



SUPPLEMENTARY FIG. S1. Molecular beacon hybridization efficiency was evaluated by exposing a 5 μM concentration of 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 upregulated mRNA.