

## **Glutathione-responsive PEGlyated nanogel with doxorubicin- conjugation for cancer therapy**

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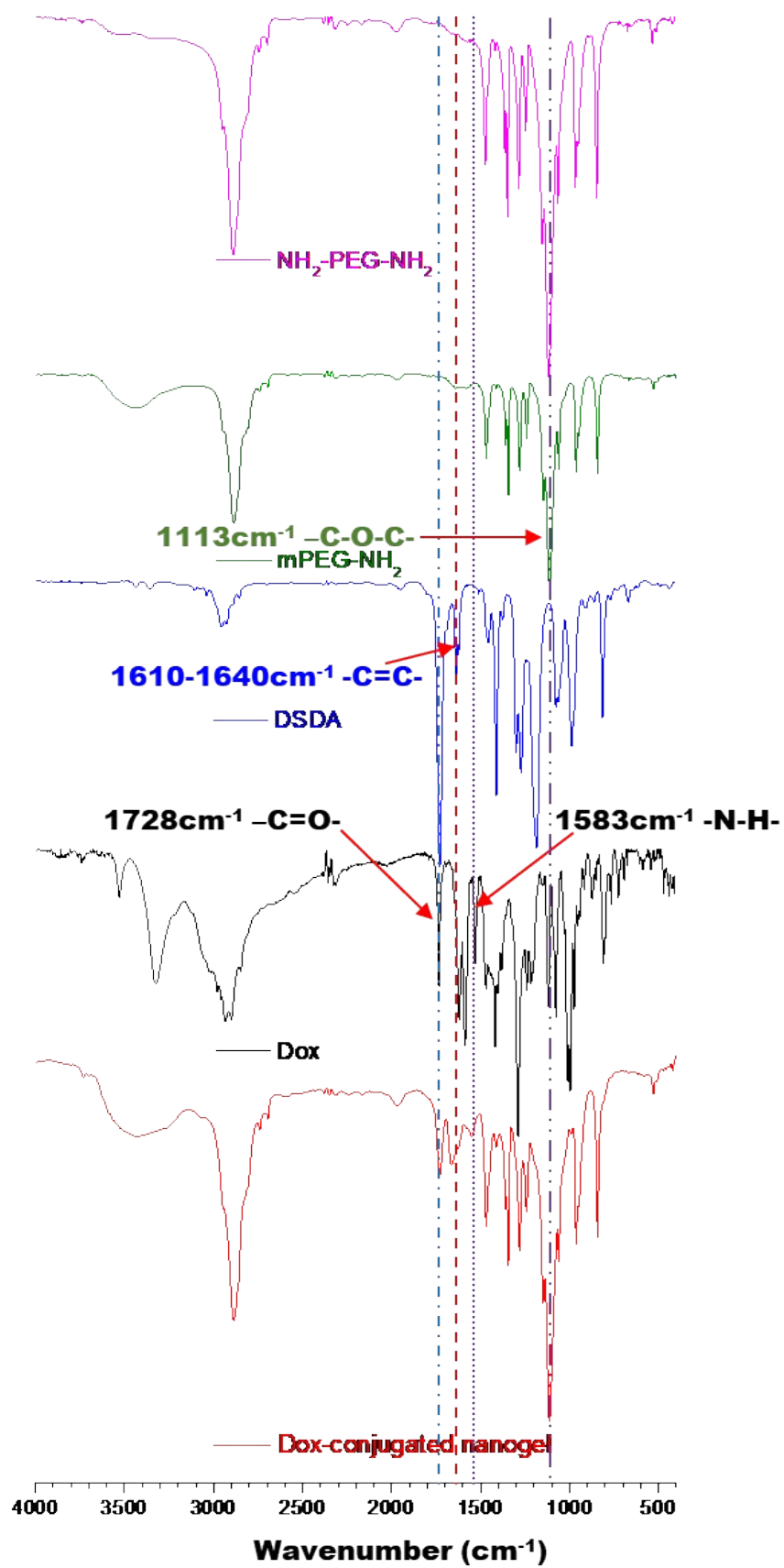
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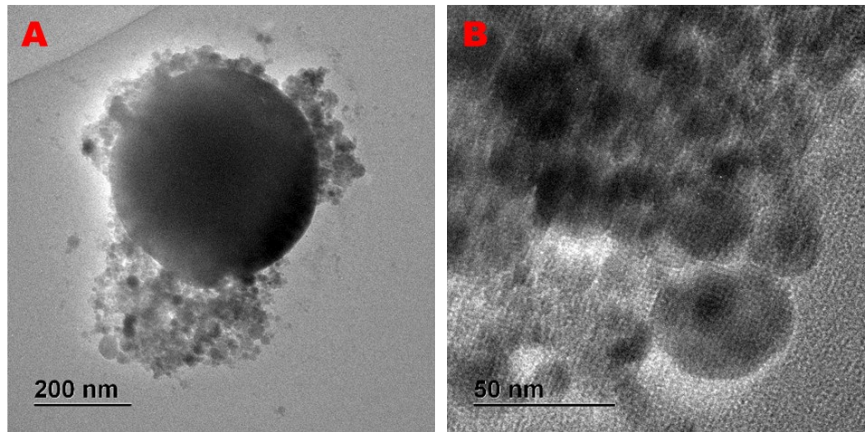
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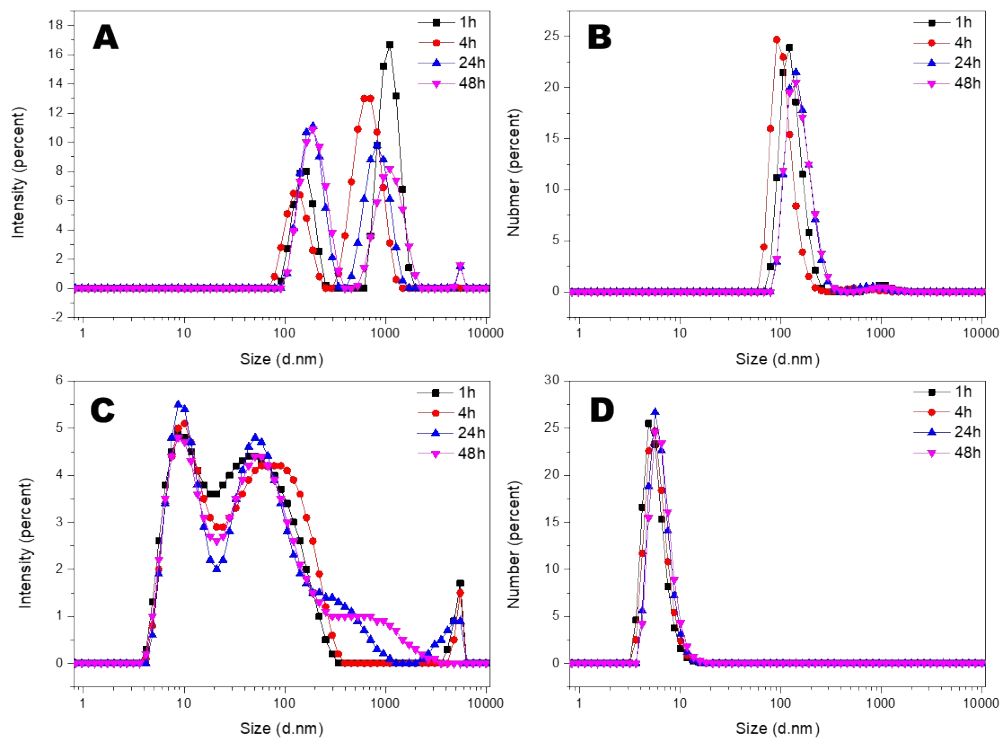
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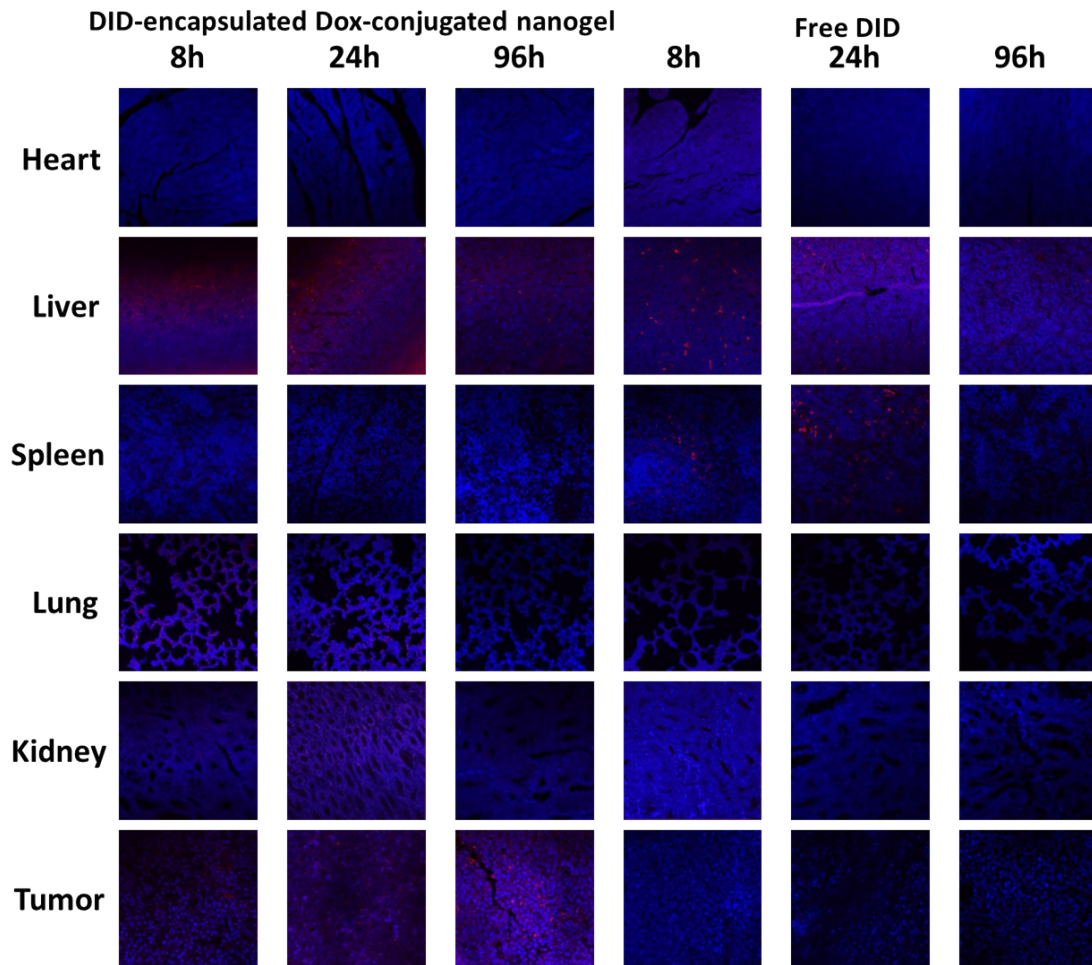
**Figure S1** The FT-IR spectra of NH<sub>2</sub>-PEG-NH<sub>2</sub>, mPEG-NH<sub>2</sub>, DSDA, Dox and Dox-conjugated nanogel.



**Figure S2** The particle sizes of Dox-conjugated nanogels in PBS with 10 mg/mL GSH at the scale of (A) 200 nm and (B) 50 nm.



**Figure S3** The particle size of medium containing 10% FBS evaluated by intensity (A) and number (B) distribution without drugs or nanogels and the particle size of medium containing 10% FBS with Dox-conjugated nanogel evaluated by intensity (C) and number (D) distribution at 1 h, 4 h, 24 h and 48 h.



**Figure S4** The tissue sections observed by of heart, liver, spleen, lung, kidney and tumor treated by DID-encapsulated Dox-conjugated nanogel and free DID in 96 h.