

Supplementary material (ESI) for Analyst
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Electronic Supporting Information

for

Highly sensitive detection of superoxide dismutase based on an immunoassay with surface-enhanced fluorescence

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Characterizations

1. The size of tiopronin-coated silver nanoparticles

As [Figure S1](#) indicated, the tiopronin-coated silver nanoparticles sizes ranged from 13 to 27 nm, indicating their satisfactory sizes according to ref. 19 (J. Phys. Chem. B 2005, 109, 7643-48).

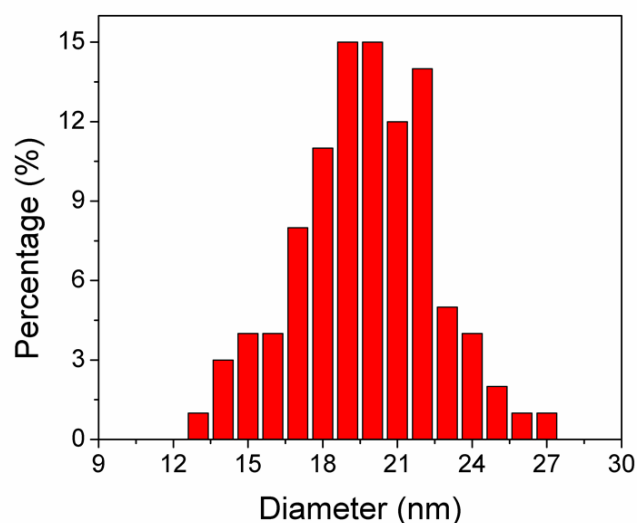


Figure S1. Size distribution analysis of tiopronin-coated silver nanoparticles

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2. The characterization of the fluorescein

As shown in Figure S2, the excitation and emission fluorescence spectra of the fluorescein was 490 nm and 520 nm, respectively.

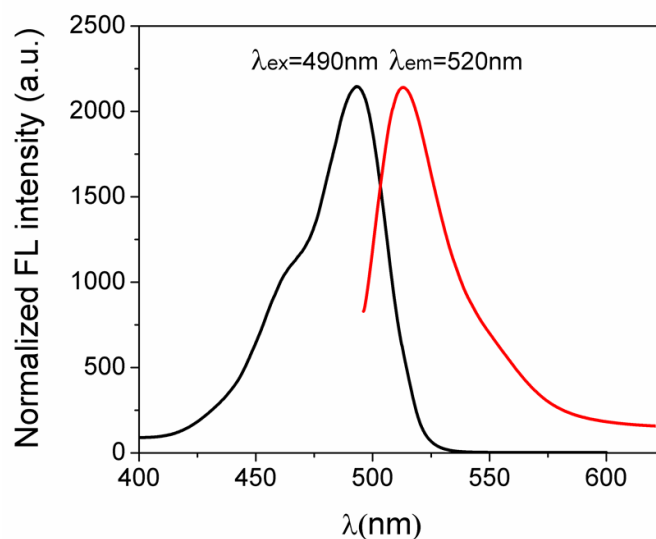


Figure S2. Excitation (black) and emission (red) fluorescence spectra of the fluorescein.

3. Absorption spectra of tiopronin, tiopronin-coated silver nanoparticles, tiopronin-coated silver nanoparticles/antibody conjugates and FIT-Ag NPs

Figure S3 reveals that the characteristic peaks of tiopronin, silver nanoparticles, anti-SOD antibody and fluorescein were 210 nm, 380 nm, 280nm and 490 nm, suggesting that the FIT-Ag NPs was synthesized successfully.

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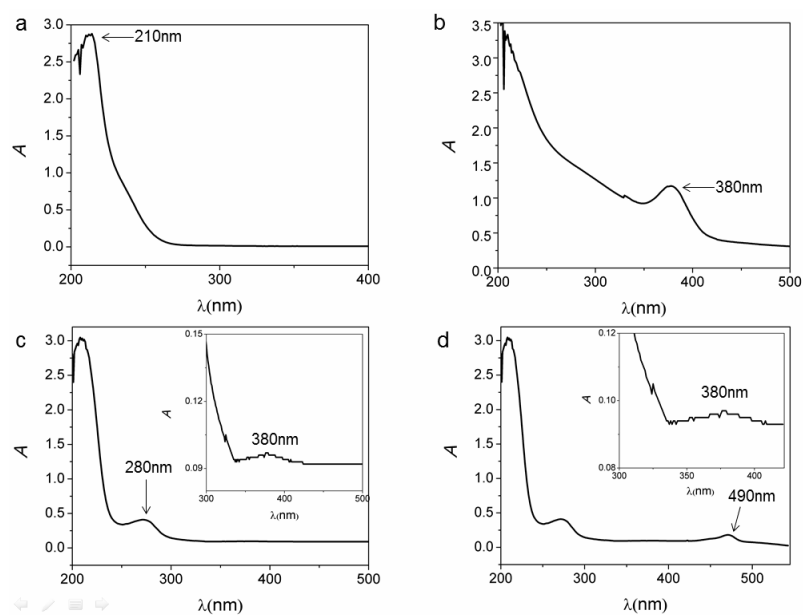


Figure S3. Absorption spectra of tiopronin (a), tiopronin-coated silver nanoparticles (b), tiopronin-coated silver nanoparticles/antibody conjugates (c) and FIT-Ag NPs (d).