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

Supplementary Information

Alendronate/folic acid-decorated polymeric nanoparticles for hierarchically targetable chemotherapy against bone metastatic breast cancer

Shih-Hong Chen,† Te-I Liu,† Cheng-Lin Chuang, Hsin-Hung Chen, Wen-Hsuan Chiang and Hsin-Cheng Chiu**

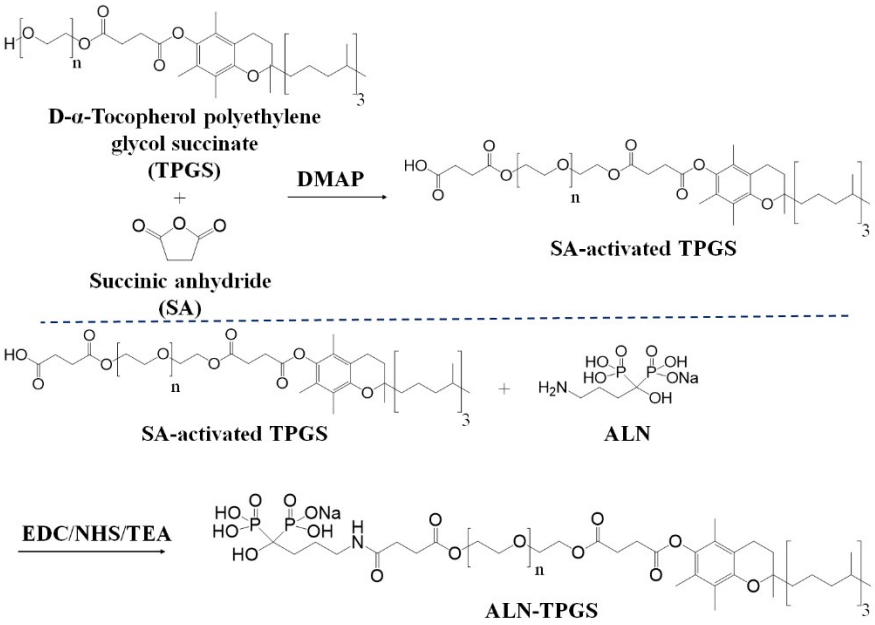

Fig. S1. Synthetic route and chemical structure of ALN-TPGS.

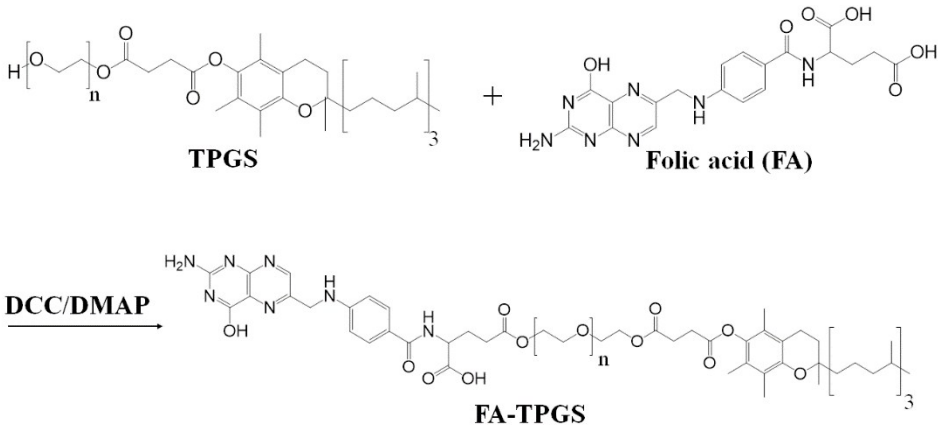

Fig. S2. Synthetic route of FA-TPGS.

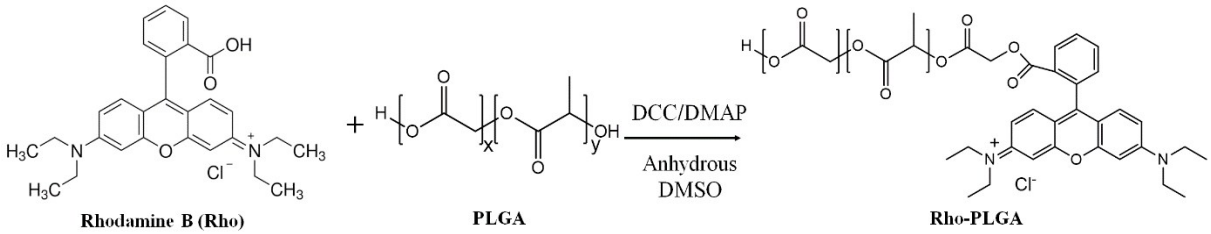

Fig. S3. Synthetic route of rhodamine B-conjugated PLGA.

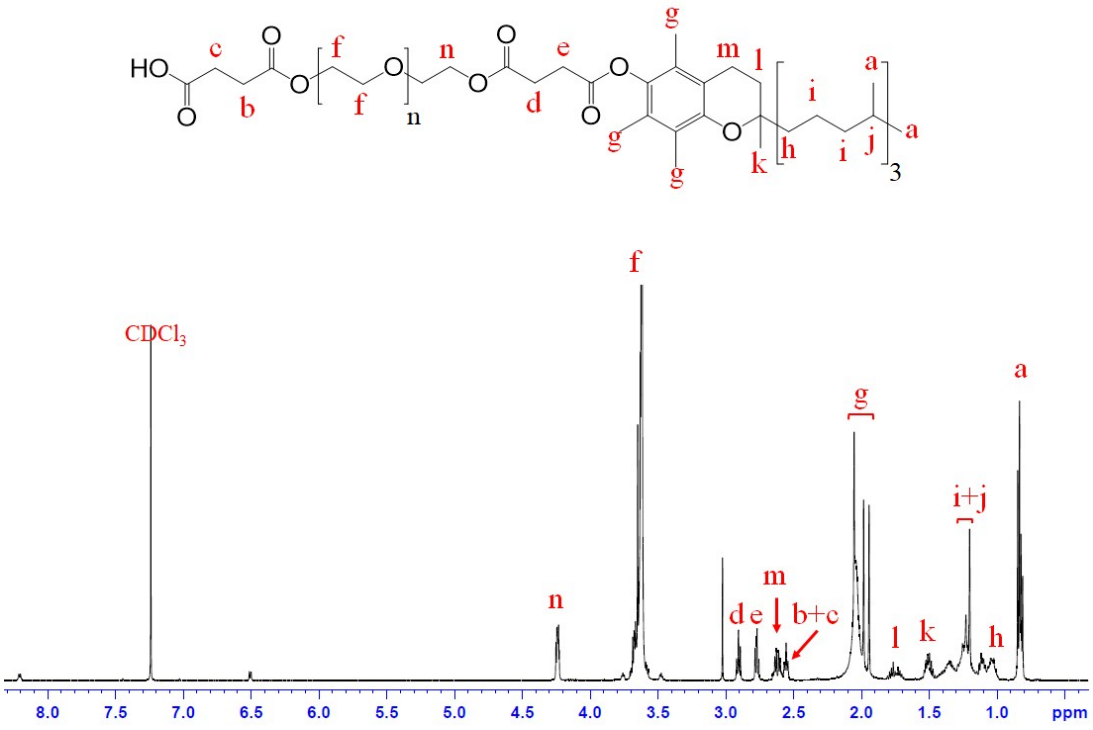

Fig. S4. ^{1}H-NMR spectrum of SA-activated TPGS in $CDCl_3$ at room temperature.

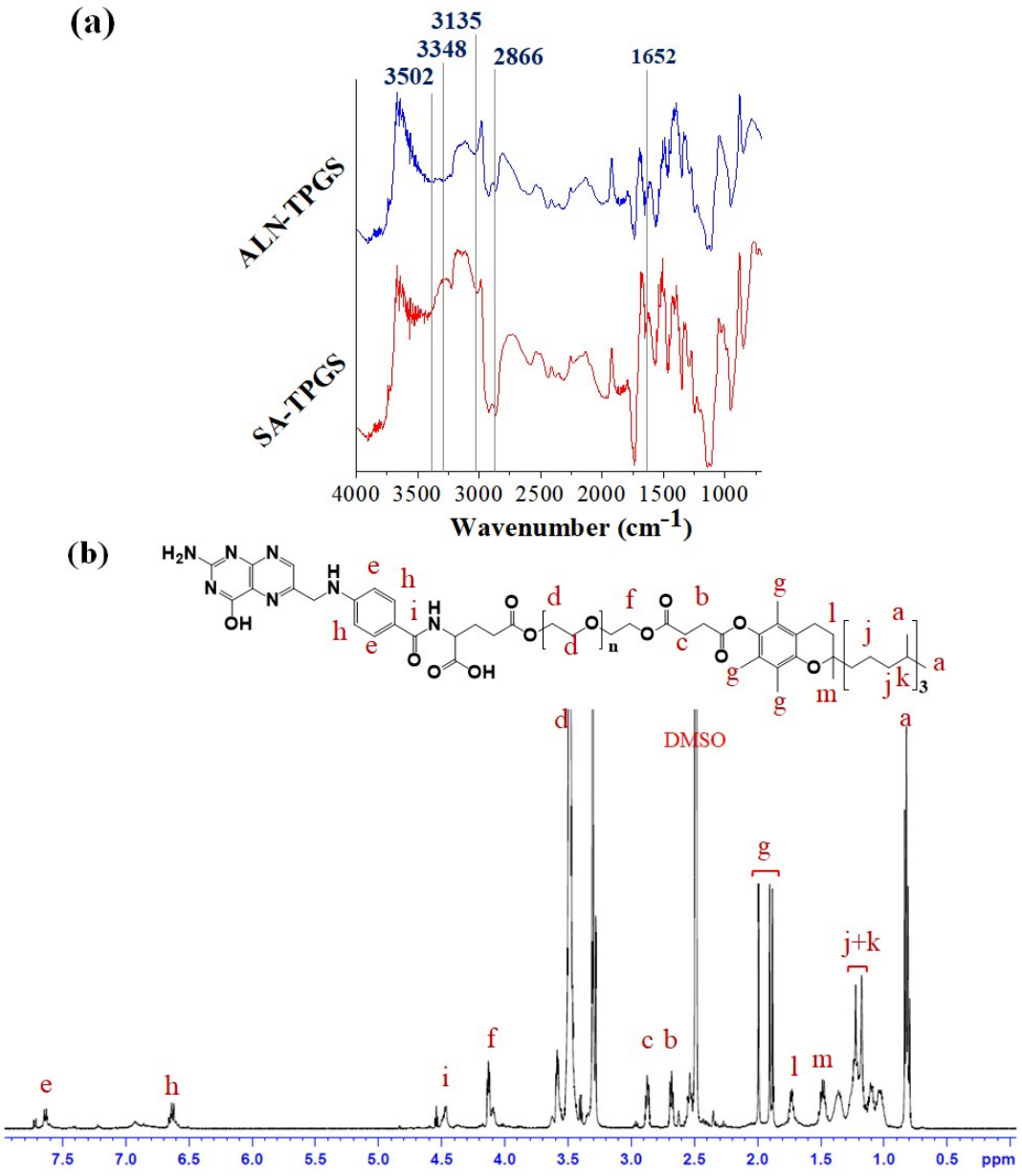

Fig. S5. (a) FT-IR spectra of SA-TPGS and ALN-TPGS. (b) ^{1}H-NMR spectrum of FA-TPGS in DMSO-d_6 at room temperature.

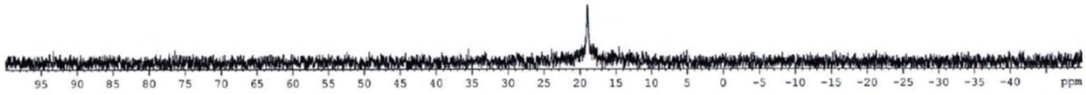

Fig. S6 ^{31}P-NMR spectrum of ALN-TPGS.

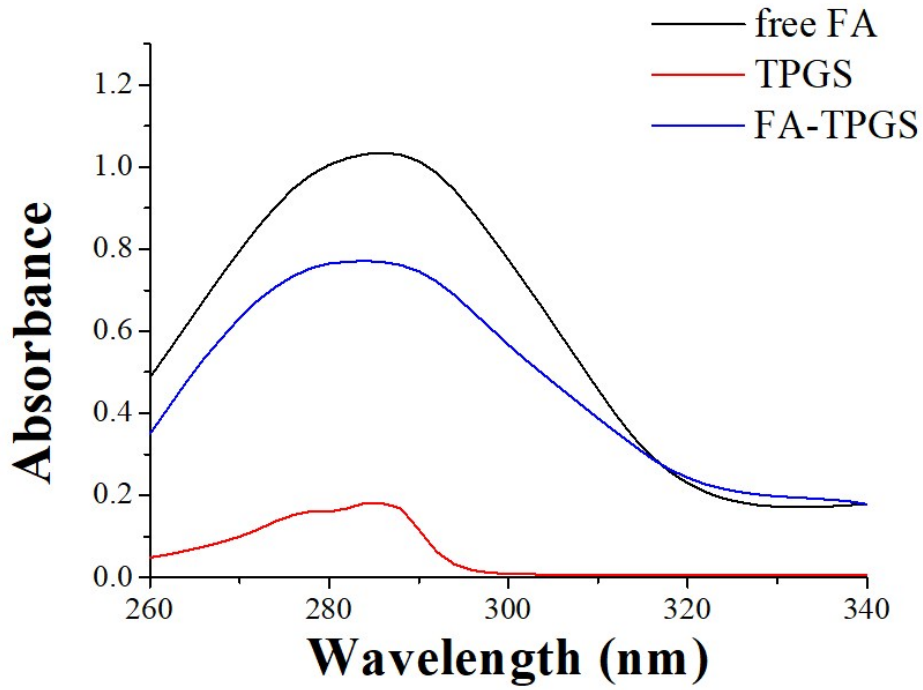

Fig. S7. UV/Vis spectra of TPGS, folic acid and FA-TPGS in DMSO.

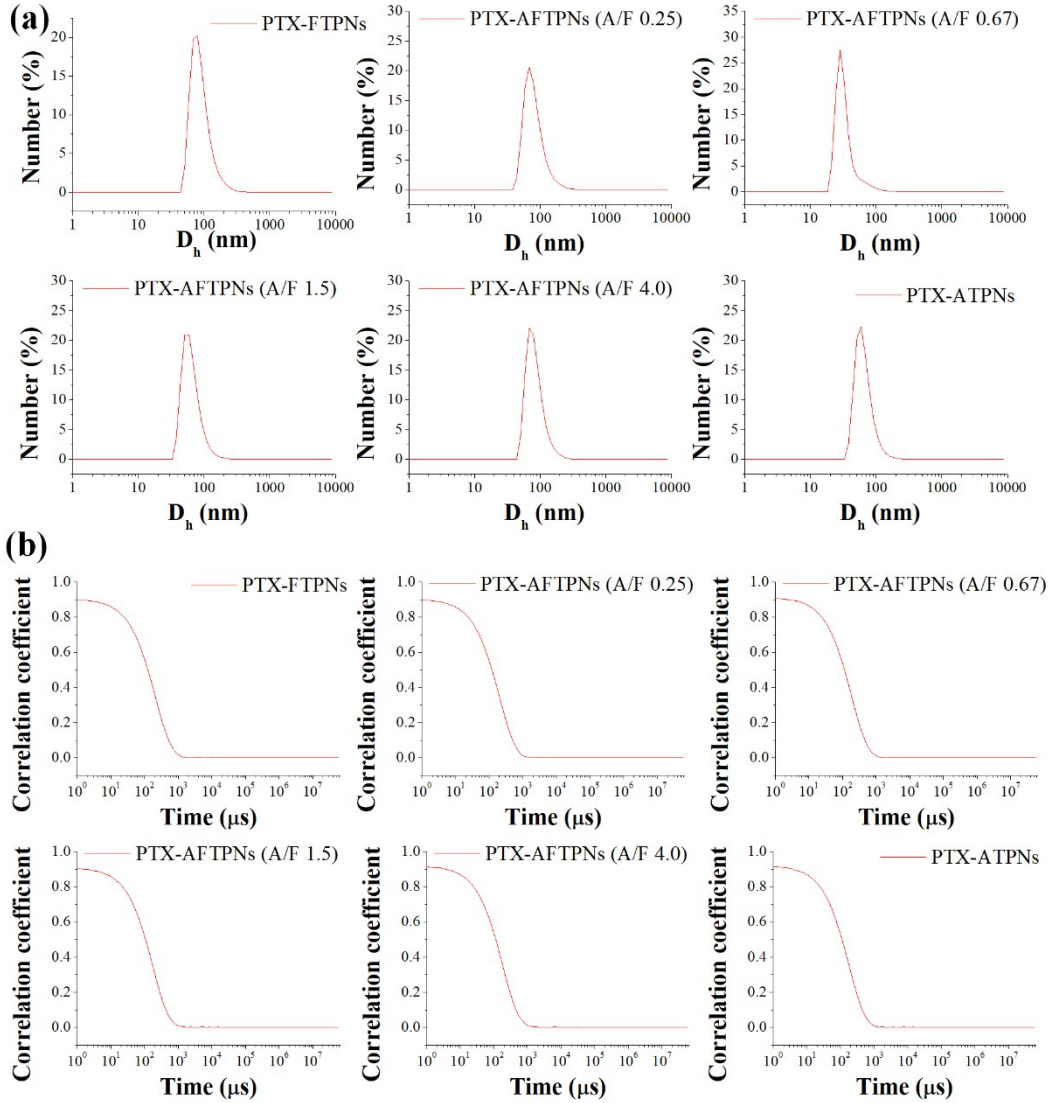

Fig. S8. Number-based size distribution and raw correlation function of various NP formulations.

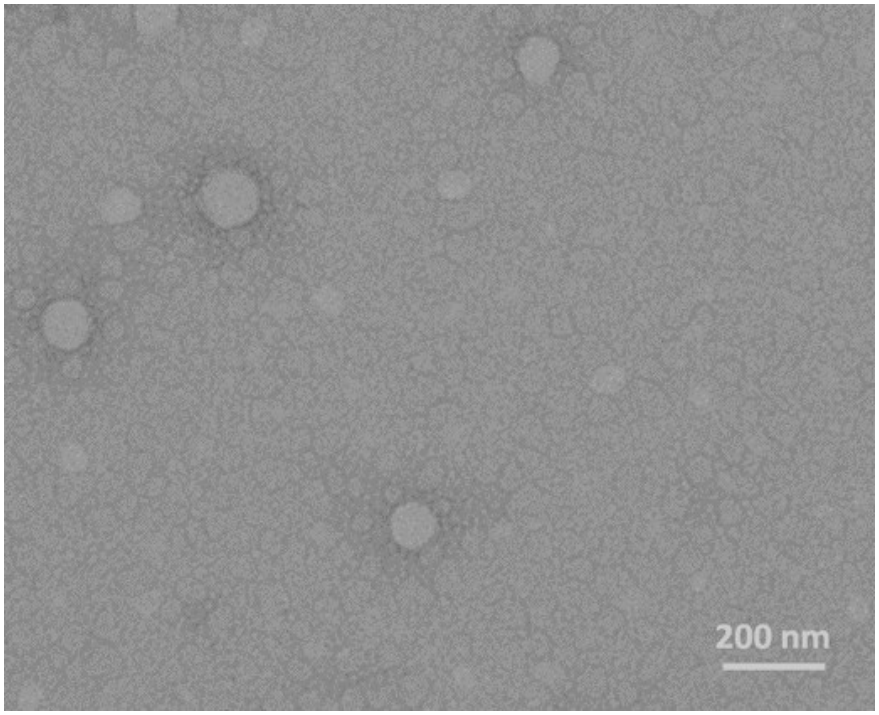

Fig. S9. TEM image of PTX-ATPNs. The scale bar is 200 nm.

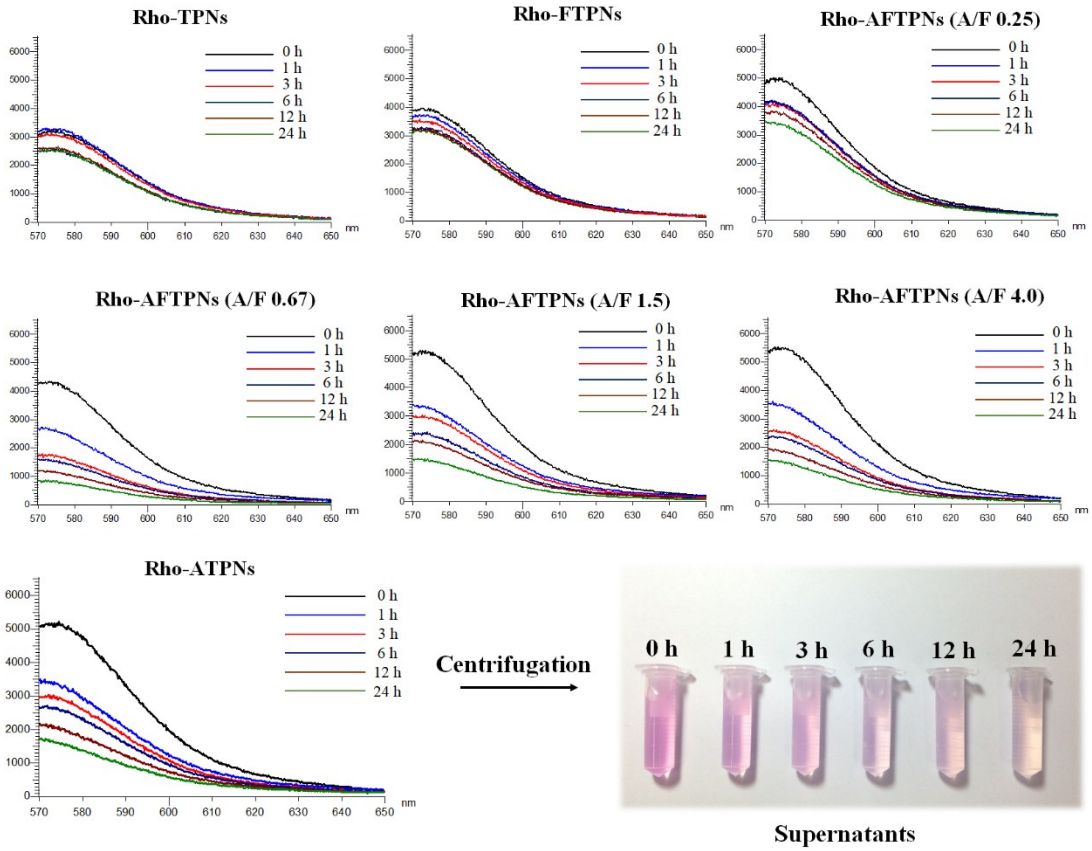

Fig. S10. Fluorescence spectra of the supernatants collected after centrifugation of the incubation mixtures of HA microparticles and various rhodamine-labeled nanoparticles over different time intervals.

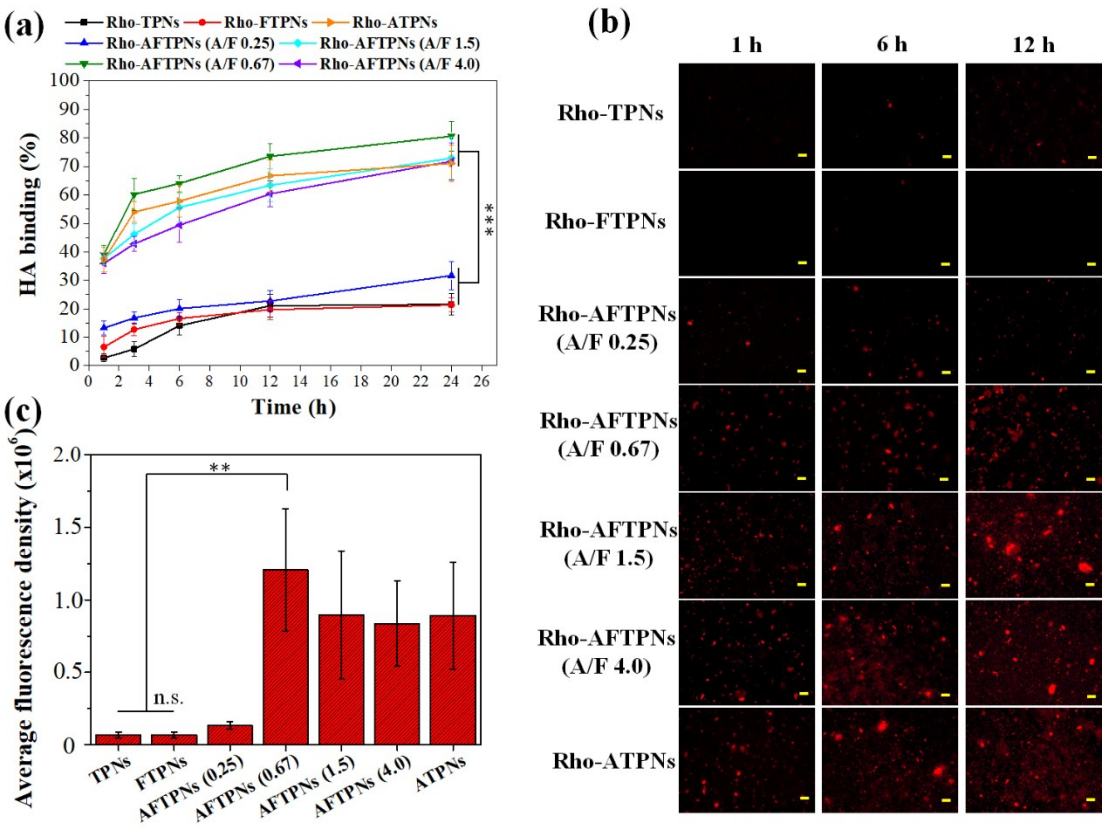

Fig. S11. (a) HA binding profiles of various rhodamine (Rho)-labeled nanoparticles. (b) Representative fluorescence images of HA microparticles after incubation with various Rho-labeled nanoparticles for 1, 6 and 12 h. Scale bars: 50 μm. (c) Mean rhodamine fluorescence intensity of HA microparticles treated with various Rho-labeled nanoparticles for 12 h.

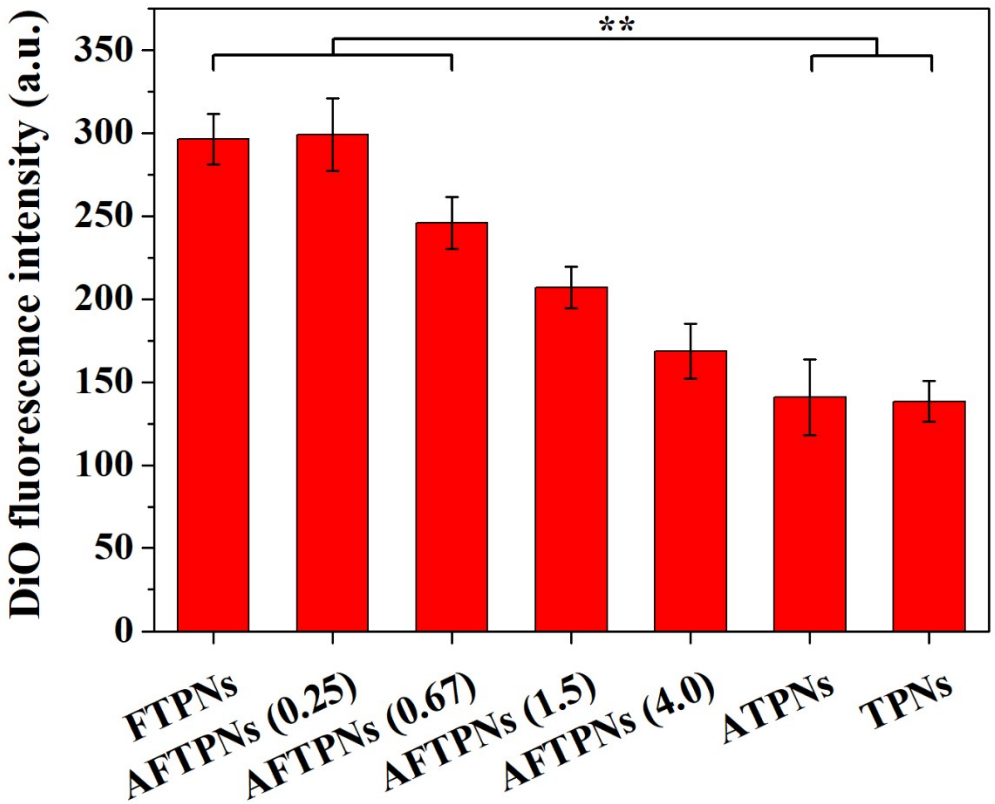

Fig. S12. DiO fluorescence intensity of CT26 cells incubated with various DiO-loaded nanoparticles (DiO concentration: 10 μM) at 37 °C for 1 h..

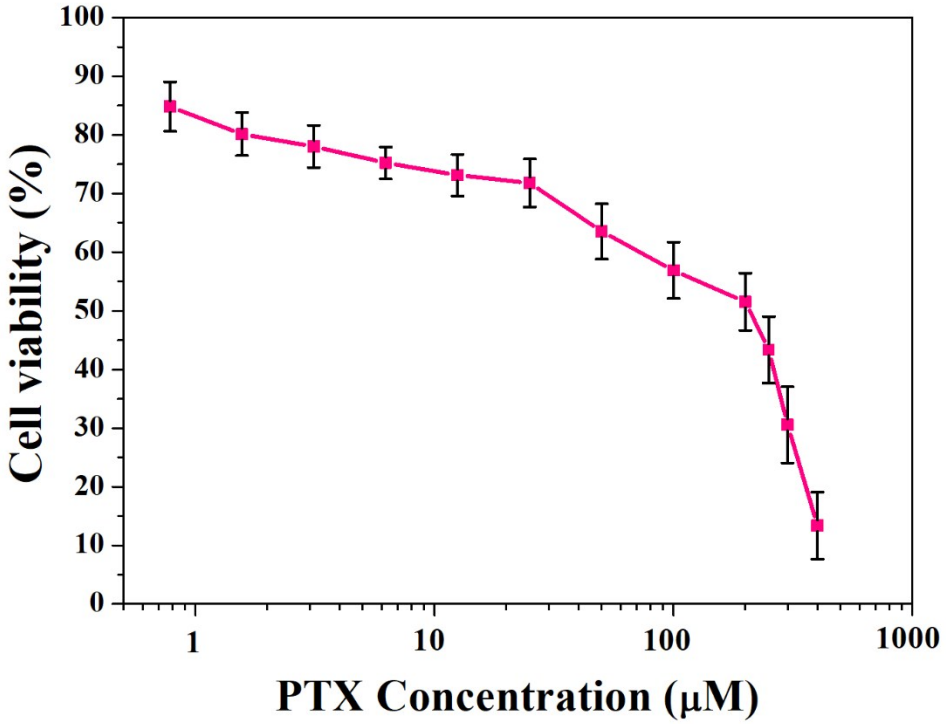

Fig. S13. Cell viability of 4T1 cells treated with free PTX at 37 °C for 8 h.