

Electronic supplementary information (ESI)

**“Stealthy”chitosan/mesoporous silica nanoparticle based complex  
system for tumor-triggered intracellular drug release**

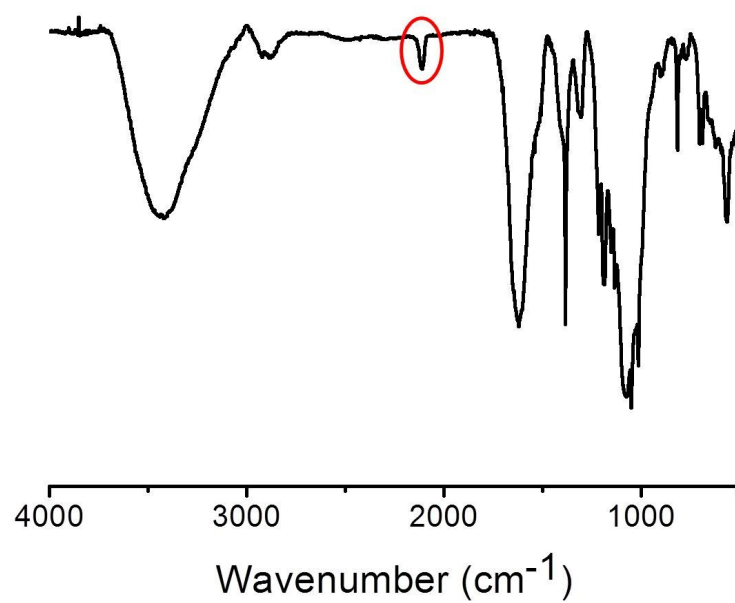
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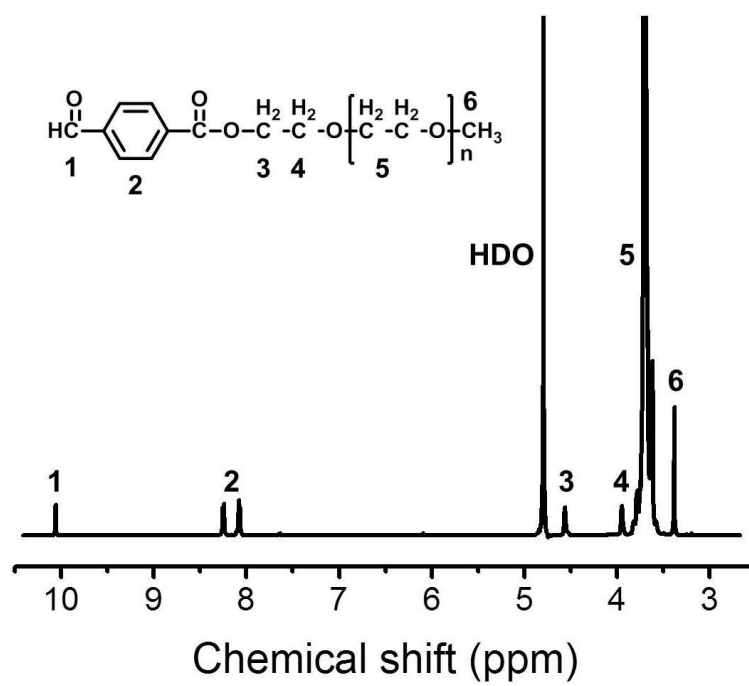
**Synthesis of DOX loaded mPEG succinimidyl carboxymethyl ester shielded MSN-SS-CHI (DOX@MSN-SS-CHI-PEG\*)**

mPEG succinimidyl carboxymethyl ester (mPEG-SC,  $M_w = 2000$ ) was purchased from Jenkem Technology Co., Ltd., Beijing, China.

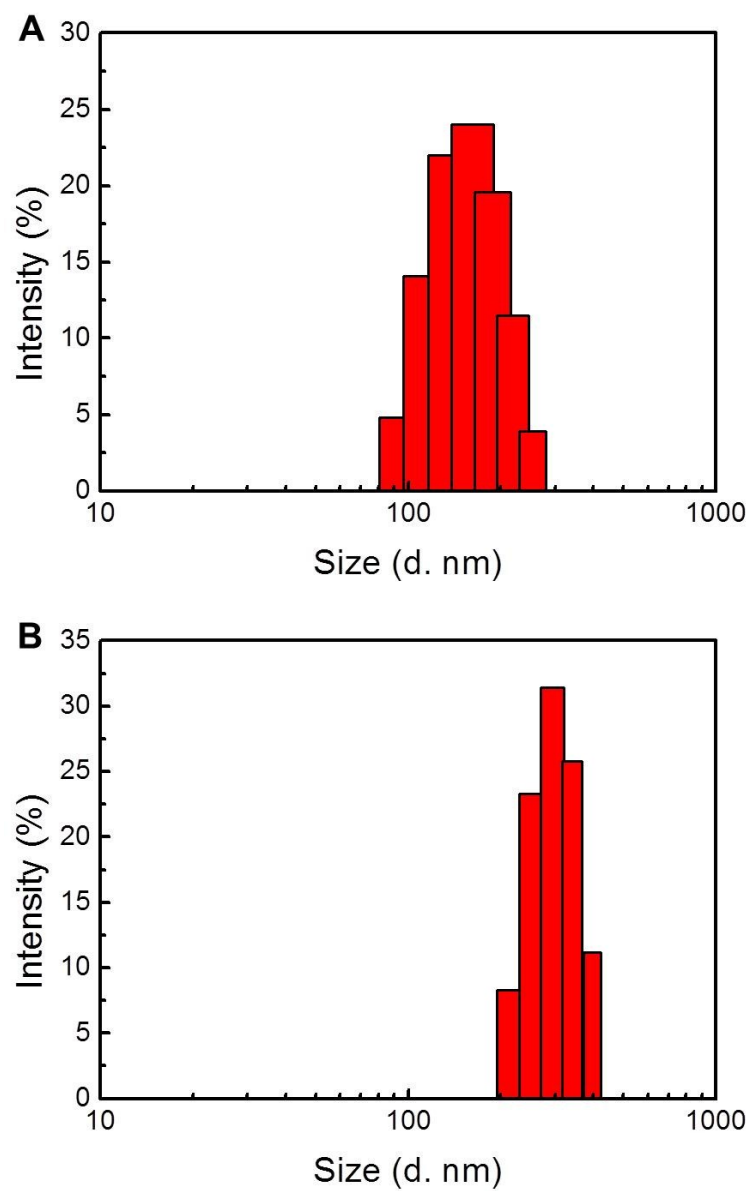
100 mg of DOX@MSN-SS-CHI was suspended in 50 mL of anhydrous DMSO. 200 mg of mPEG-SC and 0.2 mL anhydrous triethylamine was then dissolved in the suspension. The reaction was taken at 40 °C for 72 h. After that, the product was centrifuged, washed with DI water, and lyophilized to give DOX loaded DOX@MSN-SS-CHI-PEG\*.



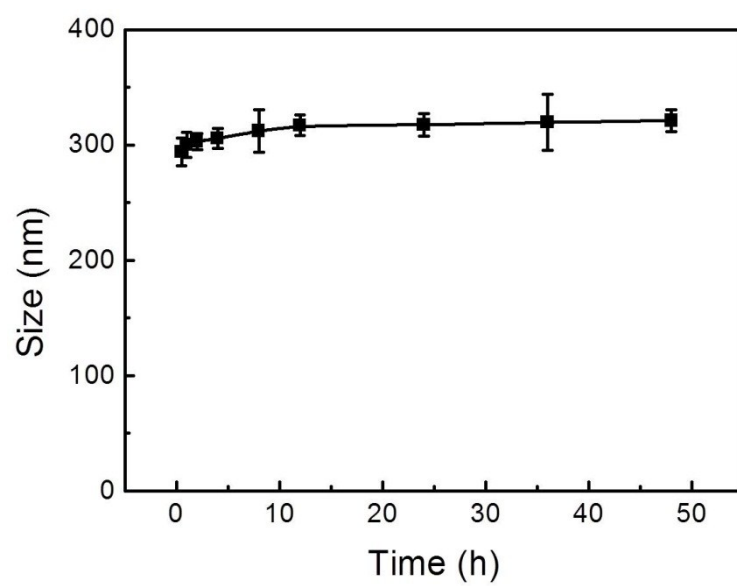
**Fig. S1** FT-IR spectrum of CHI-N<sub>3</sub>.



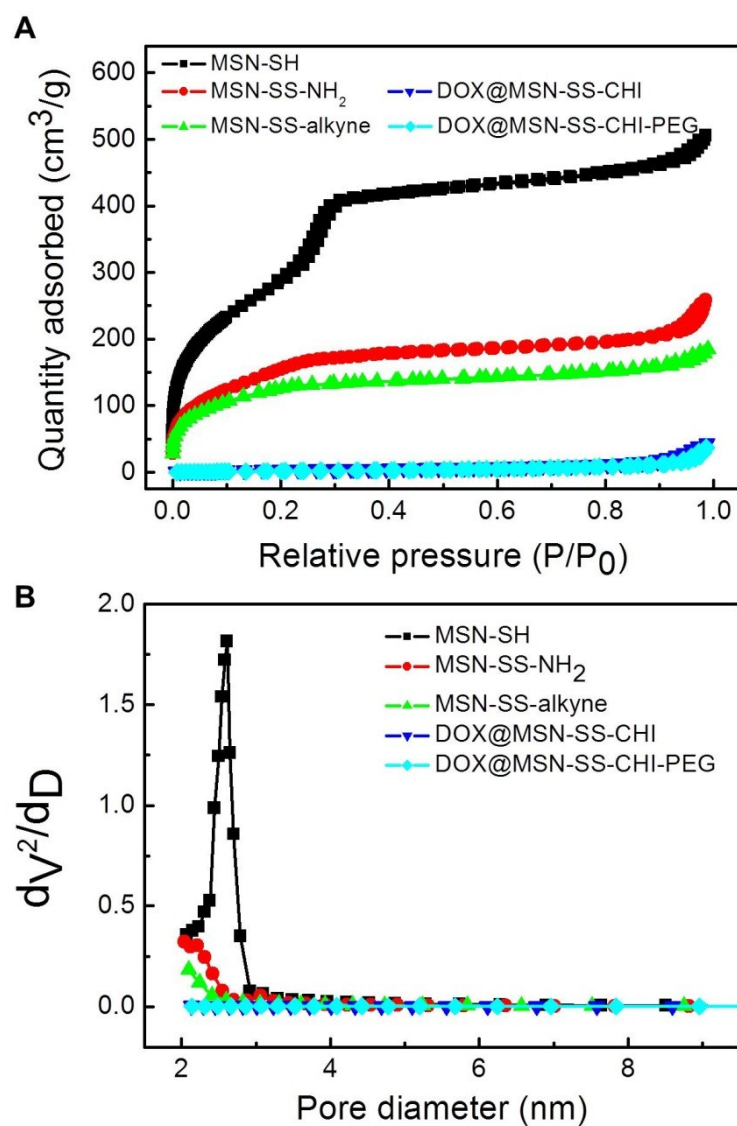
**Fig. S2**  $^1\text{H}$  NMR spectrum of mPEG-CHO.



**Fig. S3** Size distributions of MSN-SH (A) and DOX@MSN-SS-CHI-PEG (B).



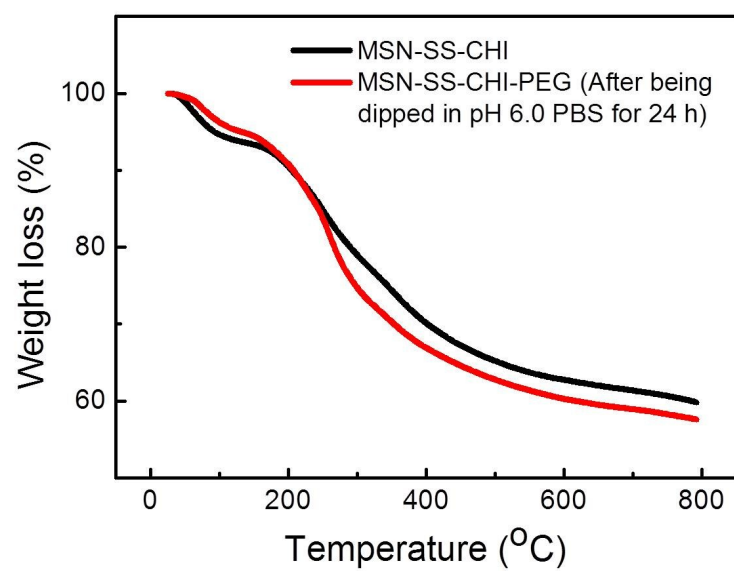
**Fig. S4** Sizes of DOX@MSN-SS-CHI-PEG being dipped and shaken in pH 7.4 PBS  
at 37 °C.



**Fig. S5** Nitrogen adsorption-desorption isotherms (A) and BJH pore distributions (B)

of MSN-SH, MSN-SS- $\text{NH}_2$ , MSN-SS-alkyne, DOX@MSN-SS-CHI and

DOX@MSN-SS-CHI-PEG.



**Fig. S6** TGA curves of MSN-SS-CHI and MSN-SS-CHI-PEG after being dipped in pH 6.0 PBS for 24.