



Full wwPDB X-ray Structure Validation Report

Jul 23, 2014 – 11:08 AM EDT

PDB ID : 4V7N
Title : Glycocyamine kinase, beta-beta homodimer from marine worm *Namalycastis* sp., with transition state analog Mg(II)-ADP-NO₃-glycocyamine.
Authors : Lim, K.; Pullalarevu, S.; Herzberg, O.
Deposited on : 2009-12-15
Resolution : 2.30 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

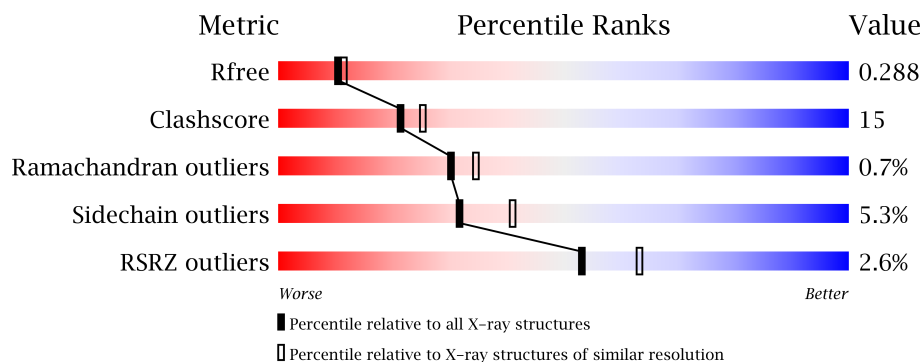
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.16 November 2013
Xtriage (Phenix) : dev-1439
EDS : stable23489
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23489

1 Overall quality at a glance

The reported resolution of this entry is 2.30 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}	66092	2929 (2.30-2.30)
Clashscore	79885	3679 (2.30-2.30)
Ramachandran outliers	78287	3642 (2.30-2.30)
Sidechain outliers	78261	3641 (2.30-2.30)
RSRZ outliers	66119	2930 (2.30-2.30)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	AA	390	
1	AB	390	
1	AC	390	
1	AD	390	
1	AE	390	
1	AF	390	
1	AG	390	
1	AH	390	
1	AI	390	
1	AJ	390	
1	AK	390	
1	AL	390	
1	AM	390	
1	AN	390	

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Mol	Chain	Length	Quality of chain
1	AO	390	
1	AP	390	
1	AQ	390	
1	AR	390	
1	BA	390	
1	BB	390	
1	BC	390	
1	BD	390	
1	BE	390	
1	BF	390	
1	BG	390	
1	BH	390	
1	BI	390	
1	BJ	390	
1	BK	390	
1	BL	390	
1	BM	390	
1	BN	390	
1	BO	390	
1	BP	390	
1	BQ	390	
1	BR	390	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
2	NMG	AE	401	-	X
2	NMG	AK	401	-	X
2	NMG	AN	401	-	X
2	NMG	AP	401	-	X
2	NMG	AQ	401	-	X
2	NMG	BB	401	-	X
2	NMG	BD	401	-	X
2	NMG	BE	401	-	X
2	NMG	BM	401	-	X
2	NMG	BN	401	-	X
2	NMG	BQ	401	-	X
4	MG	AA	503	-	X
4	MG	AB	403	-	X
4	MG	AC	403	-	X
4	MG	AD	403	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
4	MG	AE	403	-	X
4	MG	AF	403	-	X
4	MG	AG	403	-	X
4	MG	AI	403	-	X
4	MG	AK	403	-	X
4	MG	AM	403	-	X
4	MG	AP	403	-	X
4	MG	AQ	403	-	X
4	MG	AR	403	-	X
4	MG	BF	403	-	X
4	MG	BG	403	-	X
4	MG	BH	403	-	X
4	MG	BI	403	-	X
4	MG	BJ	403	-	X
4	MG	BK	403	-	X
4	MG	BL	403	-	X
4	MG	BM	403	-	X
4	MG	BN	403	-	X
4	MG	BO	403	-	X
4	MG	BP	403	-	X
4	MG	BQ	403	-	X
4	MG	BR	403	-	X
5	NO3	AA	504	X	-
5	NO3	AB	404	X	-
5	NO3	AC	404	X	X
5	NO3	AD	404	X	-
5	NO3	AE	404	X	-
5	NO3	AF	404	X	X
5	NO3	AG	404	X	-
5	NO3	AH	404	X	X
5	NO3	AI	404	X	X
5	NO3	AJ	404	X	-
5	NO3	AK	404	X	X
5	NO3	AL	404	X	X
5	NO3	AM	404	X	X
5	NO3	AN	404	X	X
5	NO3	AO	404	X	X
5	NO3	AP	404	X	X
5	NO3	AQ	404	X	X
5	NO3	AR	404	X	X
5	NO3	BA	504	X	X
5	NO3	BB	404	X	X

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Mol	Type	Chain	Res	Geometry	Electron density
5	NO3	BC	404	X	X
5	NO3	BD	404	X	X
5	NO3	BE	404	X	-
5	NO3	BF	404	X	X
5	NO3	BG	404	X	X
5	NO3	BH	404	X	-
5	NO3	BI	404	X	-
5	NO3	BJ	404	X	-
5	NO3	BK	404	X	-
5	NO3	BL	404	X	X
5	NO3	BM	404	X	X
5	NO3	BN	404	X	-
5	NO3	BO	404	X	X
5	NO3	BP	404	X	-
5	NO3	BQ	404	X	-
5	NO3	BR	404	X	X

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 113311 atoms, of which 0 are hydrogen and 0 are deuterium.

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 Glycocyamine kinase beta chain.

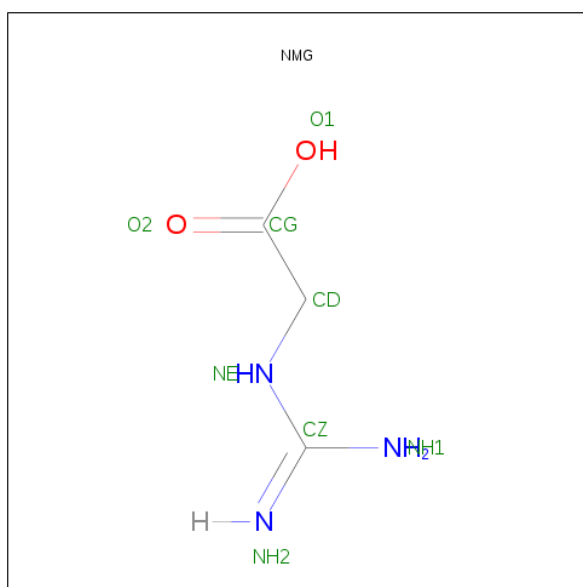
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	366	Total	C	N	O	S	0	0	0
			2901	1828	511	541	21			
1	AB	387	Total	C	N	O	S	0	0	0
			3074	1939	543	571	21			
1	AC	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	AD	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	AE	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	AF	385	Total	C	N	O	S	0	0	0
			3061	1930	541	569	21			
1	AG	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	AH	384	Total	C	N	O	S	0	0	0
			3052	1925	539	567	21			
1	AI	366	Total	C	N	O	S	0	0	0
			2901	1828	511	541	21			
1	AJ	385	Total	C	N	O	S	0	0	0
			3061	1930	541	569	21			
1	AK	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	AL	384	Total	C	N	O	S	0	0	0
			3052	1925	539	567	21			
1	AM	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	AN	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	AO	366	Total	C	N	O	S	0	0	0
			2901	1828	511	541	21			
1	AP	381	Total	C	N	O	S	0	0	0
			3021	1903	536	561	21			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AQ	366	Total	C	N	O	S	0	0	0
			2901	1828	511	541	21			
1	AR	379	Total	C	N	O	S	0	0	0
			3005	1892	533	559	21			
1	BA	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BB	388	Total	C	N	O	S	0	0	0
			3080	1942	544	573	21			
1	BC	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BD	385	Total	C	N	O	S	0	0	0
			3061	1930	541	569	21			
1	BE	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BF	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	BG	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BH	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	BI	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BJ	385	Total	C	N	O	S	0	0	0
			3061	1930	541	569	21			
1	BK	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BL	381	Total	C	N	O	S	0	0	0
			3021	1903	536	561	21			
1	BM	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BN	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	BO	367	Total	C	N	O	S	0	0	0
			2910	1834	513	542	21			
1	BP	382	Total	C	N	O	S	0	0	0
			3032	1912	537	562	21			
1	BQ	366	Total	C	N	O	S	0	0	0
			2901	1828	511	541	21			
1	BR	381	Total	C	N	O	S	0	0	0
			3021	1903	536	561	21			

- Molecule 2 is GUANIDINO ACETATE (three-letter code: NMG) (formula: $C_3H_7N_3O_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	AA	1	Total	C	N	O	0	0
			8	3	3	2		
2	AB	1	Total	C	N	O	0	0
			8	3	3	2		
2	AC	1	Total	C	N	O	0	0
			8	3	3	2		
2	AD	1	Total	C	N	O	0	0
			8	3	3	2		
2	AE	1	Total	C	N	O	0	0
			8	3	3	2		
2	AF	1	Total	C	N	O	0	0
			8	3	3	2		
2	AG	1	Total	C	N	O	0	0
			8	3	3	2		
2	AH	1	Total	C	N	O	0	0
			8	3	3	2		
2	AI	1	Total	C	N	O	0	0
			8	3	3	2		
2	AJ	1	Total	C	N	O	0	0
			8	3	3	2		
2	AK	1	Total	C	N	O	0	0
			8	3	3	2		
2	AL	1	Total	C	N	O	0	0
			8	3	3	2		
2	AM	1	Total	C	N	O	0	0
			8	3	3	2		
2	AN	1	Total	C	N	O	0	0
			8	3	3	2		

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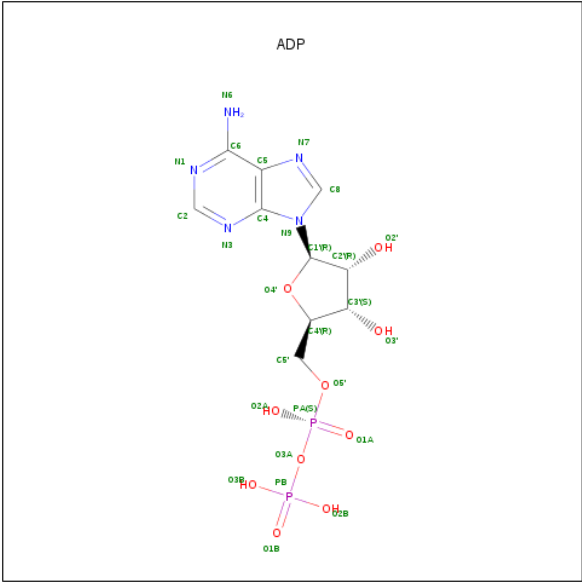
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	AO	1	Total 8	C 3	N 3	O 2	0	0
2	AP	1	Total 8	C 3	N 3	O 2	0	0
2	AQ	1	Total 8	C 3	N 3	O 2	0	0
2	AR	1	Total 8	C 3	N 3	O 2	0	0
2	BA	1	Total 8	C 3	N 3	O 2	0	0
2	BB	1	Total 8	C 3	N 3	O 2	0	0
2	BC	1	Total 8	C 3	N 3	O 2	0	0
2	BD	1	Total 8	C 3	N 3	O 2	0	0
2	BE	1	Total 8	C 3	N 3	O 2	0	0
2	BF	1	Total 8	C 3	N 3	O 2	0	0
2	BG	1	Total 8	C 3	N 3	O 2	0	0
2	BH	1	Total 8	C 3	N 3	O 2	0	0
2	BI	1	Total 8	C 3	N 3	O 2	0	0
2	BJ	1	Total 8	C 3	N 3	O 2	0	0
2	BK	1	Total 8	C 3	N 3	O 2	0	0
2	BL	1	Total 8	C 3	N 3	O 2	0	0
2	BM	1	Total 8	C 3	N 3	O 2	0	0
2	BN	1	Total 8	C 3	N 3	O 2	0	0
2	BO	1	Total 8	C 3	N 3	O 2	0	0
2	BP	1	Total 8	C 3	N 3	O 2	0	0
2	BQ	1	Total 8	C 3	N 3	O 2	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	BR	1	Total	C	N	O	0	0
			8	3	3	2		

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂).



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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	AK	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AL	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AM	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AN	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AO	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AP	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AQ	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	AR	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BA	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BB	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BC	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BD	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BE	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BF	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BG	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BH	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BI	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BJ	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BK	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BL	1	Total 27	C 10	N 5	O 10	P 2	0	0
3	BM	1	Total 27	C 10	N 5	O 10	P 2	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	BN	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	BO	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	BP	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	BQ	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
3	BR	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	AP	1	Total	Mg	0	0
			1	1		
4	BA	1	Total	Mg	0	0
			1	1		
4	AK	1	Total	Mg	0	0
			1	1		
4	AB	1	Total	Mg	0	0
			1	1		
4	BL	1	Total	Mg	0	0
			1	1		
4	BE	1	Total	Mg	0	0
			1	1		
4	AN	1	Total	Mg	0	0
			1	1		
4	BP	1	Total	Mg	0	0
			1	1		
4	BI	1	Total	Mg	0	0
			1	1		
4	BB	1	Total	Mg	0	0
			1	1		
4	AJ	1	Total	Mg	0	0
			1	1		
4	AE	1	Total	Mg	0	0
			1	1		
4	BM	1	Total	Mg	0	0
			1	1		
4	BF	1	Total	Mg	0	0
			1	1		

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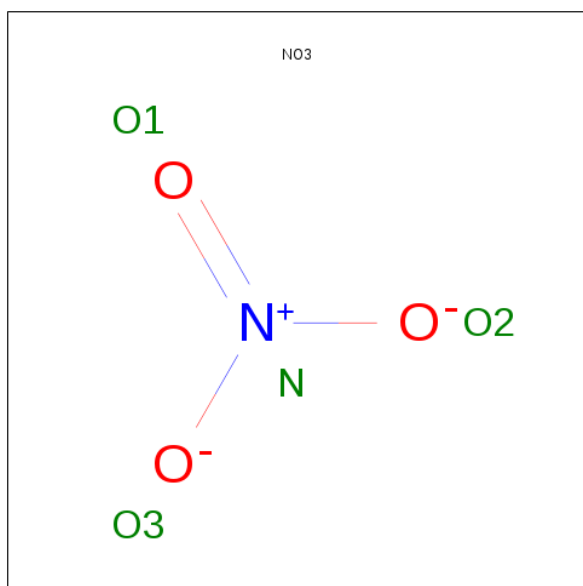
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	AA	1	Total 1	Mg 1	0	0
4	BQ	1	Total 1	Mg 1	0	0
4	BJ	1	Total 1	Mg 1	0	0
4	AR	1	Total 1	Mg 1	0	0
4	BC	1	Total 1	Mg 1	0	0
4	AM	1	Total 1	Mg 1	0	0
4	AD	1	Total 1	Mg 1	0	0
4	BN	1	Total 1	Mg 1	0	0
4	BG	1	Total 1	Mg 1	0	0
4	AI	1	Total 1	Mg 1	0	0
4	BR	1	Total 1	Mg 1	0	0
4	BK	1	Total 1	Mg 1	0	0
4	AL	1	Total 1	Mg 1	0	0
4	AG	1	Total 1	Mg 1	0	0
4	BO	1	Total 1	Mg 1	0	0
4	AQ	1	Total 1	Mg 1	0	0
4	AH	1	Total 1	Mg 1	0	0
4	AC	1	Total 1	Mg 1	0	0
4	BD	1	Total 1	Mg 1	0	0
4	AO	1	Total 1	Mg 1	0	0
4	AF	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	BH	1	Total	Mg	0	0
			1	1		

- Molecule 5 is NITRATE ION (three-letter code: NO3) (formula: NO₃).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	AA	1	Total	N	O	0	0
			4	1	3		
5	AB	1	Total	N	O	0	0
			4	1	3		
5	AC	1	Total	N	O	0	0
			4	1	3		
5	AD	1	Total	N	O	0	0
			4	1	3		
5	AE	1	Total	N	O	0	0
			4	1	3		
5	AF	1	Total	N	O	0	0
			4	1	3		
5	AG	1	Total	N	O	0	0
			4	1	3		
5	AH	1	Total	N	O	0	0
			4	1	3		
5	AI	1	Total	N	O	0	0
			4	1	3		
5	AJ	1	Total	N	O	0	0
			4	1	3		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	AK	1	Total	N	O	0	0
			4	1	3		
5	AL	1	Total	N	O	0	0
			4	1	3		
5	AM	1	Total	N	O	0	0
			4	1	3		
5	AN	1	Total	N	O	0	0
			4	1	3		
5	AO	1	Total	N	O	0	0
			4	1	3		
5	AP	1	Total	N	O	0	0
			4	1	3		
5	AQ	1	Total	N	O	0	0
			4	1	3		
5	AR	1	Total	N	O	0	0
			4	1	3		
5	BA	1	Total	N	O	0	0
			4	1	3		
5	BB	1	Total	N	O	0	0
			4	1	3		
5	BC	1	Total	N	O	0	0
			4	1	3		
5	BD	1	Total	N	O	0	0
			4	1	3		
5	BE	1	Total	N	O	0	0
			4	1	3		
5	BF	1	Total	N	O	0	0
			4	1	3		
5	BG	1	Total	N	O	0	0
			4	1	3		
5	BH	1	Total	N	O	0	0
			4	1	3		
5	BI	1	Total	N	O	0	0
			4	1	3		
5	BJ	1	Total	N	O	0	0
			4	1	3		
5	BK	1	Total	N	O	0	0
			4	1	3		
5	BL	1	Total	N	O	0	0
			4	1	3		
5	BM	1	Total	N	O	0	0
			4	1	3		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	BN	1	Total	N	O	0	0
			4	1	3		
5	BO	1	Total	N	O	0	0
			4	1	3		
5	BP	1	Total	N	O	0	0
			4	1	3		
5	BQ	1	Total	N	O	0	0
			4	1	3		
5	BR	1	Total	N	O	0	0
			4	1	3		

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	AA	106	Total	O	0	0
			106	106		
6	AB	138	Total	O	0	0
			138	138		
6	AC	116	Total	O	0	0
			116	116		
6	AD	149	Total	O	0	0
			149	149		
6	AE	154	Total	O	0	0
			154	154		
6	AF	117	Total	O	0	0
			117	117		
6	AG	131	Total	O	0	0
			131	131		
6	AH	88	Total	O	0	0
			88	88		
6	AI	111	Total	O	0	0
			111	111		
6	AJ	137	Total	O	0	0
			137	137		
6	AK	125	Total	O	0	0
			125	125		
6	AL	156	Total	O	0	0
			156	156		
6	AM	149	Total	O	0	0
			149	149		
6	AN	116	Total	O	0	0
			116	116		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	AO	113	Total O 113 113	0	0
6	AP	172	Total O 172 172	0	0
6	AQ	167	Total O 167 167	0	0
6	AR	166	Total O 166 166	0	0
6	BA	99	Total O 99 99	0	0
6	BB	130	Total O 130 130	0	0
6	BC	155	Total O 155 155	0	0
6	BD	110	Total O 110 110	0	0
6	BE	117	Total O 117 117	0	0
6	BF	144	Total O 144 144	0	0
6	BG	131	Total O 131 131	0	0
6	BH	145	Total O 145 145	0	0
6	BI	118	Total O 118 118	0	0
6	BJ	145	Total O 145 145	0	0
6	BK	127	Total O 127 127	0	0
6	BL	90	Total O 90 90	0	0
6	BM	141	Total O 141 141	0	0
6	BN	116	Total O 116 116	0	0
6	BO	173	Total O 173 173	0	0
6	BP	151	Total O 151 151	0	0
6	BQ	105	Total O 105 105	0	0

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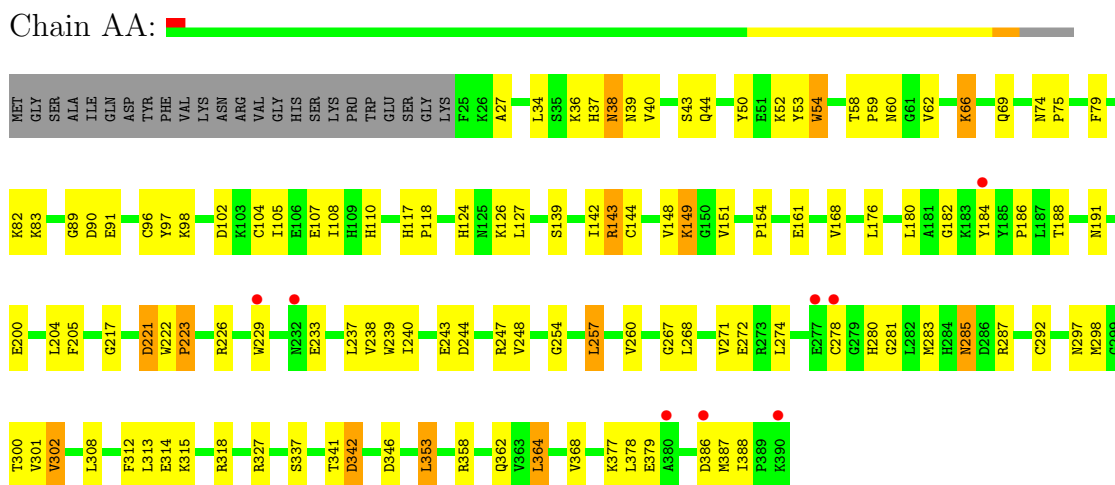
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	BR	166	Total 166	O 166	0	0

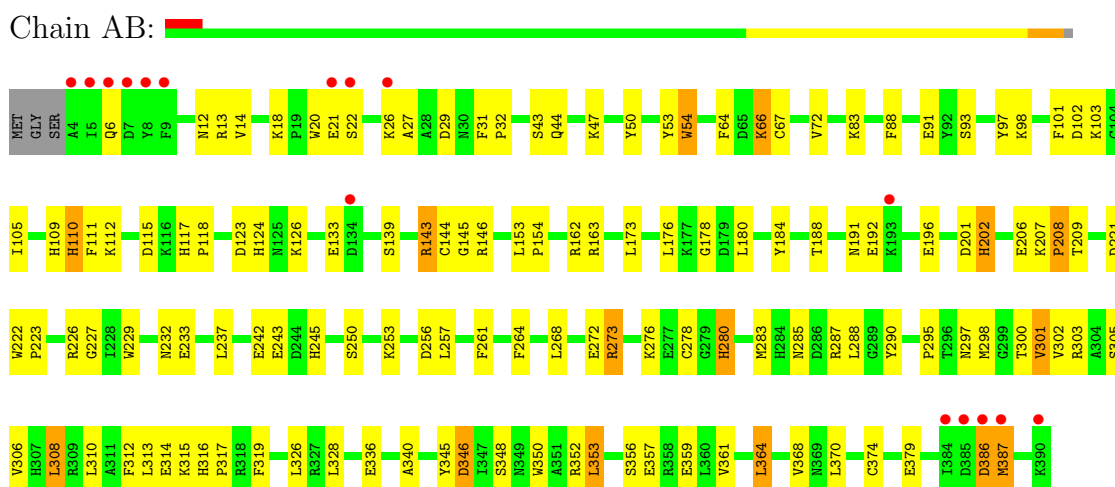
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

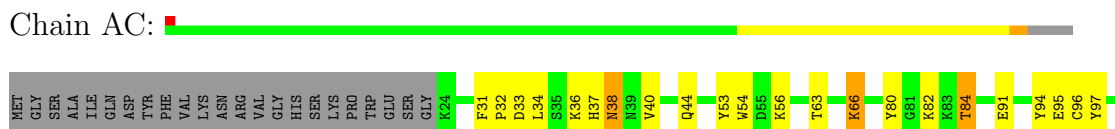
- Molecule 1: Glycocyamine kinase beta chain

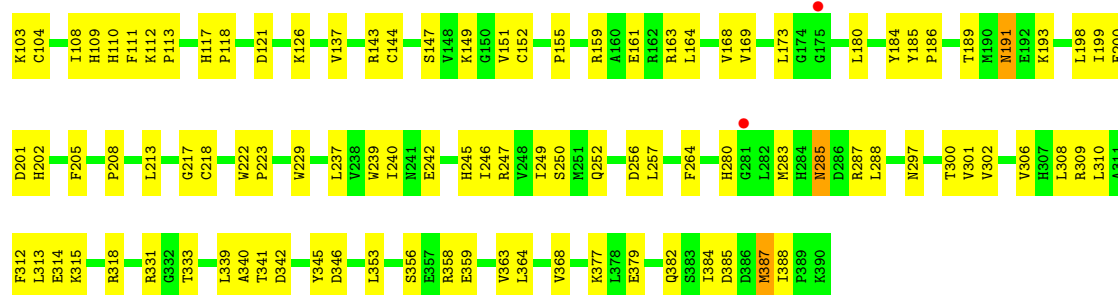


- Molecule 1: Glycocyamine kinase beta chain



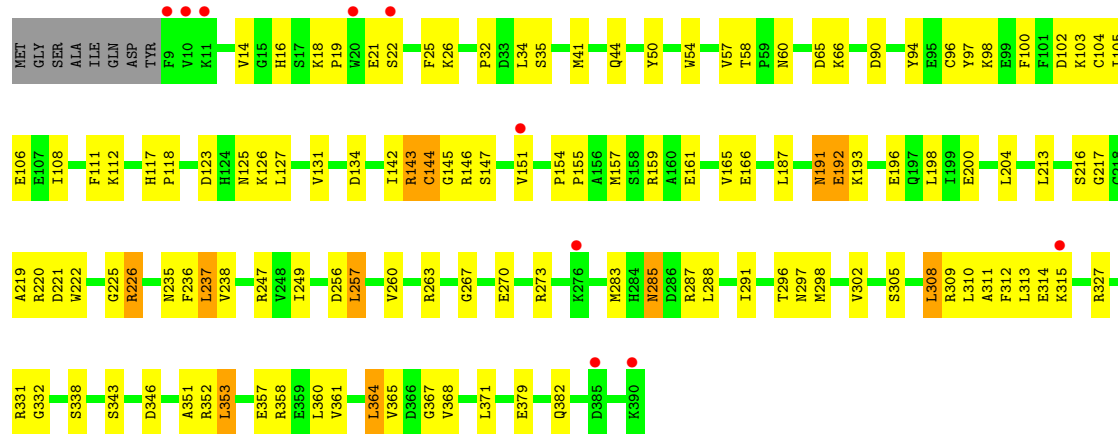
- Molecule 1: Glycocyamine kinase beta chain





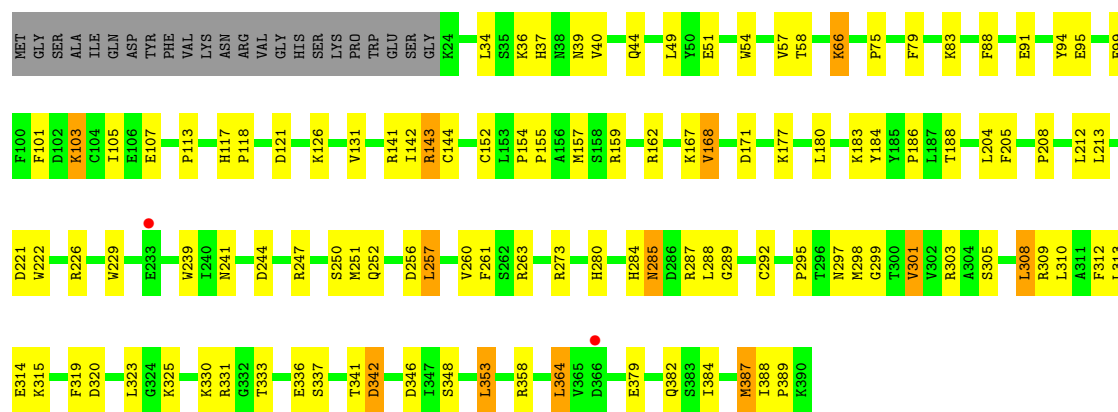
• Molecule 1: Glycocyamine kinase beta chain

Chain AD:



• Molecule 1: Glycocyamine kinase beta chain

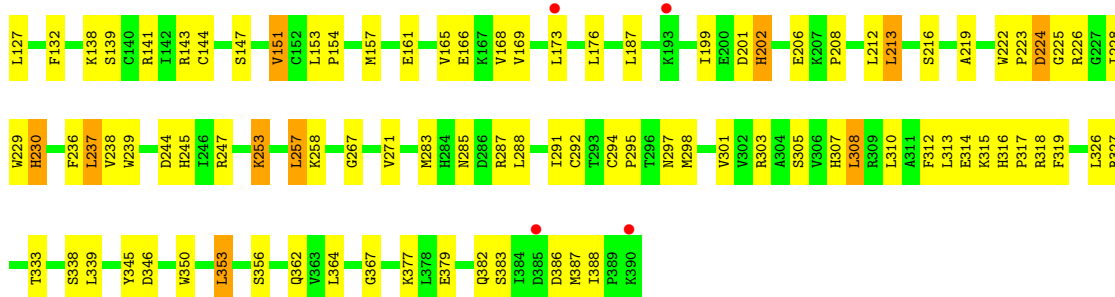
Chain AE:



• Molecule 1: Glycocyamine kinase beta chain

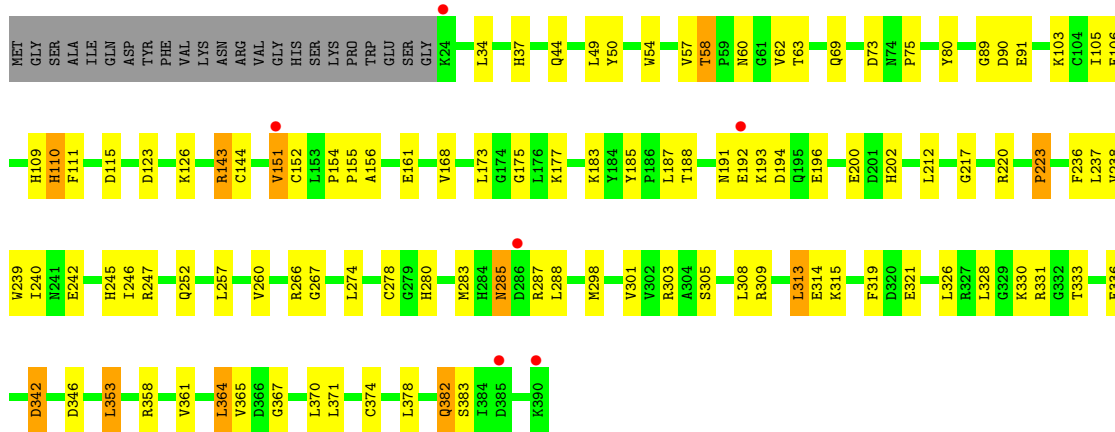
Chain AF:





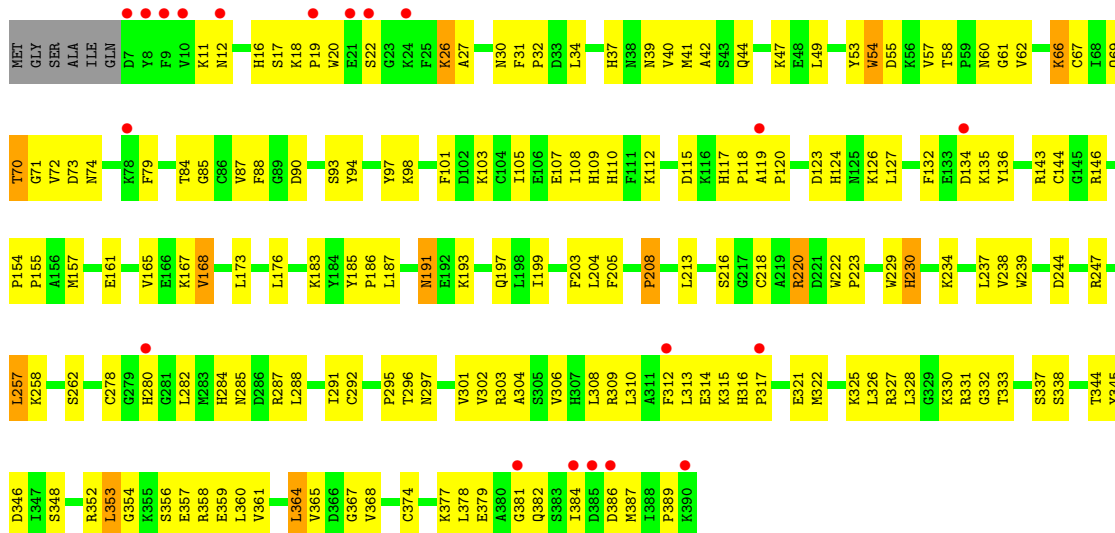
• Molecule 1: Glycocyamine kinase beta chain

Chain AG:



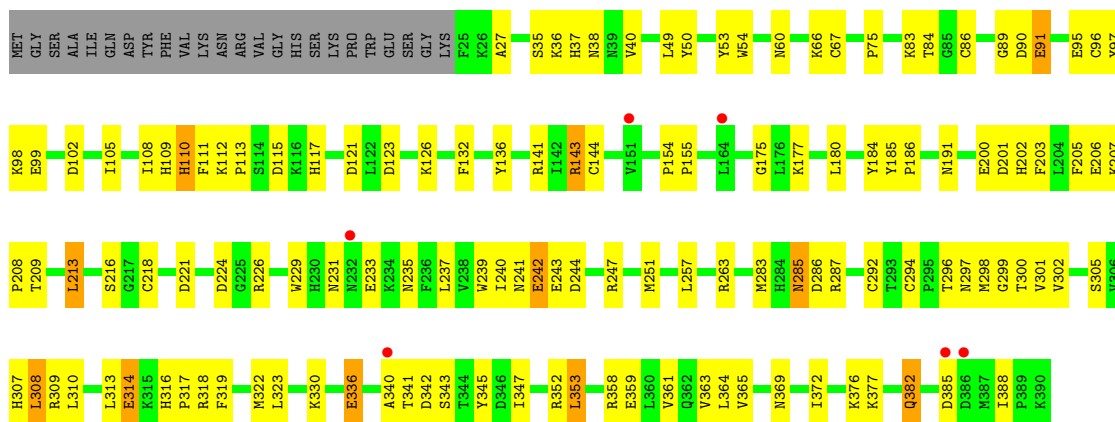
• Molecule 1: Glycocyamine kinase beta chain

Chain AH:



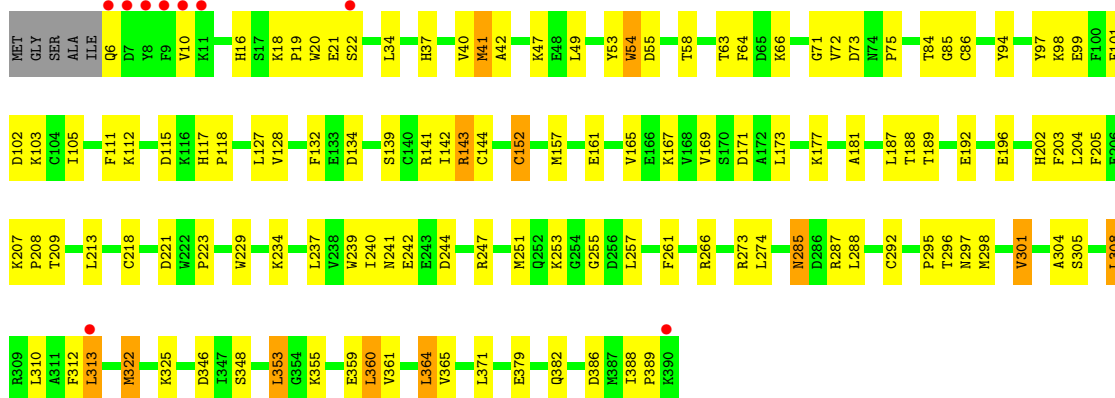
• Molecule 1: Glycocyamine kinase beta chain

Chain AI:



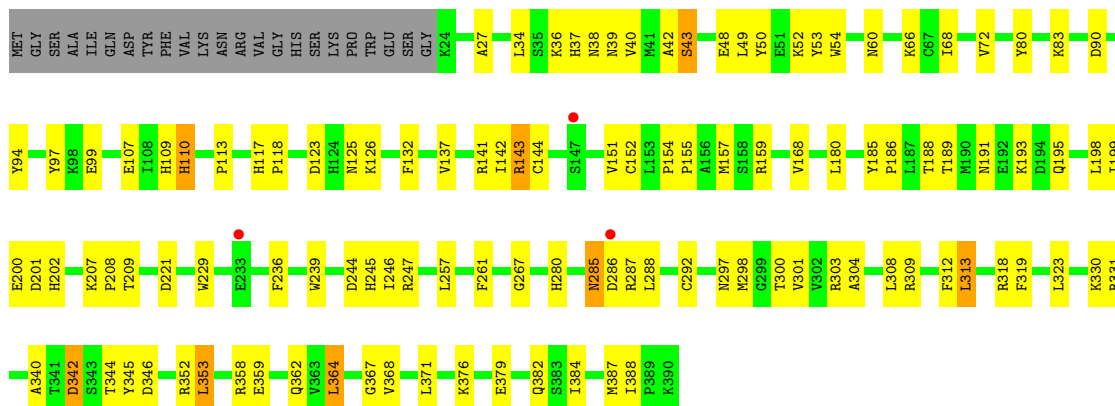
• Molecule 1: Glycocyamine kinase beta chain

Chain AJ:



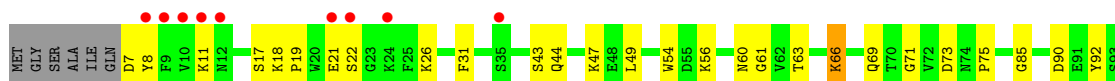
• Molecule 1: Glycocyamine kinase beta chain

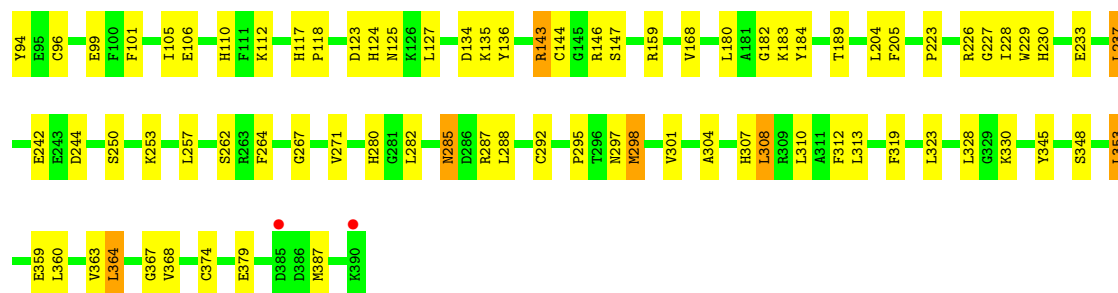
Chain AK:



• Molecule 1: Glycocyamine kinase beta chain

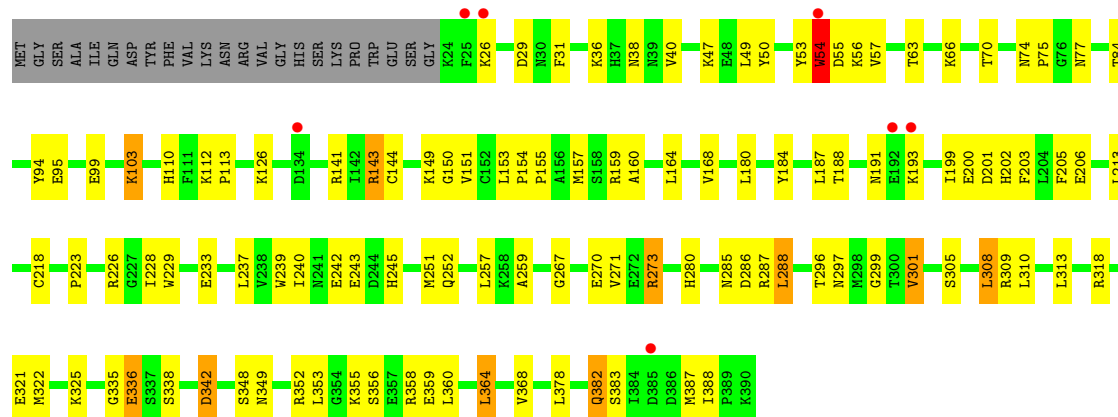
Chain AL:





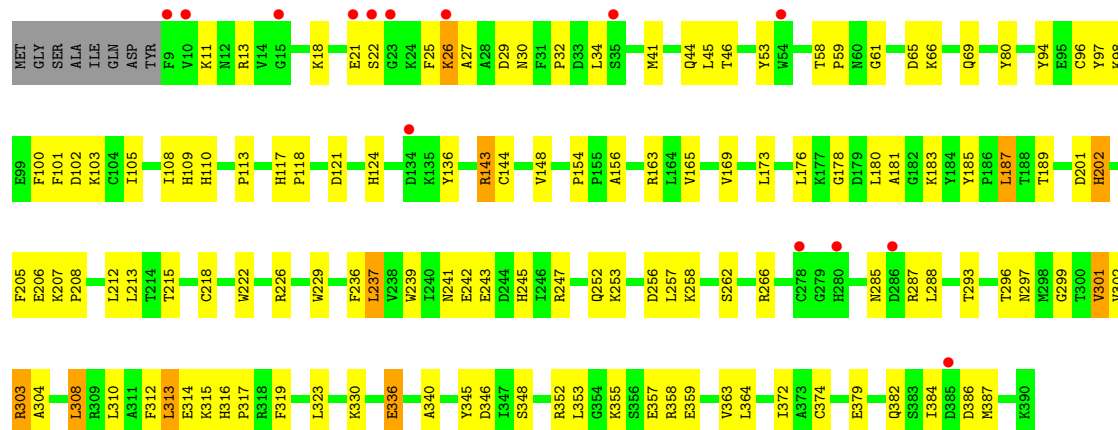
• Molecule 1: Glycocyamine kinase beta chain

Chain AM:



• Molecule 1: Glycocyamine kinase beta chain

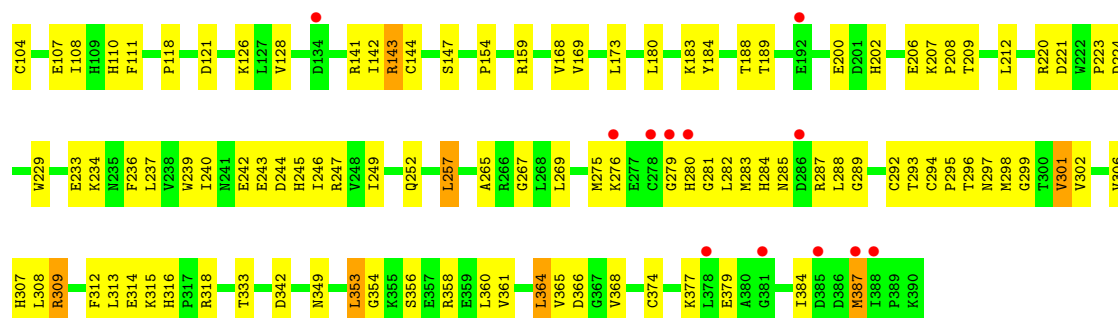
Chain AN:



• Molecule 1: Glycocyamine kinase beta chain

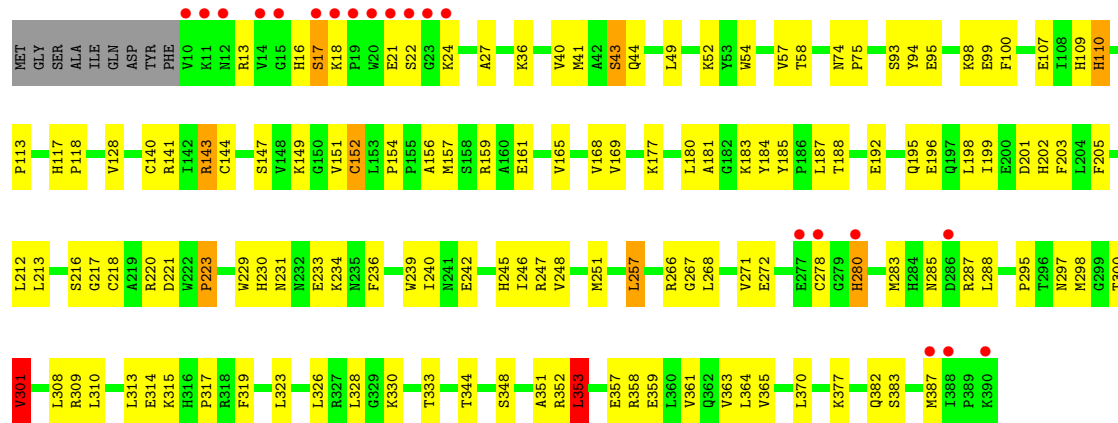
Chain AO:





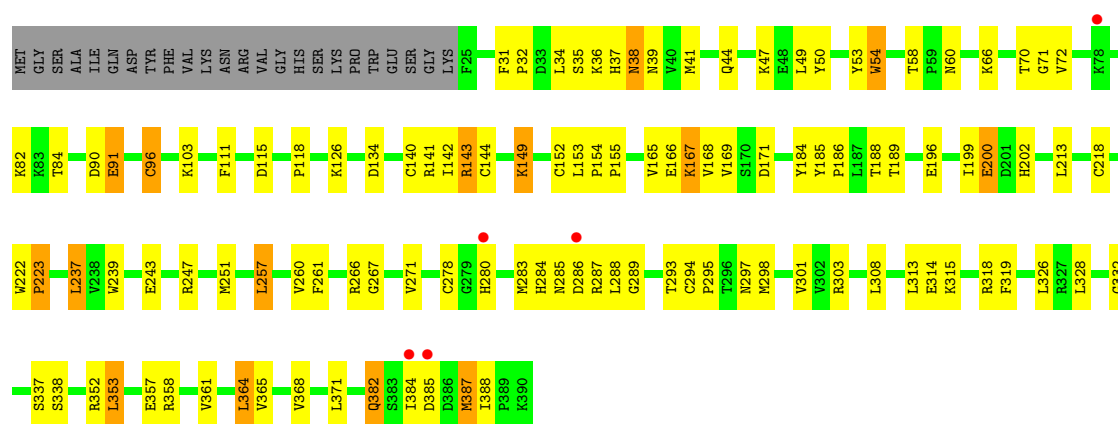
• Molecule 1: Glycocyamine kinase beta chain

Chain AP:



• Molecule 1: Glycocyamine kinase beta chain

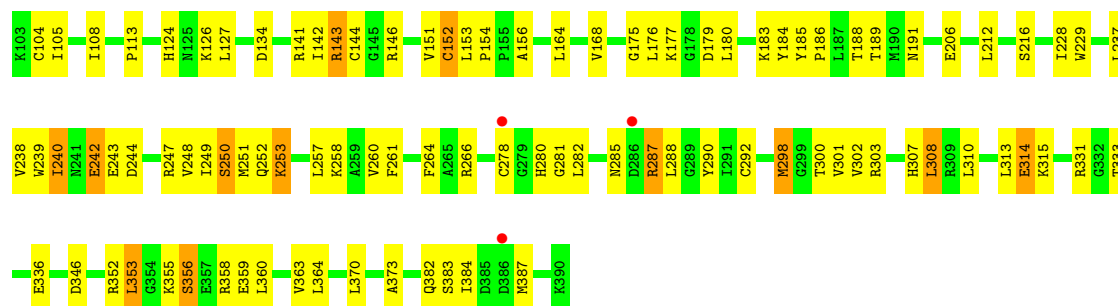
Chain AQ:



• Molecule 1: Glycocyamine kinase beta chain

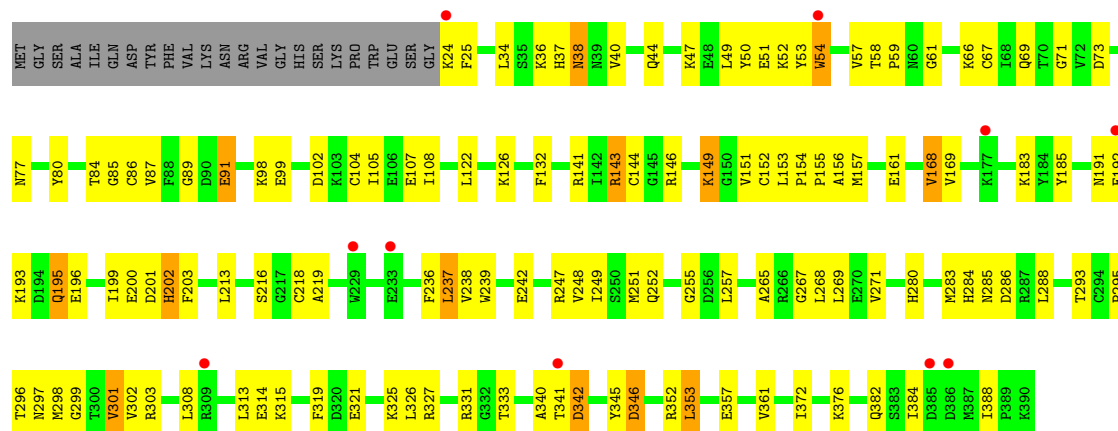
Chain AR:





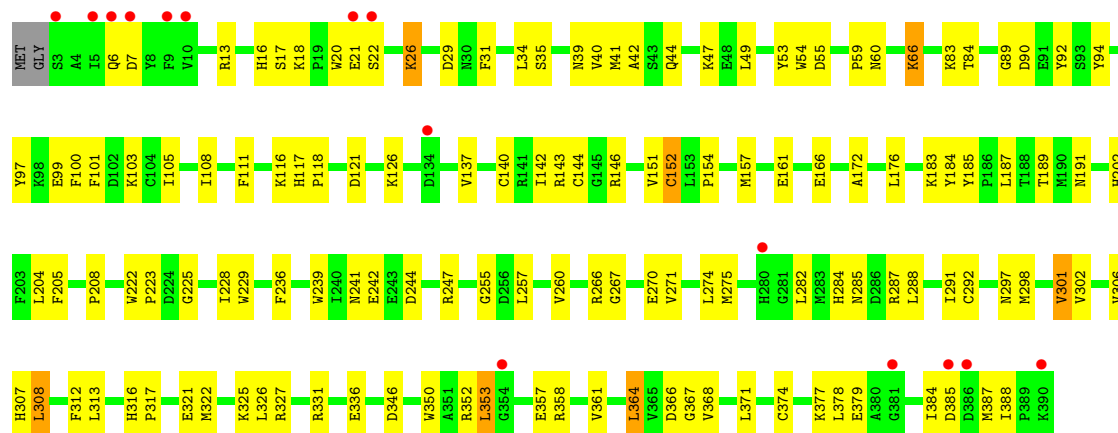
• Molecule 1: Glycocyamine kinase beta chain

Chain BA:



• Molecule 1: Glycocyamine kinase beta chain

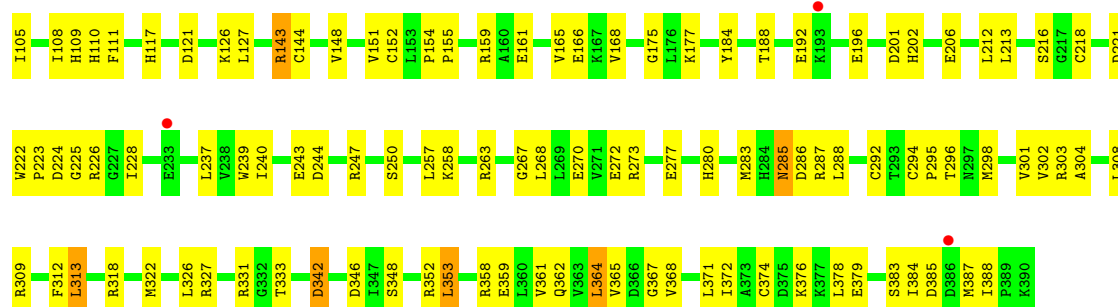
Chain BB:



• Molecule 1: Glycocyamine kinase beta chain

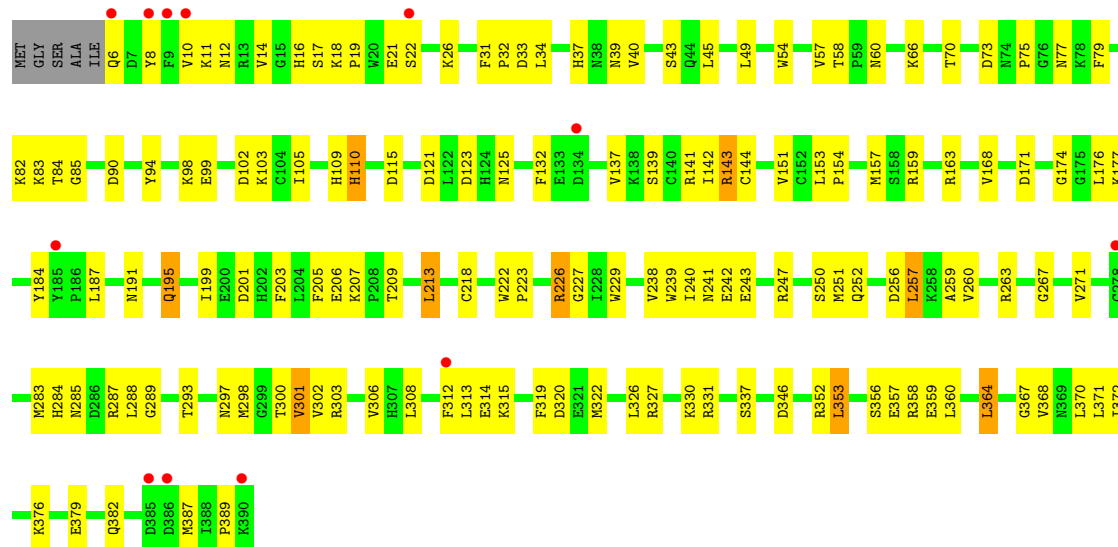
Chain BC:

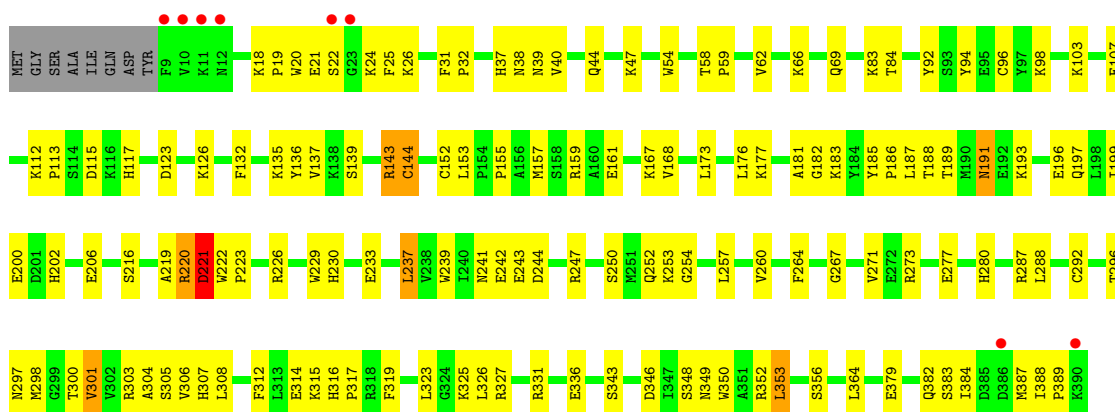




• Molecule 1: Glycocyamine kinase beta chain

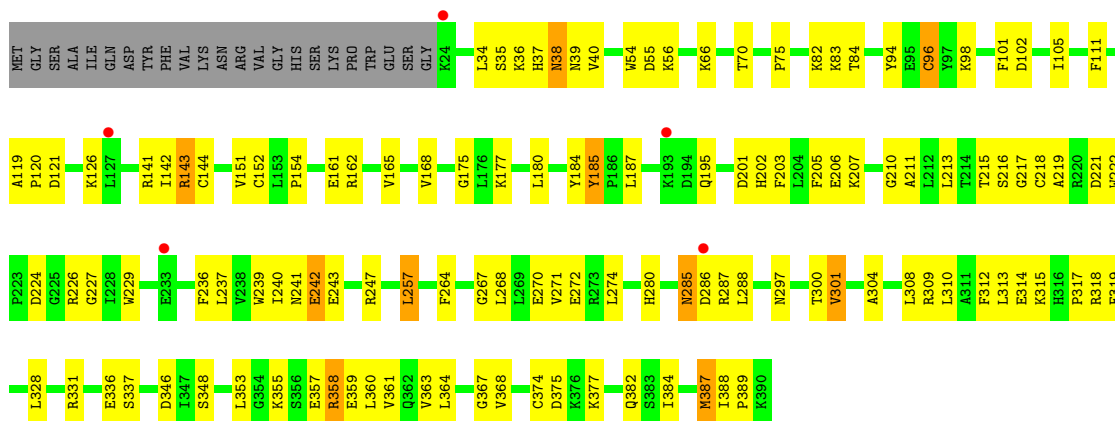
Chain BD:





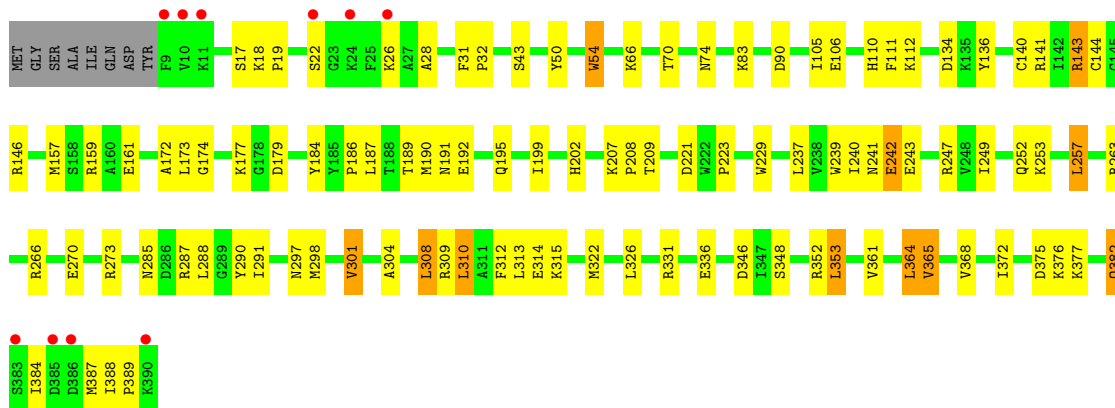
• Molecule 1: Glycocyamine kinase beta chain

Chain BG:



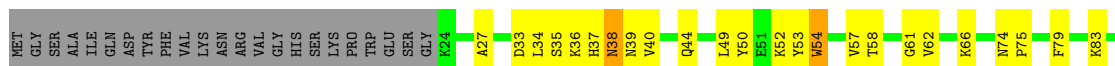
• Molecule 1: Glycocyamine kinase beta chain

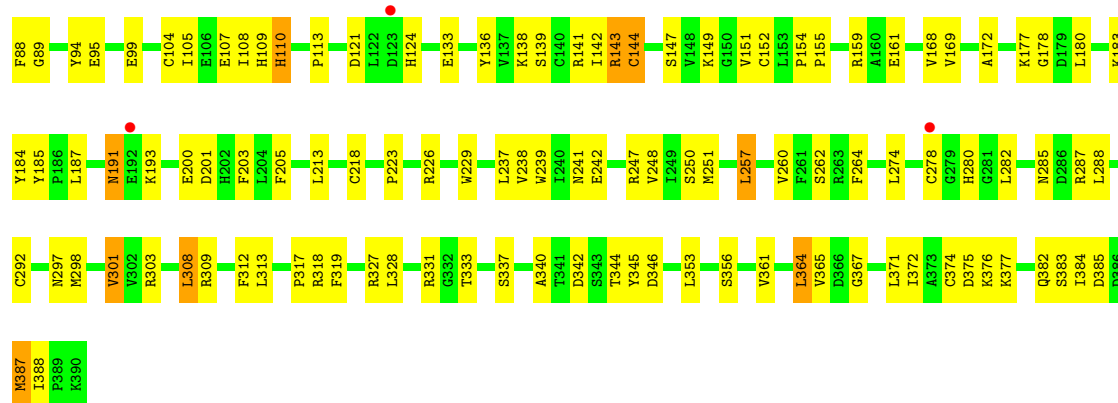
Chain BH:



• Molecule 1: Glycocyamine kinase beta chain

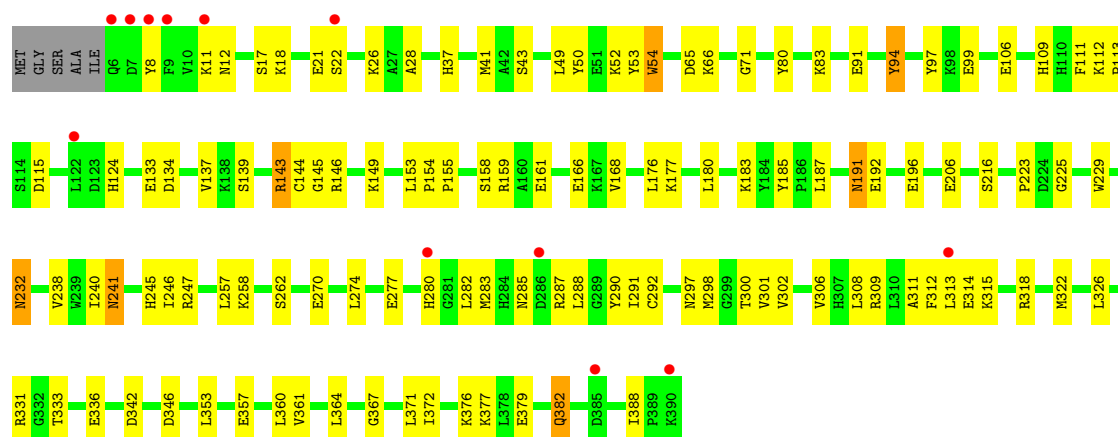
Chain BI:





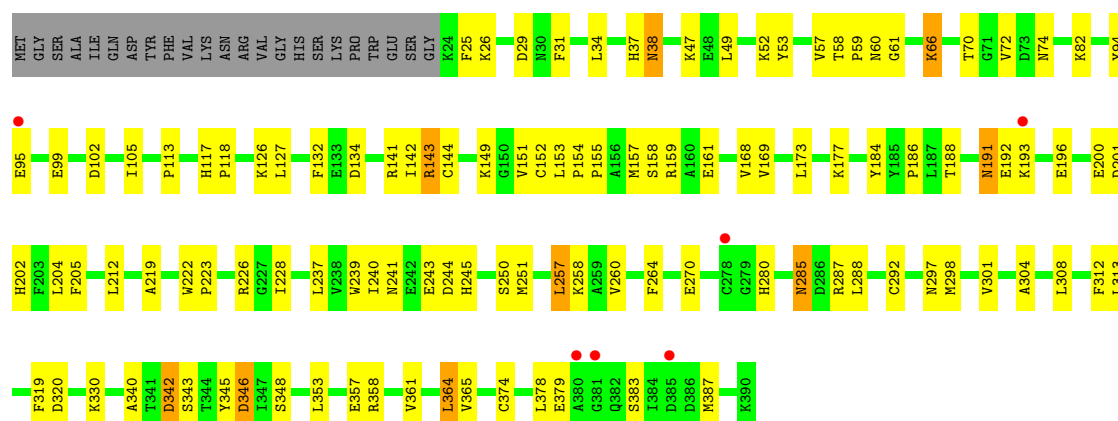
• Molecule 1: Glycocyamine kinase beta chain

Chain BJ:



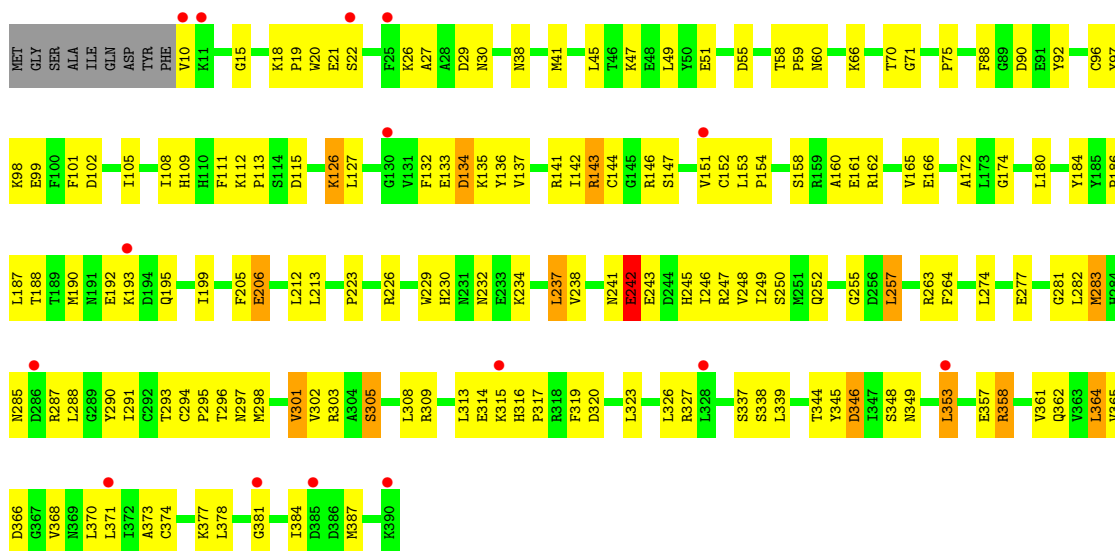
• Molecule 1: Glycocyamine kinase beta chain

Chain BK:



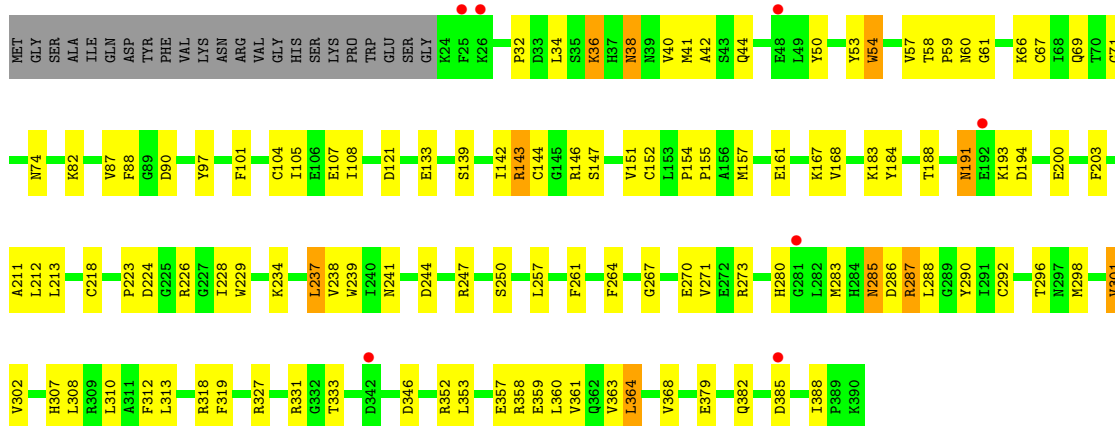
• Molecule 1: Glycocyamine kinase beta chain

Chain BL:



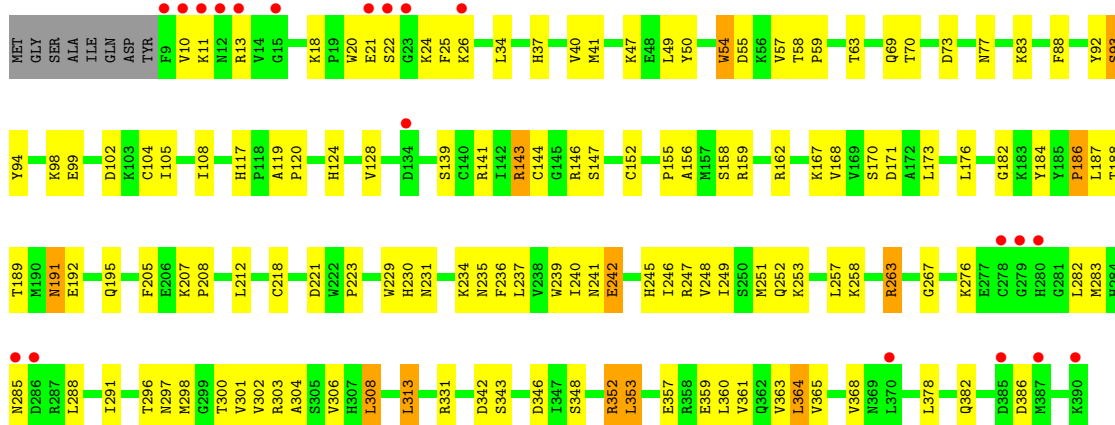
• Molecule 1: Glycocyamine kinase beta chain

Chain BM:



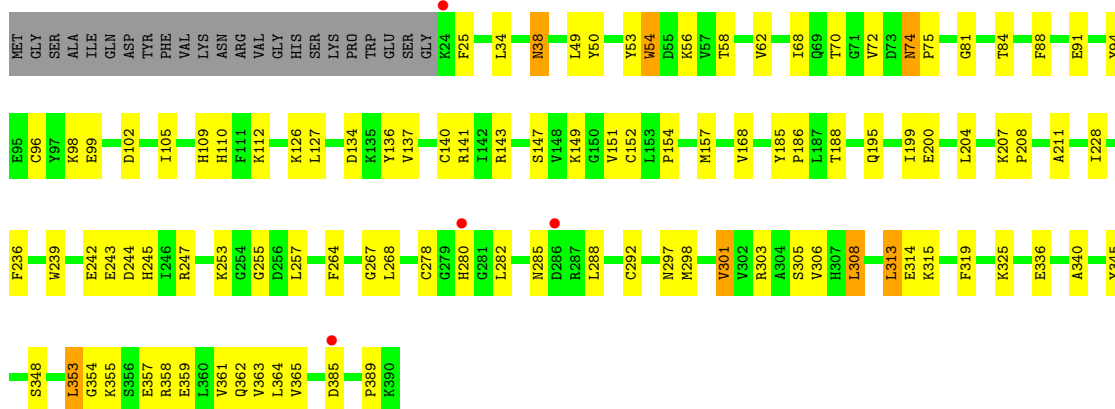
• Molecule 1: Glycocyamine kinase beta chain

Chain BN:



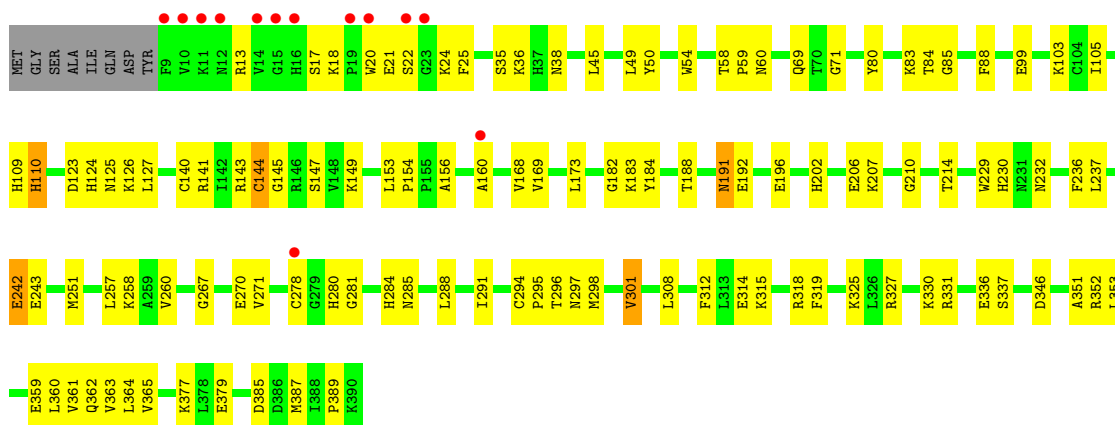
• Molecule 1: Glycocyamine kinase beta chain

Chain BO:



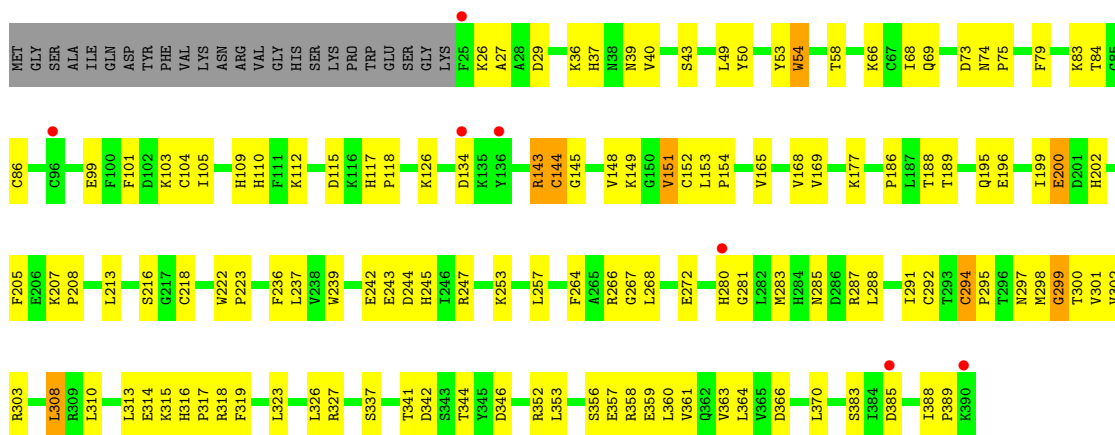
- Molecule 1: Glycocyamine kinase beta chain

Chain BP: 



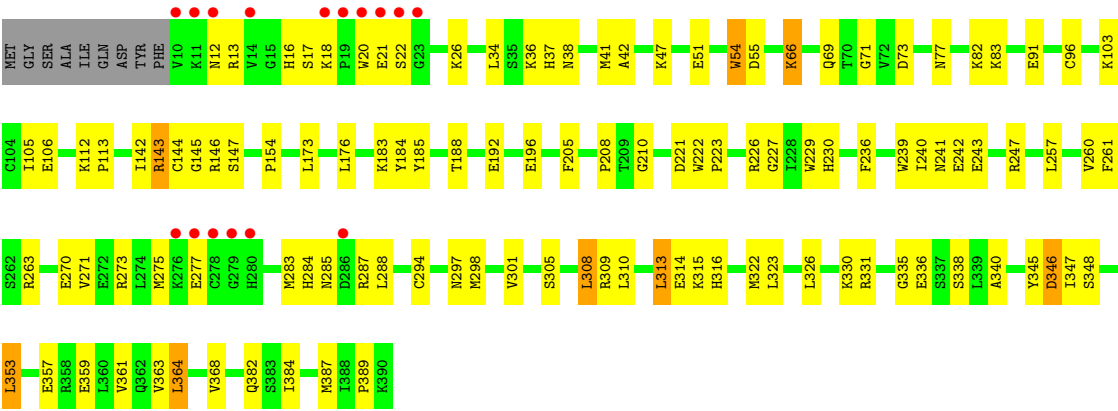
- Molecule 1: Glycocyamine kinase beta chain

Chain BQ:



- Molecule 1: Glycocyamine kinase beta chain

Chain BR:



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	243.11Å 114.27Å 259.90Å 90.00° 90.25° 90.00°	Depositor
Resolution (Å)	20.00 – 2.30 33.05 – 2.30	Depositor EDS
% Data completeness (in resolution range)	(Not available) (20.00-2.30) 92.1 (33.05-2.30)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.08 (at 2.29Å)	Xtriage
Refinement program	phenix	Depositor
R, R_{free}	0.197 , 0.263 0.230 , 0.288	Depositor DCC
R_{free} test set	29369 reflections (5.01%)	DCC
Wilson B-factor (Å ²)	23.1	Xtriage
Anisotropy	0.184	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 22.7	EDS
Estimated twinning fraction	0.428 for h,-k,-l	Xtriage
L-test for twinning	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	38 of 610844 reflections (0.006%)	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	113311	wwPDB-VP
Average B, all atoms (Å ²)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 38.54 % of the origin peak, indicating pseudo translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo translational symmetry is equal to 3.6323e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: NMG, MG, ADP, NO3

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	AA	0.34	0/2963	0.51	0/3986
1	AB	0.37	0/3142	0.55	0/4227
1	AC	0.34	0/2972	0.53	0/3997
1	AD	0.38	0/3099	0.55	0/4168
1	AE	0.35	0/2972	0.52	0/3997
1	AF	0.37	0/3129	0.56	0/4209
1	AG	0.35	0/2972	0.53	1/3997 (0.0%)
1	AH	0.35	0/3120	0.53	0/4197
1	AI	0.34	0/2963	0.52	0/3986
1	AJ	0.37	0/3129	0.53	0/4209
1	AK	0.35	0/2972	0.52	0/3997
1	AL	0.38	0/3120	0.55	0/4197
1	AM	0.35	0/2972	0.54	0/3997
1	AN	0.37	0/3099	0.54	0/4168
1	AO	0.34	0/2963	0.53	0/3986
1	AP	0.39	0/3087	0.55	1/4152 (0.0%)
1	AQ	0.35	0/2963	0.53	0/3986
1	AR	0.38	0/3071	0.55	0/4131
1	BA	0.33	0/2972	0.51	0/3997
1	BB	0.36	0/3148	0.55	1/4235 (0.0%)
1	BC	0.34	0/2972	0.53	0/3997
1	BD	0.36	0/3129	0.54	0/4209
1	BE	0.34	0/2972	0.52	0/3997
1	BF	0.38	0/3099	0.56	0/4168
1	BG	0.35	0/2972	0.52	0/3997
1	BH	0.38	0/3099	0.55	0/4168
1	BI	0.36	0/2972	0.54	0/3997
1	BJ	0.37	0/3129	0.55	0/4209
1	BK	0.35	0/2972	0.54	0/3997
1	BL	0.36	0/3087	0.54	0/4152
1	BM	0.34	0/2972	0.53	0/3997
1	BN	0.35	0/3099	0.54	0/4168

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	BO	0.36	0/2972	0.54	0/3997
1	BP	0.37	0/3099	0.55	0/4168
1	BQ	0.34	0/2963	0.53	0/3986
1	BR	0.39	0/3087	0.57	1/4152 (0.0%)
All	All	0.36	0/109423	0.54	4/147178 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	BB	308	LEU	CA-CB-CG	5.41	127.75	115.30
1	AP	353	LEU	CA-CB-CG	5.32	127.53	115.30
1	AG	364	LEU	CA-CB-CG	5.26	127.40	115.30
1	BR	353	LEU	CA-CB-CG	5.04	126.90	115.30

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	2901	0	2866	94	0
1	AB	3074	0	3034	107	0
1	AC	2910	0	2879	88	0
1	AD	3032	0	2997	81	0
1	AE	2910	0	2879	83	0
1	AF	3061	0	3018	96	0
1	AG	2910	0	2879	78	0
1	AH	3052	0	3010	141	0
1	AI	2901	0	2866	89	0
1	AJ	3061	0	3018	85	0
1	AK	2910	0	2879	89	0
1	AL	3052	0	3010	79	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AM	2910	0	2879	82	0
1	AN	3032	0	2997	96	0
1	AO	2901	0	2866	93	0
1	AP	3021	0	2988	108	0
1	AQ	2901	0	2866	85	0
1	AR	3005	0	2966	97	0
1	BA	2910	0	2879	93	0
1	BB	3080	0	3039	98	0
1	BC	2910	0	2879	90	0
1	BD	3061	0	3018	115	0
1	BE	2910	0	2879	102	0
1	BF	3032	0	2997	115	0
1	BG	2910	0	2879	90	0
1	BH	3032	0	2997	81	0
1	BI	2910	0	2879	107	0
1	BJ	3061	0	3018	78	0
1	BK	2910	0	2879	92	0
1	BL	3021	0	2988	119	0
1	BM	2910	0	2879	83	0
1	BN	3032	0	2997	101	0
1	BO	2910	0	2879	71	0
1	BP	3032	0	2997	77	0
1	BQ	2901	0	2866	95	0
1	BR	3021	0	2988	85	0
2	AA	8	0	5	0	0
2	AB	8	0	5	2	0
2	AC	8	0	5	0	0
2	AD	8	0	5	0	0
2	AE	8	0	5	1	0
2	AF	8	0	5	0	0
2	AG	8	0	5	2	0
2	AH	8	0	5	0	0
2	AI	8	0	5	1	0
2	AJ	8	0	5	0	0
2	AK	8	0	5	0	0
2	AL	8	0	5	0	0
2	AM	8	0	5	1	0
2	AN	8	0	5	1	0
2	AO	8	0	5	1	0
2	AP	8	0	5	0	0
2	AQ	8	0	5	0	0
2	AR	8	0	5	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	BA	8	0	5	0	0
2	BB	8	0	5	1	0
2	BC	8	0	5	0	0
2	BD	8	0	5	1	0
2	BE	8	0	5	0	0
2	BF	8	0	5	0	0
2	BG	8	0	5	0	0
2	BH	8	0	5	1	0
2	BI	8	0	5	0	0
2	BJ	8	0	5	1	0
2	BK	8	0	5	0	0
2	BL	8	0	5	0	0
2	BM	8	0	5	0	0
2	BN	8	0	5	0	0
2	BO	8	0	5	2	0
2	BP	8	0	5	0	0
2	BQ	8	0	5	0	0
2	BR	8	0	5	1	0
3	AA	27	0	12	1	0
3	AB	27	0	12	2	0
3	AC	27	0	12	1	0
3	AD	27	0	12	0	0
3	AE	27	0	12	4	0
3	AF	27	0	12	7	0
3	AG	27	0	12	2	0
3	AH	27	0	12	3	0
3	AI	27	0	12	3	0
3	AJ	27	0	12	3	0
3	AK	27	0	12	5	0
3	AL	27	0	12	1	0
3	AM	27	0	12	2	0
3	AN	27	0	12	1	0
3	AO	27	0	12	4	0
3	AP	27	0	12	5	0
3	AQ	27	0	12	3	0
3	AR	27	0	12	2	0
3	BA	27	0	12	3	0
3	BB	27	0	12	4	0
3	BC	27	0	12	1	0
3	BD	27	0	12	3	0
3	BE	27	0	12	4	0
3	BF	27	0	12	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	BG	27	0	12	3	0
3	BH	27	0	12	2	0
3	BI	27	0	12	2	0
3	BJ	27	0	12	2	0
3	BK	27	0	12	1	0
3	BL	27	0	12	2	0
3	BM	27	0	12	4	0
3	BN	27	0	12	3	0
3	BO	27	0	12	2	0
3	BP	27	0	12	2	0
3	BQ	27	0	12	3	0
3	BR	27	0	12	3	0
4	AA	1	0	0	0	0
4	AB	1	0	0	0	0
4	AC	1	0	0	0	0
4	AD	1	0	0	0	0
4	AE	1	0	0	0	0
4	AF	1	0	0	0	0
4	AG	1	0	0	0	0
4	AH	1	0	0	0	0
4	AI	1	0	0	0	0
4	AJ	1	0	0	0	0
4	AK	1	0	0	0	0
4	AL	1	0	0	0	0
4	AM	1	0	0	0	0
4	AN	1	0	0	0	0
4	AO	1	0	0	0	0
4	AP	1	0	0	0	0
4	AQ	1	0	0	0	0
4	AR	1	0	0	0	0
4	BA	1	0	0	0	0
4	BB	1	0	0	0	0
4	BC	1	0	0	0	0
4	BD	1	0	0	0	0
4	BE	1	0	0	0	0
4	BF	1	0	0	0	0
4	BG	1	0	0	0	0
4	BH	1	0	0	0	0
4	BI	1	0	0	0	0
4	BJ	1	0	0	0	0
4	BK	1	0	0	0	0
4	BL	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	BM	1	0	0	0	0
4	BN	1	0	0	0	0
4	BO	1	0	0	0	0
4	BP	1	0	0	0	0
4	BQ	1	0	0	0	0
4	BR	1	0	0	0	0
5	AA	4	0	0	0	0
5	AB	4	0	0	0	0
5	AC	4	0	0	0	0
5	AD	4	0	0	1	0
5	AE	4	0	0	0	0
5	AF	4	0	0	0	0
5	AG	4	0	0	0	0
5	AH	4	0	0	0	0
5	AI	4	0	0	0	0
5	AJ	4	0	0	0	0
5	AK	4	0	0	0	0
5	AL	4	0	0	0	0
5	AM	4	0	0	0	0
5	AN	4	0	0	0	0
5	AO	4	0	0	1	0
5	AP	4	0	0	0	0
5	AQ	4	0	0	0	0
5	AR	4	0	0	1	0
5	BA	4	0	0	0	0
5	BB	4	0	0	1	0
5	BC	4	0	0	0	0
5	BD	4	0	0	1	0
5	BE	4	0	0	0	0
5	BF	4	0	0	0	0
5	BG	4	0	0	0	0
5	BH	4	0	0	1	0
5	BI	4	0	0	0	0
5	BJ	4	0	0	0	0
5	BK	4	0	0	1	0
5	BL	4	0	0	0	0
5	BM	4	0	0	0	0
5	BN	4	0	0	0	0
5	BO	4	0	0	0	0
5	BP	4	0	0	0	0
5	BQ	4	0	0	0	0
5	BR	4	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AA	106	0	0	6	0
6	AB	138	0	0	12	0
6	AC	116	0	0	5	0
6	AD	149	0	0	3	0
6	AE	154	0	0	6	0
6	AF	117	0	0	9	0
6	AG	131	0	0	4	0
6	AH	88	0	0	5	0
6	AI	111	0	0	3	0
6	AJ	137	0	0	5	0
6	AK	125	0	0	8	0
6	AL	156	0	0	5	0
6	AM	149	0	0	8	0
6	AN	116	0	0	7	0
6	AO	113	0	0	7	0
6	AP	172	0	0	14	0
6	AQ	167	0	0	10	0
6	AR	166	0	0	5	0
6	BA	99	0	0	2	0
6	BB	130	0	0	2	0
6	BC	155	0	0	4	0
6	BD	110	0	0	12	0
6	BE	117	0	0	7	0
6	BF	144	0	0	6	0
6	BG	131	0	0	5	0
6	BH	145	0	0	13	0
6	BI	118	0	0	9	0
6	BJ	145	0	0	7	0
6	BK	127	0	0	4	0
6	BL	90	0	0	6	0
6	BM	141	0	0	9	0
6	BN	116	0	0	6	0
6	BO	173	0	0	6	0
6	BP	151	0	0	9	0
6	BQ	105	0	0	13	0
6	BR	166	0	0	10	0
All	All	113311	0	106446	3296	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 15.

All (3296) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AK:126:LYS:HB2	1:AK:358:ARG:HD2	1.38	1.04
1:AD:285:ASN:HB2	1:AD:291:ILE:HD11	1.40	1.02
1:BC:126:LYS:HB2	1:BC:358:ARG:HD2	1.39	1.02
1:BB:285:ASN:HD22	1:BB:288:LEU:H	1.06	1.00
1:AL:285:ASN:HD22	1:AL:288:LEU:H	1.03	0.99
1:AO:285:ASN:HD22	1:AO:288:LEU:H	1.10	0.99
1:AF:377:LYS:HG3	1:AF:387:MET:HE1	1.45	0.98
1:BK:191:ASN:HD21	1:BK:193:LYS:HB2	1.29	0.97
1:AA:297:ASN:HB3	1:AA:301:VAL:HG13	1.45	0.95
1:BD:285:ASN:HD22	1:BD:288:LEU:H	1.02	0.94
1:AL:285:ASN:ND2	1:AL:288:LEU:H	1.66	0.93
1:AQ:285:ASN:HD22	1:AQ:288:LEU:H	1.17	0.92
1:AH:285:ASN:HD22	1:AH:288:LEU:N	1.68	0.92
1:BJ:285:ASN:HD22	1:BJ:288:LEU:H	1.11	0.92
1:BF:305:SER:HB3	1:BF:348:SER:HB3	1.52	0.91
1:AF:295:PRO:O	1:AF:298:MET:HE2	1.69	0.91
1:AP:239:TRP:HB2	1:AP:247:ARG:HB2	1.53	0.91
1:BN:285:ASN:HD22	1:BN:288:LEU:H	1.14	0.90
1:AD:308:LEU:HD13	1:AD:310:LEU:HD11	1.53	0.89
1:AJ:239:TRP:HB2	1:AJ:247:ARG:HB2	1.54	0.89
3:AI:402:ADP:H5'2	3:AI:402:ADP:O2B	1.72	0.88
1:AH:285:ASN:ND2	1:AH:288:LEU:H	1.73	0.87
1:AM:126:LYS:HB2	1:AM:358:ARG:HD2	1.57	0.87
1:AA:36:LYS:HG3	6:AA:630:HOH:O	1.74	0.87
1:BH:285:ASN:HD22	1:BH:288:LEU:H	1.22	0.87
1:BL:134:ASP:HB2	6:BL:520:HOH:O	1.74	0.86
1:BA:191:ASN:HD21	1:BA:193:LYS:HB2	1.41	0.86
1:BI:285:ASN:HD22	1:BI:288:LEU:H	1.24	0.86
1:AP:188:THR:HG22	1:AP:223:PRO:HG2	1.57	0.86
1:AH:285:ASN:HD22	1:AH:288:LEU:H	0.89	0.85
1:AP:357:GLU:O	1:AP:361:VAL:HG23	1.77	0.85
1:BQ:285:ASN:HD22	1:BQ:288:LEU:H	1.25	0.85
1:AG:89:GLY:HA2	1:AG:155:PRO:HG2	1.56	0.84
1:BL:188:THR:HG22	1:BL:223:PRO:HG2	1.57	0.84
1:BD:285:ASN:HD22	1:BD:288:LEU:N	1.75	0.84
1:BF:253:LYS:HE2	6:BF:550:HOH:O	1.78	0.84
1:AR:314:GLU:HG2	1:AR:315:LYS:HD2	1.58	0.83
1:AP:278:CYS:HB3	1:AP:280:HIS:CE1	2.13	0.83
1:BN:285:ASN:ND2	1:BN:288:LEU:HG	1.93	0.83
1:AF:285:ASN:HD22	1:AF:288:LEU:H	1.24	0.83
1:AG:192:GLU:O	1:AG:196:GLU:HG3	1.79	0.83
1:BG:285:ASN:ND2	1:BG:287:ARG:H	1.76	0.82
1:BM:239:TRP:HB2	1:BM:247:ARG:HB2	1.59	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AE:297:ASN:HB3	1:AE:301:VAL:HG13	1.59	0.82
1:AR:144:CYS:HB3	1:AR:302:VAL:HG22	1.60	0.82
1:BL:298:MET:HE3	1:BL:353:LEU:HD12	1.62	0.81
1:BO:239:TRP:HB2	1:BO:247:ARG:HB2	1.63	0.81
1:AA:285:ASN:ND2	1:AA:287:ARG:H	1.78	0.81
1:BF:159:ARG:HG3	1:BF:221:ASP:OD2	1.79	0.81
1:BH:285:ASN:HD22	1:BH:288:LEU:N	1.78	0.81
1:BP:377:LYS:HG3	1:BP:387:MET:HE1	1.60	0.81
1:AG:50:TYR:O	1:AG:54:TRP:HB3	1.81	0.81
1:AA:40:VAL:HG13	1:AA:107:GLU:OE1	1.81	0.80
1:BB:208:PRO:HG3	1:BB:222:TRP:CE2	2.15	0.80
1:BL:314:GLU:HB2	1:BL:345:TYR:OH	1.80	0.80
1:BG:101:PHE:O	1:BG:105:ILE:HG13	1.81	0.80
1:AP:18:LYS:O	1:AP:21:GLU:HG2	1.81	0.80
1:AI:285:ASN:HD22	1:AI:287:ARG:H	1.25	0.80
1:BG:213:LEU:HD12	1:BG:218:CYS:HB2	1.62	0.80
1:AL:244:ASP:OD1	1:AL:292:CYS:HB3	1.82	0.79
1:AK:239:TRP:HB2	1:AK:247:ARG:HB2	1.64	0.79
1:BE:168:VAL:HG13	1:BE:280:HIS:CE1	2.18	0.79
1:AQ:188:THR:HG22	1:AQ:223:PRO:HG2	1.65	0.79
1:BL:285:ASN:HD22	1:BL:288:LEU:H	1.31	0.78
1:BM:285:ASN:HD22	1:BM:286:ASP:N	1.80	0.78
1:BN:364:LEU:O	1:BN:368:VAL:HG23	1.82	0.78
1:AQ:313:LEU:HD22	1:AQ:319:PHE:CD1	2.18	0.78
1:AE:126:LYS:HB2	1:AE:358:ARG:HD2	1.64	0.78
1:AO:239:TRP:HB2	1:AO:247:ARG:HB2	1.66	0.78
1:BQ:359:GLU:O	1:BQ:363:VAL:HG23	1.83	0.78
1:BL:297:ASN:HB3	1:BL:301:VAL:HG13	1.64	0.78
1:BA:298:MET:HE3	1:BA:353:LEU:HD12	1.64	0.77
1:BQ:196:GLU:O	1:BQ:200:GLU:HB2	1.84	0.77
1:BG:331:ARG:HB2	1:BG:346:ASP:HB3	1.67	0.77
1:BM:285:ASN:ND2	1:BM:287:ARG:H	1.81	0.77
1:AM:94:TYR:HD1	1:AM:95:GLU:HG2	1.50	0.77
1:BJ:113:PRO:HA	1:BJ:287:ARG:NH2	1.99	0.77
1:AK:151:VAL:HG12	1:AK:152:CYS:O	1.84	0.77
1:AN:143:ARG:HG2	1:AN:144:CYS:N	2.00	0.77
1:BP:123:ASP:OD1	1:BP:125:ASN:HB2	1.84	0.77
1:AN:98:LYS:HE3	1:AN:102:ASP:OD2	1.83	0.77
1:BG:285:ASN:HD22	1:BG:287:ARG:H	1.31	0.77
1:AP:188:THR:HG23	6:AP:628:HOH:O	1.83	0.77
1:AJ:49:LEU:HD21	1:AJ:99:GLU:HG2	1.66	0.76
1:AN:359:GLU:O	1:AN:363:VAL:HG23	1.86	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BC:44:GLN:OE1	1:BC:103:LYS:HE3	1.85	0.76
1:BL:285:ASN:HB2	1:BL:291:ILE:HD11	1.66	0.76
1:BK:49:LEU:HD21	1:BK:99:GLU:HG2	1.65	0.76
1:BM:191:ASN:ND2	1:BM:193:LYS:H	1.83	0.76
1:BI:40:VAL:HG13	1:BI:107:GLU:OE1	1.86	0.76
1:AK:352:ARG:HH11	1:AK:352:ARG:HG2	1.51	0.76
1:BA:341:THR:O	1:BA:342:ASP:HB2	1.86	0.76
1:AN:208:PRO:HG3	1:AN:222:TRP:CE2	2.21	0.76
1:BL:58:THR:HG22	1:BL:96:CYS:SG	2.26	0.75
1:AO:126:LYS:HB2	1:AO:358:ARG:HD2	1.68	0.75
1:BB:285:ASN:ND2	1:BB:288:LEU:H	1.83	0.75
1:BL:247:ARG:HD2	6:BL:556:HOH:O	1.85	0.75
1:BR:188:THR:HG22	1:BR:223:PRO:HG2	1.68	0.75
1:BM:188:THR:HG23	6:BM:542:HOH:O	1.86	0.75
1:AG:285:ASN:HD22	1:AG:288:LEU:H	1.34	0.75
1:AD:302:VAL:HG21	1:AD:357:GLU:HG3	1.67	0.75
1:AN:18:LYS:HB2	1:AN:21:GLU:HG2	1.69	0.75
1:BA:321:GLU:O	1:BA:325:LYS:HG3	1.87	0.75
1:BN:302:VAL:O	1:BN:352:ARG:HD3	1.86	0.75
1:AM:50:TYR:O	1:AM:54:TRP:HB3	1.87	0.74
1:BP:188:THR:HG23	6:BP:537:HOH:O	1.86	0.74
1:AF:237:LEU:HD12	1:AF:237:LEU:N	2.02	0.74
1:AK:352:ARG:CG	1:AK:352:ARG:HH11	2.00	0.74
1:AE:239:TRP:HH2	3:AE:402:ADP:H5'2	1.51	0.74
1:AQ:285:ASN:ND2	1:AQ:287:ARG:H	1.85	0.74
1:BA:191:ASN:ND2	1:BA:193:LYS:HB2	2.02	0.74
1:AL:189:THR:HB	1:AR:36:LYS:HG2	1.68	0.74
1:BI:187:LEU:HD23	1:BI:223:PRO:HB3	1.69	0.74
1:BO:305:SER:HB3	1:BO:348:SER:HB3	1.68	0.74
1:BO:152:CYS:SG	1:BP:17:SER:HB3	2.28	0.74
1:AN:108:ILE:HD13	1:AN:296:THR:HG22	1.70	0.73
1:AP:359:GLU:O	1:AP:363:VAL:HG23	1.87	0.73
1:BF:188:THR:HG23	6:BF:544:HOH:O	1.87	0.73
1:AA:39:ASN:HA	1:AA:82:LYS:HE3	1.70	0.73
1:AF:208:PRO:HG3	1:AF:222:TRP:CE2	2.23	0.73
1:BR:357:GLU:O	1:BR:361:VAL:HG23	1.88	0.73
1:AC:285:ASN:ND2	1:AC:287:ARG:H	1.86	0.73
1:BF:18:LYS:HD3	1:BF:20:TRP:CZ2	2.23	0.73
1:BC:239:TRP:HB2	1:BC:247:ARG:HB2	1.71	0.73
1:BK:38:ASN:HD21	1:BK:82:LYS:HG3	1.54	0.73
1:BI:317:PRO:HB2	1:BQ:253:LYS:HD2	1.71	0.73
1:BL:384:ILE:HA	1:BL:387:MET:HG3	1.69	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BO:314:GLU:HG2	1:BO:315:LYS:HD2	1.70	0.73
1:BB:239:TRP:HB2	1:BB:247:ARG:HB2	1.71	0.73
1:BJ:285:ASN:HD22	1:BJ:288:LEU:N	1.87	0.73
1:AA:176:LEU:HD12	1:AA:229:TRP:CH2	2.24	0.72
1:AA:142:ILE:HG13	1:AA:260:VAL:HG12	1.70	0.72
1:AJ:297:ASN:HB3	1:AJ:301:VAL:HG13	1.69	0.72
1:AJ:189:THR:O	1:AP:36:LYS:HG2	1.89	0.72
1:BI:36:LYS:HG3	6:BI:505:HOH:O	1.89	0.72
1:BQ:126:LYS:HB2	1:BQ:358:ARG:HD2	1.70	0.72
1:BQ:188:THR:HG22	1:BQ:223:PRO:HG2	1.72	0.72
1:BR:308:LEU:HD13	1:BR:310:LEU:HD11	1.71	0.72
1:BJ:143:ARG:HG2	1:BJ:144:CYS:N	2.04	0.72
1:BP:285:ASN:HB2	1:BP:291:ILE:HD11	1.71	0.72
1:AP:213:LEU:HD12	1:AP:218:CYS:HB2	1.72	0.72
1:BG:285:ASN:HD22	1:BG:287:ARG:N	1.87	0.72
1:AM:285:ASN:ND2	1:AM:287:ARG:H	1.88	0.72
1:BH:297:ASN:HB3	1:BH:301:VAL:HG13	1.72	0.72
1:BL:166:GLU:HG3	1:BL:184:TYR:OH	1.89	0.72
1:BN:57:VAL:HG22	1:BN:63:THR:HG22	1.70	0.72
1:BO:325:LYS:HD3	1:BO:389:PRO:HB2	1.70	0.72
1:BC:108:ILE:HG21	1:BC:296:THR:HG22	1.70	0.72
1:BF:137:VAL:HG13	1:BF:306:VAL:HB	1.70	0.72
1:AH:88:PHE:HD2	1:AH:93:SER:HB2	1.54	0.71
1:AL:308:LEU:HD13	1:AL:310:LEU:HD11	1.72	0.71
1:BM:50:TYR:O	1:BM:54:TRP:HB3	1.89	0.71
1:AC:191:ASN:ND2	1:AC:193:LYS:H	1.87	0.71
1:BP:202:HIS:HB3	3:BP:402:ADP:H1'	1.71	0.71
1:AQ:168:VAL:HG13	1:AQ:280:HIS:CE1	2.25	0.71
1:AF:326:LEU:HD13	1:AF:367:GLY:HA2	1.72	0.71
1:AE:142:ILE:HD12	1:AE:261:PHE:HA	1.72	0.71
1:AH:313:LEU:HD12	1:AH:374:CYS:HB2	1.73	0.71
1:BO:278:CYS:HB3	1:BO:280:HIS:CE1	2.26	0.71
1:AO:285:ASN:HD22	1:AO:288:LEU:N	1.87	0.71
1:AA:312:PHE:CZ	1:AA:379:GLU:HG3	2.26	0.71
1:AA:34:LEU:HA	1:AA:37:HIS:ND1	2.06	0.71
1:AC:318:ARG:HD3	1:AC:388:ILE:HD13	1.71	0.71
1:BE:140:CYS:HB2	1:BE:260:VAL:HG21	1.71	0.71
1:BE:239:TRP:HB2	1:BE:247:ARG:HB2	1.72	0.71
1:BQ:143:ARG:HG2	1:BQ:144:CYS:N	2.04	0.71
1:AM:285:ASN:HD22	1:AM:288:LEU:H	1.38	0.70
1:AP:140:CYS:HB3	1:AP:257:LEU:HD23	1.72	0.70
1:BE:346:ASP:HB2	6:BE:596:HOH:O	1.90	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BF:253:LYS:HE3	6:BF:503:HOH:O	1.90	0.70
1:AF:239:TRP:HB2	1:AF:247:ARG:HB2	1.72	0.70
1:AJ:188:THR:HG22	1:AJ:223:PRO:HG2	1.73	0.70
1:BI:201:ASP:HB3	1:BI:203:PHE:CE2	2.25	0.70
1:BL:313:LEU:HD23	1:BL:313:LEU:O	1.91	0.70
1:AI:285:ASN:ND2	1:AI:287:ARG:H	1.89	0.70
1:AK:66:LYS:HD3	1:AK:66:LYS:O	1.91	0.70
1:BO:168:VAL:HG13	1:BO:280:HIS:CE1	2.26	0.70
1:AG:126:LYS:HB2	1:AG:358:ARG:HD2	1.73	0.70
1:AH:304:ALA:O	1:AH:348:SER:HB2	1.90	0.70
1:AP:143:ARG:HG2	1:AP:144:CYS:N	2.05	0.70
1:BR:41:MET:HE2	1:BR:71:GLY:HA3	1.72	0.70
1:AM:143:ARG:HG2	1:AM:144:CYS:N	2.06	0.70
1:BC:309:ARG:NH1	1:BC:342:ASP:OD1	2.23	0.70
1:BC:313:LEU:CD1	1:BC:374:CYS:HB3	2.22	0.70
1:BH:372:ILE:HG22	1:BH:376:LYS:HE2	1.74	0.70
1:AG:202:HIS:HB3	3:AG:402:ADP:H1'	1.74	0.70
3:AM:402:ADP:O2B	3:AM:402:ADP:H5'1	1.91	0.70
1:AQ:303:ARG:NH2	3:AQ:402:ADP:O2A	2.23	0.70
1:BJ:292:CYS:HB2	1:BJ:297:ASN:O	1.92	0.70
1:AE:336:GLU:OE2	2:AE:401:NMG:NE	2.23	0.70
1:AI:98:LYS:HE3	1:AI:102:ASP:OD2	1.92	0.70
1:AF:187:LEU:HD23	1:AF:223:PRO:HB3	1.71	0.69
1:BN:297:ASN:HB3	1:BN:301:VAL:HG13	1.72	0.69
1:AK:331:ARG:HB2	1:AK:346:ASP:HB3	1.74	0.69
1:BJ:28:ALA:HB2	6:BJ:591:HOH:O	1.92	0.69
1:AD:94:TYR:OH	1:AD:98:LYS:HE3	1.92	0.69
1:AM:286:ASP:HB2	6:AM:545:HOH:O	1.92	0.69
1:AN:94:TYR:CE1	1:AN:288:LEU:HD11	2.28	0.69
1:AK:60:ASN:HB2	1:AK:90:ASP:OD2	1.92	0.69
1:AM:336:GLU:HB2	3:AM:402:ADP:O1A	1.92	0.69
1:AQ:278:CYS:HB3	1:AQ:280:HIS:CE1	2.27	0.69
1:BK:188:THR:HG22	1:BK:223:PRO:HG2	1.73	0.69
1:BH:143:ARG:HG2	1:BH:144:CYS:N	2.08	0.69
1:BI:385:ASP:HB2	1:BQ:134:ASP:OD2	1.92	0.69
1:AA:149:LYS:HB3	1:AA:281:GLY:O	1.93	0.69
1:BL:60:ASN:HD22	1:BL:90:ASP:HB2	1.58	0.69
1:AQ:126:LYS:HB2	1:AQ:358:ARG:HD2	1.73	0.69
1:BH:352:ARG:CG	1:BH:352:ARG:HH11	2.06	0.69
1:BP:143:ARG:HG2	1:BP:144:CYS:N	2.07	0.69
1:BD:8:TYR:HD2	1:BD:11:LYS:HZ3	1.39	0.69
1:AF:8:TYR:HD2	1:AF:11:LYS:HZ3	1.40	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AH:314:GLU:HG2	6:AH:519:HOH:O	1.93	0.68
1:AP:233:GLU:HB2	6:AP:609:HOH:O	1.91	0.68
1:BC:143:ARG:HD3	1:BC:303:ARG:HB3	1.75	0.68
1:BH:134:ASP:HB2	6:BH:632:HOH:O	1.93	0.68
1:AH:302:VAL:HG21	1:AH:357:GLU:HG3	1.75	0.68
1:AI:318:ARG:HD3	1:AI:388:ILE:HD13	1.74	0.68
1:AN:310:LEU:HD22	1:AN:313:LEU:HB3	1.75	0.68
3:AP:402:ADP:O2B	3:AP:402:ADP:H5'1	1.92	0.68
1:BF:155:PRO:HB3	1:BF:216:SER:O	1.94	0.68
1:BL:162:ARG:HD3	1:BL:226:ARG:HD2	1.74	0.68
1:BQ:236:PHE:CE1	1:BQ:267:GLY:HA3	2.29	0.68
1:AC:186:PRO:HG2	1:AC:189:THR:OG1	1.93	0.68
1:AQ:213:LEU:HD12	1:AQ:218:CYS:HB2	1.73	0.68
1:BO:91:GLU:OE2	1:BO:149:LYS:HE2	1.93	0.68
1:AB:154:PRO:HG2	1:AB:243:GLU:O	1.93	0.68
1:AG:151:VAL:HG22	1:AG:161:GLU:HG2	1.75	0.68
1:AM:285:ASN:HD21	1:AM:287:ARG:HB2	1.58	0.68
1:AQ:143:ARG:HG3	6:AQ:501:HOH:O	1.92	0.68
1:BO:50:TYR:O	1:BO:54:TRP:HB3	1.94	0.68
1:AB:278:CYS:HB3	1:AB:280:HIS:CE1	2.29	0.68
1:AJ:204:LEU:HD12	1:AJ:205:PHE:H	1.57	0.68
1:AF:285:ASN:HB2	1:AF:291:ILE:HD11	1.76	0.68
1:AG:37:HIS:CD2	1:AG:75:PRO:HA	2.29	0.68
1:AQ:385:ASP:HB3	6:AQ:528:HOH:O	1.93	0.68
1:AL:328:LEU:HD11	1:AL:367:GLY:HA3	1.75	0.68
1:BF:331:ARG:HG2	1:BF:336:GLU:HA	1.75	0.68
1:BG:168:VAL:HG13	1:BG:280:HIS:CE1	2.29	0.68
1:AA:297:ASN:HB3	1:AA:301:VAL:CG1	2.23	0.68
3:AH:402:ADP:H5'1	3:AH:402:ADP:O2B	1.92	0.68
1:BB:66:LYS:O	1:BB:66:LYS:HD3	1.93	0.68
1:AR:189:THR:O	1:BE:36:LYS:HG2	1.93	0.68
1:BK:94:TYR:CZ	1:BK:288:LEU:HD11	2.29	0.68
1:BO:195:GLN:O	1:BO:199:ILE:HG13	1.93	0.68
1:BN:128:VAL:HG11	1:BO:358:ARG:NH2	2.08	0.68
1:BN:285:ASN:HD22	1:BN:288:LEU:N	1.90	0.68
1:BD:297:ASN:HB3	1:BD:301:VAL:HG13	1.76	0.67
1:BB:247:ARG:NH1	3:BB:402:ADP:O1B	2.25	0.67
1:BI:384:ILE:HA	1:BI:387:MET:HG3	1.76	0.67
1:AF:239:TRP:HH2	3:AF:402:ADP:H5'2	1.59	0.67
1:BN:117:HIS:ND1	1:BN:353:LEU:HD23	2.10	0.67
1:BN:168:VAL:O	1:BN:171:ASP:HB2	1.93	0.67
1:AD:367:GLY:O	1:AD:371:LEU:HG	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BB:166:GLU:OE1	1:BB:225:GLY:HA2	1.94	0.67
1:AD:98:LYS:HE2	1:AD:102:ASP:OD2	1.94	0.67
1:BD:239:TRP:HB2	1:BD:247:ARG:HB2	1.74	0.67
1:AA:188:THR:HG22	1:AA:223:PRO:HG2	1.77	0.67
1:AB:314:GLU:HG3	1:AB:315:LYS:HD2	1.77	0.67
1:AH:330:LYS:HE3	1:AH:345:TYR:HE2	1.59	0.67
1:AN:101:PHE:O	1:AN:105:ILE:HG13	1.95	0.67
1:AO:188:THR:HG23	6:AO:505:HOH:O	1.95	0.67
1:AN:302:VAL:O	1:AN:352:ARG:HD3	1.94	0.67
1:BE:287:ARG:HD3	6:BE:541:HOH:O	1.95	0.67
1:AB:308:LEU:HD13	1:AB:310:LEU:HD11	1.77	0.67
1:AL:312:PHE:CE2	1:AL:379:GLU:HA	2.30	0.67
1:BO:68:ILE:O	1:BO:72:VAL:HG23	1.95	0.67
1:AA:34:LEU:HA	1:AA:37:HIS:CE1	2.30	0.67
1:AF:236:PHE:C	1:AF:237:LEU:HD12	2.16	0.67
1:AH:168:VAL:HG13	1:AH:280:HIS:CE1	2.29	0.67
1:BD:98:LYS:HE3	1:BD:102:ASP:OD2	1.95	0.67
1:BG:328:LEU:HD11	1:BG:367:GLY:HA3	1.76	0.67
1:BL:41:MET:HE2	1:BL:71:GLY:HA3	1.77	0.67
1:AD:134:ASP:HB2	6:AD:636:HOH:O	1.95	0.67
1:AD:314:GLU:HG3	1:AD:315:LYS:HD2	1.76	0.66
1:AJ:161:GLU:O	1:AJ:165:VAL:HG23	1.94	0.66
1:AE:284:HIS:CE1	1:AE:289:GLY:HA2	2.29	0.66
1:AH:108:ILE:HG21	1:AH:296:THR:HG22	1.77	0.66
1:BC:54:TRP:HZ3	6:BC:604:HOH:O	1.76	0.66
1:BL:361:VAL:O	1:BL:365:VAL:HG23	1.95	0.66
1:BE:323:LEU:HD21	1:BE:347:ILE:HD12	1.78	0.66
1:BM:285:ASN:HD22	1:BM:287:ARG:H	1.43	0.66
1:AA:143:ARG:HG2	1:AA:144:CYS:N	2.08	0.66
1:AK:191:ASN:HD21	1:AK:193:LYS:HB2	1.60	0.66
1:BR:239:TRP:HB2	1:BR:247:ARG:HB2	1.76	0.66
1:AE:180:LEU:O	1:AE:229:TRP:HH2	1.79	0.66
1:AA:300:THR:OG1	1:AA:302:VAL:HB	1.95	0.66
1:AG:188:THR:HG23	6:AG:536:HOH:O	1.95	0.66
3:BL:402:ADP:O2B	3:BL:402:ADP:H5'2	1.96	0.66
1:AJ:322:MET:HG3	1:AJ:389:PRO:HD2	1.78	0.66
1:AL:253:LYS:HE3	6:AR:502:HOH:O	1.95	0.66
1:BM:38:ASN:ND2	1:BM:82:LYS:HE3	2.11	0.66
1:AB:356:SER:OG	1:AB:359:GLU:HG3	1.96	0.66
1:AF:314:GLU:HG3	1:AF:315:LYS:HD2	1.77	0.66
1:BG:152:CYS:SG	1:BH:17:SER:HB3	2.35	0.66
1:BQ:36:LYS:HE3	6:BQ:579:HOH:O	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AI:207:LYS:O	1:AI:209:THR:HG23	1.96	0.65
1:AR:384:ILE:HB	1:AR:387:MET:HG3	1.76	0.65
1:AB:364:LEU:O	1:AB:368:VAL:HG23	1.96	0.65
1:BK:191:ASN:ND2	1:BK:193:LYS:HB2	2.08	0.65
1:BC:285:ASN:HD22	1:BC:288:LEU:H	1.45	0.65
1:BL:230:HIS:ND1	1:BL:234:LYS:HG3	2.12	0.65
1:AA:168:VAL:HG13	1:AA:280:HIS:CE1	2.31	0.65
1:AC:280:HIS:HE1	6:AC:545:HOH:O	1.78	0.65
1:BB:302:VAL:O	1:BB:352:ARG:HD3	1.95	0.65
1:BD:322:MET:HG3	1:BD:389:PRO:HD2	1.79	0.65
1:BK:244:ASP:OD1	1:BK:292:CYS:HB3	1.97	0.65
1:BO:357:GLU:O	1:BO:361:VAL:HG23	1.97	0.65
1:BD:252:GLN:NE2	1:BD:256:ASP:HB3	2.12	0.65
1:BK:141:ARG:HG3	1:BK:251:MET:HB3	1.76	0.65
1:BN:239:TRP:HB2	1:BN:247:ARG:HB2	1.78	0.65
1:BN:285:ASN:ND2	1:BN:288:LEU:H	1.92	0.65
1:BQ:143:ARG:HG3	6:BQ:505:HOH:O	1.96	0.65
1:AB:313:LEU:CD2	1:AB:319:PHE:CD1	2.80	0.65
1:AH:364:LEU:O	1:AH:368:VAL:HG23	1.97	0.65
1:AO:188:THR:HG22	1:AO:223:PRO:HG2	1.77	0.65
1:AO:60:ASN:HB2	1:AO:90:ASP:OD2	1.96	0.65
1:AR:285:ASN:HD22	1:AR:288:LEU:H	1.45	0.65
1:BD:123:ASP:OD1	1:BD:125:ASN:HB2	1.96	0.65
1:BJ:146:ARG:HD2	1:BJ:282:LEU:HD13	1.79	0.65
1:BJ:191:ASN:HB2	6:BQ:503:HOH:O	1.97	0.65
1:BN:357:GLU:O	1:BN:361:VAL:HG23	1.96	0.65
1:AB:98:LYS:HE3	1:AB:102:ASP:OD2	1.96	0.65
1:BL:143:ARG:HG2	1:BL:144:CYS:N	2.12	0.65
1:AF:285:ASN:ND2	1:AF:287:ARG:H	1.95	0.65
1:AG:44:GLN:OE1	1:AG:103:LYS:HE3	1.96	0.65
1:AR:175:GLY:O	1:AR:177:LYS:HG2	1.97	0.65
1:BG:36:LYS:HG3	6:BG:626:HOH:O	1.97	0.65
1:AC:285:ASN:HD22	1:AC:288:LEU:H	1.44	0.65
1:AD:104:CYS:O	1:AD:108:ILE:HG13	1.96	0.65
1:BE:298:MET:CE	1:BE:353:LEU:HD12	2.27	0.65
1:BR:305:SER:HB3	1:BR:348:SER:HB3	1.79	0.65
1:AM:53:TYR:O	1:AM:55:ASP:N	2.29	0.64
1:AN:247:ARG:HD2	6:AN:504:HOH:O	1.96	0.64
1:BA:352:ARG:HH11	1:BA:352:ARG:HG2	1.62	0.64
1:BC:304:ALA:O	1:BC:348:SER:HB2	1.97	0.64
1:BD:199:ILE:HD13	1:BD:206:GLU:HA	1.79	0.64
1:BP:192:GLU:O	1:BP:196:GLU:HG3	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AG:236:PHE:CE1	1:AG:267:GLY:HA3	2.32	0.64
1:AK:53:TYR:OH	1:AK:99:GLU:HB3	1.97	0.64
1:BG:357:GLU:O	1:BG:361:VAL:HG23	1.97	0.64
1:BL:26:LYS:O	1:BL:29:ASP:HB2	1.97	0.64
1:BR:205:PHE:CG	1:BR:242:GLU:HG3	2.33	0.64
1:AC:297:ASN:HB3	1:AC:301:VAL:HG13	1.79	0.64
1:AE:314:GLU:HG3	1:AE:315:LYS:HD2	1.78	0.64
1:AI:50:TYR:O	1:AI:54:TRP:HB3	1.97	0.64
1:AR:331:ARG:NH1	1:AR:336:GLU:HB2	2.12	0.64
1:BO:98:LYS:HE3	1:BO:102:ASP:OD2	1.96	0.64
1:BQ:285:ASN:HD22	1:BQ:288:LEU:N	1.96	0.64
1:AF:153:LEU:O	1:AF:157:MET:HB3	1.97	0.64
1:AG:188:THR:HG22	1:AG:223:PRO:HG2	1.79	0.64
1:BB:312:PHE:CZ	1:BB:379:GLU:HG3	2.32	0.64
1:BD:49:LEU:HD21	1:BD:99:GLU:HG2	1.78	0.64
1:BD:143:ARG:NH1	3:BD:402:ADP:O3B	2.30	0.64
1:BE:180:LEU:O	1:BE:229:TRP:HH2	1.81	0.64
1:BH:177:LYS:HB3	6:BH:595:HOH:O	1.95	0.64
1:AF:26:LYS:N	1:AF:29:ASP:OD2	2.25	0.64
1:AF:313:LEU:HD22	1:AF:319:PHE:CD1	2.32	0.64
1:AG:105:ILE:HG12	1:AG:298:MET:CE	2.27	0.64
1:BC:44:GLN:OE1	1:BC:103:LYS:HB3	1.98	0.64
1:BD:256:ASP:OD2	1:BD:259:ALA:HB2	1.97	0.64
1:BI:57:VAL:HG11	1:BI:61:GLY:HA2	1.79	0.64
1:BL:257:LEU:HD11	1:BL:364:LEU:HD13	1.79	0.64
1:BR:359:GLU:O	1:BR:363:VAL:HG23	1.97	0.64
1:AM:321:GLU:O	1:AM:325:LYS:HG3	1.98	0.64
1:BB:105:ILE:HG23	1:BB:298:MET:HE1	1.79	0.64
1:BQ:40:VAL:HG12	1:BQ:104:CYS:SG	2.37	0.64
1:BR:210:GLY:HA3	6:BR:592:HOH:O	1.97	0.64
1:AK:195:GLN:O	1:AK:199:ILE:HG13	1.98	0.64
1:AP:113:PRO:HA	1:AP:287:ARG:NH2	2.13	0.64
1:BD:284:HIS:CE1	1:BD:289:GLY:HA2	2.32	0.64
1:BI:57:VAL:CG1	1:BI:61:GLY:HA2	2.28	0.64
1:BL:60:ASN:HD22	1:BL:90:ASP:CB	2.11	0.64
1:BO:336:GLU:OE2	2:BO:401:NMG:NE	2.29	0.64
1:AD:142:ILE:HD11	1:AD:257:LEU:HD22	1.80	0.64
1:AH:187:LEU:HD23	1:AH:223:PRO:HB2	1.79	0.64
1:BG:180:LEU:O	1:BG:229:TRP:HH2	1.81	0.64
1:BJ:318:ARG:HD3	1:BJ:388:ILE:HD12	1.80	0.64
1:BQ:285:ASN:HB2	1:BQ:291:ILE:HD11	1.80	0.64
1:BR:205:PHE:CD1	1:BR:242:GLU:HG3	2.33	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AD:166:GLU:OE1	1:AD:225:GLY:HA2	1.98	0.64
1:AH:328:LEU:HD11	1:AH:367:GLY:HA3	1.79	0.64
1:AL:250:SER:HB3	1:AL:264:PHE:HB2	1.79	0.64
1:AO:97:TYR:HB2	1:AO:101:PHE:CE2	2.33	0.64
1:AR:239:TRP:HB2	1:AR:247:ARG:HB2	1.79	0.64
1:BQ:285:ASN:HB3	1:BQ:288:LEU:HB2	1.80	0.64
1:AB:188:THR:HG21	6:AB:619:HOH:O	1.98	0.63
1:AK:313:LEU:HD12	1:AK:371:LEU:O	1.98	0.63
1:AO:297:ASN:O	1:AO:301:VAL:HG13	1.98	0.63
1:BK:38:ASN:ND2	1:BK:82:LYS:HG3	2.13	0.63
1:AI:239:TRP:HB2	1:AI:247:ARG:HB2	1.79	0.63
1:BA:108:ILE:HG21	1:BA:296:THR:HG22	1.81	0.63
1:BA:213:LEU:HD12	1:BA:218:CYS:HB2	1.79	0.63
1:BK:132:PHE:HZ	1:BK:365:VAL:HG22	1.63	0.63
1:AD:143:ARG:HG2	1:AD:144:CYS:N	2.13	0.63
1:AE:121:ASP:OD2	1:AE:358:ARG:HD3	1.99	0.63
1:AN:213:LEU:HD12	1:AN:218:CYS:HB2	1.79	0.63
1:BD:109:HIS:O	1:BD:110:HIS:HB2	1.98	0.63
1:BG:121:ASP:OD2	1:BG:358:ARG:HD3	1.97	0.63
1:BG:384:ILE:HA	1:BG:387:MET:HG3	1.78	0.63
1:BI:191:ASN:HD21	1:BI:193:LYS:HB2	1.61	0.63
1:AH:297:ASN:HB3	1:AH:301:VAL:HG13	1.80	0.63
1:AR:287:ARG:HD3	6:AR:663:HOH:O	1.98	0.63
1:BF:219:ALA:O	1:BF:222:TRP:HB2	1.97	0.63
1:AB:313:LEU:HD12	1:AB:374:CYS:HB2	1.80	0.63
1:AP:184:TYR:CE1	1:AP:240:ILE:HD12	2.34	0.63
1:BF:152:CYS:HB2	1:BF:161:GLU:OE1	1.99	0.63
1:BL:274:LEU:HB3	6:BL:581:HOH:O	1.99	0.63
1:BI:385:ASP:HB2	1:BQ:134:ASP:CG	2.19	0.63
1:AK:68:ILE:O	1:AK:72:VAL:HG23	1.98	0.63
1:BH:314:GLU:HG3	1:BH:315:LYS:HD2	1.80	0.63
1:BM:168:VAL:HG13	1:BM:280:HIS:CE1	2.34	0.63
1:BO:38:ASN:C	1:BO:38:ASN:HD22	2.02	0.63
1:AI:108:ILE:HG21	1:AI:296:THR:HG22	1.81	0.63
1:BO:303:ARG:NE	3:BO:402:ADP:O3B	2.28	0.63
1:BQ:326:LEU:HD11	1:BQ:370:LEU:HD23	1.80	0.63
1:AQ:36:LYS:HG2	1:BF:189:THR:O	1.99	0.63
1:AH:94:TYR:CZ	1:AH:288:LEU:HD11	2.35	0.62
1:BC:378:LEU:HD21	1:BC:384:ILE:HG12	1.81	0.62
1:BD:142:ILE:HD11	1:BD:257:LEU:CD2	2.29	0.62
1:AF:244:ASP:OD1	1:AF:292:CYS:HB3	1.98	0.62
1:AN:330:LYS:HE3	1:AN:345:TYR:CE2	2.34	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AR:331:ARG:HB2	1:AR:346:ASP:HB3	1.81	0.62
1:BI:183:LYS:HD3	1:BI:185:TYR:CE2	2.34	0.62
1:AE:384:ILE:O	1:AE:388:ILE:HD12	2.00	0.62
1:AK:236:PHE:CZ	1:AK:267:GLY:HA3	2.33	0.62
1:BG:39:ASN:HB2	1:BG:83:LYS:O	1.99	0.62
1:BQ:314:GLU:HG3	1:BQ:315:LYS:HD2	1.81	0.62
1:AK:52:LYS:NZ	1:AK:99:GLU:OE2	2.32	0.62
1:BF:250:SER:HB3	1:BF:264:PHE:HB2	1.79	0.62
1:BR:20:TRP:HA	1:BR:54:TRP:CH2	2.34	0.62
1:AG:321:GLU:HA	1:AM:233:GLU:OE2	1.99	0.62
1:AH:356:SER:OG	1:AH:359:GLU:HG3	1.99	0.62
1:BH:106:GLU:OE2	1:BH:112:LYS:HG2	2.00	0.62
1:BJ:154:PRO:HD3	1:BJ:245:HIS:CD2	2.34	0.62
1:BP:105:ILE:HG12	1:BP:298:MET:HE3	1.82	0.62
1:BP:140:CYS:HB2	1:BP:260:VAL:HG21	1.80	0.62
1:AB:305:SER:HB3	1:AB:348:SER:HB3	1.81	0.62
2:BB:401:NMG:NH1	5:BB:404:NO3:N	2.48	0.62
1:BD:153:LEU:HD21	1:BD:283:MET:HE3	1.81	0.62
1:AG:109:HIS:O	1:AG:110:HIS:HB2	1.99	0.62
1:AK:180:LEU:HD13	1:AK:267:GLY:HA2	1.82	0.62
1:AK:297:ASN:HB3	1:AK:301:VAL:HG13	1.81	0.62
1:AR:308:LEU:HD13	1:AR:310:LEU:HD11	1.81	0.62
1:BG:317:PRO:HB2	1:BO:253:LYS:HD2	1.80	0.62
1:BM:32:PRO:HD3	1:BN:159:ARG:NH2	2.15	0.62
1:BN:176:LEU:HD13	1:BN:229:TRP:CH2	2.34	0.62
1:BR:142:ILE:HG13	1:BR:260:VAL:HG12	1.81	0.62
1:AB:233:GLU:HG3	6:AB:515:HOH:O	1.99	0.62
1:AD:191:ASN:HD21	1:AD:193:LYS:HB2	1.64	0.62
1:AI:91:GLU:HB2	1:AI:283:MET:SD	2.40	0.62
1:BG:154:PRO:HG2	1:BG:243:GLU:O	1.99	0.62
1:BL:314:GLU:HG3	1:BL:315:LYS:HD2	1.81	0.62
1:AH:374:CYS:O	1:AH:378:LEU:HG	1.99	0.62
1:AR:168:VAL:HG13	1:AR:280:HIS:CE1	2.34	0.62
1:BK:102:ASP:OD2	1:BK:113:PRO:HB3	1.99	0.62
1:AH:11:LYS:HA	1:AH:61:GLY:CA	2.30	0.62
1:BJ:357:GLU:O	1:BJ:361:VAL:HG23	2.00	0.62
1:BN:189:THR:HG21	6:BN:592:HOH:O	1.99	0.62
1:AA:151:VAL:CG1	1:AA:161:GLU:HB3	2.29	0.61
1:AD:161:GLU:O	1:AD:165:VAL:HG23	1.99	0.61
1:AG:69:GLN:HE21	1:AG:73:ASP:CG	2.03	0.61
1:AI:207:LYS:O	1:AI:209:THR:N	2.33	0.61
1:AE:285:ASN:ND2	1:AE:287:ARG:H	1.98	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AG:34:LEU:HA	1:AG:37:HIS:ND1	2.15	0.61
1:AJ:18:LYS:HB2	1:AJ:21:GLU:HG2	1.82	0.61
1:AN:313:LEU:HD23	1:AN:319:PHE:CD1	2.35	0.61
1:AP:313:LEU:CD2	1:AP:319:PHE:CD1	2.82	0.61
1:AQ:285:ASN:ND2	1:AQ:288:LEU:H	1.93	0.61
1:AR:331:ARG:HG3	6:AR:504:HOH:O	1.99	0.61
1:AR:359:GLU:O	1:AR:363:VAL:HG23	2.00	0.61
1:AC:318:ARG:CD	1:AC:388:ILE:HD13	2.30	0.61
1:AN:253:LYS:HE2	1:BA:321:GLU:OE2	2.01	0.61
1:BH:159:ARG:NH1	1:BH:221:ASP:OD1	2.31	0.61
1:BJ:297:ASN:HB3	1:BJ:301:VAL:HG13	1.82	0.61
1:BP:49:LEU:HD21	1:BP:99:GLU:HG2	1.82	0.61
1:AO:314:GLU:HG2	1:AO:315:LYS:HD2	1.81	0.61
1:AR:124:HIS:O	1:AR:258:LYS:HE3	2.01	0.61
1:AD:352:ARG:HH11	1:AD:352:ARG:HG2	1.66	0.61
1:BK:285:ASN:HD22	1:BK:287:ARG:N	1.98	0.61
1:BL:98:LYS:HE3	1:BL:102:ASP:OD2	2.00	0.61
1:BN:231:ASN:OD1	1:BN:234:LYS:N	2.32	0.61
1:AH:123:ASP:OD2	1:AH:126:LYS:HG2	2.01	0.61
1:AP:358:ARG:HH21	1:AP:359:GLU:HG3	1.66	0.61
1:BA:52:LYS:HE2	1:BA:53:TYR:CE2	2.36	0.61
1:BJ:183:LYS:HD3	1:BJ:185:TYR:CZ	2.35	0.61
1:BP:38:ASN:HA	6:BP:559:HOH:O	2.01	0.61
1:AB:184:TYR:CE1	1:AB:227:GLY:HA3	2.34	0.61
1:AG:143:ARG:HG2	1:AG:144:CYS:N	2.16	0.61
1:AG:212:LEU:HD23	2:AG:401:NMG:NH1	2.16	0.61
1:AR:98:LYS:HE3	1:AR:102:ASP:OD2	2.01	0.61
1:BA:24:LYS:HG3	1:BA:25:PHE:H	1.66	0.61
1:BK:226:ARG:HG3	1:BK:241:ASN:O	2.01	0.61
1:BK:126:LYS:HB2	1:BK:358:ARG:HD2	1.81	0.61
1:AB:301:VAL:HG12	1:AB:301:VAL:O	2.01	0.61
1:AD:123:ASP:OD1	1:AD:125:ASN:HB2	2.01	0.61
1:AP:247:ARG:HD2	6:AP:503:HOH:O	2.01	0.61
1:AR:252:GLN:HG3	1:AR:253:LYS:O	2.01	0.61
1:BB:39:ASN:OD1	1:BB:41:MET:HB3	2.00	0.61
1:AB:103:LYS:HG2	6:AB:591:HOH:O	2.01	0.61
1:AO:361:VAL:O	1:AO:365:VAL:HG23	2.00	0.61
1:BD:252:GLN:HE22	1:BD:256:ASP:HB3	1.66	0.61
1:BF:331:ARG:HB2	1:BF:346:ASP:HB3	1.83	0.61
1:BG:143:ARG:HG2	1:BG:144:CYS:N	2.15	0.61
1:BI:141:ARG:HG3	1:BI:251:MET:HB3	1.81	0.61
1:AE:152:CYS:SG	1:AF:17:SER:HB3	2.41	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AN:44:GLN:HB3	1:AN:103:LYS:HB2	1.83	0.61
1:AP:154:PRO:HA	1:AP:157:MET:HG2	1.83	0.61
1:BA:192:GLU:HG2	1:BA:196:GLU:OE2	2.01	0.61
1:BA:295:PRO:O	1:BA:298:MET:HG3	2.00	0.61
1:BC:192:GLU:O	1:BC:196:GLU:HG3	2.00	0.61
1:BC:385:ASP:HA	1:BC:388:ILE:HD12	1.83	0.61
1:BC:50:TYR:O	1:BC:54:TRP:HB3	2.01	0.61
1:AH:239:TRP:HB2	1:AH:247:ARG:HB2	1.82	0.60
1:AH:292:CYS:HB2	1:AH:297:ASN:O	1.99	0.60
1:AK:113:PRO:HA	1:AK:287:ARG:NH2	2.15	0.60
1:AP:229:TRP:CE3	1:AP:230:HIS:HA	2.36	0.60
1:AB:310:LEU:O	1:AB:314:GLU:HG2	2.01	0.60
1:AF:50:TYR:O	1:AF:54:TRP:HB3	2.01	0.60
1:AJ:188:THR:HG23	6:AJ:560:HOH:O	2.00	0.60
1:AM:267:GLY:O	1:AM:271:VAL:HG23	2.01	0.60
1:AQ:352:ARG:HH11	1:AQ:352:ARG:HG2	1.64	0.60
1:BF:244:ASP:OD1	1:BF:292:CYS:HB3	2.01	0.60
1:BF:143:ARG:HD3	1:BF:303:ARG:HB3	1.82	0.60
1:BH:270:GLU:OE1	1:BH:273:ARG:NH1	2.34	0.60
1:BL:281:GLY:O	1:BL:282:LEU:HD23	2.00	0.60
1:BO:188:THR:HG23	6:BO:519:HOH:O	2.02	0.60
1:AC:63:THR:OG1	1:AC:66:LYS:HB2	2.01	0.60
1:AD:236:PHE:CE1	1:AD:267:GLY:HA3	2.37	0.60
1:AH:47:LYS:HG3	6:AH:512:HOH:O	2.01	0.60
1:AI:184:TYR:CE1	1:AI:240:ILE:HD12	2.36	0.60
1:AK:376:LYS:HB2	6:AK:529:HOH:O	2.01	0.60
1:AM:297:ASN:HB3	1:AM:301:VAL:HG13	1.83	0.60
1:AQ:297:ASN:HB3	1:AQ:301:VAL:HG13	1.83	0.60
1:AO:366:ASP:OD2	1:AR:126:LYS:HD2	2.01	0.60
1:BA:238:VAL:HA	1:BA:247:ARG:O	2.01	0.60
1:BG:285:ASN:HD22	1:BG:286:ASP:N	1.99	0.60
1:BH:312:PHE:HB2	1:BH:375:ASP:OD1	2.00	0.60
1:BN:146:ARG:HB3	1:BN:282:LEU:HD22	1.83	0.60
1:BI:95:GLU:HG3	6:BI:524:HOH:O	2.02	0.60
1:BL:188:THR:CG2	1:BL:223:PRO:HG2	2.30	0.60
1:BP:18:LYS:O	1:BP:21:GLU:HG2	2.02	0.60
1:AA:126:LYS:HB2	1:AA:358:ARG:HD2	1.84	0.60
1:AG:191:ASN:HD21	1:AG:193:LYS:HB2	1.65	0.60
1:AK:330:LYS:HE3	1:AK:345:TYR:CE2	2.35	0.60
1:AN:165:VAL:O	1:AN:169:VAL:HG23	2.01	0.60
1:AO:93:SER:O	1:AO:101:PHE:HE2	1.84	0.60
1:AR:184:TYR:CE1	1:AR:240:ILE:HD12	2.37	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BE:144:CYS:HB3	1:BE:302:VAL:HG22	1.82	0.60
1:BK:158:SER:OG	1:BK:161:GLU:HG3	2.01	0.60
1:BK:285:ASN:ND2	1:BK:287:ARG:H	2.00	0.60
1:AB:109:HIS:O	1:AB:110:HIS:HB2	2.01	0.60
1:AJ:167:LYS:HD3	1:AJ:171:ASP:OD2	2.00	0.60
1:AO:184:TYR:CE1	1:AO:240:ILE:HD12	2.37	0.60
1:BF:202:HIS:HB3	3:BF:402:ADP:H1'	1.82	0.60
1:BG:142:ILE:HG22	1:BG:264:PHE:CD1	2.37	0.60
1:BH:364:LEU:HD22	1:BH:368:VAL:HG23	1.83	0.60
1:BJ:240:ILE:O	1:BJ:241:ASN:HB2	2.01	0.60
1:BP:285:ASN:HD22	1:BP:288:LEU:H	1.50	0.60
1:BR:314:GLU:HB2	1:BR:345:TYR:OH	2.00	0.60
1:AK:143:ARG:HG2	1:AK:144:CYS:N	2.15	0.60
1:BI:297:ASN:HB3	1:BI:301:VAL:HG13	1.84	0.60
1:BJ:314:GLU:HG3	1:BJ:315:LYS:HD2	1.83	0.60
1:BL:108:ILE:HD13	1:BL:296:THR:HG22	1.84	0.60
1:BL:147:SER:HA	1:BL:245:HIS:HB2	1.84	0.60
1:BL:27:ALA:HB3	1:BL:51:GLU:HG2	1.83	0.60
1:AA:341:THR:HG23	6:AA:629:HOH:O	2.01	0.60
1:AA:53:TYR:CE2	1:AA:97:TYR:HA	2.37	0.60
1:AB:316:HIS:CD2	1:AB:317:PRO:HD2	2.36	0.60
1:AJ:101:PHE:O	1:AJ:105:ILE:HG13	2.01	0.60
1:AP:212:LEU:O	1:AP:216:SER:HB3	2.01	0.60
1:BC:98:LYS:HG3	1:BC:102:ASP:OD2	2.02	0.60
1:BD:49:LEU:HD11	1:BD:103:LYS:HE2	1.82	0.60
1:BG:184:TYR:OH	1:BG:227:GLY:HA3	2.02	0.60
1:BI:143:ARG:HG2	1:BI:144:CYS:N	2.16	0.60
1:BG:168:VAL:HG13	1:BG:280:HIS:ND1	2.16	0.60
1:BH:308:LEU:HD13	1:BH:310:LEU:HD21	1.84	0.60
1:BK:313:LEU:O	1:BK:313:LEU:HD23	2.02	0.60
1:BQ:153:LEU:HD21	1:BQ:283:MET:SD	2.42	0.60
1:AH:191:ASN:HD21	1:AH:193:LYS:HB2	1.67	0.60
1:AH:71:GLY:HA3	1:AH:85:GLY:O	2.02	0.60
1:AL:18:LYS:HB2	1:AL:21:GLU:HG2	1.83	0.60
1:BI:247:ARG:NH1	3:BI:402:ADP:O1B	2.35	0.60
1:AA:244:ASP:OD1	1:AA:292:CYS:HB3	2.02	0.59
1:AB:297:ASN:HB3	1:AB:301:VAL:HG13	1.82	0.59
1:AO:111:PHE:CE1	1:AO:353:LEU:HD22	2.37	0.59
1:AQ:41:MET:HE3	1:AQ:71:GLY:HA3	1.84	0.59
1:AR:189:THR:HB	1:BE:36:LYS:HE2	1.84	0.59
1:BD:105:ILE:HG12	1:BD:298:MET:HE2	1.84	0.59
1:BF:296:THR:O	1:BF:352:ARG:HD2	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AO:104:CYS:O	1:AO:108:ILE:HG13	2.02	0.59
1:BB:117:HIS:ND1	1:BB:118:PRO:HD2	2.16	0.59
1:AE:142:ILE:HG13	1:AE:260:VAL:HG12	1.83	0.59
1:AG:69:GLN:NE2	1:AG:73:ASP:OD1	2.34	0.59
1:AP:177:LYS:HA	1:AP:181:ALA:HB2	1.83	0.59
1:BP:294:CYS:SG	1:BP:296:THR:HG23	2.42	0.59
1:AF:143:ARG:HG2	1:AF:144:CYS:N	2.17	0.59
1:AQ:36:LYS:HG3	6:AQ:539:HOH:O	2.01	0.59
1:BD:143:ARG:HD3	1:BD:303:ARG:HB3	1.84	0.59
1:BF:31:PHE:CE2	1:BF:47:LYS:HE3	2.38	0.59
1:BM:53:TYR:CZ	1:BM:97:TYR:HA	2.38	0.59
1:BR:192:GLU:O	1:BR:196:GLU:HG3	2.02	0.59
1:AG:239:TRP:HB2	1:AG:247:ARG:HB2	1.83	0.59
1:AP:285:ASN:ND2	1:AP:288:LEU:H	2.00	0.59
1:BA:44:GLN:NE2	1:BA:107:GLU:OE1	2.35	0.59
1:BJ:187:LEU:HB3	1:BJ:223:PRO:HB2	1.84	0.59
1:BQ:168:VAL:HG13	1:BQ:280:HIS:CE1	2.38	0.59
1:BQ:84:THR:HG22	1:BQ:86:CYS:SG	2.43	0.59
1:AA:50:TYR:O	1:AA:54:TRP:HB3	2.02	0.59
1:AJ:98:LYS:HE3	1:AJ:102:ASP:OD2	2.02	0.59
1:AM:94:TYR:CD1	1:AM:95:GLU:HG2	2.36	0.59
1:AR:104:CYS:O	1:AR:108:ILE:HG13	2.03	0.59
1:BD:105:ILE:HG12	1:BD:298:MET:CE	2.33	0.59
1:BE:151:VAL:CG1	1:BE:152:CYS:N	2.65	0.59
1:AE:36:LYS:HE2	6:AE:590:HOH:O	2.02	0.59
1:AP:151:VAL:HG12	1:AP:152:CYS:O	2.02	0.59
1:BF:143:ARG:HG2	1:BF:144:CYS:N	2.17	0.59
1:BI:312:PHE:HB2	1:BI:375:ASP:OD1	2.02	0.59
1:BI:49:LEU:HD21	1:BI:99:GLU:HG2	1.85	0.59
1:AB:188:THR:HG22	1:AB:223:PRO:HG2	1.85	0.59
1:AB:184:TYR:HE1	1:AB:227:GLY:HA3	1.68	0.59
1:AB:285:ASN:ND2	1:AB:288:LEU:H	2.01	0.59
1:BO:385:ASP:HB2	6:BO:525:HOH:O	2.01	0.59
1:BP:331:ARG:HB2	1:BP:346:ASP:HB3	1.84	0.59
1:AI:297:ASN:HB3	1:AI:301:VAL:HG13	1.84	0.59
1:AO:224:ASP:HB2	6:AO:549:HOH:O	2.01	0.59
1:AR:113:PRO:HA	1:AR:287:ARG:NH2	2.17	0.59
1:BC:364:LEU:HD22	1:BC:368:VAL:HG23	1.84	0.59
1:BE:252:GLN:OE1	1:BE:263:ARG:NH2	2.30	0.59
1:BK:298:MET:HG2	6:BK:547:HOH:O	2.02	0.59
1:BO:361:VAL:O	1:BO:365:VAL:HG23	2.03	0.59
1:AC:252:GLN:NE2	1:AC:256:ASP:HB3	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AK:298:MET:CE	1:AK:353:LEU:HD12	2.32	0.59
1:AN:124:HIS:O	1:AN:258:LYS:HE3	2.02	0.59
1:AQ:144:CYS:HA	1:AQ:301:VAL:O	2.03	0.59
1:BI:104:CYS:O	1:BI:108:ILE:HG13	2.03	0.59
1:AA:285:ASN:HD22	1:AA:287:ARG:N	2.01	0.58
1:AC:217:GLY:HA2	6:AC:564:HOH:O	2.02	0.58
1:BD:31:PHE:CD1	1:BD:32:PRO:HD2	2.38	0.58
1:BF:123:ASP:OD2	1:BF:126:LYS:HG2	2.02	0.58
1:BF:298:MET:CE	1:BF:353:LEU:HD12	2.33	0.58
1:BI:308:LEU:O	1:BI:344:THR:HA	2.03	0.58
1:AM:188:THR:HG23	6:AM:563:HOH:O	2.03	0.58
1:BD:90:ASP:HB2	6:BD:522:HOH:O	2.03	0.58
1:BG:268:LEU:O	1:BG:272:GLU:HG3	2.03	0.58
1:AC:84:THR:HG23	1:AC:108:ILE:HD11	1.85	0.58
1:AK:191:ASN:ND2	1:AK:193:LYS:H	2.01	0.58
1:AK:331:ARG:NH1	3:AK:402:ADP:O2A	2.35	0.58
1:BD:313:LEU:HD23	1:BD:313:LEU:O	2.03	0.58
1:BF:191:ASN:HD21	1:BF:193:LYS:HB2	1.68	0.58
1:BH:322:MET:HG3	1:BH:389:PRO:HD2	1.84	0.58
1:AC:53:TYR:CZ	1:AC:97:TYR:HA	2.37	0.58
1:AF:229:TRP:CE3	1:AF:230:HIS:HA	2.38	0.58
1:AH:157:MET:HE2	1:AH:161:GLU:HB3	1.86	0.58
1:AN:285:ASN:HD22	1:AN:288:LEU:H	1.50	0.58
1:BB:374:CYS:O	1:BB:378:LEU:HG	2.04	0.58
1:BC:27:ALA:HB2	1:BC:54:TRP:CD1	2.38	0.58
1:BJ:206:GLU:HG2	6:BJ:518:HOH:O	2.03	0.58
1:AI:175:GLY:O	1:AI:177:LYS:HE2	2.03	0.58
1:AK:27:ALA:HB2	1:AK:54:TRP:NE1	2.18	0.58
1:AO:384:ILE:HB	1:AO:387:MET:HG3	1.86	0.58
1:AP:212:LEU:HB3	6:AP:597:HOH:O	2.03	0.58
1:AQ:142:ILE:HD12	1:AQ:261:PHE:HA	1.84	0.58
1:BA:288:LEU:HD22	1:BA:353:LEU:HD11	1.86	0.58
1:BB:53:TYR:HB3	1:BB:97:TYR:HD2	1.69	0.58
1:BI:250:SER:HB3	1:BI:264:PHE:HB2	1.84	0.58
1:BN:59:PRO:HG2	1:BN:92:TYR:CE2	2.39	0.58
1:AH:332:GLY:HA3	1:AH:338:SER:O	2.04	0.58
1:AL:312:PHE:CE1	1:AL:379:GLU:HG3	2.38	0.58
1:BA:104:CYS:O	1:BA:108:ILE:HG13	2.03	0.58
1:BD:60:ASN:HB2	1:BD:90:ASP:OD2	2.04	0.58
1:BE:105:ILE:HG12	1:BE:298:MET:CE	2.33	0.58
1:BN:144:CYS:HA	1:BN:301:VAL:O	2.03	0.58
1:BQ:149:LYS:HB3	1:BQ:281:GLY:O	2.02	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AC:168:VAL:HG13	1:AC:280:HIS:CE1	2.38	0.58
1:AI:95:GLU:HG3	6:AI:580:HOH:O	2.04	0.58
1:AJ:213:LEU:HD12	1:AJ:218:CYS:HB2	1.84	0.58
1:AP:268:LEU:O	1:AP:272:GLU:HG3	2.03	0.58
1:AE:301:VAL:O	1:AE:301:VAL:HG12	2.03	0.58
1:AQ:196:GLU:O	1:AQ:200:GLU:HB2	2.04	0.58
1:AQ:60:ASN:HB2	1:AQ:90:ASP:OD2	2.04	0.58
1:BA:236:PHE:CZ	1:BA:267:GLY:HA3	2.38	0.58
1:BC:144:CYS:HA	1:BC:301:VAL:O	2.03	0.58
1:BD:201:ASP:HB3	1:BD:203:PHE:CE2	2.38	0.58
1:BI:151:VAL:HG12	1:BI:152:CYS:N	2.19	0.58
1:BI:318:ARG:HA	6:BI:553:HOH:O	2.04	0.58
1:BR:154:PRO:HG2	1:BR:243:GLU:O	2.04	0.58
1:AA:267:GLY:O	1:AA:271:VAL:HG23	2.04	0.58
1:AH:44:GLN:NE2	1:AH:107:GLU:OE1	2.36	0.58
1:BB:183:LYS:HD3	1:BB:185:TYR:CE2	2.39	0.58
1:BC:367:GLY:O	1:BC:371:LEU:HG	2.04	0.58
1:BH:331:ARG:HB2	1:BH:346:ASP:HB3	1.85	0.58
1:BK:285:ASN:HD22	1:BK:287:ARG:H	1.52	0.58
1:BN:300:THR:HB	1:BN:302:VAL:HG23	1.86	0.58
1:BO:112:LYS:HG3	6:BO:671:HOH:O	2.02	0.58
1:AJ:295:PRO:O	1:AJ:298:MET:HG3	2.04	0.58
1:AJ:322:MET:HG3	1:AJ:388:ILE:HG23	1.85	0.58
1:AN:313:LEU:CD1	1:AN:374:CYS:HB2	2.34	0.58
1:AO:83:LYS:HE2	6:AO:513:HOH:O	2.04	0.58
1:BE:173:LEU:HD13	1:BE:229:TRP:CG	2.38	0.58
1:BK:113:PRO:HD3	6:BK:542:HOH:O	2.04	0.58
1:BM:244:ASP:OD1	1:BM:292:CYS:HB3	2.04	0.58
1:BP:124:HIS:O	1:BP:258:LYS:HE3	2.04	0.58
1:BD:142:ILE:HD11	1:BD:257:LEU:HD23	1.85	0.57
1:BH:184:TYR:CD2	1:BH:186:PRO:HD3	2.39	0.57
1:AI:141:ARG:HG3	1:AI:251:MET:HB3	1.85	0.57
1:AJ:192:GLU:O	1:AJ:196:GLU:HG3	2.04	0.57
1:AR:212:LEU:O	1:AR:216:SER:HB3	2.04	0.57
1:AG:336:GLU:OE2	2:AG:401:NMG:NE	2.36	0.57
1:AJ:143:ARG:HG3	6:AJ:508:HOH:O	2.04	0.57
1:AM:309:ARG:NH1	1:AM:342:ASP:OD1	2.36	0.57
1:BR:384:ILE:HA	1:BR:387:MET:HG3	1.86	0.57
1:AC:38:ASN:ND2	1:AC:82:LYS:HE3	2.18	0.57
1:AH:313:LEU:HD23	1:AH:313:LEU:O	2.04	0.57
1:AM:305:SER:HB3	1:AM:348:SER:HB3	1.86	0.57
1:AP:13:ARG:HD3	1:AP:156:ALA:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AR:34:LEU:HD11	1:AR:45:LEU:HD23	1.87	0.57
1:BA:154:PRO:N	1:BA:155:PRO:HD2	2.19	0.57
1:BE:208:PRO:HG3	1:BE:222:TRP:CD2	2.38	0.57
1:BP:319:PHE:HB3	6:BP:565:HOH:O	2.03	0.57
1:BQ:223:PRO:HD2	6:BQ:522:HOH:O	2.05	0.57
1:AN:310:LEU:HD22	1:AN:313:LEU:CB	2.34	0.57
3:BD:402:ADP:H2'	6:BD:502:HOH:O	2.04	0.57
1:BG:37:HIS:CD2	1:BG:75:PRO:HA	2.39	0.57
1:BK:144:CYS:HG	1:BK:264:PHE:HZ	1.51	0.57
1:AC:285:ASN:HD22	1:AC:287:ARG:H	1.53	0.57
1:AH:146:ARG:HD2	1:AH:282:LEU:HD13	1.87	0.57
1:AQ:141:ARG:HB2	1:AQ:251:MET:HB3	1.87	0.57
1:BK:38:ASN:HD22	1:BK:38:ASN:C	2.07	0.57
1:AH:176:LEU:HD12	1:AH:229:TRP:CZ2	2.40	0.57
1:AH:88:PHE:CD2	1:AH:93:SER:HB2	2.38	0.57
1:AI:144:CYS:HA	1:AI:301:VAL:O	2.05	0.57
1:AI:323:LEU:HD13	1:AI:330:LYS:HB2	1.86	0.57
1:BN:94:TYR:HE2	1:BN:102:ASP:OD1	1.86	0.57
1:AB:29:ASP:HA	6:AB:624:HOH:O	2.05	0.57
1:AD:142:ILE:HD11	1:AD:257:LEU:CD2	2.35	0.57
1:AD:142:ILE:HG13	1:AD:260:VAL:HG12	1.85	0.57
1:AE:184:TYR:CD2	1:AE:186:PRO:HD3	2.39	0.57
1:AF:338:SER:O	1:AF:339:LEU:HD23	2.04	0.57
1:AG:374:CYS:O	1:AG:378:LEU:HG	2.04	0.57
1:AJ:305:SER:HB3	1:AJ:348:SER:HB3	1.87	0.57
1:AK:364:LEU:HD22	1:AK:368:VAL:HG23	1.86	0.57
1:AQ:167:LYS:HD3	1:AQ:171:ASP:OD2	2.04	0.57
1:BB:331:ARG:HB2	1:BB:346:ASP:HB3	1.86	0.57
1:BE:141:ARG:NH1	3:BE:402:ADP:O2B	2.37	0.57
1:BF:94:TYR:CZ	1:BF:288:LEU:HD11	2.40	0.57
1:BL:252:GLN:OE1	1:BL:263:ARG:NH2	2.38	0.57
1:BL:60:ASN:ND2	1:BL:90:ASP:HB2	2.19	0.57
1:AE:57:VAL:HG12	1:AE:58:THR:O	2.05	0.57
1:AN:180:LEU:HD23	6:AN:600:HOH:O	2.04	0.57
1:AO:285:ASN:ND2	1:AO:288:LEU:H	1.91	0.57
1:AO:309:ARG:NH1	1:AO:342:ASP:OD1	2.37	0.57
1:AP:313:LEU:HD21	1:AP:319:PHE:CD1	2.39	0.57
1:BA:201:ASP:O	1:BA:202:HIS:HB2	2.04	0.57
1:BD:298:MET:HG2	6:BD:547:HOH:O	2.04	0.57
1:BH:285:ASN:ND2	1:BH:287:ARG:H	2.02	0.57
1:AF:237:LEU:CD1	1:AF:237:LEU:N	2.68	0.57
1:AO:128:VAL:HG21	1:AR:358:ARG:NH2	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BE:298:MET:HE3	1:BE:353:LEU:HD12	1.85	0.57
1:BN:94:TYR:CZ	1:BN:288:LEU:HD11	2.39	0.57
1:BR:106:GLU:OE2	1:BR:112:LYS:HE2	2.05	0.57
1:AD:312:PHE:CZ	1:AD:379:GLU:HG3	2.39	0.56
1:AG:168:VAL:HG13	1:AG:280:HIS:CE1	2.41	0.56
1:AL:124:HIS:O	1:AL:127:LEU:HB2	2.05	0.56
1:AQ:36:LYS:HG2	1:BF:189:THR:HB	1.86	0.56
1:BL:161:GLU:O	1:BL:165:VAL:HG23	2.05	0.56
1:BN:188:THR:HG23	6:BN:518:HOH:O	2.04	0.56
1:AF:151:VAL:HA	6:AF:584:HOH:O	2.03	0.56
1:BA:152:CYS:SG	1:BB:17:SER:HB3	2.45	0.56
1:BG:202:HIS:HB3	3:BG:402:ADP:H1'	1.87	0.56
1:BK:144:CYS:HA	1:BK:301:VAL:O	2.04	0.56
1:BL:252:GLN:HB2	6:BL:533:HOH:O	2.05	0.56
1:BN:18:LYS:O	1:BN:21:GLU:HG2	2.05	0.56
1:AA:105:ILE:HG12	1:AA:298:MET:HE1	1.87	0.56
1:AN:312:PHE:CZ	1:AN:379:GLU:HG3	2.40	0.56
1:AP:168:VAL:HG13	1:AP:280:HIS:CE1	2.40	0.56
1:AP:213:LEU:HD12	1:AP:218:CYS:CB	2.35	0.56
1:BC:372:ILE:HG22	1:BC:376:LYS:HE2	1.87	0.56
1:AC:169:VAL:O	1:AC:173:LEU:HG	2.05	0.56
1:AD:159:ARG:NH1	1:AD:221:ASP:OD1	2.39	0.56
1:AH:384:ILE:HG22	1:AH:387:MET:HE2	1.86	0.56
1:AI:60:ASN:HB2	1:AI:90:ASP:OD2	2.06	0.56
1:AO:316:HIS:CE1	1:AO:318:ARG:HB2	2.41	0.56
1:BD:33:ASP:C	1:BD:34:LEU:HD23	2.26	0.56
1:BE:318:ARG:HD3	1:BE:388:ILE:HD13	1.87	0.56
1:BG:313:LEU:HD23	1:BG:313:LEU:O	2.06	0.56
1:BR:285:ASN:HD22	1:BR:288:LEU:HB2	1.68	0.56
1:AC:184:TYR:CE1	1:AC:240:ILE:HD12	2.41	0.56
1:AC:309:ARG:NH1	1:AC:342:ASP:OD1	2.37	0.56
1:AG:328:LEU:HD11	1:AG:367:GLY:HA3	1.87	0.56
1:AN:13:ARG:NH1	1:AN:156:ALA:O	2.38	0.56
1:BA:357:GLU:O	1:BA:361:VAL:HG23	2.04	0.56
1:BB:183:LYS:HG2	1:BB:184:TYR:N	2.21	0.56
1:BF:191:ASN:ND2	1:BF:193:LYS:H	2.02	0.56
1:BF:303:ARG:NE	3:BF:402:ADP:O3B	2.33	0.56
1:BN:245:HIS:O	1:BN:246:ILE:HG13	2.04	0.56
1:BQ:288:LEU:O	1:BQ:299:GLY:HA2	2.06	0.56
1:AC:161:GLU:O	1:AC:164:LEU:HB3	2.05	0.56
1:AK:297:ASN:HA	1:AK:352:ARG:HD2	1.87	0.56
1:BL:18:LYS:O	1:BL:21:GLU:HG2	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:264:PHE:CZ	1:AB:268:LEU:HD22	2.41	0.56
1:AE:247:ARG:NH1	3:AE:402:ADP:O1B	2.39	0.56
1:AG:37:HIS:HD2	1:AG:75:PRO:HA	1.70	0.56
1:AH:183:LYS:HB3	1:AH:185:TYR:CZ	2.39	0.56
1:AJ:173:LEU:HD13	1:AJ:229:TRP:CG	2.41	0.56
1:AJ:47:LYS:HG3	6:AJ:605:HOH:O	2.04	0.56
1:AR:355:LYS:HB2	1:AR:360:LEU:HD21	1.87	0.56
6:AQ:633:HOH:O	1:BF:183:LYS:HD2	2.05	0.56
1:BG:297:ASN:HB3	1:BG:301:VAL:HG13	1.86	0.56
1:BL:187:LEU:HD11	1:BL:195:GLN:NE2	2.21	0.56
1:AK:49:LEU:HD21	1:AK:99:GLU:HG2	1.87	0.56
1:AM:270:GLU:OE1	1:AM:273:ARG:NH1	2.39	0.56
1:AM:335:GLY:O	1:AM:338:SER:OG	2.22	0.56
1:AR:298:MET:HA	1:AR:301:VAL:HG22	1.88	0.56
1:BD:39:ASN:HA	1:BD:82:LYS:HE2	1.87	0.56
1:BR:12:ASN:HA	6:BR:645:HOH:O	2.04	0.56
1:AA:285:ASN:HD21	1:AA:287:ARG:HB2	1.71	0.56
1:AB:305:SER:CB	1:AB:348:SER:HB3	2.36	0.56
1:AF:318:ARG:NH1	1:AF:388:ILE:HD12	2.21	0.56
1:AM:154:PRO:HA	1:AM:157:MET:SD	2.46	0.56
1:AQ:267:GLY:O	1:AQ:271:VAL:HG23	2.05	0.56
1:BB:84:THR:HG23	1:BB:108:ILE:HD11	1.86	0.56
1:BC:69:GLN:NE2	1:BC:73:ASP:OD1	2.37	0.56
1:BE:297:ASN:HB3	1:BE:301:VAL:HG13	1.88	0.56
1:BF:157:MET:HA	1:BF:161:GLU:OE1	2.05	0.56
1:BF:304:ALA:O	1:BF:348:SER:HB2	2.06	0.56
1:BK:297:ASN:HB3	1:BK:301:VAL:HG13	1.88	0.56
1:AA:285:ASN:HD22	1:AA:287:ARG:H	1.47	0.56
1:AB:201:ASP:O	1:AB:202:HIS:HB2	2.06	0.56
1:AG:89:GLY:HA2	1:AG:155:PRO:CG	2.31	0.56
1:AI:298:MET:CE	1:AI:353:LEU:HD12	2.36	0.56
1:AK:364:LEU:HD22	1:AK:368:VAL:CG2	2.36	0.56
1:AK:303:ARG:NE	3:AK:402:ADP:O3B	2.34	0.56
1:AL:292:CYS:SG	1:AL:301:VAL:HG11	2.46	0.56
3:AO:402:ADP:H5'1	3:AO:402:ADP:O2B	2.06	0.56
1:BA:38:ASN:ND2	6:BA:605:HOH:O	2.38	0.56
1:BL:144:CYS:HB3	1:BL:302:VAL:HG22	1.88	0.56
1:BO:147:SER:O	1:BO:282:LEU:HA	2.06	0.56
1:BP:314:GLU:HG3	1:BP:315:LYS:HD2	1.88	0.56
1:BQ:352:ARG:HG2	1:BQ:352:ARG:HH11	1.71	0.56
1:AN:384:ILE:HB	1:AN:387:MET:HG3	1.86	0.55
1:BA:313:LEU:HD22	1:BA:319:PHE:CD1	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BC:127:LEU:HD23	1:BC:258:LYS:HG3	1.87	0.55
1:BL:229:TRP:O	1:BL:229:TRP:HE3	1.88	0.55
1:AG:298:MET:HE1	1:AG:353:LEU:HD12	1.87	0.55
1:AL:189:THR:HB	1:AR:36:LYS:CG	2.37	0.55
1:AM:349:ASN:HD22	1:AM:360:LEU:HD22	1.71	0.55
1:BD:132:PHE:HE1	1:BD:257:LEU:HD12	1.72	0.55
1:BL:313:LEU:HD12	1:BL:374:CYS:HB2	1.88	0.55
1:BM:313:LEU:O	1:BM:313:LEU:HD23	2.06	0.55
1:BM:359:GLU:O	1:BM:363:VAL:HG23	2.07	0.55
1:BN:108:ILE:HG21	1:BN:296:THR:HG22	1.88	0.55
1:BR:243:GLU:HB3	6:BR:566:HOH:O	2.05	0.55
1:AA:39:ASN:CA	1:AA:82:LYS:HE3	2.35	0.55
1:AJ:355:LYS:HB2	1:AJ:360:LEU:HD21	1.88	0.55
1:AL:295:PRO:O	1:AL:298:MET:HG3	2.06	0.55
1:BE:331:ARG:HB2	1:BE:346:ASP:HB3	1.88	0.55
1:BJ:180:LEU:O	1:BJ:229:TRP:HH2	1.89	0.55
1:BL:238:VAL:HG22	1:BL:248:VAL:HA	1.88	0.55
1:BL:305:SER:HB2	1:BL:348:SER:HB3	1.87	0.55
1:BR:113:PRO:HA	1:BR:287:ARG:NH2	2.21	0.55
1:AF:212:LEU:HB3	6:AF:561:HOH:O	2.06	0.55
1:AH:306:VAL:HG13	1:AH:364:LEU:HD11	1.87	0.55
1:AK:352:ARG:CG	1:AK:352:ARG:NH1	2.63	0.55
1:AN:312:PHE:CE1	1:AN:379:GLU:HG3	2.41	0.55
1:AP:192:GLU:O	1:AP:196:GLU:HG3	2.07	0.55
1:BC:292:CYS:SG	1:BC:301:VAL:HG11	2.46	0.55
1:BF:233:GLU:HG3	6:BF:638:HOH:O	2.05	0.55
1:BF:305:SER:CB	1:BF:348:SER:HB3	2.31	0.55
1:AH:187:LEU:HD23	1:AH:223:PRO:CB	2.35	0.55
1:AI:313:LEU:HD22	1:AI:319:PHE:CD1	2.41	0.55
1:AI:385:ASP:HA	1:AI:388:ILE:HD12	1.87	0.55
1:BC:105:ILE:HG12	1:BC:298:MET:CE	2.36	0.55
1:BM:121:ASP:OD2	1:BM:358:ARG:HD3	2.05	0.55
1:AB:117:HIS:ND1	1:AB:118:PRO:HD2	2.22	0.55
1:AD:127:LEU:HD11	1:AD:361:VAL:HG12	1.88	0.55
1:AN:189:THR:HB	1:BA:36:LYS:HG2	1.89	0.55
1:AR:310:LEU:O	1:AR:314:GLU:HB3	2.07	0.55
1:BD:285:ASN:ND2	1:BD:288:LEU:H	1.87	0.55
1:BH:111:PHE:CG	1:BH:353:LEU:HD13	2.40	0.55
1:BI:142:ILE:HD11	1:BI:257:LEU:CD2	2.37	0.55
1:BI:384:ILE:CA	1:BI:387:MET:HG3	2.36	0.55
1:BN:359:GLU:O	1:BN:363:VAL:HG23	2.07	0.55
1:BQ:247:ARG:NH1	3:BQ:402:ADP:O1B	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AE:331:ARG:HB2	1:AE:346:ASP:HB3	1.88	0.55
1:AG:274:LEU:O	1:AG:278:CYS:SG	2.63	0.55
1:AH:197:GLN:HB3	6:AH:545:HOH:O	2.05	0.55
1:AQ:298:MET:HE3	1:AQ:353:LEU:HD12	1.87	0.55
1:AR:13:ARG:HD3	1:AR:156:ALA:O	2.07	0.55
1:BB:59:PRO:HD2	1:BB:92:TYR:CD1	2.42	0.55
1:BD:267:GLY:O	1:BD:271:VAL:HG23	2.06	0.55
1:BF:298:MET:HE3	1:BF:353:LEU:HD12	1.89	0.55
1:BJ:112:LYS:O	1:BJ:115:ASP:HB2	2.07	0.55
1:AG:285:ASN:ND2	1:AG:288:LEU:H	2.03	0.55
1:AJ:187:LEU:HB3	1:AJ:223:PRO:HB2	1.89	0.55
1:BE:314:GLU:HG2	1:BE:315:LYS:HD2	1.87	0.55
1:BI:152:CYS:SG	1:BJ:17:SER:HB3	2.47	0.55
1:BQ:357:GLU:O	1:BQ:361:VAL:HG23	2.06	0.55
1:AH:203:PHE:CZ	1:AH:234:LYS:HE2	2.41	0.55
1:AL:168:VAL:HG13	1:AL:280:HIS:CE1	2.41	0.55
1:AQ:298:MET:HG2	6:AQ:570:HOH:O	2.06	0.55
1:BB:146:ARG:HB3	1:BB:282:LEU:HD22	1.89	0.55
1:BH:239:TRP:HB2	1:BH:247:ARG:HB2	1.88	0.55
1:BN:285:ASN:HB2	1:BN:291:ILE:HD11	1.89	0.55
1:AF:6:GLN:O	1:AF:10:VAL:HG23	2.07	0.55
1:AF:85:GLY:O	1:AF:86:CYS:HB3	2.06	0.55
1:AI:143:ARG:HG3	6:AI:532:HOH:O	2.06	0.55
1:BF:59:PRO:HD2	1:BF:92:TYR:CD1	2.42	0.55
1:BG:285:ASN:ND2	1:BG:286:ASP:N	2.55	0.55
1:BG:34:LEU:HA	1:BG:37:HIS:ND1	2.22	0.55
1:AA:148:VAL:O	1:AA:283:MET:HE3	2.06	0.54
1:AC:213:LEU:HD12	1:AC:218:CYS:HB2	1.88	0.54
1:AE:40:VAL:HG13	1:AE:107:GLU:OE1	2.07	0.54
1:AI:313:LEU:O	1:AI:313:LEU:HD23	2.07	0.54
1:AM:313:LEU:HD11	1:AM:322:MET:HE1	1.89	0.54
1:BH:136:TYR:HE2	1:BH:375:ASP:OD2	1.90	0.54
1:BH:223:PRO:HD2	6:BH:567:HOH:O	2.06	0.54
1:BJ:192:GLU:O	1:BJ:196:GLU:HG3	2.08	0.54
1:BL:127:LEU:HD12	1:BL:362:GLN:OE1	2.07	0.54
1:BN:235:ASN:HB2	1:BN:263:ARG:NH1	2.23	0.54
1:BN:34:LEU:HA	1:BN:37:HIS:ND1	2.21	0.54
1:AB:336:GLU:OE2	2:AB:401:NMG:NE	2.34	0.54
1:AI:205:PHE:HB2	1:AI:242:GLU:OE2	2.07	0.54
1:AM:205:PHE:HD2	1:AM:239:TRP:CD2	2.25	0.54
1:AN:154:PRO:HG2	1:AN:243:GLU:O	2.07	0.54
1:AO:30:ASN:OD1	1:AP:159:ARG:HB2	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BA:34:LEU:HA	1:BA:37:HIS:ND1	2.21	0.54
1:BF:230:HIS:HB3	1:BF:237:LEU:HD23	1.88	0.54
1:BP:270:GLU:OE2	1:BP:270:GLU:HA	2.06	0.54
1:BQ:148:VAL:O	1:BQ:148:VAL:HG12	2.06	0.54
1:AC:318:ARG:HD3	1:AC:388:ILE:CD1	2.38	0.54
1:AK:359:GLU:O	1:AK:362:GLN:HB3	2.07	0.54
1:AP:141:ARG:HG3	1:AP:251:MET:HB3	1.87	0.54
1:AR:146:ARG:HD2	1:AR:282:LEU:HD13	1.90	0.54
1:BE:205:PHE:HB2	1:BE:242:GLU:OE2	2.06	0.54
1:BE:252:GLN:HG2	1:BE:260:VAL:HG22	1.88	0.54
1:BE:296:THR:O	1:BE:352:ARG:HG3	2.07	0.54
1:BN:246:ILE:O	1:BN:247:ARG:HG2	2.07	0.54
1:AD:285:ASN:ND2	1:AD:287:ARG:H	2.05	0.54
1:AG:266:ARG:HG3	6:AG:572:HOH:O	2.06	0.54
1:AG:105:ILE:HG12	1:AG:298:MET:HE2	1.88	0.54
1:AG:331:ARG:HB2	1:AG:346:ASP:HB3	1.88	0.54
1:AM:270:GLU:OE2	1:AM:273:ARG:HD3	2.07	0.54
1:AN:205:PHE:HB3	1:AN:239:TRP:CZ3	2.42	0.54
1:AN:213:LEU:HD12	1:AN:218:CYS:CB	2.38	0.54
1:AN:313:LEU:HD11	1:AN:374:CYS:HB2	1.88	0.54
1:BF:37:HIS:O	1:BK:177:LYS:HB3	2.07	0.54
1:BK:285:ASN:HD22	1:BK:288:LEU:H	1.55	0.54
1:BN:143:ARG:HG2	1:BN:144:CYS:N	2.21	0.54
1:BO:127:LEU:HD12	1:BO:362:GLN:OE1	2.08	0.54
1:AK:48:GLU:N	6:AK:566:HOH:O	2.38	0.54
1:AI:35:SER:HB3	1:AO:189:THR:OG1	2.07	0.54
1:BA:143:ARG:HG2	1:BA:144:CYS:N	2.22	0.54
1:BH:352:ARG:CG	1:BH:352:ARG:NH1	2.70	0.54
1:BI:39:ASN:HB2	1:BI:83:LYS:O	2.06	0.54
1:BM:310:LEU:HD13	1:BM:313:LEU:HD22	1.90	0.54
1:BR:34:LEU:HA	1:BR:37:HIS:ND1	2.22	0.54
1:AC:94:TYR:CZ	1:AC:288:LEU:HD11	2.43	0.54
1:AD:14:VAL:HG12	1:AD:16:HIS:CD2	2.42	0.54
1:AK:285:ASN:ND2	1:AK:287:ARG:H	2.06	0.54
1:AM:75:PRO:HD2	6:AM:522:HOH:O	2.06	0.54
1:AN:187:LEU:HD22	1:AN:226:ARG:HB3	1.89	0.54
1:AO:108:ILE:HG21	1:AO:296:THR:HG22	1.90	0.54
1:BA:251:MET:O	1:BA:252:GLN:HB3	2.08	0.54
1:BD:143:ARG:NH1	1:BD:303:ARG:HD3	2.23	0.54
1:BD:70:THR:HG22	6:BD:566:HOH:O	2.08	0.54
1:BN:205:PHE:CG	1:BN:242:GLU:HG3	2.42	0.54
1:BP:13:ARG:HG2	6:BP:566:HOH:O	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BR:188:THR:CG2	1:BR:223:PRO:HG2	2.37	0.54
1:AH:193:LYS:HG3	1:AM:193:LYS:HE3	1.89	0.54
1:AH:314:GLU:HG2	1:AH:315:LYS:HD2	1.90	0.54
1:AK:94:TYR:CZ	1:AK:288:LEU:HD11	2.41	0.54
1:AN:314:GLU:HG3	1:AN:315:LYS:HD2	1.90	0.54
1:AP:95:GLU:HG3	6:AP:653:HOH:O	2.06	0.54
1:BA:122:LEU:HD12	1:BA:269:LEU:HD21	1.89	0.54
1:BC:302:VAL:O	1:BC:352:ARG:HD3	2.06	0.54
1:BD:314:GLU:HG3	1:BD:315:LYS:HD2	1.89	0.54
1:BG:185:TYR:CD1	1:BG:185:TYR:N	2.76	0.54
1:BG:205:PHE:HD2	1:BG:239:TRP:CD2	2.25	0.54
1:BM:302:VAL:O	1:BM:352:ARG:HD3	2.06	0.54
1:BN:247:ARG:NH1	3:BN:402:ADP:O1B	2.41	0.54
1:BQ:37:HIS:CD2	1:BQ:75:PRO:HA	2.43	0.54
1:AH:34:LEU:HD13	1:AH:42:ALA:HA	1.90	0.54
1:AQ:39:ASN:C	1:AQ:82:LYS:HE2	2.27	0.54
1:BH:207:LYS:O	1:BH:209:THR:N	2.35	0.54
1:BH:352:ARG:HG2	1:BH:352:ARG:HH11	1.72	0.54
1:BJ:372:ILE:HG22	1:BJ:376:LYS:HE2	1.89	0.54
1:BK:340:ALA:HB2	1:BK:345:TYR:CE2	2.42	0.54
1:BK:66:LYS:HG3	1:BL:15:GLY:O	2.08	0.54
1:AC:126:LYS:HB2	1:AC:358:ARG:HD2	1.89	0.54
1:AD:154:PRO:HA	1:AD:157:MET:SD	2.47	0.54
1:AK:50:TYR:O	1:AK:54:TRP:HB3	2.07	0.54
1:AO:141:ARG:HH21	1:AO:249:ILE:HD13	1.72	0.54
1:BA:67:CYS:O	1:BA:86:CYS:HA	2.07	0.54
1:BB:53:TYR:HB3	1:BB:97:TYR:CD2	2.43	0.54
1:BK:34:LEU:HD21	1:BK:72:VAL:HG22	1.89	0.54
3:AF:402:ADP:H5'1	3:AF:402:ADP:O2B	2.08	0.54
1:AF:303:ARG:NH2	3:AF:402:ADP:O2A	2.41	0.54
1:AL:147:SER:HG	1:AL:292:CYS:HA	1.73	0.54
1:BA:201:ASP:HB3	1:BA:203:PHE:CE2	2.42	0.54
1:BE:220:ARG:HG2	1:BF:69:GLN:NE2	2.22	0.54
1:BI:285:ASN:ND2	1:BI:287:ARG:H	2.05	0.54
1:BM:57:VAL:CG1	1:BM:61:GLY:HA2	2.38	0.54
1:BO:359:GLU:O	1:BO:363:VAL:HG23	2.08	0.54
1:BR:313:LEU:HD23	1:BR:316:HIS:HB3	1.90	0.54
1:AA:151:VAL:HG11	1:AA:161:GLU:HB3	1.90	0.53
1:AB:66:LYS:O	1:AB:66:LYS:HD3	2.06	0.53
1:AD:237:LEU:N	1:AD:237:LEU:HD12	2.23	0.53
1:BB:183:LYS:HD3	1:BB:185:TYR:CZ	2.43	0.53
1:BC:66:LYS:HE3	1:BD:16:HIS:CD2	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BF:18:LYS:O	1:BF:21:GLU:HG2	2.08	0.53
1:BH:364:LEU:HD22	1:BH:368:VAL:CG2	2.38	0.53
1:BL:346:ASP:OD1	1:BL:346:ASP:O	2.26	0.53
1:BM:191:ASN:HD21	1:BM:193:LYS:HB2	1.72	0.53
1:BO:53:TYR:OH	1:BO:99:GLU:HB3	2.08	0.53
1:BP:109:HIS:O	1:BP:110:HIS:HB2	2.07	0.53
1:BQ:110:HIS:CD2	1:BQ:327:ARG:CZ	2.91	0.53
1:AB:83:LYS:HD2	2:AB:401:NMG:O1	2.09	0.53
1:AD:143:ARG:NH2	1:AD:297:ASN:OD1	2.40	0.53
1:AF:121:ASP:HB3	1:AF:356:SER:HB2	1.90	0.53
1:AH:203:PHE:CE1	1:AH:234:LYS:HB3	2.42	0.53
1:AH:26:LYS:O	1:AH:27:ALA:C	2.47	0.53
1:AK:318:ARG:HD3	1:AK:388:ILE:HD13	1.89	0.53
1:AM:154:PRO:HG2	1:AM:243:GLU:O	2.07	0.53
1:AM:36:LYS:HG2	1:BB:189:THR:O	2.08	0.53
1:AP:323:LEU:HD13	1:AP:330:LYS:HB2	1.90	0.53
1:BC:361:VAL:O	1:BC:365:VAL:HG23	2.07	0.53
1:BG:217:GLY:HA2	6:BG:507:HOH:O	2.07	0.53
1:BG:331:ARG:HB2	1:BG:346:ASP:CB	2.38	0.53
1:BI:147:SER:O	1:BI:282:LEU:HA	2.09	0.53
1:BI:94:TYR:CE1	1:BI:288:LEU:HD11	2.43	0.53
1:BJ:50:TYR:O	1:BJ:54:TRP:HB3	2.08	0.53
1:BH:189:THR:O	1:BP:36:LYS:HG2	2.09	0.53
1:BR:308:LEU:HD13	1:BR:310:LEU:CD1	2.38	0.53
1:AA:60:ASN:HB2	1:AA:90:ASP:OD2	2.08	0.53
1:AD:105:ILE:HG12	1:AD:298:MET:HE1	1.89	0.53
1:AF:64:PHE:O	1:AF:68:ILE:HG12	2.07	0.53
1:AH:208:PRO:HD3	1:AH:222:TRP:CZ2	2.43	0.53
1:AQ:285:ASN:ND2	1:AQ:287:ARG:N	2.55	0.53
1:AQ:31:PHE:CD1	1:AQ:32:PRO:HD2	2.44	0.53
1:AR:331:ARG:HH11	1:AR:336:GLU:HB2	1.71	0.53
1:BC:109:HIS:O	1:BC:110:HIS:HB2	2.08	0.53
1:BK:142:ILE:HD12	1:BK:260:VAL:HG12	1.89	0.53
1:BN:187:LEU:HB3	1:BN:223:PRO:HB2	1.90	0.53
1:BN:296:THR:O	1:BN:352:ARG:HG3	2.08	0.53
3:BR:402:ADP:O1B	5:BR:404:NO3:N	2.42	0.53
1:AB:346:ASP:OD1	1:AB:346:ASP:C	2.47	0.53
1:AC:117:HIS:HE1	1:AC:300:THR:HG23	1.73	0.53
1:AP:180:LEU:O	1:AP:229:TRP:HH2	1.91	0.53
1:BA:384:ILE:O	1:BA:388:ILE:HG13	2.08	0.53
1:BD:105:ILE:HG23	1:BD:298:MET:HE1	1.91	0.53
1:BE:151:VAL:HG13	1:BE:152:CYS:N	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BG:83:LYS:NZ	6:BG:502:HOH:O	2.40	0.53
1:BK:313:LEU:HD22	1:BK:319:PHE:CD1	2.43	0.53
1:BN:285:ASN:HD22	1:BN:288:LEU:HG	1.70	0.53
1:BN:128:VAL:HG11	1:BO:358:ARG:HH21	1.72	0.53
1:AB:300:THR:HB	1:AB:302:VAL:HG23	1.91	0.53
1:AE:285:ASN:HD22	1:AE:287:ARG:H	1.57	0.53
1:AH:330:LYS:HE3	1:AH:345:TYR:CE2	2.42	0.53
1:AL:319:PHE:O	1:AL:323:LEU:HG	2.08	0.53
1:AN:303:ARG:HB2	1:AN:352:ARG:NH1	2.24	0.53
1:BB:121:ASP:O	1:BB:357:GLU:HB2	2.09	0.53
1:BD:195:GLN:O	1:BD:199:ILE:HG13	2.08	0.53
1:BD:213:LEU:HG	1:BD:213:LEU:O	2.09	0.53
1:BG:239:TRP:HB2	1:BG:247:ARG:HB2	1.90	0.53
1:AB:31:PHE:HD1	1:AB:50:TYR:CD2	2.25	0.53
1:AH:285:ASN:HB2	1:AH:291:ILE:HD11	1.90	0.53
1:AM:154:PRO:N	1:AM:155:PRO:HD2	2.23	0.53
1:BF:197:GLN:NE2	1:BF:200:GLU:OE1	2.41	0.53
1:BO:56:LYS:NZ	1:BO:96:CYS:HA	2.24	0.53
1:BR:314:GLU:CG	1:BR:315:LYS:HD2	2.38	0.53
1:AB:285:ASN:HD22	1:AB:288:LEU:H	1.56	0.53
1:AD:106:GLU:HG3	1:AD:111:PHE:O	2.08	0.53
1:AH:18:LYS:HB3	1:AH:20:TRP:CE2	2.43	0.53
1:AP:326:LEU:HD21	1:AP:370:LEU:HD23	1.91	0.53
1:AP:52:LYS:NZ	1:AP:99:GLU:OE2	2.42	0.53
1:AQ:284:HIS:CE1	1:AQ:289:GLY:HA2	2.44	0.53
1:AQ:285:ASN:HD22	1:AQ:288:LEU:N	1.97	0.53
1:BI:142:ILE:HD12	1:BI:260:VAL:HG12	1.91	0.53
1:BN:105:ILE:HG12	1:BN:298:MET:HE1	1.91	0.53
1:AB:143:ARG:HD2	3:AB:402:ADP:O2B	2.09	0.53
1:AE:36:LYS:O	1:AE:75:PRO:HB2	2.08	0.53
1:AF:297:ASN:HB3	1:AF:301:VAL:HG13	1.90	0.53
1:AI:226:ARG:HG3	1:AI:241:ASN:O	2.09	0.53
1:AN:80:TYR:HB2	6:AN:584:HOH:O	2.09	0.53
1:AO:183:LYS:HG2	1:AO:184:TYR:N	2.24	0.53
1:AP:195:GLN:O	1:AP:199:ILE:HG13	2.09	0.53
1:BO:236:PHE:CE1	1:BO:267:GLY:HA3	2.43	0.53
1:BP:149:LYS:HB2	1:BP:281:GLY:O	2.08	0.53
1:AE:288:LEU:HD22	1:AE:353:LEU:HD11	1.90	0.53
1:AH:44:GLN:OE1	1:AH:44:GLN:HA	2.09	0.53
1:AH:94:TYR:CZ	1:AH:98:LYS:HG3	2.44	0.53
1:AJ:359:GLU:HG3	6:AJ:625:HOH:O	2.08	0.53
1:AK:66:LYS:NZ	1:AK:155:PRO:O	2.41	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AL:374:CYS:SG	1:AL:387:MET:HE2	2.49	0.53
1:BG:37:HIS:O	1:BO:185:TYR:HE2	1.92	0.53
1:BN:252:GLN:HG3	6:BN:595:HOH:O	2.09	0.53
1:BQ:39:ASN:HB2	1:BQ:83:LYS:O	2.09	0.53
1:AC:250:SER:HB3	1:AC:264:PHE:HB2	1.91	0.53
1:AD:32:PRO:HB2	1:AD:34:LEU:HD21	1.90	0.53
1:AD:351:ALA:O	1:AD:360:LEU:HD22	2.08	0.53
1:AH:40:VAL:HB	1:AH:84:THR:O	2.08	0.53
1:AL:159:ARG:HA	6:AL:598:HOH:O	2.09	0.53
1:AL:285:ASN:ND2	1:AL:287:ARG:H	2.06	0.53
1:AM:159:ARG:HB2	1:AN:30:ASN:OD1	2.09	0.53
1:AM:228:ILE:HG23	1:AM:228:ILE:O	2.09	0.53
1:AM:285:ASN:ND2	1:AM:287:ARG:N	2.56	0.53
1:BA:267:GLY:O	1:BA:271:VAL:HG23	2.09	0.53
1:BH:253:LYS:HE3	6:BH:505:HOH:O	2.09	0.53
1:BL:316:HIS:CG	1:BL:317:PRO:HD2	2.44	0.53
1:BN:40:VAL:HG12	1:BN:104:CYS:SG	2.48	0.53
1:BQ:109:HIS:O	1:BQ:110:HIS:HB2	2.09	0.53
1:AD:285:ASN:HD22	1:AD:287:ARG:H	1.55	0.52
1:AD:361:VAL:O	1:AD:365:VAL:HG23	2.08	0.52
1:AH:213:LEU:HD12	1:AH:218:CYS:HB3	1.90	0.52
1:AH:230:HIS:C	1:AH:230:HIS:ND1	2.63	0.52
1:AJ:285:ASN:ND2	1:AJ:287:ARG:H	2.07	0.52
1:AO:121:ASP:HB3	1:AO:356:SER:HB2	1.91	0.52
1:BA:69:GLN:NE2	1:BA:73:ASP:OD1	2.42	0.52
1:BC:175:GLY:O	1:BC:177:LYS:HE2	2.09	0.52
1:BI:361:VAL:O	1:BI:365:VAL:HG23	2.09	0.52
1:AF:147:SER:HB2	1:AF:283:MET:HB2	1.91	0.52
1:AI:340:ALA:HB2	1:AI:345:TYR:CE2	2.44	0.52
1:AO:298:MET:HE3	1:AO:353:LEU:HD12	1.91	0.52
1:AP:310:LEU:HD13	1:AP:313:LEU:HD22	1.92	0.52
1:BA:238:VAL:HG22	1:BA:248:VAL:HG22	1.92	0.52
1:BB:205:PHE:HD2	1:BB:239:TRP:CD2	2.27	0.52
1:BE:168:VAL:HG13	1:BE:280:HIS:ND1	2.23	0.52
1:BE:312:PHE:CZ	1:BE:379:GLU:HG3	2.43	0.52
1:BI:109:HIS:O	1:BI:110:HIS:HB2	2.09	0.52
1:BJ:283:MET:HG2	1:BJ:291:ILE:HB	1.89	0.52
1:BK:25:PHE:CD1	1:BL:160:ALA:HB1	2.44	0.52
1:AH:222:TRP:CD1	1:AH:223:PRO:HB3	2.45	0.52
1:AN:121:ASP:OD2	1:AN:358:ARG:HD3	2.09	0.52
1:AR:250:SER:OG	1:AR:260:VAL:HG13	2.10	0.52
1:BK:34:LEU:HA	1:BK:37:HIS:ND1	2.23	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BP:206:GLU:HG3	1:BP:207:LYS:O	2.10	0.52
1:BP:182:GLY:HA3	1:BP:229:TRP:CZ2	2.44	0.52
1:AJ:18:LYS:HB3	1:AJ:20:TRP:CZ2	2.44	0.52
1:AJ:165:VAL:HB	1:AJ:241:ASN:HD21	1.75	0.52
1:AK:40:VAL:HG13	1:AK:107:GLU:OE1	2.10	0.52
1:AO:60:ASN:O	1:AP:17:SER:HA	2.10	0.52
1:BD:313:LEU:HD22	1:BD:319:PHE:CD1	2.44	0.52
1:BF:137:VAL:CG1	1:BF:306:VAL:HB	2.39	0.52
1:BH:105:ILE:HG12	1:BH:298:MET:HE3	1.91	0.52
1:BH:146:ARG:HD2	1:BH:290:TYR:CD1	2.45	0.52
1:BN:49:LEU:HD21	1:BN:99:GLU:HG2	1.91	0.52
1:AA:154:PRO:HG2	1:AA:243:GLU:O	2.10	0.52
1:AA:110:HIS:CD2	1:AA:327:ARG:CZ	2.93	0.52
1:AC:285:ASN:ND2	1:AC:288:LEU:H	2.07	0.52
1:AK:143:ARG:HH22	1:AK:297:ASN:CG	2.13	0.52
1:AL:267:GLY:O	1:AL:271:VAL:HG23	2.10	0.52
1:AR:292:CYS:SG	1:AR:301:VAL:HG11	2.49	0.52
1:BC:143:ARG:HG3	6:BC:502:HOH:O	2.09	0.52
1:BF:176:LEU:HD12	1:BF:229:TRP:CZ2	2.45	0.52
1:BI:303:ARG:NH2	3:BI:402:ADP:O2A	2.41	0.52
1:BL:205:PHE:CD1	1:BL:242:GLU:HG3	2.44	0.52
1:BM:331:ARG:NH1	3:BM:402:ADP:O2A	2.42	0.52
1:BN:184:TYR:CE1	1:BN:240:ILE:HD12	2.45	0.52
1:BG:35:SER:HB3	1:BO:186:PRO:HG2	1.90	0.52
1:AA:79:PHE:CD2	1:AA:337:SER:HA	2.45	0.52
1:AA:257:LEU:HD11	1:AA:364:LEU:HD12	1.91	0.52
1:AA:38:ASN:HD22	1:AA:38:ASN:C	2.13	0.52
1:AD:147:SER:HB2	1:AD:283:MET:HB2	1.90	0.52
1:AE:325:LYS:HD3	1:AE:389:PRO:HB2	1.92	0.52
1:AM:126:LYS:HG3	1:AM:358:ARG:HH11	1.75	0.52
1:AM:359:GLU:HG2	1:AP:128:VAL:CG2	2.40	0.52
1:AP:57:VAL:HG12	1:AP:58:THR:O	2.10	0.52
1:BC:309:ARG:NH1	1:BC:342:ASP:O	2.42	0.52
1:BC:84:THR:HG22	1:BC:86:CYS:SG	2.49	0.52
1:BE:50:TYR:O	1:BE:54:TRP:HB3	2.10	0.52
1:BH:285:ASN:HB2	1:BH:291:ILE:HD11	1.92	0.52
1:BI:121:ASP:HB3	1:BI:356:SER:HB2	1.92	0.52
1:BK:132:PHE:CZ	1:BK:365:VAL:HG22	2.45	0.52
1:BN:143:ARG:HG3	6:BN:508:HOH:O	2.09	0.52
1:AC:56:LYS:NZ	6:AC:599:HOH:O	2.41	0.52
1:AG:285:ASN:ND2	1:AG:287:ARG:H	2.07	0.52
1:AH:109:HIS:O	1:AH:110:HIS:HB2	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AQ:165:VAL:O	1:AQ:169:VAL:HG23	2.09	0.52
1:AQ:326:LEU:O	1:AQ:328:LEU:HG	2.09	0.52
1:BC:27:ALA:HB2	1:BC:54:TRP:NE1	2.25	0.52
1:BF:247:ARG:NH1	3:BF:402:ADP:O1B	2.43	0.52
1:BQ:356:SER:O	1:BQ:360:LEU:HG	2.10	0.52
1:AB:242:GLU:CD	1:AB:243:GLU:H	2.12	0.52
1:AJ:204:LEU:HD12	1:AJ:205:PHE:N	2.25	0.52
1:AK:201:ASP:O	1:AK:202:HIS:HB2	2.09	0.52
1:BB:183:LYS:HG2	1:BB:184:TYR:H	1.73	0.52
1:BF:188:THR:HG22	1:BF:223:PRO:HG2	1.92	0.52
1:BK:31:PHE:CE2	1:BK:47:LYS:HG2	2.44	0.52
1:BN:342:ASP:O	1:BN:343:SER:HB2	2.09	0.52
1:BR:145:GLY:O	1:BR:146:ARG:HD3	2.09	0.52
1:AE:44:GLN:HB3	1:AE:103:LYS:HE2	1.92	0.52
1:AI:307:HIS:CD2	3:AI:402:ADP:C6	2.98	0.52
1:AN:65:ASP:O	1:AN:69:GLN:HB2	2.10	0.52
1:AP:351:ALA:C	1:AP:352:ARG:HG2	2.30	0.52
1:BC:188:THR:HG22	1:BC:223:PRO:HG2	1.91	0.52
1:BE:109:HIS:HE1	1:BE:296:THR:O	1.93	0.52
1:BG:161:GLU:O	1:BG:165:VAL:HG23	2.09	0.52
1:AA:151:VAL:HG13	1:AA:161:GLU:HB3	1.91	0.52
1:AF:228:ILE:HD11	1:AF:237:LEU:HD23	1.92	0.52
1:AK:34:LEU:HD13	1:AK:42:ALA:HA	1.91	0.52
1:AL:297:ASN:HB3	1:AL:301:VAL:HG13	1.92	0.52
1:AN:285:ASN:HD22	1:AN:288:LEU:CB	2.23	0.52
1:AO:143:ARG:HG2	1:AO:144:CYS:N	2.25	0.52
1:AO:313:LEU:O	1:AO:313:LEU:HD23	2.10	0.52
1:AP:57:VAL:HG12	1:AP:58:THR:N	2.24	0.52
1:BB:384:ILE:HA	1:BB:387:MET:HG3	1.92	0.52
1:BD:229:TRP:HB3	1:BD:238:VAL:HB	1.91	0.52
1:BE:105:ILE:HG12	1:BE:298:MET:HE2	1.92	0.52
1:BE:113:PRO:HA	1:BE:287:ARG:HH22	1.75	0.52
1:BF:220:ARG:O	1:BF:222:TRP:N	2.43	0.52
1:BF:173:LEU:HD13	1:BF:229:TRP:CG	2.44	0.52
1:AD:106:GLU:HG3	1:AD:112:LYS:HA	1.92	0.51
1:AG:152:CYS:SG	1:AH:17:SER:HB3	2.51	0.51
1:AM:164:LEU:HB2	6:AM:569:HOH:O	2.09	0.51
1:AO:377:LYS:HG3	1:AO:387:MET:CE	2.40	0.51
1:BI:238:VAL:HA	1:BI:247:ARG:O	2.10	0.51
1:BI:143:ARG:HA	1:BI:248:VAL:O	2.11	0.51
1:BL:184:TYR:CD2	1:BL:186:PRO:HD3	2.45	0.51
1:AM:168:VAL:HG13	1:AM:280:HIS:CE1	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AM:187:LEU:HB2	1:AM:226:ARG:O	2.10	0.51
1:BB:26:LYS:O	1:BB:29:ASP:HB2	2.10	0.51
1:BE:24:LYS:HE3	1:BE:25:PHE:CE2	2.44	0.51
1:BH:202:HIS:HB3	3:BH:402:ADP:H1'	1.91	0.51
1:BL:111:PHE:CE1	1:BL:115:ASP:HB3	2.45	0.51
1:BL:143:ARG:NH2	1:BL:297:ASN:OD1	2.43	0.51
1:BN:364:LEU:HD22	1:BN:368:VAL:CG2	2.39	0.51
1:AA:285:ASN:ND2	1:AA:287:ARG:N	2.52	0.51
1:AL:135:LYS:HD3	1:AL:136:TYR:CE1	2.46	0.51
1:AN:285:ASN:ND2	1:AN:288:LEU:HD12	2.25	0.51
1:BD:8:TYR:HD2	1:BD:11:LYS:NZ	2.08	0.51
1:AC:94:TYR:CD1	1:AC:95:GLU:HG2	2.46	0.51
1:AH:312:PHE:CE2	1:AH:379:GLU:HA	2.45	0.51
1:AN:32:PRO:HB2	1:AN:34:LEU:HD21	1.92	0.51
1:BA:313:LEU:HD23	1:BA:313:LEU:O	2.10	0.51
1:BB:236:PHE:CZ	1:BB:267:GLY:HA3	2.45	0.51
1:BB:99:GLU:HG2	1:BB:99:GLU:O	2.09	0.51
1:BD:34:LEU:HA	1:BD:37:HIS:ND1	2.26	0.51
1:BE:357:GLU:O	1:BE:361:VAL:HG23	2.11	0.51
1:BE:66:LYS:HD3	1:BE:66:LYS:O	2.10	0.51
1:BC:177:LYS:HD2	1:BH:43:SER:CB	2.41	0.51
1:BN:10:VAL:HG12	1:BN:11:LYS:N	2.25	0.51
1:AD:270:GLU:HA	1:AD:270:GLU:OE2	2.10	0.51
1:AE:312:PHE:CZ	1:AE:379:GLU:HG3	2.46	0.51
1:AH:203:PHE:CE2	1:AH:234:LYS:HE2	2.46	0.51
1:AM:359:GLU:HG2	1:AP:128:VAL:HG22	1.91	0.51
1:AP:49:LEU:HD21	1:AP:99:GLU:HG2	1.92	0.51
1:BL:144:CYS:HA	1:BL:301:VAL:O	2.09	0.51
1:BM:318:ARG:HD3	1:BM:388:ILE:HD13	1.92	0.51
1:BP:361:VAL:O	1:BP:365:VAL:HG23	2.11	0.51
1:AB:31:PHE:CE1	1:AB:47:LYS:HA	2.46	0.51
1:AC:364:LEU:O	1:AC:368:VAL:HG23	2.11	0.51
1:AD:41:MET:HG2	1:AD:100:PHE:CZ	2.46	0.51
1:AE:49:LEU:HD21	1:AE:99:GLU:CD	2.31	0.51
1:AI:294:CYS:SG	1:AI:296:THR:OG1	2.65	0.51
1:AP:247:ARG:NH1	3:AP:402:ADP:O1B	2.44	0.51
1:AR:141:ARG:HD2	1:AR:251:MET:CE	2.40	0.51
1:BE:184:TYR:CE1	1:BE:240:ILE:HD12	2.46	0.51
1:BE:377:LYS:HG2	6:BE:586:HOH:O	2.11	0.51
1:BF:112:LYS:O	1:BF:115:ASP:HB2	2.11	0.51
1:BO:278:CYS:CB	1:BO:280:HIS:CE1	2.93	0.51
1:AA:142:ILE:HG13	1:AA:260:VAL:CG1	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AJ:84:THR:HG22	1:AJ:86:CYS:H	1.76	0.51
1:AK:36:LYS:HG3	6:AK:554:HOH:O	2.10	0.51
1:AP:94:TYR:OH	1:AP:98:LYS:HE3	2.11	0.51
1:BE:91:GLU:HB2	1:BE:283:MET:CE	2.41	0.51
1:BH:31:PHE:CD1	1:BH:32:PRO:HD2	2.46	0.51
1:BO:285:ASN:HB3	1:BO:288:LEU:HB2	1.93	0.51
1:BP:18:LYS:HB3	1:BP:20:TRP:CE2	2.46	0.51
1:AA:184:TYR:CE1	1:AA:240:ILE:HD12	2.46	0.51
1:AD:19:PRO:O	1:AD:25:PHE:HB2	2.11	0.51
1:AD:222:TRP:HA	1:AD:226:ARG:HH12	1.76	0.51
1:AE:40:VAL:O	1:AE:44:GLN:HG2	2.10	0.51
1:AF:212:LEU:HD12	1:AF:216:SER:HB3	1.93	0.51
1:AH:112:LYS:O	1:AH:115:ASP:HB2	2.11	0.51
6:AF:505:HOH:O	1:AI:177:LYS:HD3	2.10	0.51
1:AJ:63:THR:OG1	1:AJ:66:LYS:HB2	2.11	0.51
1:AL:134:ASP:HB2	6:AL:562:HOH:O	2.10	0.51
1:AL:364:LEU:O	1:AL:368:VAL:HG23	2.10	0.51
1:AM:199:ILE:HD13	1:AM:206:GLU:HA	1.92	0.51
1:AP:217:GLY:O	1:AP:220:ARG:NE	2.44	0.51
1:BC:48:GLU:HB2	6:BC:638:HOH:O	2.09	0.51
1:BF:44:GLN:HA	1:BF:44:GLN:OE1	2.11	0.51
1:BK:204:LEU:HD12	1:BK:205:PHE:H	1.76	0.51
1:BL:180:LEU:O	1:BL:229:TRP:HH2	1.92	0.51
1:AA:66:LYS:O	1:AA:66:LYS:HD3	2.11	0.51
1:AH:155:PRO:HB3	1:AH:216:SER:O	2.11	0.51
1:AI:205:PHE:CG	1:AI:242:GLU:HG3	2.46	0.51
1:AI:314:GLU:OE1	1:AI:343:SER:HA	2.11	0.51
1:AJ:6:GLN:O	1:AJ:10:VAL:HG23	2.10	0.51
1:AK:142:ILE:HA	1:AK:304:ALA:HA	1.92	0.51
1:AK:285:ASN:HD22	1:AK:287:ARG:H	1.59	0.51
1:AN:285:ASN:ND2	1:AN:288:LEU:H	2.09	0.51
1:BG:310:LEU:O	1:BG:314:GLU:HB3	2.11	0.51
1:BL:282:LEU:O	1:BL:283:MET:C	2.49	0.51
1:BN:306:VAL:HG23	1:BN:308:LEU:HB2	1.93	0.51
1:BO:140:CYS:SG	1:BO:306:VAL:HG12	2.51	0.51
1:AB:357:GLU:O	1:AB:361:VAL:HG23	2.11	0.51
1:AE:177:LYS:HB3	1:AL:43:SER:HA	1.92	0.51
1:AF:98:LYS:HE3	1:AF:102:ASP:OD2	2.11	0.50
1:AG:220:ARG:HG2	1:AH:69:GLN:NE2	2.25	0.50
1:AN:285:ASN:HD22	1:AN:288:LEU:N	2.08	0.50
1:AI:36:LYS:HE2	1:AO:189:THR:HB	1.93	0.50
1:BB:20:TRP:CG	1:BB:55:ASP:HB3	2.45	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BC:166:GLU:OE1	1:BC:225:GLY:HA2	2.10	0.50
1:BF:297:ASN:HB3	1:BF:301:VAL:HG13	1.93	0.50
1:BM:60:ASN:ND2	1:BM:90:ASP:OD2	2.41	0.50
1:BP:351:ALA:O	1:BP:360:LEU:HD22	2.11	0.50
1:AK:244:ASP:OD1	1:AK:292:CYS:HB3	2.11	0.50
1:AL:285:ASN:HD22	1:AL:288:LEU:N	1.88	0.50
1:AO:168:VAL:HG13	1:AO:280:HIS:CE1	2.47	0.50
1:AP:165:VAL:O	1:AP:169:VAL:HG23	2.11	0.50
1:AP:298:MET:HE3	1:AP:353:LEU:HD12	1.92	0.50
1:AR:278:CYS:HB3	1:AR:280:HIS:CE1	2.47	0.50
1:BA:91:GLU:OE2	1:BA:149:LYS:HE2	2.11	0.50
1:BB:284:HIS:HE1	6:BB:613:HOH:O	1.93	0.50
1:BC:313:LEU:HD11	1:BC:322:MET:HE1	1.92	0.50
1:BD:320:ASP:OD1	1:BD:330:LYS:NZ	2.40	0.50
1:BH:140:CYS:HB3	1:BH:257:LEU:HD23	1.93	0.50
1:BH:141:ARG:HD3	3:BH:402:ADP:C8	2.46	0.50
1:BI:183:LYS:HG2	1:BI:184:TYR:N	2.25	0.50
1:BJ:166:GLU:CD	1:BJ:225:GLY:HA2	2.32	0.50
1:BO:244:ASP:OD1	1:BO:292:CYS:HB3	2.11	0.50
1:AE:384:ILE:HA	1:AE:387:MET:HG3	1.92	0.50
1:AI:296:THR:O	1:AI:352:ARG:HG3	2.11	0.50
1:AL:184:TYR:OH	1:AL:227:GLY:HA3	2.11	0.50
1:AR:18:LYS:HB2	1:AR:21:GLU:CD	2.31	0.50
1:BG:318:ARG:HD3	1:BG:388:ILE:HD13	1.94	0.50
1:BI:257:LEU:HD11	1:BI:364:LEU:HD12	1.93	0.50
1:AD:235:ASN:HB2	1:AD:263:ARG:NH1	2.27	0.50
1:AI:66:LYS:NZ	1:AI:216:SER:O	2.45	0.50
1:AJ:18:LYS:HB3	1:AJ:20:TRP:CE2	2.47	0.50
1:AJ:322:MET:CG	1:AJ:389:PRO:HD2	2.41	0.50
1:AK:154:PRO:HA	1:AK:157:MET:SD	2.52	0.50
1:AP:143:ARG:NH1	3:AP:402:ADP:O3B	2.45	0.50
1:AQ:38:ASN:ND2	1:AQ:82:LYS:HE3	2.26	0.50
1:BA:346:ASP:C	1:BA:346:ASP:OD1	2.50	0.50
1:BD:154:PRO:HD2	1:BD:293:THR:OG1	2.12	0.50
1:BF:39:ASN:HB2	1:BF:83:LYS:O	2.11	0.50
1:BK:127:LEU:HD23	1:BK:258:LYS:HG3	1.92	0.50
1:BQ:154:PRO:HG2	1:BQ:243:GLU:O	2.12	0.50
1:BR:308:LEU:CD1	1:BR:310:LEU:HD11	2.40	0.50
1:AA:217:GLY:HA2	6:AA:609:HOH:O	2.11	0.50
1:AB:26:LYS:N	1:AB:29:ASP:OD2	2.33	0.50
1:AF:238:VAL:HA	1:AF:247:ARG:O	2.12	0.50
1:AF:312:PHE:CZ	1:AF:379:GLU:HG3	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AK:126:LYS:HB2	1:AK:358:ARG:CD	2.27	0.50
1:AM:160:ALA:HB1	1:AN:25:PHE:CD1	2.46	0.50
1:BA:151:VAL:HG12	1:BA:152:CYS:O	2.12	0.50
1:BC:108:ILE:CG2	1:BC:296:THR:HG22	2.40	0.50
1:BC:177:LYS:HD2	1:BH:43:SER:HA	1.94	0.50
1:BD:143:ARG:NH2	1:BD:297:ASN:OD1	2.45	0.50
1:BD:229:TRP:O	1:BD:238:VAL:N	2.43	0.50
1:BJ:245:HIS:C	1:BJ:246:ILE:HG13	2.32	0.50
1:BK:346:ASP:OD1	1:BK:346:ASP:C	2.49	0.50
1:BR:364:LEU:HD22	1:BR:368:VAL:HG23	1.93	0.50
1:AA:27:ALA:HB2	1:AA:54:TRP:CD1	2.47	0.50
1:AG:168:VAL:HG13	1:AG:280:HIS:ND1	2.26	0.50
1:AG:303:ARG:NH2	3:AG:402:ADP:O2A	2.45	0.50
1:AH:134:ASP:HB2	6:AH:516:HOH:O	2.11	0.50
1:AL:182:GLY:HA3	1:AL:230:HIS:O	2.12	0.50
1:AL:183:LYS:HD2	6:AR:637:HOH:O	2.11	0.50
1:AL:49:LEU:HD21	1:AL:99:GLU:HG2	1.93	0.50
1:AO:297:ASN:HB3	1:AO:301:VAL:HG13	1.94	0.50
1:AP:149:LYS:HA	1:AP:283:MET:HG3	1.93	0.50
1:BB:316:HIS:CG	1:BB:317:PRO:HD2	2.46	0.50
1:BF:135:LYS:HG2	1:BF:135:LYS:O	2.11	0.50
1:BP:45:LEU:HD11	1:BP:50:TYR:HB2	1.93	0.50
1:BQ:145:GLY:H	1:BQ:301:VAL:HG12	1.76	0.50
1:BQ:314:GLU:CG	1:BQ:315:LYS:HD2	2.41	0.50
1:BP:126:LYS:HD2	1:BQ:366:ASP:OD2	2.11	0.50
1:AC:285:ASN:HD21	1:AC:287:ARG:HB2	1.76	0.50
1:AC:340:ALA:HB2	1:AC:345:TYR:CE2	2.47	0.50
1:AG:191:ASN:ND2	1:AG:193:LYS:HB2	2.26	0.50
1:AM:153:LEU:C	1:AM:155:PRO:HD2	2.32	0.50
1:AN:69:GLN:HG3	6:AN:566:HOH:O	2.12	0.50
1:BA:297:ASN:HB3	1:BA:301:VAL:HG13	1.94	0.50
1:BA:57:VAL:CG1	1:BA:61:GLY:HA2	2.41	0.50
1:BJ:158:SER:OG	1:BJ:161:GLU:HG3	2.12	0.50
1:BP:232:ASN:HB2	6:BP:528:HOH:O	2.11	0.50
1:BQ:79:PHE:HB3	6:BQ:513:HOH:O	2.11	0.50
1:AB:124:HIS:HA	1:AB:261:PHE:CE2	2.47	0.50
1:AE:34:LEU:HA	1:AE:37:HIS:ND1	2.27	0.50
1:AH:185:TYR:HE1	1:AH:230:HIS:CE1	2.30	0.50
1:AI:84:THR:N	2:AI:401:NMG:O2	2.34	0.50
6:AM:569:HOH:O	1:AN:25:PHE:HE1	1.94	0.50
1:AO:159:ARG:HD3	1:AO:221:ASP:OD1	2.11	0.50
1:BA:314:GLU:CG	1:BA:315:LYS:HD2	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BA:47:LYS:O	1:BA:51:GLU:HB2	2.12	0.50
1:BB:364:LEU:HD22	1:BB:368:VAL:HG23	1.94	0.50
1:BE:355:LYS:HB2	1:BE:360:LEU:HD21	1.93	0.50
1:BF:18:LYS:HD3	1:BF:20:TRP:HZ2	1.74	0.50
1:BG:142:ILE:HG22	1:BG:264:PHE:CE1	2.47	0.50
1:BG:357:GLU:CD	1:BG:357:GLU:H	2.15	0.50
1:BI:62:VAL:HG11	1:BI:89:GLY:HA3	1.93	0.50
1:BK:250:SER:CB	1:BK:264:PHE:HB2	2.42	0.50
1:BR:284:HIS:CD2	1:BR:285:ASN:O	2.64	0.50
1:AB:188:THR:CG2	1:AB:223:PRO:HG2	2.42	0.50
1:AC:152:CYS:HB2	1:AC:161:GLU:OE1	2.12	0.50
1:AE:101:PHE:O	1:AE:105:ILE:HG13	2.12	0.50
1:AN:113:PRO:HA	1:AN:287:ARG:NH2	2.27	0.50
1:AN:18:LYS:O	1:AN:21:GLU:HG2	2.12	0.50
1:BA:66:LYS:HE3	1:BB:16:HIS:CD2	2.47	0.50
1:BA:40:VAL:HB	1:BA:84:THR:HA	1.94	0.50
1:BB:297:ASN:HB3	1:BB:301:VAL:HG13	1.93	0.50
1:BC:121:ASP:OD2	1:BC:358:ARG:HD3	2.12	0.50
1:BN:69:GLN:NE2	1:BN:73:ASP:OD1	2.43	0.50
1:BP:141:ARG:HG3	1:BP:251:MET:HB3	1.93	0.50
1:BR:183:LYS:HD3	1:BR:185:TYR:CE2	2.46	0.50
1:BR:277:GLU:O	1:BR:277:GLU:HG2	2.11	0.50
1:AB:112:LYS:O	1:AB:115:ASP:HB2	2.11	0.49
1:AD:191:ASN:ND2	1:AD:193:LYS:H	2.09	0.49
1:AD:126:LYS:HB2	1:AD:358:ARG:HD2	1.94	0.49
1:AN:236:PHE:C	1:AN:237:LEU:HG	2.32	0.49
1:AN:165:VAL:HG11	1:AN:241:ASN:OD1	2.12	0.49
1:AP:361:VAL:O	1:AP:365:VAL:HG23	2.12	0.49
1:AQ:188:THR:HG23	6:AQ:535:HOH:O	2.11	0.49
1:BE:240:ILE:HA	1:BE:245:HIS:O	2.12	0.49
1:BE:288:LEU:CD2	1:BE:353:LEU:HD11	2.42	0.49
1:BF:18:LYS:HB3	1:BF:20:TRP:CZ2	2.47	0.49
1:BF:303:ARG:NH2	3:BF:402:ADP:O2A	2.45	0.49
1:BM:228:ILE:HD11	1:BM:237:LEU:HD23	1.93	0.49
1:BM:313:LEU:HD21	1:BM:319:PHE:CD1	2.47	0.49
1:BA:247:ARG:NH1	3:BA:502:ADP:O1B	2.43	0.49
1:BB:152:CYS:HB2	1:BB:161:GLU:OE1	2.13	0.49
1:BC:224:ASP:O	1:BC:226:ARG:HD2	2.12	0.49
1:BE:177:LYS:HD3	6:BE:575:HOH:O	2.11	0.49
1:BJ:49:LEU:HD21	1:BJ:99:GLU:HG2	1.94	0.49
1:BN:143:ARG:NH2	1:BN:297:ASN:OD1	2.45	0.49
1:BP:278:CYS:HB3	1:BP:280:HIS:CE1	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BR:105:ILE:CD1	1:BR:298:MET:HE1	2.42	0.49
1:AB:14:VAL:HG23	6:AB:526:HOH:O	2.11	0.49
1:AE:320:ASP:OD1	1:AE:330:LYS:NZ	2.43	0.49
1:AH:183:LYS:HD3	1:AH:185:TYR:HE2	1.78	0.49
1:AR:179:ASP:CG	1:AR:266:ARG:HH12	2.16	0.49
1:AR:352:ARG:HH11	1:AR:352:ARG:HG2	1.77	0.49
1:BA:98:LYS:HE3	1:BA:102:ASP:OD2	2.12	0.49
1:BB:357:GLU:O	1:BB:361:VAL:HG23	2.13	0.49
1:BB:377:LYS:HG3	1:BB:387:MET:CE	2.42	0.49
1:BB:239:TRP:HH2	3:BB:402:ADP:H5'2	1.76	0.49
1:BE:188:THR:HG22	1:BE:223:PRO:HG2	1.93	0.49
1:BG:184:TYR:CE1	1:BG:240:ILE:HD12	2.47	0.49
1:BJ:285:ASN:ND2	1:BJ:287:ARG:H	2.10	0.49
1:BM:313:LEU:HD23	1:BM:313:LEU:C	2.32	0.49
1:BP:267:GLY:O	1:BP:271:VAL:HG23	2.12	0.49
1:AH:199:ILE:HG13	1:AH:204:LEU:HD23	1.94	0.49
1:AK:303:ARG:NH2	3:AK:402:ADP:O2A	2.45	0.49
1:BC:151:VAL:CG1	1:BC:152:CYS:N	2.75	0.49
1:BG:126:LYS:HB2	1:BG:358:ARG:HD2	1.94	0.49
1:BG:38:ASN:C	1:BG:38:ASN:HD22	2.16	0.49
1:BI:285:ASN:ND2	1:BI:288:LEU:H	2.03	0.49
1:BK:257:LEU:HD11	1:BK:364:LEU:HD12	1.95	0.49
1:BR:143:ARG:HG3	6:BR:501:HOH:O	2.11	0.49
1:AB:350:TRP:CD1	1:AB:350:TRP:C	2.86	0.49
1:AE:159:ARG:NH2	1:AF:65:ASP:OD1	2.45	0.49
1:AG:187:LEU:HB3	1:AG:223:PRO:HB2	1.94	0.49
1:AH:57:VAL:HG13	1:AH:62:VAL:O	2.12	0.49
1:AL:56:LYS:HE2	1:AL:96:CYS:SG	2.52	0.49
1:AQ:237:LEU:N	1:AQ:237:LEU:HD12	2.28	0.49
1:BB:331:ARG:NH1	1:BB:336:GLU:HB2	2.28	0.49
1:BH:322:MET:O	1:BH:326:LEU:HG	2.13	0.49
1:BH:372:ILE:CG2	1:BH:376:LYS:HE2	2.43	0.49
1:BJ:318:ARG:HD3	1:BJ:388:ILE:CD1	2.41	0.49
1:BK:154:PRO:N	1:BK:155:PRO:HD2	2.27	0.49
1:BK:94:TYR:CD1	1:BK:95:GLU:HG2	2.47	0.49
1:BM:67:CYS:HB3	1:BM:87:VAL:O	2.12	0.49
1:AA:105:ILE:HG12	1:AA:298:MET:CE	2.42	0.49
1:AA:278:CYS:HB3	1:AA:280:HIS:CE1	2.48	0.49
1:AB:18:LYS:HB3	1:AB:20:TRP:CZ2	2.48	0.49
1:AC:310:LEU:O	1:AC:314:GLU:HG2	2.12	0.49
1:AF:201:ASP:O	1:AF:202:HIS:HB2	2.12	0.49
1:AL:285:ASN:ND2	1:AL:288:LEU:N	2.49	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AL:147:SER:OG	1:AL:292:CYS:HA	2.13	0.49
1:AL:94:TYR:CZ	1:AL:288:LEU:HD11	2.48	0.49
1:AM:112:LYS:HB3	1:AM:113:PRO:HD2	1.95	0.49
1:AM:180:LEU:O	1:AM:229:TRP:HH2	1.95	0.49
1:AM:356:SER:OG	1:AM:359:GLU:HG3	2.13	0.49
1:AN:41:MET:HG2	1:AN:100:PHE:HZ	1.77	0.49
1:AQ:278:CYS:HB3	1:AQ:280:HIS:HE1	1.75	0.49
1:AQ:313:LEU:HD12	1:AQ:371:LEU:O	2.12	0.49
1:AR:298:MET:CA	1:AR:301:VAL:HG22	2.43	0.49
1:BD:121:ASP:HB3	1:BD:356:SER:HB2	1.94	0.49
1:BE:113:PRO:HA	1:BE:287:ARG:NH2	2.28	0.49
1:BE:24:LYS:HE3	1:BE:25:PHE:HE2	1.77	0.49
1:BF:177:LYS:HA	1:BF:181:ALA:HB2	1.95	0.49
1:BL:142:ILE:O	1:BL:142:ILE:HG22	2.12	0.49
1:BR:147:SER:HB2	1:BR:283:MET:HB2	1.95	0.49
1:AA:222:TRP:HA	1:AA:226:ARG:NH1	2.27	0.49
1:AC:285:ASN:HD22	1:AC:287:ARG:N	2.11	0.49
1:AM:286:ASP:HB3	6:AM:589:HOH:O	2.12	0.49
3:AO:402:ADP:O2B	3:AO:402:ADP:C5'	2.60	0.49
1:AQ:44:GLN:OE1	1:AQ:103:LYS:HB3	2.12	0.49
1:AR:287:ARG:NH1	1:AR:288:LEU:HD21	2.28	0.49
1:BB:321:GLU:O	1:BB:325:LYS:HG3	2.13	0.49
1:BD:141:ARG:HG3	1:BD:251:MET:HB3	1.95	0.49
1:BE:247:ARG:NH1	3:BE:402:ADP:O1B	2.46	0.49
1:BF:139:SER:HA	1:BF:254:GLY:O	2.12	0.49
1:BJ:346:ASP:OD1	1:BJ:346:ASP:C	2.51	0.49
1:BM:143:ARG:HG3	6:BM:530:HOH:O	2.13	0.49
1:BO:297:ASN:HB3	1:BO:301:VAL:HG13	1.94	0.49
1:BQ:303:ARG:NH2	3:BQ:402:ADP:O2A	2.45	0.49
1:AB:192:GLU:O	1:AB:196:GLU:HG3	2.12	0.49
1:AB:176:LEU:HD12	1:AB:229:TRP:CZ2	2.48	0.49
1:AC:159:ARG:NH2	1:AD:65:ASP:OD1	2.34	0.49
1:AG:183:LYS:HD3	1:AG:185:TYR:CE2	2.48	0.49
1:BE:308:LEU:HD13	1:BE:310:LEU:HD21	1.94	0.49
1:BF:316:HIS:CD2	1:BF:384:ILE:HD11	2.48	0.49
1:BL:187:LEU:HB3	1:BL:226:ARG:O	2.12	0.49
1:BM:146:ARG:HA	6:BM:569:HOH:O	2.12	0.49
1:BM:212:LEU:HB3	6:BM:603:HOH:O	2.11	0.49
1:BP:285:ASN:ND2	1:BP:288:LEU:H	2.09	0.49
1:AA:314:GLU:HG3	1:AA:315:LYS:HD2	1.93	0.49
1:AF:168:VAL:HG12	1:AF:169:VAL:N	2.27	0.49
1:AI:298:MET:HE1	1:AI:353:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AI:37:HIS:CD2	1:AI:75:PRO:HA	2.48	0.49
1:AJ:53:TYR:OH	1:AJ:99:GLU:HB3	2.12	0.49
1:AR:308:LEU:HD22	1:AR:310:LEU:HG	1.95	0.49
1:AR:50:TYR:O	1:AR:54:TRP:HB3	2.13	0.49
1:BD:322:MET:HG3	1:BD:389:PRO:CD	2.41	0.49
1:BE:141:ARG:HG3	1:BE:251:MET:HB3	1.95	0.49
1:BG:314:GLU:HG3	1:BG:315:LYS:HD2	1.94	0.49
1:BH:309:ARG:HG2	6:BH:596:HOH:O	2.12	0.49
1:BI:287:ARG:NH1	6:BI:567:HOH:O	2.44	0.49
1:BI:52:LYS:HE2	1:BI:53:TYR:CE2	2.48	0.49
1:BK:346:ASP:HB2	6:BK:501:HOH:O	2.11	0.49
1:BL:303:ARG:HA	1:BL:349:ASN:HD21	1.78	0.49
1:BM:250:SER:HB3	1:BM:264:PHE:HB2	1.94	0.49
1:BM:69:GLN:HG3	1:BM:69:GLN:O	2.11	0.49
1:BO:49:LEU:HD21	1:BO:99:GLU:HG2	1.95	0.49
1:AA:239:TRP:HB2	1:AA:247:ARG:HB2	1.95	0.49
1:AA:346:ASP:OD1	1:AA:346:ASP:C	2.51	0.49
1:AB:278:CYS:HB3	1:AB:280:HIS:HE1	1.74	0.49
1:AB:313:LEU:HD21	1:AB:319:PHE:CD1	2.47	0.49
1:AD:247:ARG:HB3	6:AD:525:HOH:O	2.12	0.49
1:AF:267:GLY:O	1:AF:271:VAL:HG23	2.13	0.49
1:BA:89:GLY:HA2	1:BA:155:PRO:HG2	1.95	0.49
1:BA:156:ALA:HB1	1:BB:16:HIS:HA	1.95	0.49
1:BJ:312:PHE:CZ	1:BJ:379:GLU:HG3	2.48	0.49
1:BM:38:ASN:HD21	1:BM:82:LYS:HE3	1.78	0.49
1:BO:81:GLY:HA2	6:BO:537:HOH:O	2.11	0.49
1:BR:66:LYS:O	1:BR:66:LYS:HD3	2.12	0.49
1:AB:143:ARG:HG2	1:AB:144:CYS:N	2.27	0.48
1:AC:137:VAL:HG13	1:AC:306:VAL:HB	1.95	0.48
1:AC:191:ASN:HD21	1:AC:193:LYS:H	1.58	0.48
1:AE:341:THR:O	1:AE:342:ASP:CB	2.61	0.48
1:AO:147:SER:HA	1:AO:245:HIS:HB2	1.95	0.48
1:AP:159:ARG:HD3	1:AP:221:ASP:OD1	2.13	0.48
1:BC:168:VAL:HG13	1:BC:280:HIS:CE1	2.48	0.48
1:BD:171:ASP:O	1:BD:174:GLY:N	2.46	0.48
1:BE:331:ARG:NH1	3:BE:402:ADP:O2A	2.45	0.48
1:BM:34:LEU:HD13	1:BM:42:ALA:CB	2.42	0.48
1:BI:36:LYS:HG2	1:BQ:189:THR:HB	1.95	0.48
1:BQ:26:LYS:O	1:BQ:29:ASP:HB2	2.13	0.48
1:AC:94:TYR:HD1	1:AC:95:GLU:HG2	1.79	0.48
1:AH:124:HIS:CE1	1:AH:262:SER:HB2	2.48	0.48
1:AI:83:LYS:HZ1	1:AI:336:GLU:HG3	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AJ:49:LEU:CD2	1:AJ:99:GLU:HG2	2.38	0.48
1:AL:180:LEU:O	1:AL:229:TRP:HH2	1.95	0.48
1:AP:187:LEU:HB3	1:AP:223:PRO:HB2	1.94	0.48
1:AQ:222:TRP:CG	1:AQ:223:PRO:HA	2.48	0.48
1:AQ:247:ARG:NH1	3:AQ:402:ADP:O1B	2.46	0.48
1:AQ:361:VAL:O	1:AQ:365:VAL:HG23	2.13	0.48
1:AQ:152:CYS:SG	1:AR:17:SER:HB3	2.53	0.48
1:BA:153:LEU:HB3	1:BA:155:PRO:HD2	1.95	0.48
1:BE:151:VAL:HG13	1:BE:152:CYS:H	1.78	0.48
1:BI:242:GLU:HB3	6:BI:526:HOH:O	2.13	0.48
1:BI:297:ASN:HB3	1:BI:301:VAL:CG1	2.43	0.48
1:BI:94:TYR:CZ	1:BI:288:LEU:HD11	2.48	0.48
1:BM:307:HIS:CE1	3:BM:402:ADP:C2	3.01	0.48
1:AH:303:ARG:HG3	1:AH:352:ARG:NH1	2.29	0.48
1:AL:319:PHE:CE1	1:AL:323:LEU:HD21	2.49	0.48
1:AO:244:ASP:OD1	1:AO:292:CYS:HB3	2.13	0.48
1:AP:213:LEU:HD13	6:AP:608:HOH:O	2.14	0.48
1:BA:236:PHE:CE1	1:BA:267:GLY:HA3	2.48	0.48
1:BB:284:HIS:CD2	1:BB:285:ASN:O	2.66	0.48
1:BH:110:HIS:HE1	6:BH:545:HOH:O	1.96	0.48
1:BK:168:VAL:HG13	1:BK:280:HIS:CE1	2.48	0.48
1:BN:139:SER:OG	3:BN:402:ADP:N1	2.45	0.48
1:BO:354:GLY:O	1:BO:355:LYS:HG3	2.13	0.48
1:AB:153:LEU:HB3	1:AB:154:PRO:HD2	1.95	0.48
1:AC:104:CYS:O	1:AC:108:ILE:HG13	2.14	0.48
1:AE:168:VAL:HG22	1:AE:280:HIS:CE1	2.48	0.48
1:AH:67:CYS:HB3	1:AH:87:VAL:O	2.13	0.48
1:AJ:111:PHE:CG	1:AJ:353:LEU:HD13	2.48	0.48
1:AN:262:SER:O	1:AN:266:ARG:HB2	2.13	0.48
1:AO:169:VAL:O	1:AO:173:LEU:HG	2.13	0.48
1:AQ:318:ARG:CZ	1:AQ:388:ILE:HD12	2.43	0.48
1:BA:288:LEU:O	1:BA:299:GLY:HA2	2.13	0.48
1:BB:327:ARG:NH1	1:BB:350:TRP:CD1	2.81	0.48
1:BB:94:TYR:OH	1:BB:287:ARG:NH1	2.42	0.48
1:BC:318:ARG:HD3	1:BC:388:ILE:HD13	1.95	0.48
1:BF:301:VAL:O	1:BF:301:VAL:HG12	2.13	0.48
1:BF:384:ILE:HA	1:BF:387:MET:HG3	1.94	0.48
1:BG:247:ARG:NH1	3:BG:402:ADP:O1B	2.46	0.48
1:BH:377:LYS:HG3	1:BH:387:MET:HE2	1.96	0.48
1:BI:374:CYS:HB3	1:BI:384:ILE:HD13	1.95	0.48
1:BK:153:LEU:C	1:BK:155:PRO:HD2	2.34	0.48
1:BK:105:ILE:CD1	1:BK:298:MET:HE1	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BM:226:ARG:HG3	1:BM:241:ASN:O	2.13	0.48
1:AE:188:THR:HG23	6:AE:545:HOH:O	2.13	0.48
1:AF:30:ASN:ND2	1:AF:50:TYR:OH	2.45	0.48
1:AL:92:TYR:O	1:AL:96:CYS:HB2	2.14	0.48
1:AP:314:GLU:HG3	1:AP:315:LYS:HD2	1.96	0.48
1:BC:151:VAL:HG12	1:BC:152:CYS:N	2.29	0.48
1:BL:250:SER:HB3	1:BL:264:PHE:HB2	1.96	0.48
1:BL:293:THR:HB	6:BL:516:HOH:O	2.13	0.48
1:BM:213:LEU:HD12	1:BM:218:CYS:HB2	1.94	0.48
1:AC:312:PHE:CE1	1:AC:379:GLU:HG3	2.49	0.48
1:AD:352:ARG:CG	1:AD:352:ARG:HH11	2.26	0.48
1:AK:110:HIS:HE1	6:AK:621:HOH:O	1.95	0.48
1:AQ:314:GLU:HG3	1:AQ:315:LYS:HD2	1.96	0.48
1:BA:285:ASN:HB3	1:BA:288:LEU:HB2	1.95	0.48
1:BB:322:MET:HE2	1:BB:388:ILE:HG12	1.94	0.48
1:BC:111:PHE:CG	1:BC:353:LEU:HD13	2.48	0.48
1:BC:201:ASP:O	1:BC:202:HIS:HB2	2.12	0.48
1:BC:312:PHE:CZ	1:BC:379:GLU:HG3	2.49	0.48
1:BD:33:ASP:O	1:BD:34:LEU:HD23	2.14	0.48
1:BE:154:PRO:HG2	1:BE:243:GLU:O	2.13	0.48
1:BI:328:LEU:HD11	1:BI:367:GLY:HA3	1.96	0.48
1:BJ:91:GLU:OE2	1:BJ:149:LYS:HG3	2.13	0.48
1:BL:213:LEU:HD13	6:BL:509:HOH:O	2.13	0.48
1:BM:191:ASN:HD21	1:BM:193:LYS:H	1.59	0.48
1:BQ:101:PHE:O	1:BQ:105:ILE:HG13	2.13	0.48
1:BQ:151:VAL:HG12	1:BQ:245:HIS:CE1	2.48	0.48
1:AD:108:ILE:HG21	1:AD:296:THR:HG22	1.94	0.48
1:AD:305:SER:HB2	1:AD:346:ASP:OD1	2.13	0.48
1:AE:288:LEU:O	1:AE:299:GLY:HA2	2.14	0.48
1:AH:18:LYS:HB3	1:AH:20:TRP:CZ2	2.49	0.48
1:AJ:152:CYS:HB2	1:AJ:161:GLU:OE1	2.14	0.48
1:AJ:177:LYS:HA	1:AJ:181:ALA:HB2	1.96	0.48
1:AO:34:LEU:CD1	1:AO:45:LEU:HD23	2.43	0.48
1:AQ:49:LEU:O	1:AQ:53:TYR:HB2	2.13	0.48
1:AR:183:LYS:O	1:AR:185:TYR:CE1	2.67	0.48
1:BA:143:ARG:NH2	1:BA:297:ASN:OD1	2.47	0.48
1:BB:39:ASN:O	1:BB:40:VAL:C	2.51	0.48
1:BI:313:LEU:HD12	1:BI:371:LEU:O	2.13	0.48
1:BI:331:ARG:HB2	1:BI:346:ASP:HB3	1.95	0.48
1:BO:109:HIS:O	1:BO:110:HIS:HB2	2.14	0.48
1:AD:285:ASN:HD22	1:AD:287:ARG:N	2.12	0.48
1:AJ:20:TRP:HB3	1:AJ:54:TRP:CE2	2.48	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AM:285:ASN:ND2	1:AM:287:ARG:HB2	2.27	0.48
1:BA:146:ARG:NH2	1:BA:268:LEU:HD21	2.29	0.48
1:BB:377:LYS:HG3	1:BB:387:MET:HE2	1.96	0.48
1:BC:154:PRO:HG2	1:BC:243:GLU:O	2.14	0.48
1:BC:237:LEU:HD12	1:BC:237:LEU:N	2.29	0.48
1:BE:88:PHE:HD1	1:BE:292:CYS:O	1.97	0.48
1:BF:113:PRO:HA	1:BF:287:ARG:NH2	2.28	0.48
1:BI:180:LEU:O	1:BI:229:TRP:HH2	1.97	0.48
1:BJ:18:LYS:O	1:BJ:21:GLU:HG2	2.14	0.48
1:BK:49:LEU:HD21	1:BK:99:GLU:CG	2.40	0.48
1:BM:270:GLU:OE1	1:BM:273:ARG:NH1	2.47	0.48
1:BM:32:PRO:HD3	1:BN:159:ARG:HH21	1.78	0.48
1:AC:155:PRO:HD3	1:AC:218:CYS:SG	2.54	0.48
1:AH:353:LEU:HD22	1:AH:354:GLY:N	2.29	0.48
1:AI:361:VAL:O	1:AI:365:VAL:HG23	2.14	0.48
1:AK:207:LYS:O	1:AK:209:THR:N	2.44	0.48
1:AM:57:VAL:HG22	1:AM:63:THR:HG22	1.96	0.48
1:AP:328:LEU:HA	1:AP:348:SER:O	2.14	0.48
1:AR:127:LEU:HB3	1:AR:258:LYS:HD2	1.96	0.48
1:BG:359:GLU:O	1:BG:363:VAL:HG23	2.14	0.48
1:BI:113:PRO:HA	1:BI:287:ARG:NH2	2.28	0.48
1:BL:165:VAL:HB	1:BL:241:ASN:HD21	1.79	0.48
1:BQ:154:PRO:HD3	1:BQ:245:HIS:CD2	2.49	0.48
1:AE:208:PRO:HA	1:AE:213:LEU:HD23	1.96	0.48
1:AG:75:PRO:HD2	6:AG:568:HOH:O	2.14	0.48
1:AH:183:LYS:HD3	1:AH:185:TYR:CE2	2.48	0.48
1:AI:121:ASP:OD2	1:AI:358:ARG:HD3	2.12	0.48
1:AQ:364:LEU:HD22	1:AQ:368:VAL:HG23	1.95	0.48
1:AQ:84:THR:HG21	1:AQ:295:PRO:HD2	1.95	0.48
1:BC:313:LEU:HD13	1:BC:374:CYS:HB3	1.96	0.48
1:BI:205:PHE:CD1	1:BI:242:GLU:HG3	2.49	0.48
1:BK:143:ARG:HG2	1:BK:144:CYS:N	2.28	0.48
1:BK:143:ARG:HG3	6:BK:506:HOH:O	2.14	0.48
1:BK:191:ASN:ND2	1:BK:193:LYS:H	2.11	0.48
1:BM:66:LYS:O	1:BM:66:LYS:HD3	2.14	0.48
1:BR:384:ILE:CA	1:BR:387:MET:HG3	2.44	0.48
1:AA:39:ASN:HB2	1:AA:83:LYS:O	2.14	0.47
1:AB:312:PHE:CE1	1:AB:379:GLU:HG3	2.49	0.47
1:AC:159:ARG:O	1:AC:163:ARG:HD2	2.14	0.47
1:AC:180:LEU:O	1:AC:229:TRP:HH2	1.96	0.47
1:AD:41:MET:HG2	1:AD:100:PHE:HZ	1.79	0.47
1:AF:288:LEU:HD22	1:AF:353:LEU:HD11	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AF:314:GLU:OE1	1:AF:345:TYR:OH	2.26	0.47
1:AH:303:ARG:HG3	1:AH:352:ARG:HH12	1.79	0.47
1:AK:144:CYS:HA	1:AK:301:VAL:O	2.14	0.47
1:AP:180:LEU:O	1:AP:229:TRP:CH2	2.67	0.47
1:BA:183:LYS:HD3	1:BA:185:TYR:CE2	2.49	0.47
1:BE:94:TYR:CZ	1:BE:288:LEU:HD11	2.48	0.47
1:BG:211:ALA:O	1:BG:215:THR:HG23	2.14	0.47
1:BJ:176:LEU:C	1:BJ:177:LYS:HG2	2.34	0.47
1:BK:184:TYR:CD2	1:BK:186:PRO:HD3	2.49	0.47
1:BK:285:ASN:HD21	1:BK:287:ARG:HB2	1.79	0.47
1:BP:285:ASN:ND2	1:BP:288:LEU:HG	2.29	0.47
1:AE:159:ARG:HG3	1:AE:221:ASP:OD2	2.14	0.47
1:AG:361:VAL:O	1:AG:365:VAL:HG23	2.14	0.47
1:AH:204:LEU:HG	1:AH:205:PHE:N	2.29	0.47
1:AH:30:ASN:ND2	1:AH:30:ASN:O	2.47	0.47
1:BE:208:PRO:HG3	1:BE:222:TRP:CE2	2.49	0.47
1:BF:305:SER:HB3	1:BF:348:SER:CB	2.35	0.47
1:BF:314:GLU:OE2	1:BF:343:SER:HB3	2.14	0.47
1:BG:143:ARG:NH1	3:BG:402:ADP:O3B	2.48	0.47
1:BG:236:PHE:CZ	1:BG:267:GLY:HA3	2.49	0.47
1:BJ:153:LEU:HD22	6:BJ:587:HOH:O	2.13	0.47
1:BJ:94:TYR:OH	1:BJ:287:ARG:NH1	2.46	0.47
1:BP:18:LYS:HD2	1:BP:21:GLU:OE2	2.14	0.47
1:BQ:195:GLN:NE2	6:BQ:531:HOH:O	2.47	0.47
1:AC:147:SER:HB2	1:AC:283:MET:HB2	1.97	0.47
1:AF:143:ARG:NH2	1:AF:297:ASN:OD1	2.47	0.47
1:AF:213:LEU:HD23	1:AF:219:ALA:HB2	1.96	0.47
1:AH:303:ARG:NH2	3:AH:402:ADP:O2A	2.46	0.47
1:AJ:247:ARG:NH1	3:AJ:402:ADP:O1B	2.47	0.47
1:AK:247:ARG:NH1	3:AK:402:ADP:O1B	2.47	0.47
1:AL:298:MET:HB2	1:AL:353:LEU:HG	1.96	0.47
1:BC:98:LYS:HE3	1:BC:102:ASP:OD2	2.14	0.47
1:BD:187:LEU:HB3	1:BD:223:PRO:HB2	1.95	0.47
1:BE:288:LEU:HD22	1:BE:353:LEU:HD11	1.96	0.47
1:BI:105:ILE:HD13	1:BI:298:MET:HE1	1.95	0.47
1:BI:364:LEU:HD22	1:BI:364:LEU:O	2.14	0.47
1:BK:312:PHE:CZ	1:BK:379:GLU:HG3	2.49	0.47
1:BK:52:LYS:HE2	1:BK:53:TYR:CE2	2.49	0.47
1:BL:126:LYS:HB2	1:BL:358:ARG:HD3	1.95	0.47
1:BM:34:LEU:HD13	1:BM:42:ALA:HB2	1.96	0.47
1:BO:34:LEU:HD12	6:BO:640:HOH:O	2.13	0.47
1:BQ:295:PRO:O	1:BQ:298:MET:HE2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AD:155:PRO:HB3	1:AD:216:SER:O	2.15	0.47
1:AG:175:GLY:O	1:AG:177:LYS:HE2	2.14	0.47
1:AI:359:GLU:O	1:AI:363:VAL:HG23	2.14	0.47
1:AI:40:VAL:HG23	1:AI:84:THR:HA	1.96	0.47
1:AL:11:LYS:HA	1:AL:61:GLY:HA3	1.97	0.47
1:AL:237:LEU:N	1:AL:237:LEU:HD12	2.30	0.47
1:BF:226:ARG:HG3	1:BF:241:ASN:O	2.14	0.47
1:BK:204:LEU:HD13	1:BK:228:ILE:HB	1.97	0.47
1:BN:331:ARG:HB2	1:BN:346:ASP:HB3	1.96	0.47
1:BR:38:ASN:HA	6:BR:618:HOH:O	2.14	0.47
1:AA:40:VAL:O	1:AA:44:GLN:HG2	2.15	0.47
1:AE:143:ARG:NH2	1:AE:297:ASN:OD1	2.39	0.47
1:AF:79:PHE:HD1	1:AF:339:LEU:CD2	2.27	0.47
1:AH:208:PRO:HG3	1:AH:222:TRP:CD1	2.48	0.47
1:AH:108:ILE:CG2	1:AH:296:THR:HG22	2.43	0.47
1:AH:321:GLU:HG2	1:AH:325:LYS:HE3	1.96	0.47
1:AK:123:ASP:OD1	1:AK:125:ASN:HB2	2.14	0.47
1:AO:312:PHE:CZ	1:AO:379:GLU:HG3	2.49	0.47
1:AQ:143:ARG:HG2	1:AQ:144:CYS:N	2.27	0.47
1:BB:137:VAL:CG1	1:BB:255:GLY:HA2	2.45	0.47
1:BG:213:LEU:CD1	1:BG:218:CYS:HB2	2.38	0.47
1:BG:257:LEU:O	1:BG:257:LEU:HD22	2.14	0.47
1:BI:50:TYR:O	1:BI:54:TRP:HB3	2.14	0.47
1:BL:195:GLN:O	1:BL:199:ILE:HG13	2.15	0.47
1:BM:285:ASN:C	1:BM:285:ASN:HD22	2.18	0.47
1:AC:300:THR:O	1:AC:302:VAL:HG23	2.15	0.47
1:AH:70:THR:O	1:AH:74:ASN:ND2	2.47	0.47
1:AI:27:ALA:HB2	1:AI:54:TRP:NE1	2.30	0.47
1:AP:201:ASP:HB3	1:AP:203:PHE:CE2	2.50	0.47
1:BA:143:ARG:O	1:BA:302:VAL:HA	2.15	0.47
1:BF:230:HIS:CB	1:BF:237:LEU:HD23	2.45	0.47
1:BL:147:SER:HB2	1:BL:283:MET:HB2	1.96	0.47
1:BL:378:LEU:HD21	1:BL:384:ILE:HG23	1.96	0.47
1:BM:101:PHE:O	1:BM:105:ILE:HG13	2.15	0.47
1:BN:70:THR:HG21	1:BN:212:LEU:HD13	1.96	0.47
1:BP:285:ASN:HD22	1:BP:288:LEU:CB	2.28	0.47
1:BP:318:ARG:NH1	1:BP:385:ASP:OD2	2.48	0.47
1:BQ:285:ASN:ND2	1:BQ:288:LEU:HG	2.30	0.47
1:AA:110:HIS:CD2	1:AA:327:ARG:NH2	2.83	0.47
1:AA:341:THR:O	1:AA:342:ASP:HB2	2.14	0.47
1:AA:38:ASN:ND2	1:AA:38:ASN:C	2.67	0.47
1:AB:105:ILE:HG12	1:AB:298:MET:CE	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AD:332:GLY:HA3	1:AD:338:SER:O	2.13	0.47
1:AE:167:LYS:HD3	1:AE:171:ASP:OD2	2.14	0.47
1:AE:105:ILE:HG12	1:AE:298:MET:HE1	1.97	0.47
1:AG:246:ILE:O	1:AG:247:ARG:HD3	2.15	0.47
1:AH:285:ASN:ND2	1:AH:288:LEU:N	2.46	0.47
1:AI:154:PRO:HG2	1:AI:243:GLU:O	2.13	0.47
1:AI:66:LYS:HE3	1:AJ:16:HIS:NE2	2.30	0.47
1:AK:109:HIS:O	1:AK:110:HIS:HB2	2.14	0.47
1:AK:27:ALA:HB2	1:AK:54:TRP:CD1	2.49	0.47
1:AM:49:LEU:HD22	1:AM:53:TYR:CE1	2.49	0.47
1:AN:109:HIS:O	1:AN:110:HIS:HB2	2.15	0.47
1:AP:143:ARG:HG3	6:AP:503:HOH:O	2.15	0.47
1:AP:377:LYS:HG2	6:AP:601:HOH:O	2.14	0.47
1:AQ:91:GLU:HB2	1:AQ:283:MET:SD	2.54	0.47
1:AR:248:VAL:C	1:AR:249:ILE:HG13	2.34	0.47
1:BA:303:ARG:NE	3:BA:502:ADP:O3B	2.46	0.47
1:BB:55:ASP:N	1:BB:55:ASP:OD1	2.47	0.47
1:BD:94:TYR:CZ	1:BD:288:LEU:HD11	2.50	0.47
1:BF:250:SER:CB	1:BF:264:PHE:HB2	2.43	0.47
1:BH:242:GLU:CG	1:BH:243:GLU:H	2.26	0.47
1:BI:239:TRP:HB2	1:BI:247:ARG:HB2	1.96	0.47
1:BI:27:ALA:HB2	1:BI:54:TRP:NE1	2.29	0.47
1:BK:157:MET:HE3	1:BK:245:HIS:HE2	1.80	0.47
1:BK:285:ASN:ND2	1:BK:288:LEU:H	2.12	0.47
1:BM:74:ASN:OD1	1:BM:211:ALA:HB1	2.14	0.47
1:BP:210:GLY:O	1:BP:214:THR:HG23	2.15	0.47
1:BR:184:TYR:CE1	1:BR:240:ILE:HD12	2.50	0.47
1:AE:239:TRP:HB2	1:AE:247:ARG:HB2	1.96	0.47
1:AF:53:TYR:OH	1:AF:99:GLU:HB2	2.15	0.47
1:AH:208:PRO:HD3	1:AH:222:TRP:CE2	2.50	0.47
1:AL:223:PRO:O	1:AL:226:ARG:HD3	2.14	0.47
1:AM:201:ASP:HB3	1:AM:203:PHE:CE2	2.49	0.47
1:AM:213:LEU:HD12	1:AM:218:CYS:HB3	1.97	0.47
1:AO:285:ASN:HD21	1:AO:287:ARG:HB2	1.80	0.47
1:AP:143:ARG:HA	1:AP:248:VAL:O	2.14	0.47
1:BH:186:PRO:HG2	1:BP:35:SER:HB3	1.97	0.47
1:BK:188:THR:CG2	1:BK:223:PRO:HG2	2.42	0.47
1:BL:370:LEU:O	1:BL:373:ALA:HB3	2.15	0.47
1:BO:136:TYR:O	1:BO:308:LEU:HD23	2.15	0.47
1:BR:346:ASP:OD1	1:BR:346:ASP:C	2.51	0.47
1:AF:153:LEU:HB3	1:AF:154:PRO:HD2	1.96	0.47
1:AG:89:GLY:CA	1:AG:155:PRO:HG2	2.37	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AK:384:ILE:HB	1:AK:387:MET:HG3	1.96	0.47
1:AL:66:LYS:HD2	1:AL:66:LYS:O	2.15	0.47
1:AN:215:THR:HG21	6:AN:596:HOH:O	2.15	0.47
1:AR:300:THR:O	1:AR:302:VAL:HG23	2.15	0.47
1:AR:41:MET:CE	1:AR:71:GLY:HA3	2.45	0.47
1:BD:312:PHE:CZ	1:BD:379:GLU:HG3	2.49	0.47
1:BD:77:ASN:ND2	1:BD:83:LYS:HE2	2.30	0.47
1:BF:182:GLY:HA3	1:BF:230:HIS:O	2.15	0.47
1:BH:364:LEU:O	1:BH:368:VAL:HG23	2.15	0.47
1:BI:83:LYS:HD3	1:BI:83:LYS:HA	1.38	0.47
3:BK:402:ADP:O1B	5:BK:404:NO3:O2	2.33	0.47
1:AB:256:ASP:HB3	6:AB:573:HOH:O	2.15	0.47
1:AH:135:LYS:HD3	1:AH:136:TYR:CE1	2.49	0.47
1:AH:316:HIS:CD2	1:AH:317:PRO:HD2	2.50	0.47
1:AJ:18:LYS:O	1:AJ:21:GLU:HG2	2.15	0.47
1:AQ:285:ASN:HD21	1:AQ:287:ARG:HB2	1.78	0.47
1:AR:144:CYS:HA	1:AR:301:VAL:O	2.14	0.47
1:BB:111:PHE:CD2	1:BB:353:LEU:HD13	2.50	0.47
1:BC:228:ILE:HD11	1:BC:237:LEU:HD23	1.95	0.47
1:BC:326:LEU:O	1:BC:327:ARG:HB2	2.14	0.47
1:BN:361:VAL:O	1:BN:365:VAL:HG23	2.15	0.47
1:BO:88:PHE:CE2	1:BO:94:TYR:HB2	2.50	0.47
1:BQ:202:HIS:HB3	3:BQ:402:ADP:H1'	1.95	0.47
1:AC:314:GLU:HG3	1:AC:315:LYS:HD2	1.97	0.47
1:AF:294:CYS:HB3	1:AF:297:ASN:HD22	1.79	0.47
1:AL:106:GLU:OE2	1:AL:112:LYS:HE2	2.14	0.47
1:AP:231:ASN:ND2	6:AP:609:HOH:O	2.48	0.47
1:AR:164:LEU:O	1:AR:168:VAL:HG23	2.15	0.47
1:BA:168:VAL:HG13	1:BA:280:HIS:ND1	2.30	0.47
1:BE:116:LYS:HG3	1:BE:287:ARG:HA	1.97	0.47
1:BF:59:PRO:HD2	1:BF:92:TYR:CG	2.50	0.47
1:BG:162:ARG:HH12	1:BG:221:ASP:HB2	1.80	0.47
1:BL:298:MET:CE	1:BL:353:LEU:HD12	2.38	0.47
1:BL:20:TRP:CG	1:BL:55:ASP:HB3	2.50	0.47
1:BM:44:GLN:NE2	1:BM:107:GLU:OE1	2.48	0.47
1:BM:88:PHE:HD1	1:BM:292:CYS:O	1.98	0.47
1:BO:136:TYR:HB3	1:BO:308:LEU:CD2	2.44	0.47
1:BR:38:ASN:OD1	1:BR:82:LYS:HE3	2.14	0.47
1:AB:44:GLN:HB3	1:AB:103:LYS:HE3	1.97	0.46
1:AD:331:ARG:NH1	5:AD:404:NO3:O2	2.47	0.46
1:AF:285:ASN:HD22	1:AF:288:LEU:N	2.02	0.46
1:AG:106:GLU:O	1:AG:110:HIS:N	2.46	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AI:201:ASP:HB3	1:AI:203:PHE:CE2	2.50	0.46
1:AO:245:HIS:C	1:AO:246:ILE:HG13	2.35	0.46
1:AQ:155:PRO:HG3	1:AQ:293:THR:HG23	1.96	0.46
1:BA:195:GLN:O	1:BA:199:ILE:HG13	2.15	0.46
1:BA:87:VAL:HB	1:BA:293:THR:HG22	1.96	0.46
1:BC:244:ASP:OD1	1:BC:292:CYS:HB3	2.15	0.46
1:BD:184:TYR:OH	1:BD:227:GLY:HA3	2.14	0.46
1:BD:368:VAL:O	1:BD:372:ILE:HG13	2.16	0.46
1:BE:205:PHE:CD1	1:BE:242:GLU:HG3	2.50	0.46
1:BE:142:ILE:HD12	1:BE:261:PHE:HA	1.97	0.46
1:BE:309:ARG:NH1	1:BE:342:ASP:OD1	2.48	0.46
1:BG:141:ARG:NH2	6:BG:518:HOH:O	2.46	0.46
1:BJ:144:CYS:HA	1:BJ:301:VAL:O	2.14	0.46
1:BM:364:LEU:HD22	1:BM:368:VAL:HG23	1.97	0.46
1:BN:88:PHE:HD2	1:BN:93:SER:HB3	1.80	0.46
1:AB:206:GLU:HG2	6:AB:529:HOH:O	2.16	0.46
1:AB:288:LEU:HD22	1:AB:353:LEU:HD11	1.97	0.46
1:AB:66:LYS:C	1:AB:66:LYS:HD3	2.36	0.46
1:AE:183:LYS:HG2	1:AE:184:TYR:N	2.30	0.46
1:AG:80:TYR:CD2	1:AG:330:LYS:HE2	2.50	0.46
1:AI:112:LYS:HB3	1:AI:113:PRO:HD2	1.96	0.46
1:AN:18:LYS:HB2	1:AN:21:GLU:CG	2.42	0.46
1:AO:207:LYS:O	1:AO:209:THR:N	2.47	0.46
1:AO:236:PHE:CE1	1:AO:267:GLY:HA3	2.50	0.46
1:AP:24:LYS:NZ	6:AP:639:HOH:O	2.47	0.46
1:AP:300:THR:C	1:AP:301:VAL:HG23	2.36	0.46
1:BB:53:TYR:CE2	1:BB:97:TYR:HA	2.50	0.46
1:BJ:155:PRO:HB3	1:BJ:216:SER:O	2.15	0.46
1:BM:133:GLU:HB2	6:BM:531:HOH:O	2.15	0.46
1:BP:154:PRO:HG2	1:BP:243:GLU:O	2.15	0.46
1:AA:110:HIS:HD2	1:AA:327:ARG:CZ	2.28	0.46
1:AA:58:THR:HB	1:AA:59:PRO:HD2	1.98	0.46
1:AF:223:PRO:O	1:AF:226:ARG:HB2	2.16	0.46
1:AJ:203:PHE:CE2	1:AJ:234:LYS:HE2	2.50	0.46
1:AK:186:PRO:HG2	1:AK:189:THR:OG1	2.15	0.46
1:AL:31:PHE:CE1	1:AL:47:LYS:HA	2.50	0.46
1:AQ:352:ARG:HG2	1:AQ:352:ARG:NH1	2.31	0.46
1:AQ:382:GLN:HE21	1:AQ:382:GLN:HB2	1.52	0.46
1:AQ:384:ILE:HA	1:AQ:387:MET:HG3	1.98	0.46
1:AR:355:LYS:HB2	1:AR:360:LEU:CD2	2.45	0.46
1:BA:66:LYS:NZ	1:BA:216:SER:O	2.48	0.46
1:BA:372:ILE:HG22	1:BA:376:LYS:HE2	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BC:105:ILE:HG12	1:BC:298:MET:HE1	1.98	0.46
1:BD:137:VAL:HG13	1:BD:306:VAL:HB	1.98	0.46
1:BN:77:ASN:ND2	1:BN:83:LYS:HE2	2.30	0.46
1:BQ:247:ARG:HG2	6:BQ:519:HOH:O	2.16	0.46
1:BQ:285:ASN:ND2	1:BQ:287:ARG:H	2.14	0.46
1:AA:313:LEU:HA	1:AA:378:LEU:HD12	1.96	0.46
1:AB:154:PRO:HD3	1:AB:245:HIS:CD2	2.50	0.46
1:AB:139:SER:HB3	1:AB:253:LYS:HA	1.97	0.46
1:AB:64:PHE:O	1:AB:67:CYS:HB2	2.16	0.46
1:AE:222:TRP:HA	1:AE:226:ARG:NH1	2.30	0.46
1:AH:312:PHE:CD2	1:AH:379:GLU:HA	2.51	0.46
1:AM:184:TYR:CE1	1:AM:240:ILE:HD12	2.50	0.46
1:AN:45:LEU:HD12	1:AN:46:THR:H	1.80	0.46
1:AR:66:LYS:HD3	1:AR:66:LYS:C	2.36	0.46
1:BC:331:ARG:HB2	1:BC:346:ASP:HB3	1.97	0.46
1:BF:267:GLY:O	1:BF:271:VAL:HG23	2.14	0.46
1:BH:28:ALA:HB2	6:BH:613:HOH:O	2.14	0.46
1:BD:45:LEU:O	1:BI:178:GLY:HA2	2.16	0.46
1:BL:326:LEU:O	1:BL:327:ARG:HB2	2.14	0.46
1:BM:229:TRP:HB3	1:BM:238:VAL:HB	1.98	0.46
1:BN:297:ASN:O	1:BN:301:VAL:HG22	2.16	0.46
1:BN:54:TRP:CD1	1:BN:55:ASP:N	2.83	0.46
1:BO:319:PHE:HB3	6:BO:617:HOH:O	2.14	0.46
1:AA:247:ARG:NH1	3:AA:502:ADP:O1B	2.49	0.46
1:AE:143:ARG:HG2	1:AE:144:CYS:N	2.29	0.46
1:AE:126:LYS:CB	1:AE:358:ARG:HD2	2.39	0.46
1:AG:175:GLY:HA2	1:AG:177:LYS:NZ	2.31	0.46
1:AG:173:LEU:HD11	1:AG:238:VAL:HG11	1.97	0.46
1:AJ:202:HIS:HB3	3:AJ:402:ADP:H1'	1.97	0.46
1:AL:307:HIS:CD2	3:AL:402:ADP:C6	3.03	0.46
1:AO:128:VAL:HG21	1:AR:358:ARG:HH21	1.81	0.46
1:BB:116:LYS:HG3	1:BB:287:ARG:HA	1.98	0.46
1:BE:143:ARG:HG3	6:BE:600:HOH:O	2.16	0.46
1:BE:312:PHE:CE2	1:BE:379:GLU:HA	2.50	0.46
1:AR:186:PRO:CG	1:BE:35:SER:HB3	2.45	0.46
1:BH:285:ASN:ND2	1:BH:288:LEU:H	2.02	0.46
1:BK:304:ALA:O	1:BK:348:SER:HB2	2.15	0.46
1:BQ:143:ARG:NH1	1:BQ:303:ARG:HD3	2.30	0.46
1:AB:302:VAL:O	1:AB:352:ARG:HD3	2.16	0.46
1:AH:312:PHE:CZ	1:AH:379:GLU:HG3	2.50	0.46
1:AH:377:LYS:HE2	1:AH:387:MET:SD	2.56	0.46
1:AM:144:CYS:HA	1:AM:301:VAL:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AN:252:GLN:NE2	1:AN:256:ASP:HB3	2.30	0.46
1:AO:202:HIS:HB3	3:AO:402:ADP:H1'	1.98	0.46
1:BG:206:GLU:HG3	1:BG:207:LYS:O	2.15	0.46
1:BH:184:TYR:CE2	1:BH:186:PRO:HD3	2.51	0.46
1:BI:297:ASN:C	1:BI:301:VAL:HG13	2.35	0.46
1:BL:190:MET:SD	1:BL:195:GLN:HB2	2.56	0.46
1:BL:313:LEU:CD2	1:BL:319:PHE:CD1	2.98	0.46
1:BL:377:LYS:HG3	1:BL:387:MET:CE	2.45	0.46
1:BM:157:MET:CE	1:BM:161:GLU:HB3	2.45	0.46
1:BQ:27:ALA:HB2	1:BQ:54:TRP:CD1	2.51	0.46
1:BR:105:ILE:HG12	1:BR:298:MET:CE	2.46	0.46
1:BR:314:GLU:HG3	1:BR:315:LYS:HD2	1.97	0.46
1:AC:37:HIS:CE1	6:AC:526:HOH:O	2.68	0.46
1:AE:105:ILE:HG12	1:AE:298:MET:CE	2.45	0.46
1:AF:301:VAL:O	1:AF:301:VAL:HG12	2.16	0.46
1:AG:237:LEU:HD12	1:AG:237:LEU:N	2.31	0.46
1:AH:11:LYS:HA	1:AH:61:GLY:HA2	1.97	0.46
1:AM:40:VAL:CG2	1:AM:84:THR:HA	2.46	0.46
1:AP:109:HIS:O	1:AP:110:HIS:HB2	2.15	0.46
1:AP:220:ARG:O	1:AP:221:ASP:HB2	2.16	0.46
1:AR:228:ILE:HD11	1:AR:237:LEU:HD23	1.98	0.46
1:AR:49:LEU:HD21	1:AR:99:GLU:HG2	1.98	0.46
1:BA:326:LEU:O	1:BA:327:ARG:HB2	2.14	0.46
1:BC:148:VAL:HG21	1:BC:165:VAL:HG13	1.97	0.46
1:BD:222:TRP:HA	1:BD:226:ARG:HH12	1.80	0.46
1:BG:285:ASN:ND2	1:BG:287:ARG:N	2.50	0.46
1:BH:285:ASN:ND2	1:BH:288:LEU:HG	2.30	0.46
1:BI:40:VAL:O	1:BI:44:GLN:HG2	2.16	0.46
1:BM:312:PHE:CZ	1:BM:379:GLU:HG3	2.51	0.46
1:BN:124:HIS:O	1:BN:258:LYS:HE3	2.15	0.46
1:BO:152:CYS:O	1:BO:157:MET:HE3	2.16	0.46
1:BP:278:CYS:HB3	1:BP:280:HIS:HE1	1.81	0.46
1:BP:294:CYS:O	1:BP:297:ASN:N	2.44	0.46
1:BP:312:PHE:CZ	1:BP:379:GLU:HG3	2.51	0.46
1:BR:66:LYS:HE3	6:BR:616:HOH:O	2.15	0.46
1:AB:105:ILE:CD1	1:AB:298:MET:HE1	2.46	0.46
1:AC:91:GLU:OE2	1:AC:149:LYS:HE2	2.15	0.46
1:AF:153:LEU:HD23	1:AF:245:HIS:CE1	2.51	0.46
1:AF:60:ASN:HD22	1:AF:90:ASP:CB	2.29	0.46
1:AL:60:ASN:HB2	1:AL:90:ASP:OD2	2.16	0.46
1:AM:26:LYS:N	1:AM:29:ASP:OD2	2.44	0.46
1:AQ:202:HIS:HB3	3:AQ:402:ADP:H1'	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AR:188:THR:HG23	6:AR:520:HOH:O	2.16	0.46
1:BB:267:GLY:O	1:BB:271:VAL:HG23	2.15	0.46
1:BB:31:PHE:CE1	1:BB:47:LYS:HA	2.51	0.46
1:BH:144:CYS:HA	1:BH:301:VAL:O	2.16	0.46
1:BI:110:HIS:CE1	1:BI:327:ARG:NH1	2.84	0.46
1:BI:191:ASN:ND2	1:BI:193:LYS:HB2	2.30	0.46
1:BI:285:ASN:HD22	1:BI:288:LEU:N	2.03	0.46
1:BI:340:ALA:HB2	1:BI:345:TYR:CD2	2.50	0.46
1:BJ:80:TYR:HD1	1:BJ:331:ARG:HA	1.80	0.46
1:BK:70:THR:HG21	1:BK:212:LEU:CD1	2.46	0.46
1:BN:207:LYS:HB3	1:BN:208:PRO:HD2	1.96	0.46
1:BQ:297:ASN:HB3	1:BQ:301:VAL:HG13	1.97	0.46
1:AF:327:ARG:O	1:AF:350:TRP:HB3	2.16	0.46
1:AG:57:VAL:HG12	1:AG:58:THR:N	2.31	0.46
1:AI:117:HIS:HE1	1:AI:300:THR:HG23	1.81	0.46
1:AI:49:LEU:HD21	1:AI:99:GLU:HG2	1.96	0.46
1:AL:123:ASP:OD1	1:AL:125:ASN:HB2	2.16	0.46
1:AO:377:LYS:HG3	1:AO:387:MET:HE1	1.98	0.46
1:AQ:196:GLU:HA	1:AQ:199:ILE:HD12	1.98	0.46
1:AQ:50:TYR:O	1:AQ:54:TRP:HB3	2.16	0.46
1:BA:301:VAL:O	1:BA:301:VAL:HG12	2.15	0.46
1:BC:168:VAL:HG13	1:BC:280:HIS:ND1	2.30	0.46
1:BD:242:GLU:CG	1:BD:243:GLU:H	2.29	0.46
1:BH:361:VAL:O	1:BH:365:VAL:HG23	2.16	0.46
1:BI:226:ARG:HG3	1:BI:241:ASN:O	2.16	0.46
1:BJ:145:GLY:H	1:BJ:301:VAL:CG1	2.29	0.46
1:BJ:124:HIS:ND1	1:BJ:262:SER:HB2	2.31	0.46
1:BN:252:GLN:OE1	1:BN:263:ARG:NH2	2.49	0.46
1:BO:151:VAL:HG12	1:BO:245:HIS:CE1	2.50	0.46
1:BR:305:SER:HA	1:BR:347:ILE:O	2.16	0.46
1:AE:273:ARG:NH2	6:AE:651:HOH:O	2.49	0.46
1:AI:244:ASP:OD1	1:AI:292:CYS:HB3	2.16	0.46
1:AL:44:GLN:OE1	1:AL:44:GLN:HA	2.16	0.46
1:BB:228:ILE:HG12	1:BB:229:TRP:N	2.30	0.46
1:BB:144:CYS:HA	1:BB:301:VAL:O	2.16	0.46
1:BE:108:ILE:HG21	1:BE:296:THR:HG22	1.98	0.46
1:BL:151:VAL:HG12	1:BL:152:CYS:N	2.31	0.46
1:BL:151:VAL:HG12	1:BL:152:CYS:O	2.16	0.46
1:BK:159:ARG:HB2	1:BL:30:ASN:OD1	2.16	0.46
1:BM:267:GLY:O	1:BM:271:VAL:HG23	2.16	0.46
1:BN:298:MET:HE2	1:BN:298:MET:HB2	1.76	0.46
1:AC:359:GLU:O	1:AC:363:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AD:18:LYS:O	1:AD:21:GLU:HG2	2.16	0.45
1:AG:252:GLN:HG2	1:AG:260:VAL:CG2	2.47	0.45
1:AH:297:ASN:HB3	1:AH:301:VAL:CG1	2.44	0.45
1:AM:288:LEU:O	1:AM:299:GLY:HA2	2.17	0.45
1:AO:298:MET:HB2	1:AO:298:MET:HE2	1.39	0.45
1:AQ:35:SER:HB3	1:BF:186:PRO:CG	2.46	0.45
1:AQ:47:LYS:HG3	6:AQ:567:HOH:O	2.16	0.45
1:AR:179:ASP:OD1	1:AR:180:LEU:HG	2.16	0.45
1:BA:201:ASP:O	1:BA:202:HIS:CB	2.64	0.45
1:BA:219:ALA:HB3	6:BA:602:HOH:O	2.15	0.45
1:BA:321:GLU:CG	1:BA:325:LYS:HE3	2.46	0.45
1:BB:60:ASN:HB2	1:BB:90:ASP:OD2	2.16	0.45
1:BG:240:ILE:O	1:BG:241:ASN:HB2	2.15	0.45
1:BK:313:LEU:HA	1:BK:378:LEU:HD12	1.97	0.45
1:BL:172:ALA:C	1:BL:174:GLY:H	2.19	0.45
1:BO:70:THR:O	1:BO:74:ASN:ND2	2.44	0.45
1:BP:13:ARG:NH1	1:BP:156:ALA:O	2.44	0.45
1:AB:18:LYS:HB2	1:AB:21:GLU:HG2	1.98	0.45
1:AC:318:ARG:NE	1:AC:388:ILE:HD13	2.31	0.45
1:AH:53:TYR:CZ	1:AH:97:TYR:HA	2.51	0.45
1:AL:330:LYS:HE3	1:AL:345:TYR:CE2	2.51	0.45
1:AM:252:GLN:HE22	1:AM:259:ALA:HB3	1.80	0.45
1:AR:141:ARG:HD2	1:AR:251:MET:HE3	1.98	0.45
1:AR:24:LYS:HE3	1:AR:25:PHE:CE2	2.52	0.45
1:AR:353:LEU:C	1:AR:353:LEU:HD22	2.37	0.45
1:BE:186:PRO:HG2	1:BE:189:THR:OG1	2.16	0.45
1:BF:117:HIS:CE1	1:BF:300:THR:HG23	2.51	0.45
1:BF:352:ARG:HH11	1:BF:352:ARG:CG	2.30	0.45
1:BJ:137:VAL:HG13	1:BJ:306:VAL:HB	1.98	0.45
1:BL:158:SER:OG	1:BL:161:GLU:HG3	2.16	0.45
1:BP:83:LYS:HZ1	1:BP:336:GLU:CG	2.29	0.45
1:BQ:53:TYR:OH	1:BQ:99:GLU:HB3	2.16	0.45
1:AA:124:HIS:CD2	1:AA:124:HIS:H	2.34	0.45
1:AA:144:CYS:HA	1:AA:301:VAL:O	2.16	0.45
1:AB:53:TYR:CZ	1:AB:97:TYR:HA	2.51	0.45
1:AC:199:ILE:HG12	1:AC:205:PHE:O	2.16	0.45
1:AC:222:TRP:CD1	1:AC:223:PRO:HB3	2.51	0.45
1:AE:212:LEU:HB3	6:AE:630:HOH:O	2.14	0.45
1:AE:308:LEU:HD22	1:AE:310:LEU:HG	1.98	0.45
1:AG:238:VAL:HA	1:AG:247:ARG:O	2.16	0.45
1:AG:80:TYR:CG	1:AG:330:LYS:HE2	2.51	0.45
1:AH:322:MET:HG3	1:AH:389:PRO:CD	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AI:224:ASP:OD1	1:AI:224:ASP:C	2.55	0.45
1:AI:298:MET:HE3	1:AI:298:MET:HB2	1.82	0.45
1:AK:141:ARG:HD3	3:AK:402:ADP:C8	2.51	0.45
1:AO:94:TYR:HA	1:AO:101:PHE:CD2	2.52	0.45
1:AP:117:HIS:ND1	1:AP:118:PRO:HD2	2.32	0.45
1:AP:141:ARG:HD3	3:AP:402:ADP:C8	2.51	0.45
1:AR:285:ASN:HD22	1:AR:288:LEU:N	2.13	0.45
1:BB:172:ALA:O	1:BB:274:LEU:HD13	2.16	0.45
1:BB:18:LYS:HB2	1:BB:21:GLU:HG2	1.98	0.45
1:BE:208:PRO:HD3	1:BE:222:TRP:CZ2	2.51	0.45
1:BE:91:GLU:HG2	1:BE:91:GLU:O	2.16	0.45
1:BH:143:ARG:HG3	6:BH:519:HOH:O	2.16	0.45
1:BI:121:ASP:CB	1:BI:356:SER:HB2	2.46	0.45
1:BK:313:LEU:CD2	1:BK:319:PHE:CD1	3.00	0.45
1:BM:41:MET:HE2	1:BM:71:GLY:HA3	1.97	0.45
6:BQ:581:HOH:O	1:BR:16:HIS:HB3	2.15	0.45
1:AC:38:ASN:HD21	1:AC:82:LYS:HE3	1.80	0.45
1:AD:309:ARG:O	1:AD:310:LEU:HD23	2.16	0.45
1:AE:157:MET:HE1	1:AE:162:ARG:HA	1.97	0.45
1:AE:244:ASP:OD1	1:AE:292:CYS:HB3	2.15	0.45
1:AG:58:THR:HG23	1:AG:62:VAL:O	2.17	0.45
1:AJ:312:PHE:CZ	1:AJ:379:GLU:HG2	2.51	0.45
1:AN:53:TYR:CZ	1:AN:97:TYR:HA	2.51	0.45
1:AO:188:THR:HG21	6:AO:570:HOH:O	2.17	0.45
1:AP:297:ASN:HB3	1:AP:301:VAL:CG1	2.46	0.45
1:AJ:253:LYS:HD2	1:AP:317:PRO:HB2	1.99	0.45
1:BA:168:VAL:HG12	1:BA:169:VAL:N	2.30	0.45
1:BA:239:TRP:HB2	1:BA:247:ARG:HB2	1.99	0.45
1:BA:91:GLU:HB2	1:BA:283:MET:SD	2.56	0.45
1:BD:10:VAL:HG13	6:BD:567:HOH:O	2.16	0.45
1:BD:176:LEU:C	1:BD:177:LYS:HG2	2.37	0.45
1:BD:207:LYS:O	1:BD:209:THR:N	2.43	0.45
1:BE:109:HIS:CE1	1:BE:296:THR:O	2.69	0.45
1:BF:352:ARG:HG2	1:BF:352:ARG:HH11	1.81	0.45
1:BL:105:ILE:O	1:BL:109:HIS:HB2	2.16	0.45
1:BL:301:VAL:O	1:BL:301:VAL:HG12	2.16	0.45
1:BM:385:ASP:HA	1:BM:388:ILE:HD12	1.98	0.45
1:BN:297:ASN:ND2	6:BN:507:HOH:O	2.44	0.45
1:BN:50:TYR:O	1:BN:54:TRP:HB3	2.17	0.45
1:BO:264:PHE:CZ	1:BO:268:LEU:HD22	2.51	0.45
1:BP:145:GLY:H	1:BP:301:VAL:CG1	2.30	0.45
1:BQ:319:PHE:CZ	1:BQ:323:LEU:HD11	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BR:309:ARG:HG2	6:BR:574:HOH:O	2.15	0.45
1:BR:47:LYS:O	1:BR:51:GLU:HB2	2.16	0.45
1:BR:54:TRP:CD1	1:BR:55:ASP:N	2.84	0.45
1:AA:182:GLY:N	1:AA:229:TRP:CZ2	2.84	0.45
1:AB:313:LEU:O	1:AB:313:LEU:HD23	2.17	0.45
1:AE:252:GLN:OE1	1:AE:263:ARG:NH2	2.50	0.45
1:AH:69:GLN:HE21	1:AH:73:ASP:CG	2.20	0.45
1:AI:302:VAL:O	1:AI:352:ARG:HD3	2.17	0.45
1:AJ:143:ARG:HG2	1:AJ:144:CYS:N	2.31	0.45
1:AK:285:ASN:HD22	1:AK:287:ARG:N	2.15	0.45
1:AL:304:ALA:O	1:AL:348:SER:HB2	2.16	0.45
1:AO:288:LEU:O	1:AO:299:GLY:HA2	2.17	0.45
1:AP:266:ARG:NH2	6:AP:555:HOH:O	2.39	0.45
1:AQ:166:GLU:OE2	1:AQ:184:TYR:OH	2.29	0.45
1:BD:364:LEU:O	1:BD:368:VAL:HG23	2.16	0.45
1:BF:44:GLN:NE2	1:BF:107:GLU:OE1	2.50	0.45
1:BJ:183:LYS:HD3	1:BJ:185:TYR:CE2	2.52	0.45
1:AI:313:LEU:HD11	1:AI:322:MET:HE1	1.99	0.45
1:AQ:239:TRP:CE3	1:AQ:247:ARG:HG3	2.51	0.45
1:BC:184:TYR:CE1	1:BC:240:ILE:HD12	2.52	0.45
1:BD:159:ARG:O	1:BD:163:ARG:HG3	2.16	0.45
1:BD:222:TRP:HA	1:BD:226:ARG:NH1	2.32	0.45
1:BD:240:ILE:O	1:BD:241:ASN:HB2	2.16	0.45
1:BF:314:GLU:HG3	1:BF:315:LYS:HD2	1.97	0.45
1:BG:151:VAL:HG12	1:BG:152:CYS:O	2.17	0.45
1:BG:313:LEU:CD2	1:BG:319:PHE:CD1	2.99	0.45
1:BG:55:ASP:OD1	1:BG:55:ASP:N	2.45	0.45
1:BM:270:GLU:OE2	1:BM:273:ARG:HD3	2.16	0.45
1:BN:143:ARG:HD3	1:BN:303:ARG:HB3	1.99	0.45
1:BN:98:LYS:HE3	1:BN:102:ASP:OD2	2.16	0.45
1:AD:151:VAL:HG11	1:AD:165:VAL:CG2	2.47	0.45
1:AI:309:ARG:NH1	1:AI:342:ASP:OD1	2.49	0.45
1:AJ:273:ARG:NH2	1:AJ:274:LEU:HD21	2.32	0.45
1:BB:176:LEU:HD21	1:BB:270:GLU:HB3	1.99	0.45
1:BF:153:LEU:C	1:BF:155:PRO:CD	2.85	0.45
1:BG:175:GLY:O	1:BG:177:LYS:HE2	2.17	0.45
1:BH:157:MET:HA	1:BH:161:GLU:OE1	2.16	0.45
1:BK:58:THR:C	1:BK:60:ASN:H	2.20	0.45
1:BL:374:CYS:HB3	1:BL:384:ILE:HG21	1.99	0.45
1:BM:191:ASN:OD1	1:BM:194:ASP:HB2	2.16	0.45
1:BO:278:CYS:HB3	1:BO:280:HIS:HE1	1.75	0.45
1:BP:191:ASN:ND2	6:BP:621:HOH:O	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:139:SER:HA	1:AA:254:GLY:O	2.16	0.45
1:AB:105:ILE:HG12	1:AB:298:MET:HE1	1.97	0.45
1:AB:207:LYS:O	1:AB:209:THR:N	2.47	0.45
1:AC:109:HIS:O	1:AC:110:HIS:HB2	2.17	0.45
1:AH:377:LYS:HG3	1:AH:387:MET:CE	2.47	0.45
1:AI:318:ARG:HD3	1:AI:388:ILE:CD1	2.45	0.45
1:AK:142:ILE:HD12	1:AK:261:PHE:HA	1.98	0.45
1:AL:359:GLU:O	1:AL:363:VAL:HG23	2.16	0.45
1:AN:308:LEU:HD22	1:AN:310:LEU:HG	1.98	0.45
1:AO:285:ASN:ND2	1:AO:288:LEU:HG	2.32	0.45
1:BD:300:THR:HB	1:BD:302:VAL:HG23	1.97	0.45
1:BE:111:PHE:CD1	1:BE:353:LEU:HD22	2.51	0.45
1:BF:319:PHE:CE1	1:BF:323:LEU:HD11	2.51	0.45
1:BI:33:ASP:OD1	1:BI:33:ASP:C	2.56	0.45
1:BJ:258:LYS:HB3	6:BJ:625:HOH:O	2.16	0.45
1:BL:18:LYS:HA	1:BL:19:PRO:HD2	1.79	0.45
1:BQ:308:LEU:O	1:BQ:344:THR:HA	2.17	0.45
6:BQ:599:HOH:O	1:BR:188:THR:HG21	2.16	0.45
1:BR:184:TYR:OH	1:BR:227:GLY:HA3	2.16	0.45
1:AB:295:PRO:HA	1:AB:298:MET:SD	2.57	0.45
1:AI:123:ASP:HB3	1:AI:126:LYS:HG3	1.99	0.45
1:AI:313:LEU:HD11	1:AI:322:MET:CE	2.47	0.45
1:AL:63:THR:HB	6:AL:521:HOH:O	2.16	0.45
1:AR:186:PRO:HG2	1:BE:35:SER:HB3	1.99	0.45
1:BA:352:ARG:CG	1:BA:352:ARG:HH11	2.29	0.45
1:BA:66:LYS:HE3	1:BB:16:HIS:NE2	2.32	0.45
1:BE:268:LEU:O	1:BE:272:GLU:HG3	2.17	0.45
1:BG:267:GLY:O	1:BG:271:VAL:HG23	2.16	0.45
1:BI:151:VAL:HG13	1:BI:161:GLU:HB3	1.98	0.45
1:BI:201:ASP:HB3	1:BI:203:PHE:CD2	2.51	0.45
1:BJ:377:LYS:HE3	1:BJ:382:GLN:HB3	1.98	0.45
1:BL:377:LYS:HG3	1:BL:387:MET:HE2	1.99	0.45
1:BR:271:VAL:O	1:BR:275:MET:HG2	2.17	0.45
1:AA:268:LEU:O	1:AA:272:GLU:HG3	2.17	0.45
1:AB:273:ARG:O	1:AB:276:LYS:HB3	2.16	0.45
1:AC:33:ASP:OD1	1:AC:33:ASP:C	2.56	0.45
1:AE:141:ARG:HG3	1:AE:251:MET:HB3	1.99	0.45
1:AE:305:SER:HB3	1:AE:348:SER:HB3	1.99	0.45
1:AF:79:PHE:HD1	1:AF:339:LEU:HD21	1.82	0.45
1:AJ:285:ASN:HD22	1:AJ:287:ARG:H	1.65	0.45
1:AJ:285:ASN:HD22	1:AJ:287:ARG:N	2.14	0.45
1:AJ:361:VAL:O	1:AJ:365:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AJ:73:ASP:O	1:AJ:75:PRO:HD2	2.17	0.45
1:AK:117:HIS:HA	1:AK:118:PRO:HD2	1.80	0.45
1:AM:336:GLU:OE2	2:AM:401:NMG:NE	2.49	0.45
1:AO:276:LYS:O	1:AO:276:LYS:HG2	2.17	0.45
1:AR:285:ASN:ND2	1:AR:288:LEU:HG	2.32	0.45
1:AR:60:ASN:HB2	1:AR:90:ASP:OD2	2.16	0.45
1:BB:137:VAL:HG12	1:BB:255:GLY:HA2	1.99	0.45
1:BB:143:ARG:O	1:BB:302:VAL:HA	2.17	0.45
1:BC:313:LEU:HA	1:BC:378:LEU:HD12	1.99	0.45
1:BD:352:ARG:HH11	1:BD:352:ARG:HG2	1.82	0.45
1:BE:141:ARG:HD3	3:BE:402:ADP:C8	2.52	0.45
1:BF:84:THR:OG1	1:BF:296:THR:HG23	2.18	0.45
1:BG:224:ASP:O	1:BG:226:ARG:HD2	2.16	0.45
1:BJ:41:MET:C	1:BJ:41:MET:SD	2.95	0.45
1:BK:201:ASP:O	1:BK:202:HIS:HB2	2.16	0.45
1:BL:229:TRP:O	1:BL:229:TRP:CE3	2.69	0.45
1:BI:35:SER:HB3	1:BQ:186:PRO:CG	2.47	0.45
1:BQ:143:ARG:NH2	1:BQ:297:ASN:OD1	2.47	0.45
1:AA:184:TYR:CD2	1:AA:186:PRO:HD3	2.52	0.44
1:AA:143:ARG:HA	1:AA:248:VAL:O	2.17	0.44
1:AA:285:ASN:HD22	1:AA:285:ASN:C	2.21	0.44
1:AB:303:ARG:HB2	1:AB:352:ARG:NH1	2.32	0.44
1:AF:308:LEU:HD22	1:AF:310:LEU:HD21	1.99	0.44
1:AH:358:ARG:HB3	1:AH:358:ARG:HE	1.58	0.44
1:AI:108:ILE:CG2	1:AI:296:THR:HG22	2.48	0.44
1:AJ:37:HIS:NE2	1:AJ:72:VAL:O	2.45	0.44
1:AJ:71:GLY:HA3	1:AJ:85:GLY:O	2.16	0.44
1:AL:69:GLN:NE2	1:AL:73:ASP:OD1	2.50	0.44
1:AN:302:VAL:HG21	1:AN:357:GLU:HG3	1.99	0.44
1:AN:117:HIS:HE1	1:AN:355:LYS:O	1.99	0.44
1:AN:212:LEU:HD23	2:AN:401:NMG:NH1	2.32	0.44
1:AO:144:CYS:HB3	1:AO:302:VAL:HG22	1.98	0.44
1:AO:265:ALA:O	1:AO:269:LEU:HD12	2.17	0.44
1:AO:387:MET:HG2	1:AO:387:MET:H	1.44	0.44
1:AP:278:CYS:HB3	1:AP:280:HIS:HE1	1.76	0.44
1:AR:101:PHE:O	1:AR:105:ILE:HG13	2.16	0.44
1:BA:57:VAL:HG12	1:BA:58:THR:O	2.17	0.44
1:BE:132:PHE:HE2	1:BE:369:ASN:OD1	2.00	0.44
1:BG:201:ASP:HB3	1:BG:203:PHE:CE2	2.52	0.44
1:BG:312:PHE:HB2	1:BG:375:ASP:OD1	2.17	0.44
1:BK:70:THR:O	1:BK:74:ASN:ND2	2.42	0.44
1:BL:141:ARG:NH1	3:BL:402:ADP:O2B	2.49	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BP:71:GLY:HA3	1:BP:85:GLY:O	2.17	0.44
1:AD:314:GLU:CG	1:AD:315:LYS:HD2	2.44	0.44
1:AD:364:LEU:HD22	1:AD:368:VAL:HG23	1.98	0.44
1:AE:117:HIS:ND1	1:AE:118:PRO:HD2	2.32	0.44
1:AH:346:ASP:C	1:AH:346:ASP:OD1	2.56	0.44
1:AH:34:LEU:HD22	1:AH:37:HIS:CD2	2.53	0.44
1:AJ:84:THR:OG1	1:AJ:296:THR:HG23	2.17	0.44
1:AM:188:THR:HG22	1:AM:223:PRO:HG2	1.99	0.44
1:AN:41:MET:HG2	1:AN:100:PHE:CZ	2.52	0.44
1:AN:26:LYS:HG3	1:AN:29:ASP:OD2	2.17	0.44
1:AR:124:HIS:HA	1:AR:261:PHE:CE2	2.52	0.44
1:BA:126:LYS:H	1:BA:126:LYS:HG2	1.62	0.44
1:BD:213:LEU:HD12	1:BD:218:CYS:HB3	1.98	0.44
1:BD:326:LEU:HD11	1:BD:370:LEU:HD23	1.98	0.44
1:BE:127:LEU:HB3	1:BE:258:LYS:HE3	1.98	0.44
1:BE:284:HIS:CD2	1:BE:285:ASN:O	2.70	0.44
1:BF:242:GLU:CD	1:BF:243:GLU:H	2.18	0.44
1:BF:168:VAL:HG13	1:BF:280:HIS:CE1	2.53	0.44
1:BF:349:ASN:HB2	6:BF:515:HOH:O	2.17	0.44
1:BK:152:CYS:O	1:BK:157:MET:HE3	2.17	0.44
1:BK:205:PHE:CE2	1:BK:239:TRP:HB3	2.51	0.44
1:BQ:152:CYS:SG	1:BR:17:SER:HB3	2.57	0.44
1:BR:226:ARG:HG3	1:BR:241:ASN:O	2.17	0.44
1:AE:204:LEU:HG	1:AE:205:PHE:N	2.32	0.44
1:AE:295:PRO:O	1:AE:298:MET:HE2	2.18	0.44
1:AF:223:PRO:O	1:AF:224:ASP:C	2.56	0.44
1:AF:230:HIS:HD1	1:AF:230:HIS:C	2.20	0.44
1:AG:313:LEU:HD22	1:AG:319:PHE:CD1	2.52	0.44
1:AG:305:SER:HB2	1:AG:346:ASP:OD1	2.18	0.44
1:AH:278:CYS:HB3	1:AH:280:HIS:CE1	2.52	0.44
1:AH:39:ASN:OD1	1:AH:39:ASN:C	2.56	0.44
1:AL:18:LYS:HA	1:AL:19:PRO:HD2	1.80	0.44
1:AO:62:VAL:HG11	1:AO:89:GLY:HA3	2.00	0.44
1:AP:267:GLY:O	1:AP:271:VAL:HG23	2.17	0.44
1:AP:147:SER:HB2	1:AP:283:MET:HB2	1.99	0.44
1:AP:295:PRO:O	1:AP:298:MET:HE1	2.17	0.44
1:AR:26:LYS:HG3	1:AR:29:ASP:OD2	2.17	0.44
1:AR:57:VAL:HG12	1:AR:61:GLY:HA2	1.98	0.44
1:BD:79:PHE:CD2	1:BD:337:SER:HA	2.52	0.44
1:BE:229:TRP:O	1:BE:230:HIS:HB3	2.18	0.44
1:BE:346:ASP:OD1	1:BE:346:ASP:O	2.36	0.44
1:BF:31:PHE:HA	1:BF:32:PRO:HD3	1.67	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BG:210:GLY:HA2	6:BG:530:HOH:O	2.17	0.44
1:BH:110:HIS:CE1	6:BH:545:HOH:O	2.69	0.44
1:BH:173:LEU:HD13	1:BH:229:TRP:CG	2.52	0.44
1:BI:57:VAL:HG12	1:BI:58:THR:N	2.33	0.44
1:BL:166:GLU:HG2	1:BL:166:GLU:O	2.18	0.44
1:BM:151:VAL:CG1	1:BM:152:CYS:N	2.80	0.44
1:BO:126:LYS:HB2	1:BO:358:ARG:HD2	1.98	0.44
1:BQ:186:PRO:HG2	1:BQ:189:THR:OG1	2.16	0.44
1:BQ:318:ARG:HD3	1:BQ:388:ILE:HD13	1.99	0.44
1:AA:297:ASN:CB	1:AA:301:VAL:HG13	2.32	0.44
1:AF:105:ILE:HG12	1:AF:298:MET:CE	2.47	0.44
1:AH:18:LYS:HA	1:AH:19:PRO:HD2	1.86	0.44
1:AH:247:ARG:NH1	3:AH:402:ADP:O1B	2.48	0.44
1:AI:213:LEU:O	1:AI:213:LEU:HG	2.16	0.44
1:AJ:169:VAL:HG12	1:AJ:240:ILE:HD11	1.99	0.44
1:AJ:308:LEU:HD13	1:AJ:310:LEU:HD11	2.00	0.44
1:AJ:312:PHE:CD1	1:AJ:379:GLU:HG3	2.52	0.44
1:AJ:325:LYS:HD3	1:AJ:389:PRO:HB2	1.99	0.44
1:AK:39:ASN:O	1:AK:43:SER:HB2	2.17	0.44
1:AN:316:HIS:HA	1:AN:317:PRO:HD2	1.75	0.44
1:AO:307:HIS:CD2	3:AO:402:ADP:C6	3.06	0.44
1:BC:117:HIS:HB2	1:BC:287:ARG:O	2.17	0.44
1:BF:18:LYS:HB3	1:BF:20:TRP:CE2	2.52	0.44
1:BG:313:LEU:HD12	1:BG:374:CYS:HB2	1.98	0.44
1:BI:110:HIS:HE1	6:BI:612:HOH:O	2.00	0.44
1:BI:34:LEU:HA	1:BI:37:HIS:ND1	2.33	0.44
1:BI:94:TYR:CD1	1:BI:95:GLU:HG2	2.53	0.44
1:BL:135:LYS:HD3	1:BL:136:TYR:CE1	2.52	0.44
1:BM:364:LEU:HD22	1:BM:368:VAL:CG2	2.47	0.44
1:BN:105:ILE:HG12	1:BN:298:MET:CE	2.46	0.44
1:BN:162:ARG:HG2	1:BN:241:ASN:ND2	2.32	0.44
1:BO:313:LEU:HD22	1:BO:313:LEU:O	2.17	0.44
1:BQ:268:LEU:O	1:BQ:272:GLU:HG3	2.18	0.44
1:AA:52:LYS:HE2	1:AA:53:TYR:CE2	2.52	0.44
1:AE:95:GLU:HG3	6:AE:595:HOH:O	2.17	0.44
1:AF:139:SER:HB3	1:AF:253:LYS:HA	2.00	0.44
1:AH:69:GLN:O	1:AH:72:VAL:N	2.48	0.44
1:AJ:117:HIS:HA	1:AJ:118:PRO:HD2	1.80	0.44
1:AJ:40:VAL:O	1:AJ:41:MET:C	2.56	0.44
1:AM:70:THR:O	1:AM:74:ASN:ND2	2.49	0.44
1:AN:136:TYR:CD2	1:AN:372:ILE:HG23	2.53	0.44
1:AO:154:PRO:HG2	1:AO:243:GLU:O	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AP:168:VAL:HG13	1:AP:280:HIS:ND1	2.32	0.44
1:AR:250:SER:HB3	1:AR:264:PHE:HB2	2.00	0.44
1:BB:89:GLY:O	1:BB:90:ASP:HB3	2.18	0.44
1:BC:359:GLU:O	1:BC:362:GLN:N	2.50	0.44
1:BD:143:ARG:HH11	3:BD:402:ADP:PB	2.40	0.44
1:BE:298:MET:HE3	1:BE:298:MET:HB2	1.83	0.44
1:BE:49:LEU:HD21	1:BE:99:GLU:HG2	2.00	0.44
1:BF:44:GLN:O	1:BF:103:LYS:HE2	2.18	0.44
1:BF:58:THR:OG1	1:BF:62:VAL:HB	2.18	0.44
1:BG:219:ALA:O	1:BG:222:TRP:HB2	2.16	0.44
1:BH:240:ILE:O	1:BH:241:ASN:HB2	2.18	0.44
1:BI:38:ASN:HD22	1:BI:38:ASN:C	2.20	0.44
1:BJ:285:ASN:ND2	1:BJ:288:LEU:H	1.94	0.44
1:BK:250:SER:HB2	1:BK:264:PHE:HB2	1.98	0.44
1:BK:320:ASP:OD1	1:BK:330:LYS:NZ	2.43	0.44
1:BN:41:MET:C	1:BN:41:MET:SD	2.96	0.44
1:BO:301:VAL:HG12	1:BO:301:VAL:O	2.17	0.44
1:BO:38:ASN:ND2	1:BO:38:ASN:C	2.71	0.44
1:BP:24:LYS:HE3	1:BP:25:PHE:CE2	2.53	0.44
1:BQ:66:LYS:NZ	1:BQ:216:SER:O	2.50	0.44
1:AA:69:GLN:NE2	1:AB:221:ASP:OD1	2.50	0.44
1:AD:50:TYR:O	1:AD:54:TRP:HB3	2.18	0.44
1:AF:258:LYS:HD2	6:AF:567:HOH:O	2.17	0.44
1:AF:105:ILE:HG12	1:AF:298:MET:HE3	1.99	0.44
1:AH:326:LEU:O	1:AH:327:ARG:HB2	2.18	0.44
1:AJ:132:PHE:N	1:AJ:255:GLY:O	2.48	0.44
1:AO:243:GLU:HG2	1:AO:243:GLU:O	2.17	0.44
1:AO:93:SER:O	1:AO:101:PHE:CE2	2.66	0.44
1:AP:27:ALA:HB2	1:AP:54:TRP:NE1	2.31	0.44
1:AQ:285:ASN:HD22	1:AQ:287:ARG:N	2.16	0.44
1:AR:370:LEU:O	1:AR:373:ALA:HB3	2.17	0.44
1:BF:40:VAL:HG13	1:BF:107:GLU:CD	2.38	0.44
1:BF:319:PHE:CZ	1:BF:323:LEU:HD11	2.52	0.44
1:BG:314:GLU:CG	1:BG:315:LYS:HD2	2.47	0.44
1:BJ:139:SER:OG	3:BJ:402:ADP:N1	2.50	0.44
1:BJ:52:LYS:HE2	1:BJ:53:TYR:CZ	2.52	0.44
1:BJ:8:TYR:O	1:BJ:12:ASN:ND2	2.51	0.44
1:BL:362:GLN:NE2	1:BL:366:ASP:OD1	2.49	0.44
1:BM:285:ASN:HD22	1:BM:287:ARG:N	2.14	0.44
1:BM:139:SER:OG	3:BM:402:ADP:N1	2.46	0.44
1:BN:245:HIS:C	1:BN:246:ILE:HG13	2.37	0.44
1:BN:253:LYS:HB2	1:BN:253:LYS:HE3	1.88	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BO:25:PHE:CD1	1:BP:160:ALA:HB1	2.52	0.44
1:BP:285:ASN:HB2	1:BP:291:ILE:CD1	2.45	0.44
1:BP:327:ARG:HA	1:BP:327:ARG:HD2	1.81	0.44
1:BP:69:GLN:HB3	6:BP:596:HOH:O	2.18	0.44
1:BQ:244:ASP:OD1	1:BQ:292:CYS:HB3	2.18	0.44
1:BR:176:LEU:HD21	1:BR:270:GLU:HB3	2.00	0.44
1:AA:204:LEU:HG	1:AA:205:PHE:N	2.33	0.44
1:AC:331:ARG:HB2	1:AC:346:ASP:HB3	2.00	0.44
1:AG:191:ASN:OD1	1:AG:194:ASP:HB2	2.18	0.44
1:AH:79:PHE:CD2	1:AH:337:SER:HA	2.53	0.44
1:AI:285:ASN:HD22	1:AI:287:ARG:N	2.03	0.44
1:AI:298:MET:HE3	1:AI:353:LEU:HD12	2.00	0.44
1:AP:40:VAL:O	1:AP:43:SER:HB2	2.18	0.44
1:AR:387:MET:H	1:AR:387:MET:HG2	1.52	0.44
1:BC:105:ILE:HG12	1:BC:298:MET:HE2	2.00	0.44
1:BD:298:MET:CE	1:BD:353:LEU:HD12	2.47	0.44
1:BD:85:GLY:HA2	6:BD:554:HOH:O	2.18	0.44
1:BE:308:LEU:HD22	1:BE:310:LEU:HD21	1.98	0.44
1:BG:377:LYS:HE3	1:BG:382:GLN:HB3	1.99	0.44
1:BH:304:ALA:O	1:BH:348:SER:HB2	2.17	0.44
2:BH:401:NMG:NH1	5:BH:404:NO3:N	2.65	0.44
1:BL:49:LEU:HD21	1:BL:99:GLU:HG2	1.99	0.44
1:BR:173:LEU:HD13	1:BR:229:TRP:CG	2.52	0.44
1:BR:229:TRP:O	1:BR:230:HIS:HB3	2.18	0.44
1:BR:335:GLY:O	1:BR:338:SER:N	2.50	0.44
1:BR:322:MET:HG3	1:BR:389:PRO:HD2	2.00	0.44
1:AC:112:LYS:HB3	1:AC:113:PRO:CD	2.47	0.44
1:AC:249:ILE:HG22	1:AC:250:SER:N	2.33	0.44
1:AE:303:ARG:NH2	3:AE:402:ADP:O2A	2.50	0.44
1:AL:125:ASN:C	1:AL:127:LEU:H	2.21	0.44
1:AL:295:PRO:O	1:AL:298:MET:CG	2.65	0.44
1:AM:382:GLN:HB2	1:AM:382:GLN:HE21	1.59	0.44
1:AR:189:THR:OG1	1:BE:35:SER:HB2	2.18	0.44
1:AR:285:ASN:HD22	1:AR:288:LEU:HG	1.82	0.44
1:BB:208:PRO:HG3	1:BB:222:TRP:NE1	2.32	0.44
1:BD:143:ARG:HG2	1:BD:144:CYS:N	2.31	0.44
1:BD:300:THR:HB	1:BD:302:VAL:CG2	2.48	0.44
1:BI:124:HIS:CE1	1:BI:262:SER:HB2	2.53	0.44
1:BI:136:TYR:CE2	1:BI:372:ILE:HG23	2.53	0.44
1:BK:270:GLU:HA	1:BK:270:GLU:OE2	2.18	0.44
1:BK:285:ASN:HB3	1:BK:288:LEU:HB2	1.98	0.44
1:BL:319:PHE:CZ	1:BL:323:LEU:HD11	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BM:191:ASN:ND2	1:BM:193:LYS:N	2.61	0.44
1:BM:313:LEU:CD2	1:BM:319:PHE:CD1	3.01	0.44
1:AA:312:PHE:CE1	1:AA:379:GLU:HG3	2.53	0.44
1:AC:34:LEU:HA	1:AC:37:HIS:CE1	2.53	0.44
1:AD:285:ASN:HB3	1:AD:288:LEU:HB2	1.99	0.44
1:AD:327:ARG:HB3	6:AD:520:HOH:O	2.18	0.44
1:AF:199:ILE:HD13	1:AF:206:GLU:HA	2.00	0.44
1:AH:185:TYR:HA	1:AH:186:PRO:HD3	1.72	0.44
1:AH:41:MET:SD	1:AH:41:MET:C	2.96	0.44
1:AI:111:PHE:CE1	1:AI:115:ASP:HB3	2.53	0.44
1:AM:313:LEU:HA	1:AM:378:LEU:HD12	1.99	0.44
1:AQ:332:GLY:HA3	1:AQ:338:SER:O	2.18	0.44
1:BC:221:ASP:O	1:BC:224:ASP:HB2	2.18	0.44
1:BE:309:ARG:NH1	1:BE:342:ASP:O	2.50	0.44
1:BE:82:LYS:HD3	6:BE:608:HOH:O	2.17	0.44
1:BI:88:PHE:HD1	1:BI:292:CYS:O	2.01	0.44
1:BK:357:GLU:CD	1:BK:357:GLU:H	2.20	0.44
1:BK:57:VAL:CG1	1:BK:61:GLY:HA2	2.48	0.44
1:BP:169:VAL:O	1:BP:173:LEU:HG	2.17	0.44
1:BP:359:GLU:O	1:BP:363:VAL:HG23	2.18	0.44
1:BQ:264:PHE:CE2	1:BQ:268:LEU:HD22	2.53	0.44
1:AD:57:VAL:HG12	1:AD:58:THR:O	2.18	0.43
1:AE:221:ASP:N	1:AF:73:ASP:OD1	2.50	0.43
1:AG:382:GLN:HB2	1:AG:382:GLN:HE21	1.53	0.43
1:AO:142:ILE:HD11	1:AO:257:LEU:CD2	2.47	0.43
1:AO:220:ARG:HB3	1:AO:221:ASP:OD2	2.17	0.43
1:AP:41:MET:HG2	1:AP:100:PHE:CZ	2.53	0.43
1:AR:356:SER:OG	1:AR:359:GLU:HG3	2.17	0.43
1:BC:331:ARG:NH1	3:BC:402:ADP:O2A	2.51	0.43
2:BD:401:NMG:NH1	5:BD:404:NO3:N	2.66	0.43
1:BF:325:LYS:HD3	1:BF:389:PRO:O	2.18	0.43
1:BQ:308:LEU:HD13	1:BQ:310:LEU:HD21	1.99	0.43
1:AA:117:HIS:HA	1:AA:118:PRO:HD2	1.78	0.43
1:AF:346:ASP:HB2	6:AF:520:HOH:O	2.18	0.43
1:AF:239:TRP:CH2	3:AF:402:ADP:H5'2	2.47	0.43
1:AH:34:LEU:HD22	1:AH:37:HIS:CG	2.53	0.43
1:AJ:142:ILE:HD12	1:AJ:261:PHE:HA	2.00	0.43
1:AK:285:ASN:C	1:AK:285:ASN:HD22	2.22	0.43
1:AM:143:ARG:HG3	6:AM:558:HOH:O	2.18	0.43
1:AM:364:LEU:HD22	1:AM:368:VAL:HG23	1.99	0.43
1:AP:18:LYS:HB2	1:AP:21:GLU:CD	2.39	0.43
1:AP:309:ARG:HA	1:AP:344:THR:HA	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AQ:140:CYS:HB2	1:AQ:260:VAL:HG21	1.99	0.43
1:AR:244:ASP:OD1	1:AR:292:CYS:HB3	2.18	0.43
1:BB:18:LYS:O	1:BB:21:GLU:HG2	2.19	0.43
1:BI:382:GLN:HB3	1:BI:383:SER:H	1.57	0.43
1:BJ:300:THR:O	1:BJ:302:VAL:HG23	2.18	0.43
1:BK:169:VAL:O	1:BK:173:LEU:HG	2.17	0.43
1:BM:142:ILE:CD1	1:BM:261:PHE:HA	2.48	0.43
1:BN:188:THR:HG22	1:BN:223:PRO:HG2	1.98	0.43
1:BN:360:LEU:HD23	1:BN:360:LEU:HA	1.85	0.43
1:BN:58:THR:HB	1:BN:59:PRO:HD2	1.99	0.43
1:BQ:302:VAL:HG21	1:BQ:357:GLU:HG3	1.99	0.43
1:BQ:50:TYR:O	1:BQ:54:TRP:HB3	2.18	0.43
1:BR:270:GLU:OE1	1:BR:273:ARG:NH1	2.47	0.43
1:BR:34:LEU:HD13	1:BR:42:ALA:HA	2.00	0.43
1:AC:201:ASP:O	1:AC:202:HIS:HB2	2.18	0.43
1:AG:309:ARG:NH1	1:AG:342:ASP:O	2.51	0.43
1:AH:54:TRP:CD1	1:AH:55:ASP:N	2.86	0.43
1:AK:198:LEU:HD23	1:AK:198:LEU:HA	1.86	0.43
1:AK:330:LYS:HE3	1:AK:345:TYR:HE2	1.84	0.43
1:AQ:153:LEU:HB3	1:AQ:154:PRO:HD2	2.01	0.43
1:AQ:298:MET:CG	6:AQ:570:HOH:O	2.66	0.43
1:AQ:384:ILE:CA	1:AQ:387:MET:HG3	2.48	0.43
1:BB:154:PRO:HA	1:BB:157:MET:HG2	2.00	0.43
1:BC:159:ARG:HD3	1:BC:221:ASP:OD1	2.19	0.43
1:BC:213:LEU:HD12	1:BC:218:CYS:HB2	2.00	0.43
1:BF:137:VAL:HA	1:BF:307:HIS:O	2.18	0.43
1:BF:239:TRP:HB2	1:BF:247:ARG:HB2	2.00	0.43
1:BH:301:VAL:HG12	1:BH:301:VAL:O	2.18	0.43
1:BM:40:VAL:HG12	1:BM:104:CYS:SG	2.58	0.43
1:BM:147:SER:HB2	1:BM:283:MET:HB2	2.00	0.43
1:BN:70:THR:HG21	1:BN:212:LEU:CD1	2.48	0.43
1:BR:336:GLU:OE2	2:BR:401:NMG:NE	2.49	0.43
1:AA:180:LEU:O	1:AA:229:TRP:HH2	2.01	0.43
1:AB:88:PHE:HE2	1:AB:101:PHE:CD2	2.37	0.43
1:AF:166:GLU:OE1	1:AF:225:GLY:HA2	2.18	0.43
1:AF:314:GLU:CG	1:AF:315:LYS:HD2	2.48	0.43
1:AH:154:PRO:O	1:AH:220:ARG:NH2	2.51	0.43
1:AI:136:TYR:O	1:AI:308:LEU:HD23	2.18	0.43
1:AJ:285:ASN:HD22	1:AJ:288:LEU:H	1.65	0.43
1:AK:188:THR:HG23	6:AK:515:HOH:O	2.17	0.43
1:AL:143:ARG:HG3	6:AL:505:HOH:O	2.19	0.43
1:AP:57:VAL:CG1	1:AP:58:THR:N	2.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AR:153:LEU:HB3	1:AR:154:PRO:HD2	1.99	0.43
1:BA:77:ASN:ND2	1:BA:80:TYR:O	2.52	0.43
1:BB:101:PHE:O	1:BB:105:ILE:HG13	2.18	0.43
1:BC:250:SER:OG	1:BC:263:ARG:HD2	2.17	0.43
1:BD:43:SER:HA	1:BI:177:LYS:HD3	2.01	0.43
1:BJ:168:VAL:HG13	1:BJ:280:HIS:CE1	2.53	0.43
1:BJ:274:LEU:HA	1:BJ:277:GLU:HB2	2.00	0.43
1:BK:357:GLU:O	1:BK:361:VAL:HG23	2.18	0.43
1:BL:309:ARG:HA	1:BL:344:THR:HA	2.00	0.43
1:BL:320:ASP:O	1:BL:323:LEU:HB2	2.18	0.43
1:BP:168:VAL:HG13	1:BP:280:HIS:CE1	2.53	0.43
1:BQ:222:TRP:HA	1:BQ:223:PRO:HA	1.83	0.43
1:BR:222:TRP:CG	1:BR:223:PRO:HA	2.53	0.43
1:AB:145:GLY:H	1:AB:301:VAL:CG1	2.32	0.43
1:AB:18:LYS:O	1:AB:21:GLU:HG2	2.18	0.43
1:AB:27:ALA:HB2	1:AB:54:TRP:CE2	2.54	0.43
1:AC:40:VAL:O	1:AC:44:GLN:HG2	2.18	0.43
1:AK:245:HIS:C	1:AK:246:ILE:HG13	2.38	0.43
1:AN:183:LYS:HD3	1:AN:185:TYR:CE2	2.53	0.43
1:AN:26:LYS:O	1:AN:27:ALA:C	2.57	0.43
1:AO:314:GLU:CG	1:AO:315:LYS:HD2	2.47	0.43
1:AR:151:VAL:HG12	1:AR:152:CYS:O	2.18	0.43
1:AR:142:ILE:HD12	1:AR:261:PHE:HA	1.99	0.43
1:BC:364:LEU:HD22	1:BC:368:VAL:CG2	2.47	0.43
1:BD:121:ASP:O	1:BD:357:GLU:HB2	2.18	0.43
1:BE:201:ASP:O	1:BE:202:HIS:HB2	2.18	0.43
1:BH:18:LYS:HA	1:BH:19:PRO:HD2	1.72	0.43
1:BI:318:ARG:HD3	1:BI:388:ILE:HD13	2.00	0.43
1:BK:219:ALA:O	1:BK:222:TRP:HB2	2.18	0.43
1:BN:195:GLN:HE21	1:BN:195:GLN:HB2	1.67	0.43
1:BQ:239:TRP:HB2	1:BQ:247:ARG:HB2	2.00	0.43
1:AB:88:PHE:HE2	1:AB:101:PHE:CG	2.37	0.43
1:AB:18:LYS:HB2	1:AB:21:GLU:CD	2.39	0.43
1:AD:298:MET:CE	1:AD:353:LEU:HD12	2.48	0.43
1:AH:126:LYS:O	1:AH:358:ARG:HD2	2.18	0.43
1:AI:341:THR:O	1:AI:342:ASP:CB	2.66	0.43
1:AK:297:ASN:OD1	1:AK:352:ARG:NE	2.49	0.43
1:AK:312:PHE:CZ	1:AK:379:GLU:HG3	2.54	0.43
1:AM:157:MET:HE3	1:AM:245:HIS:HE2	1.84	0.43
1:AM:31:PHE:O	1:AN:163:ARG:NH2	2.43	0.43
1:AN:340:ALA:HB2	1:AN:345:TYR:CE2	2.54	0.43
1:AO:206:GLU:HB2	6:AO:522:HOH:O	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AP:285:ASN:HD22	1:AP:288:LEU:H	1.65	0.43
1:BA:237:LEU:N	1:BA:237:LEU:HD12	2.33	0.43
1:BA:144:CYS:HB3	1:BA:302:VAL:HG22	2.00	0.43
1:BB:140:CYS:SG	1:BB:306:VAL:HG12	2.59	0.43
1:BB:322:MET:CE	1:BB:388:ILE:HG12	2.49	0.43
1:BC:84:THR:HG23	1:BC:108:ILE:HD11	1.99	0.43
1:BC:212:LEU:O	1:BC:216:SER:HB3	2.17	0.43
1:BD:153:LEU:HD21	1:BD:283:MET:CE	2.45	0.43
1:BE:305:SER:CB	1:BE:348:SER:HB3	2.47	0.43
1:BI:372:ILE:HG22	1:BI:376:LYS:HE2	1.99	0.43
1:BL:112:LYS:O	1:BL:287:ARG:NH2	2.52	0.43
1:BN:34:LEU:HA	1:BN:37:HIS:CE1	2.53	0.43
1:BQ:49:LEU:HD11	1:BQ:103:LYS:HE2	2.00	0.43
1:AA:176:LEU:HD23	1:AA:274:LEU:HD11	2.01	0.43
3:AB:402:ADP:H2'	6:AB:532:HOH:O	2.18	0.43
1:AG:60:ASN:HD22	1:AG:90:ASP:HB2	1.83	0.43
1:AH:327:ARG:O	1:AH:328:LEU:HD23	2.19	0.43
1:AH:331:ARG:HB2	1:AH:346:ASP:HB3	2.01	0.43
1:AJ:112:LYS:N	1:AJ:115:ASP:OD2	2.41	0.43
1:AJ:141:ARG:HG3	1:AJ:251:MET:HB3	2.01	0.43
1:AN:285:ASN:HD22	1:AN:288:LEU:HB2	1.83	0.43
1:AQ:154:PRO:HG2	1:AQ:243:GLU:O	2.18	0.43
1:BA:314:GLU:HG3	1:BA:315:LYS:HD2	2.01	0.43
1:BA:49:LEU:HD21	1:BA:99:GLU:HG2	2.01	0.43
1:BC:111:PHE:HE2	1:BC:287:ARG:NH2	2.17	0.43
1:BD:372:ILE:HG22	1:BD:376:LYS:HE2	2.00	0.43
1:BE:384:ILE:HA	1:BE:387:MET:HG3	1.99	0.43
1:BG:40:VAL:HB	1:BG:84:THR:HA	1.99	0.43
1:BG:66:LYS:NZ	1:BG:216:SER:O	2.52	0.43
1:BK:228:ILE:HD11	1:BK:237:LEU:HD23	2.01	0.43
1:BQ:153:LEU:HB3	1:BQ:154:PRO:HD2	2.00	0.43
1:BQ:199:ILE:HG12	1:BQ:205:PHE:O	2.19	0.43
1:BQ:346:ASP:C	1:BQ:346:ASP:OD1	2.57	0.43
1:AC:185:TYR:HA	1:AC:186:PRO:HD2	1.92	0.43
1:AC:94:TYR:CE2	1:AC:288:LEU:HD11	2.54	0.43
1:AE:305:SER:CB	1:AE:348:SER:HB3	2.48	0.43
1:AI:233:GLU:OE1	1:AI:235:ASN:ND2	2.47	0.43
1:AM:335:GLY:O	1:AM:336:GLU:C	2.57	0.43
1:AP:212:LEU:O	1:AP:216:SER:CB	2.66	0.43
1:AQ:91:GLU:OE2	1:AQ:149:LYS:HE2	2.18	0.43
1:AR:307:HIS:CE1	3:AR:402:ADP:C2	3.07	0.43
1:BD:18:LYS:HA	1:BD:19:PRO:HD2	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BF:24:LYS:HE3	1:BF:25:PHE:CE2	2.52	0.43
1:BL:199:ILE:HD13	1:BL:206:GLU:HA	2.00	0.43
1:BL:59:PRO:HD2	1:BL:92:TYR:CG	2.54	0.43
1:BM:108:ILE:HG21	1:BM:296:THR:HG22	1.99	0.43
1:BN:248:VAL:C	1:BN:249:ILE:HG13	2.39	0.43
1:BN:147:SER:HB3	1:BN:283:MET:HE3	2.00	0.43
1:BR:298:MET:HG2	6:BR:575:HOH:O	2.17	0.43
1:AA:98:LYS:HG3	1:AA:102:ASP:OD2	2.19	0.43
1:AC:168:VAL:HG13	1:AC:280:HIS:ND1	2.33	0.43
1:AC:31:PHE:HA	1:AC:32:PRO:HD2	1.89	0.43
1:AC:385:ASP:C	1:AC:385:ASP:OD1	2.57	0.43
1:AK:117:HIS:CE1	1:AK:300:THR:HG23	2.54	0.43
1:AK:367:GLY:HA3	6:AK:578:HOH:O	2.17	0.43
1:AO:283:MET:HB2	6:AO:578:HOH:O	2.18	0.43
1:AO:284:HIS:CE1	1:AO:289:GLY:HA2	2.54	0.43
1:AP:93:SER:O	1:AP:94:TYR:C	2.57	0.43
1:BB:366:ASP:HB3	1:BC:126:LYS:HD2	1.99	0.43
1:BC:268:LEU:O	1:BC:272:GLU:HG3	2.19	0.43
1:BE:294:CYS:HA	1:BE:295:PRO:HD3	1.91	0.43
1:AQ:35:SER:HB3	1:BF:186:PRO:HG2	2.01	0.43
1:BF:326:LEU:O	1:BF:327:ARG:HB2	2.18	0.43
1:BG:328:LEU:HD22	1:BG:364:LEU:HD23	2.01	0.43
1:BH:237:LEU:HD12	1:BH:237:LEU:N	2.34	0.43
1:BH:285:ASN:HB3	1:BH:288:LEU:HB2	1.99	0.43
1:BI:168:VAL:HG12	1:BI:169:VAL:N	2.33	0.43
1:BJ:154:PRO:HD3	1:BJ:245:HIS:NE2	2.33	0.43
1:BI:159:ARG:NH2	1:BJ:65:ASP:OD1	2.45	0.43
1:BK:38:ASN:C	1:BK:38:ASN:ND2	2.71	0.43
1:BN:18:LYS:HB2	1:BN:21:GLU:CD	2.38	0.43
1:BN:57:VAL:CG1	1:BN:58:THR:N	2.81	0.43
1:BO:154:PRO:HG2	1:BO:243:GLU:O	2.17	0.43
1:BO:285:ASN:ND2	1:BO:288:LEU:HG	2.33	0.43
1:BR:91:GLU:HG3	1:BR:283:MET:CG	2.48	0.43
1:AA:341:THR:O	1:AA:342:ASP:CB	2.67	0.43
1:AB:290:TYR:HB3	6:AB:506:HOH:O	2.19	0.43
1:AI:67:CYS:O	1:AI:86:CYS:HA	2.18	0.43
1:AK:340:ALA:HB1	1:AK:344:THR:O	2.19	0.43
1:AL:146:ARG:HD2	1:AL:282:LEU:HD13	2.00	0.43
1:AO:281:GLY:O	1:AO:282:LEU:HD23	2.19	0.43
1:AO:313:LEU:CD1	1:AO:374:CYS:HB2	2.49	0.43
1:BB:34:LEU:HD13	1:BB:42:ALA:HA	1.99	0.43
1:BD:297:ASN:O	1:BD:301:VAL:HG13	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BF:132:PHE:CD1	1:BF:137:VAL:HG21	2.54	0.43
1:BF:222:TRP:HA	1:BF:223:PRO:HA	1.82	0.43
1:BJ:106:GLU:HG3	1:BJ:112:LYS:HA	2.01	0.43
1:BJ:232:ASN:N	1:BJ:232:ASN:OD1	2.52	0.43
1:BJ:94:TYR:CZ	1:BJ:288:LEU:HD11	2.54	0.43
1:BN:13:ARG:NH1	1:BN:156:ALA:O	2.52	0.43
1:BN:141:ARG:HG3	1:BN:251:MET:HB3	2.00	0.43
1:BO:340:ALA:HB2	1:BO:345:TYR:CE2	2.54	0.43
1:BR:176:LEU:HA	1:BR:176:LEU:HD23	1.78	0.43
1:BR:236:PHE:HB2	1:BR:263:ARG:HD3	2.00	0.43
1:BR:331:ARG:NH1	3:BR:402:ADP:O2A	2.52	0.43
1:AB:326:LEU:HD11	1:AB:370:LEU:HD23	2.01	0.42
1:AC:300:THR:OG1	1:AC:302:VAL:HB	2.18	0.42
1:AC:384:ILE:HA	1:AC:387:MET:HG3	2.01	0.42
1:AE:57:VAL:HG12	1:AE:58:THR:N	2.33	0.42
1:AF:98:LYS:O	1:AF:98:LYS:HG2	2.17	0.42
3:AI:402:ADP:C5'	3:AI:402:ADP:O2B	2.55	0.42
1:AJ:244:ASP:OD1	1:AJ:292:CYS:HB3	2.19	0.42
1:AK:83:LYS:NZ	6:AK:516:HOH:O	2.52	0.42
1:AR:143:ARG:CD	1:AR:303:ARG:HB3	2.48	0.42
1:AR:384:ILE:CB	1:AR:387:MET:HG3	2.45	0.42
1:BE:208:PRO:HG3	1:BE:222:TRP:CG	2.54	0.42
1:BF:327:ARG:NH1	6:BF:533:HOH:O	2.52	0.42
1:BH:90:ASP:HB2	6:BH:594:HOH:O	2.18	0.42
1:BK:192:GLU:O	1:BK:196:GLU:HG3	2.19	0.42
1:BL:153:LEU:HB3	1:BL:154:PRO:HD2	2.01	0.42
1:BL:368:VAL:HA	1:BL:371:LEU:HD12	2.01	0.42
1:BM:331:ARG:HB2	1:BM:346:ASP:HB3	2.00	0.42
1:AA:247:ARG:HD2	6:AA:628:HOH:O	2.19	0.42
1:AE:154:PRO:N	1:AE:155:PRO:HD2	2.33	0.42
1:AE:319:PHE:O	1:AE:323:LEU:HG	2.19	0.42
1:AE:384:ILE:CA	1:AE:387:MET:HG3	2.50	0.42
1:AF:316:HIS:HA	1:AF:317:PRO:HD2	1.79	0.42
1:AF:79:PHE:HA	1:AF:339:LEU:HD21	2.01	0.42
1:AG:156:ALA:HB1	1:AH:16:HIS:HA	2.00	0.42
1:AH:173:LEU:HD11	1:AH:238:VAL:HG11	2.01	0.42
1:AI:316:HIS:HA	1:AI:317:PRO:HD2	1.84	0.42
1:AJ:94:TYR:CZ	1:AJ:288:LEU:HD11	2.54	0.42
1:AK:34:LEU:HD22	1:AK:37:HIS:CD2	2.54	0.42
1:AL:117:HIS:HA	1:AL:118:PRO:HD2	1.85	0.42
1:AM:149:LYS:HG3	1:AM:150:GLY:N	2.35	0.42
1:AO:349:ASN:HD22	1:AO:360:LEU:HD22	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AP:205:PHE:HD2	1:AP:239:TRP:CD2	2.37	0.42
1:AQ:58:THR:HG22	1:AQ:96:CYS:SG	2.59	0.42
1:AR:290:TYR:O	1:AR:298:MET:HA	2.19	0.42
1:AR:41:MET:HE2	1:AR:71:GLY:HA3	2.02	0.42
1:BB:271:VAL:O	1:BB:275:MET:HG2	2.19	0.42
1:BC:151:VAL:HG13	1:BC:161:GLU:HB3	2.00	0.42
1:BD:14:VAL:HG23	6:BD:520:HOH:O	2.18	0.42
1:BD:358:ARG:HH21	1:BD:359:GLU:HG3	1.82	0.42
1:BH:172:ALA:C	1:BH:174:GLY:H	2.23	0.42
1:BI:278:CYS:HB3	1:BI:280:HIS:CE1	2.54	0.42
1:BM:290:TYR:HB3	6:BM:569:HOH:O	2.17	0.42
1:BM:144:CYS:HA	1:BM:301:VAL:O	2.18	0.42
1:AA:301:VAL:HG12	1:AA:301:VAL:O	2.19	0.42
1:AB:173:LEU:HD23	1:AB:173:LEU:HA	1.80	0.42
1:AD:123:ASP:OD2	1:AD:126:LYS:HG2	2.19	0.42
1:AF:94:TYR:HE1	6:AF:523:HOH:O	2.03	0.42
1:AH:31:PHE:HA	1:AH:32:PRO:HD3	1.87	0.42
1:AI:89:GLY:HA2	1:AI:155:PRO:HG2	2.01	0.42
1:AJ:313:LEU:HD12	1:AJ:371:LEU:O	2.20	0.42
1:AJ:54:TRP:CD1	1:AJ:55:ASP:N	2.87	0.42
1:AK:331:ARG:HB2	1:AK:346:ASP:CB	2.45	0.42
1:AL:183:LYS:HG2	1:AL:184:TYR:N	2.33	0.42
1:AM:318:ARG:HD3	1:AM:388:ILE:CD1	2.49	0.42
1:BA:340:ALA:HB2	1:BA:345:TYR:CD2	2.54	0.42
1:BB:241:ASN:HA	1:BB:244:ASP:O	2.20	0.42
1:BB:105:ILE:CG2	1:BB:298:MET:HE1	2.46	0.42
1:BD:132:PHE:CE1	1:BD:257:LEU:HD12	2.51	0.42
1:BE:158:SER:CB	1:BF:19:PRO:HG3	2.50	0.42
1:BE:346:ASP:C	1:BE:346:ASP:OD1	2.58	0.42
1:BH:190:MET:SD	1:BH:195:GLN:HB2	2.58	0.42
1:BM:223:PRO:O	1:BM:224:ASP:C	2.57	0.42
1:BN:184:TYR:CD2	1:BN:186:PRO:HD3	2.54	0.42
1:BN:155:PRO:HG3	1:BN:218:CYS:SG	2.59	0.42
1:BN:304:ALA:O	1:BN:348:SER:HB2	2.19	0.42
1:BN:47:LYS:HG3	6:BN:530:HOH:O	2.19	0.42
1:BO:207:LYS:HB3	1:BO:208:PRO:HD2	2.02	0.42
1:BO:136:TYR:O	1:BO:308:LEU:HA	2.19	0.42
1:BP:20:TRP:HB3	1:BP:54:TRP:CH2	2.54	0.42
1:BR:308:LEU:HD13	1:BR:310:LEU:CG	2.49	0.42
1:AB:91:GLU:CD	1:AB:283:MET:HG3	2.39	0.42
1:AC:34:LEU:HA	1:AC:37:HIS:ND1	2.35	0.42
1:AG:314:GLU:HG2	1:AG:315:LYS:HD2	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AJ:34:LEU:HD13	1:AJ:42:ALA:HA	2.00	0.42
1:AL:184:TYR:CZ	1:AL:227:GLY:HA3	2.54	0.42
1:AL:124:HIS:ND1	1:AL:262:SER:HB2	2.34	0.42
1:AL:250:SER:CB	1:AL:264:PHE:HB2	2.45	0.42
1:AN:201:ASP:O	1:AN:202:HIS:HB2	2.19	0.42
1:AN:222:TRP:HA	1:AN:226:ARG:NH1	2.35	0.42
1:AP:198:LEU:HD23	6:AP:630:HOH:O	2.19	0.42
1:AP:236:PHE:CZ	1:AP:267:GLY:HA3	2.54	0.42
1:AP:313:LEU:HD23	1:AP:319:PHE:CD1	2.53	0.42
1:AP:74:ASN:HA	1:AP:75:PRO:HD2	1.88	0.42
1:BB:126:LYS:HB2	1:BB:358:ARG:HD3	2.02	0.42
1:BB:307:HIS:CE1	3:BB:402:ADP:C2	3.08	0.42
1:BB:83:LYS:NZ	1:BB:336:GLU:OE2	2.53	0.42
1:BD:205:PHE:HD2	1:BD:239:TRP:CD2	2.36	0.42
1:BE:141:ARG:NE	6:BE:532:HOH:O	2.45	0.42
1:BF:298:MET:HB2	1:BF:298:MET:HE3	1.80	0.42
1:BJ:8:TYR:HD2	1:BJ:11:LYS:HZ3	1.67	0.42
1:BL:305:SER:CB	1:BL:348:SER:HB3	2.49	0.42
1:BM:183:LYS:HG2	1:BM:184:TYR:N	2.34	0.42
1:BM:360:LEU:O	1:BM:363:VAL:HB	2.19	0.42
1:BP:80:TYR:CD1	1:BP:330:LYS:HG2	2.54	0.42
1:BQ:318:ARG:HD3	1:BQ:388:ILE:CD1	2.49	0.42
1:AB:146:ARG:NH2	1:AB:272:GLU:OE1	2.49	0.42
1:AC:91:GLU:HB2	1:AC:283:MET:CE	2.49	0.42
1:AF:138:LYS:HD2	6:AF:560:HOH:O	2.19	0.42
1:AF:143:ARG:HG3	6:AF:504:HOH:O	2.20	0.42
1:AG:217:GLY:HA2	6:AG:532:HOH:O	2.20	0.42
1:AG:240:ILE:HA	1:AG:245:HIS:O	2.19	0.42
1:AG:367:GLY:O	1:AG:371:LEU:HG	2.19	0.42
1:AH:119:ALA:HA	1:AH:120:PRO:HD3	1.87	0.42
1:AH:309:ARG:HA	1:AH:344:THR:HA	2.01	0.42
1:AH:361:VAL:O	1:AH:365:VAL:HG23	2.20	0.42
1:AH:60:ASN:HB2	1:AH:90:ASP:OD2	2.19	0.42
1:AI:305:SER:HA	1:AI:347:ILE:O	2.18	0.42
1:AI:385:ASP:HB3	6:AI:520:HOH:O	2.19	0.42
1:AK:152:CYS:SG	1:AL:17:SER:HB3	2.59	0.42
1:BC:126:LYS:HB2	1:BC:358:ARG:CD	2.29	0.42
1:BD:40:VAL:HG23	1:BD:84:THR:HA	2.01	0.42
1:BE:112:LYS:HB3	1:BE:113:PRO:HD2	2.02	0.42
1:BE:300:THR:HB	1:BE:302:VAL:HG23	2.00	0.42
1:BK:154:PRO:HG2	1:BK:243:GLU:O	2.18	0.42
1:BL:357:GLU:N	1:BL:357:GLU:OE1	2.40	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BL:59:PRO:HD2	1:BL:92:TYR:CD1	2.54	0.42
1:BP:285:ASN:HD22	1:BP:288:LEU:N	2.15	0.42
1:BQ:149:LYS:N	1:BQ:281:GLY:O	2.52	0.42
1:BR:340:ALA:HB2	1:BR:345:TYR:CE2	2.54	0.42
1:AA:377:LYS:HG3	1:AA:387:MET:CE	2.50	0.42
1:AB:18:LYS:HB3	1:AB:20:TRP:CE2	2.54	0.42
1:AA:221:ASP:HA	1:AB:72:VAL:HG12	2.02	0.42
1:AC:198:LEU:HD23	1:AC:198:LEU:HA	1.91	0.42
1:AH:101:PHE:O	1:AH:105:ILE:HG13	2.20	0.42
1:AI:185:TYR:HA	1:AI:186:PRO:HD2	1.87	0.42
1:AI:310:LEU:O	1:AI:314:GLU:HB3	2.19	0.42
1:AL:31:PHE:CZ	1:AL:47:LYS:HG2	2.54	0.42
1:AO:384:ILE:CB	1:AO:387:MET:HG3	2.49	0.42
1:AR:237:LEU:O	1:AR:238:VAL:HG23	2.20	0.42
1:BB:152:CYS:HB2	1:BB:161:GLU:CD	2.40	0.42
1:BD:297:ASN:HB3	1:BD:301:VAL:CG1	2.47	0.42
1:BD:73:ASP:C	1:BD:75:PRO:HD3	2.40	0.42
1:BD:79:PHE:HB3	6:BD:578:HOH:O	2.20	0.42
1:BE:143:ARG:HD3	1:BE:303:ARG:HB3	2.00	0.42
1:BF:143:ARG:HH22	1:BF:297:ASN:CG	2.22	0.42
1:BF:327:ARG:O	1:BF:350:TRP:HB3	2.20	0.42
1:BG:187:LEU:HD11	1:BG:195:GLN:HG3	2.02	0.42
1:BJ:290:TYR:O	1:BJ:298:MET:HA	2.19	0.42
1:BM:285:ASN:OD1	1:BM:288:LEU:HD12	2.20	0.42
1:BN:173:LEU:HD13	1:BN:229:TRP:CG	2.55	0.42
1:BP:84:THR:HB	6:BP:609:HOH:O	2.18	0.42
1:BQ:177:LYS:HD3	6:BQ:603:HOH:O	2.18	0.42
1:BR:184:TYR:CZ	1:BR:227:GLY:HA3	2.54	0.42
1:AB:250:SER:CB	1:AB:264:PHE:HB2	2.50	0.42
1:AI:180:LEU:O	1:AI:229:TRP:HH2	2.02	0.42
1:AJ:66:LYS:HD3	1:AJ:66:LYS:O	2.20	0.42
1:AL:312:PHE:CZ	1:AL:379:GLU:HG3	2.55	0.42
1:AH:193:LYS:HG3	1:AM:193:LYS:CE	2.49	0.42
1:AN:144:CYS:HA	1:AN:301:VAL:O	2.19	0.42
1:AN:288:LEU:O	1:AN:299:GLY:HA2	2.20	0.42
1:AO:212:LEU:HD13	6:AO:550:HOH:O	2.19	0.42
1:AO:66:LYS:HE2	1:AP:16:HIS:CD2	2.55	0.42
1:AQ:155:PRO:HD3	1:AQ:218:CYS:SG	2.59	0.42
1:BB:285:ASN:ND2	1:BB:287:ARG:H	2.18	0.42
1:BB:244:ASP:OD1	1:BB:292:CYS:HB3	2.20	0.42
1:BC:273:ARG:O	1:BC:277:GLU:HB2	2.20	0.42
1:BD:79:PHE:CE2	1:BD:337:SER:HB2	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BG:300:THR:C	1:BG:301:VAL:HG23	2.40	0.42
1:BI:213:LEU:HD12	1:BI:218:CYS:HB2	2.02	0.42
1:BL:358:ARG:HE	1:BL:358:ARG:HB3	1.53	0.42
1:BO:141:ARG:HD2	3:BO:402:ADP:C4	2.55	0.42
1:BQ:301:VAL:O	1:BQ:301:VAL:HG12	2.20	0.42
1:BQ:316:HIS:HA	1:BQ:317:PRO:HD2	1.86	0.42
1:BR:142:ILE:HD12	1:BR:261:PHE:HA	2.02	0.42
1:AC:36:LYS:HA	6:AC:518:HOH:O	2.19	0.42
1:AE:180:LEU:O	1:AE:229:TRP:CH2	2.67	0.42
1:AF:127:LEU:HA	1:AF:127:LEU:HD12	1.87	0.42
1:AF:287:ARG:NH1	6:AF:523:HOH:O	2.51	0.42
1:AF:307:HIS:CD2	3:AF:402:ADP:C6	3.07	0.42
1:AG:57:VAL:HG22	1:AG:63:THR:HG22	2.02	0.42
1:AH:49:LEU:HA	1:AH:49:LEU:HD23	1.92	0.42
1:AI:105:ILE:HG12	1:AI:298:MET:CE	2.50	0.42
1:AI:36:LYS:HG2	1:AO:189:THR:O	2.20	0.42
1:AL:8:TYR:CD2	1:AL:11:LYS:HE2	2.54	0.42
1:AM:31:PHE:CE1	1:AM:47:LYS:HA	2.55	0.42
1:AN:11:LYS:HA	1:AN:61:GLY:HA2	2.01	0.42
1:AO:34:LEU:HD11	1:AO:45:LEU:HD23	2.02	0.42
1:BA:157:MET:HE2	1:BA:161:GLU:HB2	2.01	0.42
1:BB:44:GLN:HG3	1:BB:103:LYS:O	2.20	0.42
1:BB:367:GLY:O	1:BB:371:LEU:HG	2.19	0.42
1:BD:327:ARG:HA	6:BD:537:HOH:O	2.20	0.42
1:BD:360:LEU:HA	1:BD:360:LEU:HD23	1.87	0.42
1:BE:162:ARG:HG2	1:BE:241:ASN:ND2	2.34	0.42
1:BF:94:TYR:CZ	1:BF:98:LYS:HG3	2.55	0.42
1:BG:364:LEU:O	1:BG:368:VAL:HG23	2.19	0.42
1:BH:70:THR:O	1:BH:74:ASN:ND2	2.53	0.42
1:BI:138:LYS:O	1:BI:139:SER:HB3	2.20	0.42
1:BI:79:PHE:HB3	6:BI:521:HOH:O	2.19	0.42
1:BJ:360:LEU:HA	1:BJ:360:LEU:HD23	1.87	0.42
1:BK:26:LYS:O	1:BK:29:ASP:HB2	2.19	0.42
1:BL:112:LYS:HB3	1:BL:113:PRO:CD	2.50	0.42
1:BL:246:ILE:O	1:BL:247:ARG:HG2	2.20	0.42
1:BL:295:PRO:O	1:BL:298:MET:HE1	2.20	0.42
1:BM:327:ARG:HA	1:BM:327:ARG:HD2	1.90	0.42
1:BO:105:ILE:HG12	1:BO:298:MET:CE	2.50	0.42
1:BO:136:TYR:HB3	1:BO:308:LEU:HD21	2.01	0.42
1:BR:184:TYR:CE1	1:BR:227:GLY:HA3	2.55	0.42
1:BR:313:LEU:HD23	1:BR:316:HIS:CB	2.50	0.42
1:AA:298:MET:CE	1:AA:353:LEU:HD12	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AC:245:HIS:C	1:AC:246:ILE:HG13	2.40	0.42
1:AD:131:VAL:HG22	1:AD:256:ASP:OD1	2.20	0.42
1:AM:355:LYS:NZ	6:AM:560:HOH:O	2.53	0.42
1:AN:108:ILE:HD13	1:AN:296:THR:CG2	2.45	0.42
1:AN:319:PHE:CZ	1:AN:323:LEU:HD11	2.55	0.42
1:AO:275:MET:HE3	1:AO:280:HIS:HB2	2.02	0.42
1:BB:202:HIS:HB3	3:BB:402:ADP:H1'	2.02	0.42
1:BD:8:TYR:HA	1:BD:11:LYS:HZ3	1.84	0.42
1:BD:250:SER:OG	1:BD:260:VAL:HG13	2.19	0.42
1:BG:94:TYR:CZ	1:BG:288:LEU:HD11	2.55	0.42
1:BI:49:LEU:HD23	1:BI:49:LEU:HA	1.93	0.42
1:BJ:159:ARG:HG3	6:BJ:533:HOH:O	2.18	0.42
1:BJ:309:ARG:NH1	1:BJ:342:ASP:OD1	2.53	0.42
3:BJ:402:ADP:H5'1	3:BJ:402:ADP:H8	1.85	0.42
1:BJ:8:TYR:CD2	1:BJ:11:LYS:HE2	2.54	0.42
1:BK:205:PHE:HD2	1:BK:239:TRP:CG	2.37	0.42
1:BL:192:GLU:O	1:BL:193:LYS:C	2.58	0.42
1:BM:346:ASP:C	1:BM:346:ASP:OD1	2.58	0.42
1:BQ:79:PHE:CD2	1:BQ:337:SER:HA	2.55	0.42
1:BR:18:LYS:HB2	1:BR:21:GLU:CD	2.40	0.42
1:AB:12:ASN:O	1:AB:14:VAL:N	2.52	0.42
1:AB:374:CYS:SG	1:AB:387:MET:CE	3.08	0.42
1:AE:94:TYR:CZ	1:AE:288:LEU:HD11	2.55	0.42
1:AE:88:PHE:HE2	1:AE:101:PHE:CD2	2.38	0.42
1:AF:127:LEU:HD12	1:AF:362:GLN:OE1	2.20	0.42
1:AF:147:SER:HB2	1:AF:283:MET:CB	2.50	0.42
1:AH:144:CYS:HA	1:AH:301:VAL:O	2.20	0.42
1:AI:377:LYS:HE3	1:AI:382:GLN:HB3	2.01	0.42
1:AJ:386:ASP:OD1	1:AJ:386:ASP:N	2.45	0.42
1:AK:36:LYS:HD3	1:AQ:189:THR:O	2.20	0.42
1:AK:80:TYR:CZ	1:AK:330:LYS:HE2	2.55	0.42
1:AM:349:ASN:ND2	1:AM:360:LEU:HD13	2.35	0.42
1:AO:237:LEU:HD12	1:AO:237:LEU:N	2.34	0.42
1:AO:292:CYS:HB3	1:AO:293:THR:H	1.65	0.42
1:BB:274:LEU:HA	1:BB:274:LEU:HD23	1.91	0.42
1:BD:285:ASN:ND2	1:BD:287:ARG:H	2.18	0.42
1:BD:358:ARG:NH2	6:BD:509:HOH:O	2.52	0.42
1:BF:112:LYS:O	1:BF:115:ASP:N	2.40	0.42
1:BF:273:ARG:O	1:BF:277:GLU:HB2	2.20	0.42
1:BF:117:HIS:HB2	1:BF:353:LEU:HD21	2.02	0.42
1:BH:195:GLN:O	1:BH:199:ILE:HG13	2.20	0.42
1:BI:226:ARG:CG	1:BI:241:ASN:O	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BJ:109:HIS:C	1:BJ:111:PHE:N	2.71	0.42
1:BJ:238:VAL:HA	1:BJ:247:ARG:O	2.20	0.42
1:BJ:270:GLU:HA	1:BJ:270:GLU:OE2	2.20	0.42
1:BK:313:LEU:HD12	1:BK:374:CYS:HB2	2.01	0.42
6:BQ:526:HOH:O	1:BR:36:LYS:HD2	2.19	0.42
1:AC:38:ASN:C	1:AC:38:ASN:HD22	2.22	0.41
1:AH:183:LYS:HB3	1:AH:185:TYR:OH	2.19	0.41
1:AH:66:LYS:HD3	1:AH:66:LYS:O	2.20	0.41
1:AI:109:HIS:O	1:AI:110:HIS:HB2	2.20	0.41
1:AP:285:ASN:ND2	1:AP:288:LEU:N	2.67	0.41
1:AR:176:LEU:HD12	1:AR:229:TRP:CZ2	2.55	0.41
1:BG:388:ILE:HA	1:BG:389:PRO:HD3	1.82	0.41
1:BI:144:CYS:HB3	1:BI:264:PHE:HZ	1.85	0.41
1:BN:191:ASN:ND2	1:BN:192:GLU:N	2.68	0.41
1:BO:74:ASN:OD1	1:BO:211:ALA:HB1	2.20	0.41
1:BQ:69:GLN:HE21	1:BQ:73:ASP:CG	2.24	0.41
1:BR:143:ARG:NH2	1:BR:297:ASN:OD1	2.42	0.41
1:BR:345:TYR:CD1	1:BR:345:TYR:N	2.87	0.41
1:BR:69:GLN:HE21	1:BR:73:ASP:CG	2.23	0.41
1:AB:326:LEU:O	1:AB:328:LEU:HG	2.20	0.41
1:AC:80:TYR:CE2	1:AC:339:LEU:HD22	2.55	0.41
1:AD:198:LEU:HB3	1:AD:204:LEU:HB2	2.02	0.41
1:AG:37:HIS:CD2	1:AG:75:PRO:CA	3.01	0.41
1:AH:127:LEU:HB3	1:AH:258:LYS:HE3	2.02	0.41
1:AJ:213:LEU:HD12	1:AJ:218:CYS:CB	2.47	0.41
1:AN:178:GLY:C	1:AN:180:LEU:H	2.23	0.41
1:AO:279:GLY:O	1:AO:280:HIS:CD2	2.73	0.41
1:AQ:257:LEU:O	1:AQ:257:LEU:HD22	2.20	0.41
1:AQ:357:GLU:O	1:AQ:361:VAL:HG23	2.19	0.41
1:BA:58:THR:HB	1:BA:59:PRO:HD2	2.02	0.41
1:BB:157:MET:HE2	1:BB:161:GLU:HB3	2.02	0.41
1:BC:94:TYR:CZ	1:BC:288:LEU:HD11	2.55	0.41
1:BH:106:GLU:OE2	1:BH:112:LYS:HE2	2.19	0.41
1:BI:172:ALA:O	1:BI:274:LEU:HD13	2.19	0.41
1:BK:240:ILE:O	1:BK:241:ASN:HB2	2.20	0.41
1:BL:338:SER:O	1:BL:339:LEU:HD23	2.20	0.41
1:BL:88:PHE:HE2	1:BL:101:PHE:CD2	2.38	0.41
1:BN:141:ARG:HD3	3:BN:402:ADP:C5	2.55	0.41
1:BQ:213:LEU:HD12	1:BQ:218:CYS:HB2	2.03	0.41
1:BQ:298:MET:HE3	1:BQ:298:MET:HB2	1.92	0.41
1:BR:18:LYS:O	1:BR:21:GLU:HG2	2.20	0.41
1:AB:208:PRO:HD3	1:AB:222:TRP:CZ2	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:93:SER:O	1:AB:97:TYR:CD1	2.73	0.41
1:AD:145:GLY:O	1:AD:146:ARG:HD3	2.21	0.41
1:AH:117:HIS:HA	1:AH:118:PRO:HD2	1.91	0.41
1:AH:12:ASN:OD1	1:AH:18:LYS:HE3	2.21	0.41
1:AH:287:ARG:NH2	1:AH:288:LEU:HD21	2.35	0.41
1:AI:201:ASP:O	1:AI:202:HIS:HB2	2.20	0.41
1:AI:235:ASN:HB2	1:AI:263:ARG:NH1	2.35	0.41
1:AK:132:PHE:CB	1:AK:137:VAL:HG21	2.51	0.41
1:AL:101:PHE:O	1:AL:105:ILE:HG13	2.19	0.41
1:AL:71:GLY:HA3	1:AL:85:GLY:O	2.20	0.41
1:AM:53:TYR:O	1:AM:56:LYS:N	2.47	0.41
1:AM:53:TYR:OH	1:AM:99:GLU:HB3	2.21	0.41
1:AN:180:LEU:O	1:AN:229:TRP:HH2	2.03	0.41
1:AP:297:ASN:HB3	1:AP:301:VAL:HG13	2.02	0.41
1:BC:89:GLY:HA2	1:BC:155:PRO:HG2	2.01	0.41
1:BI:151:VAL:CG1	1:BI:152:CYS:N	2.83	0.41
1:BJ:37:HIS:HD2	1:BJ:71:GLY:O	2.03	0.41
1:BL:237:LEU:HD12	1:BL:237:LEU:N	2.35	0.41
1:BL:274:LEU:O	1:BL:277:GLU:N	2.53	0.41
1:BN:24:LYS:HE3	1:BN:25:PHE:CE2	2.54	0.41
1:BN:236:PHE:CZ	1:BN:267:GLY:HA3	2.55	0.41
1:BP:143:ARG:HG3	6:BP:508:HOH:O	2.20	0.41
1:BP:229:TRP:CE3	1:BP:230:HIS:HA	2.55	0.41
1:BR:277:GLU:O	1:BR:277:GLU:CG	2.69	0.41
3:BR:402:ADP:H2'	6:BR:502:HOH:O	2.21	0.41
1:AC:377:LYS:HG3	1:AC:387:MET:CE	2.51	0.41
1:AD:270:GLU:OE2	1:AD:273:ARG:HD3	2.19	0.41
1:AE:39:ASN:HB2	1:AE:83:LYS:O	2.21	0.41
1:AH:356:SER:O	1:AH:360:LEU:HG	2.20	0.41
1:AH:88:PHE:HE2	1:AH:94:TYR:HA	1.84	0.41
1:AK:168:VAL:HG13	1:AK:280:HIS:CE1	2.56	0.41
1:AL:285:ASN:ND2	1:AL:287:ARG:N	2.69	0.41
1:AM:99:GLU:O	1:AM:103:LYS:HG3	2.21	0.41
1:AM:201:ASP:O	1:AM:202:HIS:HB2	2.20	0.41
1:AO:118:PRO:HD2	1:AO:354:GLY:HA2	2.03	0.41
1:AP:202:HIS:HB3	3:AP:402:ADP:H1'	2.02	0.41
1:AQ:66:LYS:HE2	1:AR:16:HIS:NE2	2.36	0.41
1:AR:184:TYR:CD2	1:AR:186:PRO:HD3	2.55	0.41
1:AR:143:ARG:HD3	1:AR:303:ARG:HB3	2.02	0.41
1:BB:287:ARG:HD3	1:BB:287:ARG:HH11	1.74	0.41
1:BB:49:LEU:HD13	1:BB:100:PHE:HA	2.02	0.41
1:BH:187:LEU:HB3	1:BH:223:PRO:HB2	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BH:384:ILE:O	1:BH:388:ILE:HG13	2.20	0.41
1:BK:342:ASP:O	1:BK:343:SER:HB2	2.21	0.41
1:BK:34:LEU:HA	1:BK:37:HIS:CE1	2.55	0.41
1:BL:314:GLU:CG	1:BL:315:LYS:HD2	2.49	0.41
1:BN:313:LEU:HA	1:BN:378:LEU:HD12	2.01	0.41
1:BQ:112:LYS:O	1:BQ:115:ASP:HB2	2.20	0.41
1:BQ:294:CYS:HB2	6:BQ:532:HOH:O	2.19	0.41
1:BR:77:ASN:ND2	1:BR:83:LYS:HE2	2.35	0.41
1:AA:66:LYS:C	1:AA:66:LYS:HD3	2.41	0.41
1:AB:123:ASP:OD2	1:AB:126:LYS:HG2	2.20	0.41
1:AB:31:PHE:HE1	1:AB:50:TYR:HB2	1.85	0.41
1:AC:144:CYS:HA	1:AC:301:VAL:O	2.20	0.41
1:AD:302:VAL:HG21	1:AD:357:GLU:CG	2.43	0.41
1:AF:141:ARG:HB3	1:AF:305:SER:OG	2.20	0.41
1:AI:285:ASN:HD22	1:AI:286:ASP:N	2.19	0.41
1:AL:205:PHE:HB2	1:AL:242:GLU:OE2	2.21	0.41
1:AN:148:VAL:H	1:AN:245:HIS:HD1	1.68	0.41
1:AO:233:GLU:O	1:AO:234:LYS:HB2	2.20	0.41
1:AO:316:HIS:HE1	1:AO:318:ARG:HB2	1.81	0.41
1:BB:142:ILE:HG13	1:BB:260:VAL:CG1	2.51	0.41
1:BE:154:PRO:HA	1:BE:157:MET:SD	2.60	0.41
1:BG:242:GLU:CG	1:BG:243:GLU:H	2.33	0.41
1:BG:270:GLU:O	1:BG:274:LEU:HG	2.20	0.41
1:BH:50:TYR:O	1:BH:54:TRP:HB3	2.20	0.41
1:BK:58:THR:C	1:BK:60:ASN:N	2.74	0.41
1:BM:203:PHE:CE2	1:BM:234:LYS:HE3	2.56	0.41
3:BM:402:ADP:H2'	6:BM:525:HOH:O	2.21	0.41
1:BN:182:GLY:HA3	1:BN:230:HIS:O	2.20	0.41
1:BP:88:PHE:CE1	1:BP:295:PRO:HG3	2.55	0.41
1:BQ:266:ARG:HA	6:BQ:552:HOH:O	2.19	0.41
1:AB:302:VAL:HG21	1:AB:357:GLU:HG3	2.02	0.41
1:AD:143:ARG:HB2	1:AD:249:ILE:HG12	2.02	0.41
1:AD:311:ALA:O	1:AD:315:LYS:NZ	2.41	0.41
1:AF:49:LEU:HD13	1:AF:100:PHE:HB2	2.03	0.41
1:AF:139:SER:CB	1:AF:253:LYS:HA	2.50	0.41
1:AG:44:GLN:OE1	1:AG:103:LYS:HB3	2.20	0.41
1:AH:84:THR:HG21	1:AH:295:PRO:HG2	2.03	0.41
1:AI:206:GLU:HG3	1:AI:207:LYS:O	2.20	0.41
1:AL:228:ILE:HD11	1:AL:237:LEU:HD23	2.02	0.41
1:AP:245:HIS:O	1:AP:246:ILE:HG13	2.21	0.41
1:AQ:111:PHE:CE1	1:AQ:115:ASP:HB2	2.56	0.41
1:AQ:70:THR:HG22	6:AQ:523:HOH:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AR:402:ADP:O1B	5:AR:404:NO3:N	2.54	0.41
1:BA:265:ALA:O	1:BA:269:LEU:HG	2.20	0.41
1:BA:50:TYR:O	1:BA:54:TRP:HB3	2.21	0.41
1:BB:151:VAL:CG1	1:BB:157:MET:HE3	2.51	0.41
1:BD:367:GLY:O	1:BD:371:LEU:HG	2.21	0.41
1:BD:73:ASP:O	1:BD:75:PRO:HD3	2.20	0.41
1:BL:144:CYS:SG	1:BL:146:ARG:NH1	2.93	0.41
1:BO:84:THR:OG1	2:BO:401:NMG:O2	2.22	0.41
1:AA:104:CYS:O	1:AA:108:ILE:HD12	2.20	0.41
1:AA:318:ARG:HA	6:AA:620:HOH:O	2.20	0.41
1:AA:38:ASN:HA	6:AA:608:HOH:O	2.21	0.41
1:AC:384:ILE:CA	1:AC:387:MET:HG3	2.51	0.41
1:AD:309:ARG:HA	1:AD:343:SER:O	2.20	0.41
1:AG:111:PHE:CE1	1:AG:115:ASP:HB3	2.55	0.41
1:AG:326:LEU:HD21	1:AG:370:LEU:HD23	2.01	0.41
1:AG:49:LEU:HD23	1:AG:49:LEU:HA	1.93	0.41
1:AG:91:GLU:HB2	1:AG:283:MET:CE	2.51	0.41
1:AI:117:HIS:CE1	1:AI:300:THR:HG23	2.56	0.41
1:AI:53:TYR:CZ	1:AI:97:TYR:HA	2.55	0.41
1:AJ:64:PHE:HB2	1:AJ:97:TYR:CE2	2.55	0.41
1:AK:185:TYR:HA	1:AK:186:PRO:HD2	1.85	0.41
1:AK:323:LEU:HD13	1:AK:330:LYS:HB2	2.03	0.41
1:AM:141:ARG:HG3	1:AM:251:MET:HB3	2.03	0.41
1:AM:308:LEU:HD13	1:AM:310:LEU:HD11	2.03	0.41
1:AN:243:GLU:HB3	6:AN:615:HOH:O	2.20	0.41
1:AO:313:LEU:HD11	1:AO:374:CYS:HB2	2.01	0.41
1:AO:85:GLY:O	1:AO:86:CYS:HB3	2.21	0.41
1:AP:152:CYS:HB2	1:AP:161:GLU:OE2	2.20	0.41
1:AR:176:LEU:HD12	1:AR:229:TRP:CH2	2.56	0.41
1:BA:284:HIS:CD2	1:BA:285:ASN:O	2.74	0.41
1:BF:157:MET:HB2	1:BF:161:GLU:OE1	2.19	0.41
1:BF:199:ILE:HD13	1:BF:206:GLU:HA	2.02	0.41
1:BF:298:MET:HE1	1:BF:353:LEU:HD12	2.02	0.41
1:BF:388:ILE:HA	1:BF:389:PRO:HD3	1.88	0.41
1:BG:111:PHE:HE2	1:BG:287:ARG:HH21	1.67	0.41
1:BG:38:ASN:HD21	1:BG:82:LYS:HE3	1.84	0.41
1:BH:249:ILE:HD13	6:BH:580:HOH:O	2.20	0.41
1:BH:83:LYS:NZ	1:BH:336:GLU:OE2	2.49	0.41
1:BK:117:HIS:ND1	1:BK:118:PRO:HD2	2.35	0.41
1:BM:142:ILE:HD12	1:BM:261:PHE:HA	2.02	0.41
1:BM:154:PRO:N	1:BM:155:PRO:HD2	2.35	0.41
1:BN:18:LYS:HB2	1:BN:21:GLU:HG2	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BP:58:THR:O	1:BP:60:ASN:N	2.54	0.41
1:BP:88:PHE:O	1:BP:153:LEU:HD12	2.20	0.41
1:BQ:207:LYS:HB3	1:BQ:208:PRO:HD2	2.03	0.41
1:BQ:319:PHE:O	1:BQ:323:LEU:HG	2.20	0.41
1:AA:127:LEU:HD12	1:AA:362:GLN:OE1	2.21	0.41
1:AB:31:PHE:HA	1:AB:32:PRO:HD2	1.72	0.41
1:AC:117:HIS:HA	1:AC:118:PRO:HD2	1.93	0.41
1:AF:173:LEU:HD23	1:AF:176:LEU:HD11	2.03	0.41
1:AF:346:ASP:OD2	3:AF:402:ADP:C8	2.73	0.41
1:AG:154:PRO:N	1:AG:155:PRO:HD2	2.35	0.41
1:AH:161:GLU:O	1:AH:165:VAL:HG23	2.21	0.41
1:AH:244:ASP:OD2	1:AH:247:ARG:NE	2.52	0.41
1:AH:309:ARG:O	1:AH:310:LEU:HD23	2.21	0.41
1:AJ:207:LYS:O	1:AJ:209:THR:N	2.53	0.41
1:AJ:205:PHE:HD2	1:AJ:239:TRP:CG	2.38	0.41
1:AK:384:ILE:HA	1:AK:387:MET:HG3	2.03	0.41
1:AL:360:LEU:HD23	1:AL:360:LEU:HA	1.83	0.41
1:AN:208:PRO:HG3	1:AN:222:TRP:NE1	2.36	0.41
1:AN:143:ARG:NH2	1:AN:297:ASN:OD1	2.38	0.41
1:AP:333:THR:O	1:AP:333:THR:HG22	2.19	0.41
1:AQ:247:ARG:NE	6:AQ:655:HOH:O	2.54	0.41
1:AR:18:LYS:HD3	1:AR:20:TRP:CZ2	2.55	0.41
1:BA:71:GLY:N	1:BA:85:GLY:O	2.54	0.41
1:BD:250:SER:OG	1:BD:263:ARG:NH1	2.51	0.41
1:BE:298:MET:HE1	1:BE:353:LEU:HD12	2.00	0.41
1:BF:196:GLU:O	1:BF:200:GLU:HB2	2.20	0.41
1:BG:313:LEU:C	1:BG:313:LEU:HD23	2.41	0.41
1:BG:304:ALA:O	1:BG:348:SER:HB2	2.21	0.41
1:BH:179:ASP:CG	1:BH:266:ARG:HH12	2.24	0.41
1:BI:74:ASN:HA	1:BI:75:PRO:HD2	1.84	0.41
1:BJ:83:LYS:NZ	1:BJ:336:GLU:HG2	2.35	0.41
1:BL:112:LYS:O	1:BL:115:ASP:HB2	2.21	0.41
1:BP:236:PHE:CE1	1:BP:267:GLY:HA3	2.55	0.41
1:BP:141:ARG:NH1	3:BP:402:ADP:O2B	2.51	0.41
1:AA:318:ARG:HD3	1:AA:388:ILE:CD1	2.51	0.41
1:AB:222:TRP:HA	1:AB:223:PRO:HA	1.76	0.41
1:AB:290:TYR:O	1:AB:298:MET:HA	2.21	0.41
1:AD:222:TRP:HA	1:AD:226:ARG:NH1	2.34	0.41
1:AD:238:VAL:HA	1:AD:247:ARG:O	2.21	0.41
1:AE:295:PRO:O	1:AE:298:MET:CE	2.69	0.41
1:AE:79:PHE:CD2	1:AE:337:SER:HA	2.55	0.41
1:AF:201:ASP:O	1:AF:202:HIS:CB	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AJ:157:MET:HE1	1:AJ:165:VAL:HG21	2.03	0.41
1:AJ:18:LYS:HA	1:AJ:19:PRO:HD2	1.80	0.41
1:AK:159:ARG:HG3	1:AK:221:ASP:OD2	2.20	0.41
1:AK:53:TYR:CE2	1:AK:97:TYR:HA	2.56	0.41
1:AN:336:GLU:HB3	3:AN:402:ADP:O2A	2.21	0.41
1:AO:180:LEU:O	1:AO:229:TRP:HH2	2.04	0.41
1:BC:267:GLY:O	1:BC:270:GLU:HB2	2.21	0.41
1:BD:285:ASN:CB	1:BD:288:LEU:HB2	2.51	0.41
1:BD:57:VAL:HG12	1:BD:58:THR:N	2.35	0.41
1:BE:328:LEU:HD11	1:BE:367:GLY:HA3	2.01	0.41
1:BF:38:ASN:HB2	1:BK:177:LYS:HD2	2.03	0.41
1:BH:252:GLN:OE1	1:BH:263:ARG:NH2	2.53	0.41
1:BI:66:LYS:NZ	1:BI:155:PRO:O	2.54	0.41
1:BI:377:LYS:HB2	1:BI:384:ILE:CG2	2.51	0.41
1:BN:119:ALA:HA	1:BN:120:PRO:HD3	1.95	0.41
1:BP:325:LYS:HD3	1:BP:389:PRO:HB2	2.02	0.41
1:AA:221:ASP:HA	1:AB:72:VAL:CG1	2.51	0.41
1:AC:208:PRO:HA	1:AC:213:LEU:HD23	2.03	0.41
1:AC:111:PHE:HE2	1:AC:287:ARG:NH2	2.19	0.41
1:AD:96:CYS:C	1:AD:97:TYR:CD2	2.95	0.41
1:AE:113:PRO:HA	1:AE:287:ARG:NH2	2.35	0.41
1:AE:66:LYS:NZ	1:AE:155:PRO:O	2.43	0.41
1:AE:285:ASN:HD22	1:AE:287:ARG:N	2.19	0.41
3:AE:402:ADP:H5'1	3:AE:402:ADP:O2B	2.20	0.41
1:AH:292:CYS:SG	1:AH:301:VAL:HG11	2.60	0.41
1:AJ:127:LEU:HG	1:AJ:128:VAL:N	2.36	0.41
1:AK:342:ASP:N	6:AK:615:HOH:O	2.53	0.41
1:AN:206:GLU:HG3	1:AN:207:LYS:O	2.21	0.41
1:AO:257:LEU:HD11	1:AO:364:LEU:CD1	2.51	0.41
1:AO:294:CYS:HA	1:AO:295:PRO:HD3	1.93	0.41
2:AO:401:NMG:NH1	5:AO:404:NO3:O2	2.54	0.41
1:AP:234:LYS:N	6:AP:609:HOH:O	2.53	0.41
1:AP:377:LYS:HG3	1:AP:387:MET:SD	2.60	0.41
1:AP:43:SER:HB3	1:AP:44:GLN:NE2	2.36	0.41
1:AR:242:GLU:CD	1:AR:243:GLU:H	2.24	0.41
1:BA:141:ARG:HH21	1:BA:249:ILE:HD13	1.86	0.41
1:BB:111:PHE:CG	1:BB:353:LEU:HD13	2.55	0.41
1:BB:326:LEU:HB3	6:BB:540:HOH:O	2.20	0.41
1:BC:372:ILE:CG2	1:BC:376:LYS:HE2	2.50	0.41
1:BD:139:SER:HB2	1:BD:252:GLN:O	2.20	0.41
1:BE:195:GLN:HE21	1:BE:195:GLN:HB2	1.62	0.41
1:BF:220:ARG:C	1:BF:222:TRP:H	2.24	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BH:382:GLN:HB2	1:BH:382:GLN:HE21	1.70	0.41
1:BI:133:GLU:HB2	6:BI:514:HOH:O	2.20	0.41
1:BI:313:LEU:HD22	1:BI:319:PHE:CD1	2.56	0.41
1:BL:96:CYS:HB3	1:BL:97:TYR:CE2	2.56	0.41
1:BM:58:THR:HB	1:BM:59:PRO:HD2	2.03	0.41
1:BO:204:LEU:CD1	1:BO:228:ILE:HB	2.51	0.41
1:BQ:117:HIS:HA	1:BQ:118:PRO:HD2	1.86	0.41
1:BQ:352:ARG:NH1	1:BQ:352:ARG:HG2	2.34	0.41
1:BR:323:LEU:HD13	1:BR:330:LYS:HB2	2.03	0.41
1:AA:313:LEU:HD23	1:AA:313:LEU:O	2.21	0.41
1:AA:364:LEU:HD22	1:AA:368:VAL:HG23	2.03	0.41
1:AA:62:VAL:HG11	1:AA:89:GLY:HA3	2.01	0.41
1:AB:163:ARG:HG3	6:AB:523:HOH:O	2.21	0.41
1:AD:117:HIS:HA	1:AD:118:PRO:HD2	1.87	0.41
1:AF:132:PHE:HE1	1:AF:257:LEU:HB2	1.86	0.41
1:AF:314:GLU:HA	1:AF:319:PHE:CD2	2.56	0.41
1:AJ:285:ASN:ND2	1:AJ:288:LEU:H	2.18	0.41
1:AJ:304:ALA:CB	1:AJ:364:LEU:HD12	2.51	0.41
1:AJ:139:SER:OG	3:AJ:402:ADP:N1	2.44	0.41
1:AK:180:LEU:O	1:AK:229:TRP:HH2	2.03	0.41
1:AM:285:ASN:HD22	1:AM:287:ARG:N	2.18	0.41
1:AN:169:VAL:O	1:AN:173:LEU:HG	2.20	0.41
1:AN:205:PHE:HB3	1:AN:239:TRP:CH2	2.56	0.41
1:AP:40:VAL:HG13	1:AP:107:GLU:OE1	2.21	0.41
1:AR:212:LEU:HD12	1:AR:216:SER:HB3	2.03	0.41
1:BA:168:VAL:HG13	1:BA:280:HIS:CE1	2.56	0.41
1:BG:98:LYS:HE3	1:BG:102:ASP:OD2	2.20	0.41
1:BL:105:ILE:HG12	1:BL:298:MET:CE	2.51	0.41
1:BL:38:ASN:N	1:BL:75:PRO:O	2.50	0.41
1:BM:298:MET:HG2	6:BM:597:HOH:O	2.21	0.41
1:BO:137:VAL:CG1	1:BO:255:GLY:HA2	2.51	0.41
1:BP:183:LYS:HG2	1:BP:184:TYR:N	2.36	0.41
1:AA:91:GLU:HG2	1:AA:91:GLU:O	2.19	0.40
1:AB:178:GLY:C	1:AB:180:LEU:H	2.24	0.40
1:AB:386:ASP:OD1	1:AB:386:ASP:N	2.54	0.40
1:AC:205:PHE:HD2	1:AC:239:TRP:CD2	2.39	0.40
1:AC:247:ARG:NH1	3:AC:402:ADP:O1B	2.53	0.40
1:AD:217:GLY:O	1:AD:220:ARG:NE	2.50	0.40
1:AF:229:TRP:CE3	1:AF:229:TRP:C	2.94	0.40
1:AG:370:LEU:HD12	1:AG:370:LEU:O	2.21	0.40
1:AJ:34:LEU:HD21	1:AJ:72:VAL:HG22	2.02	0.40
1:AP:183:LYS:HD3	1:AP:185:TYR:CE2	2.56	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BC:206:GLU:HG3	6:BC:617:HOH:O	2.21	0.40
1:BG:56:LYS:HE2	1:BG:96:CYS:SG	2.62	0.40
1:BH:352:ARG:NH1	1:BH:352:ARG:HG3	2.35	0.40
1:BI:340:ALA:HB2	1:BI:345:TYR:CE2	2.55	0.40
1:BI:384:ILE:CB	1:BI:387:MET:HG3	2.52	0.40
1:BK:144:CYS:SG	1:BK:264:PHE:HZ	2.44	0.40
1:BL:137:VAL:HG12	1:BL:255:GLY:HA2	2.03	0.40
1:BM:357:GLU:O	1:BM:361:VAL:HG23	2.21	0.40
1:BR:326:LEU:HB3	6:BR:522:HOH:O	2.21	0.40
1:AB:133:GLU:HG3	6:AB:572:HOH:O	2.21	0.40
1:AC:121:ASP:HB3	1:AC:356:SER:HB2	2.03	0.40
1:AC:168:VAL:HG12	1:AC:169:VAL:N	2.36	0.40
1:AC:44:GLN:OE1	1:AC:103:LYS:HE3	2.22	0.40
1:AD:192:GLU:O	1:AD:196:GLU:HG3	2.21	0.40
1:AE:131:VAL:HG22	1:AE:256:ASP:OD1	2.21	0.40
1:AE:250:SER:OG	1:AE:263:ARG:NH1	2.54	0.40
1:AE:36:LYS:HG2	6:AE:590:HOH:O	2.21	0.40
1:AF:141:ARG:HD2	3:AF:402:ADP:C4	2.56	0.40
1:AH:313:LEU:HA	1:AH:378:LEU:CD1	2.50	0.40
1:AI:372:ILE:HG22	1:AI:376:LYS:HE2	2.03	0.40
1:AM:187:LEU:HB3	1:AM:223:PRO:HB2	2.03	0.40
1:AN:117:HIS:HA	1:AN:118:PRO:HD2	1.86	0.40
1:AO:108:ILE:HD13	1:AO:296:THR:HG22	2.04	0.40
1:BA:132:PHE:O	1:BA:255:GLY:HA3	2.20	0.40
1:BA:331:ARG:NH1	3:BA:502:ADP:O2A	2.50	0.40
1:BB:187:LEU:HD11	1:BB:204:LEU:HD21	2.04	0.40
1:BC:151:VAL:HG12	1:BC:152:CYS:O	2.21	0.40
1:BE:208:PRO:HD3	1:BE:222:TRP:CE2	2.56	0.40
1:BF:135:LYS:HD3	1:BF:136:TYR:CE1	2.57	0.40
1:AQ:37:HIS:O	1:BF:185:TYR:HE2	2.04	0.40
1:BI:154:PRO:N	1:BI:155:PRO:HD2	2.36	0.40
1:BJ:133:GLU:HG3	6:BJ:504:HOH:O	2.21	0.40
1:BJ:314:GLU:CG	1:BJ:315:LYS:HD2	2.51	0.40
1:BJ:336:GLU:OE2	2:BJ:401:NMG:NE	2.27	0.40
1:BJ:367:GLY:O	1:BJ:371:LEU:HG	2.21	0.40
1:BL:290:TYR:O	1:BL:298:MET:HA	2.21	0.40
1:BL:294:CYS:HA	1:BL:295:PRO:HD3	1.84	0.40
1:BN:20:TRP:HB3	1:BN:54:TRP:CZ2	2.56	0.40
1:BP:352:ARG:HH11	1:BP:352:ARG:HG2	1.86	0.40
1:AA:74:ASN:HA	1:AA:75:PRO:HD2	1.92	0.40
1:AC:384:ILE:HB	1:AC:387:MET:HG3	2.03	0.40
1:AD:200:GLU:O	1:AD:200:GLU:HG2	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AE:226:ARG:HG3	1:AE:241:ASN:O	2.21	0.40
1:AE:257:LEU:HD11	1:AE:364:LEU:HD13	2.04	0.40
1:AE:382:GLN:HE21	1:AE:382:GLN:HB2	1.69	0.40
1:AG:175:GLY:HA2	1:AG:177:LYS:HZ1	1.85	0.40
1:AI:205:PHE:CD1	1:AI:242:GLU:HG3	2.56	0.40
1:AL:233:GLU:HG3	6:AL:618:HOH:O	2.21	0.40
1:AM:296:THR:O	1:AM:352:ARG:HD2	2.22	0.40
1:AN:176:LEU:O	1:AN:181:ALA:HA	2.20	0.40
1:AN:293:THR:HB	6:AN:501:HOH:O	2.22	0.40
1:AN:304:ALA:O	1:AN:348:SER:HB2	2.21	0.40
1:AP:41:MET:HG2	1:AP:100:PHE:HZ	1.86	0.40
1:AQ:34:LEU:HD21	1:AQ:72:VAL:HG22	2.01	0.40
1:AR:66:LYS:HD3	1:AR:66:LYS:O	2.20	0.40
1:BB:364:LEU:HD22	1:BB:364:LEU:O	2.21	0.40
1:BD:285:ASN:ND2	1:BD:288:LEU:N	2.57	0.40
1:BF:316:HIS:HA	1:BF:317:PRO:HD2	1.87	0.40
1:BG:70:THR:HB	1:BG:216:SER:HB3	2.03	0.40
1:BI:309:ARG:NH1	6:BI:596:HOH:O	2.48	0.40
1:BJ:322:MET:HE2	1:BJ:388:ILE:HG12	2.04	0.40
1:BJ:8:TYR:HA	1:BJ:11:LYS:HZ3	1.87	0.40
1:BL:242:GLU:OE1	1:BL:243:GLU:N	2.50	0.40
1:BL:47:LYS:O	1:BL:51:GLU:HB2	2.22	0.40
1:BM:318:ARG:NH1	1:BM:385:ASP:OD2	2.54	0.40
1:BO:353:LEU:HD22	1:BO:354:GLY:N	2.37	0.40
1:BO:74:ASN:HA	1:BO:75:PRO:HD2	1.84	0.40
1:BP:18:LYS:HB2	1:BP:21:GLU:HG2	2.03	0.40
1:BP:284:HIS:CD2	1:BP:285:ASN:O	2.74	0.40
1:BP:83:LYS:NZ	1:BP:336:GLU:OE2	2.54	0.40
1:AA:238:VAL:HA	1:AA:247:ARG:O	2.22	0.40
1:AB:162:ARG:HH12	1:AB:221:ASP:HB2	1.86	0.40
1:AB:340:ALA:HB2	1:AB:345:TYR:CD2	2.56	0.40
1:AB:111:PHE:CE1	1:AB:353:LEU:HD22	2.56	0.40
1:AF:18:LYS:O	1:AF:21:GLU:HG2	2.21	0.40
1:AF:318:ARG:CZ	1:AF:388:ILE:HD12	2.51	0.40
1:AH:132:PHE:HE1	1:AH:257:LEU:HD12	1.86	0.40
1:AH:183:LYS:NZ	6:AH:575:HOH:O	2.40	0.40
1:AH:203:PHE:HE1	1:AH:234:LYS:O	2.04	0.40
1:AI:155:PRO:HD3	1:AI:218:CYS:SG	2.61	0.40
1:AJ:134:ASP:HB2	6:AJ:556:HOH:O	2.22	0.40
1:AL:312:PHE:CD2	1:AL:379:GLU:HA	2.56	0.40
1:AN:189:THR:HB	1:BA:36:LYS:CG	2.51	0.40
1:AN:374:CYS:HA	1:AN:387:MET:HE2	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AP:298:MET:HE2	1:AP:298:MET:HB2	1.67	0.40
1:AQ:294:CYS:HA	1:AQ:295:PRO:HD3	1.93	0.40
1:AR:175:GLY:O	1:AR:177:LYS:CG	2.67	0.40
1:BA:105:ILE:HG12	1:BA:298:MET:CE	2.52	0.40
1:BC:40:VAL:N	1:BC:82:LYS:HE2	2.36	0.40
1:BD:320:ASP:N	6:BD:571:HOH:O	2.51	0.40
1:BD:331:ARG:HB2	1:BD:346:ASP:HB3	2.04	0.40
1:BE:385:ASP:HA	1:BE:388:ILE:HD12	2.03	0.40
1:BE:68:ILE:O	1:BE:72:VAL:HG23	2.21	0.40
1:BH:83:LYS:HB2	6:BH:637:HOH:O	2.21	0.40
1:BK:70:THR:HG21	1:BK:212:LEU:HD12	2.02	0.40
1:BL:45:LEU:HA	1:BL:45:LEU:HD12	1.92	0.40
1:BN:40:VAL:O	1:BN:41:MET:C	2.60	0.40
1:BO:236:PHE:CZ	1:BO:267:GLY:HA3	2.56	0.40
1:BQ:117:HIS:HE1	1:BQ:300:THR:HG23	1.87	0.40
1:BR:294:CYS:O	1:BR:297:ASN:HB2	2.22	0.40
1:AB:143:ARG:HG3	6:AB:505:HOH:O	2.20	0.40
1:AB:313:LEU:C	1:AB:313:LEU:HD23	2.42	0.40
1:AD:44:GLN:OE1	1:AD:103:LYS:HE3	2.22	0.40
1:AD:213:LEU:CD2	1:AD:219:ALA:HB2	2.51	0.40
1:AD:60:ASN:HB2	1:AD:90:ASP:OD2	2.21	0.40
1:AF:161:GLU:O	1:AF:165:VAL:HG23	2.22	0.40
1:AH:229:TRP:HB3	1:AH:238:VAL:HB	2.03	0.40
1:AH:284:HIS:CD2	1:AH:285:ASN:N	2.89	0.40
1:AH:297:ASN:CB	1:AH:301:VAL:HG13	2.50	0.40
1:AI:132:PHE:HE2	1:AI:369:ASN:OD1	2.03	0.40
1:AK:313:LEU:HD22	1:AK:319:PHE:CD1	2.56	0.40
1:AL:204:LEU:HG	1:AL:205:PHE:O	2.22	0.40
1:AL:73:ASP:O	1:AL:75:PRO:HD3	2.22	0.40
1:AN:346:ASP:OD1	1:AN:346:ASP:C	2.59	0.40
1:AN:58:THR:HB	1:AN:59:PRO:HD2	2.03	0.40
1:AO:360:LEU:HA	1:AO:360:LEU:HD23	1.84	0.40
1:AO:306:VAL:HG21	1:AO:368:VAL:HG21	2.03	0.40
1:AP:358:ARG:NH1	6:AP:612:HOH:O	2.55	0.40
1:AQ:185:TYR:HA	1:AQ:186:PRO:HD2	1.88	0.40
1:BB:312:PHE:CE2	1:BB:379:GLU:HA	2.56	0.40
1:BC:222:TRP:CD1	1:BC:223:PRO:HB3	2.57	0.40
1:BC:294:CYS:HA	1:BC:295:PRO:HD3	1.92	0.40
1:BC:327:ARG:HD2	1:BC:327:ARG:HA	1.84	0.40
1:BD:12:ASN:OD1	1:BD:18:LYS:HE3	2.21	0.40
1:BD:154:PRO:HA	1:BD:157:MET:SD	2.62	0.40
1:BD:18:LYS:O	1:BD:21:GLU:HG2	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:BD:287:ARG:NH1	6:BD:527:HOH:O	2.55	0.40
1:BF:187:LEU:HD12	1:BF:187:LEU:HA	1.66	0.40
1:BF:252:GLN:HG2	1:BF:260:VAL:CG2	2.51	0.40
1:BF:312:PHE:CZ	1:BF:379:GLU:HG3	2.57	0.40
1:BG:119:ALA:HA	1:BG:120:PRO:HD3	1.96	0.40
1:BG:355:LYS:HB2	1:BG:360:LEU:HD21	2.03	0.40
1:BH:247:ARG:HD2	6:BH:519:HOH:O	2.22	0.40
1:BH:352:ARG:HH11	1:BH:352:ARG:HG3	1.86	0.40
1:BJ:311:ALA:HB3	6:BJ:531:HOH:O	2.22	0.40
1:BJ:326:LEU:HD13	1:BJ:367:GLY:CA	2.51	0.40
1:BL:141:ARG:HH21	1:BL:249:ILE:HD13	1.87	0.40
1:BM:36:LYS:HG3	6:BM:602:HOH:O	2.21	0.40
1:BN:364:LEU:HD22	1:BN:368:VAL:HG23	2.02	0.40
1:BO:58:THR:HG23	1:BO:62:VAL:O	2.21	0.40
1:BP:127:LEU:HD12	1:BP:362:GLN:OE1	2.21	0.40
1:BQ:110:HIS:NE2	1:BQ:327:ARG:NH1	2.69	0.40
1:BQ:165:VAL:O	1:BQ:169:VAL:HG23	2.21	0.40
1:BQ:388:ILE:HA	1:BQ:389:PRO:HD3	1.83	0.40
1:BQ:74:ASN:HA	1:BQ:75:PRO:HD2	1.95	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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	AA	364/390 (93%)	335 (92%)	29 (8%)	0	100	100
1	AB	385/390 (99%)	360 (94%)	21 (6%)	4 (1%)	22	23
1	AC	365/390 (94%)	338 (93%)	26 (7%)	1 (0%)	50	60
1	AD	380/390 (97%)	359 (94%)	21 (6%)	0	100	100
1	AE	365/390 (94%)	344 (94%)	19 (5%)	2 (0%)	38	45
1	AF	383/390 (98%)	361 (94%)	20 (5%)	2 (0%)	38	45

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	AG	365/390 (94%)	338 (93%)	23 (6%)	4 (1%)	21	21
1	AH	382/390 (98%)	337 (88%)	41 (11%)	4 (1%)	22	23
1	AI	364/390 (93%)	340 (93%)	21 (6%)	3 (1%)	27	30
1	AJ	383/390 (98%)	352 (92%)	27 (7%)	4 (1%)	22	23
1	AK	365/390 (94%)	347 (95%)	17 (5%)	1 (0%)	50	60
1	AL	382/390 (98%)	362 (95%)	20 (5%)	0	100	100
1	AM	365/390 (94%)	336 (92%)	24 (7%)	5 (1%)	16	15
1	AN	380/390 (97%)	351 (92%)	26 (7%)	3 (1%)	27	30
1	AO	364/390 (93%)	342 (94%)	18 (5%)	4 (1%)	21	21
1	AP	379/390 (97%)	355 (94%)	21 (6%)	3 (1%)	27	30
1	AQ	364/390 (93%)	342 (94%)	21 (6%)	1 (0%)	50	60
1	AR	377/390 (97%)	351 (93%)	22 (6%)	4 (1%)	21	21
1	BA	365/390 (94%)	337 (92%)	23 (6%)	5 (1%)	16	15
1	BB	386/390 (99%)	358 (93%)	24 (6%)	4 (1%)	22	23
1	BC	365/390 (94%)	341 (93%)	23 (6%)	1 (0%)	50	60
1	BD	383/390 (98%)	351 (92%)	29 (8%)	3 (1%)	27	30
1	BE	365/390 (94%)	337 (92%)	25 (7%)	3 (1%)	27	30
1	BF	380/390 (97%)	344 (90%)	33 (9%)	3 (1%)	27	30
1	BG	365/390 (94%)	334 (92%)	29 (8%)	2 (0%)	38	45
1	BH	380/390 (97%)	353 (93%)	23 (6%)	4 (1%)	21	21
1	BI	365/390 (94%)	342 (94%)	22 (6%)	1 (0%)	50	60
1	BJ	383/390 (98%)	355 (93%)	26 (7%)	2 (0%)	38	45
1	BK	365/390 (94%)	341 (93%)	23 (6%)	1 (0%)	50	60
1	BL	379/390 (97%)	331 (87%)	40 (11%)	8 (2%)	11	8
1	BM	365/390 (94%)	345 (94%)	19 (5%)	1 (0%)	50	60
1	BN	380/390 (97%)	349 (92%)	26 (7%)	5 (1%)	18	17
1	BO	365/390 (94%)	344 (94%)	19 (5%)	2 (0%)	38	45
1	BP	380/390 (97%)	348 (92%)	29 (8%)	3 (1%)	27	30
1	BQ	364/390 (93%)	342 (94%)	20 (6%)	2 (0%)	38	45
1	BR	379/390 (97%)	353 (93%)	24 (6%)	2 (0%)	38	45
All	All	13426/14040 (96%)	12455 (93%)	874 (6%)	97 (1%)	30	34

All (97) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AH	168	VAL
1	AM	54	TRP
1	AM	336	GLU
1	BG	242	GLU
1	BH	242	GLU
1	BL	206	GLU
1	BQ	242	GLU
1	AB	13	ARG
1	AF	202	HIS
1	AG	200	GLU
1	AH	167	LYS
1	AP	17	SER
1	BA	301	VAL
1	BB	385	ASP
1	BD	115	ASP
1	BF	220	ARG
1	BJ	94	TYR
1	BL	283	MET
1	BL	381	GLY
1	BP	242	GLU
1	AG	123	ASP
1	AG	301	VAL
1	AJ	242	GLU
1	AM	242	GLU
1	AO	208	PRO
1	AP	242	GLU
1	BA	202	HIS
1	BA	342	ASP
1	BD	17	SER
1	BF	221	ASP
1	BJ	241	ASN
1	BL	133	GLU
1	BL	134	ASP
1	BL	242	GLU
1	BN	152	CYS
1	BN	186	PRO
1	BN	242	GLU
1	BO	242	GLU
1	AB	202	HIS
1	AK	208	PRO
1	AO	35	SER
1	AR	134	ASP

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Mol	Chain	Res	Type
1	BB	13	ARG
1	BB	242	GLU
1	BE	220	ARG
1	BG	301	VAL
1	BL	126	LYS
1	BR	208	PRO
1	AB	301	VAL
1	AC	242	GLU
1	AG	242	GLU
1	AH	208	PRO
1	AM	77	ASN
1	AN	202	HIS
1	AN	242	GLU
1	AO	242	GLU
1	AR	242	GLU
1	AR	356	SER
1	BA	242	GLU
1	BH	208	PRO
1	BH	365	VAL
1	BP	59	PRO
1	BQ	299	GLY
1	AE	301	VAL
1	AE	342	ASP
1	AF	224	ASP
1	AI	231	ASN
1	AJ	41	MET
1	AJ	208	PRO
1	BC	283	MET
1	BE	242	GLU
1	BE	301	VAL
1	BF	301	VAL
1	BL	301	VAL
1	BN	93	SER
1	BN	158	SER
1	AB	208	PRO
1	AH	381	GLY
1	AI	299	GLY
1	AN	301	VAL
1	AR	281	GLY
1	AI	208	PRO
1	AJ	301	VAL
1	AP	301	VAL

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Mol	Chain	Res	Type
1	BM	301	VAL
1	BP	301	VAL
1	AQ	118	PRO
1	BO	301	VAL
1	AM	301	VAL
1	AO	301	VAL
1	BD	301	VAL
1	BI	301	VAL
1	BK	59	PRO
1	BR	301	VAL
1	BA	168	VAL
1	BB	301	VAL
1	BH	301	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AA	315/335 (94%)	294 (93%)	21 (7%)	23	29
1	AB	333/335 (99%)	311 (93%)	22 (7%)	24	29
1	AC	316/335 (94%)	297 (94%)	19 (6%)	27	35
1	AD	329/335 (98%)	311 (94%)	18 (6%)	30	39
1	AE	316/335 (94%)	300 (95%)	16 (5%)	33	43
1	AF	332/335 (99%)	314 (95%)	18 (5%)	31	40
1	AG	316/335 (94%)	301 (95%)	15 (5%)	36	47
1	AH	331/335 (99%)	312 (94%)	19 (6%)	29	37
1	AI	315/335 (94%)	296 (94%)	19 (6%)	27	35
1	AJ	332/335 (99%)	313 (94%)	19 (6%)	29	37
1	AK	316/335 (94%)	301 (95%)	15 (5%)	36	47
1	AL	331/335 (99%)	315 (95%)	16 (5%)	35	46
1	AM	316/335 (94%)	296 (94%)	20 (6%)	25	32
1	AN	329/335 (98%)	313 (95%)	16 (5%)	35	45
1	AO	315/335 (94%)	300 (95%)	15 (5%)	35	46

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AP	328/335 (98%)	314 (96%)	14 (4%)	40	52
1	AQ	315/335 (94%)	295 (94%)	20 (6%)	25	32
1	AR	326/335 (97%)	303 (93%)	23 (7%)	21	26
1	BA	316/335 (94%)	301 (95%)	15 (5%)	36	47
1	BB	334/335 (100%)	317 (95%)	17 (5%)	33	43
1	BC	316/335 (94%)	303 (96%)	13 (4%)	41	55
1	BD	332/335 (99%)	313 (94%)	19 (6%)	29	37
1	BE	316/335 (94%)	299 (95%)	17 (5%)	31	40
1	BF	329/335 (98%)	311 (94%)	18 (6%)	30	39
1	BG	316/335 (94%)	301 (95%)	15 (5%)	36	47
1	BH	329/335 (98%)	315 (96%)	14 (4%)	40	52
1	BI	316/335 (94%)	299 (95%)	17 (5%)	31	40
1	BJ	332/335 (99%)	315 (95%)	17 (5%)	33	43
1	BK	316/335 (94%)	299 (95%)	17 (5%)	31	40
1	BL	328/335 (98%)	310 (94%)	18 (6%)	30	39
1	BM	316/335 (94%)	300 (95%)	16 (5%)	33	43
1	BN	329/335 (98%)	310 (94%)	19 (6%)	28	36
1	BO	316/335 (94%)	305 (96%)	11 (4%)	48	63
1	BP	329/335 (98%)	316 (96%)	13 (4%)	42	56
1	BQ	315/335 (94%)	296 (94%)	19 (6%)	27	35
1	BR	328/335 (98%)	311 (95%)	17 (5%)	32	42
All	All	11624/12060 (96%)	11007 (95%)	617 (5%)	32	41

All (617) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AA	38	ASN
1	AA	43	SER
1	AA	54	TRP
1	AA	66	LYS
1	AA	96	CYS
1	AA	143	ARG
1	AA	149	LYS
1	AA	191	ASN
1	AA	200	GLU

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Mol	Chain	Res	Type
1	AA	221	ASP
1	AA	223	PRO
1	AA	233	GLU
1	AA	237	LEU
1	AA	257	LEU
1	AA	285	ASN
1	AA	302	VAL
1	AA	308	LEU
1	AA	342	ASP
1	AA	353	LEU
1	AA	364	LEU
1	AA	386	ASP
1	AB	6	GLN
1	AB	22	SER
1	AB	43	SER
1	AB	54	TRP
1	AB	66	LYS
1	AB	110	HIS
1	AB	143	ARG
1	AB	191	ASN
1	AB	226	ARG
1	AB	232	ASN
1	AB	237	LEU
1	AB	257	LEU
1	AB	273	ARG
1	AB	280	HIS
1	AB	287	ARG
1	AB	306	VAL
1	AB	308	LEU
1	AB	346	ASP
1	AB	353	LEU
1	AB	364	LEU
1	AB	386	ASP
1	AB	387	MET
1	AC	38	ASN
1	AC	54	TRP
1	AC	66	LYS
1	AC	84	THR
1	AC	96	CYS
1	AC	143	ARG
1	AC	151	VAL
1	AC	191	ASN

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Mol	Chain	Res	Type
1	AC	200	GLU
1	AC	237	LEU
1	AC	257	LEU
1	AC	285	ASN
1	AC	308	LEU
1	AC	313	LEU
1	AC	333	THR
1	AC	341	THR
1	AC	353	LEU
1	AC	382	GLN
1	AC	387	MET
1	AD	22	SER
1	AD	26	LYS
1	AD	35	SER
1	AD	66	LYS
1	AD	143	ARG
1	AD	144	CYS
1	AD	187	LEU
1	AD	191	ASN
1	AD	192	GLU
1	AD	226	ARG
1	AD	237	LEU
1	AD	257	LEU
1	AD	285	ASN
1	AD	308	LEU
1	AD	313	LEU
1	AD	353	LEU
1	AD	364	LEU
1	AD	382	GLN
1	AE	51	GLU
1	AE	54	TRP
1	AE	66	LYS
1	AE	91	GLU
1	AE	103	LYS
1	AE	143	ARG
1	AE	168	VAL
1	AE	257	LEU
1	AE	285	ASN
1	AE	308	LEU
1	AE	309	ARG
1	AE	313	LEU
1	AE	333	THR

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Mol	Chain	Res	Type
1	AE	353	LEU
1	AE	364	LEU
1	AE	387	MET
1	AF	6	GLN
1	AF	22	SER
1	AF	54	TRP
1	AF	66	LYS
1	AF	96	CYS
1	AF	151	VAL
1	AF	213	LEU
1	AF	230	HIS
1	AF	237	LEU
1	AF	253	LYS
1	AF	257	LEU
1	AF	308	LEU
1	AF	333	THR
1	AF	353	LEU
1	AF	364	LEU
1	AF	382	GLN
1	AF	383	SER
1	AF	386	ASP
1	AG	58	THR
1	AG	110	HIS
1	AG	143	ARG
1	AG	151	VAL
1	AG	223	PRO
1	AG	257	LEU
1	AG	285	ASN
1	AG	308	LEU
1	AG	313	LEU
1	AG	333	THR
1	AG	342	ASP
1	AG	353	LEU
1	AG	364	LEU
1	AG	382	GLN
1	AG	383	SER
1	AH	22	SER
1	AH	26	LYS
1	AH	54	TRP
1	AH	58	THR
1	AH	66	LYS
1	AH	70	THR

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Mol	Chain	Res	Type
1	AH	103	LYS
1	AH	143	ARG
1	AH	191	ASN
1	AH	220	ARG
1	AH	230	HIS
1	AH	237	LEU
1	AH	257	LEU
1	AH	308	LEU
1	AH	333	THR
1	AH	353	LEU
1	AH	364	LEU
1	AH	382	GLN
1	AH	386	ASP
1	AI	38	ASN
1	AI	91	GLU
1	AI	96	CYS
1	AI	110	HIS
1	AI	143	ARG
1	AI	191	ASN
1	AI	200	GLU
1	AI	213	LEU
1	AI	221	ASP
1	AI	237	LEU
1	AI	242	GLU
1	AI	257	LEU
1	AI	285	ASN
1	AI	308	LEU
1	AI	314	GLU
1	AI	336	GLU
1	AI	353	LEU
1	AI	364	LEU
1	AI	382	GLN
1	AJ	22	SER
1	AJ	54	TRP
1	AJ	58	THR
1	AJ	103	LYS
1	AJ	143	ARG
1	AJ	152	CYS
1	AJ	221	ASP
1	AJ	237	LEU
1	AJ	257	LEU
1	AJ	266	ARG

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Mol	Chain	Res	Type
1	AJ	285	ASN
1	AJ	308	LEU
1	AJ	313	LEU
1	AJ	322	MET
1	AJ	346	ASP
1	AJ	353	LEU
1	AJ	360	LEU
1	AJ	364	LEU
1	AJ	382	GLN
1	AK	38	ASN
1	AK	43	SER
1	AK	110	HIS
1	AK	143	ARG
1	AK	200	GLU
1	AK	257	LEU
1	AK	285	ASN
1	AK	286	ASP
1	AK	308	LEU
1	AK	309	ARG
1	AK	313	LEU
1	AK	342	ASP
1	AK	353	LEU
1	AK	364	LEU
1	AK	382	GLN
1	AL	7	ASP
1	AL	22	SER
1	AL	26	LYS
1	AL	54	TRP
1	AL	66	LYS
1	AL	110	HIS
1	AL	143	ARG
1	AL	144	CYS
1	AL	237	LEU
1	AL	257	LEU
1	AL	285	ASN
1	AL	298	MET
1	AL	308	LEU
1	AL	313	LEU
1	AL	353	LEU
1	AL	364	LEU
1	AM	38	ASN
1	AM	54	TRP

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Mol	Chain	Res	Type
1	AM	66	LYS
1	AM	103	LYS
1	AM	110	HIS
1	AM	143	ARG
1	AM	151	VAL
1	AM	191	ASN
1	AM	200	GLU
1	AM	237	LEU
1	AM	257	LEU
1	AM	273	ARG
1	AM	288	LEU
1	AM	308	LEU
1	AM	342	ASP
1	AM	353	LEU
1	AM	364	LEU
1	AM	382	GLN
1	AM	383	SER
1	AM	387	MET
1	AN	22	SER
1	AN	26	LYS
1	AN	66	LYS
1	AN	96	CYS
1	AN	143	ARG
1	AN	187	LEU
1	AN	237	LEU
1	AN	257	LEU
1	AN	303	ARG
1	AN	308	LEU
1	AN	313	LEU
1	AN	336	GLU
1	AN	353	LEU
1	AN	364	LEU
1	AN	382	GLN
1	AN	386	ASP
1	AO	38	ASN
1	AO	54	TRP
1	AO	96	CYS
1	AO	107	GLU
1	AO	110	HIS
1	AO	143	ARG
1	AO	200	GLU
1	AO	252	GLN

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Mol	Chain	Res	Type
1	AO	257	LEU
1	AO	308	LEU
1	AO	309	ARG
1	AO	333	THR
1	AO	353	LEU
1	AO	364	LEU
1	AO	387	MET
1	AP	22	SER
1	AP	43	SER
1	AP	110	HIS
1	AP	143	ARG
1	AP	152	CYS
1	AP	223	PRO
1	AP	257	LEU
1	AP	280	HIS
1	AP	301	VAL
1	AP	308	LEU
1	AP	353	LEU
1	AP	364	LEU
1	AP	382	GLN
1	AP	383	SER
1	AQ	38	ASN
1	AQ	54	TRP
1	AQ	91	GLU
1	AQ	96	CYS
1	AQ	134	ASP
1	AQ	143	ARG
1	AQ	149	LYS
1	AQ	167	LYS
1	AQ	200	GLU
1	AQ	223	PRO
1	AQ	237	LEU
1	AQ	257	LEU
1	AQ	266	ARG
1	AQ	286	ASP
1	AQ	308	LEU
1	AQ	337	SER
1	AQ	353	LEU
1	AQ	364	LEU
1	AQ	382	GLN
1	AQ	387	MET
1	AR	22	SER

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Mol	Chain	Res	Type
1	AR	26	LYS
1	AR	43	SER
1	AR	66	LYS
1	AR	90	ASP
1	AR	143	ARG
1	AR	152	CYS
1	AR	191	ASN
1	AR	206	GLU
1	AR	240	ILE
1	AR	250	SER
1	AR	253	LYS
1	AR	257	LEU
1	AR	287	ARG
1	AR	298	MET
1	AR	308	LEU
1	AR	313	LEU
1	AR	314	GLU
1	AR	333	THR
1	AR	353	LEU
1	AR	364	LEU
1	AR	382	GLN
1	AR	383	SER
1	BA	38	ASN
1	BA	54	TRP
1	BA	91	GLU
1	BA	143	ARG
1	BA	149	LYS
1	BA	195	GLN
1	BA	200	GLU
1	BA	237	LEU
1	BA	257	LEU
1	BA	286	ASP
1	BA	308	LEU
1	BA	333	THR
1	BA	346	ASP
1	BA	353	LEU
1	BA	382	GLN
1	BB	6	GLN
1	BB	7	ASP
1	BB	22	SER
1	BB	26	LYS
1	BB	35	SER

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Mol	Chain	Res	Type
1	BB	54	TRP
1	BB	66	LYS
1	BB	152	CYS
1	BB	191	ASN
1	BB	223	PRO
1	BB	257	LEU
1	BB	266	ARG
1	BB	291	ILE
1	BB	308	LEU
1	BB	313	LEU
1	BB	353	LEU
1	BB	364	LEU
1	BC	91	GLU
1	BC	143	ARG
1	BC	257	LEU
1	BC	285	ASN
1	BC	286	ASP
1	BC	308	LEU
1	BC	313	LEU
1	BC	333	THR
1	BC	342	ASP
1	BC	353	LEU
1	BC	364	LEU
1	BC	383	SER
1	BC	387	MET
1	BD	6	GLN
1	BD	22	SER
1	BD	26	LYS
1	BD	54	TRP
1	BD	66	LYS
1	BD	110	HIS
1	BD	143	ARG
1	BD	151	VAL
1	BD	168	VAL
1	BD	191	ASN
1	BD	195	GLN
1	BD	213	LEU
1	BD	226	ARG
1	BD	257	LEU
1	BD	308	LEU
1	BD	353	LEU
1	BD	364	LEU

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Mol	Chain	Res	Type
1	BD	382	GLN
1	BD	387	MET
1	BE	35	SER
1	BE	38	ASN
1	BE	54	TRP
1	BE	103	LYS
1	BE	134	ASP
1	BE	143	ARG
1	BE	200	GLU
1	BE	257	LEU
1	BE	308	LEU
1	BE	313	LEU
1	BE	333	THR
1	BE	353	LEU
1	BE	364	LEU
1	BE	382	GLN
1	BE	383	SER
1	BE	385	ASP
1	BE	387	MET
1	BF	22	SER
1	BF	26	LYS
1	BF	54	TRP
1	BF	66	LYS
1	BF	96	CYS
1	BF	143	ARG
1	BF	144	CYS
1	BF	167	LYS
1	BF	191	ASN
1	BF	221	ASP
1	BF	237	LEU
1	BF	257	LEU
1	BF	308	LEU
1	BF	353	LEU
1	BF	356	SER
1	BF	364	LEU
1	BF	382	GLN
1	BF	383	SER
1	BG	38	ASN
1	BG	54	TRP
1	BG	96	CYS
1	BG	143	ARG
1	BG	185	TYR

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Mol	Chain	Res	Type
1	BG	237	LEU
1	BG	257	LEU
1	BG	285	ASN
1	BG	308	LEU
1	BG	309	ARG
1	BG	336	GLU
1	BG	337	SER
1	BG	353	LEU
1	BG	358	ARG
1	BG	387	MET
1	BH	22	SER
1	BH	26	LYS
1	BH	54	TRP
1	BH	66	LYS
1	BH	143	ARG
1	BH	191	ASN
1	BH	192	GLU
1	BH	257	LEU
1	BH	308	LEU
1	BH	310	LEU
1	BH	313	LEU
1	BH	353	LEU
1	BH	364	LEU
1	BH	382	GLN
1	BI	38	ASN
1	BI	54	TRP
1	BI	110	HIS
1	BI	143	ARG
1	BI	144	CYS
1	BI	149	LYS
1	BI	191	ASN
1	BI	200	GLU
1	BI	237	LEU
1	BI	257	LEU
1	BI	308	LEU
1	BI	333	THR
1	BI	337	SER
1	BI	342	ASP
1	BI	353	LEU
1	BI	364	LEU
1	BI	387	MET
1	BJ	22	SER

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Mol	Chain	Res	Type
1	BJ	26	LYS
1	BJ	43	SER
1	BJ	54	TRP
1	BJ	66	LYS
1	BJ	97	TYR
1	BJ	134	ASP
1	BJ	143	ARG
1	BJ	191	ASN
1	BJ	232	ASN
1	BJ	257	LEU
1	BJ	308	LEU
1	BJ	313	LEU
1	BJ	333	THR
1	BJ	353	LEU
1	BJ	364	LEU
1	BJ	382	GLN
1	BK	38	ASN
1	BK	66	LYS
1	BK	134	ASP
1	BK	143	ARG
1	BK	149	LYS
1	BK	151	VAL
1	BK	191	ASN
1	BK	200	GLU
1	BK	257	LEU
1	BK	285	ASN
1	BK	308	LEU
1	BK	342	ASP
1	BK	346	ASP
1	BK	353	LEU
1	BK	364	LEU
1	BK	383	SER
1	BK	387	MET
1	BL	10	VAL
1	BL	22	SER
1	BL	66	LYS
1	BL	70	THR
1	BL	132	PHE
1	BL	143	ARG
1	BL	212	LEU
1	BL	232	ASN
1	BL	237	LEU

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Mol	Chain	Res	Type
1	BL	242	GLU
1	BL	257	LEU
1	BL	305	SER
1	BL	308	LEU
1	BL	337	SER
1	BL	346	ASP
1	BL	353	LEU
1	BL	358	ARG
1	BL	364	LEU
1	BM	36	LYS
1	BM	38	ASN
1	BM	54	TRP
1	BM	143	ARG
1	BM	167	LYS
1	BM	191	ASN
1	BM	200	GLU
1	BM	237	LEU
1	BM	257	LEU
1	BM	285	ASN
1	BM	287	ARG
1	BM	308	LEU
1	BM	333	THR
1	BM	353	LEU
1	BM	364	LEU
1	BM	382	GLN
1	BN	22	SER
1	BN	26	LYS
1	BN	54	TRP
1	BN	143	ARG
1	BN	167	LYS
1	BN	170	SER
1	BN	191	ASN
1	BN	221	ASP
1	BN	237	LEU
1	BN	257	LEU
1	BN	263	ARG
1	BN	276	LYS
1	BN	308	LEU
1	BN	313	LEU
1	BN	352	ARG
1	BN	353	LEU
1	BN	364	LEU

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Mol	Chain	Res	Type
1	BN	382	GLN
1	BN	386	ASP
1	BO	38	ASN
1	BO	54	TRP
1	BO	74	ASN
1	BO	134	ASP
1	BO	143	ARG
1	BO	200	GLU
1	BO	257	LEU
1	BO	308	LEU
1	BO	313	LEU
1	BO	353	LEU
1	BO	364	LEU
1	BP	22	SER
1	BP	103	LYS
1	BP	110	HIS
1	BP	144	CYS
1	BP	147	SER
1	BP	191	ASN
1	BP	237	LEU
1	BP	242	GLU
1	BP	257	LEU
1	BP	308	LEU
1	BP	337	SER
1	BP	353	LEU
1	BP	364	LEU
1	BQ	43	SER
1	BQ	54	TRP
1	BQ	58	THR
1	BQ	68	ILE
1	BQ	143	ARG
1	BQ	144	CYS
1	BQ	151	VAL
1	BQ	200	GLU
1	BQ	237	LEU
1	BQ	257	LEU
1	BQ	294	CYS
1	BQ	308	LEU
1	BQ	313	LEU
1	BQ	341	THR
1	BQ	342	ASP
1	BQ	353	LEU

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Mol	Chain	Res	Type
1	BQ	364	LEU
1	BQ	383	SER
1	BQ	385	ASP
1	BR	13	ARG
1	BR	22	SER
1	BR	26	LYS
1	BR	54	TRP
1	BR	66	LYS
1	BR	96	CYS
1	BR	103	LYS
1	BR	143	ARG
1	BR	144	CYS
1	BR	221	ASP
1	BR	257	LEU
1	BR	308	LEU
1	BR	313	LEU
1	BR	346	ASP
1	BR	353	LEU
1	BR	364	LEU
1	BR	382	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (164) such sidechains are listed below:

Mol	Chain	Res	Type
1	AA	110	HIS
1	AA	124	HIS
1	AA	191	ASN
1	AA	285	ASN
1	AA	382	GLN
1	AB	195	GLN
1	AB	197	GLN
1	AB	280	HIS
1	AB	285	ASN
1	AC	38	ASN
1	AC	110	HIS
1	AC	191	ASN
1	AC	195	GLN
1	AC	280	HIS
1	AC	284	HIS
1	AC	285	ASN
1	AC	382	GLN
1	AD	191	ASN

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Mol	Chain	Res	Type
1	AD	195	GLN
1	AD	285	ASN
1	AE	284	HIS
1	AE	285	ASN
1	AF	6	GLN
1	AF	60	ASN
1	AF	195	GLN
1	AF	285	ASN
1	AF	307	HIS
1	AG	60	ASN
1	AG	195	GLN
1	AG	284	HIS
1	AG	285	ASN
1	AG	382	GLN
1	AH	16	HIS
1	AH	69	GLN
1	AH	77	ASN
1	AH	124	HIS
1	AH	195	GLN
1	AH	280	HIS
1	AH	284	HIS
1	AH	285	ASN
1	AH	316	HIS
1	AI	195	GLN
1	AI	285	ASN
1	AI	307	HIS
1	AI	382	GLN
1	AJ	124	HIS
1	AJ	195	GLN
1	AJ	284	HIS
1	AJ	285	ASN
1	AK	38	ASN
1	AK	74	ASN
1	AK	110	HIS
1	AK	191	ASN
1	AK	285	ASN
1	AK	382	GLN
1	AL	69	GLN
1	AL	195	GLN
1	AL	284	HIS
1	AL	285	ASN
1	AL	369	ASN

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Mol	Chain	Res	Type
1	AM	195	GLN
1	AM	285	ASN
1	AM	382	GLN
1	AN	195	GLN
1	AN	285	ASN
1	AN	382	GLN
1	AO	38	ASN
1	AO	60	ASN
1	AO	124	HIS
1	AO	197	GLN
1	AO	280	HIS
1	AO	284	HIS
1	AO	285	ASN
1	AO	369	ASN
1	AO	382	GLN
1	AP	124	HIS
1	AP	195	GLN
1	AP	280	HIS
1	AP	285	ASN
1	AP	382	GLN
1	AQ	38	ASN
1	AQ	195	GLN
1	AQ	280	HIS
1	AQ	284	HIS
1	AQ	285	ASN
1	AQ	382	GLN
1	AR	195	GLN
1	AR	280	HIS
1	AR	285	ASN
1	BA	38	ASN
1	BA	60	ASN
1	BA	195	GLN
1	BA	284	HIS
1	BA	285	ASN
1	BA	382	GLN
1	BB	284	HIS
1	BB	285	ASN
1	BC	285	ASN
1	BC	382	GLN
1	BD	195	GLN
1	BD	232	ASN
1	BD	284	HIS

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Mol	Chain	Res	Type
1	BD	285	ASN
1	BD	382	GLN
1	BE	38	ASN
1	BE	195	GLN
1	BE	284	HIS
1	BE	382	GLN
1	BF	191	ASN
1	BF	195	GLN
1	BF	197	GLN
1	BF	285	ASN
1	BG	284	HIS
1	BG	285	ASN
1	BH	60	ASN
1	BH	110	HIS
1	BH	195	GLN
1	BH	284	HIS
1	BH	285	ASN
1	BI	38	ASN
1	BI	69	GLN
1	BI	110	HIS
1	BI	195	GLN
1	BI	285	ASN
1	BJ	110	HIS
1	BJ	125	ASN
1	BJ	191	ASN
1	BJ	195	GLN
1	BJ	280	HIS
1	BJ	284	HIS
1	BJ	285	ASN
1	BK	38	ASN
1	BK	191	ASN
1	BK	195	GLN
1	BK	285	ASN
1	BK	382	GLN
1	BL	60	ASN
1	BL	195	GLN
1	BL	241	ASN
1	BL	285	ASN
1	BM	38	ASN
1	BM	195	GLN
1	BM	285	ASN
1	BM	307	HIS

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Mol	Chain	Res	Type
1	BN	16	HIS
1	BN	191	ASN
1	BN	285	ASN
1	BO	38	ASN
1	BO	285	ASN
1	BO	382	GLN
1	BP	195	GLN
1	BP	280	HIS
1	BP	285	ASN
1	BP	369	ASN
1	BQ	77	ASN
1	BQ	124	HIS
1	BQ	195	GLN
1	BQ	285	ASN
1	BQ	369	ASN
1	BR	69	GLN
1	BR	195	GLN
1	BR	280	HIS
1	BR	285	ASN
1	BR	382	GLN

5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 144 ligands modelled in this entry, 36 are monoatomic - leaving 108 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
2	NMG	AA	501	-	7,7,7	0.70	0	8,8,8	2.51	1 (12%)
3	ADP	AA	502	4	29,29,29	1.14	2 (6%)	45,45,45	1.92	6 (13%)
5	NO3	AA	504	4	3,3,3	3.24	3 (100%)	3,3,3	0.15	0
2	NMG	AB	401	-	7,7,7	0.79	0	8,8,8	3.07	2 (25%)
3	ADP	AB	402	4	29,29,29	1.14	2 (6%)	45,45,45	2.01	9 (20%)
5	NO3	AB	404	4	3,3,3	3.13	3 (100%)	3,3,3	0.21	0
2	NMG	AC	401	-	7,7,7	0.73	0	8,8,8	2.28	1 (12%)
3	ADP	AC	402	4	29,29,29	1.22	3 (10%)	45,45,45	1.94	7 (15%)
5	NO3	AC	404	4	3,3,3	3.31	3 (100%)	3,3,3	0.27	0
2	NMG	AD	401	-	7,7,7	0.68	0	8,8,8	2.06	2 (25%)
3	ADP	AD	402	4	29,29,29	1.24	3 (10%)	45,45,45	1.91	6 (13%)
5	NO3	AD	404	4	3,3,3	3.24	3 (100%)	3,3,3	0.18	0
2	NMG	AE	401	-	7,7,7	0.74	0	8,8,8	2.85	2 (25%)
3	ADP	AE	402	4	29,29,29	1.21	3 (10%)	45,45,45	1.96	6 (13%)
5	NO3	AE	404	4	3,3,3	3.33	3 (100%)	3,3,3	0.07	0
2	NMG	AF	401	-	7,7,7	0.98	0	8,8,8	2.53	2 (25%)
3	ADP	AF	402	4	29,29,29	1.19	2 (6%)	45,45,45	2.00	6 (13%)
5	NO3	AF	404	4	3,3,3	3.21	3 (100%)	3,3,3	0.24	0
2	NMG	AG	401	-	7,7,7	0.67	0	8,8,8	1.80	1 (12%)
3	ADP	AG	402	4	29,29,29	1.19	3 (10%)	45,45,45	1.97	10 (22%)
5	NO3	AG	404	4	3,3,3	3.38	3 (100%)	3,3,3	0.22	0
2	NMG	AH	401	-	7,7,7	0.70	0	8,8,8	2.20	1 (12%)
3	ADP	AH	402	4	29,29,29	1.14	2 (6%)	45,45,45	1.92	8 (17%)
5	NO3	AH	404	4	3,3,3	3.22	3 (100%)	3,3,3	0.14	0
2	NMG	AI	401	-	7,7,7	0.74	0	8,8,8	2.44	2 (25%)
3	ADP	AI	402	4	29,29,29	1.28	2 (6%)	45,45,45	1.87	8 (17%)
5	NO3	AI	404	4	3,3,3	3.36	3 (100%)	3,3,3	0.06	0
2	NMG	AJ	401	-	7,7,7	0.69	0	8,8,8	2.20	2 (25%)
3	ADP	AJ	402	4	29,29,29	1.22	2 (6%)	45,45,45	2.06	8 (17%)
5	NO3	AJ	404	4	3,3,3	3.28	3 (100%)	3,3,3	0.16	0
2	NMG	AK	401	-	7,7,7	0.69	0	8,8,8	1.52	1 (12%)
3	ADP	AK	402	4	29,29,29	1.16	3 (10%)	45,45,45	2.10	9 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	NO3	AK	404	4	3,3,3	3.28	3 (100%)	3,3,3	0.19	0
2	NMG	AL	401	-	7,7,7	0.72	0	8,8,8	2.32	1 (12%)
3	ADP	AL	402	4	29,29,29	1.20	3 (10%)	45,45,45	1.86	9 (20%)
5	NO3	AL	404	4	3,3,3	3.26	3 (100%)	3,3,3	0.25	0
2	NMG	AM	401	-	7,7,7	0.84	0	8,8,8	2.15	1 (12%)
3	ADP	AM	402	4	29,29,29	1.23	2 (6%)	45,45,45	2.05	9 (20%)
5	NO3	AM	404	4	3,3,3	3.26	3 (100%)	3,3,3	0.18	0
2	NMG	AN	401	-	7,7,7	0.69	0	8,8,8	2.45	1 (12%)
3	ADP	AN	402	4	29,29,29	1.21	2 (6%)	45,45,45	2.01	7 (15%)
5	NO3	AN	404	4	3,3,3	3.34	3 (100%)	3,3,3	0.30	0
2	NMG	AO	401	-	7,7,7	0.73	0	8,8,8	1.94	1 (12%)
3	ADP	AO	402	4	29,29,29	1.11	2 (6%)	45,45,45	1.97	8 (17%)
5	NO3	AO	404	4	3,3,3	3.18	3 (100%)	3,3,3	0.19	0
2	NMG	AP	401	-	7,7,7	0.69	0	8,8,8	2.16	1 (12%)
3	ADP	AP	402	4	29,29,29	1.09	2 (6%)	45,45,45	2.13	9 (20%)
5	NO3	AP	404	4	3,3,3	3.18	3 (100%)	3,3,3	0.16	0
2	NMG	AQ	401	-	7,7,7	0.74	0	8,8,8	3.43	1 (12%)
3	ADP	AQ	402	4	29,29,29	1.15	2 (6%)	45,45,45	1.94	10 (22%)
5	NO3	AQ	404	4	3,3,3	3.30	3 (100%)	3,3,3	0.27	0
2	NMG	AR	401	-	7,7,7	0.69	0	8,8,8	3.18	1 (12%)
3	ADP	AR	402	4	29,29,29	1.11	2 (6%)	45,45,45	1.93	8 (17%)
5	NO3	AR	404	4	3,3,3	3.35	3 (100%)	3,3,3	0.23	0
2	NMG	BA	501	-	7,7,7	0.71	0	8,8,8	2.42	1 (12%)
3	ADP	BA	502	4	29,29,29	1.11	3 (10%)	45,45,45	1.98	8 (17%)
5	NO3	BA	504	4	3,3,3	3.24	3 (100%)	3,3,3	0.10	0
2	NMG	BB	401	-	7,7,7	0.74	0	8,8,8	3.34	2 (25%)
3	ADP	BB	402	4	29,29,29	1.13	2 (6%)	45,45,45	1.99	6 (13%)
5	NO3	BB	404	4	3,3,3	3.37	3 (100%)	3,3,3	0.13	0
2	NMG	BC	401	-	7,7,7	0.74	0	8,8,8	2.00	1 (12%)
3	ADP	BC	402	4	29,29,29	1.11	2 (6%)	45,45,45	1.98	9 (20%)
5	NO3	BC	404	4	3,3,3	3.41	3 (100%)	3,3,3	0.27	0
2	NMG	BD	401	-	7,7,7	0.77	0	8,8,8	2.30	1 (12%)
3	ADP	BD	402	4	29,29,29	1.09	2 (6%)	45,45,45	1.99	6 (13%)
5	NO3	BD	404	4	3,3,3	3.22	3 (100%)	3,3,3	0.17	0
2	NMG	BE	401	-	7,7,7	0.73	0	8,8,8	2.25	1 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ADP	BE	402	4	29,29,29	1.22	3 (10%)	45,45,45	2.07	9 (20%)
5	NO3	BE	404	4	3,3,3	3.27	3 (100%)	3,3,3	0.23	0
2	NMG	BF	401	-	7,7,7	0.71	0	8,8,8	2.66	2 (25%)
3	ADP	BF	402	4	29,29,29	1.16	2 (6%)	45,45,45	2.11	11 (24%)
5	NO3	BF	404	4	3,3,3	3.40	3 (100%)	3,3,3	0.20	0
2	NMG	BG	401	-	7,7,7	0.75	0	8,8,8	1.77	2 (25%)
3	ADP	BG	402	4	29,29,29	1.18	3 (10%)	45,45,45	2.06	7 (15%)
5	NO3	BG	404	4	3,3,3	3.18	3 (100%)	3,3,3	0.16	0
2	NMG	BH	401	-	7,7,7	0.80	0	8,8,8	1.99	1 (12%)
3	ADP	BH	402	4	29,29,29	1.30	4 (13%)	45,45,45	1.83	6 (13%)
5	NO3	BH	404	4	3,3,3	3.32	3 (100%)	3,3,3	0.28	0
2	NMG	BI	401	-	7,7,7	0.80	0	8,8,8	2.80	2 (25%)
3	ADP	BI	402	4	29,29,29	1.18	2 (6%)	45,45,45	2.02	8 (17%)
5	NO3	BI	404	4	3,3,3	3.23	3 (100%)	3,3,3	0.09	0
2	NMG	BJ	401	-	7,7,7	0.73	0	8,8,8	2.50	2 (25%)
3	ADP	BJ	402	4	29,29,29	1.30	3 (10%)	45,45,45	1.95	9 (20%)
5	NO3	BJ	404	4	3,3,3	3.20	3 (100%)	3,3,3	0.23	0
2	NMG	BK	401	-	7,7,7	0.74	0	8,8,8	2.33	1 (12%)
3	ADP	BK	402	4	29,29,29	1.34	6 (20%)	45,45,45	1.89	9 (20%)
5	NO3	BK	404	4	3,3,3	3.23	3 (100%)	3,3,3	0.18	0
2	NMG	BL	401	-	7,7,7	0.75	0	8,8,8	2.27	1 (12%)
3	ADP	BL	402	4	29,29,29	1.22	2 (6%)	45,45,45	1.88	8 (17%)
5	NO3	BL	404	4	3,3,3	3.33	3 (100%)	3,3,3	0.10	0
2	NMG	BM	401	-	7,7,7	0.70	0	8,8,8	2.16	1 (12%)
3	ADP	BM	402	4	29,29,29	1.20	2 (6%)	45,45,45	2.02	9 (20%)
5	NO3	BM	404	4	3,3,3	3.25	3 (100%)	3,3,3	0.14	0
2	NMG	BN	401	-	7,7,7	0.75	0	8,8,8	2.09	1 (12%)
3	ADP	BN	402	4	29,29,29	1.20	3 (10%)	45,45,45	1.98	7 (15%)
5	NO3	BN	404	4	3,3,3	3.27	3 (100%)	3,3,3	0.22	0
2	NMG	BO	401	-	7,7,7	0.62	0	8,8,8	2.63	2 (25%)
3	ADP	BO	402	4	29,29,29	1.20	2 (6%)	45,45,45	2.13	10 (22%)
5	NO3	BO	404	4	3,3,3	3.29	3 (100%)	3,3,3	0.21	0
2	NMG	BP	401	-	7,7,7	0.75	0	8,8,8	3.07	1 (12%)
3	ADP	BP	402	4	29,29,29	1.14	2 (6%)	45,45,45	2.20	10 (22%)
5	NO3	BP	404	-	3,3,3	3.36	3 (100%)	3,3,3	0.30	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NMG	BQ	401	-	7,7,7	0.79	0	8,8,8	1.75	1 (12%)
3	ADP	BQ	402	4	29,29,29	1.16	2 (6%)	45,45,45	1.93	8 (17%)
5	NO3	BQ	404	4	3,3,3	3.27	3 (100%)	3,3,3	0.14	0
2	NMG	BR	401	-	7,7,7	0.85	0	8,8,8	2.90	1 (12%)
3	ADP	BR	402	4	29,29,29	1.23	4 (13%)	45,45,45	1.98	8 (17%)
5	NO3	BR	404	4	3,3,3	3.37	3 (100%)	3,3,3	0.12	0

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
2	NMG	AA	501	-	-	0/5/5/5	0/0/0/0
3	ADP	AA	502	4	-	0/16/32/32	0/3/3/3
5	NO3	AA	504	4	-	0/0/0/0	0/0/0/0
2	NMG	AB	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AB	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AB	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AC	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AC	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AC	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AD	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AD	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AD	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AE	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AE	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AE	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AF	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AF	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AF	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AG	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AG	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AG	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AH	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AH	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AH	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AI	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AI	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AI	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AJ	401	-	-	0/5/5/5	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	AJ	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AJ	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AK	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AK	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AK	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AL	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AL	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AL	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AM	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AM	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AM	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AN	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AN	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AN	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AO	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AO	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AO	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AP	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AP	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AP	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AQ	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AQ	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AQ	404	4	-	0/0/0/0	0/0/0/0
2	NMG	AR	401	-	-	0/5/5/5	0/0/0/0
3	ADP	AR	402	4	-	0/16/32/32	0/3/3/3
5	NO3	AR	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BA	501	-	-	0/5/5/5	0/0/0/0
3	ADP	BA	502	4	-	0/16/32/32	0/3/3/3
5	NO3	BA	504	4	-	0/0/0/0	0/0/0/0
2	NMG	BB	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BB	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BB	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BC	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BC	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BC	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BD	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BD	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BD	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BE	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BE	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BE	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BF	401	-	-	0/5/5/5	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	BF	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BF	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BG	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BG	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BG	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BH	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BH	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BH	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BI	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BI	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BI	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BJ	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BJ	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BJ	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BK	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BK	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BK	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BL	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BL	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BL	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BM	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BM	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BM	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BN	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BN	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BN	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BO	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BO	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BO	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BP	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BP	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BP	404	-	-	0/0/0/0	0/0/0/0
2	NMG	BQ	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BQ	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BQ	404	4	-	0/0/0/0	0/0/0/0
2	NMG	BR	401	-	-	0/5/5/5	0/0/0/0
3	ADP	BR	402	4	-	0/16/32/32	0/3/3/3
5	NO3	BR	404	4	-	0/0/0/0	0/0/0/0

All (199) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AI	404	NO3	O1-N	4.10	1.41	1.24
5	BC	404	NO3	O1-N	4.07	1.41	1.24
5	AE	404	NO3	O1-N	4.06	1.41	1.24
5	BF	404	NO3	O1-N	4.05	1.41	1.24
5	BB	404	NO3	O1-N	4.05	1.41	1.24
5	AG	404	NO3	O1-N	4.05	1.41	1.24
5	AR	404	NO3	O1-N	4.04	1.41	1.24
5	BI	404	NO3	O1-N	4.00	1.41	1.24
5	BR	404	NO3	O1-N	3.99	1.41	1.24
5	BL	404	NO3	O1-N	3.97	1.41	1.24
5	AL	404	NO3	O1-N	3.92	1.40	1.24
5	BO	404	NO3	O1-N	3.90	1.40	1.24
5	AK	404	NO3	O1-N	3.90	1.40	1.24
5	BQ	404	NO3	O1-N	3.89	1.40	1.24
5	BH	404	NO3	O1-N	3.88	1.40	1.24
5	AQ	404	NO3	O1-N	3.87	1.40	1.24
3	BJ	402	ADP	C4-N9	-3.87	1.32	1.37
5	BA	504	NO3	O1-N	3.86	1.40	1.24
5	BP	404	NO3	O1-N	3.86	1.40	1.24
5	AC	404	NO3	O1-N	3.85	1.40	1.24
5	BM	404	NO3	O1-N	3.85	1.40	1.24
5	AA	504	NO3	O1-N	3.85	1.40	1.24
5	AJ	404	NO3	O1-N	3.84	1.40	1.24
5	AH	404	NO3	O1-N	3.83	1.40	1.24
5	BN	404	NO3	O1-N	3.83	1.40	1.24
5	AD	404	NO3	O1-N	3.82	1.40	1.24
5	BG	404	NO3	O1-N	3.81	1.40	1.24
5	AN	404	NO3	O1-N	3.81	1.40	1.24
5	AF	404	NO3	O1-N	3.81	1.40	1.24
5	BK	404	NO3	O1-N	3.81	1.40	1.24
5	BE	404	NO3	O1-N	3.81	1.40	1.24
5	AO	404	NO3	O1-N	3.80	1.40	1.24
5	AP	404	NO3	O1-N	3.80	1.40	1.24
5	BD	404	NO3	O1-N	3.79	1.40	1.24
5	AM	404	NO3	O1-N	3.78	1.40	1.24
3	AI	402	ADP	C4-N9	-3.77	1.32	1.37
5	BJ	404	NO3	O1-N	3.76	1.40	1.24
3	AG	402	ADP	C4-N9	-3.70	1.32	1.37
3	BH	402	ADP	C4-N9	-3.69	1.32	1.37
5	AB	404	NO3	O1-N	3.67	1.39	1.24
3	BL	402	ADP	C4-N9	-3.61	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	BF	402	ADP	C4-N9	-3.51	1.32	1.37
3	BM	402	ADP	C4-N9	-3.50	1.32	1.37
3	BO	402	ADP	C4-N9	-3.49	1.32	1.37
3	BK	402	ADP	C4-N9	-3.49	1.32	1.37
3	AM	402	ADP	C4-N9	-3.44	1.32	1.37
3	AJ	402	ADP	C4-N9	-3.36	1.32	1.37
3	AM	402	ADP	C5-C4	3.35	1.48	1.40
3	AL	402	ADP	C5-C4	3.29	1.47	1.40
3	AQ	402	ADP	C4-N9	-3.28	1.33	1.37
3	AR	402	ADP	C5-C4	3.27	1.47	1.40
3	BE	402	ADP	C5-C4	3.26	1.47	1.40
3	AD	402	ADP	C5-C4	3.26	1.47	1.40
3	AB	402	ADP	C4-N9	-3.24	1.33	1.37
3	BQ	402	ADP	C5-C4	3.24	1.47	1.40
3	AH	402	ADP	C5-C4	3.20	1.47	1.40
3	BR	402	ADP	C5-C4	3.19	1.47	1.40
3	AN	402	ADP	C5-C4	3.19	1.47	1.40
3	AE	402	ADP	C5-C4	3.18	1.47	1.40
3	AF	402	ADP	C5-C4	3.18	1.47	1.40
3	AA	502	ADP	C5-C4	3.18	1.47	1.40
3	AD	402	ADP	C4-N9	-3.18	1.33	1.37
3	BR	402	ADP	C4-N9	-3.17	1.33	1.37
3	BI	402	ADP	C4-N9	-3.16	1.33	1.37
3	AO	402	ADP	C5-C4	3.15	1.47	1.40
3	AC	402	ADP	C4-N9	-3.14	1.33	1.37
3	AR	402	ADP	C4-N9	-3.14	1.33	1.37
3	BP	402	ADP	C4-N9	-3.14	1.33	1.37
3	AP	402	ADP	C5-C4	3.14	1.47	1.40
5	BP	404	NO3	O2-N	3.14	1.41	1.25
3	BN	402	ADP	C5-C4	3.13	1.47	1.40
5	AN	404	NO3	O2-N	3.13	1.41	1.25
5	BC	404	NO3	O3-N	3.13	1.41	1.25
3	BC	402	ADP	C5-C4	3.10	1.47	1.40
5	BF	404	NO3	O3-N	3.09	1.41	1.25
3	AI	402	ADP	C5-C4	3.08	1.47	1.40
5	AG	404	NO3	O3-N	3.08	1.41	1.25
3	AC	402	ADP	C5-C4	3.08	1.47	1.40
5	BH	404	NO3	O2-N	3.07	1.41	1.25
3	BC	402	ADP	C4-N9	-3.07	1.33	1.37
3	BD	402	ADP	C5-C4	3.06	1.47	1.40
5	BE	404	NO3	O3-N	3.05	1.41	1.25
5	AR	404	NO3	O2-N	3.05	1.41	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AM	404	NO3	O3-N	3.04	1.41	1.25
5	AJ	404	NO3	O3-N	3.04	1.41	1.25
3	BA	502	ADP	C5-C4	3.04	1.47	1.40
5	AQ	404	NO3	O2-N	3.03	1.41	1.25
5	BP	404	NO3	O3-N	3.03	1.41	1.25
5	AC	404	NO3	O3-N	3.02	1.41	1.25
5	BR	404	NO3	O3-N	3.02	1.41	1.25
3	BB	402	ADP	C5-C4	3.02	1.47	1.40
5	BO	404	NO3	O3-N	3.02	1.41	1.25
5	AN	404	NO3	O3-N	3.01	1.41	1.25
5	AK	404	NO3	O3-N	3.01	1.41	1.25
3	BO	402	ADP	C5-C4	3.01	1.47	1.40
5	BL	404	NO3	O2-N	3.00	1.41	1.25
5	BR	404	NO3	O2-N	3.00	1.41	1.25
5	AC	404	NO3	O2-N	2.99	1.41	1.25
3	AO	402	ADP	C4-N9	-2.99	1.33	1.37
5	BB	404	NO3	O2-N	2.99	1.41	1.25
5	AL	404	NO3	O2-N	2.98	1.41	1.25
3	BG	402	ADP	C4-N9	-2.98	1.33	1.37
3	AL	402	ADP	C4-N9	-2.98	1.33	1.37
5	BK	404	NO3	O3-N	2.98	1.41	1.25
3	AQ	402	ADP	C5-C4	2.98	1.47	1.40
5	BD	404	NO3	O3-N	2.98	1.41	1.25
5	BA	504	NO3	O2-N	2.98	1.41	1.25
3	BP	402	ADP	C5-C4	2.97	1.47	1.40
5	BB	404	NO3	O3-N	2.97	1.41	1.25
5	BQ	404	NO3	O3-N	2.97	1.41	1.25
5	BN	404	NO3	O3-N	2.96	1.41	1.25
3	BF	402	ADP	C5-C4	2.96	1.47	1.40
5	AD	404	NO3	O3-N	2.96	1.40	1.25
5	BF	404	NO3	O2-N	2.95	1.40	1.25
3	AB	402	ADP	C5-C4	2.95	1.47	1.40
5	AA	504	NO3	O2-N	2.95	1.40	1.25
3	AN	402	ADP	C4-N9	-2.95	1.33	1.37
5	BJ	404	NO3	O3-N	2.95	1.40	1.25
3	BH	402	ADP	C5-C4	2.94	1.47	1.40
5	BH	404	NO3	O3-N	2.94	1.40	1.25
3	BN	402	ADP	C4-N9	-2.94	1.33	1.37
5	BN	404	NO3	O2-N	2.94	1.40	1.25
5	AF	404	NO3	O2-N	2.93	1.40	1.25
5	AQ	404	NO3	O3-N	2.92	1.40	1.25
3	BQ	402	ADP	C4-N9	-2.92	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	BC	404	NO3	O2-N	2.92	1.40	1.25
5	AI	404	NO3	O2-N	2.92	1.40	1.25
5	BL	404	NO3	O3-N	2.92	1.40	1.25
3	BK	402	ADP	C5-C4	2.92	1.47	1.40
5	BM	404	NO3	O3-N	2.92	1.40	1.25
5	AM	404	NO3	O2-N	2.91	1.40	1.25
5	AE	404	NO3	O2-N	2.91	1.40	1.25
5	AI	404	NO3	O3-N	2.91	1.40	1.25
3	AK	402	ADP	C4-N9	-2.90	1.33	1.37
5	AB	404	NO3	O3-N	2.90	1.40	1.25
5	BE	404	NO3	O2-N	2.90	1.40	1.25
5	AE	404	NO3	O3-N	2.90	1.40	1.25
5	AJ	404	NO3	O2-N	2.89	1.40	1.25
5	AH	404	NO3	O3-N	2.89	1.40	1.25
5	AG	404	NO3	O2-N	2.89	1.40	1.25
3	BJ	402	ADP	C5-C4	2.89	1.47	1.40
3	AJ	402	ADP	C5-C4	2.88	1.47	1.40
5	BM	404	NO3	O2-N	2.88	1.40	1.25
3	BE	402	ADP	C4-N9	-2.87	1.33	1.37
5	BO	404	NO3	O2-N	2.87	1.40	1.25
5	BG	404	NO3	O2-N	2.87	1.40	1.25
5	AP	404	NO3	O2-N	2.87	1.40	1.25
5	BQ	404	NO3	O2-N	2.86	1.40	1.25
3	AK	402	ADP	C5-C4	2.85	1.46	1.40
5	AD	404	NO3	O2-N	2.85	1.40	1.25
5	AO	404	NO3	O2-N	2.85	1.40	1.25
3	BI	402	ADP	C5-C4	2.85	1.46	1.40
3	BL	402	ADP	C5-C4	2.84	1.46	1.40
5	AH	404	NO3	O2-N	2.84	1.40	1.25
3	BM	402	ADP	C5-C4	2.84	1.46	1.40
3	BG	402	ADP	C5-C4	2.83	1.46	1.40
5	AK	404	NO3	O2-N	2.83	1.40	1.25
5	AA	504	NO3	O3-N	2.83	1.40	1.25
5	BK	404	NO3	O2-N	2.83	1.40	1.25
5	BJ	404	NO3	O2-N	2.83	1.40	1.25
3	BB	402	ADP	C4-N9	-2.82	1.33	1.37
5	AR	404	NO3	O3-N	2.82	1.40	1.25
5	BD	404	NO3	O2-N	2.81	1.40	1.25
5	AF	404	NO3	O3-N	2.80	1.40	1.25
5	BA	504	NO3	O3-N	2.80	1.40	1.25
5	AO	404	NO3	O3-N	2.78	1.40	1.25
5	BI	404	NO3	O2-N	2.77	1.39	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AP	404	NO3	O3-N	2.77	1.39	1.25
5	BI	404	NO3	O3-N	2.75	1.39	1.25
5	AL	404	NO3	O3-N	2.75	1.39	1.25
5	BG	404	NO3	O3-N	2.75	1.39	1.25
5	AB	404	NO3	O2-N	2.73	1.39	1.25
3	AH	402	ADP	C4-N9	-2.66	1.33	1.37
3	AF	402	ADP	C4-N9	-2.66	1.33	1.37
3	AE	402	ADP	O4'-C1'	2.65	1.44	1.41
3	AG	402	ADP	C5-C4	2.65	1.46	1.40
3	AP	402	ADP	C4-N9	-2.63	1.33	1.37
3	BA	502	ADP	C4-N9	-2.61	1.33	1.37
3	AA	502	ADP	C4-N9	-2.56	1.34	1.37
3	BE	402	ADP	O4'-C1'	2.53	1.44	1.41
3	AE	402	ADP	C4-N9	-2.50	1.34	1.37
3	BD	402	ADP	C4-N9	-2.43	1.34	1.37
3	BG	402	ADP	O4'-C1'	2.34	1.44	1.41
3	BK	402	ADP	O4'-C1'	2.30	1.44	1.41
3	BH	402	ADP	O4'-C1'	2.26	1.44	1.41
3	BJ	402	ADP	PA-O3A	2.25	1.63	1.59
3	BH	402	ADP	PA-O3A	2.21	1.63	1.59
3	BA	502	ADP	O4'-C1'	2.21	1.44	1.41
3	AG	402	ADP	O4'-C1'	2.19	1.44	1.41
3	BR	402	ADP	PA-O3A	2.17	1.63	1.59
3	BR	402	ADP	PB-O3A	2.15	1.63	1.60
3	BK	402	ADP	PA-O3A	2.13	1.63	1.59
3	BK	402	ADP	C2'-C1'	-2.12	1.50	1.53
3	BK	402	ADP	PB-O3A	2.12	1.63	1.60
3	AK	402	ADP	O4'-C1'	2.11	1.43	1.41
3	BN	402	ADP	PB-O3A	2.10	1.63	1.60
3	AL	402	ADP	O4'-C1'	2.06	1.43	1.41
3	AC	402	ADP	PA-O3A	2.02	1.63	1.59
3	AD	402	ADP	C2-N3	2.01	1.35	1.32

All (339) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AQ	401	NMG	CD-NE-CZ	9.39	130.02	122.14
2	BB	401	NMG	CD-NE-CZ	8.96	129.66	122.14
2	AR	401	NMG	CD-NE-CZ	8.67	129.42	122.14
2	BP	401	NMG	CD-NE-CZ	8.38	129.17	122.14
2	AB	401	NMG	CD-NE-CZ	8.12	128.96	122.14
2	BR	401	NMG	CD-NE-CZ	7.87	128.75	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AP	402	ADP	N3-C2-N1	-7.80	122.03	128.89
3	BE	402	ADP	C5-C4-N3	-7.76	118.41	125.98
3	AK	402	ADP	N3-C2-N1	-7.63	122.18	128.89
2	AE	401	NMG	CD-NE-CZ	7.62	128.53	122.14
3	BF	402	ADP	N3-C2-N1	-7.59	122.21	128.89
2	BI	401	NMG	CD-NE-CZ	7.53	128.46	122.14
3	AF	402	ADP	C5-C4-N3	-7.36	118.81	125.98
3	AE	402	ADP	C5-C4-N3	-7.32	118.84	125.98
3	BO	402	ADP	N3-C2-N1	-7.30	122.47	128.89
3	AH	402	ADP	C5-C4-N3	-7.23	118.93	125.98
3	BG	402	ADP	N3-C2-N1	-7.15	122.60	128.89
3	BM	402	ADP	N3-C2-N1	-7.12	122.63	128.89
3	BP	402	ADP	N3-C2-N1	-7.06	122.68	128.89
3	BA	502	ADP	N3-C2-N1	-7.04	122.70	128.89
3	BR	402	ADP	N3-C2-N1	-7.02	122.72	128.89
3	BB	402	ADP	C5-C4-N3	-7.00	119.15	125.98
3	BQ	402	ADP	C5-C4-N3	-7.00	119.15	125.98
3	AN	402	ADP	C5-C4-N3	-7.00	119.16	125.98
2	BF	401	NMG	CD-NE-CZ	6.99	128.01	122.14
3	BJ	402	ADP	N3-C2-N1	-6.98	122.75	128.89
3	BC	402	ADP	N3-C2-N1	-6.93	122.80	128.89
2	BO	401	NMG	CD-NE-CZ	6.91	127.94	122.14
3	AD	402	ADP	C5-C4-N3	-6.89	119.26	125.98
3	AA	502	ADP	C5-C4-N3	-6.88	119.27	125.98
3	BN	402	ADP	N3-C2-N1	-6.87	122.84	128.89
3	BD	402	ADP	C5-C4-N3	-6.87	119.28	125.98
3	AJ	402	ADP	N3-C2-N1	-6.85	122.86	128.89
3	AO	402	ADP	C5-C4-N3	-6.83	119.32	125.98
3	AB	402	ADP	N3-C2-N1	-6.82	122.89	128.89
3	AC	402	ADP	C5-C4-N3	-6.77	119.38	125.98
3	BH	402	ADP	C5-C4-N3	-6.76	119.39	125.98
2	AA	501	NMG	CD-NE-CZ	6.75	127.81	122.14
3	BP	402	ADP	C5-C4-N3	-6.72	119.42	125.98
2	AF	401	NMG	CD-NE-CZ	6.69	127.76	122.14
3	AM	402	ADP	N3-C2-N1	-6.67	123.02	128.89
3	AK	402	ADP	C5-C4-N3	-6.63	119.51	125.98
2	BJ	401	NMG	CD-NE-CZ	6.61	127.69	122.14
3	BI	402	ADP	N3-C2-N1	-6.61	123.07	128.89
3	AP	402	ADP	C5-C4-N3	-6.61	119.53	125.98
3	BG	402	ADP	C5-C4-N3	-6.61	119.53	125.98
3	BN	402	ADP	C5-C4-N3	-6.61	119.54	125.98
2	AN	401	NMG	CD-NE-CZ	6.57	127.65	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AF	402	ADP	N3-C2-N1	-6.52	123.15	128.89
3	BD	402	ADP	N3-C2-N1	-6.51	123.17	128.89
3	AR	402	ADP	C5-C4-N3	-6.49	119.65	125.98
2	BA	501	NMG	CD-NE-CZ	6.43	127.54	122.14
2	AI	401	NMG	CD-NE-CZ	6.41	127.52	122.14
3	AG	402	ADP	N3-C2-N1	-6.38	123.28	128.89
3	AQ	402	ADP	N3-C2-N1	-6.37	123.29	128.89
3	AD	402	ADP	N3-C2-N1	-6.33	123.33	128.89
3	BQ	402	ADP	N3-C2-N1	-6.29	123.36	128.89
3	AO	402	ADP	N3-C2-N1	-6.26	123.39	128.89
3	BC	402	ADP	C5-C4-N3	-6.24	119.89	125.98
3	BI	402	ADP	C5-C4-N3	-6.24	119.89	125.98
3	BA	502	ADP	C5-C4-N3	-6.20	119.93	125.98
3	AL	402	ADP	C5-C4-N3	-6.19	119.94	125.98
3	BO	402	ADP	C5-C4-N3	-6.18	119.96	125.98
2	BD	401	NMG	CD-NE-CZ	6.13	127.29	122.14
3	BL	402	ADP	N3-C2-N1	-6.13	123.50	128.89
3	BK	402	ADP	C5-C4-N3	-6.12	120.01	125.98
3	AC	402	ADP	N3-C2-N1	-6.12	123.51	128.89
3	AE	402	ADP	N3-C2-N1	-6.10	123.52	128.89
3	AN	402	ADP	N3-C2-N1	-6.09	123.53	128.89
3	AR	402	ADP	N3-C2-N1	-6.09	123.53	128.89
3	AI	402	ADP	N3-C2-N1	-6.08	123.54	128.89
2	BK	401	NMG	CD-NE-CZ	6.07	127.23	122.14
3	AQ	402	ADP	C5-C4-N3	-6.07	120.06	125.98
3	BK	402	ADP	N3-C2-N1	-6.04	123.57	128.89
3	BB	402	ADP	N3-C2-N1	-6.03	123.58	128.89
2	BL	401	NMG	CD-NE-CZ	6.03	127.20	122.14
2	AC	401	NMG	CD-NE-CZ	5.99	127.17	122.14
3	AJ	402	ADP	C5-C4-N3	-5.98	120.15	125.98
2	AL	401	NMG	CD-NE-CZ	5.97	127.15	122.14
3	BH	402	ADP	N3-C2-N1	-5.96	123.64	128.89
3	BR	402	ADP	C5-C4-N3	-5.95	120.18	125.98
3	BM	402	ADP	C5-C4-N3	-5.93	120.20	125.98
3	AL	402	ADP	N3-C2-N1	-5.92	123.68	128.89
3	AA	502	ADP	N3-C2-N1	-5.91	123.69	128.89
3	AG	402	ADP	C5-C4-N3	-5.91	120.22	125.98
2	BE	401	NMG	CD-NE-CZ	5.87	127.07	122.14
3	AB	402	ADP	C5-C4-N3	-5.81	120.32	125.98
2	AH	401	NMG	CD-NE-CZ	5.80	127.01	122.14
3	BE	402	ADP	N3-C2-N1	-5.78	123.81	128.89
3	BL	402	ADP	C5-C4-N3	-5.75	120.37	125.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AI	402	ADP	C5-C4-N3	-5.72	120.40	125.98
3	AM	402	ADP	C5-C4-N3	-5.72	120.41	125.98
3	BE	402	ADP	N3-C4-N9	5.70	135.16	125.39
3	BD	402	ADP	N3-C4-N9	5.65	135.09	125.39
2	AM	401	NMG	CD-NE-CZ	5.59	126.83	122.14
3	BH	402	ADP	N3-C4-N9	5.58	134.97	125.39
3	AK	402	ADP	N3-C4-N9	5.57	134.95	125.39
3	AH	402	ADP	N3-C4-N9	5.56	134.93	125.39
2	AJ	401	NMG	CD-NE-CZ	5.56	126.81	122.14
2	BN	401	NMG	CD-NE-CZ	5.56	126.80	122.14
2	AP	401	NMG	CD-NE-CZ	5.53	126.78	122.14
2	BM	401	NMG	CD-NE-CZ	5.52	126.77	122.14
3	BG	402	ADP	N3-C4-N9	5.50	134.83	125.39
3	AF	402	ADP	N3-C4-N9	5.44	134.72	125.39
3	BB	402	ADP	N3-C4-N9	5.44	134.72	125.39
3	AO	402	ADP	N3-C4-N9	5.43	134.71	125.39
3	AE	402	ADP	N3-C4-N9	5.41	134.66	125.39
3	AA	502	ADP	N3-C4-N9	5.39	134.64	125.39
3	BQ	402	ADP	N3-C4-N9	5.38	134.62	125.39
3	AJ	402	ADP	N3-C4-N9	5.29	134.47	125.39
3	AH	402	ADP	N3-C2-N1	-5.28	124.24	128.89
3	BO	402	ADP	N3-C4-N9	5.27	134.43	125.39
3	BJ	402	ADP	C5-C4-N3	-5.24	120.87	125.98
3	AD	402	ADP	N3-C4-N9	5.23	134.37	125.39
3	BP	402	ADP	N3-C4-N9	5.23	134.36	125.39
3	BC	402	ADP	N3-C4-N9	5.21	134.33	125.39
3	BI	402	ADP	N3-C4-N9	5.21	134.32	125.39
3	BA	502	ADP	N3-C4-N9	5.16	134.24	125.39
2	BC	401	NMG	CD-NE-CZ	5.16	126.47	122.14
3	AC	402	ADP	N3-C4-N9	5.15	134.23	125.39
3	BF	402	ADP	C5-C4-N3	-5.13	120.98	125.98
2	BH	401	NMG	CD-NE-CZ	5.13	126.44	122.14
3	BN	402	ADP	N3-C4-N9	5.10	134.15	125.39
3	AM	402	ADP	N3-C4-N9	5.10	134.14	125.39
2	AD	401	NMG	CD-NE-CZ	5.05	126.38	122.14
3	AN	402	ADP	N3-C4-N9	5.04	134.04	125.39
3	AM	402	ADP	O3A-PA-O5'	5.03	116.25	102.91
3	AP	402	ADP	N3-C4-N9	5.00	133.97	125.39
3	AB	402	ADP	N3-C4-N9	4.97	133.91	125.39
2	AO	401	NMG	CD-NE-CZ	4.96	126.30	122.14
3	AL	402	ADP	N3-C4-N9	4.90	133.80	125.39
3	AR	402	ADP	N3-C4-N9	4.89	133.79	125.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	BR	402	ADP	N3-C4-N9	4.78	133.59	125.39
3	AQ	402	ADP	N3-C4-N9	4.78	133.58	125.39
3	BF	402	ADP	N3-C4-N9	4.74	133.52	125.39
3	AG	402	ADP	N3-C4-N9	4.71	133.46	125.39
3	BK	402	ADP	N3-C4-N9	4.68	133.43	125.39
3	BL	402	ADP	N3-C4-N9	4.66	133.38	125.39
3	BJ	402	ADP	N3-C4-N9	4.52	133.14	125.39
3	BM	402	ADP	N3-C4-N9	4.52	133.14	125.39
3	AI	402	ADP	N3-C4-N9	4.48	133.08	125.39
2	BQ	401	NMG	CD-NE-CZ	4.38	125.82	122.14
2	BG	401	NMG	CD-NE-CZ	4.32	125.76	122.14
2	AG	401	NMG	CD-NE-CZ	4.27	125.73	122.14
3	BF	402	ADP	C8-N9-C4	4.00	110.21	106.96
3	BP	402	ADP	O3A-PA-O5'	3.96	113.40	102.91
3	AJ	402	ADP	C8-N9-C4	3.74	110.00	106.96
3	AN	402	ADP	C4-C5-N7	-3.64	105.89	109.41
3	AB	402	ADP	C8-N9-C4	3.62	109.90	106.96
2	AK	401	NMG	CD-NE-CZ	3.59	125.16	122.14
3	BO	402	ADP	O3A-PA-O5'	3.57	112.36	102.91
3	BO	402	ADP	C8-N9-C4	3.48	109.78	106.96
3	AJ	402	ADP	O3A-PA-O5'	3.39	111.90	102.91
3	BP	402	ADP	PA-O3A-PB	3.32	141.12	131.93
3	BG	402	ADP	C8-N9-C4	3.30	109.64	106.96
3	BI	402	ADP	C8-N9-C4	3.28	109.62	106.96
3	AM	402	ADP	C8-N9-C4	3.27	109.62	106.96
3	AN	402	ADP	PA-O3A-PB	-3.26	122.89	131.93
3	AP	402	ADP	O3A-PA-O5'	3.25	111.51	102.91
3	BJ	402	ADP	C8-N9-C4	3.21	109.57	106.96
3	BK	402	ADP	C4-C5-N7	-3.20	106.31	109.41
3	AQ	402	ADP	C4-C5-N7	-3.19	106.33	109.41
3	BB	402	ADP	C8-N9-C4	3.19	109.55	106.96
3	AG	402	ADP	C8-N9-C4	3.14	109.51	106.96
3	AH	402	ADP	C4-C5-N7	-3.14	106.38	109.41
3	BF	402	ADP	O4'-C4'-C5'	-3.13	98.25	109.37
3	BM	402	ADP	C1'-N9-C4	-3.13	121.23	126.64
3	BB	402	ADP	C4-C5-N7	-3.10	106.41	109.41
3	BN	402	ADP	C4-C5-N7	-3.05	106.47	109.41
3	AK	402	ADP	C8-N9-C4	3.04	109.43	106.96
3	AR	402	ADP	C4-C5-N7	-2.95	106.56	109.41
3	AG	402	ADP	C4-C5-N7	-2.95	106.56	109.41
3	BM	402	ADP	C4-C5-N7	-2.94	106.57	109.41
3	BJ	402	ADP	C1'-N9-C4	-2.93	121.58	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AP	402	ADP	C2-N3-C4	2.91	121.66	113.27
3	BK	402	ADP	C8-N9-C4	2.91	109.32	106.96
3	AI	402	ADP	C4-C5-N7	-2.90	106.61	109.41
3	AP	402	ADP	C4-C5-N7	-2.90	106.61	109.41
3	BD	402	ADP	C8-N9-C4	2.89	109.31	106.96
3	AD	402	ADP	C4-C5-N7	-2.88	106.63	109.41
3	BR	402	ADP	C4-C5-N7	-2.86	106.65	109.41
3	AF	402	ADP	C4-C5-N7	-2.86	106.65	109.41
3	BE	402	ADP	C4-C5-N7	-2.82	106.68	109.41
3	AK	402	ADP	C2-N3-C4	2.81	121.37	113.27
3	AA	502	ADP	C4-C5-N7	-2.81	106.70	109.41
3	BF	402	ADP	PA-O3A-PB	-2.80	124.18	131.93
3	AF	402	ADP	C2-N3-C4	2.78	121.27	113.27
3	AI	402	ADP	C1'-N9-C4	-2.77	121.84	126.64
3	BE	402	ADP	O4'-C1'-N9	2.77	114.13	108.10
3	BG	402	ADP	C2-N3-C4	2.76	121.22	113.27
3	BE	402	ADP	C2-N3-C4	2.76	121.22	113.27
3	BR	402	ADP	C8-N9-C4	2.76	109.20	106.96
3	BL	402	ADP	C4-C5-N7	-2.74	106.76	109.41
3	BB	402	ADP	C2-N3-C4	2.73	121.14	113.27
3	BF	402	ADP	C1'-N9-C4	-2.72	121.94	126.64
3	BP	402	ADP	C2-N3-C4	2.71	121.06	113.27
3	BQ	402	ADP	C4-C5-N7	-2.68	106.82	109.41
3	BH	402	ADP	C8-N9-C4	2.68	109.14	106.96
3	AB	402	ADP	C4-C5-N7	-2.67	106.83	109.41
3	BD	402	ADP	C2-N3-C4	2.67	120.96	113.27
3	BN	402	ADP	C8-N9-C4	2.66	109.12	106.96
3	AC	402	ADP	C2-N3-C4	2.64	120.87	113.27
3	BA	502	ADP	O3B-PB-O2B	2.64	117.27	107.38
3	AE	402	ADP	O3A-PA-O5'	2.63	109.89	102.91
3	AL	402	ADP	O3A-PA-O5'	2.63	109.89	102.91
3	AO	402	ADP	O3A-PA-O5'	2.63	109.88	102.91
3	AE	402	ADP	C2-N3-C4	2.62	120.82	113.27
3	BO	402	ADP	C2-N3-C4	2.62	120.82	113.27
3	BL	402	ADP	C8-N9-C4	2.62	109.08	106.96
3	BM	402	ADP	C2-N3-C4	2.62	120.80	113.27
3	AO	402	ADP	C8-N9-C4	2.61	109.08	106.96
3	BP	402	ADP	C4-C5-N7	-2.59	106.90	109.41
3	AG	402	ADP	C1'-N9-C4	-2.59	122.15	126.64
3	AC	402	ADP	C4-C5-N7	-2.59	106.91	109.41
3	BA	502	ADP	C2-N3-C4	2.58	120.71	113.27
3	BI	402	ADP	C2-N3-C4	2.58	120.70	113.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AH	402	ADP	PA-O3A-PB	-2.58	124.78	131.93
3	BQ	402	ADP	C2-N3-C4	2.58	120.70	113.27
3	BA	502	ADP	C8-N9-C4	2.58	109.05	106.96
3	BN	402	ADP	C2-N3-C4	2.56	120.64	113.27
3	BI	402	ADP	C1'-N9-C4	-2.56	122.22	126.64
3	AN	402	ADP	C2-N3-C4	2.56	120.63	113.27
3	BR	402	ADP	C2-N3-C4	2.55	120.62	113.27
3	BF	402	ADP	C2-N1-C6	2.55	123.31	118.76
3	BR	402	ADP	C1'-N9-C4	-2.55	122.23	126.64
3	AR	402	ADP	O3A-PA-O5'	-2.55	96.17	102.91
3	AO	402	ADP	C2-N3-C4	2.54	120.59	113.27
3	BP	402	ADP	C8-N9-C4	2.54	109.02	106.96
3	BM	402	ADP	C8-N9-C4	2.53	109.02	106.96
3	AE	402	ADP	C4-C5-N7	-2.53	106.97	109.41
3	BC	402	ADP	C2-N3-C4	2.53	120.55	113.27
3	BC	402	ADP	O3A-PA-O5'	-2.51	96.26	102.91
3	AI	402	ADP	C8-N9-C4	2.51	109.00	106.96
3	AB	402	ADP	C2-N3-C4	2.50	120.47	113.27
3	AD	402	ADP	C2-N3-C4	2.48	120.42	113.27
3	AQ	402	ADP	C8-N9-C4	2.48	108.97	106.96
3	AA	502	ADP	C2-N3-C4	2.47	120.38	113.27
3	AB	402	ADP	C1'-N9-C4	-2.47	122.38	126.64
3	AG	402	ADP	C2-N3-C4	2.45	120.34	113.27
3	BG	402	ADP	C4-C5-N7	-2.44	107.06	109.41
3	BE	402	ADP	O3A-PA-O5'	2.44	109.36	102.91
3	BH	402	ADP	C2-N3-C4	2.43	120.28	113.27
3	AM	402	ADP	C1'-N9-C4	-2.43	122.43	126.64
3	BL	402	ADP	O3A-PA-O5'	2.43	109.36	102.91
3	BF	402	ADP	C4-C5-N7	-2.43	107.06	109.41
3	BF	402	ADP	C2-N3-C4	2.43	120.27	113.27
3	BD	402	ADP	C4-C5-N7	-2.42	107.07	109.41
3	AH	402	ADP	C8-N9-C4	2.41	108.92	106.96
3	AL	402	ADP	C2-N3-C4	2.40	120.19	113.27
3	BK	402	ADP	C2-N3-C4	2.40	120.19	113.27
3	AG	402	ADP	O4'-C1'-N9	2.40	113.33	108.10
3	AQ	402	ADP	C2-N3-C4	2.40	120.18	113.27
3	AH	402	ADP	C2-N3-C4	2.40	120.19	113.27
3	BJ	402	ADP	C2-N3-C4	2.40	120.18	113.27
3	BC	402	ADP	C8-N9-C4	2.39	108.90	106.96
3	AJ	402	ADP	C2-N3-C4	2.39	120.15	113.27
3	AQ	402	ADP	O4'-C1'-N9	2.39	113.30	108.10
3	AR	402	ADP	C2-N3-C4	2.38	120.12	113.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	BI	402	ADP	C4-C5-N7	-2.38	107.11	109.41
3	AO	402	ADP	C4-C5-N7	-2.36	107.13	109.41
3	BA	502	ADP	C4-C5-N7	-2.35	107.14	109.41
3	BL	402	ADP	C2-N3-C4	2.34	120.02	113.27
3	AF	402	ADP	O3A-PA-O5'	2.34	109.12	102.91
3	BK	402	ADP	C1'-N9-C4	-2.34	122.59	126.64
3	AM	402	ADP	C2-N1-C6	2.34	122.92	118.76
3	AK	402	ADP	O3A-PA-O5'	2.34	109.10	102.91
3	BE	402	ADP	O3B-PB-O2B	2.32	116.09	107.38
2	AD	401	NMG	CG-CD-NE	-2.32	107.53	112.92
3	AG	402	ADP	PA-O3A-PB	-2.32	125.51	131.93
3	BN	402	ADP	C2-N1-C6	2.32	122.88	118.76
3	AL	402	ADP	C4-C5-N7	-2.32	107.17	109.41
2	AB	401	NMG	CG-CD-NE	-2.31	107.55	112.92
3	BP	402	ADP	C3'-C2'-C1'	2.31	104.55	100.92
3	BG	402	ADP	O3A-PA-O5'	2.31	109.03	102.91
3	AK	402	ADP	O3B-PB-O2B	2.31	116.04	107.38
3	BK	402	ADP	O3'-C3'-C4'	-2.30	104.29	111.07
3	BC	402	ADP	O3B-PB-O2B	2.30	116.00	107.38
3	BO	402	ADP	C4-C5-N7	-2.30	107.19	109.41
3	AP	402	ADP	C2-N1-C6	2.29	122.83	118.76
3	BJ	402	ADP	O4'-C4'-C5'	-2.29	101.25	109.37
3	AM	402	ADP	C2-N3-C4	2.28	119.83	113.27
3	BM	402	ADP	O4'-C1'-N9	2.28	113.06	108.10
3	AK	402	ADP	PA-O3A-PB	-2.27	125.64	131.93
3	AR	402	ADP	C8-N9-C4	2.27	108.80	106.96
3	BJ	402	ADP	C4-C5-N7	-2.25	107.23	109.41
3	AI	402	ADP	C2-N1-C6	2.25	122.77	118.76
3	BJ	402	ADP	C2-N1-C6	2.25	122.76	118.76
3	AN	402	ADP	C8-N9-C4	2.25	108.78	106.96
3	BL	402	ADP	C1'-N9-C4	-2.24	122.76	126.64
3	BR	402	ADP	C2-N1-C6	2.23	122.74	118.76
3	BP	402	ADP	C2'-C1'-N9	-2.23	107.28	113.35
3	AH	402	ADP	O3A-PA-O5'	2.23	108.81	102.91
3	AJ	402	ADP	C4-C5-N7	-2.22	107.27	109.41
3	AI	402	ADP	C2-N3-C4	2.21	119.65	113.27
3	BI	402	ADP	PA-O3A-PB	-2.21	125.80	131.93
3	AQ	402	ADP	PA-O3A-PB	-2.21	125.81	131.93
3	AA	502	ADP	C8-N9-C4	2.21	108.75	106.96
2	AJ	401	NMG	CG-CD-NE	-2.21	107.79	112.92
3	BO	402	ADP	C2-N1-C6	2.21	122.69	118.76
3	BF	402	ADP	O5'-C5'-C4'	2.18	116.99	108.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AD	402	ADP	C8-N9-C4	2.18	108.73	106.96
2	AE	401	NMG	O1-CG-CD	2.18	120.60	112.79
3	BM	402	ADP	C2-N1-C6	2.17	122.62	118.76
3	AJ	402	ADP	C2-N1-C6	2.16	122.61	118.76
3	AP	402	ADP	C3'-C2'-C1'	2.16	104.31	100.92
2	BF	401	NMG	CG-CD-NE	-2.15	107.93	112.92
3	AQ	402	ADP	C2-N1-C6	2.14	122.58	118.76
3	AL	402	ADP	C8-N9-C4	2.14	108.70	106.96
2	BO	401	NMG	O1-CG-CD	2.13	120.45	112.79
3	BC	402	ADP	C4-C5-N7	-2.12	107.36	109.41
3	AO	402	ADP	O3B-PB-O2B	2.12	115.32	107.38
3	BC	402	ADP	C2-N1-C6	2.11	122.51	118.76
3	AR	402	ADP	C2-N1-C6	2.10	122.51	118.76
3	BA	502	ADP	C2-N1-C6	2.10	122.49	118.76
3	AC	402	ADP	C8-N9-C4	2.10	108.66	106.96
3	AG	402	ADP	O3B-PB-O2B	2.09	115.23	107.38
3	BO	402	ADP	O5'-PA-O1A	-2.09	101.20	109.37
3	AC	402	ADP	O3B-PB-O2B	2.08	115.18	107.38
2	BI	401	NMG	O1-CG-CD	2.08	120.25	112.79
3	BE	402	ADP	PA-O3A-PB	-2.08	126.18	131.93
3	AP	402	ADP	C8-N9-C4	2.08	108.65	106.96
3	AQ	402	ADP	O3B-PB-O2B	2.07	115.13	107.38
3	AL	402	ADP	C1'-N9-C4	-2.07	123.07	126.64
2	BG	401	NMG	O1-CG-CD	2.06	120.19	112.79
3	AK	402	ADP	C4-C5-N7	-2.05	107.43	109.41
3	BO	402	ADP	O3B-PB-O2B	2.04	115.04	107.38
2	BB	401	NMG	O1-CG-CD	2.04	120.10	112.79
3	AB	402	ADP	C2'-C1'-N9	-2.03	107.81	113.35
2	BJ	401	NMG	O1-CG-CD	2.03	120.08	112.79
3	BQ	402	ADP	C3'-C2'-C1'	2.03	104.10	100.92
3	BK	402	ADP	O3B-PB-O2B	2.02	114.95	107.38
2	AI	401	NMG	O1-CG-CD	2.02	120.04	112.79
3	BQ	402	ADP	O3B-PB-O2B	2.02	114.96	107.38
3	AM	402	ADP	C4-C5-N7	-2.02	107.46	109.41
3	BH	402	ADP	C2'-C3'-C4'	2.02	106.67	102.64
3	AL	402	ADP	O3B-PB-O2B	2.01	114.92	107.38
3	BQ	402	ADP	C8-N9-C4	2.01	108.59	106.96
3	AB	402	ADP	O3A-PA-O5'	-2.00	97.60	102.91
2	AF	401	NMG	O1-CG-CD	2.00	119.97	112.79

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 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	AA	366/390 (93%)	0.45	8 (2%) 59 69	18, 30, 47, 54	0
1	AB	387/390 (99%)	0.37	16 (4%) 35 46	15, 25, 46, 57	0
1	AC	367/390 (94%)	0.39	2 (0%) 88 94	15, 29, 45, 54	0
1	AD	382/390 (97%)	0.32	10 (2%) 53 63	14, 25, 41, 58	0
1	AE	367/390 (94%)	0.29	2 (0%) 88 94	17, 25, 41, 55	0
1	AF	385/390 (98%)	0.39	11 (2%) 49 59	16, 27, 46, 59	0
1	AG	367/390 (94%)	0.34	6 (1%) 68 77	18, 27, 43, 54	0
1	AH	384/390 (98%)	0.59	20 (5%) 26 36	18, 30, 47, 61	0
1	AI	366/390 (93%)	0.35	6 (1%) 68 77	17, 28, 42, 51	0
1	AJ	385/390 (98%)	0.35	9 (2%) 57 67	16, 24, 43, 59	0
1	AK	367/390 (94%)	0.30	3 (0%) 83 90	17, 27, 43, 56	0
1	AL	384/390 (98%)	0.28	11 (2%) 49 59	14, 23, 41, 57	0
1	AM	367/390 (94%)	0.35	7 (1%) 64 73	17, 25, 40, 50	0
1	AN	382/390 (97%)	0.44	14 (3%) 39 50	16, 26, 43, 53	0
1	AO	366/390 (93%)	0.52	16 (4%) 33 43	18, 30, 45, 54	0
1	AP	381/390 (97%)	0.41	20 (5%) 26 36	15, 23, 39, 56	0
1	AQ	366/390 (93%)	0.27	5 (1%) 72 80	16, 25, 39, 51	0
1	AR	379/390 (97%)	0.31	11 (2%) 49 59	15, 23, 40, 50	0
1	BA	367/390 (94%)	0.48	10 (2%) 52 62	18, 30, 47, 54	0
1	BB	388/390 (99%)	0.35	15 (3%) 37 48	15, 25, 46, 58	0
1	BC	367/390 (94%)	0.29	4 (1%) 77 85	17, 26, 40, 52	0
1	BD	385/390 (98%)	0.42	12 (3%) 47 56	16, 27, 46, 59	0
1	BE	367/390 (94%)	0.36	9 (2%) 54 65	18, 29, 45, 53	0
1	BF	382/390 (97%)	0.26	8 (2%) 60 70	13, 24, 42, 55	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	BG	367/390 (94%)	0.32	5 (1%) 72 80	16, 27, 42, 54	0
1	BH	382/390 (97%)	0.27	10 (2%) 53 63	15, 23, 41, 55	0
1	BI	367/390 (94%)	0.29	3 (0%) 83 90	17, 26, 41, 51	0
1	BJ	385/390 (98%)	0.32	12 (3%) 47 56	17, 25, 42, 61	0
1	BK	367/390 (94%)	0.32	6 (1%) 68 77	17, 26, 42, 50	0
1	BL	381/390 (97%)	0.59	15 (3%) 37 48	20, 31, 48, 59	0
1	BM	367/390 (94%)	0.36	7 (1%) 64 73	17, 26, 41, 51	0
1	BN	382/390 (97%)	0.51	20 (5%) 26 36	18, 27, 44, 52	0
1	BO	367/390 (94%)	0.26	4 (1%) 77 85	16, 25, 40, 51	0
1	BP	382/390 (97%)	0.36	13 (3%) 43 53	15, 24, 41, 50	0
1	BQ	366/390 (93%)	0.51	7 (1%) 64 73	19, 30, 44, 53	0
1	BR	381/390 (97%)	0.36	16 (4%) 35 45	15, 24, 40, 51	0
All	All	13498/14040 (96%)	0.37	353 (2%) 53 63	13, 26, 44, 61	0

All (353) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	BJ	7	ASP	8.9
1	AN	21	GLU	8.4
1	BJ	6	GLN	7.5
1	BR	22	SER	7.4
1	BP	22	SER	7.4
1	AD	9	PHE	7.0
1	AR	22	SER	6.9
1	AJ	6	GLN	6.8
1	AP	22	SER	6.8
1	AF	8	TYR	6.4
1	BH	22	SER	6.4
1	AP	278	CYS	6.2
1	BR	280	HIS	6.2
1	AN	22	SER	6.1
1	AN	10	VAL	6.1
1	AJ	8	TYR	5.8
1	BD	6	GLN	5.7
1	BN	9	PHE	5.6
1	AL	8	TYR	5.5
1	AF	7	ASP	5.4
1	AP	12	ASN	5.3

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Mol	Chain	Res	Type	RSRZ
1	AB	6	GLN	5.2
1	BD	390	LYS	5.2
1	BN	22	SER	5.1
1	AP	280	HIS	5.0
1	AP	11	LYS	4.9
1	AH	8	TYR	4.9
1	AP	277	GLU	4.7
1	AB	4	ALA	4.7
1	BP	20	TRP	4.6
1	AM	385	ASP	4.6
1	BR	278	CYS	4.5
1	AD	390	LYS	4.5
1	AH	390	LYS	4.5
1	BN	15	GLY	4.4
1	AO	385	ASP	4.4
1	BJ	9	PHE	4.4
1	BJ	8	TYR	4.4
1	AP	10	VAL	4.3
1	AL	390	LYS	4.3
1	BL	11	LYS	4.3
1	BR	12	ASN	4.2
1	BN	280	HIS	4.2
1	AF	6	GLN	4.2
1	BR	20	TRP	4.1
1	BL	385	ASP	4.1
1	AP	23	GLY	4.1
1	BB	6	GLN	4.1
1	AD	10	VAL	4.0
1	BD	8	TYR	4.0
1	BN	11	LYS	4.0
1	BH	9	PHE	4.0
1	AH	384	ILE	3.9
1	BP	19	PRO	3.9
1	BN	10	VAL	3.9
1	AH	9	PHE	3.9
1	BH	10	VAL	3.8
1	AL	9	PHE	3.8
1	BL	10	VAL	3.8
1	BF	9	PHE	3.8
1	AB	7	ASP	3.7
1	AF	22	SER	3.7
1	BB	22	SER	3.6

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Mol	Chain	Res	Type	RSRZ
1	BR	10	VAL	3.6
1	BL	193	LYS	3.6
1	BL	130	GLY	3.6
1	AP	20	TRP	3.6
1	AB	9	PHE	3.5
1	AM	134	ASP	3.5
1	BP	11	LYS	3.5
1	AQ	280	HIS	3.5
1	BJ	22	SER	3.4
1	AO	378	LEU	3.4
1	BP	12	ASN	3.4
1	BH	385	ASP	3.4
1	BQ	390	LYS	3.4
1	AH	22	SER	3.4
1	BN	12	ASN	3.3
1	BB	386	ASP	3.3
1	BC	24	LYS	3.3
1	AN	385	ASP	3.3
1	BM	385	ASP	3.3
1	BD	22	SER	3.3
1	AF	390	LYS	3.3
1	BD	278	CYS	3.3
1	BJ	11	LYS	3.3
1	AJ	22	SER	3.3
1	AF	11	LYS	3.3
1	BD	385	ASP	3.3
1	AL	10	VAL	3.2
1	AI	385	ASP	3.2
1	BQ	136	TYR	3.2
1	AN	280	HIS	3.2
1	BL	390	LYS	3.2
1	AB	385	ASP	3.2
1	BA	309	ARG	3.2
1	AF	385	ASP	3.1
1	AH	385	ASP	3.1
1	AN	134	ASP	3.1
1	AF	9	PHE	3.1
1	BA	233	GLU	3.1
1	AB	22	SER	3.1
1	AJ	7	ASP	3.1
1	AJ	390	LYS	3.1
1	BF	10	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
1	BB	5	ILE	3.1
1	BG	127	LEU	3.1
1	AB	5	ILE	3.1
1	AQ	384	ILE	3.1
1	AF	193	LYS	3.0
1	AR	24	LYS	3.0
1	AB	134	ASP	3.0
1	AM	54	TRP	3.0
1	BE	385	ASP	3.0
1	AH	312	PHE	3.0
1	BB	134	ASP	3.0
1	BR	23	GLY	3.0
1	AP	19	PRO	3.0
1	AI	164	LEU	3.0
1	BP	16	HIS	3.0
1	AQ	385	ASP	3.0
1	BP	10	VAL	3.0
1	BQ	385	ASP	3.0
1	BN	390	LYS	2.9
1	AD	385	ASP	2.9
1	AR	21	GLU	2.9
1	AN	23	GLY	2.9
1	BO	280	HIS	2.9
1	BD	134	ASP	2.9
1	BO	385	ASP	2.9
1	BN	13	ARG	2.9
1	BF	12	ASN	2.9
1	AP	286	ASP	2.9
1	BB	390	LYS	2.9
1	BH	11	LYS	2.9
1	BB	10	VAL	2.9
1	AN	278	CYS	2.9
1	AN	9	PHE	2.9
1	BH	390	LYS	2.9
1	BD	10	VAL	2.9
1	AP	390	LYS	2.9
1	AO	278	CYS	2.9
1	AI	232	ASN	2.9
1	BL	315	LYS	2.9
1	AQ	286	ASP	2.9
1	BD	9	PHE	2.8
1	BK	278	CYS	2.8

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Mol	Chain	Res	Type	RSRZ
1	BE	192	GLU	2.8
1	AH	317	PRO	2.8
1	BN	134	ASP	2.8
1	AE	233	GLU	2.8
1	AR	286	ASP	2.8
1	BQ	280	HIS	2.8
1	AH	10	VAL	2.8
1	AF	173	LEU	2.8
1	BB	385	ASP	2.8
1	BK	385	ASP	2.8
1	BN	385	ASP	2.8
1	AO	388	ILE	2.8
1	BN	285	ASN	2.7
1	BB	7	ASP	2.7
1	AH	119	ALA	2.7
1	AF	10	VAL	2.7
1	BH	24	LYS	2.7
1	BA	385	ASP	2.7
1	AP	15	GLY	2.7
1	BD	312	PHE	2.7
1	BL	22	SER	2.7
1	AL	385	ASP	2.7
1	AO	134	ASP	2.7
1	BR	286	ASP	2.7
1	AL	22	SER	2.7
1	AA	390	LYS	2.7
1	AB	26	LYS	2.7
1	AH	24	LYS	2.7
1	BA	54	TRP	2.7
1	AA	277	GLU	2.7
1	BR	279	GLY	2.7
1	AP	18	LYS	2.7
1	BK	193	LYS	2.6
1	AG	286	ASP	2.6
1	BR	276	LYS	2.6
1	AP	17	SER	2.6
1	AR	20	TRP	2.6
1	BG	193	LYS	2.6
1	AA	232	ASN	2.6
1	AO	286	ASP	2.6
1	AK	233	GLU	2.6
1	AH	7	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
1	AH	134	ASP	2.6
1	BF	11	LYS	2.6
1	BL	353	LEU	2.6
1	AO	387	MET	2.6
1	AH	381	GLY	2.6
1	BM	25	PHE	2.6
1	BM	48	GLU	2.6
1	BF	390	LYS	2.5
1	AC	175	GLY	2.5
1	BL	381	GLY	2.5
1	AD	11	LYS	2.5
1	BG	24	LYS	2.5
1	AI	386	ASP	2.5
1	BC	386	ASP	2.5
1	AP	388	ILE	2.5
1	AD	22	SER	2.5
1	BE	24	LYS	2.5
1	BR	14	VAL	2.5
1	BQ	25	PHE	2.5
1	BP	278	CYS	2.5
1	BQ	96	CYS	2.5
1	AR	12	ASN	2.5
1	BF	23	GLY	2.5
1	BP	15	GLY	2.5
1	BB	3	SER	2.5
1	BH	383	SER	2.5
1	BJ	280	HIS	2.5
1	BP	9	PHE	2.5
1	AB	21	GLU	2.5
1	BN	370	LEU	2.5
1	AB	390	LYS	2.4
1	BA	386	ASP	2.4
1	BJ	385	ASP	2.4
1	BL	286	ASP	2.4
1	BP	14	VAL	2.4
1	BR	277	GLU	2.4
1	BJ	286	ASP	2.4
1	AL	12	ASN	2.4
1	AA	278	CYS	2.4
1	AO	89	GLY	2.4
1	AK	286	ASP	2.4
1	BN	286	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
1	BB	21	GLU	2.4
1	BO	24	LYS	2.4
1	AG	151	VAL	2.4
1	BF	386	ASP	2.4
1	AD	151	VAL	2.4
1	AG	385	ASP	2.4
1	BG	286	ASP	2.4
1	AJ	9	PHE	2.4
1	AB	8	TYR	2.4
1	AJ	313	LEU	2.4
1	AL	21	GLU	2.4
1	AH	386	ASP	2.4
1	AL	11	LYS	2.4
1	AO	26	LYS	2.4
1	BM	281	GLY	2.4
1	AO	54	TRP	2.4
1	BB	354	GLY	2.3
1	BK	381	GLY	2.3
1	BN	23	GLY	2.3
1	BE	151	VAL	2.3
1	BF	22	SER	2.3
1	AP	21	GLU	2.3
1	AM	26	LYS	2.3
1	AA	184	TYR	2.3
1	BI	278	CYS	2.3
1	BJ	390	LYS	2.3
1	BR	18	LYS	2.3
1	AE	366	ASP	2.3
1	BL	25	PHE	2.3
1	AR	23	GLY	2.3
1	BE	276	LYS	2.3
1	BL	371	LEU	2.3
1	BR	19	PRO	2.3
1	BA	192	GLU	2.3
1	BI	192	GLU	2.3
1	AJ	10	VAL	2.3
1	AG	390	LYS	2.3
1	BH	26	LYS	2.3
1	BN	279	GLY	2.3
1	AM	192	GLU	2.3
1	BB	280	HIS	2.3
1	BC	193	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	BI	123	ASP	2.3
1	BD	185	TYR	2.2
1	AG	24	LYS	2.2
1	BR	11	LYS	2.2
1	BH	386	ASP	2.2
1	BO	286	ASP	2.2
1	AD	20	TRP	2.2
1	AH	280	HIS	2.2
1	BN	21	GLU	2.2
1	AM	193	LYS	2.2
1	BE	193	LYS	2.2
1	AR	15	GLY	2.2
1	AB	386	ASP	2.2
1	AO	276	LYS	2.2
1	AI	151	VAL	2.2
1	BA	229	TRP	2.2
1	AO	381	GLY	2.2
1	AN	26	LYS	2.2
1	AO	280	HIS	2.2
1	AR	16	HIS	2.2
1	AK	147	SER	2.2
1	AL	35	SER	2.2
1	AN	54	TRP	2.2
1	AM	25	PHE	2.2
1	AO	25	PHE	2.2
1	AA	380	ALA	2.2
1	AB	387	MET	2.2
1	AR	278	CYS	2.2
1	BE	386	ASP	2.1
1	AH	78	LYS	2.1
1	BA	177	LYS	2.1
1	BL	151	VAL	2.1
1	AR	386	ASP	2.1
1	BP	23	GLY	2.1
1	BC	233	GLU	2.1
1	BM	26	LYS	2.1
1	AO	279	GLY	2.1
1	BQ	134	ASP	2.1
1	AH	19	PRO	2.1
1	BM	192	GLU	2.1
1	BR	21	GLU	2.1
1	AN	286	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	AN	15	GLY	2.1
1	AQ	78	LYS	2.1
1	BK	95	GLU	2.1
1	BB	9	PHE	2.1
1	AI	340	ALA	2.1
1	BE	311	ALA	2.1
1	BK	380	ALA	2.1
1	BN	278	CYS	2.1
1	BN	387	MET	2.1
1	AJ	11	LYS	2.1
1	BB	381	GLY	2.1
1	AB	384	ILE	2.1
1	AN	35	SER	2.1
1	AP	24	LYS	2.1
1	BD	386	ASP	2.1
1	BM	342	ASP	2.1
1	BP	160	ALA	2.1
1	BJ	313	LEU	2.1
1	BL	328	LEU	2.1
1	AA	229	TRP	2.1
1	AP	14	VAL	2.1
1	AD	315	LYS	2.1
1	AH	21	GLU	2.1
1	AA	386	ASP	2.1
1	BJ	122	LEU	2.0
1	AB	193	LYS	2.0
1	AC	281	GLY	2.0
1	AL	24	LYS	2.0
1	AO	192	GLU	2.0
1	AD	276	LYS	2.0
1	BA	24	LYS	2.0
1	BE	177	LYS	2.0
1	BN	26	LYS	2.0
1	BG	233	GLU	2.0
1	AH	12	ASN	2.0
1	AP	387	MET	2.0
1	AG	192	GLU	2.0
1	BA	341	THR	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 ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	RSR	LLDF	B-factors(Å ²)	Q<0.9
4	MG	BR	403	1/1	0.49	19.26	37,37,37,37	0
4	MG	AQ	403	1/1	0.24	12.00	15,15,15,15	0
4	MG	AE	403	1/1	0.33	11.79	15,15,15,15	0
5	NO3	AK	404	4/4	0.24	11.06	24,25,27,28	0
4	MG	AC	403	1/1	0.21	8.42	16,16,16,16	0
5	NO3	BL	404	4/4	0.33	8.38	25,31,33,33	0
4	MG	BN	403	1/1	0.34	8.00	22,22,22,22	0
5	NO3	AO	404	4/4	0.28	7.66	23,25,28,36	0
4	MG	AK	403	1/1	0.26	7.37	12,12,12,12	0
2	NMG	AP	401	8/8	0.27	7.16	19,22,24,25	0
5	NO3	AN	404	4/4	0.33	7.08	22,24,25,26	0
5	NO3	AC	404	4/4	0.23	6.66	22,24,26,27	0
4	MG	BG	403	1/1	0.29	6.62	20,20,20,20	0
5	NO3	AF	404	4/4	0.30	6.50	21,22,25,26	0
4	MG	BO	403	1/1	0.23	6.46	10,10,10,10	0
4	MG	AP	403	1/1	0.24	6.29	25,25,25,25	0
5	NO3	BF	404	4/4	0.29	6.25	18,21,22,25	0
2	NMG	BD	401	8/8	0.24	6.03	20,23,24,24	0
4	MG	BH	403	1/1	0.33	5.90	19,19,19,19	0
4	MG	BK	403	1/1	0.20	5.73	11,11,11,11	0
4	MG	AM	403	1/1	0.17	5.23	13,13,13,13	0
5	NO3	BG	404	4/4	0.23	4.77	21,22,25,27	0
4	MG	AG	403	1/1	0.20	4.63	18,18,18,18	0
4	MG	AD	403	1/1	0.24	4.54	13,13,13,13	0
2	NMG	AQ	401	8/8	0.20	4.48	16,20,21,25	0
5	NO3	AP	404	4/4	0.25	4.44	20,21,24,27	0
4	MG	BM	403	1/1	0.20	4.32	9,9,9,9	0
5	NO3	AL	404	4/4	0.28	4.26	20,21,22,22	0
5	NO3	AR	404	4/4	0.23	4.22	21,22,27,29	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	MG	AR	403	1/1	0.22	4.14	11,11,11,11	0
4	MG	AB	403	1/1	0.24	4.11	11,11,11,11	0
4	MG	BQ	403	1/1	0.21	4.09	12,12,12,12	0
4	MG	AF	403	1/1	0.24	4.06	12,12,12,12	0
2	NMG	AN	401	8/8	0.25	4.02	21,24,31,31	0
5	NO3	AI	404	4/4	0.20	3.88	22,25,28,28	0
5	NO3	BA	504	4/4	0.23	3.70	25,27,28,31	0
4	MG	BL	403	1/1	0.21	3.61	18,18,18,18	0
4	MG	BJ	403	1/1	0.21	3.56	12,12,12,12	0
5	NO3	BD	404	4/4	0.21	3.55	21,23,23,27	0
2	NMG	BB	401	8/8	0.22	3.55	14,20,22,23	0
2	NMG	AE	401	8/8	0.22	3.49	18,21,23,25	0
5	NO3	AQ	404	4/4	0.21	3.46	18,22,22,22	0
5	NO3	BR	404	4/4	0.21	3.24	14,19,22,22	0
4	MG	BI	403	1/1	0.20	3.04	10,10,10,10	0
4	MG	AA	503	1/1	0.21	2.92	16,16,16,16	0
5	NO3	AM	404	4/4	0.18	2.91	22,25,26,28	0
4	MG	BP	403	1/1	0.20	2.85	8,8,8,8	0
5	NO3	BO	404	4/4	0.18	2.83	23,23,23,28	0
5	NO3	BM	404	4/4	0.19	2.64	21,22,24,24	0
5	NO3	AH	404	4/4	0.21	2.39	21,23,25,26	0
2	NMG	BN	401	8/8	0.22	2.35	21,22,25,26	0
5	NO3	BB	404	4/4	0.18	2.32	20,21,24,24	0
4	MG	BF	403	1/1	0.21	2.29	11,11,11,11	0
2	NMG	BE	401	8/8	0.21	2.26	25,28,29,31	0
2	NMG	BQ	401	8/8	0.23	2.23	25,28,33,33	0
5	NO3	BC	404	4/4	0.20	2.19	16,21,24,24	0
2	NMG	BM	401	8/8	0.22	2.18	22,24,25,26	0
4	MG	AI	403	1/1	0.17	2.16	15,15,15,15	0
2	NMG	AK	401	8/8	0.18	2.11	20,24,25,29	0
2	NMG	AR	401	8/8	0.18	1.92	18,21,24,24	0
4	MG	BB	403	1/1	0.18	1.90	18,18,18,18	0
5	NO3	BQ	404	4/4	0.18	1.87	25,26,26,27	0
2	NMG	AA	501	8/8	0.20	1.76	20,23,25,25	0
2	NMG	AH	401	8/8	0.20	1.50	21,23,30,34	0
2	NMG	BK	401	8/8	0.16	1.50	21,25,26,29	0
5	NO3	AJ	404	4/4	0.20	1.47	18,24,27,27	0
4	MG	BA	503	1/1	0.20	1.47	13,13,13,13	0
4	MG	AO	403	1/1	0.19	1.44	18,18,18,18	0
4	MG	BC	403	1/1	0.19	1.37	11,11,11,11	0
2	NMG	BG	401	8/8	0.19	1.33	20,23,25,25	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	MG	BD	403	1/1	0.16	1.25	21,21,21,21	0
2	NMG	BI	401	8/8	0.18	1.21	23,26,27,27	0
4	MG	AJ	403	1/1	0.17	1.18	10,10,10,10	0
2	NMG	AJ	401	8/8	0.17	1.09	19,24,26,30	0
2	NMG	AO	401	8/8	0.19	1.07	22,27,32,32	0
3	ADP	AF	402	27/27	0.17	1.03	21,27,30,35	0
5	NO3	AB	404	4/4	0.17	0.93	16,17,23,23	0
2	NMG	AC	401	8/8	0.18	0.93	22,24,26,27	0
2	NMG	BL	401	8/8	0.19	0.91	28,32,34,36	0
2	NMG	BC	401	8/8	0.17	0.88	16,22,25,25	0
5	NO3	AE	404	4/4	0.17	0.88	21,23,23,25	0
3	ADP	AO	402	27/27	0.17	0.80	19,24,28,31	0
2	NMG	AG	401	8/8	0.15	0.79	16,21,22,25	0
4	MG	AL	403	1/1	0.17	0.71	22,22,22,22	0
2	NMG	BH	401	8/8	0.16	0.71	18,22,24,24	0
5	NO3	BN	404	4/4	0.18	0.67	23,24,24,26	0
3	ADP	AI	402	27/27	0.16	0.64	18,24,29,33	0
5	NO3	BK	404	4/4	0.15	0.60	21,21,22,24	0
4	MG	AN	403	1/1	0.17	0.52	13,13,13,13	0
5	NO3	BJ	404	4/4	0.16	0.51	22,24,25,29	0
4	MG	AH	403	1/1	0.16	0.49	16,16,16,16	0
3	ADP	AP	402	27/27	0.15	0.47	17,21,26,30	0
3	ADP	AQ	402	27/27	0.15	0.47	14,18,22,23	0
3	ADP	BG	402	27/27	0.15	0.41	21,27,29,30	0
3	ADP	AK	402	27/27	0.14	0.40	17,22,24,26	0
3	ADP	BB	402	27/27	0.15	0.35	18,21,23,26	0
5	NO3	AD	404	4/4	0.15	0.33	24,29,29,30	0
3	ADP	BQ	402	27/27	0.15	0.31	16,22,28,29	0
5	NO3	BI	404	4/4	0.14	0.30	19,20,25,25	0
2	NMG	BO	401	8/8	0.16	0.26	21,26,28,29	0
5	NO3	BH	404	4/4	0.17	0.25	20,21,22,23	0
2	NMG	AL	401	8/8	0.15	0.24	17,19,21,22	0
4	MG	BE	403	1/1	0.16	0.23	14,14,14,14	0
3	ADP	BP	402	27/27	0.15	0.21	14,18,21,21	0
3	ADP	AM	402	27/27	0.14	0.16	17,20,24,25	0
2	NMG	BF	401	8/8	0.15	0.15	16,19,24,24	0
3	ADP	BD	402	27/27	0.15	0.14	19,25,28,31	0
3	ADP	BC	402	27/27	0.15	0.13	13,20,22,24	0
2	NMG	AM	401	8/8	0.14	0.13	17,20,21,24	0
2	NMG	AF	401	8/8	0.15	0.10	17,22,26,27	0
2	NMG	BR	401	8/8	0.13	0.10	15,17,22,23	0
3	ADP	BA	502	27/27	0.16	0.10	21,25,29,32	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
3	ADP	AG	402	27/27	0.14	0.09	17,21,25,27	0
3	ADP	BO	402	27/27	0.15	0.09	12,18,21,25	0
3	ADP	BK	402	27/27	0.14	0.08	12,19,23,25	0
3	ADP	BF	402	27/27	0.15	0.02	13,18,22,24	0
3	ADP	AJ	402	27/27	0.15	0.01	15,18,22,25	0
3	ADP	AA	502	27/27	0.15	0.00	23,28,31,35	0
3	ADP	AH	402	27/27	0.15	-0.02	20,26,30,37	0
3	ADP	AE	402	27/27	0.15	-0.04	18,21,23,28	0
3	ADP	BL	402	27/27	0.15	-0.08	23,29,34,38	0
2	NMG	AI	401	8/8	0.13	-0.18	18,22,24,27	0
3	ADP	AR	402	27/27	0.13	-0.23	11,19,21,24	0
2	NMG	AD	401	8/8	0.14	-0.27	18,24,26,26	0
3	ADP	BI	402	27/27	0.14	-0.27	16,21,25,27	0
3	ADP	AN	402	27/27	0.14	-0.33	13,20,23,23	0
3	ADP	BE	402	27/27	0.14	-0.35	19,25,29,31	0
3	ADP	AD	402	27/27	0.14	-0.46	16,21,24,27	0
3	ADP	BH	402	27/27	0.13	-0.47	14,17,21,23	0
2	NMG	AB	401	8/8	0.13	-0.50	16,23,28,28	0
3	ADP	BR	402	27/27	0.13	-0.61	13,17,21,23	0
5	NO3	BP	404	4/4	0.13	-0.63	18,20,22,24	0
3	ADP	BJ	402	27/27	0.13	-0.70	12,18,20,21	0
3	ADP	AL	402	27/27	0.13	-0.71	14,18,21,23	0
2	NMG	BP	401	8/8	0.12	-0.80	15,17,20,24	0
3	ADP	AC	402	27/27	0.13	-0.82	24,27,32,33	0
2	NMG	BJ	401	8/8	0.12	-0.84	25,26,28,29	0
2	NMG	BA	501	8/8	0.14	-0.91	21,26,27,28	0
3	ADP	BN	402	27/27	0.13	-0.91	10,20,23,26	0
3	ADP	BM	402	27/27	0.12	-1.18	13,20,23,26	0
5	NO3	BE	404	4/4	0.13	-1.29	24,25,26,29	0
3	ADP	AB	402	27/27	0.12	-1.40	14,18,21,22	0
5	NO3	AA	504	4/4	0.11	-2.05	25,26,27,28	0
5	NO3	AG	404	4/4	0.11	-2.27	19,21,25,27	0

6.5 Other polymers ⓘ

There are no such residues in this entry.