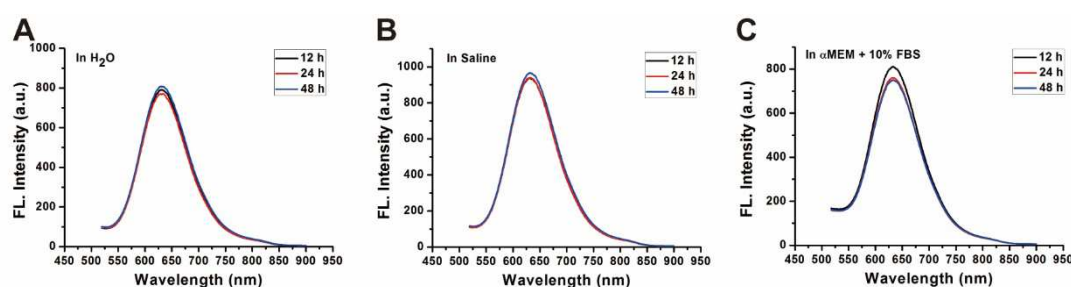


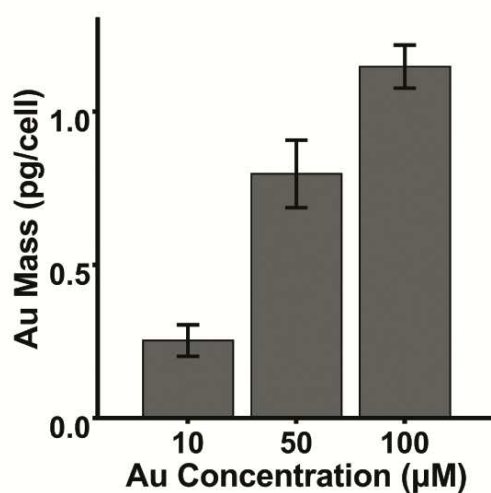
## Supplementary data

**Table S1.** The primer sequences used in the study

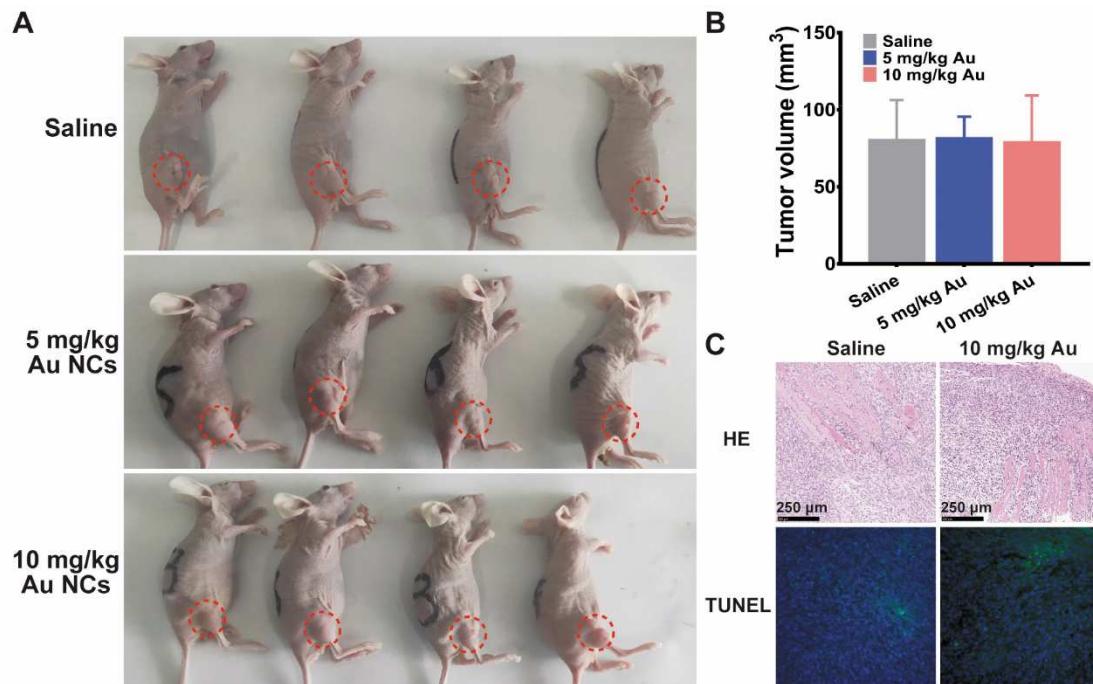
Target Gene	Primer sequences (5'-3')
$\beta$ -actin-F	GTACGCCAACACAGTGCTG
$\beta$ -actin-R	CGTCATACTCCTGCTTGCTG
Mouse TRAP-F	GCTGGAAACCATGATCACCT
Mouse TRAP-R	GAGTTGCCACACAGCATCAC
Mouse NFATc1-F	TGGAGAAGCAGAGCACAGAC
Mouse NFATc1-R	GCGGAAAGGTGGTATCTCAA
Mouse OSCAR-F	CTGCTGGTAACGGATCAGCTCCCCAGA
Mouse OSCAR-R	CCAAGGAGCCAGAACCTTCGAAACT
Mouse C-FOS-F	TTGCTGAGTCGCTTGACTGG
Mouse C-FOS-R	GGATTTGACTGGAGGTCTGC



**Figure S1.** Fluorescence emission of BSA-Au clusters at different time points in different buffer solutions: ultrapure water (A), saline (B) and  $\alpha$ MED complete medium (C).



**Figure S2.** ICP-MS detection for intracellular Au content in MDA-MB-231 cells treated with different dose of BSA-Au clusters. The data is presented as mean  $\pm$  standard deviation of triplicate experiments.



**Figure S3. Tumor growth in each group of BALB/c nude mice.** (A) Photographs of tumor-loading mice in each group after execution. Tumor site on the hindlimb is marked by red dotted circle. (B) Quantitative analyses of tumor volume. The data is presented as mean  $\pm$  standard deviation,  $n = 5$ . (C) HE and TUNEL staining of the tumor tissue of mice in the saline and 10 mg/kg BSA-Au clusters treated group.