Electronic Supplementary Material (ESI) for Analytical Methods.

Supporting Information

A label-free fluorescent assay for thrombin activity analysis based on fluorescence protein and gold nanoparticles

Xin Jin,[a] Xin Liu,[b] Xiaohua Zhu,[a] Hao Li,[a] Wang Li,[a] Yan Huang[a]* and Shouzhuo Yao[a]

a.State Key Laboratory of Chemo/Biosensing and Chemometrics, College of Chemistry and Chemical Engineering, Hunan University, Changsha 410082, P. R. China.

b.Technology Center, China Tobacco Yunnan Industrial Co., Ltd, Kunming, China

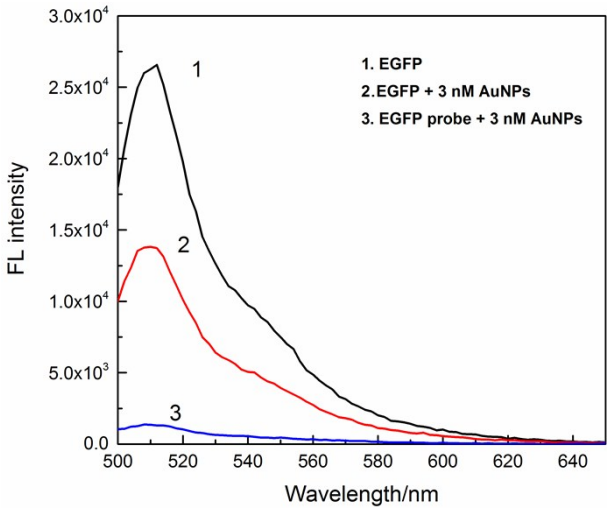


Fig. S1 (1) Fluorescence spectra of 100 nM EGFP without His-tag; (2) 100 nM EGFP without His-tag and 3 nM AuNPs; (3) 100 nM EGFP probe (with His-tag) and 3 nM AuNPs.

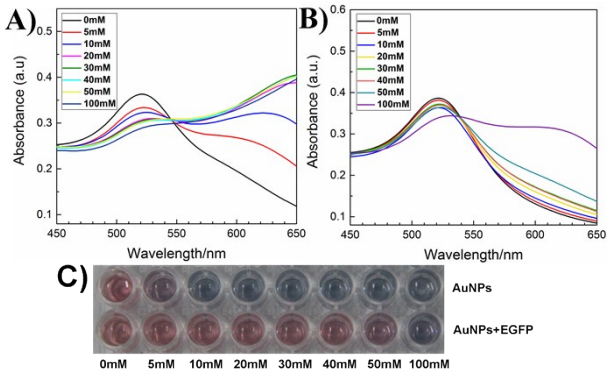


Fig. S2 Effect of of NaCl concentration on the UV-Vis spectra of (A) AuNPs and (B) EGFP/AuNPs; (C) Photograph shows colorimetric responses of AuNPs and EGFP/AuNPs solutions to various concentrations of NaCl.

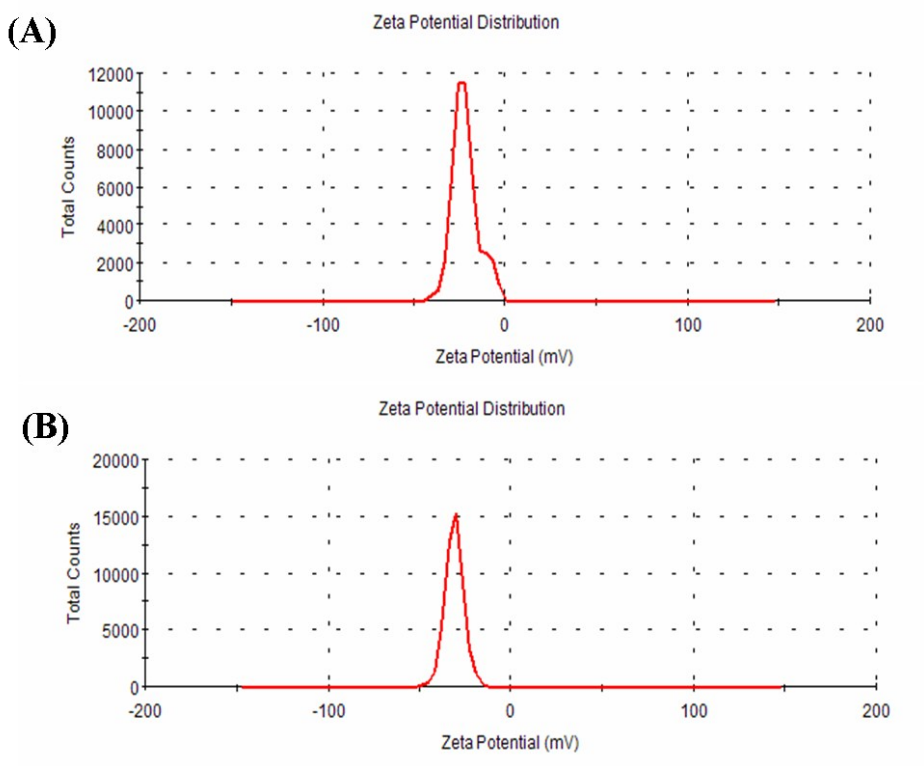


Fig. S3 Zeta potential of the EGFP probe (A) and AuNPs (B).

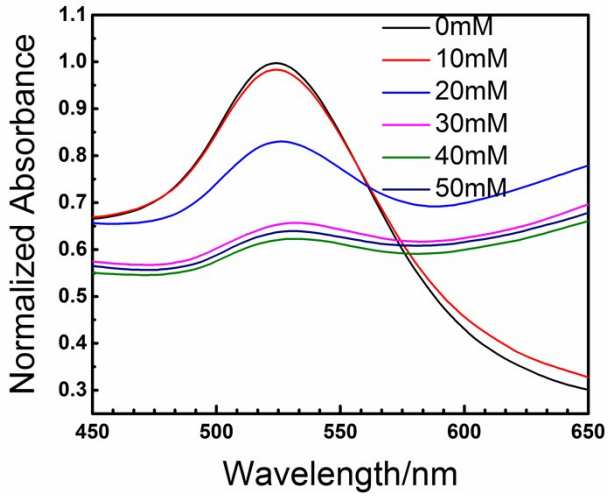


Fig. S4 Effect of the Tris-HCl concentration on the stability of AuNPs (3 nM).

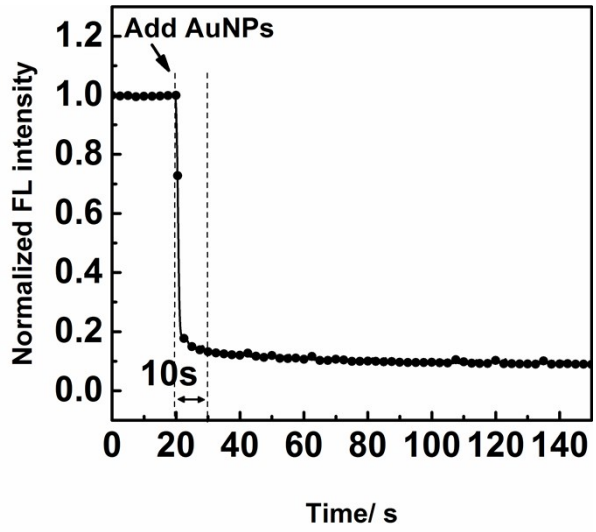


Fig. S5 Kinetic study of the fluorescence change of the EGFP probe (100 nM) after the addition of AuNPs (3 nM).

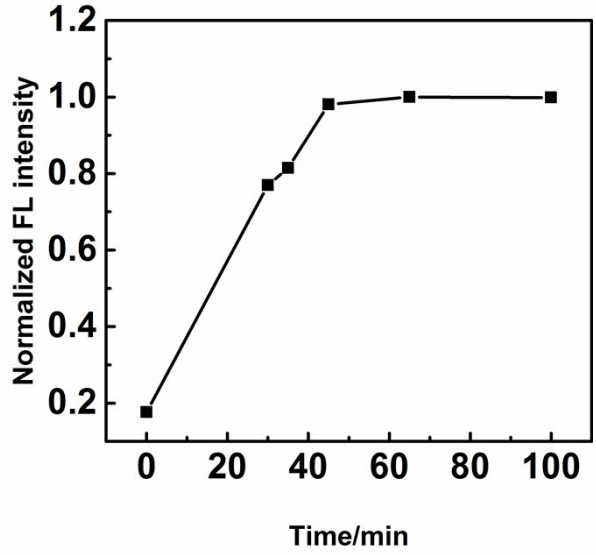
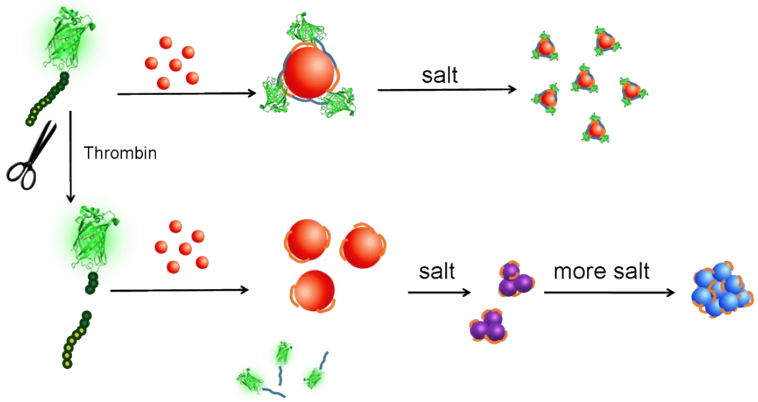


Fig. S6 Plot of different thrombin digesting time (0, 30, 35, 45, 60 and 100 min) corresponding to fluorescence intensity.



Scheme S1. Schematic illustration of the colorimetric strategy using the EGFP probe and AuNPs to assay the thrombin activity.