

Table S1. Measured thermodynamic values from DSC analysis^a of short duplex DNA samples used to generate figures 3 & 4.

Sequence	C_T μM	Na^+ mM	ΔC_p cal/mol K	ΔH° kcal/mol	T_m $^\circ\text{C}$
ctggagc	100	1022	418	46.2	40.6
agacctagt	100	1022	440	56.0	46.2
aaatagagaattc	75	1022	610	88.9	52.8
ccatgtccc	100	1022	509	65.9	53.4
gaaacagttaag	75	1022	474	96.6	56.1
ttcttatagatacaag	50	1022	504	113.6	57.8
gatctgaggtact	75	1022	523	98.4	62.5
agtagtaatcacacc	50	1022	645	117.1	64.9
gcatgcccgtgacac	50	1022	650	129.0	76.2
acgcttgtaacactagt	50	1022	534	134.2	70.7
caaagttcacccaggaaca	50	1022	550	153.8	75.2
tcagatccgaggaacggt	50	1022	657	147.4	76.3
ccgcactggacgcc	50	1022	735	122.1	77.8
aactatgaaact	75	1022	516	81.9	52.9
		272	595	80.3	46.9
		72	629	78.6	38.5
ctcggaacgcc	75	1022	519	100.1	71.2
		272	433	98.5	67.5
		72	523	94.9	59.8
ggaacaagatgc	75	1022	604	93.8	61.3
		272	623	93.9	56.4
	75	72	663	91.0	48.3

^aReported values of ΔC_p , ΔH° , T_m are determined from an average of two-state and calorimetric DSC analysis. Estimated errors for thermodynamic values as stated in Materials and Methods.