Supporting Information

Affibody-functionalized Ag_2S quantum dots for photoacoustic imaging of epidermal growth factor receptor overexpressed tumors

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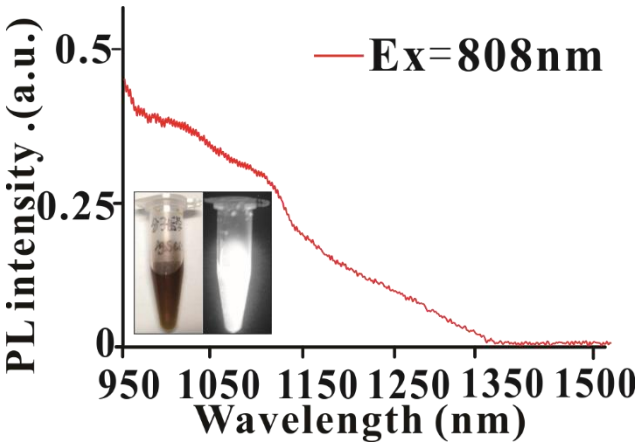

Figure S1. Normalized fluorescence spectra of Ag_2S QDs excited by 808 nm laser.

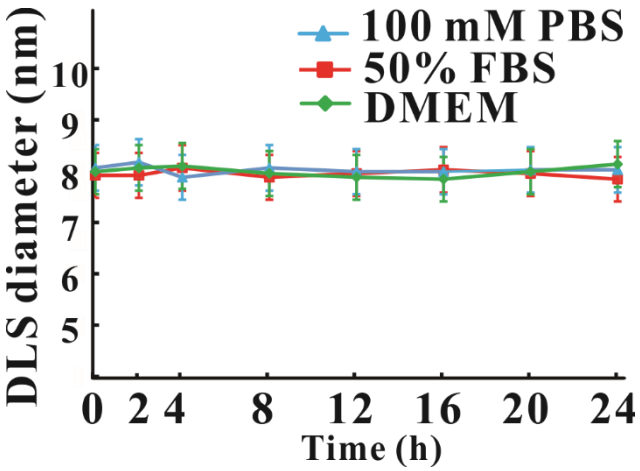

Figure S2. DLS stability of Ag_2S QDs, measured in 100 mM PBS, 50% FBS and DMEM medium.

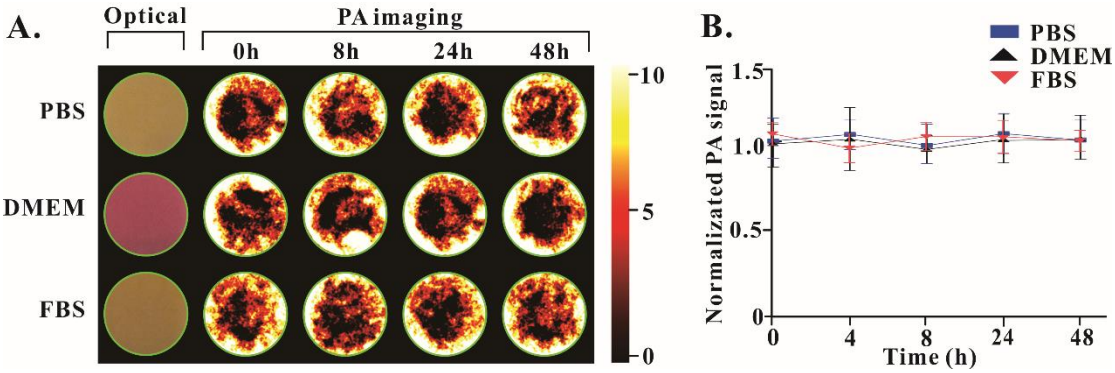

Figure S3. Stability assay of $Z_{EGFR:1907}$-Ag_2S QDs. **A.** The $Z_{EGFR:1907}$-Ag_2S QDs are stable in 1x PBS, DMEM, FBS over 2 days. **B.** PA signal change curve of $Z_{EGFR:1907}$-Ag_2S QDs after 2 days of storage in different media at room temperature.

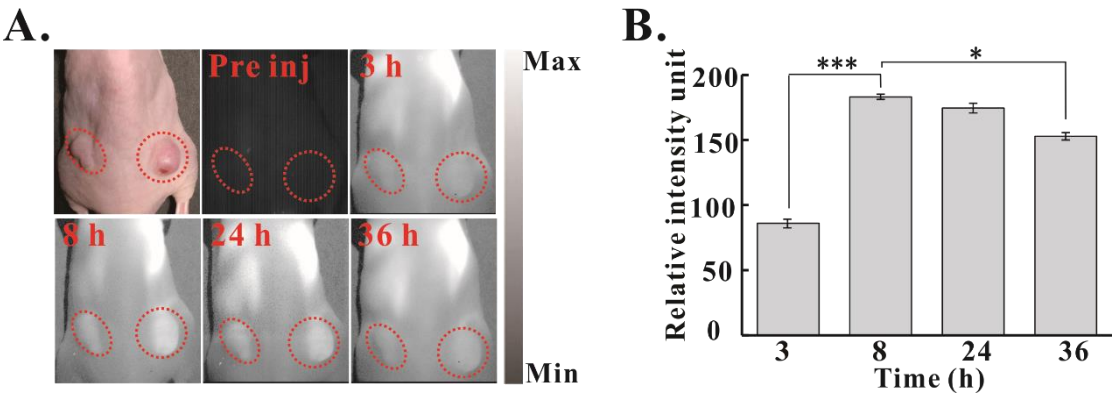

Figure S4. *In vivo* NIR fluorescence imaging of A431 tumor bearing nu/nu mouse treated with $Z_{EGFR:1907}$-Ag_2S QDs (200 μL of 1 mg/mL $Z_{EGFR:1907}$-Ag_2S QDs). **A.** Representative imaging at different time points after intravenous administration; **B.** Quantitative histogram of the NIR fluorescence signal intensity in tumor region. Circles indicate bilateral subcutaneous tumor locations. Results are presented as mean ± SD (n=3). ***P<0.001, *P<0.05

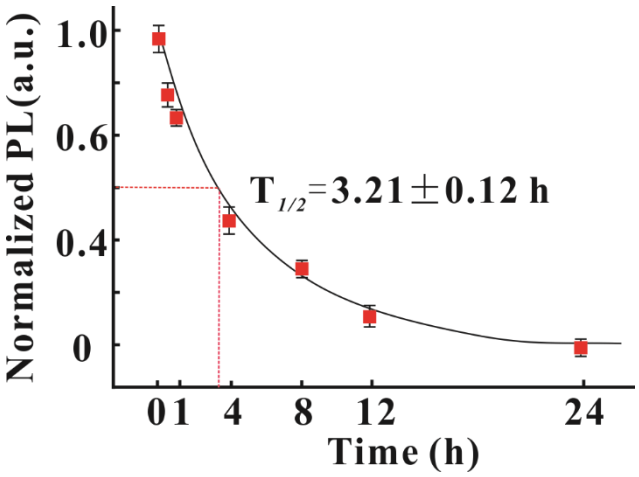

Figure S5. Blood circulation half-time curve of $Z_{EGFR:1907}$-Ag_2S QDs in mice, the circulation half-life is determined to be 3.21 ± 0.12 h.

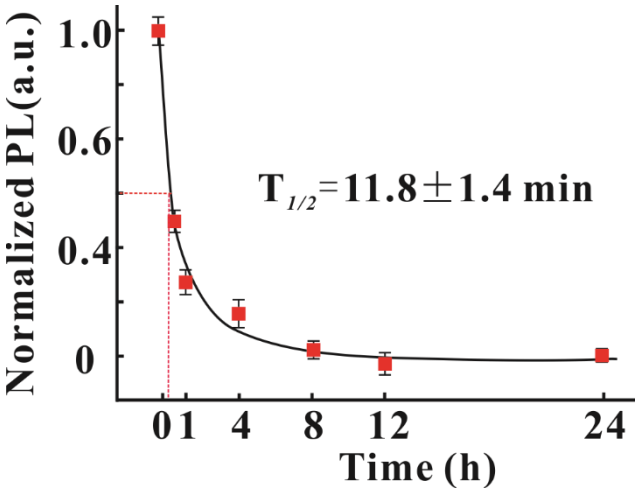

Figure S6. Blood circulation half-time curve of Ag_2S QDs in mice, the circulation half-life is determined to be 11.8 ± 1.4 min.