

SUPPLEMENTARY MATERIAL

Table S1. Sugar-phosphate torsion angles, glycosidic angles (°) and furanose conformations^a

	α P-O5'	β O5'-C5'	γ C5'-C4'	δ C4'-C3'	ϵ C3'-O3'	ζ O3'-P	χ C1'-N	P	τ_m	Pucker
C1			77	84	-157	-74	-134	16	29	C3'-endo
G2	-178	177	-170	143	-178	-84	-111	203	32	C3'-exo
T3	-71	-165	40	150	-136	-174	-81	179	42	C2'-endo
A4	-59	151	48	140	178	-88	-94	188	29	C3'-exo
C5	-79	176	59	135	-145	-154	-92	156	40	C2'-endo
G6	67	163	-71	149			-65	201	33	C3'-exo
B-DNA ^b	-62	B _I 176 B _{II} 146	48	B _I 128 B _{II} 144	B _I -176 B _{II} -114	B _I -95 B _{II} 174	B _I R -102 B _I Y -119 B _{II} -89	160	35	C2'-endo

^aAll parameters were calculated using the Curves 5.2 program (19).^bAverage values for B-DNA taken from Schneider *et al.* (22). P is the pseudorotation phase angle, τ_m is the pseudorotation amplitude, B_I and B_{II} are different phosphate conformations.**Table S2.** Geometrical properties of base pair steps and base pairs^a

Base pair	Step	Shift (Å)	Slide (Å)	Rise (Å)	Tilt (°)	Roll (°)	Twist (°)	Propeller twist (°)	Buckle (°)
C1-G6								-12	3.0
	1	0.2	0.1	7.1	-2.2	4.0	26		
G2-C5								-2	-7.5
	2	-0.6	-0.7	3.2	-0.1	3.8	28		
T3-A4								-11	2.6
	3	0.0	0.7	3.3	0.0	-4.2	47		
A4-T3									
B-DNA ^b		0	0	3.4	2	1	36	-11	

^aAll parameters were calculated using the Curves 5.2 program (19).^bAverage values for B-DNA taken from Neidle (21).