

Fig. S1. Particle size distributions of MSNs-HA (A) and MSNs-PO (B) in saline solutions.

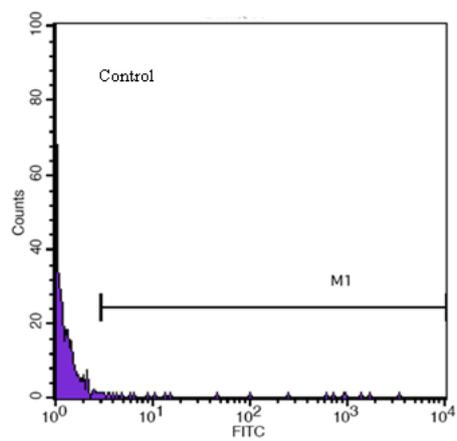


Fig. S2. Blank control group of the cytometric analysis.

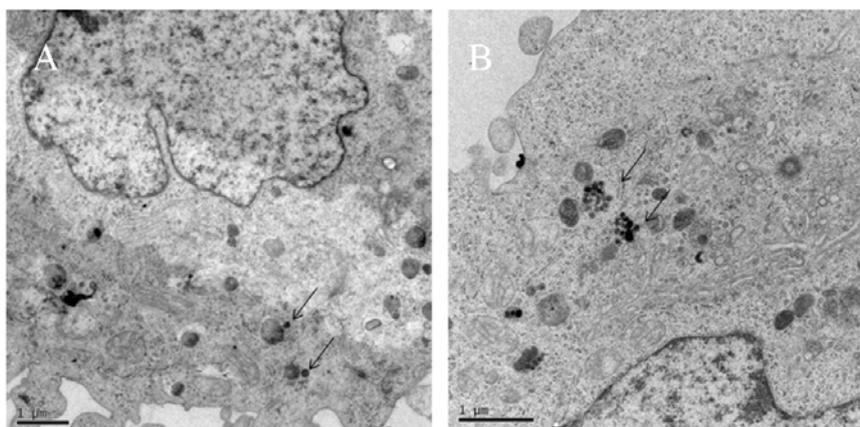


Fig. S3. Both A and B are the representative images demonstrating the locations of MSNs-HA in Hela cells after co-incubation for 3 h. The arrows show the location of MSNs-HA in cytosols.

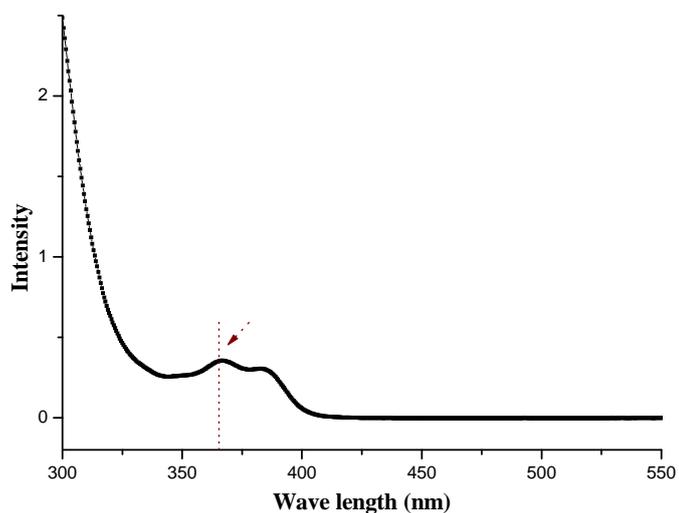


Fig. S4. UV-vis spectrum for measuring the CPT loading capacity in MSNs-NH₂. 5 mg of dried CPT loaded MSNs-HA were sonicated in 10 mL of DMSO to release the CPT drug from the mesopores. The CPT drug concentrations were determined using the UV-visible absorption spectrum.

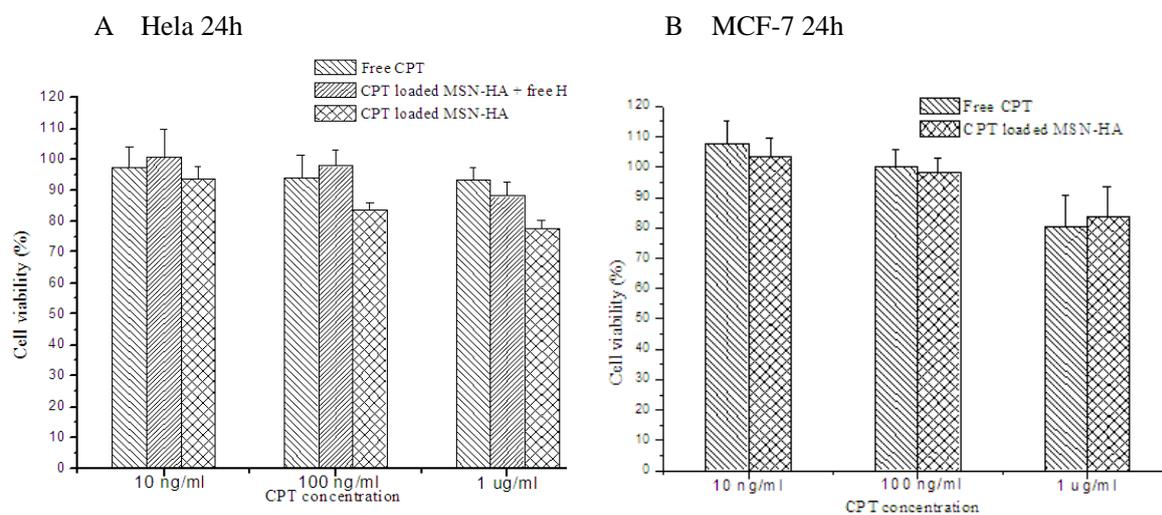


Fig. S5. (A) Viabilities of HeLa cells incubated with free CPT, CPT-loaded MSNs-HA and CPT-loaded MSNs-HA in the presence of excess free HA for 24 h. (B) Viabilities of MCF-7 cells incubated with free CPT and CPT-loaded MSNs-HA for 24 h. The cell viabilities exhibited no dramatic decrease in the first 24 h because of the low solubility, low loading amount and release rate of the hydrophobic drug from mesopores.