## Supplementary Data for

## An Ultrasensitive Fluorescent Aptasensor for Detection of Cancer Marker Protein Based on Graphene Oxide-ssDNA

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Figure S1. Optimization of condition of the fluorescent aptasensor.

(a) Effect of different pH on the  $F/F_0$  values. After 5 minutes of incubation in 37 °C, measured at room temperature. (b) Effect of different time on the  $F/F_0$  values. Incubation time is 5min, pH is 7.4. After incubation different time in pH 7.4 Buffer, measured at room temperature. (c) Effect of different incubation temperature on the  $F/F_0$  values. After incubation in pH 7.4 Buffer, measured at room temperature. Concentration of AFP was 50 pg/mL. The excitation and emission wavelengths were 488 nm and 520 nm.



Figure S2. Specificity analysis of fluorescent probes in sensing platforms.

(a): fluorescence images of HepG2 in bright vision, (b): fluorescence images of HepG2 in dark vision, (a') fluorescence images of BT474 in dark vision. About 10  $\mu$ g/mL of FAM-ssDNA as the final concentration was used. The excitation and emission wavelengths are 488 nm and 520 nm.