Supplemental Material for

"Effect of Protein Binding on Ultrafast DNA Dynamics: Characterization of a DNA:APE1 Complex"

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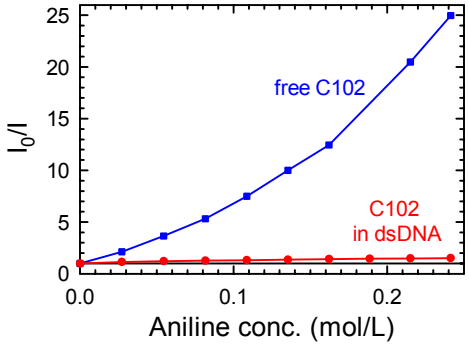

Fig. S1. Stern-Volmer plot of the quenching of coumarin fluorescence by aniline when the coumarin is free in solution (blue squares) and when the coumarin is covalently bound within an oligonucleotide (red circles). In the oligonucleotide, the coumarin is effectively shielded from the solvent, preventing quenching by the aniline. The vertical axis gives the ratio of the integrated fluorescence intensity without aniline to the intensity with aniline. The solutions were buffered at pH 10.2 with $NaHCO_3/Na_2CO_3$ to avoid protonation of the aniline.