Supplementary Materials

In vivo cancer targeting and imaging-guided surgery with near infrared-emitting quantum dot bioconjugates

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Cytotoxicity assay

The in vitro cytotoxicity was measured using 3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide (MTT) assay. L929 cells growing in log phase were seeded into a 96-well cell-culture plate at 5 X 10^3/well and then incubated for 24 h at 37 ℃ under 5% CO_2. DMEM supplemented with 10% FBS (Fetal Bovine Serum) solutions of QDs (100 μL/well, containing 1% HEPES) at different concentrations were added to the wells of the treatment group, and DMEM containing 1% HEPES (100 μL/well) to the negative control group, respectively. The cells were incubated for 24 h at 37 ℃ under 5% CO_2. Subsequently, 10 μL MTT (5 mg/mL) was added to each well and incubated for an additional 4 h at 37 ℃ under 5% CO_2. After the addition of dimethylsulfoxide (DMSO, 150 μL/well), the assay plate was allowed to stand at room temperature for 10 minutes. A Tecan Infinite M200 monochromator-based multi-function microplate reader was used to measure the OD570 (A value) of each well with background subtraction at 690 nm. The following formula was used to calculate the viability of cell growth: cell viability (%) = (mean of A value of treatment group/mean of A value of control) X 100.