Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Nanoparticle-facilitated autophagy inhibition of cancer stem cells for improved chemotherapeutic effects on glioblastoma

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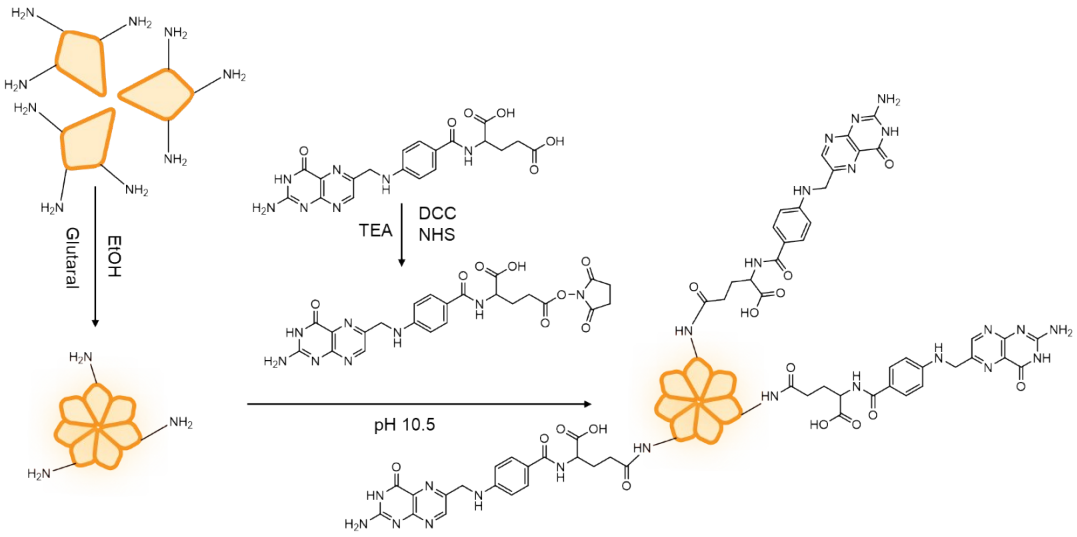

Scheme S1. Chemical synthetic route of FA-grafted BSA nanoparticles.

Table S1. Short hairpin RNA sequences used for lentiviral construction.

Vector	Sequence
siNT	TTCTCCGAACGTGTCACGT
siATG5-1	GCAGTGGCTGAGTGAACATCT
siATG5-2	CCTTTCATTCAGAAGCTGTTT

Table S2. Primers used for qRT-PCR in this study.

Gene	Forward primer (5' to 3')	Reverse primer (5' to 3')
NANOG	AGGCAAACAACCCACTTCT	TCACACCATTGCTATTCTTCG
POU5F1	GCAGCGACTATGCACAACGA	CCAGAGTGGTGACGGAGACA
SOX2	CAGCCCATGCACCGCTACGACG	CACCGAACCCATGGAGCCAAGA
β-Actin	TTGCGTTACACCCTTTCTTG	GCCACCTTCACCGTTCCAGTTT

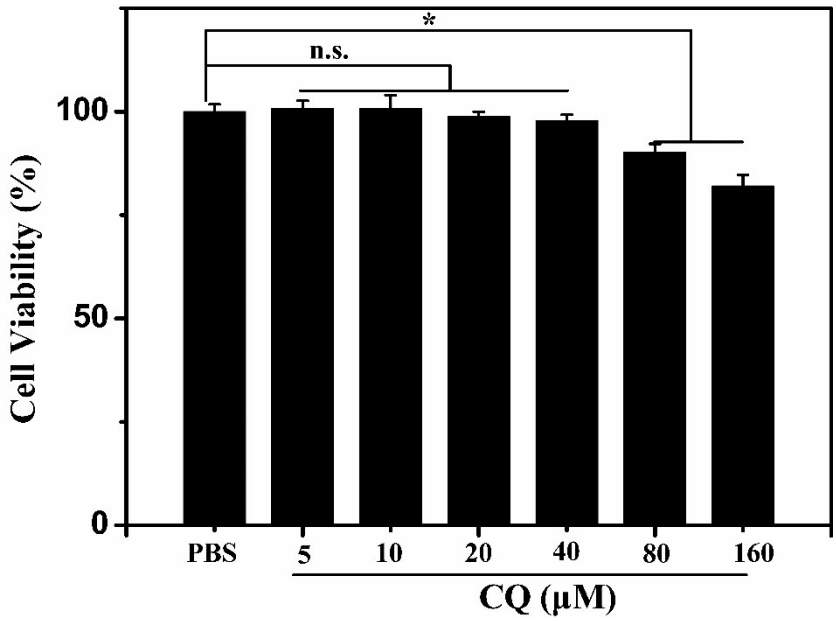

Fig. S1. MTT analysis of T98G cell viability after 24 h treatment with CQ at different concentrations. Data are shown as means ± s.d. (n = 6). n. s. means no significance, *p < 0.05.

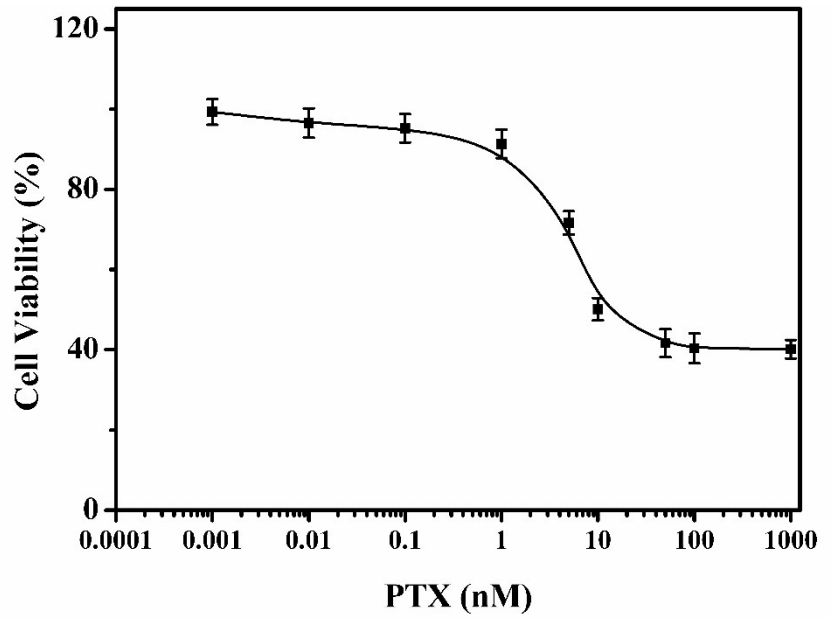

Fig. S2. Cytotoxicity profile of PTX treatment to T98G cells after culture for 24 h.

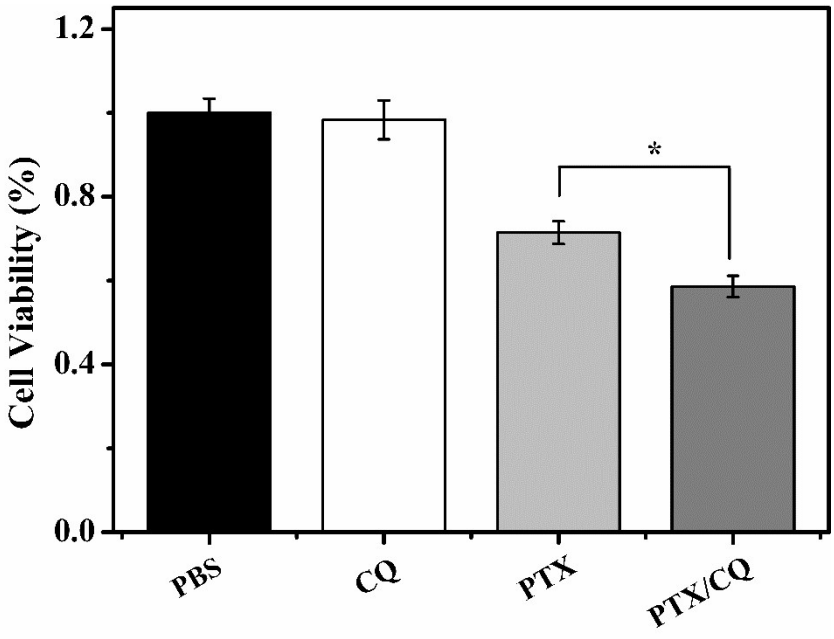

Fig. S3. MTT analyses of the viability of T98G cells with different drug treatment for 24 h. The concentration of CQ was 20 μM; and the concentration of PTX was 10 nM. Data are shown as means ± s.d. (n = 6). *$p < 0.05$.

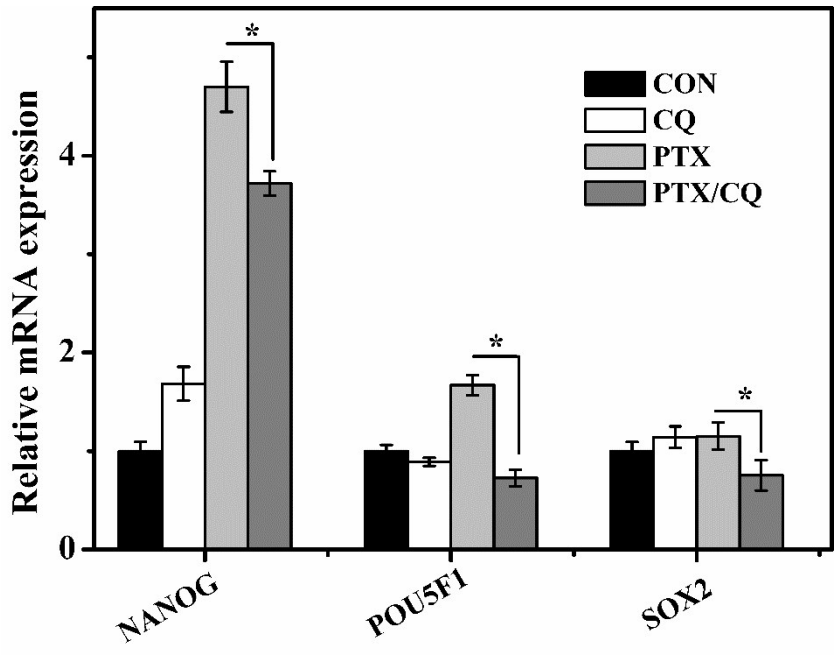

Fig. S4. Quantitative PCR assay for mRNA levels of NANOG, POU5F1 and SOX2 in T98G cells with different treatments for 3 days, The concentration of CQ was 20 μM; and the concentration of PTX was 10 nM. β-Actin was used as control, n = 4, *$p < 0.05$.

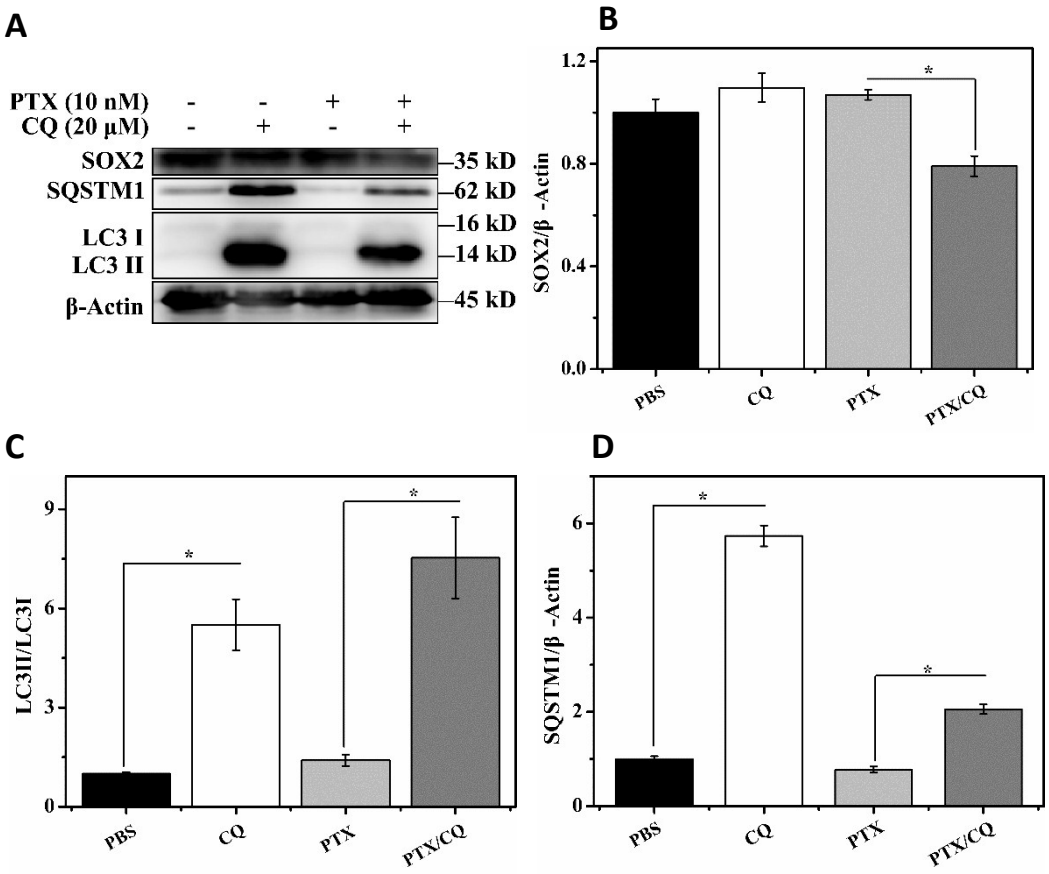

Fig. S5. (A) Protein expression of SOX2, LC3 and SQSTM1 in T98G cells after incubation with CQ, PTX and PTX/CQ for 72 h, representative Western blots are presented. (B) Western blot densitometric analysis on the expression levels of SOX2 in T98G cells with different treatments for 72 h. β-Actin was used as control, n = 3, *p < 0.05. (C) Western blot densitometric analysis on the expression levels of LC3II in T98G cells with different treatments for 72 h. LC3I was used as control, n = 3, *p < 0.05. (D) Western blot densitometric analysis on the expression levels of SQSTM1 in T98G cells with different treatments for 72 h. β-Actin was used as control, n = 3, *p < 0.05.

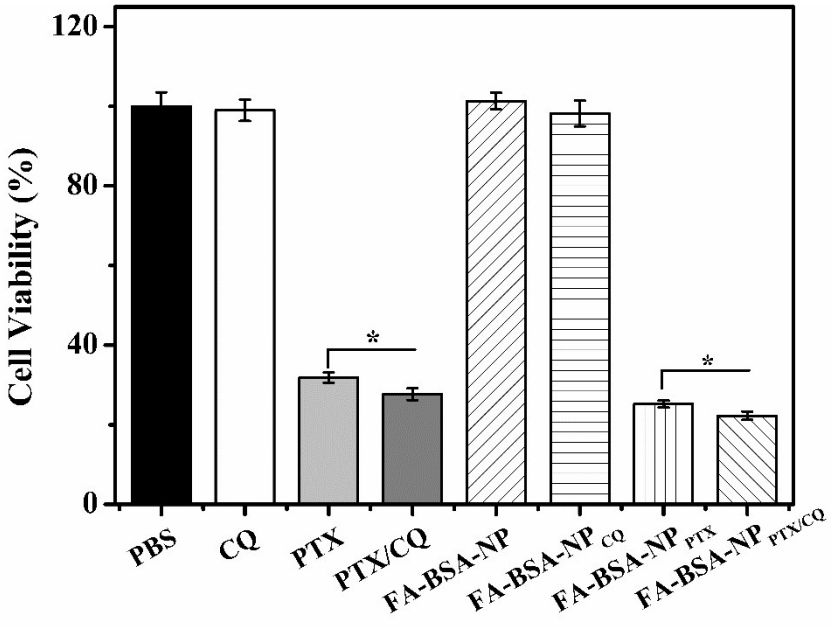

Fig. S6. MTT analysis of the viability of LN229 cells after treatment with different formulations for 3 days. Cell viability was normalized to that of PBS-treated cells which served as the indicator of 100% cell viability. Data are shown as means ± s.d. (n = 6). The concentration of CQ and PTX in the cell culture was equivalent to 20 μM or 10 nM, respectively. *$p < 0.05$.