

## Supplementary Information

### Highly stable quantum dots with silica-Poly(EGDMA-*co*-MAA) synergistic protection and the preliminary application in immunoassay

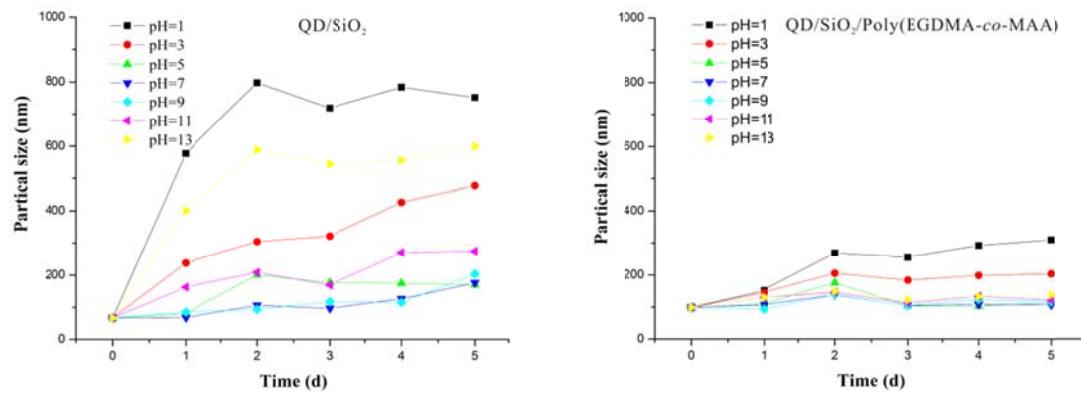


Fig. S1 Changes in particle size of (A) QD/SiO<sub>2</sub> and (B) QD/SiO<sub>2</sub>/Poly(EGDMA-*co*-MAA) treated with pH=1, 3, 5, 7, 9, 11, 13 buffers along with time.

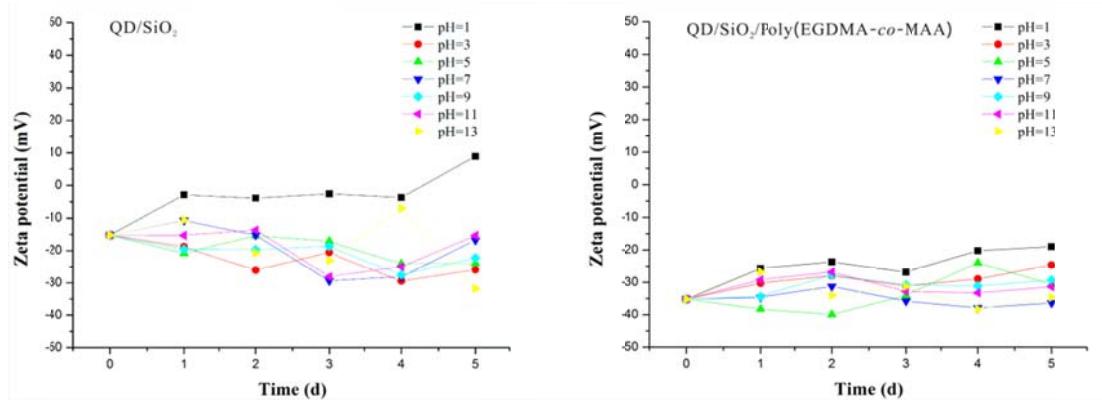


Fig. S2 Changes in surface charge of (A) QD/SiO<sub>2</sub> and (B) QD/SiO<sub>2</sub>/Poly(EGDMA-*co*-MAA) treated with pH=1, 3, 5, 7, 9, 11, 13 buffers along with time.

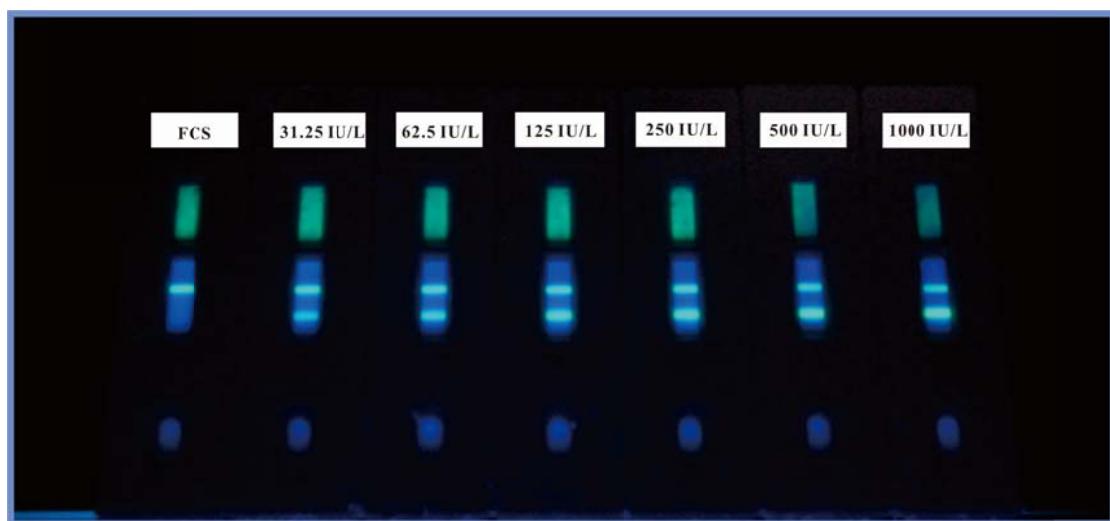


Fig. S3 Image QD/SiO<sub>2</sub>/Poly(EGDMA-co-MAA)-based ICTS after detecting of HCG at various concentrations (from left to right, the concentration of HCG antigen was 0, 31.25, 62.5, 125, 250, 500 and 1000 IU L<sup>-1</sup>, respectively).