Electronic Supplementary Material (ESI) for Analyst.

A label-free fluorescence aptasensor based on HCR and G-quadruplex DNAzyme for the detection of prostate-specific antigen

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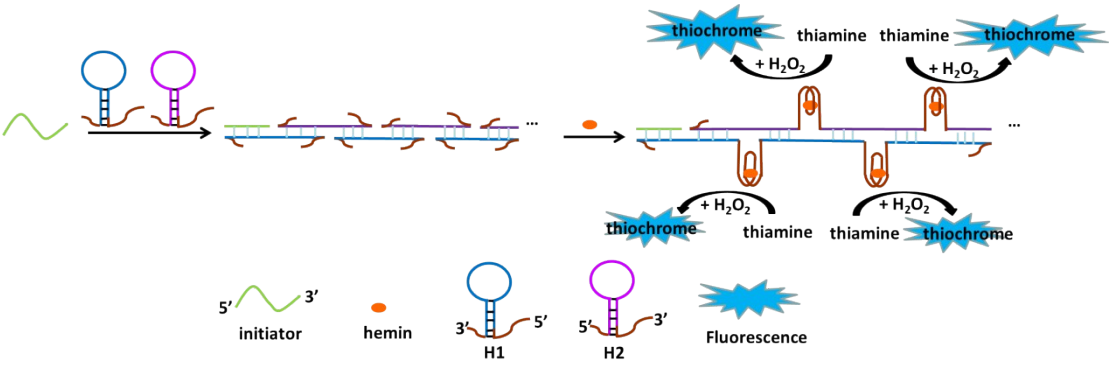

Figure S1. Scheme for the formation of the hemin/G-quadruplex DNAzyme triggered by the initiator.

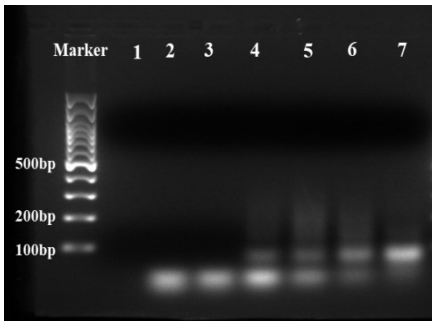

Figure S2. Agarose gel electrophoresis verification of the cascaded quadratic amplification process induced by the initiator. Lane 1: 0.5 μM initiator, Lane 2: 0.5 μM H1, Lane 3: 0.5 μM H2, Lane 4: 0.5 μM H1 + 0.5 μM H2, Lane 5: 0.25 μM initiator + 0.5 μM H1 + 0.5 μM H2, Lane 6: 0.5 μM initiator + 0.5 μM H1 + 0.5 μM H2, Lane 7: 1 μM initiator + 0.5 μM H1 + 0.5 μM H2.

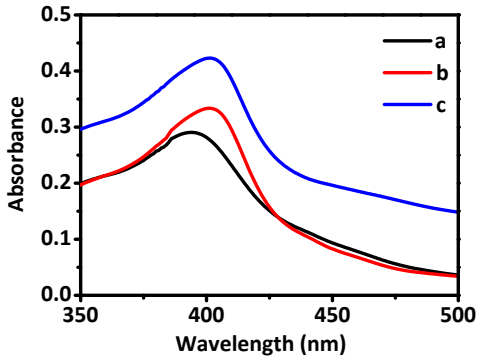

Figure S3. UV–vis spectra of the hemin at different conditions. (a) 5 μM hemin, (b) 0.5 μM H1 + 0.5 μM H2 + 5 μM hemin, (c) 1 μM initiator + 0.5 μM H1 + 0.5 μM H2 + 5μM hemin.

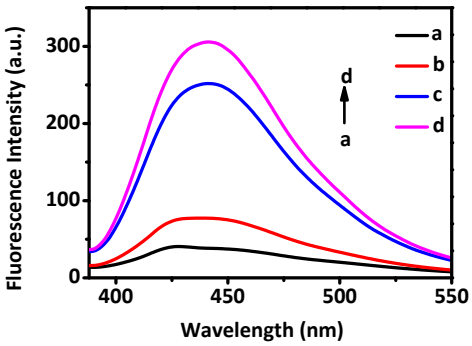

Figure S4. Fluorescence spectra of thiamine at different conditions. (a) 5 mM thiamine, (b) 5 mM thiamine + 25 mM H_2O_2, (c) 0.5μM hemin + 5 mM thiamine + 25 mM H_2O_2, (d) 100 nM initiator + 50 nM H1 + 50 nM H2 + 0.5 μM hemin + 5 mM thiamine + 25 mM H_2O_2.