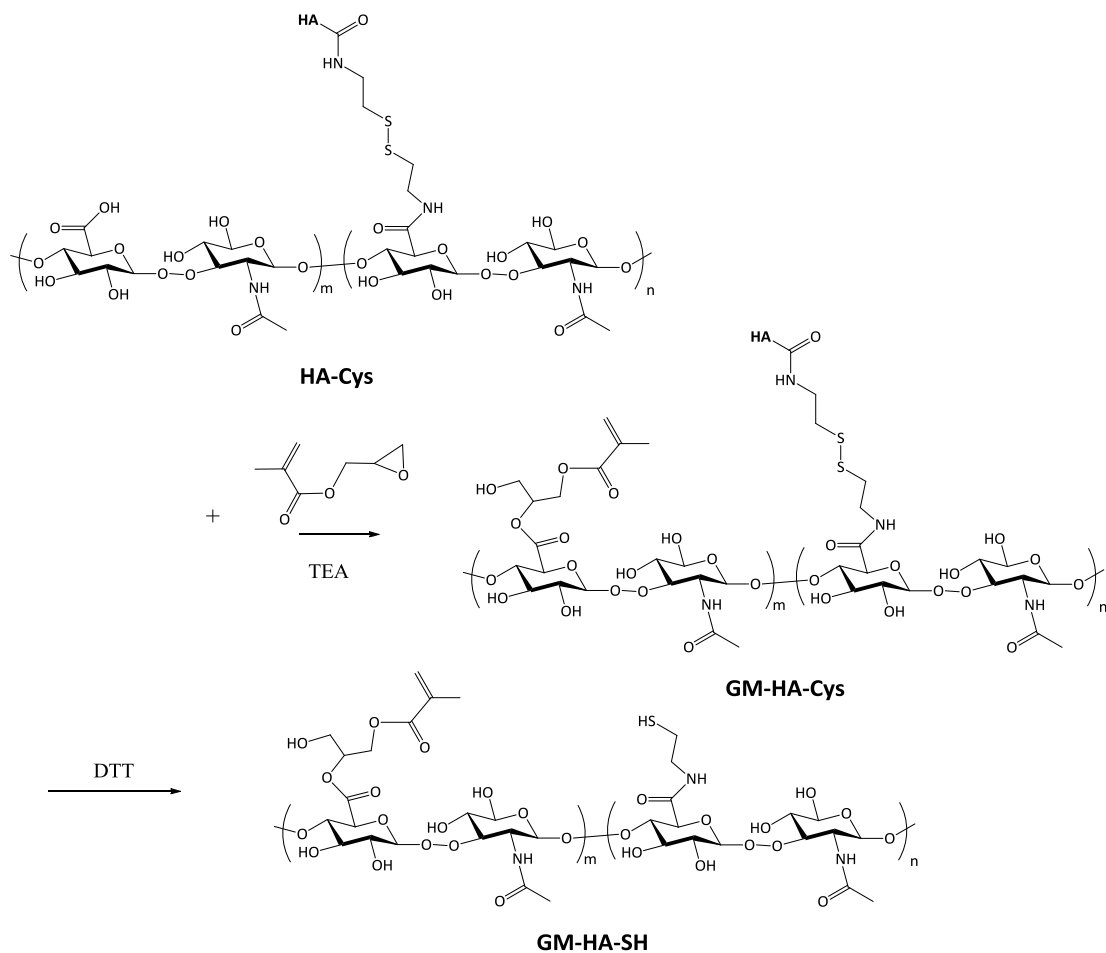


Supplementary materials

Scheme S1 Chemical synthesis of the GM-HA-SH.



Scheme S2 Synthesis of the aminated FA.

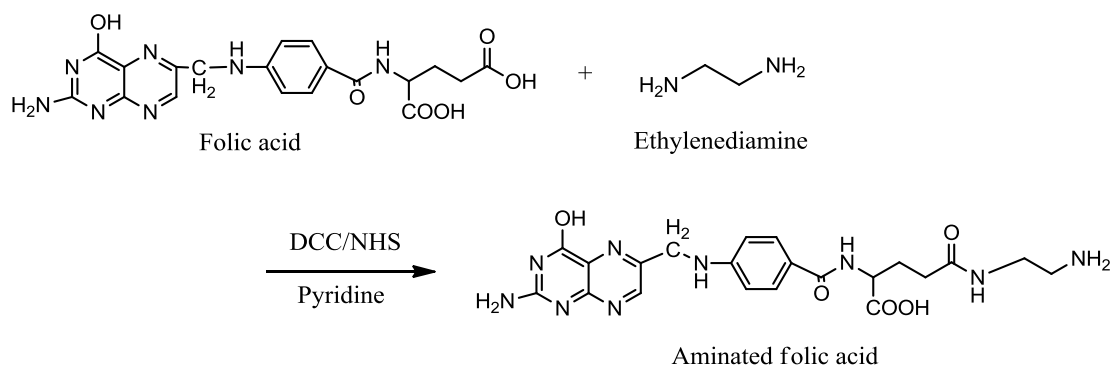


Figure S1 ^1H NMR spectrum of HA-Cys. * The symbols present corresponding chemical shifts of (a) acetamido of HA, (b) methylene ($-\text{S}-\text{S}-\text{CH}_2-\text{CH}_2-$) and (c) ($-\text{S}-\text{S}-\text{CH}_2-\text{CH}_2-$) of cyctamine of component.

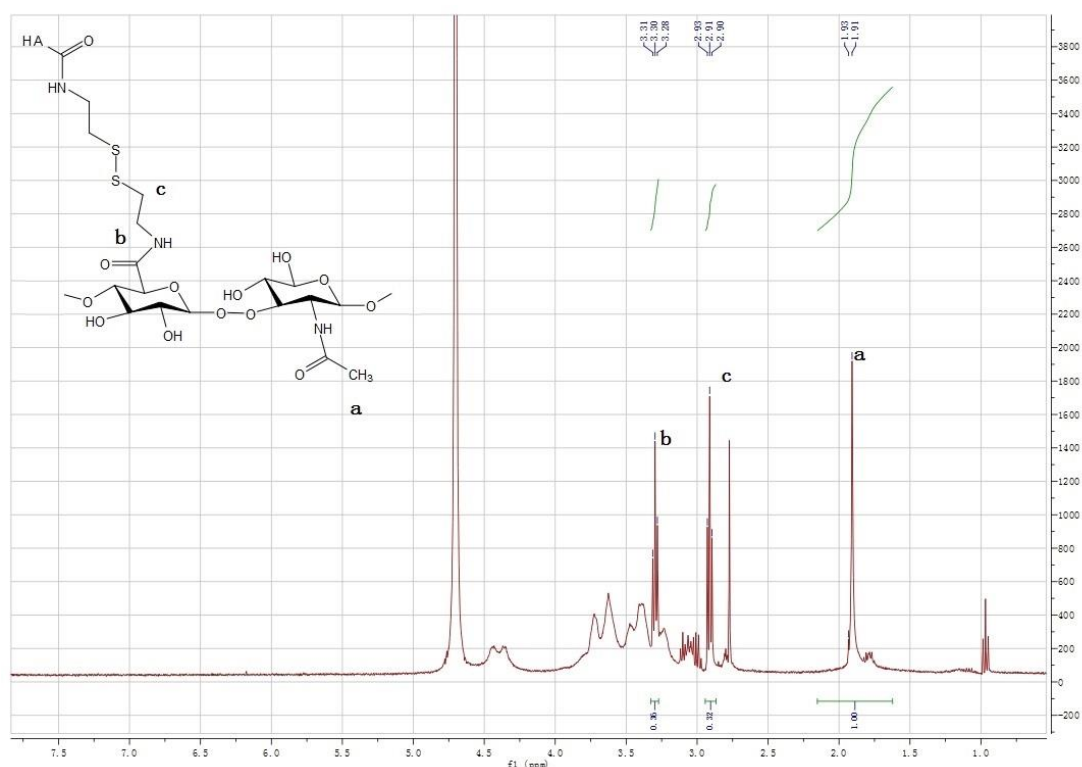


Figure S2 ^1H NMR spectrum of GM-HA-SH. * Expanded view indicated the appearance of small peaks in (b), indicative of the presence of GM.

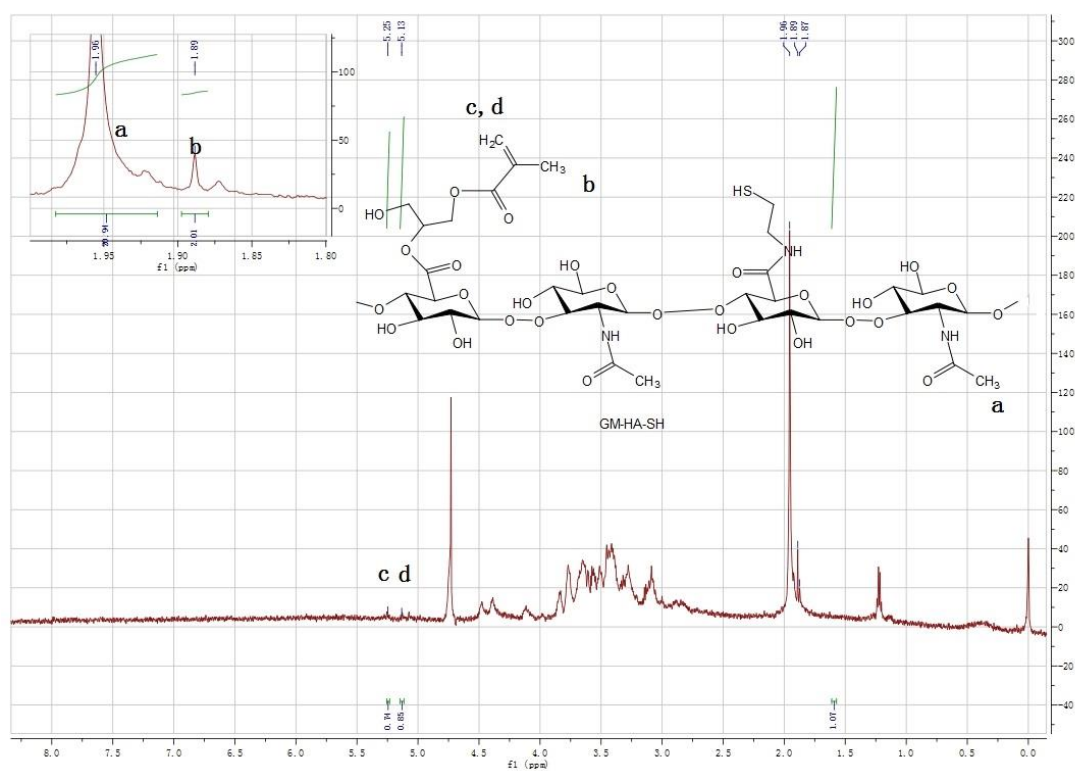


Figure S3 ^1H NMR spectrum of Z-HA-SH.

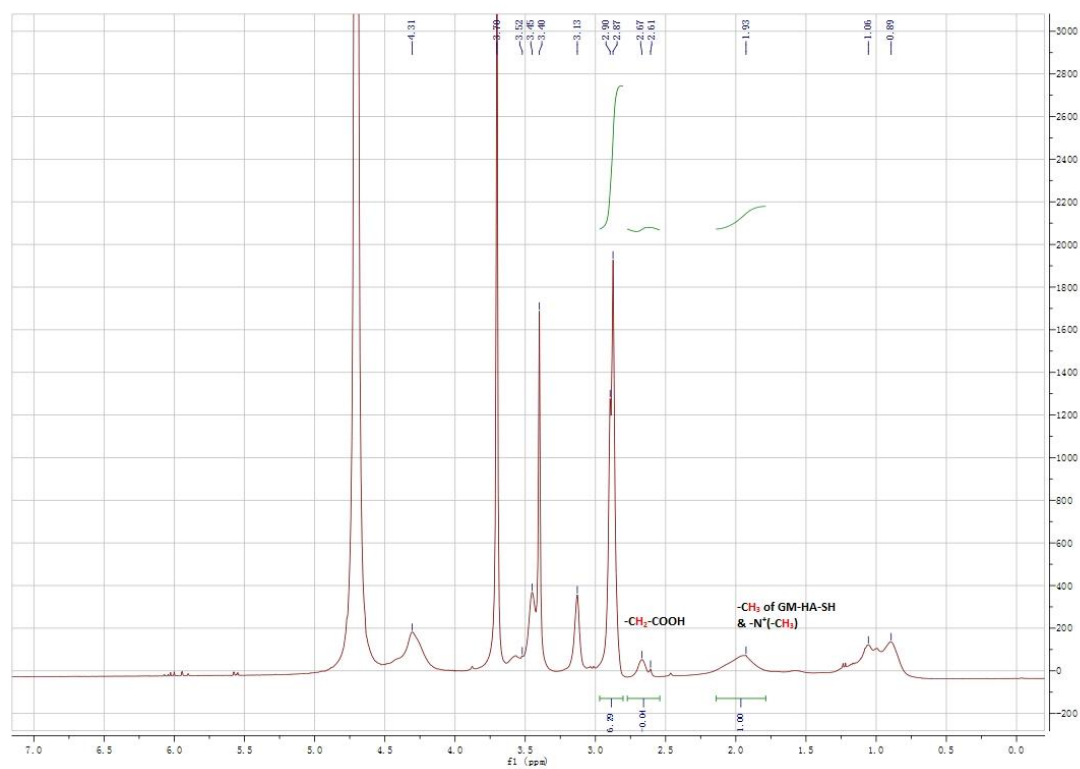
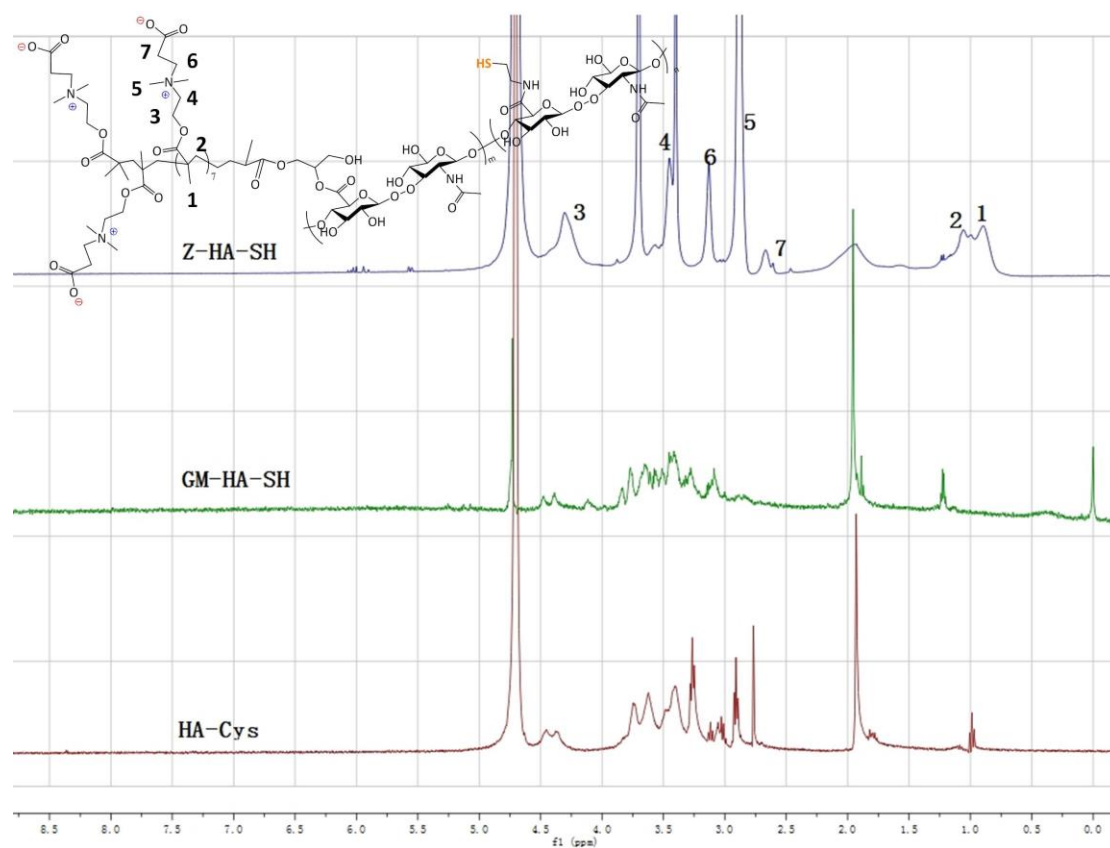


Figure S4 ^1H NMR spectrum of aminated FA.

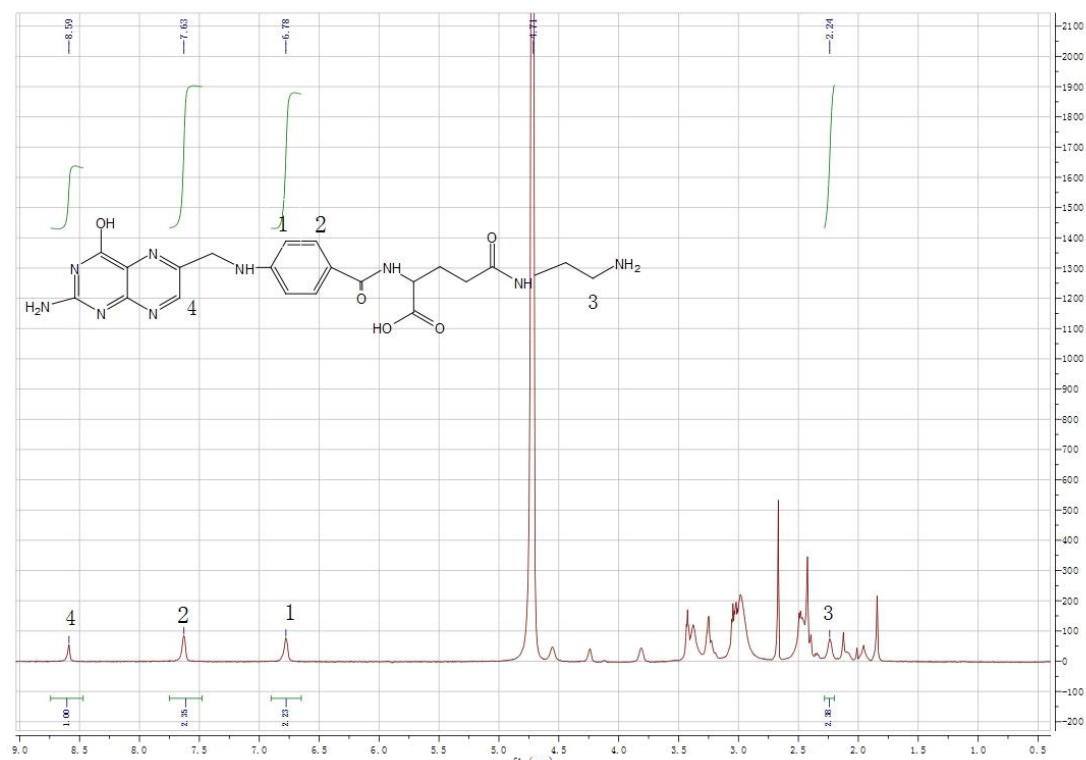


Figure S5 UV-Vis spectra of FA-Z-NCs and Z-NCs. *The inset showed the absorbance spectrum of the aminated FA aqueous solution.

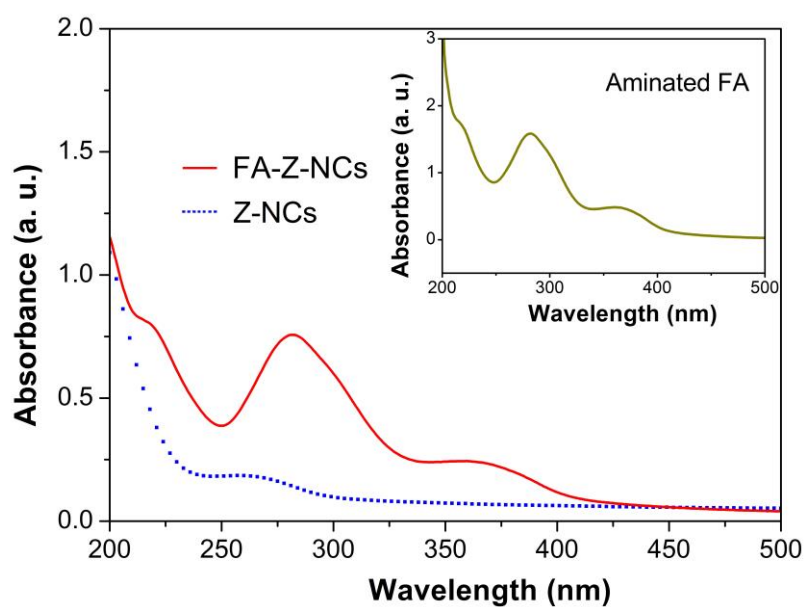


Figure S6 Size distributions of the (a) DOX/FA-Z-NCs and (b) DOX/Z-NCs.

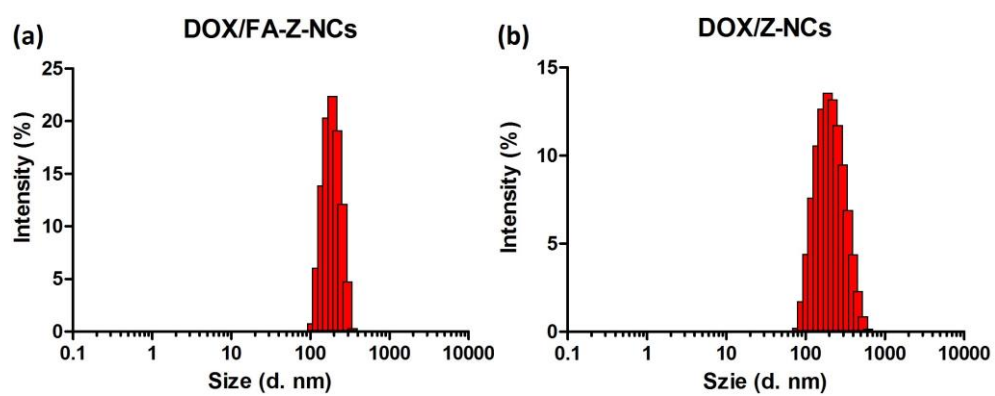


Figure S7 TEM images of DOX/FA-Z-NCs (left column) and DOX/Z-NCs (right column) after incubation in 10 mM GSH buffer for varied times: (a) (b) 0 min, (c) (d) 12 h and (e) (f) 24 h.

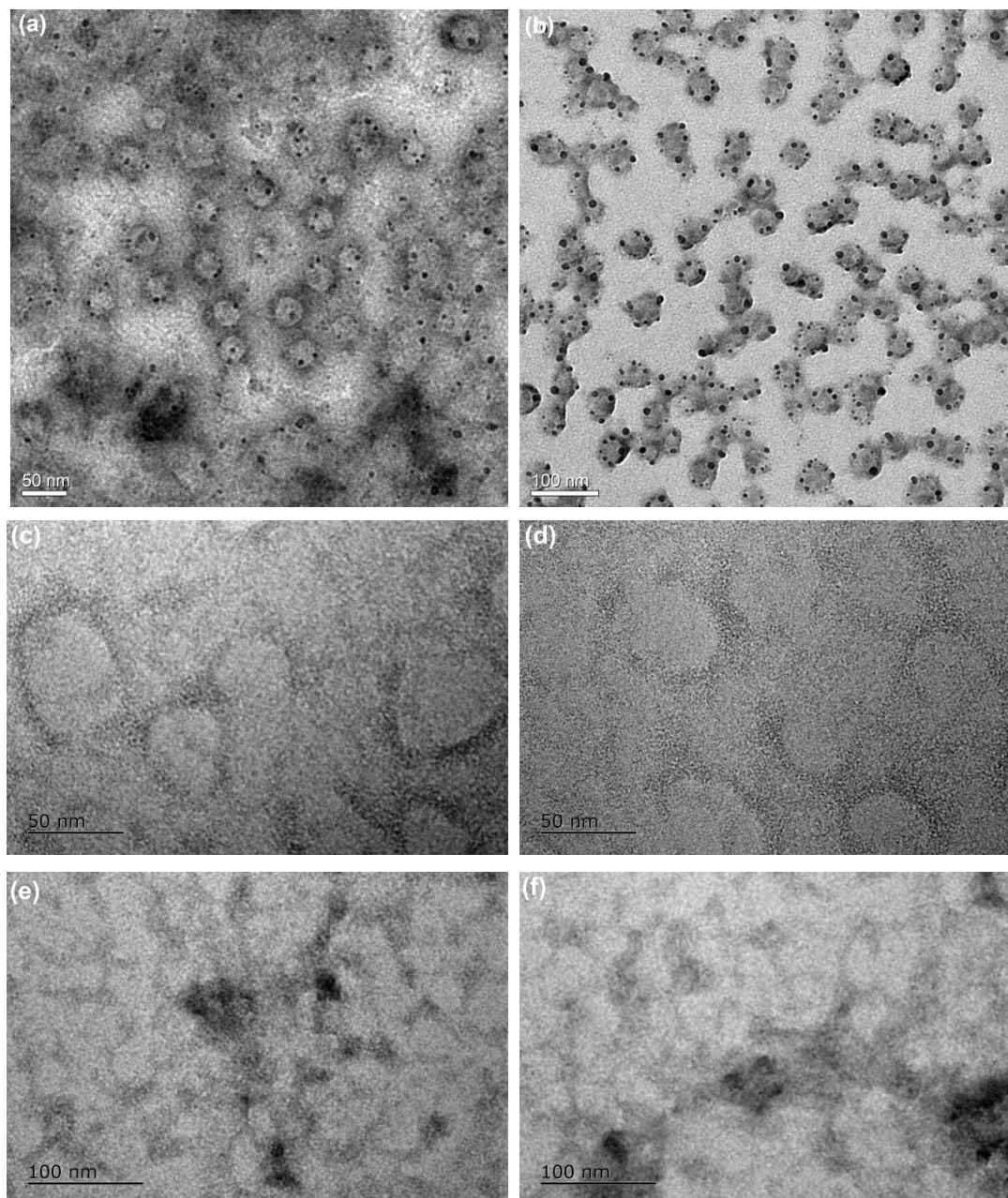


Figure S8 In vitro cytotoxicity assay. *4T1 cells were incubated with hollow nanocapsules (a) FA-Z-NCs and (b) Z-NC for 36 h. Concentrations of the hollow nanocapsules were referred to the concentrations of corresponding drug-encapsulating nanocapsules used for cell viability assay.

