

**Table 2S. The  $T_m$  of DNA in complex with protein.**

	$T_m$ of the DNA ( $^{\circ}\text{C}$ )
(GCGATCGC) <sub>2</sub>	34.2
Wt-Sac7d-DNA	64.2
M29F-DNA	48.6
V26F/M29F-DNA	58.5

Thermal denaturation of DNA (GCGATCGC)<sub>2</sub> (80  $\mu\text{M}$  bases) alone and saturated with 400  $\mu\text{M}$  protein monitored by the change in UV absorbance at 260 nm in pH 7.4, 20mM Tris-Cl buffer. In the presence of protein, the DNA melting temperature was increased  $\sim 30$   $^{\circ}\text{C}$  above that of DNA alone.