



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 28, 2014 – 02:14 AM GMT

PDB ID : 2O5J
Title : Crystal structure of the T. thermophilus RNAP polymerase elongation complex with the NTP substrate analog
Authors : Vassylyev, D.G.; Vassylyeva, M.N.
Deposited on : 2006-12-06
Resolution : 3.00 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>

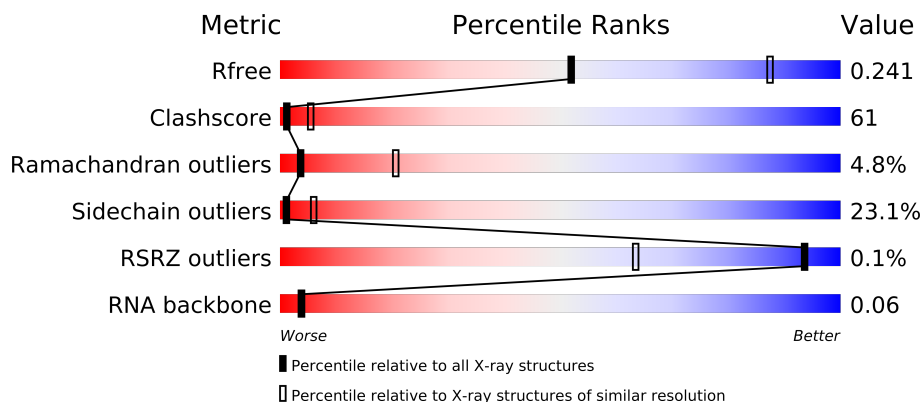
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
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) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.00 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.




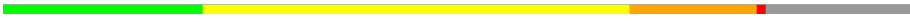
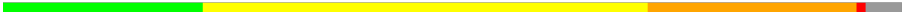

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1216 (3.00-3.00)
Clashscore	79885	1594 (3.00-3.00)
Ramachandran outliers	78287	1537 (3.00-3.00)
Sidechain outliers	78261	1540 (3.00-3.00)
RSRZ outliers	66119	1217 (3.00-3.00)
RNA backbone	1838	1070 (3.50-2.50)

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	G	23	
1	X	23	
2	H	16	
2	Y	16	
3	I	14	
3	Z	14	
4	A	315	
4	B	315	
4	K	315	
4	L	315	
5	C	1119	
5	M	1119	

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Mol	Chain	Length	Quality of chain
6	D	1524	
6	N	1524	
7	E	99	
7	O	99	

2 Entry composition

There are 11 unique types of molecules in this entry. The entry contains 51213 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 DNA chain called 5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*GP*CP*G)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	G	23	Total	C	N	O	P	0	0	0
			467	220	80	144	23			
1	X	23	Total	C	N	O	P	0	0	0
			467	220	80	144	23			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	16	Total	C	N	O	P	0	0	0
			347	153	64	114	16			
2	Y	16	Total	C	N	O	P	0	0	0
			347	153	64	114	16			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	I	13	Total	C	N	O	P	0	0	0
			270	126	57	74	13			
3	Z	13	Total	C	N	O	P	0	0	0
			270	126	57	74	13			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	A	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			
4	B	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	K	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			
4	L	229	Total	C	N	O	S	0	0	0
			1806	1153	313	337	3			

- Molecule 5 is a protein called DNA-directed RNA polymerase beta chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	1119	Total	C	N	O	S	0	0	0
			8829	5581	1577	1647	24			
5	M	1119	Total	C	N	O	S	0	0	0
			8829	5581	1577	1647	24			

- Molecule 6 is a protein called DNA-directed RNA polymerase beta' chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	1264	Total	C	N	O	S	0	0	0
			9960	6302	1773	1852	33			
6	N	1264	Total	C	N	O	S	0	0	0
			9960	6302	1773	1852	33			

- Molecule 7 is a protein called DNA-directed RNA polymerase omega chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	95	Total	C	N	O	S	0	0	0
			770	491	133	142	4			
7	O	95	Total	C	N	O	S	0	0	0
			770	491	133	142	4			

- Molecule 8 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	D	2	Total	Zn	0	0
			2	2		
8	N	2	Total	Zn	0	0
			2	2		

- Molecule 9 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

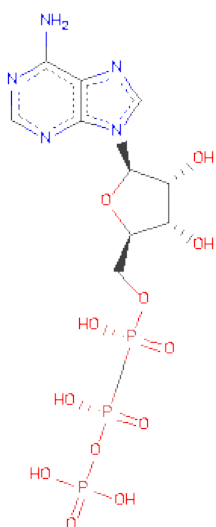
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	D	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	N	2	Total	Mg	0	0
			2	2		

- Molecule 10 is DIPHOSPHOMETHYLPHOSPHONICACID ADENOSYL ESTER (three-letter code: APC) (formula: $C_{11}H_{18}N_5O_{12}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
10	D	1	Total	C	N	O	P	0	0
			31	11	5	12	3		
10	N	1	Total	C	N	O	P	0	0
			31	11	5	12	3		

- Molecule 11 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	A	106	Total	O	0	0
			106	106		
11	B	82	Total	O	0	0
			82	82		
11	C	482	Total	O	0	0
			482	482		
11	D	506	Total	O	0	0
			506	506		
11	E	60	Total	O	0	0
			60	60		
11	G	32	Total	O	0	0
			32	32		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
11	H	37	Total 37	O 37	0	0
11	I	22	Total 22	O 22	0	0
11	K	86	Total 86	O 86	0	0
11	L	104	Total 104	O 104	0	0
11	M	483	Total 483	O 483	0	0
11	N	491	Total 491	O 491	0	0
11	O	39	Total 39	O 39	0	0
11	X	43	Total 43	O 43	0	0
11	Y	30	Total 30	O 30	0	0
11	Z	30	Total 30	O 30	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: 5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3'

Chain G: 



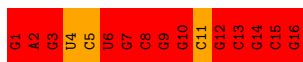
- Molecule 1: 5'-D(P*CP*CP*CP*TP*GP*TP*CP*TP*GP*GP*CP*GP*TP*TP*CP*GP*CP*GP*CP*GP*CP*CP*G)-3'

Chain X: 



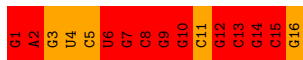
- Molecule 2: 5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3',

Chain H: 



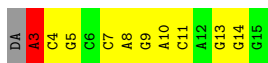
- Molecule 2: 5'-R(P*GP*AP*GP*UP*CP*UP*GP*CP*GP*GP*CP*GP*CP*GP*CP*G)-3',

Chain Y: 



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

Chain I: 



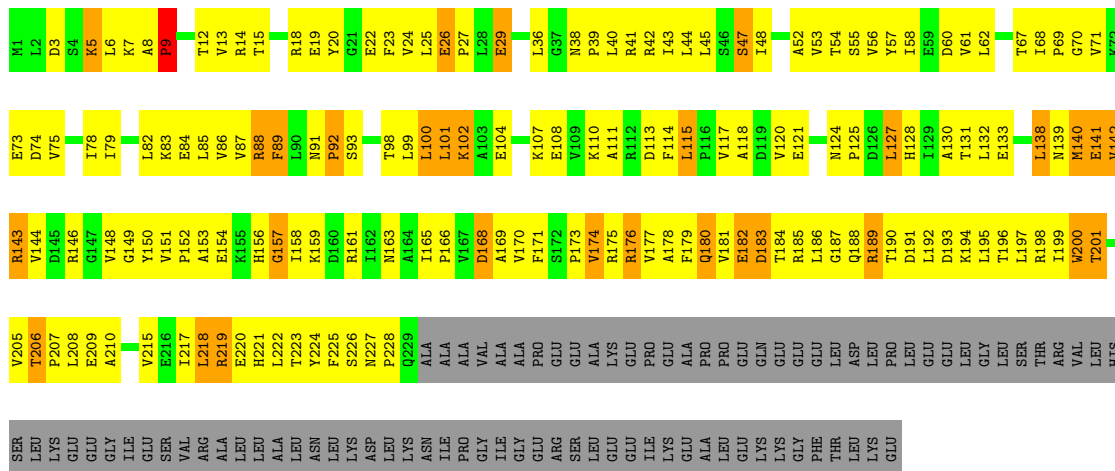
- Molecule 3: 5'-D(*AP*AP*CP*GP*CP*CP*AP*GP*AP*CP*AP*GP*GP*G)-3'

Chain Z: 



• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain A:



I199	GLY	ALA
W200	LEU	ALA
T201	SER	VAL
	THR	GLN
S204	ARG	GLY
V205	VAL	GLY
T206	LEU	GLY
P207	HIS	GLY
L208	SER	GLY
E209	LEU	GLY
A210	LYS	GLY
L211	GLY	GLY
W212	GLY	GLY
Q213	GLY	GLY
A214	ILE	GLY
V215	GLY	GLY
E216	SER	GLY
L217	VAL	GLY
L218	ARG	GLY
R219	ALA	GLY
E220	ALA	GLY
H221	LEU	GLY
L222	ALA	GLY
T223	LEU	GLY
Y224	ASN	GLY
F225	LEU	GLY
S226	LYS	GLY
W227	ASP	GLY
P228	LEU	GLY
Q229	LYS	GLY
ALA	ASN	GLY
ALA	ILE	GLY
ALA	PRO	GLY
VAL	GLY	GLY
ALA	ILE	GLY
ALA	GLY	GLY
ALA	GLY	GLY
PRO	GLY	GLY
GLY	ARG	GLY
GLY	SER	GLY
ALA	LEU	GLY
ALA	GLY	GLY
LYS	GLY	GLY
PRO	ILE	GLY
GLY	LYS	GLY
ALA	GLY	GLY
PRO	ALA	GLY
PRO	LEU	GLY
ALA	GLY	GLY
GLY	GLY	GLY
GLN	LYS	GLY
GLY	LYS	GLY
GLY	GLY	GLY
GLY	PHE	GLY
LEU	THR	GLY
ASP	LEU	GLY
LYS	LYS	GLY
PRO	LEU	GLY
LEU	LEU	GLY
GLY	GLY	GLY
LEU	GLY	GLY

• Molecule 4: DNA-directed RNA polymerase alpha chain

Chain L:

M1	GLY	ALA
L2	LEU	ALA
D3	SER	VAL
S4	THR	GLN
K5	ARG	GLY
L6	VAL	GLY
K7	LEU	GLY
A8	HIS	GLY
P9	SER	GLY
F11	LEU	GLY
	LYS	GLY
T15	GLY	GLY
E19	ILE	GLY
Y20	GLY	GLY
F23	SER	GLY
V24	VAL	GLY
L25	ARG	GLY
E26	ALA	GLY
P27	LEU	GLY
L28	ALA	GLY
E29	LEU	GLY
R30	ASN	GLY
G31	LEU	GLY
F32	LYS	GLY
G33	ASP	GLY
L34	LEU	GLY
Q35	LYS	GLY
T36	LYS	GLY
L36	ASN	GLY
G37	ILE	GLY
N38	PRO	GLY
L39	GLY	GLY
P39	GLY	GLY
L40	ILE	GLY
R41	GLY	GLY
R42	GLY	GLY
I43	ARG	GLY
L44	SER	GLY
L45	LEU	GLY
L46	ALA	GLY
S47	GLY	GLY
I48	ILE	GLY
P49	LYS	GLY
G50	GLY	GLY
T51	ALA	GLY
A52	LEU	GLY
V53	GLY	GLY
T54	LYS	GLY
S55	LYS	GLY
V56	GLY	GLY
Y57	PHE	GLY
D19	THR	GLY
E58	LEU	GLY
V59	ASP	GLY
D60	LYS	GLY
V61	LEU	GLY
L62	LEU	GLY
H63	GLY	GLY
E64	GLY	GLY
F65	LEU	GLY
S66	GLY	ALA
T67	LEU	ALA
P68	SER	VAL
L69	THR	GLN
G70	ARG	GLY
E73	VAL	GLY
D74	LEU	GLY
V75	HIS	GLY
V76	SER	GLY
E77	LEU	GLY
I78	LYS	GLY
I79	GLY	GLY
L80	GLY	GLY
N81	ILE	GLY
L82	GLY	GLY
K83	SER	GLY
E84	VAL	GLY
L85	ARG	GLY
V86	ALA	GLY
V87	LEU	GLY
R88	ALA	GLY
F89	LEU	GLY
L90	LEU	GLY
N91	ASN	GLY
P92	LEU	GLY
S93	LYS	GLY
L94	ASP	GLY
Q95	LYS	GLY
T96	LYS	GLY
V97	ASN	GLY
L98	LEU	GLY
L99	ILE	GLY
L100	PRO	GLY
L101	GLY	GLY
K102	GLY	GLY
A103	GLY	GLY
E104	ARG	GLY
G105	SER	GLY
P106	LEU	GLY
K107	GLY	GLY
E108	GLY	GLY
V109	ILE	GLY
K110	LYS	GLY
A111	GLY	GLY
R112	ALA	GLY
D113	LEU	GLY
F114	GLY	GLY
L115	LYS	GLY
P116	GLY	GLY
V117	GLY	GLY
A118	GLY	GLY
D119	THR	GLY
V120	ASP	GLY
E121	LYS	GLY
T122	LEU	GLY
M123	LEU	GLY
N124	GLY	GLY
P125	GLY	GLY
L126	LEU	GLY
L127	GLY	ALA
H128	LEU	ALA
L129	SER	VAL
A130	THR	GLN
L131	ARG	GLY
L132	VAL	GLY
L133	LEU	GLY
L134	HIS	GLY
L137	SER	GLY
R138	LEU	GLY
E139	LYS	GLY
M140	GLY	GLY
E141	GLY	GLY
V142	ILE	GLY
L143	GLY	GLY
V144	SER	GLY
D145	VAL	GLY
L146	ARG	GLY
V151	ALA	GLY
P152	LEU	GLY
K155	ASN	GLY
H156	LEU	GLY
G157	LYS	GLY
L158	ASP	GLY
K159	LYS	GLY
D160	LYS	GLY
R161	ASP	GLY
I162	LYS	GLY
N163	LEU	GLY
D168	ILE	GLY
A169	PRO	GLY
V170	GLY	GLY
F171	GLY	GLY
S172	ARG	GLY
P173	SER	GLY
V174	LEU	GLY
R175	GLY	GLY
R176	GLY	GLY
V177	ILE	GLY
A178	LYS	GLY
F179	GLY	GLY
E182	ALA	GLY
D183	LEU	GLY
T184	GLY	GLY
L185	LYS	GLY
R186	GLY	GLY
L187	GLY	GLY
A188	GLY	GLY
Q188	GLY	GLY
R189	GLY	GLY
V190	THR	GLY
T191	LEU	GLY
D192	LEU	GLY
L193	LEU	GLY
D199	GLY	GLY
K194	GLY	GLY
P195	GLY	GLY
L196	GLY	ALA
L197	LEU	ALA
R198	SER	VAL
W200	THR	GLN
W201	ARG	GLY
D202	VAL	GLY
V205	LEU	GLY
T206	SER	GLY
P207	LEU	GLY
L208	LYS	GLY
E209	GLY	GLY
A210	GLY	GLY
L211	ILE	GLY
A214	GLY	GLY
V215	SER	GLY
E216	VAL	GLY
T217	LEU	GLY
L218	ALA	GLY
R219	ALA	GLY
E220	LEU	GLY
H221	LEU	GLY
L222	ALA	GLY
T223	LEU	GLY
Y224	ASN	GLY
F225	LYS	GLY
N227	ASP	GLY
P228	LEU	GLY
Q229	LYS	GLY
ALA	ASN	GLY
ALA	ILE	GLY
ALA	PRO	GLY
VAL	GLY	GLY
ALA	GLY	GLY
ALA	GLY	GLY
PRO	ILE	GLY
GLY	LYS	GLY
GLY	GLY	GLY
ALA	GLY	GLY
PRO	ALA	GLY
PRO	LEU	GLY
ALA	GLY	GLY
GLY	GLY	GLY
GLN	LYS	GLY
GLY	LYS	GLY
GLY	GLY	GLY
GLY	PHE	GLY
GLY	LEU	GLY
GLY	LEU	GLY
GLY	LEU	GLY
ASP	LEU	GLY
LEU	LEU	GLY
PRO	GLY	GLY
LEU	GLY	GLY
GLY	GLY	GLY

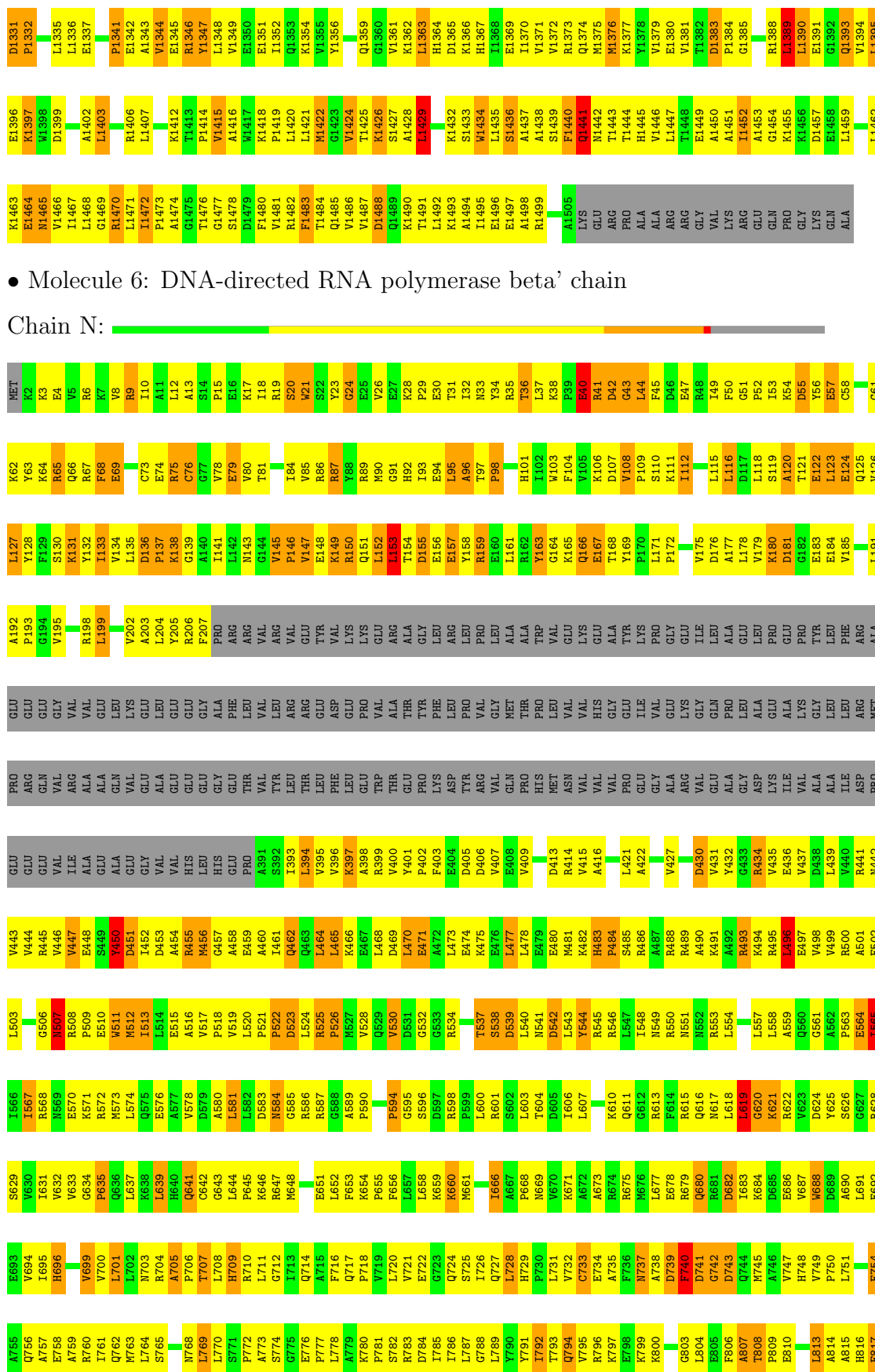
• Molecule 5: DNA-directed RNA polymerase beta chain

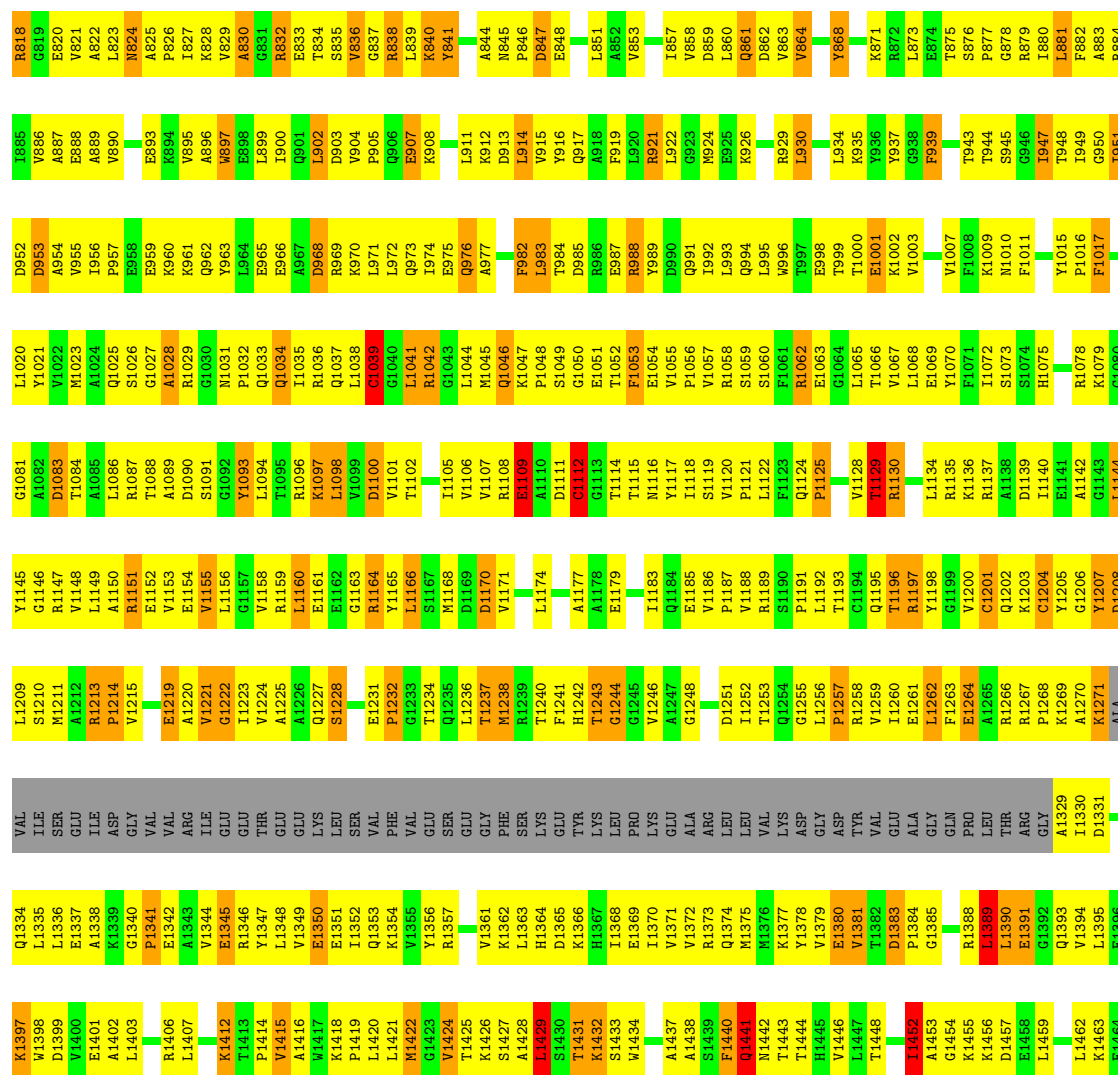
Chain C:

M1	GLY	ALA
E2	LEU	ALA
K3	SER	VAL
R4	THR	GLN
L5	ARG	GLY
F6	VAL	GLY
G7	LEU	GLY
R8	HIS	GLY
I9	SER	GLY
T10	LEU	GLY
E11	SER	GLY
V12	LEU	GLY
I13	LYS	GLY
P14	GLY	GLY
L15	GLY	GLY
P16	ILE	GLY
P17	GLY	GLY
L18	GLY	GLY
T19	SER	GLY
E20	VAL	GLY
L21	ARG	GLY
Q22	ALA	GLY
V23	LEU	GLY
E24	LEU	GLY
S25	ALA	GLY
Y26	LEU	GLY
L30	ASN	GLY
Q31	LYS	GLY
R32	LYS	GLY
V34	LEU	GLY
P35	LYS	GLY
P36	ASN	GLY
E37	ILE	GLY
K38	PRO	GLY
R39	GLY	GLY
E40	ILE	GLY
N41	GLY	GLY
I44	GLY	GLY
Q45	ARG	GLY
A46	SER	GLY
A47	LEU	GLY
F48	GLY	GLY
R49	ILE	GLY
E50	LYS	GLY
T51	GLY	GLY
F52	ALA	GLY
P53	PRO	GLY
I54	PRO	GLY
E55	GLY	GLY
E56	GLY	GLY
E57	GLY	GLY
D58	PHE	GLY
K59	THR	GLY
E123	LEU	GLY
D124	LEU	GLY
F127	GLY	GLY
L128	LEU	GLY
L66	GLY	ALA
D67	LEU	ALA
F68	SER	VAL
L69	THR	GLN
E70	ARG	GLY
Y71	VAL	GLY
R72	LEU	GLY
L73	HIS	GLY
G74	SER	GLY
E75	LEU	GLY
P76	SER	GLY
P77	LEU	GLY
F78	LYS	GLY
P79	GLY	GLY
Q80	ILE	GLY
E82	GLY	GLY
C83	GLY	GLY
K86	SER	GLY
D87	VAL	GLY
L88	ARG	GLY
T89	ALA	GLY
Y90	LEU	GLY
Q91	LEU	GLY
A92	ALA	GLY
P93	ASN	GLY
L94	LYS	GLY
Y96	LYS	GLY
A96	ASP	GLY
R97	LEU	GLY
L98	LYS	GLY
Q99	ASN	GLY
L100	ILE	GLY
I101	PRO	GLY
H102	GLY	GLY
T105	GLY	GLY
G106	GLY	GLY
L107	GLY	GLY
I108	ALA	GLY
K109	PRO	GLY
E110	GLY	GLY
D111	GLY	GLY
E112	ILE	GLY
V113	LYS	GLY
F114	GLY	GLY
L115	ALA	GLY
G116	LEU	GLY
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E123	LEU	GLY
D124	LEU	GLY
F127	GLY	GLY
L128	LEU	GLY
L129	GLY	ALA
L130	LEU	ALA
L131	SER	VAL
L132	THR	GLN
L133	ARG	GLY
L134	VAL	GLY
L137	LEU	GLY
L138	HIS	GLY
L139	SER	GLY
L140	LEU	GLY
L141	LYS	GLY
L142	GLY	GLY
L143	GLY	GLY
L144	ILE	GLY
L146	SER	GLY
L147	VAL	GLY
F148	ARG	GLY
T149	ALA	GLY
P150	LEU	GLY
D151	ARG	GLY
P152	ALA	GLY
G156	ASN	GLY
R157	LEU	GLY
Y158	GLY	GLY
I159	GLY	GLY
L160	PRO	GLY
S161	GLY	GLY
L162	GLY	GLY
T163	ILE	GLY
P164	ARG	GLY
L165	SER	GLY
P166	LEU	GLY
K167	GLY	GLY
R168	GLY	GLY
G169	GLY	GLY
P170	GLY	GLY
W171	GLY	GLY
I172	GLY	GLY
D173	GLY	GLY
L174	GLY	GLY
E175	GLY	GLY
V176	GLY	GLY
E177	ILE	GLY
P178	LYS	GLY
F179	GLY	GLY
G180	GLY	GLY
V181	GLY	GLY
V182	GLY	GLY
S183	GLY	GLY
M184	GLY	GLY
K185	GLY	GLY
V186	GLY	GLY
M187	GLY	GLY
K188	GLY	GLY
R189	GLY	GLY
K190	GLY	GLY
F191	GLY	GLY
P192	GLY	



K1271	D1208	D1139	S1073	Q1005	S942	P877	E817	S753	E693	Y625	L558	K434	Y432	ALA	ALA	LEU
ALA	L1209	I1140	S1074	A1006	T943	G878	E818	F754	V694	S626	A559	R494	Y433	ILE	ILE	PHE
VAL	S1210	I1140	R1078	V1007	I947	R879	R818	F755	I695	S627	A560	R496	R434	ARG	ARG	LEU
ILE	M1211	G1143	K1079	N1010	T948	L880	E819	G756	H696	R628	A561	R497	V435	PRO	PRO	ALA
SER	R1212	L1144	G1080	F1011	F949	F882	E820	A757	G697	S629	A562	V498	E436	GLU	GLU	ARG
ILE	R1213	G1081	G1081	N1011	G950	A883	E821	A758	V699	I631	A563	V499	V437	GLU	GLU	ARG
ASP	V1215	R1147	A1082	M1014	I951	R884	A822	A759	V700	V632	A564	B500	D438	VAL	VAL	GLN
GLY	S1216	V1148	D1083	V1015	D952	L885	L823	A760	V700	V632	A565	A501	D439	VAL	VAL	GLY
VAL	I1217	L1149	T1084	P1016	D953	L886	E824	A761	L701	V633	A566	F502	V440	ARG	ARG	VAL
VAL	G1218	A1150	A1085	F1017	A954	A887	A825	Q762	L702	G634	A567	L503	R441	ALA	ALA	VAL
ARG	E1219	R1151	L1086	F1017	V955	A887	A826	Q763	L703	G635	A568	L504	R442	ALA	ALA	VAL
ILE	A1220	R1087	L1087	L1020	V955	V890	I827	L764	R704	Q636	A569	S505	V443	ALA	ALA	LEU
GLU	V1221	R1087	L1087	L1021	I956	E891	K828	L765	A705	L637	A570	G506	V444	GLN	GLN	LYS
GLU	G1222	V1153	T1088	Y1021	P957	E891	E829	A766	P706	K638	A571	G507	R445	GLU	GLU	LYS
THR	I1223	E1154	A1089	Y1022	E958	D892	A830	A767	T707	L639	A572	R508	V446	ALA	ALA	LEU
GLU	V1224	V1155	D1090	M1023	E959	E893	E831	A768	L708	H640	A573	P509	V447	VAL	VAL	LEU
GLU	A1225	L1160	G1092	S1026	K960	K960	E832	L769	H709	Q641	A574	E510	E448	GLU	GLU	GLY
LYS	A1226	E1161	S1091	G1027	Y963	A896	E833	L770	R710	C642	A575	W511	S449	LEU	LEU	GLY
LEU	Q1227	E1161	Y1093	G1028	L964	A897	T834	P772	L711	G643	A576	M512	Y450	ALA	ALA	ALA
SER	S1228	R1164	T1095	A1028	E965	W897	E835	P772	G712	L644	A577	I513	D451	GLY	GLY	PHE
VAL	L1229	Y1165	R1096	G1030	E966	L899	E837	A773	L713	P645	A578	L514	L452	THR	THR	LEU
PHE	G1230	L1166	K1097	N1031	A967	I900	E838	S774	Q714	K646	A579	E515	D453	VAL	VAL	VAL
VAL	E1231	S1167	L1098	P1032	D968	Q901	E839	L778	A715	R647	A580	A516	A454	TYR	TYR	LEU
GLU	P1232	M1168	V1099	Q1033	R969	L902	E840	A779	R716	F717	A581	P518	R455	ARG	ARG	ARG
SER	G1233	D1169	D1100	Q1034	K970	K908	E841	L778	Q717	P718	A582	W519	C457	THR	THR	GLU
GLY	T1234	D1170	V1101	Q1037	L971	V904	E842	A779	R718	P718	A583	P519	C457	LEU	LEU	ASP
GLY	T1235	V1171	T1102	Q1038	L972	P905	E843	A781	V719	F719	A584	L520	A458	PHE	PHE	ASP
PHE	L1236	H1172	H1103	L1038	Q973	Q906	F843	S782	L720	F525	A585	P521	C397	LEU	LEU	GLU
SER	T1237	L1173	E1104	C1039	I974	E907	E844	R784	W721	K654	A586	D522	A460	PRO	PRO	GLU
LYS	M1238	L1174	I1105	G1040	E975	K908	E847	R785	E722	P655	A587	D523	1481	TRP	TRP	VAL
GLU	R1239	L1175	V1106	L1041	Q976	K908	E848	R786	Q723	F656	A588	L524	Q462	THR	THR	ALA
TYR	T1240	K1176	V1107	L1042	Q977	K908	E849	R787	Q724	L657	A589	R623	Q463	GLU	GLU	THR
LYS	F1241	A1177	R1108	G1043	Q978	K912	E850	L788	S726	L658	A590	R623	Q463	TYR	TYR	THR
LEU	H1242	E1178	E1109	L1044	E979	D913	E851	Q788	L726	L659	A591	R623	Q463	PHE	PHE	LEU
PRO	T1243	E1179	A1110	M1045	M980	L914	E852	Q789	Q727	K660	A592	M527	L465	ASP	ASP	LEU
LYS	G1244	E1183	D1111	Q1046	G981	V915	E853	Y790	L728	M661	A593	W530	E467	PRO	PRO	PRO
GLU	G1245	Q1184	G1112	K1047	F982	V915	E854	Y791	H729	E662	A594	D531	E467	TYR	TYR	PRO
ALA	G1246	Q1184	G1113	K1047	F982	V915	E854	Y792	H730	E662	A595	D532	E467	ARG	ARG	VAL
ARG	D1251	E1185	T1114	G1050	L983	A918	E855	T793	L731	N669	A596	G532	E467	VAL	VAL	GLY
LEU	T1252	V1186	G1114	G1051	T984	F919	E856	T794	L732	V670	A597	G533	L470	GLN	GLN	MET
LEU	I1253	P1187	Y1117	T1052	D985	L920	E857	C733	Q732	S602	A598	R534	E471	PRO	PRO	THR
VAL	T1254	V1188	Y1118	T1053	R986	R921	E858	V795	C733	L603	A599	R534	E471	HIS	HIS	PRO
LYS	Q1255	R1189	S1119	F1053	E987	L922	E859	R796	E734	T604	A600	R537	L473	MET	MET	LEU
ASP	G1256	S1190	V1120	V1057	R988	G923	L860	R797	A736	R676	A601	D538	E474	ASN	ASN	VAL
GLY	L1256	P1191	P1121	R1058	Y989	M924	Q861	R798	R736	L677	A602	D539	E475	VAL	VAL	VAL
ASP	P1257	L1192	F1122	S1059	Q991	K926	Q862	R799	A738	E678	A603	D540	E476	VAL	VAL	HIS
TYR	R1258	L1193	F1123	T1052	I992	K926	Q863	R800	A739	E679	A604	D541	E477	VAL	VAL	GLY
VAL	Q1259	Q1195	Q1124	F1061	L993	R929	T865	A802	F740	Q680	A605	D542	E478	PRO	PRO	GLU
GLU	E1260	T1196	P1125	R1062	Q994	L930	T866	G803	D741	Q681	A606	D543	E479	ILE	ILE	ILE
ALA	E1261	R1197	D1126	E1063	L995	L931	E867	L804	G742	R682	A607	D544	E480	VAL	VAL	VAL
GLY	F1262	Y1198	V1128	G1064	W996	D932	E868	E805	D743	I683	F614	R545	E481	ALA	ALA	GLU
GLN	F1263	G1199	V1129	L1065	T997	A933	E869	F806	Q744	K684	R615	R546	E482	ARG	ARG	LYS
PRO	E1264	V1200	T1129	T1066	E998	L934	E870	R807	A745	D685	Q616	I548	R483	VAL	VAL	GLY
LEU	A1265	C1201	R1130	V1067	T999	K935	E871	T808	A746	E686	Q617	N549	S485	ALA	ALA	PRO
THR	R1266	G1204	R1133	L1068	T1000	Y936	E872	E810	V747	V687	L618	R550	R486	LEU	LEU	LEU
ARG	K1267	Y1205	L1134	E1069	E1001	Y937	L873	E811	V749	D688	L619	R551	A487	ASP	ASP	ALA
GLY	P1268	R1206	L1135	F1070	K1002	G938	E874	A812	P750	A690	R620	L554	R488	LYS	LYS	GLU
LYS	K1269	E1207	K1136	I1072	T1004	P939	T875	L813	S752	L691	R622	K556	R489	ILE	ILE	ALA
	A1270													ALA	ALA	GLY





M63	AG4	M65	K66	E67	L68	L69	T70	G71	R72	L73	V74	F75		N78	L79	V80	P81	E82	D83	R84	L85	Q86	K87	E88	M89	E90	R91	L92	Y93	P94	V95	E96	ARG	GLU	GLU
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4 Data and refinement statistics

Property	Value	Source
Space group	P 41	Depositor
Cell constants a, b, c, α , β , γ	152.34Å 152.34Å 524.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.00 38.29 – 3.00	Depositor EDS
% Data completeness (in resolution range)	89.3 (40.00-3.00) 83.5 (38.29-3.00)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.51 (at 3.01Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.225 , 0.257 0.219 , 0.241	Depositor DCC
R_{free} test set	11219 reflections (6.04%)	DCC
Wilson B-factor (Å ²)	64.2	Xtriage
Anisotropy	0.049	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 143.5	EDS
Estimated twinning fraction	0.146 for h,-k,-l	Xtriage
L-test for twinning	$\langle L \rangle = 0.40$, $\langle L^2 \rangle = 0.23$	Xtriage
Outliers	0 of 196921 reflections	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	51213	wwPDB-VP
Average B, all atoms (Å ²)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.44% of the height of the origin peak. No significant pseudotranslation is detected.*

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: APC, ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	G	1.04	1/520 (0.2%)	1.12	1/798 (0.1%)
1	X	1.12	2/520 (0.4%)	1.14	1/798 (0.1%)
2	H	1.39	3/387 (0.8%)	2.45	39/601 (6.5%)
2	Y	1.36	3/387 (0.8%)	2.44	33/601 (5.5%)
3	I	0.72	0/304	0.92	1/467 (0.2%)
3	Z	0.73	0/304	0.91	0/467
4	A	0.69	0/1838	0.76	0/2498
4	B	0.76	0/1838	0.76	2/2498 (0.1%)
4	K	0.73	0/1838	0.82	3/2498 (0.1%)
4	L	0.73	0/1838	0.78	4/2498 (0.2%)
5	C	0.79	1/8997 (0.0%)	0.89	17/12164 (0.1%)
5	M	0.78	1/8997 (0.0%)	0.90	17/12164 (0.1%)
6	D	0.79	1/10128 (0.0%)	0.91	18/13681 (0.1%)
6	N	0.79	2/10128 (0.0%)	0.89	22/13681 (0.2%)
7	E	0.83	1/784 (0.1%)	1.07	3/1057 (0.3%)
7	O	0.78	1/784 (0.1%)	1.07	3/1057 (0.3%)
All	All	0.80	16/49592 (0.0%)	0.95	164/67528 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	G	0	6
1	X	0	5
2	H	0	2
2	Y	0	1
3	I	0	1
All	All	0	15

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	1	G	OP3-P	10.56	1.73	1.61
1	G	1	DC	OP3-P	-7.74	1.51	1.61
1	X	1	DC	OP3-P	-7.13	1.52	1.61
7	E	94	PRO	N-CA	6.34	1.58	1.47
5	C	439	CYS	CB-SG	-6.08	1.72	1.82
7	O	94	PRO	N-CA	6.07	1.57	1.47
2	Y	7	G	C5-C6	-6.04	1.36	1.42
6	N	1039	CYS	CB-SG	-5.96	1.72	1.81
6	D	1101	VAL	CB-CG2	-5.49	1.41	1.52
2	Y	1	G	OP3-P	5.44	1.67	1.61
2	Y	2	A	O3'-P	-5.32	1.54	1.61
5	M	422	ARG	CG-CD	5.29	1.65	1.51
2	H	9	G	C5-C6	-5.22	1.37	1.42
2	H	2	A	C3'-O3'	-5.17	1.34	1.42
6	N	103	TRP	CB-CG	-5.10	1.41	1.50
1	X	13	DT	O3'-P	5.04	1.67	1.61

All (164) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	Y	2	A	N9-C1'-C2'	-18.09	90.48	114.00
5	M	409	ARG	NE-CZ-NH1	15.09	127.85	120.30
2	Y	7	G	N9-C1'-C2'	-12.29	98.02	114.00
7	E	94	PRO	CA-N-CD	-11.28	95.71	111.50
2	H	1	G	N9-C1'-C2'	11.20	128.56	114.00
7	O	94	PRO	CA-N-CD	-11.13	95.92	111.50
2	H	7	G	N9-C1'-C2'	-11.00	99.70	114.00
5	M	409	ARG	NE-CZ-NH2	-9.94	115.33	120.30
2	H	2	A	N9-C1'-C2'	-9.73	101.29	112.00
2	H	2	A	P-O3'-C3'	-9.28	108.56	119.70
7	O	94	PRO	N-CA-C	9.25	136.15	112.10
7	E	94	PRO	N-CA-C	9.02	135.55	112.10
2	H	9	G	O4'-C1'-N9	9.00	115.40	108.20
2	Y	2	A	O4'-C1'-N9	-8.97	101.03	108.20
2	Y	14	G	O4'-C1'-N9	8.84	115.27	108.20
2	Y	4	U	O4'-C1'-N1	8.73	115.18	108.20
2	Y	9	G	O4'-C1'-N9	8.71	115.17	108.20
5	C	409	ARG	NE-CZ-NH1	8.58	124.59	120.30
2	H	4	U	O4'-C1'-N1	8.56	115.05	108.20
6	N	1389	LEU	CA-CB-CG	8.45	134.74	115.30
2	H	6	U	O4'-C1'-N1	8.40	114.92	108.20
4	K	197	LEU	CA-CB-CG	8.16	134.07	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	243	ARG	C-N-CD	-8.15	102.66	120.60
2	Y	14	G	N9-C1'-C2'	-8.15	103.03	112.00
2	Y	5	C	O4'-C1'-N1	8.11	114.69	108.20
2	H	5	C	O4'-C1'-N1	8.05	114.64	108.20
2	Y	9	G	C5'-C4'-O4'	-7.86	99.66	109.10
2	H	14	G	O4'-C1'-N9	7.86	114.49	108.20
2	H	13	C	N1-C1'-C2'	-7.86	103.36	112.00
2	H	1	G	O4'-C1'-N9	-7.78	101.98	108.20
2	H	9	G	C5'-C4'-O4'	-7.76	99.79	109.10
2	Y	6	U	O4'-C1'-N1	7.69	114.35	108.20
2	Y	9	G	N9-C1'-C2'	-7.67	103.56	112.00
2	H	12	G	O4'-C1'-N9	7.67	114.34	108.20
2	H	14	G	N9-C1'-C2'	-7.52	103.73	112.00
5	M	98	LEU	CA-CB-CG	7.48	132.49	115.30
6	N	1429	LEU	CA-CB-CG	7.42	132.35	115.30
5	M	243	ARG	C-N-CD	-7.36	104.41	120.60
5	C	409	ARG	NE-CZ-NH2	-7.30	116.65	120.30
2	Y	3	G	OP1-P-OP2	-7.28	108.68	119.60
2	H	9	G	N9-C1'-C2'	-7.26	104.01	112.00
2	Y	14	G	O5'-P-OP2	7.21	119.35	110.70
2	Y	12	G	O4'-C1'-N9	7.18	113.95	108.20
6	N	1244	GLY	N-CA-C	7.15	130.97	113.10
6	D	1244	GLY	N-CA-C	7.14	130.96	113.10
6	N	1244	GLY	CA-C-N	7.05	130.29	116.20
6	D	133	ILE	CA-C-N	-7.03	101.73	117.20
5	M	861	LEU	CA-CB-CG	7.02	131.45	115.30
2	H	8	C	O4'-C1'-N1	6.99	113.79	108.20
2	Y	3	G	O4'-C1'-N9	-6.85	102.72	108.20
2	Y	12	G	N9-C1'-C2'	-6.84	104.48	112.00
2	Y	2	A	OP1-P-OP2	-6.83	109.35	119.60
6	D	1244	GLY	CA-C-N	6.80	129.81	116.20
6	D	133	ILE	C-N-CA	6.79	138.68	121.70
5	M	422	ARG	NE-CZ-NH1	6.74	123.67	120.30
6	D	1243	THR	CA-C-N	6.71	129.63	116.20
4	K	218	LEU	CA-CB-CG	6.71	130.74	115.30
6	D	1096	ARG	NE-CZ-NH2	-6.65	116.97	120.30
2	H	12	G	N9-C1'-C2'	-6.58	104.76	112.00
2	Y	1	G	OP1-P-OP2	-6.48	109.87	119.60
2	H	1	G	OP1-P-OP2	-6.47	109.90	119.60
6	N	1243	THR	CA-C-N	6.46	129.12	116.20
2	Y	2	A	C3'-C2'-C1'	-6.45	96.34	101.50
2	H	10	G	O4'-C1'-N9	6.44	113.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	207	LEU	CA-CB-CG	6.41	130.04	115.30
4	B	90	LEU	CA-CB-CG	6.41	130.03	115.30
2	H	2	A	OP1-P-OP2	-6.39	110.02	119.60
2	H	13	C	O4'-C1'-N1	6.36	113.29	108.20
2	Y	13	C	N1-C1'-C2'	-6.34	105.03	112.00
2	Y	8	C	O4'-C1'-N1	6.33	113.26	108.20
2	H	10	G	N9-C1'-C2'	-6.29	105.08	112.00
5	M	207	LEU	CA-CB-CG	6.28	129.75	115.30
2	H	3	G	OP1-P-OP2	-6.28	110.18	119.60
6	D	153	LEU	CA-CB-CG	6.24	129.64	115.30
2	H	2	A	N9-C4-C5	6.18	108.27	105.80
2	H	2	A	C4'-C3'-C2'	6.17	108.77	102.60
2	H	14	G	O5'-P-OP2	6.16	118.09	110.70
2	H	7	G	C4'-C3'-O3'	6.13	125.26	113.00
4	L	90	LEU	CA-CB-CG	6.13	129.39	115.30
6	N	1243	THR	C-N-CA	-6.13	109.44	122.30
2	Y	13	C	O4'-C1'-N1	6.08	113.07	108.20
2	H	11	C	N1-C1'-C2'	-6.08	105.32	112.00
6	N	450	TYR	CA-C-N	-6.04	103.91	117.20
6	D	1429	LEU	CA-CB-CG	5.98	129.06	115.30
2	H	6	U	C3'-C2'-C1'	5.95	106.26	101.50
2	H	11	C	O4'-C1'-N1	5.94	112.95	108.20
2	Y	16	G	O4'-C1'-N9	5.91	112.93	108.20
2	H	15	C	O4'-C1'-N1	5.91	112.92	108.20
2	Y	7	G	C4'-C3'-O3'	5.90	124.81	113.00
6	N	394	LEU	CA-CB-CG	5.90	128.88	115.30
2	Y	6	U	C3'-C2'-C1'	5.89	106.21	101.50
2	H	2	A	C8-N9-C4	-5.87	103.45	105.80
6	D	1363	LEU	CA-CB-CG	5.83	128.71	115.30
2	Y	11	C	O4'-C1'-N1	5.82	112.86	108.20
6	D	1109	GLU	CA-C-N	-5.81	104.43	117.20
6	D	1243	THR	C-N-CA	-5.79	110.14	122.30
6	N	1109	GLU	CA-C-N	-5.78	104.49	117.20
5	C	58	ASP	C-N-CA	5.76	136.09	121.70
6	N	153	LEU	CA-CB-CG	5.75	128.52	115.30
2	Y	10	G	O4'-C1'-N9	5.73	112.79	108.20
5	M	58	ASP	C-N-CA	5.73	136.04	121.70
1	G	18	DG	N9-C1'-C2'	-5.73	101.72	112.60
6	D	1109	GLU	C-N-CA	5.70	135.96	121.70
5	M	304	LEU	CA-CB-CG	5.66	128.31	115.30
2	H	7	G	O4'-C1'-N9	5.64	112.72	108.20
2	Y	11	C	N1-C1'-C2'	-5.63	105.81	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	450	TYR	CA-CB-CG	-5.61	102.75	113.40
6	N	488	ARG	NE-CZ-NH1	5.59	123.09	120.30
4	K	186	LEU	CA-CB-CG	5.58	128.15	115.30
4	L	115	LEU	CA-CB-CG	5.58	128.13	115.30
2	H	1	G	C4'-C3'-C2'	5.57	108.17	102.60
6	N	450	TYR	CA-CB-CG	-5.54	102.88	113.40
5	M	424	GLY	N-CA-C	5.53	126.93	113.10
2	Y	10	G	N9-C1'-C2'	-5.51	105.94	112.00
5	C	422	ARG	NE-CZ-NH1	5.50	123.05	120.30
6	N	619	LEU	CA-CB-CG	5.49	127.92	115.30
2	H	2	A	P-O5'-C5'	-5.48	112.13	120.90
2	Y	1	G	C2'-C3'-O3'	-5.48	97.45	109.50
6	N	1109	GLU	C-N-CA	5.48	135.39	121.70
6	D	619	LEU	CA-CB-CG	5.46	127.86	115.30
6	N	1244	GLY	CA-C-O	-5.46	110.78	120.60
2	Y	7	G	O4'-C1'-N9	5.44	112.56	108.20
5	C	165	LEU	C-N-CD	-5.44	108.63	120.60
5	C	600	ASP	CB-CG-OD1	-5.40	113.44	118.30
4	L	186	LEU	CA-CB-CG	-5.40	102.88	115.30
6	D	764	LEU	CA-CB-CG	5.40	127.71	115.30
5	M	165	LEU	C-N-CD	-5.38	108.75	120.60
1	X	18	DG	N9-C1'-C2'	-5.36	102.42	112.60
5	C	30	LEU	CA-CB-CG	5.36	127.63	115.30
6	D	1101	VAL	CB-CA-C	-5.36	101.23	111.40
4	L	192	LEU	CA-CB-CG	5.34	127.59	115.30
5	C	600	ASP	CB-CG-OD2	5.34	123.11	118.30
5	C	728	HIS	CA-C-N	5.29	128.84	117.20
6	N	488	ARG	NE-CZ-NH2	-5.28	117.66	120.30
2	H	16	G	O4'-C1'-N9	5.27	112.41	108.20
5	M	285	LEU	CA-CB-CG	5.26	127.39	115.30
5	M	728	HIS	CA-C-N	5.25	128.75	117.20
5	M	409	ARG	CA-CB-CG	5.25	124.94	113.40
5	M	409	ARG	CD-NE-CZ	5.22	130.91	123.60
5	M	728	HIS	C-N-CA	-5.21	108.69	121.70
3	I	3	DA	OP1-P-OP2	-5.20	111.80	119.60
5	C	858	MET	CB-CG-SD	-5.20	96.81	112.40
5	C	244	PRO	CA-N-CD	-5.19	104.24	111.50
5	C	191	PHE	C-N-CA	-5.17	100.27	122.00
6	N	621	LYS	CA-C-N	5.16	128.54	117.20
6	N	813	LEU	CA-CB-CG	5.15	127.15	115.30
2	H	16	G	C5'-C4'-O4'	-5.15	102.92	109.10
6	D	813	LEU	CA-CB-CG	5.14	127.13	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	E	50	THR	C-N-CA	5.14	134.56	121.70
5	C	165	LEU	C-N-CA	5.13	143.56	122.00
6	N	1201	CYS	CA-CB-SG	-5.13	104.76	114.00
5	C	328	LEU	CA-CB-CG	-5.11	103.55	115.30
2	Y	15	C	O4'-C1'-N1	5.10	112.28	108.20
5	M	997	LEU	CB-CG-CD2	-5.10	102.34	111.00
2	H	12	G	C4'-C3'-C2'	5.09	107.69	102.60
7	O	50	THR	C-N-CA	5.09	134.43	121.70
2	H	2	A	C3'-C2'-C1'	-5.09	97.43	101.50
6	N	1112	CYS	CA-CB-SG	5.08	123.14	114.00
2	Y	12	G	C4'-C3'-C2'	5.06	107.66	102.60
5	C	728	HIS	C-N-CA	-5.05	109.07	121.70
4	B	115	LEU	CA-CB-CG	5.04	126.90	115.30
6	D	1244	GLY	CA-C-O	-5.04	111.52	120.60
6	N	1039	CYS	CA-CB-SG	-5.03	104.95	114.00
6	N	496	LEU	CA-CB-CG	5.00	126.80	115.30

There are no chirality outliers.

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	G	13	DT	Sidechain
1	G	15	DC	Sidechain
1	G	16	DG	Sidechain
1	G	17	DC	Sidechain
1	G	18	DG	Sidechain
1	G	19	DC	Sidechain
2	H	14	G	Sidechain
2	H	16	G	Sidechain
3	I	3	DA	Sidechain
1	X	13	DT	Sidechain
1	X	15	DC	Sidechain
1	X	16	DG	Sidechain
1	X	17	DC	Sidechain
1	X	18	DG	Sidechain
2	Y	14	G	Sidechain

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	G	467	0	259	43	0
1	X	467	0	259	43	0
2	H	347	0	174	58	0
2	Y	347	0	174	81	0
3	I	270	0	144	14	0
3	Z	270	0	144	12	0
4	A	1806	0	1861	169	0
4	B	1806	0	1861	174	0
4	K	1806	0	1861	182	0
4	L	1806	0	1861	199	0
5	C	8829	0	8933	1208	0
5	M	8829	0	8933	1204	0
6	D	9960	0	10183	1379	0
6	N	9960	0	10183	1351	0
7	E	770	0	784	108	0
7	O	770	0	784	101	0
8	D	2	0	0	0	0
8	N	2	0	0	0	0
9	D	2	0	0	0	0
9	N	2	0	0	0	0
10	D	31	0	14	2	0
10	N	31	0	14	2	0
11	A	106	0	0	16	0
11	B	82	0	0	21	0
11	C	482	0	0	120	0
11	D	506	0	0	138	0
11	E	60	0	0	6	0
11	G	32	0	0	3	0
11	H	37	0	0	3	0
11	I	22	0	0	3	0
11	K	86	0	0	19	0
11	L	104	0	0	23	0
11	M	483	0	0	129	0
11	N	491	0	0	115	0
11	O	39	0	0	6	0
11	X	43	0	0	4	0
11	Y	30	0	0	6	0
11	Z	30	0	0	4	0
All	All	51213	0	48426	5871	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 61.

All (5871) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Y:7:G:N1	5:M:1014:SER:HA	1.62	1.13
2:Y:16:G:H21	6:N:705:ALA:HB1	1.11	1.12
6:N:18:ILE:HG23	6:N:518:PRO:HG3	1.33	1.10
5:C:409:ARG:HA	5:C:454:SER:HA	1.27	1.10
6:N:1189:ARG:HB3	6:N:1204:CYS:HA	1.34	1.09
6:D:695:ILE:HD11	6:D:718:PRO:HB2	1.31	1.08
4:K:112:ARG:HE	4:K:125:PRO:HB2	1.15	1.07
6:D:908:LYS:HB2	6:D:1027:GLY:HA3	1.39	1.04
4:B:59:GLU:HB2	4:B:137:ARG:HH12	1.20	1.04
6:N:1220:ALA:HB1	6:N:1223:ILE:HD13	1.39	1.03
6:D:783:ARG:HA	6:D:1028:ALA:HA	1.40	1.03
6:N:1335:LEU:HD23	6:N:1344:VAL:HG22	1.39	1.03
6:D:161:LEU:HD21	6:D:452:ILE:HG21	1.38	1.02
5:C:305:PRO:HG3	5:C:308:ARG:HH22	1.22	1.02
5:C:752:GLY:H	5:C:792:VAL:HB	1.25	1.01
5:M:695:LEU:HD21	5:M:832:LYS:HD3	1.43	1.01
6:D:798:GLU:HB2	6:D:828:LYS:HE3	1.43	1.01
5:C:433:THR:HG21	5:C:488:ALA:HB1	1.42	1.01
5:M:946:ARG:HB3	5:M:946:ARG:HH11	1.22	1.01
6:N:180:LYS:HG2	6:N:183:GLU:HB2	1.42	1.01
2:Y:2:A:H3'	2:Y:2:A:C8	1.94	1.00
5:M:905:ILE:HD12	5:M:905:ILE:H	1.27	1.00
6:N:633:VAL:HG22	6:N:635:PRO:HD3	1.43	1.00
4:L:179:PHE:HB3	4:L:197:LEU:HD12	1.44	0.99
2:Y:7:G:H1	5:M:1014:SER:HA	0.85	0.99
6:D:637:LEU:HD21	6:D:642:CYS:HA	1.45	0.99
6:N:783:ARG:HA	6:N:1028:ALA:HA	1.41	0.98
2:Y:7:G:H21	5:M:1021:LEU:HB2	1.27	0.98
6:N:1379:VAL:HG12	6:N:1419:PRO:HA	1.40	0.98
6:N:95:LEU:HD11	6:N:517:VAL:HG23	1.46	0.97
5:C:578:VAL:HG13	5:C:671:ASN:HB3	1.46	0.97
6:N:1042:ARG:HH21	6:N:1073:SER:HB3	1.28	0.97
6:D:1183:ILE:HG22	6:N:561:GLY:HA2	1.47	0.97
2:Y:7:G:H1	5:M:1014:SER:CA	1.79	0.96
4:A:85:LEU:HA	4:A:124:ASN:HD22	1.28	0.96
6:D:1109:GLU:HG2	6:D:1201:CYS:HA	1.44	0.96
6:D:1112:CYS:HB2	6:D:1195:GLN:HG2	1.45	0.96
5:M:333:ILE:H	5:M:465:GLY:HA3	1.31	0.96
5:C:579:VAL:HG11	5:C:887:GLU:HG3	1.47	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:O:45:ARG:HG2	7:O:46:PRO:HD2	1.47	0.96
6:N:996:TRP:HA	6:N:999:THR:HG22	1.46	0.96
6:D:455:ARG:HB2	6:D:460:ALA:HA	1.47	0.95
5:M:110:GLU:HG3	5:M:369:PRO:HB3	1.44	0.95
6:N:543:LEU:HD22	6:N:580:ALA:HB1	1.47	0.95
6:N:972:LEU:HG	6:N:976:GLN:HE22	1.31	0.95
6:N:921:ARG:HH11	6:N:921:ARG:HB3	1.29	0.95
5:C:636:ALA:HB3	5:C:703:ILE:HD13	1.46	0.95
4:L:89:PHE:HB3	4:L:94:LEU:HD13	1.47	0.94
6:N:1144:LEU:HD12	6:N:1171:VAL:HG13	1.48	0.94
5:M:478:VAL:HG13	5:M:506:ASN:HB3	1.48	0.94
5:M:120:LEU:HD22	5:M:121:MET:H	1.32	0.94
6:N:1109:GLU:HG2	6:N:1201:CYS:HA	1.48	0.94
4:B:64:GLU:HB2	4:B:165:ILE:HG21	1.48	0.94
6:N:793:THR:HB	6:N:879:ARG:HD3	1.49	0.93
5:M:157:ARG:HD3	5:M:314:THR:HB	1.49	0.93
6:D:136:ASP:HB3	6:D:137:PRO:HD3	1.51	0.93
5:M:304:LEU:HD23	5:M:305:PRO:HD3	1.47	0.93
5:C:39:ARG:H	5:C:39:ARG:HD2	1.31	0.93
5:M:183:SER:HB2	5:M:190:LYS:HG2	1.48	0.93
5:M:939:ARG:HB3	5:M:982:PRO:HG3	1.47	0.93
2:Y:12:G:H8	2:Y:12:G:H5'	1.32	0.93
6:N:1487:VAL:HG11	6:N:1492:LEU:HD23	1.50	0.93
5:M:857:ASP:HB2	5:M:978:ARG:HG2	1.49	0.93
5:M:395:LYS:HE2	5:M:403:SER:HB2	1.49	0.93
5:C:36:PRO:HG2	5:C:70:GLU:HB3	1.50	0.93
4:B:18:ARG:HH12	4:B:123:MET:HE1	1.33	0.93
2:Y:2:A:H5''	6:N:671:LYS:HZ1	1.31	0.92
1:X:18:DG:H2''	1:X:19:DC:H5'	1.51	0.92
6:D:1223:ILE:HG22	6:D:1227:GLN:HE21	1.33	0.92
5:M:313:LEU:HD13	5:M:321:GLU:HB2	1.50	0.92
1:X:14:DT:H5''	6:N:1089:ALA:HA	1.48	0.92
4:B:97:VAL:HG11	4:B:120:VAL:HG21	1.52	0.92
6:D:143:ASN:HD21	6:D:145:VAL:HG12	1.32	0.92
6:N:133:ILE:HD12	6:N:153:LEU:HD13	1.50	0.91
5:M:1097:LEU:HD22	5:M:1097:LEU:H	1.33	0.91
5:M:197:LEU:HD13	5:M:207:LEU:HD11	1.52	0.91
5:C:313:LEU:HB2	11:C:1168:HOH:O	1.70	0.91
11:B:374:HOH:O	6:D:847:ASP:HB3	1.69	0.91
5:C:673:LEU:HD22	5:C:867:VAL:HA	1.52	0.91
2:H:6:U:H2'	2:H:7:G:C8	2.06	0.90
2:Y:8:C:O2'	2:Y:9:G:H5'	1.71	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Y:2:A:C3'	2:Y:2:A:C8	2.51	0.90
6:D:785:ILE:HD12	6:D:785:ILE:H	1.34	0.90
2:H:13:C:H4'	5:C:409:ARG:HH22	1.37	0.90
6:D:1253:THR:O	6:D:1257:PRO:HD2	1.71	0.90
6:N:52:PRO:HD2	6:N:85:VAL:HG21	1.52	0.90
6:D:145:VAL:HG22	6:D:146:PRO:HD2	1.53	0.90
6:N:890:VAL:HG12	6:N:926:LYS:HD2	1.54	0.90
2:Y:6:U:H2'	2:Y:7:G:C8	2.07	0.89
2:H:12:G:H5'	2:H:12:G:H8	1.38	0.89
5:M:536:PRO:HD2	5:M:537:LYS:HZ2	1.37	0.89
5:M:170:PRO:HB3	5:M:186:VAL:HG12	1.52	0.89
4:L:87:VAL:HG21	4:L:144:VAL:HG11	1.53	0.89
6:N:507:ASN:HD22	6:N:507:ASN:H	1.16	0.89
6:D:785:ILE:HG22	6:D:789:LEU:HD11	1.53	0.89
5:C:1049:LEU:HD23	6:D:1472:ILE:HD12	1.55	0.89
5:C:176:VAL:HG12	5:C:182:VAL:HG13	1.54	0.89
5:C:260:LEU:HB2	5:C:291:ALA:HB1	1.55	0.89
6:N:206:ARG:HG2	6:N:394:LEU:HD22	1.55	0.89
6:D:613:ARG:NH1	6:D:616:GLN:HG2	1.88	0.88
5:M:755:LEU:HD21	5:M:792:VAL:HG22	1.52	0.88
5:C:305:PRO:HG3	5:C:308:ARG:NH2	1.88	0.88
6:D:206:ARG:HG2	6:D:394:LEU:HD22	1.52	0.88
5:M:578:VAL:HG11	5:M:991:GLN:HB3	1.56	0.88
2:Y:14:G:O2'	2:Y:15:C:H5'	1.73	0.88
6:D:1468:LEU:HD22	6:D:1470:ARG:HB2	1.52	0.88
5:M:39:ARG:HD2	5:M:39:ARG:H	1.34	0.88
2:H:14:G:O2'	2:H:15:C:H5'	1.72	0.88
6:N:1121:PRO:HD2	6:N:1346:ARG:HH21	1.35	0.88
5:M:739:GLU:HG3	5:M:742:VAL:HB	1.52	0.88
5:C:148:PHE:HE2	5:C:281:LEU:HD13	1.39	0.88
6:D:204:LEU:HD21	6:D:400:VAL:HB	1.53	0.88
5:C:759:THR:HB	5:C:785:VAL:HG11	1.56	0.88
2:H:8:C:O2'	2:H:9:G:H5'	1.71	0.88
5:M:537:LYS:H	5:M:537:LYS:HD2	1.38	0.88
6:N:1253:THR:O	6:N:1257:PRO:HD2	1.74	0.88
1:X:15:DC:H4'	5:M:1035:MET:SD	2.13	0.87
6:N:786:ILE:HG21	6:N:1027:GLY:H	1.37	0.87
6:N:394:LEU:HD11	6:N:445:ARG:NH1	1.90	0.87
6:N:1258:ARG:HH12	6:N:1268:PRO:HB3	1.40	0.87
6:D:708:LEU:HB3	6:D:1231:GLU:HB2	1.55	0.87
6:D:786:ILE:HG22	6:D:1026:SER:HB3	1.55	0.87
4:L:59:GLU:HB2	4:L:137:ARG:HH12	1.39	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1055:LEU:HD22	5:C:1066:ALA:HB2	1.54	0.87
5:M:64:LEU:HB2	5:M:359:MET:SD	2.14	0.87
4:K:117:VAL:HB	4:K:120:VAL:HG12	1.57	0.87
4:B:82:LEU:HA	4:B:85:LEU:HD12	1.57	0.87
5:C:342:ASP:HA	5:C:345:ARG:HD2	1.55	0.87
6:N:87:ARG:HB3	6:N:523:ASP:HB3	1.57	0.86
6:N:1124:GLN:HE21	6:N:1135:ARG:HA	1.37	0.86
1:G:18:DG:H2''	1:G:19:DC:H5'	1.57	0.86
5:M:700:TYR:HB3	5:M:833:LEU:HD13	1.55	0.86
5:C:578:VAL:HG11	5:C:991:GLN:HB3	1.57	0.86
4:B:56:VAL:HG13	4:B:142:VAL:HG12	1.55	0.86
2:Y:7:G:H21	5:M:1021:LEU:CB	1.87	0.86
5:C:721:ARG:HG2	5:C:820:ARG:HH22	1.41	0.86
1:G:22:DC:H4'	5:C:388:ARG:HD2	1.56	0.86
6:N:501:ALA:HB1	6:N:1453:ALA:HB2	1.58	0.86
5:C:573:ARG:HB2	5:C:573:ARG:HH11	1.39	0.86
6:N:1492:LEU:HB3	6:N:1493:LYS:HE2	1.57	0.86
4:A:178:ALA:HB3	4:A:198:ARG:HG3	1.58	0.86
5:C:192:PRO:HD2	5:C:195:LEU:HB2	1.55	0.86
4:L:102:LYS:NZ	4:L:137:ARG:HG2	1.91	0.86
4:B:103:ALA:HB1	4:B:107:LYS:HD3	1.57	0.86
6:D:484:PRO:HB3	6:D:488:ARG:HE	1.38	0.85
6:D:1144:LEU:HD11	6:D:1186:VAL:HG21	1.56	0.85
4:A:54:THR:HG22	4:A:158:ILE:HG13	1.56	0.85
2:Y:12:G:C8	2:Y:12:G:H5'	2.11	0.85
5:M:345:ARG:HA	5:M:348:LEU:HD12	1.57	0.85
5:M:810:ASP:HB3	5:M:813:VAL:HG12	1.57	0.85
2:Y:16:G:N2	6:N:705:ALA:HB1	1.90	0.85
6:D:462:GLN:HG3	6:D:513:ILE:HD13	1.59	0.85
5:C:478:VAL:HG13	5:C:506:ASN:HB3	1.56	0.85
6:N:1223:ILE:H	6:N:1223:ILE:HD12	1.41	0.85
6:N:1036:ARG:NH2	6:N:1042:ARG:HA	1.92	0.85
2:Y:13:C:H4'	5:M:409:ARG:HH22	1.41	0.85
6:N:897:TRP:HA	6:N:900:ILE:HG12	1.58	0.85
5:C:174:LEU:HD22	5:C:307:LEU:HB2	1.57	0.85
5:C:587:VAL:HG11	5:C:666:LEU:HD22	1.56	0.85
6:D:526:PRO:O	6:D:537:THR:HA	1.77	0.85
2:Y:2:A:H5''	6:N:671:LYS:NZ	1.90	0.84
5:C:144:PRO:HG2	5:C:265:ARG:HH21	1.41	0.84
5:M:953:VAL:HG13	5:M:966:LEU:HD13	1.58	0.84
5:M:675:ALA:HB2	5:M:867:VAL:HG11	1.55	0.84
4:B:87:VAL:HG21	4:B:144:VAL:HG11	1.59	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:197:LEU:HD13	5:C:207:LEU:HD11	1.57	0.84
6:D:24:GLY:HA3	6:D:49:ILE:HG12	1.57	0.84
6:N:1259:VAL:HG11	6:N:1356:TYR:OH	1.77	0.84
5:M:36:PRO:HG2	5:M:70:GLU:HB3	1.60	0.84
5:C:409:ARG:HA	5:C:454:SER:CA	2.07	0.84
5:M:141:HIS:HB3	5:M:418:LEU:HD23	1.57	0.84
5:M:5:ARG:HE	5:M:8:ARG:HH22	1.24	0.84
5:C:857:ASP:HB3	5:C:978:ARG:HG2	1.60	0.84
5:C:687:ALA:HB2	6:D:740:PHE:HB2	1.59	0.84
6:N:86:ARG:O	6:N:522:PRO:HD2	1.77	0.84
6:D:1271:LYS:NZ	6:D:1331:ASP:HB3	1.92	0.84
5:M:467:ILE:HA	11:M:1287:HOH:O	1.76	0.84
5:M:160:ALA:HB2	11:M:1183:HOH:O	1.78	0.84
5:M:675:ALA:HA	5:M:989:VAL:HG12	1.58	0.84
4:L:1:MET:HG2	4:L:5:LYS:HB3	1.58	0.84
4:K:34:VAL:HB	5:M:939:ARG:NH1	1.93	0.83
6:D:486:ARG:HA	6:D:489:ARG:HD3	1.60	0.83
5:C:1031:ARG:HA	6:D:621:LYS:O	1.76	0.83
5:M:595:LEU:HG	5:M:655:LEU:HD12	1.59	0.83
6:D:1144:LEU:HB3	6:D:1166:LEU:HD11	1.58	0.83
4:B:94:LEU:HD11	4:B:119:ASP:HB2	1.59	0.83
5:M:436:GLY:HA2	5:M:538:GLN:O	1.79	0.83
6:D:853:VAL:HG22	6:D:858:VAL:HG23	1.60	0.83
4:L:102:LYS:HD3	4:L:139:ASN:HB2	1.59	0.83
5:C:326:ASP:HB3	5:C:431:HIS:HB2	1.60	0.83
6:D:8:VAL:HG23	6:D:1457:ASP:HB3	1.59	0.83
6:D:28:LYS:HB2	6:D:41:ARG:HH11	1.43	0.83
2:H:14:G:H4'	5:C:567:GLN:HE22	1.44	0.83
5:C:987:ILE:HG23	6:D:948:THR:HG21	1.60	0.83
6:N:111:LYS:HE2	6:N:1452:ILE:HD13	1.60	0.83
5:M:1065:ALA:HB1	5:M:1077:PRO:HG2	1.59	0.83
2:Y:5:C:H2'	2:Y:6:U:C6	2.13	0.83
5:C:751:PRO:HG3	5:C:796:GLU:HA	1.58	0.83
6:D:396:VAL:HG12	6:D:447:VAL:HA	1.61	0.83
6:N:1205:TYR:HD2	6:N:1215:VAL:HG21	1.43	0.83
6:D:1228:SER:O	6:D:1232:PRO:HD2	1.78	0.83
5:C:478:VAL:HA	5:C:506:ASN:O	1.79	0.82
5:M:12:VAL:HG12	5:M:534:VAL:HG13	1.61	0.82
6:D:521:PRO:HG2	6:D:524:LEU:HD22	1.59	0.82
6:N:119:SER:H	6:N:123:LEU:HD22	1.44	0.82
6:D:1389:LEU:HG	6:D:1390:LEU:H	1.44	0.82
6:D:1481:VAL:HG11	7:E:18:ARG:HA	1.59	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:172:PRO:HG3	11:N:9050:HOH:O	1.79	0.82
5:C:34:VAL:HB	5:C:38:LYS:HG3	1.60	0.82
7:O:41:GLU:HA	7:O:45:ARG:HG3	1.62	0.82
6:D:455:ARG:CB	6:D:460:ALA:HA	2.09	0.82
6:D:141:ILE:HD11	6:D:165:LYS:HZ1	1.43	0.82
6:D:1046:GLN:HA	6:D:1052:THR:HA	1.61	0.82
5:C:512:ARG:HB3	5:C:523:ILE:HD11	1.61	0.82
5:M:732:ALA:HA	5:M:735:ARG:HH21	1.45	0.82
6:D:434:ARG:H	6:D:447:VAL:HG22	1.42	0.82
6:D:1449:GLU:HA	6:D:1452:ILE:HD12	1.60	0.82
6:D:119:SER:H	6:D:123:LEU:HD22	1.42	0.82
6:D:123:LEU:HD11	6:D:152:LEU:HD22	1.61	0.82
5:M:715:THR:HB	5:M:717:LEU:HG	1.60	0.82
5:C:953:VAL:HG13	5:C:966:LEU:HD13	1.60	0.82
4:L:25:LEU:HD23	4:L:28:LEU:HD21	1.62	0.82
5:M:701:THR:HG22	5:M:832:LYS:HG2	1.62	0.82
6:N:540:LEU:H	6:N:540:LEU:HD12	1.44	0.82
5:M:405:ARG:HH22	5:M:566:THR:HG21	1.45	0.82
2:H:12:G:H5'	2:H:12:G:C8	2.14	0.81
5:C:146:VAL:HG11	5:C:306:THR:HB	1.62	0.81
7:O:18:ARG:HD3	7:O:75:PHE:HE1	1.44	0.81
4:A:117:VAL:HB	4:A:120:VAL:HG12	1.59	0.81
6:N:543:LEU:HD13	6:N:581:LEU:HA	1.59	0.81
4:B:85:LEU:HG	4:B:127:LEU:HD23	1.62	0.81
6:D:1464:GLU:HB3	11:D:8024:HOH:O	1.80	0.81
6:D:81:THR:HG22	6:D:82:LYS:H	1.45	0.81
2:H:5:C:H2'	2:H:6:U:C6	2.14	0.81
5:M:435:TYR:HE1	5:M:539:VAL:HG22	1.44	0.81
6:D:616:GLN:HE22	6:D:621:LYS:HG2	1.44	0.81
6:D:618:LEU:HD11	6:D:1463:LYS:HE2	1.62	0.81
6:N:1108:ARG:HH11	6:N:1108:ARG:HB2	1.45	0.81
5:C:343:GLN:HA	5:C:343:GLN:HE21	1.45	0.81
6:N:1046:GLN:HA	6:N:1052:THR:HA	1.62	0.81
4:B:59:GLU:HG3	4:B:139:ASN:ND2	1.94	0.81
6:D:799:LYS:HB3	6:D:826:PRO:HG2	1.63	0.81
6:D:1376:MET:SD	6:D:1421:LEU:HD13	2.20	0.81
5:C:408:ARG:HG3	5:C:455:LEU:HG	1.62	0.81
4:A:111:ALA:HB2	4:A:127:LEU:HD23	1.63	0.81
5:M:139:GLN:O	5:M:333:ILE:HA	1.81	0.81
6:N:119:SER:HB2	6:N:123:LEU:HB2	1.62	0.81
5:C:708:TYR:HB2	5:C:825:VAL:HG23	1.62	0.81
5:M:110:GLU:H	5:M:368:THR:HG21	1.45	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:58:ILE:HB	4:A:61:VAL:HB	1.63	0.81
5:M:442:GLU:HG2	5:M:454:SER:HB2	1.63	0.81
6:N:400:VAL:HG22	6:N:443:VAL:HG21	1.61	0.81
6:D:793:THR:HG21	6:D:906:GLN:HG2	1.63	0.81
5:M:478:VAL:HA	5:M:506:ASN:O	1.81	0.81
5:M:239:PHE:HE1	5:M:254:VAL:HB	1.44	0.81
1:X:13:DT:H5"	6:N:1093:TYR:CE2	2.15	0.81
7:E:47:LYS:HB2	7:E:52:GLU:OE2	1.79	0.81
6:D:1205:TYR:HD2	6:D:1215:VAL:HG21	1.44	0.81
2:H:13:C:H4'	5:C:409:ARG:NH2	1.96	0.81
6:D:1262:LEU:HD21	6:D:1351:GLU:HG3	1.63	0.80
6:D:772:PRO:HB3	6:D:1224:VAL:HG13	1.61	0.80
5:M:677:MET:HE1	5:M:679:PHE:HD1	1.46	0.80
6:N:73:CYS:HB3	6:N:76:CYS:O	1.82	0.80
5:M:585:GLU:HG2	5:M:589:ARG:HH12	1.47	0.80
6:N:610:LYS:O	6:N:615:ARG:HD3	1.81	0.80
6:D:1220:ALA:HB1	6:D:1223:ILE:HD12	1.63	0.80
6:D:616:GLN:NE2	6:D:621:LYS:HG2	1.96	0.80
5:C:5:ARG:HE	5:C:8:ARG:HH12	1.30	0.80
4:L:97:VAL:HG11	4:L:120:VAL:HG21	1.62	0.80
7:O:40:LEU:HB3	7:O:72:ARG:HH21	1.45	0.80
6:N:785:ILE:HG12	6:N:935:LYS:HA	1.62	0.80
5:C:703:ILE:HD12	5:C:703:ILE:H	1.46	0.80
6:N:156:GLU:O	6:N:159:ARG:HG2	1.82	0.80
5:M:736:ASP:HA	5:M:744:ARG:NH1	1.96	0.80
7:E:13:VAL:HG21	7:E:19:LEU:HB2	1.63	0.80
5:C:677:MET:SD	5:C:987:ILE:HG21	2.22	0.80
5:C:949:LYS:HD3	6:D:796:ARG:HH22	1.44	0.80
6:N:520:LEU:HD12	6:N:521:PRO:HD2	1.64	0.80
5:M:1056:LYS:O	6:N:624:ASP:HB2	1.81	0.80
4:A:206:THR:HG22	4:A:209:GLU:HG3	1.62	0.79
2:Y:7:G:N2	5:M:1021:LEU:HB2	1.96	0.79
6:D:740:PHE:HB3	11:D:8291:HOH:O	1.82	0.79
6:D:1153:VAL:HG13	6:N:561:GLY:HA3	1.63	0.79
6:D:1196:THR:HG23	11:D:8314:HOH:O	1.82	0.79
6:N:481:MET:SD	6:N:1388:ARG:HB3	2.22	0.79
5:M:65:VAL:HB	5:M:101:ILE:HB	1.63	0.79
1:G:17:DC:H2"	1:G:18:DG:H5'	1.62	0.79
5:M:1055:LEU:HD22	5:M:1066:ALA:HB2	1.64	0.79
5:M:915:LYS:HA	11:M:1454:HOH:O	1.83	0.79
5:M:854:PRO:HB2	5:M:856:GLU:HG3	1.64	0.79
5:M:1109:VAL:HG22	6:N:3:LYS:HE3	1.62	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:96:ALA:HB3	6:N:554:LEU:HD23	1.64	0.79
5:C:1017:THR:OG1	5:C:1019:GLN:HG2	1.83	0.79
5:C:139:GLN:HG2	5:C:334:ARG:HB2	1.65	0.79
5:M:260:LEU:HB2	5:M:291:ALA:HB1	1.64	0.79
5:M:762:LYS:HD2	5:M:786:LYS:HG3	1.65	0.79
6:D:1393:GLN:CD	6:D:1394:VAL:H	1.85	0.79
6:D:899:LEU:HD13	6:D:914:LEU:HD21	1.62	0.79
5:M:462:ASP:HB3	5:M:468:ARG:HD2	1.65	0.79
5:M:597:ALA:HB2	5:M:655:LEU:HD21	1.63	0.79
5:C:710:ILE:HB	5:C:790:LEU:HD22	1.65	0.79
4:B:1:MET:HG2	4:B:5:LYS:HB3	1.65	0.79
5:M:732:ALA:HB2	11:M:1476:HOH:O	1.82	0.79
4:L:62:LEU:H	4:L:62:LEU:HD12	1.45	0.79
6:D:1003:VAL:O	6:D:1007:VAL:HG23	1.83	0.79
6:D:1495:ILE:HG12	7:E:80:VAL:HG11	1.63	0.79
5:M:292:ARG:HD2	5:M:299:LYS:HZ3	1.47	0.79
4:K:31:GLY:HA3	4:L:42:ARG:HH21	1.49	0.78
6:N:796:ARG:HE	6:N:828:LYS:HZ3	1.30	0.78
6:N:1459:LEU:HB3	6:N:1465:ASN:HD21	1.47	0.78
5:C:140:ILE:HG22	5:C:333:ILE:HG13	1.64	0.78
6:N:887:ALA:HB1	6:N:893:GLU:HG3	1.66	0.78
6:D:550:ARG:HA	6:D:550:ARG:HE	1.45	0.78
5:C:356:ARG:HA	11:C:1191:HOH:O	1.82	0.78
5:M:1034:GLU:HB3	6:N:619:LEU:HD22	1.65	0.78
5:M:141:HIS:O	5:M:331:ARG:HA	1.84	0.78
5:M:66:LEU:HD22	5:M:372:LEU:HD23	1.66	0.78
5:C:2:GLU:HG3	5:C:899:GLN:HB3	1.64	0.78
6:D:782:SER:H	6:D:785:ILE:HD13	1.48	0.78
6:D:771:SER:HB3	6:D:778:LEU:HD13	1.65	0.78
5:M:360:LEU:HD23	11:M:1129:HOH:O	1.84	0.78
4:K:87:VAL:HG21	4:K:144:VAL:HG11	1.66	0.78
6:N:1204:CYS:HB3	11:N:9238:HOH:O	1.82	0.78
6:N:810:GLU:O	6:N:813:LEU:HG	1.84	0.78
5:M:769:PRO:HD2	6:N:65:ARG:CZ	2.12	0.78
2:Y:16:G:H21	6:N:705:ALA:CB	1.95	0.78
2:Y:9:G:H2'	2:Y:10:G:C8	2.17	0.78
6:N:1036:ARG:HH21	6:N:1042:ARG:HA	1.48	0.78
5:M:671:ASN:HD22	5:M:671:ASN:N	1.81	0.78
5:M:151:ASP:HB2	5:M:157:ARG:O	1.83	0.78
4:L:85:LEU:HA	4:L:124:ASN:HD22	1.48	0.78
5:M:1090:LYS:HD2	6:N:90:MET:HG3	1.66	0.78
6:N:1045:MET:HE2	6:N:1073:SER:HB3	1.63	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:127:LEU:HD12	6:D:128:TYR:H	1.49	0.78
5:C:748:GLU:HB2	5:C:799:ILE:HD12	1.64	0.78
5:C:625:LEU:HA	5:C:639:GLN:HE21	1.47	0.78
5:C:198:ARG:HD2	5:C:204:GLN:HE21	1.47	0.78
4:A:87:VAL:HG21	4:A:144:VAL:HG11	1.65	0.78
5:C:752:GLY:N	5:C:792:VAL:HB	1.99	0.77
6:D:1099:VAL:HA	11:D:8257:HOH:O	1.84	0.77
5:M:12:VAL:HB	5:M:472:ARG:CZ	2.15	0.77
5:M:468:ARG:HH21	5:M:487:THR:H	1.32	0.77
6:N:774:SER:HB3	6:N:1362:LYS:O	1.84	0.77
5:M:1050:GLN:HE22	6:N:1471:LEU:N	1.82	0.77
2:Y:12:G:H2'	2:Y:13:C:C6	2.20	0.77
5:C:308:ARG:HG2	11:C:1224:HOH:O	1.84	0.77
5:M:684:PHE:H	5:M:687:ALA:HB3	1.48	0.77
4:L:179:PHE:HB2	4:L:195:LEU:HD11	1.66	0.77
5:C:684:PHE:H	5:C:687:ALA:HB3	1.49	0.77
5:C:577:PRO:HD2	5:C:580:MET:SD	2.24	0.77
5:C:10:ARG:HA	5:C:10:ARG:HH11	1.47	0.77
4:A:43:ILE:HG13	4:A:218:LEU:HD12	1.65	0.77
5:M:413:LEU:H	5:M:413:LEU:HD12	1.48	0.77
5:M:516:ARG:HD2	5:M:521:PRO:HA	1.66	0.77
6:N:394:LEU:HD21	6:N:445:ARG:NH2	1.99	0.77
4:L:24:VAL:HG13	4:L:196:THR:HG22	1.66	0.77
5:C:979:THR:HG23	5:C:981:GLU:H	1.48	0.77
5:M:905:ILE:H	5:M:905:ILE:CD1	1.96	0.77
5:C:687:ALA:HB1	11:C:1474:HOH:O	1.83	0.77
5:C:1082:PRO:HG2	6:D:1469:GLY:HA3	1.66	0.77
6:N:1266:ARG:HG2	6:N:1267:ARG:H	1.50	0.77
5:M:64:LEU:HD22	5:M:359:MET:HG3	1.66	0.77
6:N:684:LYS:HB2	6:N:686:GLU:HG3	1.66	0.77
5:C:958:THR:HG23	5:C:961:GLU:HB2	1.67	0.77
6:N:1426:LYS:HA	6:N:1429:LEU:HD13	1.66	0.77
5:C:328:LEU:HB2	5:C:433:THR:HB	1.66	0.77
6:D:699:VAL:H	6:D:756:GLN:NE2	1.83	0.77
5:C:139:GLN:HE21	5:C:334:ARG:HD3	1.49	0.77
5:C:433:THR:HG22	5:C:437:ARG:NH1	1.99	0.77
6:D:785:ILE:HG13	6:D:939:PHE:CE2	2.19	0.77
5:M:516:ARG:NE	6:N:1068:LEU:HD13	1.99	0.77
5:M:938:LYS:HB2	5:M:938:LYS:HZ2	1.50	0.77
6:D:774:SER:HB3	6:D:1362:LYS:O	1.84	0.77
6:N:397:LYS:O	6:N:448:GLU:HB2	1.84	0.77
5:M:511:GLU:O	5:M:526:PRO:HD3	1.84	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:758:ARG:CZ	5:M:788:THR:HB	2.14	0.77
6:D:136:ASP:CB	6:D:455:ARG:HE	1.99	0.77
6:D:897:TRP:HA	6:D:900:ILE:HG12	1.65	0.77
6:D:9:ARG:HA	6:D:1455:LYS:O	1.84	0.77
6:N:554:LEU:HD13	6:N:570:GLU:HG2	1.67	0.76
5:C:1083:GLU:HG2	5:C:1086:ARG:HH21	1.48	0.76
6:N:1459:LEU:HB3	6:N:1465:ASN:ND2	2.00	0.76
5:C:431:HIS:CD2	5:C:433:THR:H	2.03	0.76
6:D:908:LYS:CB	6:D:1027:GLY:HA3	2.15	0.76
6:N:1003:VAL:O	6:N:1007:VAL:HG23	1.85	0.76
5:C:874:LEU:O	5:C:877:PRO:HD2	1.86	0.76
6:D:710:ARG:HG2	6:D:772:PRO:HG2	1.68	0.76
6:N:895:VAL:HG11	6:N:922:LEU:HD21	1.65	0.76
6:D:1087:ARG:HG3	6:D:1237:THR:HG21	1.67	0.76
6:D:202:VAL:HB	6:D:398:ALA:O	1.86	0.76
5:M:1032:PHE:O	5:M:1036:GLU:HB2	1.86	0.76
11:M:1524:HOH:O	6:N:616:GLN:HA	1.84	0.76
5:M:5:ARG:NE	5:M:8:ARG:HH12	1.83	0.76
6:D:28:LYS:HG3	6:D:29:PRO:HD2	1.68	0.76
6:N:1390:LEU:HD21	11:N:9287:HOH:O	1.86	0.76
5:M:244:PRO:HD2	5:M:245:GLY:H	1.50	0.76
6:D:1271:LYS:HZ2	6:D:1331:ASP:HB3	1.48	0.76
5:C:1032:PHE:O	5:C:1036:GLU:HB2	1.85	0.76
6:N:1481:VAL:HG11	7:O:18:ARG:HA	1.68	0.76
6:N:486:ARG:HA	6:N:489:ARG:HG2	1.68	0.76
5:M:998:TYR:HE2	5:M:1000:MET:HG3	1.49	0.76
6:N:1108:ARG:NH1	6:N:1108:ARG:HB2	2.01	0.76
5:C:614:ARG:HG3	5:C:620:LEU:HD22	1.68	0.76
6:N:1394:VAL:HB	6:N:1397:LYS:HB2	1.68	0.76
6:D:131:LYS:HG3	6:D:568:ARG:HG2	1.68	0.75
4:A:222:LEU:HD21	4:B:218:LEU:HB3	1.68	0.75
6:D:53:ILE:HD12	6:D:86:ARG:HH22	1.51	0.75
4:A:75:VAL:HA	4:A:78:ILE:HD12	1.68	0.75
6:D:554:LEU:HD21	6:D:571:LYS:HE2	1.66	0.75
6:D:25:GLU:HG3	6:D:93:ILE:HA	1.66	0.75
6:D:455:ARG:O	6:D:460:ALA:HB2	1.87	0.75
6:N:47:GLU:HA	11:N:9490:HOH:O	1.85	0.75
6:N:122:GLU:O	6:N:126:VAL:HG23	1.84	0.75
6:D:73:CYS:HB3	6:D:76:CYS:O	1.87	0.75
6:N:399:ARG:HB2	6:N:401:TYR:CZ	2.21	0.75
5:C:1016:ILE:HD13	5:C:1016:ILE:H	1.50	0.75
5:M:312:ALA:HB1	5:M:318:PRO:HG2	1.67	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1103:HIS:CD2	6:D:1463:LYS:H	2.05	0.75
6:N:136:ASP:HB3	6:N:137:PRO:HD3	1.67	0.75
5:M:997:LEU:HD21	11:M:1517:HOH:O	1.87	0.75
4:B:52:ALA:HB2	4:B:170:VAL:O	1.86	0.75
5:C:1031:ARG:HE	6:D:621:LYS:HB3	1.50	0.75
1:X:17:DC:H2''	1:X:18:DG:H5'	1.66	0.75
5:M:626:ARG:HH12	5:M:637:LEU:HB2	1.51	0.75
5:M:331:ARG:HH21	5:M:427:VAL:HG13	1.51	0.75
6:N:603:LEU:O	6:N:606:ILE:HG22	1.87	0.75
5:M:758:ARG:HB3	5:M:788:THR:O	1.87	0.75
5:M:378:LEU:HG	5:M:382:ILE:HD11	1.69	0.75
5:M:150:PRO:HA	5:M:158:TYR:HB3	1.69	0.75
6:N:496:LEU:HD12	6:N:500:ARG:HG2	1.69	0.75
5:C:650:ARG:HG3	5:C:653:ASP:HB2	1.67	0.75
4:L:162:ILE:HA	11:L:316:HOH:O	1.86	0.75
6:N:764:LEU:HD12	6:N:765:SER:H	1.52	0.75
6:N:133:ILE:HG12	6:N:456:MET:HE2	1.68	0.75
4:B:152:PRO:HB2	4:B:155:LYS:HD2	1.69	0.75
6:D:139:GLY:O	6:D:147:VAL:HB	1.87	0.75
6:D:148:GLU:HB3	6:D:151:GLN:HB2	1.69	0.75
6:D:651:GLU:HA	6:D:654:LYS:NZ	2.02	0.75
6:N:29:PRO:HD3	6:N:548:ILE:HG21	1.68	0.75
6:D:1149:LEU:HD12	6:D:1161:GLU:O	1.87	0.75
2:H:12:G:H2'	2:H:13:C:C6	2.22	0.74
6:N:853:VAL:HG22	6:N:858:VAL:HG23	1.69	0.74
5:C:169:GLY:HA3	5:C:263:ASP:HB3	1.69	0.74
4:B:211:LEU:O	4:B:215:VAL:HG13	1.86	0.74
1:X:13:DT:H5''	6:N:1093:TYR:HE2	1.51	0.74
6:N:1448:THR:O	6:N:1452:ILE:HD12	1.87	0.74
6:N:1155:VAL:HA	11:N:9051:HOH:O	1.88	0.74
4:B:41:ARG:HD2	4:B:177:VAL:HG23	1.69	0.74
5:C:141:HIS:HB3	5:C:418:LEU:HD23	1.67	0.74
2:Y:2:A:H8	2:Y:2:A:H3'	1.48	0.74
5:C:904:PRO:HD2	5:C:908:GLY:HA2	1.67	0.74
6:D:1195:GLN:HG3	6:D:1196:THR:N	2.02	0.74
5:M:1092:LEU:HA	5:M:1095:LEU:HD12	1.68	0.74
6:N:139:GLY:O	6:N:147:VAL:HB	1.86	0.74
4:A:57:TYR:HB3	4:A:141:GLU:HG3	1.67	0.74
6:N:1228:SER:O	6:N:1232:PRO:HD2	1.88	0.74
2:Y:10:G:H1'	11:Y:1398:HOH:O	1.86	0.74
2:Y:10:G:H2'	2:Y:11:C:C6	2.23	0.74
2:H:9:G:H2'	2:H:10:G:C8	2.21	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1034:GLU:HB3	6:D:619:LEU:HD22	1.67	0.74
5:M:443:THR:HG21	6:N:1078:ARG:HE	1.52	0.74
5:C:186:VAL:HG23	5:C:187:ASN:H	1.51	0.74
6:N:1424:VAL:HG13	6:N:1425:THR:H	1.50	0.74
5:M:433:THR:HG21	5:M:488:ALA:HB1	1.70	0.74
5:M:5:ARG:HB2	5:M:8:ARG:HH22	1.51	0.74
5:C:943:VAL:HG11	5:C:973:VAL:HG21	1.70	0.74
5:M:807:ARG:H	5:M:807:ARG:HE	1.36	0.74
5:C:328:LEU:H	5:C:433:THR:CB	1.99	0.74
5:C:437:ARG:HE	5:C:469:THR:HB	1.52	0.74
5:C:872:ASN:HD21	5:C:874:LEU:HD13	1.51	0.74
6:D:581:LEU:HG	6:D:582:LEU:HG	1.68	0.74
5:M:781:LYS:HD3	5:M:781:LYS:H	1.51	0.74
6:N:409:VAL:HG21	6:N:421:LEU:HD23	1.67	0.74
5:M:673:LEU:HD22	5:M:867:VAL:HA	1.69	0.74
6:N:972:LEU:HG	6:N:976:GLN:NE2	2.03	0.74
5:C:959:PRO:HB2	11:C:1203:HOH:O	1.85	0.74
4:B:59:GLU:HB2	4:B:137:ARG:NH1	1.99	0.74
6:N:786:ILE:HG21	6:N:1027:GLY:N	2.01	0.74
6:N:204:LEU:HD13	6:N:445:ARG:NE	2.03	0.74
5:M:68:PHE:HZ	5:M:71:TYR:HD2	1.36	0.74
6:D:65:ARG:HG3	6:D:66:GLN:H	1.53	0.74
6:D:806:PHE:CE1	6:D:813:LEU:HB3	2.23	0.74
5:M:1034:GLU:N	6:N:619:LEU:HB3	2.03	0.73
6:N:1093:TYR:O	6:N:1097:LYS:HG2	1.88	0.73
4:K:39:PRO:HG3	11:L:348:HOH:O	1.86	0.73
5:C:1042:ALA:HA	6:D:1220:ALA:HB3	1.68	0.73
6:D:1098:LEU:HD23	6:D:1226:ALA:HA	1.70	0.73
6:N:166:GLN:HG3	6:N:447:VAL:HB	1.71	0.73
6:N:1166:LEU:HD23	6:N:1166:LEU:H	1.53	0.73
11:D:8449:HOH:O	7:E:28:GLN:HG3	1.88	0.73
6:D:603:LEU:O	6:D:606:ILE:HG22	1.88	0.73
5:M:546:LEU:HD12	5:M:565:GLN:HE22	1.50	0.73
5:M:1005:MET:HB2	6:N:648:MET:CE	2.18	0.73
4:A:194:LYS:HG3	11:A:338:HOH:O	1.86	0.73
7:E:54:LEU:HG	7:E:58:PRO:HG2	1.71	0.73
11:A:325:HOH:O	4:B:215:VAL:HG21	1.89	0.73
4:A:82:LEU:HD22	4:A:142:VAL:HG11	1.69	0.73
5:C:668:LEU:HD13	5:C:995:MET:SD	2.29	0.73
6:D:483:HIS:HB2	6:D:484:PRO:HD3	1.68	0.73
6:N:1481:VAL:HG13	7:O:18:ARG:HE	1.53	0.73
5:C:722:ILE:HD12	5:C:823:VAL:HG21	1.69	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:959:GLU:HB2	6:N:963:TYR:CE1	2.24	0.73
6:D:1105:ILE:HD12	6:D:1373:ARG:HH21	1.52	0.73
4:L:59:GLU:HB2	4:L:137:ARG:NH1	2.03	0.73
5:M:671:ASN:HA	11:M:1511:HOH:O	1.88	0.73
6:D:171:LEU:HD21	6:D:192:ALA:CB	2.18	0.73
5:C:810:ASP:HB3	5:C:813:VAL:HG12	1.70	0.73
5:C:881:ASN:O	5:C:884:GLN:HG3	1.89	0.73
6:N:541:ASN:O	6:N:545:ARG:HG3	1.89	0.73
5:M:52:PHE:CD2	5:M:68:PHE:HB2	2.24	0.73
5:C:946:ARG:HH11	5:C:946:ARG:HB3	1.52	0.73
5:C:516:ARG:NE	6:D:1068:LEU:HD13	2.03	0.73
5:M:290:LEU:HD22	5:M:302:VAL:HG11	1.70	0.73
6:D:1462:LEU:HD21	6:D:1474:ALA:HB3	1.71	0.73
6:N:989:TYR:O	6:N:993:LEU:HG	1.87	0.73
5:C:263:ASP:HB2	5:C:264:PRO:HD3	1.69	0.73
6:D:1231:GLU:CD	6:D:1232:PRO:HD3	2.09	0.73
5:C:1035:MET:HA	5:C:1038:TRP:CE3	2.24	0.73
5:M:758:ARG:NH2	5:M:788:THR:HB	2.04	0.73
6:D:171:LEU:HD23	6:D:172:PRO:HD2	1.69	0.73
5:C:837:ASP:HA	5:C:999:HIS:HE1	1.52	0.73
5:M:132:ALA:HB1	5:M:632:ASN:HD21	1.54	0.73
6:D:834:THR:HG22	6:D:838:ARG:HH11	1.53	0.73
6:N:1166:LEU:HD12	6:N:1171:VAL:HG22	1.71	0.73
4:K:42:ARG:HH11	5:M:978:ARG:HA	1.53	0.73
7:O:48:MET:HB2	7:O:54:LEU:HB2	1.70	0.73
5:M:313:LEU:HD23	11:M:1189:HOH:O	1.89	0.73
6:D:1083:ASP:O	6:D:1087:ARG:HG2	1.89	0.73
5:C:479:VAL:HG11	5:C:503:LEU:HD11	1.71	0.73
4:K:189:ARG:HH12	4:L:155:LYS:HE3	1.54	0.73
4:L:218:LEU:O	4:L:222:LEU:HG	1.88	0.73
5:M:872:ASN:HD21	5:M:874:LEU:HB2	1.53	0.72
5:M:554:ASP:CB	5:M:880:MET:HB2	2.19	0.72
7:E:76:GLY:HA3	7:E:79:LEU:HD13	1.69	0.72
2:Y:6:U:H2'	2:Y:7:G:N7	2.03	0.72
6:N:643:GLY:HA3	6:N:727:GLN:HB2	1.70	0.72
5:C:1095:LEU:HD23	6:D:582:LEU:HD22	1.71	0.72
5:M:756:VAL:O	5:M:789:SER:HB3	1.89	0.72
5:M:578:VAL:HG23	5:M:579:VAL:HG12	1.71	0.72
5:C:768:THR:HB	5:C:771:GLU:HB3	1.72	0.72
2:Y:13:C:H4'	5:M:409:ARG:NH2	2.05	0.72
2:H:10:G:H2'	2:H:11:C:C6	2.25	0.72
5:C:850:ALA:HB2	11:C:1474:HOH:O	1.88	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:312:ALA:HB1	5:C:318:PRO:HG2	1.70	0.72
6:D:486:ARG:HA	6:D:489:ARG:CD	2.19	0.72
5:C:710:ILE:HD12	5:C:790:LEU:HB2	1.70	0.72
6:N:95:LEU:H	6:N:95:LEU:HD12	1.54	0.72
6:D:394:LEU:O	6:D:396:VAL:HG23	1.88	0.72
6:D:153:LEU:HD11	6:D:158:TYR:HB2	1.72	0.72
6:D:25:GLU:HA	6:D:92:HIS:O	1.89	0.72
6:D:68:PHE:HB2	11:D:8148:HOH:O	1.89	0.72
6:N:929:ARG:HB2	6:N:929:ARG:NH1	2.05	0.72
5:C:677:MET:HB3	5:C:987:ILE:HD13	1.71	0.72
6:D:1465:ASN:HD21	6:D:1470:ARG:HE	1.36	0.72
5:M:412:ALA:HB1	5:M:419:THR:HG21	1.71	0.72
4:B:79:ILE:HA	4:B:82:LEU:HD12	1.70	0.72
6:N:116:LEU:HD13	6:N:118:LEU:HD11	1.71	0.72
7:O:54:LEU:O	7:O:54:LEU:HD23	1.90	0.72
7:O:46:PRO:HG3	7:O:66:LYS:HD3	1.70	0.72
5:C:464:LEU:HD21	11:C:1308:HOH:O	1.89	0.72
4:B:218:LEU:O	4:B:222:LEU:HG	1.89	0.72
6:N:951:ILE:HG23	6:N:1062:ARG:HE	1.55	0.72
4:A:226:SER:O	4:A:228:PRO:HD3	1.90	0.72
6:N:493:ARG:HG2	6:N:1390:LEU:HB2	1.71	0.72
6:D:53:ILE:HD12	6:D:86:ARG:NH2	2.04	0.72
4:K:189:ARG:NH1	4:L:155:LYS:HE3	2.04	0.72
4:B:186:LEU:HD21	11:B:367:HOH:O	1.87	0.72
6:D:30:GLU:HB3	6:D:40:GLU:HG2	1.71	0.72
5:C:689:VAL:HB	5:C:870:ILE:HG13	1.71	0.72
6:N:179:VAL:HG13	6:N:183:GLU:HB3	1.72	0.72
6:N:1205:TYR:CD2	6:N:1215:VAL:HG21	2.25	0.72
6:D:122:GLU:O	6:D:126:VAL:HG23	1.90	0.72
6:D:810:GLU:O	6:D:813:LEU:HG	1.89	0.72
4:K:38:ASN:HB2	5:M:980:GLY:HA3	1.71	0.72
5:M:608:GLY:C	5:M:609:ASN:HD22	1.94	0.72
5:M:1060:ILE:HG22	11:M:1405:HOH:O	1.90	0.71
4:K:89:PHE:HD1	4:K:120:VAL:HG23	1.54	0.71
4:A:61:VAL:HG23	11:A:319:HOH:O	1.90	0.71
6:N:421:LEU:HD22	6:N:444:VAL:HG11	1.69	0.71
6:D:677:LEU:HD23	6:D:683:ILE:HG13	1.72	0.71
5:C:409:ARG:CA	5:C:454:SER:HA	2.16	0.71
5:C:861:LEU:HA	5:C:974:LEU:HD12	1.72	0.71
6:N:133:ILE:HG21	6:N:454:ALA:HB1	1.71	0.71
5:C:158:TYR:HD1	5:C:314:THR:HG22	1.54	0.71
5:C:436:GLY:O	5:C:459:ALA:HB2	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:675:ALA:HB2	5:C:867:VAL:HG11	1.71	0.71
6:D:646:LYS:HG3	6:D:720:LEU:HD23	1.70	0.71
5:M:874:LEU:HA	6:N:1023:MET:SD	2.31	0.71
5:M:704:HIS:O	5:M:828:ALA:HA	1.90	0.71
5:C:129:ILE:HD13	5:C:134:ARG:HB2	1.73	0.71
4:K:153:ALA:HA	4:K:156:HIS:CE1	2.26	0.71
4:A:179:PHE:HB2	4:A:195:LEU:HD11	1.71	0.71
5:M:270:GLY:O	5:M:274:ARG:HB3	1.89	0.71
6:D:409:VAL:HG23	6:D:421:LEU:HA	1.71	0.71
5:M:1101:THR:HG21	5:M:1111:ILE:HG23	1.71	0.71
5:M:1090:LYS:HE3	5:M:1112:PHE:HE1	1.55	0.71
6:N:1042:ARG:NH2	6:N:1073:SER:HB3	2.05	0.71
5:C:1031:ARG:NE	6:D:621:LYS:HB3	2.06	0.71
5:C:143:SER:HB2	5:C:276:LYS:HZ3	1.55	0.71
5:M:34:VAL:HB	5:M:38:LYS:HG3	1.71	0.71
4:K:56:VAL:HG22	4:K:142:VAL:HG12	1.70	0.71
6:N:1136:LYS:HB2	6:N:1139:ASP:OD2	1.90	0.71
6:N:921:ARG:NH1	6:N:921:ARG:HB3	2.05	0.71
6:N:792:ILE:HD11	6:N:878:GLY:O	1.91	0.71
6:D:119:SER:HB2	6:D:123:LEU:HB2	1.72	0.71
5:C:950:LEU:HB3	5:C:952:LEU:HD23	1.72	0.71
5:M:554:ASP:HB2	5:M:880:MET:HB2	1.71	0.71
6:N:145:VAL:HG22	6:N:146:PRO:HD2	1.71	0.71
5:C:355:VAL:HA	5:C:358:ARG:HD3	1.72	0.71
5:C:675:ALA:HA	5:C:989:VAL:HG13	1.71	0.71
6:D:1037:GLN:HG2	6:D:1042:ARG:HB3	1.73	0.71
6:N:521:PRO:HG2	6:N:524:LEU:HD22	1.72	0.71
6:D:185:VAL:HG11	6:D:191:LEU:HD21	1.72	0.71
6:D:421:LEU:HB2	6:D:427:VAL:HG12	1.72	0.71
11:M:1216:HOH:O	6:N:950:GLY:HA3	1.91	0.71
5:C:804:VAL:HG11	5:C:824:ARG:HH21	1.56	0.71
5:C:142:ARG:HB3	5:C:142:ARG:HH11	1.55	0.71
5:C:675:ALA:HB1	5:C:677:MET:SD	2.31	0.71
5:M:1115:LEU:HG	6:N:85:VAL:HG12	1.72	0.71
5:M:546:LEU:HD21	11:M:1376:HOH:O	1.90	0.71
5:C:837:ASP:HA	5:C:999:HIS:CE1	2.25	0.71
5:M:376:ARG:HG2	11:M:1395:HOH:O	1.90	0.71
6:D:615:ARG:NH2	6:D:1096:ARG:NH1	2.39	0.71
5:M:1019:GLN:NE2	6:N:616:GLN:HE22	1.88	0.71
6:N:1146:GLY:HA3	6:N:1207:TYR:HB2	1.71	0.71
6:N:50:PHE:CG	6:N:522:PRO:HD3	2.26	0.71
4:K:178:ALA:HB2	5:M:864:GLY:H	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:83:SER:O	6:D:86:ARG:HB3	1.90	0.71
5:M:325:ILE:HD11	11:M:1567:HOH:O	1.91	0.71
5:M:584:GLU:H	5:M:584:GLU:CD	1.95	0.71
4:L:89:PHE:HB3	4:L:94:LEU:CD1	2.21	0.71
4:K:178:ALA:HB3	4:K:198:ARG:HG3	1.72	0.71
6:D:486:ARG:HA	6:D:489:ARG:HG2	1.73	0.71
6:D:1332:PRO:HG3	6:D:1347:TYR:HE2	1.54	0.71
6:D:1160:LEU:HD11	6:D:1174:LEU:HD21	1.71	0.71
6:N:1033:GLN:HE21	6:N:1036:ARG:NH1	1.88	0.70
6:D:1087:ARG:HH21	6:D:1253:THR:HG22	1.56	0.70
6:D:1481:VAL:HG22	7:E:18:ARG:HE	1.56	0.70
5:M:609:ASN:N	5:M:609:ASN:HD22	1.86	0.70
6:D:1383:ASP:HB2	6:D:1416:ALA:HB3	1.71	0.70
6:N:502:PHE:CE1	6:N:509:PRO:HB3	2.26	0.70
6:N:1094:LEU:HB2	6:N:1260:ILE:HD11	1.72	0.70
2:H:12:G:H1'	5:C:393:GLN:HG2	1.73	0.70
6:N:1168:MET:HE3	6:N:1171:VAL:HB	1.72	0.70
6:D:1093:TYR:O	6:D:1097:LYS:HG2	1.91	0.70
5:C:1046:ALA:HA	6:D:1472:ILE:HG13	1.72	0.70
6:N:1406:ARG:HG3	6:N:1412:LYS:HG2	1.72	0.70
4:K:220:GLU:O	4:K:223:THR:HG22	1.89	0.70
5:M:1031:ARG:HA	6:N:621:LYS:O	1.92	0.70
1:G:13:DT:H5"	6:D:1093:TYR:CE2	2.26	0.70
4:L:102:LYS:HE3	4:L:104:GLU:HG3	1.73	0.70
6:N:78:VAL:HG12	6:N:80:VAL:HG22	1.74	0.70
6:N:507:ASN:H	6:N:507:ASN:ND2	1.90	0.70
5:C:1007:ALA:HB1	6:D:652:LEU:HD13	1.72	0.70
5:C:502:PRO:HB2	5:C:509:ALA:HB3	1.73	0.70
2:H:6:U:H2'	2:H:7:G:N7	2.05	0.70
5:C:1017:THR:HB	6:D:613:ARG:HH22	1.56	0.70
5:M:108:ILE:HB	5:M:368:THR:OG1	1.91	0.70
6:D:403:PHE:HB2	6:D:423:ASP:OD1	1.91	0.70
2:Y:2:A:OP2	6:N:671:LYS:NZ	2.25	0.70
6:N:786:ILE:HG22	6:N:1026:SER:HB3	1.73	0.70
5:M:433:THR:HG22	5:M:437:ARG:HH11	1.56	0.70
6:D:150:ARG:HH22	6:D:473:LEU:HD21	1.57	0.70
6:N:434:ARG:HB3	6:N:434:ARG:NH1	2.07	0.70
6:D:177:ALA:HB3	6:D:205:TYR:OH	1.90	0.70
5:C:1085:PHE:O	5:C:1089:VAL:HG23	1.91	0.70
6:D:1090:ASP:HA	6:D:1093:TYR:HB2	1.72	0.70
6:D:1098:LEU:HD21	6:D:1229:ILE:HD12	1.73	0.70
4:K:48:ILE:HB	11:K:973:HOH:O	1.90	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:179:VAL:HG13	6:D:183:GLU:HB3	1.74	0.70
5:C:244:PRO:HB3	11:C:1256:HOH:O	1.92	0.70
5:M:745:ILE:HD12	5:M:745:ILE:H	1.57	0.70
5:C:673:LEU:HB3	5:C:868:ASP:OD1	1.92	0.70
6:D:1209:LEU:HD23	6:D:1210:SER:N	2.06	0.70
6:D:117:ASP:HB2	6:D:495:ARG:NH2	2.07	0.70
6:D:117:ASP:H	6:D:150:ARG:NH1	1.90	0.70
5:C:144:PRO:HG2	5:C:265:ARG:NH2	2.06	0.70
6:D:1496:GLU:HA	6:D:1499:ARG:NE	2.06	0.70
6:N:565:ILE:H	6:N:565:ILE:HD12	1.56	0.70
5:M:806:LEU:HD11	5:M:824:ARG:NH2	2.06	0.70
4:K:88:ARG:O	4:K:121:GLU:HG2	1.91	0.70
2:Y:9:G:H2'	2:Y:10:G:H8	1.56	0.70
6:N:1042:ARG:O	6:N:1057:VAL:HB	1.92	0.70
6:D:496:LEU:O	6:D:500:ARG:HG2	1.92	0.70
5:M:39:ARG:HD2	5:M:39:ARG:N	2.05	0.70
5:C:762:LYS:HD3	5:C:784:ASP:O	1.90	0.70
4:A:227:ASN:O	4:B:11:PHE:HB3	1.91	0.70
6:D:584:ASN:OD1	6:D:590:PRO:HD2	1.91	0.70
6:D:1005:GLN:HA	6:D:1005:GLN:HE21	1.57	0.70
6:D:119:SER:HB2	6:D:123:LEU:H	1.57	0.70
6:N:871:LYS:HB3	6:N:873:LEU:HD21	1.74	0.70
6:D:1086:LEU:HD12	11:D:8404:HOH:O	1.91	0.70
4:L:110:LYS:HD3	4:L:126:ASP:HA	1.74	0.70
4:B:38:ASN:HB3	4:B:39:PRO:HD3	1.74	0.70
5:C:874:LEU:HD12	5:C:874:LEU:H	1.56	0.69
7:O:54:LEU:HA	7:O:58:PRO:HG2	1.74	0.69
6:N:462:GLN:HB2	6:N:513:ILE:HD13	1.74	0.69
6:D:105:VAL:HG21	6:D:128:TYR:HE1	1.57	0.69
4:B:89:PHE:HB3	4:B:94:LEU:HD12	1.74	0.69
5:C:841:ASN:H	5:C:841:ASN:HD22	1.38	0.69
6:N:760:ARG:HH11	7:O:61:VAL:HG23	1.57	0.69
4:A:56:VAL:HG22	4:A:142:VAL:HG13	1.73	0.69
5:M:242:LEU:HD13	11:M:1532:HOH:O	1.92	0.69
5:C:886:LEU:HD13	6:D:951:ILE:HG13	1.73	0.69
6:D:684:LYS:HB3	6:D:686:GLU:HG3	1.72	0.69
5:C:547:ILE:HG21	5:C:550:LEU:HD13	1.74	0.69
6:D:546:ARG:HA	11:D:8178:HOH:O	1.91	0.69
5:C:689:VAL:HG12	5:C:690:ILE:H	1.56	0.69
6:D:786:ILE:HD13	6:D:908:LYS:HB2	1.75	0.69
5:M:872:ASN:ND2	5:M:874:LEU:HB2	2.06	0.69
6:D:38:LYS:HG2	6:D:39:PRO:HD2	1.73	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:159:ILE:HG13	11:C:1362:HOH:O	1.93	0.69
5:M:877:PRO:HG2	6:N:1023:MET:SD	2.31	0.69
6:D:1395:LEU:HD23	6:D:1396:GLU:N	2.08	0.69
5:M:333:ILE:N	5:M:465:GLY:HA3	2.05	0.69
6:D:136:ASP:HB2	6:D:455:ARG:HE	1.57	0.69
6:N:554:LEU:HD21	6:N:571:LYS:HD3	1.75	0.69
6:D:141:ILE:HD11	6:D:165:LYS:NZ	2.08	0.69
6:D:1147:ARG:HB3	6:D:1188:VAL:HG21	1.73	0.69
6:D:756:GLN:HG3	6:D:760:ARG:HH11	1.57	0.69
6:N:41:ARG:HD3	6:N:42:ASP:H	1.57	0.69
6:D:1192:LEU:HB3	6:D:1345:GLU:OE2	1.92	0.69
7:O:31:LEU:HD21	7:O:60:ALA:HB2	1.73	0.69
5:C:341:THR:HA	11:C:1289:HOH:O	1.91	0.69
5:C:457:ALA:HB3	5:C:538:GLN:HA	1.74	0.69
5:C:69:LEU:HB2	5:C:97:ARG:HB2	1.73	0.69
5:C:265:ARG:HH11	5:C:267:TYR:HB3	1.55	0.69
5:C:872:ASN:HD21	5:C:874:LEU:CD1	2.04	0.69
6:N:130:SER:HB3	6:N:132:TYR:HE1	1.57	0.69
6:D:957:PRO:HA	11:D:8083:HOH:O	1.91	0.69
5:C:1100:GLN:HE21	5:C:1100:GLN:HA	1.57	0.69
6:D:741:ASP:O	6:D:743:ASP:N	2.25	0.69
5:M:838:LYS:HG2	11:M:1491:HOH:O	1.93	0.69
6:D:1059:SER:HA	11:D:8349:HOH:O	1.93	0.69
5:M:853:LEU:HD23	5:M:858:MET:HB3	1.74	0.69
6:N:54:LYS:HD2	6:N:55:ASP:H	1.58	0.69
5:C:431:HIS:HD2	5:C:433:THR:H	1.41	0.69
5:C:578:VAL:HG23	5:C:579:VAL:HG12	1.74	0.69
6:D:95:LEU:HD21	6:D:574:LEU:HD21	1.73	0.69
6:N:1124:GLN:HB3	6:N:1135:ARG:HD3	1.74	0.69
5:M:689:VAL:HG12	5:M:690:ILE:H	1.57	0.69
5:C:134:ARG:HH21	5:C:392:SER:HB2	1.56	0.69
4:A:197:LEU:HG	4:A:199:ILE:HD11	1.75	0.69
6:N:586:ARG:NH2	6:N:1444:THR:HG21	2.07	0.69
6:D:656:PHE:HB3	6:D:694:VAL:HG11	1.73	0.69
4:L:52:ALA:HB2	4:L:170:VAL:O	1.92	0.69
6:N:889:ALA:HB3	6:N:930:LEU:HD12	1.74	0.69
7:E:41:GLU:OE1	7:E:42:PRO:HD3	1.93	0.69
6:D:399:ARG:HH11	6:D:430:ASP:HB2	1.57	0.69
5:C:511:GLU:O	5:C:526:PRO:HD3	1.93	0.69
2:H:8:C:H5"	11:H:37:HOH:O	1.93	0.69
6:D:644:LEU:HD23	6:D:718:PRO:HB3	1.73	0.69
5:M:881:ASN:O	5:M:884:GLN:HG3	1.91	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1403:LEU:HD23	6:D:1407:LEU:HD13	1.74	0.69
4:B:64:GLU:HA	4:B:165:ILE:HD13	1.75	0.69
5:C:1034:GLU:H	6:D:619:LEU:HD13	1.58	0.69
5:M:580:MET:SD	5:M:584:GLU:HG3	2.33	0.69
5:C:411:SER:HA	5:C:451:LEU:O	1.93	0.69
5:M:331:ARG:NH2	5:M:427:VAL:HG13	2.07	0.69
1:X:17:DC:H5"	5:M:1030:GLN:HE21	1.58	0.69
11:B:374:HOH:O	6:D:851:LEU:HD21	1.93	0.69
5:M:405:ARG:HH22	5:M:566:THR:CG2	2.05	0.69
6:D:554:LEU:HD11	6:D:571:LYS:HD3	1.75	0.69
5:C:31:GLN:HB3	5:C:71:TYR:OH	1.92	0.69
6:D:781:PRO:HG2	6:D:911:LEU:HD23	1.75	0.68
6:D:634:GLY:HA2	6:D:727:GLN:HE21	1.57	0.68
5:C:182:VAL:HG21	5:C:220:GLY:O	1.93	0.68
6:D:10:ILE:HB	6:D:1451:ALA:HA	1.73	0.68
6:D:1046:GLN:HG2	6:D:1052:THR:HG22	1.74	0.68
6:N:489:ARG:NH2	6:N:1389:LEU:HD21	2.07	0.68
5:M:904:PRO:HD2	5:M:908:GLY:HA2	1.75	0.68
6:N:834:THR:HG22	6:N:838:ARG:HH11	1.58	0.68
5:C:405:ARG:HG3	5:C:442:GLU:OE1	1.93	0.68
5:M:479:VAL:HG11	5:M:503:LEU:HD11	1.75	0.68
4:K:94:LEU:HD21	4:K:119:ASP:HB3	1.74	0.68
5:C:946:ARG:HH22	6:D:861:GLN:HE22	1.40	0.68
5:M:148:PHE:HZ	5:M:281:LEU:HD13	1.57	0.68
5:M:252:LYS:NZ	5:M:296:GLY:HA3	2.08	0.68
6:D:1399:ASP:O	6:D:1403:LEU:HB2	1.93	0.68
5:M:333:ILE:H	5:M:465:GLY:CA	2.05	0.68
1:G:14:DT:H5'	1:G:14:DT:H6	1.59	0.68
6:N:1492:LEU:HD12	6:N:1493:LYS:NZ	2.09	0.68
4:L:61:VAL:HG21	4:L:75:VAL:HG21	1.75	0.68
6:D:524:LEU:O	6:D:526:PRO:HD3	1.92	0.68
4:B:197:LEU:HD21	4:B:199:ILE:HD11	1.74	0.68
6:N:807:ALA:HB2	6:N:833:GLU:OE1	1.93	0.68
4:B:59:GLU:CB	4:B:137:ARG:HH12	2.03	0.68
6:D:1109:GLU:HG2	6:D:1201:CYS:CA	2.20	0.68
6:D:1196:THR:HG22	11:D:8501:HOH:O	1.94	0.68
5:C:158:TYR:O	5:C:310:LEU:HD11	1.93	0.68
6:D:1380:GLU:HG3	6:D:1420:LEU:HD12	1.74	0.68
6:D:868:TYR:HB2	6:D:873:LEU:HD12	1.76	0.68
5:M:343:GLN:HG2	5:M:385:PHE:HB2	1.75	0.68
6:D:98:PRO:HB3	11:D:8058:HOH:O	1.93	0.68
5:M:305:PRO:HG3	5:M:308:ARG:HH22	1.59	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:526:PRO:HA	11:D:8171:HOH:O	1.93	0.68
5:C:5:ARG:CZ	5:C:8:ARG:HH22	2.06	0.68
6:D:964:LEU:HD21	6:D:1058:ARG:HE	1.57	0.68
6:D:409:VAL:CG2	6:D:421:LEU:HA	2.24	0.68
6:N:1161:GLU:HG2	6:N:1164:ARG:HB2	1.74	0.68
6:D:800:LYS:HE3	6:D:804:LEU:HD22	1.74	0.68
6:N:1191:PRO:HG2	6:N:1370:ILE:HD13	1.74	0.68
6:D:22:SER:HB2	6:D:92:HIS:HB3	1.76	0.68
4:K:58:ILE:HG21	4:K:68:ILE:HD11	1.75	0.68
6:D:988:ARG:O	6:D:992:ILE:HG13	1.94	0.68
5:C:435:TYR:HE1	5:C:539:VAL:HG22	1.58	0.68
6:D:650:LEU:HD23	6:D:691:LEU:HD23	1.75	0.68
5:M:874:LEU:O	5:M:877:PRO:HD2	1.93	0.68
6:D:1197:ARG:HB3	6:D:1396:GLU:HG3	1.74	0.68
6:D:1223:ILE:CG2	6:D:1227:GLN:HE21	2.06	0.68
6:N:879:ARG:HH21	6:N:904:VAL:N	1.90	0.68
6:D:1252:ILE:HG13	6:D:1253:THR:H	1.59	0.68
6:N:394:LEU:O	6:N:396:VAL:HG23	1.94	0.68
6:N:119:SER:HB2	6:N:123:LEU:H	1.59	0.68
6:N:1111:ASP:CG	6:N:1203:LYS:HG3	2.14	0.68
5:M:536:PRO:HD2	5:M:537:LYS:NZ	2.08	0.68
6:D:455:ARG:HB3	6:D:459:GLU:HG2	1.76	0.68
5:M:244:PRO:HG2	5:M:246:ASP:OD2	1.94	0.68
5:M:510:ALA:HB3	5:M:513:VAL:HG23	1.76	0.68
6:D:984:THR:HG22	6:D:987:GLU:HG3	1.76	0.68
5:C:408:ARG:HG2	5:C:454:SER:HB3	1.74	0.68
6:D:1032:PRO:HB2	11:D:8254:HOH:O	1.93	0.68
6:N:526:PRO:O	6:N:537:THR:HA	1.94	0.68
4:B:85:LEU:HA	4:B:124:ASN:HD22	1.57	0.68
5:M:516:ARG:NH1	5:M:521:PRO:HB3	2.09	0.68
5:M:292:ARG:HD2	5:M:299:LYS:NZ	2.08	0.68
7:O:51:LEU:HD23	7:O:52:GLU:H	1.59	0.68
6:N:546:ARG:NH1	6:N:546:ARG:HB3	2.08	0.67
5:C:709:GLU:HG3	5:C:824:ARG:HG2	1.76	0.67
5:M:768:THR:HB	5:M:771:GLU:HB3	1.75	0.67
5:M:495:THR:H	5:M:530:GLU:CD	1.96	0.67
5:M:1111:ILE:HG13	5:M:1112:PHE:H	1.57	0.67
2:H:8:C:HO2'	2:H:9:G:H5'	1.58	0.67
6:D:782:SER:N	6:D:785:ILE:HD13	2.08	0.67
5:M:438:ILE:HD11	5:M:467:ILE:HD12	1.75	0.67
6:D:1252:ILE:HG13	6:D:1253:THR:N	2.09	0.67
6:D:29:PRO:CG	6:D:549:ASN:HD21	2.07	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:402:PRO:HG2	11:N:9030:HOH:O	1.93	0.67
5:M:762:LYS:HD3	5:M:784:ASP:O	1.94	0.67
5:C:106:GLY:O	5:C:107:LEU:HD23	1.94	0.67
5:M:432:ARG:HH22	6:N:1047:LYS:HD3	1.59	0.67
4:L:206:THR:HG22	4:L:209:GLU:H	1.59	0.67
5:C:610:ARG:HD3	5:C:622:GLU:OE2	1.94	0.67
5:M:1034:GLU:HB3	6:N:619:LEU:HD13	1.75	0.67
2:Y:11:C:H2'	2:Y:12:G:C8	2.30	0.67
6:N:637:LEU:HD11	6:N:641:GLN:C	2.15	0.67
6:N:1412:LYS:O	6:N:1414:PRO:HD3	1.93	0.67
5:C:762:LYS:HD2	5:C:786:LYS:HB2	1.75	0.67
5:C:1:MET:HG2	5:C:900:ARG:HH22	1.60	0.67
5:C:433:THR:HG22	5:C:437:ARG:HH11	1.58	0.67
6:D:786:ILE:HG21	6:D:1027:GLY:H	1.58	0.67
6:D:1101:VAL:CG2	6:D:1424:VAL:HG23	2.23	0.67
5:C:1050:GLN:HE22	6:D:1471:LEU:HB2	1.59	0.67
6:N:524:LEU:O	6:N:526:PRO:HD3	1.95	0.67
6:N:1124:GLN:NE2	6:N:1135:ARG:HA	2.10	0.67
6:N:1434:TRP:CZ3	6:N:1457:ASP:HB2	2.29	0.67
6:N:814:ALA:O	6:N:818:ARG:HG3	1.95	0.67
5:C:630:ARG:HA	5:C:705:ILE:HD13	1.77	0.67
6:D:952:ASP:HA	6:D:1062:ARG:HH21	1.60	0.67
6:D:455:ARG:HB2	6:D:460:ALA:CA	2.25	0.67
5:M:549:PHE:CD1	5:M:886:LEU:HD23	2.30	0.67
6:D:654:LYS:HB3	6:D:655:PRO:HD3	1.77	0.67
6:D:610:LYS:O	6:D:615:ARG:HD3	1.93	0.67
6:N:483:HIS:HB2	6:N:484:PRO:HD3	1.76	0.67
5:C:909:ALA:HB1	5:C:914:ILE:HD11	1.76	0.67
6:N:520:LEU:HD21	6:N:524:LEU:HD23	1.76	0.67
6:N:131:LYS:HD3	6:N:456:MET:SD	2.35	0.67
5:M:805:ARG:HD3	5:M:823:VAL:HG22	1.75	0.67
5:C:235:LEU:HD21	11:C:1313:HOH:O	1.93	0.67
5:C:898:GLY:HA2	11:C:1408:HOH:O	1.94	0.67
4:B:58:ILE:HB	4:B:61:VAL:HB	1.76	0.67
6:N:1201:CYS:SG	6:N:1204:CYS:HB2	2.35	0.67
6:N:394:LEU:HD21	6:N:445:ARG:HH22	1.58	0.67
5:M:252:LYS:HA	11:M:1276:HOH:O	1.95	0.67
5:C:443:THR:HG22	5:C:453:THR:HB	1.77	0.67
6:N:908:LYS:HB2	6:N:1027:GLY:HA3	1.76	0.67
6:D:134:VAL:HB	6:D:464:LEU:HD11	1.75	0.67
5:M:1115:LEU:HB3	6:N:89:ARG:NH1	2.10	0.67
6:D:396:VAL:O	6:D:398:ALA:N	2.25	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1393:GLN:OE1	6:D:1394:VAL:HG23	1.95	0.67
4:B:206:THR:HG22	4:B:209:GLU:H	1.59	0.67
6:N:971:LEU:O	6:N:975:GLU:HG2	1.94	0.67
6:D:715:ALA:HB3	6:D:764:LEU:HA	1.76	0.67
5:C:872:ASN:HD22	5:C:872:ASN:C	1.99	0.67
6:N:1340:GLY:O	6:N:1344:VAL:HG23	1.94	0.67
6:D:101:HIS:HD1	6:D:103:TRP:HB2	1.59	0.67
5:M:971:LYS:HA	5:M:988:VAL:HA	1.76	0.67
6:N:1480:PHE:HB2	11:N:9408:HOH:O	1.94	0.67
4:K:1:MET:SD	4:K:5:LYS:HB3	2.35	0.67
6:D:1498:ALA:HB2	7:E:88:GLU:OE1	1.95	0.67
6:D:1465:ASN:ND2	6:D:1470:ARG:HB3	2.09	0.67
6:N:1267:ARG:HG3	6:N:1271:LYS:HZ3	1.59	0.67
1:G:17:DC:H4'	6:D:628:ARG:CZ	2.25	0.67
5:M:552:HIS:CD2	5:M:886:LEU:HD22	2.30	0.67
6:D:1485:GLN:HE21	7:E:78:ASN:HA	1.60	0.67
5:M:399:ASN:OD1	5:M:401:LEU:HB3	1.95	0.67
6:D:963:TYR:CE2	6:D:1002:LYS:HB3	2.29	0.67
5:C:884:GLN:HB3	5:C:992:MET:HE1	1.75	0.66
2:H:11:C:H2'	2:H:12:G:C8	2.29	0.66
6:D:786:ILE:HG21	6:D:1027:GLY:N	2.10	0.66
6:D:127:LEU:HD12	6:D:128:TYR:N	2.10	0.66
6:D:1252:ILE:O	6:D:1256:LEU:HD12	1.95	0.66
6:D:396:VAL:HG12	6:D:398:ALA:HB2	1.77	0.66
6:D:434:ARG:N	6:D:447:VAL:HG22	2.09	0.66
6:N:1346:ARG:HD3	11:N:9293:HOH:O	1.95	0.66
1:G:18:DG:O3'	5:C:1001:VAL:HB	1.94	0.66
5:C:5:ARG:NE	5:C:8:ARG:HH22	1.93	0.66
5:C:518:LYS:O	5:C:520:GLU:HG2	1.95	0.66
6:D:38:LYS:NZ	6:D:59:ALA:HB1	2.09	0.66
5:C:244:PRO:HG3	11:C:1490:HOH:O	1.95	0.66
6:D:584:ASN:HB2	6:D:602:SER:HB3	1.78	0.66
5:M:473:ARG:HA	5:M:531:PHE:HD1	1.60	0.66
5:M:764:GLU:HB2	6:N:54:LYS:HD3	1.77	0.66
5:M:433:THR:HG22	5:M:437:ARG:NH1	2.10	0.66
1:G:14:DT:H2''	1:G:15:DC:H5'	1.76	0.66
5:C:270:GLY:O	5:C:274:ARG:HB3	1.96	0.66
6:N:1121:PRO:HD2	6:N:1346:ARG:NH2	2.09	0.66
5:M:45:GLN:HB2	5:M:71:TYR:CE2	2.31	0.66
5:M:561:GLY:O	5:M:564:MET:HG3	1.95	0.66
4:A:79:ILE:HA	4:A:82:LEU:HD12	1.77	0.66
6:D:716:PHE:CE1	6:D:765:SER:HB3	2.30	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:977:ALA:HB1	6:D:983:LEU:HD21	1.77	0.66
4:K:150:TYR:HE2	4:K:152:PRO:HG3	1.60	0.66
5:C:435:TYR:CE1	5:C:539:VAL:HG22	2.31	0.66
6:N:1000:THR:O	6:N:1003:VAL:HG12	1.95	0.66
6:D:480:GLU:O	6:D:484:PRO:HD2	1.96	0.66
5:C:494:TYR:HB3	11:C:1172:HOH:O	1.96	0.66
5:M:953:VAL:HB	5:M:962:GLN:NE2	2.10	0.66
6:N:119:SER:H	6:N:123:LEU:CD2	2.07	0.66
5:M:251:ASP:HB3	5:M:252:LYS:HD2	1.78	0.66
5:C:1103:ASP:HB3	5:C:1105:LYS:HZ1	1.59	0.66
5:M:102:HIS:HB2	5:M:106:GLY:O	1.95	0.66
5:C:313:LEU:HB2	5:C:321:GLU:HG3	1.76	0.66
6:N:1266:ARG:HG2	6:N:1267:ARG:N	2.10	0.66
6:N:813:LEU:O	6:N:817:GLU:HB2	1.96	0.66
5:M:288:ARG:HG3	11:M:1542:HOH:O	1.94	0.66
5:C:315:ALA:HB3	11:C:1454:HOH:O	1.94	0.66
6:N:800:LYS:NZ	6:N:804:LEU:HD13	2.11	0.66
5:M:841:ASN:ND2	5:M:844:GLY:H	1.93	0.66
6:N:1111:ASP:HB2	6:N:1203:LYS:HZ1	1.60	0.66
6:N:900:ILE:HG22	6:N:914:LEU:HD11	1.75	0.66
6:D:52:PRO:HG2	6:D:80:VAL:HG13	1.76	0.66
5:C:516:ARG:HD2	5:C:521:PRO:HA	1.76	0.66
5:C:987:ILE:HG13	11:C:1149:HOH:O	1.94	0.66
5:C:151:ASP:HB2	5:C:157:ARG:O	1.95	0.66
5:C:1118:LYS:HA	6:D:23:TYR:OH	1.95	0.66
4:K:31:GLY:HA3	4:L:42:ARG:NH2	2.09	0.66
6:N:796:ARG:NE	6:N:828:LYS:HZ3	1.94	0.66
6:N:1106:VAL:HG11	6:N:1474:ALA:HB1	1.78	0.66
5:M:861:LEU:HD13	5:M:865:THR:CG2	2.25	0.66
4:L:56:VAL:HG13	4:L:142:VAL:HG12	1.78	0.66
5:M:129:ILE:HG12	5:M:386:PHE:O	1.95	0.66
6:N:1111:ASP:HB2	6:N:1203:LYS:NZ	2.11	0.66
6:D:691:LEU:O	6:D:695:ILE:HG22	1.95	0.66
6:D:1462:LEU:HD22	6:D:1472:ILE:HG22	1.77	0.66
5:C:1091:GLU:OE1	6:D:613:ARG:HG2	1.96	0.66
4:B:125:PRO:HD2	11:B:346:HOH:O	1.94	0.66
5:M:689:VAL:HG12	5:M:690:ILE:N	2.11	0.66
5:M:443:THR:HG21	6:N:1078:ARG:NE	2.10	0.66
4:A:14:ARG:HH22	4:A:24:VAL:HG23	1.61	0.66
5:C:629:TYR:HA	11:C:1337:HOH:O	1.96	0.66
5:C:678:PRO:HD2	11:D:8199:HOH:O	1.95	0.66
6:D:879:ARG:HH21	6:D:903:ASP:HA	1.60	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:O:45:ARG:HG2	7:O:46:PRO:CD	2.24	0.66
6:N:542:ASP:HA	6:N:545:ARG:HE	1.60	0.66
6:N:396:VAL:HG12	6:N:447:VAL:HA	1.76	0.66
5:M:810:ASP:OD2	5:M:815:LEU:HD22	1.96	0.66
5:C:244:PRO:HD2	5:C:245:GLY:H	1.60	0.66
5:M:473:ARG:HA	5:M:531:PHE:CD1	2.30	0.66
5:C:236:ILE:HG13	11:C:1121:HOH:O	1.96	0.66
4:K:124:ASN:HD22	4:K:127:LEU:HD22	1.60	0.66
5:C:838:LYS:HG3	5:C:997:LEU:HB2	1.78	0.66
2:H:6:U:H5'	11:H:45:HOH:O	1.94	0.66
5:C:755:LEU:HD21	5:C:792:VAL:HG22	1.75	0.66
6:D:1396:GLU:HA	6:D:1399:ASP:OD2	1.96	0.66
5:M:267:TYR:HB2	5:M:272:ALA:HB1	1.78	0.66
6:D:466:LYS:HA	11:D:8320:HOH:O	1.95	0.66
6:D:568:ARG:O	6:D:572:ARG:HG3	1.96	0.66
5:M:979:THR:HG23	5:M:981:GLU:H	1.60	0.66
6:D:1252:ILE:HA	11:D:8219:HOH:O	1.96	0.66
6:N:1044:LEU:HD22	6:N:1052:THR:HG22	1.76	0.66
4:L:221:HIS:HB3	11:L:365:HOH:O	1.96	0.66
5:C:516:ARG:HE	6:D:1068:LEU:HD13	1.60	0.66
5:C:597:ALA:HB2	5:C:655:LEU:HD21	1.78	0.66
6:N:618:LEU:HB3	6:N:619:LEU:HD23	1.78	0.66
5:M:553:ASP:HA	5:M:881:ASN:HA	1.78	0.66
6:D:1189:ARG:HB3	6:D:1204:CYS:HA	1.78	0.66
5:M:928:LYS:NZ	5:M:932:GLU:HG3	2.10	0.66
5:C:69:LEU:HD13	5:C:109:LYS:HE3	1.78	0.66
6:N:468:LEU:HB3	11:N:9068:HOH:O	1.96	0.66
5:C:12:VAL:HG13	5:C:13:ILE:HG12	1.78	0.66
4:A:117:VAL:HB	4:A:120:VAL:CG1	2.26	0.66
6:D:1089:ALA:HB3	11:D:8250:HOH:O	1.95	0.66
5:M:861:LEU:HD23	5:M:863:ASP:H	1.61	0.66
6:D:481:MET:HE2	6:D:493:ARG:HB2	1.76	0.66
6:N:1151:ARG:HG2	6:N:1187:PRO:HB2	1.77	0.66
4:K:198:ARG:HH22	5:M:932:GLU:HB3	1.61	0.65
5:M:690:ILE:CD1	5:M:833:LEU:HD23	2.26	0.65
6:D:890:VAL:HG11	6:D:922:LEU:HD13	1.78	0.65
6:N:413:ASP:O	6:N:435:VAL:HG23	1.96	0.65
7:O:27:ALA:HB2	7:O:61:VAL:HG12	1.77	0.65
5:M:502:PRO:HB2	5:M:509:ALA:HB3	1.77	0.65
5:C:83:CYS:HA	5:C:88:LEU:HB2	1.78	0.65
6:D:1329:ALA:O	6:D:1330:ILE:HD12	1.96	0.65
6:N:553:ARG:O	6:N:557:LEU:HG	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:200:LEU:HD13	5:M:300:ASP:CG	2.16	0.65
5:C:676:ILE:CG2	5:C:988:VAL:HG13	2.27	0.65
6:N:1148:VAL:HB	6:N:1203:LYS:O	1.96	0.65
5:M:98:LEU:HD13	5:M:110:GLU:O	1.95	0.65
6:N:917:GLN:O	6:N:921:ARG:HG2	1.96	0.65
6:D:761:ILE:HG23	7:E:6:ILE:HD11	1.78	0.65
6:N:769:LEU:HD12	6:N:770:LEU:HG	1.77	0.65
6:N:1342:GLU:HA	11:N:9208:HOH:O	1.96	0.65
5:C:608:GLY:C	5:C:609:ASN:HD22	1.99	0.65
6:D:796:ARG:HH21	6:D:828:LYS:HE2	1.61	0.65
6:N:788:GLY:O	6:N:792:ILE:HG22	1.95	0.65
5:M:689:VAL:HB	5:M:870:ILE:HG13	1.78	0.65
5:C:194:VAL:HA	5:C:197:LEU:HD12	1.78	0.65
5:M:911:GLU:O	5:M:915:LYS:HG2	1.96	0.65
5:C:52:PHE:CD2	5:C:68:PHE:HB2	2.31	0.65
5:C:937:ASP:HB2	5:C:940:GLU:HG3	1.78	0.65
5:C:1067:TYR:O	5:C:1071:ILE:HG12	1.96	0.65
6:D:879:ARG:HG3	6:D:879:ARG:HH11	1.60	0.65
6:D:1476:THR:HG23	7:E:21:VAL:HG22	1.77	0.65
6:N:150:ARG:HG3	11:N:9044:HOH:O	1.96	0.65
1:G:17:DC:O3'	6:D:628:ARG:NH2	2.29	0.65
11:M:1409:HOH:O	7:O:31:LEU:HD13	1.96	0.65
5:M:129:ILE:HD13	5:M:134:ARG:HB2	1.78	0.65
6:N:960:LYS:HB3	11:N:9374:HOH:O	1.96	0.65
4:B:213:GLN:O	4:B:217:ILE:HD13	1.96	0.65
6:N:1112:CYS:HB2	6:N:1195:GLN:HG2	1.78	0.65
4:L:102:LYS:HB2	4:L:139:ASN:OD1	1.96	0.65
6:N:1490:LYS:HE2	7:O:93:TYR:OH	1.96	0.65
6:N:1437:ALA:O	6:N:1446:VAL:HG21	1.95	0.65
6:N:660:LYS:HD2	6:N:694:VAL:HG22	1.78	0.65
5:C:22:GLN:HE22	5:C:407:LYS:HG2	1.59	0.65
6:D:1231:GLU:HG2	6:D:1235:GLN:CD	2.16	0.65
6:N:778:LEU:HA	6:N:780:LYS:HE2	1.78	0.65
6:N:1174:LEU:HD22	6:N:1183:ILE:HD13	1.79	0.65
2:Y:10:G:O2'	2:Y:11:C:H5'	1.96	0.65
5:C:971:LYS:HA	5:C:988:VAL:HA	1.79	0.65
4:K:112:ARG:NE	4:K:125:PRO:HB2	2.00	0.65
5:M:305:PRO:HG3	5:M:308:ARG:NH2	2.12	0.65
6:N:132:TYR:HA	11:N:9432:HOH:O	1.96	0.65
5:C:274:ARG:HG3	5:C:285:LEU:HD22	1.79	0.65
6:N:421:LEU:HB2	6:N:427:VAL:HG12	1.79	0.65
5:C:837:ASP:O	5:C:848:VAL:HG13	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:705:ILE:HA	5:M:827:VAL:O	1.97	0.65
5:C:841:ASN:N	5:C:841:ASN:HD22	1.91	0.65
4:A:197:LEU:HD23	4:A:197:LEU:H	1.62	0.65
6:N:661:MET:HA	6:N:666:ILE:HD12	1.79	0.65
5:M:808:ARG:NH2	5:M:820:ARG:HH21	1.95	0.65
5:C:328:LEU:H	5:C:433:THR:HB	1.61	0.65
2:H:12:G:O2'	2:H:13:C:H5'	1.97	0.65
4:B:137:ARG:NH1	4:B:139:ASN:HB3	2.11	0.65
6:N:754:PHE:CE2	6:N:1476:THR:HG21	2.32	0.65
6:N:637:LEU:HD21	6:N:642:CYS:HA	1.79	0.65
5:M:435:TYR:CE1	5:M:539:VAL:HG22	2.29	0.65
6:D:131:LYS:HA	6:D:456:MET:HB2	1.77	0.65
5:M:937:ASP:HB3	5:M:940:GLU:H	1.62	0.65
6:D:133:ILE:O	6:D:152:LEU:HB2	1.97	0.65
6:D:996:TRP:O	6:D:1000:THR:HG22	1.96	0.65
5:C:17:PRO:HB2	5:C:20:GLU:HB2	1.77	0.65
5:C:1060:ILE:HG23	5:C:1061:GLU:H	1.62	0.65
6:N:876:SER:O	6:N:880:ILE:HG12	1.97	0.65
6:D:50:PHE:HB3	6:D:522:PRO:HG3	1.79	0.65
6:N:74:GLU:HB3	6:N:75:ARG:NH2	2.12	0.65
4:K:27:PRO:HG2	4:K:186:LEU:HD13	1.77	0.65
4:B:54:THR:HG22	4:B:158:ILE:HG13	1.78	0.65
7:O:28:GLN:HB3	7:O:32:ARG:HH22	1.61	0.65
1:G:16:DG:OP1	5:C:1031:ARG:HD3	1.95	0.65
6:N:131:LYS:HG2	6:N:568:ARG:HG2	1.79	0.65
6:D:1084:THR:OG1	6:D:1238:MET:HA	1.96	0.65
6:N:948:THR:HB	11:N:9020:HOH:O	1.97	0.65
5:M:1056:LYS:HB3	6:N:624:ASP:H	1.60	0.65
5:C:290:LEU:HD22	5:C:302:VAL:HG11	1.79	0.65
6:D:822:ALA:HB1	11:D:8089:HOH:O	1.97	0.65
7:E:27:ALA:HB2	7:E:61:VAL:HG12	1.79	0.65
5:M:442:GLU:HG2	5:M:454:SER:CB	2.26	0.64
6:N:1147:ARG:HB3	6:N:1188:VAL:HG21	1.79	0.64
6:D:895:VAL:O	6:D:899:LEU:HG	1.97	0.64
6:D:882:PHE:HA	6:D:885:ILE:HD12	1.79	0.64
5:C:689:VAL:HG12	5:C:690:ILE:N	2.12	0.64
5:M:158:TYR:CE1	5:M:313:LEU:HG	2.33	0.64
5:C:343:GLN:HA	5:C:343:GLN:NE2	2.11	0.64
5:M:166:PRO:HG3	11:M:1337:HOH:O	1.97	0.64
2:H:10:G:O2'	2:H:11:C:H5'	1.97	0.64
6:D:1101:VAL:HG21	6:D:1424:VAL:HG23	1.78	0.64
6:N:996:TRP:O	6:N:1000:THR:HG22	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:793:THR:HB	6:N:879:ARG:CD	2.25	0.64
5:C:158:TYR:CD1	5:C:313:LEU:HG	2.32	0.64
5:C:470:PRO:HB2	5:C:534:VAL:HG21	1.78	0.64
6:D:141:ILE:HD13	6:D:450:TYR:HB3	1.79	0.64
6:N:1087:ARG:HB3	6:N:1256:LEU:HD22	1.79	0.64
6:D:484:PRO:CB	6:D:488:ARG:HE	2.07	0.64
7:E:48:MET:HB2	7:E:54:LEU:HD12	1.80	0.64
5:M:462:ASP:CG	5:M:463:GLU:H	2.01	0.64
5:M:771:GLU:HG3	11:M:1181:HOH:O	1.96	0.64
4:K:52:ALA:HA	11:K:1094:HOH:O	1.96	0.64
4:B:25:LEU:O	4:B:28:LEU:HD21	1.97	0.64
5:C:525:SER:HB2	5:C:527:GLU:HG3	1.79	0.64
6:N:762:GLN:HA	11:N:9032:HOH:O	1.97	0.64
6:D:792:ILE:HG23	6:D:793:THR:HG23	1.79	0.64
6:D:1209:LEU:HD21	7:E:16:LYS:NZ	2.12	0.64
5:M:140:ILE:HA	5:M:332:ARG:O	1.97	0.64
4:K:30:ARG:HH22	5:M:938:LYS:HD2	1.63	0.64
5:C:146:VAL:HG22	5:C:162:ILE:HG23	1.77	0.64
6:D:402:PRO:HA	6:D:443:VAL:HG23	1.80	0.64
6:D:119:SER:OG	6:D:123:LEU:HD13	1.96	0.64
6:D:804:LEU:HB2	6:D:830:ALA:O	1.98	0.64
5:C:609:ASN:N	5:C:609:ASN:HD22	1.94	0.64
5:M:542:VAL:HG23	11:M:1602:HOH:O	1.96	0.64
4:A:48:ILE:HD12	4:A:174:VAL:HG21	1.78	0.64
6:N:15:PRO:HA	6:N:18:ILE:HG12	1.79	0.64
4:B:59:GLU:HG3	4:B:139:ASN:HD22	1.61	0.64
4:L:177:VAL:HG12	4:L:199:ILE:HG12	1.79	0.64
6:N:786:ILE:HD13	6:N:1027:GLY:HA3	1.78	0.64
6:N:396:VAL:HG12	6:N:398:ALA:HB2	1.80	0.64
4:L:138:LEU:HD12	11:L:362:HOH:O	1.98	0.64
5:M:29:ALA:O	5:M:44:ILE:HG12	1.96	0.64
5:M:836:GLY:HA3	6:N:724:GLN:NE2	2.12	0.64
4:A:12:THR:OG1	4:A:24:VAL:HB	1.97	0.64
4:A:71:VAL:HG22	4:A:132:LEU:HG	1.78	0.64
5:M:362:GLY:HA3	5:M:367:LEU:HD23	1.78	0.64
4:A:36:LEU:O	4:A:40:LEU:HG	1.97	0.64
3:Z:8:DA:H1'	3:Z:9:DG:H5'	1.79	0.64
6:N:1422:MET:SD	6:N:1426:LYS:HB3	2.37	0.64
2:H:9:G:O2'	2:H:10:G:H5'	1.97	0.64
5:M:684:PHE:CD2	5:M:685:GLU:HG2	2.33	0.64
7:O:47:LYS:HA	7:O:54:LEU:HB3	1.80	0.64
6:D:104:PHE:HB3	6:D:512:MET:SD	2.38	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:613:ARG:HH12	6:D:616:GLN:HG2	1.62	0.64
5:C:204:GLN:OE1	5:C:221:LEU:HD12	1.97	0.64
4:B:212:ASN:O	4:B:215:VAL:HG22	1.97	0.64
6:D:813:LEU:HD21	11:D:8233:HOH:O	1.97	0.64
11:A:362:HOH:O	5:C:832:LYS:HD2	1.98	0.64
5:C:124:ASP:OD2	5:C:592:LEU:HB2	1.97	0.64
6:D:823:LEU:HD23	6:D:823:LEU:O	1.98	0.64
6:N:91:GLY:O	6:N:519:VAL:N	2.21	0.64
5:C:839:LEU:HD22	5:C:996:LYS:HA	1.80	0.64
5:M:265:ARG:NH2	5:M:332:ARG:HH22	1.95	0.64
6:N:554:LEU:O	6:N:558:LEU:HG	1.96	0.64
4:L:59:GLU:HG3	4:L:137:ARG:HH22	1.63	0.64
5:C:1105:LYS:NZ	5:C:1107:ASN:HD22	1.96	0.64
6:D:71:LYS:HB2	6:D:71:LYS:NZ	2.12	0.64
6:D:973:GLN:HB3	11:D:8398:HOH:O	1.96	0.64
6:D:1471:LEU:HD23	11:D:8477:HOH:O	1.98	0.64
5:M:100:LEU:HD23	5:M:368:THR:HA	1.80	0.64
6:D:1087:ARG:HD2	6:D:1256:LEU:HD13	1.78	0.64
6:D:860:LEU:HD23	6:D:877:PRO:HB2	1.79	0.64
6:N:1380:GLU:HG3	6:N:1381:VAL:N	2.13	0.64
6:N:41:ARG:HD3	6:N:42:ASP:N	2.13	0.64
6:D:1485:GLN:NE2	7:E:79:LEU:H	1.96	0.64
6:N:679:ARG:HB2	6:N:682:ASP:OD2	1.98	0.64
6:N:1415:VAL:HB	11:N:9268:HOH:O	1.96	0.64
6:N:17:LYS:HA	6:N:20:SER:HB3	1.80	0.64
6:D:1044:LEU:HD21	6:D:1053:PHE:O	1.98	0.64
5:C:872:ASN:HD22	5:C:873:PRO:N	1.95	0.64
5:M:9:ILE:HG21	11:M:1490:HOH:O	1.98	0.64
6:D:496:LEU:HD21	6:D:1388:ARG:HG3	1.79	0.64
5:M:170:PRO:HG2	11:M:1194:HOH:O	1.98	0.64
5:C:194:VAL:HG21	5:C:221:LEU:O	1.97	0.64
6:N:29:PRO:HG3	6:N:549:ASN:HD21	1.61	0.64
5:M:1005:MET:HB2	6:N:648:MET:HE1	1.78	0.64
5:C:18:LEU:HD12	5:C:18:LEU:H	1.61	0.64
6:D:18:ILE:HG23	6:D:518:PRO:HG3	1.80	0.64
5:M:410:ILE:HD11	5:M:455:LEU:HB3	1.79	0.64
5:M:906:PHE:CD1	6:N:1067:VAL:HG22	2.33	0.64
6:D:136:ASP:CG	6:D:463:GLN:HB3	2.18	0.64
5:M:314:THR:HG21	11:M:1381:HOH:O	1.97	0.64
5:M:342:ASP:O	5:M:345:ARG:HG2	1.98	0.64
6:D:486:ARG:HA	6:D:489:ARG:CG	2.28	0.64
5:C:9:ILE:HG13	5:C:907:ASP:OD2	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1353:GLN:HB3	6:N:1357:ARG:NE	2.12	0.64
2:H:11:C:H2'	2:H:12:G:H8	1.63	0.63
5:C:688:ILE:HG21	5:C:871:LEU:HD23	1.80	0.63
6:D:637:LEU:HB2	11:D:8105:HOH:O	1.98	0.63
6:N:792:ILE:HD13	6:N:793:THR:HG22	1.80	0.63
4:K:117:VAL:HB	4:K:120:VAL:CG1	2.26	0.63
4:A:206:THR:HG22	4:A:209:GLU:H	1.63	0.63
6:N:1491:THR:O	6:N:1495:ILE:HD13	1.98	0.63
5:M:598:GLU:O	5:M:651:LYS:HG3	1.98	0.63
4:K:226:SER:O	4:K:228:PRO:HD3	1.97	0.63
4:L:175:ARG:O	6:N:851:LEU:HD11	1.98	0.63
5:C:694:LEU:HD21	5:C:868:ASP:HB3	1.80	0.63
6:N:887:ALA:HB1	6:N:893:GLU:CG	2.27	0.63
6:N:971:LEU:HA	6:N:974:ILE:HD12	1.80	0.63
6:N:1462:LEU:HD22	6:N:1472:ILE:HG22	1.79	0.63
4:B:42:ARG:HA	4:B:42:ARG:NH1	2.13	0.63
6:D:1169:ASP:O	6:D:1173:LEU:HD13	1.98	0.63
5:M:83:CYS:HA	5:M:88:LEU:HB2	1.78	0.63
6:D:440:VAL:HB	6:D:441:ARG:HH21	1.61	0.63
7:O:41:GLU:HB2	7:O:45:ARG:CZ	2.27	0.63
5:C:1031:ARG:NH2	6:D:621:LYS:HG3	2.13	0.63
5:C:174:LEU:HB3	5:C:307:LEU:HD13	1.79	0.63
5:C:265:ARG:HB3	5:C:267:TYR:CD2	2.34	0.63
6:D:1119:SER:HA	6:D:1186:VAL:O	1.99	0.63
6:N:474:GLU:O	6:N:478:LEU:HG	1.98	0.63
4:K:156:HIS:CD2	4:K:158:ILE:HG12	2.34	0.63
6:N:760:ARG:HH11	7:O:61:VAL:CG2	2.11	0.63
5:M:861:LEU:HD13	5:M:865:THR:HG23	1.79	0.63
6:D:632:VAL:HG22	11:D:8291:HOH:O	1.99	0.63
5:M:395:LYS:HD3	5:M:397:GLU:OE2	1.99	0.63
5:C:284:ARG:HG3	5:C:285:LEU:H	1.64	0.63
6:N:806:PHE:CE1	6:N:813:LEU:HB3	2.34	0.63
5:M:549:PHE:CD2	5:M:886:LEU:HB3	2.33	0.63
6:D:610:LYS:HA	6:D:615:ARG:HD3	1.80	0.63
5:C:631:SER:HB3	5:C:637:LEU:HD11	1.79	0.63
6:D:1412:LYS:O	6:D:1414:PRO:HD3	1.99	0.63
6:N:799:LYS:O	6:N:826:PRO:HD2	1.98	0.63
6:D:705:ALA:HB3	6:D:706:PRO:HD3	1.80	0.63
2:Y:12:G:O2'	2:Y:13:C:H5'	1.98	0.63
2:Y:12:G:H2'	2:Y:13:C:H6	1.64	0.63
2:Y:7:G:H2'	2:Y:7:G:N3	2.12	0.63
6:N:98:PRO:HA	11:N:9070:HOH:O	1.97	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1109:GLU:OE1	6:N:1201:CYS:HB2	1.98	0.63
5:C:874:LEU:HG	6:D:1023:MET:SD	2.39	0.63
1:X:17:DC:H5"	5:M:1030:GLN:NE2	2.14	0.63
5:C:143:SER:CB	5:C:276:LYS:HZ3	2.10	0.63
6:D:1185:GLU:HG2	6:N:559:ALA:HB1	1.80	0.63
5:M:729:LEU:HD13	6:N:675:ARG:CZ	2.29	0.63
6:N:654:LYS:O	6:N:658:LEU:HG	1.98	0.63
6:N:1402:ALA:HA	11:N:9043:HOH:O	1.98	0.63
5:M:352:ALA:HA	5:M:355:VAL:HG12	1.80	0.63
5:C:437:ARG:HB3	5:C:467:ILE:HB	1.80	0.63
5:C:410:ILE:HG21	5:C:438:ILE:HD11	1.79	0.63
6:D:1047:LYS:HG2	6:D:1053:PHE:CZ	2.33	0.63
6:D:657:LEU:HD22	6:D:691:LEU:HD23	1.81	0.63
6:D:82:LYS:HB3	6:D:84:ILE:HG12	1.79	0.63
5:M:759:THR:HB	5:M:785:VAL:CG1	2.28	0.63
5:M:1005:MET:HE1	6:N:724:GLN:HA	1.81	0.63
5:C:100:LEU:HD22	5:C:372:LEU:HD22	1.81	0.63
5:M:146:VAL:HG12	5:M:162:ILE:HG12	1.81	0.63
5:C:805:ARG:HD3	5:C:807:ARG:HG3	1.81	0.63
5:C:408:ARG:HG3	5:C:455:LEU:H	1.64	0.63
4:B:123:MET:C	4:B:125:PRO:HD3	2.19	0.63
5:C:157:ARG:HG3	5:C:314:THR:CG2	2.29	0.63
6:D:119:SER:H	6:D:123:LEU:CD2	2.11	0.63
7:E:54:LEU:HG	7:E:58:PRO:CG	2.28	0.63
6:D:704:ARG:HD3	6:D:738:ALA:HB2	1.79	0.63
5:M:432:ARG:HG3	11:M:1314:HOH:O	1.99	0.63
5:M:650:ARG:HG3	5:M:653:ASP:HB2	1.81	0.63
5:C:600:ASP:OD1	5:C:651:LYS:N	2.32	0.63
5:C:906:PHE:CE1	6:D:1067:VAL:HA	2.34	0.63
5:C:690:ILE:CD1	5:C:833:LEU:HD23	2.29	0.63
5:C:672:VAL:HG12	5:C:699:PHE:CE1	2.34	0.63
5:C:670:GLN:NE2	5:C:699:PHE:O	2.30	0.63
5:C:276:LYS:HG2	5:C:280:LYS:NZ	2.14	0.63
5:C:279:GLU:HG3	5:C:280:LYS:HG3	1.79	0.63
6:N:675:ARG:HA	6:N:678:GLU:HG2	1.80	0.63
5:M:693:GLU:HA	5:M:696:LYS:HD2	1.80	0.63
4:A:220:GLU:O	4:A:223:THR:HG22	1.99	0.63
6:N:696:HIS:HD2	7:O:59:ASN:HB2	1.64	0.63
5:M:176:VAL:HG12	5:M:182:VAL:HG12	1.80	0.63
6:N:1049:SER:O	6:N:1079:LYS:HE3	1.98	0.63
4:K:12:THR:OG1	4:K:24:VAL:HB	1.99	0.63
6:D:614:PHE:CZ	6:D:1438:ALA:HB1	2.34	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:327:HIS:HA	5:C:433:THR:OG1	1.98	0.63
5:C:410:ILE:HD12	5:C:438:ILE:CG1	2.29	0.63
5:C:441:VAL:HG13	5:C:559:LEU:HA	1.81	0.63
6:D:793:THR:O	6:D:879:ARG:HD3	1.99	0.63
6:D:753:SER:HB2	11:D:8449:HOH:O	1.98	0.63
7:E:48:MET:N	7:E:54:LEU:HB2	2.14	0.63
5:M:290:LEU:H	5:M:290:LEU:HD23	1.64	0.63
2:H:4:U:H2'	2:H:5:C:C6	2.34	0.62
3:I:8:DA:H1'	3:I:9:DG:H5'	1.81	0.62
5:C:98:LEU:O	5:C:109:LYS:HD2	1.99	0.62
6:N:131:LYS:HE2	6:N:564:GLU:OE1	1.98	0.62
5:C:1033:GLY:O	5:C:1037:VAL:HG23	1.97	0.62
5:C:10:ARG:HA	5:C:10:ARG:NH1	2.12	0.62
5:M:580:MET:HB3	5:M:584:GLU:OE1	1.99	0.62
6:N:1440:PHE:HB3	11:N:9289:HOH:O	1.99	0.62
1:X:14:DT:H3'	6:N:610:LYS:NZ	2.14	0.62
2:H:6:U:C2'	2:H:7:G:C8	2.82	0.62
6:D:455:ARG:CZ	6:D:463:GLN:HG3	2.29	0.62
5:M:304:LEU:HG	5:M:308:ARG:HH21	1.64	0.62
5:C:218:VAL:HA	5:C:221:LEU:HD23	1.81	0.62
5:C:710:ILE:HD12	5:C:790:LEU:HD13	1.81	0.62
6:N:165:LYS:HA	6:N:199:LEU:HD22	1.81	0.62
6:D:1364:HIS:ND1	6:D:1366:LYS:HG3	2.14	0.62
6:D:1267:ARG:HB2	6:D:1267:ARG:HH11	1.64	0.62
7:E:70:THR:HB	7:E:72:ARG:HG2	1.81	0.62
5:C:882:LEU:HD23	5:C:885:ILE:HB	1.81	0.62
6:D:891:GLU:HB2	11:D:8407:HOH:O	1.98	0.62
6:N:95:LEU:HB2	11:N:9070:HOH:O	1.99	0.62
6:D:1029:ARG:HH22	10:D:3999:APC:PG	2.22	0.62
6:N:1219:GLU:HG2	6:N:1221:VAL:HG23	1.81	0.62
5:M:906:PHE:CE1	6:N:1067:VAL:HA	2.35	0.62
4:K:180:GLN:HE22	5:M:937:ASP:HA	1.65	0.62
6:D:143:ASN:ND2	6:D:145:VAL:HG12	2.10	0.62
5:C:1037:VAL:O	5:C:1041:GLU:HG3	1.99	0.62
5:M:44:ILE:HG23	5:M:344:PHE:HE1	1.64	0.62
6:D:175:VAL:HG11	11:D:8081:HOH:O	1.99	0.62
5:C:775:ARG:HD2	5:C:782:ALA:HB3	1.80	0.62
6:D:1437:ALA:O	6:D:1446:VAL:HG21	1.99	0.62
5:C:840:ALA:HB2	5:C:846:LYS:HG3	1.79	0.62
5:C:750:LYS:HD3	6:D:681:ARG:HD3	1.81	0.62
5:M:576:ALA:HB3	5:M:900:ARG:NH1	2.13	0.62
4:B:20:TYR:OH	4:B:198:ARG:HD2	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:9:G:H2'	2:H:10:G:H8	1.63	0.62
6:D:574:LEU:O	6:D:578:VAL:HG23	1.98	0.62
6:N:895:VAL:O	6:N:899:LEU:HG	2.00	0.62
5:M:307:LEU:HG	5:M:311:PHE:CE2	2.34	0.62
7:E:54:LEU:O	7:E:54:LEU:HD23	2.00	0.62
5:M:468:ARG:HE	5:M:487:THR:N	1.98	0.62
6:D:1000:THR:O	6:D:1003:VAL:HG12	1.99	0.62
5:M:807:ARG:H	5:M:807:ARG:NE	1.96	0.62
5:C:720:GLU:HG2	5:C:760:SER:HB3	1.82	0.62
6:N:1051:GLU:HG3	6:N:1051:GLU:O	2.00	0.62
5:M:1098:ASP:HB2	6:N:21:TRP:HZ2	1.64	0.62
4:L:211:LEU:O	4:L:215:VAL:HG13	2.00	0.62
5:M:537:LYS:HE3	5:M:905:ILE:HD13	1.81	0.62
5:M:135:VAL:HG11	5:M:407:LYS:HA	1.81	0.62
6:D:1083:ASP:OD1	6:D:1252:ILE:HD12	2.00	0.62
5:C:144:PRO:HA	5:C:163:ILE:HD11	1.81	0.62
6:D:138:LYS:HD3	11:D:8147:HOH:O	2.00	0.62
6:N:1125:PRO:HB3	6:N:1130:ARG:HH22	1.64	0.62
6:D:853:VAL:HG11	6:D:860:LEU:HG	1.81	0.62
6:N:172:PRO:HG2	6:N:175:VAL:HG21	1.82	0.62
5:M:759:THR:HA	5:M:786:LYS:O	2.00	0.62
6:D:660:LYS:HD2	6:D:694:VAL:HG22	1.80	0.62
6:N:1424:VAL:HG13	6:N:1425:THR:N	2.14	0.62
2:Y:6:U:C2'	2:Y:7:G:C8	2.82	0.62
5:M:1090:LYS:HG2	5:M:1112:PHE:HZ	1.65	0.62
5:C:573:ARG:HB2	5:C:573:ARG:NH1	2.13	0.62
7:O:41:GLU:HG2	7:O:42:PRO:HD3	1.82	0.62
6:N:130:SER:HB3	6:N:132:TYR:CE1	2.34	0.62
6:N:166:GLN:CG	6:N:396:VAL:HG13	2.29	0.62
6:D:396:VAL:C	6:D:398:ALA:H	2.03	0.62
6:D:398:ALA:HB1	6:D:446:VAL:H	1.64	0.62
4:L:58:ILE:CG2	4:L:61:VAL:HB	2.29	0.62
6:D:1495:ILE:HG21	7:E:80:VAL:HG13	1.82	0.62
6:N:764:LEU:HD12	6:N:765:SER:N	2.14	0.62
1:X:20:DG:H3'	11:X:610:HOH:O	2.00	0.62
5:C:798:GLY:H	5:C:827:VAL:CG1	2.13	0.62
1:X:14:DT:H2''	1:X:15:DC:H5'	1.80	0.62
5:C:410:ILE:O	5:C:452:ILE:HA	1.99	0.62
5:C:329:GLY:N	5:C:488:ALA:HB3	2.13	0.62
5:C:436:GLY:HA2	5:C:538:GLN:O	1.99	0.62
6:N:1146:GLY:O	6:N:1207:TYR:HB2	2.00	0.62
6:D:792:ILE:O	6:D:878:GLY:HA3	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:273:GLY:HA2	5:M:276:LYS:HE3	1.80	0.62
5:M:1087:VAL:HG23	6:N:524:LEU:HD11	1.80	0.62
5:M:120:LEU:HD22	5:M:121:MET:N	2.11	0.62
5:C:162:ILE:HD11	5:C:306:THR:HG21	1.82	0.62
5:M:457:ALA:HB3	5:M:538:GLN:HA	1.80	0.62
5:M:587:VAL:HG12	5:M:588:VAL:N	2.13	0.62
2:Y:1:G:O6	5:M:773:LEU:HD12	2.00	0.62
6:N:741:ASP:O	6:N:743:ASP:N	2.29	0.62
5:C:554:ASP:HB2	6:D:1061:PHE:HE2	1.65	0.62
5:C:674:VAL:HG23	5:C:869:VAL:HG13	1.82	0.62
5:C:702:SER:HB3	5:C:996:LYS:HZ2	1.63	0.62
5:M:113:VAL:HG11	5:M:373:VAL:CG1	2.30	0.62
5:M:194:VAL:HA	5:M:197:LEU:HD12	1.82	0.62
5:M:194:VAL:HG11	5:M:221:LEU:O	2.00	0.62
2:Y:7:G:C2	5:M:1014:SER:HA	2.33	0.62
11:N:9137:HOH:O	7:O:17:TYR:HB2	1.99	0.62
6:D:81:THR:HG22	6:D:82:LYS:N	2.14	0.62
6:N:471:GLU:O	6:N:474:GLU:HB3	2.00	0.62
6:N:490:ALA:O	6:N:493:ARG:HG3	1.99	0.62
5:C:862:PRO:HD2	5:C:925:TYR:OH	2.00	0.62
7:O:86:GLN:O	7:O:90:GLU:HG3	2.00	0.62
6:N:639:LEU:HB3	11:N:9466:HOH:O	1.98	0.62
2:Y:10:G:H2'	2:Y:11:C:H6	1.64	0.62
6:N:1121:PRO:HD3	6:N:1346:ARG:HE	1.63	0.62
4:L:102:LYS:HZ1	4:L:137:ARG:HG2	1.64	0.62
5:M:629:TYR:HB3	11:M:1373:HOH:O	1.99	0.62
5:C:830:LYS:HD3	5:C:832:LYS:HE2	1.82	0.62
5:M:265:ARG:HB3	5:M:267:TYR:CE2	2.35	0.61
5:M:23:VAL:HA	5:M:121:MET:HE1	1.81	0.61
6:N:902:LEU:HD23	6:N:902:LEU:H	1.65	0.61
5:M:928:LYS:HZ2	5:M:932:GLU:HG3	1.65	0.61
4:B:78:ILE:O	4:B:82:LEU:HG	2.00	0.61
6:N:626:SER:HB2	6:N:748:HIS:CE1	2.34	0.61
6:D:550:ARG:HE	6:D:550:ARG:CA	2.11	0.61
6:N:41:ARG:HD3	6:N:42:ASP:HB2	1.80	0.61
4:K:58:ILE:HB	4:K:61:VAL:HB	1.82	0.61
5:C:101:ILE:HG23	5:C:107:LEU:HD22	1.82	0.61
4:B:102:LYS:NZ	4:B:139:ASN:HB2	2.14	0.61
6:N:1036:ARG:HB3	6:N:1036:ARG:NH1	2.15	0.61
5:M:1030:GLN:NE2	6:N:628:ARG:HD3	2.15	0.61
5:C:343:GLN:HB2	5:C:385:PHE:CE2	2.34	0.61
6:N:583:ASP:OD2	6:N:604:THR:HG21	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:198:ARG:NH1	5:M:231:PRO:HG3	2.15	0.61
5:C:456:ALA:HB1	5:C:538:GLN:O	1.99	0.61
6:D:762:GLN:HB2	7:E:16:LYS:HE2	1.82	0.61
6:D:544:TYR:O	6:D:548:ILE:HG12	2.00	0.61
5:M:83:CYS:HG	5:M:90:TYR:HD2	1.47	0.61
6:D:440:VAL:HB	6:D:441:ARG:HE	1.63	0.61
11:M:1524:HOH:O	6:N:621:LYS:HE3	2.00	0.61
5:C:436:GLY:HA3	5:C:538:GLN:OE1	2.01	0.61
6:D:707:THR:HG23	6:D:712:GLY:HA3	1.81	0.61
6:D:101:HIS:ND1	6:D:103:TRP:HB2	2.15	0.61
5:C:7:GLY:C	5:C:8:ARG:HD2	2.20	0.61
5:M:30:LEU:HA	5:M:44:ILE:HG12	1.80	0.61
6:D:559:ALA:HB2	11:D:8141:HOH:O	1.98	0.61
4:A:41:ARG:O	4:A:45:LEU:HD13	2.00	0.61
5:C:400:PRO:HG2	5:C:593:ALA:HB2	1.82	0.61
2:H:13:C:H2'	2:H:14:G:H8	1.65	0.61
5:C:672:VAL:HG12	5:C:699:PHE:HE1	1.65	0.61
6:D:1219:GLU:HA	7:E:17:TYR:HE2	1.65	0.61
6:D:1101:VAL:HG13	6:D:1427:SER:OG	2.00	0.61
6:D:135:LEU:HA	6:D:453:ASP:O	2.01	0.61
6:D:677:LEU:HD21	6:D:687:VAL:HG11	1.81	0.61
4:B:47:SER:OG	4:B:48:ILE:HD12	1.99	0.61
6:D:1267:ARG:CB	6:D:1267:ARG:HH11	2.13	0.61
5:M:909:ALA:HB1	5:M:914:ILE:HD11	1.81	0.61
5:C:1076:VAL:HG21	11:D:8371:HOH:O	1.99	0.61
5:C:464:LEU:O	5:C:466:PHE:N	2.34	0.61
4:K:90:LEU:HB2	4:K:119:ASP:OD2	2.01	0.61
6:D:10:ILE:HD12	6:D:1450:ALA:HB3	1.82	0.61
5:M:759:THR:HB	5:M:785:VAL:CG2	2.31	0.61
4:A:182:GLU:O	4:A:194:LYS:HB3	2.00	0.61
6:N:584:ASN:ND2	6:N:590:PRO:HD2	2.16	0.61
5:C:79:PRO:HG2	5:C:82:GLU:HB2	1.80	0.61
6:D:1493:LYS:O	6:D:1497:GLU:HG2	2.01	0.61
4:A:181:VAL:HG11	11:A:382:HOH:O	2.01	0.61
2:Y:4:U:H2'	2:Y:5:C:C6	2.36	0.61
5:M:110:GLU:N	5:M:368:THR:HG21	2.14	0.61
5:C:99:GLN:HB3	5:C:109:LYS:HD3	1.81	0.61
4:L:78:ILE:O	4:L:82:LEU:HG	2.00	0.61
5:C:857:ASP:CB	5:C:978:ARG:HG2	2.31	0.61
6:D:955:VAL:HG11	6:D:1015:TYR:HE2	1.66	0.61
6:D:724:GLN:HG3	6:D:725:SER:N	2.14	0.61
4:B:133:GLU:HA	4:B:133:GLU:OE1	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:398:THR:HG21	5:C:567:GLN:HA	1.83	0.61
6:N:50:PHE:CD2	6:N:522:PRO:HD3	2.36	0.61
11:N:9036:HOH:O	7:O:89:MET:HE1	1.99	0.61
5:M:694:LEU:HD21	5:M:868:ASP:HB3	1.83	0.61
5:C:198:ARG:HD2	5:C:204:GLN:NE2	2.15	0.61
6:D:123:LEU:HG	6:D:152:LEU:HD13	1.82	0.61
6:D:1346:ARG:HH12	6:D:1349:VAL:HG11	1.66	0.61
5:M:408:ARG:NE	5:M:455:LEU:HD11	2.15	0.61
5:C:431:HIS:CG	5:C:432:ARG:N	2.69	0.61
5:C:988:VAL:HG23	11:C:1330:HOH:O	2.00	0.61
6:D:633:VAL:HB	6:D:740:PHE:CE1	2.36	0.61
5:C:1060:ILE:HG22	5:C:1086:ARG:NH2	2.15	0.61
5:M:113:VAL:HG11	5:M:373:VAL:HG11	1.81	0.61
5:C:318:PRO:HD2	5:C:321:GLU:OE1	2.01	0.61
6:N:507:ASN:HD22	6:N:507:ASN:N	1.90	0.61
6:N:135:LEU:HA	6:N:453:ASP:O	2.01	0.61
6:D:393:ILE:HD13	11:D:8118:HOH:O	2.01	0.61
5:M:676:ILE:CG2	5:M:988:VAL:HG13	2.31	0.61
6:D:615:ARG:HH22	6:D:1096:ARG:HD2	1.64	0.61
5:M:524:VAL:CG1	5:M:528:GLU:HB2	2.31	0.61
5:M:232:GLU:HB3	11:M:1516:HOH:O	1.99	0.61
6:N:1105:ILE:HD11	6:N:1374:GLN:OE1	2.01	0.61
2:H:12:G:H2'	2:H:13:C:H6	1.66	0.61
5:C:578:VAL:HG21	5:C:991:GLN:O	2.01	0.61
4:K:41:ARG:HH21	5:M:977:GLY:HA2	1.65	0.61
5:C:267:TYR:HB2	5:C:272:ALA:HB1	1.82	0.61
7:O:30:LEU:O	7:O:35:PHE:HA	2.01	0.61
5:M:983:ILE:HG21	5:M:987:ILE:HD12	1.80	0.61
4:A:39:PRO:O	4:A:43:ILE:HG12	1.99	0.61
5:M:554:ASP:HB3	5:M:880:MET:O	2.01	0.61
5:C:911:GLU:O	5:C:915:LYS:HG2	2.00	0.61
5:M:816:LYS:HB2	5:M:819:VAL:HG21	1.83	0.61
5:C:252:LYS:HB3	5:C:298:PHE:HZ	1.65	0.61
6:D:19:ARG:HH21	6:D:516:ALA:HB2	1.64	0.61
6:N:619:LEU:HD12	6:N:621:LYS:HZ3	1.66	0.60
4:A:124:ASN:ND2	4:A:127:LEU:HD22	2.16	0.60
6:D:8:VAL:HB	6:D:1434:TRP:CH2	2.36	0.60
6:D:153:LEU:CD1	6:D:158:TYR:HB2	2.31	0.60
5:M:464:LEU:O	5:M:466:PHE:N	2.33	0.60
4:A:225:PHE:CE1	4:B:40:LEU:HD11	2.35	0.60
6:N:780:LYS:HD3	6:N:912:LYS:HE3	1.82	0.60
6:N:1145:TYR:O	6:N:1147:ARG:HG2	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1045:MET:HG3	6:N:1073:SER:OG	2.00	0.60
6:D:1166:LEU:HD23	6:D:1166:LEU:H	1.65	0.60
6:N:489:ARG:CZ	6:N:1389:LEU:HD21	2.31	0.60
5:C:626:ARG:H	5:C:639:GLN:NE2	1.98	0.60
6:N:1243:THR:HG22	11:N:9395:HOH:O	2.01	0.60
6:N:699:VAL:HG22	6:N:756:GLN:HE22	1.64	0.60
6:D:873:LEU:HD11	11:D:8072:HOH:O	2.01	0.60
5:C:597:ALA:HA	5:C:655:LEU:HD11	1.83	0.60
4:B:115:LEU:HB3	11:B:371:HOH:O	2.01	0.60
6:N:1350:GLU:O	6:N:1354:LYS:HG2	2.02	0.60
2:Y:13:C:H2'	2:Y:14:G:H8	1.64	0.60
5:C:881:ASN:HD22	5:C:881:ASN:N	1.99	0.60
6:N:1109:GLU:HG2	6:N:1201:CYS:CA	2.29	0.60
5:M:537:LYS:N	5:M:537:LYS:HD2	2.12	0.60
6:N:1007:VAL:HG12	6:N:1011:PHE:CE2	2.35	0.60
6:D:136:ASP:CB	6:D:137:PRO:HD3	2.30	0.60
6:N:1268:PRO:HD2	6:N:1271:LYS:NZ	2.15	0.60
5:C:806:LEU:HD13	5:C:813:VAL:HG21	1.83	0.60
6:N:804:LEU:HB2	6:N:830:ALA:O	2.02	0.60
4:K:111:ALA:HB2	4:K:127:LEU:HD23	1.82	0.60
5:C:798:GLY:H	5:C:827:VAL:HG11	1.66	0.60
5:C:136:ILE:HG21	5:C:336:VAL:HG13	1.81	0.60
6:D:592:THR:N	6:D:600:LEU:HD11	2.16	0.60
4:K:209:GLU:HB3	11:K:1765:HOH:O	2.00	0.60
2:H:1:G:N2	5:C:770:GLU:HB3	2.17	0.60
11:N:9248:HOH:O	7:O:16:LYS:HB2	2.02	0.60
4:K:42:ARG:NH2	4:L:34:VAL:HB	2.15	0.60
5:C:575:GLN:HB2	5:C:670:GLN:OE1	2.02	0.60
4:A:85:LEU:HA	4:A:124:ASN:ND2	2.08	0.60
6:D:1216:SER:HB3	7:E:16:LYS:H	1.67	0.60
6:D:754:PHE:CD1	7:E:24:ALA:HB1	2.36	0.60
6:N:118:LEU:HD13	6:N:124:GLU:OE2	2.01	0.60
5:C:56:GLU:HB3	5:C:64:LEU:HD23	1.82	0.60
4:K:112:ARG:HE	4:K:125:PRO:CB	2.03	0.60
5:M:110:GLU:H	5:M:368:THR:CG2	2.12	0.60
5:M:751:PRO:HA	5:M:792:VAL:HB	1.83	0.60
6:D:853:VAL:HG13	6:D:858:VAL:O	2.01	0.60
5:C:627:ARG:O	5:C:638:ASP:HB2	2.00	0.60
6:N:1228:SER:HB2	11:N:9308:HOH:O	2.00	0.60
5:M:805:ARG:HG2	5:M:823:VAL:HG13	1.84	0.60
5:M:1007:ALA:HB1	6:N:652:LEU:HD13	1.84	0.60
6:N:929:ARG:HB2	6:N:929:ARG:HH11	1.65	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:86:LYS:HB3	11:C:1560:HOH:O	2.02	0.60
5:C:764:GLU:HG3	6:D:54:LYS:NZ	2.15	0.60
6:N:1109:GLU:CD	6:N:1202:GLN:H	2.03	0.60
6:D:1371:VAL:HG12	6:D:1375:MET:CE	2.32	0.60
6:D:480:GLU:HB2	11:D:8139:HOH:O	2.00	0.60
6:D:28:LYS:HA	11:D:8201:HOH:O	2.01	0.60
6:D:829:VAL:HA	11:D:8279:HOH:O	2.01	0.60
7:E:54:LEU:HA	7:E:58:PRO:HG2	1.83	0.60
5:M:671:ASN:N	5:M:671:ASN:ND2	2.50	0.60
6:D:764:LEU:HD11	6:D:766:ALA:HB3	1.84	0.60
6:N:1438:ALA:N	6:N:1446:VAL:HG11	2.16	0.60
5:C:326:ASP:HB2	5:C:431:HIS:ND1	2.17	0.60
6:D:1042:ARG:HH21	6:D:1061:PHE:HZ	1.50	0.60
6:D:1263:PHE:HB3	6:D:1424:VAL:HG11	1.83	0.60
6:D:762:GLN:HE22	7:E:20:THR:CG2	2.15	0.60
6:D:1336:LEU:HD11	6:D:1341:PRO:HG3	1.82	0.60
5:M:759:THR:HG21	5:M:783:ARG:HH21	1.67	0.60
6:N:399:ARG:HE	6:N:431:VAL:HG23	1.65	0.60
5:C:65:VAL:HG23	5:C:101:ILE:HB	1.83	0.60
6:D:952:ASP:HA	6:D:1062:ARG:NH2	2.16	0.60
6:N:1438:ALA:O	6:N:1443:THR:HG22	2.01	0.60
5:C:660:ALA:HB1	5:C:667:ALA:O	2.02	0.60
5:C:859:PRO:HB3	5:C:974:LEU:HD23	1.83	0.60
5:C:573:ARG:CG	5:C:670:GLN:HE22	2.14	0.60
6:D:127:LEU:HD22	6:D:460:ALA:CB	2.32	0.60
6:N:522:PRO:O	6:N:525:ARG:HD3	2.02	0.60
6:D:109:PRO:O	6:D:111:LYS:HD3	2.01	0.60
6:D:896:ALA:HB2	11:D:8341:HOH:O	2.02	0.60
5:M:52:PHE:CG	5:M:68:PHE:HB2	2.36	0.60
5:M:1033:GLY:O	5:M:1037:VAL:HG23	2.02	0.60
5:M:637:LEU:HD22	5:M:659:PRO:HG2	1.83	0.60
6:N:29:PRO:HD3	6:N:548:ILE:CG2	2.32	0.60
5:C:943:VAL:HG11	5:C:973:VAL:CG2	2.31	0.60
5:C:910:LYS:HB2	11:C:1325:HOH:O	2.01	0.60
6:D:54:LYS:HD2	6:D:55:ASP:H	1.66	0.60
5:C:19:THR:O	5:C:23:VAL:HG23	2.01	0.60
6:N:610:LYS:HA	11:N:9272:HOH:O	2.01	0.60
5:C:843:HIS:HA	11:C:1257:HOH:O	2.01	0.60
5:M:267:TYR:HB2	5:M:272:ALA:CB	2.32	0.60
6:N:398:ALA:HB2	6:N:447:VAL:HA	1.82	0.60
1:G:18:DG:H2''	1:G:19:DC:C5'	2.32	0.60
6:D:8:VAL:HB	6:D:1434:TRP:HH2	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:119:SER:CB	6:D:123:LEU:HD13	2.31	0.60
6:D:1495:ILE:HG22	6:D:1499:ARG:HH21	1.66	0.60
6:D:963:TYR:CD2	6:D:1002:LYS:HB3	2.37	0.60
6:N:633:VAL:HG22	6:N:635:PRO:CD	2.25	0.60
5:M:144:PRO:HG3	5:M:265:ARG:NH1	2.16	0.60
5:M:143:SER:C	5:M:276:LYS:HZ3	2.05	0.60
6:N:1267:ARG:HG3	6:N:1271:LYS:NZ	2.17	0.60
6:D:521:PRO:CG	6:D:524:LEU:HD22	2.29	0.60
6:D:1376:MET:HE3	6:D:1421:LEU:HB2	1.83	0.60
6:D:1205:TYR:CD2	6:D:1215:VAL:HG21	2.31	0.60
6:N:76:CYS:HB3	11:N:9086:HOH:O	2.01	0.60
5:C:1099:VAL:HA	6:D:9:ARG:O	2.02	0.60
6:D:1255:GLY:O	6:D:1259:VAL:HG23	2.02	0.60
5:M:409:ARG:HA	5:M:454:SER:HA	1.84	0.59
6:N:1192:LEU:HD13	6:N:1345:GLU:HG2	1.83	0.59
6:D:116:LEU:CD2	6:D:150:ARG:HD3	2.32	0.59
5:C:721:ARG:HG3	5:C:820:ARG:HH12	1.66	0.59
5:M:1005:MET:CE	6:N:724:GLN:HA	2.32	0.59
6:D:1485:GLN:NE2	7:E:78:ASN:HA	2.17	0.59
6:D:1259:VAL:HG11	6:D:1356:TYR:OH	2.02	0.59
5:M:127:PHE:HB3	11:M:1483:HOH:O	2.01	0.59
5:C:461:VAL:HG12	11:C:1351:HOH:O	2.02	0.59
5:C:45:GLN:HG2	5:C:49:ARG:CZ	2.32	0.59
6:N:185:VAL:HG21	6:N:203:ALA:HB2	1.84	0.59
4:K:151:VAL:HB	4:K:169:ALA:HB3	1.84	0.59
4:A:83:LYS:NZ	4:A:168:ASP:HB2	2.17	0.59
6:N:761:ILE:HB	7:O:20:THR:HG23	1.83	0.59
6:D:456:MET:HG2	6:D:459:GLU:OE1	2.02	0.59
5:C:148:PHE:CE2	5:C:281:LEU:HD13	2.28	0.59
5:C:218:VAL:HG22	5:C:221:LEU:HD21	1.84	0.59
6:N:478:LEU:HD23	6:N:496:LEU:HD21	1.84	0.59
6:N:1106:VAL:HG11	6:N:1474:ALA:CB	2.31	0.59
6:N:477:LEU:HD11	6:N:495:ARG:HD3	1.84	0.59
6:N:495:ARG:O	6:N:499:VAL:HG23	2.02	0.59
4:A:159:LYS:NZ	4:A:166:PRO:HD3	2.17	0.59
6:D:970:LYS:HD3	6:D:995:LEU:HD13	1.84	0.59
2:H:7:G:H2'	2:H:7:G:N3	2.17	0.59
5:M:876:VAL:HG13	5:M:881:ASN:ND2	2.16	0.59
6:D:99:ALA:O	6:D:514:LEU:N	2.33	0.59
6:D:1080:GLY:O	6:D:1083:ASP:HB3	2.02	0.59
6:D:436:GLU:CD	6:D:445:ARG:HG3	2.22	0.59
6:N:1268:PRO:HD2	6:N:1271:LYS:HZ2	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1231:GLU:O	6:D:1235:GLN:HG3	2.02	0.59
4:K:89:PHE:HB3	4:K:94:LEU:HD13	1.84	0.59
6:D:1335:LEU:HD23	6:D:1344:VAL:HG22	1.84	0.59
6:N:480:GLU:O	6:N:484:PRO:HD2	2.02	0.59
5:C:26:TYR:HD2	5:C:121:MET:HB2	1.66	0.59
4:A:8:ALA:HB1	4:B:224:TYR:HE1	1.65	0.59
6:N:1375:MET:HB3	6:N:1422:MET:O	2.02	0.59
5:C:583:LEU:HB3	11:C:1190:HOH:O	2.01	0.59
5:M:1051:GLU:OE1	5:M:1056:LYS:HE2	2.03	0.59
5:M:1056:LYS:HD3	6:N:625:TYR:HD1	1.67	0.59
6:N:966:GLU:HA	6:N:969:ARG:NH2	2.18	0.59
4:K:67:THR:CG2	5:M:609:ASN:HD21	2.15	0.59
4:K:133:GLU:OE1	5:M:605:LYS:HB3	2.02	0.59
5:M:149:THR:HG21	11:M:1567:HOH:O	2.01	0.59
5:M:18:LEU:H	5:M:18:LEU:HD12	1.67	0.59
6:D:1438:ALA:N	6:D:1446:VAL:HG11	2.17	0.59
5:C:252:LYS:HB3	5:C:298:PHE:CZ	2.38	0.59
6:N:794:GLN:HG2	6:N:1017:PHE:CZ	2.38	0.59
6:N:983:LEU:HD13	6:N:991:GLN:OE1	2.02	0.59
6:N:161:LEU:O	6:N:161:LEU:HD23	2.03	0.59
6:N:23:TYR:O	6:N:49:ILE:HG23	2.01	0.59
6:N:615:ARG:HG3	6:N:619:LEU:HD21	1.84	0.59
2:Y:6:U:H1'	11:Y:2617:HOH:O	2.03	0.59
6:N:1209:LEU:HD23	6:N:1210:SER:H	1.66	0.59
6:D:135:LEU:H	6:D:135:LEU:HD12	1.67	0.59
5:C:318:PRO:HG3	11:C:1342:HOH:O	2.01	0.59
4:L:68:ILE:HD13	11:L:362:HOH:O	2.01	0.59
4:K:31:GLY:CA	4:L:42:ARG:HH21	2.15	0.59
4:A:38:ASN:HB3	4:A:39:PRO:HD3	1.85	0.59
6:D:172:PRO:HG2	6:D:175:VAL:HG21	1.84	0.59
5:C:352:ALA:HA	5:C:355:VAL:HG12	1.85	0.59
6:N:1412:LYS:HD2	6:N:1414:PRO:HG3	1.83	0.59
4:K:209:GLU:O	4:K:213:GLN:HG3	2.02	0.59
4:A:89:PHE:CZ	4:A:146:ARG:HB2	2.37	0.59
6:D:769:LEU:HD12	6:D:919:PHE:HE1	1.68	0.59
5:C:73:LEU:HD22	5:C:94:LEU:HD13	1.84	0.59
6:D:803:GLY:HA3	11:D:8427:HOH:O	2.00	0.59
6:D:1209:LEU:HD23	6:D:1210:SER:H	1.65	0.59
6:N:156:GLU:HB2	6:N:157:GLU:OE1	2.02	0.59
6:N:1389:LEU:HG	6:N:1390:LEU:HG	1.84	0.59
5:M:854:PRO:HB2	5:M:856:GLU:CG	2.32	0.59
5:M:468:ARG:HH21	5:M:487:THR:N	2.00	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:91:ASN:OD1	4:A:92:PRO:HD2	2.03	0.59
4:K:79:ILE:HA	4:K:82:LEU:HD12	1.84	0.59
6:D:106:LYS:HG2	11:D:8237:HOH:O	2.01	0.59
5:C:260:LEU:HD22	11:C:1406:HOH:O	2.00	0.59
5:C:274:ARG:HB2	5:C:285:LEU:HD13	1.85	0.59
4:A:54:THR:HB	4:A:143:ARG:HG2	1.85	0.59
5:C:627:ARG:HG3	5:C:628:PHE:H	1.67	0.59
5:C:516:ARG:NH1	5:C:521:PRO:HB3	2.17	0.59
5:C:835:VAL:HG12	11:C:1129:HOH:O	2.03	0.59
6:N:1059:SER:OG	6:N:1065:LEU:HD12	2.03	0.59
6:N:1009:LYS:HG2	11:N:9338:HOH:O	2.03	0.59
6:N:787:LEU:HD13	6:N:1023:MET:HA	1.84	0.59
6:D:1465:ASN:HD21	6:D:1470:ARG:HB3	1.68	0.59
6:N:455:ARG:HB3	6:N:460:ALA:HA	1.83	0.59
5:C:193:LEU:HD21	11:C:1142:HOH:O	2.02	0.59
6:N:481:MET:CE	6:N:493:ARG:HA	2.32	0.59
5:M:1055:LEU:CD2	5:M:1066:ALA:HB2	2.31	0.59
6:N:422:ALA:HA	11:N:9357:HOH:O	2.01	0.59
4:K:5:LYS:HE3	4:K:5:LYS:HA	1.85	0.59
5:M:119:PRO:HG2	5:M:386:PHE:CG	2.37	0.59
6:N:584:ASN:OD1	6:N:590:PRO:HD2	2.03	0.59
5:C:692:GLU:HG2	5:C:696:LYS:HE2	1.83	0.59
5:M:575:GLN:HB2	5:M:670:GLN:HG2	1.85	0.59
6:D:161:LEU:CD2	6:D:452:ILE:HD13	2.33	0.59
6:D:1440:PHE:CG	6:D:1441:GLN:N	2.71	0.59
7:E:17:TYR:O	7:E:21:VAL:HG23	2.03	0.59
6:D:462:GLN:O	6:D:466:LYS:HE3	2.03	0.59
6:D:93:ILE:HG13	6:D:519:VAL:HG22	1.85	0.59
5:C:833:LEU:HD21	5:C:839:LEU:HD11	1.84	0.59
5:M:498:GLN:HA	5:M:533:ASP:OD2	2.03	0.59
5:M:140:ILE:HB	5:M:331:ARG:HG2	1.83	0.59
6:N:86:ARG:HD3	6:N:523:ASP:OD2	2.02	0.59
4:L:94:LEU:HD11	4:L:119:ASP:CB	2.33	0.59
6:N:860:LEU:HD23	6:N:877:PRO:HB2	1.85	0.59
6:N:396:VAL:O	6:N:398:ALA:N	2.31	0.59
4:B:94:LEU:HD11	4:B:119:ASP:CB	2.32	0.59
4:K:224:TYR:HB3	4:L:9:PRO:HB2	1.83	0.59
5:M:1000:MET:HB3	5:M:1002:GLU:HG2	1.84	0.59
4:A:225:PHE:HE1	4:B:40:LEU:HD11	1.68	0.59
6:N:970:LYS:HA	6:N:973:GLN:CD	2.23	0.59
5:C:492:ASP:CG	5:C:518:LYS:HB3	2.24	0.59
5:M:1081:VAL:HG23	5:M:1086:ARG:HH21	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Y:11:C:O2'	2:Y:12:G:H5''	2.02	0.58
5:C:488:ALA:HA	11:C:1287:HOH:O	2.02	0.58
6:N:191:LEU:HB3	6:N:393:ILE:HD12	1.85	0.58
6:D:582:LEU:HA	6:D:603:LEU:HD12	1.85	0.58
5:M:755:LEU:HD12	5:M:790:LEU:HG	1.85	0.58
5:C:342:ASP:O	5:C:346:VAL:HG23	2.03	0.58
5:C:218:VAL:HG22	5:C:221:LEU:CD2	2.33	0.58
6:D:799:LYS:O	6:D:826:PRO:HD2	2.02	0.58
6:D:401:TYR:CZ	6:D:429:SER:HA	2.38	0.58
5:C:48:PHE:O	5:C:52:PHE:HB2	2.02	0.58
4:L:173:PRO:HB2	11:L:366:HOH:O	2.02	0.58
1:G:2:DC:H2''	1:G:3:DC:C6	2.38	0.58
5:C:983:ILE:HG21	5:C:987:ILE:HD11	1.85	0.58
2:H:9:G:C8	2:H:9:G:H5'	2.38	0.58
5:M:701:THR:HG21	5:M:830:LYS:HE2	1.84	0.58
5:M:946:ARG:CB	5:M:946:ARG:HH11	2.08	0.58
1:X:18:DG:H5'	1:X:18:DG:H8	1.68	0.58
6:N:464:LEU:O	6:N:468:LEU:HG	2.02	0.58
6:N:567:ILE:O	6:N:571:LYS:HG2	2.03	0.58
4:A:54:THR:CG2	4:A:158:ILE:HG13	2.30	0.58
7:O:18:ARG:HD3	7:O:75:PHE:CE1	2.33	0.58
6:D:918:ALA:O	6:D:922:LEU:HG	2.02	0.58
5:C:1009:SER:HB2	6:D:651:GLU:O	2.03	0.58
4:B:20:TYR:HE2	4:B:198:ARG:HB3	1.68	0.58
4:A:5:LYS:HE3	4:A:5:LYS:HA	1.84	0.58
4:L:174:VAL:HG23	11:L:366:HOH:O	2.02	0.58
5:C:913:GLU:O	5:C:917:LEU:HG	2.03	0.58
6:D:693:GLU:HA	11:D:8294:HOH:O	2.03	0.58
6:N:728:LEU:HD21	6:N:733:CYS:SG	2.43	0.58
2:Y:8:C:HO2'	2:Y:9:G:H5'	1.66	0.58
6:N:15:PRO:O	6:N:18:ILE:HB	2.03	0.58
5:C:398:THR:HA	11:C:1367:HOH:O	2.03	0.58
7:O:48:MET:N	7:O:54:LEU:HB2	2.18	0.58
6:D:1236:LEU:CD1	6:D:1359:GLN:HB3	2.33	0.58
4:B:99:LEU:HB3	4:B:114:PHE:CD2	2.38	0.58
6:D:835:SER:N	6:D:838:ARG:HD3	2.18	0.58
7:O:40:LEU:CB	7:O:72:ARG:HH21	2.15	0.58
6:N:815:ALA:HA	6:N:818:ARG:HD2	1.84	0.58
5:M:861:LEU:HA	5:M:974:LEU:HD12	1.85	0.58
6:D:752:SER:HB2	11:D:8371:HOH:O	2.03	0.58
2:Y:13:C:C4'	5:M:409:ARG:HH22	2.13	0.58
6:N:1146:GLY:CA	6:N:1207:TYR:HB2	2.33	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:695:ILE:HD11	6:N:718:PRO:HB2	1.84	0.58
6:D:124:GLU:O	6:D:127:LEU:HD12	2.02	0.58
5:M:102:HIS:NE2	5:M:365:ASP:HA	2.18	0.58
6:N:522:PRO:HG2	6:N:523:ASP:H	1.68	0.58
6:D:1084:THR:HB	6:D:1241:PHE:CD2	2.38	0.58
6:D:1238:MET:HG3	11:D:8018:HOH:O	2.03	0.58
5:M:252:LYS:HZ3	5:M:296:GLY:HA3	1.69	0.58
4:A:44:LEU:O	4:A:174:VAL:HG21	2.04	0.58
6:N:1112:CYS:HB2	6:N:1195:GLN:CG	2.34	0.58
6:N:989:TYR:HA	6:N:992:ILE:HD12	1.83	0.58
6:D:101:HIS:O	6:D:105:VAL:HG23	2.02	0.58
4:L:59:GLU:CB	4:L:137:ARG:HH22	2.16	0.58
6:D:23:TYR:O	6:D:49:ILE:HG23	2.03	0.58
6:D:957:PRO:HG2	6:D:1007:VAL:HG22	1.85	0.58
6:N:711:LEU:HD21	6:N:768:ASN:CB	2.33	0.58
6:N:962:GLN:HG2	6:N:966:GLU:OE1	2.03	0.58
5:M:497:ALA:HA	5:M:515:ALA:HA	1.85	0.58
4:A:9:PRO:HB3	4:A:25:LEU:HG	1.84	0.58
5:M:938:LYS:HB2	5:M:938:LYS:NZ	2.18	0.58
6:D:50:PHE:CD2	6:D:522:PRO:HD3	2.38	0.58
7:E:48:MET:HG2	7:E:49:GLN:H	1.69	0.58
5:C:1100:GLN:HA	5:C:1100:GLN:NE2	2.18	0.58
6:N:136:ASP:CB	6:N:137:PRO:HD3	2.33	0.58
6:D:426:LYS:HE3	6:D:427:VAL:HG23	1.85	0.58
5:M:99:GLN:HG2	5:M:109:LYS:HG3	1.85	0.58
5:C:211:LEU:CD1	5:C:308:ARG:HA	2.34	0.58
5:C:548:PRO:HD3	5:C:842:ARG:HD2	1.86	0.58
5:C:580:MET:SD	5:C:584:GLU:HG3	2.44	0.58
5:C:1014:SER:HB2	5:C:1017:THR:HG23	1.85	0.58
5:C:712:ALA:O	5:C:820:ARG:HB3	2.04	0.58
6:D:1271:LYS:HZ1	6:D:1331:ASP:HB3	1.69	0.58
4:B:177:VAL:HG12	4:B:199:ILE:HG23	1.86	0.58
5:C:841:ASN:H	5:C:841:ASN:ND2	2.02	0.58
5:M:841:ASN:HD21	5:M:844:GLY:H	1.51	0.58
6:N:584:ASN:HD21	6:N:589:ALA:HA	1.67	0.58
6:N:1486:VAL:HG23	11:N:9307:HOH:O	2.03	0.58
5:M:347:GLY:HA2	11:M:1457:HOH:O	2.02	0.58
5:M:831:ARG:HA	11:M:1437:HOH:O	2.04	0.58
1:G:6:DT:H2"	1:G:7:DC:C6	2.39	0.58
5:M:701:THR:CG2	5:M:832:LYS:HG2	2.32	0.58
5:C:573:ARG:HB3	11:C:1209:HOH:O	2.03	0.58
6:N:996:TRP:HA	6:N:999:THR:CG2	2.25	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:34:VAL:HG12	11:M:1176:HOH:O	2.04	0.58
5:M:54:ILE:CG2	5:M:66:LEU:HB3	2.34	0.58
5:M:549:PHE:HB3	5:M:552:HIS:HD2	1.67	0.58
6:D:871:LYS:HE2	6:D:873:LEU:HD21	1.86	0.58
7:E:26:ARG:O	7:E:30:LEU:HD12	2.04	0.58
5:C:693:GLU:OE1	5:C:696:LYS:HD2	2.03	0.58
2:Y:13:C:H2'	2:Y:14:G:C8	2.39	0.58
5:M:1094:ALA:HA	6:N:90:MET:HE1	1.86	0.58
5:M:874:LEU:HD12	5:M:874:LEU:H	1.69	0.58
6:D:1373:ARG:HE	6:D:1374:GLN:NE2	2.02	0.58
5:M:431:HIS:H	5:M:434:HIS:CE1	2.22	0.58
6:D:465:LEU:HD22	6:D:510:GLU:HA	1.86	0.58
6:D:206:ARG:HB3	6:D:206:ARG:HH11	1.68	0.58
6:N:1119:SER:O	6:N:1121:PRO:HD3	2.04	0.58
5:M:1056:LYS:HD3	6:N:751:LEU:HD11	1.86	0.58
6:N:966:GLU:HA	6:N:969:ARG:HH22	1.67	0.58
5:C:358:ARG:HH22	5:C:373:VAL:C	2.06	0.58
5:M:91:GLN:CD	5:M:383:ARG:HH22	2.08	0.58
4:B:54:THR:CG2	4:B:158:ILE:HG13	2.33	0.58
6:N:134:VAL:HG12	6:N:152:LEU:HD22	1.86	0.58
6:D:1017:PHE:HE1	11:D:8095:HOH:O	1.87	0.58
5:M:444:PRO:HD2	5:M:452:ILE:O	2.04	0.58
6:N:1081:GLY:O	6:N:1084:THR:HG22	2.04	0.58
4:K:211:LEU:O	4:K:215:VAL:HG23	2.04	0.58
6:D:786:ILE:HD11	6:D:908:LYS:HD3	1.85	0.58
6:D:116:LEU:HD22	6:D:118:LEU:HD21	1.86	0.58
6:D:616:GLN:HG3	11:D:8092:HOH:O	2.03	0.58
5:M:310:LEU:HB2	11:M:1183:HOH:O	2.03	0.58
6:D:182:GLY:HA3	6:D:400:VAL:HG11	1.85	0.58
6:D:396:VAL:C	6:D:398:ALA:N	2.56	0.58
4:B:99:LEU:HG	11:B:336:HOH:O	2.03	0.58
5:M:464:LEU:HB2	11:M:1525:HOH:O	2.03	0.58
5:M:549:PHE:HB3	5:M:552:HIS:CD2	2.39	0.58
6:N:970:LYS:HG3	6:N:973:GLN:OE1	2.04	0.58
5:C:775:ARG:NH1	5:C:782:ALA:HB1	2.18	0.58
6:N:930:LEU:O	6:N:934:LEU:HG	2.04	0.58
3:I:7:DC:H5''	6:D:1264:GLU:OE2	2.04	0.58
6:N:161:LEU:HD21	11:N:9092:HOH:O	2.02	0.58
5:M:452:ILE:HD12	5:M:452:ILE:H	1.69	0.58
5:C:211:LEU:HD11	5:C:308:ARG:HA	1.86	0.57
5:M:875:GLY:O	5:M:879:ARG:HD2	2.03	0.57
6:N:1397:LYS:HE3	6:N:1432:LYS:HD2	1.85	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:1030:GLN:HB2	6:N:626:SER:OG	2.04	0.57
6:D:1171:VAL:O	6:D:1175:ILE:HG13	2.04	0.57
5:M:470:PRO:HD3	5:M:485:TYR:CE2	2.39	0.57
5:M:715:THR:HG21	11:M:1222:HOH:O	2.03	0.57
6:D:890:VAL:HG23	11:D:8341:HOH:O	2.03	0.57
5:C:626:ARG:H	5:C:639:GLN:HE21	1.50	0.57
5:M:1032:PHE:O	5:M:1033:GLY:O	2.21	0.57
5:M:546:LEU:CD1	5:M:565:GLN:HE22	2.17	0.57
5:C:959:PRO:HG2	11:C:1413:HOH:O	2.03	0.57
6:D:810:GLU:HB3	11:D:8233:HOH:O	2.03	0.57
5:C:1101:THR:OG1	6:D:5:VAL:HG12	2.03	0.57
5:M:134:ARG:HH11	5:M:392:SER:CB	2.17	0.57
5:C:495:THR:HG23	11:C:1226:HOH:O	2.03	0.57
1:X:6:DT:H2''	1:X:7:DC:C6	2.39	0.57
5:M:535:SER:HB3	5:M:537:LYS:NZ	2.19	0.57
5:C:573:ARG:HB3	5:C:670:GLN:HE22	1.69	0.57
6:N:149:LYS:HD2	6:N:150:ARG:H	1.69	0.57
6:D:400:VAL:HG22	6:D:443:VAL:HG21	1.85	0.57
6:N:62:LYS:HG3	6:N:75:ARG:NH1	2.19	0.57
6:D:30:GLU:HB3	6:D:40:GLU:CB	2.34	0.57
7:O:32:ARG:HB2	7:O:32:ARG:CZ	2.34	0.57
6:N:677:LEU:HD23	6:N:683:ILE:HG13	1.86	0.57
2:Y:14:G:H4'	11:Y:1734:HOH:O	2.03	0.57
2:H:10:G:H2'	2:H:11:C:H6	1.66	0.57
2:H:13:C:H2'	2:H:14:G:C8	2.39	0.57
6:N:637:LEU:HD11	6:N:641:GLN:HB2	1.86	0.57
4:K:42:ARG:HH21	4:L:31:GLY:C	2.08	0.57
5:C:577:PRO:HB3	5:C:842:ARG:NH2	2.18	0.57
5:C:99:GLN:HB3	5:C:109:LYS:CD	2.34	0.57
5:M:205:GLU:HA	5:M:209:ARG:NH1	2.20	0.57
5:C:264:PRO:HG3	11:C:1383:HOH:O	2.04	0.57
4:L:123:MET:C	4:L:125:PRO:HD3	2.24	0.57
6:N:399:ARG:HE	6:N:431:VAL:CG2	2.18	0.57
6:D:30:GLU:HB3	6:D:40:GLU:CG	2.34	0.57
6:D:444:VAL:HB	11:D:8164:HOH:O	2.04	0.57
5:M:79:PRO:HG2	5:M:82:GLU:HB2	1.85	0.57
6:D:614:PHE:CE2	6:D:1438:ALA:HB1	2.39	0.57
11:Y:1707:HOH:O	5:M:777:ILE:HG21	2.03	0.57
6:D:959:GLU:CD	6:D:959:GLU:H	2.04	0.57
6:N:510:GLU:HB2	6:N:511:TRP:CZ3	2.39	0.57
6:D:1418:LYS:HD3	6:D:1419:PRO:HD2	1.85	0.57
4:K:145:ASP:HB3	11:K:1799:HOH:O	2.03	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:K:49:PRO:HB3	4:K:148:VAL:HG22	1.86	0.57
7:O:33:HIS:HB2	7:O:37:ASN:ND2	2.18	0.57
5:M:1031:ARG:HG3	6:N:621:LYS:HB3	1.86	0.57
6:D:793:THR:HG21	6:D:906:GLN:CG	2.33	0.57
6:N:394:LEU:HG	6:N:396:VAL:HG23	1.85	0.57
4:L:58:ILE:HG21	4:L:68:ILE:HD11	1.85	0.57
5:C:1030:GLN:NE2	6:D:628:ARG:HD3	2.20	0.57
6:D:155:ASP:O	6:D:159:ARG:HG3	2.04	0.57
2:Y:9:G:O2'	2:Y:10:G:H5'	2.04	0.57
6:D:879:ARG:NH1	6:D:879:ARG:HG3	2.17	0.57
5:C:584:GLU:H	5:C:584:GLU:CD	2.07	0.57
4:K:181:VAL:HG21	5:M:939:ARG:HH11	1.70	0.57
5:M:975:TYR:HE1	11:M:1220:HOH:O	1.86	0.57
5:C:468:ARG:HE	5:C:487:THR:N	2.02	0.57
6:D:525:ARG:HB2	6:D:538:SER:HB3	1.86	0.57
4:B:170:VAL:HG11	6:D:848:GLU:OE1	2.04	0.57
6:N:28:LYS:HG3	6:N:29:PRO:HD2	1.87	0.57
5:M:841:ASN:HD22	5:M:841:ASN:C	2.07	0.57
5:M:166:PRO:HB3	11:M:1157:HOH:O	2.03	0.57
5:M:452:ILE:HD12	5:M:452:ILE:N	2.19	0.57
6:D:501:ALA:HB1	6:D:1453:ALA:HB2	1.87	0.57
6:N:1191:PRO:HG3	11:N:9238:HOH:O	2.03	0.57
6:N:758:GLU:HA	7:O:20:THR:HG21	1.86	0.57
6:N:1336:LEU:HA	6:N:1344:VAL:CG2	2.34	0.57
6:D:772:PRO:HB3	6:D:1224:VAL:CG1	2.34	0.57
5:M:205:GLU:HA	5:M:209:ARG:CZ	2.34	0.57
6:N:1083:ASP:O	6:N:1087:ARG:HG2	2.05	0.57
4:A:43:ILE:HG13	4:A:218:LEU:CD1	2.33	0.57
6:N:583:ASP:CG	6:N:586:ARG:HG3	2.25	0.57
1:G:20:DG:H4'	5:C:394:PHE:CE1	2.39	0.57
2:Y:11:C:H2'	2:Y:12:G:H8	1.66	0.57
5:C:971:LYS:HD2	5:C:986:PRO:HG2	1.87	0.57
1:G:13:DT:H5''	6:D:1093:TYR:HE2	1.68	0.57
6:D:1263:PHE:HE2	6:D:1371:VAL:HG11	1.69	0.57
4:B:85:LEU:HG	4:B:127:LEU:CD2	2.32	0.57
6:N:1129:THR:HG23	6:N:1130:ARG:H	1.69	0.57
6:D:1103:HIS:CD2	6:D:1463:LYS:HB2	2.40	0.57
6:N:139:GLY:HA2	6:N:451:ASP:O	2.05	0.57
5:M:567:GLN:O	5:M:997:LEU:HD12	2.05	0.57
4:A:221:HIS:HB3	4:B:36:LEU:HD21	1.86	0.57
6:D:1020:LEU:HD21	6:D:1038:LEU:HD12	1.86	0.57
4:L:214:ALA:O	4:L:217:ILE:HG22	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:100:LEU:HD22	4:A:102:LYS:HE2	1.87	0.57
5:M:498:GLN:OE1	6:N:1067:VAL:HB	2.05	0.57
6:N:1023:MET:O	6:N:1028:ALA:HB3	2.05	0.57
6:D:1224:VAL:HA	6:D:1227:GLN:OE1	2.05	0.57
6:D:1216:SER:CB	7:E:16:LYS:H	2.18	0.57
5:M:121:MET:HE3	5:M:125:GLY:HA2	1.87	0.57
5:M:208:ALA:HB3	5:M:209:ARG:HH21	1.70	0.57
6:D:1332:PRO:HG3	6:D:1347:TYR:CE2	2.37	0.57
6:D:1335:LEU:HD22	6:D:1344:VAL:HG13	1.86	0.57
4:L:124:ASN:OD1	4:L:127:LEU:HB2	2.05	0.57
6:N:1153:VAL:HG12	6:N:1155:VAL:HG13	1.86	0.57
6:D:1485:GLN:HE21	7:E:79:LEU:H	1.51	0.57
5:M:693:GLU:HA	5:M:696:LYS:CD	2.34	0.57
5:C:834:GLN:HB2	11:C:1129:HOH:O	2.04	0.57
4:A:68:ILE:HD12	4:A:68:ILE:H	1.69	0.57
5:M:1046:ALA:HB2	11:N:9022:HOH:O	2.03	0.57
5:C:188:LYS:HD3	11:C:1301:HOH:O	2.03	0.57
4:K:138:LEU:HD11	4:K:140:MET:SD	2.44	0.57
5:C:1049:LEU:HD11	5:C:1053:LEU:HD11	1.87	0.57
1:X:19:DC:H5"	5:M:1001:VAL:HB	1.87	0.57
5:C:144:PRO:CG	5:C:265:ARG:HH21	2.13	0.57
5:C:472:ARG:HG3	5:C:534:VAL:HG22	1.85	0.57
6:N:434:ARG:HB3	6:N:434:ARG:HH11	1.70	0.57
5:C:192:PRO:HD2	5:C:195:LEU:CB	2.32	0.57
5:M:691:SER:OG	5:M:694:LEU:HG	2.04	0.57
5:M:162:ILE:O	5:M:164:PRO:HD3	2.05	0.57
5:C:1105:LYS:HZ3	5:C:1107:ASN:HB2	1.70	0.57
5:C:1103:ASP:OD1	6:D:3:LYS:HD3	2.05	0.57
6:N:54:LYS:CD	6:N:55:ASP:H	2.17	0.57
2:Y:7:G:C8	2:Y:7:G:C5'	2.88	0.57
6:D:657:LEU:HD22	6:D:691:LEU:CD2	2.35	0.57
7:O:17:TYR:O	7:O:21:VAL:HG23	2.05	0.57
4:K:42:ARG:CZ	4:L:34:VAL:HB	2.35	0.57
6:D:455:ARG:C	6:D:460:ALA:HB2	2.25	0.57
5:M:174:LEU:HD22	5:M:307:LEU:HD13	1.87	0.57
4:L:79:ILE:HA	4:L:82:LEU:HD12	1.87	0.57
5:C:531:PHE:HB2	11:C:1172:HOH:O	2.05	0.57
5:M:1085:PHE:O	5:M:1089:VAL:HG23	2.05	0.57
5:C:975:TYR:HA	5:C:982:PRO:HA	1.86	0.57
6:D:65:ARG:CG	6:D:66:GLN:H	2.18	0.57
5:M:400:PRO:HG2	5:M:593:ALA:HB2	1.87	0.57
6:D:1406:ARG:HD2	6:D:1412:LYS:HZ3	1.70	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:161:LEU:HD13	6:N:452:ILE:HD13	1.87	0.57
4:B:88:ARG:HG3	11:B:365:HOH:O	2.04	0.57
5:C:51:THR:OG1	5:C:348:LEU:HG	2.05	0.57
6:N:1025:GLN:NE2	6:N:1025:GLN:HA	2.20	0.57
5:C:949:LYS:HA	11:C:1221:HOH:O	2.05	0.56
6:N:1057:VAL:HG13	6:N:1069:GLU:HB3	1.87	0.56
6:N:1045:MET:HB3	6:N:1073:SER:HA	1.87	0.56
7:O:41:GLU:HB2	7:O:45:ARG:NE	2.19	0.56
5:M:578:VAL:CG2	5:M:579:VAL:HG12	2.34	0.56
5:M:871:LEU:HD11	5:M:992:MET:SD	2.44	0.56
5:M:286:SER:HB3	11:M:1441:HOH:O	2.05	0.56
5:M:1050:GLN:OE1	6:N:1471:LEU:HA	2.04	0.56
5:M:716:LYS:HZ1	6:N:36:THR:HG23	1.69	0.56
2:Y:8:C:H5'	11:Y:1683:HOH:O	2.04	0.56
5:C:338:GLU:O	5:C:341:THR:HG22	2.05	0.56
1:G:22:DC:H4'	5:C:388:ARG:CD	2.33	0.56
6:D:1436:SER:HB3	11:D:8024:HOH:O	2.05	0.56
7:E:19:LEU:O	7:E:23:VAL:HG23	2.05	0.56
5:M:292:ARG:HH11	5:M:299:LYS:HD3	1.70	0.56
6:N:714:GLN:NE2	6:N:765:SER:HA	2.20	0.56
4:A:225:PHE:HB2	11:A:325:HOH:O	2.05	0.56
6:N:1091:SER:OG	6:N:1234:THR:HG23	2.04	0.56
5:M:805:ARG:HH11	5:M:805:ARG:HB3	1.70	0.56
6:N:824:ASN:HD22	6:N:824:ASN:C	2.09	0.56
4:A:52:ALA:HB2	4:A:170:VAL:O	2.04	0.56
4:L:43:ILE:O	4:L:47:SER:HB3	2.05	0.56
5:C:412:ALA:HB1	5:C:419:THR:HG21	1.87	0.56
5:C:676:ILE:HD13	6:D:948:THR:HB	1.88	0.56
6:D:1042:ARG:O	6:D:1057:VAL:HB	2.04	0.56
6:N:1189:ARG:HD2	6:N:1204:CYS:SG	2.46	0.56
6:D:1226:ALA:HB2	11:D:8257:HOH:O	2.05	0.56
6:D:758:GLU:HA	6:D:762:GLN:NE2	2.20	0.56
6:D:136:ASP:HB3	6:D:455:ARG:HE	1.70	0.56
6:N:80:VAL:HG12	6:N:81:THR:O	2.05	0.56
5:M:121:MET:CE	5:M:125:GLY:HA2	2.34	0.56
6:N:1493:LYS:O	6:N:1496:GLU:HG2	2.04	0.56
5:C:148:PHE:CZ	5:C:281:LEU:HB3	2.39	0.56
5:M:39:ARG:HG3	5:M:39:ARG:HH11	1.68	0.56
6:D:1236:LEU:HD11	6:D:1361:VAL:HG23	1.88	0.56
7:O:13:VAL:HG21	7:O:19:LEU:HB2	1.88	0.56
7:E:59:ASN:N	7:E:59:ASN:HD22	2.02	0.56
6:D:696:HIS:NE2	7:E:54:LEU:HD11	2.20	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:80:VAL:HG22	11:E:151:HOH:O	2.06	0.56
6:N:828:LYS:HG2	6:N:863:VAL:HG22	1.86	0.56
6:N:806:PHE:HE1	6:N:813:LEU:HB3	1.69	0.56
5:M:886:LEU:HD12	6:N:951:ILE:HG13	1.87	0.56
5:M:546:LEU:HD12	5:M:565:GLN:NE2	2.18	0.56
5:C:186:VAL:HG11	11:C:1130:HOH:O	2.05	0.56
5:C:943:VAL:HG23	5:C:985:GLY:H	1.70	0.56
5:C:159:ILE:HD13	11:C:1523:HOH:O	2.06	0.56
6:D:703:ASN:ND2	6:D:704:ARG:H	2.03	0.56
7:E:41:GLU:HG2	7:E:42:PRO:HD3	1.87	0.56
6:N:799:LYS:HE2	6:N:824:ASN:O	2.04	0.56
6:N:794:GLN:HG3	6:N:795:VAL:N	2.20	0.56
6:N:36:THR:C	6:N:38:LYS:H	2.07	0.56
4:B:201:THR:HG21	4:B:205:VAL:HG23	1.87	0.56
6:N:1238:MET:HA	6:N:1241:PHE:CE2	2.40	0.56
5:M:257:VAL:HA	11:M:1334:HOH:O	2.04	0.56
5:M:1054:THR:HG21	5:M:1079:PRO:HB3	1.87	0.56
4:L:92:PRO:HA	4:L:146:ARG:NH2	2.20	0.56
4:L:92:PRO:HA	4:L:146:ARG:CZ	2.35	0.56
7:O:84:ARG:HD3	11:O:1385:HOH:O	2.05	0.56
1:X:2:DC:H2"	1:X:3:DC:C6	2.40	0.56
5:C:333:ILE:HD13	5:C:467:ILE:HG13	1.86	0.56
5:C:838:LYS:O	5:C:839:LEU:HD23	2.06	0.56
6:D:700:VAL:HG22	6:D:718:PRO:HG3	1.87	0.56
5:M:532:MET:HB3	11:M:1310:HOH:O	2.04	0.56
5:C:577:PRO:HA	5:C:671:ASN:ND2	2.20	0.56
6:D:754:PHE:HE1	7:E:28:GLN:HE22	1.53	0.56
6:N:988:ARG:O	6:N:992:ILE:HG13	2.05	0.56
6:D:117:ASP:N	6:D:150:ARG:NH1	2.53	0.56
6:D:116:LEU:HD11	6:D:464:LEU:HB3	1.86	0.56
6:N:47:GLU:OE1	6:N:53:ILE:HB	2.06	0.56
6:D:847:ASP:O	6:D:851:LEU:HG	2.06	0.56
6:N:1271:LYS:NZ	6:N:1331:ASP:HB2	2.20	0.56
6:N:481:MET:HE3	6:N:1388:ARG:HG3	1.88	0.56
5:M:48:PHE:O	5:M:52:PHE:HB2	2.05	0.56
5:M:668:LEU:HD13	5:M:995:MET:HE2	1.87	0.56
6:D:65:ARG:H	6:D:68:PHE:HE1	1.51	0.56
6:D:36:THR:C	6:D:38:LYS:H	2.09	0.56
5:M:611:ILE:HG13	5:M:625:LEU:HD21	1.87	0.56
4:L:187:GLY:HA3	11:L:397:HOH:O	2.05	0.56
6:N:704:ARG:HD3	6:N:738:ALA:HB2	1.87	0.56
4:B:160:ASP:HB3	11:B:345:HOH:O	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:42:ARG:NH2	4:B:34:VAL:HB	2.20	0.56
6:N:1336:LEU:HA	6:N:1344:VAL:HG21	1.86	0.56
1:G:16:DG:H5"	5:C:1031:ARG:HB3	1.88	0.56
6:D:117:ASP:HB2	6:D:495:ARG:HH21	1.69	0.56
6:N:792:ILE:O	6:N:878:GLY:HA3	2.04	0.56
5:C:284:ARG:HG3	5:C:285:LEU:N	2.19	0.56
4:A:54:THR:HB	4:A:143:ARG:CG	2.35	0.56
5:M:457:ALA:N	5:M:540:PHE:O	2.36	0.56
6:D:29:PRO:HG3	6:D:549:ASN:HD21	1.69	0.56
6:N:119:SER:HB2	6:N:123:LEU:CB	2.33	0.56
5:M:577:PRO:HG3	5:M:993:PHE:CE1	2.41	0.56
6:D:1267:ARG:HG2	6:D:1267:ARG:O	2.05	0.56
4:B:16:GLN:HG3	11:B:397:HOH:O	2.05	0.56
1:X:14:DT:H5'	1:X:14:DT:H6	1.70	0.56
5:C:437:ARG:HA	5:C:467:ILE:HG21	1.86	0.56
5:C:451:LEU:C	5:C:452:ILE:HD12	2.26	0.56
2:H:11:C:O2'	2:H:12:G:H5"	2.05	0.56
6:N:180:LYS:HD2	6:N:180:LYS:H	1.69	0.56
5:C:697:ARG:O	5:C:699:PHE:N	2.39	0.56
7:O:46:PRO:C	7:O:47:LYS:HG2	2.25	0.56
6:D:136:ASP:OD1	6:D:463:GLN:HB3	2.05	0.56
6:N:853:VAL:HG11	6:N:860:LEU:HG	1.88	0.56
5:M:307:LEU:HD12	5:M:310:LEU:HD23	1.87	0.56
4:K:178:ALA:HB2	5:M:864:GLY:N	2.21	0.56
5:C:12:VAL:HG13	5:C:13:ILE:CG1	2.36	0.56
6:D:964:LEU:HD22	6:D:1058:ARG:HH21	1.70	0.56
5:M:626:ARG:HH22	5:M:637:LEU:HD13	1.70	0.56
5:C:804:VAL:HG11	5:C:824:ARG:NH2	2.19	0.56
5:C:232:GLU:O	5:C:235:LEU:HB3	2.05	0.56
6:N:960:LYS:NZ	6:N:1041:LEU:HD13	2.21	0.56
5:M:600:ASP:OD1	5:M:651:LYS:HB2	2.05	0.56
5:C:693:GLU:HA	5:C:696:LYS:HG3	1.88	0.56
4:B:117:VAL:HG22	11:B:392:HOH:O	2.06	0.56
4:K:206:THR:HG23	4:K:207:PRO:HD2	1.88	0.56
4:K:92:PRO:HD3	11:K:1047:HOH:O	2.05	0.56
11:M:1366:HOH:O	6:N:6:ARG:HB2	2.04	0.56
5:M:516:ARG:HE	6:N:1068:LEU:HD13	1.69	0.56
5:M:516:ARG:HH21	6:N:1068:LEU:HB3	1.71	0.56
5:C:265:ARG:NH1	5:C:267:TYR:HB3	2.20	0.56
5:M:1070:ILE:HG21	6:N:655:PRO:HB2	1.88	0.56
6:N:24:GLY:HA3	6:N:49:ILE:HG12	1.87	0.56
6:D:1124:GLN:HG2	6:D:1133:ARG:HG3	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:906:GLN:HB3	6:D:911:LEU:HD11	1.88	0.56
5:M:695:LEU:HD11	11:M:1250:HOH:O	2.05	0.56
6:D:1102:THR:HB	11:D:8257:HOH:O	2.04	0.56
5:M:260:LEU:HB2	11:M:1400:HOH:O	2.05	0.56
6:D:116:LEU:HD13	6:D:118:LEU:HD11	1.87	0.56
6:N:883:ALA:HB2	11:N:9040:HOH:O	2.04	0.56
5:C:162:ILE:HD12	5:C:172:ILE:HB	1.86	0.56
5:C:265:ARG:HD2	5:C:267:TYR:HB3	1.88	0.56
6:D:703:ASN:HD22	6:D:704:ARG:H	1.53	0.56
5:M:172:ILE:HG23	5:M:184:MET:HE3	1.87	0.56
7:E:30:LEU:O	7:E:35:PHE:HA	2.06	0.56
5:C:654:LEU:HD13	5:C:664:GLY:N	2.21	0.56
4:L:101:LEU:HA	11:L:368:HOH:O	2.06	0.56
6:D:1091:SER:HB3	6:D:1234:THR:OG1	2.05	0.56
5:M:1034:GLU:H	6:N:619:LEU:HD13	1.71	0.56
5:C:410:ILE:HD12	5:C:438:ILE:HG13	1.88	0.56
5:C:439:CYS:HB2	5:C:541:SER:HB2	1.87	0.56
4:L:197:LEU:HD23	4:L:199:ILE:HG13	1.87	0.56
6:D:137:PRO:HD2	6:D:453:ASP:CG	2.27	0.56
4:B:124:ASN:ND2	4:B:127:LEU:HD22	2.21	0.56
6:N:150:ARG:HD3	6:N:464:LEU:HD21	1.88	0.56
6:D:28:LYS:HB2	6:D:41:ARG:NH1	2.19	0.56
6:N:482:LYS:HE2	6:N:1384:PRO:HG2	1.88	0.56
5:C:897:LEU:HD23	5:C:924:VAL:HG21	1.88	0.56
5:M:290:LEU:HB3	5:M:302:VAL:HG12	1.88	0.56
6:N:1353:GLN:HB3	6:N:1357:ARG:HE	1.70	0.56
6:D:714:GLN:NE2	6:D:765:SER:HA	2.20	0.56
7:E:27:ALA:CB	7:E:61:VAL:HG12	2.35	0.56
7:E:40:LEU:HB3	7:E:72:ARG:HH21	1.68	0.56
3:I:3:DA:H3'	11:I:500:HOH:O	2.05	0.56
2:Y:8:C:O5'	2:Y:8:C:H6	1.89	0.56
6:N:783:ARG:CA	6:N:1028:ALA:HA	2.26	0.56
5:C:578:VAL:HG13	5:C:671:ASN:CB	2.29	0.56
6:D:1222:GLY:O	6:D:1225:ALA:HB3	2.06	0.56
7:O:54:LEU:HG	7:O:58:PRO:HG2	1.88	0.56
5:M:569:VAL:HG12	5:M:996:LYS:O	2.07	0.56
5:C:474:VAL:HG12	5:C:531:PHE:HA	1.88	0.56
7:O:13:VAL:HG13	7:O:75:PHE:CZ	2.41	0.56
5:M:1050:GLN:HE22	6:N:1470:ARG:C	2.09	0.56
5:C:358:ARG:HA	5:C:361:MET:HG2	1.87	0.56
7:O:27:ALA:CB	7:O:61:VAL:HG12	2.35	0.56
4:A:102:LYS:HZ2	4:A:139:ASN:HD21	1.54	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:680:ASP:HB2	5:C:682:TYR:CE2	2.40	0.56
5:C:233:GLU:HB3	11:C:1182:HOH:O	2.06	0.56
5:M:1057:SER:HB2	6:N:622:ARG:O	2.05	0.56
6:D:1197:ARG:HB3	6:D:1396:GLU:CG	2.36	0.55
6:D:1209:LEU:HD11	7:E:16:LYS:HD2	1.88	0.55
6:D:710:ARG:CG	6:D:772:PRO:HG2	2.34	0.55
5:C:150:PRO:HA	5:C:158:TYR:HB3	1.89	0.55
5:C:166:PRO:HD2	5:C:263:ASP:O	2.06	0.55
6:N:1121:PRO:CD	6:N:1346:ARG:HH21	2.14	0.55
4:L:59:GLU:CG	4:L:137:ARG:HH22	2.18	0.55
4:K:94:LEU:HD11	4:K:119:ASP:CG	2.25	0.55
6:D:1336:LEU:HD22	6:D:1421:LEU:HB2	1.87	0.55
6:D:957:PRO:CG	6:D:1007:VAL:HA	2.36	0.55
6:N:165:LYS:HG2	6:N:448:GLU:OE2	2.06	0.55
4:K:32:PHE:O	4:K:36:LEU:HG	2.05	0.55
5:M:697:ARG:O	5:M:699:PHE:N	2.38	0.55
4:L:101:LEU:HD11	4:L:113:ASP:HB3	1.89	0.55
7:E:31:LEU:HD21	7:E:60:ALA:HB2	1.88	0.55
2:Y:9:G:C8	2:Y:9:G:H5'	2.41	0.55
5:C:676:ILE:HG21	5:C:988:VAL:HG13	1.88	0.55
6:D:700:VAL:HG12	6:D:749:VAL:HG12	1.88	0.55
4:K:112:ARG:HG2	4:K:125:PRO:CB	2.37	0.55
5:M:946:ARG:HB3	5:M:946:ARG:NH1	2.07	0.55
5:C:850:ALA:HA	6:D:632:VAL:HG11	1.87	0.55
5:C:1016:ILE:CD1	5:C:1016:ILE:H	2.16	0.55
6:D:462:GLN:HG2	6:D:466:LYS:NZ	2.21	0.55
6:D:114:THR:HG22	6:D:495:ARG:HA	1.87	0.55
5:C:267:TYR:HB2	5:C:272:ALA:CB	2.37	0.55
6:N:1258:ARG:NH1	6:N:1268:PRO:HB3	2.16	0.55
6:N:834:THR:HG22	6:N:838:ARG:NH1	2.21	0.55
6:D:804:LEU:HD23	6:D:804:LEU:H	1.71	0.55
6:N:120:ALA:HB2	11:N:9298:HOH:O	2.07	0.55
5:C:1020:PRO:O	5:C:1021:LEU:HD12	2.07	0.55
5:C:965:GLU:O	5:C:969:GLN:HG2	2.05	0.55
6:N:1016:PRO:HB3	11:N:9351:HOH:O	2.04	0.55
6:N:1165:TYR:CE2	6:N:1214:PRO:HB3	2.42	0.55
6:D:473:LEU:O	6:D:477:LEU:HG	2.06	0.55
5:M:943:VAL:HG23	5:M:985:GLY:H	1.72	0.55
5:C:472:ARG:HG2	5:C:483:VAL:HG22	1.88	0.55
5:C:759:THR:HB	5:C:785:VAL:CG1	2.33	0.55
4:L:58:ILE:HG22	4:L:61:VAL:H	1.71	0.55
6:N:402:PRO:HA	6:N:443:VAL:HG23	1.88	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:173:ASP:HB2	5:M:185:LYS:NZ	2.22	0.55
5:M:134:ARG:HD3	5:M:392:SER:HB3	1.86	0.55
4:B:48:ILE:HG13	11:B:331:HOH:O	2.07	0.55
5:C:92:ALA:HB2	5:C:120:LEU:HD11	1.87	0.55
4:B:30:ARG:HH22	5:C:854:PRO:CG	2.20	0.55
6:D:808:THR:OG1	6:D:809:PRO:HD3	2.07	0.55
5:C:401:LEU:HD21	5:C:565:GLN:HE21	1.71	0.55
5:M:265:ARG:HB3	5:M:267:TYR:CD2	2.42	0.55
5:M:138:SER:HB3	5:M:333:ILE:HG23	1.88	0.55
5:M:975:TYR:HA	5:M:982:PRO:HA	1.89	0.55
6:D:1007:VAL:HG12	6:D:1011:PHE:CE2	2.40	0.55
4:K:72:LYS:HE3	5:M:641:PRO:O	2.06	0.55
5:C:527:GLU:OE1	5:C:528:GLU:HG3	2.06	0.55
5:C:136:ILE:CG2	5:C:336:VAL:HG22	2.36	0.55
4:B:30:ARG:HH22	5:C:854:PRO:HG2	1.72	0.55
5:M:115:LEU:HD12	5:M:115:LEU:O	2.06	0.55
4:K:57:TYR:CE2	4:K:59:GLU:HA	2.41	0.55
5:C:780:GLU:HG2	11:C:1242:HOH:O	2.06	0.55
4:A:183:ASP:HB3	11:A:321:HOH:O	2.07	0.55
6:D:887:ALA:HB3	11:D:8116:HOH:O	2.06	0.55
5:C:139:GLN:O	5:C:333:ILE:HA	2.07	0.55
6:N:1209:LEU:HG	6:N:1219:GLU:OE1	2.07	0.55
6:N:1335:LEU:CD2	6:N:1344:VAL:HG22	2.27	0.55
6:D:117:ASP:H	6:D:150:ARG:HH12	1.55	0.55
5:M:987:ILE:HG12	6:N:948:THR:HG21	1.88	0.55
5:C:5:ARG:NE	5:C:8:ARG:HH12	2.00	0.55
5:M:285:LEU:O	5:M:285:LEU:HD23	2.06	0.55
5:C:431:HIS:NE2	5:C:432:ARG:HB2	2.22	0.55
6:N:1027:GLY:HA2	11:N:9239:HOH:O	2.06	0.55
5:M:433:THR:CG2	5:M:488:ALA:HB1	2.35	0.55
6:N:957:PRO:HG2	6:N:1007:VAL:HG22	1.87	0.55
6:D:112:ILE:HB	6:D:512:MET:SD	2.46	0.55
6:N:52:PRO:HD2	6:N:85:VAL:CG2	2.32	0.55
1:X:17:DC:H2''	1:X:18:DG:C5'	2.37	0.55
6:N:116:LEU:HD21	6:N:464:LEU:HD22	1.88	0.55
6:N:119:SER:N	6:N:123:LEU:HD22	2.17	0.55
6:D:1481:VAL:HG12	6:D:1481:VAL:O	2.07	0.55
5:M:626:ARG:HH12	5:M:637:LEU:CB	2.17	0.55
4:B:41:ARG:HD2	4:B:177:VAL:CG2	2.37	0.55
6:N:1105:ILE:HD13	11:N:9367:HOH:O	2.05	0.55
6:N:161:LEU:HD22	6:N:452:ILE:HG21	1.87	0.55
6:D:794:GLN:HB3	6:D:1017:PHE:HZ	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:153:ALA:HA	4:A:156:HIS:NE2	2.22	0.55
5:C:1045:ALA:HB1	5:C:1048:THR:HB	1.89	0.55
6:N:827:ILE:H	6:N:827:ILE:HD12	1.72	0.55
6:D:801:GLY:HA2	11:D:8362:HOH:O	2.06	0.55
6:N:18:ILE:CG2	6:N:518:PRO:HG3	2.22	0.55
5:C:140:ILE:CG2	5:C:333:ILE:HG13	2.34	0.55
5:C:141:HIS:HA	11:C:1222:HOH:O	2.06	0.55
5:C:411:SER:OG	5:C:413:LEU:HD12	2.07	0.55
5:C:949:LYS:HD3	6:D:796:ARG:NH2	2.19	0.55
5:M:141:HIS:CB	5:M:418:LEU:HD23	2.33	0.55
4:K:177:VAL:O	5:M:864:GLY:CA	2.55	0.55
4:K:181:VAL:HG21	5:M:939:ARG:NH1	2.20	0.55
1:G:18:DG:H8	1:G:18:DG:H5'	1.72	0.55
6:D:554:LEU:HD21	6:D:571:LYS:CE	2.36	0.55
6:N:137:PRO:HB2	6:N:138:LYS:HD3	1.89	0.55
5:M:660:ALA:HB1	5:M:667:ALA:O	2.06	0.55
6:N:43:GLY:N	11:N:9087:HOH:O	2.40	0.55
4:K:72:LYS:HG3	5:M:641:PRO:HB2	1.87	0.55
5:M:752:GLY:O	6:N:679:ARG:HG2	2.06	0.55
5:M:176:VAL:C	5:M:178:PRO:HD3	2.27	0.55
5:M:1067:TYR:CE1	5:M:1071:ILE:HD11	2.41	0.55
5:M:719:PRO:HB2	11:M:1137:HOH:O	2.07	0.55
5:M:730:SER:O	5:M:734:LEU:HD13	2.07	0.55
4:L:205:VAL:HG11	11:L:322:HOH:O	2.05	0.55
6:N:1097:LYS:O	6:N:1101:VAL:HG23	2.07	0.55
6:N:1425:THR:HG22	6:N:1429:LEU:CD1	2.36	0.55
5:C:437:ARG:NE	5:C:469:THR:HB	2.20	0.55
5:C:753:ASP:O	5:C:792:VAL:HG23	2.07	0.55
6:N:183:GLU:HG2	6:N:184:GLU:N	2.21	0.55
5:M:535:SER:HB3	5:M:537:LYS:HZ2	1.71	0.55
6:D:1147:ARG:HB3	6:D:1188:VAL:CG2	2.37	0.55
6:N:123:LEU:O	6:N:126:VAL:HB	2.07	0.55
6:D:119:SER:N	6:D:123:LEU:HD22	2.18	0.55
4:A:206:THR:HG23	4:A:208:LEU:H	1.72	0.55
6:D:1495:ILE:HG22	6:D:1499:ARG:HE	1.72	0.55
4:K:5:LYS:O	4:K:8:ALA:HB2	2.07	0.55
4:K:150:TYR:CE2	4:K:152:PRO:HG3	2.42	0.55
5:C:290:LEU:HB3	5:C:302:VAL:HG12	1.88	0.55
5:C:397:GLU:OE2	5:C:633:GLN:HG2	2.07	0.55
5:M:1098:ASP:HB2	6:N:21:TRP:CZ2	2.42	0.55
6:N:737:ASN:ND2	10:N:4999:APC:O3'	2.37	0.55
6:N:840:LYS:HE2	6:N:841:TYR:CE2	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:K:161:ARG:HA	11:K:728:HOH:O	2.07	0.55
5:M:1022:GLY:HA3	5:M:1026:GLN:O	2.07	0.55
4:B:55:SER:OG	4:B:143:ARG:HD3	2.06	0.55
6:D:1105:ILE:HD12	6:D:1373:ARG:NH2	2.19	0.55
5:M:139:GLN:HE21	5:M:418:LEU:HD22	1.72	0.55
4:K:30:ARG:HH12	5:M:938:LYS:HD2	1.70	0.55
5:C:182:VAL:HG12	5:C:193:LEU:CD1	2.37	0.55
5:C:194:VAL:HG12	5:C:204:GLN:HE22	1.72	0.55
5:M:12:VAL:HB	5:M:472:ARG:NH2	2.22	0.55
6:D:1389:LEU:HG	6:D:1390:LEU:HG	1.89	0.55
5:M:239:PHE:CE1	5:M:254:VAL:HB	2.33	0.55
6:N:1393:GLN:HB2	6:N:1398:TRP:CZ2	2.42	0.55
6:D:899:LEU:HD12	6:D:900:ILE:HG23	1.88	0.55
6:N:1457:ASP:O	6:N:1459:LEU:HD12	2.07	0.55
4:B:154:GLU:CD	4:B:155:LYS:HZ1	2.10	0.55
6:D:30:GLU:HB3	6:D:40:GLU:HB3	1.89	0.55
5:M:609:ASN:N	5:M:609:ASN:ND2	2.54	0.55
6:N:696:HIS:CD2	7:O:59:ASN:HB2	2.41	0.55
6:D:1266:ARG:HG2	6:D:1267:ARG:N	2.20	0.55
6:D:57:GLU:HG2	6:D:58:CYS:N	2.21	0.55
5:C:374:ASN:ND2	5:C:377:PRO:HD3	2.21	0.55
5:C:751:PRO:HA	5:C:792:VAL:HB	1.89	0.55
1:G:12:DG:H2''	1:G:13:DT:O5'	2.06	0.55
5:M:700:TYR:CB	5:M:833:LEU:HD22	2.37	0.55
6:D:618:LEU:HB3	6:D:619:LEU:HD23	1.89	0.55
6:D:119:SER:HB2	6:D:123:LEU:CB	2.37	0.55
6:D:403:PHE:CD2	6:D:444:VAL:HG23	2.41	0.55
5:M:173:ASP:O	5:M:184:MET:HA	2.06	0.55
6:D:474:GLU:O	6:D:478:LEU:HG	2.06	0.55
4:K:73:GLU:OE1	4:K:130:ALA:HA	2.06	0.55
4:B:181:VAL:HB	11:B:355:HOH:O	2.06	0.55
6:D:630:VAL:HA	6:D:744:GLN:CG	2.37	0.55
2:H:3:G:H1'	11:C:1128:HOH:O	2.06	0.55
4:B:7:LYS:HG2	11:B:368:HOH:O	2.07	0.55
6:N:1263:PHE:O	6:N:1424:VAL:HG12	2.07	0.54
2:Y:7:G:H8	2:Y:7:G:O5'	1.90	0.54
2:H:7:G:C5'	2:H:7:G:C8	2.91	0.54
6:N:1192:LEU:HD22	6:N:1345:GLU:HG2	1.89	0.54
6:D:1425:THR:HG21	11:D:8492:HOH:O	2.06	0.54
6:N:520:LEU:CD1	6:N:521:PRO:HD2	2.35	0.54
5:C:313:LEU:CB	5:C:321:GLU:HG3	2.37	0.54
6:D:447:VAL:HG23	6:D:448:GLU:N	2.21	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1125:PRO:C	6:N:1130:ARG:HH12	2.11	0.54
7:O:13:VAL:HG11	7:O:18:ARG:HB3	1.89	0.54
6:N:482:LYS:HB2	6:N:1388:ARG:NH2	2.21	0.54
6:D:890:VAL:HG11	6:D:922:LEU:CD1	2.37	0.54
5:M:587:VAL:HG11	5:M:666:LEU:HD22	1.88	0.54
4:A:53:VAL:HG13	4:A:142:VAL:HG12	1.89	0.54
5:C:1:MET:CG	5:C:900:ARG:HH22	2.19	0.54
5:C:20:GLU:O	5:C:24:GLU:HG2	2.07	0.54
6:N:584:ASN:CG	6:N:590:PRO:HD2	2.27	0.54
5:M:716:LYS:NZ	6:N:36:THR:HA	2.21	0.54
6:D:630:VAL:HA	6:D:744:GLN:HG2	1.89	0.54
6:N:1500:LYS:HB3	11:N:9412:HOH:O	2.07	0.54
6:D:827:ILE:HG22	6:D:837:GLY:HA2	1.88	0.54
6:D:675:ARG:HA	6:D:678:GLU:CD	2.27	0.54
5:C:714:ASP:HB2	5:C:818:GLY:O	2.07	0.54
4:L:219:ARG:HB2	11:L:344:HOH:O	2.06	0.54
4:B:24:VAL:HG22	4:B:196:THR:HB	1.90	0.54
5:C:842:ARG:HH21	5:C:993:PHE:HB3	1.73	0.54
6:D:115:LEU:HD13	6:D:502:PHE:CD1	2.42	0.54
6:D:1087:ARG:HD2	6:D:1256:LEU:HD22	1.89	0.54
6:D:445:ARG:HG2	6:D:445:ARG:HH11	1.71	0.54
5:C:1032:PHE:O	5:C:1033:GLY:O	2.26	0.54
5:M:244:PRO:CD	5:M:245:GLY:H	2.20	0.54
5:M:666:LEU:HD11	5:M:668:LEU:HD21	1.88	0.54
5:C:814:GLU:HB3	11:C:1562:HOH:O	2.06	0.54
5:M:607:ASP:HB2	5:M:610:ARG:O	2.06	0.54
6:D:967:ALA:HA	11:D:8411:HOH:O	2.06	0.54
5:M:15:LEU:HG	5:M:458:TYR:CE1	2.43	0.54
6:N:141:ILE:HD13	6:N:450:TYR:O	2.07	0.54
6:N:171:LEU:HD21	6:N:192:ALA:CB	2.37	0.54
5:M:1060:ILE:HG23	5:M:1061:GLU:H	1.73	0.54
6:N:98:PRO:C	6:N:458:ALA:HB3	2.27	0.54
5:C:413:LEU:HD11	5:C:452:ILE:HD11	1.89	0.54
5:C:1046:ALA:HB2	6:D:1476:THR:H	1.72	0.54
6:D:165:LYS:HD3	6:D:448:GLU:CD	2.27	0.54
6:N:1120:VAL:O	6:N:1185:GLU:HA	2.08	0.54
4:L:59:GLU:CG	4:L:139:ASN:HD22	2.20	0.54
5:M:851:LYS:HE2	5:M:852:ILE:O	2.08	0.54
5:M:674:VAL:HG12	5:M:990:GLY:O	2.07	0.54
6:N:111:LYS:HG2	6:N:1452:ILE:HD11	1.89	0.54
6:D:119:SER:HB2	6:D:123:LEU:HD13	1.88	0.54
6:D:133:ILE:HG12	6:D:153:LEU:O	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:367:LEU:O	5:C:371:LYS:HB3	2.06	0.54
5:C:508:ILE:HG13	5:C:526:PRO:HB3	1.89	0.54
5:C:526:PRO:HG2	11:C:1239:HOH:O	2.06	0.54
4:K:152:PRO:HB3	4:K:154:GLU:OE2	2.07	0.54
4:A:83:LYS:HZ3	4:A:168:ASP:HB2	1.72	0.54
5:C:200:LEU:HD13	5:C:300:ASP:CG	2.27	0.54
5:M:250:ARG:HG2	5:M:253:ALA:HB3	1.90	0.54
6:D:685:ASP:HA	6:D:688:TRP:CD1	2.41	0.54
5:C:715:THR:HG22	5:C:717:LEU:HG	1.90	0.54
5:M:1008:ARG:NH2	5:M:1012:PRO:O	2.41	0.54
2:Y:5:C:H5'	5:M:764:GLU:OE2	2.06	0.54
5:C:432:ARG:HH22	6:D:1053:PHE:HZ	1.55	0.54
5:C:1060:ILE:HG23	5:C:1061:GLU:N	2.23	0.54
6:D:137:PRO:HD2	6:D:453:ASP:OD2	2.07	0.54
5:C:12:VAL:HG12	5:C:534:VAL:HG13	1.89	0.54
5:C:289:THR:O	5:C:291:ALA:N	2.40	0.54
6:D:204:LEU:HD12	6:D:396:VAL:HB	1.88	0.54
5:C:198:ARG:HH11	5:C:204:GLN:HG2	1.71	0.54
5:M:983:ILE:HG21	5:M:987:ILE:CD1	2.37	0.54
4:L:81:ASN:ND2	4:L:127:LEU:HD11	2.22	0.54
6:N:28:LYS:HB3	6:N:41:ARG:HD2	1.89	0.54
7:O:51:LEU:CD2	7:O:52:GLU:H	2.19	0.54
7:O:28:GLN:CB	7:O:32:ARG:HH22	2.21	0.54
5:M:598:GLU:HG3	5:M:623:TYR:OH	2.08	0.54
5:C:292:ARG:HD2	5:C:299:LYS:HE2	1.90	0.54
4:A:149:GLY:O	4:A:171:PHE:HB2	2.08	0.54
4:L:54:THR:HG22	4:L:158:ILE:HG13	1.89	0.54
6:D:971:LEU:HG	6:D:972:LEU:HD22	1.89	0.54
5:M:1008:ARG:NH1	5:M:1011:GLY:N	2.56	0.54
5:M:1060:ILE:HD12	5:M:1064:ASN:HD21	1.72	0.54
6:N:1192:LEU:HD21	6:N:1372:VAL:HG13	1.89	0.54
6:N:132:TYR:O	6:N:456:MET:HB3	2.06	0.54
6:D:622:ARG:HD2	11:D:8134:HOH:O	2.07	0.54
4:B:99:LEU:HD13	4:B:144:VAL:HG21	1.90	0.54
6:N:1255:GLY:O	6:N:1259:VAL:HG23	2.08	0.54
5:M:1085:PHE:HE2	6:N:1468:LEU:HG	1.72	0.54
5:C:897:LEU:O	5:C:899:GLN:HG2	2.08	0.54
5:M:554:ASP:HB3	5:M:880:MET:HB2	1.87	0.54
6:D:1485:GLN:NE2	7:E:79:LEU:N	2.55	0.54
6:D:38:LYS:HG2	6:D:39:PRO:CD	2.37	0.54
6:N:462:GLN:CB	6:N:513:ILE:HD13	2.37	0.54
11:N:9184:HOH:O	7:O:80:VAL:HG21	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:1067:TYR:CZ	5:M:1071:ILE:HD11	2.43	0.54
6:D:731:LEU:CD1	6:D:931:LEU:HB3	2.37	0.54
6:N:1054:GLU:HB3	11:N:9098:HOH:O	2.07	0.54
5:C:869:VAL:HA	11:C:1453:HOH:O	2.08	0.54
6:N:754:PHE:HE2	6:N:1476:THR:HG21	1.72	0.54
6:D:1373:ARG:HE	6:D:1374:GLN:HE21	1.56	0.54
5:M:332:ARG:HA	5:M:465:GLY:O	2.07	0.54
6:D:135:LEU:HD13	6:D:148:GLU:HB2	1.89	0.54
5:M:132:ALA:HB1	5:M:632:ASN:ND2	2.20	0.54
5:M:943:VAL:HG11	5:M:973:VAL:HG21	1.90	0.54
5:C:310:LEU:O	5:C:314:THR:HG23	2.07	0.54
5:C:182:VAL:HG21	5:C:220:GLY:C	2.28	0.54
6:D:394:LEU:H	6:D:394:LEU:HD23	1.73	0.54
5:C:479:VAL:HG23	11:C:1232:HOH:O	2.08	0.54
6:D:203:ALA:HB1	11:D:8118:HOH:O	2.06	0.54
5:C:806:LEU:CD1	5:C:813:VAL:HG21	2.37	0.54
5:M:164:PRO:HB2	11:M:1226:HOH:O	2.07	0.54
5:C:607:ASP:HB3	5:C:610:ARG:H	1.71	0.54
5:M:89:THR:HG21	5:M:383:ARG:NH2	2.23	0.54
4:L:92:PRO:HA	4:L:146:ARG:NH1	2.23	0.54
6:N:141:ILE:H	6:N:141:ILE:HD12	1.73	0.54
5:C:16:PRO:HD2	5:C:458:TYR:HA	1.89	0.54
6:D:989:TYR:O	6:D:993:LEU:HG	2.08	0.54
4:B:33:GLY:O	4:B:195:LEU:HD13	2.08	0.54
5:C:861:LEU:HD12	5:C:865:THR:HG23	1.88	0.54
5:C:577:PRO:HA	5:C:671:ASN:HD21	1.71	0.54
5:M:461:VAL:HA	11:M:1287:HOH:O	2.07	0.54
7:O:41:GLU:HG2	7:O:42:PRO:CD	2.37	0.54
5:M:304:LEU:CD2	5:M:305:PRO:HD3	2.29	0.54
6:D:133:ILE:CG2	6:D:454:ALA:HB1	2.37	0.54
5:M:837:ASP:O	5:M:848:VAL:HG13	2.06	0.54
6:D:685:ASP:HA	6:D:688:TRP:NE1	2.22	0.54
5:M:248:PRO:HA	11:M:1493:HOH:O	2.07	0.54
6:D:62:LYS:HD2	6:D:75:ARG:HD2	1.90	0.54
6:N:1246:VAL:HB	11:N:9392:HOH:O	2.07	0.54
4:A:6:LEU:HD11	11:A:387:HOH:O	2.07	0.54
4:A:115:LEU:HD22	11:A:317:HOH:O	2.07	0.54
6:N:90:MET:HE1	6:N:518:PRO:HB2	1.89	0.54
5:C:833:LEU:HD11	5:C:839:LEU:HD21	1.89	0.54
5:C:668:LEU:O	5:C:995:MET:HB3	2.08	0.54
5:C:1017:THR:HB	6:D:613:ARG:NH2	2.22	0.54
6:D:470:LEU:H	6:D:470:LEU:HD23	1.73	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:1097:LEU:HD22	5:M:1097:LEU:N	2.13	0.54
6:D:165:LYS:HA	6:D:199:LEU:CD1	2.38	0.54
6:D:708:LEU:HB3	6:D:1231:GLU:CB	2.35	0.54
5:C:496:ILE:HD12	5:C:496:ILE:N	2.23	0.54
6:D:111:LYS:HG2	6:D:1452:ILE:HD11	1.90	0.54
7:E:47:LYS:HA	7:E:54:LEU:HB3	1.88	0.54
4:L:159:LYS:HB2	11:L:316:HOH:O	2.08	0.54
6:N:583:ASP:OD1	6:N:586:ARG:HG3	2.07	0.54
4:A:24:VAL:HG13	4:A:196:THR:HG22	1.89	0.54
4:K:14:ARG:HH22	4:K:24:VAL:HG23	1.73	0.54
11:B:382:HOH:O	6:D:685:ASP:HB3	2.08	0.54
6:D:926:LYS:HA	6:D:929:ARG:HD2	1.88	0.54
4:A:101:LEU:HB3	4:A:114:PHE:CD2	2.43	0.54
6:D:1209:LEU:HD21	7:E:16:LYS:HZ1	1.73	0.54
6:D:799:LYS:O	6:D:829:VAL:HG22	2.08	0.54
5:C:100:LEU:HD22	5:C:372:LEU:CD2	2.38	0.54
5:C:1101:THR:OG1	5:C:1109:VAL:HB	2.08	0.54
6:N:776:GLU:HB3	6:N:912:LYS:HE2	1.90	0.54
5:C:397:GLU:OE1	5:C:631:SER:HB2	2.08	0.54
6:D:471:GLU:O	6:D:474:GLU:HB3	2.08	0.54
5:M:620:LEU:H	5:M:620:LEU:HD12	1.72	0.54
5:C:684:PHE:N	5:C:687:ALA:HB3	2.19	0.54
6:N:996:TRP:HB2	11:N:9079:HOH:O	2.07	0.54
6:N:131:LYS:HZ3	6:N:568:ARG:HB2	1.72	0.54
5:M:1095:LEU:HB2	5:M:1097:LEU:HD23	1.89	0.54
11:B:374:HOH:O	6:D:851:LEU:HD11	2.07	0.54
6:N:436:GLU:HB2	6:N:445:ARG:HG3	1.89	0.54
4:L:137:ARG:HD3	4:L:137:ARG:C	2.28	0.54
4:L:5:LYS:O	4:L:8:ALA:HB2	2.07	0.54
5:M:468:ARG:HE	5:M:487:THR:CA	2.21	0.54
6:D:1003:VAL:HG11	6:D:1041:LEU:HD23	1.90	0.54
6:D:964:LEU:HD21	6:D:1058:ARG:NE	2.22	0.54
6:N:868:TYR:HB2	6:N:873:LEU:HD12	1.89	0.54
4:A:91:ASN:ND2	4:A:93:SER:H	2.06	0.54
4:A:42:ARG:HH12	4:B:34:VAL:HG11	1.72	0.54
5:M:225:SER:HB2	11:M:1245:HOH:O	2.08	0.54
6:D:565:ILE:HB	6:D:566:ILE:HD12	1.90	0.54
6:N:177:ALA:HB3	6:N:205:TYR:OH	2.08	0.54
6:D:754:PHE:CG	7:E:24:ALA:HB1	2.43	0.53
6:D:127:LEU:HD22	6:D:460:ALA:HB3	1.90	0.53
4:A:22:GLU:OE2	4:A:198:ARG:HB3	2.08	0.53
6:N:478:LEU:O	6:N:1388:ARG:NH2	2.42	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:53:ILE:HA	6:D:86:ARG:NE	2.23	0.53
5:C:911:GLU:HB3	5:C:912:PRO:HD3	1.90	0.53
5:M:510:ALA:HB3	5:M:513:VAL:CG2	2.37	0.53
6:N:1462:LEU:O	6:N:1466:VAL:HG23	2.08	0.53
6:D:600:LEU:HD12	6:D:600:LEU:H	1.72	0.53
6:D:32:ILE:HB	6:D:527:MET:HE3	1.90	0.53
6:N:1122:LEU:HB3	11:N:9164:HOH:O	2.09	0.53
5:C:758:ARG:HH22	5:C:788:THR:HB	1.73	0.53
5:C:497:ALA:HA	5:C:515:ALA:HA	1.90	0.53
5:M:57:GLU:O	5:M:62:GLY:HA3	2.07	0.53
2:H:13:C:C4'	5:C:409:ARG:HH22	2.13	0.53
6:N:1168:MET:CE	6:N:1171:VAL:HB	2.37	0.53
6:N:1191:PRO:HG2	6:N:1370:ILE:CD1	2.38	0.53
6:N:875:THR:HB	6:N:880:ILE:HD11	1.90	0.53
5:C:157:ARG:NH1	5:C:217:LEU:HD22	2.23	0.53
5:C:285:LEU:HD12	5:C:288:ARG:O	2.07	0.53
6:N:168:THR:CG2	6:N:206:ARG:HH12	2.21	0.53
5:M:34:VAL:HB	5:M:38:LYS:CG	2.38	0.53
6:D:22:SER:CB	6:D:92:HIS:HB3	2.37	0.53
5:M:259:GLY:HA3	11:M:1270:HOH:O	2.08	0.53
4:K:72:LYS:HD2	5:M:606:VAL:HG11	1.90	0.53
6:N:462:GLN:HA	6:N:513:ILE:HD13	1.89	0.53
3:Z:10:DA:H5''	6:N:121:THR:HG21	1.89	0.53
6:N:1262:LEU:HD21	6:N:1351:GLU:HG3	1.91	0.53
3:I:11:DC:H5	11:I:331:HOH:O	1.91	0.53
4:L:73:GLU:HB3	4:L:77:GLU:CG	2.38	0.53
6:N:619:LEU:HD23	6:N:619:LEU:N	2.23	0.53
5:C:438:ILE:HG23	5:C:453:THR:OG1	2.08	0.53
6:N:1114:THR:CG2	6:N:1195:GLN:HB3	2.38	0.53
5:C:577:PRO:HG3	5:C:993:PHE:CE1	2.42	0.53
5:C:1049:LEU:CD1	5:C:1053:LEU:HD11	2.39	0.53
5:C:1054:THR:HG22	5:C:1082:PRO:HG3	1.89	0.53
4:L:94:LEU:HD11	4:L:119:ASP:HB3	1.91	0.53
6:N:394:LEU:HG	6:N:396:VAL:CG2	2.38	0.53
1:G:17:DC:H2''	1:G:18:DG:C5'	2.36	0.53
6:D:1184:GLN:HB2	6:N:559:ALA:HA	1.90	0.53
6:D:126:VAL:HG21	11:D:8125:HOH:O	2.07	0.53
6:N:817:GLU:O	6:N:821:VAL:HG23	2.08	0.53
5:C:134:ARG:HE	5:C:392:SER:HB3	1.72	0.53
6:D:1063:GLU:HG3	6:D:1064:GLY:N	2.24	0.53
5:C:1105:LYS:HZ2	5:C:1107:ASN:HD22	1.55	0.53
6:D:955:VAL:HG11	6:D:1015:TYR:CE2	2.42	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:136:ILE:HG22	5:C:336:VAL:HG22	1.88	0.53
6:N:473:LEU:O	6:N:477:LEU:HG	2.08	0.53
4:L:201:THR:HG21	4:L:205:VAL:HG23	1.90	0.53
4:K:171:PHE:O	4:K:173:PRO:HD3	2.08	0.53
5:M:512:ARG:HD3	5:M:523:ILE:HD11	1.90	0.53
7:O:91:ARG:HG2	11:O:2238:HOH:O	2.08	0.53
5:C:462:ASP:OD1	5:C:462:ASP:N	2.41	0.53
6:N:95:LEU:HD13	6:N:515:GLU:C	2.28	0.53
6:D:781:PRO:O	6:D:786:ILE:HD11	2.07	0.53
6:N:878:GLY:HA2	6:N:881:LEU:HD23	1.90	0.53
5:M:205:GLU:HB2	11:M:1398:HOH:O	2.07	0.53
5:C:274:ARG:HB2	5:C:285:LEU:CD1	2.38	0.53
4:B:5:LYS:O	4:B:8:ALA:HB2	2.08	0.53
6:D:957:PRO:HG2	6:D:1007:VAL:HA	1.89	0.53
6:D:1010:ASN:ND2	11:D:8083:HOH:O	2.41	0.53
5:M:344:PHE:HE2	5:M:378:LEU:HD21	1.74	0.53
6:N:1078:ARG:HH11	6:N:1078:ARG:HG3	1.72	0.53
5:M:1045:ALA:HB1	5:M:1048:THR:HB	1.90	0.53
5:M:334:ARG:O	5:M:339:LEU:HD11	2.09	0.53
5:M:642:ARG:HD2	11:M:1230:HOH:O	2.08	0.53
4:A:62:LEU:HD13	11:A:334:HOH:O	2.08	0.53
5:M:1019:GLN:HG2	5:M:1058:ASP:OD1	2.08	0.53
6:N:1148:VAL:HG13	6:N:1163:GLY:HA2	1.90	0.53
5:C:872:ASN:ND2	5:C:874:LEU:H	2.06	0.53
6:D:758:GLU:O	6:D:762:GLN:HG2	2.08	0.53
5:M:140:ILE:HD11	5:M:412:ALA:HB2	1.91	0.53
1:X:17:DC:H4'	6:N:628:ARG:CD	2.38	0.53
5:C:309:TYR:HA	5:C:312:ALA:HB3	1.90	0.53
4:L:58:ILE:HB	4:L:61:VAL:CG1	2.39	0.53
6:D:152:LEU:HD11	11:D:8125:HOH:O	2.09	0.53
6:D:1376:MET:HE1	6:D:1421:LEU:HD22	1.90	0.53
4:L:121:GLU:OE2	4:L:123:MET:HG2	2.09	0.53
6:N:1231:GLU:HB3	6:N:1232:PRO:CD	2.38	0.53
6:D:191:LEU:HD11	6:D:395:VAL:CG2	2.38	0.53
6:N:886:VAL:HG13	6:N:930:LEU:HD11	1.89	0.53
6:N:814:ALA:HB1	6:N:818:ARG:NH2	2.24	0.53
6:N:800:LYS:HZ1	6:N:804:LEU:HD22	1.73	0.53
6:N:769:LEU:HD11	6:N:919:PHE:CZ	2.43	0.53
5:C:905:ILE:HG22	5:C:906:PHE:N	2.23	0.53
4:A:159:LYS:HZ1	4:A:166:PRO:HD3	1.72	0.53
4:A:102:LYS:NZ	4:A:139:ASN:HD21	2.06	0.53
4:K:57:TYR:CZ	4:K:59:GLU:HA	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:159:LYS:N	4:B:159:LYS:HD3	2.24	0.53
5:M:224:GLU:HB2	5:M:227:PHE:CD1	2.44	0.53
4:K:20:TYR:HD2	4:K:21:GLY:N	2.07	0.53
4:K:9:PRO:HB3	4:K:25:LEU:CG	2.38	0.53
4:A:175:ARG:CZ	4:A:176:ARG:HD3	2.37	0.53
4:K:176:ARG:HG3	4:K:200:TRP:CE3	2.44	0.53
5:C:167:LYS:HE3	11:C:1598:HOH:O	2.08	0.53
6:D:643:GLY:O	6:D:726:ILE:HG23	2.08	0.53
6:N:1112:CYS:SG	6:N:1195:GLN:HG2	2.49	0.53
5:M:532:MET:HG2	5:M:533:ASP:O	2.08	0.53
6:N:700:VAL:HG22	6:N:718:PRO:HG3	1.91	0.53
6:N:996:TRP:CA	6:N:999:THR:HG22	2.29	0.53
6:D:806:PHE:HE1	6:D:813:LEU:HD23	1.72	0.53
4:K:20:TYR:HD2	4:K:21:GLY:H	1.55	0.53
5:C:1006:HIS:HA	5:C:1027:PHE:CD1	2.43	0.53
6:D:864:VAL:HG12	6:D:865:THR:H	1.74	0.53
11:K:1782:HOH:O	5:M:640:ARG:HG2	2.08	0.53
1:X:22:DC:H4'	5:M:388:ARG:HG3	1.90	0.53
5:C:326:ASP:CB	5:C:431:HIS:HB2	2.37	0.53
5:C:329:GLY:HA3	5:C:489:THR:HG23	1.89	0.53
4:L:33:GLY:O	4:L:195:LEU:HD22	2.09	0.53
6:D:1221:VAL:HG12	6:D:1222:GLY:N	2.24	0.53
7:E:25:LYS:HA	7:E:28:GLN:HE21	1.74	0.53
4:B:99:LEU:HD13	4:B:144:VAL:CG2	2.39	0.53
5:C:218:VAL:HG23	5:C:311:PHE:HE1	1.72	0.53
6:D:132:TYR:C	6:D:133:ILE:HD13	2.29	0.53
5:M:463:GLU:HB3	11:M:1525:HOH:O	2.09	0.53
6:D:1041:LEU:HD12	6:D:1058:ARG:HA	1.90	0.53
6:D:960:LYS:HE2	6:D:1041:LEU:HD22	1.91	0.53
5:M:515:ALA:HB3	5:M:524:VAL:CG2	2.39	0.53
6:N:679:ARG:HB2	6:N:682:ASP:CG	2.29	0.53
5:C:257:VAL:HG21	11:C:1481:HOH:O	2.08	0.53
2:Y:7:G:O6	5:M:1015:LEU:HB2	2.09	0.53
5:C:217:LEU:HD23	5:C:217:LEU:N	2.24	0.53
6:N:1271:LYS:HZ1	6:N:1331:ASP:HB2	1.72	0.53
7:E:18:ARG:HD3	11:E:116:HOH:O	2.09	0.53
5:M:769:PRO:HG2	6:N:65:ARG:HD3	1.90	0.53
6:D:592:THR:H	6:D:600:LEU:HD11	1.74	0.53
6:D:995:LEU:HD11	11:D:8411:HOH:O	2.08	0.53
6:D:43:GLY:N	11:D:8160:HOH:O	2.41	0.53
4:B:50:GLY:HA3	4:B:171:PHE:O	2.08	0.53
5:C:881:ASN:HD22	5:C:881:ASN:H	1.55	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:679:PHE:C	6:D:943:THR:HG22	2.29	0.53
6:D:161:LEU:HD22	6:D:452:ILE:HD13	1.91	0.53
5:C:305:PRO:HA	5:C:308:ARG:HB3	1.90	0.53
6:D:181:ASP:O	6:D:204:LEU:HA	2.08	0.53
6:N:1128:VAL:O	6:N:1129:THR:C	2.47	0.53
5:C:545:ASN:OD1	5:C:583:LEU:HD13	2.08	0.53
6:D:1435:LEU:HD23	6:D:1467:ILE:HD12	1.91	0.53
7:O:73:LEU:HD12	7:O:73:LEU:N	2.24	0.53
5:M:549:PHE:CG	5:M:886:LEU:HD23	2.43	0.53
4:K:218:LEU:HG	11:K:1711:HOH:O	2.09	0.53
6:D:1258:ARG:HG2	11:D:8324:HOH:O	2.09	0.53
4:K:47:SER:HB3	4:K:217:ILE:HD13	1.90	0.53
5:M:142:ARG:HA	5:M:330:ASN:O	2.09	0.53
6:N:1200:VAL:HG22	6:N:1373:ARG:HH12	1.73	0.53
6:N:808:THR:OG1	6:N:809:PRO:HD3	2.09	0.53
5:M:644:VAL:HG22	5:M:647:GLN:OE1	2.08	0.53
1:X:12:DG:H2''	1:X:13:DT:H5'	1.90	0.53
5:M:1101:THR:OG1	5:M:1109:VAL:HB	2.08	0.53
5:M:1101:THR:HG21	5:M:1111:ILE:CG2	2.38	0.53
5:C:442:GLU:HA	11:C:1416:HOH:O	2.08	0.53
6:D:1037:GLN:OE1	6:D:1042:ARG:HD3	2.09	0.53
6:D:695:ILE:HG21	6:D:720:LEU:HD11	1.89	0.53
6:D:1441:GLN:NE2	6:D:1442:ASN:HB2	2.25	0.53
5:M:264:PRO:HB3	5:M:289:THR:CB	2.38	0.53
5:M:264:PRO:HB3	5:M:289:THR:HB	1.90	0.53
5:M:394:PHE:HD1	5:M:633:GLN:HE22	1.56	0.53
6:N:792:ILE:HG13	6:N:881:LEU:HD21	1.91	0.53
6:N:1086:LEU:HB2	6:N:1087:ARG:NH1	2.23	0.53
5:C:195:LEU:HG	5:C:238:LEU:CD1	2.38	0.53
6:N:482:LYS:HB2	6:N:1388:ARG:HH21	1.73	0.53
5:M:759:THR:HB	5:M:785:VAL:HG13	1.90	0.53
4:L:10:VAL:HG23	4:L:26:GLU:O	2.09	0.53
5:C:957:LYS:HD3	5:C:961:GLU:OE1	2.09	0.53
5:M:172:ILE:H	5:M:172:ILE:HD12	1.73	0.53
4:B:206:THR:CG2	4:B:209:GLU:H	2.20	0.53
5:C:798:GLY:HA3	5:C:828:ALA:O	2.09	0.53
4:K:49:PRO:HG3	11:K:867:HOH:O	2.09	0.53
6:D:827:ILE:O	6:D:837:GLY:HA3	2.09	0.53
6:D:971:LEU:HG	6:D:972:LEU:N	2.22	0.53
6:D:1176:LYS:HA	6:D:1179:GLU:OE1	2.09	0.53
4:K:100:LEU:HG	4:K:101:LEU:N	2.22	0.53
5:M:1008:ARG:HB2	5:M:1027:PHE:HB2	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:Z:1999:HOH:O	6:N:1426:LYS:HG3	2.08	0.52
6:N:705:ALA:CB	6:N:706:PRO:HD3	2.39	0.52
5:C:443:THR:HA	5:C:452:ILE:O	2.09	0.52
4:L:37:GLY:HA3	4:L:179:PHE:CD1	2.45	0.52
6:D:1465:ASN:ND2	6:D:1470:ARG:HE	2.05	0.52
5:C:1031:ARG:HH21	6:D:621:LYS:HG3	1.73	0.52
6:N:166:GLN:HG2	6:N:396:VAL:HG13	1.91	0.52
5:M:953:VAL:HG22	5:M:966:LEU:HD11	1.90	0.52
6:N:496:LEU:CD1	6:N:500:ARG:HG2	2.39	0.52
5:M:949:LYS:HD3	6:N:796:ARG:HH22	1.74	0.52
5:M:821:GLU:HB3	11:M:1453:HOH:O	2.08	0.52
6:N:882:PHE:O	6:N:886:VAL:HG23	2.08	0.52
5:C:1:MET:HG2	5:C:900:ARG:NH2	2.23	0.52
4:B:28:LEU:HG	4:B:193:ASP:O	2.08	0.52
5:M:367:LEU:HB3	5:M:371:LYS:HG2	1.90	0.52
5:M:69:LEU:HB2	5:M:97:ARG:HB2	1.91	0.52
1:G:20:DG:H4'	5:C:394:PHE:CZ	2.44	0.52
6:N:1503:VAL:HG21	11:N:9060:HOH:O	2.07	0.52
6:N:1058:ARG:HG2	11:N:9214:HOH:O	2.08	0.52
4:A:186:LEU:HB3	4:A:192:LEU:CD1	2.39	0.52
6:D:1269:LYS:HB3	6:D:1269:LYS:NZ	2.24	0.52
7:E:32:ARG:HB2	7:E:32:ARG:HH11	1.74	0.52
5:M:260:LEU:CB	5:M:291:ALA:HB1	2.36	0.52
6:N:520:LEU:HG	6:N:521:PRO:N	2.24	0.52
5:M:305:PRO:HA	5:M:308:ARG:HB3	1.91	0.52
5:C:143:SER:HB2	5:C:276:LYS:NZ	2.24	0.52
5:C:260:LEU:HG	5:C:261:ILE:HG13	1.91	0.52
6:N:204:LEU:HD13	6:N:445:ARG:HE	1.72	0.52
5:M:456:ALA:HB1	5:M:538:GLN:O	2.09	0.52
6:N:1236:LEU:HD11	6:N:1361:VAL:HG23	1.90	0.52
4:K:70:GLY:H	5:M:607:ASP:CG	2.12	0.52
6:D:610:LYS:HA	6:D:615:ARG:CD	2.39	0.52
6:N:1053:PHE:CE1	6:N:1072:ILE:HD12	2.44	0.52
5:C:1105:LYS:O	5:C:1107:ASN:N	2.42	0.52
5:M:134:ARG:HH11	5:M:392:SER:HB3	1.74	0.52
5:M:89:THR:HA	5:M:129:ILE:O	2.08	0.52
5:C:251:ASP:HB3	5:C:252:LYS:HD2	1.91	0.52
4:L:43:ILE:HG21	4:L:214:ALA:HA	1.91	0.52
5:M:74:GLY:O	5:M:76:PRO:HD3	2.09	0.52
2:H:8:C:H6	2:H:8:C:O5'	1.92	0.52
6:N:899:LEU:HD12	6:N:900:ILE:HG23	1.91	0.52
6:N:789:LEU:O	6:N:793:THR:HG23	2.08	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:K:180:GLN:HA	5:M:937:ASP:OD1	2.08	0.52
5:M:1092:LEU:HA	5:M:1095:LEU:CD1	2.39	0.52
5:M:218:VAL:HG22	5:M:221:LEU:CD2	2.39	0.52
6:D:1081:GLY:HA2	6:D:1241:PHE:CD1	2.45	0.52
6:N:496:LEU:O	6:N:496:LEU:HD12	2.09	0.52
6:D:426:LYS:CE	6:D:427:VAL:HG23	2.40	0.52
5:M:432:ARG:NH2	6:N:1047:LYS:HD3	2.22	0.52
7:O:80:VAL:HG13	11:O:1385:HOH:O	2.09	0.52
6:D:975:GLU:HA	6:D:975:GLU:OE1	2.08	0.52
4:L:7:LYS:HE3	4:L:186:LEU:HD13	1.90	0.52
4:K:163:ASN:HA	11:K:2179:HOH:O	2.10	0.52
6:N:104:PHE:HD1	6:N:512:MET:HG2	1.74	0.52
2:Y:7:G:H22	5:M:1014:SER:CA	2.23	0.52
5:M:1105:LYS:O	5:M:1107:ASN:N	2.42	0.52
5:M:850:ALA:HA	6:N:632:VAL:HG11	1.92	0.52
6:N:644:LEU:HD12	6:N:645:PRO:HD2	1.91	0.52
5:M:860:HIS:CE1	5:M:975:TYR:HB2	2.45	0.52
5:C:110:GLU:HG3	5:C:369:PRO:HB3	1.92	0.52
5:M:1001:VAL:HG22	11:M:1555:HOH:O	2.09	0.52
6:D:1248:GLY:HA2	6:D:1251:ASP:OD2	2.09	0.52
5:C:487:THR:HB	5:C:490:GLU:HG3	1.90	0.52
6:D:202:VAL:HG11	6:D:400:VAL:HG12	1.91	0.52
6:D:434:ARG:HB2	6:D:447:VAL:CG2	2.40	0.52
6:N:1121:PRO:CD	6:N:1346:ARG:HE	2.22	0.52
6:D:628:ARG:HB2	11:D:8067:HOH:O	2.08	0.52
5:M:690:ILE:HD11	5:M:833:LEU:HD23	1.91	0.52
5:M:674:VAL:HG23	5:M:869:VAL:HG13	1.92	0.52
6:N:119:SER:CB	6:N:123:LEU:HB2	2.38	0.52
5:M:807:ARG:N	5:M:807:ARG:HE	2.05	0.52
5:C:1105:LYS:HD2	5:C:1107:ASN:ND2	2.25	0.52
4:B:43:ILE:HG23	4:B:47:SER:CB	2.40	0.52
5:C:290:LEU:HB3	5:C:302:VAL:CG1	2.39	0.52
6:N:584:ASN:HD22	6:N:585:GLY:N	2.08	0.52
4:L:43:ILE:HG23	4:L:47:SER:CB	2.39	0.52
4:B:12:THR:OG1	4:B:24:VAL:HB	2.10	0.52
6:N:192:ALA:HB1	6:N:193:PRO:HD2	1.92	0.52
6:D:557:LEU:HD11	11:D:8469:HOH:O	2.08	0.52
6:D:64:LYS:HD2	11:D:8441:HOH:O	2.09	0.52
5:C:230:ARG:HG2	5:C:230:ARG:HH11	1.73	0.52
6:N:1118:ILE:HD12	11:N:9016:HOH:O	2.09	0.52
1:X:13:DT:OP1	6:N:1093:TYR:HE2	1.93	0.52
5:C:327:HIS:HA	5:C:431:HIS:CD2	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:538:GLN:HG3	5:C:539:VAL:N	2.24	0.52
5:C:559:LEU:HD23	5:C:563:ASN:OD1	2.10	0.52
6:N:1165:TYR:OH	6:N:1202:GLN:HG2	2.09	0.52
5:M:684:PHE:N	5:M:687:ALA:HB3	2.21	0.52
6:N:787:LEU:CD1	6:N:1023:MET:HA	2.39	0.52
6:D:1112:CYS:CB	6:D:1195:GLN:HG2	2.29	0.52
5:M:328:LEU:HD13	5:M:433:THR:HB	1.90	0.52
6:D:95:LEU:HB3	6:D:515:GLU:O	2.09	0.52
6:N:568:ARG:O	6:N:572:ARG:HG3	2.08	0.52
5:C:173:ASP:O	5:C:184:MET:HA	2.09	0.52
6:D:1232:PRO:HA	6:D:1235:GLN:OE1	2.10	0.52
5:M:839:LEU:HD23	5:M:996:LYS:HA	1.92	0.52
6:D:1184:GLN:HB2	6:N:559:ALA:CB	2.39	0.52
5:M:5:ARG:HE	5:M:8:ARG:NH2	2.02	0.52
5:M:470:PRO:HB2	5:M:534:VAL:HG21	1.92	0.52
6:D:52:PRO:CG	6:D:80:VAL:HG13	2.39	0.52
6:N:109:PRO:HB3	6:N:494:LYS:NZ	2.25	0.52
4:L:27:PRO:HB3	4:L:192:LEU:HD22	1.91	0.52
5:C:816:LYS:HZ3	5:C:816:LYS:H	1.57	0.52
6:D:1118:ILE:HD11	11:D:8142:HOH:O	2.09	0.52
6:N:832:ARG:HB3	6:N:833:GLU:OE1	2.09	0.52
6:N:654:LYS:HB3	6:N:655:PRO:HD3	1.91	0.52
6:D:600:LEU:N	6:D:600:LEU:HD12	2.25	0.52
5:M:1071:ILE:O	6:N:659:LYS:HD3	2.09	0.52
6:D:820:GLU:HB2	6:D:836:VAL:HG11	1.92	0.52
6:D:989:TYR:CE1	6:D:993:LEU:HD21	2.44	0.52
6:N:44:LEU:H	6:N:44:LEU:HD12	1.75	0.52
5:C:1062:GLY:HA2	11:C:1284:HOH:O	2.10	0.52
4:A:190:THR:HA	11:A:369:HOH:O	2.08	0.52
5:M:754:ILE:HG12	5:M:791:ARG:NH1	2.25	0.52
5:M:516:ARG:NH2	6:N:1068:LEU:HB3	2.25	0.52
6:N:1045:MET:HE2	6:N:1073:SER:CB	2.35	0.52
6:D:142:LEU:CD2	6:D:146:PRO:HA	2.40	0.52
5:M:218:VAL:O	5:M:221:LEU:HG	2.10	0.52
5:C:258:TYR:HB3	11:C:1335:HOH:O	2.08	0.52
5:M:5:ARG:CZ	5:M:8:ARG:HH12	2.22	0.52
6:D:834:THR:HA	6:D:838:ARG:NH1	2.24	0.52
6:N:1034:GLN:NE2	6:N:1243:THR:HB	2.25	0.52
5:M:971:LYS:HG2	5:M:988:VAL:CB	2.40	0.52
6:N:1440:PHE:O	6:N:1441:GLN:O	2.28	0.52
6:D:660:LYS:HD2	6:D:694:VAL:CG2	2.40	0.52
7:E:45:ARG:HG2	11:E:129:HOH:O	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:1009:SER:OG	6:N:654:LYS:HD2	2.09	0.52
5:M:18:LEU:HD22	5:M:404:LEU:HD21	1.91	0.52
7:O:36:LYS:HA	7:O:36:LYS:HE2	1.90	0.52
4:K:64:GLU:HA	4:K:165:ILE:HD13	1.91	0.52
4:L:109:VAL:O	4:L:129:ILE:HG12	2.09	0.52
5:M:1008:ARG:HH12	5:M:1011:GLY:H	1.58	0.52
5:M:1019:GLN:HE22	6:N:616:GLN:HE22	1.58	0.52
1:X:12:DG:H2''	1:X:13:DT:C5'	2.40	0.52
5:C:39:ARG:H	5:C:39:ARG:CD	2.03	0.52
6:N:1492:LEU:HD12	6:N:1493:LYS:HZ1	1.73	0.52
5:C:13:ILE:HD11	5:C:483:VAL:HG21	1.92	0.52
6:D:82:LYS:HD2	11:D:8499:HOH:O	2.08	0.52
7:E:48:MET:CB	7:E:54:LEU:HB2	2.39	0.52
5:M:589:ARG:HH11	5:M:589:ARG:HB2	1.73	0.52
5:C:9:ILE:HD12	5:C:9:ILE:H	1.75	0.52
5:M:757:GLY:HA2	5:M:789:SER:OG	2.10	0.52
6:D:615:ARG:HH22	6:D:1096:ARG:CD	2.22	0.52
4:L:206:THR:HG23	4:L:208:LEU:H	1.73	0.52
4:K:8:ALA:HB1	4:L:224:TYR:CE1	2.45	0.52
6:D:1498:ALA:HB1	7:E:84:ARG:NH2	2.25	0.52
4:A:14:ARG:HH22	4:A:24:VAL:CG2	2.23	0.52
5:C:22:GLN:C	5:C:121:MET:HE1	2.30	0.52
4:K:73:GLU:CD	4:K:130:ALA:HA	2.30	0.52
6:N:610:LYS:HG3	11:N:9272:HOH:O	2.09	0.52
6:N:619:LEU:HD12	6:N:621:LYS:NZ	2.25	0.52
5:C:859:PRO:O	5:C:867:VAL:HG22	2.09	0.52
5:C:983:ILE:HB	11:C:1149:HOH:O	2.10	0.52
5:C:564:MET:SD	5:C:995:MET:HG3	2.50	0.52
5:M:157:ARG:HG2	11:M:1381:HOH:O	2.09	0.52
4:A:178:ALA:HB3	4:A:198:ARG:CG	2.37	0.52
5:C:748:GLU:CB	5:C:799:ILE:HD12	2.39	0.52
5:M:1032:PHE:HZ	5:M:1040:LEU:HD13	1.74	0.52
4:A:222:LEU:HD13	4:B:218:LEU:HD23	1.90	0.52
6:N:756:GLN:NE2	6:N:760:ARG:HD2	2.24	0.52
6:D:684:LYS:HD3	6:D:686:GLU:OE1	2.10	0.52
5:C:65:VAL:CG2	5:C:101:ILE:HB	2.40	0.52
5:M:91:GLN:NE2	5:M:383:ARG:NH2	2.57	0.52
5:M:352:ALA:HA	5:M:355:VAL:CG1	2.39	0.52
6:N:452:ILE:HG22	11:N:9064:HOH:O	2.10	0.52
6:N:141:ILE:HD12	6:N:141:ILE:N	2.25	0.52
5:C:996:LYS:HE3	11:C:1151:HOH:O	2.10	0.52
7:O:54:LEU:HA	7:O:58:PRO:CG	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:212:GLY:HA3	5:M:218:VAL:HG21	1.91	0.52
6:N:204:LEU:HD12	6:N:396:VAL:CG2	2.40	0.52
5:M:565:GLN:OE1	5:M:842:ARG:HG2	2.10	0.52
6:D:651:GLU:HA	6:D:654:LYS:HZ2	1.73	0.52
4:K:156:HIS:CD2	4:K:157:GLY:N	2.77	0.52
5:C:774:LEU:HD23	5:C:775:ARG:N	2.25	0.52
6:D:543:LEU:O	6:D:546:ARG:HB2	2.10	0.52
5:C:102:HIS:HB2	5:C:106:GLY:O	2.10	0.52
6:N:656:PHE:HB3	6:N:694:VAL:HG11	1.92	0.52
6:D:731:LEU:HD13	6:D:931:LEU:HB3	1.91	0.52
6:N:1270:ALA:O	6:N:1329:ALA:HB3	2.09	0.52
4:L:216:GLU:HG3	4:L:220:GLU:OE1	2.10	0.52
6:N:616:GLN:NE2	11:N:9292:HOH:O	2.43	0.52
5:M:1094:ALA:HA	6:N:90:MET:CE	2.39	0.52
6:N:642:CYS:SG	6:N:716:PHE:HB2	2.50	0.52
5:C:1018:GLN:C	5:C:1019:GLN:HE21	2.14	0.52
4:B:124:ASN:N	4:B:125:PRO:HD3	2.23	0.52
6:D:525:ARG:HB2	6:D:538:SER:CB	2.40	0.52
5:C:1037:VAL:HG12	5:C:1041:GLU:OE2	2.10	0.52
7:O:67:GLU:HB3	7:O:73:LEU:HD11	1.91	0.52
6:N:1403:LEU:O	6:N:1407:LEU:HD13	2.10	0.52
6:N:1440:PHE:CG	6:N:1441:GLN:N	2.78	0.52
6:D:399:ARG:HD3	6:D:430:ASP:OD2	2.09	0.52
4:K:1:MET:O	4:K:6:LEU:HD22	2.10	0.52
5:C:20:GLU:OE2	5:C:460:ARG:NH1	2.42	0.52
6:D:1267:ARG:NH1	6:D:1267:ARG:HB2	2.24	0.52
6:D:820:GLU:HA	6:D:825:ALA:O	2.10	0.52
5:M:353:ARG:HA	11:M:1274:HOH:O	2.09	0.52
5:M:1109:VAL:HA	6:N:3:LYS:HE3	1.92	0.51
6:N:95:LEU:H	6:N:95:LEU:CD1	2.20	0.51
6:N:632:VAL:HG23	6:N:725:SER:HB2	1.92	0.51
5:M:557:ARG:NH1	5:M:879:ARG:HD3	2.25	0.51
6:N:396:VAL:CG1	6:N:447:VAL:HA	2.41	0.51
6:D:206:ARG:CG	6:D:394:LEU:HD22	2.33	0.51
6:D:396:VAL:CG1	6:D:447:VAL:HA	2.36	0.51
4:A:67:THR:CG2	5:C:609:ASN:HD21	2.23	0.51
6:N:960:LYS:HZ1	6:N:1041:LEU:HD13	1.75	0.51
5:M:576:ALA:HB3	5:M:900:ARG:HH11	1.75	0.51
4:A:9:PRO:HD2	4:B:224:TYR:CE1	2.45	0.51
6:N:461:ILE:O	6:N:465:LEU:HB2	2.09	0.51
5:C:286:SER:HB3	5:C:299:LYS:HE3	1.92	0.51
6:N:1020:LEU:HD21	6:N:1035:ILE:CG2	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:163:ASN:HD21	5:C:744:ARG:NH2	2.08	0.51
6:N:709:HIS:CD2	6:N:709:HIS:H	2.28	0.51
5:C:843:HIS:CB	5:C:884:GLN:HG2	2.40	0.51
6:N:754:PHE:O	6:N:758:GLU:HG2	2.10	0.51
5:M:557:ARG:HD3	5:M:560:MET:SD	2.50	0.51
6:D:1098:LEU:CD2	6:D:1226:ALA:HA	2.38	0.51
5:M:139:GLN:NE2	5:M:418:LEU:HD22	2.25	0.51
5:M:110:GLU:HG3	5:M:369:PRO:CB	2.29	0.51
6:N:50:PHE:CB	6:N:522:PRO:HG3	2.40	0.51
6:N:52:PRO:CG	6:N:80:VAL:HG13	2.39	0.51
4:K:41:ARG:O	4:K:45:LEU:HD12	2.10	0.51
6:N:1496:GLU:HA	6:N:1499:ARG:CZ	2.40	0.51
5:C:157:ARG:HG3	5:C:314:THR:HG21	1.92	0.51
5:C:176:VAL:C	5:C:178:PRO:HD3	2.31	0.51
5:C:144:PRO:N	5:C:276:LYS:NZ	2.58	0.51
6:N:1121:PRO:HA	6:N:1185:GLU:HG2	1.90	0.51
6:N:1267:ARG:HA	6:N:1271:LYS:HZ1	1.75	0.51
5:C:198:ARG:CZ	5:C:203:ASP:HA	2.39	0.51
4:L:182:GLU:OE1	4:L:194:LYS:O	2.29	0.51
6:D:1118:ILE:HG13	6:D:1192:LEU:HD13	1.92	0.51
5:M:97:ARG:HA	5:M:111:ASP:O	2.10	0.51
6:N:35:ARG:HG3	6:N:35:ARG:HH11	1.75	0.51
5:M:787:ASP:HB3	11:M:1300:HOH:O	2.09	0.51
6:D:831:GLY:HA3	11:D:8198:HOH:O	2.09	0.51
4:K:102:LYS:NZ	4:K:115:LEU:HD22	2.24	0.51
6:N:1248:GLY:O	6:N:1252:ILE:HG12	2.10	0.51
4:A:188:GLN:HG3	4:A:189:ARG:H	1.74	0.51
4:A:138:LEU:O	4:A:138:LEU:HD23	2.10	0.51
5:C:141:HIS:C	5:C:331:ARG:HG2	2.31	0.51
6:N:879:ARG:NH1	6:N:879:ARG:HG3	2.25	0.51
5:M:211:LEU:CD1	5:M:308:ARG:HA	2.40	0.51
1:X:18:DG:H2''	1:X:19:DC:C5'	2.31	0.51
4:L:102:LYS:HZ2	4:L:137:ARG:HG2	1.72	0.51
1:G:19:DC:OP1	5:C:1001:VAL:HG11	2.10	0.51
5:C:194:VAL:CG1	5:C:204:GLN:HE22	2.22	0.51
6:D:813:LEU:HD12	6:D:814:ALA:N	2.26	0.51
5:C:841:ASN:HD21	5:C:845:ASN:N	2.08	0.51
6:N:889:ALA:CB	6:N:930:LEU:HD12	2.39	0.51
5:M:771:GLU:O	5:M:775:ARG:HG2	2.11	0.51
4:B:206:THR:HG23	4:B:208:LEU:H	1.75	0.51
5:M:841:ASN:HD21	5:M:845:ASN:H	1.58	0.51
6:N:703:ASN:ND2	6:N:704:ARG:N	2.58	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:26:GLU:HG3	4:A:184:THR:HG21	1.91	0.51
7:E:39:VAL:HG22	7:E:67:GLU:HG2	1.92	0.51
6:N:1377:LYS:HE3	6:N:1394:VAL:HG13	1.92	0.51
6:D:762:GLN:HE22	7:E:20:THR:HG21	1.75	0.51
5:M:1087:VAL:HG23	6:N:524:LEU:HD21	1.92	0.51
6:N:793:THR:CB	6:N:879:ARG:HD3	2.31	0.51
5:C:163:ILE:HG13	5:C:163:ILE:O	2.08	0.51
6:D:483:HIS:ND1	6:D:483:HIS:N	2.59	0.51
6:D:1464:GLU:HA	6:D:1467:ILE:CD1	2.40	0.51
6:N:172:PRO:HG2	6:N:175:VAL:CG2	2.41	0.51
4:L:36:LEU:O	4:L:39:PRO:HD2	2.10	0.51
5:C:946:ARG:NH1	5:C:946:ARG:HB3	2.25	0.51
5:M:804:VAL:HB	5:M:824:ARG:HB2	1.93	0.51
6:N:871:LYS:HB3	6:N:873:LEU:CD2	2.40	0.51
5:C:552:HIS:CD2	6:D:1064:GLY:HA2	2.46	0.51
5:C:547:ILE:HD13	5:C:550:LEU:HD13	1.91	0.51
6:D:690:ALA:O	6:D:694:VAL:HG23	2.10	0.51
5:M:173:ASP:OD1	5:M:185:LYS:HG3	2.11	0.51
5:M:79:PRO:HD2	5:M:82:GLU:OE1	2.10	0.51
5:C:598:GLU:HG3	5:C:623:TYR:OH	2.10	0.51
6:N:977:ALA:HB1	6:N:983:LEU:HD21	1.91	0.51
4:K:9:PRO:HB3	4:K:25:LEU:HG	1.92	0.51
5:M:976:ASP:HB2	11:M:1439:HOH:O	2.10	0.51
4:B:216:GLU:HA	4:B:219:ARG:NH1	2.25	0.51
5:C:605:LYS:HD2	5:C:612:VAL:HB	1.92	0.51
6:N:1090:ASP:HA	6:N:1093:TYR:HB2	1.91	0.51
5:C:328:LEU:HB3	5:C:488:ALA:HB2	1.93	0.51
2:H:8:C:H2'	2:H:9:G:C8	2.46	0.51
5:C:678:PRO:O	6:D:943:THR:HA	2.10	0.51
4:B:102:LYS:NZ	4:B:137:ARG:NE	2.59	0.51
6:D:582:LEU:HD23	6:D:603:LEU:CD1	2.41	0.51
5:M:23:VAL:N	5:M:121:MET:HE1	2.25	0.51
6:N:701:LEU:HD12	6:N:701:LEU:H	1.74	0.51
6:D:145:VAL:CG2	6:D:146:PRO:HD2	2.33	0.51
6:D:394:LEU:O	6:D:396:VAL:N	2.43	0.51
5:C:195:LEU:HG	5:C:238:LEU:HD12	1.91	0.51
5:C:343:GLN:HB2	5:C:385:PHE:CD2	2.46	0.51
6:D:1491:THR:O	6:D:1495:ILE:HD13	2.11	0.51
4:L:124:ASN:HD21	4:L:127:LEU:HD22	1.74	0.51
4:K:158:ILE:O	4:K:159:LYS:HE2	2.11	0.51
4:L:202:ASP:HA	11:L:321:HOH:O	2.10	0.51
4:A:98:THR:HG22	11:A:364:HOH:O	2.09	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:640:ARG:O	5:C:642:ARG:HG2	2.10	0.51
5:M:351:LEU:HD22	5:M:377:PRO:HB2	1.92	0.51
5:M:855:VAL:HG11	11:M:1481:HOH:O	2.11	0.51
6:N:1100:ASP:HB3	6:N:1428:ALA:HB1	1.92	0.51
5:C:334:ARG:HG2	5:C:338:GLU:CD	2.31	0.51
5:C:432:ARG:HH12	6:D:1072:ILE:HD11	1.75	0.51
6:N:1366:LYS:HA	6:N:1369:GLU:OE1	2.11	0.51
5:M:879:ARG:HH21	6:N:1029:ARG:NH2	2.08	0.51
5:C:564:MET:HE1	5:C:995:MET:HB2	1.92	0.51
6:D:1101:VAL:HG21	6:D:1424:VAL:HA	1.93	0.51
6:N:879:ARG:HH21	6:N:903:ASP:C	2.13	0.51
6:N:153:LEU:HD22	6:N:158:TYR:HB2	1.93	0.51
6:N:1129:THR:O	6:N:1130:ARG:HD2	2.11	0.51
7:E:58:PRO:C	7:E:59:ASN:HD22	2.13	0.51
4:L:24:VAL:HG13	4:L:196:THR:CG2	2.39	0.51
5:M:549:PHE:HA	11:M:1469:HOH:O	2.10	0.51
4:B:40:LEU:O	4:B:44:LEU:HG	2.11	0.51
6:N:1094:LEU:HB2	6:N:1260:ILE:CD1	2.38	0.51
6:D:540:LEU:HA	6:D:543:LEU:CD1	2.40	0.51
6:D:705:ALA:CB	6:D:706:PRO:HD3	2.40	0.51
4:A:5:LYS:O	4:A:8:ALA:HB2	2.10	0.51
4:A:88:ARG:HD2	4:A:121:GLU:OE1	2.10	0.51
5:C:835:VAL:HG13	5:C:836:GLY:N	2.25	0.51
6:D:31:THR:HB	6:D:527:MET:HE1	1.92	0.51
6:N:1107:VAL:HA	6:N:1200:VAL:O	2.11	0.51
5:C:612:VAL:HG12	11:C:1460:HOH:O	2.10	0.51
6:N:864:VAL:HB	11:N:9142:HOH:O	2.10	0.51
5:M:913:GLU:O	5:M:917:LEU:HG	2.11	0.51
5:C:603:VAL:H	5:C:647:GLN:H	1.57	0.51
4:L:29:GLU:OE2	4:L:29:GLU:HA	2.10	0.51
5:M:1090:LYS:HE3	5:M:1112:PHE:CE1	2.42	0.51
6:N:1191:PRO:HB2	11:N:9021:HOH:O	2.10	0.51
6:D:903:ASP:O	6:D:904:VAL:HG13	2.11	0.51
6:N:1476:THR:HG23	7:O:21:VAL:HG22	1.92	0.51
6:N:634:GLY:O	6:N:637:LEU:HB3	2.11	0.51
6:N:1033:GLN:O	6:N:1037:GLN:HG3	2.10	0.51
6:N:1042:ARG:HH21	6:N:1045:MET:HE2	1.76	0.51
6:D:129:PHE:C	6:D:568:ARG:HH21	2.14	0.51
5:C:217:LEU:HD23	5:C:217:LEU:H	1.76	0.51
5:M:710:ILE:HD12	5:M:790:LEU:HB2	1.91	0.51
4:L:102:LYS:HD3	4:L:139:ASN:CB	2.35	0.51
5:M:64:LEU:HD13	5:M:359:MET:HG3	1.93	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1452:ILE:HG22	6:N:1453:ALA:N	2.25	0.51
6:N:828:LYS:HD3	6:N:862:ASP:OD2	2.11	0.51
4:B:40:LEU:HD21	4:B:215:VAL:HG12	1.93	0.51
5:C:1088:LEU:HD23	5:C:1089:VAL:N	2.26	0.51
5:C:52:PHE:CG	5:C:68:PHE:HB2	2.46	0.51
6:N:1117:TYR:CE2	6:N:1151:ARG:HD3	2.45	0.51
4:A:221:HIS:HA	4:A:224:TYR:HD2	1.76	0.51
6:D:631:ILE:HG21	6:D:745:MET:SD	2.50	0.51
5:M:892:LEU:HD11	5:M:967:PHE:CE1	2.45	0.51
6:N:415:VAL:O	6:N:432:TYR:HA	2.11	0.51
6:D:933:ALA:O	6:D:937:TYR:HD1	1.93	0.51
5:M:163:ILE:O	5:M:163:ILE:HG13	2.09	0.51
5:C:573:ARG:CB	5:C:670:GLN:HE22	2.23	0.51
6:D:1101:VAL:HG23	6:D:1424:VAL:HG23	1.93	0.51
5:M:169:GLY:HA2	5:M:263:ASP:OD1	2.11	0.51
6:D:582:LEU:HD23	6:D:603:LEU:HD12	1.92	0.51
6:N:542:ASP:O	6:N:546:ARG:HG3	2.10	0.51
5:C:158:TYR:CE1	5:C:314:THR:HA	2.46	0.51
5:M:5:ARG:HB2	5:M:8:ARG:NH2	2.21	0.51
6:D:1347:TYR:CD2	6:D:1348:LEU:HD12	2.46	0.51
6:N:62:LYS:HB2	6:N:73:CYS:SG	2.51	0.51
5:C:957:LYS:HD3	5:C:961:GLU:CD	2.30	0.51
5:C:352:ALA:HA	5:C:355:VAL:CG1	2.41	0.51
4:K:26:GLU:HG2	4:K:27:PRO:CA	2.40	0.51
6:D:566:ILE:HD12	6:D:566:ILE:H	1.76	0.51
5:C:1008:ARG:NH2	5:C:1011:GLY:H	2.09	0.51
5:M:550:LEU:O	5:M:550:LEU:HD12	2.10	0.51
4:L:160:ASP:HB3	4:L:161:ARG:HD2	1.92	0.51
5:C:80:GLN:HE22	5:C:122:THR:HG23	1.76	0.51
5:C:878:SER:HA	6:D:1034:GLN:OE1	2.11	0.51
5:C:147:TYR:HB3	11:C:1186:HOH:O	2.10	0.51
7:O:10:PHE:CZ	7:O:16:LYS:HE3	2.46	0.51
6:N:1023:MET:HG2	6:N:1029:ARG:HB2	1.93	0.51
6:D:1441:GLN:CD	6:D:1442:ASN:HB2	2.31	0.51
5:M:160:ALA:HB3	5:M:174:LEU:HB2	1.93	0.51
6:N:481:MET:SD	6:N:493:ARG:HA	2.51	0.51
6:D:1040:GLY:O	6:D:1060:SER:HB3	2.11	0.51
6:D:393:ILE:HG21	11:D:8118:HOH:O	2.11	0.51
6:D:413:ASP:O	6:D:435:VAL:HG23	2.11	0.51
7:E:41:GLU:CG	7:E:42:PRO:HD3	2.41	0.51
6:D:1379:VAL:HG12	6:D:1419:PRO:HA	1.93	0.51
5:M:1047:HIS:H	5:M:1047:HIS:CD2	2.28	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:7:LYS:O	4:B:7:LYS:HD2	2.11	0.51
6:D:671:LYS:HG3	11:D:8106:HOH:O	2.11	0.51
5:C:604:ALA:HB3	5:C:612:VAL:O	2.10	0.51
6:D:154:THR:HG22	6:D:157:GLU:OE2	2.10	0.51
6:D:785:ILE:HG13	6:D:939:PHE:HE2	1.74	0.51
6:N:1379:VAL:HA	6:N:1420:LEU:HB2	1.92	0.51
5:C:1019:GLN:HE22	5:C:1058:ASP:CB	2.24	0.51
6:N:155:ASP:N	11:N:9432:HOH:O	2.43	0.51
6:N:133:ILE:HD13	6:N:158:TYR:CD2	2.45	0.51
5:C:288:ARG:HB2	5:C:288:ARG:NH1	2.26	0.51
6:D:181:ASP:HA	6:D:205:TYR:CD1	2.46	0.51
6:N:1087:ARG:HB3	6:N:1256:LEU:CD2	2.41	0.51
5:M:571:LEU:HD21	5:M:700:TYR:HA	1.93	0.51
6:D:1151:ARG:HG2	6:D:1187:PRO:HB2	1.92	0.51
4:B:89:PHE:HB3	4:B:94:LEU:CD1	2.39	0.51
7:E:48:MET:HG2	7:E:49:GLN:N	2.26	0.51
5:M:660:ALA:HA	11:M:1443:HOH:O	2.11	0.51
6:N:409:VAL:CG1	6:N:435:VAL:HG11	2.41	0.51
5:M:1007:ALA:HB2	6:N:648:MET:HG2	1.91	0.51
5:C:552:HIS:ND1	5:C:886:LEU:HD22	2.26	0.51
5:C:3:ILE:HA	5:C:900:ARG:O	2.11	0.51
4:A:14:ARG:HG3	4:A:14:ARG:HH11	1.75	0.51
4:B:48:ILE:HD12	4:B:48:ILE:H	1.76	0.51
7:E:27:ALA:HA	7:E:30:LEU:HD13	1.93	0.51
5:C:730:SER:O	5:C:734:LEU:HD13	2.11	0.51
7:E:33:HIS:CD2	7:E:89:MET:HG2	2.45	0.51
5:M:628:PHE:HA	11:M:1256:HOH:O	2.10	0.51
5:M:1016:ILE:HG12	5:M:1017:THR:N	2.26	0.51
6:D:1023:MET:O	6:D:1028:ALA:HB3	2.11	0.50
6:N:1222:GLY:O	6:N:1225:ALA:HB3	2.11	0.50
7:E:16:LYS:HA	11:E:128:HOH:O	2.10	0.50
6:N:50:PHE:HB3	6:N:522:PRO:HG3	1.92	0.50
5:C:978:ARG:NH1	11:C:1599:HOH:O	2.44	0.50
5:C:1034:GLU:HG2	6:D:619:LEU:HD13	1.93	0.50
6:D:133:ILE:HG21	6:D:454:ALA:HB1	1.93	0.50
6:D:550:ARG:HA	6:D:550:ARG:NE	2.20	0.50
6:D:978:TYR:HB2	6:D:983:LEU:HD12	1.93	0.50
5:M:692:GLU:O	5:M:696:LYS:HG3	2.10	0.50
5:M:773:LEU:O	5:M:777:ILE:HG13	2.11	0.50
5:M:1046:ALA:HB3	5:M:1047:HIS:HD2	1.76	0.50
4:B:160:ASP:HA	11:B:363:HOH:O	2.09	0.50
5:M:15:LEU:HD12	5:M:15:LEU:H	1.77	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:710:ARG:C	6:N:712:GLY:H	2.14	0.50
6:D:719:VAL:O	6:D:721:VAL:HG23	2.10	0.50
6:N:1101:VAL:HG22	6:N:1428:ALA:HB2	1.94	0.50
5:C:328:LEU:C	5:C:488:ALA:HB3	2.30	0.50
5:C:338:GLU:HA	5:C:341:THR:HG22	1.93	0.50
6:N:1146:GLY:HA3	6:N:1207:TYR:CB	2.39	0.50
6:N:643:GLY:O	6:N:726:ILE:HG23	2.09	0.50
6:N:633:VAL:HB	6:N:740:PHE:CE1	2.46	0.50
5:M:144:PRO:HB2	11:M:1136:HOH:O	2.11	0.50
5:M:289:THR:O	5:M:291:ALA:N	2.44	0.50
6:D:151:GLN:HA	11:D:8479:HOH:O	2.12	0.50
5:M:943:VAL:HG11	5:M:973:VAL:CG2	2.41	0.50
5:C:148:PHE:HB2	5:C:313:LEU:CD2	2.41	0.50
5:C:468:ARG:CZ	5:C:485:TYR:O	2.59	0.50
5:M:439:CYS:HB2	5:M:541:SER:HB3	1.92	0.50
6:D:133:ILE:HG13	6:D:153:LEU:HD12	1.93	0.50
5:C:920:GLN:O	5:C:924:VAL:HG23	2.11	0.50
5:C:51:THR:HG23	5:C:348:LEU:HD23	1.93	0.50
10:N:4999:APC:H8	10:N:4999:APC:H5'1	1.93	0.50
4:K:92:PRO:HG3	4:K:146:ARG:HH12	1.76	0.50
5:M:916:GLU:HG3	5:M:917:LEU:HD23	1.93	0.50
6:D:611:GLN:HG3	6:D:611:GLN:O	2.11	0.50
6:N:937:TYR:CD1	6:N:937:TYR:N	2.79	0.50
5:M:888:THR:HG21	11:M:1248:HOH:O	2.10	0.50
6:N:1424:VAL:CG1	6:N:1425:THR:H	2.22	0.50
5:C:436:GLY:HA2	5:C:456:ALA:CB	2.41	0.50
6:D:657:LEU:HB2	6:D:691:LEU:HD22	1.93	0.50
5:M:537:LYS:HG3	5:M:905:ILE:CD1	2.42	0.50
4:A:111:ALA:HB3	4:A:124:ASN:O	2.11	0.50
6:D:1403:LEU:O	6:D:1407:LEU:HB2	2.11	0.50
6:D:134:VAL:O	6:D:134:VAL:HG23	2.11	0.50
5:M:1115:LEU:CG	6:N:85:VAL:HG12	2.40	0.50
1:G:18:DG:O4'	5:C:1002:GLU:HB3	2.11	0.50
5:M:852:ILE:N	5:M:852:ILE:HD12	2.26	0.50
5:M:589:ARG:HG3	5:M:596:TYR:CZ	2.46	0.50
5:C:1105:LYS:NZ	5:C:1107:ASN:HB2	2.26	0.50
5:M:364:GLU:HB2	11:M:1318:HOH:O	2.10	0.50
5:M:702:SER:OG	5:M:831:ARG:HB2	2.11	0.50
5:C:1021:LEU:HD23	11:C:1374:HOH:O	2.11	0.50
5:M:726:ILE:HB	11:M:1385:HOH:O	2.10	0.50
6:D:926:LYS:HA	6:D:929:ARG:CD	2.41	0.50
2:Y:7:G:OP1	6:N:530:VAL:HG13	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:433:THR:C	5:C:435:TYR:H	2.15	0.50
2:Y:2:A:H8	2:Y:2:A:C3'	2.12	0.50
5:M:141:HIS:C	5:M:331:ARG:HG3	2.32	0.50
5:C:1019:GLN:N	5:C:1019:GLN:HE21	2.08	0.50
6:D:131:LYS:HG3	6:D:568:ARG:CG	2.41	0.50
6:D:150:ARG:HG3	6:D:464:LEU:HD22	1.93	0.50
5:M:1087:VAL:HG22	5:M:1091:GLU:OE1	2.10	0.50
5:M:22:GLN:C	5:M:121:MET:HE1	2.32	0.50
5:M:862:PRO:HA	5:M:975:TYR:CE2	2.47	0.50
5:M:218:VAL:HA	5:M:221:LEU:HD23	1.93	0.50
6:D:434:ARG:H	6:D:447:VAL:CG2	2.20	0.50
1:G:18:DG:H5''	6:D:628:ARG:NH2	2.26	0.50
6:D:87:ARG:HB2	6:D:523:ASP:HB3	1.93	0.50
5:M:5:ARG:NE	5:M:8:ARG:NH1	2.57	0.50
5:C:610:ARG:HG3	5:C:622:GLU:HG3	1.94	0.50
3:Z:10:DA:H5''	6:N:121:THR:CG2	2.41	0.50
4:B:20:TYR:CE2	4:B:198:ARG:HB3	2.45	0.50
5:C:737:LEU:HD21	5:C:741:GLY:CA	2.42	0.50
11:N:9174:HOH:O	7:O:81:PRO:HG2	2.11	0.50
2:Y:6:U:OP1	6:N:528:VAL:HG13	2.12	0.50
6:N:1195:GLN:HG3	6:N:1196:THR:N	2.27	0.50
6:N:637:LEU:CD2	6:N:642:CYS:HA	2.41	0.50
7:O:54:LEU:HG	7:O:58:PRO:CG	2.42	0.50
6:N:896:ALA:O	6:N:900:ILE:HG23	2.12	0.50
5:M:395:LYS:HE3	5:M:407:LYS:HE2	1.92	0.50
4:K:177:VAL:O	5:M:864:GLY:HA2	2.12	0.50
5:C:721:ARG:HA	5:C:820:ARG:NH2	2.26	0.50
6:D:29:PRO:CB	6:D:549:ASN:HD21	2.23	0.50
5:M:1055:LEU:HD11	5:M:1076:VAL:HB	1.94	0.50
4:L:62:LEU:HD12	4:L:62:LEU:N	2.22	0.50
5:M:807:ARG:N	5:M:807:ARG:NE	2.59	0.50
6:D:171:LEU:HD21	6:D:192:ALA:HB1	1.91	0.50
5:M:757:GLY:HA2	5:M:789:SER:CB	2.42	0.50
5:C:597:ALA:CA	5:C:655:LEU:HD11	2.41	0.50
4:B:43:ILE:HG21	4:B:214:ALA:HA	1.94	0.50
5:C:460:ARG:HB3	11:C:1158:HOH:O	2.11	0.50
4:K:24:VAL:HG22	4:K:196:THR:CG2	2.41	0.50
5:C:185:LYS:HE2	5:C:190:LYS:HZ3	1.75	0.50
5:C:1006:HIS:HD1	5:C:1027:PHE:HD1	1.60	0.50
6:N:1020:LEU:HD21	6:N:1035:ILE:HG23	1.93	0.50
5:C:732:ALA:HA	5:C:735:ARG:NH1	2.26	0.50
11:C:1228:HOH:O	6:D:2:LYS:HA	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:542:ASP:OD2	6:D:542:ASP:N	2.42	0.50
6:N:613:ARG:HH11	6:N:616:GLN:HG2	1.76	0.50
5:C:690:ILE:HD12	5:C:833:LEU:HD23	1.94	0.50
2:H:14:G:P	5:C:409:ARG:HH12	2.35	0.50
6:N:758:GLU:HA	7:O:20:THR:CG2	2.42	0.50
6:D:470:LEU:HD12	6:D:503:LEU:CD2	2.42	0.50
5:M:158:TYR:HE1	5:M:314:THR:HA	1.76	0.50
6:N:890:VAL:HG23	6:N:890:VAL:O	2.11	0.50
6:N:1267:ARG:HA	6:N:1331:ASP:HB2	1.94	0.50
5:M:810:ASP:HB3	5:M:813:VAL:CG1	2.36	0.50
6:D:108:VAL:HG23	6:D:109:PRO:HD3	1.94	0.50
5:M:1005:MET:HB2	6:N:648:MET:HE3	1.92	0.50
5:M:836:GLY:HA3	6:N:724:GLN:HE21	1.76	0.50
5:C:630:ARG:HA	5:C:705:ILE:CD1	2.41	0.50
5:C:22:GLN:NE2	5:C:407:LYS:HG2	2.26	0.50
7:O:28:GLN:HB3	7:O:32:ARG:NH2	2.25	0.50
5:M:410:ILE:CD1	5:M:455:LEU:HB3	2.42	0.50
6:D:155:ASP:O	6:D:159:ARG:N	2.41	0.50
5:M:754:ILE:HG12	5:M:791:ARG:HH12	1.77	0.50
6:N:1240:THR:HB	6:N:1252:ILE:HD13	1.92	0.50
5:C:713:ARG:NH2	6:D:532:GLY:H	2.09	0.50
5:C:275:TYR:HA	11:C:1297:HOH:O	2.11	0.50
6:N:619:LEU:HB2	6:N:621:LYS:HD3	1.92	0.50
5:C:702:SER:HB3	5:C:996:LYS:NZ	2.27	0.50
6:N:1192:LEU:HD21	6:N:1372:VAL:CG1	2.42	0.50
5:C:301:GLU:O	5:C:305:PRO:HG2	2.12	0.50
5:M:876:VAL:O	5:M:879:ARG:O	2.30	0.50
6:N:1394:VAL:HG11	6:N:1397:LYS:HE2	1.94	0.50
5:C:580:MET:HB3	5:C:584:GLU:OE1	2.11	0.50
6:N:1037:GLN:HG2	6:N:1042:ARG:HB2	1.93	0.50
6:D:1440:PHE:O	6:D:1441:GLN:O	2.30	0.50
5:M:120:LEU:HD13	5:M:121:MET:O	2.12	0.50
6:N:150:ARG:CD	6:N:464:LEU:HD21	2.41	0.50
5:C:820:ARG:HB2	11:C:1271:HOH:O	2.12	0.50
6:D:1103:HIS:NE2	6:D:1463:LYS:HB2	2.27	0.50
7:E:68:LEU:CD1	7:E:73:LEU:HD22	2.41	0.50
5:C:627:ARG:CG	5:C:628:PHE:H	2.25	0.50
5:M:622:GLU:O	5:M:624:PRO:HD3	2.11	0.50
5:M:192:PRO:HB2	5:M:195:LEU:HB2	1.93	0.50
6:N:690:ALA:O	6:N:694:VAL:HG23	2.12	0.50
5:M:837:ASP:HA	5:M:999:HIS:CE1	2.46	0.50
4:B:174:VAL:HG13	4:B:200:TRP:O	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:26:GLU:HB3	4:B:194:LYS:HG3	1.93	0.50
6:D:902:LEU:H	6:D:902:LEU:HD23	1.75	0.50
6:N:845:ASN:N	6:N:848:GLU:HG3	2.26	0.50
5:M:1020:PRO:O	5:M:1021:LEU:HD12	2.11	0.50
5:M:1034:GLU:HB3	6:N:619:LEU:CD2	2.40	0.50
6:D:634:GLY:CA	6:D:727:GLN:HE21	2.23	0.50
5:C:564:MET:HE2	5:C:565:GLN:HA	1.93	0.50
6:N:52:PRO:HG2	6:N:80:VAL:HG13	1.93	0.50
6:D:397:LYS:O	6:D:448:GLU:HB2	2.12	0.50
6:N:1237:THR:N	11:N:9434:HOH:O	2.45	0.50
5:M:5:ARG:NE	5:M:8:ARG:HH22	2.00	0.50
6:N:475:LYS:HA	6:N:478:LEU:HG	1.94	0.50
5:C:999:HIS:HD2	5:C:1004:LYS:NZ	2.10	0.50
6:N:1139:ASP:HB3	6:N:1357:ARG:NH2	2.27	0.50
5:C:290:LEU:H	5:C:290:LEU:HD23	1.75	0.50
6:D:54:LYS:CD	6:D:55:ASP:H	2.25	0.50
6:N:982:PHE:HB3	6:N:983:LEU:HD23	1.92	0.50
6:N:79:GLU:HG3	11:N:9414:HOH:O	2.12	0.50
5:C:57:GLU:O	5:C:62:GLY:HA3	2.12	0.50
6:D:562:ALA:HB1	6:D:567:ILE:HD11	1.94	0.50
1:X:8:DT:H2"	1:X:9:DG:C8	2.46	0.50
6:N:637:LEU:HD12	6:N:641:GLN:OE1	2.12	0.50
5:C:842:ARG:HG3	5:C:995:MET:HE1	1.93	0.50
6:D:100:ALA:HA	6:D:514:LEU:H	1.76	0.50
6:D:127:LEU:HD23	6:D:134:VAL:HG22	1.93	0.50
6:D:477:LEU:HD13	6:D:496:LEU:HA	1.94	0.50
6:D:510:GLU:O	6:D:513:ILE:HD12	2.12	0.50
5:M:22:GLN:OE1	5:M:407:LYS:HB3	2.12	0.50
5:C:265:ARG:HD2	5:C:267:TYR:CB	2.41	0.50
6:N:1087:ARG:HE	6:N:1253:THR:HG23	1.77	0.50
7:E:18:ARG:O	7:E:22:VAL:HG23	2.12	0.50
6:D:133:ILE:HG13	6:D:153:LEU:CD1	2.41	0.50
6:N:714:GLN:CD	6:N:765:SER:HA	2.33	0.50
6:N:1236:LEU:HD11	6:N:1361:VAL:CG2	2.42	0.50
5:M:290:LEU:HB3	5:M:302:VAL:CG1	2.41	0.50
6:D:683:ILE:HG23	6:D:687:VAL:HG21	1.94	0.50
6:D:739:ASP:O	6:D:741:ASP:N	2.45	0.50
5:M:432:ARG:HH21	6:N:1048:PRO:HD2	1.77	0.50
5:C:906:PHE:CZ	6:D:1067:VAL:HA	2.46	0.50
6:D:721:VAL:HG12	6:D:722:GLU:N	2.26	0.50
5:M:17:PRO:HG3	11:M:1503:HOH:O	2.12	0.50
6:D:1021:TYR:HA	11:D:8152:HOH:O	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:32:ALA:HB2	11:M:1235:HOH:O	2.12	0.50
4:B:62:LEU:HD12	4:B:62:LEU:H	1.77	0.50
5:C:408:ARG:CG	5:C:455:LEU:H	2.24	0.49
2:H:7:G:H8	2:H:7:G:O5'	1.95	0.49
6:N:1364:HIS:CE1	6:N:1366:LYS:HG3	2.47	0.49
6:N:787:LEU:HD21	6:N:1023:MET:HE2	1.94	0.49
6:N:1042:ARG:NH2	11:N:9443:HOH:O	2.45	0.49
5:M:139:GLN:HE21	5:M:418:LEU:CD2	2.25	0.49
6:N:1489:GLN:O	6:N:1493:LYS:HG2	2.12	0.49
5:C:97:ARG:HA	5:C:111:ASP:O	2.12	0.49
6:D:1144:LEU:HD11	6:D:1186:VAL:CG2	2.37	0.49
6:D:82:LYS:CB	6:D:84:ILE:HG12	2.42	0.49
6:N:1459:LEU:HD21	6:N:1468:LEU:HD22	1.93	0.49
6:N:143:ASN:OD1	6:N:145:VAL:HG12	2.11	0.49
6:N:502:PHE:CZ	6:N:509:PRO:HB3	2.46	0.49
6:N:838:ARG:HG2	6:N:838:ARG:NH1	2.26	0.49
6:D:977:ALA:CB	6:D:983:LEU:HD21	2.42	0.49
5:M:134:ARG:CD	5:M:392:SER:HB3	2.42	0.49
5:M:77:PRO:HG2	5:M:117:HIS:NE2	2.27	0.49
3:Z:9:DG:H2''	3:Z:10:DA:C8	2.47	0.49
6:D:1443:THR:O	6:D:1447:LEU:HD13	2.11	0.49
5:C:73:LEU:N	5:C:73:LEU:HD23	2.27	0.49
6:D:926:LYS:HG3	11:D:8014:HOH:O	2.11	0.49
6:N:1020:LEU:HD23	6:N:1021:TYR:N	2.27	0.49
4:A:163:ASN:HD21	5:C:744:ARG:HH22	1.59	0.49
6:N:864:VAL:HB	11:N:9057:HOH:O	2.11	0.49
5:C:113:VAL:O	5:C:115:LEU:HG	2.11	0.49
5:C:119:PRO:HG2	5:C:386:PHE:CD2	2.47	0.49
6:D:1128:VAL:O	6:D:1129:THR:C	2.50	0.49
6:D:1402:ALA:HB3	11:D:8309:HOH:O	2.11	0.49
5:M:616:GLU:OE1	5:M:616:GLU:HA	2.11	0.49
5:M:1019:GLN:CD	6:N:616:GLN:HE22	2.15	0.49
6:D:634:GLY:CA	6:D:727:GLN:HG2	2.43	0.49
5:C:577:PRO:HB2	5:C:580:MET:HG2	1.93	0.49
1:G:12:DG:H2''	1:G:13:DT:C5'	2.43	0.49
5:M:415:PRO:HD2	5:M:418:LEU:HD13	1.94	0.49
6:N:1010:ASN:HB3	11:N:9288:HOH:O	2.12	0.49
6:N:522:PRO:HG2	6:N:523:ASP:N	2.26	0.49
4:B:86:VAL:HG12	4:B:124:ASN:HB2	1.94	0.49
5:C:264:PRO:HD2	11:C:1410:HOH:O	2.12	0.49
6:D:29:PRO:HB3	6:D:549:ASN:HD21	1.77	0.49
6:D:185:VAL:HG21	6:D:203:ALA:HB2	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:676:ILE:O	5:M:676:ILE:HG23	2.11	0.49
5:M:583:LEU:N	5:M:584:GLU:OE2	2.45	0.49
5:M:198:ARG:HE	5:M:198:ARG:HA	1.77	0.49
6:D:709:HIS:CD2	6:D:709:HIS:N	2.80	0.49
6:D:547:LEU:HB3	11:D:8068:HOH:O	2.11	0.49
5:M:959:PRO:O	5:M:963:LEU:HG	2.11	0.49
5:M:21:ILE:HD12	5:M:21:ILE:H	1.77	0.49
7:E:83:ASP:O	7:E:86:GLN:HG3	2.13	0.49
5:C:881:ASN:N	5:C:881:ASN:ND2	2.60	0.49
6:N:1189:ARG:NH1	6:N:1203:LYS:HB2	2.28	0.49
6:D:762:GLN:NE2	7:E:20:THR:OG1	2.45	0.49
5:M:276:LYS:O	5:M:280:LYS:HB3	2.12	0.49
6:N:996:TRP:CE2	6:N:1056:PRO:HG2	2.47	0.49
6:N:957:PRO:HG3	6:N:1007:VAL:HA	1.94	0.49
6:N:133:ILE:CG2	6:N:454:ALA:HB1	2.41	0.49
5:C:260:LEU:HA	5:C:291:ALA:CB	2.42	0.49
6:D:1143:GLY:O	6:D:1147:ARG:NE	2.45	0.49
7:O:18:ARG:O	7:O:22:VAL:HG23	2.12	0.49
7:O:68:LEU:HD12	7:O:73:LEU:HD22	1.93	0.49
6:D:1495:ILE:HG12	7:E:80:VAL:CG1	2.39	0.49
6:N:437:VAL:HG13	6:N:444:VAL:HG22	1.94	0.49
5:C:54:ILE:HG22	5:C:66:LEU:HB3	1.95	0.49
5:C:64:LEU:HD22	5:C:359:MET:HG3	1.93	0.49
4:L:47:SER:HB2	4:L:217:ILE:HD13	1.95	0.49
6:D:836:VAL:O	6:D:840:LYS:HG3	2.12	0.49
4:L:103:ALA:HB1	4:L:107:LYS:CE	2.42	0.49
5:C:689:VAL:HG11	5:C:870:ILE:HD11	1.94	0.49
5:C:674:VAL:CG2	5:C:869:VAL:HG13	2.42	0.49
5:C:876:VAL:O	5:C:879:ARG:O	2.30	0.49
6:D:737:ASN:O	6:D:737:ASN:CG	2.50	0.49
5:M:689:VAL:HG11	5:M:870:ILE:HD11	1.93	0.49
6:D:1384:PRO:HG3	6:D:1389:LEU:HA	1.92	0.49
5:C:8:ARG:N	5:C:907:ASP:OD2	2.45	0.49
6:D:519:VAL:HG12	6:D:544:TYR:CE2	2.48	0.49
6:D:172:PRO:HG2	6:D:175:VAL:CG2	2.42	0.49
6:D:1258:ARG:HA	6:D:1261:GLU:OE2	2.12	0.49
4:A:83:LYS:HE2	4:A:170:VAL:HG13	1.93	0.49
4:A:68:ILE:HD12	4:A:68:ILE:N	2.27	0.49
6:D:1124:GLN:HG2	6:D:1133:ARG:CG	2.42	0.49
4:A:190:THR:HG23	11:A:369:HOH:O	2.12	0.49
5:M:897:LEU:HD12	11:M:1461:HOH:O	2.12	0.49
4:B:62:LEU:HD13	4:B:63:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1022:GLY:HA3	5:C:1026:GLN:O	2.12	0.49
6:D:17:LYS:O	6:D:20:SER:HB3	2.12	0.49
6:N:516:ALA:O	6:N:518:PRO:HD3	2.13	0.49
5:C:432:ARG:HH12	6:D:1072:ILE:CD1	2.25	0.49
6:D:1374:GLN:OE1	6:D:1377:LYS:HD3	2.12	0.49
6:D:118:LEU:HD21	6:D:464:LEU:HD13	1.94	0.49
6:D:465:LEU:HD13	6:D:513:ILE:HD11	1.95	0.49
4:K:30:ARG:NH2	5:M:938:LYS:HD2	2.25	0.49
5:C:490:GLU:HB3	5:C:493:ARG:CZ	2.42	0.49
5:M:736:ASP:HA	5:M:744:ARG:HH11	1.77	0.49
5:C:1001:VAL:O	5:C:1001:VAL:HG12	2.13	0.49
6:D:1168:MET:HE3	6:D:1171:VAL:HG21	1.94	0.49
5:C:496:ILE:HA	5:C:531:PHE:O	2.11	0.49
6:N:10:ILE:HG13	6:N:1434:TRP:CZ2	2.47	0.49
5:M:574:ALA:HB2	11:M:1443:HOH:O	2.12	0.49
4:K:218:LEU:O	4:K:222:LEU:HD13	2.12	0.49
4:A:199:ILE:N	4:A:199:ILE:HD12	2.26	0.49
5:M:340:MET:HG2	5:M:386:PHE:HE1	1.78	0.49
5:M:1009:SER:HB3	6:N:651:GLU:O	2.13	0.49
2:H:16:G:H21	6:D:705:ALA:HB1	1.78	0.49
7:O:33:HIS:HB2	7:O:37:ASN:HD21	1.77	0.49
6:D:1125:PRO:HB3	6:D:1130:ARG:NH1	2.27	0.49
5:M:1016:ILE:HD13	5:M:1017:THR:H	1.78	0.49
6:D:638:LYS:HD2	6:D:932:ASP:CG	2.33	0.49
5:C:304:LEU:HA	11:C:1215:HOH:O	2.12	0.49
5:C:409:ARG:HD2	5:C:452:ILE:CG2	2.42	0.49
5:C:449:ILE:C	5:C:451:LEU:H	2.15	0.49
5:C:437:ARG:O	5:C:467:ILE:HD13	2.12	0.49
5:M:471:TYR:HB2	11:M:1201:HOH:O	2.11	0.49
6:N:641:GLN:HB3	6:N:717:GLN:O	2.12	0.49
6:D:1263:PHE:O	6:D:1424:VAL:HG12	2.12	0.49
5:M:265:ARG:HH22	5:M:332:ARG:HH22	1.60	0.49
6:N:897:TRP:HA	6:N:900:ILE:CG1	2.37	0.49
5:M:23:VAL:CA	5:M:121:MET:HE1	2.43	0.49
5:C:150:PRO:HG3	5:C:158:TYR:HD2	1.78	0.49
6:D:1087:ARG:HG3	6:D:1237:THR:CG2	2.40	0.49
6:D:138:LYS:HD2	6:D:450:TYR:OH	2.13	0.49
5:C:537:LYS:HD2	5:C:537:LYS:H	1.78	0.49
6:D:108:VAL:CB	6:D:109:PRO:HD3	2.42	0.49
6:N:137:PRO:HD2	6:N:453:ASP:OD1	2.12	0.49
5:M:561:GLY:HA2	5:M:564:MET:HG3	1.93	0.49
6:N:1139:ASP:O	6:N:1142:ALA:HB3	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:610:LYS:CA	6:D:615:ARG:HD3	2.42	0.49
6:N:800:LYS:HE3	6:N:804:LEU:HB3	1.93	0.49
5:C:127:PHE:O	5:C:133:ASP:HA	2.12	0.49
5:M:127:PHE:O	5:M:133:ASP:HA	2.13	0.49
5:M:837:ASP:HA	5:M:999:HIS:HE1	1.78	0.49
6:D:1418:LYS:HD3	6:D:1419:PRO:CD	2.42	0.49
6:D:926:LYS:HA	6:D:929:ARG:HH11	1.78	0.49
5:M:319:GLY:HA3	11:M:1388:HOH:O	2.11	0.49
5:C:165:LEU:HD11	11:C:1123:HOH:O	2.13	0.49
6:N:947:ILE:HG23	11:N:9083:HOH:O	2.11	0.49
6:N:1101:VAL:HG21	6:N:1424:VAL:HG23	1.95	0.49
4:B:102:LYS:HZ1	4:B:137:ARG:NE	2.11	0.49
6:D:613:ARG:O	6:D:616:GLN:HB3	2.13	0.49
5:M:403:SER:O	5:M:407:LYS:HG3	2.13	0.49
5:C:162:ILE:HD12	5:C:172:ILE:CB	2.43	0.49
5:C:270:GLY:O	5:C:274:ARG:HD2	2.12	0.49
5:C:264:PRO:HB3	5:C:289:THR:CB	2.43	0.49
5:C:192:PRO:HB2	5:C:195:LEU:H	1.78	0.49
6:D:108:VAL:HB	6:D:109:PRO:HD3	1.94	0.49
5:M:1065:ALA:HB1	5:M:1077:PRO:CG	2.36	0.49
6:D:899:LEU:HD13	6:D:914:LEU:CD2	2.37	0.49
6:D:957:PRO:O	6:D:960:LYS:HB3	2.13	0.49
5:M:31:GLN:NE2	5:M:71:TYR:OH	2.45	0.49
6:D:191:LEU:HG	6:D:197:SER:OG	2.13	0.49
5:C:89:THR:HA	5:C:129:ILE:O	2.12	0.49
5:M:902:ILE:O	5:M:904:PRO:HD3	2.12	0.49
5:C:841:ASN:N	5:C:841:ASN:ND2	2.60	0.49
7:E:38:THR:HG23	7:E:41:GLU:OE2	2.13	0.49
5:M:146:VAL:HG12	5:M:162:ILE:HA	1.93	0.49
5:C:101:ILE:HG22	5:C:102:HIS:N	2.27	0.49
6:N:151:GLN:HG3	6:N:152:LEU:H	1.78	0.49
5:M:250:ARG:HH11	5:M:250:ARG:HG3	1.78	0.49
5:C:1111:ILE:HD12	5:C:1112:PHE:H	1.78	0.49
5:M:25:SER:CB	5:M:335:THR:HB	2.42	0.49
4:A:73:GLU:OE1	4:A:130:ALA:HA	2.12	0.49
5:C:596:TYR:HB2	11:C:1524:HOH:O	2.12	0.49
6:N:1338:ALA:HB2	11:N:9199:HOH:O	2.12	0.49
6:D:1211:MET:SD	6:D:1213:ARG:HG2	2.52	0.49
4:K:63:HIS:CD2	4:K:66:SER:HB2	2.48	0.49
5:C:141:HIS:CE1	5:C:334:ARG:HG3	2.47	0.49
6:N:1213:ARG:NH2	7:O:15:SER:HA	2.27	0.49
6:D:754:PHE:CE2	6:D:1476:THR:HG21	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1487:VAL:HA	11:N:9036:HOH:O	2.11	0.49
5:C:98:LEU:N	5:C:98:LEU:HD12	2.28	0.49
6:N:116:LEU:HD22	6:N:118:LEU:HG	1.95	0.49
5:C:150:PRO:HG3	5:C:158:TYR:CD2	2.47	0.49
5:C:162:ILE:O	5:C:164:PRO:HD3	2.12	0.49
6:D:1087:ARG:CG	6:D:1237:THR:HG21	2.41	0.49
5:C:265:ARG:O	5:C:288:ARG:HD2	2.13	0.49
6:D:204:LEU:O	6:D:394:LEU:HD23	2.13	0.49
5:C:537:LYS:HG3	5:C:545:ASN:HD21	1.78	0.49
6:D:1000:THR:HG23	6:D:1001:GLU:N	2.28	0.49
4:L:111:ALA:HB3	4:L:124:ASN:O	2.13	0.49
6:D:1192:LEU:HD22	6:D:1345:GLU:CG	2.43	0.49
6:N:827:ILE:O	6:N:837:GLY:HA3	2.12	0.49
5:M:374:ASN:HD22	5:M:377:PRO:HD3	1.76	0.49
5:M:136:ILE:HD11	11:M:1417:HOH:O	2.12	0.49
6:N:1156:LEU:HG	6:N:1177:ALA:HB2	1.94	0.49
5:C:918:LEU:HD23	5:C:968:LEU:HA	1.93	0.49
6:N:1488:ASP:OD1	6:N:1488:ASP:N	2.46	0.49
6:N:92:HIS:HA	6:N:517:VAL:O	2.13	0.49
5:C:433:THR:CG2	5:C:488:ALA:HB1	2.28	0.49
5:C:689:VAL:O	5:C:869:VAL:HG23	2.13	0.49
5:C:677:MET:HE1	5:C:974:LEU:HD23	1.94	0.49
5:C:575:GLN:HG2	5:C:671:ASN:OD1	2.11	0.49
5:M:328:LEU:N	5:M:328:LEU:HD12	2.28	0.49
5:M:328:LEU:HD11	5:M:434:HIS:CD2	2.47	0.49
6:N:538:SER:O	6:N:541:ASN:ND2	2.45	0.49
5:M:301:GLU:O	5:M:305:PRO:HG2	2.13	0.49
5:C:368:THR:N	5:C:369:PRO:HD2	2.28	0.49
5:C:313:LEU:HA	5:C:321:GLU:HG3	1.94	0.49
5:M:68:PHE:CZ	5:M:71:TYR:HD2	2.24	0.49
6:D:38:LYS:HZ1	6:D:59:ALA:HB1	1.77	0.49
5:M:971:LYS:HE2	11:M:1216:HOH:O	2.13	0.49
6:N:565:ILE:HD12	6:N:565:ILE:N	2.26	0.49
5:M:524:VAL:HG12	5:M:528:GLU:HB2	1.95	0.49
5:C:190:LYS:HB2	11:C:1219:HOH:O	2.13	0.49
6:N:1498:ALA:HB2	7:O:88:GLU:OE1	2.13	0.49
6:N:703:ASN:ND2	6:N:704:ARG:H	2.11	0.49
5:C:1040:LEU:HD21	5:C:1048:THR:HG22	1.95	0.49
4:A:173:PRO:HB2	4:A:205:VAL:HG22	1.94	0.49
6:D:915:VAL:HG11	6:D:931:LEU:HD21	1.94	0.49
4:B:176:ARG:HG3	4:B:200:TRP:CE3	2.47	0.49
6:D:883:ALA:HB2	11:D:8066:HOH:O	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:184:GLU:HG3	11:D:8384:HOH:O	2.13	0.49
6:D:737:ASN:ND2	10:D:3999:APC:O3'	2.38	0.49
5:M:498:GLN:NE2	6:N:1068:LEU:HG	2.28	0.49
5:M:687:ALA:HB2	6:N:740:PHE:HB2	1.95	0.49
5:M:433:THR:O	5:M:437:ARG:HD2	2.12	0.49
6:D:508:ARG:HD2	6:D:509:PRO:HD2	1.94	0.49
6:N:545:ARG:HB2	6:N:545:ARG:CZ	2.42	0.49
5:M:981:GLU:HG3	5:M:982:PRO:HD2	1.94	0.49
6:D:396:VAL:CG1	6:D:447:VAL:HG12	2.42	0.49
5:M:759:THR:HB	5:M:785:VAL:HG22	1.95	0.49
5:C:860:HIS:CE1	5:C:975:TYR:HB2	2.48	0.49
5:C:722:ILE:O	5:C:722:ILE:HG23	2.13	0.49
6:D:192:ALA:HB1	6:D:193:PRO:HD2	1.94	0.49
5:C:762:LYS:HD2	5:C:786:LYS:CB	2.42	0.49
4:B:173:PRO:HA	4:B:202:ASP:OD2	2.13	0.49
6:N:829:VAL:O	6:N:835:SER:HB3	2.12	0.49
5:C:906:PHE:CD1	6:D:1067:VAL:HG13	2.48	0.49
5:C:46:ALA:O	5:C:49:ARG:HG2	2.13	0.49
6:D:729:HIS:CE1	6:D:731:LEU:HB2	2.48	0.49
5:M:893:ALA:HB2	5:M:918:LEU:HD12	1.95	0.49
4:L:176:ARG:HE	6:N:847:ASP:CG	2.17	0.49
4:B:57:TYR:CE2	4:B:161:ARG:HG2	2.48	0.49
6:N:739:ASP:O	6:N:741:ASP:N	2.45	0.48
5:C:439:CYS:SG	5:C:442:GLU:HB2	2.52	0.48
5:C:439:CYS:SG	5:C:442:GLU:N	2.75	0.48
5:C:853:LEU:HB2	5:C:858:MET:CE	2.42	0.48
6:D:1033:GLN:N	11:D:8254:HOH:O	2.46	0.48
6:N:1114:THR:HG23	6:N:1114:THR:O	2.13	0.48
6:D:1026:SER:C	6:D:1028:ALA:H	2.17	0.48
2:Y:2:A:C4'	2:Y:2:A:C8	2.95	0.48
5:C:579:VAL:CG1	5:C:887:GLU:HG3	2.33	0.48
6:D:1102:THR:CG2	6:D:1370:ILE:HG22	2.42	0.48
11:C:1216:HOH:O	6:D:606:ILE:HD11	2.12	0.48
4:L:89:PHE:CD1	4:L:120:VAL:HG13	2.48	0.48
5:M:174:LEU:HD13	5:M:307:LEU:HD13	1.94	0.48
5:C:276:LYS:O	5:C:280:LYS:HB2	2.12	0.48
6:D:1231:GLU:CG	6:D:1232:PRO:HD3	2.43	0.48
5:M:673:LEU:HB3	5:M:868:ASP:OD1	2.13	0.48
6:N:470:LEU:H	6:N:470:LEU:CD2	2.24	0.48
5:M:490:GLU:HG2	5:M:493:ARG:CZ	2.42	0.48
4:L:124:ASN:ND2	4:L:127:LEU:HB2	2.28	0.48
4:L:24:VAL:HG12	4:L:26:GLU:OE2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:699:VAL:H	6:D:756:GLN:HE22	1.55	0.48
5:M:376:ARG:NH1	5:M:376:ARG:HG3	2.28	0.48
4:K:1:MET:O	4:K:6:LEU:HD13	2.12	0.48
5:C:18:LEU:HD22	5:C:404:LEU:CD2	2.43	0.48
5:M:127:PHE:HZ	5:M:336:VAL:HG11	1.78	0.48
6:N:729:HIS:CE1	6:N:731:LEU:H	2.31	0.48
5:M:262:ALA:HB3	11:M:1334:HOH:O	2.13	0.48
6:D:675:ARG:HA	6:D:678:GLU:HG2	1.94	0.48
5:M:250:ARG:HG2	5:M:253:ALA:CB	2.43	0.48
5:M:642:ARG:HG3	5:M:657:ASP:OD2	2.13	0.48
5:M:630:ARG:HA	11:M:1247:HOH:O	2.12	0.48
6:D:1136:LYS:HB2	6:D:1139:ASP:OD1	2.13	0.48
5:M:95:TYR:CD2	5:M:114:PHE:HB2	2.47	0.48
6:D:1217:ILE:HD12	6:D:1480:PHE:CE2	2.48	0.48
5:C:1049:LEU:CD2	6:D:1472:ILE:HD12	2.37	0.48
5:M:217:LEU:HD12	5:M:311:PHE:CD2	2.48	0.48
4:B:111:ALA:HB3	4:B:124:ASN:O	2.12	0.48
5:M:39:ARG:CD	5:M:39:ARG:H	2.18	0.48
6:D:522:PRO:HG2	6:D:523:ASP:H	1.78	0.48
4:A:180:GLN:HB3	4:A:182:GLU:OE2	2.11	0.48
5:M:302:VAL:O	5:M:306:THR:HG23	2.14	0.48
5:M:19:THR:HG22	5:M:404:LEU:CD1	2.41	0.48
6:D:1366:LYS:HA	6:D:1369:GLU:OE2	2.13	0.48
6:D:689:ASP:O	6:D:693:GLU:HG3	2.12	0.48
5:M:642:ARG:NH1	11:M:1230:HOH:O	2.45	0.48
5:M:1043:TYR:CE1	6:N:710:ARG:HG3	2.48	0.48
4:L:30:ARG:HB2	4:L:30:ARG:HH11	1.78	0.48
5:C:1102:LEU:N	6:D:7:LYS:O	2.46	0.48
4:A:108:GLU:OE2	4:A:131:THR:HG22	2.13	0.48
6:N:646:LYS:NZ	6:N:722:GLU:HG2	2.28	0.48
5:C:723:THR:HG23	5:C:725:ASP:H	1.78	0.48
6:D:1483:PHE:N	6:D:1483:PHE:CD1	2.81	0.48
1:X:16:DG:N2	11:X:2005:HOH:O	2.46	0.48
5:C:398:THR:HB	5:C:399:ASN:HD22	1.79	0.48
5:C:674:VAL:HG23	5:C:869:VAL:O	2.13	0.48
6:N:1220:ALA:O	6:N:1224:VAL:HG23	2.14	0.48
6:N:1026:SER:C	6:N:1028:ALA:H	2.16	0.48
5:C:548:PRO:HG3	5:C:842:ARG:NH1	2.28	0.48
5:M:98:LEU:HD21	5:M:373:VAL:HG21	1.95	0.48
6:N:543:LEU:HA	6:N:546:ARG:HG3	1.96	0.48
6:N:202:VAL:HB	6:N:398:ALA:O	2.13	0.48
6:D:164:GLY:O	6:D:199:LEU:HD12	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:736:ASP:HA	5:M:744:ARG:HH12	1.75	0.48
5:C:981:GLU:HG3	5:C:982:PRO:CD	2.43	0.48
5:M:842:ARG:NH2	5:M:887:GLU:CD	2.66	0.48
6:N:959:GLU:O	6:N:963:TYR:HD1	1.96	0.48
6:N:678:GLU:HB3	11:N:9222:HOH:O	2.13	0.48
6:D:764:LEU:HD12	6:D:766:ALA:H	1.79	0.48
6:N:757:ALA:CB	7:O:24:ALA:HB2	2.42	0.48
4:B:115:LEU:O	4:B:115:LEU:HD12	2.13	0.48
4:A:150:TYR:OH	5:C:696:LYS:HA	2.12	0.48
4:L:174:VAL:HG13	4:L:200:TRP:O	2.13	0.48
5:C:119:PRO:HB2	11:C:1174:HOH:O	2.12	0.48
6:N:619:LEU:HG	6:N:621:LYS:HE2	1.94	0.48
5:C:1083:GLU:HA	5:C:1086:ARG:HE	1.79	0.48
5:M:368:THR:N	5:M:369:PRO:HD2	2.29	0.48
5:C:98:LEU:HD13	5:C:110:GLU:O	2.13	0.48
6:N:155:ASP:O	6:N:159:ARG:HB3	2.13	0.48
6:N:606:ILE:HG23	11:N:9149:HOH:O	2.12	0.48
6:N:181:ASP:O	6:N:204:LEU:HA	2.13	0.48
6:D:1147:ARG:O	6:D:1166:LEU:HD23	2.12	0.48
6:D:50:PHE:CB	6:D:522:PRO:HG3	2.43	0.48
6:N:119:SER:N	6:N:123:LEU:HB2	2.28	0.48
7:O:73:LEU:HD12	7:O:73:LEU:H	1.79	0.48
5:M:52:PHE:HB3	5:M:53:PRO:HD3	1.95	0.48
6:D:139:GLY:HA2	6:D:451:ASP:O	2.13	0.48
5:M:880:MET:HE1	6:N:1243:THR:O	2.13	0.48
5:C:622:GLU:O	5:C:624:PRO:HD3	2.14	0.48
6:N:1238:MET:HA	6:N:1241:PHE:HE2	1.76	0.48
6:D:827:ILE:H	6:D:827:ILE:HD12	1.77	0.48
4:L:73:GLU:OE1	4:L:130:ALA:HA	2.13	0.48
6:N:759:ALA:O	6:N:763:MET:HB3	2.14	0.48
1:X:8:DT:H2''	1:X:9:DG:H8	1.77	0.48
5:M:959:PRO:HB2	11:M:1487:HOH:O	2.13	0.48
6:D:1213:ARG:HH12	7:E:11:GLY:HA2	1.78	0.48
6:D:881:LEU:HA	11:D:8376:HOH:O	2.13	0.48
1:X:12:DG:H2''	1:X:13:DT:O5'	2.14	0.48
2:Y:7:G:H5''	2:Y:7:G:C8	2.49	0.48
6:N:15:PRO:HB3	11:N:9303:HOH:O	2.12	0.48
5:M:1103:ASP:OD1	6:N:3:LYS:HD2	2.13	0.48
6:N:92:HIS:CA	6:N:519:VAL:HG23	2.43	0.48
5:C:415:PRO:HD2	5:C:418:LEU:HD13	1.95	0.48
5:C:675:ALA:CA	5:C:989:VAL:HG13	2.43	0.48
6:D:785:ILE:O	6:D:789:LEU:HG	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:688:ILE:CG2	5:C:871:LEU:HD23	2.43	0.48
6:N:1378:TYR:O	6:N:1379:VAL:HG13	2.13	0.48
5:M:342:ASP:HA	5:M:345:ARG:CD	2.43	0.48
6:D:133:ILE:HG13	6:D:153:LEU:HG	1.95	0.48
6:N:939:PHE:O	6:N:943:THR:HG23	2.13	0.48
6:D:1495:ILE:HG22	6:D:1499:ARG:NH2	2.28	0.48
6:N:399:ARG:HH21	6:N:431:VAL:HG22	1.78	0.48
6:N:584:ASN:HD21	6:N:590:PRO:HD2	1.77	0.48
5:C:601:GLY:HA3	5:C:615:TYR:HA	1.95	0.48
5:M:1012:PRO:HB2	5:M:1021:LEU:O	2.13	0.48
6:N:613:ARG:HA	6:N:613:ARG:HD3	1.62	0.48
6:N:95:LEU:HA	6:N:551:ASN:ND2	2.28	0.48
5:C:326:ASP:HB2	5:C:431:HIS:CG	2.49	0.48
5:C:409:ARG:NH1	5:C:444:PRO:HG2	2.28	0.48
2:H:11:C:C2'	2:H:12:G:H5''	2.44	0.48
6:N:1066:THR:HG22	6:N:1069:GLU:OE1	2.12	0.48
5:M:260:LEU:HG	5:M:261:ILE:HG12	1.95	0.48
7:O:41:GLU:N	7:O:42:PRO:CD	2.76	0.48
6:N:902:LEU:HB3	11:N:9040:HOH:O	2.13	0.48
4:B:18:ARG:NH1	4:B:123:MET:HE1	2.14	0.48
5:M:218:VAL:HG22	5:M:221:LEU:HD21	1.94	0.48
5:C:1034:GLU:HA	5:C:1037:VAL:CG2	2.43	0.48
5:M:16:PRO:HG2	5:M:485:TYR:OH	2.14	0.48
6:N:500:ARG:HG3	11:N:9399:HOH:O	2.14	0.48
5:M:44:ILE:HD12	5:M:344:PHE:CD1	2.48	0.48
6:N:42:ASP:O	6:N:43:GLY:O	2.32	0.48
5:M:607:ASP:HB3	5:M:609:ASN:H	1.79	0.48
5:C:159:ILE:HD11	11:C:1246:HOH:O	2.13	0.48
6:N:1441:GLN:OE1	6:N:1442:ASN:HB2	2.13	0.48
6:N:583:ASP:HB2	6:N:604:THR:OG1	2.14	0.48
4:B:23:PHE:HZ	4:B:207:PRO:HB2	1.78	0.48
5:M:21:ILE:HD11	11:M:1541:HOH:O	2.13	0.48
5:M:95:TYR:HD2	5:M:114:PHE:HB2	1.79	0.48
6:D:110:SER:HB3	6:D:113:GLY:H	1.77	0.48
5:C:168:ARG:HB2	11:C:1136:HOH:O	2.13	0.48
5:M:61:LYS:HD3	5:M:61:LYS:O	2.14	0.48
2:Y:7:G:H8	2:Y:7:G:C5'	2.27	0.48
5:C:691:SER:HB2	5:C:858:MET:SD	2.53	0.48
6:N:1102:THR:HG22	6:N:1222:GLY:HA3	1.95	0.48
6:N:1378:TYR:HA	6:N:1395:LEU:H	1.78	0.48
6:D:762:GLN:CB	7:E:16:LYS:HE2	2.44	0.48
5:M:260:LEU:HA	5:M:291:ALA:CB	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:462:GLN:HA	6:D:513:ILE:HD13	1.94	0.48
5:C:176:VAL:HG13	11:C:1142:HOH:O	2.14	0.48
6:D:1381:VAL:HG13	11:D:8400:HOH:O	2.14	0.48
7:E:23:VAL:HG22	7:E:68:LEU:HD23	1.96	0.48
4:K:224:TYR:HD1	11:K:1342:HOH:O	1.96	0.48
6:N:490:ALA:HA	6:N:1390:LEU:CD1	2.44	0.48
4:L:124:ASN:N	4:L:125:PRO:HD3	2.29	0.48
5:M:626:ARG:HB3	5:M:626:ARG:HH11	1.79	0.48
6:D:963:TYR:HE2	6:D:1002:LYS:HB3	1.78	0.48
5:C:1103:ASP:OD1	5:C:1109:VAL:HG22	2.14	0.48
5:M:845:ASN:ND2	11:M:1407:HOH:O	2.46	0.48
4:L:173:PRO:HG3	11:L:367:HOH:O	2.14	0.48
5:C:758:ARG:NH2	5:C:788:THR:HB	2.29	0.48
6:D:42:ASP:O	6:D:43:GLY:O	2.31	0.48
5:C:205:GLU:O	5:C:209:ARG:HD2	2.14	0.48
6:N:1152:GLU:OE2	6:N:1154:GLU:HG3	2.13	0.48
5:M:767:PRO:HD3	11:M:1522:HOH:O	2.14	0.48
6:N:93:ILE:HB	6:N:517:VAL:HB	1.96	0.48
5:C:562:SER:HB3	11:C:1416:HOH:O	2.12	0.48
5:C:405:ARG:NE	5:C:566:THR:HG21	2.28	0.48
6:D:644:LEU:HD23	6:D:718:PRO:CB	2.43	0.48
6:D:792:ILE:O	6:D:792:ILE:HG12	2.13	0.48
4:B:102:LYS:HZ2	4:B:139:ASN:HB2	1.78	0.48
6:N:1484:THR:H	7:O:25:LYS:NZ	2.11	0.48
6:N:1336:LEU:CD1	6:N:1341:PRO:HG3	2.44	0.48
6:D:1112:CYS:HB2	6:D:1195:GLN:CG	2.32	0.48
7:O:57:ASP:H	7:O:58:PRO:HD3	1.79	0.48
6:N:1499:ARG:HB2	6:N:1499:ARG:HH11	1.78	0.48
5:M:1095:LEU:HD21	6:N:603:LEU:HB3	1.95	0.48
5:C:265:ARG:H	5:C:289:THR:HG21	1.78	0.48
6:N:394:LEU:HD21	6:N:445:ARG:CZ	2.43	0.48
5:C:587:VAL:HG23	11:C:1190:HOH:O	2.12	0.48
6:D:1381:VAL:HB	6:D:1389:LEU:O	2.14	0.48
6:D:119:SER:N	6:D:123:LEU:HB2	2.29	0.48
6:D:81:THR:HB	6:D:85:VAL:HG22	1.95	0.48
6:N:1383:ASP:HB2	6:N:1416:ALA:HB3	1.96	0.48
4:L:23:PHE:O	4:L:196:THR:HA	2.14	0.48
4:K:38:ASN:CB	5:M:980:GLY:HA3	2.40	0.48
5:M:172:ILE:HG23	5:M:184:MET:SD	2.54	0.48
6:N:804:LEU:HD23	6:N:804:LEU:H	1.79	0.48
5:M:716:LYS:HZ1	6:N:36:THR:HA	1.78	0.48
6:D:671:LYS:O	6:D:675:ARG:HG3	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:562:ALA:HB1	6:D:567:ILE:CD1	2.44	0.48
5:C:317:VAL:HG23	11:C:1254:HOH:O	2.14	0.48
4:A:215:VAL:HG21	4:B:225:PHE:CD1	2.49	0.48
6:N:1098:LEU:HD23	6:N:1371:VAL:HG21	1.96	0.48
4:L:226:SER:O	4:L:228:PRO:HD3	2.14	0.48
2:Y:7:G:H2'	2:Y:8:C:OP1	2.14	0.48
2:Y:9:G:C5'	2:Y:9:G:C8	2.97	0.48
5:C:833:LEU:HD13	5:C:996:LYS:HD2	1.96	0.48
6:N:1109:GLU:CG	6:N:1201:CYS:HA	2.34	0.48
6:N:1223:ILE:H	6:N:1223:ILE:CD1	2.19	0.48
6:D:727:GLN:NE2	11:D:8105:HOH:O	2.46	0.48
6:N:786:ILE:HD13	6:N:1027:GLY:CA	2.44	0.48
6:D:1094:LEU:O	6:D:1098:LEU:HD13	2.14	0.48
6:D:1221:VAL:O	6:D:1224:VAL:HB	2.14	0.48
6:D:581:LEU:H	6:D:581:LEU:HD23	1.77	0.48
6:N:546:ARG:HH11	6:N:546:ARG:HB3	1.78	0.48
5:C:260:LEU:CD1	5:C:261:ILE:HG13	2.43	0.48
1:G:23:DG:N2	11:G:185:HOH:O	2.46	0.48
6:D:1120:VAL:HB	6:D:1144:LEU:HD21	1.96	0.48
6:D:153:LEU:HB3	11:D:8252:HOH:O	2.14	0.48
7:O:22:VAL:CG1	7:O:68:LEU:HD21	2.44	0.48
4:K:36:LEU:O	4:K:39:PRO:HD2	2.14	0.48
5:C:774:LEU:HD11	11:D:8351:HOH:O	2.14	0.48
6:N:974:ILE:HD11	6:N:995:LEU:HD22	1.95	0.48
5:M:129:ILE:HG22	5:M:130:ASN:N	2.29	0.48
4:A:156:HIS:CD2	4:A:157:GLY:N	2.82	0.48
5:M:21:ILE:HD12	5:M:21:ILE:N	2.29	0.48
5:M:256:TYR:HB2	11:M:1408:HOH:O	2.13	0.48
7:E:5:GLY:HA3	7:E:8:LYS:HD2	1.96	0.48
5:M:1013:TYR:HB3	5:M:1018:GLN:OE1	2.13	0.48
6:D:650:LEU:HD23	6:D:691:LEU:CD2	2.43	0.48
5:M:684:PHE:HD2	11:N:9180:HOH:O	1.97	0.48
5:C:681:GLY:O	6:D:633:VAL:HG11	2.14	0.48
6:D:1097:LYS:O	6:D:1101:VAL:HG23	2.13	0.48
6:D:1105:ILE:HG23	6:D:1373:ARG:NH2	2.28	0.48
6:D:1462:LEU:HD21	6:D:1474:ALA:CB	2.42	0.48
5:M:101:ILE:HG22	5:M:102:HIS:N	2.29	0.48
5:M:1030:GLN:HE22	6:N:628:ARG:HD3	1.78	0.48
6:N:9:ARG:HA	6:N:1455:LYS:O	2.13	0.48
5:M:1040:LEU:N	5:M:1040:LEU:HD12	2.29	0.48
6:D:93:ILE:HG13	6:D:519:VAL:CG2	2.43	0.48
5:M:91:GLN:NE2	5:M:383:ARG:HH22	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:36:LEU:HD11	4:B:221:HIS:CD2	2.49	0.48
6:D:769:LEU:HB2	6:D:919:PHE:CE1	2.49	0.48
6:D:675:ARG:HB3	6:D:675:ARG:CZ	2.43	0.48
4:L:7:LYS:O	4:L:7:LYS:HD2	2.14	0.48
3:I:4:DC:H2"	3:I:5:DG:O5'	2.14	0.48
4:B:153:ALA:HA	4:B:156:HIS:CE1	2.49	0.48
5:C:322:VAL:HG23	5:C:322:VAL:O	2.14	0.48
1:X:14:DT:H3'	6:N:610:LYS:HZ1	1.79	0.47
6:N:94:GLU:O	6:N:551:ASN:ND2	2.45	0.47
5:C:433:THR:O	5:C:437:ARG:HD2	2.14	0.47
6:D:796:ARG:O	6:D:797:LYS:HD2	2.14	0.47
6:N:783:ARG:HH12	6:N:1029:ARG:NH2	2.12	0.47
6:N:1378:TYR:OH	6:N:1431:THR:HA	2.14	0.47
6:D:117:ASP:N	6:D:150:ARG:HH11	2.12	0.47
6:N:525:ARG:HB2	6:N:538:SER:CB	2.43	0.47
6:N:84:ILE:O	6:N:87:ARG:HG3	2.13	0.47
5:M:503:LEU:HD23	5:M:507:ARG:O	2.14	0.47
5:M:152:PRO:HB2	11:M:1160:HOH:O	2.14	0.47
5:C:193:LEU:N	5:C:193:LEU:HD12	2.29	0.47
5:C:144:PRO:HA	5:C:163:ILE:CD1	2.44	0.47
1:G:18:DG:H5"	6:D:628:ARG:HH22	1.79	0.47
5:M:571:LEU:HD21	5:M:700:TYR:CD2	2.49	0.47
5:M:833:LEU:HD21	5:M:839:LEU:HD11	1.96	0.47
5:M:780:GLU:HG3	5:M:781:LYS:HD3	1.96	0.47
5:M:604:ALA:HB3	5:M:612:VAL:O	2.14	0.47
5:M:969:GLN:CD	5:M:971:LYS:HE3	2.34	0.47
5:M:129:ILE:HG13	5:M:386:PHE:HB3	1.96	0.47
4:K:213:GLN:O	4:K:217:ILE:HG13	2.13	0.47
4:A:150:TYR:CE1	5:C:696:LYS:HA	2.49	0.47
5:M:257:VAL:HG22	11:M:1151:HOH:O	2.13	0.47
5:C:715:THR:CG2	5:C:717:LEU:HG	2.43	0.47
6:D:932:ASP:O	6:D:935:LYS:HB3	2.14	0.47
6:D:796:ARG:NE	6:D:828:LYS:HZ2	2.12	0.47
6:D:1429:LEU:HG	6:D:1441:GLN:HG3	1.96	0.47
3:I:9:DG:H2"	3:I:10:DA:C8	2.50	0.47
7:O:57:ASP:N	7:O:58:PRO:HD3	2.30	0.47
6:N:47:GLU:O	6:N:51:GLY:N	2.47	0.47
6:N:58:CYS:HA	6:N:78:VAL:HG11	1.96	0.47
5:C:158:TYR:CD1	5:C:314:THR:HG22	2.44	0.47
6:D:1087:ARG:NH2	6:D:1253:THR:HG22	2.27	0.47
6:D:1228:SER:HA	11:D:8193:HOH:O	2.14	0.47
6:D:1147:ARG:HB2	6:D:1166:LEU:HD21	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1147:ARG:HD2	6:D:1188:VAL:HG21	1.96	0.47
5:M:487:THR:OG1	5:M:490:GLU:HG3	2.13	0.47
6:D:756:GLN:CG	6:D:760:ARG:HH11	2.25	0.47
5:C:31:GLN:HB3	5:C:71:TYR:HH	1.78	0.47
6:N:838:ARG:HG2	6:N:838:ARG:HH11	1.79	0.47
5:M:252:LYS:HZ2	5:M:296:GLY:HA3	1.77	0.47
4:K:2:LEU:HA	4:K:6:LEU:HD22	1.96	0.47
4:K:111:ALA:HB3	4:K:124:ASN:O	2.13	0.47
6:D:440:VAL:CB	6:D:441:ARG:HH21	2.26	0.47
5:C:185:LYS:HB3	5:C:188:LYS:O	2.13	0.47
6:D:1124:GLN:HA	6:D:1125:PRO:HD3	1.65	0.47
6:D:42:ASP:CG	6:D:48:ARG:HH22	2.18	0.47
6:D:902:LEU:HD13	11:D:8066:HOH:O	2.12	0.47
6:N:861:GLN:H	6:N:861:GLN:NE2	2.12	0.47
6:N:573:MET:HE2	11:N:9331:HOH:O	2.14	0.47
2:Y:7:G:O6	5:M:1015:LEU:N	2.45	0.47
6:D:1101:VAL:HG21	6:D:1424:VAL:CA	2.44	0.47
6:D:1441:GLN:OE1	6:D:1442:ASN:HB2	2.13	0.47
6:N:628:ARG:HG3	6:N:628:ARG:NH1	2.30	0.47
6:N:1130:ARG:HD3	11:N:9173:HOH:O	2.13	0.47
3:Z:4:DC:H4'	11:Z:1418:HOH:O	2.15	0.47
6:D:520:LEU:HD12	6:D:521:PRO:HD2	1.97	0.47
6:D:619:LEU:N	6:D:619:LEU:HD23	2.29	0.47
5:C:77:PRO:HB2	5:C:78:PHE:CD1	2.49	0.47
5:M:287:GLY:O	5:M:288:ARG:C	2.52	0.47
5:C:31:GLN:HG2	5:C:31:GLN:O	2.14	0.47
4:A:26:GLU:HG2	4:A:27:PRO:HG3	1.96	0.47
5:M:734:LEU:HD11	11:M:1385:HOH:O	2.14	0.47
4:A:171:PHE:O	4:A:173:PRO:HD3	2.15	0.47
5:M:620:LEU:N	5:M:620:LEU:HD12	2.29	0.47
4:A:73:GLU:H	4:A:73:GLU:CD	2.17	0.47
5:C:1102:LEU:HB2	6:D:7:LYS:HB2	1.96	0.47
6:D:583:ASP:OD2	6:D:604:THR:HG21	2.14	0.47
5:M:764:GLU:HG3	6:N:54:LYS:HD3	1.96	0.47
6:N:610:LYS:HB2	11:N:9190:HOH:O	2.15	0.47
6:N:95:LEU:N	6:N:95:LEU:HD12	2.24	0.47
5:C:437:ARG:HH21	5:C:469:THR:HG22	1.80	0.47
5:C:398:THR:HG21	5:C:567:GLN:C	2.34	0.47
6:D:1033:GLN:O	6:D:1037:GLN:HG3	2.14	0.47
6:D:1200:VAL:N	11:D:8286:HOH:O	2.47	0.47
7:E:16:LYS:HD3	7:E:17:TYR:CE1	2.49	0.47
5:M:65:VAL:HG12	5:M:67:ASP:OD2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:64:GLU:HG2	4:B:64:GLU:O	2.14	0.47
5:C:158:TYR:HE1	5:C:314:THR:HA	1.79	0.47
5:C:148:PHE:HZ	5:C:281:LEU:HB3	1.78	0.47
6:N:394:LEU:O	6:N:396:VAL:N	2.47	0.47
5:M:675:ALA:CA	5:M:989:VAL:HG12	2.38	0.47
7:O:26:ARG:NH1	7:O:29:GLN:HE21	2.13	0.47
6:D:1262:LEU:HD23	6:D:1352:ILE:CG1	2.44	0.47
5:C:625:LEU:O	5:C:627:ARG:N	2.47	0.47
6:D:147:VAL:HG12	11:D:8415:HOH:O	2.14	0.47
6:N:1231:GLU:HB3	6:N:1232:PRO:HD3	1.96	0.47
5:M:610:ARG:NH1	5:M:612:VAL:HG23	2.30	0.47
5:M:798:GLY:H	5:M:827:VAL:CG1	2.28	0.47
5:C:361:MET:HG3	5:C:371:LYS:HD2	1.96	0.47
5:C:244:PRO:CD	5:C:245:GLY:H	2.26	0.47
6:N:756:GLN:HE22	6:N:760:ARG:HB3	1.80	0.47
5:M:474:VAL:HG12	5:M:531:PHE:HA	1.96	0.47
5:M:1049:LEU:HD23	6:N:1472:ILE:HD12	1.95	0.47
4:A:67:THR:HG23	5:C:609:ASN:HD21	1.79	0.47
5:C:18:LEU:HD22	5:C:404:LEU:HD21	1.95	0.47
6:N:820:GLU:HA	6:N:825:ALA:O	2.15	0.47
6:D:159:ARG:HB3	6:D:163:TYR:OH	2.14	0.47
5:M:1067:TYR:HB3	11:M:1303:HOH:O	2.13	0.47
5:M:734:LEU:HD21	11:M:1385:HOH:O	2.14	0.47
4:A:101:LEU:HD22	4:A:114:PHE:CZ	2.49	0.47
4:K:9:PRO:HB3	4:K:25:LEU:HD21	1.95	0.47
4:K:64:GLU:HG3	4:K:64:GLU:O	2.13	0.47
6:D:783:ARG:HA	6:D:1028:ALA:CA	2.29	0.47
5:M:537:LYS:H	5:M:537:LYS:CD	2.20	0.47
6:N:1023:MET:HG2	6:N:1029:ARG:H	1.80	0.47
6:D:1220:ALA:HB1	6:D:1223:ILE:CD1	2.40	0.47
5:M:310:LEU:O	5:M:314:THR:HG23	2.14	0.47
5:C:144:PRO:N	5:C:276:LYS:HZ2	2.12	0.47
5:C:759:THR:HG21	5:C:783:ARG:NH2	2.30	0.47
6:N:1268:PRO:HD3	6:N:1331:ASP:HB2	1.96	0.47
7:O:13:VAL:HG12	7:O:14:ASP:N	2.29	0.47
6:N:493:ARG:CZ	6:N:1391:GLU:HA	2.45	0.47
4:B:154:GLU:HB3	4:B:155:LYS:HZ2	1.78	0.47
4:B:40:LEU:HD22	4:B:211:LEU:CD1	2.43	0.47
6:D:683:ILE:N	6:D:683:ILE:HD12	2.29	0.47
6:D:884:ARG:HG2	11:D:8116:HOH:O	2.14	0.47
7:O:8:LYS:O	7:O:12:MET:HG3	2.14	0.47
6:D:876:SER:O	6:D:880:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:764:GLU:CB	6:N:54:LYS:HD3	2.44	0.47
5:M:1090:LYS:CD	6:N:90:MET:HG3	2.40	0.47
5:C:874:LEU:HD11	6:D:787:LEU:HD23	1.97	0.47
6:N:1220:ALA:CB	6:N:1223:ILE:HD13	2.27	0.47
6:D:634:GLY:HA3	6:D:727:GLN:HG2	1.97	0.47
6:N:1432:LYS:HA	11:N:9333:HOH:O	2.13	0.47
6:D:1107:VAL:HA	6:D:1200:VAL:O	2.14	0.47
6:D:1223:ILE:HG22	6:D:1227:GLN:NE2	2.16	0.47
6:N:520:LEU:HD11	6:N:524:LEU:HD23	1.96	0.47
5:C:260:LEU:C	5:C:260:LEU:HD12	2.34	0.47
6:D:138:LYS:HE2	11:D:8030:HOH:O	2.14	0.47
6:D:23:TYR:O	6:D:91:GLY:HA2	2.14	0.47
5:M:7:GLY:O	5:M:8:ARG:NE	2.48	0.47
6:N:119:SER:H	6:N:123:LEU:HB2	1.79	0.47
6:N:493:ARG:NH2	6:N:1391:GLU:HA	2.29	0.47
5:M:68:PHE:HZ	5:M:71:TYR:CD2	2.23	0.47
5:C:626:ARG:N	5:C:639:GLN:HE21	2.13	0.47
4:A:79:ILE:HG21	4:A:165:ILE:HD11	1.94	0.47
5:C:722:ILE:CD1	5:C:823:VAL:HG21	2.39	0.47
6:D:401:TYR:HB2	11:D:8164:HOH:O	2.14	0.47
6:D:1160:LEU:CD1	6:D:1174:LEU:HD21	2.42	0.47
4:B:45:LEU:HD21	6:D:855:HIS:NE2	2.30	0.47
5:M:86:LYS:HD2	11:M:1208:HOH:O	2.14	0.47
2:Y:8:C:H2'	2:Y:9:G:N7	2.30	0.47
5:M:1090:LYS:HG2	5:M:1112:PHE:CZ	2.48	0.47
6:N:1204:CYS:C	11:N:9238:HOH:O	2.51	0.47
5:C:874:LEU:HD11	6:D:787:LEU:CD2	2.44	0.47
6:N:634:GLY:HA2	6:N:727:GLN:HE21	1.79	0.47
5:C:564:MET:HG3	5:C:565:GLN:N	2.29	0.47
5:M:331:ARG:CB	5:M:331:ARG:HH11	2.27	0.47
5:M:437:ARG:C	5:M:438:ILE:HD12	2.35	0.47
6:D:455:ARG:CB	6:D:460:ALA:CA	2.86	0.47
6:D:137:PRO:HD3	6:D:455:ARG:HH21	1.80	0.47
4:K:177:VAL:O	5:M:864:GLY:HA3	2.15	0.47
4:B:124:ASN:HD21	4:B:127:LEU:HD22	1.78	0.47
6:N:127:LEU:HD13	6:N:128:TYR:CD2	2.49	0.47
6:N:204:LEU:O	6:N:394:LEU:HD23	2.14	0.47
5:C:287:GLY:O	5:C:288:ARG:C	2.53	0.47
6:D:206:ARG:HB2	6:D:392:SER:O	2.14	0.47
6:D:398:ALA:HA	6:D:446:VAL:O	2.15	0.47
5:C:1030:GLN:NE2	5:C:1030:GLN:HA	2.29	0.47
5:M:689:VAL:HG11	5:M:870:ILE:CD1	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1115:LEU:HG	6:D:85:VAL:HG12	1.97	0.47
5:M:589:ARG:HG3	5:M:596:TYR:CE1	2.50	0.47
5:M:1056:LYS:HD3	6:N:625:TYR:CD1	2.50	0.47
5:M:462:ASP:CG	5:M:463:GLU:N	2.67	0.47
6:D:1496:GLU:HA	6:D:1499:ARG:CZ	2.44	0.47
5:M:45:GLN:HE21	5:M:68:PHE:HE2	1.62	0.47
5:M:769:PRO:HG2	6:N:65:ARG:CD	2.45	0.47
4:L:81:ASN:O	4:L:127:LEU:HD21	2.15	0.47
6:D:97:THR:HG21	6:D:571:LYS:HZ3	1.80	0.47
6:N:1353:GLN:HG2	6:N:1368:ILE:CD1	2.45	0.47
5:M:172:ILE:HG23	5:M:184:MET:CE	2.45	0.47
5:M:162:ILE:HB	5:M:172:ILE:HB	1.96	0.47
6:D:800:LYS:HE3	6:D:804:LEU:HD13	1.96	0.47
4:A:69:PRO:HA	5:C:607:ASP:OD1	2.14	0.47
5:M:119:PRO:HG2	5:M:386:PHE:CD2	2.49	0.47
6:N:666:ILE:HG13	6:N:666:ILE:H	1.41	0.47
4:L:43:ILE:HG23	4:L:47:SER:HB3	1.97	0.47
4:B:117:VAL:HG11	11:B:324:HOH:O	2.14	0.47
4:A:101:LEU:HD23	4:A:140:MET:HG2	1.95	0.47
5:C:1008:ARG:NH2	5:C:1011:GLY:N	2.62	0.47
4:L:161:ARG:HD2	4:L:161:ARG:N	2.30	0.47
6:D:638:LYS:HD2	6:D:932:ASP:OD1	2.14	0.47
5:C:322:VAL:HB	11:C:1379:HOH:O	2.15	0.47
6:N:1197:ARG:HB2	6:N:1197:ARG:HH11	1.80	0.47
5:M:27:ARG:HD3	5:M:28:ARG:N	2.29	0.47
5:M:430:VAL:HG13	6:N:1075:HIS:ND1	2.30	0.47
5:M:926:PHE:HD2	5:M:930:LYS:HE3	1.80	0.47
5:M:1031:ARG:NH1	6:N:621:LYS:HZ2	2.13	0.47
6:N:519:VAL:HA	6:N:544:TYR:OH	2.15	0.47
2:H:10:G:C2'	2:H:11:C:H5'	2.45	0.47
6:D:720:LEU:H	6:D:720:LEU:HD12	1.80	0.47
5:C:688:ILE:N	11:C:1474:HOH:O	2.47	0.47
5:C:573:ARG:HG2	5:C:670:GLN:OE1	2.15	0.47
6:D:1462:LEU:HD23	6:D:1473:PRO:HD2	1.96	0.47
6:D:135:LEU:HB2	6:D:148:GLU:O	2.15	0.47
5:M:996:LYS:HE3	11:M:1161:HOH:O	2.14	0.47
5:C:204:GLN:OE1	5:C:222:MET:HA	2.15	0.47
6:D:1384:PRO:HG3	6:D:1389:LEU:CA	2.45	0.47
7:E:64:ALA:O	7:E:68:LEU:HD13	2.14	0.47
6:D:53:ILE:HA	6:D:86:ARG:CZ	2.44	0.47
5:M:376:ARG:HH11	5:M:376:ARG:HG3	1.80	0.47
4:B:58:ILE:HD13	4:B:140:MET:HB3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:1070:ILE:HG23	6:N:656:PHE:CD1	2.50	0.47
5:C:26:TYR:CD2	5:C:121:MET:HB2	2.49	0.47
5:M:78:PHE:HB3	5:M:82:GLU:OE1	2.14	0.47
5:M:603:VAL:H	5:M:647:GLN:H	1.63	0.47
5:C:964:LYS:NZ	5:C:968:LEU:HD21	2.29	0.47
6:D:173:PRO:HB2	11:D:8270:HOH:O	2.13	0.47
4:L:152:PRO:HG2	6:N:857:ILE:HD12	1.96	0.47
6:N:26:VAL:HG21	6:N:519:VAL:HG11	1.97	0.47
5:C:553:ASP:OD1	5:C:843:HIS:HB3	2.14	0.47
2:H:7:G:H5''	2:H:7:G:C8	2.50	0.47
4:K:112:ARG:HG2	4:K:125:PRO:CA	2.45	0.47
6:N:1221:VAL:HG12	6:N:1222:GLY:N	2.30	0.47
6:N:1476:THR:C	6:N:1478:SER:N	2.67	0.47
5:M:688:ILE:CD1	5:M:847:GLY:HA3	2.45	0.47
6:D:1472:ILE:HD13	6:D:1472:ILE:N	2.29	0.47
5:C:1016:ILE:HG12	5:C:1017:THR:N	2.29	0.47
6:D:116:LEU:HD22	6:D:118:LEU:CD2	2.45	0.47
5:C:470:PRO:HD3	5:C:485:TYR:HE2	1.79	0.47
1:G:19:DC:P	5:C:1001:VAL:HB	2.55	0.47
5:C:1036:GLU:O	5:C:1039:ALA:HB3	2.14	0.47
6:N:711:LEU:HD21	6:N:768:ASN:HB2	1.95	0.47
4:L:222:LEU:HA	4:L:225:PHE:CE1	2.50	0.47
5:M:625:LEU:O	5:M:627:ARG:N	2.48	0.47
6:N:756:GLN:O	6:N:756:GLN:NE2	2.48	0.47
6:D:704:ARG:HH12	6:D:743:ASP:CB	2.28	0.47
5:C:937:ASP:HB2	5:C:940:GLU:CG	2.43	0.47
4:A:89:PHE:HZ	4:A:146:ARG:HB2	1.80	0.47
5:M:69:LEU:HD21	5:M:99:GLN:HG3	1.97	0.47
6:N:845:ASN:ND2	6:N:846:PRO:HD2	2.30	0.47
4:A:73:GLU:CD	4:A:130:ALA:HA	2.35	0.47
6:N:1156:LEU:HD21	6:N:1177:ALA:HA	1.97	0.47
1:X:21:DC:H3'	11:X:589:HOH:O	2.14	0.47
5:C:769:PRO:HB3	11:D:8366:HOH:O	2.15	0.47
6:N:884:ARG:HG2	11:N:9101:HOH:O	2.14	0.47
4:L:140:MET:HG2	4:L:141:GLU:N	2.28	0.47
6:N:439:LEU:HG	11:N:9125:HOH:O	2.15	0.47
4:B:162:ILE:HD12	4:B:163:ASN:N	2.29	0.47
7:O:38:THR:HG21	7:O:63:TRP:CZ3	2.50	0.47
5:C:437:ARG:HG2	5:C:467:ILE:O	2.15	0.47
5:C:674:VAL:HG11	5:C:992:MET:HB3	1.97	0.47
2:H:8:C:H2'	2:H:9:G:N7	2.30	0.47
6:D:796:ARG:HH21	6:D:828:LYS:CE	2.27	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:L:34:VAL:HA	4:L:179:PHE:HE1	1.79	0.47
5:M:876:VAL:HG13	5:M:881:ASN:HD21	1.79	0.47
6:D:1191:PRO:HB3	6:D:1370:ILE:HD13	1.95	0.47
6:D:710:ARG:C	6:D:712:GLY:H	2.18	0.47
5:C:1095:LEU:HD22	6:D:101:HIS:CE1	2.49	0.47
5:M:151:ASP:OD1	5:M:154:ARG:HB3	2.15	0.47
5:C:146:VAL:CG2	5:C:162:ILE:HG23	2.43	0.47
6:D:130:SER:HB3	6:D:132:TYR:CE1	2.50	0.47
6:D:896:ALA:O	6:D:899:LEU:HD12	2.15	0.47
5:M:806:LEU:HD11	5:M:824:ARG:HH22	1.79	0.47
5:M:822:VAL:CB	5:M:824:ARG:HH21	2.28	0.47
6:N:1442:ASN:CG	6:N:1444:THR:HB	2.36	0.47
6:N:1462:LEU:HD21	6:N:1474:ALA:HB3	1.97	0.47
4:A:48:ILE:CD1	4:A:210:ALA:HB1	2.44	0.47
6:N:1118:ILE:HG12	6:N:1193:THR:HG23	1.97	0.47
4:B:110:LYS:HD3	4:B:112:ARG:HG2	1.97	0.47
4:B:51:THR:HG23	11:B:316:HOH:O	2.15	0.47
2:Y:15:C:H2'	2:Y:16:G:C8	2.50	0.46
2:H:4:U:O2'	2:H:5:C:H5'	2.15	0.46
5:C:872:ASN:ND2	5:C:874:LEU:N	2.63	0.46
6:D:161:LEU:HD21	6:D:452:ILE:CG2	2.27	0.46
5:M:498:GLN:HE22	6:N:1067:VAL:CG1	2.28	0.46
5:C:580:MET:HB3	5:C:584:GLU:CD	2.35	0.46
6:D:1198:TYR:HE2	6:D:1377:LYS:HD2	1.80	0.46
6:D:118:LEU:HD13	6:D:461:ILE:HD12	1.97	0.46
6:D:502:PHE:HA	11:D:8084:HOH:O	2.14	0.46
6:D:502:PHE:CZ	6:D:509:PRO:HB3	2.50	0.46
4:L:94:LEU:HD11	4:L:119:ASP:HB2	1.97	0.46
4:K:177:VAL:HG13	4:K:199:ILE:CD1	2.45	0.46
5:C:69:LEU:C	5:C:70:GLU:HG2	2.35	0.46
5:C:265:ARG:HD2	5:C:267:TYR:CG	2.50	0.46
6:N:1121:PRO:HB2	6:N:1135:ARG:HH12	1.79	0.46
5:C:1098:ASP:O	6:D:10:ILE:HA	2.15	0.46
7:E:54:LEU:HA	7:E:58:PRO:CG	2.44	0.46
5:M:678:PRO:HD2	11:N:9146:HOH:O	2.14	0.46
6:N:481:MET:CE	6:N:1388:ARG:HG3	2.44	0.46
6:N:1389:LEU:HG	6:N:1390:LEU:H	1.79	0.46
6:N:493:ARG:HD2	6:N:494:LYS:N	2.30	0.46
6:N:10:ILE:HD11	6:N:1434:TRP:NE1	2.30	0.46
5:C:999:HIS:HB2	11:C:1358:HOH:O	2.15	0.46
6:N:462:GLN:O	6:N:466:LYS:HG3	2.15	0.46
5:C:900:ARG:NH1	11:C:1210:HOH:O	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1103:ASP:N	5:C:1107:ASN:O	2.44	0.46
4:K:111:ALA:HB2	4:K:127:LEU:CD2	2.45	0.46
6:N:1149:LEU:HD23	6:N:1187:PRO:O	2.15	0.46
4:B:27:PRO:C	4:B:28:LEU:HD23	2.35	0.46
4:A:88:ARG:NH1	4:A:89:PHE:O	2.47	0.46
6:N:134:VAL:CG1	6:N:152:LEU:HD22	2.45	0.46
5:C:394:PHE:CE1	5:C:632:ASN:HB3	2.49	0.46
5:C:292:ARG:HB2	5:C:299:LYS:HG2	1.97	0.46
6:N:1122:LEU:HD11	6:N:1186:VAL:HG23	1.97	0.46
7:O:91:ARG:HH11	7:O:92:LEU:HD21	1.80	0.46
4:A:175:ARG:NH2	4:A:176:ARG:HD3	2.30	0.46
6:D:843:PHE:CE1	6:D:864:VAL:HG11	2.50	0.46
4:A:133:GLU:OE1	5:C:605:LYS:HB3	2.16	0.46
5:C:737:LEU:HD21	5:C:741:GLY:C	2.36	0.46
5:M:2:GLU:O	5:M:3:ILE:HD13	2.15	0.46
6:N:92:HIS:HA	6:N:519:VAL:HG23	1.96	0.46
5:C:859:PRO:HB3	5:C:974:LEU:CD2	2.44	0.46
2:H:9:G:C5'	2:H:9:G:C8	2.98	0.46
6:D:647:ARG:HA	6:D:650:LEU:HD12	1.96	0.46
6:D:1468:LEU:HD23	6:D:1468:LEU:O	2.15	0.46
6:D:136:ASP:OD2	6:D:464:LEU:HD23	2.15	0.46
4:K:181:VAL:H	5:M:937:ASP:CG	2.19	0.46
5:M:940:GLU:HG3	11:M:1220:HOH:O	2.15	0.46
5:M:862:PRO:HD3	5:M:973:VAL:O	2.14	0.46
6:N:133:ILE:HB	6:N:153:LEU:CD1	2.45	0.46
5:C:172:ILE:H	5:C:172:ILE:HD12	1.80	0.46
5:C:193:LEU:N	5:C:193:LEU:CD1	2.78	0.46
6:N:434:ARG:NH2	6:N:447:VAL:HG11	2.29	0.46
5:M:751:PRO:HB2	6:N:680:GLN:NE2	2.30	0.46
5:M:689:VAL:CG1	5:M:690:ILE:H	2.25	0.46
5:C:207:LEU:HD22	5:C:221:LEU:HD13	1.97	0.46
7:E:48:MET:HB2	7:E:54:LEU:HB2	1.96	0.46
6:N:1381:VAL:HB	6:N:1389:LEU:O	2.14	0.46
5:M:911:GLU:HB2	5:M:912:PRO:HD3	1.97	0.46
4:L:124:ASN:HD21	4:L:127:LEU:HB2	1.80	0.46
5:M:1050:GLN:NE2	6:N:1471:LEU:N	2.58	0.46
5:C:1100:GLN:HB3	6:D:9:ARG:HH21	1.80	0.46
5:M:668:LEU:HD13	5:M:995:MET:CE	2.44	0.46
6:D:66:GLN:O	6:D:69:GLU:HB3	2.16	0.46
6:D:69:GLU:HG2	6:D:70:GLY:N	2.30	0.46
6:D:540:LEU:HA	6:D:543:LEU:HD11	1.97	0.46
6:D:871:LYS:NZ	6:N:442:ASN:HD22	2.13	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:79:PRO:HA	5:M:90:TYR:HE2	1.80	0.46
6:N:452:ILE:HB	11:N:9092:HOH:O	2.14	0.46
6:N:33:ASN:O	6:N:36:THR:O	2.33	0.46
4:A:42:ARG:HH12	4:B:34:VAL:CG1	2.28	0.46
5:C:292:ARG:HD2	5:C:299:LYS:CE	2.46	0.46
5:M:512:ARG:HB3	5:M:523:ILE:HD11	1.97	0.46
4:A:7:LYS:HE3	4:A:186:LEU:HD22	1.97	0.46
5:M:897:LEU:HD11	5:M:920:GLN:HB3	1.97	0.46
5:C:713:ARG:HH22	6:D:532:GLY:H	1.62	0.46
5:C:718:GLY:HA3	5:C:761:PHE:CE1	2.50	0.46
6:D:1100:ASP:HB3	6:D:1428:ALA:HB1	1.97	0.46
5:C:456:ALA:HA	5:C:541:SER:HA	1.97	0.46
6:N:1369:GLU:HA	6:N:1372:VAL:HG12	1.97	0.46
6:N:793:THR:OG1	6:N:905:PRO:HA	2.14	0.46
6:N:133:ILE:HG22	6:N:455:ARG:N	2.30	0.46
6:N:564:GLU:O	6:N:567:ILE:HG13	2.16	0.46
6:N:890:VAL:HG12	6:N:926:LYS:CD	2.35	0.46
6:N:396:VAL:C	6:N:398:ALA:N	2.69	0.46
6:D:164:GLY:HA3	11:D:8094:HOH:O	2.15	0.46
5:C:494:TYR:HD2	5:C:530:GLU:HB3	1.81	0.46
5:C:212:GLY:HA3	5:C:218:VAL:HG21	1.96	0.46
6:D:119:SER:HB2	6:D:123:LEU:N	2.29	0.46
5:M:677:MET:HB3	5:M:987:ILE:HD13	1.96	0.46
4:B:170:VAL:HG23	4:B:170:VAL:O	2.16	0.46
5:M:798:GLY:HA3	5:M:828:ALA:O	2.15	0.46
4:B:206:THR:HG23	4:B:208:LEU:N	2.29	0.46
4:K:26:GLU:HG3	4:K:184:THR:HG21	1.95	0.46
6:N:799:LYS:HB3	6:N:826:PRO:HG2	1.97	0.46
5:C:600:ASP:OD1	5:C:651:LYS:HB2	2.15	0.46
5:M:831:ARG:NH1	5:M:999:HIS:HB3	2.31	0.46
4:K:200:TRP:HZ2	11:M:1430:HOH:O	1.97	0.46
6:N:1252:ILE:HA	11:N:9048:HOH:O	2.14	0.46
1:X:15:DC:H2"	1:X:16:DG:H8	1.80	0.46
6:N:18:ILE:HG23	6:N:518:PRO:CG	2.23	0.46
2:H:5:C:O5'	2:H:5:C:H6	1.98	0.46
6:N:1335:LEU:HD13	6:N:1347:TYR:CE2	2.50	0.46
6:D:116:LEU:HG	6:D:468:LEU:CD1	2.46	0.46
6:D:117:ASP:O	6:D:150:ARG:HD2	2.16	0.46
6:N:792:ILE:HD13	6:N:793:THR:CG2	2.44	0.46
6:N:204:LEU:HB3	6:N:445:ARG:HH21	1.81	0.46
5:M:739:GLU:OE2	5:M:744:ARG:HA	2.14	0.46
4:L:102:LYS:HD2	4:L:138:LEU:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:197:LEU:HB3	5:C:202:TYR:HB2	1.97	0.46
6:D:1394:VAL:HB	6:D:1397:LYS:HB2	1.97	0.46
5:M:286:SER:OG	5:M:299:LYS:HE3	2.15	0.46
4:L:184:THR:CG2	4:L:194:LYS:HB2	2.45	0.46
4:L:39:PRO:HD3	11:L:348:HOH:O	2.16	0.46
5:M:611:ILE:HD11	5:M:641:PRO:HG3	1.97	0.46
5:C:75:GLU:HA	5:C:76:PRO:HD3	1.79	0.46
5:C:889:HIS:CE1	6:D:951:ILE:HG22	2.50	0.46
5:C:159:ILE:CG2	5:C:175:GLU:HB2	2.45	0.46
5:M:401:LEU:HG	5:M:402:SER:N	2.29	0.46
6:N:820:GLU:CB	6:N:836:VAL:HG21	2.45	0.46
5:M:381:ALA:HB2	11:M:1457:HOH:O	2.15	0.46
4:L:43:ILE:HD12	4:L:217:ILE:CG2	2.45	0.46
4:A:156:HIS:CD2	4:A:157:GLY:H	2.32	0.46
6:D:844:ALA:O	6:D:867:ARG:HB3	2.15	0.46
4:A:18:ARG:O	4:A:207:PRO:HD3	2.15	0.46
6:N:911:LEU:O	6:N:915:VAL:HG23	2.14	0.46
5:M:984:GLU:HG3	6:N:944:THR:O	2.15	0.46
6:D:407:VAL:HG13	6:D:422:ALA:HB2	1.97	0.46
5:M:948:GLU:OE1	5:M:955:PRO:HA	2.16	0.46
6:N:1146:GLY:O	6:N:1207:TYR:N	2.48	0.46
6:N:1221:VAL:O	6:N:1224:VAL:HB	2.15	0.46
6:N:637:LEU:CD1	6:N:641:GLN:HB2	2.45	0.46
5:C:1046:ALA:HB3	6:D:1476:THR:HB	1.98	0.46
5:M:326:ASP:OD1	5:M:427:VAL:HG22	2.14	0.46
5:M:217:LEU:HD12	5:M:311:PHE:HA	1.96	0.46
4:K:30:ARG:NH1	5:M:938:LYS:HD2	2.31	0.46
6:D:434:ARG:HB2	6:D:447:VAL:HG22	1.98	0.46
6:D:1184:GLN:N	6:N:559:ALA:O	2.47	0.46
5:C:198:ARG:HD3	5:C:228:ALA:HA	1.98	0.46
6:D:123:LEU:HD11	6:D:152:LEU:CD2	2.39	0.46
5:M:468:ARG:HB3	5:M:486:MET:O	2.14	0.46
6:D:399:ARG:HH11	6:D:430:ASP:CB	2.25	0.46
4:K:52:ALA:HB2	4:K:170:VAL:O	2.15	0.46
5:M:109:LYS:HE2	5:M:111:ASP:HA	1.97	0.46
4:A:173:PRO:O	4:A:201:THR:HG22	2.16	0.46
4:A:101:LEU:HD22	4:A:114:PHE:CE2	2.49	0.46
5:C:605:LYS:CD	5:C:612:VAL:HB	2.45	0.46
5:M:61:LYS:NZ	11:M:1290:HOH:O	2.48	0.46
5:M:1093:GLN:HB3	6:N:90:MET:SD	2.55	0.46
6:D:785:ILE:HG22	6:D:789:LEU:CD1	2.36	0.46
5:C:1083:GLU:CG	5:C:1086:ARG:HH21	2.25	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:880:ILE:O	6:N:883:ALA:HB3	2.15	0.46
5:M:937:ASP:O	5:M:941:VAL:HG23	2.16	0.46
5:M:939:ARG:CB	5:M:982:PRO:HG3	2.33	0.46
5:C:181:VAL:HG12	5:C:182:VAL:N	2.30	0.46
5:M:689:VAL:O	5:M:869:VAL:HG23	2.15	0.46
4:K:224:TYR:HB3	4:L:9:PRO:CB	2.45	0.46
6:D:1335:LEU:CD2	6:D:1344:VAL:HG22	2.46	0.46
6:N:400:VAL:O	6:N:400:VAL:HG13	2.16	0.46
6:D:1002:LYS:HA	11:D:8149:HOH:O	2.16	0.46
6:N:654:LYS:HB2	6:N:654:LYS:NZ	2.31	0.46
4:K:23:PHE:O	4:K:196:THR:HA	2.16	0.46
5:M:1047:HIS:N	5:M:1047:HIS:CD2	2.83	0.46
5:C:737:LEU:HD21	5:C:741:GLY:N	2.30	0.46
5:C:732:ALA:HA	5:C:735:ARG:CZ	2.45	0.46
5:C:226:VAL:HG13	5:C:227:PHE:CD1	2.51	0.46
5:C:445:GLU:HA	5:C:449:ILE:HD12	1.97	0.46
5:C:971:LYS:HB2	5:C:986:PRO:HB2	1.97	0.46
6:D:1042:ARG:NH2	6:D:1061:PHE:HZ	2.12	0.46
4:A:86:VAL:HG12	4:A:124:ASN:HB2	1.97	0.46
5:C:1082:PRO:HD2	6:D:1468:LEU:O	2.15	0.46
5:M:260:LEU:HA	5:M:291:ALA:HB2	1.98	0.46
5:M:467:ILE:HG23	11:M:1287:HOH:O	2.15	0.46
6:D:436:GLU:HB2	6:D:445:ARG:CG	2.45	0.46
4:L:68:ILE:HG21	11:L:362:HOH:O	2.15	0.46
6:D:618:LEU:HD12	6:D:1439:SER:HB3	1.96	0.46
5:C:902:ILE:O	5:C:904:PRO:HD3	2.15	0.46
6:D:1393:GLN:HE22	6:D:1394:VAL:HB	1.80	0.46
6:N:30:GLU:HB3	6:N:40:GLU:HB3	1.96	0.46
5:M:146:VAL:CG2	5:M:281:LEU:HD11	2.46	0.46
6:D:987:GLU:O	6:D:991:GLN:HB2	2.15	0.46
6:D:1213:ARG:HH12	7:E:10:PHE:C	2.19	0.46
6:N:611:GLN:O	6:N:611:GLN:HG3	2.14	0.46
5:M:748:GLU:HA	5:M:799:ILE:HD13	1.97	0.46
1:X:15:DC:H2"	1:X:16:DG:C8	2.51	0.46
6:N:1145:TYR:HD2	6:N:1168:MET:SD	2.39	0.46
6:D:786:ILE:CG2	6:D:1026:SER:HB3	2.37	0.46
6:D:785:ILE:H	6:D:785:ILE:CD1	2.13	0.46
6:D:939:PHE:O	6:D:943:THR:HG23	2.16	0.46
6:N:1209:LEU:CD2	6:N:1210:SER:H	2.28	0.46
5:M:906:PHE:CZ	6:N:1067:VAL:HA	2.51	0.46
6:D:1101:VAL:HG12	6:D:1374:GLN:HB3	1.97	0.46
6:D:438:ASP:HB2	6:D:445:ARG:NH1	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:545:ASN:OD1	5:C:583:LEU:HD22	2.16	0.46
5:M:694:LEU:HD21	5:M:868:ASP:OD2	2.15	0.46
5:C:218:VAL:O	5:C:221:LEU:HG	2.16	0.46
6:N:62:LYS:HG3	6:N:75:ARG:HD2	1.98	0.46
6:N:397:LYS:HB3	6:N:448:GLU:CB	2.46	0.46
5:M:1036:GLU:O	5:M:1039:ALA:HB3	2.16	0.46
5:M:567:GLN:HG2	11:M:1537:HOH:O	2.15	0.46
6:N:403:PHE:CE2	6:N:444:VAL:HG23	2.51	0.46
5:C:232:GLU:O	5:C:236:ILE:HD12	2.16	0.46
5:C:1101:THR:HG23	5:C:1109:VAL:O	2.16	0.46
6:N:960:LYS:HD3	11:N:9374:HOH:O	2.15	0.46
5:C:524:VAL:HG13	5:C:528:GLU:HB2	1.98	0.46
6:N:1402:ALA:HB2	6:N:1415:VAL:CG2	2.46	0.46
6:N:984:THR:CG2	6:N:987:GLU:H	2.29	0.46
5:C:834:GLN:HE21	5:C:834:GLN:HB2	1.58	0.46
6:D:31:THR:HB	6:D:527:MET:CE	2.46	0.46
6:D:1031:ASN:HB3	6:D:1034:GLN:CD	2.36	0.46
5:C:522:VAL:HG21	11:C:1425:HOH:O	2.15	0.46
5:C:1081:VAL:HG23	11:C:1198:HOH:O	2.16	0.46
5:M:1008:ARG:HH12	5:M:1011:GLY:N	2.14	0.46
5:C:418:LEU:N	5:C:418:LEU:HD12	2.31	0.46
5:C:437:ARG:HG2	5:C:467:ILE:HB	1.98	0.46
6:N:1112:CYS:CB	6:N:1195:GLN:HG2	2.44	0.46
6:D:749:VAL:HA	6:D:750:PRO:HD3	1.82	0.46
6:D:783:ARG:HH22	6:D:1239:ARG:HH22	1.64	0.46
5:C:401:LEU:CD2	5:C:565:GLN:HE21	2.29	0.46
6:N:543:LEU:CD1	6:N:581:LEU:HA	2.38	0.46
5:M:864:GLY:O	5:M:866:PRO:HD3	2.15	0.46
6:D:1228:SER:O	6:D:1232:PRO:CD	2.58	0.46
5:M:674:VAL:HG21	5:M:871:LEU:HG	1.98	0.46
5:C:516:ARG:HH21	6:D:1068:LEU:HB3	1.81	0.46
6:D:33:ASN:HB2	6:D:40:GLU:OE1	2.16	0.46
6:N:1349:VAL:HA	6:N:1368:ILE:HG21	1.98	0.46
5:M:745:ILE:CD1	5:M:745:ILE:H	2.22	0.46
6:N:760:ARG:NH1	7:O:61:VAL:HG23	2.27	0.46
6:D:951:ILE:HD13	6:D:951:ILE:O	2.16	0.46
6:D:800:LYS:CE	6:D:804:LEU:HD22	2.43	0.46
6:N:968:ASP:O	6:N:971:LEU:HB3	2.16	0.46
6:N:974:ILE:CD1	6:N:995:LEU:HD22	2.45	0.46
5:M:91:GLN:NE2	5:M:117:HIS:O	2.49	0.46
5:C:404:LEU:HD22	5:C:591:SER:HB3	1.98	0.46
5:C:231:PRO:HD2	11:C:1261:HOH:O	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:707:THR:HG22	6:N:712:GLY:HA3	1.96	0.46
4:K:185:ARG:HD2	4:K:185:ARG:O	2.15	0.46
5:M:1019:GLN:NE2	11:N:9292:HOH:O	2.48	0.46
5:M:1060:ILE:CD1	5:M:1064:ASN:HD21	2.29	0.46
5:M:1031:ARG:HE	6:N:621:LYS:HB3	1.80	0.46
5:C:333:ILE:HD12	5:C:333:ILE:N	2.31	0.46
6:N:1366:LYS:O	6:N:1370:ILE:HG12	2.15	0.46
6:N:644:LEU:HD12	6:N:645:PRO:CD	2.46	0.46
6:N:1394:VAL:HB	6:N:1397:LYS:CB	2.43	0.46
5:M:433:THR:C	5:M:435:TYR:H	2.18	0.46
6:N:1002:LYS:HA	11:N:9185:HOH:O	2.15	0.46
6:D:617:ASN:HA	11:D:8092:HOH:O	2.15	0.46
6:N:902:LEU:HD13	11:N:9040:HOH:O	2.14	0.46
5:C:217:LEU:HD11	5:C:314:THR:OG1	2.16	0.46
5:C:169:GLY:CA	5:C:263:ASP:HB3	2.44	0.46
6:D:443:VAL:CG1	6:D:445:ARG:HH22	2.29	0.46
6:D:1166:LEU:HD12	6:D:1171:VAL:HG22	1.98	0.46
5:M:342:ASP:O	5:M:346:VAL:HG23	2.16	0.46
6:N:481:MET:HE3	6:N:496:LEU:HD23	1.98	0.46
6:D:899:LEU:HB3	6:D:921:ARG:NH1	2.31	0.46
6:N:65:ARG:HA	6:N:65:ARG:HD2	1.70	0.46
6:N:30:GLU:HB3	6:N:40:GLU:CB	2.45	0.46
6:N:959:GLU:O	6:N:963:TYR:CD1	2.70	0.46
6:N:1353:GLN:HG2	6:N:1368:ILE:HD11	1.98	0.46
5:C:124:ASP:OD1	5:C:124:ASP:N	2.48	0.46
6:D:71:LYS:HB2	6:D:71:LYS:HZ3	1.79	0.46
4:L:175:ARG:HD3	4:L:202:ASP:HB3	1.98	0.46
6:D:19:ARG:H	6:D:19:ARG:HG2	1.51	0.46
1:G:6:DT:H71	11:G:2394:HOH:O	2.16	0.46
6:D:926:LYS:HG2	6:D:929:ARG:NH1	2.30	0.46
5:C:758:ARG:HH11	5:C:758:ARG:HG2	1.81	0.46
7:E:37:ASN:HD22	7:E:89:MET:CE	2.29	0.46
5:C:737:LEU:HD21	5:C:741:GLY:H	1.81	0.46
6:D:638:LYS:NZ	11:D:8121:HOH:O	2.48	0.46
5:C:322:VAL:HG13	11:C:1193:HOH:O	2.14	0.46
6:D:407:VAL:HA	6:D:422:ALA:CB	2.46	0.46
6:N:115:LEU:HB2	6:N:498:VAL:HG11	1.98	0.46
5:M:568:ALA:HB3	11:M:1233:HOH:O	2.15	0.46
6:N:491:LYS:O	6:N:491:LYS:HD2	2.16	0.46
5:C:430:VAL:HG12	6:D:1078:ARG:HG3	1.98	0.45
6:N:1192:LEU:HD22	6:N:1345:GLU:CG	2.46	0.45
6:N:783:ARG:NH1	6:N:1029:ARG:CZ	2.79	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:496:LEU:HD21	6:D:1388:ARG:CG	2.44	0.45
5:M:100:LEU:HD12	5:M:101:ILE:O	2.16	0.45
4:K:198:ARG:NH2	5:M:932:GLU:HB3	2.30	0.45
6:D:1123:PHE:CZ	6:D:1178:ALA:HB1	2.51	0.45
5:C:219:GLN:HA	5:C:222:MET:HE2	1.98	0.45
5:C:950:LEU:HB3	5:C:952:LEU:CD2	2.44	0.45
5:C:5:ARG:HB2	5:C:5:ARG:HE	1.65	0.45
5:M:195:LEU:O	5:M:199:VAL:HG23	2.16	0.45
6:N:770:LEU:HD11	6:N:919:PHE:HE2	1.80	0.45
5:M:352:ALA:CA	5:M:355:VAL:HG12	2.44	0.45
6:N:1051:GLU:HB3	11:N:9122:HOH:O	2.15	0.45
6:N:1262:LEU:HD21	6:N:1351:GLU:CG	2.46	0.45
5:M:1043:TYR:HA	6:N:710:ARG:NH1	2.30	0.45
6:D:14:SER:O	6:D:17:LYS:N	2.49	0.45
6:D:639:LEU:HD12	6:D:640:HIS:H	1.81	0.45
6:D:1218:GLY:HA2	11:D:8043:HOH:O	2.15	0.45
6:N:631:ILE:HG21	6:N:745:MET:HG3	1.97	0.45
5:M:688:ILE:HD12	5:M:847:GLY:HA3	1.99	0.45
5:C:573:ARG:CB	5:C:573:ARG:HH11	2.19	0.45
5:C:669:GLY:HA3	5:C:995:MET:HA	1.98	0.45
6:D:1098:LEU:CD2	6:D:1229:ILE:HD12	2.44	0.45
3:I:8:DA:H1'	3:I:9:DG:C5'	2.46	0.45
7:O:41:GLU:HG2	7:O:42:PRO:N	2.31	0.45
6:D:114:THR:HB	6:D:498:VAL:HG21	1.98	0.45
5:M:211:LEU:HD22	11:M:1152:HOH:O	2.17	0.45
4:K:198:ARG:HH22	5:M:932:GLU:CB	2.26	0.45
5:C:146:VAL:HG13	5:C:162:ILE:HA	1.97	0.45
6:N:206:ARG:HG3	6:N:206:ARG:HH11	1.81	0.45
5:C:203:ASP:O	5:C:207:LEU:HB2	2.16	0.45
6:N:119:SER:OG	6:N:123:LEU:HD13	2.16	0.45
6:N:1380:GLU:OE2	6:N:1390:LEU:HA	2.15	0.45
6:N:470:LEU:H	6:N:470:LEU:HD23	1.81	0.45
4:L:121:GLU:OE1	4:L:123:MET:HG2	2.16	0.45
5:M:30:LEU:HD12	5:M:30:LEU:O	2.17	0.45
5:M:44:ILE:HG23	5:M:344:PHE:CE1	2.47	0.45
6:N:409:VAL:HG11	6:N:435:VAL:HG21	1.98	0.45
4:K:39:PRO:O	4:K:43:ILE:HG12	2.17	0.45
6:N:1136:LYS:O	6:N:1140:ILE:HG13	2.15	0.45
5:M:146:VAL:HG21	5:M:281:LEU:HD11	1.98	0.45
5:M:192:PRO:HD2	5:M:195:LEU:HD22	1.98	0.45
5:C:189:ARG:HD3	5:C:190:LYS:H	1.81	0.45
6:N:772:PRO:HB2	11:N:9024:HOH:O	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:95:LEU:HA	6:N:551:ASN:HD21	1.81	0.45
5:C:398:THR:HG21	5:C:567:GLN:CA	2.46	0.45
6:D:508:ARG:NH1	11:D:8038:HOH:O	2.50	0.45
5:M:1115:LEU:O	6:N:89:ARG:CZ	2.64	0.45
5:M:479:VAL:HG22	5:M:506:ASN:HA	1.98	0.45
4:L:59:GLU:HG2	4:L:139:ASN:HD22	1.80	0.45
6:D:896:ALA:O	6:D:900:ILE:HG23	2.17	0.45
6:N:796:ARG:NE	6:N:828:LYS:NZ	2.61	0.45
5:C:10:ARG:HH11	5:C:11:GLU:H	1.63	0.45
5:M:577:PRO:HB3	5:M:842:ARG:NH1	2.31	0.45
6:N:963:TYR:H	6:N:963:TYR:HD1	1.63	0.45
6:N:756:GLN:HE21	6:N:760:ARG:HD2	1.82	0.45
5:C:832:LYS:HE3	11:C:1519:HOH:O	2.15	0.45
6:N:465:LEU:HD22	6:N:510:GLU:HA	1.97	0.45
6:D:884:ARG:HA	11:D:8116:HOH:O	2.16	0.45
5:C:640:ARG:HA	11:C:1183:HOH:O	2.16	0.45
5:M:350:ARG:HB3	5:M:377:PRO:HB3	1.97	0.45
6:D:1402:ALA:HB2	6:D:1415:VAL:CG2	2.46	0.45
6:D:1135:ARG:HD2	6:D:1139:ASP:OD2	2.17	0.45
6:N:907:GLU:O	6:N:911:LEU:HG	2.15	0.45
4:L:112:ARG:H	4:L:112:ARG:HG2	1.48	0.45
5:M:801:VAL:HG23	5:M:802:ARG:N	2.31	0.45
6:D:1207:TYR:HA	6:D:1214:PRO:HA	1.97	0.45
4:L:50:GLY:HA3	4:L:171:PHE:O	2.16	0.45
6:N:31:THR:OG1	6:N:32:ILE:N	2.49	0.45
4:K:16:GLN:NE2	11:K:788:HOH:O	2.47	0.45
6:N:169:TYR:HB3	6:N:195:VAL:HG11	1.99	0.45
6:D:530:VAL:HB	6:D:534:ARG:HB2	1.99	0.45
5:C:431:HIS:CD2	5:C:432:ARG:N	2.85	0.45
5:C:569:VAL:HA	5:C:570:PRO:HD3	1.85	0.45
5:M:9:ILE:HD11	5:M:537:LYS:HZ3	1.81	0.45
6:N:781:PRO:O	6:N:786:ILE:HD11	2.17	0.45
5:C:401:LEU:HD22	5:C:546:LEU:HD13	1.99	0.45
5:C:1055:LEU:HD22	5:C:1066:ALA:CB	2.37	0.45
5:C:1063:ARG:O	5:C:1066:ALA:HB3	2.16	0.45
6:D:136:ASP:HB3	6:D:137:PRO:CD	2.33	0.45
6:D:606:ILE:O	6:D:613:ARG:HB2	2.16	0.45
5:M:479:VAL:HG21	5:M:503:LEU:CD1	2.46	0.45
5:M:310:LEU:HD11	11:M:1381:HOH:O	2.15	0.45
4:K:41:ARG:HA	4:K:44:LEU:HD12	1.97	0.45
5:C:265:ARG:HB3	5:C:267:TYR:CE2	2.51	0.45
6:D:165:LYS:HA	6:D:199:LEU:HD13	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:396:VAL:CG1	6:D:398:ALA:HB2	2.46	0.45
6:D:44:LEU:O	6:D:525:ARG:NH2	2.49	0.45
5:C:523:ILE:HG23	5:C:523:ILE:O	2.17	0.45
5:C:385:PHE:O	5:C:389:SER:HB2	2.16	0.45
6:D:1376:MET:CE	6:D:1421:LEU:HD22	2.46	0.45
4:A:206:THR:HG23	4:A:208:LEU:N	2.31	0.45
5:M:468:ARG:NE	5:M:487:THR:HG23	2.32	0.45
5:C:625:LEU:HA	5:C:639:GLN:NE2	2.24	0.45
5:M:1007:ALA:HB1	6:N:652:LEU:CD1	2.46	0.45
5:C:810:ASP:HA	5:C:811:PRO:HD3	1.68	0.45
4:K:158:ILE:HA	11:K:1352:HOH:O	2.15	0.45
6:N:800:LYS:HE3	6:N:804:LEU:HD22	1.98	0.45
5:M:77:PRO:HG2	5:M:117:HIS:CE1	2.51	0.45
5:C:403:SER:O	5:C:407:LYS:HD3	2.16	0.45
5:M:817:PRO:O	6:N:532:GLY:HA2	2.15	0.45
5:C:1008:ARG:HB2	5:C:1027:PHE:HB2	1.99	0.45
4:A:186:LEU:HB2	11:A:361:HOH:O	2.17	0.45
6:N:106:LYS:CE	6:N:125:GLN:HE22	2.30	0.45
5:M:601:GLY:HA3	5:M:615:TYR:HA	1.97	0.45
6:D:819:GLY:HA2	11:D:8465:HOH:O	2.17	0.45
5:M:1105:LYS:C	5:M:1107:ASN:HD22	2.19	0.45
6:N:1476:THR:C	6:N:1478:SER:H	2.19	0.45
6:D:1476:THR:O	6:D:1482:ARG:HA	2.17	0.45
1:G:15:DC:H2"	1:G:16:DG:H8	1.82	0.45
5:C:146:VAL:HG11	5:C:306:THR:CB	2.41	0.45
5:C:260:LEU:HA	5:C:291:ALA:HB2	1.97	0.45
6:N:204:LEU:HD12	6:N:396:VAL:HG21	1.97	0.45
3:Z:4:DC:H2"	3:Z:5:DG:O5'	2.16	0.45
4:K:94:LEU:HD11	4:K:119:ASP:HB3	1.98	0.45
6:D:618:LEU:CD1	6:D:1439:SER:HB3	2.47	0.45
6:D:1344:VAL:HG12	6:D:1348:LEU:CD1	2.46	0.45
6:N:497:GLU:O	6:N:500:ARG:HB2	2.16	0.45
5:M:769:PRO:HD2	6:N:65:ARG:NE	2.32	0.45
6:N:41:ARG:CD	6:N:42:ASP:H	2.28	0.45
6:D:68:PHE:HZ	11:D:8399:HOH:O	1.98	0.45
7:E:45:ARG:HB2	7:E:45:ARG:HE	1.62	0.45
4:B:48:ILE:HG22	4:B:173:PRO:HD2	1.99	0.45
5:M:165:LEU:HA	5:M:166:PRO:O	2.16	0.45
4:K:13:VAL:HG22	4:K:23:PHE:HD1	1.82	0.45
4:A:9:PRO:HB3	4:A:25:LEU:CG	2.46	0.45
6:N:152:LEU:HD23	6:N:152:LEU:N	2.31	0.45
6:D:794:GLN:OE1	6:D:905:PRO:HG3	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:250:ARG:NH1	5:M:250:ARG:HG3	2.31	0.45
5:M:375:SER:HA	11:M:1564:HOH:O	2.14	0.45
5:C:168:ARG:HH11	5:C:168:ARG:HG3	1.82	0.45
5:M:122:THR:HB	5:M:124:ASP:OD1	2.17	0.45
4:L:2:LEU:O	4:L:6:LEU:HD23	2.16	0.45
5:M:43:GLY:HA2	5:M:341:THR:HG21	1.96	0.45
1:X:13:DT:OP1	6:N:1093:TYR:CE2	2.70	0.45
6:N:618:LEU:HD22	6:N:619:LEU:HD22	1.98	0.45
5:C:329:GLY:CA	5:C:489:THR:HG23	2.46	0.45
5:C:567:GLN:HB2	5:C:997:LEU:HD12	1.98	0.45
5:C:833:LEU:CD1	5:C:996:LYS:HD2	2.47	0.45
6:D:1057:VAL:HG13	6:D:1069:GLU:HB3	1.98	0.45
6:N:1475:GLY:O	6:N:1478:SER:HB3	2.16	0.45
5:M:695:LEU:O	5:M:695:LEU:HD23	2.16	0.45
6:N:179:VAL:HG21	6:N:191:LEU:HD23	1.99	0.45
5:M:516:ARG:CZ	6:N:1068:LEU:HD13	2.44	0.45
5:M:876:VAL:HG12	5:M:876:VAL:O	2.17	0.45
6:D:1153:VAL:CG1	6:N:561:GLY:HA3	2.41	0.45
6:D:1198:TYR:N	11:D:8501:HOH:O	2.48	0.45
5:M:139:GLN:HA	5:M:411:SER:O	2.17	0.45
5:C:1016:ILE:HD13	5:C:1016:ILE:N	2.24	0.45
6:N:701:LEU:N	6:N:701:LEU:HD12	2.32	0.45
6:N:168:THR:OG1	6:N:206:ARG:NH2	2.49	0.45
5:M:690:ILE:CG2	5:M:852:ILE:HG13	2.47	0.45
6:D:1389:LEU:HD13	11:D:8087:HOH:O	2.17	0.45
5:M:31:GLN:CD	5:M:34:VAL:HG23	2.36	0.45
6:N:1031:ASN:HB3	6:N:1034:GLN:OE1	2.15	0.45
6:D:36:THR:O	6:D:38:LYS:N	2.49	0.45
6:N:1412:LYS:NZ	6:N:1414:PRO:HG3	2.32	0.45
7:O:28:GLN:HB3	7:O:32:ARG:HH12	1.82	0.45
6:N:682:ASP:N	6:N:682:ASP:OD1	2.49	0.45
5:C:51:THR:CG2	5:C:348:LEU:HD23	2.46	0.45
3:I:3:DA:H4'	5:C:423:ALA:HB1	1.97	0.45
6:D:32:ILE:HD12	6:D:527:MET:HG2	1.97	0.45
4:L:73:GLU:HB3	4:L:77:GLU:HG3	1.97	0.45
6:N:845:ASN:H	6:N:848:GLU:HG3	1.81	0.45
6:N:945:SER:OG	6:N:947:ILE:HG13	2.16	0.45
6:D:1213:ARG:NH2	7:E:10:PHE:O	2.44	0.45
6:D:1135:ARG:HB3	6:D:1140:ILE:CG1	2.47	0.45
5:M:662:GLU:HG2	5:M:663:ASN:CG	2.37	0.45
5:M:1034:GLU:CB	6:N:619:LEU:HD13	2.45	0.45
6:N:515:GLU:HG3	11:N:9303:HOH:O	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:570:PRO:O	5:C:702:SER:HB2	2.16	0.45
2:H:9:G:C5'	2:H:9:G:H8	2.30	0.45
6:D:1102:THR:HG23	6:D:1370:ILE:HG22	1.99	0.45
6:D:1484:THR:O	7:E:25:LYS:HD3	2.17	0.45
5:C:160:ALA:HB3	5:C:174:LEU:HB2	1.97	0.45
6:D:10:ILE:HD11	6:D:1434:TRP:CE2	2.51	0.45
5:M:987:ILE:HG12	6:N:948:THR:CG2	2.46	0.45
6:N:784:ASP:HB3	6:N:939:PHE:CE2	2.51	0.45
6:N:1232:PRO:O	6:N:1236:LEU:HG	2.16	0.45
5:C:837:ASP:OD1	5:C:999:HIS:NE2	2.50	0.45
5:C:910:LYS:HG3	5:C:912:PRO:HD2	1.99	0.45
4:K:58:ILE:HG21	4:K:68:ILE:CD1	2.46	0.45
6:D:992:ILE:HG21	11:D:8500:HOH:O	2.16	0.45
6:D:1406:ARG:HB2	6:D:1412:LYS:HZ3	1.82	0.45
5:C:551:GLU:HB3	5:C:906:PHE:CD2	2.52	0.45
4:A:41:ARG:HH11	4:A:177:VAL:HB	1.82	0.45
5:C:56:GLU:CB	5:C:64:LEU:HD23	2.46	0.45
5:M:829:GLN:NE2	5:M:831:ARG:HH21	2.15	0.45
5:C:603:VAL:O	5:C:646:GLY:HA2	2.16	0.45
5:M:615:TYR:HB3	5:M:617:ASP:OD1	2.16	0.45
5:M:899:GLN:HG3	5:M:901:TYR:CZ	2.51	0.45
6:D:576:GLU:HA	6:D:579:ASP:OD2	2.17	0.45
6:N:587:ARG:HG2	6:N:587:ARG:HH11	1.81	0.45
6:D:633:VAL:HG22	6:D:635:PRO:HD3	1.98	0.45
6:D:1225:ALA:HB2	6:D:1367:HIS:ND1	2.32	0.45
6:N:993:LEU:HA	11:N:9079:HOH:O	2.17	0.45
5:C:1060:ILE:O	5:C:1063:ARG:HG2	2.15	0.45
5:M:860:HIS:CE1	5:M:977:GLY:HA2	2.52	0.45
4:B:97:VAL:HG13	11:B:325:HOH:O	2.17	0.45
7:E:80:VAL:HG11	7:E:85:LEU:HD23	1.98	0.45
6:N:969:ARG:O	6:N:973:GLN:HG3	2.17	0.45
5:M:806:LEU:O	5:M:821:GLU:HB2	2.17	0.45
6:D:998:GLU:O	6:D:1002:LYS:HG3	2.17	0.45
6:D:974:ILE:O	6:D:983:LEU:HD11	2.16	0.45
5:M:844:GLY:O	5:M:846:LYS:HG3	2.16	0.45
6:N:777:PRO:HG2	6:N:916:TYR:HB2	1.98	0.45
5:C:906:PHE:CE1	6:D:1067:VAL:HG13	2.52	0.45
6:D:1261:GLU:O	6:D:1264:GLU:O	2.35	0.45
6:N:987:GLU:O	6:N:991:GLN:HG3	2.16	0.45
6:N:36:THR:O	6:N:38:LYS:N	2.49	0.45
6:N:1262:LEU:HD23	6:N:1352:ILE:HA	1.99	0.45
6:D:407:VAL:HA	6:D:422:ALA:HB2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:954:ALA:HB1	6:N:1039:CYS:SG	2.57	0.45
4:A:13:VAL:HG22	4:A:23:PHE:CD1	2.51	0.45
6:D:1492:LEU:HD22	6:D:1492:LEU:O	2.16	0.45
6:N:1147:ARG:CB	6:N:1188:VAL:HG21	2.44	0.45
11:C:1135:HOH:O	6:D:750:PRO:HB3	2.16	0.45
6:N:1209:LEU:O	6:N:1210:SER:C	2.54	0.45
6:N:1336:LEU:HD11	6:N:1341:PRO:HG3	1.99	0.45
6:N:634:GLY:N	6:N:635:PRO:HD3	2.32	0.45
5:C:1046:ALA:O	6:D:1472:ILE:HD11	2.16	0.45
5:M:265:ARG:H	5:M:289:THR:HG21	1.80	0.45
1:G:15:DC:H2''	1:G:16:DG:C8	2.52	0.45
6:N:542:ASP:HA	6:N:545:ARG:NE	2.30	0.45
5:M:689:VAL:CG1	5:M:690:ILE:N	2.79	0.45
6:D:525:ARG:HB2	6:D:538:SER:OG	2.17	0.45
4:L:1:MET:HB2	11:L:357:HOH:O	2.17	0.45
5:M:564:MET:SD	5:M:565:GLN:N	2.90	0.45
6:N:28:LYS:CG	6:N:29:PRO:HD2	2.47	0.45
4:K:189:ARG:HG3	4:K:191:ASP:OD1	2.17	0.45
6:D:33:ASN:O	6:D:36:THR:O	2.34	0.45
5:C:76:PRO:HA	5:C:77:PRO:HD3	1.89	0.45
6:D:1345:GLU:O	6:D:1349:VAL:HG23	2.16	0.45
4:B:213:GLN:HG2	11:B:331:HOH:O	2.17	0.45
5:C:22:GLN:OE1	5:C:407:LYS:HB3	2.16	0.45
5:M:358:ARG:HB3	5:M:371:LYS:O	2.17	0.45
4:L:45:LEU:HD22	6:N:851:LEU:CD2	2.47	0.45
4:L:19:GLU:N	4:L:19:GLU:OE2	2.49	0.45
7:O:84:ARG:HB3	11:O:1385:HOH:O	2.15	0.45
6:N:837:GLY:O	6:N:841:TYR:CD1	2.70	0.45
5:M:882:LEU:HD23	5:M:882:LEU:N	2.32	0.45
5:M:243:ARG:HB3	11:M:1168:HOH:O	2.16	0.45
5:C:855:VAL:HG13	5:C:856:GLU:OE2	2.17	0.45
11:A:316:HOH:O	4:B:148:VAL:HG23	2.17	0.45
5:C:14:PRO:HB2	11:C:1307:HOH:O	2.17	0.45
1:X:14:DT:H3'	6:N:610:LYS:HZ3	1.81	0.45
2:Y:8:C:H2'	2:Y:9:G:C8	2.52	0.45
6:D:1102:THR:HG22	6:D:1222:GLY:HA3	1.99	0.45
6:D:1426:LYS:HA	6:D:1429:LEU:HD13	1.99	0.45
6:D:1465:ASN:ND2	6:D:1471:LEU:O	2.50	0.45
5:C:1095:LEU:CD2	6:D:582:LEU:HD22	2.43	0.45
5:C:703:ILE:CD1	5:C:703:ILE:H	2.17	0.45
6:N:876:SER:HB3	11:N:9301:HOH:O	2.17	0.45
6:N:127:LEU:HD12	6:N:127:LEU:H	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:484:PRO:HB3	6:D:488:ARG:NE	2.17	0.45
5:M:36:PRO:HB2	5:M:70:GLU:HG2	1.98	0.45
5:M:678:PRO:HG2	6:N:943:THR:HA	1.99	0.45
6:D:1010:ASN:HB3	11:D:8019:HOH:O	2.17	0.45
5:C:899:GLN:NE2	5:C:901:TYR:OH	2.50	0.45
5:C:813:VAL:HG22	5:C:814:GLU:N	2.32	0.45
5:M:798:GLY:H	5:M:827:VAL:HG11	1.82	0.45
5:C:54:ILE:CG2	5:C:66:LEU:HB3	2.47	0.45
6:N:675:ARG:O	6:N:678:GLU:HG2	2.17	0.45
6:D:761:ILE:HG12	7:E:65:MET:HE1	1.99	0.45
6:N:777:PRO:CG	6:N:916:TYR:HB2	2.47	0.45
6:D:1369:GLU:HA	6:D:1372:VAL:HG12	1.98	0.45
5:M:817:PRO:C	5:M:819:VAL:H	2.20	0.45
1:X:6:DT:H2"	1:X:7:DC:C5	2.52	0.45
5:C:248:PRO:HG3	11:C:1252:HOH:O	2.17	0.45
6:N:1425:THR:O	6:N:1429:LEU:HD12	2.16	0.44
5:C:689:VAL:HG21	5:C:870:ILE:HD12	1.99	0.44
6:N:754:PHE:CZ	6:N:1476:THR:HG21	2.52	0.44
6:N:700:VAL:HG13	6:N:718:PRO:HG2	2.00	0.44
5:M:265:ARG:HB3	5:M:267:TYR:CZ	2.52	0.44
5:M:461:VAL:HG13	5:M:465:GLY:HA2	1.98	0.44
6:N:999:THR:HA	6:N:1002:LYS:HD2	1.98	0.44
6:D:112:ILE:HD11	6:D:461:ILE:CG2	2.47	0.44
6:N:793:THR:O	6:N:879:ARG:HD3	2.17	0.44
4:L:102:LYS:HE3	4:L:104:GLU:CG	2.43	0.44
4:A:20:TYR:HE2	4:A:198:ARG:HB2	1.82	0.44
6:D:1119:SER:O	6:D:1121:PRO:HD3	2.16	0.44
6:D:1147:ARG:O	6:D:1165:TYR:HA	2.18	0.44
5:M:490:GLU:HG2	5:M:493:ARG:NH2	2.32	0.44
6:N:1231:GLU:HA	6:N:1234:THR:OG1	2.17	0.44
5:M:1003:ASP:OD1	5:M:1004:LYS:HG2	2.16	0.44
4:A:179:PHE:HB2	4:A:195:LEU:CD1	2.45	0.44
5:M:199:VAL:HG13	5:M:235:LEU:HG	1.99	0.44
5:M:400:PRO:HG2	5:M:593:ALA:CB	2.47	0.44
6:N:1151:ARG:HG2	6:N:1187:PRO:CB	2.45	0.44
5:M:80:GLN:HE21	5:M:84:ARG:NH2	2.15	0.44
4:A:83:LYS:HG3	4:A:170:VAL:HG21	1.98	0.44
5:M:334:ARG:HG3	11:M:1156:HOH:O	2.17	0.44
5:C:1008:ARG:HH12	5:C:1010:THR:HA	1.81	0.44
6:D:1487:VAL:HG12	6:D:1488:ASP:N	2.31	0.44
6:D:950:GLY:O	6:D:953:ASP:HB2	2.16	0.44
5:C:1084:SER:HA	5:C:1087:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:6:ARG:HH11	6:D:6:ARG:HG2	1.82	0.44
6:N:54:LYS:HE3	6:N:55:ASP:HB2	1.99	0.44
6:N:705:ALA:HB3	6:N:706:PRO:HD3	1.99	0.44
2:Y:4:U:O2'	2:Y:5:C:H5'	2.16	0.44
5:C:674:VAL:HG12	5:C:990:GLY:O	2.18	0.44
5:C:676:ILE:O	6:D:948:THR:HB	2.17	0.44
6:D:783:ARG:HH12	6:D:1239:ARG:NH2	2.15	0.44
5:M:9:ILE:O	5:M:9:ILE:HD12	2.18	0.44
6:D:1183:ILE:O	6:D:1183:ILE:HG13	2.16	0.44
6:D:1377:LYS:O	6:D:1395:LEU:HB3	2.18	0.44
6:D:116:LEU:HD11	6:D:464:LEU:CB	2.46	0.44
4:L:94:LEU:HD21	4:L:119:ASP:HB2	1.99	0.44
4:B:84:GLU:OE1	4:B:127:LEU:HD11	2.17	0.44
6:N:434:ARG:H	6:N:447:VAL:HG22	1.82	0.44
5:C:783:ARG:HG2	5:C:785:VAL:HB	1.98	0.44
6:D:1232:PRO:HB3	6:D:1361:VAL:HG21	1.99	0.44
6:D:1184:GLN:HB2	6:N:559:ALA:CA	2.47	0.44
6:D:1271:LYS:HD3	6:D:1331:ASP:N	2.32	0.44
5:C:1038:TRP:HA	5:C:1041:GLU:OE1	2.17	0.44
5:M:13:ILE:HD12	5:M:13:ILE:O	2.17	0.44
6:D:1486:VAL:CG1	7:E:22:VAL:HG13	2.46	0.44
6:N:400:VAL:HG22	6:N:443:VAL:CG2	2.41	0.44
6:N:470:LEU:HD12	6:N:503:LEU:HD21	1.99	0.44
5:C:817:PRO:C	5:C:819:VAL:H	2.20	0.44
5:M:676:ILE:HG21	5:M:988:VAL:HG13	1.99	0.44
6:D:584:ASN:CG	6:D:590:PRO:HD2	2.37	0.44
5:M:853:LEU:HB3	5:M:858:MET:HE2	2.00	0.44
6:N:1472:ILE:O	6:N:1477:GLY:HA3	2.17	0.44
4:K:26:GLU:HG2	4:K:27:PRO:N	2.32	0.44
6:D:15:PRO:O	6:D:19:ARG:HG2	2.18	0.44
5:M:670:GLN:NE2	5:M:699:PHE:O	2.51	0.44
6:D:1014:ASN:O	6:D:1016:PRO:HD3	2.17	0.44
5:C:422:ARG:HB2	11:C:1579:HOH:O	2.17	0.44
5:C:532:MET:HG2	5:C:533:ASP:N	2.32	0.44
5:M:1013:TYR:CZ	5:M:1063:ARG:HD2	2.52	0.44
2:Y:11:C:C2'	2:Y:12:G:H5''	2.47	0.44
6:N:85:VAL:HG23	6:N:86:ARG:N	2.33	0.44
5:C:97:ARG:HB3	5:C:109:LYS:HE3	1.99	0.44
1:X:18:DG:P	6:N:628:ARG:HH21	2.40	0.44
5:M:208:ALA:O	5:M:218:VAL:HG21	2.17	0.44
6:D:396:VAL:HB	6:D:398:ALA:HB3	1.98	0.44
3:Z:6:DC:P	6:N:1266:ARG:HH12	2.41	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:525:ARG:HG2	6:D:525:ARG:O	2.17	0.44
6:D:10:ILE:O	6:D:1451:ALA:HA	2.18	0.44
5:M:405:ARG:NH2	5:M:566:THR:CG2	2.79	0.44
6:N:784:ASP:HB3	6:N:939:PHE:HE2	1.82	0.44
5:C:748:GLU:HA	5:C:799:ILE:HD12	1.99	0.44
5:C:595:LEU:HD22	5:C:625:LEU:HD23	2.00	0.44
5:M:780:GLU:HG3	5:M:781:LYS:H	1.83	0.44
6:D:420:VAL:O	6:D:421:LEU:HD23	2.17	0.44
5:C:352:ALA:CA	5:C:355:VAL:HG12	2.47	0.44
5:M:859:PRO:HB3	5:M:974:LEU:HD23	1.99	0.44
5:C:44:ILE:HG22	5:C:45:GLN:N	2.31	0.44
4:L:19:GLU:O	4:L:200:TRP:HA	2.18	0.44
6:D:156:GLU:O	6:D:159:ARG:HB2	2.18	0.44
4:B:30:ARG:HB3	4:B:30:ARG:CZ	2.47	0.44
4:L:201:THR:HG21	4:L:205:VAL:O	2.17	0.44
6:D:471:GLU:H	6:D:471:GLU:HG2	1.52	0.44
4:L:73:GLU:CD	4:L:130:ALA:HA	2.38	0.44
6:N:35:ARG:HG3	6:N:35:ARG:NH1	2.33	0.44
5:M:1043:TYR:CE2	6:N:763:MET:HA	2.53	0.44
6:D:593:ASN:HB2	11:D:8122:HOH:O	2.18	0.44
6:D:1432:LYS:HB3	6:D:1432:LYS:NZ	2.32	0.44
6:N:530:VAL:HB	6:N:534:ARG:HB2	1.99	0.44
2:Y:16:G:H3'	11:Y:968:HOH:O	2.17	0.44
5:C:553:ASP:OD1	5:C:881:ASN:HB2	2.17	0.44
2:H:7:G:C5'	2:H:7:G:H8	2.29	0.44
6:N:1213:ARG:HH22	7:O:15:SER:HA	1.83	0.44
5:M:1084:SER:HA	5:M:1087:VAL:HG12	1.98	0.44
5:C:172:ILE:HG12	11:C:1177:HOH:O	2.17	0.44
6:N:436:GLU:OE2	6:N:445:ARG:HD3	2.18	0.44
5:C:721:ARG:CG	5:C:820:ARG:HH12	2.29	0.44
5:C:503:LEU:HD23	5:C:507:ARG:O	2.17	0.44
5:C:479:VAL:HG22	5:C:506:ASN:HA	1.99	0.44
5:C:952:LEU:HB3	5:C:966:LEU:HD11	2.00	0.44
6:D:1000:THR:HG23	6:D:1001:GLU:H	1.82	0.44
5:M:949:LYS:CD	6:N:796:ARG:HH22	2.29	0.44
4:L:124:ASN:ND2	4:L:127:LEU:HD22	2.32	0.44
5:C:957:LYS:NZ	5:C:957:LYS:HB2	2.33	0.44
6:D:651:GLU:HG2	11:D:8181:HOH:O	2.17	0.44
6:D:654:LYS:O	6:D:658:LEU:HG	2.17	0.44
5:C:52:PHE:O	5:C:54:ILE:N	2.50	0.44
5:M:252:LYS:HD2	5:M:252:LYS:N	2.32	0.44
7:O:24:ALA:O	7:O:28:GLN:HG3	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:150:TYR:CZ	5:C:696:LYS:HA	2.53	0.44
5:C:189:ARG:NH1	5:C:190:LYS:HD2	2.33	0.44
6:N:1262:LEU:HA	6:N:1262:LEU:HD12	1.77	0.44
4:A:219:ARG:HD3	4:B:219:ARG:HG3	1.99	0.44
5:M:94:LEU:HD12	5:M:95:TYR:N	2.32	0.44
4:B:95:GLN:HA	4:B:146:ARG:HD2	1.99	0.44
4:A:47:SER:HB3	4:A:217:ILE:HD13	2.00	0.44
5:M:1034:GLU:CB	6:N:619:LEU:HD22	2.44	0.44
5:C:393:GLN:HE21	5:C:393:GLN:HB2	1.62	0.44
5:C:566:THR:O	5:C:566:THR:HG22	2.18	0.44
5:C:689:VAL:CG1	5:C:853:LEU:HD13	2.47	0.44
5:C:673:LEU:HD21	5:C:867:VAL:HG12	2.00	0.44
6:D:875:THR:HG22	6:D:879:ARG:HB2	2.00	0.44
6:N:1336:LEU:CD2	6:N:1421:LEU:HB2	2.48	0.44
1:G:12:DG:H1'	1:G:13:DT:H5'	1.99	0.44
5:M:140:ILE:HG22	5:M:333:ILE:CD1	2.48	0.44
6:D:95:LEU:HD23	6:D:96:ALA:H	1.82	0.44
6:N:50:PHE:HB3	6:N:522:PRO:CD	2.47	0.44
6:N:899:LEU:CB	6:N:917:GLN:HG2	2.48	0.44
5:C:170:PRO:HB2	11:C:1335:HOH:O	2.17	0.44
7:E:13:VAL:HG11	7:E:18:ARG:HB3	2.00	0.44
6:D:1344:VAL:HG11	6:D:1421:LEU:CD2	2.48	0.44
6:D:550:ARG:NH1	6:D:573:MET:SD	2.88	0.44
4:L:121:GLU:CD	4:L:123:MET:HG2	2.37	0.44
6:D:554:LEU:HD12	6:D:570:GLU:HB3	2.00	0.44
4:L:38:ASN:HB3	4:L:39:PRO:HD3	2.00	0.44
4:A:165:ILE:O	4:A:165:ILE:HG13	2.18	0.44
5:C:492:ASP:OD2	5:C:518:LYS:HB3	2.18	0.44
6:N:1139:ASP:HB3	6:N:1357:ARG:CZ	2.48	0.44
6:D:1380:GLU:HA	6:D:1391:GLU:O	2.18	0.44
6:D:800:LYS:HD3	6:D:800:LYS:O	2.18	0.44
5:C:106:GLY:C	5:C:107:LEU:HD23	2.38	0.44
6:N:1149:LEU:HD22	6:N:1187:PRO:HG2	2.00	0.44
4:B:47:SER:OG	4:B:48:ILE:N	2.49	0.44
5:M:18:LEU:HD23	5:M:542:VAL:HG21	2.00	0.44
6:D:15:PRO:HD3	6:D:511:TRP:CE3	2.52	0.44
5:M:69:LEU:HD12	5:M:97:ARG:HB3	1.98	0.44
5:C:189:ARG:HD3	5:C:190:LYS:N	2.33	0.44
5:M:15:LEU:HD12	5:M:15:LEU:N	2.31	0.44
7:O:62:THR:HB	11:O:844:HOH:O	2.18	0.44
5:M:548:PRO:HB2	5:M:843:HIS:HE1	1.83	0.44
5:M:1034:GLU:HB3	6:N:619:LEU:CD1	2.46	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:690:ILE:HG23	5:C:852:ILE:HA	1.99	0.44
6:N:1147:ARG:O	6:N:1166:LEU:HD23	2.17	0.44
6:N:644:LEU:HD12	6:N:645:PRO:N	2.33	0.44
5:C:579:VAL:HB	5:C:890:LEU:HD21	1.98	0.44
6:D:1201:CYS:SG	6:D:1204:CYS:HB2	2.57	0.44
6:D:1367:HIS:O	6:D:1371:VAL:HG23	2.17	0.44
5:M:23:VAL:HA	5:M:121:MET:CE	2.48	0.44
5:C:69:LEU:CD1	5:C:109:LYS:HE3	2.45	0.44
5:C:148:PHE:HB2	5:C:313:LEU:HD22	1.99	0.44
6:D:1080:GLY:O	6:D:1083:ASP:N	2.50	0.44
5:C:473:ARG:HA	5:C:531:PHE:CD1	2.53	0.44
6:D:119:SER:H	6:D:123:LEU:HB2	1.83	0.44
5:C:650:ARG:CG	5:C:653:ASP:HB2	2.44	0.44
6:D:33:ASN:HB2	6:D:40:GLU:OE2	2.18	0.44
5:C:549:PHE:CD2	5:C:886:LEU:HB3	2.52	0.44
5:M:496:ILE:HA	5:M:531:PHE:O	2.18	0.44
5:C:235:LEU:C	5:C:235:LEU:HD23	2.37	0.44
4:B:48:ILE:N	4:B:48:ILE:HD12	2.32	0.44
5:C:524:VAL:CG1	5:C:528:GLU:HB2	2.48	0.44
4:A:132:LEU:N	4:A:132:LEU:HD12	2.32	0.44
5:M:198:ARG:HG2	5:M:204:GLN:HE22	1.82	0.44
5:C:41:ASN:O	5:C:46:ALA:HB2	2.17	0.44
4:L:7:LYS:C	4:L:7:LYS:HD2	2.37	0.44
7:O:5:GLY:HA3	7:O:8:LYS:HD2	1.99	0.44
4:A:151:VAL:HB	4:A:169:ALA:HB3	2.00	0.44
1:X:13:DT:OP2	6:N:1096:ARG:NH2	2.45	0.44
6:N:95:LEU:HA	6:N:551:ASN:OD1	2.17	0.44
5:C:329:GLY:CA	5:C:488:ALA:HB3	2.48	0.44
6:N:1192:LEU:HD23	11:N:9021:HOH:O	2.17	0.44
6:N:637:LEU:HD11	6:N:642:CYS:N	2.33	0.44
5:C:546:LEU:HD13	5:C:565:GLN:HE22	1.82	0.44
6:D:115:LEU:HD12	6:D:499:VAL:HG22	2.00	0.44
5:M:284:ARG:O	5:M:301:GLU:HB2	2.18	0.44
6:N:124:GLU:O	6:N:127:LEU:HD12	2.18	0.44
6:N:131:LYS:NZ	6:N:568:ARG:HB2	2.32	0.44
6:N:1259:VAL:HG11	6:N:1356:TYR:HH	1.81	0.44
6:D:1463:LYS:O	6:D:1467:ILE:HG13	2.18	0.44
6:D:123:LEU:CD1	6:D:152:LEU:HD22	2.41	0.44
6:N:711:LEU:HD22	6:N:714:GLN:NE2	2.33	0.44
5:C:862:PRO:HD3	5:C:973:VAL:O	2.18	0.44
5:M:728:HIS:C	5:M:729:LEU:HG	2.38	0.44
5:M:728:HIS:O	5:M:729:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:58:ILE:HG21	4:B:61:VAL:HG23	2.00	0.44
6:N:121:THR:HB	11:N:9300:HOH:O	2.17	0.44
4:L:143:ARG:NE	4:L:145:ASP:OD1	2.51	0.44
4:L:73:GLU:OE1	4:L:131:THR:N	2.51	0.44
4:B:19:GLU:O	4:B:200:TRP:HA	2.18	0.44
6:N:884:ARG:CZ	6:N:884:ARG:HB3	2.45	0.44
6:D:1432:LYS:HG2	6:D:1433:SER:N	2.33	0.44
6:N:955:VAL:HG11	6:N:1015:TYR:CE2	2.52	0.44
5:M:1060:ILE:HG21	5:M:1083:GLU:OE1	2.17	0.44
2:Y:10:G:C2'	2:Y:11:C:H5'	2.47	0.44
6:D:1098:LEU:HD21	6:D:1229:ILE:CD1	2.44	0.44
6:D:128:TYR:O	6:D:457:GLY:HA2	2.17	0.44
6:D:95:LEU:HD23	6:D:96:ALA:N	2.32	0.44
6:N:578:VAL:O	6:N:581:LEU:HD23	2.17	0.44
5:M:479:VAL:HG21	5:M:503:LEU:HD11	1.98	0.44
4:K:34:VAL:HG23	4:K:179:PHE:HZ	1.82	0.44
4:K:44:LEU:HD13	4:K:177:VAL:HG11	2.00	0.44
5:C:288:ARG:HH11	5:C:288:ARG:CB	2.31	0.44
6:D:489:ARG:NH1	11:D:8508:HOH:O	2.49	0.44
6:D:8:VAL:HG23	6:D:1457:ASP:CB	2.37	0.44
5:M:12:VAL:HG13	5:M:13:ILE:HG13	2.00	0.44
6:D:1481:VAL:HG22	7:E:18:ARG:HH21	1.83	0.44
6:N:493:ARG:HG2	6:N:1390:LEU:CB	2.43	0.44
5:M:854:PRO:HB2	5:M:856:GLU:CD	2.38	0.44
5:M:721:ARG:HH21	5:M:783:ARG:NH1	2.15	0.44
6:D:554:LEU:CD1	6:D:571:LYS:HD3	2.45	0.44
5:M:971:LYS:HG2	5:M:988:VAL:HB	2.00	0.44
6:D:615:ARG:NH2	6:D:1096:ARG:CZ	2.81	0.44
7:E:41:GLU:HB2	7:E:45:ARG:CZ	2.48	0.44
5:M:808:ARG:NH2	5:M:820:ARG:NH2	2.65	0.44
4:K:26:GLU:HG2	4:K:27:PRO:HA	1.99	0.44
5:M:165:LEU:HD12	5:M:166:PRO:C	2.38	0.44
5:M:84:ARG:HG2	5:M:131:GLY:O	2.18	0.44
6:N:984:THR:HG22	6:N:987:GLU:HG3	1.99	0.44
5:C:964:LYS:O	5:C:968:LEU:HG	2.17	0.44
4:K:185:ARG:HB2	11:K:1437:HOH:O	2.17	0.44
5:C:137:VAL:HG22	5:C:391:LEU:HG	2.00	0.44
5:M:41:ASN:O	5:M:46:ALA:HB2	2.18	0.44
6:D:418:GLY:O	6:D:428:LYS:HB3	2.18	0.44
6:N:1100:ASP:HB3	6:N:1428:ALA:CB	2.47	0.44
6:D:1045:MET:O	6:D:1053:PHE:HD1	2.01	0.44
5:C:874:LEU:C	5:C:877:PRO:HD2	2.38	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1102:THR:O	6:N:1102:THR:HG22	2.18	0.44
6:N:1221:VAL:O	6:N:1224:VAL:N	2.50	0.44
6:N:1478:SER:O	6:N:1482:ARG:N	2.51	0.44
5:C:573:ARG:HD2	5:C:699:PHE:HA	2.00	0.44
6:N:1037:GLN:OE1	6:N:1042:ARG:HD2	2.17	0.44
5:M:140:ILE:HD12	5:M:140:ILE:O	2.18	0.44
5:C:1055:LEU:CD2	5:C:1066:ALA:HB2	2.37	0.44
6:D:569:ASN:HA	6:D:572:ARG:NE	2.33	0.44
6:N:1481:VAL:O	6:N:1481:VAL:HG12	2.18	0.44
6:D:81:THR:HB	6:D:85:VAL:CG2	2.48	0.44
6:N:486:ARG:CA	6:N:489:ARG:HG2	2.45	0.44
5:M:486:MET:HG3	5:M:490:GLU:HB2	2.00	0.44
6:N:962:GLN:O	6:N:966:GLU:HG3	2.18	0.44
5:C:355:VAL:CG2	5:C:372:LEU:HG	2.48	0.44
6:D:18:ILE:HD12	6:D:518:PRO:HG3	1.99	0.44
6:N:639:LEU:HD23	6:N:639:LEU:H	1.83	0.44
5:M:198:ARG:HG2	5:M:204:GLN:NE2	2.33	0.44
6:D:19:ARG:NE	6:D:94:GLU:OE1	2.51	0.44
5:C:127:PHE:CE1	5:C:136:ILE:HG12	2.53	0.44
4:A:5:LYS:HE2	4:B:224:TYR:OH	2.18	0.44
4:L:43:ILE:HD12	4:L:217:ILE:HG21	2.00	0.44
4:L:101:LEU:HD23	4:L:101:LEU:C	2.38	0.44
4:A:26:GLU:HG2	4:A:27:PRO:N	2.33	0.44
6:D:675:ARG:HA	6:D:678:GLU:CG	2.48	0.44
4:K:102:LYS:HZ1	4:K:115:LEU:HD22	1.82	0.44
6:N:646:LYS:HG2	6:N:720:LEU:HB3	1.99	0.44
3:I:4:DC:H3'	11:I:2461:HOH:O	2.18	0.44
6:N:163:TYR:HE1	6:N:198:ARG:HH12	1.66	0.44
1:X:15:DC:P	6:N:610:LYS:HE2	2.58	0.43
2:Y:5:C:H6	2:Y:5:C:O5'	2.00	0.43
5:C:409:ARG:HB3	5:C:454:SER:OG	2.17	0.43
5:C:563:ASN:O	5:C:567:GLN:HG2	2.18	0.43
6:D:632:VAL:O	6:D:727:GLN:HA	2.18	0.43
6:N:1045:MET:CB	6:N:1073:SER:HA	2.48	0.43
1:G:11:DC:H5''	6:D:1442:ASN:ND2	2.33	0.43
7:E:28:GLN:HB2	7:E:28:GLN:HE21	1.56	0.43
5:C:703:ILE:HD11	11:C:1597:HOH:O	2.17	0.43
5:M:940:GLU:N	11:M:1220:HOH:O	2.51	0.43
5:C:279:GLU:HG3	5:C:280:LYS:N	2.33	0.43
5:C:285:LEU:HD23	5:C:285:LEU:O	2.18	0.43
5:M:578:VAL:HG21	5:M:991:GLN:O	2.18	0.43
6:D:26:VAL:HG11	6:D:44:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:834:THR:CG2	6:D:838:ARG:HH11	2.27	0.43
5:M:52:PHE:O	5:M:54:ILE:N	2.51	0.43
6:N:165:LYS:HG2	6:N:397:LYS:HD3	2.00	0.43
4:A:222:LEU:HD22	4:B:218:LEU:HD23	2.00	0.43
5:M:669:GLY:HA3	5:M:995:MET:HA	1.99	0.43
4:B:40:LEU:HD22	4:B:211:LEU:HD12	1.99	0.43
6:D:393:ILE:HD12	11:D:8204:HOH:O	2.18	0.43
5:M:971:LYS:HG2	5:M:988:VAL:N	2.33	0.43
6:N:1164:ARG:NH1	6:N:1170:ASP:OD2	2.51	0.43
5:C:22:GLN:O	5:C:121:MET:HE1	2.17	0.43
5:M:177:GLU:N	5:M:178:PRO:HD3	2.32	0.43
6:D:675:ARG:O	6:D:678:GLU:HG2	2.17	0.43
6:D:60:CYS:SG	6:D:62:LYS:HG3	2.58	0.43
5:C:745:ILE:HD11	5:C:803:THR:OG1	2.18	0.43
5:M:1008:ARG:NH2	5:M:1020:PRO:HB3	2.33	0.43
6:N:1261:GLU:O	6:N:1264:GLU:O	2.35	0.43
6:N:1165:TYR:HB2	11:N:9241:HOH:O	2.18	0.43
11:M:1170:HOH:O	6:N:754:PHE:HB2	2.18	0.43
5:C:568:ALA:HB1	5:C:668:LEU:HB2	2.00	0.43
5:M:147:TYR:CE2	5:M:280:LYS:HE2	2.52	0.43
5:C:1058:ASP:O	5:C:1060:ILE:N	2.51	0.43
5:M:307:LEU:CD1	5:M:310:LEU:HD23	2.48	0.43
6:N:155:ASP:O	6:N:159:ARG:N	2.49	0.43
6:N:204:LEU:HB3	6:N:445:ARG:NH2	2.32	0.43
6:N:1087:ARG:HB3	6:N:1237:THR:HG21	2.00	0.43
6:D:56:TYR:C	6:D:80:VAL:HG11	2.38	0.43
6:D:1262:LEU:HD21	6:D:1351:GLU:CG	2.43	0.43
6:N:1383:ASP:HA	6:N:1384:PRO:HD3	1.71	0.43
4:L:86:VAL:HG12	4:L:124:ASN:HB2	1.99	0.43
5:M:842:ARG:NH2	5:M:887:GLU:OE1	2.51	0.43
5:C:841:ASN:HD21	5:C:845:ASN:H	1.65	0.43
5:C:101:ILE:HD12	5:C:107:LEU:HD13	2.00	0.43
6:D:1066:THR:OG1	6:D:1067:VAL:N	2.51	0.43
6:D:1438:ALA:CA	6:D:1446:VAL:HG11	2.48	0.43
5:M:573:ARG:HB3	5:M:670:GLN:OE1	2.18	0.43
5:M:672:VAL:HG12	5:M:699:PHE:HE1	1.82	0.43
6:D:827:ILE:HG23	6:D:840:LYS:NZ	2.33	0.43
4:K:114:PHE:O	4:K:116:PRO:HD3	2.18	0.43
6:N:732:VAL:HG12	6:N:732:VAL:O	2.18	0.43
4:L:83:LYS:HE2	4:L:168:ASP:HB2	2.00	0.43
11:M:1450:HOH:O	6:N:1456:LYS:HB3	2.17	0.43
2:Y:9:G:C5'	2:Y:9:G:H8	2.30	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:431:HIS:CG	5:C:432:ARG:H	2.35	0.43
2:H:5:C:H2'	2:H:6:U:C5	2.52	0.43
6:N:645:PRO:HG3	6:N:725:SER:O	2.18	0.43
5:M:876:VAL:H	5:M:877:PRO:CD	2.31	0.43
5:M:873:PRO:O	5:M:877:PRO:HD3	2.18	0.43
5:M:144:PRO:N	5:M:276:LYS:HZ3	2.15	0.43
6:D:477:LEU:HD21	6:D:495:ARG:NH1	2.33	0.43
5:C:1031:ARG:CZ	6:D:621:LYS:NZ	2.81	0.43
6:N:53:ILE:HA	6:N:86:ARG:HD2	1.99	0.43
4:K:30:ARG:HH22	5:M:938:LYS:CD	2.28	0.43
6:N:154:THR:HG23	6:N:157:GLU:H	1.82	0.43
6:N:436:GLU:OE1	6:N:445:ARG:O	2.36	0.43
6:D:411:THR:HG23	6:D:436:GLU:HA	2.01	0.43
5:M:569:VAL:HA	5:M:570:PRO:HD3	1.88	0.43
5:M:342:ASP:HA	5:M:345:ARG:HD3	1.99	0.43
5:M:677:MET:HE1	5:M:679:PHE:CD1	2.38	0.43
6:N:481:MET:CE	6:N:496:LEU:HD23	2.48	0.43
6:N:481:MET:HE1	6:N:493:ARG:HA	2.01	0.43
6:D:957:PRO:HG3	6:D:1007:VAL:HA	2.00	0.43
6:N:813:LEU:HB2	6:N:839:LEU:HD21	1.99	0.43
4:B:65:PHE:CE1	6:D:813:LEU:HD13	2.54	0.43
4:K:133:GLU:OE2	4:K:134:GLU:HB2	2.17	0.43
6:D:409:VAL:CG1	6:D:435:VAL:HG11	2.48	0.43
7:E:41:GLU:H	7:E:41:GLU:CD	2.21	0.43
5:C:71:TYR:HA	5:C:96:ALA:HB2	2.00	0.43
5:C:124:ASP:OD2	5:C:592:LEU:HD12	2.19	0.43
5:M:198:ARG:HE	5:M:198:ARG:CA	2.32	0.43
5:M:816:LYS:HB2	5:M:819:VAL:CG2	2.47	0.43
6:D:827:ILE:HG22	6:D:837:GLY:CA	2.47	0.43
5:M:351:LEU:HD11	11:M:1564:HOH:O	2.17	0.43
5:M:601:GLY:O	5:M:648:ARG:HA	2.18	0.43
4:L:91:ASN:N	4:L:91:ASN:OD1	2.51	0.43
5:C:360:LEU:HD22	11:C:1160:HOH:O	2.17	0.43
6:N:57:GLU:OE2	6:N:61:GLY:HA2	2.18	0.43
6:N:615:ARG:NH2	6:N:1096:ARG:HD2	2.34	0.43
6:N:1209:LEU:HD21	7:O:17:TYR:OH	2.19	0.43
7:O:21:VAL:HG12	7:O:25:LYS:HD2	1.99	0.43
5:M:879:ARG:HH21	6:N:1029:ARG:HH22	1.65	0.43
6:D:1105:ILE:HG22	11:D:8286:HOH:O	2.17	0.43
6:D:1471:LEU:HD21	6:D:1477:GLY:HA2	1.99	0.43
5:M:328:LEU:HD11	5:M:434:HIS:HD2	1.82	0.43
5:C:36:PRO:CG	5:C:70:GLU:HB3	2.36	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:X:17:DC:O3'	6:N:628:ARG:NE	2.51	0.43
6:N:606:ILE:CG2	6:N:607:LEU:HG	2.48	0.43
5:C:466:PHE:O	5:C:468:ARG:N	2.52	0.43
6:N:1453:ALA:O	6:N:1455:LYS:HG2	2.18	0.43
6:D:1117:TYR:CE1	6:D:1187:PRO:HA	2.53	0.43
6:D:1486:VAL:HG12	7:E:22:VAL:HG13	2.00	0.43
6:D:1046:GLN:HG2	6:D:1052:THR:CG2	2.44	0.43
6:N:471:GLU:OE1	6:N:503:LEU:HD21	2.18	0.43
5:M:462:ASP:HB3	5:M:468:ARG:CD	2.43	0.43
5:M:490:GLU:HG2	5:M:493:ARG:NH1	2.33	0.43
6:D:957:PRO:HG3	11:D:8019:HOH:O	2.17	0.43
5:M:587:VAL:CG1	5:M:588:VAL:N	2.79	0.43
5:M:567:GLN:C	5:M:997:LEU:HD12	2.38	0.43
5:M:1003:ASP:OD2	6:N:724:GLN:NE2	2.52	0.43
6:N:970:LYS:HE2	11:N:9402:HOH:O	2.18	0.43
5:C:142:ARG:NH2	5:C:325:ILE:HG12	2.34	0.43
6:N:832:ARG:NE	6:N:832:ARG:HA	2.33	0.43
5:M:166:PRO:HA	11:M:1128:HOH:O	2.17	0.43
4:A:48:ILE:HD11	4:A:210:ALA:HB1	2.00	0.43
6:N:794:GLN:HG2	6:N:1017:PHE:CE1	2.53	0.43
7:O:65:MET:O	7:O:69:LEU:HD12	2.17	0.43
5:C:256:TYR:CE1	5:C:293:PHE:HB2	2.53	0.43
6:N:615:ARG:HH22	6:N:1096:ARG:CD	2.31	0.43
5:M:1101:THR:C	5:M:1102:LEU:HD12	2.38	0.43
5:C:853:LEU:HB2	5:C:858:MET:HE2	2.01	0.43
6:D:1099:VAL:HG23	6:D:1226:ALA:HB1	2.00	0.43
6:D:1209:LEU:O	6:D:1210:SER:C	2.53	0.43
6:D:95:LEU:CD2	6:D:574:LEU:HD21	2.45	0.43
5:M:1095:LEU:HB2	5:M:1097:LEU:CD2	2.47	0.43
5:M:39:ARG:NH1	5:M:39:ARG:HG3	2.29	0.43
6:N:111:LYS:HG2	6:N:1452:ILE:CD1	2.48	0.43
6:D:1271:LYS:CE	6:D:1331:ASP:H	2.32	0.43
6:D:108:VAL:CG2	6:D:109:PRO:HD3	2.47	0.43
6:D:1436:SER:N	11:D:8024:HOH:O	2.49	0.43
6:D:899:LEU:HB3	6:D:921:ARG:HH12	1.83	0.43
5:C:976:ASP:HB3	5:C:979:THR:HG22	2.00	0.43
6:N:40:GLU:HB3	6:N:41:ARG:H	1.68	0.43
5:C:814:GLU:O	5:C:816:LYS:NZ	2.52	0.43
4:K:55:SER:HB2	4:K:158:ILE:HB	2.00	0.43
5:M:853:LEU:O	5:M:858:MET:HE1	2.19	0.43
4:L:52:ALA:HB2	4:L:170:VAL:C	2.38	0.43
5:M:162:ILE:HB	5:M:172:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:610:ARG:HD3	5:C:622:GLU:CD	2.38	0.43
6:D:711:LEU:HD21	6:D:768:ASN:CB	2.49	0.43
5:M:399:ASN:O	5:M:400:PRO:C	2.57	0.43
4:K:127:LEU:HA	11:K:827:HOH:O	2.17	0.43
6:D:1406:ARG:CB	6:D:1412:LYS:HZ3	2.31	0.43
4:K:116:PRO:HG3	11:K:2001:HOH:O	2.17	0.43
4:B:216:GLU:HA	4:B:219:ARG:HH12	1.83	0.43
6:D:1122:LEU:O	6:D:1135:ARG:HB2	2.18	0.43
5:M:37:GLU:HA	11:M:1579:HOH:O	2.18	0.43
5:C:250:ARG:HG2	5:C:253:ALA:HB3	2.00	0.43
6:N:1467:ILE:H	6:N:1467:ILE:HG13	1.55	0.43
6:D:415:VAL:O	6:D:432:TYR:HA	2.18	0.43
6:N:1101:VAL:HG13	6:N:1427:SER:OG	2.18	0.43
5:C:398:THR:OG1	5:C:566:THR:O	2.21	0.43
6:N:1148:VAL:HG11	6:N:1203:LYS:HB3	2.00	0.43
6:D:695:ILE:HD13	6:D:720:LEU:HD11	2.00	0.43
6:N:781:PRO:HB3	6:N:785:ILE:CG2	2.49	0.43
6:N:1431:THR:OG1	6:N:1432:LYS:N	2.51	0.43
6:D:127:LEU:CD2	6:D:134:VAL:HG22	2.49	0.43
6:N:525:ARG:HB2	6:N:538:SER:HB3	2.00	0.43
6:N:893:GLU:O	6:N:896:ALA:HB3	2.18	0.43
4:L:99:LEU:HD13	4:L:144:VAL:CG2	2.49	0.43
5:C:496:ILE:HG13	5:C:531:PHE:HB2	2.01	0.43
6:D:522:PRO:HG2	6:D:523:ASP:N	2.33	0.43
7:O:26:ARG:HE	7:O:30:LEU:HD12	1.84	0.43
7:O:67:GLU:HB3	7:O:73:LEU:CD1	2.48	0.43
6:D:52:PRO:HG2	6:D:80:VAL:HA	2.00	0.43
6:N:62:LYS:HG3	6:N:75:ARG:HH11	1.84	0.43
4:L:86:VAL:O	4:L:86:VAL:HG13	2.18	0.43
5:C:975:TYR:N	5:C:975:TYR:CD1	2.86	0.43
6:D:554:LEU:HD11	6:D:571:LYS:CD	2.48	0.43
5:M:666:LEU:HD11	5:M:668:LEU:CD2	2.48	0.43
6:N:41:ARG:HB2	11:N:9006:HOH:O	2.18	0.43
6:D:683:ILE:HG23	6:D:687:VAL:CG2	2.48	0.43
5:M:771:GLU:HB2	11:M:1204:HOH:O	2.18	0.43
6:D:716:PHE:CZ	6:D:765:SER:HB3	2.54	0.43
5:C:18:LEU:HD13	5:C:590:ASP:CB	2.48	0.43
5:C:230:ARG:HA	5:C:231:PRO:HD3	1.84	0.43
6:N:961:LYS:HG2	11:N:9172:HOH:O	2.17	0.43
6:D:475:LYS:NZ	11:D:8306:HOH:O	2.51	0.43
5:C:602:GLU:OE1	5:C:648:ARG:HG2	2.18	0.43
4:A:19:GLU:O	4:A:200:TRP:HA	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:179:ASN:ND2	11:M:1597:HOH:O	2.50	0.43
2:Y:5:C:H2'	2:Y:6:U:C5	2.50	0.43
5:C:140:ILE:HG13	5:C:411:SER:O	2.18	0.43
6:D:1098:LEU:HD11	6:D:1263:PHE:CE2	2.53	0.43
6:D:1422:MET:CE	6:D:1427:SER:HA	2.48	0.43
6:N:994:GLN:O	6:N:998:GLU:HG3	2.17	0.43
6:N:396:VAL:CG1	6:N:447:VAL:HG12	2.47	0.43
4:B:103:ALA:N	11:B:348:HOH:O	2.51	0.43
5:C:1118:LYS:O	5:C:1119:ARG:HB2	2.18	0.43
6:D:849:ALA:O	6:D:853:VAL:HG23	2.18	0.43
6:D:80:VAL:HG12	6:D:81:THR:O	2.18	0.43
5:M:31:GLN:NE2	5:M:31:GLN:O	2.52	0.43
6:D:171:LEU:HD11	11:D:8204:HOH:O	2.19	0.43
6:D:33:ASN:HB2	6:D:40:GLU:CD	2.38	0.43
5:M:285:LEU:HD12	5:M:288:ARG:O	2.19	0.43
5:M:771:GLU:HG2	5:M:771:GLU:O	2.19	0.43
5:C:631:SER:CB	5:C:637:LEU:HD11	2.45	0.43
6:N:826:PRO:O	6:N:836:VAL:HG13	2.18	0.43
4:B:100:LEU:O	4:B:115:LEU:HG	2.19	0.43
4:B:23:PHE:O	4:B:196:THR:HA	2.19	0.43
4:L:54:THR:CG2	4:L:158:ILE:HG13	2.48	0.43
6:N:12:LEU:HD21	6:N:104:PHE:CE1	2.52	0.43
5:M:882:LEU:HD11	6:N:1038:LEU:HB3	2.00	0.43
4:L:227:ASN:H	4:L:227:ASN:ND2	2.16	0.43
6:D:556:LYS:O	6:D:560:GLN:HG3	2.19	0.43
7:O:70:THR:HG22	7:O:71:GLY:N	2.33	0.43
6:D:586:ARG:HH22	6:D:1444:THR:HG21	1.83	0.43
5:M:834:GLN:HB3	11:M:1436:HOH:O	2.19	0.43
5:C:815:LEU:HD23	11:C:1323:HOH:O	2.19	0.43
4:L:223:THR:HG23	11:L:379:HOH:O	2.18	0.43
5:C:140:ILE:HA	5:C:332:ARG:O	2.18	0.43
6:N:1148:VAL:CG1	6:N:1163:GLY:HA2	2.48	0.43
6:N:1207:TYR:HA	6:N:1214:PRO:HA	2.00	0.43
6:D:782:SER:O	6:D:786:ILE:HG13	2.18	0.43
5:C:949:LYS:CD	6:D:796:ARG:HH22	2.24	0.43
6:N:179:VAL:CG1	6:N:183:GLU:HB3	2.45	0.43
6:D:470:LEU:H	6:D:470:LEU:CD2	2.31	0.43
6:D:496:LEU:HD11	6:D:1388:ARG:HG3	2.01	0.43
5:M:151:ASP:OD2	5:M:152:PRO:HD2	2.19	0.43
5:M:194:VAL:CG1	5:M:221:LEU:HB2	2.48	0.43
5:C:493:ARG:HE	5:C:493:ARG:HB2	1.53	0.43
6:D:400:VAL:CG2	6:D:443:VAL:HG21	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1336:LEU:CD1	6:D:1341:PRO:HG3	2.49	0.43
6:N:949:ILE:N	11:N:9020:HOH:O	2.51	0.43
6:D:699:VAL:H	6:D:756:GLN:HE21	1.62	0.43
6:N:399:ARG:NE	6:N:430:ASP:HB2	2.33	0.43
5:M:805:ARG:NH1	5:M:807:ARG:HD3	2.34	0.43
5:C:1003:ASP:OD1	5:C:1004:LYS:HD3	2.19	0.43
5:C:17:PRO:O	5:C:20:GLU:HB3	2.19	0.43
4:K:7:LYS:HD2	4:K:186:LEU:HD21	2.00	0.43
5:M:352:ALA:C	5:M:355:VAL:HG12	2.39	0.43
6:D:1438:ALA:O	6:D:1443:THR:HG22	2.18	0.43
5:M:672:VAL:HG12	5:M:699:PHE:CE1	2.54	0.43
5:M:99:GLN:NE2	5:M:109:LYS:HB2	2.33	0.43
5:M:716:LYS:NZ	6:N:36:THR:HG23	2.31	0.43
6:D:935:LYS:HE3	11:D:8312:HOH:O	2.18	0.43
6:D:867:ARG:O	6:D:867:ARG:HD2	2.19	0.43
6:N:106:LYS:HE2	6:N:125:GLN:HE22	1.84	0.43
5:C:250:ARG:HD2	11:C:1278:HOH:O	2.18	0.43
6:N:816:HIS:N	6:N:816:HIS:ND1	2.65	0.43
6:D:662:GLU:OE2	6:D:669:ASN:HA	2.18	0.43
6:N:207:PHE:HB3	11:N:9229:HOH:O	2.18	0.43
5:M:1019:GLN:HA	5:M:1020:PRO:HD3	1.86	0.43
6:N:1424:VAL:CG1	6:N:1425:THR:N	2.82	0.43
5:C:441:VAL:O	5:C:559:LEU:HG	2.18	0.43
6:N:1144:LEU:HA	6:N:1147:ARG:HG3	2.00	0.43
5:C:875:GLY:O	5:C:879:ARG:HD2	2.19	0.43
6:D:787:LEU:HD13	6:D:1023:MET:HA	2.00	0.43
5:C:751:PRO:HA	5:C:792:VAL:CG1	2.49	0.43
6:N:191:LEU:HD22	6:N:393:ILE:HD13	2.00	0.43
5:M:553:ASP:OD2	5:M:883:GLY:HA3	2.18	0.43
6:N:525:ARG:CD	6:N:525:ARG:H	2.31	0.43
5:M:193:LEU:HD22	5:M:307:LEU:HD21	2.00	0.43
6:N:456:MET:HG2	11:N:9491:HOH:O	2.18	0.43
6:N:607:LEU:HD23	11:N:9149:HOH:O	2.19	0.43
5:C:258:TYR:CD2	5:C:258:TYR:N	2.84	0.43
5:C:145:GLY:H	5:C:163:ILE:HG13	1.83	0.43
5:C:759:THR:HG23	11:C:1516:HOH:O	2.19	0.43
6:D:1268:PRO:HD2	6:D:1271:LYS:HD3	2.01	0.43
6:D:1262:LEU:HD23	6:D:1352:ILE:HG12	2.00	0.43
5:C:7:GLY:H	5:C:904:PRO:HD2	1.84	0.43
5:C:626:ARG:HG3	5:C:626:ARG:HH11	1.84	0.43
4:A:43:ILE:HD11	4:B:35:THR:HG21	2.00	0.43
5:C:981:GLU:HG3	5:C:982:PRO:HD3	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:909:ALA:HB1	5:C:914:ILE:CD1	2.47	0.43
5:C:1103:ASP:OD2	5:C:1108:PRO:O	2.37	0.43
7:O:28:GLN:CA	7:O:32:ARG:HH22	2.32	0.43
6:D:440:VAL:CG2	6:D:441:ARG:HH21	2.32	0.43
5:M:111:ASP:CG	5:M:112:GLU:HG2	2.39	0.43
6:N:1498:ALA:CB	7:O:84:ARG:HE	2.31	0.43
5:C:714:ASP:N	5:C:818:GLY:O	2.52	0.43
4:A:108:GLU:HB3	4:A:110:LYS:CE	2.49	0.43
6:D:189:GLN:HG3	11:D:8023:HOH:O	2.19	0.43
2:Y:7:G:N2	5:M:1014:SER:HA	2.32	0.43
6:N:1264:GLU:HG3	6:N:1425:THR:OG1	2.19	0.43
5:M:1103:ASP:OD2	6:N:3:LYS:HD2	2.18	0.43
5:C:983:ILE:HG21	5:C:987:ILE:CD1	2.49	0.43
6:N:1112:CYS:O	6:N:1189:ARG:NH2	2.52	0.43
5:M:701:THR:CG2	5:M:830:LYS:HE2	2.46	0.43
6:N:695:ILE:CD1	6:N:718:PRO:HB2	2.48	0.43
6:D:1441:GLN:NE2	6:D:1442:ASN:H	2.17	0.43
3:I:8:DA:OP1	6:D:1426:LYS:HE3	2.19	0.43
6:D:497:GLU:O	6:D:500:ARG:HB2	2.19	0.43
5:C:1031:ARG:CZ	6:D:621:LYS:HZ2	2.32	0.43
5:M:175:GLU:HB3	5:M:183:SER:OG	2.18	0.43
5:C:262:ALA:O	5:C:264:PRO:O	2.37	0.43
3:Z:5:DG:H3'	11:Z:945:HOH:O	2.18	0.43
4:L:76:VAL:HA	4:L:79:ILE:HG12	2.00	0.43
5:M:851:LYS:HD2	5:M:852:ILE:H	1.84	0.43
1:G:23:DG:OP1	5:C:388:ARG:NH1	2.52	0.43
4:L:9:PRO:HB3	4:L:25:LEU:CD2	2.49	0.43
6:D:799:LYS:N	11:D:8279:HOH:O	2.52	0.43
5:M:299:LYS:HG3	11:M:1441:HOH:O	2.19	0.43
5:C:894:GLY:HA2	5:C:901:TYR:OH	2.19	0.43
4:L:26:GLU:HB2	4:L:27:PRO:HA	2.01	0.43
5:M:564:MET:CB	11:M:1517:HOH:O	2.67	0.43
6:N:407:VAL:HA	6:N:422:ALA:CB	2.49	0.43
5:C:946:ARG:HD3	5:C:984:GLU:HB3	2.01	0.43
5:M:290:LEU:N	5:M:290:LEU:HD23	2.32	0.43
6:D:30:GLU:N	11:D:8061:HOH:O	2.52	0.43
5:M:822:VAL:HB	5:M:824:ARG:HH21	1.84	0.43
6:D:764:LEU:HD12	6:D:765:SER:N	2.34	0.43
6:D:767:HIS:CE1	7:E:6:ILE:HG21	2.54	0.43
6:N:1150:ALA:CB	6:N:1151:ARG:HD2	2.48	0.43
6:N:826:PRO:HD2	6:N:829:VAL:HG22	2.00	0.43
6:D:820:GLU:HG3	6:D:836:VAL:HG11	1.99	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:A:215:VAL:HG11	4:B:225:PHE:HD1	1.84	0.43
6:N:508:ARG:HD3	11:N:9337:HOH:O	2.18	0.43
4:L:70:GLY:N	11:L:402:HOH:O	2.50	0.43
6:N:953:ASP:OD2	6:N:953:ASP:N	2.52	0.43
5:C:139:GLN:HE21	5:C:334:ARG:CD	2.25	0.42
5:C:399:ASN:ND2	5:C:402:SER:OG	2.52	0.42
6:D:786:ILE:CD1	6:D:908:LYS:HD3	2.49	0.42
5:M:687:ALA:C	5:M:688:ILE:HG13	2.39	0.42
5:M:874:LEU:HD23	6:N:783:ARG:HB3	2.01	0.42
5:M:141:HIS:NE2	5:M:332:ARG:HD2	2.34	0.42
6:D:101:HIS:HD2	6:D:514:LEU:HD11	1.83	0.42
6:N:860:LEU:HD22	6:N:881:LEU:HD23	2.01	0.42
5:M:208:ALA:HB3	5:M:209:ARG:NH2	2.33	0.42
5:C:313:LEU:HD13	5:C:321:GLU:CG	2.49	0.42
5:C:265:ARG:NH1	11:C:1308:HOH:O	2.51	0.42
6:D:397:LYS:HB3	6:D:448:GLU:CB	2.49	0.42
6:D:397:LYS:HD3	6:D:448:GLU:OE1	2.19	0.42
4:L:59:GLU:HB2	4:L:137:ARG:CZ	2.49	0.42
6:D:1123:PHE:CE2	6:D:1184:GLN:HA	2.54	0.42
5:C:583:LEU:O	5:C:587:VAL:HG23	2.20	0.42
5:M:436:GLY:HA2	5:M:538:GLN:C	2.35	0.42
6:D:133:ILE:HG13	6:D:153:LEU:CG	2.48	0.42
7:O:26:ARG:HD3	7:O:73:LEU:CD2	2.49	0.42
6:D:1344:VAL:HG12	6:D:1348:LEU:HD13	2.00	0.42
5:C:614:ARG:HG3	5:C:620:LEU:CD2	2.43	0.42
6:N:1153:VAL:O	6:N:1160:LEU:HG	2.19	0.42
6:N:963:TYR:HA	6:N:966:GLU:OE2	2.19	0.42
6:D:175:VAL:HG21	11:D:8081:HOH:O	2.19	0.42
4:K:133:GLU:HG3	5:M:605:LYS:HA	2.01	0.42
6:D:739:ASP:OD1	6:D:741:ASP:OD1	2.37	0.42
6:N:586:ARG:HH22	6:N:1444:THR:HG21	1.84	0.42
7:E:41:GLU:N	7:E:42:PRO:CD	2.81	0.42
7:O:51:LEU:HD12	11:O:1058:HOH:O	2.19	0.42
5:M:515:ALA:HB3	5:M:524:VAL:HG21	2.01	0.42
5:M:519:GLY:HA3	11:M:1314:HOH:O	2.19	0.42
6:D:701:LEU:O	6:D:747:VAL:HA	2.20	0.42
5:C:599:GLU:HA	5:C:651:LYS:HG3	2.00	0.42
5:C:251:ASP:HB3	5:C:252:LYS:CD	2.48	0.42
6:N:984:THR:HG23	6:N:987:GLU:H	1.84	0.42
5:C:183:SER:OG	5:C:190:LYS:HG2	2.18	0.42
5:M:458:TYR:CD1	5:M:458:TYR:N	2.86	0.42
5:C:500:ASN:HA	11:C:1162:HOH:O	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:1490:LYS:HB2	7:E:93:TYR:OH	2.19	0.42
5:M:1058:ASP:O	5:M:1060:ILE:N	2.51	0.42
5:M:1103:ASP:N	5:M:1107:ASN:O	2.49	0.42
5:C:571:LEU:HD12	5:C:996:LYS:HZ2	1.84	0.42
5:M:684:PHE:O	5:M:685:GLU:C	2.58	0.42
6:N:783:ARG:HG3	6:N:783:ARG:H	1.53	0.42
5:C:580:MET:CE	5:C:584:GLU:HG3	2.49	0.42
6:N:522:PRO:HA	6:N:525:ARG:NE	2.34	0.42
5:C:313:LEU:CA	5:C:321:GLU:HG3	2.48	0.42
6:D:1231:GLU:OE2	6:D:1232:PRO:HD3	2.18	0.42
1:G:23:DG:H5"	5:C:388:ARG:NH2	2.35	0.42
6:N:501:ALA:CB	6:N:1453:ALA:HB2	2.38	0.42
6:D:26:VAL:HG11	6:D:44:LEU:CD2	2.48	0.42
5:M:12:VAL:HB	5:M:472:ARG:NH1	2.34	0.42
6:D:1046:GLN:HG2	6:D:1052:THR:CA	2.49	0.42
6:D:893:GLU:O	6:D:896:ALA:HB3	2.20	0.42
5:C:747:ALA:C	5:C:799:ILE:HG23	2.39	0.42
6:D:699:VAL:HG21	6:D:760:ARG:HB3	2.01	0.42
6:N:714:GLN:HE22	6:N:768:ASN:HD22	1.67	0.42
6:N:407:VAL:HA	6:N:422:ALA:HB2	2.01	0.42
6:D:171:LEU:HD21	6:D:192:ALA:HB3	2.00	0.42
5:C:816:LYS:HB2	5:C:819:VAL:HG21	2.00	0.42
5:C:352:ALA:O	5:C:355:VAL:HG12	2.19	0.42
6:N:756:GLN:NE2	6:N:760:ARG:HB3	2.34	0.42
5:M:191:PHE:HB2	5:M:192:PRO:HD3	2.01	0.42
5:M:235:LEU:HD21	11:M:1276:HOH:O	2.18	0.42
6:N:161:LEU:HB2	11:N:9073:HOH:O	2.19	0.42
6:D:794:GLN:HB3	6:D:1017:PHE:CZ	2.51	0.42
6:D:969:ARG:HA	11:D:8045:HOH:O	2.19	0.42
6:D:564:GLU:HA	6:D:567:ILE:HD12	2.01	0.42
5:M:136:ILE:HA	5:M:136:ILE:HD13	1.93	0.42
5:M:960:GLU:HG3	5:M:961:GLU:N	2.32	0.42
4:A:152:PRO:HB3	4:A:154:GLU:OE1	2.19	0.42
4:L:106:PRO:HG3	4:L:133:GLU:O	2.19	0.42
5:C:437:ARG:CB	5:C:467:ILE:HB	2.49	0.42
6:D:1047:LYS:HG2	6:D:1053:PHE:CE2	2.54	0.42
4:B:102:LYS:HZ3	4:B:139:ASN:HB2	1.84	0.42
5:C:573:ARG:CD	5:C:670:GLN:HE22	2.32	0.42
6:D:137:PRO:HG3	6:D:467:GLU:OE1	2.20	0.42
6:D:98:PRO:HG3	6:D:462:GLN:HE22	1.85	0.42
6:N:45:PHE:HB3	6:N:86:ARG:HH22	1.83	0.42
5:M:203:ASP:O	5:M:207:LEU:HB2	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:267:TYR:N	5:C:267:TYR:CD2	2.87	0.42
6:N:206:ARG:HG3	6:N:206:ARG:NH1	2.34	0.42
5:M:869:VAL:HG22	5:M:871:LEU:HD23	2.01	0.42
4:A:55:SER:HB2	4:A:158:ILE:HB	2.01	0.42
6:D:829:VAL:O	6:D:835:SER:HB2	2.19	0.42
6:D:185:VAL:HG21	6:D:191:LEU:CD2	2.49	0.42
6:D:191:LEU:HB2	6:D:195:VAL:HG12	2.00	0.42
6:D:423:ASP:N	6:D:423:ASP:OD1	2.52	0.42
6:D:711:LEU:HD22	6:D:714:GLN:NE2	2.34	0.42
6:D:701:LEU:CD1	6:D:715:ALA:HB2	2.49	0.42
4:L:56:VAL:HG12	4:L:57:TYR:N	2.34	0.42
5:C:259:GLY:O	5:C:290:LEU:O	2.37	0.42
6:D:440:VAL:HB	6:D:441:ARG:NH2	2.30	0.42
4:K:206:THR:HG23	4:K:207:PRO:CD	2.49	0.42
6:N:840:LYS:HE2	6:N:841:TYR:HE2	1.84	0.42
6:D:32:ILE:HD13	6:D:37:LEU:O	2.19	0.42
4:B:169:ALA:HB1	4:B:171:PHE:CE2	2.54	0.42
6:N:631:ILE:HG21	6:N:745:MET:CG	2.49	0.42
5:M:617:ASP:HB2	5:M:619:ARG:NE	2.33	0.42
6:D:625:TYR:CD1	6:D:625:TYR:N	2.88	0.42
5:C:297:GLU:HG3	11:C:1205:HOH:O	2.18	0.42
6:N:63:TYR:HB3	6:N:68:PHE:CE1	2.54	0.42
2:Y:16:G:H5'	6:N:742:GLY:C	2.39	0.42
5:C:399:ASN:O	5:C:400:PRO:C	2.57	0.42
5:C:690:ILE:HD11	5:C:833:LEU:HD23	2.00	0.42
5:M:695:LEU:CD2	5:M:832:LYS:HD3	2.29	0.42
6:N:785:ILE:CG1	6:N:935:LYS:HA	2.43	0.42
6:D:1109:GLU:CG	6:D:1201:CYS:HA	2.31	0.42
6:D:455:ARG:NH1	6:D:463:GLN:HG3	2.35	0.42
6:N:921:ARG:HH11	6:N:921:ARG:CB	2.15	0.42
6:N:903:ASP:O	6:N:904:VAL:HG13	2.19	0.42
5:C:214:TYR:OH	5:C:312:ALA:HB2	2.19	0.42
6:N:441:ARG:HH22	6:N:445:ARG:NH2	2.16	0.42
5:C:626:ARG:O	5:C:638:ASP:HA	2.19	0.42
5:M:526:PRO:HA	5:M:529:VAL:CG2	2.50	0.42
5:M:526:PRO:HA	5:M:529:VAL:HG23	2.01	0.42
5:M:244:PRO:HD2	5:M:245:GLY:N	2.28	0.42
6:N:409:VAL:HG12	6:N:435:VAL:HG11	2.01	0.42
6:D:193:PRO:HG2	11:D:8081:HOH:O	2.18	0.42
5:C:362:GLY:HA2	5:C:371:LYS:NZ	2.34	0.42
5:C:1085:PHE:O	5:C:1088:LEU:HB3	2.18	0.42
6:N:462:GLN:CA	6:N:513:ILE:HD13	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:146:VAL:CG1	5:M:162:ILE:HG12	2.48	0.42
5:C:86:LYS:HB2	5:C:88:LEU:HD23	2.01	0.42
5:M:364:GLU:O	5:M:367:LEU:HG	2.18	0.42
3:Z:8:DA:H1'	3:Z:9:DG:C5'	2.46	0.42
5:C:695:LEU:HD11	5:C:832:LYS:HB3	2.02	0.42
5:C:588:VAL:HA	5:C:591:SER:OG	2.19	0.42
4:A:221:HIS:HA	4:A:224:TYR:CD2	2.54	0.42
2:H:2:A:H2'	2:H:3:G:O5'	2.20	0.42
5:M:334:ARG:HA	5:M:338:GLU:OE2	2.19	0.42
4:K:9:PRO:HB3	4:K:25:LEU:CD2	2.50	0.42
5:M:894:GLY:HA2	5:M:901:TYR:OH	2.19	0.42
6:N:653:PHE:CD1	6:N:653:PHE:N	2.87	0.42
5:M:654:LEU:HD13	5:M:664:GLY:N	2.34	0.42
6:N:688:TRP:HA	6:N:688:TRP:CE3	2.54	0.42
6:N:739:ASP:OD1	6:N:741:ASP:OD1	2.36	0.42
5:C:689:VAL:CG1	5:C:690:ILE:N	2.82	0.42
5:C:839:LEU:CD2	5:C:996:LYS:HA	2.47	0.42
6:N:1365:ASP:O	6:N:1369:GLU:HG3	2.19	0.42
1:G:12:DG:H2''	1:G:13:DT:H5'	2.01	0.42
6:N:989:TYR:CE1	6:N:993:LEU:HD21	2.54	0.42
6:D:118:LEU:O	6:D:120:ALA:N	2.53	0.42
6:D:118:LEU:CD1	6:D:461:ILE:HD12	2.50	0.42
6:D:114:THR:CG2	6:D:495:ARG:HA	2.49	0.42
5:M:937:ASP:OD2	5:M:939:ARG:HG2	2.20	0.42
5:M:208:ALA:CB	5:M:209:ARG:HH21	2.32	0.42
6:D:486:ARG:CA	6:D:489:ARG:HG2	2.47	0.42
6:D:29:PRO:HD3	11:D:8201:HOH:O	2.18	0.42
6:D:1389:LEU:HG	6:D:1390:LEU:N	2.24	0.42
5:M:566:THR:HG22	5:M:566:THR:O	2.18	0.42
6:D:79:GLU:HG2	6:D:80:VAL:N	2.33	0.42
6:D:838:ARG:NH1	6:D:838:ARG:HG2	2.34	0.42
5:C:924:VAL:HG12	11:C:1285:HOH:O	2.18	0.42
4:L:182:GLU:OE1	4:L:194:LYS:HD2	2.20	0.42
5:M:1032:PHE:HB3	6:N:620:GLY:O	2.20	0.42
5:C:352:ALA:C	5:C:355:VAL:HG12	2.39	0.42
4:L:142:VAL:HG23	4:L:142:VAL:O	2.18	0.42
4:L:56:VAL:HG22	4:L:142:VAL:HG12	2.01	0.42
5:C:609:ASN:N	5:C:609:ASN:ND2	2.63	0.42
6:N:1401:GLU:OE2	6:N:1415:VAL:HG21	2.20	0.42
6:D:440:VAL:HB	6:D:441:ARG:NE	2.32	0.42
5:C:807:ARG:C	11:C:1277:HOH:O	2.58	0.42
6:D:817:GLU:HA	6:D:836:VAL:HG21	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:227:PHE:HB3	11:C:1552:HOH:O	2.20	0.42
5:M:602:GLU:OE1	5:M:648:ARG:HB3	2.18	0.42
6:D:1487:VAL:HB	7:E:74:VAL:HG23	2.00	0.42
6:N:955:VAL:HG11	6:N:1015:TYR:CZ	2.54	0.42
4:L:106:PRO:HA	4:L:133:GLU:O	2.20	0.42
5:C:663:ASN:C	5:C:665:PHE:H	2.23	0.42
5:C:191:PHE:CE2	5:C:196:LEU:HD12	2.55	0.42
5:M:1060:ILE:O	5:M:1064:ASN:ND2	2.53	0.42
5:M:1111:ILE:HG13	5:M:1112:PHE:N	2.31	0.42
5:C:333:ILE:HG12	5:C:467:ILE:HD11	2.01	0.42
5:C:431:HIS:HD2	5:C:433:THR:OG1	2.03	0.42
5:C:408:ARG:O	5:C:454:SER:HA	2.19	0.42
2:H:9:G:N2	11:H:26:HOH:O	2.53	0.42
5:C:874:LEU:HA	6:D:1023:MET:SD	2.60	0.42
5:M:536:PRO:HB3	5:M:906:PHE:HD1	1.84	0.42
6:N:1036:ARG:HH11	6:N:1036:ARG:HB3	1.82	0.42
5:C:1096:ALA:HB2	6:D:101:HIS:NE2	2.34	0.42
6:D:116:LEU:HD23	6:D:150:ARG:HH11	1.85	0.42
1:X:19:DC:H3'	11:X:2000:HOH:O	2.19	0.42
6:N:131:LYS:HZ3	6:N:568:ARG:CB	2.32	0.42
6:N:166:GLN:OE1	6:N:396:VAL:HG22	2.20	0.42
5:M:833:LEU:HD11	5:M:839:LEU:HD21	2.01	0.42
6:D:1121:PRO:HG3	6:D:1185:GLU:OE2	2.19	0.42
5:M:810:ASP:HA	5:M:811:PRO:HD3	1.67	0.42
5:C:710:ILE:CD1	5:C:790:LEU:HD13	2.49	0.42
5:C:620:LEU:HD11	11:C:1436:HOH:O	2.19	0.42
5:M:889:HIS:HE1	6:N:951:ILE:H	1.67	0.42
5:C:77:PRO:HD3	5:C:91:GLN:O	2.20	0.42
6:D:610:LYS:C	6:D:615:ARG:HD3	2.39	0.42
5:M:473:ARG:HG3	5:M:474:VAL:N	2.35	0.42
6:N:656:PHE:HB3	6:N:694:VAL:CG1	2.50	0.42
4:K:13:VAL:HG22	4:K:23:PHE:CD1	2.55	0.42
6:D:54:LYS:CG	6:D:55:ASP:H	2.32	0.42
5:C:693:GLU:HA	5:C:696:LYS:HE3	2.00	0.42
5:M:575:GLN:NE2	5:M:670:GLN:OE1	2.52	0.42
6:D:959:GLU:CD	6:D:959:GLU:N	2.73	0.42
6:D:841:TYR:HB3	6:D:843:PHE:CZ	2.54	0.42
5:C:606:VAL:HG23	5:C:645:VAL:HG12	2.02	0.42
6:D:709:HIS:CD2	6:D:709:HIS:H	2.37	0.42
5:C:1111:ILE:H	5:C:1111:ILE:HG13	1.48	0.42
6:D:1211:MET:HE1	6:D:1213:ARG:HD3	2.00	0.42
5:C:644:VAL:HB	11:C:1372:HOH:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1158:VAL:HG12	6:N:1159:ARG:N	2.35	0.42
5:C:895:TYR:HA	11:C:1275:HOH:O	2.20	0.42
4:B:101:LEU:HD23	4:B:101:LEU:C	2.40	0.42
6:N:19:ARG:HE	6:N:516:ALA:CB	2.32	0.42
5:C:140:ILE:HD11	5:C:412:ALA:HB2	2.01	0.42
6:N:1365:ASP:N	6:N:1365:ASP:OD2	2.53	0.42
6:N:1055:VAL:HA	6:N:1056:PRO:HD3	1.90	0.42
6:N:998:GLU:O	6:N:1002:LYS:HG3	2.20	0.42
5:M:98:LEU:N	5:M:98:LEU:HD12	2.35	0.42
6:N:506:GLY:O	6:N:507:ASN:C	2.58	0.42
4:L:75:VAL:O	4:L:79:ILE:HG23	2.19	0.42
4:B:142:VAL:HG23	4:B:142:VAL:O	2.18	0.42
6:D:1103:HIS:HD2	6:D:1463:LYS:H	1.59	0.42
5:C:966:LEU:HD12	5:C:966:LEU:HA	1.94	0.42
5:M:783:ARG:HE	5:M:785:VAL:CG1	2.32	0.42
6:N:137:PRO:HD2	6:N:453:ASP:CG	2.39	0.42
6:D:806:PHE:HE1	6:D:813:LEU:HB3	1.79	0.42
5:M:580:MET:O	5:M:902:ILE:HA	2.19	0.42
6:N:1047:LYS:HG2	6:N:1053:PHE:CE1	2.54	0.42
6:D:711:LEU:HD21	6:D:768:ASN:HB2	2.01	0.42
5:M:1009:SER:OG	5:M:1010:THR:N	2.53	0.42
4:K:213:GLN:NE2	11:K:1765:HOH:O	2.51	0.42
5:M:69:LEU:HD12	5:M:97:ARG:CB	2.49	0.42
6:D:820:GLU:OE1	6:D:840:LYS:HE3	2.20	0.42
5:M:458:TYR:HD1	5:M:458:TYR:N	2.18	0.42
5:C:137:VAL:N	5:C:391:LEU:HD21	2.33	0.42
4:L:189:ARG:HG3	4:L:189:ARG:O	2.19	0.42
4:A:161:ARG:HA	4:A:161:ARG:NE	2.34	0.42
6:N:457:GLY:C	6:N:459:GLU:N	2.72	0.42
5:M:1111:ILE:HG12	5:M:1111:ILE:H	1.43	0.42
5:C:541:SER:OG	5:C:542:VAL:N	2.52	0.42
6:D:1072:ILE:HG12	11:D:8010:HOH:O	2.20	0.42
6:D:695:ILE:HD13	6:D:720:LEU:CD1	2.50	0.42
5:C:401:LEU:HD21	5:C:565:GLN:NE2	2.34	0.42
6:D:462:GLN:HG2	6:D:466:LYS:HZ2	1.85	0.42
6:D:470:LEU:HD21	11:D:8038:HOH:O	2.19	0.42
6:N:879:ARG:HH11	6:N:879:ARG:CG	2.32	0.42
6:D:87:ARG:NH2	11:D:8227:HOH:O	2.53	0.42
6:D:1341:PRO:O	6:D:1343:ALA:N	2.52	0.42
5:M:677:MET:HE3	5:M:678:PRO:O	2.19	0.42
5:C:1105:LYS:HD2	5:C:1107:ASN:HD22	1.83	0.42
6:D:54:LYS:HB3	6:D:57:GLU:OE2	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:3:DA:O4'	5:C:423:ALA:HB2	2.20	0.42
5:C:780:GLU:H	5:C:780:GLU:HG3	1.53	0.42
4:A:184:THR:N	11:A:321:HOH:O	2.53	0.42
5:M:628:PHE:CZ	5:M:703:ILE:HD13	2.55	0.42
6:D:698:LYS:HE3	6:D:698:LYS:HB3	1.92	0.42
7:E:66:LYS:HD2	7:E:69:LEU:HD23	2.02	0.42
6:D:780:LYS:HD2	6:D:912:LYS:HB2	2.02	0.42
5:M:1035:MET:H	5:M:1035:MET:HG3	1.65	0.42
6:N:19:ARG:HH11	6:N:19:ARG:HG3	1.85	0.42
5:C:139:GLN:HA	5:C:411:SER:O	2.19	0.42
5:C:431:HIS:CD2	5:C:432:ARG:HB2	2.55	0.42
5:C:442:GLU:HG2	5:C:454:SER:H	1.84	0.42
6:N:1221:VAL:O	6:N:1222:GLY:C	2.58	0.42
6:D:116:LEU:HD23	6:D:150:ARG:NH1	2.35	0.42
6:D:127:LEU:CD1	6:D:128:TYR:N	2.80	0.42
6:N:574:LEU:O	6:N:578:VAL:HG23	2.19	0.42
4:B:81:ASN:O	4:B:127:LEU:HD21	2.20	0.42
4:L:58:ILE:HG21	4:L:61:VAL:HB	2.00	0.42
6:D:1451:ALA:O	6:D:1452:ILE:C	2.57	0.42
6:N:1078:ARG:NH1	6:N:1078:ARG:HG3	2.34	0.42
6:N:403:PHE:CD2	6:N:444:VAL:HG23	2.55	0.42
4:A:182:GLU:HG2	4:A:194:LYS:HG2	2.02	0.42
6:N:1415:VAL:HG22	11:N:9043:HOH:O	2.19	0.42
5:M:909:ALA:CB	5:M:914:ILE:HD11	2.47	0.42
4:A:8:ALA:HB1	4:B:224:TYR:CE1	2.51	0.42
6:N:673:ALA:O	6:N:677:LEU:HD12	2.19	0.42
6:N:683:ILE:HG23	6:N:687:VAL:HG21	2.01	0.42
4:L:73:GLU:CB	4:L:77:GLU:HG3	2.50	0.42
6:D:48:ARG:HB3	6:D:48:ARG:HE	1.53	0.42
7:E:33:HIS:CE1	7:E:89:MET:HB3	2.55	0.42
6:D:1444:THR:OG1	6:D:1445:HIS:N	2.53	0.42
6:N:600:LEU:HD12	6:N:600:LEU:H	1.83	0.42
6:N:596:SER:HB3	6:N:598:ARG:NE	2.35	0.42
5:M:20:GLU:OE2	5:M:460:ARG:HD3	2.20	0.42
4:K:107:LYS:HD3	4:K:108:GLU:O	2.20	0.42
3:I:13:DG:H2"	3:I:14:DG:C8	2.55	0.42
5:C:719:PRO:HD2	11:C:1241:HOH:O	2.20	0.42
2:Y:7:G:H22	5:M:1014:SER:HA	1.84	0.42
5:M:536:PRO:CD	5:M:537:LYS:HZ2	2.17	0.42
6:N:632:VAL:O	6:N:727:GLN:HA	2.20	0.42
5:M:872:ASN:HD21	5:M:874:LEU:HD13	1.85	0.42
5:C:577:PRO:HA	5:C:993:PHE:CD2	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:O:47:LYS:CA	7:O:54:LEU:HB3	2.49	0.42
6:D:461:ILE:O	6:D:465:LEU:HB2	2.18	0.42
6:N:628:ARG:HG3	6:N:628:ARG:HH11	1.84	0.42
5:C:182:VAL:HG12	5:C:193:LEU:HD13	2.01	0.42
6:N:446:VAL:O	6:N:447:VAL:O	2.38	0.42
4:K:91:ASN:HB3	11:K:1721:HOH:O	2.20	0.42
5:C:537:LYS:CG	5:C:545:ASN:HD21	2.33	0.42
6:D:50:PHE:HB3	6:D:522:PRO:CG	2.46	0.42
5:C:208:ALA:O	5:C:218:VAL:HG21	2.19	0.42
5:C:208:ALA:HB1	5:C:218:VAL:CG1	2.50	0.42
5:M:456:ALA:HA	5:M:541:SER:HA	2.01	0.42
4:L:25:LEU:CD2	4:L:28:LEU:HD21	2.40	0.42
6:D:82:LYS:HB2	11:D:8499:HOH:O	2.20	0.42
6:D:1341:PRO:O	6:D:1344:VAL:N	2.53	0.42
7:E:59:ASN:ND2	7:E:59:ASN:N	2.68	0.42
6:D:1001:GLU:O	6:D:1004:THR:HB	2.20	0.42
6:N:397:LYS:HB3	6:N:448:GLU:HB3	2.01	0.42
5:M:549:PHE:HE2	5:M:887:GLU:HA	1.85	0.42
4:B:152:PRO:HG2	6:D:857:ILE:HD12	2.01	0.42
5:M:757:GLY:HA2	5:M:789:SER:HB3	2.02	0.42
5:M:605:LYS:O	5:M:611:ILE:HA	2.20	0.42
5:C:71:TYR:HA	5:C:96:ALA:CB	2.50	0.42
5:M:728:HIS:NE2	5:M:775:ARG:NH1	2.67	0.42
6:N:804:LEU:HD12	6:N:830:ALA:O	2.20	0.42
5:M:1049:LEU:HD23	6:N:1472:ILE:CD1	2.49	0.42
4:A:70:GLY:O	4:A:132:LEU:HA	2.19	0.42
5:C:598:GLU:O	5:C:651:LYS:HG3	2.20	0.42
4:B:22:GLU:HG2	4:B:198:ARG:HG2	2.00	0.42
5:M:917:LEU:HB3	11:M:1461:HOH:O	2.20	0.42
6:N:859:ASP:HB3	6:N:861:GLN:NE2	2.35	0.42
6:N:1463:LYS:O	6:N:1467:ILE:HG13	2.19	0.42
6:N:1137:ARG:HG3	11:N:9103:HOH:O	2.19	0.42
5:M:63:GLY:HA3	5:M:103:LYS:HG3	2.02	0.42
5:M:1013:TYR:CE1	5:M:1020:PRO:HG3	2.55	0.41
2:H:13:C:C3'	5:C:409:ARG:HH22	2.32	0.41
6:D:1042:ARG:HD2	6:D:1045:MET:CE	2.50	0.41
6:D:789:LEU:HD13	6:D:911:LEU:HD21	2.02	0.41
5:C:564:MET:HE3	5:C:564:MET:O	2.20	0.41
5:M:263:ASP:HB2	5:M:264:PRO:HD3	2.02	0.41
6:N:1000:THR:HG23	6:N:1001:GLU:N	2.34	0.41
6:D:105:VAL:HG12	11:D:8237:HOH:O	2.20	0.41
6:D:581:LEU:HG	6:D:582:LEU:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:1031:ARG:NH1	6:D:621:LYS:NZ	2.68	0.41
4:K:30:ARG:HD2	4:K:30:ARG:HA	1.87	0.41
5:M:940:GLU:O	5:M:943:VAL:HG12	2.19	0.41
6:N:206:ARG:CG	6:N:394:LEU:HD22	2.36	0.41
6:N:1267:ARG:HD2	6:N:1271:LYS:HE2	2.01	0.41
6:N:1206:GLY:O	6:N:1215:VAL:HG23	2.20	0.41
6:D:82:LYS:C	6:D:84:ILE:N	2.74	0.41
6:N:1381:VAL:HG22	6:N:1398:TRP:CZ2	2.54	0.41
6:D:890:VAL:HG23	6:D:890:VAL:O	2.19	0.41
6:D:1495:ILE:HG22	6:D:1499:ARG:NE	2.35	0.41
5:M:292:ARG:HD2	5:M:299:LYS:CE	2.49	0.41
5:M:842:ARG:HG3	5:M:995:MET:HE3	2.02	0.41
5:M:842:ARG:HH22	5:M:887:GLU:CD	2.23	0.41
5:C:186:VAL:HG23	5:C:187:ASN:N	2.26	0.41
5:C:848:VAL:HG12	5:C:849:VAL:N	2.35	0.41
5:M:756:VAL:O	5:M:789:SER:CB	2.66	0.41
5:C:129:ILE:CG1	5:C:134:ARG:HD3	2.50	0.41
6:N:1399:ASP:O	6:N:1403:LEU:HB2	2.19	0.41
5:C:243:ARG:N	5:C:244:PRO:HD3	2.32	0.41
5:M:745:ILE:HG21	11:M:1187:HOH:O	2.19	0.41
4:K:14:ARG:HH11	4:K:14:ARG:HG3	1.85	0.41
4:A:89:PHE:CE2	4:A:146:ARG:HB2	2.55	0.41
4:L:43:ILE:HG23	4:L:217:ILE:HG21	2.02	0.41
4:L:143:ARG:NH1	4:L:158:ILE:HG21	2.35	0.41
6:D:926:LYS:HB3	6:D:926:LYS:HE2	1.93	0.41
6:D:566:ILE:N	6:D:566:ILE:HD12	2.35	0.41
6:N:12:LEU:HD23	6:N:12:LEU:HA	1.84	0.41
5:C:1084:SER:O	5:C:1087:VAL:HG12	2.20	0.41
6:N:485:SER:HA	11:N:9344:HOH:O	2.19	0.41
6:N:107:ASP:O	6:N:108:VAL:C	2.57	0.41
2:Y:7:G:H22	5:M:1014:SER:N	2.17	0.41
5:C:873:PRO:O	5:C:877:PRO:HD3	2.20	0.41
6:N:1209:LEU:HD13	11:N:9248:HOH:O	2.20	0.41
6:D:1472:ILE:O	6:D:1477:GLY:HA3	2.19	0.41
6:D:12:LEU:HD21	6:D:104:PHE:CZ	2.55	0.41
6:D:134:VAL:HA	6:D:151:GLN:O	2.19	0.41
6:N:52:PRO:CB	6:N:80:VAL:HG13	2.50	0.41
5:C:636:ALA:HB3	5:C:703:ILE:CD1	2.33	0.41
5:M:217:LEU:HD13	11:M:1269:HOH:O	2.20	0.41
6:D:1248:GLY:O	6:D:1252:ILE:HG12	2.20	0.41
6:N:394:LEU:HD11	6:N:445:ARG:HH12	1.81	0.41
5:M:39:ARG:NH2	11:M:1341:HOH:O	2.52	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:522:PRO:HA	6:D:525:ARG:NE	2.34	0.41
4:L:9:PRO:HB3	4:L:25:LEU:HG	2.03	0.41
6:D:960:LYS:NZ	6:D:1040:GLY:O	2.45	0.41
5:C:89:THR:O	5:C:91:GLN:HG3	2.20	0.41
5:M:274:ARG:HG3	5:M:285:LEU:HD22	2.02	0.41
5:C:68:PHE:HZ	5:C:71:TYR:HD2	1.68	0.41
6:D:984:THR:HG23	6:D:986:ARG:H	1.84	0.41
5:M:354:GLY:O	5:M:358:ARG:HD3	2.19	0.41
4:L:175:ARG:HG2	4:L:175:ARG:H	1.61	0.41
6:N:1498:ALA:HB1	7:O:84:ARG:HE	1.86	0.41
6:N:709:HIS:CD2	6:N:709:HIS:N	2.89	0.41
5:M:1016:ILE:CG1	5:M:1017:THR:N	2.82	0.41
4:L:106:PRO:HG3	4:L:134:GLU:CD	2.41	0.41
6:N:1363:LEU:O	6:N:1363:LEU:HD12	2.20	0.41
5:C:704:HIS:O	5:C:829:GLN:OE1	2.38	0.41
7:E:44:GLU:HA	11:E:110:HOH:O	2.20	0.41
6:N:66:GLN:O	6:N:69:GLU:HB3	2.20	0.41
5:M:957:LYS:NZ	5:M:957:LYS:HB2	2.35	0.41
4:A:111:ALA:CB	4:A:127:LEU:HD23	2.42	0.41
7:E:28:GLN:HG2	7:E:32:ARG:HH22	1.86	0.41
5:M:211:LEU:HD11	5:M:308:ARG:HA	2.02	0.41
4:K:41:ARG:HG3	4:K:177:VAL:CG1	2.50	0.41
5:C:182:VAL:CG2	5:C:220:GLY:O	2.67	0.41
5:C:468:ARG:NH2	11:C:1462:HOH:O	2.53	0.41
6:D:412:GLY:HA2	6:D:434:ARG:NH1	2.34	0.41
4:K:91:ASN:O	4:K:94:LEU:HD12	2.20	0.41
6:D:1464:GLU:HA	6:D:1467:ILE:HD11	2.02	0.41
4:L:88:ARG:HD2	4:L:123:MET:SD	2.61	0.41
5:M:666:LEU:HD12	5:M:667:ALA:N	2.35	0.41
5:M:29:ALA:HB2	5:M:337:GLY:HA3	2.01	0.41
6:D:420:VAL:C	6:D:421:LEU:HD23	2.40	0.41
5:C:552:HIS:HD2	6:D:1064:GLY:HA2	1.86	0.41
6:D:481:MET:CE	6:D:493:ARG:HB2	2.47	0.41
5:M:1070:ILE:HG23	6:N:656:PHE:HD1	1.84	0.41
5:M:670:GLN:NE2	5:M:699:PHE:CG	2.88	0.41
4:L:48:ILE:HG22	4:L:173:PRO:HD2	2.03	0.41
6:N:704:ARG:CZ	6:N:737:ASN:O	2.69	0.41
4:A:42:ARG:HH22	4:B:34:VAL:HB	1.85	0.41
5:C:1006:HIS:HA	5:C:1027:PHE:HD1	1.83	0.41
5:M:913:GLU:O	5:M:916:GLU:HB3	2.20	0.41
5:C:115:LEU:H	5:C:115:LEU:HG	1.70	0.41
4:A:128:HIS:HE1	4:A:131:THR:HG23	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:8:LYS:O	7:E:12:MET:HG3	2.20	0.41
4:B:132:LEU:HD23	4:B:136:GLY:O	2.20	0.41
5:C:6:PHE:N	5:C:6:PHE:CD1	2.88	0.41
6:D:783:ARG:HD2	6:D:1029:ARG:HG2	2.02	0.41
6:N:633:VAL:C	6:N:635:PRO:HD3	2.40	0.41
4:K:42:ARG:HH11	5:M:978:ARG:CA	2.28	0.41
6:N:782:SER:O	6:N:786:ILE:HG13	2.20	0.41
6:D:754:PHE:O	6:D:758:GLU:HG2	2.20	0.41
5:C:1016:ILE:HG12	5:C:1017:THR:H	1.84	0.41
6:D:124:GLU:O	6:D:128:TYR:HB2	2.19	0.41
6:D:496:LEU:HD12	6:D:500:ARG:HG2	2.03	0.41
6:D:98:PRO:HA	6:D:515:GLU:HA	2.01	0.41
6:N:899:LEU:HB3	6:N:917:GLN:HG2	2.01	0.41
5:M:23:VAL:HG13	11:M:1414:HOH:O	2.20	0.41
5:M:632:ASN:HB3	5:M:633:GLN:NE2	2.35	0.41
4:K:181:VAL:O	5:M:938:LYS:N	2.54	0.41
5:C:98:LEU:C	5:C:109:LYS:HD2	2.40	0.41
6:N:159:ARG:NH2	11:N:9468:HOH:O	2.53	0.41
6:N:1124:GLN:HA	6:N:1125:PRO:HD3	1.60	0.41
6:D:1236:LEU:HD12	6:D:1359:GLN:HB3	2.03	0.41
5:M:13:ILE:HG23	5:M:483:VAL:HG21	2.02	0.41
6:N:493:ARG:CG	6:N:1390:LEU:HB2	2.45	0.41
6:N:470:LEU:HD12	6:N:503:LEU:CD2	2.50	0.41
5:M:1085:PHE:CE2	6:N:1468:LEU:HG	2.52	0.41
6:N:1155:VAL:HG12	11:N:9051:HOH:O	2.20	0.41
4:K:36:LEU:HD11	11:L:365:HOH:O	2.20	0.41
6:N:1440:PHE:C	6:N:1440:PHE:CD2	2.93	0.41
5:M:1067:TYR:O	5:M:1071:ILE:HG12	2.20	0.41
6:D:972:LEU:HD23	11:D:8045:HOH:O	2.19	0.41
6:D:1100:ASP:HB3	6:D:1428:ALA:CB	2.49	0.41
6:D:1110:ALA:O	6:D:1111:ASP:C	2.58	0.41
3:Z:13:DG:H2''	3:Z:14:DG:C8	2.55	0.41
1:X:11:DC:H2''	1:X:12:DG:H8	1.85	0.41
1:X:12:DG:H2'	1:X:13:DT:H72	2.02	0.41
5:C:569:VAL:HG13	5:C:996:LYS:HZ3	1.84	0.41
6:N:1114:THR:O	6:N:1114:THR:CG2	2.68	0.41
6:D:906:GLN:HB3	6:D:911:LEU:CD1	2.49	0.41
6:N:1330:ILE:HB	6:N:1347:TYR:OH	2.20	0.41
5:C:669:GLY:C	5:C:670:GLN:HG2	2.41	0.41
5:C:842:ARG:HG3	5:C:995:MET:CE	2.51	0.41
6:D:510:GLU:HG2	11:D:8320:HOH:O	2.20	0.41
6:D:112:ILE:HA	6:D:512:MET:HE3	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:M:217:LEU:CD1	5:M:311:PHE:HA	2.50	0.41
5:M:928:LYS:O	5:M:932:GLU:HG3	2.21	0.41
4:K:94:LEU:HD11	4:K:119:ASP:CB	2.51	0.41
6:N:8:VAL:HG12	6:N:9:ARG:N	2.34	0.41
6:D:28:LYS:HD2	11:D:8201:HOH:O	2.20	0.41
6:D:1481:VAL:HG11	7:E:18:ARG:CA	2.42	0.41
6:D:1481:VAL:HG22	7:E:18:ARG:NE	2.28	0.41
6:D:1046:GLN:HG2	6:D:1052:THR:CB	2.51	0.41
5:M:292:ARG:HB2	5:M:299:LYS:HG2	2.02	0.41
5:M:309:TYR:HA	5:M:312:ALA:HB3	2.02	0.41
5:M:780:GLU:HG3	5:M:781:LYS:N	2.35	0.41
5:M:259:GLY:O	5:M:290:LEU:O	2.38	0.41
5:M:580:MET:HE1	5:M:665:PHE:CZ	2.55	0.41
6:N:800:LYS:CE	6:N:804:LEU:HD13	2.50	0.41
5:C:692:GLU:O	5:C:696:LYS:HG3	2.20	0.41
2:H:2:A:C2'	2:H:3:G:O5'	2.68	0.41
5:C:715:THR:HA	11:C:1542:HOH:O	2.20	0.41
4:K:174:VAL:HG13	4:K:200:TRP:O	2.20	0.41
5:C:603:VAL:HG11	5:C:606:VAL:HG22	2.03	0.41
6:N:710:ARG:C	6:N:712:GLY:N	2.74	0.41
5:M:25:SER:OG	5:M:335:THR:HB	2.20	0.41
5:C:137:VAL:CG2	5:C:391:LEU:HG	2.50	0.41
6:D:702:LEU:N	6:D:702:LEU:HD12	2.35	0.41
5:C:118:ILE:HG22	5:C:382:ILE:HD13	2.01	0.41
5:C:791:ARG:O	5:C:793:PRO:HD3	2.20	0.41
6:D:1154:GLU:HB3	6:N:563:PRO:HB3	2.01	0.41
7:E:43:GLU:HG3	7:E:43:GLU:H	1.69	0.41
5:M:1008:ARG:HA	5:M:1027:PHE:CD2	2.54	0.41
2:Y:16:G:O3'	6:N:741:ASP:OD1	2.39	0.41
5:C:141:HIS:CD2	5:C:141:HIS:C	2.93	0.41
5:C:673:LEU:CD2	5:C:867:VAL:HG12	2.50	0.41
2:H:7:G:H2'	2:H:8:C:OP1	2.20	0.41
6:N:716:PHE:O	6:N:718:PRO:HD3	2.21	0.41
5:C:668:LEU:HD12	5:C:668:LEU:H	1.86	0.41
6:D:1153:VAL:HG12	6:D:1155:VAL:HG22	2.02	0.41
6:N:956:ILE:HA	6:N:957:PRO:HD3	1.93	0.41
5:M:23:VAL:HA	11:M:1414:HOH:O	2.21	0.41
5:M:395:LYS:HE2	5:M:403:SER:CB	2.36	0.41
5:C:318:PRO:HB2	11:C:1545:HOH:O	2.20	0.41
5:C:265:ARG:HB2	11:C:1165:HOH:O	2.21	0.41
6:D:1457:ASP:O	6:D:1459:LEU:HD12	2.21	0.41
7:O:9:LEU:HB3	7:O:19:LEU:CD2	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:838:ARG:HH11	6:D:838:ARG:HG2	1.86	0.41
5:M:983:ILE:O	5:M:983:ILE:HG22	2.20	0.41
5:M:713:ARG:HB3	5:M:720:GLU:OE2	2.20	0.41
5:M:993:PHE:HE1	5:M:995:MET:HE2	1.85	0.41
6:D:1485:GLN:HG2	6:D:1485:GLN:H	1.75	0.41
6:N:1406:ARG:HE	6:N:1407:LEU:HD12	1.84	0.41
6:D:1494:ALA:HB1	7:E:88:GLU:OE2	2.21	0.41
5:M:80:GLN:HE21	5:M:84:ARG:HH21	1.68	0.41
5:C:764:GLU:HG3	6:D:54:LYS:HZ3	1.85	0.41
6:N:729:HIS:HE1	6:N:731:LEU:HG	1.85	0.41
5:C:348:LEU:HD12	5:C:348:LEU:HA	1.90	0.41
5:C:1012:PRO:HB2	5:C:1021:LEU:O	2.20	0.41
6:N:937:TYR:H	6:N:937:TYR:HD1	1.66	0.41
6:N:63:TYR:HB3	6:N:68:PHE:CD1	2.55	0.41
6:D:641:GLN:HB3	6:D:717:GLN:O	2.20	0.41
5:C:754:ILE:HD12	5:C:789:SER:HB3	2.02	0.41
5:C:443:THR:HG21	6:D:1078:ARG:NH2	2.36	0.41
5:C:491:GLU:CB	11:C:1287:HOH:O	2.68	0.41
5:C:694:LEU:HD21	5:C:868:ASP:CB	2.47	0.41
6:D:1107:VAL:HG12	6:D:1217:ILE:HA	2.02	0.41
6:D:1223:ILE:HD11	6:D:1462:LEU:HD12	2.03	0.41
1:G:14:DT:H5"	11:D:8242:HOH:O	2.21	0.41
5:M:158:TYR:CZ	5:M:313:LEU:HG	2.55	0.41
6:N:701:LEU:O	6:N:747:VAL:HA	2.21	0.41
5:M:1092:LEU:HD23	5:M:1095:LEU:HD13	2.03	0.41
5:C:263:ASP:C	5:C:264:PRO:O	2.59	0.41
5:M:738:ASP:HB2	5:M:744:ARG:HB3	2.02	0.41
5:M:469:THR:OG1	5:M:470:PRO:HD2	2.21	0.41
6:D:1393:GLN:NE2	6:D:1394:VAL:HB	2.36	0.41
5:C:595:LEU:HD12	11:C:1444:HOH:O	2.21	0.41
4:L:11:PHE:CE1	4:L:23:PHE:HB3	2.55	0.41
5:M:668:LEU:H	5:M:668:LEU:HD12	1.86	0.41
5:C:358:ARG:CA	5:C:361:MET:HG2	2.51	0.41
6:D:764:LEU:HD23	6:D:767:HIS:CD2	2.54	0.41
6:N:916:TYR:O	6:N:919:PHE:HB3	2.19	0.41
7:O:93:TYR:HA	7:O:94:PRO:HD2	1.87	0.41
6:N:709:HIS:HA	6:N:1227:GLN:HB3	2.01	0.41
6:D:717:GLN:HG2	11:D:8027:HOH:O	2.21	0.41
5:M:73:LEU:O	5:M:73:LEU:HD12	2.21	0.41
6:N:1134:LEU:HB3	11:N:9479:HOH:O	2.20	0.41
4:B:229:GLN:HB2	4:B:229:GLN:HE21	1.62	0.41
5:M:1021:LEU:HA	11:M:1512:HOH:O	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:1425:THR:HG22	6:N:1429:LEU:HD12	2.01	0.41
1:X:15:DC:OP2	6:N:610:LYS:HE2	2.21	0.41
2:H:14:G:C2'	2:H:15:C:H5'	2.48	0.41
6:D:1197:ARG:CB	6:D:1396:GLU:HG3	2.45	0.41
6:N:1007:VAL:HA	11:N:9288:HOH:O	2.21	0.41
6:N:879:ARG:HH11	6:N:879:ARG:HG3	1.84	0.41
6:D:446:VAL:O	6:D:447:VAL:O	2.39	0.41
5:M:674:VAL:HG11	5:M:992:MET:HB3	2.02	0.41
4:A:178:ALA:HA	11:C:1156:HOH:O	2.20	0.41
6:D:525:ARG:HA	6:D:526:PRO:HD3	1.73	0.41
4:K:224:TYR:HB3	4:L:9:PRO:CG	2.51	0.41
7:O:19:LEU:O	7:O:23:VAL:HG23	2.20	0.41
4:L:124:ASN:CG	4:L:127:LEU:HB2	2.41	0.41
4:L:81:ASN:HD21	4:L:127:LEU:HD11	1.85	0.41
5:C:639:GLN:HG2	11:C:1396:HOH:O	2.19	0.41
6:N:28:LYS:CB	6:N:41:ARG:HD2	2.50	0.41
6:N:407:VAL:HG12	6:N:409:VAL:H	1.85	0.41
6:D:185:VAL:HG11	6:D:197:SER:OG	2.20	0.41
7:E:76:GLY:N	7:E:79:LEU:HD22	2.36	0.41
6:N:1406:ARG:HE	6:N:1407:LEU:CD1	2.33	0.41
6:D:1086:LEU:HA	11:D:8250:HOH:O	2.21	0.41
6:N:832:ARG:HA	6:N:832:ARG:CZ	2.51	0.41
6:N:1117:TYR:CD2	6:N:1117:TYR:N	2.88	0.41
6:N:769:LEU:HD11	6:N:919:PHE:CE2	2.56	0.41
5:C:599:GLU:OE2	5:C:619:ARG:NH2	2.54	0.41
1:G:6:DT:H2''	1:G:7:DC:C5	2.55	0.41
5:C:185:LYS:HE2	5:C:190:LYS:NZ	2.35	0.41
5:M:1096:ALA:O	6:N:13:ALA:CB	2.68	0.41
5:C:242:LEU:HD11	11:C:1327:HOH:O	2.21	0.41
5:C:1079:PRO:HB2	11:D:8463:HOH:O	2.19	0.41
5:M:393:GLN:NE2	5:M:406:HIS:HE1	2.18	0.41
6:N:965:GLU:HA	6:N:965:GLU:OE1	2.20	0.41
5:C:140:ILE:HD13	5:C:331:ARG:CZ	2.51	0.41
5:C:676:ILE:O	5:C:676:ILE:HD13	2.21	0.41
5:C:690:ILE:HG13	5:C:694:LEU:HD12	2.01	0.41
6:N:1336:LEU:HD22	6:N:1421:LEU:HB2	2.03	0.41
6:N:1336:LEU:CA	6:N:1344:VAL:HG21	2.50	0.41
5:M:471:TYR:CD2	5:M:533:ASP:HA	2.56	0.41
5:M:878:SER:OG	6:N:1029:ARG:HD2	2.20	0.41
5:C:1046:ALA:HA	6:D:1472:ILE:CG1	2.44	0.41
5:M:140:ILE:HG13	5:M:411:SER:O	2.20	0.41
5:M:280:LYS:NZ	5:M:280:LYS:HB2	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:470:LEU:N	6:D:470:LEU:HD23	2.36	0.41
6:N:89:ARG:O	6:N:521:PRO:HB3	2.20	0.41
4:B:64:GLU:CA	4:B:165:ILE:HD13	2.48	0.41
6:N:875:THR:HG22	6:N:879:ARG:HB2	2.03	0.41
5:M:193:LEU:HD21	11:M:1471:HOH:O	2.21	0.41
5:C:150:PRO:HA	5:C:158:TYR:HD2	1.86	0.41
5:C:172:ILE:HG23	5:C:184:MET:CE	2.51	0.41
6:D:434:ARG:HB2	6:D:447:VAL:HG21	2.03	0.41
3:Z:5:DG:H1'	3:Z:6:DC:H5'	2.01	0.41
6:N:119:SER:HB2	6:N:123:LEU:N	2.31	0.41
5:C:385:PHE:HA	5:C:389:SER:OG	2.21	0.41
6:D:996:TRP:CE3	6:D:996:TRP:HA	2.56	0.41
6:N:796:ARG:O	6:N:828:LYS:HD2	2.21	0.41
5:C:957:LYS:HG2	5:C:961:GLU:CB	2.51	0.41
6:N:165:LYS:O	6:N:167:GLU:HG3	2.20	0.41
6:N:708:LEU:HD22	6:N:1234:THR:OG1	2.21	0.41
4:B:65:PHE:CD1	4:B:65:PHE:N	2.88	0.41
6:N:648:MET:HE2	11:N:9201:HOH:O	2.20	0.41
5:M:704:HIS:HA	11:M:1346:HOH:O	2.21	0.41
4:K:159:LYS:NZ	4:K:164:ALA:O	2.50	0.41
6:D:1063:GLU:HG3	6:D:1064:GLY:H	1.84	0.41
6:D:703:ASN:ND2	6:D:704:ARG:N	2.67	0.41
5:M:495:THR:HG21	5:M:524:VAL:HG11	2.03	0.41
4:L:209:GLU:HG2	11:L:361:HOH:O	2.21	0.41
6:N:1472:ILE:HB	6:N:1474:ALA:O	2.21	0.41
5:C:1067:TYR:HB3	11:C:1435:HOH:O	2.21	0.41
6:N:1437:ALA:C	6:N:1446:VAL:HG21	2.40	0.41
4:K:10:VAL:HG12	4:K:12:THR:HG22	2.02	0.41
4:K:14:ARG:HB2	4:K:14:ARG:CZ	2.50	0.41
6:N:728:LEU:HD12	6:N:729:HIS:N	2.36	0.41
5:M:848:VAL:HG12	5:M:849:VAL:N	2.36	0.41
4:K:173:PRO:HB2	4:K:205:VAL:HG22	2.03	0.41
6:N:791:TYR:CD2	6:N:945:SER:HB2	2.56	0.41
5:M:86:LYS:HZ3	5:M:812:GLY:H	1.69	0.41
6:D:1492:LEU:HD11	11:D:8102:HOH:O	2.21	0.41
4:A:154:GLU:H	4:A:154:GLU:CD	2.24	0.41
6:N:749:VAL:HA	6:N:750:PRO:HD3	1.87	0.41
6:D:938:GLY:O	6:D:942:SER:HB3	2.21	0.41
7:E:4:PRO:HG3	11:E:115:HOH:O	2.21	0.41
5:C:438:ILE:HA	5:C:455:LEU:HA	2.03	0.41
6:N:1147:ARG:HB3	6:N:1188:VAL:CG2	2.50	0.41
5:C:876:VAL:H	5:C:877:PRO:CD	2.33	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:137:ARG:CZ	4:B:139:ASN:HB3	2.51	0.41
6:N:180:LYS:CG	6:N:183:GLU:HB2	2.31	0.41
5:M:874:LEU:CD1	5:M:874:LEU:H	2.34	0.41
6:D:1191:PRO:CB	6:D:1370:ILE:HD13	2.51	0.41
6:D:1425:THR:HG22	6:D:1429:LEU:CD1	2.50	0.41
6:D:1429:LEU:HD12	6:D:1440:PHE:HE1	1.85	0.41
1:G:12:DG:H2'	1:G:13:DT:H72	2.02	0.41
6:D:456:MET:N	6:D:459:GLU:OE1	2.49	0.41
5:M:102:HIS:CE1	5:M:365:ASP:HA	2.55	0.41
6:N:47:GLU:HG3	6:N:51:GLY:O	2.21	0.41
5:C:160:ALA:HB2	5:C:310:LEU:HB2	2.02	0.41
5:C:468:ARG:NE	5:C:485:TYR:O	2.54	0.41
5:C:1030:GLN:O	6:D:622:ARG:HA	2.21	0.41
5:M:674:VAL:CG2	5:M:871:LEU:HG	2.51	0.41
5:C:808:ARG:NH2	5:C:820:ARG:CZ	2.84	0.41
6:D:1117:TYR:HB2	6:D:1188:VAL:O	2.21	0.41
6:D:1435:LEU:HB2	6:D:1457:ASP:OD2	2.21	0.41
6:D:1003:VAL:O	6:D:1006:ALA:HB3	2.21	0.41
4:L:26:GLU:HB3	4:L:194:LYS:HG3	2.03	0.41
6:N:773:ALA:HB2	11:N:9308:HOH:O	2.21	0.41
6:D:36:THR:C	6:D:38:LYS:N	2.75	0.41
6:N:1406:ARG:NE	6:N:1407:LEU:HD12	2.36	0.41
5:C:911:GLU:OE1	6:D:951:ILE:HD12	2.21	0.41
6:N:1041:LEU:O	6:N:1041:LEU:HD23	2.21	0.41
6:N:1438:ALA:CA	6:N:1446:VAL:HG11	2.51	0.41
3:I:7:DC:OP2	6:D:1266:ARG:NE	2.54	0.41
5:C:606:VAL:HG11	5:C:643:VAL:O	2.21	0.41
4:B:80:LEU:HA	4:B:83:LYS:HD2	2.03	0.41
6:N:954:ALA:C	6:N:1039:CYS:SG	2.99	0.41
5:C:945:ARG:NE	11:C:1564:HOH:O	2.54	0.41
4:L:49:PRO:HG3	11:L:364:HOH:O	2.20	0.41
1:G:8:DT:H2''	1:G:9:DG:C8	2.55	0.41
6:N:668:PRO:HB3	11:N:9371:HOH:O	2.20	0.41
5:C:436:GLY:O	5:C:459:ALA:CB	2.65	0.40
6:N:1213:ARG:HD2	6:N:1214:PRO:N	2.35	0.40
5:M:572:ILE:HD11	5:M:701:THR:CB	2.51	0.40
5:M:685:GLU:HG3	5:M:686:ASP:N	2.36	0.40
6:D:1403:LEU:HD22	11:D:8028:HOH:O	2.21	0.40
1:G:11:DC:H2''	1:G:12:DG:H8	1.85	0.40
6:N:957:PRO:HG3	11:N:9288:HOH:O	2.20	0.40
6:D:495:ARG:O	6:D:499:VAL:HG23	2.21	0.40
6:N:50:PHE:HB3	6:N:522:PRO:CG	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:792:ILE:H	6:N:792:ILE:HG22	1.63	0.40
4:K:44:LEU:HD13	4:K:177:VAL:CG1	2.51	0.40
6:N:127:LEU:HA	6:N:132:TYR:HD1	1.86	0.40
5:C:174:LEU:O	5:C:310:LEU:HD22	2.22	0.40
6:N:434:ARG:HH22	6:N:447:VAL:HG11	1.86	0.40
6:N:137:PRO:HD2	6:N:453:ASP:CB	2.50	0.40
5:M:776:SER:HA	5:M:780:GLU:HB3	2.02	0.40
4:K:38:ASN:CG	5:M:980:GLY:CA	2.89	0.40
5:C:52:PHE:CE1	5:C:66:LEU:HG	2.56	0.40
5:M:494:TYR:HB3	5:M:530:GLU:OE2	2.21	0.40
6:N:800:LYS:HZ1	6:N:804:LEU:HD13	1.86	0.40
4:B:48:ILE:HA	4:B:49:PRO:HD3	1.88	0.40
4:L:172:SER:HA	4:L:173:PRO:HD3	1.88	0.40
6:D:972:LEU:HD13	6:D:972:LEU:HA	1.94	0.40
6:D:645:PRO:CD	6:D:726:ILE:HG12	2.51	0.40
4:K:101:LEU:HD23	4:K:101:LEU:C	2.41	0.40
5:C:1065:ALA:HB3	11:C:1284:HOH:O	2.20	0.40
5:M:256:TYR:HE1	11:M:1452:HOH:O	2.04	0.40
4:B:80:LEU:HG	6:D:844:ALA:HA	2.02	0.40
5:C:250:ARG:HG2	5:C:253:ALA:CB	2.51	0.40
4:B:66:SER:O	4:B:75:VAL:HG23	2.21	0.40
5:M:1:MET:HE3	11:M:1165:HOH:O	2.21	0.40
5:C:327:HIS:CD2	5:C:431:HIS:NE2	2.88	0.40
5:C:410:ILE:HD12	5:C:438:ILE:HG12	2.00	0.40
5:C:874:LEU:HD12	5:C:874:LEU:N	2.30	0.40
6:D:1093:TYR:CE1	6:D:1097:LYS:HE2	2.57	0.40
5:C:1053:LEU:CD1	6:D:1466:VAL:HG22	2.51	0.40
6:N:996:TRP:CZ2	6:N:1056:PRO:HG2	2.57	0.40
5:C:1095:LEU:HD23	5:C:1095:LEU:HA	1.93	0.40
5:M:395:LYS:O	5:M:633:GLN:NE2	2.54	0.40
6:N:701:LEU:HD13	6:N:748:HIS:HB2	2.03	0.40
5:C:150:PRO:HA	5:C:158:TYR:CD2	2.56	0.40
5:C:164:PRO:HD2	5:C:170:PRO:O	2.20	0.40
5:C:267:TYR:O	5:C:268:ASP:C	2.59	0.40
5:C:260:LEU:CB	5:C:291:ALA:HB1	2.37	0.40
6:D:141:ILE:CD1	6:D:450:TYR:HB3	2.48	0.40
6:N:1271:LYS:HZ3	6:N:1271:LYS:HB2	1.86	0.40
4:L:137:ARG:CZ	4:L:139:ASN:HB3	2.52	0.40
6:D:1184:GLN:HB2	6:N:559:ALA:HB1	2.02	0.40
5:C:474:VAL:HG23	5:C:478:VAL:O	2.21	0.40
5:C:5:ARG:HB3	5:C:902:ILE:HD12	2.02	0.40
6:N:493:ARG:NE	6:N:1390:LEU:O	2.54	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:958:THR:CG2	5:C:961:GLU:HB2	2.46	0.40
4:A:182:GLU:N	4:A:182:GLU:OE2	2.54	0.40
4:K:219:ARG:HG2	4:L:222:LEU:HD12	2.03	0.40
11:K:1711:HOH:O	4:L:222:LEU:HD11	2.21	0.40
4:K:159:LYS:HA	4:K:159:LYS:HD3	1.90	0.40
5:M:474:VAL:HG13	5:M:530:GLU:C	2.42	0.40
6:D:999:THR:O	6:D:1002:LYS:HB2	2.21	0.40
5:M:80:GLN:HG2	5:M:90:TYR:CZ	2.56	0.40
6:N:1105:ILE:HA	11:N:9367:HOH:O	2.21	0.40
1:G:20:DG:H3'	11:G:38:HOH:O	2.20	0.40
5:C:1008:ARG:NH1	5:C:1010:THR:HA	2.37	0.40
4:K:101:LEU:HD12	4:K:114:PHE:N	2.36	0.40
5:C:605:LYS:O	5:C:611:ILE:HA	2.21	0.40
5:C:80:GLN:HB3	5:C:80:GLN:HE21	1.63	0.40
5:C:80:GLN:HG2	5:C:90:TYR:CE2	2.56	0.40
5:C:1090:LYS:HE2	5:C:1112:PHE:CE1	2.56	0.40
6:N:646:LYS:HG3	6:N:721:VAL:O	2.20	0.40
6:N:955:VAL:HG11	6:N:1015:TYR:OH	2.21	0.40
4:L:70:GLY:O	4:L:132:LEU:HA	2.21	0.40
5:C:1078:GLU:HA	5:C:1079:PRO:HD3	1.93	0.40
4:L:90:LEU:O	4:L:90:LEU:HD12	2.21	0.40
6:D:34:TYR:O	6:D:35:ARG:C	2.60	0.40
4:L:185:ARG:NH1	11:L:381:HOH:O	2.55	0.40
6:D:965:GLU:HA	6:D:968:ASP:HB3	2.02	0.40
3:Z:3:DA:H1'	11:Z:824:HOH:O	2.20	0.40
4:A:107:LYS:HE2	4:A:113:ASP:OD2	2.21	0.40
1:X:12:DG:C8	1:X:13:DT:H72	2.56	0.40
2:Y:12:G:C5'	2:Y:12:G:C8	2.96	0.40
5:C:408:ARG:NE	5:C:542:VAL:HG23	2.37	0.40
5:C:676:ILE:HG22	5:C:988:VAL:O	2.21	0.40
6:D:1071:PHE:HB3	11:D:8010:HOH:O	2.22	0.40
6:D:796:ARG:C	6:D:797:LYS:HD2	2.42	0.40
4:K:42:ARG:NH2	4:L:31:GLY:O	2.40	0.40
5:C:697:ARG:HG3	5:C:697:ARG:O	2.21	0.40
6:D:1221:VAL:O	6:D:1222:GLY:C	2.59	0.40
6:D:1477:GLY:O	6:D:1478:SER:C	2.59	0.40
5:M:141:HIS:CA	5:M:331:ARG:HG3	2.52	0.40
5:M:437:ARG:HB3	5:M:467:ILE:HB	2.03	0.40
6:D:456:MET:HG3	11:D:8208:HOH:O	2.21	0.40
6:N:525:ARG:HB2	6:N:538:SER:HB2	2.03	0.40
5:M:217:LEU:HD11	5:M:314:THR:OG1	2.21	0.40
5:C:97:ARG:HB3	5:C:109:LYS:CE	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:168:THR:HG21	6:N:206:ARG:HH12	1.86	0.40
6:D:400:VAL:O	6:D:402:PRO:HD3	2.20	0.40
6:N:1087:ARG:CB	6:N:1256:LEU:HD22	2.49	0.40
6:D:1117:TYR:CD1	6:D:1187:PRO:HA	2.57	0.40
6:D:107:ASP:O	6:D:108:VAL:C	2.60	0.40
6:D:1046:GLN:HG2	6:D:1052:THR:HA	2.03	0.40
5:C:710:ILE:HB	5:C:790:LEU:CD2	2.43	0.40
5:M:720:GLU:OE1	5:M:758:ARG:HD2	2.21	0.40
5:M:626:ARG:NH1	5:M:629:TYR:HB2	2.37	0.40
6:D:810:GLU:C	6:D:813:LEU:HG	2.39	0.40
5:M:610:ARG:HD2	5:M:622:GLU:HG3	2.04	0.40
6:D:421:LEU:HD21	6:D:429:SER:OG	2.21	0.40
5:C:909:ALA:CB	5:C:914:ILE:HD11	2.45	0.40
5:M:80:GLN:HG2	5:M:90:TYR:CE1	2.57	0.40
6:D:681:ARG:HB2	6:D:681:ARG:HE	1.66	0.40
5:M:909:ALA:HB1	5:M:914:ILE:CD1	2.48	0.40
4:A:156:HIS:HD2	4:A:157:GLY:N	2.20	0.40
4:A:175:ARG:HH21	4:A:176:ARG:HE	1.68	0.40
6:N:12:LEU:HD21	6:N:104:PHE:CZ	2.57	0.40
6:N:415:VAL:HG12	6:N:416:ALA:N	2.37	0.40
5:M:1034:GLU:H	6:N:619:LEU:HB3	1.79	0.40
5:C:431:HIS:CD2	5:C:433:THR:OG1	2.74	0.40
6:D:700:VAL:HG13	6:D:718:PRO:HG2	2.03	0.40
6:D:789:LEU:O	6:D:793:THR:HG23	2.21	0.40
5:M:684:PHE:CG	5:M:685:GLU:N	2.90	0.40
6:D:1221:VAL:O	6:D:1224:VAL:N	2.54	0.40
5:M:139:GLN:OE1	5:M:415:PRO:HD3	2.22	0.40
1:G:14:DT:C2'	1:G:15:DC:H5'	2.49	0.40
5:M:1091:GLU:HA	6:N:520:LEU:HD13	2.03	0.40
4:L:58:ILE:HG22	4:L:61:VAL:HB	2.03	0.40
6:N:501:ALA:HB1	6:N:1453:ALA:CB	2.40	0.40
6:D:1481:VAL:CG2	7:E:18:ARG:HE	2.30	0.40
6:N:1108:ARG:NH1	11:N:9097:HOH:O	2.54	0.40
6:N:135:LEU:HD22	6:N:147:VAL:HG23	2.02	0.40
4:K:35:THR:HG23	4:L:39:PRO:HA	2.03	0.40
4:K:67:THR:HG22	5:M:627:ARG:HH21	1.87	0.40
4:K:88:ARG:NH1	4:K:88:ARG:HG2	2.37	0.40
5:C:782:ALA:O	5:C:784:ASP:N	2.54	0.40
4:B:43:ILE:HG23	4:B:47:SER:HB3	2.02	0.40
4:B:43:ILE:HG23	4:B:47:SER:OG	2.20	0.40
2:H:16:G:H5'	6:D:742:GLY:HA3	2.04	0.40
6:D:817:GLU:O	6:D:821:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:N:44:LEU:CD1	6:N:44:LEU:H	2.34	0.40
6:N:691:LEU:HG	6:N:720:LEU:HD21	2.02	0.40
5:M:926:PHE:CD2	5:M:930:LYS:HE3	2.55	0.40
5:C:773:LEU:O	5:C:777:ILE:HG13	2.20	0.40
4:B:67:THR:HB	4:B:74:ASP:OD1	2.21	0.40
5:C:739:GLU:HG2	5:C:739:GLU:H	1.62	0.40
6:D:1037:GLN:CG	6:D:1042:ARG:HB3	2.47	0.40
6:N:1147:ARG:O	6:N:1165:TYR:HA	2.21	0.40
6:N:637:LEU:HD21	6:N:641:GLN:O	2.22	0.40
3:I:8:DA:H2"	3:I:9:DG:OP2	2.22	0.40
5:C:1019:GLN:HE22	5:C:1058:ASP:HB2	1.86	0.40
5:C:636:ALA:CB	5:C:703:ILE:HD13	2.34	0.40
4:B:165:ILE:HA	4:B:166:PRO:HD3	1.95	0.40
5:C:160:ALA:HB1	5:C:306:THR:OG1	2.21	0.40
6:D:1083:ASP:OD2	6:D:1241:PHE:HB3	2.21	0.40
5:C:182:VAL:HG12	5:C:193:LEU:HD11	2.02	0.40
5:C:144:PRO:CG	5:C:265:ARG:NH2	2.80	0.40
6:N:1044:LEU:HD13	6:N:1052:THR:HG21	2.04	0.40
5:C:7:GLY:O	5:C:8:ARG:HD2	2.21	0.40
4:A:206:THR:CG2	4:A:209:GLU:H	2.32	0.40
5:C:626:ARG:HG2	11:C:1192:HOH:O	2.21	0.40
6:D:51:GLY:HA3	6:D:86:ARG:HA	2.04	0.40
4:A:82:LEU:CD2	4:A:142:VAL:HG11	2.43	0.40
5:C:520:GLU:HA	5:C:521:PRO:HD3	1.96	0.40
6:N:1047:LYS:HB3	6:N:1048:PRO:CD	2.51	0.40
4:K:170:VAL:HG13	11:M:1536:HOH:O	2.20	0.40
4:K:18:ARG:O	4:K:207:PRO:HD3	2.22	0.40
6:D:630:VAL:HA	6:D:744:GLN:HG3	2.03	0.40
5:C:300:ASP:OD2	5:C:303:PHE:HB3	2.22	0.40
5:C:1006:HIS:O	6:D:627:GLY:HA2	2.21	0.40
6:D:1269:LYS:HB3	6:D:1269:LYS:HZ2	1.85	0.40
4:L:133:GLU:HB3	4:L:134:GLU:H	1.62	0.40
5:C:743:VAL:HG13	5:C:800:VAL:HG11	2.02	0.40
5:M:324:ASP:HA	11:M:1465:HOH:O	2.22	0.40
6:D:506:GLY:O	6:D:507:ASN:C	2.59	0.40
6:N:112:ILE:O	6:N:112:ILE:HD12	2.22	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	
4	A	227/315 (72%)	206 (91%)	14 (6%)	7 (3%)	7	34
4	B	227/315 (72%)	206 (91%)	15 (7%)	6 (3%)	8	39
4	K	227/315 (72%)	208 (92%)	13 (6%)	6 (3%)	8	39
4	L	227/315 (72%)	206 (91%)	15 (7%)	6 (3%)	8	39
5	C	1117/1119 (100%)	919 (82%)	136 (12%)	62 (6%)	3	16
5	M	1117/1119 (100%)	923 (83%)	133 (12%)	61 (6%)	3	16
6	D	1258/1524 (82%)	1051 (84%)	149 (12%)	58 (5%)	4	22
6	N	1258/1524 (82%)	1058 (84%)	140 (11%)	60 (5%)	4	20
7	E	93/99 (94%)	76 (82%)	11 (12%)	6 (6%)	2	11
7	O	93/99 (94%)	74 (80%)	12 (13%)	7 (8%)	2	8
All	All	5844/6744 (87%)	4927 (84%)	638 (11%)	279 (5%)	4	20

All (279) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	29	GLU
4	A	187	GLY
4	B	29	GLU
4	B	187	GLY
5	C	178	PRO
5	C	231	PRO
5	C	244	PRO
5	C	288	ARG
5	C	290	LEU
5	C	369	PRO
5	C	462	ASP
5	C	465	GLY
5	C	548	PRO
5	C	627	ARG
5	C	680	ASP
5	C	727	PRO

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Mol	Chain	Res	Type
5	C	908	GLY
5	C	1033	GLY
5	C	1106	ASP
6	D	40	GLU
6	D	43	GLY
6	D	55	ASP
6	D	137	PRO
6	D	447	VAL
6	D	705	ALA
6	D	742	GLY
6	D	832	ARG
6	D	844	ALA
6	D	1028	ALA
6	D	1129	THR
6	D	1389	LEU
6	D	1441	GLN
7	E	42	PRO
4	K	29	GLU
4	K	187	GLY
4	L	29	GLU
4	L	187	GLY
5	M	170	PRO
5	M	178	PRO
5	M	191	PHE
5	M	231	PRO
5	M	244	PRO
5	M	288	ARG
5	M	290	LEU
5	M	369	PRO
5	M	462	ASP
5	M	465	GLY
5	M	548	PRO
5	M	680	ASP
5	M	727	PRO
5	M	908	GLY
5	M	1033	GLY
5	M	1106	ASP
6	N	40	GLU
6	N	43	GLY
6	N	55	ASP
6	N	137	PRO
6	N	447	VAL

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Mol	Chain	Res	Type
6	N	705	ALA
6	N	742	GLY
6	N	832	ARG
6	N	844	ALA
6	N	1028	ALA
6	N	1129	THR
6	N	1389	LEU
6	N	1441	GLN
7	O	42	PRO
5	C	40	GLU
5	C	44	ILE
5	C	59	LYS
5	C	152	PRO
5	C	156	GLY
5	C	170	PRO
5	C	191	PHE
5	C	251	ASP
5	C	363	SER
5	C	418	LEU
5	C	457	ALA
5	C	529	VAL
5	C	626	ARG
5	C	698	ASP
5	C	783	ARG
5	C	784	ASP
5	C	864	GLY
5	C	1059	ASP
6	D	34	TYR
6	D	120	ALA
6	D	164	GLY
6	D	620	GLY
6	D	740	PHE
6	D	803	GLY
6	D	1208	ASP
6	D	1342	GLU
6	D	1385	GLY
6	D	1452	ILE
6	D	1454	GLY
7	E	53	GLY
7	E	58	PRO
5	M	40	GLU
5	M	44	ILE

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Mol	Chain	Res	Type
5	M	59	LYS
5	M	152	PRO
5	M	156	GLY
5	M	223	ASP
5	M	251	ASP
5	M	363	SER
5	M	418	LEU
5	M	529	VAL
5	M	626	ARG
5	M	627	ARG
5	M	698	ASP
5	M	905	ILE
5	M	1005	MET
5	M	1059	ASP
6	N	120	ALA
6	N	164	GLY
6	N	594	PRO
6	N	620	GLY
6	N	740	PHE
6	N	803	GLY
6	N	1125	PRO
6	N	1208	ASP
6	N	1221	VAL
6	N	1385	GLY
6	N	1424	VAL
6	N	1452	ILE
6	N	1454	GLY
7	O	53	GLY
7	O	58	PRO
4	A	3	ASP
5	C	74	GLY
5	C	164	PRO
5	C	188	LYS
5	C	223	ASP
5	C	262	ALA
5	C	268	ASP
5	C	325	ILE
5	C	424	GLY
5	C	517	ARG
5	C	740	GLU
5	C	808	ARG
6	D	37	LEU

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Mol	Chain	Res	Type
6	D	96	ALA
6	D	110	SER
6	D	395	VAL
6	D	507	ASN
6	D	594	PRO
6	D	696	HIS
6	D	822	ALA
6	D	924	MET
6	D	1125	PRO
6	D	1196	THR
6	D	1341	PRO
7	E	43	GLU
4	L	191	ASP
5	M	74	GLY
5	M	164	PRO
5	M	188	LYS
5	M	268	ASP
5	M	424	GLY
5	M	457	ALA
5	M	517	ARG
5	M	808	ARG
5	M	864	GLY
5	M	984	GLU
6	N	37	LEU
6	N	96	ALA
6	N	395	VAL
6	N	397	LYS
6	N	507	ASN
6	N	539	ASP
6	N	807	ALA
6	N	830	ALA
6	N	924	MET
6	N	1196	THR
6	N	1269	LYS
7	O	43	GLU
5	C	80	GLN
5	C	180	GLY
5	C	282	GLY
5	C	984	GLU
5	C	1004	LYS
5	C	1024	LYS
5	C	1045	ALA

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Mol	Chain	Res	Type
6	D	808	THR
6	D	830	ALA
6	D	1221	VAL
6	D	1244	GLY
6	D	1269	LYS
6	D	1390	LEU
4	K	3	ASP
5	M	180	GLY
5	M	262	ALA
5	M	767	PRO
5	M	1024	LYS
6	N	34	TYR
6	N	110	SER
6	N	735	ALA
6	N	808	THR
6	N	822	ALA
6	N	1244	GLY
7	O	32	ARG
7	O	82	GLU
5	C	767	PRO
5	C	877	PRO
6	D	31	THR
6	D	807	ALA
7	E	82	GLU
5	M	80	GLN
5	M	264	PRO
5	M	877	PRO
5	M	1004	LYS
5	M	1045	ALA
6	N	181	ASP
6	N	601	ARG
6	N	1390	LEU
4	A	118	ALA
4	B	48	ILE
4	B	191	ASP
5	C	11	GLU
5	C	264	PRO
5	C	905	ILE
5	C	1114	GLY
6	D	406	ASP
6	D	483	HIS
6	D	525	ARG

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Mol	Chain	Res	Type
6	D	530	VAL
6	D	601	ARG
4	L	48	ILE
5	M	740	GLU
5	M	781	LYS
6	N	24	GLY
6	N	483	HIS
6	N	696	HIS
6	N	1222	GLY
6	N	1341	PRO
5	C	646	GLY
5	C	779	GLY
7	E	5	GLY
4	L	157	GLY
5	M	144	PRO
5	M	646	GLY
5	M	779	GLY
5	M	1114	GLY
6	N	136	ASP
6	N	526	PRO
6	N	1214	PRO
4	A	157	GLY
4	B	157	GLY
5	C	1079	PRO
6	D	565	ILE
6	D	1214	PRO
4	K	9	PRO
5	M	53	PRO
4	A	9	PRO
5	C	53	PRO
6	D	134	VAL
6	D	136	ASP
6	D	1050	GLY
4	K	125	PRO
4	K	157	GLY
4	L	125	PRO
5	M	282	GLY
5	M	876	VAL
6	N	146	PRO
6	N	530	VAL
4	A	125	PRO
4	B	125	PRO

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Mol	Chain	Res	Type
6	D	484	PRO
6	D	595	GLY
5	M	336	VAL
6	N	484	PRO
6	N	595	GLY
6	N	1050	GLY
5	C	876	VAL
6	D	98	PRO
6	D	1222	GLY
6	N	565	ILE
7	O	5	GLY

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	
4	A	202/273 (74%)	162 (80%)	40 (20%)	2	11
4	B	202/273 (74%)	159 (79%)	43 (21%)	1	8
4	K	202/273 (74%)	162 (80%)	40 (20%)	2	11
4	L	202/273 (74%)	150 (74%)	52 (26%)	1	4
5	C	941/941 (100%)	704 (75%)	237 (25%)	1	4
5	M	941/941 (100%)	713 (76%)	228 (24%)	1	5
6	D	1063/1279 (83%)	825 (78%)	238 (22%)	1	7
6	N	1063/1279 (83%)	833 (78%)	230 (22%)	1	8
7	E	84/88 (96%)	59 (70%)	25 (30%)	0	2
7	O	84/88 (96%)	68 (81%)	16 (19%)	2	12
All	All	4984/5708 (87%)	3835 (77%)	1149 (23%)	1	6

All (1149) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	5	LYS
4	A	9	PRO
4	A	15	THR

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Mol	Chain	Res	Type
4	A	26	GLU
4	A	29	GLU
4	A	47	SER
4	A	60	ASP
4	A	74	ASP
4	A	84	GLU
4	A	88	ARG
4	A	89	PHE
4	A	92	PRO
4	A	99	LEU
4	A	100	LEU
4	A	101	LEU
4	A	102	LYS
4	A	104	GLU
4	A	115	LEU
4	A	127	LEU
4	A	138	LEU
4	A	140	MET
4	A	141	GLU
4	A	142	VAL
4	A	143	ARG
4	A	148	VAL
4	A	168	ASP
4	A	174	VAL
4	A	176	ARG
4	A	180	GLN
4	A	182	GLU
4	A	183	ASP
4	A	185	ARG
4	A	189	ARG
4	A	191	ASP
4	A	193	ASP
4	A	200	TRP
4	A	201	THR
4	A	206	THR
4	A	218	LEU
4	A	219	ARG
4	B	1	MET
4	B	2	LEU
4	B	3	ASP
4	B	4	SER
4	B	7	LYS

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Mol	Chain	Res	Type
4	B	25	LEU
4	B	26	GLU
4	B	28	LEU
4	B	32	PHE
4	B	41	ARG
4	B	42	ARG
4	B	47	SER
4	B	60	ASP
4	B	62	LEU
4	B	63	HIS
4	B	65	PHE
4	B	66	SER
4	B	67	THR
4	B	73	GLU
4	B	77	GLU
4	B	81	ASN
4	B	85	LEU
4	B	89	PHE
4	B	90	LEU
4	B	93	SER
4	B	95	GLN
4	B	112	ARG
4	B	122	ILE
4	B	140	MET
4	B	155	LYS
4	B	156	HIS
4	B	159	LYS
4	B	163	ASN
4	B	189	ARG
4	B	195	LEU
4	B	196	THR
4	B	197	LEU
4	B	201	THR
4	B	206	THR
4	B	213	GLN
4	B	216	GLU
4	B	221	HIS
4	B	229	GLN
5	C	1	MET
5	C	2	GLU
5	C	8	ARG
5	C	9	ILE

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Mol	Chain	Res	Type
5	C	10	ARG
5	C	13	ILE
5	C	26	TYR
5	C	30	LEU
5	C	34	VAL
5	C	38	LYS
5	C	39	ARG
5	C	40	GLU
5	C	41	ASN
5	C	48	PHE
5	C	49	ARG
5	C	51	THR
5	C	65	VAL
5	C	70	GLU
5	C	73	LEU
5	C	80	GLN
5	C	82	GLU
5	C	91	GLN
5	C	95	TYR
5	C	98	LEU
5	C	105	THR
5	C	114	PHE
5	C	115	LEU
5	C	117	HIS
5	C	121	MET
5	C	123	GLU
5	C	124	ASP
5	C	127	PHE
5	C	133	ASP
5	C	139	GLN
5	C	142	ARG
5	C	147	TYR
5	C	148	PHE
5	C	151	ASP
5	C	152	PRO
5	C	158	TYR
5	C	161	SER
5	C	163	ILE
5	C	170	PRO
5	C	171	TRP
5	C	177	GLU
5	C	178	PRO

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Mol	Chain	Res	Type
5	C	183	SER
5	C	184	MET
5	C	187	ASN
5	C	188	LYS
5	C	193	LEU
5	C	194	VAL
5	C	196	LEU
5	C	198	ARG
5	C	205	GLU
5	C	217	LEU
5	C	221	LEU
5	C	225	SER
5	C	233	GLU
5	C	235	LEU
5	C	237	ARG
5	C	238	LEU
5	C	241	LEU
5	C	243	ARG
5	C	252	LYS
5	C	254	VAL
5	C	260	LEU
5	C	266	ARG
5	C	267	TYR
5	C	268	ASP
5	C	274	ARG
5	C	275	TYR
5	C	278	GLU
5	C	279	GLU
5	C	284	ARG
5	C	285	LEU
5	C	286	SER
5	C	290	LEU
5	C	293	PHE
5	C	294	GLU
5	C	295	ASP
5	C	301	GLU
5	C	309	TYR
5	C	321	GLU
5	C	327	HIS
5	C	330	ASN
5	C	334	ARG
5	C	345	ARG

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Mol	Chain	Res	Type
5	C	351	LEU
5	C	359	MET
5	C	360	LEU
5	C	363	SER
5	C	365	ASP
5	C	366	SER
5	C	367	LEU
5	C	368	THR
5	C	385	PHE
5	C	387	SER
5	C	390	GLN
5	C	393	GLN
5	C	394	PHE
5	C	397	GLU
5	C	398	THR
5	C	399	ASN
5	C	405	ARG
5	C	408	ARG
5	C	413	LEU
5	C	419	THR
5	C	421	GLU
5	C	422	ARG
5	C	426	ASP
5	C	433	THR
5	C	435	TYR
5	C	441	VAL
5	C	445	GLU
5	C	453	THR
5	C	455	LEU
5	C	460	ARG
5	C	469	THR
5	C	484	VAL
5	C	491	GLU
5	C	492	ASP
5	C	498	GLN
5	C	503	LEU
5	C	507	ARG
5	C	508	ILE
5	C	518	LYS
5	C	525	SER
5	C	527	GLU
5	C	538	GLN

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Mol	Chain	Res	Type
5	C	560	MET
5	C	562	SER
5	C	564	MET
5	C	567	GLN
5	C	569	VAL
5	C	573	ARG
5	C	578	VAL
5	C	586	ARG
5	C	590	ASP
5	C	602	GLU
5	C	605	LYS
5	C	609	ASN
5	C	610	ARG
5	C	611	ILE
5	C	617	ASP
5	C	620	LEU
5	C	638	ASP
5	C	639	GLN
5	C	644	VAL
5	C	647	GLN
5	C	649	VAL
5	C	657	ASP
5	C	668	LEU
5	C	676	ILE
5	C	677	MET
5	C	679	PHE
5	C	684	PHE
5	C	699	PHE
5	C	701	THR
5	C	703	ILE
5	C	705	ILE
5	C	707	ARG
5	C	714	ASP
5	C	715	THR
5	C	721	ARG
5	C	727	PRO
5	C	729	LEU
5	C	739	GLU
5	C	740	GLU
5	C	748	GLU
5	C	753	ASP
5	C	766	GLU

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Mol	Chain	Res	Type
5	C	770	GLU
5	C	774	LEU
5	C	780	GLU
5	C	784	ASP
5	C	805	ARG
5	C	807	ARG
5	C	814	GLU
5	C	816	LYS
5	C	821	GLU
5	C	825	VAL
5	C	834	GLN
5	C	841	ASN
5	C	846	LYS
5	C	856	GLU
5	C	858	MET
5	C	865	THR
5	C	868	ASP
5	C	870	ILE
5	C	872	ASN
5	C	881	ASN
5	C	890	LEU
5	C	900	ARG
5	C	904	PRO
5	C	923	GLU
5	C	937	ASP
5	C	938	LYS
5	C	939	ARG
5	C	946	ARG
5	C	950	LEU
5	C	953	VAL
5	C	958	THR
5	C	960	GLU
5	C	961	GLU
5	C	963	LEU
5	C	966	LEU
5	C	971	LYS
5	C	981	GLU
5	C	988	VAL
5	C	989	VAL
5	C	995	MET
5	C	999	HIS
5	C	1002	GLU

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Mol	Chain	Res	Type
5	C	1005	MET
5	C	1016	ILE
5	C	1019	GLN
5	C	1021	LEU
5	C	1031	ARG
5	C	1035	MET
5	C	1040	LEU
5	C	1051	GLU
5	C	1052	MET
5	C	1061	GLU
5	C	1064	ASN
5	C	1072	LYS
5	C	1080	SER
5	C	1085	PHE
5	C	1097	LEU
5	C	1098	ASP
5	C	1101	THR
5	C	1104	GLU
5	C	1105	LYS
5	C	1108	PRO
5	C	1110	ASP
5	C	1111	ILE
5	C	1118	LYS
6	D	6	ARG
6	D	8	VAL
6	D	16	GLU
6	D	29	PRO
6	D	34	TYR
6	D	41	ARG
6	D	42	ASP
6	D	45	PHE
6	D	56	TYR
6	D	57	GLU
6	D	58	CYS
6	D	68	PHE
6	D	69	GLU
6	D	75	ARG
6	D	76	CYS
6	D	82	LYS
6	D	85	VAL
6	D	87	ARG
6	D	95	LEU

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Mol	Chain	Res	Type
6	D	97	THR
6	D	101	HIS
6	D	103	TRP
6	D	108	VAL
6	D	111	LYS
6	D	116	LEU
6	D	124	GLU
6	D	127	LEU
6	D	128	TYR
6	D	133	ILE
6	D	145	VAL
6	D	149	LYS
6	D	151	GLN
6	D	152	LEU
6	D	155	ASP
6	D	161	LEU
6	D	163	TYR
6	D	169	TYR
6	D	180	LYS
6	D	189	GLN
6	D	196	VAL
6	D	198	ARG
6	D	199	LEU
6	D	206	ARG
6	D	207	PHE
6	D	407	VAL
6	D	410	SER
6	D	423	ASP
6	D	430	ASP
6	D	443	VAL
6	D	445	ARG
6	D	447	VAL
6	D	452	ILE
6	D	456	MET
6	D	465	LEU
6	D	470	LEU
6	D	474	GLU
6	D	481	MET
6	D	483	HIS
6	D	485	SER
6	D	493	ARG
6	D	496	LEU

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Mol	Chain	Res	Type
6	D	505	SER
6	D	508	ARG
6	D	513	ILE
6	D	519	VAL
6	D	522	PRO
6	D	523	ASP
6	D	525	ARG
6	D	538	SER
6	D	542	ASP
6	D	543	LEU
6	D	546	ARG
6	D	550	ARG
6	D	554	LEU
6	D	570	GLU
6	D	586	ARG
6	D	590	PRO
6	D	594	PRO
6	D	607	LEU
6	D	611	GLN
6	D	615	ARG
6	D	619	LEU
6	D	621	LYS
6	D	626	SER
6	D	639	LEU
6	D	642	CYS
6	D	644	LEU
6	D	651	GLU
6	D	659	LYS
6	D	662	GLU
6	D	669	ASN
6	D	670	VAL
6	D	676	MET
6	D	678	GLU
6	D	679	ARG
6	D	682	ASP
6	D	691	LEU
6	D	692	GLU
6	D	698	LYS
6	D	703	ASN
6	D	709	HIS
6	D	710	ARG
6	D	724	GLN

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Mol	Chain	Res	Type
6	D	733	CYS
6	D	734	GLU
6	D	736	PHE
6	D	737	ASN
6	D	739	ASP
6	D	740	PHE
6	D	741	ASP
6	D	743	ASP
6	D	744	GLN
6	D	754	PHE
6	D	758	GLU
6	D	762	GLN
6	D	763	MET
6	D	764	LEU
6	D	782	SER
6	D	783	ARG
6	D	785	ILE
6	D	791	TYR
6	D	796	ARG
6	D	808	THR
6	D	810	GLU
6	D	811	GLU
6	D	824	ASN
6	D	826	PRO
6	D	827	ILE
6	D	832	ARG
6	D	833	GLU
6	D	834	THR
6	D	838	ARG
6	D	842	VAL
6	D	859	ASP
6	D	863	VAL
6	D	868	TYR
6	D	869	MET
6	D	876	SER
6	D	879	ARG
6	D	897	TRP
6	D	899	LEU
6	D	904	VAL
6	D	907	GLU
6	D	913	ASP
6	D	914	LEU

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Mol	Chain	Res	Type
6	D	922	LEU
6	D	932	ASP
6	D	947	ILE
6	D	951	ILE
6	D	959	GLU
6	D	971	LEU
6	D	975	GLU
6	D	980	MET
6	D	982	PHE
6	D	983	LEU
6	D	988	ARG
6	D	991	GLN
6	D	1005	GLN
6	D	1014	ASN
6	D	1038	LEU
6	D	1044	LEU
6	D	1052	THR
6	D	1060	SER
6	D	1062	ARG
6	D	1063	GLU
6	D	1066	THR
6	D	1067	VAL
6	D	1070	TYR
6	D	1074	SER
6	D	1083	ASP
6	D	1084	THR
6	D	1090	ASP
6	D	1093	TYR
6	D	1096	ARG
6	D	1100	ASP
6	D	1112	CYS
6	D	1114	THR
6	D	1118	ILE
6	D	1119	SER
6	D	1127	GLU
6	D	1134	LEU
6	D	1135	ARG
6	D	1139	ASP
6	D	1151	ARG
6	D	1152	GLU
6	D	1155	VAL
6	D	1164	ARG

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Mol	Chain	Res	Type
6	D	1166	LEU
6	D	1167	SER
6	D	1196	THR
6	D	1197	ARG
6	D	1207	TYR
6	D	1211	MET
6	D	1214	PRO
6	D	1231	GLU
6	D	1232	PRO
6	D	1234	THR
6	D	1237	THR
6	D	1242	HIS
6	D	1256	LEU
6	D	1257	PRO
6	D	1259	VAL
6	D	1260	ILE
6	D	1264	GLU
6	D	1267	ARG
6	D	1271	LYS
6	D	1330	ILE
6	D	1331	ASP
6	D	1332	PRO
6	D	1337	GLU
6	D	1344	VAL
6	D	1346	ARG
6	D	1347	TYR
6	D	1354	LYS
6	D	1363	LEU
6	D	1365	ASP
6	D	1376	MET
6	D	1383	ASP
6	D	1389	LEU
6	D	1393	GLN
6	D	1395	LEU
6	D	1397	LYS
6	D	1403	LEU
6	D	1415	VAL
6	D	1422	MET
6	D	1424	VAL
6	D	1426	LYS
6	D	1429	LEU
6	D	1434	TRP

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Mol	Chain	Res	Type
6	D	1436	SER
6	D	1440	PHE
6	D	1441	GLN
6	D	1464	GLU
6	D	1465	ASN
6	D	1470	ARG
6	D	1472	ILE
6	D	1483	PHE
6	D	1488	ASP
7	E	28	GLN
7	E	30	LEU
7	E	31	LEU
7	E	32	ARG
7	E	40	LEU
7	E	41	GLU
7	E	42	PRO
7	E	47	LYS
7	E	49	GLN
7	E	51	LEU
7	E	57	ASP
7	E	67	GLU
7	E	68	LEU
7	E	69	LEU
7	E	70	THR
7	E	72	ARG
7	E	74	VAL
7	E	77	GLU
7	E	79	LEU
7	E	81	PRO
7	E	82	GLU
7	E	83	ASP
7	E	85	LEU
7	E	86	GLN
7	E	94	PRO
4	K	1	MET
4	K	5	LYS
4	K	9	PRO
4	K	20	TYR
4	K	26	GLU
4	K	45	LEU
4	K	49	PRO
4	K	54	THR

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Mol	Chain	Res	Type
4	K	58	ILE
4	K	64	GLU
4	K	80	LEU
4	K	86	VAL
4	K	89	PHE
4	K	92	PRO
4	K	93	SER
4	K	96	THR
4	K	99	LEU
4	K	102	LYS
4	K	109	VAL
4	K	116	PRO
4	K	126	ASP
4	K	127	LEU
4	K	131	THR
4	K	134	GLU
4	K	143	ARG
4	K	145	ASP
4	K	167	VAL
4	K	179	PHE
4	K	180	GLN
4	K	182	GLU
4	K	183	ASP
4	K	189	ARG
4	K	197	LEU
4	K	201	THR
4	K	204	SER
4	K	206	THR
4	K	208	LEU
4	K	216	GLU
4	K	219	ARG
4	K	229	GLN
4	L	1	MET
4	L	3	ASP
4	L	4	SER
4	L	7	LYS
4	L	10	VAL
4	L	11	PHE
4	L	15	THR
4	L	20	TYR
4	L	26	GLU
4	L	30	ARG

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Mol	Chain	Res	Type
4	L	41	ARG
4	L	47	SER
4	L	51	THR
4	L	58	ILE
4	L	60	ASP
4	L	61	VAL
4	L	62	LEU
4	L	63	HIS
4	L	64	GLU
4	L	66	SER
4	L	67	THR
4	L	73	GLU
4	L	77	GLU
4	L	80	LEU
4	L	81	ASN
4	L	89	PHE
4	L	95	GLN
4	L	100	LEU
4	L	115	LEU
4	L	117	VAL
4	L	122	ILE
4	L	132	LEU
4	L	140	MET
4	L	151	VAL
4	L	160	ASP
4	L	161	ARG
4	L	163	ASN
4	L	172	SER
4	L	176	ARG
4	L	177	VAL
4	L	179	PHE
4	L	182	GLU
4	L	184	THR
4	L	190	THR
4	L	191	ASP
4	L	196	THR
4	L	200	TRP
4	L	206	THR
4	L	223	THR
4	L	224	TYR
4	L	226	SER
4	L	227	ASN

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Mol	Chain	Res	Type
5	M	1	MET
5	M	10	ARG
5	M	26	TYR
5	M	27	ARG
5	M	30	LEU
5	M	31	GLN
5	M	33	ASP
5	M	39	ARG
5	M	42	VAL
5	M	51	THR
5	M	95	TYR
5	M	98	LEU
5	M	99	GLN
5	M	100	LEU
5	M	107	LEU
5	M	115	LEU
5	M	117	HIS
5	M	118	ILE
5	M	120	LEU
5	M	126	SER
5	M	128	ILE
5	M	133	ASP
5	M	141	HIS
5	M	142	ARG
5	M	148	PHE
5	M	158	TYR
5	M	170	PRO
5	M	173	ASP
5	M	177	GLU
5	M	178	PRO
5	M	179	ASN
5	M	182	VAL
5	M	186	VAL
5	M	188	LYS
5	M	190	LYS
5	M	193	LEU
5	M	194	VAL
5	M	198	ARG
5	M	205	GLU
5	M	209	ARG
5	M	210	GLU
5	M	216	GLU

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Mol	Chain	Res	Type
5	M	218	VAL
5	M	221	LEU
5	M	222	MET
5	M	224	GLU
5	M	225	SER
5	M	227	PHE
5	M	230	ARG
5	M	233	GLU
5	M	241	LEU
5	M	243	ARG
5	M	252	LYS
5	M	260	LEU
5	M	261	ILE
5	M	264	PRO
5	M	266	ARG
5	M	267	TYR
5	M	271	GLU
5	M	281	LEU
5	M	285	LEU
5	M	289	THR
5	M	290	LEU
5	M	293	PHE
5	M	294	GLU
5	M	301	GLU
5	M	303	PHE
5	M	304	LEU
5	M	309	TYR
5	M	320	HIS
5	M	323	ASP
5	M	331	ARG
5	M	332	ARG
5	M	342	ASP
5	M	344	PHE
5	M	350	ARG
5	M	351	LEU
5	M	359	MET
5	M	361	MET
5	M	365	ASP
5	M	367	LEU
5	M	376	ARG
5	M	383	ARG
5	M	387	SER

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Mol	Chain	Res	Type
5	M	388	ARG
5	M	393	GLN
5	M	394	PHE
5	M	401	LEU
5	M	413	LEU
5	M	419	THR
5	M	422	ARG
5	M	425	PHE
5	M	426	ASP
5	M	433	THR
5	M	440	PRO
5	M	443	THR
5	M	458	TYR
5	M	471	TYR
5	M	472	ARG
5	M	474	VAL
5	M	480	THR
5	M	485	TYR
5	M	487	THR
5	M	489	THR
5	M	503	LEU
5	M	511	GLU
5	M	516	ARG
5	M	517	ARG
5	M	520	GLU
5	M	530	GLU
5	M	537	LYS
5	M	543	ASN
5	M	553	ASP
5	M	554	ASP
5	M	572	ILE
5	M	579	VAL
5	M	581	THR
5	M	585	GLU
5	M	586	ARG
5	M	589	ARG
5	M	599	GLU
5	M	602	GLU
5	M	607	ASP
5	M	609	ASN
5	M	613	VAL
5	M	616	GLU

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Mol	Chain	Res	Type
5	M	617	ASP
5	M	620	LEU
5	M	625	LEU
5	M	627	ARG
5	M	628	PHE
5	M	645	VAL
5	M	647	GLN
5	M	654	LEU
5	M	662	GLU
5	M	668	LEU
5	M	671	ASN
5	M	677	MET
5	M	678	PRO
5	M	679	PHE
5	M	686	ASP
5	M	699	PHE
5	M	701	THR
5	M	706	GLU
5	M	711	GLU
5	M	715	THR
5	M	717	LEU
5	M	727	PRO
5	M	728	HIS
5	M	731	GLU
5	M	736	ASP
5	M	737	LEU
5	M	738	ASP
5	M	739	GLU
5	M	745	ILE
5	M	748	GLU
5	M	750	LYS
5	M	751	PRO
5	M	765	SER
5	M	766	GLU
5	M	769	PRO
5	M	780	GLU
5	M	781	LYS
5	M	783	ARG
5	M	784	ASP
5	M	785	VAL
5	M	787	ASP
5	M	794	PRO

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Mol	Chain	Res	Type
5	M	803	THR
5	M	805	ARG
5	M	806	LEU
5	M	807	ARG
5	M	814	GLU
5	M	824	ARG
5	M	834	GLN
5	M	841	ASN
5	M	856	GLU
5	M	857	ASP
5	M	862	PRO
5	M	868	ASP
5	M	870	ILE
5	M	878	SER
5	M	881	ASN
5	M	884	GLN
5	M	904	PRO
5	M	907	ASP
5	M	913	GLU
5	M	916	GLU
5	M	918	LEU
5	M	920	GLN
5	M	937	ASP
5	M	938	LYS
5	M	946	ARG
5	M	953	VAL
5	M	958	THR
5	M	960	GLU
5	M	966	LEU
5	M	981	GLU
5	M	984	GLU
5	M	988	VAL
5	M	997	LEU
5	M	999	HIS
5	M	1003	ASP
5	M	1005	MET
5	M	1006	HIS
5	M	1008	ARG
5	M	1016	ILE
5	M	1017	THR
5	M	1018	GLN
5	M	1021	LEU

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Mol	Chain	Res	Type
5	M	1027	PHE
5	M	1035	MET
5	M	1054	THR
5	M	1055	LEU
5	M	1058	ASP
5	M	1060	ILE
5	M	1074	GLU
5	M	1075	ASP
5	M	1078	GLU
5	M	1081	VAL
5	M	1085	PHE
5	M	1092	LEU
5	M	1095	LEU
5	M	1097	LEU
5	M	1098	ASP
5	M	1103	ASP
5	M	1110	ASP
5	M	1115	LEU
6	N	4	GLU
6	N	9	ARG
6	N	20	SER
6	N	21	TRP
6	N	36	THR
6	N	40	GLU
6	N	41	ARG
6	N	42	ASP
6	N	44	LEU
6	N	56	TYR
6	N	57	GLU
6	N	64	LYS
6	N	65	ARG
6	N	67	ARG
6	N	68	PHE
6	N	69	GLU
6	N	75	ARG
6	N	76	CYS
6	N	79	GLU
6	N	87	ARG
6	N	95	LEU
6	N	97	THR
6	N	98	PRO
6	N	101	HIS

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Mol	Chain	Res	Type
6	N	108	VAL
6	N	112	ILE
6	N	116	LEU
6	N	122	GLU
6	N	123	LEU
6	N	124	GLU
6	N	127	LEU
6	N	131	LYS
6	N	133	ILE
6	N	138	LYS
6	N	145	VAL
6	N	147	VAL
6	N	148	GLU
6	N	149	LYS
6	N	150	ARG
6	N	152	LEU
6	N	153	LEU
6	N	155	ASP
6	N	157	GLU
6	N	159	ARG
6	N	163	TYR
6	N	166	GLN
6	N	167	GLU
6	N	176	ASP
6	N	178	LEU
6	N	180	LYS
6	N	199	LEU
6	N	405	ASP
6	N	406	ASP
6	N	414	ARG
6	N	430	ASP
6	N	434	ARG
6	N	450	TYR
6	N	451	ASP
6	N	455	ARG
6	N	456	MET
6	N	462	GLN
6	N	464	LEU
6	N	465	LEU
6	N	469	ASP
6	N	470	LEU
6	N	471	GLU

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Mol	Chain	Res	Type
6	N	477	LEU
6	N	493	ARG
6	N	496	LEU
6	N	507	ASN
6	N	511	TRP
6	N	512	MET
6	N	513	ILE
6	N	522	PRO
6	N	523	ASP
6	N	525	ARG
6	N	537	THR
6	N	538	SER
6	N	539	ASP
6	N	542	ASP
6	N	544	TYR
6	N	550	ARG
6	N	564	GLU
6	N	565	ILE
6	N	567	ILE
6	N	576	GLU
6	N	581	LEU
6	N	584	ASN
6	N	594	PRO
6	N	617	ASN
6	N	619	LEU
6	N	629	SER
6	N	635	PRO
6	N	639	LEU
6	N	641	GLN
6	N	647	ARG
6	N	660	LYS
6	N	666	ILE
6	N	669	ASN
6	N	680	GLN
6	N	682	ASP
6	N	688	TRP
6	N	692	GLU
6	N	699	VAL
6	N	701	LEU
6	N	707	THR
6	N	709	HIS
6	N	728	LEU

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Mol	Chain	Res	Type
6	N	733	CYS
6	N	734	GLU
6	N	737	ASN
6	N	739	ASP
6	N	740	PHE
6	N	741	ASP
6	N	743	ASP
6	N	754	PHE
6	N	769	LEU
6	N	792	ILE
6	N	794	GLN
6	N	797	LYS
6	N	817	GLU
6	N	818	ARG
6	N	823	LEU
6	N	824	ASN
6	N	836	VAL
6	N	838	ARG
6	N	840	LYS
6	N	841	TYR
6	N	847	ASP
6	N	861	GLN
6	N	864	VAL
6	N	868	TYR
6	N	881	LEU
6	N	888	GLU
6	N	897	TRP
6	N	902	LEU
6	N	907	GLU
6	N	913	ASP
6	N	914	LEU
6	N	921	ARG
6	N	930	LEU
6	N	939	PHE
6	N	947	ILE
6	N	951	ILE
6	N	952	ASP
6	N	953	ASP
6	N	968	ASP
6	N	976	GLN
6	N	982	PHE
6	N	983	LEU

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Mol	Chain	Res	Type
6	N	985	ASP
6	N	988	ARG
6	N	1001	GLU
6	N	1017	PHE
6	N	1032	PRO
6	N	1034	GLN
6	N	1039	CYS
6	N	1041	LEU
6	N	1042	ARG
6	N	1046	GLN
6	N	1053	PHE
6	N	1060	SER
6	N	1062	ARG
6	N	1063	GLU
6	N	1070	TYR
6	N	1083	ASP
6	N	1088	THR
6	N	1093	TYR
6	N	1097	LYS
6	N	1098	LEU
6	N	1100	ASP
6	N	1109	GLU
6	N	1112	CYS
6	N	1115	THR
6	N	1116	ASN
6	N	1129	THR
6	N	1130	ARG
6	N	1144	LEU
6	N	1151	ARG
6	N	1155	VAL
6	N	1160	LEU
6	N	1164	ARG
6	N	1166	LEU
6	N	1170	ASP
6	N	1179	GLU
6	N	1197	ARG
6	N	1198	TYR
6	N	1204	CYS
6	N	1207	TYR
6	N	1208	ASP
6	N	1211	MET
6	N	1213	ARG

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Mol	Chain	Res	Type
6	N	1219	GLU
6	N	1228	SER
6	N	1232	PRO
6	N	1237	THR
6	N	1238	MET
6	N	1242	HIS
6	N	1251	ASP
6	N	1257	PRO
6	N	1262	LEU
6	N	1264	GLU
6	N	1271	LYS
6	N	1334	GLN
6	N	1337	GLU
6	N	1345	GLU
6	N	1348	LEU
6	N	1350	GLU
6	N	1380	GLU
6	N	1381	VAL
6	N	1383	ASP
6	N	1389	LEU
6	N	1391	GLU
6	N	1397	LYS
6	N	1412	LYS
6	N	1415	VAL
6	N	1418	LYS
6	N	1422	MET
6	N	1429	LEU
6	N	1431	THR
6	N	1432	LYS
6	N	1433	SER
6	N	1440	PHE
6	N	1441	GLN
6	N	1452	ILE
6	N	1471	LEU
6	N	1472	ILE
6	N	1478	SER
6	N	1489	GLN
6	N	1492	LEU
7	O	26	ARG
7	O	30	LEU
7	O	43	GLU
7	O	46	PRO

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Mol	Chain	Res	Type
7	O	48	MET
7	O	56	ASP
7	O	59	ASN
7	O	69	LEU
7	O	72	ARG
7	O	78	ASN
7	O	81	PRO
7	O	82	GLU
7	O	86	GLN
7	O	89	MET
7	O	94	PRO
7	O	96	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (154) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	91	ASN
4	A	124	ASN
4	A	163	ASN
4	A	180	GLN
4	A	221	HIS
4	B	81	ASN
4	B	95	GLN
4	B	124	ASN
4	B	128	HIS
4	B	139	ASN
4	B	180	GLN
4	B	221	HIS
4	B	229	GLN
5	C	22	GLN
5	C	80	GLN
5	C	130	ASN
5	C	139	GLN
5	C	187	ASN
5	C	320	HIS
5	C	327	HIS
5	C	330	ASN
5	C	343	GLN
5	C	390	GLN
5	C	393	GLN
5	C	399	ASN
5	C	406	HIS

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Mol	Chain	Res	Type
5	C	431	HIS
5	C	434	HIS
5	C	500	ASN
5	C	543	ASN
5	C	552	HIS
5	C	565	GLN
5	C	567	GLN
5	C	609	ASN
5	C	639	GLN
5	C	663	ASN
5	C	671	ASN
5	C	834	GLN
5	C	841	ASN
5	C	872	ASN
5	C	881	ASN
5	C	889	HIS
5	C	899	GLN
5	C	1019	GLN
5	C	1030	GLN
5	C	1050	GLN
5	C	1100	GLN
5	C	1107	ASN
6	D	143	ASN
6	D	166	GLN
6	D	463	GLN
6	D	549	ASN
6	D	552	ASN
6	D	616	GLN
6	D	636	GLN
6	D	703	ASN
6	D	709	HIS
6	D	714	GLN
6	D	727	GLN
6	D	737	ASN
6	D	756	GLN
6	D	762	GLN
6	D	824	ASN
6	D	917	GLN
6	D	962	GLN
6	D	1005	GLN
6	D	1010	ASN
6	D	1014	ASN

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Mol	Chain	Res	Type
6	D	1033	GLN
6	D	1103	HIS
6	D	1172	HIS
6	D	1227	GLN
6	D	1334	GLN
6	D	1359	GLN
6	D	1441	GLN
6	D	1465	ASN
6	D	1485	GLN
7	E	28	GLN
7	E	29	GLN
7	E	33	HIS
7	E	37	ASN
7	E	86	GLN
4	K	16	GLN
4	K	63	HIS
4	K	95	GLN
4	K	124	ASN
4	K	156	HIS
4	K	180	GLN
4	K	212	ASN
4	K	213	GLN
4	K	229	GLN
4	L	81	ASN
4	L	95	GLN
4	L	124	ASN
4	L	227	ASN
5	M	31	GLN
5	M	91	GLN
5	M	139	GLN
5	M	204	GLN
5	M	374	ASN
5	M	393	GLN
5	M	406	HIS
5	M	543	ASN
5	M	552	HIS
5	M	556	ASN
5	M	565	GLN
5	M	567	GLN
5	M	575	GLN
5	M	609	ASN
5	M	633	GLN

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Mol	Chain	Res	Type
5	M	639	GLN
5	M	671	ASN
5	M	704	HIS
5	M	829	GLN
5	M	841	ASN
5	M	872	ASN
5	M	881	ASN
5	M	889	HIS
5	M	899	GLN
5	M	1050	GLN
5	M	1064	ASN
5	M	1107	ASN
6	N	125	GLN
6	N	442	ASN
6	N	507	ASN
6	N	529	GLN
6	N	549	ASN
6	N	575	GLN
6	N	584	ASN
6	N	616	GLN
6	N	617	ASN
6	N	680	GLN
6	N	696	HIS
6	N	703	ASN
6	N	714	GLN
6	N	727	GLN
6	N	737	ASN
6	N	744	GLN
6	N	756	GLN
6	N	824	ASN
6	N	845	ASN
6	N	861	GLN
6	N	906	GLN
6	N	976	GLN
6	N	1010	ASN
6	N	1014	ASN
6	N	1025	GLN
6	N	1033	GLN
6	N	1124	GLN
6	N	1202	GLN
6	N	1465	ASN
7	O	29	GLN

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Mol	Chain	Res	Type
7	O	78	ASN
7	O	86	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	H	16/16 (100%)	10 (62%)	8 (50%)
2	Y	16/16 (100%)	10 (62%)	8 (50%)
All	All	32/32 (100%)	20 (62%)	16 (50%)

All (20) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	H	2	A
2	H	3	G
2	H	6	U
2	H	7	G
2	H	8	C
2	H	9	G
2	H	10	G
2	H	12	G
2	H	13	C
2	H	15	C
2	Y	2	A
2	Y	3	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G
2	Y	10	G
2	Y	12	G
2	Y	13	C
2	Y	15	C

All (16) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	H	1	G
2	H	6	U
2	H	7	G
2	H	8	C

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Mol	Chain	Res	Type
2	H	9	G
2	H	12	G
2	H	13	C
2	H	15	C
2	Y	1	G
2	Y	6	U
2	Y	7	G
2	Y	8	C
2	Y	9	G
2	Y	12	G
2	Y	13	C
2	Y	15	C

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 10 ligands modelled in this entry, 8 are monoatomic - leaving 2 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	$\# Z > 2$
10	APC	D	3999	9	33,33,33	4.47	4 (12%)	52,52,52	2.00	13 (25%)
10	APC	N	4999	9	33,33,33	4.52	4 (12%)	52,52,52	2.05	13 (25%)

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
10	APC	D	3999	9	-	0/20/38/38	0/1/3/3
10	APC	N	4999	9	-	0/20/38/38	0/1/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	N	4999	APC	PB-C3A	-18.34	1.64	1.79
10	D	3999	APC	PB-C3A	-17.89	1.64	1.79
10	N	4999	APC	PA-C3A	-17.54	1.64	1.79
10	D	3999	APC	PA-C3A	-17.29	1.64	1.79
10	D	3999	APC	PB-O2B	-3.37	1.48	1.56
10	D	3999	APC	PA-O2A	-2.97	1.49	1.56
10	N	4999	APC	PB-O2B	-2.86	1.49	1.56
10	N	4999	APC	PA-O2A	-2.64	1.49	1.56

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	N	4999	APC	O4'-C1'-N9	6.22	114.23	108.44
10	N	4999	APC	C1'-N9-C4	-6.11	116.08	126.64
10	N	4999	APC	C8-N9-C1'	6.00	138.20	126.38
10	D	3999	APC	C8-N9-C1'	5.90	138.00	126.38
10	D	3999	APC	C1'-N9-C4	-5.74	116.72	126.64
10	D	3999	APC	O4'-C1'-N9	5.49	113.55	108.44
10	D	3999	APC	PA-C3A-PB	4.40	123.94	117.62
10	N	4999	APC	PA-C3A-PB	4.07	123.47	117.62
10	N	4999	APC	PG-O3B-PB	-3.61	119.47	131.81
10	D	3999	APC	PG-O3B-PB	-3.56	119.65	131.81
10	D	3999	APC	O2A-PA-O1A	2.95	120.11	110.93
10	N	4999	APC	O2A-PA-O1A	2.91	119.98	110.93
10	N	4999	APC	O2B-PB-O1B	2.89	119.93	110.93
10	D	3999	APC	C5-C6-N6	2.87	127.21	120.72
10	D	3999	APC	O2'-C2'-C3'	-2.87	102.51	111.83
10	D	3999	APC	O2B-PB-O1B	2.84	119.75	110.93
10	N	4999	APC	C5-C6-N6	2.72	126.87	120.72
10	N	4999	APC	C2'-C3'-C4'	2.34	107.31	102.65
10	D	3999	APC	C2'-C3'-C4'	2.28	107.20	102.65
10	N	4999	APC	C2'-C1'-N9	-2.25	107.48	113.27
10	N	4999	APC	O2A-PA-C3A	2.21	111.69	106.61
10	D	3999	APC	C8-N9-C4	-2.19	105.23	106.90
10	N	4999	APC	O3B-PB-O1B	-2.16	106.94	111.51

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Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
10	D	3999	APC	C3'-C2'-C1'	2.15	104.28	100.91
10	D	3999	APC	O3B-PB-O1B	-2.09	107.08	111.51
10	N	4999	APC	C3'-C2'-C1'	2.05	104.11	100.91

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	G	23/23 (100%)	-0.57	0 100 100	22, 46, 76, 79	0
1	X	23/23 (100%)	-0.51	0 100 100	21, 38, 71, 90	0
2	H	16/16 (100%)	-0.50	0 100 100	36, 56, 100, 102	0
2	Y	16/16 (100%)	-0.53	0 100 100	21, 73, 101, 103	0
3	I	13/14 (92%)	-0.72	0 100 100	49, 65, 74, 85	0
3	Z	13/14 (92%)	-0.68	0 100 100	54, 67, 80, 81	0
4	A	229/315 (72%)	-0.34	0 100 100	41, 66, 86, 94	0
4	B	229/315 (72%)	-0.31	1 (0%) 90 41	43, 70, 85, 101	0
4	K	229/315 (72%)	-0.34	0 100 100	41, 65, 81, 93	0
4	L	229/315 (72%)	-0.34	0 100 100	38, 68, 80, 90	0
5	C	1119/1119 (100%)	-0.34	1 (0%) 93 63	26, 64, 86, 101	0
5	M	1119/1119 (100%)	-0.33	0 100 100	25, 65, 89, 109	0
6	D	1264/1524 (82%)	-0.37	3 (0%) 93 54	23, 61, 83, 100	0
6	N	1264/1524 (82%)	-0.38	0 100 100	26, 60, 84, 100	0
7	E	95/99 (95%)	-0.38	0 100 100	35, 59, 74, 82	0
7	O	95/99 (95%)	-0.40	0 100 100	45, 66, 80, 84	0
All	All	5976/6850 (87%)	-0.36	5 (0%) 93 63	21, 64, 86, 109	0

All (5) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
6	D	416	ALA	3.0
4	B	147	GLY	2.5
6	D	391	ALA	2.1
6	D	192	ALA	2.0
5	C	185	LYS	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
8	ZN	D	6112	1/1	0.15	0.20	59,59,59,59	0
10	APC	N	4999	31/31	0.17	0.18	45,49,51,54	0
10	APC	D	3999	31/31	0.17	0.16	41,49,52,54	0
8	ZN	N	7112	1/1	0.14	-0.80	65,65,65,65	0
8	ZN	N	5058	1/1	0.10	-1.18	66,66,66,66	0
9	MG	N	9001	1/1	0.11	-1.44	21,21,21,21	0
9	MG	N	9002	1/1	0.10	-1.54	23,23,23,23	0
9	MG	D	8001	1/1	0.10	-1.58	23,23,23,23	0
8	ZN	D	4058	1/1	0.10	-1.91	66,66,66,66	0
9	MG	D	8002	1/1	0.09	-2.15	25,25,25,25	0

6.5 Other polymers ⓘ

There are no such residues in this entry.