU:HD13	1.79	0.65
1:K:304:LEU:HD22	1:K:304:LEU:C	2.14	0.65
1:H:195:THR:O	1:H:203:GLN:NE2	2.29	0.65
1:K:299:CYS:HB3	1:K:328:LEU:HB3	1.78	0.65
1:A:553:PRO:O	1:A:556:ARG:HG2	1.97	0.65
1:I:149:LEU:HD22	1:I:587:VAL:HG11	1.77	0.65
1:J:396:VAL:HG21	1:J:404:LEU:CD1	2.24	0.65
1:K:387:ARG:O	1:K:388:GLU:HG2	1.97	0.65
1:A:164:ILE:HG12	1:A:539:ILE:HB	1.79	0.64
1:B:268:PRO:HG3	1:B:292:VAL:HG12	1.76	0.64
1:I:588:ASN:HD22	1:I:588:ASN:N	1.90	0.64
1:H:57:VAL:HA	1:H:104:PRO:HG2	1.77	0.64
1:B:368:ASN:HD22	1:B:370:GLN:HG2	1.61	0.64
1:I:473:LYS:HG3	1:I:517:ILE:HD11	1.78	0.64
1:J:553:PRO:O	1:J:556:ARG:HG2	1.97	0.64
3:K:1001:ADP:H3'	3:K:1001:ADP:O1A	1.96	0.64
1:C:315:LEU:HG	1:C:316:ASN:H	1.63	0.64
1:D:161:GLY:HA2	1:D:513:ARG:NE	2.12	0.64
1:K:215:ASN:ND2	1:K:451:HIS:CD2	2.63	0.64
1:H:473:LYS:NZ	1:H:480:ASP:O	2.28	0.64
1:A:474:GLU:OE1	1:A:511:ARG:NH2	2.29	0.64
1:C:165:ASN:HD21	1:C:523:GLN:HE22	1.43	0.64
1:E:143:LEU:C	1:E:143:LEU:HD12	2.18	0.64
1:G:248:ARG:NH1	1:G:589:TYR:O	2.31	0.64
1:D:158:GLY:HA2	1:D:161:GLY:HA2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:33:VAL:HG11	1:I:93:TYR:CE2	2.33	0.64
1:I:142:LEU:HB2	1:I:588:ASN:ND2	2.12	0.64
1:L:173:ALA:O	3:L:1001:ADP:O3B	2.16	0.64
1:A:149:LEU:HD21	1:A:576:VAL:CG2	2.27	0.64
1:A:175:LYS:N	3:A:1001:ADP:O1B	2.31	0.64
1:C:566:ALA:HA	1:C:569:LEU:HG	1.80	0.64
1:J:213:ILE:HG12	1:J:221:LEU:CD1	2.27	0.64
1:A:530:GLU:OE2	1:A:532:ARG:HD3	1.97	0.64
1:D:70:HIS:HB3	1:D:73:VAL:HG23	1.76	0.64
1:E:204:SER:O	1:E:479:GLN:O	2.15	0.64
1:K:495:ARG:HH21	1:K:527:SER:HA	1.63	0.64
1:J:359:LEU:CD2	1:J:374:GLN:NE2	2.61	0.64
1:K:597:ARG:HG2	1:K:600:GLU:HG3	1.80	0.64
1:A:566:ALA:HA	1:A:569:LEU:HG	1.79	0.63
1:B:219:GLU:CA	1:B:222:LEU:HD12	2.28	0.63
1:I:103:ASP:HB3	1:I:104:PRO:HD3	1.80	0.63
1:D:324:ILE:HD11	1:D:383:LEU:HD11	1.80	0.63
1:I:400:SER:OG	1:I:401:PRO:HD2	1.98	0.63
1:I:421:LEU:HD11	1:I:453:LEU:HD13	1.81	0.63
1:J:86:LEU:HD23	1:J:86:LEU:N	2.12	0.63
1:D:201:GLY:CA	1:D:204:SER:OG	2.46	0.63
1:J:354:THR:CG2	1:J:381:TYR:CZ	2.81	0.63
1:G:566:ALA:HA	1:G:569:LEU:HG	1.81	0.63
1:I:375:LEU:HD12	1:I:375:LEU:C	2.16	0.63
1:J:405:ARG:NE	1:K:323:ASN:OD1	2.32	0.63
1:H:91:VAL:HG11	1:L:111:GLN:HE22	1.64	0.63
1:G:315:LEU:HB3	1:G:317:LEU:HD13	1.81	0.63
1:I:547:LEU:HD12	1:I:547:LEU:H	1.63	0.63
1:L:19:LEU:H	1:L:31:PHE:HA	1.62	0.63
1:L:222:LEU:N	1:L:222:LEU:HD12	2.13	0.63
1:H:218:GLY:HA2	1:H:451:HIS:CB	2.29	0.63
1:D:161:GLY:HA3	1:D:513:ARG:HH21	1.63	0.63
1:B:189:SER:O	1:B:194:ARG:NH2	2.32	0.63
1:F:335:GLN:NE2	1:F:343:ILE:O	2.31	0.63
1:I:51:LYS:NZ	1:I:106:ASN:ND2	2.47	0.63
1:D:82:VAL:HG22	1:D:87:LEU:CD2	2.16	0.63
1:E:566:ALA:HA	1:E:569:LEU:HD13	1.80	0.63
1:G:19:LEU:HD13	1:G:32:ALA:HB2	1.81	0.63
1:G:547:LEU:H	1:G:547:LEU:HD12	1.64	0.63
1:J:291:PHE:HB2	1:J:436:PRO:HG3	1.78	0.63
1:B:19:LEU:HD13	1:B:32:ALA:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:453:LEU:HB3	1:E:457:ALA:HB3	1.80	0.62
1:J:346:ASP:OD2	1:J:382:LYS:NZ	2.23	0.62
1:H:547:LEU:HD22	1:L:557:PHE:HA	1.80	0.62
1:C:231:MET:CE	1:C:256:ALA:HB1	2.29	0.62
1:C:597:ARG:HG2	1:C:600:GLU:HG3	1.81	0.62
1:F:189:SER:O	1:F:194:ARG:NH2	2.32	0.62
1:J:60:TYR:HE2	1:J:103:ASP:HB2	1.64	0.62
1:K:246:ALA:C	1:K:251:LEU:HD11	2.19	0.62
1:H:196:ALA:HA	1:H:203:GLN:NE2	2.14	0.62
1:E:473:LYS:HG3	1:E:517:ILE:CD1	2.26	0.62
1:F:269:ARG:HA	1:F:280:GLN:HG2	1.82	0.62
1:F:396:VAL:HG13	1:F:404:LEU:HD11	1.79	0.62
1:B:530:GLU:HG3	1:B:532:ARG:H	1.64	0.62
1:D:203:GLN:OE1	1:D:203:GLN:HA	1.99	0.62
1:F:156:ILE:O	1:F:162:GLY:O	2.18	0.62
1:I:51:LYS:NZ	1:I:106:ASN:HD21	1.97	0.62
1:E:76:GLU:HG2	1:F:71:GLU:OE2	1.99	0.62
1:K:280:GLN:O	1:K:280:GLN:HG3	2.00	0.62
1:B:474:GLU:OE1	1:B:511:ARG:NH2	2.32	0.62
1:E:227:PRO:HA	1:E:258:PRO:HG3	1.81	0.62
1:I:219:GLU:O	1:I:219:GLU:HG2	1.99	0.62
1:J:335:GLN:NE2	1:J:343:ILE:O	2.31	0.62
1:E:149:LEU:HD12	1:E:150:PRO:CD	2.30	0.62
1:I:60:TYR:O	1:I:99:VAL:HG13	1.98	0.62
1:A:24:VAL:HG12	1:A:110:PRO:HD2	1.80	0.62
1:D:320:VAL:HG22	1:D:399:GLN:HG2	1.81	0.62
1:K:162:GLY:H	1:K:538:ALA:HB2	1.65	0.62
1:B:165:ASN:HD21	1:B:523:GLN:HE22	1.48	0.62
1:C:393:PRO:O	1:C:397:LEU:HD23	1.98	0.62
1:G:202:ARG:NH1	1:G:202:ARG:HB3	2.15	0.62
1:I:142:LEU:C	1:I:588:ASN:ND2	2.52	0.62
1:K:136:ALA:HA	1:K:195:THR:HG22	1.80	0.62
1:G:166:ILE:HG22	1:G:175:LYS:HB3	1.80	0.62
1:J:20:GLY:HA3	1:L:70:HIS:HB2	1.82	0.62
1:J:76:GLU:HA	1:K:21:THR:HG21	1.81	0.62
1:J:174:THR:CG2	3:J:1001:ADP:H5'2	2.28	0.62
1:K:277:ILE:O	1:K:277:ILE:HG22	1.99	0.62
1:A:87:LEU:C	1:A:87:LEU:HD23	2.21	0.61
1:K:73:VAL:HG23	1:K:73:VAL:O	2.00	0.61
1:A:155:PHE:CE2	1:A:579:PRO:HB2	2.35	0.61
1:B:230:ARG:NH1	1:B:599:ASP:OD1	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:488:GLU:HB3	1:B:491:LYS:HG2	1.82	0.61
1:E:225:ASP:OD1	1:E:226:LYS:HG2	2.00	0.61
1:F:405:ARG:HA	1:F:408:THR:HB	1.82	0.61
1:K:184:HIS:ND1	1:K:594:TRP:HZ3	1.97	0.61
1:H:388:GLU:CG	1:E:388:GLU:HG2	2.30	0.61
1:D:354:THR:OG1	1:D:355:PRO:CD	2.47	0.61
1:E:165:ASN:OD1	1:E:523:GLN:NE2	2.28	0.61
1:E:173:ALA:HB2	1:E:544:ARG:H	1.65	0.61
1:I:173:ALA:CB	1:I:543:GLY:HA3	2.28	0.61
1:I:222:LEU:N	1:I:222:LEU:HD12	2.15	0.61
1:F:195:THR:HG23	1:F:203:GLN:HE22	1.65	0.61
1:J:396:VAL:HG23	1:J:404:LEU:CD1	2.26	0.61
1:K:219:GLU:OE1	1:K:283:GLN:NE2	2.34	0.61
1:L:357:GLU:O	1:L:359:LEU:HD13	1.99	0.61
1:E:473:LYS:CG	1:E:517:ILE:HD11	2.27	0.61
1:I:291:PHE:HB2	1:I:436:PRO:HG3	1.83	0.61
1:K:472:TYR:CZ	1:K:476:VAL:CG2	2.83	0.61
1:H:19:LEU:HD11	1:G:76:GLU:HB2	1.82	0.61
1:A:269:ARG:HA	1:A:280:GLN:HG2	1.83	0.61
1:D:143:LEU:HD23	1:D:149:LEU:HB2	1.82	0.61
1:F:242:LYS:HB2	1:F:244:LEU:HD13	1.83	0.61
1:J:91:VAL:HG11	1:K:111:GLN:NE2	2.15	0.61
1:H:319:PHE:CZ	1:G:315:LEU:HD21	2.33	0.61
1:D:215:ASN:ND2	1:D:451:HIS:HD2	1.99	0.61
1:D:304:LEU:HD22	1:D:324:ILE:HG22	1.82	0.61
3:D:1001:ADP:H5'2	3:D:1001:ADP:C8	2.35	0.61
1:E:57:VAL:HA	1:E:104:PRO:HG2	1.83	0.61
1:I:396:VAL:HG22	1:I:396:VAL:O	2.01	0.61
1:K:553:PRO:O	1:K:556:ARG:HG2	2.01	0.61
1:H:397:LEU:HB3	1:G:401:PRO:HB2	1.83	0.61
1:E:291:PHE:HB2	1:E:436:PRO:HG3	1.81	0.61
1:J:189:SER:O	1:J:194:ARG:NH2	2.33	0.61
1:L:597:ARG:HB3	1:L:600:GLU:HG3	1.81	0.61
1:A:76:GLU:HG3	1:B:19:LEU:HD21	1.83	0.61
1:C:231:MET:HE1	1:C:256:ALA:HB1	1.83	0.61
1:E:474:GLU:OE1	1:E:511:ARG:NH2	2.34	0.61
1:E:553:PRO:HA	1:E:556:ARG:HD3	1.81	0.61
1:G:142:LEU:HG	1:G:252:LEU:HD11	1.83	0.61
1:I:323:ASN:HD22	1:I:397:LEU:HD23	1.65	0.61
1:K:184:HIS:ND1	1:K:594:TRP:CZ3	2.69	0.61
1:K:235:GLU:CD	1:K:248:ARG:HH11	2.04	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:349:PHE:CE1	1:A:356:PRO:HB3	2.36	0.60
1:L:358:ASN:OD1	1:L:358:ASN:O	2.19	0.60
1:I:30:TRP:CE2	1:I:96:ARG:HG3	2.36	0.60
1:L:193:ASP:N	1:L:206:THR:OG1	2.34	0.60
1:B:308:PHE:CD2	1:B:410:ARG:HD3	2.36	0.60
1:C:530:GLU:OE2	1:C:532:ARG:HD3	2.02	0.60
1:F:291:PHE:HB2	1:F:436:PRO:HG3	1.83	0.60
1:J:87:LEU:H	1:J:87:LEU:CD1	2.14	0.60
1:E:219:GLU:OE1	1:E:283:GLN:HG3	2.01	0.60
1:K:297:GLU:OE1	1:K:301:ARG:HD3	2.02	0.60
1:L:47:VAL:HB	1:L:116:VAL:HG22	1.83	0.60
1:H:219:GLU:OE1	1:H:283:GLN:HG3	2.02	0.60
1:E:175:LYS:NZ	1:E:524:GLN:HA	2.15	0.60
1:F:547:LEU:HD12	1:F:547:LEU:H	1.65	0.60
1:G:406:ALA:HA	1:G:409:ARG:HG2	1.84	0.60
1:K:174:THR:HG22	3:K:1001:ADP:H5'2	1.83	0.60
1:L:376:ILE:CD1	1:L:411:LEU:HB3	2.26	0.60
1:B:530:GLU:OE2	1:B:532:ARG:HD3	2.01	0.60
1:C:310:ASP:OD2	1:C:314:SER:HB3	2.02	0.60
1:K:213:ILE:HD13	1:K:221:LEU:HD22	1.83	0.60
1:A:173:ALA:O	3:A:1001:ADP:O1B	2.20	0.60
1:E:175:LYS:NZ	1:E:524:GLN:CA	2.63	0.60
1:K:414:VAL:HG22	1:K:414:VAL:O	2.02	0.60
1:D:269:ARG:HA	1:D:280:GLN:HG2	1.82	0.60
1:E:218:GLY:O	1:F:202:ARG:NH1	2.35	0.60
1:I:299:CYS:HB2	1:I:332:ALA:HB2	1.83	0.60
1:K:530:GLU:HG3	1:K:532:ARG:H	1.66	0.60
1:H:249:TYR:OH	1:H:591:PHE:O	2.17	0.60
1:A:371:THR:OG1	1:A:373:GLU:OE1	2.19	0.60
1:C:473:LYS:NZ	1:C:480:ASP:O	2.30	0.60
1:F:156:ILE:HA	1:F:162:GLY:O	2.02	0.60
1:K:398:LYS:O	1:K:398:LYS:HG2	2.01	0.60
1:A:142:LEU:HD12	1:A:248:ARG:HB3	1.83	0.59
1:B:371:THR:HG23	1:B:374:GLN:HG3	1.82	0.59
1:B:414:VAL:HG22	1:B:414:VAL:O	2.02	0.59
1:B:73:VAL:HG23	1:B:73:VAL:O	2.02	0.59
1:E:154:ARG:HG2	1:E:154:ARG:HH11	1.67	0.59
1:K:228:ASN:OD1	1:K:231:MET:N	2.34	0.59
1:A:156:ILE:HD13	1:A:164:ILE:HD11	1.84	0.59
1:F:153:PHE:HD2	1:F:195:THR:HG21	1.67	0.59
1:J:282:ASP:HB2	1:K:202:ARG:HH12	1.62	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:495:ARG:NH2	1:K:527:SER:HA	2.17	0.59
1:D:441:ARG:HH21	1:D:441:ARG:CG	2.15	0.59
1:J:154:ARG:NH1	1:J:159:GLU:OE2	2.35	0.59
1:J:385:GLU:O	1:J:385:GLU:HG2	2.02	0.59
1:K:282:ASP:N	1:K:282:ASP:OD1	2.33	0.59
1:L:553:PRO:HA	1:L:556:ARG:HD3	1.83	0.59
1:H:147:GLN:HA	1:H:147:GLN:HE21	1.67	0.59
1:F:163:HIS:CE1	1:F:509:ALA:HA	2.37	0.59
1:F:453:LEU:HB3	1:F:457:ALA:HB3	1.84	0.59
1:J:231:MET:HE1	1:J:256:ALA:HB1	1.83	0.59
1:B:473:LYS:HG2	1:B:517:ILE:HD11	1.85	0.59
1:B:553:PRO:O	1:B:556:ARG:HG2	2.02	0.59
1:J:163:HIS:HB3	1:J:519:LEU:O	2.02	0.59
1:C:335:GLN:NE2	1:C:343:ILE:O	2.36	0.59
1:G:323:ASN:OD1	1:I:405:ARG:CD	2.50	0.59
1:I:192:MET:HA	1:I:195:THR:HG22	1.84	0.59
1:J:323:ASN:OD1	1:J:397:LEU:HD22	2.02	0.59
1:B:302:ARG:NH1	1:B:325:GLU:OE2	2.29	0.59
1:K:473:LYS:CB	1:K:517:ILE:HD11	2.32	0.59
1:L:603:ASP:OD1	1:L:603:ASP:N	2.35	0.59
1:H:142:LEU:HG	1:H:252:LEU:HD11	1.84	0.59
1:C:202:ARG:HH21	1:C:202:ARG:CG	2.16	0.59
1:D:162:GLY:HA3	1:D:538:ALA:HB3	1.85	0.59
1:J:142:LEU:HG	1:J:252:LEU:HD11	1.84	0.59
1:J:264:LEU:HD23	1:J:447:VAL:HB	1.83	0.59
1:H:188:ARG:NH2	1:H:260:ARG:HG2	2.17	0.59
1:A:163:HIS:HB3	1:A:519:LEU:O	2.03	0.59
1:G:106:ASN:HB3	1:G:108:ILE:HG23	1.84	0.59
1:I:419:SER:N	1:I:420:PRO:HD2	2.18	0.59
1:I:560:GLN:HA	1:I:563:ARG:HG3	1.84	0.59
1:J:324:ILE:HD13	1:J:407:PHE:CZ	2.36	0.59
1:K:277:ILE:HD11	1:K:426:LEU:HD22	1.83	0.59
1:L:228:ASN:ND2	1:L:600:GLU:OE1	2.36	0.59
1:B:57:VAL:HA	1:B:104:PRO:HG2	1.85	0.58
1:C:70:HIS:HB2	1:D:20:GLY:HA3	1.85	0.58
1:K:353:GLU:OE1	1:K:353:GLU:HA	2.03	0.58
1:L:412:ARG:HH11	1:L:415:GLN:HE22	1.50	0.58
1:B:331:LEU:HD21	1:B:344:VAL:HG12	1.85	0.58
1:G:228:ASN:ND2	1:G:600:GLU:OE2	2.36	0.58
1:J:402:GLY:C	1:K:319:PHE:HE1	2.06	0.58
1:C:173:ALA:O	3:C:1001:ADP:O1B	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:548:ALA:HB2	1:F:556:ARG:HB2	1.85	0.58
1:K:267:PRO:HG3	1:K:453:LEU:HD21	1.84	0.58
1:H:418:LEU:HD23	1:H:421:LEU:HD12	1.85	0.58
1:A:24:VAL:CG1	1:A:110:PRO:HD2	2.34	0.58
1:D:453:LEU:HB3	1:D:457:ALA:HB3	1.84	0.58
1:E:553:PRO:O	1:E:556:ARG:HG2	2.03	0.58
1:G:453:LEU:HB3	1:G:457:ALA:HB3	1.85	0.58
1:K:149:LEU:HD13	1:K:585:VAL:HG21	1.84	0.58
1:K:149:LEU:HD22	1:K:587:VAL:HG11	1.84	0.58
1:K:399:GLN:HB3	1:K:404:LEU:HD21	1.86	0.58
1:H:153:PHE:HD2	1:H:195:THR:HG21	1.68	0.58
1:H:354:THR:CG2	1:H:355:PRO:HD2	2.33	0.58
1:B:223:PHE:H	1:B:284:ARG:HH11	1.50	0.58
1:K:450:ILE:HD12	1:K:458:GLN:HB3	1.84	0.58
1:L:267:PRO:HB3	1:L:421:LEU:HD21	1.85	0.58
1:H:149:LEU:CD2	1:H:587:VAL:HG11	2.32	0.58
1:B:213:ILE:CG2	1:B:447:VAL:HG22	2.33	0.58
1:B:547:LEU:H	1:B:547:LEU:HD12	1.67	0.58
1:D:70:HIS:HB2	1:E:20:GLY:HA3	1.84	0.58
1:E:359:LEU:CD2	1:E:374:GLN:NE2	2.66	0.58
1:K:138:PHE:CB	1:K:191:VAL:HG11	2.34	0.58
1:K:174:THR:HB	3:K:1001:ADP:C5'	2.32	0.58
1:K:309:SER:OG	1:K:501:ILE:CG2	2.51	0.58
1:K:472:TYR:CE1	1:K:476:VAL:CB	2.87	0.58
1:L:343:ILE:HD13	1:L:362:SER:HB2	1.84	0.58
1:C:530:GLU:HG3	1:C:532:ARG:H	1.69	0.58
1:I:149:LEU:HD13	1:I:585:VAL:HG21	1.86	0.58
1:I:51:LYS:HZ3	1:I:106:ASN:HD21	1.50	0.58
1:I:163:HIS:N	1:I:163:HIS:CD2	2.72	0.58
1:A:202:ARG:O	1:A:204:SER:OG	2.17	0.58
1:J:403:THR:N	1:K:319:PHE:CE1	2.72	0.58
1:C:598:ARG:O	1:C:601:VAL:HG12	2.03	0.58
1:E:131:ASP:OD1	1:E:131:ASP:N	2.35	0.58
1:G:101:ARG:HD3	1:G:126:MET:O	2.03	0.58
1:G:170:SER:HA	3:G:1001:ADP:O2B	2.03	0.58
1:G:597:ARG:CG	1:G:600:GLU:HG3	2.34	0.58
1:K:247:ASP:C	1:K:251:LEU:CD1	2.72	0.58
1:L:202:ARG:HH21	1:L:478:ARG:HH22	1.51	0.58
1:B:166:ILE:HG22	1:B:175:LYS:HB3	1.86	0.57
1:D:161:GLY:HA3	1:D:513:ARG:HE	1.64	0.57
1:E:597:ARG:NH2	1:E:599:ASP:OD2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:473:LYS:HE3	1:L:515:LEU:O	2.04	0.57
1:C:212:LEU:HD13	1:C:438:PRO:HB3	1.87	0.57
1:I:588:ASN:ND2	1:I:588:ASN:O	2.37	0.57
1:L:553:PRO:O	1:L:556:ARG:HG2	2.04	0.57
1:H:495:ARG:NH2	1:H:554:GLU:OE2	2.37	0.57
1:A:135:GLU:O	1:A:194:ARG:HD2	2.04	0.57
1:B:163:HIS:N	1:B:163:HIS:CD2	2.73	0.57
1:D:153:PHE:HD2	1:D:195:THR:HG21	1.70	0.57
1:D:163:HIS:N	1:D:163:HIS:CD2	2.73	0.57
1:D:175:LYS:CG	3:D:1001:ADP:O1B	2.47	0.57
1:E:263:GLN:HE21	1:E:265:LEU:HD21	1.70	0.57
1:E:530:GLU:OE2	1:E:532:ARG:HD3	2.02	0.57
1:J:238:VAL:HG11	1:J:248:ARG:NH2	2.18	0.57
1:J:354:THR:HG23	1:J:381:TYR:CZ	2.39	0.57
1:L:33:VAL:HG21	1:L:93:TYR:CD2	2.39	0.57
1:H:163:HIS:CD2	1:H:163:HIS:N	2.71	0.57
1:H:242:LYS:HZ3	1:H:588:ASN:ND2	2.03	0.57
1:B:268:PRO:HG3	1:B:292:VAL:CG1	2.34	0.57
1:B:470:PHE:CE1	1:B:515:LEU:CD2	2.87	0.57
1:C:269:ARG:HA	1:C:280:GLN:HG2	1.86	0.57
1:D:291:PHE:HB2	1:D:436:PRO:HG3	1.85	0.57
1:E:166:ILE:HG23	1:E:541:VAL:HB	1.86	0.57
1:F:103:ASP:HB3	1:F:104:PRO:HD3	1.86	0.57
1:F:601:VAL:HG13	1:F:601:VAL:O	2.04	0.57
1:I:87:LEU:HD12	1:I:88:PRO:HD3	1.71	0.57
1:J:601:VAL:O	1:J:601:VAL:HG13	2.05	0.57
1:K:560:GLN:HA	1:K:563:ARG:HG3	1.86	0.57
1:H:388:GLU:HG2	1:E:388:GLU:HB3	1.85	0.57
1:D:201:GLY:N	1:D:204:SER:OG	2.37	0.57
1:D:215:ASN:HD21	1:D:451:HIS:HD2	1.51	0.57
1:E:327:LYS:HZ2	1:E:394:LYS:HG2	1.69	0.57
1:B:149:LEU:HD22	1:B:587:VAL:HG11	1.87	0.57
1:C:315:LEU:HD22	1:D:319:PHE:CZ	2.37	0.57
1:I:162:GLY:H	1:I:538:ALA:HB2	1.69	0.57
1:J:64:ASP:OD2	1:J:98:LEU:HD21	2.05	0.57
1:C:597:ARG:HG3	1:C:600:GLU:HG3	1.86	0.57
1:E:149:LEU:HD23	1:E:587:VAL:HG11	1.86	0.57
1:E:269:ARG:HA	1:E:280:GLN:HG2	1.86	0.57
1:I:71:GLU:HG3	1:I:92:SER:HB3	1.86	0.57
1:L:474:GLU:OE1	1:L:511:ARG:NH2	2.38	0.57
1:B:548:ALA:HB2	1:C:556:ARG:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:149:LEU:HD21	1:J:576:VAL:HG21	1.87	0.57
1:K:19:LEU:HD13	1:K:32:ALA:HB2	1.87	0.57
1:H:163:HIS:CD2	1:H:163:HIS:H	2.20	0.57
1:A:530:GLU:HG3	1:A:532:ARG:H	1.69	0.57
1:D:103:ASP:CB	1:D:104:PRO:CD	2.64	0.57
1:D:238:VAL:HG11	1:D:248:ARG:HH21	1.67	0.57
1:D:335:GLN:NE2	1:D:343:ILE:O	2.37	0.57
1:E:327:LYS:NZ	1:E:394:LYS:HG2	2.19	0.57
1:I:131:ASP:OD1	1:I:131:ASP:N	2.38	0.57
1:C:211:ALA:N	1:C:444:GLN:O	2.33	0.56
1:D:161:GLY:N	1:D:513:ARG:HH21	2.03	0.56
1:I:41:LEU:O	1:I:63:VAL:CG1	2.29	0.56
1:J:41:LEU:HB2	1:K:107:PHE:HB2	1.86	0.56
1:J:51:LYS:HG2	1:J:52:PRO:HD2	1.87	0.56
1:K:309:SER:OG	1:K:501:ILE:HG22	2.05	0.56
1:L:307:VAL:HG13	1:L:414:VAL:HG11	1.85	0.56
1:A:86:LEU:HD22	1:A:86:LEU:C	2.23	0.56
1:E:51:LYS:HG2	1:E:52:PRO:HD2	1.87	0.56
1:E:174:THR:CG2	3:E:1001:ADP:H5'2	2.34	0.56
1:G:24:VAL:HG11	1:G:110:PRO:O	2.04	0.56
1:I:414:VAL:O	1:I:414:VAL:HG22	2.05	0.56
1:I:553:PRO:O	1:I:556:ARG:HG2	2.03	0.56
1:K:219:GLU:OE1	1:K:283:GLN:CD	2.43	0.56
1:K:349:PHE:N	1:K:349:PHE:CD1	2.72	0.56
1:A:163:HIS:N	1:A:163:HIS:CD2	2.73	0.56
1:A:553:PRO:HA	1:A:556:ARG:HD3	1.88	0.56
1:B:213:ILE:HG23	1:B:447:VAL:HG22	1.87	0.56
1:B:238:VAL:HG11	1:B:248:ARG:HH21	1.71	0.56
1:D:263:GLN:CB	1:D:443:ILE:HG21	2.35	0.56
1:E:151:LEU:HD21	1:E:156:ILE:HD11	1.87	0.56
1:E:264:LEU:HD23	1:E:447:VAL:HB	1.88	0.56
1:G:103:ASP:HB3	1:G:104:PRO:CD	2.27	0.56
1:G:168:GLY:O	1:G:175:LYS:NZ	2.35	0.56
1:K:164:ILE:CD1	1:K:182:LEU:HD13	2.35	0.56
1:A:238:VAL:HG11	1:A:248:ARG:NH2	2.20	0.56
1:E:547:LEU:H	1:E:547:LEU:HD12	1.69	0.56
1:L:122:ARG:O	1:L:126:MET:HG2	2.05	0.56
1:A:335:GLN:NE2	1:A:343:ILE:O	2.38	0.56
1:D:70:HIS:CG	1:D:73:VAL:HG21	2.39	0.56
1:E:249:TYR:HE1	1:E:590:PRO:CB	2.18	0.56
1:G:553:PRO:O	1:G:556:ARG:HG2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:218:GLY:HA2	1:B:451:HIS:CB	2.35	0.56
1:D:406:ALA:HA	1:D:409:ARG:HG2	1.87	0.56
1:K:70:HIS:HB3	1:K:73:VAL:HG22	1.87	0.56
1:K:255:PRO:HB2	1:K:257:GLU:HG2	1.86	0.56
1:A:547:LEU:HD12	1:A:547:LEU:H	1.71	0.56
1:B:437:ASP:HB3	1:B:440:ARG:HB2	1.86	0.56
1:E:163:HIS:CD2	1:E:163:HIS:N	2.73	0.56
1:F:163:HIS:CD2	1:F:163:HIS:N	2.73	0.56
1:G:156:ILE:HD13	1:G:164:ILE:HD11	1.88	0.56
1:K:163:HIS:CD2	1:K:163:HIS:N	2.72	0.56
1:K:188:ARG:HH11	1:K:188:ARG:CG	2.19	0.56
1:L:75:PHE:O	1:L:79:VAL:HG23	2.05	0.56
1:B:163:HIS:HB3	1:B:519:LEU:O	2.06	0.56
1:B:473:LYS:HB3	1:B:515:LEU:HG	1.88	0.56
1:E:138:PHE:CZ	1:E:151:LEU:HD23	2.40	0.56
1:K:363:GLU:OE1	1:K:363:GLU:N	2.32	0.56
1:K:470:PHE:HD1	1:K:517:ILE:HD12	1.70	0.56
1:B:406:ALA:HA	1:B:409:ARG:HG2	1.88	0.56
1:D:194:ARG:O	1:D:197:GLN:HB2	2.06	0.56
1:D:530:GLU:HG3	1:D:532:ARG:H	1.71	0.56
1:F:530:GLU:OE2	1:F:532:ARG:HD3	2.06	0.56
1:K:473:LYS:CA	1:K:473:LYS:HZ2	2.19	0.56
1:D:76:GLU:HA	1:E:21:THR:HG21	1.88	0.56
1:J:101:ARG:NH1	1:J:126:MET:HA	2.21	0.56
1:J:597:ARG:HG2	1:J:600:GLU:HG3	1.87	0.56
1:L:269:ARG:HA	1:L:280:GLN:HG2	1.88	0.56
1:B:295:ILE:HD13	1:B:422:ILE:CG2	2.33	0.55
1:J:385:GLU:HA	1:J:389:GLY:HA2	1.88	0.55
1:K:215:ASN:HA	1:K:221:LEU:HD13	1.86	0.55
1:H:163:HIS:HB3	1:H:519:LEU:O	2.05	0.55
1:H:335:GLN:NE2	1:H:343:ILE:O	2.38	0.55
1:C:188:ARG:NH2	1:C:259:PHE:HA	2.21	0.55
1:G:530:GLU:OE2	1:G:532:ARG:HD3	2.06	0.55
1:I:107:PHE:HB2	1:K:41:LEU:HB2	1.88	0.55
1:B:299:CYS:O	1:B:329:PHE:HA	2.07	0.55
3:B:1001:ADP:O1A	3:B:1001:ADP:H3'	2.05	0.55
1:E:174:THR:HG22	3:E:1001:ADP:C4'	2.36	0.55
1:F:163:HIS:HE1	1:F:508:ILE:O	1.88	0.55
1:I:352:SER:OG	1:I:354:THR:OG1	2.24	0.55
1:H:547:LEU:H	1:H:547:LEU:HD12	1.72	0.55
1:D:161:GLY:HA3	1:D:513:ARG:NH2	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:215:ASN:HD21	1:D:219:GLU:HA	1.72	0.55
1:E:249:TYR:CE1	1:E:590:PRO:HB3	2.42	0.55
1:E:376:ILE:HD13	1:E:411:LEU:HB3	1.88	0.55
1:F:142:LEU:HD22	1:F:146:GLY:HA2	1.87	0.55
1:J:248:ARG:HH11	1:J:590:PRO:HA	1.70	0.55
1:L:236:ASP:O	1:L:240:ARG:HG2	2.06	0.55
1:B:501:ILE:O	1:B:504:VAL:HG12	2.07	0.55
1:G:156:ILE:O	1:G:162:GLY:O	2.24	0.55
1:L:530:GLU:OE2	1:L:532:ARG:HD3	2.07	0.55
1:L:547:LEU:H	1:L:547:LEU:HD12	1.72	0.55
1:D:161:GLY:HA3	1:D:513:ARG:NE	2.22	0.55
1:D:219:GLU:OE2	1:D:223:PHE:CZ	2.60	0.55
1:J:403:THR:N	1:K:319:PHE:HE1	2.03	0.55
1:A:149:LEU:CD2	1:A:576:VAL:HG21	2.37	0.55
1:B:75:PHE:CD1	1:C:71:GLU:CG	2.89	0.55
1:D:219:GLU:OE2	1:D:223:PHE:CE2	2.60	0.55
1:L:219:GLU:HA	1:L:222:LEU:HD13	1.88	0.55
1:C:291:PHE:HB2	1:C:436:PRO:HG3	1.87	0.55
1:E:352:SER:HB3	1:E:354:THR:HG22	1.89	0.55
1:H:38:SER:HB3	1:L:52:PRO:HG3	1.89	0.55
1:H:546:ASP:HB3	1:H:549:GLU:HG2	1.89	0.55
1:D:560:GLN:HA	1:D:563:ARG:HG3	1.88	0.55
1:J:248:ARG:HB2	1:J:590:PRO:HG3	1.89	0.55
1:L:153:PHE:HD2	1:L:195:THR:HG21	1.71	0.55
1:H:223:PHE:CD1	1:H:601:VAL:CG2	2.80	0.55
1:A:355:PRO:HB2	1:A:357:GLU:OE1	2.06	0.55
1:C:547:LEU:H	1:C:547:LEU:HD12	1.72	0.55
1:D:546:ASP:HB3	1:D:549:GLU:HG2	1.89	0.55
1:A:215:ASN:HD21	1:A:219:GLU:H	1.55	0.54
1:B:62:LEU:HD23	1:B:63:VAL:O	2.07	0.54
1:B:419:SER:N	1:B:420:PRO:HD2	2.21	0.54
1:G:166:ILE:CG2	1:G:175:LYS:HB3	2.37	0.54
1:H:310:ASP:OD2	1:H:314:SER:HB3	2.06	0.54
1:A:155:PHE:CD2	1:A:579:PRO:CG	2.78	0.54
1:B:213:ILE:HD11	1:B:221:LEU:HD11	1.89	0.54
1:B:238:VAL:HG11	1:B:248:ARG:NH2	2.22	0.54
1:F:41:LEU:HD13	1:F:66:VAL:HG12	1.89	0.54
1:F:566:ALA:HA	1:F:569:LEU:CG	2.37	0.54
1:A:155:PHE:CE2	1:A:579:PRO:CB	2.90	0.54
1:C:64:ASP:OD1	1:C:96:ARG:HD2	2.07	0.54
1:I:349:PHE:CD2	1:I:349:PHE:N	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:149:LEU:HD12	1:H:150:PRO:CD	2.38	0.54
1:B:79:VAL:HG21	1:C:19:LEU:HD12	1.89	0.54
1:G:149:LEU:HD13	1:G:585:VAL:HG21	1.88	0.54
1:I:478:ARG:HG3	1:I:516:GLY:HA3	1.90	0.54
1:K:135:GLU:O	1:K:194:ARG:NH1	2.40	0.54
1:K:280:GLN:HG2	1:K:452:ALA:HB1	1.89	0.54
1:H:219:GLU:OE1	1:H:283:GLN:CG	2.55	0.54
1:A:174:THR:CB	3:A:1001:ADP:H5'2	2.37	0.54
1:B:219:GLU:CA	1:B:222:LEU:HD11	2.21	0.54
1:D:155:PHE:HA	1:D:161:GLY:O	2.07	0.54
1:F:180:LEU:HD11	1:F:221:LEU:HD21	1.89	0.54
1:G:71:GLU:HG3	1:G:92:SER:HB3	1.89	0.54
1:K:597:ARG:HG2	1:K:600:GLU:CD	2.27	0.54
1:L:354:THR:OG1	1:L:355:PRO:HD3	2.03	0.54
1:H:315:LEU:HG	1:H:316:ASN:N	2.22	0.54
1:J:324:ILE:HD11	1:J:383:LEU:HD21	1.89	0.54
1:B:201:GLY:HA2	1:B:204:SER:OG	2.08	0.54
1:E:149:LEU:HD22	1:E:587:VAL:HG11	1.89	0.54
1:G:469:VAL:O	1:G:473:LYS:HG2	2.08	0.54
1:I:24:VAL:HG11	1:I:110:PRO:O	2.07	0.54
1:A:155:PHE:CA	1:A:161:GLY:HA3	2.34	0.54
1:A:263:GLN:HE21	1:A:265:LEU:HD21	1.72	0.54
1:J:41:LEU:HB2	1:K:107:PHE:CB	2.37	0.54
1:L:371:THR:OG1	1:L:373:GLU:OE1	2.25	0.54
1:H:20:GLY:HA3	1:G:70:HIS:HB2	1.90	0.54
1:A:192:MET:HA	1:A:195:THR:HG22	1.90	0.54
1:E:473:LYS:HG3	1:E:517:ILE:CG1	2.37	0.54
1:J:149:LEU:HD13	1:J:585:VAL:HG21	1.90	0.54
1:K:172:VAL:HG11	1:K:544:ARG:HD2	1.89	0.54
1:H:42:ASP:OD2	1:H:586:LEU:HD22	2.08	0.54
1:H:474:GLU:OE1	1:H:511:ARG:NH2	2.39	0.54
1:A:149:LEU:CD1	1:A:585:VAL:HG21	2.37	0.54
1:B:268:PRO:HD2	1:B:421:LEU:HD23	1.90	0.54
1:B:292:VAL:HG21	1:B:426:LEU:CD1	2.38	0.54
1:D:597:ARG:HB2	1:D:600:GLU:HG3	1.89	0.54
1:I:98:LEU:HD23	1:I:583:ASN:OD1	2.07	0.54
1:I:397:LEU:HD22	1:I:397:LEU:H	1.72	0.54
1:J:158:GLY:O	1:J:513:ARG:NH2	2.40	0.54
1:J:218:GLY:HA2	1:J:451:HIS:CG	2.43	0.54
1:J:283:GLN:NE2	1:J:598:ARG:HD3	2.23	0.54
1:K:473:LYS:CB	1:K:473:LYS:NZ	2.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:597:ARG:HG2	1:K:600:GLU:CG	2.38	0.54
1:H:238:VAL:HG11	1:H:248:ARG:NH2	2.18	0.53
1:B:252:LEU:HD22	1:B:254:LEU:HD12	1.91	0.53
1:E:174:THR:O	1:E:174:THR:OG1	2.25	0.53
1:I:57:VAL:HA	1:I:104:PRO:HG2	1.90	0.53
1:L:263:GLN:HE21	1:L:265:LEU:HD21	1.73	0.53
1:C:215:ASN:HB3	1:C:449:ASP:HA	1.89	0.53
1:F:560:GLN:HA	1:F:563:ARG:HG3	1.90	0.53
1:G:230:ARG:O	1:G:233:GLU:HG2	2.07	0.53
1:I:63:VAL:HG12	1:I:63:VAL:O	2.07	0.53
1:K:324:ILE:CD1	1:K:324:ILE:N	2.72	0.53
1:L:164:ILE:HG12	1:L:539:ILE:HB	1.90	0.53
1:A:453:LEU:HB3	1:A:457:ALA:HB3	1.89	0.53
1:D:64:ASP:OD1	1:D:96:ARG:HD2	2.08	0.53
1:E:173:ALA:HB2	1:E:544:ARG:N	2.23	0.53
1:E:405:ARG:HD2	1:F:323:ASN:OD1	2.08	0.53
1:G:269:ARG:HB2	1:G:278:VAL:HG23	1.89	0.53
1:K:372:PHE:CE2	1:K:376:ILE:HD11	2.43	0.53
1:L:131:ASP:OD1	1:L:131:ASP:N	2.39	0.53
1:I:174:THR:O	1:I:174:THR:OG1	2.21	0.53
1:I:530:GLU:OE2	1:I:532:ARG:HD3	2.08	0.53
1:K:235:GLU:OE1	1:K:248:ARG:HD3	2.08	0.53
1:L:33:VAL:HG21	1:L:93:TYR:CG	2.44	0.53
1:H:373:GLU:HG3	1:H:415:GLN:NE2	2.24	0.53
1:H:423:ARG:NH1	1:H:426:LEU:HD21	2.23	0.53
1:E:342:LEU:HB3	1:E:369:LEU:HD12	1.90	0.53
1:I:268:PRO:HG3	1:I:292:VAL:HG12	1.89	0.53
1:I:532:ARG:O	1:I:536:ASN:ND2	2.34	0.53
1:K:211:ALA:HB3	1:K:445:LEU:HD12	1.90	0.53
1:H:76:GLU:HA	1:L:21:THR:HG21	1.90	0.53
1:H:228:ASN:ND2	1:H:600:GLU:HB3	2.24	0.53
1:B:223:PHE:HA	1:B:284:ARG:HH11	1.67	0.53
1:D:79:VAL:HG21	1:E:19:LEU:HD12	1.89	0.53
1:D:392:ASP:HB3	1:D:395:TRP:HB2	1.90	0.53
1:F:553:PRO:HA	1:F:556:ARG:HD3	1.89	0.53
1:I:597:ARG:NH2	1:I:599:ASP:OD2	2.41	0.53
1:K:164:ILE:HG12	1:K:539:ILE:HB	1.90	0.53
1:K:298:PHE:HD2	1:K:422:ILE:HD13	1.74	0.53
1:L:135:GLU:OE2	1:L:154:ARG:NH2	2.42	0.53
1:H:506:LEU:HD23	1:H:533:ILE:CD1	2.39	0.53
1:C:41:LEU:HB2	1:D:107:PHE:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:174:THR:HG22	3:C:1001:ADP:H5'2	1.90	0.53
1:E:213:ILE:HD13	1:E:221:LEU:HD22	1.91	0.53
1:E:310:ASP:OD2	1:E:314:SER:HB3	2.07	0.53
1:E:560:GLN:HA	1:E:563:ARG:HG3	1.90	0.53
1:G:248:ARG:HH11	1:G:590:PRO:HA	1.74	0.53
1:J:71:GLU:OE2	1:L:76:GLU:HB3	2.09	0.53
1:C:231:MET:SD	1:C:249:TYR:HE2	2.32	0.53
1:D:441:ARG:HH21	1:D:441:ARG:HG3	1.74	0.53
1:I:70:HIS:CE1	1:I:82:VAL:HG11	2.44	0.53
1:I:400:SER:OG	1:I:401:PRO:CD	2.57	0.53
1:B:175:LYS:N	3:B:1001:ADP:O1B	2.42	0.53
1:E:219:GLU:OE1	1:E:283:GLN:CB	2.56	0.53
1:G:388:GLU:O	1:G:388:GLU:HG2	2.09	0.53
1:J:566:ALA:HA	1:J:569:LEU:CG	2.35	0.53
1:L:162:GLY:HA3	1:L:513:ARG:HG2	1.91	0.53
1:H:153:PHE:CD2	1:H:195:THR:HG21	2.44	0.53
1:A:155:PHE:CE2	1:A:579:PRO:CG	2.91	0.53
1:A:157:ASN:HD21	1:A:159:GLU:HG3	1.74	0.53
1:A:219:GLU:OE2	1:A:283:GLN:HB2	2.08	0.53
1:B:263:GLN:HE21	1:B:265:LEU:HD21	1.73	0.53
1:D:473:LYS:NZ	1:D:480:ASP:O	2.30	0.53
1:H:530:GLU:OE2	1:H:532:ARG:HD3	2.09	0.52
1:C:180:LEU:HD11	1:C:221:LEU:HD21	1.89	0.52
1:D:24:VAL:O	1:D:109:PRO:HB3	2.09	0.52
1:F:553:PRO:O	1:F:556:ARG:HG2	2.09	0.52
1:J:112:PRO:HB2	1:L:70:HIS:CE1	2.44	0.52
1:J:156:ILE:HA	1:J:162:GLY:O	2.08	0.52
1:J:282:ASP:HB3	1:K:202:ARG:CZ	2.38	0.52
1:K:41:LEU:HD13	1:K:66:VAL:HG12	1.90	0.52
1:K:473:LYS:CD	1:K:515:LEU:O	2.53	0.52
1:L:129:SER:HB3	1:L:132:LYS:HG3	1.90	0.52
1:H:223:PHE:HZ	1:H:598:ARG:HD3	1.71	0.52
1:H:553:PRO:O	1:H:556:ARG:HG2	2.08	0.52
1:B:213:ILE:CD1	1:B:221:LEU:HD11	2.40	0.52
1:C:76:GLU:OE2	1:D:92:SER:HB2	2.09	0.52
1:D:248:ARG:NH1	1:D:589:TYR:O	2.41	0.52
1:J:76:GLU:HG3	1:K:19:LEU:HD21	1.92	0.52
1:J:218:GLY:HA2	1:J:451:HIS:HB2	1.91	0.52
1:J:379:LEU:O	1:J:383:LEU:HB2	2.09	0.52
1:J:598:ARG:O	1:J:601:VAL:CG1	2.50	0.52
1:K:175:LYS:NZ	1:K:524:GLN:HA	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:388:GLU:CG	1:E:388:GLU:CG	2.87	0.52
1:C:472:TYR:CE2	1:C:476:VAL:HG11	2.44	0.52
1:I:59:PHE:CE1	1:I:110:PRO:HG3	2.44	0.52
1:I:263:GLN:HE21	1:I:265:LEU:HD21	1.74	0.52
1:K:453:LEU:HD23	1:K:453:LEU:N	2.23	0.52
1:L:396:VAL:O	1:L:399:GLN:HB2	2.08	0.52
1:H:423:ARG:HH11	1:H:426:LEU:HD21	1.74	0.52
1:D:267:PRO:HB3	1:D:421:LEU:HD21	1.92	0.52
1:E:154:ARG:HG2	1:E:154:ARG:NH1	2.25	0.52
1:J:42:ASP:OD2	1:J:586:LEU:HD22	2.09	0.52
1:J:101:ARG:NH2	1:J:131:ASP:OD2	2.42	0.52
1:J:155:PHE:HA	1:J:161:GLY:HA3	1.92	0.52
1:L:588:ASN:N	1:L:588:ASN:HD22	2.08	0.52
1:B:184:HIS:CE1	1:B:188:ARG:HG3	2.45	0.52
1:B:193:ASP:OD2	1:B:206:THR:HG21	2.09	0.52
1:E:441:ARG:HD2	1:E:442:GLY:H	1.74	0.52
1:K:155:PHE:CA	1:K:161:GLY:HA3	2.37	0.52
1:A:228:ASN:ND2	1:A:600:GLU:HB3	2.25	0.52
1:B:393:PRO:HA	1:B:396:VAL:HG12	1.92	0.52
1:B:405:ARG:HH22	1:C:326:GLU:HG2	1.74	0.52
1:D:547:LEU:H	1:D:547:LEU:HD12	1.75	0.52
1:G:283:GLN:NE2	1:G:598:ARG:HB2	2.25	0.52
1:G:474:GLU:OE1	1:G:511:ARG:NH2	2.39	0.52
1:I:73:VAL:HG12	1:I:82:VAL:HG21	1.91	0.52
1:K:354:THR:HG23	1:K:354:THR:O	2.08	0.52
1:K:401:PRO:HA	1:K:404:LEU:HD12	1.91	0.52
1:D:71:GLU:HG2	1:D:92:SER:HB3	1.91	0.52
1:E:142:LEU:HG	1:E:252:LEU:HD11	1.92	0.52
1:I:24:VAL:HG12	1:I:109:PRO:HB3	1.91	0.52
1:J:133:MET:SD	1:J:150:PRO:HB2	2.50	0.52
1:J:199:SER:HB2	1:J:203:GLN:OE1	2.09	0.52
1:J:354:THR:CG2	1:J:381:TYR:OH	2.58	0.52
1:K:138:PHE:CG	1:K:191:VAL:HG11	2.45	0.52
1:K:142:LEU:HD12	1:K:248:ARG:CG	2.34	0.52
1:B:418:LEU:HD21	1:B:457:ALA:HA	1.91	0.52
1:E:219:GLU:OE1	1:E:283:GLN:CG	2.58	0.52
1:I:222:LEU:N	1:I:222:LEU:CD1	2.73	0.52
1:K:472:TYR:C	1:K:472:TYR:CD1	2.84	0.52
1:L:222:LEU:N	1:L:222:LEU:CD1	2.73	0.52
1:H:184:HIS:CE1	1:H:188:ARG:HG3	2.45	0.52
1:C:248:ARG:HH11	1:C:590:PRO:HA	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:315:LEU:HD22	1:F:319:PHE:HZ	1.75	0.52
1:G:80:GLU:O	1:G:83:VAL:HG22	2.10	0.52
1:G:180:LEU:HD11	1:G:221:LEU:HD21	1.91	0.52
1:K:547:LEU:H	1:K:547:LEU:HD12	1.74	0.52
1:L:165:ASN:HD21	1:L:523:GLN:HE22	1.58	0.52
1:A:41:LEU:HD13	1:A:66:VAL:HG12	1.91	0.52
1:B:566:ALA:HA	1:B:569:LEU:HD13	1.92	0.52
1:C:163:HIS:HB3	1:C:519:LEU:O	2.09	0.52
1:I:397:LEU:N	1:I:397:LEU:CD2	2.73	0.52
1:J:82:VAL:HG22	1:J:87:LEU:HD21	1.90	0.52
1:H:388:GLU:OE2	1:E:388:GLU:HG3	2.10	0.51
1:A:157:ASN:N	1:A:157:ASN:OD1	2.42	0.51
1:D:548:ALA:HB2	1:E:556:ARG:HB2	1.92	0.51
1:F:327:LYS:HE3	1:F:394:LYS:O	2.10	0.51
1:J:469:VAL:O	1:J:473:LYS:HG2	2.10	0.51
1:K:70:HIS:HB3	1:K:73:VAL:CG2	2.40	0.51
1:L:347:TRP:CG	1:L:347:TRP:O	2.58	0.51
1:L:372:PHE:O	1:L:376:ILE:HG13	2.10	0.51
1:H:70:HIS:ND1	1:H:73:VAL:HG21	2.25	0.51
1:H:263:GLN:HE21	1:H:265:LEU:HD21	1.75	0.51
1:H:315:LEU:HD22	1:L:319:PHE:CZ	2.40	0.51
1:E:249:TYR:OH	1:E:591:PHE:O	2.20	0.51
1:I:397:LEU:HB3	1:K:401:PRO:CG	2.37	0.51
1:J:453:LEU:HB3	1:J:457:ALA:HB3	1.92	0.51
1:K:249:TYR:O	1:K:254:LEU:O	2.28	0.51
1:C:400:SER:HB2	1:D:398:LYS:HZ2	1.74	0.51
1:F:57:VAL:HG13	1:F:104:PRO:HD2	1.91	0.51
1:K:219:GLU:HB3	1:K:283:GLN:HG3	1.92	0.51
1:K:502:LYS:HE3	1:K:530:GLU:HB2	1.91	0.51
1:H:219:GLU:OE1	1:H:283:GLN:HB2	2.11	0.51
1:H:219:GLU:OE2	1:H:283:GLN:HB2	2.10	0.51
1:B:149:LEU:HD13	1:B:585:VAL:HG21	1.93	0.51
1:B:175:LYS:HZ3	1:B:524:GLN:HA	1.76	0.51
1:C:175:LYS:HZ1	1:C:524:GLN:HA	1.75	0.51
1:D:530:GLU:OE2	1:D:532:ARG:HD3	2.10	0.51
1:I:588:ASN:ND2	1:I:588:ASN:H	2.05	0.51
1:J:87:LEU:CD1	1:J:87:LEU:N	2.72	0.51
1:J:547:LEU:H	1:J:547:LEU:HD12	1.76	0.51
1:L:159:GLU:OE1	1:L:203:GLN:NE2	2.43	0.51
1:L:355:PRO:N	1:L:355:PRO:C	2.58	0.51
1:H:24:VAL:O	1:H:109:PRO:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:223:PHE:N	1:B:284:ARG:HH11	2.08	0.51
1:D:155:PHE:CE1	1:D:160:SER:HB3	2.46	0.51
1:E:174:THR:HG21	3:E:1001:ADP:C4	2.45	0.51
1:G:560:GLN:HA	1:G:563:ARG:HG3	1.93	0.51
1:J:213:ILE:HG12	1:J:221:LEU:HD12	1.92	0.51
1:J:218:GLY:CA	1:J:451:HIS:HB2	2.40	0.51
1:K:294:THR:OG1	1:K:297:GLU:HG2	2.11	0.51
1:L:396:VAL:HG12	1:L:404:LEU:HD11	1.92	0.51
1:E:188:ARG:HH22	1:E:260:ARG:H	1.58	0.51
1:E:209:GLY:HA2	1:E:481:THR:O	2.11	0.51
1:F:158:GLY:HA2	1:F:161:GLY:O	2.10	0.51
1:F:226:LYS:CB	1:F:601:VAL:HG23	2.41	0.51
1:G:175:LYS:NZ	1:G:524:GLN:HA	2.24	0.51
1:A:190:GLY:O	1:A:193:ASP:HB2	2.11	0.51
1:A:570:GLN:HG3	1:A:571:PRO:HD2	1.93	0.51
1:B:223:PHE:HA	1:B:284:ARG:HH12	1.72	0.51
1:E:406:ALA:HA	1:E:409:ARG:HG2	1.92	0.51
1:J:579:PRO:HB3	1:L:172:VAL:HG21	1.93	0.51
1:B:396:VAL:O	1:B:399:GLN:HB2	2.11	0.51
1:D:153:PHE:CD2	1:D:195:THR:HG21	2.46	0.51
1:E:174:THR:HG22	3:E:1001:ADP:H5'2	1.93	0.51
1:K:278:VAL:HG23	1:K:278:VAL:O	2.10	0.51
1:A:41:LEU:HB2	1:B:107:PHE:HB3	1.93	0.51
1:B:500:PRO:O	1:B:503:ASP:HB2	2.11	0.51
1:C:60:TYR:HE1	1:C:103:ASP:HB2	1.76	0.51
1:E:175:LYS:N	3:E:1001:ADP:O1B	2.44	0.51
1:G:269:ARG:HA	1:G:280:GLN:HG2	1.91	0.51
1:K:473:LYS:CB	1:K:473:LYS:HZ2	2.24	0.51
1:L:62:LEU:O	1:L:98:LEU:N	2.38	0.51
1:L:238:VAL:HG11	1:L:248:ARG:NH2	2.22	0.51
1:H:242:LYS:HZ2	1:H:588:ASN:ND2	2.04	0.51
1:B:75:PHE:HD1	1:C:71:GLU:CG	2.23	0.51
1:E:199:SER:HB2	1:E:202:ARG:HG2	1.93	0.51
1:G:375:LEU:O	1:G:379:LEU:HG	2.10	0.51
1:I:173:ALA:HB2	1:I:544:ARG:N	2.26	0.51
1:J:156:ILE:HD13	1:J:164:ILE:HD11	1.92	0.51
1:J:401:PRO:HB2	1:K:397:LEU:CB	2.38	0.51
1:K:251:LEU:HD12	1:K:251:LEU:H	1.76	0.51
1:H:19:LEU:HD12	1:G:79:VAL:HG21	1.93	0.50
1:A:21:THR:HG21	1:F:76:GLU:HA	1.92	0.50
1:C:376:ILE:HD13	1:C:411:LEU:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:248:ARG:HB2	1:H:590:PRO:HG3	1.92	0.50
1:H:291:PHE:HA	1:H:434:TYR:O	2.12	0.50
1:H:506:LEU:HD13	1:H:532:ARG:NH2	2.27	0.50
1:B:76:GLU:N	1:B:76:GLU:OE2	2.43	0.50
1:E:386:GLU:HG3	1:E:387:ARG:HG3	1.93	0.50
1:J:269:ARG:HB2	1:J:278:VAL:HG23	1.94	0.50
1:J:324:ILE:HD12	1:J:407:PHE:CE2	2.41	0.50
1:K:199:SER:HB2	1:K:202:ARG:HB2	1.91	0.50
1:K:352:SER:O	1:K:352:SER:OG	2.30	0.50
1:B:478:ARG:HG3	1:B:516:GLY:CA	2.38	0.50
1:C:263:GLN:HE21	1:C:265:LEU:HD21	1.76	0.50
1:C:453:LEU:HB3	1:C:457:ALA:HB3	1.93	0.50
1:G:264:LEU:HD23	1:G:447:VAL:HB	1.93	0.50
1:G:319:PHE:HZ	1:I:315:LEU:HD21	1.77	0.50
1:L:219:GLU:OE2	1:L:282:ASP:OD1	2.28	0.50
1:H:71:GLU:OE2	1:G:76:GLU:N	2.45	0.50
1:H:131:ASP:OD1	1:H:131:ASP:N	2.39	0.50
1:B:195:THR:HG23	1:B:203:GLN:HE22	1.76	0.50
1:C:473:LYS:HG3	1:C:517:ILE:HG12	1.93	0.50
1:D:397:LEU:O	1:D:398:LYS:HE3	2.12	0.50
1:E:174:THR:OG1	1:E:589:TYR:OH	2.04	0.50
1:E:249:TYR:HE1	1:E:590:PRO:HB2	1.73	0.50
1:F:184:HIS:CE1	1:F:188:ARG:HG3	2.46	0.50
1:K:153:PHE:CE2	1:K:157:ASN:HB3	2.46	0.50
1:A:597:ARG:NH2	1:A:599:ASP:OD2	2.45	0.50
1:B:103:ASP:CB	1:B:104:PRO:HD3	2.40	0.50
1:C:371:THR:OG1	1:C:373:GLU:OE1	2.30	0.50
1:F:386:GLU:HG3	1:F:387:ARG:HG3	1.92	0.50
1:I:52:PRO:HD2	1:K:38:SER:HB3	1.93	0.50
1:I:184:HIS:CE1	1:I:188:ARG:HG3	2.46	0.50
1:K:298:PHE:C	1:K:298:PHE:CD1	2.85	0.50
1:L:181:PHE:CE1	1:L:590:PRO:HD2	2.46	0.50
1:H:109:PRO:HG3	1:G:66:VAL:HG13	1.94	0.50
1:B:155:PHE:CD1	1:B:579:PRO:HG2	2.46	0.50
1:B:324:ILE:N	1:B:324:ILE:CD1	2.74	0.50
1:D:76:GLU:N	1:E:71:GLU:OE2	2.35	0.50
1:D:385:GLU:HA	1:D:389:GLY:HA2	1.93	0.50
1:F:352:SER:HB3	1:F:385:GLU:OE2	2.11	0.50
1:I:478:ARG:HG2	1:I:478:ARG:O	2.11	0.50
1:L:386:GLU:HG3	1:L:387:ARG:HG3	1.92	0.50
1:A:268:PRO:HG3	1:A:292:VAL:HG12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:349:PHE:HB2	1:A:354:THR:HB	1.93	0.50
1:B:42:ASP:OD2	1:B:586:LEU:HD22	2.11	0.50
1:E:560:GLN:HG2	1:E:563:ARG:NH1	2.26	0.50
1:G:315:LEU:HD23	1:G:317:LEU:HD11	1.93	0.50
1:I:33:VAL:HG21	1:I:93:TYR:CD2	2.46	0.50
1:J:184:HIS:CE1	1:J:188:ARG:HG3	2.47	0.50
1:J:560:GLN:HG2	1:J:563:ARG:NH1	2.26	0.50
1:K:247:ASP:C	1:K:251:LEU:HD13	2.32	0.50
1:K:513:ARG:NH1	1:K:513:ARG:CB	2.73	0.50
1:L:344:VAL:HG23	1:L:344:VAL:O	2.11	0.50
1:A:135:GLU:OE2	1:A:154:ARG:NH2	2.45	0.50
1:A:560:GLN:HA	1:A:563:ARG:HG3	1.93	0.50
1:B:470:PHE:HD1	1:B:517:ILE:HD12	1.76	0.50
1:C:315:LEU:HD23	1:C:317:LEU:HD12	1.93	0.50
1:D:236:ASP:O	1:D:240:ARG:HG2	2.12	0.50
1:E:202:ARG:HG3	1:E:203:GLN:N	2.27	0.50
1:I:298:PHE:CD1	1:I:298:PHE:C	2.85	0.50
1:J:40:GLY:N	1:J:43:ASP:OD2	2.45	0.50
1:L:51:LYS:N	1:L:55:THR:O	2.35	0.50
1:L:473:LYS:HB3	1:L:515:LEU:HG	1.94	0.50
1:C:406:ALA:HA	1:C:409:ARG:HG2	1.94	0.50
1:D:221:LEU:HD22	1:D:224:LEU:HD11	1.94	0.50
1:D:381:TYR:CZ	1:D:386:GLU:OE2	2.65	0.50
1:F:102:VAL:HB	1:F:105:GLU:HA	1.94	0.50
1:I:19:LEU:HD13	1:I:32:ALA:HB2	1.93	0.50
1:J:143:LEU:HB3	1:J:587:VAL:HG12	1.93	0.50
1:K:181:PHE:CE1	1:K:590:PRO:HD2	2.47	0.50
1:K:266:ALA:HB1	1:K:267:PRO:HD2	1.93	0.50
1:H:193:ASP:OD1	1:H:206:THR:HG22	2.11	0.49
1:H:405:ARG:HD3	1:L:323:ASN:HA	1.94	0.49
1:B:57:VAL:HG13	1:B:104:PRO:HD2	1.94	0.49
1:C:175:LYS:NZ	1:C:524:GLN:HA	2.27	0.49
1:D:310:ASP:OD2	1:D:314:SER:HB3	2.12	0.49
1:E:41:LEU:HD13	1:E:66:VAL:HG12	1.92	0.49
1:E:82:VAL:HG13	1:E:89:ALA:HB2	1.93	0.49
1:F:242:LYS:HB2	1:F:244:LEU:CD1	2.41	0.49
1:G:162:GLY:O	1:G:518:ILE:HD12	2.12	0.49
1:K:44:LEU:HD21	1:K:62:LEU:HD12	1.94	0.49
1:K:174:THR:OG1	1:K:589:TYR:OH	2.15	0.49
1:H:383:LEU:HG	1:H:404:LEU:HD22	1.93	0.49
1:E:156:ILE:HD13	1:E:164:ILE:HD11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:371:THR:OG1	1:G:373:GLU:OE1	2.30	0.49
1:I:269:ARG:O	1:I:269:ARG:HG3	2.12	0.49
1:L:25:THR:HG23	1:L:26:PRO:HD2	1.93	0.49
1:L:410:ARG:HH22	1:L:456:HIS:CD2	2.30	0.49
1:L:478:ARG:O	1:L:478:ARG:HD3	2.12	0.49
1:A:142:LEU:CD1	1:A:248:ARG:HB3	2.41	0.49
1:B:553:PRO:HA	1:B:556:ARG:HD3	1.92	0.49
1:C:79:VAL:HG21	1:D:19:LEU:HD12	1.93	0.49
1:D:320:VAL:CG2	1:D:399:GLN:HG2	2.41	0.49
1:F:80:GLU:OE2	1:F:80:GLU:HA	2.11	0.49
1:G:128:LEU:HD13	1:G:150:PRO:HD2	1.95	0.49
1:J:149:LEU:HD22	1:J:587:VAL:HG11	1.94	0.49
1:L:326:GLU:HG3	1:L:330:ARG:NH1	2.28	0.49
1:B:223:PHE:HE1	1:B:284:ARG:HB2	1.75	0.49
1:B:376:ILE:HD13	1:B:411:LEU:HB3	1.95	0.49
1:B:460:PHE:C	1:B:460:PHE:CD1	2.85	0.49
1:E:315:LEU:HG	1:E:316:ASN:N	2.27	0.49
1:I:33:VAL:CG2	1:I:93:TYR:CD2	2.95	0.49
1:J:26:PRO:O	1:J:99:VAL:HG21	2.11	0.49
1:J:349:PHE:HB2	1:J:352:SER:CB	2.24	0.49
1:L:75:PHE:HB3	1:L:78:ASP:HB2	1.94	0.49
1:H:315:LEU:HG	1:H:316:ASN:H	1.78	0.49
1:I:59:PHE:CD1	1:I:110:PRO:HG3	2.47	0.49
1:I:133:MET:SD	1:I:150:PRO:HB2	2.53	0.49
1:K:188:ARG:CG	1:K:188:ARG:NH1	2.73	0.49
1:K:499:SER:HB2	1:K:500:PRO:CD	2.43	0.49
1:L:50:ARG:HA	1:L:56:PRO:HA	1.94	0.49
1:H:466:LEU:HD21	1:H:484:VAL:HG11	1.95	0.49
1:A:320:VAL:HG21	1:A:403:THR:HG22	1.93	0.49
1:B:175:LYS:NZ	1:B:524:GLN:HA	2.27	0.49
1:C:57:VAL:HG13	1:C:104:PRO:HD2	1.94	0.49
1:E:470:PHE:CZ	1:E:507:ASP:HB3	2.48	0.49
1:G:149:LEU:HD21	1:G:576:VAL:HG21	1.94	0.49
1:I:158:GLY:HA2	1:I:513:ARG:HB3	1.94	0.49
1:L:31:PHE:CE1	1:L:33:VAL:HG12	2.47	0.49
1:L:84:ALA:HB3	1:L:86:LEU:HD23	1.93	0.49
1:A:347:TRP:CH2	1:A:354:THR:HG21	2.47	0.49
1:B:75:PHE:CE1	1:C:71:GLU:HG3	2.47	0.49
1:B:248:ARG:HH11	1:B:590:PRO:HA	1.77	0.49
1:F:174:THR:HG22	3:F:1001:ADP:H5'2	1.94	0.49
1:I:553:PRO:HA	1:I:556:ARG:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:LEU:HD12	1:A:143:LEU:O	2.12	0.49
1:B:174:THR:CB	3:B:1001:ADP:H5'2	2.43	0.49
1:C:238:VAL:HG11	1:C:248:ARG:NH2	2.18	0.49
1:J:219:GLU:OE1	1:J:283:GLN:CB	2.46	0.49
1:K:428:PRO:HA	1:K:431:ALA:HB3	1.95	0.49
1:D:263:GLN:HB2	1:D:443:ILE:CG2	2.42	0.49
1:F:64:ASP:OD1	1:F:96:ARG:HD2	2.13	0.49
1:L:248:ARG:HB2	1:L:590:PRO:HG3	1.94	0.49
1:A:228:ASN:HD22	1:A:600:GLU:HB3	1.77	0.49
1:D:41:LEU:HD13	1:D:66:VAL:HG12	1.94	0.49
1:G:376:ILE:HD13	1:G:411:LEU:HB3	1.94	0.49
1:J:68:LYS:HD3	1:K:111:GLN:HG2	1.94	0.49
1:L:323:ASN:HD21	1:L:397:LEU:HD13	1.78	0.49
1:H:17:MET:HE2	1:G:83:VAL:HG11	1.95	0.48
1:B:153:PHE:HD2	1:B:195:THR:HG21	1.78	0.48
1:E:66:VAL:HG13	1:F:109:PRO:HG3	1.94	0.48
1:E:174:THR:CA	3:E:1001:ADP:H5'2	2.42	0.48
1:K:142:LEU:CD1	1:K:248:ARG:HG2	2.35	0.48
1:K:297:GLU:OE1	1:K:301:ARG:CD	2.60	0.48
1:K:481:THR:O	1:K:481:THR:OG1	2.30	0.48
1:H:189:SER:O	1:H:194:ARG:NH2	2.41	0.48
1:A:131:ASP:N	1:A:131:ASP:OD1	2.40	0.48
1:E:343:ILE:HA	1:E:367:VAL:O	2.13	0.48
1:J:380:GLU:O	1:J:384:LEU:HB2	2.12	0.48
1:K:155:PHE:HA	1:K:161:GLY:CA	2.38	0.48
1:L:60:TYR:CE1	1:L:103:ASP:HB2	2.44	0.48
1:L:166:ILE:HG23	1:L:541:VAL:HB	1.94	0.48
1:H:183:LEU:HD22	1:H:187:PHE:CE2	2.48	0.48
1:H:556:ARG:HB2	1:G:548:ALA:CB	2.43	0.48
1:A:174:THR:HG22	3:A:1001:ADP:C5'	2.37	0.48
1:C:104:PRO:HD2	1:C:104:PRO:O	2.12	0.48
1:D:238:VAL:HG11	1:D:248:ARG:NH2	2.29	0.48
1:G:291:PHE:HB2	1:G:436:PRO:HG3	1.94	0.48
1:I:142:LEU:C	1:I:588:ASN:HD21	2.16	0.48
1:J:158:GLY:HA2	1:J:161:GLY:O	2.12	0.48
1:J:199:SER:OG	1:L:597:ARG:HD3	2.13	0.48
1:J:530:GLU:OE2	1:J:532:ARG:HD3	2.13	0.48
1:K:220:ASP:HA	1:K:596:THR:O	2.13	0.48
1:K:269:ARG:O	1:K:269:ARG:CG	2.47	0.48
1:L:176:THR:OG1	1:L:487:ASP:OD2	2.30	0.48
1:A:221:LEU:HD22	1:A:224:LEU:HD11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:236:ASP:O	1:A:240:ARG:HG2	2.13	0.48
1:C:353:GLU:OE2	1:C:353:GLU:HA	2.13	0.48
1:I:47:VAL:HG13	1:I:59:PHE:HB2	1.95	0.48
1:C:231:MET:SD	1:C:249:TYR:CE2	3.07	0.48
1:C:362:SER:N	1:C:366:GLY:O	2.34	0.48
1:E:40:GLY:N	1:E:43:ASP:OD2	2.44	0.48
1:F:376:ILE:HD13	1:F:411:LEU:HB3	1.94	0.48
1:I:418:LEU:HD21	1:I:457:ALA:HA	1.95	0.48
1:J:386:GLU:OE1	1:J:392:ASP:HB2	2.14	0.48
1:K:136:ALA:HA	1:K:195:THR:HG21	1.95	0.48
1:K:473:LYS:HB2	1:K:517:ILE:HD11	1.94	0.48
1:L:33:VAL:HG22	1:L:93:TYR:O	2.13	0.48
1:B:219:GLU:HB3	1:B:222:LEU:CD1	2.44	0.48
1:D:219:GLU:OE1	1:D:283:GLN:NE2	2.47	0.48
1:D:553:PRO:HA	1:D:556:ARG:HD3	1.96	0.48
1:F:165:ASN:ND2	1:F:523:GLN:HE22	2.08	0.48
1:F:199:SER:HB3	1:F:203:GLN:H	1.78	0.48
1:L:349:PHE:O	1:L:349:PHE:CD1	2.67	0.48
1:A:157:ASN:ND2	1:A:159:GLU:HG3	2.29	0.48
1:B:294:THR:HB	1:B:340:THR:HB	1.96	0.48
1:B:570:GLN:HG3	1:B:571:PRO:HD2	1.95	0.48
1:C:268:PRO:HG3	1:C:292:VAL:HG12	1.94	0.48
1:G:40:GLY:N	1:G:43:ASP:OD2	2.46	0.48
1:I:24:VAL:O	1:K:67:ARG:HA	2.14	0.48
1:I:478:ARG:HG3	1:I:516:GLY:CA	2.43	0.48
1:L:357:GLU:OE1	1:L:358:ASN:O	2.31	0.48
1:L:423:ARG:NH1	1:L:426:LEU:HD21	2.29	0.48
1:H:175:LYS:HD2	1:H:522:ALA:HB1	1.95	0.48
1:B:149:LEU:HD21	1:B:576:VAL:HG21	1.94	0.48
1:B:353:GLU:HG3	1:B:353:GLU:O	2.13	0.48
1:C:199:SER:HB2	1:C:203:GLN:H	1.79	0.48
1:D:51:LYS:HG2	1:D:52:PRO:HD2	1.96	0.48
1:D:149:LEU:HD21	1:D:576:VAL:HG21	1.95	0.48
1:G:387:ARG:C	1:G:388:GLU:CD	2.64	0.48
1:I:142:LEU:O	1:I:588:ASN:N	2.43	0.48
1:L:24:VAL:HG11	1:L:110:PRO:O	2.13	0.48
1:L:64:ASP:OD1	1:L:96:ARG:HD2	2.14	0.48
1:A:386:GLU:HG3	1:A:387:ARG:HG3	1.95	0.48
1:D:441:ARG:CG	1:D:441:ARG:NH2	2.73	0.48
1:F:19:LEU:HD13	1:F:32:ALA:HB2	1.95	0.48
1:I:268:PRO:HD2	1:I:421:LEU:HD23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:165:ASN:OD1	1:K:523:GLN:NE2	2.37	0.48
1:H:553:PRO:HA	1:H:556:ARG:HD3	1.94	0.48
1:A:376:ILE:HD13	1:A:411:LEU:HB3	1.95	0.48
1:J:379:LEU:CD2	1:J:395:TRP:HZ3	2.27	0.48
1:H:386:GLU:HB3	1:H:392:ASP:N	2.29	0.47
1:H:530:GLU:HG3	1:H:532:ARG:H	1.79	0.47
1:H:597:ARG:CG	1:H:600:GLU:HG3	2.44	0.47
1:C:553:PRO:O	1:C:556:ARG:HG2	2.14	0.47
1:F:153:PHE:CD2	1:F:195:THR:HG21	2.48	0.47
1:H:453:LEU:HB3	1:H:457:ALA:HB3	1.96	0.47
1:A:406:ALA:HA	1:A:409:ARG:HG2	1.95	0.47
1:B:525:THR:HG22	1:B:527:SER:H	1.79	0.47
1:E:64:ASP:OD1	1:E:96:ARG:HD2	2.14	0.47
1:E:274:GLY:O	1:E:423:ARG:NH2	2.45	0.47
1:G:149:LEU:HD22	1:G:587:VAL:HG11	1.95	0.47
1:L:149:LEU:HD21	1:L:576:VAL:HG21	1.96	0.47
1:H:64:ASP:OD1	1:H:96:ARG:HD2	2.14	0.47
1:H:175:LYS:N	3:H:1001:ADP:O3B	2.46	0.47
1:H:550:ALA:HB1	1:H:563:ARG:HB3	1.96	0.47
1:B:213:ILE:CD1	1:B:221:LEU:CD1	2.92	0.47
1:J:299:CYS:HB2	1:J:332:ALA:HB2	1.96	0.47
1:K:213:ILE:CG2	1:K:447:VAL:HG22	2.44	0.47
1:K:269:ARG:HB2	1:K:278:VAL:HG23	1.96	0.47
1:H:166:ILE:HG22	1:H:175:LYS:HB3	1.96	0.47
1:H:215:ASN:HD21	1:H:219:GLU:H	1.62	0.47
1:H:242:LYS:HZ3	1:H:588:ASN:HD21	1.60	0.47
1:B:219:GLU:CB	1:B:222:LEU:CD1	2.92	0.47
1:B:268:PRO:HD3	1:B:291:PHE:O	2.14	0.47
1:B:525:THR:HG21	1:B:549:GLU:OE1	2.14	0.47
1:D:248:ARG:HB2	1:D:590:PRO:HG3	1.96	0.47
1:E:36:GLY:HA2	1:F:52:PRO:HB3	1.96	0.47
1:E:41:LEU:HB2	1:F:107:PHE:CB	2.45	0.47
1:L:242:LYS:NZ	1:L:588:ASN:OD1	2.47	0.47
1:H:597:ARG:HG2	1:H:600:GLU:HG3	1.95	0.47
1:C:149:LEU:HD21	1:C:576:VAL:HG21	1.96	0.47
1:E:211:ALA:HA	1:E:483:PHE:O	2.13	0.47
1:G:52:PRO:HD2	1:I:38:SER:HB3	1.97	0.47
1:J:354:THR:HG23	1:J:381:TYR:CE2	2.46	0.47
1:J:599:ASP:OD1	1:J:599:ASP:N	2.47	0.47
1:L:49:THR:HG21	1:L:110:PRO:HA	1.97	0.47
1:L:84:ALA:CB	1:L:86:LEU:CD2	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:215:ASN:HB3	1:A:449:ASP:HA	1.96	0.47
1:B:75:PHE:HD1	1:C:71:GLU:HG2	1.79	0.47
1:C:162:GLY:H	1:C:538:ALA:HB2	1.79	0.47
1:C:191:VAL:O	1:C:195:THR:HG22	2.15	0.47
1:C:320:VAL:HG22	1:C:399:GLN:HG2	1.96	0.47
1:J:175:LYS:NZ	1:J:524:GLN:HA	2.30	0.47
1:H:70:HIS:CG	1:H:73:VAL:HG21	2.50	0.47
1:H:269:ARG:HA	1:H:280:GLN:HG2	1.97	0.47
1:A:19:LEU:HD13	1:A:32:ALA:HB2	1.96	0.47
1:A:228:ASN:ND2	1:A:600:GLU:OE1	2.48	0.47
1:B:190:GLY:O	1:B:193:ASP:HB2	2.14	0.47
1:B:191:VAL:O	1:B:195:THR:HG22	2.14	0.47
1:B:231:MET:HE3	1:B:232:VAL:HG13	1.97	0.47
1:B:473:LYS:CG	1:B:517:ILE:HD11	2.43	0.47
1:C:69:ARG:NE	1:D:23:ASP:OD1	2.42	0.47
1:D:281:THR:OG1	1:D:284:ARG:O	2.19	0.47
1:E:169:ILE:HG22	1:E:172:VAL:HB	1.97	0.47
1:F:474:GLU:OE1	1:F:511:ARG:NH2	2.47	0.47
1:I:223:PHE:HB3	1:I:601:VAL:HG21	1.96	0.47
1:I:323:ASN:ND2	1:I:397:LEU:HD23	2.30	0.47
1:J:61:GLY:HA2	1:J:100:THR:H	1.80	0.47
1:J:64:ASP:OD1	1:J:96:ARG:HD2	2.15	0.47
1:J:324:ILE:HD12	1:J:407:PHE:CE1	2.50	0.47
1:K:294:THR:HB	1:K:340:THR:HB	1.95	0.47
1:L:326:GLU:CG	1:L:330:ARG:NH1	2.78	0.47
1:L:423:ARG:NH1	1:L:425:ASP:OD1	2.47	0.47
1:A:108:ILE:O	1:A:108:ILE:HG13	2.14	0.47
1:C:40:GLY:N	1:C:43:ASP:OD2	2.47	0.47
1:C:175:LYS:HD2	1:C:522:ALA:HB1	1.95	0.47
1:E:41:LEU:HB2	1:F:107:PHE:HB2	1.96	0.47
1:E:58:ARG:HB2	1:E:103:ASP:HB3	1.97	0.47
1:E:155:PHE:HD1	1:E:161:GLY:HA3	1.80	0.47
1:G:553:PRO:HA	1:G:556:ARG:HD3	1.96	0.47
1:K:502:LYS:HG2	1:K:506:LEU:CD1	2.44	0.47
1:L:268:PRO:HG3	1:L:292:VAL:HG12	1.95	0.47
1:H:373:GLU:HA	1:H:415:GLN:OE1	2.14	0.47
1:A:149:LEU:HD22	1:A:587:VAL:CG1	2.42	0.47
1:A:349:PHE:CE1	1:A:356:PRO:CG	2.92	0.47
1:B:64:ASP:OD1	1:B:96:ARG:HD2	2.15	0.47
1:D:553:PRO:O	1:D:556:ARG:HG2	2.15	0.47
1:E:282:ASP:OD1	1:E:282:ASP:N	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:142:LEU:HA	1:J:142:LEU:HD23	1.75	0.47
1:K:149:LEU:HD21	1:K:576:VAL:HG21	1.97	0.47
1:K:248:ARG:O	1:K:251:LEU:N	2.48	0.47
1:H:291:PHE:HD2	1:H:436:PRO:HG3	1.80	0.47
1:C:165:ASN:HD21	1:C:523:GLN:NE2	2.11	0.47
1:C:189:SER:O	1:C:194:ARG:NH2	2.48	0.47
1:D:162:GLY:CA	1:D:538:ALA:HB2	2.43	0.47
1:D:173:ALA:HB1	1:D:543:GLY:HA3	1.97	0.47
1:E:70:HIS:HB2	1:F:20:GLY:HA3	1.97	0.47
1:F:191:VAL:O	1:F:195:THR:HG22	2.14	0.47
1:F:284:ARG:O	1:F:288:VAL:HG21	2.15	0.47
1:I:174:THR:HG1	1:I:589:TYR:HH	1.62	0.47
1:J:63:VAL:HA	1:J:96:ARG:O	2.15	0.47
1:K:502:LYS:HG2	1:K:506:LEU:HD11	1.96	0.47
1:L:51:LYS:HG3	1:L:57:VAL:HG21	1.97	0.47
1:H:228:ASN:ND2	1:H:600:GLU:OE1	2.48	0.46
1:D:469:VAL:O	1:D:473:LYS:HG2	2.15	0.46
1:F:248:ARG:HD2	1:F:590:PRO:HA	1.97	0.46
1:H:506:LEU:HD23	1:H:533:ILE:HD12	1.97	0.46
1:A:299:CYS:HB2	1:A:332:ALA:HB2	1.98	0.46
1:F:133:MET:HG2	1:F:152:ASN:HB2	1.97	0.46
1:F:248:ARG:HH11	1:F:590:PRO:HA	1.81	0.46
1:G:153:PHE:HD2	1:G:195:THR:HG21	1.80	0.46
1:G:387:ARG:O	1:G:388:GLU:CG	2.62	0.46
1:I:159:GLU:OE1	1:I:203:GLN:NE2	2.48	0.46
1:I:339:GLY:HA2	1:I:428:PRO:HG3	1.97	0.46
1:J:191:VAL:O	1:J:195:THR:HG22	2.15	0.46
1:K:131:ASP:OD1	1:K:131:ASP:N	2.48	0.46
1:K:139:PRO:HG2	1:K:254:LEU:HD21	1.95	0.46
1:K:153:PHE:HE1	1:K:186:ILE:HD13	1.79	0.46
1:L:64:ASP:OD1	1:L:65:ASN:N	2.49	0.46
1:A:146:GLY:CA	1:A:251:LEU:HD23	2.42	0.46
1:B:171:GLY:N	3:B:1001:ADP:O2B	2.37	0.46
1:B:291:PHE:HA	1:B:434:TYR:O	2.15	0.46
1:D:291:PHE:HA	1:D:434:TYR:O	2.15	0.46
1:D:566:ALA:HA	1:D:569:LEU:CG	2.42	0.46
1:H:269:ARG:HB2	1:H:278:VAL:HG23	1.96	0.46
1:H:478:ARG:HD2	1:H:514:SER:O	2.15	0.46
1:B:80:GLU:OE2	1:B:80:GLU:N	2.40	0.46
1:B:173:ALA:HB1	1:B:543:GLY:HA3	1.97	0.46
1:C:248:ARG:NH1	1:C:590:PRO:HA	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:248:ARG:HH11	1:C:589:TYR:C	2.19	0.46
1:D:82:VAL:HG23	1:D:87:LEU:HD22	1.87	0.46
1:E:387:ARG:O	1:E:390:GLU:HG2	2.16	0.46
1:F:175:LYS:HZ3	1:F:524:GLN:HA	1.79	0.46
1:F:176:THR:HB	3:F:1001:ADP:O2A	2.15	0.46
1:I:513:ARG:HH22	1:K:217:LYS:HE2	1.80	0.46
1:K:231:MET:SD	1:K:249:TYR:HE2	2.39	0.46
1:H:291:PHE:HB2	1:H:436:PRO:HG3	1.97	0.46
1:A:267:PRO:HG2	1:A:280:GLN:HG3	1.97	0.46
1:B:320:VAL:HG21	1:B:403:THR:HG22	1.98	0.46
1:E:133:MET:CG	1:E:152:ASN:HB2	2.46	0.46
1:F:155:PHE:CD1	1:F:579:PRO:HG2	2.51	0.46
1:J:323:ASN:CG	1:L:405:ARG:HD2	2.36	0.46
1:K:64:ASP:OD1	1:K:96:ARG:HD2	2.15	0.46
1:K:298:PHE:CD2	1:K:422:ILE:HD13	2.51	0.46
1:K:426:LEU:N	1:K:426:LEU:HD23	2.30	0.46
1:K:514:SER:OG	1:K:515:LEU:HD12	2.16	0.46
1:L:406:ALA:HA	1:L:409:ARG:HG2	1.96	0.46
1:L:495:ARG:NE	1:L:527:SER:O	2.48	0.46
1:H:216:VAL:HG11	1:H:488:GLU:OE1	2.15	0.46
1:A:210:ARG:HB2	1:A:482:VAL:HG22	1.98	0.46
1:B:223:PHE:CA	1:B:284:ARG:NH1	2.70	0.46
1:F:228:ASN:OD1	1:F:600:GLU:HB3	2.16	0.46
1:G:71:GLU:OE2	1:I:76:GLU:N	2.45	0.46
1:G:176:THR:OG1	1:G:487:ASP:OD2	2.33	0.46
1:J:597:ARG:CG	1:J:600:GLU:HG3	2.45	0.46
1:K:196:ALA:HB1	1:K:205:GLY:HA2	1.97	0.46
1:K:436:PRO:O	1:K:436:PRO:HG2	2.15	0.46
1:K:553:PRO:HA	1:K:556:ARG:HD3	1.98	0.46
1:H:501:ILE:O	1:H:504:VAL:HG12	2.16	0.46
1:C:73:VAL:HG12	1:C:82:VAL:HG21	1.98	0.46
1:C:473:LYS:HG3	1:C:517:ILE:CG1	2.45	0.46
1:D:161:GLY:HA2	1:D:513:ARG:HH21	1.76	0.46
1:E:101:ARG:NH2	1:E:131:ASP:OD1	2.47	0.46
1:G:57:VAL:HA	1:G:104:PRO:HG2	1.98	0.46
1:I:40:GLY:O	1:I:63:VAL:HG11	2.15	0.46
1:L:19:LEU:N	1:L:31:PHE:HA	2.30	0.46
1:C:248:ARG:HB2	1:C:590:PRO:HG3	1.96	0.46
1:D:70:HIS:CB	1:D:73:VAL:CG2	2.80	0.46
1:E:247:ASP:OD1	1:E:247:ASP:N	2.47	0.46
1:I:100:THR:HG22	1:I:583:ASN:ND2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:421:LEU:HD11	1:L:453:LEU:HD11	1.98	0.46
1:B:223:PHE:CA	1:B:284:ARG:HH11	2.27	0.46
1:C:320:VAL:HG21	1:C:403:THR:HG22	1.98	0.46
1:C:525:THR:HG22	1:C:527:SER:H	1.81	0.46
1:E:219:GLU:CD	1:E:283:GLN:HB2	2.36	0.46
1:E:268:PRO:HG3	1:E:292:VAL:HG12	1.97	0.46
1:G:335:GLN:NE2	1:G:343:ILE:O	2.46	0.46
1:J:591:PHE:CZ	3:J:1001:ADP:C2	3.04	0.46
1:K:79:VAL:O	1:K:83:VAL:HG13	2.16	0.46
1:H:269:ARG:HB2	1:H:278:VAL:O	2.16	0.46
1:H:387:ARG:NH1	1:H:393:PRO:HD2	2.30	0.46
1:A:66:VAL:HG13	1:B:109:PRO:HG3	1.98	0.46
1:B:195:THR:HG23	1:B:203:GLN:NE2	2.31	0.46
1:C:41:LEU:HD13	1:C:66:VAL:HG12	1.97	0.46
1:C:165:ASN:ND2	1:C:523:GLN:HE22	2.10	0.46
1:L:560:GLN:HA	1:L:563:ARG:HG3	1.98	0.46
1:B:228:ASN:ND2	1:B:600:GLU:HB3	2.31	0.45
1:C:242:LYS:HB2	1:C:244:LEU:CD1	2.43	0.45
1:D:41:LEU:HB2	1:E:107:PHE:CB	2.46	0.45
1:G:155:PHE:C	1:G:161:GLY:HA3	2.35	0.45
1:G:156:ILE:CD1	1:G:164:ILE:HD11	2.46	0.45
1:I:324:ILE:N	1:I:324:ILE:CD1	2.78	0.45
1:I:414:VAL:HG22	1:I:418:LEU:HG	1.97	0.45
1:K:246:ALA:O	1:K:251:LEU:CD1	2.57	0.45
1:E:174:THR:HG21	3:E:1001:ADP:N9	2.32	0.45
1:E:335:GLN:NE2	1:E:343:ILE:H	2.14	0.45
1:I:248:ARG:HB3	1:I:590:PRO:HG3	1.99	0.45
1:L:191:VAL:O	1:L:195:THR:HG22	2.17	0.45
1:L:248:ARG:HH11	1:L:589:TYR:C	2.20	0.45
1:L:393:PRO:O	1:L:397:LEU:HD12	2.16	0.45
1:L:523:GLN:HG3	1:L:529:VAL:HG21	1.98	0.45
1:I:244:LEU:HD12	1:I:244:LEU:HA	1.76	0.45
1:K:281:THR:OG1	1:K:281:THR:O	2.34	0.45
1:K:386:GLU:HG3	1:K:387:ARG:HG3	1.99	0.45
1:H:331:LEU:HD21	1:H:344:VAL:HG12	1.98	0.45
1:A:80:GLU:H	1:A:80:GLU:HG2	1.58	0.45
1:D:478:ARG:HG3	1:D:515:LEU:C	2.37	0.45
1:F:51:LYS:HG2	1:F:52:PRO:HD2	1.98	0.45
1:F:284:ARG:HG2	1:F:288:VAL:CG2	2.47	0.45
1:I:370:GLN:HB3	1:I:425:ASP:HB3	1.98	0.45
1:I:566:ALA:HA	1:I:569:LEU:CG	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:78:ASP:O	1:J:82:VAL:HG23	2.16	0.45
1:K:372:PHE:CE1	1:K:422:ILE:HD12	2.51	0.45
1:A:335:GLN:HG3	1:A:342:LEU:HD12	1.98	0.45
1:C:175:LYS:N	3:C:1001:ADP:O1B	2.49	0.45
1:D:184:HIS:CE1	1:D:188:ARG:HG3	2.51	0.45
1:D:228:ASN:ND2	1:D:231:MET:N	2.64	0.45
1:D:269:ARG:HB2	1:D:278:VAL:HG23	1.99	0.45
1:E:473:LYS:HB3	1:E:515:LEU:HG	1.98	0.45
1:E:473:LYS:NZ	1:E:480:ASP:O	2.42	0.45
1:F:188:ARG:NH2	1:F:260:ARG:HG3	2.31	0.45
1:G:221:LEU:HD23	1:G:221:LEU:HA	1.82	0.45
1:G:386:GLU:HG3	1:G:387:ARG:HG3	1.99	0.45
1:J:64:ASP:OD1	1:J:65:ASN:N	2.49	0.45
1:J:375:LEU:O	1:J:379:LEU:HG	2.17	0.45
1:J:379:LEU:HD23	1:J:395:TRP:HZ3	1.82	0.45
1:K:62:LEU:HD23	1:K:63:VAL:O	2.17	0.45
1:K:419:SER:HB3	1:K:420:PRO:HD3	1.97	0.45
1:C:44:LEU:HD21	1:C:62:LEU:HD12	1.97	0.45
1:D:39:VAL:O	1:E:108:ILE:HG22	2.17	0.45
1:F:238:VAL:HG11	1:F:248:ARG:NH2	2.24	0.45
1:G:155:PHE:HA	1:G:161:GLY:N	2.32	0.45
1:G:158:GLY:HA2	1:G:161:GLY:O	2.17	0.45
1:G:308:PHE:HD1	1:G:410:ARG:HD2	1.82	0.45
1:I:386:GLU:HG3	1:I:387:ARG:HG3	1.99	0.45
1:J:41:LEU:HD13	1:J:66:VAL:HG12	1.99	0.45
1:J:87:LEU:O	1:J:87:LEU:HD13	2.17	0.45
1:J:181:PHE:CE1	1:J:590:PRO:HD2	2.52	0.45
1:L:470:PHE:HA	1:L:517:ILE:HD11	1.99	0.45
1:A:109:PRO:HG3	1:F:66:VAL:HG13	1.97	0.45
1:A:170:SER:HA	3:A:1001:ADP:O2B	2.17	0.45
1:C:175:LYS:NZ	1:C:523:GLN:C	2.70	0.45
1:C:473:LYS:HE3	1:C:515:LEU:O	2.16	0.45
1:D:274:GLY:O	1:D:423:ARG:NH2	2.44	0.45
1:E:153:PHE:CE2	1:E:157:ASN:HB3	2.52	0.45
1:G:20:GLY:HA3	1:I:70:HIS:HB2	1.99	0.45
1:J:310:ASP:CG	1:J:314:SER:HB3	2.37	0.45
1:L:396:VAL:HB	1:L:404:LEU:HD11	1.99	0.45
1:A:188:ARG:NH2	1:A:260:ARG:HB2	2.31	0.45
1:D:225:ASP:HB3	1:D:284:ARG:HH12	1.82	0.45
1:E:58:ARG:H	1:E:104:PRO:HD3	1.81	0.45
1:E:143:LEU:HD12	1:E:143:LEU:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:164:ILE:HD13	1:K:182:LEU:HD13	1.98	0.45
1:K:525:THR:HG22	1:K:527:SER:H	1.82	0.45
1:L:417:TYR:CD2	1:L:454:SER:HB2	2.51	0.45
1:H:415:GLN:O	1:H:419:SER:HB2	2.17	0.45
1:A:143:LEU:C	1:A:143:LEU:CD1	2.85	0.45
1:B:281:THR:HB	1:B:284:ARG:O	2.16	0.45
1:D:44:LEU:HD21	1:D:62:LEU:HD12	1.98	0.45
1:D:350:GLU:CG	1:D:351:ASP:N	2.77	0.45
1:E:81:ASP:HB3	1:E:86:LEU:HD12	1.98	0.45
1:F:269:ARG:CA	1:F:280:GLN:HG2	2.46	0.45
1:I:291:PHE:CD2	1:I:291:PHE:O	2.70	0.45
1:J:566:ALA:HA	1:J:569:LEU:CD1	2.47	0.45
1:L:51:LYS:HG2	1:L:52:PRO:HD2	1.98	0.45
1:H:331:LEU:HD23	1:H:342:LEU:HD21	1.99	0.45
1:A:416:LYS:HG3	1:A:417:TYR:CE1	2.52	0.45
1:B:228:ASN:ND2	1:B:600:GLU:OE1	2.49	0.45
1:D:149:LEU:HD22	1:D:587:VAL:HG11	1.99	0.45
1:D:269:ARG:HB2	1:D:278:VAL:O	2.17	0.45
1:G:29:PHE:CZ	1:G:47:VAL:HG11	2.52	0.45
1:I:238:VAL:HG11	1:I:248:ARG:CZ	2.47	0.45
1:J:69:ARG:HB2	1:J:92:SER:OG	2.17	0.45
1:J:307:VAL:HG11	1:J:411:LEU:HD23	1.99	0.45
1:L:153:PHE:CD2	1:L:195:THR:HG21	2.51	0.45
1:L:396:VAL:CG1	1:L:404:LEU:HD11	2.47	0.45
1:H:352:SER:HB2	1:H:385:GLU:OE2	2.17	0.44
1:A:221:LEU:HD23	1:A:221:LEU:HA	1.78	0.44
1:A:248:ARG:HB2	1:A:590:PRO:HG3	1.98	0.44
1:A:548:ALA:HB2	1:B:556:ARG:HB2	1.99	0.44
1:E:101:ARG:NH1	1:E:132:LYS:HE2	2.26	0.44
1:F:170:SER:OG	1:F:524:GLN:OE1	2.17	0.44
1:I:515:LEU:HD12	1:I:515:LEU:O	2.16	0.44
1:J:82:VAL:HG22	1:J:87:LEU:CD2	2.47	0.44
1:J:397:LEU:HD23	1:L:401:PRO:HB2	1.99	0.44
1:K:248:ARG:CA	1:K:251:LEU:HD13	2.44	0.44
1:L:47:VAL:HG13	1:L:59:PHE:HB2	1.99	0.44
1:H:155:PHE:CD1	1:H:579:PRO:HG2	2.53	0.44
1:H:489:LEU:HA	1:H:489:LEU:HD23	1.80	0.44
1:A:388:GLU:O	1:A:388:GLU:CG	2.65	0.44
1:C:588:ASN:HD22	1:C:588:ASN:N	2.16	0.44
1:D:161:GLY:CA	1:D:513:ARG:CZ	2.95	0.44
1:I:82:VAL:HA	1:I:87:LEU:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:87:LEU:HD22	1:J:87:LEU:C	2.38	0.44
1:K:175:LYS:HZ3	1:K:524:GLN:HA	1.82	0.44
1:K:362:SER:HB3	1:K:366:GLY:CA	2.47	0.44
1:L:71:GLU:CG	1:L:92:SER:HB3	2.48	0.44
1:B:80:GLU:H	1:B:80:GLU:CD	2.16	0.44
1:E:269:ARG:HB2	1:E:278:VAL:O	2.17	0.44
1:F:221:LEU:HA	1:F:221:LEU:HD23	1.66	0.44
1:G:107:PHE:CB	1:I:41:LEU:HB2	2.47	0.44
1:I:263:GLN:NE2	1:I:265:LEU:HD21	2.32	0.44
1:I:291:PHE:CD2	1:I:291:PHE:C	2.90	0.44
1:I:344:VAL:HG11	1:I:378:TYR:CE2	2.52	0.44
1:I:511:ARG:NH1	1:K:456:HIS:CE1	2.76	0.44
1:J:218:GLY:CA	1:J:451:HIS:CG	3.00	0.44
1:L:164:ILE:HD13	1:L:182:LEU:HD13	2.00	0.44
1:L:189:SER:O	1:L:194:ARG:NH2	2.48	0.44
1:L:566:ALA:HA	1:L:569:LEU:CG	2.45	0.44
1:C:192:MET:HB2	1:C:206:THR:HB	1.98	0.44
1:D:175:LYS:NZ	1:D:523:GLN:C	2.70	0.44
1:D:228:ASN:HD22	1:D:231:MET:N	2.16	0.44
1:F:269:ARG:HB2	1:F:278:VAL:HG23	2.00	0.44
1:G:236:ASP:O	1:G:240:ARG:HG2	2.17	0.44
1:I:269:ARG:HD3	1:I:280:GLN:HA	1.99	0.44
1:L:417:TYR:CE2	1:L:454:SER:HB2	2.53	0.44
1:L:597:ARG:HG2	1:L:598:ARG:H	1.80	0.44
1:H:168:GLY:O	1:H:524:GLN:HA	2.17	0.44
1:H:489:LEU:HD13	1:H:533:ILE:HG21	2.00	0.44
1:A:87:LEU:HD23	1:A:88:PRO:N	2.32	0.44
1:B:436:PRO:O	1:B:436:PRO:HG2	2.17	0.44
1:B:478:ARG:HB2	1:B:515:LEU:O	2.16	0.44
1:D:248:ARG:HD2	1:D:590:PRO:HA	1.98	0.44
1:E:58:ARG:HB2	1:E:103:ASP:CB	2.47	0.44
1:E:143:LEU:C	1:E:143:LEU:CD1	2.85	0.44
1:E:214:PHE:CD2	1:E:462:VAL:HG22	2.52	0.44
1:E:525:THR:HG22	1:E:527:SER:H	1.82	0.44
1:F:371:THR:OG1	1:F:373:GLU:OE1	2.35	0.44
1:F:469:VAL:O	1:F:473:LYS:HG2	2.17	0.44
1:G:265:LEU:HA	1:G:289:THR:O	2.17	0.44
1:I:33:VAL:CG1	1:I:93:TYR:CD2	3.00	0.44
1:I:59:PHE:HZ	1:I:108:ILE:O	2.01	0.44
1:I:173:ALA:HB2	1:I:544:ARG:H	1.82	0.44
1:I:215:ASN:CB	1:I:221:LEU:HB2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:372:PHE:CE2	1:I:376:ILE:HD11	2.52	0.44
1:J:213:ILE:CD1	1:J:221:LEU:CD1	2.95	0.44
1:L:155:PHE:HA	1:L:161:GLY:HA3	2.00	0.44
1:L:423:ARG:HD3	1:L:426:LEU:HD11	2.00	0.44
1:A:143:LEU:HB3	1:A:587:VAL:HG12	1.99	0.44
1:B:473:LYS:CB	1:B:515:LEU:HG	2.48	0.44
1:C:199:SER:CB	1:C:203:GLN:HB2	2.48	0.44
1:C:269:ARG:HB2	1:C:278:VAL:HG23	1.99	0.44
1:C:326:GLU:CG	1:C:330:ARG:NH1	2.81	0.44
1:E:294:THR:HA	1:E:423:ARG:O	2.17	0.44
1:E:412:ARG:O	1:E:415:GLN:HG2	2.17	0.44
1:G:460:PHE:O	1:G:464:VAL:HG13	2.18	0.44
1:I:156:ILE:O	1:I:156:ILE:HG22	2.17	0.44
1:I:228:ASN:HD21	1:I:600:GLU:HB3	1.81	0.44
1:I:320:VAL:HG22	1:I:399:GLN:HG3	1.99	0.44
1:K:158:GLY:HA2	1:K:161:GLY:O	2.17	0.44
1:K:174:THR:OG1	1:K:174:THR:O	2.35	0.44
1:K:472:TYR:CE1	1:K:476:VAL:HG21	2.52	0.44
1:L:230:ARG:H	1:L:230:ARG:HG2	1.58	0.44
1:H:153:PHE:CE2	1:H:157:ASN:HB3	2.52	0.44
1:A:17:MET:CE	1:F:83:VAL:HG11	2.47	0.44
1:A:396:VAL:CG2	1:A:404:LEU:HD11	2.48	0.44
1:B:344:VAL:HG11	1:B:378:TYR:CE2	2.52	0.44
1:B:412:ARG:HA	1:B:412:ARG:HD3	1.85	0.44
1:D:149:LEU:HD12	1:D:150:PRO:HD2	1.98	0.44
1:E:156:ILE:O	1:E:156:ILE:HG22	2.18	0.44
1:G:556:ARG:HB2	1:I:548:ALA:CB	2.48	0.44
1:J:21:THR:CG2	1:L:79:VAL:HG21	2.43	0.44
1:J:291:PHE:HA	1:J:434:TYR:O	2.16	0.44
1:K:227:PRO:HA	1:K:258:PRO:HG3	2.00	0.44
1:H:108:ILE:HG22	1:G:40:GLY:HA2	1.99	0.44
1:A:42:ASP:OD2	1:A:586:LEU:HD22	2.18	0.44
1:A:331:LEU:HD21	1:A:344:VAL:HG12	2.00	0.44
1:A:353:GLU:HA	1:A:353:GLU:OE2	2.18	0.44
1:B:474:GLU:HG3	1:B:515:LEU:HD21	1.99	0.44
1:D:423:ARG:NH1	1:D:426:LEU:HD21	2.33	0.44
1:G:530:GLU:HB3	1:G:533:ILE:HD13	1.99	0.44
1:J:79:VAL:HG21	1:K:19:LEU:HD12	2.00	0.44
1:K:362:SER:HB3	1:K:366:GLY:N	2.32	0.44
1:K:542:VAL:HG12	1:K:543:GLY:O	2.17	0.44
1:L:41:LEU:HD13	1:L:66:VAL:HG12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:369:LEU:HD13	1:B:375:LEU:HD12	2.00	0.44
1:C:149:LEU:HD22	1:C:587:VAL:HG11	2.00	0.44
1:E:67:ARG:HA	1:F:24:VAL:O	2.17	0.44
1:E:125:ALA:HB1	1:E:130:ALA:HB3	2.00	0.44
1:F:203:GLN:O	1:F:203:GLN:HG3	2.18	0.44
1:G:387:ARG:O	1:G:388:GLU:OE1	2.23	0.44
1:I:472:TYR:CZ	1:I:476:VAL:HG21	2.53	0.44
1:J:60:TYR:CE2	1:J:103:ASP:HB2	2.49	0.44
1:J:282:ASP:HB3	1:K:202:ARG:HH22	1.82	0.44
1:K:349:PHE:CD2	1:K:349:PHE:O	2.70	0.44
1:B:286:GLU:O	1:B:288:VAL:HG23	2.18	0.43
1:B:443:ILE:HD13	1:B:443:ILE:HA	1.84	0.43
1:C:188:ARG:HH22	1:C:259:PHE:HA	1.83	0.43
1:C:242:LYS:CB	1:C:244:LEU:CD1	2.96	0.43
1:E:176:THR:HB	3:E:1001:ADP:O1A	2.18	0.43
1:E:495:ARG:NE	1:E:527:SER:O	2.51	0.43
1:G:388:GLU:OE1	1:G:388:GLU:N	2.51	0.43
1:I:215:ASN:HA	1:I:221:LEU:HD12	2.00	0.43
1:K:191:VAL:HG22	1:K:191:VAL:O	2.18	0.43
1:K:283:GLN:H	1:K:283:GLN:HG2	1.57	0.43
1:K:315:LEU:CB	1:K:317:LEU:HD13	2.41	0.43
1:L:82:VAL:HG11	1:L:89:ALA:HB3	1.99	0.43
1:H:268:PRO:HG3	1:H:292:VAL:HG12	1.99	0.43
1:A:153:PHE:HE2	1:A:195:THR:HG21	1.80	0.43
1:A:347:TRP:CD1	1:A:381:TYR:CD2	3.06	0.43
1:B:178:TYR:CE2	1:B:541:VAL:HG11	2.52	0.43
1:C:326:GLU:HG3	1:C:330:ARG:NH1	2.32	0.43
1:D:57:VAL:HG13	1:D:104:PRO:HD2	1.99	0.43
1:E:167:SER:O	1:E:542:VAL:HA	2.17	0.43
1:F:135:GLU:HB2	1:F:194:ARG:HB3	2.00	0.43
1:G:331:LEU:HD21	1:G:344:VAL:HG12	2.01	0.43
1:J:282:ASP:HB3	1:K:202:ARG:NH2	2.33	0.43
1:K:432:GLU:O	1:K:435:ARG:HG2	2.18	0.43
1:L:248:ARG:HH11	1:L:590:PRO:HA	1.83	0.43
1:L:291:PHE:HA	1:L:434:TYR:O	2.18	0.43
1:L:473:LYS:CB	1:L:515:LEU:HG	2.49	0.43
1:L:603:ASP:O	1:L:604:LEU:HD13	2.18	0.43
1:H:128:LEU:HD11	1:H:143:LEU:HD11	1.99	0.43
1:H:191:VAL:O	1:H:195:THR:HG22	2.19	0.43
1:H:319:PHE:CZ	1:G:315:LEU:CD2	3.01	0.43
1:H:405:ARG:NH2	1:L:326:GLU:HG2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:505:LEU:HD23	1:H:505:LEU:HA	1.85	0.43
1:B:133:MET:SD	1:B:150:PRO:HB2	2.57	0.43
1:C:387:ARG:C	1:C:388:GLU:OE1	2.56	0.43
1:E:133:MET:HG2	1:E:152:ASN:HB2	2.00	0.43
1:E:489:LEU:HA	1:E:489:LEU:HD23	1.85	0.43
1:G:202:ARG:HB3	1:G:202:ARG:HH11	1.80	0.43
1:I:142:LEU:HD23	1:I:142:LEU:HA	1.88	0.43
1:I:149:LEU:HD21	1:I:576:VAL:HG21	1.99	0.43
1:J:269:ARG:HA	1:J:280:GLN:HG2	1.99	0.43
1:K:60:TYR:HE2	1:K:103:ASP:HB2	1.83	0.43
1:K:215:ASN:HD21	1:K:451:HIS:CD2	2.33	0.43
1:K:387:ARG:HB2	1:K:390:GLU:HG2	1.99	0.43
1:K:566:ALA:HA	1:K:569:LEU:HD13	1.99	0.43
1:H:57:VAL:HG13	1:H:104:PRO:HD2	2.00	0.43
1:H:307:VAL:HG11	1:H:411:LEU:HD23	1.99	0.43
1:A:269:ARG:CA	1:A:280:GLN:HG2	2.47	0.43
1:B:165:ASN:ND2	1:B:523:GLN:HE22	2.15	0.43
1:B:368:ASN:ND2	1:B:370:GLN:HG2	2.31	0.43
1:B:597:ARG:HB3	1:B:600:GLU:HG3	2.00	0.43
1:D:221:LEU:HD23	1:D:221:LEU:HA	1.83	0.43
1:D:440:ARG:HB3	1:D:443:ILE:CG1	2.49	0.43
1:G:183:LEU:HD23	1:G:183:LEU:HA	1.90	0.43
1:I:227:PRO:HA	1:I:258:PRO:HG3	2.01	0.43
1:J:331:LEU:HD12	1:J:331:LEU:HA	1.86	0.43
1:K:80:GLU:HG3	1:K:81:ASP:H	1.84	0.43
1:K:184:HIS:C	1:K:184:HIS:CD2	2.92	0.43
1:K:263:GLN:NE2	1:K:265:LEU:HD21	2.33	0.43
1:A:226:LYS:HB3	1:A:226:LYS:HE3	1.77	0.43
1:G:392:ASP:O	1:G:395:TRP:N	2.50	0.43
1:I:59:PHE:HD2	1:I:99:VAL:HG11	1.84	0.43
1:K:163:HIS:CB	1:K:519:LEU:O	2.65	0.43
1:A:227:PRO:HA	1:A:258:PRO:HG3	2.01	0.43
1:A:402:GLY:C	1:B:319:PHE:CE1	2.92	0.43
1:D:397:LEU:C	1:D:398:LYS:HG3	2.39	0.43
1:E:163:HIS:HB3	1:E:519:LEU:O	2.18	0.43
1:E:335:GLN:CD	1:E:343:ILE:H	2.22	0.43
1:G:24:VAL:CG1	1:G:110:PRO:HD2	2.49	0.43
1:G:142:LEU:HD23	1:G:142:LEU:HA	1.85	0.43
1:G:525:THR:HG22	1:G:527:SER:H	1.83	0.43
1:I:29:PHE:CZ	1:I:47:VAL:CG1	3.01	0.43
1:J:131:ASP:O	1:J:134:GLU:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:587:VAL:C	1:L:588:ASN:HD22	2.22	0.43
1:A:19:LEU:HD12	1:A:19:LEU:HA	1.85	0.43
1:B:76:GLU:CD	1:B:76:GLU:H	2.20	0.43
1:C:24:VAL:O	1:C:109:PRO:HB3	2.19	0.43
1:D:62:LEU:HD23	1:D:63:VAL:O	2.19	0.43
1:G:184:HIS:NE2	1:G:255:PRO:O	2.45	0.43
1:G:228:ASN:CG	1:G:600:GLU:OE2	2.57	0.43
1:G:338:LYS:HE3	1:G:428:PRO:HG2	2.00	0.43
1:I:88:PRO:O	1:I:88:PRO:HG2	2.19	0.43
1:I:320:VAL:CG2	1:I:399:GLN:HG3	2.47	0.43
1:I:426:LEU:HB3	1:I:430:GLN:HE21	1.83	0.43
1:K:473:LYS:HZ2	1:K:473:LYS:HA	1.84	0.43
1:L:106:ASN:HB3	1:L:108:ILE:HG12	1.99	0.43
1:L:269:ARG:CA	1:L:280:GLN:HG2	2.48	0.43
1:L:469:VAL:O	1:L:473:LYS:HG2	2.19	0.43
1:H:76:GLU:HG2	1:L:71:GLU:OE2	2.19	0.43
1:H:195:THR:C	1:H:203:GLN:NE2	2.72	0.43
1:H:218:GLY:HA2	1:H:451:HIS:CG	2.53	0.43
1:A:193:ASP:OD2	1:A:206:THR:HG21	2.18	0.43
1:B:24:VAL:O	1:B:109:PRO:HB3	2.19	0.43
1:B:70:HIS:HB2	1:C:20:GLY:HA3	2.01	0.43
1:B:248:ARG:HD2	1:B:590:PRO:HA	2.00	0.43
1:B:349:PHE:CB	1:B:352:SER:HB3	2.43	0.43
1:F:155:PHE:HA	1:F:161:GLY:CA	2.49	0.43
1:F:525:THR:HG22	1:F:527:SER:H	1.83	0.43
1:G:155:PHE:CD1	1:G:579:PRO:HG2	2.53	0.43
1:G:515:LEU:HD12	1:G:515:LEU:HA	1.81	0.43
1:J:396:VAL:HG23	1:J:404:LEU:HD21	2.01	0.43
1:K:304:LEU:N	1:K:305:PRO:CD	2.81	0.43
1:K:419:SER:N	1:K:420:PRO:CD	2.81	0.43
1:K:490:ASN:OD1	1:K:490:ASN:C	2.50	0.43
1:L:317:LEU:O	1:L:321:ILE:HG13	2.18	0.43
1:B:467:ARG:HD3	1:B:467:ARG:HA	1.74	0.43
1:C:70:HIS:HB3	1:C:73:VAL:HG21	2.00	0.43
1:C:163:HIS:CD2	1:C:163:HIS:N	2.87	0.43
1:C:495:ARG:NE	1:C:527:SER:O	2.52	0.43
1:D:105:GLU:O	1:D:105:GLU:HG3	2.19	0.43
1:E:172:VAL:HG11	1:E:544:ARG:HD2	2.01	0.43
1:E:478:ARG:HG3	1:E:516:GLY:N	2.34	0.43
1:I:21:THR:HG21	1:K:76:GLU:HA	2.00	0.43
1:J:107:PHE:HB3	1:L:41:LEU:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:394:LYS:O	1:J:397:LEU:HD11	2.19	0.43
1:L:416:LYS:H	1:L:416:LYS:HG2	1.61	0.43
1:A:131:ASP:O	1:A:134:GLU:HG2	2.19	0.43
1:C:263:GLN:NE2	1:C:265:LEU:HD21	2.34	0.43
1:F:515:LEU:HD12	1:F:515:LEU:HA	1.76	0.43
1:G:105:GLU:OE2	1:I:570:GLN:HB2	2.19	0.43
1:I:107:PHE:CB	1:K:41:LEU:HB2	2.48	0.43
1:K:29:PHE:CZ	1:K:47:VAL:HG11	2.54	0.43
1:K:173:ALA:HB2	1:K:544:ARG:N	2.34	0.43
1:K:387:ARG:C	1:K:388:GLU:HG2	2.40	0.43
1:L:396:VAL:HG12	1:L:404:LEU:CD1	2.49	0.43
1:A:394:LYS:HB2	1:A:394:LYS:HE3	1.80	0.42
1:C:199:SER:HB3	1:C:203:GLN:HB2	2.01	0.42
1:C:291:PHE:HA	1:C:434:TYR:O	2.18	0.42
1:D:350:GLU:CG	1:D:351:ASP:H	2.29	0.42
1:E:416:LYS:HG3	1:E:417:TYR:CE1	2.54	0.42
1:E:478:ARG:HD2	1:E:514:SER:O	2.19	0.42
1:F:42:ASP:OD2	1:F:586:LEU:HD22	2.18	0.42
1:G:412:ARG:O	1:G:415:GLN:HG2	2.19	0.42
1:I:247:ASP:OD1	1:I:247:ASP:N	2.51	0.42
1:L:101:ARG:HH12	1:L:131:ASP:CG	2.22	0.42
1:L:165:ASN:HD21	1:L:523:GLN:NE2	2.17	0.42
1:A:151:LEU:HD23	1:A:151:LEU:HA	1.68	0.42
1:B:488:GLU:OE2	1:B:491:LYS:HD3	2.19	0.42
1:D:87:LEU:C	1:D:87:LEU:CD2	2.86	0.42
1:D:161:GLY:HA3	1:D:513:ARG:CZ	2.49	0.42
1:F:196:ALA:HB1	1:F:204:SER:HA	2.00	0.42
1:F:242:LYS:CB	1:F:244:LEU:CD1	2.97	0.42
1:G:131:ASP:OD1	1:G:131:ASP:N	2.46	0.42
1:G:556:ARG:HB2	1:I:548:ALA:HB2	2.01	0.42
1:I:267:PRO:HB3	1:I:421:LEU:HD21	2.01	0.42
1:I:349:PHE:HB3	1:I:352:SER:HB3	2.01	0.42
1:L:308:PHE:CZ	1:L:411:LEU:HD11	2.53	0.42
1:L:415:GLN:O	1:L:419:SER:HB2	2.18	0.42
1:H:236:ASP:O	1:H:240:ARG:HG2	2.18	0.42
1:A:17:MET:HE2	1:F:83:VAL:HG11	2.01	0.42
1:A:193:ASP:CG	1:A:206:THR:HG21	2.40	0.42
1:C:418:LEU:HD21	1:C:457:ALA:HA	2.01	0.42
1:D:188:ARG:NH2	1:D:260:ARG:HG3	2.34	0.42
1:D:418:LEU:HD23	1:D:421:LEU:HD12	2.00	0.42
1:F:310:ASP:OD2	1:F:314:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:320:VAL:HG21	1:F:403:THR:HG22	2.02	0.42
1:G:64:ASP:OD1	1:G:96:ARG:HD2	2.19	0.42
1:I:349:PHE:CB	1:I:352:SER:HB3	2.49	0.42
1:J:268:PRO:HG3	1:J:292:VAL:HG12	2.01	0.42
1:K:225:ASP:O	1:K:258:PRO:CB	2.67	0.42
1:K:251:LEU:HD12	1:K:251:LEU:N	2.35	0.42
1:K:277:ILE:HG21	1:K:434:TYR:CE2	2.54	0.42
1:A:174:THR:HA	3:A:1001:ADP:O5'	2.19	0.42
1:D:307:VAL:HG11	1:D:411:LEU:HD23	2.01	0.42
1:E:163:HIS:HE1	1:E:508:ILE:O	2.03	0.42
1:E:174:THR:HA	3:E:1001:ADP:H5'2	2.01	0.42
1:E:375:LEU:O	1:E:379:LEU:HG	2.19	0.42
1:E:405:ARG:HA	1:E:408:THR:HB	2.01	0.42
1:F:60:TYR:HE2	1:F:103:ASP:HB2	1.84	0.42
1:F:155:PHE:HA	1:F:161:GLY:HA3	2.01	0.42
1:F:294:THR:HA	1:F:423:ARG:O	2.19	0.42
1:I:33:VAL:HG11	1:I:93:TYR:CD2	2.53	0.42
1:K:57:VAL:HG22	1:K:104:PRO:HG2	2.01	0.42
1:K:386:GLU:CG	1:K:387:ARG:HG3	2.49	0.42
1:K:400:SER:OG	1:K:403:THR:OG1	2.19	0.42
1:H:248:ARG:O	1:H:252:LEU:HD13	2.19	0.42
1:C:81:ASP:HB3	1:C:86:LEU:HB2	2.02	0.42
1:C:269:ARG:HB2	1:C:278:VAL:O	2.19	0.42
1:C:294:THR:HA	1:C:423:ARG:O	2.20	0.42
1:C:560:GLN:HA	1:C:563:ARG:HG3	2.01	0.42
1:D:133:MET:SD	1:D:150:PRO:HB2	2.60	0.42
1:E:335:GLN:NE2	1:E:343:ILE:O	2.52	0.42
1:F:354:THR:HA	1:F:355:PRO:HD2	1.84	0.42
1:I:466:LEU:HB3	1:I:504:VAL:HG21	2.01	0.42
1:H:188:ARG:HH22	1:H:260:ARG:HG2	1.83	0.42
1:A:310:ASP:OD2	1:A:314:SER:HB3	2.19	0.42
1:A:349:PHE:CE1	1:A:356:PRO:CB	3.03	0.42
1:C:221:LEU:HA	1:C:221:LEU:HD23	1.74	0.42
1:E:44:LEU:HD21	1:E:62:LEU:HD12	2.02	0.42
1:F:265:LEU:HA	1:F:289:THR:O	2.19	0.42
1:F:310:ASP:OD2	1:F:312:SER:HB2	2.20	0.42
1:I:363:GLU:H	1:I:363:GLU:CD	2.22	0.42
1:I:530:GLU:HG3	1:I:532:ARG:H	1.85	0.42
1:K:386:GLU:HB3	1:K:391:GLY:HA2	2.02	0.42
1:K:387:ARG:O	1:K:388:GLU:CG	2.65	0.42
1:K:387:ARG:O	1:K:390:GLU:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:396:VAL:O	1:K:396:VAL:CG2	2.60	0.42
1:B:215:ASN:HB3	1:B:449:ASP:HA	2.02	0.42
1:B:277:ILE:HG13	1:B:277:ILE:O	2.20	0.42
1:B:293:PHE:CZ	1:B:464:VAL:CG2	3.03	0.42
1:E:215:ASN:HB3	1:E:449:ASP:HA	2.02	0.42
1:E:224:LEU:HD12	1:E:445:LEU:HD21	2.00	0.42
1:F:190:GLY:O	1:F:193:ASP:HB2	2.20	0.42
1:I:376:ILE:CD1	1:I:411:LEU:HB3	2.45	0.42
1:J:284:ARG:O	1:J:288:VAL:HG21	2.20	0.42
1:J:326:GLU:CG	1:J:330:ARG:NH1	2.82	0.42
1:K:288:VAL:HG13	1:K:288:VAL:O	2.19	0.42
1:A:264:LEU:HD23	1:A:447:VAL:HB	2.01	0.42
1:G:188:ARG:NH2	1:G:260:ARG:HG3	2.35	0.42
1:I:397:LEU:HB3	1:K:401:PRO:CB	2.50	0.42
1:L:218:GLY:HA2	1:L:451:HIS:CG	2.53	0.42
1:L:372:PHE:HD2	1:L:415:GLN:HB2	1.85	0.42
1:A:265:LEU:HA	1:A:289:THR:O	2.20	0.42
1:C:597:ARG:HG2	1:C:600:GLU:CG	2.50	0.42
1:E:103:ASP:HB3	1:E:104:PRO:HD3	2.02	0.42
1:E:192:MET:HE1	1:E:481:THR:OG1	2.20	0.42
1:E:269:ARG:HB2	1:E:278:VAL:HG23	2.02	0.42
1:G:31:PHE:CE2	1:G:116:VAL:HG11	2.55	0.42
1:K:228:ASN:HB2	1:K:595:ALA:HA	2.01	0.42
1:K:354:THR:OG1	1:K:355:PRO:HD2	2.19	0.42
1:K:495:ARG:HH21	1:K:527:SER:CA	2.29	0.42
1:L:515:LEU:HD12	1:L:515:LEU:HA	1.75	0.42
1:A:165:ASN:OD1	1:A:523:GLN:NE2	2.38	0.42
1:B:263:GLN:NE2	1:B:265:LEU:HD21	2.35	0.42
1:D:249:TYR:OH	1:D:591:PHE:O	2.28	0.42
1:F:155:PHE:CD1	1:F:161:GLY:HA3	2.54	0.42
1:F:412:ARG:O	1:F:415:GLN:HG2	2.20	0.42
1:G:107:PHE:HB3	1:I:41:LEU:HB2	2.01	0.42
1:G:221:LEU:HD22	1:G:224:LEU:HD11	2.00	0.42
1:J:70:HIS:HB2	1:K:20:GLY:HA3	2.02	0.42
1:J:236:ASP:O	1:J:240:ARG:HG2	2.20	0.42
1:K:215:ASN:ND2	1:K:215:ASN:C	2.72	0.42
1:K:369:LEU:CD2	1:K:374:GLN:HB3	2.50	0.42
1:K:513:ARG:CB	1:K:513:ARG:CZ	2.98	0.42
1:L:223:PHE:HA	1:L:284:ARG:NH1	2.35	0.42
1:L:375:LEU:O	1:L:379:LEU:HG	2.19	0.42
1:A:473:LYS:HG3	1:A:517:ILE:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:41:LEU:HB2	1:E:107:PHE:HB3	2.02	0.41
1:D:326:GLU:CG	1:D:330:ARG:NH1	2.82	0.41
1:E:169:ILE:N	1:E:544:ARG:O	2.48	0.41
1:F:597:ARG:HB3	1:F:600:GLU:HG3	2.01	0.41
1:G:248:ARG:HB2	1:G:590:PRO:HG3	2.02	0.41
1:I:210:ARG:HG2	1:I:210:ARG:HH11	1.85	0.41
1:K:173:ALA:HB2	1:K:544:ARG:H	1.84	0.41
1:K:472:TYR:CE1	1:K:476:VAL:HB	2.54	0.41
1:A:242:LYS:NZ	1:A:588:ASN:OD1	2.54	0.41
1:B:486:LEU:O	1:B:521:GLY:HA2	2.20	0.41
1:C:166:ILE:O	1:C:522:ALA:HA	2.20	0.41
1:C:327:LYS:HD3	1:C:327:LYS:HA	1.86	0.41
1:E:315:LEU:HG	1:E:316:ASN:H	1.84	0.41
1:E:525:THR:HG21	1:E:549:GLU:OE1	2.20	0.41
1:G:393:PRO:O	1:G:397:LEU:HD12	2.20	0.41
1:I:570:GLN:HG3	1:I:571:PRO:HD2	2.01	0.41
1:K:473:LYS:HA	1:K:476:VAL:HG12	2.03	0.41
1:L:82:VAL:CG1	1:L:89:ALA:HB3	2.50	0.41
1:L:192:MET:O	1:L:196:ALA:CB	2.65	0.41
1:L:343:ILE:HD13	1:L:362:SER:CB	2.50	0.41
1:L:394:LYS:HE3	1:L:394:LYS:HB3	1.82	0.41
1:H:221:LEU:HD23	1:H:221:LEU:HA	1.65	0.41
1:D:486:LEU:HD12	1:D:486:LEU:HA	1.86	0.41
1:E:530:GLU:HB3	1:E:533:ILE:HD13	2.02	0.41
1:J:16:GLY:HA2	1:J:34:SER:OG	2.20	0.41
1:J:216:VAL:HG21	1:J:492:TYR:OH	2.20	0.41
1:J:267:PRO:HB3	1:J:421:LEU:HD21	2.03	0.41
1:J:418:LEU:HD23	1:J:421:LEU:HD12	2.02	0.41
1:K:223:PHE:HA	1:K:284:ARG:NH1	2.35	0.41
1:K:456:HIS:ND1	1:K:456:HIS:N	2.68	0.41
1:H:515:LEU:HA	1:H:515:LEU:HD12	1.83	0.41
1:A:175:LYS:NZ	1:A:524:GLN:HA	2.36	0.41
1:A:219:GLU:HG2	1:A:222:LEU:HD22	2.02	0.41
1:B:81:ASP:HB3	1:B:86:LEU:HB2	2.02	0.41
1:C:51:LYS:HG2	1:C:52:PRO:HD2	2.02	0.41
1:C:131:ASP:OD1	1:C:131:ASP:N	2.49	0.41
1:C:264:LEU:HD23	1:C:447:VAL:HB	2.02	0.41
1:E:213:ILE:CG1	1:E:485:VAL:HB	2.40	0.41
1:E:304:LEU:HD22	1:E:324:ILE:HG22	2.01	0.41
1:E:545:LEU:HD11	1:E:555:TYR:CD1	2.55	0.41
1:F:47:VAL:HG23	1:F:115:HIS:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:291:PHE:HD2	1:G:436:PRO:HG3	1.85	0.41
1:I:40:GLY:N	1:I:43:ASP:OD2	2.50	0.41
1:K:136:ALA:CA	1:K:195:THR:HG22	2.49	0.41
1:K:213:ILE:HD13	1:K:221:LEU:HD21	1.97	0.41
1:L:252:LEU:HD22	1:L:254:LEU:HD12	2.02	0.41
1:L:412:ARG:O	1:L:415:GLN:HG2	2.20	0.41
1:B:248:ARG:O	1:B:252:LEU:HD12	2.20	0.41
1:B:299:CYS:HB2	1:B:332:ALA:HB2	2.01	0.41
1:B:320:VAL:HG22	1:B:399:GLN:HG2	2.02	0.41
1:C:292:VAL:HG21	1:C:426:LEU:CD1	2.50	0.41
1:F:149:LEU:HD22	1:F:587:VAL:HG11	2.01	0.41
1:F:268:PRO:HG3	1:F:292:VAL:HG12	2.03	0.41
1:F:387:ARG:O	1:F:390:GLU:HG2	2.21	0.41
1:G:470:PHE:CZ	1:G:507:ASP:HB3	2.55	0.41
1:I:597:ARG:HB3	1:I:600:GLU:HG3	2.03	0.41
1:K:156:ILE:O	1:K:518:ILE:HD12	2.19	0.41
1:K:206:THR:O	1:K:206:THR:HG22	2.21	0.41
1:K:227:PRO:HG3	1:K:258:PRO:HG2	2.02	0.41
1:L:175:LYS:HZ3	1:L:524:GLN:HA	1.85	0.41
1:L:223:PHE:O	1:L:595:ALA:HB3	2.21	0.41
1:L:331:LEU:HA	1:L:331:LEU:HD12	1.76	0.41
1:L:554:GLU:OE1	1:L:554:GLU:N	2.53	0.41
1:H:506:LEU:HD23	1:H:533:ILE:HD11	2.02	0.41
1:A:68:LYS:NZ	1:B:111:GLN:HG2	2.35	0.41
1:D:180:LEU:HD11	1:D:221:LEU:HD21	2.02	0.41
1:E:101:ARG:HH22	1:E:131:ASP:CG	2.23	0.41
1:E:441:ARG:HD2	1:E:442:GLY:N	2.35	0.41
1:E:530:GLU:HG3	1:E:532:ARG:H	1.85	0.41
1:F:63:VAL:HA	1:F:96:ARG:O	2.20	0.41
1:F:217:LYS:HA	1:F:217:LYS:HD3	1.98	0.41
1:F:232:VAL:O	1:F:236:ASP:HB2	2.21	0.41
1:G:106:ASN:HD22	1:G:106:ASN:HA	1.58	0.41
1:I:104:PRO:O	1:I:104:PRO:HD2	2.21	0.41
1:J:392:ASP:OD1	1:J:393:PRO:HD2	2.20	0.41
1:K:263:GLN:HB2	1:K:443:ILE:HG21	2.02	0.41
1:K:267:PRO:CB	1:K:453:LEU:HD21	2.50	0.41
1:K:275:THR:HG23	1:K:425:ASP:OD2	2.21	0.41
1:L:41:LEU:HD12	1:L:41:LEU:HA	1.92	0.41
1:L:218:GLY:N	1:L:451:HIS:HB2	2.25	0.41
1:C:423:ARG:NH1	1:C:425:ASP:OD1	2.53	0.41
1:C:423:ARG:NH1	1:C:426:LEU:HD21	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:249:TYR:HB3	1:D:254:LEU:O	2.19	0.41
1:D:376:ILE:HD13	1:D:411:LEU:HB3	2.02	0.41
1:E:76:GLU:HB3	1:F:21:THR:HG21	2.03	0.41
1:E:182:LEU:HA	1:E:182:LEU:HD23	1.81	0.41
1:E:597:ARG:NH2	1:F:198:GLY:O	2.53	0.41
1:F:156:ILE:CA	1:F:162:GLY:O	2.68	0.41
1:G:111:GLN:HG3	1:I:91:VAL:HG11	2.02	0.41
1:G:223:PHE:CE1	1:G:284:ARG:HB2	2.56	0.41
1:I:210:ARG:HG2	1:I:210:ARG:NH1	2.36	0.41
1:J:354:THR:O	1:J:354:THR:OG1	2.38	0.41
1:J:403:THR:CA	1:K:319:PHE:HE1	2.33	0.41
1:K:483:PHE:CD1	1:K:518:ILE:HB	2.56	0.41
1:K:545:LEU:HA	1:K:545:LEU:HD23	1.80	0.41
1:L:71:GLU:HG2	1:L:92:SER:HB3	2.02	0.41
1:L:396:VAL:CB	1:L:404:LEU:HD11	2.51	0.41
1:L:570:GLN:O	1:L:573:THR:HB	2.20	0.41
1:A:469:VAL:O	1:A:473:LYS:HG2	2.19	0.41
1:B:292:VAL:HG21	1:B:426:LEU:HD11	2.02	0.41
1:E:405:ARG:O	1:E:409:ARG:N	2.39	0.41
1:G:21:THR:HG21	1:I:76:GLU:HA	2.02	0.41
1:I:331:LEU:HD23	1:I:342:LEU:HD21	2.03	0.41
1:I:419:SER:N	1:I:420:PRO:CD	2.83	0.41
1:J:52:PRO:HB3	1:L:36:GLY:HA2	2.02	0.41
1:J:175:LYS:HZ3	1:J:524:GLN:HA	1.85	0.41
1:J:248:ARG:NH1	1:J:590:PRO:HA	2.35	0.41
1:J:294:THR:HA	1:J:423:ARG:O	2.21	0.41
1:K:73:VAL:O	1:K:73:VAL:CG2	2.67	0.41
1:K:215:ASN:HD22	1:K:451:HIS:HD2	1.63	0.41
1:K:495:ARG:NE	1:K:527:SER:O	2.51	0.41
1:H:213:ILE:HD12	1:H:485:VAL:HB	2.02	0.41
1:H:248:ARG:CB	1:H:590:PRO:HG3	2.51	0.41
1:A:548:ALA:CB	1:B:556:ARG:HB2	2.51	0.41
1:B:41:LEU:HD13	1:B:66:VAL:HG12	2.02	0.41
1:C:315:LEU:HD23	1:C:317:LEU:CD1	2.51	0.41
1:D:412:ARG:O	1:D:415:GLN:HG2	2.21	0.41
1:E:416:LYS:HG3	1:E:417:TYR:CD1	2.55	0.41
1:F:142:LEU:HG	1:F:252:LEU:CD1	2.48	0.41
1:F:195:THR:HG23	1:F:203:GLN:NE2	2.35	0.41
1:F:269:ARG:HB2	1:F:278:VAL:O	2.20	0.41
1:G:51:LYS:HE3	1:G:55:THR:OG1	2.21	0.41
1:G:165:ASN:HD21	1:G:523:GLN:HE22	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:202:ARG:HG2	1:I:478:ARG:NH2	2.35	0.41
1:I:268:PRO:CB	1:I:277:ILE:HG23	2.51	0.41
1:I:315:LEU:HD23	1:I:317:LEU:CD1	2.51	0.41
1:I:397:LEU:H	1:I:397:LEU:CD2	2.33	0.41
1:J:143:LEU:HD23	1:J:149:LEU:HB2	2.02	0.41
1:K:215:ASN:CG	1:K:218:GLY:O	2.59	0.41
1:K:223:PHE:HE1	1:K:284:ARG:HB2	1.84	0.41
1:K:267:PRO:CG	1:K:453:LEU:HD21	2.49	0.41
1:K:362:SER:HB3	1:K:366:GLY:H	1.86	0.41
1:K:473:LYS:HZ1	1:K:482:VAL:HG21	1.85	0.41
1:L:59:PHE:CD2	1:L:102:VAL:HG12	2.56	0.41
1:L:143:LEU:HD12	1:L:147:GLN:O	2.21	0.41
1:L:203:GLN:HG3	1:L:203:GLN:O	2.21	0.41
1:L:321:ILE:HG13	1:L:321:ILE:H	1.67	0.41
1:L:525:THR:HG21	1:L:549:GLU:OE1	2.21	0.41
1:H:242:LYS:HZ1	1:H:588:ASN:HD21	1.62	0.41
1:A:399:GLN:HB3	1:A:404:LEU:HD21	2.03	0.41
1:A:401:PRO:HA	1:A:404:LEU:HB2	2.02	0.41
1:B:221:LEU:HD23	1:B:221:LEU:HA	1.61	0.41
1:B:236:ASP:O	1:B:240:ARG:HG2	2.21	0.41
1:B:249:TYR:OH	1:B:591:PHE:O	2.30	0.41
1:C:294:THR:HB	1:C:340:THR:HB	2.03	0.41
1:D:201:GLY:HA2	1:D:204:SER:HG	1.86	0.41
1:E:174:THR:HG22	3:E:1001:ADP:C5'	2.50	0.41
1:F:495:ARG:NE	1:F:527:SER:O	2.54	0.41
1:G:24:VAL:HG12	1:G:110:PRO:HD2	2.03	0.41
1:I:304:LEU:N	1:I:305:PRO:CD	2.84	0.41
1:I:355:PRO:O	1:I:355:PRO:CD	2.69	0.41
1:J:403:THR:HA	1:K:319:PHE:HE1	1.86	0.41
1:K:111:GLN:N	1:K:114:ASP:OD2	2.53	0.41
1:K:223:PHE:CE1	1:K:284:ARG:HB2	2.56	0.41
1:K:259:PHE:HE1	1:K:594:TRP:CD2	2.39	0.41
1:L:203:GLN:O	1:L:203:GLN:CG	2.69	0.41
1:H:252:LEU:HD23	1:H:254:LEU:HD12	2.03	0.40
1:D:228:ASN:HD22	1:D:231:MET:H	1.68	0.40
1:E:70:HIS:HB3	1:E:73:VAL:HG22	2.03	0.40
1:F:331:LEU:HD12	1:F:331:LEU:HA	1.93	0.40
1:G:401:PRO:HA	1:G:404:LEU:HD12	2.02	0.40
1:I:51:LYS:HZ1	1:I:106:ASN:ND2	2.19	0.40
1:J:349:PHE:CB	1:J:352:SER:CB	2.93	0.40
1:K:51:LYS:HB2	1:K:55:THR:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:183:LEU:HD23	1:K:183:LEU:HA	1.85	0.40
1:K:364:LEU:HD12	1:K:364:LEU:HA	1.64	0.40
1:K:416:LYS:HG3	1:K:417:TYR:CE1	2.56	0.40
1:L:51:LYS:HB2	1:L:55:THR:O	2.21	0.40
1:L:68:LYS:HA	1:L:92:SER:O	2.20	0.40
1:L:155:PHE:CD1	1:L:579:PRO:HG2	2.57	0.40
1:L:301:ARG:NH2	1:L:468:GLU:OE2	2.54	0.40
1:A:36:GLY:HA2	1:B:52:PRO:HB3	2.02	0.40
1:A:163:HIS:CD2	1:A:163:HIS:H	2.39	0.40
1:C:418:LEU:HD23	1:C:421:LEU:HD12	2.02	0.40
1:J:19:LEU:HD12	1:J:19:LEU:HA	1.85	0.40
1:L:59:PHE:HZ	1:L:108:ILE:O	2.04	0.40
1:L:84:ALA:CB	1:L:86:LEU:HD21	2.51	0.40
1:L:248:ARG:NH1	1:L:589:TYR:C	2.74	0.40
1:L:267:PRO:HD3	1:L:449:ASP:O	2.20	0.40
1:L:320:VAL:CG1	1:L:399:GLN:HG2	2.50	0.40
1:L:386:GLU:HB3	1:L:391:GLY:HA2	2.04	0.40
1:H:172:VAL:HG11	1:H:544:ARG:HD2	2.02	0.40
1:A:473:LYS:HG3	1:A:517:ILE:HD11	2.02	0.40
1:A:488:GLU:OE1	1:A:491:LYS:HD3	2.22	0.40
1:B:66:VAL:HG13	1:C:109:PRO:HG3	2.03	0.40
1:B:439:LEU:CD1	1:B:469:VAL:HG22	2.51	0.40
1:E:320:VAL:HG21	1:E:403:THR:HG22	2.02	0.40
1:F:19:LEU:HA	1:F:19:LEU:HD12	1.90	0.40
1:F:44:LEU:HD21	1:F:62:LEU:HD12	2.04	0.40
1:F:327:LYS:HA	1:F:327:LYS:HD3	1.94	0.40
1:G:59:PHE:HZ	1:G:108:ILE:O	2.04	0.40
1:G:151:LEU:HD23	1:G:151:LEU:HA	1.95	0.40
1:G:263:GLN:HB2	1:G:443:ILE:HD12	2.03	0.40
1:J:213:ILE:CD1	1:J:221:LEU:HD13	2.51	0.40
1:J:231:MET:HE3	1:J:256:ALA:HB1	2.01	0.40
1:L:473:LYS:HG3	1:L:517:ILE:CG1	2.50	0.40
1:H:320:VAL:HG21	1:H:403:THR:HG22	2.02	0.40
1:A:156:ILE:HA	1:A:162:GLY:O	2.20	0.40
1:A:168:GLY:O	1:A:524:GLN:HA	2.22	0.40
1:C:236:ASP:O	1:C:240:ARG:HG2	2.21	0.40
1:E:242:LYS:HB3	1:E:244:LEU:HD13	2.03	0.40
1:F:236:ASP:O	1:F:240:ARG:HG2	2.21	0.40
1:G:103:ASP:CB	1:G:104:PRO:HD3	2.24	0.40
1:G:357:GLU:OE1	1:G:357:GLU:N	2.54	0.40
1:I:19:LEU:HD21	1:K:76:GLU:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:266:ALA:HB1	1:I:267:PRO:HD2	2.03	0.40
1:J:263:GLN:HE21	1:J:265:LEU:HD21	1.86	0.40
1:J:265:LEU:HA	1:J:289:THR:O	2.20	0.40
1:K:244:LEU:HA	1:K:244:LEU:HD12	1.85	0.40
1:K:597:ARG:CG	1:K:600:GLU:CG	2.92	0.40
1:L:155:PHE:HA	1:L:161:GLY:CA	2.51	0.40
1:L:269:ARG:H	1:L:280:GLN:HG2	1.86	0.40
1:H:91:VAL:HG11	1:L:111:GLN:NE2	2.31	0.40
1:A:545:LEU:HD23	1:A:545:LEU:HA	1.86	0.40
1:D:317:LEU:O	1:D:321:ILE:HG13	2.21	0.40
1:E:195:THR:HG23	1:E:203:GLN:NE2	2.36	0.40
1:E:215:ASN:HA	1:E:221:LEU:HD12	2.03	0.40
1:F:248:ARG:HH11	1:F:589:TYR:C	2.25	0.40
1:F:263:GLN:NE2	1:F:265:LEU:HD21	2.31	0.40
1:F:466:LEU:HD21	1:F:484:VAL:HG11	2.03	0.40
1:G:47:VAL:HG13	1:G:59:PHE:HB2	2.03	0.40
1:G:231:MET:SD	1:G:593:ALA:HA	2.62	0.40
1:G:284:ARG:O	1:G:284:ARG:CG	2.69	0.40
1:G:372:PHE:O	1:G:376:ILE:HG13	2.21	0.40
1:I:215:ASN:HD21	1:I:219:GLU:HA	1.86	0.40
1:I:239:VAL:HG11	1:I:240:ARG:HH21	1.85	0.40
1:I:299:CYS:CB	1:I:332:ALA:HB2	2.52	0.40
1:J:62:LEU:HD23	1:J:63:VAL:O	2.21	0.40
1:J:323:ASN:O	1:J:327:LYS:HG2	2.21	0.40
1:J:406:ALA:CA	1:J:409:ARG:HG2	2.48	0.40
1:K:331:LEU:HD21	1:K:344:VAL:HG12	2.04	0.40
1:K:382:LYS:HE2	1:K:395:TRP:CE2	2.57	0.40
1:L:172:VAL:HG11	1:L:544:ARG:HD2	2.03	0.40
1:L:546:ASP:HB3	1:L:549:GLU:HG2	2.03	0.40

All (8) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:207:ALA:O	1:K:200:GLY:O[1_655]	1.50	0.70
1:A:200:GLY:O	1:D:441:ARG:O[1_655]	1.62	0.58
1:B:285:SER:O	1:E:193:ASP:OD2[3_745]	1.62	0.58
1:B:269:ARG:NH2	1:E:188:ARG:O[3_745]	1.74	0.46
1:B:272:ALA:CB	1:E:250:ALA:O[3_745]	1.88	0.32
1:C:202:ARG:NH1	1:E:261:ASP:OD1[3_745]	1.99	0.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:202:ARG:NH1	1:E:261:ASP:OD2[3_745]	2.17	0.03
1:J:260:ARG:NH2	1:L:261:ASP:OD1[4_476]	2.17	0.03

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	589/618 (95%)	565 (96%)	24 (4%)	0	100	100
1	B	588/618 (95%)	566 (96%)	22 (4%)	0	100	100
1	C	592/618 (96%)	572 (97%)	20 (3%)	0	100	100
1	D	589/618 (95%)	566 (96%)	23 (4%)	0	100	100
1	E	586/618 (95%)	569 (97%)	17 (3%)	0	100	100
1	F	589/618 (95%)	570 (97%)	19 (3%)	0	100	100
1	G	592/618 (96%)	571 (96%)	21 (4%)	0	100	100
1	H	592/618 (96%)	565 (95%)	27 (5%)	0	100	100
1	I	592/618 (96%)	573 (97%)	19 (3%)	0	100	100
1	J	588/618 (95%)	564 (96%)	24 (4%)	0	100	100
1	K	592/618 (96%)	578 (98%)	14 (2%)	0	100	100
1	L	592/618 (96%)	565 (95%)	27 (5%)	0	100	100
All	All	7081/7416 (96%)	6824 (96%)	257 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	
1	A	484/499 (97%)	469 (97%)	15 (3%)	40	68
1	B	483/499 (97%)	460 (95%)	23 (5%)	25	56
1	C	485/499 (97%)	474 (98%)	11 (2%)	50	74
1	D	484/499 (97%)	466 (96%)	18 (4%)	34	62
1	E	484/499 (97%)	464 (96%)	20 (4%)	30	59
1	F	484/499 (97%)	471 (97%)	13 (3%)	44	70
1	G	485/499 (97%)	471 (97%)	14 (3%)	42	69
1	H	485/499 (97%)	469 (97%)	16 (3%)	38	66
1	I	485/499 (97%)	451 (93%)	34 (7%)	15	44
1	J	483/499 (97%)	469 (97%)	14 (3%)	42	69
1	K	485/499 (97%)	443 (91%)	42 (9%)	10	34
1	L	485/499 (97%)	456 (94%)	29 (6%)	19	49
All	All	5812/5988 (97%)	5563 (96%)	249 (4%)	29	59

All (249) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	70	HIS
1	H	91	VAL
1	H	111	GLN
1	H	147	GLN
1	H	163	HIS
1	H	221	LEU
1	H	228	ASN
1	H	350	GLU
1	H	358	ASN
1	H	386	GLU
1	H	480	ASP
1	H	490	ASN
1	H	561	SER
1	H	569	LEU
1	H	576	VAL
1	H	585	VAL
1	A	70	HIS
1	A	80	GLU
1	A	86	LEU

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Mol	Chain	Res	Type
1	A	111	GLN
1	A	151	LEU
1	A	163	HIS
1	A	203	GLN
1	A	223	PHE
1	A	257	GLU
1	A	260	ARG
1	A	364	LEU
1	A	371	THR
1	A	480	ASP
1	A	588	ASN
1	A	597	ARG
1	B	70	HIS
1	B	78	ASP
1	B	91	VAL
1	B	111	GLN
1	B	163	HIS
1	B	167	SER
1	B	221	LEU
1	B	222	LEU
1	B	223	PHE
1	B	228	ASN
1	B	296	ARG
1	B	297	GLU
1	B	324	ILE
1	B	357	GLU
1	B	371	THR
1	B	384	LEU
1	B	408	THR
1	B	451	HIS
1	B	464	VAL
1	B	480	ASP
1	B	561	SER
1	B	569	LEU
1	B	597	ARG
1	C	70	HIS
1	C	91	VAL
1	C	223	PHE
1	C	236	ASP
1	C	357	GLU
1	C	371	THR
1	C	439	LEU

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Mol	Chain	Res	Type
1	C	464	VAL
1	C	545	LEU
1	C	561	SER
1	C	588	ASN
1	D	70	HIS
1	D	82	VAL
1	D	83	VAL
1	D	86	LEU
1	D	91	VAL
1	D	105	GLU
1	D	163	HIS
1	D	199	SER
1	D	223	PHE
1	D	244	LEU
1	D	351	ASP
1	D	354	THR
1	D	441	ARG
1	D	459	MET
1	D	464	VAL
1	D	480	ASP
1	D	561	SER
1	D	585	VAL
1	E	49	THR
1	E	70	HIS
1	E	83	VAL
1	E	87	LEU
1	E	93	TYR
1	E	131	ASP
1	E	149	LEU
1	E	163	HIS
1	E	183	LEU
1	E	195	THR
1	E	223	PHE
1	E	260	ARG
1	E	371	THR
1	E	396	VAL
1	E	480	ASP
1	E	524	GLN
1	E	561	SER
1	E	569	LEU
1	E	585	VAL
1	E	597	ARG

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Mol	Chain	Res	Type
1	F	73	VAL
1	F	91	VAL
1	F	163	HIS
1	F	199	SER
1	F	223	PHE
1	F	282	ASP
1	F	283	GLN
1	F	350	GLU
1	F	359	LEU
1	F	388	GLU
1	F	561	SER
1	F	585	VAL
1	F	588	ASN
1	G	70	HIS
1	G	74	THR
1	G	106	ASN
1	G	108	ILE
1	G	223	PHE
1	G	232	VAL
1	G	233	GLU
1	G	283	GLN
1	G	350	GLU
1	G	354	THR
1	G	396	VAL
1	G	464	VAL
1	G	480	ASP
1	G	489	LEU
1	I	15	ILE
1	I	28	VAL
1	I	70	HIS
1	I	75	PHE
1	I	93	TYR
1	I	106	ASN
1	I	111	GLN
1	I	206	THR
1	I	223	PHE
1	I	228	ASN
1	I	231	MET
1	I	244	LEU
1	I	289	THR
1	I	294	THR
1	I	298	PHE

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Mol	Chain	Res	Type
1	I	324	ILE
1	I	330	ARG
1	I	331	LEU
1	I	336	THR
1	I	349	PHE
1	I	352	SER
1	I	355	PRO
1	I	375	LEU
1	I	388	GLU
1	I	390	GLU
1	I	396	VAL
1	I	451	HIS
1	I	478	ARG
1	I	490	ASN
1	I	504	VAL
1	I	561	SER
1	I	585	VAL
1	I	588	ASN
1	I	597	ARG
1	J	70	HIS
1	J	87	LEU
1	J	91	VAL
1	J	99	VAL
1	J	104	PRO
1	J	219	GLU
1	J	221	LEU
1	J	223	PHE
1	J	244	LEU
1	J	357	GLU
1	J	403	THR
1	J	464	VAL
1	J	585	VAL
1	J	602	ASP
1	K	70	HIS
1	K	86	LEU
1	K	105	GLU
1	K	106	ASN
1	K	111	GLN
1	K	145	ASP
1	K	163	HIS
1	K	167	SER
1	K	169	ILE

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Mol	Chain	Res	Type
1	K	176	THR
1	K	215	ASN
1	K	221	LEU
1	K	223	PHE
1	K	244	LEU
1	K	248	ARG
1	K	264	LEU
1	K	295	ILE
1	K	298	PHE
1	K	304	LEU
1	K	315	LEU
1	K	324	ILE
1	K	325	GLU
1	K	331	LEU
1	K	351	ASP
1	K	357	GLU
1	K	386	GLU
1	K	403	THR
1	K	421	LEU
1	K	426	LEU
1	K	439	LEU
1	K	456	HIS
1	K	465	LEU
1	K	473	LYS
1	K	480	ASP
1	K	496	GLU
1	K	511	ARG
1	K	513	ARG
1	K	561	SER
1	K	569	LEU
1	K	576	VAL
1	K	585	VAL
1	K	602	ASP
1	L	15	ILE
1	L	27	THR
1	L	49	THR
1	L	70	HIS
1	L	75	PHE
1	L	77	SER
1	L	81	ASP
1	L	86	LEU
1	L	91	VAL

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Mol	Chain	Res	Type
1	L	93	TYR
1	L	131	ASP
1	L	143	LEU
1	L	145	ASP
1	L	221	LEU
1	L	223	PHE
1	L	244	LEU
1	L	359	LEU
1	L	364	LEU
1	L	371	THR
1	L	397	LEU
1	L	408	THR
1	L	451	HIS
1	L	464	VAL
1	L	476	VAL
1	L	480	ASP
1	L	489	LEU
1	L	561	SER
1	L	585	VAL
1	L	588	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (45) such sidechains are listed below:

Mol	Chain	Res	Type
1	H	106	ASN
1	H	147	GLN
1	H	228	ASN
1	H	415	GLN
1	H	588	ASN
1	A	228	ASN
1	B	165	ASN
1	B	228	ASN
1	B	451	HIS
1	C	523	GLN
1	D	163	HIS
1	D	228	ASN
1	D	263	GLN
1	D	283	GLN
1	D	451	HIS
1	E	163	HIS
1	E	203	GLN
1	E	263	GLN

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Mol	Chain	Res	Type
1	F	163	HIS
1	F	165	ASN
1	F	203	GLN
1	F	263	GLN
1	G	263	GLN
1	G	283	GLN
1	G	523	GLN
1	G	588	ASN
1	I	70	HIS
1	I	106	ASN
1	I	111	GLN
1	I	184	HIS
1	I	228	ASN
1	I	263	GLN
1	I	430	GLN
1	I	451	HIS
1	I	570	GLN
1	I	588	ASN
1	J	197	GLN
1	J	283	GLN
1	K	358	ASN
1	K	368	ASN
1	K	451	HIS
1	K	456	HIS
1	L	106	ASN
1	L	111	GLN
1	L	165	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 14 ligands modelled in this entry, 2 are monoatomic - leaving 12 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ADP	C	1001	-	24,29,29	0.97	2 (8%)	29,45,45	1.20	3 (10%)
3	ADP	K	1001	-	24,29,29	1.03	2 (8%)	29,45,45	1.45	4 (13%)
3	ADP	L	1001	-	24,29,29	0.97	2 (8%)	29,45,45	1.03	2 (6%)
3	ADP	H	1001	2	24,29,29	1.02	3 (12%)	29,45,45	1.16	3 (10%)
3	ADP	E	1001	-	24,29,29	0.81	1 (4%)	29,45,45	1.36	2 (6%)
3	ADP	D	1001	2	24,29,29	0.92	1 (4%)	29,45,45	1.16	4 (13%)
3	ADP	B	1001	-	24,29,29	0.94	2 (8%)	29,45,45	1.01	2 (6%)
3	ADP	J	1001	-	24,29,29	0.94	2 (8%)	29,45,45	1.27	2 (6%)
3	ADP	I	1001	-	24,29,29	0.95	2 (8%)	29,45,45	1.07	2 (6%)
3	ADP	A	1001	-	24,29,29	0.96	2 (8%)	29,45,45	1.03	2 (6%)
3	ADP	G	1001	-	24,29,29	0.98	2 (8%)	29,45,45	1.24	3 (10%)
3	ADP	F	1001	-	24,29,29	0.90	1 (4%)	29,45,45	1.02	3 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	C	1001	-	-	2/12/32/32	0/3/3/3
3	ADP	K	1001	-	-	5/12/32/32	0/3/3/3
3	ADP	L	1001	-	-	5/12/32/32	0/3/3/3
3	ADP	H	1001	2	-	6/12/32/32	0/3/3/3
3	ADP	E	1001	-	-	4/12/32/32	0/3/3/3
3	ADP	D	1001	2	-	3/12/32/32	0/3/3/3
3	ADP	B	1001	-	-	6/12/32/32	0/3/3/3
3	ADP	J	1001	-	-	4/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	I	1001	-	-	6/12/32/32	0/3/3/3
3	ADP	A	1001	-	-	4/12/32/32	0/3/3/3
3	ADP	G	1001	-	-	6/12/32/32	0/3/3/3
3	ADP	F	1001	-	-	5/12/32/32	0/3/3/3

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	K	1001	ADP	PB-O2B	-2.46	1.45	1.54
3	L	1001	ADP	PB-O3B	-2.22	1.46	1.54
3	G	1001	ADP	PB-O2B	-2.22	1.46	1.54
3	H	1001	ADP	PB-O2B	-2.21	1.46	1.54
3	C	1001	ADP	PB-O2B	-2.19	1.46	1.54
3	B	1001	ADP	C8-N7	-2.16	1.30	1.34
3	K	1001	ADP	C8-N7	-2.16	1.30	1.34
3	F	1001	ADP	C8-N7	-2.15	1.30	1.34
3	B	1001	ADP	PB-O3B	-2.15	1.46	1.54
3	I	1001	ADP	PB-O3B	-2.14	1.46	1.54
3	A	1001	ADP	C8-N7	-2.12	1.30	1.34
3	A	1001	ADP	PB-O2B	-2.11	1.46	1.54
3	L	1001	ADP	C8-N7	-2.11	1.30	1.34
3	C	1001	ADP	C8-N7	-2.09	1.31	1.34
3	G	1001	ADP	C8-N7	-2.09	1.31	1.34
3	J	1001	ADP	C8-N7	-2.07	1.31	1.34
3	J	1001	ADP	PB-O3B	-2.07	1.46	1.54
3	I	1001	ADP	C8-N7	-2.06	1.31	1.34
3	D	1001	ADP	C8-N7	-2.03	1.31	1.34
3	H	1001	ADP	C8-N7	-2.02	1.31	1.34
3	E	1001	ADP	C8-N7	-2.01	1.31	1.34
3	H	1001	ADP	PB-O3B	-2.00	1.47	1.54

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	1001	ADP	PA-O3A-PB	-5.08	115.40	132.83
3	K	1001	ADP	PA-O3A-PB	-5.06	115.48	132.83
3	J	1001	ADP	PA-O3A-PB	-4.30	118.06	132.83
3	C	1001	ADP	PA-O3A-PB	-3.61	120.45	132.83
3	G	1001	ADP	PA-O3A-PB	-3.31	121.47	132.83
3	D	1001	ADP	C2'-C3'-C4'	-2.74	97.32	102.64
3	L	1001	ADP	PA-O3A-PB	-2.54	124.12	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	K	1001	ADP	O3'-C3'-C2'	-2.51	103.71	111.82
3	G	1001	ADP	C5-C6-N6	2.48	124.12	120.35
3	K	1001	ADP	O4'-C4'-C3'	-2.47	100.22	105.11
3	B	1001	ADP	O3'-C3'-C2'	-2.47	103.83	111.82
3	J	1001	ADP	C5-C6-N6	2.45	124.08	120.35
3	I	1001	ADP	C5-C6-N6	2.38	123.96	120.35
3	H	1001	ADP	C5-C6-N6	2.37	123.95	120.35
3	L	1001	ADP	C5-C6-N6	2.34	123.91	120.35
3	H	1001	ADP	C2'-C3'-C4'	-2.31	98.16	102.64
3	D	1001	ADP	C5-C6-N6	2.27	123.80	120.35
3	A	1001	ADP	C5-C6-N6	2.26	123.79	120.35
3	C	1001	ADP	C5-C6-N6	2.24	123.75	120.35
3	G	1001	ADP	O3'-C3'-C2'	-2.23	104.59	111.82
3	B	1001	ADP	C5-C6-N6	2.23	123.75	120.35
3	H	1001	ADP	O4'-C4'-C3'	-2.22	100.73	105.11
3	D	1001	ADP	O4'-C4'-C3'	-2.21	100.75	105.11
3	E	1001	ADP	C5-C6-N6	2.16	123.63	120.35
3	C	1001	ADP	C2'-C3'-C4'	-2.15	98.46	102.64
3	F	1001	ADP	C5-C6-N6	2.15	123.62	120.35
3	K	1001	ADP	C5-C6-N6	2.14	123.61	120.35
3	D	1001	ADP	PA-O3A-PB	-2.10	125.62	132.83
3	F	1001	ADP	O4'-C4'-C3'	-2.10	100.96	105.11
3	I	1001	ADP	C2'-C3'-C4'	-2.01	98.73	102.64
3	F	1001	ADP	C2'-C3'-C4'	-2.01	98.74	102.64
3	A	1001	ADP	O4'-C4'-C3'	-2.00	101.15	105.11

There are no chirality outliers.

All (56) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	1001	ADP	O4'-C4'-C5'-O5'
3	F	1001	ADP	C5'-O5'-PA-O3A
3	G	1001	ADP	C5'-O5'-PA-O3A
3	I	1001	ADP	C5'-O5'-PA-O1A
3	L	1001	ADP	C5'-O5'-PA-O1A
3	H	1001	ADP	O4'-C4'-C5'-O5'
3	H	1001	ADP	C3'-C4'-C5'-O5'
3	A	1001	ADP	O4'-C4'-C5'-O5'
3	A	1001	ADP	C3'-C4'-C5'-O5'
3	C	1001	ADP	C3'-C4'-C5'-O5'
3	E	1001	ADP	O4'-C4'-C5'-O5'
3	E	1001	ADP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
3	F	1001	ADP	O4'-C4'-C5'-O5'
3	F	1001	ADP	C3'-C4'-C5'-O5'
3	I	1001	ADP	O4'-C4'-C5'-O5'
3	I	1001	ADP	C3'-C4'-C5'-O5'
3	K	1001	ADP	O4'-C4'-C5'-O5'
3	K	1001	ADP	C3'-C4'-C5'-O5'
3	B	1001	ADP	C3'-C4'-C5'-O5'
3	B	1001	ADP	O4'-C4'-C5'-O5'
3	D	1001	ADP	O4'-C4'-C5'-O5'
3	J	1001	ADP	C3'-C4'-C5'-O5'
3	D	1001	ADP	C3'-C4'-C5'-O5'
3	I	1001	ADP	PB-O3A-PA-O1A
3	G	1001	ADP	C3'-C4'-C5'-O5'
3	A	1001	ADP	C4'-C5'-O5'-PA
3	F	1001	ADP	C4'-C5'-O5'-PA
3	B	1001	ADP	PB-O3A-PA-O5'
3	J	1001	ADP	C4'-C5'-O5'-PA
3	J	1001	ADP	O4'-C4'-C5'-O5'
3	B	1001	ADP	PB-O3A-PA-O1A
3	G	1001	ADP	PB-O3A-PA-O1A
3	B	1001	ADP	C4'-C5'-O5'-PA
3	K	1001	ADP	C4'-C5'-O5'-PA
3	F	1001	ADP	C5'-O5'-PA-O2A
3	G	1001	ADP	C5'-O5'-PA-O1A
3	K	1001	ADP	C5'-O5'-PA-O2A
3	H	1001	ADP	PB-O3A-PA-O1A
3	I	1001	ADP	PB-O3A-PA-O2A
3	G	1001	ADP	O4'-C4'-C5'-O5'
3	H	1001	ADP	PB-O3A-PA-O2A
3	L	1001	ADP	PB-O3A-PA-O2A
3	H	1001	ADP	PA-O3A-PB-O2B
3	H	1001	ADP	PA-O3A-PB-O3B
3	L	1001	ADP	PA-O3A-PB-O2B
3	A	1001	ADP	C5'-O5'-PA-O3A
3	I	1001	ADP	C5'-O5'-PA-O3A
3	J	1001	ADP	C5'-O5'-PA-O3A
3	K	1001	ADP	C5'-O5'-PA-O3A
3	L	1001	ADP	C5'-O5'-PA-O3A
3	E	1001	ADP	PB-O3A-PA-O1A
3	E	1001	ADP	PB-O3A-PA-O2A
3	G	1001	ADP	PB-O3A-PA-O2A
3	B	1001	ADP	C5'-O5'-PA-O1A

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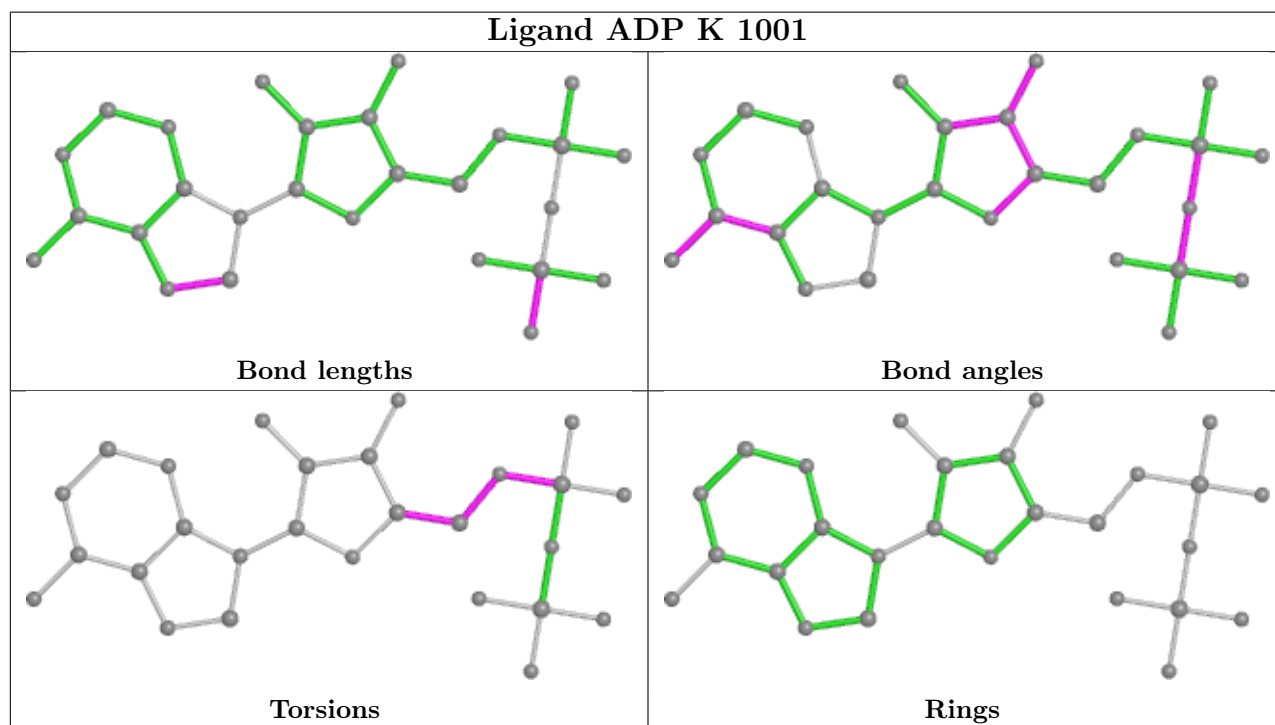
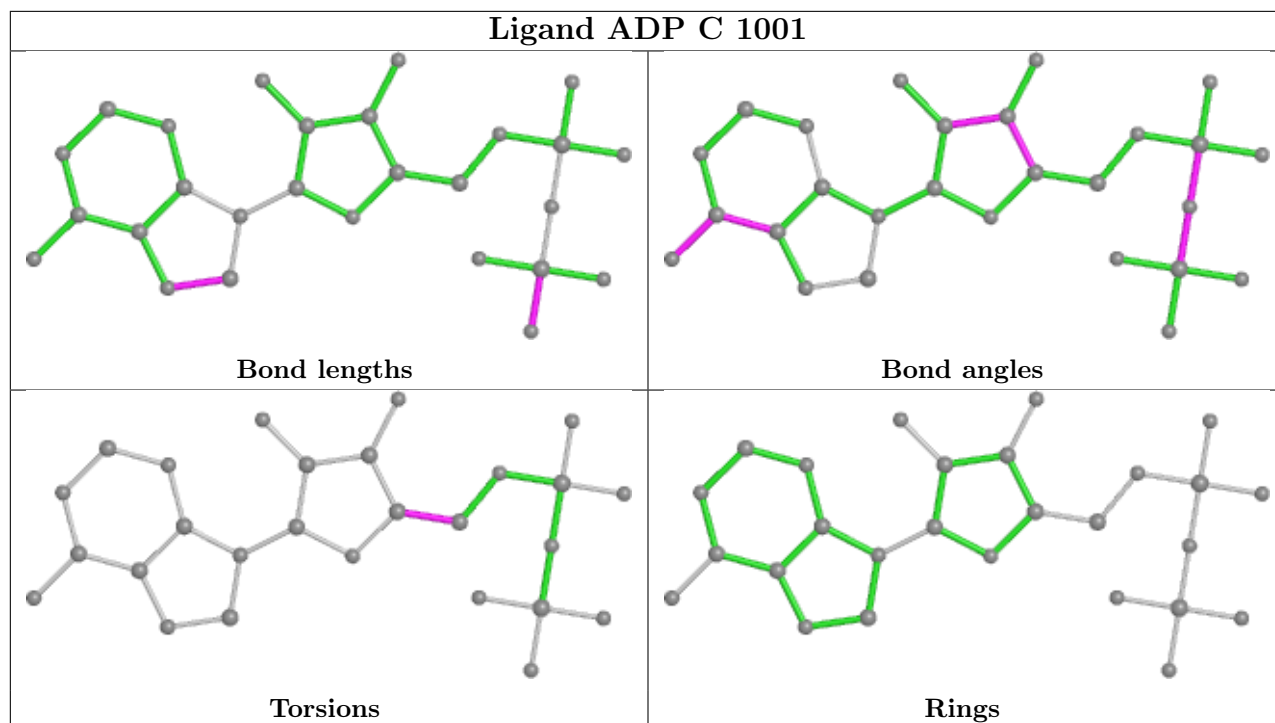
Mol	Chain	Res	Type	Atoms
3	D	1001	ADP	C5'-O5'-PA-O1A
3	L	1001	ADP	O4'-C4'-C5'-O5'

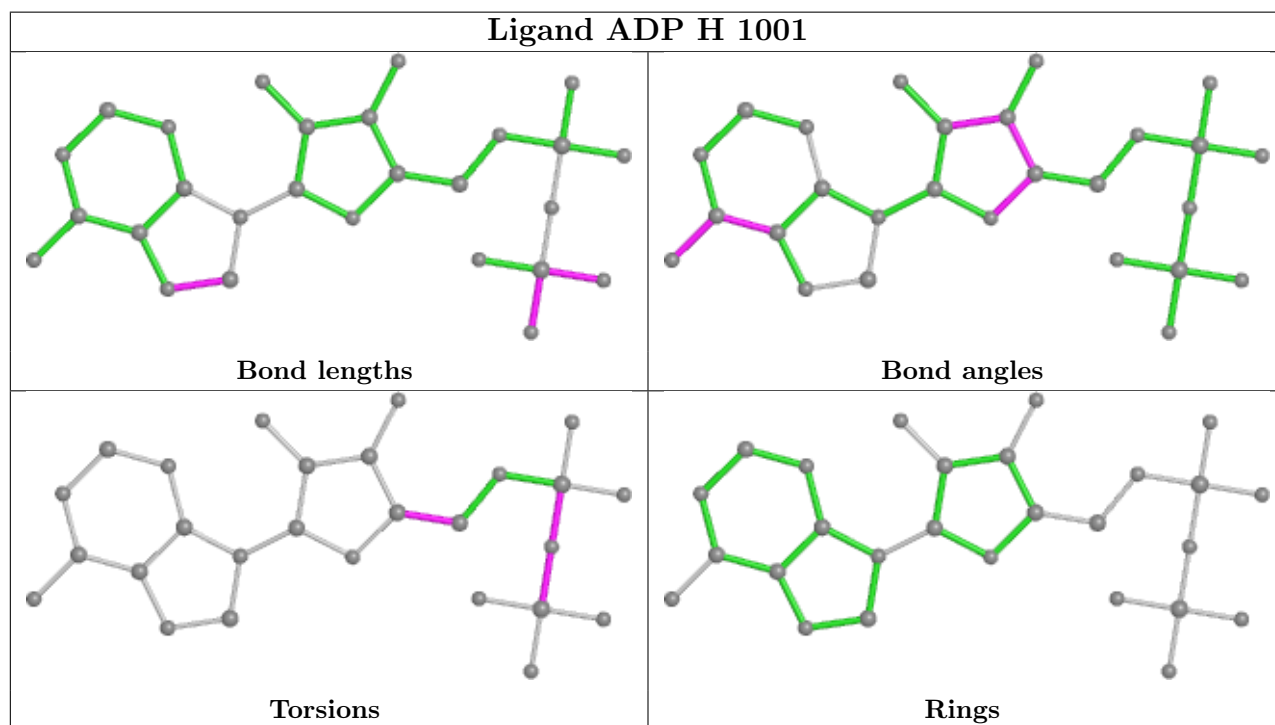
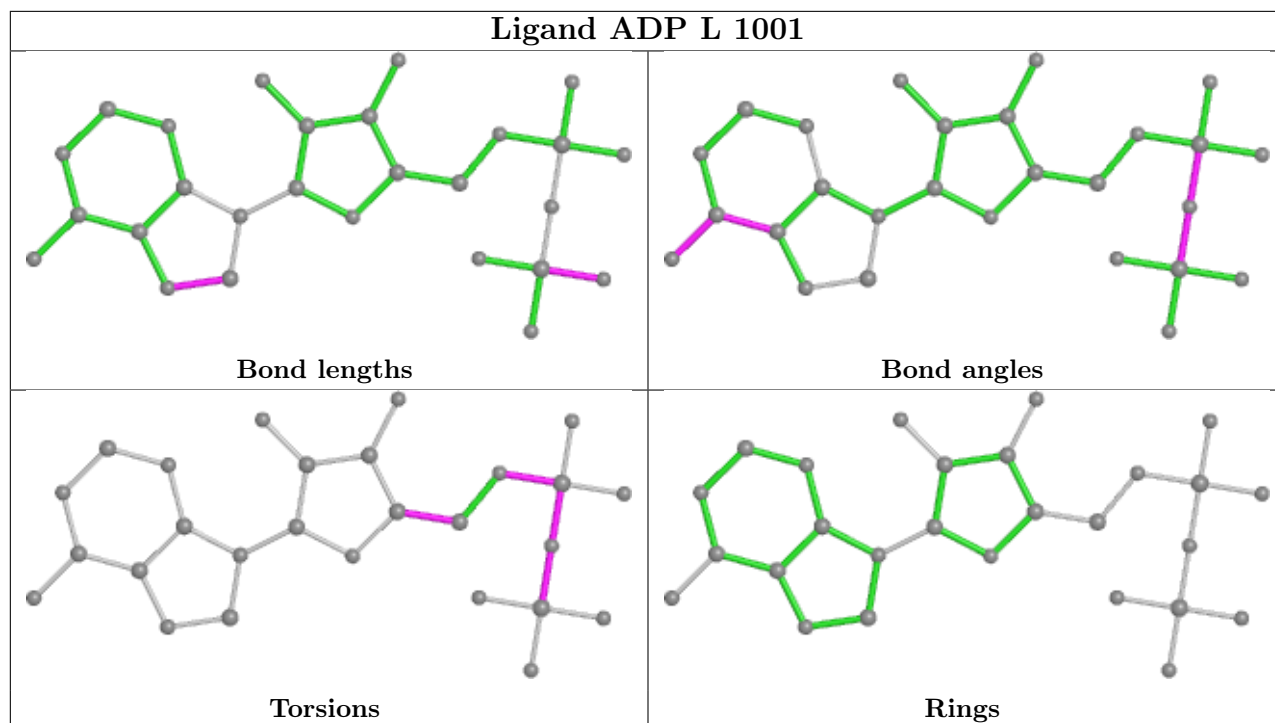
There are no ring outliers.

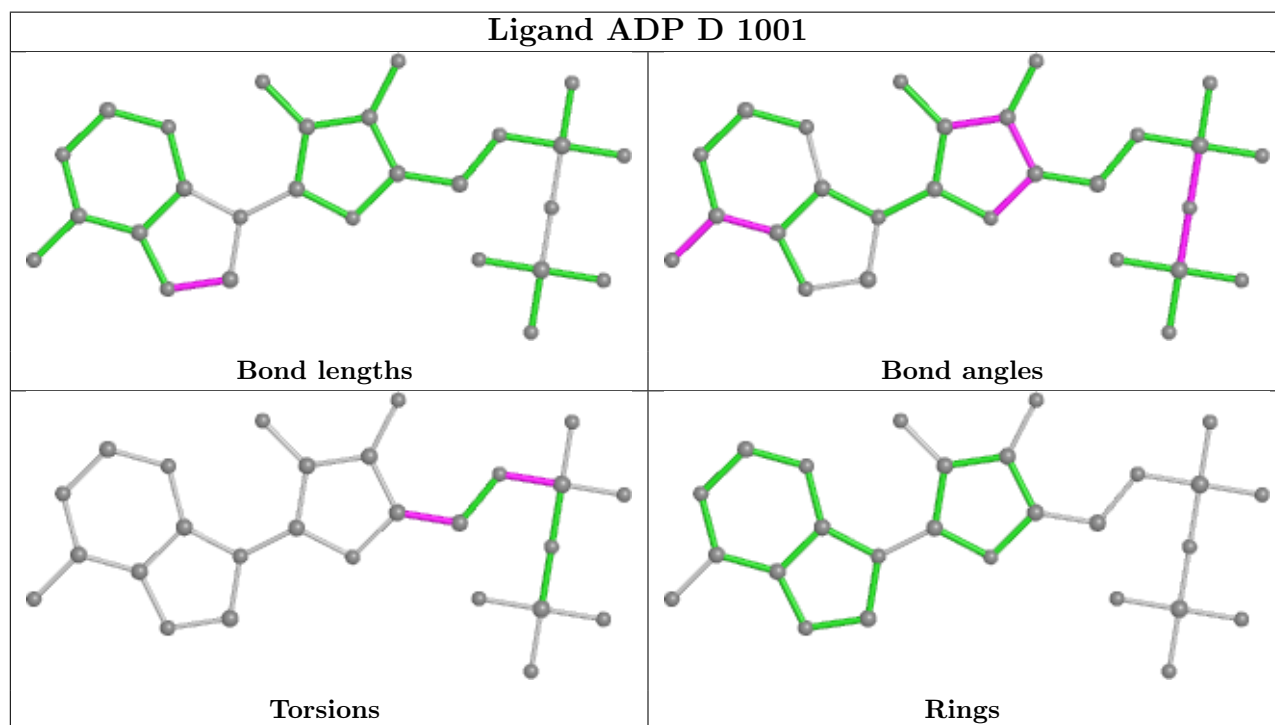
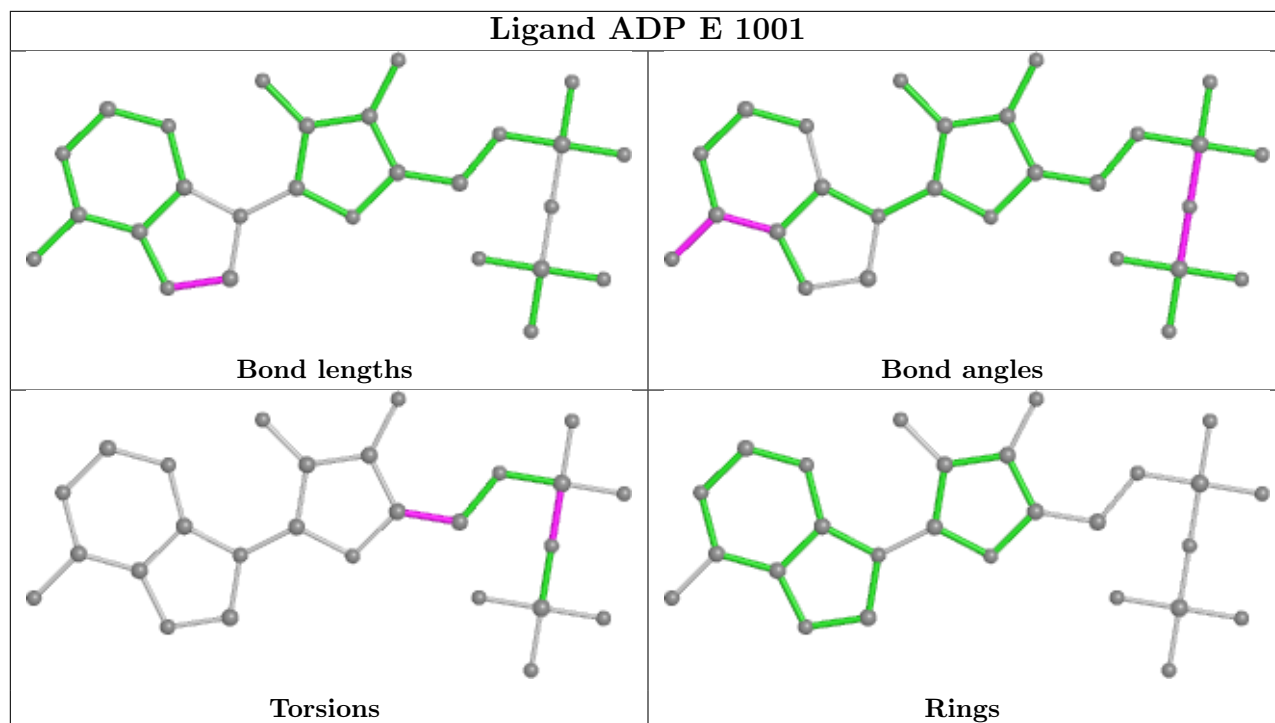
11 monomers are involved in 53 short contacts:

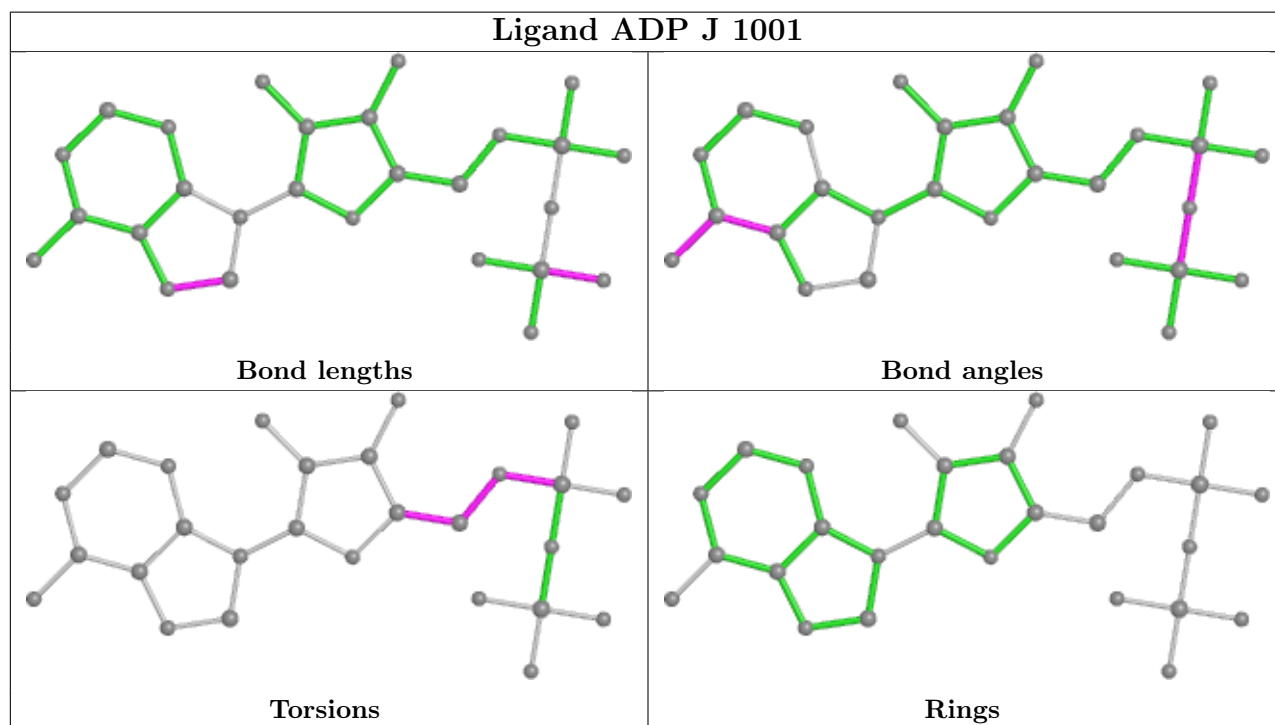
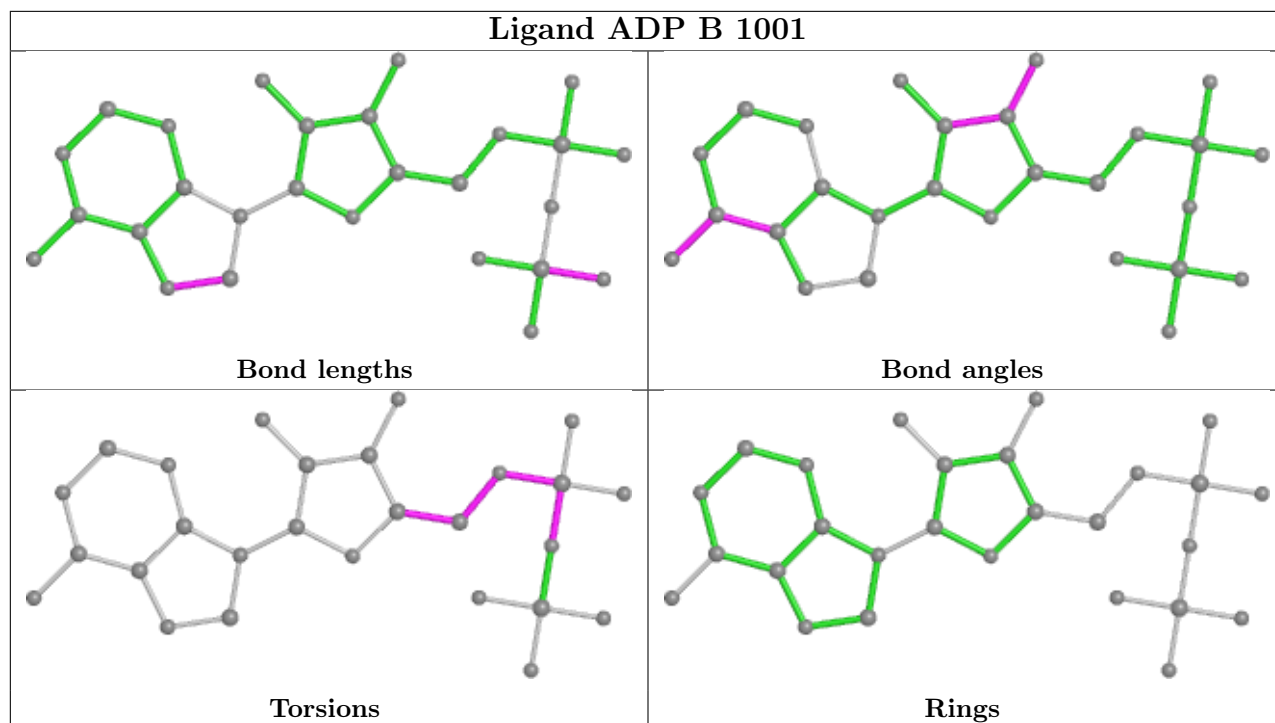
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	1001	ADP	3	0
3	K	1001	ADP	6	0
3	L	1001	ADP	1	0
3	H	1001	ADP	1	0
3	E	1001	ADP	15	0
3	D	1001	ADP	3	0
3	B	1001	ADP	6	0
3	J	1001	ADP	4	0
3	A	1001	ADP	9	0
3	G	1001	ADP	2	0
3	F	1001	ADP	3	0

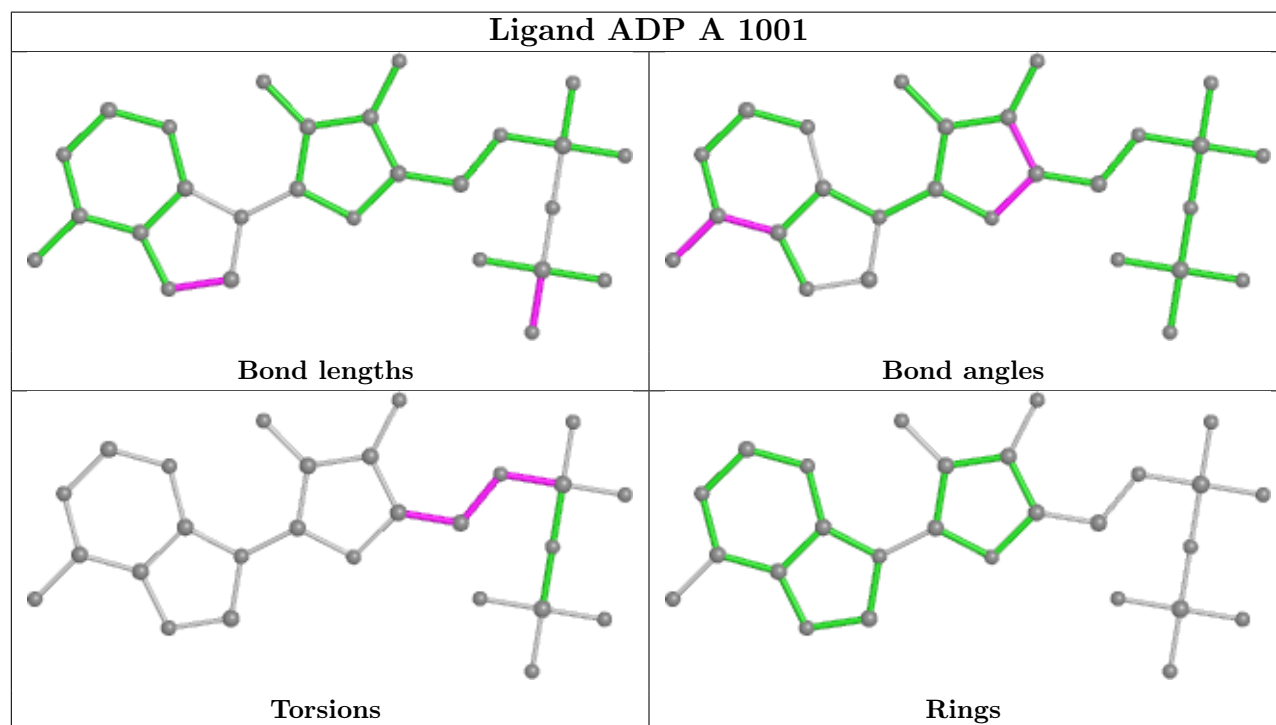
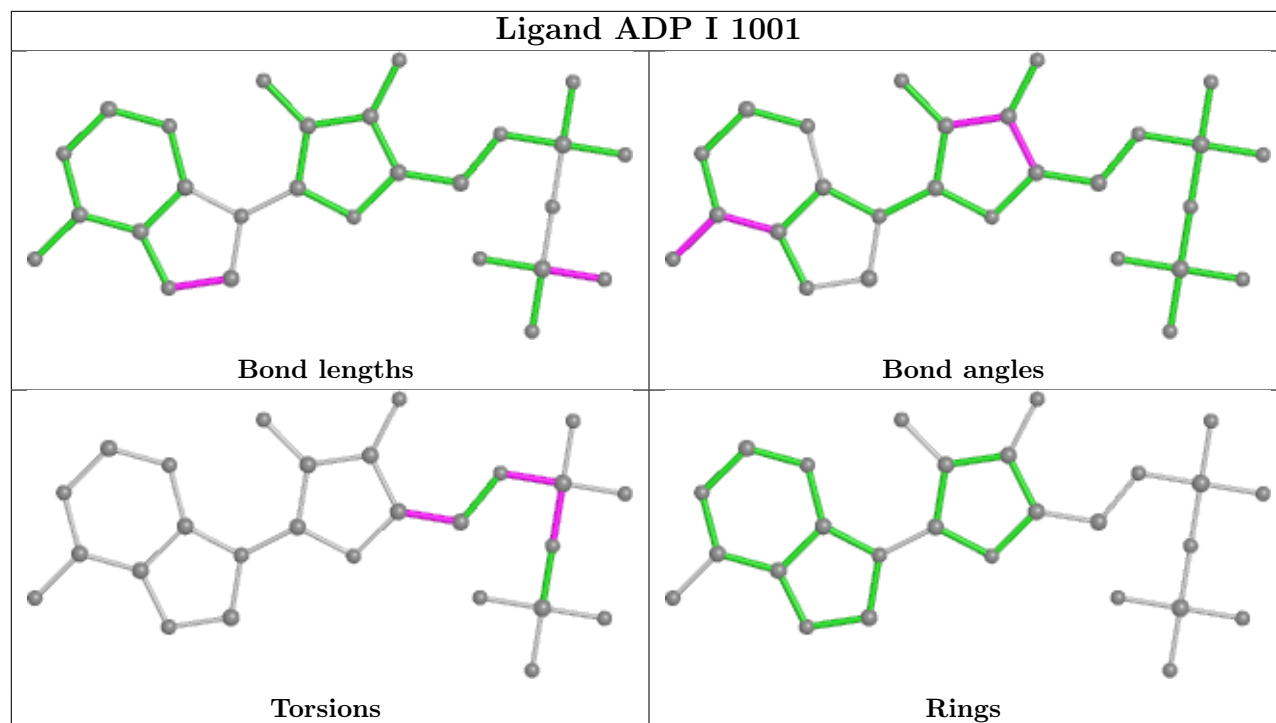
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

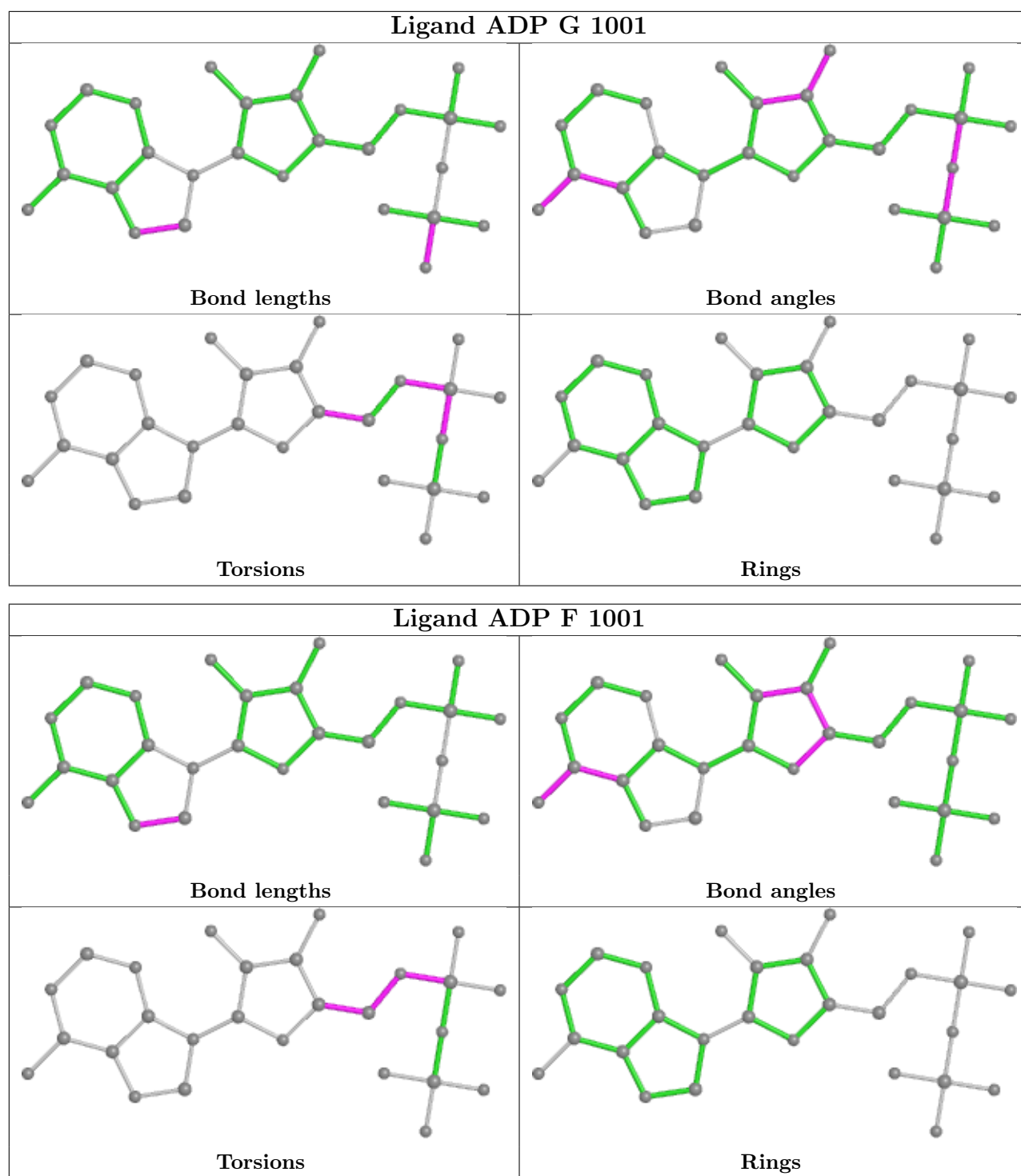












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	591/618 (95%)	0.32	50 (8%) 10 12	55, 65, 78, 88	0
1	B	590/618 (95%)	0.32	47 (7%) 12 13	55, 66, 79, 89	0
1	C	594/618 (96%)	0.35	44 (7%) 14 16	57, 70, 81, 90	0
1	D	591/618 (95%)	0.55	57 (9%) 8 9	63, 76, 85, 92	0
1	E	590/618 (95%)	0.47	53 (8%) 9 11	62, 73, 83, 91	0
1	F	591/618 (95%)	0.42	63 (10%) 6 7	58, 68, 79, 87	0
1	G	594/618 (96%)	0.30	42 (7%) 16 18	55, 65, 76, 85	0
1	H	594/618 (96%)	0.28	32 (5%) 25 26	52, 64, 76, 86	0
1	I	594/618 (96%)	0.31	54 (9%) 9 10	57, 68, 81, 87	0
1	J	590/618 (95%)	0.54	58 (9%) 7 9	64, 74, 86, 94	0
1	K	594/618 (96%)	0.36	50 (8%) 11 13	60, 71, 83, 90	0
1	L	594/618 (96%)	0.43	44 (7%) 14 16	59, 71, 82, 93	0
All	All	7107/7416 (95%)	0.39	594 (8%) 11 13	52, 70, 82, 94	0

All (594) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	312	SER	10.8
1	I	312	SER	10.2
1	J	313	ALA	9.9
1	B	313	ALA	7.9
1	F	312	SER	7.8
1	C	312	SER	7.8
1	D	312	SER	7.7
1	F	351	ASP	7.7
1	D	311	ALA	7.6
1	G	312	SER	7.5
1	J	312	SER	7.3

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Mol	Chain	Res	Type	RSRZ
1	E	313	ALA	7.2
1	B	351	ASP	7.1
1	L	313	ALA	6.8
1	B	314	SER	6.6
1	I	313	ALA	6.5
1	D	358	ASN	6.4
1	D	314	SER	6.4
1	L	351	ASP	6.4
1	E	312	SER	6.3
1	D	313	ALA	6.3
1	H	313	ALA	6.3
1	F	313	ALA	6.2
1	C	313	ALA	6.1
1	J	351	ASP	6.1
1	K	358	ASN	6.0
1	D	316	ASN	6.0
1	E	275	THR	5.8
1	I	311	ALA	5.9
1	A	313	ALA	5.8
1	A	312	SER	5.8
1	J	273	ALA	5.7
1	H	312	SER	5.7
1	F	480	ASP	5.7
1	J	311	ALA	5.6
1	E	479	GLN	5.6
1	E	316	ASN	5.6
1	C	355	PRO	5.4
1	G	313	ALA	5.4
1	E	198	GLY	5.3
1	L	312	SER	5.3
1	L	272	ALA	5.3
1	H	273	ALA	5.2
1	B	200	GLY	5.2
1	B	352	SER	5.2
1	C	311	ALA	5.2
1	F	356	PRO	5.2
1	G	311	ALA	5.1
1	H	351	ASP	5.1
1	F	204	SER	5.1
1	J	427	THR	5.0
1	G	356	PRO	5.0
1	L	356	PRO	5.0

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Mol	Chain	Res	Type	RSRZ
1	I	272	ALA	5.0
1	G	204	SER	5.0
1	G	351	ASP	5.0
1	D	310	ASP	4.9
1	I	358	ASN	4.9
1	K	312	SER	4.9
1	F	316	ASN	4.9
1	B	311	ALA	4.9
1	D	276	ALA	4.8
1	F	311	ALA	4.8
1	E	203	GLN	4.8
1	F	271	GLY	4.8
1	I	200	GLY	4.8
1	A	273	ALA	4.8
1	E	199	SER	4.7
1	A	276	ALA	4.7
1	F	275	THR	4.7
1	A	603	ASP	4.7
1	A	314	SER	4.7
1	I	351	ASP	4.7
1	K	356	PRO	4.6
1	K	351	ASP	4.6
1	F	203	GLN	4.6
1	D	275	THR	4.5
1	I	479	GLN	4.5
1	J	274	GLY	4.5
1	D	603	ASP	4.5
1	C	310	ASP	4.5
1	E	480	ASP	4.5
1	G	310	ASP	4.5
1	K	606	GLY	4.5
1	E	350	GLU	4.5
1	H	311	ALA	4.5
1	A	476	VAL	4.5
1	F	355	PRO	4.5
1	A	275	THR	4.4
1	G	276	ALA	4.4
1	C	351	ASP	4.4
1	C	316	ASN	4.4
1	D	357	GLU	4.4
1	D	274	GLY	4.4
1	F	205	GLY	4.4

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Mol	Chain	Res	Type	RSRZ
1	B	389	GLY	4.4
1	D	352	SER	4.4
1	A	351	ASP	4.4
1	J	276	ALA	4.4
1	K	271	GLY	4.4
1	F	314	SER	4.4
1	K	605	GLY	4.4
1	E	358	ASN	4.3
1	B	350	GLU	4.3
1	B	479	GLN	4.3
1	F	272	ALA	4.3
1	F	309	SER	4.3
1	G	350	GLU	4.3
1	F	603	ASP	4.2
1	A	311	ALA	4.2
1	I	356	PRO	4.2
1	B	198	GLY	4.2
1	K	274	GLY	4.2
1	E	314	SER	4.1
1	G	199	SER	4.1
1	J	275	THR	4.1
1	B	271	GLY	4.1
1	D	318	GLY	4.1
1	J	88	PRO	4.1
1	K	272	ALA	4.1
1	L	358	ASN	4.1
1	I	201	GLY	4.1
1	D	351	ASP	4.1
1	H	350	GLU	4.1
1	E	353	GLU	4.1
1	G	208	GLY	4.0
1	L	275	THR	4.0
1	E	352	SER	4.0
1	I	603	ASP	4.0
1	E	13	ASP	4.0
1	K	145	ASP	4.0
1	E	351	ASP	4.0
1	F	350	GLU	4.0
1	J	272	ALA	3.9
1	A	310	ASP	3.9
1	B	356	PRO	3.9
1	J	199	SER	3.9

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Mol	Chain	Res	Type	RSRZ
1	B	204	SER	3.9
1	F	199	SER	3.9
1	A	272	ALA	3.9
1	L	350	GLU	3.8
1	L	273	ALA	3.8
1	F	208	GLY	3.8
1	G	358	ASN	3.8
1	B	201	GLY	3.8
1	C	350	GLU	3.8
1	E	311	ALA	3.8
1	K	273	ALA	3.8
1	F	358	ASN	3.8
1	I	240	ARG	3.8
1	A	350	GLU	3.8
1	E	272	ALA	3.7
1	J	310	ASP	3.7
1	C	272	ALA	3.7
1	F	273	ALA	3.7
1	J	270	ALA	3.7
1	K	285	SER	3.7
1	B	203	GLN	3.7
1	L	314	SER	3.7
1	C	273	ALA	3.7
1	E	355	PRO	3.7
1	E	310	ASP	3.7
1	K	602	ASP	3.7
1	F	207	ALA	3.7
1	B	275	THR	3.7
1	D	199	SER	3.7
1	K	313	ALA	3.6
1	L	357	GLU	3.6
1	B	276	ALA	3.6
1	I	275	THR	3.6
1	I	352	SER	3.6
1	A	316	ASN	3.6
1	J	350	GLU	3.6
1	D	350	GLU	3.6
1	E	357	GLU	3.6
1	F	198	GLY	3.6
1	I	606	GLY	3.6
1	D	356	PRO	3.6
1	E	309	SER	3.6

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Mol	Chain	Res	Type	RSRZ
1	C	314	SER	3.6
1	D	282	ASP	3.5
1	G	285	SER	3.5
1	J	198	GLY	3.5
1	B	310	ASP	3.5
1	F	90	SER	3.5
1	A	271	GLY	3.5
1	G	272	ALA	3.5
1	G	201	GLY	3.5
1	A	360	ASP	3.5
1	J	233	GLU	3.5
1	K	353	GLU	3.5
1	A	430	GLN	3.5
1	B	199	SER	3.5
1	E	273	ALA	3.5
1	L	311	ALA	3.5
1	A	270	ALA	3.5
1	L	316	ASN	3.5
1	J	358	ASN	3.4
1	G	479	GLN	3.4
1	C	390	GLU	3.4
1	L	144	ALA	3.4
1	D	475	ARG	3.4
1	F	285	SER	3.4
1	G	273	ALA	3.4
1	J	353	GLU	3.4
1	G	314	SER	3.4
1	D	345	HIS	3.4
1	F	270	ALA	3.4
1	C	336	THR	3.4
1	A	240	ARG	3.4
1	C	275	THR	3.3
1	H	276	ALA	3.3
1	K	603	ASP	3.3
1	L	310	ASP	3.3
1	J	314	SER	3.3
1	I	310	ASP	3.3
1	L	270	ALA	3.3
1	D	273	ALA	3.3
1	A	363	GLU	3.3
1	B	202	ARG	3.3
1	A	285	SER	3.3

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Mol	Chain	Res	Type	RSRZ
1	K	355	PRO	3.3
1	A	358	ASN	3.3
1	I	276	ALA	3.3
1	K	84	ALA	3.3
1	L	606	GLY	3.3
1	D	245	SER	3.3
1	B	355	PRO	3.3
1	D	88	PRO	3.3
1	J	479	GLN	3.3
1	E	271	GLY	3.3
1	G	480	ASP	3.3
1	L	274	GLY	3.3
1	H	356	PRO	3.3
1	F	357	GLU	3.3
1	D	353	GLU	3.2
1	B	318	GLY	3.2
1	J	336	THR	3.2
1	H	310	ASP	3.2
1	E	390	GLU	3.2
1	C	315	LEU	3.2
1	A	475	ARG	3.2
1	D	145	ASP	3.2
1	J	456	HIS	3.2
1	D	240	ARG	3.2
1	F	206	THR	3.2
1	A	145	ASP	3.2
1	E	276	ALA	3.2
1	J	285	SER	3.2
1	L	564	GLY	3.2
1	J	385	GLU	3.2
1	K	310	ASP	3.2
1	A	356	PRO	3.1
1	H	80	GLU	3.1
1	H	352	SER	3.1
1	H	606	GLY	3.1
1	E	285	SER	3.1
1	C	269	ARG	3.1
1	B	272	ALA	3.1
1	F	479	GLN	3.1
1	H	199	SER	3.1
1	C	353	GLU	3.1
1	I	316	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
1	I	360	ASP	3.1
1	E	476	VAL	3.1
1	C	356	PRO	3.1
1	E	356	PRO	3.1
1	B	336	THR	3.1
1	K	198	GLY	3.1
1	F	352	SER	3.0
1	G	316	ASN	3.0
1	A	352	SER	3.0
1	C	145	ASP	3.0
1	D	602	ASP	3.0
1	K	350	GLU	3.0
1	B	357	GLU	3.0
1	F	260	ARG	3.0
1	J	131	ASP	3.0
1	H	564	GLY	3.0
1	A	197	GLN	3.0
1	K	316	ASN	3.0
1	C	276	ALA	3.0
1	D	161	GLY	3.0
1	F	276	ALA	3.0
1	G	198	GLY	3.0
1	L	145	ASP	3.0
1	D	355	PRO	3.0
1	I	271	GLY	3.0
1	C	352	SER	3.0
1	C	358	ASN	3.0
1	F	338	LYS	3.0
1	I	197	GLN	3.0
1	I	471	GLU	3.0
1	J	475	ARG	2.9
1	I	204	SER	2.9
1	J	269	ARG	2.9
1	H	314	SER	2.9
1	I	273	ALA	2.9
1	F	202	ARG	2.9
1	B	207	ALA	2.9
1	G	270	ALA	2.9
1	B	496	GLU	2.9
1	D	243	GLY	2.9
1	F	310	ASP	2.9
1	H	272	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	G	275	THR	2.9
1	J	316	ASN	2.9
1	C	80	GLU	2.9
1	I	208	GLY	2.9
1	D	479	GLN	2.9
1	F	200	GLY	2.9
1	K	243	GLY	2.9
1	C	285	SER	2.9
1	I	285	SER	2.9
1	I	85	GLY	2.9
1	B	358	ASN	2.9
1	D	286	GLU	2.9
1	J	338	LYS	2.9
1	K	197	GLN	2.8
1	I	270	ALA	2.8
1	L	425	ASP	2.8
1	A	353	GLU	2.8
1	I	350	GLU	2.8
1	I	353	GLU	2.8
1	A	318	GLY	2.8
1	E	318	GLY	2.8
1	F	283	GLN	2.8
1	L	475	ARG	2.8
1	J	352	SER	2.8
1	G	225	ASP	2.8
1	I	225	ASP	2.8
1	H	270	ALA	2.8
1	I	339	GLY	2.8
1	G	202	ARG	2.8
1	L	318	GLY	2.8
1	C	309	SER	2.8
1	F	84	ALA	2.8
1	K	311	ALA	2.8
1	A	120	ALA	2.7
1	I	336	THR	2.7
1	J	337	GLY	2.7
1	K	604	LEU	2.7
1	C	337	GLY	2.7
1	F	103	ASP	2.7
1	I	354	THR	2.7
1	J	145	ASP	2.7
1	K	282	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
1	K	276	ALA	2.7
1	G	269	ARG	2.7
1	K	357	GLU	2.7
1	E	197	GLN	2.7
1	D	144	ALA	2.7
1	F	240	ARG	2.7
1	B	363	GLU	2.7
1	K	270	ALA	2.7
1	F	145	ASP	2.7
1	J	36	GLY	2.7
1	G	260	ARG	2.7
1	H	348	GLN	2.7
1	C	90	SER	2.6
1	B	197	GLN	2.6
1	B	84	ALA	2.6
1	D	269	ARG	2.6
1	K	309	SER	2.6
1	H	336	THR	2.6
1	F	197	GLN	2.6
1	E	202	ARG	2.6
1	I	314	SER	2.6
1	L	199	SER	2.6
1	A	315	LEU	2.6
1	I	90	SER	2.6
1	K	352	SER	2.6
1	E	233	GLU	2.6
1	B	208	GLY	2.6
1	A	203	GLN	2.6
1	A	480	ASP	2.6
1	H	275	THR	2.6
1	J	355	PRO	2.6
1	J	433	GLY	2.6
1	E	274	GLY	2.6
1	B	309	SER	2.6
1	B	316	ASN	2.6
1	F	366	GLY	2.6
1	E	240	ARG	2.6
1	D	285	SER	2.6
1	H	357	GLU	2.6
1	H	240	ARG	2.6
1	C	260	ARG	2.6
1	I	13	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
1	J	225	ASP	2.6
1	G	286	GLU	2.5
1	K	240	ARG	2.5
1	A	336	THR	2.5
1	A	432	GLU	2.5
1	G	360	ASP	2.5
1	I	604	LEU	2.5
1	H	430	GLN	2.5
1	L	560	GLN	2.5
1	E	282	ASP	2.5
1	D	85	GLY	2.5
1	J	476	VAL	2.5
1	K	278	VAL	2.5
1	B	360	ASP	2.5
1	K	275	THR	2.5
1	A	35	HIS	2.5
1	L	243	GLY	2.5
1	B	480	ASP	2.5
1	I	199	SER	2.5
1	I	480	ASP	2.5
1	A	496	GLU	2.5
1	A	274	GLY	2.5
1	E	201	GLY	2.5
1	I	207	ALA	2.5
1	D	280	GLN	2.5
1	K	80	GLU	2.5
1	G	205	GLY	2.5
1	L	84	ALA	2.5
1	G	203	GLN	2.5
1	A	357	GLU	2.5
1	A	281	THR	2.4
1	D	272	ALA	2.4
1	K	120	ALA	2.4
1	J	602	ASP	2.4
1	K	103	ASP	2.4
1	C	318	GLY	2.4
1	K	260	ARG	2.4
1	G	207	ALA	2.4
1	A	282	ASP	2.4
1	E	475	ARG	2.4
1	J	229	ALA	2.4
1	C	430	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	88	PRO	2.4
1	A	286	GLU	2.4
1	G	357	GLU	2.4
1	L	432	GLU	2.4
1	G	197	GLN	2.4
1	B	390	GLU	2.4
1	I	363	GLU	2.4
1	I	286	GLU	2.4
1	L	122	ARG	2.4
1	L	240	ARG	2.4
1	J	240	ARG	2.4
1	J	409	ARG	2.4
1	J	297	GLU	2.4
1	I	475	ARG	2.4
1	E	53	ASP	2.3
1	J	161	GLY	2.3
1	L	13	ASP	2.3
1	B	206	THR	2.3
1	K	287	GLY	2.3
1	L	476	VAL	2.3
1	D	202	ARG	2.3
1	C	456	HIS	2.3
1	C	560	GLN	2.3
1	D	599	ASP	2.3
1	E	81	ASP	2.3
1	L	280	GLN	2.3
1	F	389	GLY	2.3
1	D	451	HIS	2.3
1	F	35	HIS	2.3
1	K	336	THR	2.3
1	L	338	LYS	2.3
1	D	75	PHE	2.3
1	A	410	ARG	2.3
1	F	409	ARG	2.3
1	G	365	GLY	2.3
1	C	35	HIS	2.3
1	F	120	ALA	2.3
1	I	103	ASP	2.3
1	F	201	GLY	2.3
1	B	475	ARG	2.3
1	K	199	SER	2.3
1	J	241	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	287	GLY	2.3
1	H	353	GLU	2.3
1	E	88	PRO	2.3
1	E	241	ALA	2.3
1	L	81	ASP	2.3
1	H	274	GLY	2.3
1	G	430	GLN	2.3
1	J	309	SER	2.3
1	D	237	LYS	2.3
1	F	455	ALA	2.3
1	J	120	ALA	2.3
1	D	287	GLY	2.3
1	E	103	ASP	2.3
1	D	476	VAL	2.3
1	J	430	GLN	2.3
1	F	432	GLU	2.2
1	E	345	HIS	2.2
1	I	605	GLY	2.2
1	L	479	GLN	2.2
1	G	240	ARG	2.2
1	I	602	ASP	2.2
1	K	360	ASP	2.2
1	H	355	PRO	2.2
1	H	233	GLU	2.2
1	B	85	GLY	2.2
1	J	35	HIS	2.2
1	E	122	ARG	2.2
1	F	220	ASP	2.2
1	I	389	GLY	2.2
1	F	514	SER	2.2
1	I	260	ARG	2.2
1	F	353	GLU	2.2
1	C	120	ALA	2.2
1	A	602	ASP	2.2
1	D	225	ASP	2.2
1	F	282	ASP	2.2
1	C	240	ARG	2.2
1	B	602	ASP	2.2
1	L	225	ASP	2.2
1	C	233	GLU	2.2
1	I	377	SER	2.2
1	D	363	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	14	ALA	2.2
1	E	269	ARG	2.2
1	L	276	ALA	2.2
1	C	410	ARG	2.2
1	F	430	GLN	2.2
1	L	429	GLU	2.2
1	H	202	ARG	2.2
1	D	315	LEU	2.1
1	D	472	TYR	2.1
1	J	471	GLU	2.1
1	L	393	PRO	2.1
1	A	599	ASP	2.1
1	C	475	ARG	2.1
1	F	363	GLU	2.1
1	F	602	ASP	2.1
1	G	271	GLY	2.1
1	A	472	TYR	2.1
1	F	354	THR	2.1
1	C	357	GLU	2.1
1	C	360	ASP	2.1
1	K	53	ASP	2.1
1	L	427	THR	2.1
1	G	429	GLU	2.1
1	L	355	PRO	2.1
1	D	354	THR	2.1
1	J	80	GLU	2.1
1	L	74	THR	2.1
1	K	365	GLY	2.1
1	J	472	TYR	2.1
1	F	388	GLU	2.1
1	F	471	GLU	2.1
1	I	281	THR	2.1
1	D	120	ALA	2.1
1	I	145	ASP	2.1
1	A	366	GLY	2.1
1	A	441	ARG	2.1
1	J	280	GLN	2.1
1	B	80	GLU	2.1
1	J	122	ARG	2.1
1	H	203	GLN	2.1
1	C	197	GLN	2.1
1	H	358	ASN	2.1

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Mol	Chain	Res	Type	RSRZ
1	F	323	ASN	2.1
1	D	432	GLU	2.1
1	I	476	VAL	2.1
1	E	498	ASP	2.1
1	D	373	GLU	2.1
1	I	282	ASP	2.1
1	K	72	GLY	2.1
1	K	425	ASP	2.1
1	A	269	ARG	2.1
1	B	260	ARG	2.1
1	G	363	GLU	2.1
1	K	531	ARG	2.1
1	K	429	GLU	2.0
1	E	145	ASP	2.0
1	J	282	ASP	2.0
1	C	429	GLU	2.0
1	H	568	ILE	2.0
1	F	427	THR	2.0
1	J	144	ALA	2.0
1	B	243	GLY	2.0
1	E	354	THR	2.0
1	K	89	ALA	2.0
1	C	271	GLY	2.0
1	C	433	GLY	2.0
1	E	200	GLY	2.0
1	L	337	GLY	2.0
1	E	427	THR	2.0
1	G	427	THR	2.0
1	J	74	THR	2.0
1	H	560	GLN	2.0
1	D	117	ARG	2.0
1	J	271	GLY	2.0
1	D	490	ASN	2.0
1	D	203	GLN	2.0
1	G	394	LYS	2.0
1	A	86	LEU	2.0
1	B	83	VAL	2.0

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates [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(\AA^2)	Q<0.9
2	MG	D	1000	1/1	0.66	0.35	71,71,71,71	0
3	ADP	E	1001	27/27	0.83	0.40	71,72,72,73	0
3	ADP	F	1001	27/27	0.89	0.29	65,65,66,66	0
3	ADP	I	1001	27/27	0.90	0.26	66,66,67,67	0
3	ADP	K	1001	27/27	0.90	0.23	66,67,68,68	0
3	ADP	A	1001	27/27	0.91	0.23	64,65,65,65	0
3	ADP	B	1001	27/27	0.91	0.26	65,66,67,67	0
3	ADP	G	1001	27/27	0.91	0.25	62,63,63,64	0
3	ADP	C	1001	27/27	0.91	0.25	70,71,71,71	0
3	ADP	D	1001	27/27	0.91	0.23	74,75,75,75	0
3	ADP	J	1001	27/27	0.92	0.23	70,70,71,71	0
3	ADP	L	1001	27/27	0.92	0.23	70,71,71,71	0
2	MG	H	1000	1/1	0.93	0.11	65,65,65,65	0
3	ADP	H	1001	27/27	0.94	0.17	62,64,65,65	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.

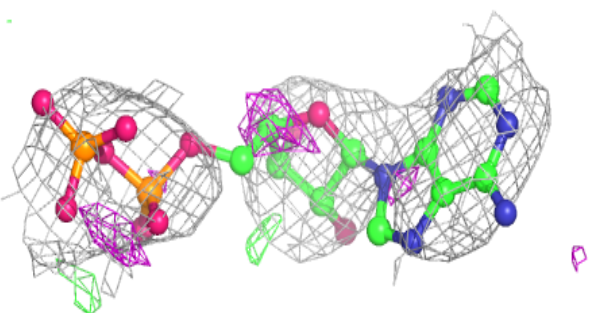
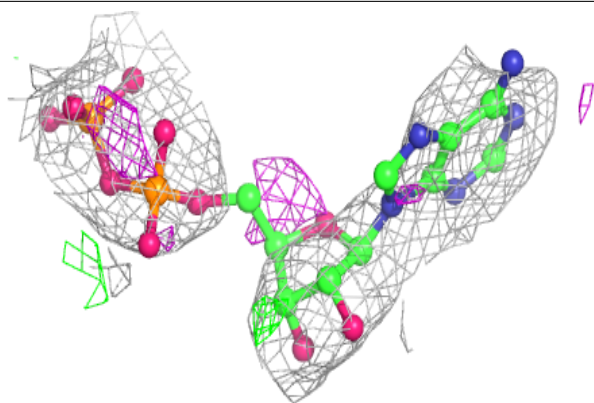
Electron density around MG D 1000:

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

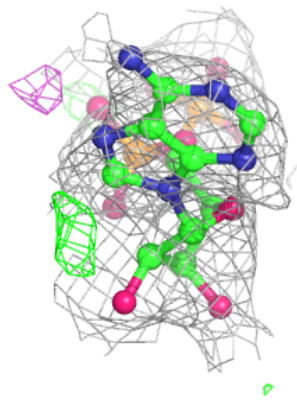
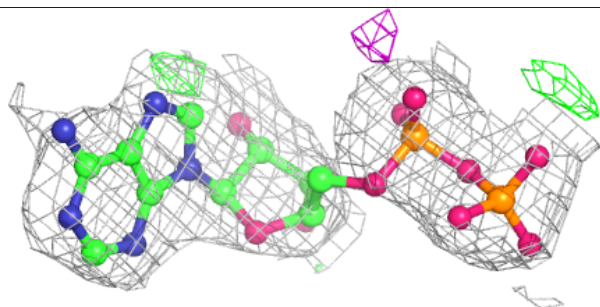
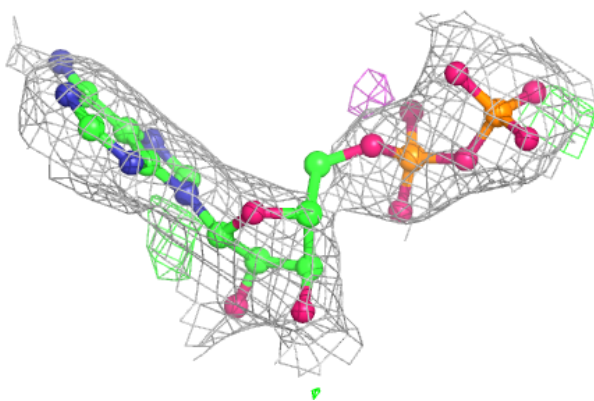


Electron density around ADP E 1001:

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

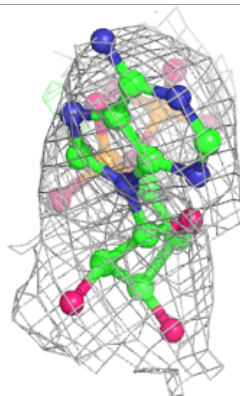
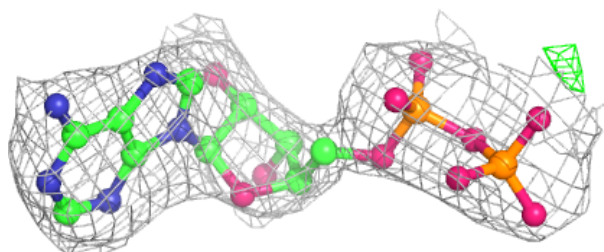
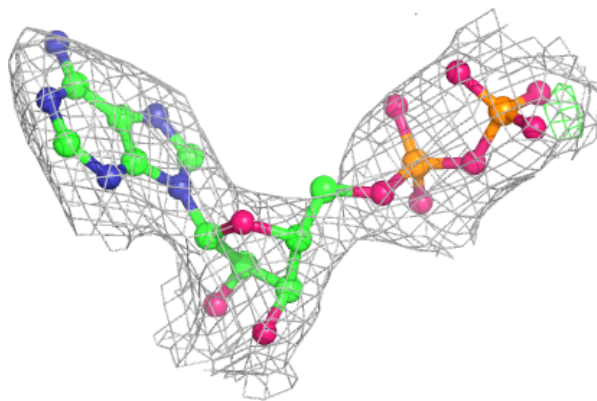
**Electron density around ADP F 1001:**

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

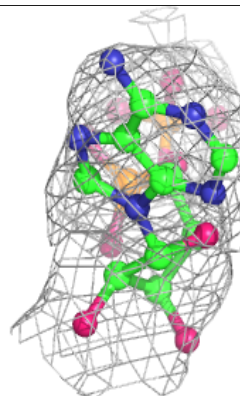
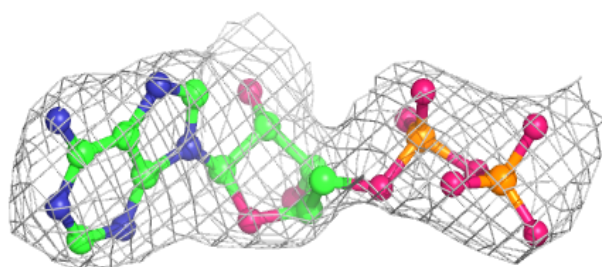
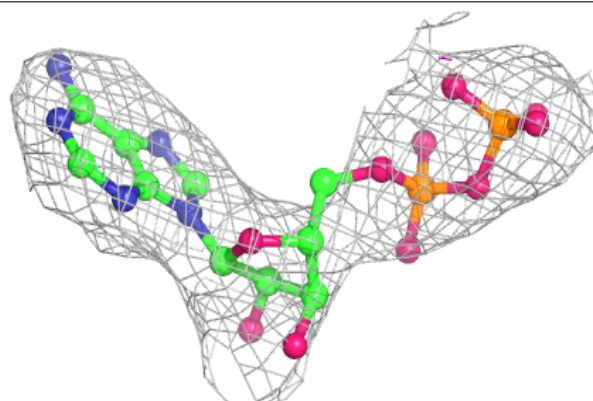


Electron density around ADP I 1001:

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

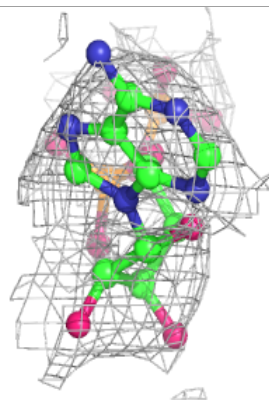
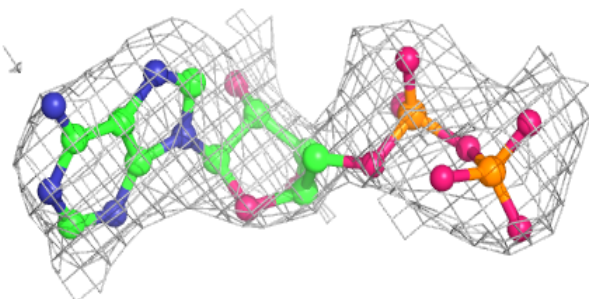
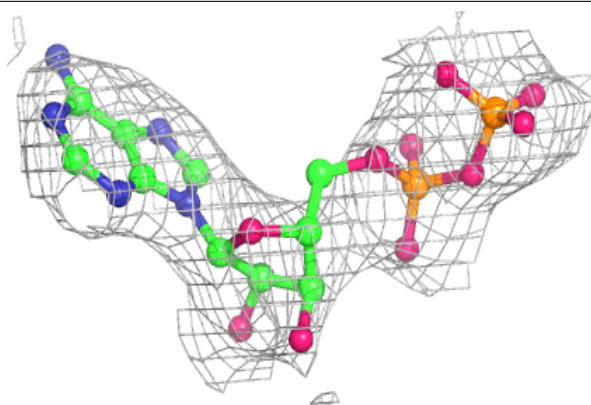
**Electron density around ADP K 1001:**

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

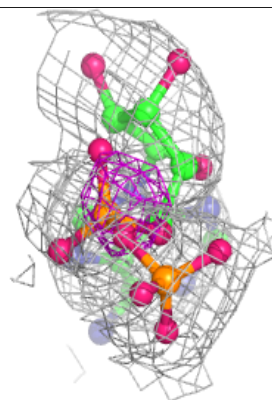
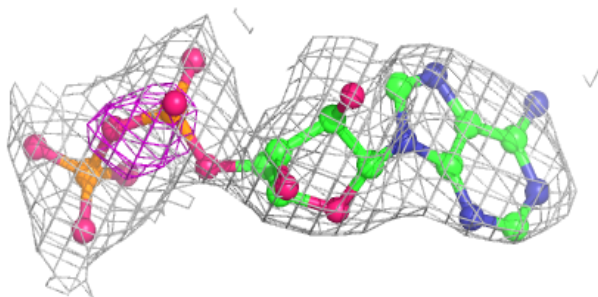
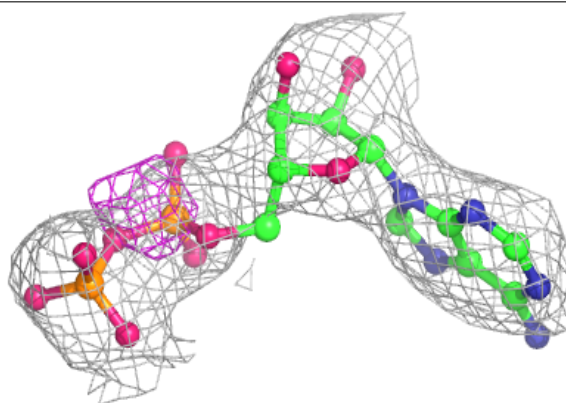


Electron density around ADP A 1001:

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

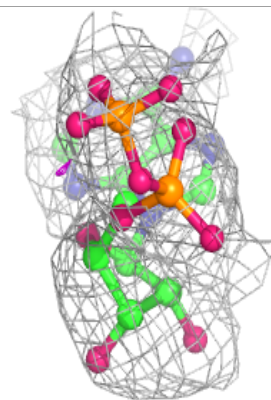
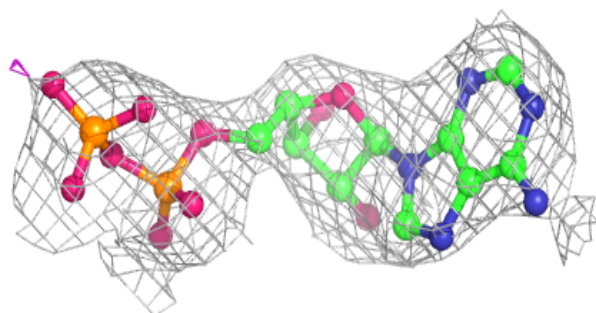
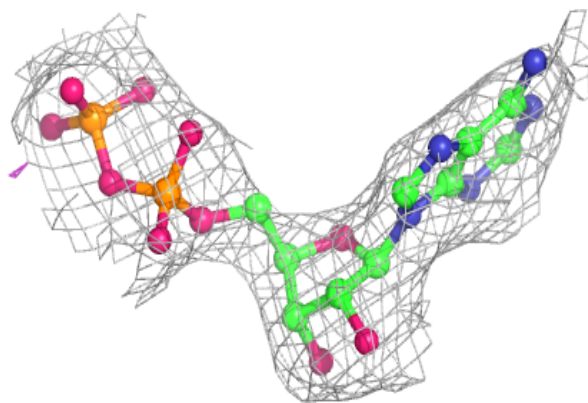
**Electron density around ADP B 1001:**

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

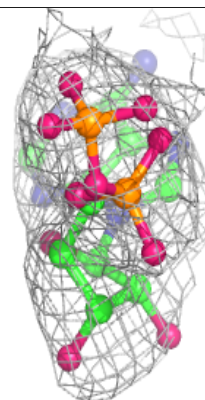
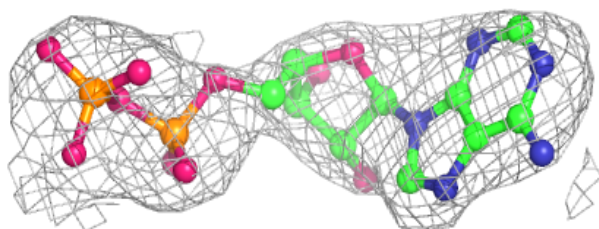
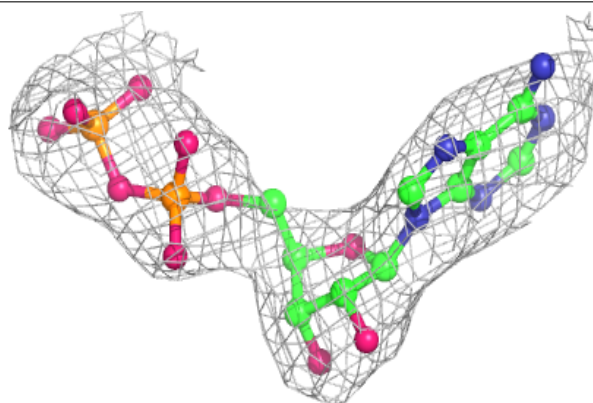


Electron density around ADP G 1001:

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

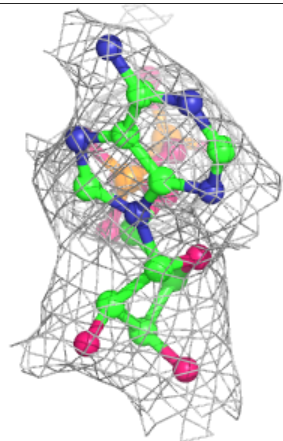
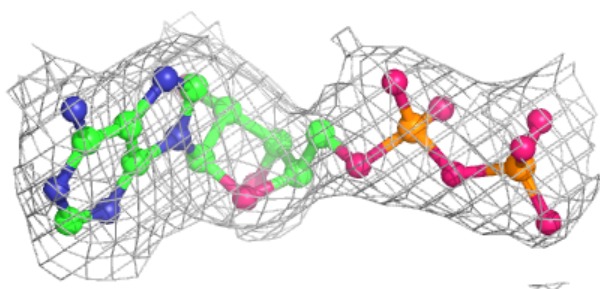
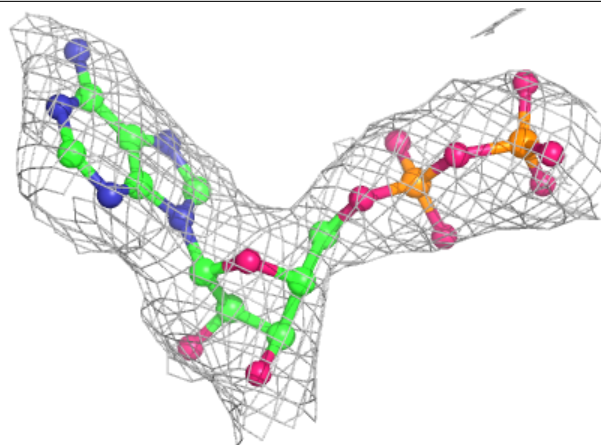
**Electron density around ADP C 1001:**

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

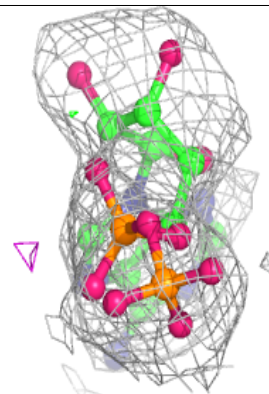
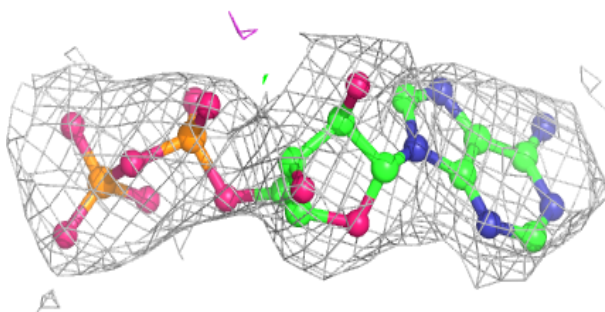
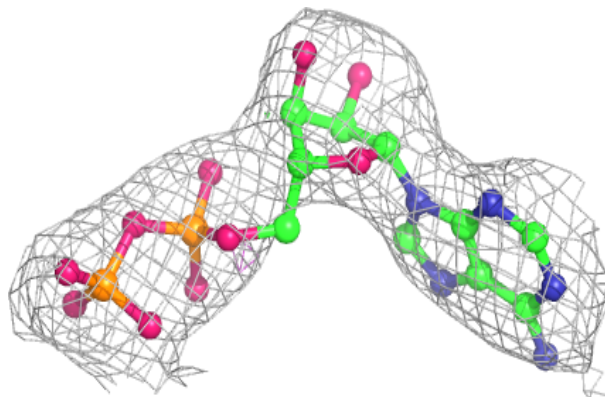


Electron density around ADP D 1001:

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

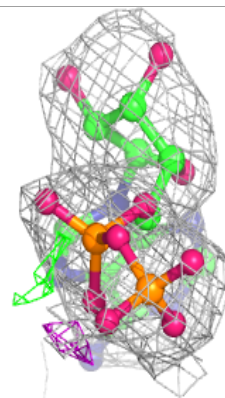
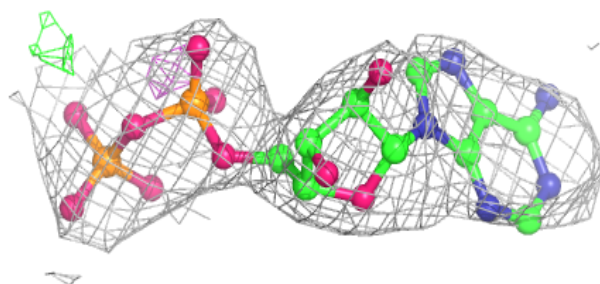
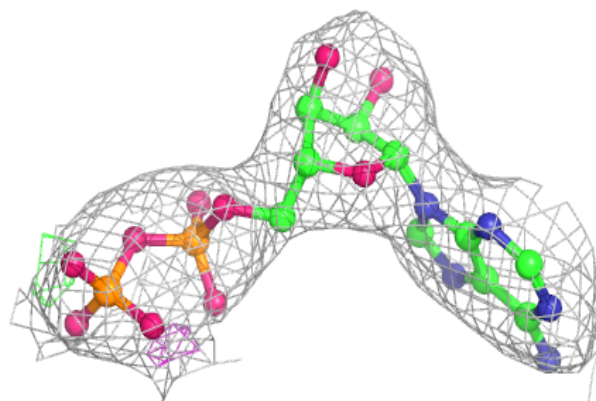
**Electron density around ADP J 1001:**

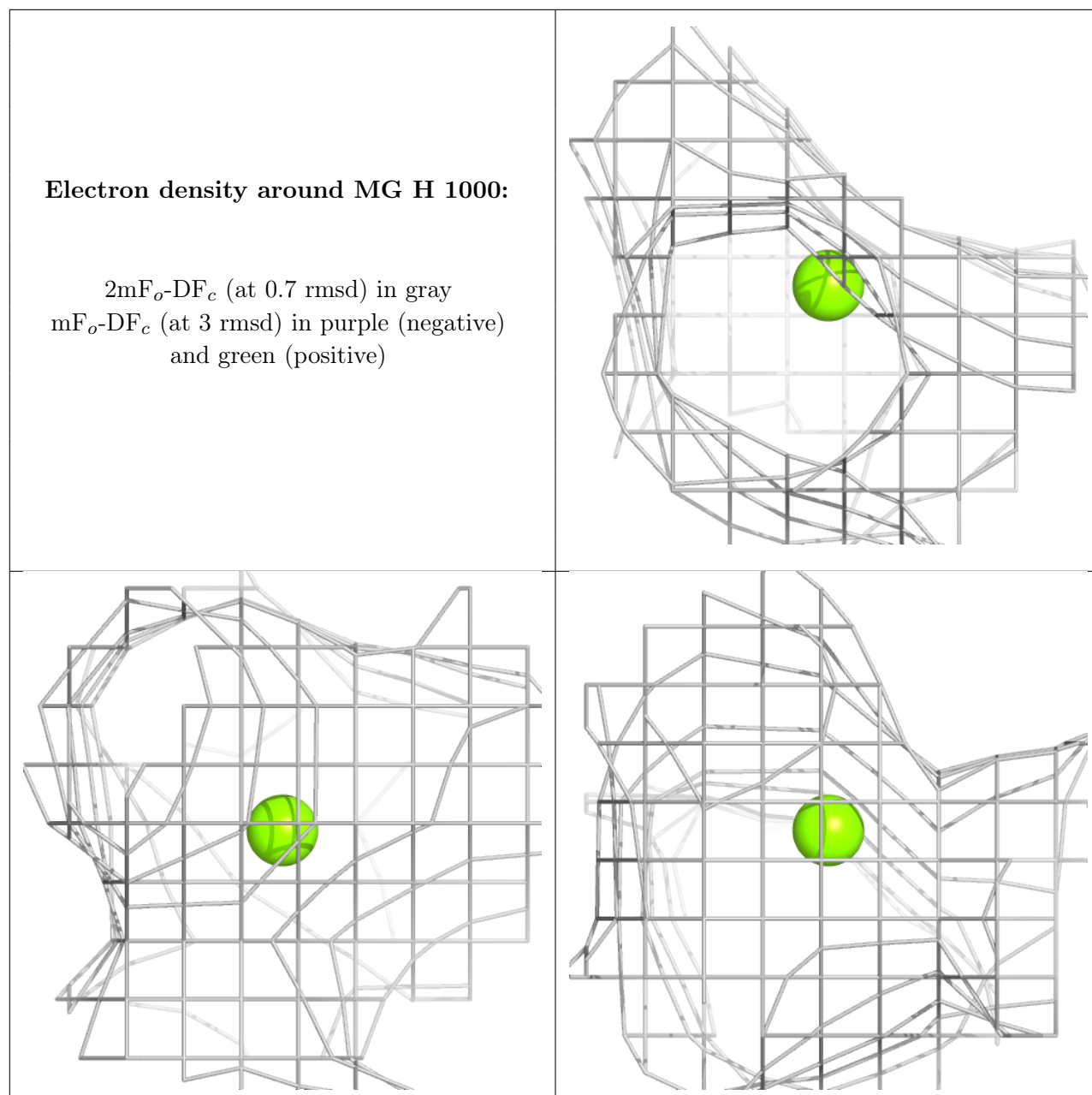
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

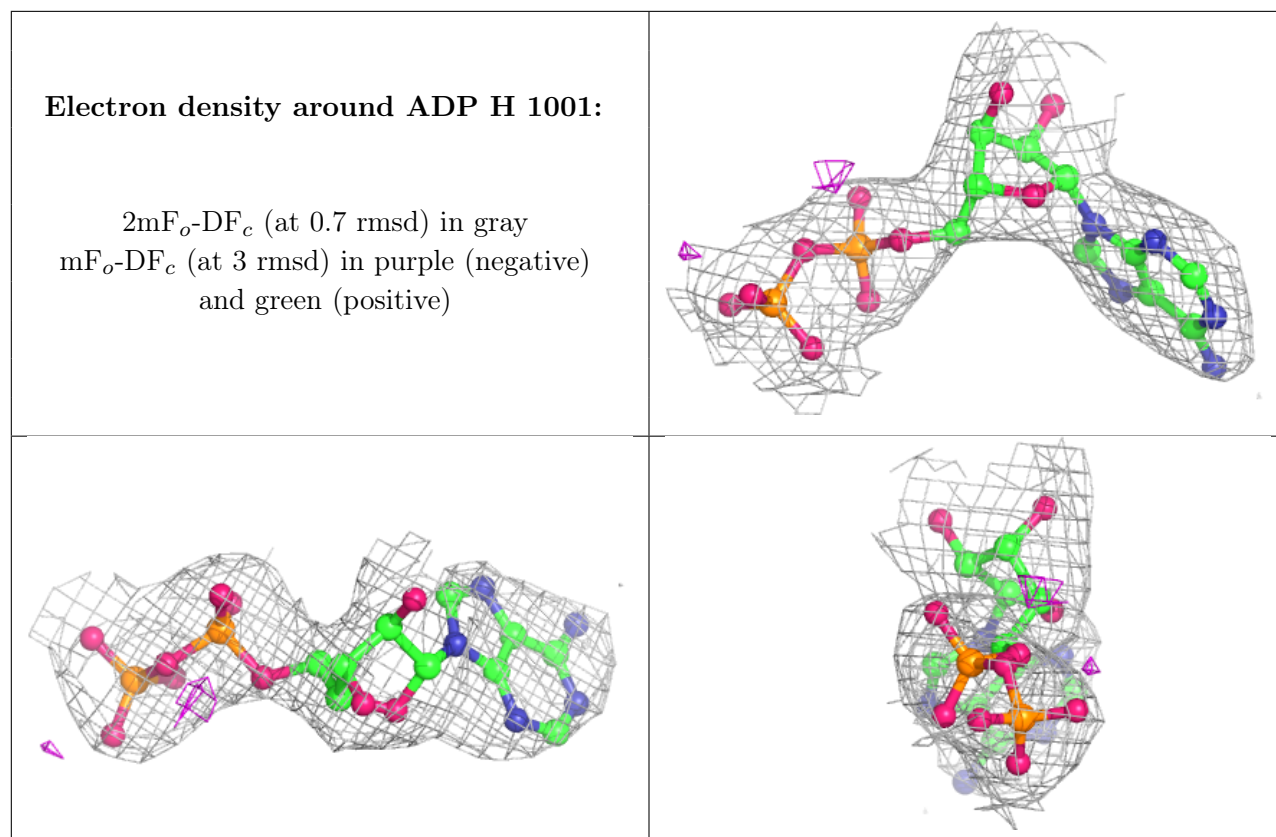


Electron density around ADP L 1001:

$2mF_o-DF_c$ (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.