Supporting Information

Nonbiodegradable Spiegelmer-Driven Colorimetric Biosensor for Bisphenol A Detection

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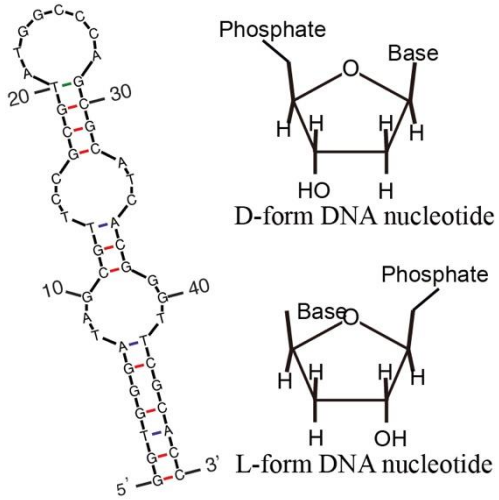

aptamer	sequence
D-T4	5′-GGTGGGATAGCGTTCCGCGTATGGCCCAGCGCATCACGGGTTCGCACC-3'
L-T4	5′-*GGTGGGATAGCGTTCCGCGTATGGCCCAGCGCATCACGGGTTCGCACC*-3'
oligo dT	5'-TTTTTTTTTTTTTTT-3'
TATA dsDNA	5'-GGGAATTCGGGCTATAAAAGGGGGATCCGG-3′ 3'-CCCTTAAGCCCGATATTTTCCCCCTAGGCC-5'

Figure S-1. An aptamer against BPA (D-T4) and its sequence were designed by our previous paper [18]. L-form aptamer (L-T4) was synthesized based on D-T4 aptamer. Negative controlled nucleic acid such as oligo dT and TATA dsDNA) were synthesized and their sequence were also printed. The secondary structures of the aptamer and spiegelmer were predicted by *Mfold.* The nucleotides are numbered every 10 bases, and the 5’ and 3’ termini are labeled. The aptamer and spiegelmer share the same nucleotide sequence (left) but differ in terms of sugar backbone structure (right).

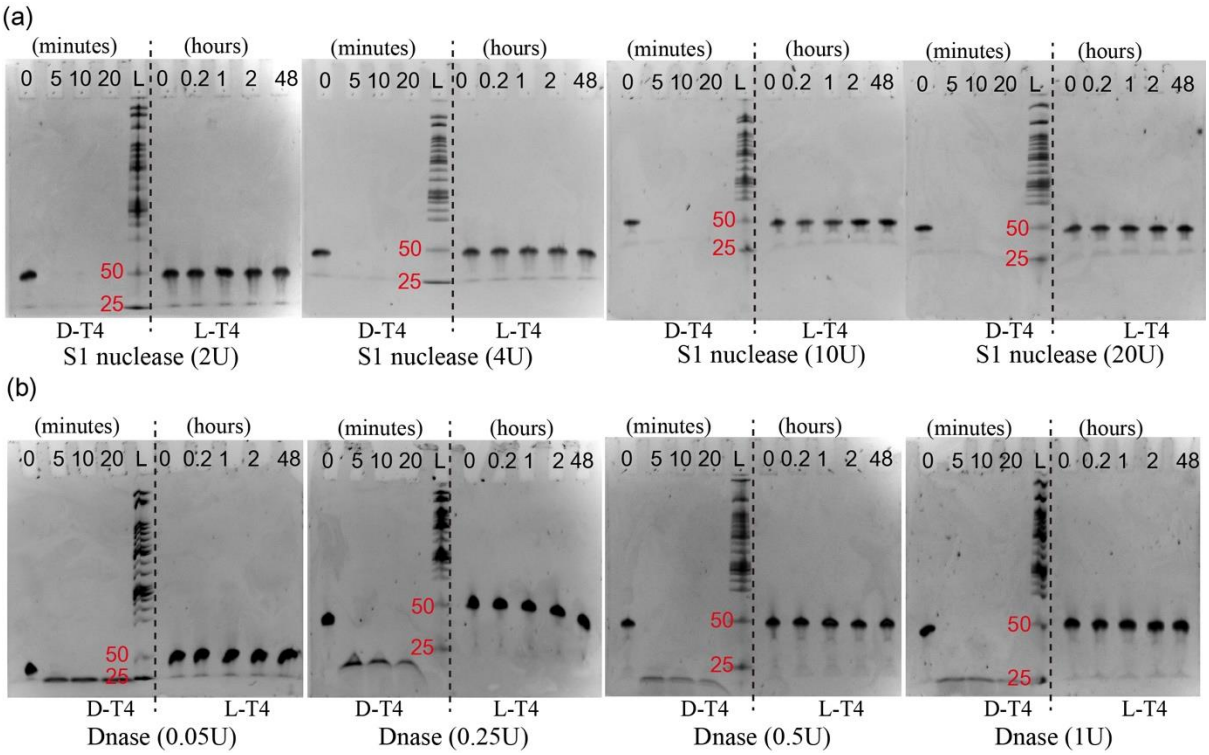

Figure S-2 a) The stability test of L-4 aptamer against S-1 nuclease units at 2U, 4U, 10U, and 20U, respectively. b) The stability test of L-4 aptamer against TURBO^{TM} DNase units at 0.05U, 0.25U, 0.5U, and 1U, respectively.

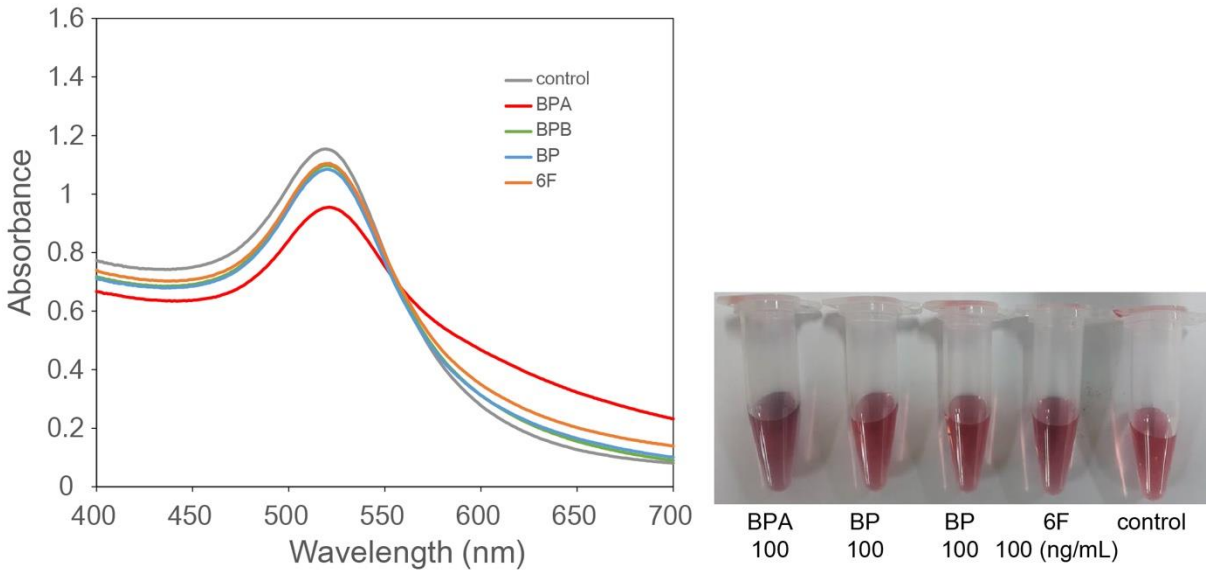

Figure S-3. The specificity of L-T4 with BPA analogs (BPB, BP and 6F) at 100 ng/ml for a AuNP-based assay. An image of the color change for the L-T4-AuNP specificity assays were presented on the right side of the figure.