



Full wwPDB NMR Structure Validation Report ⓘ

Jun 6, 2023 – 08:10 pm BST

PDB ID : 7OGV
BMRB ID : 34623
Title : A self-complementary DNA dodecamer duplex containing 5-hydroxymethylcytosine
Authors : Battistini, F.; Dans, P.D.; Terrazas, M.; Castellazzi, C.L.; Portella, G.; Labrador, M.; Villegas, N.; Brun-Heath, I.; Gonzalez, C.; Orozco, M.
Deposited on : 2021-05-07

This is a Full wwPDB NMR Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.33

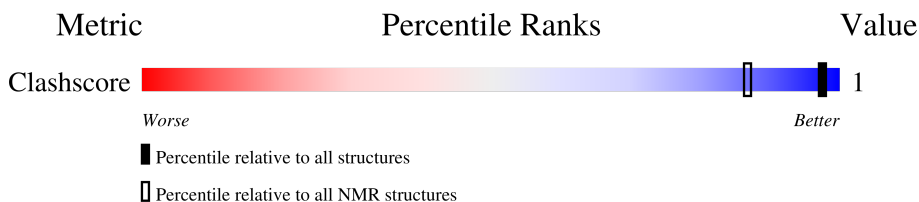
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR



The overall completeness of chemical shifts assignment is 21%.

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)	NMR archive (#Entries)
Clashscore	158937	12864

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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	A	12	 50% 50%
1	B	12	 75% 25%

2 Ensemble composition and analysis

This entry contains 10 models. This entry does not contain polypeptide chains, therefore identification of well-defined residues and clustering analysis are not possible. All residues are included in the validation scores.

3 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 764 atoms, of which 274 are hydrogens and 0 are deuteriums.

- Molecule 1 is a DNA chain called DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3').

Mol	Chain	Residues	Atoms					Trace	
			Total	C	H	N	O		P
1	A	12	Total 382	C 116	H 137	N 47	O 71	P 11	0
1	B	12	Total 382	C 116	H 137	N 47	O 71	P 11	0

4 Residue-property plots

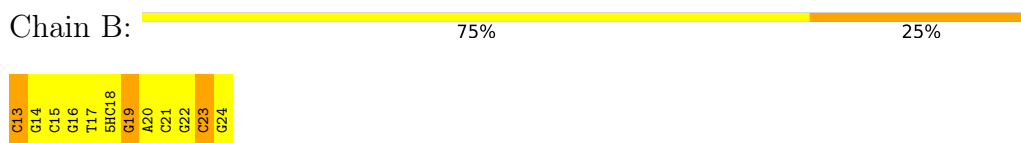
4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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 outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

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



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



4.2 Scores per residue for each member of the ensemble

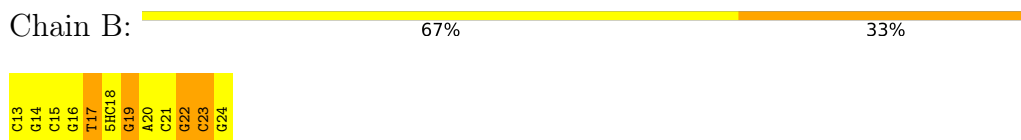
Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

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

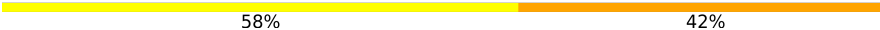


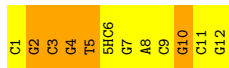
- Molecule 1: DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3')




4.2.2 Score per residue for model 2

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

Chain A:  58% 42%



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

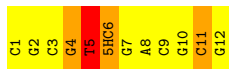
Chain B:  83% 17%



4.2.3 Score per residue for model 3

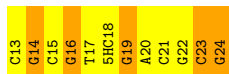
- Molecule 1: DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3')

Chain A:  67% 25% 8%



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

Chain B:  58% 42%




4.2.4 Score per residue for model 4

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

Chain A:  67% 33%



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

Chain B:  8% 50% 42%



4.2.5 Score per residue for model 5

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

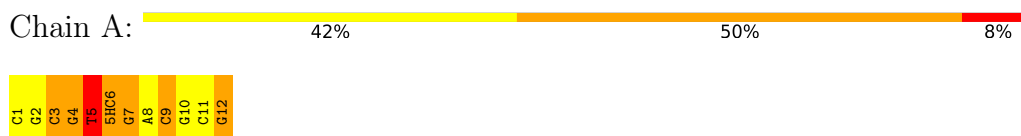


- Molecule 1: DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3')

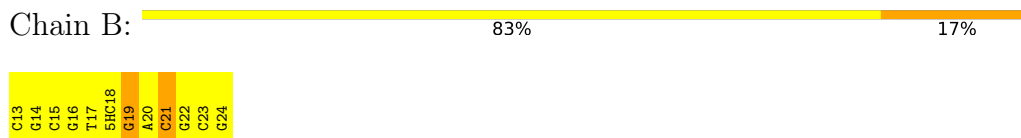


4.2.6 Score per residue for model 6

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



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



4.2.7 Score per residue for model 7

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



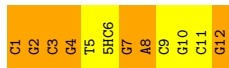
- Molecule 1: DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3')



4.2.8 Score per residue for model 8

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

Chain A:  42% 58%




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

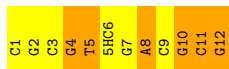
Chain B:  33% 67%



4.2.9 Score per residue for model 9

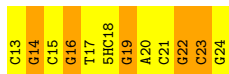
- Molecule 1: DNA (5'-D*(P*GP*CP*GP*TP*(DH)P*GP*AP*CP*GP*CP*G-3')

Chain A:  50% 50%



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

Chain B:  58% 42%



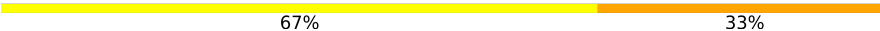
4.2.10 Score per residue for model 10

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

Chain A:  58% 42%



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

Chain B:  67% 33%



5 Refinement protocol and experimental data overview

The models were refined using the following method: *molecular dynamics*.

Of the 10 calculated structures, 10 were deposited, based on the following criterion: *all calculated structures submitted*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
Amber	refinement	
Amber	structure calculation	

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	105
Number of shifts mapped to atoms	105
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	21%

6 Model quality i

6.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 5HC

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 (average) root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	2.39±0.11	12±3/250 (4.8± 1.1%)	3.48±0.16	56±6/382 (14.6± 1.6%)
1	B	2.40±0.11	11±3/250 (4.4± 1.3%)	3.57±0.25	58±9/382 (15.1± 2.3%)
All	All	2.40	232/5000 (4.6%)	3.53	1132/7640 (14.8%)

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	Planarity
1	A	0.0±0.0	5.1±1.1
1	B	0.0±0.0	4.5±1.9
All	All	0	96

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	B	14	DG	N7-C5	11.96	1.46	1.39	9	2
1	B	22	DG	N7-C5	11.74	1.46	1.39	3	3
1	A	8	DA	C5'-C4'	9.40	1.61	1.51	9	1
1	B	14	DG	N1-C2	-9.31	1.30	1.37	8	2
1	A	7	DG	C5'-C4'	9.17	1.61	1.51	2	1
1	A	11	DC	P-O5'	-8.96	1.50	1.59	3	2
1	A	7	DG	C2-N2	-8.85	1.25	1.34	9	5
1	A	9	DC	C4-N4	-8.54	1.26	1.33	2	4
1	B	20	DA	N3-C4	8.33	1.39	1.34	5	3
1	B	24	DG	N7-C5	8.03	1.44	1.39	4	4
1	B	15	DC	C4-N4	-8.01	1.26	1.33	3	4
1	B	17	DT	C5-C7	7.85	1.54	1.50	7	5

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	B	14	DG	P-O5'	7.74	1.67	1.59	1	1
1	A	5	DT	N1-C2	7.71	1.44	1.38	2	5
1	B	23	DC	N1-C6	7.63	1.41	1.37	6	2
1	B	17	DT	C4'-C3'	7.60	1.60	1.53	3	1
1	A	12	DG	C2-N2	-7.54	1.27	1.34	2	2
1	B	19	DG	P-O5'	7.52	1.67	1.59	7	1
1	A	10	DG	C2-N2	-7.48	1.27	1.34	4	4
1	A	9	DC	N3-C4	-7.39	1.28	1.33	4	2
1	A	2	DG	N1-C2	-7.34	1.31	1.37	3	3
1	B	21	DC	C4-N4	-7.10	1.27	1.33	8	2
1	A	3	DC	P-O5'	-7.08	1.52	1.59	3	1
1	B	21	DC	C5'-C4'	7.00	1.59	1.51	2	2
1	A	7	DG	N7-C5	7.00	1.43	1.39	7	1
1	B	17	DT	C2'-C1'	6.95	1.59	1.52	6	1
1	B	15	DC	O3'-P	6.89	1.69	1.61	8	2
1	A	7	DG	C4'-O4'	-6.88	1.38	1.45	5	1
1	B	14	DG	C2-N2	-6.87	1.27	1.34	8	4
1	A	8	DA	N3-C4	6.85	1.39	1.34	7	4
1	B	16	DG	C5-C6	6.82	1.49	1.42	8	1
1	B	24	DG	N1-C2	-6.79	1.32	1.37	4	2
1	B	21	DC	C2'-C1'	6.76	1.59	1.52	10	1
1	B	20	DA	C5'-C4'	6.70	1.58	1.51	3	1
1	A	12	DG	N3-C4	6.69	1.40	1.35	7	1
1	B	14	DG	N3-C4	6.67	1.40	1.35	3	1
1	B	19	DG	C2-N2	-6.65	1.27	1.34	10	4
1	A	12	DG	C4'-O4'	-6.64	1.38	1.45	4	2
1	B	16	DG	N7-C5	6.60	1.43	1.39	5	3
1	A	7	DG	C2'-C1'	6.57	1.58	1.52	10	1
1	A	1	DC	C5-C6	6.55	1.39	1.34	2	1
1	B	20	DA	C6-N1	-6.50	1.31	1.35	7	3
1	B	22	DG	N3-C4	6.49	1.40	1.35	10	1
1	A	7	DG	P-O5'	6.45	1.66	1.59	2	1
1	A	1	DC	C4-N4	-6.44	1.28	1.33	1	2
1	A	7	DG	C5-C6	6.43	1.48	1.42	10	1
1	B	20	DA	N7-C5	6.42	1.43	1.39	1	2
1	B	22	DG	C5'-C4'	6.42	1.58	1.51	4	2
1	B	21	DC	C4'-C3'	6.41	1.59	1.53	4	1
1	B	23	DC	N3-C4	-6.35	1.29	1.33	6	1
1	A	7	DG	C6-N1	-6.33	1.35	1.39	6	1
1	B	22	DG	C5-C6	6.29	1.48	1.42	4	1
1	B	14	DG	C4'-O4'	-6.27	1.38	1.45	8	2

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	10	DG	C4'-O4'	-6.26	1.38	1.45	6	2
1	B	22	DG	P-O5'	-6.25	1.53	1.59	1	2
1	A	10	DG	N7-C5	6.25	1.43	1.39	1	1
1	A	3	DC	N1-C6	6.24	1.40	1.37	7	1
1	A	3	DC	C4-N4	-6.23	1.28	1.33	4	3
1	A	10	DG	C6-N1	-6.21	1.35	1.39	6	1
1	B	17	DT	N3-C4	-6.20	1.33	1.38	5	1
1	B	15	DC	N3-C4	-6.20	1.29	1.33	2	2
1	A	5	DT	C5-C6	6.19	1.38	1.34	9	2
1	B	14	DG	C5-C6	6.18	1.48	1.42	9	1
1	A	8	DA	N9-C4	6.17	1.41	1.37	9	1
1	B	13	DC	C4-N4	-6.17	1.28	1.33	7	1
1	A	3	DC	C5'-C4'	6.14	1.58	1.51	10	2
1	A	12	DG	C5'-C4'	6.09	1.58	1.51	4	2
1	B	16	DG	C5'-C4'	6.07	1.58	1.51	1	1
1	A	2	DG	P-O5'	6.06	1.65	1.59	4	1
1	B	24	DG	C5-C4	-6.06	1.34	1.38	9	1
1	A	2	DG	N3-C4	6.03	1.39	1.35	9	3
1	B	20	DA	C6-N6	-6.03	1.29	1.33	10	1
1	A	2	DG	C2-N2	-6.00	1.28	1.34	10	3
1	B	22	DG	C2-N2	-5.99	1.28	1.34	6	2
1	B	23	DC	C4-N4	-5.99	1.28	1.33	2	2
1	A	12	DG	N7-C5	5.97	1.42	1.39	3	2
1	A	12	DG	C6-N1	-5.93	1.35	1.39	8	1
1	B	19	DG	N7-C5	5.89	1.42	1.39	3	2
1	A	3	DC	C4'-C3'	5.88	1.59	1.53	6	1
1	A	11	DC	N3-C4	-5.87	1.29	1.33	1	2
1	A	7	DG	O3'-P	5.87	1.68	1.61	4	1
1	B	14	DG	C4'-C3'	5.87	1.59	1.53	8	1
1	A	2	DG	C3'-O3'	-5.86	1.36	1.44	9	1
1	A	8	DA	C6-N1	-5.86	1.31	1.35	1	1
1	A	7	DG	N1-C2	-5.84	1.33	1.37	10	1
1	A	3	DC	N3-C4	-5.81	1.29	1.33	9	3
1	B	16	DG	C8-N7	-5.81	1.27	1.30	10	1
1	A	5	DT	C5'-C4'	5.80	1.57	1.51	7	1
1	B	24	DG	N9-C8	5.75	1.41	1.37	1	1
1	B	16	DG	C2-N2	-5.68	1.28	1.34	4	3
1	A	4	DG	N3-C4	5.68	1.39	1.35	7	2
1	A	5	DT	C4'-C3'	5.66	1.59	1.53	9	1
1	A	10	DG	C3'-C2'	5.65	1.59	1.52	3	1
1	A	2	DG	O3'-P	-5.63	1.54	1.61	5	1

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	B	24	DG	C4'-O4'	-5.63	1.39	1.45	6	1
1	A	2	DG	C4'-O4'	-5.63	1.39	1.45	7	1
1	A	12	DG	C5-C6	5.54	1.47	1.42	5	1
1	B	23	DC	C4'-O4'	-5.53	1.39	1.45	3	1
1	B	19	DG	C4'-O4'	-5.52	1.39	1.45	4	1
1	A	4	DG	C2-N2	-5.51	1.29	1.34	4	1
1	A	7	DG	N3-C4	5.51	1.39	1.35	10	2
1	A	10	DG	C5'-C4'	5.47	1.57	1.51	7	2
1	A	11	DC	C2'-C1'	5.46	1.57	1.52	3	1
1	A	12	DG	N1-C2	-5.46	1.33	1.37	2	1
1	A	5	DT	C5-C7	5.46	1.53	1.50	3	1
1	A	4	DG	O3'-P	-5.45	1.54	1.61	7	1
1	A	9	DC	C4'-O4'	-5.43	1.39	1.45	4	2
1	A	4	DG	C4'-O4'	-5.43	1.39	1.45	7	1
1	A	1	DC	C4'-O4'	-5.41	1.39	1.45	6	1
1	B	17	DT	N1-C2	5.39	1.42	1.38	5	2
1	B	20	DA	P-O5'	-5.39	1.54	1.59	4	1
1	B	15	DC	C4'-C3'	5.38	1.58	1.53	4	1
1	B	22	DG	N9-C8	-5.37	1.34	1.37	5	1
1	A	10	DG	N9-C4	-5.36	1.33	1.38	8	1
1	B	13	DC	C5-C6	5.34	1.38	1.34	1	1
1	A	12	DG	C4'-C3'	5.30	1.58	1.53	1	1
1	A	9	DC	N1-C6	5.30	1.40	1.37	8	1
1	A	4	DG	C6-N1	-5.30	1.35	1.39	8	2
1	B	24	DG	N3-C4	5.27	1.39	1.35	3	2
1	A	11	DC	O3'-P	5.27	1.67	1.61	8	1
1	A	10	DG	C8-N7	-5.26	1.27	1.30	10	1
1	B	22	DG	C4'-O4'	-5.25	1.39	1.45	3	2
1	B	22	DG	C4'-C3'	5.24	1.58	1.53	9	1
1	B	15	DC	C4'-O4'	-5.23	1.39	1.45	2	1
1	A	8	DA	C4'-O4'	-5.23	1.39	1.45	2	1
1	B	16	DG	N3-C4	5.18	1.39	1.35	6	1
1	B	21	DC	C2-N3	5.18	1.39	1.35	2	1
1	A	5	DT	N3-C4	-5.17	1.34	1.38	1	1
1	A	2	DG	C8-N7	5.17	1.34	1.30	9	1
1	A	9	DC	C2'-C1'	5.14	1.57	1.52	2	1
1	A	5	DT	C4'-O4'	-5.14	1.40	1.45	10	1
1	B	23	DC	P-O5'	5.10	1.64	1.59	8	1
1	B	20	DA	C3'-C2'	-5.10	1.46	1.52	9	1
1	B	24	DG	C2-N2	-5.09	1.29	1.34	4	1
1	A	8	DA	C2'-C1'	5.09	1.57	1.52	10	1

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	4	DG	C5'-C4'	5.09	1.56	1.51	9	1
1	A	5	DT	C2'-C1'	5.08	1.57	1.52	1	1
1	A	5	DT	C3'-O3'	-5.08	1.37	1.44	4	1
1	B	22	DG	N9-C4	5.08	1.42	1.38	3	1
1	A	1	DC	O3'-P	-5.07	1.55	1.61	9	1
1	A	3	DC	O3'-P	-5.05	1.55	1.61	8	1
1	B	24	DG	C8-N7	5.05	1.33	1.30	1	1
1	B	15	DC	C3'-O3'	-5.04	1.37	1.44	10	1
1	B	19	DG	C4'-C3'	5.01	1.58	1.53	6	1
1	A	12	DG	P-O5'	5.00	1.64	1.59	3	1

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	20	DA	N1-C6-N6	-16.79	108.53	118.60	7	7
1	B	23	DC	N1-C2-O2	16.20	128.62	118.90	1	7
1	B	15	DC	O4'-C1'-N1	15.36	118.75	108.00	7	6
1	A	3	DC	N3-C2-O2	-15.01	111.39	121.90	10	9
1	A	5	DT	N3-C2-O2	-14.84	113.40	122.30	7	7
1	B	22	DG	N1-C6-O6	-14.79	111.03	119.90	7	5
1	B	21	DC	O4'-C1'-N1	14.49	118.15	108.00	8	2
1	A	10	DG	N7-C8-N9	14.37	120.29	113.10	8	2
1	B	24	DG	N1-C6-O6	-14.35	111.29	119.90	1	6
1	B	13	DC	O4'-C1'-N1	14.26	117.98	108.00	1	9
1	A	10	DG	O4'-C4'-C3'	14.23	114.54	106.00	8	3
1	A	4	DG	O4'-C1'-N9	14.21	117.94	108.00	7	4
1	B	14	DG	C4-C5-N7	-13.87	105.25	110.80	2	4
1	B	23	DC	N3-C2-O2	-13.71	112.30	121.90	1	9
1	A	9	DC	O4'-C4'-C3'	13.60	114.16	106.00	9	5
1	A	8	DA	O4'-C4'-C3'	13.33	114.00	106.00	4	2
1	B	24	DG	C5-C6-O6	13.29	136.57	128.60	1	2
1	B	20	DA	C5-C6-N1	13.29	124.35	117.70	5	7
1	B	15	DC	O4'-C4'-C3'	13.19	113.91	106.00	1	2
1	B	15	DC	N3-C2-O2	-13.02	112.79	121.90	6	7
1	B	13	DC	N3-C2-O2	-13.01	112.79	121.90	9	8
1	B	14	DG	N9-C4-C5	13.01	110.60	105.40	2	2
1	A	5	DT	O4'-C1'-N1	12.86	117.00	108.00	6	4
1	A	11	DC	N3-C2-O2	-12.58	113.09	121.90	1	7
1	A	10	DG	C5-N7-C8	-12.42	98.09	104.30	8	2
1	B	15	DC	N1-C2-O2	12.27	126.26	118.90	6	7

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	24	DG	O4'-C1'-C2'	-12.26	96.09	105.90	8	3
1	B	17	DT	O4'-C1'-N1	12.24	116.57	108.00	1	3
1	B	16	DG	O4'-C1'-N9	12.23	116.56	108.00	3	2
1	A	3	DC	N1-C2-O2	12.14	126.19	118.90	10	8
1	A	10	DG	N3-C4-C5	-12.06	122.57	128.60	6	4
1	A	2	DG	C5-C6-N1	12.02	117.51	111.50	9	4
1	B	16	DG	N7-C8-N9	12.01	119.10	113.10	10	4
1	B	19	DG	C5-C6-N1	11.95	117.48	111.50	5	4
1	A	8	DA	N1-C6-N6	-11.93	111.44	118.60	5	8
1	B	13	DC	N3-C4-C5	11.92	126.67	121.90	7	3
1	A	12	DG	O4'-C1'-C2'	-11.92	96.36	105.90	2	4
1	B	15	DC	N3-C4-C5	11.90	126.66	121.90	8	6
1	A	11	DC	O4'-C1'-C2'	-11.89	96.39	105.90	5	1
1	A	7	DG	N3-C2-N2	-11.76	111.67	119.90	1	5
1	A	12	DG	N1-C6-O6	-11.74	112.86	119.90	8	6
1	B	13	DC	O4'-C1'-C2'	-11.69	96.55	105.90	6	2
1	B	16	DG	N9-C4-C5	11.61	110.04	105.40	7	3
1	A	7	DG	N9-C4-C5	11.53	110.01	105.40	8	2
1	A	3	DC	C6-N1-C2	-11.52	115.69	120.30	9	1
1	A	10	DG	C2-N3-C4	11.48	117.64	111.90	2	5
1	B	19	DG	N1-C6-O6	-11.43	113.05	119.90	3	4
1	B	21	DC	N3-C2-O2	-11.29	113.99	121.90	1	4
1	A	12	DG	C5-C6-N1	11.29	117.14	111.50	8	6
1	B	21	DC	N3-C4-C5	11.26	126.40	121.90	6	7
1	A	12	DG	O4'-C1'-N9	11.23	115.86	108.00	10	2
1	B	20	DA	O4'-C4'-C3'	-11.19	99.29	106.00	1	3
1	B	15	DC	O4'-C1'-C2'	-11.11	97.01	105.90	9	4
1	A	8	DA	C4'-C3'-C2'	-11.06	93.15	103.10	4	2
1	B	16	DG	O4'-C1'-C2'	-11.04	97.06	105.90	5	4
1	B	19	DG	O4'-C1'-N9	11.03	115.72	108.00	6	4
1	A	3	DC	C2-N3-C4	-11.02	114.39	119.90	1	3
1	B	14	DG	O4'-C1'-N9	11.01	115.70	108.00	5	3
1	A	8	DA	C4-C5-C6	-11.00	111.50	117.00	5	7
1	B	24	DG	O4'-C1'-N9	10.95	115.67	108.00	8	5
1	B	16	DG	C8-N9-C4	-10.90	102.04	106.40	10	4
1	B	13	DC	C2-N3-C4	-10.90	114.45	119.90	7	2
1	B	21	DC	N1-C2-O2	10.84	125.41	118.90	1	5
1	A	10	DG	C8-N9-C4	-10.82	102.07	106.40	6	5
1	B	23	DC	O4'-C1'-C2'	-10.81	97.25	105.90	2	3
1	B	22	DG	N3-C4-C5	-10.74	123.23	128.60	10	5
1	B	16	DG	C4-C5-N7	-10.72	106.51	110.80	7	3

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	11	DC	N3-C4-C5	10.59	126.14	121.90	1	3
1	A	3	DC	O4'-C1'-N1	10.57	115.40	108.00	8	5
1	A	8	DA	C5-N7-C8	-10.53	98.63	103.90	4	4
1	A	12	DG	N3-C4-C5	-10.50	123.35	128.60	1	1
1	A	3	DC	O4'-C4'-C3'	10.49	112.30	106.00	9	4
1	B	17	DT	N3-C2-O2	-10.49	116.01	122.30	7	6
1	A	9	DC	O4'-C1'-N1	10.45	115.31	108.00	4	7
1	B	24	DG	C2-N3-C4	10.43	117.12	111.90	10	1
1	B	20	DA	C4-C5-C6	-10.43	111.78	117.00	10	9
1	B	23	DC	O4'-C1'-N1	10.42	115.30	108.00	9	7
1	B	24	DG	C4-C5-N7	10.41	114.97	110.80	2	1
1	B	14	DG	C5-C6-O6	10.40	134.84	128.60	2	3
1	A	7	DG	N1-C6-O6	-10.32	113.71	119.90	10	5
1	B	19	DG	O4'-C1'-C2'	-10.31	97.65	105.90	3	4
1	A	1	DC	N3-C4-N4	-10.29	110.79	118.00	8	5
1	A	7	DG	C5-C6-N1	10.25	116.62	111.50	5	3
1	A	10	DG	O4'-C1'-C2'	-10.20	97.74	105.90	7	4
1	A	5	DT	C5-C6-N1	-10.20	117.58	123.70	1	6
1	A	3	DC	C5-C4-N4	-10.17	113.08	120.20	5	3
1	B	16	DG	C2-N3-C4	10.14	116.97	111.90	6	1
1	A	5	DT	N1-C2-O2	10.09	131.17	123.10	7	2
1	A	3	DC	N3-C4-C5	10.07	125.93	121.90	8	5
1	B	19	DG	O4'-C4'-C3'	10.07	112.04	106.00	9	2
1	B	20	DA	C5-N7-C8	-10.06	98.87	103.90	1	5
1	A	11	DC	O4'-C4'-C3'	10.05	112.03	106.00	9	2
1	A	2	DG	N7-C8-N9	10.05	118.12	113.10	2	4
1	B	24	DG	C5-N7-C8	-10.04	99.28	104.30	2	2
1	A	1	DC	N3-C4-C5	-9.98	117.91	121.90	5	7
1	A	11	DC	N1-C2-O2	9.98	124.89	118.90	1	7
1	B	17	DT	C6-C5-C7	-9.95	116.93	122.90	4	7
1	A	12	DG	C4-C5-N7	-9.88	106.85	110.80	1	3
1	A	7	DG	O4'-C1'-C2'	-9.87	98.01	105.90	4	2
1	A	9	DC	N1-C2-O2	9.84	124.80	118.90	8	4
1	B	24	DG	C8-N9-C4	-9.83	102.47	106.40	5	3
1	B	17	DT	C5-C6-N1	-9.80	117.82	123.70	3	3
1	A	2	DG	C4-C5-N7	-9.75	106.90	110.80	3	4
1	A	12	DG	N1-C2-N3	9.75	129.75	123.90	2	2
1	B	19	DG	N3-C4-C5	-9.67	123.76	128.60	10	3
1	B	23	DC	C6-N1-C2	-9.62	116.45	120.30	6	2
1	B	17	DT	C4-C5-C7	-9.59	113.25	119.00	5	2
1	A	9	DC	N3-C2-O2	-9.57	115.20	121.90	5	7

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	19	DG	C6-N1-C2	-9.57	119.36	125.10	5	3
1	B	13	DC	C6-N1-C2	-9.53	116.49	120.30	5	3
1	B	20	DA	C2-N3-C4	9.53	115.36	110.60	6	2
1	A	7	DG	O4'-C1'-N9	9.49	114.64	108.00	10	2
1	A	9	DC	N3-C4-C5	9.48	125.69	121.90	7	4
1	B	17	DT	C6-N1-C2	-9.45	116.58	121.30	5	2
1	B	22	DG	P-O3'-C3'	9.43	131.01	119.70	1	2
1	B	16	DG	N1-C6-O6	-9.41	114.25	119.90	6	5
1	B	21	DC	O4'-C4'-C3'	9.38	111.63	106.00	6	2
1	B	24	DG	N9-C4-C5	9.36	109.14	105.40	5	3
1	B	20	DA	O4'-C1'-N9	-9.33	101.47	108.00	10	7
1	B	15	DC	N3-C4-N4	-9.33	111.47	118.00	1	5
1	A	4	DG	N1-C6-O6	-9.31	114.31	119.90	4	6
1	A	2	DG	N3-C4-C5	-9.30	123.95	128.60	3	2
1	B	16	DG	C5-C6-N1	9.30	116.15	111.50	6	4
1	A	2	DG	O4'-C4'-C3'	9.29	111.57	106.00	1	2
1	A	8	DA	C4-C5-N7	9.27	115.33	110.70	4	2
1	A	12	DG	C6-C5-N7	9.27	135.96	130.40	5	2
1	B	19	DG	C8-N9-C4	-9.26	102.70	106.40	2	3
1	A	1	DC	C4-C5-C6	9.25	122.03	117.40	5	2
1	A	12	DG	N9-C4-C5	9.23	109.09	105.40	1	3
1	A	2	DG	C8-N9-C4	-9.22	102.71	106.40	2	4
1	A	10	DG	O4'-C1'-N9	-9.17	101.58	108.00	3	4
1	B	14	DG	N1-C6-O6	-9.17	114.40	119.90	2	6
1	B	22	DG	O4'-C1'-N9	9.16	114.41	108.00	1	3
1	A	1	DC	O4'-C4'-C3'	9.08	111.45	106.00	3	1
1	A	7	DG	C6-C5-N7	9.05	135.83	130.40	5	4
1	B	14	DG	O4'-C4'-C3'	8.96	111.38	106.00	8	2
1	B	13	DC	N1-C2-O2	8.96	124.28	118.90	1	7
1	A	1	DC	O4'-C1'-N1	8.95	114.27	108.00	5	4
1	A	5	DT	O4'-C1'-C2'	-8.93	98.75	105.90	2	2
1	B	21	DC	C2-N3-C4	-8.93	115.44	119.90	6	3
1	A	4	DG	C5-N7-C8	-8.89	99.86	104.30	7	3
1	B	20	DA	N1-C2-N3	-8.88	124.86	129.30	6	3
1	B	22	DG	O4'-C4'-C3'	-8.86	100.68	106.00	6	5
1	B	22	DG	C5-C6-O6	8.86	133.91	128.60	7	3
1	A	8	DA	N1-C2-N3	-8.86	124.87	129.30	6	5
1	B	21	DC	C5-C4-N4	-8.85	114.01	120.20	6	1
1	A	10	DG	N1-C6-O6	-8.82	114.61	119.90	7	4
1	B	15	DC	C2-N3-C4	-8.77	115.52	119.90	1	5
1	A	1	DC	N3-C2-O2	-8.76	115.77	121.90	6	6

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	17	DT	N1-C2-N3	8.74	119.85	114.60	7	3
1	B	16	DG	N3-C2-N2	-8.72	113.79	119.90	5	2
1	B	15	DC	C5-C6-N1	-8.69	116.66	121.00	2	1
1	B	22	DG	C4-C5-N7	-8.67	107.33	110.80	2	4
1	A	2	DG	C4-C5-C6	-8.62	113.63	118.80	10	2
1	A	1	DC	C5-C6-N1	-8.60	116.70	121.00	5	3
1	A	8	DA	C6-C5-N7	8.59	138.31	132.30	10	2
1	B	24	DG	O4'-C4'-C3'	8.53	111.12	106.00	2	2
1	B	20	DA	C5-C6-N6	8.52	130.52	123.70	7	3
1	A	2	DG	N9-C4-C5	8.48	108.79	105.40	3	5
1	A	10	DG	C5-C6-N1	8.48	115.74	111.50	6	5
1	A	8	DA	C8-N9-C4	-8.43	102.43	105.80	2	1
1	B	21	DC	N3-C4-N4	-8.42	112.10	118.00	8	4
1	A	7	DG	C6-N1-C2	-8.39	120.07	125.10	4	3
1	A	2	DG	N1-C6-O6	-8.33	114.90	119.90	6	4
1	B	19	DG	N3-C2-N2	-8.33	114.07	119.90	3	3
1	A	4	DG	O4'-C4'-C3'	8.32	110.99	106.00	8	4
1	A	11	DC	N3-C4-N4	-8.30	112.19	118.00	1	1
1	B	23	DC	C5-C4-N4	-8.29	114.40	120.20	3	2
1	A	12	DG	N3-C2-N2	-8.27	114.11	119.90	10	4
1	A	4	DG	C4'-C3'-C2'	-8.27	95.66	103.10	7	2
1	B	14	DG	N3-C4-C5	-8.25	124.47	128.60	1	4
1	A	3	DC	N1-C2-N3	8.22	124.96	119.20	1	2
1	A	8	DA	O4'-C1'-N9	8.21	113.75	108.00	4	3
1	A	11	DC	O4'-C1'-N1	8.21	113.75	108.00	4	5
1	A	2	DG	C6-N1-C2	-8.15	120.21	125.10	9	3
1	B	24	DG	C5-C6-N1	8.14	115.57	111.50	3	6
1	A	2	DG	N3-C2-N2	-8.14	114.20	119.90	1	1
1	A	3	DC	C4-C5-C6	-8.14	113.33	117.40	7	1
1	B	16	DG	N1-C2-N3	8.12	128.77	123.90	8	3
1	B	16	DG	N3-C4-C5	-8.11	124.55	128.60	7	3
1	A	7	DG	C8-N9-C4	-8.09	103.17	106.40	8	5
1	B	22	DG	N3-C2-N2	-8.04	114.27	119.90	3	4
1	A	4	DG	C8-N9-C4	-8.04	103.18	106.40	3	3
1	B	21	DC	O4'-C1'-C2'	-8.02	99.48	105.90	10	5
1	B	14	DG	C6-C5-N7	8.02	135.21	130.40	5	3
1	B	17	DT	N3-C4-O4	-8.01	115.09	119.90	9	1
1	B	13	DC	C4-C5-C6	8.00	121.40	117.40	10	3
1	B	24	DG	C4-C5-C6	-8.00	114.00	118.80	3	3
1	B	19	DG	N9-C4-C5	7.99	108.59	105.40	2	3
1	B	23	DC	N3-C4-C5	7.96	125.08	121.90	9	2

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	2	DG	N1-C2-N3	7.94	128.66	123.90	9	3
1	B	17	DT	O4'-C1'-C2'	-7.87	99.60	105.90	5	7
1	B	22	DG	C5-N7-C8	-7.86	100.37	104.30	8	2
1	A	8	DA	C5-C6-N1	7.81	121.61	117.70	2	9
1	B	22	DG	C8-N9-C4	-7.76	103.30	106.40	1	1
1	A	10	DG	C5-C6-O6	-7.76	123.94	128.60	6	1
1	A	9	DC	C5-C6-N1	-7.76	117.12	121.00	1	4
1	A	4	DG	O4'-C1'-C2'	7.75	112.10	105.90	3	1
1	A	8	DA	C3'-C2'-C1'	7.75	111.80	102.50	4	2
1	A	3	DC	C5-C6-N1	-7.73	117.14	121.00	1	3
1	A	10	DG	N9-C4-C5	7.73	108.49	105.40	5	2
1	A	10	DG	N3-C2-N2	-7.66	114.54	119.90	10	5
1	B	13	DC	C5-C6-N1	-7.61	117.19	121.00	7	2
1	B	16	DG	C6-N1-C2	-7.59	120.54	125.10	8	1
1	B	24	DG	N3-C2-N2	-7.58	114.59	119.90	1	3
1	A	4	DG	C5-C6-N1	7.56	115.28	111.50	6	2
1	B	20	DA	C4-C5-N7	7.56	114.48	110.70	10	2
1	B	22	DG	O4'-C1'-C2'	-7.50	99.90	105.90	1	1
1	A	4	DG	N7-C8-N9	7.50	116.85	113.10	1	5
1	B	17	DT	O4'-C4'-C3'	7.50	110.50	106.00	6	3
1	B	24	DG	N1-C2-N2	7.48	122.93	116.20	10	1
1	B	14	DG	N3-C2-N2	-7.45	114.68	119.90	7	3
1	B	19	DG	C2-N3-C4	7.43	115.62	111.90	5	3
1	A	8	DA	O4'-C1'-C2'	7.42	111.83	105.90	6	5
1	A	2	DG	C6-C5-N7	7.41	134.84	130.40	3	1
1	A	12	DG	O4'-C4'-C3'	7.40	110.44	106.00	7	3
1	A	5	DT	C6-C5-C7	-7.40	118.46	122.90	8	4
1	B	13	DC	N3-C4-N4	-7.39	112.83	118.00	7	4
1	A	10	DG	C6-C5-N7	7.39	134.83	130.40	7	2
1	B	14	DG	N1-C2-N3	7.39	128.33	123.90	6	2
1	A	3	DC	O4'-C1'-C2'	-7.35	100.02	105.90	7	2
1	A	4	DG	N1-C2-N3	7.32	128.29	123.90	7	3
1	B	15	DC	C5-C4-N4	7.31	125.31	120.20	3	1
1	A	5	DT	N3-C4-O4	-7.29	115.52	119.90	9	4
1	A	12	DG	C6-N1-C2	-7.23	120.76	125.10	3	3
1	A	5	DT	C5-C4-O4	7.21	129.95	124.90	8	2
1	A	12	DG	N7-C8-N9	7.20	116.70	113.10	6	4
1	B	20	DA	C6-C5-N7	7.20	137.34	132.30	6	4
1	A	7	DG	P-O3'-C3'	7.16	128.29	119.70	1	3
1	A	9	DC	C4'-C3'-C2'	-7.16	96.66	103.10	9	2
1	A	7	DG	C1'-O4'-C4'	-7.15	102.95	110.10	5	3

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	14	DG	O4'-C1'-C2'	7.13	111.60	105.90	8	2
1	A	4	DG	C2-N3-C4	-7.06	108.37	111.90	5	2
1	A	9	DC	C6-N1-C2	-7.06	117.48	120.30	10	1
1	A	10	DG	N3-C4-N9	7.04	130.23	126.00	6	2
1	B	15	DC	C2-N1-C1'	7.03	126.54	118.80	8	1
1	A	2	DG	C2-N3-C4	7.02	115.41	111.90	3	1
1	B	14	DG	C8-N9-C4	-7.01	103.59	106.40	2	1
1	B	14	DG	C5-N7-C8	-7.01	100.80	104.30	6	2
1	A	11	DC	C2-N3-C4	-6.96	116.42	119.90	3	3
1	B	15	DC	C4'-C3'-C2'	-6.95	96.85	103.10	1	1
1	B	19	DG	C4-C5-N7	-6.94	108.02	110.80	10	3
1	B	16	DG	P-O3'-C3'	6.93	128.01	119.70	2	2
1	B	23	DC	N3-C4-N4	-6.91	113.17	118.00	9	1
1	B	24	DG	N7-C8-N9	-6.89	109.65	113.10	9	3
1	B	17	DT	C4-C5-C6	6.89	122.13	118.00	7	4
1	A	3	DC	C1'-O4'-C4'	-6.89	103.21	110.10	9	2
1	B	20	DA	C6-N1-C2	-6.88	114.47	118.60	5	2
1	B	22	DG	C5-C6-N1	6.83	114.92	111.50	7	2
1	A	7	DG	N1-C2-N3	6.82	127.99	123.90	4	1
1	B	20	DA	N7-C8-N9	6.81	117.21	113.80	10	6
1	A	5	DT	C4-C5-C6	6.77	122.06	118.00	8	3
1	B	24	DG	C6-C5-N7	6.76	134.46	130.40	5	3
1	A	2	DG	C5-C6-O6	6.75	132.65	128.60	2	5
1	A	1	DC	N1-C2-O2	6.75	122.95	118.90	10	2
1	A	7	DG	C5-C6-O6	-6.75	124.55	128.60	5	3
1	A	7	DG	C4-C5-N7	-6.74	108.11	110.80	8	3
1	A	5	DT	N1-C2-N3	6.73	118.64	114.60	9	1
1	A	10	DG	C4-C5-N7	-6.73	108.11	110.80	9	1
1	A	9	DC	N3-C4-N4	-6.71	113.30	118.00	8	3
1	B	19	DG	C6-C5-N7	6.71	134.42	130.40	8	3
1	B	14	DG	C6-N1-C2	-6.70	121.08	125.10	6	1
1	A	10	DG	C6-N1-C2	-6.70	121.08	125.10	3	1
1	A	9	DC	C2-N3-C4	-6.69	116.55	119.90	2	4
1	B	14	DG	P-O3'-C3'	6.68	127.71	119.70	3	1
1	B	16	DG	C4'-C3'-C2'	6.66	109.09	103.10	2	3
1	B	14	DG	C1'-O4'-C4'	-6.63	103.47	110.10	8	1
1	A	9	DC	O4'-C1'-C2'	-6.63	100.60	105.90	6	2
1	A	10	DG	C4'-C3'-C2'	-6.62	97.14	103.10	8	3
1	B	16	DG	C1'-O4'-C4'	-6.61	103.49	110.10	1	1
1	B	19	DG	C3'-C2'-C1'	-6.61	94.57	102.50	8	1
1	A	4	DG	N3-C4-N9	6.60	129.96	126.00	1	1

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	12	DG	C8-N9-C4	-6.59	103.76	106.40	4	3
1	A	2	DG	O4'-C1'-N9	6.59	112.61	108.00	8	2
1	A	1	DC	C2-N3-C4	-6.58	116.61	119.90	4	2
1	A	8	DA	N7-C8-N9	6.56	117.08	113.80	2	2
1	B	21	DC	C6-N1-C2	-6.56	117.68	120.30	7	3
1	A	11	DC	C4'-C3'-C2'	-6.53	97.22	103.10	9	2
1	A	11	DC	C5-C6-N1	-6.53	117.74	121.00	10	2
1	A	1	DC	C6-N1-C2	-6.53	117.69	120.30	6	1
1	A	12	DG	C4-C5-C6	-6.51	114.89	118.80	8	5
1	A	11	DC	C3'-C2'-C1'	-6.51	94.69	102.50	3	1
1	A	8	DA	C2-N3-C4	6.47	113.84	110.60	2	2
1	B	22	DG	C2-N3-C4	6.47	115.14	111.90	7	2
1	B	16	DG	C6-C5-N7	6.45	134.27	130.40	3	1
1	B	22	DG	N3-C4-N9	6.45	129.87	126.00	9	4
1	A	8	DA	P-O3'-C3'	6.42	127.40	119.70	3	1
1	B	16	DG	C3'-C2'-C1'	-6.42	94.80	102.50	2	2
1	A	7	DG	O4'-C4'-C3'	6.41	109.84	106.00	1	3
1	A	12	DG	C1'-O4'-C4'	-6.41	103.69	110.10	9	2
1	B	19	DG	N1-C2-N2	-6.36	110.48	116.20	8	1
1	B	16	DG	C5-N7-C8	-6.35	101.12	104.30	10	3
1	A	2	DG	C5-N7-C8	-6.34	101.13	104.30	6	1
1	B	14	DG	C3'-C2'-C1'	-6.34	94.89	102.50	9	1
1	B	19	DG	O5'-P-OP2	-6.34	99.99	105.70	6	1
1	B	13	DC	N1-C2-N3	6.33	123.63	119.20	9	2
1	B	14	DG	C5-C6-N1	6.29	114.64	111.50	1	3
1	B	16	DG	O4'-C4'-C3'	6.25	109.75	106.00	9	1
1	A	4	DG	C5-C6-O6	6.24	132.34	128.60	4	2
1	B	19	DG	C1'-O4'-C4'	-6.23	103.87	110.10	2	2
1	B	13	DC	C5-C4-N4	-6.21	115.85	120.20	2	4
1	B	16	DG	N3-C4-N9	6.21	129.72	126.00	9	1
1	B	24	DG	C4'-C3'-C2'	-6.20	97.52	103.10	7	2
1	B	14	DG	C2-N3-C4	-6.17	108.81	111.90	3	2
1	A	12	DG	C5-N7-C8	-6.16	101.22	104.30	10	3
1	A	4	DG	C1'-O4'-C4'	-6.16	103.94	110.10	3	2
1	B	22	DG	N9-C4-C5	6.08	107.83	105.40	5	3
1	A	7	DG	N7-C8-N9	6.08	116.14	113.10	1	2
1	B	19	DG	C4-C5-C6	-6.04	115.18	118.80	1	2
1	A	4	DG	N3-C2-N2	-6.03	115.68	119.90	5	5
1	B	21	DC	C4'-C3'-C2'	-6.03	97.68	103.10	6	1
1	B	17	DT	C2-N3-C4	-6.03	123.58	127.20	9	1
1	B	16	DG	N1-C2-N2	6.02	121.62	116.20	5	2

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	B	22	DG	N7-C8-N9	6.01	116.11	113.10	7	4
1	A	12	DG	C2-N3-C4	6.01	114.91	111.90	1	2
1	A	7	DG	C4-C5-C6	-6.01	115.19	118.80	10	2
1	A	2	DG	O4'-C1'-C2'	-5.99	101.11	105.90	2	1
1	B	14	DG	N7-C8-N9	5.98	116.09	113.10	6	1
1	B	24	DG	N3-C4-N9	-5.98	122.41	126.00	5	1
1	B	24	DG	C5'-C4'-C3'	5.96	124.84	114.10	8	1
1	B	20	DA	P-O3'-C3'	5.93	126.82	119.70	6	2
1	B	20	DA	C8-N9-C4	-5.92	103.43	105.80	9	2
1	B	19	DG	N1-C2-N3	5.92	127.45	123.90	3	1
1	A	9	DC	C1'-O4'-C4'	-5.90	104.20	110.10	1	3
1	A	10	DG	C4-C5-C6	-5.88	115.27	118.80	7	2
1	B	17	DT	C4'-C3'-C2'	-5.88	97.81	103.10	3	4
1	A	8	DA	N9-C4-C5	-5.85	103.46	105.80	5	3
1	A	4	DG	C4-C5-N7	5.83	113.13	110.80	1	1
1	B	23	DC	C5-C6-N1	-5.82	118.09	121.00	3	1
1	B	19	DG	C5-C6-O6	-5.82	125.11	128.60	9	2
1	A	11	DC	P-O3'-C3'	5.81	126.68	119.70	1	1
1	A	5	DT	C4-C5-C7	-5.81	115.51	119.00	9	1
1	B	22	DG	O5'-P-OP2	-5.79	100.49	105.70	1	1
1	B	21	DC	C5-C6-N1	-5.75	118.12	121.00	5	2
1	B	20	DA	C1'-O4'-C4'	-5.75	104.35	110.10	3	1
1	A	7	DG	N3-C4-C5	-5.73	125.73	128.60	8	2
1	B	22	DG	N1-C2-N2	-5.71	111.06	116.20	1	2
1	B	17	DT	C1'-O4'-C4'	-5.71	104.39	110.10	9	1
1	B	17	DT	C5'-C4'-C3'	5.71	124.38	114.10	10	1
1	A	8	DA	N3-C4-N9	-5.69	122.85	127.40	10	1
1	A	10	DG	N1-C2-N3	5.69	127.31	123.90	3	2
1	A	2	DG	N1-C2-N2	-5.69	111.08	116.20	7	1
1	A	10	DG	C1'-O4'-C4'	-5.67	104.44	110.10	8	1
1	B	14	DG	N3-C4-N9	5.66	129.39	126.00	1	2
1	A	12	DG	C4'-C3'-C2'	-5.64	98.03	103.10	9	1
1	B	21	DC	N1-C2-N3	-5.64	115.25	119.20	4	2
1	B	24	DG	N3-C4-C5	-5.62	125.79	128.60	10	1
1	A	3	DC	P-O3'-C3'	5.61	126.43	119.70	6	1
1	B	17	DT	N1-C2-O2	5.60	127.58	123.10	6	1
1	B	20	DA	O4'-C1'-C2'	5.59	110.38	105.90	6	1
1	A	7	DG	C8-N9-C1'	5.59	134.26	127.00	8	1
1	B	24	DG	C1'-O4'-C4'	-5.58	104.52	110.10	2	2
1	A	7	DG	C5-N7-C8	-5.58	101.51	104.30	10	3
1	B	23	DC	C4-C5-C6	-5.58	114.61	117.40	9	1

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	11	DC	C1'-O4'-C4'	-5.54	104.56	110.10	9	2
1	B	23	DC	C2-N3-C4	-5.53	117.14	119.90	9	3
1	A	2	DG	P-O5'-C5'	5.51	129.71	120.90	3	1
1	A	11	DC	O5'-P-OP2	-5.50	100.75	105.70	6	1
1	A	12	DG	C5-C6-O6	5.50	131.90	128.60	4	2
1	B	15	DC	P-O3'-C3'	5.49	126.29	119.70	2	1
1	A	2	DG	N3-C4-N9	5.48	129.29	126.00	8	1
1	B	17	DT	O5'-P-OP2	5.44	117.23	110.70	1	1
1	B	15	DC	C3'-C2'-C1'	5.44	109.03	102.50	1	1
1	A	1	DC	O4'-C1'-C2'	-5.42	101.57	105.90	4	1
1	B	22	DG	C6-C5-N7	5.41	133.65	130.40	2	1
1	A	4	DG	N3-C4-C5	-5.38	125.91	128.60	8	2
1	B	19	DG	N7-C8-N9	5.37	115.78	113.10	2	2
1	A	11	DC	C4-C5-C6	5.37	120.08	117.40	4	1
1	A	4	DG	C6-N1-C2	-5.35	121.89	125.10	4	1
1	B	24	DG	C4-N9-C1'	-5.34	119.56	126.50	9	2
1	B	17	DT	C5-C4-O4	5.34	128.64	124.90	9	1
1	B	20	DA	C4'-C3'-C2'	-5.33	98.31	103.10	3	1
1	B	15	DC	C6-N1-C1'	-5.31	114.43	120.80	8	1
1	A	4	DG	N9-C4-C5	5.30	107.52	105.40	3	1
1	A	7	DG	C2-N3-C4	5.29	114.55	111.90	10	1
1	A	9	DC	O5'-C5'-C4'	5.28	124.21	111.00	2	2
1	B	23	DC	P-O3'-C3'	5.28	126.04	119.70	4	1
1	B	19	DG	P-O3'-C3'	5.27	126.03	119.70	7	1
1	A	5	DT	C2-N3-C4	-5.23	124.06	127.20	1	1
1	B	24	DG	C5'-C4'-O4'	5.23	119.24	109.30	7	1
1	B	22	DG	C4-C5-C6	-5.19	115.69	118.80	7	1
1	B	23	DC	C3'-C2'-C1'	-5.18	96.28	102.50	8	1
1	A	2	DG	C1'-O4'-C4'	-5.13	104.97	110.10	10	2
1	A	3	DC	C4'-C3'-C2'	-5.11	98.50	103.10	7	1
1	B	21	DC	C1'-O4'-C4'	-5.11	104.99	110.10	6	1
1	B	15	DC	C1'-O4'-C4'	-5.10	105.00	110.10	5	1
1	A	11	DC	C6-N1-C2	-5.08	118.27	120.30	6	1
1	B	23	DC	C1'-O4'-C4'	-5.07	105.03	110.10	8	1
1	A	10	DG	P-O3'-C3'	5.07	125.79	119.70	10	1
1	B	19	DG	N3-C4-N9	5.07	129.04	126.00	3	1
1	B	22	DG	C1'-O4'-C4'	-5.04	105.06	110.10	4	1
1	B	21	DC	C5'-C4'-O4'	5.03	118.85	109.30	9	1
1	A	9	DC	P-O3'-C3'	5.01	125.71	119.70	3	1
1	B	14	DG	N1-C2-N2	5.01	120.71	116.20	10	1
1	B	16	DG	O3'-P-O5'	-5.01	94.49	104.00	10	1

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	11	DC	C5-C4-N4	-5.00	116.70	120.20	3	1

There are no chirality outliers.

All unique planar outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Group	Models (Total)
1	A	4	DG	Sidechain	9
1	B	19	DG	Sidechain	8
1	A	7	DG	Sidechain	6
1	A	2	DG	Sidechain	6
1	B	13	DC	Sidechain	6
1	A	5	DT	Sidechain	5
1	A	11	DC	Sidechain	5
1	B	23	DC	Sidechain	5
1	A	12	DG	Sidechain	5
1	A	10	DG	Sidechain	4
1	B	14	DG	Sidechain	4
1	B	16	DG	Sidechain	4
1	B	24	DG	Sidechain	4
1	B	22	DG	Sidechain	4
1	B	17	DT	Sidechain	3
1	A	3	DC	Sidechain	3
1	B	20	DA	Sidechain	3
1	A	8	DA	Sidechain	3
1	B	21	DC	Sidechain	3
1	A	1	DC	Sidechain	3
1	A	9	DC	Sidechain	2
1	B	15	DC	Sidechain	1

6.2 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 each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	245	137	131	0±0
1	B	245	137	129	0±0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes
All	All	4900	2740	2640	4

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 1.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:5:DT:C6	1:A:6:5HC:H5M2	0.52	2.40	6	2
1:A:2:DG:C4	1:A:3:DC:C5	0.46	3.04	1	1
1:B:22:DG:C5	1:B:23:DC:C5	0.41	3.09	1	1

6.3 Torsion angles [i](#)

6.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

6.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds 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 is the number of standard deviations the observed value is removed from the expected value. A bond length with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	5HC	A	6	1	18,22,23	0.97±0.14	1±1 (3±3%)

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	5HC	B	18	1	18,22,23	0.96±0.16	1±1 (4±4%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of 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 angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
1	5HC	A	6	1	23,31,34	1.66±0.23	5±1 (21±5%)
1	5HC	B	18	1	23,31,34	1.57±0.24	5±2 (22±7%)

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
1	5HC	A	6	1	-	0±0,9,23,24	0±0,2,2,2
1	5HC	B	18	1	-	0±0,9,23,24	0±0,2,2,2

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
1	A	6	5HC	O4'-C4'	3.09	1.38	1.45	1	3
1	B	18	5HC	O4'-C4'	2.69	1.39	1.45	3	3
1	A	6	5HC	O4'-C1'	2.68	1.36	1.42	5	1
1	B	18	5HC	O5'-C5'	2.65	1.38	1.44	4	1
1	A	6	5HC	C2-N3	2.45	1.41	1.36	6	1
1	A	6	5HC	C4-N3	2.42	1.30	1.34	5	1
1	B	18	5HC	C5M-C5	2.21	1.55	1.51	7	1
1	B	18	5HC	C4-N4	2.20	1.28	1.34	2	1
1	B	18	5HC	O4'-C1'	2.09	1.37	1.42	2	2
1	A	6	5HC	C3'-C4'	2.07	1.58	1.53	2	1

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
1	A	6	5HC	O2-C2-N3	5.81	112.88	122.33	5	9
1	A	6	5HC	C5-C6-N1	5.04	116.14	122.91	9	5
1	B	18	5HC	O2-C2-N3	4.93	114.31	122.33	3	9
1	A	6	5HC	O2-C2-N1	4.55	128.29	118.89	5	4
1	B	18	5HC	C5M-C5-C6	4.36	112.77	119.33	8	5
1	B	18	5HC	C2'-C3'-C4'	3.91	94.61	102.76	6	2
1	A	6	5HC	C4-N3-C2	3.78	115.58	120.69	8	5
1	A	6	5HC	O4'-C1'-N1	3.75	114.56	107.86	5	4
1	B	18	5HC	O2-C2-N1	3.70	126.53	118.89	3	4
1	B	18	5HC	O4'-C1'-C2'	3.42	99.79	106.25	8	5
1	B	18	5HC	C5-C6-N1	3.42	118.32	122.91	8	7
1	B	18	5HC	O4'-C1'-N1	3.20	113.58	107.86	10	3
1	A	6	5HC	O5-C5M-C5	3.17	119.31	111.03	1	3
1	B	18	5HC	C2'-C1'-N1	3.12	120.95	113.77	4	1
1	A	6	5HC	C6-N1-C2	3.10	116.58	120.87	5	1
1	B	18	5HC	O4'-C4'-C3'	3.10	112.90	105.67	6	3
1	A	6	5HC	O4'-C1'-C2'	2.90	100.77	106.25	7	5
1	A	6	5HC	N4-C4-N3	2.87	113.24	118.48	2	2
1	B	18	5HC	C6-N1-C2	2.80	116.99	120.87	5	2
1	A	6	5HC	C1'-N1-C2	2.74	122.55	117.74	2	1
1	A	6	5HC	O4'-C4'-C5'	2.51	101.11	109.37	7	2
1	B	18	5HC	O5-C5M-C5	2.48	117.50	111.03	9	2
1	A	6	5HC	O5'-C5'-C4'	2.45	117.34	108.99	7	3
1	A	6	5HC	C5M-C5-C6	2.36	115.78	119.33	4	2
1	B	18	5HC	O5'-C5'-C4'	2.28	116.76	108.99	7	3
1	B	18	5HC	N4-C4-N3	2.26	114.36	118.48	5	2
1	B	18	5HC	C1'-N1-C6	2.23	124.62	120.77	1	2
1	A	6	5HC	C3'-C2'-C1'	2.10	97.28	102.54	8	1
1	A	6	5HC	N1-C2-N3	2.09	122.61	118.81	8	1
1	A	6	5HC	O3'-C3'-C2'	2.07	118.32	110.90	5	1
1	B	18	5HC	O3'-C3'-C2'	2.03	118.16	110.90	6	1

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6.5 Carbohydrates

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation [i](#)

The completeness of assignment taking into account all chemical shift lists is 21% for the well-defined parts and 21% for the entire structure.

7.1 Chemical shift list 1

File name: `working_cs.cif`

Chemical shift list name: `starch_output`

7.1.1 Bookkeeping [i](#)

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	105
Number of shifts mapped to atoms	105
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

7.1.2 Chemical shift referencing [i](#)

No chemical shift referencing corrections were calculated (not enough data).

7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 21%, i.e. 93 atoms were assigned a chemical shift out of a possible 446. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Sugar	63/264 (24%)	63/154 (41%)	0/110 (0%)	0/0 (—%)
Base	30/182 (16%)	30/116 (26%)	0/34 (0%)	0/32 (0%)
Overall	93/446 (21%)	93/270 (34%)	0/144 (0%)	0/32 (0%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 21%, i.e. 93 atoms were assigned a chemical shift out of a possible 446. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹H	¹³C	¹⁵N
Sugar	63/264 (24%)	63/154 (41%)	0/110 (0%)	0/0 (—%)
Base	30/182 (16%)	30/116 (26%)	0/34 (0%)	0/32 (0%)
Overall	93/446 (21%)	93/270 (34%)	0/144 (0%)	0/32 (0%)

7.1.4 Statistically unusual chemical shifts [i](#)

There are no statistically unusual chemical shifts.

7.1.5 Random Coil Index (RCI) plots [i](#)

No *random coil index*(RCI) plot could be generated from the current chemical shift list. RCI is only applicable to proteins

8 NMR restraints analysis

8.1 Conformationally restricting restraints

The following table provides the summary of experimentally observed NMR restraints in different categories. Restraints are classified into different categories based on the sequence separation of the atoms involved.

Description	Value
Total distance restraints	268
Intra-residue ($ i-j =0$)	110
Sequential ($ i-j =1$)	124
Medium range ($ i-j >1$ and $ i-j <5$)	0
Long range ($ i-j \geq 5$)	0
Inter-chain	34
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	11.2
Number of long range restraints per residue ¹	0.0

¹Long range hydrogen bonds and disulfide bonds are counted as long range restraints while calculating the number of long range restraints per residue

8.2 Residual restraint violations

This section provides the overview of the restraint violations analysis. The violations are binned as small, medium and large violations based on its absolute value. Average number of violations per model is calculated by dividing the total number of violations in each bin by the size of the ensemble.

8.2.1 Average number of distance violations per model

Distance violations less than 0.1 Å are not included in the calculation.

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	9.8	0.2
0.2-0.5 (Medium)	24.6	0.5
>0.5 (Large)	181.1	7.06

8.2.2 Average number of dihedral-angle violations per model

Dihedral-angle violations less than 1° are not included in the calculation. There are no dihedral-angle violations

9 Distance violation analysis i

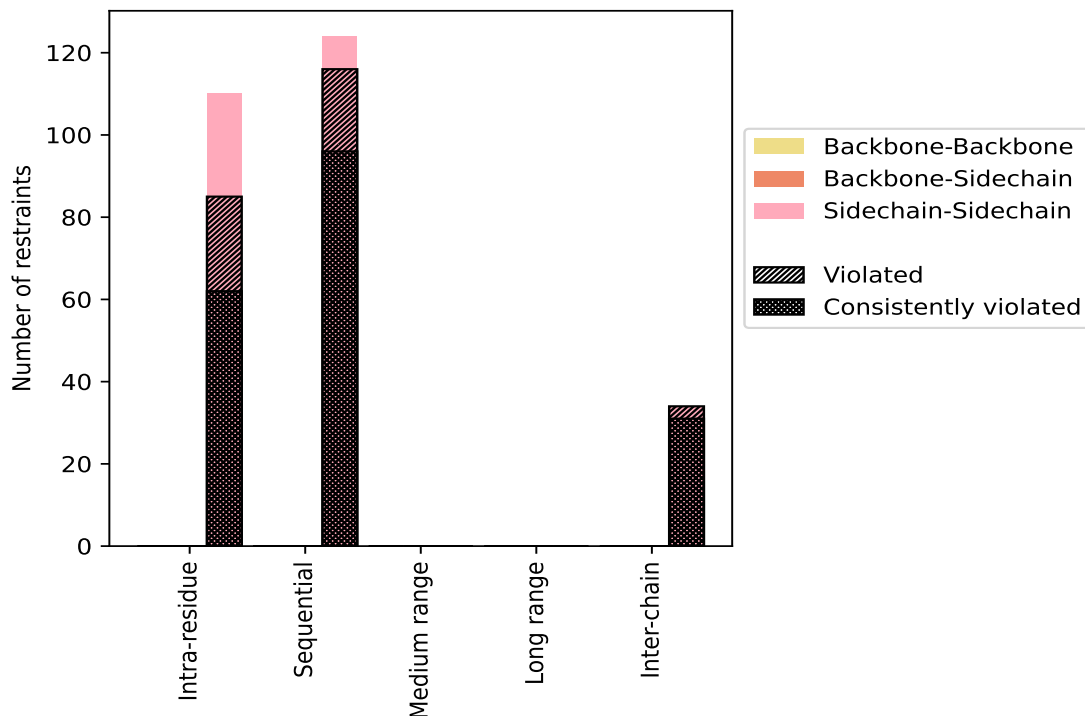
9.1 Summary of distance violations i

The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

Restrains type	Count	% ¹	Violated ³			Consistently Violated ⁴		
			Count	% ²	% ¹	Count	% ²	% ¹
Intra-residue (i-j =0)	110	41.0	85	77.3	31.7	62	56.4	23.1
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	110	41.0	85	77.3	31.7	62	56.4	23.1
Sequential (i-j =1)	124	46.3	116	93.5	43.3	96	77.4	35.8
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	124	46.3	116	93.5	43.3	96	77.4	35.8
Medium range (i-j >1 & i-j <5)	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Long range (i-j ≥5)	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Inter-chain	34	12.7	34	100.0	12.7	31	91.2	11.6
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	34	12.7	34	100.0	12.7	31	91.2	11.6
Hydrogen bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	268	100.0	235	87.7	87.7	189	70.5	70.5
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	268	100.0	235	87.7	87.7	189	70.5	70.5

¹ percentage calculated with respect to the total number of distance restraints, ² percentage calculated with respect to the number of restraints in a particular restraint category, ³ violated in at least one model, ⁴ violated in all the models

9.1.1 Bar chart : Distribution of distance restraints and violations [i](#)



Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfid bonds are counted in their appropriate category on the x-axis

9.2 Distance violation statistics for each model [i](#)

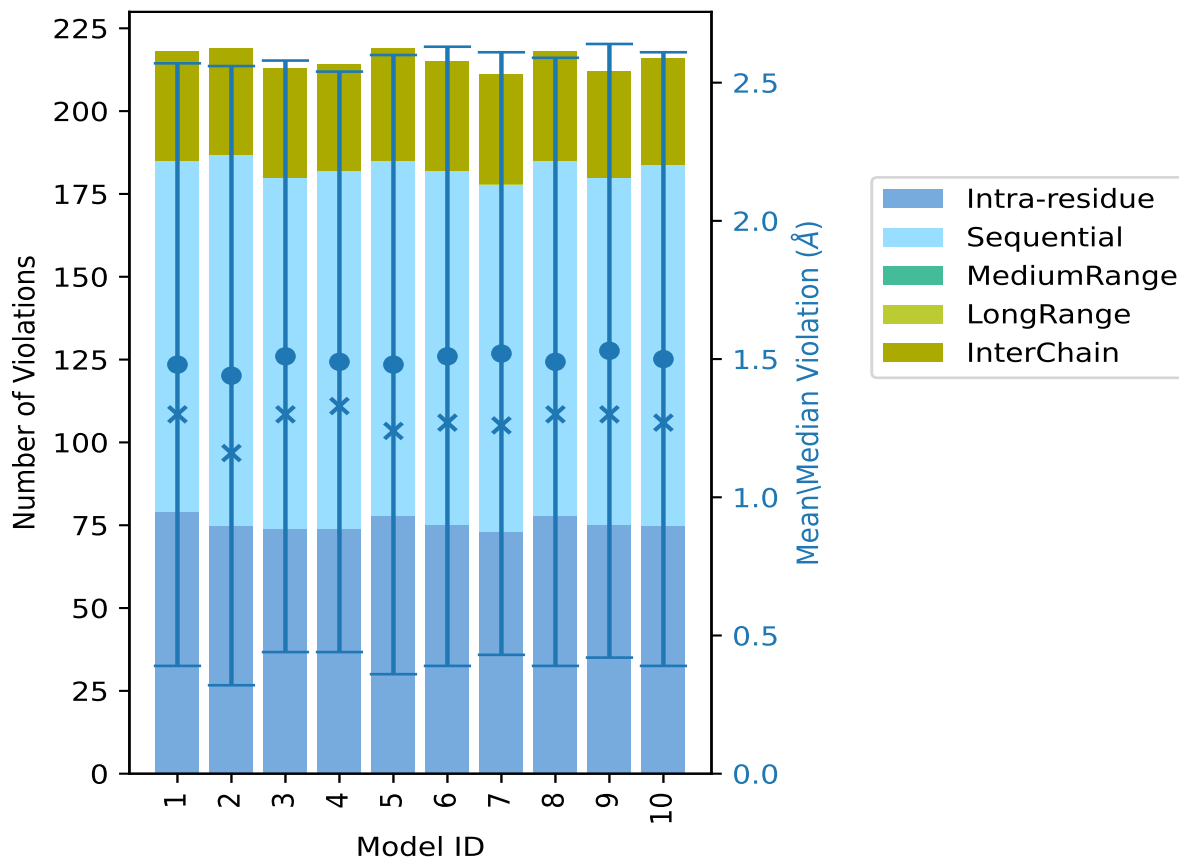
The following table provides the distance violation statistics for each model in the ensemble. Violations less than 0.1 Å are not included in the statistics.

Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
1	79	106	0	0	33	218	1.48	6.75	1.09	1.3
2	75	112	0	0	32	219	1.44	6.98	1.12	1.16
3	74	106	0	0	33	213	1.51	6.39	1.07	1.3
4	74	108	0	0	32	214	1.49	6.5	1.05	1.33
5	78	107	0	0	34	219	1.48	7.06	1.12	1.24
6	75	107	0	0	33	215	1.51	7.0	1.12	1.27
7	73	105	0	0	33	211	1.52	6.92	1.09	1.26
8	78	107	0	0	33	218	1.49	6.24	1.1	1.3
9	75	105	0	0	32	212	1.53	6.91	1.11	1.3
10	75	109	0	0	32	216	1.5	6.88	1.11	1.27

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints,

⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model [i](#)



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

9.3 Distance violation statistics for the ensemble [i](#)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 33(IR:25, SQ:8, MR:0, LR:0, IC:0) restraints are not violated in the ensemble.

Number of violated restraints						Fraction of the ensemble	
IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total	Count ⁶	%
0	3	0	0	0	3	1	10.0
5	2	0	0	1	8	2	20.0
2	2	0	0	0	4	3	30.0
1	2	0	0	0	3	4	40.0

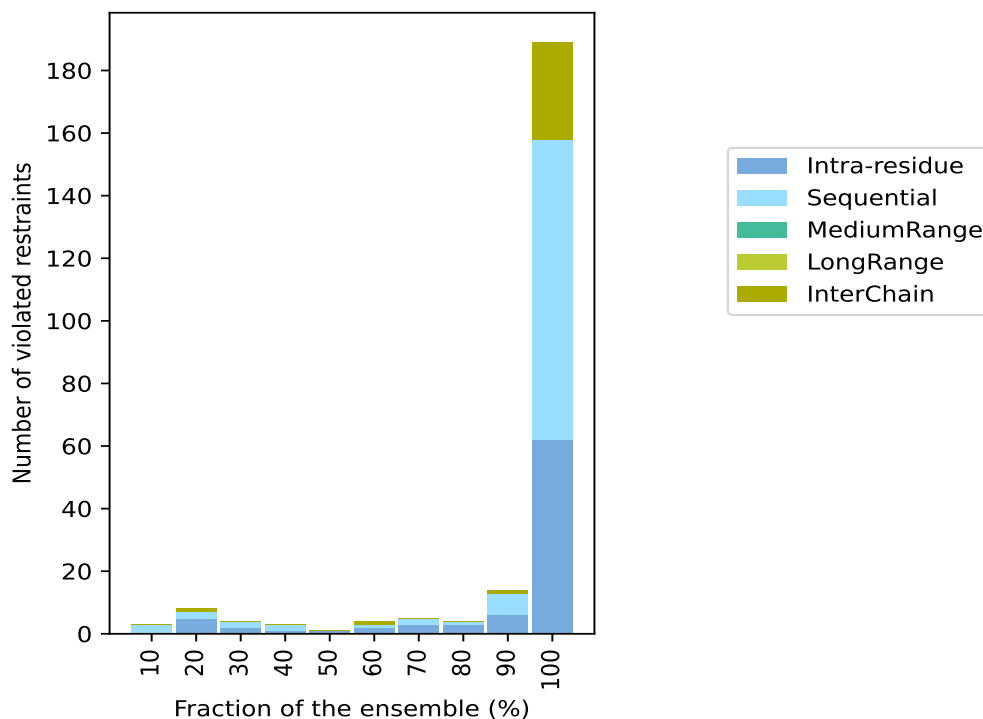
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Number of violated restraints						Fraction of the ensemble	
IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total	Count ⁶	%
1	0	0	0	0	1	5	50.0
2	1	0	0	1	4	6	60.0
3	2	0	0	0	5	7	70.0
3	1	0	0	0	4	8	80.0
6	7	0	0	1	14	9	90.0
62	96	0	0	31	189	10	100.0

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶ Number of models with violations

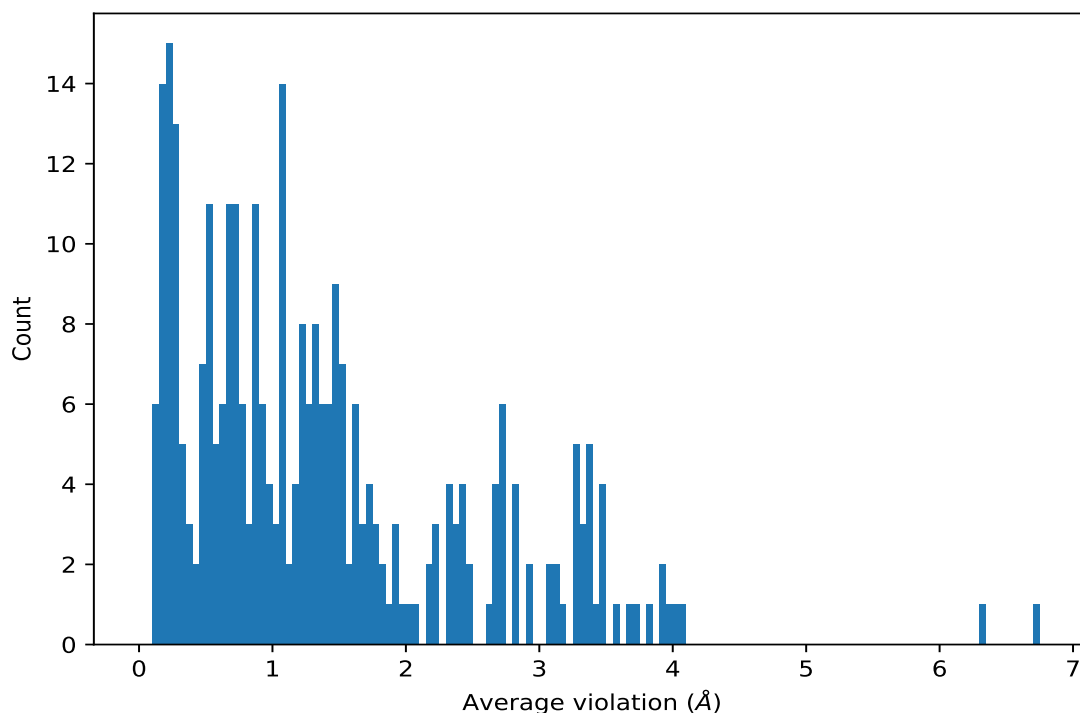
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



9.4 Most violated distance restraints in the ensemble [i](#)

9.4.1 Histogram : Distribution of mean distance violations [i](#)

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble



9.4.2 Table: Most violated distance restraints [i](#)

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	10	6.71	0.26	6.76
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	10	6.31	0.42	6.15
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	10	4.05	0.15	4.03
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	10	4.03	0.14	4.0
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	10	3.99	0.1	3.96
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	10	3.92	0.08	3.94
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	10	3.92	0.44	3.91
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	10	3.84	0.35	3.86
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	10	3.74	0.48	3.72
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	10	3.65	0.33	3.66
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	10	3.59	0.16	3.6
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	10	3.47	0.05	3.46
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	10	3.47	0.05	3.46
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	10	3.45	0.08	3.46
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	10	3.45	0.08	3.46
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	10	3.4	0.16	3.34

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	10	3.37	0.07	3.38
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	10	3.37	0.07	3.38
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	10	3.37	0.07	3.38
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	10	3.36	0.41	3.42
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	10	3.35	0.36	3.46
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	10	3.32	0.19	3.29
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	10	3.3	0.49	3.36
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	10	3.3	0.49	3.36
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	10	3.28	0.11	3.25
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	10	3.26	0.12	3.29
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	10	3.25	0.11	3.25
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	10	3.25	0.11	3.25
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	10	3.25	0.11	3.25
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	10	3.18	0.13	3.14
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	10	3.14	0.21	3.2
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	10	3.1	0.25	3.18
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	10	3.06	0.29	3.12
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	10	3.06	0.29	3.12
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	10	2.93	0.12	2.95
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	10	2.93	0.12	2.95
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	10	2.83	0.35	2.84
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	10	2.83	0.35	2.84
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	10	2.81	0.06	2.8
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	10	2.81	0.06	2.8
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	10	2.74	0.07	2.71
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	10	2.74	0.07	2.71
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	10	2.73	0.05	2.72
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	10	2.73	0.05	2.72
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	10	2.71	0.07	2.73
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	10	2.71	0.07	2.73
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	10	2.68	0.27	2.71
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	10	2.68	0.27	2.71
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	10	2.67	0.09	2.71
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	10	2.67	0.09	2.71
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	10	2.6	0.22	2.62
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	10	2.47	0.18	2.5
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	10	2.47	0.18	2.5
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	10	2.44	0.13	2.42
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	10	2.44	0.13	2.42
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	10	2.44	0.34	2.58
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	10	2.42	0.17	2.42
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	10	2.38	0.27	2.42

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	10	2.35	0.11	2.34
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	10	2.35	0.11	2.34
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	10	2.31	0.26	2.33
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	10	2.31	0.26	2.33
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	10	2.3	0.17	2.28
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	10	2.3	0.17	2.28
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	10	2.22	0.09	2.23
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	10	2.22	0.09	2.23
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	10	2.22	0.21	2.28
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	10	2.18	0.05	2.18
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	10	2.16	0.05	2.15
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	10	2.07	0.2	2.04
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	10	2.03	0.15	2.04
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	10	1.98	0.13	1.9
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	10	1.92	0.38	1.94
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	10	1.92	0.36	1.82
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	10	1.9	0.09	1.88
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	10	1.88	0.17	1.9
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	10	1.84	0.14	1.82
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	10	1.84	0.16	1.84
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	10	1.79	0.25	1.88
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	10	1.78	0.22	1.82
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	10	1.78	0.14	1.79
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	10	1.73	0.12	1.74
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	10	1.73	0.29	1.72
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	10	1.7	0.34	1.78
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	10	1.7	0.34	1.78
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	10	1.69	0.19	1.76
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	10	1.65	0.16	1.63
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	10	1.65	0.16	1.63
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	10	1.63	0.06	1.63
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	10	1.63	0.05	1.63
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	10	1.62	0.04	1.62
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	10	1.62	0.21	1.6
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	10	1.62	0.21	1.6
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	10	1.6	0.19	1.61
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	10	1.56	0.29	1.53
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	10	1.55	0.16	1.57
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	10	1.53	0.2	1.49
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	10	1.53	0.06	1.52
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	10	1.52	0.59	1.61
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	10	1.51	0.32	1.63

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	10	1.51	0.13	1.54
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	10	1.51	0.14	1.52
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	10	1.5	0.27	1.52
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	10	1.49	0.23	1.53
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	10	1.49	0.18	1.48
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	10	1.49	0.26	1.46
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	10	1.48	0.24	1.48
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	10	1.48	0.24	1.48
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	10	1.47	0.47	1.48
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	10	1.47	0.07	1.49
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	10	1.47	0.31	1.48
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	10	1.46	0.12	1.46
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	10	1.44	0.05	1.44
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	10	1.43	0.32	1.46
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	10	1.43	0.37	1.52
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	10	1.42	0.06	1.41
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	10	1.41	0.17	1.44
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	10	1.41	0.18	1.42
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	10	1.39	0.05	1.39
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	10	1.38	0.04	1.38
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	10	1.38	0.14	1.38
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	10	1.37	0.16	1.43
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	10	1.35	0.27	1.4
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	10	1.35	0.16	1.32
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	10	1.34	0.34	1.19
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	10	1.33	0.06	1.35
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	10	1.33	0.06	1.33
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	10	1.33	0.27	1.42
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	10	1.33	0.15	1.34
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	10	1.32	0.24	1.42
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	10	1.32	0.15	1.3
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	10	1.3	0.07	1.29
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	10	1.29	0.06	1.28
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	10	1.29	0.07	1.28
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	10	1.28	0.06	1.25
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	10	1.28	0.15	1.26
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	10	1.26	0.08	1.27
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	10	1.25	0.04	1.25
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	10	1.24	0.03	1.25
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	10	1.23	0.18	1.25
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	10	1.23	0.23	1.34
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	10	1.23	0.08	1.21

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	10	1.22	0.19	1.21
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	10	1.21	0.08	1.23
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	10	1.2	0.11	1.19
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	10	1.19	0.29	1.04
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	10	1.18	0.32	1.23
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	10	1.17	0.05	1.18
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	10	1.15	0.16	1.14
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	10	1.11	0.05	1.12
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	10	1.1	0.11	1.11
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	10	1.09	0.16	1.07
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	10	1.09	0.16	1.07
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	10	1.09	0.16	1.07
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	10	1.09	0.16	1.07
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	10	1.09	0.16	1.07
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	10	1.09	0.16	1.07
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	10	1.08	0.31	1.16
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	10	1.08	0.46	1.2
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	10	1.07	0.19	1.0
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	10	1.07	0.19	1.0
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	10	1.07	0.19	1.0
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	10	1.07	0.19	1.0
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	10	1.07	0.19	1.0
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	10	1.07	0.19	1.0
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	10	1.04	0.33	1.05
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	10	1.01	0.2	1.02
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	10	1.0	0.17	0.97
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	10	0.99	0.31	0.96
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	10	0.99	0.22	1.0
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	10	0.96	0.12	1.0
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	10	0.95	0.07	0.93
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	10	0.94	0.05	0.95
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	10	0.94	0.3	0.92
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	10	0.92	0.17	0.95
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	10	0.92	0.32	0.92
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	10	0.92	0.21	0.89
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	10	0.91	0.31	0.92
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	10	0.89	0.28	1.07
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	10	0.88	0.22	0.84
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	10	0.87	0.07	0.88
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	10	0.86	0.26	0.82
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	10	0.86	0.19	0.82
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	10	0.86	0.19	0.82

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	10	0.86	0.19	0.82
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	10	0.86	0.19	0.82
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	10	0.86	0.19	0.82
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	10	0.86	0.19	0.82
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	10	0.84	0.1	0.82
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	10	0.81	0.27	0.94
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	10	0.8	0.18	0.74
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	10	0.78	0.19	0.8
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	10	0.78	0.19	0.8
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	10	0.76	0.18	0.74
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	10	0.76	0.21	0.77
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	10	0.75	0.19	0.78
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	10	0.75	0.08	0.76
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	10	0.71	0.08	0.69
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	10	0.7	0.16	0.68
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	10	0.7	0.16	0.72
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	10	0.7	0.16	0.72
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	10	0.7	0.16	0.72
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	10	0.7	0.16	0.72
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	10	0.7	0.16	0.72
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	10	0.7	0.16	0.72
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	10	0.7	0.27	0.69
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	10	0.7	0.27	0.69
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	10	0.69	0.19	0.6
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	10	0.69	0.16	0.69
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	10	0.69	0.16	0.69
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	10	0.68	0.26	0.72
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	10	0.66	0.28	0.68
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	10	0.66	0.14	0.71
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	10	0.66	0.16	0.67
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	10	0.66	0.16	0.67
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	10	0.65	0.13	0.67
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	10	0.65	0.17	0.66
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	10	0.65	0.17	0.66
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	10	0.64	0.18	0.7
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	10	0.64	0.27	0.7
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	10	0.61	0.17	0.62
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	10	0.61	0.12	0.62
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	10	0.6	0.13	0.62
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	10	0.59	0.22	0.54
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	10	0.59	0.22	0.54
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	10	0.57	0.14	0.55

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	10	0.56	0.1	0.6
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	10	0.52	0.2	0.51
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	10	0.52	0.25	0.63
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	10	0.5	0.04	0.5
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	10	0.5	0.1	0.5
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	10	0.5	0.22	0.42
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	10	0.5	0.22	0.42
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	10	0.5	0.07	0.5
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	10	0.49	0.2	0.48
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	10	0.48	0.18	0.5
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	10	0.48	0.18	0.48
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	10	0.48	0.18	0.44
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	10	0.43	0.25	0.4
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	10	0.32	0.13	0.32
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	10	0.28	0.11	0.3
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	10	0.25	0.08	0.24
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	9	1.24	0.4	1.41
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	9	0.87	0.34	0.88
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	9	0.7	0.27	0.74
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	9	0.58	0.19	0.55
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	9	0.52	0.22	0.44
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	9	0.52	0.22	0.44
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	9	0.52	0.3	0.48
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	9	0.48	0.16	0.47
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	9	0.45	0.22	0.47
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	9	0.45	0.22	0.47
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	9	0.4	0.26	0.34
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	9	0.36	0.11	0.39
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	9	0.34	0.08	0.34
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	9	0.34	0.12	0.33
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	9	0.34	0.12	0.33
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	9	0.28	0.12	0.24
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	9	0.21	0.06	0.22
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	8	0.52	0.23	0.52
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	8	0.39	0.14	0.44
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	8	0.39	0.14	0.44
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	8	0.34	0.18	0.29
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	8	0.26	0.08	0.29
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	8	0.26	0.08	0.29
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'''	8	0.26	0.08	0.29
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	7	0.26	0.14	0.23
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	7	0.24	0.08	0.22

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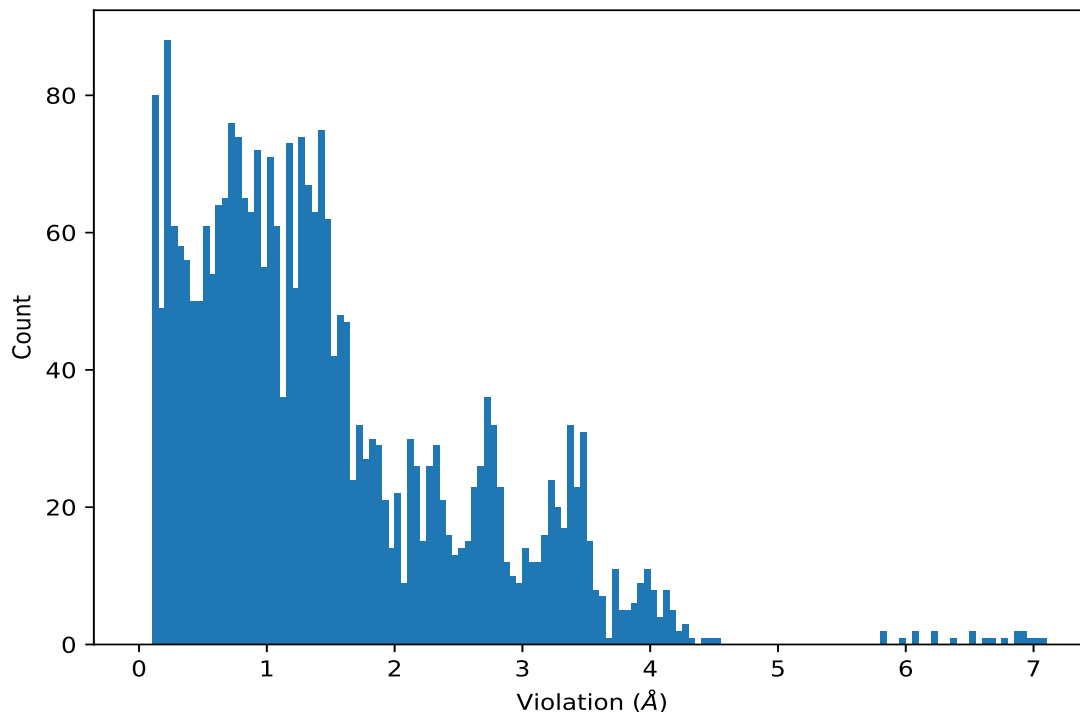
Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	7	0.24	0.1	0.2
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	7	0.24	0.1	0.2
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	7	0.24	0.1	0.2
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	7	0.24	0.1	0.2
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	7	0.23	0.13	0.18
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	7	0.23	0.06	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	7	0.23	0.06	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	7	0.23	0.06	0.23
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	6	0.64	0.17	0.7
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	6	0.26	0.12	0.24
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	6	0.26	0.12	0.24
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	6	0.24	0.04	0.24
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	6	0.24	0.04	0.24
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	6	0.24	0.04	0.24
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	6	0.17	0.06	0.16
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	6	0.17	0.06	0.16
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	6	0.17	0.06	0.16
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	6	0.17	0.06	0.16
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	5	0.19	0.04	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	5	0.19	0.04	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	5	0.19	0.04	0.2
(1,153)	1:B:21:DC:H1'	1:B:22:DG:H8	4	0.29	0.19	0.22
(1,204)	1:B:14:DG:H8	1:B:14:DG:H4'	4	0.18	0.02	0.18
(1,49)	1:A:1:DC:H2'	1:A:2:DG:H8	4	0.15	0.03	0.15
(1,49)	1:A:1:DC:H2''	1:A:2:DG:H8	4	0.15	0.03	0.15
(1,183)	1:B:13:DC:H2'	1:B:14:DG:H8	3	0.29	0.12	0.31
(1,183)	1:B:13:DC:H2''	1:B:14:DG:H8	3	0.29	0.12	0.31
(1,156)	1:B:14:DG:H8	1:B:14:DG:H2'	3	0.28	0.07	0.23
(1,25)	1:A:8:DA:H8	1:A:8:DA:H2'	3	0.21	0.08	0.2
(1,242)	1:B:22:DG:H8	1:B:23:DC:H5	3	0.17	0.04	0.19
(1,38)	1:A:11:DC:H2'	1:A:12:DG:H8	2	0.24	0.08	0.24
(1,14)	1:A:2:DG:H1'	1:A:3:DC:H6	2	0.19	0.08	0.19
(1,26)	1:A:10:DG:H8	1:A:10:DG:H2'	2	0.17	0.06	0.17
(1,21)	1:A:1:DC:H6	1:A:1:DC:H2'	2	0.17	0.05	0.17
(1,27)	1:A:11:DC:H6	1:A:11:DC:H2'	2	0.14	0.02	0.14
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2'	2	0.12	0.02	0.12
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2''	2	0.12	0.02	0.12
(1,125)	1:A:6:5HC:HN41	1:B:19:DG:H1	2	0.12	0.02	0.12
(1,125)	1:A:6:5HC:HN42	1:B:19:DG:H1	2	0.12	0.02	0.12
(1,155)	1:B:13:DC:H6	1:B:13:DC:H2'	2	0.12	0.0	0.12

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

9.5.1 Histogram : Distribution of distance violations [i](#)

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.



9.5.2 Table : All distance violations [i](#)

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	5	7.06
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	6	7.0
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	2	6.98
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	7	6.92
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	9	6.91
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	10	6.88
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	6	6.87
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	1	6.75
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	1	6.66
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	9	6.61

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	2	6.51
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	4	6.5
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	3	6.39
(1,247)	1:A:11:DC:H1'	1:A:12:DG:H1	8	6.24
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	7	6.23
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	5	6.07
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	10	6.07
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	4	5.98
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	3	5.82
(1,113)	1:B:23:DC:H1'	1:B:24:DG:H1	8	5.8
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	5	4.5
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	10	4.45
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	1	4.43
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	7	4.3
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	6	4.29
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	9	4.29
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	3	4.25
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	2	4.21
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	8	4.2
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	1	4.17
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	7	4.15
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	5	4.15
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	7	4.15
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	3	4.15
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	8	4.13
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	8	4.13
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	5	4.13
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	10	4.13
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	8	4.13
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	6	4.12
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	8	4.1
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	9	4.1
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	1	4.08
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	10	4.06
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	4	4.05
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	7	4.05
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	5	4.04
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	7	4.04
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	5	4.02
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	7	4.01
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	2	4.01
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	1	4.01

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	9	4.0
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	2	4.0
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	10	3.99
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	3	3.97
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	6	3.96
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	3	3.96
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	8	3.96
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	6	3.96
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	4	3.95
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	9	3.95
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	4	3.95
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	8	3.95
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	10	3.95
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	9	3.94
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	2	3.94
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	10	3.93
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	6	3.93
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	4	3.93
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	7	3.93
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	3	3.92
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	2	3.92
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	9	3.9
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	10	3.89
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	9	3.88
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	6	3.88
(1,258)	1:A:9:DC:H42	1:B:17:DT:H3	2	3.87
(1,124)	1:B:21:DC:H42	1:A:5:DT:H3	3	3.87
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	6	3.85
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	6	3.84
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	8	3.84
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	9	3.83
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	5	3.82
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	7	3.8
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	4	3.78
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	1	3.78
(1,264)	1:B:18:5HC:H6	1:A:7:DG:H1	2	3.76
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	8	3.76
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	8	3.75
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	1	3.74
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	4	3.74
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	10	3.74
(1,130)	1:A:6:5HC:H6	1:B:19:DG:H1	5	3.73

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	3	3.71
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	3	3.71
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	4	3.71
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	10	3.7
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	10	3.7
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	8	3.7
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	7	3.7
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	3	3.67
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	2	3.64
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	2	3.62
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	2	3.62
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	3	3.62
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	10	3.62
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	9	3.62
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	3	3.62
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	7	3.57
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	7	3.57
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	5	3.57
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	10	3.56
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	10	3.56
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	10	3.56
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	5	3.56
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	3	3.55
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	8	3.54
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	6	3.53
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	6	3.53
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	9	3.53
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	9	3.53
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	9	3.53
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	10	3.52
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	8	3.51
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	8	3.51
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	1	3.51
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	3	3.5
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	3	3.5
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	8	3.5
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	8	3.5
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	9	3.5
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	9	3.49
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	9	3.49
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	2	3.49
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	4	3.48

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	4	3.48
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	3	3.48
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	1	3.47
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	1	3.47
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	5	3.47
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	5	3.47
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	10	3.47
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	8	3.47
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	5	3.47
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	5	3.47
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	8	3.46
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	8	3.46
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	8	3.46
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	2	3.46
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	4	3.46
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	4	3.46
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	1	3.46
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	1	3.46
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	2	3.46
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	2	3.46
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	4	3.46
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	7	3.45
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	7	3.45
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	9	3.45
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	5	3.45
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	3	3.45
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	3	3.45
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	10	3.44
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	10	3.44
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	10	3.44
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	5	3.44
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	6	3.43
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	6	3.43
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	2	3.43
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	2	3.43
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	2	3.43
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	7	3.43
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	7	3.42
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	7	3.42
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	7	3.42
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	1	3.42
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	8	3.42

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	1	3.42
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	4	3.41
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	5	3.4
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	5	3.4
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	5	3.4
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	1	3.4
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	6	3.4
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	6	3.4
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	2	3.39
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	2	3.39
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	2	3.39
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	9	3.39
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	4	3.38
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	4	3.38
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	4	3.38
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	3	3.37
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	3	3.37
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	3	3.37
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	8	3.37
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	5	3.37
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	5	3.37
(1,180)	1:B:22:DG:H8	1:B:22:DG:H21	7	3.37
(1,180)	1:B:22:DG:H8	1:B:22:DG:H22	7	3.37
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	4	3.37
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	4	3.37
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	4	3.37
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	2	3.37
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	6	3.37
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	1	3.37
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	8	3.36
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	8	3.36
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	10	3.36
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	10	3.36
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	2	3.36
(1,118)	1:B:23:DC:H1'	1:B:22:DG:H1	2	3.36
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	6	3.36
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	6	3.35
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	6	3.35
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	6	3.35
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	6	3.35
(1,46)	1:A:10:DG:H8	1:A:10:DG:H21	4	3.34
(1,46)	1:A:10:DG:H8	1:A:10:DG:H22	4	3.34

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	9	3.34
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	8	3.34
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	1	3.33
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	6	3.33
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	6	3.32
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	4	3.32
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	2	3.32
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	5	3.32
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	6	3.32
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	6	3.31
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	10	3.3
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	9	3.3
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	9	3.3
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	9	3.3
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	8	3.3
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	6	3.29
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	6	3.29
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	6	3.29
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	7	3.29
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	10	3.29
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	10	3.29
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	5	3.29
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	7	3.28
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	7	3.26
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	1	3.26
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	1	3.26
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	8	3.26
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	8	3.26
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	8	3.26
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	10	3.26
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	10	3.26
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	10	3.26
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	2	3.26
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	5	3.25
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	3	3.25
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	5	3.24
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	5	3.24
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	5	3.24
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	3	3.24
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	8	3.24
(1,266)	1:B:17:DT:H71	1:A:7:DG:H1	1	3.23
(1,266)	1:B:17:DT:H72	1:A:7:DG:H1	1	3.23

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,266)	1:B:17:DT:H73	1:A:7:DG:H1	1	3.23
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	5	3.23
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	9	3.23
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	5	3.23
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	9	3.22
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	4	3.22
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	6	3.22
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	10	3.21
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	3	3.21
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	3	3.21
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	3	3.21
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	1	3.21
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	9	3.2
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	9	3.2
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	9	3.2
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	8	3.2
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	10	3.2
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	2	3.19
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	2	3.19
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	9	3.19
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	9	3.19
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	4	3.18
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	1	3.17
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	9	3.17
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	7	3.17
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	7	3.17
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	7	3.17
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	1	3.17
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	9	3.17
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	3	3.16
(1,252)	1:A:11:DC:H1'	1:A:10:DG:H1	7	3.16
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	6	3.16
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	4	3.15
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	3	3.14
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	3	3.14
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	10	3.14
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	8	3.13
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	6	3.13
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	10	3.13
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	7	3.12
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	7	3.12
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	10	3.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	10	3.12
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	4	3.12
(1,114)	1:A:1:DC:H5	1:B:24:DG:H1	5	3.12
(1,254)	1:B:16:DG:H8	1:A:10:DG:H1	1	3.09
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	7	3.09
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	1	3.08
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	1	3.08
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	4	3.07
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	5	3.05
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	5	3.05
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	8	3.05
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	8	3.05
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	3	3.05
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	3	3.05
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	2	3.05
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	1	3.04
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	1	3.04
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	1	3.04
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	4	3.03
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	4	3.03
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	4	3.01
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	4	3.01
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	3	3.01
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	3	3.01
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	5	3.0
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	5	3.0
(1,132)	1:A:5:DT:H71	1:B:19:DG:H1	1	3.0
(1,132)	1:A:5:DT:H72	1:B:19:DG:H1	1	3.0
(1,132)	1:A:5:DT:H73	1:B:19:DG:H1	1	3.0
(1,253)	1:B:15:DC:H1'	1:A:10:DG:H1	5	2.99
(1,119)	1:A:3:DC:H1'	1:B:22:DG:H1	4	2.99
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	10	2.99
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	3	2.98
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	3	2.98
(1,248)	1:B:13:DC:H5	1:A:12:DG:H1	2	2.98
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	7	2.96
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	10	2.95
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	10	2.95
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	6	2.94
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	6	2.94
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	5	2.94
(1,120)	1:A:4:DG:H8	1:B:22:DG:H1	4	2.93

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	6	2.92
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	6	2.92
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	5	2.91
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	5	2.91
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	8	2.9
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	8	2.9
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	10	2.89
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	10	2.89
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	7	2.88
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	7	2.88
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	8	2.86
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	8	2.86
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	7	2.86
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	7	2.86
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	9	2.86
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	9	2.86
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	2	2.85
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	2	2.85
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	2	2.84
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	2	2.84
(1,117)	1:A:4:DG:H1'	1:B:22:DG:H1	4	2.84
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	8	2.84
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	8	2.84
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	7	2.83
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	7	2.83
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	6	2.83
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	6	2.83
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	9	2.83
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	1	2.82
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	1	2.82
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	6	2.81
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	6	2.81
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	3	2.81
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	3	2.81
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	8	2.81
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	4	2.8
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	4	2.8
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	3	2.8
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	3	2.8
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	4	2.8
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	4	2.8
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	2	2.79

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	9	2.79
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	4	2.79
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	4	2.79
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	8	2.79
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	8	2.79
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	4	2.79
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	4	2.79
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	7	2.78
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	7	2.78
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	7	2.78
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	7	2.78
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	9	2.77
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	9	2.77
(1,251)	1:B:16:DG:H1'	1:A:10:DG:H1	1	2.77
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	9	2.77
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	9	2.77
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	1	2.77
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	1	2.77
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	6	2.77
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	6	2.77
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	6	2.76
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	6	2.76
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	10	2.76
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	10	2.76
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	2	2.76
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	2	2.76
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	2	2.75
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	2	2.75
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	2	2.75
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	9	2.75
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	9	2.75
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	7	2.74
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	9	2.74
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	9	2.74
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	5	2.74
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	5	2.74
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	2	2.73
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	2	2.73
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	5	2.73
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	2	2.73
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	2	2.73
(1,265)	1:B:18:5HC:H5M1	1:A:7:DG:H1	2	2.73

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,265)	1:B:18:5HC:H5M2	1:A:7:DG:H1	2	2.73
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	1	2.73
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	1	2.73
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	5	2.73
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	5	2.73
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	5	2.72
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	5	2.72
(1,182)	1:B:24:DG:H8	1:B:24:DG:H21	5	2.72
(1,182)	1:B:24:DG:H8	1:B:24:DG:H22	5	2.72
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	9	2.71
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	9	2.71
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	4	2.71
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	4	2.71
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	7	2.71
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	7	2.71
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	8	2.71
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	8	2.71
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	5	2.7
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	5	2.7
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	6	2.7
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	6	2.7
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	1	2.7
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	1	2.7
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	4	2.7
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	4	2.7
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	3	2.69
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	3	2.69
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	3	2.69
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	3	2.69
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	2	2.69
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	2	2.68
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	2	2.68
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	5	2.68
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	5	2.68
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	8	2.68
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	8	2.68
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	1	2.68
(1,40)	1:A:2:DG:H8	1:A:2:DG:H21	10	2.67
(1,40)	1:A:2:DG:H8	1:A:2:DG:H22	10	2.67
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	3	2.67
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	3	2.67
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	10	2.66

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	2	2.66
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	9	2.66
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	4	2.66
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	9	2.65
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	9	2.65
(1,48)	1:A:12:DG:H8	1:A:12:DG:H21	10	2.65
(1,48)	1:A:12:DG:H8	1:A:12:DG:H22	10	2.65
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	3	2.65
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	3	2.65
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	6	2.64
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	6	2.64
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	5	2.63
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	5	2.63
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	6	2.63
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	1	2.63
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	1	2.63
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	6	2.63
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	6	2.63
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	10	2.63
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	10	2.63
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	8	2.62
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	8	2.62
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	6	2.62
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	7	2.61
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	7	2.61
(1,184)	1:B:14:DG:H21	1:B:15:DC:H6	8	2.61
(1,184)	1:B:14:DG:H22	1:B:15:DC:H6	8	2.61
(1,174)	1:B:14:DG:H8	1:B:14:DG:H21	2	2.61
(1,174)	1:B:14:DG:H8	1:B:14:DG:H22	2	2.61
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	10	2.61
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	10	2.61
(1,103)	1:A:8:DA:H2	1:A:9:DC:H5	7	2.61
(1,237)	1:B:20:DA:H2	1:B:21:DC:H5	3	2.59
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	10	2.59
(1,50)	1:A:2:DG:H21	1:A:3:DC:H6	9	2.58
(1,50)	1:A:2:DG:H22	1:A:3:DC:H6	9	2.58
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	6	2.58
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	4	2.57
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	4	2.57
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	6	2.57
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	6	2.57
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	1	2.57

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	1	2.57
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	3	2.56
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	3	2.56
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	8	2.55
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	8	2.55
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	1	2.54
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	8	2.54
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	8	2.54
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	7	2.53
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	2	2.53
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	2	2.53
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	5	2.52
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	4	2.51
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	4	2.51
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	4	2.5
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	4	2.5
(1,54)	1:A:8:DA:H2	1:A:9:DC:H6	7	2.5
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	6	2.5
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	6	2.5
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	7	2.49
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	7	2.49
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	5	2.49
(1,131)	1:A:6:5HC:H5M1	1:B:19:DG:H1	9	2.49
(1,131)	1:A:6:5HC:H5M2	1:B:19:DG:H1	9	2.49
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	2	2.47
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	2	2.47
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	2	2.46
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	2	2.46
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	3	2.46
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	3	2.46
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	8	2.45
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	8	2.45
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	6	2.44
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	6	2.44
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	9	2.43
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	9	2.43
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	10	2.43
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	3	2.42
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	3	2.42
(1,188)	1:B:20:DA:H2	1:B:21:DC:H6	3	2.42
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	10	2.41
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	10	2.41

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	9	2.41
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	4	2.41
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	4	2.41
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	1	2.4
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	3	2.4
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	6	2.4
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	5	2.39
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	5	2.39
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	7	2.39
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	7	2.39
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	10	2.39
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	10	2.39
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	1	2.39
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	1	2.39
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	10	2.38
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	7	2.38
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	10	2.38
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	10	2.38
(1,97)	1:A:2:DG:H21	1:A:3:DC:H5	1	2.37
(1,97)	1:A:2:DG:H22	1:A:3:DC:H5	1	2.37
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	8	2.36
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	3	2.36
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	10	2.36
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	10	2.36
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	2	2.36
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	3	2.35
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	3	2.35
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	2	2.34
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	2	2.34
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	7	2.34
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	7	2.34
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	1	2.34
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	1	2.34
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	9	2.34
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	9	2.34
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	1	2.33
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	1	2.33
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	4	2.33
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	9	2.32
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	9	2.32
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	4	2.32
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	4	2.32

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	2	2.31
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	2	2.31
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	10	2.31
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	10	2.31
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	5	2.31
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	2	2.31
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	2	2.31
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	7	2.3
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	5	2.3
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	1	2.3
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	1	2.3
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	6	2.3
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	8	2.3
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	8	2.3
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	7	2.29
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	7	2.29
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	1	2.29
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	1	2.29
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	1	2.29
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	5	2.29
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	5	2.29
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	6	2.29
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	6	2.29
(1,255)	1:B:18:5HC:H5M1	1:B:17:DT:H3	1	2.28
(1,255)	1:B:18:5HC:H5M2	1:B:17:DT:H3	1	2.28
(1,231)	1:B:14:DG:H21	1:B:15:DC:H5	8	2.28
(1,231)	1:B:14:DG:H22	1:B:15:DC:H5	8	2.28
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	5	2.28
(1,134)	1:B:20:DA:H2	1:A:4:DG:H1	7	2.28
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	3	2.27
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	3	2.27
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	9	2.27
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	2	2.27
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	7	2.27
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	10	2.26
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	7	2.26
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	7	2.25
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	4	2.25
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	4	2.25
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	4	2.25
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	9	2.24
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	7	2.24

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	7	2.24
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	5	2.23
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	5	2.23
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	1	2.22
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	1	2.22
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	9	2.22
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	6	2.22
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	6	2.22
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	6	2.22
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	6	2.22
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	3	2.21
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	7	2.2
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	1	2.2
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	2	2.19
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	10	2.19
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	3	2.19
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	5	2.19
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	7	2.19
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	7	2.18
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	4	2.18
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	10	2.18
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	5	2.18
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	1	2.17
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	8	2.17
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	8	2.17
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	10	2.17
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	9	2.17
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	8	2.16
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	8	2.16
(1,52)	1:A:4:DG:H21	1:A:5:DT:H6	9	2.16
(1,52)	1:A:4:DG:H22	1:A:5:DT:H6	9	2.16
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	6	2.16
(1,186)	1:B:16:DG:H21	1:B:17:DT:H6	5	2.16
(1,186)	1:B:16:DG:H22	1:B:17:DT:H6	5	2.16
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	5	2.15
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	3	2.15
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	3	2.15
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	10	2.15
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	10	2.15
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	2	2.14
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	5	2.14
(1,268)	1:A:8:DA:H2	1:B:16:DG:H1	3	2.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	7	2.14
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	7	2.14
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	10	2.14
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	8	2.14
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	8	2.13
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	6	2.13
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	9	2.13
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	10	2.13
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	5	2.13
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	5	2.13
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	3	2.12
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	9	2.12
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	9	2.12
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	3	2.11
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	3	2.11
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	3	2.11
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	3	2.11
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	4	2.11
(1,44)	1:A:8:DA:H8	1:A:8:DA:H2	8	2.11
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	9	2.11
(1,178)	1:B:20:DA:H8	1:B:20:DA:H2	2	2.11
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	9	2.11
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	7	2.11
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	7	2.11
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	4	2.1
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	8	2.1
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	7	2.1
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	4	2.09
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	6	2.09
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	1	2.09
(1,121)	1:A:6:5HC:H5M1	1:A:5:DT:H3	4	2.08
(1,121)	1:A:6:5HC:H5M2	1:A:5:DT:H3	4	2.08
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	3	2.05
(1,243)	1:B:22:DG:H21	1:B:23:DC:H5	9	2.05
(1,243)	1:B:22:DG:H22	1:B:23:DC:H5	9	2.05
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	3	2.05
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	8	2.04
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	6	2.04
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	5	2.03
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	3	2.03
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	9	2.03
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	5	2.03

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	10	2.03
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	1	2.03
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	5	2.03
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	6	2.02
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	4	2.02
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	8	2.02
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	3	2.01
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	4	2.01
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	5	2.01
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	1	2.01
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	6	2.0
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	9	2.0
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	1	2.0
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	8	2.0
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	3	2.0
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	2	2.0
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	10	1.99
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	7	1.99
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	1	1.99
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	4	1.99
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	9	1.98
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	10	1.98
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	9	1.97
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	8	1.97
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	3	1.96
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	1	1.96
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	6	1.95
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	6	1.95
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	3	1.95
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	2	1.95
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	6	1.94
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	10	1.94
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	1	1.94
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	1	1.94
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	9	1.94
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	9	1.94
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	9	1.94
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	8	1.93
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	2	1.92
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	9	1.92
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	6	1.92
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	6	1.92

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	9	1.91
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	9	1.91
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	2	1.91
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	6	1.91
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	1	1.9
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	3	1.9
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	8	1.9
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	1	1.9
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	10	1.9
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	4	1.89
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	5	1.89
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	7	1.89
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	6	1.89
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	4	1.89
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	5	1.88
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	2	1.88
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	2	1.88
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	5	1.88
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	6	1.88
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	2	1.88
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	8	1.88
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	3	1.87
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	5	1.87
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	10	1.87
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	7	1.87
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	9	1.87
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	8	1.86
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	2	1.86
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	3	1.86
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	3	1.86
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	2	1.86
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	3	1.86
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	3	1.86
(1,129)	1:B:20:DA:H2	1:B:19:DG:H1	5	1.86
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	1	1.85
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	2	1.85
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	7	1.85
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	7	1.85
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	4	1.84
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	10	1.84
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	10	1.84
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	4	1.84

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	2	1.84
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	6	1.83
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	4	1.83
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	4	1.83
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	7	1.83
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	7	1.82
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	7	1.82
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	9	1.82
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	9	1.82
(1,233)	1:B:14:DG:H1'	1:B:15:DC:H5	8	1.82
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	6	1.82
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	10	1.82
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	6	1.82
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	8	1.82
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	6	1.81
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	1	1.81
(1,220)	1:B:19:DG:H8	1:B:20:DA:H8	4	1.81
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	5	1.81
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	5	1.81
(1,109)	1:A:10:DG:H21	1:A:11:DC:H5	2	1.81
(1,109)	1:A:10:DG:H22	1:A:11:DC:H5	2	1.81
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	6	1.8
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	6	1.8
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	2	1.8
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	2	1.8
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	5	1.8
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	9	1.79
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	2	1.79
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	6	1.79
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	3	1.79
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	7	1.79
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	5	1.79
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	4	1.79
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	9	1.79
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	8	1.78
(1,86)	1:A:7:DG:H8	1:A:8:DA:H8	7	1.78
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	2	1.78
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	2	1.78
(1,212)	1:B:22:DG:H8	1:B:22:DG:H4'	3	1.78
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	10	1.78
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	8	1.78
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	1	1.78

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	5	1.77
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	7	1.77
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	5	1.77
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	5	1.77
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	6	1.77
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	9	1.77
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	8	1.77
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	1	1.76
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	9	1.76
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	3	1.76
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	6	1.76
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	10	1.74
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	10	1.74
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	4	1.74
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	5	1.74
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	6	1.74
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	9	1.74
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	10	1.73
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	1	1.73
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	6	1.73
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	10	1.73
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	10	1.73
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	9	1.73
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	4	1.73
(1,224)	1:B:23:DC:H6	1:B:24:DG:H8	4	1.73
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	10	1.73
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	1	1.73
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	4	1.72
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	3	1.72
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	6	1.72
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	1	1.72
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	4	1.72
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	6	1.72
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	8	1.72
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	3	1.71
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	5	1.71
(1,263)	1:A:8:DA:H2	1:A:7:DG:H1	5	1.71
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	4	1.71
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	7	1.71
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	3	1.71
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	8	1.7
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	3	1.7

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	4	1.7
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	10	1.69
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	10	1.69
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	10	1.69
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	6	1.69
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	3	1.69
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	10	1.69
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	10	1.69
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	10	1.68
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	5	1.68
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	4	1.68
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	8	1.68
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	4	1.68
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	6	1.68
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	6	1.68
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	4	1.67
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	2	1.67
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	4	1.66
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	5	1.66
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	3	1.65
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	4	1.65
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	4	1.65
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	1	1.65
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	7	1.65
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	8	1.65
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	4	1.64
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	4	1.64
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	5	1.64
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	9	1.64
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	10	1.64
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	3	1.64
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	7	1.64
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	8	1.63
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	4	1.63
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	7	1.63
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	9	1.63
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	2	1.63
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	1	1.63
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	4	1.63
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	4	1.63
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	7	1.63
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	7	1.63

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	8	1.63
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	9	1.63
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	3	1.63
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	6	1.63
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	3	1.62
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	10	1.62
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	1	1.62
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	1	1.62
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	3	1.62
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	3	1.62
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	5	1.62
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	5	1.61
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	4	1.61
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	9	1.61
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	1	1.61
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	10	1.61
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	6	1.61
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	6	1.61
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	3	1.61
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	9	1.61
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	10	1.61
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	2	1.6
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	8	1.6
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	3	1.6
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	10	1.6
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	10	1.6
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	2	1.6
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	1	1.6
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	2	1.6
(1,192)	1:B:14:DG:H8	1:B:14:DG:H3'	3	1.6
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	10	1.59
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	1	1.59
(1,78)	1:A:10:DG:H8	1:A:10:DG:H4'	6	1.59
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	1	1.59
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	1	1.59
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	5	1.59
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	3	1.59
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	7	1.59
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	9	1.59
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	1	1.59
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	1	1.59
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	3	1.59

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	9	1.59
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	6	1.59
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	10	1.59
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	10	1.59
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	3	1.58
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	10	1.58
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	5	1.58
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	6	1.58
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	2	1.58
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	1	1.57
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	5	1.57
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	9	1.57
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	5	1.57
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	1	1.57
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	4	1.57
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	10	1.57
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	10	1.57
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	4	1.57
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	2	1.56
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	1	1.56
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	7	1.56
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	8	1.56
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	9	1.56
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	8	1.56
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	6	1.56
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	9	1.55
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	5	1.55
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	9	1.55
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	4	1.55
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	2	1.55
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	6	1.55
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	9	1.55
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	5	1.55
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	4	1.55
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	6	1.55
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	6	1.55
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	3	1.54
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	7	1.54
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	1	1.54
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	1	1.54
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	5	1.54
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	10	1.54

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	8	1.54
(1,2)	1:A:2:DG:H1'	1:A:2:DG:H8	1	1.54
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	8	1.54
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	8	1.54
(1,136)	1:B:14:DG:H1'	1:B:14:DG:H8	1	1.54
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	9	1.53
(1,201)	1:B:16:DG:H3'	1:B:17:DT:H6	6	1.53
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	5	1.53
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	2	1.53
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	9	1.53
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	5	1.52
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	3	1.52
(1,58)	1:A:2:DG:H8	1:A:2:DG:H3'	8	1.52
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	3	1.52
(1,200)	1:B:14:DG:H3'	1:B:15:DC:H6	2	1.52
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	6	1.52
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	9	1.52
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	8	1.51
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	5	1.51
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	3	1.51
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	2	1.51
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	2	1.51
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	8	1.51
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	7	1.5
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	4	1.5
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	8	1.5
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	1	1.5
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	2	1.5
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	3	1.5
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	7	1.5
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	1	1.5
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	6	1.5
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	7	1.5
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	1	1.5
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	1	1.5
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	8	1.5
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	2	1.49
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	7	1.49
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	6	1.49
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	3	1.49
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	2	1.49
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	10	1.49

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	9	1.49
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	1	1.49
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	3	1.49
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	4	1.49
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	4	1.49
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	4	1.49
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	6	1.49
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	9	1.49
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	3	1.49
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	5	1.48
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	7	1.48
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	7	1.48
(1,66)	1:A:2:DG:H3'	1:A:3:DC:H6	8	1.48
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	9	1.48
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	6	1.48
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	9	1.48
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	7	1.48
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	4	1.48
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	7	1.48
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	8	1.48
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	8	1.48
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	3	1.48
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	10	1.48
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	1	1.47
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	1	1.47
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	4	1.47
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	3	1.47
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	4	1.46
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	3	1.46
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	4	1.46
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	10	1.46
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	9	1.46
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	4	1.46
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	1	1.46
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	9	1.46
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	9	1.46
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	7	1.46
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	5	1.46
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	10	1.46
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	3	1.46
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	3	1.46
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	8	1.45

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	7	1.45
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	3	1.45
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	2	1.45
(1,3)	1:A:3:DC:H1'	1:A:3:DC:H6	6	1.45
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	7	1.45
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	7	1.45
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	2	1.45
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	8	1.45
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	4	1.45
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	1	1.45
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	1	1.45
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	3	1.45
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	4	1.45
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	2	1.45
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	3	1.44
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	2	1.44
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	10	1.44
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	5	1.44
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	4	1.44
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	4	1.44
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	4	1.44
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	8	1.44
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	9	1.44
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	3	1.44
(1,190)	1:B:22:DG:H21	1:B:23:DC:H6	5	1.44
(1,190)	1:B:22:DG:H22	1:B:23:DC:H6	5	1.44
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	8	1.44
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	1	1.44
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	9	1.44
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	1	1.44
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	8	1.44
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	8	1.44
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	8	1.44
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	8	1.44
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	8	1.44
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	8	1.44
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	5	1.44
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	7	1.43
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	9	1.43
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	4	1.43
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	7	1.43
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	6	1.43

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	5	1.43
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	2	1.43
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	7	1.43
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	5	1.43
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	1	1.43
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	2	1.43
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	2	1.42
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	6	1.42
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	4	1.42
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	3	1.42
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	10	1.42
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	2	1.42
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	2	1.42
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	7	1.42
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	7	1.42
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	8	1.41
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	8	1.41
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	1	1.41
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	10	1.41
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	1	1.41
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	1	1.41
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	1	1.41
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	1	1.41
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	1	1.41
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	1	1.41
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	1	1.41
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	6	1.41
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	1	1.41
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	3	1.41
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	1	1.41
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	9	1.41
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	4	1.41
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	7	1.41
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	9	1.41
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	6	1.4
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	4	1.4
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	7	1.4
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	7	1.4
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	9	1.4
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	10	1.4
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	1	1.4
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	4	1.4

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	8	1.4
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	10	1.4
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	4	1.4
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	1	1.4
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	10	1.4
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	4	1.39
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	6	1.39
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	3	1.39
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	7	1.39
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	7	1.39
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	8	1.39
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	7	1.39
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	8	1.39
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	2	1.39
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	7	1.39
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	10	1.39
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	9	1.38
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	4	1.38
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	9	1.38
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	6	1.38
(1,30)	1:A:2:DG:H2'	1:A:3:DC:H6	8	1.38
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	1	1.38
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	10	1.38
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	8	1.38
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	8	1.38
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	3	1.38
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	9	1.38
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	7	1.38
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	10	1.37
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	6	1.37
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	10	1.37
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	3	1.37
(1,225)	1:B:17:DT:H1'	1:A:8:DA:H2	9	1.37
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	2	1.37
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	8	1.37
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	6	1.37
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	4	1.37
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	5	1.37
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	8	1.37
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	5	1.37
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	8	1.36
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	10	1.36

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	8	1.36
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	6	1.36
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	5	1.36
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	6	1.36
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	7	1.36
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	5	1.36
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	4	1.36
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	9	1.36
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	9	1.36
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	9	1.36
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	9	1.36
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	9	1.36
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	9	1.36
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	8	1.36
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	4	1.36
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	9	1.35
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	10	1.35
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	4	1.35
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	3	1.35
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	10	1.35
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	4	1.35
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	10	1.35
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	6	1.35
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	2	1.35
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	1	1.35
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	4	1.35
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	5	1.34
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	9	1.34
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	1	1.34
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	2	1.34
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	7	1.34
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	1	1.34
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	9	1.34
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	1	1.34
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	3	1.34
(1,145)	1:B:23:DC:H1'	1:B:23:DC:H6	9	1.34
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	2	1.34
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	7	1.34
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	3	1.34
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	7	1.34
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	8	1.34
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	1	1.33

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	4	1.33
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	3	1.33
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	4	1.33
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	1	1.33
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	10	1.33
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	6	1.33
(1,99)	1:A:2:DG:H1'	1:A:3:DC:H5	1	1.32
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	8	1.32
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	7	1.32
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	7	1.32
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	4	1.32
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	8	1.32
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	3	1.32
(1,10)	1:A:10:DG:H1'	1:A:10:DG:H8	1	1.32
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	6	1.31
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	5	1.31
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	5	1.31
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	8	1.31
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	8	1.31
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	8	1.31
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	8	1.31
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	8	1.31
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	8	1.31
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	1	1.31
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	8	1.31
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	9	1.31
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	10	1.31
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	8	1.31
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	9	1.31
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	5	1.31
(1,137)	1:B:15:DC:H1'	1:B:15:DC:H6	8	1.31
(1,110)	1:A:10:DG:H2'	1:A:11:DC:H5	5	1.31
(1,11)	1:A:11:DC:H1'	1:A:11:DC:H6	5	1.31
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	10	1.31
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	6	1.3
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	6	1.3
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	9	1.3
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	2	1.3
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	8	1.3
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	8	1.3
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	9	1.3
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	9	1.3

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	9	1.3
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	4	1.3
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	4	1.3
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	2	1.3
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	3	1.3
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	7	1.3
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	8	1.3
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	8	1.3
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	3	1.3
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	1	1.29
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	10	1.29
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	3	1.29
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	5	1.29
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	4	1.29
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	8	1.29
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	6	1.29
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	7	1.29
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	10	1.29
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	5	1.29
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	6	1.29
(1,144)	1:B:22:DG:H1'	1:B:22:DG:H8	5	1.29
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	1	1.29
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	8	1.28
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	7	1.28
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	2	1.28
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	10	1.28
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	1	1.28
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	10	1.28
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	5	1.28
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	8	1.28
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	6	1.28
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	4	1.28
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	7	1.28
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	10	1.28
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	6	1.27
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	3	1.27
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	6	1.27
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	2	1.27
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	1	1.27
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	6	1.27
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	10	1.27
(1,217)	1:B:16:DG:H8	1:B:17:DT:H6	5	1.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	7	1.27
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	8	1.27
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	3	1.27
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	4	1.27
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	6	1.27
(1,91)	1:A:5:DT:H1'	1:B:20:DA:H2	7	1.26
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	7	1.26
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	9	1.26
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	1	1.26
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	7	1.26
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	5	1.26
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	1	1.26
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	5	1.26
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	3	1.26
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	5	1.26
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	10	1.26
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	7	1.26
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	7	1.26
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	6	1.26
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	3	1.25
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	9	1.25
(1,80)	1:A:1:DC:H6	1:A:2:DG:H8	9	1.25
(1,68)	1:A:8:DA:H3'	1:A:9:DC:H6	6	1.25
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	10	1.25
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	8	1.25
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	10	1.25
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	6	1.25
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	8	1.25
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	8	1.25
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	8	1.25
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	8	1.25
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	8	1.25
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	8	1.25
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	10	1.25
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	2	1.25
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	10	1.25
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	10	1.25
(1,143)	1:B:21:DC:H1'	1:B:21:DC:H6	10	1.25
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	7	1.25
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	9	1.25
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	4	1.25
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	5	1.24

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	2	1.24
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	10	1.24
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	1	1.24
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	5	1.24
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	7	1.24
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	1	1.24
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	6	1.24
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	5	1.24
(1,83)	1:A:4:DG:H8	1:A:5:DT:H6	8	1.23
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	4	1.23
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	9	1.23
(1,67)	1:A:4:DG:H3'	1:A:5:DT:H6	9	1.23
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	1	1.23
(1,257)	1:B:18:5HC:HN41	1:B:17:DT:H3	8	1.23
(1,257)	1:B:18:5HC:HN42	1:B:17:DT:H3	8	1.23
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	10	1.23
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	2	1.23
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	4	1.23
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	6	1.23
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	4	1.23
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	9	1.23
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	2	1.22
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	2	1.22
(1,6)	1:A:6:5HC:H1'	1:A:6:5HC:H6	1	1.22
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	7	1.22
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	1	1.22
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	6	1.22
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	5	1.22
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	5	1.22
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	1	1.22
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	7	1.22
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	4	1.22
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	5	1.22
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	10	1.22
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	2	1.22
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	2	1.22
(1,101)	1:A:3:DC:H1'	1:A:3:DC:H5	2	1.22
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	9	1.21
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	4	1.21
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	6	1.21
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	5	1.21
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	6	1.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,9)	1:A:9:DC:H1'	1:A:9:DC:H6	1	1.2
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	8	1.2
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	10	1.2
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	2	1.2
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	2	1.2
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	6	1.2
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	8	1.2
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	8	1.2
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	4	1.2
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	2	1.19
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	5	1.19
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	7	1.19
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	2	1.19
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	2	1.19
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	2	1.19
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	2	1.19
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	2	1.19
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	2	1.19
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	8	1.19
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	7	1.19
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	1	1.19
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	8	1.19
(1,140)	1:B:18:5HC:H1'	1:B:18:5HC:H6	3	1.19
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	1	1.19
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	4	1.18
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	6	1.18
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	7	1.18
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	9	1.18
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	5	1.18
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	2	1.18
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	9	1.18
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	10	1.17
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	7	1.17
(1,56)	1:A:10:DG:H21	1:A:11:DC:H6	5	1.17
(1,56)	1:A:10:DG:H22	1:A:11:DC:H6	5	1.17
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	1	1.17
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	8	1.17
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	5	1.17
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	5	1.17
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	5	1.17
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	5	1.17
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	5	1.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	5	1.17
(1,244)	1:B:22:DG:H2'	1:B:23:DC:H5	3	1.17
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	9	1.17
(1,218)	1:B:17:DT:H6	1:B:18:5HC:H6	3	1.17
(1,214)	1:B:13:DC:H6	1:B:14:DG:H8	6	1.17
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	3	1.17
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	1	1.16
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	4	1.16
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	9	1.16
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	10	1.16
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	7	1.16
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	10	1.16
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	3	1.16
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	5	1.16
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	6	1.16
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	8	1.16
(1,235)	1:B:15:DC:H1'	1:B:15:DC:H5	8	1.16
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	1	1.16
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	2	1.16
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	7	1.16
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	7	1.16
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	4	1.16
(1,141)	1:B:19:DG:H1'	1:B:19:DG:H8	2	1.16
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	7	1.15
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	3	1.15
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	4	1.15
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	6	1.15
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	9	1.15
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	2	1.15
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	2	1.15
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	8	1.15
(1,213)	1:B:23:DC:H6	1:B:23:DC:H4'	5	1.15
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	3	1.15
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	2	1.15
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	2	1.15
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	2	1.15
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	2	1.15
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	2	1.15
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	2	1.15
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	8	1.15
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	3	1.14
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	2	1.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,193)	1:B:15:DC:H6	1:B:15:DC:H3'	2	1.14
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	2	1.13
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	3	1.13
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	6	1.13
(1,7)	1:A:7:DG:H1'	1:A:7:DG:H8	1	1.13
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	6	1.13
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	1	1.13
(1,196)	1:B:22:DG:H8	1:B:22:DG:H3'	3	1.13
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	3	1.13
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	6	1.13
(1,146)	1:B:24:DG:H1'	1:B:24:DG:H8	10	1.13
(1,202)	1:B:20:DA:H3'	1:B:21:DC:H6	9	1.12
(1,194)	1:B:18:5HC:H6	1:B:18:5HC:H3'	8	1.12
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	6	1.12
(1,90)	1:A:11:DC:H6	1:A:12:DG:H8	9	1.11
(1,62)	1:A:10:DG:H8	1:A:10:DG:H3'	4	1.11
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	10	1.11
(1,216)	1:B:15:DC:H6	1:B:16:DG:H8	4	1.11
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	2	1.11
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	1	1.11
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	4	1.11
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	10	1.11
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	5	1.11
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	4	1.1
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	8	1.1
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	4	1.1
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	8	1.1
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	8	1.1
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	3	1.1
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	9	1.1
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	9	1.1
(1,164)	1:B:14:DG:H2'	1:B:15:DC:H6	2	1.1
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	3	1.1
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	1	1.1
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	1	1.09
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	7	1.09
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	7	1.09
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	7	1.09
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	7	1.09
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	7	1.09
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	7	1.09
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	10	1.09

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	2	1.09
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	2	1.09
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	5	1.09
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	5	1.09
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	5	1.09
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	5	1.09
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	5	1.09
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	5	1.09
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	5	1.09
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	6	1.08
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	7	1.08
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	9	1.08
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	4	1.08
(1,59)	1:A:3:DC:H6	1:A:3:DC:H3'	6	1.08
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	6	1.08
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	1	1.08
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	3	1.08
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	6	1.08
(1,142)	1:B:20:DA:H1'	1:B:20:DA:H8	7	1.08
(1,123)	1:A:6:5HC:HN41	1:A:5:DT:H3	10	1.08
(1,123)	1:A:6:5HC:HN42	1:A:5:DT:H3	10	1.08
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	8	1.08
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	2	1.07
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	4	1.07
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	7	1.07
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	2	1.06
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	2	1.06
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	7	1.06
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	7	1.06
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	2	1.06
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	10	1.06
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	7	1.06
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	3	1.05
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	7	1.05
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	8	1.05
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	6	1.05
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	7	1.05
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	3	1.05
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	3	1.05
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	3	1.05
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	3	1.05
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	3	1.05

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	3	1.05
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	6	1.05
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	3	1.05
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	5	1.05
(1,191)	1:B:13:DC:H6	1:B:13:DC:H3'	10	1.05
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	3	1.05
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	10	1.05
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	1	1.05
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	1	1.05
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	8	1.05
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	8	1.05
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	1	1.04
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	7	1.04
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	2	1.04
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	2	1.04
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	7	1.04
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	7	1.04
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	9	1.04
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	7	1.04
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	5	1.04
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	4	1.04
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	8	1.04
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	9	1.04
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	9	1.04
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	10	1.04
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	8	1.04
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	5	1.04
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	7	1.03
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	9	1.03
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	9	1.03
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	9	1.03
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	9	1.03
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	9	1.03
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	9	1.03
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	3	1.03
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	9	1.03
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	4	1.03
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	4	1.03
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	4	1.03
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	4	1.03
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	4	1.03
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	4	1.03

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,79)	1:A:11:DC:H6	1:A:11:DC:H4'	5	1.02
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	10	1.02
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	10	1.02
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	10	1.02
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	10	1.02
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	10	1.02
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	10	1.02
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	10	1.02
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	9	1.02
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	1	1.02
(1,152)	1:B:20:DA:H1'	1:B:21:DC:H6	4	1.02
(1,12)	1:A:12:DG:H1'	1:A:12:DG:H8	9	1.02
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	7	1.02
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	9	1.01
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	10	1.01
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	4	1.01
(1,8)	1:A:8:DA:H1'	1:A:8:DA:H8	5	1.01
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	1	1.01
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	2	1.01
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	2	1.01
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	2	1.01
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	2	1.01
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	2	1.01
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	2	1.01
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	8	1.01
(1,228)	1:B:20:DA:H2	1:B:21:DC:H1'	6	1.01
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	2	1.01
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	2	1.01
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	10	1.01
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	1	1.01
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	6	1.0
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	6	1.0
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	4	1.0
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	2	1.0
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	7	1.0
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	4	1.0
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	5	1.0
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	1	1.0
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	9	1.0
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	3	1.0
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	9	0.99
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	1	0.99

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	3	0.99
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	5	0.99
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	5	0.99
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	1	0.99
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	1	0.99
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	7	0.99
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	6	0.99
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	3	0.99
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	1	0.99
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	6	0.98
(1,167)	1:B:17:DT:H2'	1:B:18:5HC:H6	9	0.98
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	4	0.98
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	4	0.98
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	1	0.98
(1,84)	1:A:5:DT:H6	1:A:6:5HC:H6	5	0.97
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	2	0.97
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	5	0.97
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	1	0.97
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	5	0.97
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	7	0.97
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	3	0.97
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	4	0.97
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	1	0.97
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	1	0.97
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	1	0.97
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	1	0.97
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	1	0.97
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	1	0.97
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	3	0.97
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	2	0.97
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	5	0.96
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	2	0.96
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	6	0.96
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	6	0.96
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	6	0.96
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	6	0.96
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	6	0.96
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	6	0.96
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	8	0.96
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	9	0.96
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	7	0.96
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	7	0.96

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	7	0.96
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	7	0.96
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	7	0.96
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	7	0.96
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	9	0.96
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	1	0.95
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	4	0.95
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	9	0.95
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	4	0.95
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	8	0.95
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	3	0.95
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	1	0.94
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	7	0.94
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	10	0.94
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	1	0.94
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	5	0.94
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	6	0.94
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	6	0.94
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	5	0.94
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	6	0.94
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	5	0.93
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	7	0.93
(1,64)	1:A:12:DG:H8	1:A:12:DG:H3'	2	0.93
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	7	0.93
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	4	0.93
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	4	0.93
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	4	0.93
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	4	0.93
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	4	0.93
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	4	0.93
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	6	0.93
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	2	0.93
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	7	0.93
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	4	0.93
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	4	0.93
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	9	0.92
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	8	0.92
(1,57)	1:A:1:DC:H6	1:A:1:DC:H3'	10	0.92
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	10	0.92
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	6	0.92
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	8	0.92
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	7	0.92

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	6	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	3	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	3	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	3	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	3	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	3	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	3	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	6	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	6	0.92
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	6	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	6	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	6	0.92
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	6	0.92
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	9	0.91
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	6	0.91
(1,63)	1:A:11:DC:H6	1:A:11:DC:H3'	8	0.91
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	3	0.91
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	6	0.91
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	7	0.91
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	2	0.91
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	10	0.91
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	7	0.91
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	7	0.91
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	7	0.91
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	7	0.91
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	7	0.91
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	7	0.91
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	1	0.91
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	1	0.91
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	4	0.91
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	4	0.91
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	9	0.91
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	9	0.91
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	7	0.91
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	7	0.91
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	3	0.9
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	3	0.9
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	3	0.9
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	4	0.9
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	7	0.9
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	6	0.9
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	2	0.89

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,82)	1:A:3:DC:H6	1:A:4:DG:H8	3	0.89
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	4	0.89
(1,60)	1:A:6:5HC:H6	1:A:6:5HC:H3'	7	0.89
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	10	0.89
(1,163)	1:B:13:DC:H2'	1:B:14:DG:H8	5	0.89
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	4	0.89
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	5	0.89
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	5	0.89
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	9	0.89
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	2	0.88
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	6	0.88
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	5	0.88
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	5	0.88
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	4	0.88
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	1	0.88
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	1	0.88
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	2	0.88
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	1	0.88
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	3	0.88
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	1	0.88
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	2	0.88
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	2	0.88
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	2	0.88
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	2	0.88
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	2	0.88
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	2	0.88
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	8	0.88
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	9	0.87
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	10	0.87
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	10	0.87
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	2	0.87
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	8	0.86
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	7	0.86
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	7	0.86
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	9	0.86
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	9	0.86
(1,135)	1:B:13:DC:H1'	1:B:13:DC:H6	8	0.86
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	10	0.86
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	6	0.86
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	10	0.86
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	3	0.85
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	2	0.85

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	10	0.85
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	10	0.85
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	10	0.85
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	10	0.85
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	10	0.85
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	10	0.85
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	10	0.85
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	1	0.85
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	3	0.85
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	4	0.85
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	8	0.85
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	8	0.85
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	8	0.85
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	8	0.85
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	8	0.85
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	8	0.85
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	7	0.85
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	7	0.85
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	2	0.85
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	10	0.85
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	7	0.84
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	4	0.84
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	6	0.84
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	5	0.84
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	5	0.84
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	9	0.84
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	5	0.84
(1,1)	1:A:1:DC:H1'	1:A:1:DC:H6	8	0.84
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	5	0.83
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	8	0.83
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	8	0.83
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	9	0.83
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	1	0.83
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	3	0.83
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	2	0.83
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	2	0.82
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	4	0.82
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	5	0.82
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	5	0.82
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	5	0.82
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	5	0.82
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	5	0.82

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	5	0.82
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	5	0.82
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	5	0.82
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	5	0.82
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	2	0.82
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	5	0.82
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	5	0.82
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	4	0.82
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	7	0.82
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H71	10	0.82
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H72	10	0.82
(1,126)	1:A:6:5HC:HN41	1:A:5:DT:H73	10	0.82
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H71	10	0.82
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H72	10	0.82
(1,126)	1:A:6:5HC:HN42	1:A:5:DT:H73	10	0.82
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	4	0.82
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	3	0.81
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	7	0.81
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	7	0.81
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	7	0.81
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	7	0.81
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	7	0.81
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	7	0.81
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	2	0.81
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	10	0.81
(1,198)	1:B:24:DG:H8	1:B:24:DG:H3'	10	0.81
(1,151)	1:B:19:DG:H1'	1:B:20:DA:H8	2	0.81
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	2	0.81
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	6	0.81
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	2	0.8
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	2	0.8
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	1	0.8
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	1	0.8
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	1	0.8
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	1	0.8
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	1	0.8
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	1	0.8
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	4	0.8
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	4	0.8
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	7	0.8
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	3	0.8
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	1	0.8

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	7	0.8
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	7	0.79
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	7	0.79
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H71	6	0.79
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H72	6	0.79
(1,260)	1:B:18:5HC:HN41	1:B:17:DT:H73	6	0.79
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H71	6	0.79
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H72	6	0.79
(1,260)	1:B:18:5HC:HN42	1:B:17:DT:H73	6	0.79
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	2	0.79
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	3	0.79
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	3	0.79
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	3	0.79
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	4	0.79
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	6	0.79
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	9	0.79
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	6	0.79
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	8	0.79
(1,94)	1:A:8:DA:H2	1:A:9:DC:H1'	7	0.78
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	4	0.78
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	8	0.78
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	9	0.78
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	5	0.78
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	5	0.78
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	4	0.78
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	5	0.78
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	6	0.78
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	6	0.78
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	6	0.78
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	6	0.78
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	6	0.78
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	6	0.78
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	3	0.77
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	7	0.77
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	8	0.77
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	3	0.77
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	7	0.77
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	4	0.77
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	4	0.77
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	4	0.77
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	4	0.77
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	4	0.77

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	4	0.77
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	5	0.77
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	6	0.77
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	7	0.77
(1,199)	1:B:13:DC:H3'	1:B:14:DG:H8	4	0.77
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	6	0.77
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	8	0.77
(1,168)	1:B:18:5HC:H2'	1:B:19:DG:H8	8	0.77
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	1	0.77
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	6	0.77
(1,122)	1:B:20:DA:H2	1:A:5:DT:H3	3	0.77
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	7	0.76
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	3	0.76
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	1	0.76
(1,34)	1:A:6:5HC:H2'	1:A:7:DG:H8	2	0.76
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	5	0.76
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	1	0.76
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	9	0.76
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	9	0.76
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	1	0.76
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	8	0.76
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	4	0.76
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	3	0.76
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	9	0.76
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	9	0.76
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	10	0.75
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	6	0.75
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	8	0.75
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	10	0.75
(1,169)	1:B:19:DG:H2'	1:B:20:DA:H8	2	0.75
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	5	0.75
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	3	0.75
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	2	0.75
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	10	0.74
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	4	0.74
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	4	0.74
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	6	0.74
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	8	0.74
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	9	0.74
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	4	0.74
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	4	0.74
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	4	0.74

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	4	0.74
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	4	0.74
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	4	0.74
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	10	0.74
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	10	0.74
(1,88)	1:A:9:DC:H6	1:A:10:DG:H8	10	0.73
(1,73)	1:A:4:DG:H8	1:A:4:DG:H4'	1	0.73
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	9	0.73
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	9	0.73
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	9	0.73
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	9	0.73
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	9	0.73
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	9	0.73
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	7	0.73
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	7	0.73
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	8	0.73
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	8	0.73
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	3	0.73
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	3	0.73
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	10	0.73
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	9	0.73
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	1	0.73
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	8	0.73
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	5	0.73
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	6	0.72
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	3	0.72
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	10	0.72
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	1	0.72
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	3	0.72
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	4	0.72
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	1	0.72
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	9	0.72
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	4	0.72
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	5	0.72
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	7	0.72
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	9	0.72
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	6	0.72
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	8	0.72
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	5	0.72
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	5	0.72
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	5	0.72
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	2	0.71

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	9	0.71
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	8	0.71
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	2	0.71
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	5	0.71
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	5	0.71
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	3	0.71
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	6	0.71
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	10	0.71
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	2	0.71
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	2	0.71
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	10	0.71
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	10	0.71
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	10	0.71
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	10	0.71
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	10	0.71
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	10	0.71
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	9	0.7
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	4	0.7
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	1	0.7
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	9	0.7
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	9	0.7
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	3	0.7
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	3	0.7
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	8	0.7
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	4	0.7
(1,92)	1:A:6:5HC:H1'	1:B:20:DA:H2	4	0.69
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	1	0.69
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	3	0.69
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	7	0.69
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	7	0.69
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	9	0.69
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	7	0.69
(1,226)	1:B:18:5HC:H1'	1:A:8:DA:H2	8	0.69
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	3	0.69
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	2	0.69
(1,207)	1:B:16:DG:H8	1:B:16:DG:H4'	10	0.69
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	6	0.69
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	2	0.69
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	2	0.69
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	2	0.69
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	10	0.69
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	10	0.69

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	6	0.69
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	7	0.68
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	10	0.68
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	10	0.68
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	10	0.68
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	3	0.68
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	3	0.68
(1,197)	1:B:23:DC:H6	1:B:23:DC:H3'	5	0.68
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	10	0.68
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	8	0.67
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	3	0.67
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	5	0.67
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	8	0.67
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	6	0.67
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	6	0.67
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	7	0.67
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	4	0.67
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	3	0.67
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	3	0.67
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	9	0.67
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	2	0.66
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	4	0.66
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	5	0.66
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	8	0.66
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	8	0.66
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	2	0.66
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	9	0.66
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	9	0.66
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	3	0.66
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	7	0.66
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	6	0.66
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	8	0.66
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	8	0.66
(1,105)	1:A:8:DA:H8	1:A:9:DC:H5	7	0.66
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	2	0.66
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	1	0.65
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	2	0.65
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	5	0.65
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	9	0.65
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	5	0.65
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	5	0.65
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	8	0.65

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	5	0.65
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	1	0.65
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	9	0.65
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	4	0.65
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	8	0.65
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	8	0.65
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	2	0.64
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	10	0.64
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	10	0.64
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	9	0.64
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	9	0.64
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	1	0.64
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	9	0.63
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	5	0.63
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	2	0.63
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	2	0.63
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	6	0.63
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	6	0.63
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	3	0.63
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	5	0.63
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	4	0.62
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	2	0.62
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	5	0.62
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	4	0.62
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	9	0.62
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	8	0.62
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	9	0.62
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	6	0.62
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	2	0.62
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	4	0.62
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	4	0.62
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	5	0.62
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	2	0.62
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	6	0.62
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	1	0.62
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	8	0.62
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	1	0.62
(1,16)	1:A:5:DT:H1'	1:A:6:5HC:H6	9	0.62
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	5	0.61
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	4	0.61
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	5	0.61
(1,236)	1:B:20:DA:H2'	1:B:21:DC:H5	2	0.61

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	9	0.61
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	3	0.61
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	4	0.61
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	7	0.61
(1,18)	1:A:8:DA:H1'	1:A:9:DC:H6	2	0.61
(1,139)	1:B:17:DT:H1'	1:B:17:DT:H6	9	0.61
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	3	0.61
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	3	0.61
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	3	0.61
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	3	0.61
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	3	0.61
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	3	0.61
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	5	0.61
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	1	0.6
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	6	0.6
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	10	0.6
(1,256)	1:A:8:DA:H2	1:B:17:DT:H3	10	0.6
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	3	0.6
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	3	0.6
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	8	0.6
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	3	0.6
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	9	0.6
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	2	0.6
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	5	0.6
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	10	0.6
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	9	0.6
(1,153)	1:B:21:DC:H1'	1:B:22:DG:H8	10	0.6
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	10	0.6
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	10	0.59
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	3	0.59
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	3	0.59
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	9	0.59
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	8	0.59
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	3	0.59
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	5	0.59
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	5	0.59
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	5	0.59
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	5	0.59
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	5	0.59
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	5	0.59
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	7	0.59
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	7	0.59

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,5)	1:A:5:DT:H1'	1:A:5:DT:H6	6	0.58
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H71	3	0.58
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H72	3	0.58
(1,261)	1:B:18:5HC:H5M1	1:B:17:DT:H73	3	0.58
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H71	3	0.58
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H72	3	0.58
(1,261)	1:B:18:5HC:H5M2	1:B:17:DT:H73	3	0.58
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	5	0.58
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	3	0.58
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	6	0.58
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	2	0.58
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	2	0.58
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	10	0.57
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	9	0.57
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	6	0.57
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	5	0.57
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	2	0.57
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	4	0.57
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	2	0.57
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	2	0.57
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	8	0.57
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	4	0.57
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	6	0.57
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	6	0.57
(1,76)	1:A:7:DG:H4'	1:A:8:DA:H8	8	0.56
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	3	0.56
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	4	0.56
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	10	0.56
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	6	0.56
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	10	0.56
(1,20)	1:A:10:DG:H1'	1:A:11:DC:H6	2	0.56
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	7	0.56
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	7	0.56
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	9	0.56
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	9	0.56
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	4	0.55
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	3	0.55
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	7	0.55
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	9	0.55
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	9	0.55
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	8	0.54
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	9	0.54

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	4	0.54
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	4	0.54
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	6	0.54
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	10	0.54
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	8	0.54
(1,33)	1:A:5:DT:H2'	1:A:6:5HC:H6	8	0.54
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	7	0.54
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	7	0.54
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	4	0.54
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	2	0.54
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	2	0.54
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	5	0.54
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	8	0.54
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	4	0.54
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	7	0.54
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	6	0.53
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	1	0.53
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	1	0.53
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	10	0.53
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	10	0.53
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	1	0.53
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	10	0.53
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	7	0.53
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	9	0.53
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	6	0.53
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	6	0.53
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	8	0.52
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	3	0.52
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	8	0.52
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	1	0.52
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	7	0.52
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	5	0.52
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	5	0.52
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	5	0.52
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	6	0.52
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	1	0.52
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	1	0.52
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	1	0.52
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	1	0.52
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	1	0.52
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	1	0.52
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	1	0.52

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	1	0.52
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	9	0.51
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	9	0.51
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	3	0.51
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	9	0.51
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	7	0.51
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	8	0.51
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	6	0.51
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	5	0.51
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	6	0.5
(1,203)	1:B:13:DC:H6	1:B:13:DC:H4'	7	0.5
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	2	0.5
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	7	0.5
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	1	0.5
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	3	0.5
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	8	0.5
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	8	0.5
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	5	0.49
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	7	0.49
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	9	0.49
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	8	0.49
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	7	0.49
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	6	0.49
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	8	0.49
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	8	0.48
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	6	0.48
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	6	0.48
(1,249)	1:B:23:DC:H41	1:A:2:DG:H1	10	0.48
(1,249)	1:B:23:DC:H42	1:A:2:DG:H1	10	0.48
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	9	0.48
(1,232)	1:B:14:DG:H2'	1:B:15:DC:H5	2	0.48
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	9	0.48
(1,222)	1:B:21:DC:H6	1:B:22:DG:H8	5	0.48
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	2	0.48
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	10	0.48
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	5	0.48
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	6	0.48
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	6	0.48
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	8	0.48
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	8	0.48
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	3	0.48
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	1	0.47

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	8	0.47
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	8	0.47
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	7	0.47
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	7	0.47
(1,241)	1:B:22:DG:H1'	1:B:23:DC:H5	10	0.47
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	3	0.47
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	8	0.47
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	4	0.47
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	4	0.47
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	1	0.47
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	1	0.47
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	1	0.46
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	5	0.46
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	1	0.46
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	2	0.46
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	2	0.46
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	5	0.46
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	2	0.46
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	8	0.46
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	6	0.46
(1,87)	1:A:8:DA:H8	1:A:9:DC:H6	1	0.45
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	10	0.45
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	5	0.45
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	1	0.45
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	1	0.45
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	1	0.44
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	1	0.44
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	7	0.44
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	7	0.44
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	8	0.44
(1,227)	1:B:20:DA:H1'	1:B:20:DA:H2	7	0.44
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	5	0.44
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	3	0.44
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	3	0.44
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	7	0.43
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	9	0.43
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	1	0.43
(1,239)	1:B:20:DA:H8	1:B:21:DC:H5	1	0.43
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	7	0.43
(1,209)	1:B:19:DG:H8	1:B:19:DG:H4'	2	0.43
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	10	0.43
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	2	0.43

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,154)	1:B:22:DG:H1'	1:B:23:DC:H6	10	0.43
(1,138)	1:B:16:DG:H1'	1:B:16:DG:H8	10	0.43
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	10	0.42
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	2	0.42
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	6	0.42
(1,183)	1:B:13:DC:H2'	1:B:14:DG:H8	8	0.42
(1,183)	1:B:13:DC:H2''	1:B:14:DG:H8	8	0.42
(1,150)	1:B:17:DT:H1'	1:B:18:5HC:H6	6	0.42
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	10	0.42
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	10	0.42
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	10	0.41
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	10	0.41
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	4	0.41
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	4	0.41
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	4	0.41
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	4	0.41
(1,238)	1:B:20:DA:H1'	1:B:21:DC:H5	4	0.41
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	2	0.41
(1,102)	1:A:8:DA:H2'	1:A:9:DC:H5	10	0.41
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	1	0.4
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	2	0.4
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	1	0.4
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	1	0.4
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	9	0.4
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	5	0.4
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	2	0.4
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	6	0.4
(1,116)	1:A:3:DC:H41	1:B:22:DG:H1	3	0.4
(1,116)	1:A:3:DC:H42	1:B:22:DG:H1	3	0.4
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	3	0.4
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	3	0.4
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	2	0.4
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	2	0.4
(1,93)	1:A:8:DA:H1'	1:A:8:DA:H2	6	0.39
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	4	0.39
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	10	0.39
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	3	0.39
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H71	9	0.39
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H72	9	0.39
(1,127)	1:A:6:5HC:H5M1	1:A:5:DT:H73	9	0.39
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H71	9	0.39
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H72	9	0.39

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,127)	1:A:6:5HC:H5M2	1:A:5:DT:H73	9	0.39
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	10	0.39
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	10	0.39
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	10	0.39
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	7	0.39
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	7	0.39
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	1	0.38
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	9	0.38
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	4	0.38
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	4	0.38
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	5	0.38
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	6	0.38
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	6	0.38
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	8	0.38
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	8	0.38
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	9	0.38
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	4	0.38
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	1	0.37
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	6	0.37
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	6	0.37
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	4	0.37
(1,156)	1:B:14:DG:H8	1:B:14:DG:H2'	2	0.37
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	10	0.37
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	5	0.37
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	10	0.37
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	10	0.37
(1,89)	1:A:10:DG:H8	1:A:11:DC:H6	5	0.36
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	3	0.36
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	1	0.36
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	8	0.36
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	2	0.36
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	9	0.36
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	5	0.36
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	5	0.36
(1,81)	1:A:2:DG:H8	1:A:3:DC:H6	7	0.35
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	7	0.35
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	3	0.35
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	3	0.35
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	3	0.35
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	3	0.35
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	9	0.35
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	7	0.35

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	4	0.35
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	1	0.35
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	1	0.35
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	7	0.35
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	7	0.35
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	7	0.34
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	10	0.34
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	6	0.34
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	6	0.34
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	7	0.34
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	1	0.34
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	7	0.34
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	6	0.33
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	6	0.33
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	6	0.33
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	10	0.33
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	2	0.33
(1,215)	1:B:14:DG:H8	1:B:15:DC:H6	10	0.33
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	2	0.33
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	10	0.33
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	10	0.33
(1,15)	1:A:3:DC:H1'	1:A:4:DG:H8	8	0.33
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	10	0.33
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	7	0.32
(1,38)	1:A:11:DC:H2'	1:A:12:DG:H8	2	0.32
(1,35)	1:A:7:DG:H2'	1:A:8:DA:H8	5	0.32
(1,267)	1:A:9:DC:H41	1:B:16:DG:H1	4	0.32
(1,267)	1:A:9:DC:H42	1:B:16:DG:H1	4	0.32
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	9	0.32
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	9	0.32
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	1	0.32
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	2	0.32
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	2	0.32
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	4	0.32
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	10	0.32
(1,149)	1:B:15:DC:H1'	1:B:16:DG:H8	3	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	1	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	1	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	1	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	6	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	6	0.32
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	6	0.32

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	9	0.31
(1,75)	1:A:7:DG:H8	1:A:7:DG:H4'	5	0.31
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	6	0.31
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	5	0.31
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	5	0.31
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	7	0.31
(1,4)	1:A:4:DG:H1'	1:A:4:DG:H8	1	0.31
(1,25)	1:A:8:DA:H8	1:A:8:DA:H2'	10	0.31
(1,183)	1:B:13:DC:H2'	1:B:14:DG:H8	3	0.31
(1,183)	1:B:13:DC:H2''	1:B:14:DG:H8	3	0.31
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	8	0.31
(1,17)	1:A:7:DG:H1'	1:A:8:DA:H8	4	0.31
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	4	0.31
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	4	0.3
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	9	0.3
(1,166)	1:B:16:DG:H2'	1:B:17:DT:H6	1	0.3
(1,153)	1:B:21:DC:H1'	1:B:22:DG:H8	8	0.3
(1,13)	1:A:1:DC:H1'	1:A:2:DG:H8	3	0.3
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	9	0.3
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	9	0.3
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	9	0.3
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	4	0.29
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	6	0.29
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	6	0.29
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	6	0.29
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	10	0.29
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	2	0.28
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	2	0.28
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	2	0.28
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	6	0.28
(1,65)	1:A:1:DC:H3'	1:A:2:DG:H8	2	0.28
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	8	0.28
(1,250)	1:B:15:DC:H41	1:A:10:DG:H1	1	0.28
(1,250)	1:B:15:DC:H42	1:A:10:DG:H1	1	0.28
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	3	0.28
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	8	0.28
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	4	0.27
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	2	0.27
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	3	0.27
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	3	0.27
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	3	0.27
(1,219)	1:B:18:5HC:H6	1:B:19:DG:H8	2	0.27

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	9	0.27
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	9	0.27
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	7	0.27
(1,14)	1:A:2:DG:H1'	1:A:3:DC:H6	2	0.27
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	5	0.27
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	5	0.27
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	5	0.27
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	5	0.27
(1,112)	1:A:1:DC:H41	1:B:24:DG:H1	5	0.27
(1,112)	1:A:1:DC:H42	1:B:24:DG:H1	5	0.27
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	3	0.27
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	3	0.27
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'''	3	0.27
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	10	0.26
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	3	0.26
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	3	0.26
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	1	0.26
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	1	0.26
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	4	0.26
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	5	0.26
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	10	0.26
(1,98)	1:A:2:DG:H2'	1:A:3:DC:H5	6	0.25
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	6	0.25
(1,69)	1:A:1:DC:H6	1:A:1:DC:H4'	5	0.25
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	7	0.25
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	7	0.25
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	7	0.25
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	7	0.25
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	8	0.25
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	8	0.25
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	8	0.25
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	8	0.25
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'''	8	0.25
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	3	0.25
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	10	0.25
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	1	0.25
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	1	0.25
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'''	5	0.25
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''''	5	0.25
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	6	0.25
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	3	0.24
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	8	0.24

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	8	0.24
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	5	0.24
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	7	0.24
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	1	0.24
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	1	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	1	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	1	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	7	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	7	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	7	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	8	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	8	0.23
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	8	0.23
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	8	0.23
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	6	0.23
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	9	0.23
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	2	0.23
(1,26)	1:A:10:DG:H8	1:A:10:DG:H2'	5	0.23
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	3	0.23
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	3	0.23
(1,246)	1:B:13:DC:H41	1:A:12:DG:H1	2	0.23
(1,246)	1:B:13:DC:H42	1:A:12:DG:H1	2	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	1	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	1	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	1	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	9	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	9	0.23
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	9	0.23
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	9	0.23
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	1	0.23
(1,156)	1:B:14:DG:H8	1:B:14:DG:H2'	5	0.23
(1,156)	1:B:14:DG:H8	1:B:14:DG:H2'	7	0.23
(1,107)	1:A:10:DG:H1'	1:A:11:DC:H5	2	0.23
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	9	0.23
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	2	0.22
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	3	0.22
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	3	0.22
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	3	0.22
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	2	0.22
(1,21)	1:A:1:DC:H6	1:A:1:DC:H2'	2	0.22
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	5	0.21
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	3	0.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,32)	1:A:4:DG:H2'	1:A:5:DT:H6	9	0.21
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	9	0.21
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	9	0.21
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	9	0.21
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	8	0.21
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	3	0.21
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	3	0.21
(1,204)	1:B:14:DG:H8	1:B:14:DG:H4'	5	0.21
(1,170)	1:B:21:DC:H2'	1:B:22:DG:H8	4	0.21
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	2	0.21
(1,115)	1:A:11:DC:H41	1:B:14:DG:H1	4	0.21
(1,115)	1:A:11:DC:H42	1:B:14:DG:H1	4	0.21
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	4	0.21
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	4	0.21
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	4	0.21
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	2	0.21
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	6	0.2
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	1	0.2
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	8	0.2
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	8	0.2
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	8	0.2
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	8	0.2
(1,25)	1:A:8:DA:H8	1:A:8:DA:H2'	1	0.2
(1,242)	1:B:22:DG:H8	1:B:23:DC:H5	4	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	1	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	1	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	1	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	2	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	2	0.2
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	2	0.2
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	9	0.2
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	8	0.2
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	2	0.2
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	7	0.2
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2''	9	0.2
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	9	0.2
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	2	0.2
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	2	0.2
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	2	0.2
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	2	0.2
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	8	0.2
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	8	0.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	8	0.2
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	8	0.2
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	5	0.19
(1,242)	1:B:22:DG:H8	1:B:23:DC:H5	5	0.19
(1,208)	1:B:17:DT:H6	1:B:17:DT:H4'	4	0.19
(1,204)	1:B:14:DG:H8	1:B:14:DG:H4'	4	0.19
(1,187)	1:B:17:DT:H2'	1:B:18:5HC:H6	2	0.19
(1,187)	1:B:17:DT:H2''	1:B:18:5HC:H6	2	0.19
(1,165)	1:B:15:DC:H2'	1:B:16:DG:H8	2	0.19
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	3	0.18
(1,49)	1:A:1:DC:H2'	1:A:2:DG:H8	10	0.18
(1,49)	1:A:1:DC:H2''	1:A:2:DG:H8	10	0.18
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	4	0.18
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	10	0.18
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	10	0.18
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	10	0.18
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	10	0.18
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	5	0.18
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	8	0.18
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	4	0.18
(1,133)	1:B:21:DC:H41	1:A:4:DG:H1	5	0.18
(1,133)	1:B:21:DC:H42	1:A:4:DG:H1	5	0.18
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	2	0.18
(1,85)	1:A:6:5HC:H6	1:A:7:DG:H8	10	0.17
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5'	10	0.17
(1,206)	1:B:16:DG:H8	1:B:16:DG:H5''	10	0.17
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	8	0.17
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	8	0.17
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	8	0.17
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	4	0.16
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	4	0.16
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	4	0.16
(1,74)	1:A:5:DT:H6	1:A:5:DT:H4'	8	0.16
(1,49)	1:A:1:DC:H2'	1:A:2:DG:H8	1	0.16
(1,49)	1:A:1:DC:H2''	1:A:2:DG:H8	1	0.16
(1,36)	1:A:9:DC:H2'	1:A:10:DG:H8	10	0.16
(1,27)	1:A:11:DC:H6	1:A:11:DC:H2'	5	0.16
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	4	0.16
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2'	4	0.16
(1,245)	1:B:23:DC:H5	1:B:23:DC:H2''	4	0.16
(1,223)	1:B:22:DG:H8	1:B:23:DC:H6	10	0.16
(1,204)	1:B:14:DG:H8	1:B:14:DG:H4'	8	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,204)	1:B:14:DG:H8	1:B:14:DG:H4'	10	0.16
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	3	0.16
(1,172)	1:B:23:DC:H2'	1:B:24:DG:H8	6	0.16
(1,38)	1:A:11:DC:H2'	1:A:12:DG:H8	10	0.15
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	1	0.15
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	1	0.15
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	1	0.15
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	1	0.15
(1,159)	1:B:20:DA:H8	1:B:20:DA:H2'	3	0.15
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	9	0.14
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2''	9	0.14
(1,95)	1:A:1:DC:H5	1:A:1:DC:H2'	9	0.14
(1,70)	1:A:2:DG:H8	1:A:2:DG:H4'	8	0.14
(1,49)	1:A:1:DC:H2'	1:A:2:DG:H8	7	0.14
(1,49)	1:A:1:DC:H2''	1:A:2:DG:H8	7	0.14
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2'	9	0.14
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2''	9	0.14
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2'	3	0.14
(1,175)	1:B:15:DC:H6	1:B:15:DC:H2''	3	0.14
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	3	0.14
(1,171)	1:B:22:DG:H2'	1:B:23:DC:H6	6	0.14
(1,153)	1:B:21:DC:H1'	1:B:22:DG:H8	4	0.14
(1,125)	1:A:6:5HC:HN41	1:B:19:DG:H1	5	0.14
(1,125)	1:A:6:5HC:HN42	1:B:19:DG:H1	5	0.14
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	7	0.14
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	10	0.14
(1,29)	1:A:1:DC:H2'	1:A:2:DG:H8	2	0.13
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	4	0.13
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	4	0.13
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	6	0.13
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	3	0.13
(1,183)	1:B:13:DC:H2'	1:B:14:DG:H8	2	0.13
(1,183)	1:B:13:DC:H2''	1:B:14:DG:H8	2	0.13
(1,153)	1:B:21:DC:H1'	1:B:22:DG:H8	5	0.13
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	4	0.13
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	4	0.13
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	4	0.13
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	4	0.13
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	6	0.12
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M1	5	0.12
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M1	5	0.12
(1,262)	1:B:18:5HC:HN41	1:B:18:5HC:H5M2	5	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,262)	1:B:18:5HC:HN42	1:B:18:5HC:H5M2	5	0.12
(1,259)	1:B:18:5HC:HN41	1:A:7:DG:H1	7	0.12
(1,259)	1:B:18:5HC:HN42	1:A:7:DG:H1	7	0.12
(1,242)	1:B:22:DG:H8	1:B:23:DC:H5	6	0.12
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	6	0.12
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2''	6	0.12
(1,229)	1:B:13:DC:H5	1:B:13:DC:H2'	6	0.12
(1,221)	1:B:20:DA:H8	1:B:21:DC:H6	1	0.12
(1,211)	1:B:20:DA:H8	1:B:20:DA:H4'	10	0.12
(1,210)	1:B:19:DG:H4'	1:B:20:DA:H8	8	0.12
(1,21)	1:A:1:DC:H6	1:A:1:DC:H2'	5	0.12
(1,205)	1:B:15:DC:H6	1:B:15:DC:H4'	1	0.12
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	8	0.12
(1,155)	1:B:13:DC:H6	1:B:13:DC:H2'	7	0.12
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	6	0.12
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	6	0.12
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	6	0.12
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	6	0.12
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	6	0.12
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M1	9	0.12
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M1	9	0.12
(1,128)	1:A:6:5HC:HN41	1:A:6:5HC:H5M2	9	0.12
(1,128)	1:A:6:5HC:HN42	1:A:6:5HC:H5M2	9	0.12
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	5	0.12
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2'	5	0.12
(1,111)	1:A:11:DC:H5	1:A:11:DC:H2''	5	0.12
(1,104)	1:A:8:DA:H1'	1:A:9:DC:H5	8	0.12
(1,77)	1:A:8:DA:H8	1:A:8:DA:H4'	2	0.11
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5'	10	0.11
(1,72)	1:A:4:DG:H8	1:A:4:DG:H5''	10	0.11
(1,71)	1:A:3:DC:H6	1:A:3:DC:H4'	1	0.11
(1,49)	1:A:1:DC:H2'	1:A:2:DG:H8	6	0.11
(1,49)	1:A:1:DC:H2''	1:A:2:DG:H8	6	0.11
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2'	2	0.11
(1,41)	1:A:3:DC:H6	1:A:3:DC:H2''	2	0.11
(1,37)	1:A:10:DG:H2'	1:A:11:DC:H6	5	0.11
(1,31)	1:A:3:DC:H2'	1:A:4:DG:H8	9	0.11
(1,27)	1:A:11:DC:H6	1:A:11:DC:H2'	1	0.11
(1,26)	1:A:10:DG:H8	1:A:10:DG:H2'	1	0.11
(1,25)	1:A:8:DA:H8	1:A:8:DA:H2'	8	0.11
(1,19)	1:A:9:DC:H1'	1:A:10:DG:H8	6	0.11
(1,155)	1:B:13:DC:H6	1:B:13:DC:H2'	8	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,147)	1:B:13:DC:H1'	1:B:14:DG:H8	4	0.11
(1,14)	1:A:2:DG:H1'	1:A:3:DC:H6	3	0.11
(1,125)	1:A:6:5HC:HN41	1:B:19:DG:H1	6	0.11
(1,125)	1:A:6:5HC:HN42	1:B:19:DG:H1	6	0.11
(1,108)	1:A:10:DG:H8	1:A:11:DC:H5	1	0.11

10 Dihedral-angle violation analysis

No dihedral-angle restraints found