



Full wwPDB EM Model Validation Report ⓘ

Mar 15, 2020 – 03:52 PM EDT

PDB ID : 6PSU
EMDB ID : EMD-20464
Title : Escherichia coli RNA polymerase promoter unwinding intermediate (TRPi2)
with TraR and rpsT P2 promoter
Authors : Chen, J.; Chiu, C.E.; Campbell, E.A.; Darst, S.A.
Deposited on : 2019-07-13
Resolution : 3.90 Å(reported)

This is a Full wwPDB EM Model Validation Report for a publicly released PDB/EMDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.0 (224370), CSD as540be (2019)
buster-report : 1.1.7 (2018)
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.8

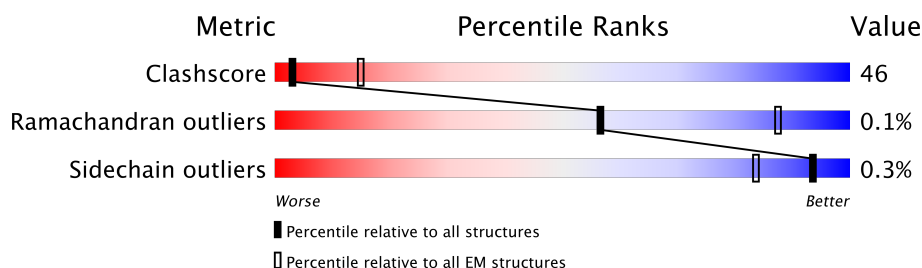
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 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)	EM structures (#Entries)
Clashscore	136327	1886
Ramachandran outliers	132723	1663
Sidechain outliers	132532	1531

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

Mol	Chain	Length	Quality of chain
1	N	72	44% 56%
2	G	329	32% 38% 30%
2	H	329	24% 42% 34%
2	M	329	9% 13% 78%
3	I	1342	36% 63% .
4	J	1430	34% 59% 6%
5	K	91	27% 52% 21%
6	L	616	25% 61% 14%
7	O	85	. 46% 51%

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Mol	Chain	Length	Quality of chain
8	P	85	<div> 7% 35% 56% </div>

2 Entry composition

There are 11 unique types of molecules in this entry. The entry contains 32323 atoms, of which 156 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Protein TraR.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	N	72	Total	C	N	O	S	0	0
			571	353	105	108	5		

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	G	230	Total	C	N	O	S	0	0
			1775	1108	314	347	6		
2	H	217	Total	C	N	O	S	0	0
			1668	1043	293	326	6		
2	M	73	Total	C	N	O	S	0	0
			572	362	100	108	2		

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	I	1340	Total	C	N	O	S	0	0
			10567	6631	1841	2052	43		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	J	1344	Total	C	N	O	S	0	0
			10433	6556	1856	1971	50		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	VAL	-	expression tag	UNP P0A8T7
J	1408	LEU	-	expression tag	UNP P0A8T7
J	1409	GLU	-	expression tag	UNP P0A8T7
J	1410	LEU	-	expression tag	UNP P0A8T7
J	1411	GLU	-	expression tag	UNP P0A8T7

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Chain	Residue	Modelled	Actual	Comment	Reference
J	1412	VAL	-	expression tag	UNP P0A8T7
J	1413	LEU	-	expression tag	UNP P0A8T7
J	1414	PHE	-	expression tag	UNP P0A8T7
J	1415	GLN	-	expression tag	UNP P0A8T7
J	1416	GLY	-	expression tag	UNP P0A8T7
J	1417	PRO	-	expression tag	UNP P0A8T7
J	1418	SER	-	expression tag	UNP P0A8T7
J	1419	SER	-	expression tag	UNP P0A8T7
J	1420	GLY	-	expression tag	UNP P0A8T7
J	1421	HIS	-	expression tag	UNP P0A8T7
J	1422	HIS	-	expression tag	UNP P0A8T7
J	1423	HIS	-	expression tag	UNP P0A8T7
J	1424	HIS	-	expression tag	UNP P0A8T7
J	1425	HIS	-	expression tag	UNP P0A8T7
J	1426	HIS	-	expression tag	UNP P0A8T7
J	1427	HIS	-	expression tag	UNP P0A8T7
J	1428	HIS	-	expression tag	UNP P0A8T7
J	1429	HIS	-	expression tag	UNP P0A8T7
J	1430	HIS	-	expression tag	UNP P0A8T7

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	K	72	Total	C	N	O	S	0	0
			577	352	110	114	1		

- Molecule 6 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	L	529	Total	C	N	O	S	0	0
			4277	2677	753	821	26		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	-2	SER	-	expression tag	UNP Q0P6L9
L	-1	GLU	-	expression tag	UNP Q0P6L9
L	0	PHE	-	expression tag	UNP Q0P6L9

- Molecule 7 is a DNA chain called DNA (85-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	O	42	Total	C	N	O	P	0	0
			863	411	168	242	42		

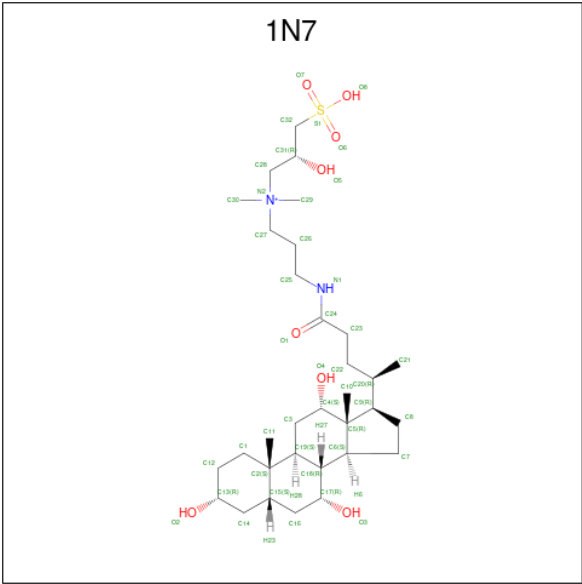
- Molecule 8 is a DNA chain called DNA (85-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	P	37	Total	C	N	O	P	0	0
			752	363	117	235	37		

- Molecule 9 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
9	J	2	Total	Zn	0
			2	2	
9	N	1	Total	Zn	0
			1	1	

- Molecule 10 is CHAPSO (three-letter code: 1N7) (formula: C₃₂H₅₉N₂O₈S).



Mol	Chain	Residues	Atoms				AltConf
10	N	1	Total	C	H	O	0
			66	24	39	3	
10	I	1	Total	C	H	O	0
			66	24	39	3	
10	J	1	Total	C	H	O	0
			66	24	39	3	

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Mol	Chain	Residues	Atoms				AltConf
10	L	1	Total	C	H	O	0
			66	24	39	3	

- Molecule 11 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
11	J	1	Total	Mg	0
			1	1	

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 the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

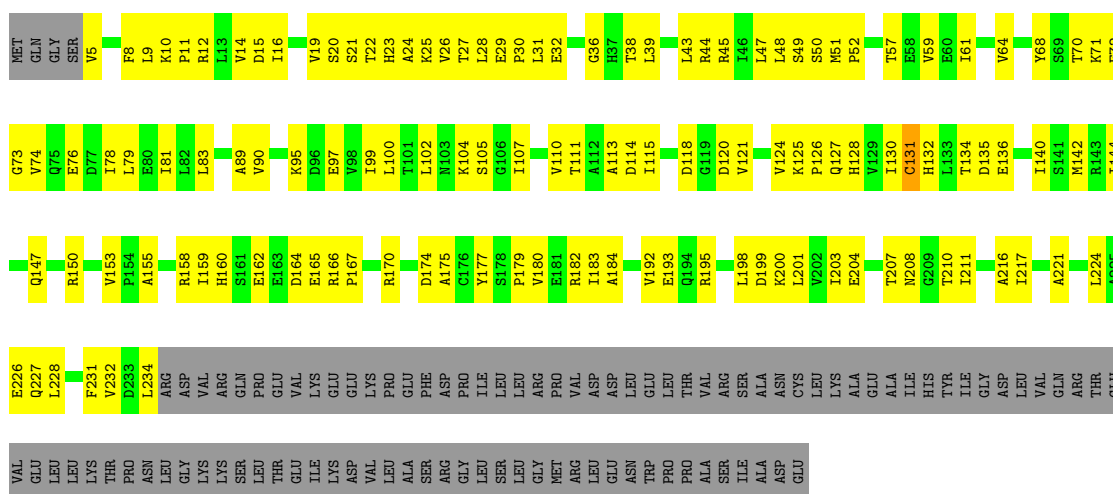
• Molecule 1: Protein TraR

Chain N: 




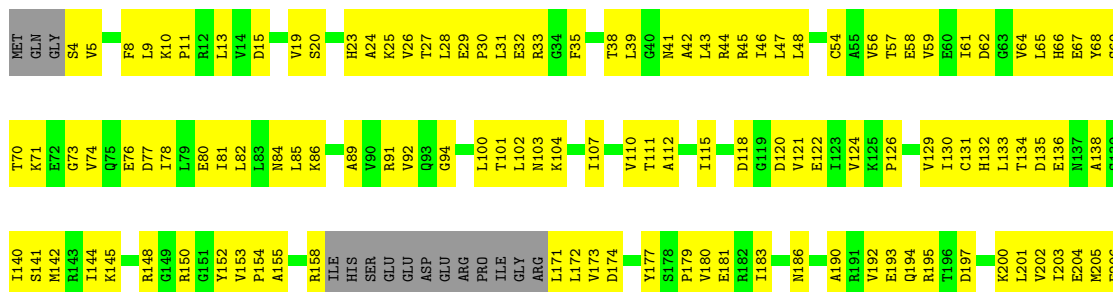
• Molecule 2: DNA-directed RNA polymerase subunit alpha

Chain G: 



• Molecule 2: DNA-directed RNA polymerase subunit alpha

Chain H: 



T207	T211	P213	E214	E215	A216	T217	R218	R219	T222	I223	A225	Q227	L228	F231	V232	ASP	LEU	ARG	ASP	VAL	GLN	PRO	GLU	VAL	LYS	GLU	GLU	LYS	PRO	GLU	PHE	ASP	PRO	ILE	LEU	LEU	ARG	PRO	THR	VAL	VAL	ARG	SER	ALA	ALA	CYS	LEU
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LYS	ALA	GLY	ALA	ILE	HIS	TYR	ILE	GLY	ASP	LEU	VAL	GLN	ARG	THR	GLU	VAL	GLU	LEU	GLY	LYS	PRO	GLN	LEU	THR	GLU	ILE	LYS	ASP	VAL	LEU	ALA	SER	ARG	GLY	LEU	ASN	TRP	PRO	THR	ALA	VAL	ARG	SER	ILE	ALA	GLU	ASP
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• Molecule 2: DNA-directed RNA polymerase subunit alpha

Chain M:  9% 13% 78%

MET	GLN	GLY	SER	VAL	THR	GLU	PHE	LEU	LYS	PRO	ARG	LEU	VAL	VAL	ASP	GLU	ILE	GLN	VAL	SER	ILE	THR	HIS	ALA	LYS	VAL	THR	GLY	LEU	ASN	GLY	THR	ALA	ASN	LEU	ARG	MET	PRO	GLY	CYS	ALA	THR	VAL	THR	ASP	GLU	VAL
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ILE	ASP	GLY	VAL	LEU	HIS	GLU	TYR	SER	GLY	GLY	VAL	GLN	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
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VAL	GLU	ILE	VAL	LYS	PRO	HIS	GLN	HIS	VAL	VAL	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP
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GLU	ARG	ILE	ALA	TYR	ASN	VAL	GLU	ALA	ARG	VAL	GLN	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
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GLU	VAL	GLU	GLU	LYS	PRO	GLU	PHE	D250	P251	L252	L253	V257	D259	L260	F261	L262	R265	S266	A267	R268	C269	L270	K271	L275	H276	Y277	L278	G279	L281	V282	Q283	R284	T285	E286	L289	L290	K291	T292	P293	N294	L295	G296	K297	K298	S299	L300	T301	G302	I303	R304	D305	V306
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L307	L312	S313	L314	G315	K316	R317	L318	F322	PRO	ALA	SER	ILE	ALA	ASP	GLU
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• Molecule 3: DNA-directed RNA polymerase subunit beta

Chain I:  36% 63%

MET	V2	Y3	S4	Y5	T6	E7	K8	R9	I10	I11	R12	F15	G16	K17	R18	L22	D23	Y26	L27	L28	S29	I30	Q31	L32	F38	I39	E40	Q41	D42	Q46	Y47	G48	L49	A52	S55	V56	F57	P58	I59	Q60	S61	G64	N65	S66	E67	L68	Q69	Y70	V71	S72	Y73
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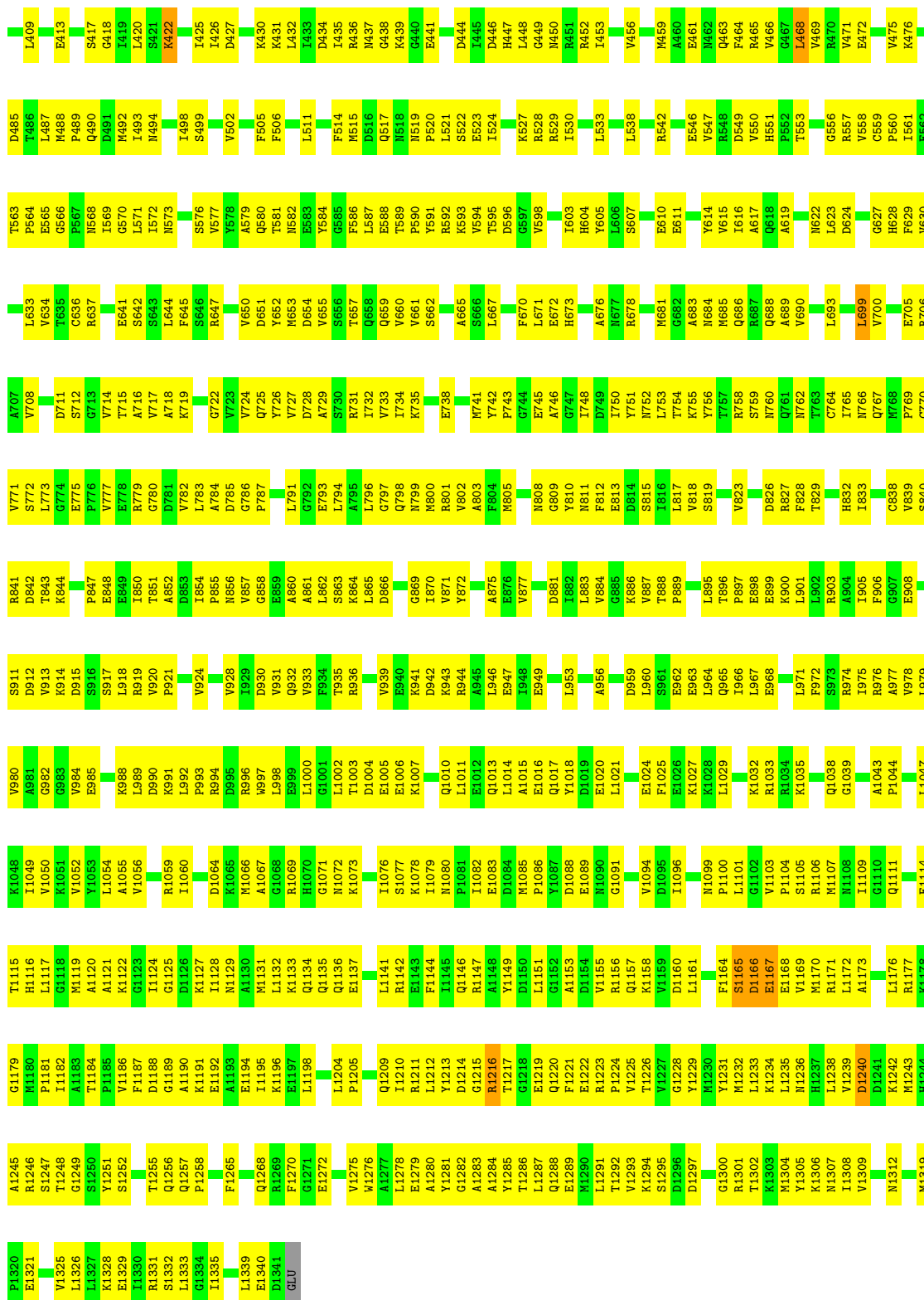
R74	L75	F80	D81	V82	Q83	Q86	R87	R88	G89	Y90	T91	A94	P95	L96	R97	V98	K99	L100	R101	L102	V103	I104	Y105	E106	R107	I108	A109	P110	E111	V114	K115	D116	I117	K118	E119	E121	V122	Y123	E126	I127	M130	T131	D132	M133	G134	T135	F136	V137	I138	T141	E142
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R143	V144	I145	V146	S147	Q148	L149	P153	F156	F157	D158	S159	D160	K161	T164	H165	S166	S167	G168	K169	L170	L171	Y172	N173	A174	R175	I176	I177	P178	Y179	R180	G181	S182	W183	L184	D185	F186	F188	D189	P190	K191	L194	F195	V196	R197	I198	D199	R200	R201	R202	K203	L204	P205	A206	T207
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I208	I209	L210	R211	A212	L213	N214	Y215	T216	T217	E218	Q219	I220	L221	D222	L223	F224	F225	E226	K227	V228	I229	F230	E231	I232	R233	L237	Q238	R239	E240	L241	V242	P243	E244	R245	L246	R247	G248	E249	T250	A251	S252	F253	D254	I255	E256	A257	V261	Y262	V263	E264	K265	R266	G267	R268	I269	T270	T271
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H273	I274	L277	D281	V282	K283	L284	I285	E286	V287	P288	V289	E290	Y291	I292	V296	V297	A298	K299	D300	Y301	I302	D303	T306	G307	R308	N309	L310	I311	P312	A313	G314	M315	E316	L317	S318	L319	D320	L321	L322	A323	K324	L325	S326	Q327	S328	G329	K330	R331	R332	I333	E334	T335	L336	F337	T338
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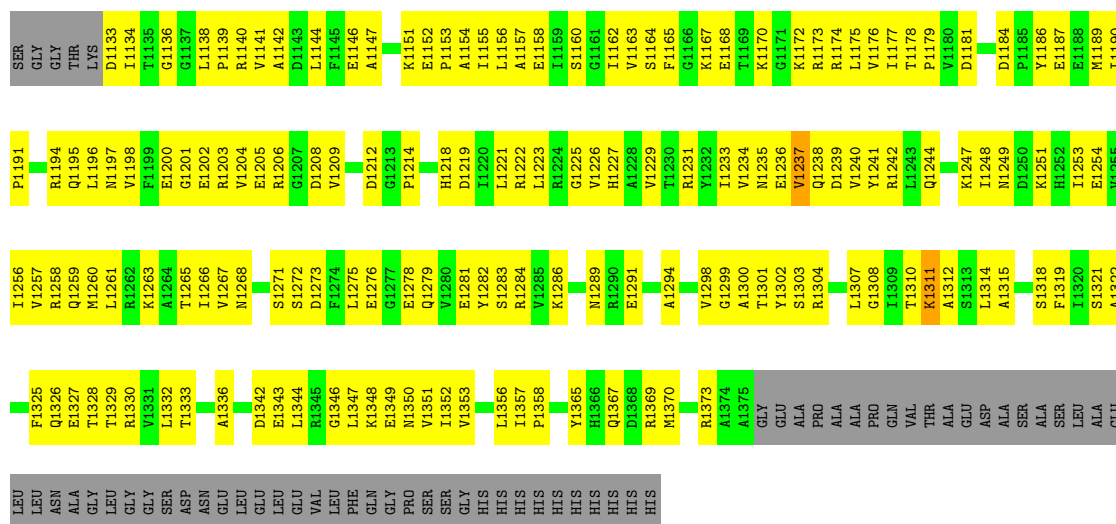
N339	D340	L341	D342	H343	G344	P345	Y346	I347	S348	E349	T350	L351	R352	V353	D354	P355	D358	R359	S361	A362	L363	V364	E365	I366	V367	R368	N369	M370	R371	P372	G373	E374	T377	A380	A381	E382	S383	N387	L388	F389	F390	S391	R394	Y395	D396	L397	G401	R402	M403	F404	F405	N406
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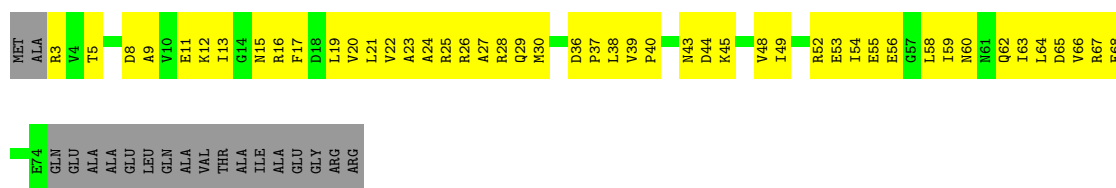
● Molecule 4: DNA-directed RNA polymerase subunit beta'

Chain J: 34% 59% 6%

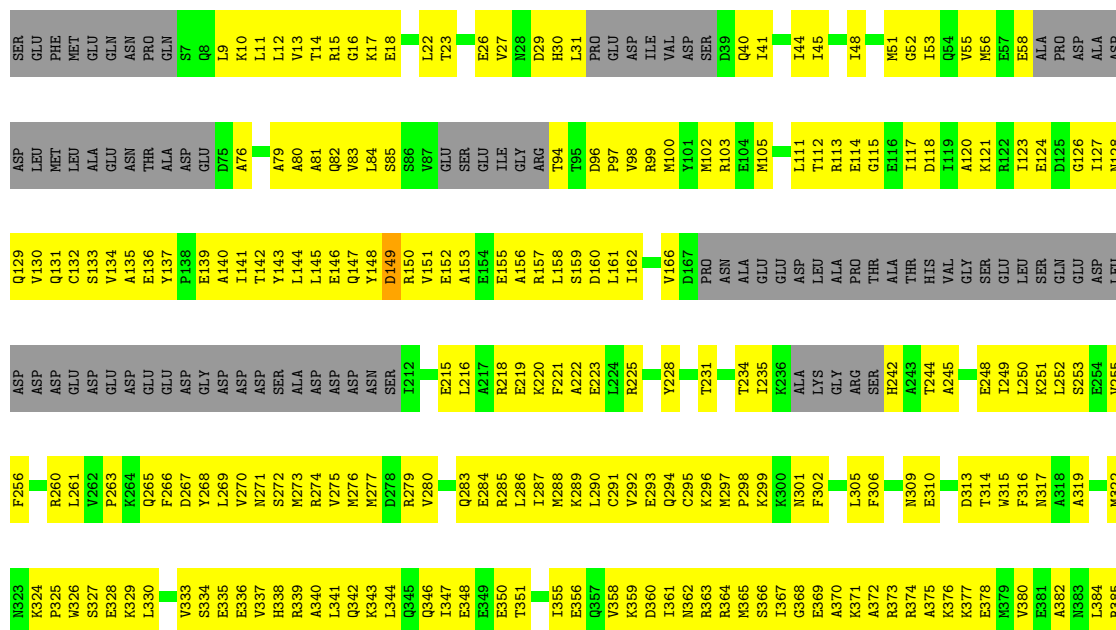
S1058	V997	E866	L788	V639	V564	S492	R425	G358	P288	D134	C70	VAL
L1059	P998	Q667	N720	V639	A565	N495	A426	P359	D289	I135	L71	LYS
V1060	G1000	N792	I722	G640	A566	N495	P427	I290	I290	R136	C72	ASP
V1061	G1001	N792	I722	G640	A566	N495	P427	I290	I290	R136	C73	LEU
L1062	A1001	N792	I722	G640	A566	N495	P427	I290	I290	R136	C74	LEU
S1063	V1002	N792	I722	G640	A566	N495	P427	I290	I290	R136	C75	LEU
S1064	L1003	N792	I722	G640	A566	N495	P427	I290	I290	R136	C76	LEU
A1065	A1004	N792	I722	G640	A566	N495	P427	I290	I290	R136	C77	LEU
K1066	K1005	N792	I722	G640	A566	N495	P427	I290	I290	R136	C78	LEU
L1067	L1006	N792	I722	G640	A566	N495	P427	I290	I290	R136	C79	LEU
G1071	G1008	N792	I722	G640	A566	N495	P427	I290	I290	R136	C80	LEU
K1072	K1009	N792	I722	G640	A566	N495	P427	I290	I290	R136	C81	LEU
L1073	L1010	N792	I722	G640	A566	N495	P427	I290	I290	R136	C82	LEU
L1074	A1012	N792	I722	G640	A566	N495	P427	I290	I290	R136	C83	LEU
P1075	G1013	N792	I722	G640	A566	N495	P427	I290	I290	R136	C84	LEU
A1077	G1014	N792	I722	G640	A566	N495	P427	I290	I290	R136	C85	LEU
L1078	E1015	N792	I722	G640	A566	N495	P427	I290	I290	R136	C86	LEU
L1079	E1016	N792	I722	G640	A566	N495	P427	I290	I290	R136	C87	LEU
I1080	V1017	N792	I722	G640	A566	N495	P427	I290	I290	R136	C88	LEU
L1081	V1018	N792	I722	G640	A566	N495	P427	I290	I290	R136	C89	LEU
D1082	A1019	N792	I722	G640	A566	N495	P427	I290	I290	R136	C90	LEU
N1086	W1020	N792	I722	G640	A566	N495	P427	I290	I290	R136	C91	LEU
D1087	D1021	N792	I722	G640	A566	N495	P427	I290	I290	R136	C92	LEU
P1088	P1022	N792	I722	G640	A566	N495	P427	I290	I290	R136	C93	LEU
L1089	H1023	N792	I722	G640	A566	N495	P427	I290	I290	R136	C94	LEU
M1095	M1026	N792	I722	G640	A566	N495	P427	I290	I290	R136	C95	LEU
P1096	V1027	N792	I722	G640	A566	N495	P427	I290	I290	R136	C96	LEU
A1097	I1028	N792	I722	G640	A566	N495	P427	I290	I290	R136	C97	LEU
Q1098	T1029	N792	I722	G640	A566	N495	P427	I290	I290	R136	C98	LEU
F1100	E1030	N792	I722	G640	A566	N495	P427	I290	I290	R136	C99	LEU
L1101	S1032	N792	I722	G640	A566	N495	P427	I290	I290	R136	C100	LEU
A1105	F1034	N792	I722	G640	A566	N495	P427	I290	I290	R136	C101	LEU
I1106	V1035	N792	I722	G640	A566	N495	P427	I290	I290	R136	C102	LEU
V1107	I1036	N792	I722	G640	A566	N495	P427	I290	I290	R136	C103	LEU
Q1108	T1037	N792	I722	G640	A566	N495	P427	I290	I290	R136	C104	LEU
L1109	L1038	N792	I722	G640	A566	N495	P427	I290	I290	R136	C105	LEU
E1110	D1039	N792	I722	G640	A566	N495	P427	I290	I290	R136	C106	LEU
G1112	M1040	N792	I722	G640	A566	N495	P427	I290	I290	R136	C107	LEU
V1113	I1041	N792	I722	G640	A566	N495	P427	I290	I290	R136	C108	LEU
S1115	T1045	N792	I722	G640	A566	N495	P427	I290	I290	R136	C109	LEU
S1117	T1047	N792	I722	G640	A566	N495	P427	I290	I290	R136	C110	LEU
G1118	R1048	N792	I722	G640	A566	N495	P427	I290	I290	R136	C111	LEU
L1119	Q1049	N792	I722	G640	A566	N495	P427	I290	I290	R136	C112	LEU
T1120	T1050	N792	I722	G640	A566	N495	P427	I290	I290	R136	C113	LEU
L1121	D1051	N792	I722	G640	A566	N495	P427	I290	I290	R136	C114	LEU
E1052	E1053	N792	I722	G640	A566	N495	P427	I290	I290	R136	C115	LEU
R1123	L1054	N792	I722	G640	A566	N495	P427	I290	I290	R136	C116	LEU
I1124	T1054	N792	I722	G640	A566	N495	P427	I290	I290	R136	C117	LEU
Q1125	L1055	N792	I722	G640	A566	N495	P427	I290	I290	R136	C118	LEU
E203	L1056	N792	I722	G640	A566	N495	P427	I290	I290	R136	C119	LEU
L132	S1057	N792	I722	G640	A566	N495	P427	I290	I290	R136	C120	LEU
K86												
D67												
Y68												
E69												
P51												
E52												
R53												
D54												
G55												
L56												
F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
E69												
P51												
E52												
R53												
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G55												
L56												
F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
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P51												
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G55												
L56												
F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
E69												
P51												
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D54												
G55												
L56												
F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
E69												
P51												
E52												
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F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
E69												
P51												
E52												
R53												
D54												
G55												
L56												
F57												
C58												
A59												
R60												
I61												
F62												
K66												
D67												
Y68												
E69												
P51												
E52												
R53												
D54												
G55												
L56												
F57												
C58												
A59												

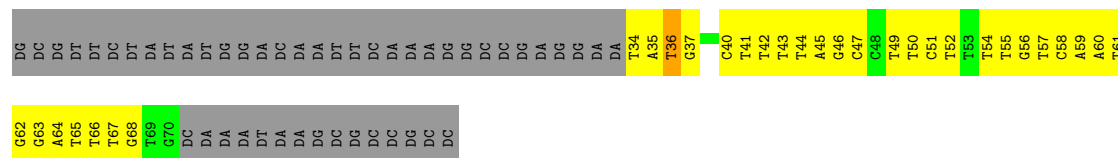


• Molecule 5: DNA-directed RNA polymerase subunit omega



• Molecule 6: RNA polymerase sigma factor RpoD





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	46553	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	80	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, 1N7, 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	N	0.37	0/581	0.50	0/785
2	G	0.40	0/1797	0.53	0/2437
2	H	0.37	0/1687	0.54	0/2287
2	M	0.26	0/579	0.54	0/784
3	I	0.44	0/10736	0.55	1/14487 (0.0%)
4	J	0.41	0/10592	0.54	0/14308
5	K	0.32	0/579	0.49	0/779
6	L	0.29	0/4329	0.47	1/5820 (0.0%)
7	O	0.63	0/971	0.92	0/1495
8	P	0.59	0/837	1.06	1/1290 (0.1%)
All	All	0.41	0/32688	0.57	3/44472 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	I	0	4
4	J	0	1
All	All	0	5

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	I	1167	GLU	N-CA-C	5.85	126.79	111.00
6	L	149	ASP	CB-CG-OD2	5.24	123.01	118.30
8	P	36	DT	O4'-C4'-C3'	-5.22	102.41	104.50

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	I	1165	SER	Peptide
3	I	1166	ASP	Peptide
3	I	1240	ASP	Peptide
3	I	247	ARG	Peptide
4	J	47	ARG	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	N	571	0	556	50	0
2	G	1775	0	1803	131	0
2	H	1668	0	1702	175	0
2	M	572	0	602	61	0
3	I	10567	0	10585	1020	0
4	J	10433	0	10625	1022	0
5	K	577	0	588	53	0
6	L	4277	0	4325	530	0
7	O	863	0	471	74	0
8	P	752	0	426	74	0
9	J	2	0	0	0	0
9	N	1	0	0	0	0
10	I	27	39	39	7	0
10	J	27	39	38	4	0
10	L	27	39	37	3	0
10	N	27	39	38	4	0
11	J	1	0	0	0	0
All	All	32167	156	31835	2955	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 46.

All (2955) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:L:701:1N7:C3	10:L:701:1N7:C19	1.83	1.57
10:I:1401:1N7:C19	10:I:1401:1N7:C3	1.82	1.51
10:N:102:1N7:C19	10:N:102:1N7:C3	1.83	1.51
10:J:1504:1N7:C3	10:J:1504:1N7:C19	1.83	1.50
6:L:284:GLU:HA	6:L:287:ILE:HB	1.36	1.07
4:J:1167:LYS:HB3	4:J:1174:ARG:HD3	1.36	1.06
3:I:1164:PHE:HB3	3:I:1165:SER:HB2	1.42	1.02
3:I:1258:PRO:HG2	4:J:346:ARG:HB2	1.40	1.01
2:G:61:ILE:HG22	2:G:142:MET:HB3	1.43	1.01
4:J:937:ILE:HD11	4:J:1134:ILE:HG12	1.41	1.01
6:L:385:ARG:HD2	7:O:55:DC:H5'	1.39	1.01
3:I:839:VAL:HA	3:I:1049:ILE:HG22	1.42	1.01
6:L:313:ASP:HB3	6:L:317:ASN:HB2	1.42	1.01
6:L:567:MET:HG3	6:L:569:THR:HB	1.42	1.00
6:L:248:GLU:HA	6:L:251:LYS:HE3	1.41	1.00
4:J:937:ILE:O	4:J:1133:ASP:OD1	1.81	0.99
3:I:221:LEU:HD23	3:I:336:LEU:HD11	1.45	0.99
4:J:964:LYS:HB3	4:J:977:SER:HB3	1.42	0.99
4:J:1105:ALA:HA	4:J:1124:ILE:HG12	1.43	0.98
6:L:48:ILE:HG23	6:L:55:VAL:HG11	1.44	0.98
2:G:45:ARG:HD2	2:H:38:THR:HB	1.44	0.98
2:H:28:LEU:HD23	2:H:31:LEU:HD21	1.45	0.98
3:I:685:MET:HG3	3:I:1235:LEU:HD11	1.45	0.98
4:J:937:ILE:HG12	4:J:1134:ILE:O	1.61	0.98
4:J:557:LYS:HB2	4:J:563:LEU:HD23	1.46	0.97
3:I:727:VAL:HG23	3:I:732:ILE:HG12	1.44	0.97
3:I:998:LEU:HD13	3:I:1015:ALA:HA	1.47	0.97
6:L:126:GLY:HA3	6:L:372:ALA:HB2	1.47	0.96
6:L:161:LEU:HD23	6:L:162:ILE:HG23	1.48	0.95
3:I:732:ILE:HD11	3:I:769:PRO:HB3	1.45	0.95
3:I:317:LEU:HB2	3:I:321:LEU:HB2	1.49	0.95
3:I:750:ILE:HG21	3:I:966:ILE:HD12	1.49	0.94
2:H:59:VAL:HG22	2:H:144:ILE:HG13	1.48	0.94
4:J:369:PRO:HG2	4:J:372:MET:HB2	1.46	0.94
6:L:444:ALA:HB1	6:L:457:ILE:HD13	1.50	0.94
4:J:937:ILE:HD11	4:J:1134:ILE:CG1	1.98	0.94
4:J:51:PRO:HD2	4:J:71:LEU:HD21	1.50	0.94
3:I:59:ILE:HG23	3:I:476:LYS:HE2	1.48	0.93
4:J:425:ARG:HG2	4:J:427:PRO:HD2	1.46	0.93
4:J:1026:PRO:HA	4:J:1123:ARG:HA	1.48	0.93
4:J:1060:VAL:HG22	4:J:1107:VAL:H	1.31	0.93
4:J:26:SER:HB3	4:J:29:MET:HG3	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:321:LEU:HA	3:I:324:LYS:HG2	1.50	0.92
4:J:937:ILE:C	4:J:1133:ASP:OD1	2.07	0.92
3:I:463:GLN:HG2	3:I:505:PHE:HB2	1.48	0.92
4:J:1089:LEU:HA	4:J:1096:PRO:HA	1.52	0.92
4:J:72:CYS:HB3	4:J:88:CYS:HB3	1.49	0.92
4:J:1179:PRO:HD3	4:J:1184:ASP:HB3	1.52	0.92
6:L:336:GLU:HA	6:L:339:ARG:HD3	1.51	0.91
4:J:1079:LYS:HD2	4:J:1087:ASP:HB3	1.52	0.91
4:J:1314:LEU:HB3	4:J:1326:GLN:HE22	1.33	0.91
1:N:46:GLU:HA	1:N:49:ARG:HG3	1.50	0.91
3:I:1131:MET:HE2	3:I:1141:LEU:HD12	1.51	0.91
4:J:1144:LEU:HD11	4:J:1236:GLU:HG3	1.51	0.90
4:J:975:ILE:HD12	4:J:980:THR:HG21	1.54	0.90
4:J:1036:ARG:HG3	4:J:1081:VAL:HG21	1.54	0.90
4:J:114:ILE:HD11	4:J:311:ARG:HB2	1.53	0.89
6:L:135:ALA:HA	6:L:141:ILE:HD11	1.54	0.88
6:L:76:ALA:HA	6:L:79:ALA:HB3	1.54	0.88
4:J:519:ASN:HB2	4:J:709:ARG:HB2	1.56	0.88
4:J:969:SER:HB2	4:J:1119:ASP:HA	1.56	0.88
4:J:1172:LYS:HD3	4:J:1189:MET:HB3	1.56	0.88
4:J:1067:ARG:HD3	4:J:1072:LYS:HG3	1.55	0.88
3:I:237:LEU:HD11	3:I:322:LEU:HD21	1.52	0.87
4:J:1026:PRO:HB3	4:J:1123:ARG:HG2	1.55	0.87
4:J:950:ILE:HD12	4:J:982:LEU:HD22	1.56	0.87
6:L:151:VAL:HG22	6:L:156:ALA:HB3	1.54	0.87
4:J:1029:THR:HA	4:J:1099:TYR:HE2	1.39	0.87
4:J:1050:THR:HA	4:J:1057:SER:HA	1.57	0.87
2:H:133:LEU:HD21	2:H:138:ALA:HB3	1.56	0.87
4:J:126:LEU:HD11	4:J:223:LEU:HD13	1.56	0.86
6:L:112:THR:HG23	6:L:115:GLY:HA3	1.57	0.86
4:J:368:LEU:HD23	4:J:373:ALA:HB2	1.57	0.86
2:H:19:VAL:HB	2:H:23:HIS:HB3	1.56	0.86
2:M:282:VAL:HB	2:M:316:MET:HB2	1.55	0.86
2:H:13:LEU:HD22	2:H:28:LEU:HD12	1.56	0.86
3:I:233:ARG:HD3	3:I:238:GLN:HB2	1.57	0.86
3:I:288:PRO:HG2	3:I:291:TYR:HB2	1.58	0.86
4:J:1062:LEU:HB3	4:J:1066:GLU:HB3	1.56	0.86
2:G:43:LEU:HD13	2:G:217:ILE:HD11	1.57	0.85
3:I:689:ALA:HB2	3:I:1233:LEU:HD23	1.59	0.85
2:M:270:LEU:HB3	2:M:275:ILE:HB	1.57	0.85
3:I:980:VAL:HA	3:I:984:VAL:HG23	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:157:ARG:HB3	6:L:160:ASP:HB2	1.58	0.85
6:L:551:LEU:HB2	6:L:556:ALA:HB2	1.57	0.85
4:J:322:ARG:HH12	6:L:510:PRO:HG3	1.42	0.85
6:L:231:THR:HG21	6:L:249:ILE:HG13	1.59	0.85
6:L:149:ASP:OD1	6:L:225:ARG:NH2	2.10	0.84
1:N:8:ALA:HB2	4:J:786:THR:HG21	1.57	0.84
4:J:153:ASN:HB3	4:J:154:LEU:HD12	1.60	0.84
6:L:395:THR:HA	6:L:404:LEU:HD11	1.59	0.84
4:J:131:PRO:HG2	4:J:134:ASP:HB2	1.59	0.84
4:J:252:LEU:HG	4:J:262:THR:HG22	1.59	0.84
4:J:932:MET:HG3	4:J:933:ARG:HG2	1.59	0.84
2:H:213:PRO:HA	2:H:216:ALA:HB3	1.60	0.84
3:I:257:ALA:HB2	3:I:285:ILE:HG22	1.58	0.83
4:J:198:CYS:HB3	4:J:224:LEU:HD22	1.61	0.83
3:I:490:GLN:HE21	6:L:472:GLN:HB3	1.42	0.83
4:J:573:THR:HG22	4:J:575:GLY:H	1.42	0.83
3:I:1120:ALA:HB1	3:I:1198:LEU:HB3	1.59	0.83
3:I:560:PRO:HB2	4:J:776:THR:HG21	1.60	0.82
2:G:102:LEU:HD22	2:G:115:ILE:HG13	1.62	0.82
6:L:479:THR:HG23	6:L:482:GLU:H	1.44	0.82
3:I:826:ASP:OD1	3:I:829:THR:OG1	1.96	0.82
3:I:558:VAL:HG11	3:I:573:ASN:HB3	1.62	0.82
4:J:325:LYS:HD3	6:L:508:GLU:HG2	1.60	0.82
6:L:136:GLU:HB3	6:L:361:ILE:HG12	1.62	0.81
4:J:355:ILE:HG21	4:J:466:MET:HG2	1.61	0.81
4:J:245:LEU:HD21	4:J:327:LEU:HD21	1.60	0.81
3:I:811:ASN:HA	3:I:815:SER:HB2	1.62	0.81
4:J:474:LEU:HB3	5:K:28:ARG:HH12	1.44	0.81
6:L:452:ILE:HG13	6:L:457:ILE:HD11	1.63	0.81
8:P:67:DT:H5''	2:M:298:LYS:HB2	1.62	0.81
7:O:26:DT:H2''	7:O:27:DT:H5'	1.60	0.81
7:O:44:DA:H1'	7:O:45:DA:H5'	1.63	0.81
6:L:157:ARG:HE	6:L:159:SER:HB3	1.45	0.81
3:I:303:ASP:HB3	3:I:308:GLU:H	1.46	0.80
4:J:826:ILE:HG12	4:J:831:VAL:HA	1.62	0.80
4:J:1047:THR:HG23	4:J:1049:GLN:HG3	1.63	0.80
6:L:426:LYS:HB3	7:O:52:DA:H5'	1.62	0.80
3:I:1142:ARG:HH21	3:I:1165:SER:HB3	1.46	0.80
6:L:118:ASP:HA	6:L:121:LYS:HE3	1.64	0.80
6:L:287:ILE:HA	6:L:337:VAL:HG13	1.63	0.80
3:I:953:LEU:HD22	3:I:1033:ARG:HG3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:60:DA:H2'	8:P:61:DT:H71	1.64	0.80
3:I:493:ILE:O	6:L:472:GLN:NE2	2.15	0.80
4:J:388:ARG:HB3	4:J:390:LEU:HD13	1.63	0.80
3:I:5:TYR:HA	3:I:8:LYS:HD2	1.62	0.79
6:L:583:THR:HG22	6:L:585:GLU:H	1.47	0.79
8:P:54:DT:H2'	8:P:55:DT:H5'	1.62	0.79
4:J:839:VAL:HG12	4:J:864:LEU:HD12	1.63	0.79
3:I:1297:ASP:OD2	3:I:1300:GLY:N	2.13	0.79
4:J:1061:VAL:HG21	4:J:1101:LEU:HB2	1.62	0.79
3:I:992:LEU:HD11	3:I:1000:LEU:HD11	1.63	0.79
3:I:237:LEU:HB2	3:I:287:VAL:HG22	1.65	0.79
4:J:1221:LEU:HD12	4:J:1229:VAL:HG11	1.65	0.79
4:J:1046:ILE:HD11	4:J:1059:LEU:HD13	1.65	0.79
4:J:821:MET:HE1	4:J:879:ALA:HA	1.63	0.79
6:L:292:VAL:HA	6:L:297:MET:HB3	1.65	0.79
2:G:59:VAL:HG12	2:G:144:ILE:HG23	1.65	0.78
2:H:102:LEU:HD21	2:H:115:ILE:HG23	1.65	0.78
3:I:1161:LEU:HG	3:I:1164:PHE:HD2	1.48	0.78
4:J:1275:LEU:HB3	4:J:1278:GLU:HB2	1.64	0.78
4:J:925:GLU:HG3	4:J:926:PRO:HD3	1.63	0.78
6:L:406:GLN:HA	6:L:409:ASN:HD22	1.47	0.78
2:H:62:ASP:OD1	2:H:141:SER:N	2.14	0.78
5:K:38:LEU:HD11	5:K:67:ARG:HH22	1.48	0.78
6:L:134:VAL:HG22	6:L:273:MET:HE1	1.66	0.78
7:O:26:DT:H2'	7:O:27:DT:H71	1.66	0.78
3:I:589:THR:OG1	3:I:659:GLN:OE1	2.02	0.78
2:H:155:ALA:N	2:H:174:ASP:OD1	2.17	0.77
3:I:1165:SER:OG	3:I:1166:ASP:N	2.17	0.77
3:I:557:ARG:HB3	3:I:587:LEU:HD13	1.65	0.77
4:J:279:LEU:HD11	4:J:296:LYS:HG2	1.65	0.77
1:N:6:ASP:OD1	3:I:678:ARG:NH2	2.17	0.77
3:I:238:GLN:HA	3:I:286:GLU:HA	1.65	0.77
3:I:519:ASN:HD21	3:I:796:LEU:HD23	1.50	0.77
3:I:1245:ALA:HB1	4:J:376:LEU:HD21	1.65	0.77
6:L:595:LEU:O	6:L:599:ARG:N	2.18	0.77
4:J:1156:LEU:HD12	4:J:1209:VAL:HA	1.67	0.77
5:K:3:ARG:NH2	5:K:5:THR:O	2.17	0.77
6:L:392:LYS:HE3	7:O:56:DC:H4'	1.67	0.77
3:I:1308:ILE:HG21	4:J:379:PRO:HB2	1.66	0.77
6:L:280:VAL:HG21	6:L:355:ILE:HG21	1.66	0.77
3:I:216:THR:HG23	3:I:219:GLN:HE22	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:255:ILE:HG22	3:I:262:TYR:HB2	1.65	0.77
2:G:14:VAL:HG21	2:G:29:GLU:HB2	1.67	0.76
2:G:71:LYS:HE3	2:G:140:ILE:HG22	1.65	0.76
2:G:11:PRO:HA	2:G:30:PRO:HD2	1.67	0.76
2:M:286:GLU:HG3	2:M:300:LEU:HD21	1.66	0.76
8:P:42:DT:H2''	8:P:43:DT:H72	1.67	0.76
3:I:120:GLN:NE2	3:I:490:GLN:OE1	2.19	0.76
2:G:102:LEU:HB2	2:G:142:MET:HG3	1.67	0.76
2:H:61:ILE:HD12	2:H:142:MET:HE1	1.67	0.76
3:I:560:PRO:O	4:J:780:ARG:NH2	2.18	0.76
4:J:74:LYS:NZ	4:J:86:GLU:OE1	2.18	0.76
7:O:42:DA:H1'	7:O:43:DA:H5'	1.67	0.76
3:I:933:VAL:HG22	3:I:1050:VAL:HG12	1.67	0.76
3:I:303:ASP:N	3:I:308:GLU:O	2.18	0.75
3:I:569:ILE:HD11	4:J:783:LEU:HD22	1.66	0.75
3:I:303:ASP:OD2	3:I:306:THR:OG1	2.02	0.75
4:J:679:TYR:OH	4:J:754:ILE:O	2.01	0.75
2:H:100:LEU:HB2	2:H:144:ILE:HG22	1.66	0.75
6:L:286:LEU:HD23	6:L:340:ALA:HB2	1.67	0.75
3:I:848:GLU:HG2	3:I:888:THR:HG22	1.66	0.75
3:I:771:VAL:HG11	3:I:783:LEU:HD13	1.69	0.75
4:J:950:ILE:HG12	4:J:1018:ALA:HB3	1.67	0.75
6:L:132:CYS:O	6:L:136:GLU:N	2.20	0.74
4:J:975:ILE:HD13	4:J:1003:LEU:HD11	1.69	0.74
4:J:930:LEU:HD23	4:J:1244:GLN:HG2	1.69	0.74
6:L:366:SER:HA	6:L:369:GLU:HB3	1.69	0.74
3:I:231:GLU:HG2	3:I:332:ARG:HA	1.69	0.74
3:I:889:PRO:HA	3:I:913:VAL:HA	1.69	0.74
6:L:80:ALA:HA	6:L:83:VAL:HG12	1.68	0.74
3:I:1176:LEU:HD22	3:I:1181:PRO:HD3	1.69	0.74
3:I:120:GLN:HE22	3:I:490:GLN:HB2	1.52	0.74
3:I:187:GLU:OE1	3:I:197:ARG:NE	2.19	0.74
5:K:53:GLU:HG3	5:K:59:ILE:HD12	1.68	0.74
3:I:931:VAL:HG22	3:I:1052:VAL:HG22	1.69	0.74
4:J:1263:LYS:HE3	4:J:1315:ALA:HB1	1.68	0.74
6:L:150:ARG:O	6:L:155:GLU:N	2.20	0.74
6:L:478:PRO:HB2	6:L:483:LEU:HD11	1.69	0.74
4:J:1346:GLY:O	4:J:1350:ASN:ND2	2.21	0.74
4:J:891:ASP:OD1	4:J:1286:LYS:NZ	2.21	0.74
4:J:1265:THR:O	4:J:1303:SER:N	2.20	0.73
4:J:482:ALA:O	5:K:16:ARG:NH2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:838:CYS:HB2	3:I:918:LEU:HD22	1.70	0.73
4:J:180:MET:SD	4:J:293:ARG:NH2	2.61	0.73
4:J:582:ILE:HD13	4:J:627:THR:HG21	1.71	0.73
3:I:764:CYS:SG	3:I:766:ASN:ND2	2.61	0.73
4:J:516:ASP:HB2	4:J:547:ARG:HE	1.53	0.73
8:P:64:DA:H2"	8:P:65:DT:H5"	1.69	0.73
4:J:1160:SER:HA	4:J:1205:GLU:HA	1.70	0.73
6:L:76:ALA:O	6:L:80:ALA:N	2.18	0.73
4:J:111:THR:OG1	4:J:300:GLN:OE1	2.07	0.73
2:H:33:ARG:NH1	2:H:197:ASP:OD2	2.21	0.73
6:L:555:GLU:HA	6:L:558:VAL:HG12	1.71	0.73
2:M:304:LYS:HA	2:M:307:LEU:HD12	1.71	0.73
5:K:13:ILE:HD11	5:K:19:LEU:HA	1.70	0.73
4:J:291:ILE:HD13	6:L:409:ASN:HB3	1.69	0.72
6:L:548:LEU:HA	6:L:551:LEU:HG	1.71	0.72
2:H:82:LEU:HG	2:H:173:VAL:HG12	1.70	0.72
4:J:661:VAL:HG12	4:J:682:VAL:HG23	1.69	0.72
6:L:250:LEU:HD12	6:L:253:SER:HB3	1.71	0.72
4:J:56:LEU:O	4:J:250:ARG:NH2	2.22	0.72
3:I:1101:LEU:HD21	4:J:508:LEU:HD22	1.70	0.72
3:I:436:ARG:O	3:I:436:ARG:NH1	2.23	0.72
4:J:132:LEU:HD23	4:J:136:GLU:HG3	1.70	0.72
4:J:34:SER:OG	4:J:36:GLY:O	2.06	0.72
3:I:12:ARG:NH1	3:I:1182:ILE:O	2.22	0.72
4:J:1046:ILE:HD12	4:J:1059:LEU:HD22	1.72	0.72
3:I:1286:THR:N	4:J:479:GLU:OE1	2.21	0.72
2:G:113:ALA:HB2	2:G:126:PRO:HB3	1.71	0.72
3:I:434:ASP:HB2	3:I:439:LYS:HE2	1.71	0.72
4:J:364:HIS:HB3	4:J:487:THR:HG21	1.71	0.72
4:J:1029:THR:HG22	4:J:1119:ASP:H	1.55	0.72
1:N:52:PHE:HB2	1:N:55:VAL:CG2	2.19	0.72
4:J:161:THR:O	4:J:165:TYR:N	2.19	0.72
3:I:252:SER:O	3:I:265:LYS:NZ	2.22	0.72
3:I:100:LEU:HD12	3:I:493:ILE:HD11	1.72	0.71
3:I:1103:VAL:HG21	4:J:639:VAL:HG21	1.70	0.71
3:I:1131:MET:HA	3:I:1136:GLN:HG2	1.71	0.71
4:J:1175:LEU:HD11	4:J:1200:GLU:HB3	1.73	0.71
4:J:1311:LYS:HD3	4:J:1314:LEU:HD21	1.71	0.71
4:J:1031:VAL:HG12	4:J:1032:SER:H	1.56	0.71
1:N:42:ASN:OD1	3:I:267:ARG:NH1	2.21	0.71
4:J:1036:ARG:HB2	4:J:1081:VAL:HG11	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:813:ASP:HA	4:J:895:CYS:SG	2.31	0.71
4:J:974:VAL:HA	4:J:1003:LEU:HG	1.71	0.71
6:L:234:THR:O	6:L:242:HIS:N	2.24	0.71
6:L:284:GLU:O	6:L:288:MET:N	2.21	0.71
4:J:259:ARG:HE	6:L:502:LYS:HE3	1.54	0.71
2:H:183:ILE:HD11	2:H:203:ILE:HG22	1.71	0.71
4:J:1195:GLN:N	4:J:1212:ASP:OD1	2.23	0.71
8:P:43:DT:H1'	8:P:44:DT:H5'	1.73	0.71
1:N:64:TYR:HE2	3:I:341:LEU:HB2	1.56	0.71
3:I:277:LEU:O	3:I:281:ASP:N	2.23	0.71
3:I:561:ILE:HD11	3:I:665:ALA:HB1	1.73	0.71
4:J:287:ALA:HB1	4:J:288:PRO:HD2	1.73	0.71
6:L:151:VAL:HG12	6:L:158:LEU:HD23	1.71	0.71
2:G:118:ASP:HB3	2:G:121:VAL:HG12	1.73	0.70
3:I:812:PHE:HZ	4:J:503:SER:HB2	1.56	0.70
1:N:48:ARG:NH2	1:N:62:GLN:OE1	2.24	0.70
3:I:1164:PHE:HB3	3:I:1165:SER:CB	2.21	0.70
4:J:198:CYS:HB3	4:J:224:LEU:CD2	2.21	0.70
2:H:47:LEU:HD22	2:H:180:VAL:HG11	1.73	0.70
3:I:251:ALA:N	3:I:267:ARG:O	2.18	0.70
4:J:44:ILE:HG22	4:J:51:PRO:HA	1.72	0.70
3:I:634:VAL:HG11	3:I:650:VAL:HG11	1.73	0.70
4:J:1064:SER:HA	4:J:1067:ARG:HG2	1.73	0.70
4:J:201:LEU:HD13	4:J:204:GLU:HB2	1.73	0.70
4:J:1089:LEU:CA	4:J:1096:PRO:HA	2.21	0.70
4:J:334:LYS:O	4:J:340:GLN:HB2	1.92	0.70
4:J:982:LEU:N	4:J:995:TYR:O	2.24	0.70
2:G:52:PRO:HB3	2:H:5:VAL:HG21	1.72	0.70
3:I:1248:THR:HG21	6:L:531:PRO:HG2	1.73	0.70
4:J:1164:SER:HA	4:J:1200:GLU:HB2	1.73	0.70
4:J:417:ARG:NH1	5:K:43:ASN:O	2.25	0.70
4:J:748:ALA:HB2	4:J:754:ILE:HG12	1.73	0.70
3:I:1243:MET:HE3	4:J:445:LYS:HD3	1.74	0.70
4:J:822:MET:SD	4:J:838:ARG:NH2	2.64	0.70
2:G:234:LEU:HD12	2:H:218:ARG:HE	1.57	0.70
3:I:148:GLN:NE2	3:I:533:LEU:O	2.24	0.70
3:I:42:ASP:OD2	3:I:46:GLN:N	2.18	0.70
4:J:984:LEU:HB3	4:J:993:GLU:H	1.57	0.70
4:J:984:LEU:N	4:J:993:GLU:O	2.25	0.70
3:I:1240:ASP:HB3	4:J:445:LYS:HD2	1.74	0.69
2:G:150:ARG:NH1	2:H:5:VAL:O	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:59:ILE:O	3:I:68:LEU:N	2.23	0.69
4:J:1029:THR:HG23	4:J:1118:GLY:H	1.57	0.69
3:I:1321:GLU:OE2	4:J:99:ARG:NE	2.22	0.69
4:J:950:ILE:HD13	4:J:997:VAL:HG22	1.73	0.69
5:K:3:ARG:HB2	5:K:48:VAL:HG13	1.74	0.69
6:L:114:GLU:HA	6:L:117:ILE:HD13	1.73	0.69
6:L:385:ARG:NH1	7:O:55:DC:OP2	2.25	0.69
6:L:539:SER:O	6:L:543:ALA:N	2.20	0.69
2:H:154:PRO:O	2:H:158:ARG:NH1	2.25	0.69
6:L:283:GLN:O	6:L:287:ILE:N	2.24	0.69
2:G:104:LYS:NZ	2:G:114:ASP:OD2	2.19	0.69
3:I:960:LEU:HD22	3:I:1029:LEU:HB2	1.73	0.69
4:J:1138:LEU:HB3	4:J:1139:PRO:HD3	1.74	0.69
3:I:706:ARG:NH1	3:I:791:LEU:O	2.24	0.69
3:I:998:LEU:HB3	3:I:1015:ALA:HB2	1.75	0.69
7:O:23:DC:H2'	7:O:24:DC:C6	2.26	0.69
3:I:1024:GLU:HA	3:I:1027:LYS:HE2	1.74	0.69
3:I:542:ARG:NH1	3:I:542:ARG:O	2.22	0.69
4:J:1067:ARG:NE	4:J:1072:LYS:HA	2.08	0.69
3:I:12:ARG:NH2	3:I:793:GLU:OE2	2.24	0.69
3:I:726:TYR:HA	3:I:773:LEU:HD11	1.74	0.69
4:J:701:LEU:HD21	4:J:723:TYR:HB2	1.75	0.69
4:J:968:ASN:HA	4:J:1118:GLY:HA3	1.75	0.69
2:G:184:ALA:HB2	3:I:1091:GLY:HA3	1.75	0.69
3:I:346:TYR:O	3:I:350:THR:OG1	2.11	0.69
3:I:38:PHE:HA	3:I:48:GLY:HA2	1.75	0.69
6:L:351:THR:HB	6:L:358:VAL:HG21	1.74	0.69
3:I:864:LYS:HD2	3:I:875:ALA:HB1	1.74	0.68
4:J:478:LEU:HB3	5:K:20:VAL:HG13	1.74	0.68
4:J:960:LEU:HB3	4:J:963:VAL:HB	1.75	0.68
6:L:494:ILE:O	6:L:497:VAL:HG12	1.93	0.68
2:G:208:ASN:OD1	2:G:210:THR:OG1	2.05	0.68
3:I:818:VAL:HG22	3:I:1096:ILE:HG12	1.75	0.68
6:L:583:THR:HB	6:L:586:ARG:HB3	1.75	0.68
3:I:971:LEU:HD13	3:I:1018:TYR:HD1	1.59	0.68
2:G:73:GLY:O	2:G:134:THR:N	2.27	0.68
3:I:1121:ALA:HB2	3:I:1182:ILE:HD11	1.73	0.68
3:I:146:VAL:HG23	3:I:511:LEU:HD22	1.74	0.68
3:I:994:ARG:HG2	3:I:997:TRP:CH2	2.29	0.68
4:J:1281:GLU:OE1	4:J:1283:SER:N	2.22	0.68
6:L:327:SER:HA	6:L:330:LEU:HG	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:486:ARG:HG3	6:L:487:MET:HE3	1.75	0.68
6:L:333:VAL:HG22	6:L:337:VAL:HG23	1.74	0.68
7:O:16:DC:H2''	7:O:17:DA:H5'	1.74	0.68
4:J:1029:THR:HA	4:J:1099:TYR:CE2	2.28	0.68
4:J:901:ARG:NH1	4:J:906:GLY:O	2.26	0.68
3:I:617:ALA:N	3:I:652:TYR:O	2.19	0.68
6:L:263:PRO:HA	6:L:266:PHE:HB3	1.75	0.68
3:I:842:ASP:HB3	3:I:1047:LEU:HD11	1.76	0.68
4:J:1308:GLY:O	4:J:1312:ALA:N	2.23	0.68
4:J:502:PRO:HB3	4:J:506:VAL:HG23	1.75	0.68
4:J:984:LEU:HB3	4:J:993:GLU:N	2.09	0.68
2:G:14:VAL:HG12	2:G:15:ASP:H	1.59	0.68
3:I:404:LYS:NZ	3:I:450:ASN:OD1	2.25	0.68
4:J:418:GLU:HG3	5:K:48:VAL:HG21	1.75	0.68
6:L:406:GLN:O	6:L:410:ILE:HG12	1.93	0.68
6:L:455:HIS:NE2	7:O:44:DA:OP2	2.18	0.68
4:J:973:LEU:HB3	4:J:1003:LEU:HD12	1.75	0.67
2:M:250:ASP:HB3	2:M:253:LEU:HD23	1.76	0.67
2:G:26:VAL:HG22	2:G:203:ILE:HB	1.75	0.67
3:I:138:ILE:HG13	3:I:143:ARG:HD3	1.74	0.67
4:J:1077:ALA:HB2	4:J:1100:PHE:HA	1.77	0.67
4:J:492:SER:OG	4:J:495:ASN:O	2.11	0.67
2:G:61:ILE:HG13	2:G:64:VAL:HB	1.76	0.67
3:I:233:ARG:O	3:I:238:GLN:NE2	2.27	0.67
8:P:57:DT:H2''	8:P:58:DC:H5'	1.76	0.67
3:I:406:ASN:ND2	3:I:413:GLU:O	2.28	0.67
4:J:1079:LYS:HE3	4:J:1081:VAL:HG12	1.76	0.67
4:J:502:PRO:HB3	4:J:506:VAL:CG2	2.24	0.67
8:P:43:DT:H2''	8:P:44:DT:H5'	1.76	0.67
3:I:256:GLU:HB2	3:I:261:VAL:HG22	1.77	0.67
4:J:1105:ALA:HA	4:J:1124:ILE:CG1	2.23	0.67
6:L:290:LEU:O	6:L:294:GLN:NE2	2.27	0.67
3:I:1142:ARG:HG3	3:I:1161:LEU:CD2	2.25	0.67
3:I:494:ASN:HA	6:L:472:GLN:HE22	1.60	0.67
6:L:81:ALA:HA	6:L:84:LEU:HG	1.76	0.67
3:I:149:LEU:HD13	3:I:453:ILE:HG12	1.77	0.67
6:L:269:LEU:O	6:L:273:MET:N	2.23	0.66
6:L:305:LEU:HD13	6:L:319:ALA:HB2	1.76	0.66
6:L:583:THR:HG22	6:L:585:GLU:N	2.10	0.66
3:I:962:GLU:O	3:I:966:ILE:HG12	1.95	0.66
8:P:60:DA:H2''	8:P:61:DT:H5'	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1155:VAL:O	3:I:1158:LYS:NZ	2.28	0.66
10:I:1401:1N7:C3	10:I:1401:1N7:C2	2.69	0.66
2:G:73:GLY:N	3:I:728:ASP:OD2	2.29	0.66
4:J:902:ASP:OD2	4:J:1249:ASN:ND2	2.28	0.66
3:I:607:SER:OG	3:I:610:GLU:OE1	2.11	0.66
3:I:856:ASN:HA	6:L:613:ASP:O	1.96	0.66
6:L:463:LEU:O	6:L:467:SER:N	2.27	0.66
2:H:215:GLU:HA	2:H:218:ARG:HG2	1.76	0.66
3:I:1157:GLN:O	3:I:1158:LYS:NZ	2.23	0.66
3:I:145:ILE:HG21	3:I:456:VAL:HG23	1.76	0.66
3:I:402:ARG:NE	3:I:417:SER:O	2.28	0.66
3:I:1109:ILE:HD11	4:J:740:LEU:HD11	1.77	0.66
4:J:836:ARG:HD2	4:J:869:CYS:SG	2.36	0.66
4:J:964:LYS:O	4:J:976:THR:OG1	2.10	0.66
4:J:1046:ILE:HA	4:J:1062:LEU:HD12	1.78	0.66
5:K:36:ASP:HB2	5:K:37:PRO:HD2	1.78	0.66
3:I:560:PRO:CB	4:J:776:THR:HG21	2.25	0.66
3:I:988:LYS:HA	3:I:991:LYS:HG3	1.75	0.66
4:J:1074:LEU:O	4:J:1075:ARG:NH1	2.27	0.66
4:J:1152:GLU:OE2	4:J:1194:ARG:NE	2.29	0.66
4:J:20:ILE:HG13	4:J:1344:LEU:HD21	1.78	0.66
4:J:835:LEU:HD13	4:J:878:ASP:HA	1.78	0.66
4:J:959:LYS:HB3	4:J:985:ILE:HD11	1.77	0.66
4:J:1062:LEU:HB3	4:J:1066:GLU:CB	2.25	0.66
4:J:368:LEU:HG	4:J:369:PRO:HD2	1.77	0.66
6:L:468:ARG:NH1	8:P:35:DA:OP1	2.25	0.66
3:I:1257:GLN:HE22	4:J:345:LYS:HE2	1.59	0.66
2:G:180:VAL:HA	2:G:207:THR:HG22	1.78	0.66
3:I:65:ASN:O	3:I:105:TYR:N	2.20	0.66
3:I:808:ASN:OD1	3:I:1216:ARG:NH2	2.29	0.65
3:I:992:LEU:HB2	3:I:993:PRO:HD2	1.77	0.65
3:I:998:LEU:HD13	3:I:1015:ALA:CA	2.24	0.65
6:L:478:PRO:HB2	6:L:483:LEU:CD1	2.27	0.65
1:N:52:PHE:O	1:N:55:VAL:HG23	1.96	0.65
3:I:230:PHE:N	3:I:333:ILE:O	2.29	0.65
3:I:819:SER:HB2	3:I:1085:MET:HG3	1.76	0.65
4:J:926:PRO:HG2	4:J:1248:ILE:HD11	1.77	0.65
4:J:952:VAL:N	4:J:1015:GLU:O	2.27	0.65
6:L:157:ARG:HG2	6:L:160:ASP:H	1.59	0.65
3:I:254:ASP:HB3	3:I:265:LYS:HG3	1.78	0.65
3:I:302:ILE:HG22	3:I:309:LEU:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1024:THR:HB	4:J:1123:ARG:HB3	1.77	0.65
4:J:1064:SER:HB3	4:J:1072:LYS:HD3	1.78	0.65
6:L:26:GLU:O	6:L:30:HIS:N	2.29	0.65
4:J:253:VAL:HG11	6:L:523:ILE:HD13	1.79	0.65
3:I:1005:GLU:HG2	3:I:1006:GLU:OE1	1.97	0.65
3:I:301:TYR:CE2	3:I:333:ILE:HA	2.31	0.65
3:I:906:PHE:CD2	6:L:611:LEU:HD11	2.30	0.65
4:J:1006:GLY:N	4:J:1009:GLU:OE2	2.26	0.65
4:J:884:SER:OG	4:J:886:VAL:HG12	1.95	0.65
6:L:295:CYS:O	6:L:326:TRP:HB2	1.97	0.65
6:L:133:SER:CB	6:L:365:MET:HB2	2.26	0.65
3:I:517:GLN:O	3:I:517:GLN:HG2	1.96	0.65
2:H:112:ALA:HB3	2:H:126:PRO:HA	1.77	0.65
3:I:972:PHE:HD1	3:I:975:ILE:HD12	1.61	0.65
4:J:1163:VAL:HG23	4:J:1177:ILE:HA	1.78	0.65
4:J:367:GLY:H	4:J:448:GLN:HB2	1.62	0.65
6:L:137:TYR:CZ	6:L:139:GLU:HB2	2.31	0.65
6:L:162:ILE:HD13	6:L:221:PHE:HE2	1.62	0.65
4:J:334:LYS:HA	4:J:339:ARG:HD3	1.79	0.65
6:L:277:MET:HA	6:L:280:VAL:HG12	1.78	0.65
3:I:565:GLU:OE1	3:I:684:ASN:ND2	2.30	0.65
4:J:363:LEU:HD23	4:J:487:THR:HG22	1.79	0.65
6:L:598:LEU:O	6:L:604:SER:OG	2.14	0.65
3:I:383:SER:O	3:I:387:ASN:ND2	2.29	0.65
4:J:20:ILE:HD12	4:J:1344:LEU:HD11	1.78	0.65
4:J:978:ARG:NH2	4:J:1197:ASN:O	2.30	0.65
3:I:901:LEU:HD22	6:L:565:ILE:HD11	1.78	0.65
3:I:237:LEU:HB2	3:I:287:VAL:CG2	2.27	0.65
4:J:1038:THR:HG21	4:J:1079:LYS:HD3	1.78	0.65
4:J:423:LEU:HD12	4:J:468:VAL:HG12	1.79	0.65
4:J:982:LEU:HB3	4:J:995:TYR:HB2	1.77	0.65
5:K:3:ARG:HH21	5:K:5:THR:H	1.42	0.65
2:H:158:ARG:HE	2:H:172:LEU:HD12	1.61	0.64
3:I:202:ARG:HA	6:L:29:ASP:OD1	1.97	0.64
3:I:28:LEU:HD13	3:I:527:LYS:HD3	1.79	0.64
3:I:974:ARG:O	3:I:978:VAL:HG23	1.97	0.64
4:J:1035:VAL:O	4:J:1112:GLY:N	2.25	0.64
8:P:61:DT:H1'	8:P:62:DG:H5'	1.79	0.64
2:H:57:THR:O	2:H:173:VAL:HG22	1.96	0.64
3:I:242:VAL:HB	3:I:245:ARG:HB2	1.79	0.64
3:I:716:ALA:HB3	3:I:784:ALA:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:798:GLN:HB3	3:I:827:ARG:NH2	2.12	0.64
4:J:93:THR:HG22	4:J:94:GLN:H	1.60	0.64
2:H:86:LYS:NZ	2:H:174:ASP:HB2	2.13	0.64
6:L:593:LYS:HA	6:L:596:ARG:HG2	1.80	0.64
2:H:19:VAL:CB	2:H:23:HIS:HB3	2.27	0.64
3:I:1212:LEU:HD22	3:I:1225:VAL:CG2	2.27	0.64
10:I:1401:1N7:C3	10:I:1401:1N7:C18	2.70	0.64
3:I:611:GLU:OE2	3:I:637:ARG:NH2	2.30	0.64
3:I:976:ARG:O	3:I:980:VAL:HG23	1.98	0.64
6:L:487:MET:HB3	6:L:489:MET:CE	2.27	0.64
6:L:586:ARG:NH1	6:L:589:GLN:HB3	2.12	0.64
2:G:50:SER:HB2	2:G:150:ARG:HD2	1.80	0.64
3:I:1131:MET:HE2	3:I:1141:LEU:HA	1.79	0.64
3:I:303:ASP:HB3	3:I:308:GLU:N	2.11	0.64
6:L:409:ASN:O	6:L:413:MET:HG2	1.97	0.64
7:O:41:DT:H2"	7:O:42:DA:N7	2.13	0.64
3:I:387:ASN:HA	3:I:391:SER:HB3	1.79	0.64
3:I:772:SER:N	3:I:775:GLU:OE1	2.20	0.64
4:J:951:GLN:HA	4:J:1016:THR:HA	1.80	0.64
4:J:1061:VAL:HG21	4:J:1101:LEU:CB	2.28	0.64
6:L:117:ILE:HG23	6:L:421:TYR:CE1	2.33	0.64
6:L:274:ARG:HA	6:L:274:ARG:CZ	2.28	0.64
3:I:591:TYR:OH	3:I:637:ARG:NH2	2.31	0.64
2:G:68:TYR:HB3	3:I:756:TYR:CD2	2.33	0.64
3:I:864:LYS:O	3:I:871:VAL:HA	1.98	0.64
3:I:1209:GLN:NE2	3:I:1226:THR:OG1	2.31	0.64
3:I:100:LEU:HD12	3:I:493:ILE:CD1	2.28	0.64
4:J:1036:ARG:CG	4:J:1081:VAL:HG21	2.27	0.64
4:J:176:PHE:CE2	4:J:178:ALA:HB3	2.33	0.64
6:L:166:VAL:HG22	6:L:260:ARG:HG3	1.79	0.64
4:J:281:ARG:O	4:J:285:LEU:HG	1.98	0.64
2:M:298:LYS:O	2:M:302:GLU:HG2	1.98	0.64
2:G:9:LEU:HD11	2:G:198:LEU:HD13	1.80	0.63
3:I:1212:LEU:HD22	3:I:1225:VAL:HG21	1.79	0.63
3:I:230:PHE:O	3:I:333:ILE:N	2.24	0.63
4:J:865:HIS:ND1	4:J:867:GLN:OE1	2.31	0.63
6:L:292:VAL:HG22	6:L:297:MET:HG2	1.80	0.63
6:L:287:ILE:HG13	6:L:340:ALA:HB1	1.78	0.63
1:N:56:THR:O	1:N:57:LEU:HD23	1.98	0.63
3:I:1105:SER:HB3	4:J:731:ARG:HD3	1.80	0.63
3:I:426:ILE:HG22	3:I:430:LYS:HD2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:559:ALA:HB3	4:J:562:GLU:HB3	1.80	0.63
4:J:910:ASN:HB3	5:K:15:ASN:OD1	1.98	0.63
2:M:269:CYS:HB2	2:M:292:THR:HG21	1.78	0.63
2:G:158:ARG:NH1	2:G:162:GLU:OE2	2.31	0.63
2:H:100:LEU:HB2	2:H:144:ILE:CG2	2.28	0.63
2:H:58:GLU:HA	2:H:172:LEU:HA	1.80	0.63
2:H:201:LEU:HG	2:H:203:ILE:HG13	1.79	0.63
3:I:317:LEU:HD11	3:I:322:LEU:HD13	1.80	0.63
3:I:58:PRO:HB3	3:I:69:GLN:HG2	1.80	0.63
4:J:1079:LYS:HE3	4:J:1081:VAL:CG1	2.28	0.63
4:J:1205:GLU:N	4:J:1208:ASP:OD1	2.30	0.63
4:J:603:LYS:O	4:J:607:THR:HG23	1.98	0.63
6:L:306:PHE:HA	6:L:315:TRP:HB2	1.80	0.63
1:N:9:TYR:OH	1:N:13:GLU:OE1	2.09	0.63
3:I:1073:LYS:HD2	4:J:462:ASP:HB2	1.80	0.63
3:I:210:LEU:HA	3:I:213:LEU:HD12	1.80	0.63
3:I:840:SER:HA	3:I:848:GLU:OE1	1.98	0.63
4:J:325:LYS:CD	6:L:508:GLU:HG2	2.28	0.63
3:I:590:PRO:HG3	3:I:605:TYR:CE1	2.32	0.63
4:J:1314:LEU:HB3	4:J:1326:GLN:NE2	2.08	0.63
2:G:22:THR:HB	2:G:207:THR:O	1.98	0.63
6:L:130:VAL:HG22	6:L:365:MET:HG3	1.81	0.63
4:J:740:LEU:O	4:J:762:ASN:HB2	1.98	0.63
6:L:134:VAL:HG22	6:L:273:MET:CE	2.28	0.63
3:I:1086:PRO:O	3:I:1094:VAL:HG12	1.98	0.63
3:I:617:ALA:HA	3:I:636:CYS:SG	2.39	0.63
3:I:735:LYS:HA	3:I:748:ILE:HG22	1.80	0.63
4:J:1152:GLU:HB3	4:J:1214:PRO:HD2	1.80	0.63
6:L:525:ASP:OD1	6:L:526:THR:N	2.32	0.63
6:L:585:GLU:OE1	8:P:58:DC:N4	2.32	0.63
2:G:61:ILE:CG2	2:G:142:MET:HB3	2.25	0.63
3:I:302:ILE:HA	3:I:310:ILE:H	1.64	0.63
6:L:123:ILE:O	6:L:127:ILE:HG23	1.99	0.63
6:L:16:GLY:CA	6:L:22:LEU:HD11	2.28	0.63
6:L:27:VAL:HG11	6:L:45:ILE:HG12	1.81	0.63
7:O:39:DG:H1'	7:O:40:DC:C5'	2.29	0.63
4:J:1318:SER:OG	4:J:1319:PHE:N	2.31	0.62
4:J:58:CYS:HB3	4:J:61:ILE:HB	1.80	0.62
6:L:490:PRO:HD2	6:L:493:LYS:HE2	1.81	0.62
8:P:43:DT:C2'	8:P:44:DT:H5'	2.29	0.62
8:P:68:DG:OP1	2:M:265:ARG:HB3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:690:VAL:CG2	3:I:1236:ASN:HB3	2.29	0.62
3:I:895:LEU:HD11	3:I:900:LYS:HG3	1.81	0.62
4:J:1263:LYS:HA	4:J:1281:GLU:HA	1.80	0.62
6:L:23:THR:HB	6:L:58:GLU:H	1.64	0.62
6:L:429:THR:HA	7:O:53:DT:C7	2.29	0.62
3:I:242:VAL:HB	3:I:245:ARG:CB	2.28	0.62
3:I:301:TYR:HB3	3:I:325:LEU:HD21	1.80	0.62
3:I:351:LEU:O	3:I:354:ASP:HB2	1.99	0.62
3:I:538:LEU:CD2	3:I:547:VAL:HG11	2.30	0.62
3:I:623:LEU:HA	3:I:630:VAL:HG13	1.82	0.62
3:I:852:ALA:O	3:I:854:ILE:HG13	2.00	0.62
4:J:719:PHE:HD1	4:J:724:MET:HE1	1.64	0.62
6:L:386:LEU:O	6:L:390:ILE:HG13	1.99	0.62
2:H:183:ILE:HD12	2:H:204:GLU:O	2.00	0.62
3:I:905:ILE:HA	6:L:595:LEU:HD12	1.81	0.62
4:J:1025:MET:N	4:J:1124:ILE:O	2.22	0.62
4:J:1158:GLU:OE1	4:J:1158:GLU:N	2.33	0.62
4:J:279:LEU:O	4:J:283:LEU:HG	1.98	0.62
6:L:149:ASP:O	6:L:153:ALA:N	2.26	0.62
3:I:66:SER:HB3	3:I:104:ILE:HG22	1.82	0.62
3:I:1142:ARG:HG3	3:I:1161:LEU:HD23	1.81	0.62
3:I:750:ILE:HG21	3:I:966:ILE:CD1	2.28	0.62
4:J:254:PRO:HA	4:J:260:PHE:HD2	1.65	0.62
4:J:909:ILE:HD11	4:J:913:GLU:HB3	1.82	0.62
7:O:39:DG:H1'	7:O:40:DC:H5'	1.80	0.62
3:I:172:TYR:HB3	3:I:432:LEU:HD11	1.81	0.62
3:I:361:SER:HA	3:I:364:VAL:HG22	1.81	0.62
3:I:149:LEU:HD22	3:I:530:ILE:HG21	1.82	0.62
4:J:1146:GLU:OE1	4:J:1308:GLY:HA3	2.00	0.62
4:J:42:GLU:OE2	6:L:451:ARG:NH1	2.32	0.62
6:L:426:LYS:CB	7:O:52:DA:H5'	2.30	0.62
3:I:1083:GLU:N	3:I:1083:GLU:OE1	2.30	0.62
3:I:59:ILE:N	3:I:68:LEU:O	2.21	0.62
4:J:1155:ILE:O	4:J:1156:LEU:HD13	2.00	0.62
6:L:145:LEU:HD11	6:L:225:ARG:HA	1.82	0.62
6:L:291:CYS:HB3	6:L:297:MET:SD	2.40	0.62
6:L:326:TRP:HA	6:L:329:LYS:HD2	1.81	0.62
4:J:260:PHE:CB	6:L:504:PRO:HB3	2.29	0.62
2:M:295:LEU:HD21	2:M:300:LEU:HB2	1.81	0.62
2:G:61:ILE:HD12	2:G:64:VAL:HG21	1.82	0.62
2:H:74:VAL:HG12	2:H:133:LEU:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:120:GLN:HB3	3:I:489:PRO:HD2	1.82	0.62
3:I:289:VAL:HG11	3:I:319:LEU:HD12	1.81	0.62
3:I:371:ARG:HB3	3:I:374:GLU:OE2	1.99	0.62
10:J:1504:1N7:C3	10:J:1504:1N7:C2	2.72	0.62
4:J:405:GLU:O	4:J:408:VAL:HG22	2.00	0.62
2:M:313:SER:O	2:M:316:MET:HG3	2.00	0.62
4:J:133:ARG:O	4:J:137:ARG:HD3	2.01	0.61
4:J:958:ILE:HD11	4:J:1011:VAL:HG21	1.81	0.61
3:I:256:GLU:HA	3:I:261:VAL:HA	1.82	0.61
3:I:770:CYS:HB3	3:I:785:ASP:OD2	2.00	0.61
4:J:555:TYR:CE1	4:J:565:ALA:HB2	2.35	0.61
4:J:559:ALA:HB3	4:J:562:GLU:CB	2.30	0.61
6:L:292:VAL:HG11	6:L:299:LYS:HD2	1.82	0.61
7:O:37:DA:H2"	7:O:38:DG:C8	2.35	0.61
2:G:57:THR:HG21	2:G:147:GLN:HG2	1.83	0.61
3:I:60:GLN:HG2	3:I:61:SER:O	2.00	0.61
4:J:1035:VAL:HG21	4:J:1113:VAL:HB	1.82	0.61
4:J:792:ASN:HB2	4:J:795:TYR:CD1	2.35	0.61
6:L:426:LYS:N	7:O:52:DA:OP2	2.33	0.61
2:G:113:ALA:HB2	2:G:126:PRO:CB	2.30	0.61
2:G:226:GLU:HG2	2:H:10:LYS:CE	2.30	0.61
2:H:25:LYS:HG2	2:H:204:GLU:HG3	1.82	0.61
3:I:905:ILE:HG22	3:I:906:PHE:CD1	2.36	0.61
4:J:1268:ASN:HA	4:J:1276:GLU:HG3	1.83	0.61
4:J:430:HIS:HD2	4:J:432:LEU:HB2	1.64	0.61
4:J:553:THR:HB	4:J:567:THR:HG22	1.82	0.61
6:L:333:VAL:CG2	6:L:337:VAL:HG23	2.29	0.61
3:I:685:MET:CG	3:I:1235:LEU:HD11	2.26	0.61
3:I:420:LEU:HD13	3:I:425:ILE:HD11	1.81	0.61
3:I:911:SER:OG	3:I:912:ASP:N	2.33	0.61
4:J:957:SER:HB3	4:J:985:ILE:HB	1.83	0.61
6:L:148:TYR:HA	6:L:161:LEU:HD11	1.81	0.61
4:J:1052:GLU:HA	4:J:1055:GLY:HA2	1.81	0.61
4:J:1221:LEU:HA	4:J:1225:GLY:O	2.00	0.61
4:J:88:CYS:SG	4:J:90:VAL:HG12	2.41	0.61
4:J:961:SER:O	4:J:980:THR:HA	2.00	0.61
6:L:9:LEU:O	6:L:13:VAL:HG13	2.01	0.61
6:L:583:THR:HB	6:L:586:ARG:CB	2.30	0.61
6:L:573:LEU:HB3	8:P:56:DG:OP2	2.00	0.61
2:G:102:LEU:HB2	2:G:142:MET:CG	2.31	0.61
2:G:45:ARG:NH2	3:I:1215:GLY:O	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:700:VAL:O	3:I:1069:ARG:NH2	2.33	0.61
3:I:745:GLU:HG2	3:I:971:LEU:HD11	1.82	0.61
4:J:1021:ASP:OD1	4:J:1023:HIS:N	2.32	0.61
4:J:1061:VAL:HB	4:J:1105:ALA:HB3	1.82	0.61
4:J:851:PRO:HD3	4:J:877:VAL:HG12	1.83	0.61
1:N:46:GLU:HA	1:N:49:ARG:CG	2.28	0.61
2:H:211:ILE:HG12	2:H:215:GLU:OE1	2.01	0.61
3:I:153:PRO:O	3:I:401:GLY:HA2	2.00	0.61
3:I:249:GLU:O	3:I:268:ARG:HD3	2.00	0.61
3:I:409:LEU:HD12	3:I:427:ASP:HB3	1.82	0.61
4:J:110:PRO:HB2	4:J:182:ALA:HB1	1.83	0.61
5:K:56:GLU:OE1	5:K:58:LEU:HB2	2.00	0.61
8:P:49:DT:H2'	8:P:50:DT:H71	1.82	0.61
2:G:29:GLU:OE1	2:G:200:LYS:HG3	2.01	0.61
3:I:1164:PHE:HA	3:I:1168:GLU:OE1	2.01	0.61
3:I:358:ASP:OD1	3:I:361:SER:HB3	2.01	0.61
3:I:803:ALA:HB2	3:I:1094:VAL:HG21	1.81	0.61
3:I:1105:SER:HB2	4:J:731:ARG:HG2	1.83	0.61
6:L:586:ARG:O	6:L:586:ARG:NH1	2.33	0.61
3:I:434:ASP:HA	3:I:437:ASN:HB3	1.83	0.61
3:I:528:ARG:NH2	3:I:576:SER:O	2.32	0.61
4:J:1175:LEU:CD1	4:J:1200:GLU:HB3	2.30	0.61
4:J:1163:VAL:HG23	4:J:1177:ILE:HG13	1.83	0.61
4:J:254:PRO:HA	4:J:260:PHE:CD2	2.36	0.61
4:J:40:LYS:HB3	4:J:42:GLU:OE1	2.00	0.61
4:J:52:GLU:HG3	4:J:53:ARG:H	1.66	0.61
3:I:733:VAL:HG23	3:I:750:ILE:HG22	1.83	0.60
4:J:1042:ASP:OD1	4:J:1059:LEU:HD21	2.01	0.60
4:J:1194:ARG:CG	4:J:1212:ASP:HB2	2.31	0.60
4:J:1219:ASP:OD1	4:J:1222:ARG:NH2	2.34	0.60
4:J:968:ASN:HB3	4:J:974:VAL:HG22	1.82	0.60
6:L:316:PHE:CZ	6:L:337:VAL:HB	2.36	0.60
6:L:390:ILE:HD13	6:L:432:THR:HG23	1.83	0.60
2:M:266:SER:HA	2:M:269:CYS:SG	2.41	0.60
4:J:107:LEU:HA	4:J:276:ASN:HD21	1.64	0.60
6:L:270:VAL:O	6:L:274:ARG:N	2.31	0.60
4:J:573:THR:HG22	4:J:575:GLY:N	2.14	0.60
6:L:105:MET:HE2	6:L:384:LEU:HD12	1.81	0.60
3:I:98:VAL:O	3:I:122:VAL:N	2.33	0.60
3:I:255:ILE:CG2	3:I:262:TYR:HB2	2.30	0.60
3:I:351:LEU:HA	3:I:354:ASP:OD1	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:265:LEU:HD11	4:J:330:MET:SD	2.40	0.60
2:H:44:ARG:HH12	4:J:538:ARG:HH11	1.48	0.60
1:N:14:GLN:O	1:N:18:THR:HG23	2.00	0.60
3:I:256:GLU:CB	3:I:261:VAL:HG22	2.31	0.60
3:I:317:LEU:HB2	3:I:321:LEU:CB	2.29	0.60
4:J:986:ASP:HB2	4:J:992:LYS:HG3	1.83	0.60
6:L:13:VAL:O	6:L:17:LYS:HE3	2.02	0.60
6:L:16:GLY:HA2	6:L:22:LEU:HD11	1.83	0.60
3:I:1125:GLY:HA3	3:I:1179:GLY:HA2	1.83	0.60
3:I:228:VAL:N	3:I:335:THR:O	2.30	0.60
3:I:475:VAL:HG22	3:I:492:MET:O	2.01	0.60
3:I:633:LEU:HG	3:I:644:LEU:HB3	1.82	0.60
4:J:423:LEU:CD1	4:J:468:VAL:HG12	2.31	0.60
4:J:513:MET:SD	4:J:579:LEU:HB2	2.42	0.60
6:L:279:ARG:O	6:L:283:GLN:HG2	2.02	0.60
2:H:13:LEU:HD11	2:H:15:ASP:O	2.02	0.60
2:H:190:ALA:HB2	2:H:200:LYS:HB2	1.83	0.60
3:I:1161:LEU:HG	3:I:1164:PHE:CD2	2.34	0.60
4:J:796:LEU:HD12	4:J:1142:ALA:HB2	1.83	0.60
6:L:286:LEU:O	6:L:337:VAL:HG22	2.01	0.60
6:L:384:LEU:O	6:L:387:VAL:HG12	2.02	0.60
6:L:605:GLU:HA	6:L:608:ARG:HG2	1.82	0.60
2:G:8:PHE:HA	2:G:32:GLU:OE2	2.02	0.60
3:I:1043:ALA:HB1	3:I:1044:PRO:HD2	1.83	0.60
3:I:801:ARG:HD2	3:I:1229:TYR:OH	2.01	0.60
3:I:519:ASN:O	3:I:523:GLU:HG2	2.02	0.60
3:I:857:VAL:HG21	3:I:862:LEU:HD21	1.83	0.60
4:J:59:ALA:HB2	4:J:71:LEU:HD22	1.83	0.60
4:J:839:VAL:CG1	4:J:864:LEU:HD12	2.31	0.60
2:M:286:GLU:CG	2:M:300:LEU:HD21	2.31	0.60
3:I:870:ILE:HD13	3:I:884:VAL:HG13	1.83	0.60
4:J:1039:ASP:OD2	4:J:1074:LEU:HB3	2.01	0.60
4:J:959:LYS:NZ	4:J:961:SER:OG	2.34	0.60
6:L:12:LEU:HB3	6:L:30:HIS:ND1	2.16	0.60
2:H:24:ALA:HB3	2:H:213:PRO:HG2	1.84	0.60
3:I:1016:GLU:O	3:I:1020:GLU:HG2	2.01	0.60
3:I:862:LEU:HB3	3:I:865:LEU:HD23	1.84	0.60
4:J:813:ASP:OD1	4:J:883:ARG:NH2	2.35	0.60
4:J:809:VAL:HG12	4:J:911:LYS:HA	1.82	0.60
6:L:15:ARG:HA	6:L:18:GLU:OE1	2.01	0.60
6:L:375:ALA:HA	6:L:378:GLU:OE1	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:584:ARG:HH22	8:P:57:DT:H71	1.67	0.60
3:I:1288:GLN:O	3:I:1292:THR:HB	2.02	0.59
4:J:1237:VAL:CG1	4:J:1253:ILE:HD13	2.32	0.59
4:J:980:THR:HG23	4:J:997:VAL:HB	1.84	0.59
2:H:35:PHE:HA	2:H:38:THR:HG22	1.83	0.59
3:I:1024:GLU:HA	3:I:1027:LYS:CE	2.31	0.59
3:I:174:ALA:CB	3:I:432:LEU:HD22	2.31	0.59
3:I:203:LYS:O	3:I:204:LEU:HD23	2.01	0.59
3:I:469:VAL:O	3:I:472:GLU:HG3	2.02	0.59
3:I:521:LEU:HD12	3:I:667:LEU:HD12	1.83	0.59
4:J:117:LEU:HG	4:J:118:LYS:HG2	1.84	0.59
4:J:20:ILE:CD1	4:J:1344:LEU:HD11	2.32	0.59
6:L:386:LEU:O	6:L:389:SER:OG	2.11	0.59
10:N:102:1N7:C3	10:N:102:1N7:C18	2.71	0.59
3:I:1117:LEU:HD21	3:I:1182:ILE:HD12	1.85	0.59
3:I:80:PHE:CE2	3:I:88:ARG:HD2	2.37	0.59
4:J:641:ILE:HD12	4:J:644:MET:HE3	1.84	0.59
6:L:162:ILE:HD13	6:L:221:PHE:CE2	2.37	0.59
6:L:360:ASP:HA	6:L:363:ARG:HB3	1.85	0.59
6:L:525:ASP:OD1	6:L:527:THR:N	2.32	0.59
3:I:1013:GLN:HG2	3:I:1017:GLN:NE2	2.17	0.59
3:I:215:TYR:HB3	3:I:220:ILE:HD11	1.83	0.59
3:I:965:GLN:O	3:I:968:GLU:HG3	2.02	0.59
6:L:551:LEU:HD21	6:L:598:LEU:HD21	1.83	0.59
6:L:595:LEU:HA	6:L:598:LEU:HB2	1.85	0.59
1:N:36:LEU:HD23	1:N:43:PRO:HA	1.83	0.59
2:G:49:SER:OG	3:I:1083:GLU:OE2	2.20	0.59
3:I:1064:ASP:O	3:I:1076:ILE:HG22	2.03	0.59
3:I:670:PHE:HZ	3:I:1117:LEU:HD13	1.68	0.59
3:I:266:GLY:O	3:I:267:ARG:NE	2.34	0.59
3:I:28:LEU:HD21	3:I:524:ILE:HG13	1.84	0.59
3:I:798:GLN:HB3	3:I:827:ARG:HH22	1.68	0.59
4:J:441:LEU:O	4:J:442:ILE:HD13	2.03	0.59
7:O:40:DC:C1'	7:O:41:DT:H5'	2.32	0.59
2:G:29:GLU:HB3	2:G:30:PRO:HD3	1.83	0.59
3:I:1291:LEU:CD2	4:J:1351:VAL:HG13	2.33	0.59
4:J:1049:GLN:NE2	4:J:1060:VAL:HB	2.18	0.59
4:J:388:ARG:CB	4:J:390:LEU:HD13	2.32	0.59
4:J:783:LEU:HA	4:J:786:THR:HG22	1.85	0.59
6:L:347:ILE:HA	6:L:350:GLU:HB2	1.84	0.59
6:L:368:GLY:O	6:L:372:ALA:N	2.23	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:250:ASP:HB3	2:M:253:LEU:CD2	2.33	0.59
7:O:56:DC:H2''	7:O:57:DT:O5'	2.02	0.59
3:I:106:GLU:HG2	3:I:109:ALA:HB3	1.83	0.59
3:I:1117:LEU:HD12	3:I:1195:ILE:HG12	1.85	0.59
3:I:1243:MET:SD	4:J:372:MET:HG3	2.42	0.59
4:J:1178:THR:HA	4:J:1184:ASP:HB3	1.83	0.59
4:J:885:VAL:HG13	4:J:894:VAL:HG11	1.83	0.59
6:L:412:LEU:O	6:L:416:VAL:HG23	2.02	0.59
6:L:94:THR:HG22	6:L:96:ASP:H	1.67	0.59
8:P:65:DT:H1'	8:P:66:DT:H5'	1.85	0.59
3:I:1072:ASN:ND2	3:I:1111:GLN:OE1	2.36	0.59
3:I:966:ILE:HG23	10:I:1401:1N7:H25	1.85	0.59
4:J:226:ALA:HA	4:J:229:GLN:HE21	1.67	0.59
4:J:664:ILE:CG2	4:J:678:ARG:HG2	2.33	0.59
6:L:158:LEU:HD22	6:L:218:ARG:HD3	1.84	0.59
6:L:361:ILE:HA	6:L:364:ARG:NH2	2.16	0.59
3:I:1128:ILE:HG13	3:I:1144:PHE:HE2	1.68	0.59
4:J:289:ASP:HA	4:J:292:VAL:HG22	1.85	0.59
4:J:342:LEU:HG	4:J:1352:ILE:HD13	1.84	0.59
4:J:515:ARG:O	4:J:545:HIS:HB2	2.03	0.59
6:L:130:VAL:HA	6:L:365:MET:HG3	1.83	0.59
8:P:59:DA:H2''	8:P:60:DA:O5'	2.01	0.59
8:P:67:DT:H5''	2:M:298:LYS:CB	2.31	0.59
3:I:833:ILE:HA	3:I:1055:ALA:HA	1.84	0.59
3:I:588:GLU:HG2	3:I:607:SER:N	2.17	0.59
3:I:758:ARG:NH2	3:I:762:ASN:OD1	2.28	0.59
3:I:906:PHE:HD2	6:L:611:LEU:HD21	1.68	0.59
3:I:918:LEU:HD12	3:I:919:ARG:H	1.67	0.59
3:I:936:ARG:HB3	3:I:939:VAL:CG2	2.32	0.59
4:J:1176:VAL:HG12	4:J:1184:ASP:HB2	1.84	0.59
6:L:150:ARG:HB3	6:L:155:GLU:HB2	1.85	0.59
6:L:231:THR:CG2	6:L:249:ILE:HG13	2.32	0.59
6:L:466:ILE:HG23	6:L:469:GLN:HE21	1.67	0.59
3:I:1010:GLN:O	3:I:1013:GLN:HB3	2.03	0.58
4:J:1322:ALA:HA	4:J:1325:PHE:HE1	1.68	0.58
4:J:194:LEU:HB3	4:J:228:VAL:HG22	1.85	0.58
4:J:621:ALA:O	4:J:624:ILE:HG22	2.03	0.58
6:L:544:THR:HG22	6:L:607:LEU:HD21	1.85	0.58
2:H:214:GLU:O	2:H:218:ARG:NE	2.35	0.58
3:I:177:ILE:HG23	3:I:183:TRP:CD1	2.38	0.58
3:I:314:ASN:O	3:I:315:MET:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:871:VAL:HG13	3:I:883:LEU:O	2.03	0.58
6:L:130:VAL:O	6:L:134:VAL:HG23	2.03	0.58
7:O:40:DC:H1'	7:O:41:DT:H5'	1.85	0.58
2:H:102:LEU:O	2:H:141:SER:HA	2.03	0.58
3:I:719:LYS:N	3:I:751:TYR:OH	2.24	0.58
4:J:85:CYS:SG	4:J:86:GLU:N	2.76	0.58
2:G:44:ARG:O	2:G:48:LEU:HG	2.03	0.58
3:I:302:ILE:CG2	3:I:309:LEU:HA	2.33	0.58
3:I:914:LYS:HG2	3:I:915:ASP:H	1.68	0.58
4:J:1281:GLU:OE2	4:J:1284:ARG:HG2	2.03	0.58
4:J:384:LYS:HG3	4:J:415:VAL:HG12	1.86	0.58
4:J:430:HIS:CD2	4:J:432:LEU:HB2	2.38	0.58
4:J:694:SER:O	4:J:697:MET:HG3	2.04	0.58
6:L:315:TRP:CZ3	6:L:316:PHE:HB2	2.38	0.58
2:H:110:VAL:N	2:H:131:CYS:O	2.36	0.58
2:H:192:VAL:HG22	2:H:193:GLU:OE1	2.04	0.58
3:I:1103:VAL:HG22	3:I:1104:PRO:HD3	1.86	0.58
3:I:302:ILE:HG22	3:I:309:LEU:HD12	1.84	0.58
3:I:565:GLU:N	3:I:565:GLU:OE1	2.29	0.58
3:I:753:LEU:HD23	3:I:767:GLN:HB2	1.86	0.58
3:I:97:ARG:HH22	6:L:475:GLY:HA2	1.68	0.58
4:J:1156:LEU:CD1	4:J:1209:VAL:HA	2.33	0.58
4:J:442:ILE:HG22	4:J:443:GLU:O	2.03	0.58
4:J:527:LEU:HD23	4:J:533:ALA:HB2	1.84	0.58
6:L:454:VAL:O	6:L:458:GLU:N	2.35	0.58
8:P:42:DT:H2''	8:P:43:DT:C7	2.34	0.58
3:I:11:ILE:HG22	3:I:1172:LEU:HD11	1.86	0.58
3:I:446:ASP:HB3	3:I:546:GLU:O	2.03	0.58
3:I:690:VAL:HG22	3:I:1236:ASN:HB3	1.85	0.58
4:J:422:LEU:O	4:J:468:VAL:HA	2.02	0.58
4:J:548:VAL:O	4:J:572:THR:N	2.28	0.58
6:L:151:VAL:CG2	6:L:161:LEU:HD12	2.34	0.58
6:L:157:ARG:HG2	6:L:160:ASP:N	2.18	0.58
6:L:271:ASN:O	6:L:275:VAL:HG23	2.04	0.58
6:L:41:ILE:O	6:L:45:ILE:HG13	2.04	0.58
6:L:548:LEU:HA	6:L:551:LEU:CD1	2.34	0.58
6:L:385:ARG:HB2	7:O:54:DT:H1'	1.85	0.58
3:I:103:VAL:HA	3:I:117:ILE:HG22	1.86	0.58
4:J:1322:ALA:HA	4:J:1325:PHE:CE1	2.39	0.58
4:J:1356:LEU:HD12	4:J:1365:TYR:CG	2.39	0.58
4:J:700:ASN:O	4:J:704:GLU:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:569:ILE:CD1	4:J:783:LEU:HD22	2.33	0.58
7:O:16:DC:C2'	7:O:17:DA:H5'	2.34	0.58
6:L:583:THR:OG1	7:O:26:DT:OP2	2.20	0.58
2:G:97:GLU:OE1	2:G:99:ILE:HG13	2.04	0.58
3:I:66:SER:HA	3:I:104:ILE:HA	1.85	0.58
3:I:66:SER:CB	3:I:104:ILE:HG22	2.33	0.58
3:I:98:VAL:HB	3:I:122:VAL:CG1	2.34	0.58
4:J:1109:LEU:H	4:J:1109:LEU:HD12	1.69	0.58
4:J:808:VAL:O	4:J:810:THR:HG23	2.04	0.58
4:J:984:LEU:O	4:J:992:LYS:HB2	2.04	0.58
6:L:253:SER:HA	6:L:256:PHE:HB3	1.85	0.58
6:L:285:ARG:O	6:L:289:LYS:HB3	2.04	0.58
6:L:576:VAL:CG1	6:L:587:ILE:HG21	2.33	0.58
2:G:125:LYS:HG3	2:G:127:GLN:OE1	2.04	0.58
3:I:147:SER:HB2	3:I:530:ILE:HD13	1.86	0.58
3:I:564:PRO:O	3:I:569:ILE:HG12	2.03	0.58
2:G:68:TYR:HB3	3:I:756:TYR:HD2	1.68	0.58
4:J:1266:ILE:HB	4:J:1276:GLU:O	2.04	0.58
4:J:1325:PHE:CE2	4:J:1326:GLN:HG3	2.38	0.58
4:J:915:ILE:HA	4:J:918:ILE:CG1	2.34	0.58
6:L:151:VAL:HG21	6:L:161:LEU:HD12	1.85	0.58
6:L:231:THR:HA	6:L:248:GLU:OE1	2.03	0.58
6:L:386:LEU:HB2	7:O:54:DT:O2	2.03	0.58
3:I:255:ILE:HB	3:I:263:VAL:H	1.69	0.58
3:I:628:HIS:HB3	3:I:647:ARG:NH2	2.18	0.58
4:J:1061:VAL:CG2	4:J:1105:ALA:HB3	2.33	0.58
4:J:1175:LEU:O	4:J:1187:GLU:HG2	2.04	0.58
4:J:1369:ARG:O	4:J:1373:ARG:N	2.35	0.58
4:J:378:LYS:HB3	4:J:379:PRO:HD3	1.85	0.58
6:L:113:ARG:O	6:L:117:ILE:HD12	2.04	0.58
6:L:339:ARG:HB3	6:L:343:LYS:NZ	2.19	0.58
6:L:370:ALA:O	6:L:374:ARG:N	2.32	0.58
6:L:605:GLU:HA	6:L:608:ARG:CG	2.34	0.58
2:H:35:PHE:O	2:H:38:THR:HG22	2.03	0.57
3:I:519:ASN:ND2	3:I:796:LEU:HD23	2.18	0.57
3:I:5:TYR:HA	3:I:8:LYS:CD	2.33	0.57
4:J:148:GLU:HB2	4:J:177:ASP:HB2	1.86	0.57
4:J:844:THR:HG23	4:J:864:LEU:HD21	1.86	0.57
6:L:162:ILE:HG22	6:L:261:LEU:CB	2.34	0.57
1:N:51:ILE:HG13	1:N:52:PHE:H	1.69	0.57
6:L:440:THR:HG21	8:P:37:DG:OP1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1010:GLN:O	3:I:1014:LEU:HG	2.04	0.57
3:I:1192:GLU:O	3:I:1196:LYS:HG2	2.04	0.57
3:I:60:GLN:HA	3:I:67:GLU:HA	1.87	0.57
3:I:718:ALA:HB3	3:I:779:ARG:O	2.04	0.57
3:I:865:LEU:HD12	3:I:869:GLY:C	2.24	0.57
4:J:923:ILE:HD11	4:J:1253:ILE:HA	1.86	0.57
1:N:39:ALA:HB3	1:N:61:CYS:SG	2.44	0.57
8:P:61:DT:H1'	8:P:62:DG:C5'	2.34	0.57
2:G:26:VAL:CG2	2:G:203:ILE:HB	2.33	0.57
3:I:197:ARG:NH2	6:L:29:ASP:OD2	2.37	0.57
3:I:823:VAL:HG23	3:I:1060:ILE:HG22	1.85	0.57
3:I:866:ASP:HB3	3:I:872:TYR:CE1	2.39	0.57
4:J:1045:THR:CG2	4:J:1074:LEU:HD12	2.35	0.57
4:J:1266:ILE:HD13	4:J:1278:GLU:HB3	1.86	0.57
6:L:274:ARG:NH1	6:L:274:ARG:HA	2.19	0.57
6:L:130:VAL:HG22	6:L:365:MET:CG	2.34	0.57
6:L:573:LEU:HA	6:L:576:VAL:HG12	1.85	0.57
6:L:585:GLU:O	6:L:588:ARG:HG2	2.03	0.57
3:I:70:TYR:HA	3:I:100:LEU:CD2	2.34	0.57
3:I:15:PHE:CG	3:I:1190:ALA:HB2	2.40	0.57
3:I:141:THR:HB	3:I:514:PHE:HE1	1.68	0.57
4:J:694:SER:OG	4:J:738:ARG:NE	2.18	0.57
4:J:826:ILE:HD11	4:J:831:VAL:HG13	1.85	0.57
2:G:48:LEU:HD21	2:G:183:ILE:HG12	1.85	0.57
2:H:134:THR:HG23	2:H:136:GLU:H	1.67	0.57
3:I:1245:ALA:HB2	4:J:351:GLY:HA3	1.87	0.57
3:I:1307:ASN:HB3	3:I:1312:ASN:O	2.04	0.57
3:I:274:ILE:HA	3:I:277:LEU:HD12	1.85	0.57
3:I:636:CYS:HB2	3:I:645:PHE:CD2	2.39	0.57
5:K:44:ASP:OD1	5:K:52:ARG:NH1	2.37	0.57
2:H:41:ASN:ND2	3:I:1217:THR:O	2.38	0.57
3:I:1144:PHE:O	3:I:1147:ARG:HG2	2.04	0.57
3:I:230:PHE:CD2	3:I:292:ILE:HD12	2.40	0.57
4:J:1120:THR:HB	4:J:1123:ARG:HH11	1.70	0.57
6:L:51:MET:N	6:L:52:GLY:HA2	2.19	0.57
2:G:192:VAL:HG22	2:G:193:GLU:H	1.70	0.57
2:H:183:ILE:HD11	2:H:203:ILE:CG2	2.34	0.57
3:I:823:VAL:CG2	3:I:1060:ILE:HG22	2.35	0.57
3:I:270:THR:O	3:I:273:HIS:HB2	2.03	0.57
3:I:397:LEU:N	3:I:418:GLY:O	2.24	0.57
4:J:1087:ASP:O	4:J:1096:PRO:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1329:THR:O	4:J:1333:THR:HG23	2.05	0.57
4:J:426:ALA:HB3	4:J:427:PRO:HD3	1.86	0.57
4:J:454:CYS:O	4:J:458:ASN:N	2.38	0.57
4:J:475:GLU:HG3	5:K:24:ALA:CB	2.35	0.57
3:I:1165:SER:HA	3:I:1168:GLU:OE1	2.05	0.57
3:I:10:ARG:NH2	3:I:791:LEU:HB2	2.20	0.57
4:J:1037:PHE:HE2	4:J:1059:LEU:HB2	1.69	0.57
4:J:306:LEU:CD2	4:J:307:LEU:HD23	2.35	0.57
6:L:343:LYS:O	6:L:347:ILE:HG13	2.05	0.57
3:I:1146:GLN:OE1	3:I:1160:ASP:HA	2.04	0.57
3:I:249:GLU:O	3:I:268:ARG:HA	2.05	0.57
6:L:124:GLU:O	6:L:127:ILE:HG12	2.05	0.57
6:L:374:ARG:HH12	6:L:378:GLU:HG3	1.70	0.57
3:I:174:ALA:HB3	3:I:432:LEU:HD22	1.85	0.57
4:J:821:MET:HE1	4:J:879:ALA:CA	2.35	0.57
4:J:848:VAL:HB	4:J:858:VAL:HG22	1.86	0.57
5:K:29:GLN:HE22	5:K:64:LEU:HD22	1.70	0.57
6:L:112:THR:HG23	6:L:115:GLY:CA	2.32	0.57
6:L:118:ASP:O	6:L:121:LYS:HG2	2.05	0.57
6:L:289:LYS:HA	6:L:293:GLU:OE1	2.05	0.57
6:L:392:LYS:CE	7:O:56:DC:H4'	2.35	0.57
6:L:541:ARG:O	6:L:545:HIS:HB2	2.05	0.57
6:L:565:ILE:O	6:L:567:MET:HG2	2.04	0.57
6:L:557:LYS:HB3	6:L:580:PHE:HZ	1.69	0.57
8:P:36:DT:H2'	8:P:37:DG:H5''	1.86	0.57
8:P:43:DT:C1'	8:P:44:DT:H5'	2.34	0.57
3:I:15:PHE:CD2	3:I:1190:ALA:HB2	2.40	0.56
3:I:404:LYS:NZ	3:I:449:GLY:O	2.32	0.56
4:J:353:SER:OG	4:J:354:VAL:N	2.38	0.56
4:J:384:LYS:HG3	4:J:415:VAL:CG1	2.35	0.56
4:J:623:GLN:O	4:J:627:THR:HG22	2.05	0.56
4:J:811:GLU:OE2	4:J:890:THR:HG23	2.05	0.56
4:J:909:ILE:HD11	4:J:913:GLU:CB	2.35	0.56
2:M:283:GLN:HG2	2:M:317:ARG:NH2	2.20	0.56
2:H:13:LEU:HD12	2:H:29:GLU:OE2	2.04	0.56
3:I:185:ASP:HB2	3:I:197:ARG:CG	2.35	0.56
3:I:596:ASP:OD1	3:I:596:ASP:N	2.36	0.56
4:J:1060:VAL:HG22	4:J:1107:VAL:N	2.13	0.56
4:J:1064:SER:HB3	4:J:1072:LYS:CD	2.35	0.56
4:J:46:TYR:OH	6:L:453:PRO:HG3	2.05	0.56
4:J:514:THR:OG1	4:J:595:ALA:O	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:610:ARG:HD2	4:J:866:GLU:HG2	1.88	0.56
4:J:658:GLU:HA	4:J:661:VAL:HG22	1.86	0.56
6:L:148:TYR:HA	6:L:161:LEU:CD1	2.35	0.56
3:I:708:VAL:HG11	3:I:794:LEU:HD22	1.87	0.56
4:J:37:GLU:HB2	4:J:104:HIS:CE1	2.40	0.56
4:J:1261:LEU:HD13	4:J:1304:ARG:HH11	1.71	0.56
4:J:311:ARG:HH21	4:J:1329:THR:HG21	1.70	0.56
4:J:153:ASN:HB3	4:J:154:LEU:CD1	2.34	0.56
4:J:900:GLY:O	4:J:908:ILE:HD12	2.05	0.56
6:L:548:LEU:HA	6:L:551:LEU:CG	2.35	0.56
2:G:226:GLU:O	2:H:10:LYS:HE2	2.05	0.56
3:I:166:SER:OG	3:I:166:SER:O	2.23	0.56
4:J:367:GLY:N	4:J:448:GLN:HB2	2.21	0.56
5:K:15:ASN:ND2	5:K:17:PHE:HB2	2.20	0.56
6:L:144:LEU:HD21	6:L:221:PHE:CD1	2.40	0.56
6:L:280:VAL:HG21	6:L:355:ILE:CG2	2.35	0.56
6:L:439:ILE:HG22	6:L:443:ILE:CD1	2.36	0.56
2:H:101:THR:O	2:H:102:LEU:HD23	2.04	0.56
2:H:192:VAL:HG12	2:H:195:ARG:HB2	1.87	0.56
3:I:1106:ARG:HD2	3:I:1106:ARG:H	1.70	0.56
3:I:3:TYR:CE1	3:I:11:ILE:HD11	2.40	0.56
3:I:205:PRO:HG2	3:I:355:PRO:HD3	1.88	0.56
3:I:514:PHE:CE2	3:I:760:ASN:HB3	2.41	0.56
3:I:944:ARG:HA	3:I:947:GLU:OE1	2.04	0.56
4:J:1311:LYS:CD	4:J:1314:LEU:HD21	2.35	0.56
4:J:195:GLU:HA	4:J:198:CYS:SG	2.44	0.56
4:J:201:LEU:HA	4:J:204:GLU:HB2	1.87	0.56
4:J:235:GLU:OE1	4:J:235:GLU:N	2.36	0.56
4:J:297:ARG:HE	6:L:100:MET:HE1	1.70	0.56
4:J:60:ARG:HG2	4:J:89:GLY:O	2.05	0.56
6:L:593:LYS:HA	6:L:596:ARG:HD3	1.87	0.56
2:G:31:LEU:HB3	2:G:199:ASP:OD2	2.05	0.56
3:I:1333:LEU:HB2	3:I:1335:ILE:HG12	1.86	0.56
3:I:683:ALA:O	3:I:686:GLN:HB2	2.05	0.56
4:J:128:LEU:HD11	4:J:189:LEU:HD21	1.88	0.56
4:J:171:GLU:HG2	4:J:172:PHE:CD2	2.41	0.56
4:J:382:TYR:HE1	4:J:401:VAL:HG21	1.70	0.56
4:J:502:PRO:HB2	4:J:507:VAL:CG1	2.36	0.56
4:J:643:ASP:HB3	4:J:720:ASN:OD1	2.06	0.56
4:J:70:CYS:SG	4:J:73:GLY:N	2.78	0.56
6:L:363:ARG:HG2	6:L:367:ILE:HD12	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:390:ILE:HD12	6:L:435:ILE:HG21	1.87	0.56
7:O:33:DA:OP2	7:O:33:DA:H2'	2.04	0.56
2:G:165:GLU:HG3	2:G:170:ARG:NH2	2.21	0.56
4:J:1267:VAL:HG21	4:J:1301:THR:HG22	1.86	0.56
10:N:102:1N7:C2	10:N:102:1N7:C3	2.73	0.56
7:O:37:DA:H2''	7:O:38:DG:H8	1.70	0.56
3:I:105:TYR:CE1	3:I:114:VAL:HG12	2.41	0.56
3:I:26:TYR:HE2	3:I:28:LEU:HB2	1.71	0.56
3:I:363:LEU:HD22	3:I:382:GLU:OE1	2.05	0.56
3:I:469:VAL:HA	3:I:472:GLU:CG	2.36	0.56
4:J:1298:VAL:HG22	4:J:1299:GLY:O	2.06	0.56
4:J:573:THR:HB	4:J:576:ARG:HG3	1.87	0.56
4:J:689:ALA:O	4:J:693:VAL:HG23	2.06	0.56
4:J:894:VAL:HG21	4:J:915:ILE:HD11	1.87	0.56
6:L:124:GLU:O	6:L:128:ASN:ND2	2.39	0.56
2:H:82:LEU:HG	2:H:173:VAL:CG1	2.35	0.56
2:H:64:VAL:HA	2:H:65:LEU:HB2	1.88	0.56
3:I:131:THR:HG22	3:I:132:ASP:H	1.70	0.56
3:I:350:THR:O	3:I:354:ASP:N	2.39	0.56
3:I:724:VAL:HG12	3:I:775:GLU:O	2.04	0.56
3:I:877:VAL:HG11	3:I:920:VAL:HG21	1.87	0.56
4:J:1162:ILE:HD12	4:J:1202:GLU:C	2.25	0.56
6:L:476:ARG:HD2	6:L:477:GLU:N	2.21	0.56
2:M:307:LEU:HA	2:M:312:LEU:HB2	1.88	0.56
2:G:164:ASP:OD2	2:G:166:ARG:HG3	2.06	0.56
3:I:339:ASN:ND2	3:I:341:LEU:HB3	2.21	0.56
3:I:728:ASP:OD1	3:I:729:ALA:N	2.38	0.56
4:J:889:ASP:O	4:J:1286:LYS:NZ	2.27	0.56
2:M:253:LEU:HA	2:M:278:ILE:HB	1.87	0.56
3:I:839:VAL:CA	3:I:1049:ILE:HG22	2.28	0.56
4:J:306:LEU:HD23	4:J:307:LEU:HD23	1.86	0.56
4:J:355:ILE:HG12	4:J:464:ASP:O	2.05	0.56
4:J:84:ILE:HG22	4:J:91:GLU:HG3	1.88	0.56
6:L:162:ILE:HG22	6:L:261:LEU:HB3	1.88	0.56
2:G:45:ARG:HG3	3:I:1083:GLU:HG3	1.88	0.55
3:I:211:ARG:HH22	3:I:217:THR:HG22	1.70	0.55
3:I:942:ASP:OD2	3:I:943:LYS:N	2.39	0.55
4:J:1307:LEU:HD23	4:J:1311:LYS:HG3	1.88	0.55
4:J:37:GLU:HB2	4:J:104:HIS:NE2	2.21	0.55
4:J:548:VAL:HG12	4:J:550:VAL:HG23	1.86	0.55
4:J:511:TYR:CD2	4:J:728:SER:HB3	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:759:ILE:HD11	4:J:774:ILE:CG2	2.35	0.55
5:K:3:ARG:NH1	5:K:55:GLU:OE1	2.39	0.55
6:L:143:TYR:HA	6:L:146:GLU:HG3	1.88	0.55
3:I:105:TYR:CD1	3:I:114:VAL:HA	2.41	0.55
3:I:1234:LYS:NZ	3:I:1238:LEU:HD21	2.21	0.55
3:I:860:ALA:O	3:I:863:SER:HB3	2.06	0.55
4:J:1164:SER:O	4:J:1175:LEU:HG	2.06	0.55
4:J:343:LEU:HD22	4:J:1351:VAL:HG12	1.88	0.55
4:J:363:LEU:CD2	4:J:487:THR:HG22	2.36	0.55
3:I:1281:TYR:OH	4:J:431:ARG:O	2.18	0.55
4:J:502:PRO:HG2	4:J:601:ILE:CD1	2.37	0.55
2:H:4:SER:OG	2:H:5:VAL:N	2.40	0.55
3:I:1064:ASP:OD1	3:I:1239:VAL:HG12	2.07	0.55
3:I:146:VAL:HG12	3:I:529:ARG:HB3	1.88	0.55
4:J:998:PRO:HG2	4:J:1020:TRP:NE1	2.21	0.55
4:J:1048:ARG:CZ	4:J:1059:LEU:HG	2.37	0.55
4:J:701:LEU:CD2	4:J:723:TYR:HB2	2.35	0.55
4:J:59:ALA:HB2	4:J:71:LEU:CD2	2.36	0.55
4:J:910:ASN:CG	5:K:15:ASN:HA	2.27	0.55
6:L:235:ILE:HD13	6:L:245:ALA:CB	2.36	0.55
8:P:36:DT:C2'	8:P:37:DG:H3'	2.37	0.55
2:G:192:VAL:HG11	2:G:195:ARG:O	2.07	0.55
2:H:211:ILE:CG1	2:H:215:GLU:HB3	2.37	0.55
3:I:204:LEU:HD21	3:I:369:MET:SD	2.46	0.55
3:I:321:LEU:HA	3:I:324:LYS:CG	2.29	0.55
3:I:349:GLU:O	3:I:353:VAL:HG23	2.06	0.55
4:J:583:VAL:HG13	4:J:584:PRO:HD2	1.87	0.55
4:J:572:THR:HG21	4:J:589:TYR:OH	2.06	0.55
4:J:857:LEU:HD21	4:J:871:LEU:HD22	1.88	0.55
6:L:128:ASN:HA	6:L:131:GLN:OE1	2.05	0.55
6:L:351:THR:CB	6:L:358:VAL:HG21	2.36	0.55
4:J:259:ARG:HG2	10:L:701:1N7:O2	2.07	0.55
2:H:130:ILE:HG22	2:H:131:CYS:SG	2.46	0.55
2:H:155:ALA:HA	2:H:158:ARG:NH2	2.22	0.55
3:I:10:ARG:HD2	3:I:1181:PRO:CG	2.37	0.55
3:I:161:LYS:HD2	3:I:170:VAL:CG2	2.35	0.55
3:I:22:LEU:HD22	3:I:603:ILE:CD1	2.37	0.55
3:I:731:ARG:NH1	3:I:752:ASN:OD1	2.39	0.55
3:I:842:ASP:HA	3:I:847:PRO:HA	1.89	0.55
4:J:120:LEU:HD12	4:J:1330:ARG:HD3	1.88	0.55
4:J:128:LEU:HD11	4:J:189:LEU:CD2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:527:LEU:HB2	4:J:550:VAL:HG22	1.88	0.55
4:J:85:CYS:O	4:J:89:GLY:HA2	2.05	0.55
6:L:484:ALA:O	6:L:488:LEU:HA	2.07	0.55
3:I:1013:GLN:HG2	3:I:1017:GLN:HE22	1.71	0.55
4:J:1035:VAL:N	4:J:1113:VAL:O	2.20	0.55
10:J:1504:1N7:H31	10:J:1504:1N7:H5	1.88	0.55
4:J:518:VAL:HB	4:J:707:ILE:HD12	1.88	0.55
5:K:38:LEU:HD13	5:K:58:LEU:HG	1.89	0.55
6:L:322:MET:HB3	6:L:324:LYS:CG	2.36	0.55
6:L:347:ILE:HG22	6:L:355:ILE:CD1	2.37	0.55
2:G:11:PRO:HD3	2:H:227:GLN:OE1	2.07	0.55
2:H:61:ILE:HG22	2:H:62:ASP:H	1.71	0.55
3:I:1117:LEU:CD2	3:I:1182:ILE:HD12	2.37	0.55
3:I:771:VAL:HG11	3:I:783:LEU:CD1	2.36	0.55
4:J:949:SER:HB3	4:J:1016:THR:HG23	1.88	0.55
4:J:825:VAL:O	4:J:832:LYS:HB2	2.07	0.55
4:J:474:LEU:HD21	5:K:27:ALA:HB1	1.87	0.55
6:L:13:VAL:HG11	6:L:84:LEU:CD2	2.36	0.55
6:L:487:MET:HB3	6:L:489:MET:HE1	1.88	0.55
8:P:58:DC:C6	8:P:58:DC:H5'	2.41	0.55
3:I:1252:SER:OG	3:I:1255:THR:O	2.24	0.55
3:I:142:GLU:HB3	3:I:515:MET:CE	2.36	0.55
4:J:1160:SER:CA	4:J:1205:GLU:HA	2.37	0.55
4:J:847:ASP:HA	4:J:858:VAL:O	2.06	0.55
6:L:405:ILE:O	6:L:409:ASN:ND2	2.39	0.55
3:I:1002:LEU:HD22	3:I:1007:LYS:HB2	1.89	0.55
3:I:1132:LEU:HD22	3:I:1173:ALA:HB1	1.88	0.55
4:J:1347:LEU:HG	4:J:1357:ILE:CG2	2.36	0.55
4:J:515:ARG:HH12	4:J:717:VAL:HG23	1.72	0.55
6:L:338:HIS:O	6:L:342:GLN:HG3	2.07	0.55
6:L:487:MET:HB3	6:L:489:MET:HE2	1.89	0.55
2:H:54:CYS:SG	2:H:92:VAL:HB	2.46	0.55
2:H:73:GLY:O	2:H:134:THR:N	2.39	0.55
3:I:1270:PHE:O	4:J:344:GLY:HA2	2.07	0.55
3:I:960:LEU:HA	3:I:963:GLU:CG	2.37	0.55
4:J:1115:ILE:HB	4:J:1119:ASP:OD2	2.07	0.55
4:J:1172:LYS:CD	4:J:1189:MET:HB3	2.32	0.55
4:J:129:ASP:OD1	4:J:220:ARG:NH1	2.33	0.55
4:J:308:ASP:OD2	4:J:311:ARG:NH1	2.39	0.55
4:J:349:TYR:CD2	4:J:472:LEU:HD11	2.42	0.55
4:J:653:ILE:HG23	4:J:692:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:24:ARG:HG3	4:J:684:ASP:OD1	2.07	0.55
6:L:252:LEU:HA	6:L:255:VAL:HG22	1.89	0.55
6:L:373:ARG:HB3	6:L:377:LYS:NZ	2.22	0.55
6:L:471:LEU:HB2	6:L:478:PRO:HD3	1.88	0.55
8:P:60:DA:C2'	8:P:61:DT:H71	2.36	0.55
2:H:19:VAL:HG12	2:H:20:SER:H	1.72	0.54
3:I:1103:VAL:HG21	4:J:639:VAL:HG11	1.88	0.54
3:I:122:VAL:HG22	3:I:123:TYR:O	2.06	0.54
3:I:217:THR:HB	3:I:313:ALA:HB3	1.89	0.54
3:I:349:GLU:N	3:I:349:GLU:OE1	2.40	0.54
3:I:387:ASN:CA	3:I:391:SER:HB3	2.37	0.54
3:I:563:THR:HG23	3:I:564:PRO:HD2	1.88	0.54
4:J:1082:ASP:OD2	4:J:1086:ASN:ND2	2.39	0.54
4:J:385:LEU:HD13	4:J:400:MET:SD	2.47	0.54
4:J:540:GLY:O	4:J:541:LEU:HD23	2.07	0.54
4:J:80:HIS:O	4:J:83:VAL:HG12	2.06	0.54
6:L:406:GLN:HA	6:L:409:ASN:ND2	2.21	0.54
2:M:257:VAL:HA	2:M:260:LEU:HD23	1.90	0.54
3:I:57:PHE:CD2	3:I:70:TYR:HB2	2.42	0.54
3:I:765:ILE:HD12	3:I:787:PRO:HG3	1.89	0.54
4:J:1021:ASP:HB3	4:J:1024:THR:OG1	2.07	0.54
4:J:1035:VAL:HG12	4:J:1037:PHE:HE1	1.72	0.54
4:J:107:LEU:HA	4:J:276:ASN:ND2	2.23	0.54
4:J:1173:ARG:HH21	4:J:1196:LEU:HD23	1.72	0.54
6:L:9:LEU:HA	6:L:12:LEU:CD2	2.37	0.54
6:L:464:ASN:O	6:L:468:ARG:HG3	2.07	0.54
3:I:56:VAL:CG2	3:I:468:LEU:HD12	2.37	0.54
4:J:1060:VAL:HA	4:J:1107:VAL:HG23	1.89	0.54
4:J:1172:LYS:HB3	4:J:1190:ILE:C	2.28	0.54
6:L:319:ALA:HB1	6:L:322:MET:CE	2.37	0.54
6:L:567:MET:O	6:L:569:THR:HG22	2.07	0.54
6:L:96:ASP:O	6:L:100:MET:HG3	2.08	0.54
2:G:45:ARG:HD2	2:H:38:THR:CB	2.29	0.54
3:I:1067:ALA:CB	3:I:1073:LYS:HA	2.38	0.54
3:I:671:LEU:HD23	3:I:1186:VAL:HG22	1.90	0.54
3:I:118:LYS:NZ	3:I:488:MET:HG3	2.22	0.54
3:I:549:ASP:OD2	4:J:750:PRO:HG2	2.07	0.54
3:I:557:ARG:HB3	3:I:587:LEU:CD1	2.36	0.54
3:I:943:LYS:HE3	3:I:947:GLU:OE2	2.08	0.54
4:J:26:SER:HB2	4:J:236:TRP:CZ2	2.41	0.54
4:J:796:LEU:HG	4:J:800:LEU:HD23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:843:VAL:O	4:J:883:ARG:HG2	2.07	0.54
6:L:9:LEU:O	6:L:12:LEU:HG	2.07	0.54
6:L:136:GLU:HB3	6:L:361:ILE:CG1	2.35	0.54
3:I:1121:ALA:HB2	3:I:1182:ILE:CD1	2.38	0.54
4:J:1035:VAL:HG21	4:J:1109:LEU:HB3	1.88	0.54
4:J:1095:MET:HG2	4:J:1096:PRO:O	2.08	0.54
4:J:114:ILE:HG23	4:J:115:TRP:HD1	1.72	0.54
4:J:1179:PRO:HD3	4:J:1184:ASP:CB	2.31	0.54
4:J:1265:THR:HG22	4:J:1279:GLN:HB3	1.89	0.54
3:I:1073:LYS:CD	4:J:462:ASP:HB2	2.38	0.54
4:J:975:ILE:HG13	4:J:997:VAL:HG12	1.88	0.54
8:P:64:DA:C2'	8:P:65:DT:H5''	2.36	0.54
2:G:43:LEU:HD13	2:G:217:ILE:CD1	2.34	0.54
2:H:102:LEU:HD21	2:H:115:ILE:HG12	1.88	0.54
2:H:181:GLU:N	2:H:206:GLU:O	2.29	0.54
2:H:81:ILE:O	2:H:85:LEU:HG	2.07	0.54
3:I:953:LEU:CD2	3:I:1033:ARG:HG3	2.35	0.54
4:J:1024:THR:HB	4:J:1123:ARG:CB	2.38	0.54
4:J:1060:VAL:HG13	4:J:1105:ALA:O	2.07	0.54
4:J:1162:ILE:HA	4:J:1203:ARG:HA	1.89	0.54
3:I:1291:LEU:HD22	4:J:1351:VAL:HG13	1.89	0.54
4:J:166:LEU:O	4:J:170:GLU:N	2.40	0.54
4:J:502:PRO:HB2	4:J:507:VAL:HG12	1.89	0.54
3:I:490:GLN:NE2	6:L:472:GLN:HB3	2.19	0.54
4:J:1156:LEU:HD12	4:J:1208:ASP:O	2.08	0.54
4:J:1268:ASN:HA	4:J:1276:GLU:CG	2.37	0.54
4:J:1332:LEU:O	4:J:1336:ALA:N	2.41	0.54
4:J:317:THR:OG1	4:J:322:ARG:O	2.13	0.54
4:J:418:GLU:CG	5:K:48:VAL:HG21	2.37	0.54
6:L:142:THR:O	6:L:146:GLU:HG3	2.07	0.54
6:L:474:MET:HG2	6:L:482:GLU:OE2	2.08	0.54
6:L:51:MET:CB	6:L:53:ILE:HG13	2.38	0.54
3:I:1067:ALA:HB2	3:I:1073:LYS:HA	1.89	0.54
3:I:1332:SER:O	4:J:243:PRO:HG2	2.06	0.54
3:I:195:PHE:HB3	3:I:203:LYS:CG	2.38	0.54
3:I:178:PRO:HG3	3:I:395:TYR:CE1	2.43	0.54
3:I:706:ARG:NH1	3:I:793:GLU:HG3	2.23	0.54
3:I:840:SER:OG	3:I:850:ILE:HD11	2.08	0.54
4:J:1110:GLU:O	4:J:1113:VAL:HG23	2.07	0.54
4:J:360:TYR:CZ	4:J:361:LEU:HD23	2.43	0.54
4:J:418:GLU:HB2	5:K:45:LYS:CG	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:983:LYS:HA	4:J:994:SER:HA	1.90	0.54
6:L:126:GLY:HA3	6:L:372:ALA:CB	2.32	0.54
1:N:51:ILE:O	1:N:53:PRO:HD3	2.08	0.54
2:G:16:ILE:HG23	2:G:25:LYS:O	2.08	0.54
3:I:1272:GLU:OE2	3:I:1276:TRP:NE1	2.40	0.54
3:I:839:VAL:HG21	3:I:841:ARG:NH1	2.23	0.54
4:J:1167:LYS:HE3	4:J:1170:LYS:HB2	1.89	0.54
4:J:122:SER:O	4:J:125:GLY:N	2.40	0.54
4:J:587:LEU:HD21	4:J:608:CYS:HA	1.89	0.54
6:L:275:VAL:HG12	6:L:279:ARG:HD2	1.90	0.54
6:L:582:VAL:O	6:L:583:THR:OG1	2.25	0.54
2:G:228:LEU:O	2:G:232:VAL:HG12	2.07	0.54
2:H:92:VAL:O	2:H:148:ARG:NH2	2.39	0.54
3:I:1101:LEU:HD23	4:J:725:MET:SD	2.48	0.54
3:I:10:ARG:HD2	3:I:1181:PRO:HG2	1.90	0.54
3:I:231:GLU:HA	3:I:332:ARG:HA	1.90	0.54
3:I:590:PRO:HB2	3:I:655:VAL:CG2	2.37	0.54
3:I:936:ARG:HB3	3:I:939:VAL:HG21	1.88	0.54
4:J:1035:VAL:CG2	4:J:1113:VAL:HB	2.38	0.54
4:J:1163:VAL:CG2	4:J:1177:ILE:HG13	2.37	0.54
4:J:216:LYS:O	4:J:219:LYS:HG2	2.08	0.54
4:J:705:THR:OG1	4:J:718:SER:HA	2.07	0.54
4:J:901:ARG:O	4:J:903:LEU:N	2.39	0.54
3:I:1101:LEU:O	3:I:1104:PRO:HD2	2.08	0.53
10:J:1504:1N7:C3	10:J:1504:1N7:C18	2.70	0.53
3:I:1295:SER:OG	4:J:345:LYS:HD3	2.08	0.53
4:J:515:ARG:NH1	4:J:717:VAL:HG23	2.23	0.53
2:H:77:ASP:OD1	2:H:78:ILE:N	2.34	0.53
3:I:617:ALA:HB3	3:I:653:MET:HA	1.90	0.53
3:I:622:ASN:HB2	3:I:630:VAL:CG2	2.37	0.53
3:I:1340:GLU:HB2	4:J:19:ALA:O	2.09	0.53
4:J:279:LEU:CD1	4:J:296:LYS:HG2	2.35	0.53
3:I:1331:ARG:HG3	4:J:33:TRP:CH2	2.43	0.53
4:J:846:GLU:HG3	4:J:847:ASP:O	2.08	0.53
5:K:26:ARG:HG2	5:K:59:ILE:HD13	1.90	0.53
6:L:310:GLU:OE2	6:L:356:GLU:HB2	2.08	0.53
7:O:21:DA:N3	2:M:265:ARG:NH1	2.42	0.53
7:O:26:DT:C2'	7:O:27:DT:H5'	2.35	0.53
2:G:118:ASP:HB3	2:G:121:VAL:CG1	2.38	0.53
2:G:74:VAL:HG21	2:G:81:ILE:HD11	1.90	0.53
3:I:1116:HIS:HE1	4:J:641:ILE:H	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1127:LYS:O	3:I:1131:MET:HG3	2.08	0.53
3:I:59:ILE:CD1	3:I:472:GLU:HB2	2.39	0.53
3:I:843:THR:OG1	3:I:844:LYS:N	2.42	0.53
4:J:1172:LYS:HB3	4:J:1190:ILE:O	2.09	0.53
4:J:553:THR:CB	4:J:567:THR:HG22	2.38	0.53
6:L:346:GLN:O	6:L:350:GLU:N	2.30	0.53
6:L:371:LYS:HA	6:L:374:ARG:HB2	1.91	0.53
6:L:595:LEU:HD23	6:L:595:LEU:H	1.72	0.53
2:G:231:PHE:CE1	2:H:28:LEU:HD22	2.44	0.53
2:H:65:LEU:HD23	2:H:66:HIS:N	2.23	0.53
3:I:1120:ALA:O	3:I:1124:ILE:HG12	2.08	0.53
3:I:225:PHE:CE2	3:I:347:ILE:HB	2.43	0.53
3:I:56:VAL:HG21	3:I:468:LEU:HD12	1.91	0.53
4:J:317:THR:OG1	4:J:318:GLY:N	2.42	0.53
6:L:277:MET:CE	6:L:359:LYS:HG2	2.38	0.53
6:L:351:THR:CG2	6:L:358:VAL:HG21	2.38	0.53
6:L:503:GLU:HB2	6:L:504:PRO:HD2	1.89	0.53
6:L:96:ASP:HB2	6:L:99:ARG:HG3	1.89	0.53
3:I:298:ALA:HB3	3:I:334:GLU:HB3	1.91	0.53
3:I:558:VAL:CG1	3:I:573:ASN:HB3	2.37	0.53
3:I:809:GLY:O	4:J:359:PRO:HG3	2.09	0.53
4:J:799:ARG:NH1	4:J:1142:ALA:HB1	2.23	0.53
4:J:189:LEU:HB3	4:J:234:PRO:HB2	1.90	0.53
6:L:394:TYR:O	6:L:397:ARG:HG2	2.09	0.53
10:L:701:1N7:C3	10:L:701:1N7:C2	2.74	0.53
8:P:50:DT:H2"	8:P:51:DC:C5	2.42	0.53
2:G:76:GLU:OE1	2:G:76:GLU:N	2.42	0.53
3:I:11:ILE:CG2	3:I:1172:LEU:HD11	2.39	0.53
3:I:688:GLN:HB2	3:I:1235:LEU:HD22	1.91	0.53
3:I:469:VAL:HA	3:I:472:GLU:HG3	1.91	0.53
3:I:871:VAL:CG1	3:I:883:LEU:HA	2.38	0.53
3:I:979:LEU:O	3:I:984:VAL:HA	2.09	0.53
3:I:975:ILE:HD11	3:I:998:LEU:HD11	1.90	0.53
4:J:154:LEU:HD11	4:J:158:GLN:NE2	2.24	0.53
4:J:306:LEU:O	4:J:326:SER:HB2	2.08	0.53
4:J:451:PRO:HA	4:J:454:CYS:SG	2.49	0.53
1:N:52:PHE:HB2	1:N:55:VAL:HG23	1.88	0.53
8:P:58:DC:H5'	8:P:58:DC:H6	1.73	0.53
3:I:216:THR:OG1	3:I:219:GLN:OE1	2.14	0.53
3:I:301:TYR:HB2	3:I:311:CYS:SG	2.48	0.53
3:I:657:THR:OG1	3:I:1187:PHE:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:848:GLU:OE1	3:I:886:LYS:HD2	2.09	0.53
4:J:959:LYS:HA	4:J:1007:ASP:OD1	2.08	0.53
3:I:801:ARG:NH2	3:I:1088:ASP:OD2	2.40	0.53
3:I:22:LEU:HD12	3:I:23:ASP:H	1.74	0.53
4:J:1136:GLY:HA2	4:J:1240:VAL:HG13	1.91	0.53
4:J:233:LYS:O	4:J:236:TRP:HB2	2.08	0.53
3:I:1284:ALA:N	4:J:479:GLU:OE2	2.34	0.53
4:J:490:ILE:HG22	4:J:500:ILE:HG21	1.89	0.53
4:J:570:LYS:NZ	4:J:589:TYR:HB3	2.24	0.53
4:J:742:GLY:O	4:J:762:ASN:HB3	2.09	0.53
5:K:26:ARG:HD3	5:K:64:LEU:HD21	1.89	0.53
6:L:112:THR:CG2	6:L:115:GLY:HA3	2.36	0.53
6:L:248:GLU:O	6:L:251:LYS:HG2	2.09	0.53
3:I:1082:ILE:H	3:I:1082:ILE:HD12	1.74	0.53
3:I:1287:LEU:HD21	3:I:1291:LEU:HD21	1.91	0.53
4:J:1023:HIS:HA	4:J:1125:PRO:HB3	1.91	0.53
4:J:1027:VAL:HG12	4:J:1122:ALA:O	2.09	0.53
4:J:45:ASN:OD1	4:J:48:THR:HG22	2.09	0.53
1:N:51:ILE:HG21	4:J:667:GLN:OE1	2.08	0.53
5:K:30:MET:HE1	5:K:49:ILE:HG22	1.90	0.53
6:L:99:ARG:O	6:L:103:ARG:HG3	2.09	0.53
6:L:436:ARG:HD2	8:P:35:DA:N1	2.24	0.53
3:I:1246:ARG:NH1	3:I:1265:PHE:O	2.42	0.53
3:I:1319:MET:HE3	4:J:1353:VAL:O	2.09	0.53
3:I:255:ILE:N	3:I:263:VAL:O	2.41	0.53
3:I:367:TYR:CD2	3:I:381:ALA:HA	2.44	0.53
3:I:623:LEU:CA	3:I:630:VAL:HG13	2.38	0.53
3:I:803:ALA:CB	3:I:1094:VAL:HG21	2.39	0.53
4:J:117:LEU:O	4:J:132:LEU:HD11	2.09	0.53
4:J:308:ASP:OD1	4:J:328:ALA:HB3	2.09	0.53
4:J:361:LEU:HB2	4:J:365:GLN:HE21	1.73	0.53
3:I:676:ALA:HB3	4:J:779:ALA:CB	2.38	0.53
4:J:796:LEU:O	4:J:800:LEU:HD23	2.09	0.53
6:L:366:SER:HA	6:L:369:GLU:CB	2.35	0.53
6:L:395:THR:HA	6:L:404:LEU:CD1	2.34	0.53
6:L:497:VAL:O	6:L:500:ILE:HB	2.09	0.53
2:H:183:ILE:HD13	2:H:205:MET:HE2	1.91	0.52
3:I:1089:GLU:HA	3:I:1213:TYR:HE1	1.73	0.52
3:I:98:VAL:HG12	3:I:100:LEU:HG	1.91	0.52
4:J:114:ILE:HD11	4:J:311:ARG:CB	2.35	0.52
6:L:123:ILE:HG13	6:L:375:ALA:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:157:ARG:NE	6:L:159:SER:HB3	2.19	0.52
2:G:182:ARG:O	2:G:183:ILE:HD13	2.09	0.52
2:G:19:VAL:HG12	2:G:24:ALA:HA	1.91	0.52
2:H:183:ILE:HD13	2:H:205:MET:CE	2.39	0.52
3:I:301:TYR:OH	3:I:332:ARG:HG3	2.10	0.52
3:I:38:PHE:HE2	3:I:127:ILE:HD12	1.73	0.52
3:I:4:SER:O	3:I:8:LYS:HG3	2.10	0.52
3:I:610:GLU:HB3	3:I:614:TYR:HE1	1.74	0.52
4:J:1105:ALA:O	4:J:1107:VAL:HG23	2.09	0.52
4:J:937:ILE:HD11	4:J:1134:ILE:HG13	1.86	0.52
3:I:819:SER:CB	3:I:1085:MET:HG3	2.39	0.52
3:I:1211:ARG:NH1	3:I:1213:TYR:OH	2.42	0.52
3:I:17:LYS:H	3:I:17:LYS:HD2	1.74	0.52
3:I:317:LEU:HD13	3:I:322:LEU:N	2.23	0.52
3:I:61:SER:OG	3:I:66:SER:HB2	2.10	0.52
3:I:960:LEU:HA	3:I:963:GLU:HG3	1.90	0.52
4:J:1367:GLN:O	4:J:1370:MET:N	2.41	0.52
6:L:235:ILE:HD13	6:L:245:ALA:HB1	1.91	0.52
6:L:309:ASN:ND2	6:L:314:THR:HB	2.24	0.52
6:L:455:HIS:HA	6:L:458:GLU:HB2	1.89	0.52
3:I:208:ILE:HG23	3:I:209:ILE:HD13	1.92	0.52
1:N:70:LYS:NZ	3:I:438:GLY:HA2	2.25	0.52
3:I:39:ILE:CD1	3:I:75:LEU:HG	2.39	0.52
4:J:1003:LEU:HA	4:J:1017:VAL:O	2.10	0.52
4:J:260:PHE:HB2	6:L:504:PRO:HB3	1.91	0.52
3:I:1166:ASP:H	3:I:1168:GLU:H	1.57	0.52
3:I:324:LYS:O	3:I:327:GLN:HG2	2.10	0.52
3:I:533:LEU:HD21	3:I:571:LEU:HD13	1.91	0.52
3:I:551:HIS:CE1	3:I:553:THR:HG23	2.44	0.52
3:I:877:VAL:CG1	3:I:920:VAL:HG21	2.39	0.52
3:I:1107:MET:CE	4:J:739:GLN:HG2	2.40	0.52
4:J:925:GLU:CG	4:J:926:PRO:HD3	2.35	0.52
6:L:166:VAL:CG2	6:L:260:ARG:HG3	2.38	0.52
6:L:253:SER:O	6:L:256:PHE:HB3	2.09	0.52
3:I:1248:THR:CG2	6:L:531:PRO:HG2	2.38	0.52
1:N:8:ALA:HB2	4:J:786:THR:CG2	2.35	0.52
3:I:299:LYS:HB3	3:I:334:GLU:OE1	2.09	0.52
3:I:577:VAL:HG23	3:I:661:VAL:O	2.09	0.52
4:J:1176:VAL:HG13	4:J:1186:TYR:O	2.08	0.52
4:J:357:VAL:HG13	4:J:451:PRO:HG3	1.91	0.52
4:J:71:LEU:H	4:J:90:VAL:HG11	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:260:LEU:HB3	2:M:262:LEU:HG	1.91	0.52
2:M:292:THR:HB	2:M:295:LEU:CB	2.39	0.52
2:H:192:VAL:HG22	2:H:193:GLU:H	1.75	0.52
10:I:1401:1N7:H5	10:I:1401:1N7:H31	1.92	0.52
3:I:158:ASP:OD1	3:I:159:SER:N	2.42	0.52
3:I:233:ARG:HB2	3:I:238:GLN:HB2	1.92	0.52
3:I:615:VAL:N	3:I:651:ASP:OD2	2.38	0.52
4:J:1030:GLU:HG2	4:J:1031:VAL:HG23	1.91	0.52
4:J:1064:SER:HA	4:J:1067:ARG:CG	2.40	0.52
4:J:1064:SER:HB3	4:J:1072:LYS:CE	2.39	0.52
4:J:1194:ARG:HG3	4:J:1212:ASP:HB2	1.91	0.52
4:J:411:ILE:O	4:J:415:VAL:HG13	2.09	0.52
1:N:52:PHE:HE2	4:J:673:VAL:HG12	1.74	0.52
4:J:924:GLY:O	4:J:927:GLY:N	2.39	0.52
1:N:13:GLU:HA	1:N:16:THR:HG22	1.92	0.52
7:O:20:DA:H2"	7:O:21:DA:C8	2.43	0.52
3:I:800:MET:HG3	3:I:1096:ILE:HD12	1.91	0.52
3:I:549:ASP:OD1	3:I:550:VAL:N	2.43	0.52
3:I:452:ARG:NH1	3:I:584:TYR:O	2.26	0.52
4:J:1042:ASP:HA	4:J:1046:ILE:O	2.10	0.52
4:J:1051:ASP:N	4:J:1056:LEU:O	2.42	0.52
4:J:1067:ARG:CD	4:J:1072:LYS:HA	2.40	0.52
4:J:58:CYS:H	4:J:62:PHE:HD2	1.57	0.52
4:J:719:PHE:CD1	4:J:724:MET:HE1	2.45	0.52
6:L:228:TYR:O	6:L:231:THR:N	2.40	0.52
6:L:347:ILE:HG22	6:L:355:ILE:HD12	1.92	0.52
6:L:402:LEU:HA	6:L:405:ILE:CD1	2.39	0.52
6:L:564:GLY:HA2	6:L:569:THR:HG23	1.92	0.52
6:L:98:VAL:O	6:L:102:MET:HG2	2.09	0.52
2:M:282:VAL:CB	2:M:316:MET:HB2	2.34	0.52
3:I:28:LEU:CD1	3:I:527:LYS:HD3	2.39	0.52
3:I:667:LEU:HD21	3:I:705:GLU:HG2	1.92	0.52
3:I:994:ARG:HA	3:I:997:TRP:CE2	2.45	0.52
6:L:393:LYS:HD2	8:P:35:DA:N7	2.24	0.52
4:J:322:ARG:NH1	6:L:510:PRO:HG3	2.21	0.52
6:L:81:ALA:HA	6:L:84:LEU:CG	2.40	0.52
2:G:224:LEU:HD23	2:G:228:LEU:HD23	1.91	0.52
2:G:9:LEU:H	2:G:9:LEU:HD23	1.74	0.52
3:I:1247:SER:OG	3:I:1248:THR:N	2.43	0.52
4:J:1056:LEU:HD21	4:J:1108:GLN:HE21	1.75	0.52
4:J:1079:LYS:HG3	4:J:1098:GLN:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:161:THR:CG2	4:J:164:GLN:H	2.23	0.52
3:I:1245:ALA:O	4:J:375:GLU:HG2	2.09	0.52
4:J:612:LEU:HD23	4:J:616:PRO:CB	2.40	0.52
6:L:114:GLU:HA	6:L:117:ILE:CD1	2.39	0.52
6:L:540:LEU:HA	6:L:610:PHE:HE2	1.74	0.52
6:L:9:LEU:HA	6:L:12:LEU:HD23	1.91	0.52
2:H:62:ASP:OD2	2:H:71:LYS:NZ	2.41	0.51
3:I:105:TYR:HA	3:I:115:LYS:H	1.75	0.51
3:I:7:GLU:O	3:I:11:ILE:HB	2.10	0.51
3:I:563:THR:CG2	3:I:570:GLY:H	2.24	0.51
3:I:685:MET:HG3	3:I:1235:LEU:CD1	2.28	0.51
3:I:733:VAL:CG2	3:I:748:ILE:HD12	2.40	0.51
4:J:120:LEU:HB2	4:J:121:PRO:HD3	1.92	0.51
4:J:128:LEU:O	4:J:130:MET:HG3	2.09	0.51
4:J:343:LEU:HD22	4:J:1351:VAL:CG1	2.39	0.51
4:J:407:VAL:O	4:J:411:ILE:HG12	2.11	0.51
4:J:857:LEU:HD11	4:J:871:LEU:HD22	1.92	0.51
6:L:336:GLU:HA	6:L:339:ARG:CD	2.35	0.51
6:L:593:LYS:HE2	6:L:596:ARG:NH1	2.24	0.51
2:G:73:GLY:O	2:G:134:THR:OG1	2.19	0.51
2:H:180:VAL:HA	2:H:207:THR:HA	1.92	0.51
2:H:65:LEU:HB3	2:H:69:SER:HB2	1.92	0.51
3:I:1293:VAL:HG21	3:I:1304:MET:HB2	1.92	0.51
3:I:189:ASP:OD2	3:I:191:LYS:HB2	2.10	0.51
3:I:629:PHE:CE2	3:I:634:VAL:HG21	2.46	0.51
4:J:1272:SER:OG	4:J:1273:ASP:N	2.43	0.51
4:J:281:ARG:HA	4:J:284:ASP:OD1	2.10	0.51
4:J:386:GLU:OE2	4:J:394:ILE:HG13	2.10	0.51
6:L:127:ILE:HG13	6:L:131:GLN:NE2	2.24	0.51
6:L:543:ALA:HB1	6:L:606:VAL:CG2	2.40	0.51
2:M:266:SER:HA	2:M:269:CYS:HG	1.75	0.51
2:M:282:VAL:HG11	2:M:312:LEU:HD22	1.92	0.51
7:O:43:DA:H1'	7:O:44:DA:H5''	1.92	0.51
8:P:45:DA:H1'	8:P:46:DG:C8	2.45	0.51
8:P:62:DG:H2''	8:P:63:DG:C8	2.44	0.51
2:G:50:SER:HB2	2:H:8:PHE:HZ	1.75	0.51
3:I:1142:ARG:HG3	3:I:1161:LEU:HD22	1.92	0.51
3:I:1246:ARG:HD2	3:I:1265:PHE:O	2.10	0.51
3:I:31:GLN:NE2	3:I:145:ILE:O	2.43	0.51
3:I:221:LEU:HD11	3:I:351:LEU:CD1	2.40	0.51
3:I:49:LEU:HD22	3:I:464:PHE:CE2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:594:VAL:HG12	3:I:595:THR:O	2.10	0.51
3:I:61:SER:HB2	3:I:64:GLY:H	1.76	0.51
3:I:975:ILE:HD13	3:I:998:LEU:HG	1.92	0.51
4:J:1163:VAL:HG13	4:J:1200:GLU:HA	1.93	0.51
4:J:224:LEU:O	4:J:228:VAL:HG23	2.09	0.51
4:J:482:ALA:HB3	5:K:20:VAL:HG22	1.91	0.51
4:J:518:VAL:HG23	4:J:707:ILE:HD11	1.93	0.51
4:J:555:TYR:HB2	4:J:585:LYS:O	2.10	0.51
4:J:968:ASN:O	4:J:971:GLY:N	2.40	0.51
5:K:22:VAL:HG23	5:K:25:ARG:HH21	1.76	0.51
6:L:463:LEU:HD22	6:L:483:LEU:HD23	1.91	0.51
4:J:253:VAL:HG21	6:L:523:ILE:HG21	1.91	0.51
3:I:905:ILE:HA	6:L:595:LEU:CD1	2.41	0.51
1:N:64:TYR:CE2	3:I:341:LEU:HB2	2.40	0.51
6:L:428:SER:HB2	7:O:54:DT:O4	2.10	0.51
2:H:102:LEU:CD2	2:H:115:ILE:HA	2.40	0.51
3:I:130:MET:SD	3:I:134:GLY:HA2	2.50	0.51
3:I:435:ILE:HA	3:I:439:LYS:O	2.11	0.51
4:J:1282:TYR:HH	4:J:1302:TYR:HH	1.56	0.51
6:L:126:GLY:HA2	6:L:129:GLN:OE1	2.11	0.51
6:L:23:THR:HA	6:L:56:MET:O	2.10	0.51
6:L:280:VAL:HB	6:L:347:ILE:HG21	1.93	0.51
2:G:159:ILE:HA	2:G:162:GLU:OE2	2.11	0.51
3:I:16:GLY:O	3:I:1156:ARG:HB3	2.11	0.51
4:J:1049:GLN:HE22	4:J:1060:VAL:HB	1.75	0.51
3:I:1103:VAL:CG2	4:J:639:VAL:HG21	2.41	0.51
4:J:759:ILE:HD11	4:J:774:ILE:HG21	1.93	0.51
6:L:421:TYR:O	6:L:424:GLY:N	2.44	0.51
8:P:49:DT:C2'	8:P:50:DT:H71	2.40	0.51
2:H:118:ASP:HB3	2:H:121:VAL:HG23	1.92	0.51
2:H:41:ASN:O	2:H:45:ARG:HG3	2.11	0.51
3:I:1099:ASN:OD1	3:I:1100:PRO:HD2	2.11	0.51
3:I:253:PHE:CD1	3:I:288:PRO:HD3	2.45	0.51
3:I:289:VAL:CG1	3:I:319:LEU:HD12	2.39	0.51
4:J:364:HIS:HB2	4:J:485:MET:CE	2.40	0.51
4:J:545:HIS:HA	4:J:573:THR:CG2	2.40	0.51
6:L:148:TYR:O	6:L:152:GLU:HG2	2.10	0.51
6:L:385:ARG:HD2	7:O:55:DC:C5'	2.28	0.51
2:H:91:ARG:HG3	2:H:122:GLU:HB2	1.92	0.51
3:I:933:VAL:HG22	3:I:1050:VAL:CG1	2.37	0.51
3:I:886:LYS:O	3:I:917:SER:OG	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:956:ALA:O	3:I:959:ASP:HB3	2.11	0.51
3:I:994:ARG:HA	3:I:997:TRP:CD2	2.45	0.51
3:I:813:GLU:HB2	4:J:461:PHE:HD1	1.76	0.51
1:N:72:TYR:HB3	3:I:168:GLY:O	2.09	0.51
7:O:30:DC:H2''	7:O:31:DA:C8	2.45	0.51
2:H:19:VAL:CG2	2:H:23:HIS:HB3	2.41	0.51
3:I:725:GLN:OE1	3:I:735:LYS:HB2	2.11	0.51
3:I:732:ILE:CD1	3:I:769:PRO:HB3	2.31	0.51
4:J:885:VAL:HG12	4:J:1258:ARG:HD2	1.92	0.51
4:J:161:THR:H	4:J:164:GLN:HB2	1.76	0.51
4:J:975:ILE:HG12	4:J:1001:ALA:HB3	1.92	0.51
5:K:54:ILE:HD13	5:K:59:ILE:O	2.10	0.51
6:L:385:ARG:HB3	7:O:54:DT:O3'	2.11	0.51
2:M:253:LEU:HD22	2:M:318:LEU:HD13	1.93	0.51
7:O:44:DA:C8	7:O:44:DA:H5'	2.46	0.51
8:P:46:DG:H2''	8:P:47:DC:C6	2.46	0.51
2:H:33:ARG:HG3	2:H:197:ASP:OD2	2.11	0.51
2:H:84:ASN:HD21	4:J:551:ARG:HH12	1.59	0.51
3:I:188:PHE:HE2	3:I:436:ARG:HG2	1.76	0.51
3:I:26:TYR:HA	3:I:711:ASP:OD1	2.10	0.51
3:I:60:GLN:HA	3:I:67:GLU:HG3	1.92	0.51
3:I:672:GLU:HG3	3:I:673:HIS:CD2	2.45	0.51
3:I:811:ASN:HA	3:I:815:SER:CB	2.37	0.51
3:I:858:GLY:N	3:I:861:ALA:HB3	2.26	0.51
4:J:949:SER:HA	4:J:1020:TRP:CZ3	2.46	0.51
5:K:62:GLN:O	5:K:66:VAL:HG12	2.11	0.51
7:O:41:DT:O2	8:P:46:DG:N2	2.44	0.51
2:H:42:ALA:O	2:H:46:ILE:HG12	2.10	0.51
3:I:1184:THR:HG23	3:I:1189:GLY:CA	2.41	0.51
3:I:30:ILE:HG22	3:I:31:GLN:OE1	2.10	0.51
3:I:887:VAL:HG23	3:I:913:VAL:HG21	1.93	0.51
3:I:898:GLU:HG3	6:L:565:ILE:HG12	1.93	0.51
4:J:1167:LYS:HG2	4:J:1168:GLU:H	1.75	0.51
4:J:1176:VAL:CG1	4:J:1184:ASP:HB2	2.41	0.51
4:J:19:ALA:HA	4:J:1343:GLU:HA	1.92	0.51
4:J:518:VAL:HG11	4:J:714:GLU:OE2	2.10	0.51
4:J:826:ILE:CG1	4:J:831:VAL:HG13	2.41	0.51
4:J:865:HIS:CE1	4:J:867:GLN:HB2	2.46	0.51
6:L:544:THR:O	6:L:548:LEU:HB2	2.11	0.51
6:L:565:ILE:HG22	6:L:566:ASP:OD2	2.11	0.51
8:P:42:DT:C2'	8:P:43:DT:H72	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:124:VAL:HG11	2:G:210:THR:CG2	2.41	0.50
2:H:100:LEU:HD23	2:H:115:ILE:CG2	2.41	0.50
2:H:13:LEU:HB2	2:H:29:GLU:HG3	1.92	0.50
2:H:211:ILE:HD11	2:H:215:GLU:HB3	1.93	0.50
3:I:1002:LEU:HD23	3:I:1003:THR:N	2.26	0.50
3:I:55:SER:OG	3:I:465:ARG:HD2	2.11	0.50
3:I:519:ASN:HB3	3:I:522:SER:H	1.76	0.50
3:I:726:TYR:HA	3:I:773:LEU:CD1	2.41	0.50
3:I:810:TYR:CZ	3:I:1078:LYS:HD2	2.46	0.50
3:I:976:ARG:CZ	3:I:989:LEU:HB3	2.41	0.50
4:J:1052:GLU:HA	4:J:1055:GLY:CA	2.40	0.50
4:J:1067:ARG:CZ	4:J:1072:LYS:HA	2.40	0.50
4:J:1032:SER:HA	4:J:1116:SER:C	2.32	0.50
4:J:1167:LYS:NZ	4:J:1168:GLU:O	2.44	0.50
4:J:1176:VAL:HG11	4:J:1184:ASP:O	2.10	0.50
4:J:189:LEU:HD13	4:J:234:PRO:CB	2.41	0.50
4:J:681:LYS:O	4:J:685:ILE:HG12	2.12	0.50
6:L:322:MET:HB3	6:L:324:LYS:HG3	1.93	0.50
3:I:898:GLU:OE2	6:L:565:ILE:HA	2.12	0.50
2:M:267:ALA:O	2:M:271:LYS:HG3	2.11	0.50
3:I:1059:ARG:NH1	3:I:1059:ARG:HB2	2.26	0.50
3:I:263:VAL:HG12	3:I:267:ARG:HG3	1.93	0.50
4:J:1327:GLU:CD	4:J:1330:ARG:HB2	2.31	0.50
5:K:26:ARG:NH1	5:K:29:GLN:HB2	2.27	0.50
6:L:277:MET:HA	6:L:280:VAL:CG1	2.41	0.50
6:L:593:LYS:O	6:L:593:LYS:HD3	2.11	0.50
1:N:37:CYS:O	1:N:41:GLY:N	2.42	0.50
8:P:36:DT:H2'	8:P:37:DG:H3'	1.93	0.50
3:I:1146:GLN:OE1	3:I:1161:LEU:HD13	2.11	0.50
3:I:448:LEU:HB2	3:I:553:THR:OG1	2.12	0.50
3:I:734:ILE:O	3:I:734:ILE:HG13	2.11	0.50
4:J:952:VAL:HG22	4:J:1015:GLU:HB3	1.93	0.50
4:J:34:SER:OG	4:J:35:PHE:N	2.45	0.50
4:J:67:ASP:OD1	4:J:95:THR:HG22	2.12	0.50
8:P:68:DG:H5''	2:M:294:ASN:O	2.11	0.50
8:P:54:DT:C2'	8:P:55:DT:H5'	2.38	0.50
2:G:107:ILE:HG13	2:G:135:ASP:O	2.11	0.50
2:H:89:ALA:HB3	2:H:124:VAL:HG12	1.94	0.50
2:H:68:TYR:CE1	2:H:78:ILE:HB	2.46	0.50
3:I:149:LEU:HD22	3:I:530:ILE:CG2	2.41	0.50
4:J:1079:LYS:HA	4:J:1098:GLN:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1031:VAL:HA	4:J:1117:SER:OG	2.11	0.50
4:J:146:VAL:HA	4:J:178:ALA:HB2	1.94	0.50
4:J:475:GLU:HG3	5:K:24:ALA:HB1	1.93	0.50
6:L:429:THR:HA	7:O:53:DT:H72	1.93	0.50
1:N:24:ARG:O	1:N:27:ILE:HG22	2.12	0.50
2:H:102:LEU:HB2	2:H:142:MET:HG2	1.92	0.50
3:I:226:GLU:HG2	3:I:227:LYS:H	1.76	0.50
3:I:300:ASP:HA	3:I:312:ALA:HA	1.94	0.50
3:I:898:GLU:HB3	6:L:540:LEU:CD2	2.41	0.50
4:J:101:ARG:O	4:J:246:PRO:HG3	2.12	0.50
4:J:167:ASP:HA	4:J:170:GLU:HB3	1.93	0.50
4:J:545:HIS:HA	4:J:573:THR:HG23	1.94	0.50
4:J:801:VAL:O	4:J:805:GLN:HB2	2.11	0.50
3:I:108:GLU:HG3	3:I:108:GLU:O	2.10	0.50
3:I:1129:ASN:O	3:I:1133:LYS:HG2	2.12	0.50
3:I:1172:LEU:O	3:I:1176:LEU:HG	2.12	0.50
3:I:219:GLN:O	3:I:223:LEU:HG	2.11	0.50
3:I:396:ASP:OD1	3:I:418:GLY:HA3	2.12	0.50
4:J:1040:MET:SD	4:J:1077:ALA:N	2.85	0.50
4:J:1318:SER:HB3	4:J:1321:SER:OG	2.12	0.50
4:J:294:ASN:O	4:J:298:MET:HG3	2.11	0.50
4:J:509:GLY:HA3	4:J:632:ALA:HB2	1.93	0.50
8:P:66:DT:C6	8:P:67:DT:H72	2.46	0.50
3:I:1275:VAL:HG13	3:I:1287:LEU:HD11	1.93	0.50
3:I:857:VAL:CG2	3:I:862:LEU:HD21	2.42	0.50
4:J:1271:SER:OG	4:J:1271:SER:O	2.25	0.50
6:L:390:ILE:CD1	6:L:432:THR:HG23	2.41	0.50
6:L:412:LEU:HD12	6:L:412:LEU:O	2.12	0.50
6:L:605:GLU:O	6:L:608:ARG:HB2	2.10	0.50
2:H:193:GLU:HG2	2:H:194:GLN:N	2.26	0.50
3:I:670:PHE:CZ	3:I:1117:LEU:HD13	2.46	0.50
3:I:1306:LYS:O	3:I:1309:VAL:HG22	2.12	0.50
3:I:238:GLN:HB3	3:I:284:LEU:HD21	1.94	0.50
3:I:794:LEU:HD21	3:I:796:LEU:HD11	1.93	0.50
4:J:134:ASP:O	4:J:138:VAL:HG23	2.12	0.50
4:J:368:LEU:HD23	4:J:373:ALA:CB	2.38	0.50
4:J:788:LEU:HD23	4:J:788:LEU:O	2.12	0.50
6:L:287:ILE:HA	6:L:337:VAL:CG1	2.37	0.50
6:L:333:VAL:CG2	6:L:336:GLU:HB3	2.42	0.50
6:L:40:GLN:O	6:L:44:ILE:HG22	2.12	0.50
6:L:551:LEU:CD2	6:L:598:LEU:HD21	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:551:LEU:HD12	6:L:556:ALA:HA	1.93	0.50
2:G:39:LEU:O	2:G:43:LEU:HG	2.12	0.50
2:H:100:LEU:HD23	2:H:115:ILE:HG21	1.93	0.50
3:I:1184:THR:HG23	3:I:1189:GLY:HA3	1.94	0.50
3:I:178:PRO:HA	3:I:397:LEU:HG	1.94	0.50
3:I:351:LEU:HD23	3:I:354:ASP:OD1	2.12	0.50
4:J:1231:ARG:O	4:J:1235:ASN:HB2	2.12	0.50
4:J:358:GLY:HA3	4:J:448:GLN:OE1	2.12	0.50
6:L:385:ARG:CB	7:O:54:DT:H1'	2.42	0.50
1:N:48:ARG:HE	1:N:55:VAL:HG11	1.77	0.50
2:G:12:ARG:H	2:G:30:PRO:HD2	1.76	0.49
2:H:104:LYS:N	2:H:140:ILE:O	2.44	0.49
3:I:1132:LEU:HD11	3:I:1170:MET:SD	2.52	0.49
3:I:1222:GLU:N	3:I:1222:GLU:OE1	2.45	0.49
3:I:921:PRO:HD2	3:I:924:VAL:CG2	2.42	0.49
3:I:871:VAL:CG2	3:I:928:VAL:HG11	2.41	0.49
4:J:967:VAL:HG13	4:J:971:GLY:C	2.32	0.49
6:L:298:PRO:HD2	6:L:326:TRP:CZ2	2.47	0.49
6:L:401:PHE:O	6:L:405:ILE:HG23	2.12	0.49
6:L:540:LEU:O	6:L:544:THR:HG23	2.12	0.49
6:L:567:MET:HG3	6:L:569:THR:CB	2.28	0.49
6:L:586:ARG:HH21	7:O:24:DC:H2'	1.77	0.49
2:G:104:LYS:HD2	2:G:105:SER:H	1.77	0.49
3:I:254:ASP:N	3:I:265:LYS:HG2	2.28	0.49
3:I:26:TYR:O	3:I:29:SER:HB3	2.11	0.49
3:I:453:ILE:HD12	3:I:587:LEU:HG	1.95	0.49
4:J:1266:ILE:HD12	4:J:1278:GLU:O	2.12	0.49
4:J:1267:VAL:HB	4:J:1301:THR:C	2.32	0.49
3:I:812:PHE:CZ	4:J:503:SER:HB2	2.44	0.49
4:J:955:LYS:HE2	4:J:1010:GLN:HE22	1.76	0.49
6:L:394:TYR:HD2	6:L:439:ILE:HG21	1.78	0.49
6:L:576:VAL:HG13	6:L:587:ILE:HG21	1.93	0.49
4:J:393:THR:HG21	6:L:610:PHE:CE1	2.47	0.49
6:L:80:ALA:HA	6:L:83:VAL:CG1	2.38	0.49
6:L:81:ALA:HA	6:L:84:LEU:CD2	2.41	0.49
2:H:48:LEU:HD23	2:H:183:ILE:HG22	1.94	0.49
3:I:361:SER:HA	3:I:364:VAL:CG2	2.40	0.49
3:I:594:VAL:HG13	3:I:598:VAL:O	2.12	0.49
3:I:593:LYS:HA	3:I:652:TYR:CD1	2.47	0.49
3:I:6:THR:O	3:I:9:LYS:HB2	2.12	0.49
3:I:949:GLU:O	3:I:953:LEU:HG	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:134:ASP:OD1	4:J:159:ILE:HD13	2.12	0.49
4:J:39:LYS:HB2	4:J:54:ASP:OD1	2.13	0.49
4:J:902:ASP:H	4:J:1251:LYS:NZ	2.11	0.49
6:L:248:GLU:HG2	6:L:251:LYS:NZ	2.27	0.49
6:L:51:MET:HB3	6:L:53:ILE:HG13	1.94	0.49
1:N:21:ASN:O	1:N:25:GLN:HG2	2.11	0.49
1:N:36:LEU:HD23	1:N:43:PRO:CA	2.42	0.49
1:N:44:ILE:O	1:N:49:ARG:HD3	2.13	0.49
3:I:1142:ARG:NH2	3:I:1165:SER:HB3	2.22	0.49
3:I:963:GLU:HA	3:I:966:ILE:HD11	1.94	0.49
4:J:1116:SER:N	4:J:1119:ASP:OD2	2.20	0.49
4:J:113:HIS:CE1	4:J:115:TRP:HB2	2.47	0.49
4:J:865:HIS:HD1	4:J:867:GLN:H	1.59	0.49
4:J:968:ASN:HB2	4:J:1118:GLY:O	2.13	0.49
6:L:22:LEU:HB3	6:L:26:GLU:OE1	2.12	0.49
6:L:470:MET:O	6:L:474:MET:HG3	2.11	0.49
3:I:1251:TYR:HB2	6:L:528:LEU:CD1	2.42	0.49
6:L:48:ILE:CG2	6:L:55:VAL:HG11	2.30	0.49
6:L:586:ARG:HE	7:O:24:DC:C2'	2.25	0.49
8:P:40:DC:C2'	8:P:41:DT:H72	2.43	0.49
2:G:221:ALA:HB3	2:H:231:PHE:HB3	1.95	0.49
2:H:201:LEU:HG	2:H:203:ILE:CG1	2.42	0.49
3:I:117:ILE:HG13	3:I:117:ILE:O	2.13	0.49
3:I:57:PHE:HD1	3:I:59:ILE:HG13	1.78	0.49
4:J:1267:VAL:HB	4:J:1301:THR:HB	1.95	0.49
4:J:805:GLN:OE1	4:J:1348:LYS:HB2	2.12	0.49
4:J:196:GLN:O	4:J:199:GLU:HG3	2.12	0.49
4:J:365:GLN:HB2	4:J:438:GLU:O	2.12	0.49
4:J:903:LEU:HB2	4:J:905:ARG:O	2.11	0.49
6:L:158:LEU:HD22	6:L:218:ARG:CD	2.43	0.49
6:L:147:GLN:HG3	6:L:265:GLN:OE1	2.12	0.49
6:L:305:LEU:CD1	6:L:319:ALA:HB2	2.43	0.49
2:H:89:ALA:HB3	2:H:124:VAL:CG1	2.43	0.49
3:I:1004:ASP:N	3:I:1004:ASP:OD1	2.46	0.49
3:I:619:ALA:HB2	3:I:654:ASP:HB2	1.94	0.49
4:J:1146:GLU:OE2	4:J:1310:THR:HG22	2.12	0.49
4:J:17:PHE:HE2	4:J:20:ILE:HG12	1.78	0.49
4:J:355:ILE:HG21	4:J:466:MET:CG	2.37	0.49
4:J:367:GLY:CA	4:J:448:GLN:HB2	2.42	0.49
4:J:664:ILE:HG22	4:J:678:ARG:HG2	1.93	0.49
4:J:960:LEU:CB	4:J:963:VAL:HB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:976:THR:HA	4:J:999:TYR:HE1	1.76	0.49
6:L:322:MET:HG2	6:L:324:LYS:NZ	2.27	0.49
1:N:14:GLN:HG2	10:N:102:1N7:H4	1.95	0.49
2:G:90:VAL:HA	2:G:124:VAL:HG13	1.95	0.49
2:H:107:ILE:HG13	2:H:135:ASP:HA	1.95	0.49
3:I:88:ARG:NH2	3:I:1035:LYS:O	2.41	0.49
3:I:1165:SER:OG	3:I:1169:VAL:HG22	2.13	0.49
3:I:1287:LEU:HD13	4:J:1357:ILE:HD11	1.94	0.49
3:I:420:LEU:CD1	3:I:425:ILE:HD11	2.43	0.49
3:I:794:LEU:CD2	3:I:796:LEU:HD11	2.43	0.49
4:J:1162:ILE:HA	4:J:1202:GLU:O	2.12	0.49
4:J:181:GLY:O	4:J:185:ILE:HG12	2.13	0.49
4:J:859:PRO:HD2	4:J:862:THR:CG2	2.43	0.49
1:N:37:CYS:CB	1:N:58:CYS:H	2.25	0.49
2:G:124:VAL:HG11	2:G:210:THR:HG22	1.93	0.49
3:I:898:GLU:OE2	6:L:565:ILE:HG12	2.13	0.49
4:J:1357:ILE:CG2	4:J:1358:PRO:HD2	2.43	0.49
4:J:129:ASP:HB2	4:J:220:ARG:HH22	1.78	0.49
4:J:71:LEU:N	4:J:90:VAL:HG11	2.28	0.49
4:J:949:SER:HB3	4:J:1016:THR:CG2	2.43	0.49
6:L:435:ILE:O	6:L:439:ILE:HG12	2.12	0.49
6:L:439:ILE:HG22	6:L:443:ILE:HD12	1.94	0.49
6:L:454:VAL:O	6:L:458:GLU:HB2	2.12	0.49
3:I:1256:GLN:OE1	6:L:528:LEU:HD21	2.13	0.49
6:L:593:LYS:HG2	6:L:596:ARG:HH11	1.78	0.49
2:G:89:ALA:O	2:G:124:VAL:HG22	2.12	0.49
3:I:103:VAL:HG12	3:I:117:ILE:HG22	1.95	0.49
3:I:359:ARG:HD3	3:I:360:LEU:HD12	1.95	0.49
3:I:930:ASP:OD1	3:I:931:VAL:N	2.45	0.49
3:I:976:ARG:NE	3:I:989:LEU:HD23	2.28	0.49
4:J:1047:THR:HG22	4:J:1062:LEU:HD21	1.94	0.49
4:J:311:ARG:NH2	4:J:1329:THR:HG21	2.28	0.49
4:J:425:ARG:HD2	4:J:459:ALA:HB2	1.94	0.49
4:J:926:PRO:CG	4:J:1248:ILE:HD11	2.42	0.49
6:L:575:GLU:OE2	6:L:578:LYS:NZ	2.26	0.49
6:L:23:THR:HG21	6:L:58:GLU:O	2.12	0.49
7:O:23:DC:H2''	7:O:24:DC:C5'	2.43	0.49
2:G:102:LEU:HD23	2:G:144:ILE:HD11	1.94	0.49
2:G:175:ALA:HB1	2:G:177:TYR:CZ	2.48	0.49
3:I:221:LEU:HD23	3:I:336:LEU:CD1	2.29	0.49
3:I:624:ASP:HB2	3:I:630:VAL:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1163:VAL:CG2	4:J:1175:LEU:HD21	2.43	0.49
4:J:1278:GLU:HG2	4:J:1279:GLN:H	1.78	0.49
4:J:708:ASN:HB2	4:J:711:GLY:O	2.13	0.49
6:L:234:THR:C	6:L:245:ALA:HB2	2.33	0.49
6:L:45:ILE:O	6:L:48:ILE:HG22	2.12	0.49
2:M:257:VAL:O	2:M:260:LEU:HB2	2.13	0.49
3:I:130:MET:CG	3:I:134:GLY:HA2	2.43	0.48
3:I:214:ASN:ND2	3:I:359:ARG:HH21	2.10	0.48
3:I:202:ARG:HH12	3:I:368:ARG:HH22	1.61	0.48
3:I:895:LEU:HD23	3:I:895:LEU:H	1.78	0.48
4:J:1321:SER:HB3	4:J:1349:GLU:CD	2.32	0.48
6:L:220:LYS:O	6:L:223:GLU:HB3	2.12	0.48
4:J:260:PHE:HB3	6:L:504:PRO:HB3	1.95	0.48
6:L:569:THR:OG1	6:L:570:ASP:N	2.43	0.48
2:M:252:ILE:HG22	2:M:312:LEU:HD21	1.95	0.48
2:M:304:LYS:CG	2:M:314:LEU:HD11	2.43	0.48
3:I:1239:VAL:O	3:I:1242:LYS:N	2.40	0.48
3:I:361:SER:O	3:I:365:GLU:HG2	2.13	0.48
3:I:538:LEU:HD21	3:I:547:VAL:HG11	1.94	0.48
4:J:1027:VAL:HG13	4:J:1121:LEU:HD22	1.95	0.48
4:J:930:LEU:HD11	4:J:1241:TYR:CE1	2.49	0.48
4:J:164:GLN:HA	4:J:167:ASP:OD1	2.13	0.48
4:J:410:ASP:O	4:J:414:GLU:HG3	2.13	0.48
4:J:766:GLY:C	4:J:767:LEU:HD12	2.34	0.48
6:L:339:ARG:O	6:L:342:GLN:N	2.47	0.48
6:L:111:LEU:HD12	6:L:382:ALA:HB3	1.95	0.48
6:L:530:LEU:O	6:L:533:ASP:N	2.46	0.48
2:M:289:LEU:O	2:M:295:LEU:HD13	2.13	0.48
2:H:58:GLU:HB2	2:H:171:LEU:O	2.13	0.48
3:I:1165:SER:OG	3:I:1169:VAL:HG13	2.11	0.48
3:I:122:VAL:HG21	3:I:493:ILE:CD1	2.43	0.48
3:I:732:ILE:HD11	3:I:769:PRO:CB	2.32	0.48
3:I:754:THR:H	3:I:767:GLN:CG	2.25	0.48
4:J:1024:THR:O	4:J:1024:THR:OG1	2.32	0.48
4:J:1047:THR:HG22	4:J:1062:LEU:HD11	1.95	0.48
5:K:60:ASN:OD1	5:K:63:ILE:HD13	2.13	0.48
6:L:132:CYS:O	6:L:136:GLU:HG2	2.13	0.48
6:L:529:GLU:HG2	6:L:534:SER:OG	2.13	0.48
2:G:153:VAL:HB	2:G:175:ALA:HB3	1.95	0.48
2:H:104:LYS:HD3	2:H:110:VAL:HG22	1.95	0.48
3:I:105:TYR:C	3:I:115:LYS:HB2	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1136:GLN:HB3	3:I:1137:GLU:OE1	2.12	0.48
3:I:802:VAL:HG12	3:I:1228:GLY:O	2.13	0.48
3:I:141:THR:O	3:I:143:ARG:HG3	2.14	0.48
3:I:738:GLU:HA	3:I:741:MET:HB2	1.94	0.48
3:I:9:LYS:HD3	3:I:791:LEU:HD22	1.96	0.48
3:I:976:ARG:HH12	3:I:990:ASP:CB	2.27	0.48
4:J:1034:PHE:CE1	4:J:1114:GLN:HG3	2.48	0.48
4:J:342:LEU:O	4:J:343:LEU:HD23	2.13	0.48
4:J:859:PRO:HD2	4:J:862:THR:HG21	1.95	0.48
6:L:268:TYR:O	6:L:272:SER:N	2.40	0.48
6:L:362:ASN:HA	6:L:365:MET:HE2	1.95	0.48
6:L:507:MET:HG2	6:L:520:GLY:HA3	1.94	0.48
7:O:21:DA:H5''	2:M:294:ASN:ND2	2.29	0.48
2:G:57:THR:CG2	2:G:147:GLN:HG2	2.42	0.48
3:I:180:ARG:O	3:I:395:TYR:HA	2.13	0.48
3:I:714:VAL:HB	3:I:786:GLY:HA3	1.94	0.48
4:J:1005:LYS:HB3	4:J:1009:GLU:OE1	2.13	0.48
4:J:1064:SER:HA	4:J:1067:ARG:CD	2.43	0.48
4:J:799:ARG:HH12	4:J:1142:ALA:HB1	1.78	0.48
4:J:1289:ASN:ND2	4:J:1300:ALA:O	2.43	0.48
4:J:416:ILE:CG2	4:J:439:PRO:HB2	2.43	0.48
4:J:826:ILE:HD13	4:J:831:VAL:HG22	1.95	0.48
4:J:998:PRO:HG2	4:J:1020:TRP:CE2	2.48	0.48
6:L:306:PHE:HA	6:L:315:TRP:CB	2.43	0.48
6:L:388:ILE:O	6:L:392:LYS:HG3	2.12	0.48
6:L:583:THR:O	6:L:587:ILE:HG12	2.13	0.48
1:N:35:TYR:O	1:N:43:PRO:HA	2.13	0.48
8:P:63:DG:H2'	8:P:63:DG:OP2	2.13	0.48
2:G:68:TYR:CE1	2:G:79:LEU:HD11	2.49	0.48
2:H:158:ARG:HE	2:H:172:LEU:CD1	2.24	0.48
2:H:47:LEU:CD2	2:H:180:VAL:HG11	2.42	0.48
3:I:1216:ARG:HD3	3:I:1216:ARG:H	1.79	0.48
3:I:156:PHE:CE1	3:I:177:ILE:HD12	2.47	0.48
3:I:296:VAL:O	3:I:335:THR:HG23	2.14	0.48
3:I:198:ILE:CG2	3:I:388:LEU:HD21	2.43	0.48
3:I:57:PHE:HD2	3:I:70:TYR:HB2	1.77	0.48
3:I:897:PRO:O	3:I:898:GLU:HB2	2.14	0.48
3:I:94:ALA:O	3:I:126:GLU:HB2	2.14	0.48
4:J:1061:VAL:CB	4:J:1105:ALA:HB3	2.43	0.48
4:J:1160:SER:CB	4:J:1205:GLU:HA	2.43	0.48
4:J:1239:ASP:HA	4:J:1242:ARG:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:842:ARG:NH2	4:J:1254:GLU:OE1	2.44	0.48
3:I:1279:GLU:OE2	4:J:1347:LEU:HB3	2.13	0.48
4:J:152:THR:OG1	4:J:153:ASN:N	2.46	0.48
4:J:437:PHE:HZ	4:J:453:VAL:HG11	1.79	0.48
3:I:1107:MET:SD	4:J:739:GLN:HG2	2.52	0.48
6:L:267:ASP:HA	6:L:270:VAL:HB	1.96	0.48
2:G:72:GLU:OE1	2:G:72:GLU:N	2.47	0.48
3:I:338:THR:HA	3:I:343:HIS:O	2.13	0.48
3:I:628:HIS:HB3	3:I:647:ARG:HH21	1.77	0.48
3:I:70:TYR:CZ	3:I:72:SER:HA	2.49	0.48
3:I:714:VAL:CG1	3:I:787:PRO:HD2	2.44	0.48
4:J:1036:ARG:HB2	4:J:1081:VAL:CG1	2.43	0.48
4:J:146:VAL:HG21	4:J:154:LEU:CD2	2.44	0.48
4:J:153:ASN:C	4:J:154:LEU:HD12	2.33	0.48
4:J:926:PRO:HB2	4:J:1248:ILE:HD11	1.94	0.48
4:J:988:PHE:HB2	4:J:990:ARG:HG2	1.96	0.48
5:K:37:PRO:HB3	5:K:49:ILE:HG21	1.96	0.48
6:L:150:ARG:HB3	6:L:155:GLU:CG	2.44	0.48
3:I:122:VAL:HG21	3:I:493:ILE:HG21	1.96	0.48
3:I:1325:VAL:O	3:I:1329:GLU:HG3	2.13	0.48
3:I:588:GLU:HG2	3:I:607:SER:CA	2.43	0.48
3:I:828:PHE:O	3:I:1234:LYS:HE2	2.14	0.48
4:J:1147:ALA:HB1	4:J:1218:HIS:CD2	2.48	0.48
4:J:1153:PRO:HD2	4:J:1194:ARG:HH22	1.79	0.48
4:J:526:VAL:HA	4:J:549:LYS:O	2.13	0.48
6:L:600:HIS:NE2	2:M:258:ASP:OD2	2.46	0.48
2:M:304:LYS:HD3	2:M:304:LYS:O	2.14	0.48
8:P:51:DC:C2'	8:P:52:DT:H72	2.44	0.48
2:G:227:GLN:HA	2:G:227:GLN:OE1	2.14	0.48
3:I:1192:GLU:HG2	3:I:1196:LYS:HE3	1.96	0.48
3:I:228:VAL:O	3:I:335:THR:N	2.47	0.48
3:I:556:GLY:O	3:I:579:ALA:HB2	2.14	0.48
3:I:4:SER:C	3:I:8:LYS:HE3	2.34	0.48
3:I:963:GLU:OE2	3:I:964:LEU:HD22	2.13	0.48
4:J:1026:PRO:HB2	4:J:1028:ILE:HG23	1.96	0.48
4:J:161:THR:HG23	4:J:164:GLN:H	1.78	0.48
4:J:42:GLU:CB	4:J:52:GLU:HG2	2.43	0.48
4:J:364:HIS:HB2	4:J:485:MET:HE2	1.95	0.48
4:J:490:ILE:O	4:J:499:ILE:HG22	2.13	0.48
2:G:155:ALA:HA	2:G:158:ARG:HB3	1.96	0.48
2:H:102:LEU:C	2:H:141:SER:HA	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:150:ARG:O	2:H:177:TYR:HB2	2.14	0.48
3:I:1165:SER:OG	3:I:1169:VAL:N	2.46	0.48
3:I:254:ASP:OD1	3:I:254:ASP:N	2.47	0.48
3:I:499:SER:HA	3:I:502:VAL:HG12	1.96	0.48
3:I:61:SER:OG	3:I:66:SER:O	2.23	0.48
4:J:147:ILE:HG13	4:J:177:ASP:O	2.13	0.48
4:J:751:ASP:OD1	4:J:753:SER:N	2.46	0.48
4:J:986:ASP:OD2	4:J:992:LYS:HD2	2.13	0.48
2:M:282:VAL:CG1	2:M:312:LEU:HD22	2.44	0.48
8:P:57:DT:H2'	8:P:58:DC:C5'	2.42	0.48
8:P:68:DG:P	2:M:296:GLY:H	2.37	0.48
2:H:67:GLU:HA	2:H:68:TYR:HA	1.58	0.47
3:I:1119:MET:HE1	3:I:1210:ILE:HD11	1.95	0.47
3:I:209:ILE:O	3:I:213:LEU:HG	2.14	0.47
3:I:232:ILE:N	3:I:331:LYS:O	2.42	0.47
3:I:538:LEU:O	3:I:538:LEU:HD12	2.14	0.47
3:I:840:SER:O	3:I:1047:LEU:HB2	2.14	0.47
4:J:1009:GLU:O	4:J:1011:VAL:HG13	2.14	0.47
4:J:1237:VAL:CG1	4:J:1253:ILE:HG21	2.44	0.47
4:J:162:GLU:O	4:J:166:LEU:HD23	2.14	0.47
3:I:1339:LEU:HD23	4:J:17:PHE:CG	2.48	0.47
4:J:342:LEU:HD21	4:J:1352:ILE:HG23	1.96	0.47
4:J:347:VAL:HG12	4:J:348:ASP:O	2.14	0.47
4:J:548:VAL:N	4:J:572:THR:O	2.47	0.47
4:J:612:LEU:HD23	4:J:616:PRO:HB2	1.95	0.47
5:K:39:VAL:CG2	5:K:40:PRO:HD2	2.44	0.47
6:L:348:GLU:N	6:L:355:ILE:HD11	2.29	0.47
6:L:373:ARG:HA	6:L:376:LYS:HE2	1.96	0.47
6:L:98:VAL:HG13	6:L:402:LEU:HD11	1.95	0.47
6:L:444:ALA:HB1	6:L:457:ILE:CD1	2.34	0.47
6:L:452:ILE:HG13	6:L:457:ILE:CD1	2.39	0.47
6:L:509:THR:HG23	6:L:510:PRO:HD2	1.96	0.47
2:M:289:LEU:HD21	2:M:303:ILE:HG21	1.96	0.47
2:H:102:LEU:CD2	2:H:115:ILE:HG12	2.44	0.47
3:I:1220:GLN:NE2	3:I:1221:PHE:O	2.47	0.47
3:I:120:GLN:NE2	3:I:490:GLN:HB2	2.26	0.47
3:I:877:VAL:HG13	3:I:881:ASP:HB2	1.94	0.47
3:I:979:LEU:HD12	3:I:985:GLU:HG3	1.96	0.47
4:J:1282:TYR:HD2	4:J:1286:LYS:HB2	1.78	0.47
4:J:18:ASP:OD1	4:J:19:ALA:N	2.47	0.47
6:L:432:THR:O	6:L:436:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:595:LEU:O	6:L:599:ARG:HG3	2.14	0.47
2:H:43:LEU:O	2:H:47:LEU:HD12	2.14	0.47
2:H:64:VAL:HA	2:H:65:LEU:CB	2.44	0.47
3:I:161:LYS:HD2	3:I:170:VAL:HG22	1.96	0.47
3:I:754:THR:H	3:I:767:GLN:HG2	1.78	0.47
4:J:1174:ARG:HA	4:J:1187:GLU:OE2	2.14	0.47
4:J:1253:ILE:O	4:J:1257:VAL:HG23	2.15	0.47
4:J:83:VAL:O	4:J:92:VAL:HG12	2.14	0.47
6:L:348:GLU:CG	6:L:355:ILE:HG12	2.45	0.47
6:L:593:LYS:CA	6:L:596:ARG:HG2	2.42	0.47
3:I:796:LEU:H	3:I:796:LEU:HD12	1.78	0.47
4:J:167:ASP:HA	4:J:170:GLU:CB	2.45	0.47
4:J:858:VAL:HB	4:J:862:THR:OG1	2.15	0.47
4:J:884:SER:OG	4:J:885:VAL:N	2.46	0.47
4:J:975:ILE:CD1	4:J:980:THR:HG21	2.33	0.47
6:L:150:ARG:HB3	6:L:155:GLU:CB	2.44	0.47
2:G:107:ILE:HD11	2:G:136:GLU:HA	1.95	0.47
2:H:86:LYS:HZ2	2:H:174:ASP:HB2	1.78	0.47
3:I:103:VAL:CB	3:I:117:ILE:HG22	2.44	0.47
4:J:1046:ILE:CD1	4:J:1059:LEU:HD13	2.40	0.47
4:J:1080:ILE:HB	4:J:1097:ALA:HB3	1.95	0.47
4:J:1140:ARG:O	4:J:1144:LEU:HB2	2.15	0.47
4:J:271:ARG:O	4:J:275:ARG:HG3	2.15	0.47
4:J:422:LEU:CD1	4:J:471:PRO:HG3	2.44	0.47
6:L:294:GLN:HG3	6:L:295:CYS:SG	2.54	0.47
4:J:298:MET:HE1	6:L:402:LEU:O	2.14	0.47
2:G:192:VAL:HG21	2:G:198:LEU:HD12	1.96	0.47
2:H:144:ILE:HG12	2:H:145:LYS:H	1.80	0.47
3:I:671:LEU:HD23	3:I:1186:VAL:CG2	2.45	0.47
3:I:1213:TYR:CE2	3:I:1220:GLN:HG3	2.50	0.47
3:I:1245:ALA:HB1	4:J:376:LEU:CD2	2.39	0.47
3:I:3:TYR:CZ	3:I:11:ILE:HD11	2.49	0.47
3:I:122:VAL:HG21	3:I:493:ILE:HD12	1.97	0.47
3:I:765:ILE:CD1	3:I:787:PRO:HG3	2.44	0.47
4:J:38:VAL:HG22	4:J:105:ILE:HG12	1.96	0.47
4:J:122:SER:OG	4:J:132:LEU:HD12	2.14	0.47
4:J:118:LYS:NZ	4:J:136:GLU:OE2	2.44	0.47
4:J:164:GLN:HA	4:J:167:ASP:CG	2.35	0.47
6:L:137:TYR:O	6:L:140:ALA:HB3	2.14	0.47
6:L:558:VAL:O	6:L:561:MET:HB2	2.14	0.47
2:M:285:THR:O	2:M:289:LEU:HD13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:28:DG:H2''	7:O:29:DA:C8	2.50	0.47
3:I:254:ASP:CB	3:I:265:LYS:HG3	2.45	0.47
3:I:724:VAL:HA	3:I:734:ILE:HG22	1.97	0.47
3:I:1339:LEU:HD23	4:J:17:PHE:CD1	2.50	0.47
2:H:152:TYR:OH	4:J:532:GLU:OE2	2.32	0.47
4:J:826:ILE:CD1	4:J:831:VAL:HG13	2.45	0.47
6:L:216:LEU:O	6:L:219:GLU:HG2	2.14	0.47
3:I:1286:THR:O	3:I:1289:GLU:HG2	2.15	0.47
3:I:1333:LEU:CD2	4:J:327:LEU:HD13	2.44	0.47
3:I:851:THR:OG1	3:I:852:ALA:N	2.47	0.47
3:I:848:GLU:CG	3:I:888:THR:HG22	2.40	0.47
3:I:980:VAL:O	3:I:984:VAL:HB	2.15	0.47
4:J:1023:HIS:C	4:J:1125:PRO:HA	2.35	0.47
4:J:279:LEU:HD12	4:J:295:GLU:HG3	1.95	0.47
4:J:509:GLY:CA	4:J:632:ALA:HB2	2.43	0.47
4:J:950:ILE:O	4:J:950:ILE:HG13	2.15	0.47
6:L:584:ARG:HH12	8:P:57:DT:H72	1.79	0.47
3:I:48:GLY:N	3:I:461:GLU:OE2	2.48	0.47
4:J:159:ILE:O	4:J:160:LEU:HD23	2.15	0.47
4:J:250:ARG:NH1	4:J:266:ASN:OD1	2.48	0.47
4:J:244:VAL:HA	4:J:269:TYR:OH	2.14	0.47
4:J:475:GLU:OE1	4:J:475:GLU:N	2.44	0.47
4:J:536:LEU:HD23	4:J:541:LEU:HB2	1.96	0.47
4:J:78:LEU:O	4:J:78:LEU:HD12	2.15	0.47
6:L:141:ILE:O	6:L:144:LEU:HB3	2.14	0.47
6:L:234:THR:CG2	6:L:244:THR:HB	2.45	0.47
6:L:293:GLU:OE1	6:L:293:GLU:N	2.48	0.47
2:H:62:ASP:OD2	2:H:140:ILE:HA	2.15	0.47
2:H:201:LEU:HD12	2:H:202:VAL:H	1.79	0.47
2:H:29:GLU:O	2:H:31:LEU:HD22	2.15	0.47
2:H:76:GLU:HA	2:H:80:GLU:HG2	1.96	0.47
3:I:246:LEU:HB3	3:I:249:GLU:OE2	2.15	0.47
3:I:40:GLU:HG2	3:I:41:GLN:N	2.30	0.47
3:I:960:LEU:HD22	3:I:1029:LEU:HD12	1.95	0.47
3:I:967:LEU:HD21	3:I:1025:PHE:HE2	1.79	0.47
4:J:975:ILE:CD1	4:J:1003:LEU:HD11	2.43	0.47
4:J:899:TYR:CE1	4:J:1251:LYS:HE2	2.49	0.47
4:J:514:THR:HB	4:J:576:ARG:HG2	1.97	0.47
2:H:44:ARG:NH1	4:J:538:ARG:HD2	2.29	0.47
4:J:733:SER:O	4:J:737:ILE:HG12	2.14	0.47
4:J:84:ILE:HG22	4:J:91:GLU:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:117:ILE:HG22	6:L:121:LYS:CE	2.44	0.47
6:L:402:LEU:H	6:L:402:LEU:HD12	1.80	0.47
7:O:44:DA:H8	7:O:44:DA:H5'	1.79	0.47
2:H:56:VAL:HG11	2:H:144:ILE:HD11	1.97	0.47
2:G:234:LEU:HD13	2:H:218:ARG:HH21	1.80	0.47
3:I:818:VAL:HB	3:I:1076:ILE:HD11	1.97	0.47
3:I:1214:ASP:HB3	3:I:1217:THR:CG2	2.45	0.47
3:I:1122:LYS:HE2	3:I:1229:TYR:CE2	2.50	0.47
3:I:1234:LYS:HZ2	3:I:1238:LEU:HD21	1.79	0.47
3:I:312:ALA:H	3:I:315:MET:CE	2.28	0.47
3:I:521:LEU:HD12	3:I:667:LEU:CD1	2.44	0.47
4:J:1017:VAL:HG12	4:J:1017:VAL:O	2.15	0.47
4:J:1222:ARG:NH1	4:J:1223:LEU:HD21	2.29	0.47
4:J:556:GLU:HG2	4:J:558:ASP:OD2	2.15	0.47
4:J:605:LEU:HA	4:J:605:LEU:HD23	1.63	0.47
3:I:1107:MET:SD	4:J:736:GLN:HB3	2.55	0.47
5:K:12:LYS:HG3	5:K:54:ILE:O	2.15	0.47
6:L:291:CYS:SG	6:L:330:LEU:HD22	2.55	0.47
2:G:192:VAL:CG2	2:G:198:LEU:HD12	2.45	0.46
2:H:61:ILE:HG13	2:H:78:ILE:HD12	1.97	0.46
3:I:1204:LEU:HB3	3:I:1205:PRO:HD2	1.97	0.46
3:I:242:VAL:HB	3:I:245:ARG:HB3	1.96	0.46
3:I:256:GLU:HB3	3:I:261:VAL:HG13	1.97	0.46
3:I:358:ASP:OD1	3:I:358:ASP:N	2.48	0.46
3:I:156:PHE:HE2	3:I:450:ASN:HB3	1.81	0.46
3:I:895:LEU:HD12	3:I:899:GLU:HG3	1.97	0.46
4:J:616:PRO:O	4:J:619:ILE:HG22	2.15	0.46
6:L:123:ILE:HG13	6:L:375:ALA:HB3	1.97	0.46
6:L:324:LYS:HB2	6:L:327:SER:CB	2.45	0.46
6:L:336:GLU:O	6:L:339:ARG:HB2	2.15	0.46
2:M:295:LEU:CD2	2:M:300:LEU:HB2	2.45	0.46
1:N:2:SER:OG	1:N:3:ASP:N	2.47	0.46
2:G:5:VAL:O	2:H:150:ARG:NH2	2.40	0.46
2:H:59:VAL:O	2:H:171:LEU:HD23	2.14	0.46
2:H:86:LYS:HZ1	2:H:174:ASP:HB2	1.80	0.46
2:G:39:LEU:HD21	2:H:224:LEU:HD11	1.96	0.46
3:I:1103:VAL:CG2	3:I:1104:PRO:HD3	2.45	0.46
3:I:636:CYS:O	3:I:642:SER:HB2	2.14	0.46
3:I:712:SER:OG	3:I:714:VAL:HG22	2.15	0.46
4:J:1172:LYS:HD3	4:J:1189:MET:CB	2.39	0.46
4:J:1141:VAL:HG13	4:J:1237:VAL:CG2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1261:LEU:HD13	4:J:1304:ARG:NH1	2.30	0.46
4:J:735:ALA:O	4:J:738:ARG:HB3	2.16	0.46
4:J:84:ILE:HG13	4:J:84:ILE:O	2.14	0.46
4:J:915:ILE:HA	4:J:918:ILE:HG12	1.97	0.46
6:L:143:TYR:HB3	6:L:269:LEU:HD21	1.98	0.46
6:L:326:TRP:HA	6:L:329:LYS:CD	2.44	0.46
6:L:470:MET:CE	6:L:486:ARG:HB2	2.45	0.46
6:L:547:VAL:HG23	6:L:548:LEU:HD12	1.96	0.46
6:L:593:LYS:HA	6:L:596:ARG:CD	2.45	0.46
7:O:28:DG:H2"	7:O:29:DA:H8	1.79	0.46
2:G:158:ARG:NH1	2:G:158:ARG:O	2.39	0.46
2:H:120:ASP:N	2:H:120:ASP:OD1	2.47	0.46
3:I:18:ARG:HG2	3:I:1188:ASP:OD1	2.15	0.46
3:I:289:VAL:CG1	3:I:322:LEU:HD23	2.45	0.46
3:I:590:PRO:HB2	3:I:655:VAL:HG21	1.96	0.46
3:I:633:LEU:HA	3:I:633:LEU:HD12	1.73	0.46
4:J:1078:LEU:HD11	4:J:1107:VAL:HG11	1.97	0.46
4:J:1089:LEU:CB	4:J:1096:PRO:HA	2.45	0.46
4:J:1032:SER:CB	4:J:1116:SER:HA	2.45	0.46
4:J:1238:GLN:HG2	4:J:1253:ILE:HD12	1.97	0.46
4:J:1314:LEU:HD12	4:J:1315:ALA:N	2.31	0.46
4:J:783:LEU:HA	4:J:786:THR:CG2	2.45	0.46
4:J:836:ARG:HA	4:J:869:CYS:SG	2.55	0.46
5:K:26:ARG:HH11	5:K:29:GLN:HB2	1.80	0.46
2:G:110:VAL:O	2:G:130:ILE:HB	2.15	0.46
3:I:685:MET:HE2	3:I:1071:GLY:HA2	1.98	0.46
3:I:1268:GLN:HG3	4:J:467:ALA:HB1	1.97	0.46
3:I:1283:ALA:HB1	3:I:1286:THR:HB	1.97	0.46
3:I:339:ASN:N	3:I:343:HIS:O	2.47	0.46
3:I:388:LEU:HG	3:I:389:PHE:CD2	2.50	0.46
3:I:178:PRO:HB3	3:I:397:LEU:HD11	1.98	0.46
3:I:444:ASP:OD1	3:I:444:ASP:N	2.47	0.46
3:I:471:VAL:O	3:I:475:VAL:HG23	2.15	0.46
3:I:67:GLU:HB3	3:I:103:VAL:CG2	2.46	0.46
4:J:1160:SER:OG	4:J:1206:ARG:N	2.30	0.46
4:J:782:GLY:O	4:J:786:THR:HG22	2.16	0.46
3:I:1111:GLN:O	3:I:1115:THR:HG22	2.16	0.46
3:I:1133:LYS:HG3	3:I:1134:GLN:N	2.31	0.46
3:I:233:ARG:CD	3:I:238:GLN:HB2	2.37	0.46
3:I:230:PHE:HB2	3:I:333:ILE:HB	1.97	0.46
3:I:524:ILE:O	3:I:528:ARG:HD3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:9:LYS:HD3	3:I:791:LEU:CD2	2.46	0.46
4:J:1029:THR:O	4:J:1118:GLY:HA2	2.15	0.46
3:I:1282:GLY:HA3	5:K:17:PHE:CE1	2.51	0.46
6:L:143:TYR:OH	6:L:147:GLN:NE2	2.49	0.46
6:L:84:LEU:O	6:L:84:LEU:HD12	2.15	0.46
8:P:34:DT:H73	8:P:34:DT:OP1	2.14	0.46
8:P:36:DT:C3'	8:P:37:DG:H5''	2.45	0.46
2:H:103:ASN:HA	2:H:141:SER:HB2	1.97	0.46
3:I:1167:GLU:O	3:I:1171:ARG:NH2	2.49	0.46
3:I:137:VAL:CG2	3:I:142:GLU:HG2	2.45	0.46
3:I:299:LYS:HE2	3:I:300:ASP:O	2.15	0.46
3:I:391:SER:OG	3:I:394:ARG:HB2	2.15	0.46
3:I:557:ARG:HA	3:I:579:ALA:HB2	1.97	0.46
3:I:717:VAL:HG12	3:I:782:VAL:HG12	1.98	0.46
3:I:976:ARG:HD2	3:I:976:ARG:HA	1.64	0.46
4:J:1151:LYS:C	4:J:1153:PRO:HD3	2.36	0.46
4:J:176:PHE:CZ	4:J:178:ALA:HB3	2.51	0.46
4:J:252:LEU:HG	4:J:262:THR:CG2	2.40	0.46
3:I:1305:TYR:CE1	4:J:379:PRO:HG3	2.51	0.46
4:J:641:ILE:HD12	4:J:644:MET:CE	2.46	0.46
6:L:144:LEU:HD21	6:L:221:PHE:CE1	2.50	0.46
6:L:215:GLU:HB3	6:L:218:ARG:NH2	2.31	0.46
6:L:468:ARG:HH12	8:P:35:DA:P	2.38	0.46
6:L:479:THR:HG22	6:L:482:GLU:HB2	1.96	0.46
2:G:11:PRO:O	2:G:12:ARG:HG3	2.16	0.46
3:I:498:ILE:H	3:I:498:ILE:HD12	1.80	0.46
4:J:1319:PHE:HD1	4:J:1342:ASP:HB2	1.81	0.46
4:J:30:ILE:HG21	4:J:241:VAL:HG12	1.97	0.46
4:J:66:LYS:NZ	4:J:69:GLU:OE2	2.24	0.46
4:J:850:LYS:HA	4:J:877:VAL:CG1	2.45	0.46
4:J:103:GLY:C	4:J:244:VAL:HG22	2.36	0.46
4:J:1035:VAL:HG23	4:J:1113:VAL:O	2.15	0.46
4:J:127:LEU:HD21	4:J:234:PRO:HB3	1.98	0.46
3:I:1325:VAL:HG22	4:J:249:LEU:HD22	1.98	0.46
4:J:842:ARG:HB3	4:J:882:VAL:HG21	1.97	0.46
3:I:898:GLU:CD	6:L:565:ILE:HG12	2.36	0.46
6:L:82:GLN:NE2	6:L:85:SER:OG	2.49	0.46
8:P:40:DC:H1'	8:P:41:DT:O5'	2.15	0.46
3:I:1088:ASP:OD1	3:I:1088:ASP:N	2.47	0.46
3:I:161:LYS:HD2	3:I:170:VAL:HG21	1.97	0.46
3:I:95:PRO:HA	3:I:126:GLU:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1002:VAL:O	4:J:1018:ALA:HA	2.15	0.46
4:J:1021:ASP:HB3	4:J:1024:THR:HG23	1.97	0.46
4:J:1026:PRO:CA	4:J:1123:ARG:HA	2.33	0.46
4:J:1023:HIS:HA	4:J:1125:PRO:HA	1.97	0.46
4:J:1266:ILE:HA	4:J:1302:TYR:HA	1.98	0.46
4:J:1311:LYS:HE2	4:J:1314:LEU:HD21	1.97	0.46
4:J:399:LYS:HB3	4:J:399:LYS:HE2	1.65	0.46
3:I:1280:ALA:HB1	4:J:918:ILE:CG2	2.46	0.46
6:L:145:LEU:CD1	6:L:225:ARG:HA	2.46	0.46
1:N:72:TYR:HB3	3:I:170:VAL:HG23	1.98	0.46
3:I:344:GLY:HA3	3:I:346:TYR:CE2	2.50	0.46
3:I:178:PRO:HB3	3:I:397:LEU:CD1	2.46	0.46
3:I:818:VAL:CG2	3:I:1076:ILE:HD12	2.46	0.46
3:I:898:GLU:HA	3:I:901:LEU:HB3	1.97	0.46
4:J:38:VAL:CG2	4:J:105:ILE:HG12	2.46	0.46
4:J:1162:ILE:HD11	4:J:1201:GLY:O	2.16	0.46
4:J:370:LYS:HG3	4:J:441:LEU:HD12	1.98	0.46
4:J:530:PRO:O	4:J:533:ALA:HB3	2.16	0.46
4:J:909:ILE:HD12	4:J:910:ASN:H	1.81	0.46
6:L:27:VAL:O	6:L:31:LEU:HG	2.16	0.46
6:L:301:ASN:O	6:L:305:LEU:HB2	2.16	0.46
2:M:252:ILE:O	2:M:252:ILE:HG22	2.16	0.46
2:G:125:LYS:HE3	2:G:128:HIS:HB2	1.98	0.45
3:I:968:GLU:HB3	3:I:1018:TYR:OH	2.16	0.45
3:I:1191:LYS:N	3:I:1194:GLU:OE1	2.47	0.45
3:I:404:LYS:HE3	3:I:450:ASN:HA	1.98	0.45
3:I:564:PRO:HG2	3:I:568:ASN:O	2.15	0.45
3:I:699:LEU:HG	3:I:799:ASN:HD22	1.81	0.45
3:I:982:GLY:O	3:I:1002:LEU:HD11	2.16	0.45
4:J:1144:LEU:HD11	4:J:1236:GLU:CG	2.34	0.45
4:J:1165:PHE:HA	4:J:1175:LEU:CG	2.46	0.45
4:J:1181:ASP:OD1	4:J:1181:ASP:N	2.47	0.45
4:J:1178:THR:HA	4:J:1184:ASP:CB	2.46	0.45
4:J:1174:ARG:HG2	4:J:1187:GLU:OE1	2.16	0.45
4:J:254:PRO:HB3	4:J:260:PHE:HE2	1.80	0.45
4:J:478:LEU:HD13	5:K:23:ALA:HB3	1.99	0.45
4:J:908:ILE:HG13	4:J:909:ILE:O	2.16	0.45
6:L:151:VAL:CG2	6:L:156:ALA:HB3	2.36	0.45
6:L:319:ALA:O	6:L:322:MET:HB2	2.16	0.45
6:L:324:LYS:HB2	6:L:327:SER:HB3	1.98	0.45
2:M:304:LYS:HG2	2:M:314:LEU:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:40:DC:H1'	7:O:41:DT:O4'	2.15	0.45
8:P:41:DT:OP1	8:P:41:DT:H3'	2.17	0.45
3:I:104:ILE:O	3:I:115:LYS:N	2.49	0.45
3:I:1129:ASN:OD1	3:I:1177:ARG:HG3	2.16	0.45
3:I:1119:MET:HG2	3:I:1204:LEU:HD13	1.99	0.45
3:I:316:GLU:N	3:I:316:GLU:OE1	2.40	0.45
3:I:435:ILE:HD11	3:I:441:GLU:C	2.36	0.45
3:I:801:ARG:HD2	3:I:1229:TYR:CZ	2.52	0.45
4:J:1036:ARG:NH2	4:J:1081:VAL:HB	2.31	0.45
4:J:1247:LYS:O	4:J:1248:ILE:HG13	2.16	0.45
4:J:151:MET:SD	4:J:151:MET:N	2.89	0.45
4:J:582:ILE:HD13	4:J:627:THR:CG2	2.44	0.45
4:J:845:ALA:O	4:J:860:ARG:HD3	2.16	0.45
4:J:872:LEU:HG	4:J:877:VAL:CG2	2.46	0.45
4:J:950:ILE:HD12	4:J:982:LEU:CD2	2.37	0.45
4:J:955:LYS:O	4:J:984:LEU:HD11	2.17	0.45
6:L:315:TRP:CE3	6:L:316:PHE:HB2	2.51	0.45
6:L:576:VAL:HG11	6:L:587:ILE:HG21	1.98	0.45
2:G:10:LYS:O	2:G:30:PRO:HB2	2.17	0.45
3:I:1281:TYR:CE2	4:J:431:ARG:HG3	2.52	0.45
3:I:1319:MET:HE3	4:J:1353:VAL:HG13	1.98	0.45
3:I:182:SER:HB3	3:I:199:ASP:OD1	2.16	0.45
3:I:623:LEU:HD12	3:I:627:GLY:HA2	1.99	0.45
3:I:963:GLU:HA	3:I:966:ILE:CG1	2.46	0.45
4:J:1152:GLU:HB3	4:J:1214:PRO:CD	2.45	0.45
4:J:536:LEU:O	4:J:536:LEU:HD23	2.15	0.45
6:L:135:ALA:HB1	6:L:253:SER:HB2	1.97	0.45
6:L:399:LEU:HD12	6:L:399:LEU:HA	1.74	0.45
6:L:479:THR:CG2	6:L:482:GLU:HB2	2.47	0.45
2:H:35:PHE:CA	2:H:38:THR:HG22	2.45	0.45
2:H:59:VAL:HG21	2:H:85:LEU:HD12	1.99	0.45
3:I:1122:LYS:HG2	3:I:1229:TYR:CZ	2.52	0.45
3:I:1258:PRO:HG2	4:J:346:ARG:CB	2.28	0.45
3:I:587:LEU:HD23	3:I:587:LEU:HA	1.86	0.45
3:I:22:LEU:HD22	3:I:603:ILE:HD13	1.98	0.45
3:I:641:GLU:N	3:I:641:GLU:OE1	2.49	0.45
3:I:977:ALA:O	3:I:980:VAL:HB	2.16	0.45
4:J:1154:ALA:HB2	4:J:1212:ASP:O	2.17	0.45
4:J:1234:VAL:O	4:J:1238:GLN:HB2	2.16	0.45
4:J:1267:VAL:CG2	4:J:1301:THR:HG22	2.47	0.45
4:J:549:LYS:HA	4:J:571:ASP:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:566:GLY:HA2	4:J:787:ALA:CB	2.46	0.45
6:L:347:ILE:O	6:L:351:THR:N	2.38	0.45
6:L:547:VAL:O	6:L:551:LEU:HG	2.16	0.45
7:O:34:DA:H2"	7:O:35:DG:C8	2.52	0.45
2:G:71:LYS:CE	2:G:140:ILE:HG22	2.41	0.45
3:I:1131:MET:CE	3:I:1141:LEU:HA	2.46	0.45
3:I:131:THR:HG22	3:I:132:ASP:N	2.31	0.45
3:I:239:MET:O	3:I:284:LEU:HD12	2.17	0.45
3:I:985:GLU:HB2	3:I:989:LEU:HD22	1.98	0.45
4:J:1046:ILE:CD1	4:J:1059:LEU:HD22	2.46	0.45
4:J:1194:ARG:HG2	4:J:1212:ASP:HB2	1.97	0.45
4:J:1327:GLU:OE2	4:J:1330:ARG:HB2	2.15	0.45
4:J:194:LEU:HB3	4:J:228:VAL:CG2	2.46	0.45
4:J:114:ILE:HB	4:J:304:ASP:OD1	2.16	0.45
4:J:748:ALA:HA	4:J:754:ILE:HA	1.99	0.45
4:J:950:ILE:CD1	4:J:982:LEU:HD13	2.46	0.45
3:I:1285:TYR:HE2	5:K:21:LEU:HD13	1.81	0.45
2:M:290:LEU:HD13	2:M:300:LEU:HD13	1.97	0.45
2:G:68:TYR:HE1	2:G:79:LEU:HD11	1.82	0.45
2:G:78:ILE:HA	2:G:78:ILE:HD13	1.83	0.45
2:H:61:ILE:HG23	2:H:140:ILE:HD11	1.97	0.45
2:H:13:LEU:HA	2:H:29:GLU:CD	2.37	0.45
2:H:68:TYR:CZ	2:H:78:ILE:HB	2.52	0.45
3:I:1176:LEU:HD22	3:I:1181:PRO:CD	2.44	0.45
3:I:1219:GLU:OE2	4:J:634:ARG:NH1	2.50	0.45
3:I:146:VAL:HG23	3:I:511:LEU:CD2	2.44	0.45
3:I:224:PHE:CG	3:I:347:ILE:HG13	2.52	0.45
3:I:115:LYS:NZ	3:I:485:ASP:OD1	2.49	0.45
3:I:52:ALA:O	3:I:55:SER:HB3	2.16	0.45
3:I:667:LEU:CD2	3:I:705:GLU:HG2	2.47	0.45
3:I:75:LEU:HD12	3:I:94:ALA:HB3	1.98	0.45
4:J:120:LEU:HB2	4:J:121:PRO:CD	2.47	0.45
4:J:74:LYS:HE2	4:J:75:TYR:OH	2.15	0.45
4:J:844:THR:CG2	4:J:864:LEU:HD21	2.46	0.45
5:K:9:ALA:HB1	5:K:19:LEU:HD13	1.98	0.45
6:L:222:ALA:O	6:L:225:ARG:HB3	2.17	0.45
2:G:23:HIS:HE1	2:G:204:GLU:HG3	1.82	0.45
2:G:61:ILE:HD11	2:G:64:VAL:HG11	1.98	0.45
3:I:195:PHE:HB3	3:I:203:LYS:HG3	1.98	0.45
3:I:254:ASP:O	3:I:256:GLU:HG2	2.16	0.45
3:I:237:LEU:CD1	3:I:322:LEU:HD21	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:320:ASP:O	3:I:324:LYS:HG2	2.17	0.45
3:I:559:CYS:CB	3:I:662:SER:HB2	2.47	0.45
3:I:887:VAL:HB	3:I:913:VAL:CG2	2.46	0.45
4:J:1266:ILE:HD13	4:J:1275:LEU:O	2.17	0.45
4:J:474:LEU:HD21	5:K:27:ALA:CB	2.47	0.45
6:L:275:VAL:CG1	6:L:279:ARG:HD2	2.46	0.45
6:L:369:GLU:OE1	6:L:373:ARG:HD3	2.17	0.45
6:L:543:ALA:HB1	6:L:606:VAL:HG21	1.97	0.45
2:H:35:PHE:HA	2:H:38:THR:CG2	2.47	0.45
3:I:165:HIS:O	3:I:165:HIS:ND1	2.50	0.45
3:I:194:LEU:CD1	3:I:346:TYR:HB3	2.46	0.45
3:I:188:PHE:CE1	3:I:194:LEU:HG	2.51	0.45
3:I:26:TYR:CE2	3:I:28:LEU:HB2	2.50	0.45
3:I:40:GLU:HG2	3:I:41:GLN:H	1.81	0.45
4:J:1160:SER:OG	4:J:1206:ARG:HG2	2.17	0.45
3:I:808:ASN:H	4:J:633:ALA:HB2	1.82	0.45
4:J:722:ILE:CG2	4:J:737:ILE:HD12	2.46	0.45
4:J:809:VAL:CG1	4:J:911:LYS:HA	2.47	0.45
1:N:37:CYS:HB2	1:N:58:CYS:HB3	1.99	0.45
7:O:56:DC:H1'	7:O:57:DT:C2	2.52	0.45
3:I:956:ALA:HB1	3:I:1032:LYS:HG2	1.99	0.45
3:I:1151:LEU:HD11	3:I:1198:LEU:CD2	2.47	0.45
3:I:1166:ASP:H	3:I:1168:GLU:N	2.14	0.45
3:I:301:TYR:N	3:I:311:CYS:O	2.36	0.45
3:I:202:ARG:NH1	3:I:368:ARG:HH22	2.14	0.45
3:I:466:VAL:O	3:I:469:VAL:HG12	2.17	0.45
3:I:854:ILE:HG23	3:I:855:PRO:HD2	1.98	0.45
4:J:525:MET:HG3	4:J:527:LEU:CD1	2.47	0.45
4:J:862:THR:O	4:J:864:LEU:HD23	2.15	0.45
4:J:857:LEU:HD21	4:J:871:LEU:CD2	2.47	0.45
4:J:910:ASN:ND2	5:K:15:ASN:HA	2.32	0.45
6:L:426:LYS:HG3	6:L:428:SER:H	1.82	0.45
6:L:573:LEU:O	6:L:573:LEU:HD12	2.17	0.45
2:G:51:MET:HE1	2:G:216:ALA:HA	1.99	0.45
3:I:828:PHE:CE1	3:I:1066:MET:HE2	2.52	0.45
3:I:321:LEU:CA	3:I:324:LYS:HG2	2.35	0.45
3:I:377:THR:HG23	3:I:380:ALA:HB3	1.99	0.45
3:I:580:GLN:HG3	3:I:581:THR:O	2.17	0.45
4:J:1110:GLU:N	4:J:1110:GLU:OE2	2.49	0.45
4:J:895:CYS:SG	4:J:898:CYS:N	2.89	0.45
4:J:913:GLU:HA	4:J:913:GLU:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:984:LEU:HD23	4:J:992:LYS:HB3	1.99	0.45
5:K:8:ASP:O	5:K:11:GLU:HB3	2.16	0.45
5:K:38:LEU:HD11	5:K:67:ARG:NH2	2.25	0.45
5:K:65:ASP:O	5:K:68:GLU:HB2	2.17	0.45
6:L:231:THR:HG21	6:L:249:ILE:CG1	2.40	0.45
6:L:448:ARG:HB2	6:L:450:ILE:O	2.16	0.45
6:L:481:GLU:HG2	6:L:491:GLU:OE2	2.17	0.45
6:L:562:ARG:HD3	6:L:591:GLU:HG3	1.99	0.45
2:H:112:ALA:HB3	2:H:126:PRO:C	2.38	0.44
2:H:213:PRO:HA	2:H:216:ALA:CB	2.41	0.44
3:I:1105:SER:CB	4:J:731:ARG:HH11	2.30	0.44
3:I:210:LEU:O	3:I:215:TYR:HB2	2.16	0.44
3:I:227:LYS:NZ	3:I:298:ALA:HB1	2.32	0.44
3:I:118:LYS:HD3	3:I:487:LEU:O	2.16	0.44
3:I:887:VAL:HB	3:I:913:VAL:HG22	1.99	0.44
4:J:1226:VAL:HG13	4:J:1227:HIS:CD2	2.52	0.44
4:J:194:LEU:HD23	4:J:228:VAL:CG2	2.47	0.44
4:J:418:GLU:HB2	5:K:45:LYS:HB2	1.99	0.44
4:J:646:ILE:HD11	4:J:762:ASN:ND2	2.32	0.44
4:J:68:TYR:CE2	4:J:78:LEU:HD13	2.52	0.44
4:J:59:ALA:O	4:J:90:VAL:HG23	2.17	0.44
7:O:48:DG:H2''	7:O:49:DC:OP1	2.18	0.44
8:P:40:DC:H2''	8:P:41:DT:OP2	2.17	0.44
8:P:51:DC:H2''	8:P:52:DT:H72	1.98	0.44
2:H:82:LEU:CG	2:H:173:VAL:HG12	2.43	0.44
3:I:839:VAL:HG12	3:I:1049:ILE:HG21	1.99	0.44
3:I:1319:MET:CE	4:J:1353:VAL:HG13	2.47	0.44
3:I:221:LEU:HD11	3:I:351:LEU:HD11	1.99	0.44
3:I:988:LYS:HA	3:I:991:LYS:CG	2.45	0.44
4:J:1034:PHE:HB2	4:J:1081:VAL:CG2	2.47	0.44
4:J:1153:PRO:O	4:J:1194:ARG:NH1	2.50	0.44
4:J:1167:LYS:HG2	4:J:1168:GLU:N	2.33	0.44
4:J:1165:PHE:HA	4:J:1175:LEU:HD12	1.98	0.44
4:J:385:LEU:HD23	4:J:385:LEU:HA	1.82	0.44
4:J:473:THR:O	4:J:476:ALA:HB3	2.17	0.44
4:J:515:ARG:NH2	4:J:718:SER:O	2.50	0.44
6:L:120:ALA:HA	6:L:123:ILE:HD12	1.99	0.44
1:N:37:CYS:HB2	1:N:58:CYS:H	1.82	0.44
2:G:38:THR:OG1	2:H:45:ARG:HD3	2.16	0.44
2:H:9:LEU:HD12	2:H:32:GLU:OE2	2.18	0.44
3:I:17:LYS:HG3	3:I:1153:ALA:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:284:LEU:O	3:I:285:ILE:HG23	2.17	0.44
3:I:359:ARG:HD3	3:I:360:LEU:CD1	2.48	0.44
3:I:432:LEU:HD12	3:I:435:ILE:HG22	1.99	0.44
3:I:494:ASN:HA	6:L:472:GLN:NE2	2.29	0.44
3:I:616:ILE:HG22	3:I:617:ALA:O	2.17	0.44
3:I:748:ILE:HD11	3:I:966:ILE:HB	1.99	0.44
4:J:449:LEU:HA	4:J:449:LEU:HD12	1.67	0.44
4:J:800:LEU:O	4:J:803:VAL:HG12	2.17	0.44
6:L:14:THR:HG22	6:L:18:GLU:OE2	2.17	0.44
7:O:33:DA:H2''	7:O:34:DA:OP2	2.17	0.44
8:P:44:DT:H2''	8:P:45:DA:N7	2.32	0.44
8:P:63:DG:H1'	8:P:64:DA:H5'	1.99	0.44
2:H:13:LEU:HD22	2:H:28:LEU:CD1	2.39	0.44
2:H:201:LEU:HD23	2:H:203:ILE:HD11	2.00	0.44
3:I:832:HIS:N	3:I:1056:VAL:O	2.43	0.44
3:I:1328:LYS:HA	3:I:1328:LYS:HD3	1.74	0.44
3:I:136:PHE:CE2	3:I:145:ILE:HD13	2.53	0.44
3:I:136:PHE:O	3:I:142:GLU:HA	2.17	0.44
3:I:348:SER:HA	3:I:351:LEU:HD12	2.00	0.44
3:I:681:MET:HB3	3:I:685:MET:HE1	1.99	0.44
3:I:976:ARG:NH2	3:I:989:LEU:HB3	2.32	0.44
4:J:885:VAL:HG23	4:J:899:TYR:HA	1.99	0.44
4:J:982:LEU:CD2	4:J:995:TYR:HB2	2.48	0.44
2:M:252:ILE:O	2:M:278:ILE:HG21	2.17	0.44
7:O:38:DG:H2'	7:O:38:DG:OP2	2.18	0.44
2:H:134:THR:OG1	2:H:135:ASP:N	2.51	0.44
2:H:24:ALA:CB	2:H:213:PRO:HG2	2.46	0.44
3:I:589:THR:HG23	3:I:591:TYR:CE2	2.52	0.44
3:I:59:ILE:HD11	3:I:472:GLU:HB2	1.98	0.44
3:I:60:GLN:CA	3:I:67:GLU:HG3	2.48	0.44
3:I:742:TYR:CD2	3:I:743:PRO:HD2	2.52	0.44
3:I:839:VAL:HG21	3:I:841:ARG:CZ	2.47	0.44
3:I:871:VAL:HG13	3:I:883:LEU:HA	1.99	0.44
3:I:976:ARG:HH12	3:I:990:ASP:HB2	1.81	0.44
4:J:1332:LEU:HD23	4:J:1332:LEU:HA	1.85	0.44
4:J:1365:TYR:O	4:J:1369:ARG:HG2	2.17	0.44
4:J:661:VAL:CG1	4:J:682:VAL:HG23	2.45	0.44
6:L:13:VAL:HG11	6:L:84:LEU:HD22	2.00	0.44
6:L:10:LYS:O	6:L:13:VAL:HG22	2.18	0.44
6:L:385:ARG:HH11	7:O:55:DC:H5'	1.83	0.44
6:L:451:ARG:HG2	6:L:452:ILE:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:470:MET:SD	6:L:482:GLU:HG2	2.58	0.44
3:I:901:LEU:HA	6:L:563:PHE:CE1	2.53	0.44
6:L:593:LYS:HA	6:L:596:ARG:CG	2.46	0.44
6:L:590:ILE:O	6:L:594:ALA:N	2.51	0.44
2:M:282:VAL:O	2:M:316:MET:N	2.29	0.44
2:M:298:LYS:HA	2:M:298:LYS:HD2	1.79	0.44
8:P:45:DA:H2"	8:P:46:DG:OP2	2.16	0.44
3:I:1158:LYS:HD3	3:I:1158:LYS:HA	1.57	0.44
3:I:227:LYS:HD3	3:I:227:LYS:HA	1.77	0.44
3:I:521:LEU:CD1	3:I:667:LEU:HD12	2.45	0.44
4:J:1231:ARG:HB3	4:J:1231:ARG:NH1	2.33	0.44
4:J:1282:TYR:CD2	4:J:1286:LYS:HB2	2.52	0.44
4:J:398:LYS:HD3	6:L:532:LEU:HD13	1.99	0.44
6:L:146:GLU:O	6:L:150:ARG:HG3	2.18	0.44
2:H:27:THR:O	2:H:27:THR:HG23	2.18	0.44
3:I:1167:GLU:O	3:I:1168:GLU:HG3	2.18	0.44
3:I:1301:ARG:HG3	3:I:1302:THR:N	2.33	0.44
3:I:255:ILE:HB	3:I:263:VAL:N	2.31	0.44
3:I:249:GLU:C	3:I:268:ARG:HD3	2.37	0.44
3:I:431:LYS:HA	3:I:434:ASP:OD1	2.17	0.44
4:J:1053:LEU:HD12	4:J:1054:THR:N	2.32	0.44
4:J:1152:GLU:O	4:J:1214:PRO:HD2	2.17	0.44
4:J:1157:ALA:O	4:J:1206:ARG:HA	2.17	0.44
4:J:1176:VAL:HG22	4:J:1187:GLU:HB2	1.98	0.44
4:J:1261:LEU:HD12	4:J:1261:LEU:O	2.17	0.44
4:J:429:LEU:HB3	4:J:925:GLU:HB3	2.00	0.44
4:J:559:ALA:HB3	4:J:562:GLU:HB2	2.00	0.44
4:J:58:CYS:SG	4:J:59:ALA:N	2.91	0.44
4:J:502:PRO:HG2	4:J:601:ILE:HD13	2.00	0.44
1:N:24:ARG:HH21	4:J:687:ALA:CB	2.30	0.44
4:J:876:SER:CB	4:J:990:ARG:HH21	2.31	0.44
4:J:885:VAL:HG13	4:J:894:VAL:CG1	2.48	0.44
4:J:967:VAL:HG13	4:J:971:GLY:O	2.17	0.44
6:L:139:GLU:HA	6:L:142:THR:OG1	2.17	0.44
2:M:282:VAL:HB	2:M:316:MET:CB	2.35	0.44
3:I:169:LYS:HD2	3:I:169:LYS:HA	1.68	0.44
3:I:39:ILE:HD11	3:I:75:LEU:HG	2.00	0.44
3:I:590:PRO:HG3	3:I:605:TYR:CD1	2.53	0.44
4:J:1075:ARG:HD3	4:J:1075:ARG:HA	1.75	0.44
4:J:902:ASP:HB3	4:J:1251:LYS:HD3	1.99	0.44
6:L:117:ILE:HG23	6:L:421:TYR:CD1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:51:MET:HB2	6:L:53:ILE:HG13	1.98	0.44
7:O:21:DA:H1'	7:O:22:DT:H5'	2.00	0.44
2:H:11:PRO:HG3	2:H:28:LEU:HD21	2.00	0.44
3:I:1038:GLN:HG3	3:I:1039:GLY:O	2.18	0.44
3:I:176:ILE:O	3:I:178:PRO:HD3	2.18	0.44
3:I:566:GLY:HA2	4:J:787:ALA:HB1	2.00	0.44
3:I:812:PHE:CE2	3:I:813:GLU:HG2	2.53	0.44
3:I:989:LEU:O	3:I:992:LEU:HD23	2.18	0.44
4:J:1106:ILE:O	4:J:1122:ALA:HB1	2.18	0.44
4:J:615:LYS:HB2	4:J:616:PRO:HD3	2.00	0.44
4:J:683:ILE:HD11	4:J:756:GLU:HA	2.00	0.44
4:J:783:LEU:HD23	4:J:783:LEU:O	2.16	0.44
4:J:986:ASP:HB2	4:J:992:LYS:CG	2.46	0.44
6:L:133:SER:OG	6:L:365:MET:HB2	2.18	0.44
6:L:12:LEU:HB3	6:L:30:HIS:CG	2.51	0.44
3:I:897:PRO:HB2	6:L:564:GLY:O	2.17	0.44
1:N:52:PHE:HB2	1:N:55:VAL:HG22	1.97	0.44
7:O:21:DA:H5''	2:M:294:ASN:HD21	1.82	0.44
8:P:46:DG:H2''	8:P:47:DC:H6	1.83	0.44
3:I:1122:LYS:HG2	3:I:1229:TYR:CE1	2.53	0.43
3:I:741:MET:CE	3:I:746:ALA:HB2	2.48	0.43
3:I:976:ARG:HH12	3:I:990:ASP:CA	2.31	0.43
3:I:99:LYS:O	3:I:100:LEU:HD23	2.18	0.43
4:J:1049:GLN:O	4:J:1058:SER:N	2.39	0.43
4:J:1059:LEU:HA	4:J:1059:LEU:HD23	1.67	0.43
4:J:1239:ASP:HA	4:J:1242:ARG:CB	2.48	0.43
4:J:579:LEU:HD12	4:J:582:ILE:HG12	2.00	0.43
4:J:850:LYS:HA	4:J:877:VAL:HG11	2.00	0.43
6:L:348:GLU:HG3	6:L:355:ILE:HG12	2.00	0.43
1:N:40:CYS:HB3	3:I:268:ARG:HB3	2.00	0.43
8:P:42:DT:H2''	8:P:43:DT:OP2	2.18	0.43
2:G:39:LEU:HD23	2:G:39:LEU:HA	1.67	0.43
3:I:838:CYS:O	3:I:1049:ILE:HA	2.18	0.43
3:I:254:ASP:HB3	3:I:265:LYS:N	2.33	0.43
3:I:469:VAL:HA	3:I:472:GLU:HG2	2.00	0.43
3:I:637:ARG:O	3:I:637:ARG:HG3	2.18	0.43
3:I:903:ARG:HB3	3:I:908:GLU:O	2.18	0.43
4:J:115:TRP:CE3	4:J:1333:THR:HG22	2.54	0.43
4:J:420:PRO:O	4:J:471:PRO:HD2	2.18	0.43
4:J:749:LYS:HD3	4:J:753:SER:OG	2.18	0.43
4:J:768:ASN:N	4:J:771:GLN:OE1	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:13:ILE:HD11	5:K:19:LEU:CA	2.45	0.43
6:L:280:VAL:HA	6:L:347:ILE:CD1	2.48	0.43
6:L:292:VAL:CG1	6:L:299:LYS:HD2	2.48	0.43
6:L:555:GLU:HA	6:L:558:VAL:CG1	2.45	0.43
8:P:63:DG:H4'	8:P:64:DA:OP1	2.17	0.43
2:H:111:THR:HA	2:H:129:VAL:HA	1.99	0.43
2:H:186:ASN:N	2:H:186:ASN:OD1	2.51	0.43
3:I:1232:MET:C	3:I:1233:LEU:HD12	2.39	0.43
3:I:1321:GLU:HG3	4:J:99:ARG:HH21	1.82	0.43
3:I:921:PRO:HD2	3:I:924:VAL:HG23	1.99	0.43
3:I:971:LEU:HD13	3:I:1018:TYR:CD1	2.46	0.43
3:I:972:PHE:CD1	3:I:975:ILE:HD12	2.46	0.43
3:I:979:LEU:O	3:I:984:VAL:HG23	2.18	0.43
4:J:1275:LEU:CB	4:J:1278:GLU:HB2	2.42	0.43
4:J:568:SER:OG	4:J:569:LEU:N	2.51	0.43
4:J:800:LEU:HD12	4:J:1256:ILE:HD12	1.99	0.43
6:L:261:LEU:CD1	6:L:266:PHE:HB2	2.47	0.43
6:L:437:GLN:O	6:L:441:ARG:HB3	2.18	0.43
6:L:557:LYS:O	6:L:561:MET:HG2	2.18	0.43
6:L:437:GLN:HB3	8:P:37:DG:O6	2.18	0.43
8:P:56:DG:C8	8:P:57:DT:H72	2.52	0.43
3:I:444:ASP:O	3:I:447:HIS:HB2	2.17	0.43
3:I:459:MET:SD	3:I:511:LEU:HD13	2.58	0.43
3:I:556:GLY:O	3:I:576:SER:HB3	2.18	0.43
3:I:633:LEU:CG	3:I:644:LEU:HB3	2.48	0.43
3:I:70:TYR:OH	3:I:72:SER:HA	2.19	0.43
3:I:818:VAL:HB	3:I:1076:ILE:CD1	2.48	0.43
3:I:842:ASP:N	3:I:842:ASP:OD1	2.50	0.43
4:J:129:ASP:CB	4:J:220:ARG:HH22	2.31	0.43
4:J:367:GLY:HA3	4:J:448:GLN:HB2	1.98	0.43
6:L:272:SER:O	6:L:276:MET:N	2.51	0.43
4:J:325:LYS:CE	6:L:508:GLU:HG2	2.48	0.43
3:I:898:GLU:O	6:L:540:LEU:HD21	2.18	0.43
6:L:584:ARG:HH12	8:P:57:DT:C7	2.30	0.43
7:O:55:DC:H3'	7:O:55:DC:P	2.59	0.43
2:G:211:ILE:CG2	2:G:216:ALA:HB2	2.49	0.43
2:H:26:VAL:HG13	2:H:26:VAL:O	2.18	0.43
3:I:726:TYR:O	3:I:733:VAL:HG12	2.19	0.43
3:I:941:LYS:CB	3:I:946:LEU:HD21	2.49	0.43
3:I:98:VAL:O	3:I:122:VAL:HG12	2.18	0.43
4:J:1106:ILE:HG12	4:J:1125:PRO:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:132:LEU:HD23	4:J:132:LEU:O	2.19	0.43
4:J:252:LEU:O	4:J:252:LEU:HD23	2.18	0.43
4:J:300:GLN:O	4:J:304:ASP:HB2	2.19	0.43
3:I:1257:GLN:NE2	4:J:345:LYS:HE2	2.31	0.43
4:J:452:LEU:HG	4:J:625:MET:SD	2.58	0.43
4:J:707:ILE:O	4:J:713:GLU:HA	2.18	0.43
4:J:826:ILE:HG12	4:J:831:VAL:HG13	2.01	0.43
6:L:97:PRO:HB2	6:L:402:LEU:HD22	2.00	0.43
1:N:37:CYS:SG	1:N:61:CYS:HB2	2.58	0.43
2:G:39:LEU:CD2	2:H:228:LEU:HD21	2.48	0.43
2:H:211:ILE:HD11	2:H:215:GLU:CB	2.47	0.43
3:I:1166:ASP:N	3:I:1168:GLU:H	2.14	0.43
3:I:142:GLU:CB	3:I:515:MET:CE	2.96	0.43
3:I:233:ARG:HB2	3:I:238:GLN:CG	2.49	0.43
3:I:241:LEU:CD1	3:I:285:ILE:HG12	2.49	0.43
3:I:344:GLY:HA3	3:I:346:TYR:CZ	2.54	0.43
3:I:1291:LEU:HD21	4:J:1351:VAL:HG13	2.01	0.43
4:J:148:GLU:HB2	4:J:177:ASP:CB	2.49	0.43
4:J:174:ASP:OD1	4:J:175:GLU:HG3	2.19	0.43
4:J:342:LEU:C	4:J:343:LEU:HD23	2.39	0.43
4:J:516:ASP:N	4:J:516:ASP:OD1	2.49	0.43
4:J:885:VAL:CG2	4:J:899:TYR:HA	2.49	0.43
6:L:219:GLU:O	6:L:223:GLU:N	2.51	0.43
2:M:277:TYR:O	2:M:280:ASP:HB2	2.19	0.43
2:M:293:PRO:O	2:M:294:ASN:HB2	2.19	0.43
8:P:43:DT:H1'	8:P:44:DT:C5'	2.46	0.43
2:G:100:LEU:HD22	2:G:121:VAL:HG11	2.01	0.43
3:I:1079:ILE:HG23	3:I:1079:ILE:O	2.18	0.43
3:I:201:ARG:HD2	3:I:370:MET:SD	2.58	0.43
3:I:660:VAL:O	3:I:660:VAL:HG22	2.19	0.43
3:I:759:SER:HB3	3:I:765:ILE:HG12	2.00	0.43
3:I:693:LEU:HD22	3:I:829:THR:HB	2.01	0.43
3:I:842:ASP:CB	3:I:847:PRO:HA	2.48	0.43
3:I:866:ASP:OD2	3:I:944:ARG:NH1	2.52	0.43
3:I:963:GLU:O	3:I:966:ILE:HG13	2.19	0.43
3:I:965:GLN:HA	3:I:968:GLU:CG	2.48	0.43
4:J:949:SER:HA	4:J:1020:TRP:CH2	2.53	0.43
4:J:1027:VAL:HG22	4:J:1027:VAL:O	2.18	0.43
4:J:44:ILE:HD11	4:J:252:LEU:HD22	2.00	0.43
4:J:490:ILE:HG13	4:J:491:LEU:CD2	2.49	0.43
6:L:11:LEU:HD12	6:L:11:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:315:TRP:CH2	6:L:341:LEU:HD11	2.54	0.43
6:L:387:VAL:HG23	6:L:435:ILE:HG21	2.00	0.43
6:L:491:GLU:HA	6:L:494:ILE:HB	2.01	0.43
7:O:21:DA:H2''	7:O:22:DT:C6	2.53	0.43
7:O:34:DA:H4'	7:O:35:DG:OP1	2.19	0.43
8:P:36:DT:C2'	8:P:37:DG:H5''	2.48	0.43
2:G:100:LEU:HD21	2:G:121:VAL:HG21	2.00	0.43
2:H:85:LEU:HD21	2:H:130:ILE:HG23	1.99	0.43
3:I:1240:ASP:N	3:I:1240:ASP:OD1	2.43	0.43
3:I:1246:ARG:NH2	3:I:1249:GLY:H	2.16	0.43
3:I:173:ASN:HA	3:I:187:GLU:HA	2.00	0.43
3:I:499:SER:O	3:I:502:VAL:HG12	2.18	0.43
3:I:590:PRO:HB2	3:I:655:VAL:HG22	2.00	0.43
1:N:5:ALA:HB3	3:I:678:ARG:NH2	2.34	0.43
3:I:817:LEU:HD11	3:I:1080:ASN:ND2	2.33	0.43
3:I:97:ARG:HD3	3:I:97:ARG:HA	1.87	0.43
4:J:1350:ASN:ND2	4:J:1358:PRO:HD3	2.33	0.43
4:J:103:GLY:CA	4:J:244:VAL:HG22	2.48	0.43
4:J:350:SER:HB2	4:J:469:HIS:ND1	2.34	0.43
4:J:357:VAL:HG22	4:J:461:PHE:CZ	2.54	0.43
4:J:70:CYS:SG	4:J:74:LYS:N	2.92	0.43
4:J:644:MET:O	4:J:764:ARG:HD2	2.19	0.43
4:J:849:LEU:HD13	4:J:855:ASP:C	2.39	0.43
6:L:408:GLY:CA	6:L:439:ILE:HD11	2.48	0.43
3:I:797:GLY:N	3:I:1231:TYR:OH	2.52	0.43
3:I:342:ASP:O	3:I:344:GLY:N	2.52	0.43
3:I:387:ASN:CB	3:I:391:SER:HB3	2.49	0.43
3:I:417:SER:OG	3:I:418:GLY:N	2.52	0.43
3:I:714:VAL:HG23	3:I:715:THR:H	1.83	0.43
3:I:864:LYS:HD2	3:I:875:ALA:CB	2.43	0.43
3:I:887:VAL:CG2	3:I:913:VAL:HG21	2.48	0.43
4:J:1077:ALA:HB2	4:J:1100:PHE:CD1	2.53	0.43
4:J:1256:ILE:O	4:J:1260:MET:HG3	2.18	0.43
4:J:162:GLU:OE1	4:J:162:GLU:HA	2.18	0.43
4:J:371:LYS:HB2	4:J:371:LYS:HE2	1.80	0.43
4:J:527:LEU:HD23	4:J:533:ALA:CB	2.49	0.43
4:J:51:PRO:HB3	4:J:57:PHE:O	2.19	0.43
4:J:647:PRO:HG3	4:J:697:MET:HA	2.00	0.43
4:J:759:ILE:HG23	4:J:771:GLN:HB3	2.00	0.43
4:J:826:ILE:CD1	4:J:831:VAL:HG22	2.49	0.43
4:J:964:LYS:CB	4:J:977:SER:HB3	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:147:GLN:NE2	6:L:265:GLN:HE22	2.17	0.43
6:L:335:GLU:O	6:L:339:ARG:HG3	2.18	0.43
6:L:339:ARG:O	6:L:343:LYS:HD2	2.19	0.43
6:L:277:MET:HG2	6:L:362:ASN:HD21	1.84	0.43
6:L:588:ARG:HD2	8:P:57:DT:H73	2.01	0.43
3:I:1149:TYR:OH	3:I:1176:LEU:HD11	2.18	0.43
3:I:137:VAL:HG22	3:I:142:GLU:HG2	2.00	0.43
3:I:453:ILE:CD1	3:I:587:LEU:HG	2.49	0.43
4:J:1005:LYS:HB2	4:J:1017:VAL:HG13	2.01	0.43
4:J:536:LEU:HD22	4:J:542:ALA:CB	2.49	0.43
4:J:745:GLY:C	4:J:746:LEU:HD12	2.40	0.43
4:J:965:SER:OG	4:J:975:ILE:HA	2.19	0.43
2:M:281:LEU:HD23	2:M:307:LEU:HD21	2.01	0.43
7:O:29:DA:H2''	7:O:30:DC:H5'	2.00	0.43
3:I:158:ASP:HB3	3:I:173:ASN:OD1	2.19	0.42
3:I:73:TYR:CD2	3:I:96:LEU:HD11	2.54	0.42
3:I:714:VAL:HB	3:I:787:PRO:HD2	2.01	0.42
3:I:935:THR:HG22	3:I:936:ARG:O	2.19	0.42
3:I:964:LEU:HA	3:I:967:LEU:HD21	2.01	0.42
4:J:1155:ILE:H	4:J:1155:ILE:HD12	1.84	0.42
4:J:364:HIS:HB3	4:J:487:THR:CG2	2.44	0.42
4:J:911:LYS:HE2	4:J:911:LYS:HB3	1.83	0.42
6:L:583:THR:HG22	6:L:586:ARG:H	1.83	0.42
7:O:46:DG:H2''	7:O:47:DG:H8	1.84	0.42
2:H:13:LEU:HA	2:H:29:GLU:OE2	2.19	0.42
2:G:45:ARG:HH22	3:I:1216:ARG:HA	1.84	0.42
3:I:194:LEU:HD11	3:I:346:TYR:HB3	2.02	0.42
3:I:81:ASP:N	3:I:81:ASP:OD1	2.46	0.42
4:J:138:VAL:O	4:J:181:GLY:HA2	2.19	0.42
4:J:268:LEU:HD23	4:J:271:ARG:NH2	2.34	0.42
4:J:842:ARG:CB	4:J:882:VAL:HG21	2.49	0.42
6:L:334:SER:O	6:L:338:HIS:HB2	2.19	0.42
6:L:373:ARG:HB3	6:L:377:LYS:HZ3	1.83	0.42
2:H:222:THR:HA	2:H:225:ALA:HB3	2.01	0.42
3:I:111:GLU:HG3	3:I:111:GLU:H	1.67	0.42
3:I:11:ILE:O	3:I:11:ILE:HG23	2.19	0.42
3:I:1332:SER:OG	4:J:327:LEU:HD11	2.20	0.42
3:I:164:THR:HB	3:I:171:LEU:HD11	2.00	0.42
3:I:210:LEU:HD23	3:I:213:LEU:HD12	2.00	0.42
3:I:210:LEU:HA	3:I:213:LEU:HB2	2.00	0.42
3:I:432:LEU:O	3:I:435:ILE:HG22	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:71:LEU:HA	4:J:71:LEU:HD12	1.74	0.42
4:J:950:ILE:HG12	4:J:1018:ALA:CB	2.41	0.42
6:L:128:ASN:HA	6:L:131:GLN:CD	2.40	0.42
6:L:297:MET:HE2	6:L:302:PHE:N	2.33	0.42
6:L:351:THR:HG21	6:L:358:VAL:HG21	2.01	0.42
6:L:376:LYS:HB2	6:L:376:LYS:HE3	1.81	0.42
6:L:419:PHE:HB2	6:L:430:TYR:CD2	2.54	0.42
6:L:496:LYS:O	6:L:500:ILE:HG12	2.20	0.42
8:P:44:DT:H2''	8:P:45:DA:C8	2.53	0.42
2:H:129:VAL:HG21	2:H:132:HIS:CE1	2.54	0.42
2:H:219:ARG:O	2:H:223:ILE:HG12	2.19	0.42
2:H:76:GLU:HG3	2:H:80:GLU:HG2	2.01	0.42
3:I:933:VAL:HA	3:I:1050:VAL:HG12	2.01	0.42
3:I:165:HIS:HD2	3:I:190:PRO:HG2	1.85	0.42
3:I:289:VAL:HG13	3:I:322:LEU:HD23	2.00	0.42
2:G:70:THR:OG1	3:I:729:ALA:HB3	2.19	0.42
4:J:1167:LYS:CE	4:J:1170:LYS:HB2	2.49	0.42
4:J:440:VAL:O	4:J:442:ILE:HG12	2.19	0.42
4:J:800:LEU:HD12	4:J:1256:ILE:CD1	2.49	0.42
4:J:868:TRP:O	4:J:872:LEU:HD13	2.20	0.42
8:P:63:DG:H1'	8:P:64:DA:C8	2.54	0.42
2:G:131:CYS:SG	2:G:140:ILE:HD13	2.60	0.42
2:G:231:PHE:O	2:G:234:LEU:HG	2.19	0.42
3:I:1293:VAL:CG2	3:I:1304:MET:HB2	2.50	0.42
3:I:22:LEU:HD12	3:I:23:ASP:N	2.33	0.42
3:I:244:GLU:HA	3:I:274:ILE:HD13	2.00	0.42
3:I:198:ILE:HG21	3:I:388:LEU:HD21	2.02	0.42
3:I:213:LEU:HD22	3:I:422:LYS:HB3	2.01	0.42
3:I:963:GLU:HA	3:I:966:ILE:HG12	2.01	0.42
4:J:1291:GLU:O	4:J:1294:ALA:HB3	2.19	0.42
4:J:193:ASP:OD1	4:J:195:GLU:N	2.52	0.42
3:I:1245:ALA:CB	4:J:351:GLY:HA3	2.48	0.42
4:J:425:ARG:HH12	4:J:464:ASP:HB3	1.84	0.42
4:J:581:MET:HB3	4:J:581:MET:HE2	1.88	0.42
4:J:511:TYR:HE2	4:J:724:MET:HG3	1.84	0.42
6:L:280:VAL:HA	6:L:347:ILE:HD13	2.01	0.42
6:L:571:TYR:HB3	6:L:575:GLU:CG	2.49	0.42
6:L:558:VAL:HB	6:L:580:PHE:HE2	1.84	0.42
2:H:64:VAL:CA	2:H:65:LEU:HB2	2.49	0.42
3:I:103:VAL:HG12	3:I:117:ILE:CG2	2.48	0.42
3:I:230:PHE:CE2	3:I:292:ILE:HB	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:254:ASP:H	3:I:265:LYS:HG2	1.84	0.42
3:I:805:MET:HB2	3:I:805:MET:HE3	1.88	0.42
4:J:1062:LEU:HD22	4:J:1066:GLU:OE2	2.20	0.42
4:J:1120:THR:CB	4:J:1123:ARG:HH11	2.32	0.42
4:J:1203:ARG:NH2	4:J:1205:GLU:OE1	2.40	0.42
4:J:1319:PHE:CD1	4:J:1342:ASP:HB2	2.55	0.42
4:J:164:GLN:HA	4:J:167:ASP:OD2	2.20	0.42
4:J:372:MET:O	4:J:376:LEU:HG	2.19	0.42
4:J:72:CYS:SG	4:J:74:LYS:HB2	2.59	0.42
4:J:986:ASP:HB2	4:J:992:LYS:CD	2.49	0.42
6:L:127:ILE:HG13	6:L:131:GLN:HE22	1.85	0.42
6:L:339:ARG:HB3	6:L:343:LYS:HZ2	1.82	0.42
6:L:363:ARG:HG2	6:L:367:ILE:CD1	2.49	0.42
6:L:415:ALA:O	6:L:419:PHE:N	2.44	0.42
6:L:427:PHE:CE2	6:L:431:ALA:HB2	2.55	0.42
6:L:586:ARG:HE	7:O:24:DC:H2''	1.84	0.42
6:L:80:ALA:O	6:L:84:LEU:HD23	2.19	0.42
1:N:48:ARG:HA	1:N:51:ILE:HG12	2.01	0.42
7:O:56:DC:H2'	7:O:56:DC:H6	1.66	0.42
2:G:111:THR:O	2:G:114:ASP:HB2	2.20	0.42
2:G:179:PRO:HG3	2:G:211:ILE:HG13	2.00	0.42
2:G:45:ARG:NH2	3:I:1216:ARG:HA	2.34	0.42
3:I:1294:LYS:HB3	4:J:347:VAL:HG13	2.01	0.42
3:I:387:ASN:HB3	3:I:391:SER:HB3	2.02	0.42
3:I:750:ILE:HG13	3:I:750:ILE:O	2.20	0.42
3:I:871:VAL:HG21	3:I:928:VAL:HG11	2.02	0.42
4:J:111:THR:OG1	4:J:300:GLN:HA	2.20	0.42
4:J:58:CYS:SG	4:J:60:ARG:N	2.93	0.42
6:L:166:VAL:HG22	6:L:260:ARG:CG	2.48	0.42
6:L:325:PRO:O	6:L:328:GLU:HB3	2.19	0.42
6:L:362:ASN:HB2	6:L:365:MET:HE2	2.01	0.42
6:L:133:SER:HB3	6:L:365:MET:HB2	2.00	0.42
6:L:426:LYS:HG2	7:O:52:DA:H3'	2.01	0.42
2:M:278:ILE:O	2:M:282:VAL:HG13	2.19	0.42
2:M:290:LEU:HB2	2:M:300:LEU:CD1	2.49	0.42
2:G:76:GLU:OE2	2:G:132:HIS:N	2.53	0.42
3:I:102:LEU:HD12	3:I:103:VAL:H	1.84	0.42
3:I:1114:GLU:HG2	3:I:1114:GLU:O	2.16	0.42
3:I:1120:ALA:CB	3:I:1198:LEU:HB3	2.39	0.42
3:I:180:ARG:O	3:I:396:ASP:N	2.51	0.42
3:I:324:LYS:HA	3:I:327:GLN:CD	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:59:ILE:CG2	3:I:476:LYS:HE2	2.33	0.42
3:I:992:LEU:HD11	3:I:996:ARG:O	2.20	0.42
4:J:56:LEU:HD12	4:J:56:LEU:N	2.35	0.42
4:J:934:THR:HG23	4:J:934:THR:O	2.19	0.42
6:L:277:MET:CG	6:L:362:ASN:HD21	2.33	0.42
6:L:361:ILE:HA	6:L:364:ARG:HH21	1.81	0.42
6:L:477:GLU:HG2	6:L:478:PRO:N	2.34	0.42
1:N:44:ILE:O	1:N:44:ILE:HG13	2.20	0.42
1:N:56:THR:C	1:N:57:LEU:HD23	2.40	0.42
2:G:27:THR:C	2:G:28:LEU:HD12	2.41	0.42
2:H:203:ILE:H	2:H:203:ILE:HG13	1.54	0.42
3:I:1109:ILE:HD11	4:J:740:LEU:CD1	2.46	0.42
3:I:1131:MET:CA	3:I:1136:GLN:HG2	2.44	0.42
3:I:1165:SER:HG	3:I:1169:VAL:HG13	1.84	0.42
3:I:1172:LEU:HD23	3:I:1172:LEU:O	2.19	0.42
3:I:149:LEU:HD12	3:I:452:ARG:O	2.20	0.42
3:I:367:TYR:HD2	3:I:381:ALA:HA	1.82	0.42
3:I:95:PRO:HA	3:I:126:GLU:CB	2.50	0.42
3:I:971:LEU:O	3:I:975:ILE:HG13	2.20	0.42
3:I:975:ILE:HD13	3:I:998:LEU:CG	2.49	0.42
4:J:1039:ASP:OD1	4:J:1074:LEU:HD13	2.19	0.42
4:J:1229:VAL:O	4:J:1233:ILE:HG12	2.19	0.42
6:L:12:LEU:CD1	6:L:48:ILE:HD12	2.49	0.42
1:N:15:LEU:HD11	4:J:750:PRO:O	2.19	0.42
1:N:3:ASP:O	1:N:6:ASP:N	2.51	0.42
2:H:111:THR:OG1	2:H:112:ALA:N	2.51	0.42
3:I:1285:TYR:CE1	4:J:1356:LEU:HD11	2.55	0.42
3:I:214:ASN:CG	3:I:359:ARG:HE	2.23	0.42
3:I:985:GLU:OE1	3:I:989:LEU:HD13	2.20	0.42
4:J:1026:PRO:HB2	4:J:1028:ILE:CG2	2.50	0.42
4:J:1033:GLY:HA2	4:J:1081:VAL:O	2.20	0.42
4:J:1038:THR:HG23	4:J:1079:LYS:HB2	2.02	0.42
4:J:1357:ILE:HG23	4:J:1358:PRO:HD2	2.01	0.42
4:J:154:LEU:CD2	4:J:158:GLN:HB3	2.50	0.42
4:J:45:ASN:HB3	4:J:48:THR:O	2.20	0.42
4:J:571:ASP:OD1	4:J:571:ASP:N	2.51	0.42
4:J:813:ASP:HA	4:J:895:CYS:HG	1.83	0.42
6:L:136:GLU:CB	6:L:361:ILE:HG12	2.42	0.42
6:L:443:ILE:O	6:L:447:ALA:HB3	2.20	0.42
2:M:260:LEU:HD12	2:M:306:VAL:HG11	2.02	0.42
3:I:1132:LEU:HD12	3:I:1132:LEU:HA	1.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1287:LEU:HD22	4:J:1357:ILE:HD11	2.02	0.41
3:I:58:PRO:CB	3:I:69:GLN:HG2	2.48	0.41
3:I:895:LEU:CD1	3:I:900:LYS:HG3	2.48	0.41
3:I:905:ILE:HG22	3:I:906:PHE:CE1	2.54	0.41
3:I:871:VAL:HG23	3:I:928:VAL:HG11	2.02	0.41
4:J:954:ASN:O	4:J:1013:GLY:HA2	2.20	0.41
4:J:35:PHE:CG	4:J:101:ARG:HD2	2.55	0.41
4:J:199:GLU:O	4:J:202:ARG:HB2	2.20	0.41
6:L:31:LEU:HD11	6:L:44:ILE:HG21	2.02	0.41
6:L:322:MET:HB3	6:L:324:LYS:HG2	2.01	0.41
6:L:344:LEU:HD23	6:L:344:LEU:HA	1.92	0.41
4:J:262:THR:HG23	6:L:504:PRO:HB2	2.02	0.41
2:H:192:VAL:CG1	2:H:195:ARG:HB2	2.48	0.41
3:I:815:SER:HB3	3:I:1077:SER:OG	2.19	0.41
3:I:215:TYR:HB3	3:I:220:ILE:CD1	2.47	0.41
3:I:328:SER:HG	3:I:330:HIS:CD2	2.38	0.41
3:I:699:LEU:HA	3:I:699:LEU:HD22	1.66	0.41
4:J:174:ASP:CG	4:J:175:GLU:HG3	2.41	0.41
4:J:332:LYS:HB3	4:J:1328:THR:HB	2.02	0.41
4:J:416:ILE:HD13	4:J:416:ILE:HA	1.84	0.41
4:J:62:PHE:O	4:J:98:ARG:HG2	2.20	0.41
4:J:641:ILE:HD12	4:J:641:ILE:HA	1.96	0.41
4:J:686:TRP:CD2	4:J:758:PRO:HG2	2.55	0.41
4:J:847:ASP:HB3	4:J:856:ILE:HG13	2.01	0.41
6:L:135:ALA:HB1	6:L:253:SER:CB	2.50	0.41
6:L:9:LEU:HD22	6:L:31:LEU:CD2	2.50	0.41
6:L:333:VAL:HG23	6:L:336:GLU:HB3	2.02	0.41
6:L:420:GLU:HA	6:L:420:GLU:OE1	2.20	0.41
6:L:558:VAL:HA	6:L:561:MET:HB2	2.02	0.41
2:M:292:THR:HB	2:M:295:LEU:HB3	2.02	0.41
7:O:32:DA:H2"	7:O:33:DA:C8	2.55	0.41
2:G:20:SER:OG	2:G:21:SER:N	2.53	0.41
2:H:82:LEU:HD21	2:H:171:LEU:HD12	2.03	0.41
3:I:1104:PRO:O	3:I:1107:MET:HG2	2.20	0.41
3:I:1270:PHE:HZ	3:I:1278:LEU:HD12	1.85	0.41
3:I:184:LEU:HD12	3:I:185:ASP:N	2.35	0.41
3:I:742:TYR:CG	3:I:743:PRO:HD2	2.55	0.41
4:J:1030:GLU:CG	4:J:1031:VAL:HG23	2.49	0.41
4:J:298:MET:HE1	6:L:402:LEU:C	2.41	0.41
6:L:511:ILE:HG22	6:L:517:SER:O	2.19	0.41
2:M:304:LYS:O	2:M:307:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:226:GLU:HG2	2:H:10:LYS:HE3	2.01	0.41
2:H:73:GLY:CA	2:H:134:THR:HG22	2.50	0.41
2:H:153:VAL:HB	2:H:177:TYR:HE2	1.85	0.41
3:I:10:ARG:HD2	3:I:1181:PRO:HG3	2.01	0.41
3:I:755:LYS:CE	3:I:755:LYS:HA	2.47	0.41
3:I:779:ARG:HG3	3:I:780:GLY:H	1.86	0.41
3:I:811:ASN:OD1	3:I:811:ASN:N	2.52	0.41
3:I:871:VAL:HG11	3:I:883:LEU:HA	2.01	0.41
3:I:942:ASP:O	3:I:946:LEU:HG	2.20	0.41
4:J:1067:ARG:NH2	4:J:1071:GLY:O	2.52	0.41
4:J:1034:PHE:HB2	4:J:1081:VAL:HG23	2.01	0.41
4:J:1165:PHE:HA	4:J:1175:LEU:CB	2.50	0.41
4:J:154:LEU:HD21	4:J:158:GLN:CG	2.51	0.41
2:H:44:ARG:NH1	4:J:538:ARG:HH11	2.14	0.41
4:J:253:VAL:HG21	6:L:523:ILE:CG2	2.49	0.41
6:L:585:GLU:HG2	7:O:27:DT:H73	2.01	0.41
2:G:155:ALA:N	2:G:174:ASP:OD1	2.47	0.41
2:G:28:LEU:HD13	2:G:201:LEU:HD23	2.02	0.41
3:I:173:ASN:N	3:I:173:ASN:OD1	2.54	0.41
3:I:221:LEU:HD11	3:I:351:LEU:HD13	2.02	0.41
3:I:351:LEU:HA	3:I:354:ASP:HB2	2.01	0.41
3:I:722:GLY:H	3:I:777:VAL:HG23	1.85	0.41
3:I:870:ILE:CD1	3:I:884:VAL:HG13	2.49	0.41
4:J:1034:PHE:H	4:J:1081:VAL:HG23	1.85	0.41
4:J:1050:THR:HG23	4:J:1050:THR:O	2.20	0.41
4:J:1189:MET:O	4:J:1191:PRO:HD3	2.20	0.41
4:J:1226:VAL:HA	4:J:1229:VAL:HG12	2.02	0.41
4:J:1265:THR:CG2	4:J:1279:GLN:HB3	2.50	0.41
4:J:140:TYR:HB3	6:L:100:MET:CE	2.51	0.41
4:J:429:LEU:HA	4:J:429:LEU:HD13	1.82	0.41
4:J:601:ILE:HD11	4:J:624:ILE:CD1	2.51	0.41
4:J:851:PRO:HD3	4:J:877:VAL:CG1	2.49	0.41
6:L:593:LYS:C	6:L:596:ARG:HG2	2.40	0.41
7:O:23:DC:H2''	7:O:24:DC:H5'	2.01	0.41
2:G:192:VAL:HG22	2:G:193:GLU:N	2.35	0.41
2:H:103:ASN:HA	2:H:141:SER:CB	2.50	0.41
2:H:29:GLU:CB	2:H:30:PRO:HD2	2.51	0.41
3:I:1131:MET:HA	3:I:1136:GLN:CG	2.46	0.41
3:I:557:ARG:NH2	3:I:611:GLU:OE1	2.46	0.41
4:J:1052:GLU:HA	4:J:1055:GLY:N	2.36	0.41
4:J:114:ILE:HD12	4:J:304:ASP:OD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1163:VAL:HG23	4:J:1177:ILE:CA	2.49	0.41
4:J:246:PRO:HD2	4:J:249:LEU:HD12	2.02	0.41
4:J:141:PHE:CD1	4:J:293:ARG:HG2	2.55	0.41
4:J:330:MET:HE2	4:J:330:MET:HB3	1.75	0.41
4:J:332:LYS:O	4:J:336:GLY:HA3	2.20	0.41
4:J:749:LYS:HB3	4:J:750:PRO:CD	2.50	0.41
6:L:296:LYS:O	6:L:298:PRO:HD3	2.21	0.41
7:O:55:DC:H2''	7:O:56:DC:N3	2.36	0.41
2:G:160:HIS:H	2:G:162:GLU:HG3	1.86	0.41
10:I:1401:1N7:C19	10:I:1401:1N7:C4	2.88	0.41
1:N:40:CYS:CB	3:I:268:ARG:HB3	2.50	0.41
3:I:230:PHE:CB	3:I:333:ILE:HB	2.51	0.41
3:I:5:TYR:HA	3:I:8:LYS:CE	2.51	0.41
3:I:839:VAL:HG12	3:I:1049:ILE:CG2	2.50	0.41
3:I:896:THR:OG1	3:I:899:GLU:HB3	2.19	0.41
3:I:899:GLU:OE2	3:I:903:ARG:HG2	2.21	0.41
4:J:1075:ARG:HG3	4:J:1165:PHE:CZ	2.56	0.41
4:J:1209:VAL:O	4:J:1209:VAL:HG23	2.21	0.41
4:J:282:LEU:HD21	6:L:410:ILE:CD1	2.51	0.41
4:J:353:SER:O	4:J:465:GLN:HB3	2.21	0.41
3:I:1276:TRP:CH2	4:J:798:ARG:HA	2.55	0.41
6:L:509:THR:O	6:L:518:HIS:HA	2.20	0.41
6:L:546:ASP:O	6:L:549:ALA:HB3	2.21	0.41
2:G:79:LEU:O	2:G:83:LEU:HD13	2.21	0.41
2:H:70:THR:OG1	2:H:71:LYS:N	2.53	0.41
3:I:1131:MET:O	3:I:1136:GLN:HG2	2.21	0.41
3:I:395:TYR:OH	3:I:397:LEU:HD11	2.21	0.41
3:I:519:ASN:OD1	3:I:520:PRO:HD2	2.20	0.41
3:I:727:VAL:HG23	3:I:732:ILE:CG1	2.32	0.41
4:J:1037:PHE:HD2	4:J:1040:MET:HB2	1.86	0.41
4:J:1198:VAL:HG11	4:J:1204:VAL:HG11	2.03	0.41
6:L:23:THR:CB	6:L:58:GLU:H	2.33	0.41
2:M:270:LEU:HD22	2:M:275:ILE:HG13	2.03	0.41
8:P:41:DT:H2''	8:P:42:DT:OP2	2.21	0.41
2:G:95:LYS:HE3	2:G:120:ASP:OD2	2.20	0.41
3:I:932:GLN:O	3:I:1050:VAL:HA	2.21	0.41
3:I:1223:ARG:HA	3:I:1224:PRO:HD2	1.90	0.41
3:I:194:LEU:C	3:I:206:ALA:HB2	2.41	0.41
3:I:856:ASN:HA	6:L:613:ASP:C	2.39	0.41
3:I:988:LYS:HA	3:I:991:LYS:CD	2.51	0.41
3:I:975:ILE:CD1	3:I:998:LEU:HD11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:162:GLU:HA	4:J:165:TYR:HB3	2.03	0.41
4:J:217:LEU:O	4:J:221:ILE:HG12	2.21	0.41
4:J:971:GLY:C	4:J:972:LYS:HE2	2.41	0.41
6:L:234:THR:HG21	6:L:244:THR:HB	2.01	0.41
6:L:376:LYS:HB3	6:L:416:VAL:HG11	2.03	0.41
2:M:262:LEU:HB3	2:M:266:SER:OG	2.21	0.41
7:O:42:DA:H1'	7:O:43:DA:C5'	2.46	0.41
2:H:179:PRO:O	2:H:207:THR:HB	2.20	0.41
2:H:39:LEU:HD23	2:H:39:LEU:HA	1.81	0.41
3:I:689:ALA:CB	3:I:1233:LEU:HD23	2.39	0.41
3:I:592:ARG:N	3:I:653:MET:O	2.47	0.41
4:J:116:PHE:O	4:J:124:ILE:HG22	2.20	0.41
4:J:225:GLU:O	4:J:229:GLN:HG3	2.21	0.41
4:J:377:PHE:CD2	4:J:416:ILE:HD11	2.56	0.41
4:J:418:GLU:HB2	5:K:45:LYS:HG2	2.01	0.41
4:J:913:GLU:O	4:J:915:ILE:HG23	2.21	0.41
4:J:84:ILE:HG22	4:J:91:GLU:CB	2.51	0.41
4:J:950:ILE:HD12	4:J:982:LEU:HD13	2.02	0.41
6:L:275:VAL:HG12	6:L:279:ARG:CD	2.50	0.41
6:L:369:GLU:O	6:L:373:ARG:HG3	2.20	0.41
6:L:586:ARG:HE	7:O:24:DC:H2'	1.86	0.41
2:G:50:SER:HB2	2:H:8:PHE:CZ	2.55	0.41
2:H:153:VAL:HG12	2:H:158:ARG:NH1	2.36	0.41
3:I:254:ASP:HA	3:I:264:GLU:O	2.21	0.41
3:I:142:GLU:O	3:I:515:MET:HB3	2.20	0.41
3:I:515:MET:HG2	3:I:517:GLN:HB2	2.03	0.41
3:I:587:LEU:O	3:I:607:SER:HA	2.21	0.41
3:I:90:VAL:HG12	3:I:91:THR:N	2.36	0.41
3:I:936:ARG:HB3	3:I:939:VAL:HG23	2.03	0.41
4:J:1022:PRO:O	4:J:1126:GLN:N	2.53	0.41
4:J:1038:THR:CG2	4:J:1079:LYS:HD3	2.49	0.41
4:J:1144:LEU:HD22	4:J:1237:VAL:HB	2.03	0.41
4:J:416:ILE:HG21	4:J:439:PRO:HB2	2.02	0.41
5:K:53:GLU:CG	5:K:59:ILE:HD12	2.42	0.41
2:M:292:THR:HB	2:M:295:LEU:HD13	2.03	0.41
7:O:22:DT:H3	8:P:64:DA:H61	1.69	0.41
2:H:118:ASP:H	2:H:121:VAL:HB	1.85	0.40
2:H:103:ASN:HA	2:H:140:ILE:O	2.21	0.40
2:H:150:ARG:HD3	2:H:150:ARG:HA	1.89	0.40
3:I:1007:LYS:O	3:I:1011:LEU:HG	2.22	0.40
3:I:1135:GLN:HG3	3:I:1135:GLN:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:368:ARG:O	3:I:372:PRO:HA	2.20	0.40
4:J:114:ILE:HG23	4:J:115:TRP:CD1	2.55	0.40
4:J:495:ASN:N	4:J:495:ASN:OD1	2.53	0.40
1:N:23:ILE:HG23	4:J:680:ASN:ND2	2.36	0.40
4:J:804:ALA:HA	4:J:1259:GLN:HG3	2.03	0.40
6:L:274:ARG:HA	6:L:274:ARG:NE	2.36	0.40
4:J:335:GLN:NE2	6:L:516:ASP:O	2.54	0.40
6:L:559:LEU:HA	6:L:559:LEU:HD12	1.89	0.40
2:M:262:LEU:HD23	2:M:262:LEU:HA	1.84	0.40
7:O:18:DC:H2"	7:O:19:DA:C8	2.56	0.40
2:G:32:GLU:OE1	2:H:150:ARG:NH1	2.49	0.40
2:H:112:ALA:HB3	2:H:126:PRO:CA	2.45	0.40
3:I:1079:ILE:HA	3:I:1079:ILE:HD12	1.94	0.40
3:I:1326:LEU:HD21	4:J:338:PHE:CZ	2.56	0.40
3:I:1333:LEU:HD23	4:J:327:LEU:HD13	2.02	0.40
3:I:178:PRO:HG3	3:I:395:TYR:HE1	1.85	0.40
3:I:195:PHE:CB	3:I:203:LYS:HD2	2.52	0.40
3:I:283:LYS:HE3	3:I:283:LYS:HB2	1.89	0.40
3:I:32:LEU:HD23	3:I:32:LEU:HA	1.79	0.40
3:I:56:VAL:HG11	3:I:468:LEU:HB3	2.03	0.40
3:I:724:VAL:HG11	3:I:772:SER:O	2.21	0.40
3:I:98:VAL:HB	3:I:122:VAL:HG12	2.02	0.40
4:J:1046:ILE:HA	4:J:1062:LEU:CD1	2.48	0.40
4:J:1034:PHE:HE1	4:J:1114:GLN:HG3	1.86	0.40
4:J:132:LEU:O	4:J:136:GLU:HG3	2.21	0.40
4:J:883:ARG:H	4:J:883:ARG:HG2	1.69	0.40
4:J:926:PRO:HG2	4:J:1248:ILE:CD1	2.48	0.40
5:K:30:MET:SD	5:K:49:ILE:HB	2.61	0.40
6:L:118:ASP:CA	6:L:121:LYS:HE3	2.43	0.40
7:O:46:DG:H2"	7:O:47:DG:C8	2.56	0.40
3:I:833:ILE:HG23	3:I:1054:LEU:O	2.21	0.40
3:I:1168:GLU:O	3:I:1172:LEU:N	2.40	0.40
3:I:1252:SER:O	3:I:1256:GLN:NE2	2.54	0.40
3:I:965:GLN:HB2	10:I:1401:1N7:H24	2.02	0.40
3:I:582:ASN:HB2	3:I:586:PHE:O	2.21	0.40
3:I:593:LYS:HB2	3:I:604:HIS:CE1	2.57	0.40
3:I:678:ARG:HD3	3:I:678:ARG:HA	1.62	0.40
3:I:818:VAL:HG21	3:I:1076:ILE:HD12	2.03	0.40
4:J:188:LEU:HA	4:J:188:LEU:HD23	1.95	0.40
4:J:45:ASN:O	4:J:47:ARG:N	2.55	0.40
4:J:484:MET:HA	4:J:489:ASN:HD21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:591:ILE:HG23	4:J:592:VAL:HG13	2.03	0.40
4:J:870:ASP:O	4:J:873:GLU:HB3	2.22	0.40
4:J:975:ILE:CD1	4:J:1003:LEU:HD21	2.51	0.40
6:L:136:GLU:HB2	6:L:361:ILE:HG23	2.03	0.40
7:O:25:DA:H2'	7:O:26:DT:H5''	2.03	0.40
8:P:50:DT:H2'	8:P:50:DT:H6	1.72	0.40
3:I:1021:LEU:O	3:I:1024:GLU:HG3	2.21	0.40
3:I:1191:LYS:O	3:I:1195:ILE:HG13	2.22	0.40
3:I:185:ASP:HB2	3:I:197:ARG:HG3	2.04	0.40
3:I:759:SER:HB3	3:I:765:ILE:CG1	2.51	0.40
4:J:1254:GLU:O	4:J:1257:VAL:HB	2.21	0.40
4:J:20:ILE:HD11	4:J:1353:VAL:HG21	2.02	0.40
5:K:60:ASN:OD1	5:K:60:ASN:N	2.55	0.40
6:L:135:ALA:HA	6:L:141:ILE:CD1	2.38	0.40
6:L:302:PHE:O	6:L:306:PHE:N	2.39	0.40
6:L:573:LEU:HD11	6:L:587:ILE:HB	2.03	0.40
2:G:81:ILE:HG12	2:G:131:CYS:HB3	2.04	0.40
2:G:167:PRO:HG2	2:G:170:ARG:NH1	2.37	0.40
2:G:47:LEU:O	2:G:180:VAL:HG21	2.21	0.40
2:G:31:LEU:HD23	2:G:36:GLY:HA2	2.04	0.40
3:I:1006:GLU:HG2	3:I:1007:LYS:N	2.35	0.40
3:I:1017:GLN:HB2	3:I:1017:GLN:HE21	1.64	0.40
3:I:17:LYS:N	3:I:17:LYS:HD2	2.36	0.40
3:I:241:LEU:HD13	3:I:285:ILE:HG12	2.04	0.40
3:I:312:ALA:H	3:I:315:MET:HE2	1.86	0.40
3:I:502:VAL:O	3:I:506:PHE:HD1	2.03	0.40
3:I:549:ASP:CG	4:J:750:PRO:HG2	2.42	0.40
3:I:572:ILE:HG22	3:I:572:ILE:O	2.21	0.40
3:I:755:LYS:HA	3:I:755:LYS:HE3	2.04	0.40
3:I:83:GLN:HA	3:I:86:GLN:OE1	2.21	0.40
3:I:965:GLN:HA	3:I:968:GLU:HG3	2.02	0.40
4:J:1037:PHE:CD2	4:J:1040:MET:HG3	2.57	0.40
4:J:1184:ASP:OD1	4:J:1184:ASP:N	2.53	0.40
4:J:1251:LYS:HE2	4:J:1251:LYS:HB3	1.77	0.40
4:J:384:LYS:HA	4:J:384:LYS:HD2	1.81	0.40
4:J:615:LYS:HG3	4:J:615:LYS:H	1.72	0.40
4:J:923:ILE:HD11	4:J:1253:ILE:CA	2.49	0.40
6:L:261:LEU:HD11	6:L:266:PHE:HB2	2.03	0.40
6:L:380:VAL:HG23	6:L:412:LEU:HG	2.02	0.40
6:L:51:MET:HB2	6:L:53:ILE:CD1	2.52	0.40
6:L:555:GLU:CA	6:L:558:VAL:HG12	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:317:ARG:NE	2:M:317:ARG:HA	2.36	0.40
8:P:54:DT:H2'	8:P:55:DT:H71	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	N	70/72 (97%)	67 (96%)	3 (4%)	0	100	100
2	G	228/329 (69%)	193 (85%)	35 (15%)	0	100	100
2	H	213/329 (65%)	169 (79%)	43 (20%)	1 (0%)	31	71
2	M	71/329 (22%)	68 (96%)	3 (4%)	0	100	100
3	I	1338/1342 (100%)	1156 (86%)	182 (14%)	0	100	100
4	J	1338/1430 (94%)	1187 (89%)	150 (11%)	1 (0%)	53	86
5	K	70/91 (77%)	59 (84%)	11 (16%)	0	100	100
6	L	517/616 (84%)	464 (90%)	53 (10%)	0	100	100
All	All	3845/4538 (85%)	3363 (88%)	480 (12%)	2 (0%)	56	86

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	J	859	PRO
2	H	94	GLY

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	N	61/61 (100%)	61 (100%)	0	100	100
2	G	196/286 (68%)	195 (100%)	1 (0%)	90	95
2	H	185/286 (65%)	185 (100%)	0	100	100
2	M	65/286 (23%)	65 (100%)	0	100	100
3	I	1155/1157 (100%)	1151 (100%)	4 (0%)	93	96
4	J	1122/1189 (94%)	1117 (100%)	5 (0%)	92	96
5	K	63/75 (84%)	63 (100%)	0	100	100
6	L	467/543 (86%)	467 (100%)	0	100	100
All	All	3314/3883 (85%)	3304 (100%)	10 (0%)	93	96

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	G	131	CYS
3	I	422	LYS
3	I	468	LEU
3	I	699	LEU
3	I	1216	ARG
4	J	137	ARG
4	J	304	ASP
4	J	338	PHE
4	J	1237	VAL
4	J	1311	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	N	25	GLN
2	G	23	HIS
2	H	84	ASN
2	H	132	HIS
3	I	120	GLN
3	I	387	ASN
3	I	490	GLN
3	I	620	ASN
3	I	766	ASN

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Mol	Chain	Res	Type
3	I	856	ASN
3	I	1017	GLN
3	I	1116	HIS
3	I	1209	GLN
3	I	1299	ASN
4	J	158	GLN
4	J	229	GLN
4	J	294	ASN
4	J	365	GLN
4	J	450	HIS
4	J	465	GLN
4	J	489	ASN
4	J	680	ASN
4	J	1049	GLN
4	J	1108	GLN
5	K	29	GLN
5	K	31	GLN
6	L	82	GLN
6	L	128	ASN
6	L	147	GLN
6	L	246	GLN
6	L	309	ASN
6	L	362	ASN
6	L	409	ASN
6	L	446	GLN
6	L	469	GLN
6	L	472	GLN
6	L	579	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
10	1N7	I	1401	-	30,30,46	4.77	15 (50%)	47,48,72	2.24	16 (34%)
10	1N7	J	1504	-	30,30,46	4.90	14 (46%)	47,48,72	2.10	14 (29%)
10	1N7	L	701	-	30,30,46	4.97	16 (53%)	47,48,72	2.16	14 (29%)
10	1N7	N	102	-	30,30,46	4.90	14 (46%)	47,48,72	2.24	16 (34%)

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	1N7	I	1401	-	-	0/7/72/92	0/4/4/4
10	1N7	J	1504	-	-	1/7/72/92	0/4/4/4
10	1N7	L	701	-	-	5/7/72/92	0/4/4/4
10	1N7	N	102	-	-	7/7/72/92	0/4/4/4

All (59) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	L	701	1N7	C3-C19	17.96	1.83	1.53
10	J	1504	1N7	C3-C19	17.68	1.83	1.53
10	N	102	1N7	C3-C19	17.57	1.83	1.53
10	I	1401	1N7	C3-C19	17.15	1.82	1.53
10	N	102	1N7	C3-C4	11.39	1.73	1.53
10	J	1504	1N7	C3-C4	11.36	1.73	1.53
10	L	701	1N7	C3-C4	11.30	1.73	1.53
10	I	1401	1N7	C3-C4	10.80	1.72	1.53
10	L	701	1N7	C5-C4	-9.16	1.40	1.54
10	N	102	1N7	C5-C4	-8.90	1.40	1.54
10	J	1504	1N7	C5-C4	-8.68	1.40	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	I	1401	1N7	C5-C4	-8.53	1.41	1.54
10	I	1401	1N7	C2-C19	-7.44	1.42	1.56
10	N	102	1N7	C2-C19	-7.28	1.42	1.56
10	J	1504	1N7	C2-C19	-7.15	1.42	1.56
10	L	701	1N7	C2-C19	-7.07	1.42	1.56
10	I	1401	1N7	C8-C7	5.88	1.70	1.54
10	L	701	1N7	C8-C7	5.87	1.70	1.54
10	N	102	1N7	C8-C7	5.60	1.69	1.54
10	J	1504	1N7	C8-C7	5.40	1.69	1.54
10	J	1504	1N7	C5-C9	4.65	1.63	1.55
10	N	102	1N7	C5-C9	4.22	1.62	1.55
10	L	701	1N7	O4-C4	-4.19	1.36	1.43
10	J	1504	1N7	O4-C4	-4.06	1.36	1.43
10	I	1401	1N7	O4-C4	-4.00	1.36	1.43
10	I	1401	1N7	C5-C9	3.96	1.62	1.55
10	L	701	1N7	C5-C6	-3.96	1.48	1.55
10	N	102	1N7	C18-C6	-3.86	1.46	1.53
10	N	102	1N7	O4-C4	-3.81	1.37	1.43
10	L	701	1N7	C7-C6	3.50	1.61	1.54
10	L	701	1N7	C18-C6	-3.47	1.47	1.53
10	L	701	1N7	C5-C9	3.41	1.61	1.55
10	J	1504	1N7	C2-C15	3.38	1.61	1.55
10	I	1401	1N7	C5-C6	-3.38	1.49	1.55
10	L	701	1N7	C2-C15	3.36	1.60	1.55
10	N	102	1N7	C5-C6	-3.34	1.49	1.55
10	J	1504	1N7	C14-C15	-3.29	1.48	1.53
10	I	1401	1N7	C18-C6	-3.25	1.47	1.53
10	J	1504	1N7	C5-C6	-3.21	1.50	1.55
10	J	1504	1N7	C18-C6	-3.13	1.47	1.53
10	N	102	1N7	C7-C6	3.08	1.60	1.54
10	I	1401	1N7	C14-C15	-3.03	1.48	1.53
10	I	1401	1N7	C7-C6	2.84	1.60	1.54
10	N	102	1N7	C2-C15	2.81	1.60	1.55
10	J	1504	1N7	C7-C6	2.77	1.60	1.54
10	L	701	1N7	C14-C15	-2.69	1.49	1.53
10	N	102	1N7	C14-C13	2.60	1.56	1.51
10	N	102	1N7	C10-C5	2.60	1.58	1.54
10	I	1401	1N7	C2-C15	2.57	1.59	1.55
10	J	1504	1N7	C1-C2	2.54	1.58	1.54
10	L	701	1N7	C14-C13	2.48	1.56	1.51
10	L	701	1N7	C16-C15	2.43	1.57	1.53
10	L	701	1N7	O2-C13	-2.35	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	I	1401	1N7	C14-C13	2.33	1.56	1.51
10	N	102	1N7	O2-C13	-2.29	1.36	1.43
10	I	1401	1N7	C1-C2	2.14	1.58	1.54
10	J	1504	1N7	O2-C13	-2.13	1.37	1.43
10	I	1401	1N7	O2-C13	-2.08	1.37	1.43
10	L	701	1N7	C10-C5	2.02	1.57	1.54

All (60) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	N	102	1N7	C7-C6-C18	-7.21	108.23	118.32
10	I	1401	1N7	C7-C6-C18	-6.07	109.83	118.32
10	J	1504	1N7	C7-C6-C18	-5.83	110.17	118.32
10	L	701	1N7	C9-C5-C4	-5.47	112.65	117.68
10	L	701	1N7	C7-C6-C18	-5.33	110.86	118.32
10	J	1504	1N7	C9-C5-C6	5.19	105.39	100.08
10	L	701	1N7	C19-C18-C17	-5.16	105.67	111.87
10	I	1401	1N7	C9-C5-C4	-4.99	113.09	117.68
10	J	1504	1N7	C9-C5-C4	-4.64	113.41	117.68
10	N	102	1N7	C9-C5-C4	-4.61	113.44	117.68
10	N	102	1N7	C19-C3-C4	-4.54	108.27	114.30
10	N	102	1N7	C6-C5-C4	4.33	111.48	107.39
10	N	102	1N7	C5-C6-C18	4.06	119.95	114.75
10	I	1401	1N7	C19-C3-C4	-3.94	109.07	114.30
10	I	1401	1N7	C21-C20-C22	-3.93	104.12	110.36
10	L	701	1N7	C16-C15-C14	-3.86	106.72	111.19
10	I	1401	1N7	C19-C18-C17	-3.85	107.25	111.87
10	I	1401	1N7	C9-C5-C6	3.83	104.00	100.08
10	I	1401	1N7	C5-C6-C18	3.80	119.62	114.75
10	I	1401	1N7	C6-C5-C4	3.54	110.73	107.39
10	J	1504	1N7	C5-C6-C18	3.53	119.28	114.75
10	N	102	1N7	C16-C15-C2	-3.47	108.94	112.65
10	J	1504	1N7	C21-C20-C9	-3.45	107.59	112.92
10	J	1504	1N7	C1-C12-C13	-3.44	106.09	110.46
10	L	701	1N7	C1-C12-C13	-3.42	106.11	110.46
10	L	701	1N7	C21-C20-C9	-3.40	107.67	112.92
10	I	1401	1N7	C1-C12-C13	-3.37	106.17	110.46
10	L	701	1N7	C6-C5-C4	3.34	110.54	107.39
10	N	102	1N7	C11-C2-C1	-3.32	102.86	108.25
10	L	701	1N7	C7-C8-C9	-3.14	98.88	105.13
10	L	701	1N7	C22-C20-C9	3.12	116.78	110.28
10	N	102	1N7	C21-C20-C22	-3.11	105.43	110.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	N	102	1N7	C16-C17-C18	3.10	114.82	111.48
10	J	1504	1N7	C14-C13-C12	-3.06	106.84	110.54
10	L	701	1N7	C21-C20-C22	-3.05	105.51	110.36
10	J	1504	1N7	C19-C18-C17	-3.02	108.24	111.87
10	J	1504	1N7	C2-C19-C18	3.02	115.08	111.82
10	I	1401	1N7	C2-C19-C18	3.01	115.07	111.82
10	J	1504	1N7	C8-C9-C20	-2.99	107.44	112.15
10	N	102	1N7	C19-C18-C17	-2.96	108.32	111.87
10	I	1401	1N7	C16-C15-C14	-2.85	107.89	111.19
10	J	1504	1N7	C16-C15-C14	-2.84	107.90	111.19
10	I	1401	1N7	C8-C7-C6	-2.57	100.02	105.13
10	J	1504	1N7	C3-C19-C18	-2.55	107.14	110.86
10	L	701	1N7	C11-C2-C1	-2.52	104.15	108.25
10	J	1504	1N7	C11-C2-C15	-2.50	106.08	110.34
10	L	701	1N7	C16-C17-C18	-2.43	108.87	111.48
10	I	1401	1N7	C10-C5-C9	-2.39	107.44	111.20
10	N	102	1N7	C3-C4-C5	-2.36	108.81	111.23
10	I	1401	1N7	C8-C9-C20	-2.36	108.44	112.15
10	N	102	1N7	C11-C2-C19	2.34	114.43	111.17
10	J	1504	1N7	C15-C14-C13	-2.29	109.45	112.81
10	N	102	1N7	C21-C20-C9	-2.28	109.40	112.92
10	L	701	1N7	C11-C2-C19	2.26	114.32	111.17
10	N	102	1N7	C10-C5-C4	-2.22	106.78	109.08
10	I	1401	1N7	C3-C19-C18	-2.20	107.66	110.86
10	L	701	1N7	O3-C17-C18	2.18	114.23	109.39
10	N	102	1N7	C10-C5-C6	2.16	114.60	111.20
10	I	1401	1N7	C16-C17-C18	2.04	113.68	111.48
10	N	102	1N7	C22-C20-C9	2.02	114.49	110.28

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
10	N	102	1N7	C21-C20-C22-C23
10	N	102	1N7	C9-C20-C22-C23
10	L	701	1N7	C22-C20-C9-C5
10	L	701	1N7	C20-C22-C23-C24
10	L	701	1N7	C21-C20-C9-C8
10	L	701	1N7	C21-C20-C9-C5
10	N	102	1N7	C20-C22-C23-C24
10	N	102	1N7	C21-C20-C9-C5
10	J	1504	1N7	C20-C22-C23-C24

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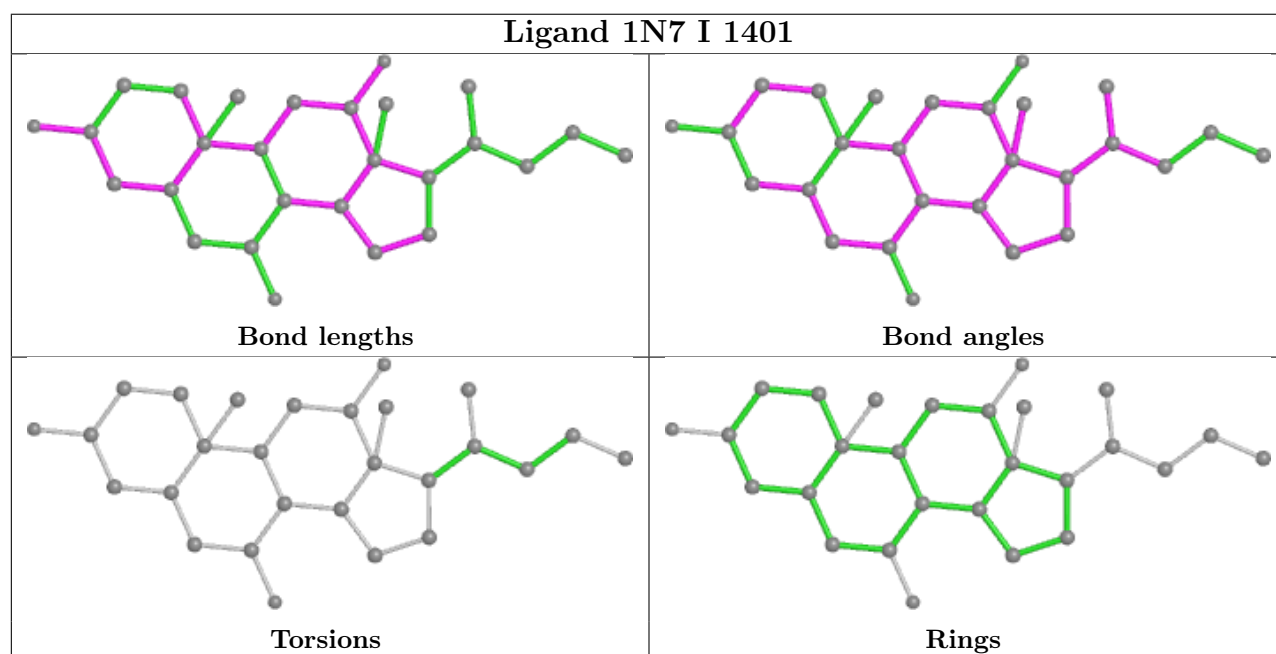
Mol	Chain	Res	Type	Atoms
10	L	701	1N7	C22-C20-C9-C8
10	N	102	1N7	C21-C20-C9-C8
10	N	102	1N7	C22-C20-C9-C5
10	N	102	1N7	C22-C20-C9-C8

There are no ring outliers.

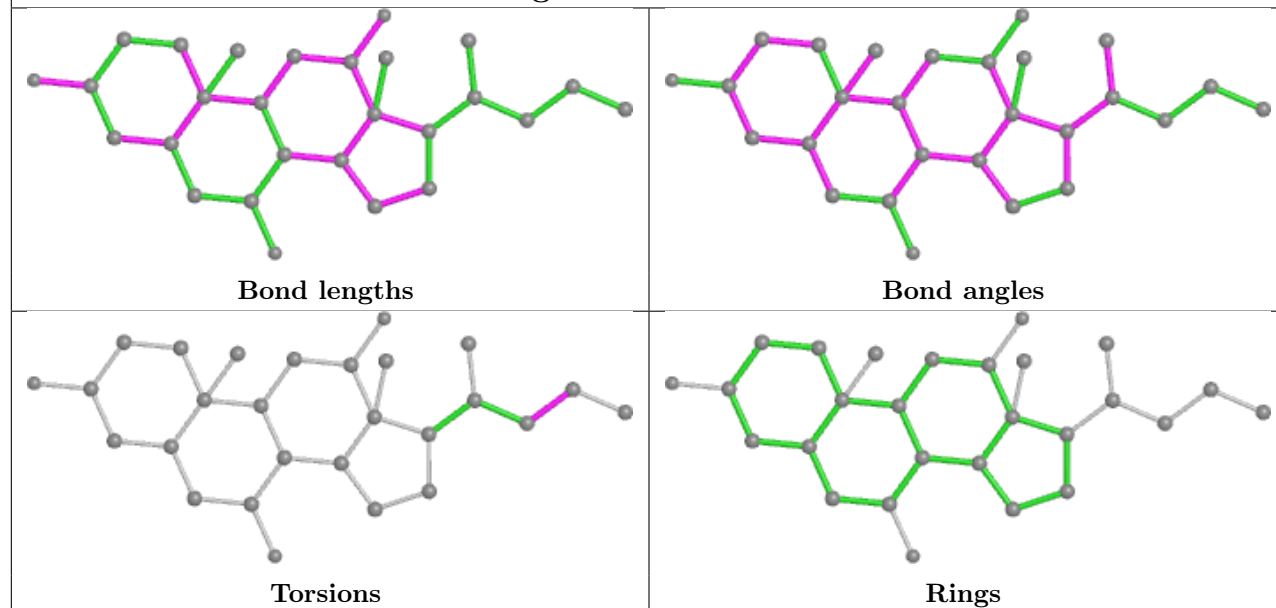
4 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	I	1401	1N7	7	0
10	J	1504	1N7	4	0
10	L	701	1N7	3	0
10	N	102	1N7	4	0

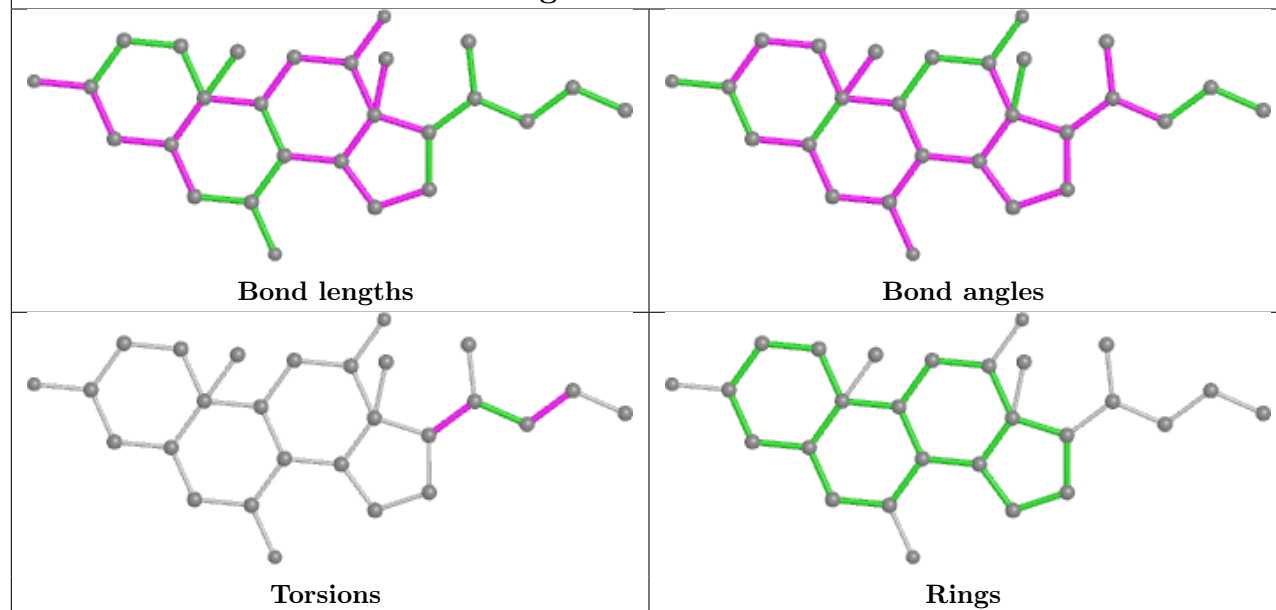
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

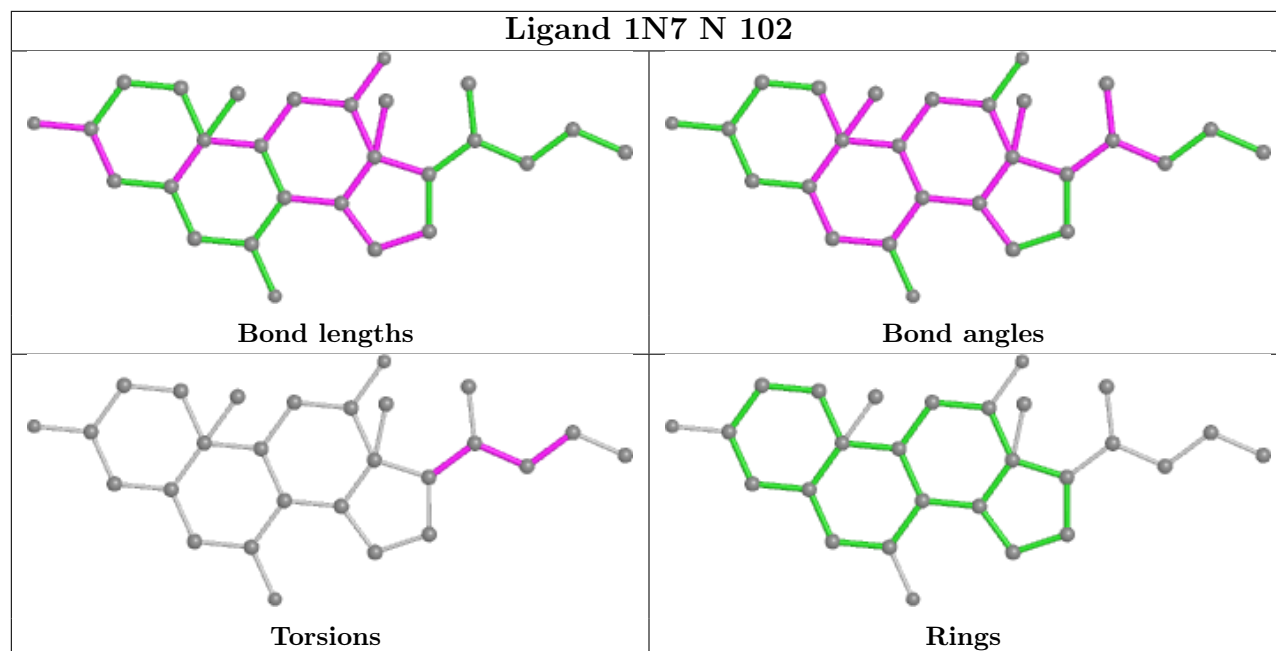


Ligand 1N7 J 1504



Ligand 1N7 L 701





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.