

## *Electronic Supplementary Information*

Paper-Based Fluoroimmunoassay for Rapid and Sensitive

Detection of Antigen

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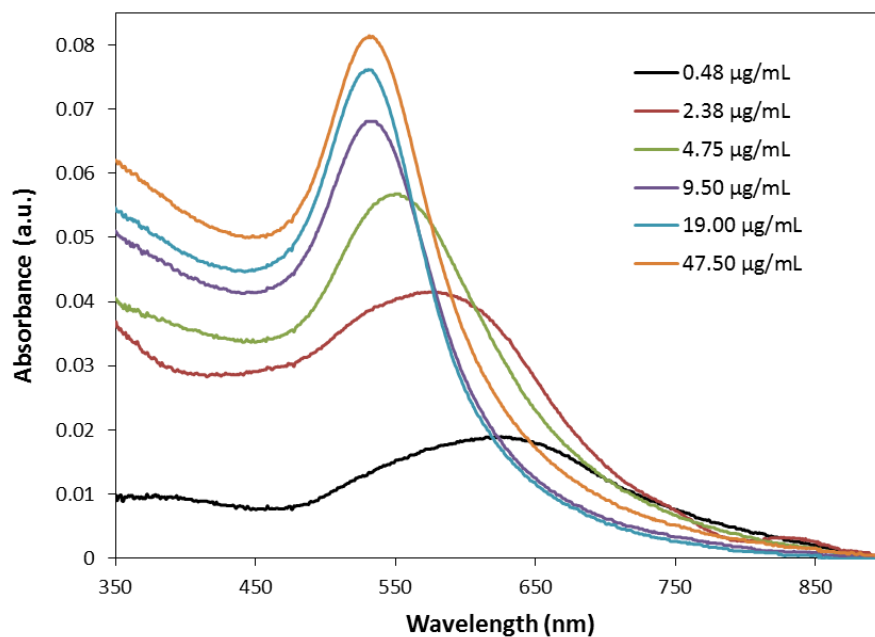
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**Gold Aggregation Test for Determination of Minimum Anti-goat IgG Concentration.** Briefly, 10  $\mu\text{L}$  of anti-goat IgG at different concentrations were added to 14 nm Au colloidal solution (200  $\mu\text{L}$ ) adjusted to pH 9.0 to reach final concentrations from 0.48  $\mu\text{g/mL}$  to 47.50  $\mu\text{g/mL}$ . After 1 h incubation at room temperature, 30  $\mu\text{L}$  of 10% NaCl was added to each mixture. The UV-vis spectra were measured for each sample (Fig. S1).



**Fig. S1.** Absorption spectra of Au NPs incubated with anti-goat IgG at different concentrations. When the concentration drops below 19 µg/mL, there is a gradual red-shift of the spectra with the decreasing protein concentration, indicating higher degree of aggregation due to insufficient protein protection.