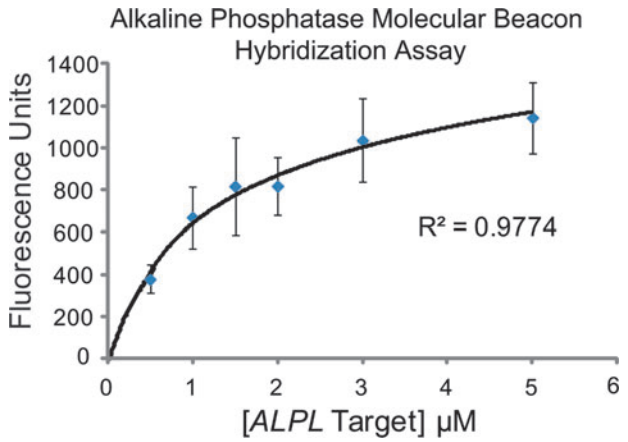

SUPPLEMENTARY FIG. S1. Molecular beacon hybridization efficiency was evaluated by exposing a 5 µM concentration of alkaline phosphatase (*ALPL*) beacon to stepwise increases in target sequence. As expected, at lower concentrations, fluorescence intensity increased rapidly, while at the highest concentration, the binding was saturated ($R^2 = 0.9774$). Beacon fluorescence increased steadily with target concentration, indicating that the beacon readily unfolds and binds to the target. The data suggest that at target concentrations higher than 5 µM, a saturation of binding would occur. These concentrations are $\sim 1 \times 10^8$ times higher than intracellular concentrations of up-regulated mRNA. Mean ± standard deviation.