Supplementary Material

Fluorescent aptasensor with product-triggered amplification by exonuclease III digestion for highly sensitive ATP detection

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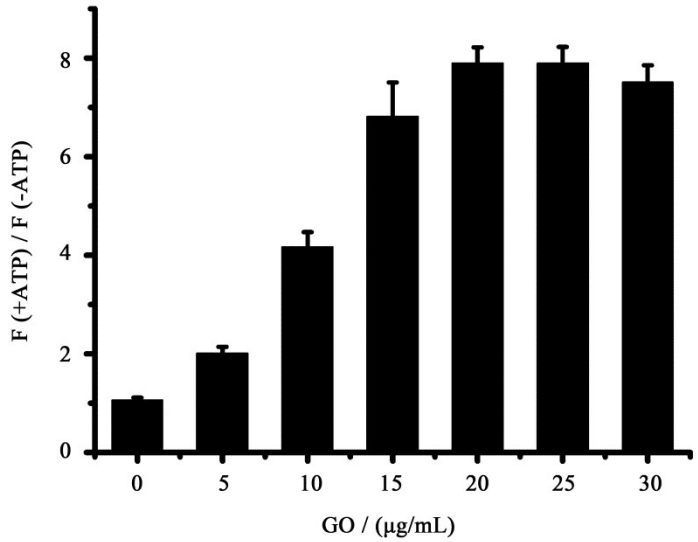

Fig. S1 Optimization the amount of graphene oxide (GO) in the system. After treated by Exo III both in the presence and absence of 100 μM ATP, the probe was incubated with different concentrations of GO (0, 5, 10, 15, 20, 25, 30 μg/mL) for 15 min. The ratio F(+ATP)/F(-ATP) was calculated for the GO amount optimization.

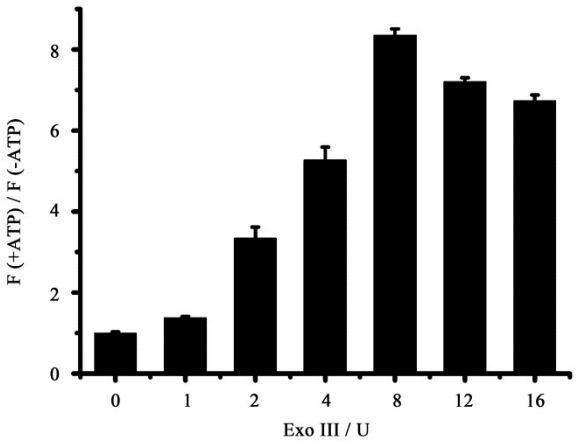

Fig. S2 Optimization of the amount of Exonuclease III (Exo III) for ATP detection. The assay probe was incubated with 100 μM ATP followed by the treatment with different amount of Exo III (0, 1, 2, 4, 8, 12, 16 U) in 20 μL of NEBuffer 1 at room temperature for 30 min. For each group, 8ul of graphene oxide (0.5 mg/mL) was added for quenching the fluorescent labeled in the probe.

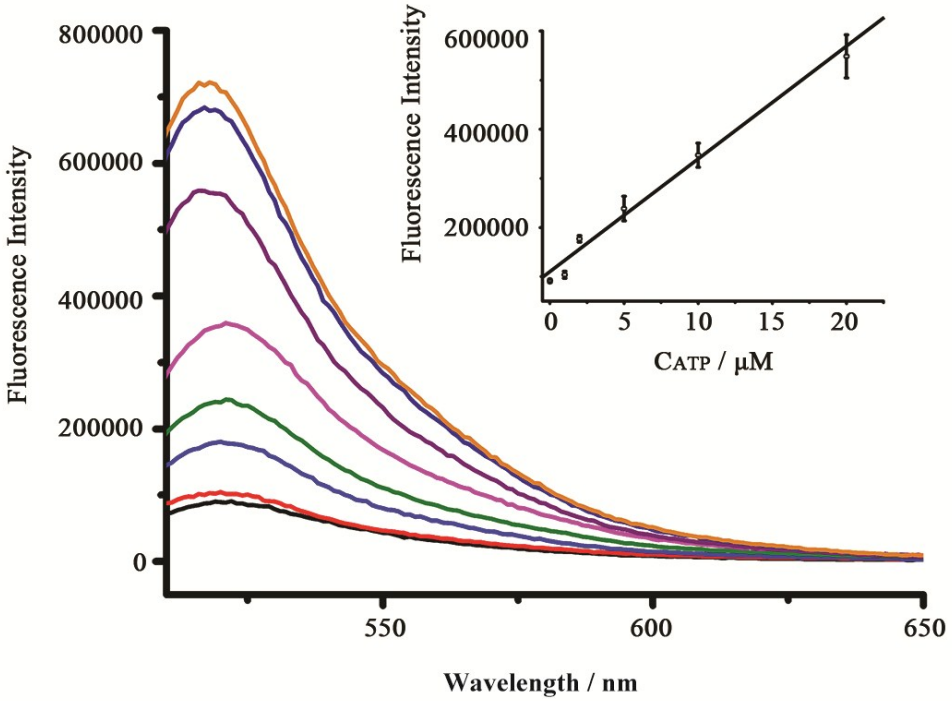

Fig. S3 Fluorescence emission spectra of the control probe with a series concentration of ATP (from down to top: 0, 1, 2, 5, 10, 20, 50, 100 μM) after incubation at 25 °C for 30 min. The inset shows a linear relationship between the peak fluorescent intensities (517 nM) and the ATP concentrations range from 0 to 20 μM.