

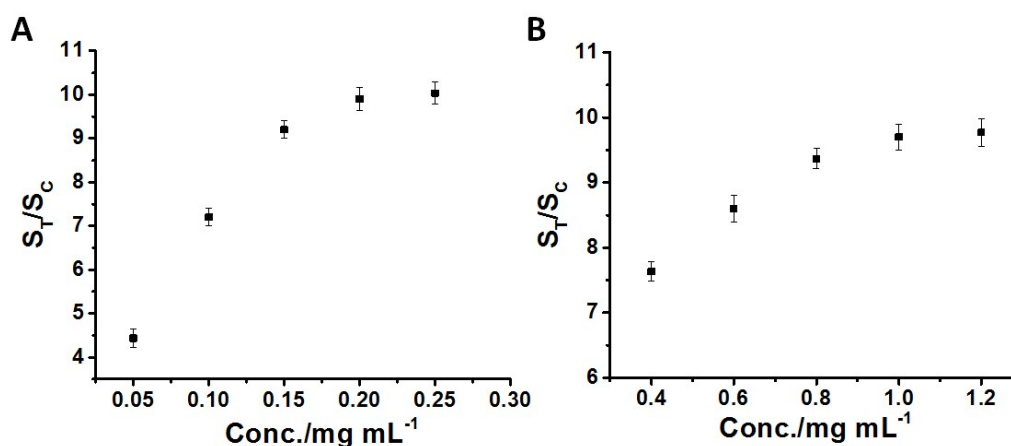
## Lanthanide chelates-encapsulated polystyrene nanoparticles for rapid and quantitative immunochromatographic assay of procalcitonin

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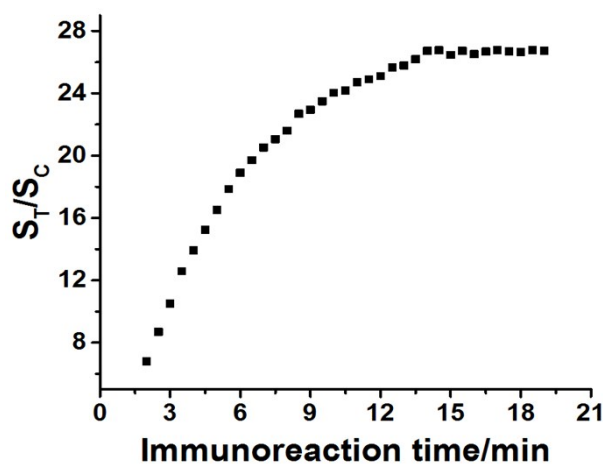
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**Fig. S-1.** Concentration optimization graphs of the antibodies labeled on EuPSNs and on the test line. (A) Different concentration of Ab2 was added at 0.05, 0.1, 0.15, 0.2 and 0.25 mg mL<sup>-1</sup> to label the EuPSNs, the concentration of Ab1 on T line was 1 mg mL<sup>-1</sup>. (B) Different concentration of Ab1 was dispensed at the test line at 0.4, 0.6, 0.8, 1.0 and 1.2 mg mL<sup>-1</sup>, the concentration of Ab2 used to label EuPSNs was 0.2 mg mL<sup>-1</sup>.



**Fig. S-2.** Immunoreaction kinetic curves of S<sub>T</sub>/S<sub>C</sub> after adding 75 μL of bovine serum containing 50 ng mL<sup>-1</sup> PCT on the sample pad of an IST strip.

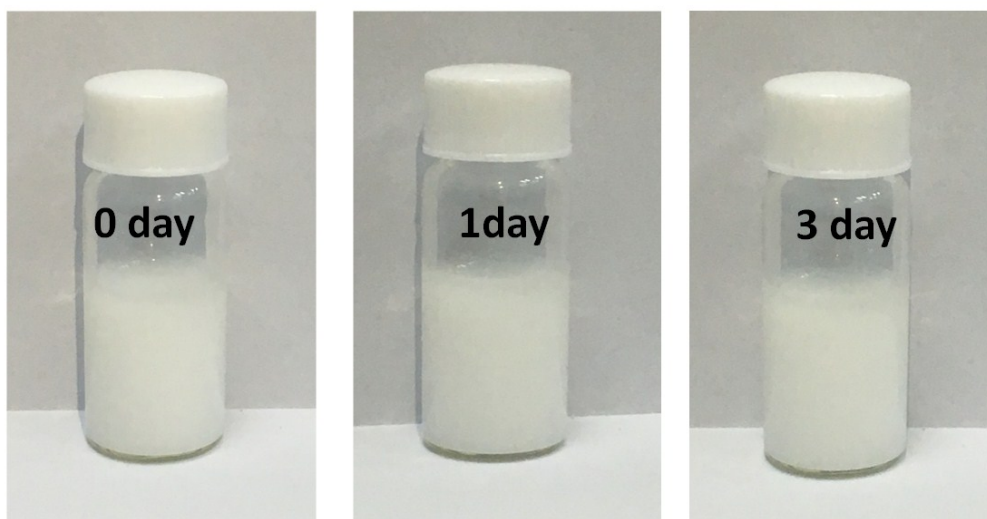


Fig. S-3. The stability of EuPSNs dispersed in deionized water.

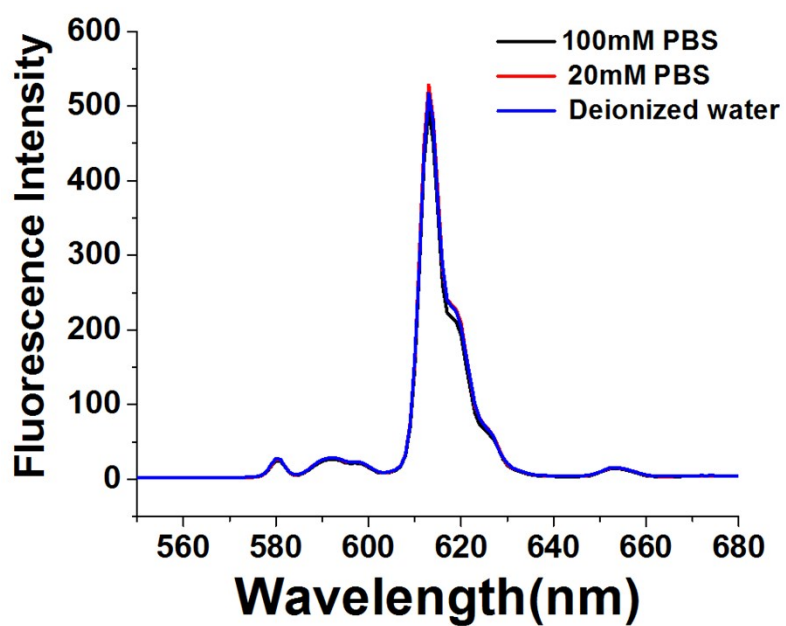


Fig. S-4. Fluorescence spectra of EuPSNs (0.5 mg/mL) dispersed in deionized water, 20mM PBS and 100mM PBS. The excitation wavelength was set at 365 nm and the measurement was carried out under atmospheric condition.