Supporting Information

An Aptamer-Tethered, DNAzyme-Embedded Molecular Beacon for Simultaneous Detection and Regulation of Tumor-related Genes in Living Cells

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Figure S1. The secondary structures of (A) AMB and (B) ADB sensors.

Figure S2. A comparison of AMB sensor performance in buffer and biological samples.
**Figure S3.** The fluorescence image of A549 cells with 0.5 μM sgc8 aptamer-functionalized MB for 2 h. The scar bar, 40 μm.
Figure S4. (A) The fluorescence image of A549 cells and MCF-7 cells treated with 0.5 μM AMB for 2 h. (B) Relative fluorescent intensity quantified from A. (C) A comparison of miR21 level in A549 and MCF-7 cells quantified by RT-PCR.